

UTAH OIL AND GAS CONSERVATION COMMISSION

REMARKS: WELL LOG  ELECTRIC LOGS  WATER SANDS  LOCATION INSPECTED  SUB. REPORT/abd.

981029 Int. Inf, Conf Rem!

DATE FILED MARCH 23, 1998  
 LAND: FEE & PATENTED STATE LEASE NO. ML-38665 PUBLIC LEASE NO. INDIAN

DRILLING APPROVED: MAY 7, 1998  
 SPUDDED IN: 7-7-98  
 COMPLETED: 9-30-98 SW PUT TO PRODUCING: 12-18-98

INITIAL PRODUCTION:  
 GRAVITY A.P.I.  
 GOR:  
 PRODUCING ZONES: 6028-6580'  
 TOTAL DEPTH: 6950'  
 WELL ELEVATION: 5816 GR

DATE ABANDONED:  
 FIELD: DRUNKARDS WASH  
 UNIT: DRUNKARDS WASH  
 COUNTY: CARBON  
 WELL NO. UTAH D8 API NO. 43-007-30431

LOCATION 1342 FNL FT. FROM (N) (S) LINE, 350 FWL FT. FROM (E) (W) LINE. SW NW 1/4 - 1/4 SEC. 12

TWP.	RGE.	SEC.	OPERATOR	TWP.	RGE.	SEC.	OPERATOR
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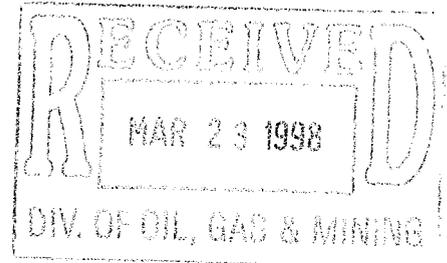
ORIGINAL

RIVER GAS CORPORATION

CONFIDENTIAL

UTAH OPERATIONS  
1305 South 100 East  
Price, Utah 84501  
Bus. (435) 637-8876  
FAX (435) 637-8924

March 20, 1998



Mr. Michael Hebertson  
State of Utah  
Div. of Oil, Gas and Mining  
1594 W. North Temple-Suite 1210  
SLC, Utah 84114-5801

RE: Application for Permit to Drill-  
Disposal Well 8, W/2, NW/4, Sect.12  
T15S, R09E, SLB & M, Carbon County, Utah

Dear Mr. Hebertson:

Enclosed is the original of the *Application for Permit to Drill (APD)* for the above named well. Included with the APD is the following information:

- Exhibit "A"- Survey plat of the proposed well site;
- Exhibit "B" - Proposed Location Map with Pipeline, Power, and Road Access;
- Exhibit "C" - Evidence of Bond;
- Exhibit "D" - Drilling Information;
- Exhibit "E" - Well Site Plan;
- Exhibit "F" - Typical Road Cross-section;
- Exhibit "G" - BOP Diagram;

A surface land use agreement is currently being negotiated. Upon completion, an affidavit regarding the agreement will be submitted to your office.

Please accept this letter as River Gas Corporation's written request for confidential treatment of all information contained in and pertaining to this permit application, if said information is eligible for such consideration. This request is made in accordance with the State of Utah's Oil and Gas Conservation General Rules item number R649-2-11.

Thank you very much for your timely consideration of this application. Please feel free to contact me if you have any questions.

Sincerely,

*Don S. Hamilton*

Don S. Hamilton  
Permit Specialist

cc: Mr. Gilbert Hunt, DOGM  
Mr. Chuck Snure, Texaco  
Mr. R.A. Lamarre, Texaco  
Mr. Gee Lake, Jr., Dominion Resources  
Mr. Eric Jones, BLM, Moab  
Mrs. Tammie Butts, River Gas Corporation  
RGC Well File

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

**APPLICATION FOR PERMIT TO DRILL OR DEEPEN**

5. Lease Designation and Serial Number: **ML-38665**

6. If Indian, Allottee or Tribe Name: **N/A**

7. Unit Agreement Name: **Drunkards Wash UTU-67921X**

8. Farm or Lease Name: **Utah**

9. Well Number: **D8**

10. Field or Pool, or Wildcat: **Drunkards Wash**

11. Qtr/Qtr, Section, Township, Range, Meridian: **W/2, NW/4, Sec.12, T15S, R9E, SLB&M**

12. County: **Carbon** 13. State: **UTAH**

14. Distance in miles and direction from nearest town or post office: **5.1 miles southwest of Price, Utah**

15. Distance to nearest property or lease line (feet): **350'** 16. Number of acres in lease: **920 acres** 17. Number of acres assigned to this well: **N/A**

18. Distance to nearest well, drilling, completed, or applied for, on this lease (feet): **950'** 19. Proposed Depth: **7000'** 20. Rotary or cable tools: **Rotary**

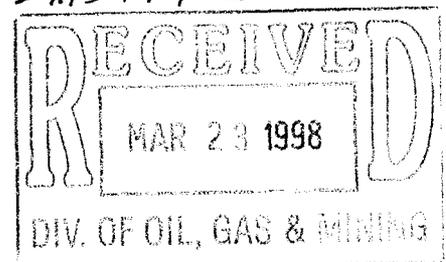
21. Elevations (show whether DF, RT, GR, etc.): **5816' GR** 22. Approximate date work will start: **April 1998**

**PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
24"	20"	Conductor	40'	See below
17 1/2"	13 3/8"	48#	300'	
12 1/4"	9 5/8"	36#	2200'	
8 1/2"	7"	26#	7000'	

DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, 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.

320 sks G+2%CaCl + 1/4#per sack flocel  $1.15 \text{ ft}^3/\text{SK}$   $1.61 \text{ ft}^3/\text{SK}$   
 350 sks 50/50 poz +8%gel+2%CaCl+10%extender 220 sks 10-1 RFC  
 390 sks 50/50 poz +8%gel+2%CaCl+10%extender 340 sks 10-1 REC  
 260 sks G+2%CaCl+1/4#per sack flocel; 130 sks G+2%CaCl+1/4#per sack flocel  $\rightarrow 1.15 \text{ ft}^3/\text{SK}$   
 $1.92 \text{ ft}^3/\text{SK}$  *per Don H. w/ R.G.C.*



24. Name & Signature: Don S. Hamilton *Don S. Hamilton* Title: Permit Specialist Date: 3/20/98

(This space for state use only)

API Number Assigned: 43-007-30431 Approval: **Approved by the Utah Division of Oil, Gas and Mining**

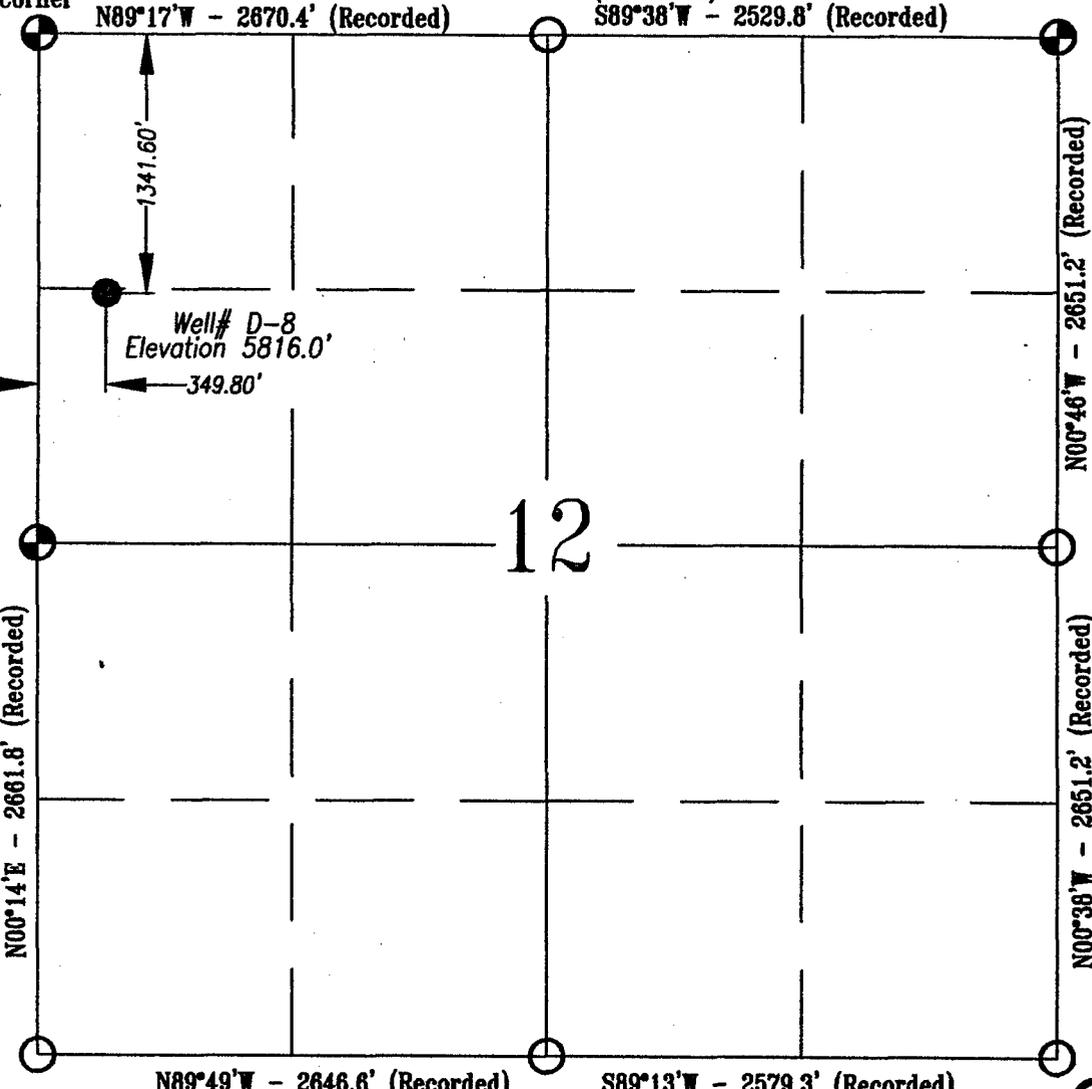
Date: 5/7/98  
 By: *[Signature]*

(1/93) (See Instructions on Reverse Side)

# Range 9 East

NW Corner N89°17'W - 2670.4' (Recorded) N89°49'01"W - 5202.9' (Measured) S89°38'W - 2529.8' (Recorded)

Township 15 South  
N00°04'E - 2646.3' (Measured)  
N00°14'E - 2661.8' (Recorded)



N89°49'W - 2646.6' (Recorded) S89°13'W - 2579.3' (Recorded)

N00°46'W - 2651.2' (Recorded)  
N00°36'W - 2651.2' (Recorded)

### Basis of Bearing:

Basis of Bearing N00°04'E recorded between the NW Corner And the West Quarter Corner of Section 12, Township 15 South, Range 9 East, Salt Lake Base & Meridian.

### Basis Of Elevation:

Basis of Elevation of 5822' as indicated in the NW Corner of Section 12, Township 15 South, Range 9 East, Salt Lake Base and Meridian.

### Description of Location:

Proposed Drill Hole located in the West 1/2 NW 1/4 of Section 12; 1341.6' South and 349.8' East from the NW Corner of Section 12, T15S, R9E, Salt Lake Base & Meridian.

### Surveyor's Certificate:

I, John S. Huefner, a Registered Licensed Land Surveyor, holding Certificate #144842, State of Utah, do hereby certify that the information on this drawing is a true and accurate survey of the land, and was conducted under my personal supervision, as shown hereon.

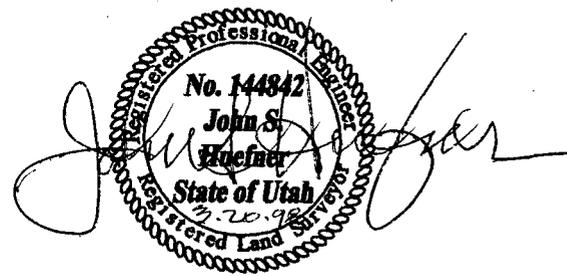
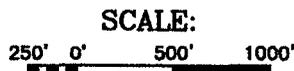


Exhibit "A"  
1 OF 3

### LEGEND:

- Drill Hole Location
- ⊕ Brass Cap (Found)
- Brass Cap (Searched for, But Not Found)



DRAWN BY: <b>P. BOYLEN</b> CHECKED BY: <b>L.W.J.</b> DATE: <b>3/13/98</b> SCALE: <b>1"=1000'</b> JOB NO. <b>269</b> DRAWING NO. <b>A-1</b> SHEET <b>1</b> OF <b>4</b>	<p>3206 South 125 West Price, Utah 84501 (801) 637-9300 FAX (801) 637-2533</p> <p><b>River Gas Corporation</b> Well# D-8 Section 12, T15S, R9E, S.L.B.&amp;M. Carbon County, Utah</p>
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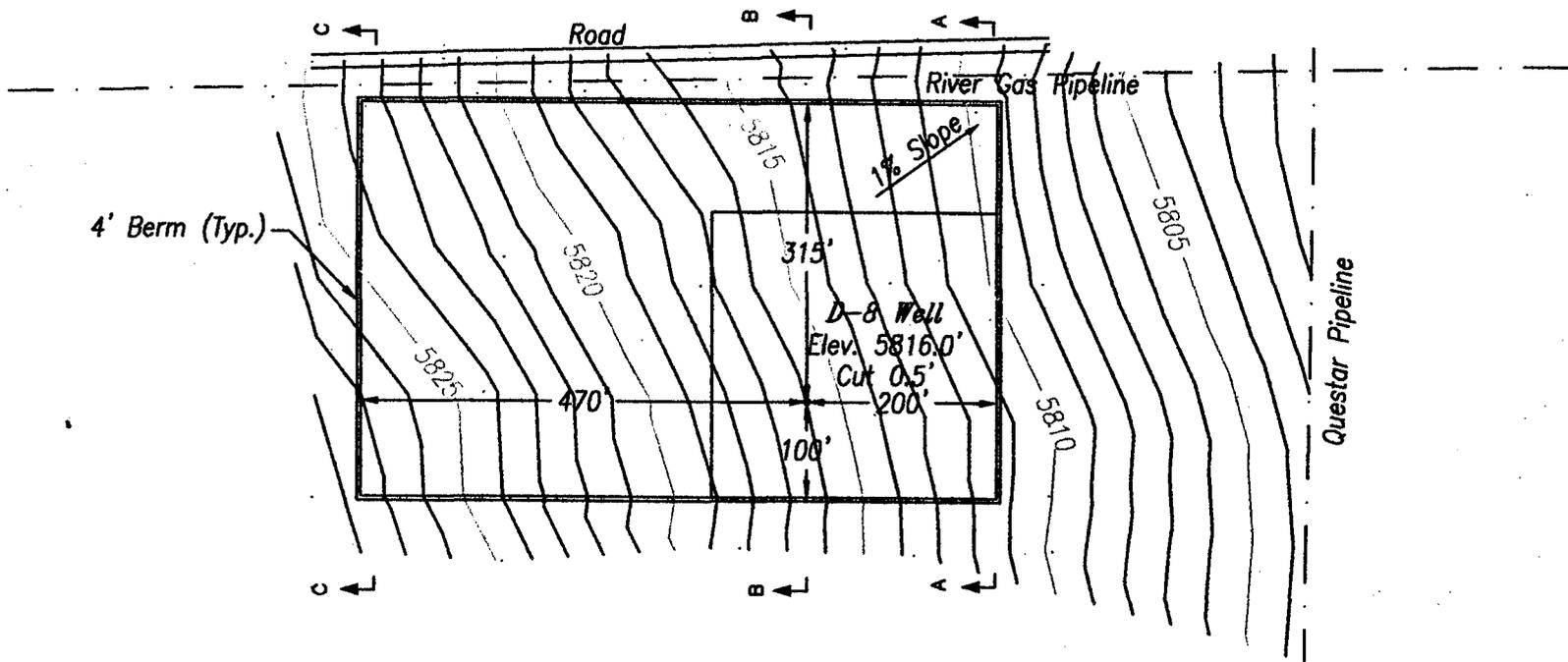
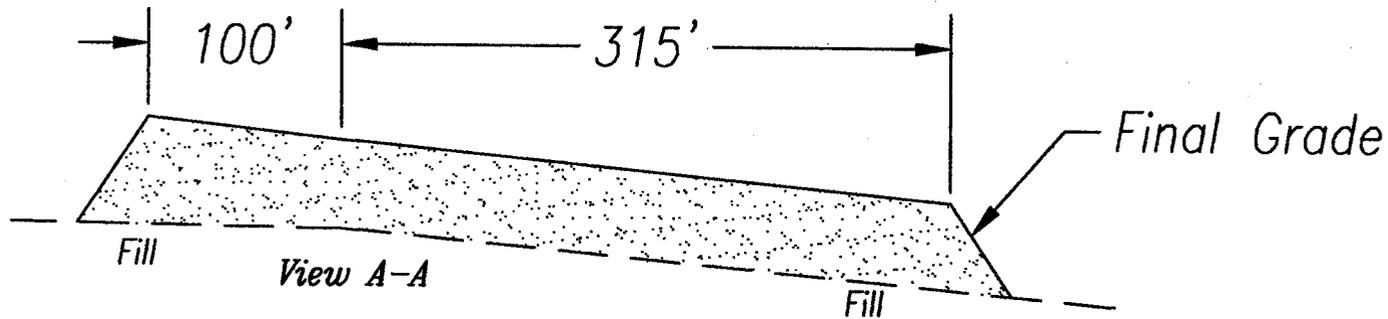
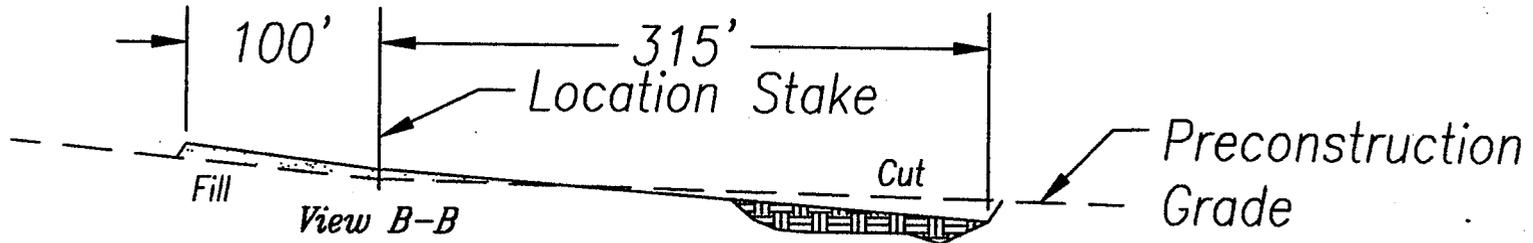
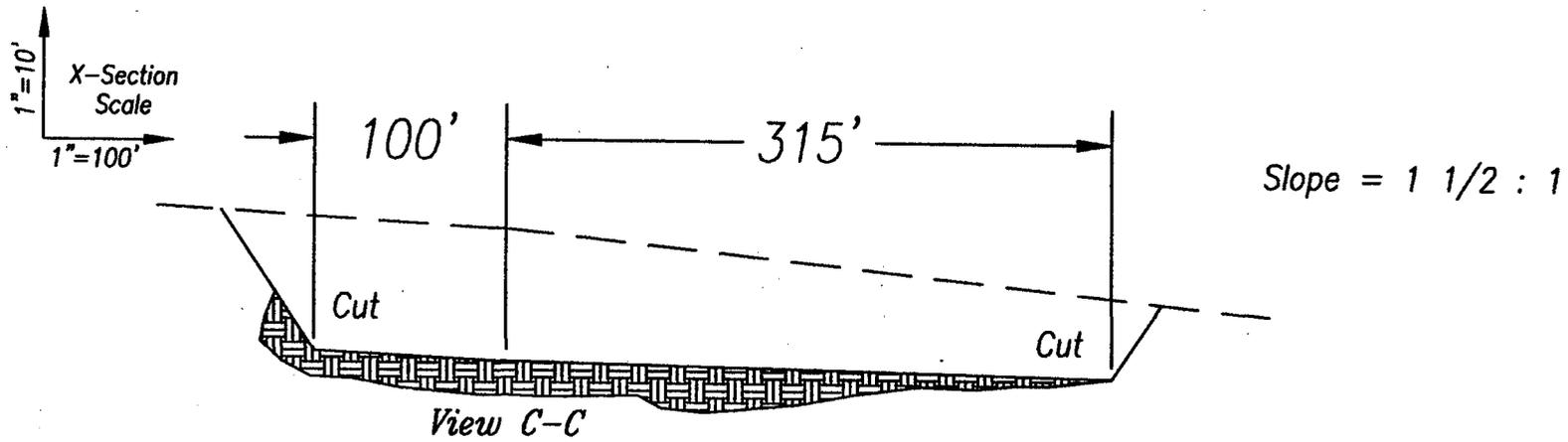


Exhibit "A"  
2 OF 3



Elevation Ungraded Ground at Location Stake = 5816.0'  
Elevation Graded Ground at Location Stake = 5815.5'

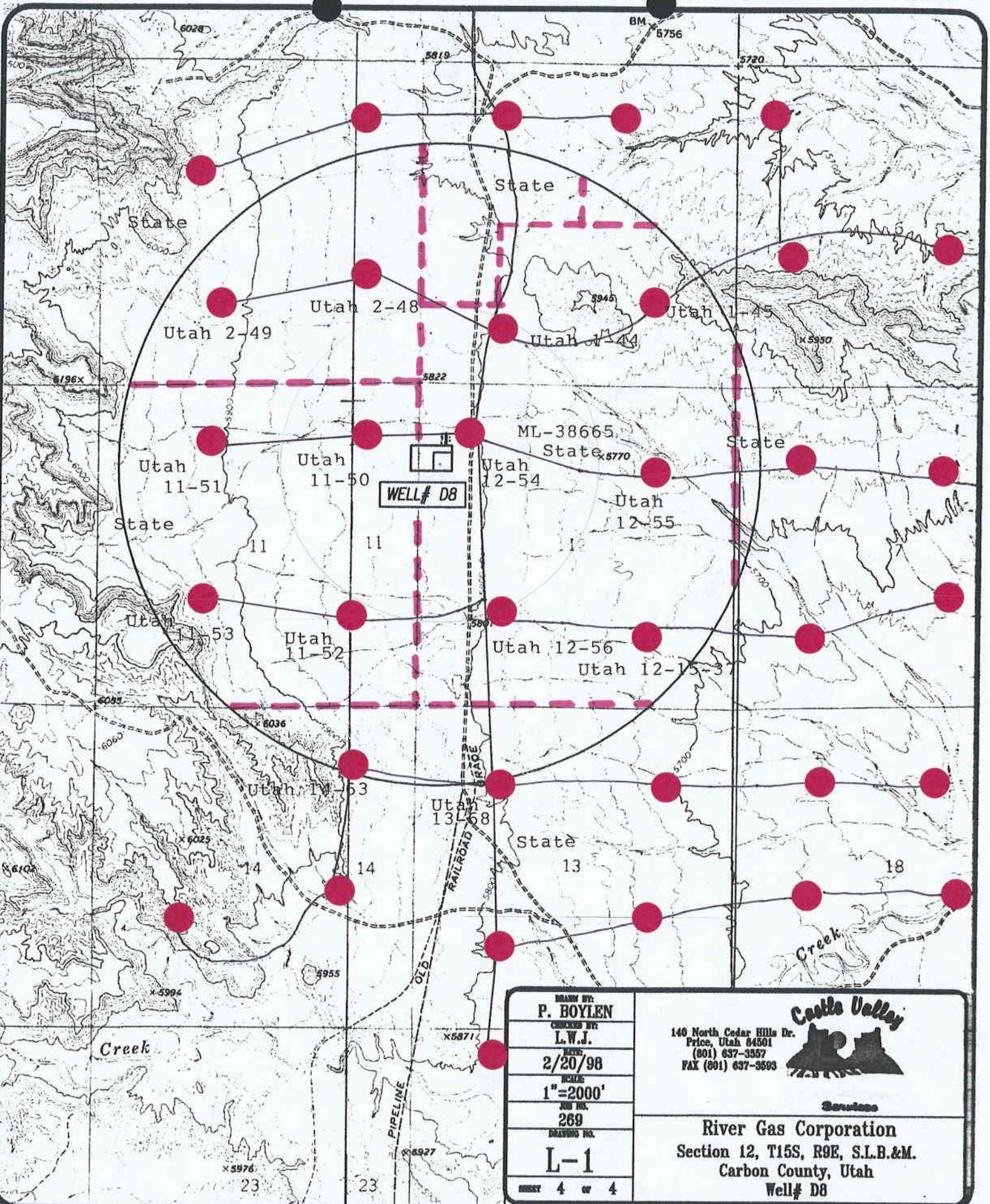
DRAWN BY: <b>P. BOYLEN</b>	 <p><b>Castle Valley</b></p> <p>3286 South 125 West          Price, Utah 84501          (801) 637-9300          FAX (801) 637-2833</p>
CHECKED BY: <b>L.W.J.</b>	
DATE: <b>3/12/98</b>	
SCALE: <b>1"=200'</b>	
JOB NO. <b>269</b>	
DRAWING NO. <b>A-2</b>	SERVICE: <b>River Gas Corporation</b> Location Layout Section 12, T15S, R9E, S.L.B.&M. Carbon County, Utah
SHEET <b>2</b> OF <b>4</b>	



**APPROXIMATE YARDAGES**

<b>CUT</b>	
(6") Topsoil Stripping	= 5,200.00 Cu. Yds.
Remaining Location	= 21,264.11 Cu. Yds.
<b>TOTAL CUT</b>	<b>= 26,464.11 Cu. Yds.</b>
<b>TOTAL FILL</b>	<b>= 1,132.01 Cu. Yds.</b>

DRAWN BY: <b>P. BOYLEN</b>	
CHECKED BY: <b>L.W.J.</b>	
DATE: <b>3/12/98</b>	3266 South 125 West Price, Utah 84501 (801) 637-9300 FAX (801) 637-2833
SCALE: <b>As Shown</b>	<b>SerVICES</b> <b>River Gas Corporation</b> Typical Cross Sections Section 12, T15S, R9E, S.L.B.&M. Well# D-8
JOB NO. <b>269</b>	
DRAWING NO. <b>C-1</b>	
SHEET <b>3</b> OF <b>4</b>	

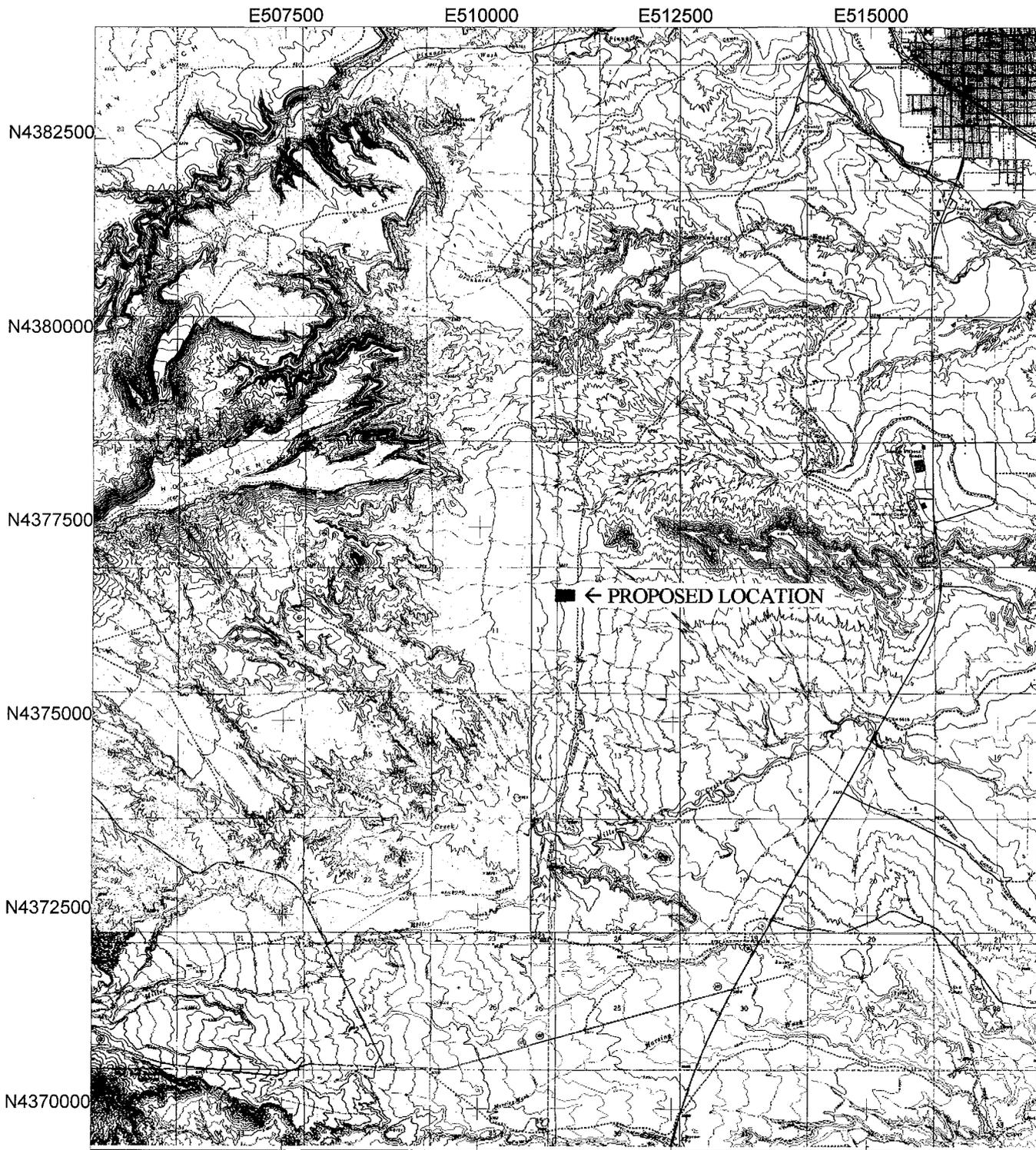


DRAWN BY: <b>P. BOYLEN</b>
CHECKED BY: <b>L.W.J.</b>
DATE: <b>2/20/98</b>
SCALE: <b>1"=2000'</b>
SHEET NO. <b>269</b>
DRAWING NO. <b>L-1</b>
SHEET <b>4</b> OF <b>4</b>

**Castle Valley**  
 140 North Cedar Hills Dr.  
 Price, Utah 84501  
 (801) 637-3557  
 FAX (801) 637-3593

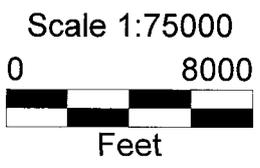


River Gas Corporation  
 Section 12, T15S, R9E, S.L.B.&M.  
 Carbon County, Utah  
 Well# D8



# Proposed D-8

Universal Transverse Mercator  
North 12  
NAD83 (Conus)



3/18/1998  
Pathfinder Office™

AMSOUTH BANK OF ALABAMA  
500 FIFTH AVENUE NORTH  
IRMININGHAM, ALABAMA 35203 USA  
UR REFERENCE NUMBER: S304606

International Services

TELEX: 6827189  
Cable: AMSOUBKBHM  
S.W.I.F.T. AMSB US 44

Mobile:  
TELEX: 6821116  
Cable: AMSOMBL  
S.W.I.F.T. AMSB US 44

AMENDMENT NUMBER: 005  
CREDIT LETTER OF CREDIT NUMBER: S304606  
DATE: NOVEMBER 13, 1995

*Sovereign Lands Only!*

BENEFICIARY:  
STATE OF UTAH, DEPARTMENT OF  
NATURAL RESOURCES, DIVISION OF  
STATE LANDS AND FORESTRY  
3 TRIAD CENTER SUITE 400  
55 WEST TEMPLE  
SALT LAKE CITY, UTAH 84180-1204

ON THE REQUEST OF RIVER GAS CORPORATION 511 ENERGY CENTER BLVD  
NORTHPORT, ALABAMA 35476

WE HEREBY AMEND OUR LETTER OF CREDIT NUMBER S304606 DATED  
DECEMBER 14, 1990 OPENED IN YOUR FAVOR AS FOLLOWS:

ACCOUNT PARTY'S ADDRESS IS CHANGES TO:  
511 ENERGY CENTER BLVD.  
NORTHPORT, ALABAMA 35476.

\*REFERENCES HEREIN TO AMSOUTH BANK N.A. SHALL BE DEEMED TO REFER  
TO AMSOUTH BANK OF ALABAMA.\*\*

ALL OTHER TERMS AND CONDITIONS REMAIN UNCHANGED.  
THIS AMENDMENT BECOMES AN INTEGRAL PART OF THE ORIGINAL LETTER OF  
CREDIT AND IS TO BE ATTACHED THERETO.

*James E. Walker*  
AUTHORIZED SIGNATURE

1305 South 100 East  
Price, Utah 84501  
(801) 637-8876  
(801) 637-8924 fax

# River Gas Corporation

To: Lisba Fax: (801) 359-3940

From: Dan Hamilton Date: 3-26-98

Re: Band information Pages: 2 (including cover)

CC: \_\_\_\_\_

- Urgent
- For Review
- Please Comment
- Please Reply
- Please Recycle

**Notes:**

Following is a band credit sheet for lands administered by SITLA. I appologize for the poor copy. Please let me know if I can be of any further assistance.



AMSOUTH BANK OF ALABAMA  
1900 FIFTH AVENUE NORTH  
BIRMINGHAM, ALABAMA 35203 USA  
OUR REFERENCE NUMBER: S308586

International Services

Mobile:  
TELEX: 6821116  
Cable: AMSOMBL  
S.W.I.F.T. AMSB US 44

AMENDMENT NUMBER: 002  
TO LETTER OF CREDIT NUMBER: S308586  
DATE: NOVEMBER 13, 1995

*Free Wells Only!*

BENEFICIARY:  
STATE OF UTAH  
DEPT. OF NATURAL RESOURCES  
DIV. OF OIL, GAS AND MINING  
355 WEST TEMPLE 3 TRIAD CENTER  
SUITE 350  
SALT LAKE CITY, UTAH 84180-1203

AT THE REQUEST OF RIVER GAS CORPORATION 3600 WATERMELON ROAD  
SUITE 204 NORTHPORT, ALABAMA 35476 AND FOR THE ACCOUNT OF SAME

WE HEREBY AMEND OUR LETTER OF CREDIT NUMBER S308586 DATED  
DECEMBER 3, 1993 OPENED IN YOUR FAVOR AS FOLLOWS:

-ACCOUNT PARTY'S ADDRESS IS CHANGED  
TO: 511 ENERGY CENTER BLYD  
NORTHPORT, ALABAMA 35476

\*\*REFERENCES HEREIN TO AMSOUTH BANK N.A. SHALL BE DEEMED TO REFER  
TO AMSOUTH BANK OF ALABAMA.\*\*

ALL OTHER TERMS AND CONDITIONS REMAIN UNCHANGED.  
THIS AMENDMENT BECOMES AN INTEGRAL PART OF THE ORIGINAL LETTER OF  
CREDIT AND IS TO BE ATTACHED THERETO.

*Janice Y. Hoover*  
\_\_\_\_\_  
AUTHORIZED SIGNATURE

EXHIBIT "D"- Page 1  
**RIVER GAS CORPORATION**  
Drilling Information

(D8)Disposal Well  
(W/2,NW/4) Sect. 12, T15S, R9E, SLB & M, Carbon County, Ut.

**R615-3-4 Permitting of Wells to be Drilled, Deepened or Plugged Back**

2.1 Telephone numbers for additional information:

Don S. Hamilton	(435) 637-8876 Office
Permit Specialist	(435) 636-5256 Mobile

Jerry Dietz	(435) 637-8876 Office
Production Superintendent	(435) 636-5114 Mobile

Lenny Grimsley	(435) 637-8876 Office
Construction Specialist	(435) 636-5259 Mobile

Michael J. Farrens	(205) 759-3282 Office
Exec.Vice President	(205) 758-8535 Home

- 2.2 Lease: State of Utah ML-38665
- 2.3 This disposal well will be drilled approximately 5.1 miles southwest of Price, Utah.
- 2.4 Survey Plat: See Exhibit " A"
- 2.5 Water will be purchased from Price River Water Improvement District, PRWID. This was previously arranged by Mr. Mike Farrens of RGC with Mr. Phillip Palmer of PRWID and approved by Mr. Mark Page of the Utah State Division of Water Rights.
- 2.6 **Drilling Program**
- 2.6.1 Following is a tabulation of the geologic units and the respective depths where they are expected to be penetrated in the well.

**RIVER GAS CORPORATION**

Drilling Information Cont.

<u>Formation/Unit</u>	<u>Estimated Depth(top)</u>
Upper Mancos Shale	Surface
Ferron Sandstone	2085'
Tununk Shale	2340'
Dakota	2707'
Cedar Mtn	2746'
Morrison	3545'
Summerville	4052'
Curtis	4476'
Entrada	4628'
Carmel	5305'
Navajo	5965'
Kayenta	6327'
Wingate	6421'

2.6.2 This well will be utilized strictly for the injection of produced waters from RGC's coalbed methane wells. Zones that have shown to be gas and water-bearing are the coals and sandstones of the Ferron Formation. The Navajo Sandstone is expected to be water-bearing, and potentially containing CO<sub>2</sub>.

2.6.3 A rotating head with a diverter system will be used to drill the surface hole. For the remainder of the drilling (surface shoe to TD), a double gate 5000 psi BOPE will be used with a rotating head. This equipment will be tested to 3500 psi or 70% of the minimum interval yield pressure. All tests will be recorded in a Driller's Report Book. Physical operation of the BOPE's will be checked on each trip. See Attachment "G" for the schematic of the BOPE.

2.6.4 **Casing Program-** 20" conductor pipe will be set to approximately 40'. Surface casing will be 13 3/8" 48#/ft. set to approximately 300' and cemented with 320 sacks of class "G" cement with 2% CaCl<sub>2</sub>. Intermediate casing will be 9 5/8", 36 lb./ft. LTC set to approximately 2200' and cemented with 350 sks 50/50 POZ, 220 sks 10-1 RFC. Production casing will be 7", 26 lb./ft. LTC which will be run to TD and cemented in two stages with 260 sks G + 390 sks 50/50 Pozmix cement and tail-in with 130 sks G & 340 sacks of 10-1 RFC. Cement volumes may vary depending on hole conditions and a maximum effort will be made to bring cement back to the surface on all casings.

Exhibit "D" - Page 3

**RIVER GAS CORPORATION**

Drilling Information Cont.

**2.6.5 Mud Program:**

<u>Depth</u>	<u>Hole Size</u>	<u>Program</u>
0-300'	17 1/2" hole	
300'-2200'	12 1/4" hole	Drill with air. 400 psi @ 1500-1800 cfs.
2200'-TD	8-1/2" hole	Drill with air 400 psi @ 1500-1800 cfs.

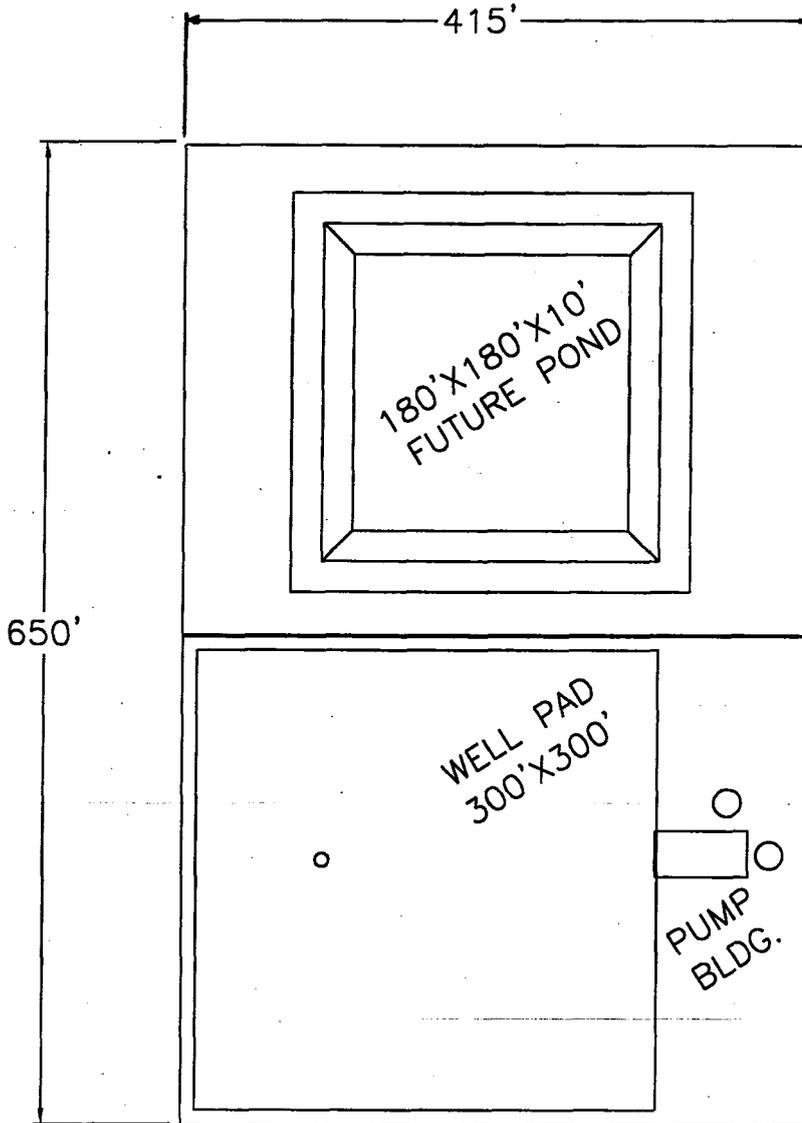
If necessary to mud-up, a fresh water Bentonite type system will be used.

**2.6.6 Logging and Testing Program:**

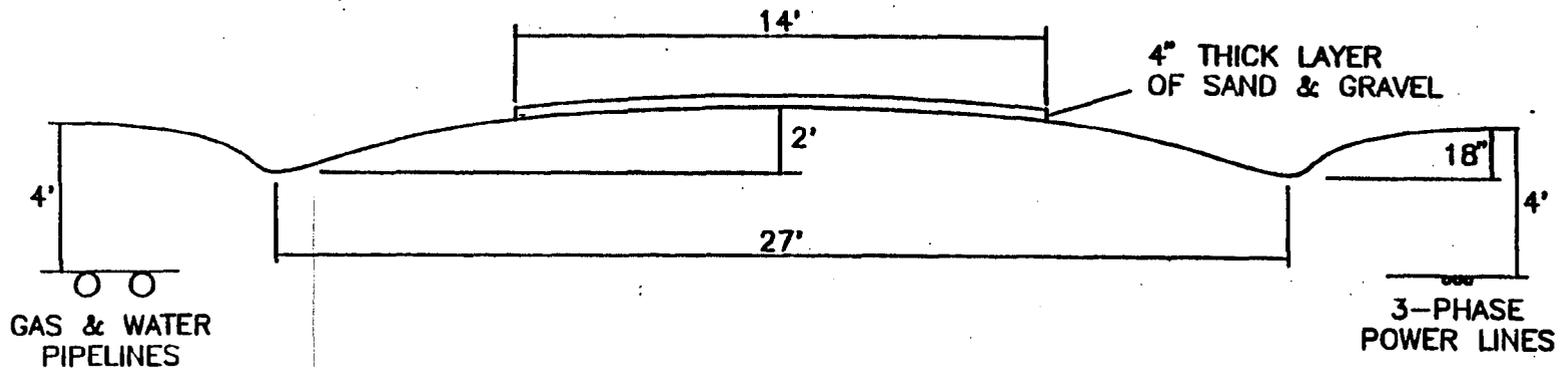
<u>Depth</u>	
0-300'	Gamma Ray
300-TD	GR,DIL, LDT, CNL, DSI SONIC

2.6.7 We expect a bottom hole pressure of 3000 psi. No hazards are expected.

# PROPOSED DISPOSAL WELL D-8



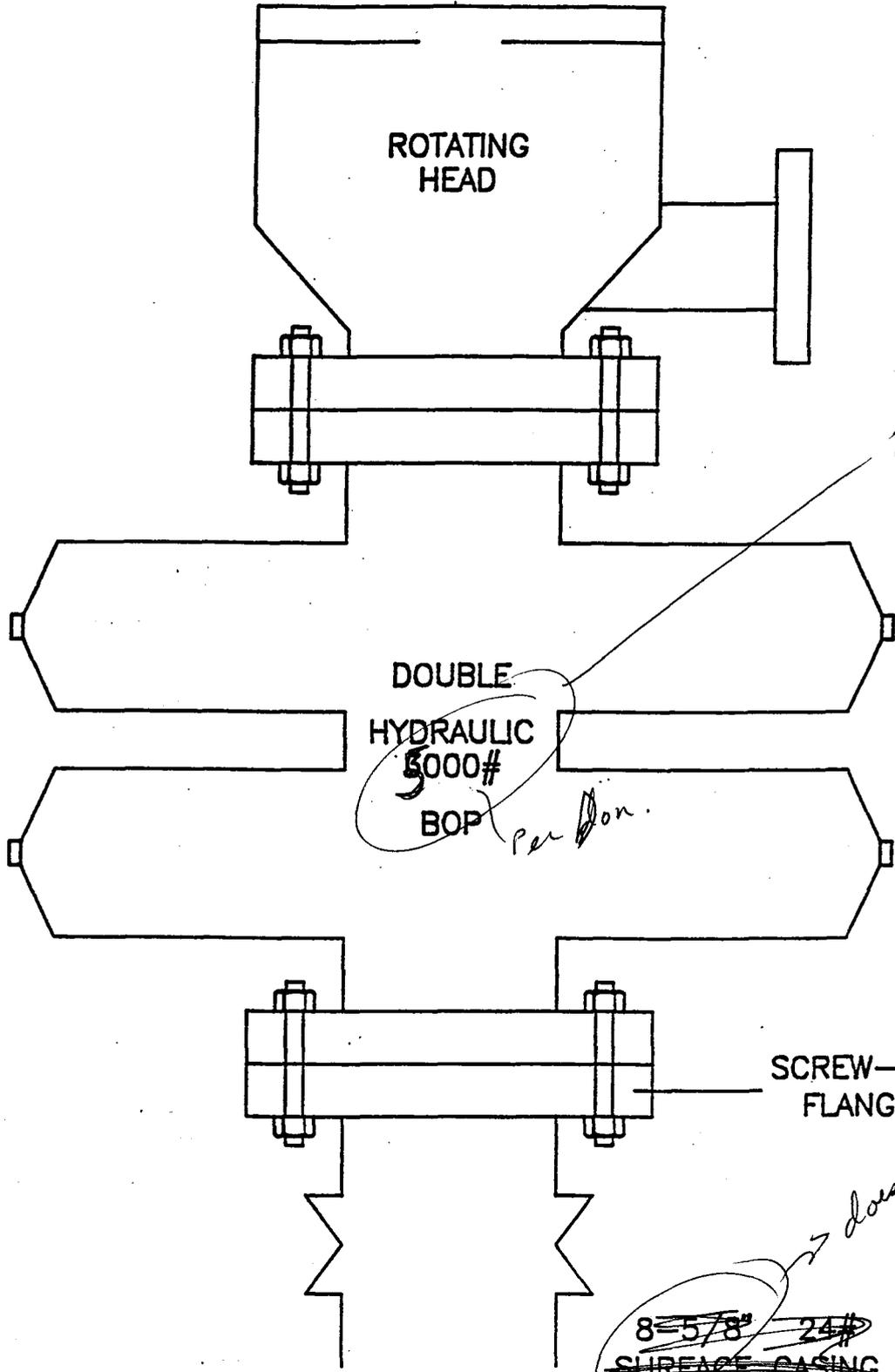
# RIVER GAS CORPORATION



## TYPICAL ROAD CROSS-SECTION

NOT TO SCALE

# DIVERTER HEAD



2.6.3 says  
3500  
test  
pressure

DOUBLE  
HYDRAULIC  
5000#  
BOP

per Don.

SCREW-ON  
FLANGE

doesn't match  
any csq.  
sizes.  
minor

~~8-5/8" 24#~~  
~~SURFACE CASING~~

SURFACE CASING

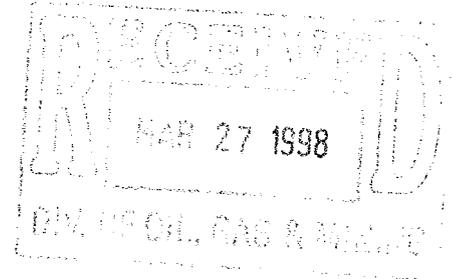


ORIGINAL

RIVER GAS CORPORATION

UTAH OPERATIONS  
1305 South 100 East  
Price, Utah 84501  
Bus. (435) 637-8876  
FAX (435) 637-8924

March 25, 1998



Mr. Chris Kierst  
Div. of Oil, Gas and Mining  
P.O. Box 145801  
1594 W. North Temple-Suite 1210  
SLC, Utah 84114-5801

RE: Supplemental Information for the previously submitted D-7 and D-8

Dear Mr. Kierst:

Following our conversation on Friday, March 20, 1998 the following information is being provided to supplement the APD's previously submitted. This information will become a part of our APD packages for future disposal wells. Please include the following information with your review of the APD's:

Attachment "A" - Selected Points to be Addressed in On-site Pre-drill Evaluation

Attachment "B" - Proposed Drilling Equipment Location Layout

Thank you for accepting this supplemental information in this manner. Please feel free to contact me if you have any questions.

