

FILE NOTATIONS

Entered in NID File ...✓...
 Location Map Pinned ...✓...
 Card Indexed ...✓...

Checked by Chief 57.....
 Approval Letter
 Disapproval Letter

COMPLETION DATA:

Date Well Completed 10-11-78..

Location Inspected ..

OW ✓... WW..... TA.....
 GW..... OS..... PA.....

Bond released

State or Fee Land

LOGS FILED

Driller's Log...✓...
 Electric Logs (No.) ✓.....

E..... I..... Dual I Lat..... GR-N..... Micro.....
 BHC Sonic GR..... Lat..... Mi-L..... Sonic ..
 CBLog..... CCLog..... Others.....

UTAH DIVISION OF OIL, GAS AND MINING

REMARKS: WELL LOG ELECTRIC LOGS WATER SANDS No LOCATION INSI ED SUB. REPORT/ABD

Operator name change from Flying Dia. to Bow valley
 * RECOMPLETE 2-16-88
 ** WORK-OVER 3-1-88 - 891007 Orig of opn 3-15-89
 950711 for N1195/merger eff 01-2-91

DATE FILED 4-4-78

LAND: FEE & PATENTED STATE LEASE NO. PUBLIC LEASE NO. INDIAN

DRILLING APPROVED: 4-4-78

SPOUDED IN: 4-3-78

COMPLETED: 10-11-78 PUT TO PRODUCING: 6-18-78

* 2-16-88

INITIAL PRODUCTION: 102 BOPD; 48 MCF/D; 70 BWPD

* 102 BOPD 18MCF 5 BWPD

GRAVITY A.P.I. 42

* 34.8

GOR: 470

-

PRODUCING ZONES: 11,018'-11,774' Wasatch

* 8449-9647' GRU

TOTAL DEPTH: 12,500'

** COMINGLED GR-WS

WELL ELEVATION: 5324' KB

DATE ABANDONED:

FIELD: Bluebell

UNIT:

COUNTY: Uintah

WELL NO. Davis 1-33

API NO: 43-047-30384

LOCATION 1980' FT. FROM (N) LINE. 2356' FT. FROM (W) LINE. SE NW 1/4-1/4 SEC. 33

TWP.	RGE.	SEC.	OPERATOR	TWP.	RGE.	SEC.	OPERATOR
			Flying Dia.				

GEOLOGIC TOPS:

Green River-6431'

TGR3 8408'

Wasatch 9444'



Flying Diamond Oil Corporation

1700 BROADWAY SUITE 900 DENVER, COLORADO 80290 PHONE (303) 861-4366 573-6624

March 27, 1978

State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
1588 West North Temple
Salt Lake City, Utah 84116

ATTN: Mr. Cleon B. Feight
Director



Re: Application for Permit to Drill
Davis No. 1-33
Section 33, T1S, R1E, USM
Bluebell Field
Uintah County, Utah

Gentlemen:

Enclosed, in triplicate, is Form DOGC-1a (Application for Permit to Drill, Deepen, or Plug Back) along with a certified copy of the well location plat setting forth our proposed operations in Section 33, T1S, R1E, USM, Uintah County, Utah. A Designation of Agent and \$25,000 blanket bond covering drilling operations performed by Flying Diamond Oil Corporation in the State of Utah have previously been filed with your office.

We trust that the enclosed materials are in compliance with Rule C-3, General Rules and Regulations and Rules of Practice and Procedure, and look forward to your approval of our proposed operations as soon as possible. Should you require further information, please contact the undersigned.

Very truly yours,

FLYING DIAMOND OIL CORPORATION

Michael H. North
Division Land Manager
Western Oil & Gas Division

MHN:jg

Enclosures

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL & GAS

5. Lease Designation and Serial No.

6. If Indian, Allottee or Tribe Name

7. Unit Agreement Name

8. Farm or Lease Name

Davis ✓

9. Well No.

1-33 ✓

10. Field and Pool, or Wildcat

Bluebell Field ✓

11. Sec., T., R., M., or Blk. and Survey or Area

Sec. 33, T1S, R1E, USM

12. County of ~~Box~~ 13. State

Uintah Utah

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work

DRILL

DEEPEN

PLUG BACK

b. Type of Well

Oil Well

Gas Well

Other

Single Zone

Multiple Zone

2. Name of Operator

FLYING DIAMOND OIL CORPORATION ✓

3. Address of Operator

1700 Broadway, Suite 900, Denver, Colorado 80290

4. Location of Well (Report location clearly and in accordance with any State requirements.)*
At surface

2,356' FWL & 1,980' FNL (SE/4NW/4) Sec. 33, T1S, R1E, USM

At proposed prod. zone

Same ✓

14. Distance in miles and direction from nearest town or post office*

Four miles northwest of Ft. Duchesne, Utah

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. line, if any)

1,980'

16. No. of acres in lease

40.00

17. No. of acres assigned to this well

640.00

18. Distance from proposed location* to nearest well, drilling, completed, or applied for, on this lease, ft.

19. Proposed depth

12,500' ✓

20. Rotary or cable tools

Rotary

21. Elevations (Show whether DF, RT, GR, etc.)

5,310' ungraded ground

22. Approx. date work will start*

April 3, 1978

23. PROPOSED CASING AND CEMENTING PROGRAM

Size of Hole	Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement
17-1/2"	13-3/8"	48 lb. H-40	150'	circ. to surface 170 sx. ✓
12-1/4"	9-5/8"	40 lb. K-55	2,200'	circ. to surface 800 sx. ✓
8-3/4"	7"	23-29 lb. S-95	10,000'	400 sx. ✓
6"	5"	18 lb. P110	12,500'	circ. around liner 600 sx. ✓

This application is to drill and complete a well in the Wasatch Formation. The well is to be drilled vertically with a hole deviation of not more than 1 degree/100'.

Blowout prevention equipment will include recording mud pit level indicator, flow meter, and other warning devices on the derrick floor.

(Supplemental information attached)



df

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. Signed Michael H. North Division Land Manager Title Western Oil & Gas Division Date March 27, 1978
(This space for Federal or State office use)

Permit No. _____ Approval Date _____

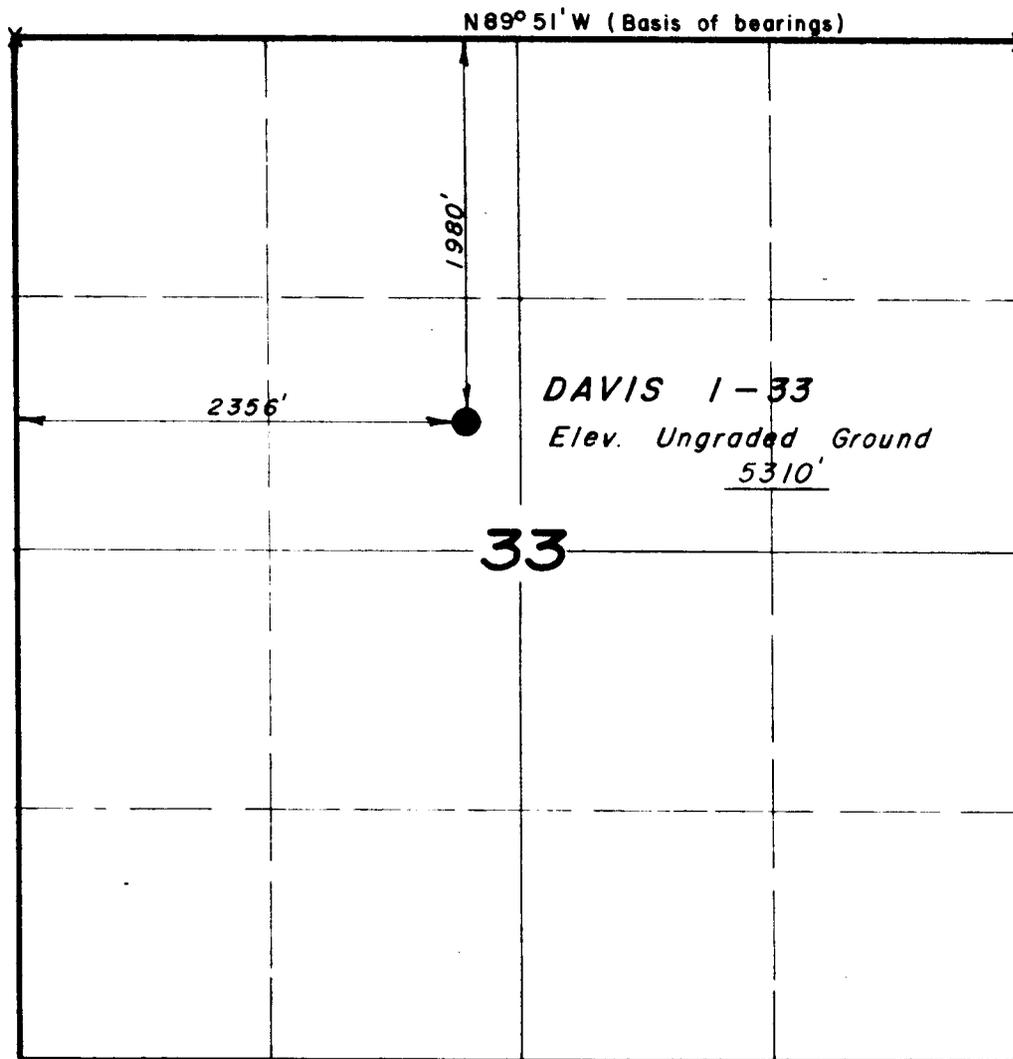
Approved by _____ Title _____ Date _____
Conditions of approval, if any:

TIS, RIE, U.S.B. & M.

PROJECT

FLYING DIAMOND

Well location, *DAVIS 1-33*, located as shown in the SW1/4 NW1/4 Section 33, TIS, RIE, U.S.B. & M., Uintah County, Utah.



CERTIFICATE

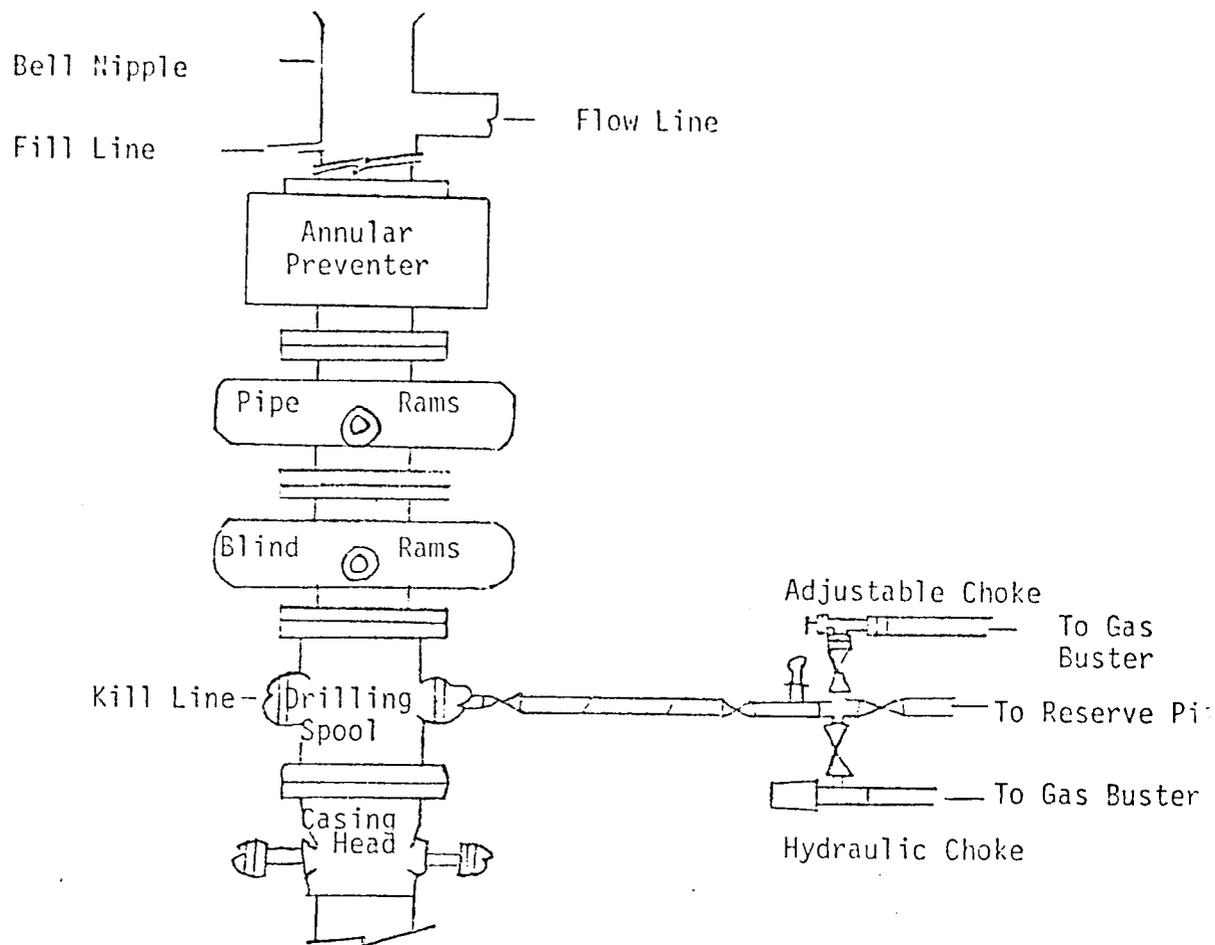
THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Gene Stewart
 REGISTERED LAND SURVEYOR
 REGISTRATION NO 3154
 STATE OF UTAH

X = Corners Found & Used.

UINTAH ENGINEERING & LAND SURVEYING
 P.O. BOX Q - 110 EAST - FIRST SOUTH
 VERNAL, UTAH - 84078

SCALE 1" = 1000'	DATE 23 March 1978
PARTY D.A. & D.S.	REFERENCES GLO Plat
WEATHER Warm	FILE Flying Diamond



Above the top of the Wasatch, all BOP equipment shall be 3,000 psi working pressure. Below the top of the Wasatch, 5,000 psi equipment shall be utilized. All equipment will be pressure tested to the manufacturer's recommendations upon installation and, thereafter, at two week intervals.

Auxiliary equipment shall consist of upper and lower kelly cocks, full opening valves and inside BOP. Monitoring equipment shall be installed on the mud system.

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

** FILE NOTATIONS **

Date: March 30 -

Operator: Flying Saurood Corp.

Well No: Paris 1-33

Location: Sec. 33 T. 1S R. 1E County: Uintah

File Prepared:
Card Indexed:

Entered on N.I.D.:
Completion Sheet:

API NUMBER: B-047-30384

CHECKED BY:

Administrative Assistant [Signature]

Remarks:

Petroleum Engineer ok P

Remarks:

Director 2

Remarks:

INCLUDE WITHIN APPROVAL LETTER:

Bond Required:

Survey Plat Required:

Order No. B1-24

Surface Casing Change
to _____

Rule C-3(c), Topographic exception/company owns or controls acreage
within a 660' radius of proposed site

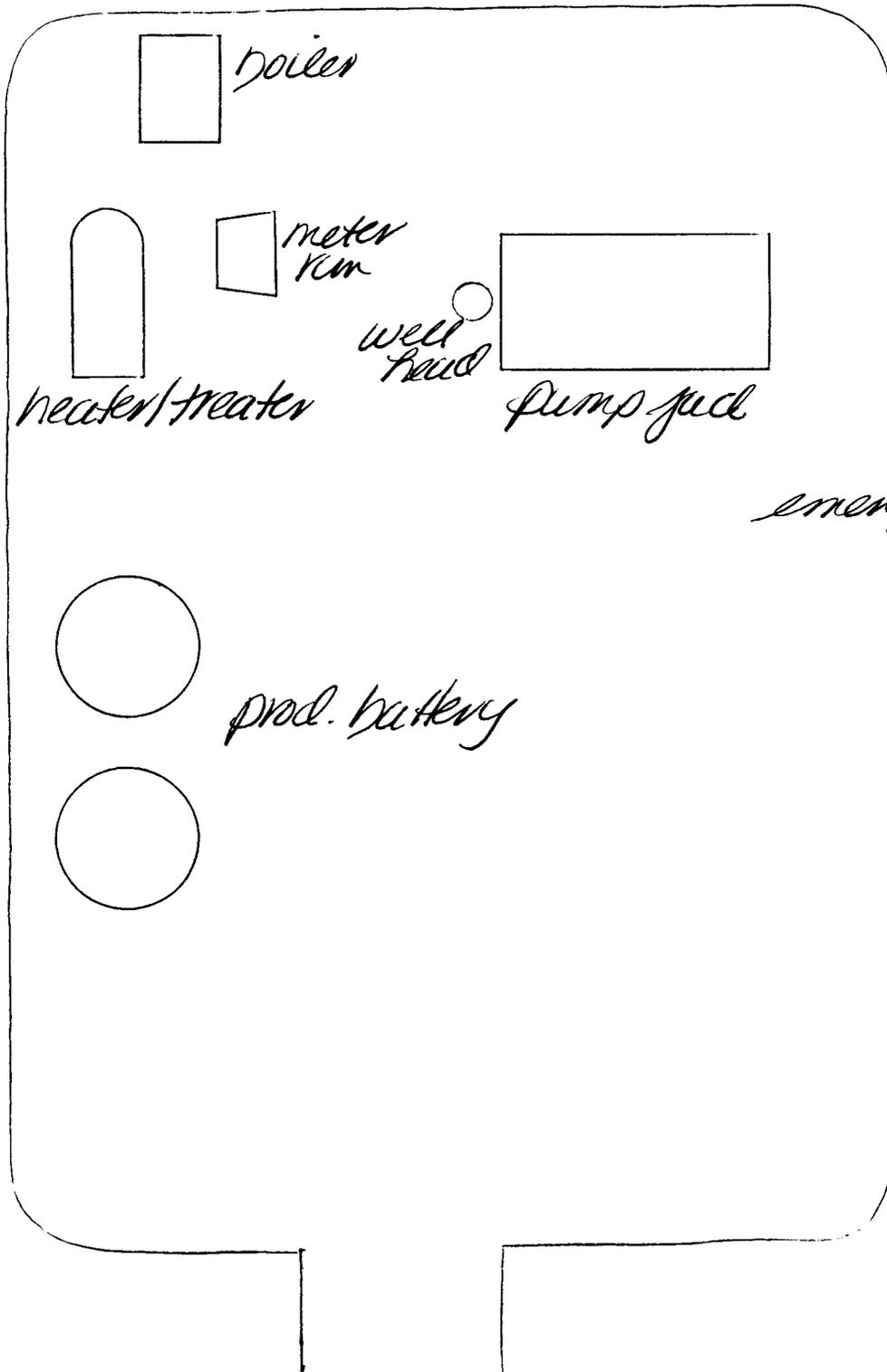
O.K. Rule C-3

O.K. In _____ Unit

Other:

Letter Written/Approved

Davis-33 Sec 33, T1S, R1E Hubby 11/30/88



boiler



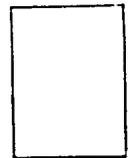
heater/treater

meter
KCM

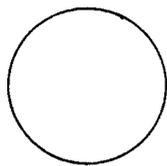
well
head



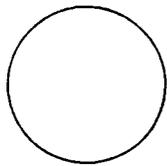
pump jack



emergency
exit



prod. battery



April 4, 1978

Flying Diamond Corporation
1700 Broadway
Suite 900
Denver, Colorado 80290

Re: Well No. Davis 1-33
Sec. 33, T. 1 S, R. 1 E, USM
Uintah County, Utah

Gentlemen:

Insofar as this office is concerned, approval to drill the above referred to well is hereby granted in accordance with the Order issued in Cause No. 131-24.

Should you determine that it will be necessary to plug and abandon this well, you are hereby requested to immediately notify the following:

PATRICK L. DRISCOLL - Chief Petroleum Engineer
HOME: 582-7247
OFFICE: 533-5771

Enclosed please find Form OGC-8-X, which is to be completed whether or not water sands (aquifers) are encountered during drilling.

Further, it is requested that this Division be notified within 24 hours after drilling operations commence, and that the drilling contractor and rig number be identified.

The API number assigned to this well is 43-047-30384.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

CLEON B. FEIGHT
Director

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

		5. LEASE DESIGNATION AND SERIAL NO.	
		6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		7. UNIT AGREEMENT NAME	
2. NAME OF OPERATOR FLYING DIAMOND OIL CORPORATION		8. FARM OR LEASE NAME Davis	
3. ADDRESS OF OPERATOR 1700 Broadway, Suite 900, Denver, Colorado 80290		9. WELL NO. 1-33	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 2356' FWL & 1980' FNL (SE/4NW/4) SEC 33-T1S-R1E, USM		10. FIELD AND POOL, OR WILDCAT Bluebell Field	
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA SEC 33-T1S-R1E, USM	
14. PERMIT NO. 43-047-30384	15. ELEVATIONS (Show whether DF, RT, OR, etc.) 5310' Ungraded Ground	12. COUNTY OF RECORD Uintah	13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) _____	

(Other) Drilling Well (NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

APR. 78

4-1-78	Rigging up.
4-2-78	Rigging up.
4-3-78	Spudded well.
4-4-78	Drilling.
4-5-78	Ran 13-3/8" csg. and set at 159' with 175 sx Class "G" cmt.
4-6-78	to
4-9-78	Drilling.
4-10-78	Ran 9-5/8" csg. and set at 2,125' with 660 sx HOWCO Lite & 200 sx. Class "G" cmt.
4-11-78	to
4-30-78	Drilling.

18. I hereby certify that the foregoing is true and correct

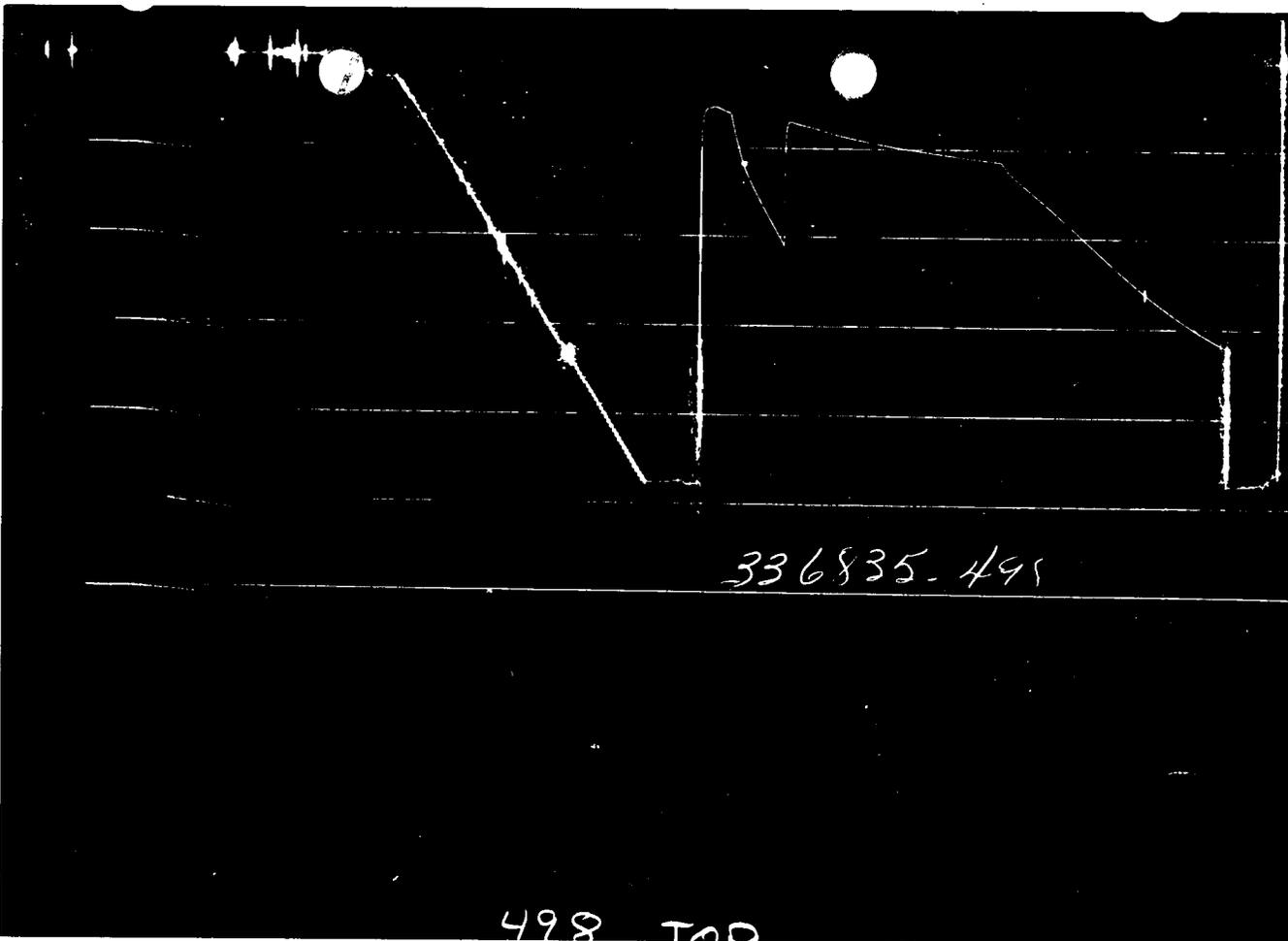
SIGNED G. K. Bailey TITLE Mgr., Drilling & Production DATE 6-27-78

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

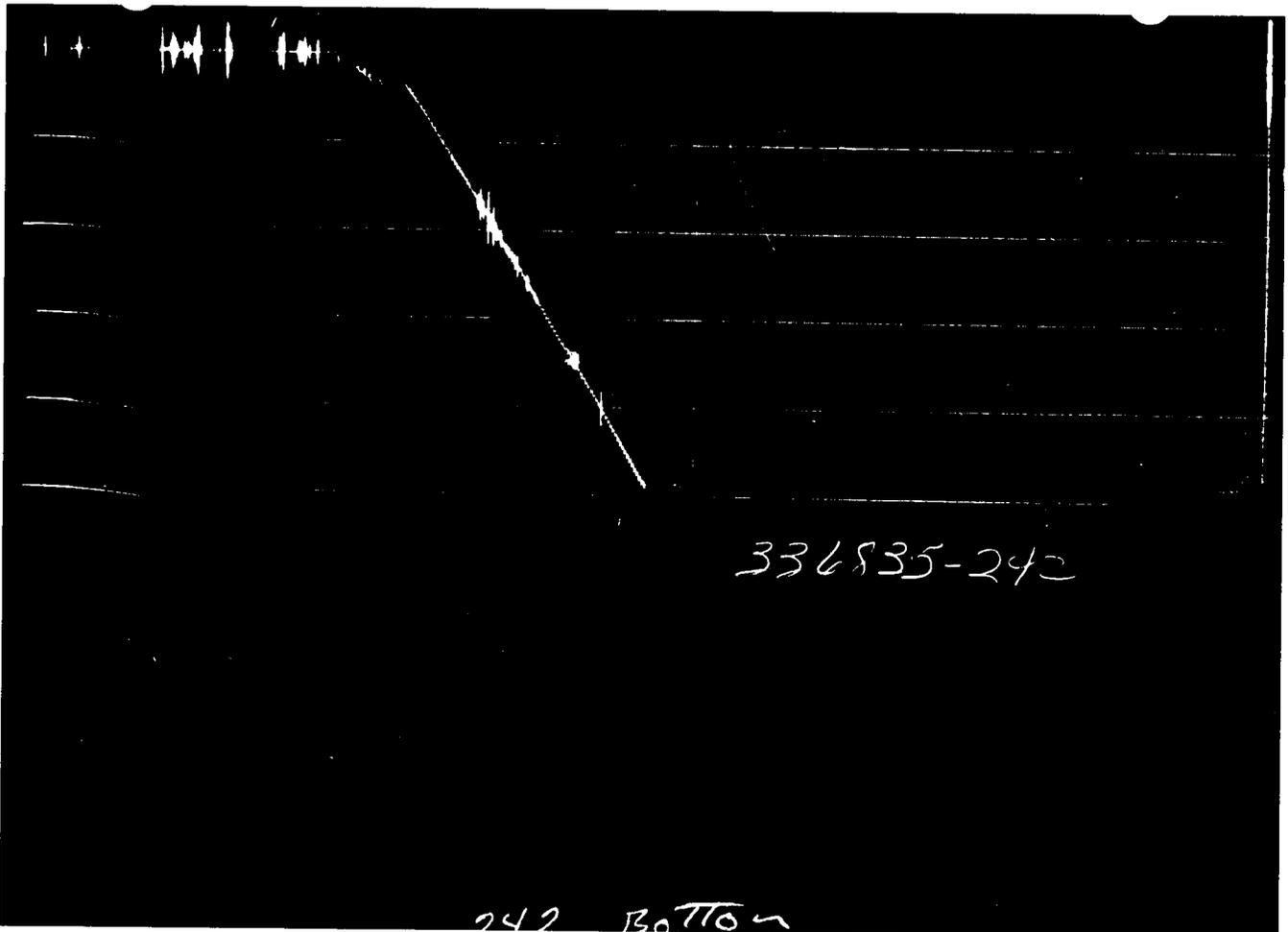
CONDITIONS OF APPROVAL, IF ANY:

↑ PRESSURE
↓



336835-491

498 TOP



336835-242

242 BOTTOM

Each Horizontal Line Equal to 1000 p.s.i.

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING
1588 West North Temple
Salt Lake City, Utah 84116

P

REPORT OF WATER ENCOUNTERED DURING DRILLING

Well Name & Number: Davis 1-33 (A1E)

Operator: (Bow Valley) Flying Diamond Oil Corporation Address: 1700 Broadway, Suite 900, Denver, Colo. 80290

Contractor: Chase Drilling Company Address: Denver, Colorado

Location 1/4 1/4; Sec. 33 T. 1S N, R. 1E; W Uintah County.

Water Sands:

<u>Depth:</u>		<u>Volume:</u>	<u>Quality:</u>
From-	To-	Flow Rate or Head	Fresh or Salty
1.	<u>NONE</u>		
2.			
3.			
4.			
5.			

(Continue on Reverse Side if Necessary)

Formation Tops:

Green River	6,431
TGR ₃	8,408
Wasatch	9,444

Remarks:

- NOTE: (a) Upon diminishing supply of forms, please inform this office.
 (b) Report on this form as provided for in Rule C-20, General Rules and Regulations and Rules of Practice and Procedure.
 (c) If a water analysis has been made of the above reported zone, please forward a copy along with this form.

Casing perms. _____ Bottom choke _____ Surf. temp _____ °F Ticket No. 336835
 Gas gravity _____ Oil gravity _____ GOR _____
 Spec. gravity _____ Chlorides _____ ppm Res. _____ @ _____ °F
INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED

Date Time	a.m. p.m.	Choke Size	Surface Pressure psi	Gas Rate MCF	Liquid Rate BPD	Remarks
5-1-78						On location-coming out of hole
18:00						
21:30						Started picking up tools
23:15						Started in hole-500' water cushion
5-2-78						Opened tool with 4" in water-to bottom
02:59						of bucket in 30 seconds...18" in water.
03:15						Closed tool for closed in pressure.
03:42						Gas to surface.
03:45						Reopened tool with 6" in water-to bottom
03:46						of bucket-18" water.
03:50						Opened to pit.
04:00		1/8"	0			Tester on line.
04:15		1/8"	4	5.64		
04:30		1/8"	7	7.70		
04:45		1/8"	9	8.89		
05:00		1/8"	12	10.5		
05:15		1/8"	13	11.0		
05:30		1/8"	14	11.6		
05:45		1/8"	15	12.1		
05:45						Shut in for final closed in pressure.
07:05						Started to reverse out.
07:54						Pulled packers loose.
08:05						Started off bottom.
08:40						Picked up kelly to circulate drill pipe.
12:00						Started out of hole.
18:00						Out of hole.



	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing	6"	3"	1.00'	
Reversing Sub				
Water Cushion Valve				
Drill Pipe	4 1/2"	3.826"	8843'	
Drill Collars	6 1/4"	-	372'	
Handling Sub & Choke Assembly				
Dual CIP Valve				
Dual CIP Sampler	5"	.87"	6.75'	9215'
Hydro-Spring Tester	5"	.75"	5'	9220'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"	3.06"	4'	9222'
Hydraulic Jar	5"	1.75"	5'	
VR Safety Joint	5"	1.00"	3'	
Pressure Equalizing Crossover				
Packer Assembly	7 3/4"	1.53"	5.75'	9239'
Distributor	5"	1.68"	2'	
Packer Assembly	7 3/4"	1.53"	5.75'	9247'
Flush Joint Anchor	5 3/4"	2.78"	18'	
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case				
Drill Collars	6 1/4"	2 1/4"	168'	
Anchor Pipe Safety Joint				
Packer Assembly				
Distributor				
Packer Assembly				
Anchor Pipe Safety Joint				
Side Wall Anchor				
Drill Collars				
Flush Joint Anchor	5 3/4"	2.78"	10'	
Blanked-Off B.T. Running Case	5 3/4"	2.50"	4'	9465'
Total Depth				9468'

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

<p>1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/></p> <p>2. NAME OF OPERATOR <u>FLYING DIAMOND OIL CORPORATION</u></p> <p>3. ADDRESS OF OPERATOR <u>1700 Broadway, Suite 900, Denver, Colorado 80290</u></p> <p>4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface <u>2356' FWL & 1980' FNL (SE/4NW/4) SEC 33-T1S-R1E, USM</u></p>		<p>5. LEASE DESIGNATION AND SERIAL NO.</p> <p>6. IF INDIAN, ALLOTTEE OR TRIBE NAME</p> <p>7. UNIT AGREEMENT NAME</p> <p>8. FARM OR LEASE NAME <u>Davis</u></p> <p>9. WELL NO. <u>1-33</u></p> <p>10. FIELD AND POOL, OR WILDCAT <u>Bluebell Field</u></p> <p>11. SEC., T., R., M., OR BLE. AND SURVEY OR AREA <u>SEC 33-T1S-R1E</u></p> <p>12. COUNTY OR PARISH <u>Uintah</u></p> <p>13. STATE <u>Utah</u></p>
<p>14. PERMIT NO. <u>43-047 -30384</u></p>	<p>15. ELEVATIONS (Show whether DF, RT, OR, etc.) <u>5310' Ungraded Ground</u></p>	

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) _____	

(Other) Drilling Well

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

MAY 1978

- 5-1-78 Drilling
- 5-2-78 Ran DST from 9,247' to 9,468' (copy attached)
- 5-3-78 to
- 5-8-78 Drilling
- 5-9-78 Ran DIL, Formation Density Caliper
- 5-10-78 Drilling
- 5-11-78 Ran 10,011' of 7" csg, landed at 9,984', cemented w/450 sx. cmt.
- 5-12-78 to
- 5-31-78 Drilling



18. I hereby certify that the foregoing is true and correct

SIGNED G. K. Bailey TITLE Mgr., Drilling & Production DATE 6-27-78

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

SUBMIT **TRIPPLICATE***
 (Other instructions on reverse side)

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. 9	
2. NAME OF OPERATOR FLYING DIAMOND OIL CORPORATION d/b/a BOW VALLEY EXPLORATION (U.S.) INC.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
3. ADDRESS OF OPERATOR 1700 Broadway, Suite 900, Denver, Colorado 80290		7. UNIT AGREEMENT NAME	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 2356' FWL & 1980' FNL (SE/4NW/4) SEC 33-T1S-R1E, USM		8. FARM OR LEASE NAME Davis	
14. PERMIT NO. 43-047-30384		9. WELL NO. 1-33	
15. ELEVATIONS (Show whether DP, RT, GR, etc.) 5310' Ungraded Ground		10. FIELD AND POOL, OR WILDCAT Bluebell Field	
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA SEC 33-T1S-R1E	
		12. COUNTY OR PARISH Uintah	13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) _____	
(Other) <input type="checkbox"/>	Drilling Well <input type="checkbox"/>	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

JUNE 1978:

- 6-1-78 Drilling.
- 6-2-78 Ran DILL, FDC-CNL-GR.
- 6-3-78 Ran 2712' of 5" Liner.
- 6-4-78 Cmt'd liner w/700 sx. cmt.
- 6-5-78 Drlg. cmt.
- 6-6-78 Drlg. cmt.
- 6-7-78 POOH, LDDP.
- 6-8-78 Released Rig.
- 6-9-78 MORT.
- 6-10-78 Set anchors & pull tested.
- 6-11-78 Ran CBL.
- 6-12-78 Wtg. on completion unit.
thru
- 6-15-78 Wtg. on completion unit.
- 6-16-78 MIRUSU. Ran 2-7/8" tbg.
- 6-17-78 Prep. to Perf.
- 6-18-78 Perforated w/2" Jumbo Jet, 1 JSPF (DIL-GR) between 12,370'- 11,468'.
- 6-19-78 Prep. to acidize.
- 6-20-78 Acidized w/12,500 gals. 15% HCL, 17,500 gals. 7½% HCL, 10,000 gals. form. wtr., 85 bbls. flush, 57 ball sealers & 2000# Benzoic Acid Flakes.
- 6-21-78 Well flowing.

18. I hereby certify that the foregoing is true and correct

SIGNED G. K. Bailey TITLE Mgr., Drilling & Production DATE 8-25-78

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*



5. LEASE DESIGNATION AND SERIAL NO.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Davis

9. WELL NO.

1-33

10. FIELD AND POOL, OR WILDCAT

East Bluebell

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA

SEC 33, T1S, R1E, USM

12. COUNTY OR PARISH Utah

13. STATE Utah

1a. TYPE OF WELL: OIL WELL GAS WELL DRY Other

b. TYPE OF COMPLETION: NEW WELL WORK OVER DEEP EN PLUG BACK DIFF. DESVR. Other

2. NAME OF OPERATOR
Flying Diamond Oil Corporation

3. ADDRESS OF OPERATOR
1700 Broadway, Suite 900, Denver, Colorado 80290

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface 2356' FWL, 1980' FNL (SE,NW) SEC 33, T1S, R1E

At top prod. interval reported below
USM, Uintah County, Utah

At total depth
Same

14. PERMIT NO. DATE ISSUED

15. DATE SPUDDED 4-3-78 16. DATE T.D. REACHED 6-1-78 17. DATE COMPL. (Ready to prod.) 10-11-78 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 5324 KB 19. ELEV. CASINGHEAD 5310

20. TOTAL DEPTH, MD & TVD 12,500 MD&TVD 21. PLUG, BACK T.D., MD & TVD 11830 MD&TVD 22. IF MULTIPLE COMPL., HOW MANY* 23. INTERVALS DRILLED BY Surf-TD ROTARY TOOLS CABLE TOOLS

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 11018 - 11774 Wasatch FM. 25. WAS DIRECTIONAL SURVEY MADE YES

26. TYPE ELECTRIC AND OTHER LOGS RUN DIL-GR, CNL-FDL, CBL 27. WAS WELL CORED NO

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13 3/8" OD	54.5	159	17 1/2	175 sx "G"	
9 5/8" OD	40.5	2140	12 1/4	660 sx Lite, 200sx "G"	
7" OD	26,29,32	9984	8 3/4	450 sx 10-0 RFL	

29. LINER RECORD				30. TUBING RECORD			
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
5" OD	9800	12465	700		2 7/8	9889	9889
					1.9" OD	5448	N/A

31. PERFORATION RECORD (Interval, size and number)
(6-18-78) 11468-12372, 19 intervals
48 Holes. Detail Attached
(8-10-78) 11018-11362, 5 intervals,
64 Holes
(10-1-78) 11990, 8 Holes

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.	
DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
11468-12372	30,000 gal. 15% & 7 1/2% HCl
11018-11774	20,000 gal. 15% HCl
11862-12372	225 sx Class G cmt.

33.* PRODUCTION

DATE FIRST PRODUCTION 6-18-78 PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Flowing WELL STATUS (Producing or shut-in) Producing

DATE OF TEST 10-11-78 HOURS TESTED 24 CHOKE SIZE 20/64" PROD'N. FOR TEST PERIOD 102 OIL—BBL. 102 GAS—MCF. 48 WATER—BBL. 70 GAS-OIL RATIO 470

FLOW. TUBING PRESS. 100 CASING PRESSURE NA CALCULATED 24-HOUR RATE 102 OIL—BBL. 102 GAS—MCF. 48 WATER—BBL. 70 OIL GRAVITY-API (CORR.) 42

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) Sold to Gary Operating TEST WITNESSED BY E. B. Whicker

35. LIST OF ATTACHMENTS
Perforation Detail

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED E. B. Whicker TITLE DIST. PROD. SCRIPT. DATE 10/31/78

*(See Instructions and Spaces for Additional Data on Reverse Side)

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES:

SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
Green River	9247	9467	DST #1. No wtr. cushion. Open tool 15 mins. SI 30 mins. Open 2 hrs. SI 1 hr. Recovered 500 Ft. wtr, 150 Ft. G.C. Mud, 5540' Oil. FBHP = 792 PSIG. SIBHP = 3277 PSIG

38.

GEOLOGIC MARKERS

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH
Green River	6,431	6,431
TGR ₃	8,408	8,408
Wasatch	9,444	9,444

**UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY**

SUBMIT IN TRIPPLICATE*
(Other instructions on reverse side)

Budget Bureau No. 42-R1424

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

<p>1. <input type="checkbox"/> OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER</p>		<p>5. LEASE DESIGNATION AND SERIAL NO. 9C-000176</p>	
<p>2. NAME OF OPERATOR Bow Valley Petroleum, Inc.</p>		<p>6. IF INDIAN, ALLOTTEE OR TRIBE NAME</p>	
<p>3. ADDRESS OF OPERATOR P.O. Drawer 130, Roosevelt, Utah 84066</p>		<p>7. UNIT AGREEMENT NAME</p>	
<p>4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 2356' FWL; 1980' FNL, SE NW</p>		<p>8. FARM OR LEASE NAME Davis</p>	
<p>14. PERMIT NO. 43-047-30384</p>		<p>15. ELEVATIONS (Show whether BV, RT, GR, etc.) 5310' Ungraded ground</p>	
<p>12. COUNTY OR PARISH Uintah</p>		<p>13. STATE Utah</p>	
<p>9. WELL NO. 1-33AE</p>		<p>10. FIELD AND POOL, OR WILDCAT Bluebell</p>	
<p>11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 33, T1S, R1E</p>			

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	FULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING <input type="checkbox"/> and ACIDIZING <input checked="" type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) _____	
(Other) _____		(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

On 6-29-84 Bow Valley perforated eleven additional Wasatch zones from 11,800' to 11,433' with 3-1/8" casing guns, 3 SPF. Intervals were acidized with 5000 gallons 15% HCL on 7-3-84.

63 Additional zones from 11,127' to 10,064' were perforated with 3-1/8" casing guns, 3 SPF on 7-8-84. All perfs were acidized with 15,000 gallons 15% HCL.

Average production before work: 29 BOPD, 19 MCFD, 4 BWPD
Average production after work: 79 BOPD, 22 MCFD, 32 BWPD

RECEIVED

AUG 16 1984

DIVISION OF OIL
GAS & MINING

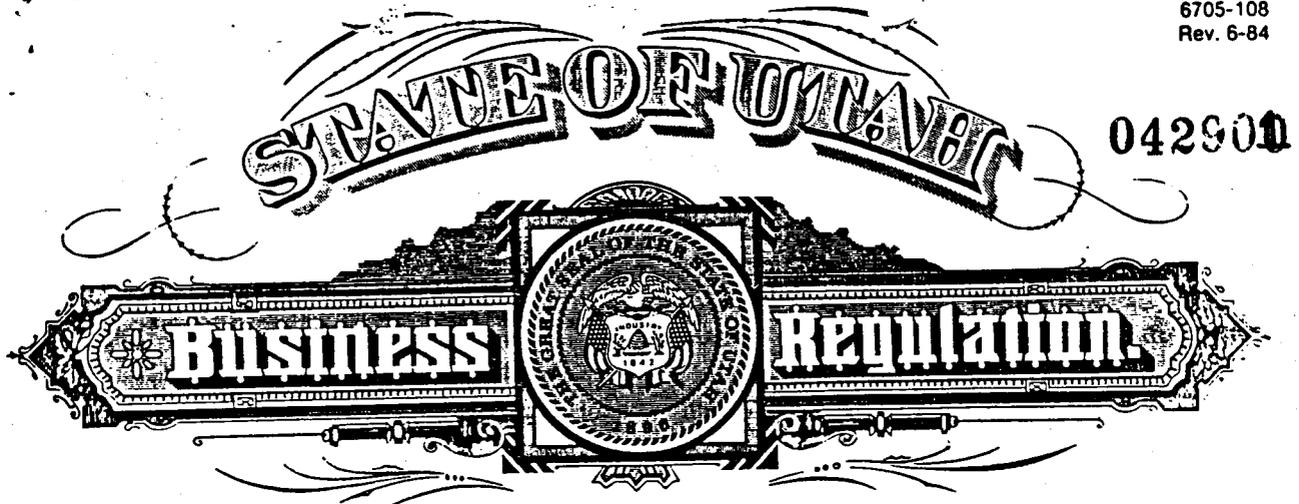
18. I hereby certify that the foregoing is true and correct

SIGNED Michelle Emerson TITLE Eng. Tech. DATE 8-14-84

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:



042900

AMENDED
 CERTIFICATE OF AUTHORITY
 OF

.....
 GW PETROLEUM INC.

The Department of Business Regulation, Division of Corporations and Commercial Code, pursuant to the Utah Business Corporation Act, hereby issues an Amended Certificate of Authority to GW PETROLEUM INC., formerly BOW VALLEY PETROLEUM INC.

to transact business in the State of Utah.

File No. #79959

RECEIVED
 APR 27 1987

DIVISION OF
 OIL, GAS & MINING



Dated this 23rd day of
February A.D. 19 87

[Handwritten Signature]
 Director, Division of Corporations and
 Commercial Code

Filing Fee: \$25.00

File Duplicate Originals

1987 FEB 23 PM 2:28

APPLICATION FOR
AMENDED CERTIFICATE OF AUTHORITY
OF

23rd Feb 87

35.00

M.C. BOW VALLEY PETROLEUM INC.
(corporate name)

To the Division of Corporations and Commercial Code
State of Utah

Pursuant to the provisions of Section 16-10-14 of the Utah Business Corporation Act, the undersigned corporation hereby applies for an Amended Certificate of Authority to transact business Utah, and for that purpose submits the following statement:

FIRST: A Certificate of Authority was issued to the corporation by your office on December 19, , 19 78 , authorizing it to transact business in your State.

SECOND: The corporate name of the corporation has been changed to _____
GW PETROLEUM INC.

THIRD: The corporation will use the changed name hereafter in Utah.

FOURTH: It desires to pursue in the transaction of business in Utah other or additional purposes than those set forth in its prior Application for a Certificate of Authority, as follows:

No change

Dated February 3 , 19 87 .

- Notes: 1. If the corporate name has not been changed, insert "No Change".
- 2. If no other or additional purposes are proposed, insert "NO Change".

Under penalties of perjury, we declare that this application for Amended Certificate of Authority has been examined by us and is, to the best of our knowledge and belief, true, correct and complete.

Send completed forms to:
STATE OF UTAH
Department of Business Regulation
Div. of Corporations & Commercial Code
160 E. 300 South / P.O. Box 5801
Salt Lake City, Utah 84110 - 5801

RECEIVED
APR 27 1987

DIVISION OF
OIL, GAS & MINING

G W PETROLEUM INC.

(exact corporate name)

By

[Signature]
President or Vice President

By

[Signature]
Secretary or Assistant Secretary



UTAH
NATURAL RESOURCE:
Oil, Gas & Mining

355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Ut
84180-1203. ● (801-538-5340)

MONTHLY OIL AND GAS PRODUCTION REPORT

Operator name and address:

● BOW VALLEY PETROLEUM, INC.
1675 BROADWAY, SUITE 2100
DENVER CO 80202
ATTN: JUDY WILSON

Utah Account No. NO130

Report Period (Month/Year) 3 / 87

Amended Report

Well Name API Number Entity Location	Producing Zone	Days Oper	Production Volume		
			Oil (BBL)	Gas (MSCF)	Water (BBL)
X V. MILES #1 4301330275 00740 01S 04W 20	WSTC				
X A. RUST #2 4301330290 00745 01S 04W 22	GR-WS				
X REARY 1-X17A3 4301330326 00750 01S 03W 17	GR-WS				
X UTE TRIBAL 1-32Z1 4301330324 00755 01N 01W 32	WSTC				
X GOVT 4-14 4304730155 00760 06S 20E 14	GRRV				
X SADIE BLANK 1-33Z1 4301330355 00765 01N 01W 33	WSTC				
X UTE TRIBAL 1-34B 4301310494 00775 01N 02W 34	WSTC				
X UTE TRIBAL 1-16 4304730231 00780 01S 01E 16	GR-WS				
X MAGDALENE PAPADOPULOS 1-34A1E 4304730241 00785 01S 01E 34	WSTC				
X C.J. HACKFORD 1-23 4304730279 00790 01S 01E 23	WSTC				
X UTE TRIBAL 1-35A1E 4304730286 00795 01S 01E 35	WSTC				
X UTE TRIBAL 1-27A1E 4304730421 00800 01S 01E 27	GR-WS				
X DAVIS 1-33 4304730384 00805 01S 01E 33	WSTC				
TOTAL					

Comments (attach separate sheet if necessary) _____

I have reviewed this report and certify the information to be accurate and complete. Date _____

Authorized signature _____ Telephone _____

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE

(See other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0137
Expires August 31, 1985

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL GAS WELL DRY OTHER

1b. TYPE OF COMPLETION: NEW WELL WORK OVER DEEP-EN PLUG BACK DIFF. SERV. OTHER

2. NAME OF OPERATOR: GW Petroleum, Inc. NO135

3. ADDRESS OF OPERATOR: P.O. Drawer 130, Roosevelt, Utah 84066

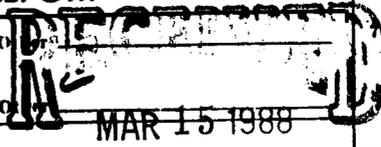
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface: 2356' FWL, 1980' FNL, SE NW
At top prod. interval reported below: same
At total depth: same

5. LEASE DESIGNATION AND SERIAL NO.: 9C-000176

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute Tribe

UNIT AGREEMENT NAME: 032104

FARM OR LEASE NAME: Davis



14. PERMIT NO.: 43-047-30384 | DATE ISSUED: MAR 15 1988

DIVISION OF OIL, GAS & MINING

9. WELL NO.: 1-33A1E

10. FIELD AND POOL, OR WILDCAT: Bluebell

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Sec. 33, T1S, R1E

12. COUNTY OR PARISH: Uintah | 13. STATE: Utah

15. DATE SPUDDED: N/A | 16. DATE T.D. REACHED: N/A | 17. DATE COMPL. (Ready to prod.): 2-16-88 | 18. ELEVATIONS (DF, RKB, RT, OR, ETC.): 5324' KB | 19. ELEV. CASINGHEAD: N/A

20. TOTAL DEPTH, MD & TVD: 12,500' | 21. PLUG BACK T.D., MD & TVD: 9783' | 22. IF MULTIPLE COMPL., HOW MANY: N/A | 23. INTERVALS DRILLED BY: N/A | ROTARY TOOLS: N/A | CABLE TOOLS: N/A

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*: 8449'-9647' Green River Formation

25. WAS DIRECTIONAL SURVEY MADE: N/A

26. TYPE ELECTRIC AND OTHER LOGS RUN: | 27. WAS WELL CORRED: N/A

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED

29. LINER RECORD | 30. TUBING RECORD

SIZE	TOP (MD)	BOTTOM (MD)	BACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)

31. PERFORATION RECORD (Interval, size and number): See Attached

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
8449'-9647'	20,000 gallons 10% HCl acid

33. PRODUCTION

DATE FIRST PRODUCTION: 2-16-88 | PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump): 912 Pump Jack ---- 2 1/2" X1-3/4" X20' X24' RHBC | WELL STATUS (Producing or shut-in): Producing

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
2-18-88	24	-----	→	102	18	5	

FLOW, TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
		→				34.8

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.): Sold to Gary Energy | TEST WITNESSED BY: Wayne Lee

35. LIST OF ATTACHMENTS: Perforation Detail

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED: Richard A. Nechan | TITLE: Eng. Tech. | DATE: 3-10-88

*(See Instructions and Spaces for Additional Data on Reverse Side)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

DAVIS 1-33A1E

Recompletion
Perforation Detail
Green River Formation

*Note: Set Baker Model "G" RBP @ 9783' with 15 feet 20-40 mesh frac sand on top.

Perforated Feb.5 and Feb.6, 1988.
All perfs with 4" OD ported csg guns, 2 JSPF, phased 120 degrees, using 22 gram charges.

Run #1	Run #2	Run #3	Run #4
9640-47	9370-80	9226-29	8649-51
9556-58	9303-07	9102-10	8619-41
9518-22	9288-90	8740-50	8525-28
9398-9405	9276-78	8674-80	
9356-58	9260-64		
9336-40	9241		
	Run #5	Run #6	
	8556-72	8478-91	
	8506-14	8449-57	

Total 148 feet, 296 holes.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE
(Other instruction
verse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug any well. Use "APPLICATION FOR PERMIT" for such proposals.)

1. OIL WELL GAS WELL OTHER

2. NAME OF OPERATOR
GW Petroleum, Inc.

3. ADDRESS OF OPERATOR
P.O. Drawer 130, Roosevelt, Utah 84066

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)
At surface

2356' FWL, 1980' FNL, SE NW

14. PERMIT NO.
43-047-30384

15. ELEVATIONS (Show whether DF, RT, OR, etc.)
5324' KB

5. LEASE DESIGNATION AND SERIAL NO.

9C-000176 Pow / Green

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Ute Tribe 033012

7. UNIT AGREEMENT NAME

N/A

8. FARM OR LEASE NAME

Davis

9. WELL NO.

1-33A1E

10. FIELD AND POOL, OR WILDCAT

Bluebell

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA

Sec.33, T1S, R1E

12. COUNTY OR PARISH

Uintah

13. STATE

Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF
FRACTURE TREAT
SHOOT OR ACIDIZE
REPAIR WELL
(Other)

PULL OR ALTER CASING
MULTIPLE COMPLETE
ABANDON*
CHANGE PLANE

SUBSEQUENT REPORT OF:

WATER SHUT-OFF
FRACTURE TREATMENT
SHOOTING OR ACIDIZING
(Other)

REPAIRING WELL
ALTERING CASING
ABANDONMENT*

Opened by-pass on BP @ 9783'
(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

On March 1, 1988 by-pass sleeve on Baker #47-A model "G" RBP was opened to allow Wasatch Formation fluids to be commingled with Green River production.

Well is now producing through new Green River perms 8449'-9647', and through old Wasatch perms 10064'-12372'.

18. I hereby certify that the foregoing is true and correct

SIGNED Michelle A. Meham
MICHELLE MEHAM

TITLE Eng. Technician

DATE 3-16-88

(This space for Federal or State office use)

APPROVED BY _____
CONDITIONS OF APPROVAL, IF ANY:

TITLE _____

DATE _____

*See Instructions on Reverse Side

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

BLM COPY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug wells. Use "APPLICATION FOR PERMIT" for such proposals.)

RECEIVED
OCT 26 1989

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		3. LEASE DESIGNATION AND SERIAL NO.
2. NAME OF OPERATOR Flying J, Inc.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME
3. ADDRESS OF OPERATOR P.O. Box 175 North Salt Lake, Utah 84054		7. UNIT AGREEMENT NAME 9C176
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface		8. FARM OR LEASE NAME Davis
14. API NUMBER 43-047-30384		9. WELL NO. 1-33
15. ELEVATIONS (Show whether DF, KT, GR, etc.)		10. FIELD AND POOL, OR WILDCAT
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA T. 1S R. 1E Sec. 33
		12. COUNTY OR PARISH Uintah
		13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	FULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <u>Change of Operator</u>	<input checked="" type="checkbox"/>
(Other) <input type="checkbox"/>		(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

The above well was taken over by Flying J, Inc. from GW Petroleum, effective March 15, 1989.

18. I hereby certify that the foregoing is true and correct

SIGNED Dan Kenna TITLE Technical Assistant DATE October 25, 1989

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

SUBMIT IN TRIPPLICATE*
(Other instructions on reverse side)

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

5. LEASE DESIGNATION AND SERIAL NO.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
See Attached

9. WELL NO.
See Attached

10. FIELD AND POOL, OR WILDCAT

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA

12. COUNTY OR PARISH
Duchesne & Uintah

13. STATE
Utah

1. OIL WELL GAS WELL OTHER

2. NAME OF OPERATOR
GW Petroleum Inc.

3. ADDRESS OF OPERATOR
1111 Bagby, Suite 1700 Houston, Texas 77002

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
See Attached

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

NOV 03 1989
DIVISION OF OIL, GAS & MINING

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF

PULL OR ALTER CASING

WATER SHUT-OFF

REPAIRING WELL

FRACTURE TREAT

MULTIPLE COMPLETE

FRACTURE TREATMENT

ALTERING CASING

SHOOT OR ACIDIZE

ABANDON*

SHOOTING OR ACIDIZING

ABANDONMENT*

REPAIR WELL

CHANGE PLANS

(Other) Change of Operator

(Other)

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Effective April 1, 1989, Flying J Corporation took over operation of the wells listed on the following attachment.

OIL AND GAS	
OPN	RJF
JRB	GLH
2-DTS	SLS
3-	
1-TAS	
3.	MICROFILM
4.	FILE

18. I hereby certify that the foregoing is true and correct

SIGNED Dwight Sanders TITLE Engineering Aide DATE 10/27/89

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

WELL NAME	API NUMBER	LOCATION
UTE TRIBAL #2	4301330020	00690 1S 1W 8
GOSE GOVT #1	4304720171	00695 6S 21E 19
GOST GOVT 2-18	4304720062	00697 6S 21E 18
K. SHISLER #1	4301330041	00700 1S 1W 9
UTE TRIBAL 2-35B	4301330106	00705 1N 2W 35
E. YUMP #1	4301330167	00710 1N 1W 31
UTE TRIBAL 1-26B	4301330168	00715 1N 2W 26
FARNSWORTH #1	4301330169	00730 1S 4W 18 - fee
SHINER #1-14A4	4301330258	00735 1S 4W 14 - fee
BASTIAN 1-2A1	4304731373	00736 1S 1W 2 - fee
CARSON 2-36A1	4304731407	00737 1S 1W 36
V. MILES #1	4301330275	00740 1S 4W 20 - fee
A. RUST #2	4301330290	00745 1S 4W 22 - fee
REARY 1-X17A3	4301330326	00750 1S 3W 17 - fee
UTE TRIBAL 1-32Z1	4301330324	00755 1N 1W 32
GOVT 4-14	4304730155	00760 6S 20E 14
SADIE BLANK 1-33Z1	4301330355	00765 1N 1W 33 - fee
UTE TRIBAL 1-34B	4301310494	00775 1N 2W 34
UTE TRIBAL 1-16	4304730231	00780 1S 1E 16
PAPADOPULOS 1-34A1E	4304730241	00785 1S 1E 34 - fee
C. J. HACKFORD 1-23	4304730279	00790 1S 1E 23 - fee
UTE TRIBAL 1-35A1E	4304730286	00795 1S 1E 35
UTE TRIBAL 1-17A1E	4304730421	00800 1S 1E 27
DAVIS 1-33	4304730384	00805 1S 1E 33 - fee
UTE TRIBAL 1-22A1E	4304730429	00810 1S 1E 22
LARSEN 1-25A1	4304730552	00815 1S 1W 25 - fee
DRY GULCH 1-36A1	4304730569	00820 1S 1W 36 - fee
NELSON 1-31A1E	4304730671	00830 1S 1E 31 - fee
UTE TRIBAL 1-32A1E	4304730676	00835 1S 1E 32
ROSEMARY LLOYD 1-24A1E	4304730707	00840 1S 1E 24 - fee
H. D. LANDY 1-30A1E	4304730790	00845 1S 1E 30 - fee
UTE TRIBAL 1-15A1E	4304730820	00850 1S 1E 15
WALKER 1-14A1E	4304730820	00855 1S 1E 14 - fee
UTE TRIBAL 1-17A1E	4304730829	00860 1S 1E 17
UTE TRIBAL 1-25A1E	4304730830	00865 1S 1E 25
FAUSETT 1-26A1E	4304730821	00870 1S 1E 26 - fee
HOUSTON 1-34Z1	4301330566	00885 1N 1W 34 - fee
E. FISHER #2-26A4	4301331119	00890 1S 4W 26 - fee
UTE TRIBAL 1-29A1E	4304730937	00895 1S 1E 29
BOLTON 2-29A1E	4304731112	00900 1S 1E 29 - fee
WISSE 1-28Z1	4301330609	00905 1N 1W 28 - fee
POWELL 1-21B1	4301330621	00910 2S 1W 21 - fee
UTE TRIBAL 2-22A1E	4304731265	00915 1S 1E 22 - fee
L. BOLTON 1-12A1	4304731295	00920 1S 1W 12 - fee
H. MARTIN 1-21Z1	4301330707	00925 1N 1W 21 - fee
FOWLES 1-26A1	4304731296	00930 1S 1W 26 - fee
LAWSON 1-21A1	4301330738	00935 1S 1W 21 - fee
R. HOUSTON 1-22Z1	4301330884	00936 1N 1W 22 - fee
BIRCHELL 1-27A1	4301330758	00940 1S 1W 27 - fee
WESLEY BASTIAN FEE #1	4301310496	00942 1S 1W 8 - fee
KNIGHT #1	4301330184	01090 2S 3W 28 - fee
MYRIN RANCH #1	4301330176	01091 2S 3W 20 - fee
DUSTIN #1	4301330122	01092 2S 3W 22 - fee
HANSEN #1	4301330161	01093 2S 3W 23 - fee
PRESCOTT 1-35Z1	4304731173	01425 1N 1W 35 - fee

WELL NAME	API NUMBER	LOCATION
KW CARRELL #1	4301330158	02307 2S 3W 27 - fee
D. R. LONG 2-19A1E	4304731470	09505 1S 1E 19 - fee
OBERHANSLY 2-31Z1	4301330970	09725 1N 1W 31 - fee
O MOON 2-26Z1	4304731480	10135 1N 1W 26 - fee
PAPADOPULOS 2-34A1E	4304730683	10610 1S 1E 34 - fee
JESSEN 2-14A4	4301331160	10611 1S 4W 14 - fee
UTE TRIBAL #2-34Z2	4301331167	10668 1N 2W 34
BASTIAN #3-8A1	4301331181	10758 1S 1W 8 - fee
LILA D. #2-25A1	4304731797	10790 1S 1W 25 - fee

> no documentation from Flying J on operator change

RECEIVED
NOV 03 1999

OLSON
OLSON & ASSOCIATES



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Norman H. Bangerter

Governor

Dee C. Hansen

Executive Director

Dianne R. Nielson, Ph.D.

Division Director

355 West North Temple

3 Triad Center, Suite 350

Salt Lake City, Utah 84180-1203

801-538-5340

December 14, 1989

GW Petroleum Inc.
1111 Bagby
Suite 1700
Houston, Texas 77002

Gentlemen:

Re: Notification of Lease Sale or Transfer

The division recently received notification of a change of operator from GW Petroleum Inc. to Flying J Corporation for the following wells located on fee leases:

Farnsworth #1	15	4W	5-18	API No. 43-013-30209
Shiner #1-14A4				API No. 43-013-30258
Bastian 1-2A1				API No. 43-047-31373
V. Miles #1	15	4W	5-20	API No. 43-013-30275
A. Rust #2	15	4W	5-22	API No. 43-013-30290
Reary 1-X17A3				API No. 43-013-30326
Sadie Blank 1-33Z1				API No. 43-013-30355
Papadopulos 1-34A1E				API No. 43-047-30241
C.J. Hackford 1-23	15	1E	23	API No. 43-047-30279
Davis 1-33	15	1E	33	API No. 43-047-30384
Larsen 1-25A1				API No. 43-047-30552
Dry Gulch 1-36A1				API No. 43-047-30569
Nelson 1-31A1E				API No. 43-047-30671
Rosemary Lloyd 1-24A1E				API No. 43-047-30707
H.D. Landy 1-30A1E				API No. 43-047-30790
Walker 1-14A1E				API No. 43-047-30805
Fausett 1-26A1E				API No. 43-047-30821
Houston 1-34Z1				API No. 43-013-30566
E. Fisher #2-26A4				API No. 43-013-31119
Boulton 2-29A1E				API No. 43-047-31112
Wisse 1-28Z1				API No. 43-013-30609
Powell 1-21B1				API No. 43-013-30621
Ute Tribal 2-22A1E				API No. 43-047-31265
L. Bolton 1-12A1				API No. 43-047-31295
H. Martin 1-21Z1				API No. 43-013-30707

H. Martin 1-21Z1				API No. 43-013-30707
Fowles 1-26A1				API No. 43-047-31296
Lawson 1-21A1				API No. 43-013-30738
R. Houston 1-22Z1				API No. 43-013-30884
Birchell 1-27A1				API No. 43-013-30758
Wesley Bastian Fee #1	15	2	8	API No. 43-013-10496
Knight #1	25	300	27	API No. 43-013-30184
Myrin Ranch #1	25	300	27	API No. 43-013-30176
Dustin #1	25	300	27	API No. 43-013-30122
Hansen #1	25	300	27	API No. 43-013-30161
Prescott 1-35Z1				API No. 43-047-31173
KW Carrell #1	25	300	27	API No. 43-013-30158
D. R. Long 2-19A1E				API No. 43-047-31470
Oberhansly 2-31Z1				API No. 43-013-30970
O Moon 2-26Z1				API No. 43-047-31480
Papadopulos 2-34A1E				API No. 43-047-30683
Jessen 2-14A4				API No. 43-013-31160
Bastian #3-8A1				API No. 43-013-31181
Lila D. #2-25A1				API No. 43-047-31797

Rule R615-2-10, of the Utah Oil and Gas Conservation General Rules, states:

"The owner of a lease shall provide notification to any person with an interest in such lease, when all or part of that interest in the lease is sold or transferred."

This letter is written to advise GW Petroleum Inc. of its responsibility to notify all individuals with an interest in these leases of the change of operator. Please provide written documentation of this notification to the division no later than January 15, 1990.

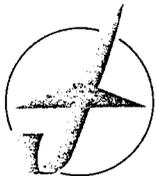
Sincerely,



Don Staley
Administrative Supervisor
Oil and Gas

ldc
cc: D.R. Nielson
R.J. Firth
Well files

HOI3/1



FLYING J INC.

333 WEST CENTER - NORTH SALT LAKE, UTAH 84054

(801) 298-7733

December 19, 1989

- ① Rwm ✓ (film)
- ② Well Files
(see attached list)

RECEIVED
DEC 22 1989

DIVISION OF
OIL, GAS & MINING

Mr. Don Staley
Division of Oil, Gas & Mining
3 Triad Center, Suite 350
Salt Lake City, UT 84180

RE: GW Petroleum Sale of Properties to Flying J
Bluebell/Altamont Fields
Duchesne, Uintah Counties, UT

Dear Mr. Staley:

Norman Zeiler of GW Petroleum informed me today that he had received a letter from the Division of Oil, Gas & Mining indicating that per Utah statute, owners under the properties which they sold to Flying J needed to be informed of the sale. Please be advised that Flying J has sent new division orders to all royalty, overriding royalty and working interest owners based on the pay sheets we received from GW Petroleum. With the new division orders we enclosed a letter stating that Flying J had purchased these properties from GW Petroleum. That would cover all the owners in FJ operated properties for whom we had correct addresses. We have also contacted the operators for non-operated wells in order to have the revenue stream converted to FJ. The assignment showing all leases we purchased has been recorded in both Uintah and Duchesne counties. We are in the process of having non-operators under communitized locations sign designations of operator naming Flying J the new operator.

Please advise if this does not constitute notice under Utah law. If it does not, please let me know as soon as possible what additional steps need to be taken to comply.

Yours very truly,

LaVonne J. Garrison-Stringer
LaVonne J. Garrison-Stringer
Land Manager

cc: Mr. Norman Zeiler

24

WELL NAME	API NUMBER	LOCATION
UTE TRIBAL #2	4301330020 00690	1S 1W 8
GOSE GOVT #1	4304720171 00695	6S 21E 19
GOST GOVT 2-18	4304720062 00697	6S 21E 18
K. SHISLER #1	4301330041 00700	1S 1W 9
UTE TRIBAL 2-35B	4301330106 00705	1N 2W 35
E. YUMP #1	4301330167 00710	1N 1W 31
UTE TRIBAL 1-26B	4301330168 00715	1N 2W 26
FARNSWORTH #1	4301330169 00730	1S 4W 18 - fee
SHINER #1-14A	4301330258 00735	1S 4W 14 - fee
BASTIAN #1-2A1	4304731373 00736	1S 1W 2 - fee
CARSON 2-36A1	4304731407 00737	1S 1W 36
V. MILES #1	4301330275 00740	1S 4W 20 - fee
A. TRUST #2	4301330290 00745	1S 4W 22 - fee
REARY #1-X17A3	4301330326 00750	1S 3W 17 - fee
UTE TRIBAL 1-32Z1	4301330324 00755	1N 1W 32
GOVT 4-14	4304730155 00760	6S 20E 14
SADIE BLANK 1-33Z1	4301330355 00765	1N 1W 33 - fee
UTE TRIBAL 1-34B	4301310494 00775	1N 2W 34
UTE TRIBAL 1-16	4304730231 00780	1S 1E 16
PAPADOPULOS 1-34A1E	4304730241 00785	1S 1E 34 - fee
C. J. HACKFORD 1-23	4304730279 00790	1S 1E 23 - fee
UTE TRIBAL 1-35A1E	4304730286 00795	1S 1E 35
UTE TRIBAL 1-17A1E (DTS)	4304730421 00800	1S 1E 27
DAVIS 1-33	4304730384 00805	1S 1E 33 - fee
UTE TRIBAL 1-22A1E	4304730429 00810	1S 1E 22
LARSEN 1-25A1	4304730552 00815	1S 1W 25 - fee
DRY GULCH 1-36A1	4304730569 00820	1S 1W 36 - fee
NELSON 1-31A1E	4304730671 00830	1S 1E 31 - fee
UTE TRIBAL 1-32A1E	4304730676 00835	1S 1E 32
ROSEMARY LLOYD 1-24A1E	4304730707 00840	1S 1E 24 - fee
H. O. LANDY 1-30A1E	4304730790 00845	1S 1E 30 - fee
UTE TRIBAL 1-15A1E	4304730820 00850	1S 1E 15
WALKER 1-14A1E (DTS)	4304730820 00855	1S 1E 14 - fee
UTE TRIBAL 1-17A1E	4304730829 00860	1S 1E 17
UTE TRIBAL 1-25A1E	4304730830 00865	1S 1E 25
FAUSETT 1-26A1E	4304730821 00870	1S 1E 26 - fee
HOUSTON 1-34Z1	4301330566 00885	1N 1W 34 - fee
E. FISHER #2-26A4	4301331119 00890	1S 4W 26 - fee
UTE TRIBAL 1-29A1E	4304730937 00895	1S 1E 29
BOLTON 2-29A1E	4304731112 00900	1S 1E 29 - fee
WISSE 1-28Z1	4301330609 00905	1N 1W 28 - fee
POWELL 1-21B1	4301330621 00910	2S 1W 21 - fee
UTE TRIBAL 2-22A1E	4304731265 00915	1S 1E 22 - fee
L. BOLTON 1-12A1	4304731295 00920	1S 1W 12 - fee
H. MARTIN 1-21Z1	4301330707 00925	1N 1W 21 - fee
FOWLES 1-26A1	4304731296 00930	1S 1W 26 - fee
LAWSON 1-21A1	4301330738 00935	1S 1W 21 - fee
R. HOUSTON 1-22Z1	4301330884 00936	1N 1W 22 - fee
BIRCHELL 1-27A1	4301330758 00940	1S 1W 27 - fee
WESLEY BASTIAN FEE #1	4301310496 00942	1S 1W 8 - fee
KNIGHT #1	4301330184 01090	2S 3W 28 - fee
MYRIN RANCH #1	4301330176 01091	2S 3W 20 - fee
DUSTIN #1	4301330122 01092	2S 3W 22 - fee
HANSEN #1	4301330161 01093	2S 3W 23 - fee
PRESCOTT 1-35Z1	4304731173 01425	1N 1W 35 - fee

WELL NAME	API NUMBER	LOCATION
KW. CARRELL #1	4301330158 02307	2S 3W 27 - fee
D. R. LONG 2-19A1E	4304731470 09505	1S 1E 19 - fee
OBERHANSLY 2-31Z1	4301330970 09725	1N 1W 31 - fee
O MOON 2-26Z1	4304731480 10135	1N 1W 26 - fee
PAPADOPULOS 2-34A1E	4304730683 10610	1S 1E 34 - fee
JESSEN 2-14A4	4301331160 10611	1S 4W 14 - fee
UTE TRIBAL #2-34Z2	4301331167 10668	1N 2W 34
BASTIAN #3-8A1	4301331181 10758	1S 1W 8 - fee
LILA D. #2-25A1	4304731797 10790	1S 1W 25 - fee

Tenneco 21-19 4304731004 2S 1E 19

RECEIVED
NOV 03 1939

RECEIVED
OIL & GAS DIVISION

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

BLM COPY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. <u>Fee</u>	
2. NAME OF OPERATOR <u>Flying J, Inc.</u>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
3. ADDRESS OF OPERATOR <u>P.O. Box 175 North Salt Lake, Utah 84054</u>		7. UNIT AGREEMENT NAME <u>9C176</u>	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface		8. FARM OR LEASE NAME <u>Davis</u>	
14. API NUMBER <u>43-047-30384</u>		9. WELL NO. <u>1-33</u>	
15. ELEVATIONS (Show whether SP, ST, GR, etc.)		10. FIELD AND POOL, OR WILDCAT	
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA <u>T. 1S R. 1E Sec. 33</u>	
		12. COUNTY OR PARISH <u>Uintah</u>	13. STATE <u>Utah</u>

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	FULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <u>Change of Operator</u>	<input checked="" type="checkbox"/>
(Other) <input type="checkbox"/>		(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

The above well was taken over by Flying J, Inc. from GW Petroleum, effective March 15, 1989.

RECEIVED
MAR 26 1989
DIVISION OF
OIL GAS & MINING

OCT 1989

18. I hereby certify that the foregoing is true and correct

SIGNED Dan Lewis TITLE Technical Assistant DATE October 25, 1989

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE MAR 24 1992

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

ans

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells.
Use APPLICATION FOR PERMIT TO DRILL OR DEEPEN form for such proposals.

5. Lease Designation and Serial Number:

Fee

6. If Indian, Allottee or Tribe Name:

7. Unit Agreement Name:
CA#9C-000176

8. Well Name and Number:
DAVIS 1-33A1E

9. API Well Number:
43-047-30384

10. Field and Pool, or Wildcat:
Bluebell

1. Type of Well: OIL GAS OTHER:

2. Name of Operator:
FLYING J OIL & GAS INC.

3. Address and Telephone Number:
333 W. Center, North Salt Lake, UT 84054/(801) 298-7733

4. Location of Well
Footages: 2,356' FWL, 1,980' FNL
OO, Sec.,T.,R.,M.: SENW, Section 33, T1S, R1E

County: UINTAH

State: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT
(Submit in Duplicate)

- Abandonment
- Casing Repair
- Change of Plans
- Conversion to Injection
- Fracture Treat
- Multiple Completion
- Other Install pit tank & reclaim existing unlined pit.
- New Construction
- Pull or Alter Casing
- Recompletion
- Shoot or Acidize
- Vent or Flare
- Water Shut-Off

Approximate date work will start 7/10/94

SUBSEQUENT REPORT
(Submit Original Form Only)

- Abandonment *
- Casing Repair
- Change of Plans
- Conversion to Injection
- Fracture Treat
- Other _____
- New Construction
- Pull or Alter Casing
- Shoot or Acidize
- Vent or Flare
- Water Shut-Off

Date of work completion _____

Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form.

* Must be accompanied by a cement verification report.

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Flying J intends to close the existing emergency pit at the referenced well location and install an above-ground tank for containment of fluids. The tank will receive produced fluid only in emergency situations and tank fluid will be removed and properly disposed in a timely fashion. The existing pit will be cleaned up by treating and separating any fluid present and by using bioremediation and composting techniques on hydrocarbon saturated soil.

13.

Name & Signature:

JOHN R. BAZA

Title: SR. PETROLEUM ENGINEER

Date: 7/1/94

(This space for State use only)

Accepted by the State
of Utah Division of
Oil, Gas and Mining

Date: 7-8-94

By: [Signature]

JUL - 5 1994

(See Instructions on Reverse Side)

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING
 355 West North Temple, 3 Triad, Suite 350, Salt Lake City, UT 84180-1203

MONTHLY OIL AND GAS PRODUCTION REPORT

OPERATOR NAME AND ADDRESS:

C/O FLYING J O&G INC
 FLYING J INC
 PO DRAWER 130/G ROBB
 ROOSEVELT UT 84066

UTAH ACCOUNT NUMBER: N1195

REPORT PERIOD (MONTH/YEAR): 2 / 95

AMENDED REPORT (Highlight Changes)

Well Name API Number Entity Location	Producing Zone	Well Status	Days Oper	Production Volumes		
				OIL(BBL)	GAS(MCF)	WATER(BBL)
✓ C.J. HACKFORD 1-23 4304730279 00790 01S 01E 23	GR-WS	✓		Fee	9C-000171	(E&P)
✓ UTE TRIBAL 1-35A1E 4304730286 00795 01S 01E 35	GR-WS	✓		1420H622665	9C-000173	(IND)
✓ UTE TRIBAL 1-27A1E 4304730421 00800 01S 01E 27	GR-WS	✓		1420H622662	9C-000175	(IND)
✓ DAVIS 1-33 4304730384 00805 01S 01E 33	GR-WS	✓		Fee	9C-000176	(IND)
✓ UTE TRIBAL 1-22A1E 4304730429 00810 01S 01E 22	GRRVL			1420H623163	(7/95 BIA NARR)	
✓ LARSEN 1-25A1 4304730552 00815 01S 01W 25	GR-WS	✓		Fee		
✓ LLOYD GULCH 1-36A1 4304730569 00820 01S 01W 36	GR-WS	✓		Fee	VR491-84677C	(IND)
✓ NELSON 1-31A1E 4304730671 00830 01S 01E 31	GR-WS	✓		Fee		
✓ ROSEMARY LLOYD 1-24A1E 4304730707 00840 01S 01E 24	GR-WS	✓		Fee		
✓ H.D. LANDY 1-30A1E 4304730790 00845 01S 01E 30	GR-WS	✓		Fee	CR-I-157	(IND)
✓ UTE TRIBAL 1-15A1E 4304730820 00850 01S 01E 15	GR-WS	✓		1420H622717	UT080149-860681	(E&P)
✓ WALKER 1-14A1E 4304730805 00855 01S 01E 14	GR-WS	✓		Fee	VR491-84683C	(IND)
✓ UTE TRIBAL 1-17A1E 4304730829 00860 01S 01E 17	GR-WS	✓		1420H622658	VR491-84689C	(IND)
TOTALS						

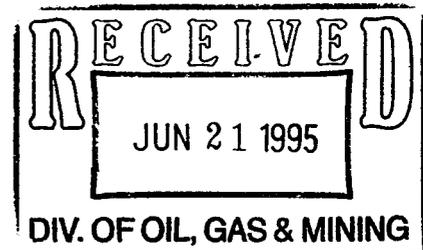
COMMENTS: _____

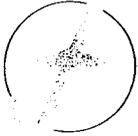
I hereby certify that this report is true and complete to the best of my knowledge. Date: _____

Name and Signature: _____ Telephone Number: _____

COMMUNITIZATION AGREEMENTS
UTAH STATE OFFICE

COMM AGREEMENT NO.	CRS NUMB.	OPERATOR	ACRES	SEC	DESCRIP.	SEC	TWN	RNG	EFFECTIVE DATE	COUNTY
96-000111	UTU58815	FLYING J OIL & GAS INC.	640.000000	ALL		8	01S	01W	04/01/73	DUCHESNE
96-000109	UTU58813	FLYING J OIL & GAS INC.	640.000000	ALL		29	01S	01W	11/01/73	DUCHESNE
UT080491-84C729	UTU60873	FLYING J OIL & GAS INC.	640.000000	ALL		15	01S	01W	10/22/84	DUC & UIN
UT080491-84C730	UTU66535	FLYING J OIL & GAS INC.	640.000000	ALL		10	01S	01W	09/26/84	UIN & DUC
VR491-84679C	UTU60980	FLYING J OIL & GAS INC.	480.000000	S2N2, S2		23	01S	01W	05/04/83	UINTAH
VR491-84685C	UTU60991	FLYING J OIL & GAS INC.	640.000000	ALL		16	01S	01W	03/27/84	DUCHESNE
VR491-84691C	UTU61000	FLYING J OIL & GAS INC.	640.000000	ALL		22	01S	01W	12/05/83	DUC & UIN
VR491-84689C	UTU60994	FLYING J OIL & GAS INC.	560.000000	IRR		17	01S	01E	01/26/77	UINTAH
VR491-84683C	UTU60985	FLYING J OIL & GAS INC.	640.000000	ALL		14	01S	01E	02/22/81	UINTAH
VR491-84677C	UTU60970	FLYING J OIL & GAS INC.	640.000000	ALL		36	01S	01W	05/10/79	UINTAH
VR491-84673C	UTU60965	FLYING J OIL & GAS INC.	640.000000	ALL		27	01S	01W	09/17/83	DUCHESNE
VR491-84671C	UTU60953	FLYING J OIL & GAS INC.	640.000000	ALL		21	01S	01W	06/26/83	DUCHESNE
VR491-84670C	UTU60952	FLYING J OIL & GAS INC.	640.000000	ALL		12	01S	01W	05/06/83	UINTAH
UT080149-85C705	UTU60907	FLYING J OIL & GAS INC.	640.000000	ALL		26	01N	01W	02/18/85	UINTAH
UT080149-85C680	UTU60892	FLYING J OIL & GAS INC.	640.000000	ALL		21	01N	01W	09/20/83	DUCHESNE
UT080149-84C712	UTU60886	FLYING J OIL & GAS INC.	480.000000	IRR		29	01S	01E	02/10/82	UINTAH
UT080149-84C713	UTU60887	FLYING J OIL & GAS INC.	640.000000	ALL		28	01N	01W	04/15/82	DUCHESNE
NW-644	UTU60836	FLYING J OIL & GAS INC.	640.000000	ALL		14	01S	04W	08/29/73	DUCHESNE
NRM-696	UTU60813	FLYING J OIL & GAS INC.	640.000000	ALL		17	01S	03W	03/12/74	DUCHESNE
CR-1-157	UTU60782	FLYING J OIL & GAS INC.	440.000000	IRR		30	01S	01E	02/24/82	UINTAH
CR-1-156	UTU60781	FLYING J OIL & GAS INC.	640.000000	ALL		26	01S	04W	02/05/82	DUCHESNE
96-000115	UTU58819	FLYING J OIL & GAS INC.	640.000000	ALL		22	01S	04W	07/23/73	DUCHESNE
9C-000176	UTU58860	FLYING J OIL & GAS INC.	640.000000	ALL		33	01S	01E	08/24/78	UINTAH
NW-616	UTU60833	FLYING J OIL & GAS INC.	640.000000	ALL		28	02S	03W	02/01/73	DUCHESNE
UT080149-86C681	UTU60915	FLYING J OIL & GAS INC.	640.000000	ALL		15	01S	01E	04/03/81	UINTAH
96-000100	UTU58805	FLYING J OIL & GAS INC.	638.500000	ALL		31	01N	01W	01/02/74	DUCHESNE
9C-000122	UTU58826	FLYING J OIL & GAS INC.	640.000000	ALL		32	01N	01W	06/01/74	DUCHESNE
9C-000144	UTU58848	FLYING J OIL & GAS INC.	640.000000	ALL		33	01N	01W	12/02/75	DUCHESNE
9C-000149	UTU58852	FLYING J OIL & GAS INC.	640.000000	ALL		34	01S	01E	11/05/76	UINTAH
9C-000173	UTU58858	FLYING J OIL & GAS INC.	640.000000	ALL		35	01S	01E	05/11/78	UINTAH
9C-000175	UTU58859	FLYING J OIL & GAS INC.	520.000000	E2, E2W2, SWSW		27	01S	01E	06/27/78	UINTAH
9C-000171	UTU58857	FLYING J OIL & GAS INC.	640.000000	ALL		23	01S	01E	01/31/78	UINTAH





FLYING J OIL & GAS INC.

333 WEST CENTER STREET • P.O. BOX 540180 • NORTH SALT LAKE, UTAH 84054-0180
PHONE (801) 298-7733 • FAX (801) 298-9394

March 8, 1995

Ms. Diane Mitchell
Bureau of Indian Affairs
P. O. Box 130
Fort Duchesne, Utah 84026

MAR 11 1995

POST OFFICE

Re: State of Utah
Communitization Agreements
Duchesne and Uintah Counties

Dear Diane:

Enclosed, herewith is a recorded copies of the following list documents in order for you to approve all of the Communitization Agreements from Flying J Inc. and Flying J Exploration & Production Inc. into Flying J Oil & Gas Inc:

1. Affidavit with Articles of Merger of Flying J Uintah Inc with and into Flying J Oil & Gas Inc.
2. Assignment from Flying J Inc. into Flying J Uintah Inc.
3. Assignment from Flying J Uintah Inc. into Flying J Inc.
4. Assignment from Flying J Inc. and Flying J Exploration and Production Inc. into Flying J Uintah Inc.

Attached is a list of the Communitization Agreements that are still in the name of Flying J Inc. and Flying J Exploration and Production Inc.

Should you need any additional information, please contact the undersigned.

Sincerely,

FLYING J OIL & GAS INC.

Coralie Timothy
Coralie Timothy
Lease Records Administrator

cc: Ms. Theresa Thompson, Bureau of Land Management, Salt Lake
Ms. Lisha Cordova, State of Utah, Oil, Gas and Mining

COMMUNITIZATION AGREEMENTS
STATE OF UTAH

March 8, 1995

Listed below are the Communitization Agreements to be changed into the name of Flying J Oil & Gas Inc.:

<u>Comm Agreement No.</u>	<u>Operator</u>
UT080I49-85C680	Flying J Inc.
UT080I49-85C705	Flying J Inc.
UT080I49-84C713	Flying J Inc.
9C-000122	Flying J Inc.
9C-000144	Flying J Inc.
VR49I-84683C	Flying J Inc.
UT080I49-86C681	Flying J Explor. & Prod.
VR49I-84689C	Flying J Inc.
9C-000171	Flying J Explor. & Prod.
9C-000175	Flying J Inc.
UT080I49-84C712	Flying J Inc.
CR-I-157	Flying J Inc.
9C-000176	Flying J Inc.
9C-000149	Flying J Inc.
9C-000173	Flying J Inc.
96-000111	Flying J Explor. & Prod.
VR49I-84670C	Flying J Inc.
VR49I-84671C	Flying J Inc.
VR49I-84673C	Flying J Inc.
VR49I-84677C	Flying J Inc.
NRM-696	Flying J Inc.
96-000115	Flying J Explor. & Prod.
CR-I-156	Flying J Inc.
UT080I49-85C680	Flying J Inc.
UT080I49-85C705	Flying J Inc.
UT080I49-84C713	Flying J Inc.
9C-000122	Flying J Inc.
9C-000144	Flying J Inc.
VR49I-84683C	Flying J Inc.
UT080I49-86C681	Flying J Explor. & Prod.
VR49I-84689C	Flying J Inc.
9C-000171	Flying J Explor. & Prod.
9C-000175	Flying J Inc.
UT080I49-84C712	Flying J Inc.
CR-I-157	Flying J Inc.
9C-000176	Flying J Inc.
9C-000149	Flying J Inc.
9C-000173	Flying J Inc.
96-000111	Flying J Explor. & Prod.
VR49I-84670C	Flying J Inc.
VR49I-84671C	Flying J Inc.
VR49I-84673C	Flying J Inc.
VR49I-84677C	Flying J Inc.
NRM-696	Flying J Inc.

Page 2
March 8, 1995

96-000115
CR-I-156
NW-616

Flying J Explor. & Prod.
Flying J Inc.
Flying J Explor. & Prod.

A F F I D A V I T

STATE OF UTAH)
) SS
County of Davis)

ENTRY 93004995
Book 556 PAGE 219

I, LaVonne J. Garrison-Stringer, of lawful age, and being first duly sworn, upon my oath, deposes and says:

1. That I am the Land Manager for Flying J Oil & Gas Inc. and am duly authorized to make this Affidavit on behalf of the corporation.

2. That attached hereto and by this reference made a part hereof is a certified copy of the Articles of Merger of Flying J Uintah Inc. with and into Flying J Oil & Gas Inc. dated effective January 2, 1991.

3. That Flying J Oil & Gas Inc. has interests in the following described sections located in Duchesne and/or Uintah Counties, Utah.

ENTRY NO. 93004995 DATE 7-9-91 TIME 1:44 PM BOOK 556 PAGE 219
FEE \$ 112.50 RECORDED AT REQUEST OF LaVonne J. Garrison-Stringer
Deborah M. Nelson DUCHESNE COUNTY RECORDER DEPUTY

Township 1 North, Range 1 West, USM
Sections 20, 21, 22, 23, 26, 27, 28, 30, 31, 32, 33, 34, 35

Township 1 North, Range 2 West, USM
Sections 26, 31, 34, 35

Township 1 South, Range 1 East, USM
Sections 10, 14, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 29,
30, 31, 32, 33, 34, 35

Township 1 South, Range 1 West, USM
Sections 2, 4, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18, 21, 22, 23,
25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36

Township 1 South, Range 2 East, USM
Section 30

Township 1 South, Range 2 West, USM
Sections 1, 2, 3, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 20,
21, 22, 23, 24, 25, 26, 28, 29, 32, 33, 34, 35, 36

Township 1 South, Range 3 West, USM
Sections 5, 8, 9, 10, 15, 16, 17, 20, 21, 29, 30, 32, 33

Township 1 South, Range 4 West, USM
Sections 13, 14, 18, 19, 20, 21, 22, 24, 26, 27, 28, 29, 30, 33, 35

Township 1 South, Range 5 West, USM
Sections 24, 25, 35

Township 2 South, Range 1 East, USM
Sections 2, 5, 6, 7, 10, 18, 19

Township 2 South, Range 1 West, USM
Sections 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 20, 21

Township 2 South, Range 2 West, USM
Sections 2, 3, 4, 5, 7, 8, 10, 11, 14, 17, 18, 19, 23, 24

Township 2 South, Range 3 West, USM
Sections 2, 4, 5, 7, 8, 9, 10, 11, 12, 14, 16, 20, 21, 22, 23, 24,
26, 27, 28

Township 3 South, Range 5 West, USM
Sections 14, 15, 16, 26

Township 6 South, Range 20 East, USM
Sections 14

Township 6 South, Range 21 East, USM
Sections 6, 18, 19

ENTRY 93004995
Book 556 PAGE 219 \$90.00
30-AUG-93 04:43
RANDY SIMMONS
RECORDER, UTAH COUNTY, UTAH
FLYING J OIL AND GAS
P O BOX 540180 HO SLC UT 84054-0180
REC BY: BRENDA MCDONALD, DEPUTY

4. That said merger affects Flying J's interest in the sections captioned above and any other lands previously owned by Flying J Uintah Inc. located in Duchesne and/or Uintah Counties, Utah, which are not described herein.

Further Affiant sayeth not.

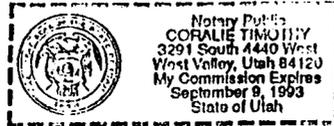
LAVONNE J. GARRISON-STRINGER

Subscribed and sworn to before me this 20th day of March 1991.

My Commission Expires:

9-9-93

Coralie Timothy
Notary Public for the State of Utah
Residing at Salt Lake City, Utah



147768

ENTRY 93004995
BOOK 556 PAGE 221

RECEIVED

1991 JAN -9 PM 2:59

DIVISION OF CORPORATIONS
STATE OF UTAH

and approved on the 9th day of Jan 91

in the office of this Division
EXAMINER

9th day of Jan 91
AS 1/9/91



Robert V. ...

REGISTERED
DIVISION ONE 502

ARTICLES OF MERGER
OF
FLYING J UINTAH INC. cc 138596
WITH AND INTO
FLYING J OIL & GAS INC. cc 147768

THESE ARTICLES OF MERGER (the "Articles") are filed pursuant to Section 69 of the Utah Business Corporation Act by Flying J Uintah Inc., a Utah corporation ("Flying J Uintah"), and Flying J Oil & Gas Inc., a Utah corporation ("Oil & Gas").

Flying J Uintah and Oil & Gas hereby certify as follows:

1. The Boards of Directors of Flying J Uintah and Oil & Gas have approved a Plan of Merger relating to the merger of Flying J Uintah with and into Oil & Gas, with Oil & Gas being the surviving corporation. A copy of this Plan of Merger, in the form so approved, is attached to these Articles as Exhibit A.

2. Flying J Uintah has 1,000 shares of Common Stock outstanding, and Oil & Gas has 3,000,000 shares of Common Stock outstanding.

3. All outstanding shares of Flying J Uintah and of Oil & Gas were voted for the Plan of Merger.

Oil & Gas, as the surviving corporation, hereby requests that the Utah Department of Commerce, Division of Corporations and Commercial Code: (i) endorse on the original and one copy of these Articles the word "filed" and the month, day and year of the filing; (ii) file the original in its office; and (iii) issue a Certificate of Merger, together with an attached copy of the Articles of Merger, to Oil & Gas's representative: P. Christian Anderson, Esq., Rogers, Mackey, Price, Anderson & Cannon, 900

ENTRY NO. _____ DATE _____ TIME _____ BOOK _____ PAGE _____
FEE \$ _____ RECORDED AT REQUEST OF _____
_____ DUCHESNE COUNTY RECORDER _____ DEPUT

1009010077

First Interstate Plaza, 170 South Main Street, Salt Lake City,
Utah 84101.

IN WITNESS WHEREOF, Flying J Uintah and Oil & Gas have
caused these Articles of Merger to be executed effective as of
the 2nd day of January, 1991 by their duly authorized officers.
The undersigned declare, under penalty of perjury, that the
matters set forth above are true.

FLYING J UINTAH INC.

By: J. Phillip Adams
J. Phillip Adams,
President

By: Barre G. Burgon
Barre G. Burgon,
Secretary

FLYING J OIL & GAS INC.

By: J. Phillip Adams
J. Phillip Adams,
President

By: Barre G. Burgon
Barre G. Burgon,
Secretary

EXHIBIT A
AGREEMENT AND PLAN OF MERGER
OF FLYING J UINTAH INC.
AND FLYING J OIL & GAS INC.

THIS AGREEMENT AND PLAN OF MERGER, dated as of December 1, 1990 (the "Agreement") is entered into by and between Flying J Uintah Inc., a Utah corporation ("Flying J Uintah"), and Flying J Oil & Gas Inc., a Utah corporation ("Oil & Gas"). Uintah and Oil & Gas are sometimes referred to herein as the "Constituent Corporations."

RECITALS

A. Flying J Uintah is a corporation duly organized and existing under the laws of the State of Utah and has an authorized capital of 1,000 shares of Common Stock, having a par value of \$1.00 per share. All 1,000 authorized shares of Flying J Uintah's Common Stock (the "Flying J Uintah Shares") are issued and outstanding. No options, warrants, or other rights or securities exercisable for or convertible into Common Stock of Flying J Uintah have been issued or are outstanding.

B. Oil & Gas is a corporation duly organized and existing under the laws of the State of Utah and has an authorized capital of 10,000,000 shares of Common Stock, \$1.00 par value per share, and 2,000,000 shares of Preferred Stock, \$1.00 par value per share. Oil & Gas has issued and outstanding 3,000,000 shares of Common Stock (the "Oil & Gas Shares") and no shares of Preferred Stock.

C. All of the Flying J Uintah Shares and the Oil & Gas Shares are held by Big West Oil Company, a Delaware corporation ("Parent"), so that both Oil & Gas and Flying J Uintah are wholly owned subsidiaries of Parent.

D. Parent and the respective Boards of Directors of Flying J Uintah and Oil & Gas have determined that, for the purpose of consolidating oil and gas properties and operations, it is advisable that Flying J Uintah merge with and into Oil & Gas, with Oil & Gas to be the surviving corporation, upon the terms and conditions herein provided.

NOW THEREFORE, in consideration of the mutual agreements and covenants set forth herein, the Constituent Corporations hereby agree, subject to the terms and conditions hereinafter set forth, as follows:

I. MERGER

1.1 Merger. In accordance with the provisions of this Agreement and the Utah Business Corporation Act, Flying J Uintah shall be merged with and into Oil & Gas (the "Merger") and Oil & Gas shall be, and is herein sometimes referred to as, the "Surviving Corporation," and the name of the Surviving Corporation shall be "Flying J Oil & Gas Inc."

1.2 Filing and Effectiveness. The Merger shall become effective when the following actions shall have been completed:

- (a) This Agreement and the Merger shall have been approved by the Board of Directors of each of the Constituent

Corporations and by Parent as the sole shareholder of each of the Constituent Corporations, in accordance with the requirements of the Utah Business Corporation Act; and

(b) An executed form of Articles of Merger or an executed counterpart of this Agreement shall have been filed with the Utah Department of Commerce, Division of Corporations and Commercial Code.

The date and time when the Merger shall become effective, as aforesaid, is herein called the "Effective Date of Merger."

1.3 Certificate of Incorporation. The Articles of Incorporation of Oil & Gas as in effect immediately prior to the Effective Date of Merger shall continue in full force and effect as the Articles of Incorporation of the Surviving Corporation until duly amended in accordance with the provisions thereof and applicable law.

1.4 Bylaws. The Bylaws of Oil & Gas as in effect immediately prior to the Effective Date of Merger shall continue in full force and effect as the Bylaws of the Surviving Corporation until duly amended in accordance with the provisions thereof and applicable law.

1.5 Directors and Officers. The directors and officers of Oil & Gas immediately prior to the Effective Date of Merger shall be the directors and officers of the Surviving Corporation until their successors shall have been elected and qualified or until otherwise provided by law, the Articles of Incorporation of the

Surviving Corporation, or the Bylaws of the Surviving Corporation.

ENTRY 93004995
BOOK 556 PAGE 226

1.6 Effect of Merger. Upon the Effective Date of Merger, the separate existence of Flying J Uintah shall cease and Oil & Gas, as the Surviving Corporation: (i) shall continue to possess all of its assets, rights, powers and property as constituted immediately prior to the Effective Date of Merger, and shall succeed, without other transfer, to all of the assets, rights, powers and property of Flying J Uintah in the manner of and as more fully set forth in Section 71 of the Utah Business Corporation Act, and (ii) shall continue to be subject to all of its debts, liabilities and obligations as constituted immediately prior to the Effective Date of Merger and shall succeed, without other transfer, to all of the debts, liabilities and obligations of Flying J Uintah in the same manner as if Oil & Gas had itself incurred them, all as more fully provided under the applicable provisions of Section 71 of the Utah Business Corporation Act.

II. MANNER OF CONVERSION OF STOCK

2.1 Flying J Uintah Common Stock. Upon the Effective Date of Merger, each of the Flying J Uintah Shares shall, by virtue of the Merger and without any action by the holder of such shares or any other person, be cancelled.

2.2 Oil & Gas Common Stock. Upon the Effective Date of Merger, each of the Oil & Gas Shares shall remain fully paid and non-assessable shares of the duly issued and outstanding Common Stock of Oil & Gas, as the Surviving Corporation.

III. GENERAL

3.1 Covenants of Oil & Gas. Oil & Gas covenants and agrees that it will, on or before the Effective Date of Merger:

(a) Qualify to do business as a foreign corporation in any jurisdictions where such a qualification is required, including the States of North Dakota, Wyoming and Montana, and in connection therewith establish a registered office and a registered agent if and as required by each state's respective corporation law.

(b) File any and all documents with the tax authority of the State of Utah necessary to the assumption by Oil & Gas of all the Utah state tax liabilities of Flying J Uintah.

(c) Take such other actions as may be required by the Utah Business Corporation Act.

3.2 Abandonment. At any time before the Effective Date of Merger, this Agreement may be terminated and the Merger may be abandoned for any reason whatsoever by the Board of Directors of either Flying J Uintah or Oil & Gas or both, notwithstanding the approval of this Agreement by Parent, as the sole shareholder of Flying J Uintah and Oil & Gas.

3.3 Amendment. The Boards of Directors of the Constituent Corporations may amend this Agreement at any time prior to the filing of Articles of Merger of a counterpart of this Agreement with the Utah Department of Commerce, provided that an amendment made subsequent to the approval of this Agreement by the Parent as the sole shareholder of the Constituent Corporations shall

not: (1) alter or change the amount or kind of shares, securities, cash, property and/or rights to be received in exchange for or on conversion of all or any of the shares of any class or series thereof of such Constituent Corporation; (2) alter or change any term of the Certificate of Incorporation of the Surviving Corporation to be effected by the merger or consolidation; or (3) alter or change any of the terms and conditions of this Agreement if such alteration or change would adversely affect the Parent as the holder of the Flying J Uintah Shares and the Oil & Gas Shares.

3.4 Registered Office. The registered office of the Surviving Corporation in the State of Utah is located at 50 West 990 South, Brigham City, Utah 84603. O. Jay Call is the registered agent of the Surviving Corporation at such address.

3.5 Governing Law. This Agreement shall in all respects be construed, interpreted and enforced in accordance with and governed by the laws of the State of Utah applicable to contracts entered into and to be performed entirely within such state.

3.6 Counterparts. In order to facilitate the filing and recording of this Agreement, the same may be executed in any number of counterparts, each of which shall be deemed to be an original.

IN WITNESS WHEREOF, this Agreement, having first been approved by resolution of the Boards of Directors of Flying J Uintah and Oil & Gas and by resolution of Parent as the sole shareholder of each of the Constituent Corporations, is hereby executed on

behalf of each of the Constituent Corporations and attested by
their respective officers thereunto duly authorized.

FLYING J OIL & GAS INC.,
a Utah corporation

FLYING J UINTAH INC.,
a Utah corporation

By: J. Phillip Adams
J. Phillip Adams, President

By: J. Phillip Adams
J. Phillip Adams, President

ATTEST:

ATTEST:

Barre G. Burgon
Barre G. Burgon, Secretary

Barre G. Burgon
Barre G. Burgon, Secretary

STATE OF UTAH
DEPARTMENT OF COMMERCE
DIVISION OF CORPORATIONS AND COMMERCIAL CODE

ENTRY 93004995
BOOK 556 PAGE 230

I hereby certify that the foregoing is a true copy of Articles of Incorporation and the endorsements thereon, as the same is taken from and compared with the original filed in the office of this Division on the 9th day of January A.D. 1961 and now remaining on file and of record therein.



