

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

5. Lease Designation and Serial No.  
Fee

6. If Indian, Allottee or Tribe Name

7. Unit Agreement Name

8. Farm or Lease Name

Bountiful Livestock

9. Well No.

1

10. Field and Pool, or Wildcat

Overthrust - Wildcat

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

Sec 16 T4N, R8E

12. County or Parrish 13. State

Summit, Wyoming

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work

DRILL

DEEPEN

PLUG BACK

b. Type of Well

Oil Well

Gas Well

Other

Single Zone

Multiple Zone

2. Name of Operator

Amoco Production Company

3. Address of Operator

P. O. Box 17675, Salt Lake City, Utah 84117

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

At surface

NW/4 SW/4 Section 16, 804.9' FWL 1941.2' FSL

At proposed prod. zone

Same

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

18 Road miles Southwest of Evanston, Wyoming

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

804.9'

16. No. of acres in lease

17. No. of acres assigned to this well

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

19. Proposed depth

11,500'

20. Rotary or cable tools

Rotary to TD

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

7283' ungraded ground

22. Approx. date work will start\*

When approved

23. PROPOSED CASING AND CEMENTING PROGRAM

Size of Hole	Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement
	20" (Surface)	133 + 94# (New)	2000'	CL G w/2% cacl to surface
12-1/4"	9-5/8" (Oil String)	43.5, 40 & 36 (New)	9000'	600 sx cl "G"
* 17-1/4"	13-3/8" (Intermed)	88.2#, 72# & 61# (New)	7050'	3000 sx CIG w/18% salt
8-3/4"	7" (Liner)	29# (New)	11500'	600 sx cl "G"

\* If salt is present, hole will be reamed to 17-1/4" and the 13-3/8" intermediate string will be set. If salt is not present, the 13-3/8" casing will not be run.

Propose to test the Nugget and other Jurassic formations for commercial accumulations of hydrocarbons.

The Bountiful Livestock Well #1 has been moved Southeast 75 degrees, 0 minutes 0 seconds a total of 150 feet from the C-NW/4 SW/4 Section 16, 660' FWL 1980' FSL - T4N, R8E. Subject well was moved so as to increase the distance from a large drainage in the immediate vicinity.

SEE ATTACHMENTS

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

24. Signed D. Davidson Title District Adm. Supervisor Date 1-17-79

(This space for Federal or State office use)

Permit No. 43-043-30096 Approval Date .....

Approved by ..... Title ..... Date .....

Conditions of approval, if any:

\*See Instructions On Reverse Side

ATTACHMENT TO FORM OGC-1A

BOUNTIFUL LIVESTOCK WELL #1

1. Geologic name of the surface formation: Wasatch.

2. Estimated tops of geological markers:

Evanston - 1365'	Stump (subthrust) - 7600'
Gannett - 3840'	Preuss (subthrust) - 7900'
Stump - 5515'	Twin Creek (subthrust) - 9000'
Preuss - 5815'	Nuggett (subthrust) - 10,000'
Twin Creek - 7000'	
Gannett (subthrust) - 7400'	

3. Estimated depths anticipated to encounter water, oil, gas or other mineral-bearing formations:

Water, oil and gas anticipated at 7000'

4. Casing Program - see Form OGC-1a item #23

5. Operators minimum specifications for pressure control equipment are explained on attached schematic diagram. Testing of such is to be performed daily and noted on the IADC Daily Drilling Report. After running surface casing and prior to drilling out, BOP and other pressure equipment will be tested to the full working pressure rating as shown on the attached diagram. Thereafter, the BOP will be checked daily for mechanical operations only and will be noted on the IADC Daily Drilling Report.

6. Mud Program:

Surface to 2000'	- Native 8.4-8.5#/gal
2000'-7050'	- LSND, 8.4-8.6#/gal, nugget to be penetrated w/minimum obtainable mud weight.
7050-TD	- LSND, 8.4-8.7#/gal, nugget to be penetrated w/minimum obtainable mud weight.

7. Auxiliary Equipment

Kelly Cock: floor sub with a full opening valve. 3" choke manifold with remote control choke, 2500 psi wp.

Mud loggers (2-man unit) on location from surface to total depth.

8. Testing Program:

Drill stem tests to be conducted as determined by Amoco's Denver Division Exploration Department.

Logging Program:

DIL-GR*	- Base of surface casing to total depth
DLL-MSFL**	- Base of surface casing to total depth
Sonic-GR	- Base of surface casing to total depth
CNL-FDC-GR	- Base of surface casing to total depth

Logging Program Continued:

FIL-Dipmeter - Over zones of interest

- \* Fresh Mud
- \*\* Salty Mud

Coring Program:

Propose to take cores within the Nugget, actual core point and interval to be determined by wellsite geologist.