Sincerely,

*Don S. Hamilton*

Don S. Hamilton  
Permit Specialist

cc: Mrs. Tammie Butts, RGC  
RGC Well File

**SELECTED POINTS TO BE ADDRESSED IN ON-SITE PRE-DRILL  
EVALUATION**

River Gas Corp.  
Disposal Well D-8  
W/NW, Sec. 12, T15S, R09E, SLB&M  
1342' FNL, 350' FWL  
Carbon County, Utah

Multipoint Surface Use Plan

**1. Existing Roads**

- a) We do not plan to change, alter or improve upon any existing state or county roads. Existing roads will be maintained in the same or better condition.
- b) The access to the Utah 11-50 and Utah 11-51 from the Utah 12-54 will be utilized for this well.

**2. Planned Access**

- a) Approximately 200' of new access will be constructed.
- b) From the east-west section 11 access, traverse approximately 200' south to the D-8 (see Exhibit "B", included in the previously submitted APD).
- c) Maximum Width: 14' travel surface with 27' base
- d) Maximum grade: 3%
- e) Turnouts: None
- f) Drainage design: 2 culverts will be required. Water will be diverted around the well pad as necessary.
- g) Following drilling, the road will be surfaced and maintained as necessary to prevent soil erosion and accommodate year-round traffic.

**3. Location of Existing Wells**

- a) There are many existing wells within ½ mile of the proposed location (see Exhibit "B", included in the previously submitted APD).

#### **4. Location of Existing and/or Proposed Facilities**

- a) If drilling is successful, installation of production facilities will follow. Buried power lines run along the access road on the east or north, gathering lines on the south or west.
- b)
- c) Rehabilitation of all pad areas not used for production facilities will be made in accordance with landowner stipulations.

#### **5. Location and Type of Water Supply**

- a) Water to be used for drilling will be purchased from the Price River Water Improvement District (PRWID) (tel. 435-637-6350).
- b) Water will be transported by truck over approved access roads.
- c) No water well is to be drilled for this location.

#### **6. Source of Construction Materials**

- a) Any necessary construction materials needed will be obtained locally and hauled to the location on existing roads.
- b) No construction or surfacing materials will be taken from Federal/Indian land.

#### **7. Methods for handling waste disposal**

- a) As the well will be air drilled, a small reserve pit will be constructed with a minimum of one-half the total depth below the original ground surface on the lowest point within the pit. The pit will not be lined unless conditions encountered during construction warrant it or if deemed necessary by the DOGM representative during the pre-site inspection. Three sides of the reserve pit will be fenced within 24 hours after completion of construction and the fourth side within 24 hours after drilling operations cease with four strands of barbed wire, or woven wire topped with barbed wire to a height of not less than four feet. The fence will be kept in good repair while the pit is drying.
- b) Following drilling, the liquid waste will be evaporated from the pit and the pit backfilled and returned to natural grade.
- c) No liquid hydrocarbons will be discharged to the reserve pit or location.
- d) In the event fluids are produced, any oil will be retained in tankage until sold and any water produced will be retained until its quality can be determined. The quality and quantity of the water will determine the method of disposal.
- e) Trash will be contained in a portable metal container and will be hauled from location periodically and disposed of at an approved disposal site. Chemical toilets will be placed on location and sewage will be disposed of at an appropriate disposal site.

## **8. Ancillary Facilities**

- a) We anticipate no need for ancillary facilities with the exception of three trailers to be located on the drill site.

## **9. Wellsite Layout**

- a) Available topsoil will be removed from the location and stockpiled. Location of mud tanks, reserve and burn pits, and soil stockpiles will be located as shown on the following attachment.
- b) A blooie pit will be located 150' diagonally from the drill hole. A line will be placed on the surface from the center hole to the burn pit. The burn pit will not be lined, but will be fenced on four sides to protect livestock/wildlife.
- c) Natural runoff will be diverted around the well pad.

## **10. Plans for Restoration of Surface**

- a) All surface areas not required for production operations will be graded to as near original condition as possible and contoured to maintain possible erosion to a minimum.
- b) Available topsoil will be stockpiled and will be evenly distributed over the disturbed areas. The area will be reseeded as prescribed by the landowner.
- c) Pits and any other area that would present a hazard to wildlife or livestock will be fenced off when the rig is released and removed.
- d) Any oil accumulation on the pit will be removed or overhead flagged as dictated by then existing conditions.
- e) Date of commencement will be as soon as possible. Rehabilitation will commence following completion of the well. If the wellsite is to be abandoned, all disturbed areas will be recontoured to match the original natural contour as closely as is possible.

## **11. Surface Ownership**

- a) The well site and access road will be constructed on lands owned by the State Institutional & Trust Lands Administration. The operator shall contact the landowner's representative and the Division of Oil, Gas & Mining 48 hours prior to the beginning construction activities.

12. **Other Information:**

- a) The primary surface use is grazing. The nearest dwelling is more than 3 ½ miles away from the location. Nearest live water is approximately 2 miles south.
- b) If there is snow on the ground when construction begins, it will be removed before the soil is disturbed and piled downhill from the topsoil stockpile location.
- c) The backslope and foreslope will be constructed no steeper than 4:1.
- d) All equipment and vehicles will be confined to the access road and well pad.
- e) A complete copy of the approved Application for Permit to Drill (APD) including conditions and stipulations, shall be on the wellsite during construction and drilling operations.
- f) There will be no deviation from the proposed drilling and/or workover program without prior approval from the Division of Oil, Gas & Mining.

13. **Company Representative**

Don S. Hamilton  
River Gas Corporation, 1305 So. 100 E., Price, Utah 84501  
Office (435) 637-8876  
Mobile (435) 636-5671

Mail Approved A.P.D. To: Company Representative

14. **Certification**

I hereby certify that I, or persons under my direct supervision have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct, and that the work associated with the operations proposed herein will be performed by River Gas Corp. and its subcontractors in conformity with this plan and the terms and conditions under which it is approved.

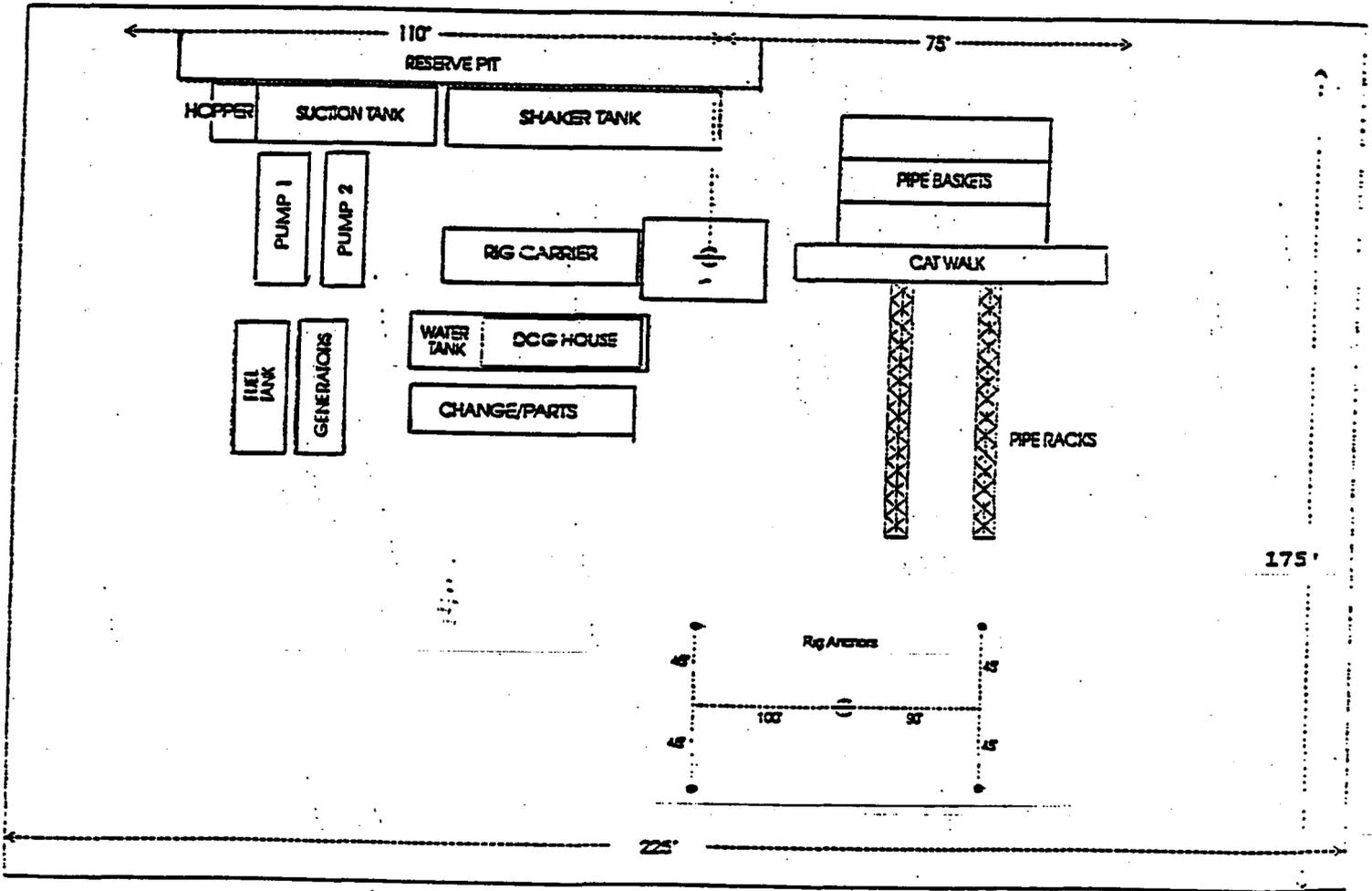
Don S. Hamilton  
Don S. Hamilton  
Permit Specialist  
River Gas Corporation

3-25-98  
Date

Attachment "B"

Proposed Drilling Equipment Location Layout

River Gas Corp.  
Disposal Well D-8  
W/NW, Sec. 12, T15S, R09E, SLB&M  
1342'FNL, 350'FWL  
Carbon County, Utah



note: Road access is to the East on the North Side of the location.

1305 South 100 East  
Price, Utah 84501  
(801) 637-8876  
(801) 637-8924 fax

# River Gas Corporation

To: Lisha Cordova Fax: 1-801-359-3940

From: Don Hamilton Date: 4-10-98

Re: SITLA statewide Bond Pages: 4 (including cover)

CC: \_\_\_\_\_

- Urgent
- For Review
- Please Comment
- Please Reply
- Please Recycle

**Notes:**

Following is the information you requested!

hard copy to follow





# POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS:

That GULF INSURANCE COMPANY, a corporation of the State of Missouri, hereinafter called "Company," does hereby appoint

**FRANCES BURKS, DALLAS, TEXAS**

its true and lawful Attorney-in-fact to make, execute, seal and deliver on its behalf, as surety, any and all bonds and undertakings of suretyship, including waiver and consent of surety to conditions of contracts.

The execution of such bonds or undertakings in pursuance of these presents shall be as binding upon the Company as if they had been executed and acknowledged by the regularly elected officers of the Company.

This Power of Attorney is issued pursuant to and by authority of the following resolution of the Board of Directors of the Company, adopted effective July 1, 1983, and now in full force and effect:

"Resolved that the President, or any Senior Vice President, or any Vice President, or the Secretary, or any Assistant Secretary may appoint Attorneys-in-fact in any state, territory or federal district to represent this Company and to act on its behalf within the scope of the authority granted to them, in writing, which authority may include the power to make, execute, seal and deliver on behalf of this Company, as surety, and to its full and legal effect, any and all bonds and undertakings of suretyship and other documents and other documents and other documents the ordinary course of every business may require, including authority to appoint agents for the service of process in any jurisdiction, state or federal, and authority to assist in the signature of the President, or any Senior Vice President, or any Vice President, or the Secretary, or any Assistant Secretary, and to verify any affidavit or other statement relating to the foregoing, and to carry on a copy of any of the bylaws of the Company and to any resolutions adopted by the Board of Directors; and any such Attorney-in-fact may be removed and the authority granted him revoked by the President, or any Senior Vice President, or any Vice President, or the Secretary, or any Assistant Secretary, or by the Board of Directors."

This Power of Attorney and Certificate are signed and sealed by facsimile under and by authority of the following resolution of the Board of Directors of the Company, adopted effective July 1, 1983, and now in full force and effect:

"Resolved that the signature of the President, or of any Senior Vice President, or of any Vice President, or of the Secretary, or of any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing Attorneys-in-fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, including any such power of attorney and certificate revoking the authority of the foregoing Attorneys-in-fact, as well as for the appointment of agents for the service of process in any jurisdiction, state or federal, including any such power of attorney and certificate revoking the authority of such agents; and any such power of attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power of attorney or certificate so executed and certified by such facsimile signature and facsimile seal shall be valid and binding upon the Company at the time any such power of attorney and certificate are executed and in the future with respect to any bond or undertaking to which they are attached."

I, the undersigned, do hereby certify that the Company has caused this Power of Attorney to be signed and its corporate seal to be affixed by its authorized officer this 1st day of June 19 88



By Clifford R. Beard  
Sr. Vice President



30th day of June 19 88 before me, a Notary Public of the State and County aforesaid, residing therein, duly commissioned and sworn, and being by me first duly sworn according to law, and desiring and saying that he is that officer of the company designated in and to which said Power of Attorney and Certificate relate, that he knows the seal of said company; that the seal affixed to such instrument is the corporate seal of said company; and that the corporate seal and his signature subscribed to the said instrument by the authority and direction of said company.

Clifford R. Beard  
Notary Public  
Clifford R. Beard

### CERTIFICATE

I, the undersigned, do hereby certify that the original Power of Attorney of which the foregoing is a true and correct copy is in full force and effect, and the foregoing resolutions are true and correct transcripts from the records of GULF INSURANCE COMPANY and that the above named officer was on the date of execution of the foregoing Power of Attorney authorized to execute this Power of Attorney.



I, the undersigned, do hereby certify that the foregoing is a true and correct copy of the original Power of Attorney of which the foregoing is a true and correct copy is in full force and effect, and the foregoing resolutions are true and correct transcripts from the records of GULF INSURANCE COMPANY and that the above named officer was on the date of execution of the foregoing Power of Attorney authorized to execute this Power of Attorney.

Clifford R. Beard  
Vice President

Bond No. \_\_\_\_\_

Effective \_\_\_\_\_, 19\_\_\_\_

On Behalf of \_\_\_\_\_

In Favor of \_\_\_\_\_



**GULF INSURANCE COMPANY**  
**ATLANTIC INSURANCE COMPANY**  
**SELECT INSURANCE COMPANY**  
**EXECUTIVE OFFICES - IRVING, TEXAS**

United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
Utah State Office  
P.O. Box 45155  
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:  
3160  
(UT-922)

Memorandum

To: Assistant District Manager Minerals, Moab District  
From: Michael Coulthard, Petroleum Engineer  
Subject: 1998 Plan of Development ~~Hanging Rock Unit~~ *Drunkards Wash Unit*  
Uintah County, Utah.

Pursuant to telephone conversation between Lisha Cordova, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management. The following water disposal well (Navajo Formation) is planned for calendar year 1998 for the Drunkards Wash Unit, Carbon County, Utah.

Well No. D-8 1342 FNL, 350 FWL of Sec 12, T15S R9E

This office has no objection to permitting the well at this time.

bcc: File - Drunkards Wash Unit  
Division of Oil Gas and Mining  
Agr. Sec. Chron  
Fluid Chron

MCoulthard:mc:03/31/98



RIVER GAS CORPORATION

UTAH OPERATIONS  
1305 South 100 East  
Price, Utah 84501  
Bus. (435) 637-8876  
FAX (435) 637-8924

APR 22 1998  
RIVER GAS CORPORATION

April 13, 1998

Mr. Chris Kierst  
Div. of Oil, Gas and Mining  
P.O. Box 145801  
1594 W. North Temple-Suite 1210  
SLC, Utah 84114-5801

RE: Supplemental Information for the previously submitted D-7 and D-8 Disposal Wells

Dear Mr. Kierst:

Following our conversation on Friday, April 17, 1998 the following information is being provided to supplement the APD previously submitted. This information will become a part of our APD packages for future disposal wells and will assist you in the approval process. Please include the following information with your review of the APD:

Thank you for accepting this supplemental information in this manner. Please feel free to contact me if you have any questions.

Sincerely,

*Don S. Hamilton*

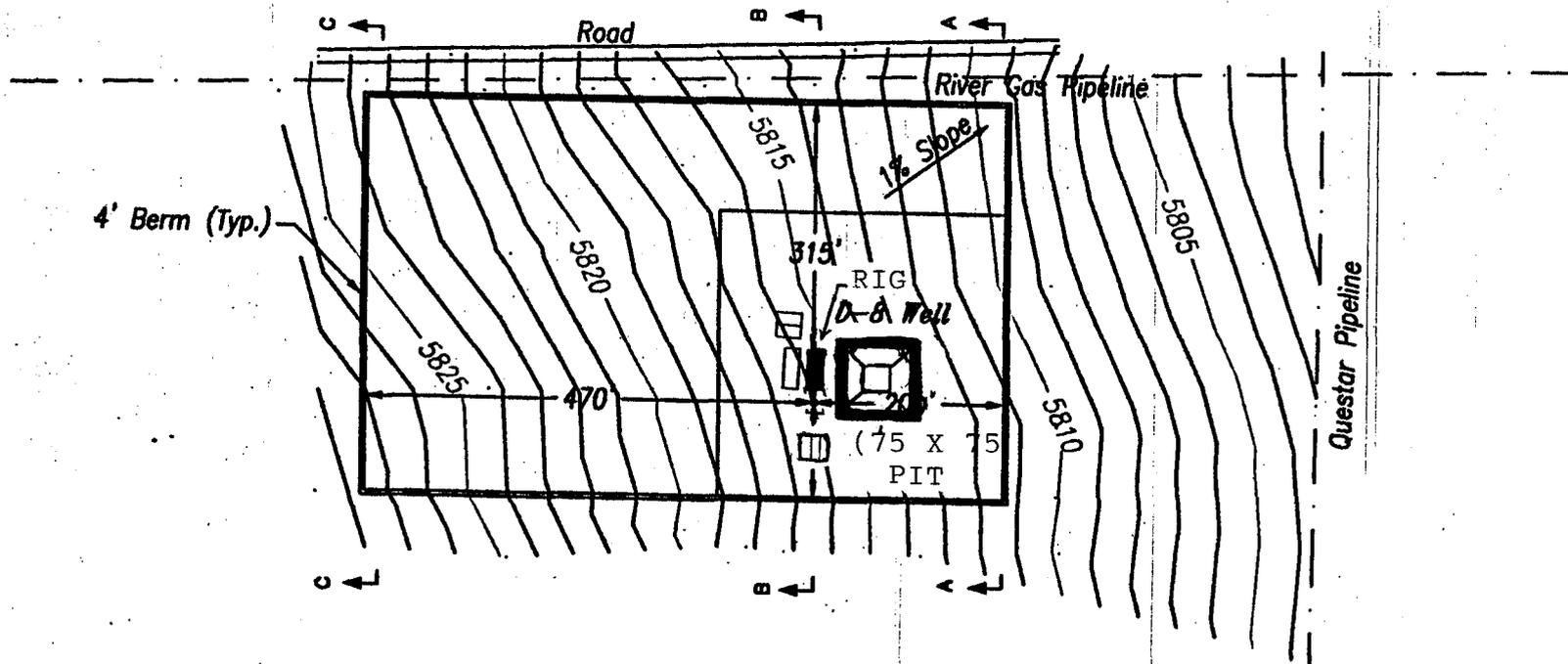
Don S. Hamilton  
Permit Specialist

Enc. Proposed Drilling Equipment Location Layout

cc: Mrs. Tammie Butts, RGC  
RGC Well File

PROPOSED DRILLING EQUIPMENT LOCATION LAYOUT

D-8



Elevation Ungraded Ground at Location Stake = 5816.0'  
 Elevation Graded Ground at Location Stake = 5815.5'



DRAWN BY: <b>P. BOYLEN</b>	
CHECKED BY: <b>L.W.J.</b>	
DATE: <b>3/12/98</b>	
SCALE: <b>1"=200'</b>	
JOB NO. <b>269</b>	
DRAWING NO. <b>A-2</b>	Section <b>River Gas Corporation</b> Location Layout Section 12, T15S, R9E, S.L.B.&M. Carbon County, Utah
SHEET <b>2</b> OF <b>4</b>	

3266 South 125 West  
 Price, Utah 84501  
 (801) 637-9300  
 FAX (801) 637-2833

WORKSHEET  
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 03/23/98

API NO. ASSIGNED: 43-007-30431

WELL NAME: D8  
OPERATOR: RIVER GAS CORPORATION (N1605)

PROPOSED LOCATION:  
SWNW 12 - T15S - R09E  
SURFACE: 1342-FNL-0350-FWL  
BOTTOM: 1342-FNL-0350-FWL  
CARBON COUNTY  
DRUNKARDS WASH FIELD (048)

LEASE TYPE: STA  
LEASE NUMBER: ML-38665

PROPOSED PRODUCING FORMATION: NAVA

INSPECT LOCATION BY: 04/23/98

TECH REVIEW	Initials	Date
Engineering		
Geology		
Surface		

RECEIVED AND/OR REVIEWED:

Plat  
 Bond: Federal[] State[] Fee[]  
(Number \_\_\_\_\_)  
 Potash (Y/N)  
 Oil shale (Y/N)  
 Water permit  
(Number \_\_\_\_\_)  
 RDCC Review (Y/N)  
(Date: \_\_\_\_\_)

LOCATION AND SITING:

R649-2-3. Unit: \_\_\_\_\_  
 R649-3-2. General.  
 R649-3-3. Exception.  
 Drilling Unit.  
Board Cause no: \_\_\_\_\_  
Date: \_\_\_\_\_

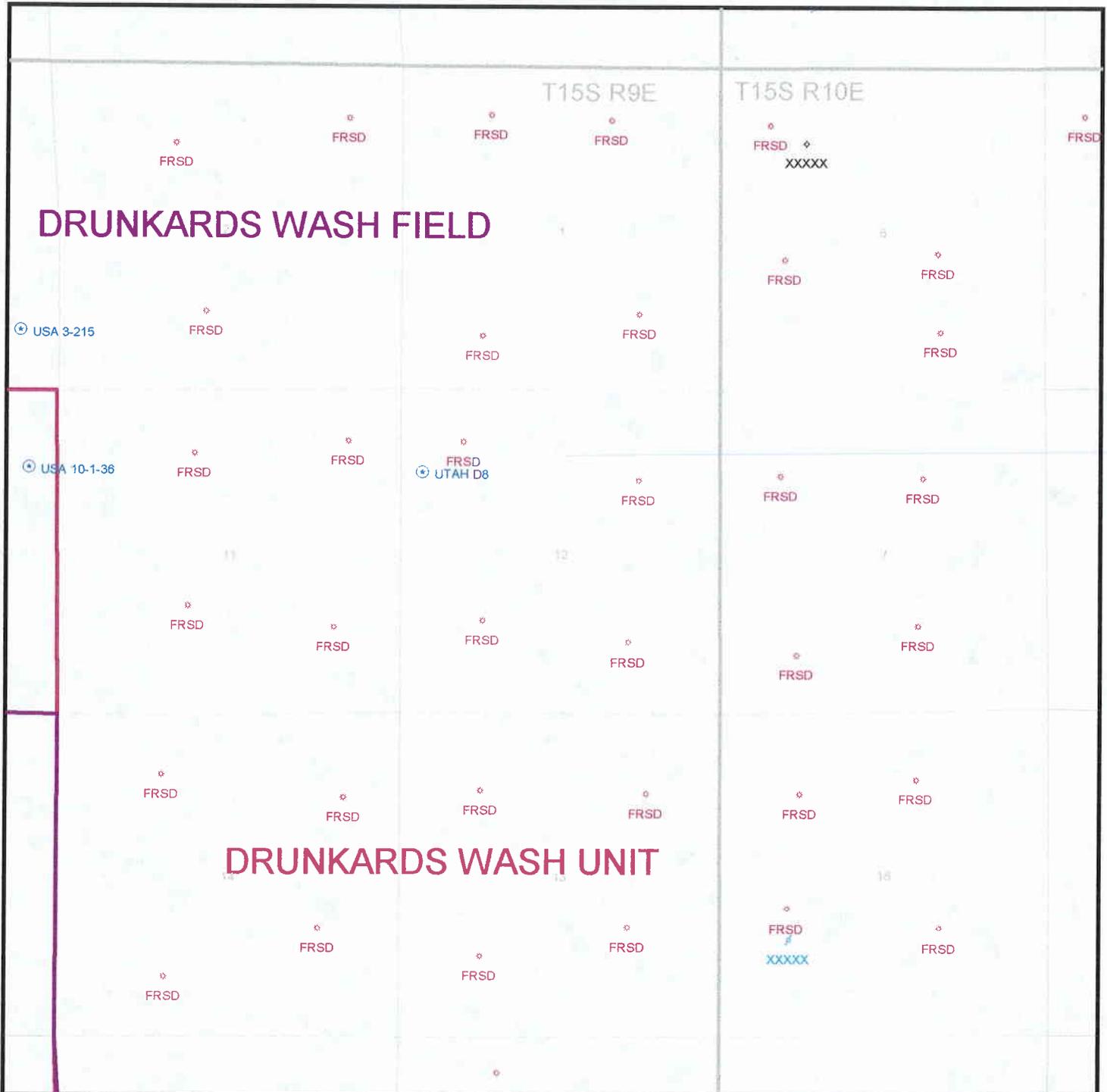
COMMENTS: \_\_\_\_\_

STIPULATIONS: ① STATEMENT OF BASIS



DIVISION OF OIL, GAS & MINING

OPERATOR: RIVER GAS OF UTAH (N1605)  
FIELD: DRUNKARDS WASH (048)  
SEC. 12, TWP. 15S, RNG. 9E,  
COUNTY: CARBON UAC: R649-2-3 DRUNKARDS WASH UNIT



DATE PREPARED:  
26-MAR-1998

**State of Utah**  
**On-Site Evaluation**  
**Division of Oil, Gas and Mining**

OPERATOR: River Gas Corporation

WELL NAME & NUMBER: D 8

API NUMBER: 4300730431

LEASE: State FIELD/UNIT: Drunkard's Wash

LOCATION: 1/4, 1/4 W/2 NW Sec: 12 TWP: 15S RNG: 9E 1342 FNL 350 FWL

LEGAL WELL SITING:      F SEC. LINE;      F 1/4, 1/4 LINE;      F ANOTHER WELL.

GPS COORD (UTM): X=511,115 Y=4,376,544

SURFACE OWNER: State

**PARTICIPANTS:**

C. Kierst (DOGM), B. Griffin (RGC), Ben Morris (DWR)

**REGIONAL/LOCAL SETTING & TOPOGRAPHY:**

Western margin of Colorado Plateau / location is below and about 7 miles east of the Wasatch Plateau (western flank of northern end of the San Rafael Uplift) on a flat draining to the southeast between erosional remnants. It is about 1.5 miles southeast of the low benches. The flat is paved with slope wash.

**SURFACE USE PLAN:**

CURRENT SURFACE USE: Grazing, habitat

PROPOSED SURFACE DISTURBANCE: 225' X 175' pad (pit is inboard, on pad), 200' access road (27' base).

LOCATION OF EXISTING WELLS WITHIN A 1 MILE RADIUS: 12 wells within a mile radius.

LOCATION OF PRODUCTION FACILITIES AND PIPELINES: Powerline and gathering system follow approach road.

SOURCE OF CONSTRUCTION MATERIAL: Gravel approach road and location; soil stored in berm.

ANCILLARY FACILITIES: 3 trailers on drill site.

**WASTE MANAGEMENT PLAN:**

Portable toilets and garbage cans will be emptied into centralized  
dumpsters which will be emptied into an approved landfill.

**ENVIRONMENTAL PARAMETERS:**

AFFECTED FLOOD PLAINS AND/OR WETLANDS: None

FLORA/FAUNA: Sagebrush, broom snakeweed, bunch grass, cactus / birds,  
lizards, coyotes, rodents, raptors, reptiles, badgers, high priority  
elk.

SOIL TYPE AND CHARACTERISTICS: Clayey, silty, poorly permeable soil on  
Quaternary Slope Wash

SURFACE FORMATION & CHARACTERISTICS: Quaternary Slope Wash over Blue  
Gate Shale Member of the Mancos Shale; light gray, bentonitic shale  
with occasional thin fine sandstone ledges.

EROSION/SEDIMENTATION/STABILITY: Stable ground.

PALEONTOLOGICAL POTENTIAL: poor

**RESERVE PIT:**

CHARACTERISTICS: 75' X 75' X 12' dugout

LINER REQUIREMENTS (Site Ranking Form attached): Native clay liner

**SURFACE RESTORATION/RECLAMATION PLAN:**

As per State lease surface reclamation terms.

SURFACE AGREEMENT: State lease on file with SITLA

CULTURAL RESOURCES/ARCHAEOLOGY: Cleared and report on file.

**OTHER OBSERVATIONS/COMMENTS:**

Location about 2 miles northwest of Miller Creek and Carbon Canal.  
Price River is about 5 miles to the northeast.

**ATTACHMENTS:**

4 Photos

Chris Kierst  
DOGM REPRESENTATIVE

4/7/98 /2:40 PM  
DATE/TIME

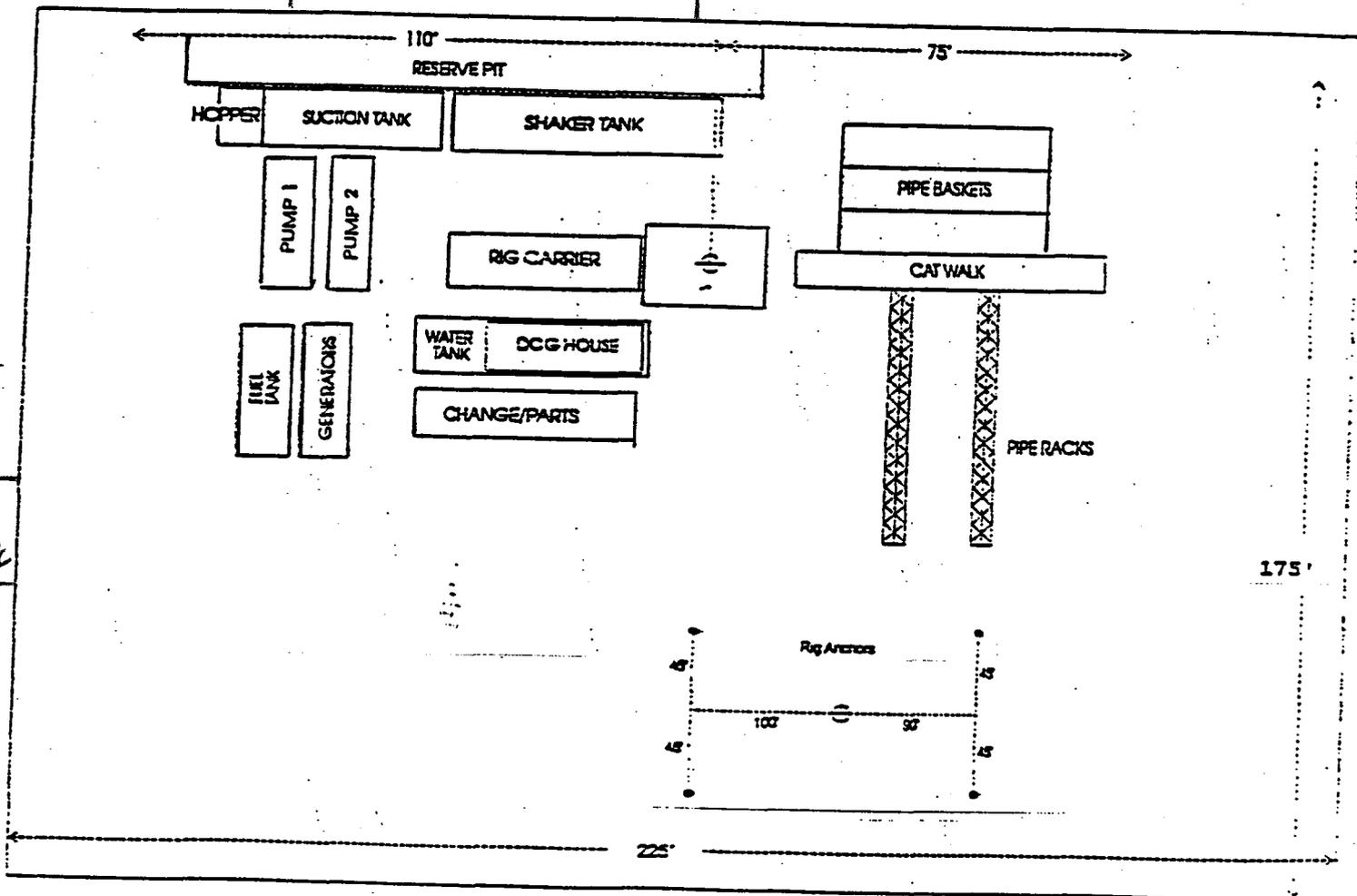
**Evaluation Ranking Criteria and Ranking Score  
For Reserve and Onsite Pit Liner Requirements**

<u>Site-Specific Factors</u>	<u>Ranking</u>	<u>Site Ranking</u>
<b>Distance to Groundwater (feet)</b>		
>200	0	
100 to 200	5	
75 to 100	10	
25 to 75	15	
<25 or recharge area	20	<u>0</u>
<b>Distance to Surf. Water (feet)</b>		
>1000	0	
300 to 1000	2	
200 to 300	10	
100 to 200	15	
< 100	20	<u>0</u>
<b>Distance to Nearest Municipal Well (feet)</b>		
>5280	0	
1320 to 5280	5	
500 to 1320	10	
<500	15	<u>0</u>
<b>Distance to Other Wells (feet)</b>		
>1320	0	
300 to 1320	10	
<300	20	<u>10</u>
<b>Native Soil Type</b>		
Low permeability	0	
Mod. permeability	10	
High permeability	20	<u>0</u>
<b>Fluid Type</b>		
Air/mist	0	
Fresh Water	5	
TDS >5000 and <10000	15	
TDS >10000 or Oil Base	20	
Mud Fluid containing high levels of hazardous constituents		<u>0</u>
<b>Drill Cuttings</b>		
Normal Rock	0	
Salt or detrimental	10	<u>0</u>
<b>Annual Precipitation (inches)</b>		
<10	0	
10 to 20	5	
>20	10	<u>5</u>
<b>Affected Populations</b>		
<10	0	
10 to 30	6	
30 to 50	8	
>50	10	<u>0</u>
<b>Presence of Nearby Utility</b>		
<b>Conduits</b>		
Not Present	0	
Unknown	10	
Present	15	<u>0</u>
<b>Final Score (Level II Sensitivity)</b>		<u>15</u>

Proposed Drilling Equipment Location Layout

River Gas Corp.  
Disposal Well D-8  
W/NW, Sec. 12, T15S, R09E, SLB&M  
1342'FNL, 350'FWL  
Carbon County, Utah

Pit



note: Road access is to the East on the North Side of the location.

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING  
**DRILLING INSPECTION FORM**

Operator: River Gas Corporation Company Rep: \_\_\_\_\_

Well Name: D-8 water disposal well API Number: 4300730431

Qtr/Qtr: SWNW Section: 12 Township: 15S Range: 9E

Contractor: Cyclone Rig Number: 12

Inspector: Chris Kierst Time: ? Date: 4/28/98

Spud Date: Dry: ? Rotary: ? Projected T.D.: N.A.

Operations At Time Of Visit: Drilling ahead.

Depth at time of visit: 3550' Survey: ?

Well Sign: Yes Circulating Method: ? Lbs/Gal BOPE: ?

Blooiie Line: ? Flare Pit: ? H2S Potential: low

ENVIRONMENTAL:

Reserve Pit: Yes Fenced: ? Lined: ?

BOPE Test recorded in the Rig Daily Tour Book: Not Examined

REMARKS:

\_\_\_\_\_  
\_\_\_\_\_

**DIVISION OF OIL, GAS AND MINING**  
**APPLICATION FOR PERMIT TO DRILL**  
**STATEMENT OF BASIS**

**Operator Name:** River Gas Corporation

**Name & Number:** D 8

**API Number:** 4300730431

**Location:** 1/4,1/4 W/2 NW Sec. 12 T. 15S R. 9E

**Geology/Ground Water:**

There are no aquifers with high quality ground water expected to be encountered. The proposed casing and cement program will adequately isolate any zones of water penetrated.

**Reviewer:** Chris Kierst      **Date:** 4/9/98

**Surface:**

Thin, clayey slope wash over Blue Gate Shale Member of the Mancos Shale is starved for coarse alluvial constituents. Cleveland Canal passes over Miller Creek ~2 miles down drainage to the southeast. Miller Creek joins the Price River about 10 miles east. The lack of nearby surface water or utility conduits and fineness of the sediments suggests that a native clay pit liner will suffice. Precipitation will be deflected around the location with berms and culverts. There are no nearby culinary or irrigation water supply wells. The site was photographed and characterized on 4/7/98. Provision was made to ensure site rehabilitation, litter and waste control, preservation of drainage patterns and the integrity of local infrastructure, groundwater and other resources. The well utilities and gas gathering system will follow the approach road.

**Reviewer:** Chris Kierst      **Date:** 4/9/98

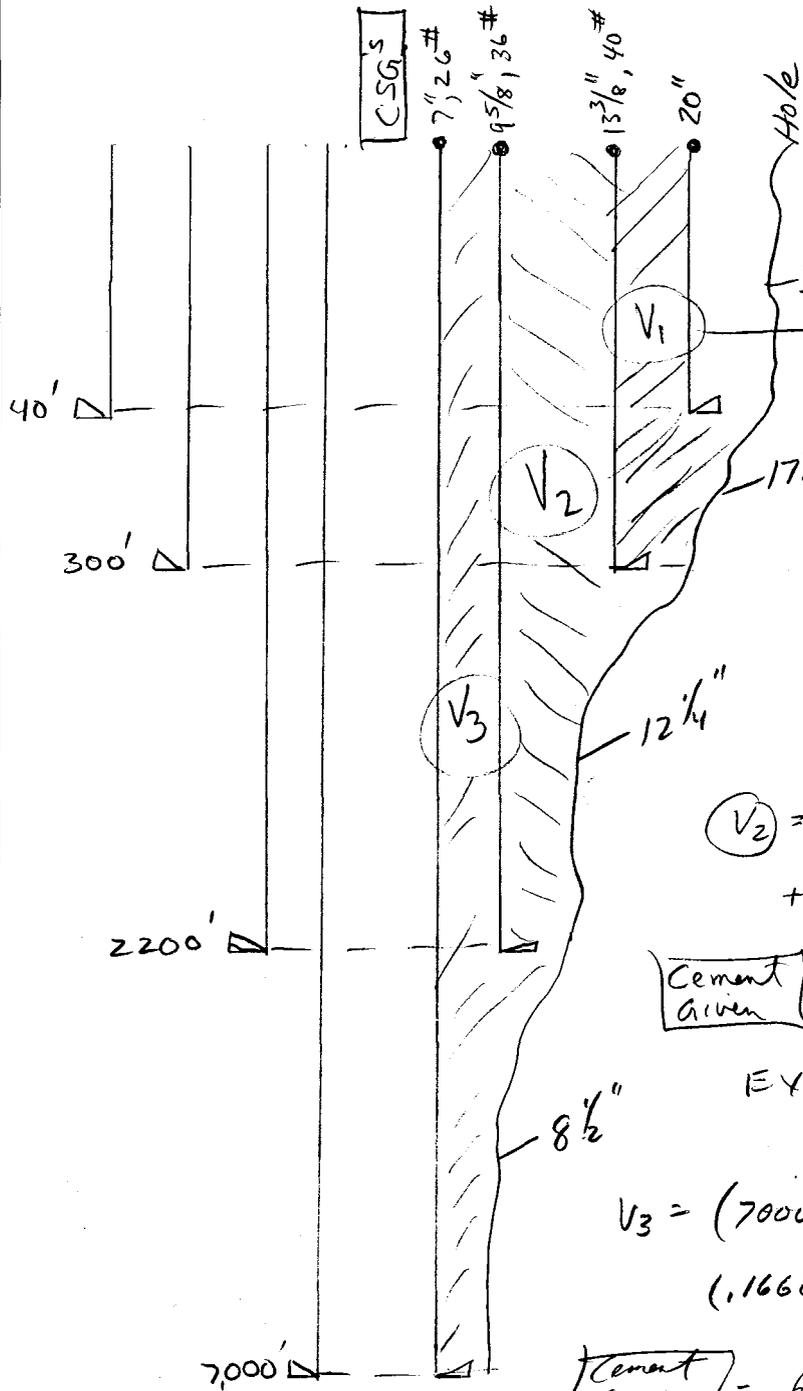
**Engineering:**

BOP, Mud, Casing and Cement programs adequate.

**Reviewer:** Robert J. Krueger      **Date:** 5/5/98

**Conditions of Approval/Application for Permit to Drill:**

- 1) Culverts sufficient to manage expected runoff, standing and surface water in crossed drainages.
- 2) Berm location and pit.
- 3) Site infrastructure as per amended drilling location plat.
- 4) Native clay liner is sufficient.
- 5) Sundry Notices and /or Well Completion Reports shall include but are not limited to: BOP Pressure Test Results; API casing grade and other final casing specifications; liner or tubing specifications; well drilling and completion details; final cement locations and volumes; injectivity/well test results, and a final well "as-built" diagram.



Cement

$$V_1 = (300 - 40 \text{ ft}) \left( 0.6946 \frac{\text{ft}^3}{\text{ft}} \right) + \left( 1.0190 \frac{\text{ft}^3}{\text{ft}} \right) (40 \text{ ft}) = 221.4 \text{ ft}^3$$

Cement Given:  $(320 \text{ SKS}) \left( 1.15 \frac{\text{ft}^3}{\text{SK}} \right) = 368 \text{ ft}^3$

Excess =  $368 / 221.4 = 1.66 \checkmark$

$$V_2 = (2200 - 300 \text{ ft}) \left( 0.3132 \frac{\text{ft}^3}{\text{ft}} \right) + (300 \text{ ft}) \left( 0.3354 \frac{\text{ft}^3}{\text{ft}} \right) = 696 \text{ ft}^3$$

Cement Given =  $(350 \text{ SKS}) (1.92) + (220) (1.61) = 1026$

Excess =  $1026 / 696 = 1.47 \checkmark$

$$V_3 = (7000 - 2200) \left( 0.1268 \frac{\text{ft}^3}{\text{ft}} \right) + (2200) \left( 0.1668 \frac{\text{ft}^3}{\text{ft}} \right) = 976 \text{ ft}^3$$

Cement Given =  $(890 \text{ SKS}) \left( 1.92 \frac{\text{ft}^3}{\text{SK}} \right) + (340 \text{ SKS}) \left( 1.61 \frac{\text{ft}^3}{\text{SK}} \right) + 1.15 \frac{\text{ft}^3}{\text{SK}} (260 + 130 \text{ SKS}) = 1745 \text{ ft}^3$

Excess =  $1745 / 976 = 1.79 \checkmark$

BOP

★ Casing Size & Pressure Rating  
Part match. - BOP is rated @ 5000 psi not 3000 as shown on diagram! per Don 5-6-98.

Casing

	Burst.	Coll.	Joint	Burst.	Joint
7", 26# LTC	4,980	4,320	364,000	(7000)(433) = 3031 psi	(7000)(26) = 2.0 SF
9 5/8", 36# LTC	3,950	2,020	489,000	Coll → (433)(2200) = 953 psi	2.1 SF
13 3/8", 48#	560	1,080	260,000	All OK.	



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt  
Governor  
Ted Stewart  
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)

May 7, 1998

River Gas Corporation  
1305 South 100 East  
Price, Utah 84501

Re: Utah D8 Well, 1342' FNL, 350' FWL, SW NW, Sec. 12, T. 15 S.,  
R. 9 E., Carbon County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. 40-6-1 et seq., Utah Administrative Code R649-3-1 et seq., and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-007-30431.

Sincerely,

A handwritten signature in cursive script that reads "John R. Baza".

John R. Baza  
Associate Director

lwp

Enclosures

cc: Carbon County Assessor  
Bureau of Land Management, Moab District Office

Operator:                     River Gas Corporation                      
Well Name & Number:           Utah D8                                      
API Number:                     43-007-30431                              
Lease:                             ML-38665                                      
Location:   SW NW           Sec.   12           T.   15 S.           R.   9 E.          

### Conditions of Approval

1. General

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for Permit to Drill.

2. Notification Requirements

Notify the Division within 24 hours prior to spudding the well or commencing drilling operations. Contact Jim Thompson at (801)538-5336.

Notify the Division prior to commencing operations to plug and abandon the well. Contact Dan Jarvis at (801) 538-5338 or Robert Krueger at (801) 538-5274.

3. Reporting Requirements

All required reports, forms and submittals shall be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

5. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

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.

1. Type of Well: OIL [ ] GAS [x] OTHER: [ ]

2. Name of Operator: River Gas Corporation

3. Address and Telephone Number: 1305 South 100 East, Price, UT 84501 (801)637-8876

4. Location of Well: 1342' FNL, 350' FWL

Footages:

QQ, Sec., T., R., M.: W/2, NW/4, SEC.12, T15S, R9E, SLB&M

5. Lease Designation and Serial Number:

ML-368665

6. If Indian, Allottee or Tribe Name:

N/A

7. Unit Agreement Name:

Drunkards Wash UTU-67921X

8. Well Name and Number:

Utah D-8

9. API Well Number:

43-007-30431

10. Field or Pool, or Wildcat:

Drunkards Wash

County: Carbon

State: UTAH

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

NOTICE OF INTENT (Submit in Duplicate)

- Abandon, Repair Casing, Change of Plans, Convert to Injection, Fracture Treat or Acidize, Multiple Completion, Other, New Construction, Pull or Alter Casing, Recomplete, Reperforate, Vent or Flare, Water Shut-Off

Approximate date work will start

SUBSEQUENT REPORT (Submit Original Form Only)

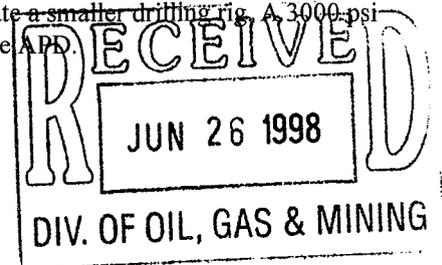
- Abandon \*, Repair Casing, Change of Plans, Convert to Injection, Fracture Treat or Acidize, Other, New Construction, Pull or Alter Casing, Reperforate, Vent or Flare, Water Shut-Off

Date of work completion

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

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.)

The BOP diagram and written description of the BOP has been modified to accomodate a smaller drilling rig. A 3000-psi annular (hydri) BOP will be utilized to drill this well rather than the BOP designated within the APP.



CONFIDENTIAL

Approved by the Utah Division of Oil, Gas and Mining

Date: 6/30/98

By: [Signature]

COPY SENT TO OPERATOR Date: 6-30-98 Initials: KDR

13.

Name & Signature: Don S. Hamilton

[Signature]

Title: Permit Specialist

Date: 6/23/98

(This space for state use only)

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

**CONFIDENTIAL**

Name of Company: RIVER GAS CORP

Well Name: UTAH D-8

Api No. 43-007-30431

Section 12 Township 15S Range 9E County CARBON

Drilling Contractor PENSE BROS

Rig # 11

SPUDDED:

Date 7/7/98

Time \_\_\_\_\_

How DRY HOLE

Drilling will commence \_\_\_\_\_

Reported by GREG MUELLER

Telephone # 1-435-636-5561

Date: 7/8/98 Signed: JLT

✓

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

5. Lease Designation and Serial Number:  
**ML-368665**

6. If Indian, Allottee or Tribe Name:  
**N/A**

7. Unit Agreement Name:  
**Drunkards Wash UTU-67921X**

8. Well Name and Number:  
**Utah D-8**

9. API Well Number:  
**43-007-30431**

10. Field or Pool, or Wildcat:  
**Drunkards Wash**

**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.

1. Type of Well: OIL  GAS  OTHER: **CONFIDENTIAL**

2. Name of Operator: **River Gas Corporation**

3. Address and Telephone Number: **1305 South 100 East, Price, UT 84501 (801)637-8876**

4. Location of Well  
Footages: **1342' FNL, 350' FWL**  
County: **Carbon**  
QQ, Sec., T., R., M.: **W/2, NW/4, SEC.12, T15S, R9E, SLB&M**  
State: **UTAH**

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

**NOTICE OF INTENT**  
(Submit in Duplicate)

- Abandon
- Repair Casing
- Change of Plans
- Convert to Injection
- Fracture Treat or Acidize
- Multiple Completion
- Other \_\_\_\_\_
- New Construction
- Pull or Alter Casing
- Recomplete
- Reperforate
- Vent or Flare
- Water Shut-Off

Approximate date work will start \_\_\_\_\_

**SUBSEQUENT REPORT**  
(Submit Original Form Only)

- Abandon \*
- Repair Casing
- Change of Plans
- Convert to Injection
- Fracture Treat or Acidize
- Other Weekly Report
- New Construction
- Pull or Alter Casing
- Reperforate
- Vent or Flare
- Water Shut-Off

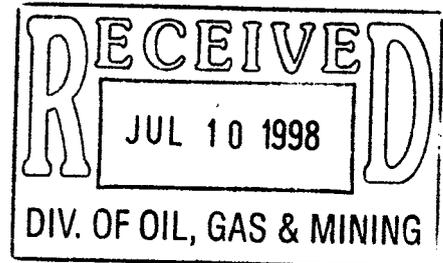
Date of work completion \_\_\_\_\_

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

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.)