Peter Van Alstyne

PETER VAN ALSTYNE
DIVISION DIRECTOR

Date 1/29/61 File # 147758

By Elizabeth L. Edwards

SEARCHED _____
SERIALIZED _____
INDEXED _____
FILED _____
MAR 24 1961
FBI - SALT LAKE CITY

WHEN RECORDED, RETURN TO:
Flying J Utah Inc.
Attn: LaVonne Garrison-Strickland
P. O. Box 540180
North Salt Lake, UT 84054-0180

TRY NO. 276700 DATE 11/11 TIME 11:15 BOOK 118 PAGE 210
RECORDED AT REQUEST OF (Carlyne M. ...)
DUCHESE COUNTY RECORDER (Carlyne M. ...)

ASSIGNMENT

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, FLYING J INC., hereinafter called Assignor, does hereby give grant, assign, transfer and convey unto FLYING J UINTAH INC., hereinafter called Assignee, all of Assignor's right, title, and interest, of whatsoever kind and character, lying within the following described sections located in Duchesne and/or Uintah Counties, Utah.

Township 1 North, Range 1 West, USM

Sections: 20, 21, 22, 23, 26, 27, 28, 30, 31, 32, 33, 34, 35

Township 1 North, Range 2 West, USM

Sections: 26, 31, 34, 35

Township 1 South, Range 1 East, USM

Sections: 10, 14, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 29, 30, 31, 32, 33, 34, 35

Township 1 South, Range 1 West, USM

Sections: 2, 4, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18, 21, 22, 23, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36

Township 1 South, Range 2 East, USM

Section: 30

Township 1 South, Range 2 West, USM

Sections: 1, 2, 3, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 20, 21, 22, 23, 24, 25, 26, 28, 29, 32, 33, 34, 35, 36

Township 1 South, Range 3 West, USM

Sections: 5, 6, 8, 9, 10, 15, 16, 17, 20, 21, 29, 30, 32, 33

Township 1 South, Range 4 West, USM

Sections: 13, 14, 18, 19, 20, 21, 22, 24, 26, 28, 29, 30, 33, 35

Township 1 South, Range 5 West, USM

Sections: 24, 25, 35

Township 2 South, Range 1 East, USM

Sections: 2, 5, 6, 7, 10, 18, 19

Township 2 South, Range 1 West, USM

Sections: 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 20, 21

Township 2 South, Range 2 West, USM

Sections: 2, 3, 4, 5, 7, 8, 10, 11, 14, 17, 18, 19, 23

Township 2 South, Range 3 West, USM

Sections: 2, 4, 5, 7, 8, 9, 10, 11, 12, 14, 16, 20, 21, 22, 23, 24, 26, 27, 28

Township 3 South, Range 5 West, USM

Sections: 14, 15, 16

Township 3 South, Range 6 West, USM

Section: 26

Township 6 South, Range 20 East, SLM

Section: 14

Township 6 South, Range 21 East, SLM

Sections: 6, 18, 19

This assignment also covers and includes all of Assignor's interest in all wells, equipment, personal property, and fixtures located on the lands and all contracts and agreements to which these properties are subject.

41-0
WHEN RECORDED, RETURN TO: **ENTRY NO. 276797** DATE Aug 9 90 TIME 11:08 BOOK MR-240 PAGE 617-618
Flying J Inc. **FEE \$ 52.00** RECORDED AT REQUEST OF J. Flying J. Inc.
P. O. Box 540180 Caradigm Madson DUCHESNE COUNTY RECORDER Cheryl Young DEPUTY
North Salt Lake, UT 84054-0180
Attn: LaVonne Garrison-Stringer

ASSIGNMENT
EMT 3901-90 BK 490 Pg. 324-325
MATHIE GARDNER UTAH CO RECORDER
DATE 8-9-90 AT 12:49 PM Fee 41.00
Dep C. Allen Rec for Flying J. Inc.

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, FLYING J UINTAH INC., hereinafter called Assignor, does hereby give grant, assign, transfer and convey unto FLYING J INC., hereinafter called Assignee, all of Assignor's right, title, and interest, of whatsoever kind and character, lying within the following described sections located in Duchesne and/or Uintah Counties, Utah.

Township 1 North, Range 1 West, USM
Sections: 20, 21, 22, 23, 26, 27, 28, 30, 31, 32, 33, 34, 35

Township 1 North, Range 2 West, USM
Sections: 26, 31, 34, 35

Township 1 South, Range 1 East, USM
Sections: 10, 14, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 29, 30, 31, 32, 33, 34, 35

Township 1 South, Range 1 West, USM
Sections: 2, 4, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18, 21, 22, 23, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36

Township 1 South, Range 2 East, USM
Section: 30

Township 1 South, Range 2 West, USM
Sections: 1, 2, 3, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 20, 21, 22, 23, 24, 25, 26, 28, 29, 32, 33, 34, 35, 36

Township 1 South, Range 3 West, USM
Sections: 5, 8, 9, 10, 15, 16, 17, 20, 21, 29, 30, 32, 33

Township 1 South, Range 4 West, USM
Sections: 13, 14, 18, 19, 20, 21, 22, 24, 26, 27, 28, 29, 30, 33, 35

Township 1 South, Range 5 West, USM
Sections: 24, 25, 35

Township 2 South, Range 1 East, USM
Sections: 2, 5, 6, 7, 10, 18, 19

Township 2 South, Range 1 West, USM
Sections: 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 20, 21

Township 2 South, Range 2 West, USM
Sections: 2, 3, 4, 5, 7, 8, 10, 11, 14, 17, 18, 19, 23, 24

Township 2 South, Range 3 West, USM
Sections: 2, 4, 5, 7, 8, 9, 10, 11, 12, 14, 16, 20, 21, 22, 23, 24, 26, 27, 28

Township 3 South, Range 5 West, USM
Sections: 14, 15, 16, 26

Township 6 South, Range 20 East, USM
Section: 14

Township 6 South, Range 21 East, USM
Sections: 6, 18, 19

This assignment also covers and includes all of Assignor's interest in all wells, equipment, personal property, and fixtures located on the lands and all contracts and agreements to which these properties are subject.

It is the intent of Assignor to convey to Assignee all of their currently owned interest in Duchesne and Uintah Counties, Utah, in case a description has been omitted from this Assignment.

The interests assigned are conveyed subject to all burdens currently affecting Assignor's interest on the date of this Assignment.

Dated this 7th day of August 1990.

ASSIGNOR, FLYING J UINTAH INC.

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ATTEST

[Signature]

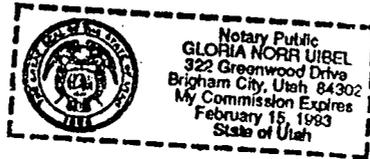
By: [Signature]

STATE OF Utah)
) ss.
COUNTY OF Big Lake

On the 7th day of August, 1990, personally appeared before me, Richard E. [Signature], to me personally known, who, being by me duly sworn, did say that he is the Senior Vice President of FLYING J UINTAH INC., that said instrument was signed in behalf of said corporation by authority of its Board of Directors, and acknowledged said instrument to be the free act and deed of said corporation.

Witness by hand and seal this 7th day of August, 1990.

[Signature]
Notary Public



State of Utah }
County of Duchesne } ss.

I, Cheryl Young, Deputy, County Recorder in and for Duchesne County, hereby certify that the foregoing is a full, true and correct copy of the Assignment Entry # 276791 Book MR-240 page 617-618

and now on file and of record in my office.

In witness whereof, I have hereunto set my hand and affixed the official seal of said office, this 9th day of August, 1990.

Cheryl Young, Deputy
County Recorder

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Flying J Inc. and Flying J Exploration and Production Inc., hereinafter called Assignors', do hereby give grant, assign, transfer and convey unto Flying J Uintah Inc., hereinafter called Assignee, all of Assignors' right, title, and interest, of whatsoever kind and character, lying within the following described sections located in Duchesne and/or Uintah Counties, Utah.

Township 1 North, Range 1 West, USM
 Sections: 20, 21, 22, 23, 26, 27, 28, 30, 31, 32, 33, 34, 35

Township 1 North, Range 2 West, USM
 Sections: 26, 31, 34, 35

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Township 1 South, Range 1 East, USM
 Sections: 10, 14, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 29, 30, 31, 32, 33, 34, 35

Township 1 South, Range 1 West, USM
 Sections: 2, 4, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18, 21, 22, 23, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36

Township 1 South, Range 2 East, USM
 Section: 30

Township 1 South, Range 2 West, USM
 Sections: 1, 2, 3, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 20, 21, 22, 23, 24, 25, 26, 28, 29, 32, 33, 34, 35, 36

Township 1 South, Range 3 West, USM
 Sections: 5, 8, 9, 10, 15, 16, 17, 20, 21, 29, 30, 32, 33

Township 1 South, Range 4 West, USM
 Sections: 13, 14, 18, 19, 20, 21, 22, 24, 26, 27, 28, 29, 30, 33, 35

Township 1 South, Range 5 West, USM
 Sections: 24, 25, 35

Township 2 South, Range 1 East, USM
 Sections: 2, 5, 6, 7, 10, 18, 19

Township 2 South, Range 1 West, USM
 Sections: 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 20, 21

Township 2 South, Range 2 West, USM
 Sections: 2, 3, 4, 5, 7, 8, 10, 11, 14, 17, 18, 19, 23, 24

Township 2 South, Range 3 West, USM
 Sections: 2, 4, 5, 7, 8, 9, 10, 11, 12, 14, 16, 20, 21, 22, 23, 24, 26, 27, 28

Township 3 South, Range 5 West, USM
 Sections: 14, 15, 16, 26

Township 6 South, Range 20 East, USM
 Section: 14

Township 6 South, Range 21 East, USM
 Sections: 6, 18, 19

This assignment also covers and includes all of Assignors' interest in all wells, equipment, personal property, and fixtures located on the lands and all contracts and agreements to which these properties are subject.

ENTRY NO. 6128 DATE 7-16-90 TIME 8:42 AM BOOK 17204 PAGE 499-445
 REC'D AT REQUEST OF Flying J Exploration & Production Inc.
Marie Gardner DEPUTY DUCHESNE COUNTY RECORDER

Assignment
Flying J Inc. to Flying J Uintah Inc.
June 25, 1990
Page 2

It is the intent of Assignors to convey to Assignee all of their currently owned interest in Duchesne and Uintah Counties, Utah, in case a description has been omitted from this Assignment.

The interests assigned are conveyed subject to all burdens currently affecting Assignor's interest on the date of this Assignment.

Dated this 25th day of June 1990.

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ATTEST FLYING J INC.

Barre G. Burgen
Secretary

J. Phillip Adams
~~Barre G. Burgen~~ Executive Vice President

ATTEST FLYING J EXPLORATION AND PRODUCTION INC.

James W. Wilson
James W. Wilson
Assistant Secretary

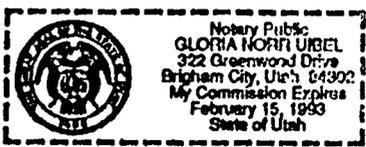
John R. Scales
John R. Scales
Vice President/General Manager

STATE OF)
) ss.
COUNTY OF)

On the 26th day of June, 1990, personally appeared before me, Barre G. Burgen and J. Phillip Adams to me personally known, who, being by me duly sworn, did say that they are the Secretary and Executive Vice Pres. of Flying J Inc., that said instrument was signed in behalf of said corporation by authority of its Board of Directors, and acknowledged said instrument to be the free act and deed of said corporation.

Witness by hand and seal this 26th day of June, 1990.

Gloria Norri Uebel
Notary Public

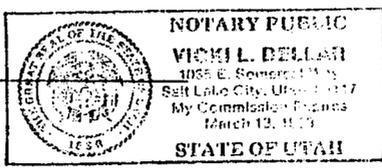


STATE OF Utah)
) ss.
COUNTY OF Salt Lake)

On the 29th day of June, 1990, personally appeared before me, John R. Scales and James W. Wilson, to me personally known, who, being by me duly sworn, did say that they are the Vice President and Assistant Secretary of Flying J Exploration and Production Inc., that said instrument was signed in behalf of said corporation by authority of its Board of Directors, and acknowledged said instrument to be the free act and deed of said corporation.

Witness by hand and seal this 29th day of June, 1990.

Vicki L. Bellan
Notary Public





United States Department of the Interior

BUREAU OF INDIAN AFFAIRS

UINTAH AND OURAY AGENCY

FORT DUCHESNE, UTAH 84026

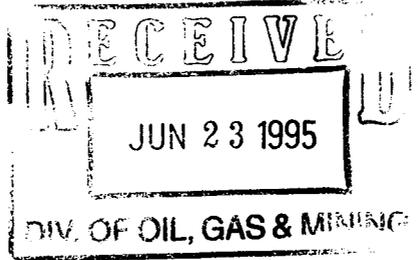
(801) 722-2406 Ext. 51/52/54

IN REPLY REFER TO:

Minerals and Mining

Name Change

Flying J Oil and Gas, Inc.
Attention: Coralie Timothy
P. O. Box 540180
N. Salt Lake City, UT 84054-0180



JUN 22 1995

Dear Coralie:

As discussed on the telephone regarding the name changes of various Flying J and its subsidiaries, we have reviewed all documents submitted, and hereby approve of the name change for the following companies.

Flying J Uintah Inc. to Flying J Oil & Gas Inc.
Flying J Inc. to Flying J Uintah Inc.
Flying J Uintah Inc. to Flying J, Inc.
Flying J Inc. and Flying J Exploration and Production Inc.
to Flying J Uintah Inc.

All records will be changed to reflect that Flying J Oil & Gas, Inc. will be operator of the subject wells listed on the attached sheet. With the exception of the following:

CA No. VR49I84-679C
CA No. VR49I-84691C

Bradley 1-23A1

Fred Bassett 1-22A1

** BIA previously aprv. 12/94 see file.*
** BIA previously aprv. 12/94 see file.*

The sundries submitted indicate a change of operator from Badger Oil Corporation to Flying J Oil and Gas, Inc. This requires the Designation of Operator forms to be completed and approved by this office.

If you have any questions regarding the above, please contact this office.

Sincerely,


Acting Superintendent

cc: Lisha Cordova, Utah State Office
Theresa Thonpson, BLM State Office
Margie Hermann, Vernal BLM District Office
Energy & Minerals, Ute Indian Tribe
Ute Distribution Corporation, Roosevelt, UT

ROUTING AND TRANSMITTAL SLIP

Date 6-19

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. <u>Lisha Cordova</u>		
2. <u>DOG-M</u>		
3.		
4.		
5.		

Action	File	Note and Return
Approval	For Clearance	Per Conversation
As Requested	For Correction	Prepare Reply
Circulate	For Your Information	See Me
Comment	Investigate	Signature
Coordination	Justify	

REMARKS

CA'S showing flying of Oil + Gas Inc. as operator. I notified Coralie with flying of. BIA accepted the name change without issuing a decision. Not sure what they are going to do. We changed our records to reflect flying of Oil + Gas Inc. effective 3-8-95. Date of letter

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name/org. symbol, Agency/Post) <u>Lisha</u>	Room No.—Bldg.
	Phone No.

Division of Oil, Gas and Mining
OPERATOR CHANGE WORKSHEET

Routing	
1-LEC	✓
2-LWP	7-PLZ ✓
3-DTS	8-SJA ✓
4-VLC	9-FLE ✓
5-RJF	✓
6-LWP	✓

Attach all documentation received by the division regarding this change.
 Initial each listed item when completed. Write N/A if item is not applicable.

- Change of Operator (~~well sold~~) Designation of Agent
 Designation of Operator Operator Name Change ~~Only~~

The operator of the well(s) listed below has changed (EFFECTIVE DATE: 1-2-91)

TO (new operator) <u>FLYING J OIL & GAS INC</u>	FROM (former operator) <u>FLYING J INC</u>
(address) <u>PO DRAWER 130</u>	(address) <u>PO DRAWER 130</u>
<u>ROOSEVELT UT 84066</u>	<u>ROOSEVELT UT 84066</u>
	<u>C/O FLYING J O&G INC</u>
phone (<u>801</u>) <u>722-5166</u>	phone (<u>801</u>) <u>722-5166</u>
account no. <u>N 8080</u>	account no. <u>N1195</u>

Well(s) (attach additional page if needed):

Name: **SEE ATTACHED**	API: <u>047-30384</u>	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____

OPERATOR CHANGE DOCUMENTATION

1. (Rule R615-8-10) Sundry or other legal documentation has been received from former operator (Attach to this form). *(Rec'd 3-10-95)*
2. (Rule R615-8-10) Sundry or other legal documentation has been received from new operator (Attach to this form). *(Rec'd 3-10-95)*
3. The Department of Commerce has been contacted if the new operator above is not currently operating any wells in Utah. Is company registered with the state? (yes/no) _____ If yes, show company file number: _____
4. (For Indian and Federal Wells ONLY) The BLM has been contacted regarding this change (attach Telephone Documentation Form to this report). Make note of BLM status in comments section of this form. Management review of **Federal and Indian** well operator changes should take place prior to completion of steps 5 through 9 below.
5. Changes have been entered in the Oil and Gas Information System (Wang/IBM) for each well listed above. *(6-30-95)*
6. Cardex file has been updated for each well listed above. *7-12-95*
7. Well file labels have been updated for each well listed above. *7-12-95*
8. Changes have been included on the monthly "Operator, Address, and Account Changes" memo for distribution to State Lands and the Tax Commission. *(6-30-95)*
9. A folder has been set up for the Operator Change file, and a copy of this page has been placed there for reference during routing and processing of the original documents.

ENTITY REVIEW

- 1. (Rule R615-8-7) Entity assignments have been reviewed for all wells listed above. Were entity changes made? (yes/no) (no) (If entity assignments were changed, attach copies of Form 6, Entity Action Form).
- 2. State Lands and the Tax Commission have been notified through normal procedures of entity changes.

BOND VERIFICATION (Fee wells only) # 610200730/80/100 Surety "The North River Ins. Co." (Trust Lands/Bond OK)

- 1. (Rule R615-3-1) The new operator of any fee lease well listed above has furnished a proper bond.
- 2. A copy of this form has been placed in the new and former operators' bond files.
- 3. The former operator has requested a release of liability from their bond (yes/no) no. Today's date _____ 19____. If yes, division response was made by letter dated _____ 19____.

LEASE INTEREST OWNER NOTIFICATION RESPONSIBILITY

- 1. (Rule R615-2-10) The former operator/lessee of any fee lease well listed above has been notified by letter dated _____ 19____, of their responsibility to notify any person with an interest in such lease of the change of operator. Documentation of such notification has been requested.
- 2. Copies of documents have been sent to State Lands for changes involving State leases. 7-14-95 to Ed Boucher

FILMING

- 1. All attachments to this form have been microfilmed. Date: July 21 1995.

FILING

- 1. Copies of all attachments to this form have been filed in each well file.
- 2. The original of this form and the original attachments have been filed in the Operator Change file.

COMMENTS

3/95 Flying J / Coralie Timothy 'chg. all wells over to Flying J O.E.B. at the same time if possible'. (Wait for C.A. approvals and chg. C.A. e. non C.A. wells at same time)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

RECEIVED
OCT 24 1995

<p>SUNDRY NOTICES AND REPORTS ON OIL, GAS & MINING</p> <p>Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells. Use APPLICATION FOR PERMIT— for such proposals.</p>		<p>6. Lease Designation and Serial Number Fee</p> <p>7. Indian Allottee or Tribe Name NA</p> <p>8. Unit or Communitization Agreement CA #9C-000176</p> <p>9. Well Name and Number Davis 1-33A1E</p> <p>10. API Well Number 43 047 30384</p> <p>11. Field and Pool, or Wildcat Bluebell</p>				
<p>1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other (specify)</p>						
<p>2. Name of Operator Flying J Oil and Gas Inc</p>						
<p>3. Address of Operator PO Drawer 130 Roosevelt, Utah 84066</p>		<p>4. Telephone Number 801-722-5166</p>				
<p>5. Location of Well</p> <table style="width: 100%;"> <tr> <td style="width: 30%;">Footage : 2356' FWL 1980' FNL</td> <td style="width: 40%;">County : Uintah</td> </tr> <tr> <td>QQ, Sec. T., R., M. : Sec 33 T1S R1E SENW</td> <td>State : UTAH</td> </tr> </table>			Footage : 2356' FWL 1980' FNL	County : Uintah	QQ, Sec. T., R., M. : Sec 33 T1S R1E SENW	State : UTAH
Footage : 2356' FWL 1980' FNL	County : Uintah					
QQ, Sec. T., R., M. : Sec 33 T1S R1E SENW	State : UTAH					

12. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA																											
<p style="text-align: center;">NOTICE OF INTENT (Submit in Duplicate)</p> <table style="width: 100%;"> <tr> <td><input type="checkbox"/> Abandonment</td> <td><input type="checkbox"/> New Construction</td> </tr> <tr> <td><input type="checkbox"/> Casing Repair</td> <td><input type="checkbox"/> Pull or Alter Casing</td> </tr> <tr> <td><input type="checkbox"/> Change of Plans</td> <td><input type="checkbox"/> Recompletion</td> </tr> <tr> <td><input type="checkbox"/> Conversion to Injection</td> <td><input type="checkbox"/> Shoot or Acidize</td> </tr> <tr> <td><input type="checkbox"/> Fracture Treat</td> <td><input type="checkbox"/> Vent or Flare</td> </tr> <tr> <td><input type="checkbox"/> Multiple Completion</td> <td><input type="checkbox"/> Water Shut-Off</td> </tr> <tr> <td><input type="checkbox"/> Other _____</td> <td></td> </tr> </table> <p>Approximate Date Work Will Start _____</p>	<input type="checkbox"/> Abandonment	<input type="checkbox"/> New Construction	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Pull or Alter Casing	<input type="checkbox"/> Change of Plans	<input type="checkbox"/> Recompletion	<input type="checkbox"/> Conversion to Injection	<input type="checkbox"/> Shoot or Acidize	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Vent or Flare	<input type="checkbox"/> Multiple Completion	<input type="checkbox"/> Water Shut-Off	<input type="checkbox"/> Other _____		<p style="text-align: center;">SUBSEQUENT REPORT (Submit Original Form Only)</p> <table style="width: 100%;"> <tr> <td><input type="checkbox"/> Abandonment *</td> <td><input type="checkbox"/> New Construction</td> </tr> <tr> <td><input type="checkbox"/> Casing Repair</td> <td><input checked="" type="checkbox"/> Pull or Alter Casing</td> </tr> <tr> <td><input type="checkbox"/> Change of Plans</td> <td><input checked="" type="checkbox"/> Shoot or Acidize</td> </tr> <tr> <td><input type="checkbox"/> Conversion to Injection</td> <td><input type="checkbox"/> Vent or Flare</td> </tr> <tr> <td><input type="checkbox"/> Fracture Treat</td> <td><input type="checkbox"/> Water Shut-Off</td> </tr> <tr> <td><input type="checkbox"/> Other _____</td> <td></td> </tr> </table> <p><input checked="" type="checkbox"/> Date of Work Completion <u>8/17/95</u></p> <p style="font-size: small;">Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form. * Must be accompanied by a cement verification report.</p>	<input type="checkbox"/> Abandonment *	<input type="checkbox"/> New Construction	<input type="checkbox"/> Casing Repair	<input checked="" type="checkbox"/> Pull or Alter Casing	<input type="checkbox"/> Change of Plans	<input checked="" type="checkbox"/> Shoot or Acidize	<input type="checkbox"/> Conversion to Injection	<input type="checkbox"/> Vent or Flare	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Water Shut-Off	<input type="checkbox"/> Other _____	
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<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Water Shut-Off																										
<input type="checkbox"/> Other _____																											

13. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Clean out & acidized Greenriver perforations 8449' - 9647', 148', 296 perfs w/20,000 gal 15% HCL plus additives. Diverted w/2000# BAF & 600 1.3 sg ball sealers. Caught pressure w/18 bbls pumped 1670#, 20 BPM. Flush to btm perf w/110 bbls 3% KCL. ISIP 3037, 5 min 1880, 10 min 1790, 15 min 1735. Max pressure 9100, avg pressure 7800, max rate 22 BPM, avg rate 17 BPM.

14. I hereby certify that the foregoing is true and correct

<p>Name & Signature <i>Larry Rich</i></p>	<p>Larry Rich</p>	<p>Title Production Superintendent</p>	<p>Date <u>10/23/95</u></p>
(State Use Only)			

for Credit
11/6/95

Location:	Sec 33 T1S R1E Uintah County, Utah	Well:	Davis 1-33A1E
TD:	12,500'	WI:	90.937500% RI: 69.937500%
BTD:	11,830'	Spud Date:	4/3/78
Perfs:	11,018' - 11,774'	Accounting #	77035
Formation:	Wasatch	GR:	3310
Field:	Bluebell	KB:	3324'

8/4/95

@7:am RI hot oil turck pump 160 bbls 275 degrees formation wtr down csg.
 @9:am MURU Smith Well Service rig & equipment. LD Horsehead unseat rod pump. LD polish rod 1-6' & 1-4' pony rods. Flush rods & tbg w/50 bbls fromaiton wtr A/A. POOH w/114-1" & 119-7/8" EL rods flush rods & tbg w/40 bbls wtr as above. Continue POOH w/110-3/4 & 8-1" EL rods. LD 1 1/4" rod pump, (no scale onpump). Change over to 2 7/8" equipment. SWIFN @7:pm.

8/5/95

@7:am bleed pressure off csg. ND WH NU BOP. Release 7" tbg anchor set @8844'. POOH w/284 jts 2 7/8" tbg. LD PSN, 7" tbg anchor, 6' perf pup jt, 3 jts 2 7/8" tbg & bull plug, (spent 45 min pulling 1st 10 jts tbg. Anchor dragging & hanging up, pull 48 stands before pulling free.) PU 6" OD 4 blade mill & csg scraper. TIH stacked out w/2000#. Mill @8471'. Pull 35000# over string wt to pull free. Work pipe & rotate f/1 1/2 hrs could not go down hole torquing up w/very little wt SWIFN @7:pm. 210 LW to date.

8/6/95

@7:am pump 50 bbls formation water down csg. Rotate w/tongs @8471 f/2 1/2 hrs pumping wtr as above @1 BPM down csg could not run water on mill without torquing up made no hole. POOH LD 4 blade mill & scraper. Outside btm edge of mill tapered in slightly & 1/16" wide scrape upside of mill no marks on scraper. PU 6" OD tapered mill. TIH tag up @8471 rotate w/tongs f/1 1/2 hrs while pumpnig wtr as above down csg @1 BPM made approx. 6" of hole, (could not run much wt on mill). Pull up 70' SWIFN @5:30 pm. LW today 330, LW to date 540.

8/7/95

Off f/Sunday.

N/C

8/8/95

@7:am RU drilling equipment. Pump formation wtr dn csg. Picked up circulation w/298 bbls wtr pumped. Drill out 3 1/2' tight spot, 8471' - 8474.5' in 3 hrs last 1' in 20 min. Fell through. Circulated out metal cuttings while milling. Hang back drilling equipment. TIH w/tbg to Baker 7" custom built opening tool @9778'. Circ hole clean. POOH LD tapered mill. Had no drag when pull through tight spot. Load out drilling equipment. SWIFN @7:pm. LW today 523 bbls, LW to date 1063 bbls.

Location:	Sec 33 T1S R1E Uintah County, Utah	Well:	Davis 1-33A1E
TD:	12,500'	WI:	90.937500% RI: 69.937500
PBTD:	11,830'	Spud Date:	4/3/78
Perfs:	11,018' - 11,774'	Accounting #	77035
Formation:	Wasatch	GR:	5310
Field:	Bluebell	KB:	3324'

8/9/95

@7:am PU 7" 32# Mt. States model "TS" pkr type RBP & 7" 29-32# HD pkr. Both w/5.875" OD gauge rings & 2 7/8" x 1 3/4" ID PSN. TIH w/same, hot oiling tbg as needed to clean out paraffin. Set pkr @9750' fill tbg w/9 bbls formation water. Pump 1 1/4 BPM @950 PSI w/10 bbls through open 7" Baker mod 47 AH Loc set RBP @9783'. Shut down pressure dropped to "0" in 4 min. Release pkr & set plug @9745 reset pkr @9718' pressure test tbg & tools to 2500 PSI. Held OK. Release pkr fill & circ well. Spot 4 sks sand on top of RBP. Pull pkr to 8240' circ down 2 7/8" tbg drop SV & pump to seat. Set pkr & NU 6" 10000# tree land tbg 30000# comp. Btm of pkr @8238'. Pressure test csg & pkr to 3000 psi held OK. Pressure test 2 7/8" tbg to 6500 psi, held OK. RU wireline & retrieve SV. SWIFN @8:pm. LW today 191 bbls, LW to date 1254 bbls.

8/10-11/95

Waiting on stimulation company.

8/12/95

@7:am RU Dowell to acidize Greenriver perfs 8449' - 9647' 148' 296 perfs. Hold safety meeting. Install pop offs on 7" csg set same @3200#. Test pump & lines to 10,000#. Hold 3000# on csg throughout job. Acidize w/20,000 gal 15% HCL containing 2 gal/1000 clay control, 3 gal/1000 non emulsifier, 5 gal/1000 corrosion inhibitor, 10 gal/1000 iron control, 1 gal/1000 friction reducer, (friction reducer in acid and flush) & 10 gal/1000 scale inhibitor. Divert w/2000# BAF & 600 1.3 sq ball sealers. Pump as follows. Drop ball sealers evenly throughout all but 1st 10 bbls of acid. Caught pressure w/18 bbls pumped 1670# 20 BPM. Drop 500# BAF slugs @100 bbls 8198# 21.7 BPM, 190 bbls 8459# 20.1 BPM, 280 bbls 6665# 15.1 BPM & 370 bbls 7205# 15 BPM. Had good diversion & breaks throughout job. Flush to btm perf w/110 bbls 3% KCL. Shut down w/572 total bbls pumped. Final pressure 6019, ISIP 8037, 5 min 1880, 10 min 1790, 15 min 1785. Max pressure 9100, avg pressure 7800, max rate 22 BPM, Avg rate 17 BPM. Shut well in w/1735#. RD Dowell. SWIFN @9:22 am. LW today 572, LW to date 1826.

8/13/95

@7:am bleed gas pressure off 2 7/8" tbg in 7 min. No fluid. R/U swab equipment. FL on 1st run @3100'. Made 38 runs swab 182 bbls fluid. Had gas & oil after 20 bbls. Oil stabilized @40% after 65 bbls swabbed. FL stabilized @5200' after 80 bbls swabbed w/PH of 3 @6:pm. Shut well in. 390 bbls of acid load remain.

8/14/95

Rig & crew off f/Sunday.

January 3, 2001

**CONVERSION TO WATER DISPOSAL PROCEDURE
DAVIS 1-33A1E**

Purpose: Convert to SWD well.

PERTINENT INFORMATION

Well Location: 2356' FWL 1980' FNL (SENW)
Section 33, Township 1 South, Range 1 East
Uintah County, Utah

Elevation: 5310' GL, 5324' KB

TD: 12,500'
PBSD: 9731' Bridge Plug

API No.: 43-047-30384

Acctg. No.: 77035

Casing: 13-3/8", 54# K55 LT&C @ 159' w/ 175 sx cmt
9-5/8", 40.5# K55 LT&C 8rd @ 2170 w/ 860 sx cmt
7", 26,29&33# S95 LT&C 8rd @ 9984' w/ 450 sx cmt
5", 18# P110 AB-FL4S liner @ 9,800'-12,465' w/ 700 sx cmt

Perforations: Wasatch formation 12,372' to 10,064', 154', 334 holes
Green River formation 8,449' to 9647'', 148', 296 holes

PROCEDURE

1. MIRUSU. Hot oil well as needed to release pump and flush tubing.
2. POOH with rods and pump.
3. Release tubing anchor and POOH with tubing and anchor.
4. Pick up and run bit and scraper for 7" 32# casing. Clean out to PBTB @ 9778'.
5. RIH and set CIBP at 9778'. Set cement retainer at 8300'. Squeeze 200 sx class G cement below retainer into SWD perms from 8449' to 9647'. Leave 2 bbls (52') cement on top of retainer.
6. Pull up three stands and reverse out. Pressure test casing to 1000 psi. POOH.
7. Run CBL from PBTB to surface and evaluate to determine if remedial cement work will be required. Squeeze if necessary.
8. Rig up perforators and perforate the following Green River intervals using 4" casing guns, premium charge shooting 4 JSPF:

5820-54'	5542-48'
5723-32'	5500-14'
5698-5708'	
9. Run 7" 32# retrievable packer on 2 7/8" tubing and set at \pm 5400'.
10. Fill backside with packer fluid and perform MIT.
11. Swab perforations for formation water sample.
12. Install wellhead equipment and commence water disposal.
Note: Do not exceed 1964 psi prior to conduction a step rate test.

Davis 1-33A1E SWD Conversion

UT2881-04555

Description of confining formation overlying the Green River Formation

The Uinta Formation, of Eocene age, overlies the Green River Formation at the Davis 1-33A1E. The Uinta is comprised primarily of gray-green to varicolored mudstone which is moderately firm, slightly calcareous, and contains a minor siltstone component. Interbedded with the mudstones are abundant beds of pink, firm biotititic Tuff. Also contained in the mudstones are a few thin beds of discontinuous sandstones which tend to be clayey and slightly calcareous.

The top of the Green River Formation occurs at 5404' in the Davis well bore and the Uinta Formation top is at 2216' making the total thickness of the Uinta 3188' in the Davis 1-33A1E.

DAVIS 1-33A1E FORMATION TOPS
Reference: Schlumberger DIL log dated 6/1/78

<u>FORMATION</u>	<u>TOP DEPTH</u>
Green River	5,404'
Tgr3	8,494'
Wasatch	9,438'
3 Finger Limestone	11,978'
North Horn Transition	12,338'

Davis 1-33A1E Chronological Well History

4/3/78 Spud well.
4/5/78 Drilled 13 1/2" hole to 506' and reamed to 17 1/2". Ran 5 jts 13 3/8", 54.50# ST&C K55 casing (total length 172.01'). Set casing shoe at 159'. Cemented to surface with 175 sx 15. PPG Class G cement. Good cement returns to surface.

4/10/78 Drilled 12 1/4" hole to 2126'. Ran 51 jts 9 5/8" 40# K55 LT&C casing to 2170'. Cemented with lead cement of 660 sx HOWCO Lite and tailed with 200 sx Class G. Full returns throughout job. Circulated excess cement to the pit. Cement stayed at surface.

5/11/78 Drilled 8 3/4" hole to 10,000'. Ran 227 jts 7" 29# LT&C casing to 9984'. Cemented with 450 sx 1% RFC.

6/3/781 Drilled 6" hle to 12,500'. Ran 2712' of 5" 18# P110 FJ liner. Liner top at 9800'; shoe at 12,465'. Cemented with 700 sx Class G cement. Full returns throughout.

6/11/78 Ran CBL from 12,420' to 7200' with 1500 psi on well.
6/18/78 Set packer at 9899' and perforated Wasatch formation from 12,372' to 11,772'.
6/20/78 Acidized Wasatch perms with 12,500 gallons 15% HCl; 17,500 gallons 7.5% HCl and 10,000 gallons fnt water. Turned well to production.

8/16/78 Re-acidized Wasatch perms with 20,000 gallons 15% HCl.
9/2/78 Milled over and recovered packer from 9899'
9/3/78 Cleaned out casing. Found a bad spot at 11,200'.
9/27/78 Set cement retainer at 12,150'.
9/28/78 Pumped 75 sx Class G cement below retainer.
9/29/78 Cleaned out through bad spot.
10/1/78 Perfed squeeze holes from 11,980' to 11,990'.
10/3/78 Set cement retainer at 11,830' and pumped 75 sx class G cement into formation.
10/6/78 Set packer at 9886' and swabbed well. Returned to production.
11/5/78 Set packer at 11,266' and acidized perforations below with 10,000 gallons 15% HCl.
3/4/79 Install pump, rods and pumping unit.
6/29/84 Clean out well to 11,818'.
7/3/84 Straddle bad spot in liner at 11,200'. Top packer at 11,176' and bottom packer at 11,250'.

7/4/84 Acidize Wasatch perms with 5000 gallons 15% HCl and swab back load.
7/8/84 Set 'F' plug at 11,216'. Perforate Wasatch intervals from 10,064' to 11,091'.
7/10/84 Set packer at 9835' and swab.
9/11/84 Acidize Wasatch perforations from 10,064' to 11,127' with 15,000 gallons 15% HCl and swab back load.

9/14/84 Return well to production.
2/2/88 Set RBP at 9783'.
2/5/88 Perforate Green River intervals from 9647' to 8449'.
2/8/88 Set packer at 8242' and acidize Green River perms with 20,000 gallons 10% HCl.
2/13/88 Unable to retrieve RBP from 9783'.
2/14/88 Placed well on production from Green River perforations.
8/9/95 Set RBP at 9731' and packer at 8240'. Acidized Green River perms with 20,000 gallons 15% HCl.
8/16/95 Returned well to production.



FLYING J OIL & GAS INC.

P.O. DRAWER 130 • ROOSEVELT, UTAH 84066
PHONE (801) 722-5166 • FAX (801) 722-5169

Dan Jarvis
State of Utah Natural Resources
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84114-5801

May 16, 2000

Dear Mr. Jarvis

Please find enclosed UIC Form 1 application to convert the Davis 1-33A1E oil well in Uintah County, Utah to a Class II salt water disposal well. Please contact me at 435 722-5166 and the letterhead address in Roosevelt, Utah with any questions concerning the application.

Sincerely,

Douglas G. Howard
Sr. Petroleum Engineer

RECEIVED

APR 13 2001

DIVISION OF
OIL, GAS AND MINING

May 26, 2000

To: Mineral & Surface Owners
(As per attached Exhibit A)

Re: Produced Water Disposal Application
Davis 1-33A1E
SE NW Section 33, T1S, R1E
Bluebell Field
Uintah County, Utah

Ladies and Gentlemen:

Flying J Oil & Gas Inc. is proposing to convert the Davis #1-33A1E well located in SE NW Section 33, T1S-R1E, Uintah County, Utah to an injection well to dispose of water produced from wells in the Uinta Basin.

The Davis #1-33A1E drilled and completed in 1978 and has produced intermittently since May 1997. Cumulative production is 261 MBO and 67 MBW. Flying J is proposing to perforate the Upper Green River from about 5500' to 5700', (approximately 3000' above the TGR3 marker), to inject and dispose of produced water from wells in the Uinta Basin in order to improve field economics.

Rules, regulations and guidelines of the United States EPA and the Utah Division of Oil, gas and Mining designed to protect underground sources of drinking water and surface water will be strictly followed.

In accordance with Utah Division of Oil, Gas and Mining rule R649-5-2.12, Flying J Oil & Gas Inc. hereby provides notification of its intent to perform the subject well conversion. Any person who would be adversely aggrieved by the authorization of the underground disposal into the proposed injection zone may file with the Utah Division of Oil, Gas and Mining within fifteen (15) days of notification.

Additional information on the operation of the proposed disposal well may be obtained at the Division office located at:

Utah Division of Oil, Gas and Mining
1594 West North Temple
Suite 1210
Box 145801
Salt Lake City, Utah 84114
(801) 538-5338

Very Truly yours,

Doug Howard
Senior Petroleum Engineer

AFFIDAVIT OF NOTIFICATON

I, Luana Badovinac, hereby certify that I have notified, by certified mail, return receipt requested, all lease operators, owners, and surface owners, as listed on Exhibit A, within one-half (1/2) mile from the Davis 1-33A1E well, of Flying J Oil & Gas, Inc.'s intention to convert said well to water disposal. A copy of the letter of notification is attached as Exhibit B.

Dated this 26th day of May, 2000.

Luana Badovinac

STATE OF UTAH)
)
COUNTY OF SALT LAKE)

Subscribed and sworn to before me by Luana Badovinac this _____ day
of _____, 2000.

Witness my hand and official seal.

Notary Public

My Commission Expires: _____

SURFACE AND WORKING INTEREST OWNERS OF RECORD WITHIN
ONE HALF MILE RADIUS OF THE
DAVIS 1-33A1E WELL

Working Interest Owners

ANR Production Company
% Dwayne G. Jammal
P.O. Box 179
Bellaire, TX 77402

Coastal Oil & Gas Corporation
9 Greenway Plaza
Houston, TX 77046-0995

Devon Energy Production Company, LP
20 North Broadway, Suite 1500
Oklahoma City, OK 73102

Flying J Oil & Gas Inc.
333 West Center Street
North Salt Lake, UT 84054

Intrepid Oil & Gas LLC
The Trinity Building
1801 Broadway, Suite 800
Denver, CO 80202

John D. Chasel
2285 Lucky John Drive
Park City, UT 84060

Quinex Energy Corporation
%John Wells
465 South 200 West, Suite 300
Bountiful, UT 84010

William Clive Sprouse Estate
Lavar Moffitt, Personal Rep.
P.O. Box 150462
East Ely, NV 89315-0462

Surface Owners

Charles G. Bolton
Route 2 Box 2680
Roosevelt, UT 84066

Bureau of Indian Affairs
Attn: Charles H. Cameron
P.O. Box 130
Ft. Duchesne, UT 84026

Marving J. Hamaker
RR 2 Box 2708
Roosevelt, UT 84066

Wayne L. Rasband
RR 2 Box 2621
Roosevelt, UT 84066

Velma Winn
RR2 Box 2659
Roosevelt, UT 84066



FLYING J OIL & GAS INC.

P.O. DRAWER 130 • ROOSEVELT, UTAH 84066
PHONE (801) 722-5166 • FAX (801) 722-5169

Dan Jarvis
Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

April 12, 2001

Dan,

Please find enclosed the Application for Injection Well to convert the Davis 1-33A1E oil well in Uintah County, Utah to a Class II salt water disposal well. As we discussed on the phone today, I probably will be submitting an application for a different well that we might think is a better candidate for SWD. If we do that, I suppose this application will be withdrawn. In any case, I thought that this application had already been submitted to you, but since it apparently has not, you should at least have a copy for your records. I do have a Draft Permit from the EPA, Permit No. UT2881-04555 if you need to reference that.

Please contact me at 435 722-5166 in Roosevelt if you have any questions or see deficiencies in the application.

Sincerely,

Douglas G. Howard
Sr. Petroleum Engineer

RECEIVED

APR 13 2001

DIVISION OF
OIL, GAS AND MINING

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

UIC FORM 1

APPLICATION FOR INJECTION WELL

Name of Operator Flying J Oil & Gas, Inc.	Utah Account Number N 8080	Well Name and Number Davis 1-33A1E
Address of Operator PO Drawer 130 CITY Roosevelt STATE Ut ZIP 84066	Phone Number (435) 722-5166	API Number 4304730384
Location of Well Footage : 2356' FWL 1980' FNL County : Uintah		Field or Unit Name East Bluebell
QQ, Section, Township, Range: SENW 33 1S 1E State : UTAH		Lease Designation and Number

Is this application for expansion of an existing project? Yes No

Will the proposed well be used for:

Enhanced Recovery?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Disposal?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Storage?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

Is this application for a new well to be drilled? Yes No

If this application is for an existing well, has a casing test been performed? Yes No
Date of test: _____

Proposed injection interval: from 5,500 to 5,732

Proposed maximum injection: rate 2 pressure 1,964 psig

Proposed injection zone contains oil , gas , and / or fresh water within 1/2 mile of the well.

List of attachments: _____

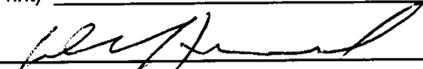
RECEIVED
APR 13 2001
DIVISION OF
OIL, GAS AND MINING

**ATTACH ADDITIONAL INFORMATION AS REQUIRED BY CURRENT
UTAH OIL AND GAS CONSERVATION GENERAL RULES**

I hereby certify that this report is true and complete to the best of my knowledge.

Name (Please Print) Doug Howard

Title Sr. Petroleum Engineer

Signature 

Date _____

INSTRUCTIONS

This form shall be submitted by the well operator prior to the commencement of operations for injecting any fluid into a well for the purpose of enhanced recovery, disposal, or storage within the state of Utah, in accordance to the Utah Oil and Gas Conservation General Rules. Approvals or orders authorizing injection wells shall be valid for the life of the well, unless revoked by the board for just cause, after notice and hearing.

Send to:

Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

FLYING J OIL & GAS, INC.
UNDERGROUND INJECTION CONTROL
CLASS II TYPE D
PERMIT APPLICATION
05/11/00

A. Area of Review Methods

1. The area of review is a fixed radius of 1/4 mile from the well bore of the Davis 1-33A1E.

B. Area of Review

Attached as Exhibit B1 is a topographic map with the outer radius extending one mile beyond the property boundaries and showing the proposed injection well. The applicable 1/4 mile radius area of review is shaded. There are no other wells within the area of review that penetrate the injection zone.

C. Corrective Action Plan

Though no wells of record penetrate the proposed injection zone within the area of review, should upward fluid migration occur through the well bore of any previously unknown, improperly plugged or unplugged well due to injection of permitted fluids, injection will be stopped until proper plugging can be accomplished. The Underground Injection Control Branch of the USEPA will be notified immediately. Should any problems develop in the casing of the injection well, injection will be shut-in until such repairs can be made to remedy the situation. Operations shall not be resumed until the Director gives approval in writing to recommence injection.

D. Maps and Cross Section of USDWs

Does not apply to Class II wells.

FLYING J OIL & GAS, INC.
UNDERGROUND INJECTION CONTROL
CLASS II TYPE D
PERMIT APPLICATION
05/11/00

E. Name and Depth of USDWs

There are no identified USDWs in this area. State of Utah Department of Natural Resources Technical Publication No. 92 and U.S. Geological Survey Open-File Report 87-394 states that the top of the saline ground water (10,000 to 35,000 TDS mg/l) is approximately 7800 feet from surface at this location. However, the Water-Quality-Zone Contours on the Generalized Map of Moderately Saline Ground Water in the Northern Uinta Basin in the area of this well are very busy and are extrapolated from very limited well control data.

Exhibit E1 shows calculations of R_w for the proposed injection zones. Exhibit E2 is a plot of R_w vs TDS for produced water in offset wells. The conclusion of Exhibits E1 and E2 is that the TDS for the formation water in the proposed injection intervals exceeds 10,000 ppm. A copy of the Dual Induction Log across the proposed injection zone is attached as Exhibits E3a, E3b and E3c.

A copy of the Generalized Map of Moderately Saline Ground Water in the Northern Uinta Basin produced with Publication No. 92 is included as Exhibit E4. The location of the Davis 1-33A1E is indicated on the map.

F. Maps and Cross Sections of Geologic Structure of Area

Does not apply to Class II wells.

FLYING J OIL & GAS, INC.
UNDERGROUND INJECTION CONTROL
CLASS II TYPE D
PERMIT APPLICATION
05/11/00

G. Geological Data on Injection and Confining Zones

1. Injection Zone

Geologic Name: Green River Formation
Injection Interval: 5500' - 6000'
Lithology: Sandstones and siltstones interbedded with shales and limestones. Sandstones and siltstones are very fine grain to medium grain, angular and subangular, calcareous.
Fracture Gradient: Typically 0.77 psi/ft for the Green River Formation.
TDS of formation water: Greater than 10,000 ppm (see Exhibits E1 and E2).

2. Upper Confining Zone

Geologic Name: Green River
Depth Interval: 5404' to 5490' (Green River Top is at 5404')
Lithology: Shale with limestone streaks.

3. Lower Confining Zone

Geologic Name: Green River Formation
Depth Interval: 6700' - 8494' (TGr3 is at 8494')
Formation: Green River
Lithology: Multiple shale & limestone streaks.

H. Operating Data

1. Average injection rate is estimated to 3000 barrels of water per day (BWPD). The maximum injectivity will be limited by the maximum pressure.

2. Average injection pressure is expected to be 1000 psig surface pressure. The maximum surface pressure will be limited to 1964 psig. Should the average operating pressure be higher than anticipated the maximum pressure will be redetermined via a step rate test.

FLYING J OIL & GAS, INC.
UNDERGROUND INJECTION CONTROL
CLASS II TYPE D
PERMIT APPLICATION
05/11/00

Based on 40 CFR 147.1253 the value for maximum wellhead pressure is calculated by using the following formula:

$$P_m = [0.770 - 0.433 S_g]d$$

Where: P_m = maximum pressure at wellhead in pounds per square inch
 S_g = specific gravity of injected fluid (unitless), assume 1.00
 d = depth to injection zone = 5750 feet

or
$$P_m = [0.770 - 0.433 (1.00)]5750$$

$$P_m = 1964 \text{ psig}$$

3. The annulus fluid will consist of fresh water treated with an oxygen scavenger, a biocide, and a scale inhibitor.

4. Typical water samples are included as Exhibit H1 through Exhibit H7. A current list of sources is shown on Exhibit H8. A combined water analysis will be submitted annually.

I. Formation Testing Program

After the injection zone is perforated the well will be swabbed to obtain representative formation water sample. Static bottom hole pressure will be measured from the midpoint of the perforated interval. A step rate test will be conducted should the average injection pressure be higher than expected.

J. Stimulation Program

The perforations will be acidized if needed to establish communication with the formation in the injection interval.

K. Injection Procedures

The injection fluids will be delivered to the facility either via a pipeline or tank trucks. Fluids will be placed in above ground storage tanks. The water will be cleaned up by gravity separation and filtering as necessary prior to injection. The fluids will be injected down hole with a triplex pump.

FLYING J OIL & GAS, INC.
UNDERGROUND INJECTION CONTROL
CLASS II TYPE D
PERMIT APPLICATION
05/11/00

L. Construction Procedures

Not required for conversion of a producing well to a Class II disposal well.

M. Construction Details

Attached as Exhibit M1, Exhibit M2, Exhibit M3, and Exhibit M4.

N. Changes in Injected fluid

Not required for Class II applications.

O. Plans for Well Failures

In the event of a down hole failure of the tubing or packer, the failed equipment will be repaired within 30 days of discovery. In the event of casing failure, injection will be terminated at the time of discovery and will not resume until the leak has been repaired and the casing tested for mechanical integrity.

P. Monitoring Program

No monitoring wells will be drilled.

Q. Plugging and Abandonment Plan

Attached on EPA form No. 7520-14, Exhibit Q1, Q2 and Q3.

R. Necessary Resources

The financial statement for the corporation is being submitted for demonstration of financial responsibility.

S. Aquifer Exemptions

Not required.

T. Existing EPA Permits

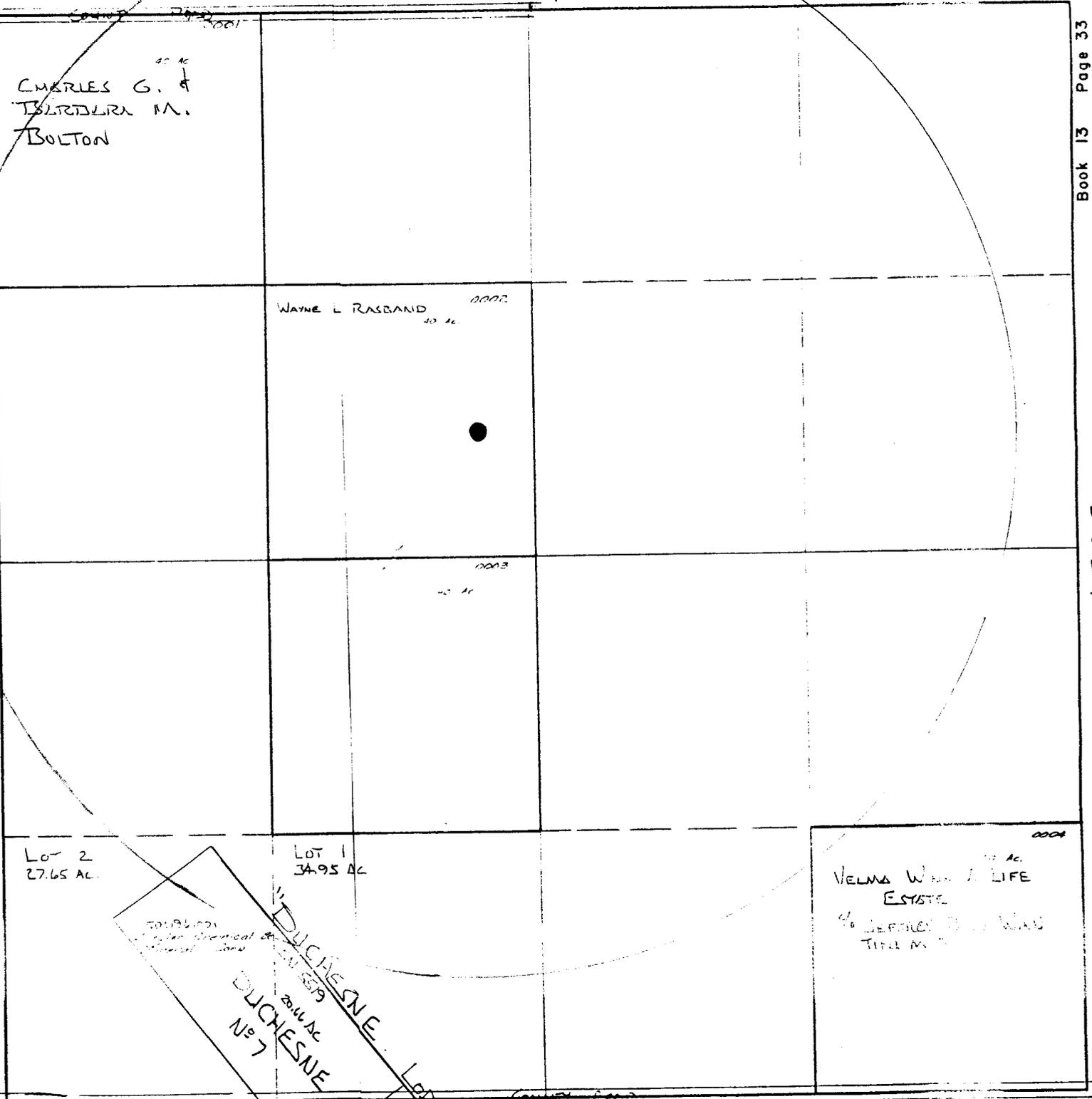
None.

U. Nature of Business

Oil and Gas Operating Company.

EXHIB 2.1

TRIBAL SURFACE
5500 E



20 AC
CHARLES G. &
ISABELLA M.
BOLTON

WAYNE E. RASSBAND
20 AC

LOT 2
27.65 AC.

LOT 1
34.95 AC

20 AC
VELMA W. & LIFE
ESTATE
OF JEFFREY D. & WANDA
T. M.

PLAT 1000
DUCHESSNE
No. 7
3000 N

3000 N

6500 E

Exhibit E1

Davis 1-33A1E

Green River Rw Determination from SP and DIL

Mean Surface Temp 60 deg F
 TD 9964 feet
 BHT 155 deg F
 Rm 2.44 @ 74 deg F
 Rmf 2.07 @ 74 deg F

Proposed Intervals for Injection		Tf	Feet	Rmc	Rmfc	SP	Rdig	Rsn/Rmc	SP cor fac	SSP	Rmf/Rwe	Rwe	Rw
Top	Bottom												
5500	5514	113	14	1.55	1.4	-45	67	43	1.17	-52.7	5	0.20000	0.22
5542	5548	113	6	1.55	1.4	-37.5	46	30	1.45	-54.4	5	0.20000	0.22
5698	5708	114	10	1.53	1.37	-93	92	60	1.33	-123.7	42	0.02381	0.036
5723	5732	115	9	1.5	1.35	-52.5	245	163	1.62	-85.1	13	0.07692	0.085

From Dresser Atlas Log Interpretation Fundamentals Handbook, Copyright 1975, Charts 1-5

Rw vs TDS from Chemical
Analysis of Produced Water

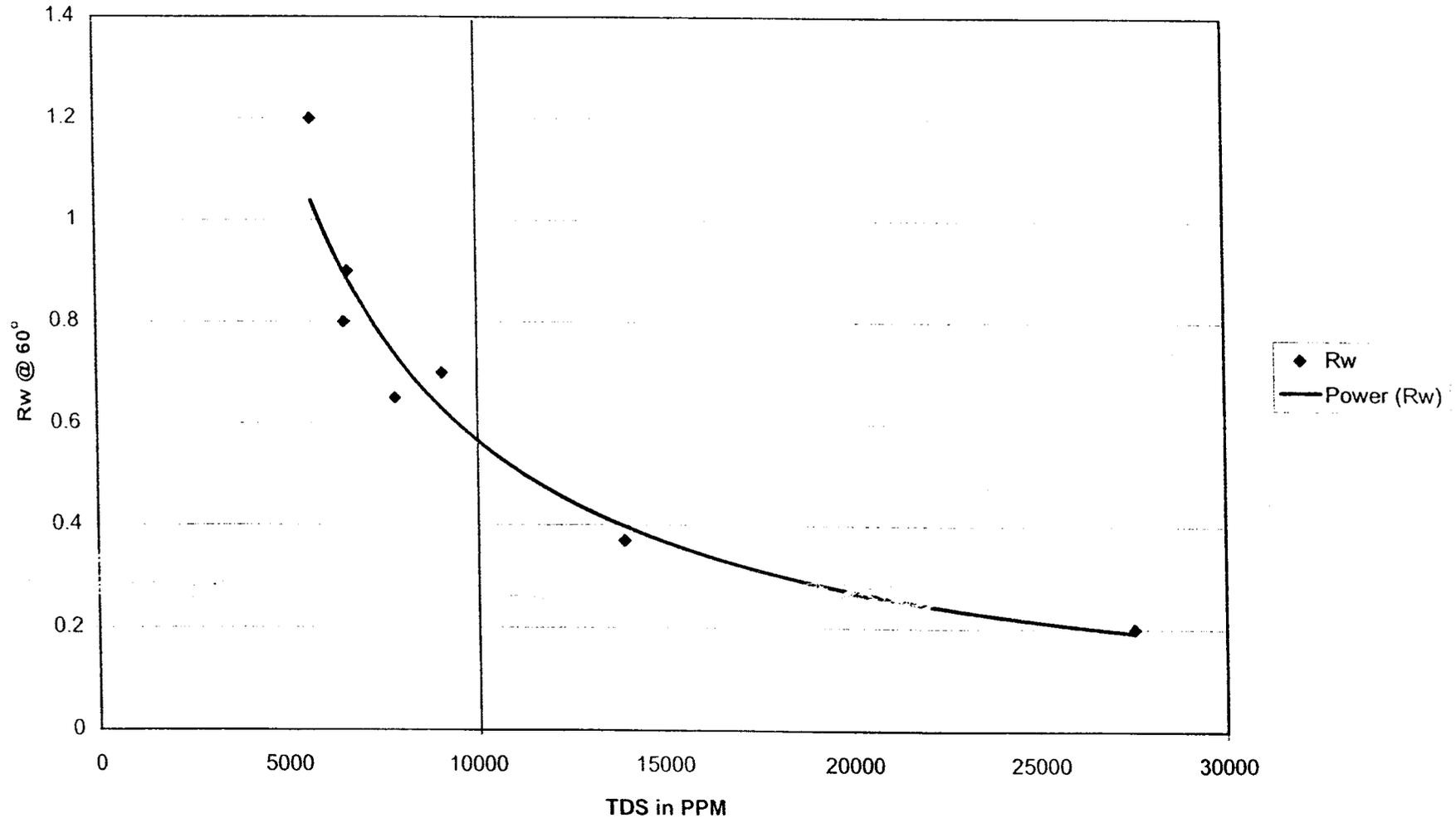


Exhibit E2a

Supporting Data For Exhibit E2

Well	Date Sampled	TDS	CO3	HCO3	OH	CL	SO4	Ca	Mg	NaCl	Calculated NaCl eqv	Total NaCl	Rw from Chart
Walker 1-14A1E	10/8/96	27518	0	500		16600	0	2000	240	20812	35715	56527	0.2
Ute 1-22A1E	9/3/97	13999	0	970	0	7800	0	1000	0	10815	16811.9	27627	0.37
Hackford 1-23A1E	9/24/99	7909	0	1100	0	3900	0	80	24	6431	8221	14652	0.65
Ute 1-27A1E	2/6/97	9165		2300		3500	130	16	28	5788	7757.2	13545	0.7
R Lloyd 1-24A1E	8/3/98	6584	0	1000	0	3200	0	140	5	5261	6813	12074	0.8
Ute 2-22A1E	8/3/98	6696	0	1200	0	3000	0	80	0	5028	6400	11428	0.9
MP 1-34A1E	9/21/99	5755	0	1200		2500	0	40	12	4092	5386	9478	1.2

Water Analysis for Unichem, Div of BJ Services

Conversion factors from Pet Engr Hndbk, SPE, Table 49.2 pg 49-4

Sw from Pet Engr Hndbk, SPE, Fig. 49.3, pg 49-3

Note the General Rule-of-Thumb:

For NaCl water, when $Rw=0.60$ then $TDS=10,000$

For $NaHCO_3$ water, when $Rw=0.80$ then $TDS=10,000$

For $NaSO_4$ water, when $Rw=0.80$ then $TDS=10,000$

WATER ANALYSIS REPORT

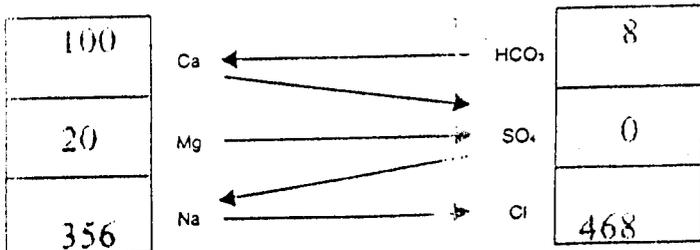
Company FLYING J EXPLORATIONS Address _____ Date 10-09-96

Source WALKER 1-14A1E Date Sampled 10-08-96 Analysis No. _____

	Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>5.1</u>		
2. H ₂ S (Qualitative)	<u>0</u>		
3. Specific Gravity	<u>1.020</u>		
4. Dissolved Solids		<u>27,518</u>	
5. Alkalinity (CaCO ₃)		<u>0</u>	
6. Bicarbonate (HCO ₃)		<u>500</u>	+ 61 <u>8</u> HCO ₃
7. Chlorides (Cl)		<u>16,600</u>	+ 35.5 <u>468</u> Cl
8. Sulfates (SO ₄)		<u>0</u>	+ 48 <u>0</u> SO ₄
9. Calcium (Ca)		<u>2,000</u>	+ 20 <u>100</u> Ca
10. Magnesium (Mg)		<u>240</u>	+ 12.2 <u>20</u> Mg
11. Total Hardness (CaCO ₃)		<u>6000</u>	
12. Total Iron (Fe)		<u>22</u>	
13. Manganese			
14. Barium (Qualitative)			
15. Phosphate Residuals		<u>24</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Saturation Values

Compound	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

Compound	Eqvly. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		<u>8</u>		<u>648</u>
CaSO ₄	68.07				
CaCl ₂	55.50		<u>92</u>		<u>5,106</u>
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62		<u>20</u>		<u>952</u>
NaHCO ₃	84.00				
Na ₂ SO ₄	71.03				
NaCl	58.46		<u>356</u>		<u>20,812</u>

REMARKS _____

WATER ANALYSIS REPORT

Company FLYING J EXPLORATIONS Address _____ Date 09-03-97

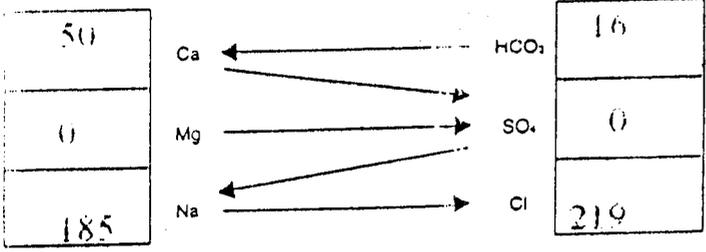
Source UTE 1-22A 1E Date Sampled 09-03-97 Analysis No. _____

	Analysis	mg/l(ppm)	*Meg/l
1. PH	7.7		
2. H ₂ S (Qualitative)	()		
3. Specific Gravity	1.014		
4. Dissolved Solids		13,090	
5. Alkalinity (CaCO ₃)		0	+ 30 0 CO ₃
6. Bicarbonate (HCO ₃)		970	+ 61 16 HCO ₃
7. Hydroxyl (OH)		0	+ 17 0 OH
8. Chlorides (Cl)		7,800	+ 35.5 219 Cl
9. Sulfates (SO ₄)		0	+ 48 0 SO ₄
10. Calcium (Ca)		1,000	+ 20 50 Ca
11. Magnesium (Mg)		0	+ 12.2 0 Mg
12. Total Hardness (CaCO ₃)		2,500	
13. Total Iron (Fe)		12	
14. Manganese			
15. Phosphate Residuals		21	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION

Compound	Equly. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		16		1,297
CaSO ₄	68.07				
CaCl ₂	55.50		34		1,887
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00				
Na ₂ SO ₄	71.03				
NaCl	58.46		185		10,815



Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

UNICHEM

A Division of BJ Services

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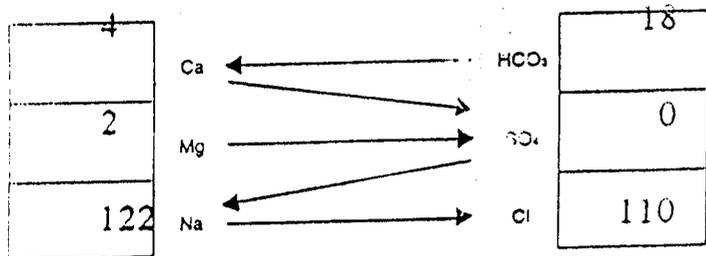
WATER ANALYSIS REPORT

Company FLYING J OIL & GAS Address _____ Date 9-24-99
Source HACKFORD 1-23AIE Date Sampled 9-24-99 Analysis No. _____

	Analysis	mg/l(ppm)	*Meg/l
1. PH	8.8		
2. H ₂ S (Qualitative)	1.0		
3. Specific Gravity	1.006		
4. Dissolved Solids		7909	
5. Alkalinity (CaCO ₃)		CO ₃ 0	+ 30 0 CO ₃
6. Bicarbonate (HCO ₃)		HCO ₃ 1100	+ 61 18 HCO ₃
7. Hydroxyl (OH)		OH 0	+ 17 0 OH
8. Chlorides (Cl)		Cl 3900	+ 35.5 110 Cl
9. Sulfates (SO ₄)		SO ₄ 0	+ 48 0 SO ₄
10. Calcium (Ca)		Ca 80	+ 20 4 Ca
11. Magnesium (Mg)		Mg 24	+ 12.2 2 Mg
12. Total Hardness (CaCO ₃)		300	
13. Total Iron (Fe)		2.2	
14. Manganese		.1	
15. Phosphate Residuals		47	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Saturation Values	Distilled Water 20°C
CaCO ₃	1.1 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

Compound	Equly. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		4		324
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17		2		146
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		12		1008
Na ₂ SO ₄	71.03				
NaCl	58.46		110		6431

REMARKS _____

WATER ANALYSIS REPORT

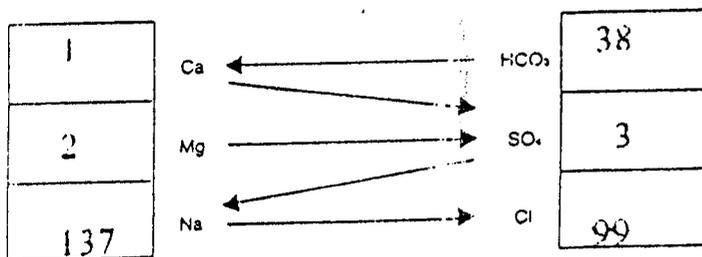
Company FLYING J EXPLORATIONS Address _____ Date 02-11-97

Source UTE 1-27A1F Date Sampled 02-06-97 Analysis No. _____

	Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>9.0</u>		
2. H ₂ S (Qualitative)	<u>4.5</u>		
3. Specific Gravity	<u>1.003</u>		
4. Dissolved Solids		<u>9,165</u>	
5. Alkalinity (CaCO ₃)		<u>75</u>	
6. Bicarbonate (HCO ₃)		<u>2,300</u>	+ 61 <u>38</u> HCO ₃
7. Chlorides (Cl)		<u>3,500</u>	+ 35.5 <u>99</u> Cl
8. Sulfates (SO ₄)		<u>130</u>	+ 48 <u>3</u> SO ₄
9. Calcium (Ca)		<u>16</u>	+ 20 <u>1</u> Ca
10. Magnesium (Mg)		<u>28</u>	+ 12.2 <u>2</u> Mg
11. Total Hardness (CaCO ₃)		<u>160</u>	
12. Total Iron (Fe)		<u>0.9</u>	
13. Manganese			
14. Barium (Qualitative)			
15. Phosphate Residuals		<u>35</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Eq. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04	<u>1</u>			<u>81</u>
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17	<u>2</u>			<u>143</u>
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00	<u>35</u>			<u>2,940</u>
Na ₂ SO ₄	71.03	<u>3</u>			<u>213</u>
NaCl	58.46	<u>99</u>			<u>5,788</u>

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 mg/l

REMARKS _____

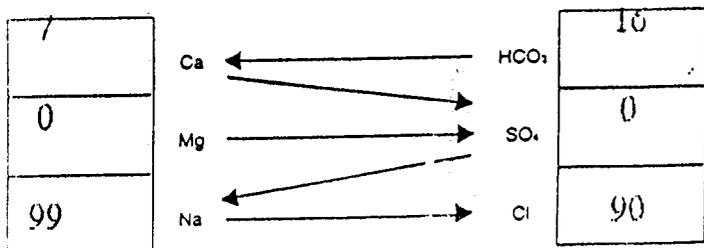
WATER ANALYSIS REPORT

Company FLYING J EXPLORATIONS Address _____ Date 08-05-98
 Source ROSE MARY LLYOD 1-24A1E Date Sampled 08-03-98 Analysis No. _____

	Analysis	mg/l(ppm)	*Meg/l
1. PH	8.2		
2. H ₂ S (Qualitative)	0.5		
3. Specific Gravity	1.004		
4. Dissolved Solids		6,584	
5. Alkalinity (CaCO ₃)		CO ₃ 0	+ 30 0 CO ₃
6. Bicarbonate (HCO ₃)		HCO ₃ 1,000	+ 61 16 HCO ₃
7. Hydroxyl (OH)		OH 0	+ 17 0 OH
8. Chlorides (Cl)		Cl 3,200	+ 35.5 90 Cl
9. Sulfates (SO ₄)		SO ₄ 0	+ 48 0 SO ₄
10. Calcium (Ca)		Ca 140	+ 20 7 Ca
11. Magnesium (Mg)		Mg 5	+ 12.2 0 Mg
12. Total Hardness (CaCO ₃)		370	
13. Total Iron (Fe)		0.5	
14. Manganese		0	
15. Phosphate Residuals		30	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

Compound	Equly. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04	7			567
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00	9			756
Na ₂ SO ₄	71.03				
NaCl	58.46	90			5,261

REMARKS _____

WATER ANALYSIS REPORT

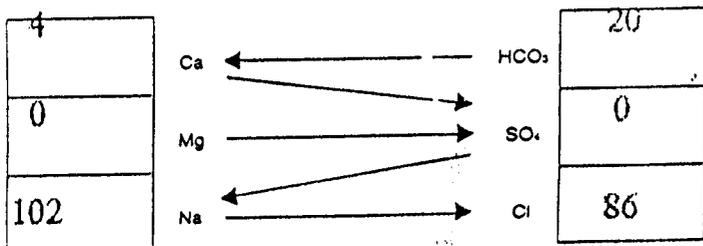
FLYING J EXPLORATIONS

Company _____ Address _____ Date 08-05-98
 Source UTE TRIBAL 2-22A1E Date Sampled 08-03-98 Analysis No. _____

	Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>8.2</u>		
2. H ₂ S (Qualitative)	<u>1.0</u>		
3. Specific Gravity	<u>1.005</u>		
4. Dissolved Solids		<u>6,696</u>	
5. Alkalinity (CaCO ₃)		<u>0</u>	+ 30 <u>0</u> CO ₃
6. Bicarbonate (HCO ₃)		<u>1,200</u>	+ 61 <u>20</u> HCO ₃
7. Hydroxyl (OH)		<u>0</u>	+ 17 <u>0</u> OH
8. Chlorides (Cl)		<u>3,000</u>	+ 35.5 <u>86</u> Cl
9. Sulfates (SO ₄)		<u>0</u>	+ 48 <u>0</u> SO ₄
10. Calcium (Ca)		<u>80</u>	+ 20 <u>1</u> Ca
11. Magnesium (Mg)		<u>0</u>	+ 12.2 <u>0</u> Mg
12. Total Hardness (CaCO ₃)		<u>200</u>	
13. Total Iron (Fe)		<u>1.4</u>	
14. Manganese		<u>0</u>	
15. Phosphate Residuals		<u>53</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

Compound	Equly. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04	<u>4</u>			<u>324</u>
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00	<u>16</u>			<u>1,344</u>
Na ₂ SO ₄	71.03				
NaCl	58.46	<u>86</u>			<u>5,028</u>

REMARKS _____

UNICHEM

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WATER ANALYSIS REPORT

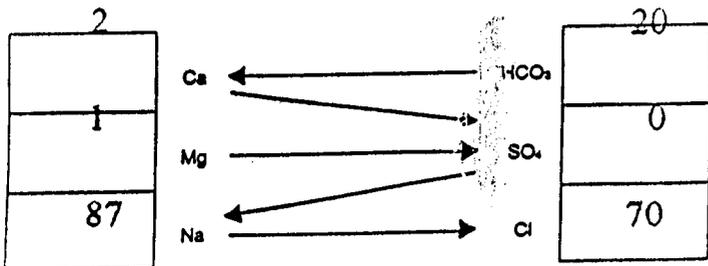
FLYING J OIL & GAS

Company _____ Address _____ Date 9-21-99
Source MP 1-34AIE Date Sampled _____ Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	9.2	0
2. H ₂ S (Qualitative)	1.006	
3. Specific Gravity		
4. Dissolved Solids	5755	
5. Alkalinity (CaCO ₃)	CO ₃ 0	+ 30 0 CO ₃
6. Bicarbonate (HCO ₃)	HCO ₃ 1200	+ 61 18 HCO ₃
7. Hydroxyl (OH)	OH 0	+ 17 0 OH
8. Chlorides (Cl)	Cl 2500	+ 35.5 70 Cl
9. Sulfates (SO ₄)	SO ₄ 40	+ 48 2 SO ₄
10. Calcium (Ca)	Ca 12	+ 20 1 Ca
11. Magnesium (Mg)	MG 150	+ 12.2 Mg
12. Total Hardness (CaCO ₃)	1.0	
13. Total Iron (Fe)	0	
14. Manganese	26	
15. Phosphate Residuals		

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equly. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		2		162
CaSO ₄	68.07				
CaCl ₂	55.50		1		73
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62		17		1428
NaHCO ₃	84.00				
Na ₂ SO ₄	71.03		70		4092
NaCl	58.46				

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

DUAL INDUCTION - LATEROLOG WITH LINEAR CORRELATION LOG

801-784-3394
11,820
Schlumberger

Exhibit E3

COMPANY FLYING DIAMOND OIL CORP.
WELL DAVIS 1-33
FIELD EAST BLUEBELL
COUNTY UINTAH **STATE** UTAH

SE-NW
 2356' FWL & 1980' FNL
 LOCATION
 API SERIAL NO. SEC. TWP. RANGE
 33 1S 1E
 Other Service
 FDC-CN

Permanent Datum: GL (UNGRADED); Elev.: 5310
 Log Measured From: KB 14 Ft. Above Perm. Datum
 Drilling Measured From: KB
 Elev.: K.B.:
 D.F.:
 EM. G.I. 5310

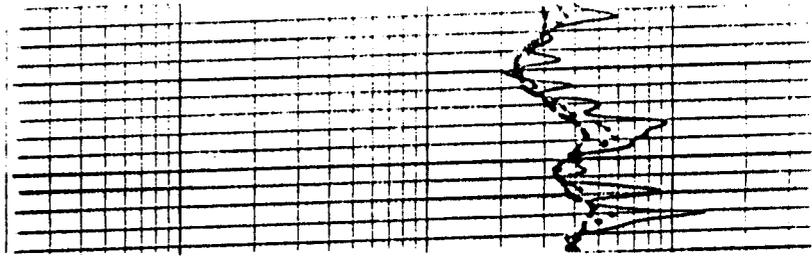
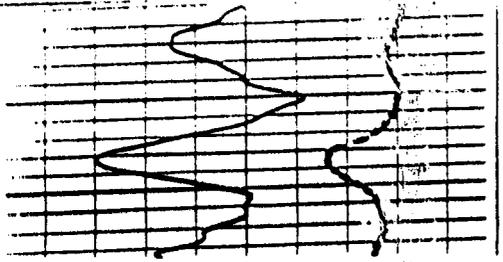
Date	5/8/78	6/1/78	
Run No.	ONE	TWO	
Depth-Driller	9993	12500	
Depth-Logger	9994	12508	
Btm. Log Interval	9988	12502	
Top Log Interval	60	9999	
Casing-Driller	9 5/8 @ 2125	7" @ 10000	@
Casing-Logger	2121	9999	
Bit Size	8 3/4	6 1/2	
Type Fluid in Hole	LSND	FGM	
Dens.	9.8	36	12.8 50
pH	9.5	17.8ml	10.4 8.0ml
Source of Sample	FLOWLINE	FLOWLINE	
Rm @ Meas. Temp.	2.44 @ 74 °F	2.44 @ 73 °F	@ °F
Rmf @ Meas. Temp.	2.07 @ 74 °F	1.72 @ 73 °F	@ °F
Rmc @ Meas. Temp.	3.66 @ 74 °F	3.65 @ 73 °F	@ °F
Source: Rmf Rmc	M C	M C	

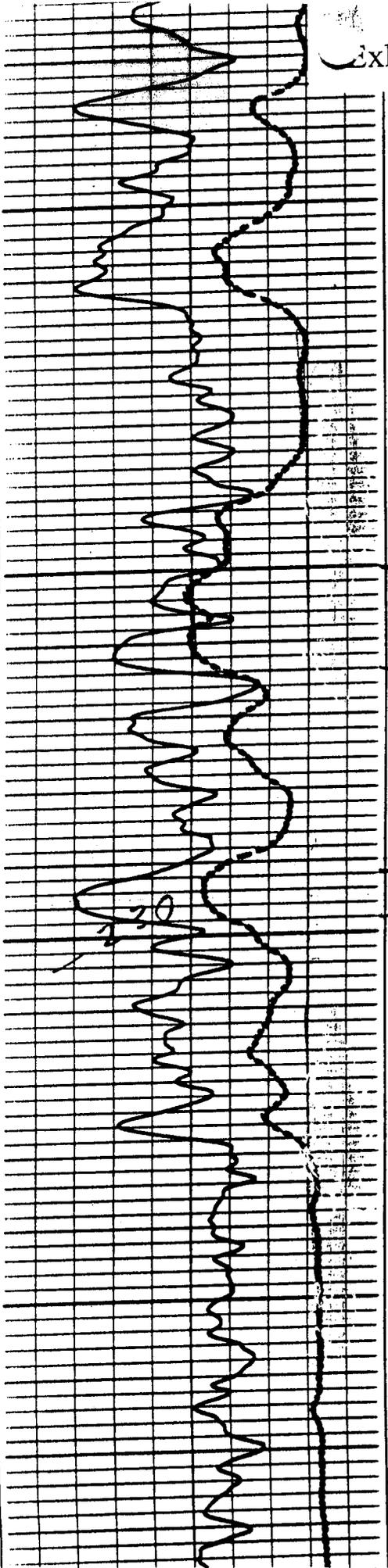
MARKED
 COUNTY UINTAH
 FIELD EAST BLUEBELL
 LOCATION DAVIS 1-33
 WELL DAVIS 1-33
 COMPANY FLYING DIAMOND

DETAIL LOG 5" = 100'

SPONTANEOUS-POTENTIAL	
- 15 MV +	MILLIVOLTS
GAMMA RAY API UNITS	
0	150
150	300

DEPTH	RESISTIVITY OHMS M ² /M			
	LATEROLOG - 8			
	0.2	1.0	10	100
	MEDIUM INDUCTION			
	0.2	1.0	10	100
	DEEP INDUCTION			
	0.2	1.0	10	100





5500

5600

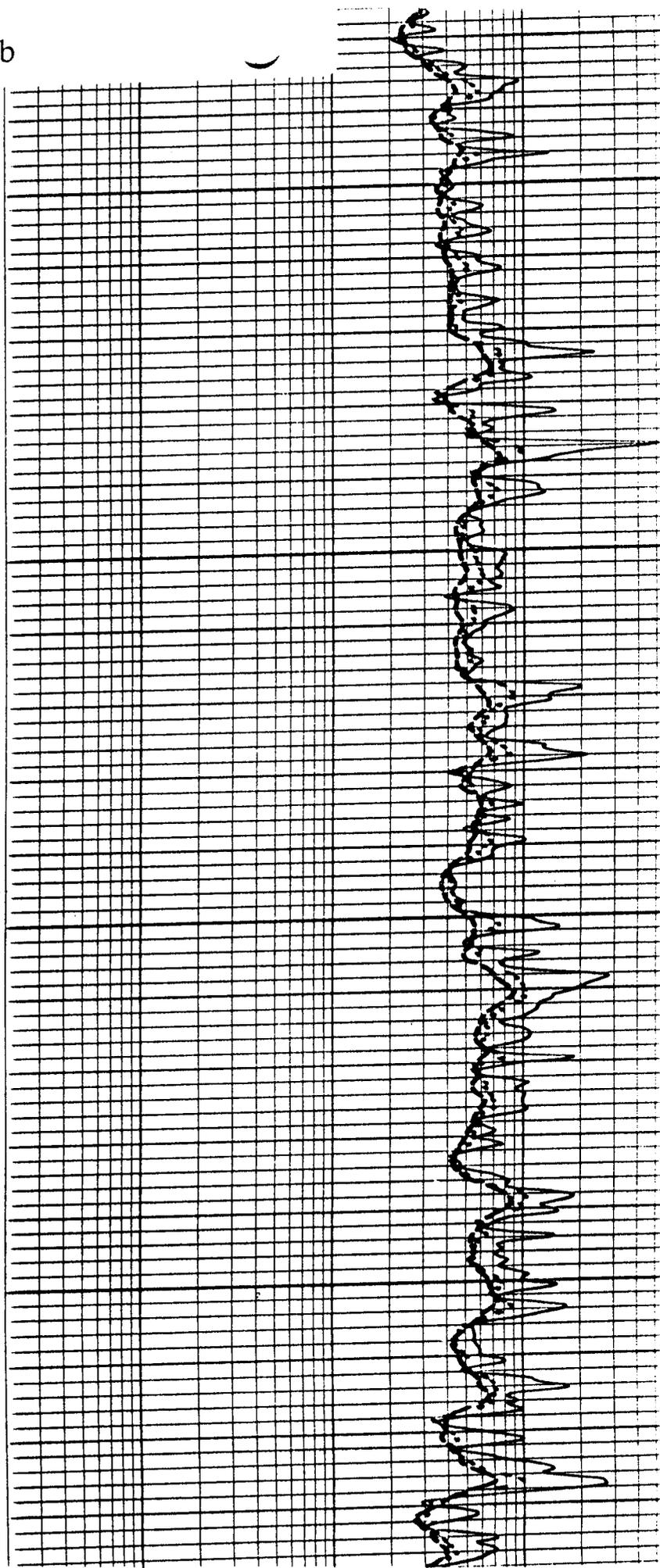
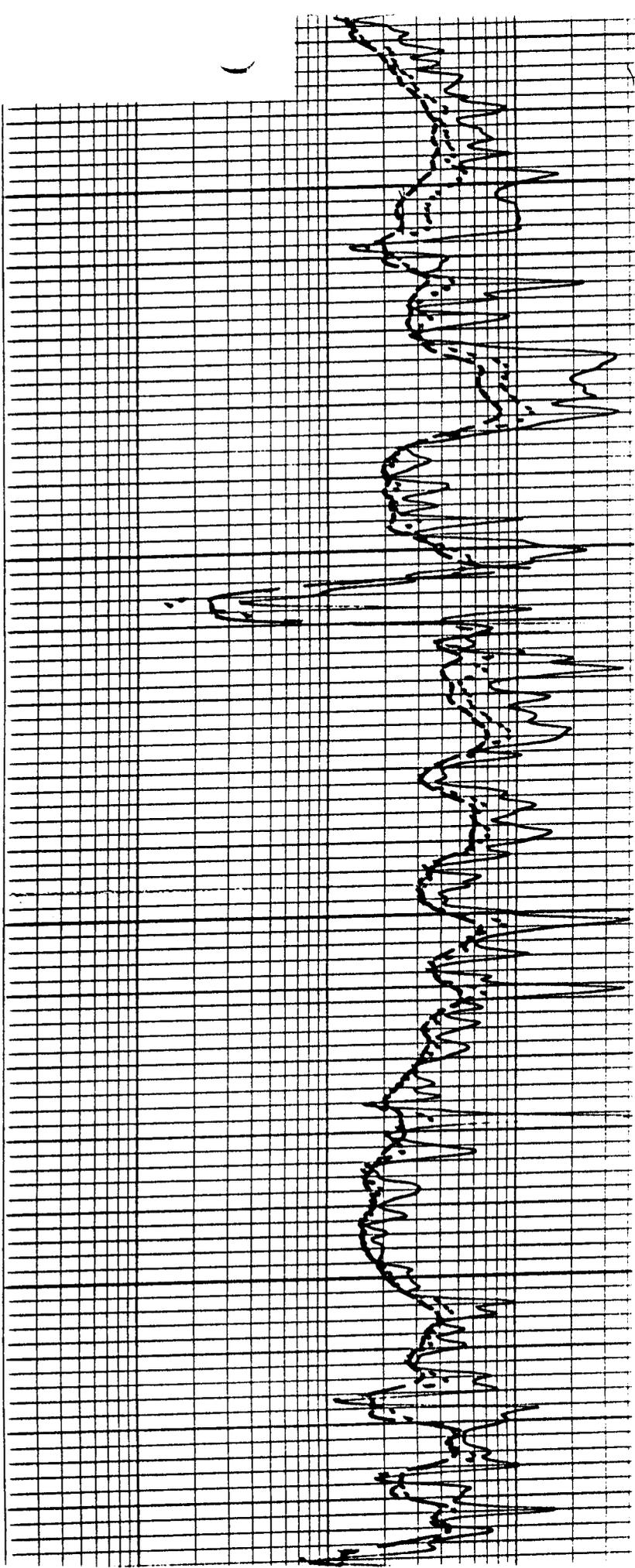
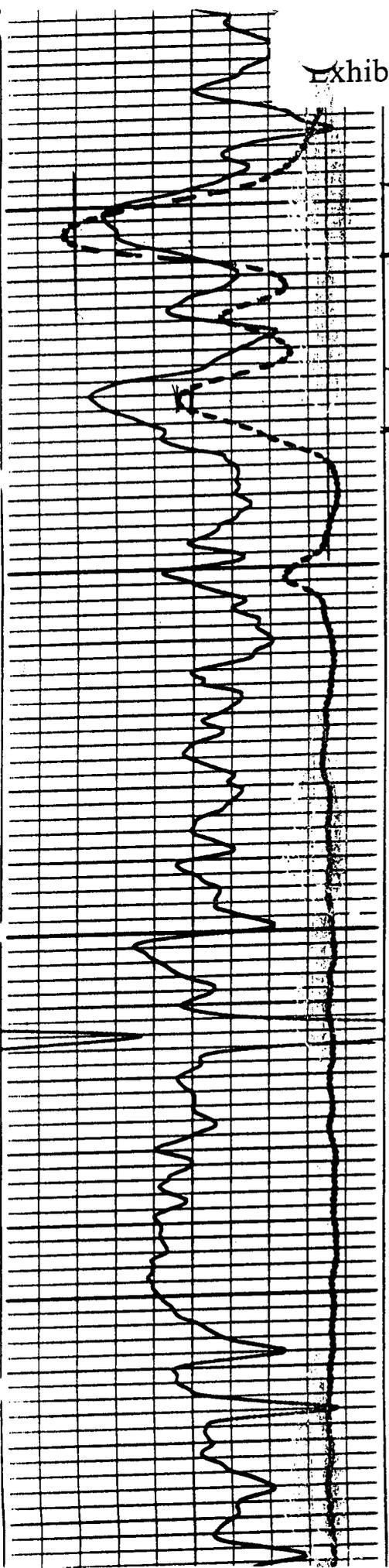


Exhibit E3c

5700

5800



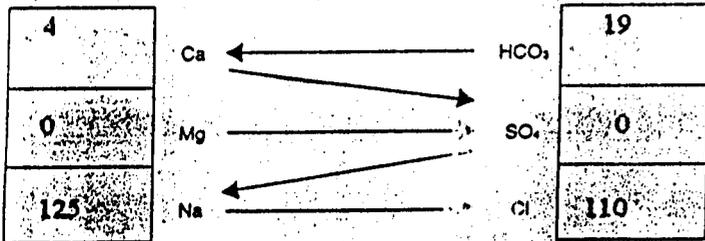
WATER ANALYSIS REPORT

Company Flying J Address _____ Date 12/29/00
 Source U-222-11B Date Sampled 2/28/00 Analysis No. _____

Analysis	mg/l(ppm)	Meg/l
1. PH	9	
2. H ₂ S (Qualitative)	3.5	
3. Specific Gravity	1.008	
4. Dissolved Solids	8,007	
5. Alkalinity (CaCO ₃)	CO ₃ _____ + 30 _____ CO ₃	0
6. Bicarbonate (HCO ₃)	HCO ₃ <u>1,160</u> + 61 _____ HCO ₃	19
7. Hydroxyl (OH)	OH _____ + 17 _____ OH	0
8. Chlorides (Cl)	Cl _____ + 35.5 _____ Cl	110
9. Sulfates (SO ₄)	SO ₄ _____ + 48 _____ SO ₄	0
10. Calcium (Ca)	Ca _____ + 20 _____ Ca	0
11. Magnesium (Mg)	Mg _____ + 12.2 _____ Mg	0
12. Total Hardness (CaCO ₃)	180	
13. Total Iron (Fe)	4	
14. Manganese	0.3	
15. Phosphate Residuals	35	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equly. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04	4			324
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00	15			1,260
Na ₂ SO ₄	71.03				
NaCl	58.46	110			6,431

Saturation Values

Compound	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

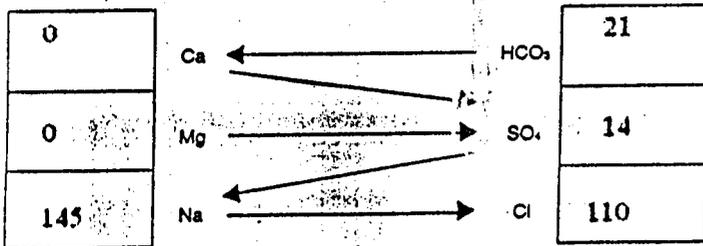
WATER ANALYSIS REPORT

Company Flying J Address _____ Date 2/29/00
 Source Ute 129 AIE Date Sampled 2/28/00 Analysis No. _____

Analysis	mg/l(ppm)	*Meq/l
1. PH	10	
2. H ₂ S (Qualitative)	23.0	
3. Specific Gravity	1.008	
4. Dissolved Solids	8,813	
5. Alkalinity (CaCO ₃)	360	12
6. Bicarbonate (HCO ₃)	350	9
7. Hydroxyl (OH)	0	0
8. Chlorides (Cl)	3,900	110
9. Sulfates (SO ₄)	660	14
10. Calcium (Ca)	8	0
11. Magnesium (Mg)	0	0
12. Total Hardness (CaCO ₃)	20	
13. Total Iron (Fe)	6	
14. Manganese	0.3	
15. Phosphate Residuals	32	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equly. Wt.	X	Meq/l	=	Mg/l
Ca(HCO ₃) ₂	81.04				
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00	21			1,764
Na ₂ SO ₄	71.03	14			994
NaCl	58.46	110			6,431

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

UNICHEM

A Division of BJ Services

Exhibit H3

P.O. Box 217
Roosevelt, Utah 84068

Office (435) 722-5066
Fax (435) 722-5727

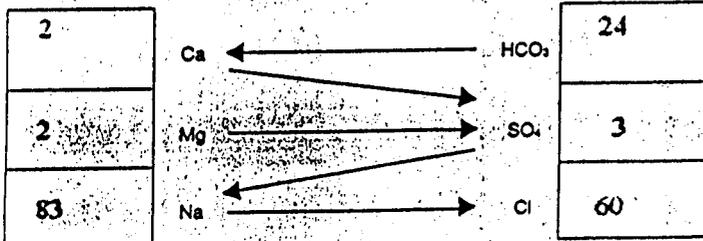
WATER ANALYSIS REPORT

Company Flying J Address _____ Date 2/28/00
Source Ute Canyon 2-36A Date Sampled 2/26/00 Analysis No. _____

Analysis	mg/l(ppm)	Meg/l
1. PH	9.8	
2. H ₂ S (Qualitative)	4.5	
3. Specific Gravity	1.003	
4. Dissolved Solids	5,683	
5. Alkalinity (CaCO ₃)	CO ₃ 0 + 30 0 CO ₃	
6. Bicarbonate (HCO ₃)	HCO ₃ 1,460 + 61 24 HCO ₃	
7. Hydroxyl (OH)	OH 0 + 17 0 OH	
8. Chlorides (Cl)	Cl 2,100 + 35.5 60 Cl	
9. Sulfates (SO ₄)	SO ₄ 150 + 48 3 SO ₄	
10. Calcium (Ca)	Ca 40 + 20 2 Ca	
11. Magnesium (Mg)	Mg 24 + 12.2 2 Mg	
12. Total Hardness (CaCO ₃)	200	
13. Total Iron (Fe)	40.0	
14. Manganese	5	
15. Phosphate Residuals	63	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equly. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		2		162
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17		2		146
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		20		
Na ₂ SO ₄	71.03		3		
NaCl	58.46		60		

Saturation Values	Distilled Water 20°C
CaCO ₃	19 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

UNICHEM

A Division of BJ Services

Exhibit H4

P.O. Box 217
Roosevelt, Utah 84066

Office (435) 722-5066
Fax (435) 722-5727

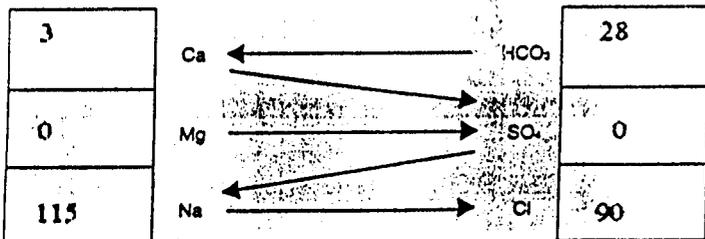
WATER ANALYSIS REPORT

Company Flving J Address _____ Date 2/29/00
 Source Sadie Blank 1321 Date Sampled 2/28/00 Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	9.3	
2. H ₂ S (Qualitative)	2.0	
3. Specific Gravity	1.007	
4. Dissolved Solids	7,595	
5. Alkalinity (CaCO ₃)	CO ₃ 0 + 30 0	CO ₃
6. Bicarbonate (HCO ₃)	HCO ₃ 1,700 + 61 28	HCO ₃
7. Hydroxyl (OH)	OH 0 + 17 0	OH
8. Chlorides (Cl)	Cl 3,190 + 35.5 90	Cl
9. Sulfates (SO ₄)	SO ₄ 0 - 48 0	SO ₄
10. Calcium (Ca)	Ca 60 + 20 3	Ca
11. Magnesium (Mg)	Mg 0 + 12.2 0	Mg
12. Total Hardness (CaCO ₃)	150	
13. Total Iron (Fe)	20	
14. Manganese	0.9	
15. Phosphate Residuals	72	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equly. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04	3			243
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00	25			2,100
Na ₂ SO ₄	71.03				
NaCl	58.46	90			5,261

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

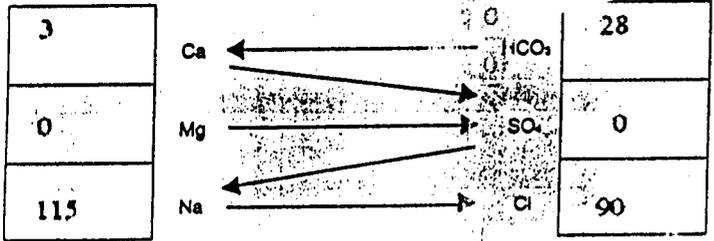
WATER ANALYSIS REPORT

Company Flying J Address _____ Date 2/29/00
 Source Sadie Blank Date Sampled 2/28/00 Analysis No. _____

Analysis	mg/l(ppm)	Meg/l
1. PH	<u>9.3</u>	
2. H ₂ S (Qualitative)	<u>2.0</u>	
3. Specific Gravity	<u>1.007</u>	
4. Dissolved Solids	<u>7,595</u>	
5. Alkalinity (CaCO ₃)	<u>0</u>	<u>0</u>
6. Bicarbonate (HCO ₃)	<u>0</u>	<u>0</u>
7. Hydroxyl (OH)	<u>+ 30</u>	<u>0</u>
8. Chlorides (Cl)	<u>+ 61</u>	<u>28</u>
9. Sulfates (SO ₄)	<u>+ 17</u>	<u>0</u>
10. Calcium (Ca)	<u>+ 35.5</u>	<u>90</u>
11. Magnesium (Mg)	<u>+ 48</u>	<u>0</u>
12. Total Hardness (CaCO ₃)	<u>+ 20</u>	<u>3</u>
13. Total Iron (Fe)	<u>+ 12.2</u>	<u>0</u>
14. Manganese		
15. Phosphate Residuals		

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 H4
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*Milli equivalents per liter



Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

Compound	Equiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04	<u>3</u>			<u>243</u>
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00	<u>25</u>			<u>2,100</u>
Na ₂ SO ₄	71.03				
NaCl	58.46	<u>90</u>			<u>5,261</u>

REMARKS _____

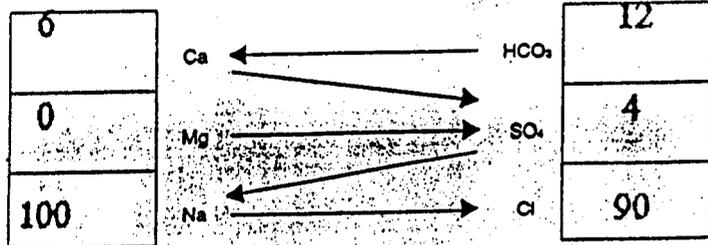
WATER ANALYSIS REPORT

Company FLYING J EXPLORATIONS Address _____ Date 08-07-98
 Source LANDY 30A1E Date Sampled 08-06-98 Analysis No. _____

	Analysis	mg/l (ppm)	*Meq/l
1. PH	8.1		
2. H ₂ S (Qualitative)	0.5		
3. Specific Gravity	1.005		
4. Dissolved Solids		6,535	
5. Alkalinity (CaCO ₃)		0	+ 30 0
6. Bicarbonate (HCO ₃)		700	+ 61 12
7. Hydroxyl (OH)		0	+ 17 0
8. Chlorides (Cl)		3,200	+ 35.5 90
9. Sulfates (SO ₄)		180	+ 48 4
10. Calcium (Ca)		112	+ 20 6
11. Magnesium (Mg)		0	+ 12.2 0
12. Total Hardness (CaCO ₃)		280	
13. Total Iron (Fe)		1.6	
14. Manganese		0	
15. Phosphate Residuals		30	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equly. Wt.	X	Meq/l	=	Mg/l
Ca(HCO ₃) ₂	81.04	6			486
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00	6			504
Na ₂ SO ₄	71.03	4			284
NaCl	58.46	90			5,261

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

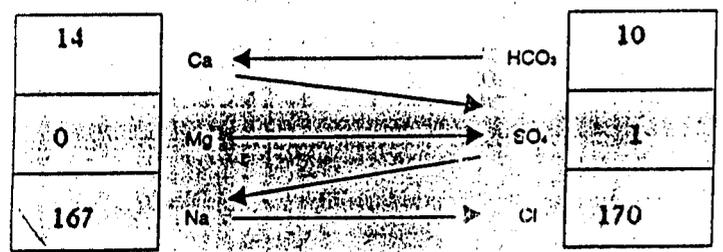
WATER ANALYSIS REPORT

Company Frang Address _____ Date 2/28/00
 Source Line 19 A/B Date Sampled 2/26/00 Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	9.1	
2. H ₂ S (Qualitative)	0.5	
3. Specific Gravity	1.010	
4. Dissolved Solids	10,955	
5. Alkalinity (CaCO ₃)	0	0
6. Bicarbonate (HCO ₃)	610	10
7. Hydroxyl (OH)	0	0
8. Chlorides (Cl)	6,000	170
9. Sulfates (SO ₄)	40	1
10. Calcium (Ca)	280	14
11. Magnesium (Mg)	0	0
12. Total Hardness (CaCO ₃)	700	
13. Total Iron (Fe)	1.5	
14. Manganese	0.3	
15. Phosphate Residuals	25	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equly. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04	10			810
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00	4			336
Na ₂ SO ₄	71.03	1			71
NaCl	58.46	170			9,938

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

UNICHEM

A Division of BJ Services

P.O. Box 217
Roosevelt, Utah 84066

Office (435) 722-5066
Fax (435) 722-5727

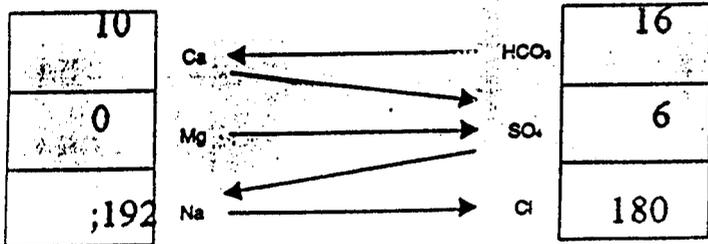
WATER ANALYSIS REPORT

Company FLYING J OIL & GAS Address _____ Date 9-21-90
Source POWELL 1-21B1 Date Sampled _____ Analysis No. _____

	Analysis	mg/l(ppm)	*Meq/l
1. PH	8.6		
2. H ₂ S (Qualitative)	1.5		
3. Specific Gravity	1.012		
4. Dissolved Solids		12263	
5. Alkalinity (CaCO ₃)		CO ₃ 0	+ 30 0 CO ₃
6. Bicarbonate (HCO ₃)		HCO ₃ 980	+ 61 16 HCO ₃
7. Hydroxyl (OH)		OH 0	+ 17 0 OH
8. Chlorides (Cl)		Cl 6400	+ 35.5 180 Cl
9. Sulfates (SO ₄)		SO ₄ 300	+ 48 6 SO ₄
10. Calcium (Ca)		Ca 200	+ 20 10 Ca
11. Magnesium (Mg)		Mg 0	+ 12.2 0 Mg
12. Total Hardness (CaCO ₃)		500	
13. Total Iron (Fe)		.6	
14. Manganese		0	
15. Phosphate Residuals			