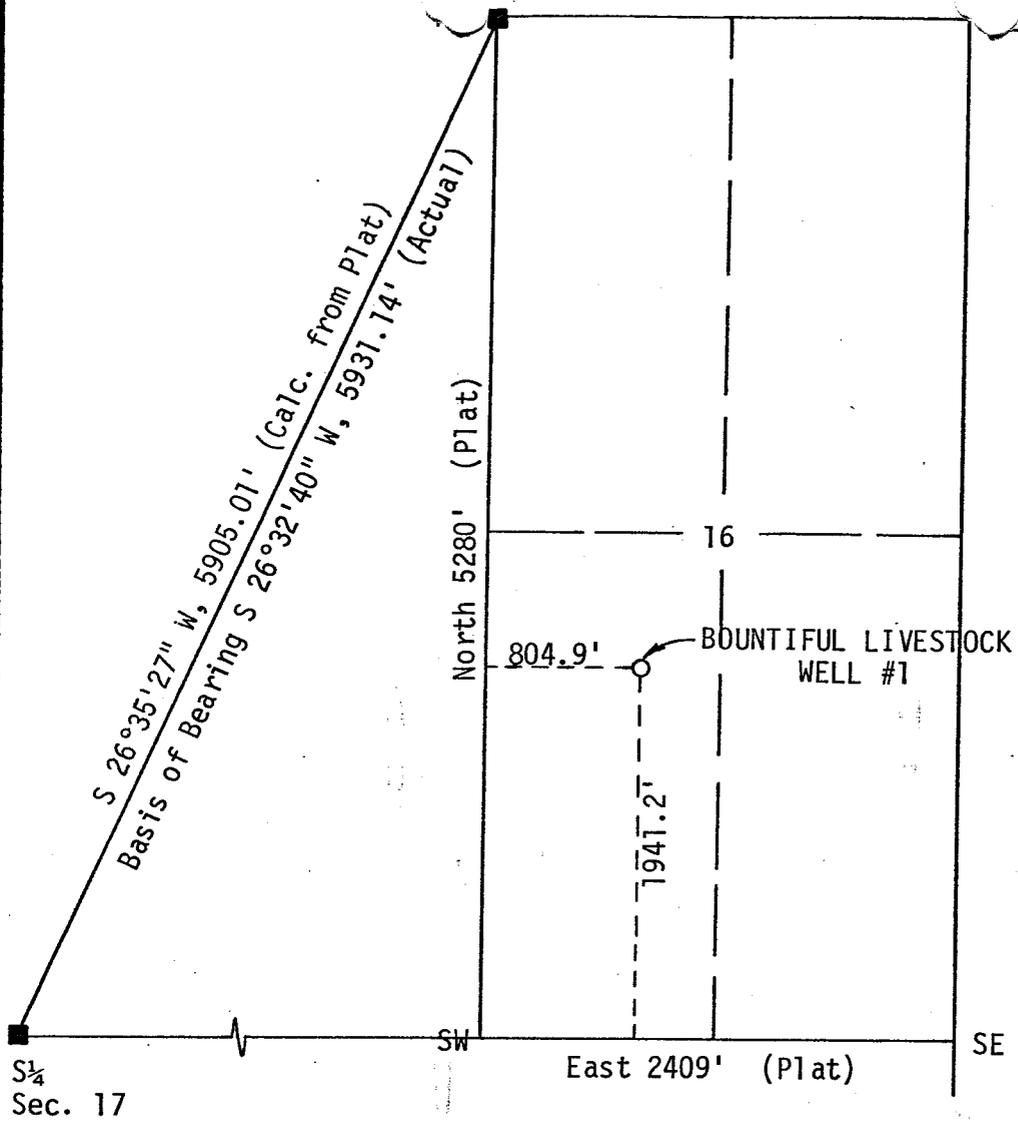
Stimulation Program

After evaluation of open hole logs to determine possible productive zones, anticipate stimulating 3 zones within the Twin Creek and Nugget. Each zone to be stimulated w/approximately 5000 gal 15% HCL acid.

9. No abnormal pressure or temperature or potential hazards are anticipated. Anticipated bottom hole pressure - 6300 psi - casing head 9-5/8" 5000# wp. Tubing head, 10" x 5000# x 7-1/16" 10,000# wp.
10. The anticipated starting date will be when approved. The duration of the operations will be approximately sixty days.

T 4 N

R 8 E



SCALE: 1" = 1000'

- Found Brass Cap
- Found Stone
- ⊙ Set Brass Cap
- ⊖ Found Stone - Set Brass Cap
- Hub and Tack