SEE ATTACHED

**CONFIDENTIAL**



13. Name & Signature: **Laurie Tryon** *Laurie Tryon* Title: **Administrative Asst.** Date: **7/9/98**

(This space for state use only)

DAILY WELL REPORT

River Gas Corporation  
Disposal Well #8  
1342' FNL, 350' FWL  
W/2, NW/4, Sec.12,T15S,R9E  
CARBON COUNTY, UTAH  
SURVEYED ELEVATION: 5816'  
API# 43-015-30431  
DRILLING CONTRACTOR: Bob Beeman #30 Gardner Denver 2500

PAGE 1

**DRILLING**

Day 1. 7/7/98. Current Depth: 0'. Present Operations: Rigging Up. 7a.m. to 7a.m. Move equipment, spot equipment, make repairs to the rig. [REDACTED]

Day 2. 7/8/98. Current Depth: 30'. Present Operations: Prepare to start drilling. Drilled in 24 hrs: 30'. 7a.m. to 7a.m Rig up, Set air packs & prepare to spud. Spud 4p.m. 7/7/98. Drilling pilot hole. Drill down one kelly, adjust air, and clean hole. Pick up off bottom. Shut rig down for night. [REDACTED]

STATE OF UTAH  
 DIVISION OF OIL, GAS AND MINING  
 ENTITY ACTION FORM - FORM 6

OPERATOR River Gas Corporation  
 ADDRESS 1305 South 100 East  
Price, UT 84501

OPERATOR ACCT. NO. N1605

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		
A	99999	12409	43-007-30340	Prettyman 11-114	SW/SE	11	14S	9E	CARBON	7/3/98	
WELL 1 COMMENTS: <i>Entities added 7-14-98. f Drunkards Wash Unit / Non P.A.</i> <b>CONFIDENTIAL</b>											
A	99999	12410	43-007-30335	Giacoletto 11-113	SE/SW	11	14S	9E	CARBON	7/1/98	
WELL 2 COMMENTS: <i>Drunkards Wash Unit / Non P.A.</i> <b>CONFIDENTIAL</b>											
A	99999	12411	43-007-30393	USA 19-222	NW/SE	19	15S	10E	CARBON	7/6/98	
WELL 3 COMMENTS: <i>Drunkards Wash Unit / Non P.A.</i> <b>CONFIDENTIAL</b>											
A	99999	11256	43-007-30431	Utah D8	W/2 NW	12	15S	9E	CARBON	7/7/98	
WELL 4 COMMENTS: <i>Drunkards Wash Unit Ferron "A,C" P.A.</i> <b>CONFIDENTIAL</b>											
WELL 5 COMMENTS:											

**R E C E I V E D**  
 JUL 14 1998  
 DIV OF OIL, GAS & MINING

- ACTION CODES (See Instructions on back of form)
- A - Establish new entity for new well (single well only)
  - B - Add new well to existing entity (group or unit well)
  - C - Re-assign well from one existing entity to another existing entity
  - D - Re-assign well from one existing entity to a new entity
  - E - Other (explain in comments section)

NOTE: Use COMMENT section to explain why each Action Code was selected.

Laurie A. Tryon *Laurie A. Tryon*  
 Signature  
 Administrative Asst. 7/8/98  
 Title Date  
 Phone No. (435)637-8876

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.

1. Type of Well: OIL  GAS  OTHER:

2. Name of Operator: River Gas Corporation

3. Address and Telephone Number: 1305 South 100 East, Price, UT 84501 (801)637-8876

4. Location of Well  
Footages: 1342' FNL, 350' FWL

QQ, Sec., T., R., M.: W/2, NW/4, SEC.12, T15S, R9E, SLB&M

5. Lease Designation and Serial Number:

ML-368665

6. If Indian, Allottee or Tribe Name:

N/A

7. Unit Agreement Name:

Drunkards Wash UTU-67921X

8. Well Name and Number:

Utah D-8

9. API Well Number:

43-007-30431

10. Field or Pool, or Wildcat:

Drunkards Wash

County: Carbon

State: UTAH

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

**NOTICE OF INTENT**  
(Submit in Duplicate)

- Abandon
- Repair Casing
- Change of Plans
- Convert to Injection
- Fracture Treat or Acidize
- Multiple Completion
- Other \_\_\_\_\_
- New Construction
- Pull or Alter Casing
- Recomplete
- Reperforate
- Vent or Flare
- Water Shut-Off

Approximate date work will start \_\_\_\_\_

**SUBSEQUENT REPORT**  
(Submit Original Form Only)

- Abandon \*
- Repair Casing
- Change of Plans
- Convert to Injection
- Fracture Treat or Acidize
- Other Weekly Report
- New Construction
- Pull or Alter Casing
- Reperforate
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- Water Shut-Off

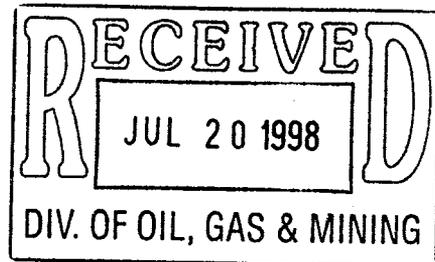
Date of work completion \_\_\_\_\_

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

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.)

SEE ATTACHED

**CONFIDENTIAL**



13.

Name & Signature: Laurie Tryon

Title: Administrative Asst.

Date: 7/17/98

(This space for state use only)

DAILY WELL REPORT

River Gas Corporation  
Disposal Well #8  
1342' FNL, 350' FWL  
W/2, NW/4, Sec.12,T15S,R9E  
CARBON COUNTY, UTAH  
SURVEYED ELEVATION: 5816'  
API# 43-015-30431  
DRILLING CONTRACTOR: Bob Beeman #30 Gardner Denver 2500

PAGE 1

DRILLING

Day 1. 7/7/98. Current Depth: 0'. Present Operations: Rigging Up. 7a.m. to 7a.m. Move equipment, spot equipment, make repairs to the rig. [REDACTED]

Day 2. 7/8/98. Current Depth: 30'. Present Operations: Prepare to start drilling. Drilled in 24 hrs: 30'. 7a.m. to 7a.m Rig up, Set air packs & prepare to spud. Spud 4p.m. 7/7/98. Drilling pilot hole. Drill down one kelly, adjust air, and clean hole. Pick up off bottom. Shut rig down for night. [REDACTED]

Day 3. 7/9/98. Current Depth: 125'. Drilled in 24 hrs:95'. Present Operations: Drilling surface hole. Drilled from 0' to 100' with 17 1/2" hammer bit#1. Drilled from 0' to 90' with 26" hole opener bit#2. 7a.m. to 7a.m. Drill pilot hole 17 1/2' to 100'. Pull out of hole. Pick up hole opener & ream hole open to 26' to 90'. Run and weld 20" conductor to 9'. Cement w/10 sks of Portland. Wait on cement-prepare to drill out. Go in hole w/17 1/2" hammer. Drilling @125'. [REDACTED]

Day 4. 7/10/98. Current Depth: 125'. Drilled in 24 hrs: 0'. Present Operations: Wait for special fishing tools. 7a.m. to 7a.m. Drilling @125'-Hammer would not drill. Pull out of hole-hammer bit broke off hammer & still in hole. Made five attempts w/spear fishing tool to retrieve hammer bit (no success). Ordered special tools to be flown in to Salt Lake airport. Wait for tools. Rig up mud pumps, set mud tanks, work on compressors & rig. [REDACTED]

Day 5. 7/11/98. Current Depth: 125'. Drilled in 24 hrs:0'. Present Operations: Fishing. 7a.m. to 7a.m. Waiting for special fishing tools. Make up fishing tools. Go in hole. Attempt to washover fish. Pull out of hole. Modify fish tool. Go in hole. Attempt to fish hammer. Pull out of hole. Modify washover tool & wait for tap mill. Go in hole & wash on fish. Pull out of hole. Lay down washover tool. Pick up tap mill. Go in hole. Mill on fish. [REDACTED]

Day 6. 7/12/98. Current Depth: 125'. Drilled in 24 hrs: 0'. Present Operations: Fishing-repair hammer tool. Total rotating hrs:10. 7a.m. to 7a.m. Fishing, go in hole with modified washover tool, circulated on fish, attempted to pull out of hole, became stuck @121'. Worked stuck pipe. Spotted pipe lax. Worked pipe, built hammer tool to jar down on fish, hammer tool broke, repair hammer tool. [REDACTED]

## DAILY WELL REPORT

River Gas Corporation  
Disposal Well #8  
1342' FNL, 350' FWL  
W/2, NW/4, Sec.12,T15S,R9E  
CARBON COUNTY, UTAH  
SURVEYED ELEVATION: 5816'  
API# 43-015-30431  
DRILLING CONTRACTOR: Bob Beeman #30 Gardner Denver 2500

PAGE 2

### DRILLING

Day 7. 7/12/98. Current Depth: 125'. Present Operations: Fishing-milling. 7a.m. to 7a.m. Hammer down on fish, work fish free, clean hole & pull out of hole. Clean out washover pipe-hammer bit still in hole. Attempt to fish bit with modified overshot. Go on fish. Could not get overshot to catch bit. Pulled out of hole. Trip in hole. Will mill-milling on fish. [REDACTED]

Day 8. 7/14/98. Current Depth: 125'. Present Operations: Fishing bit. 7a.m. to 7a.m. TOOH w/overshot tool. TIH w/17 1/2" bit & 18 1/2" reaming stabilizer. TOOH. Building new overshot tool. TIH with tool & ream to bit. Fishing for bit. [REDACTED]

Day 9. 7/15/98. Current Depth: 125'. Present Operations: Fishing bit w/magnet. Drilled in 24 hrs: 0'. 7a.m. to 7a.m. Working overshot tool out of hole. Setting up & running new mill. Milling on fish. TOOH to rebuild mill. Work on bit. TIH with mill. Milling on fish. TOOH for 1500# magnet & TIH. Fishing w/magnet. [REDACTED]

Day 10. 7/16/98. Current Depth: 155'. Present Operations: Drilling 17 1/2" surface. Drilled in 24 hrs:30'. Drilled from 90' to 125' with 17 1/2" hammer bit#3. Total rotating hrs:13. 7a.m. to 7a.m. Fishing with magnet. TOOH with magnet. TIH with overshot tool. Fishing w/overshot. TOOH w/overshot. TIH w/magnet & fish. TOOH w/magnet. TIH w/2 cone bit, work over fish. Blowing to clean hole & TOOH. TIH w/magnet & fish-got it.,TOOH. Lay down & prepare to drill. TIH & drill w/17 1/2 tri-cone & air. [REDACTED]

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.

1. Type of Well: OIL  GAS  OTHER:

2. Name of Operator:

River Gas Corporation

CONFIDENTIAL

3. Address and Telephone Number:

1305 South 100 East, Price, UT 84501 (435)637-8876

4. Location of Well

Footages:

1342' FNL, 350' FWL

QQ, Sec., T., R., M.: W/2, NW/4, SEC.12, T15S, R9E, SLB&M

5. Lease Designation and Serial Number:

ML-368665

6. If Indian, Allottee or Tribe Name:

N/A

7. Unit Agreement Name:

Drunkards Wash UTU-67921X

8. Well Name and Number:

Utah D-8

9. API Well Number:

43-007-30431

10. Field or Pool, or Wildcat:

Drunkards Wash

County: Carbon

State: UTAH

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

NOTICE OF INTENT (Submit in Duplicate)

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Approximate date work will start

SUBSEQUENT REPORT (Submit Original Form Only)

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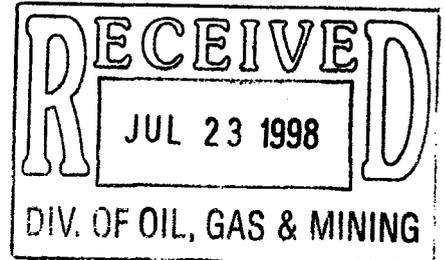
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A 9-5/8" (5000 psi) starting head was utilized in this well rather than a 13-5/8" (5000 psi) starting head as stated in the APD.

CONFIDENTIAL



13.

Name & Signature: Don S. Hamilton

Don S. Hamilton

Title: Permit Specialist

Date: 7/21/98

(This space for state use only)

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

**SUNDRY NOTICES AND REPORTS ON WELLS**

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2. Name of Operator:

River Gas Corporation

3. Address and Telephone Number:

1305 South 100 East, Price, UT 84501 (435)637-8876

4. Location of Well

Footages:

1342' FNL, 350' FWL

QQ, Sec., T., R., M.: W/2, NW/4, SEC.12, T15S, R9E, SLB&M

5. Lease Designation and Serial Number:

ML-368665

6. If Indian, Allottee or Tribe Name:

N/A

7. Unit Agreement Name:

Drunkards Wash UTU-67921X

8. Well Name and Number:

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43-007-30431

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County: Carbon

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Approximate date work will start \_\_\_\_\_

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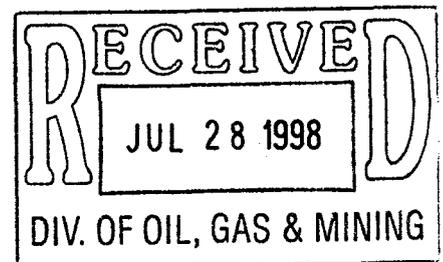
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SEE ATTACHED

**CONFIDENTIAL**



13.

Name & Signature: Laurie Tryon

Title: Administrative Asst.

Date: 7/24/98

(This space for state use only)

DAILY WELL REPORT

River Gas Corporation  
Disposal Well #8  
1342' FNL, 350' FWL  
W/2, NW/4, Sec.12,T15S,R9E  
CARBON COUNTY, UTAH  
SURVEYED ELEVATION: 5816'  
API# 43-015-30431  
DRILLING CONTRACTOR: Bob Beeman #30 Gardner Denver 2500

PAGE 3

DRILLING

Day 13. 7/19/98. Current Depth: 1570'. Present Operations: Drilling w/ 12 1/4" hammer. 7a.m. to 7a.m. Preparing to drill 12 1/4" hole. Drilling out cement plug. Drilling 330'-525'. Drilling 525'-805'. Drilling 805'-974'. Drilling 970'-1490'. Drilling 1490'-1570'. [REDACTED]

Day 14. 7/20/98. Current Depth:2255'. Present Operations:TIH w/ 12 1/4" tri-cone. Drilled from 314.3' to 2255' with 12 1/4" hammer bit #5. 7a.m. to 7a.m. Drilling w/12 1/4" hammer 1570'-1768'. Drilling 1768'-1990'. Drilling 1990'-2193'. Drilling 2193'-2255'. TOOH to change bit. Preparing to run 12 1/4" tri-cone. TIH w/ 12 1/4" tri-cone. [REDACTED]

Day 15. 7/21/98. Current Depth: 2550'. Present Operations: Conditioning hole. Drilled in 24 hrs: 295'. Drilled from 2255' to 2550' with 12 1/4" tri-cone bit#6. Total rotating hrs: 87.25. 7a.m. to 7a.m. TIH w/12 1/4" bit. Reaming to bottom. Drilling 12 1/4" hole to 2255'-2285'. Drilling 2285'-2350'. Drilling 2350'-2550'. TD @6:30a.m. 7/21/98. Conditioning hole. [REDACTED]

Day 16.7/22/98. Current Depth: 2540'. Present Operations: TOOH to log. Drilled in 24 hrs: 0'. Drilled from 2255' to 2550' with 12 1/4" tri-cone bit#6. 7a.m. to 7a.m. Conditioning hole. TOOH to 1500'. Mix & pump 4 tubs of mud. TIH to bottom. Circulate & condition hole. Short trip out & back 600'. Condition hole. TOOH to log. [REDACTED]

Day 17. 7/23/98. Current Depth: 2540'. Present Operations: Running 9 5/8" casing. Drilled in 24 hrs: 0'. 7a.m. to 7a.m. Trip out of hole. Logged well. Tripped in hole to condition. Condition. Trip out of hole. Prepare to run 9 5/8" casing. [REDACTED]

DAILY WELL REPORT

River Gas Corporation  
Disposal Well #8  
1342' FNL, 350' FWL  
W/2, NW/4, Sec.12,T15S,R9E  
CARBON COUNTY, UTAH  
SURVEYED ELEVATION: 5816'  
API# 43-015-30431  
DRILLING CONTRACTOR: Bob Beeman #30 Gardner Denver 2500

PAGE 2

DRILLING

Day 7. 7/12/98. Current Depth: 125'. Present Operations: Fishing-milling. 7a.m. to 7a.m. Hammer down on fish, work fish free, clean hole & pull out of hole. Clean out washover pipe-hammer bit still in hole. Attempt to fish bit with modified overshot. Go on fish. Could not get overshot to catch bit. Pulled out of hole. Trip in hole. Will mill-milling on fish. [REDACTED]

Day 8. 7/14/98. Current Depth: 125'. Present Operations: Fishing bit. 7a.m. to 7a.m. TOOH w/overshot tool. TIH w/17 1/2" bit & 18 1/2" reaming stabilizer. TOOH. Building new overshot tool. TIH with tool & ream to bit. Fishing for bit. [REDACTED]

Day 9. 7/15/98. Current Depth: 125'. Present Operations: Fishing bit w/magnet. Drilled in 24 hrs: 0'. 7a.m. to 7a.m. Working overshot tool out of hole. Setting up & running new mill. Milling on fish. TOOH to rebuild mill. Work on bit. TIH with mill. Milling on fish. TOOH for 1500# magnet & TIH. Fishing w/magnet. [REDACTED]

Day 10. 7/16/98. Current Depth: 155'. Present Operations: Drilling 17 1/2" surface. Drilled in 24 hrs: 30'. Drilled from 90' to 125' with 17 1/2" hammer bit#3. Total rotating hrs: 13. 7a.m. to 7a.m. Fishing with magnet. TOOH with magnet. TIH with overshot tool. Fishing w/overshot. TOOH w/overshot. TIH w/magnet & fish. TOOH w/magnet. TIH w/2 cone bit, work over fish. Blowing to clean hole & TOOH. TIH w/magnet & fish-got it., TOOH. Lay down & prepare to drill. TIH & drill w/17 1/2 tri-cone & air. [REDACTED]

Day 11. 07/17/98. Current Depth: 330'. Present Operations: TOOH. Drilled in 24 hrs: 175'. Total rotating hours: 32 3/4. 7 a.m. to 7 a.m. Drilled 155-255' w/ Bit #4 17 1/2" tri-cone. RD to work on clutch. Drilled 255-330'. Cleaned hole. PU to rebuild rotary clutch. TOOH. [REDACTED]

Day 12. 7/18/98. Current Depth: 330'. Present Operations: Preparing to drill 12 1/4". Drilled in 24 hrs: 0'. Total rotating hrs: 32 3/4". 7a.m. to 7a.m. TOOH. Preparing to run casing. Running Casing. RU Dowell. Pump cement job. WOC. Nipple up BOP. Lay down 3 1/2" pipe. TIH w/ 12 1/4" hammer. [REDACTED]

DAILY WELL REPORT

River Gas Corporation  
Disposal Well #8  
1342' FNL, 350' FWL  
W/2, NW/4, Sec.12,T15S,R9E  
CARBON COUNTY, UTAH  
SURVEYED ELEVATION: 5816'  
API# 43-015-30431  
DRILLING CONTRACTOR: Bob Beeman #30 Gardner Denver 2500

PAGE 1

DRILLING

Day 1. 7/7/98. Current Depth: 0'. Present Operations: Rigging Up. 7a.m. to 7a.m. Move equipment, spot equipment, make repairs to the rig. [REDACTED]

Day 2. 7/8/98. Current Depth: 30'. Present Operations: Prepare to start drilling. Drilled in 24 hrs: 30'. 7a.m. to 7a.m Rig up, Set air packs & prepare to spud. Spud 4p.m. 7/7/98. Drilling pilot hole. Drill down one kelly, adjust air, and clean hole. Pick up off bottom. Shut rig down for night. [REDACTED]

Day 3. 7/9/98. Current Depth: 125'. Drilled in 24 hrs:95'. Present Operations: Drilling surface hole. Drilled from 0' to 100' with 17 1/2" hammer bit#1. Drilled from 0' to 90' with 26" hole opener bit#2. 7a.m. to 7a.m. Drill pilot hole 17 1/2' to 100'. Pull out of hole. Pick up hole opener & ream hole open to 26' to 90'. Run and weld 20" conductor to 9'. Cement w/10 sks of Portland. Wait on cement-prepare to drill out. Go in hole w/17 1/2" hammer. Drilling @125'. [REDACTED]

Day 4. 7/10/98. Current Depth: 125'. Drilled in 24 hrs: 0'. Present Operations: Wait for special fishing tools. 7a.m. to 7a.m. Drilling @125'-Hammer would not drill. Pull out of hole-hammer bit broke off hammer & still in hole. Made five attempts w/spear fishing tool to retrieve hammer bit (no success). Ordered special tools to be flown in to Salt Lake airport. Wait for tools. Rig up mud pumps, set mud tanks, work on compressors & rig. [REDACTED]

Day 5. 7/11/98. Current Depth: 125'. Drilled in 24 hrs:0'. Present Operations: Fishing. 7a.m. to 7a.m. Waiting for special fishing tools. Make up fishing tools. Go in hole. Attempt to washover fish. Pull out of hole. Modify fish tool. Go in hole. Attempt to fish hammer. Pull out of hole. Modify washover tool & wait for tap mill. Go in hole & wash on fish. Pull out of hole. Lay down washover tool. Pick up tap mill. Go in hole. Mill on fish. [REDACTED]

Day 6. 7/12/98. Current Depth: 125'. Drilled in 24 hrs: 0'. Present Operations: Fishing-repair hammer tool. Total rotating hrs:10. 7a.m. to 7a.m. Fishing, go in hole with modified washover tool, circulated on fish, attempted to pull out of hole, became stuck @121'. Worked stuck pipe. Spotted pipe lax. Worked pipe, built hammer tool to jar down on fish, hammer tool broke, repair hammer tool. [REDACTED]

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

5. Lease Designation and Serial Number:  
**ML-368665**

6. If Indian, Allottee or Tribe Name:  
**N/A**

7. Unit Agreement Name:  
**Drunkards Wash UTU-67921X**

8. Well Name and Number:  
**Utah D-8**

9. API Well Number:  
**43-007-30431**

10. Field or Pool, or Wildcat:  
**Drunkards Wash**

**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.

1. Type of Well: **OIL**  **GAS**  **OTHER:** \_\_\_\_\_

2. Name of Operator:  
**River Gas Corporation**

3. Address and Telephone Number:  
**1305 South 100 East, Price, UT 84501 (435)637-8876**

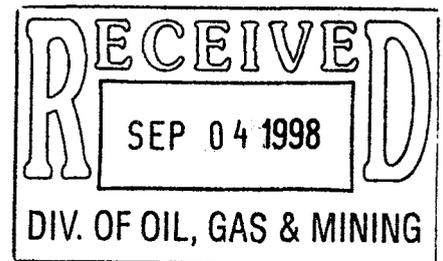
4. Location of Well  
Footages: **1342' FNL, 350' FWL**  
County: **Carbon**  
State: **UTAH**  
QQ, Sec., T., R., M.: **W/2, NW/4, SEC.12, T15S, R9E, SLB&M**

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

NOTICE OF INTENT (Submit in Duplicate)	SUBSEQUENT REPORT (Submit Original Form Only)
<input type="checkbox"/> Abandon <input type="checkbox"/> Repair Casing <input type="checkbox"/> Change of Plans <input type="checkbox"/> Convert to Injection <input type="checkbox"/> Fracture Treat or Acidize <input type="checkbox"/> Multiple Completion <input type="checkbox"/> Other _____	<input type="checkbox"/> Abandon * <input type="checkbox"/> Repair Casing <input type="checkbox"/> Change of Plans <input type="checkbox"/> Convert to Injection <input type="checkbox"/> Fracture Treat or Acidize <input checked="" type="checkbox"/> Other <u>Weekly Report</u>
<input type="checkbox"/> New Construction <input type="checkbox"/> Pull or Alter Casing <input type="checkbox"/> Recomplete <input type="checkbox"/> Reperforate <input type="checkbox"/> Vent or Flare <input type="checkbox"/> Water Shut-Off	<input type="checkbox"/> New Construction <input type="checkbox"/> Pull or Alter Casing <input type="checkbox"/> Reperforate <input type="checkbox"/> Vent or Flare <input type="checkbox"/> Water Shut-Off
Approximate date work will start _____ <div style="text-align: center; font-size: 2em; font-weight: bold;">CONFIDENTIAL</div>	Date of work completion _____ <small>Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION REPORT AND LOG form.</small>

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.)

SEE ATTACHED



13. Name & Signature: Laurie Tryon *Laurie Tryon* Title: Administrative Asst. Date: 8/28/98

(This space for state use only)

DAILY WELL REPORT

River Gas Corporation  
Disposal Well #8  
1342' FNL, 350' FWL  
W/2, NW/4, Sec.12, T15S, R9E  
CARBON COUNTY, UTAH  
SURVEYED ELEVATION: 5816'  
API# 43-015-30431  
DRILLING CONTRACTOR: Bob Beeman #30 Gardner Denver 2500

PAGE 1

**DRILLING**

Day 1. 7/7/98. Current Depth: 0'. Present Operations: Rigging Up. 7a.m. to 7a.m. Move equipment, spot equipment, make repairs to the rig. [REDACTED]

Day 2. 7/8/98. Current Depth: 30'. Present Operations: Prepare to start drilling. Drilled in 24 hrs: 30'. 7a.m. to 7a.m Rig up, Set air packs & prepare to spud. **Spud 4p.m. 7/7/98.** Drilling pilot hole. Drill down one kelly, adjust air, and clean hole. Pick up off bottom. Shut rig down for night. [REDACTED]

Day 3. 7/9/98. Current Depth: 125'. Drilled in 24 hrs:95'. Present Operations: Drilling surface hole. Drilled from 0' to 100' with 17 1/2" hammer bit#1. Drilled from 0' to 90' with 26" hole opener bit#2. 7a.m. to 7a.m. Drill pilot hole 17 1/2 to 100'. Pull out of hole. Pick up hole opener & ream hole open to 26' to 90'. Run and weld 20" conductor to 9'. Cement w/10 sks of Portland. Wait on cement-prepare to drill out. Go in hole w/17 1/2" hammer. Drilling @125'. [REDACTED]

Day 4. 7/10/98. Current Depth: 125'. Drilled in 24 hrs: 0'. Present Operations: Wait for special fishing tools. 7a.m. to 7a.m. Drilling @125'-Hammer would not drill. Pull out of hole-hammer bit broke off hammer & still in hole. Made five attempts w/spear fishing tool to retrieve hammer bit (no success). Ordered special tools to be flown in to Salt Lake airport. Wait for tools. Rig up mud pumps, set mud tanks, work on compressors & rig [REDACTED]

Day 5. 7/11/98. Current Depth: 125'. Drilled in 24 hrs:0'. Present Operations: Fishing. 7a.m. to 7a.m. Waiting for special fishing tools. Make up fishing tools. Go in hole. Attempt to washover fish. Pull out of hole. Modify fish tool. Go in hole. Attempt to fish hammer. Pull out of hole. Modify washover tool & wait for tap mill. Go in hole & wash on fish. Pull out of hole. Lay down washover tool. Pick up tap mill. Go in hole. Mill on fish. [REDACTED]

Day 6. 7/12/98. Current Depth: 125'. Drilled in 24 hrs: 0'. Present Operations: Fishing-repair hammer tool. Total rotating hrs:10. 7a.m. to 7a.m. Fishing, go in hole with modified washover tool, circulated on fish, attempted to pull out of hole, became stuck @121'. Worked stuck pipe. Spotted pipe lax. Worked pipe, built hammer tool to jar down on fish, hammer tool broke, repair hammer tool. [REDACTED]

DAILY WELL REPORT

River Gas Corporation  
Disposal Well #8  
1342' FNL, 350' FWL  
W/2, NW/4, Sec.12,T15S,R9E  
CARBON COUNTY, UTAH  
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PAGE 2

**DRILLING**

Day 7.7/12/98. Current Depth: 125'. Present Operations: Fishing-milling. 7a.m. to 7a.m. Hammer down on fish, work fish free, clean hole & pull out of hole. Clean out washover pipe-hammer bit still in hole. Attempt to fish bit with modified overshot. Go on fish. Could not get overshot to catch bit. Pulled out of hole. Trip in hole. Will mill-milling on fish. [REDACTED]

Day 8. 7/14/98. Current Depth:125'. Present Operations: Fishing bit. 7a.m. to 7a.m. TOOH w/overshot tool. TIH w/17 1/2" bit & 18 1/2" reaming stabilizer. TOOH. Building new overshot tool. TIH with tool & ream to bit. Fishing for bit. [REDACTED]

Day 9. 7/15/98. Current Depth: 125'. Present Operations: Fishing bit w/magnet. Drilled in 24 hrs: 0'. 7a.m. to 7a.m. Working overshot tool out of hole. Setting up & running new mill. Milling on fish. TOOH to rebuild mill. Work on bit. TIH with mill. Milling on fish. TOOH for 1500# magnet & TIH. Fishing w/ magnet. [REDACTED]

Day 10. 7/16/98. Current Depth: 155'. Present Operations: Drilling 17 1/2" surface. Drilled in 24 hrs:30'. Drilled from 90' to 125' with 17 1/2" hammer bit#3. Total rotating hrs:13. 7a.m. to 7a.m. Fishing with magnet. TOOH with magnet. TIH with overshot tool. Fishing w/overshot. TOOH w/overshot. TIH w/magnet & fish. TOOH w/magnet. TIH w/2 cone bit, work over fish. Blowing to clean hole & TOOH. TIH w/magnet & fish-got it.,TOOH. Lay down & prepare to drill. TIH & drill w/17 1/2 tri-cone & air. [REDACTED]

Day 11. 07/17/98. Current Depth: 330.' Present Operations: TOOH. Drilled in 24 hrs: 175.' Total rotating hours: 32 3/4. 7 a.m. to 7 a.m. Drilled 155-255' w/ Bit #4 17 1/2" tri-cone. RD to work on clutch. Drilled 255-330.' Cleaned hole. PU to rebuild rotary clutch. TOOH. [REDACTED]

Day 12. 7/18/98. Current Depth: 330'. Present Operations: Preparing to drill 12 1/4". Drilled in 24 hrs: 0'. Total rotating hrs: 32 3/4". 7a.m. to 7a.m. TOOH. Preparing to run casing. Running Casing. RU Dowell. Pump cement job. WOC. Nipple up BOP. Lay down 3 1/2" pipe. TIH w/ 12 1/4" hammer. [REDACTED]

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API# 43-015-30431  
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PAGE 3

DRILLING

Day 13. 7/19/98. Current Depth: 1570'. Present Operations: Drilling w/ 12 1/4" hammer. 7a.m. to 7a.m. Preparing to drill 12 1/4" hole. Drilling out cement plug. Drilling 330'-525'. Drilling 525'-805'. Drilling 805'-974'. Drilling 970'-1490'. Drilling 1490'-1570'. [REDACTED]  
[REDACTED]

Day 14. 7/20/98. Current Depth: 2255'. Present Operations: TIH w/ 12 1/4" tri-cone. Drilled from 314.3' to 2255' with 12 1/4" hammer bit #5. 7a.m. to 7a.m. Drilling w/ 12 1/4" hammer 1570'-1768'. Drilling 1768'-1990'. Drilling 1990'-2193'. Drilling 2193'-2255'. TOO H to change bit. Preparing to run 12 1/4" tri-cone. TIH w/ 12 1/4" tri-cone. [REDACTED]  
[REDACTED]

Day 15. 7/21/98. Current Depth: 2550'. Present Operations: Conditioning hole. Drilled in 24 hrs: 295'. Drilled from 2255' to 2550' with 12 1/4" tri-cone bit #6. Total rotating hrs: 87.25. 7a.m. to 7a.m. TIH w/ 12 1/4" bit. Reaming to bottom. Drilling 12 1/4" hole to 2255'-2285'. Drilling 2285'-2350'. Drilling 2350'-2550'. TD @6:30a.m. 7/21/98. Conditioning hole. [REDACTED]  
[REDACTED]

Day 16. 7/22/98. Current Depth: 2540'. Present Operations: TOO H to log. Drilled in 24 hrs: 0'. Drilled from 2255' to 2550' with 12 1/4" tri-cone bit #6. 7a.m. to 7a.m. Conditioning hole. TOO H to 1500'. Mix & pump 4 tubs of mud. TIH to bottom. Circulate & condition hole. Short trip out & back 600'. Condition hole. TOO H to log. [REDACTED]  
[REDACTED]

Day 17. 7/23/98. Current Depth: 2540'. Present Operations: Running 9 5/8" casing. Drilled in 24 hrs: 0'. 7a.m. to 7a.m. Trip out of hole. Logged well. Tripped in hole to condition. Condition. Trip out of hole. Prepare to run 9 5/8" casing. [REDACTED]

Day 18. 7/24/98. Current Depth: 2540'. Present Operations: Moving Beeman off location. Total rotating hrs: 87 1/4. 7a.m. to 7a.m. Preparing to run 9 5/8" 36# K-55. Running casing (2509'). RU Dowell. Mix & pump cement. RD Dowell. WOC. Cut pipe & nipple down BOP. Rig Released 12a.m. 7/24/98. Cut 12 1/2' 95/8" casing. [REDACTED]

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DRILLING CONTRACTOR: Bob Beeman #30 Gardner Denver 2500

PAGE 4

**DRILLING**

Day 19. 8/24/98. Current Depth:2550'. Present Operations: Nippling up BOP 7a.m. to 7a.m. Moving rig & equipment on location & rigging up. Nippling up BOP & pulling rotating head. [REDACTED]

Day 20. 8/25/98. Current Depth: 2550'. Present Operations: Circulating Mud. 7a.m. to 7a.m. Nippling up BOP. Changing pipe rams. Test BOPs, choke manifold & kelly, delays due to Cyclone: Smashed 2 door gaskets on BOP, accumulators failed, flowline was 4' short. Brought in new accumulators. TIH w/ 8 3/4" Tri-cone, Smith F3, 3/13 nozzles, bit sub, 21 drill collars & x-over sub, tagged cement @2423'. Pulled up, set up & tightened kelly. Circulating mud. [REDACTED]

Day 21. 8/26/98. Current Depth: 2820'. Present Operations: Drilling 8 3/4" hole. Drilled in 24 hrs: 310'. 7a.m. to 7a.m. Waiting on pump. Circulate to see mud. Drilling cement. Repairing mud line. Drilling out shoe. Drilling 2510'-2556'. Unplugging flowline. Drilling 2556'-2600'. Drilling 2600'-2642'. Drilling 2642'-2672'. Drilling 2672'-2717'. Drilling 2717'-2788'. Drilling 2788'-2820'. [REDACTED]

Day 22. 8/27/98. Current Depth: 3200'. Present Operations: Drilling 8 3/4" hole. Drilled in 24 hrs: 380'. Total rotating hrs: 39 3/4. 7a.m. to 7a.m. Drill 2820'-2830'. Rig service. Drill 2830'-2877'. Drill 2877'-2960'. Drill 2960'-3010'. Ran deviation survey 3/4 @2984'. Drill 3010'-3073'. Drilling 3073'-3160'. Drilling 3160'-3181'. Clean shale tank. Drill 3181'-3200'. [REDACTED]

Day 23. 8/28/98. Current Depth: 3505'. Present Operations: Drilling 8 3/4" hole. Total rotating hrs: 63 1/4. 7a.m. to 7a.m. Drill 3200'-3212'. Rig service. Drill 3226'-3505'. [REDACTED]

Day 24. 8/29/98. Current Depth: 3682'. Present Operations: Drilling 8 3/4" hole. Total rotating hrs: 86'. 7a.m. to 7a.m. Drill 3505'-3524'. Rig service. Drill 3524'-3558'. Circulated & ran wireline survey 3/4@3524'. Drill 3558'-3682'. [REDACTED]

DAILY WELL REPORT

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CARBON COUNTY, UTAH  
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API# 43-015-30431  
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PAGE 5

**DRILLING**

8/30/98. Current Depth: 3790'. Present Operations: Drilling 8 3/4" hole. Drilled in 24 hrs: 108'. Drilled from 2510' to 3704' with 8 3/4" tri-cone bit#7. Total rotating hrs: 88 1/2 on #7. 12.75 on #8. 7a.m. to 7a.m. Drill 3682'-3704'. Circulate to condition & pump slug. Begin to TOOH, tight, backdown & increase visc. Raise visc to 55 & pumped sweep. TOOH to change bit. Make up bit & TIH to 3618'. Ream & wash to bottom @3704'. Drill 3704'-3713'. Rig service. Drill 3713'-3751'. Work on pump. Drill 3571'-3773'. Clean shale tank. Drill 3773'-3790'. [REDACTED]

8/31/98. Current Depth: 3943'. Present Operations: Drilling 8 3/4" hole. Drilled in 24 hrs: 153'. 7a.m. to 7a.m. Drill 3790'-3804'. Rig service. Drill 3804'-3818'. Work on pump. Drill 3818'-3845'. Work on pump, replace swab. Drill 3845'-3943'. [REDACTED]

9/1/98. Current Depth: 4070'. Present Operations: Working on pump. Total rotating hrs: 56 3/4. 7a.m. to 7a.m. Drill 3943'-3991'. Circulate then run survey 3°@3960'. Drill 3991'-4070'. Work on pump-change lines & swab. [REDACTED]

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

ORIGINAL

**SUNDRY NOTICES AND REPORTS ON WELLS**

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Use APPLICATION FOR PERMIT TO DRILL OR DEEPEN form for such proposals.

1. Type of Well: OIL  GAS  OTHER:

2. Name of Operator:

River Gas Corporation

3. Address and Telephone Number:

1305 South 100 East, Price, UT 84501 (435)637-8876

4. Location of Well  
Footages:

1342' FNL, 350' FWL

QQ, Sec., T., R., M.: W/2, NW/4, SEC.12, T15S, R9E, SLB&M

5. Lease Designation and Serial Number:

ML-368665

6. If Indian, Allottee or Tribe Name:

N/A

7. Unit Agreement Name:

Drunkards Wash UTU-67921X

8. Well Name and Number:

Utah D-8

9. API Well Number:

43-007-30431

10. Field or Pool, or Wildcat:

Drunkards Wash

County: Carbon

State: UTAH

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

**NOTICE OF INTENT**  
(Submit in Duplicate)

- |  |   |
|--|---|
| <input type="checkbox"/> Abandon                   | <input type="checkbox"/> New Construction     |
| <input type="checkbox"/> Repair Casing             | <input type="checkbox"/> Pull or Alter Casing |
| <input type="checkbox"/> Change of Plans           | <input type="checkbox"/> Recomplete           |
| <input type="checkbox"/> Convert to Injection      | <input type="checkbox"/> Reperforate          |
| <input type="checkbox"/> Fracture Treat or Acidize | <input type="checkbox"/> Vent or Flare        |
| <input type="checkbox"/> Multiple Completion       | <input type="checkbox"/> Water Shut-Off       |
| <input type="checkbox"/> Other _____               |   |

Approximate date work will start \_\_\_\_\_

**SUBSEQUENT REPORT**  
(Submit Original Form Only)

- |  |   |
|--|---|
| <input type="checkbox"/> Abandon *                             | <input type="checkbox"/> New Construction     |
| <input type="checkbox"/> Repair Casing                         | <input type="checkbox"/> Pull or Alter Casing |
| <input type="checkbox"/> Change of Plans                       | <input type="checkbox"/> Reperforate          |
| <input type="checkbox"/> Convert to Injection                  | <input type="checkbox"/> Vent or Flare        |
| <input type="checkbox"/> Fracture Treat or Acidize             | <input type="checkbox"/> Water Shut-Off       |
| <input checked="" type="checkbox"/> Other <u>Weekly Report</u> |   |

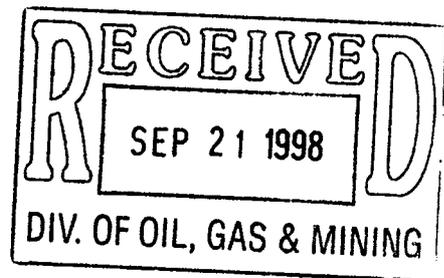
Date of work completion \_\_\_\_\_

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

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.)

SEE ATTACHED

**CONFIDENTIAL**



13.

Name & Signature: Laurie Tryon

Title: Administrative Asst.

Date: 9/18/98

(This space for state use only)

DAILY WELL REPORT

River Gas Corporation  
Disposal Well #8  
1342' FNL, 350' FWL  
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CARBON COUNTY, UTAH  
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API# 43-015-30431  
DRILLING CONTRACTOR: Bob Beeman #30 Gardner Denver 2500

PAGE 7

DRILLING

Day 37. 9/11/98. Current Depth: 5351'. Present Operations: TOOH. Looking for washout. Drilled in 24 hrs: 72'. Drilled from 4989 to 5307' with 8 3/4" MB3420 3/13 Reed 4P61A bit#10. 7a.m. to 7a.m. Drill 5279' to 5299'. Rig service. Check BOPs & clean shale tank. Drill 5299-5307'. Check pump & valves, change swab. POOH. Lay down shock sub. Change swab. Make up bit(Smith F35PS, LT0534 w/ 3/13) & TIH w/ BHA. Break circulation & check pump. Finish TIH to 5268'. Wash/ream 5268-5307'. Drill 5307-5330'. Rig service. Drill 5330-5351'(300 psi pressure loss). Check pump & air out o.k. Pumped flag, hit & pressured up. TOOH looking for washout. [REDACTED]

Day 38. 9/12/98. Current Depth:5482'. Present Operations: Drilling @5482'. Drilled in 24 hrs: 131. 7a.m. to 7a.m. POOH looking for hole (hole in wobble jt). Service rig & check blind rams. PU shock sub & TIH to 5351'. Drill 5351'-5482'. [REDACTED]

Day 39. 9/13/98. Current Depth: 5616'. Present Operations: Working on clutch. Drilled in 24 hrs: 134'. 7a.m. to 7a.m. Drill 5482'-5484'. Drop survey 1"@5484'. Service rig & check BOP. Drill 5484-5572'.(lost 200 psi). Checked surface equip-pumped flag-hit. POOH. Looking for hole, found, PU kelley & pressure test, TIH to bottom@5572. Drill 5572-5616'. Working on clutch & inspecting drum. [REDACTED]

Day 40. 9/14/98. Current Depth: 5774'. Present Operations: Drilling @5774'. Drilled in 24 hrs: 158'. 7a.m. to 7a.m Work on drawworks. Drill 5616-5630'. Service Rig & Check BOP. Repair compound oilers. Drill 5630-5671'. Check pump valves. Drill 5671-5774'. [REDACTED]

Day 41. 9/15/98. Current Depth: 5948'. Present Operations: Drilling @5948'. Drilled in 24 hrs: 174'. 7a.m. to 7a.m. Drill 5774-5795'. Rig service, Check BOP. Drill 5795'-5948'. [REDACTED]

DAILY WELL REPORT

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DRILLING CONTRACTOR: Bob Beeman #30 Gardner Denver 2500

PAGE 8

DRILLING

Day 42. 9/16/98. Current Depth: 6016'. Present Operations: TOOH. Looking for hole. Drilled from 5306' to 5972' with 8 3/4" LT0534 3/13 Smith F35PS bit#11. 7a.m. to 7a.m. Service rig & check BOP. Drill 5948-5972'. Work on pump & change swab. Check surface valves & pump flags. Drop survey. TOOH w/pipe & change bit. Dress bit (smith F4P, LN 2754, Assy#0016661 3/13) & TIH w/bit. Wash 30' to bottom. Work on clutch. Drill 5972-5989'. Drill 5989-6016'. TOOH. Looking for hole in drill string. [REDACTED]

Day 43. 9/17/98. Current Depth: 6379'. Present Operations: Drilling @6379'. Drilled in 24 hrs: 363'. 7a.m. to 7a.m. TOOH 35 stds to find hole. Circulate during rig service. TOH to inspect collars. TIH & hit bridge @3493'. Wash & ream through bridge. TIH. Wash/ream 69' to bottom. Drill 6016-6379'. [REDACTED]

Day 44. 9/18/98. Current Depth: 6585'. Present Operations: Drilling @6585'. 7a.m. to 7a.m. Drill 6379'-6502'. Work on pumps(change swab). Drill 6502-6511'. Circulate & run deviation survey (2°@6511). Drill 6511-6573'. Work on pump. Drill 6573'-6585'. [REDACTED]

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

ORIGINAL

5. Lease Designation and Serial Number:

ML-368665

**SUNDRY NOTICES AND REPORTS ON WELLS**

6. If Indian, Allottee or Tribe Name:

N/A

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Drunkards Wash UTU-67921X

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8. Well Name and Number:

Utah D-8

2. Name of Operator:

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10. Field or Pool, or Wildcat:

Drunkards Wash

4. Location of Well

Footages:

1342' FNL, 350' FWL

CONFIDENTIAL

County: Carbon

QQ, Sec., T., R., M.: W/2, NW/4, SEC.12, T15S, R9E, SLB&M

State: UTAH

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

**NOTICE OF INTENT**  
(Submit in Duplicate)

- Abandon
- Repair Casing
- Change of Plans
- Convert to Injection
- Fracture Treat or Acidize
- Multiple Completion
- Other \_\_\_\_\_
- New Construction
- Pull or Alter Casing
- Recomplete
- Reperforate
- Vent or Flare
- Water Shut-Off

Approximate date work will start \_\_\_\_\_

**SUBSEQUENT REPORT**  
(Submit Original Form Only)

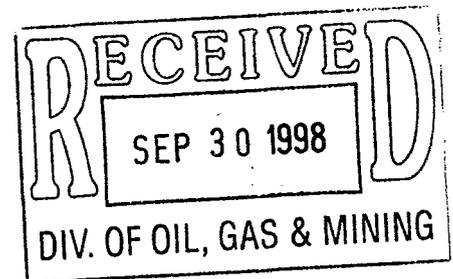
- Abandon \*
- Repair Casing
- Change of Plans
- Convert to Injection
- Fracture Treat or Acidize
- Other Weekly Report
- New Construction
- Pull or Alter Casing
- Reperforate
- Vent or Flare
- Water Shut-Off

Date of work completion \_\_\_\_\_

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

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.)

SEE ATTACHED



13.

Name & Signature: Laurie Tryon

Title: Administrative Asst.

Date: 9/25/98

(This space for state use only)

DAILY WELL REPORT

River Gas Corporation  
Disposal Well #8  
1342' FNL, 350' FWL  
W/2, NW/4, Sec.12,T15S,R9E  
CARBON COUNTY, UTAH  
SURVEYED ELEVATION: 5816'  
API# 43-015-30431  
DRILLING CONTRACTOR: Cyclone Drilling Rig#12

PAGE 9

DRILLING

Day 48. 9/22/98. Current Depth: 6950'. Present Operations: Circulating on bottom. Drilled in 24 hrs:0' Drilled from 5972' to 6950' with 8 3/4" LN 2754 Smith F4 bit#12. 7a.m. to 7a.m. Circulate & condition hole. Pump pill & TOOH to log. RU DS loggers. Log D8. RD Schlumberger. TIH to circulate. Circulating on bottom waiting for casing. [REDACTED]

Day 49. 9/23/98. Current Depth: 6950'. Present Operations: Circulating through casing. 7a.m. to 7a.m. Circulate while lay down machine RU & casing is unloaded. Lay down drill pipe. Lay down drill collars. RU to run casing. Change pipe rams to 7". Run 7" casing. RU Dowell & RD casing crew. Circulate. Cemented 1" stage- bumped plug@6:20a.m. Dropped bomb for lower D.V. Tool. Pressured up to 700 psi & began circulation. [REDACTED]

Day 50. 9/24/98. Current Depth: 6950'. Present Operations: Rig Released. 7a.m. to 7a.m. Circulating after stage #1. Pump stage#2 cement job, bump plug. Drop bomb. Pressure up & began circulation through upper DV tool. Pump stage#3 cement job, bump final plug@5:33 p.m. Rig down Dowell. Nipple down BOP & set 7" slips. Empty & clean mud tanks. Rig released @1:30a.m. 9/24/98. [REDACTED]



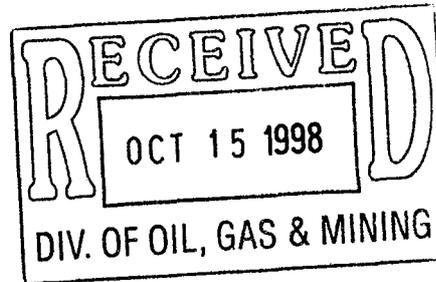
ORIGINAL

RIVER GAS CORPORATION

CONFIDENTIAL

UTAH OPERATIONS  
1305 South 100 East  
Price, Utah 84501  
Bus. (435) 637-8876  
FAX (435) 637-8924

October 13, 1998



Mr. Gil Hunt  
State of Utah  
Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
Post Office Box 145801  
Salt Lake City, Utah 84114-5801

RE: Application for Injection Well – Utah D-8  
W/2, NW/4 Section 12,  
T15S, R9E, SLB&M, Carbon County Utah

UIC-236

Dear Mr. Hunt:

Enclosed is the original of the *Application for Injection Well* for the above named well. Included with the UIC Form 1 is the following information:

- Exhibit "A" - Survey Plat of the Proposed Well Site;
- Exhibit "B" - Maps Depicting Nearby Wells and Land Ownership;
- Exhibit "C" - Statement Regarding Logs Performed on the Well;
- Exhibit "D" - Description of the Casing Program;
- Exhibit "E" - Description of the Fluid Types;
- Exhibit "F" - Statement of the Injection Pressures;
- Exhibit "G" - Statement of Geologic and Hydrologic Data;
- Exhibit "H" - Statement of Affidavit;

Thank you for your timely consideration of this application. Please feel free to contact me if you have any questions or find any deficiencies.