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equlv. Wt.	X	Meq/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		10		810
CaSO ₄	88.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62		6		504
NaHCO ₃	84.00		6		426
Na ₂ SO ₄	71.03		180		10523
NaCl	58.46				

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

EXHIBIT H8

FLYING J OPERATED SOURCES OF PRODUCED WATER

	Sec	Tnsp	Rng	Status
ALLRED 2-32A1E	32	1S	1E	P
BADGER SAM H.U. MONGUS 1-15A1	15	1S	1W	P
BASTIAN 1-2A1	2	1S	1W	P
BASTIAN 3-8A1	8	1S	1W	P
BIRCHELL 1-27A1	27	1S	1W	Int
BISEL GURR 11-1	11	1S	1W	P
BOLTON 2-29A1E	29	1S	1E	P
BOOM BOOM	29	1S	1W	P
BRADLEY 1-23A1	23	1S	1W	P
D.R. LONG 2-19A1E	19	1S	1E	P
DAVIS 1-33 A1E	33	1S	1E	Int
DRY GULCH 1-36A1	36	1S	1W	SI
EULA UTE 1-16A1	16	1S	1W	P
FISHER 2-26A4	26	1S	4W	SI
FOWLES 1-26A1	26	1S	1W	Int
FRED BASSETT 1-22A1	22	1S	1W	p
GOVERNMENT 10-14	14	6S	20E	P
GOVERNMENT 12-14	14	6S	20E	P
GOVERNMENT 4-14	14	6S	20E	Int
GUSHER 2-17B1	17	2S	1W	Int
H. MARTIN 1-21Z1	21	1N	1W	P
H.D. LANDY 1-30A1E	30	1S	1E	P
H.E. MANN 2-28Z2	28	1N	2W	P
HACKFORD 1-23A1E	23	1S	1E	P
HANSEN 1-23B3	23	2S	3W	P
HOUSTON 1-34Z1	34	1N	1W	P
KNIGHT 1-28B3	28	2S	3W	SI
L. BOLTON 1-12A1	12	1S	1W	P
LANDY 2-30A1E	30	1S	1E	P
LARSEN 1-25A1	25	1S	1W	P
LILA D. 2-25A1	25	1S	1W	P
MAXIMILLIAN UTE 1-14A3	14	1S	3W	P
MP 1-34A1E	34	1S	1E	P
NELSON 1-31A1E	31	1S	1E	P
O MOON 2-26Z1	26	1N	1W	P
PERFECT 10 1-10A1	10	1S	1W	P
POWELL 1-21B1	21	2S	1W	P
PRESCOTT 1-35Z1	35	1N	1W	P
R. HOUSTON 1-22Z1	22	1N	1W	P
R. LLOYD 1-24A1E	24	1S	1E	P
REARY 2-17A3	17	1S	3W	Int
RUST #2	22	1S	3W	Int
RUST 3-22A4	22	1S	4W	Int
SADIE BLANK 1-33Z1	33	1N	1W	P
UTE CARSON 2-36A1	36	1S	1W	P
UTE TRIBAL 2-8A1	8	1S	1W	SI
UTE TRIBAL 1-15A1E	15	1S	1E	P
UTE TRIBAL 1-17A1E	17	1S	1E	P
UTE TRIBAL 1-22A1E	22	1S	1E	P
UTE TRIBAL 1-27A1E	27	1S	1E	Int
UTE TRIBAL 1-29A1E	29	1S	1E	P
UTE TRIBAL 1-32Z1	32	1N	1W	Int
UTE TRIBAL 1-35A1E	35	1S	1E	Int
UTE TRIBAL 2-22A1E	22	1S	1E	P
UTE TRIBAL 2-35B(Z2)	35	1N	2W	SI
WALKER 1-14A1E	14	1S	1E	P
WISSE 1-28Z1	28	1N	1W	P

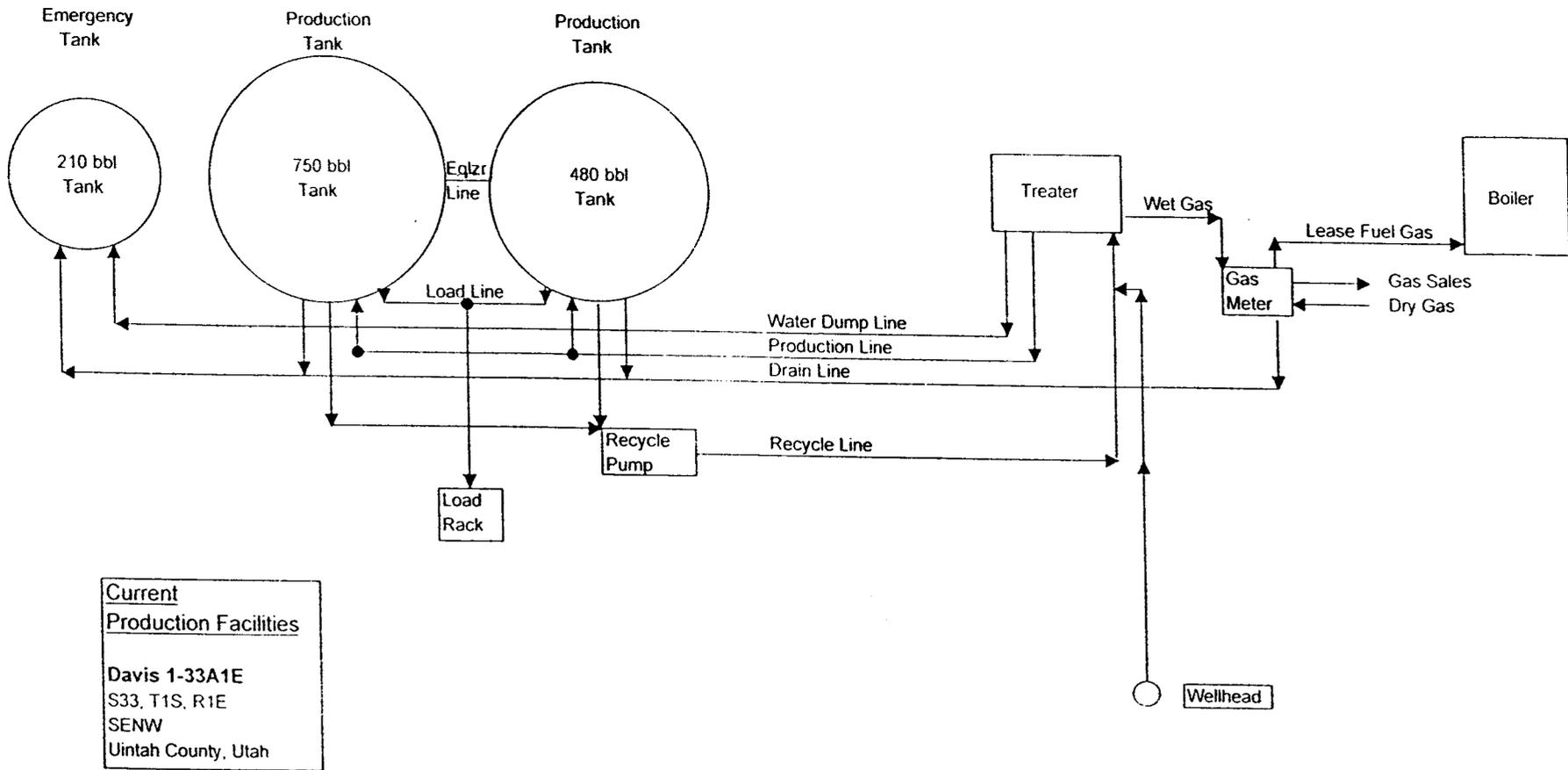


Exhibit M1

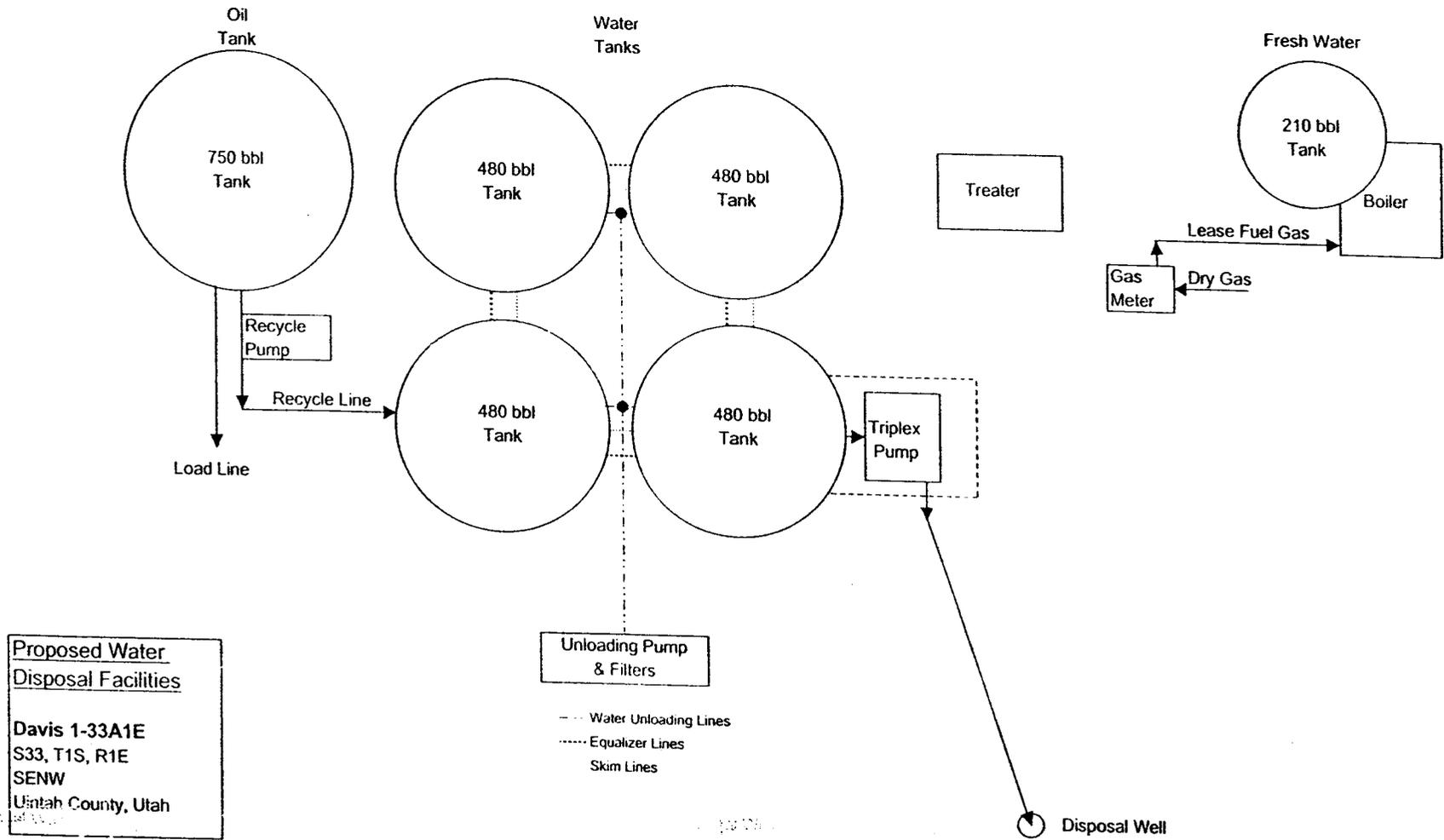


Exhibit M2



DATE: 4/21/00

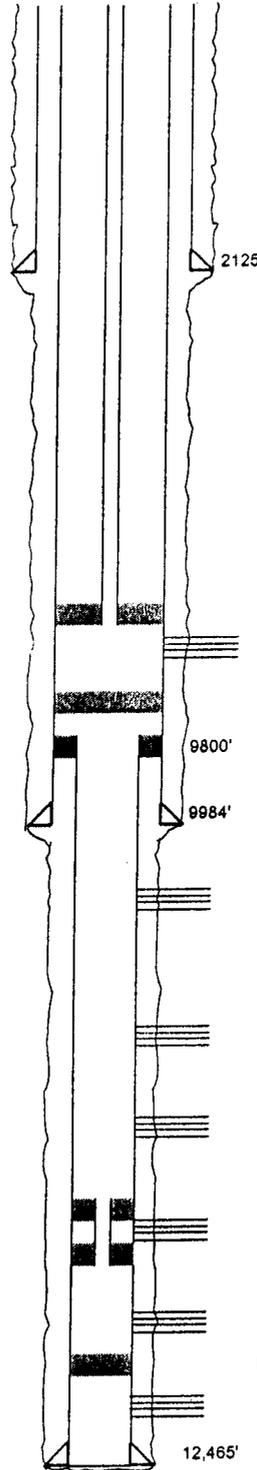
Davis #1-33A1
 Section 33 T1S, R1E SE/NW
 Uintah County, Utah

WELLBORE DIAGRAM
 Present Configuration

Ground Elevation: 5310'
 Kelly Elevation: 5324'

SURFACE CASING

CSG SIZE: 9-5/8"
 GRADE: K55
 WEIGHT: 40.5#
 DEPTH LANDED: 2125'
 HOLE SIZE: 12 1/2"
 CEMENT DATA: 660 sx Lite; 200 sx G
 Cement to surface



LONG STRING

CSG SIZE: 7"
 GRADE: S95
 WEIGHT: 26#, 29#, 32#
 DEPTH LANDED: 9984'
 HOLE SIZE: 8 3/4"
 CEMENT DATA: 450 sx Class G RFC

GREEN RIVER PERFORATIONS

8/12/95: 8449' - 9647' 23 intervals, 148', 296 perms 4" guns
 Model G RBP @ 9778'

WASATCH PERFORATIONS

6/17/78: 11,468' - 12,372' 48 intervals, 48', 48 perms, 2" guns
 8/10/78: 11,018' - 11,362' 5 intervals, 32', 64 perms 2" guns
 6/29/84: 11,433' - 11,800' 11 intervals, 11', 33 perms, 3 1/8" guns
 7/7/84: 10,064' - 11,127' 63 intervals, 63', 189 perms 3 1/8" guns

LINER

CSG SIZE: 5"
 GRADE: P110
 WEIGHT: 18#
 TOP: 9800'
 BOTTOM: 12,465'
 LENGTH: 2665'
 DEPTH LANDED: 12,465'
 HOLE SIZE: 6"
 CEMENT DATA: 700 sx Stress I

Stradle Packer Assembly on 2 7/8" Tubing
 from 11,176' to 11,250'

Baker FSG plug @ 11,817' set 7/6/84

Perforations 11,862' to 11,890' sqzd w/75 sx 10/3/78
 Perforations 12,042' to 12,372' sqzd w/75 sx 9/28/78

PLUG BACK TD
TOTAL DEPTH 12,500'

LOGS: CBL;
 Dual Induction/GR;
 Formation Density/GR;

Davis #1-33A1
 Section 33 T1S, R1E SE/NW
 Uintah County, Utah

WELLBORE DIAGRAM
 Water Disposal

Ground Elevation: 5310'
 Kelly Elevation: 5324'

SURFACE CASING

CSG SIZE: 9-5/8"
 GRADE: K55
 WEIGHT: 40.5#
 DEPTH LANDED: 2125'
 HOLE SIZE: 12 1/2"
 CEMENT DATA: 660 sx Lite, 200 sx G
 Cement to surface

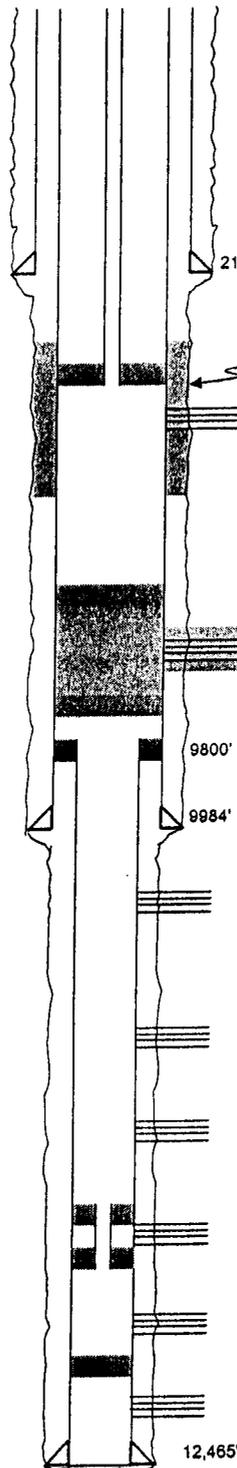
LONG STRING

CSG SIZE: 7"
 GRADE: S95
 WEIGHT: 26#, 29#, 32#
 DEPTH LANDED: 9984'
 HOLE SIZE: 8 3/4"
 CEMENT DATA: 450 sx Class G RFC

LINER

CSG SIZE: 5"
 GRADE: P110
 WEIGHT: 18#
 TOP: 9800'
 BOTTOM: 12,465'
 LENGTH: 2665'
 DEPTH LANDED: 12,465'
 HOLE SIZE: 6"
 CEMENT DATA: 700 sx Stress I

PLUG BACK TD
TOTAL DEPTH 12,500'



Remedial Squeeze for Good Cement Bond If Necessary

GREEN RIVER SWD PERFORATIONS
 5500' - 5732'

Cement Retainer @ 8300' with 200 sx Class G cement sqzd bel

GREEN RIVER PERFORATIONS
 8/12/95: 8449' - 9647' 23 intervals, 148', 296 perfs 4" guns

Model G RBP @ 9778'

WASATCH PERFORATIONS

6/17/78: 11,468' - 12,372' 48 intervals, 48', 48 perfs, 2" guns
 8/10/78: 11,018' - 11,362' 5 intervals, 32', 64 perfs 2" guns
 6/29/84: 11,433' - 11,800' 11 intervals, 11', 33 perfs, 3 1/8" guns
 7/7/84: 10,064' - 11,127' 63 intervals, 63', 189 perfs 3 1/8" guns

Straddle Packer Assembly on 2 7/8" Tubing
 from 11,176' to 11,250'

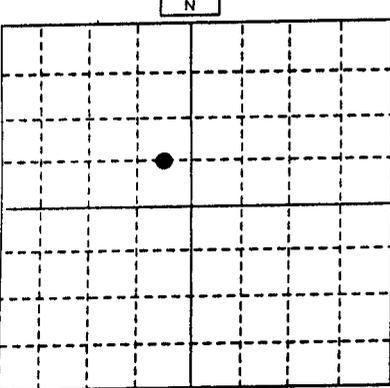
Baker FSG plug @ 11,817' set 7/6/84

Perforations 11,862' to 11,890' sqzd w/75 sx 10/3/78
 Perforations 12,042' to 12,372' sqzd w/75 sx 9/28/78

LOGS: CBL;
 Dual Induction/GR;
 Formation Density/GR;

PLUGGING AND ABANDONMENT PLAN

WELL NAME & NUMBER, FIELD NAME, LEASE NAME & NUMBER Davis 1-33A1E Bluebell Field	NAME, ADDRESS, & PHONE NUMBER OF OWNER / OPERATOR Flying J Oil & Gas, Inc. 333 West Center Street North Salt Lake, Utha 84054 801-296-7700
---	---

Locate Well and Outline Unit on Section Plat - 640 Acres 	STATE Utah	COUNTY Duchesne	STATE PERMIT NUMBER 43-047-30384
SURFACE LOCATION DESCRIPTION SW 1/4 of NW 1/4 of ___ 1/4 of ___ 1/4 of Section <u>33</u> Township <u>1S</u> Range <u>1E</u>			
LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT Surface Location <u>1980</u> ft. From (N/S) <u>N</u> Line of Quarter Section And <u>2356</u> ft. From (E/W) <u>W</u> Line of Quarter Section			
TYPE OF AUTHORIZATION <input checked="" type="checkbox"/> Individual Permit <input type="checkbox"/> Rule <input type="checkbox"/> Area Permit		WELL ACTIVITY <input type="checkbox"/> Class I <input type="checkbox"/> Hazardous <input type="checkbox"/> Nonhazardous <input checked="" type="checkbox"/> Class II <input checked="" type="checkbox"/> Brine Disposal <input type="checkbox"/> Hydrocarbon Storage <input type="checkbox"/> Enhanced Recovery <input type="checkbox"/> Class III <input type="checkbox"/> Class IV	
Number of Wells in Area Permit _____ US EPA Permit Number _____			

CASING/TUBING/CEMENT RECORD AFTER PLUGGING AND ABANDONMENT							METHOD OF EMPLACEMENT OF CEMENT PLUGS		
Size	Wt (lb/ft) TBG/CSG	Original Amount (CSG)	CSG to be Left in Well	Hole Size	Sacks Cement Used	Type			
9 5/8"	40.5#	2125'	2125'	12 1/2"	860	Lite & G	<input checked="" type="checkbox"/> Balance Method <input type="checkbox"/> Dump Bailer Method <input type="checkbox"/> Two Plug Method <input checked="" type="checkbox"/> Other		
7"	26,29,32#	9984'	9984'	8 3/4"	450	G			
5"	18#	2665'	2665'	6"	700	G			

CEMENT TO PLUG AND ABANDON DATA					Plug #	Plug #	Plug #	Plug #	Plug #	Plug #	Plug #
Size of Hole or Pipe in Which Plug Will Be Placed (Inches)					7"	7"	7"	9 5/8"			
Calculated Top of Plug (ft.)					8248'	2000'	Surface	Surface			
Measured Top of Plug (ft.)											
Depth to Bottom of Plug (ft.)					9778'	2200'	200'	2125'			
Sacks of Cement to be Used					200	37	37	300			
Slurry Volume to be Used (cu. Ft.)					230	43	43	345			
Slurry Weight (lb./gal.)					15.8	15.8	15.8	15.8			
Type of Cement, Spacer or Other Material Used					Class G	Class G	Class G	Class G			
Type of Preflush Used					Water	Water	Water	Water			

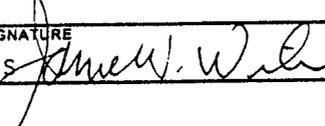
DESCRIPTION OF PLUGGING PROCEDURE

Attached as Exhibit Q3

ESTIMATED COST OF PLUGGING AND ABANDONMENT					
Cement	\$ -	12000	Cast Iron Bridge Plug	\$ -	2000
Logging	\$ -		Cement Retainer	\$ -	2000
Rig or Pulling Unit	\$ -	10000	Miscellaneous	\$ -	4000
	\$ -		Total	\$ -	30000

CERTIFICATION

I certify under the penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

NAME AND OFFICIAL TITLE James W. Wilson--VP of operations	SIGNATURE 	DATE SIGNED 5/12/00
--	--	------------------------



Davis #1-33A1
 Section 33 T1S, R1E SE/NW
 Uintah County, Utah

WELLBORE DIAGRAM
 P&A

Ground Elevation: 5310'
 Kelly Elevation: 5324'

SURFACE CASING

CSG SIZE: 9-5/8"
 GRADE: K55
 WEIGHT: 40.5#
 DEPTH LANDED: 2125'
 HOLE SIZE: 12 1/2"
 CEMENT DATA: 660 sx Lite; 200 sx G Cement to surface

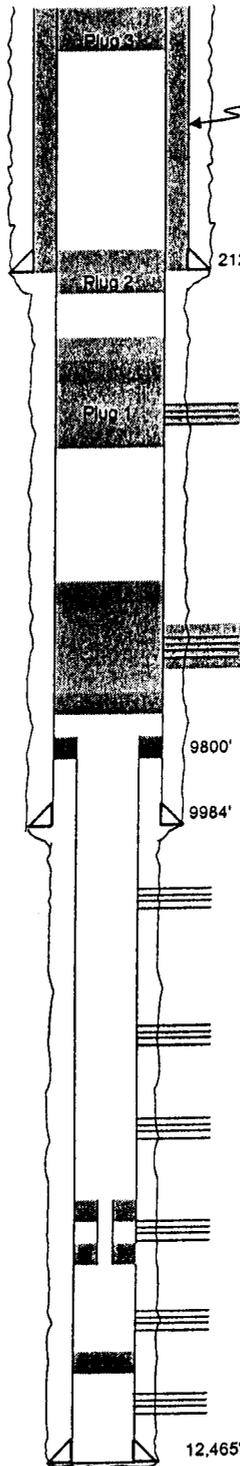
LONG STRING

CSG SIZE: 7"
 GRADE: S95
 WEIGHT: 26#, 29#, 32#
 DEPTH LANDED: 9984'
 HOLE SIZE: 8 3/4"
 CEMENT DATA: 450 sx Class G RFC

LINER

CSG SIZE: 5"
 GRADE: P110
 WEIGHT: 18#
 TOP: 9800'
 BOTTOM: 12,465'
 LENGTH: 2665'
 DEPTH LANDED: 12,465'
 HOLE SIZE: 6"
 CEMENT DATA: 700 sx Stress I

PLUG BACK TD
TOTAL DEPTH 12,500'



- Plug 1** 200 sx Class G cement pump cement retainer and into SWD and 2 bbls (52') placed on top
- Plug 2** 37 sx (200') Class G cement i across surface casing shoe fro
- Plug 3** 37 sx (200') Class G cement i from 200' to surface
- Plug 4** 300 sx Class G cement pump casing valve to fill the 9 5/8" -

Cement Retainer @ 5450'

GREEN RIVER SWD PERFORATIONS
 5500' - 5732'

Cement Retainer @ 8300' with 200 sx Class G cement sqzd bel

GREEN RIVER PERFORATIONS
 8/12/95: 8449' - 9647' 23 intervals, 148', 296 perfs 4" guns

Model G RBP @ 9778'

WASATCH PERFORATIONS

- 8/17/78: 11,468' - 12,372' 48 intervals, 48', 48 perfs, 2" guns
- 8/10/78: 11,018' - 11,362' 5 intervals, 32', 64 perfs 2" guns
- 8/29/84: 11,433' - 11,800' 11 intervals, 11', 33 perfs, 3 1/8" guns
- 7/7/84: 10,064' - 11,127' 63 intervals, 63', 189 perfs 3 1/8" guns

Stradle Packer Assembly on 2 7/8" Tubing
 from 11,176' to 11,250'

Baker FSG plug @ 11,817' set 7/6/84

Perforations 11,862' to 11,890' sqzd w/75 sx 10/3/78
 Perforations 12,042' to 12,372' sqzd w/75 sx 9/28/78

LOGS: CBL;
 Dual Induction/GR;
 Formation Density/GR;

Exhibit Q3

April 24, 2000

**PLUG AND ABANDONMENT PROCEDURE
DAVIS 1-33A1E
EXHIBIT Q3**

Purpose: Plug and abandon Green River SWD well.

PERTINENT INFORMATION

Well Location: 2356' FWL 1980' FNL (SENW)
Section 33, Township 1 South, Range 1 East
Uintah County, Utah

Elevation: 5310' GL, 5324' KB

TD: 12,500'
PBTD: 9778' CIBP

API No.: 43-047-30384

Acctg. No.: 77035

Casing: 13-3/8", 54# K55 LT&C @ 159' w/ 175 sx cmt
9-5/8", 40.5# K55 LT&C 8rd @ 2170 w/ 860 sx cmt
7", 26,29&33# S95 LT&C 8rd @ 9984' w/ 450 sx cmt
5", 18# P110 AB-FL4S liner @ 9,800'-12,465' w/ 700 sx cmt

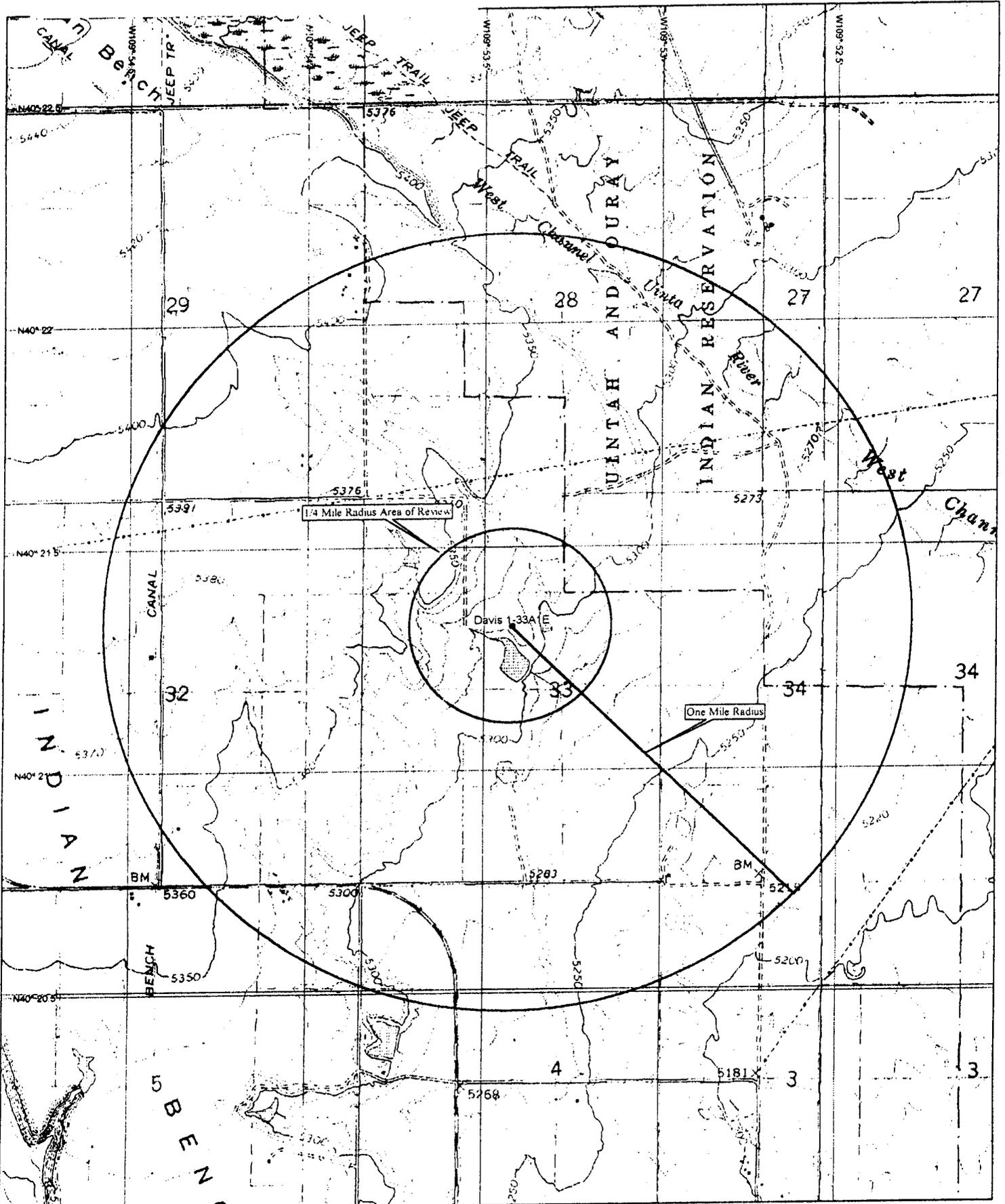
Perforations: Wasatch formation 12,372' to 10,064', 154', 334 holes
Green River formation 8,449' to 9647'', 148', 296 holes

Notes: Green River perforations will be squeezed with 200 sx cement and casing plug set at 9978' and cement retainer @ 8300'.

PROCEDURE

1. MIRUSU. Hot oil well as needed to release packer and flush tubing.
2. POOH tubing and packer.
3. Pick up and run bit and scraper for 7" 32# casing. Clean out to PBTD @ 8300'.
4. RIH and set cement retainer at 5450'. Squeeze 200 sx class G cement below retainer (Plug 1) into SWD perfs from 5500' to 5732'. Leave 2 bbls (52') cement on top of retainer.
5. Pull up three stands and reverse out. Displace well with packer fluid.
6. Pull end of tubing to 2200'. Place 37 sx Class G cement, balanced plug from 2200' to 2000' (Plug 2) across surface casing shoe.
7. POOH with tubing and remove BOP. Pump 300 sx Class G cement down surface casing valve and fill 7" - 9 5/8" annulus with cement (Plug 4).
8. Cut off and remove wellhead.
9. Run tubing to 200' and place 37 sx Class G cement, balanced plug inside 7" casing from 200' to surface (Plug 3), letting excess cement spill into 7"- 9 5/8" casing annulus to fill fallback from Plug 4.
10. Install dry hole marker and reclaim surface to landowner specification.

Exhibit B1



UNICHEM

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WATER ANALYSIS REPORT

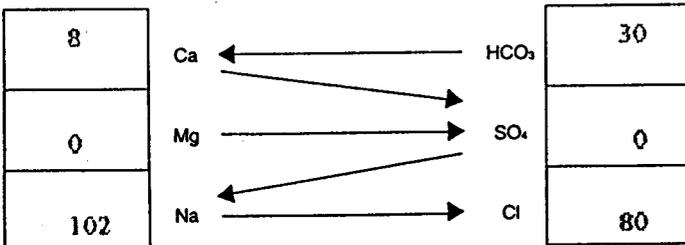
Company Flying J Address _____ Date 1/25/01

Source Cusher 2-17B1 Date Sampled _____ Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>8.5</u>	
2. H ₂ S (Qualitative)	<u>3.0</u>	
3. Specific Gravity	<u>1.007</u>	
4. Dissolved Solids	<u>7,136</u>	
5. Alkalinity (CaCO ₃)	CO ₃ <u>0</u>	÷ 30 <u>0</u> CO ₃
6. Bicarbonate (HCO ₃)	HCO ₃ <u>1,830</u>	÷ 61 <u>30</u> HCO ₃
7. Hydroxyl (OH)	OH <u>0</u>	÷ 17 <u>0</u> OH
8. Chlorides (Cl)	Cl <u>2,800</u>	÷ 35.5 <u>80</u> Cl
9. Sulfates (SO ₄)	SO ₄ <u>0</u>	÷ 48 <u>0</u> SO ₄
10. Calcium (Ca)	Ca <u>160</u>	÷ 20 <u>8</u> Ca
11. Magnesium (Mg)	Mg <u>0</u>	÷ 12.2 <u>0</u> Mg
12. Total Hardness (CaCO ₃)	<u>400</u>	
13. Total Iron (Fe)	<u>1.2</u>	
14. Manganese	<u>0.0</u>	
15. Phosphate Residuals	<u>88</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		<u>8</u>		<u>648</u>
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		<u>22</u>		<u>1,848</u>
Na ₂ SO ₄	71.03				
NaCl	58.46		<u>80</u>		<u>4,677</u>

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

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WATER ANALYSIS REPORT

Company Flying J Address _____ Date 1/23/01
Source Hansen 1-23B3 Date Sampled 1/22/01 Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>8.4</u>	
2. H ₂ S (Qualitative)	<u>1.0</u>	
3. Specific Gravity	<u>1.000</u>	
4. Dissolved Solids	<u>9,078</u>	
5. Alkalinity (CaCO ₃)	CO ₃ <u>0</u>	÷ 30 <u>0</u> CO ₃
6. Bicarbonate (HCO ₃)	HCO ₃ <u>2,318</u>	÷ 61 <u>38</u> HCO ₃
7. Hydroxyl (OH)	OH <u>0</u>	÷ 17 <u>0</u> OH
8. Chlorides (Cl)	Cl <u>3,540</u>	÷ 35.5 <u>100</u> Cl
9. Sulfates (SO ₄)	SO ₄ <u>35</u>	÷ 48 <u>1</u> SO ₄
10. Calcium (Ca)	Ca <u>80</u>	÷ 20 <u>4</u> Ca
11. Magnesium (Mg)	Mg <u>0</u>	÷ 12.2 <u>0</u> Mg
12. Total Hardness (CaCO ₃)	<u>200</u>	
13. Total Iron (Fe)	<u>1.6</u>	
14. Manganese	<u>0</u>	
15. Phosphate Residuals	<u>12</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION

Compound	Eqiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04	<u>4</u>			<u>324</u>
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00	<u>34</u>			<u>2,856</u>
Na ₂ SO ₄	71.03	<u>1</u>			<u>71</u>
NaCl	58.46	<u>100</u>			<u>5,846</u>

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

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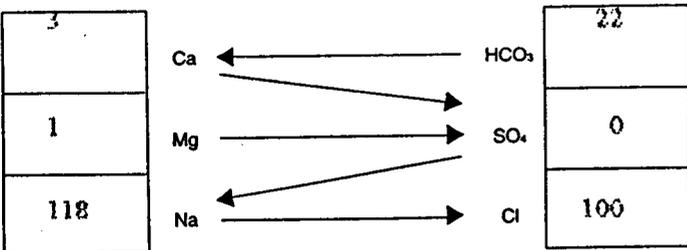
WATER ANALYSIS REPORT

Company Flying J Address _____ Date 1/11/01
Source Hackford 1-23AIE Date Sampled _____ Analysis No. _____

	Analysis	mg/l(ppm)	*Meg/l
1. PH	8.9		
2. H ₂ S (Qualitative)	0.5		
3. Specific Gravity	1.009		
4. Dissolved Solids		7,683	
5. Alkalinity (CaCO ₃)		0	÷ 30 = 0 CO ₃
6. Bicarbonate (HCO ₃)		1,342	÷ 61 = 22 HCO ₃
7. Hydroxyl (OH)		0	÷ 17 = 0 OH
8. Chlorides (Cl)		3,540	÷ 35.5 = 100 Cl
9. Sulfates (SO ₄)		15	÷ 48 = 0 SO ₄
10. Calcium (Ca)		60	÷ 20 = 3 Ca
11. Magnesium (Mg)		12	÷ 12.2 = 1 Mg
12. Total Hardness (CaCO ₃)		200	
13. Total Iron (Fe)		4.1	
14. Manganese		0.1	
15. Phosphate Residuals		21	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		3		243
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17		1		73
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		18		1,512
Na ₂ SO ₄	71.03				
NaCl	58.46		100		5,846

Saturation Values

CaCO₃

CaSO₄ · 2H₂O

MgCO₃

Distilled Water 20°C

13 Mg/l

2,090 Mg/l

103 Mg/l

REMARKS _____

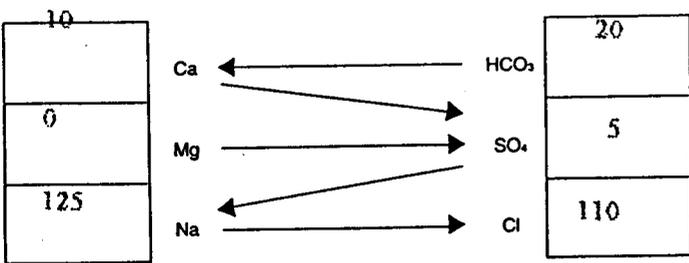
WATER ANALYSIS REPORT

Company Flying J Address _____ Date 1/15/01
 Source H.D. Landy 1-30 AIE Date Sampled _____ Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	10.0	
2. H ₂ S (Qualitative)	10.0	
3. Specific Gravity	1.008	
4. Dissolved Solids	8,420	
5. Alkalinity (CaCO ₃)	CO ₃ 0	÷ 30 0 CO ₃
6. Bicarbonate (HCO ₃)	HCO ₃ 1,220	÷ 61 20 HCO ₃
7. Hydroxyl (OH)	OH 0	÷ 17 0 OH
8. Chlorides (Cl)	Cl 3,900	÷ 35.5 110 Cl
9. Sulfates (SO ₄)	SO ₄ 225	÷ 48 5 SO ₄
10. Calcium (Ca)	Ca 200	÷ 20 10 Ca
11. Magnesium (Mg)	Mg 0	÷ 12.2 0 Mg
12. Total Hardness (CaCO ₃)	500	
13. Total Iron (Fe)	1.0	
14. Manganese	0.2	
15. Phosphate Residuals	19	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Eqiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04	10			810
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00	10			840
Na ₂ SO ₄	71.03	5			355
NaCl	58.46	110			6,431

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

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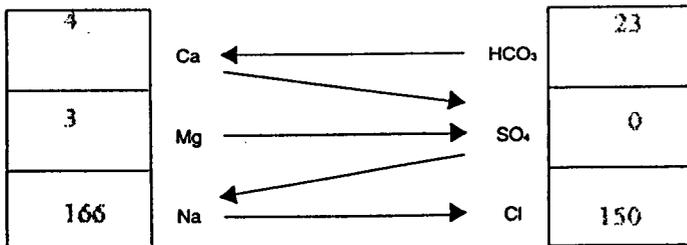
Company Flying J Address _____ Date 1/15/01

Source H Martin 1-21Z1 Date Sampled 1/15/01 Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>8.0</u>	
2. H ₂ S (Qualitative)	<u>1.0</u>	
3. Specific Gravity	<u>1.010</u>	
4. Dissolved Solids	<u>10,634</u>	
5. Alkalinity (CaCO ₃)	CO ₃ <u>0</u>	÷ 30 <u>0</u> CO ₃
6. Bicarbonate (HCO ₃)	HCO ₃ <u>1,400</u>	÷ 61 <u>23</u> HCO ₃
7. Hydroxyl (OH)	OH <u>0</u>	÷ 17 <u>0</u> OH
8. Chlorides (Cl)	Cl <u>5,300</u>	÷ 35.5 <u>150</u> Cl
9. Sulfates (SO ₄)	SO ₄ <u>0</u>	÷ 48 <u>0</u> SO ₄
10. Calcium (Ca)	Ca <u>80</u>	÷ 20 <u>4</u> Ca
11. Magnesium (Mg)	Mg <u>36</u>	÷ 12.2 <u>3</u> Mg
12. Total Hardness (CaCO ₃)	<u>350</u>	
13. Total Iron (Fe)	<u>3.2</u>	
14. Manganese	<u>0.1</u>	
15. Phosphate Residuals	<u>46</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		<u>4</u>		<u>243</u>
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17		<u>3</u>		<u>220</u>
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		<u>16</u>		<u>1,344</u>
Na ₂ SO ₄	71.03				
NaCl	58.46		<u>150</u>		<u>8,769</u>

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

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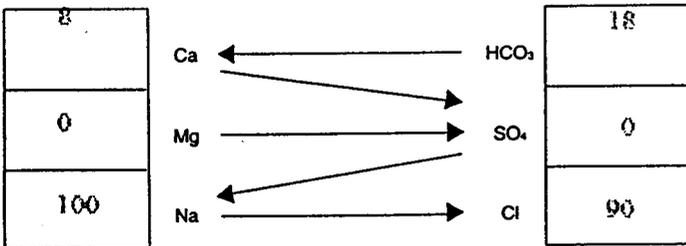
Company Flying J Address _____ Date 1/25/01

Source He Mann 2-28Z2 Date Sampled _____ Analysis No. _____

	Analysis	mg/l(ppm)	*Meg/l
1. PH	8.3		
2. H ₂ S (Qualitative)	0.0		
3. Specific Gravity	1.006		
4. Dissolved Solids		5,758	
5. Alkalinity (CaCO ₃)	CO ₃	0	÷ 30 0 CO ₃
6. Bicarbonate (HCO ₃)	HCO ₃	1,098	÷ 61 18 HCO ₃
7. Hydroxyl (OH)	OH	0	÷ 17 0 OH
8. Chlorides (Cl)	Cl	3,200	÷ 35.5 90 Cl
9. Sulfates (SO ₄)	SO ₄	0	÷ 48 0 SO ₄
10. Calcium (Ca)	Ca	160	÷ 20 8 Ca
11. Magnesium (Mg)	Mg	0	÷ 12.2 0 Mg
12. Total Hardness (CaCO ₃)		400	
13. Total Iron (Fe)		1.1	
14. Manganese		0.0	
15. Phosphate Residuals		17	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Eqiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		8		648
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		10		840
Na ₂ SO ₄	71.03				
NaCl	58.46		90		5,261

Saturation Values

CaCO₃

Distilled Water 20°C

13 Mg/l

CaSO₄ · 2H₂O

2,090 Mg/l

MgCO₃

103 Mg/l

REMARKS _____

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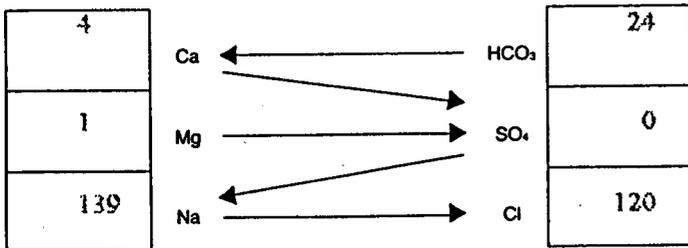
Company Flying J Address _____ Date 1/15/01

Source Houston 1-34 Z1 Date Sampled _____ Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>8.0</u>	
2. H ₂ S (Qualitative)	<u>0.5</u>	
3. Specific Gravity	<u>1.009</u>	
4. Dissolved Solids	<u>9,001</u>	
5. Alkalinity (CaCO ₃)	<u>0</u>	<u>0</u> CO ₃
6. Bicarbonate (HCO ₃)	<u>1,464</u>	<u>24</u> HCO ₃
7. Hydroxyl (OH)	<u>0</u>	<u>0</u> OH
8. Chlorides (Cl)	<u>4,250</u>	<u>120</u> Cl
9. Sulfates (SO ₄)	<u>0</u>	<u>0</u> SO ₄
10. Calcium (Ca)	<u>80</u>	<u>4</u> Ca
11. Magnesium (Mg)	<u>10</u>	<u>1</u> Mg
12. Total Hardness (CaCO ₃)	<u>240</u>	
13. Total Iron (Fe)	<u>2.0</u>	
14. Manganese	<u>0.1</u>	
15. Phosphate Residuals	<u>36</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		<u>4</u>		<u>324</u>
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17		<u>1</u>		<u>73</u>
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		<u>19</u>		<u>1,596</u>
Na ₂ SO ₄	71.03				
NaCl	58.46		<u>120</u>		<u>7,015</u>

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

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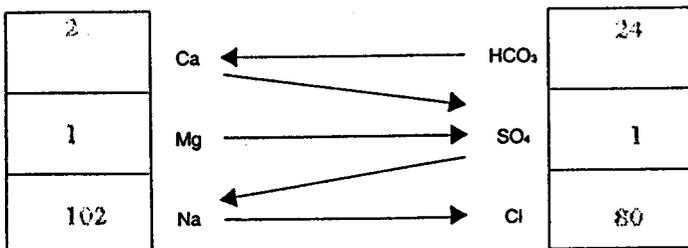
Company Flying j Address _____ Date 1/22/01

Source Knight 1-28B3 Date Sampled 1/19/01 Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>8.0</u>	
2. H ₂ S (Qualitative)	<u>0.5</u>	
3. Specific Gravity	<u>1.006</u>	
4. Dissolved Solids	<u>6,679</u>	
5. Alkalinity (CaCO ₃)	CO ₃ <u>0</u>	÷ 30 <u>0</u> CO ₃
6. Bicarbonate (HCO ₃)	HCO ₃ <u>1,464</u>	÷ 61 <u>24</u> HCO ₃
7. Hydroxyl (OH)	OH <u>0</u>	÷ 17 <u>0</u> OH
8. Chlorides (Cl)	Cl <u>2,800</u>	÷ 35.5 <u>80</u> Cl
9. Sulfates (SO ₄)	SO ₄ <u>40</u>	÷ 48 <u>1</u> SO ₄
10. Calcium (Ca)	Ca <u>40</u>	÷ 20 <u>2</u> Ca
11. Magnesium (Mg)	Mg <u>12</u>	÷ 12.2 <u>1</u> Mg
12. Total Hardness (CaCO ₃)	<u>150</u>	
13. Total Iron (Fe)	<u>1.0</u>	
14. Manganese	<u>0</u>	
15. Phosphate Residuals	<u>30</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Eqiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		<u>2</u>		<u>162</u>
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17		<u>1</u>		<u>73</u>
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		<u>21</u>		<u>1,764</u>
Na ₂ SO ₄	71.03				
NaCl	58.46		<u>80</u>		<u>4,677</u>

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

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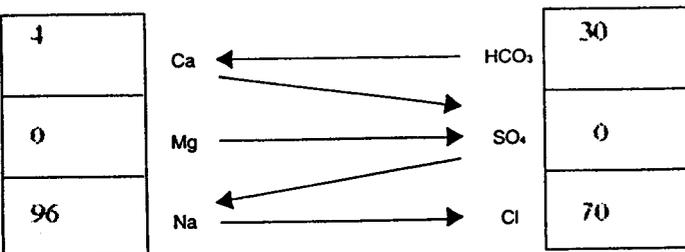
WATER ANALYSIS REPORT

Company Flying J Address _____ Date 2/28/00
Source Landy 1-30A1E Date Sampled 2/26/00 Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	9.7	
2. H ₂ S (Qualitative)	4.0	
3. Specific Gravity	1.006	
4. Dissolved Solids	6,588	
5. Alkalinity (CaCO ₃)	CO ₃ 0	÷ 30 0 CO ₃
6. Bicarbonate (HCO ₃)	HCO ₃ 1,800	÷ 61 30 HCO ₃
7. Hydroxyl (OH)	OH 0	÷ 17 0 OH
8. Chlorides (Cl)	Cl 2,500	÷ 35.5 70 Cl
9. Sulfates (SO ₄)	SO ₄ 0	÷ 48 0 SO ₄
10. Calcium (Ca)	Ca 80	÷ 20 4 Ca
11. Magnesium (Mg)	Mg 0	÷ 12.2 0 Mg
12. Total Hardness (CaCO ₃)	200	
13. Total Iron (Fe)	6.8	
14. Manganese	0	
15. Phosphate Residuals	58	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04	4			324
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00	26			2,184
Na ₂ SO ₄	71.03				
NaCl	58.46	70			4,092

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

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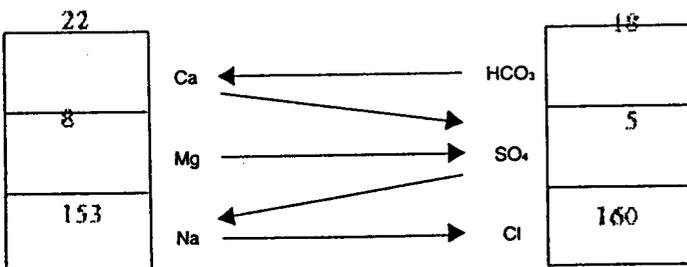
WATER ANALYSIS REPORT

Company Flying J Address _____ Date 1/16/01
Source Larson 1-25A1 Date Sampled 1/15/01 Analysis No. _____

	Analysis	mg/l(ppm)	*Meg/l
1. PH	8.3		
2. H ₂ S (Qualitative)	34.0		
3. Specific Gravity	1.010		
4. Dissolved Solids		11,043	
5. Alkalinity (CaCO ₃)		0	0
6. Bicarbonate (HCO ₃)		1,098	18
7. Hydroxyl (OH)		0	0
8. Chlorides (Cl)		5,664	160
9. Sulfates (SO ₄)		225	5
10. Calcium (Ca)		440	22
11. Magnesium (Mg)		97	8
12. Total Hardness (CaCO ₃)		1,500	
13. Total Iron (Fe)		7	
14. Manganese		0.6	
15. Phosphate Residuals		20	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Saturation Values

CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

Distilled Water 20°C

Compound	Equlv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		18		1,459
CaSO ₄	68.07		4		272
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17		1		60
MgSO ₄	60.19		7		333
MgCl ₂	47.62				
NaHCO ₃	84.00				
Na ₂ SO ₄	71.03				
NaCl	58.46		153		8,944

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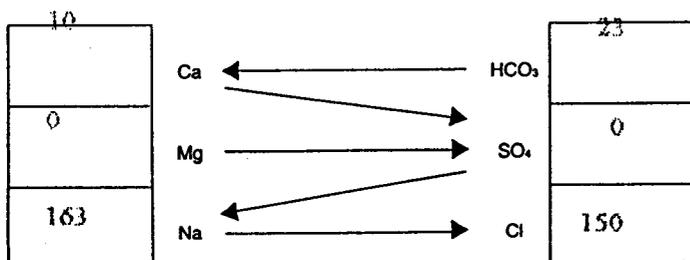
WATER ANALYSIS REPORT

Company Flying J Address _____ Date 1/15/01
Source L. Bolton 1-12A1 Date Sampled 1/15/01 Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	8.1	
2. H ₂ S (Qualitative)	0.0	
3. Specific Gravity	1.010	
4. Dissolved Solids	10,649	
5. Alkalinity (CaCO ₃)	CO ₃ 0	÷ 30 0 CO ₃
6. Bicarbonate (HCO ₃)	HCO ₃ 1,400	÷ 61 23 HCO ₃
7. Hydroxyl (OH)	OH 0	÷ 17 0 OH
8. Chlorides (Cl)	Cl 5,300	÷ 35.5 150 Cl
9. Sulfates (SO ₄)	SO ₄ 0	÷ 48 0 SO ₄
10. Calcium (Ca)	Ca 200	÷ 20 10 Ca
11. Magnesium (Mg)	Mg 0	÷ 12.2 0 Mg
12. Total Hardness (CaCO ₃)	500	
13. Total Iron (Fe)	1.4	
14. Manganese	0.0	
15. Phosphate Residuals	40	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		10		810
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		13		1,092
Na ₂ SO ₄	71.03				
NaCl	58.46		150		8,769

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

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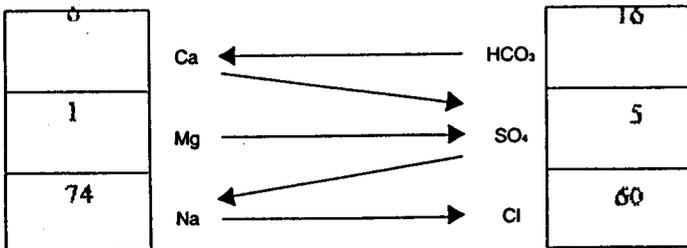
Company Flying J Address _____ Date 1/16/01

Source Lila D. 2-25A1 Date Sampled 1/15/01 Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	8.8	
2. H ₂ S (Qualitative)	0.5	
3. Specific Gravity	1.005	
4. Dissolved Solids	5,130	
5. Alkalinity (CaCO ₃)	CO ₃ 0	÷ 30 0 CO ₃
6. Bicarbonate (HCO ₃)	HCO ₃ 976	÷ 61 16 HCO ₃
7. Hydroxyl (OH)	OH 0	÷ 17 0 OH
8. Chlorides (Cl)	Cl 2,100	÷ 35.5 60 Cl
9. Sulfates (SO ₄)	SO ₄ 225	÷ 48 5 SO ₄
10. Calcium (Ca)	Ca 120	÷ 20 6 Ca
11. Magnesium (Mg)	Mg 7	÷ 12.2 1 Mg
12. Total Hardness (CaCO ₃)	330	
13. Total Iron (Fe)	1.1	
14. Manganese	0.0	
15. Phosphate Residuals	25	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		6		486
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17		1		73
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		9		756
Na ₂ SO ₄	71.03		5		355
NaCl	58.46		60		3,508

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

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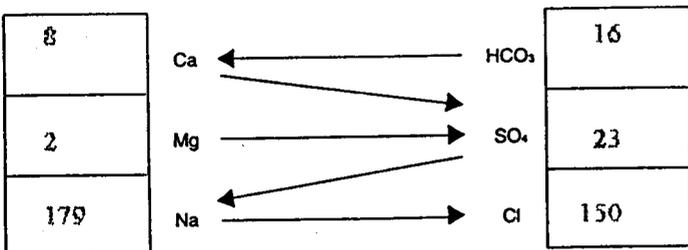
Company Flying J Address _____ Date 1/22/01

Source Max Ute 1-14A3 Date Sampled 1/19/01 Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>7.7</u>	
2. H ₂ S (Qualitative)	<u>1.0</u>	
3. Specific Gravity	<u>1.010</u>	
4. Dissolved Solids	<u>11,702</u>	
5. Alkalinity (CaCO ₃)	CO ₃ <u>0</u>	÷ 30 <u>0</u> CO ₃
6. Bicarbonate (HCO ₃)	HCO ₃ <u>976</u>	÷ 61 <u>16</u> HCO ₃
7. Hydroxyl (OH)	OH <u>0</u>	÷ 17 <u>0</u> OH
8. Chlorides (Cl)	Cl <u>5,300</u>	÷ 35.5 <u>150</u> Cl
9. Sulfates (SO ₄)	SO ₄ <u>1,125</u>	÷ 48 <u>23</u> SO ₄
10. Calcium (Ca)	Ca <u>160</u>	÷ 20 <u>8</u> Ca
11. Magnesium (Mg)	MG <u>24</u>	÷ 12.2 <u>2</u> Mg
12. Total Hardness (CaCO ₃)	<u>500</u>	
13. Total Iron (Fe)	<u>11</u>	
14. Manganese	<u>0</u>	
15. Phosphate Residuals	<u>100</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equly. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04	<u>8</u>			<u>648</u>
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17	<u>2</u>			<u>146</u>
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00	<u>0</u>			<u>504</u>
Na ₂ SO ₄	71.03	<u>23</u>			<u>1,634</u>
NaCl	58.46	<u>150</u>			<u>8,769</u>

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

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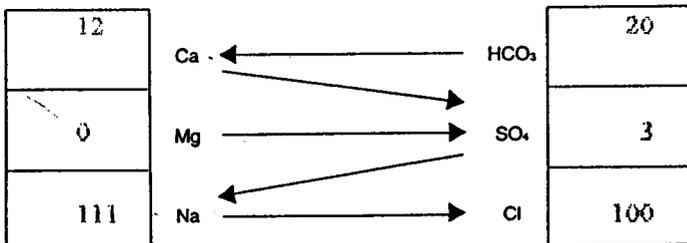
Company Flying J Address _____ Date 1/10/01

Source MP 1-34AIE Date Sampled 1/10/01 Analysis No. _____

	Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>8.2</u>		
2. H ₂ S (Qualitative)	<u>4.0</u>		
3. Specific Gravity	<u>1.007</u>		
4. Dissolved Solids		<u>7,703</u>	
5. Alkalinity (CaCO ₃)		<u>0</u>	÷ 30 <u>0</u> CO ₃
6. Bicarbonate (HCO ₃)		<u>1,220</u>	÷ 61 <u>20</u> HCO ₃
7. Hydroxyl (OH)		<u>0</u>	÷ 17 <u>0</u> OH
8. Chlorides (Cl)		<u>3,540</u>	÷ 35.5 <u>100</u> Cl
9. Sulfates (SO ₄)		<u>150</u>	÷ 48 <u>3</u> SO ₄
10. Calcium (Ca)		<u>240</u>	÷ 20 <u>12</u> Ca
11. Magnesium (Mg)		<u>0</u>	÷ 12.2 <u>0</u> Mg
12. Total Hardness (CaCO ₃)		<u>600</u>	
13. Total Iron (Fe)		<u>30</u>	
14. Manganese		<u>0.3</u>	
15. Phosphate Residuals		<u>44</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Saturation Values

CaCO₃

Distilled Water 20°C

13 Mg/l

CaSO₄ · 2H₂O

2,090 Mg/l

MgCO₃

103 Mg/l

Compound	Eqiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		<u>12</u>		<u>973</u>
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		<u>8</u>		<u>672</u>
Na ₂ SO ₄	71.03		<u>3</u>		<u>213</u>
NaCl	58.46		<u>100</u>		<u>5,846</u>

REMARKS _____

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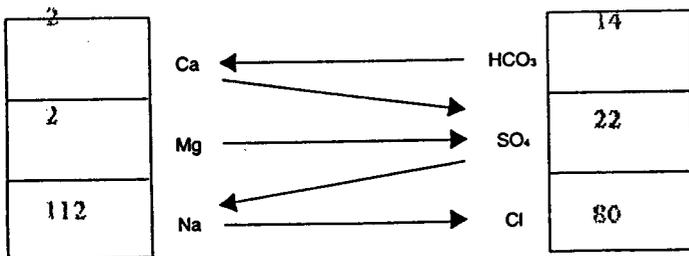
WATER ANALYSIS REPORT

Company Flying J Address _____ Date 1/16/01
Source Badger Sam 1-15A1 Date Sampled 1/15/01 Analysis No. _____

	Analysis	mg/l(ppm)	*Meg/l
1. PH	8.8		
2. H ₂ S (Qualitative)	0.5		
3. Specific Gravity	1.006		
4. Dissolved Solids		7,344	
5. Alkalinity (CaCO ₃)		0	÷ 30 = 0 CO ₃
6. Bicarbonate (HCO ₃)		854	÷ 61 = 14 HCO ₃
7. Hydroxyl (OH)		0	÷ 17 = 0 OH
8. Chlorides (Cl)		2,800	÷ 35.5 = 80 Cl
9. Sulfates (SO ₄)		1,050	÷ 48 = 22 SO ₄
10. Calcium (Ca)		40	÷ 20 = 2 Ca
11. Magnesium (Mg)		24	÷ 12.2 = 2 Mg
12. Total Hardness (CaCO ₃)		200	
13. Total Iron (Fe)		3.0	
14. Manganese		0.1	
15. Phosphate Residuals		9	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04	2	162		
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17	2	146		
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00	10	840		
Na ₂ SO ₄	71.03	22	1,562		
NaCl	58.46	80	4,677		

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

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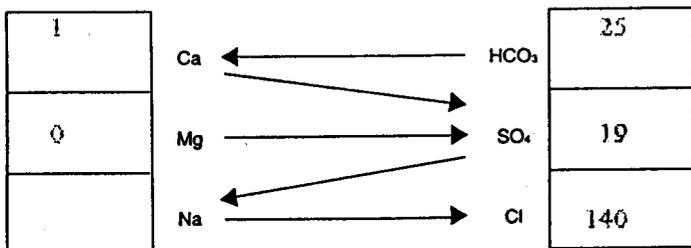
Company Flying J Address _____ Date 1/8/01

Source Bastian 1-2A1 Date Sampled 1/8/01 Analysis No. _____

	Analysis	mg/l(ppm)	*Meg/l
1. PH		<u>8.9</u>	
2. H ₂ S (Qualitative)		<u>9.0</u>	
3. Specific Gravity		<u>1.010</u>	
4. Dissolved Solids		<u>11,658</u>	
5. Alkalinity (CaCO ₃)	CO ₃	<u>0</u>	÷ 30 <u>0</u> CO ₃
6. Bicarbonate (HCO ₃)	HCO ₃	<u>1,525</u>	÷ 61 <u>25</u> HCO ₃
7. Hydroxyl (OH)	OH	<u>0</u>	÷ 17 <u>0</u> OH
8. Chlorides (Cl)	Cl	<u>5,000</u>	÷ 35.5 <u>140</u> Cl
9. Sulfates (SO ₄)	SO ₄	<u>900</u>	÷ 48 <u>19</u> SO ₄
10. Calcium (Ca)	Ca	<u>24</u>	÷ 20 <u>1</u> Ca
11. Magnesium (Mg)	Mg	<u>0</u>	÷ 12.2 <u>0</u> Mg
12. Total Hardness (CaCO ₃)		<u>60</u>	
13. Total Iron (Fe)		<u>1.8</u>	
14. Manganese		<u>0.0</u>	
15. Phosphate Residuals		<u>52</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Eqv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		<u>1</u>		<u>81</u>
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		<u>24</u>		<u>2,016</u>
Na ₂ SO ₄	71.03		<u>19</u>		<u>1,350</u>
NaCl	58.46		<u>140</u>		<u>8,184</u>

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

Identify solids: Paraffin = 85% FeS = 10% CaCO₃ = 5%

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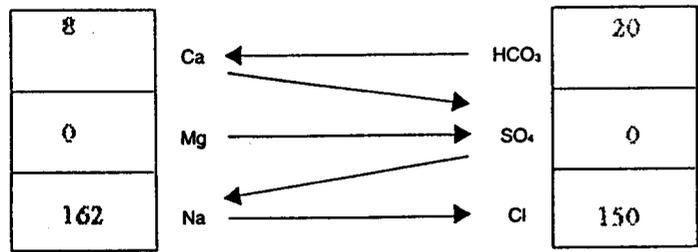
Company Flying J Address _____ Date 1/25/01

Source Bastian 3-8 AI Date Sampled _____ Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>8.2</u>	
2. H ₂ S (Qualitative)	<u>7.0</u>	
3. Specific Gravity		
4. Dissolved Solids		
5. Alkalinity (CaCO ₃)	CO ₃ <u>0</u>	÷ 30 <u>0</u> CO ₃
6. Bicarbonate (HCO ₃)	HCO ₃ <u>1,220</u>	÷ 61 <u>20</u> HCO ₃
7. Hydroxyl (OH)	OH <u>0</u>	÷ 17 <u>0</u> OH
8. Chlorides (Cl)	Cl <u>5,300</u>	÷ 35.5 <u>150</u> Cl
9. Sulfates (SO ₄)	SO ₄ <u>0</u>	÷ 48 <u>0</u> SO ₄
10. Calcium (Ca)	Ca <u>160</u>	÷ 20 <u>8</u> Ca
11. Magnesium (Mg)	Mg <u>0</u>	÷ 12.2 <u>0</u> Mg
12. Total Hardness (CaCO ₃)	<u>400</u>	
13. Total Iron (Fe)	<u>1.3</u>	
14. Manganese	<u>0.3</u>	
15. Phosphate Residuals	<u>25</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Eqiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		<u>8</u>		<u>648</u>
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		<u>12</u>		<u>1,008</u>
Na ₂ SO ₄	71.03				
NaCl	58.46		<u>150</u>		<u>8,769</u>

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

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WATER ANALYSIS REPORT

Company Flying J Address _____ Date 1/15/01
Source Bisel Gurr 1-11A1 Date Sampled _____ Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	7.5	
2. H ₂ S (Qualitative)	8.0	
3. Specific Gravity	1.012	
4. Dissolved Solids	12,775	
5. Alkalinity (CaCO ₃)	CO ₃ _____	+ 30 _____ 0 CO ₃
6. Bicarbonate (HCO ₃)	HCO ₃ 3,538 _____	+ 61 _____ 58 HCO ₃
7. Hydroxyl (OH)	OH _____	+ 17 _____ 0 OH
8. Chlorides (Cl)	Cl 4,250 _____	+ 35.5 _____ 120 Cl
9. Sulfates (SO ₄)	SO ₄ 600 _____	+ 48 _____ 13 SO ₄
10. Calcium (Ca)	Ca 40 _____	+ 20 _____ 2 Ca
11. Magnesium (Mg)	Mg _____	+ 12.2 _____ 0 Mg
12. Total Hardness (CaCO ₃)	100	
13. Total Iron (Fe)	1.0	
14. Manganese	0.0	
15. Phosphate Residuals	44	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION

Compound	Eqv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04	2	162		
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00	56	4,704		
Na ₂ SO ₄	71.03	13	923		
NaCl	58.46	120	7,015		

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

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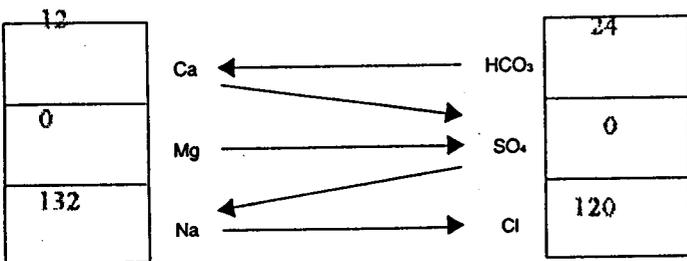
WATER ANALYSIS REPORT

Company Flying J Address _____ Date 1/15/01
Source Bradley 1-23A1 Date Sampled _____ Analysis No. _____

	Analysis	mg/l(ppm)	*Meg/l
1. PH	8.8		
2. H ₂ S (Qualitative)	0.5		
3. Specific Gravity	1.009		
4. Dissolved Solids		8,990	
5. Alkalinity (CaCO ₃)		0	÷ 30 = 0 CO ₃
6. Bicarbonate (HCO ₃)		1,464	÷ 61 = 24 HCO ₃
7. Hydroxyl (OH)		0	÷ 17 = 0 OH
8. Chlorides (Cl)		4,250	÷ 35.5 = 120 Cl
9. Sulfates (SO ₄)		0	÷ 48 = 0 SO ₄
10. Calcium (Ca)		240	÷ 20 = 12 Ca
11. Magnesium (Mg)		0	÷ 12.2 = 0 Mg
12. Total Hardness (CaCO ₃)		600	
13. Total Iron (Fe)		3.2	
14. Manganese		0.5	
15. Phosphate Residuals		20	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		12		973
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		12		1,008
Na ₂ SO ₄	71.03				
NaCl	58.46		120		7,015

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

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WATER ANALYSIS REPORT

Company Flying J Address _____ Date 1/15/01
Source Dr. Long 2-19AIE Date Sampled 1/15/01 Analysis No. _____

	Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>8.9</u>		
2. H ₂ S (Qualitative)	<u>1.0</u>		
3. Specific Gravity	<u>1.012</u>		
4. Dissolved Solids		<u>12,788</u>	
5. Alkalinity (CaCO ₃)	CO ₃	<u>0</u>	+ 30 <u>0</u> CO ₃
6. Bicarbonate (HCO ₃)	HCO ₃	<u>850</u>	+ 61 <u>14</u> HCO ₃
7. Hydroxyl (OH)	OH	<u>0</u>	+ 17 <u>0</u> OH
8. Chlorides (Cl)	Cl	<u>7,100</u>	+ 35.5 <u>200</u> Cl
9. Sulfates (SO ₄)	SO ₄	<u>0</u>	+ 48 <u>0</u> SO ₄
10. Calcium (Ca)	Ca	<u>200</u>	+ 20 <u>10</u> Ca
11. Magnesium (Mg)	Mg	<u>61</u>	+ 12.2 <u>5</u> Mg
12. Total Hardness (CaCO ₃)		<u>750</u>	
13. Total Iron (Fe)		<u>1.5</u>	
14. Manganese		<u>0.1</u>	
15. Phosphate Residuals		<u>12</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION

Compound	Equly. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		<u>10</u>		<u>810</u>
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17		<u>4</u>		<u>293</u>
MgSO ₄	60.19				
MgCl ₂	47.62		<u>1</u>		<u>48</u>
NaHCO ₃	84.00				
Na ₂ SO ₄	71.03				
NaCl	58.46		<u>199</u>		<u>11,634</u>

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

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WATER ANALYSIS REPORT

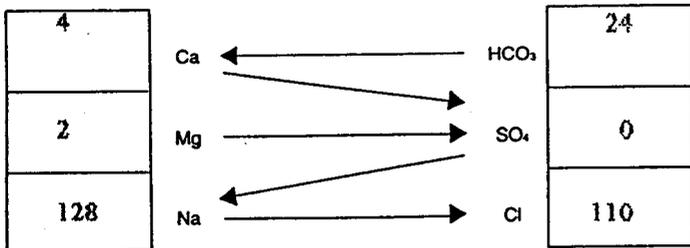
Company Flying J Address _____ Date 1/25/01

Source Eula Ute 1-16A1 Date Sampled _____ Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	8.4	
2. H ₂ S (Qualitative)	11.0	
3. Specific Gravity	1.008	
4. Dissolved Solids	8,412	
5. Alkalinity (CaCO ₃)	CO ₃ 0	÷ 30 0 CO ₃
6. Bicarbonate (HCO ₃)	HCO ₃ 1,464	÷ 61 24 HCO ₃
7. Hydroxyl (OH)	OH 0	÷ 17 0 OH
8. Chlorides (Cl)	Cl 3,900	÷ 35.5 110 Cl
9. Sulfates (SO ₄)	SO ₄ 0	÷ 48 0 SO ₄
10. Calcium (Ca)	Ca 80	÷ 20 4 Ca
11. Magnesium (Mg)	Mg 24	÷ 12.2 2 Mg
12. Total Hardness (CaCO ₃)	300	
13. Total Iron (Fe)	1.2	
14. Manganese	0.2	
15. Phosphate Residuals	63	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Eq. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		4		324
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17		2		146
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		18		1,512
Na ₂ SO ₄	71.03				
NaCl	58.46		110		6,431

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

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WATER ANALYSIS REPORT

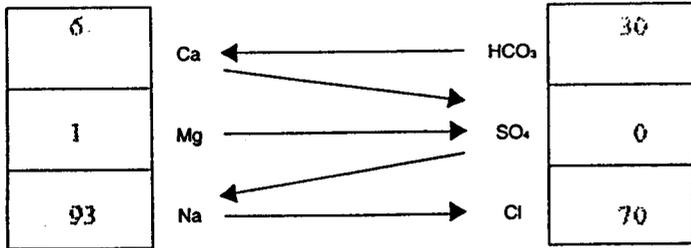
Company Flying J Address _____ Date 1/15/01

Source Fowells 1-26A1 Date Sampled _____ Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>8.5</u>	
2. H ₂ S (Qualitative)	<u>0.5</u>	
3. Specific Gravity	<u>1.006</u>	
4. Dissolved Solids	<u>6,601</u>	
5. Alkalinity (CaCO ₃)	<u>0</u>	<u>0</u> CO ₃
6. Bicarbonate (HCO ₃)	<u>1,830</u>	<u>30</u> HCO ₃
7. Hydroxyl (OH)	<u>0</u>	<u>0</u> OH
8. Chlorides (Cl)	<u>2,500</u>	<u>70</u> Cl
9. Sulfates (SO ₄)	<u>0</u>	<u>0</u> SO ₄
10. Calcium (Ca)	<u>120</u>	<u>6</u> Ca
11. Magnesium (Mg)	<u>12</u>	<u>1</u> Mg
12. Total Hardness (CaCO ₃)	<u>350</u>	
13. Total Iron (Fe)	<u>1.4</u>	
14. Manganese	<u>0.0</u>	
15. Phosphate Residuals	<u>59</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Eqiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		<u>6</u>		
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17		<u>1</u>		<u>73</u>
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		<u>23</u>		<u>1,932</u>
Na ₂ SO ₄	71.03				
NaCl	58.46		<u>70</u>		<u>4,092</u>

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

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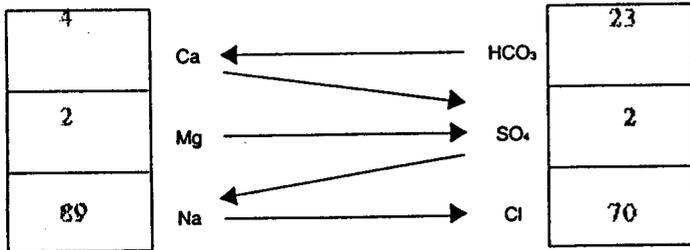
WATER ANALYSIS REPORT

Company Flying J Address _____ Date 1/15/01
Source Fred Bassett 1-22A1 Date Sampled 1/15/01 Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	8.0	
2. H ₂ S (Qualitative)	1.0	
3. Specific Gravity	1.006	
4. Dissolved Solids	6,115	
5. Alkalinity (CaCO ₃)	CO ₃ 0	÷ 30 0 CO ₃
6. Bicarbonate (HCO ₃)	HCO ₃ 1,400	÷ 61 23 HCO ₃
7. Hydroxyl (OH)	OH 0	÷ 17 0 OH
8. Chlorides (Cl)	Cl 2,500	÷ 35.5 70 Cl
9. Sulfates (SO ₄)	SO ₄ 110	÷ 48 2 SO ₄
10. Calcium (Ca)	Ca 80	÷ 20 4 Ca
11. Magnesium (Mg)	Mg 24	÷ 12.2 2 Mg
12. Total Hardness (CaCO ₃)	300	
13. Total Iron (Fe)	1.1	
14. Manganese	0.0	
15. Phosphate Residuals	11	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		4		324
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17		2		146
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		17		1,428
Na ₂ SO ₄	71.03				
NaCl	58.46		70		4,092

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

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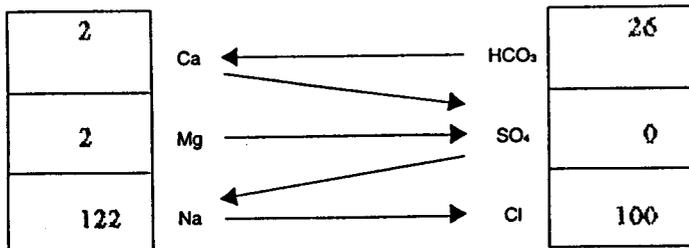
Company Flying J Address _____ Date 1/25/01

Source Mr. Boom Boom 2-29A1 Date Sampled _____ Analysis No. _____

	Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>8.3</u>		
2. H ₂ S (Qualitative)	<u>5.0</u>		
3. Specific Gravity	<u>1.008</u>		
4. Dissolved Solids		<u>7,996</u>	
5. Alkalinity (CaCO ₃)	CO ₃	<u>0</u>	÷ 30 <u>0</u> CO ₃
6. Bicarbonate (HCO ₃)	HCO ₃	<u>1,586</u>	÷ 61 <u>26</u> HCO ₃
7. Hydroxyl (OH)	OH	<u>0</u>	÷ 17 <u>0</u> OH
8. Chlorides (Cl)	Cl	<u>3,540</u>	÷ 35.5 <u>100</u> Cl
9. Sulfates (SO ₄)	SO ₄	<u>0</u>	÷ 48 <u>0</u> SO ₄
10. Calcium (Ca)	Ca	<u>40</u>	÷ 20 <u>2</u> Ca
11. Magnesium (Mg)	Mg	<u>24</u>	÷ 12.2 <u>2</u> Mg
12. Total Hardness (CaCO ₃)		<u>200</u>	
13. Total Iron (Fe)		<u>6.0</u>	
14. Manganese		<u>0.1</u>	
15. Phosphate Residuals		<u>39</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		<u>2</u>		<u>162</u>
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17		<u>2</u>		<u>146</u>
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		<u>22</u>		<u>1,848</u>
Na ₂ SO ₄	71.03				
NaCl	58.46		<u>100</u>		<u>5,846</u>

Saturation Values

CaCO₃

CaSO₄ · 2H₂O

MgCO₃

Distilled Water 20°C

13 Mg/l

2,090 Mg/l

103 Mg/l

REMARKS _____

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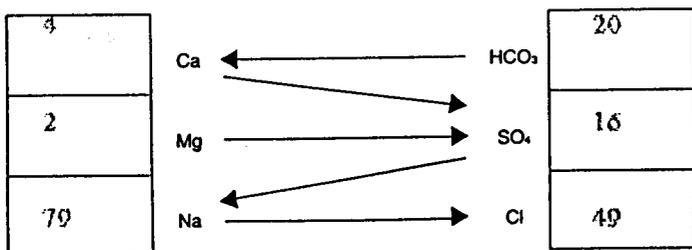
Company Flying J Address _____ Date 1/15/01

Source Nelson 1-31A1K Date Sampled 1/15/01 Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	8.3	
2. H ₂ S (Qualitative)	1.0	
3. Specific Gravity	1.005	
4. Dissolved Solids	5,591	
5. Alkalinity (CaCO ₃)	CO ₃ 0	+ 30 0 CO ₃
6. Bicarbonate (HCO ₃)	HCO ₃ 1,220	+ 61 20 HCO ₃
7. Hydroxyl (OH)	OH 0	+ 17 0 OH
8. Chlorides (Cl)	Cl 1,700	+ 35.5 49 Cl
9. Sulfates (SO ₄)	SO ₄ 750	+ 48 16 SO ₄
10. Calcium (Ca)	Ca 80	+ 20 4 Ca
11. Magnesium (Mg)	Mg 24	+ 12.2 2 Mg
12. Total Hardness (CaCO ₃)	300	
13. Total Iron (Fe)	.9	
14. Manganese	0.0	
15. Phosphate Residuals	14	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04	4			324
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17	2			146
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00	14			1,176
Na ₂ SO ₄	71.03	16			1,137
NaCl	58.46	49			2,865

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

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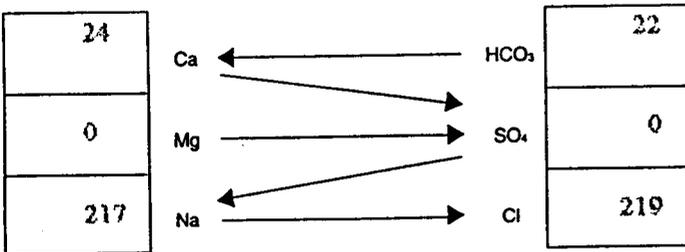
WATER ANALYSIS REPORT

Company Flying J Address _____ Date 1/15/01
Source O. Moon 2-26Z1 Date Sampled _____ Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>7.5</u>	
2. H ₂ S (Qualitative)	<u>0.0</u>	
3. Specific Gravity	<u>1.014</u>	
4. Dissolved Solids	<u>14,611</u>	
5. Alkalinity (CaCO ₃)	<u>0</u>	÷ 30 <u>0</u> CO ₃
6. Bicarbonate (HCO ₃)	<u>1,340</u>	÷ 61 <u>22</u> HCO ₃
7. Hydroxyl (OH)	<u>0</u>	÷ 17 <u>0</u> OH
8. Chlorides (Cl)	<u>7,800</u>	÷ 35.5 <u>219</u> Cl
9. Sulfates (SO ₄)	<u>0</u>	÷ 48 <u>0</u> SO ₄
10. Calcium (Ca)	<u>480</u>	÷ 20 <u>24</u> Ca
11. Magnesium (Mg)	<u>0</u>	÷ 12.2 <u>0</u> Mg
12. Total Hardness (CaCO ₃)	<u>1,200</u>	
13. Total Iron (Fe)	<u>22</u>	
14. Manganese	<u>0.0</u>	
15. Phosphate Residuals	<u>69</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Eqv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		22		1,783
CaSO ₄	68.07				
CaCl ₂	55.50		2		111
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00				
Na ₂ SO ₄	71.03				
NaCl	58.46		217		12,686

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

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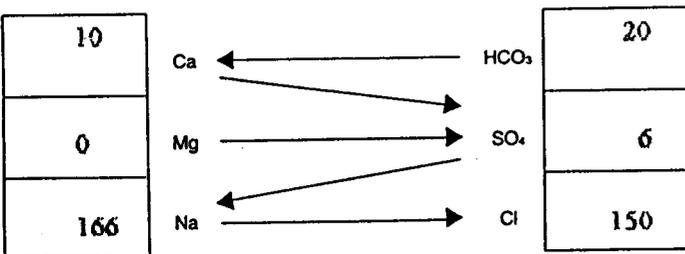
Company Flying J Address _____ Date 1/25/01

Source Powell 1-21B1 Date Sampled _____ Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	8.7	
2. H ₂ S (Qualitative)	2.5	
3. Specific Gravity	1.010	
4. Dissolved Solids	10,838	
5. Alkalinity (CaCO ₃)	CO ₃ 0	÷ 30 0 CO ₃
6. Bicarbonate (HCO ₃)	HCO ₃ 1,220	÷ 61 20 HCO ₃
7. Hydroxyl (OH)	OH 0	÷ 17 0 OH
8. Chlorides (Cl)	Cl 5,300	÷ 35.5 150 Cl
9. Sulfates (SO ₄)	SO ₄ 300	÷ 48 6 SO ₄
10. Calcium (Ca)	Ca 200	÷ 20 10 Ca
11. Magnesium (Mg)	MG 0	÷ 12.2 0 Mg
12. Total Hardness (CaCO ₃)	500	
13. Total Iron (Fe)	1.0	
14. Manganese	0.1	
15. Phosphate Residuals	30	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		10		810
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		10		840
Na ₂ SO ₄	71.03		6		426
NaCl	58.46		150		8,769

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

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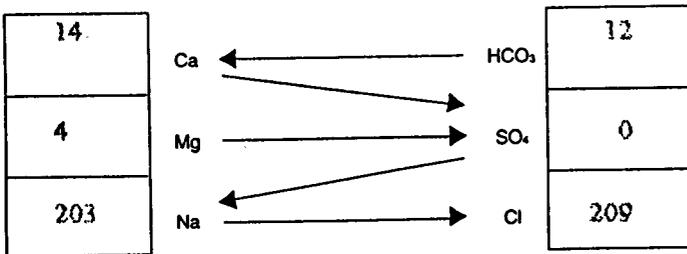
Company Flying J Address _____ Date 1/15/01

Source Prescot 1-35 Z1 Date Sampled _____ Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>8.9</u>	
2. H ₂ S (Qualitative)	<u>4.0</u>	
3. Specific Gravity	<u>1.013</u>	
4. Dissolved Solids	<u>13,128</u>	
5. Alkalinity (CaCO ₃)	CO ₃ <u>0</u>	÷ 30 <u>0</u> CO ₃
6. Bicarbonate (HCO ₃)	HCO ₃ <u>730</u>	÷ 61 <u>12</u> HCO ₃
7. Hydroxyl (OH)	OH <u>0</u>	÷ 17 <u>0</u> OH
8. Chlorides (Cl)	Cl <u>7,400</u>	÷ 35.5 <u>209</u> Cl
9. Sulfates (SO ₄)	SO ₄ <u>0</u>	÷ 48 <u>0</u> SO ₄
10. Calcium (Ca)	Ca <u>280</u>	÷ 20 <u>14</u> Ca
11. Magnesium (Mg)	Mg <u>49</u>	÷ 12.2 <u>4</u> Mg
12. Total Hardness (CaCO ₃)	<u>900</u>	
13. Total Iron (Fe)	<u>1.0</u>	
14. Manganese	<u>0.2</u>	
15. Phosphate Residuals	<u>50</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04	<u>12</u>			<u>973</u>
CaSO ₄	68.07				
CaCl ₂	55.50	<u>2</u>			<u>111</u>
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62	<u>4</u>			<u>191</u>
NaHCO ₃	84.00				
Na ₂ SO ₄	71.03				
NaCl	58.46	<u>203</u>			<u>11,867</u>

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

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WATER ANALYSIS REPORT

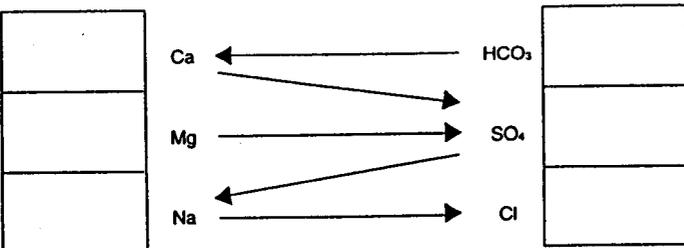
Company Flying J Address _____ Date 1/10/01

Source R.Lloyd 1-24AIE Date Sampled 1/10/01 Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>8.7</u>	
2. H ₂ S (Qualitative)	<u>0.0</u>	
3. Specific Gravity	<u>1.006</u>	
4. Dissolved Solids	<u>6,916</u>	
5. Alkalinity (CaCO ₃)	CO ₃ <u>0</u>	÷ 30 <u>0</u> CO ₃
6. Bicarbonate (HCO ₃)	HCO ₃ <u>1,220</u>	÷ 61 <u>20</u> HCO ₃
7. Hydroxyl (OH)	OH <u>0</u>	÷ 17 <u>0</u> OH
8. Chlorides (Cl)	Cl <u>3,200</u>	÷ 35.5 <u>90</u> Cl
9. Sulfates (SO ₄)	SO ₄ <u>0</u>	÷ 48 <u>0</u> SO ₄
10. Calcium (Ca)	Ca <u>80</u>	÷ 20 <u>4</u> Ca
11. Magnesium (Mg)	Mg <u>24</u>	÷ 12.2 <u>2</u> Mg
12. Total Hardness (CaCO ₃)	<u>300</u>	
13. Total Iron (Fe)	<u>5.0</u>	
14. Manganese	<u>0.1</u>	
15. Phosphate Residuals	<u>31</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equlv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04	<u>4</u>			<u>324</u>
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17	<u>2</u>			<u>146</u>
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00	<u>14</u>			<u>1,176</u>
Na ₂ SO ₄	71.03				
NaCl	58.46	<u>90</u>			<u>5,261</u>

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

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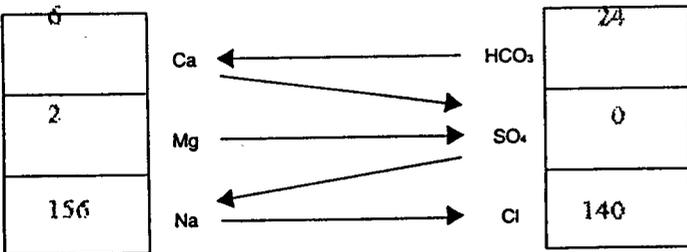
WATER ANALYSIS REPORT

Company Flying J Address _____ Date 1/16/01
Source Sadie Blank 1-33Z1 Date Sampled 1/15/01 Analysis No. _____

	Analysis	mg/l(ppm)	*Meg/l
1. PH	8.8		
2. H ₂ S (Qualitative)	3.0		
3. Specific Gravity	1.010		
4. Dissolved Solids		10,183	
5. Alkalinity (CaCO ₃)		0	÷ 30 = 0 CO ₃
6. Bicarbonate (HCO ₃)		1,464	÷ 61 = 24 HCO ₃
7. Hydroxyl (OH)		0	÷ 17 = 0 OH
8. Chlorides (Cl)		5,000	÷ 35.5 = 140 Cl
9. Sulfates (SO ₄)		0	÷ 48 = 0 SO ₄
10. Calcium (Ca)		112	÷ 20 = 6 Ca
11. Magnesium (Mg)		19	÷ 12.2 = 2 Mg
12. Total Hardness (CaCO ₃)		360	
13. Total Iron (Fe)		35	
14. Manganese		0.6	
15. Phosphate Residuals		21	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		6		486
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17		2		146
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		16		1,344
Na ₂ SO ₄	71.03				
NaCl	58.46		140		8,184

Saturation Values

CaCO₃

CaSO₄ · 2H₂O

MgCO₃

Distilled Water 20°C

13 Mg/l

2,090 Mg/l

103 Mg/l

REMARKS _____

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WATER ANALYSIS REPORT

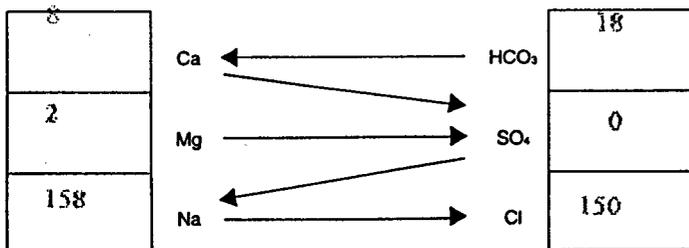
Company Flying J Address _____ Date 1/15/01

Source Perfect 10 1-10A1 Date Sampled 1/15/01 Analysis No. _____

	Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>7.9</u>		
2. H ₂ S (Qualitative)	<u>1.0</u>		
3. Specific Gravity	<u>1.010</u>		
4. Dissolved Solids		<u>10,218</u>	
5. Alkalinity (CaCO ₃)		<u>0</u>	÷ 30 <u>0</u> CO ₃
6. Bicarbonate (HCO ₃)		<u>1,100</u>	÷ 61 <u>18</u> HCO ₃
7. Hydroxyl (OH)		<u>0</u>	÷ 17 <u>0</u> OH
8. Chlorides (Cl)		<u>5,300</u>	÷ 35.5 <u>150</u> Cl
9. Sulfates (SO ₄)		<u>0</u>	÷ 48 <u>0</u> SO ₄
10. Calcium (Ca)		<u>160</u>	÷ 20 <u>8</u> Ca
11. Magnesium (Mg)		<u>24</u>	÷ 12.2 <u>2</u> Mg
12. Total Hardness (CaCO ₃)		<u>500</u>	
13. Total Iron (Fe)		<u>1.2</u>	
14. Manganese		<u>0.0</u>	
15. Phosphate Residuals		<u>19</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		<u>8</u>		<u>648</u>
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17		<u>2</u>		<u>146</u>
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		<u>8</u>		<u>672</u>
Na ₂ SO ₄	71.03				
NaCl	58.46		<u>150</u>		<u>8,769</u>

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

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WATER ANALYSIS REPORT

Company Flying J Address _____ Date 1/10/01

Source Ute Carson 2-36AI Date Sampled 1/10/01 Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>8.6</u>	
2. H ₂ S (Qualitative)	<u>4.0</u>	
3. Specific Gravity	<u>1.005</u>	
4. Dissolved Solids	<u>5,303</u>	
5. Alkalinity (CaCO ₃)	CO ₃ <u>0</u>	÷ 30 <u>0</u> CO ₃
6. Bicarbonate (HCO ₃)	HCO ₃ <u>1,342</u>	÷ 61 <u>22</u> HCO ₃
7. Hydroxyl (OH)	OH <u>0</u>	÷ 17 <u>0</u> OH
8. Chlorides (Cl)	Cl <u>2,100</u>	÷ 35.5 <u>59</u> Cl
9. Sulfates (SO ₄)	SO ₄ <u>0</u>	÷ 48 <u>0</u> SO ₄
10. Calcium (Ca)	Ca <u>40</u>	÷ 20 <u>2</u> Ca
11. Magnesium (Mg)	Mg <u>4</u>	÷ 12.2 <u>0</u> Mg
12. Total Hardness (CaCO ₃)	<u>120</u>	
13. Total Iron (Fe)	<u>1.1</u>	
14. Manganese	<u>0.0</u>	
15. Phosphate Residuals	<u>65</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION

Compound	Eq. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04	<u>2</u>	<u>162</u>		
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00	<u>20</u>	<u>1,680</u>		
Na ₂ SO ₄	71.03				
NaCl	58.46	<u>59</u>	<u>3,449</u>		

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

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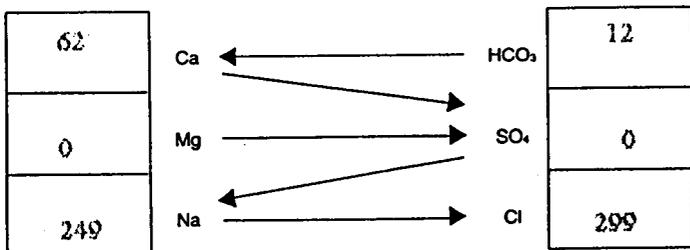
Company Flying I Address _____ Date 1/10/01

Source Ute 1-15 ATE Date Sampled 1/10/01 Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>7.7</u>	
2. H ₂ S (Qualitative)	<u>0.5</u>	
3. Specific Gravity	<u>1.015</u>	
4. Dissolved Solids	<u>18,299</u>	
5. Alkalinity (CaCO ₃)	<u>0</u>	÷ 30 <u>0</u> CO ₃
6. Bicarbonate (HCO ₃)	<u>732</u>	÷ 61 <u>12</u> HCO ₃
7. Hydroxyl (OH)	<u>0</u>	÷ 17 <u>0</u> OH
8. Chlorides (Cl)	<u>10,600</u>	÷ 35.5 <u>299</u> Cl
9. Sulfates (SO ₄)	<u>0</u>	÷ 48 <u>0</u> SO ₄
10. Calcium (Ca)	<u>1240</u>	÷ 20 <u>62</u> Ca
11. Magnesium (Mg)	<u>0</u>	÷ 12.2 <u>0</u> Mg
12. Total Hardness (CaCO ₃)	<u>3,100</u>	
13. Total Iron (Fe)	<u>7.4</u>	
14. Manganese	<u>1.0</u>	
15. Phosphate Residuals	<u>27</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		<u>12</u>		<u>973</u>
CaSO ₄	68.07				
CaCl ₂	55.50		<u>50</u>		<u>2,775</u>
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00				
Na ₂ SO ₄	71.03				
NaCl	58.46		<u>249</u>		<u>14,557</u>

Saturation Values

CaCO₃

CaSO₄ · 2H₂O

MgCO₃

Distilled Water 20°C

13 Mg/l

2,090 Mg/l

103 Mg/l

REMARKS _____

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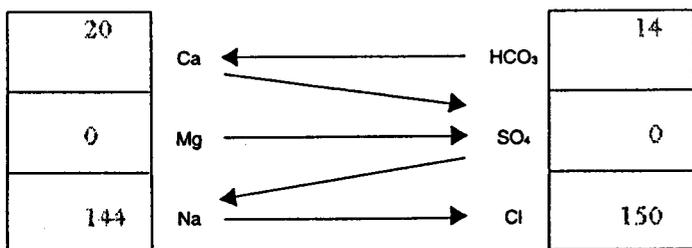
Company Flying J Address _____ Date 1/10/01

Source Ute 1-17AIR Date Sampled 1/10/01 Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	8.3	
2. H ₂ S (Qualitative)	1.0	
3. Specific Gravity	1.010	
4. Dissolved Solids	10,142	
5. Alkalinity (CaCO ₃)	0	0
6. Bicarbonate (HCO ₃)	854	14
7. Hydroxyl (OH)	0	0
8. Chlorides (Cl)	5,300	150
9. Sulfates (SO ₄)	0	0
10. Calcium (Ca)	400	20
11. Magnesium (Mg)	0	0
12. Total Hardness (CaCO ₃)	1,000	
13. Total Iron (Fe)	1.8	
14. Manganese	0.1	
15. Phosphate Residuals	17	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		14		1,135
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		6		504
Na ₂ SO ₄	71.03				
NaCl	58.46		150		8,769

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

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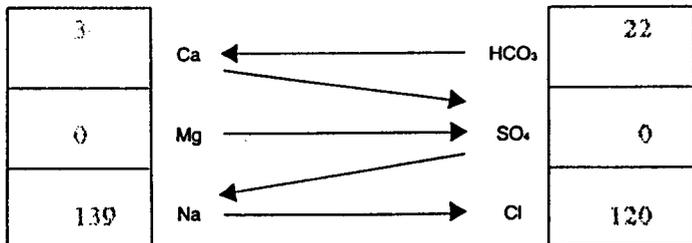
Company Flying J Address _____ Date 1/10/01

Source Ute 1-22AIE Date Sampled 1/10/01 Analysis No. _____

	Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>8.5</u>		
2. H ₂ S (Qualitative)	<u>0.5</u>		
3. Specific Gravity	<u>1.008</u>		
4. Dissolved Solids		<u>8,851</u>	
5. Alkalinity (CaCO ₃)	CO ₃	<u>0</u>	÷ 30 <u>0</u> CO ₃
6. Bicarbonate (HCO ₃)	HCO ₃	<u>1,340</u>	÷ 61 <u>22</u> HCO ₃
7. Hydroxyl (OH)	OH	<u>0</u>	÷ 17 <u>0</u> OH
8. Chlorides (Cl)	Cl	<u>4,250</u>	÷ 35.5 <u>120</u> Cl
9. Sulfates (SO ₄)	SO ₄	<u>0</u>	÷ 48 <u>0</u> SO ₄
10. Calcium (Ca)	Ca	<u>64</u>	÷ 20 <u>3</u> Ca
11. Magnesium (Mg)	Mg	<u>0</u>	÷ 12.2 <u>0</u> Mg
12. Total Hardness (CaCO ₃)		<u>160</u>	
13. Total Iron (Fe)		<u>4.0</u>	
14. Manganese		<u>0.0</u>	
15. Phosphate Residuals		<u>34</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		<u>3</u>		<u>243</u>
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		<u>19</u>		<u>1,596</u>
Na ₂ SO ₄	71.03				
NaCl	58.46		<u>120</u>		<u>7,015</u>

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

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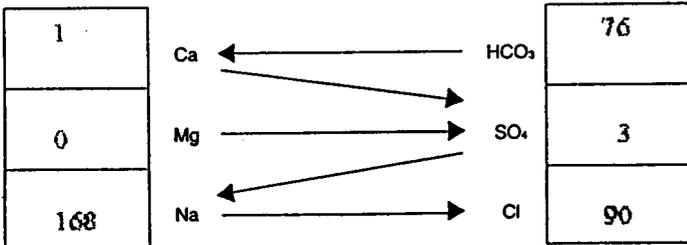
Company Flying J Address _____ Date 1/10/01

Source Ute 1-27AIE Date Sampled 1/10/01 Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>8.5</u>	
2. H ₂ S (Qualitative)	<u>4.5</u>	
3. Specific Gravity	<u>1.010</u>	
4. Dissolved Solids	<u>11,874</u>	
5. Alkalinity (CaCO ₃)	<u>0</u>	<u>0</u> CO ₃
6. Bicarbonate (HCO ₃)	<u>4,636</u>	<u>76</u> HCO ₃
7. Hydroxyl (OH)	<u>0</u>	<u>0</u> OH
8. Chlorides (Cl)	<u>3,200</u>	<u>90</u> Cl
9. Sulfates (SO ₄)	<u>150</u>	<u>3</u> SO ₄
10. Calcium (Ca)	<u>24</u>	<u>1</u> Ca
11. Magnesium (Mg)	<u>0</u>	<u>0</u> Mg
12. Total Hardness (CaCO ₃)	<u>60</u>	
13. Total Iron (Fe)	<u>1.0</u>	
14. Manganese	<u>0.0</u>	
15. Phosphate Residuals	<u>61</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Eqiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04	<u>1</u>			<u>81</u>
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00	<u>75</u>			<u>6,300</u>
Na ₂ SO ₄	71.03	<u>3</u>			<u>213</u>
NaCl	58.46	<u>90</u>			<u>5,261</u>

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

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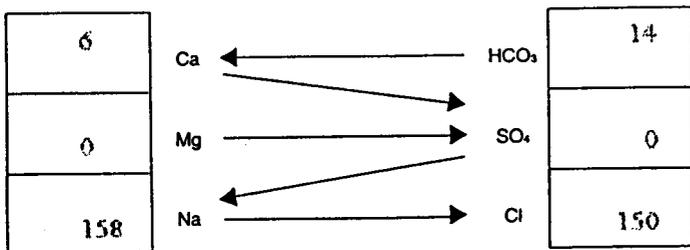
Company Flying J Address _____ Date 1/25/01

Source Weiss 1-28Z1 Date Sampled _____ Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>8.5</u>	
2. H ₂ S (Qualitative)	<u>1.0</u>	
3. Specific Gravity	<u>1.000</u>	
4. Dissolved Solids	<u>9,908</u>	
5. Alkalinity (CaCO ₃)	<u>0</u>	÷ 30 <u>0</u> CO ₃
6. Bicarbonate (HCO ₃)	<u>854</u>	÷ 61 <u>14</u> HCO ₃
7. Hydroxyl (OH)	<u>0</u>	÷ 17 <u>0</u> OH
8. Chlorides (Cl)	<u>5,300</u>	÷ 35.5 <u>150</u> Cl
9. Sulfates (SO ₄)	<u>0</u>	÷ 48 <u>0</u> SO ₄
10. Calcium (Ca)	<u>120</u>	÷ 20 <u>6</u> Ca
11. Magnesium (Mg)	<u>0</u>	÷ 12.2 <u>0</u> Mg
12. Total Hardness (CaCO ₃)	<u>300</u>	
13. Total Iron (Fe)	<u>9</u>	
14. Manganese	<u>0.0</u>	
15. Phosphate Residuals	<u>13</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Eq. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		<u>6</u>		<u>486</u>
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		<u>8</u>		<u>672</u>
Na ₂ SO ₄	71.03				
NaCl	58.46		<u>150</u>		<u>8,769</u>

Saturation Values

CaCO₃

Distilled Water 20°C

13 Mg/l

CaSO₄ · 2H₂O

2,090 Mg/l

MgCO₃

103 Mg/l

REMARKS _____

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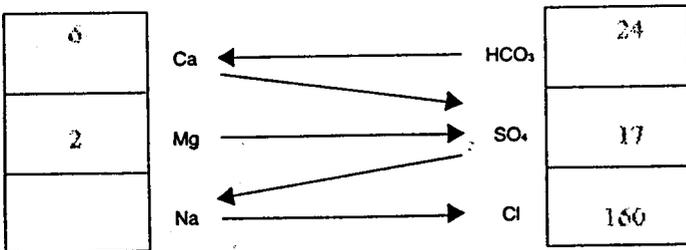
Company Flying J Address _____ Date 1/23/00

Source Walker 1-14AIE Date Sampled 1/22/00 Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>8.6</u>	
2. H ₂ S (Qualitative)	<u>5.0</u>	
3. Specific Gravity	<u>1.012</u>	
4. Dissolved Solids	<u>12,543</u>	
5. Alkalinity (CaCO ₃)	<u>0</u>	÷ 30 <u>0</u> CO ₃
6. Bicarbonate (HCO ₃)	<u>1,460</u>	÷ 61 <u>24</u> HCO ₃
7. Hydroxyl (OH)	<u>0</u>	÷ 17 <u>0</u> OH
8. Chlorides (Cl)	<u>5,700</u>	÷ 35.5 <u>160</u> Cl
9. Sulfates (SO ₄)	<u>800</u>	÷ 48 <u>17</u> SO ₄
10. Calcium (Ca)	<u>120</u>	÷ 20 <u>6</u> Ca
11. Magnesium (Mg)	<u>24</u>	÷ 12.2 <u>2</u> Mg
12. Total Hardness (CaCO ₃)	<u>400</u>	
13. Total Iron (Fe)	<u>1.5</u>	
14. Manganese	<u>0.1</u>	
15. Phosphate Residuals	<u>41</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Eq. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		<u>6</u>		<u>486</u>
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17		<u>2</u>		<u>146</u>
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		<u>16</u>		<u>1,344</u>
Na ₂ SO ₄	71.03		<u>17</u>		<u>1,208</u>
NaCl	58.46		<u>160</u>		<u>9,354</u>

Saturation Values

CaCO₃

CaSO₄ · 2H₂O

MgCO₃

Distilled Water 20°C

13 Mg/l

2,090 Mg/l

103 Mg/l

REMARKS _____

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WATER ANALYSIS REPORT

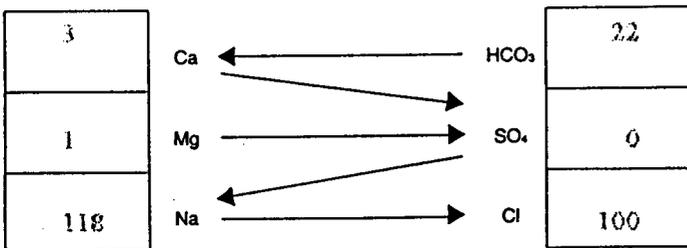
Company Hyving J Address _____ Date 1/10/01

Source Ute 2-22AIE Date Sampled 1/10/01 Analysis No. _____

	Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>8.2</u>		
2. H ₂ S (Qualitative)	<u>0.0</u>		
3. Specific Gravity	<u>1.007</u>		
4. Dissolved Solids		<u>7,669</u>	
5. Alkalinity (CaCO ₃)	CO ₃	<u>0</u>	÷ 30 <u>0</u> CO ₃
6. Bicarbonate (HCO ₃)	HCO ₃	<u>1,342</u>	÷ 61 <u>22</u> HCO ₃
7. Hydroxyl (OH)	OH	<u>0</u>	÷ 17 <u>0</u> OH
8. Chlorides (Cl)	Cl	<u>3,540</u>	÷ 35.5 <u>100</u> Cl
9. Sulfates (SO ₄)	SO ₄	<u>0</u>	÷ 48 <u>0</u> SO ₄
10. Calcium (Ca)	Ca	<u>56</u>	÷ 20 <u>3</u> Ca
11. Magnesium (Mg)	Mg	<u>17</u>	÷ 12.2 <u>1</u> Mg
12. Total Hardness (CaCO ₃)		<u>210</u>	
13. Total Iron (Fe)		<u>5.0</u>	
14. Manganese		<u>0.0</u>	
15. Phosphate Residuals		<u>42</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Eqv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		<u>3</u>		<u>243</u>
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17		<u>1</u>		<u>73</u>
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		<u>18</u>		<u>1,512</u>
Na ₂ SO ₄	71.03				
NaCl	58.46		<u>100</u>		<u>5,846</u>

Saturation Values

CaCO₃

CaSO₄ · 2H₂O

MgCO₃

Distilled Water 20°C

13 Mg/l

2,090 Mg/l

103 Mg/l

REMARKS _____

UNICHEM

A Division of BJ Services

P.O. Box 217
Roosevelt, Utah 84066

Office (435) 722-5066
Fax (435) 722-5727

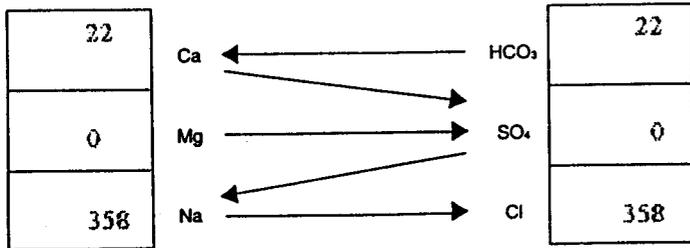
WATER ANALYSIS REPORT

Company Flying J Address _____ Date 1/10/01
Source Ute 1-35AIE Date Sampled 1/10/01 Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>8.0</u>	
2. H ₂ S (Qualitative)	<u>1.0</u>	
3. Specific Gravity	<u>1.020</u>	
4. Dissolved Solids	<u>22,716</u>	
5. Alkalinity (CaCO ₃)	<u>0</u>	<u>0</u> CO ₃
6. Bicarbonate (HCO ₃)	<u>1,342</u>	<u>22</u> HCO ₃
7. Hydroxyl (OH)	<u>0</u>	<u>0</u> OH
8. Chlorides (Cl)	<u>12,700</u>	<u>358</u> Cl
9. Sulfates (SO ₄)	<u>0</u>	<u>0</u> SO ₄
10. Calcium (Ca)	<u>440</u>	<u>22</u> Ca
11. Magnesium (Mg)	<u>0</u>	<u>0</u> Mg
12. Total Hardness (CaCO ₃)	<u>1,100</u>	
13. Total Iron (Fe)	<u>12</u>	
14. Manganese	<u>0.4</u>	
15. Phosphate Residuals	<u>75</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Equiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		<u>22</u>		<u>1,783</u>
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00				
Na ₂ SO ₄	71.03				
NaCl	58.46		<u>358</u>		<u>20,929</u>

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

UNICHEM

A Division of BJ Services

P.O. Box 217
Roosevelt, Utah 84066

Office (435) 722-5066
Fax (435) 722-5727

WATER ANALYSIS REPORT

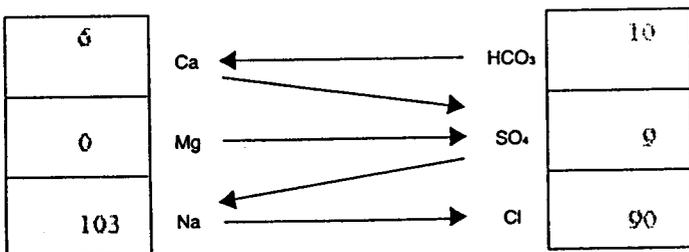
Company Flying J Address _____ Date 1/10/01

Source Ute 1-29AIE Date Sampled 1/10/01 Analysis No. _____

Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>8.1</u>	
2. H ₂ S (Qualitative)	<u>7.0</u>	
3. Specific Gravity	<u>1.005</u>	
4. Dissolved Solids	<u>6,749</u>	
5. Alkalinity (CaCO ₃)	<u>0</u>	÷ 30 <u>0</u> CO ₃
6. Bicarbonate (HCO ₃)	<u>610</u>	÷ 61 <u>10</u> HCO ₃
7. Hydroxyl (OH)	<u>0</u>	÷ 17 <u>0</u> OH
8. Chlorides (Cl)	<u>3,200</u>	÷ 35.5 <u>90</u> Cl
9. Sulfates (SO ₄)	<u>450</u>	÷ 48 <u>9</u> SO ₄
10. Calcium (Ca)	<u>120</u>	÷ 20 <u>6</u> Ca
11. Magnesium (Mg)	<u>0</u>	÷ 12.2 <u>0</u> Mg
12. Total Hardness (CaCO ₃)	<u>300</u>	
13. Total Iron (Fe)	<u>2.0</u>	
14. Manganese	<u>0.2</u>	
15. Phosphate Residuals	<u>12</u>	

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Eqv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO ₃) ₂	81.04		<u>5</u>		<u>485</u>
CaSO ₄	68.07				
CaCl ₂	55.50				
Mg(HCO ₃) ₂	73.17				
MgSO ₄	60.19				
MgCl ₂	47.62				
NaHCO ₃	84.00		<u>4</u>		<u>336</u>
Na ₂ SO ₄	71.03		<u>9</u>		<u>639</u>
NaCl	58.46		<u>90</u>		<u>5,261</u>

Saturation Values	Distilled Water 20°C
CaCO ₃	13 Mg/l
CaSO ₄ · 2H ₂ O	2,090 Mg/l
MgCO ₃	103 Mg/l

REMARKS _____

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Q. 535
Q. 536
Q. 635
Q. 636

UIC FORM 1

APPLICATION FOR INJECTION WELL

Name of Operator Flying J Oil & Gas Inc	Utah Account Number N 8080	Well Name and Number Davis 1-33A1E
Address of Operator PO Drawer 130 CITY Roosevelt STATE Ut ZIP 84066	Phone Number (435) 722-5166	API Number 4304730384
Location of Well Footage : 2356' FWL 1980' FNL County : Uintah		Field or Unit Name East Bluebell
QQ, Section, Township, Range: SENW 33 1S 1E State : UTAH		Lease Designation and Number Fee

Is this application for expansion of an existing project? Yes No

Will the proposed well be used for:

Enhanced Recovery?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Disposal?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Storage?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

Is this application for a new well to be drilled? Yes No

If this application is for an existing well, has a casing test been performed? Yes No
Date of test: _____

Proposed injection interval: from 5,500 to 5,732

Proposed maximum injection: rate 5 pressure 1,179 psig

Proposed injection zone contains oil , gas , and / or fresh water within 1/2 mile of the well.