S 1/4 Sec. 17

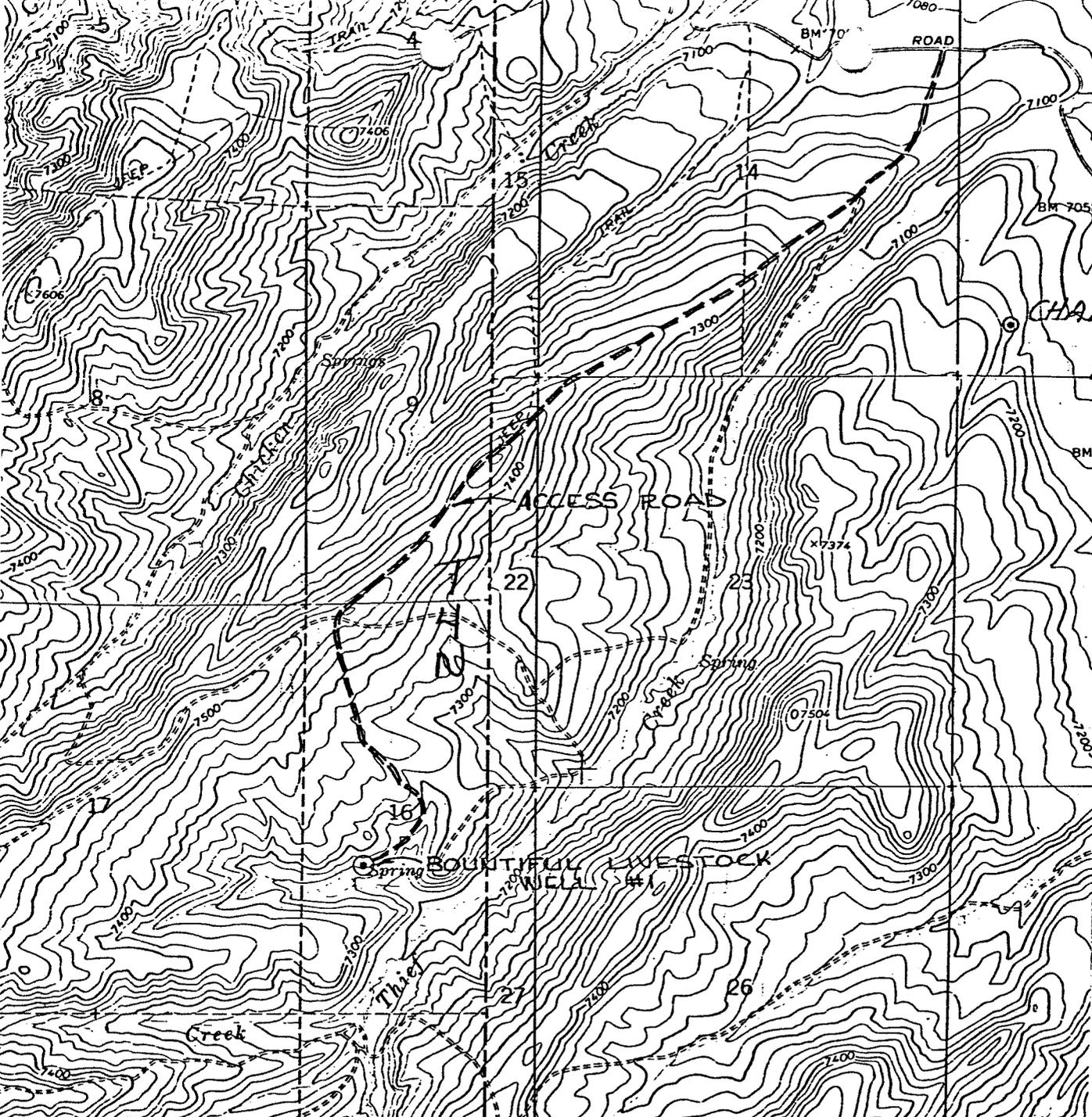
I, John A. Proffit of Evanston, Wyoming certify that in accordance with a request from R.C. Buckley of Evanston, Wyoming for Amoco Production Company I made a survey on the \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_ for Location and Elevation of the Bountiful Livestock Well #1 as shown on the above map, the wellsite is in the NW 1/4 SW 1/4 of Section 16, Township 4 North, Range 8 East of the Salt Lake Base Meridian, Summit County, State of Utah, Elevation is \_\_\_\_\_ Feet \_\_\_\_\_ Datum \_\_\_\_\_

Reference point \_\_\_\_\_  
 Reference point \_\_\_\_\_  
 Reference point \_\_\_\_\_  
 Reference point \_\_\_\_\_

John A. Proffit 1/11/79  
 JOHN A. PROFFIT UTAH R.L.S. NO. 2860

DATE: 1-11-79  
 JOB NO.: 78-10-57

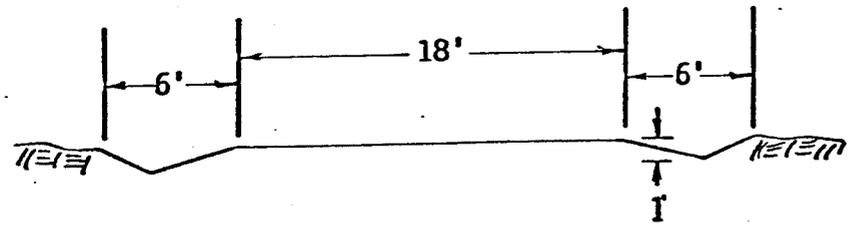
UINTA ENGINEERING & SURVEYING, INC.  
 808 MAIN STREET, EVANSTON, WYOMING



SCALE: 1"=200'

R8E

NOTE: Sketch is from a 7½' U.S.G.S. Quadrangle "Porcupine Ridge, Utah-Wyoming"