Sincerely,

*Don S. Hamilton*

Don S. Hamilton  
Permit Specialist

cc: Mr. R.A. Lamarre, Texaco  
Mr. Chuck Snure, Texaco  
Mr. Gee Lake, Jr., Dominion Resources  
Mrs. Tammie Butts, RGC  
Mr. Joey Stephenson, RGC  
Mr. Dennis Plowman, RGC  
RGC Well File - Utah D-8



# Range 9 East

NW Corner N89°17'W - 2670.4' (Recorded) N89°49'01"W - 5202.9' (Measured) S89°38'W - 2529.8' (Recorded)

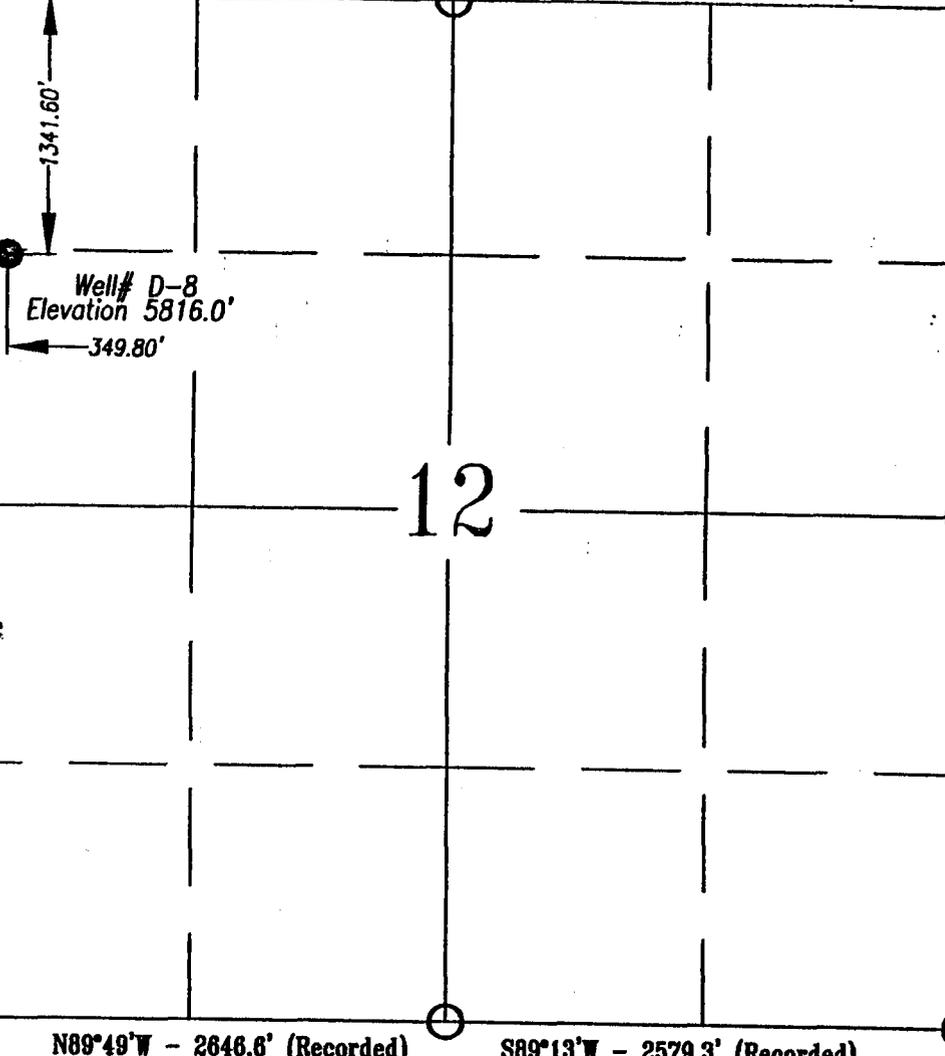
Township 15 South

N00°04'E - 2646.3' (Measured)

N00°14'E - 2661.8' (Recorded)

N00°46'W - 2651.2' (Recorded)

N00°38'W - 2651.2' (Recorded)



**Basis of Bearing:**  
 Basis of Bearing N00°04'E recorded between the NW Corner And the West Quarter Corner of Section 12, Township 15 South, Range 9 East, Salt Lake Base & Meridian.

**Basis Of Elevation:**  
 Basis of Elevation of 5822' as indicated in the NW Corner of Section 12, Township 15 South, Range 9 East, Salt Lake Base and Meridian.

**Description of Location:**  
 Proposed Drill Hole located in the West 1/2 NW 1/4 of Section 12; 1341.6' South and 349.8' East from the NW Corner of Section 12, T15S, R9E, Salt Lake Base & Meridian.

**Surveyor's Certificate:**  
 I, John S. Huefner, a Registered Licensed Land Surveyor, holding Certificate #144842, State of Utah, do hereby certify that the information on this drawing is a true and accurate survey of the land, and was conducted under my personal supervision, as shown hereon.

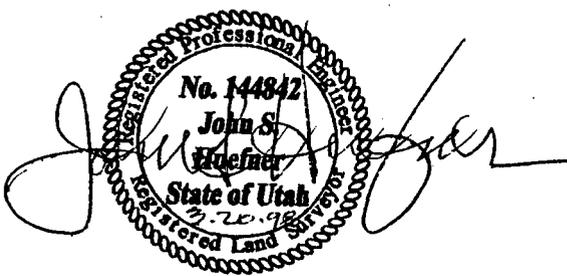
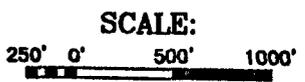


Exhibit "A"  
 1 OF 3

**LEGEND:**

- Drill Hole Location
- ⊕ Brass Cap (Found)
- Brass Cap (Searched for, But Not Found)



DRAWN BY: <b>P. BOYLEN</b>	<p>3204 South 125 West                  Price, Utah 84501                  (801) 637-9300                  FAX (801) 637-2833</p>
CHECKED BY: <b>L.W.J.</b>	
DATE: <b>3/13/98</b>	
SCALE: <b>1" = 1000'</b>	
JOB NO. <b>269</b>	
DRAWING NO. <b>A-1</b>	River Gas Corporation Well # D-8 Section 12, T15S, R9E, S.L.B.&M. Carbon County, Utah
SHEET 1 of 4	

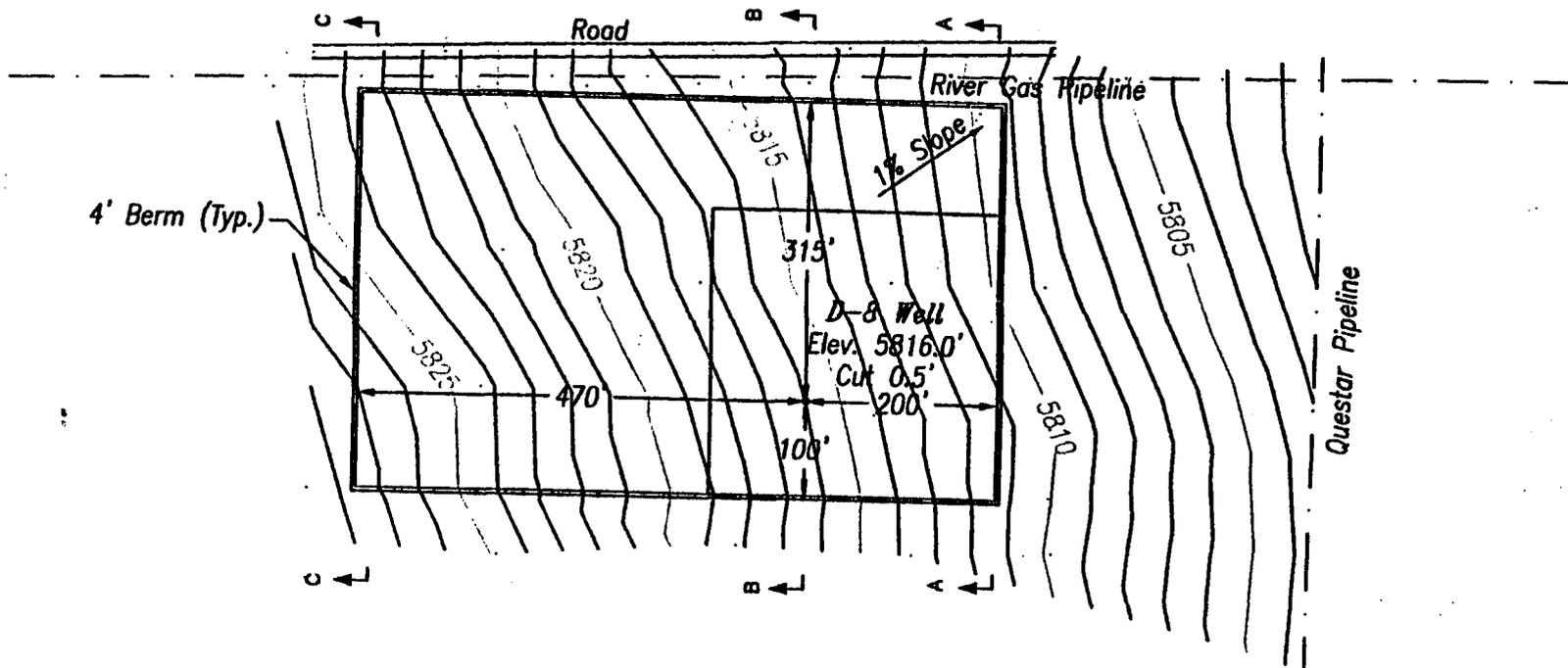


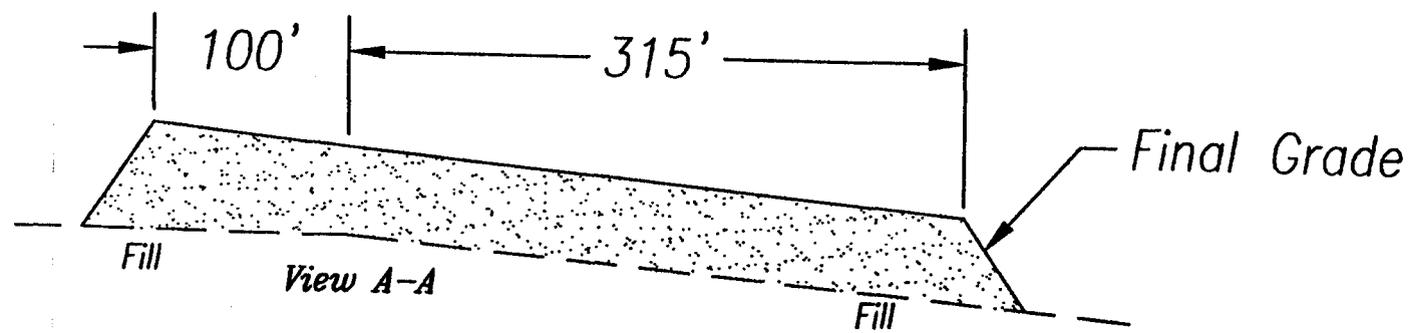
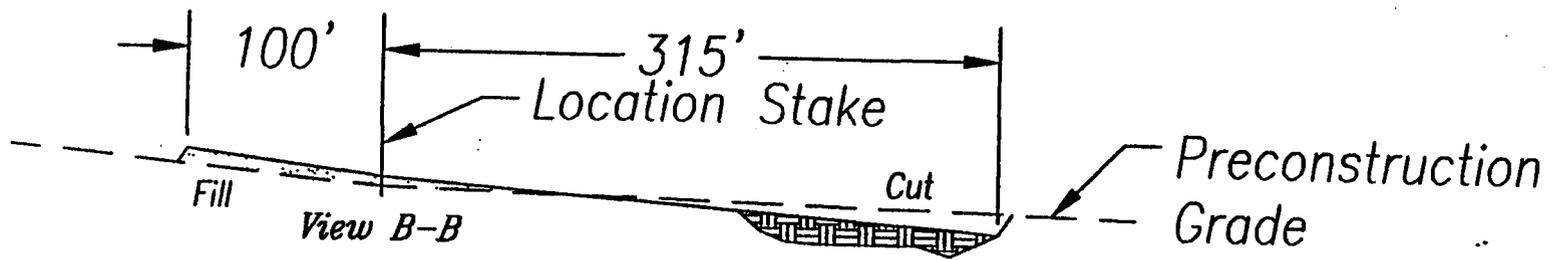
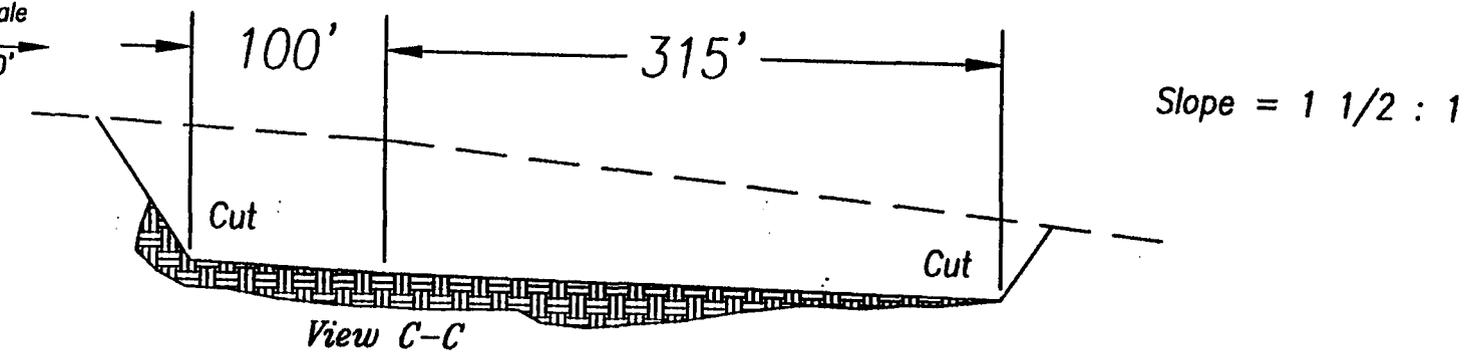
Exhibit "A"  
2 of 3

Elevation Ungraded Ground at Location Stake = 5816.0'  
Elevation Graded Ground at Location Stake = 5815.5'



DRAWN BY: <b>P. BOYLEN</b> CHECKED BY: <b>L.W.J.</b> DATE: <b>3/12/98</b> SCALE: <b>1"=200'</b> JOB NO. <b>269</b> DRAWING NO. <b>A-2</b> SHEET <b>2</b> OF <b>4</b>	 3200 South 125 West P.O. Box 94501 Provo, Utah 84601 (801) 637-8300 FAX (801) 637-2833 Section <b>River Gas Corporation</b> Location Layout Section 12, T15S, R9E, S.L.B.&M. Carbon County, Utah
--	--

1" = 10'  
X-Section Scale  
1" = 100'



APPROXIMATE YARDAGES

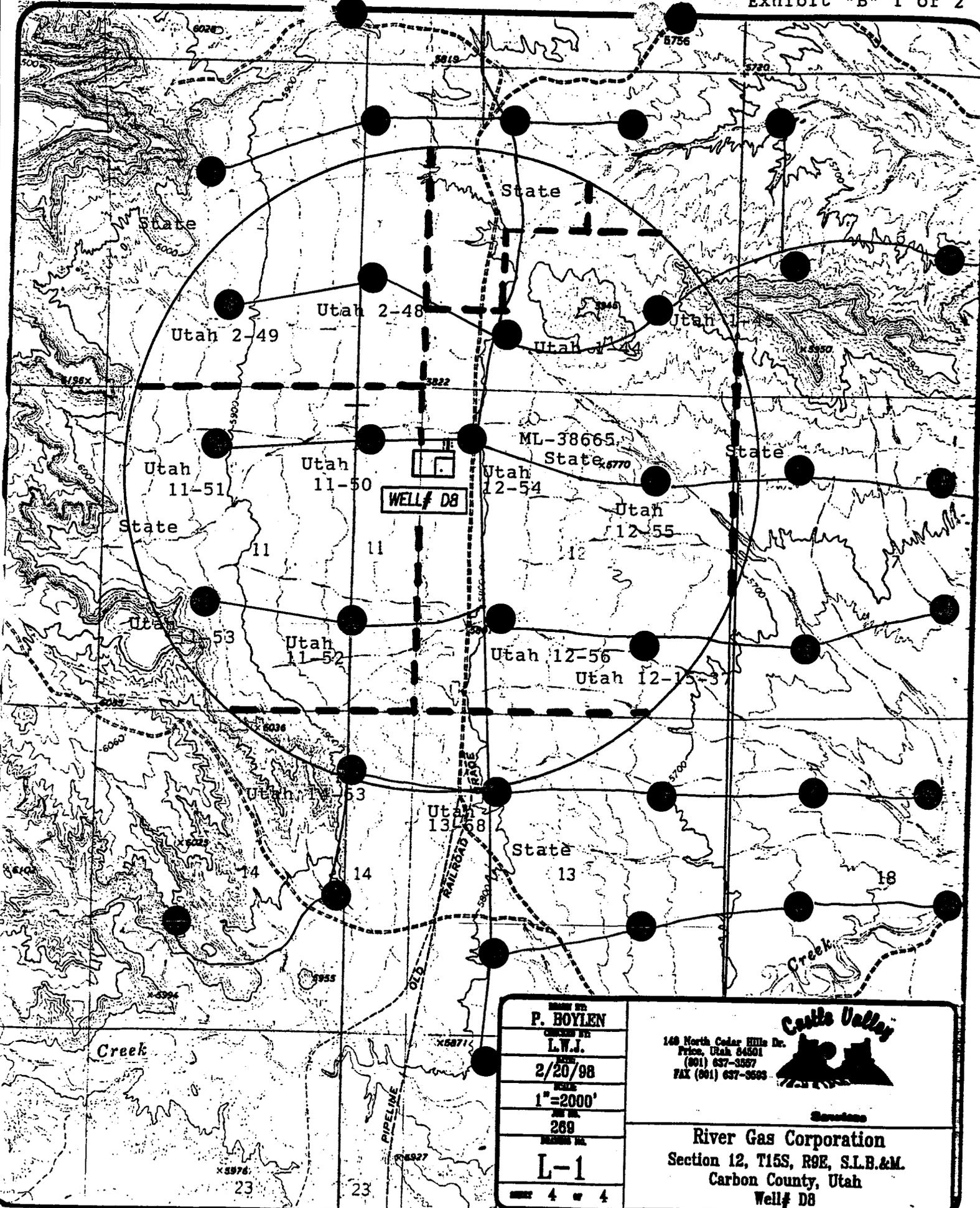
CUT	
(6") Topsoil Stripping	= 5,200.00 Cu. Yds.
Remaining Location	= 21,264.11 Cu. Yds.
<b>TOTAL CUT</b>	<b>= 26,464.11 Cu. Yds.</b>
<b>TOTAL FILL</b>	<b>= 1,132.01 Cu. Yds.</b>

DRAWN BY:  
**P. BOYLEN**  
CHECKED BY:  
**L.W.J.**  
DATE:  
**3/12/98**  
SCALE:  
**As Shown**  
JOB NO.  
**269**  
DRAWING NO.  
**C-1**  
SHEET **3** OF **4**

**Castle Valley**  
3226 South 125 West  
Preston, Utah 84501  
(801) 637-9300  
FAX (801) 637-2833

**River Gas Corporation**  
Typical Cross Sections  
Section 12, T15S, R9E, S.L.B.&M.  
Well # D-8

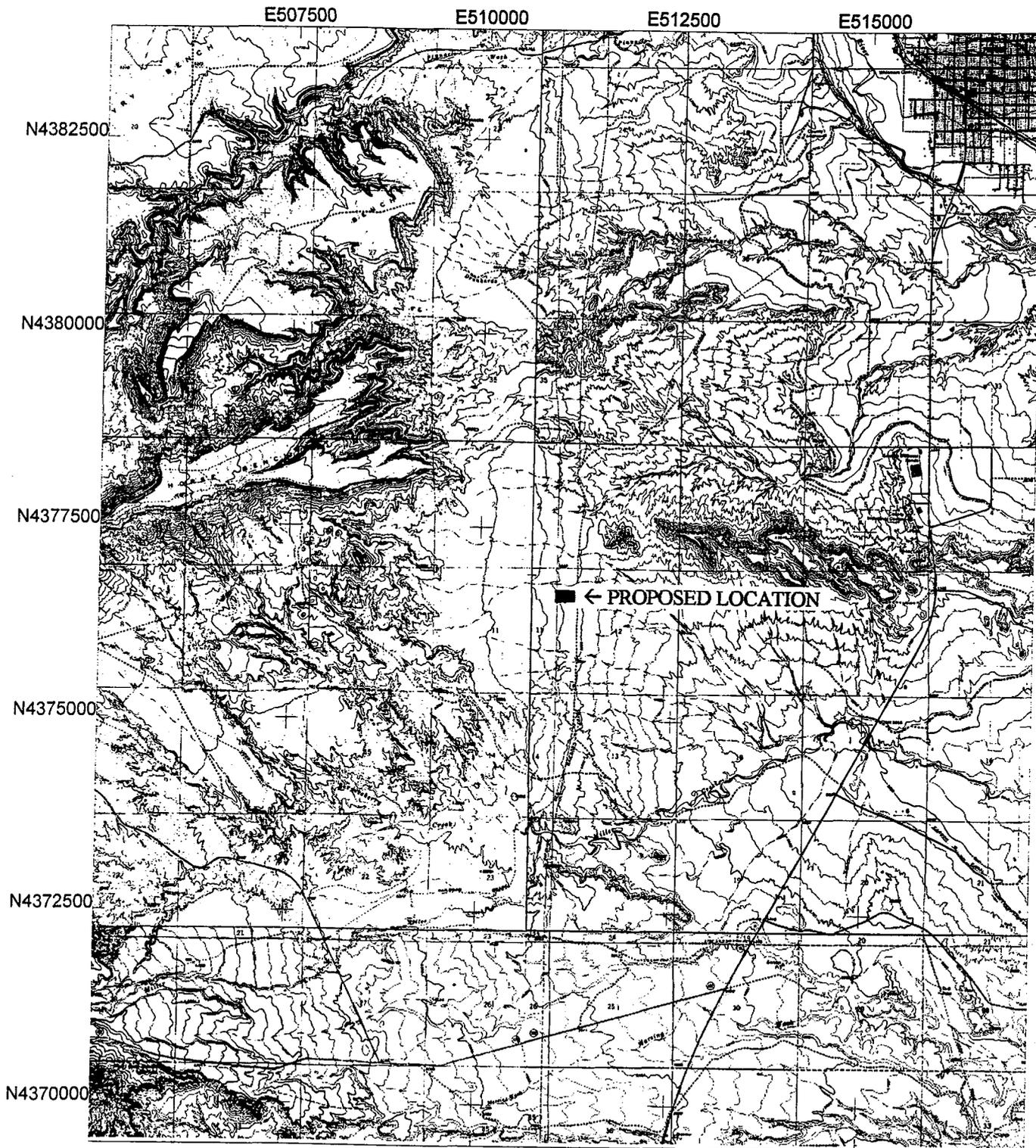
Exhibit "A"  
3 OF 3



DRAWN BY  
**P. BOYLEN**  
 CHECKED BY  
**L.W.J.**  
 DATE  
**2/20/98**  
 SCALE  
**1"=2000'**  
 SHEET NO.  
**289**  
 SHEET NO.  
**L-1**  
 OF 4 OF 4

**Castle Valley**  
 148 North Cedar Hills Dr.  
 Price, Utah 84501  
 (801) 637-3557  
 FAX (801) 637-3593

**River Gas Corporation**  
 Section 12, T15S, R9E, S1B.&M.  
 Carbon County, Utah  
 Well # D8



# Proposed D-8

Universal Transverse Mercator  
North 12  
NAD83 (Conus)

N  
^

Scale 1:75000

0 8000



Feet

3/18/1998

Pathfinder Office™

**Statement Regarding Logs Performed on the Well**

Logs compiled on the Utah D-8 well have been previously submitted, or will be submitted to your office in the future.

## Description of the Casing Program

Conductor Casing Description:

13-3/8" 48#/ft, H-40, ST&C SMLS, installed from 90' to 314.3'

Surface Casing Description:

9-5/8" 36#/ft, K-55 LT&C SMLS, installed from 314.3' to 2510.7'

Production Casing Description:

7" 26#/ft, K-55, installed from 2510.7' to 6950'

## **Description of Fluid Types**

Water Analysis compiled on the Utah D-8 well will be submitted to your office when they become available.

## WATER ANALYSIS REPORT

Company RIVER GAS CORPORATION Address \_\_\_\_\_ Date 02-06-98

Source D-1 DISCHARGE Date Sampled 02-05-98 Analysis No. \_\_\_\_\_

	Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>8.0</u>		
2. H <sub>2</sub> S (Qualitative)	<u>0</u>		
3. Specific Gravity	<u>1.008</u>		
4. Dissolved Solids		<u>9,450</u>	
5. Alkalinity (CaCO <sub>3</sub> )		CO <sub>3</sub> <u>0</u>	+ 30 <u>0</u> CO <sub>3</sub>
6. Bicarbonate (HCO <sub>3</sub> )		HCO <sub>3</sub> <u>3,900</u>	+ 61 <u>64</u> HCO <sub>3</sub>
7. Hydroxyl (OH)		OH <u>0</u>	+ 17 <u>0</u> OH
8. Chlorides (Cl)		Cl <u>2,500</u>	+ 35.5 <u>70</u> Cl
9. Sulfates (SO <sub>4</sub> )		SO <sub>4</sub> <u>0</u>	+ 48 <u>0</u> SO <sub>4</sub>
10. Calcium (Ca)		Ca <u>56</u>	+ 20 <u>3</u> Ca
11. Magnesium (Mg)		MG <u>0</u>	+ 12.2 <u>0</u> Mg
12. Total Hardness (CaCO <sub>3</sub> )		<u>140</u>	
13. Total Iron (Fe)		<u>1.3</u>	
14. Manganese			
15. Phosphate Residuals		<u>44</u>	

\*Milli equivalents per liter

### PROBABLE MINERAL COMPOSITION

Compound	Equiv. Wt.	X	Meg/l	=	Mg/l
Ca(HCO <sub>3</sub> ) <sub>2</sub>	81.04	<u>3</u>			<u>243</u>
CaSO <sub>4</sub>	68.07				
CaCl <sub>2</sub>	55.50				
Mg(HCO <sub>3</sub> ) <sub>2</sub>	73.17				
MgSO <sub>4</sub>	60.19				
MgCl <sub>2</sub>	47.62				
NaHCO <sub>3</sub>	84.00	<u>61</u>			<u>5,124</u>
Na <sub>2</sub> SO <sub>4</sub>	71.03				
NaCl	58.46	<u>70</u>			<u>4,092</u>

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

REMARKS \_\_\_\_\_

Exhibit "F"

## **Statement of the Injection Pressures**

---

The proposed average and maximum injection pressures will be submitted to your office when they become available.

## **Statement of Geologic and Hydrologic Data**

All available geologic and hydrologic data have been previously submitted or will be submitted to your office in the future.

Exhibit "H"

## **Statement of Affidavit**

An affidavit certifying that a copy of the application has been provided to all owners within a one-half mile radius is currently being prepared and will be submitted to your office in the future.

ANALYSIS OF THE STEP  
RATE TEST IN WELL D-8  
AT DRUNKARD'S WASH

PREPARED FOR:

RIVER GAS CORPORATION  
511 ENERGY CENTER BLVD.  
NORTHPORT, ALABAMA 35473

PREPARED BY:

MICHAEL W. CONWAY  
STIM-LAB, INC.  
7406 NORTH HWY 81  
DUNCAN, OKLAHOMA 73534

P.O. NUMBER: VERBAL/JOHN HOLLINGSHEAD  
FILE NUMBER: SL 5205

OCTOBER 27, 1998

ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM SAMPLES AND LOGS WHICH WERE SUPPLIED. WE CANNOT, AND DO NOT, GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATIONS, AND WE SHALL NOT, EXCEPT IN THE CASE OF GROSS OR WILLFUL NEGLIGENCE ON OUR PART, BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COSTS, DAMAGES OR EXPENSES INCURRED OR SUSTAINED BY ANYONE RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR OFFICERS, AGENTS OR EMPLOYEES. THESE INTERPRETATIONS ARE ALSO SUBJECT TO OUR GENERAL TERMS AND CONDITIONS AS SET OUT IN OUR CURRENT PRICE SCHEDULE.



A Core Laboratories Company

# ANALYSIS OF THE STEP RATE INJECTION TEST CONDUCTED IN WELL D-8 AT DRUNKARD'S WASH

## INJECTION CHARACTERISTICS

Well D-8 was completed in October, 1998 and a step rate test was conducted on October 6, 1998 to determine the fracture parting pressure in the Navajo sandstone. Both the Navajo and Wingate sandstones were opened through 429 feet of perforations at the depths shown in Table 1. The intervals were shot 4 spf with 0.6" holes.

Two separate step-rate tests were conducted. The rates in the first test were varied from 0.5 to 8.2 BPM and the second test went to a maximum of 17.9 BPM. The composite analysis of the test is given in Figure 1. Both sets of data were plotted and the average parting pressure determined. The data shows that the fracture parting pressure varied significantly between the two tests. In the first injection, the apparent fracture parting pressure is 3505 psi at a gauge depth of 6892'. The value increased significantly to 3792 psi in the second injection.

*Table 1 - Perforation Placement in Well D-8*

Perforation Location (ft)
6506-6580
6439-6449
6425-6436
6396-6422
6319-6384
6274-6316
6206-6268
6194-6200
6183-6190
6164-6180
6118-6160
6070-6100
6028-6066

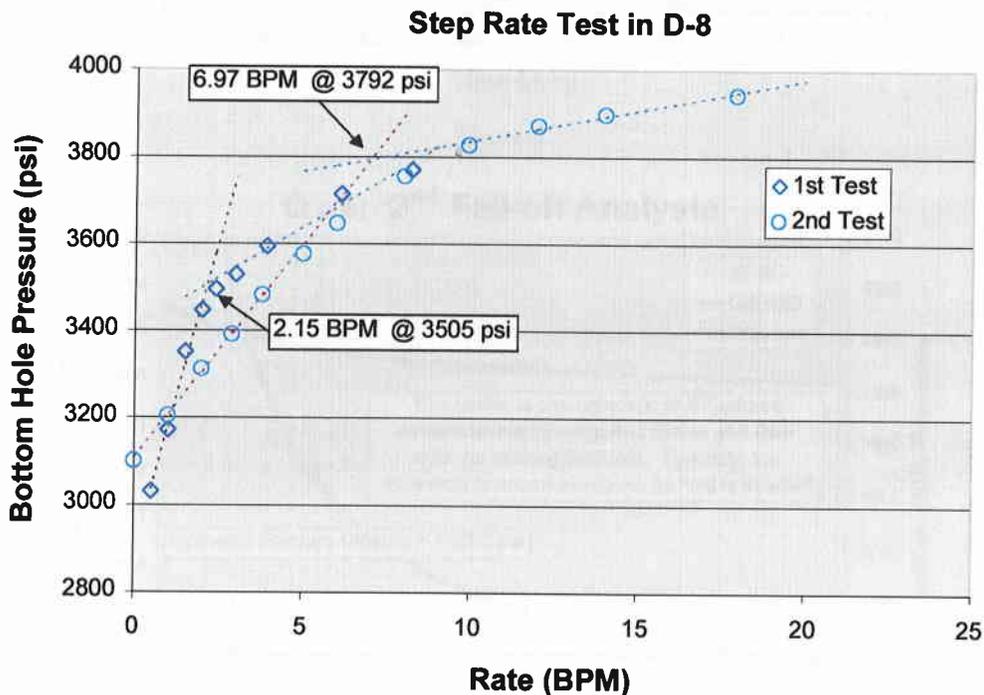


Figure 1

A detailed analysis of the fall-off behavior was required to understand the observed injection characteristics. First, considering the number of perforations present in the well, it was surprising to see evidence for perforation/fracture entry friction. This is shown in the injection data that shows a step increase in both the surface and bottom hole pressure with increase in rate (Figure 2). The analysis of the pressure fall-off data clearly identified the conditions responsible for the observed data. Figure 3 shows that this system is dominated by a significant naturally fractured region in the perforated interval. Initially, there is preferential fluid flow into that area even though it must occur through a limited number of perforations and thus the injection data has the characteristics of significant perforation friction. Definitive fracture opening and closing pressures are very difficult to define in these systems and injection tests can only give a lower bound on the actual fracture parting pressure.

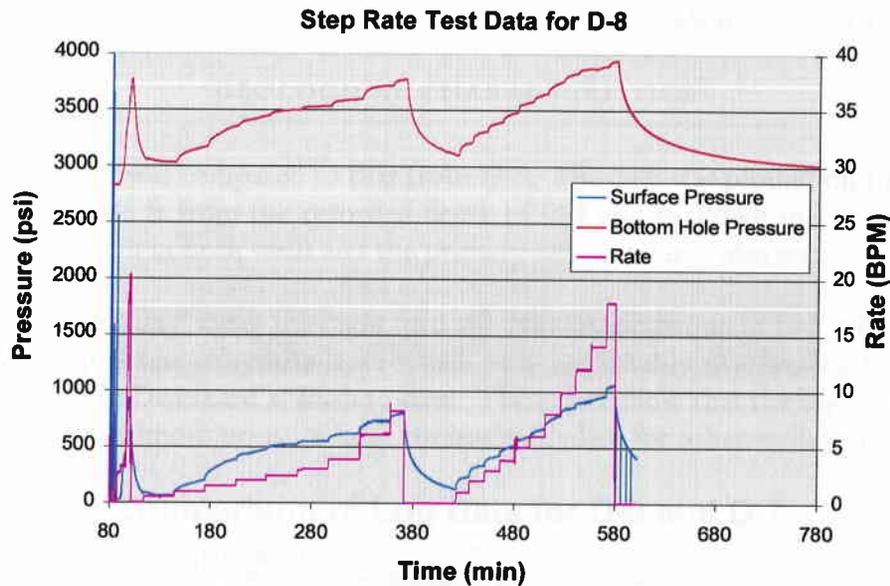


Figure 2

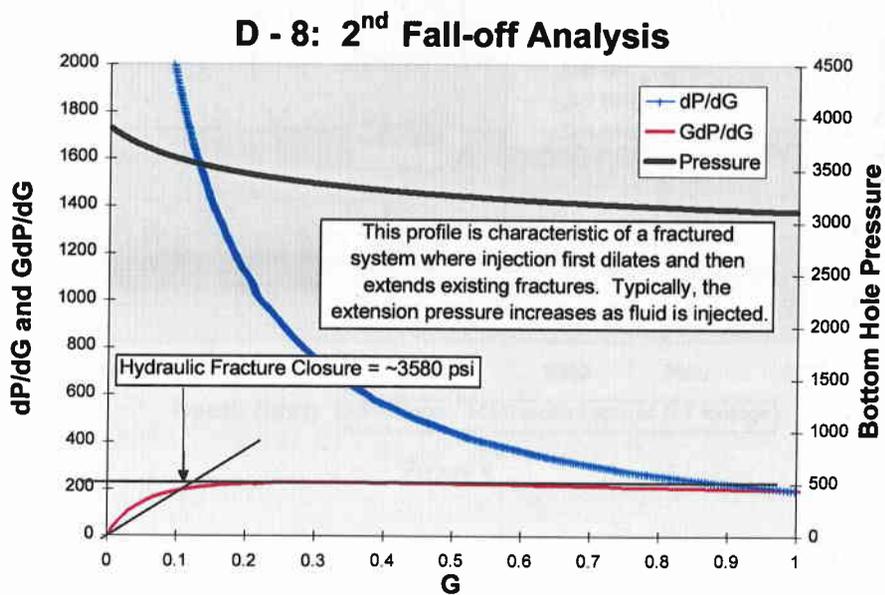


Figure 3

## RESERVOIR PRESSURE

The initial pressure for each of the wells adjusted to a datum of the top perforations is given in Table 2. This would suggest that there has been some pressurization of the formation around D-8 due to injection into primarily D-1.

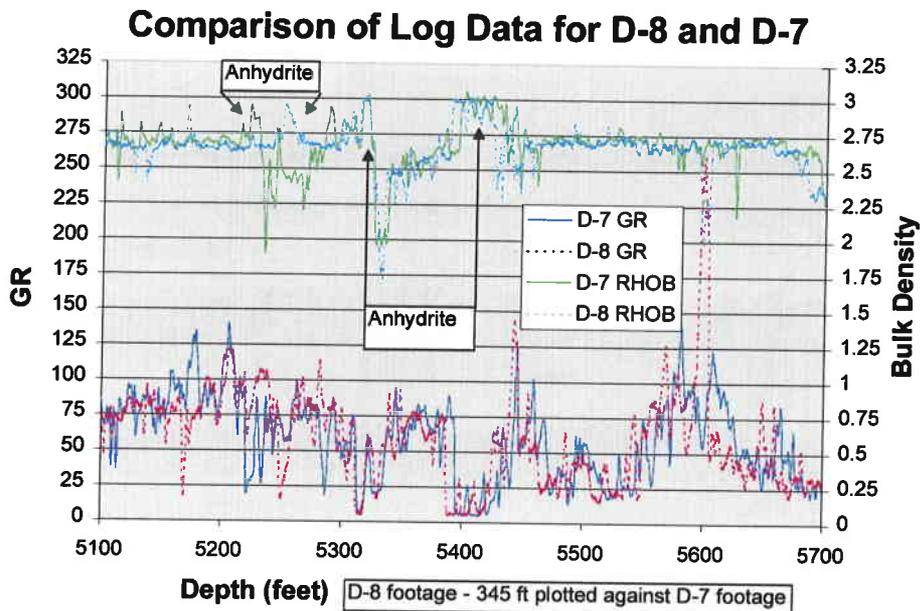
*Table 2 - Initial Pressure*

Well	Depth	Pressure	Gradient
D1	5726	2260	0.395
D3	5550	2162	0.390
D4	6100	2381	0.390
D5	7010	2530	0.361
D7	6445	2485	0.385
D8	6506	2669	0.410

## GEOLOGICAL CHARACTERISTICS

The log data from D-8 was compared to that from D-7. The data was plotted on the same footage scale by subtracting 345 ft from the recorded depth of D-8 and is shown in Figure 4. The three anhydrite layers are seen in both wells and the primary rubble zone is also seen.

This data confirms that any water injection into the Navajo sandstone in D-8 will be confined to that zone by the high stress anhydrite layer which very predictably overlies the Navajo in all the disposal wells drilled in Drunkard's Wash to date. These data show that the injection into D-8 can be conducted at the maximum pressure limit currently in place for other wells in this area.



*Figure 4*

Michael W. Conway

October 27, 1998

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 RIVER GAS	:	ACTION
CORPORATION FOR	:	
ADMINISTRATIVE APPROVAL OF	:	CAUSE NO. UIC-236
THE UTAH D-8 WELL LOCATED IN	:	
SECTION 12, TOWNSHIP 15 SOUTH,	:	
RANGE 9 EAST, S.L.M., CARBON	:	
COUNTY, UTAH, AS A CLASS II	:	
INJECTION WELL	:	

---ooOoo---

THE STATE OF UTAH TO ALL PERSONS INTERESTED IN THE ABOVE ENTITLED MATTER.

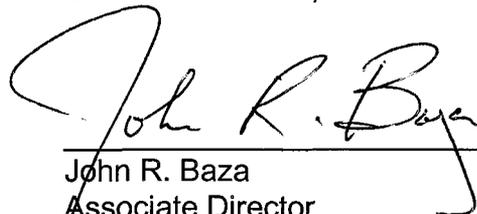
Notice is hereby given that the Division of Oil, Gas and Mining (the "Division") is commencing an informal adjudicative proceeding to consider the application of River Gas Corporation for administrative approval of the Utah D-8 well, located in Section 12, Township 15 South, Range 9 East, S.L.M., Carbon 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 6030 feet to 6560 feet (Navajo Sandstone Formation) will be selectively perforated for water injection. The maximum requested injection pressure will be limited to 1600 psig with a maximum rate of 14,400 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 before the Board of Oil, Gas and Mining. Protestants and/or intervenors should be prepared to demonstrate at the hearing how this matter affects their interests.

Dated this 29th day of October, 1998.

STATE OF UTAH  
DIVISION OF OIL, GAS & MINING

  
\_\_\_\_\_  
John R. Baza  
Associate Director

**River Gas Corporation  
Utah D-8 Well  
Cause No. UIC-236**

Publication Notices were sent to the following:

River Gas Corporation  
1305 South 100 East  
Price, Utah 84501

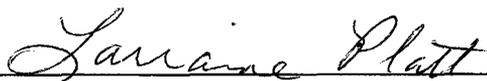
Newspaper Agency Corporation  
Legal Advertising  
P.O. Box 45838  
Salt Lake City, Utah 84145

Sun Advocate  
P. O. Box 870  
845 East Main  
Price, Utah 84501-0870

Bureau of Land Management  
Price Field Office  
125 South 600 West  
Price, Utah 84501

Carbon County Commission  
120 East Main  
Price, Utah 84501

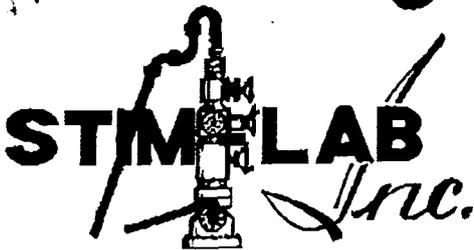
U.S. Environmental Protection Agency  
Region VIII  
Attn: Dan Jackson  
999 18th Street  
Denver, Colorado 80202-2466



Lorraine Platt

Secretary

October 29, 1998



7406 N. 81 HIGHWAY ✓ P.O. BOX 1644 ✓ DUNCAN, OKLAHOMA 73534  
TELEPHONE 580/252-4309 ✓ FAX NUMBER 580/252-6979  
WWW.STIMLAB.COM

GLENN PENNY  
President

October 23, 1998

Mr. John Hollingshead  
River Gas Corporation  
511 Energy Center  
Northport, AL 35473

RE: Results from Scale Comparison of Injection Waters (D7 & D8) and Connate.  
Project #SL5400.

Dear Mr. Hollingshead:

The tests you requested have been completed. The results are listed in the table on the following page.

Thank you for using Stim-Lab, Inc. for your testing needs. If you have any questions, or if Stim-Lab can be of further assistance, please call and refer to Project #SL5400.

Sincerely,

A handwritten signature in cursive script that reads "Barbara Taylor".

Barbara Taylor  
Analytical Chemist

A CORE LABORATORIES COMPANY



P.O. Box 1644  
7406 N. Hwy 81, Duncan, OK 73534

Analytical Department

**Table I**

<b>River Gas Corporation</b>		
<b>Drunkards Wash, Price, Utah</b>		
<b>Connate &amp; Injection Water Scale Comparison of D7 &amp; D8</b>		
<b>Project # SL5400</b>		
<b>Sample</b>	<b>Ratio</b>	<b>mg TSS/L**</b>
D7:Connate	75:25	219.19
D7:Connate	50:50	264.64
D7:Connate	25:75	221.88
D7 Alone	100	368.00*
D8:Connate	75:25	101.05
D8:Connate	50:50	151.52
D8:Connate	25:75	321.21
D8 Alone	100	3,594.0*
<b>COMMENTS</b>		
Precipitate was not visible after sample stood overnight.		
*All waters were filtered prior to running scaling tendency test. TSS (total suspended solids) of the unfiltered injection waters is shown for comparison.		
**Based on previous similar studies, the solids found in this test are most likely calcium carbonate (CaCO <sub>3</sub> ).		



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt  
Governor  
Ted Stewart  
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)

October 29, 1998

Newspaper Agency Corporation  
Legal Advertising  
PO Box 45838  
Salt Lake City, Utah 84145

Re: Notice of Agency Action - Cause No. UIC-236

Gentlemen:

Enclosed is a copy of the referenced Notice of Agency Action. Please publish the Notice, once only, as soon as possible. Please send proof of publication and billing to the Division of Oil, Gas and Mining, 1594 West North Temple, Suite 1210, P.O. Box 145801, Salt Lake City, Utah 84114-5801.

Sincerely,

A handwritten signature in cursive script that reads "Lorraine Platt".

Lorraine Platt  
Secretary

Enclosure



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt  
Governor  
Ted Stewart  
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)

October 29, 1998

Sun Advocate  
P. O. Box 870  
845 East Main  
Price, Utah 84501-0870

Re: Notice of Agency Action - Cause No. UIC-236

Gentlemen:

Enclosed is a copy of the referenced Notice of Agency Action. Please publish the Notice, once only, as soon as possible. Please send proof of publication and billing to the Division of Oil, Gas and Mining, 1594 West North Temple, Suite 1210, P.O. Box 145801, Salt Lake City, Utah 84114-5801.

Sincerely,

A handwritten signature in cursive script that reads "Lorraine Platt".

Lorraine Platt  
Secretary

Enclosure

---ooOoo---

IN THE MATTER OF THE APPLICATION  
OF \_\_\_\_\_

NOTICE OF AGENCY  
ACTION

\_\_\_\_\_ (Operator)

FOR ADMINISTRATIVE APPROVAL OF  
THE \_\_\_\_\_

CAUSE NO. UIC-\_\_\_\_\_

\_\_\_\_\_ WELL(s)

LOCATED IN SECTION \_\_\_\_\_ ,

TOWNSHIP \_\_\_\_\_ S or N,

RANGE \_\_\_\_\_ E or W,

S.L.M. or \_\_\_\_\_ ,

\_\_\_\_\_ COUNTY, UTAH, AS

A CLASS II INJECTION WELL

---ooOoo---

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 \_\_\_\_\_ (Operator) for administrative approval of the \_\_\_\_\_ well, located in Section \_\_\_\_\_, Township \_\_\_\_\_ (S or N), Range \_\_\_\_\_ (E or W), S.L.M. or \_\_\_\_\_, \_\_\_\_\_ 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 \_\_\_\_\_ feet to \_\_\_\_\_ feet (\_\_\_\_\_ Formation) will be selectively perforated for water injection. The maximum requested injection pressure will be limited to \_\_\_\_\_ PSIG with a maximum rate of \_\_\_\_\_ 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 before the Board of Oil, Gas and Mining. Protestants and/or intervenors should be prepared to demonstrate at the hearing how this matter affects their interests.

Dated this \_\_\_\_\_ th day of \_\_\_\_\_ 199\_\_.

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 RIVER GAS	:	ACTION
CORPORATION FOR	:	
ADMINISTRATIVE APPROVAL OF	:	CAUSE NO. UIC-236
THE UTAH D-8 WELL LOCATED IN	:	
SECTION 12, TOWNSHIP 15 SOUTH,	:	
RANGE 9 EAST, S.L.M., CARBON	:	
COUNTY, UTAH, AS A CLASS II	:	
INJECTION WELL	:	

---ooOoo---

THE STATE OF UTAH TO ALL PERSONS INTERESTED IN THE ABOVE ENTITLED MATTER.

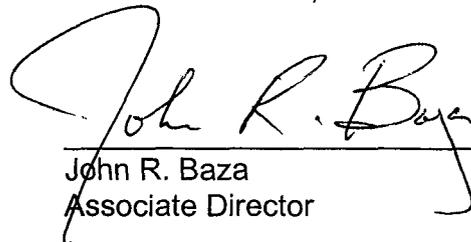
Notice is hereby given that the Division of Oil, Gas and Mining (the "Division") is commencing an informal adjudicative proceeding to consider the application of River Gas Corporation for administrative approval of the Utah D-8 well, located in Section 12, Township 15 South, Range 9 East, S.L.M., Carbon 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 6030 feet to 6560 feet (Navajo Sandstone Formation) will be selectively perforated for water injection. The maximum requested injection pressure will be limited to 1600 psig with a maximum rate of 14,400 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 before the Board of Oil, Gas and Mining. Protestants and/or intervenors should be prepared to demonstrate at the hearing how this matter affects their interests.

Dated this 29th day of October, 1998.

STATE OF UTAH  
DIVISION OF OIL, GAS & MINING

  
\_\_\_\_\_  
John R. Baza  
Associate Director

**River Gas Corporation  
Utah D-8 Well  
Cause No. UIC-236**

Publication Notices were sent to the following:

River Gas Corporation  
1305 South 100 East  
Price, Utah 84501

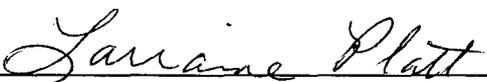
Newspaper Agency Corporation  
Legal Advertising  
P.O. Box 45838  
Salt Lake City, Utah 84145

Sun Advocate  
P. O. Box 870  
845 East Main  
Price, Utah 84501-0870

Bureau of Land Management  
Price Field Office  
125 South 600 West  
Price, Utah 84501

Carbon County Commission  
120 East Main  
Price, Utah 84501

U.S. Environmental Protection Agency  
Region VIII  
Attn: Dan Jackson  
999 18th Street  
Denver, Colorado 80202-2466

  
\_\_\_\_\_  
Lorraine Platt  
Secretary  
October 29, 1998

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 RIVER GAS	:	ACTION
CORPORATION FOR	:	
ADMINISTRATIVE APPROVAL OF	:	CAUSE NO. UIC-236
THE UTAH D-8 WELL LOCATED IN	:	
SECTION 12, TOWNSHIP 15 SOUTH,	:	
RANGE 9 EAST, S.L.M., CARBON	:	
COUNTY, UTAH, AS A CLASS II	:	
INJECTION WELL	:	

---ooOoo---

THE STATE OF UTAH TO ALL PERSONS INTERESTED IN THE ABOVE ENTITLED  
MATTER.