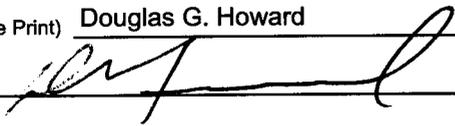
List of attachments: Ownership Plat, Cement Bond Logs, Water Sources, East West North South Cross Section

**ATTACH ADDITIONAL INFORMATION AS REQUIRED BY CURRENT
UTAH OIL AND GAS CONSERVATION GENERAL RULES**

I hereby certify that this report is true and complete to the best of my knowledge.

Name (Please Print) Douglas G. Howard

Title Sr. Petroleum Engineer

Signature 

Date 11-5-01

Item No.

1. Information being reviewed by UDOGM
2. A corrected copy of UIC Form 1 is enclosed.
- 2.1 A plat showing Surface owners within ½ mile radius is enclosed. There are no abandoned or active oil wells within a 1/2 mile radius. The operator of producing leases is Flying J Oil & Gas Inc.
- 2.2 Open hole well logs are on file with UDOGM.
- 2.3 The cement bond log is inclosed.
- 2.4 Open hole well logs are on file with UDOGM.
- 2.5 Current and proposed wellbore diagrams have been submitted.
- 2.6 Produced water from wells in the Altamont Bluebell field will be disposed of in the well. Enclosed are the names of the wells that will dispose water into the Davis SWD well.
- 2.7 Water analysis of water samples from the wells that will dispose water into the Davis SWD are enclosed. The intended injection zone is behind pipe and will likely require remedial cement work. Water samples will be obtained and tested for compatibility after the cement work is completed. The zone will be perforated and swabbed for water samples.
- 2.8 The proposed average injection pressure is 1000 psi. Maximum pressure is 1179 psig until a step rate test is run and may be adjusted pending the results of that test.
- 2.9 Confining zones:
 - Upper confining zone 5404' to 5490' (Green River top is 5404')

A thirty (30) foot confining shale is identified on the Dual Induction-Laterlog from 5492' to 5464' feet and is correlatable to other wells in the area. The Uinta Formation, of Eocene age, overlies the Green River Formation at the Davis 1-33A1E and is comprised primarily of gray-green to varicolored mudstone which is moderately firm, slightly calcareous, and contains a minor siltstone component. Interbedded with the mudstones are abundant beds of pink, firm biotititic Tuff. Also contained in the mudstones are a few thin beds of discontinuous sandstones which tend to be clayey and slightly calcareous. The top of the Green River Formation occurs at 5404' in the Davis well bore and the Uinta Formation top is at 2216' making the total thickness of the Uinta 3188' in the Davis well.
 - Lower confining zone 6700' to 8496' (TGr3 is at 8494')

The gross intervals in which the porous sandstones occur are comprised of tight sandstones and interbedded shales forming confining layers below the proposed injection zone. The gross intervals are correlatable over a large area of the eastern Uinta basin. These individual sandstones are not continuous from well to well. These sandstones are of marginal lacustrine deltaic origin which is a depositional environment that is not prone to form individual sand bodies with large lateral extent.
- 2.10 The Davis 1-33A1E is located near the eastern most limits of the Bluebell-Altamont Field. It is structurally located near the axis of the Bluebell Nose which plunges northwesterly in this area at rates of 50 to 100 feet per mile. The proposed disposal interval in the well is from depths of 5500' to 5732'. This interval is located in the upper member of the Green River Formation and is composed depositionally of marginal lacustrine fluvial deltaic sandstones and shales. The interval begins about 100' below the top of the Green River and while the gross interval is easily identified in wells throughout this part of the field, individual sandstones are of more limited areal extent. NS and EW cross sections are enclosed.

Item No.

- 2.11 There are no other producing wells within a ½ mile radius.
- 2.12 An affidavit has been submitted.
- 2.13 Additional information will be submitted as requested.

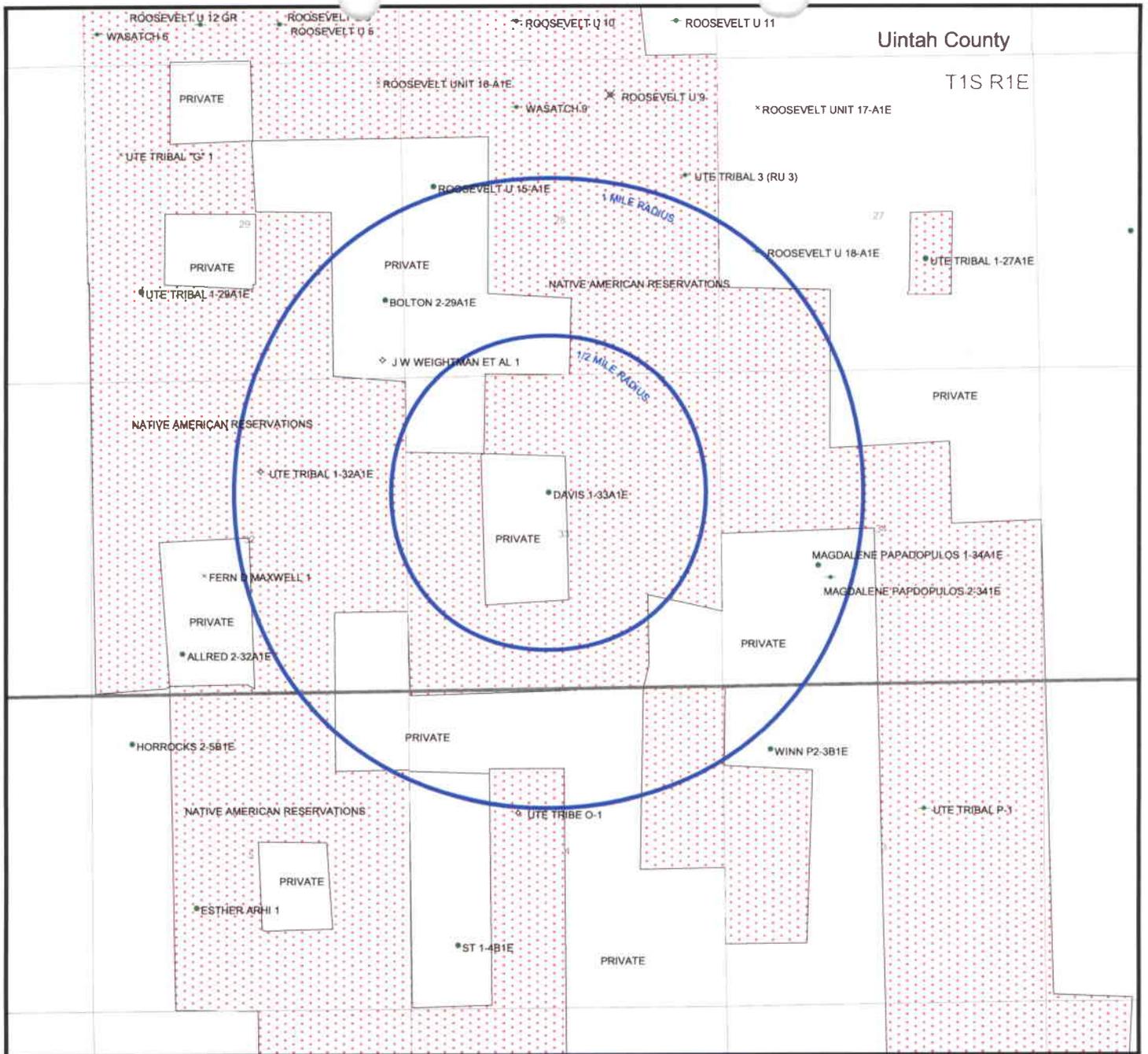
From: Michael Hebertson
To: Doug Howard
Subject: Injection Well Permit

Doug,

A preliminary evaluation of your injection well permit has been completed. Attached you will find a copy of the inhouse Analysis Document we use to determine the completeness of your filing. This document is basically a copy of the rules on the left half of the page, and a comment section on the right hand side. Please note that there are portions of the permit that are sufficient, and others that are lacking. I am interested in the portions that are lacking, and which will be needed in order to finish the processing of your permit. Submittal of a complete package will expedite your permit.

Good Luck,

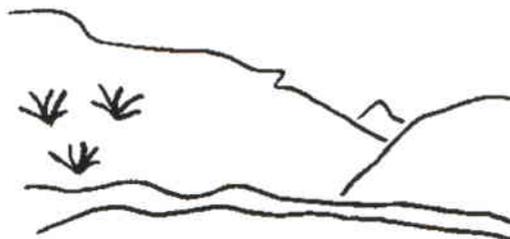
M. Hebertson



Well Status

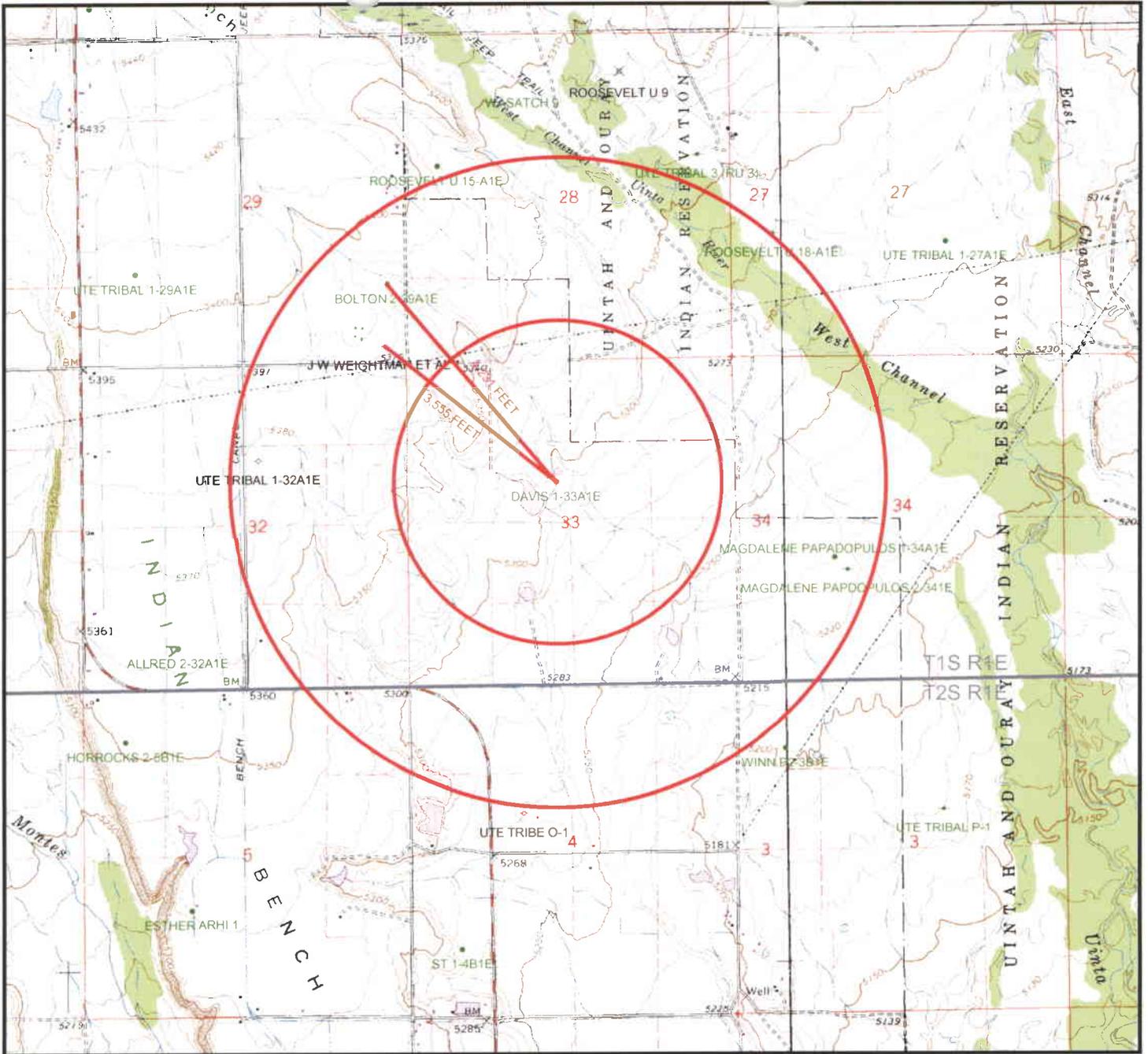
- ⚡ GAS INJECTION
- ⦿ GAS STORAGE
- × LOCATION ABANDONED
- ⊕ NEW LOCATION
- ◇ PLUGGED & ABANDONED
- ⋄ PRODUCING GAS
- PRODUCING OIL
- ⊖ SHUT-IN GAS
- ⊖ SHUT-IN OIL
- × TEMP. ABANDONED
- TEST WELL
- △ WATER INJECTION
- ◆ WATER SUPPLY
- ⚡ WATER DISPOSAL

- ▭ Sections
- ▭ Township



Utah Oil Gas and Mining

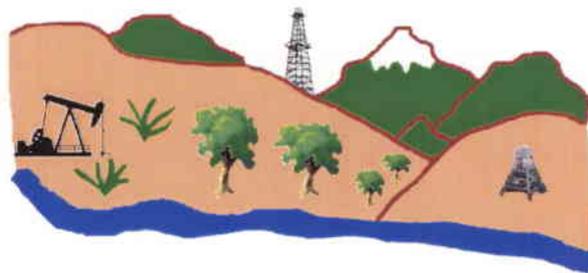




Well Status

- GAS INJECTION
- GAS STORAGE
- LOCATION ABANDONED
- ⊙ NEW LOCATION
- ◇ PLUGGED & ABANDONED
- PRODUCING GAS
- PRODUCING OIL
- SHUT-IN GAS
- SHUT-IN OIL
- ✕ TEMP. ABANDONED
- TEST WELL
- ▲ WATER INJECTION
- WATER SUPPLY
- WATER DISPOSAL
- Sections
- Township

**FLYING J OIL & GAS INC
DAVIS 1-33A1E
PROPOSED INJECTION WELL**



Prepared By: K. M. Hebertson

Utah Oil Gas and Mining

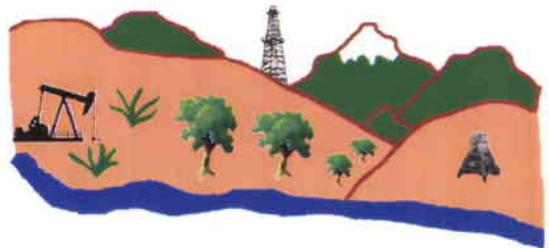


LEGEND

Well Status

- ✓ GAS INJECTION
- GAS STORAGE WELL
- LOCATION ABANDONED
- NEW LOCATION
- PLUGGED & ABANDONED
- PRODUCING GAS
- PRODUCING OIL
- SHUT-IN GAS
- SHUT-IN OIL
- TEMP. ABANDONED
- TEST WELL
- WATER INJECTION
- WATER SUPPLY
- WATER DISPOSAL

- County Boundary
- Sections
- Township
- Field Status**
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- PROPOSED
- STORAGE
- TERMINATED



Utah Oil Gas and Mining



UIC INJECTION PERMIT ANALYSIS FORM

WELL NAME: Davis 1-33A1E

RG49-5-2. Requirements For Class II Injection Wells Including Water Disposal, Storage And Enhanced Recovery Wells.	Completed Items, Needed Items, & Comments
<p>1. Injection wells shall be completed. Equipped, operated, and maintained in a manner that will prevent pollution and damage to any USDW, or other resources and will confine injected fluids to the interval approved.</p> <p>2. The application for an injection well shall include a properly completed UIC Form 1 and the following:</p> <p>2.1. A plat showing the location of the injection well, all abandoned or active wells within a one-half mile radius of the proposed well, and the surface owner and the operator of any lands or producing leases, respectively, within a one-half mile radius of the proposed injection well.</p> <p>2.2. Copies of electrical or radioactive logs, including gamma ray logs, for the proposed well run prior to the installation of casing and indicating resistivity, spontaneous potential, caliper, and porosity.</p> <p>2.3. A copy of a cement bond, or comparable log run for the proposed injection well after casing was set and cemented.</p> <p>2.4. Copies of logs already on file with the division should be referenced, but need not be refiled.</p> <p>2.5. A description of the casing or proposed casing program of the injection well and of the proposed method for testing the casing before use of the well.</p> <p>2.6. A statement as to the type of fluid to be used for injection. its source and estimated amounts to be injected daily.</p> <p>2.7. Standard laboratory analyses of (1) the fluid to be injected, (2) the fluid in the formation into which the fluid is being injected, and (3) the compatibility of the fluids.</p> <p>2.8. The proposed average and maximum injection pressures.</p> <p>2.9. Evidence and data to support a finding that the proposed injection well will not initiate fractures through the overlying strata or a confining interval that could enable the injected fluid or formation fluid to enter the fresh water strata.</p> <p>2.10. Appropriate geological data on the injection interval and confining beds, and nearby Underground Sources of Drinking Water, including the geologic name, lithologic description, thickness, depth, water quality, and lateral extent; also information relative to geologic structure near the proposed well which may effect the conveyance and/or storage of the injected fluids.</p> <p>2.11. A review of the mechanical condition of each well within a one-half mile radius of the proposed injection well to assure that no conduit exists that could enable fluids to migrate up or down the wellbore and enter improper intervals.</p> <p>2.12. An affidavit certifying that a copy of the application has been provided to all operators, owners and surface owners within a one-half mile radius of the proposed injection well.</p> <p>2.13. Any other additional information that the board or division may determine is necessary to adequately review the application.</p>	<p>1. These aspects of the application are being reviewed.</p> <p>2. The application is Not properly filled out. Maximum injection rates do not match.</p> <p>2.1. Plat does not show the Surface Owners in ½ mile radius Plat does not show the Mineral Owners in ½ mile radius</p> <p>2.2. Logs on file are the Dual Induction Log, Neutron Compensated Density Log, and a Coriband Computer Log.</p> <p>2.3. No Cement Bond Log is on file, or included in the application. Cement integrity over the proposed injection zone is supplied.</p> <p>2.4. Copies of logs on file will be used as necessary.</p> <p>2.5. As is and as proposed diagrams are submitted</p> <p>2.6. Better information is needed for this requirement. Type of fluid will be water, the source is not clearly stated and the amount is suspect.</p> <p>2.7. Fluid compatibility results is needed other water sample analysis have been included. Water from the intended injection zone is required.</p> <p>2.8. The numbers on the injection permit are not what is stated in the dialogue. These numbers must agree.</p> <p>2.9. Not supplied at all , no confining beds have been designated. No stratigraphic presentation has been submitted. No actual area of extent has been presented. No mechanical report of rock properties for the confining beds or injection zone has been submitted.</p> <p>2.10. Insufficient (USDW) information has been submitted. 3 WATER RIGHTS are within a mile 2 of these are water wells. No Lithologic description, thickness, depth, water quality, and lateral extent; also information relative to geologic structure near the proposed well which may effect the conveyance and/or storage of the injected fluids. Cross sections NS & EW are required!</p> <p>2.11. There are no other wells within a ½ mile radius.</p> <p>2.12. An affidavit has been submitted.</p> <p>2.13. Additional information is not requested until the needed permit information is supplied.</p>

OTHER COMMENTS AND OBSERVATIONS: The preliminary review for this application is hereby returned to the operator with the noted deficiencies and required materials specified. At the time a complete package of materials is presented and reviewed the permit will be published for public comment. To better expedite the process of review it is requested that the materials requested be submitted as a whole and not piecemeal.

RG49-5-2. Requirements For Class II Injection Wells Including Water Disposal, Storage And Enhanced Recovery Wells.

Completed Items, Needed Items, & Comments

1. Injection wells shall be completed. Equipped, operated, and maintained in a manner that will prevent pollution and damage to any USDW, or other resources and will confine injected fluids to the interval approved.
2. The application for an injection well shall include a properly completed UIC Form 1 and the following:
 - 2.1. A plat showing the location of the injection well, all abandoned or active wells within a one-half mile radius of the proposed well, and the surface owner and the operator of any lands or producing leases, respectively, within a one-half mile radius of the proposed injection well.
 - 2.2. Copies of electrical or radioactive logs, including gamma ray logs, for the proposed well run prior to the installation of casing and indicating resistivity, spontaneous potential, caliper, and porosity.
 - 2.3. A copy of a cement bond, or comparable log run for the proposed injection well after casing was set and cemented.
 - 2.4. Copies of logs already on file with the division should be referenced, but need not be refiled.
 - 2.5. A description of the casing or proposed casing program of the injection well and of the proposed method for testing the casing before use of the well.
 - 2.6. A statement as to the type of fluid to be used for injection. its source and estimated amounts to be injected daily.
 - 2.7. Standard laboratory analyses of (1) the fluid to be injected, (2) the fluid in the formation into which the fluid is being injected, and (3) the compatibility of the fluids.
 - 2.8. The proposed average and maximum injection pressures.
 - 2.9. Evidence and data to support a finding that the proposed injection well will not initiate fractures through the overlying strata or a confining interval that could enable the injected fluid or formation fluid to enter the fresh water strata.
 - 2.10. Appropriate geological data on the injection interval and confining beds, and nearby Underground Sources of Drinking Water, including the geologic name, lithologic description, thickness, depth, water quality, and lateral extent; also information relative to geologic structure near the proposed well which may effect the conveyance and/or storage of the injected fluids.
 - 2.11. A review of the mechanical condition of each well within a one-half mile radius of the proposed injection well to assure that no conduit exists that could enable fluids to migrate up or down the wellbore and enter improper intervals.
 - 2.12. An affidavit certifying that a copy of the application has been provided to all operators, owners and surface owners within a one-half mile radius of the proposed injection well.
 - 2.13. Any other additional information that the board or division may determine is necessary to adequately review the application.

1. These aspects of the application are being reviewed.
2. The application is **Not** properly filled out. Maximum injection rates do not match.
 - 2.1. Plat does not show the Surface Owners in 1/2 mile radius
Plat does not show the Mineral Owners in 1/2 mile radius
 - 2.2. Logs on file are the Dual Induction Log, Neutron Compensated Density Log, and a Coriband Computer Log.
 - 2.3. No Cement Bond Log is on file, or included in the application. Cement integrity over the proposed injection zone is supplied.
 - 2.4. Copies of logs on file will be used as necessary.
 - 2.5. As is and as proposed diagrams are submitted
 - 2.6. Better information is needed for this requirement. Type of fluid will be water, the source is not clearly stated and the amount is suspect.
 - 2.7. Fluid compatibility results is needed other water sample analysis have been included. Water from the intended injection zone is required.
 - 2.8. The numbers on the injection permit are not what is stated in the dialogue. These numbers must agree.
 - 2.9. Not supplied at all , no confining beds have been designated. No stratigraphic presentation has been submitted. No actual area of extent has been presented. No mechanical report of rock properties for the confining beds or injection zone has been submitted.
 - 2.10. Insufficient (USDW) information has been submitted. 3 WATER RIGHTS are within a mile 2 of these are water wells. No Lithologic description, thickness, depth, water quality, and lateral extent; also information relative to geologic structure near the proposed well which may effect the conveyance and/or storage of the injected fluids. Cross sections NS & EW are required!
 - 2.11. There are no other wells within a 1/2 mile radius.
 - 2.12. An affidavit has been submitted.
 - 2.13. Additional information is not requested until the needed permit information is supplied.

OTHER COMMENTS AND OBSERVATIONS: The preliminary review for this application is hereby returned to the operator with the noted deficiencies and required materials specified. At the time a complete package of materials is presented and reviewed the permit will be published for public comment. To better expedite the process of review it is requested that the materials requested be submitted as a whole and not piecemeal.



FLYING J OIL & GAS INC.

P.O. DRAWER 130 • ROOSEVELT, UTAH 84066
PHONE (801) 722-5166 • FAX (801) 722-5169

K. Michael Hebertson
State of Utah Natural Resources
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84114-5801

November 5, 2001

Re: UIC Form 1 Application
Conversion to SWD
Davis #1-33A1E
Section 33, T1S, R1E
Uintah County, Utah

Deficiencies in Application

Dear Mr. Hebertson,

Enclosed please find corrections and additions to the referenced UIC Form 1 Application. The material provided references the item number of your letter dated July 8, 2001 which is also enclosed.

Please call me at 435.722.5166 or email me at doug.howard@flyingj.com to let me know if additional information is required.

Thanks for your help.

Sincerely,

Doug Howard

K. HOWARD
KENDALL
7-96-7921

RECEIVED

NOV 07 2001

DIVISION OF
OIL, GAS AND MINING

Proposed Water Disposal Well: Davis 1-33A1E

The Davis 1-33A1E is located in T.1 S., R 1 E. Section 33 se,nw Uintah County, Utah near the eastern most limits of the Bluebell-Altamont Field.

The Davis 1-33A1E is structurally located near the axis of the Bluebell Nose which plunges northwesterly in this area at rates of 50 to 100 feet per mile.

The proposed disposal interval in the well is from depths of 5500' to 5732'. This interval is located in the upper member of the Green River Formation and is composed depositionally of marginal lacustrine fluvial deltaic sandstones and shales. The interval begins about 100' below the top of the Green River and while the gross interval is easily identified in wells throughout this part of the field, individual sandstones are of a more limited areal extent

ST. OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

SUNDRY NOTICE AND REPORTS ON WELLS
Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells
Use APPLICATION FOR PERMIT -- for such proposals

b. Lease Designation and Serial Number
Fee
7. Indian Allottee or Tribe Name
8. Unit or Communitization Agreement 9C 000176
9. Wel Name and Number Davis 1-33A1E
10. API Well Number 43 047 30384
11. Field and Pool, or Exploratory Area Bluebell

1. Title of Well
 Oil Well Gas Well Other

2. Name of Operator
Flying J Oil and Gas Inc

3. Address and Telephone No.
PO Drawer 130, Roosevelt, Utah 84066

4. Telephone Number
435-722-5166

5. Location of Well
Footage **2356' FWL 1980' FNL** County: **Uintah**
State: **Utah**

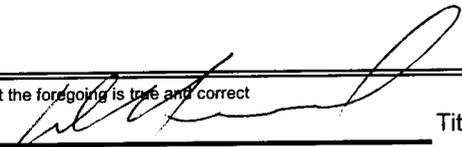
QQ, Sec. T.,R.,M.: **SENW Sec 33 T1S R1E**

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
NOTICE OF INTENT (Submit in Duplicate)		SUBSEQUENT REPORT (Submit Original Form Only)	
<input type="checkbox"/> Abandonment	<input type="checkbox"/> New Construction	<input type="checkbox"/> Abandonment	<input type="checkbox"/> New Construction
<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Pull or Alter Casing	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Pull or Alter Casing
<input type="checkbox"/> Change of Plans	<input type="checkbox"/> Recompletion	<input type="checkbox"/> Change of Plans	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Conversion to Injection	<input type="checkbox"/> Shoot or Acidize	<input type="checkbox"/> Conversion to Injection	<input type="checkbox"/> Shoot or Acidize
<input type="checkbox"/> Fracture Test	<input type="checkbox"/> Vent or Flare	<input type="checkbox"/> Fracture Test	<input type="checkbox"/> Vent or Flare
<input type="checkbox"/> Multiple Completion	<input type="checkbox"/> Water Shut-Off	<input type="checkbox"/> Multiple Completion	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Other	Cement Bond Evaluation and Obtain Water Sample from Proposed Injection Interval	<input type="checkbox"/> Other	
Approximate Date Work Will Start _____		Date of Work Completion _____	
		Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG FORM. *Must be accompanied by a cement verification report	

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface location and measured and true vertical depths for all markers and zones pertinent to this work.

See attachment for procedure

RECEIVED
NOV 19 2001
DIVISION OF
OIL, GAS AND MINING

14. I hereby certify that the foregoing is true and correct
Signed  Title Senior Petroleum Engineer Date 11/19/01
Doug Howard

(State Use Only)

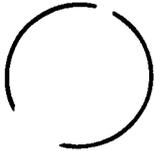
COPY SENT TO OPERATOR
Date: 11/27/01
Initials: CHD

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 11/28/01
BY: Dale D...

PROCEDURE

1. MIRUSU. Hot oil well as needed to release pump and flush tubing.
2. POOH with rods and pump.
3. Release tubing anchor and POOH with tubing and anchor.
4. Pick up and run bit and scraper for 7" 32# casing. Clean out to PBTB @ 9778'.
5. RIH and set CIBP at 9778'. Set cement retainer at 8300'. Squeeze 200 sx class G cement below retainer into SWD perms from 8449' to 9647'. Leave 2 bbls (52') cement on top of retainer.
6. Pull up three stands and reverse out. Pressure test casing to 1000 psi. POOH.
7. Run CBL from PBTB to surface and evaluate to determine if remedial cement work will be required. Squeeze if necessary. Re-run CBL to demonstrate cement bond 100 feet above and below proposed injection zone.
8. Rig up perforators and perforate the following Green River intervals using 4" casing guns, premium charge shooting 4 JSPF:

5820-54'	5542-48'
5723-32'	5500-14'
5698-5708'	
9. Run 7" 32# retrievable packer on 2 7/8" tubing and set at \pm 5400'.
10. Fill backside with packer fluid and perform MIT.
11. Swab perforations for formation water sample. Break down if necessary.
12. Wait on State approval before performing additional work.



FLYING J OIL & GAS INC.

333 WEST CENTER STREET • NORTH SALT LAKE, UTAH 84054
PHONE (801) 296-7700 • FAX (801) 296-7888

RECEIVED

Division of Oil, Gas & Mining
P.O. Box 145801
Salt Lake City, Utah 84114-5801
Attn: Mike Hebertson

NOV 21 2001

21 November 2001

DIVISION OF
OIL, GAS AND MINING

Mike:

As per our telephone conversation on the 20 Nov. 2001, please find enclosed:

Cross sections A-A' (east-west), and B-B' (north-south) showing the gross injection interval and the upper and lower confining zones.

A brief description of the rock types in this area of the Uinta Basin.

A small structure map on the top of the Green River formation in a 9 section area around the Davis 1-33A1E.

This information is an amended version of the data you previously received from us and is updated to include the items we discussed. Please contact me if any further information is required.

Best wishes.

43-047-30384

UIC-273.1
fc

Carl F. Kendall
Chief Geologist
Flying J Oil & Gas Inc.

Proposed Water Disposal Well: Davis 1-33A1E

The Davis 1-33A1E is located in T.1 S., R 1 E. Section 33 se,nw Uintah County, Utah near the eastern most limits of the Bluebell-Altamont Field.

The Davis 1-33A1E is structurally located near the axis of the Bluebell Nose which plunges northerly in this area at rates of about 50 to 100 feet per mile.

The proposed disposal interval in the well is from depths of 5500' to 5732'. This interval is located in the upper part of the Evacuation Creek member of the Green River Formation and is composed depositionally of marginal lacustrine fluvial deltaic sandstones and shales. The interval begins about 100' below the top of the Green River and while the gross interval is easily identified in wells throughout this part of the field, however, individual sandstones are of a more limited Aerial extent

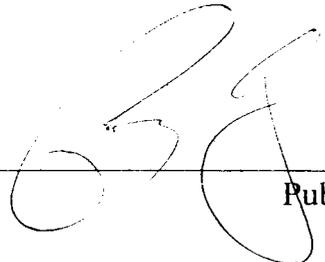
The primary confining zone above the injection interval is the Uinta Formation which lies immediately above the Green River Fm. The Uinta Fm. is comprised of mudstones which are gray-green, yellow, and reddish brown in color, slightly calcareous and silty in part. These mudstones are interbedded with thin tuffs which are light gray to pink in color and micaceous. Some thin gypsiferous shales are also found in the Uinta Fm.

The confining zones below the injection interval is comprised primarily of the shales and tuffaceous beds in the lower part of the Evacuation Creek member of the Green River Fm.. The mudstones are light brown, blocky and dolomitic. The tuffs are light gray to pink, cryptocrystalline and micaceous.

SWORN AFFIDAVIT OF PUBLICATION

County of Duchesne,
State of UTAH

I, Craig L. Ashby on oath, say that I am the PUBLISHER of the Uintah Basin Standard, a weekly newspaper of general circulation, published at Roosevelt, and County aforesaid, and that a certain notice, a true copy of which is hereto attached, was published in the full page of such newspaper for 1 consecutive issues, and the first publication was on the 18 day of November, 2001, and that the last publication of such notice was in the issue of such newspaper dated the 17 day of December, 2001.



Publisher

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY

Subscribed and sworn to before me this
17 day of December, 2001


Notary Public

 BONNIE PARRISH
Notary Public - STATE of UTAH
1000 HILLCREST DR. (415-5)
ROOSEVELT, UT 84066
COMM. EXP 3-31-2004

WELL LOCATED IN SECTION 33, TOWNSHIP 1 SOUTH, RANGE 1 EAST, U.S.M., UINTAH COUNTY, UTAH, AS A CLASS II INJECTION WELL

STATE OF UTAH
DIVISION OF OIL
& GAS & MINING
John R. Baza
Associate Director
Published in the Uintah Basin Standard December 18, 2001.

THE STATE OF UTAH TO ALL PERSONS INTERESTED IN THE ABOVE ENTITLED MATTER.

Notice is hereby given that the Division of Oil, Gas and Mining (the "Division") is commencing an informal adjudicative proceeding to consider the application of Flying J Oil and Gas Inc. for administrative approval of the Davis 1-33A1E well, located in Section 33, Township 1 South, Range 1 East, Uintah County, Utah, for conversion to a Class II injection well. The proceeding will be conducted in accordance with Utah Admin. R. 649-10, Administrative Procedures.

The interval from 5,500 feet to 5,732 feet (Green River Formation) will be selectively perforated for water injection. The maximum requested injection pressure is to be determined from a Step Rate Test, and a maximum injection rate of 1,500 BWPD.

Any person desiring to object to the application or otherwise intervene in the proceeding, must file a written protest or notice of intervention with the Division within fifteen days following publication of this notice. If such a protest or notice of intervention is received, a hearing will be scheduled in accordance with the aforementioned administrative procedure rules. Protestants and/or interveners should be prepared to demonstrate at the hearing how this matter affects their interests.

**NOTICE OF AGENCY ACTION
CAUSE NO. UIC-273**

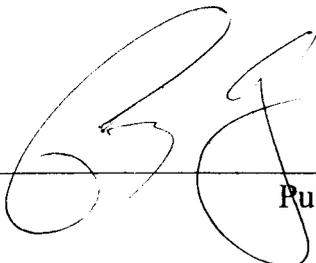
IN THE MATTER OF THE APPLICATION OF FLYING JOIL AND GAS, INC. FOR ADMINISTRATIVE APPROVAL OF THE DAVIS 1-33A1E

Dated this 14th day of December, 2001.

FIDAVIT OF PUBLICATION

City of Duchesne,
County of Uintah,
State of UTAH

I, Craig L. Ashby on oath, say that I am the PUBLISHER of the Uintah Basin Standard, a weekly newspaper of general circulation, published at Roosevelt, Utah, and County aforesaid, and that a certain notice, a true and correct copy of which is hereto attached, was published in the full page of such newspaper for 1 consecutive issues, and the first publication was on the 18 day of December, 2001, and that the last publication of such notice was in the issue of such newspaper dated the 7 day of December, 2001.

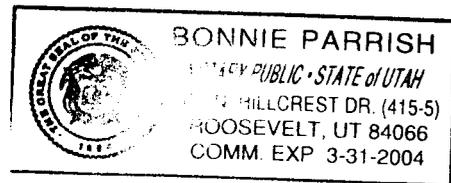


Publisher

Subscribed and sworn to before me this
7 day of December, 2001



Notary Public



WELL LOCATED IN SECTION 33, TOWNSHIP 1 SOUTH, RANGE 1 EAST, U.S.M.L., UINTAH COUNTY, UTAH, AS A CLASS II INJECTION WELL

STATE OF UTAH
DIVISION OF OIL
& MINING
John R. Baza
Associate Director
Published in the Uintah Basin Standard December 18, 2001.

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Dated this 14th day of December, 2001.

NOTICE OF AGENCY ACTION CAUSE NO. UIC-273

IN THE MATTER OF THE APPLICATION OF FLYING J OIL AND GAS, INC. FOR ADMINISTRATIVE APPROVAL OF THE DAVIS 1-33A1E

143 SOUTH MAIN ST.
P.O. BOX 45838
SALT LAKE CITY, UTAH 84145
FED. TAX I.D.# 87-0217663

Newspaper Agency Corporation

The Salt Lake Tribune  DESERET NEWS

CUSTOMER'S COPY

PROOF OF PUBLICATION

CUSTOMER NAME AND ADDRESS	ACCOUNT NUMBER	DATE
DIV OF OIL-GAS & MINING 1594 W NORTH TEMP #1210 P.O. BOX 145801 SALT LAKE CITY, UT 84114	D5385340L-07	12/20/01

ACCOUNT NAME	
DIV OF OIL-GAS & MINING	
TELEPHONE	INVOICE NUMBER
801-538-5340	TL8201FDCW1
SCHEDULE	
START 12/20/01 END 12/20/01	
CUST. REF. NO.	

UIC 273	
CAPTION	
BEFORE THE DIVISION OF OIL, GA	
SIZE	
56 LINES 2.00 COLUMN	
TIMES	RATE
1	1.16
MISC. CHARGES	AD CHARGES
.00	129.92
TOTAL COST	
129.92	

BEFORE THE DIVISION OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH

---ooOoo---
IN THE MATTER OF THE APPLICATION OF FLYING J OIL AND GAS, INC. FOR ADMINISTRATIVE APPROVAL OF THE DAVIS 1-33A1E WELL LOCATED IN SECTION 33, TOWNSHIP 1 SOUTH, RANGE 1 EAST, U.S.M., UTAH COUNTY, UTAH, AS A CLASS II INJECTION WELL : NOTICE OF AGENCY ACTION : CAUSE NO. UIC-273

---ooOoo---
THE STATE OF UTAH TO ALL PERSONS INTERESTED IN THE ABOVE ENTITLED MATTER.

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Any person desiring to object to the application or otherwise intervene in the proceeding, must file a written protest or notice of intervention with the Division within fifteen days following publication of this notice. If such a protest or notice of intervention is received, a hearing will be scheduled in accordance with the aforementioned administrative procedure rules. Protestants and/or interveners should be prepared to demonstrate at the hearing how this matter affects their interests.

Dated this 14TH day of December, 2001.

STATE OF UTAH
DIVISION OF OIL, GAS & MINING
/s/ John R. Baza
Associate Director

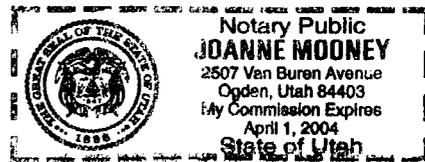
8201FDCW

AFFIDAVIT OF PUBLICATION

AS NEWSPAPER AGENCY CORPORATION LEGAL BOOKKEEPER, I CERTIFY ADVERTISEMENT OF BEFORE THE DIVISION OF OIL, GA DIV OF OIL-GAS & MINING WAS PUBLISHED BY CORPORATION, AGENT FOR THE SALT LAKE TRIBUNE AND DESERET PRINTED IN THE ENGLISH LANGUAGE WITH GENERAL CIRCULATION IN SALT LAKE CITY, SALT LAKE COUNTY IN THE STATE OF UTAH.

PUBLISHED ON START 12/20/01 END 12/20/01

SIGNATURE *Joanne Mooney*
DATE 12/20/01



**THIS IS NOT A STATEMENT BUT A "PROOF OF PUBLICATION"
PLEASE PAY FROM BILLING STATEMENT.**

143 SOUTH MAIN ST.
 P.O. BOX 45838
 SALT LAKE CITY, UTAH 84145
 FED. TAX I.D.# 87-0217663

Newspaper Agency Corporation

The Salt Lake Tribune



DESERET NEWS

CUSTOMER'S COPY

PROOF OF PUBLICATION

CUSTOMER NAME AND ADDRESS	ACCOUNT NUMBER	DATE
DIV OF OIL-GAS & MINING 1594 W NORTH TEMP #1210 P.O. BOX 145801 SALT LAKE CITY, UT 84114	D5385340L-07	12/20/01

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TELEPHONE	INVOICE NUMBER
801-538-5340	TL8201FDCW1
SCHEDULE	
START 12/20/01 END 12/20/01	
CUST. REF. NO.	
UIC 273	
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BEFORE THE DIVISION OF OIL, GA	
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TIMES	RATE
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MISC. CHARGES	AD CHARGES
.00	129.92
TOTAL COST	
129.92	

BEFORE THE DIVISION OF OIL, GAS AND MINING
 DEPARTMENT OF NATURAL RESOURCES
 STATE OF UTAH

---ooOoo---

IN THE MATTER OF THE : NOTICE OF AGENCY
 APPLICATION OF FLYING : ACTION
 J OIL AND GAS, INC FOR : CAUSE NO. UIC-273
 ADMINISTRATIVE APPROVAL :
 OF THE DAVIS 1-33A1E :
 WELL LOCATED IN SECTION :
 33, TOWNSHIP 1 SOUTH, :
 RANGE 1 EAST, U.S.M. :
 UINTAH COUNTY, UTAH, AS :
 A CLASS II INJECTION WELL

---ooOoo---

THE STATE OF UTAH TO ALL PERSONS INTERESTED IN THE
 ABOVE ENTITLED MATTER.

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Any person desiring to object to the application or otherwise intervene in the proceeding, must file a written protest or notice of intervention with the Division within fifteen days following publication of this notice. If such protest or notice is filed, the Division will schedule a public hearing in the Division office at 145 South 350 West in Richfield, Utah. Anytime during regular office hours, the site number and brief descriptions are available to any interested persons or groups of the UICOT Region four office at 145 South 350 West in Richfield, Utah.

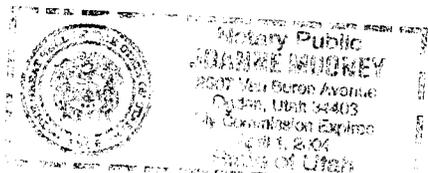
84/11. Letters must be postmarked by midnight January 21, 2002.

AFFIDAVIT OF PUBLICATION

AS NEWSPAPER AGENCY CORPORATION LEGAL BOOKKEEPER, I CERTIFY THAT THE ATTACHED ADVERTISEMENT OF BEFORE THE DIVISION OF OIL, GA FOR DIV OF OIL-GAS & MINING WAS PUBLISHED BY THE NEWSPAPER AGENCY CORPORATION, AGENT FOR THE SALT LAKE TRIBUNE AND DESERET NEWS, DAILY NEWSPAPERS PRINTED IN THE ENGLISH LANGUAGE WITH GENERAL CIRCULATION IN UTAH, AND PUBLISHED IN SALT LAKE CITY, SALT LAKE COUNTY IN THE STATE OF UTAH.

PUBLISHED ON START 12/20/01 END 12/20/01

SIGNATURE *Parma King*
 DATE 12/20/01



THIS IS NOT A STATEMENT BUT A "PROOF OF PUBLICATION"
PLEASE PAY FROM BILLING STATEMENT.



UTAH DIVISION OF WATER RIGHTS
 NWPLAT POINT OF DIVERSION LOCATION PROGRAM

MAP CHAR	WATER RIGHT	QUANTITY CFS AND/OR AC-FT	SOURCE DESCRIPTION	or WELL INFO	POINT OF DIVERSION DESCRIPTION
			DIAMETER	DEPTH	CNR SEC TWN RNG B&M
0	43 6801	.0150 .00	6	400	N N 465 W 650 SE 29 1S 1E US
					PRIORITY DATE: 03/03/19
					Roosevelt
1	43 3427	5.0000 .00	Unita River		N 2791 E 1016 W4 34 1S 1E US
					PRIORITY DATE: 12/30/19
					Myton
2	4310804	.0000 1.73	6	0 - 30	1976 N S 150 E 100 NW 33 1S 1E US
					PRIORITY DATE: 02/26/19
					Roosevelt



State Online Services

Agency List

Search Utah.gov

UTAH DIVISION OF WATER RIGHTS

WRPRINT Water Right Information Listing

Version: 2001.09.26.00 Rundate: 12/04/2001 10:24 AM

Water Right 43-6801

[WRPRINT] ***WR#: 43 6801 has been PRINTED!!
(WARNING: Water Rights makes NO claims as to the accuracy of this data.) RUN DATE: 12/0
WRNUM: 43-6801 APPLICATION/CLAIM NO.: A38110 CERT. NO.:

OWNERSHIP*****

NAME: Bolton, Charles G. and Barbara OWNER MISC:
ADDR:
CITY: Roosevelt STATE: UT ZIP: 84066 INTEREST: 100%
LAND OWNED BY APPLICANT?

DATES, ETC.*****

FILING: 03/03/1967 | PRIORITY: 03/03/1967 | ADV BEGAN: 04/06/1967 | ADV ENDED: / / | NEWSPAPER: Uintah Basin St.
PROTST END: / / | PROTESTED: [No] | APPR/REJ: [Approved] | APPR/REJ: 07/17/1967 | PROOF DUE: 06/30/1970 | EXTEN:
ELEC/PROOF: [Election] | ELEC/PROOF: 06/19/1970 | CERT/WUC: 05/26/1972 | LAP, ETC: / / | PROV LETR: / / | RENOV.
PD Book No. Type of Right: APPL Status: WUCS Source of Info: WUC Map: 159c Date Verified: 11/16/1994 I:

LOCATION OF WATER RIGHT*****

FLOW: 0.015 cfs SOURCE: Underground Water Well
COUNTY: Duchesne COMMON DESCRIPTION:

POINT OF DIVERSION -- UNDERGROUND:
(1) N 465 ft W 650 ft from SE cor, Sec 29, T 1S, R 1E, USBM DIAM: 6 ins. DEPTH: 400 to ft. YEAR DRILLED:
Comment:

USES OF WATER RIGHT*****



State Online Services

Agency List

Search Utah.gov

go

UTAH DIVISION OF WATER RIGHTS

WRPRINT Water Right Information Listing

Version: 2001.09.26.00 Rundate: 12/04/2001 10:26 AM

Water Right 43-3427

View Documents

Use Data

[WRPRINT] ***WR#: 43 3427 has been PRINTED!!

(WARNING: Water Rights makes NO claims as to the accuracy of this data.) RUN DATE: 12/0

WRNUM: 43-3427 APPLICATION/CLAIM NO.: A22482 CERT. NO.: 5207

OWNERSHIP*****

NAME: Dean, Morley OWNER MISC:
ADDR:
CITY: Myton STATE: UT ZIP: 84052 INTEREST: 100%
LAND OWNED BY APPLICANT?

DATES, ETC.*****

FILING: 12/30/1950 | PRIORITY: 12/30/1950 | ADV BEGAN: 03/29/1951 | ADV ENDED: / / | NEWSPAPER: Vernal Express
PROTST END: / / | PROTESTED: [No] | APPR/REJ: [Approved] | APPR/REJ: 07/17/1951 | PROOF DUE: 05/31/1956 | EXTEN:
ELEC/PROOF: [Proof] | ELEC/PROOF: 05/31/1956 | CERT/WUC: / / | LAP, ETC: / / | PROV LETR: / / | RENOV:
PD Book No. Type of Right: APPL Status: CERT Source of Info: CERT Map: Date Verified: 10/01/1993 I:

LOCATION OF WATER RIGHT*****

FLOW: 5.0 cfs SOURCE: Uinta River
COUNTY: Uintah COMMON DESCRIPTION:

POINT OF DIVERSION -- SURFACE:

(1) N 2791 ft E 1016 ft from W4 cor, Sec 34, T 1S, R 1E, USBM

Diverting Works: Diversion dam and ditch

Source: Uinta River

USES OF WATER RIGHT*****



UTAH DIVISION OF WATER RIGHTS

WRPRINT Water Right Information Listing

Version: 2001.09.26.00 Rundate: 12/04/2001 10:26 AM

Water Right 43-10804

[WRPRINT] ***WR#: 4310804 has been PRINTED!!
 (WARNING: Water Rights makes NO claims as to the accuracy of this data.) RUN DATE: 12/04/2001 10:26 AM
 WRNUM: 43-10804 APPLICATION/CLAIM NO.: A71367 CERT. NO.:

OWNERSHIP*****

 NAME: Bolton, Richard and Karalee OWNER MISC:
 ADDR: Rt. 2 Box 2680
 CITY: Roosevelt STATE: UT ZIP: 84066 INTEREST:
 LAND OWNED BY APPLICANT? Yes

DATES, ETC.*****

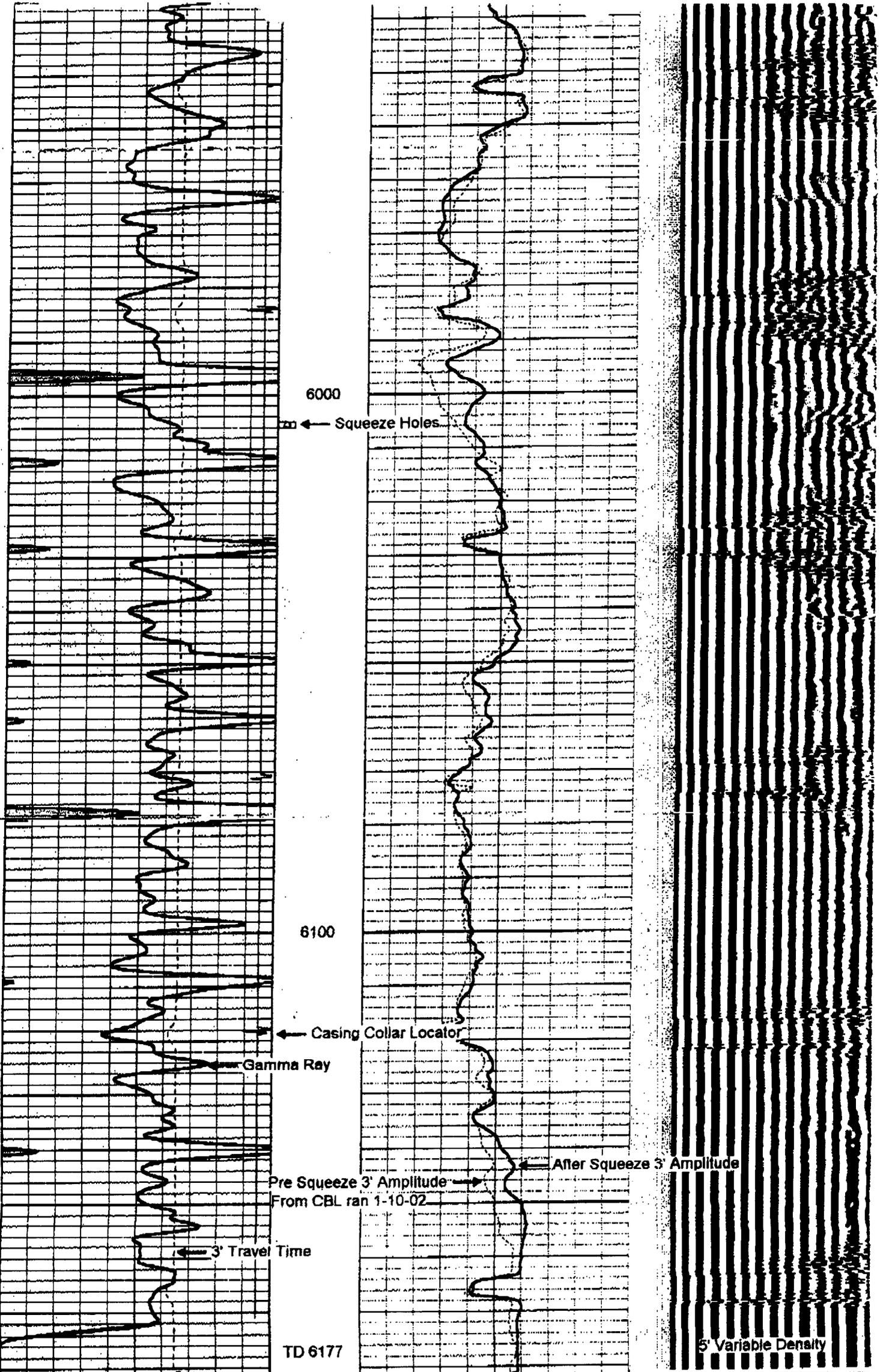
 FILING: 02/26/1998 | PRIORITY: 02/26/1998 | ADV BEGAN: / / | ADV ENDED: / / | NEWSPAPER:
 PROTST END: / / | PROTESTED: [No] | APPR/REJ: [Approved] | APPR/REJ: 08/21/1998 | PROOF DUE: 06/30/2004 | EXTEN:
 ELEC/PROOF:[] | ELEC/PROOF: / / | CERT/WUC: / / | LAP, ETC: / / | PROV LETR: / / | RENOV:
 PD Book No. Type of Right: APPL Status: APP Source of Info: APPL Map: Date Verified: 02/26/1998 I:

LOCATION OF WATER RIGHT*****

 FLOW: 1.73 acre-feet SOURCE: Underground Water Well (Existing)
 COUNTY: Uintah COMMON DESCRIPTION: 10 mi. northeast of Roosevelt

POINT OF DIVERSION -- UNDERGROUND:
 (1) S 150 ft E 100 ft from NW cor, Sec 33, T 1S, R 1E, USBM DIAM: 6 ins. DEPTH: 0 to 30 ft. YEAR DRILLED:
 Comment:

USES OF WATER RIGHT*****



-19	Collar Locator	1	0	3' Amplitude (mV)	100	200	Variable Density	12
0	Gamma Ray (GAPI)	150	0	Amplified 3' Amp (mV)	10			
400	TT3 (usec)	200	0	PSAMP3 (mV)	100			
150	Gamma Ray (GAPI)	300						
300	Gamma Ray (GAPI)	450						

Flying J Oil & Gas

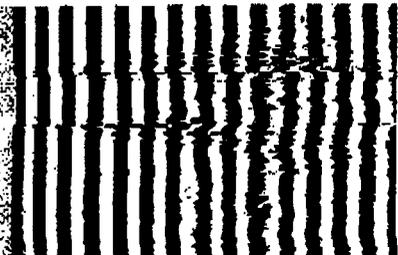
Post-it® Fax Note		Date <i>1-10-02</i>	# of pages ▶ <i>6</i>
To <i>Mike Hebertson</i>	From <i>Larry Rich</i>		
Co./Dept.	Co.		
Phone #	Phone # <i>435-722-5166</i>		
Fax #	Fax # <i>435-722-5169</i>		

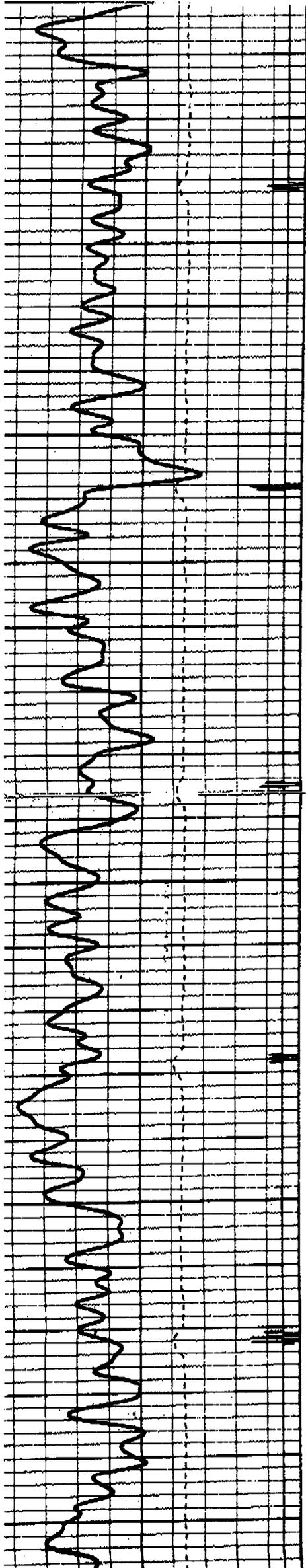
Davis 1-33 A/E
S.D.W.

RECEIVED

JAN 10 2002

DIVISION OF
OIL, GAS AND MINING

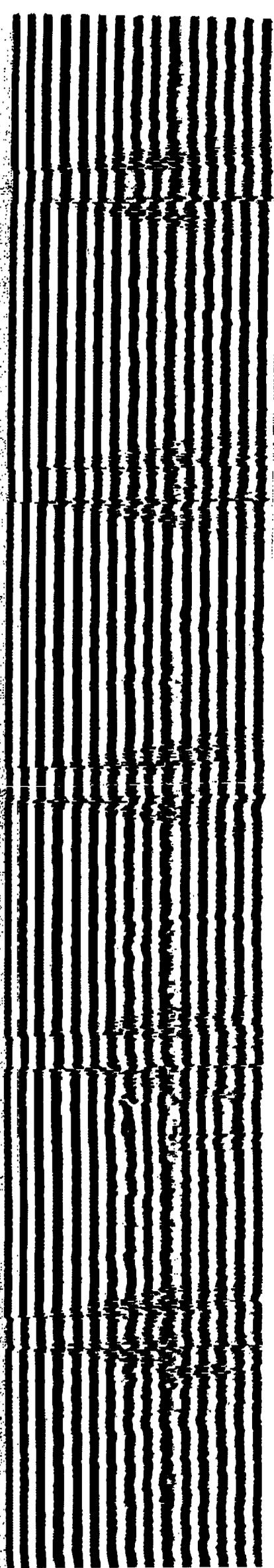
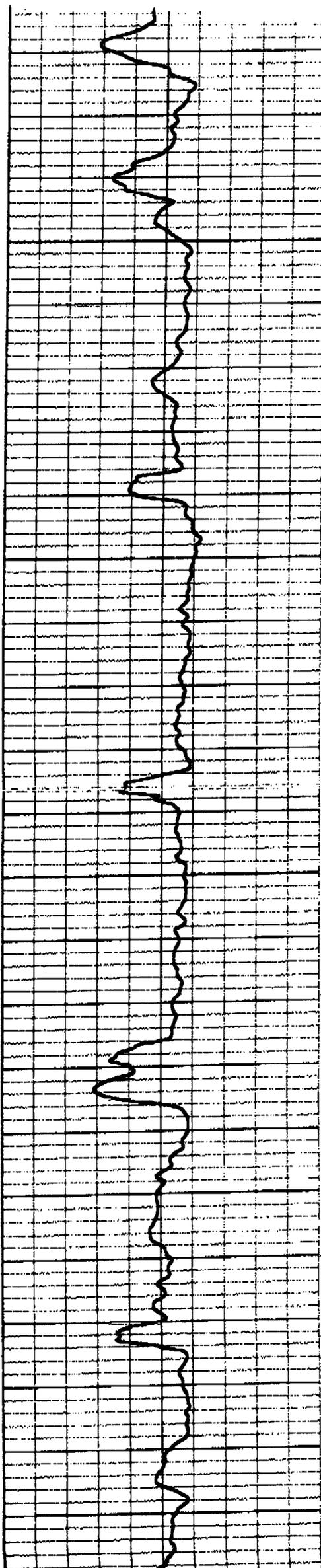


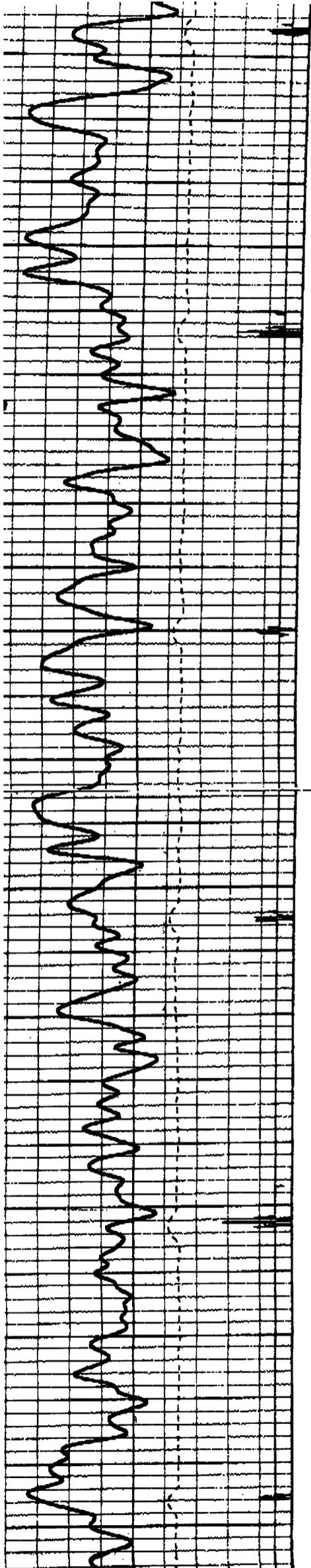


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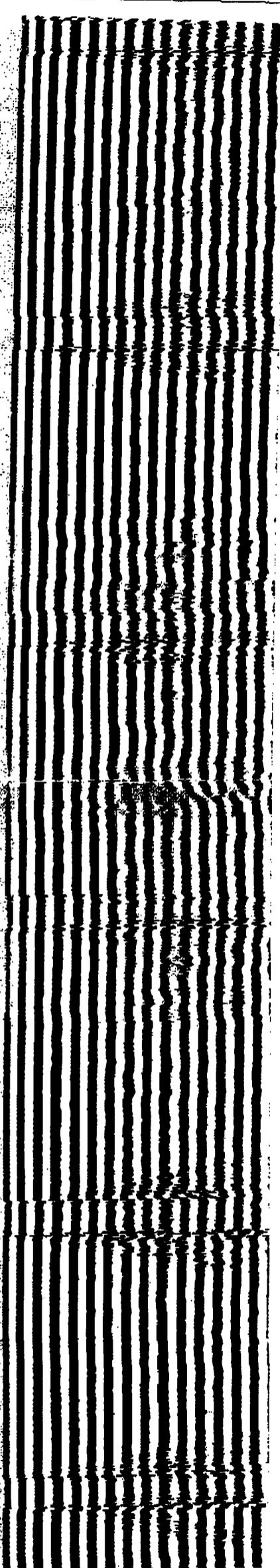
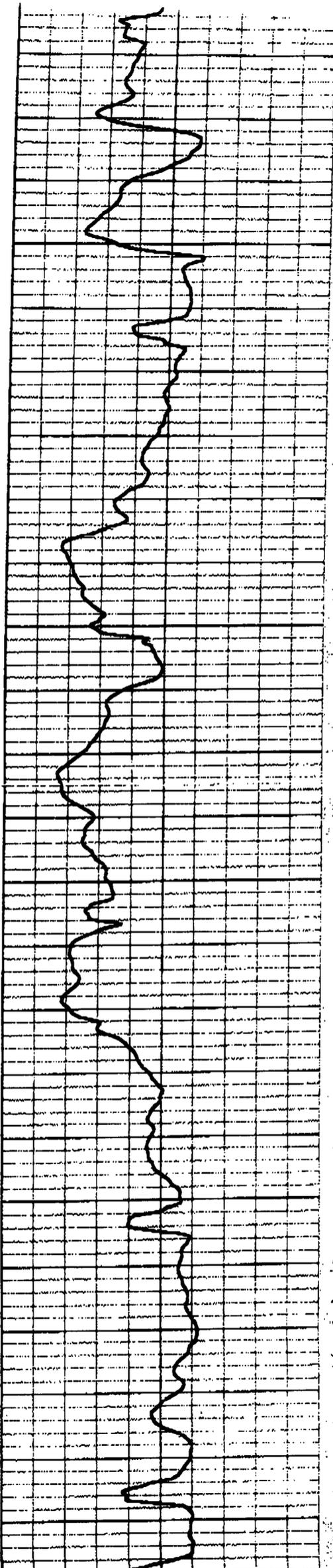
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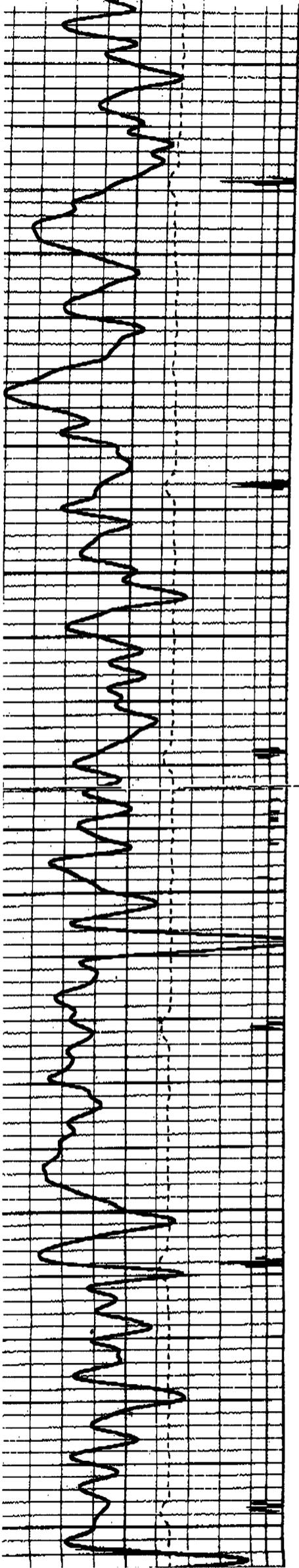




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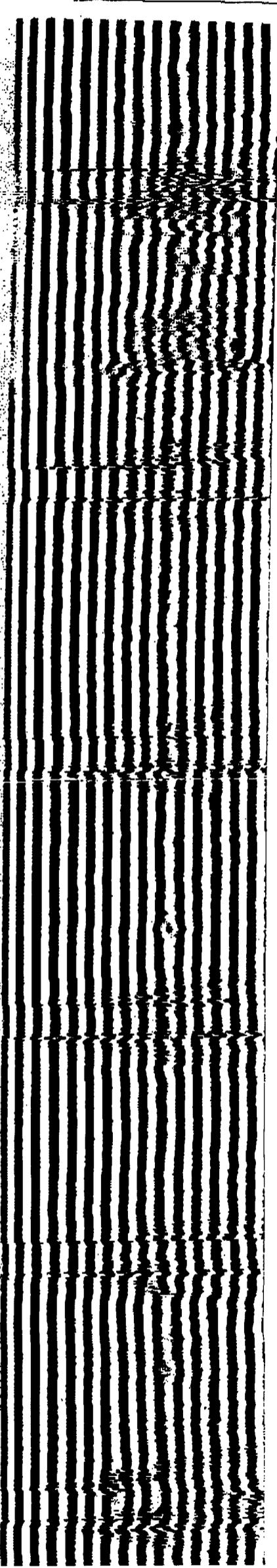
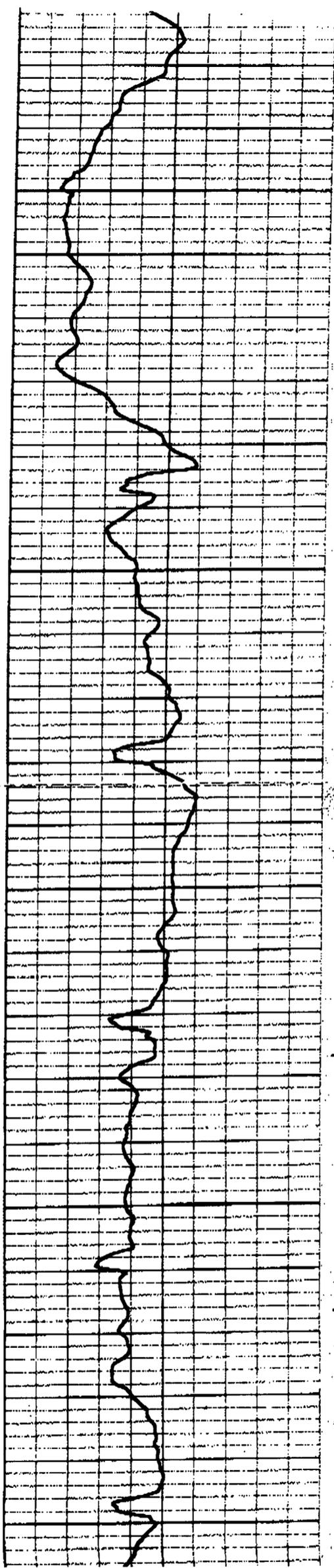


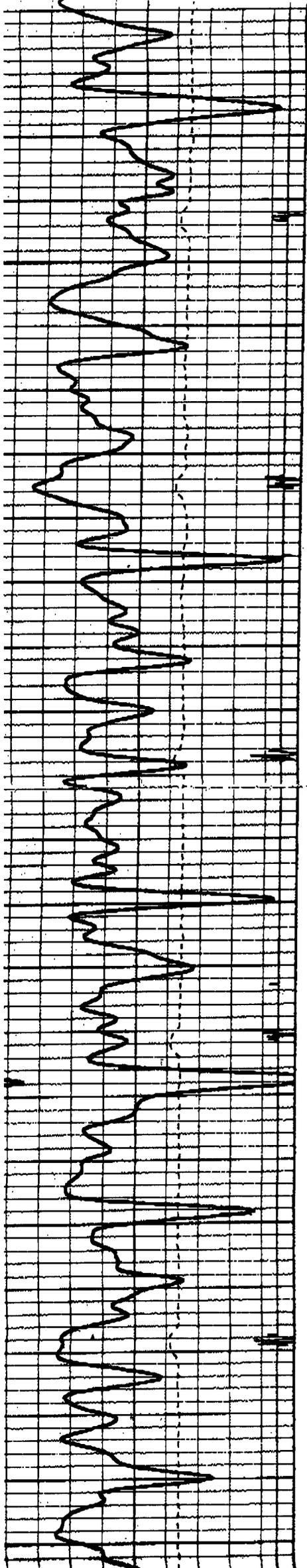


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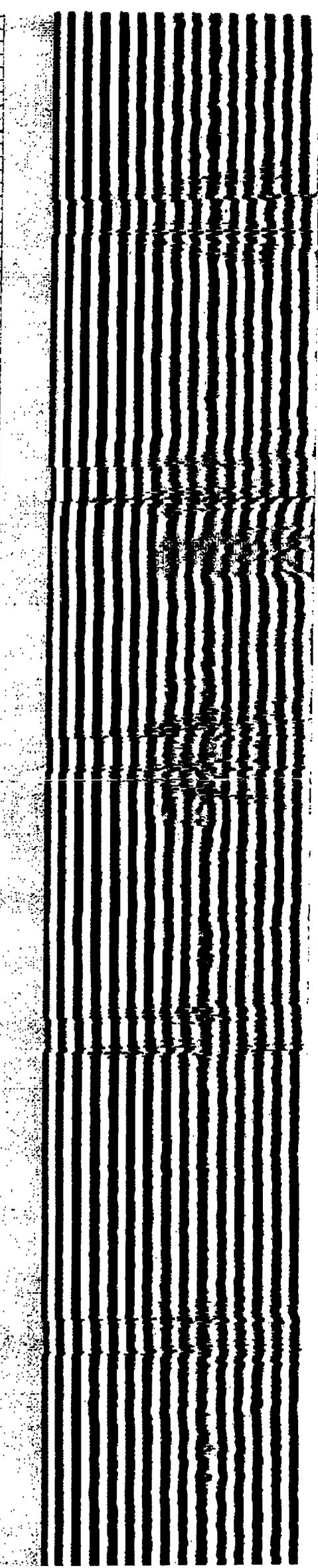
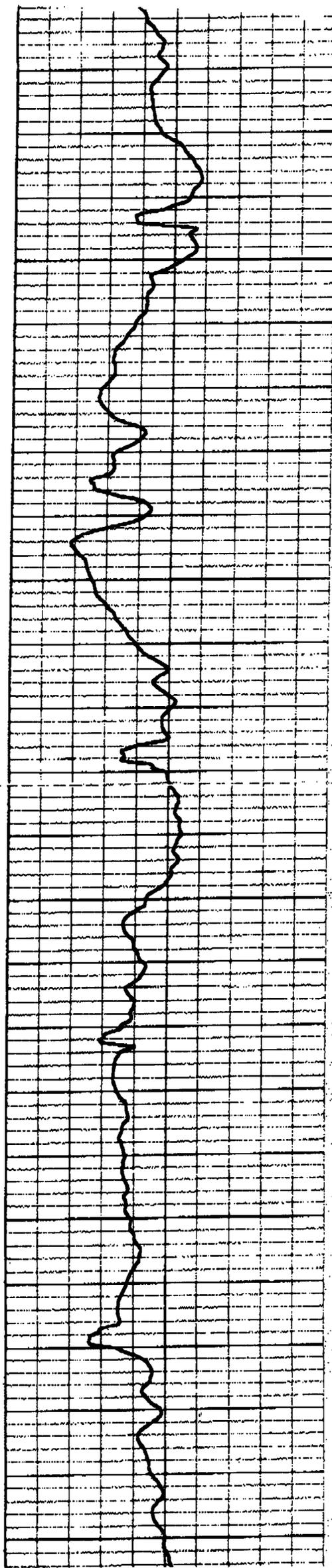
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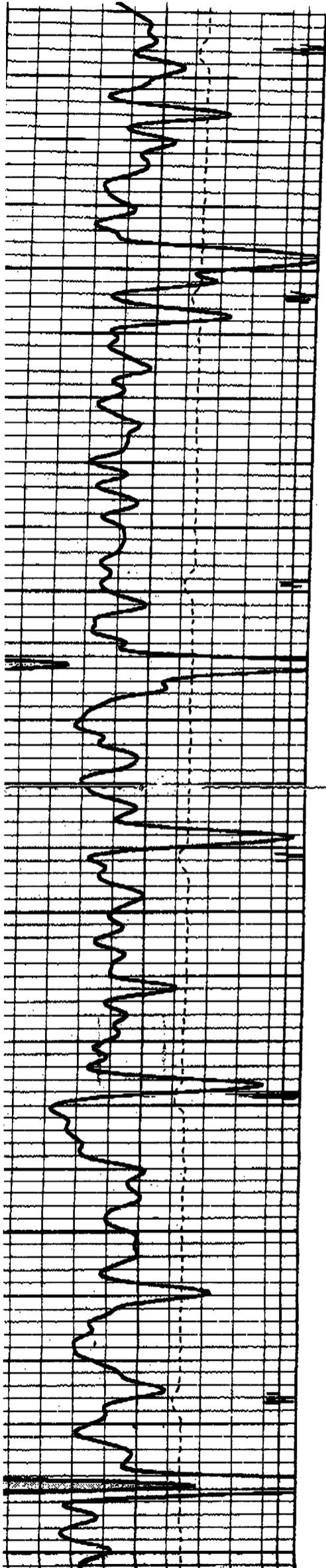




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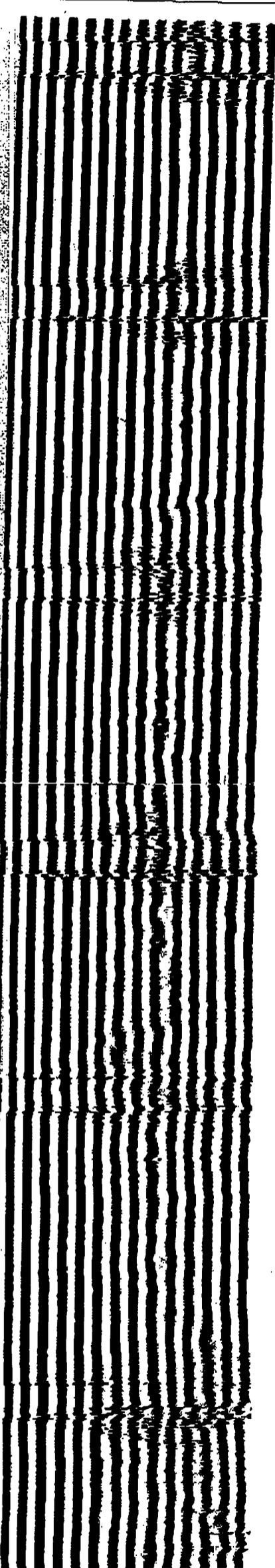
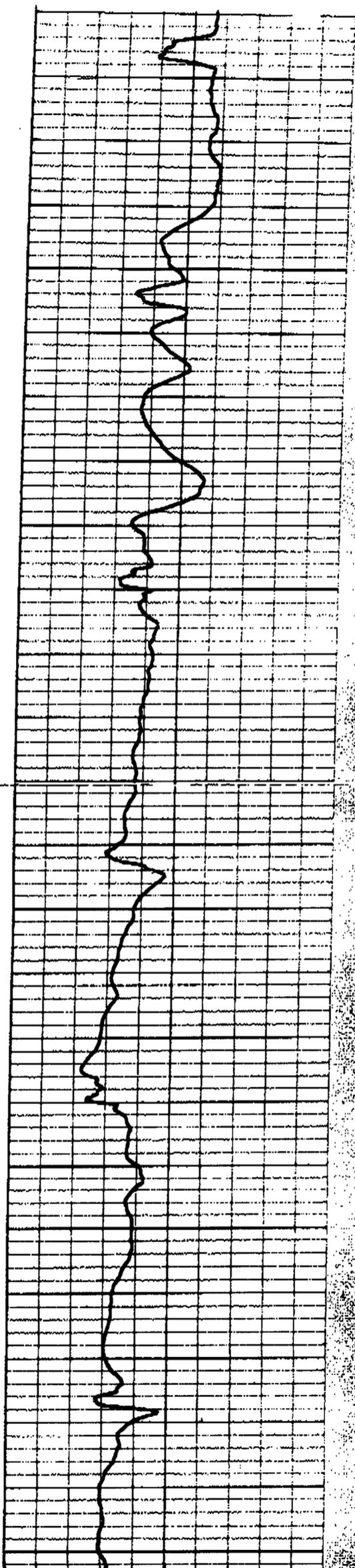


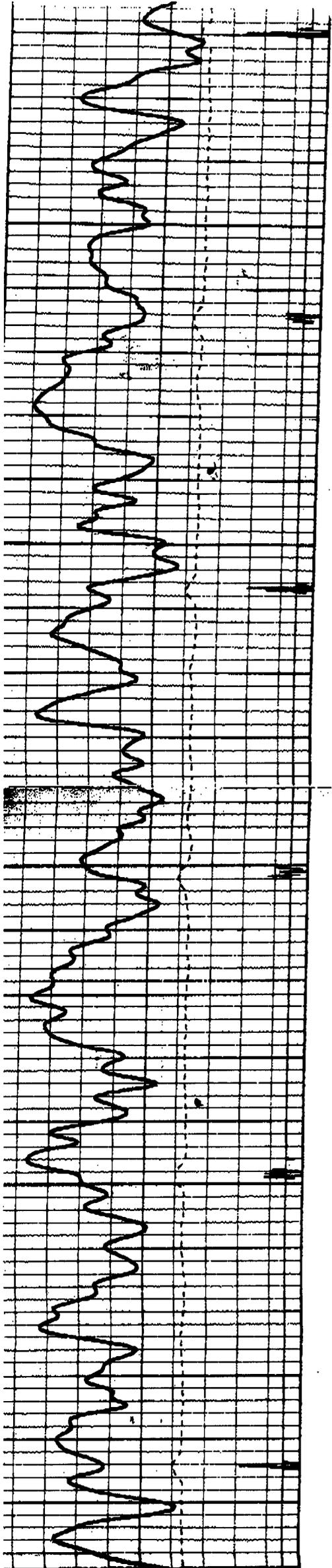


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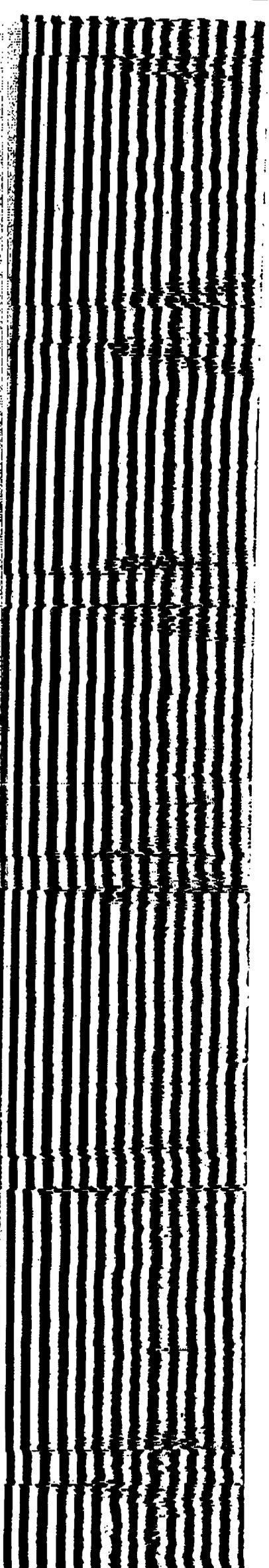
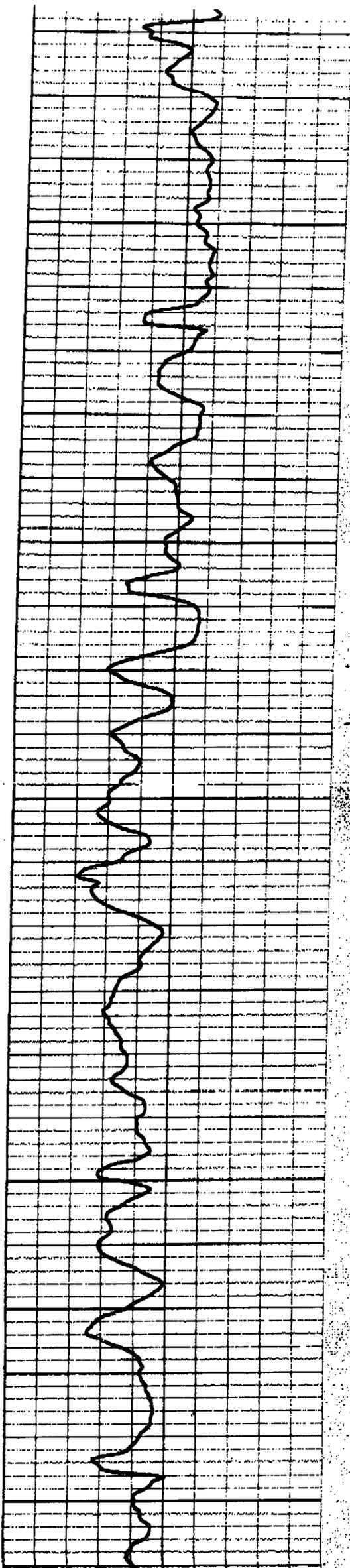
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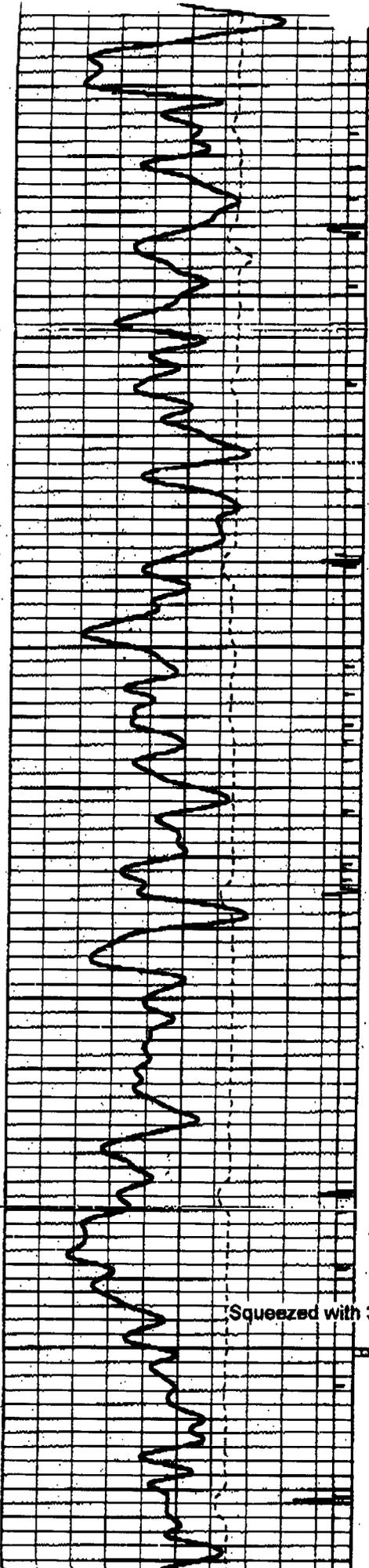




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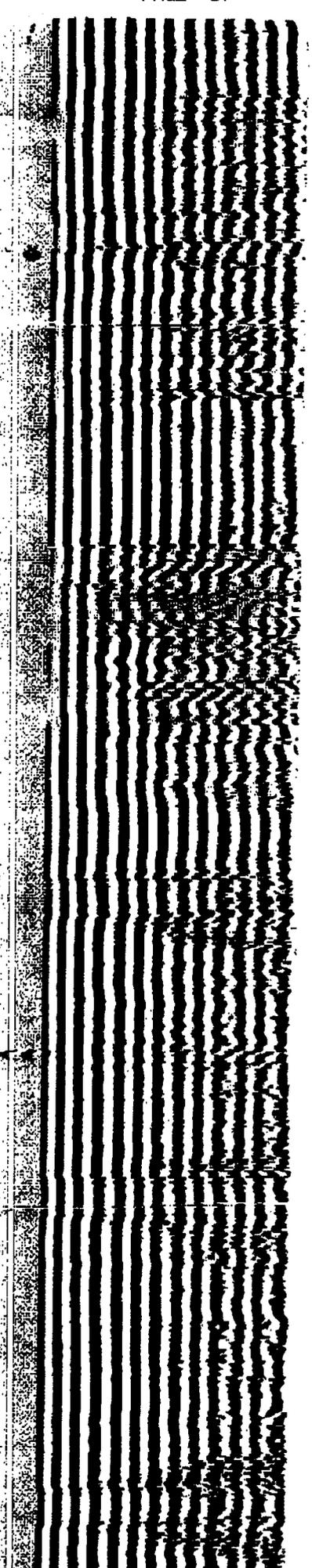
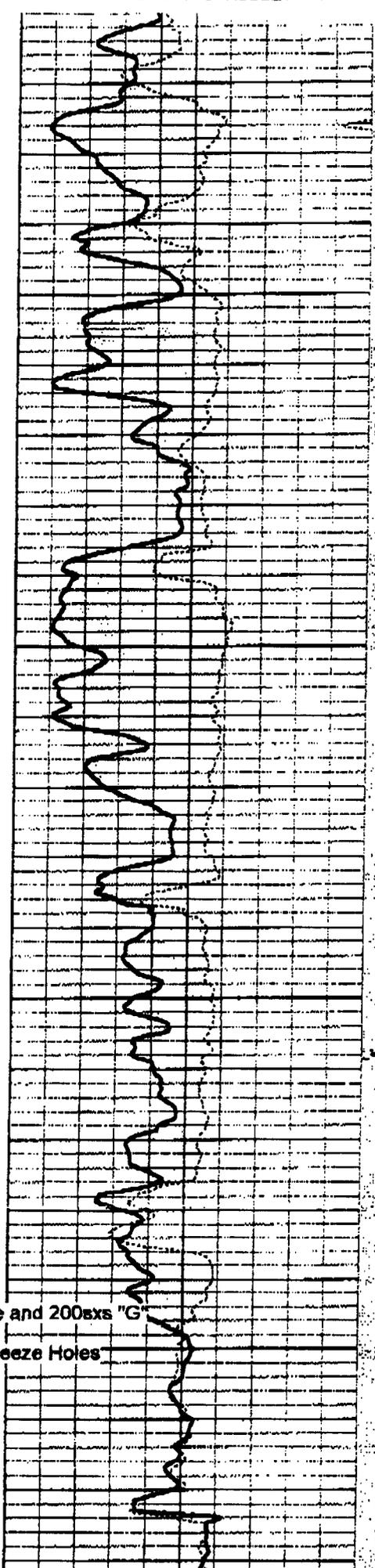


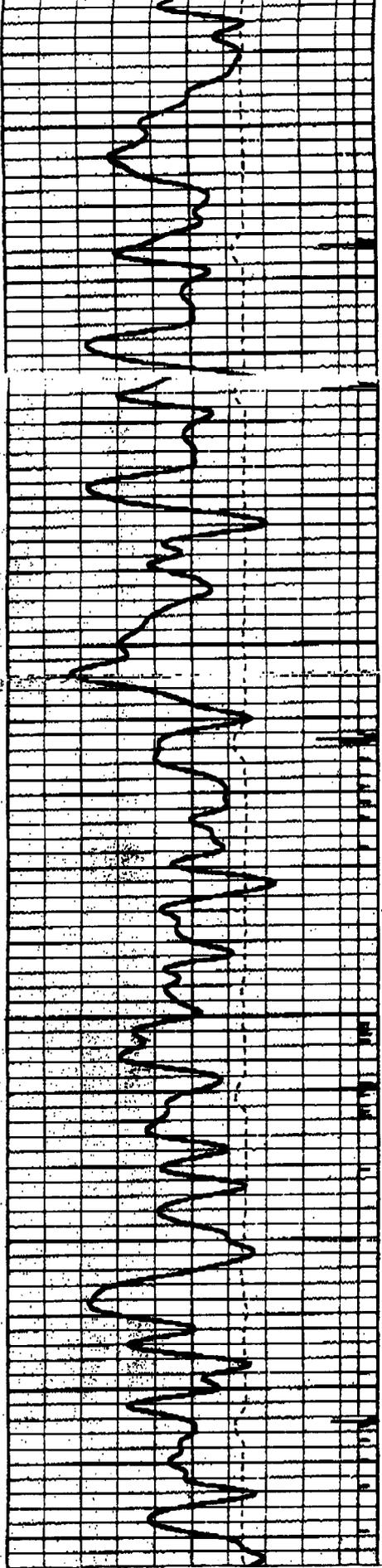
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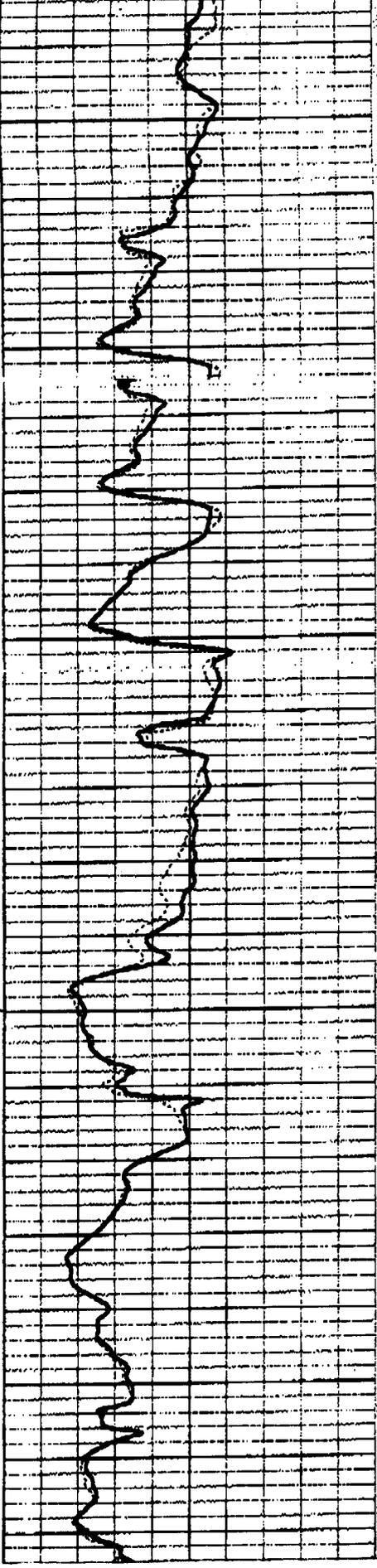
↑ Squeezed with 300sxs Lite and 200sxs "G"