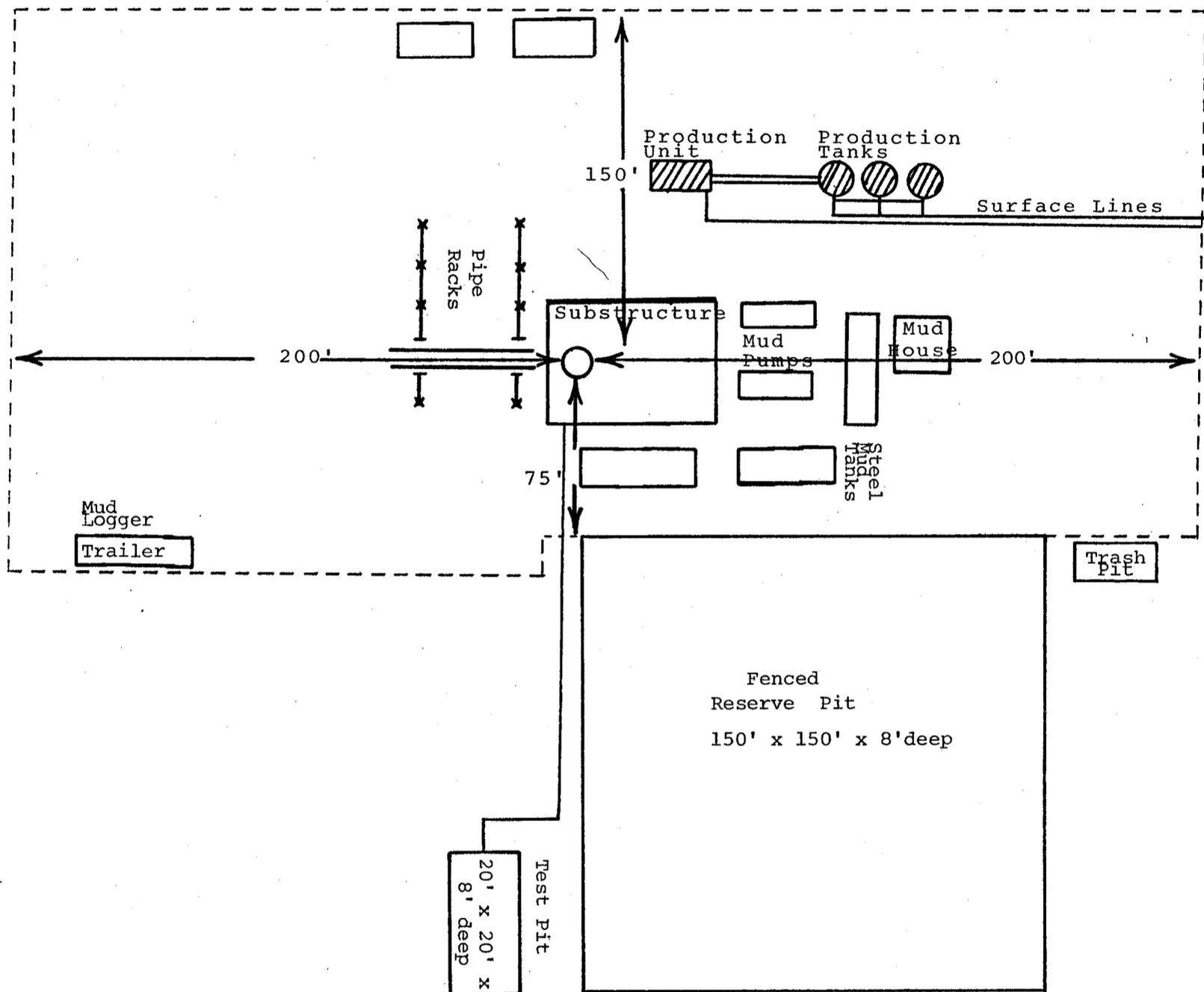
CROSS SECTION OF ACCESS ROAD  
(no scale)

SKETCH MAP OF  
ACCESS ROAD  
FOR  
AMOCO PRODUCTION COMPANY  
(Bountiful Livestock Well #1)  
THROUGH  
Secs. 14, 22, 23, T13N, R121W, 6th P.  
Uinta County, Wyoming  
Secs. 9 & 16, T4N, R8E, SLBM  
Summit County, Utah  
Uinta Engineering & Surveying, Inc.  
P.O. Box 746 - 808 Main Street  
Evanston, Wyoming 82930

78-10-57

1-11-79

Tool Pushers Trailer      Amoco Company Trailer



⊗ = Shows permanent production equipment to be installed after drilling rig has moved out.

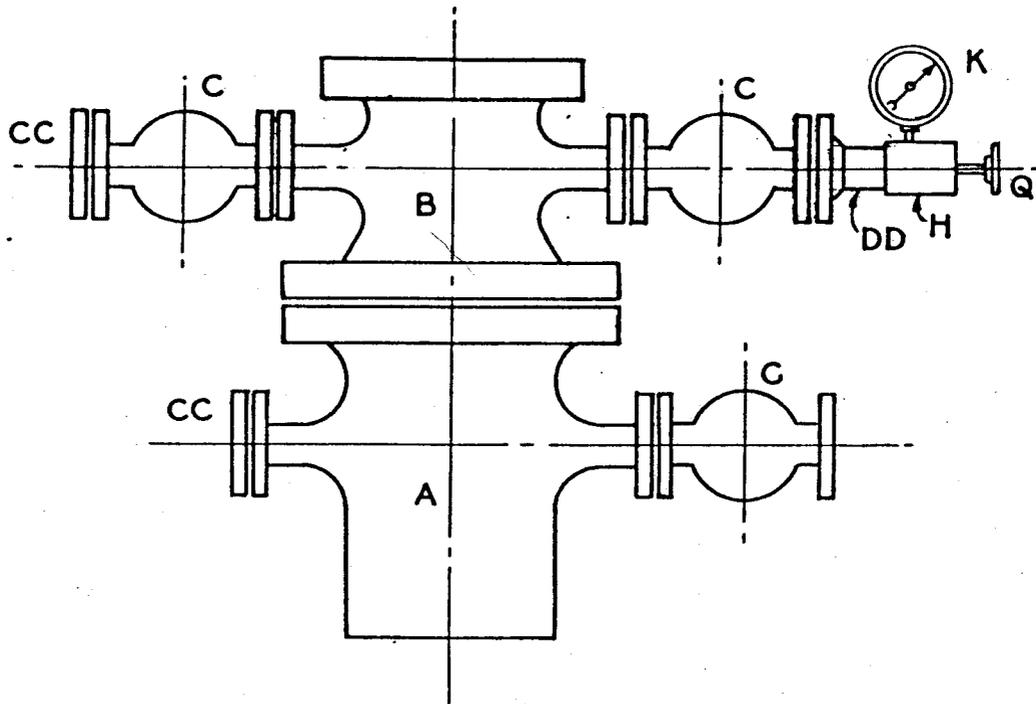
----- Dotted lines indicated perimeter of leveled location.