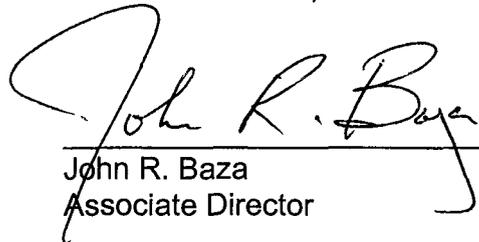
Notice is hereby given that the Division of Oil, Gas and Mining (the "Division") is commencing an informal adjudicative proceeding to consider the application of River Gas Corporation for administrative approval of the Utah D-8 well, located in Section 12, Township 15 South, Range 9 East, S.L.M., Carbon 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 6030 feet to 6560 feet (Navajo Sandstone Formation) will be selectively perforated for water injection. The maximum requested injection pressure will be limited to 1600 psig with a maximum rate of 14,400 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 before the Board of Oil, Gas and Mining. Protestants and/or intervenors should be prepared to demonstrate at the hearing how this matter affects their interests.

Dated this 29th day of October, 1998.

STATE OF UTAH  
DIVISION OF OIL, GAS & MINING

  
\_\_\_\_\_  
John R. Baza  
Associate Director

---ooOoo---

IN THE MATTER OF THE APPLICATION  
OF River Gas Corporation  
\_\_\_\_\_ (Operator)

NOTICE OF AGENCY  
ACTION

FOR ADMINISTRATIVE APPROVAL OF  
THE Utah D-8

CAUSE NO. UIC- 236

\_\_\_\_\_ WELL(s)

LOCATED IN SECTION 12,

TOWNSHIP 14 (S) or N,

RANGE 9 (E) or W,

S.L.M. or \_\_\_\_\_,

Carbon COUNTY, UTAH, AS

A CLASS II INJECTION WELL

---ooOoo---

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 River Gas Corporation (Operator) for administrative approval of the Utah D-8 well, located in Section 12, Township 14 (S) or N), Range 9 (E) or W), S.L.M. or \_\_\_\_\_, Carbon 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 6030 feet to 6560 feet (Navajo Sandstone Formation) will be selectively perforated for water injection. The maximum requested injection pressure will be limited to 4600 PSIG with a maximum rate of 14,400 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 before the Board of Oil, Gas and Mining. Protestants and/or intervenors should be prepared to demonstrate at the hearing how this matter affects their interests.

Dated this 28 th day of October 1998.

AFFIDAVIT OF PUBLICATION

STATE OF UTAH)

SS.

County of Carbon,)

I, Kevin Ashby, on oath, say that I am the Publisher of the Sun Advocate, a twice-weekly newspaper of general circulation, published at Price, State and County aforesaid, and that a certain notice, a true copy of which is hereto attached, was published in the full issue of such newspaper for 1 (One) consecutive issues, and that the first publication was on the 5th day of November, 1998 and that the last publication of such notice was in the issue of such newspaper dated the 5th day of November, 1998.

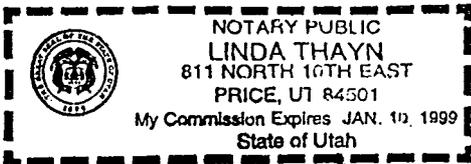
*Kevin Ashby*  
Kevin Ashby - Publisher

Subscribed and sworn to before me this 5th day of November 1998.

*Linda Thayne*

Notary Public My commission expires January 10, 1999 Residing at Price, Utah

Publication fee, \$ 72.00



**NOTICE OF AGENCY ACTION**  
**CAUSE NO. UIC-235**  
**CAUSE NO. UIC-236**

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

IN THE MATTER OF THE APPLICATION OF RIVER GAS CORPORATION FOR ADMINISTRATIVE APPROVAL OF THE DREW D-6 WELL LOCATED IN SECTION 34, TOWNSHIP 14 SOUTH, RANGE 9 EAST AND UTAH D-8 WELL LOCATED IN SECTION 12, TOWNSHIP 15 SOUTH, RANGE 9 EAST, S.L.M., CARBON COUNTY, UTAH, AS CLASS II INJECTION WELLS

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 River Gas Corporation for administrative approval of the Drew D-6 Well located in Section 34, Township 14 South, Range 9 East and Utah D-8 Well located in Section 12, Township 15 South, Range 9 East, S.L.M., Carbon County, Utah for conversion to Class II injection wells. The proceeding will be conducted in accordance with Utah Admin. R. 649-10, Administrative Procedures.

The interval for the Drew D-6 well from 6600 feet to 7500 feet and Utah D-8 well from 6030 feet to 6560 feet (Navajo Sandstone Formation) will be selectively perforated for water injection. The maximum requested injection pressure will be limited to 1600 psig with a maximum rate of 14,400 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 before the Board of Oil, Gas and Mining. Protestants and/or intervenors should be prepared to demonstrate at the hearing how this matter affects their interests.

Dated this 29th day of October, 1998.

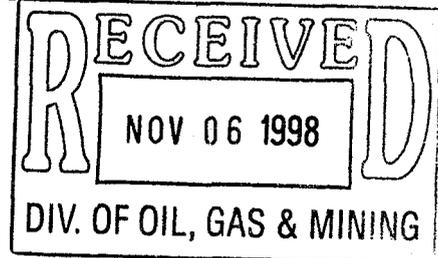
STATE OF UTAH  
 DIVISION OF OIL, GAS & MINING  
 John B. Baza  
 Associate Director

Published in the Sun Advocate November 5, 1998



**RIVER GAS CORPORATION**

511 Energy Center Blvd.  
Northport, Alabama 35476  
Phone (205) 759-3282  
Fax (205) 759-3188 (Accounting)  
Fax (205) 758-5309 (Corporate)



November 2 , 1998

Mr. Chris Kierst  
Utah Division of Oil, Gas, and Mining  
1594 West North Temple  
Salt Lake City, Utah 84114

RE: Geologic information regarding Class II injection application for well D-8, Carbon County, Utah

Dear Mr. Kierst:

The purpose of this letter is to provide the geologic information for River Gas Corporation's disposal well D-8 as requested in R649-5-3-2.10 of the Utah Administrative Code for natural resources. The formation tops within D-8, located in Section 12, T15S, R9E, are as follows:

<b>Formation</b>	<b>Top</b>
Mancos Shale	Surface
Ferron Sandstone	2116'
Tununk Shale	2360'
Dakota Sandstone	2732'
Cedar Mountain	2761'
Morrison Formation	3584'
Summerville Formation	4048'
Curtis Sandstone	4534'
Entrada Sandstone	4696'
Carmel Sandstone	5354'
Navajo Sandstone	6030'
Kayenta Sandstone	6384'
Wingate Formation	6510'

## Description of Injection Zones Within Well D-8

As you are aware, the injection intervals are located in the following lithologic units:

<b>Formation</b>	<b>Gross Thickness (feet)</b>	<b>Gross Perforated Interval</b>	<b>Description</b>
Navajo Sandstone	354	6030-6384	V. fine gr, lt orange, cross-bedded
Kayenta Formation	126	6396-6449	Reddish-brown, silty
Wingate Sandstone	385	6506-6580	V. fine gr, orange-brown, cross-bedded

All of the above units are located within the Jurassic-aged Glen Canyon Group.

## Confining Units

The upper confining unit of the injection interval is the Carmel Formation (top depth at 5354', gross thickness of approximately 676'), which is composed of silty sandstone, shale, limestone, and some anhydrite. Three high stress zones were detected from a dipole sonic log. These zones are located at 5594-5602, 5658-5664, and 5734-5764. The lower two zones appear to be beds of anydrite. These zones exhibit minimum horizontal stresses approximately 1000 psi higher than the injection interval. Therefore, these zones act as barriers to any uphole fracture migration.

The lower confining unit of the injection interval is the Chinle Shale at 6895'.

A cross-section and Navajo Sandstone structure map are enclosed.

Please feel free to call me if you need additional information.

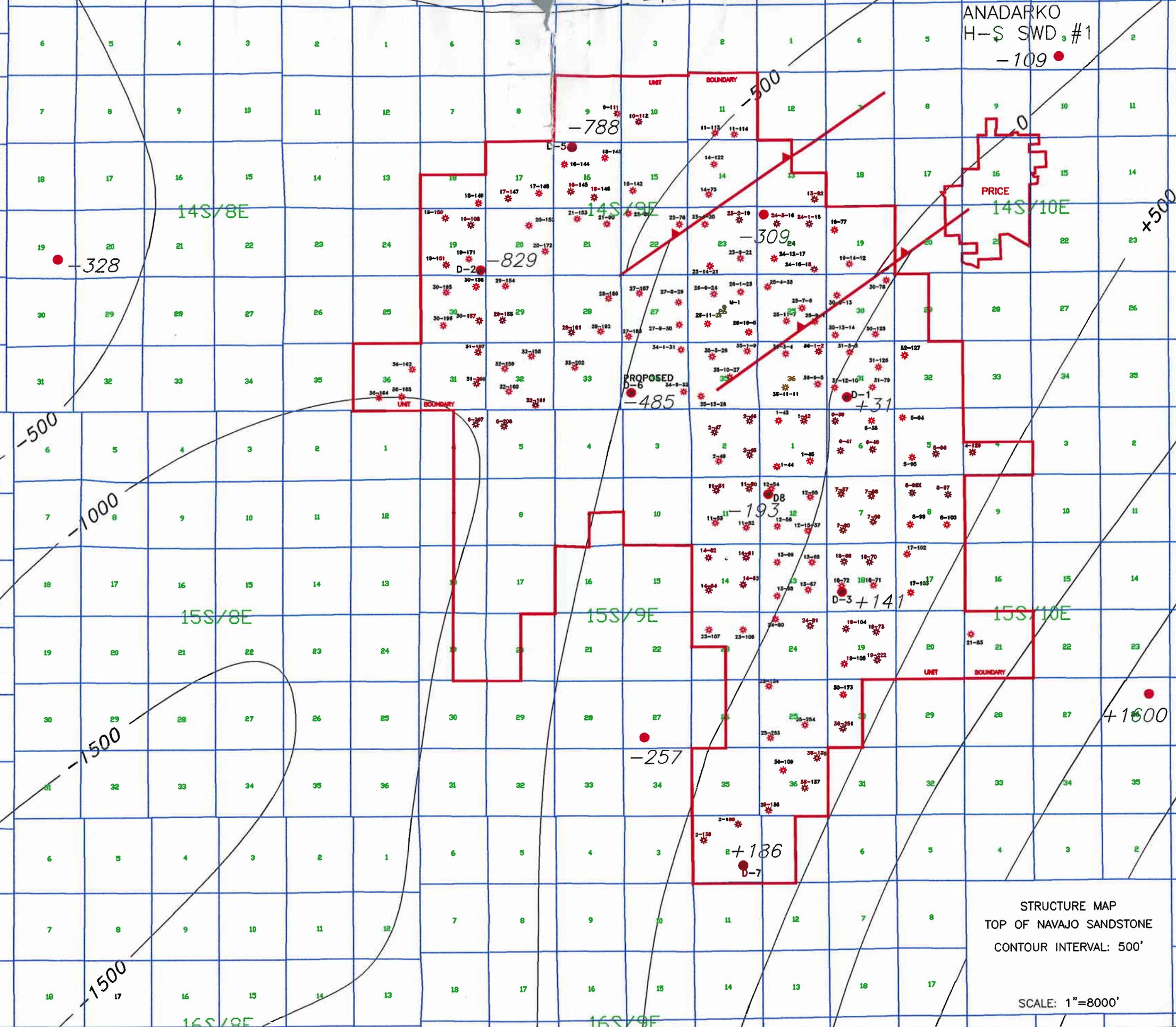
Sincerely,



Terry Burns

Geologist

ANADARKO  
H-S SWD #1  
-109



STRUCTURE MAP  
TOP OF NAVAJO SANDSTONE  
CONTOUR INTERVAL: 500'

SCALE: 1"=8000'



## RIVER GAS CORPORATION

511 Energy Center Boulevard  
Northport, Alabama 35473  
Phone (205) 759-3282  
Fax (205) 758-5309

November 10, 1998

Mr. Christopher J. Kierst  
State of Utah  
Department of Natural Resources  
Division of Oil, Gas, & Mining  
1594 West North Temple St.  
Ste. 1210  
Box 145801  
Salt Lake City, Ut 84114-5801

Re: D-8 Disposal Well  
API No. 43-007-30431  
Carbon County, Utah

Dear Mr. Gil Hunt,

The above referenced well is located in the west half of the northwest quarter of Section 12, Township 15 South, Range 9 east (SLB&M). The following data is being submitted as supplemental information as stipulated by the UIC Form 1.

### Summary of Events

On September 30, 1998, a Colorado Well Service workover unit was rigged up to complete the D-8 disposal well. Two cement diverting tools were drilled out at depths of 2619 feet (G.L.) and 5479 feet (G.L.). Pipe was run in the hole to tag up on the PBTD at 6890 feet. Prior to perforating the casing, a scraper run down to 6890 feet was conducted and the hole was cleaned with 280 barrels of fresh fluid. On October 1, 1998, Computalog ran a bond log of the cement behind the 7 inch casing. Two runs were made: one from 6890 feet to 5500 feet with 1000 psig. pressure on the well; and one from 6890 feet to 2280 feet with no pressure on the well. The differences can noticed upon review of the attached bond log copy. On October 2, 1998, the following holes were placed in the 7 inch casing (4" gun, 4 spf, .6 EH, 22 in. pen.): 6506-6580, 6439-6449, 6425-6436, 6396-6422, 6319-6384, 6274-6316, 6206-6268, 6194-6200, 6183-6190, 6164-6180, 6118-6160, 6070-6100, and 6028-6066. The well was then swabbed to recover connate water from the Navajo and Wingate formations. Their respective TDS levels were 89,900 ppm and 201,000 ppm. The wells was acidized on October 5, 1998 with 4000 gallons of 7 ½% HCL acid at an average rate of 7 bpm at 1640 psig.. The rate was shut off several times to allow the acid to soak the perforations. On October 6, 1998, Northern Lights rigged up a slickline unit and ran in the hole to soft-set two quartz memory gauges at 6890 feet. Dowell Schlumberger then conducted a step-rate test to determine the parting pressure of the perforated formation. Data sheets and a brief explanation can be found in the following

body.

Water Analysis of Navajo/Wingate Connate Water

Attached are test results from Chemtech-Ford Laboratories of Salt Lake City, Utah. The Navajo water had a TDS level of 89,900 mg/l and the Wingate water had a TDS level of 201,000 mg/l.

Compatibility of Connate Fluids with Injection Fluids

Attached are test results from Stim-Lab Inc. of Duncan, Oklahoma stating that there should be no problems mixing our produced fluids with the connate fluid.

Casing Pressure Test

The 7 inch casing was pressure tested to a surface of 1000 psig. for thirty minutes. This test was conducted while bond logging the well from 6890 feet to 5500 feet. The effects of this activity can be seen on the enclosed bond log copy and in the remarks section of the log. Orson Barney (Colorado Well Service), Kriss Howard & Dave Russill (Computalog), and John Hollingshead (River Gas Corp.) witnessed the pressure test.

Anticipated Average Injection Rate and Pressure

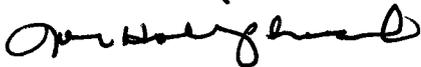
The average rate is expected to be 9360 bpd. The average pressure is expected to be 1325 psig..

Requested Maximum Injection Pressure

River Gas Corporation respectfully request that the maximum injection pressure be established at **1350** psig. surface. This pressure should be safely contained as explained in the enclosed Stim-Lab report.

Please contact me at 205-759-3282 should you have any questions pertaining to the above information.

Most Cordially,



John Hollingshead  
Reservoir Engineer



Date: 11/ 3/98

To: River Gas Corp.  
 attn. John Hollingshead  
 511 Energy Ctr. Blvd.  
 Northport, AL 35476

NAVAJO FORMATION WATER

Group #: 25746  
 Lab #: 98-U008636  
 Sample Desc: D-8 Disposal Well  
 Sample Matrix: WASTE WATER  
 Date Sampled: 10/ 3/98  
 Date Submitted: 10/ 7/98

Time Sampled: 12:10  
 Time Received: 12:00

CERTIFICATE OF ANALYSIS

PARAMETER	RESULT	MINIMUM REPORTING		METHOD	ANALYST
		LIMIT (MRL)	DATE ANALYZED		
INORGANIC PARAMETERS					
Bicarbonate as HCO <sub>3</sub> , mg/L	2,450	1	10/16/98 10:00	SM 2320B	TSM
Carbonate as CO <sub>3</sub> , mg/L	< 3	3	10/16/98 10:00	SM 2320B	TSM
Hydroxide as OH, mg/L	< 3	3	10/16/98 10:00	SM 2320B	TSM
Alkalinity, Total (CaCO <sub>3</sub> ), mg/L	2,010	1	10/16/98 10:00	SM 2320B	TSM
Chloride (D), mg/L	45,000	500	10/13/98 9:00	EPA 325.3	TSM
Conductance, Specific, umhos/cm	110,000	1	10/14/98 9:00	EPA 120.1	KRF
Resistivity, uhmos	25.8	0.1	11/ 3/98	Sm18 2510A	LH
pH, units	6.6	0.1	10/15/98 9:45	EPA 150.1	LPS
Specific Gravity, g/mL	1.06	0.01	11/ 2/98	EPA 1311	LH
Sulfate, mg/L	2,840	1000	10/12/98 11:00	EPA 375.4	TSM
Total Dissolved Solids, mg/L	89,900	250	10/ 8/98 12:00	EPA 160.1	LPS
Calcium (T), as Ca, mg/L	678	0.2	10/14/98 14:53	EPA 200.7	EG
Iron (T), as Fe, mg/L	530	0.05	10/14/98 14:53	EPA 200.7	EG
Magnesium (T), as Mg, mg/L	152	0.2	10/14/98 14:53	EPA 200.7	EG
Sodium (T), as Na, mg/L	23,300	2000	10/15/98 12:58	EPA 200.7	EG
Receiving Temperature, C	6.8		10/ 7/98 12:00		RCG

Approved By:

Ron Fuller, Laboratory Director

MRL = Report detection limit

Date: 11/ 3/98

To: River Gas Corp.  
 attn. John Hollingshead  
 511 Energy Ctr. Blvd.  
 Northport, AL 35476

WINGATE FORMATION WATER

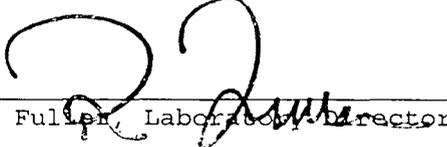
Group #: 25746  
 Lab #: 98-U008635  
 Sample Desc: D-8 Disposal Well  
 Sample Matrix: WASTE WATER  
 Date Sampled: 10/ 3/98  
 Date Submitted: 10/ 7/98

Time Sampled: 16:50  
 Time Received: 12:00

## CERTIFICATE OF ANALYSIS

PARAMETER	RESULT	MINIMUM REPORTING		METHOD	ANALYST
		LIMIT (MRL)	DATE ANALYZED		
INORGANIC PARAMETERS					
Bicarbonate as HCO <sub>3</sub> , mg/L	1,670	1	10/16/98 10:00	SM 2320B	TSM
Carbonate as CO <sub>3</sub> , mg/L	< 3	3	10/16/98 10:00	SM 2320B	TSM
Hydroxide as OH, mg/L	< 3	3	10/16/98 10:00	SM 2320B	TSM
Alkalinity, Total (CaCO <sub>3</sub> ), mg/L	1,370	1	10/16/98 10:00	SM 2320B	TSM
Chloride (D), mg/L	116,000	500	10/13/98 9:00	EPA 325.3	TSM
Conductance, Specific, umhos/cm	201,000	1	10/14/98 9:00	EPA 120.1	KRF
Resistivity, uhmos	6.2	0.1	11/ 3/98	Sm18 2510A	LH
pH, units	6.4	0.1	10/15/98 9:45	EPA 150.1	LPS
Specific Gravity, g/mL	1.13	0.01	11/ 2/98	EPA 1311	LH
Sulfate, mg/L	2,540	1000	10/12/98 11:00	EPA 375.4	TSM
Total Dissolved Solids, mg/L	201,000	250	10/ 8/98 12:00	EPA 160.1	LPS
Calcium (T), as Ca, mg/L	544	0.2	10/14/98 14:53	EPA 200.7	EG
Iron (T), as Fe, mg/L	1,160	0.05	10/14/98 14:53	EPA 200.7	EG
Magnesium (T), as Mg, mg/L	205	0.2	10/14/98 14:53	EPA 200.7	EG
Sodium (T), as Na, mg/L	55,200	2000	10/15/98 12:58	EPA 200.7	EG
Receiving Temperature, C	6.8		10/ 7/98 12:00		RCG

Approved By:


  
 Ron Fuller, Laboratory Director

MRL = Report detection limit

Page 1

{generic.rpt}

6100 SOUTH STRATLER  
 SALT LAKE CITY UTAH 84107 6905  
 801 262 7299 PHONE  
 801 262 7378 FAX



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

6. Lease Designation and Serial Number

ML-368665

7. Indian Allottee or Tribe Name

N/A

8. Unit or Communitization Agreement

Drunkards Wash UTU=67921X

9. Well Name and Number

Utah D-8

10. API Well Number

43-007-30431

11. Field and Pool, or Wildcat

Drunkards Wash

**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— for such proposals

1. Type of Well  
 Oil Well     Gas Well     Other (specify)

2. Name of Operator  
 River Gas Corporation

3. Address of Operator  
 1305 South 100 East, Price, UT 84501

4. Telephone Number  
 801-637-8876

5. Location of Well  
 Footage : 1342' FNL, 350' FWL  
 County : Carbon  
 QQ, Sec. T., R., M. : W/2 NW/4 S12, T15S, R9E SLB&M  
 State : UTAH

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

NOTICE OF INTENT  
(Submit in Duplicate)

- |  |   |
|--|---|
| <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 _____             |   |

Approximate Date Work Will Start \_\_\_\_\_

SUBSEQUENT REPORT  
(Submit Original Form Only)

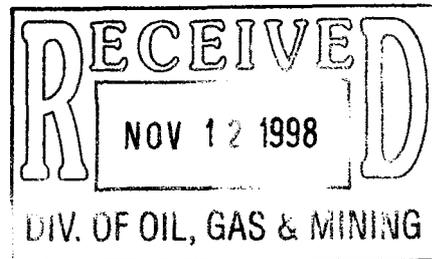
- |   |   |
|---|---|
| <input type="checkbox"/> Abandonment *                          | <input type="checkbox"/> New Construction     |
| <input type="checkbox"/> Casing Repair                          | <input type="checkbox"/> Pull or Alter Casing |
| <input type="checkbox"/> Change of Plans                        | <input type="checkbox"/> 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 checked="" type="checkbox"/> Other <u>Step-Rate Test</u> |   |

Date of Work Completion October 13, 1998

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. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

See attached



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

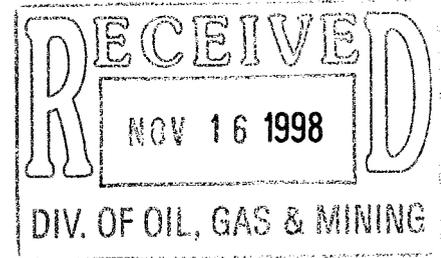
Name & Signature John Hollingshead John Hollingshead Title Reservoir Engr. Date 11/11/98  
 (State Use Only)



RIVER GAS CORPORATION

UTAH OPERATIONS  
1305 South 100 East  
Price, Utah 84501  
Bus. (801) 637-8876  
FAX (801) 637-8924

November 12, 1998



Mr. Chris Kierst  
State of Utah  
Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
Post Office Box 145801  
Salt Lake City, Utah 84114-5801

RE: Supplemental Information for the Previously Submitted  
Application for Injection Well – Utah D-8  
W/2, NW/4, Section 12,  
T15S, R9E, SLB&M, Carbon County Utah

Dear Mr. Kierst:

Enclosed is supplemental information as requested concerning the casing program. The following attachment has been revised and is included for your review:

Exhibit "D" - Description of the Casing Program;

Thank you for your timely consideration of this application. Please feel free to contact me if you have any questions or find any deficiencies.

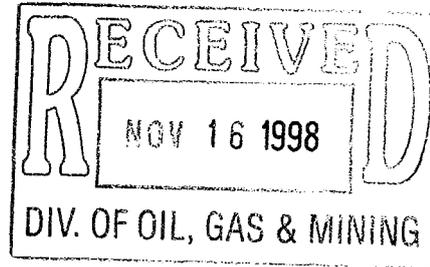
Sincerely,

*Don S. Hamilton*

Don S. Hamilton  
Permit Specialist

cc: Mr. R.A. Lamarre, Texaco  
Mr. Chuck Snure, Texaco  
Mr. Gee Lake, Jr., Dominion Resources  
Mrs. Tammie Butts, RGC  
Mr. Joey Stephenson, RGC  
Mr. Dennis Plowman, RGC  
RGC Well File - Utah D-8

Exhibit "D"



## Description of the Casing Program

### Conductor Casing Description:

20" 93#/ft, H-40, ST&C SMLS, installed from 0' to 90'  
landed 3 joints of casing at 90'

### Surface Casing Description:

13-3/8" 48#/ft, H-40, ST&C SMLS, installed from 90' to 330'  
325 sacks Class G, 2% CaCl + 1/4 lb. per sack D-29  
15#/gal. density and 1.15 cu.ft./sack yield (displaced 41 bbls. water).  
(circulated 3 bbls. of cement to the surface).  
landed 7 joints of casing at 314.3'

### Intermediate Casing Description:

9-5/8" 36#/ft, K-55 LT&C SMLS, installed from 314.3' to 2510'  
475 sacks lead 50/50 Poz (12.5#/gal. density and 1.92 cu.ft./ sack yield)  
8% gel, 10% D44, 1/4 lb. per sack D-29, 2% S-1  
100 sacks tail "G" + 2% S-1, 1/4 lb. per sack D-29  
(displaced 192 bbls. of water)  
(circulated 10 bbls. of cement to the surface).  
Landed 66 joints of casing at 2510.69'  
Casing shoe installed (1.55' long) at 2509'

### Production Casing Description:

7" 26#/ft, K-55, installed from 2510.65' to 6950'  
676 sacks 50/50 POZ (12.5#/gal. density and 1.92 cu.ft./ sack yield)  
8% D-20, 10% D-44 bwow, 1/4 lb. per sack D-29  
65 sacks "G" + 2% S-1, 1/4 lb. per sack D-29 (15.8#/gal. density and 1.15 cu.ft./  
sack yield)  
529 sacks 10-1 RFC (14.2#/gal. density and 1.61 cu.ft./ sack yield)

Joint	Description	Length	G.L.
1	shoe	1.00'	6925.91'
35	7" 26#/ft. K-55	1448.06'	5476.85'
1	DV tool	2.22'	5474.63'
68	7" 26#/ft. K-55	2851.37'	2623.26'
1	DV tool	2.22'	2621.04'
65	7" 26#/ft. K-55	2621.04'	0.00'

STATE OF ALABAMA )  
 ) SS.  
COUNTY OF TUSCALOOSA )

**Affidavit of Notifications for Proposed Injection Well**

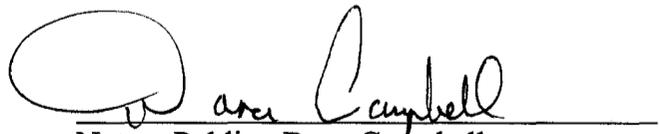
I, WILLIAM L. KIRK, JR., Senior Landman for River Gas Corporation does hereby certify that on October 21, 1998, he transmitted a notice of intention by River Gas Corporation to convert a well drilled in the SW/4 of SW/4 Section 12, Township 15 South, Range 9 East, SLM, Carbon County, Utah to an Injection Well, as required by the State of Utah, Division of Oil, Gas and Mining for Injection Well Permit approval. Said notice was either transmitted by certified mail, return receipt requested, overnight mail, or hand delivered, to all owners lying within a one-half (1/2) mile radius of said well. Attached hereto as Exhibit "A" is a plat and addressee list outlining the owners within such one-half (1/2) mile radius area. Attached hereto as Exhibit "B" is a sample of the notice, with attachments, transmitted to all of said owners. Attached hereto as Exhibit "C" is documentation of receipt by said owners of the transmitted notice, with attachments.

FURTHER AFFLIANT SAYETH NOT.

  
William L. Kirk, Jr.

Subscribed and sworn to before me this the 17 day of November, 1998, by William L. Kirk, Jr.

Witness my hand and official seal.

  
Notary Public - Dana Campbell  
Address: 6231 Hibiscus Lane  
Northport, Alabama 35473

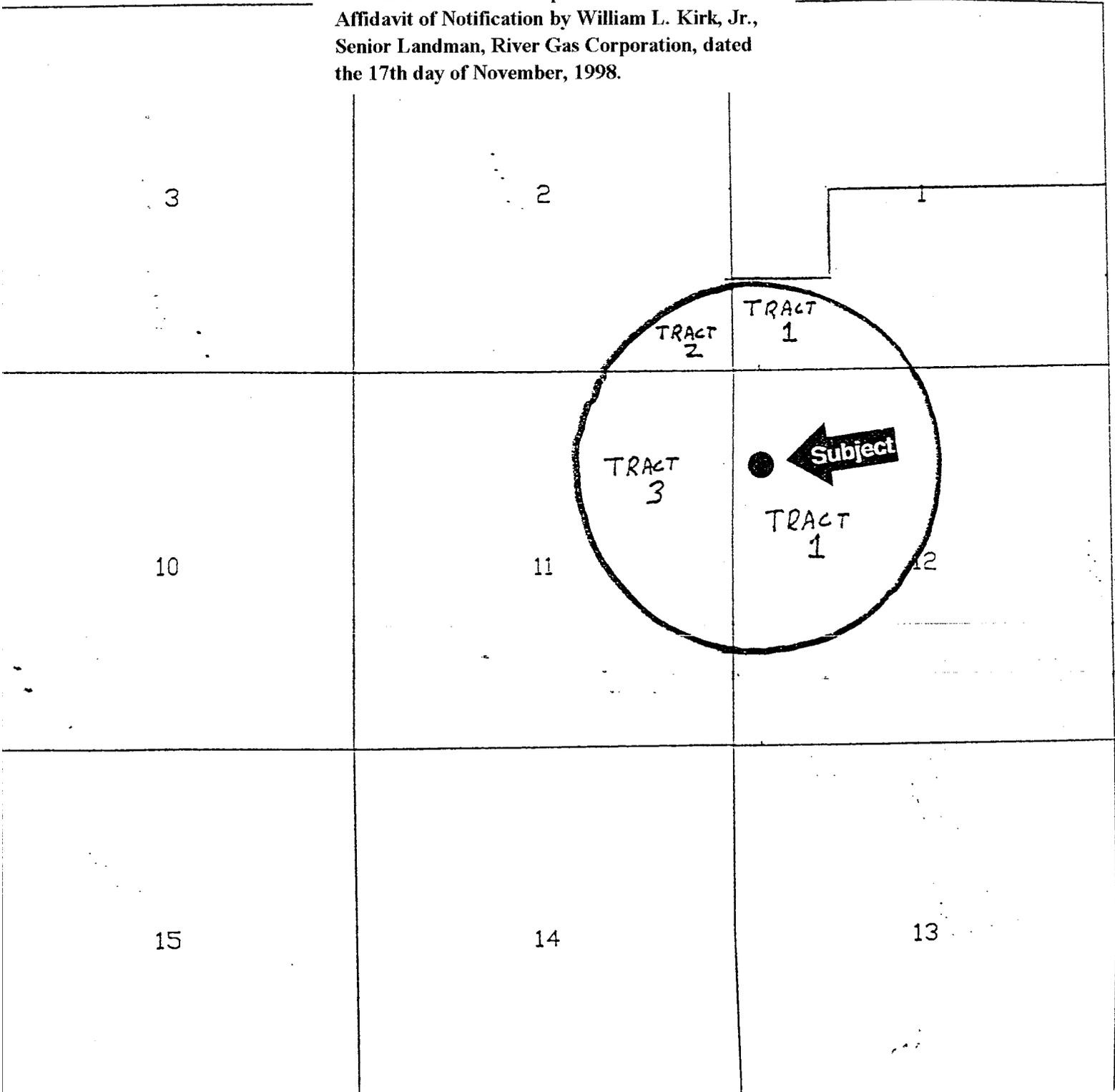
(SEAL)

My Commission Expires: March 9, 2002

EXHIBIT "A"  
PAGE 1 OF 2  
River Gas Corporation  
Proposed Disposal Well D-8  
SWNW, Section 12, T15S, R9E, SLM  
Carbon County, Utah  
Operators, Owners, Surface Owners Within 1/2 Mile Radius

Exhibit "A"

Attached to and made a part of that certain  
Affidavit of Notification by William L. Kirk, Jr.,  
Senior Landman, River Gas Corporation, dated  
the 17th day of November, 1998.



## EXHIBIT "A"

PAGE 2 OF 2

River Gas Corporation  
 Proposed Disposal Well D-8  
 SW/NW, Section 12, T15S, R9E, SLM  
 Carbon County, Utah

Operators, Owners, Surface Owners Within 1/2 Mile Radius

TRACT 1

Surface Owner: State of Utah, c/o School and Institutional Trust  
 Lands Administration  
 Mineral Owner: State of Utah, c/o School and Institutional Trust  
 Lands Administration  
 Oil & Gas Lease: ML-38665  
 Oil & Gas Lessee: River Gas Corporation & Texaco Exploration and  
 Production Inc., Dominion Reserves-Utah, Inc.  
 Coal Lease: None of record  
 Coal Lessee: Not applicable  
 Other Minerals Lessee: None of record  
 Grazing Permittee: As to Section 1 - Steve Stamatakis, et al (GP-  
 22928); as to Section 12 - Steve Stamatakis (GP-  
 21727)  
 Oil & Gas Operator: River Gas Corporation

TRACT 2

Surface Owner: Arthur J. Anderson (50%) and Eava Anderson, Trustee  
 U/D/T dated December 4, 1991 (50%)  
 Mineral Owner: State of Utah, c/o School and Institutional Trust  
 Lands Administration  
 Oil & Gas Lease: ML-38832  
 Oil & Gas Lessee: River Gas Corporation & Texaco Exploration and  
 Production Inc., Dominion Reserves-Utah, Inc.  
 Coal Lease: None of record  
 Coal Lessee: Not applicable  
 Other Minerals Lessee: None of record  
 Grazing Permittee: Unknown - None of record  
 Oil & Gas Operator: River Gas Corporation

TRACT 3

Surface Owner: State of Utah, c/o School and Institutional Trust  
 Lands Administration  
 Mineral Owner: State of Utah, c/o School and Institutional Trust  
 Lands Administration  
 Oil & Gas Lease: ML-39333  
 Oil & Gas Lessee: River Gas Corporation & Texaco Exploration and  
 Production Inc., Dominion Reserves-Utah, Inc.  
 Coal Lease: None of record  
 Coal Lessee: Not applicable  
 Other Minerals Lessee: None of record  
 Grazing Permittee: Steve Stamatakis (GP-21727)  
 Oil & Gas Operator: River Gas Corporation

NOTE: OVERRIDING ROYALTY OWNERS, IF ANY, ARE NOT IDENTIFIED IN ACCORDANCE  
 WITH RIVER GAS CORPORATION'S PREVIOUS INQUIRY TO THE DIVISION OF OIL, GAS AND  
 MINING AS TO NEED FOR THAT INFORMATION.



October 21, 1998

**RIVER GAS CORPORATION**

VIA OVERNIGHT MAIL  
OCTOBER 21, 1998

511 Energy Center Boulevard  
Northport, Alabama 35473  
Phone (205) 759-3282  
Fax (205) 758-5309

Mr. Chuck Snure  
Texaco Exploration and Production Inc.  
Denver Division  
4601 DTC Boulevard  
Denver, Colorado 80237

**SAMPLE**

Re: Proposed Disposal Well D-8 / Drunkards Wash Unit  
SW/4 of NW/4 Section 12-T15S-R9E, SLM  
Carbon County, Utah

Dear Mr. Snure:

River Gas Corporation drilled the referenced well in accordance with an Application of Permit to Drill ("APD") which was approved by the State of Utah's Division of Oil, Gas and Mining ("DOGM"). Your company owns an interest in Tracts 1, 2 and 3 as shown on the attached map which is within 1/2 mile of the subject well. DOGM requires us to give notice to operators, owners and surface owners within a 1/2 mile radius of a well which is proposed to be utilized as an injection well.

Attached hereto is a photocopy of our Application for Injection Well ("UIC Form 1") which we sent to DOGM, October 13, 1998. The utilization of this well as an injection well will not affect any shallow water zones. If the tests are successful, we will request DOGM to approve this well as an injection well.

If you want any of the information that will be submitted to DOGM later in conjunction with the filing of this UIC Form 1, please send me a written request. Otherwise, you can review the information at the Division of Oil, Gas and Mining, 1594 West North Temple, Suite 1210, Salt Lake City, Utah 84114-5801, 801/538-5340.

Thank you for your time and attention to this matter. Should you have any comments or questions, please call me at the above number.

Very truly yours,

RIVER GAS CORPORATION

A handwritten signature in black ink, appearing to read "William L. Kirk, Jr.", is written over the typed name.

William L. Kirk, Jr., RLP  
Senior Landman

**Exhibit "B"**

Attached to and made a part of that certain  
Affidavit of Notification by William L. Kirk, Jr.,  
Senior Landman, River Gas Corporation, dated  
the 17th day of November, 1998.

enclosures

EXHIBIT "A"  
PAGE 1 OF 2  
River Gas Corporation  
Proposed Disposal Well D-8  
SWNW, Section 12, T15S, R9E, SLM  
Carbon County, Utah  
Operators, Owners, Surface Owners Within 1/2 Mile Radius

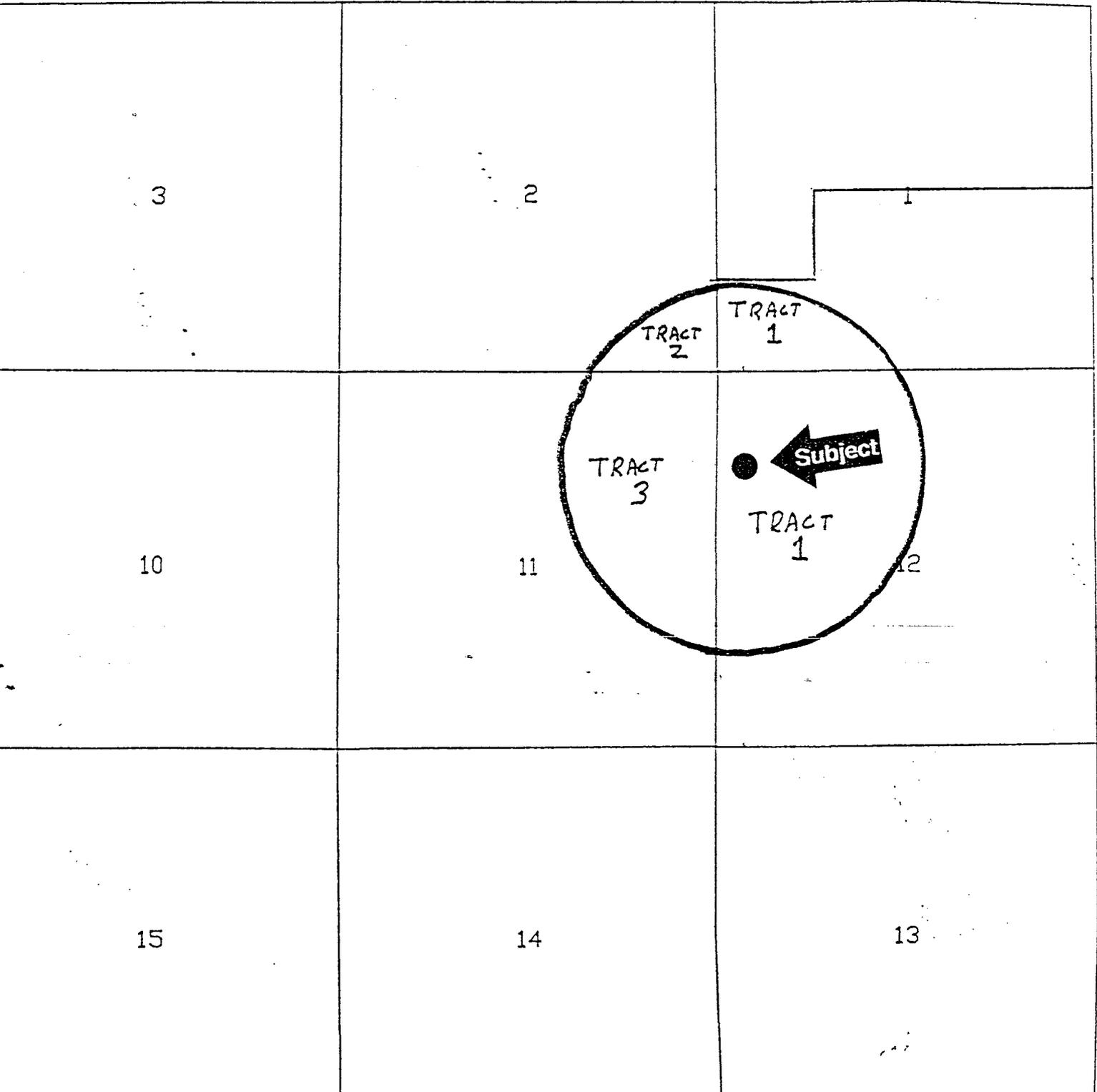


EXHIBIT "A"

PAGE 2 OF 2

River Gas Corporation  
Proposed Disposal Well D-8  
SW/NW, Section 12, T15S, R9E, SLM  
Carbon County, Utah

Operators, Owners, Surface Owners Within 1/2 Mile Radius

TRACT 1

Surface Owner: State of Utah, c/o School and Institutional Trust  
Lands Administration  
Mineral Owner: State of Utah, c/o School and Institutional Trust  
Lands Administration  
Oil & Gas Lease: ML-38665  
Oil & Gas Lessee: River Gas Corporation & Texaco Exploration and  
Production Inc., Dominion Reserves-Utah, Inc.  
Coal Lease: None of record  
Coal Lessee: Not applicable  
Other Minerals Lessee: None of record  
Grazing Permittee: As to Section 1 - Steve Stamatakis, et al (GP-  
22928); as to Section 12 - Steve Stamatakis (GP-  
21727)  
Oil & Gas Operator: River Gas Corporation

TRACT 2

Surface Owner: Arthur J. Anderson (50%) and Eava Anderson, Trustee  
U/D/T dated December 4, 1991 (50%)  
Mineral Owner: State of Utah, c/o School and Institutional Trust  
Lands Administration  
Oil & Gas Lease: ML-38832  
Oil & Gas Lessee: River Gas Corporation & Texaco Exploration and  
Production Inc., Dominion Reserves-Utah, Inc.  
Coal Lease: None of record  
Coal Lessee: Not applicable  
Other Minerals Lessee: None of record  
Grazing Permittee: Unknown - None of record  
Oil & Gas Operator: River Gas Corporation

TRACT 3

Surface Owner: State of Utah, c/o School and Institutional Trust  
Lands Administration  
Mineral Owner: State of Utah, c/o School and Institutional Trust  
Lands Administration  
Oil & Gas Lease: ML-39333  
Oil & Gas Lessee: River Gas Corporation & Texaco Exploration and  
Production Inc., Dominion Reserves-Utah, Inc.  
Coal Lease: None of record  
Coal Lessee: Not applicable  
Other Minerals Lessee: None of record  
Grazing Permittee: Steve Stamatakis (GP-21727)  
Oil & Gas Operator: River Gas Corporation

NOTE: OVERRIDING ROYALTY OWNERS, IF ANY, ARE NOT IDENTIFIED IN ACCORDANCE WITH RIVER GAS CORPORATION'S PREVIOUS INQUIRY TO THE DIVISION OF OIL, GAS AND MINING AS TO NEED FOR THAT INFORMATION.

APPLICATION FOR INJECTION WELL - UIC FORM 1

OPERATOR River Gas Corporation River Gas Corporation  
ADDRESS 1305 South 100 East 511 Energy Center Blvd.  
Price, UT 84501 Northport, AL 35473

Well name and number: Utah D8  
Field or Unit name: Drunkards Wash UTU-67921X Lease no. ML-38665  
Well location: QQW/2.NW/4 section 12 township 15 range 9 county Carbon

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

Will the proposed well be used for: Enhanced Recovery? ... Yes  No   
Disposal? ..... Yes  No   
Storage? ..... Yes  No

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 on the well?..... Yes  No   
Date of test: n/a API Number: 43-007-30431

Proposed injection interval: from 6030' to 6560'

Proposed maximum injection: rate 14.400 BBL pressure 1,600 psig

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

IMPORTANT: Additional information as required by R615-5-2 should accompany this form.

List of Attachments: See Cover Letter

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

Name Don S. Hamilton Signature Don S. Hamilton  
Title Permit Specialist Date October 13, 1998  
Phone No. (435) 637-8876

(State use only)  
Application approved by \_\_\_\_\_ Title \_\_\_\_\_  
Approval Date \_\_\_\_\_

Comments:

Township 15 South

Range 9 East

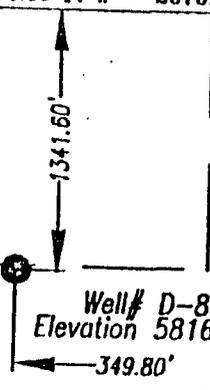
NW Corner N89°49'01"W - 5202.9' (Measured) N89°17'W - 2670.4' (Recorded) S89°38'W - 2529.8' (Recorded)

N00°04'E - 2646.3' (Measured)

N00°14'E - 2661.8' (Recorded)

N00°46'W - 2651.2' (Recorded)

N00°38'W - 2651.2' (Recorded)



Well # D-8  
Elevation 5816.0'

12

N89°49'W - 2646.8' (Recorded) S89°13'W - 2579.3' (Recorded)

Basis of Bearing:  
Basis of Bearing N00°04'E recorded between the NW Corner And the West Quarter Corner of Section 12, Township 15 South, Range 9 East, Salt Lake Base & Meridian.

Basis Of Elevation:  
Basis of Elevation of 5822' as indicated in the NW Corner of Section 12, Township 15 South, Range 9 East, Salt Lake Base and Meridian.

Description of Location:  
Proposed Drill Hole located in the West 1/2 NW 1/4 of Section 12; 1341.6' South and 349.8' East from the NW Corner of Section 12, T15S, R9E, Salt Lake Base & Meridian.

Surveyor's Certificate:  
I, John S. Huefner, a Registered Licensed Land Surveyor, holding Certificate #144842, State of Utah, do hereby certify that the information on this drawing is a true and accurate survey of the land, and was conducted under my personal supervision, as shown hereon.