← Squeeze Holes



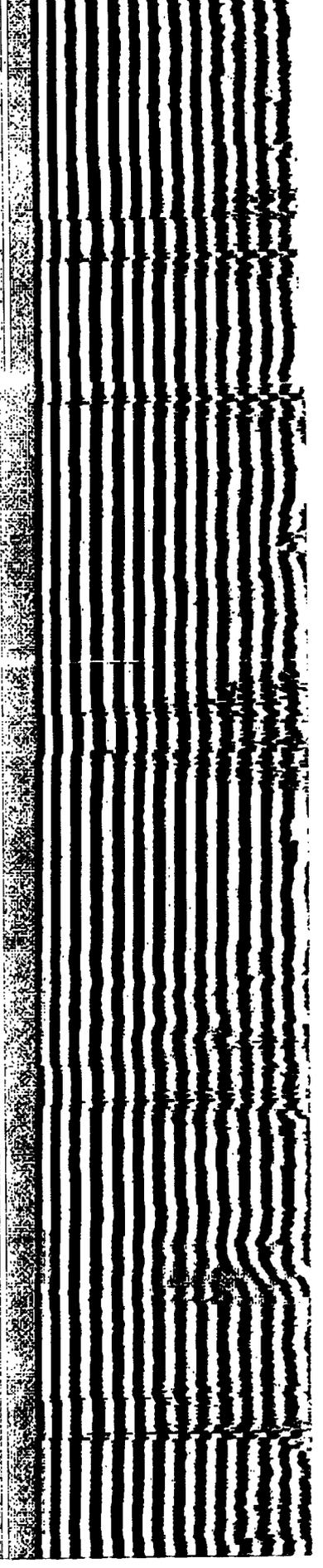


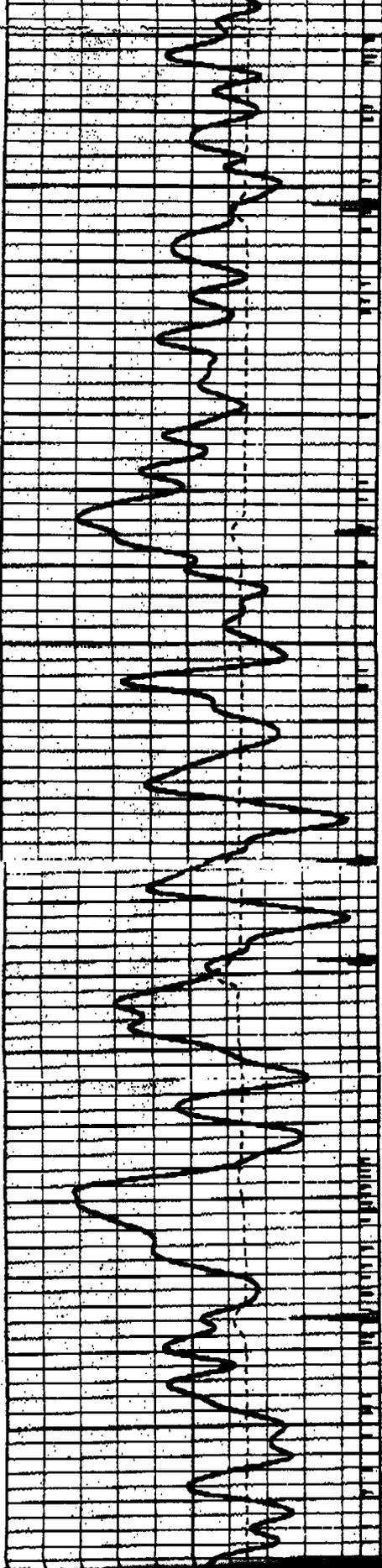
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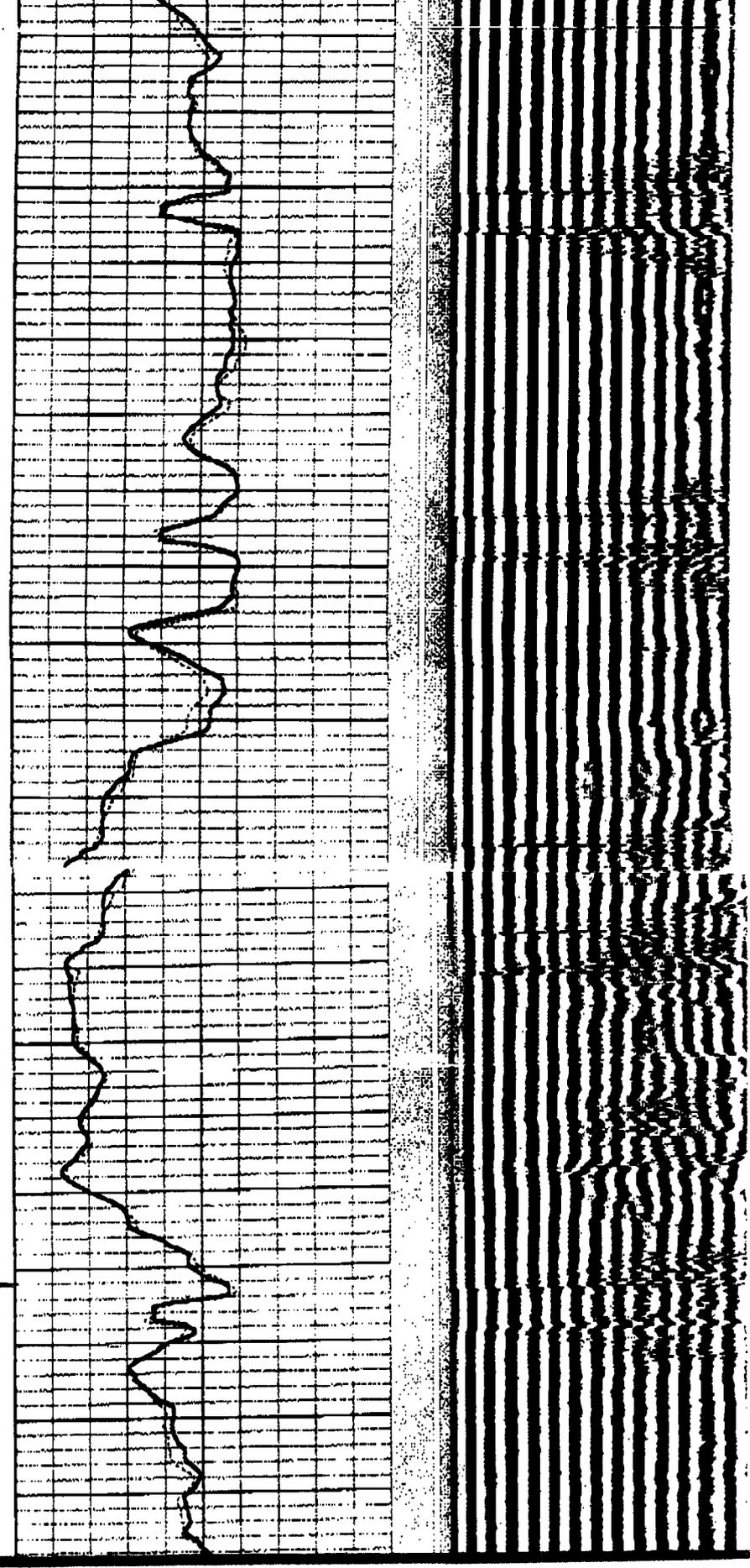
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20/10/66

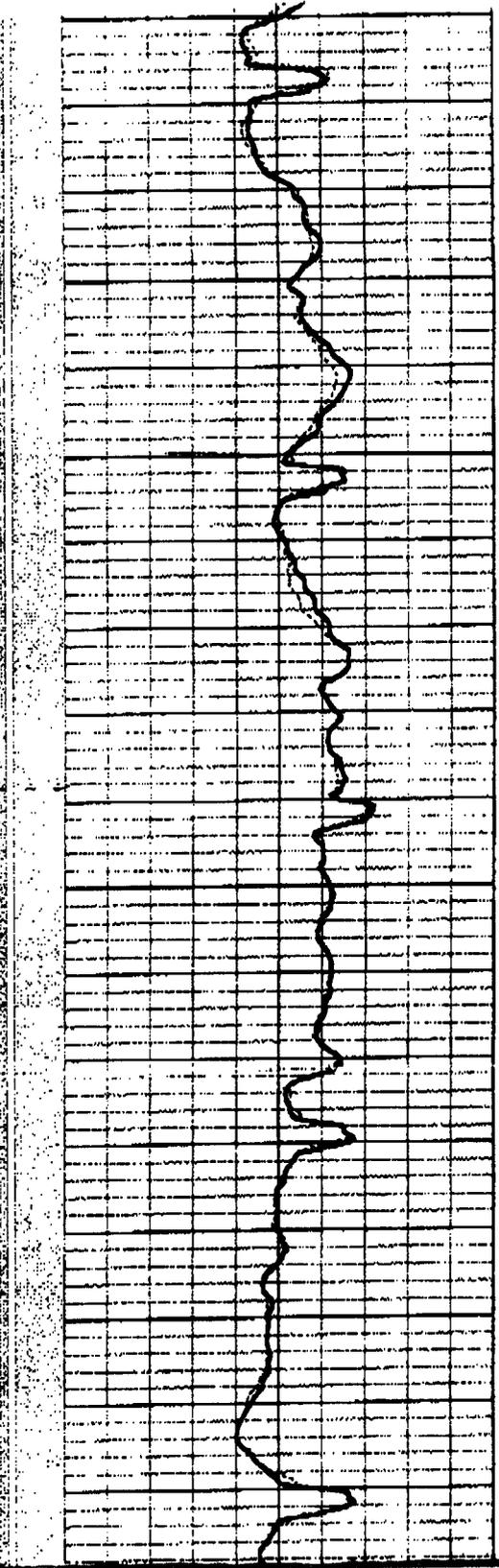
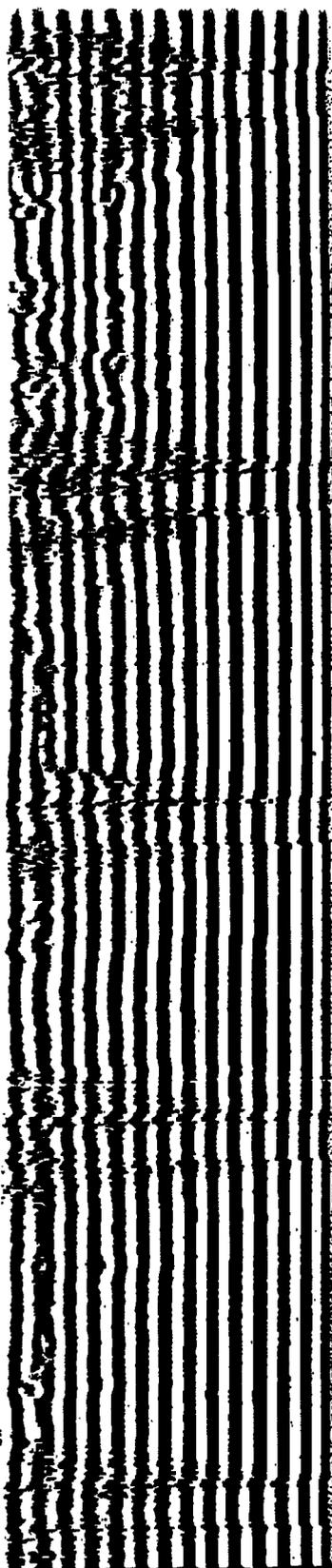




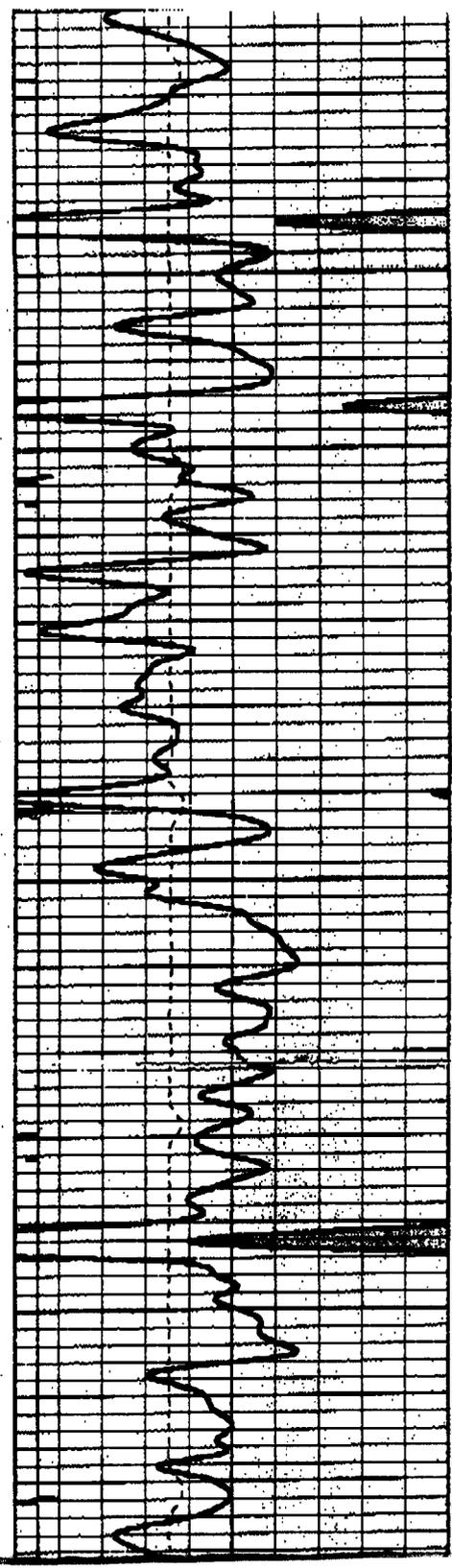
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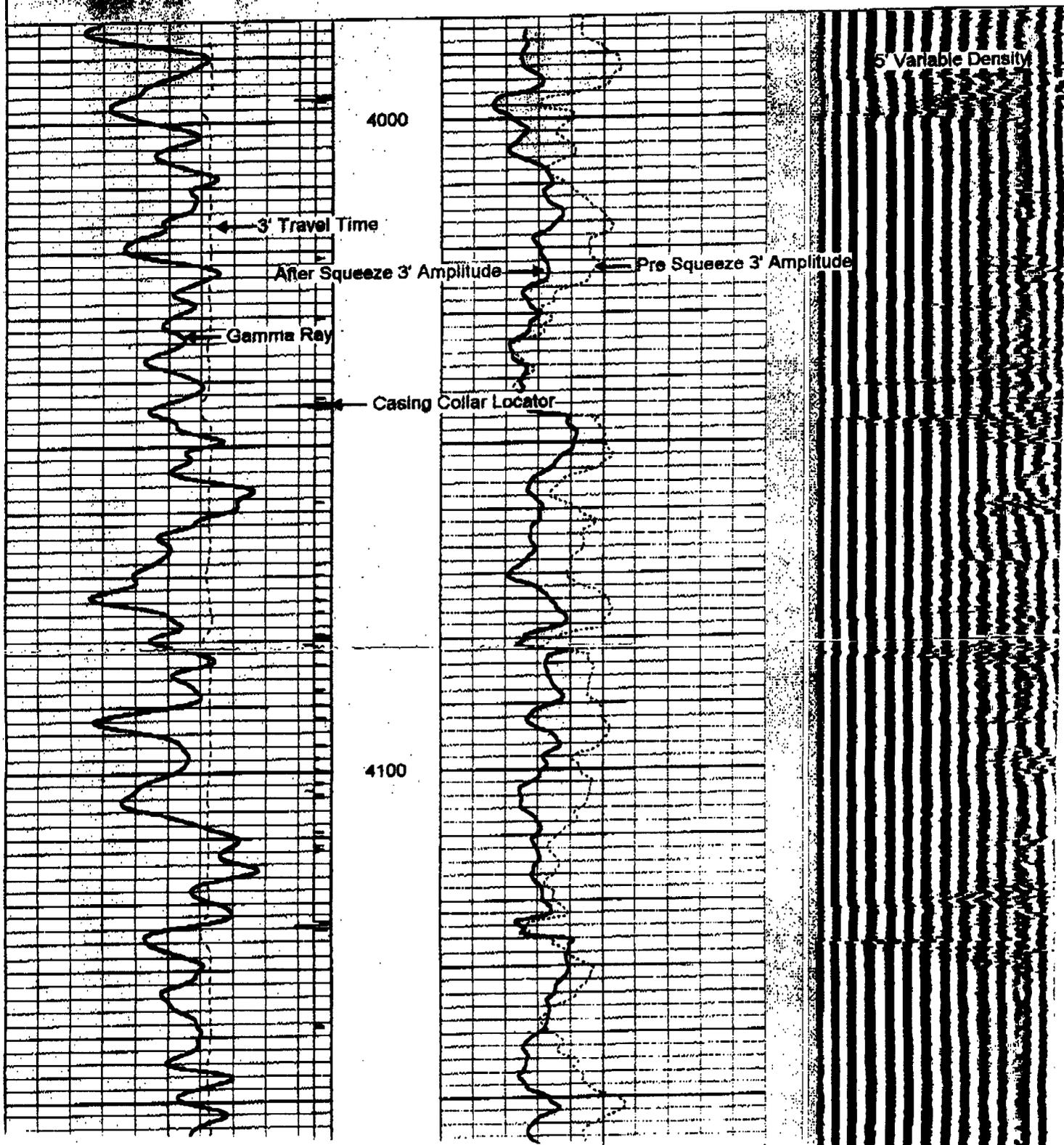
Log ran after 55sx squeeze between holes at 6220 & 6005, and 300sxs lite and 200sxs "G" squeeze in holes @ 535 to surface.

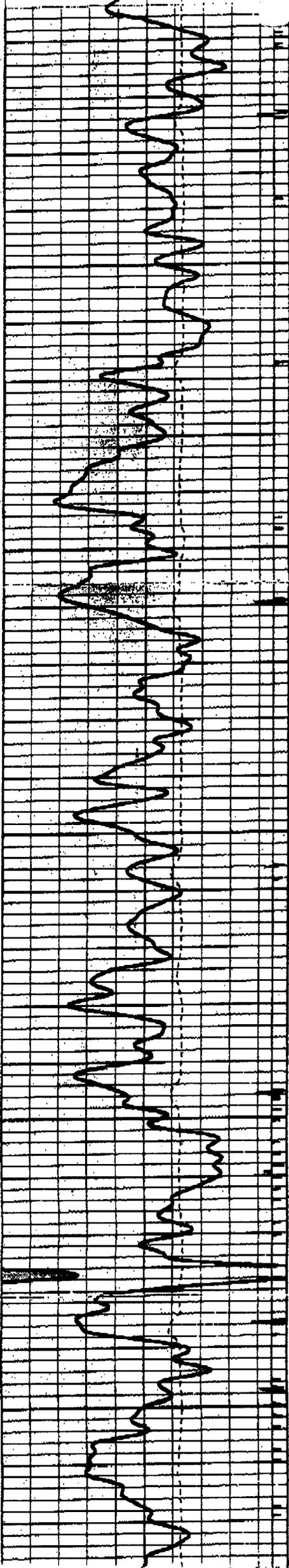


Main Pass 1000 PSI

Database File: fj133.db
 Dataset Pathname: blue/1-33a1e/run1/pass4
 Presentation Format: cbl01
 Dataset Creation: Wed Jan 23 14:13:17 2002 by Log 6.2_B4
 Charted by: Depth in Feet scaled 1:240

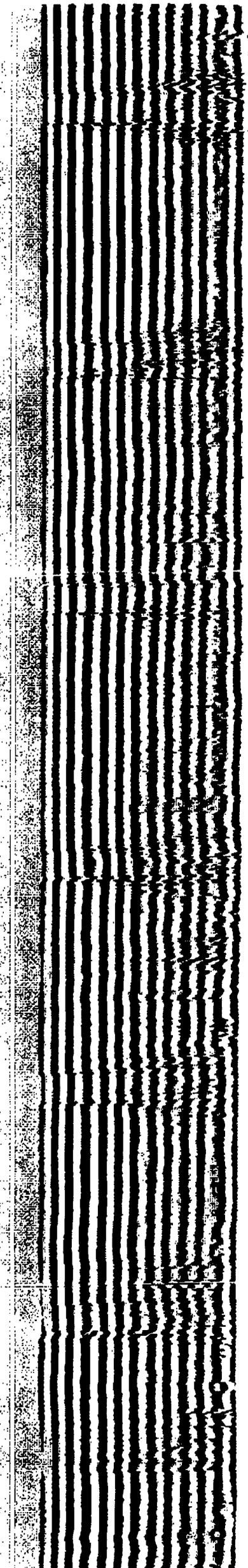
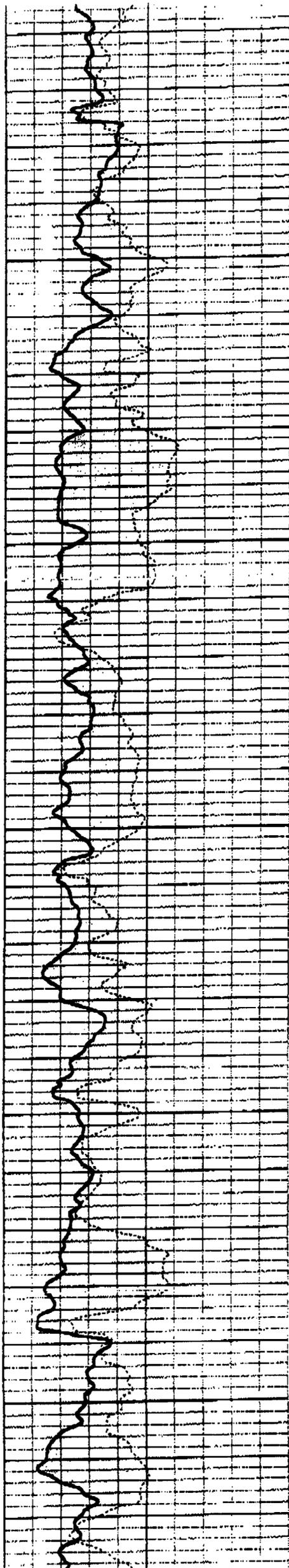
-19	Collar Locator	1	0	3' Amplitude (mV)	100	200	Variable Density	120
0	Gamma Ray (GAPI)	150	0	Amplified 3' Amp (mV)	10			
400	TT3 (usec)	200	0	PSAMP3 (mV)	100			
150	Gamma Ray (GAPI)	300						
300	Gamma Ray (GAPI)	450						

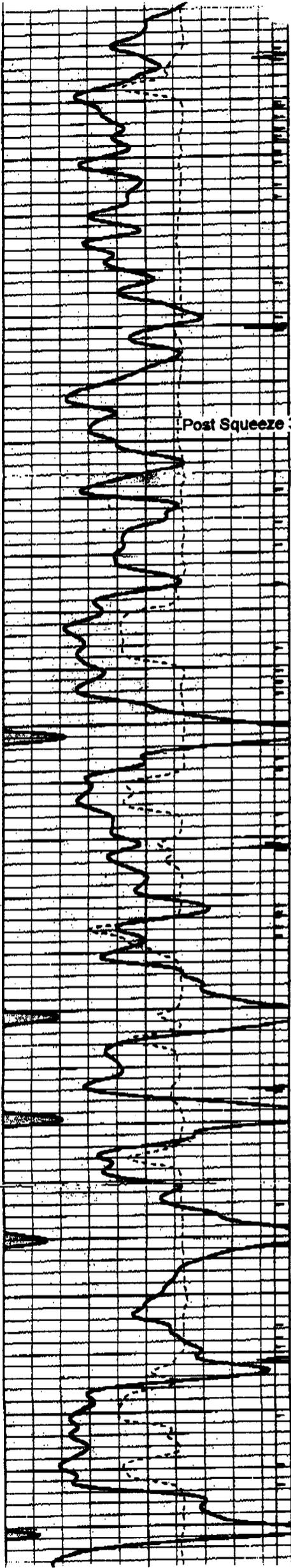




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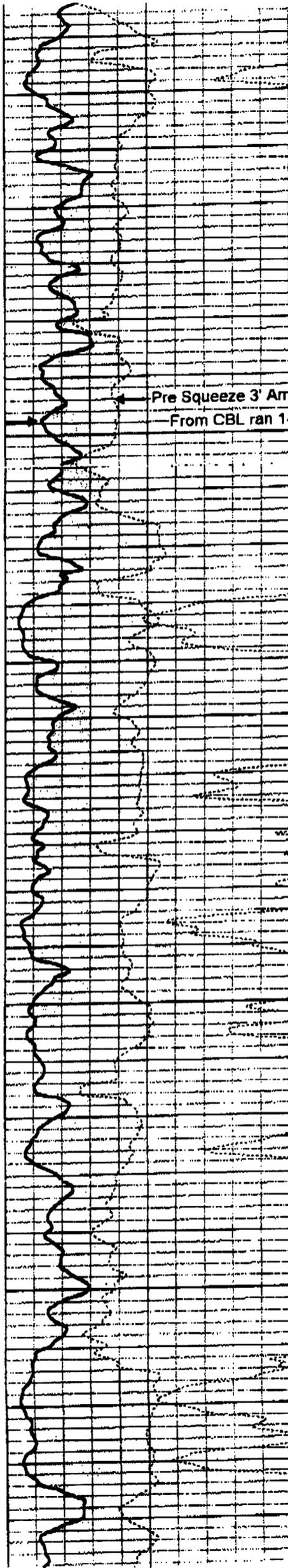


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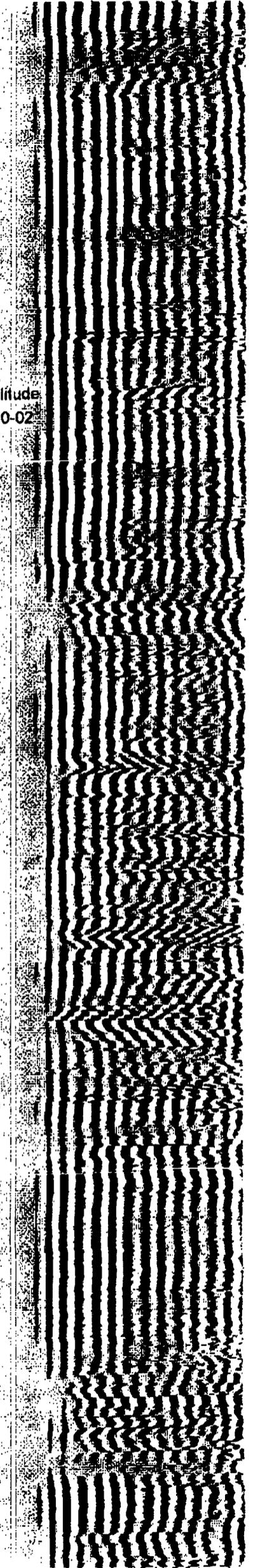
Post Squeeze 3' Amplitude

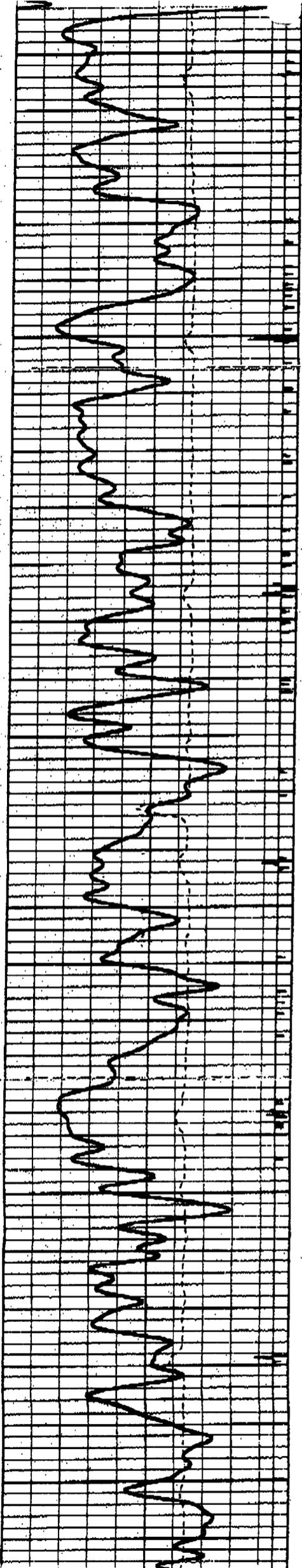
4500

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Pre Squeeze 3' Amplitude
From CBL ran 1-10-02

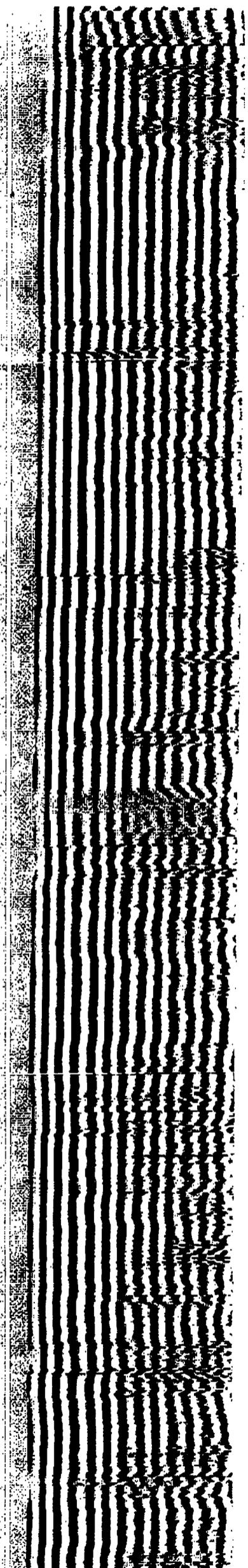
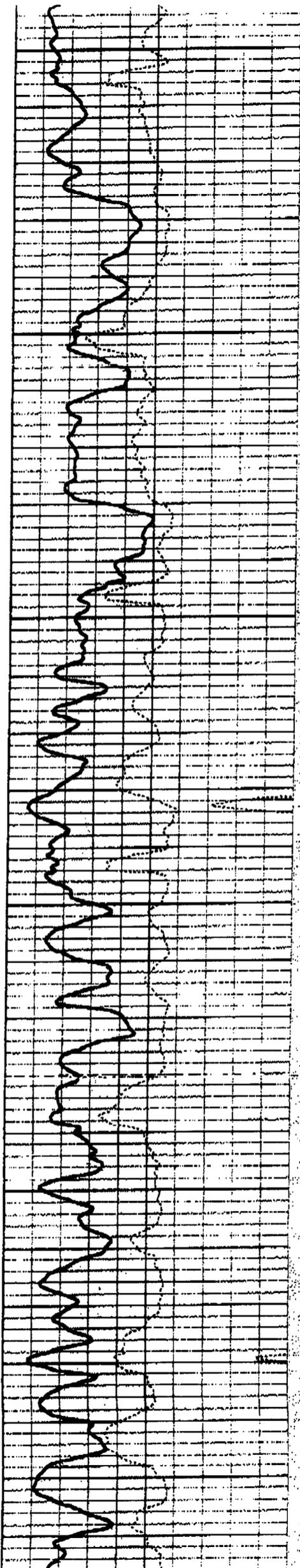


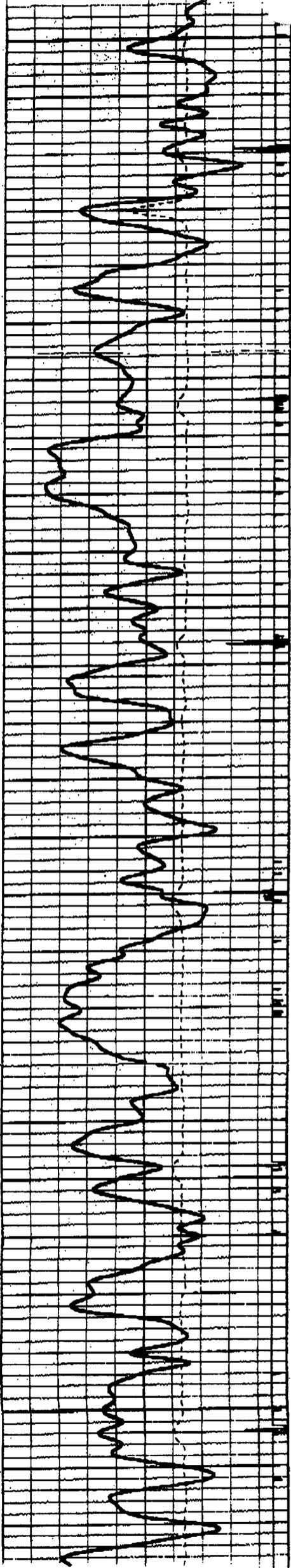


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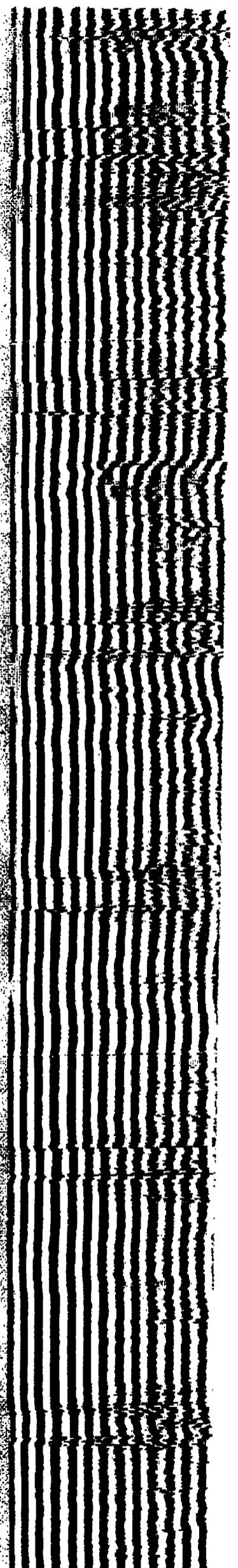
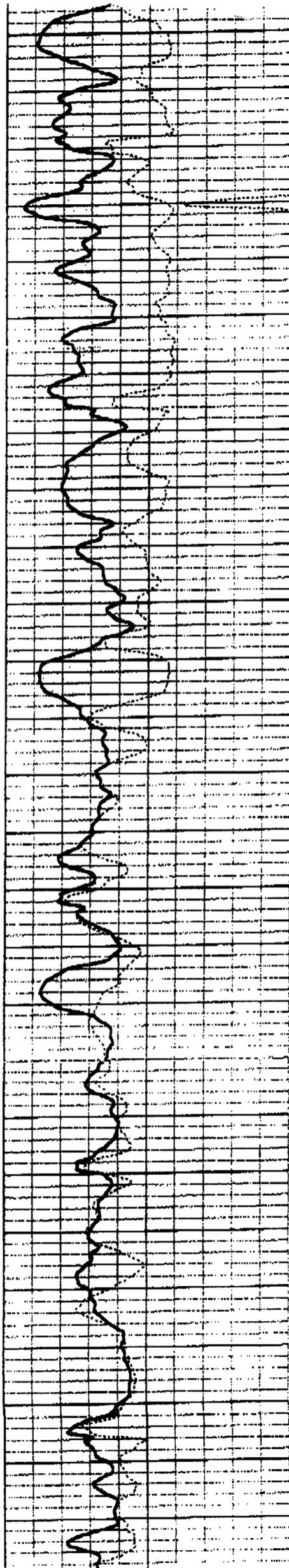




4900

5000

5100



Analytical Laboratory Report for:
Flying J



BJ Unichem
Chemical Services

UNICHEM Representative: G.W. Simper

Production Water Analysis

Listed below please find water analysis report from: Davis, 1-33AIE

Lab Test No: 2002400361 Sample Date: 01/28/2002
Specific Gravity: 1.005
TDS: 6025
pH: 9.10
Conductivity: 9000 μ mhos
Resistivity: 1.1@71F ohms/M

Cations:	mg/L	as:
Calcium	32	(Ca ⁺⁺)
Magnesium	53	(Mg ⁺⁺)
Sodium	2093	(Na ⁺)
Iron	90.00	(Fe ⁺⁺)
Anions:	mg/L	as:
Bicarbonate	732	(HCO ₃ ⁻)
Sulfate	225	(SO ₄ ⁻)
Chloride	2800	(Cl ⁻)
Gases:		
Carbon Dioxide		(CO ₂)
Hydrogen Sulfide	0	(H ₂ S)

Lab Comments:

This water appears to be compatible to other waters in the area.

RECEIVED

JAN 28 2002

DIVISION OF
OIL, GAS AND MINING

DownHole SAT(tm)
SURFACE WATER DEPOSITION POTENTIAL INDICATORS

Flying J

Davis 1-33AIE

Report Date: 01-28-2002 Sampled: 01-28-2002
Sample #: 0 at 1430

SATURATION LEVEL

Calcite (CaCO3)	43.37
Aragonite (CaCO3)	36.75
Anhydrite (CaSO4)	0.00626
Gypsum (CaSO4*2H2O)	0.00764
Barite (BaSO4)	0.00
Hydroxyapatite	0.00
Iron hydroxide (Fe(OH)3)	169141
Siderite (FeCO3)	1171
Iron sulfide (FeS)	0.00

MOMENTARY EXCESS (Lbs/1000 Barrels)

Calcite (CaCO3)	13.99
Aragonite (CaCO3)	13.92
Witherite (BaCO3)	-0.541
Strontianite (SrCO3)	-0.0989
Anhydrite (CaSO4)	-499.48
Gypsum (CaSO4*2H2O)	-503.87
Barite (BaSO4)	-0.0814
Hydroxyapatite	-256.49
Iron hydroxide (Fe(OH)3)	< 0.001
Siderite (FeCO3)	0.162
Iron sulfide (FeS)	-0.00255

SIMPLE INDICES

Langelier	2.18
Stiff Davis Index	2.11

BOUND IONS

	TOTAL	FREE
Calcium	32.04	16.52
Barium	0.00	0.00
Carbonate	448.46	161.31
Phosphate	0.00	0.00
Sulfate	225.00	201.48

OPERATING CONDITIONS

Temperature (°F)	100.00
Time (mins)	3.00

UNICHEM - Corporate Office
14505 Torrey Chase Boulevard, Houston, Texas 77014

RECEIVED

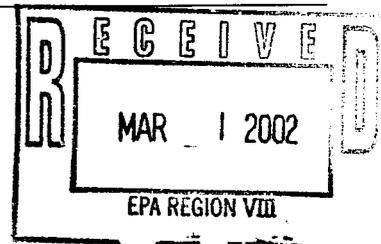
JAN 28 2002

DIVISION OF
OIL, GAS AND MINING



FLYING J OIL & GAS INC.

P.O. DRAWER 130 • ROOSEVELT, UTAH 84066
PHONE (801) 722-5166 • FAX (801) 722-5169



Mr. Paul S. Osborne
Mail Code: 8P-W-GW
United States Environmental Protection Agency
Region 8
999 185h Street – Suite 300
Denver, CO 80202-2466

February 20, 2002

RE: **8P-W-GW**
Aquifer Exemption
UIC
Minor Modification No.1 – Davis 1-33A1E SWD
EPA Permit No. UT2881-04555
Bluebell/Altamont Field, Uintah County, Utah

Dear Mr. Osborne:

Flying J Oil & Gas Inc. hereby requests an aquifer exemption for the upper Green River interval from 5500' to 5732' in the Davis 1-33A1E well located in Section 33 Tsp 1 South, Range 1East, U.S.M., Uintah County Utah.

Application has been made by Flying J to convert this well to a Class II injection well. A water sample taken from the proposed injection interval was found to have a TDS of 6025 mg/l, making it a potential USDW as defined by 40 CFR 144.3. However, the interval meets the criteria for exempted aquifers as set forth in 40 CFR 146.4 (a), (b) and (c) as follows:

- (a) The upper Green River does not currently serve as a source of drinking water.
- (b) It cannot now and will not in the future serve as a source of drinking water because it is at a depth that makes recovery for drinking water purposes economically impractical.
- (c) The total devolved solids of 6025 mg/L is more than 3,000 and less than 10,000 mg/l and it is not reasonably expected to supply a public water system.

Attached as Exhibit A is a plot showing the location of water rights points of diversion within a one-mile radius of the proposed water disposal well. Three water rights are shown, all used for irrigation and/or domestic stockwatering. Included are descriptions of each of the water rights. None of the water is used for culinary purposes.

Attached as Exhibit B is cross section with log sections along line A – A' correlating the wells to Marker 'A'. Also included is a log section from the Duncan 4-2A2, in Section 2, R1S, T2W, (marked Exhibit B1) which is also correlated to Marker 'A'. As can be seen, the proposed injection interval in the Davis 1-33A1E well produces hydrocarbons in the same Bluebell field.

Exhibit C is the estimated cost to drill to and complete a well into the upper Green River. Because of the depth, the expense, the possibility of encountering hydrocarbons and the poor water quality, development of water from the Green River formation as drinking water is economically and technically impractical.

Exhibit D is a water analysis of the water showing that the Total Dissolved Solids is 6025 mg/l.

*Mail to
Gil Hunt
Utah Division of
Oil Gas and Mining
Salt Lake City*

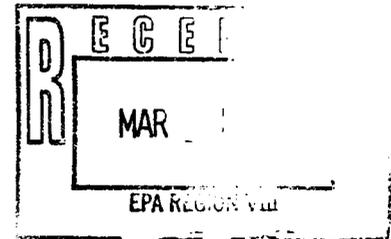
Sincerely,

Douglas G. Howard
Senior Petroleum Engineer

Exhibit A1

UTAH DIVISION OF WATER RIGHTS
 NWPLAT POINT OF DIVERSION LOCATION PF

MAP CHAR	WATER RIGHT	QUANTITY CFS	AND/OR AC-FT	SOURCE DESCRIPTION or DIAMETER	WELL INFO DEPTH	YEAR LOG	WELL INFO	POI NORTH
0	43 6801	.0150	.00	6	400		N	N 465
WATER USE(S): DOMESTIC STOCKWATERING Bolton, Charles G. and Barbara								
1	43 3427	5.0000	.00	Unita River				N 2791
WATER USE(S): IRRIGATION STOCKWATERING Dean, Morley								
2	4310804	.0000	1.73	6	0 - 30	1976	N	S 150
WATER USE(S): IRRIGATION DOMESTIC STOCKWATERING Bolton, Richard and Karalee Rt. 2 Box 2680								



DownHole SAT(tm)
SURFACE WATER DEPOSITION POTENTIAL INDICATORS

Flying J

Davis 1-33AIE

Report Date: 01-28-2002 Sampled: 01-28-2002
Sample #: 0 at 1430

SATURATION LEVEL
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 Aragonite (CaCO3) 36.75
 Anhydrite (CaSO4) 0.00626
 Gypsum (CaSO4*2H2O) 0.00764
 Barite (BaSO4) 0.00
 Hydroxyapatite 0.00
 Iron hydroxide (Fe(OH)3) 169141
 Siderite (FeCO3) 1171
 Iron sulfide (FeS) 0.00

MOMENTARY EXCESS (Lbs/1000 Barrels)
 Calcite (CaCO3) 13.99
 Aragonite (CaCO3) 13.92
 Witherite (BaCO3) -0.541
 Strontianite (SrCO3) -0.0989
 Anhydrite (CaSO4) -499.48
 Gypsum (CaSO4*2H2O) -503.87
 Barite (BaSO4) -0.0814
 Hydroxyapatite -256.49
 Iron hydroxide (Fe(OH)3) < 0.001
 Siderite (FeCO3) 0.162
 Iron sulfide (FeS) -0.00255

SIMPLE INDICES
 Langelier 2.18
 Stiff Davis Index 2.11

BOUND IONS	TOTAL	FREE
Calcium	32.04	16.52
Barium	0.00	0.00
Carbonate	448.46	161.31
Phosphate	0.00	0.00
Sulfate	225.00	201.48

OPERATING CONDITIONS

Temperature (°F) 100.00
 Time(mins) 3.00

UNICHEM - Corporate Office
 14505 Torrey Chase Boulevard, Houston, Texas 77014

WELL:	<u>Upper Green River Water Well</u>	DATE:	<u>2-Feb-02</u>
FIELD:	<u>Bluebell</u>	FORMATION:	<u>Green River</u>
COUNTY:	<u>Uintah</u>	TOTAL DEPTH:	<u>5800'</u>
STATE:	<u>Utah</u>		

COMMENT Drill and complete a Green River water well.

INTANGIBLE COMPLETION		ESTIMATED COST
8546.01	ICC SITE,ROW, DAMAGES	_____
8546.02	ICC FOOTAGE OR CONTRACT	_____
8546.03	ICC DAY RATE/NO RIG	14000
8546.04	ICC BITS REAMERS&RENTALS	2500
8546.05	ICC ELEC SURVEY & LOGS	_____
8546.06	ICC DST & CORE ANALYSIS	_____
8546.07	ICC ELECTRICITY	_____
8546.08	ICC FUEL	_____
8546.09	ICC CEMENTING & SVCS	18000
8546.1	ICC PERF & LOGS	7500
8546.11	ICC MUD & ADDITIVES	_____
8546.14	ICC FISHING TOOLS,SVCS	_____
8546.15	ICC GEO/ENG/MUD LOG	_____
8546.16	ICC ON SITE SUPERVISION	_____
8546.18	ICC TRUCKING	3500
8546.2	ICC WIRELINE	_____
8546.21	ICC STIM/FRAC/ACID	_____
8546.22	ICC CASING RIG & CREW	8500
8546.23	ICC WATER	1500
8546.24	ICC CONTRACT LABOR	_____
8546.25	ICC COMPANY LABOR	_____
8546.34	ICC MISCELLANEOUS	5000
8546.37	ICC OVERHEAD	_____
8546.4	ICC INSURANCE	_____
TOTAL ICC		60500
TANGIBLE COMPLETION		
8545.01	TCC CSG, TBG, RODS	50000
8545.02	TCC SUBSFC EQUIP	3500
8545.03	TCC SFT PROD FACIL	1000
8545.04	TCC PIPELINES	_____
8545.05	TCC WELLHEAD	500
8545.06	TCC STORAGE TANKS	_____
8545.07	TCC LIFTING EQUIP	40000
8545.08	TCC METERS/PROD CTRL	_____
8545.09	TCC BUILDINGS	_____
8545.34	TCC MISCELLANEOUS	5000
TOTAL TCC		100000
TOTAL COMPLETED WELL		380500

**UPPER GREEN RIVER
DRILLING COST ESTIMATE**

WELL:	<u>Upper Green River Water Well</u>	DATE:	<u>2-Feb-02</u>
FIELD:	<u>Bluebell</u>	FORMATION:	<u>Green River</u>
COUNTY:	<u>Uintah</u>	TOTAL DEPTH:	<u>5800'</u>
STATE:	<u>Utah</u>		

COMMENT Drill and complete a Green River water well.

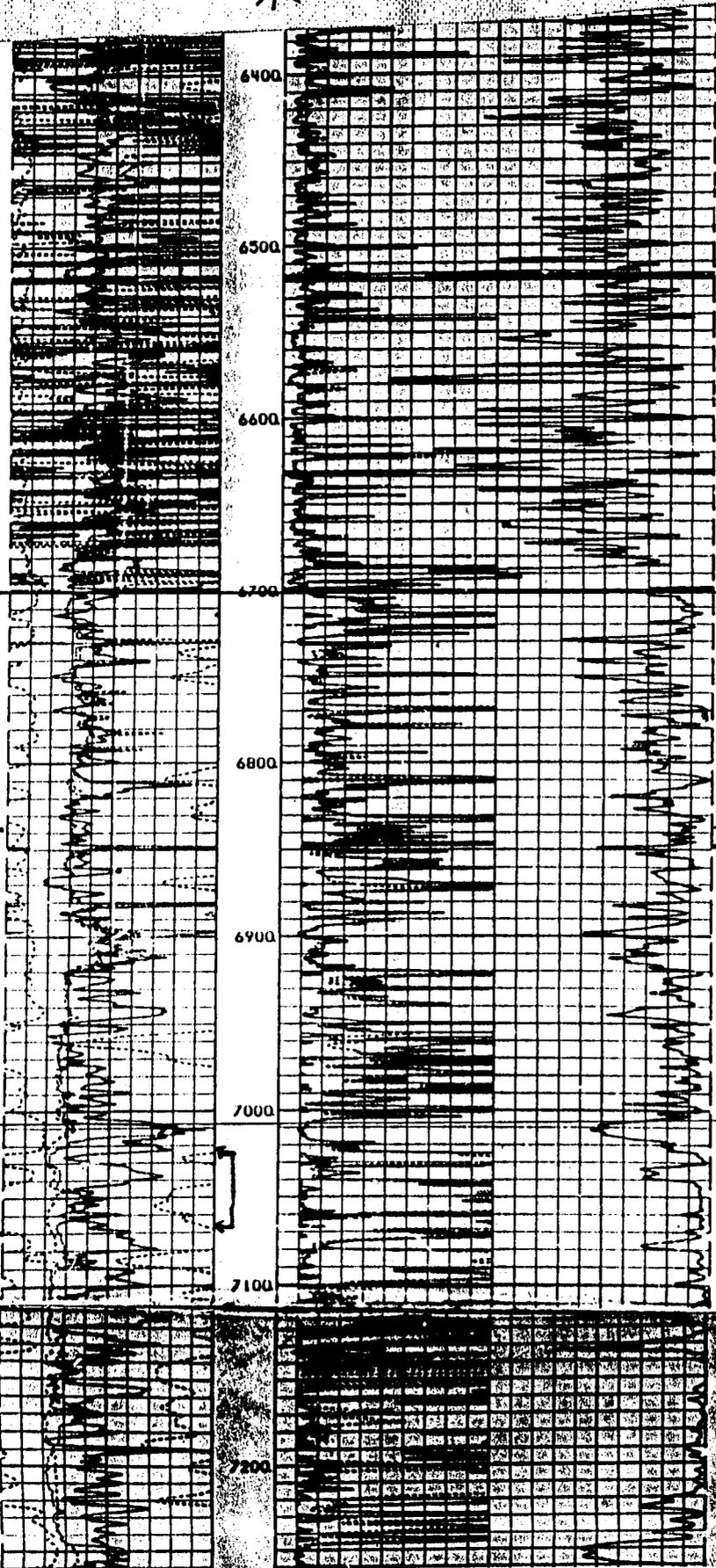
INTANGIBLE DRILLING	ESTIMATED COST
8544.01 IDC SITE, ROW & DAMAGES	
8544.02 IDC FOOTAGE OR CONTRAC' <u>5800' @ 25/ft</u>	<u>145000</u>
8544.03 IDC DAY RATE <u>2 days</u>	<u>17000</u>
8544.04 IDC BITS REAMERS RENTAL	
8544.05 IDC ELEC SURVEY & LOGS	<u>8500</u>
8544.06 IDC DST & CORE ANALYSIS	
8544.07 IDC ELECTRICITY	
8544.08 IDC FUEL	
8544.09 IDC CEMENTING & SVCS	<u>5500</u>
8544.10 IDC MUD LOGGING	
8544.11 IDC MUD & ADDITIVES	<u>10000</u>
8544.12 IDC MI & MO RIG SETUP	
8544.14 IDC FISHING TOOLS & SVC	
8544.15 IDC GEO,ENGINEER & MUD LOG	
8544.16 IDC ON SITE SUPERVISION	<u>2500</u>
8544.18 IDC TRUCKING	<u>5000</u>
8544.22 IDC CSG RIG & CREW	<u>4500</u>
8544.23 IDC WATER	<u>2500</u>
8544.24 IDC CONTRACT LABOR	<u>1500</u>
8544.34 IDC MISCELLANEOUS	<u>5000</u>
8544.37 IDC OVERHEAD	
8544.40 IDC INSURANCE	
 TOTAL IDC	 207000
 TANGIBLE DRILLING	
8543.01 TDC CONDUCTOR SFC CSG	<u>9000</u>
8543.02 TDC INTERMEDIATE CASING	
8543.03 TDC OTHER SUBSFC CSG	
8543.04 TDC DRILL TUBING	
8543.05 TDC WELLHEAD	<u>1500</u>
8543.34 TDC MISCELLANEOUS	<u>2500</u>
 TOTAL TDC	 13000
 TOTAL DRYHOLE COST	 220000

T 5. R. 2 W.

Exhibit B1

Sec 2 12 SE

Duncan 4-2A2



Green River Fa.
Evaporation Cr.
mbr

Equivalent of injection interval

Marker 'A'

Productive of gas in
Porell 4-2A2

Cum Gas 1,965,212 mcf
29,069 bbl oil

Analytical Laboratory Report for:
Flying J



BJ Unichem
Chemical Services

UNICHEM Representative: G.W. Simper

Production Water Analysis

Listed below please find water analysis report from: Davis, 1-33AIE

Lab Test No: 2002400361 Sample Date: 01/28/2002
Specific Gravity: 1.005
TDS: 6025
pH: 9.10
Conductivity: 9000 μ hos
Resistivity: 1.1@71F ohms/M

Cations:	mg/L	as:
Calcium	32	(Ca ⁺⁺)
Magnesium	53	(Mg ⁺⁺)
Sodium	2093	(Na ⁺)
Iron	90.00	(Fe ⁺⁺)
Anions:	mg/L	as:
Bicarbonate	732	(HCO ₃ ⁻)
Sulfate	225	(SO ₄ ⁻)
Chloride	2800	(Cl ⁻)
Gases:		
Carbon Dioxide		(CO ₂)
Hydrogen Sulfide	0	(H ₂ S)

Lab Comments:

This water appears to be compatible to other waters in the area.

produced



DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER QUALITY

Water Quality Board

K.C. Shaw, P.E.
Chairman

William R. Williams
Vice Chairman

Robert G. Adams
Nan Bunker

Ray M. Child, C.P.A.

John R. Cushing, Mayor

Neil K. Kochenour, M.D.

Dianne R. Nielson, Ph.D.

Ronald C. Sims, Ph.D.

Douglas E. Thompson, Mayor

J. Ann Wechsler

Don A. Ostler, P.E.

Executive Secretary

Michael O. Leavitt
Governor

Dianne R. Nielson, Ph.D.
Executive Director

Don A. Ostler, P.E.
Director

288 North 1460 West
P.O. Box 144870
Salt Lake City, Utah 84114-4870
(801) 538-6146
(801) 538-6016 Fax
(801) 536-4414 T.D.D.
www.deq.state.ut.us Web

April 25, 2002

Lowell Braxton, Director
Division of Oil, Gas, and Mining
PO Box 145801
Salt Lake City, Utah 84114-5801

Dear Mr. Braxton:

Subject: Letter from DOGM to DWQ Dated April 2, 2002; Public Notice for Aquifer Exemption; Davis 1-33A1E Salt Water Disposal Well, Section 33, T1S, R1E, Uintah County

We have received your letter noted above regarding the request made by Flying J Oil and Gas, Inc. for an aquifer exemption (Green River Formation adjacent to Davis 1-33A1E salt water disposal well). A careful review of the aquifer exemption request, water well records, and the criteria for aquifer exemption noted in 40 CFR 146.4 indicates nothing that would cause us to oppose the exemption. It is our understanding that the proposed injection well would be Class II, regulated by DOGM.

If you have any questions, please call Jerry Jackson of this office at 801-538-6023.

Sincerely,

Dennis Frederick, Manager
Ground Water Protection Section

DF:glj:mhf

cc: Joseph Shaffer, TriCounty Health Department
Douglas Minter, EPA Region VIII

P:\WP\FLYING J AQUIFER EXEMPTION.WPD
FILE:FLYING J AQUIFER EXEMPTION REQUEST

RECEIVED
APR 26 2002
DIVISION OF
OIL, GAS AND MINING



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt
Governor
Robert Morgan
Executive Director
Lowell P. Braxton
Division Director

1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

April 29, 2002

Mr. Paul S. Osborne, Mail Code 8P-W-GW
U.S. Environmental Protection Agency
Region VIII
999 18th Street, Suite 300
Denver, CO 80202-2466

Re: Aquifer Exemption for the Green River Formation, Sec. 33, T1S, R1E,
Uintah County, Utah

Dear Mr. Osborne:

The Utah Division of Oil, Gas and Mining (the "Division") received the public notice issued by your agency dated March 27, 2002, concerning intent to issue an aquifer exemption for the Green River Formation and major permit modification of EPA final permit UT2881-04555.

The Division has considered the proposed exemption and has forwarded the notice to both the Utah Division of Water Rights and Utah Division of Water Quality for their review.

The Division is not opposed to the aquifer exemption, however, our review has revealed the existence of a gilsonite vein that cuts diagonally across section 33, from southeast to northwest, near where the proposed injection well is located. We recommend that the existence of this vein be taken into consideration and addressed during the permitting process for the well and aquifer exemption.

The Division appreciates the opportunity to participate in this aquifer exemption process. If you would like to discuss this matter further, please contact Gil Hunt at 801-538-5297.

Sincerely,

A handwritten signature in black ink that reads "Lowell P. Braxton".

Lowell P. Braxton
Director

GLH:er



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
Phone 800-227-8917
<http://www.epa.gov/region08>

JUL 11 2002

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. James W. Wilson
Vice President of Operations
Flying J Oil and Gas Inc.
333 West Center Street
North Salt Lake City, Utah 84054

RE: UNDERGROUND INJECTION CONTROL (UIC)
**Final Aquifer Exemption and Major Permit
Modification No. 1 for the Davis No. 1-33A1E
SWD**, Green River Formation - EPA Permit No.
UT2881-04555 Bluebell/ Altamont Field, Uintah
County, Utah

Dear Mr. Wilson:

As you are aware, EPA issued a Draft Aquifer Exemption and Major Permit Modification No. 1 for **the Davis No. 1-33A1E SWD**, Green River Formation - EPA Permit No. UT2881-04555 Bluebell/ Altamont Field, Uintah County, Utah on March 18, 2002. This proposed action was public noticed in the Uintah Basin Standard on March 26, 2002, and the Vernal Express on March 27, 2002.

The public comment period ended on April 29, 2002, and there were no comments from either the general public or the land owners who may be affected by the proposed action. We also did not receive any comments from you concerning our actions. Because of the absence of comments, the Permit is being issued as proposed and is effective immediately.

Enclosed is a Final Aquifer Exemption and the Final Permit Modification No. 1. The Final Addendum to the Statement of Basis, which discusses the rationale for the Aquifer Exemption and the Permit Modification, is also enclosed.

RECEIVED
JUL 11 2002
EPA REGION 8
OIL & GAS DIVISION

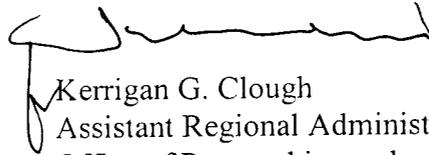


Please be aware that Flying J oil and Gas does not have authorization to begin injection into the **Davis No. 1-33A1E SWD**. The construction and testing requirements of the Final Permit must be completed and the completion report submitted to EPA with all the necessary documentation. Injection may commence upon your receipt of written authorization to begin injection from the EPA.

It is Flying J's responsibility to be familiar with, and to comply with, all conditions contained in this Permit Modification and the Original Permit.

If you have any questions on this action please contact Paul S. Osborne at 800.227.8917, extension 6125. Also direct all correspondence and/or reports to **ATTENTION: Paul Osborne AT MAIL CODE 8P-W-GW**. Thank you for your continued cooperation.

Sincerely,



Kerrigan G. Clough
Assistant Regional Administrator
Office of Partnerships and
Regulatory Assistance

Enclosures: Final Aquifer Exemption
Final Addendum to the Statement of Basis
Final Major Permit Modification No. 1

cc: Mr. Gilbert Hunt
State of Utah Natural Resources
Division of Oil, Gas and Mining

Mr. Douglas G. Howard
Flying J Oil and Gas
3500 East 500 North
Roosevelt, Utah 84066

Mr. D. Floyd Wopsock, Chairman
Uintah & Ouray Business Committee

Ms. Elaine Willie, Environmental Director
Ute Indian Tribe

Mr. Norman Cambridge
BIA - Uintah & Ouray Agency

Mr. Jerry Kenczka
BLM - Vernal District Office

Mr. Mario Salazar, OGWDW

Mr. Bruce Kobelski, OGWDW



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
Phone 800-227-8917
<http://www.epa.gov/region08>

Ref: 8P-W-GW

MAJOR PERMIT MODIFICATION No. 1
EPA FINAL PERMIT
UT2881-04555

Flying J Oil and Gas, Inc.
Davis 1-33A1E SWD
Uintah County, Utah

Pursuant to Part III, Section B. 1. of the above-referenced Final Permit, a Major Permit Modification No. 1 is made. These changes are as follows:

ORIGINAL Permit Language (April 20, 2001):

PART II. SPECIFIC PERMIT CONDITIONS

C. WELL OPERATION

5. Injection Volume Limitation. There is no limitation on the number of barrels of water per day (BWPD) that may be injected into this well, provided further that in no case shall injection pressure exceed that limit shown in Part II, Section C. 4. (b) of this permit.

IS MODIFIED TO READ:

PART II. SPECIFIC PERMIT CONDITIONS

C. WELL OPERATION

5. Injection Volume Limitation. To prevent movement of injected fluid beyond the one half mile aquifer exemption boundary, the operator shall inject no more that a total volume of 14 million barrels of produced water, provided further that in no case shall injection pressure exceed that limit shown in Part II, Section C. 4. (b) of this permit.

All other provisions and conditions of Final Permit No. **UT2881-04555** shall remain as originally issued, or as previously modified.

JUL 11 2002

Date

Kerrigan G. Clough
*Assistant Regional Administrator
Office of Partnerships and
Regulatory Assistance



Printed on Recycled Paper



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Phone 800-227-8917
<http://www.epa.gov/region08>

Ref: Underground Injection Control Program

AQUIFER EXEMPTION

In compliance with provisions of the Safe Drinking Water Act, as amended, (42 USC 300f-300j-11, commonly known as the SDWA) and attendant regulations incorporated by the U. S. Environmental Protection Agency under Title 40 in the Code of Federal Regulations (40 CFR):

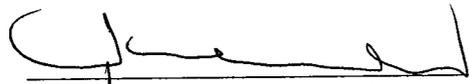
The Green River Formation) is exempted as an underground source of drinking water (USDW) in the area located:

- (1) in the subsurface interval of approximately 5,500 ft. to 5,732 ft.; and,
- (2) within the radius of one half (1/2) mile from the Davis No. 1-33A1E injection well, SE 1/4 of the NW 1/4 (1980 ft. from the north line and 2356 ft from the west line), Section 33, T1S, R1E, Uintah County, Utah.

This aquifer exemption is granted in conjunction with **Permit No. UT2881-04555**, issued to Flying J Oil and Gas, Inc. for the injection of Class II brine water produced by surrounding oil wells producing from the Green River and Wasatch Formation into the Davis No. 1-33A1E injection well. These fluids will be injected into the Green River Formation at the depth interval from 5,500 ft. to 5,732 ft., based on Underground Injection Control (UIC) regulations found at 40 CFR §144.7 and §146.4 (see Statement of Basis, page 1).

This aquifer exemption has no expiration date.

Signed this date: JUL 11 2002



Kerrigan G. Clough
Assistant Regional Administrator
Office of Partnerships and
Regulatory assistance





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
Phone 800-227-8917
<http://www.epa.gov/region08>

Ref: 8P-W-GW

**ADDENDUM TO THE
STATEMENT OF BASIS
FOR THE DAVIS 1-33A1E**

**FOR AN
AQUIFER EXEMPTION OF THE
GREEN RIVER FORMATION
ASSOCIATED WITH
MAJOR PERMIT MODIFICATION NO. 1
EPA PERMIT
UT2881-04555**

**Flying J Oil and Gas, Inc.
Davis 1-33A1E SWD
Uintah County, Utah**

As part of the recompletion of the Davis1-33A1E, under provisions of UIC Permit **UT2881-04555**, Flying J Oil and Gas Inc. perforated the permitted injection zone (Green River Interval from 5,500 feet to 5,732 feet in late January 2002. As required by the Permit, the well was then swabbed prior to obtaining a sample. The results of the analysis of the sample indicates that the Green River Formation contains water with a total dissolved solids content of 6,025 mg/liter. Thus, the Green River Formation in the vicinity of the Davis well is an underground source of drinking water (USDW) as defined at 40 CFR §144.3. In this case the regulations at 40 CFR §§144.12 and 146.22 prohibit injection into the proposed injection zone between 5500 and 5732 feet unless Flying J demonstrates that the zone can be exempted from protection per 40 CFR §146.4.

USDWs are aquifers or portions thereof that contain less than 10,000 mg/l total dissolved solids (TDS) and which are being or could be used as a source of drinking water. The proposed Green River Formation injection zone may be classified as an underground source of drinking water (USDW) based upon information supplied by the applicant. According to analyses of formation water from the Green River injection zone in the Davis well, the total dissolved solids (TDS) content of the **water in the proposed injection zone is 6,025 milligrams per liter (mg/l)**. Because it contains water of less than 10,000 mg/l TDS, the Green River Formation is defined as a USDW in this area and an aquifer exemption is required for this injection operation. According to UIC regulations at 40 CFR 146.4, an aquifer may be exempted from protection as a USDW based upon the following criteria:

- (a) the aquifer does not currently serve as a source of drinking water; and,
- (b) it is mineral, hydrocarbon or geothermal energy producing, or can be



demonstrated by a permit applicant as part of a permit application for a Class II or III operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible, or

(c) the total dissolved solids content of the ground water is more than 3,000 and less than 10,000 mg/L and it is not reasonably expected to supply a public water system.

On February 20, 2002, Flying J Inc. submitted a request for an exemption of the Green River Formation adjacent to the Davis 1-33A1E. This request contained information indicating that there are no existing water supply wells obtaining supplies from this Formation within a one mile radius of the injection well. There is one well located approximately one mile to the east that was tested in the proposed injection horizon and is presently shut-in. There are two stock watering wells located in the one mile radius that obtain water from wells that are 30 feet and 400 feet in depth. Water wells for domestic supply in this area are either drilled into the shallow alluvium that contains water with a TDS of 500 to 1,500 TDS, or into the Duchesne River Formation that contains water with a TDS of about 500 TDS. A well into the Duchesne River would be 300 to 400 feet deep in this area. The applicant has indicated that this well is located in a rural area near Roosevelt, Utah, and that there are three communities, including Roosevelt within 6 to 10 miles of the well. The applicant has provided information indicating that the cost of drilling and completing a well into the Green River Formation would be approximately \$380,000. The cost of drilling and completing a water supply well into shallower aquifers (less than 400 feet) containing water of better quality is estimated to be less than \$40,000. Additionally, to utilize a well into the Green River as a water supply for a public drinking water system, it would be necessary to build a pipeline to transport the water and a water treatment plant to treat the water sufficiently for potable use. This would require significant additional capital investment and an increased O&M cost.

The applicant estimates that the project may involve the injection of about 2000 barrels of water per day (BWPD) over a 20 year life of the project. The Green River injection interval (5,500 to 5732 feet) contains 32 total feet of 12% average porosity. The cylindrical volume of available reservoir within one half (1/2) mile of the Davis 1-33A1E well is approximately 15 million barrels. This assumes radial flow of injected fluid and a piston like displacement of the native reservoir fluid.

Based on EPA's review of available information, the shallow aquifers in this area contain ample sources of good quality water to supply the needs of the area. The cost of drilling and completing a well into the Green River Formation along with the associated treatment and transportation costs make it economically impractical to utilize this Formation as a source of supply for a Public water system. For these reasons, EPA has determined that the Green River Formation fits the criteria of 40 CFR 146.4 (a) and (c). By this action EPA is proposing to exempt the Green River Formation from protection as a USDW in an area within a one half (1/2) mile radius of the Davis 1-33A1E.

To assure protection of the reservoir located outside of the exempted zone, the Final Permit for the Davis 1-33A1E is being modified as part of this action, a volume limit is proposed (Part II Section C. (5)) for the Permit. This limitation will allow a total volume of injection of 14 million barrels over the life of the project. The proposed limitation is about 1 million barrels less than the estimated volume of the exempted reservoir to provide a buffer.

Notice for the proposed aquifer exemption and Major Permit Modification No. 1 was issued on March 18, 2002. The public notice was published in the Unita Basin Standard on March 26, 2002, and in the Vernal Express on March 27, 2002. The public comment period ended on April 29, 2002, and no comments were received from either the

general public or landowners. One comment was received from the Utah Division of Oil, Gas and Mining indicating the presence of a gilsonite vein in the vicinity of the well.

The Division did not object to the issuance of the exemption, but requested that the relationship of the vein to the area proposed for exemption be addressed. The applicant has provided information regarding the actual location of the gilsonite vein relative to the area to be exempted. The vein runs through the SW corner of section 33, about 2600 feet from the Davis 1-33A1E, and is just outside the area to be exempted. A portion of the vein is covered by a patented mining claim. The claim extends only a short distance into Section 33. The majority of the claim is located to the south and east of Section 33. While there is no direct evidence for the depth of the vein in this area, it is believed that the source of the gilsonite is from the oil shales of the Parachute Creek member of the Green River Fm. which includes the Mahogany Bench zone. It is assumed that at some point along the 3 miles or so of the length of the vein that it penetrates to these zones. The top of the Parachute Creek Member in the Davis well is 6590 ft. and the Mahogany Bench is from 6780 ft. to 6975 ft. Although the gilsonite vein may or may not penetrate the proposed injection zone located at 5500 to 5732 feet, it is outside of the area to be exempted and should not directly affect the zone of injection. Additionally, the owners of the lease were notified and they indicated that they had no objections to the disposal project.

Because the gilsonite vein is outside of the area to be exempted and no comments were received opposing the exemption, Major Modification No. 1 and the associated aquifer exemption of the Green River Formation is being issued effective immediately.



State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt
Governor

Kathleen Clarke
Executive Director

Lowell P. Braxton
Division Director

1594 West North Temple, Suite 1210

PO Box 145801

Salt Lake City, Utah 84114-5801

801-538-5340

801-359-3940 (Fax)

801-538-7223 (TDD)

August 1, 2002

Flying J Oil & Gas Inc.
P.O. Drawer 130
Roosevelt, Utah 84066

Re: Davis 1-33A1E, Section 33, Township 1 South, Range 1 East, Uintah County, Utah,

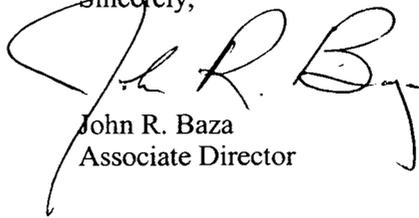
Gentlemen:

Pursuant to Utah Admin. Code R649-5-3-3, the Division of Oil, Gas and Mining (the "Division") issues its administrative approval for conversion of the referenced well to a Class II injection well. Accordingly, the following stipulations shall apply for full compliance with this approval:

1. Compliance with all applicable requirements for the operation, maintenance and reporting for Underground Injection Control ("UIC") Class II injection wells pursuant to Utah Admin. Code R649-1 et seq.
2. Conformance with all conditions and requirements of the complete application submitted by Flying J Oil & Gas Inc.
3. Conduct a Step Rate Test to determine injection pressures and rates and to determine the fracture gradient for maximum pressure and injection rate. This information will be presented to the Division as a graph and written explanation of the data collected
4. Conduct a Mechanical Integrity Test.

The above stipulations will be complied with prior to the issuance of a final injection permit. If you have any questions regarding this approval or the necessary requirements, please contact K. Michael Hebertson (801) 538-5333 at this office.

Sincerely,



John R. Baza
Associate Director

KMH:er

cc: Uintah County Commission
Dan Jackson, Environmental Protection Agency
Bureau of Land Management, Vernal

INJECTION WELL - PRESSURE TEST

Well Name: <u>Davis 1-33A1E</u>	API Number: <u>43-047-30384</u>
Qtr/Qtr: <u>SE/NW</u> Section: <u>33</u>	Township: <u>15</u> Range: <u>1E</u>
Company Name: <u>Flying J Oil & Gas Inc.</u>	
Lease: State _____ Fee <u>X</u>	Federal _____ Indian _____
Inspector: <u>David W. Blackford</u>	Date: <u>7/31/07</u>

Initial Conditions:

Tubing - Rate: 0 Pressure: 500 psi
 Casing/Tubing Annulus - Pressure: 0 psi

Conditions During Test:

Time (Minutes)	Annulus Pressure	Tubing Pressure
0	<u>1000</u>	<u>500</u>
5	<u>1000</u>	<u>500</u>
10	<u>1000</u>	<u>500</u>
15	<u>1000</u>	<u>500</u>
20	<u>1000</u>	<u>500</u>
25	<u>1000</u>	<u>500</u>
30	<u>1000</u>	<u>500</u>

Results: Pass/Fail

Conditions After Test:

Tubing Pressure: 500 psi
 Casing/Tubing Annulus Pressure: 0 psi

COMMENTS: well being converted from POW to
SWD. Packer @ 5322'

[Signature]
 Operator Representative

RECEIVED
 AUG 05 2002
 DIVISION OF
 OIL, GAS AND MINING

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

			5. LEASE DESIGNATION AND SERIAL NUMBER:
			6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
			7. UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Salt Water Disposal</u>			8. WELL NAME and NUMBER: Davis 1-33A1E
2. NAME OF OPERATOR: Flying J Oil & Gas, Inc.			9. API NUMBER: 4304730384
3. ADDRESS OF OPERATOR: PO Drawer 130' CITY Roosevelt STATE UT ZIP 84066		PHONE NUMBER: (435) 722-5166	10. FIELD AND POOL, OR WILDCAT: Bluebell
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2356' FWL 1980' FNL			COUNTY: Uintah
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SENW 33 T1S R1E			STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: 7/31/2002	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.
 Work record and MIT is attached.

NAME (PLEASE PRINT) <u>Douglas G. Howard</u>	TITLE <u>Senior Petroleum Engineer</u>
SIGNATURE	DATE <u>8/2/2002</u>

(This space for State use only)

RECEIVED

AUG 9 2002

DIVISION OF
OIL, GAS AND MINING

Record of Well Work
Conversion to SWD

- 1/3/02 Rig up General Well Service Rig #102. Unseat pump and flush rods.
1/4/02 Pull rods and pump.
1/5/02 Release anchor catcher and pull tubing.
1/6/02 Shut down.
1/7/02 Clean out casing to 9778' with bit and scraper.
1/8/02 Run and set CIBP at 9776'
1/9/02 Set cement retainer at 8312'. Test tubing to 1500 psi, casing to 1000 psi. Pump 250 sx class G cement into perfs from 8449' to 9647'.
1/10/02 Run CBL from 8000' to 100' holding 1000 psi on csg. Submit copies to EPA and State of Utah.
1/11/02 Perforate casing at 6005'. Unable to break down perfs. Perforate casing at 5350'. Pump into perfs at 1300 psi, 2.5 BPM. Returns out 9 5/8" at surface. Circulate 462 bbls of water into perforation at 5350' and out surface valve on surface casing. Final circulating pressure 500 psi at 3.5 BPM.
1/12/02 Shut down.
1/13/02 Shut down.
1/14/02 Set cement retainer at 5293'. Pump 300 sx class G Hi lift cement tailed by 200 sx G. Circulate 30 bbls cement to surface.
1/15/02 PU bit and drill collars. Wait on cement.
1/16/02 Tag cement at 5285'. Drilled out cement and retainer. Cleaned out well to 5304'.
1/17/02 Continue cleanout. Drilled through cement at 5362'.
1/18/02 Test casing from surface to cement CR at 8312' to 1000 psi. No loss in 15 minutes. Perforate casing at 6220' and 6005'. Set packer at 6102' and circulate between perforations. Final circulation rate 1/2 BPM into perfs at 6220' with returns from perfs at 6005'.
1/19/20 Shut down.
1/20/02 Shut down.
1/21/02 Shut down for rig repair.
1/22/02 Set cement retainer at 6190'. Pump 55 sx class G cement into perfs at 6220' some returns from perfs at 6005. POOH with tubing.
1/23/02 Tag cement with bit at 6168'. Drill out cement to retainer at 6190'. Ran CBL from 6177' to 4000'. Sent copies to EPA and State of Utah.
1/24/02 Perforate the following intervals for SWD.

5500' - 5514' 5723' - 5732'
5542' - 5548' 5820' - 5854'
5698' - 5708'

Set retrievable packer at 5412'. Test casing to 1000 psi for 15 minutes with no loss.
1/25/01 Swab perforated intervals for water sample. Swabbed 93 bbls measuring resistivity of water.
1/26/02 Shut down.
1/27/20 Shut down.
1/28/02 Swab perforated intervals for water sample. Swabbed 23 bbls. Sent sample for analysis. Ran pressure bomb to 6000' for 48 hour BHP test.

Davis 1-33A1E
August, 2, 2002
Page 2

- 1/29/02 Wait on BHP test.
- 1/30/02 Pull pressure bomb. Pull tubing.
- 1/31/02 Run retrievable packer to 5416'. Fill casing annulus with treated packer fluid. Test tubing to 3000 psi with no loss in 15 minutes. Test casing to 1000 psi. Lost 250 psi in 15 minutes. (Note: squeeze holes at 5350').
- 2/1/02 Set packer at 5322'. Test casing to 1000 psi for 20 minutes with no pressure loss.
- 2/2/02 –
- 7/11/02 Waiting on Aquifer Exemption
- 7/31/02 Ran MIT. MIT log is attached. Well is currently shut in waiting on approval.

Mechanical Integrity Test

Casing or Annulus Pressure Mechanical Integrity Test

U.S. Environmental Protection Agency
Underground Injection Control Program
999 18th Street, Suite 500 Denver, CO 80202-2466

State

EPA Witness: David N. Beck Date: 7 / 31 / 02
 Test conducted by: Larry Rich (Flying J Oil & Gas)
 Others present: Byron Tomlinson (Action Hot Oil Service)

Well Name: <u>Davis 1-33 AIE</u>	Type: ER SWD	Status: AC TA UC
Field: <u>East Blue Bell</u>		
Location: _____	Sec: <u>33</u> T <u>1</u> N <u>(S)</u> R <u>1(E)</u> W	County: <u>Jintah</u> State: <u>UT</u>
Operator: <u>Flying J Oil & Gas</u>		
Last MIT: _____	Maximum Allowable Pressure: _____	PSIG

Is this a regularly scheduled test? Yes No
 Initial test for permit? Yes No
 Test after well rework? Yes No
 Well injecting during test? Yes No If Yes, rate: _____ bpd

Pre-test casing/tubing annulus pressure: CSG-0- psig

MIT DATA TABLE	Test #1	Test #2	Test #3
TUBING PRESSURE			
Initial Pressure	<u>495</u> psig	psig	psig
End of test pressure	<u>495</u> psig	psig	psig
CASING / TUBING ANNULUS PRESSURE			
0 minutes	<u>1000</u> psig	psig	psig
5 minutes	<u>1000</u> psig	psig	psig
10 minutes	<u>1000</u> psig	psig	psig
15 minutes	<u>1000</u> psig	psig	psig
20 minutes	<u>1000</u> psig	psig	psig
25 minutes	<u>1000</u> psig	psig	psig
30 minutes	<u>1000</u> psig	psig	psig
_____ minutes	psig	psig	psig
_____ minutes	psig	psig	psig
RESULT	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

Tbg.
495
495
495
495
495
495
495
495

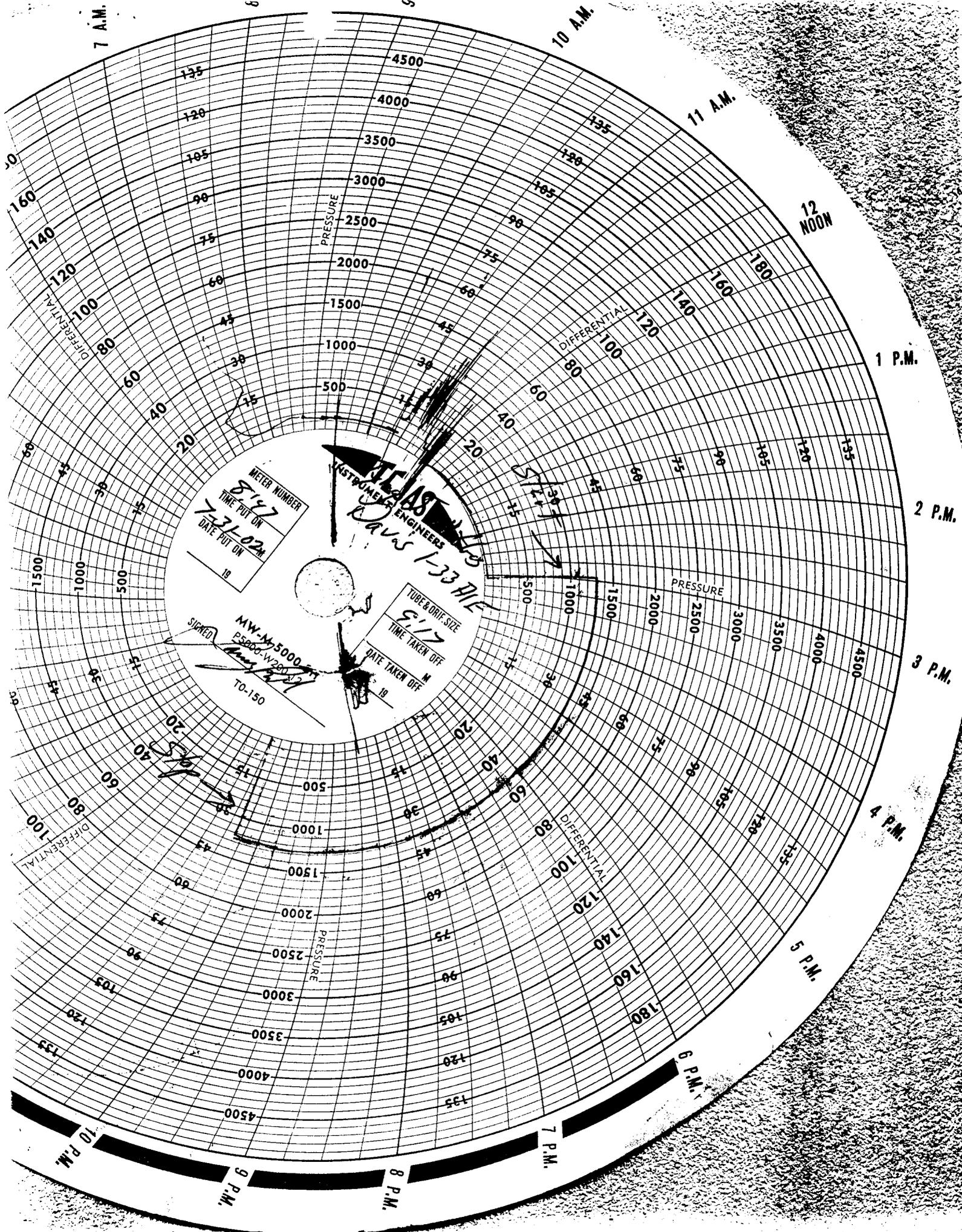
Does the annulus pressure build back up after the test? Yes No

MECHANICAL INTEGRITY PRESSURE TEST

Additional comments for mechanical integrity pressure test, such as volume of fluid added to annulus and bled back at end of test, reason for failing test (casing head leak, tubing leak, other), etc.:

1-30L To fill annulus / Bled back 1-30L

Signature of Witness: Larry Rich



7 A.M.

10 A.M.

11 A.M.

12 NOON

1 P.M.

2 P.M.

3 P.M.

4 P.M.

5 P.M.

6 P.M.

7 P.M.

8 P.M.

9 P.M.

10 P.M.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
Phone 800-227-8917
<http://www.epa.gov/region08>

Ref: 8P-W-GW

MINOR PERMIT MODIFICATION No. 2
EPA FINAL PERMIT
UT2881-04555

Flying J Oil and Gas, Inc.
Davis 1-33A1E SWD
Uintah County, Utah

Pursuant to Part III, Sections B. 1 and 3. of the above-referenced Final Permit, a Minor Permit Modification No. 2 is made. These changes are as follows:

Existing Permit Language:

PART II. SPECIFIC PERMIT CONDITIONS

C. WELL OPERATION

2. Mechanical Integrity.

- (a) Schedule for Demonstration of Mechanical Integrity. A demonstration of both part I and part II of mechanical integrity shall be made at regular intervals, no less frequently than once every five (5) years from the effective date of this Permit, in accordance with 40 CFR § 146.8. Part II of mechanical integrity shall be demonstrated with a series of temperature logs. The test methods and criteria are to follow current UIC Guidance. The Guidance on pressure tests is located in Appendix E of the Permit.
- (b) Loss of Mechanical Integrity. **The operator is required to establish and maintain mechanical integrity (40 CFR 144.51 (q)).** If the well fails to demonstrate mechanical integrity, or a loss of mechanical integrity as defined by 40 CFR § 146.8 becomes evident during operation, the permittee shall notify the Director in accordance with Part III, Section E. 10. of this permit. Following any loss of mechanical integrity, injection activities shall be terminated immediately; and operations shall not be resumed until the permittee has taken necessary actions to restore integrity to the well and EPA gives written approval to recommence injection.

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IS MODIFIED TO READ:

PART II. SPECIFIC PERMIT CONDITIONS

C. WELL OPERATION

2. Mechanical Integrity.

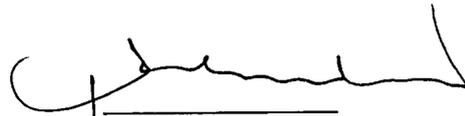
- (a) Schedule for Demonstration of Mechanical Integrity. A demonstration of both part I and part II of mechanical integrity shall be made at regular intervals, no less frequently than once every five (5) years from the effective date of this Permit, in accordance with 40 CFR § 146.8. Part II of mechanical integrity shall be demonstrated with a series of temperature logs. The test methods and criteria are to follow current UIC Guidance. The Guidance on pressure tests is located in Appendix E of the Permit. Initiation of mechanical integrity demonstrations will be according to the following provisions:
- (i) It shall be the permittee's responsibility to arrange and conduct the routine five-year tubing/casing annulus pressure test demonstration. The permittee shall notify the Director of his intent to demonstrate mechanical integrity at least thirty (30) days prior to such demonstration. Results of the test, **including pressure chart recordings** shall be submitted to the Director as soon as possible but no later than sixty (60) days after the demonstration.
- (ii) In addition to any demonstration made under paragraph (i), above, the Director may require a demonstration of mechanical integrity, at any time during the permitted life of the well.
- (b) Loss of Mechanical Integrity. **The operator is required to establish and maintain mechanical integrity (40 CFR 144.51 (q)).** If the well fails to demonstrate mechanical integrity, or a loss of mechanical integrity as defined by 40 CFR § 146.8 becomes evident during operation, the permittee shall notify the Director in accordance with Part III, Section E. 10. (c) of this Permit. Furthermore, **injection activities shall be terminated immediately, and operation shall not be resumed until the permittee has taken necessary actions to restore integrity to the well and the Director gives written approval to recommence injection.** The Director must be notified per the requirements of Part II Section C. 2. (b)(i) above, prior to running an MIT to demonstrate that integrity has been restored.

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All other provisions and conditions of Final Permit No. **UT2881-04555** shall remain as originally issued, or as previously modified.

AUG 12 2002

Date



Kerrigan G. Clough
*Assistant Regional Administrator
Office of Partnerships and
Regulatory Assistance



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
Phone 800-227-8917
<http://www.epa.gov/region08>

AUG 12 2002

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. James W. Wilson
Vice President of Operations
Flying J Oil and Gas Inc.
333 West Center Street
North Salt Lake City, Utah 84054

RE: UNDERGROUND INJECTION CONTROL (UIC)
Minor Modification No. 2 - Davis No. 1-33A1E
SWD EPA Permit No. UT2881-04555 Bluebell/
Altamont Field, Uintah County, Utah

Dear Mr. Wilson:

During the final completion of the Davis No. 1-33A1E, it was noted that there was some confusion relating to the time frame for notifying EPA of the schedule for mechanical integrity testing (MIT) and the standards and criteria for the test. Paul Osborne discussed this issue with Mr. Doug Howard in your Vernal Office on July 30, 2002. Paul indicated that we would like to modify the Permit to incorporate some of the language in the EPA MIT Guidance relating to scheduling of future MITs. Mr Howard indicated that Flying J would not have a problem with a Minor Modification of the Permit.

Enclosed is a copy of the minor modification. It clarifies the requirement that the operator notify EPA at least 30 days in advance of any MIT on the Davis No. 1-33A1E. This requirement is similar to the prior notification requirement for any work over of the well.

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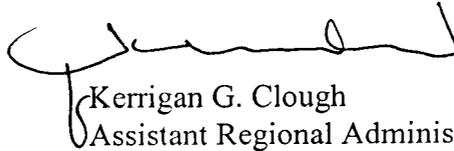
Page 1 of 2



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If you have any questions, please contact Mr. Dan Jackson at (303) 312-6155 or Mr. Paul S. Osborne at (303) 312-6125, in this regard. **Also, please direct all correspondence to the ATTENTION: Paul S. Osborne, citing Mail Code: 8P-W-GW, very prominently.**

Sincerely,



Kerrigan G. Clough
Assistant Regional Administrator
Office of Partnerships and
Regulatory Assistance

Enclosures: Minor Modification No. 1

cc: Mr. Gilbert Hunt
State of Utah Natural Resources
Division of Oil, Gas and Mining

Mr. Douglas G. Howard
Flying J Oil and Gas
3500 East 500 North
Roosevelt, Utah 84066

Mr. D. Floyd Wopsock, Chairman
Uintah & Ouray Business Committee

Ms. Elaine Willie, Environmental Director
Ute Indian Tribe

Mr. Norman Cambridge
BIA - Uintah & Ouray Agency

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
<http://www.epa.gov/region08>

SEP 13 2002

REF: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

RECEIVED

SEP 16 2002

DIVISION OF
OIL, GAS AND MINING

Mr. James W. Wilson
Vice President of Operations
Flying J Oil and Gas Inc.
333 West Center Street
North Salt Lake City, Utah 84054

RE: UNDERGROUND INJECTION CONTROL (UIC)
Authorization to Inject , Davis No. 1-33A1E
SWD , Green River Formation - EPA Permit No.
UT2881-04555 Bluebell/ Altamont Field, Uintah
County, Utah

Dear Mr. Wilson:

Thank you for submitting to the Region VIII Ground Water Program Office of the Environmental Protection Agency (EPA) the information pertaining the Davis No. 1-33A1E Class II disposal well. Conditions of Part II Section C Subpart 1 required submittal of the following information:

- (a) Well Rework Record Form 7520-12 and the daily work record for the completion;
- (b) results from formation testing/logging required at Part II A.5 (b) (pore pressure/static bottom hole pressure determination);
- (c) results from pressure test that demonstrated Part I (Internal) mechanical integrity, no significant leak in the casing, tubing, or packer, made by using a casing-tubing pressure test or an approved alternate test method;
- (d) results of a cement bond log (CBL) for demonstrating Part II (External) mechanical integrity, no significant fluid movement into a USDW through vertical channels adjacent to the wellbore, which shall be followed up with temperature



- (d) results of a cement bond log (CBL) for demonstrating Part II (External) mechanical integrity, no significant fluid movement into a USDW through vertical channels adjacent to the wellbore, which shall be followed up with temperature surveys after four (4) to six (6) months of injection; and.
- (e) results of a valid, uncontaminated sample of the injection interval water prior to any stimulation of the reservoir by adequate pumping or swabbing prior to sampling and analyze the fluid for standard cations, anions, and total dissolved solids.

As you are aware, the CBL run on the Davis No. 1-33A1E showed poor cement quality above the perforations. As a result of the potential for fluid movement adjacent to the casing, the Permit requires that you run temperature surveys on the well after four to six months of injection. These surveys should be conducted according to the Guidance attached to the Permit. Your actual plan for running the dynamic and shut-in temperatures should be submitted to the Regional Office at least thirty (30) days in advance of the test.

On July 7, 2002, a casing pressure test, witnessed by the State of Utah Division of Oil and Gas was conducted using the EPA testing procedures. Review of test results indicates no significant leak in the casing, tubing, or packer, and is approved as a demonstration of Part I (Internal) MI. **Demonstration of Part I (Internal) MI is required after well work over involving casing, tubing and packer. Demonstration of both Part I (Internal) and Part II (External) MI is required at least once every five years.**

Conditions specified in Part II (C)(1) have been met and information submitted, and the results have been reviewed and approved by the EPA. Therefore, effective upon your receipt of this letter, **Administrative approval hereby is granted for fluid injection into the Davis No. 1-33A1E Class II Disposal Well under the conditions of EPA Permit No. UT2881-04555.**

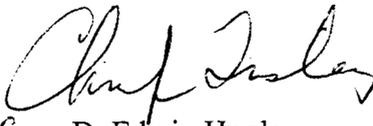
Please be reminded of the Permit determinations regarding operating, monitoring, and reporting requirements (see Part II Section D of your Permit). The Permit also establishes a **maximum allowable injection pressure of 1,179 psig**. It is your responsibility to be aware of and to comply with all conditions of your Permit.

As of this approval, responsibility for permit compliance and enforcement is transferred to the Region VIII UIC Technical Enforcement Program office. Therefore, please direct all future notification, reporting, monitoring and compliance correspondence to the following address, referencing your well and UIC Permit number on all correspondence regarding this well.

Technical Enforcement Program - UIC
U.S. EPA Region VIII, Mail Code 8ENF-T
999 18th Street, Suite 300
Denver, Colorado 80202-2466

If you have any questions regarding this approval, please call Paul Osborne of my staff at 303-312-6125. For questions regarding notification, testing, monitoring, reporting or other Permit requirements, the UIC Technical Enforcement Program may be reached by calling (800) 227-8917.

Sincerely,


for D. Edwin Hogle
Director
Ground Water Program

cc: Mr. Gilbert Hunt
State of Utah Natural Resources
Division of Oil, Gas and Mining

Mr. Douglas G. Howard
Flying J Oil and Gas
3500 East 500 North
Roosevelt, Utah 84066

Mr. D. Floyd Wopsock, Chairman
Uintah & Ouray Business Committee

Ms. Elaine Willie, Environmental Director
Ute Indian Tribe

Mr. Norman Cambridge
BIA - Uintah & Ouray Agency

Mr. Jerry Kenczka
BLM - Vernal District Office

Mr. Mario Salazar, OGWDW

Mr. Bruce Kobelski, OGWDW

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

<p align="center">SUNDRY NOTICE AND REPORTS ON WELLS</p> <p align="center">Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells</p> <p align="center">Use APPLICATION FOR PERMIT -- for such proposals</p>		6. Lease Designation and Serial Number Fee
		7. Indian Allottee or Tribe Name
1. Title of Well [] Oil Well [] Gas Well [X] Other SWD		8. Unit or Communitization Agreement 9C 000176
2. Name of Operator Flying J Oil and Gas Inc		9. Well Name and Number Davis 1-33A1E
3. Address and Telephone No. PO Drawer 130, Roosevelt, Utah 84066	4. Telephone Number 435 722-5166	10. API Well Number 43 047 30384
5. Location of Well Footage 2359' FWL 1980' FNL County: Uintah		11. Field and Pool, or Exploratory Area Bluebell
QQ, Sec. T.,R.,M.: SENW Sec 33 T1S R1E State: Utah		

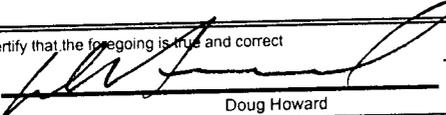
12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
NOTICE OF INTENT (Submit in Duplicate)		SUBSEQUENT REPORT (Submit Original Form Only)	
[] Abandonment	[] New Construction	[] Abandonment	[] New Construction
[] Casing Repair	[] Pull or Alter Casing	[] Casing Repair	[] Pull or Alter Casing
[] Change of Plans	[] Recompletion	[] Change of Plans	[] Recompletion
[] Conversion to Injection	[] Shoot or Acidize	[] Conversion to Injection	[] Shoot or Acidize
[] Fracture Test	[] Vent or Flare	[] Fracture Test	[] Vent or Flare
[] Multiple Completion	[] Water Shut-Off	[] Multiple Completion	[] Water Shut-Off
[X] Other <u>Step Rate Test</u>		[] Other _____	
Approximate Date Work Will Start <u>11/11/02</u>		Date of Work Completion _____	
Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG FORM. *Must be accompanied by a cement verification report			

13 Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface location and measured and true vertical depths for all markers and zones pertinent to this work.

Flying J Oil & Gas, Inc. proposes to do a step-rate test on this well to determine parting pressure and maximum allowable injection pressure.

The procedure is attached.

14. I hereby certify that the foregoing is true and correct

Signed  Title Sr. Petroleum Engineer Date 9/19/02

Doug Howard

(State Use Only)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

SUNDRY NOTICE AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells Use APPLICATION FOR PERMIT -- for such proposals		6. Lease Designation and Serial Number Fee
		7. Indian Allottee or Tribe Name
		8. Unit or Communitization Agreement 9C 000176
		9. Well Name and Number Davis 1-33A1E
1. Title of Well [] Oil Well [] Gas Well [X] Other SWD		10. API Well Number 43 047 30384
2. Name of Operator Flying J Oil and Gas Inc		11. Field and Pool, or Exploratory Area Bluebell
3. Address and Telephone No. PO Drawer 130, Roosevelt, Utah 84066	4. Telephone Number 435 722-5166	

5. Location of Well
 Footage **2359' FWL 1980' FNL** County: **Uintah**
 QQ, Sec. T.,R.,M.: **SENW Sec 33 T1S R1E** State: **Utah**

12. CHECK APPROPRIATE BOX(es) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
NOTICE OF INTENT (Submit in Duplicate)		SUBSEQUENT REPORT (Submit Original Form Only)	
<input type="checkbox"/> Abandonment	<input type="checkbox"/> New Construction	<input type="checkbox"/> Abandonment	<input type="checkbox"/> New Construction
<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Pull or Alter Casing	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Pull or Alter Casing
<input type="checkbox"/> Change of Plans	<input type="checkbox"/> Recompletion	<input type="checkbox"/> Change of Plans	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Conversion to Injection	<input type="checkbox"/> Shoot or Acidize	<input type="checkbox"/> Conversion to Injection	<input type="checkbox"/> Shoot or Acidize
<input type="checkbox"/> Fracture Test	<input type="checkbox"/> Vent or Flare	<input type="checkbox"/> Fracture Test	<input type="checkbox"/> Vent or Flare
<input type="checkbox"/> Multiple Completion	<input type="checkbox"/> Water Shut-Off	<input type="checkbox"/> Multiple Completion	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Other <u>Verbal Authorization to Inject Water</u>		<input type="checkbox"/> Other _____	
Approximate Date Work Will Start <u>9/21/2001</u>		Date of Work Completion _____	
Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG FORM. *Must be accompanied by a cement verification report			

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface location and measured and true vertical depths for all markers and zones pertinent to this work.

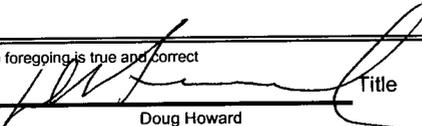
Verbal authorization was given by Dan Jarvis on 9/19/2002 to commence injection of water into the Davis 1-33A1E in compliance with all state and EPA permit requirements. Maximum injection pressure will be 1179 psig as permitted by the EPA. After four months a step rate test will be conducted to determine maximum injection rate and pressure and a temperature survey will be run to determine if there is fluid movement adjacent to the casing.

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14. I hereby certify that the foregoing is true and correct

Signed  Title _____ Date 9/19/02

Doug Howard Sr. Petroleum Engineer

(State Use Only)

Flying J Oil & Gas Inc.
Davis 1-3A1E SWD
Step Rate Test Procedure

- 1) Shut in well for at least 48 hours prior to the test. Record wellhead pressure with a recording pressure gauge during the shut in period.
- 2) Perform a series of successively higher injection rates according to the attached schedule. Record pressure values for each rate and time step. Each step should last exactly as long as the preceding rate. If stabilized pressure values are not obtained with the rate steps, the test results may be inconclusive.
- 3) Injection rates should be controlled with a constant flow regulator that has been tested prior to use. A throttling device is not sufficient.
- 4) Flow rates should be measured with a calibrated turbine flow meter.
- 5) Pressures should be measured with a down hole pressure bomb set at 5675'. (Perfs 5500'-5854')
- 6) Measure and record injection pressures at the wellhead with a recording pressure gauge, for immediate test results.
- 7) A plot of injection rates and the corresponding stabilized pressure values should be graphically represented as a constant slope straight line to a point at which the formation fracture, or parting pressure is exceeded. The slope of the subsequent straight line should be less than that of the before-fracture straight line. If possible pump four steps above parting pressure.
- 8) If the formation fracture pressure has definitely been exceeded, evidenced by at least two injection rate-pressure combinations greater than the breakdown pressure, the injection pump should be stopped and the pressure allowed to bleed off into the formation. There will occur a significant instantaneous pressure drop (ISIP), after which the pressure values begin to level out. This ISIP value must be read and recorded. Conduct a fall-off test by continuing to monitor pressure to obtain closure pressure if possible.

Davis 1-33A1E SWD

10/15/02

Maximum anticipated injection rate: 8 BPM

Step	Test Rate	Rate Description	BPM	Time (min)	Pressure (psig)	Bbls per stage
STEP #1	Test Rate	(5% of Maximum Rate)	0.4	0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60		24
STEP #2	Test Rate	(10% of Maximum Rate)	0.8	0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60		48
STEP #3	Test Rate	(20% of Maximum Rate)	1.6	0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60		96
STEP #4	Test Rate	(40% of Maximum Rate)	3.2	0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60		192
STEP #5	Test Rate	(60% of Maximum Rate)	4.8	0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60		288
STEP #6	Test Rate	(80% of Maximum Rate)	6.4	0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60		384
STEP #7	Test Rate	(100% of Maximum Rate)	8	0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60		480
ISIP						
						Total Bbls Rqr'd 1512

FLYING J OIL & GAS INC
333 WEST CENTER STREET

NORTH SALT LAKE, UT. 84054 801-296-7700

PAGE 1

ORIGINAL, DO NOT THROW AWAY. RETAIN FOR YOUR RECORDS

PAYEE NO. 6013

OWNER NAME: LEROY F PECTOL &

DATE 01/31/02
CHECK NO. 145972

TO:
JOHN
WATSON

WELL#	SALE DATE	TYP	PROD INT	WELL NAME	PRICE	QUANTITY	GROSS	YOUR INTEREST	YOUR SHARE
77035	09/01	2	RI	DAVIS 1-33A1E	1.18	346.84			
				GROSS VALUE			408.99	0.00520833	2.13
				UTAH CONSERVATION TAX			0.82		0.00
				UTAH WITHHOLDING TAX			20.45		0.11
				NET AMOUNT			387.72		2.02
10/01	3		RI	0.29	579.59				
				GROSS VALUE			169.59	0.00520833	0.88
				UTAH CONSERVATION TAX			0.34		0.00
				UTAH WITHHOLDING TAX			8.48		0.04
				NET AMOUNT			160.77		0.84
10/01	2		RI	0.63	315.00				
				GROSS VALUE			198.49	0.00520833	1.03
				UTAH CONSERVATION TAX			0.40		0.00
				UTAH WITHHOLDING TAX			9.92		0.05
				NET AMOUNT			188.17		0.98
11/01	1		RI	16.53	265.37				
				GROSS VALUE			4385.50	0.00520833	22.84
				UTAH CONSERVATION TAX			8.77		0.05
				UTAH WITHHOLDING TAX			219.28		1.14
				NET AMOUNT			4157.45		21.65
11/01	2		RI	1.63	450.10				
				GROSS VALUE			734.20	0.00520833	3.82
				UTAH CONSERVATION TAX			1.47		0.01
				UTAH WITHHOLDING TAX			36.71		0.19
				NET AMOUNT			696.02		3.62
11/01	3		RI	0.24	670.66				
				GROSS VALUE			158.03	0.00520833	0.82
				UTAH CONSERVATION TAX			0.32		0.00
				UTAH WITHHOLDING TAX			7.90		0.04
				NET AMOUNT			149.81		0.78
12/01	1		RI	16.22	274.93				
				GROSS VALUE			4459.36	0.00520833	23.23
				UTAH CONSERVATION TAX			8.92		0.05
				UTAH WITHHOLDING TAX			222.97		1.16
				NET AMOUNT			4227.47		22.02
				OWNER GROSS					
				OWNER NET DEDUCTIONS					
				OWNER NET TOTALS					
CURRENT CHECK				54.75			2.84		51.91
YEAR TO DATE				54.75			2.84		51.91

-----PRODUCTS/DEDUCTIONS----- TOTAL CHECK AMOUNT 51.91
 2 - GAS / 3 - NGL / 1 - OIL / UWH - UTAH WITHHOLDING TAX /
 UGON - UTAH CONSERVATION TAX /

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DIVISION OF
OIL, GAS AND MINING

LERoy
PECTOL

TO: JOHN BAZA

ENTRY 95006720
BOOK 607 PAGE 759

MINERAL DEED

Know All Men by These Presents: THAT Jean D. Nelson (William H. Nelson-Deceased)

of: 702 Golfmore Dr Apt. G, Grand Junction, Colorado 81506 or

of P.O. Box 3548 G.J., Co 81502, hereinafter called Grantor, (whether one or more) for and in consideration
(Give exact post office address)

of the sum of Ten Dollars (\$ 10.00)
cash in hand paid and other good and valuable considerations, the receipt of which is hereby acknowledged, do

hereby grant, bargain, sell, convey, transfer, assign and deliver unto Leroy F. and Nancy E. Pectol
of Rt #1 Box 1055, Roosevelt, Ut 84066, hereinafter
(Give exact post office address)

called Grantee (whether one or more) an undivided 0.0104166 Royalty interest in
and to all of the oil, gas and other minerals in and under and that may be produced from the following described
lands situated in Uintah County, State of Utah, to-wit:

Township 1 South, Range 1 East, U. S. M. (all Section # 33)

Section # 33 NE 1/4 SW 1/4, SE 1/4 NW 1/4 (Reference)

Book # 13 page 33 parcel # 0002, 0003 (40 acres each)

ENTRY 95006720
BOOK 607 PAGE 759 \$11.00
12-DEC-95 10:33
RANDY SIMMONS
RECORDER, UINTAH COUNTY, UTAH
LEROY F AND NANCY E PECTOL
RT #1 BOX 1055 ROOSEVELT UT 84066
REC BY: RUTH DUNN, DEPUTY

containing 80 acres, more or less, together with the right of ingress and egress at all times
for the purpose of mining, drilling, exploring, operating and developing said lands for oil, gas, and other minerals,
and storing, handling, transporting and marketing the same therefrom with the right to remove from said
land all of Grantee's property and improvements.