The fenced pit used for production will be covered if any fluid is present. The drilling and production pads will be constructed with dozers and graders using native material.

TYPICAL  
LOCATION  
LAYOUT

AMOCO PRODUCTION COMPANY  
P. O. Box 17675  
SALT LAKE CITY, UTAH 84117

EXHIBIT "D"



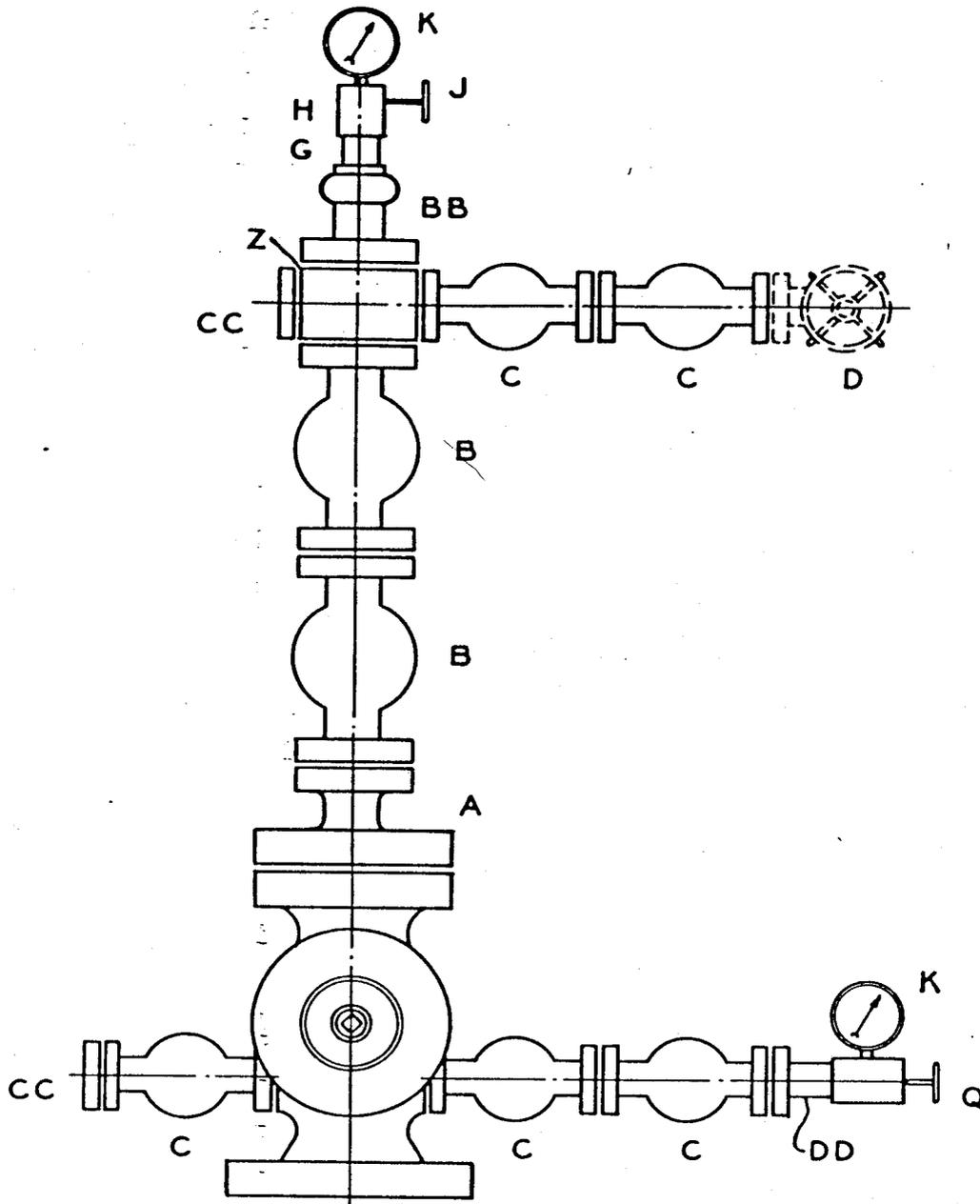
FOR 5,000# W. P. PRIMARY CASINGHEAD,  
AND 5,000# W.P. SECONDARY CASINGHEAD.

IF INTERMEDIATE STRING OF CASING NOT REQUIRED,  
LOWER (PRIMARY) HEAD WILL BE ONLY CASINGHEAD USED.

Amoco Production Company  
STANDARD BASIC CASINGHEAD HOOK-UP  
5 000 # W. P.

SCALE: NONE  
DR. MBB AP.  
DRG. A-8343  
No.

Refer to Specification No. W-8  
Effective Date: June 1, 1973



Amoco Production Company  
STANDARD BASIC WELL HEAD HOOK-UP  
10,000# W.P.  
(CHOKE STEM UP STREAM)