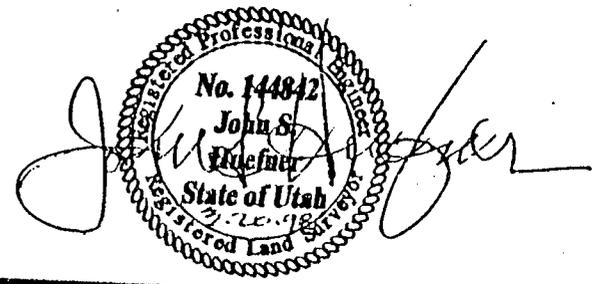
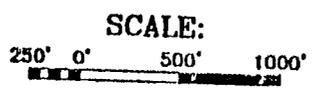


Exhibit "A"  
1 OF 3

LEGEND:

- Drill Hole Location
- ⊕ Brass Cap (Found)
- Brass Cap (Searched for, But Not Found)



DRAWN BY: <b>P. BOYLEN</b> CHECKED BY: <b>L.W.J.</b> DATE: <b>3/13/98</b> SCALE: <b>1" = 1000'</b> JOB NO. <b>289</b> SHEET NO. <b>A-1</b>	 2204 South 125 West Price, Utah 84501 (801) 637-9300 FAX (801) 637-2533 Service
<b>River Gas Corporation</b> Well # D-8 Section 12, T15S, R9E, S.L.B.&M. Carbon County, Utah	

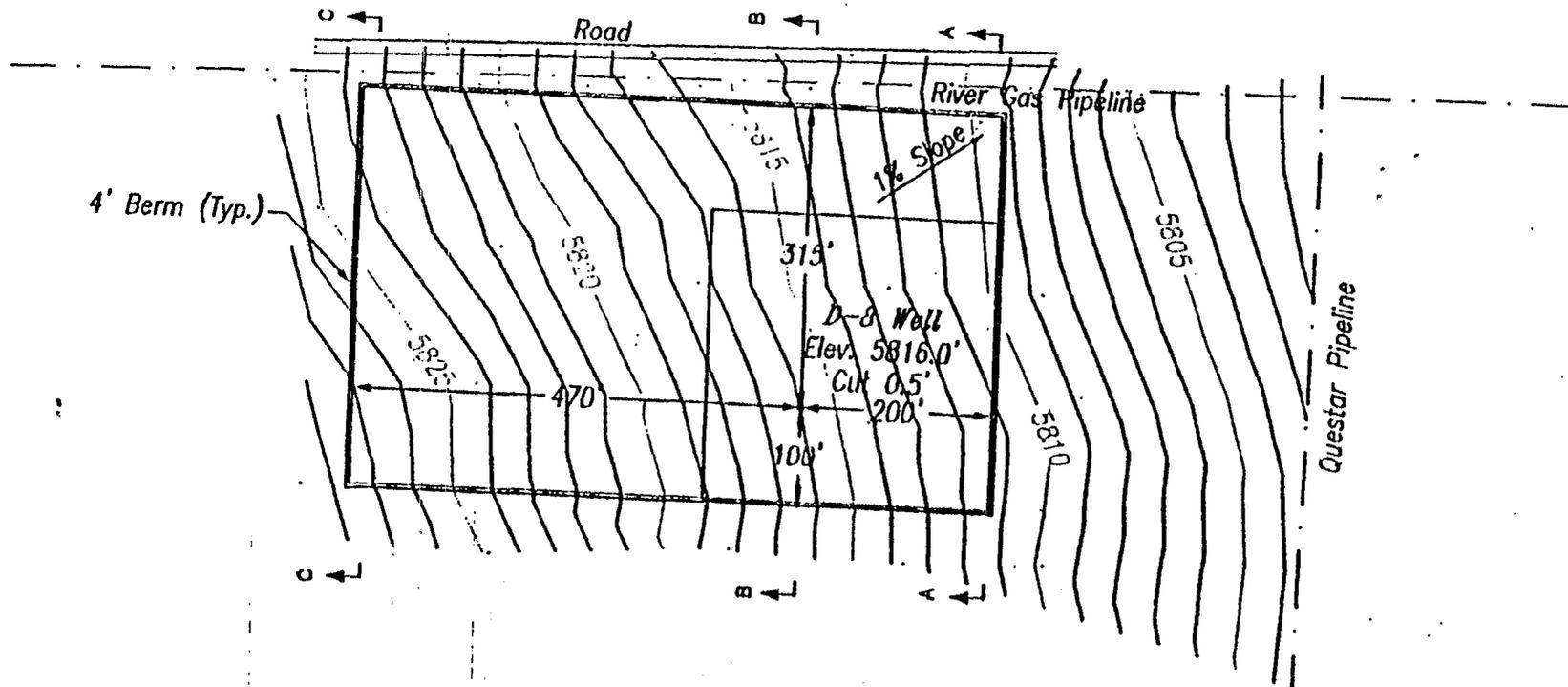


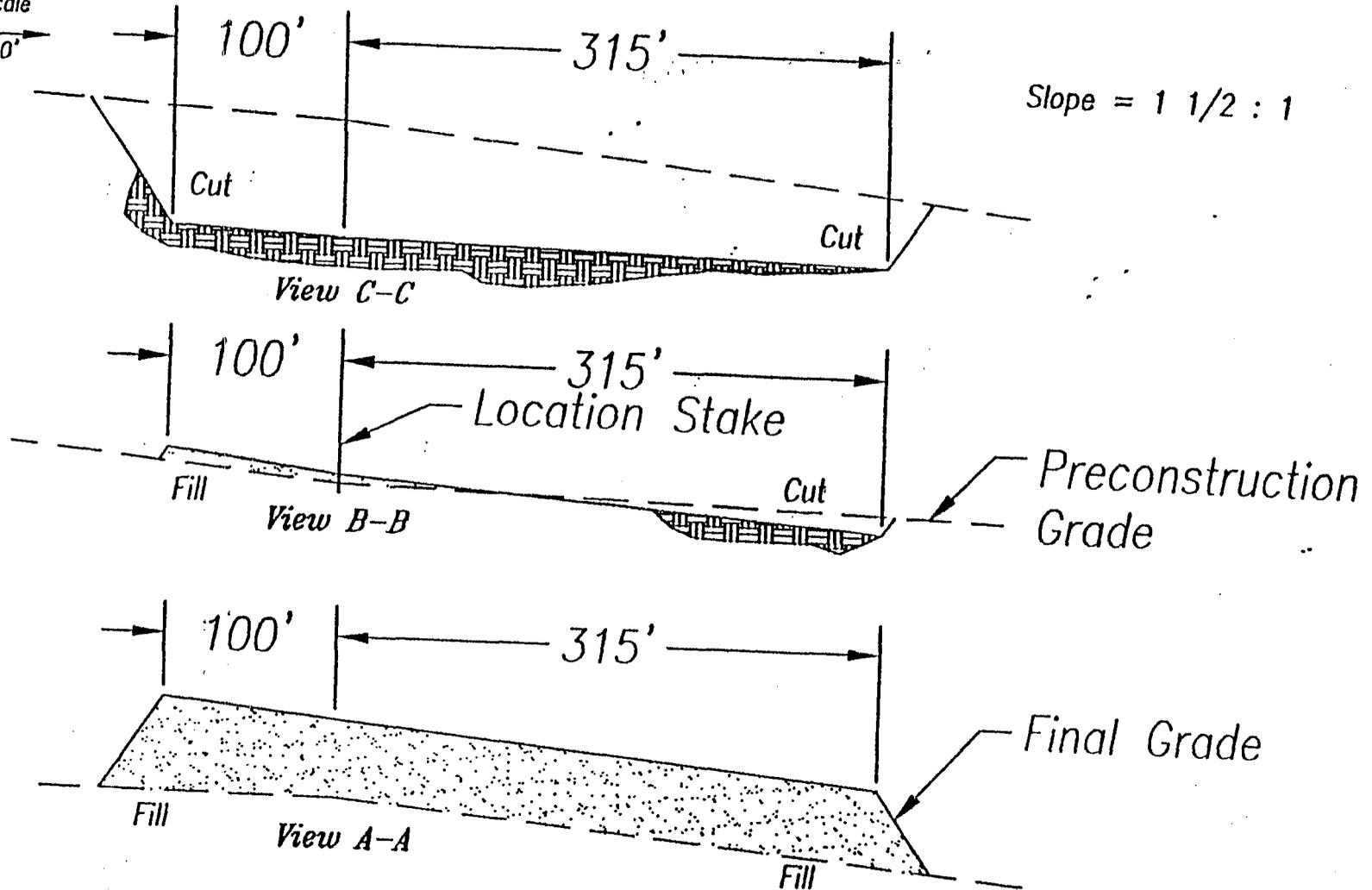
Exhibit "A"  
2 OF 3

Elevation Ungraded Ground at Location Stake = 5816.0'  
Elevation Graded Ground at Location Stake = 5815.5'



DRAWN BY: <b>P. BOYLEN</b> CHECKED BY: <b>L.W.J.</b> DATE: <b>3/12/98</b> SCALE: <b>1"=200'</b> JOB NO: <b>269</b> DRAWING NO. <b>A-2</b> SHEET <b>2</b> OF <b>4</b>	<div style="text-align: right;">  </div> <p>3229 South 125 West Price, Utah 84501 (801) 637-9300 FAX (801) 637-2833</p> <hr/> <p style="text-align: center;"><b>River Gas Corporation</b> Location Layout Section 12, T15S, R9E, S.L.B.&amp;M. Carbon County, Utah</p>
--	---

1"=10'  
X-Section  
Scale  
1"=100'



APPROXIMATE YARDAGES

CUT	
(6") Topsoil Stripping	= 5,200.00 Cu. Yds.
Remaining Location	= 21,264.11 Cu. Yds.
<b>TOTAL CUT</b>	<b>= 26,464.11 Cu. Yds.</b>
<b>TOTAL FILL</b>	<b>= 1,132.01 Cu. Yds.</b>

DRAWN BY:  
**P. BOYLEN**

CHECKED BY:  
**L.W.J.**

DATE:  
**3/12/98**

SCALE:  
**As Shown**

SHEET NO.  
**260**

DISTRICT NO.  
**C-1**

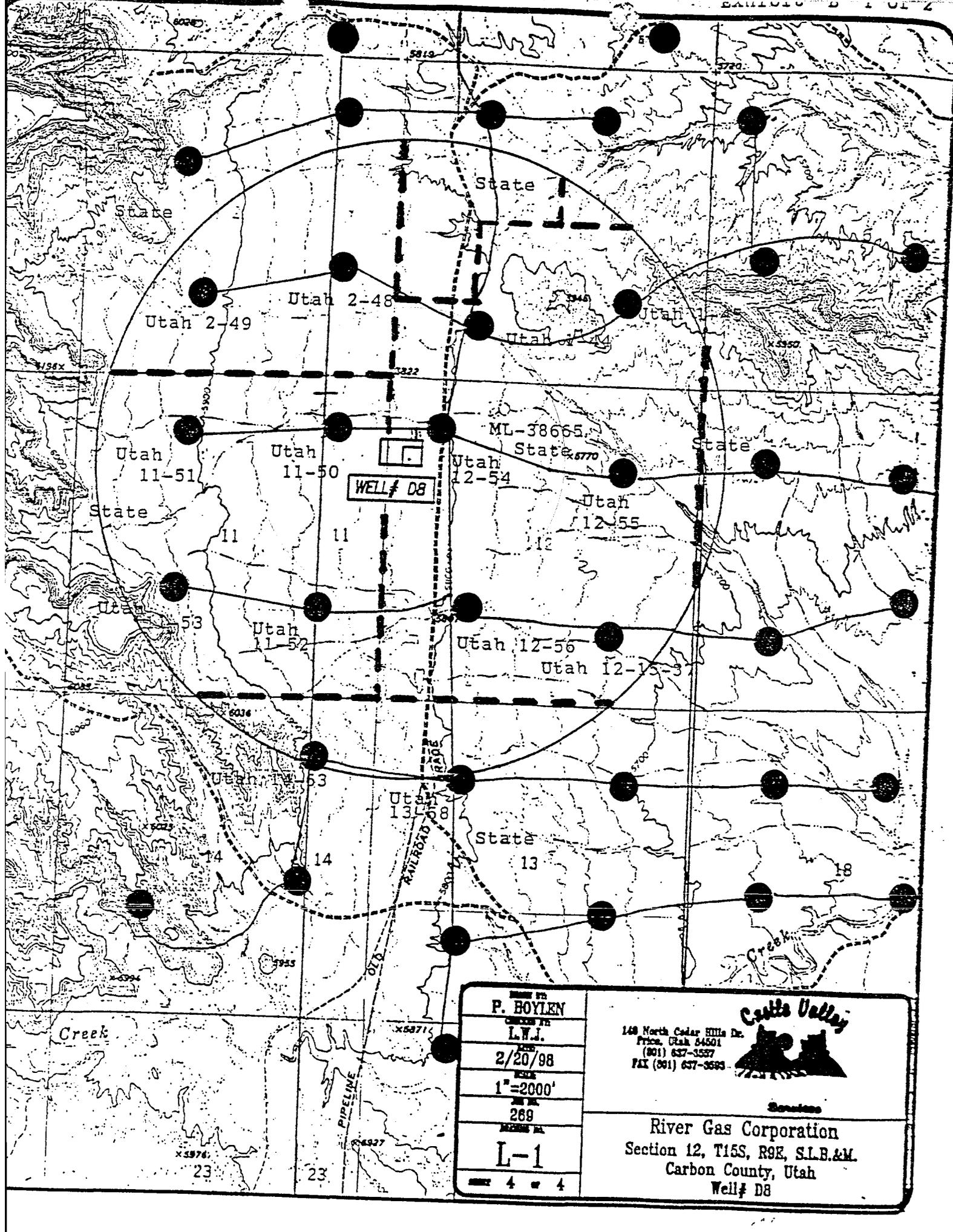
SHEET **3** OF **4**

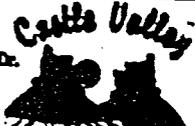
**Castle Valley**

3200 South 125 West  
Provo, Utah 84601  
(801) 637-9300  
FAX (801) 637-2833

**Servicos**

**River Gas Corporation**  
Typical Cross Sections  
Section 12, T15S, R0E, S.L.B.&M.  
Well # D-8



DRAWN BY <b>P. BOYLEN</b> CHECKED BY <b>L.W.J.</b> DATE <b>2/20/98</b> SCALE <b>1"=2000'</b> SHEET NO. <b>269</b> SECTION NO. <b>L-1</b> OF 4 OF 4	 <p> <b>Castle Valley</b>          148 North Cedar Hills Dr.          Price, Utah 84501          (801) 637-3537          FAX (801) 637-3683       </p> <p> <b>River Gas Corporation</b>          Section 12, T15S, R9E, S.L.B.&amp;M.          Carbon County, Utah          Well # D8       </p>
--	---

E50750

E51000

E51250

E51500

N4382500

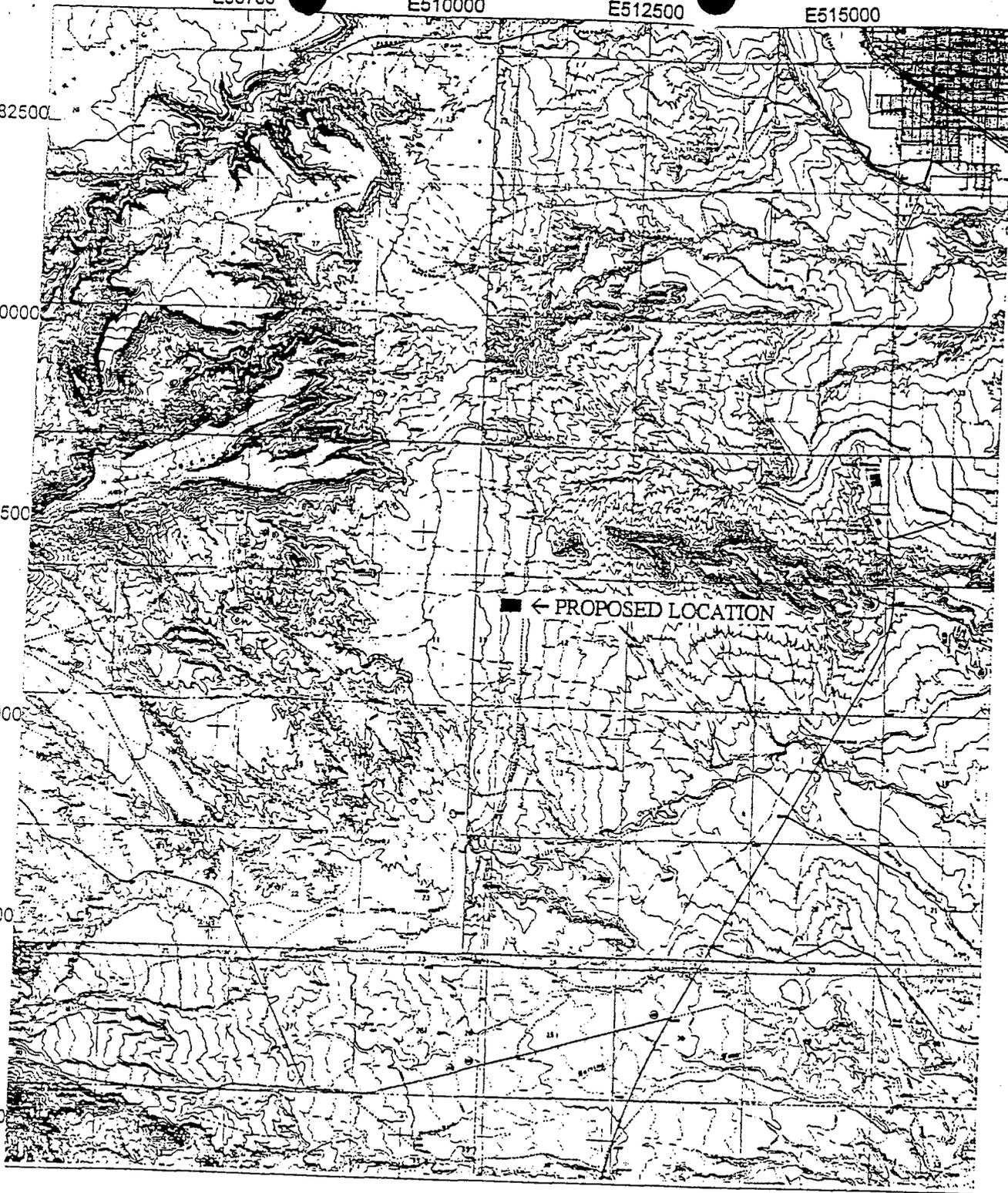
N4380000

N4377500

N4375000

N4372500

N4370000



# Proposed D-8

Universal Transverse Mercator  
 North 12  
 NAD83 (Conus)

N

Scale 1:75000



3/18/1998

Pathfinder Office™

## Statement Regarding Logs Performed on the Well

Logs compiled on the Utah D-8 well have been previously submitted, or will be submitted to your office in the future.

## Description of the Casing Program

Conductor Casing Description:

13-3/8" 48#/ft, H-40, ST&C SMLS, installed from 90' to 314.3'

Surface Casing Description:

9-5/8" 36#/ft, K-55 LT&C SMLS, installed from 314.3' to 2510.7'

Production Casing Description:

7" 26#/ft, K-55, installed from 2510.7' to 6950'

## Description of Fluid Types

Water Analysis compiled on the Utah D-8 well will be submitted to your office when they become available.

WATER ANALYSIS REPORT

Exhibit "E" 2 of 2

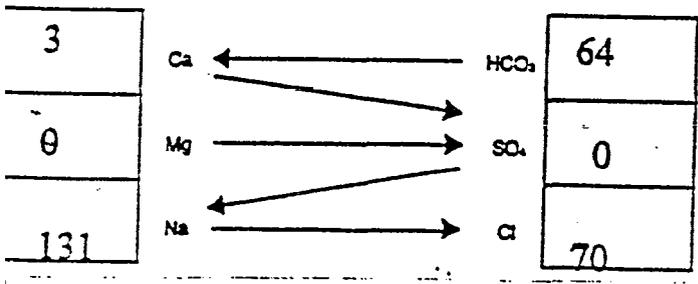
Company RIVER GAS CORPORATION Address \_\_\_\_\_ Date 02-06-98

Source D-1 DISCHARGE Date Sampled 02-05-98 Analysis No. \_\_\_\_\_

	Analysis	mg/l(ppm)	*Meg/l
1. PH	<u>8.0</u>		
2. H <sub>2</sub> S (Qualitative)	<u>0</u>		
3. Specific Gravity	<u>1.008</u>		
4. Dissolved Solids		<u>9,450</u>	
5. Alkalinity (CaCO <sub>3</sub> )			
6. Bicarbonate (HCO <sub>3</sub> )		<u>3,900</u>	<u>64</u>
7. Hydroxyl (OH)		<u>0</u>	<u>0</u>
8. Chlorides (Cl)		<u>2,500</u>	<u>70</u>
9. Sulfates (SO <sub>4</sub> )		<u>0</u>	<u>0</u>
10. Calcium (Ca)		<u>56</u>	<u>3</u>
11. Magnesium (Mg)		<u>0</u>	<u>0</u>
12. Total Hardness (CaCO <sub>3</sub> )		<u>140</u>	
13. Total Iron (Fe)		<u>1.3</u>	
14. Manganese			
15. Phosphate Residuals		<u>44</u>	

\*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Compound	Eqv. Wt.	X	Mec/l	=	Mg/l
Ca(HCO <sub>3</sub> ) <sub>2</sub>	81.04	<u>3</u>			<u>243</u>
CaSO <sub>4</sub>	68.07				
CaCl <sub>2</sub>	55.50				
Mg(HCO <sub>3</sub> ) <sub>2</sub>	73.17				
MgSO <sub>4</sub>	60.19				
MgCl <sub>2</sub>	47.62				
NaHCO <sub>3</sub>	84.00	<u>61</u>			<u>5,124</u>
Na <sub>2</sub> SO <sub>4</sub>	71.03				
NaCl	58.46	<u>70</u>			<u>4,092</u>

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

REMARKS \_\_\_\_\_

## Statement of the Injection Pressures

The proposed average and maximum injection pressures will be submitted to your office when they become available.

## Statement of Geologic and Hydrologic Data

All available geologic and hydrologic data have been previously submitted or will be submitted to your office in the future.

## Statement of Affidavit

An affidavit certifying that a copy of the application has been provided to all owners within a one-half mile radius is currently being prepared and will be submitted to your office in the future.

Exhibit "C" - Page 1 of 5.  
 Attached to and made a part of that certain  
 Affidavit of Notification by William L. Kirk, Jr.,  
 Senior Landman, River Gas Corporation, dated  
 the 17th day of November, 1998.

Is your RETURN ADDRESS completed on the reverse side?

**SENDER:**

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1.  Addressee's Address  
 2.  Restricted Delivery  
 Consult postmaster for fee.

3. Article Addressed to:  
 Mr. Arthur J. Anderson  
 4190 South Fortuna Way  
 Salt Lake City, Utah  
 84123

4a. Article Number:  
 2-384-413-249

4b. Service Type  
 Registered  Certified  
 Express Mail  Insured  
 Return Receipt for Merchandise  COD

7. Date of Delivery: 10/27

5. Received By: (Print Name)

6. Signature: (Addressee or Agent)  
 Arthur J. Anderson

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1994 102595-98-B-0229 Domestic Return Receipt

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

**SENDER:**

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1.  Addressee's Address  
 2.  Restricted Delivery  
 Consult postmaster for fee.

3. Article Addressed to:  
 Ms. EVA Anderson  
 61 North 500 East  
 Price, Utah 84501

4a. Article Number:  
 2-384-413-248

4b. Service Type  
 Registered  Certified  
 Express Mail  Insured  
 Return Receipt for Merchandise  COD

7. Date of Delivery: 10/27

5. Received By: (Print Name)

6. Signature: (Addressee or Agent)  
 Virginia Thatcher

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1994 102595-98-B-0229 Domestic Return Receipt

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

**SENDER:**

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1.  Addressee's Address  
 2.  Restricted Delivery  
 Consult postmaster for fee.

3. Article Addressed to:  
 Mr. Steve Stamatakis  
 2676 Gordon Cr. Road  
 Price, Utah 84501

4a. Article Number:  
 2-384-413-250

4b. Service Type  
 Registered  Certified  
 Express Mail  Insured  
 Return Receipt for Merchandise  COD

7. Date of Delivery: OCT 26 1998

5. Received By: (Print Name)

6. Signature: (Addressee or Agent)  
 Steve Stamatakis

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1994 102595-98-B-0229 Domestic Return Receipt

Thank you for using Return Receipt Service.



Texaco Exploration and Production Inc  
Denver Division

P O Box 2100  
Denver CO 80201  
4601 DTC Boulevard  
Denver CO 80237

**VIA FAX**

October 26, 1998

**received**  
10/29/98

River Gas Corporation  
511 Energy Center Blvd.  
Northport, Alabama 35473

Attention: Mr. William L. Kirk, Jr.

RE: Proposed Disposal Well D-8  
Carbon County, Utah

Dear Bill,

Please be advised that Texaco is in receipt of your notice of Application for Injection Well for the captioned well. Additionally, Texaco supports River Gas in its attempt to receive approval for same.

Yours very truly,

Chuck Snure

CAS:bw

**Exhibit "C" - Page 2 of 5.**  
Attached to and made a part of that certain  
Affidavit of Notification by William L. Kirk, Jr.,  
Senior Landman, River Gas Corporation, dated  
the 17th day of November, 1998.

# facsimile

TRANSMITTAL

to: Bill Kirk

River Gas

fax #: (205) 758-5309

re: Disposal well D8 8W/NW12 TISS-R9E Carbon County, Utah

date: 11/6/98

pages: 1 page(s) total, including this cover sheet

Bill,  
I have received your notice of October 21, 1998 concerning the above well. Let me know if you need anything else.

Thanks,  
Joe

From the desk of...

Joseph M. Coughlin, II

Dominion Energy, Inc.  
P. O. Box 26532  
Richmond, Virginia 23261

(804) 775-3771  
Fax: (804) 775-5823

Note:  
11/6/98  
Called Joe. He received  
10/22/98. Initial FAX  
misplaced  
William Kirk

Exhibit "C" - Page 3 of 5.  
Attached to and made a part of that certain  
Affidavit of Notification by William L. Kirk, Jr.,  
Senior Landman, River Gas Corporation, dated  
the 17th day of November, 1998.

ROBERT G. PRUITT, JR.  
OLIVER W. GUSHEE, JR.  
THOMAS W. BACHTELL  
A. JOHN DAVIS, III  
JOHN W. ANDERSON  
FREDERICK M. MacDONALD  
JOHN F. WALDO  
ANGELA L. FRANKLIN  
JOHN S. FLITTON  
MICHAEL S. JOHNSON  
CHRISTOPHER J. CASTILLO

LAW OFFICES  
**PRUITT, GUSHEE & BACHTELL**  
Suite 1850 Beneficial Life Tower  
Salt Lake City, Utah 84111-1495  
(801) 531-8446

Telecopier  
(801) 531-8468

OF COUNSEL  
ROBERT G. PRUITT, III  
BRENT A. BOHMAN

**TELECOPIER TRANSMITTAL COVER SHEET**

TO: Bill Kirk

DATE: October 22, 1998

COMPANY: River Gas Corporation

TELECOPIER NUMBER: 205-758-5309

CITY/STATE: Northport, AL

PAGES (INCLUDING COVER SHEET): 2

FROM: Fred MacDonald

CLIENT/MATTER NUMBER: 1526.00

MESSAGE:

Here's the confirmation of delivery of the package to SITLA. Our runner delivered it this morning as evidenced by the time and date stamp in the upper right corner.

**Exhibit "C" - Page 4 of 5.**  
Attached to and made a part of that certain  
Affidavit of Notification by William L. Kirk, Jr.,  
Senior Landman, River Gas Corporation, dated  
the 17th day of November, 1998.

ORIGINAL TO FOLLOW VIA: U.S. MAIL [ ] FEDERAL EXPRESS [ ] NOT TO FOLLOW

THE INFORMATION CONTAINED IN THIS COMMUNICATION IS CONFIDENTIAL, MAY BE PROTECTED BY THE ATTORNEY-CLIENT PRIVILEGE OR THE WORK PRODUCT DOCTRINE, MAY CONSTITUTE INSIDE INFORMATION, AND IS INTENDED ONLY FOR THE USE OF THE ADDRESSEE. UNAUTHORIZED USE, DISCLOSURE OR COPYING IS STRICTLY PROHIBITED AND MAY BE UNLAWFUL. IF YOU HAVE RECEIVED THIS COMMUNICATION IN ERROR, PLEASE IMMEDIATELY NOTIFY US AT (801) 531-8446.



# RGC

FILED

98 OCT 22 AM 10:32

October 21, 1998

## RIVER GAS CORPORATION

STATE OF UTAH  
TRUST LANDS ADMINISTRATION

VIA HAND DELIVERY BY

PRUITT, GUSHEE & BACHTELL  
511 Energy Center Boulevard  
Northport, Alabama 35473  
Phone (205) 759-3282  
Fax (205) 758-5309

Mr. James D. Cooper  
Assistant Director  
State of Utah  
School and Institutional Trust Lands Administration  
675 East 500 South, Suite 500  
Salt Lake City, Utah 84102-2818

Re: Proposed Disposal Well D-8 / Drunkards Wash Unit  
SW/4 of NW/4 Section 12-T15S-R9E, SLM  
Carbon County, Utah

Dear Mr. Cooper:

River Gas Corporation drilled the referenced well in accordance with an Application of Permit to Drill ("APD") which was approved by the State of Utah's Division of Oil, Gas and Mining ("DOGMA"). Your organization owns an interest in Tracts 1, 2 and 3 as shown on the attached map which is within 1/2 mile of the subject well. DOGMA requires us to give notice to operators, owners and surface owners within a 1/2 mile radius of a well which is proposed to be utilized as an injection well.

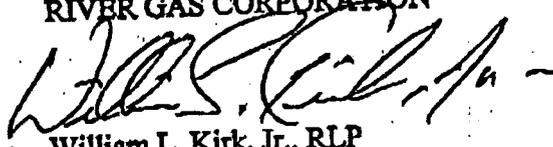
Attached hereto is a photocopy of our Application for Injection Well ("UIC Form 1") which we sent to DOGMA, October 13, 1998. The utilization of this well as an injection well will not affect any shallow water zones. If the tests are successful, we will request DOGMA to approve this well as an injection well.

If you want any of the information that will be submitted to DOGMA later in conjunction with the filing of this UIC Form 1, please send me a written request. Otherwise, you can review the information at the Division of Oil, Gas and Mining, 1594 West North Temple, Suite 1210, Salt Lake City, Utah 84114-5801, 801/538-5340.

Thank you for your time and attention to this matter. Should you have any comments or questions, please call me at the above number.

Very truly yours,

RIVER GAS CORPORATION

  
William L. Kirk, Jr., RLP  
Senior Landman

enclosures

Exhibit "C" - Page 5 of 5.  
Attached to and made a part of that certain  
Affidavit of Notification by William L. Kirk, Jr.,  
Senior Landman, River Gas Corporation, dated  
the 17th day of November, 1998.

APPLICATION FOR INJECTION WELL - UIC FORM 1

OPERATOR River Gas Corporation River Gas Corporation  
ADDRESS 1305 South 100 East 511 Energy Center Blvd.  
Price, UT 84501 Northport, AL 35473

Well name and number: Utah D8

Field or Unit name: Drunkards Wash UTU-67921X Lease no. ML-38665

Well location: QQW2,NW/4 section 12 township 15 range 9 county Carbon

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

Will the proposed well be used for: Enhanced Recovery? ... Yes  No   
Disposal? ..... Yes  No   
Storage? ..... Yes  No

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 on the well?..... Yes  No   
Date of test: n/a API Number: 43-007-30431

Proposed injection interval: from 6028' to 6580'

Proposed maximum injection: rate 14,400 BBL pressure 1,350 psig

Proposed injection zone contains  oil,  gas, and/or  fresh water within 1/4 mile of the well.

IMPORTANT: Additional information as required by R615-5-2 should accompany this form.

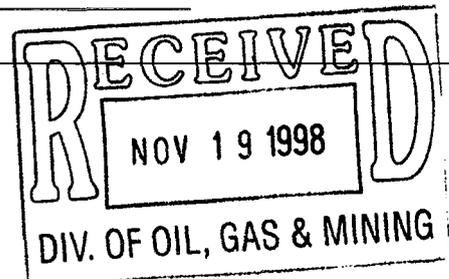
List of Attachments: See Cover Letter

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

Name Don S. Hamilton Signature Don S. Hamilton  
Title Permit Specialist Date November 17, 1998  
Phone No. (435) 637-8876

(State use only)  
Application approved by \_\_\_\_\_ Title \_\_\_\_\_  
Approval Date \_\_\_\_\_

Comments:





DIVISION OF OIL, GAS AND MINING  
UNDERGROUND INJECTION CONTROL PROGRAM

**PERMIT  
STATEMENT OF BASIS**

**Applicant:** River Gas Corporation

**Well:** Utah D8

**Location:** T15S, R9E, S12, Carbon Co., UT

**API:** 4300730431

**Ownership Issues:**

The well is located on lands owned by the State of Utah and administered by the School and Institutional Trust Lands Administration. Affidavits of Notification of surface owners within a half mile radius have been provided.

**Well Integrity:**

per from 20", 93#/foot, H-40, ST&C SMLS conductor pipe installed from 0' to 90'. 13-3/8", 48#/ft., H-40 ST&C SMLS surface casing, installed from 90' to 330' using 325 sack of Class G cement with 2% CaCl and 1/4 pound/sack D-29 (15#/gal., 1.15cu. ft./sx). 9-5/8", 36#/ft., K-55 LT&C SMLS intermediate casing, installed from 314.3' to 2510' using 475 sacks lead 50/50 Poz (12.5#/gal., 1.92cu. ft./sx.) 8% gel, 10% D-44, 1/4 pound per sack D-29, 2% S-1, 100 sacks tail "G" + 2% S-1, 1/4 pound sack D-29. Casing shoe at 2509'. 7", 26#/ft., K-55 production casing,, installed 2510.65' to 6950' using 676 sacks 50/50 Poz cement (12.5#/gal., 1.92 cu. ft./sx.), 8% D-20, 10% D-44, 1/4 pound per sack D-29; 65 sacks "G" + 2% S-1, 1/4 pound per sack D-29 (15.8#/gal. density, 1.15cu. ft./sx yield); 529 sacks 10-1 RFC (14.2#/gal. density and 1.61 cu.ft./sx yield). A Cement Bond Log was run from 6890.5' TD to 2500' (just above the top of the 7" production casing) and then re-run by Schlumberger from below to above the injection interval for validation of earlier questionable results. The cement appears to be acceptably bonded over this interval. This should be adequate to prevent any upward migration of fluid between the 7" casing and the borehole wall. The 7" casing was perforated in the Navajo Sandstone, Kayenta Formation and Wingate Sandstone in a gross interval from 6,028' to 6,580'.

**Ground Water Protection:**

There are no aquifers with high-quality ground water expected to be encountered in the thin, clayey slope wash covering the Blue Gate Shale Member of the Mancos Shale. Conductor, surface and intermediate casing will adequately protect the shallow alluvial sediments. Other subsurface water is unlikely between the surface

shallow alluvial sediments. Other subsurface water is unlikely between the surface alluvium and the Cretaceous-age Ferron Sandstone Member of the Mancos Shale. The Ferron Sandstone Member (including the coal measures) provides the field produced (and injected) water. The Ferron Sandstone is found at 2,116' of depth in the Utah D8 well and in nearby production wells, has shown an average total dissolved solids (TDS) level of nearly 9,500 mg/l.

The Navajo Sandstone formation water at the subject well was tested at 89,900 mg/l TDS by CHEMTECH-FORD ANALYTICAL LABORATORIES of Salt Lake City, Utah. The Wingate Sandstone in the D7 well provided water samples which were tested at 201,000 mg/L TDS. This value was determined from swabbed samples taken October 3, 1998. The Navajo Sandstone is a known fresh water aquifer at many locations in the state. In the San Rafael Swell area, the quality of Navajo Sandstone ground water is generally best near the outcrop and recharge areas and poorer with increased depth and distance from recharge [Utah State Department of Natural Resources (DNR) Technical Publication # 78]. This premise has been supported by test results on samples taken from the subject well and other disposal wells in the field. The planned injection of Ferron Sandstone Member produced formation water into the specified formations at this location will result in the dilution of the more saline Navajo Sandstone formation water.

The proposed operation is expected to have little effect on the overall hydrology of the aquifer because of its great extent compared to the volume of fluid that will likely be injected. According to DNR Technical Publication #78, the Navajo Sandstone alone contains approximately 94,000,000 acre-feet of water in transient storage. Injection at a rate of 14,400 barrels per day for 10 years would result in approximately 6,775 acre-feet being injected. This equates to about 0.007% of the water already in storage in the Navajo Sandstone and would require at least 143 disposal wells working round the clock for 10 years to inject 1% of the stored volume in the Navajo Sandstone. During a step rate test conducted in the D8 well on October 6, 1998, STIM-LAB, Inc., measured the apparent fracture parting pressure at 3,505 psi at a guage depth of 6892' and an injection rate of 2.15 BPM during the initial injection run. A second injection run presented a significantly higher value of 3792 psi at the higher injection rate of 6.97 BPM. The maximum injection rate proposed by the operator is 10 BPM (14,400 BPD at maximum 1,350 psig).

After reviewing applicable information including the application submitted by River Gas Corporation, it is our conclusion that injection into the Navajo Sandstone, Kayenta Formation, and Wingate Sandstone at this location would result in some dilution of the saline water present in the aquifer and a pressure increase near the well which would dissipate after injection ceases. No long term negative impacts are anticipated as a result of injection of produced water into the subject well.

**Oil/Gas & Other Mineral Resources Protection:**

The Ferron coal/gas zone is protected by casing and cement. No other known potentially producible zones were encountered by the well. The injection zone is isolated nearly 4,000' below the productive interval.

A review of the well records of the Division of Oil, Gas and Mining for the half mile area of review indicated that there were no existing well bores within a half mile of the proposed disposal well other than shallower Ferron Sandstone Member production wells.

**Bonding:**

River Gas Corporation has a \$200,000 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 and The (Price, UT) Sun Advocate. In addition, copies of the notice were provided to the EPA, BLM (Price,UT), Emery County Planning Office, and River Gas Corporation. The amended notice stated the proposed interval for injection into the Navajo Sandstone, Kayenta Formation, and Wingate Sandstone was from 6,028' to 6,580'. Any future injection into a formation other than those specified will require administrative approval after appropriate sampling and testing.

A properly designed and constructed injection well, combined with periodic mechanical integrity tests, poses no threat to fresh or useable groundwater supplies. The Division staff recommends approval of this application contingent upon no additional or unforeseen information being presented at the hearing which changes our analysis.

Reviewer(s): Christopher Kierst

Date: 11/20/98

Computalog, U.S.A.  
268 South Hwy. 55  
Unit # 2  
Price, Ut 84501  
Phone: 435-637-9398  
Fax: 435-637-9420

In Regards To D-8

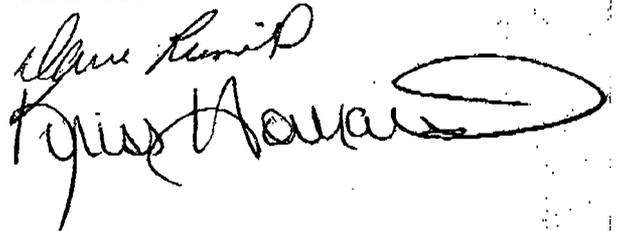
It is my belief that the travel time presentation is accurate to the extent of borehole conditions such as two strings of pipe, variations in cement type and perhaps in conjunction with cement curing.

Decentralization of the tool is a possible effect of the travel time measurement in relations to the amplitude and VDL measurements.

Furthermore the repeat section correlates to the main pass respectively.

Sincerely,

Dave Russill  
Kriss Howard

Handwritten signatures of Dave Russill and Kriss Howard. The signature for Kriss Howard is more prominent and includes a large circular flourish at the end.



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt  
Governor  
Ted Stewart  
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)

December 10, 1998

River Gas Corporation  
1305 South 100 East  
Price, Utah 84501

Re: Utah D8, Section 12, Township 15 South, Range 9 East, Carbon 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 River Gas Corporation.

If you have any questions regarding this approval or the necessary requirements, please contact Christopher Kierst at this office.

Sincerely,

A handwritten signature in cursive script that reads "John R. Baza".

John R. Baza  
Associate Director, Oil and Gas

lwp

cc: Dan Jackson, Environmental Protection Agency  
School and Institutional Trust Lands Administration  
Emery County Commission



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt  
Governor  
Ted Stewart  
Executive Director  
Lowell P. Braxton  
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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)

UNDERGROUND INJECTION CONTROL PERMIT

Cause No. UIC-236

Operator: River Gas Corporation  
Wells: Utah D8  
Location: Section 12, Township 15 South, Range 9 East,  
County: Emery  
API No.: 43-007-30431  
Well Type: Disposal

Stipulations of Permit Approval

1. Approval for conversion to Injection Well issued on December 10, 1998
2. Maximum Allowable Injection Pressure: 1350 psig
3. Maximum Allowable Injection Rate: 14,400 BPD
4. Injection Interval: 6028 feet to 6580 feet (Navajo Sandstone, Kayenta Formation and Wingate Sandstone)

Approved by:

  
John R. Baza

Associate Director, Oil and Gas

12/10/98

Date



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt  
Governor  
Ted Stewart  
Executive Director  
Lowell P. Braxton  
Division Director

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PO Box 145801  
Salt Lake City, Utah 84114-5801  
801-538-5340  
801-359-3940 (Fax)  
801-538-7223 (TDD)

December 10, 1998

River Gas Corporation  
1305 South 100 East  
Price, Utah 84501

Re: Utah D8, Section 12, Township 15 South, Range 9 East, Carbon 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 River Gas Corporation.

If you have any questions regarding this approval or the necessary requirements, please contact Christopher Kierst at this office.

Sincerely,

John R. Baza  
Associate Director, Oil and Gas

lwp

cc: Dan Jackson, Environmental Protection Agency  
School and Institutional Trust Lands Administration  
Emery County Commission



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt  
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1594 West North Temple, Suite 1210  
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Salt Lake City, Utah 84114-5801  
801-538-5340  
801-359-3940 (Fax)  
801-538-7223 (TDD)

UNDERGROUND INJECTION CONTROL PERMIT

Cause No. UIC-236

**Operator:** River Gas Corporation  
**Wells:** Utah D8  
**Location:** Section 12, Township 15 South, Range 9 East,  
County: Emery  
**API No.:** 43-007-30431  
**Well Type:** Disposal

Stipulations of Permit Approval

1. Approval for conversion to Injection Well issued on December 10, 1998
2. Maximum Allowable Injection Pressure: 1350 psig
3. Maximum Allowable Injection Rate: 14,400 BPD
4. Injection Interval: 6028 feet to 6580 feet (Navajo Sandstone, Kayenta Formation and Wingate Sandstone)

Approved by:

  
John R. Baza  
Associate Director, Oil and Gas

12/10/98  
Date

FORM 8

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

5. LEASE DESIGNATION AND SERIAL NO.

ML-38665

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

N/A

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

7. UNIT AGREEMENT NAME

Drunkards Wash UTU-67921X

8. FARM OR LEASE NAME

Utah

9. WELL NO.

D-8

10. FIELD AND POOL, OR WILDCAT

Drunkards Wash

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

W/2NW/4, Sec 12, T15S, R09E, SLB&M

12. COUNTY

Carbon

13. STATE

Utah

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

b. TYPE OF COMPLETION: NEW WELL  WORK OVER  DEEP-EN  PLUG BACK  DIFF. RESVR.  Other \_\_\_\_\_

2. NAME OF OPERATOR

River Gas Corporation

3. ADDRESS OF OPERATOR

1305 S. 100 E Price, Utah 84501-0638 (435) 637-8876

4. LOCATION OF WELL (Report clearly and in accordance with any State requirements)

At surface 1342' FNL & 350' FWL

At top prod. interval reported below

14. API NO.  
43-007-30431

DATE ISSUED  
5/7/98

15. DATE SPUNDED  
7/7/98

16. DATE T.D. REACHED  
7/21/98

17. DATE COMPL. (Ready to prod. or Plug & Abd.)  
9/30/98

18. ELEVATIONS (DF, REB, RT, GR, ETC.)  
GR 5816'

19. ELEV CASINGHEAD  
N/A

20. TOTAL DEPTH, MD & TVD  
6950'

21. PLUG BACK T.D., MD & TVD

22. IF MULTIPLE COMPL., HOW MANY  
N/A

23. INTERVALS DRILLED BY

ROTARY TOOLS  
to TD

CABLE TOOLS  
N/A

24. PRODUCING INTERVAL(S), OF THIS COMPLETION--TOP, BOTTOM, NAME (MD OR TVD)  
6028-6384 Injection Interval in Navajo Sandstone, 6384-6510 Kayenta injection Interval, 6510-6580 Wingate Injection Interval

25. WAS DIRECTIONAL SURVEY MADE  
YES

26. TYPE ELECTRIC AND OTHER LOGS RUN

CBL, GR, Dual Induction, Diploesonic, SP, Neutron-Density, Caliper

27. WAS WELL CORED DRILL STEM TEST YES  NO

(Submit analysis See reverse side)

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENT RECORD	AMOUNT PULLED
13-3/8"	48# H-40	314.3'	13-1/2"	325 sks Class G+2% S-1+1/4#	
9-5/8"	36# K-55	2510.65'	12-1/4"	475 sks 50/50 Poz, 100 sks Class G	
7"	26# K-55	6931.97'	8-3/4"	676 sks 50/50 Poz, 65 sks Class G, 529 sks 10-1 RFC	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)

30. TUBING RECORD

31. PERFORATION RECORD (Interval, size and number)

6506-6580, 6439-6449, 6425-6436, 6396-6422, 6319-6384, 6274-6316, 6206-6268, 6194-6200, 6183-6190, 6164-6180, 6118-6110, 6070-6100, 6028-6066.

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED

33. PRODUCTION

DATE FIRST PRODUCTION 12/18/98  
PRODUCTION METHOD (Flowing, gas lift, pumping--size and type of pump)  
WELL STATUS (Producing or shut-in) Injection

DATE OF TEST HOURS TESTED CHOKER SIZE PROD'N. FOR TEST PERIOD OIL--BBL. GAS--MCF. WATER--BBL. GAS-OIL RATIO

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

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

TEST WITNESSED BY

35. LIST OF ATTACHMENTS  
N/A

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

SIGNED Carl Kuehler

TITLE Administrative Assistant

DATE February 23, 1999

WELL NUMBER: D-8

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, lime tool open, flowing and shut-in pressures, and recoveries):		38. GEOLOGIC MARKERS	
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
	TOP	MEAS. DEPTH	TRUE VERT. DEPTH
Ferron	2116		
Tunuck	2360		
Dakota	2732		
Cedar Mountain	2761		
Morrison	3584		
Summerville	4048		
Curtis	4534		
Entrada	4696		
Carmel	5354		
Navajo	6030		
Kayenta	6384		
Wingate	6510		
Chinle	6895		

**ORIGINAL**

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

**CONFIDENTIAL**

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

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

b. TYPE OF COMPLETION: NEW WELL  WORK OVER  DEEP-EN  PLUG BACK  DIFF. RESVR.  Other \_\_\_\_\_

2. NAME OF OPERATOR  
River Gas Corporation

3. ADDRESS OF OPERATOR  
1305 S. 100 E Price, Utah 84501-0638 (435) 637-8876

4. LOCATION OF WELL (Report clearly and in accordance with any State requirements) location  
At surface 1342' FNL & 350' FWL  
At top prod. interval reported below

5. LEASE DESIGNATION AND SERIAL NO.  
ML-38665

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
N/A

7. UNIT AGREEMENT NAME  
Drunkards Wash UTU-67921X

8. FARM OR LEASE NAME  
Utah

9. WELL NO.  
D-8

10. FIELD AND POOL, OR WILDCAT  
Drunkards Wash

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA  
W/2NW/4, Sec 12, T15S, R09E, SLB&M

14. API NO. 43-007-30431 DATE ISSUED 5/7/98

15. DATE SPUNDED 7/7/98 16. DATE T.D. REACHED 7/21/98 17. DATE COMPL. (Ready to prod. or Plug & Abd.) 9/30/98 18. ELEVATIONS (DF, REB, RT, GR, ETC.) GR 5816' 19. ELEV. CASINGHEAD N/A

20. TOTAL DEPTH, MD & TVD 6950' 21. PLUG BACK T.D., MD & TVD \_\_\_\_\_ 22. IF MULTIPLE COMPL., HOW MANY N/A 23. INTERVALS DRILLED BY \_\_\_\_\_ ROTARY TOOLS \_\_\_\_\_ CABLE TOOLS \_\_\_\_\_

24. PRODUCING INTERVAL(S), OF THIS COMPLETION--TOP, BOTTOM, NAME (MD OR TVD)  
6028-6384 Injection Interval in Navajo Sandstone, 6384-6510 Kayenta injection Interval, 6510-6580 Wingate Injection Interval

25. WAS DIRECTIONAL SURVEY MADE  YES  NO

26. TYPE ELECTRIC AND OTHER LOGS RUN  
CBL, GR, Dual Induction, Diploesonic, SP, Neutron-Density, Caliper

27. WAS WELL CORED YES  NO  DRILL STEM TEST YES  NO  (Submit analysis) (See reverse side)

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENT RECORD	AMOUNT PULLED
13-3/8"	48# H-40	314.3'	13-1/2"	325 sks Class G+2% S-1+1/4#	
9-5/8"	36# K-55	2510.65'	12-1/4"	475 sks 50/50 Poz, 100 sks Class G	
7"	26# K-55	6931.97'	8-3/4"	676 sks 50/50 Poz, 65 sks Class G, 529 sks 10-1 RFC	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)

31. PERFORATION RECORD (Interval, size and number)  
6506-6580, 6439-6449, 6425-6436, 6396-6422, 6319-6384, 6274-6316, 6206-6268, 6194-6200, 6183-6190, 6164-6180, 6118-6110, 6070-6100, 6028-6066

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED

33. PRODUCTION

DATE FIRST PRODUCTION 12/18/98 PRODUCTION METHOD (Flowing, gas lift, pumping--size and type of pump) Flowing Gas & Mining WELL STATUS (Producing or shut-in) Injection

DATE OF TEST	HOURS TESTED	CHOKER SIZE	PROD'N. FOR TEST PERIOD	OIL---BBL.	GAS---MCF.	WATER---BBL.	GAS-OIL RATIO

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

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) \_\_\_\_\_ TEST WITNESSED BY \_\_\_\_\_

35. LIST OF ATTACHMENTS  
N/A

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

SIGNED Cal Smith TITLE Administrative Assistant DATE February 23, 1999



FORM 8 **CONFIDENTIAL**

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

**COPY**

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

1. TYPE OF WELL: OIL WELL  GAS WELL  DRY  Other Water Disposal

2. TYPE OF COMPLETION: NEW WELL  WORK OVER  DEEP-EN  FLUG BACK  DIFF. RESVR.  Other \_\_\_\_\_

3. NAME OF OPERATOR  
River Gas Corporation

4. ADDRESS OF OPERATOR  
1305 S. 100 E Price, Utah 84501-0638 (435) 637-8876

5. LOCATION OF WELL (Report clearly and in accordance with any State requirements)  
At surface 1342' FNL & 350' FWL  
At top prod. interval reported below

5. LEASE DESIGNATION AND SERIAL NO.  
ML-38665

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
N/A

7. UNIT AGREEMENT NAME  
Drunkards Wash UTU-67921X

8. FARM OR LEASE NAME  
Utah

9. WELL NO.  
D-8

10. FIELD AND POOL OR WILDCAT  
Drunkards Wash

11. SEC. T. R. M. OR BLOCK AND SURVEY OR AREA  
W/2NW/4, Sec 12, T15S, R09E, S1 B&M

14. API NO. 43-007-30431 DATE ISSUED 5/7/98 12. COUNTY Carbon 13. STATE Utah

15. DATE SPUDDED 7/7/98 16. DATE T.D. REACHED 7/21/98 17. DATE COMPL. (Ready to prod. or Plug & Abd.) 9/30/98 18. ELEVATIONS (DF, RER, RT, GR, ETC.) GR 5816' 19. ELEV. CASINGHEAD N/A

20. TOTAL DEPTH, MD & TVD 6950' 21. PLUG BACK T.D., MD & TVD \_\_\_\_\_ 22. IF MULTIPLE COMPL., HOW MANY N/A 23. INTERVALS DRILLED BY \_\_\_\_\_ ROTARY TOOLS \_\_\_\_\_ CABLE TOOLS \_\_\_\_\_

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD OR TVD)  
6028-6384 Injection Interval in Navajo Sandstone, 6384-6510 Kayceen injection Interval, 6510-6580 Wingsate Injection Interval

25. WAS DIRECTIONAL SURVEY MADE YES

26. TYPE ELECTRIC AND OTHER LOGS RUN  
CBL, GR, Dual Induction, Diploesonic, SP, Neutron-Density, Caliper

27. WAS WELL COBED YES  NO  DRILL STEM TEST YES  NO

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENT RECORD	AMOUNT PULLED
13-3/8"	48# H-40	314.3'	13-1/2"	325 sks Class G+2% S-1+1/4#	
9-5/8"	36# K-55	2510.65'	12-1/4"	475 sks 50/50 Poz, 100 sks Class G	
7"	26# K-55	6931.97'	8-3/4"	676 sks 50/50 Poz, 65 sks Class G, 529 sks 10-1 RFC	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)

31. PERFORATION RECORD (Interval, size and number)  
6506-6580, 6439-6449, 6425-6436, 6396-6422, 6319-6384, 6274-6316, 6206-6268, 6194-6200, 6183-6190, 6164-6180, 6118-6110, 6070-6100, 6028-6066.