This sale is made subject to any rights now existing to any lessee or assigns under any valid and subsist-
ing oil and gas lease of record heretofore executed: it being understood and agreed that said Grantee shall have,
receive, and enjoy the herein granted undivided interest in and to all bonuses, rents, royalties and other bene-
fits which may accrue under the terms of said lease insofar as it covers the above described land from and after
the date hereof, precisely as if the Grantee herein had been at the date of the making of said lease the owner of
a similar undivided interest in and to the lands described and Grantee one of the lessors therein.

Grantor agrees to execute such further assurances as may be requisite for the full and complete enjoyment
of the rights herein granted and likewise agrees that Grantee herein shall have the right at any time to re-
deem for said Grantor by payment, any mortgage, taxes, or other liens on the above described land, upon de-
fault in payment by Grantor, and be subrogated to the rights of the holder thereof.

TO HAVE AND TO HOLD The above described property and easement with all and singular the rights,
privileges, and appurtenances thereunto or in any wise belonging to the said Grantee herein heirs,
successors, personal representatives, administrators, executors, and assigns forever, and Grantor do es not
hereby warrant said title to Grantee heirs, executors, administrators, personal representatives,
executors, and assigns forever, and Grantor do es not hereby agree to defend all and singular the said property
unto the said Grantee herein heirs, successors, executors, personal representatives, and assigns
against every person whomsoever claiming or to claim the same or any part thereof.

WITNESS hand this day of December, 19 95

Jean D. Nelson
Jean D. Nelson (Owner & Personal Representative)

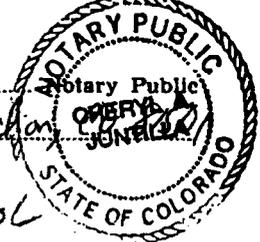
STATE OF Colorado }
COUNTY OF Mesa } SS: INDIVIDUAL ACKNOWLEDGEMENT

Before me, the undersigned, a Notary Public, in and for said County and State on this 1st day of
December, 1995, personally appeared Jean D. Nelson

to me known to be the identical person... who executed the within and foregoing instrument and acknowledged
to me that she executed the same as her free and voluntary act and deed for the uses and purposes
therein set forth.

Given under my hand and seal the day and year last above written.

My commission expires July 27, 1999
Residing at 200 Grand Avenue, Suite 400, Grand Junction



LEROY PECTOL

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

SUNDRY NOTICE AND REPORTS ON WELLS
Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells
Use APPLICATION FOR PERMIT -- for such proposals

6. Lease Designation and Serial Number Fee
7. Indian Allottee or Tribe Name
8. Unit or Communitization Agreement 9C 000176
9. Well Name and Number Davis 1-33A1E
10. API Well Number 43 047 30384
11. Field and Pool, or Exploratory Area Bluebell

1. Title of Well <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other SWD	
2. Name of Operator Flying J Oil and Gas Inc	
3. Address and Telephone No. PO Drawer 130, Roosevelt, Utah 84066	4. Telephone Number 435 722-5166

5. Location of Well
Footage **2359' FWL 1980' FNL** County: **Uintah**
QQ, Sec. T.,R.,M.: **SENW Sec 33 T1S R1E** State: **Utah**

12. CHECK APPROPRIATE BOX(es) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
NOTICE OF INTENT (Submit in Duplicate)		SUBSEQUENT REPORT (Submit Original Form Only)	
<input type="checkbox"/> Abandonment	<input type="checkbox"/> New Construction	<input type="checkbox"/> Abandonment	<input type="checkbox"/> New Construction
<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Pull or Alter Casing	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Pull or Alter Casing
<input type="checkbox"/> Change of Plans	<input type="checkbox"/> Recompletion	<input type="checkbox"/> Change of Plans	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Conversion to Injection	<input type="checkbox"/> Shoot or Acidize	<input type="checkbox"/> Conversion to Injection	<input type="checkbox"/> Shoot or Acidize
<input type="checkbox"/> Fracture Test	<input type="checkbox"/> Vent or Flare	<input type="checkbox"/> Fracture Test	<input type="checkbox"/> Vent or Flare
<input type="checkbox"/> Multiple Completion	<input type="checkbox"/> Water Shut-Off	<input type="checkbox"/> Multiple Completion	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Other <u>Step Rate Test</u>		<input type="checkbox"/> Other _____	
Approximate Date Work Will Start <u>11/11/02</u>		Date of Work Completion _____	
Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG FORM. *Must be accompanied by a cement verification report			

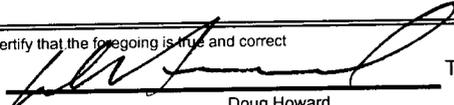
13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface location and measured and true vertical depths for all markers and zones pertinent to this work.

Flying J Oil & Gas, Inc. proposes to do a step-rate test on this well to determine parting pressure and maximum allowable injection pressure.

The procedure is attached.

RECEIVED
NOV 19 2002
DIVISION OF OIL, GAS AND MINING

14. I hereby certify that the foregoing is true and correct

Signed		Title	_____	Date	<u>9/19/02</u>
	Doug Howard		Sr. Petroleum Engineer		

(State Use Only)

Flying J Oil & Gas Inc.
Davis 1-3A1E SWD
Step Rate Test Procedure

- 1) Shut in well for at least 48 hours prior to the test. Record wellhead pressure with a recording pressure gauge during the shut in period.
- 2) Perform a series of successively higher injection rates according to the attached schedule. Record pressure values for each rate and time step. Each step should last exactly as long as the preceding rate. If stabilized pressure values are not obtained with the rate steps, the test results may be inconclusive.
- 3) Injection rates should be controlled with a constant flow regulator that has been tested prior to use. A throttling device is not sufficient.
- 4) Flow rates should be measured with a calibrated turbine flow meter.
- 5) Pressures should be measured with a down hole pressure bomb set at 5675'. (Perfs 5500'-5854')
- 6) Measure and record injection pressures at the wellhead with a recording pressure gauge, for immediate test results.
- 7) A plot of injection rates and the corresponding stabilized pressure values should be graphically represented as a constant slope straight line to a point at which the formation fracture, or parting pressure is exceeded. The slope of the subsequent straight line should be less than that of the before-fracture straight line. If possible pump four steps above parting pressure.
- 8) If the formation fracture pressure has definitely been exceeded, evidenced by at least two injection rate-pressure combinations greater than the breakdown pressure, the injection pump should be stopped and the pressure allowed to bleed off into the formation. There will occur a significant instantaneous pressure drop (ISIP), after which the pressure values begin to level out. This ISIP value must be read and recorded. Conduct a fall-off test by continuing to monitor pressure to obtain closure pressure if possible.

Davis 1-33A1E SWD

10/15/02

Maximum anticipated injection rate: 8 BPM

STEP #	Test Rate	(% of Maximum Rate)	BPM													Bbls per stage
STEP #1	Test Rate	(5% of Maximum Rate)	0.4 BPM													24
	Time (minutes)	0	5	10	15	20	25	30	35	40	45	50	55	60		
	Pressure (psig)															
STEP #2	Test Rate	(10% of Maximum Rate)	0.8 BPM													48
	Time (minutes)	0	5	10	15	20	25	30	35	40	45	50	55	60		
	Pressure (psig)															
STEP #3	Test Rate	(20% of Maximum Rate)	1.6 BPM													96
	Time (minutes)	0	5	10	15	20	25	30	35	40	45	50	55	60		
	Pressure (psig)															
STEP #4	Test Rate	(40% of Maximum Rate)	3.2 BPM													192
	Time (minutes)	0	5	10	15	20	25	30	35	40	45	50	55	60		
	Pressure (psig)															
STEP #5	Test Rate	(60% of Maximum Rate)	4.8 BPM													288
	Time (minutes)	0	5	10	15	20	25	30	35	40	45	50	55	60		
	Pressure (psig)															
STEP #6	Test Rate	(80% of Maximum Rate)	6.4 BPM													384
	Time (minutes)	0	5	10	15	20	25	30	35	40	45	50	55	60		
	Pressure (psig)															
STEP #7	Test Rate	(100% of Maximum Rate)	8 BPM													480
	Time (minutes)	0	5	10	15	20	25	30	35	40	45	50	55	60		
	Pressure (psig)															
ISIP																
													Total Bbls Rqr'd	1512		

RECEIVED
OCT 16 2002
OFFICE OF
TRAINING



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
Phone 800-227-8917
<http://www.epa.gov/region08>

Ref: 8P-W-GW

**ADDENDUM TO THE
STATEMENT OF BASIS**

**MINOR PERMIT MODIFICATION No. 1
EPA FINAL PERMIT
UT2881-04555**

**Flying J Oil and Gas, Inc.
Davis 1-33A1E SWD
Uintah County, Utah**

On January 10, 2002, a cement bond log (CBL) was conducted on the Davis 1-33A1E to investigate the condition of the cement adjacent to the casing in the injection and confining interval. The log indicated that there was little or no cement adjacent to the top of the injection zone at 5,500 feet. A decision was made to attempt to squeeze cement into the zone of interest. On January 11, 2002, the casing was initially perforated below the injection zone at 6005, but circulation could not be established. The casing was perforated above the injection interval at 5,350 feet, and circulation to the surface was established at 3.5 barrels per minute. On January 14, 2002, the well was squeezed with 300 sacks of Hi Lift G cement followed by 200 sacks of conventional Class G cement. This resulted in about 30 barrels of excess cement returned at the surface.

On January 23, 2002, a 2nd CBL was run on the Davis 1-33A1E to evaluate the effectiveness of the cement squeeze that had just been completed. EPA's review indicated that the squeeze cement job performed on the well through perforations located at 5,350 feet did add cement above the proposed injection interval (5,500 to 5,732 feet). The review of the CBL does not indicate that there is sufficient cement with 80 percent bonding per EPA Region VIII Guidance. Thus, the cementing record (which includes the CBL) is inadequate to demonstrate Part II of mechanical integrity, as defined at Title 40 of the Code of Federal Regulations (40 CFR), Section 146.8(a)(2).

The Final Permit addressed this possible situation by requiring a radioactive tracer survey if the follow up CBL did not demonstrate adequate cementing. Because of the presence of underground sources of drinking water (USDWs) adjacent to the injection zone, the Region has reassessed this requirement. Based on this assessment the Region has determined that the temperature log will provide a more complete demonstration that there is no flow into or between USDWs adjacent to the casing.

As a result of the CBL information obtained on the well, the Permit has been modified to require a temperature log to demonstrate Part II of mechanical integrity.





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Ref: 8P-W-GW

**MINOR PERMIT MODIFICATION No. 1
EPA FINAL PERMIT
UT2881-04555**

**Flying J Oil and Gas, Inc.
Davis 1-33A1E SWD
Uintah County, Utah**

Pursuant to Part III, Sections B. 1 and 3. of the above-referenced Final Permit, a Minor Permit Modification No. 1 is made. These changes are as follows:

ORIGINAL Permit Language (April 20, 2001):

PART II. SPECIFIC PERMIT CONDITIONS

A. WELL CONVERSION REQUIREMENTS

5. Formation Testing. During the conversion of the Davis 1-33 A1E SWD, but prior to injection, the permittee shall run the following logs and tests and shall submit them for EPA review and approval
 - (e) If the CBLs do not provide an adequate demonstration of zone isolation, the permittee shall be required to run a radioactive tracer survey (RATS) to demonstrate that the cement is adequate to isolate the injection zone.

and

C. WELL OPERATION

2. Mechanical Integrity.
 - (a) Schedule for Demonstration of Mechanical Integrity. A demonstration of mechanical integrity shall be made at regular intervals, no less frequently than once every five (5) years from the effective date of this Permit, in accordance with 40 CFR § 146.8 and test methods and criteria are to follow current **UIC Guidance**. This Guidance is located in Appendix E of the Permit.



IS MODIFIED TO READ:

PART II. SPECIFIC PERMIT CONDITIONS

A. WELL CONVERSION REQUIREMENTS

- 5. Formation Testing. During the conversion of the Davis 1-33 A1E SWD, but prior to injection (except for the temperature log), the permittee shall run the following logs and tests and shall submit them for EPA review and approval
 - (e) If the CBLs do not provide an adequate demonstration of zone isolation, the permittee shall be required to run a temperature survey to demonstrate that there is no flow adjacent to the casing (Part II of Mechanical integrity). This log shall be run per EPA Guidance going into the well from 3,500 feet to the bottom of the injection zone. The temperature log will be conducted 4 to 6 months after commencement of injection.

and

C. WELL OPERATION

- 2. Mechanical Integrity.
 - (a) Schedule for Demonstration of Mechanical Integrity. A demonstration of both part I and part II of mechanical integrity shall be made at regular intervals, no less frequently than once every five (5) years from the effective date of this Permit, in accordance with 40 CFR § 146.8. Part II of mechanical integrity shall be demonstrated with a series of temperature logs. The test methods and criteria are to follow current UIC Guidance. The Guidance on pressure tests is located in Appendix E of the Permit.

All other provisions and conditions of Final Permit No. **UT2881-04555** shall remain as originally issued, or as previously modified.

Date

Kerrigan G. Clough
*Assistant Regional Administrator
Office of Partnerships and
Regulatory Assistance



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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Ref: 8P-W-GW

**ADDENDUM TO THE
STATEMENT OF BASIS
FOR THE DAVIS 1-33A1E**

**FOR AN
AQUIFER EXEMPTION OF THE
GREEN RIVER FORMATION
ASSOCIATED WITH
MAJOR PERMIT MODIFICATION NO. 1
EPA PERMIT
UT2881-04555**

**Flying J Oil and Gas, Inc.
Davis 1-33A1E SWD
Uintah County, Utah**

As part of the recompletion of the Davis1-33A1E, under provisions of UIC Permit **UT2881-04555**, Flying J Oil and Gas Inc. perforated the permitted injection zone (Green River Interval from 5,500 feet to 5,732 feet in late January 2002. As required by the Permit, the well was then swabbed prior to obtaining a sample. The results of the analysis of the sample indicates that the Green River Formation contains water with a total dissolved solids content of 6,025 mg/liter. Thus, the Green River Formation in the vicinity of the Davis well is an underground source of drinking water (USDW) as defined at 40 CFR §144.3. In this case the regulations at 40 CFR §§144.12 and 146.22 prohibit injection into the proposed injection zone between 5500 and 5732 feet unless Flying J demonstrates that the zone can be exempted from protection per 40 CFR §146.4.

USDWs are aquifers or portions thereof that contain less than 10,000 mg/l total dissolved solids (TDS) and which are being or could be used as a source of drinking water. The proposed Green River Formation injection zone may be classified as an underground source of drinking water (USDW) based upon information supplied by the applicant. According to analyses of formation water from the Green River injection zone in the Davis well, the total dissolved solids (TDS) content of the **water in the proposed injection zone is 6,025 milligrams per liter (mg/l)**. Because it contains water of less than 10,000 mg/l TDS, the Green River Formation is defined as a USDW in this area and an aquifer exemption is required for this injection operation. According to UIC regulations at 40 CFR 146.4, an aquifer may be exempted from protection as a USDW based upon the following criteria:

- (a) the aquifer does not currently serve as a source of drinking water; and,
- (b) it is mineral, hydrocarbon or geothermal energy producing, or can be demonstrated by a permit applicant as part of a permit application for a Class II or III operation to



contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible, or

(c) the total dissolved solids content of the ground water is more than 3,000 and less than 10,000 mg/L and it is not reasonably expected to supply a public water system.

On February 20, 2002, Flying J Inc. submitted a request for an exemption of the Green River Formation adjacent to the Davis 1-33A1E. This request contained information indicating that there are no existing water supply wells obtaining supplies from this Formation within a one mile radius of the injection well. There is one producing well located approximately one mile to the east that produces oil from the proposed injection horizon. There are two stock watering wells located in the one mile radius that obtain water from wells that are 30 feet and 400 feet in depth. Water wells for domestic supply in this area are either drilled into the shallow alluvium that contains water with a TDS of 500 to 1,500 TDS, or into the Duchesne River Formation that contains water with a TDS of about 500 TDS. A well into the Duchesne River would be 300 to 400 feet deep in this area. The applicant has indicated that this well is located in a rural area near Roosevelt, Utah, and that there are three communities, including Roosevelt within 6 to 10 miles of the well. The applicant has provided information indicating that the cost of drilling and completing a well into the Green River Formation would be approximately \$380,000. The cost of drilling and completing a water supply well into shallower aquifers (less than 400 feet) containing water of better quality is estimated to be less than \$40,000. Additionally, to utilize a well into the Green River as a water supply for a public drinking water system, it would be necessary to build a pipeline to transport the water and a water treatment plant to treat the water sufficiently for potable use. This would require significant additional capital investment and an increased O&M cost.

The applicant estimates that the project may involve the injection of about 2000 barrels of water per day (BWPD) over a 20 year life of the project. The Green River injection interval (5,500 to 5732 feet) contains 32 total feet of 12% average porosity. The cylindrical volume of available reservoir within one half (1/2) mile of the Davis 1-33A1E well is approximately 15 million barrels. This assumes radial flow of injected fluid and a piston like displacement of the native reservoir fluid.

Based on EPA's review of available information, the shallow aquifers in this area contain ample sources of good quality water to supply the needs of the area. The cost of drilling and completing a well into the Green River Formation along with the associated treatment and transportation costs make it economically impractical to utilize this Formation as a source of supply for a Public water system. For these reasons, EPA has determined that the Green River Formation fits the criteria of 40 CFR 146.4 (a) and (c). By this action EPA is proposing to exempt the Green River Formation from protection as a USDW in an area within a one half (1/2) mile radius of the Davis 1-33A1E.

To assure protection of the reservoir located outside of the exempted zone, the Final Permit for the Davis 1-33A1E is being modified as part of this action, a volume limit is proposed (Part II Section C. (5)) for the Permit. This limitation will allow a total volume of injection of 14 million barrels over the life of the project. The proposed limitation is about 1 million barrels less than the estimated volume of the exempted reservoir to provide a buffer.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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Ref: 8P-W-GW

MAJOR PERMIT MODIFICATION No. 1
EPA FINAL PERMIT
UT2881-04555

Flying J Oil and Gas, Inc.
Davis 1-33A1E SWD
Uintah County, Utah

Pursuant to Part III, Section B. 1. of the above-referenced Final Permit, a Major Permit Modification No. 1 is made. These changes are as follows:

ORIGINAL Permit Language (April 20, 2001):

PART II. SPECIFIC PERMIT CONDITIONS

C. WELL OPERATION

5. Injection Volume Limitation. There is no limitation on the number of barrels of water per day (BWPD) that may be injected into this well, provided further that in no case shall injection pressure exceed that limit shown in Part II, Section C. 4. (b) of this permit.

IS MODIFIED TO READ:

PART II. SPECIFIC PERMIT CONDITIONS

C. WELL OPERATION

5. Injection Volume Limitation. To prevent movement of injected fluid beyond the one half mile aquifer exemption boundary, to operator shall inject no more that a total volume of 14 million barrels of produced water, provided further that in no case shall injection pressure exceed that limit shown in Part II, Section C. 4. (b) of this permit.

All other provisions and conditions of Final Permit No. **UT2881-04555** shall remain as originally issued, or as previously modified.

Date

Kerrigan G. Clough
*Assistant Regional Administrator
Office of Partnerships and
Regulatory Assistance





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
Phone 800-227-8917
<http://www.epa.gov/region08>

Ref: 8-P-W-GW

PUBLIC NOTICE

INTENT TO ISSUE AN AQUIFER EXEMPTION OF THE GREEN RIVER FORMATION AND A MAJOR PERMIT MODIFICATION NO. 1 OF EPA FINAL PERMIT UT2881-04555

TO
Flying J Oil and Gas Inc.

PURPOSE OF PUBLIC NOTICE

The purpose of this notice is to solicit public comment and to serve notice of a public hearing to be held regarding the proposal by the Region VIII Office of the U. S. Environmental Protection Agency (EPA) to issue: an aquifer exemption of the Green River Formation adjacent to the Davis 1-33A1E Class II salt water disposal well (Permit No. UT2881-04555. This action also includes a Major Modification of the Permit to establish a limitation on the total volume that can be injected into the well.

BACKGROUND

As part of the recompletion of the Davis1-33A1E, under provisions of UIC Permit **UT2881-04555**, Flying J Oil and Gas Inc. perforated the permitted injection zone (Green River Interval from 5,500 feet to 5,732 feet in late January 2002. As required by the Permit, the well was then swabbed prior to obtaining a sample. The results of the analysis of the sample indicates that the Green River Formation contains water with a total dissolved solids content of 6,025 mg/liter. Thus, the Green River Formation in the vicinity of the Davis well is an underground source of drinking water (USDW) as defined at 40 CFR §144.3. In this case the regulations at 40 CFR §§144.12 and 146.22 prohibit injection into the proposed injection zone between 5500 and 5732 feet unless Flying J demonstrates that the zone can be exempted from protection per 40 CFR §146.4.



USDWs are aquifers or portions thereof that contain less than 10,000 mg/l total dissolved solids (TDS) and which are being or could be used as a source of drinking water. The proposed Green River Formation injection zone may be classified as an underground source of drinking water (USDW) based upon information supplied by the applicant. According to analyses of formation water from the Green River injection zone in the Davis well, the total dissolved solids (TDS) content of the **water in the proposed injection zone is 6,025 milligrams per liter (mg/l)**. Because it contains water of less than 10,000 mg/l TDS, the Green River Formation is defined as a USDW in this area and an aquifer exemption is required for this injection operation. According to UIC regulations at 40 CFR §146.4, an aquifer may be exempted from protection as a USDW based upon the following criteria:

- (a) the aquifer does not currently serve as a source of drinking water; and,
- (b) it is mineral, hydrocarbon or geothermal energy producing, or can be demonstrated by a permit applicant as part of a permit application for a Class II or III operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible, or
- (c) the total dissolved solids content of the ground water is more than 3,000 and less than 10,000 mg/L and it is not reasonably expected to supply a public water system.

On February 20, 2002, Flying J Inc. submitted a request for an exemption of the Green River Formation adjacent to the Davis 1-33A1E. This request contained information indicating that there are no existing water supply wells obtaining supplies from this Formation within a one mile radius of the injection well. There is one producing well located approximately one mile to the east that produces oil from the proposed injection horizon. There are two stock watering wells located in the one mile radius that obtain water from wells that are 30 feet and 400 feet in depth. Water wells for domestic supply in this area are either drilled into the shallow alluvium that contains water with a TDS of 500 to 1,500 TDS, or into the Duchesne River Formation that contains water with a TDS of about 500 TDS. A well into the Duchesne River would be 300 to 400 feet deep in this area. The applicant has indicated that this well is located in a rural area near Roosevelt, Utah, and that there are three communities, including Roosevelt within 6 to 10 miles of the well. The applicant has provided information indicating that the cost of drilling and completing a well into the Green River Formation would be approximately \$380,000. The cost of drilling and completing a water supply well into shallower aquifers (less than 400 feet) containing water of better quality is estimated to be less than \$40,000. Additionally, to utilize a well into the Green River as a water supply for a public drinking water system, it would be necessary to build a pipeline to transport the water and a water treatment plant to treat the water sufficiently for potable use. This would require significant additional capital investment and an increased O&M cost.

The applicant estimates that the project may involve the injection of about 2000 barrels of water per day (BWPD) over a 20 year life of the project. The Green River injection interval (5,500 to 5732 feet) contains 32 total feet of 12% average porosity. The cylindrical volume of available reservoir within one half (½) mile of the Davis 1-33A1E well is approximately 15 million barrels. This assumes radial flow of injected fluid and a piston like displacement of the

native reservoir fluid. To assure protection of the reservoir located outside of the exempted zone, the Final Permit for the Davis 1-33A1E is being modified as part of this action, a volume limit is proposed (Part II Section C. (5)) for the Permit. This limitation will allow a total volume of injection of 14 million barrels over the life of the project. The proposed limitation is about 1 million barrels less than the estimated volume of the exempted reservoir to provide a buffer.

Based on EPA's review of available information, the shallow aquifers in this area contain ample sources of good quality water to supply the needs of the area. The cost of drilling and completing a well into the Green River Formation along with the associated treatment and transportation costs make it economically impractical to utilize this Formation as a source of supply for a Public water system. For these reasons, EPA has determined that the Green River Formation fits the criteria of 40 CFR 146.4 (a) and (c).

The EPA has made a preliminary determination to approve the requested exemption and the associated volume limitation proposed in the Permit Modification. Therefore, the EPA is hereby serving notice of intent to issue the exemption of the Green River Formation at a depth of 5,500 feet to 5,732 feet within one half (½) mile of the Davis 1-33A1E.

PUBLIC COMMENTS

All data submitted by the applicant are contained in the administrative record. The draft aquifer exemption, and a statement of basis which discusses exemption are available for public inspection from 9:00 a.m. to 4:00 p.m. by contacting the following office:

Mr. Paul S. Osborne, Mail Code 8P2-W-GW
U.S. Environmental Protection Agency
Region 8
999 18th Street, Suite 500
Denver, CO 80202-2466
(303) 312-6627

Public comments are encouraged and will be accepted, in writing, at the Denver Office for a period of thirty (30) days after publication of this notice. A request for a public hearing should be made in writing and should state the nature of the issues proposed to be raised at the hearing. A public hearing will be held only if significant interest is shown.

FINAL PERMIT DECISION AND APPEAL PROCESS

After the hearing and the close of the public comment period, EPA will issue a final aquifer exemption and will notify all commentors regarding this decision. The decision will be to issue, deny, or modify the aquifer exemption. The final decision shall become effective thirty (30) days after the final decision is issued, unless no commentors request a change to the draft proposal in which case the exemption shall become effective immediately upon issuance.

Within thirty (30) days after a final permit decision has been issued, any person who filed comments on the draft permit or participated in the public hearing may petition the Administrator to review the permit decision. Commentors are directed to 40 CFR §124.15 through §124.20 for the regulations and procedural requirements governing this appeal process.

Date of Publication



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REGION 8
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Ref: Underground Injection Control Program

AQUIFER EXEMPTION

In compliance with provisions of the Safe Drinking Water Act, as amended, (42 USC 300f-300j-11, commonly known as the SDWA) and attendant regulations incorporated by the U. S. Environmental Protection Agency under Title 40 in the Code of Federal Regulations (40 CFR):

The Green River Formation) is exempted as an underground source of drinking water (USDW) in the area located:

- (1) in the subsurface interval of approximately 5,500 ft. to 5,732 ft.; and,
- (2) within the radius of one half (1/2) mile from the Davis No. 1-33A1E injection well, SE 1/4 of the NW 1/4 (1980 ft. from the north line and 2356 ft from the west line), Section 33, T1S, R1E, Uintah County, Utah.

This aquifer exemption is granted in conjunction with **Permit No. UT2881-04555**, issued to Flying J Oil and Gas, Inc. for the injection of Class II brine water produced by surrounding Green River Formation oil wells through the Davis No. 1-33A1E injection well and into the Green River Formation at the depth interval from 5,500 ft. to 5,732 ft., based on Underground Injection Control (UIC) regulations found at 40 CFR §144.7 and §146.4 (see Statement of Basis, page 1).

This aquifer exemption has no expiration date.

Signed this date: _____.

Kerrigan G. Clough
Assistant Regional Administrator
Office of Partnerships and
Regulatory assistance





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
Phone 800-227-8917
<http://www.epa.gov/region08>

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. James W. Wilson
Vice President of Operations
Flying J Oil and Gas Inc.
333 West Center Street
North Salt Lake City, Utah 84054

RE: **UNDERGROUND INJECTION CONTROL (UIC)**
Draft Aquifer Exemption and Major Permit
Modification No. 1 for the Davis No. 1-33A1E
SWD , Green River Formation - EPA Permit No.
UT2881-04555 Bluebell/ Altamont Field, Uintah
County, Utah

Dear Mr. Wilson:

We have reviewed the February 20, 2002, request from Flying J Oil and Gas Inc. for an aquifer exemption of the Green River Formation from 5,500 feet to 5,732 feet. within ½ mile of the Davis 1-33A1E. The aquifer exemption is required for the recently permitted Davis 1-33A1E (EPA Permit No. UT2881-04555) because sampling of the formation indicates that the Green River contains fluids with a total dissolved solids content of 6,025 mg/liter. Thus, the Green River Formation in the vicinity of the Davis well is a USDW as defined at 40 CFR §144.3. In this case the regulations at 40 CFR §§144.12 and 146.22 prohibit injection into the proposed injection zone between 5500 and 5732 feet unless Flying J demonstrates that the zone can be exempted from protection per 40 CFR §146.4. Prior to the commencement of injection, it will be necessary for EPA to issue an exemption of the Green River Formation from protection as a USDW.

The applicant estimates that the project may involve the injection of about 2000 barrels of water per day (BWPD) over a 20 year life of the project. The Green River injection interval (5,500 to 5732 feet) contains 32 total feet of 12% average porosity. The cylindrical volume of



available reservoir within one half (½) mile of the Davis 1-33A1E well is approximately 15 million barrels. This assumes radial flow of injected fluid and a piston like displacement of the native reservoir fluid.

After reviewing your request for an exemption of the Green River Formation and the associated data relative to the requested action, we have determined that the zone in question meets the criteria for an exemption found in 40 CFR 146.4. The formation contains water in excess of 3,000 mg/liter, and it is not reasonably expected to serve a water system. Therefore EPA is proposing to issue an exemption of the Green River Formation from 5,500 to 5,732 feet within one half (½) mile of the Davis 1-33A1E.

To assure protection of the reservoir located outside of the exempted zone, the Final Permit for the Davis 1-33A1E is being modified as part of this action. Major Permit Modification No. 1 establishes a volume limit is proposed (Part II Section C. (5)) for the Permit. This limitation will allow a total volume of injection of 14 million barrels over the life of the project. The proposed limitation is about 1 million barnacles less than the estimated volume of the exempted reservoir to provide a buffer.

Enclosed is a copy of the Draft Aquifer Exemption, Major Modification No. 1, the Draft Addendum to the Statement of Basis, and the Public Notice. This action will be noticed to the public for a 30 day public comment period. This notice for comment on this proposed action will include opportunity for requesting a hearing. If there is no comment, the Aquifer Exemption and the Major Modification will be issued, effective the date of issuance. **There can be no injection into the Davis 1-33A1E until the process is completed and the exemption is effective.**

If you have any questions, please contact Mr. Dan Jackson at (303) 312-6155 or Mr. Paul S. Osborne at (303) 312-6125, in this regard. **Also, please direct all correspondence to the ATTENTION: Paul S. Osborne, citing Mail Code: 8P-W-GW, very prominently.**

Sincerely,

D. Edwin Hogle
Director
Ground Water Program

Enclosures: Draft Aquifer Exemption
Draft Addendum to the Statement of Basis
Major Permit Modification No. 1
Public Notice

cc: Mr. Gilbert Hunt
State of Utah Natural Resources
Division of Oil, Gas and Mining

Mr. Douglas G. Howard
Flying J Oil and Gas
3500 East 500 North
Roosevelt, Utah 84066

Mr. Ronald McCook, Chairman
Uintah & Ouray Business Committee

Ms. Elaine Willie, Environmental Director
Ute Indian Tribe

Mr. Norman Cambridge
BIA - Uintah & Ouray Agency

Mr. Jerry Kenczka
BLM - Vernal District Office

Mr Mario Salazar, OGWDW



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Phone 800-227-8917
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Ref: 8P-W-GW

**ADDENDUM TO THE
STATEMENT OF BASIS
FOR THE DAVIS 1-33A1E**

**FOR AN
AQUIFER EXEMPTION OF THE
GREEN RIVER FORMATION
ASSOCIATED WITH
EPA FINAL PERMIT
UT2881-04555**

**Flying J Oil and Gas, Inc.
Davis 1-33A1E SWD
Uintah County, Utah**

As part of the recompletion of the Davis1-33A1E, under provisions of UIC Permit **UT2881-04555**, Flying J Oil and Gas Inc. perforated the permitted injection zone (Green River Interval from 5,500 feet to 5,732 feet in late January 2002. As required by the Permit, the well was then swabbed prior to obtaining a sample. The results of the analysis of the sample indicates that the Green River Formation contains water with a total dissolved solids content of 6,025 mg/liter. Thus, the Green River Formation in the vicinity of the Davis well is an underground source of drinking water (USDW) as defined at 40 CFR §144.3. In this case the regulations at 40 CFR §§144.12 and 146.22 prohibit injection into the proposed injection zone between 5500 and 5732 feet unless Flying J demonstrates that the zone can be exempted from protection per 40 CFR §146.4.

USDWs are aquifers or portions thereof that contain less than 10,000 mg/l total dissolved solids (TDS) and which are being or could be used as a source of drinking water. The proposed Green River Formation injection zone may be classified as an underground source of drinking water (USDW) based upon information supplied by the applicant. According to analyses of formation water from the Green River injection zone in the Davis well, the total dissolved solids (TDS) content of the **water in the proposed injection zone is 6,025 milligrams per liter (mg/l)**. Because it contains water of less than 10,000 mg/l TDS, the Green River Formation is defined as a USDW in this area and an aquifer exemption is required for this injection operation. According to UIC regulations at 40 CFR §146.4, an aquifer may be exempted from protection as a USDW based upon the following criteria:

- (a) the aquifer does not currently serve as a source of drinking water; and,
- (b) it is mineral, hydrocarbon or geothermal energy producing, or can be



demonstrated by a permit applicant as part of a permit application for a Class II or III operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible, or

(c) the total dissolved solids content of the ground water is more than 3,000 and less than 10,000 mg/L and it is not reasonably expected to supply a public water system.

On February 20, 2002, Flying J Inc. submitted a request for an exemption of the Green River Formation adjacent to the Davis 1-33A1E. This request contained information indicating that there are no existing water supply wells obtaining supplies from this Formation within a one mile radius of the injection well. There is one producing well located approximately one mile to the east that produces oil from the proposed injection horizon. There are two stock watering wells located in the one mile radius that obtain water from wells that are 30 feet and 400 feet in depth. Water wells for domestic supply in this area are either drilled into the shallow alluvium that contains water with a TDS of 500 to 1,500 TDS, or into the Duchesne River Formation that contains water with a TDS of about 500 TDS. A well into the Duchesne River would be 300 to 400 feet deep in this area. The applicant has indicated that this well is located in a rural area near Roosevelt, Utah, and that there are three communities, including Roosevelt within 6 to 10 miles of the well. The applicant has provided information indicating that the cost of drilling and completing a well into the Green River Formation would be approximately \$380,000. The cost of drilling and completing a water supply well into shallower aquifers (less than 400 feet) containing water of better quality is estimated to be less than \$40,000. Additionally, to utilize a well into the Green River as a water supply for a public drinking water system, it would be necessary to build a pipeline to transport the water and a water treatment plant to treat the water sufficiently for potable use. This would require significant additional capital investment and an increased O&M cost..

Based on EPA's review of available information, the shallow aquifers in this area contain ample sources of good quality water to supply the needs of the area. The cost of drilling and completing a well into the Green River Formation along with the associated treatment and transportation costs make it economically impractical to utilize this Formation as a source of supply for a Public water system. For these reasons, EPA has determined that the Green River Formation fits the criteria of 40 CFR 146.4 (a) and (c). By this action EPA is proposing to exempt the Green River Formation from protection as a USDW in an area within a one quarter (1/4) mile radius of the Davis 1-33A1E.



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Phone 800-227-8917
<http://www.epa.gov/region08>**

Ref: 8-P-W-GW

PUBLIC NOTICE

**INTENT TO ISSUE AN AQUIFER EXEMPTION OF THE
GREEN RIVER FORMATION
ASSOCIATED WITH
EPA FINAL PERMIT
UT2881-04555**

**TO
Flying J Oil and Gas Inc.**

PURPOSE OF PUBLIC NOTICE

The purpose of this notice is to solicit public comment and to serve notice of a public hearing to be held regarding the proposal by the Region VIII Office of the U. S. Environmental Protection Agency (EPA) to issue: an aquifer exemption of the Green River Formation adjacent to the Davis 1-33A1E Class II salt water disposal well (Permit No. UT2881-04555).

BACKGROUND

As part of the recompletion of the Davis1-33A1E, under provisions of UIC Permit **UT2881-04555**, Flying J Oil and Gas Inc. perforated the permitted injection zone (Green River Interval from 5,500 feet to 5,732 feet in late January 2002. As required by the Permit, the well was then swabbed prior to obtaining a sample. The results of the analysis of the sample indicates that the Green River Formation contains water with a total dissolved solids content of 6,025 mg/liter. Thus, the Green River Formation in the vicinity of the Davis well is an underground source of drinking water (USDW) as defined at 40 CFR §144.3. In this case the regulations at 40 CFR §§144.12 and 146.22 prohibit injection into the proposed injection zone between 5500 and 5732 feet unless Flying J demonstrates that the zone can be exempted from protection per 40 CFR §146.4.

USDWs are aquifers or portions thereof that contain less than 10,000 mg/l total dissolved solids (TDS) and which are being or could be used as a source of drinking water. The proposed Green River Formation injection zone may be classified as an underground source of drinking



water (USDW) based upon information supplied by the applicant. According to analyses of formation water from the Green River injection zone in the Davis well, the total dissolved solids (TDS) content of the **water in the proposed injection zone is 6,025 milligrams per liter (mg/l)**. Because it contains water of less than 10,000 mg/l TDS, the Green River Formation is defined as a USDW in this area and an aquifer exemption is required for this injection operation. According to UIC regulations at 40 CFR §146.4, an aquifer may be exempted from protection as a USDW based upon the following criteria:

- (a) the aquifer does not currently serve as a source of drinking water; and,
- (b) it is mineral, hydrocarbon or geothermal energy producing, or can be demonstrated by a permit applicant as part of a permit application for a Class II or III operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible, or
- (c) the total dissolved solids content of the ground water is more than 3,000 and less than 10,000 mg/L and it is not reasonably expected to supply a public water system.

On February 20, 2002, Flying J Inc. submitted a request for an exemption of the Green River Formation adjacent to the Davis 1-33A1E. This request contained information indicating that there are no existing water supply wells obtaining supplies from this Formation within a one mile radius of the injection well. There is one producing well located approximately one mile to the east that produces oil from the proposed injection horizon. There are two stock watering wells located in the one mile radius that obtain water from wells that are 30 feet and 400 feet in depth. Water wells for domestic supply in this area are either drilled into the shallow alluvium that contains water with a TDS of 500 to 1,500 TDS, or into the Duchesne River Formation that contains water with a TDS of about 500 TDS. A well into the Duchesne River would be 300 to 400 feet deep in this area. The applicant has indicated that this well is located in a rural area near Roosevelt, Utah, and that there are three communities, including Roosevelt within 6 to 10 miles of the well. The applicant has provided information indicating that the cost of drilling and completing a well into the Green River Formation would be approximately \$380,000. The cost of drilling and completing a water supply well into shallower aquifers (less than 400 feet) containing water of better quality is estimated to be less than \$40,000. Additionally, to utilize a well into the Green River as a water supply for a public drinking water system, it would be necessary to build a pipeline to transport the water and a water treatment plant to treat the water sufficiently for potable use. This would require significant additional capital investment and an increased O&M cost.

Based on EPA's review of available information, the shallow aquifers in this area contain ample sources of good quality water to supply the needs of the area. The cost of drilling and completing a well into the Green River Formation along with the associated treatment and transportation costs make it economically impractical to utilize this Formation as a source of supply for a Public water system. For these reasons, EPA has determined that the Green River Formation fits the criteria of 40 CFR 146.4 (a) and (c).

The EPA has made a preliminary determination to approve the requested exemption. Therefore, the EPA is hereby serving notice of intent to issue the exemption of the Green River Formation at a depth of 5,500 feet to 5,732 feet within 1/4 mile of the Davis 1-33A1E.

PUBLIC COMMENTS

All data submitted by the applicant are contained in the administrative record. The draft aquifer exemption, and a statement of basis which discusses exemption are available for public inspection from 9:00 a.m. to 4:00 p.m. by contacting the following office:

Mr. Paul S. Osborne, Mail Code 8P2-W-GW
U.S. Environmental Protection Agency
Region 8
999 18th Street, Suite 500
Denver, CO 80202-2466
(303) 312-6627

Public comments are encouraged and will be accepted, in writing, at the Denver Office for a period of thirty (30) days after publication of this notice. A request for a public hearing should be made in writing and should state the nature of the issues proposed to be raised at the hearing. A public hearing will be held only if significant interest is shown.

FINAL PERMIT DECISION AND APPEAL PROCESS

After the hearing and the close of the public comment period, EPA will issue a final aquifer exemption and will notify all commentors regarding this decision. The decision will be to issue, deny, or modify the aquifer exemption. The final decision shall become effective thirty (30) days after the final decision is issued, unless no commentors request a change to the draft proposal in which case the exemption shall become effective immediately upon issuance.

Within thirty (30) days after a final permit decision has been issued, any person who filed comments on the draft permit or participated in the public hearing may petition the Administrator to review the permit decision. Commentors are directed to 40 CFR §124.15 through §124.20 for the regulations and procedural requirements governing this appeal process.

Date of Publication



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
Phone 800-227-8917
<http://www.epa.gov/region08>

Ref: Undergroun d Injection Control Program

AQUIFER EXEMPTION

In compliance with provisions of the Safe Drinking Water Act, as amended, (42 USC 300f-300j-11, commonly known as the SDWA) and attendant regulations incorporated by the U. S. Environmental Protection Agency under Title 40 in the Code of Federal Regulations (40 CFR):

The Green River Formation) is exempted as an underground source of drinking water (USDW) in the area located:

- (1) in the subsurface interval of approximately 5,500 ft. to 5,732 ft.; and,
- (2) within the radius of one quarter (1/4) mile from the Davis No. 1-33A1E injection well, SE 1/4 of the NW 1/4 (1980 ft. from the north line and 2356 ft from the west line), Section 33, T1S, R1E, Uintah County, Utah.

This aquifer exemption is granted in conjunction with **Permit No. UT2881-04555**, issued to Flying J Oil and Gas, Inc. for the injection of Class II brine water produced by surrounding Green River Formation oil wells through the Davis No. 1-33A1E injection well and into the Green River Formation at the depth interval from 5,500 ft. to 5,732 ft., based on Underground Injection Control (UIC) regulations found at 40 CFR §144.7 and §146.4 (see Statement of Basis, page 3).

This aquifer exemption has no expiration date.

Signed this date: _____.

Kerrigan G. Clough
Assistant Regional Administrator
Office of Partnerships and
Regulatory assistance





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
<http://www.epa.gov/region08>

UNDERGROUND INJECTION CONTROL PROGRAM

FINAL PERMIT

Class II Salt Water Disposal Well

Permit No. UT2881-04555

Well Name: Davis 1-33A1E SWD
Field Name: East Bluebell Area
County & State: Uintah, Utah

issued to:

Flying J Oil and Gas Inc.
333 West Center Street
North Salt Lake, Utah 84054

Date Prepared:

April 4, 2001



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PART I. AUTHORIZATION TO CONVERT AND OPERATE

Pursuant to the Underground Injection Control Regulations of the U. S. Environmental Protection Agency codified at Title 40 of the Code of Federal Regulations, Parts 124, 144, 146, and 147,

Flying J Oil and Gas Inc.
333 West Center Street
North Lake, Utah 84054

is hereby authorized to convert and operate a Lower Green River and Wasatch Formations producer to a Class II Upper Green River salt water disposal (SWD) well which will be known as the Davis 1-33 A1E SWD. The proposed Class II Davis 1-33 A1E SWD is located in the SE NW (2,356 feet from the west line and 1980 feet from the north line) Section 33, Township 1 South, Range 1 East, Uintah County, Utah. The well is located within the exterior boundaries of the Uintah-Ouray Indian Reservation. Injection shall be for the purpose of disposing of permittee produced water from Lower Green River and Wasatch producing wells in the Altamont/Bluebell oil fields. Water disposal shall be in accordance with conditions set forth herein. **Injection between the outermost casing protecting underground sources of drinking water (USDWs) and the wellbore is prohibited.** If the well is not converted within one (1) year from the effective date of this Permit, the Permit shall expire as provided by Part II, Section A. 6.

Injection activities shall not commence until the operator has fulfilled all applicable conditions of this Permit and has received written authorization from the Director. "Prior to Commencing Injection" requirements are set forth in Part II, Section C. 1. of this Permit.

All conditions set forth herein refer to Title 40 Parts 124, 144, 146, and 147 of the Code of Federal Regulations and are regulations that are in effect on the date that this Permit becomes effective.

This Permit consists of a total of thirty-seven (37) pages and includes all items listed in the Table of Contents. Further, it is based upon representations made by the permittee and on other information contained in the administrative record. Any information submitted by the permittee found to be incorrect may be cause for modification or termination of the permit and/or may subject the permittee to formal enforcement action. **It is the responsibility of the permittee to read, understand, and carryout all provisions of this Permit.**

This Permit and the authorization to inject are issued for the operating life of the well, unless terminated (Part III, Section B), or except upon automatic expiration due to prolonged postponement of conversion (Part II, Section A. 6.). **The Permit will be reviewed by EPA at**

least every five (5) years to determine whether action under 40 CFR § 144.36 (a) is warranted. The Permit will expire upon delegation of primary enforcement responsibility for the UIC Program to the State of Utah, Division of Oil, Gas, and Mining, or the Uintah-Ouray Indian Agency, unless either the State or the Agency has adequate authority, and chooses, to adopt and enforce this permit as a State Permit or as an Agency Permit.

Issued _____.

This Permit shall become effective _____.

* _____
Kerrigan G. Clough
Assistant Regional Administrator
Office of Partnerships And
Regulatory Assistance

* **NOTE:** The person holding this title is referred to as the "Director" throughout this Permit.

PART II. SPECIFIC PERMIT CONDITIONS

A. WELL CONVERSION REQUIREMENTS

1. Casing and Cementing. The conversion details submitted with the application are hereby incorporated into this Permit as Appendix A, and shall be binding on the permittee. The existing well construction is as follows:

Surface casing (9-5/8 inch) is set in a 12-1/2 inch hole to a depth of 2,125 feet kelly bushing (KB). The surface casing is secured with 660 sacks of lite cement and 200 sacks of G cement from the casing shoe to the surface.

The seven (7) inch longstring casing is set in a 8-3/4 inch hole to a depth of 9,984 feet KB, and secured with 450 sacks of Class G cement. Flying J has not provided evidence of the actual top of cement, but shall run a cement bond log-casing collar locator-gamma ray-travel time-variable density log (CBL-CCL-GR-TR-VDL) to verify the location and quality of cement to determine the need for a remedial squeeze in the vicinity of the proposed perforations.

A five (5) inch liner was run from 9,800 feet to 12,465 feet and was secured with 700 sacks of Stress I cement. The plug back to total depth (PBSD) was 12,500 feet.

2. Tubing and Packer Specifications. The operator has the option of using 2-7/8 inch or 3-1/2 inch tubing. A packer will be set at a depth no more than 100 feet above the top perforation. Injection between the outermost casing protecting underground sources of drinking water (USDWs) and the wellbore is prohibited.
3. Monitoring Devices. The operator shall provide and maintain in good operating condition:
- (a) a sampling tap on the injection line and isolated by shut-off valves, for the purpose of obtaining representative samples of the injection fluids;
 - (b) two (2), one-half (1/2) inch Female Iron Pipe (FIP) fittings, isolated by plug or globe valves, and located: 1) at the wellhead on the tubing; and 2) on the tubing/casing annulus, and positioned to allow attachment of 1/2 inch Male Iron Pipe (MIP) calibrated gauges which the operator will have in his possession at all times;
 - (c) a non-resettable flow meter with cumulative volume recorder that is certified for at least ninety-five (95) percent accuracy.

4. Proposed Changes and Workovers. The permittee shall give advance notice to the Director, as soon as possible, but no later than forty-five (45) days prior to any major workover, of any planned physical alterations or additions to the permitted well. Major alterations or workovers of the permitted well shall meet all conditions as set forth in this Permit. **A major alteration/workover shall be considered any work performed, which affects casing, packer(s), or tubing. In addition, the permittee shall provide all records of well workovers, logging, or other test data to EPA within sixty (60) days of completion of the activity.** Appendix B contains examples of the appropriate reporting forms.

Demonstration of mechanical integrity shall be performed within thirty (30) days of completion of workovers/alterations and prior to resuming injection activities, in accordance with Part II, Section C. 1. (c).

5. Formation Testing. During the conversion of the Davis 1-33 A1E SWD, but prior to injection, the permittee shall run the following logs and tests and shall submit them for EPA review and approval
- (a) Test the tubing/casing annulus for mechanical integrity prior to commencing injection. The annulus must be tested at a pressure equal to the maximum allowable pressure or 1,000 psi , whichever is less, but at least 300 psi.
 - (b) Obtain the pore pressure of the Upper Green River Formation perforations using a down hole pressure gage
 - (c) Obtain a valid, uncontaminated sample of the injection interval water prior to any stimulation of the reservoir by adequate pumping or swabbing prior to sampling and analyze the fluid for standard cations, anions, and total dissolved solids.
 - (d) Run a CBL-CCL-GR-TR-VDL and submit to the EPA for analysis and comments before final conversion of the Davis No. 1-33A1E to a Class II SWD well shall be approved. If remedial cementing is needed, a 2nd log will be run after the remedial cementing to verify the adequacy of the cement placement.
 - (e) If the CBLs do not provide an adequate demonstration of zone isolation, the permittee shall be required to run a radioactive tracer survey (RATS) to demonstrate that the cement is adequate to isolate the injection zone.

- (f) Conduct and submit a report on a Step Rate Test within six (6) months of authorization to inject to identify the injection zone fracture pressure; the operator may then request an increased injection pressure authorization.
6. Postponement of Conversion. If the well is not converted to injection status within one (1) year from the effective date of this Permit, the authorization to convert and inject will automatically expire, unless the permittee requests and is granted an extension. The request shall be made to the Director in writing, and shall state the reasons for the delay in conversion. The extension under this section may not exceed one (1) year. Once authorization to convert and inject expires under this part, the full permitting process, including opportunity for public comment, must be repeated before authorization to convert and inject will be reissued.

B. CORRECTIVE ACTION

The applicant submitted the required Area of Review (AOR) information with the Permit Application. Within the 1/4-mile AOR there are no locations, producing, dry holes, or water wells.

C. WELL OPERATION

1. Prior to Commencing Injection. Injection operations for the Davis 1-33 A1E SWD may not commence until the permittee has complied with and submitted the following:
- (a) Determined the injection zone fluid pore pressure using a downhole pressure gage.
 - (b) Conducted a successful mechanical integrity pressure test (MIT) of the well, using a pressure chart recorder that demonstrates the well has mechanical integrity in accordance with 40 CFR § 146.8 (and the guidelines discussed in the Permit) and has received notice from the Director that such a demonstration is satisfactory. The permittee shall notify EPA two (2) weeks prior to conducting this test so that an authorized representative may be present to witness the test. Results of the test shall be submitted, on EPA MIT Form (**Appendix B**), to the Director as soon as possible but no later than thirty (30) days after the demonstration.
 - (c) Construction is complete, and the permittee has submitted a Well Completion Record (Form 7520-12) in Appendix B, and copies of all cased hole logs, a copy of the daily conversion, sampling, and completion summary; and any required reservoir tests and water quality analyses, **and**

- (i) The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the Permit, and has provided written authorization; **or**
- (ii) The permittee has not received notice from the Director of his or her intent to inspect or otherwise review the new injection well within thirteen (13) days of the date of the receipt of the Well Rework Record in paragraph (c) of this Permit condition in which case prior inspection or review is waived and the permittee may commence injection.
- (d) The permittee has submitted to the EPA a copy of the Cement Bond Log-Gamma Ray-Casing Collar Locator (CBL-GR-CCL) for analysis and comments, and has demonstrated that the injection zone is isolated from overlying formations with adequate casing and cement.

2. Mechanical Integrity.

- (a) Schedule for Demonstration of Mechanical Integrity. A demonstration of mechanical integrity shall be made at regular intervals, no less frequently than once every five (5) years from the effective date of this Permit, in accordance with 40 CFR § 146.8 and test methods and criteria are to follow current **UIC Guidance**. This Guidance is located in Appendix E of the Permit.
- (b) Loss of Mechanical Integrity. **The operator is required to establish and maintain mechanical integrity (40 CFR 144.51 (q)).** If the well fails to demonstrate mechanical integrity, or a loss of mechanical integrity as defined by 40 CFR § 146.8 becomes evident during operation, the permittee shall notify the Director in accordance with Part III, Section E. 10. of this permit. Following any loss of mechanical integrity, injection activities shall be terminated immediately; and operations shall not be resumed until the permittee has taken necessary actions to restore integrity to the well and EPA gives written approval to recommence injection.

3. Injection Interval. Injection shall be limited to the Upper Green River Formation in the gross subsurface interval 5,500 feet to 5,732 feet.

4. Injection Pressure Limitation.

- (a) Injection pressure, measured at the surface, shall not exceed an amount that the Director determines is appropriate to ensure that injection does initiate

new fractures or propagate existing fractures in the confining zone adjacent to USDWs.

- (b) The exact pressure limit may be increased or decreased by the Director in order to ensure that the requirements in paragraph (a) are fulfilled. In order to determine an exact pressure limit, the permittee shall conduct a step rate injection test or other authorized well test(s) that will serve to determine the fracture pressure of the injection zone. The test procedures shall be pre-approved in writing by the Director. The Director will specify in writing, to the permittee, any increase or decrease to the injection pressure based upon the test results and/or other parameters reflecting actual injection operations. Until such time that this demonstration and approval is made, the initial injection pressure, measured at the surface, shall not exceed **1,179 psig**.

5. Injection Volume Limitation. There is no limitation on the number of barrels of water per day (BWPD) that may be injected into this well, provided further that in no case shall injection pressure exceed that limit shown in Part II, Section C. 4. (b) of this permit.
6. Injection Fluid Limitation. ~~Injection Fluid Limitation~~. Injected fluids shall be limited to those which are brought to the surface in connection with natural gas storage operations, or conventional oil and gas production and may be commingled with waste waters from gas plants which are an integral part of production operations, unless those waters are classified as a hazardous waste at the time of injection. Fluids shall be further limited to those generated by sources owned or operated by the Permittee. The injectate will be produced water from the Wasatch and Green River Formations. Initially the well will be used for disposal of water 57 production wells operating by Flying J Oil and Gas. These wells were listed in Exhibit H8 of the Permit application. Additional production wells in this field may be added at a later date to the production stream. The permittee shall **notify EPA in advance of adding new sources** and shall provide an annual listing of the sources of injected fluids in **accordance with** the reporting requirements in Part II, **Section D. 4.** of this Permit. **If the permittee wishes to dispose of any other Class II fluids generated on site, approval must be obtained from the Director prior to disposal.** The injection of any material regulated as hazardous under Subpart C of RCRA as defined by 40 CFR 261 **is not allowed**.
7. Annular Fluid. The annulus between the tubing and the casing shall be filled with a packer fluid that is treated with a corrosion inhibitor. The fluid may be either fresh water, produced water, or other fluid as approved, in writing, by the Director.

D. MONITORING, RECORDKEEPING, AND REPORTING OF RESULTS

1. Injection Well Monitoring Program. Samples and measurements shall be representative of the monitored activity. The permittee shall utilize the applicable analytical methods described in Table 1 of 40 CFR § 136.3, or in Appendix III of 40 CFR Part 261, or in certain circumstances, by other methods that have been approved by the EPA Administrator. Monitoring shall consist of:
 - (a) Analysis of the injection fluids, performed **annually** for Total Dissolved Solids (TDS), pH, Specific Conductivity, and Specific Gravity; and whenever there is a change in the source of injection fluids.
 - (b) **Weekly** observations of flow rate and cumulative volume. At least one observation of flow rate and cumulative volume, each, shall be recorded at 30 day intervals.
 - (c) **Weekly** observations of injection and annulus pressure. At least one observation of injection pressure and annulus pressure, each, shall be recorded at 30 day intervals.

2. Monitoring Information. Records of any monitoring activity (including all field observations) required under this Permit shall include:
 - (a) The date, exact place, the time of sampling or field measurements;
 - (b) The name of the individual(s) who performed the sampling or measurements;
 - (c) The exact sampling method(s) used to take samples;
 - (d) The date(s) laboratory analyses were performed;
 - (e) The name of the individual(s) who performed the analyses;
 - (f) The analytical techniques or methods used by laboratory personnel; and
 - (g) The results of such analyses.

3. Recordkeeping.
 - (a) The permittee shall retain records concerning:

- (i) the nature and composition of all injected fluids until three (3) years after the completion of plugging and abandonment which has been carried out in accordance with the Plugging and Abandonment Plan shown in Appendix C, and is consistent with 40 CFR § 146.10.
 - (ii) all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation and copies of all reports required by this Permit for a period of at least five (5) years from the date of the sample, measurement or report throughout the operating life of the well.
- (b) The permittee shall continue to retain such records after the retention period specified in paragraphs (a) (i) and (a) (ii) unless he delivers the records to the Director or obtains written approval from the Director to discard the records.
- (c) The permittee shall maintain copies (or originals) of all pertinent records at the office of Flying J Oil & Gas Inc. located at 3500 E 500 N, Roosevelt, Utah

4. **Annual Reporting.** The permittee shall submit an **Annual Report, whether injecting or not**, to the Director summarizing the results of the monitoring required by Part II, Section D. 1. (a), and (b) of this Permit. The permittee shall also include a listing of all sources of the fluids injected during the year identifying the source by either the well name(s), the field name(s), or the facility name(s), the formation source, and the well/facility location. Copies of all monthly records on disposed fluids, and any major changes in characteristics or sources of disposed fluid shall be included in the Annual Report.

The first Annual Report shall cover the period from the effective date of the Permit through December 31 of that year. Subsequently, the Annual Report shall cover the period from January 1 through December 31, and shall be submitted by **February 15** of the following year. Appendix B contains Form 7520-11 which may be copied and used to submit the annual summary of monitoring. All monitoring reports, rework records, and other required notification after receiving authorization to inject should be submitted to the following address:

U.S. Environmental Protection Agency
Region VIII, Mailcode 8ENF-T
999 18th Street, Suite 300
Denver Colorado 80202-2466

E. PLUGGING AND ABANDONMENT

1. Notice of Plugging and Abandonment. The permittee shall notify the Director forty-five (45) days before conversion, workover, or abandonment of the well.
2. Plugging and Abandonment Plan. The permittee shall plug and abandon the well as provided in the Plugging and Abandonment Plan, Appendix C. This plan incorporates information supplied by the permittee and EPA. The EPA reserves the right to change the manner in which the well will be plugged if the well is modified during its permitted life or if the well is not made consistent with EPA requirements for construction and mechanical integrity. The Director may ask the permittee to update the estimated plugging cost periodically. Such estimates shall be based upon costs which a third party would incur to plug the well according to the plan.
3. Cessation of Injection Activities. After a cessation of operations of two (2) years, the permittee shall plug and abandon the well in accordance with the Plugging and Abandonment Plan, unless he:
 - (a) has provided notice to the Director; and
 - (b) has demonstrated that the well will be used in the future; and
 - (c) has described actions or procedures, satisfactory to the Director, that will be taken to ensure that the well will not endanger underground sources of drinking water during the period of temporary abandonment.
4. Plugging and Abandonment Report. Within sixty (60) days after plugging the well, the permittee shall submit a report on Form 7520-13 to the Director. The report shall be certified as accurate by the person who performed the plugging operation and the report shall consist of either: (1) a statement that the well was plugged in accordance with the plan; or (2) where actual plugging differed from the plan, a statement that specifies the different procedures followed.

F. FINANCIAL RESPONSIBILITY

1. Demonstration of Financial Responsibility. The permittee is required to maintain continuous financial responsibility and resources to close, plug and abandon the injection well as provided in the plugging and abandonment plan.
 - (a) The permittee has established financial responsibility by submitting a financial statement. An analysis of this statement indicates that the

operator meets EPA's requirements for financial coverage of their injection wells.

- (b) The permittee may upon his own initiative and upon written request to EPA, change the method of demonstrating financial responsibility from financial statement coverage to a financial instrument such as a bond, letter of credit, or trust fund. Any change must be approved by the Director.

2. Insolvency of Financial Institution. In the event that an alternate demonstration of financial responsibility has been approved under (b), above, the permittee must submit an alternate demonstration of financial responsibility acceptable to the Director within sixty (60) days after either of the following events occur:

- (a) The institution issuing the trust or financial instrument files for bankruptcy; or
- (b) The authority of the trustee institution to act as trustee, or the authority of the institution issuing the financial instrument, is suspended or revoked.

3. Cancellation of Demonstration by Financial Institution. The permittee must submit an alternative demonstration of financial responsibility acceptable to the Director, within sixty (60) days after the institution issuing the trust or financial instrument serves 120-day notice to the EPA of their intent to cancel the trust or financial instrument.

PART III. GENERAL PERMIT CONDITIONS

A. EFFECT OF PERMIT

The permittee is allowed to engage in underground injection in accordance with the conditions of this Permit. The permittee, as authorized by this Permit, shall not construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR, Part 142 or otherwise adversely affect the health of persons. Any underground injection activity not authorized in this Permit or otherwise authorized by Permit or rule is prohibited. Issuance of this Permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of State or local law or regulations. Compliance with the terms of this Permit does not constitute a defense to any enforcement action brought under the provisions of Section 1431 of the Safe Drinking Water Act (SDWA) or any other law governing protection of

public health or the environment for any imminent and substantial endangerment to human health, or the environment, nor does it serve as a shield to the permittee's independent obligation to comply with all UIC regulations.

B. PERMIT ACTIONS

1. Modification, Reissuance, or Termination. The Director may, for cause or upon a request from the permittee, modify, revoke and reissue, or terminate this Permit in accordance with 40 CFR §§ 124.5, 144.12, 144.39, and 144.40. Also, the Permit is subject to minor modifications for cause as specified in 40 CFR § 144.41. The filing of a request for a Permit Modification, revocation and reissuance, or termination or the notification of planned changes or anticipated noncompliance on the part of the permittee does not stay the applicability or enforceability of any Permit condition.
2. Conversions (Non-Class II). The Director may, for cause or upon a request from the permittee allow conversion of the well from a Class II injection well to a non-Class II well (either to a producing well or to another use). Pursuant to 40 CFR 144.51 (n), the permittee shall notify the Director prior to converting the well from a Class II injection well to a non-Class II well. Notification shall be made in writing to the Director at least 180 days prior to commencement of the proposed conversion operations with a request for a Permit Modification and information concerning the conversion. Conversion may not proceed until a Permit Modification indicating the conditions of the proposed conversion is received by the permittee. Conditions of the Modification may include such items as, but is not limited to, approval of the proposed well rework, follow up demonstration of mechanical integrity, and well specific monitoring and reporting following the conversion. In the case of conversion back to an oil or gas well, monitoring and reporting will be for a period of not less than six (6) months, during which period the permittee will submit to this EPA office copies of not less than six (6) consecutive monthly reports as submitted to the State of Utah Oil, Gas, and Mining Division. This Permit remains in effect until all conversion requirements have been fulfilled, conversion is complete, and the information stipulated by the modification has been submitted to the Director that demonstrates the conversion has occurred and is complete.
3. Transfers. This Permit is not transferrable to any person **except after notice is provided to the Director** and the requirements of 40 CFR §144.38 are complied with. The Director may require modification, or revocation and reissuance, of the Permit to change the name of the permittee and incorporate such other requirements as may be necessary under the SDWA.

4. Operator Change of Address. Notice shall be given to the appropriate EPA Office upon operator change of address.
5. Termination of Permit. Pursuant to 40 CFR 144.40, the Director may terminate a permit during its term or deny a permit renewal application for non-compliance with any condition of the permit, or for failure to fully disclose all relevant facts during the Permit issuance process or misrepresentation of relevant facts at any time, or for a determination that the permitted activity endangers human health and the environment and can only be regulated to acceptable levels by permit modification or termination.

C. SEVERABILITY

The provisions of this Permit are severable, and if any provision of this Permit or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Permit shall not be affected thereby.

D. CONFIDENTIALITY

In accordance with 40 CFR Part 2 and 40 CFR § 144.5, any information submitted to EPA pursuant to this Permit may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the validity of the claim will be assessed in accordance with the procedures in 40 CFR Part 2 (Public Information). Claims of confidentiality for the following information will be denied:

- The name and address of the permittee; and
- Information which deals with the existence, absence or level of contaminants in drinking water.

E. GENERAL DUTIES AND REQUIREMENTS

1. Duty to Comply. The permittee shall comply with all conditions of this Permit, except to the extent and for the duration such noncompliance is authorized by an emergency Permit. Any Permit noncompliance constitutes a violation of the SDWA and is grounds for enforcement action, Permit termination, revocation and

reissuance, or modification. Such noncompliance may also be grounds for enforcement action under the Resource Conservation and Recovery Act (RCRA).

2. Penalties for Violations of Permit Conditions. Any person who violates a Permit requirement is subject to civil penalties, fines, and other enforcement action under the SDWA and may be subject to such actions pursuant to the RCRA. Any person who willfully violates Permit conditions may be subject to criminal prosecution.
3. Need to Halt or Reduce Activity not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit.
4. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Permit.
5. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up, or auxiliary facilities or similar systems, only when necessary, to achieve compliance with the conditions of this Permit.
6. Duty to Provide Information. The permittee shall furnish the Director, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with the Permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this Permit.
7. Inspection and Entry. The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:
 - (a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit;

- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;
 - (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and
 - (d) Sample or monitor, at reasonable times, for the purpose of assuring Permit compliance or as otherwise authorized by the SDWA any substances or parameters at any location.
8. Records of Permit Application. The permittee shall maintain records of all data required to complete the Permit application and any supplemental information submitted for a period of five (5) years from the effective date of this Permit. This period may be extended by request of the Director at any time.
9. Signatory Requirements. All reports or other information requested by the Director shall be signed and certified according to 40 CFR § 144.32.
10. Reporting of Noncompliance.
- (a) Anticipated Noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with Permit requirements.
 - (b) Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than thirty (30) days following each schedule date.
 - (c) Twenty-four Hour Reporting.
 - (i) The permittee shall report to the Director any noncompliance which may endanger health or the environment. Information shall be provided orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances by telephoning EPA at (303) 312-6211 (during normal business hours) or at (303) 293-1788 (for reporting at all other times). The following information shall be included in the verbal report:

- (A) Any monitoring or other information which indicates that any contaminant may cause endangerment to an underground source of drinking water.
 - (B) Any noncompliance with a Permit condition or malfunction of the injection system which may cause fluid migration into or between underground sources of drinking water.
- (ii) A written submission shall also be provided within five (5) days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. **(See address in Part II. Section D. 4 of this Permit)**
- (d) Other Noncompliance. The permittee shall report all other instances of noncompliance not otherwise reported at the time monitoring reports are submitted. The reports shall contain the information listed in Part III, Section E. 10. (C) (ii) of this Permit.
- (e) Other Information. Where the permittee becomes aware that he failed to submit any relevant facts in the permit application, or submitted incorrect information in a Permit application or in any report to the Director, the permittee shall submit such correct facts or information within two (2) weeks of the time such information becomes known.

APPENDIX A (CONSTRUCTION DETAILS)

CURRENT CONSTRUCTION
Davis 1-33A1E SWD

PROPOSED CONVERSION
Davis 1-33A1E SWD

APPENDIX B (REPORTING FORMS)

1. EPA Form 7520- 7: APPLICATION TO TRANSFER PERMIT
2. EPA Form 7520-10: WELL COMPLETION REPORT
3. EPA Form 7520-11: ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT
4. EPA Form 7520-12: WELL REWORK RECORD
5. EPA Form 7520-13: PLUGGING RECORD
6. EPA Form R8 MECHANICAL INTEGRITY PRESSURE TEST CASING/TUBING ANNULUS



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AGENCY**

**REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
Phone 800-227-8917
<http://www.epa.gov/region08>**

Ref: 8P-W-GW

**MAJOR PERMIT MODIFICATION No. 1
EPA FINAL PERMIT
UT2881-04555**

**Flying J Oil and Gas, Inc.
Davis 1-33A1E SWD
Uintah County, Utah**

Pursuant to Part III, Section B. 1. of the above-referenced Final Permit, a Major Permit Modification No. 1 is made. These changes are as follows:

ORIGINAL Permit Language (April 20, 2001):

PART II. SPECIFIC PERMIT CONDITIONS

C. WELL OPERATION

5. Injection Volume Limitation. There is no limitation on the number of barrels of water per day (BWPD) that may be injected into this well, provided further that in no case shall injection pressure exceed that limit shown in Part II, Section C. 4. (b) of this permit.

IS MODIFIED TO READ:

PART II. SPECIFIC PERMIT CONDITIONS

C. WELL OPERATION

5. Injection Volume Limitation. To prevent movement of injected fluid beyond the one half mile aquifer exemption boundary, the operator shall inject no more that a total volume of 14 million barrels of produced water, provided further that in no case shall injection pressure exceed that limit shown in Part II, Section C. 4. (b) of this permit.

All other provisions and conditions of Final Permit No. **UT2881-04555** shall remain as originally issued, or as previously modified.

Date

Kerrigan G. Clough
*Assistant Regional Administrator
Office of Partnerships and
Regulatory Assistance



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Phone 800-227-8917

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Ref: Underground Injection Control Program

AQUIFER EXEMPTION

In compliance with provisions of the Safe Drinking Water Act, as amended, (42 USC 300f-300j-11, commonly known as the SDWA) and attendant regulations incorporated by the U. S. Environmental Protection Agency under Title 40 in the Code of Federal Regulations (40 CFR):

The Green River Formation) is exempted as an underground source of drinking water (USDW) in the area located:

- (1) in the subsurface interval of approximately 5,500 ft. to 5,732 ft.; and,
- (2) within the radius of one half (1/2) mile from the Davis No. 1-33A1E injection well, SE 1/4 of the NW 1/4 (1980 ft. from the north line and 2356 ft from the west line), Section 33, T1S, R1E, Uintah County, Utah.

This aquifer exemption is granted in conjunction with **Permit No. UT2881-04555**, issued to Flying J Oil and Gas, Inc. for the injection of Class II brine water produced by surrounding oil wells producing from the Green River and Wasatch Formation into the Davis No. 1-33A1E injection well. These fluids will be injected into the Green River Formation at the depth interval from 5,500 ft. to 5,732 ft., based on Underground Injection Control (UIC) regulations found at 40 CFR §144.7 and §146.4 (see Statement of Basis, page 1).

This aquifer exemption has no expiration date.

Signed this date: _____.

Kerrigan G. Clough
Assistant Regional Administrator
Office of Partnerships and
Regulatory assistance



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Ref: 8P-W-GW

**ADDENDUM TO THE
STATEMENT OF BASIS
FOR THE DAVIS 1-33A1E**

**FOR AN
AQUIFER EXEMPTION OF THE
GREEN RIVER FORMATION
ASSOCIATED WITH
MAJOR PERMIT MODIFICATION NO. 1
EPA PERMIT
UT2881-04555**

**Flying J Oil and Gas, Inc.
Davis 1-33A1E SWD
Uintah County, Utah**

As part of the recompletion of the Davis1-33A1E, under provisions of UIC Permit **UT2881-04555**, Flying J Oil and Gas Inc. perforated the permitted injection zone (Green River Interval from 5,500 feet to 5,732 feet in late January 2002. As required by the Permit, the well was then swabbed prior to obtaining a sample. The results of the analysis of the sample indicates that the Green River Formation contains water with a total dissolved solids content of 6,025 mg/liter. Thus, the Green River Formation in the vicinity of the Davis well is an underground

source of drinking water (USDW) as defined at 40 CFR §144.3. In this case the regulations at 40 CFR §§144.12 and 146.22 prohibit injection into the proposed injection zone between 5500 and 5732 feet unless Flying J demonstrates that the zone can be exempted from protection per 40 CFR §146.4.

USDWs are aquifers or portions thereof that contain less than 10,000 mg/l total dissolved solids (TDS) and which are being or could be used as a source of drinking water. The proposed Green River Formation injection zone may be classified as an underground source of drinking water (USDW) based upon information supplied by the applicant. According to analyses of formation water from the Green River injection zone in the Davis well, the total dissolved solids (TDS) content of the **water in the proposed injection zone is 6,025 milligrams per liter (mg/l)**. Because it contains water of less than 10,000 mg/l TDS, the Green River Formation is defined as a USDW in this area and an aquifer exemption is required for this injection operation. According to UIC regulations at 40 CFR 146.4, an aquifer may be exempted from protection as a USDW based upon the following criteria:

- (a) the aquifer does not currently serve as a source of drinking water; and,
- (b) it is mineral, hydrocarbon or geothermal energy producing, or can be demonstrated by a permit applicant as part of a permit application for a Class II or III operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible, or
- (c) the total dissolved solids content of the ground water is more than 3,000 and less than 10,000 mg/L and it is not reasonably expected to supply a public water system.

On February 20, 2002, Flying J Inc. submitted a request for an exemption of the Green River Formation adjacent to the Davis 1-33A1E. This request contained information indicating that there are no existing water supply wells obtaining supplies from this Formation within a one mile radius of the injection well. There is one well located approximately one mile to the east that was tested in the proposed injection horizon and is presently shut-in. There are two stock watering wells located in the one mile radius that obtain water from wells that are 30 feet and 400 feet in depth. Water wells for domestic supply in this area are either drilled into the shallow alluvium that contains water with a TDS of 500 to 1,500 TDS, or into the Duchesne River Formation that contains water with a TDS of about 500 TDS. A well into the Duchesne River would be 300 to 400 feet deep in this area. The applicant has indicated that this well is located in a rural area near Roosevelt, Utah, and that there are three communities, including Roosevelt within 6 to 10 miles of the well. The applicant has provided information indicating that the cost of drilling and completing a well into the Green River Formation would be approximately \$380,000. The cost of drilling and completing a water supply well into shallower aquifers (less than 400 feet) containing water of better quality is estimated to be less than \$40,000. Additionally, to utilize a well into the Green River as a water supply for a public drinking water system, it would be necessary to build a pipeline to transport the water and a water treatment plant to treat the water sufficiently for potable use. This would require significant additional capital investment and an increased O&M cost.

The applicant estimates that the project may involve the injection of about 2000 barrels of water per day (BWPD) over a 20 year life of the project. The Green River injection interval (5,500 to 5732 feet) contains 32 total feet of 12% average porosity. The cylindrical volume of available reservoir within one half (½) mile of the Davis 1-33A1E well is approximately 15 million barrels. This assumes radial flow of injected fluid and a piston like displacement of the native reservoir fluid.

Based on EPA's review of available information, the shallow aquifers in this area contain ample sources of good quality water to supply the needs of the area. The cost of drilling and completing a well into the Green River Formation along with the associated treatment and transportation costs make it economically impractical to utilize this Formation as a source of supply for a Public water system. For these reasons, EPA has determined that the Green River Formation fits the criteria of 40 CFR 146.4 (a) and (c). By this action EPA is proposing to exempt the Green River Formation from protection as a USDW in an area within a one half (1/2) mile radius of the Davis 1-33A1E.

To assure protection of the reservoir located outside of the exempted zone, the Final Permit for the Davis 1-33A1E is being modified as part of this action, a volume limit is proposed (Part II Section C. (5)) for the Permit. This limitation will allow a total volume of injection of 14 million barrels over the life of the project. The proposed limitation is about 1 million barrels less than the estimated volume of the exempted reservoir to provide a buffer.

Notice for the proposed aquifer exemption and Major Permit Modification No. 1 was issued on March 18, 2002. The public notice was published in the Unita Basin Standard on March 26, 2002, and in the Vernal Express on March 27, 2002. The public comment period ended on April 29, 2002, and no comments were received from either the general public or landowners. One comment was received from the Utah Division of Oil, Gas and Mining indicating the presence of a gilsonite vein in the vicinity of the well.

The Division did not object to the issuance of the exemption, but requested that the relationship of the vein to the area proposed for exemption be addressed. The applicant has provided information regarding the location of the gilsonite vein relative to the area to be exempted. The vein runs through the SW corner of section 33, about 2600 feet from the Davis 1-33A1E. The vein apparently ends about ½ mile NW of Section 33. While there is no direct evidence for the depth of the vein in this area, it is believed that the source of the Gilsonite is from the oil shales of the Parachute Creek member of the Green River Fm. which includes the Mahogany Bench zone. It is assumed that at some point along the 3 miles or so of the length of the vein that it penetrates to these zones. The top of the Parachute Creek Member in the Davis well is 6590 ft. and the Mahogany Bench is from 6780 ft. to 6975 ft. Although the gilsonite vein may or may not penetrate the proposed injection zone located at 5500 to 5732 feet, it is outside of the area to be exempted and should not directly affect the zone of injection.

Because the gilsonite vein is outside of the area to be exempted and no comments

were received opposing the exemption, Major Modification No. 1 and the associated aquifer exemption of the Green River Formation is being issued effective immediately.



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**UNITED STATES
ENVIRONMENTAL PROTECTION
AGENCY**

**REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
Phone 800-227-8917
<http://www.epa.gov/region08>**

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. James W. Wilson
Vice President of Operations
Flying J Oil and Gas Inc.
333 West Center Street
North Salt Lake City, Utah 84054

RE: **UNDERGROUND INJECTION CONTROL (UIC)
Final Aquifer Exemption and Major Permit
Modification No. 1 for the Davis No. 1-33A1E
SWD , Green River Formation - EPA Permit No.
UT2881-04555 Bluebell/ Altamont Field, Uintah
County, Utah**

Dear Mr. Wilson:

As you are aware, EPA issued a Draft Aquifer Exemption and Major Permit Modification No. 1 for **the Davis No. 1-33A1E SWD** , Green River Formation - EPA Permit No. UT2881-04555 Bluebell/ Altamont Field, Uintah County, Utah on March 18, 2002. This proposed action was public noticed in the Uintah Basin Standard on March 26, 2002, and the

Vernal Express on March 27, 2002.

The public comment period ended on April 29, 2002, and there were no comments from either the general public or the land owners who may be affected by the proposed action. We also did not receive any comments from you concerning our actions. There was one comment from the Utah Division of Oil and gas regarding the presence of Gilsonite veins in the vicinity of the well. This comment did not oppose the exemption, but asked that the proximity of the Gilsonite vein to the proposed exemption be investigated.

We received an E-Mail response from you indicating that the Gilsonite vein was outside of the one-half mile area of review. Given that the vein is outside of the area of review, it should not have a direct affect on the injection activity. Because of the absence of comments objecting to the exemption, the Permit is being issued as proposed and is effective immediately.

Enclosed is a Final Aquifer Exemption and the Final Permit Modification No. 1. The Final Addendum to the Statement of Basis, which discusses the rationale for the Aquifer Exemption and the Permit Modification, is also enclosed.

Please be aware that Flying J oil and Gas does not have authorization to begin injection into the **Davis No. 1-33A1E SWD**. The construction and testing requirements of the Final Permit must be completed and the completion report submitted to EPA with all the necessary documentation. Injection may commence upon your receipt of written authorization to begin injection from the EPA.

It is Flying J's responsibility to be familiar with, and to comply with, all conditions contained in this Permit Modification and the Original Permit.

If you have any questions on this action please contact Paul S. Osborne at 800.227.8917, extension 6125. Also direct all correspondence and/or reports to **ATTENTION: Paul Osborne AT MAIL CODE 8P-W-GW**. Thank you for your continued cooperation.

Sincerely,

Assistant Regional Administrator

Kerrigan G. Clough
Office of Partnerships and
Regulatory Assistance

Enclosures: Final Aquifer Exemption
Final Addendum to the Statement of Basis
Final Major Permit Modification No. 1

cc: Mr. Gilbert Hunt
State of Utah Natural Resources
Division of Oil, Gas and Mining

Mr. Douglas G. Howard
Flying J Oil and Gas
3500 East 500 North
Roosevelt, Utah 84066

Mr. D. Floyd Wopsock, Chairman
Uintah & Ouray Business Committee

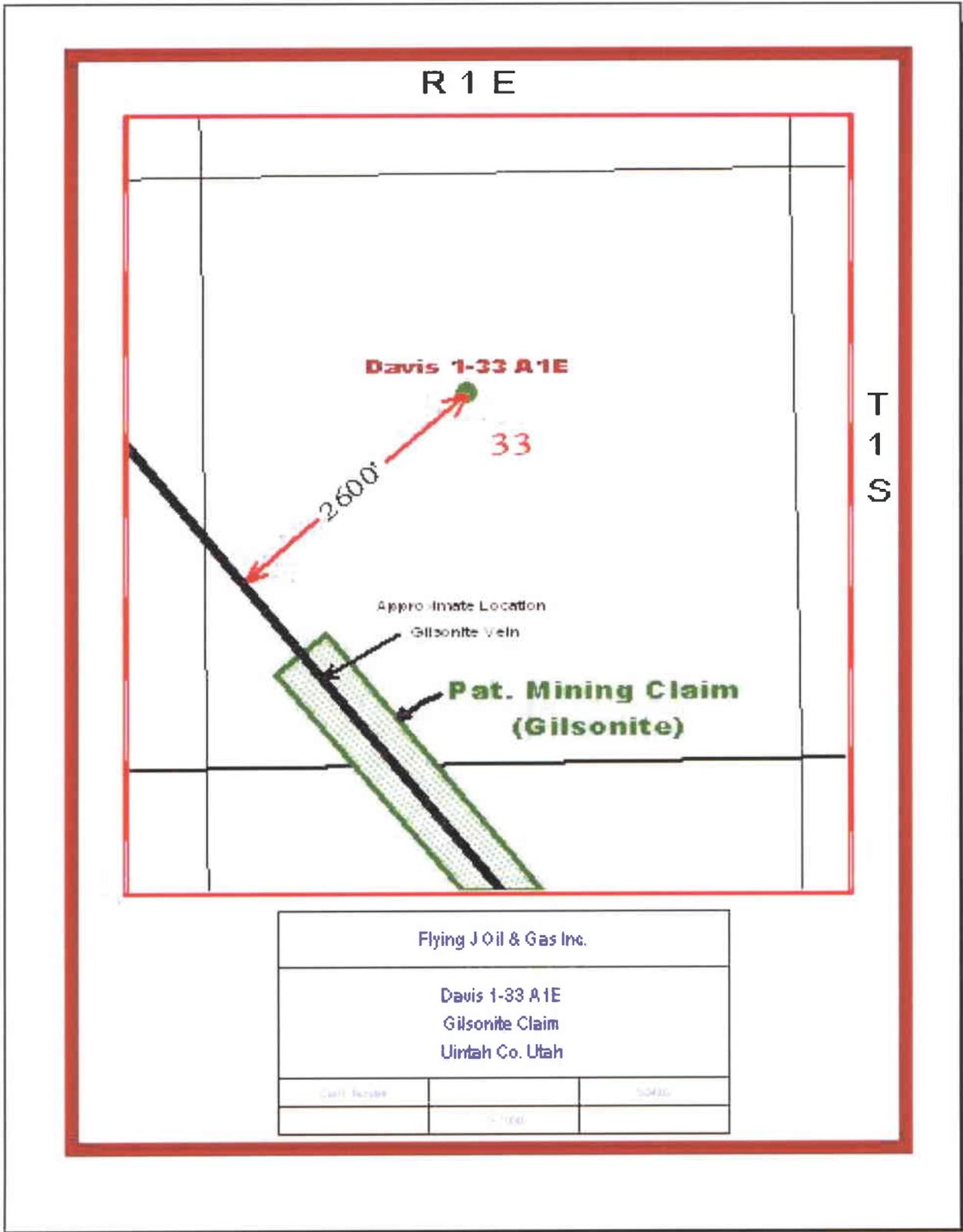
Ms. Elaine Willie, Environmental Director
Ute Indian Tribe

Mr. Norman Cambridge
BIA - Uintah & Ouray Agency

Mr. Jerry Kenczka
BLM - Vernal District Office

Mr. Mario Salazar, OGWDW

Mr. Bruce Kobelski, OGWDW





FLYING J OIL & GAS INC.

P.O. DRAWER 130 • ROOSEVELT, UTAH 84066
PHONE (801) 722-5166 • FAX (801) 722-5169

D. Edwin Hogle
US EPA
8P-W-GW
999 18th Street, Suite 500
Denver, CO 80202-2466

December 30, 2002

RE: Underground Injection Control
Davis No. 1-33A1E SWD
EPA Permit No. UT2881-04555
Blubell/Altomont Field
Uintah County, Utah

Dear Mr. Hogle

Attached is the job report and the bottom hole pressure data from the Step Rate Test that was run on the subject well on November 11, 2002. A plot of the bottom hole pressure vs. rate demonstrates a significant change of slope at about 3068 psi BHP which appears to be the fracture initiation pressure. The perforated interval is from 5500' to 5854' with the midpoint of perforations at 5677' resulting in a frac gradient of 0.54 psi/ft. The surface pressure at fracture initiation is 610 psi. At that pressure it appears that we will be able to dispose of 1440 bbls of water per day.

If there are any questions concerning the data or the test procedure please contact me at (435) 722-5166.

Sincerely,

Douglas G. Howard
Sr. Petroleum Engineer
Flying J Oil & Gas Inc.

Cc: Mr. Gil Hunt
State of Utah Natural Resourcec
Department of Oil, Gas and Mining

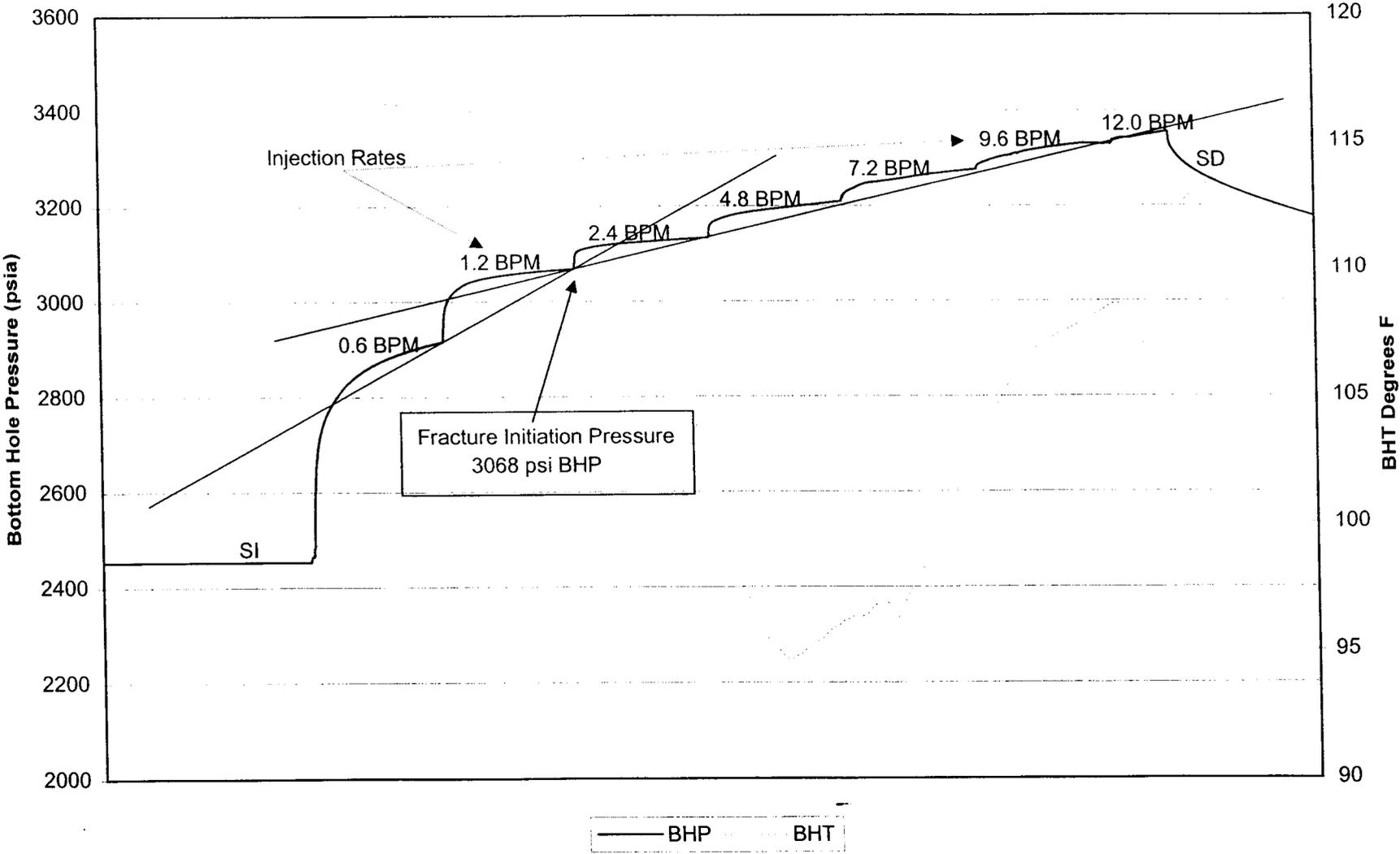
Ms. Elaine Willie
Environmental Director
Ute Indian Tribe

Mr. Jerry Kenczka
BLM-Vernal District

RECEIVED

JAN 06 2003

Davis 1-33A1E
Step Rate Test



FracCAT Treatment Report

Well : Davis 1-33A1E
Field : Altamont Bluebell
Formation : WASATCH

Well Location : Gusher
County : Uintah
State : Utah
Country : USA

Prepared for
Client : Flying-J
Client Rep : Larry Rich
Proposal No. : STAGE 2
Date Prepared : 11-13-2002

Prepared by
Name : ED WAGNER
Division : DOWELL
Phone : 405-748-2749

Service Point : VERNAL
Fax No. : 1 435 789 0138

Comments :

Disclaimer Notice:

This information is presented in good faith, but no warranty is given by and Dowell assumes no liability for advice or recommendations made concerning results to be obtained from the use of any product or service. The results given are estimates based on calculations produced by a computer model including various assumptions on the well, reservoir and treatment. The results depend on input data provided by the Operator and estimates as to unknown data and can be no more accurate than the model, the assumptions and such input data. The information presented is Dowell's best estimate of the actual results that may be achieved and should be used for comparison purposes rather than absolute values. The quality of input data, and hence results, may be improved through the use of certain tests and procedures which Dowell can assist in selecting.

The Operator has superior knowledge of the well, the reservoir, the field and conditions affecting them. If the Operator is aware of any conditions whereby a neighboring well or wells might be affected by the treatment proposed herein it is the Operator's responsibility to notify the owner or owners of the well or wells accordingly.

Prices quoted are estimates only and are good for 30 days from the date of issue. Actual charges may vary depending upon time, equipment, and material ultimately required to perform these services.

Freedom from infringement of patents of Dowell or others is not to be inferred.