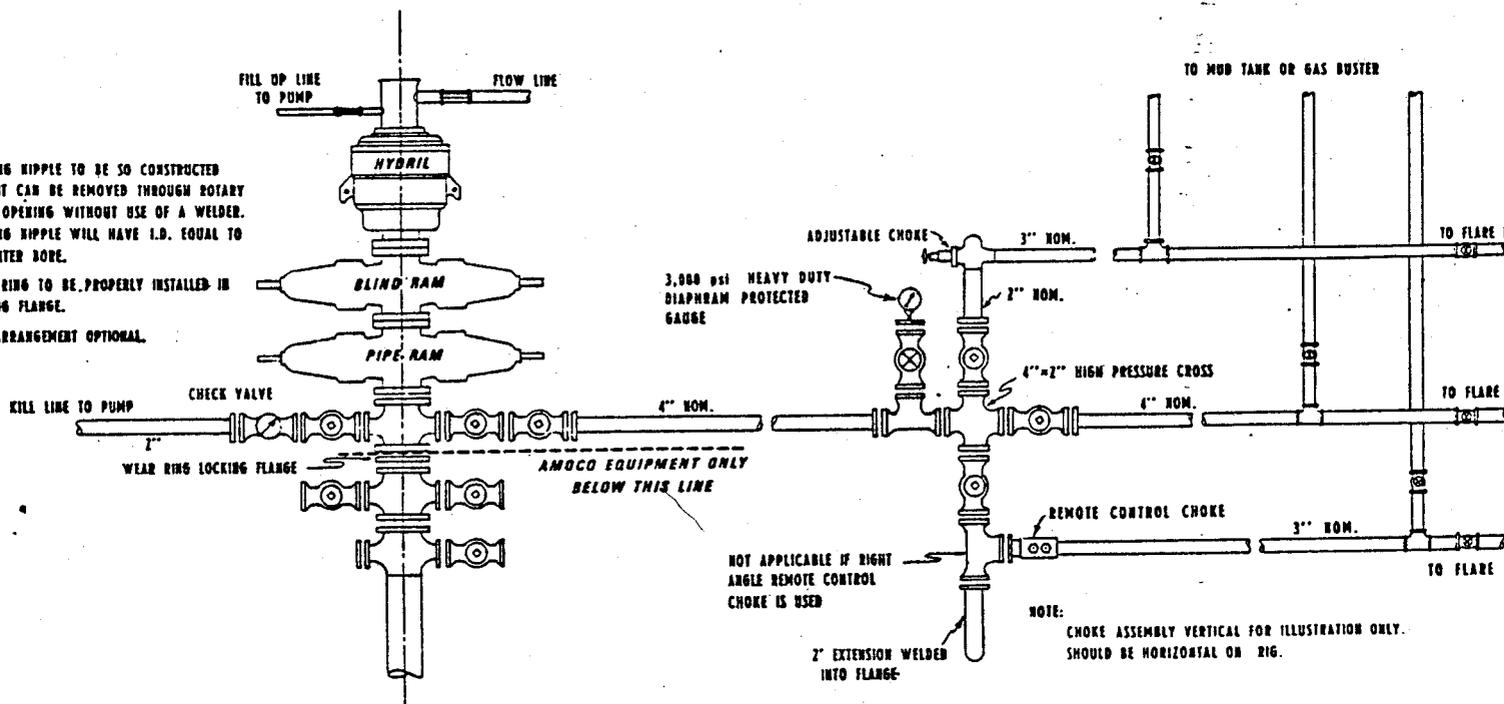
SCALE: NONE  
DR. W.J.F. AP. *WJF*  
DRG. NO. A-8080

**Amoco Production Company**  
**MINIMUM BLOW-OUT PREVENTER REQUIREMENTS**  
 3,000 psi W.P.  
 2/78

**ARRANGEMENT IF MANIFOLD IS ON SIDE OF RIG**

**NOTE:**

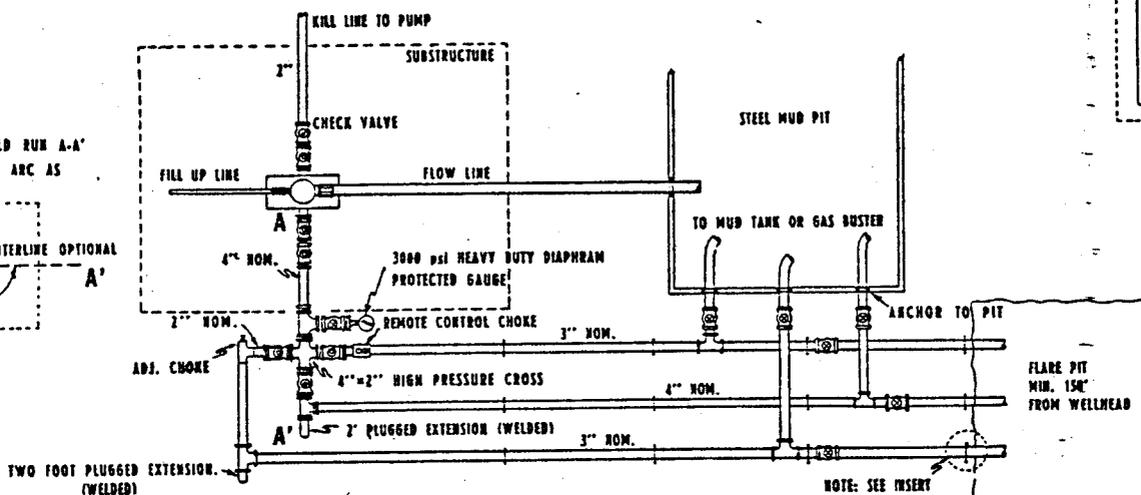
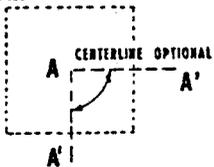
- 1 DRILLING NIPPLE TO BE SO CONSTRUCTED THAT IT CAN BE REMOVED THROUGH ROTARY TABLE OPENING WITHOUT USE OF A WELDER. DRILLING NIPPLE WILL HAVE I.D. EQUAL TO PREVENTER BORE.
- 2 WEAR RING TO BE PROPERLY INSTALLED IN LOCKING FLANGE.
- 3 RAM ARRANGEMENT OPTIONAL.