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED

33. PRODUCTION

DATE FIRST PRODUCTION 12/18/98 PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) \_\_\_\_\_ WELL STATUS (Producing or shut-in) Injection

DATE OF TEST \_\_\_\_\_ HOURS TESTED \_\_\_\_\_ CHOKED SIZE \_\_\_\_\_ PRODN. FOR TEST PERIOD \_\_\_\_\_ OIL—BBL. \_\_\_\_\_ GAS—MCF. \_\_\_\_\_ WATER—BBL. \_\_\_\_\_ GAS-OIL RATIO \_\_\_\_\_

FLOW. TUBING PRES. \_\_\_\_\_ CASING PRESSURE \_\_\_\_\_ CALCULATED 24-HOUR RATE \_\_\_\_\_ OIL—BBL. \_\_\_\_\_ GAS—MCF. \_\_\_\_\_ WATER—BBL. \_\_\_\_\_ OIL GRAVITY - API (CORR.) \_\_\_\_\_

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) \_\_\_\_\_ TEST WITNESSED BY \_\_\_\_\_

35. LIST OF ATTACHMENTS  
N/A

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

SIGNED Cal Smith TITLE Administrative Assistant DATE February 23, 1999

WELL NUMBER: D-8

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):		38. GEOLOGIC MARKERS	
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
			NAME
			MEAS. DEPTH TRUE VERT. DEPTH
Feron	2116		
Tunuck	2380		
Dakota	2732		
Cedar Mountain	2761		
Morrison	3584		
Summerville	4046		
Curle	4534		
Entrada	4888		
Carmel	5354		
Navajo	6030		
Kayenta	6384		
Wingate	6610		
Chinle	8895		

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.

1. Type of Well: OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER: Water Disposal	5. Lease Designation and Serial Number: ML- 38665
2. Name of Operator: River Gas Corporation	6. If Indian, Allottee or Tribe Name: N/A
3. Address and Telephone Number: 1305 South 100 East, Price, UT 84501 (435)637-8876	7. Unit Agreement Name: Drunkards Wash-UTU-67921X
4. Location of Well Footages: 1342' FNL, 350' FWL County: Carbon QQ, Sec., T., R., M.: W/2, NW/4, SEC.12, T15S, R09E, SLB&M State: UTAH	8. Well Name and Number: Utah D-8 9. API Well Number: 43-007-30431 10. Field or Pool, or Wildcat: Drunkards Wash

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

NOTICE OF INTENT (Submit in Duplicate)	SUBSEQUENT REPORT (Submit Original Form Only)
<input type="checkbox"/> Abandon <input type="checkbox"/> Repair Casing <input type="checkbox"/> Change of Plans <input type="checkbox"/> Convert to Injection <input type="checkbox"/> Fracture Treat or Acidize <input type="checkbox"/> Multiple Completion <input type="checkbox"/> Other _____  Approximate date work will start _____	<input type="checkbox"/> Abandon * <input type="checkbox"/> Repair Casing <input type="checkbox"/> Change of Plans <input type="checkbox"/> Convert to Injection <input type="checkbox"/> Fracture Treat or Acidize <input checked="" type="checkbox"/> Other <u>Online Sundry</u>  Date of work completion _____  Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION REPORT AND LOG form.
<input type="checkbox"/> New Construction <input type="checkbox"/> Pull or Alter Casing <input type="checkbox"/> Recomplete <input type="checkbox"/> Reperforate <input type="checkbox"/> Vent or Flare <input type="checkbox"/> Water Shut-Off	<input type="checkbox"/> New Construction <input type="checkbox"/> Pull or Alter Casing <input type="checkbox"/> Reperforate <input type="checkbox"/> Vent or Flare <input type="checkbox"/> Water Shut-Off

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.)

The Utah D-8 was placed online and showed first production on 12-18-98.

**CONFIDENTIAL**

**ORIGINAL**

13. Name & Signature: Dawn J Wilson Title: Administrative Assistant Date: 3/3/99

(This space for state use only)

**INJECTION WELL - INSPECTION RECORD**

Well Name: <u>D-8</u>	API Number: <u>43-007-30431</u>		
Qtr/Qtr: <u>NW/NW</u>	Section: <u>12</u>	Township: <u>15S</u>	Range: <u>9E</u>
Company Name: <u>RIVER GAS CORPORATION</u>			
Lease: State _____	Fee _____	Federal <u>X</u>	Indian _____
Inspector: <u>DENNIS L. INGRAM</u>	Date: <u>04/06/00</u>		

Injection Type:

Disposal: WDW      Enhanced Recovery: \_\_\_\_\_      Other: \_\_\_\_\_

Injecting: NO      Shut-In: \_\_\_\_\_

Rate: 0.0 (bpd)      Totalizer: 521516 (bbls)

Gauges:      Tubing: YES

Casing: NO      Casing Pressure: 0 (psig)

Tubing Pressure: 1201 (psig)      Housekeeping: GOOD, CLEAN

Equipment Condition: GOOD

COMMENTS: Pump just shut down by low level water switch. Barton recorder with chart shows recent activity. Met River Gas' safety man on location. Looks good.

INJECTION WELL - PRESSURE TEST

Well Name: <u>Utah D-8</u>	API Number: <u>43-007-30431</u>
Qtr/Qtr: <u>SUN</u> Section: <u>12</u>	Township: <u>15 S</u> Range: <u>9 E</u>
Company Name: <u>ConocoPhillips</u>	
Lease: State <u>X</u> Fee _____	Federal _____ Indian _____
Inspector: <u>Mark A Jones</u>	Date: _____

Initial Conditions:

Tubing - Rate: 0 Pressure: 0 psi

Casing/Tubing Annulus - Pressure: 0 psi

Conditions During Test:

Time (Minutes)	Annulus Pressure	Tubing Pressure
0	<u>1250 #</u>	<u>N/A</u>
5	<u>1200 #</u>	
10		
15		
20	<u>1200 #</u>	<u>N/A</u>
25		
30		

Results: Pass/Fail

Conditions After Test:

Tubing Pressure: N/A psi

Casing/Tubing Annulus Pressure: 0 # psi

COMMENTS: No tubing in well Top of packer @ 5570'  
Top perf @ 6028'

Mike Ward  
Operator Representative

# 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— for such proposals

7. Indian Allottee or Tribe Name  
N/A

8. Unit or Communitization Agreement

Drunkards Wash UTU=67921X

1. Type of Well  
 Oil Well     Gas Well     Other (specify)

9. Well Name and Number  
Utah D-8

2. Name of Operator  
River Gas Corporation

10. API Well Number  
43-007-30431

3. Address of Operator  
6825 S.S. 5300 WEST, PRICE, UT 84501

4. Telephone Number  
435-613-9777

11. Field and Pool, or Wildcat  
Drunkards Wash

5. Location of Well  
 Footage : 1342' FNL, 350' FWL  
 CQ, Sec. T., R., M. : W/2 NW/4 S12, T15S, R9E SLB&M

County : Carbon  
State : UTAH

## CHECK APPROPRIATE BOXES 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"/> 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 checked="" type="checkbox"/> Other <b>MAX. PRESSURE INCREASE</b> |   |

- |  |   |
|--|---|
| <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"/> 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                   |   |

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 LCG form.  
 \* Must be accompanied by a cement verification report.

### 3. 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.)

River Gas Corporation respectfully request the maximum injection pressure for the D-8 disposal well be increased from 1350 psi. to 1700 psi.. This requested pressure is in-line with the D-3 maximum pressure of 1700 psi.. The confining geologic sections existing in the D-3 are evident in the D-8 well. It is our opinion that injected fluids will be safely contained within the Navajo sandstones, and that the new pressure will enable the disposal of an additional increment of produced fluids. This should help handle the current water rates realized in this area of the Drunkards Wash Unit.

RECEIVED

JUL 23 2000

DIVISION OF  
OIL, GAS AND MINING

I hereby certify that the foregoing is true and correct.

Signature: John Hollingshead    Title: Reservoir Engineer    Date: 6-1-2000

APPROVED BY THE STATE  
OF UTAH DIVISION OF  
OIL, GAS, AND MINING

DATE: 6/23/00  
BY: [Signature]

Supported by Stim Lab report  
dated 6-10-2000.

**UPDATED ANALYSIS OF  
STRESS PROFILES IN  
THE INJECTION WELLS  
AT DRUNKARD'S WASH**

PREPARED FOR:

RIVER GAS CORPORATION  
1300 MCFARLAND BLVD, STE. 300  
TUSCALOOSA, ALABAMA 35406

PREPARED BY:

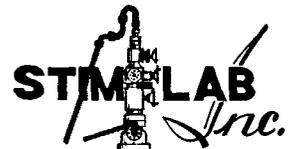
MICHAEL W. CONWAY  
STIM-LAB, INC.  
7406 NORTH HWY 81  
DUNCAN, OKLAHOMA 73534

P.O. NUMBER: VERBAL/JOHN HOLLINGSHEAD  
FILE NUMBER: SL 4503

JUNE 10, 2000

ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM SAMPLES AND LOGS WHICH WERE SUPPLIED. WE CANNOT, AND DO NOT, GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATIONS, AND WE SHALL NOT, EXCEPT IN THE CASE OF GROSS OR WILLFUL NEGLIGENCE ON OUR PART, BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COSTS, DAMAGES OR EXPENSES INCURRED OR SUSTAINED BY ANYONE RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR OFFICERS, AGENTS OR EMPLOYEES. THESE INTERPRETATIONS ARE ALSO SUBJECT TO OUR GENERAL TERMS AND CONDITIONS AS SET OUT IN OUR CURRENT PRICE SCHEDULE.

**MICROFICHE**

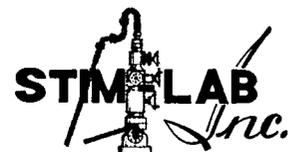


## ANALYSIS OF STRESS PROFILE IN THE INJECTION WELLS AT DRUNKARDS WASH

Wells D-1 and D-2 were re-entries and thus did not have a complete log suite available for analysis. Well D-3 was completed in late May 1996 and was the first newly drilled disposal well. An extensive logging and testing program was conducted to identify the stress conditions present in the reservoir. Well D-4 was completed in August 1997 and well D-5 in September 1997. In 1998, 3 wells were completed: D-7 in August, D-8 in October and D-6 was re-entered in November. In July 1999 D-10 was completed and D-11 in August, 1999. The location of the wells is shown in figure 1.

The full log suites on the new wells have allowed us to derive a consistent picture of the stress state in the area and understand the geological factors controlling the fracture parting pressure in the Navajo and Wingate sandstones. The dipole sonic log is the principal log used to identify the rock properties which lead to the stress condition present in the reservoir. There are a number of factors which contribute to the total stress present in the reservoir. The most important are the lithostatic stress, tectonic stress and pore pressure. A clear understanding of the role of each is needed to understand the *in-situ* stresses. By applying first principals to the dipole sonic log data, injection tests in the primary zone, and 3-D hydraulic fracture modeling studies, the stress state in the various strata present in the wellbore can be defined. The key question that was addressed is to understand the containment mechanisms present that will ensure that fluids injected into the Navajo and Wingate sandstones are in fact contained.

There are two pressures related to fracturing that are traditionally measured. The easiest to measure is the fracture parting pressure (fracture extension pressure). This is the value obtained from analysis of the step-rate test and is defined as the pressure required to open a previously existing fracture, but not generate new fracture area. The second is the fracture closure pressure which is also the minimum horizontal stress. This is much more difficult to determine accurately and is determined from the analysis of the pressure decline observed during the fall-off after injecting fluid above the parting pressure. This is also the value calculated from logs and needed for the 3-D hydraulic fracturing simulations. Fortunately, the computer simulations and pressure fall-off tests show that the closure pressure is reasonably predictable and is 250-400 psi below the fracture extension pressure.



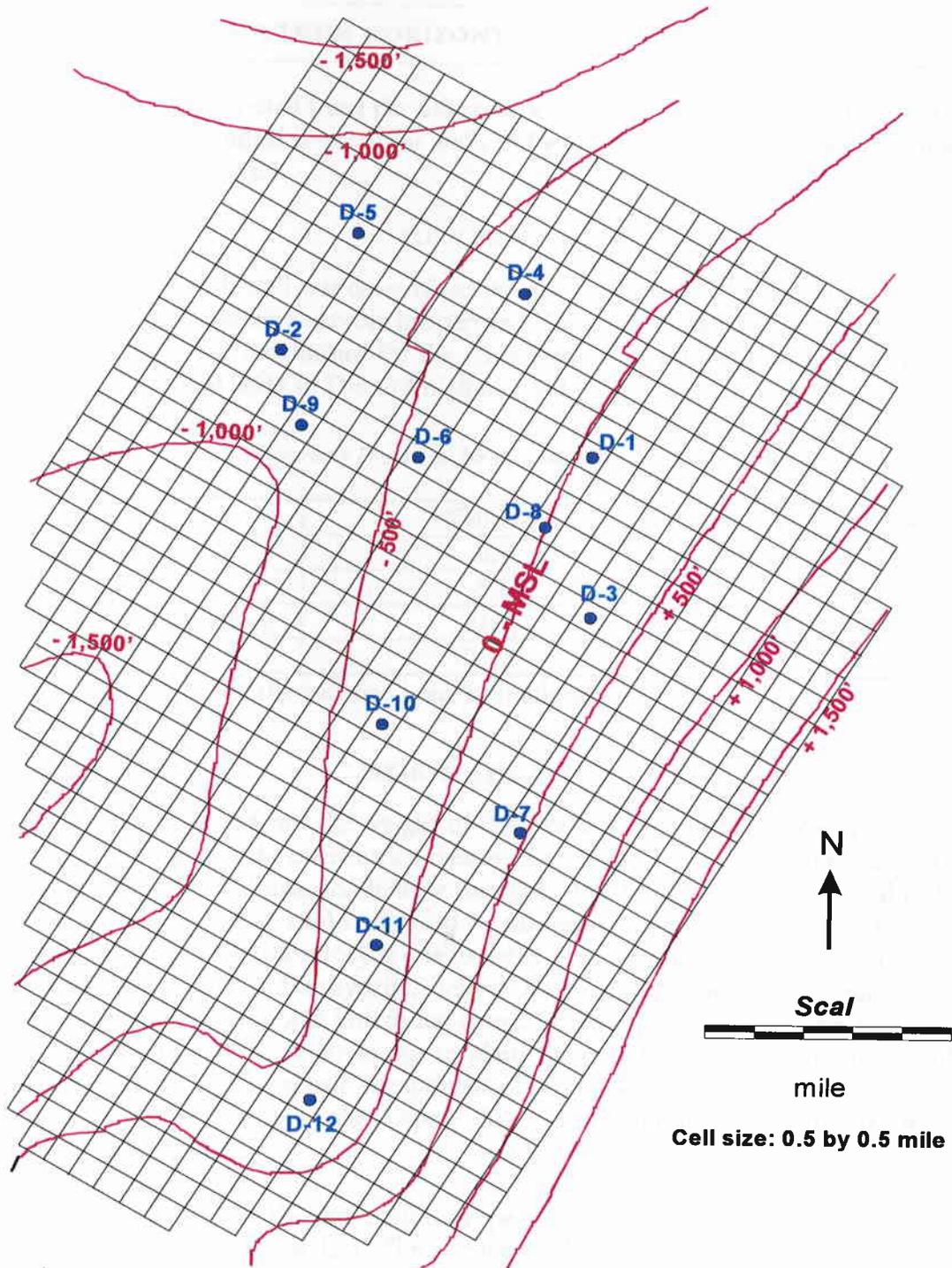


Figure 1 - Locations of the disposal wells in the River Gas, Drunkards Wash Project, Carbon County, Utah. Wells are shown on the North - 30 Degrees East Rotated Aquifer Simulation Grid used to model the long-term pressure response.

## MINIMUM HORIZONTAL CLOSURE STRESS

The closure stress is computed from the *lithostatic stress + pore pressure + tectonic stress*. Each of these components was studied in detail for wells D-3 and D-4 as soon as adequate information was available early in the project.

### PORE PRESSURE

The pore pressure in each well was determined from the analysis of the data from the fall-off test as well as the other pertinent reservoir properties. The detailed data is given in Table 1 for D-3 and D-4. Similar data was determined for the other wells. The pore pressure gradient varied over the project from a low of 0.347 in D-6 to a high of 0.443 in D-8.

*Table 1 - Reservoir Properties for Drunkard's Wash Disposal Wells*

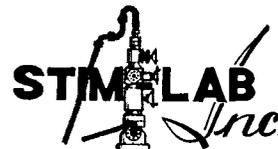
Reservoir Property	Well D-3 <sup>a</sup>	Well D-4
Conductivity (md-ft)	264	960
Skin	-5.8	-3.9
Initial Reservoir Pressure (psi)	2158	2490
Top of Navajo (ft)	5532	5972

<sup>a</sup>Fall-off test conducted after the well had been hydraulically fractured

### LITHOSTATIC STRESS

The lithostatic stress arises from the weight of the overburden. The load placed on a particular rock layer by the weight of the overburden creates a horizontal stress. Poisson's ratio is a measure of the amount of horizontal stress created by the load. The lithostatic stress is equal to Poisson's ratio divided by (1 - Poisson's ratio) multiplied by the effective vertical stress. The Poisson's ratio measured by logs and in the laboratory is due to the elastic nature of rock. However, certain rock types, namely halite, coal and anhydrite, behave like a plastic and there is some permanent deformation that creates additional horizontal stress. Some shales and limestones also may have a non-elastic increase in horizontal stress due to plastic deformation. Therefore, the Dipole Sonic Log which measures only the elastic component of stress, will typically calculate the minimum lithostatic stress. Furthermore, the Dipole Sonic Log cannot detect any of the tectonic component of total stress.

The general characteristics of the mechanical properties in the Navajo Sandstone are exemplified by the data given in Figure 2 for D-3. The porous sandstone intervals generally have a Young's modulus around 7 to 8 million psi and a Poisson's ratio around 0.18 to 0.22. Silty shales have a Young's modulus around 4 million psi and a Poisson's ratio approaching 0.3. The logs for D-5, which has a very low fracture extension pressure, show very similar mechanical properties to those seen in D-3. The most important value for calculations of the tectonic stress is Young's modulus.



### D-3 Log Derived Mechanical Properties Poisson's Ratio

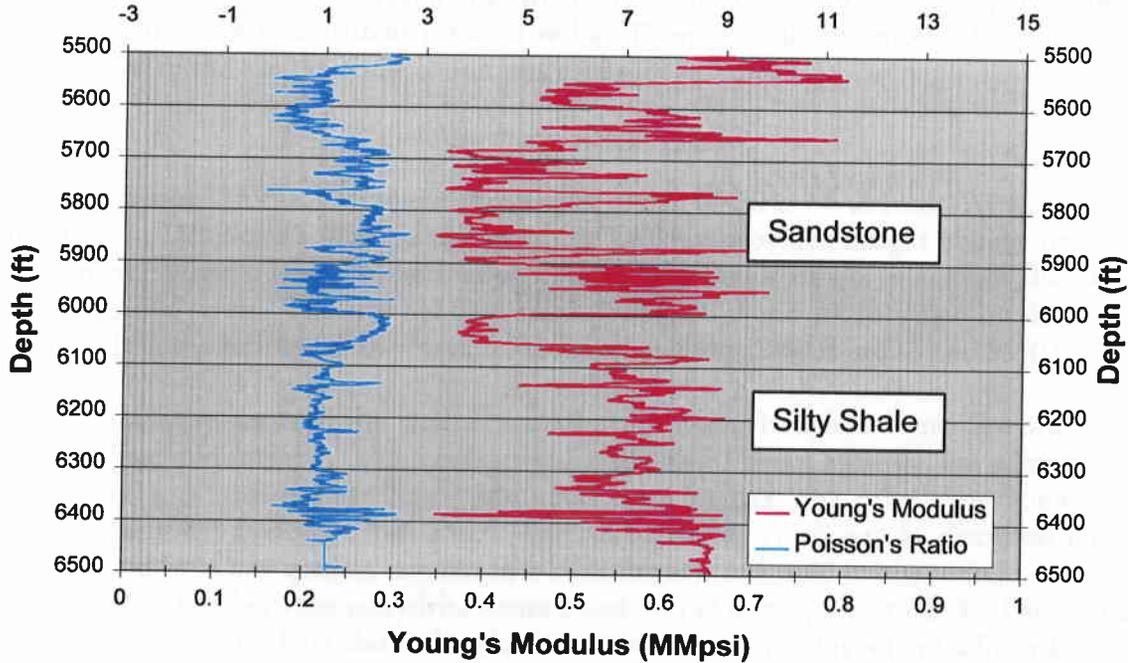


Figure 2. D-3 log derived mechanical properties

Step rate tests were conducted in all wells to determine the fracture extension pressure. The original pressure data was collected at a variety of gauge depths for the downhole data and the surface pressure includes friction pressure. All pressures were normalized to the top of the Navajo by adjusting for the hydrostatic head difference and are shown in Table 2.

Table 2: Summary of the Fracture Extension Pressure in the Navajo Sandstone

Well Name	Navajo Top (ft)	Initial Reservoir Pressure		Fracture Extension Pressure		
		(psi)	(psi/ft)	BHP	Surface (psi)	(psi/ft)
D-1	5730	2260	0.394	3031	550	0.529
D-2	7134	2495	0.350	3670	581	0.514
D-3	5562	2158	0.388	4106	1475	0.738
D-4	6041	2490	0.412	3041	425	0.503
D-5	7003	2458	0.351	3270	238	0.467
D-6	7146	2478	0.347	3284	190	0.460
D-7	5665	2485	0.439	3229	776	0.570
D-8	6028	2669	0.443	3316	706	0.550
D-10	6650	2494	0.375	3261	382	0.490
D-11	5080	1995	0.393	4119	1919	0.811



The frac gradient ranged from 0.46 to 0.81 psi/ft. The dipole sonic log data shows that the variations in frac gradient are not due to local variations in the rock properties because the Poisson's ratio is very consistent between wells. Therefore, the variations observed must be due to variations in the local tectonic conditions that vary across the property.

### TECTONIC STRESS

Characterization of the horizontal stress that arises because of tectonics is more difficult to quantify. In Drunkard's Wash, a review of the geology provided insight about horizontal stress component. When a lateral stress is applied to a rock mass it results in a strain that is translated into horizontal stress. The area has been tectonically active and is confirmed by the presence of a thrust fault in the vicinity of the Navajo Sandstone at about 5200 ft in D-3 and 5650 ft in D-4.

The log similarity between the wells is remarkable. Even though D-3 and D-4 are separated by over 6 miles, minor depth adjustments were made and Figure 3 shows the comparison of the gamma ray and bulk density logs. Measured from surface, the correlating zones in D-4 are approximately 450 ft deeper than D-3. The rubble zone, which will be discussed more later is characterized by a low gamma ray and low bulk density and is 20 ft bigger in D-4 than D-3, but there is 20 less feet between anhydrite zones 2 and 3 in D-4 compared to D-3. These adjustments were made in Figure 3 to show the similarities when both wells were adjusted to the same elevation (based on D-4). These lateral slip faults are often difficult to detect because there is no vertical displacement. The FMI log run in D-3 confirmed the presence of a rubblized zone just below the middle anhydrite zone and confirmed the suspected repeat of the lower anhydrite section.

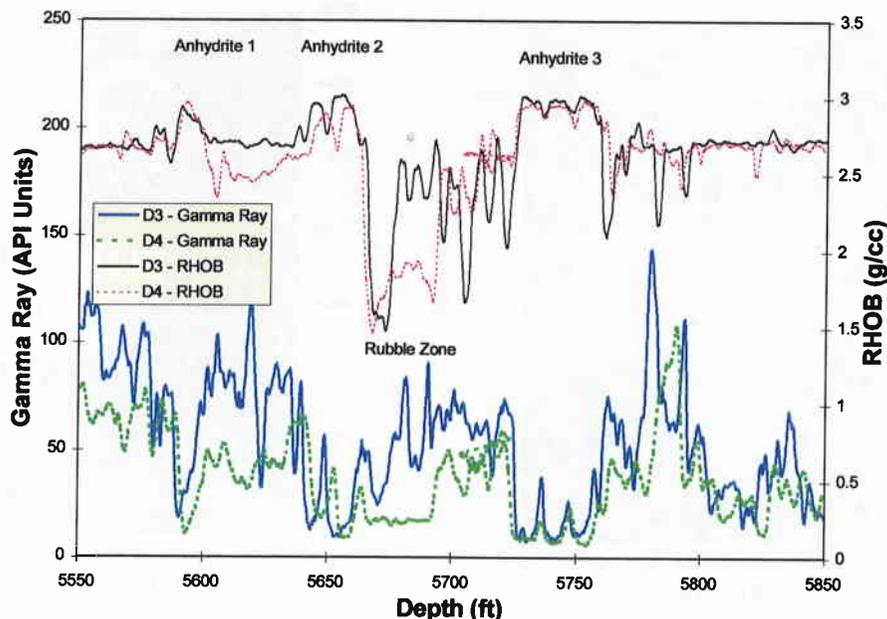


Figure 3: The D-3 log was depth shifted by 455 ft to compare to the D-4 log.

The pressure modelling shows that there is no evidence for any major discontinuity in the Navajo sandstone in the project. The dike map for the area shows that there are intrusions that will behave as flow path modifiers but do not indicate that they should make for closed compartments. There are also large lateral variations in the permeability. The comparison of the D-3 logs to D-10 logs shows similar characteristics further confirming the similarities between the wells (Figure 4). The 3 anhydrite zones (density  $\sim 3$ ) and the rubble zone (density  $< 2$ ) can be seen above the Navajo sandstone. Right above the Navajo, there is a dense, high modulus limestone that will also be much higher stress than the sandstone. However, the ultimate barrier that will provide containment of any fluid injected into the Navajo will be the anhydrite layers.

No direct measurement of these stresses exist and thus must be computed based on the logs and observed stresses in the Navajo sandstone. When a horizontal stress is placed on heterogeneous, layered rock mass; the stiffer rocks (measured as higher Young's Modulus) will bear the majority of the load because they deform less. This is in fact the definition of Young's Modulus where strain equals change in length divided by the total length and Young's modulus is the slope of the stress-strain curve. This results in higher *in-situ* stress in the high modulus rocks. At some point in time, the tectonic stress from the northwest concentrated the strain in the anhydrite layers, they mechanically failed, and the section was thrust over itself. As the plate rode over itself, it created a rubblized zone out of the bottom of the upper plate and the top of the lower plate.. This condition exists in all wells in the project, so we can conclude that this plate movement has large aerial extent. This process is shown schematically in Figure 5.

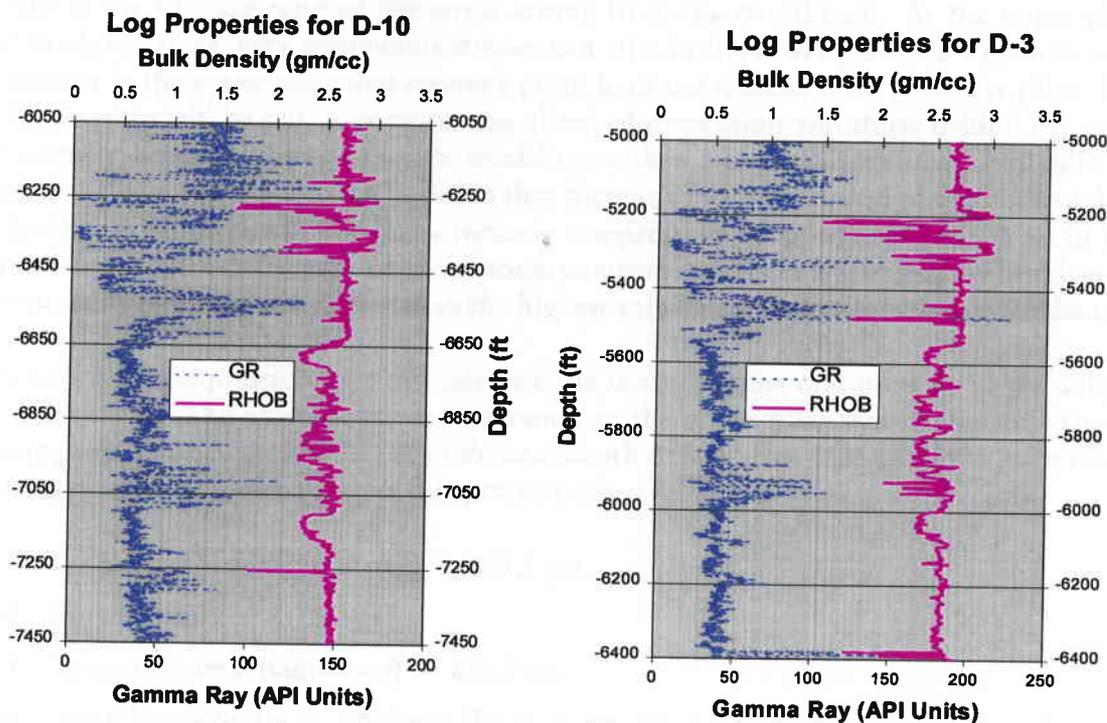


Figure 4. Comparison of the log properties for Wells D-10 and D-3. The 3 anhydrite zones are easily identified by the density of  $\sim 3$ . The rubble zone has a density less than 2.

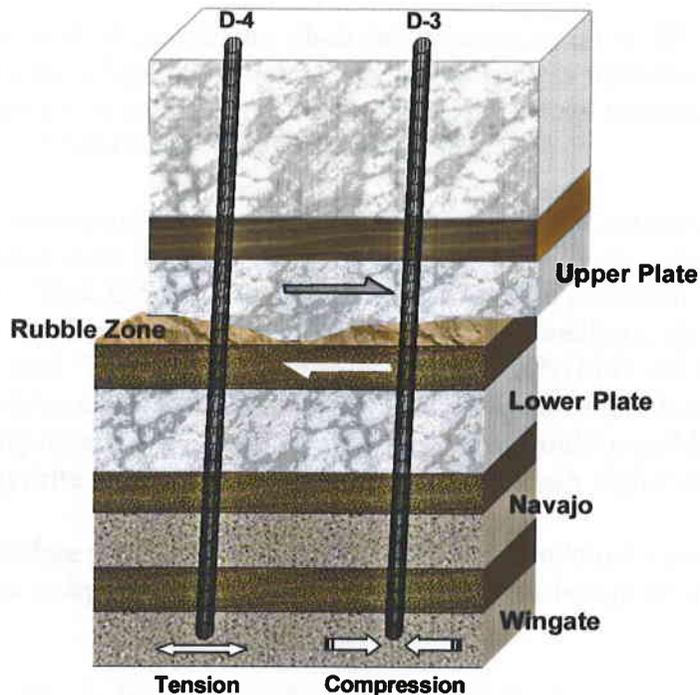


Figure 5. Plate thrust characteristics

From this understanding, we can deduce that the tectonic stress is still present in the zones above the rubble zone. The tectonic stress in the zones below the rubble zone just depends on how effectively the slippage relieved the stress arising from the overthrust. As the upper plate rides over the lower plate, very anomalous stresses can arise in the lower plate. In Figure 5, we show a protrusion in the upper plate that creates a point load and it slides over the lower plate. Rocks in the lower plate will be put in compression ahead of protrusion and those behind the protrusion will actually be in tension. Fracture modeling with a 3-D Grid Oriented Hydraulic Fracture Extension Replicator (GOHFER<sup>®</sup>) shows that there is a tectonic tension of approximately 400 psi in the Navajo Sandstone in D-4 and a tectonic compression of approximately 500 psi in D-3. We do not have any direct measure of the tectonic compression in the upper plate other than it has to be reasonably constant and higher than the highest value measured in the Navajo Sandstone.

Since D-3 is in compression, we can calculate the tectonic stress that must be in the anhydrite in the lower plate. The actual stress concentration in the upper plate will be higher. The fracture parting pressure calculated in D-3 at a reference depth of 5560 ft is 4106 psi (1475 psi surface). The stress components required to give this pressure are:

1. Lithostatic Stress (sandstone) = 803.7 psi
2. Pore Pressure = 2170.2 psi
3. Tectonic Stress (sandstone) = 853.0 psi
4. Net Closure Stress = 279.0 psi (fracture extension - fracture closure pressure)

The tectonic strain required to create the observed tectonic stress is 130 microstrains. The tectonic stress in the anhydrite layers will be even higher because the dynamic Young's Modulus is 11.5 in the anhydrite compared to 6.5 in the sandstone. This gives a minimum tectonic stress in the anhydrite above the rubble zone of 1500 psi in well D-3.

In order to predict the minimum fracture extension pressure in the anhydrite above the rubble zone in the area, the stress state needs to be determined in wells in the areas where the Navajo Sandstone is in tension. Well D-5 has the second lowest fracture extension pressure gradient in the area. Based on the mechanical properties measured in that wellbore, the stress in the lower anhydrite can be computed. The data was imported into the GOHFER software and the closure stress in the lower anhydrite was calculated to be 5200 psi. This corresponds to a fracture gradient of 0.775 psi/ft. This represents the lowest stress barrier that could possibly be present in the project. The upper anhydrite barrier in the upper plate will be much higher stressed.

In D-5, the maximum surface pressure that could be used that would not exceed this pressure can be computed. The lower anhydrite is around 6710' and thus a surface pressure of 2290 psi would not exceed this stress.

The containment in the Navajo has been confirmed in well D-1 where a radioactive tracer survey showed no fluid movement above the upper perforations. D-1 had an initial fracture extension pressure of 550 psi. In 1998, Tracer survey's show containment in the Navajo even after 340 million gallons of water has been injected at surface pressures up to 1350 psi.

The maximum stress in the anhydrite was examined in Well D-11 which had the highest fracture extension pressure observed in the project. Again, the GOHFER simulator was used to compute the stress present in the anhydrite that would be required to create the observed stress in the Navajo sandstone. The stress in the anhydrite required to result in a fracture extension pressure of about 4120 psi in the Navajo sandstone is 6900 psi, which is a frac gradient of 1.45 in the anhydrite.

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#### CONCLUSIONS AND RECOMMENDATION

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Previously, we had suggested that the surface injection pressure maximums in the injection wells could safely be increased because of the much higher stress in the anhydrite barriers. Based on the data collected to date, we can now compute the stress present in the anhydrite in the lower plate.

*Table 3. Computed Closure Cressure in the Anhydrite in the Lower Plate and the Conservative Maximum Recommended Surface Injection Pressure*

Well Name	Lower Plate Anhydrite (ft)	Reservoir Pressure Gradient (psi/ft)	Closure Pressure in Anhydrite in Lower Plate <sup>(1)</sup>		
			BHP	urface (psi)	(psi/ft)
D-1	5410	0.394	4780	2437	0.884
D-2	6884	0.350	6150	3169	0.893
D-3	5285	0.388	6675	4387	1.263
D-4	5762	0.412	4800	2305	0.833
D-5	6707	0.351	5525	2621	0.824
D-6	6799	0.347	5600	2656	0.824
D-7	5412	0.439	4900	2557	0.905
D-8	5750	0.443	5000	2510	0.870
D-10	6550	0.375	5180	2344	0.791
D-11	4823	0.393	6900	4812	1.431

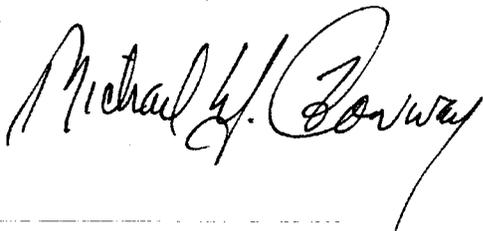
<sup>(1)</sup>Lower Plate stress calculated by assuming closure pressure in Navajo is 250-350 psi lower than the fracture extension pressure.

The stress in the anhydrite in the upper plate must be much higher. In fact, it must be greater than or equal to the highest stress determined for the lower plate. The data shows that stress in the anhydrite is generally very high relative to any other rock in the reservoir since it is bearing the majority of the stress created by the regional strain.

Anhydrite caps on the salt zones being used for nuclear waste disposal in New Mexico have been extensively studied as part of the ultimate containment because of their low permeability and high stress. The zones in New Mexico are typically less than 1 ft thick and therefore it has not been possible to directly measure the stress. The advantage here is that the zones are much thicker and there are 3 zones rather than 1 zone to give even more confidence in the integrity of the barrier.

Michael W. Conway, Ph.D.

June 10, 2000



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.

1. Type of Well: OIL  GAS  OTHER:

2. Name of Operator:  
River Gas Corporation

3. Address and Telephone Number: 6825 S. 5300 W. P.O. Box 851 Price, Utah 84501 (435) 613-9777

4. Location of Well Footages:  
QQ, Sec., T., R., M.:  
SLB & M

5. Lease Designation and Serial Number:

6. If Indian, Allottee or Tribe Name:

7. Unit Agreement Name:

8. Well Name and Number:

9. API Well Number:

10. Field or Pool, or Wildcat:

County: Carbon County  
State: Utah

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

**NOTICE OF INTENT**  
(Submit in Duplicate)

- Abandon
  - Repair Casing
  - Change of Plans
  - Convert to Injection
  - Fracture Treat or Acidize
  - Multiple Completion
  - Other Change of Operator
- Approximate date work will start \_\_\_\_\_

- New Construction
- Pull or Alter Casing
- Recomplete
- Reperforate
- Vent or Flare
- Water Shut-Off

**SUBSEQUENT REPORT**  
(Submit Original Form Only)

- Abandon \*
  - Repair Casing
  - Change of Plans
  - Convert to Injection
  - Fracture Treat or Acidize
  - Other \_\_\_\_\_
- Date of work completion \_\_\_\_\_

- New Construction
- Pull or Alter Casing
- Reperforate
- Vent or Flare
- Water Shut-Off

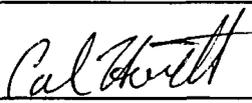
Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION REPORT AND LOG form.

\* 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.)

Please be advised that River Gas Corporation is transferring ownership of the attached list of wells to Phillips Petroleum Company 9780 Mt. Pyramid Court, Englewood, CO 80112.  
Please direct all correspondence and reports to: Phillips Petroleum Company P.O. Box 3368, Englewood, CO 80155-3368.  
Effective 1/1/01.

13.

Name & Signature: Cal Hurtt  Title: Development Manager Date: 12/19/00

(This space for state use only)

## RGC/Phillips Merger

### List of Affected BLM Leases and Rights-of-Way

#### A. Oil & Gas Leases

UTU-47157	UTU-70219	UTU-75016
UTU-49631	UTU-70400	UTU-75019
UTU-50645	UTU-71390	UTU-75021
UTU-51584	UTU-72003	UTU-75022
UTU-53872	UTU-72004	UTU-76332
UTU-57821	UTU-72350	UTU-76334
UTU-60402	UTU-72355	UTU-77351
UTU-60925	UTU-72358	UTU-77353
UTU-61154	UTU-72377	UTU-77354
UTU-61155	UTU-72470	UTU-78408
UTU-61158	UTU-72477	UTU-78409
UTU-61547	UTU-72624	UTU-78410
UTU-61548	UTU-72723	UTU-78411
UTU-62145	UTU-72724	UTU-78412
UTU-62276	UTU-72746	UTU-78413
UTU-65298	UTU-73004	UTU-78782
UTU-65300	UTU-73075	UTU-78783
UTU-65302	UTU-73330	UTU-79150
UTU-65303	UTU-73331	UTU-79151
UTU-67621	UTU-73523	UTU-79152
UTU-67839	UTU-73752	UTU-79153
UTU-67906	UTU-73884	UTU-79154
UTU-68314	UTU-74376	UTU-79155
UTU-69449	UTU-75015	UTU-79159

#### B. Rights-of-Way

UTU-73226	UTU-77141	UTU-77976
UTU-74319	UTU-77141-01	UTU-77989
UTU-74320	UTU-77151	UTU-77989-01
UTU-76610	UTU-77151-01	
UTU-76629	UTU-77154	

**TRANSFER OF AUTHORITY TO INJECT**

Well Name and Number <b>See Attached</b>	API Number
Location of Well	Field or Unit Name
Footage : County :	Lease Designation and Number
QQ, Section, Township, Range: State : UTAH	

EFFECTIVE DATE OF TRANSFER: 1/1/01

**CURRENT OPERATOR**

Company: River Gas Corporation Name: Cal Hurtt  
 Address: 1300 McFarland Blvd. NE, Suite 300 Signature: *Cal Hurtt*  
city Tuscaloosa state AL zip 35406 Title: *Development Supervisor*  
 Phone: (205) 759-3282 Date: *12/19/00*

Comments:  
 Change in operatorship due to merger of River Gas Corporation into Phillips Petroleum Company effective 12/31/00 at 11:59 p.m.

**NEW OPERATOR**

Company: Phillips Petroleum Company Name:  Billy Stacy  
 Address: 9780 Mt. Pyramid Court Signature: *Billy Stacy*  
city Englewood state CO zip 80112 Title: *Asset Manager*  
 Phone: (720) 344-4984 Date: *2-6-01*

Comments: Please send all reports and correspondence to:  
 Phillips Petroleum Company  
 P.O. Box 3368  
 Englewood, CO 80155-3368

(This space for State use only)

Transfer approved by: *[Signature]*  
 Title: *Field Services Manager*

Approval Date: *2-21-01*

Comments:

Disposal Wells to be transferred from RGC to Phillips Petroleum Company

Well #	API #	Location	Section	Township	Range
American Quasar D1	4300730040	999FSL, 1552 FWL	31	14S	10E
Arcadia-Telonis D2	4300730093	465 FSL, 560 FEL	19	14S	09E
Utah D3	4300730290	1600 FSL, 1530 FEL	18	15S	10E
Utah D4	4300730314	600 FNL, 500 FWL	24	14S	09E
Fausett D5	4300730351	467 FNL, 1461 FWL	16	14S	09E
Drew D6	4300730100	1300 FSL, 830 FWL	34	14S	09E
Utah D7	4301530338	1371 FSL, 1530 FEL	2	14S	09E
Utah D8	4300730431	1342 FNL, 350 FWL	12	15S	09E
Utah D9	4300730438	1960 FNL, 1487 FWL	32	14S	09E
RGC D10	4300730520	162 FNL, 1557 FEL	28	15S	09E
USA D11	4301530356	1513 FNL, 2437 FEL	13	16S	09E
Sampinos D14	4300730567	1695 FSL, 2133 FEL	16	15S	10E

LAW OFFICES

**PRUITT, GUSHEE & BACHTELL**

SUITE 1850 BENEFICIAL LIFE TOWER

SALT LAKE CITY, UTAH 84111-1495

(801) 531-8446

TELECOPIER (801) 531-8468

E-MAIL: mail@pgblaw.com

THOMAS W. BACHTELL  
A. JOHN DAVIS, III  
JOHN W. ANDERSON  
FREDERICK M. MACDONALD  
GEORGE S. YOUNG  
ANGELA L. FRANKLIN  
JOHN S. FLITTON  
MICHAEL S. JOHNSON  
WILLIAM E. WARD

SENIOR COUNSEL:  
ROBERT G. PRUITT, JR.  
OLIVER W. GUSHEE, JR.

OF COUNSEL:  
ROBERT G. PRUITT, III  
BRENT A. BOHMAN

January 29, 2001

**HAND DELIVERED**

Mr. Jim Thompson  
Utah Division of Oil, Gas & Mining  
1594 W. North Temple  
Salt Lake City, UT 84116

*Re: River Gas/Phillips Merger*

Dear Mr. Thompson:

As you may know, River Gas Corporation ("RGC") merged into Phillips Petroleum Company ("Phillips") effective December 31, 2000 at 11:59 p.m. I have enclosed a Certificate of Articles of Merger issued by the Utah Department of Commerce and, although duplicative, a sundry notice formally evidencing the merger for your records, and a list of all wells, including injection wells, formerly operated by RGC.

Please change the Division's records to reflect the change in operator of these wells from RGC to Phillips. All operational questions should be directed to Phillips at the following address:

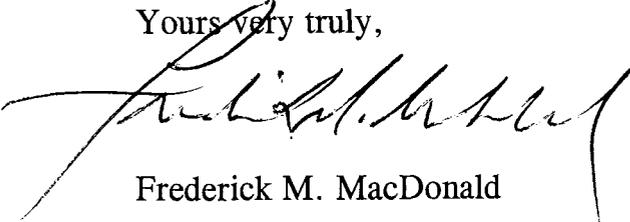
Phillips Petroleum Company  
Attn: Billy Stacy, Operations Manager  
P.O. Box 3368  
Englewood, CO 80155-3368  
Telephone No.: (720) 344-4984

Phillips currently has a bond on file with the Division (a copy of which is enclosed for your reference), but I understand an \$80,000 Letter of Credit is in the process of being substituted.

Mr. Jim Thompson  
January 29, 2001  
Page 2

On behalf of Phillips, I thank you for your cooperation. Should you have any further questions or concerns, please do not hesitate to contact me.

Yours very truly,

A handwritten signature in black ink, appearing to read "Frederick M. MacDonald", written over the typed name below.

Frederick M. MacDonald

FMM:cs  
2078.16  
Enclosures  
cc: W. H. Rainbolt  
Billy Stacy



Utah Department of Commerce  
 Division of Corporations & Commercial Code  
 160 East 300 South, 2nd Floor, Box 146705  
 Salt Lake City, UT 84114-6705  
 Phone: (801) 530-4849  
 Toll Free: (877) 526-3994 Utah Residents  
 Fax: (801) 530-6438  
 Web site: <http://www.commerce.state.ut.us>

Registration Number: 562960-0143  
 Business Name: PHILLIPS PETROLEUM COMPANY  
 Registered Date: JUNE 14, 1946

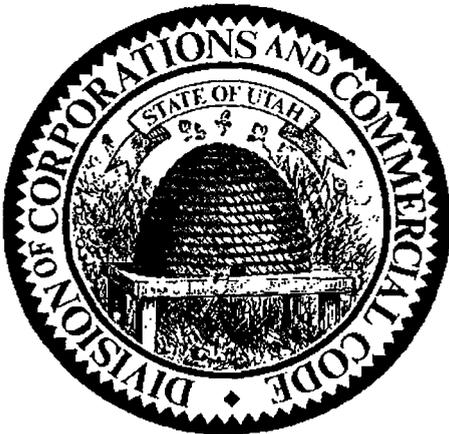
01/12/01

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## CERTIFICATE OF ARTICLES OF MERGER

THE UTAH DIVISION OF CORPORATIONS AND COMMERCIAL CODE ("DIVISION") HEREBY CERTIFIES THAT

ARTICLES OF MERGER WERE FILED WITH THIS OFFICE ON DECEMBER 12, 2000 MERGING RIVER GAS CORPORATION, A CORPORATION OF THE STATE OF ALABAMA, INTO PHILLIPS PETROLEUM COMPANY, THE SURVIVING CORPORATION WHICH IS OF THE STATE OF DELAWARE, AS APPEARS OF RECORD IN THE OFFICE OF THE DIVISION.