Client : Flying-J
 Well : Davis 1-33A1E
 Formation: WASATCH
 District : VERNAL
 Country : USA
 Loadcase : Acq Load Case

Section 1: Wellbore Configuration

Deviated Hole: NO
 Treating Down: TUBING
 Flush Volume to 5154.5 ft is 29.8 bbl

Tubing			
OD (in)	Weight (lb/ft)	ID (in)	Depth (ft)
2.875	6.5	2.441	5500.0

Casing			
OD (in)	Weight (lb/ft)	ID (in)	Depth (ft)
5.500	17.0	4.892	6000.0

Section 2: Perforations

Perforations						
Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Shot Density (shot/ft)	Number	Diameter (in)
5500.0	5500.0	5854.0	5854.0	1.00	354	0.32

Section 3: Designed Pump Schedule Step

Designed Pump Schedule Step									
Stg #	Stage Name	Slury Volume (bbl)	Pump Rate (bbl/min)	Pump Time (min)	Fluid Name	Fluid Volume (gal)	Prop Name	Prop Conc (PPA)	Prop Mass (lb)
1.	PAD	30.0	0.6	50.0	8.43 ppg	1260		0.0	0
2.	0.0 PPA	72.0	1.2	60.0	8.43 ppg	3024		0.0	0
3.	0.0 PPA	144.0	2.4	60.0	8.43 ppg	6048		0.0	0
4.	0.0 PPA	288.0	4.8	60.0	8.43 ppg	12096		0.0	0
5.	0.0 PPA	432.0	7.2	60.0	8.43 ppg	18143		0.0	0
6.	0.0 PPA	576.0	9.6	60.0	8.43 ppg	24192		0.0	0
7.	FLUSH	720.0	12.0	60.0	8.43 ppg	30240		0.0	0
8.	FLUSH	0.0	0.0	0.0	8.43 ppg	0		0.0	0
9.	FLUSH	0.0	0.0	0.0	8.43 ppg	0		0.0	0

Client : Flying-J
 Well : Davis 1-33A1E
 Formation: WASATCH
 District : VERNAL
 Country : USA
 Loadcase : Acq Load Case

Designed Step Totals			
Slurry (bbl)	Pump Time (min)	Clean Fluid (gal)	Proppant (lb)
2262.0	410.0	95003	0

Section 4: As Measured Pump Schedule

As Measured Pump Schedule										
Stg #	Stage Name	Slurry Volume (bbl)	Slurry Rate (bbl/min)	Pump Time (min)	Fluid Name	Fluid Volume (gal)	Proppant Name	Max Prop Conc (PPA)	Prop Conc (PPA)	Prop Mass (lb)
1	PAD	37.6	0.6	59.7	8.43 ppg	1580	None	0.0	0.0	0
2	0.0 PPA	72.0	1.2	59.9	8.43 ppg	3024	20/40 Ottawa	0.0	0.0	0
3	0.0 PPA	144.0	2.4	59.3	8.43 ppg	6048	20/40 Ottawa	0.0	0.0	0
4	0.0 PPA	288.0	4.8	60.0	8.43 ppg	11941	20/40 Ottawa	0.0	0.0	0
5	0.0 PPA	432.0	7.2	60.0	8.43 ppg	0	20/40 Ottawa	0.0	0.0	0
6	0.0 PPA	576.0	9.6	60.1	8.43 ppg	0	20/40 Ottawa	0.0	0.0	0
7	FLUSH	301.1	12.0	25.1	8.43 ppg	0	None	0.0	0.0	0

As Measured Totals					
Slurry (bbl)	Pump Time (min)	Clean Fluid (gal)	Proppant (lb)	Liquid 1 (gal)	Liquid 2 (gal)
1850.6	384.0	77742	0	0.0	0.0

Average Treating Pressure: 1533 psi
 Maximum Treating Pressure: 4273 psi
 Average Injection Rate: 4.8 bbl/min
 Maximum Injection Rate: 13.5 bbl/min
 Average Horsepower: 277.4 hhp
 Maximum Horsepower: 1278.5 hhp
 Maximum Prop Concentration: 0.0 PPA

Client : Flying-J
Well : Davis 1-33A1E
Formation : WASATCH
District : VERNAL
Country : USA
Loadcase : Acq Load Case

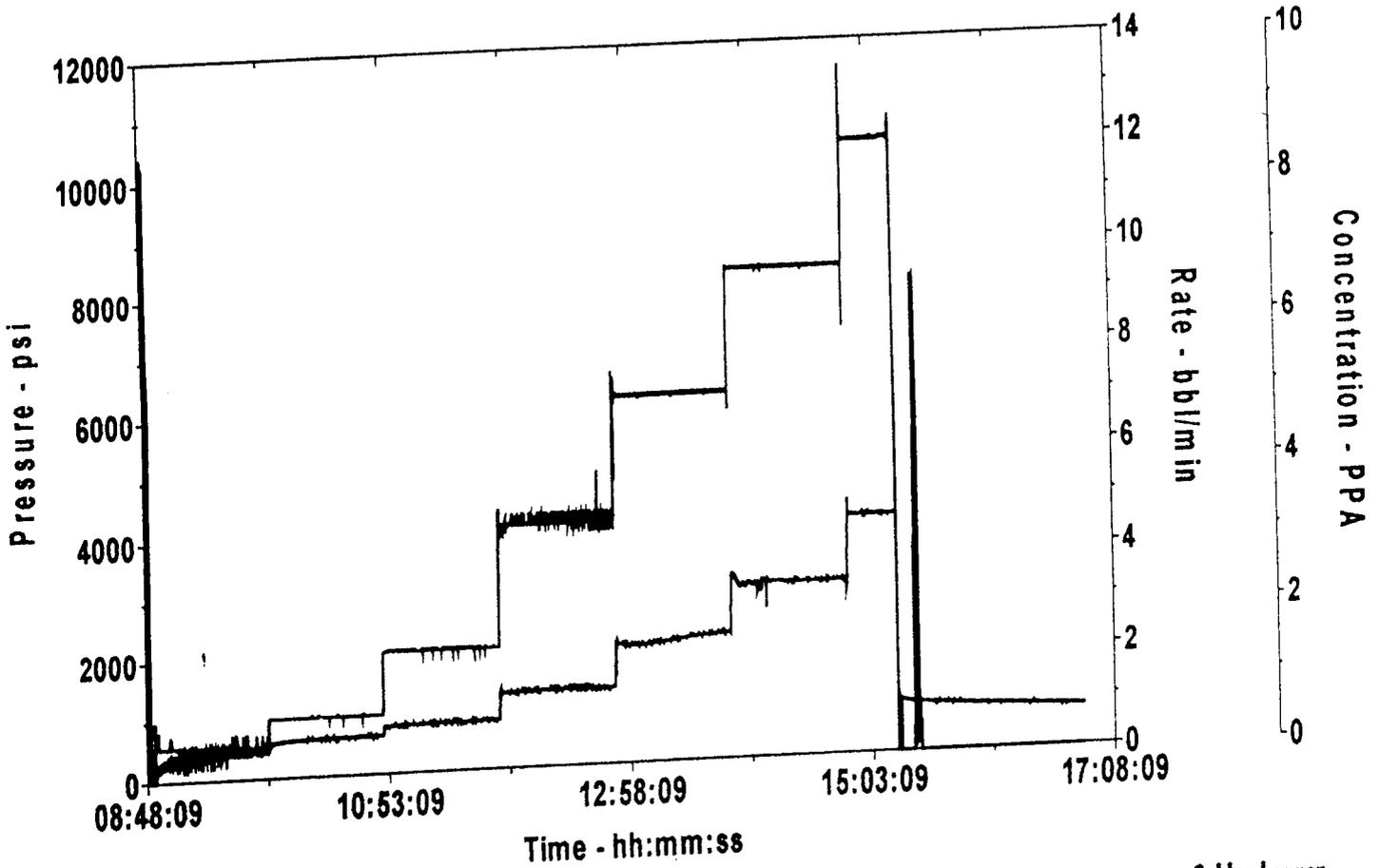
Flying-J
Davis 1-33A1E
11-13-2002

FracCAT*

PRC Post Job Plot

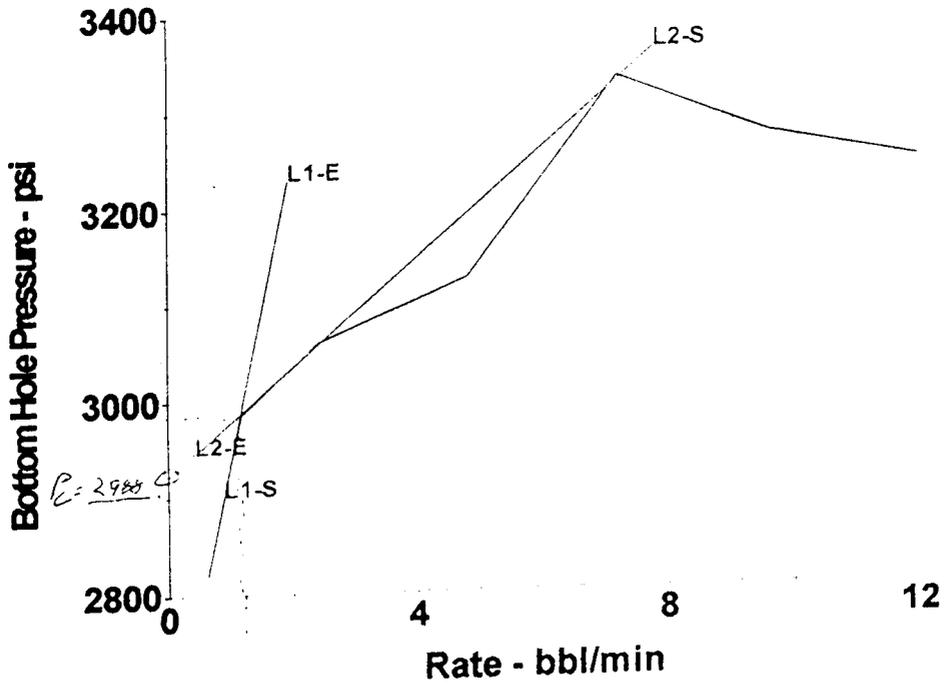
— Tr. Press

— Slurry Rate



Schlumberger

Pressure vs. Rate Plot





Stimulation Service Report

Customer FLYING J OIL & GAS, INC				Job Number 2206742372			
Well DAVIS 1-33A1E			Location (legal) Vernal, UT			Schlumberger Location Vernal, UT	
Field ALTAMONT BLUEBELL		Formation Name/Type Green River		Deviation 0	BHS: Size In	Well MD ft	Well TVD ft
County Uintah		State/Province UT		BHP psi	BHST °F	BHCT °F	Pore Pres Gradient psi/ft
Well Waste 0630393579		API / UVI		Casing/Liner			
Rig Name		Drilled For Oil & Gas	Service Via Land	Depth, ft	Size, In	Weight, lb/ft	Grade
Offshore Zone		Well Class Old	Well Type Workover	Thread			
Primary Treating Fluid 2% KCL		Polymer Loading lb/1000gal	Fluid Density lb/gal	Tubing/Drill Pipe			
Service Line Fracturing		Job Type		Depth, ft 5500	Size, In 2.875	Weight, lb/ft 6.5	Grade N80
Max. Allowed Tubing Pressure 10000 psi	Max. Allowed Ann. Pressure 0 psi	WellHead Connection 2 7/8" 6.5# T/S		Thread N/A			
Service Instructions Step Rate Test Perfs @ 5500' To 5854' Starting @ 0.4 BPM, 0.8 BPM, 1.6 BPM, 3.2 BPM, 4.8 BPM, 6.4 BPM, 8.0 BPM, 10 BPM, 12 BPM. In 60 Minute Increments.				Perforations/Open Hole			
Job Scheduled For:	Arrived on Location: 2002-Nov-13 6:00	Leave Location: 2002-Nov-13 17:30		Top, ft 5500	Bottom, ft 5854	spf	No. of Shots
							Total Interval ft
							Diameter In
				Treat Down Tubing	Displacement bbl	Packer Type	Packer Depth ft
				Tubing Vol. bbl	CasingVol. bbl	AnnularVol. bbl	OpenHoleVol. bbl

Date	Time	Treating Pressure 24 hr clock psi	Slurry Rate bbl/min	TOT SLUR bbl	0	0	0	0	0	0	Message
2002-Nov-13	8:48	5210	0.9	0.0	0	0	0	0	0	0	Pressure Test Lines
2002-Nov-13	8:52	-3	0.0	0.0	0	0	0	0	0	0	Started injection test
2002-Nov-13	8:53	205	0.7	0.9	0	0	0	0	0	0	start @ .6 bbl/min
2002-Nov-13	8:58	303	0.6	3.8	0	0	0	0	0	0	5 min @ .6 bbl/min
2002-Nov-13	9:03	345	0.6	7.0	0	0	0	0	0	0	10 min @ .6 bbl/min
2002-Nov-13	9:08	376	0.6	10.2	0	0	0	0	0	0	15 min @ .6 bbl/min
2002-Nov-13	9:13	397	0.6	13.3	0	0	0	0	0	0	20 min @ .6 bbl/min
2002-Nov-13	9:18	403	0.6	16.3	0	0	0	0	0	0	25 min @ .6 bbl/min
2002-Nov-13	9:23	429	0.6	19.5	0	0	0	0	0	0	30 min @ .6 bbl/min
2002-Nov-13	9:28	426	0.6	22.6	0	0	0	0	0	0	35 min @ .6 bbl/min
2002-Nov-13	9:33	440	0.6	25.7	0	0	0	0	0	0	40 min @ .6 bbl/min
2002-Nov-13	9:38	448	0.6	28.8	0	0	0	0	0	0	45 min @ .6 bbl/min
2002-Nov-13	9:43	460	0.6	31.9	0	0	0	0	0	0	50 min @ .6 bbl/min
2002-Nov-13	9:48	461	0.6	35.0	0	0	0	0	0	0	55 min @ .6 bbl/min
2002-Nov-13	9:51	476	1.1	36.9	0	0	0	0	0	0	start 1.2 bbl/min
2002-Nov-13	9:55	590	1.2	41.4	0	0	0	0	0	0	5 min @ 1.2 bbl/min
2002-Nov-13	10:00	610	1.2	47.3	0	0	0	0	0	0	10 min @ 1.2 bbl/min
2002-Nov-13	10:05	622	1.2	53.2	0	0	0	0	0	0	15 min @ 1.2 bbl/min
2002-Nov-13	10:10	629	1.2	59.0	0	0	0	0	0	0	20 min @ 1.2 bbl/min

Well			Field			Service Date		Customer			Job Number
DAVIS #1-33A1E			ALTAMONT BLUEBELL			2002-Nov-13		FLYING J OIL & GAS, INC			2206742372
Date	Time	Treating Pressure	Slurry Rate	TOT SLUR	0	0	0	0	0	0	Message
	24 hr clock	psi	bb/min	bbi	0	0	0	0	0	0	
2002-Nov-13	10:15	630	1.2	64.9	0	0	0	0	0	0	25 min @ 1.2 bbl/min
2002-Nov-13	10:20	636	1.2	70.8	0	0	0	0	0	0	30 min @ 1.2 bbl/min
2002-Nov-13	10:25	637	1.2	76.7	0	0	0	0	0	0	35 min @ 1.2 bbl/min
2002-Nov-13	10:30	644	1.2	82.6	0	0	0	0	0	0	40 min @ 1.2 bbl/min
2002-Nov-13	10:35	641	1.2	88.4	0	0	0	0	0	0	45 min @ 1.2 bbl/min
2002-Nov-13	10:40	644	1.2	94.3	0	0	0	0	0	0	50 min @ 1.2 bbl/min
2002-Nov-13	10:45	649	1.2	100.2	0	0	0	0	0	0	55 min @ 1.2 bbl/min
2002-Nov-13	10:49	652	1.2	106.0	0	0	0	0	0	0	60 min @ 1.2 bbl/min
2002-Nov-13	10:50	649	1.2	106.2	0	0	0	0	0	0	start 2.4 bbl/min
2002-Nov-13	10:51	799	2.4	109.7	0	0	0	0	0	0	stabilized pressure
2002-Nov-13	10:55	804	2.4	117.7	0	0	0	0	0	0	5 min @ 2.4bbl/min
2002-Nov-13	11:00	808	2.4	129.7	0	0	0	0	0	0	10min @ 2.4bbl/min
2002-Nov-13	11:05	812	2.4	141.7	0	0	0	0	0	0	15min @ 2.4bbl/min
2002-Nov-13	11:10	814	2.4	153.8	0	0	0	0	0	0	20min @ 2.4bbl/min
2002-Nov-13	11:15	817	2.4	166.0	0	0	0	0	0	0	25min @ 2.4bbl/min
2002-Nov-13	11:20	819	2.4	177.8	0	0	0	0	0	0	30min @ 2.4bbl/min
2002-Nov-13	11:25	821	2.4	189.9	0	0	0	0	0	0	35min @ 2.4bbl/min
2002-Nov-13	11:30	822	2.4	201.7	0	0	0	0	0	0	40min @ 2.4bbl/min
2002-Nov-13	11:35	824	2.4	213.8	0	0	0	0	0	0	45min @ 2.4bbl/min
2002-Nov-13	11:40	825	2.4	225.7	0	0	0	0	0	0	50min @ 2.4bbl/min
2002-Nov-13	11:45	827	2.4	237.7	0	0	0	0	0	0	55min @ 2.4bbl/min
2002-Nov-13	11:50	829	2.4	249.9	0	0	0	0	0	0	60min @ 2.4bbl/min
2002-Nov-13	11:50	970	4.1	250.7	0	0	0	0	0	0	start 4.8 bbl/min
2002-Nov-13	11:50	1299	4.7	253.7	0	0	0	0	0	0	stabilized pressure
2002-Nov-13	11:55	1269	4.8	272.9	0	0	0	0	0	0	5min @ 4.8 bbl/min
2002-Nov-13	12:00	1278	4.8	296.7	0	0	0	0	0	0	10min @ 4.8 bbl/min
2002-Nov-13	12:05	1281	4.8	321.1	0	0	0	0	0	0	15 min @ 4.8 bbl/min
2002-Nov-13	12:10	1283	4.8	344.5	0	0	0	0	0	0	20min @ 4.8 bbl/min
2002-Nov-13	12:15	1291	4.8	370.3	0	0	0	0	0	0	25min @ 4.8 bbl/min
2002-Nov-13	12:20	1295	4.8	392.4	0	0	0	0	0	0	30min @ 4.8 bbl/min
2002-Nov-13	12:25	1291	4.8	416.5	0	0	0	0	0	0	35min @ 4.8 bbl/min
2002-Nov-13	12:30	1294	4.8	440.3	0	0	0	0	0	0	40min @ 4.8 bbl/min
2002-Nov-13	12:35	1296	4.8	464.1	0	0	0	0	0	0	45min @ 4.8 bbl/min
2002-Nov-13	12:40	1295	4.8	488.0	0	0	0	0	0	0	50min @ 4.8 bbl/min
2002-Nov-13	12:45	1288	4.8	512.3	0	0	0	0	0	0	55min @ 4.8 bbl/min
2002-Nov-13	12:50	1293	4.8	535.9	0	0	0	0	0	0	60min @ 4.8 bbl/min
2002-Nov-13	12:50	1626	5.7	540.4	0	0	0	0	0	0	start 7.2 bbl/min
2002-Nov-13	12:50	1777	7.0	541.7	0	0	0	0	0	0	Stable pressure 1990psi
2002-Nov-13	12:55	1993	7.1	571.8	0	0	0	0	0	0	5min @ 7.2 bbl/min

Well		Field			Service Date		Customer			Job Number
DAVIS #1-33A1E		ALTAMONT BLUEBELL			2002-Nov-13		FLYING J OIL & GAS, INC			2206742372
Date	Time	Treating Pressure	Slurry Rate	TOT SLUR	0	0	0	0	0	Message
	24 hr clock	psi	bbf/min	bbf	0	0	0	0	0	
2002-Nov-13	13:00	1976	7.2	607.0	0	0	0	0	0	10min @ 7.2 bbl/min
2002-Nov-13	13:05	1978	7.2	643.1	0	0	0	0	0	15min @ 7.2 bbl/min
2002-Nov-13	13:10	1993	7.2	678.9	0	0	0	0	0	20min @ 7.2 bbl/min
2002-Nov-13	13:15	2015	7.1	716.0	0	0	0	0	0	25min @ 7.2 bbl/min
2002-Nov-13	13:20	2036	7.2	750.4	0	0	0	0	0	30min @ 7.2 bbl/min
2002-Nov-13	13:25	2062	7.2	786.3	0	0	0	0	0	35min @ 7.2 bbl/min
2002-Nov-13	13:30	2078	7.2	823.3	0	0	0	0	0	40min @ 7.2 bbl/min
2002-Nov-13	13:35	2094	7.1	858.1	0	0	0	0	0	45min @ 7.2 bbl/min
2002-Nov-13	13:40	2107	7.2	894.0	0	0	0	0	0	50min @ 7.2 bbl/min
2002-Nov-13	13:45	2122	7.1	929.9	0	0	0	0	0	55min @ 7.2 bbl/min
2002-Nov-13	13:50	2123	7.2	966.0	0	0	0	0	0	60min @ 7.2 bbl/min
2002-Nov-13	13:50	2513	8.7	967.7	0	0	0	0	0	start 9.6 bbl/min
2002-Nov-13	13:54	2912	9.6	1005.6	0	0	0	0	0	new stabilized pressure
2002-Nov-13	13:55	2906	9.6	1013.1	0	0	0	0	0	5min @ 9.6 bbl/min
2002-Nov-13	14:00	2939	9.6	1061.0	0	0	0	0	0	10min @ 9.6 bbl/min
2002-Nov-13	14:05	2915	9.6	1108.8	0	0	0	0	0	15min @ 9.6 bbl/min
2002-Nov-13	14:10	2952	9.5	1157.6	0	0	0	0	0	20min @ 9.6 bbl/min
2002-Nov-13	14:15	2951	9.5	1209.7	0	0	0	0	0	25min @ 9.6 bbl/min
2002-Nov-13	14:20	2937	9.6	1252.4	0	0	0	0	0	30min @ 9.6 bbl/min
2002-Nov-13	14:25	2937	9.6	1303.5	0	0	0	0	0	35min @ 9.6 bbl/min
2002-Nov-13	14:30	2936	9.6	1348.8	0	0	0	0	0	40min @ 9.6 bbl/min
2002-Nov-13	14:35	2937	9.5	1396.8	0	0	0	0	0	45min @ 9.6 bbl/min
2002-Nov-13	14:40	2938	9.6	1443.9	0	0	0	0	0	50min @ 9.6 bbl/min
2002-Nov-13	14:45	2935	9.6	1499.6	0	0	0	0	0	55min @ 9.6 bbl/min
2002-Nov-13	14:50	2935	9.6	1539.8	0	0	0	0	0	60min @ 9.6 bbl/min
2002-Nov-13	14:50	3362	10.7	1544.2	0	0	0	0	0	start 12 bbl/min
2002-Nov-13	14:50	4262	12.2	1549.7	0	0	0	0	0	new stabilized pressure
2002-Nov-13	14:55	4006	12.1	1600.6	0	0	0	0	0	5min @ 12 bbl/min
2002-Nov-13	15:00	4008	12.0	1667.2	0	0	0	0	0	10 min @ 12 bbl/min
2002-Nov-13	15:05	4009	12.0	1718.7	0	0	0	0	0	15min @ 12 bbl/min
2002-Nov-13	15:10	4010	12.0	1778.7	0	0	0	0	0	20min @ 12 bbl/min
2002-Nov-13	15:15	4007	12.1	1839.0	0	0	0	0	0	25min @ 12 bbl/min
2002-Nov-13	15:16	878	0.0	1850.6	0	0	0	0	0	ISIP 890 psi
2002-Nov-13	15:22	832	0.0	1850.6	0	0	0	0	0	5 min
2002-Nov-13	15:27	817	0.2	1850.6	0	0	0	0	0	10 min
2002-Nov-13	15:31	805	0.0	1850.6	0	0	0	0	0	15min

Well		Field			Service Date		Customer			Job Number
DAVIS #1-33A1E		ALTAMONT BLUEBELL			2002-Nov-13		FLYING J OIL & GAS, INC			2206742372
Date	Time	Treating Pressure	Slurry Rate	TOT SLUR						Message
	24 hr clock	psi	bbbl/min	bbbl	0	0	0	0	0	
2002-Nov-13	15:36	795	0.0	1850.6	0	0	0	0	0	20 min
2002-Nov-13	15:42	780	0.0	1850.6	0	0	0	0	0	25 min
2002-Nov-13	15:46	771	0.0	1850.6	0	0	0	0	0	30 min
2002-Nov-13	15:51	764	0.0	1850.6	0	0	0	0	0	35 min
2002-Nov-13	15:56	755	0.0	1850.6	0	0	0	0	0	40 min
2002-Nov-13	16:01	745	0.0	1850.6	0	0	0	0	0	45 min
2002-Nov-13	16:06	738	0.0	1850.6	0	0	0	0	0	50 min
2002-Nov-13	16:09	734	0.0	1850.6	0	0	0	0	0	55 min
2002-Nov-13	16:14	726	0.0	1850.6	0	0	0	0	0	60 min
2002-Nov-13	16:19	719	0.0	1850.6	0	0	0	0	0	65 min
2002-Nov-13	16:24	711	0.0	1850.6	0	0	0	0	0	70 min
2002-Nov-13	16:29	704	0.0	1850.6	0	0	0	0	0	75 min
2002-Nov-13	16:34	697	0.0	1850.6	0	0	0	0	0	80 min
2002-Nov-13	16:39	690	0.0	1850.6	0	0	0	0	0	85 min
2002-Nov-13	16:44	682	0.0	1850.6	0	0	0	0	0	90 min
2002-Nov-13	16:49	675	0.0	1850.6	0	0	0	0	0	95 min
2002-Nov-13	16:51	671	0.0	1850.6	0	0	0	0	0	job complete
Post Job Summary										
Average Injection Rates, bpm					Volume of Fluid Injected, bbl					
Fluid	N2	CO2	Maximum Rate		Clean Fluid	Acid	Oil	CO2	N2	(scf)
4.7			12		1850					
Treating Pressure Summary, psi					Quantity of & placed, lb					
Breakdown	Maximum	Final	Average	ISIP	15 Min. ISIP	Total Injected		Total Ordered/Designed		
	4015		1295							
N2 Percent	CO2 Percent	Designed Fluid Volume		Displacement	Slurry Volume		Pad Volume	Percent Pad		
%	%	gal		gal	bbl		gal	%		
Customer or Authorized Representative				Schlumberger Supervisor		Number of Stages	Fracture Gradient	<input checked="" type="checkbox"/> Job Completed <input type="checkbox"/> Screen Out		
Rich, Larry				McCurdy, Tom		7	psi/ft			

Davis 1-33A1E SWD

10/15/02

Maximum anticipated injection rate: 12 BPM

STEP #	Test Rate	(% of Maximum Rate)	BPM	Time (minutes)	Pressure (psig)	Bbls per stage																												
STEP #1	Test Rate	(5% of Maximum Rate)	0.6 BPM	0	0	5	257	10	322	15	357	20	381	25	396	30	420	35	428	40	438	45	445	50	452	55	459	60	464					36
STEP #2	Test Rate	(10% of Maximum Rate)	1.2 BPM	0	535	5	590	10	610	15	623	20	630	25	631	30	637	35	637	40	644	45	641	50	644	55	648	60	652					72
STEP #3	Test Rate	(20% of Maximum Rate)	2.4 BPM	0	790	5	805	10	808	15	811	20	815	25	817	30	819	35	821	40	822	45	824	50	825	55	827	60	828					144
STEP #4	Test Rate	(40% of Maximum Rate)	4.8 BPM	0	1258	5	1271	10	1277	15	1282	20	1284	25	1286	30	1295	35	1296	40	1293	45	1297	50	1295	55	1288	60	1295					288
STEP #5	Test Rate	(60% of Maximum Rate)	7.2 BPM	0	2012	5	1993	10	1977	15	1978	20	1994	25	2015	30	2036	35	2062	40	2078	45	2094	50	2109	55	2122	60	2123					432
STEP #6	Test Rate	(80% of Maximum Rate)	9.6 BPM	0	3105	5	2939	10	2915	15	2917	20	2951	25	2952	30	2938	35	2937	40	2935	45	2937	50	2938	55	2935	60	2935					576
STEP #7	Test Rate	(100% of Maximum Rate)	12 BPM	0	4015	5	4008	10	4007	15	4009	20	4010	25	4007	30	4007	35		40		45		50		55		60					720	
ISIP				890																														

420 NKS in Tank

Total Bbls Rqrd 2268

Step Rate Test Procedure.xls Data

Bottom Hole closure pressure 2988 #

4:55 PM 670 #



FLYING J OIL & GAS INC.

P.O. DRAWER 130 • ROOSEVELT, UTAH 84066
PHONE (801) 722-5166 • FAX (801) 722-5169

Mr. Paul S. Osborne
Mail Code: 8P-W-GW
United States Environmental Protection Agency
Region 8
999 185h Street – Suite 300
Denver, CO 80202-2466

February 19, 2003

RE: **8P-W-GW**
Expanded Disposal Interval
UIC
Minor Modification No.2 – Davis 1-33A1E SWD
EPA Permit No. UT2881-04555
Bluebell/Altamont Field, Uintah County, Utah

Dear Mr. Osborne:

Flying J Oil & Gas Inc. hereby requests that the top of the approved disposal interval be moved up from 5500' to 5430'. The presently approved injection interval is 5500' - 6000'. The new disposal interval would be from 5430' - 6000'

A Temperature and R/A Tracer Survey was run on January 25, 2003. The log of that survey is enclosed. The R/A log was run while injecting water at 3.6 barrels per minute at 1000 psi surface pressure. The radioactive tracer material used was I-131. Temperature surveys were run as follows:

Run 1 Prior to injecting water after the well had been shut in for several days
Run 2 While injecting water
Run 3 After 1 hour shut-in
Run 4 After 4 hour shut-in
Run 5 After 8 hour shut-in

Results of the survey indicate that most of the water is entering the perforations from 5500' – 5514'. Some water is traveling up the hole, behind casing, and entering the formation at 5430'. The top of the Green River formation is at 5408' (see enclosed geologic statement and cross-section) so the injected water stays within the Green River formation. The lower Uinta Formation is the upper confining interval and adequately confines the injected water to the Green River formation.

Flying J Oil & Gas is requesting that the injection interval be expanded to 5430' – 6000' and additional perforations be allowed up to 5430'.

Sincerely,


Douglas G. Howard
Senior Petroleum Engineer

Cc: Mr. Gil Hunt
State of Utah Natural Resourcec
Department of Oil, Gas and Mining

Ms. Elaine Willie
Environmental Director
Ute Indian Tribe

Mr. Jerry Kenczka
BLM-Vernal District

RECEIVED

FEB 20 2003

(A SUBSIDIARY OF FLYING J INC.)

DIV. OF OIL, GAS & MINING

Proposed Water Disposal Well: Davis 1-33A1E

Requested Amendment to the Proposed Disposal Interval:

As previously described in our disposal application, the primary confining zone above the injection interval is the Uinta Formation which lies immediately above the Green River Formation. The Top of the Green River Formation occurs at a log depth of 5408' in the Davis 1-33A1E. (see attached cross-section B-B') The originally requested disposal interval was 5500' to 5732', which interval was perforated and an injectivity test was performed. A "Treatment and Radio Activity Survey" log was run on the 25th of January 2003. The logs shows that waters are being injected into the Green River Fm. behind pipe up to 5430'. This is still in the Green River Formation and well below the confining zone, and we therefore request that the approved injection interval be expanded upward within the Green River Formation to 5430' such that the new disposal interval be designated from 5430' to 5732'

5 Feb 2003

A

T. 1 S., R. 1 E.

Sec 32 C, N/2

Ute Tribal 1-32 A1E

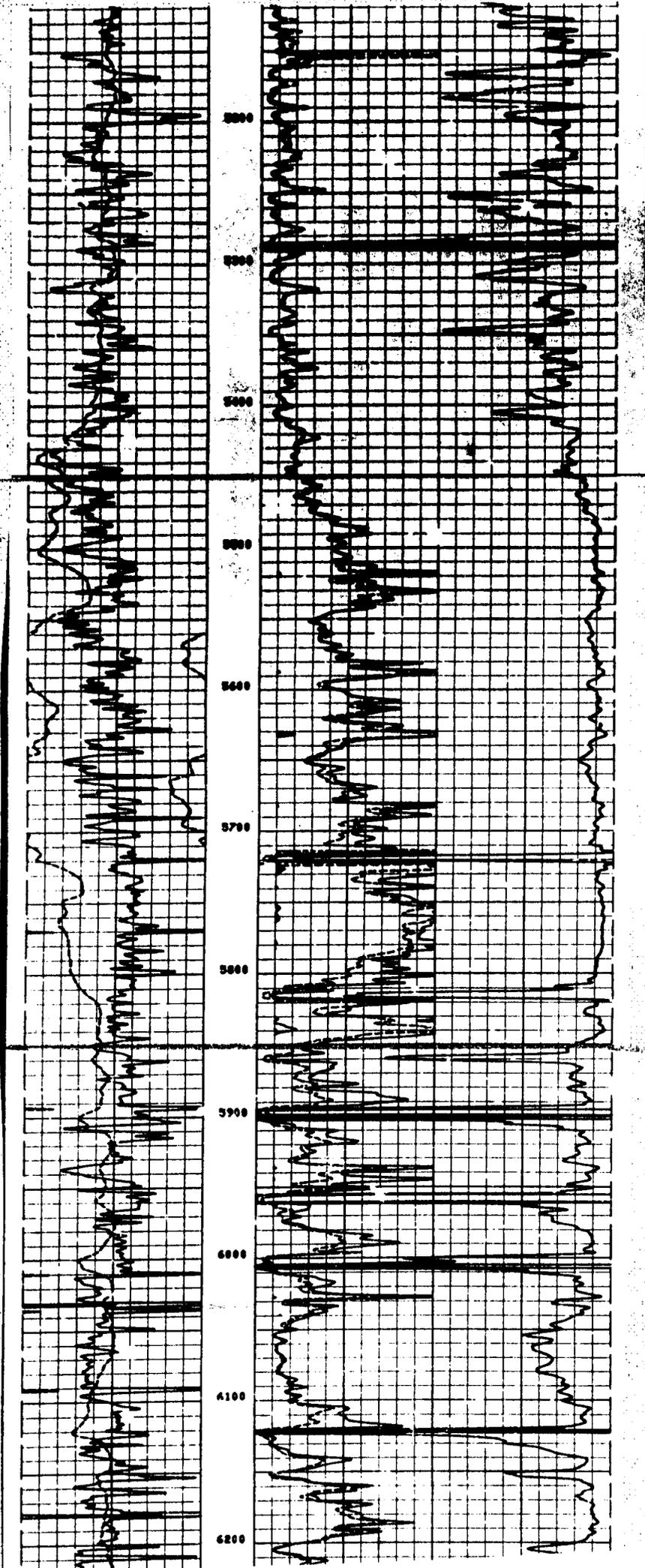
West

Uinta Fm.

Datum

Green River Fm.
Evacuation Cr. Mbr.

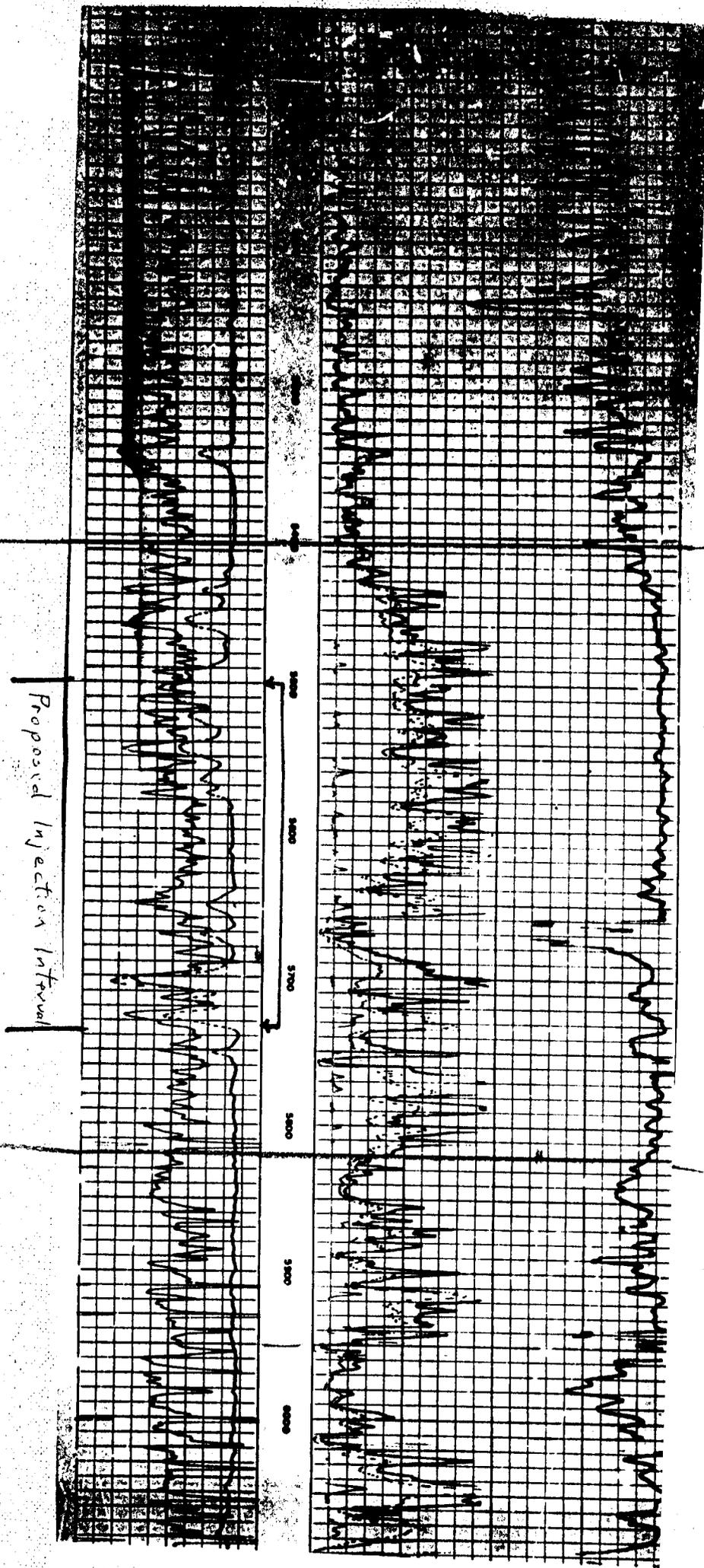
Lower Evacuation
Creek Mbr.



T. 1 S. R. 1 E.

Sec 33 SE, NW

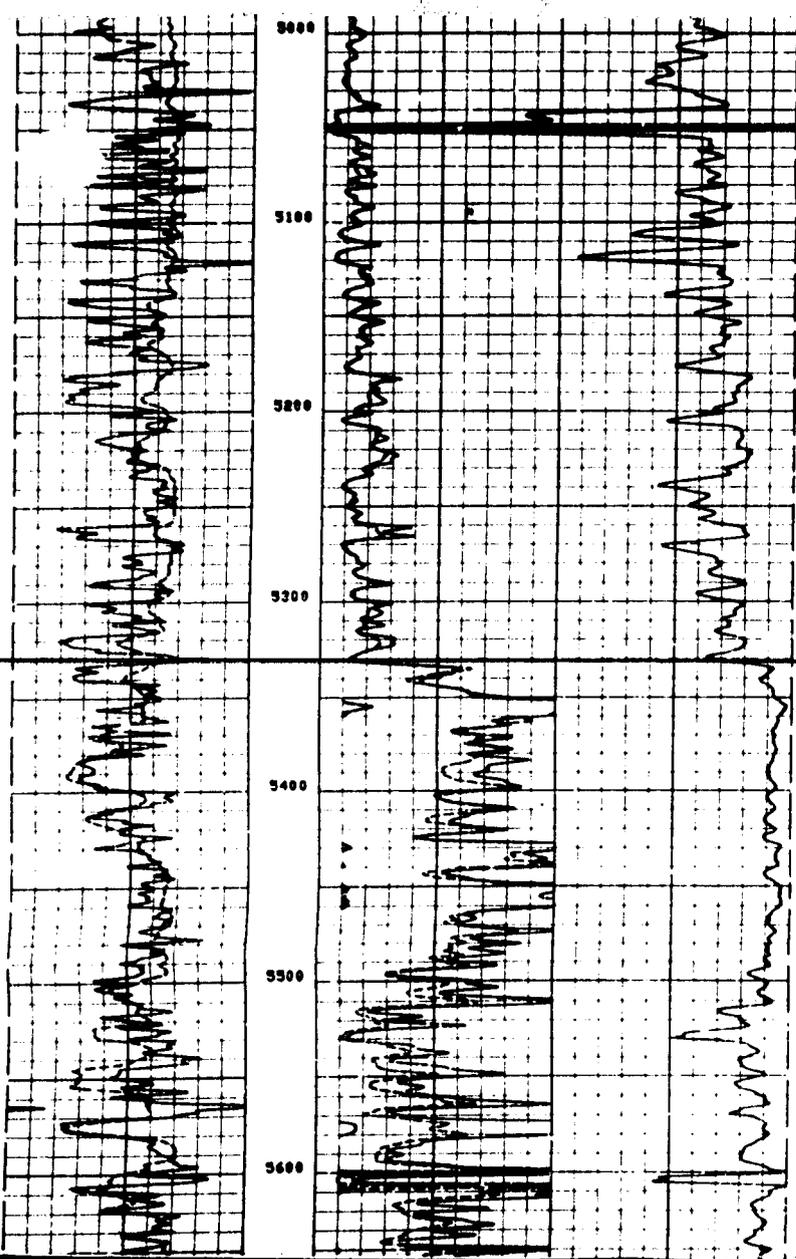
Davis 1-33A1E



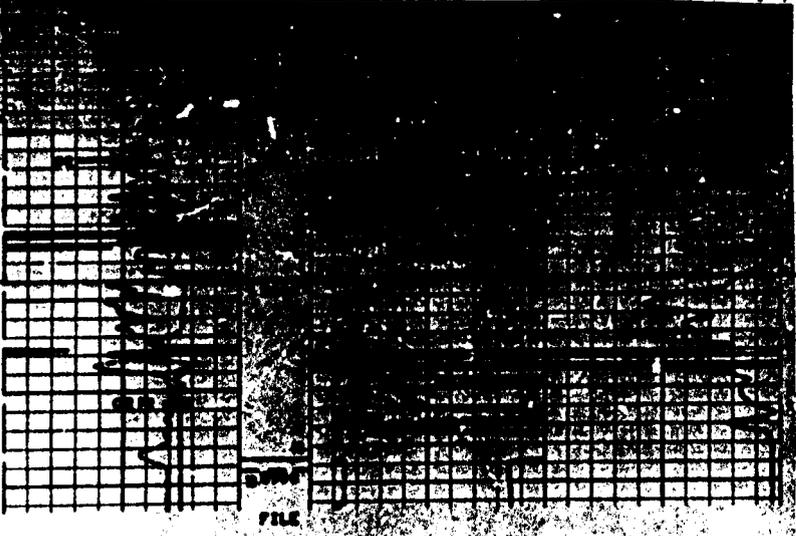
T. 1 S., R. 1 E.
Sec 34 NESW
M.P. 1-34 A 1 E

A'

East



Upper Confining Zone



Lower Confining Zone

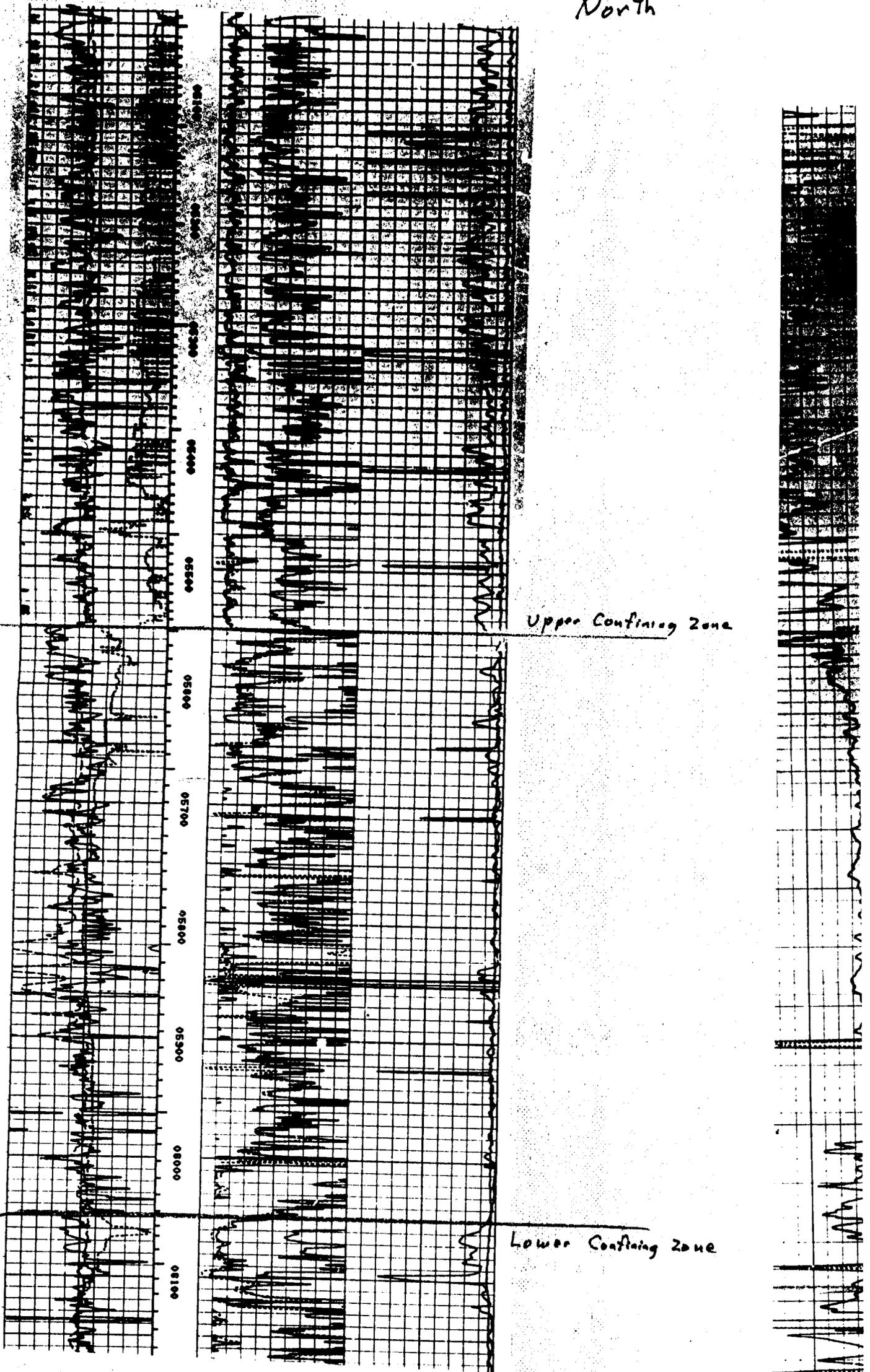
FILE



T. 1 S., R. 1 E.
Sec. 28 NE, NW
Unit 9

B'

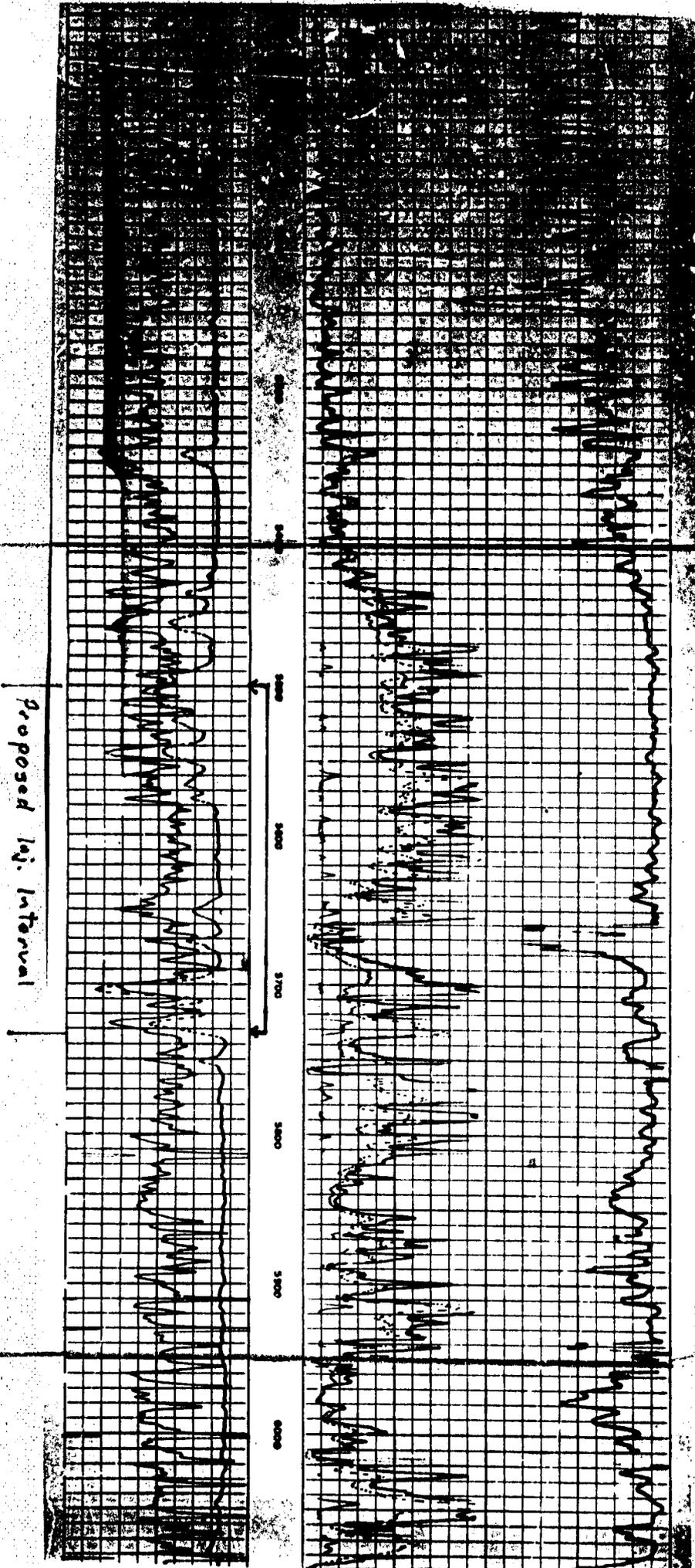
North



T. I. S., R. I. E.

Sec 33 SE, W

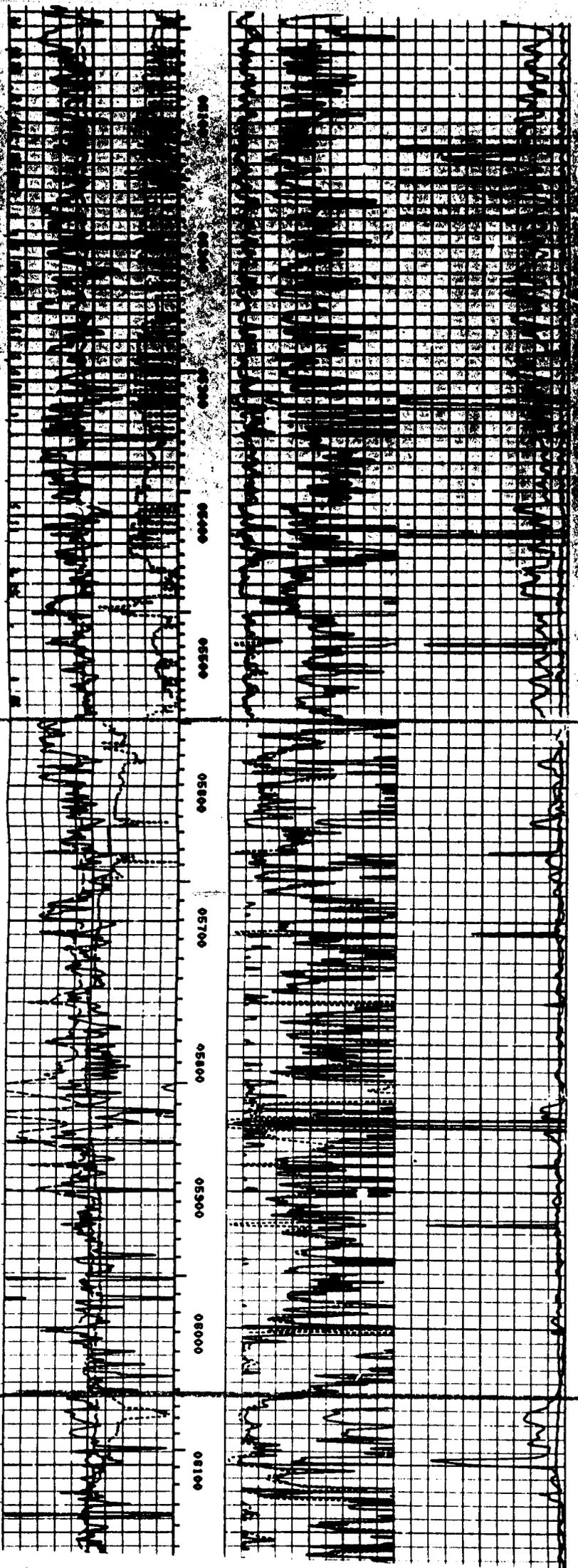
Davis 1-33 A 1 E



T. 1 S., R. 1 E.
Sec. 28 NE, NW
Unit 9

B'

North



Upper Confining Zone

Lower Confining Zone

DIVISION OF OIL, GAS AND MINING
UNDERGROUND INJECTION CONTROL PROGRAM

**PERMIT
STATEMENT OF BASIS**

Applicant: Flying J Oil & Gas Inc. **Well:** Davis 1-33A1E
Location: Sec. 33, T1S, R1E, Uintah County **API:** 43-047-30384

Ownership Issues:

Flying J Oil & Gas Inc. is the Mineral owner of the lease where this well is located. The company has notified all of the surface and mineral owners within a one half mile radius that the well is being applied for conversion to water injection. The well has been published in the Vernal Express, the Salt Lake Tribune, and the Deseret News. There were no objections or comments received concerning this well.

Well Integrity:

The well is equipped with two strings of pipe which have been cemented in place in the following order:

The Davis 1-33A1E was spud on 4-3-78 and drilled to 2125' with a 12 1/4 bit; 51 joints of 9-5/8", 40#/ft K-55 LT&C casing were run and cemented with 660 sks of HOWCO Lite and 200 sx "G" cement.

The 9-5/8" casing shoe was drilled-out with an 8-3/4" bit to a total depth of 9984'. 227 joints of 7" 29#/ft casing were run, and cemented with 450 sks of Class G cement mixed 1% RFC.

The well was eventually drilled to 12,465' and a 5 inch liner hung from 9800' to 12,465, however this portion of the well does not figure into the injection proposal, and has been plugged using a cement retainer and 200 sx class G cement squeezed below from 8300' to 8449'.

The tubing being used for injection of fluids is 2.875 inch, 6.5 lb/ft N80 grade set at 5500 feet. The topmost injection perforation is at 5500 feet, the bottom most perforation is at 5824, with a shot density of 1 shot /ft.

Ground Water Protection:

The geology for this location indicates that the surface casing set at 2125 feet and cemented to surface, has adequately protected any near surface sands that may have been present. No water bearing sands were reported as being encountered while drilling. In this area of the Uinta Basin the base of the moderately saline waters is at 2000 feet below Sea Level, and the

perforated interval intended for disposal is at 420' below Sea Level. There is therefore, 1580' of moderately saline groundwater possible before the saline level is reached. Water samples from the intended injection zone were used to determine the water quality of the formation before the permit was issued.

Produced Green River water samples from this portion of the basin show TDS values from 5120 ppm to 22,045 ppm. The water analysis for this well indicates that the TDS is 6025 PPM. This is below the EPA USDW limit of 10,000 PPM. Flying J therefore applied to the EPA for an aquifer exemption. The exemption was granted. The exemption notice was received July 11, 2002.

Within a mile radius there are 3 points of diversion adjacent to the well, the closest is just over a half mile to the northwest. It is a well 400' deep used for stock watering, Permit No. 43 6801 belonging to Charles and Barbara Bolton. The quality of the water is unknown, however it can be presumed to be below the moderately saline level. This well is located in the SE Quarter of Section 29, Township 1 South, Range 1 E, Uintah County.

A bond log for the intended injection zone was received on January 11, 2002. The log was run after several attempts to circulate cement from below the injection zone to the surface. None of these attempted cement jobs worked well and there is little evidence that the cement covered the desired interval. Through the injection zone the bond averages less than 60% with the highest bonded area from 5690 to 5718 just over 80%. The Bond above 5500 feet drops to less than 50% for the next 300 feet. Only slight improvement is seen from 5200 to 4700 feet, and this area does not exceed 60%. The main pass was run under pressure at 1000 PSI. It is noted that several conversations with the operator during the conversion process indicated that the pump rates and pressures were very high, and could have easily exceeded parting pressure during attempts to establish circulation. It is therefore concluded that a combination of light cement weights and micro-annulus are the probable cause of the poor bond log. It is also noted that circulation was not established during the numerous attempts to squeeze cement behind the pipe. This would indicate that some seal between the pipe and the formation does exist and that a lower than parting pressure for injection could be granted.

The Step Rate Test for this well was run on November 11, 2002, after several months of injection. The EPA granted Flying J a temporary injection permit as part of the aquifer exemption. The results of the Step Rate are as follows: A change in the slope of the injection pressure is seen at ~3068 psi bottom hole pressure. This translates to 610 psi Surface Pressure and represents a frac gradient of 0.54 psi/ft gradient. The test was run with 2.875 inch tubing in the hole, with a maximum bottom hole pressure of 4273 psi at 12 barrels/min. The average treating pressure was 1533 psi, and the average injection rate was 4.8 bbl/min. At bottom hole frac pressure of 3068 psi, 1440 bbls of water could be disposed of each day. The original application for this well was received 13 April 2001, and proposed a rate of 2 unknown units, presumed to be BBLs, at pressure of 1964 psig. An amended application was received on 5 November 2001 proposing an injection rate of 5 unknown units, presumed to be BBLs, at a pressure of 1179. The submitted Step Rate Test does not support either of the proposed rates, and Flying J has not proposed a pressure of less than 610 psi but has

indicated that at 610 psi surface pressure they expect to put away 1440 BBLs/Day. The fracture pressure rate for the well is 1 BBL/min. at 610 psi., therefore it is recommended that the well be approved for injection not to exceed 610 psi surface pressure, and allow the maximum rate to be what the well will take at that pressure. The suggested injection pressure is the same as will be approved by the EPA.

Flying J has not submitted sufficient evidence showing that the upper confining layer is capable of containing the fracture at higher pressures or injection rates exceeding 1 BBL/M.

Due to the poor quality of the Cement Bond Log it is also suggested that Flying J be required to perform an annual RA Tracer or temperature survey to prove that the injected fluids are being confined to the perforated zone. Should the first survey show that the fluids are in zone and not migrating to adjacent intervals, the required test interval can be changed to a 5 year cycle.

Oil/Gas & Other Mineral Resources Protection:

The Green River formation produces both Oil and Gas in this part of the Uinta Basin, however the productive interval is much lower and will have been isolated by a cement plug and a cement retainer that is set at 8300'. It is therefore considered that the mineral resources in this well have been protected.

Bonding:

Flying J has an \$80,000 Fee Surety Bond in place, which provides coverage for this well.

Actions Taken and Further Approvals Needed:

Notice of this application was published in the Salt Lake Tribune, Deseret News and The Uintah Basin Standard, December 20, 2001. In addition, copies of the notice were provided to the EPA, BLM (Vernal, UT), and Uintah County Planning Office. The notice stated the proposed interval for injection was the Green River Formation, and was to be selectively perforated from 5500' to 5732'.

Applicable technical publications concerning water resources in the general vicinity of this project have been reviewed and taken into consideration during the permit review process.

Reviewer(s): K. Michael Hebertson Date: 15-January-2003

*Final Permit
Issued by EPA*



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
Phone 800-227-8917
<http://www.epa.gov/region08>

MAR 6 2003

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Douglas G. Howard
Senior Petroleum Engineer
Flying J Oil and Gas Inc.
P.O. Drawer 130
Roosevelt, Utah 84066

RECEIVED

MAR 10 2003

DIV. OF OIL, GAS & MINING

RE: UNDERGROUND INJECTION CONTROL (UIC)
**Request for Expanded Disposal Interval - Davis
No. 1-33A1E SWD** EPA Permit No. UT2881-
04555 Bluebell/ Altamont Field, Uintah County,
Utah.

Dear Mr. Howard:

We have reviewed your February 19, 2003, letter requesting to expand the Green River Formation disposal interval. In your letter you request an expansion of the disposal interval from 5,500 ft. to 6,000 feet to an interval encompassing the Green River Formation between 5,430 to 6,000 feet. This raises some confusion because the injection interval presently authorized by the Permit No. UT2881-04555 and associated aquifer exemption only covers the interval between 5,500 to 5,762 feet. It was our assumption that the perforations below 5,762 feet were plugged. If the lower perforations are not plugged, this issue will also need to be addressed. Before any new changes in the Permit can be evaluated, the extent of your injection interval and the ability of that interval to completely contain all disposed fluids needs to be addressed. Especially important is the need for verification that the formation immediately overlying the injection interval and the cement adjacent to casing above 5,430 feet are adequate to prevent movement of fluid out of the injection zone.

Our review of the temperature log data indicates that a significant amount of the injected fluid is contained in the interval immediately above the injection perforations. Lesser amounts of fluid appear to be stored around 5,470 feet and 5,440 feet. The temperature log also indicates



that there may have been some fluid movement above 5,430 feet which is outside of your currently approved injection interval top and above your requested interval top at 5,430 feet.

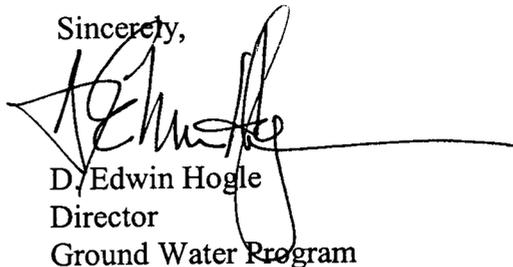
Additionally, your letter did not address whether the proposed perforated zones will allow you to dispose of your estimated volume under the reduced maximum injection pressure. The logs run on the well indicated little or no fluid moving into the lower sets of perforations. There is no information in your submittal indicating whether you plan to address the poor injection performance of the lower sets of perforations.

Our primary concern with the future use of this well for injection into either the existing or expanded interval is protection of USDWs by adequate cement isolation of the wellbore, adequate confinement of the injection zone and the ability of the perforated intervals to take water at pressures that are less than the maximum authorized injection pressure. We are concerned that expanding the injection zone to allow injection into the interval between 5,500 and 5,430 feet may still allow uphole movement of fluids above the top of the new interval. We would recommend that prior to our proceeding with a modification of this Permit you consider evaluating the possibility of permitting a different well (either a new drill or a conversion) for use as a disposal well or remediating or otherwise improving the capability of this well.

If you determine that Flying J wants to pursue your request to modify this Permit, we will need information that addresses our concerns listed above. As you are aware, it will be necessary for EPA to make a Major Modification of the Permit to expand the injection interval and aquifer exemption and to add any additional measures needed to address our concerns. Until such time as the Permit has been modified and you have demonstrated that there is no upward movement of fluids adjacent to the casing, no injection into the Davis 1-33A1E is allowed.

If you have any questions regarding our concerns, please contact Mr. Dan Jackson at (303) 312-6155 or Mr. Paul S. Osborne at (303) 312-6125, in this regard. **Also, please direct all correspondence to the ATTENTION: Paul S. Osborne, citing Mail Code: 8P-W-GW, very prominently.**

Sincerely,



D. Edwin Hogle
Director
Ground Water Program

cc: Mr. Gilbert Hunt
State of Utah Natural Resources
Division of Oil, Gas and Mining

Mr. James W. Wilson
Vice President of Operations
Flying J Oil and Gas Inc.
333 West Center Street
North Salt Lake City, Utah 84054

Ms. Elaine Willie
Environmental Director
Ute Indian Tribe

Mr. Jerry Kenczka
BLM-Vernal District



FLYING J OIL & GAS INC.

P.O. DRAWER 130 • ROOSEVELT, UTAH 84066
PHONE (801) 722-5166 • FAX (801) 722-5169

Attention: Paul S. Osborne
Mail Code: 8P-W-GW
United States Environmental Protection Agency
Region 8
999 185h Street – Suite 300
Denver, CO 80202-2466

March 26, 2003

RE: **8P-W-GW**
Expansion of Disposal Interval
UIC
Major Modification No.1 – Davis 1-33A1E SWD
EPA Permit No. UT2881-04555
Bluebell/Altamont Field, Uintah County, Utah

Dear Mr. Osborne:

Flying J Oil & Gas Inc. hereby requests a Major Modification to EPA Permit No. UT2881-04555 expanding the injection interval to the top of the Green River Formation at 5408' down to an existing cement retainer at 6190'.

Aquifer Exemption

The expanded interval meets the criteria for exempted aquifers as set forth in 40 CFR 146.4 (a), (b) and (c) as follows:

- (a) The upper Green River does not currently serve as a source of drinking water.
- (b) It cannot now and will not in the future serve as a source of drinking water because it is at a depth that makes recovery for drinking water purposes economically impractical.
- (c) The total devolved solids of 6025 mg/L is more than 3,000 and less than 10,000 mg/l and it is not reasonably expected to supply a public water system.

Exhibits of water rights points of diversion within a one-mile radius, cross sections, the cost of drilling a well and water analysis have been submitted with the original application and have not changed. An expanded cross section of adjacent wells showing confining zones was also submitted separately.

Confining Zones

The confining zones above and below the proposed injection interval are as described in an attachment to the original application as follows:

The primary confining zone above the injection interval is the Uinta Formation which lies immediately above the Green River Fm. The Uinta Fm. is comprised of mudstones which are gray-green, yellow, and reddish brown in color, slightly calcareous and silty in part. These mudstones are interbedded with thin tuffs which are light gray to pink in color and micaceous. Some thin gypsiferous shales are also found in the Uinta Fm.

The confining zones below the injection interval is comprised primarily of the shales and tuffaceous beds in the lower part of the Evacuation Creek member of the Green River Fm.. The mudstones are light brown, blocky and dolomitic. The tuffs are light gray to pink, cryptocrystalline and micaceous.

A Temperature and R/A Tracer Survey run on the Davis well on January 25, 2003 indicated movement of water behind casing from the top set of perforations at 5500'-5514' up to ±5430' where it entered the formation. *There is no apparent vertical movement of water outside the casing above 5430' demonstrating mechanical integrity of the cement bond and the overlying formation.* Based on interpretation of the Temperature and R/A Tracer Survey, the overlying mudstones of the Uinta Formation and the cement bond are effective confining barriers and all of the injected water stayed in the Green River formation. There is no indication that water will move upward out of the Green River Formation. Expanding the injection interval to the top of the Green River formation at 5408' will allow Flying J Oil & Gas to perforate the interval from 5430' – 5464' providing a more direct path for the water to enter the formation.

Maximum Allowable Injection Pressure

Flying J Oil & Gas is not requesting an increase in the MAIP of 610 psi at this time.

Existing Perforations

Upon approval of this Major Modification, Flying J Oil & Gas will perforate the interval from 5432' – 5462', isolate new and existing perforations, break them down and acidize as necessary in an effort to improve injectivity. The perforations will be isolated in groups as follows:

5820' – 5854',	5696' – 5732'
5542' – 5548'	5500' – 5512'
5432' – 5462'	

Please contact me at (435) 722-5166, or email me at doug.howard@flyingj.com if additional information is needed.

Sincerely,



Doug Howard
Sr. Petroleum Engineer
Flying J Oil & Gas

Cc: Mr. Gil Hunt
State of Utah Natural Resourcec
Department of Oil, Gas and Mining

Ms. Elaine Willie
Environmental Director
Ute Indian Tribe

Mr. Jerry Kenczka
BLM-Vernal District



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Phone 800-227-8917
<http://www.epa.gov/region08>

MAY 6 2003

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. James W. Wilson
Vice President of Operations
Flying J Oil and Gas Inc.
333 West Center Street
North Salt Lake City, Utah 84054

RE: UNDERGROUND INJECTION CONTROL (UIC)
**Draft Aquifer Exemption and Major Permit
Modification No. 2 for the Davis No. 1-33A1E
SWD**, Green River Formation - EPA Permit No.
UT2881-04555 Bluebell/ Altamont Field, Uintah
County, Utah

Dear Mr. Wilson:

On January 25, 2003, Flying J Oil and Gas ran an injection test accompanied by a radioactive tracer survey (RATS) and a series of temperature surveys. The results of these surveys indicated that the majority of the fluid was going into the top set of perforations and fluid was migrating upwards out of zone and into sands in the vicinity of 5,430 feet below ground surface (BGS). On February 19, 2003, Flying J submitted a request for an expansion of the injection zone that would encompass all of the remainder of the Green River Formation overlying the existing permitted interval (5,500 to 5,732 feet BGS). Additionally, the request included an expansion of the injection interval to include a Green River zone (5,820-5854 feet BGS) underlying the presently permitted interval. This request for an expansion of the injection zone was followed up with further information regarding the proposed action on March 26, 2003. Flying J requested an expansion of the aquifer exemption for the remainder of the Green River Formation above the existing perforations and approval to add an additional set of perforations from 5,432 to 5,462 feet BGS. The permittee also indicated that if approval of this proposed major modification is granted, the new perforations will be added followed by the isolation and fracture stimulation of each of the five individual perforated intervals.

We have reviewed the February 19, 2003, request and the subsequent information **RECEIVED**

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regarding the request from Flying J Oil and Gas Inc. for an expansion of the injected interval to include the Green River Formation from the top of the Formation at 5,408 feet to a reasonable distance below the bottom set of perforations at 5,854 feet BGS. This expansion requires an expansion of the existing Green River Aquifer Exemption from 5,500 feet to 5,732 feet within ½ mile of the Davis 1-33A1E. The expanded aquifer exemption will extend from 5,408 feet to 5,948 feet BGS within a ½ mile radius of the Davis 1-33A1E (EPA Permit No. UT2881-04555). The aquifer exemption is required because sampling of the formation indicates that the Green River contains fluids with a total dissolved solids content of 6,025 mg/liter. Thus, the Green River Formation in the vicinity of the Davis well is a USDW as defined at 40 CFR §144.3. In this case the regulations at 40 CFR §§144.12 and 146.22 prohibit injection into the proposed expansion of the injection zone between 5,408 and 5,948 feet unless Flying J demonstrates that the zone can be exempted from protection per 40 CFR §146.4. Prior to the recommencement of injection, it will be necessary for EPA to issue an expanded exemption of the Green River Formation from protection as a USDW.

After reviewing your request for an expansion of the existing exemption of the Green River Formation and the associated data relative to the requested action, we have determined that the zone in question appears to meet the criteria for an exemption found in 40 CFR 146.4. The formation contains water in excess of 3,000 mg/liter, and it is not reasonably expected to serve a water system. Therefore EPA is proposing to issue an exemption of the Green River Formation from 5,408 to 5,948 feet BGS within a one half (½) mile radius of the Davis 1-33A1E.

To assure protection of the reservoir located outside of the exempted zone, the Final Permit for the Davis 1-33A1E is being modified as part of this action. The Draft Major Permit Modification No. 2 proposes to expand the injection interval and the aquifer exemption to include all of the Green River Formation from the top at 5,408 feet to the top of the lower confining zone at 5,948 feet BGS(see Part II Section C. (3)). The Permit Modification also lowers the injection pressure to 610 psig based on the results of the November 11, 2002, step-rate test (see Part II Section C. (4)). Finally the Permit is proposed to be modified to require recompletion of the well to add new perforations and to require that the well be tested to demonstrate that the well has mechanical integrity for both part I and part II. The Permit modification also requires that part II of mechanical integrity be demonstrated by conducting a 24 hour injection test followed by a radioactive tracer survey and several shut-in temperature logs to establish the nature of the injection profile and to demonstrate that the fluid is staying within the permitted interval (see Part II Section C. (8)).

Enclosed is a copy of the Draft Aquifer Exemption, Major Modification No. 2, the Draft Addendum to the Statement of Basis, and the Public Notice. This action will be noticed to the public for a 30 day public comment period. This notice for comment on this proposed action will include opportunity for requesting a hearing. If there is no comment, the Aquifer Exemption and the Major Modification will be issued, effective the date of issuance. **There can be no recommencement of normal injection into the Davis 1-33A1E until the process is completed and the Major Modification No. 2 and the expanded exemption are effective.**

If you have any questions, please contact Mr. Paul S. Osborne at (303) 312-6125, in this regard. **Also, please direct all correspondence to the ATTENTION: Paul S. Osborne, citing Mail Code: 8P-W-GW, very prominently.**

Sincerely,



Dan Jackson
Acting Director
Ground Water Program

Enclosures: Draft Aquifer Exemption
Draft Addendum to the Statement of Basis
Major Permit Modification No. 2
Public Notice

cc: Mr. Gilbert Hunt
State of Utah Natural Resources
Division of Oil, Gas and Mining

Mr. Douglas G. Howard
Flying J Oil and Gas
3500 East 500 North
Roosevelt, Utah 84066

Mr. D. Floyd Wopsock, Chairman
Uintah & Ouray Business Committee

Ms. Elaine Willie, Environmental Director
Ute Indian Tribe

Mr. Norman Cambridge
BIA - Uintah & Ouray Agency

Mr. Jerry Kenczka
BLM - Vernal District Office

Mr Mario Salazar, OGWDW



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DENVER, CO 80202-2466
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Prepared On April 28,2003

Ref: 8P-W-GW

**ADDENDUM TO THE
STATEMENT OF BASIS
FOR THE DAVIS 1-33A1E**

**FOR AN EXPANSION OF THE INJECTION ZONE,
AN EXPANSION OF THE AQUIFER EXEMPTION
OF THE GREEN RIVER FORMATION AND A
DECREASE IN THE INJECTION PRESSURE
ASSOCIATED WITH
MAJOR PERMIT MODIFICATION NO. 2
EPA PERMIT
UT 20881-04555**

**Flying J Oil and Gas, Inc.
Davis 1-33A1E SWD
Uintah County, Utah**

As part of the recompletion of the Davis1-33A1E, under provisions of UIC Permit **UT2881-04555**, Flying J Oil and Gas Inc. perforated the permitted injection zone (Green River Interval from 5,500 feet to 5,732 feet in late January 2002. As required by the Permit, the well was then swabbed prior to obtaining a sample. The results of the analysis of the sample indicates that the Green River Formation contains water with a total dissolved solids content of 6,025 mg/liter. Thus, the Green River Formation in the vicinity of the Davis well is an underground source of drinking water (USDW) as defined at 40 CFR §144.3. In this case the regulations at 40 CFR §§144.12 and 146.22 prohibit injection into the proposed injection zone between 5500 and 5732 feet unless Flying J demonstrates that the zone can be exempted from protection per 40 CFR §146.4.

USDWs are aquifers or portions thereof that contain less than 10,000 mg/l total dissolved solids (TDS) and which are being or could be used as a source of drinking water. The proposed Green River Formation injection zone is classified as an underground source of drinking water (USDW) based upon information supplied by the applicant. According to analyses of formation water from the Green River injection zone in the Davis well, the total dissolved solids (TDS) content of the **water in the proposed injection zone is 6,025 milligrams per liter (mg/l)**. Because it contains water of less than 10,000 mg/l TDS, the Green River Formation is defined as a USDW in this area and an aquifer exemption is required for this injection operation. According to UIC regulations at 40 CFR 146.4, an aquifer may be exempted from protection as a USDW based upon the following criteria:

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- (a) the aquifer does not currently serve as a source of drinking water; and,
- (b) it is mineral, hydrocarbon or geothermal energy producing, or can be demonstrated by a permit applicant as part of a permit application for a Class II or III operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible, or
- (c) the total dissolved solids content of the ground water is more than 3,000 and less than 10,000 mg/L and it is not reasonably expected to supply a public water system.

On February 20, 2002, Flying J Oil and Gas Inc. submitted a request for an exemption of the Green River Formation adjacent to the Davis 1-33A1E. This request contained information indicating that there are no existing water supply wells obtaining supplies from this Formation within a one mile radius of the injection well. There is one producing well located approximately one mile to the east that produces oil from the proposed injection horizon. There are two stock watering wells located in the one mile radius that obtain water from wells that are 30 feet and 400 feet in depth. Water wells for domestic supply in this area are either drilled into the shallow alluvium that contains water with a TDS of 500 to 1,500 TDS, or into the Duchesne River Formation that contains water with a TDS of about 500 TDS. A well into the Duchesne River would be 300 to 400 feet deep in this area. The applicant has indicated that this well is located in a rural area near Roosevelt, Utah, and that there are three communities, including Roosevelt within 6 to 10 miles of the well. The applicant has provided information indicating that the cost of drilling and completing a well into the Green River Formation would be approximately \$380,000. The cost of drilling and completing a water supply well into shallower aquifers (less than 400 feet) containing water of better quality is estimated to be less than \$40,000. Additionally, to utilize a well into the Green River as a water supply for a public drinking water system, it would be necessary to build a pipeline to transport the water and a water treatment plant to treat the water sufficiently for potable use. This would require significant additional capital investment and an increased O&M cost.

Based on EPA's review of available information, the shallow aquifers in this area contain ample sources of good quality water to supply the needs of the area. The cost of drilling and completing a well into the Green River Formation along with the associated treatment and transportation costs make it economically impractical to utilize this Formation as a source of supply for a public water system. For these reasons, EPA determined that the Green River Formation fits the criteria of 40 CFR 146.4 (a) and (c). The exemption of the Green River Formation from 5,500 to 5,732 feet was granted on July 11, 2002. By this action, EPA exempted the Green River Formation (5,500 to 5,732 feet) from protection as a USDW in an area within a one half (1/2) mile radius of the Davis 1-33A1E. To assure protection of the reservoir located outside of the exempted zone, the Final Permit for the Davis 1-33A1E was also modified as part of the granting of the aquifer exemption, and a volume limit is placed (Part II Section C. (5)) in the Permit. This limits the total volume of injection to a maximum of 14 million barrels over the life of the project. The proposed limitation is about 1 million barrels less than the estimated volume of the exempted reservoir to provide a buffer.

On January 25, 2003, Flying J Oil and Gas ran an injection test accompanied by a radioactive tracer survey (RATS) and a series of temperature surveys. The results of these surveys indicated that the majority of the fluid was going into the top set of perforations and fluid was migrating upwards out of zone and into sands in the vicinity of 5,430 feet. On February 19, 2003, Flying J submitted a request for an expansion of the injection zone that would encompass the area of migration seen on the RATS log overlying the existing perforations (5,500 to 5,732 feet) to the top of the Green River at 5,408 feet. The request included an expansion of the lower limit of the interval in the Permit from 5,732 to 5,900. This expansion will include a major sand interval from 5,820 to 5,854 feet. This request for an expansion of the injection zone was

followed up with further information regarding the proposed action on March 26, 2003. Flying J requested an expansion of the aquifer exemption to the limits of the proposed injection interval of 5,408 to 5,900. The March 26, 2003 letter included a request to add an additional set of perforation from 5,432 to 5,462 feet. The permittee also indicated that if approval of this proposed major modification is granted, the new perforations will be added followed by the isolation and fracture stimulation of each of the five individual perforated intervals.

The permittee has submitted information that indicates the top of the Green River Formation is confined by the lower Uinta Bentonitic unit. This unit is approximately 200 feet thick at the Davis 1-33A1E well. The bentonitic unit is tight and has a regional extent outside of the area of review. This areal extent of the unit and its low porosity indicates that it will be adequate to confine the injection horizons in the underlying Green River Formation.

The applicant has indicated that they believe that the cement adjacent to the Davis 1-33A1E is adequate to prevent upward fluid flow adjacent to the casing. Because of some fluid flow adjacent to the casing at 5,500 feet during the last injectivity test, additional testing is necessary. If this Major Modification of EPA PERMIT UT2881-04555 is approved, the operator will be required to run an injectivity test for a minimum of 24 hours, prior to receiving authority to recommence unrestricted long term injection under the conditions of the Permit. The injectivity test must be run after the new perforations are added and the perforated zones have been stimulated. The injectivity test must be followed by a RATS log and by a series of temperature logs per a plan approved by EPA prior to running the injectivity test. This test will be designed to assess the possible movement of fluid out of zone. This information must be submitted to EPA for review, approval and issuance of a final authorization to inject. If the tests demonstrate that the well has mechanical integrity for part I and part II, authorization will be granted contingent upon the periodic testing of the well for both part I and part II of mechanical integrity.

The Permit for the Davis 1-33A1E was initially written to allow a maximum authorized injection pressure of 1,179 psi. The applicant requested a maximum surface injection pressure (MAIP) of 1,964 psig, and proposed to run a step-rate test if higher pressures are needed. Because of the absence of valid fracture gradient information in this area, EPA has calculated a more conservative injection pressure limitation. A permitted surface injection pressure of 1,179 psig corresponds to an EPA formation fracture pressure gradient of approximately 0.65 psi/ft; this is considered a reasonable interim value for the Upper Green Formation until such time the formation fracture pressure is determined with a Step-Rate Injectivity Test (to be performed within six (6) months of authorization to inject). The permitted 1,179 psig MAIP was considered adequate to protect any possible USDWs.

On November 11, 2002, a step rate test was conducted on the Davis 1-33A1E to investigate the actual fracture pressure in the injection zone. A plot of the bottom hole pressure vs. rate demonstrates a significant change of slope at about 3068 psi BHP which appears to be the fracture initiation pressure. The perforated interval at the time of the test was from 5500 feet to 5854 feet BGS resulting in a fracture gradient of 0.54 psi/ft. The surface pressure at fracture initiation is 610 psi.

Because of the lower fracture pressure determined by the step rate test, EPA proposes to modify this Permit to reduce the MAIP to a value of 610 psi. If the permittee wants a higher MAIP, it will be necessary to run either another step rate test or provide a demonstration that fluids will not move out of the injection zone via fractures.



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Ref: 8P-W-GW

MAJOR PERMIT MODIFICATION No. 2
EPA FINAL PERMIT
UT20881-04555

Flying J Oil and Gas, Inc.
Davis 1-33A1E SWD
Uintah County, Utah

Pursuant to Part III, Section B. 1. of the above-referenced Final Permit, a Major Permit Modification No. 2 is made. These changes are as follows:

ORIGINAL Permit Language (April 20, 2001) as modified by Minor Modification No. 1 and Major Modification No. 1:

PART I. AUTHORIZATION TO CONVERT AND OPERATE

Pursuant to the Underground Injection Control Regulations of the U. S. Environmental Protection Agency codified at Title 40 of the Code of Federal Regulations, Parts 124, 144, 146, and 147,

Flying J Oil and Gas Inc.
333 West Center Street
North Lake, Utah 84054

is hereby authorized to convert and operate a Lower Green River and Wasatch Formations producer to a Class II Upper Green River salt water disposal (SWD) well which will be known as the Davis 1-33 A1E SWD. The proposed Class II Davis 1-33 A1E SWD is located in the SE NW (2,356 feet from the west line and 1980 feet from the north line) Section 33, Township 1 South, Range 1 East, Uintah County, Utah. The well is located within the exterior boundaries of the Uintah-Ouray Indian Reservation. Injection shall be for the purpose of disposing of permittee produced water from Lower Green River and Wasatch producing wells in the Altamont/Bluebell oil fields. Water disposal shall be in accordance with conditions set forth herein. **Injection between the outermost casing protecting underground sources of drinking water (USDWs) and the wellbore is prohibited.** If the well is not converted within one (1) year from the effective date of this Permit, the Permit shall expire as provided by Part II, Section A. 6.

Injection activities shall not commence until the operator has fulfilled all applicable conditions of this Permit and has received written authorization from the Director. "Prior to Commencing Injection" requirements are set forth in Part II, Section C. 1. of this Permit.

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All conditions set forth herein refer to Title 40 Parts 124, 144, 146, and 147 of the Code of Federal Regulations and are regulations that are in effect on the date that this Permit becomes effective.

This Permit consists of a total of thirty-seven (37) pages and includes all items listed in the Table of Contents. Further, it is based upon representations made by the permittee and on other information contained in the administrative record. Any information submitted by the permittee found to be incorrect may be cause for modification or termination of the permit and/or may subject the permittee to formal enforcement action. **It is the responsibility of the permittee to read, understand, and carryout all provisions of this Permit.**

This Permit and the authorization to inject are issued for the operating life of the well, unless terminated (Part III, Section B), or except upon automatic expiration due to prolonged postponement of conversion (Part II, Section A. 6.). **The Permit will be reviewed by EPA at least every five (5) years to determine whether action under 40 CFR § 144.36 (a) is warranted.** The Permit will expire upon delegation of primary enforcement responsibility for the UIC Program to the State of Utah, Division of Oil, Gas, and Mining, or the Uintah-Ouray Indian Agency, unless either the State or the Agency has adequate authority, and chooses, to adopt and enforce this permit as a State Permit or as an Agency Permit.

Issued April 20, 2001.

This Permit shall become effective April 20, 2001.

* Signed by Stephen Tuber for
Kerrigan G. Clough
Assistant Regional Administrator
Office of Partnerships and
Regulatory Assistance

* **NOTE:** The person holding this title is referred to as the "Director" throughout this Permit.

PART II. SPECIFIC PERMIT CONDITIONS

C. WELL OPERATION

2. Mechanical Integrity.

- (a) Schedule for Demonstration of Mechanical Integrity. A demonstration of both part I and part II of mechanical integrity shall be made at regular intervals, no less frequently than once every five (5) years from the effective date of this Permit, in accordance with 40 CFR § 146.8. Part II

of mechanical integrity shall be demonstrated with a series of temperature logs. The test methods and criteria are to follow current UIC Guidance. The Guidance on pressure tests is located in Appendix E of the Permit.

- (b) Loss of Mechanical Integrity. **The operator is required to establish and maintain mechanical integrity (40 CFR 144.51 (q)).** If the well fails to demonstrate mechanical integrity, or a loss of mechanical integrity as defined by 40 CFR § 146.8 becomes evident during operation, the permittee shall notify the Director in accordance with Part III, Section E. 10. of this permit. Following any loss of mechanical integrity, injection activities shall be terminated immediately; and operations shall not be resumed until the permittee has taken necessary actions to restore integrity to the well and EPA gives written approval to recommence injection.
- 3. Injection Interval. Injection shall be limited to the Upper Green River Formation in the gross subsurface interval 5,500 feet to 5,732 feet.
- 4. Injection Pressure Limitation.
 - (a) Injection pressure, measured at the surface, shall not exceed an amount that the Director determines is appropriate to ensure that injection does not initiate new fractures or propagate existing fractures in the confining zone adjacent to USDWs.
 - (b) The exact pressure limit may be increased or decreased by the Director in order to ensure that the requirements in paragraph (a) are fulfilled. In order to determine an exact pressure limit, the permittee shall conduct a step rate injection test or other authorized well test(s) that will serve to determine the fracture pressure of the injection zone. The test procedures shall be pre-approved in writing by the Director. The Director will specify in writing, to the permittee, any increase or decrease to the injection pressure based upon the test results and/or other parameters reflecting actual injection operations. Until such time that this demonstration and approval is made, the initial injection pressure, measured at the surface, shall not exceed **1,179 psig**.
- 5. Injection Volume Limitation. To prevent movement of injected fluid beyond the one half mile aquifer exemption boundary, the operator shall inject no more than a total volume of 14 million barrels of produced water, provided further that in no case shall injection pressure exceed that limit shown in Part II, Section C. 4. (b) of this permit. (modified July 11, 2002 by Major Permit Modification #1).

IS MODIFIED TO READ:

PART I. AUTHORIZATION TO CONVERT AND OPERATE

Pursuant to the Underground Injection Control Regulations of the U. S. Environmental Protection Agency codified at Title 40 of the Code of Federal Regulations, Parts 124, 144, 146, and 147,

Flying J Oil and Gas Inc.
333 West Center Street
North Lake, Utah 84054

is hereby authorized to convert and operate a Lower Green River and Wasatch Formations producer to a Class II Upper Green River salt water disposal (SWD) well which will be known as the Davis 1-33 A1E SWD. The proposed Class II Davis 1-33 A1E SWD is located in the SE NW (2,356 feet from the west line and 1980 feet from the north line) Section 33, Township 1 South, Range 1 East, Uintah County, Utah. The well is located within the exterior boundaries of the Uintah-Ouray Indian Reservation. Injection shall be for the purpose of disposing of permittee produced water from Lower Green River and Wasatch producing wells in the Altamont/Bluebell oil fields. Water disposal shall be in accordance with conditions set forth herein. **Injection between the outermost casing protecting underground sources of drinking water (USDWs) and the wellbore is prohibited.** If the well is not converted within one (1) year from the effective date of this Permit, the Permit shall expire as provided by Part II, Section A. 6.

Injection activities shall not commence until the operator has fulfilled all applicable conditions of this Permit and has received written authorization from the Director. "Prior to Commencing Injection" requirements are set forth in Part II, Section C. 1. of this Permit.

All conditions set forth herein refer to Title 40 Parts 124, 144, 146, and 147 of the Code of Federal Regulations and are regulations that are in effect on the date that this Permit becomes effective.

This Permit consists of a total of thirty-seven (37) pages and includes all items listed in the Table of Contents. Further, it is based upon representations made by the permittee and on other information contained in the administrative record. Any information submitted by the permittee found to be incorrect may be cause for modification or termination of the permit and/or may subject the permittee to formal enforcement action. **It is the responsibility of the permittee to read, understand, and carryout all provisions of this Permit.**

This Permit and the authorization to inject are issued for the operating life of the well, unless terminated (Part III, Section B), or except upon automatic expiration due to prolonged postponement of conversion (Part II, Section A. 6.). **The Permit will be reviewed by EPA at least every five (5) years to determine whether action under 40 CFR § 144.36 (a) is warranted.** The Permit will expire upon delegation of primary enforcement responsibility for the UIC Program to the State of Utah, Division of Oil, Gas, and Mining, or the Uintah-Ouray Indian Agency, unless either the State or the Agency has adequate authority, and chooses, to adopt and enforce this permit as a State Permit or as an Agency Permit.

Major Permit Modification No. 2 Issued _____.

This Modified Permit shall become effective _____.

DRAFT

Stephen S. Tuber
*Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

* **NOTE:** The person holding this title is referred to as the "Director" throughout this Permit.

PART II. SPECIFIC PERMIT CONDITIONS

C. WELL OPERATION

2. Mechanical Integrity.

- (a) Schedule for Demonstration of Mechanical Integrity. A demonstration of both part I (40 CFR 146.8(a)(1)) and part II (40 CFR 146.8(a)(2)) of mechanical integrity shall be made at regular intervals, no less frequently than once every five (5) years from the effective date of this Permit, in accordance with 40 CFR § 146.8. Part I of mechanical integrity shall be demonstrated with a standard annular pressure test. Part II of mechanical integrity shall be demonstrated with a series of temperature logs. **A demonstration of mechanical integrity for both part I and part II shall be required after completion of any activities involving a workover, perforation of the original permitted interval, or perforation of an approved expanded interval.** The test methods and criteria are to follow current UIC Guidance. The Guidance on pressure tests is located in Appendix E of the Permit.
- (b) Loss of Mechanical Integrity. **The operator is required to establish and maintain mechanical integrity (40 CFR 144.51 (q)).** If the well fails to demonstrate mechanical integrity of either **Part I (40 CFR 146.8(a)(1)) or Part II (40 CFR 146.8(a)(2))**, or a loss of mechanical integrity as defined by 40 CFR § 146.8 becomes evident during operation, the permittee shall notify the Director in accordance with Part III, Section E. 10. of this permit. Following any loss of mechanical integrity injection activities shall be terminated immediately; and operations shall not be resumed until the permittee has taken necessary actions to restore integrity to the well and EPA gives written approval to recommence injection.

3. Injection Interval. Injection shall be limited to the Upper Green River Formation in the gross subsurface interval 5,408 feet to 5,948 feet BGS.

4. Injection Pressure Limitation.

- (a) Injection pressure, measured at the surface, shall not exceed an amount that the Director determines is appropriate to ensure that injection does not initiate new fractures or propagate existing fractures in the confining zone adjacent to USDWs.
- (b) The exact pressure limit may be increased or decreased by the Director in order to ensure that the requirements in paragraph (a) are fulfilled. If the

operator determines that a higher maximum allowable injection pressure (MAIP) is justified, the permittee shall conduct a step rate injection test or other authorized well test(s) that will serve to demonstrate that the maximum allowable injection pressure injection will not initiate fractures that will allow fluid movement into USDWs. The test procedures shall be pre-approved in writing by the Director. The Director will specify in writing, to the permittee, any increase or decrease to the injection pressure based upon the test results and/or other parameters reflecting actual injection operations. The Director will make any appropriate changes to the MAIP as a minor modification to the Permit. Until such time that a new demonstration is made and approval is approved by the Director, the injection pressure, measured at the surface, shall not exceed **610 psig**.

5. Injection Volume Limitation. To prevent movement of injected fluid beyond the one half mile aquifer exemption boundary, the operator shall inject no more that a total volume of 14 million barrels of produced water, provided further that in no case shall injection pressure exceed that limit shown in Part II, Section C. 4. (b) of this Permit.

8. **Prior to Recommencing Normal Injection Operations After a Major Workover to Expand the Injection Interval**. Injection operations for the Davis 1-33 A1E SWD may not recommence until the permittee has complied with and submitted the following:

- (a) Completed the perforation from 5,432 feet to 5,462 feet of the expanded injection interval and fracture stimulation of the new and existing perforations and the reinstallation of tubing and packer;
- (b) Conducted a successful mechanical integrity pressure test (MIT) of the well (part I), using a pressure chart recorder that demonstrates the well has mechanical integrity in accordance with 40 CFR § 146.8(a)(1) (and the guidelines discussed in the Permit) and run tests to confirm the well has part II mechanical integrity (as defined in Section 8. (c) below) and has received notice from the Director that such a demonstration is satisfactory. The permittee shall notify EPA two (2) weeks prior to conducting this test so that an authorized representative may be present to witness the test. Results of the test shall be submitted, on EPA MIT Form (Appendix B), to the Director as soon as possible but no later than thirty (30) days after the demonstration.
- (c) Conducted a 24 hour injection test at a pressure of no more than 610 psig., conducted a RATS investigation to determine the flow profile into the injection interval, and conduct a series of temperature surveys to demonstrate part II of mechanical integrity;
- (d) Rework and testing is complete, and the permittee has submitted a new Well Completion Record (Form 7520-12) in Appendix B, and copies of all test results and an analysis of the test results, and

- (i) **The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the Permit, and has provided written authorization; or**
- (ii) **The permittee has not received notice from the Director of his or her intent to inspect or otherwise review the new injection well within thirteen (13) days of the date of the receipt of the Well Rework Record in paragraph (c) of this Permit condition in which case prior inspection or review is waived and the permittee may commence injection.**

All other provisions and conditions of Final Permit No. **UT2881-04555** shall remain as originally issued, or as previously modified.

DRAFT

Date

Stephen S. Tuber
* Assistant Regional Administrator
Office of Partnerships and
Regulatory Assistance

* **NOTE:** The person holding this title is referred to as the "Director" throughout this Permit.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
Phone 800-227-8917
<http://www.epa.gov/region08>

Ref: Underground Injection Control Program

DRAFT EXPANDED AQUIFER EXEMPTION

In compliance with provisions of the Safe Drinking Water Act, as amended, (42 USC 300f-300j-11, commonly known as the SDWA) and attendant regulations incorporated by the U. S. Environmental Protection Agency under Title 40 in the Code of Federal Regulations (40 CFR):

The Green River Formation (as defined below) is exempted as an underground source of drinking water (USDW) in the area located:

- (1) in the subsurface interval of approximately 5,408 ft. to 5,948 ft. (expanded from 5,500 ft. to 5,732 ft.); and,
- (2) within the radius of one half (1/2) mile from the Davis No. 1-33A1E injection well, SE 1/4 of the NW 1/4 (1980 ft. from the north line and 2356 ft from the west line), Section 33, T1S, R1E, Uintah County, Utah.

This aquifer exemption is expanded in conjunction with **Permit No. UT2881-04555**, issued to Flying J Oil and Gas, Inc. for the injection of Class II brine water produced by surrounding Green River Formation oil wells through the Davis No. 1-33A1E injection well and into the Green River Formation at the depth interval from 5,408 ft. to 5,948 ft., based on Underground Injection Control (UIC) regulations found at 40 CFR §144.7 and §146.4 (see Statement of Basis, page 1).

This aquifer exemption has no expiration date.

Signed this date: _____

DRAFT

Stephen S. Tuber
Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

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DIV. OF OIL, GAS & MINING



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Ref: 8-P-W-GW

PUBLIC NOTICE

**INTENT TO ISSUE AN
EXPANSION OF THE INJECTION ZONE, AND
THE AQUIFER EXEMPTION FOR
THE GREEN RIVER FORMATION, AND A
DECREASE IN THE INJECTION PRESSURE
ASSOCIATED WITH
MAJOR PERMIT MODIFICATION NO. 2 OF
EPA FINAL PERMIT
UT2881-04555
TO
Flying J Oil and Gas Inc.**

PURPOSE OF PUBLIC NOTICE

The purpose of this notice is to solicit public comment and to provide an opportunity to request a public hearing regarding the proposal by the Region VIII Office of the U. S. Environmental Protection Agency (EPA) to issue: an expansion of the injection zone and a related expansion of an existing aquifer exemption of the Green River Formation adjacent to the Davis 1-33A1E Class II salt water disposal well (Permit No. UT2881-04555). The original exemption was made on July 11, 2002, for the interval from 5,500 feet to 5,732 feet. This new action also includes a Major Modification of the Permit to expand the injection zone to lower the maximum allowable injection pressure and to establish conditions that must be met prior to receiving authorization to recommence normal injection operations.

BACKGROUND

As part of the recompletion of the Davis1-33A1E, under provisions of UIC Permit UT2881-04555, Flying J Oil and Gas Inc. perforated the permitted injection zone (Green River Interval from 5,500 feet to 5,732 feet in late January 2002. As required by the Permit, the well was then swabbed prior to obtaining a sample. The results of the analysis of the sample indicates that the Green River Formation contains water with a total dissolved solids content of 6,025 mg/liter. Thus, the Green River Formation in the vicinity of the Davis well is an underground source of drinking water (USDW) as defined at 40 CFR §144.3. In this case the regulations at 40 CFR §§144.12 and 146.22 prohibit injection into the proposed injection zone between 5500 and

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5732 feet unless Flying J demonstrates that the zone can be exempted from protection per 40 CFR §146.4.

USDWs are aquifers or portions thereof that contain less than 10,000 mg/l total dissolved solids (TDS) and which are being or could be used as a source of drinking water. The proposed Green River Formation injection zone is classified as an underground source of drinking water (USDW) based upon information supplied by the applicant. According to analyses of formation water from the Green River injection zone in the Davis well, the total dissolved solids (TDS) content of the **water in the proposed injection zone is 6,025 milligrams per liter (mg/l).**

On February 20, 2002, Flying J Oil and Gas Inc. submitted a request for an exemption of the Green River Formation adjacent to the Davis 1-33A1E. This request contained information indicating that there are no existing water supply wells obtaining supplies from this Formation within a one mile radius of the injection well. There is one producing well located approximately one mile to the east that produces oil from the proposed injection horizon. There are two stock watering wells located in the one mile radius that obtain water from wells that are 30 feet and 400 feet in depth. Water wells for domestic supply in this area are either drilled into the shallow alluvium that contains water with a TDS of 500 to 1,500 TDS, or into the Duchesne River Formation that contains water with a TDS of about 500 TDS. A well into the Duchesne River would be 300 to 400 feet deep in this area. The applicant has indicated that this well is located in a rural area near Roosevelt, Utah, and that there are three communities, including Roosevelt within 6 to 10 miles of the well. The applicant has provided information indicating that the cost of drilling and completing a well into the Green River Formation would be approximately \$380,000. The cost of drilling and completing a water supply well into shallower aquifers (less than 400 feet) containing water of better quality is estimated to be less than \$40,000. Additionally, to utilize a well into the Green River as a water supply for a public drinking water system, it would be necessary to build a pipeline to transport the water and a water treatment plant to treat the water sufficiently for potable use. This would require significant additional capital investment and an increased O&M cost.

Based on EPA's review of available information, the shallow aquifers in this area contain ample sources of good quality water to supply the needs of the area. The cost of drilling and completing a well into the Green River Formation along with the associated treatment and transportation costs make it economically impractical to utilize this Formation as a source of supply for a public water system. For these reasons, EPA determined that the Green River Formation fits the criteria of 40 CFR 146.4 (a) and (c). **The exemption of the Green River Formation from 5,500 to 5,732 feet was initially granted on July 11, 2002.**

On January 25, 2003, Flying J Oil and Gas ran an injection test accompanied by a radioactive tracer survey (RATS) and a series of temperature surveys. The results of these surveys indicated that the majority of the fluid was going into the top set of perforations and fluid was migrating upwards out of zone and into sands in the vicinity of 5,430 feet. On February 19, 2003, Flying J submitted a request for an expansion of the injection zone that would encompass

the area of migration seen on the RATS log overlying the existing perforations (5,500 to 5,732 feet) to the top of the Green River at 5,408 feet. The request included an expansion of the lower limit of the interval in the Permit from 5,732 to 5,900. This expansion will include a major sand interval from 5,820 to 5,854 feet. This request for an expansion of the injection zone was followed up with further information regarding the proposed action on March 26, 2003. Flying J requested an expansion of the aquifer exemption to the limits of the proposed injection interval of 5,408 to 5,948. The March 26, 2003 letter included a request to add an additional set of perforation from 5,432 to 5,462 feet. The permittee also indicated that if approval of this proposed major modification is granted, the new perforations will be added followed by the isolation and fracture stimulation of each of the five individual perforated intervals.

The permittee has submitted information that indicates the top of the Green River Formation is confined by the lower Uinta Bentonitic unit. This unit is approximately 150 feet thick at the Davis 1-33A1E well. The Bentonitic unit is tight and has a regional extent outside of the area of review. This areal extent of the unit and its low porosity indicates that it will be adequate to confine the injection horizons in the underlying Green River Formation.

Because of some fluid flow adjacent to the casing at 5,500 feet during the last injectivity test, additional testing is necessary. If this Major Modification of EPA PERMIT UT2881-04555 is approved, the operator will be required to run an injectivity test for a minimum of 24 hours, prior to receiving authority to recommence unrestricted long term injection under the conditions of the Permit. The injectivity test must be run after the new perforations are added and the perforated zones have been stimulated. The injectivity test must be followed by a RATS log and by a series of temperature logs per a plan approved by EPA prior to running the injectivity test. This test will be designed to assess the possible movement of fluid out of zone. If the tests demonstrate that the well has mechanical integrity for part I and part II, authorization will be granted contingent upon the periodic testing of the well for both part I and part II of mechanical integrity.

The Permit for the Davis 1-33A1E was initially written to allow a maximum authorized injection pressure of 1,179 psi. The applicant requested a maximum surface injection pressure (MAIP) of 1,964 psig, and proposed to run a step-rate test if higher pressures are needed. Because of the absence of valid fracture gradient information in this area, EPA has calculated a more conservative injection pressure limitation. A permitted surface injection pressure of 1,179 psig corresponds to an EPA formation fracture pressure gradient of approximately 0.65 psi/ft; this is considered a reasonable interim value for the Upper Green Formation.

On November 11, 2002, a step rate test was conducted on the Davis 1-33A1E to investigate the actual fracture pressure in the injection zone. A plot of the bottom hole pressure vs. rate demonstrates a significant change of slope at about 3068 psi BHP which appears to be the fracture initiation pressure. The perforated interval at the time of the test was from 5500 feet to 5854 feet BGS resulting in a fracture gradient of 0.54 psi/ft. The surface pressure at fracture initiation is 610 psi. Because of the lower fracture pressure determined by the step rate test, EPA proposes to modify this Permit to reduce the MAIP to a value of 610 psi.

The EPA has made a preliminary determination to approve the requested expansion of the injection zone and the associated aquifer exemption, the change in the maximum injection pressure, and the associated requirements for demonstrating the well has both part I and part II of mechanical integrity. Therefore, the EPA is hereby serving notice of intent to issue the expansion of the exemption of the Green River Formation at a depth of 5,408 feet to 5,948 feet within one half (½) mile of the Davis 1-33A1E.

PUBLIC COMMENTS

All data submitted by the applicant are contained in the administrative record. The Draft Aquifer Exemption, and a Statement of Basis which discusses exemption are available for public inspection from 9:00 a.m. to 4:00 p.m. by contacting the following office:

Mr. Paul S. Osborne, Mail Code 8P-W-GW
U.S. Environmental Protection Agency
Region VIII
999 18th Street, Suite 300
Denver, CO 80202-2466
(303) 312-6125

Public comments are encouraged and will be accepted, in writing, at the Denver Office for a period of thirty (30) days after publication of this notice. A request for a public hearing should be made in writing and should state the nature of the issues proposed to be raised at the hearing. A public hearing will be held only if significant interest is shown.

FINAL PERMIT DECISION AND APPEAL PROCESS

After the hearing and the close of the public comment period, EPA will issue a Final Aquifer Exemption and will notify all commentors regarding this decision. The decision will be to issue, deny, or modify the aquifer exemption. The final decision shall become effective thirty (30) days after the final decision is issued, unless no commentors request a change to the draft proposal in which case the exemption shall become effective immediately upon issuance.

Within thirty (30) days after a final permit decision has been issued, any person who filed comments on the Draft Aquifer Exemption and Major Permit Modification or participated in the public hearing may petition the Administrator to review the permit decision. Commentors are directed to 40 CFR §124.15 through §124.20 for the regulations and procedural requirements governing this appeal process.

Date of Publication



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

**REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
Phone 800-227-8917
<http://www.epa.gov/region08>**

Prepared on June 20, 2003

Ref: 8P-W-GW

**FINAL ADDENDUM TO THE
STATEMENT OF BASIS
FOR THE DAVIS 1-33A1E**

**FOR AN EXPANSION OF THE INJECTION ZONE,
AN EXPANSION OF THE AQUIFER EXEMPTION
OF THE GREEN RIVER FORMATION AND A
DECREASE IN THE INJECTION PRESSURE
ASSOCIATED WITH
MAJOR PERMIT MODIFICATION NO. 2
EPA PERMIT
UT 20881-04555**

**Flying J Oil and Gas, Inc.
Davis 1-33A1E SWD
Uintah County, Utah**

As part of the recompletion of the Davis1-33A1E, under provisions of UIC Permit **UT2881-04555**, Flying J Oil and Gas Inc. perforated the permitted injection zone (Green River Interval from 5,500 feet to 5,732 feet) in late January 2002. As required by the Permit, the well was then swabbed prior to obtaining a sample. The results of the analysis of the sample indicates that the Green River Formation contains water with a total dissolved solids content of 6,025 mg/liter. Thus, the Green River Formation in the vicinity of the Davis well is an underground source of drinking water (USDW) as defined at 40 CFR §144.3. In this case the regulations at 40 CFR §§144.12 and 146.22 prohibit injection into the proposed injection zone between 5500 and 5732 feet unless Flying J demonstrates that the zone can be exempted from protection per 40 CFR §146.4.

USDWs are aquifers or portions thereof that contain less than 10,000 mg/l total dissolved solids (TDS) and which are being or could be used as a source of drinking water. The proposed Green River Formation injection zone is classified as an underground source of drinking water (USDW) based upon information supplied by the applicant. According to analyses of formation water from the Green River injection zone in the Davis well, the total dissolved solids (TDS) content of the **water in the proposed injection zone is 6,025 milligrams per liter (mg/l)**. Because it contains water of less than 10,000 mg/l TDS, the Green River Formation is defined as a USDW in this area and an aquifer exemption is required for this injection operation. According to UIC regulations at 40 CFR 146.4, an aquifer may be exempted from protection as a USDW based upon the following criteria:



- (a) the aquifer does not currently serve as a source of drinking water; and,
- (b) it is mineral, hydrocarbon or geothermal energy producing, or can be demonstrated by a permit applicant as part of a permit application for a Class II or III operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible, or
- (c) the total dissolved solids content of the ground water is more than 3,000 and less than 10,000 mg/L and it is not reasonably expected to supply a public water system.

On February 20, 2002, Flying J Oil and Gas Inc. submitted a request for an exemption of the Green River Formation adjacent to the Davis 1-33A1E. This request contained information indicating that there are no existing water supply wells obtaining supplies from this Formation within a one mile radius of the injection well. There is one producing well located approximately one mile to the east that produces oil from the proposed injection horizon. There are two stock watering wells located in the one mile radius that obtain water from wells that are 30 feet and 400 feet in depth. Water wells for domestic supply in this area are either drilled into the shallow alluvium that contains water with a TDS of 500 to 1,500 TDS, or into the Duchesne River Formation that contains water with a TDS of about 500 TDS. A well into the Duchesne River would be 300 to 400 feet deep in this area. The applicant has indicated that this well is located in a rural area near Roosevelt, Utah, and that there are three communities, including Roosevelt within 6 to 10 miles of the well. The applicant has provided information indicating that the cost of drilling and completing a well into the Green River Formation would be approximately \$380,000. The cost of drilling and completing a water supply well into shallower aquifers (less than 400 feet) containing water of better quality is estimated to be less than \$40,000. Additionally, to utilize a well into the Green River as a water supply for a public drinking water system, it would be necessary to build a pipeline to transport the water and a water treatment plant to treat the water sufficiently for potable use. This would require significant additional capital investment and an increased O&M cost.

Based on EPA's review of available information, the shallow aquifers in this area contain ample sources of good quality water to supply the needs of the area. The cost of drilling and completing a well into the Green River Formation along with the associated treatment and transportation costs make it economically impractical to utilize this Formation as a source of supply for a public water system. For these reasons, EPA determined that the Green River Formation fits the criteria of 40 CFR 146.4 (a) and (c). The exemption of the Green River Formation from 5,500 to 5,732 feet was granted on July 11, 2002. By this action, EPA exempted the Green River Formation (5,500 to 5,732 feet) from protection as a USDW in an area within a one half (1/2) mile radius of the Davis 1-33A1E. To assure protection of the reservoir located outside of the exempted zone, the Final Permit for the Davis 1-33A1E was also modified as part of the granting of the aquifer exemption, and a volume limit is placed (Part II Section C. (5)) in the Permit. This limits the total volume of injection to a maximum of 14 million barrels over the life of the project. The proposed limitation is about 1 million barrels less than the estimated volume of the exempted reservoir to provide a buffer.

On January 25, 2003, Flying J Oil and Gas ran an injection test accompanied by a radioactive tracer survey (RATS) and a series of temperature surveys. The results of these surveys indicated that the majority of the fluid was going into the top set of perforations and fluid was migrating upwards out of zone and into sands in the vicinity of 5,430 feet. On February 19, 2003, Flying J submitted a request for an expansion of the injection zone that would encompass the area of migration seen on the RATS log overlying the existing perforations (5,500 to 5,732 feet) to the top of the Green River at 5,408 feet. The request included an expansion of the lower limit of the interval in the Permit from 5,732 to 5,900. This expansion will include a major sand

interval from 5,820 to 5,854 feet. This request for an expansion of the injection zone was followed up with further information regarding the proposed action on March 26, 2003. Flying J requested an expansion of the aquifer exemption to the limits of the proposed injection interval of 5,408 to 5,900. The March 26, 2003 letter included a request to add an additional set of perforation from 5,432 to 5,462 feet. The permittee also indicated that if approval of this proposed major modification is granted, the new perforations will be added followed by the isolation and fracture stimulation of each of the five individual perforated intervals.

The permittee has submitted information that indicates the top of the Green River Formation is confined by the lower Uinta Bentonitic unit. This unit is approximately 200 feet thick at the Davis 1-33A1E well. The bentonitic unit is tight and has a regional extent outside of the area of review. This areal extent of the unit and its low porosity indicates that it will be adequate to confine the injection horizons in the underlying Green River Formation.

The applicant has indicated that they believe that the cement adjacent to the Davis 1-33A1E is adequate to prevent upward fluid flow adjacent to the casing. Because of some fluid flow adjacent to the casing at 5,500 feet during the last injectivity test, additional testing is necessary. If this Major Modification of EPA PERMIT UT2881-04555 is approved, the operator will be required to run an injectivity test for a minimum of 24 hours, prior to receiving authority to recommence unrestricted long term injection under the conditions of the Permit. The injectivity test must be run after the new perforations are added and the perforated zones have been stimulated. The injectivity test must be followed by a RATS log and by a series of temperature logs per a plan approved by EPA prior to running the injectivity test. This test will be designed to assess the possible movement of fluid out of zone. This information must be submitted to EPA for review, approval and issuance of a final authorization to inject. If the tests demonstrate that the well has mechanical integrity for part I and part II, authorization will be granted contingent upon the periodic testing of the well for both part I and part II of mechanical integrity.