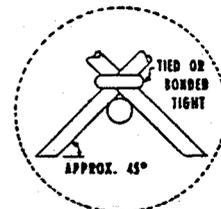
**ARRANGEMENT IF MANIFOLD IS UNDER PIPE SLIDE**

**NOTE:**

DIRECTION OF MANIFOLD RUN A-A' OPTIONAL WITHIN 90° ARC AS SHOWN BELOW



**INSERT**



**NOTE:**

- 1 BLOW-OUT PREVENTERS, ALL FITTINGS AND PIPE MUST BE 3,000 psi W.P. MINIMUM.
- 2 ALL FITTINGS UPSTREAM OF MANIFOLD TO BE FLANGED, SCREWED OR WELDED CONNECTIONS DOWNSTREAM FROM CHOKES PERMISSIBLE. ADJUSTABLE CHOKES MAY HAVE SCREWED CONNECTIONS.
- 3 ALL VALVES TO BE FULL OPENING, PLUG OR GATE METAL TO METAL SEAL, AND 3,000 psi W.P. MINIMUM.
- 4 SAFETY VALVE MUST BE AVAILABLE ON RIG FLOOR AT ALL TIMES WITH PROPER CONNECTION. VALVE TO BE FULL BORE 3,000 psi W.P. MINIMUM.
- 5 ALL LINES DOWNSTREAM OF CHOKES TO BE SECURELY ANCHORED EVERY 30' AND REAR END OF CHOKES LINES.
- 6 EQUIPMENT THROUGH WHICH BIT MUST PASS SHALL BE AS LARGE AS INSIDE DIAMETER OF THE CASING BEING DRILLED THROUGH.
- 7 KELLY COCK ON KELLY.
- 8 EXTENSION WRENCHES AND HAND WHEELS TO BE PROPERLY INSTALLED AND BRACED AT ALL TIMES.
- 9 AUXILIARY BLOW-OUT PREVENTER CONTROL STATION TO BE LOCATED AS CLOSE TO DRILLERS POSITION AS FEASIBLE.
- 10 BLOW-OUT PREVENTER CLOSING EQUIPMENT TO INCLUDE 20 GALLON ACCUMULATOR, AND TWO INDEPENDENT SOURCES OF PUMP POWER ON EACH CLOSING UNIT. INSTALLATION TO BE LOCATED AT LEAST 75' FROM STACK ON DRILLERS' SIDE OF RIG.
- 11 ALL UNMARKED PIPE MINIMUM 3" O.D. NOM. GRADE J-55 TUBING OR MIN. 3,000 psi W.P. LINE PIPE.
- 12 REMOTE CONTROL CHOKES INSTALLATION AND LINE TO BE STRAIGHT AS POSSIBLE WITH NO 90° TURNS BELOW CHOKES.

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

\*\* FILE NOTATIONS \*\*

Date: Jan. 22 -  
Operator: Ameco Production Co.  
Well No: Beautiful Liberty Co. #1  
Location: Sec. 16 T. 4N R. 8E County: Summit Co.

File Prepared:  Entered on N.I.D.:   
Card Indexed:  Completion Sheet:

API NUMBER: 43-043-30096

CHECKED BY:

Administrative Assistant [Signature]

Remarks: OC - Irregular Section - No other wells in Section

Petroleum Engineer M.J.M. 2-15-79

Remarks:

Director \_\_\_\_\_

Remarks:

INCLUDE WITHIN APPROVAL LETTER:

Bond Required:  Survey Plat Required:   
Order No.  Surface Casing Change   
to \_\_\_\_\_

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

O.K. Rule C-3  O.K. In \_\_\_\_\_ Unit

Other:

Letter Written/Approved

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

SUBMIT IN DUPLICATE\*  
(Other instructions on reverse side)

5. Lease Designation and Serial No.

Fee

6. If Indian, Allottee or Tribe Name

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work

DRILL

DEEPEN

PLUG BACK

b. Type of Well

Oil Well

Gas Well

Other

Single Zone

Multiple Zone

2. Name of Operator

Amoco Production Company

3. Address of Operator

P.O. Box 17675, Salt Lake City, Utah 84117

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

At surface  
NW/4 SW/4 Section 16, 686.1' FWL 2137.4' FSL

At proposed prod. zone

Same

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

18 Road Miles Southwest of Evanston, Wyoming Summit, Utah

15. Distance from proposed\* location to nearest property or lease line, ft.

686.1'

16. No. of acres in lease

17. No. of acres assigned to this well

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

19. Proposed depth

11,500

20. Rotary or cable tools

Rotary to TD

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

7305' Ungraded Ground

22. Approx. date work will start\*

When approved

23.

PROPOSED CASING AND CEMENTING PROGRAM

Size of Hole	Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement
	20" (Surface)	133# & 94# (New)	2000'	CL "G" W/2% CaCl <sub>2</sub> to surface
12 1/4"	9 5/8" (Oil String)	43.5, 40 & 36# (New)	9000'	600 Sx CL "G"
* 17 1/4"	13 5/8" (Intermediate)	88.2, 72, and 61# (New)	7050'	3000 Sx CL "G" W/18% Salt
8 3/4"	7 (Liner)	29#	11500'	600 Sx CL "G"

\* If salt is present, hole will be reamed to 17 1/4" and the 13 3/8" intermediate string will be set. If salt is not present, the 13 3/8" casing will not be run.

Propose to test the Nugget and other Jurassic formations for commercial accumulations of hydrocarbons.