Ric Campbell  
 Acting Division Director of  
 Corporations and Commercial Code

6870 JOURNAL  
0017119

State of Delaware  
Office of the Secretary of State

PAGE 1

TS

12/13/2000  
Receipt Number: 188532  
Amount Paid: \$145.00

I, EDWARD J. FREEL, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF OWNERSHIP, WHICH MERGES:

"RIVER GAS CORPORATION", A ALABAMA CORPORATION, WITH AND INTO "PHILLIPS PETROLEUM COMPANY" UNDER THE NAME OF "PHILLIPS PETROLEUM COMPANY", A CORPORATION ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF DELAWARE, AS RECEIVED AND FILED IN THIS OFFICE THE SIXTH DAY OF DECEMBER, A.D. 2000, AT 10 O'CLOCK A.M.

AND I DO HEREBY FURTHER CERTIFY THAT THE EFFECTIVE DATE OF THE AFORESAID CERTIFICATE OF OWNERSHIP IS THE THIRTY-FIRST DAY OF DECEMBER, A.D. 2000, AT 11:59 O'CLOCK A.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.

12-12-00P04:02 RCVD

TAP  
FILED  
DEC 12 2000

Utah Div. Of Corp. & Comm. Code

State of Utah  
Department of Commerce  
Division of Corporations and Commercial Code  
I Hereby certify that the foregoing has been filed and approved on this 12 day of Dec 20 2000 in the office of this Division and hereby issue this Certificate thereof.

Examiner Ric Campbell Date 12/13/2000  
RIC CAMPBELL  
ACTING DIRECTOR



Edward J. Freel  
Edward J. Freel, Secretary of State  
AUTHENTICATION: 0837738

0064324 8100M  
001609453

DATE: 12-07-00

**CERTIFICATE OF OWNERSHIP AND MERGER**

**OF**

**RIVER GAS CORPORATION**

**(an Alabama corporation)**

**into**

**Phillips Petroleum Company**

**(a Delaware corporation)**

It is hereby certified that:

1. Phillips Petroleum Company [hereinafter sometimes referred to as the "Corporation"] is a business corporation of the State of Delaware.

2. The Corporation is the owner of all of the outstanding shares of each class of stock of River Gas Corporation, which is a business corporation of the State of Alabama.

3. The laws of the jurisdiction of organization of River Gas Corporation permit the merger of a business corporation of that jurisdiction with a business corporation of another jurisdiction.

4. The Corporation hereby merges River Gas Corporation into the Corporation.

5. The following is a copy of the resolutions adopted on November 21, 2000 by the Board of Directors of the Corporation to merge the said River Gas Corporation into the Corporation:

\*1. Phillips Petroleum Company, which is a business corporation of the State of Delaware and is the owner of all of the outstanding shares of River Gas Corporation, which is a business corporation of the State of Alabama, hereby merges River Gas Corporation into Phillips Petroleum Company pursuant to the provisions of the Alabama Business Corporation Act and pursuant to the

12-12-00P04:02 RCVD

provisions of Section 253 of the General Corporation Law of Delaware.

"2. The separate existence of River Gas Corporation shall cease at the effective time and date of the merger pursuant to the provisions of the Alabama Business Corporation Act; and Phillips Petroleum Company shall continue its existence as the surviving corporation pursuant to the provisions of Section 253 of the General Corporation Law of Delaware.

"3. The Articles of Incorporation of Phillips Petroleum Company are not amended in any respect by this Plan of Merger.

"4. The issued shares of River Gas Corporation shall not be converted or exchanged in any manner, but each said share which is issued immediately prior to the effective time and date of the merger shall be surrendered and extinguished.

"5. Each share of Phillips Petroleum Company outstanding immediately prior to the effective time and date of the merger is to be an identical outstanding share of Phillips Petroleum Company at the effective time and date of the merger.

"6. No shares of Phillips Petroleum Company and no shares, securities, or obligations convertible into such shares are to be issued or delivered under this Plan of Merger.

"7. The Board of Directors and the proper officers of Phillips Petroleum Company are hereby authorized, empowered, and directed to do any and all acts and things, and to make, execute, deliver, file, and/or record any and all instruments, papers, and documents which shall be or become necessary, proper, or convenient to carry out or put into effect any of the provisions of this Plan of Merger or of the merger herein provided for. "

" This Company approves that the effective time and date of the merger herein provided for in the State of Alabama shall be 11:59 p.m. on December 31, 2000."

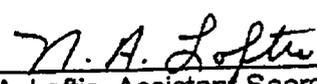
"Any Vice President, the Treasurer, any Assistant Treasurer, the Secretary, any Assistant Secretary, and each of them severally, be and hereby is authorized to make, execute,

deliver, file, and/or record any and all instruments, papers, and documents which shall be or become necessary, proper, or convenient to carry out or put into effect any of the provisions of these resolutions and to do or cause to be done all such acts as are necessary to give effect to the purpose and intent of the approval herein set forth."

6. This Certificate of Ownership and Merger shall be effective at 11:59 p.m. on December 31, 2000.

Executed on November 27, 2000

Phillips Petroleum Company

  
\_\_\_\_\_  
N. A. Loftis, Assistant Secretary



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office  
P.O. Box 45155  
Salt Lake City, UT 84145-0155

In Reply Refer To:  
3106  
UTU-47157 et al  
(UT-932)

JAN 30 2001

### NOTICE

Phillips Petroleum Company : Oil and Gas  
Attn: W. H. Rainbolt, Rocky Mtn. Region-Land :  
Box 1967 :  
Houston, TX 77251-1967 :

### Merger Recognized

Acceptable evidence has been filed in this office concerning the merger of River Gas Corporation into Phillips Petroleum Company with Phillips Petroleum Company being the surviving entity.

The oil and gas lease files and rights-of-way files identified on the enclosed exhibit have been noted as to the merger. The exhibit is the list supplied by the representative of the companies, and verified by our computerized records. We have not adjudicated the case files to determine if the entity affected by the merger holds an interest in the leases identified, nor have we attempted to identify leases where the entity is the operator on the ground, maintaining no vested record title or operating rights interest. We are notifying the Minerals Management Service and all applicable BLM offices of the merger by a copy of this notice. If additional documentation for a change of operator is required by our Field Offices, you will be contacted by them.

By recognition of the merger the obligor is automatically changed by operation of law from River Gas Corporation to Phillips Petroleum Company on Letter of Credit No. P-207337 (BLM Bond No. UT0829). A rider to BLM Bond No. ES0048 assuming any and all liabilities of BLM Bond No. UT0829 must be submitted for approval to the Eastern States Office, Attn: Bill Forbes, 7450 Boston Boulevard, Springfield, VA 22153. After the rider is approved, the Letter of Credit will be returned to the financial institution that issued it.

**ROBERT LOPEZ**

Robert Lopez  
Chief, Branch of  
Minerals Adjudication

Enclosure  
Exhibit of Leases

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FEB 02 2001

DIVISION OF  
OIL, GAS AND MINING

cc: Moab Field Office  
Vernal Field Office  
Price Field Office  
MMS—Reference Data Branch, MS 3130, P.O. Box 5860, Denver, CO 80217  
State of Utah, DOGM, Attn: Jim Thompson (Ste. 1210), Box 145801, SLC, UT 84114  
The Chase Manhattan Bank, Attn: Standby Letter of Credit Dept., 4 Chase Metrotech Center, 8<sup>th</sup> Floor  
Brooklyn, NY 11245  
Teresa Thompson (UT-931)  
LaVerne Steah (UT-942)  
Pruitt, Gushee & Bachtell, Attn: Frederick M. MacDonald, Suite 1850 Beneficial Life Tower,  
Salt Lake City, Utah 84111-1495  
BLM, Eastern States Office (Attn: Bill Forbes)

**OPERATOR CHANGE WORKSHEET**

**ROUTING**

1. GLH ✓		4-KAS ✓
2. CDW		5-78 ✓
3. JLT		6-FILE

Enter date after each listed item is completed

Change of Operator (Well Sold)

Designation of Agent

Operator Name Change (Only)

**X Merger**

The operator of the well(s) listed below has changed, effective: **12-31-2000**

<b>FROM:</b> (Old Operator):
RIVER GAS CORPORATION
Address: 6825 S. 5300 W. P. O. BOX 851
PRICE, UT 84501
Phone: 1-(435)-613-9777
Account N1605

<b>TO:</b> ( New Operator):
PHILLIPS PETROLEUM COMPANY
Address: P. O. BOX 3368
ENGLEWOOD, CO 80155-3368
Phone: 1-(720)-344-4984
Account N1475

**CA No.**

**Unit: DRUNKARDS WASH**

**WELL(S)**

NAME	API NO.	ENTITY NO.	SEC. TWN RNG	LEASE TYPE	WELL TYPE	WELL STATUS
FAUSETT D5	43-007-30351	12165	16-14S-09E	Fee	SWD	A
ARCADIA-TELONIS 1 (D-2)	43-007-30093	99990	19-14S-09E	Fee	SWD	A
UTAH D-4	43-007-30314	11256	24-14S-09E	State	SWD	A
UTAH M-1	43-007-30199	11256	26-14S-09E	State	SWD	A
UTAH D-9	43-007-30438	12771	32-14S-09E	State	SWD	A
USA D6	43-007-30100	12466	34-14S-09E	Federal	SWD	A
DRUNKARDS WASH 31-1 (D-1)	43-007-30040	11256	31-14S-10E	State	SWD	A
UTAH D8	43-007-30431	11256	12-15S-09E	State	SWD	A
RGC D-10	43-007-30520	12545	28-15S-09E	Fee	SWD	A
UTAH M-2	43-007-30066	2889	34-15S-09E	Federal	TW	A
SAMPINOS D-14	43-007-30567	12729	16-15S-10E	Fee	SWD	A
UTAH D-3	43-007-30290	11256	18-15S-10E	State	SWD	A
UTAH D7	43-015-30338	12404	02-16S-09E	State	SWD	A
D-11	43-015-30356	12572	13-16S-09E	Federal	SWD	A

**OPERATOR CHANGES DOCUMENTATION**

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 01/29/2001
2. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 01/29/2001
3. The new company has been checked through the **Department of Commerce, Division of Corporations Database** on: 02/15/2001

4. Is the new operator registered in the State of Utah: YES Business Number: 562960-0143
5. If **NO**, the operator was contacted contacted on: \_\_\_\_\_
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: 01/30/2001
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 the BIA has approved the operator change for all wells listed involved in a CA on: N/A
9. **Underground Injection Control ("UIC") Pro:** The 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: 02/22/2001

**DATA ENTRY:**

1. Changes entered in the **Oil and Gas Database** on: 02/20/2001
2. Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 02/20/2001
3. Bond information entered in RBDMS on: N/A
4. Fee wells attached to bond in RBDMS on: N/A

**STATE BOND VERIFICATION:**

1. State well(s) covered by Bond No.: 5952189

**FEE WELLS - BOND VERIFICATION/LEASE INTEREST OWNER NOTIFICATION:**

1. (R649-3-1) The **NEW** operator of any fee well(s) listed has furnished a bond: P-207328
2. The **FORMER** operator has requested a release of liability from their bond on: N/A  
The Division sent response by letter on: N/A
3. (R649-2-10) The **FORMER** 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: N/A

**FILMING:**

1. All attachments to this form have been **MICROFILMED** on: 2.22.01

**FILING:**

1. **ORIGINALS/COPIES** of all attachments pertaining to each individual well have been filed in each well file on: \_\_\_\_\_

**COMMENTS:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



Phillips Petroleum Company  
Houston, Texas 77001

Divisions of Oil, Gas, and Mining  
Attn: Mr. John Baza  
1594 West North Temple,  
Suite 1210, P. O. Box 145801  
Salt Lake City, UT 84114-5801

Re: Notice of Address Change, Merger and Name Change  
Address Change effective **December 2, 2002**  
Merger and Name Change effective **December 31, 2002**

Gentlemen:

1. Effective December 2, 2002, Phillips Petroleum Company will close its Englewood, Colorado Rocky Mountain Region office. After that time, all correspondence, notices and invoice for Land related matters should be directed to the address(es) noted below. Note that until December 31, 2002, all properties in which Phillips held an interest will continue to be operated by Phillips Petroleum Company, a wholly-owned subsidiary of ConocoPhillips.
2. On December 31, 2002, Phillips Petroleum Company and Conoco Inc. will merge, and the surviving corporation will be renamed "ConocoPhillips Company".

In accordance with the notice provisions of the Operating Agreements and other agreements, if any, between our companies, please adjust your company/organization records, effective for address purposes as of December 2, 2002, and for company name purposes, as of January 1, 2003, to reflect the following information for addressing and delivery of notices, invoicing and payment, and communications with ConocoPhillips Company. This will also apply to Lease Sale notices and other lease-related correspondence and notifications.

**U.S. Mail Address:**

ConocoPhillips Company  
P.O. Box 2197  
Houston, Texas 77252  
Attn: Chief Landman,  
San Juan/Rockies

**Physical Address & Overnight Delivery:**

ConocoPhillips Company  
550 Westlake Park Blvd.  
Three Westlake Park  
3WL, Room WL 9000  
Houston, Texas 77079  
Attn: Chief Landman,  
San Juan/Rockies

**All ballots and official notices/responses sent by facsimile transmission should be sent to the following contact:**

Attn: Chief Landman,  
San Juan/Rockies

Fax No.: 832-486-2688 or  
832-486-2687

Please contact the undersigned immediately if you have any questions. This notice does not apply to royalty inquiries, joint interest billings, or revenue remittances. Please continue to use the same addresses you are currently using for these matters

Sincerely,

*William Rainbat*

**RECEIVED**

DEC 02 2002

DIVISION OF  
OIL, GAS AND MINING

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

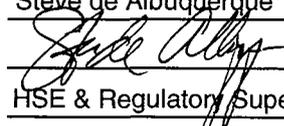
UIC FORM 5

**TRANSFER OF AUTHORITY TO INJECT**

Well Name and Number <u>See Attached List</u>	API Number <u>See List</u>
Location of Well Footage : <u>See Attached List</u> County : _____ QQ, Section, Township, Range: _____ State : <u>UTAH</u>	Field or Unit Name Lease Designation and Number

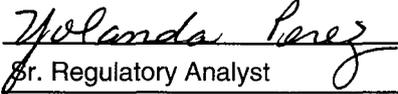
**EFFECTIVE DATE OF TRANSFER:** 1/1/2003

**CURRENT OPERATOR**

Company: <u>Phillips Petroleum Company</u>	Name: <u>Steve de Albuquerque</u>
Address: <u>980 Plaza Office</u>	Signature: 
<u>city Bartlesville state OK zip 74004</u>	Title: <u>HSE &amp; Regulatory Supervisor</u>
Phone: <u>(918) 661-4415</u>	Date: <u>12/30/2002</u>

Comments: Conoco Inc. and Phillips Petroleum Company merged to form ConocoPhillips Company. Please see attached list of wells effected by name change.

**NEW OPERATOR**

Company: <u>ConocoPhillips Company</u>	Name: <u>Yolanda Perez</u>
Address: <u>P. O. Box 2197, WL3 4066</u>	Signature: 
<u>city Houston state TX zip 77252</u>	Title: <u>Sr. Regulatory Analyst</u>
Phone: <u>(832) 486-2329</u>	Date: <u>12/30/2002</u>

Comments: Conoco Inc. and Phillips Petroleum Company merged to form ConocoPhillips Company. Please see attached list of wells effected by name change.

(This space for State use only)

Transfer approved by:   
Title: Tech. Services Manager

Approval Date: 2-3-03

Comments: D5, D2 + D3 are due for MIT.

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**JAN 08 2003**  
DIV. OF OIL, GAS & MINING

UIC Well List

SWD WELLS							
api	well_name	section	township	range	well_type	well_status	lease_type
4300730093	ARCADIA-TELONIS 1 (D-2)	19	140S	090E	WD	A	FEE
4301530356	D-11	13	160S	090E	WD	A	FEDERAL
4300730040	DRUNKARDS WASH 31-1 (D-1 )	31	140S	100E	WD	A	STATE
4300730351	FAUSETT D5	16	140S	090E	WD	A	FEE
4301530531	PPCO D13	30	160S	090E	WD	DRL	FEE
4300730520	RGC D-10	28	150S	090E	WD	A	FEE
4300730567	SAMPINOS D-14	16	150S	100E	WD	A	FEE
4300730100	USA D6	34	140S	090E	WD	A	FEDERAL
4300730819	UTAH D15	34	130S	090E	WD	APD	STATE
4300730290	UTAH D-3	18	150S	100E	WD	A	STATE
4300730314	UTAH D-4	24	140S	090E	WD	A	STATE
4301530338	UTAH D7	02	160S	090E	WD	A	STATE
4300730431	UTAH D8	12	150S	090E	WD	A	STATE
4300730438	UTAH D-9	32	140S	090E	WD	A	STATE
4300730199	UTAH M-1	26	140S	090E	TW	A	STATE
4300730066	UTAH M-2	34	150S	090E	TW	A	FEDERAL

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DIV. OF OIL, GAS & MINING

List of Produced Water Ponds/Pits

	Permit/ License No.	State/Federal		Immediate Name Change Required		Other Immediate Actions Required*		Agency	Agency Contact Name	Agency Contact Number
		S	F	Y	N	Y	N			
1	EVAPORATION POND	X		X				Utah Dept of Natural Resources, Dept. of Oil Gas and Mining	Gil Hunt	(801) 538-5340
2	D-1 POND	X		X				Utah Dept of Natural Resources, Dept. of Oil Gas and Mining	Gil Hunt	(801) 538-5340
3	D-2 (C-2) POND	X		X				Utah Dept of Natural Resources, Dept. of Oil Gas and Mining	Gil Hunt	(801) 538-5340
4	D-3 POND	X		X				Utah Dept of Natural Resources, Dept. of Oil Gas and Mining	Gil Hunt	(801) 538-5340
* Describe: OPERATIONAL PERMITS FOR PRODUCED WATER PONDS										

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JAN 08 2003

DIV. OF OIL, GAS & MINING

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

FORM 9

5. LEASE DESIGNATION AND SERIAL NUMBER:

**SUNDRY NOTICES AND REPORTS ON WELLS**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

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:

1. TYPE OF WELL OIL WELL  GAS WELL  OTHER All

8. WELL NAME and NUMBER:  
See Attached List

2. NAME OF OPERATOR:  
Phillips Petroleum Company

9. API NUMBER:  
See List

3. ADDRESS OF OPERATOR:  
980 Plaza Office CITY Bartlesville STATE OK ZIP 74004

PHONE NUMBER:  
(918) 661-4415

10. FIELD AND POOL, OR WILDCAT:

4. LOCATION OF WELL  
FOOTAGES AT SURFACE: See Attached List

COUNTY:

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 (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"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input checked="" 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 checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<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.

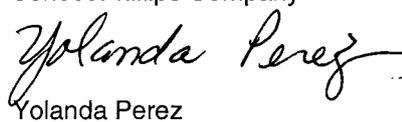
Conoco Inc. was merged into Phillips Petroleum Company, the surviving corporation, on December 31, 2002. In connection with this merger and effective on the same date, the name of the surviving corporation was changed to "ConocoPhillips Company". We are requesting that a new Operator Number be assigned to ConocoPhillips Company.

Please send production reporting forms to Herb Henderson at ConocoPhillips Company, 315 S. Johnstone, 980 Plaza Office, Bartlesville, OK 74004. Herb's phone number is 918-661-4415.

Current Operator  
Phillips Petroleum Company

  
Steve de Albuquerque

New Operator  
ConocoPhillips Company

  
Yolanda Perez

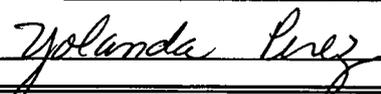
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**JAN 08 2003**

DIV. OF OIL, GAS & MINING

NAME (PLEASE PRINT) Yolanda Perez

TITLE Sr. Regulatory Analyst

SIGNATURE 

DATE 12/30/2002

(This space for State use only)

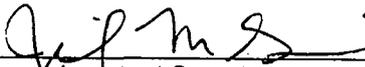


## SECRETARY'S CERTIFICATE

I, the undersigned, Jennifer M. Garcia, Assistant Secretary of ConocoPhillips Company, formerly Phillips Petroleum Company, organized and existing under and by virtue of the laws of the State of Delaware (the "Corporation"), hereby certify that:

1. As Assistant Secretary I am authorized to execute this certificate on behalf of the Corporation.
2. The attached photocopy of the Certificate of Amendment to the Restated Certificate of Incorporation of Phillips Petroleum Company (to be renamed ConocoPhillips Company) is a true and correct copy as filed in the office of the Secretary of State of Delaware on the 12<sup>th</sup> day of December 2002, with an effective date of January 1, 2003 and such Certificate of Amendment has not been modified, amended, rescinded or revoked and is in full force and effect as of the date hereof.
3. The attached photocopy of the Certificate of Merger of Conoco Inc. with and into ConocoPhillips Company is a true and correct copy as filed in the office of the Secretary of State of Delaware on the 12<sup>th</sup> day of December 2002, with an effective date of December 31, 2002 and such Certificate of Merger has not been modified, amended, rescinded or revoked and is in full force and effect as of the date hereof.

IN WITNESS WHEREOF, I have hereunto set my hand as Assistant Secretary and affixed the corporate seal of the Corporation this 7th day of January 2003.

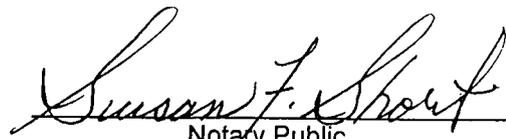
  
 Assistant Secretary  
 ConocoPhillips Company

STATE OF TEXAS                   §  
   §  
 COUNTY OF HARRIS           §

This instrument was acknowledged before me on January 7, 2003, by Jennifer M. Garcia, Assistant Secretary of ConocoPhillips Company, a Delaware corporation, on behalf of said Corporation.



RECEIVED  
 JAN 08 2003

  
 Notary Public

# Delaware

PAGE 1

*The First State*

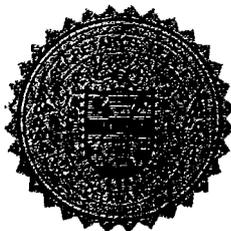
I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AMENDMENT OF "PHILLIPS PETROLEUM COMPANY", CHANGING ITS NAME FROM "PHILLIPS PETROLEUM COMPANY" TO "CONOCOPHILLIPS COMPANY", FILED IN THIS OFFICE ON THE TWELFTH DAY OF DECEMBER, A.D. 2002, AT 1:41 O'CLOCK P.M.

AND I DO HEREBY FURTHER CERTIFY THAT THE EFFECTIVE DATE OF THE AFORESAID CERTIFICATE OF AMENDMENT IS THE THIRTY-FIRST DAY OF DECEMBER, A.D. 2002, AT 11 O'CLOCK P.M.

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JAN 08 2003

DIV. OF OIL, GAS & MINING



*Harriet Smith Windsor*

Harriet Smith Windsor, Secretary of State

AUTHENTICATION: 2183360

0064324 8100

030002793

DATE: 01-02-03

**CERTIFICATE OF AMENDMENT**

to the

**RESTATED CERTIFICATE OF INCORPORATION**

of

**PHILLIPS PETROLEUM COMPANY  
(to be renamed ConocoPhillips Company)**

Phillips Petroleum Company ("Phillips"), a corporation organized and existing under the General Corporation Law of the State of Delaware (the "DGCL"), hereby certifies that:

1. The amendments to Phillips' Restated Certificate of Incorporation set forth below were duly adopted in accordance with the provisions of Section 242 of the DGCL and have been consented to in writing by the sole stockholder of Phillips in accordance with Section 228 of the DGCL.

2. Phillips' Restated Certificate of Incorporation is hereby amended by deleting Article I thereof and replacing in lieu thereof a new Article I reading in its entirety as follows:

"The name of the corporation (which is hereinafter referred to as the "Corporation") is ConocoPhillips Company."

3. Phillips' Restated Certificate of Incorporation is hereby amended by deleting Section 1 of Article IV thereof and replacing in lieu thereof a new Section 1 reading in its entirety as follows:

"Section 1. The Corporation shall be authorized to issue 2,100 shares of capital stock, of which 2,100 shares shall be shares of Common Stock, \$.01 par value ("Common Stock")."

4. Pursuant to Section 103(d) of the DGCL, this amendment will become effective at 11:00 p.m., Eastern time, on December 31, 2002.

IN WITNESS WHEREOF, Phillips has caused this certificate to be executed this  
12th day of December, 2002.

PHILLIPS PETROLEUM COMPANY

By:   
Name: Rick A. Harrington  
Title: Senior Vice President, Legal,  
and General Counsel

RECEIVED  
JAN 08 2003  
DIV. OF OIL, GAS & MINING

# Delaware

PAGE 1

*The First State*

I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF MERGER, WHICH MERGES:

"CONOCO INC.", A DELAWARE CORPORATION,

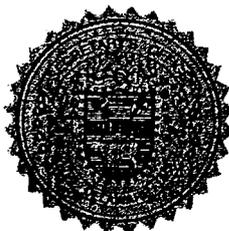
WITH AND INTO "CONOCOPHILLIPS COMPANY" UNDER THE NAME OF "CONOCOPHILLIPS COMPANY", A CORPORATION ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF DELAWARE, AS RECEIVED AND FILED IN THIS OFFICE THE TWELFTH DAY OF DECEMBER, A.D. 2002, AT 1:44 O'CLOCK P.M.

AND I DO HEREBY FURTHER CERTIFY THAT THE EFFECTIVE DATE OF THE AFORESAID CERTIFICATE OF MERGER IS THE THIRTY-FIRST DAY OF DECEMBER, A.D. 2002, AT 11:59 O'CLOCK P.M.

RECEIVED

JAN 08 2003

DIV. OF OIL, GAS & MINING



0064324 8100M

030002793

*Harriet Smith Windsor*

Harriet Smith Windsor, Secretary of State

AUTHENTICATION: 2183370

DATE: 01-02-03

**CERTIFICATE OF MERGER**

of

**Conoco Inc.**  
**(a Delaware corporation)**

with and into

**ConocoPhillips Company**  
**(a Delaware corporation)**

Phillips Petroleum Company, a Delaware corporation to be renamed ConocoPhillips Company prior to the effective time of this certificate of merger (the "Surviving Corporation"), in compliance with the requirements of the General Corporation Law of the State of Delaware (the "DGCL") and desiring to effect a merger of Conoco Inc., a Delaware corporation formerly incorporated under the name Du Pont Holdings, Inc. (the "Merging Corporation" and together with the Surviving Corporation, the "Constituent Corporations"), with and into the Surviving Corporation, and acting by its duly authorized officer, DOES HEREBY CERTIFY that:

**First:** As of the date hereof, the name and state of incorporation of each of the Constituent Corporations of the merger are as follows:

<u>NAME</u>	<u>STATE OF INCORPORATION</u>
PHILLIPS PETROLEUM COMPANY	Delaware
CONOCO INC.	Delaware

**Second:** An agreement and plan of merger has been approved, adopted, certified, executed and acknowledged by each of the Constituent Corporations in accordance with the requirements of Section 251 of the DGCL;

**Third:** The name of the Surviving Corporation will be ConocoPhillips Company;

**Fourth:** The Certificate of Incorporation of ConocoPhillips Company immediately prior to the merger shall be the Certificate of Incorporation of the Surviving Corporation until such time as it may be amended in accordance with applicable law and the provisions thereof,

**Fifth:** The executed agreement and plan of merger is on file at an office of the Surviving Corporation, the address of which is 600 North Dairy Ashford, Houston, Texas 77079;

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DIV. OF OIL, GAS & MINING

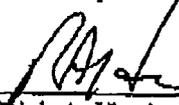
**Sixth:** A copy of the agreement and plan of merger will be furnished by the Surviving Corporation, on request and without cost, to any stockholder of any Constituent Corporation; and

**Seventh:** Pursuant to Section 103(d) of the DGCL, this certificate of merger will become effective at 11:59 p.m., Eastern time, on December 31, 2002.

Dated: December 12, 2002

**PHILLIPS PETROLEUM COMPANY**  
(a Delaware corporation)

75

By:   
Name: Rick A. Harrington  
Title: Senior Vice President, Legal,  
and General Counsel

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STATE OF UTAH  
DEPARTMENT OF COMMERCE  
REGISTRATION

CONOCOPHILLIPS COMPANY

EFFECTIVE  
06/14/1946

EXPIRATION  
\*RENEWAL

REFERENCE NUMBER(S), CLASSIFICATION(S) & DETAIL(S)

Corporation - Foreign - Profit  
562960-0143

UNITED STATES CORP CO  
CONOCOPHILLIPS COMPANY  
GATEWAY TOWER EAST STE 900  
10 EAST SOUTH TEMPLE  
SLC UT 84133

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JAN 08 2003

DIV. OF OIL, GAS & MINING

STATE OF UTAH  
DEPARTMENT OF COMMERCE  
DIVISION OF CORPORATIONS & COMMERCIAL CODE  
REGISTRATION

EFFECTIVE DATE: 06/14/1946

EXPIRATION DATE: \*RENEWAL

ISSUED TO: CONOCOPHILLIPS COMPANY



REFERENCE NUMBER(S), CLASSIFICATION(S) & DETAIL(S)

562960-0143 Corporation - Foreign - Profit

\*RENEWAL

You will need to renew your registration each anniversary date of the effective date.

Exceptions: DBAs and Business Trusts renew every three (3) years from the effective date.



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Eastern States Office  
7450 Boston Boulevard  
Springfield, Virginia 22153

IN REPLY REFER TO  
3106.8(932.34)WF

January 16, 2003

### NOTICE

ConocoPhillips Company : Oil & Gas Leases  
P.O. Box 7500 :  
Bartlesville, Oklahoma 74005 :

#### Merger/Name Change Recognized

Acceptable evidence was received in this office on January 14, 2003, concerning the change of name of Phillips Petroleum Company to **ConocoPhillips Company** and the merger of **Conoco Incorporated** into **ConocoPhillips Company** on Federal oil and gas leases, with **ConocoPhillips Company being the surviving entity.**

The Secretary of the State of Delaware certified the effective date of this merger effective December 31, 2002.

The oil and gas lease files identified on the enclosed exhibit have been noted to the merger. The exhibit was compiled from a list of leases obtained from your list of leases. Eastern States has not abstracted the lease files to determine if the entities affected by this merger hold an interest in the leases identified nor have we attempted to identify leases where the entities are the operator on the ground maintaining no vested record title or operating rights interest. We are notifying the Minerals Management Service and all applicable Bureau of Land Management offices of this merger and name change by a copy of this notice. If additional documentation for changes of operator are required by our Field Offices, you will be contacted by them.

If you identify other leases in which the merging entity maintain an interest, please contact this office and we will appropriately document those files with a copy of this Notice.

By Operation of law the name of the principal on Nationwide Oil and Gas Bond held by Conoco Incorporated (ES0085) has been changed to ConocoPhillips Company.

If you have any questions, please contact Bill Forbes at 703-440-1536.

*S/ Wilbert B. Forbes*

Wilbert B. Forbes  
Land Law Examiner  
Branch of Use Authorization  
Division of Resources Planning, Use  
and Protection

bc: JFO, BLM State Offices, MMS, ES RF, 930 RF, ES-932;  
Bforbes:wbf:01/16/03:440-1536/ConocoPhillips Co

**OPERATOR CHANGE WORKSHEET**

ROUTING	
1. GLH	<input checked="" type="checkbox"/>
2. CDW	<input type="checkbox"/>
3. FILE	<input type="checkbox"/>

Change of Operator (Well Sold)

Designation of Agent/Operator

Operator Name Change

**X Merger**

The operator of the well(s) listed below has changed, effective: **12-31-02**

<b>FROM: (Old Operator):</b>	<b>TO: ( New Operator):</b>
PHILLIPS PETROLEUM COMPANY	CONOCOPHILLIPS COMPANY
Address: 980 Plaza Office	Address: P O BOX 2197, WL3 4066
Bartlesville, OK 74004	HOUSTON, TX 77252
Phone: 1-(918)-661-4415	Phone: 1-(832)-486-2329
Account No. N1475	Account No. N2335

**CA No. Unit:**

WELL(S)	SEC TWN RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
UTAH D-15	34-13S-09E	43-007-30819	99999	STATE	SWD	APD
FAUSETT D-5	16-14S-09E	43-007-30351	12165	FEE	SWD	A
ARCADIA-TELONIS 1 (D-2)	19-14S-09E	43-007-30093	99990	FEE	SWD	A
UTAH D-4	24-14S-09E	43-007-30314	11256	STATE	SWD	A
UTAH M-1	26-14S-09E	43-007-30199	11256	STATE	TW	A
UTAH D-9	32-14S-09E	43-007-30438	12771	STATE	SWD	A
USA D-6	34-14S-09E	43-007-30100	12466	FEDERAL	SWD	A
UTAH D-8	12-15S-09E	43-007-30431	11256	STATE	SWD	A
RGC D-10	28-15S-09E	43-007-30520	12545	FEE	SWD	A
UTAH M-2	34-15S-09E	43-007-30066	2889	FEDERAL	TW	A
DRUNKARDS WASH 31-1 (D-1)	31-14S-10E	43-007-30040	11256	STATE	SWD	A
SAMPINOS D-14	16-15S-10E	43-007-30567	12729	FEE	SWD	A
UTAH D-3	18-15S-10E	43-007-30290	11256	STATE	SWD	A
UTAH D-7	02-16S-09E	43-015-30338	12404	STATE	SWD	A
D-11	13-16S-09E	43-015-30356	12572	FEDERAL	SWD	A
PPCO D13	30-16S-09E	43-015-30531	99999	FEE	SWD	DRL

**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: 01/08/2003
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 01/08/2003
- The new company has been checked through the **Department of Commerce, Division of Corporations Database** on: 02/03/2003
- Is the new operator registered in the State of Utah: YES Business Number: 562960-0143
- If **NO**, the operator was contacted on: \_\_\_\_\_

6. (R649-9-2) Waste Management Plan has been received on: IN PLACE

7. **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: 01/14/2003

8. **Federal and Indian Units:**

The BLM or BIA has approved the successor of unit operator for wells listed on: 01/14/2003

9. **Federal and Indian Communization Agreements ("CA"):**

The BLM or BIA has approved the operator for all wells listed within a CA on: 01/14/2003

10. **Underground Injection Control ("UIC")** The 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: 02/04/2003

**DATA ENTRY:**

- Changes entered in the **Oil and Gas Database** on: 02/03/2003
- Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 02/03/2003
- Bond information entered in RBDMS on: N/A
- Fee wells attached to bond in RBDMS on: N/A

**STATE WELL(S) BOND VERIFICATION:**

1. State well(s) covered by Bond Number: 8140-60-24

**FEDERAL WELL(S) BOND VERIFICATION:**

1. Federal well(s) covered by Bond Number: 8015-16-69

**INDIAN WELL(S) BOND VERIFICATION:**

1. Indian well(s) covered by Bond Number: N/A

**FEE WELL(S) BOND VERIFICATION:**

- (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number 6196922
- The **FORMER** operator has requested a release of liability from their bond on: N/A  
The Division sent response by letter on: N/A

**LEASE INTEREST OWNER NOTIFICATION:**

3. (R649-2-10) The **FORMER** 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: N/A

**COMMENTS:**

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STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

ORIGINAL

**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: <b>ML-38665</b>	
6. If Indian, Allottee or Tribe Name: <b>N/A</b>	
7. Unit Agreement Name: <b>UTU67921X Drunkards Wash</b>	
8. Well Name and Number: <b>Utah Disposal #8</b>	
9. API Well Number: <b>43-007-30431</b>	
10. Field or Pool, or Wildcat: <b>Drunkards Wash</b>	
1. Type of Well: <b>OIL</b> <input type="checkbox"/> <b>GAS</b> <input type="checkbox"/> <b>OTHER</b> <input checked="" type="checkbox"/>	County: <b>Carbon County</b>
2. Name of Operator: <b>ConocoPhillips Company</b>	State: <b>Utah</b>
3. Address and Telephone Number: <b>6825 South 5300 West, P.O. Box 851, Price, UT 84501 (435) 613-9777</b>	
4. Location of Well Footages: <b>1342' FNL, 350' FWL</b>	
QQ, Sec., T., R., M.: <b>W/2, NW/4, SEC.12, T15S, R09E, SLB &amp; M</b>	

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

NOTICE OF INTENT (Submit in Duplicate)	SUBSEQUENT REPORT (Submit Original Form Only)
<input type="checkbox"/> Abandon <input type="checkbox"/> Repair Casing <input type="checkbox"/> Change of Plans <input type="checkbox"/> Convert to Injection <input type="checkbox"/> Fracture Treat or Acidize <input type="checkbox"/> Multiple Completion <input type="checkbox"/> Other _____ Approximate date work will start _____	<input type="checkbox"/> Abandon * <input type="checkbox"/> Repair Casing <input type="checkbox"/> Change of Plans <input type="checkbox"/> Convert to Injection <input type="checkbox"/> Fracture Treat or Acidize <input checked="" type="checkbox"/> Other <u>Mechanical Integrity Test</u> Date of work completion <u>09/20/04</u>
<input type="checkbox"/> New Construction <input type="checkbox"/> Pull or Alter Csg <input type="checkbox"/> Recomplete <input type="checkbox"/> Reperforate <input type="checkbox"/> Vent or Flare <input type="checkbox"/> Water Shut-Off	<input type="checkbox"/> New Construction <input type="checkbox"/> Pull or Alter Csg <input type="checkbox"/> Reperforate <input type="checkbox"/> Vent or Flare <input type="checkbox"/> Water Shut-Off

Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION REPORT 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.)

A Mechanical Integrity test was conducted on the D-8 disposal well on 9/20/04. Prior to the test, a seal bore packer with tailpipe assembly was run and set with top of packer at 5590' GL. Top perforation is at 6028' GL. An "XN" plug was set in a profile nipple on the tailpipe below the packer and the 7" casing was tested to 1200 psi for 15 minutes with no leak-off.

Mark Jones from the DOGM was present for the pressure test.

Accepted by the  
Utah Division of  
Oil, Gas and Mining

Date: 11-15-04  
By: [Signature]

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OCT 01 2004

DIV. OF OIL, GAS & MINING

13.

Name & Signature: Michael Ward Michael E. Ward Title: Engineer Date: 09/27/2004

(This space for state use only)

**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 type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Disposal</u>			5. LEASE DESIGNATION AND SERIAL NUMBER: <b>ML-38665</b>
2. NAME OF OPERATOR: <b>ConocoPhillips Company</b>			6. IF INDIAN, ALLOTTEE OR TRIBE NAME: <b>N/A</b>
3. ADDRESS OF OPERATOR: P.O. Box 51810    CITY <u>Midland</u> STATE <u>Tx</u> ZIP <u>79710</u>		PHONE NUMBER: <b>(432) 688-6943</b>	7. UNIT or CA AGREEMENT NAME: <b>UTU67921X Drunkards Wash</b>
4. LOCATION OF WELL FOOTAGES AT SURFACE: <u>1342' FNL &amp; 350 FWL</u>			8. WELL NAME and NUMBER: <b>Utah D8</b>
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <u>W2NW 12 15S 9E</u>			9. API NUMBER: <b>4300730431</b>
COUNTY: <u>Carbon</u>			10. FIELD AND POOL, OR WILDCAT: <b>Drunkards Wash</b>
STATE: <b>UTAH</b>			

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>12/20/2007</u>	<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>Perforations</u>
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only)  Date of work completion:			

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

ConocoPhillips Company respectfully request to perform the attached workover for the possible production of the Dakota formation. If the workover proves production and production equipment to be set, there is no additional disturbance to the location needed at this time. Please see attached procedure.

NAME (PLEASE PRINT) <u>Donna Williams</u>	TITLE <u>Sr. Regulatory Specialist</u>
SIGNATURE	DATE <u>12/13/2007</u>

**RECEIVED**

(This space for State use only)

**APPROVED BY THE STATE  
OF UTAH DIVISION OF  
OIL, GAS, AND MINING**

DATE: 12/20/07  
BY:

**DEC 14 2007**  
DIV. OF OIL, GAS & MINING

(5/2000)

\* A CROP shall be set @ ± 6000' (immediately above injection perfs) and 100' of cement on top of CROP (6000' to 5900') prior to putting well on production from Dakota Fm.

December 6, 2007

Utah D-8

API# 430073043100

Drunkard's Wash, Carbon County Utah

Steps:

- 1) RIH and set CIBP at 4,000'.
- 2) RIH with GR/CCL and perforating gun loaded with 4-SPF, 60 degree phasing.
- 3) Perforate 2736' – 2747' (11') & 2754' – 2755' (1'). POOH with gun.
- 4) Allow well to flow to the onsite facilities and record production rates and pressure.
- 5) If the well will not flow, RU workover rig and run artificial lift equipment.
- 6) Collect production tests on artificial lift.
- 7) Decision point - Decide if the well will produce at economic rates without a fracture stimulation. If not, frac.
- 8) POOH with artificial lift equipment.
- 9) RU frac stimulation equipment.
- 10) Frac the well at 40-50 BPM, as follows:
  - Load well w/ 5# Linear (4)
  - Spearhead 1500 gals. 15% HCl Ferchek SC Acid – breakdown perms @ 8 BPM
  - Pump acid into perms w/ 5# Linear
  - Shut-in for approx. 15 minutes
  - Pump pad of 15,500 gals. 5# Linear (4) (30% pad)
  - Pump 4000 gals. 20# Delta Frac (18) w/ 0.25 ppg 16/30 sand
  - Pump 4000 gals. 20# Delta Frac (18) w/ 0.5 ppg 16/30 sand (45% pad)
  - Pump 5000 gals. 20# Delta Frac (18) w/ 1 ppg 16/30 sand
  - Pump 5000 gals. 20# Delta Frac (18) w/ 2 ppg 16/30 sand
  - Pump 5000 gals. 20# Delta Frac (18) w/ 3 ppg 16/30 sand
  - Pump 5000 gals. 20# Delta Frac (18) w/ 4 ppg 16/30 sand
  - Pump 5000 gals. 20# Delta Frac (18) w/ 5 ppg 16/30 sand
  - Pump 4000 gals. 20# Delta Frac (18) w/ 6 ppg 16/30 sand
  - Flush w/ 2950 gals. 5# Linear (4)
- 11) CO well to CIBP and run artificial lift equipment. PWOP.

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

AMENDED REPORT  FORM 8  
(highlight changes)

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

5. LEASE DESIGNATION AND SERIAL NUMBER:  
**ML-38665**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:  
**N/A**

7. UNIT or CA AGREEMENT NAME:  
**Drunkards Wash UTU 67921X**

8. WELL NAME and NUMBER:  
**Utah D-8**

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

b. TYPE OF WORK: NEW WELL  HORIZ. LATS.  DEEP-EN  RE-ENTRY  DIFF. RESVR.  OTHER \_\_\_\_\_

2. NAME OF OPERATOR:  
**ConocoPhillips Company**

9. API NUMBER:  
**4300730431**

3. ADDRESS OF OPERATOR: P.O. Box 51810 CITY **Midland** STATE **Tx** ZIP **79710** PHONE NUMBER: **(432) 688-6943**

10. FIELD AND POOL, OR WILDCAT:  
**Drunkards Wash**

4. LOCATION OF WELL (FOOTAGES)  
AT SURFACE: **1342 FNL & 350 FWL**

AT TOP PRODUCING INTERVAL REPORTED BELOW:

AT TOTAL DEPTH: **Same**

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:  
**W2NW 12 15S 9E**

12. COUNTY: **Carbon** 13. STATE: **UTAH**

14. DATE SPUDDED: **7/7/1998** 15. DATE T.D. REACHED: **7/21/1998** 16. DATE COMPLETED: **7/2/2008** ABANDONED  READY TO PRODUCE

17. ELEVATIONS (DF, RKB, RT, GL):  
**5816' GL**

18. TOTAL DEPTH: MD **6,950** 19. PLUG BACK T.D.: MD **5,844** 20. IF MULTIPLE COMPLETIONS, HOW MANY? \* \_\_\_\_\_

21. DEPTH BRIDGE MD **6156' to 6000'** PLUG SET: **TVD with 156' cut**

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)  
**On File**

23. WAS WELL CORED? NO  YES  (Submit analysis)  
WAS DST RUN? NO  YES  (Submit report)  
DIRECTIONAL SURVEY? NO  YES  (Submit copy)

**24. CASING AND LINER RECORD (Report all strings set in well)**

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
	13 3/8	48#	0	314		325 sxs			
12 1/4"	9 5/8	36#	0	2,511		575 sxs			
8 3/4	7	26#	0	6,932		1205 sxs			

**25. TUBING RECORD**

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 7/8"	2,370							

**26. PRODUCING INTERVALS**

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
(A) Dakota	2,735	2,748			2,735 2,748	6 spf		Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
(B) Dakota	2,753	2,758			2,753 2,758	6 spf		Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>

**27. PERFORATION RECORD**

**28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.**

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
2735-2758	F w/308 bbls Delta Frac 140R + 67800# 16/30 brown sand

29. ENCLOSED ATTACHMENTS:  ELECTRICAL/MECHANICAL LOGS  GEOLOGIC REPORT  DST REPORT  DIRECTIONAL SURVEY  
 SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION  CORE ANALYSIS  OTHER: \_\_\_\_\_

30. WELL STATUS:

**RECEIVED**

**SEP 09 2008**

31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED: 7/14/2008	TEST DATE: 7/14/2008	HOURS TESTED: 24	TEST PRODUCTION RATES: →	OIL – BBL: 0	GAS – MCF: 260	WATER – BBL: 34	PROD. METHOD: Pump
CHOKE SIZE: 21/64	TBG. PRESS.	CSG. PRESS. 600	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	INTERVAL STATUS:

INTERVAL B (As shown in item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	INTERVAL STATUS:

INTERVAL C (As shown in item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	INTERVAL STATUS:

INTERVAL D (As shown in item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	INTERVAL STATUS:

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

Sold

33. SUMMARY OF POROUS ZONES (Include Aquifers):

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.

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
				On File from Original Completion	

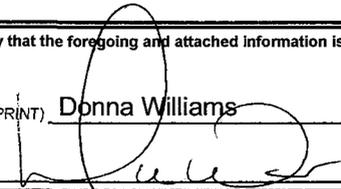
35. ADDITIONAL REMARKS (Include plugging procedure)

Well was recompleted to the Dakota formation.

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

NAME (PLEASE PRINT) Donna Williams

TITLE Sr. Regulatory Specialist

SIGNATURE 

DATE 9/4/2008

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

\* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

\*\* ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

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

UTAH DIVISION OF OIL, GAS AND MINING

NOTICE OF REPORTING PROBLEMS

Operator: Conocophillips Company Account: N2335 Today's Date: 09/16/2008

Problems:

- Late Report(s)
- Inaccurate Report(s)
- Incomplete Report(s)
- Other: No Subsequent Reports

Failure to submit reports in a timely, accurate, and complete manner may result in the issuance of a Notice of Violation by the Division of Oil, Gas and Mining, and may result in the Division pursuing enforcement action as outlined in Rule R649-10, Administrative Procedures, and Section 40-6-11 of the Utah Code.

**To avoid compliance action, these reporting problems should be resolved within 7 days.**

Send reports to:

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

Fax to:

(801) 359-3940

43 007 30431  
Utah D8  
15S 9E 12

Type of Report	Month(s) of Problem Report		
<input type="checkbox"/> Production – Form 10 <input type="checkbox"/> Disposition – Form 11 <input type="checkbox"/> Gas Plant – Form 13 <input type="checkbox"/> Enhanced Recovery – UIC Form 2 <input type="checkbox"/> Injection – UIC Form 3 <input type="checkbox"/> Other _____			
Type of Report	Well Name(s)	API Number(s)	Drilling Commenced
<input type="checkbox"/> Spud Notice – Form 9 <input type="checkbox"/> Drilling Reports – Form 9 <input type="checkbox"/> Well Completion Report – Form 8 <input checked="" type="checkbox"/> Other <u>Subsequent Sundry</u>	<input checked="" type="checkbox"/> List Attached		

Description of Problem:

Operator has submitted sundry of intents on the following wells that have been approved by DOGM. Per Rule 649-3-23, a subsequent report shall be submitted on Form 9, Sundry Notice, with in 30 days after completion. The report should show workover results, well status, work completion date, new perforation depths, etc

If you have questions or concerns regarding this matter, please contact Rachel Medina at (801) 538-5260 .

cc: Compliance File  
RAM  
Well File  
CHD



**ENTITY ACTION FORM**

Operator: ConocoPhillips Company Operator Account Number: N 2335  
 Address: P.O. Box 51810  
city Midland  
state Tx zip 79710 Phone Number: (432) 688-6943

**Well 1**

API Number	Well Name	QQ	Sec	Twp	Rng	County
4300730431	Utah D8	W2NW	12	15S	9E	Carbon
Action Code	Current Entity Number	New Entity Number		Spud Date		Entity Assignment Effective Date
A	99999	17088		Recomplete 6/24/08		9/25/08
<b>Comments:</b> DK TA						

**Well 2**

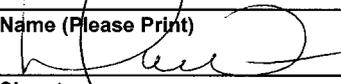
API Number	Well Name	QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number		Spud Date		Entity Assignment Effective Date
<b>Comments:</b>						

**Well 3**

API Number	Well Name	QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number		Spud Date		Entity Assignment Effective Date
<b>Comments:</b>						

**ACTION CODES:**

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

Donna Williams  
 Name (Please Print)  
  
 Signature  
 Sr. Regulatory Specialist  
 Title  
 Date 9/24/2008

**RECEIVED**

**SEP 24 2008**