The Permit for the Davis 1-33A1E was initially written to allow a maximum authorized injection pressure of 1,179 psi. The applicant requested a maximum surface injection pressure (MAIP) of 1,964 psig, and proposed to run a step-rate test if higher pressures are needed. Because of the absence of valid fracture gradient information in this area, EPA has calculated a more conservative injection pressure limitation. A permitted surface injection pressure of 1,179 psig corresponds to an EPA formation fracture pressure gradient of approximately 0.65 psi/ft; this is considered a reasonable interim value for the Upper Green Formation until such time the formation fracture pressure is determined with a Step-Rate Injectivity Test (to be performed within six (6) months of authorization to inject). The permitted 1,179 psig MAIP was considered adequate to protect any possible USDWs.

On November 11, 2002, a step rate test was conducted on the Davis 1-33A1E to investigate the actual fracture pressure in the injection zone. A plot of the bottom hole pressure vs. rate demonstrates a significant change of slope at about 3068 psi BHP which appears to be the fracture initiation pressure. The perforated interval at the time of the test was from 5500 feet to 5854 feet BGS resulting in a fracture gradient of 0.54 psi/ft. The surface pressure at fracture initiation is 610 psi.

Because of the lower fracture pressure determined by the step rate test, EPA proposes to modify this Permit to reduce the MAIP to a value of 610 psi. If the permittee wants a higher MAIP, it will be necessary to run either another step rate test or provide a demonstration that fluids will not move out of the injection zone via fractures.

The proposal to modify the Flying J Permit for the Davis 1-33A1E (UT 20881-04555) and to expand the area of exemption was issued in draft form and a 30 day Public Notice, including an opportunity for a hearing was published in the Vernal express on May 14, 2003. A 2nd Public Notice was published in the Uintah Basin Standard on May 20, 2003. The official record for Permit Modification # 2 expired on June 19, 2003, and no comments were received during the comment period. Based on the material submitted, EPA has made a decision to issue Major Modification No. 2 and the associated expanded aquifer exemption. At EPA's initiative, there has been a slight modification of the proposed Permit requirements relating to mechanical integrity. After completion of the workover, the operator is required to demonstrate Part II of mechanical integrity by running a baseline temperature prior to running a 24 hour injection test. At the end of the injection test, the operator is required to run a RATS to define the injection profile and to show that the fluids are confined to the injection interval.

Upon demonstrating Part I and II of mechanical integrity upon completion of the workover, the operator will be authorized to inject for a minimum of 90 days and a maximum of 120 days. After injection of at least 90 days, the well must be shut-in and at least three temperature logs run that demonstrate continued confinement of the injection fluid within the authorized injection interval.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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Phone 800-227-8917
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Ref: 8P-W-GW

MAJOR PERMIT MODIFICATION No. 2
EPA FINAL PERMIT
UT20881-04555

Flying J Oil and Gas, Inc.
Davis 1-33A1E SWD
Uintah County, Utah

Pursuant to Part III, Section B. 1. of the above-referenced Final Permit, a Major Permit Modification No. 2 is made. These changes are as follows:

ORIGINAL Permit Language (April 20, 2001) as modified by Minor Modification No. 1 and Major Modification No. 1:

PART I. AUTHORIZATION TO CONVERT AND OPERATE

Pursuant to the Underground Injection Control Regulations of the U. S. Environmental Protection Agency codified at Title 40 of the Code of Federal Regulations, Parts 124, 144, 146, and 147,

Flying J Oil and Gas Inc.
333 West Center Street
North Lake, Utah 84054

is hereby authorized to convert and operate a Lower Green River and Wasatch Formations producer to a Class II Upper Green River salt water disposal (SWD) well which will be known as the Davis 1-33 A1E SWD. The proposed Class II Davis 1-33 A1E SWD is located in the SE NW (2,356 feet from the west line and 1980 feet from the north line) Section 33, Township 1 South, Range 1 East, Uintah County, Utah. The well is located within the exterior boundaries of the Uintah-Ouray Indian Reservation. Injection shall be for the purpose of disposing of permittee produced water from Lower Green River and Wasatch producing wells in the Altamont/Bluebell oil fields. Water disposal shall be in accordance with conditions set forth herein. **Injection between the outermost casing protecting underground sources of drinking water (USDWs) and the wellbore is prohibited.** If the well is not converted within one (1) year from the effective date of this Permit, the Permit shall expire as provided by Part II, Section A. 6.

Injection activities shall not commence until the operator has fulfilled all applicable conditions of this Permit and has received written authorization from the Director. "Prior to Commencing Injection" requirements are set forth in Part II, Section C. 1. of this Permit.



All conditions set forth herein refer to Title 40 Parts 124, 144, 146, and 147 of the Code of Federal Regulations and are regulations that are in effect on the date that this Permit becomes effective.

This Permit consists of a total of thirty-seven (37) pages and includes all items listed in the Table of Contents. Further, it is based upon representations made by the permittee and on other information contained in the administrative record. Any information submitted by the permittee found to be incorrect may be cause for modification or termination of the permit and/or may subject the permittee to formal enforcement action. **It is the responsibility of the permittee to read, understand, and carryout all provisions of this Permit.**

This Permit and the authorization to inject are issued for the operating life of the well, unless terminated (Part III, Section B), or except upon automatic expiration due to prolonged postponement of conversion (Part II, Section A. 6.). **The Permit will be reviewed by EPA at least every five (5) years to determine whether action under 40 CFR § 144.36 (a) is warranted.** The Permit will expire upon delegation of primary enforcement responsibility for the UIC Program to the State of Utah, Division of Oil, Gas, and Mining, or the Uintah-Ouray Indian Agency, unless either the State or the Agency has adequate authority, and chooses, to adopt and enforce this permit as a State Permit or as an Agency Permit.

Issued April 20, 2001.

This Permit shall become effective April 20, 2001.

* Signed by Stephen Tuber for
Kerrigan G. Clough
Assistant Regional Administrator
Office of Partnerships and
Regulatory Assistance

* **NOTE:** The person holding this title is referred to as the "Director" throughout this Permit.

PART II. SPECIFIC PERMIT CONDITIONS

C. WELL OPERATION

2. Mechanical Integrity.

- (a) Schedule for Demonstration of Mechanical Integrity. A demonstration of both part I and part II of mechanical integrity shall be made at regular intervals, no less frequently than once every five (5) years from the

effective date of this Permit, in accordance with 40 CFR § 146.8. Part II of mechanical integrity shall be demonstrated with a series of temperature logs. The test methods and criteria are to follow current UIC Guidance. The Guidance on pressure tests is located in Appendix E of the Permit.

- (b) Loss of Mechanical Integrity. **The operator is required to establish and maintain mechanical integrity (40 CFR 144.51 (q)).** If the well fails to demonstrate mechanical integrity, or a loss of mechanical integrity as defined by 40 CFR § 146.8 becomes evident during operation, the permittee shall notify the Director in accordance with Part III, Section E. 10. of this permit. Following any loss of mechanical integrity, injection activities shall be terminated immediately; and operations shall not be resumed until the permittee has taken necessary actions to restore integrity to the well and EPA gives written approval to recommence injection.
- 3. Injection Interval. Injection shall be limited to the Upper Green River Formation in the gross subsurface interval 5,500 feet to 5,732 feet.
- 4. Injection Pressure Limitation.
 - (a) Injection pressure, measured at the surface, shall not exceed an amount that the Director determines is appropriate to ensure that injection does not initiate new fractures or propagate existing fractures in the confining zone adjacent to USDWs.
 - (b) The exact pressure limit may be increased or decreased by the Director in order to ensure that the requirements in paragraph (a) are fulfilled. In order to determine an exact pressure limit, the permittee shall conduct a step rate injection test or other authorized well test(s) that will serve to determine the fracture pressure of the injection zone. The test procedures shall be pre-approved in writing by the Director. The Director will specify in writing, to the permittee, any increase or decrease to the injection pressure based upon the test results and/or other parameters reflecting actual injection operations. Until such time that this demonstration and approval is made, the initial injection pressure, measured at the surface, shall not exceed **1,179 psig**.
- 5. Injection Volume Limitation. To prevent movement of injected fluid beyond the one half mile aquifer exemption boundary, the operator shall inject no more than a total volume of 14 million barrels of produced water, provided further that in no case shall injection pressure exceed that limit shown in Part II, Section C. 4. (b) of this permit. (modified July 11, 2002 by Major Permit Modification #1).

IS MODIFIED TO READ:

PART I. AUTHORIZATION TO CONVERT AND OPERATE

Pursuant to the Underground Injection Control Regulations of the U. S. Environmental Protection Agency codified at Title 40 of the Code of Federal Regulations, Parts 124, 144, 146, and 147,

Flying J Oil and Gas Inc.
333 West Center Street
North Lake, Utah 84054

is hereby authorized to convert and operate a Lower Green River and Wasatch Formations producer to a Class II Upper Green River salt water disposal (SWD) well which will be known as the Davis 1-33 A1E SWD. The proposed Class II Davis 1-33 A1E SWD is located in the SE NW (2,356 feet from the west line and 1980 feet from the north line) Section 33, Township 1 South, Range 1 East, Uintah County, Utah. The well is located within the exterior boundaries of the Uintah-Ouray Indian Reservation. Injection shall be for the purpose of disposing of permittee produced water from Lower Green River and Wasatch producing wells in the Altamont/Bluebell oil fields. Water disposal shall be in accordance with conditions set forth herein. **Injection between the outermost casing protecting underground sources of drinking water (USDWs) and the wellbore is prohibited.** If the well is not converted within one (1) year from the effective date of this Permit, the Permit shall expire as provided by Part II, Section A. 6.

Injection activities shall not commence until the operator has fulfilled all applicable conditions of this Permit and has received written authorization from the Director. "Prior to Commencing Injection" requirements are set forth in Part II, Section C. 1. of this Permit.

All conditions set forth herein refer to Title 40 Parts 124, 144, 146, and 147 of the Code of Federal Regulations and are regulations that are in effect on the date that this Permit becomes effective.

This Permit consists of a total of thirty-seven (37) pages and includes all items listed in the Table of Contents. Further, it is based upon representations made by the permittee and on other information contained in the administrative record. Any information submitted by the permittee found to be incorrect may be cause for modification or termination of the permit and/or may subject the permittee to formal enforcement action. **It is the responsibility of the permittee to read, understand, and carryout all provisions of this Permit.**

This Permit and the authorization to inject are issued for the operating life of the well, unless terminated (Part III, Section B), or except upon automatic expiration due to prolonged postponement of conversion (Part II, Section A. 6.). **The Permit will be reviewed by EPA at least every five (5) years to determine whether action under 40 CFR § 144.36 (a) is warranted.** The Permit will expire upon delegation of primary enforcement responsibility for the UIC Program to the State of Utah, Division of Oil, Gas, and Mining, or the Uintah-Ouray Indian Agency, unless either the State or the Agency has adequate authority, and chooses, to adopt and enforce this permit as a State Permit or as an Agency Permit.

Major Permit Modification No. 2 Issued _____.

This Modified Permit shall become effective _____.



Stephen S. Tuber
*Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

* **NOTE:** The person holding this title is referred to as the "Director" throughout this Permit.

PART II. SPECIFIC PERMIT CONDITIONS

C. WELL OPERATION

2. Mechanical Integrity.

- (a) **Schedule for Demonstration of Mechanical Integrity.** A demonstration of both part I (40 CFR 146.8(a)(1)) and part II (40 CFR 146.8(a)(2)) of mechanical integrity shall be made at regular intervals, no less frequently than once every five (5) years from the effective date of this Permit, in accordance with 40 CFR § 146.8. Part I of mechanical integrity shall be demonstrated with a standard annular pressure test. **Part II of mechanical integrity shall be demonstrated with both a radioactive tracer survey (RATS) and a series of temperature logs as outlined in Section C. 2(c) and Section C. 8(c).** A demonstration of mechanical integrity for both part I and part II shall be required after completion of any activities involving a workover, perforation of the original permitted interval, or perforation of an approved expanded interval. The test methods and criteria are to follow current UIC Guidance. The Guidance on pressure tests is located in Appendix E of the Permit. The Guidance for the RATS and the temperature survey is attached to this modification.
- (b) **Loss of Mechanical Integrity.** **The operator is required to establish and maintain mechanical integrity (40 CFR 144.51 (q)).** If the well fails to demonstrate mechanical integrity of either **Part I (40 CFR 146.8(a)(1)) or Part II (40 CFR 146.8(a)(2))**, or a loss of mechanical integrity as defined by 40 CFR § 146.8 becomes evident during operation, the permittee shall notify the Director in accordance with Part III, Section E. 10. of this permit. Following any loss of mechanical integrity injection activities shall be terminated immediately; and operations shall not be resumed until the permittee has taken necessary actions to restore integrity to the well and EPA gives written approval to recommence injection.
- (c) After the operator has completed the requirements listed in Section C. 8 of this Permit and received Authorization to recommence injection, the operator shall be authorized to inject for a minimum period of 90 days, but no more than 120 days. At the end of this period of injection, the operator shall shut-in the well and run a series of temperature logs to demonstrate that prolonged injection does not initiate fluid movement out of the injection zone.

The temperature surveys shall include at least three shut-in passes from a point located approximately 100 feet above the confining zone to total

depth. The first shut-in temperature log should be run after a shut-in period of 1 hour (see Guidance on temperature survey). The operator shall submit the log results to EPA for approval prior commencing unrestricted injection.

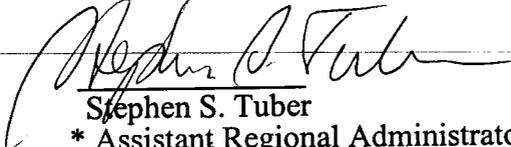
- (d) After receiving authorization for unrestricted injection, the operator shall maintain mechanical integrity per Section C 2. (b) and (c) of this Permit (above).
3. Injection Interval. Injection shall be limited to the Upper Green River Formation in the gross subsurface interval 5,408 feet to 5,948 feet BGS.
4. Injection Pressure Limitation.
- (a) Injection pressure, measured at the surface, shall not exceed an amount that the Director determines is appropriate to ensure that injection does not initiate new fractures or propagate existing fractures in the confining zone adjacent to USDWs.
 - (b) The exact pressure limit may be increased or decreased by the Director in order to ensure that the requirements in paragraph (a) are fulfilled. If the operator determines that a higher maximum allowable injection pressure (MAIP) is justified, the permittee shall conduct a step rate injection test or other authorized well test(s) that will serve to demonstrate that the maximum allowable injection pressure injection will not initiate fractures that will allow fluid movement into USDWs. The test procedures shall be pre-approved in writing by the Director. The Director will specify in writing, to the permittee, any increase or decrease to the injection pressure based upon the test results and/or other parameters reflecting actual injection operations. The Director will make any appropriate changes to the MAIP as a minor modification to the Permit. Until such time that a new demonstration is made and approval is approved by the Director, the injection pressure, measured at the surface, shall not exceed **610 psig**.
5. Injection Volume Limitation. To prevent movement of injected fluid beyond the one half mile aquifer exemption boundary, the operator shall inject no more than a total volume of 14 million barrels of produced water, provided further that in no case shall injection pressure exceed that limit shown in Part II, Section C. 4. (b) of this Permit.

8. **Prior to Recommencing Normal Injection Operations After a Major Workover to Expand the Injection Interval.** Injection operations for the Davis 1-33 A1E SWD may not recommence until the permittee has complied with and submitted the following:
- (a) Completed the perforation from 5,432 feet to 5,462 feet of the expanded injection interval and fracture stimulation of the new and existing perforations and the reinstallation of tubing and packer;

- (b) Conducted a successful mechanical integrity pressure test (MIT) of the well (part I), using a pressure chart recorder that demonstrates the well has mechanical integrity in accordance with 40 CFR § 146.8(a)(1) (and the guidelines discussed in the Permit) and run tests to confirm the well has part II mechanical integrity (as defined in Section 8. (c) and (d) below) and has received notice from the Director that such a demonstration is satisfactory. The permittee shall notify EPA two (2) weeks prior to conducting this test so that an authorized representative may be present to witness the test. Results of the test shall be submitted, on EPA MIT Form (Appendix B), to the Director as soon as possible but no later than thirty (30) days after the demonstration.
- (c) Conducted a baseline temperature log, prior to commencing the injection test, from a point at least 100 feet above the confining zone to TD of the well;
- (d) Conducted a 24 hour injection test at a pressure of no more than 610 psig., conducted a RATS investigation to determine the flow profile into the injection interval and to demonstrate part II of mechanical integrity (initial containment of Fluid in the injection zone);
- (e) Rework and testing is complete, and the permittee has submitted a new Well Completion Record (Form 7520-12) in Appendix B, and copies of all test results and an analysis of the test results, and
 - (i) The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the Permit, and has provided written authorization; or
 - (ii) The permittee has not received notice from the Director of his or her intent to inspect or otherwise review the new injection well within thirteen (13) days of the date of the receipt of the Well Rework Record in paragraph (c) of this Permit condition in which case prior inspection or review is waived and the permittee may commence injection.

All other provisions and conditions of Final Permit No. UT2881-04555 shall remain as originally issued, or as previously modified.

Date _____


 Stephen S. Tuber
 * Assistant Regional Administrator
 Office of Partnerships and
 Regulatory Assistance

* NOTE: The person holding this title is referred to as the "Director" throughout this Permit.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
Phone 800-227-8917
<http://www.epa.gov/region08>

Ref: Underground Injection Control Program

FINAL EXPANDED AQUIFER EXEMPTION

In compliance with provisions of the Safe Drinking Water Act, as amended, (42 USC 300f-300j-11, commonly known as the SDWA) and attendant regulations incorporated by the U. S. Environmental Protection Agency under Title 40 in the Code of Federal Regulations (40 CFR):

The Green River Formation (as defined below) is exempted as an underground source of drinking water (USDW) in the area located:

- (1) in the subsurface interval of approximately 5,408 ft. to 5,948 ft. (expanded from 5,500 ft. to 5,732 ft.); and,
- (2) within the radius of one half (1/2) mile from the Davis No. 1-33A1E injection well, SE 1/4 of the NW 1/4 (1980 ft. from the north line and 2356 ft from the west line), Section 33, T1S, R1E, Uintah County, Utah.

This aquifer exemption is expanded in conjunction with **Permit No. UT20881-04555**, issued to Flying J Oil and Gas, Inc. for the injection of Class II brine water produced by surrounding Green River Formation oil wells through the Davis No. 1-33A1E injection well and into the Green River Formation at the depth interval from 5,408 ft. to 5,948 ft., based on Underground Injection Control (UIC) regulations found at 40 CFR §144.7 and §146.4 (see Statement of Basis, page 1).

This aquifer exemption has no expiration date.

Signed this date: _____.

Stephen S. Tuber
Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
Phone 800-227-8917
<http://www.epa.gov/region08>

Ref: 8P-W-GW

JUN 24 2003

RECEIVED

JUN 27 2003

DIV. OF OIL, GAS & MINING

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. James W. Wilson
Vice President of Operations
Flying J Oil and Gas Inc.
333 West Center Street
North Salt Lake City, Utah 84054

RE: UNDERGROUND INJECTION CONTROL (UIC)
**Final Aquifer Exemption and Major Permit
Modification No. 2 for the Davis No. 1-33A1E
SWD**, Green River Formation - EPA Permit No.
UT2881-04555 Bluebell/ Altamont Field, Uintah
County, Utah

Dear Mr. Wilson:

On May 14, 2003, EPA proposed Major Modification No. 2 for the Davis No. 1-33A1E. This Major Modification was at the request of Flying J Oil and Gas per a February 19, 2003, letter from Mr. Douglas Howard. Flying J requested an expansion of the aquifer exemption for the remainder of the Green River Formation above the existing perforations and approval to add an additional set of perforations from 5,432 to 5,462 feet below ground surface (BGS). The request also indicated that if approval of this proposed major modification is granted, the new perforations will be added followed by the isolation and fracture stimulation of each of the five individual perforated intervals.

The proposed Major Modification No. 2 and the associated aquifer exemption was issued for Public Notice with an initial publication in the Vernal Express on May 14, 2003. A 2nd Public Notice was published in the Uintah Basin Standard on May 20, 2003. To assure protection of the reservoir located outside of the exempted zone, the Final Permit for the Davis 1-33A1E was modified as part of the proposed action. The Draft Major Permit Modification No. 2 proposed to expand the injection interval and the aquifer exemption to include all of the Green River Formation from the top at 5,408 feet BGS to the top of the lower confining zone at 5,948 feet BGS (see Part II Section C. (3)). The Permit Modification also lowered the injection pressure to



610 psig based on the results of the November 11, 2002, step-rate test (see Part II Section C. (4)). Finally the Permit authorized recompletion of the well to add new perforations and to require that the well be tested to demonstrate that the well has mechanical integrity for both Part I and Part II. The Permit modification also required that Part II of mechanical integrity be demonstrated by conducting a 24 hour injection test followed by a radioactive tracer survey and several shut-in temperature logs to establish the nature of the injection profile and to demonstrate that the fluid is staying within the permitted interval (see Part II Section C. (8)).

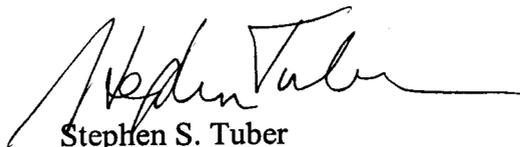
The official record for Permit Modification No. 2 expired on June 19, 2003, and no comments were received during the comment period. Based on the material submitted, EPA has made a decision to issue Major Modification No. 2 and the associated expanded aquifer exemption. At EPA's initiative, there has been a slight modification of the proposed Permit requirements relating to mechanical integrity. After completion of the workover, the operator is required to demonstrate Part II of mechanical integrity by running a baseline temperature prior to running a 24 hour injection test. At the end of the injection test, the operator is required to run a RATS to define the injection profile and to show that the fluids are confined to the injection interval.

Upon demonstrating Part I and II of mechanical integrity after completion of the workover, the operator will be authorized to inject for a minimum of 90 days and a maximum of 120 days. After injection of at least 90 days, the well must be shut-in and at least three temperature logs run that demonstrate continued confinement of the injection fluid within the authorized injection interval.

Enclosed is a copy of the Final Aquifer Exemption, the Final Major Modification No. 2, the Final Addendum to the Statement of Basis, and copies of the EPA Guidance for RATS and temperature surveys. **There can be no recommencement of normal injection into the Davis 1-33A1E until the process is completed and the Major Modification No. 2 and the requirements of Section C. 8 of the Permit have been completed.**

If you have any questions, please contact Mr. Paul S. Osborne at (303) 312-6125, in this regard. **Also, please direct all correspondence to the ATTENTION: Paul S. Osborne, citing Mail Code: 8P-W-GW, very prominently.**

Sincerely,



Stephen S. Tuber
Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

Enclosures: Final Aquifer Exemption
Final Addendum to the Statement of Basis
Major Permit Modification No. 2
Guidance for temperature surveys
and Radioactive tracer surveys

cc: Mr. Gilbert Hunt
State of Utah Natural Resources
Division of Oil, Gas and Mining

Mr. Douglas G. Howard
Flying J Oil and Gas
3500 East 500 North
Roosevelt, Utah 84066

Mr. D. Floyd Wopsock, Chairman
Uintah & Ouray Business Committee

Ms. Elaine Willie, Environmental Director
Ute Indian Tribe

Mr. Chester Mills
BIA - Uintah & Ouray Agency

Mr. Jerry Kenczka
BLM - Vernal District Office

Mr Mario Salazar, OGWDW

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

<p align="center">SUNDRY NOTICE AND REPORTS ON WELLS</p> <p><small>Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.</small></p>		5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
1. TYPE OF WELLS [X] Oil Well [] Gas Well [X] Other <i>WD</i>		7. UNIT or CA AGREEMENT NAME: 9C 000176
2. NAME OF OPERATOR Flying J Oil & Gas Inc		8. WELL NAME and NUMBER Davis 1-33A1E
3. ADDRESS OF OPERATOR PO Drawer 130 Roosevelt, Utah 84066		9. API NUMBER: 43 047 30384
PHONE NUMBER 435-722-5166		10. FIELD AND POOL, OR WILDCAT Bluebell
4. LOCATION OF WELLS FOOTAGES AT SURFACE: 2356' FWL 1980' FNL		COUNTY: Uintah
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SENW Sec 33 T1S R1E		STATE: UTAH

11 CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT <small>(Submit in Duplicate)</small> <small>Approximate date work will start</small>	<input checked="" type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PLUG BACK <input type="checkbox"/> PRODUCTION (START/RESUME) <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> RECOMPLETE-DIFFERENT FORMATION
<input checked="" type="checkbox"/> SUBSEQUENT REPORT <small>(Submit Original Form Only)</small> <small>Date of work completion:</small> 3/30/2004	<input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TEMPORARILY ABANDON <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> WATER SHUT-OFF <input checked="" type="checkbox"/> OTHER <u>Additional perforations</u>	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS, Clearly show all pertinent details including dates, depths, volumes, etc.

Perforated from 5432' to 5462', 30', 4" gun, 4 SPF, 120 holes.
Acidized injection perforations, 5698' to 5732 with 3500 gal of 15% HCL acid with additives

NAME (PLEASE PRINT) <u>Larry Rich</u>	TITLE <u>Production Superintendent</u>
SIGNATURE 	DATE <u>April 19, 2004</u>

(This space for State use only)

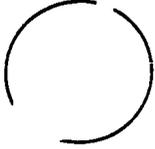
RECEIVED

APR 22 2004

DIV. OF OIL, GAS & MINING

RECEIVED

MAY 28 2004



FLYING J OIL & GAS INC.

DIV. OF OIL, GAS & MINING

333 WEST CENTER STREET • NORTH SALT LAKE, UTAH 84054

PHONE (801) 296-7700 • FAX (801) 296-7888

May 27, 2004

Mr. Paul S. Osborne
United States E.P.A.
Region 8
999 18th Street, Suite 3000
Denver, CO 80202-2466

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY

Mail Code: 8P-W-GW

RE: Underground Injection Control (UIC)
Davis 1-33A1E SWD
Green River Formation – EPA Permit No.
UT2881-04555 Bluebell/Altamont Field,
Uintah County, Utah

Dear Mr. Osborne:

Attached is a copy of the State Sundry Notice for work authorized under Major Permit Modification No. 2 for the Davis 1-33A1E SWD. The workover included perforating a zone at 5,432 to 5,462 feet and acidizing the entire injection zone. During the acid stimulation, communication developed between the top injection perforation and squeeze holes at a depth of 5350 feet. To confine injection to the approved zone, it was necessary to squeeze additional cement into the squeeze holes to fill the void between casing and bore hole down to the top of the injection zone. The cementing operation appears to have been successful and we are now prepared to perform MIT Parts I and II as required under the referenced permit.

Although the squeeze holes were successfully pressure tested following the recent cement squeeze, dual injection packers were installed with one placed above and the other below the squeeze holes. The packers were placed as such to add redundancy in protecting the squeeze holes from injection. Our intentions to install the dual packers and their setting depths were verbally approved by you on May 25, 2004.

Flying J Oil & Gas plans to perform the MIT Part I and run a baseline temperature and RATS as required for the MIT Part II as soon as contractors can be scheduled. Tentative scheduling is to run the baseline temperature and gamma ray surveys on June 3, inject

overnight, and then run RATS on June 4, 2004. Assuming these surveys indicate containment as expected, injection equipment will be installed so the 90 to 120 day injection test to be followed by temperature surveys can be initiated before the June 24, 2004 permit expiration. Please advise if this expedited MIT scheduling is unsatisfactory with your office.

For your reference a revised and updated well bore schematic for the Davis 1-33A1E is attached with the State Sundry Notice. It reflects the changes made during the last workover including the injection packer depths and the added perforations. Please note that the depths of injection perforations and squeeze holes on the schematic are given as cased-hole log depths rather than the open-hole log depths referenced in previous communications. This was done to better correlate future temperature and injection surveys which use casing collars for depth control.

Thank you for all your assistance. If you have any questions concerning this matter, please contact me at (801) 296-7772.

Sincerely,
Flying J Oil & Gas Inc.



Ellis M. Peterson
Senior Petroleum Engineer

Enclosures: Copy of Sundry Notice
Well Bore Schematic

cc: Mr. Gil Hunt
State of Utah Natural Resources
Division of Oil, Gas and Mining

Ms. Elaine Willie, Environmental Coordinator
Northern Ute Indian Tribe

Mr. Jerry Kenczka
BLM – Vernal Field Office

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS		5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
		7. UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>SWD</u>	8. WELL NAME and NUMBER: Davis 1-33A1E	
2. NAME OF OPERATOR: Flying J Oil & Gas Inc.		9. API NUMBER: 4304730384
3. ADDRESS OF OPERATOR: 333 West Center St. CITY North Salt Lake STATE UT ZIP 84054	PHONE NUMBER: (801) 296-7700	10. FIELD AND POOL, OR WILDCAT: Bluebell - Upper Green River
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1980' FNL 2356' FWL		COUNTY: Uintah
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SENW 33 1 S 1 E U		STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: <input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: 5/25/2004	<input checked="" type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input checked="" type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>Cement squeeze casing</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

- Flying J Oil & Gas completed the following operations to prepare the subject well for SWD:
1. Perforated the Upper Green River from 5432' to 5462' (DIL depths) with 4 SPF using 4" guns.
 2. Acidized Upper Green River perforations from 5432' to 5732' using 3500 gallons of 15% HCl acid with additives and 355 ball sealers.
 3. Set RBP at 5487'. Dump bailed 4 sacks of sand and pumped sand slurry with 30 sacks of sand to plug back well bore.
 4. Set CICR at 5243' and pumped 100 sacks of 15.6 ppg, 1.18 yield, Class G cement through leaking squeeze holes at 5350' (DIL depth). Circulated approximately 38 sacks of cement out after squeezing to 1750 psi.
 5. Drilled out cement and retrieved RBP.
 6. Circulated hole clean using air foam unit.
 7. Ran dual packers separated by one joint of tubing. Set top packer at 5318' and bottom packer at 5359'.
 8. Pressure tested casing to 1000 psi. Loaded annulus with packer fluid and 15 gallons of diesel.

Well bore is ready for MIT and injection.

Attachments: Well Bore Diagram

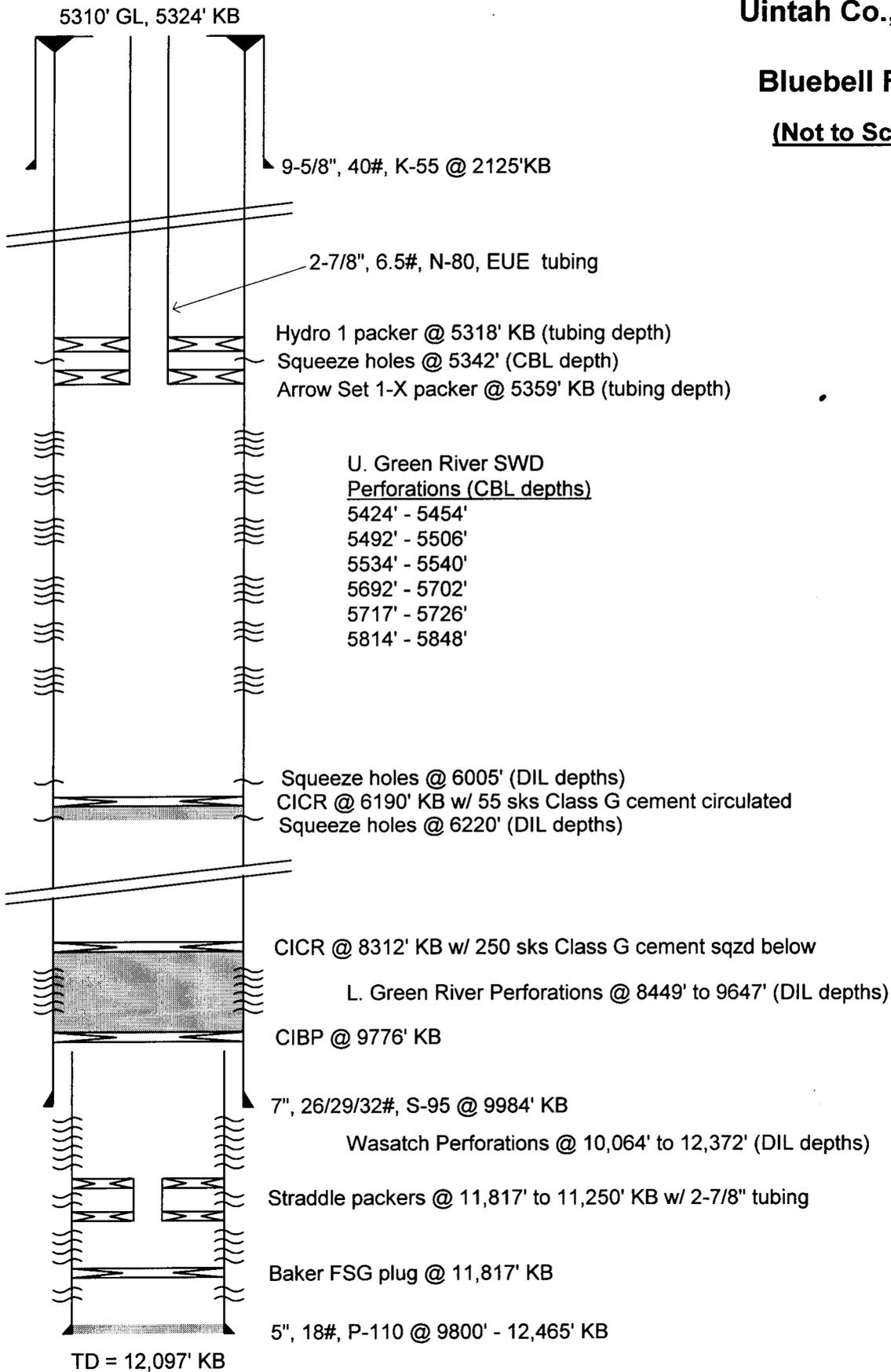
NAME (PLEASE PRINT) <u>Ellis M. Peterson</u>	TITLE <u>Senior Petroleum Engineer</u>
SIGNATURE	DATE <u>5/26/2004</u>

(This space for State use only)

Davis 1-33A1E SWD
SE NW Sec. 33, T1S, R1E
Uintah Co., Utah

Bluebell Field

(Not to Scale)



Location:	Sec 33 T1S R1E Uintah County, Utah	Well:	Davis 1-33A1E
TD:	12,500'	WI:	90.937500% RI: 69.937500
PBTD:	11,830'	Spud Date:	4/3/78
Perfs:	11,018' - 11,774'	Accounting #	77035
Formation:	Wasatch	GR:	5310
Field:	Bluebell	KB:	5324'

8/15/95

@7:am SITP 3310#, SICP "0". RU swab FL @4400' on first run. Made 6 runs recovered 28 bbls 100% oil. RD swab equipment. ND 10,000# tree, equalize & release 7" HD pkr @8238'. TIH tag up on sand @9731'. Reverse ball sealers & sand off RBP w/323 bbls H2O Work f/1 1/2 hrs to release RPB. POOH w/200 jts 2 7/8" tbg. SWIFN @7:pm.

8/16/95

@7:am finish TOOH LD RBP & pkr. PU 2 jts 2 7/8" tbg w/btm jt bull plugged, 2 7/8" x 6' N-80 perf pup jt, Mtn States 7" 32# tbg anchor w/carbide slips & PSN. TIH w/310 jts 2 7/8" tbg. Set tbg anchor @9663'. ND BOPs land tbg w/20,000# tension. NU wellhead flush tbg w/50 bbls H2O. PU & prime Rocky Mtn 2 1/2 x 1 1/4 x 20' x 23 1/2 RHBC rod pump w/212" stroke & 1 1/2 x 21' lg dip tube & screen. TIH w/8-1", 110 - 3/4" 35 new EL 3/4" (145 total), 119-7/8" & 111-1" EL rods. Space out w/1-8', 1-6' & 2-4' x 1" pony rods. Seat pump fill tbg w/12 bbls H2O pressure test w/rod pump to 1000# held OK. Turn well to battery @9:pm.

Tbg Detail

KB	14.0
310 jts N-80 2 7/8" tbg (27 jts work string 848.86)	9642.77
PSN @9660.27'	1.10
Mtn States 7" B-2 tbg anchor w/carbide	2.35
2 7/8" perf pup jts (16-3/8" holes)	6.10
2 jts 2 7/8" tbg 8rd	16.67
2 7/8" bull plug & collar	.81
Btm of gas sep	9732.30

Rod Detail

14' KB 1 1/2 x 30' polish rod
 2 x 4' x 1", 1x 6' x 1" & 1x 8' x 1" pony rod
 111-1" EL
 119-7/8" EL
 145-3/4" EL (35 new)
 8-1" EL
 1-Rocky Mtn pump 2 1/2 x 1 1/4 x 20 x 23 1/2 RHBC 212" stroke
 1- 1 1/2" x 21' dip tube & screen

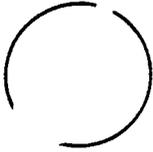
8/17/95

@7:am RD rig & equipment. Well has been on production f/12 hrs. 1019 bbls load H2O & acid to recover.

Final Report

xxxxxxxxxx

Gil Hunt
DOGMI



FLYING J OIL & GAS INC.

333 WEST CENTER STREET • NORTH SALT LAKE, UTAH 84054
PHONE (801) 296-7700 • FAX (801) 296-7888

June 17, 2004

RECEIVED

JUN 22 2004

DIV. OF OIL, GAS & MINING

Mr. Paul S. Osborne
United States E.P.A.
Region 8
999 18th Street, Suite 3000
Denver, CO 80202-2466

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY

Mail Code: 8P-W-GW

RE: Underground Injection Control (UIC)
Davis 1-33A1E SWD
Green River Formation – EPA Permit No.
UT2881-04555 Bluebell/Altamont Field,
Uintah County, Utah

Dear Mr. Osborne:

Attached is a report with supporting documents for the MIT work recently completed on the Davis 1-33A1E SWD well. The report describes and interprets the testing which was required under the Major Modification No. 2 to the original permit. Upon approval of the testing to date and authorization from your agency, Flying J Oil & Gas will make preparations and commence temporary injection to be followed by a series of temperature surveys.

The Major Modification No. 2 was approved on June 24, 2003. If this permit is to expire on the 1-year anniversary of the approval, it is requested that you give an extension as necessary to allow the temporary and then continuous injection in the subject well. There could be up to one month of construction to prepare for temporary injection and it is not planned to make the necessary expenditures for these facilities until EPA approval is granted to proceed.

The radioactive tracer survey work completed and reported herewith demonstrates confinement of injected fluids to the authorized injection interval at surface injection pressures up to 1200 psig. It is requested that Flying J Oil & Gas be allowed to inject at surface pressures up to 1200 psig during the upcoming 90 to 120 day injection period. If the subsequent temperature surveys following the temporary injection period exhibit no

fluid migration out of zone, it is requested that the injection permit be modified to increase the maximum allowed surface injection pressure from the current 610 psig to 1200 psig.

Thank you for your assistance in this matter. I look forward to hearing from you giving authorization to proceed with the temporary injection. If you have any questions concerning this matter, please contact me at (801) 296-7772.

Sincerely,
Flying J Oil & Gas Inc.

A handwritten signature in black ink, appearing to read "Ellis M. Peterson".

Ellis M. Peterson
Senior Petroleum Engineer

Enclosures: Report with attachments

cc w/ attachments:

Mr. Gil Hunt
State of Utah Natural Resources
Division of Oil, Gas and Mining

RECEIVED

JUN 22 2004

DIV. OF OIL, GAS & MIN.

FLYING J OIL & GAS

**DAVIS 1-33A1E SWD
SE NW SECTION 33
TOWNSHIP 1 SOUTH, RANGE 1 EAST, U.S.M.**

**EPA PERMIT NO. UT2881-04555
BLUEBELL/ALTAMONT FIELD
UINTAH COUNTY, UTAH**

Part I and Part II MIT Results from Work Performed on June 3 – 4, 2004.

Introduction:

A major modification to the injection permit for the Davis 1-33A1E was approved on June 24, 2003. This major modification provided approval for expansion of the injection interval from 5,408 to 5,948 feet below ground surface (BGS), to add perforations from 5,432 to 5,462 feet BGS, and to acid stimulate the injection perforations. The permit modification also lowered the maximum allowed surface injection pressure (MASIP) to 610 psig and required that Part II mechanical integrity be demonstrated in addition to the Part I mechanical integrity requirements. Requirements for demonstrating Part II mechanical integrity include running a baseline temperature survey followed by a 24-hour injection test and radioactive tracer survey (RATS).

Flying J Oil & Gas requested to follow the required RATS with additional RATS work at successive 200-psi pressure intervals to demonstrate fluid confinement above the 610-psi MASIP. The EPA approved this added RATS work provided that if any RATS indicated confinement may be jeopardized, no further surveys at higher pressures be conducted.

After approval of the Part I and Part II mechanical integrity, the EPA will authorize temporary injection for 90 to 120 days. Static temperature surveys are to be run following this temporary injection period to demonstrate continued confinement of the injection fluid within the authorized injection interval.

The workover to perforate the approved interval and to acid stimulate all injection zones was completed on May 25, 2004. During that workover, additional cement was squeezed above the approved injection interval to effectively eliminate migration of fluids behind the production casing. A copy of the Well Rework Record for this work is attached. Mechanical integrity test (MIT) work on the Davis 1-33A1E was completed over a two-day period of June 3 and 4, 2004. Results of that MIT work are provided herein.

Conclusion:

The tubing-casing annulus was successfully tested to 1010 psig to pass Part I requirements of mechanical integrity. A base temperature survey was recorded from below the lower confining zone to above the top confining zone of the authorized injection interval. A subsequent 21-hour injection period was followed by a RATS at 600 psig injection pressure to successfully demonstrate Part II of mechanical integrity. Subsequent RATS work was performed at pressures up to 1200 psig and demonstrated that injection fluids are contained to the authorized injection zone at surface injection pressures of 1200 psig.

Recommendation:

Approve temporary injection for a period of 90 to 120 days to be followed by a series of three temperature surveys with the well shut-in, per requirements of Major Modification No. 2. Authorize injection pressures up to 1200 psig during the temporary injection period, and subject to the required temperature surveys showing confinement of injected fluids to the authorized injection interval, change the MASIP from 610 psig to 1200 psig.

Results:

Base temperature and Gamma-Ray (GR) surveys were run in the well prior to any injection. The temperature log was run going down per EPA guidelines from 4,795 to 6,084 feet cased-hole log depth (CHLD). The base GR survey was run logging up from 6,084 feet to 4,795 feet CHLD. A copy of the base temperature log is included herewith.

The tubing-casing annulus was pressured to 1010 psig and the injection line was shut in at the truck mounted pump for a period of 35 minutes. The final pressure at the end of the shut-in period was 960 psig. Pressure loss during the mandatory 30 minute test period met EPA criteria of less than ten percent, so the well passed Part I of the MIT requirements. A signed MIT reporting form is attached with details of the test. There was no regulatory agency witness present during the test.

Injection following the MIT Part I commenced at 11:50 AM, June 3, with an initial injection rate of 0.6 BPM and pressure of 550 psig. A truck mounted, pump was used to inject water from two rented tanks during the injection period. Injection continued until 8:45 AM, June 4, and the injected volume totaled 840 BW. Average rate and pressure for the injection period was 0.7 BPM and about 600 psig. A rented pressure chart recorder was used to record and monitor pressure during the MIT Part I test and injection period. A copy of the annotated pressure chart is attached.

A larger capacity trailer mounted pump began injecting at 10:05 AM on June 4. Injection rates were varied as necessary to inject at pressures of approximately 600, 800, 1000, and 1200 psig while a RATS was run at each sequential pressure to check for fluid migration above the approved injection interval. Injection profiles were computed using RATS data recorded with constant injection rates corresponding to the 600 and 1200 psig injection pressures. Injection rates and volumes recorded by the pumping company and reported on the RATS log are approximately 7% higher than determined by measuring actual tank volumes. The stable volumetric injection rates were approximately 1.2 BPM at 600 psig, 2.4 BPM at 800 psig, 3.0 BPM at 1000 psig, and 4.1 BPM at 1200 psig. A plot of the injection rate and pressure data as metered by the pumping service during the RATS surveys is attached. The

RATS log is also included herewith. There was no indication of injection fluid going above or below the approved injection interval during any RATS.

The following table provides the RATS determined injection profiles while injecting at 600 psi and 1200 psi:

<u>Perforation Interval (CHLD)</u>	<u>Fluid Exit at ± 600 psig</u>	<u>Fluid Exit at ± 1200 psig</u>
5124 – 5454 feet	12 %	23 %
5492 – 5506 feet	44 %	53 %
5534 – 5540 feet	35 %	20 %
5692 – 5702 feet	6 %	3 %
5717 – 5726 feet	3 %	1 %
5814 – 5848 feet	0 %	0 %

A GR log was run from 6,084 feet to 4,795 feet CHLD following the RATS work for comparison to the base GR as another check for fluid with radioactive (RA) tracer that may have migrated out of zone. There was no evidence of fluid migration out of zone on the GR logs.

Discussion:

Production Logging Services ran a base temperature log per EPA guidelines over depths covering the upper confining zone, injection interval, and lower confining zone. A base GR survey was recorded over the same interval. All of the RATS and temperature log information is on depth to cased-hole logs because casing collars are used for depth correlation. Open-hole log depths were referenced for injection zone and perforation interval BGS depths in the injection permit. The cased-hole logs on this well are approximately 8 feet shallow to the open-hole logs at the depths of interest. Therefore, the top of the authorized injection zone on the RATS and temperature logs is 5,400 feet CHLD compared to the 5,408 feet BGS referenced in permit documentation for the Davis 1-33A1E.

An Action Hot Oil Service truck was connected to the well after the base log surveys were completed. A pressure gauge was installed on the tubing and the pump truck was connected to the casing. There was initially about 10 psig on the annulus because of heat expansion of and air liberation from the annular fluid. This pressure was bled off the tubing-casing annulus and water was pumped to fill the injection line. Approximately 1.5 BW was used to fill the lines and annulus and pressure up to 1010 psig. The line was initially shut in at the pump on the truck to check the pressure decrease. Annulus pressure was monitored at a gauge on the pump truck. During the shut-in period, slight dripping leaks were noticed at the pump and one line connection. However, even with the leaks and what appeared to be some air in the pressured system, it was apparent that the pressure drop would be less than ten percent so the test was continued for the required 30 minute duration. Otherwise, a casing valve would have been shut to isolate pressure to the tubing-casing annulus as is the prescribed testing method. The gauge on the tubing remained at 0 psig before, during, and after the annular pressure test. Following the test, approximately 0.8 BW was bled back to tanks from the pressurized system.

A rented Barton chart recorder was connected to the injection line and used to record pressures during the tubing-casing pressure test and the subsequent injection period. Even

after “zeroing” the recorder, it read high to two conventional pressure gauges. During the MIT it initially recorded approximately 1335 psig and dropped to a final pressure of 1285 psig over 35 minutes. This is compared to the gauge pressure of 1010 psig initially and 960 psig at the end of the period. Regardless of which pressure measurement is considered, the MIT Part I had less than ten percent pressure drop over a 30 minute period, and EPA criteria was met for a successful test. During recent workover operations, the casing was successfully pressure tested on a routine basis to 1000 psig so the mechanical integrity of the casing is currently without question.

After successfully conducting the Part I MIT, the temporary injection line was connected to the tubing and injection continued using the Action Hot Oil Service pump. The rented Barton recorder continued to record pressures with a discrepancy to the gauges of over 200 psig. Pressure pulses with the pump were difficult to dampen on the chart recorder and gauges. Manually controlled injection was maintained through the night at approximately 600 psig and an average rate of 0.67 BPM based on tank strap measurements. A total of 840 barrels of produced water was injected in approximately 21 hours from about noon on June 3 to the next morning.

Production Logging Services rigged back up to the well and Big 4 Cementing connected to the tubing with a high-rate trailer mounted pump and recording equipment. Big 4 began injecting at 10:05 AM on June 4. After stable injection was established at 600 psi and 1.2 BPM, a stationary RATS was recorded with the GR detector at 5,400 feet CHLD. There was no indication of radioactive material traveling back up-hole past the top of the authorized injection zone. Additional RA slugs with repeated logging passes were then recorded at a stabilized rate of 1.2 BPM and 600 psig to determine the injection profile and verify there being no movement of fluid out of zone.

Stationary RATS were run with the detector at the top of the authorized injection interval while injecting at stabilized rates corresponding to injection pressures of 800, 1000, and 1200 psig. There was no indication of upward fluid migration past the detector on any of these surveys. A RATS with repeated slugs and logging passes was run at a stabilized rate of 4.1 BPM and pressure of 1200 psig to determine the injection distribution and verify no movement of fluid out of zone. The pressure dropped slightly while pumping at a stabilized rate during the 1000 psig stage, but the rate and pressures were adequately stable for valid measurements during all of the RATS. A GR log was run for comparison to the base GR survey while pumping at a minimal rate and after all the RA tracer work was completed. There were no significant variances in the before and after GR surveys to indicate out of zone migration of fluids. Details of the RATS work are described on the accompanying log.

The rate and volume metering on the Big 4 equipment appeared to be reporting about 7% high to actual volume measurements. Two tanks on the pump truck with each having ten barrel capacity were repeatedly filled and recorded with time to allow more accurate determination of injection rates and volumes. The Big 4 recorded plot and rates reported on the RATS log reflect metered rates and not corrected data. Rates reported in this document are corrected values.

There is a difference between injection rates that Action Hot Oil Service and Big 4 Cementing pumped at the same approximate injection pressure of 600 psig. Volumes and rates pumped by both services were determined by measuring tank volumes, so the 70% difference in rates is unlikely due to metering error. However, the volume measurements in 10-barrel tanks on

the Big 4 truck should be more accurate than the strapping of 500-barrel tanks by Action Hot Oil Service. The reason for the injection rate variance may be due to the more consistent pressure with less pulsing effect that the Big 4 pump provided, but this explanation is merely speculative.

Rental tanks and pumping equipment have been removed from the Davis 1-33A1E location. Pending EPA approval for the temporary 90 to 120 day injection period, a skid mounted pump and temporary tanks will be installed to allow injection on a more continuous basis. After the post injection period temperature surveys are completed to finalize the MIT Part II requirements and after the EPA gives final approval for normal injection to commence, permanent injection equipment will be installed and the production equipment that is still on location will be removed.

Certification:

I, Ellis M. Peterson, having prepared this document, certify that I am familiar with this subject matter, and to the best of my knowledge, the information and statements provided are true and correct.



Ellis M. Peterson, P.E.
Senior Petroleum Engineer

Date: June 17, 2004

Flying J Oil & Gas
333 West Center Street
North Salt Lake, Utah 84054



Attachments & Enclosures:

- Well Rework Record (EPA Form 7520-12)
- Mechanical Integrity Test Form
- Davis 1-33A1E Well Bore Schematic
- Copy of Barton Pressure Recorder Chart
- Big 4 Cementing recorded Pressure/Rate Graph
- PLS Temperature; CCL Survey (Shut-in)
- PLS Radioactive Tracer Survey

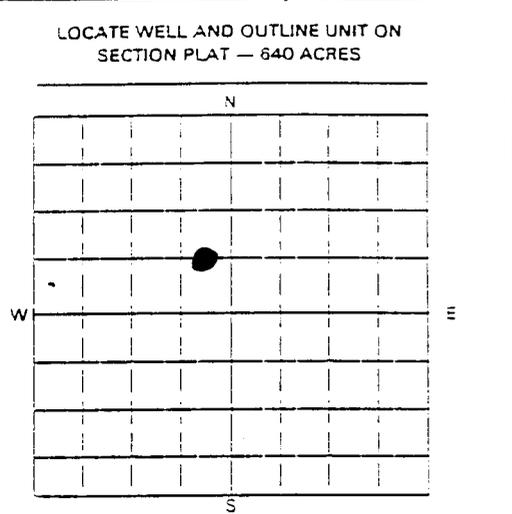
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

WELL REWORK RECORD



NAME AND ADDRESS OF PERMITTEE: *Flying J Oil & Gas Inc.
333 West Center Street
North Salt Lake, UT 84054*

NAME AND ADDRESS OF CONTRACTOR:



STATE: *Utah* COUNTY: *Uintah* PERMIT NUMBER: *UT2881-04555*

SURFACE LOCATION DESCRIPTION: *1/4 OF SE 1/4 OF NW 1/4 SECTION 33 TOWNSHIP 1 S RANGE 1 E*

LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT

Surface Location: *1980* ft. from (N/S) *N* Line of quarter section
and *2256* ft. from (E/W) *W* Line of quarter section

WELL ACTIVITY	Total Depth Before Rework	TYPE OF PERMIT
<input checked="" type="checkbox"/> Brine Disposal	<i>6190' (PBTD)</i>	<input checked="" type="checkbox"/> Individual
<input type="checkbox"/> Enhanced Recovery	Total Depth After Rework	<input type="checkbox"/> Area
<input type="checkbox"/> Hydrocarbon Storage	<i>6190' (PBTD)</i>	Number of Wells <i>1</i>
Lease Name	Date Rework Commenced	Well Number
<i>Davis</i>	<i>3/26/04</i>	1-33A1E <i>1-33A1E</i>
	Date Rework Completed	
	<i>5/25/04</i>	

WELL CASING RECORD — BEFORE REWORK

Casing		Cement		Perforations		Acid or Fracture Treatment Record
Size	Depth	Sacks	Type	From	To	
<i>9 5/8"</i>	<i>2125</i>	<i>860</i>	<i>Lite + G</i>	-	-	-
<i>7"</i>	<i>9984</i>	<i>450</i>	<i>G, RFC</i>	<i>5500</i>	<i>5854</i>	<i>Acid, 2000 gal 15% HCl</i>
<i>"</i>		<i>+ 555</i>	<i>Mil-Sl, G</i>			

WELL CASING RECORD — AFTER REWORK (Indicate Additions and Changes Only)

Casing		Cement		Perforations		Acid or Fracture Treatment Record
Size	Depth	Sacks	Type	From	To	
<i>7"</i>	<i>9984</i>	<i>100</i>	<i>G</i>	<i>5432</i>	<i>5462</i>	<i>Acid, 3500 gal 15% HCl to treat all injection perms</i>

DESCRIBE REWORK OPERATIONS IN DETAIL USE ADDITIONAL SHEETS IF NECESSARY

WIRE LINE LOGS. LIST EACH TYPE

Added perms at 5432-5462' (DIL), Acidized all perms with 3500gal 15% HCl, squeezed cement behind 7" casing through old holes at 5350'(DIL). Cleaned out well bore and ran injection packers. See attached updated well bore schematic.

Log Types: _____ Logged Intervals: _____

CERTIFICATION

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32).

NAME AND OFFICIAL TITLE (Please type or print): *Ellis M. Peterson, Sr. Petroleum Engineer*

SIGNATURE: *Ellis M. Peterson*

DATE SIGNED: *6/2/04*

Mechanical Integrity Test

Casing or Annulus Pressure Mechanical Integrity Test

U.S. Environmental Protection Agency
Underground Injection Control Program
999 18th Street, Suite 500 Denver, CO 80202-2466

EPA Witness: None Date: 6/3/04
 Test conducted by: Ellis Peterson, Flying J Oil & Gas
 Others present: John Wood, Action Hot Oil

Well Name: <u>Davis 1-33A1E SWD</u>	Type: ER <u>(SWD)</u>	Status: AC TA <u>(UC)</u>
Field: <u>East Bluebell</u>		
Location: <u>SE NW</u> Sec: <u>33</u> T <u>1</u> N <u>(S)</u> R <u>1</u> <u>(E)</u> W County: <u>Wintah</u> State: <u>UT</u>		
Operator: <u>Flying J Oil & Gas</u>		
Last MIT: <u>7/31/02</u>	Maximum Allowable Pressure: <u>610</u>	PSIG

Is this a regularly scheduled test? Yes No
 Initial test for permit? Major Mod. 2 Yes No
 Test after well rework? Yes No
 Well injecting during test? Yes No If Yes, rate: _____ bpd

Pre-test casing/tubing annulus pressure: 10 psig

0/0/0/0/0/0/0/0/0

MIT DATA TABLE	Test #1	Test #2	Test #3
TUBING PRESSURE			
Initial Pressure	0 psig	psig	psig
End of test pressure	0 psig	psig	psig
CASING / TUBING ANNULUS PRESSURE			
0 minutes	1010 psig	psig	psig
5 minutes	1000 psig	psig	psig
10 minutes	990 psig	psig	psig
15 minutes	980 psig	psig	psig
20 minutes	970 psig	psig	psig
25 minutes	970 psig	psig	psig
30 minutes	960 psig	psig	psig
<u>35</u> minutes	960 psig	psig	psig
_____ minutes	psig	psig	psig
RESULT	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> Pass <input type="checkbox"/> Fail

Does the annulus pressure build back up after the test? Yes No

MECHANICAL INTEGRITY PRESSURE TEST

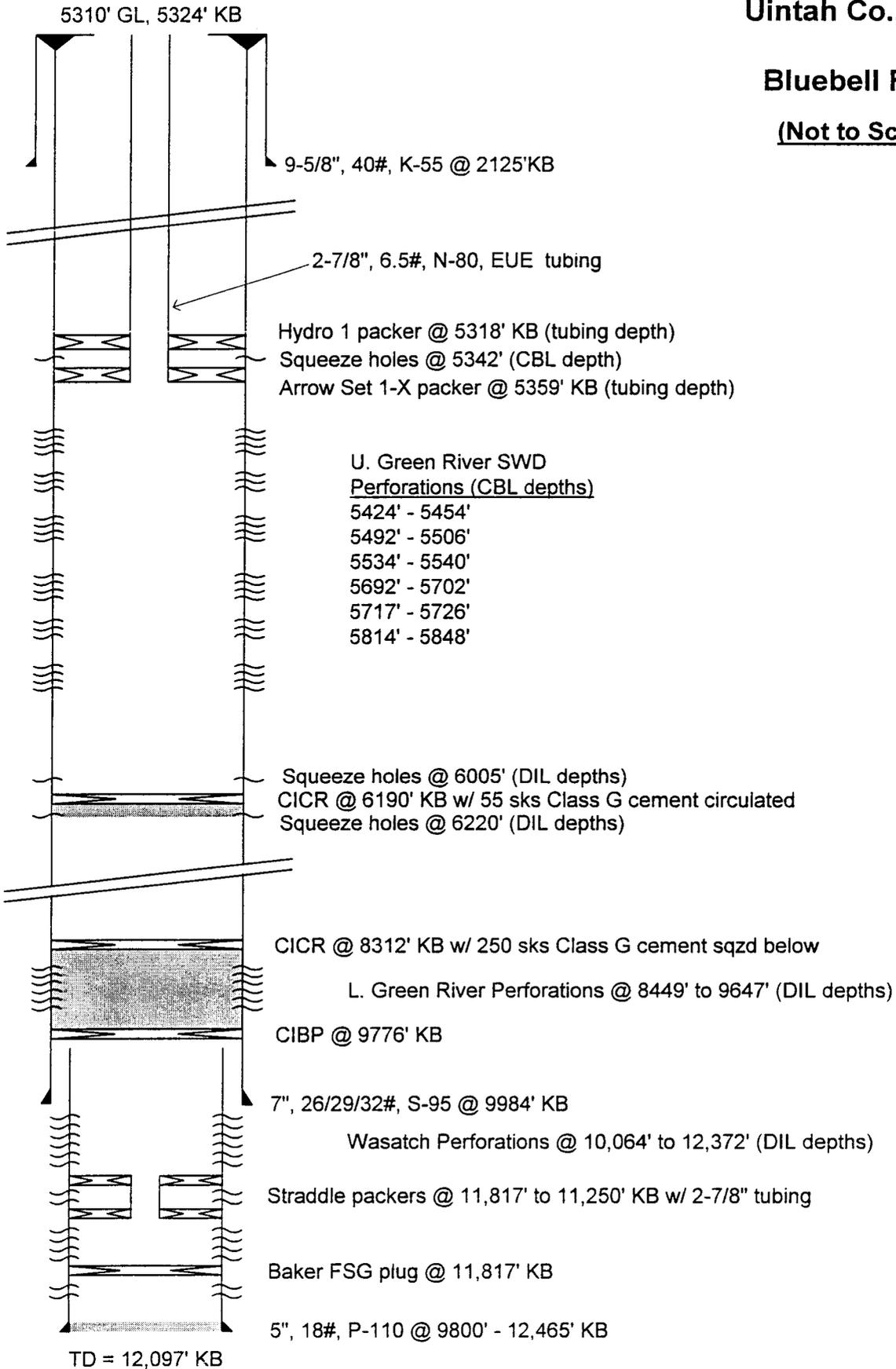
Additional comments for mechanical integrity pressure test, such as volume of fluid added to annulus and bled back at end of test, reason for failing test (casing head leak, tubing leak, other), etc.:

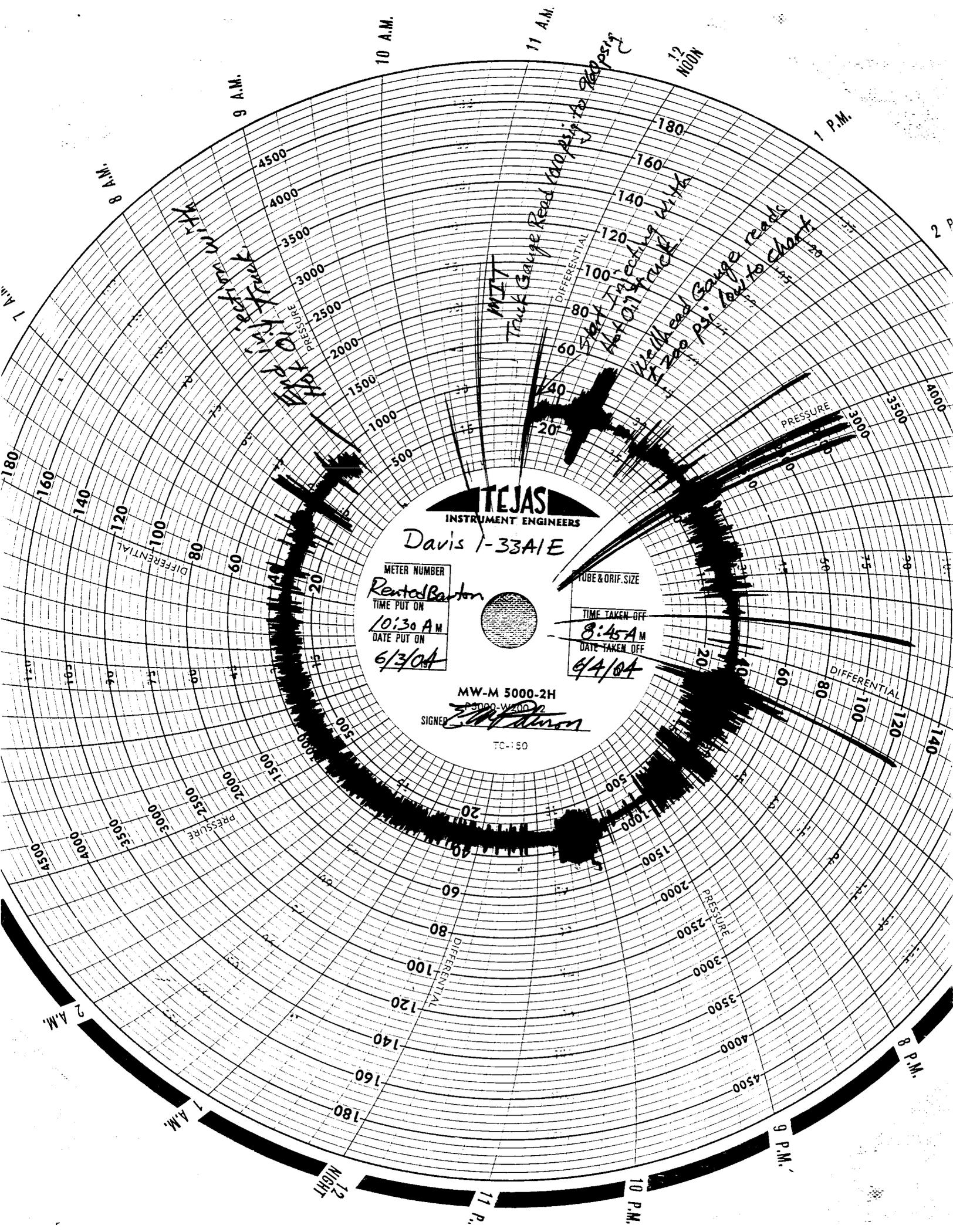
Used 1 1/2 Bbl to fill lines and pressure up. Bled back 3/4 Bbl, had drips from line throughout test.

Davis 1-33A1E SWD
SE NW Sec. 33, T1S, R1E
Uintah Co., Utah

Bluebell Field

(Not to Scale)





TEJAS
INSTRUMENT ENGINEERS

Davis 1-33A/E

METER NUMBER
Rental Barton
TIME PUT ON
10:30 AM
DATE PUT ON
6/3/04

TUBE & ORIF. SIZE
TIME TAKEN OFF
8:45 AM
DATE TAKEN OFF
6/4/04

MW-M 5000-2H

SIGNED *[Signature]*

TC-150

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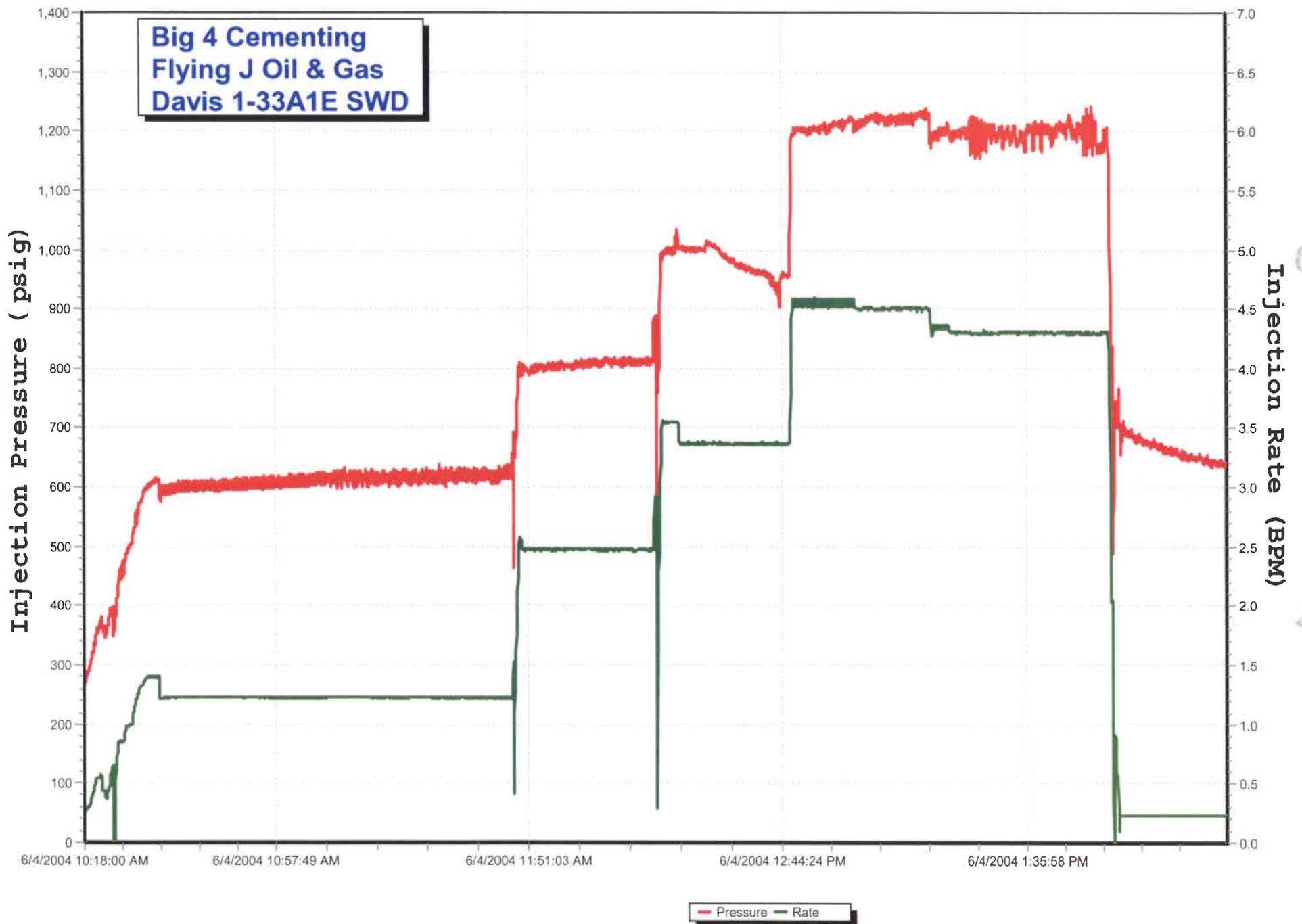
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STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICE AND REPORTS ON WELLS <small>Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.</small>		5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
		6. IF INIDAN, ALLOTTEE OR TRIBE NAME:
		7. UNIT or CA AGREEMENT NAME: 9C 000176
1. TYPE OF WELLS <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		8. WELL NAME and NUMBER Davis 1-33A1E
2. NAME OF OPERATOR Flying J Oil & Gas Inc		9. API NUMBER: 43 047 30384
3. ADDRESS OF OPERATOR PO Drawer 130 Roosevelt, Utah 84066	PHONE NUMBER 435-722-5166	10. FIELD AND POOL, OR WILDCAT Bluebell
4. LOCATION OF WELLS FOOTAGES AT SURFACE: 2356' FWL 1980' FNL		COUNTY: Uintah
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SENW Sec 33 T1S R1E		STATE: UTAH

11 CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT <small>(Submit in Duplicate)</small> <small>Approximate date work will start</small> <hr/> <input checked="" type="checkbox"/> SUBSEQUENT REPORT <small>(Submit Original Form Only)</small> <small>Date of work completion:</small> <u>4/4/07</u>	<input checked="" type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PLUG BACK <input type="checkbox"/> PRODUCTION (START/RESUME) <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> RECOMPLETE-DIFFERENT FORMATION	<input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TEMPORARILY ABANDON <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> WATER SHUT-OFF <input type="checkbox"/> OTHER _____

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS, Clearly show all pertinent details including dates, depths, volumes, etc.

Acidized the Green River Formation from 5424' - 5848' with 5000 gal 15% HCL with additives.

NAME (PLEASE PRINT) <u>Keith Davis</u>	TITLE <u>Foreman</u>
SIGNATURE <u><i>Keith Davis</i></u>	DATE <u>April 5, 2007</u>

(This space for State use only)

(5/2000)

RECEIVED
APR 10 2007
DIV. OF OIL, GAS & MINING

RECEIVED

JUL 3 0 2007

DIV. OF OIL, GAS & MINING

STATE OF UTAH
Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

INJECTION WELL - PRESSURE TEST

Test Date: <u>7/25/07</u>	Well Owner/Operator: <u>Flying J Oil + Gas Inc</u>
Disposal Well: <u>X</u>	Enhanced Recovery Well: _____ Other: _____
API No.: <u>43-047-30394</u>	Well Name/Number: <u>Davis 1-33A3</u>
Section: <u>33</u>	Township: <u>15</u> Range: <u>1E</u>

Initial Conditions:

Tubing - Rate: 0 Pressure: 1125 psi
 Casing/Tubing Annulus - Pressure: 0 psi

Conditions During Test:

Time (Minutes)	Annulus Pressure	Tubing Pressure
0	<u>800</u>	<u>1125</u>
5	<u>800</u>	<u>1125</u>
10	<u>800</u>	<u>1125</u>
15	<u>790</u>	<u>1110</u>
20	<u>770</u>	<u>1110</u>
25	<u>760</u>	<u>1110</u>
30	<u>760</u>	<u>1110</u>

Results: Pass Fail

Conditions After Test:

Tubing Pressure: 1110 psi
 Casing/Tubing Annulus Pressure: 0 psi

REMARKS:

Keith Davis
 Operator Representative

David W. Hartford
 DOGM Witness

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS		6. LEASE DESIGNATION AND SERIAL NUMBER: Fee
		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NA
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		7. UNIT or CA AGREEMENT NAME: 9C176
		8. WELL NAME and NUMBER: Davis 1-33A1E
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Salt Water Disposal</u>		9. API NUMBER: 4304730384
2. NAME OF OPERATOR: Flying J Oil & Gas Inc.		10. FIELD AND POOL, OR WILDCAT: Bluebell
3. ADDRESS OF OPERATOR: 333 W Center St CITY North Salt Lake STATE UT ZIP 84054		PHONE NUMBER: (801) 296-7700
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1980 FNL 2356 FWL		COUNTY: Uintah
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SENW 33 1S 1E U		STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: <u>6/1/2009</u>	<input checked="" type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input checked="" type="checkbox"/> REPERFORATE CURRENT FORMATION
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion:	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>Step-Rate Test, MIT</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

It is planned to perform work on this well as required and approved by the EPA under Major Permit Modification No. 3 and as detailed in the attached procedure.

**Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY**

NAME (PLEASE PRINT) <u>Jordan R. Nelson</u>	TITLE <u>Petroleum Engineer</u>
SIGNATURE <u><i>Jordan R Nelson</i></u>	DATE <u>3/30/2009</u>

(This space for State use only)

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APR 02 2009

DIV. OF OIL, GAS & MINING

Flying J Oil & Gas Inc.
Recompletion Procedure
Davis 1-33A1E SWD

Purpose: Perform step rate test, add perforations, perform mechanical integrity test (MIT).

PERTINENT INFORMATION

Well Location: 1980' FNL, 2356' FWL (SENW)
Section 33, Township 1 South, Range 1 East
Uintah County, Utah

Elevation: 5310' GL, 5324' KB

TD: 12,500'

PBTD: 6190' (Cement retainer w/ ½ sack cement on top)

API No.: 43-047-30384

Casing: 13 3/8" 54.5# K55 LTC @ 159' cmt to surface
9 5/8" 40.5# K55 LTC @ 2125' cmt to surface
7" 26/29/32# S95 LTC @ 9984' cmt to approx. 7000' (450 sks cmt)
* Squeezed 600 sks cmt into annulus @ 5350' to surface.
5" 18# P110 AB-FL4S liner @ 9800' – 12,465' w/700 sks cmt

Tubing: 2 7/8" 6.5# N80 8rd

Packers: 7" 29# Hydro 1 hydraulic set pkr @ 5318'
7" 29# Arrow set 1-X pkr @ 5359'

Current Perforations: Upper Green River
5424' – 5454' (30') 5692' – 5702' (10')
5492' – 5506' (14') 5717' – 5726' (9')
5534' – 5540' (6') 5814' – 5848' (34')

PROCEDURE

Note: Send sundry notice to Utah DOGM for planned workover and a copy of the state sundry notice to the EPA (Region 8). Get approval from the EPA before commencing work on the injection well and make sure they have two weeks notice for witnessing the step-rate test before the recompletion and the mechanical integrity test (MIT) to follow the recompletion.

STEP-RATE TEST

1. Shut well in prior to workover to allow pressure to dissipate. Flow back well if necessary.
2. Perform step-rate test as per EPA guidelines with their representative available if possible (give 2-week notice). Purpose of step-rate test is to re-evaluate maximum allowable injection pressure (MAIP). Rates will be held steady for 60 minutes each and will be stepped up to approximately 7.2 bpm with a maximum surface pressure of 2200 psi.
3. Submit step-rate test data to the EPA. A temporary MAIP will be requested from the EPA based on the test data.

RECOMPLETION

1. MIRUSU, ND wellhead and NU BOP.
2. Shear release 7" Hydro 1 pkr at 5318' and rotate release 7" Arrow set 1-X pkr at 5359'. POOH with tbg and send pkrs to be redressed.
3. RIH with a 6" bit and 6-4 3/4" drill collars. Drill out CIBP at 6190' and cmt while reverse circulating. POOH.
4. Round trip a 6" bit and 7" (29#) csg scraper to PBTD of ±8300'. Circulate clean and POOH.
5. RU wireline company. Perforate the middle Green River in the following intervals. Use 4" ported guns loaded 4 SPF with DP 22 gm charges on 90° phasing. Correlate depths to Schlumberger Dual Induction Log dated 5/8/78:

8218 – 8260 (42')	7854 – 7874 (20')	7316 – 7348 (32')
8201 – 8206 (5')	7748 – 7790 (42')	6940 – 6950 (10')
8126 – 8132 (6')	7620 – 7660 (40')	6910 – 6920 (10')
8091 – 8104 (13')	7486 – 7510 (24')	6880 – 6890 (10')
8000 – 8038 (38')	7370 – 7390 (20')	6850 – 6860 (10')
7972 – 7980 (8')		

1320 perfs, 330 feet, 16 intervals

RD and release wireline company.

6. RIH with a 7" (29#) HD pkr and SN. Set pkr at $\pm 6790'$.
7. RU acid company. Acidize middle Green River perms at 6850' to 8260' (1320 holes, 330') with 15,000 gallons 15% HCl acid plus additives and 2000 balls for diversion. Pressure test lines to 10,000 psi. Pump 1000 gallons of acid and then space balls evenly through out remaining 14,000 gallon acid volume. Flush to bottom perf at 8260' with produced water. Surge balls off perms and pump an additional 300 bbls of produced water. Monitor annulus for communication while pumping down tbg. RD acid company.
8. Release pkr at $\pm 6790'$ and POOH.
9. RIH with a 7" (29#) Arrow set 1-X pkr, 2 7/8" PSN, one joint of 2 7/8" tbg, 7" (29#) Hydro 1 pkr w/ standing valve in place and a 7" Type T-2 on-off tool on 2-7/8" tbg. Set 7" 29# Arrow set 1-X pkr at 5359' and pressure test pkr and csg to 1000 psi. Set Hydro 1 pkr at 5318'. RIH with sand line and retrieve standing valve.
10. Release on-off tool and displace csg with 200 bbls of produced water containing recommended volumes of corrosion inhibitor, biocide, and oxygen scavenger. Leave 15 gal of diesel in csg at surface.
11. Connect on-off tool, ND BOP, land tbg in 10,000 lbs compression, and NU wellhead.
12. Pressure test Hydro 1 pkr @ 5318', on-off tool and 7" csg to 1000 psi. RDMOSU.

MECHANICAL INTEGRITY TEST (MIT)

1. RU wireline company and run a base temperature log from 4800' to PBTB (CICR @ 8312'). Record a base GR log from PBTB to 4800'. RD wireline company.
2. RU pump truck to 7" csg, bleed any air off csg and fill it with water. Perform a pressure test of the csg to 1000 psi for Part I mechanical integrity test (MIT) per EPA guidelines with their representative available if possible (give 2-week notice). Fill out the EPA MIT report form and have it signed by a witness if there is no EPA representative.
3. Connect pump truck to tbg and start injecting overnight at no more than requested temporary MSIP.
4. RU wireline company. RIH with radioactive tracer survey (RATS) tool. RU pump truck and inject at requested temporary MSIP. Run stationary top check shot at 5400' followed by chased profile shots while maintaining a stable rate at requested temporary MSIP. Slow rate to 0.2 BPM and run a temperature log from 4800' to PBTB and a final GR log from PBTB to 4800'. RATS should be witnessed by an EPA inspector (give 2-week notice). RD & release wireline company & pump truck.

5. Complete an EPA Well Rework Record and submit it with the MIT report to the EPA, Region 8. Also send a copy of the EPA submission to the Utah State DOGM, and Vernal BLM offices.
6. Return well to water disposal service at or below temporary requested MSIP.
7. After 90 days but no more than 120 days of injection, the well will be shut in and three temperature logs will be run. Upon approval from EPA, unrestricted injection may begin.

**Division of Oil, Gas and Mining
OPERATOR CHANGE WORKSHEET**

ROUTING

1. DJJ
2. CDW

X - Change of Operator (Well Sold)

Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective:

1/1/2010

FROM: (Old Operator): N8080-Flying J Oil & Gas, Inc. 333 West Center Street North Salt Lake, UT 84054 Phone: 1 (801) 296-7726	TO: (New Operator): N3065-El Paso E&P Company, LP 1099 18th Street, Suite 1900 Denver, CO 80202 Phone: 1 (303) 291-6400
--	--

CA No.

Unit:

WELL NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
SEE ATTACHED LIST								

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 1/13/2010
2. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 1/13/2010
3. The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 2/24/2010
- 4a. Is the new operator registered in the State of Utah: Business Number: 2114377-0181
- 5a. (R649-9-2) Waste Management Plan has been received on: IN PLACE
- 5b. Inspections of LA PA state/fee well sites complete on: 8/10/2009 *
- 5c. Reports current for Production/Disposition & Sundries on: 2/22/2010
6. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM not yet BIA not yet
7. **Federal and Indian Units:**
The BLM or BIA has approved the successor of unit operator for wells listed on: n/a
8. **Federal and Indian Communization Agreements ("CA"):**
The BLM or BIA has approved the operator for all wells listed within a CA on: n/a
9. **Underground Injection Control ("UIC")** approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: 2/8/2010

DATA ENTRY:

1. Changes entered in the **Oil and Gas Database** on: 2/24/2010
2. Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 2/24/2010
3. Bond information entered in RBDMS on: 2/24/2010
4. Fee/State wells attached to bond in RBDMS on: 2/24/2010
5. Injection Projects to new operator in RBDMS on: 2/24/2010
6. Receipt of Acceptance of Drilling Procedures for APD/New on: *

BOND VERIFICATION:

1. Federal well(s) covered by Bond Number: WYB3457
2. Indian well(s) covered by Bond Number: RLB0009692
- 3a. (R649-3-1) The **NEW** operator of any state/fee well(s) listed covered by Bond Number 400JU0708
- 3b. The **FORMER** operator has requested a release of liability from their bond on: not yet

LEASE INTEREST OWNER NOTIFICATION:

4. (R649-2-10) The **NEW** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: 2/25/2010

COMMENTS: * Due to Flying J's bankruptcy, these items are being accepted as is.

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICE AND REPORTS ON WELLS <small>Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.</small>		5. LEASE DESIGNATION AND SERIAL NUMBER: See Attachment
		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: See Attachment
		7. UNIT or CA AGREEMENT NAME: See Attachment
		8. WELL NAME and NUMBER See Attachment
1. TYPE OF WELLS <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other	9. API NUMBER: See Attachment	
2. NAME OF OPERATOR El Paso E&P Company, L.P. <i>N 3065</i>	10. FIELD AND POOL, OR WILDCAT See Attachment	
3. ADDRESS OF OPERATOR 1099 18th Street, Suite 1900, Denver, CO 80202	PHONE NUMBER 303-291-6400	

4. LOCATION OF WELLS
FOOTAGES AT SURFACE: See Attachment COUNTY: Duchesne & Uintah

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: STATE: UTAH

11 CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION		TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT <small>(Submit in Duplicate)</small> Approximate date work will start	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PLUG BACK <input type="checkbox"/> PRODUCTION (START/RESUME) <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> RECOMPLETE-DIFFERENT FORMATION	<input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TEMPORARILY ABANDON <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> WATER SHUT-OFF <input checked="" type="checkbox"/> OTHER <u>Change of Operator</u>
<input type="checkbox"/> SUBSEQUENT REPORT <small>(Submit Original Form Only)</small> Date of work completion:			

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS, Clearly show all pertinent details including dates, depths, volumes, etc.

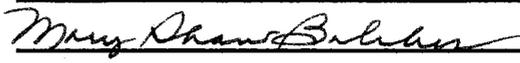
Effective January 1, 2010, operations of the wells on the attached exhibit were taken over by:
El Paso E&P Company, L.P., a Delaware limited partnership
1099 18th Street, Suite 1900
Denver, CO 80202

The previous operator was: FLYING J OIL & GAS INC. *N 8080*
333 WEST CENTER STREET
NORTH SALT LAKE, UT 84054
801 296-7726

By: 
Chris J. Malan
Executive Vice President

Effective January 1, 2010, El Paso E&P Company, L.P. is responsible under the terms and conditions of the leases for operations conducted on the leased lands or a portion thereof under Utah Department of Natural Resources Bond 400JU0708 issued by Travelers Casualty and Surety

BLM WYB3457 BIA RLB 000 9692

NAME (PLEASE PRINT) Mary Sharon Balakas TITLE Attorney in Fact
SIGNATURE  DATE 12/29/09

(This space for State use only)

APPROVED *2/24/2010*
Earlene Russell
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

RECEIVED
JAN 13 2010
DIV. OF OIL, GAS & MINING

Flying J Oil Gas Inc (N8080) to El Paso E1 Company LP (N3065)

well_name	sec	twp	rng	api	entity	Lease	well	stat	flag
GOVT 4-14	14	060S	200E	4304730155	760	Federal	OW	S	
GOVERNMENT 10-14	14	060S	200E	4304732709	12009	Federal	OW	S	
GOVERNMENT 12-14	14	060S	200E	4304732850	12150	Federal	OW	P	
MAXIMILLIAN-UTE 14-1	14	010S	030W	4301330726	8437	Indian	OW	P	
FRED BASSETT 1-22A1	22	010S	010W	4301330781	9460	Indian	OW	P	
THE PERFECT "10" 1-10A1	10	010S	010W	4301330935	9461	Indian	OW	P	
BADGER-SAM H U MONGUS 1-15A1	15	010S	010W	4301330949	9462	Indian	OW	P	
UTE TRIBAL 1-35A1E	35	010S	010E	4304730286	795	Indian	OW	P	
UTE TRIBAL 1-27A1E	27	010S	010E	4304730421	800	Indian	OW	P	
UTE TRIBAL 1-22A1E	22	010S	010E	4304730429	810	Indian	OW	P	
UTE TRIBAL 1-15A1E	15	010S	010E	4304730820	850	Indian	OW	P	
UTE TRIBAL 1-17A1E	17	010S	010E	4304730829	860	Indian	OW	P	
UTE TRIBAL 1-29A1E	29	010S	010E	4304730937	895	Indian	OW	P	
CARSON 2-36A1	36	010S	010W	4304731407	737	Indian	OW	P	
UTE 2-17A1E	17	010S	010E	4304737831	16709	Indian	OW	P	
SADIE BLANK 1-33Z1	33	010N	010W	4301330355	765	Fee	OW	P	
HOUSTON 1-34Z1	34	010N	010W	4301330566	885	Fee	OW	P	
WISSE 1-28Z1	28	010N	010W	4301330609	905	Fee	OW	P	
POWELL 1-21B1	21	020S	010W	4301330621	910	Fee	OW	P	
H MARTIN 1-21Z1	21	010N	010W	4301330707	925	Fee	OW	P	
BIRCHELL 1-27A1	27	010S	010W	4301330758	940	Fee	OW	P	
EULA-UTE 1-16A1	16	010S	010W	4301330782	8443	Fee	OW	P	
R HOUSTON 1-22Z1	22	010N	010W	4301330884	936	Fee	OW	P	
BADGER MR BOOM BOOM 2-29A1	29	010S	010W	4301331013	9463	Fee	OW	P	
REARY 2-17A3	17	010S	030W	4301331318	11251	Fee	OW	P	
MAGDALENE PAPADOPULOS 1-34A1E	34	010S	010E	4304730241	785	Fee	OW	P	
DAVIS 1-33A1E	33	010S	010E	4304730384	805	Fee	WD	A	
LARSEN 1-25A1	25	010S	010W	4304730552	815	Fee	OW	TA	
DRY GULCH 1-36A1	36	010S	010W	4304730569	820	Fee	OW	TA	
NELSON 1-31A1E	31	010S	010E	4304730671	830	Fee	OW	P	
ROSEMARY LLOYD 1-24A1E	24	010S	010E	4304730707	840	Fee	OW	P	
H D LANDY 1-30A1E	30	010S	010E	4304730790	845	Fee	OW	P	
WALKER 1-14A1E	14	010S	010E	4304730805	855	Fee	OW	P	
BOLTON 2-29A1E	29	010S	010E	4304731112	900	Fee	OW	P	
PRESCOTT 1-35Z1	35	010N	010W	4304731173	1425	Fee	OW	P	
BISEL GURR 11-1	11	010S	010W	4304731213	8438	Fee	OW	P	
UTE TRIBAL 2-22A1E	22	010S	010E	4304731265	915	Fee	OW	P	
L. BOLTON 1-12A1	12	010S	010W	4304731295	920	Fee	OW	P	
FOWLES 1-26A1	26	010S	010W	4304731296	930	Fee	OW	P	
BRADLEY 23-1	23	010S	010W	4304731297	8435	Fee	OW	P	
BASTIAN 1-2A1	02	010S	010W	4304731373	736	Fee	OW	P	
D R LONG 2-19A1E	19	010S	010E	4304731470	9505	Fee	OW	P	
O MOON 2-26Z1	26	010N	010W	4304731480	10135	Fee	OW	P	
LILA D 2-25A1	25	010S	010W	4304731797	10790	Fee	OW	P	
LANDY 2-30A1E	30	010S	010E	4304731895	11127	Fee	OW	P	
BISEL-GURR 2-11A1	11	010S	010W	4304735410	14428	Fee	OW	P	
KNIGHT 16-30	30	030S	020E	4304738499	16466	Fee	OW	P	
ELIASON 6-30	30	030S	020E	4304738500	16465	Fee	OW	S	

Flying J Oil Gas Inc (N8080) to El Paso E2 Company LP (N3065)

well_name	sec	twp	rng	api	entity	Lease	well	stat	flag
KNIGHT 14-30	30	030S	020E	4304738501	15848	Fee	OW	P	
FLYING J FEE 2-12A1	12	010S	010W	4304739467	16686	Fee	OW	P	
OBERHANSLY 3-11A1	11	010S	010W	4304739679		Fee	OW	APD	
BISEL GURR 4-11A1	11	010S	010W	4304739961	16791	Fee	OW	P	
ULT 4-31	31	030S	020E	4304740017	16985	Fee	OW	P	
DEEP CREEK 2-31	31	030S	020E	4304740026	16950	Fee	OW	P	
DEEP CREEK 8-31	31	030S	020E	4304740032	17053	Fee	OW	P	
ULT 6-31	31	030S	020E	4304740033		Fee	OW	APD	
ULT 12-29	29	030S	020E	4304740039	17010	Fee	OW	P	
ELIASON 12-30	30	030S	020E	4304740040	17011	Fee	OW	P	C
OBERHANSLY 2-2A1	02	010S	010W	4304740164		Fee	OW	APD	
KILLIAN 3-12A1	12	010S	010W	4304740226		State	OW	APD	

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

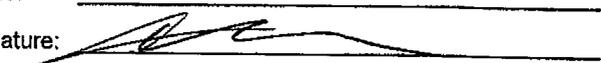
UIC FORM 5

TRANSFER OF AUTHORITY TO INJECT

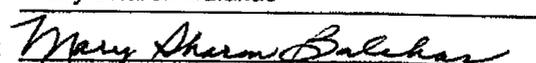
Well Name and Number Davis 1-33A1E		API Number 4304730384
Location of Well Footage : 1980 FNL & 2356 FWL County : Uintah		Field or Unit Name Bluebell
QQ, Section, Township, Range: SENW 33 1S 1E State : UTAH		Lease Designation and Number FEE

EFFECTIVE DATE OF TRANSFER: 1/1/2010

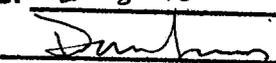
CURRENT OPERATOR

Company: <u>Flying J Oil & Gas Inc.</u>	Name: <u>Chris J. Malan</u>
Address: <u>333 West Center Street</u>	Signature: 
<u>city North Salt Lake state UT zip 84054</u>	Title: <u>Executive Vice President</u>
Phone: <u>(801) 296-7700</u>	Date: _____
Comments: _____	

NEW OPERATOR

Company: <u>El Paso E&P Company, L.P., a Delaware LP</u>	Name: <u>Mary Sharon Balakas</u>
Address: <u>1099 18th St. Suite 1900</u>	Signature: 
<u>city Denver state CO zip 80202</u>	Title: <u>Business Area Manager</u>
Phone: <u>(303) 291-6400</u>	Date: _____
Comments: _____	

(This space for State use only)

Transfer approved by: _____
Title: _____
Date: 2-8-10
By: 

Accepted by the
Utah Division of
Oil, Gas and Mining

Approval Date: _____

Comments: _____

This is an EPA approved well.

Federal Approval of this
Action is Necessary

RECEIVED
FEB 08 2010

DIV. OF OIL, GAS & MINING

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	5. LEASE DESIGNATION AND SERIAL NUMBER: FEE
	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	7. UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Water Disposal Well	8. WELL NAME and NUMBER: DAVIS 1-33A1E
2. NAME OF OPERATOR: EL PASO E&P COMPANY, LP	9. API NUMBER: 43047303840000
3. ADDRESS OF OPERATOR: 1099 18th ST, STE 1900 , Denver, CO, 80202	PHONE NUMBER: 303 291-6417 Ext
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1980 FNL 2356 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENW Section: 33 Township: 01.0S Range: 01.0E Meridian: U	9. FIELD and POOL or WILDCAT: BLUEBELL
	COUNTY: UINTAH
	STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 4/15/2010	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input checked="" type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: _____

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

EL PASO E & P REQUESTS APPROVAL TO WORK ON THIS WELL AS REQUIRED AND APPROVED BY THE EPA UNDER MAJOR PERMIT MODIFICATION NO. 3. PORPOSED WORK: 1. POOH W/TBG & PKRS 2. DRILL OUT CICR @ 6190' AND CLEAN OUT TO PBTD+/-8300' 3. PREFORATE 6617-8276' 4. ACIDIZE PERFS 5. RIH W/TBG & PKRS 6. PRESSURE TEST PKRS & CSG (PART 1 MIT) 7. RUN TEMPERATURE LOGS AND RADIOACTIVE TRACER SURVEYS (PART MIT) EL PASO WILL SUBMITT APPROPRIATE EPA AND BLM SUNDRIES.

Accepted by the Utah Division of Oil, Gas and Mining

Date: March 25, 2010

By:

NAME (PLEASE PRINT) Marie Okeefe	PHONE NUMBER 303 291-6417	TITLE Sr Regulatory Analyst
SIGNATURE N/A		DATE 3/22/2010

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: FEE
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: 7. UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Water Disposal Well	8. WELL NAME and NUMBER: DAVIS 1-33A1E
2. NAME OF OPERATOR: EL PASO E&P COMPANY, LP	9. API NUMBER: 43047303840000
3. ADDRESS OF OPERATOR: 1099 18th ST, STE 1900 , Denver, CO, 80202	PHONE NUMBER: 303 291-6417 Ext
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1980 FNL 2356 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENW Section: 33 Township: 01.0S Range: 01.0E Meridian: U	9. FIELD and POOL or WILDCAT: BLUEBELL COUNTY: UINTAH STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 4/15/2010 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input checked="" type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: _____

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

EL PASO E & P REQUESTS APPROVAL TO WORK ON THIS WELL AS REQUIRED AND APPROVED BY THE EPA UNDER MAJOR PERMIT MODIFICATION NO. 3. PORPOSED WORK: 1. POOH W/TBG & PKRS 2. DRILL OUT CICR @ 6190' AND CLEAN OUT TO PBTD+/-8300' 3. PREFORATE 6617-8276' 4. ACIDIZE PERFS 5. RIH W/TBG & PKRS 6. PRESSURE TEST PKRS & CSG (PART 1 MIT) 7. RUN TEMPERATURE LOGS AND RADIOACTIVE TRACER SURVEYS (PART MIT) EL PASO WILL SUBMITT APPROPRIATE EPA AND BLM SUNDRIES.

Accepted by the Utah Division of Oil, Gas and Mining

Date: March 25, 2010

By:

NAME (PLEASE PRINT) Marie Okeefe	PHONE NUMBER 303 291-6417	TITLE Sr Regulatory Analyst
SIGNATURE N/A		DATE 3/22/2010

Division of Oil, Gas and Mining
OPERATOR CHANGE WORKSHEET (for state use only)

ROUTING
 CDW

X - Change of Operator (Well Sold)

Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective:

6/1/2012

FROM: (Old Operator):
 N3065- El Paso E&P Company, L.P.
 1001 Louisiana Street
 Houston, TX. 77002

 Phone: 1 (713) 997-5038

TO: (New Operator):
 N3850- EP Energy E&P Company, L.P.
 1001 Louisiana Street
 Houston, TX. 77002

 Phone: 1 (713) 997-5038

CA No.

Unit:

N/A

WELL NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
See Attached List								

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

- (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 6/25/2012
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 6/25/2012
- The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 6/27/2012
- Is the new operator registered in the State of Utah: _____ Business Number: 2114377-0181
- (R649-9-2)Waste Management Plan has been received on: Yes
- Inspections of LA PA state/fee well sites complete on: N/A
- Reports current for Production/Disposition & Sundries on: 6/25/2012
- Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM N/A BIA Not Received
- Federal and Indian Units:**
The BLM or BIA has approved the successor of unit operator for wells listed on: N/A
- Federal and Indian Communization Agreements ("CA"):**
The BLM or BIA has approved the operator for all wells listed within a CA on: N/A
- Underground Injection Control ("UIC")** Division has approved UIC Form 5 Transfer of Authority to **Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: 9/12/2012

DATA ENTRY:

- Changes entered in the **Oil and Gas Database** on: 9/24/2102
- Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 9/24/2012
- Bond information entered in RBDMS on: 9/24/2012
- Fee/State wells attached to bond in RBDMS on: 9/24/2012
- Injection Projects to new operator in RBDMS on: 9/24/2012
- Receipt of Acceptance of Drilling Procedures for APD/New on: N/A

BOND VERIFICATION:

- Federal well(s) covered by Bond Number: 103601420
- Indian well(s) covered by Bond Number: 103601473
- (R649-3-1) The **NEW** operator of any state/fee well(s) listed covered by Bond Number 400JU0705
- The **FORMER** operator has requested a release of liability from their bond on: N/A

LEASE INTEREST OWNER NOTIFICATION:

- (R649-2-10) The **NEW** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: 9/24/2012

COMMENTS:

Well Name	Sec	TWP	RNG	API Number	Enity Number	Lease	Well Tyoe	Well Status
UTE 1-14C6	14	030S	060W	4301330056	12354	Indian	WD	A
UTE TRIBAL 1-A	18	030S	060W	4301315122	99990	Fee	WD	A
LAKE FORK 2-23B4	23	020S	040W	4301330038	1970	Fee	WD	A
TEW 1-9B5	09	020S	050W	4301330121	1675	Fee	WD	A
RHOADES MOON 1-36B5	36	020S	050W	4301330289	4765	Fee	WD	A
G HANSON 2-4B3 SWD	04	020S	030W	4301330337	99990	Fee	WD	A
LDS CHURCH 2-27B5	27	020S	050W	4301330340	99990	Fee	WD	A
LINDSAY RUSSELL 2-32B4	32	020S	040W	4301330371	99996	Fee	WD	A
EHRICH 2-11B5	11	020S	050W	4301330391	99990	Fee	WD	A
LAWSON 1-21A1	21	010S	010W	4301330738	935	Fee	WI	A
DAVIS 1-33A1E	33	010S	010E	4304730384	805	Fee	WD	A
ALLRED 2-16A3	16	010S	030W	4301330361	99996	Fee	WD	I
BIRCH 2-35A5	35	010S	050W	4301330362	99996	Fee	WD	I

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: Multiple Leases
2. NAME OF OPERATOR: El Paso E&P Company, L.P. Attn: Maria Gomez		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: 1001 Louisiana CITY Houston STATE TX ZIP 77002		7. UNIT or CA AGREEMENT NAME:
PHONE NUMBER: (713) 997-5038		8. WELL NAME and NUMBER: See Attached
4. LOCATION OF WELL FOOTAGES AT SURFACE: See Attached		9. API NUMBER:
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:		10. FIELD AND POOL, OR WILDCAT: See Attached
COUNTY:		STATE: UTAH

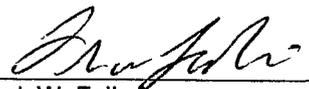
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

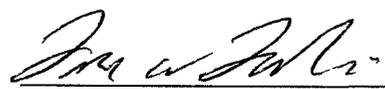
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>Change of</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	<u>Name/Operator</u>

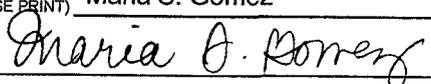
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Please be advised that El Paso E&P Company, L.P. (current Operator) has changed names to EP Energy E&P Company, L.P. (new Operator) effective June 1, 2012 and that EP Energy E&P Company, L.P. is considered the new operator of the attached well locations.

EP Energy E&P Company, L.P. is responsible under the terms and conditions of the lease(s) for the operations conducted upon leased lands. Bond coverage is provided by the State of Utah Statewide Blanket Bond No. 400JU0705, Bureau of Land Management Nationwide Bond No. 103601420, and Bureau of Indian Affairs Nationwide Bond No. 103601473.


Frank W. Falleri
Vice President
El Paso E&P Company, L.P.


Frank W. Falleri
Sr. Vice President
EP Energy E&P Company, L.P.

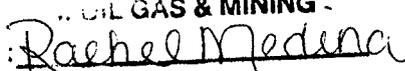
NAME (PLEASE PRINT) <u>Maria S. Gomez</u>	TITLE <u>Principal Regulatory Analyst</u>
SIGNATURE 	DATE <u>6/22/2012</u>

(This space for State use only)

APPROVED
SEP 24 2012

RECEIVED
JUN 25 2012

(5/2000)

OIL GAS & MINING


(See Instructions on Reverse Side)

DIV OF OIL GAS & MINING

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

UIC FORM 5

I

TRANSFER OF AUTHORITY TO INJECT

Well Name and Number Davis 1-33A1E	API Number 4304730384
Location of Well Footage : 1980' FNL & 2356' FWL County : Uintah QQ, Section, Township, Range: SENW 33 1S 1E State : UTAH	Field or Unit Name Bluebell Lease Designation and Number Fee

EFFECTIVE DATE OF TRANSFER: 6/1/2012

CURRENT OPERATOR

Company: <u>El Paso E&P Company, L.P.</u>	Name: <u>Maria S. Gomez</u>
Address: <u>1001 Louisiana</u> city <u>Houston</u> state <u>TX</u> zip <u>77002</u>	Signature: <u><i>Maria S. Gomez</i></u>
Phone: <u>(713) 997-5038</u>	Title: <u>Principal Regulatory Analyst</u>
Comments:	Date: <u>9/11/2012</u>

NEW OPERATOR

Company: <u>EP Energy E&P Company, L.P.</u>	Name: <u>Maria S. Gomez</u>
Address: <u>1001 Louisiana</u> city <u>Houston</u> state <u>TX</u> zip <u>77002</u>	Signature: <u><i>Maria S. Gomez</i></u>
Phone: <u>(713) 997-5038</u>	Title: <u>Principal Regulatory Analyst</u>
Comments:	Date: <u>9/11/2012</u>

(This space for State use only)

Transfer approved by: *[Signature]* Approval Date: *9/19/2012*

Title: *UIC Geologist*

Comments:

RECEIVED
SEP 12 2012

DIV. OF OIL, GAS & MINING