Revision to show a change in location. Location has been moved approximately 157' North of the C-NW/4 SW/4 Sec 16, 660' FWL 1980' FSL-T4N-R8E, as requested by the surface owner. Surface owner requested location move so as to remove the well site from a dry drainage used as a travel route by his cattle.

All other information remains unchanged from that reported in our application of January 17, 1979.

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

24.

Original Signed By  
D. S. DAVIDSON

Signed

Title District Adm. Supervisor

Date 1/29/79

(This space for Federal or State office use)

Permit No.

Approval Date

Approved by

Title

Date

Conditions of approval, if any:

Logging Program Continued:

FIL-Dipmeter - Over zones of interest

- \* Fresh Mud
- \*\* Salty Mud

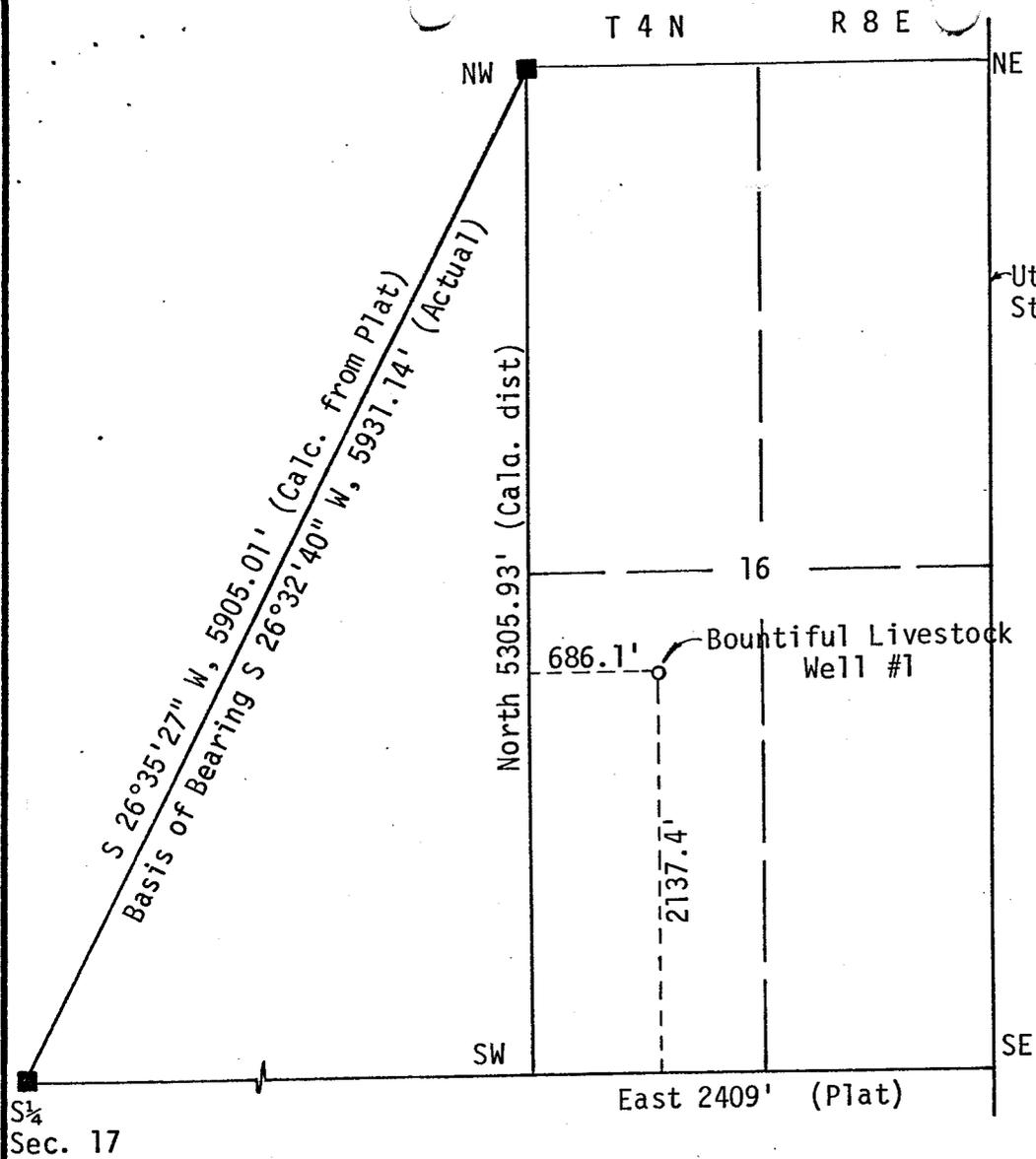
Coring Program:

Propose to take cores within the Nugget, actual core point and interval to be determined by wellsite geologist.

Stimulation Program

After evaluation of open hole logs to determine possible productive zones, anticipate stimulating 3 zones within the Twin Creek and Nugget. Each zone to be stimulated w/approximately 5000 gal 15% HCL acid.

9. No abnormal pressure or temperature or potential hazards are anticipated. Anticipated bottom hole pressure - 6300 psi - casing head 9-5/8" 5000# wp. Tubing head, 10" x 5000# x 7-1/16" 10,000# wp.
10. The anticipated starting date will be when approved. The duration of the operations will be approximately sixty days.



S $\frac{1}{4}$   
Sec. 17

Utah/Wyoming  
Stateline



SCALE: 1" = 1000'

- Found Brass Cap
- Found Stone
- ⊙ Set Brass Cap
- ⊙ Found Stone - Set Brass Cap
- Hub and Tack

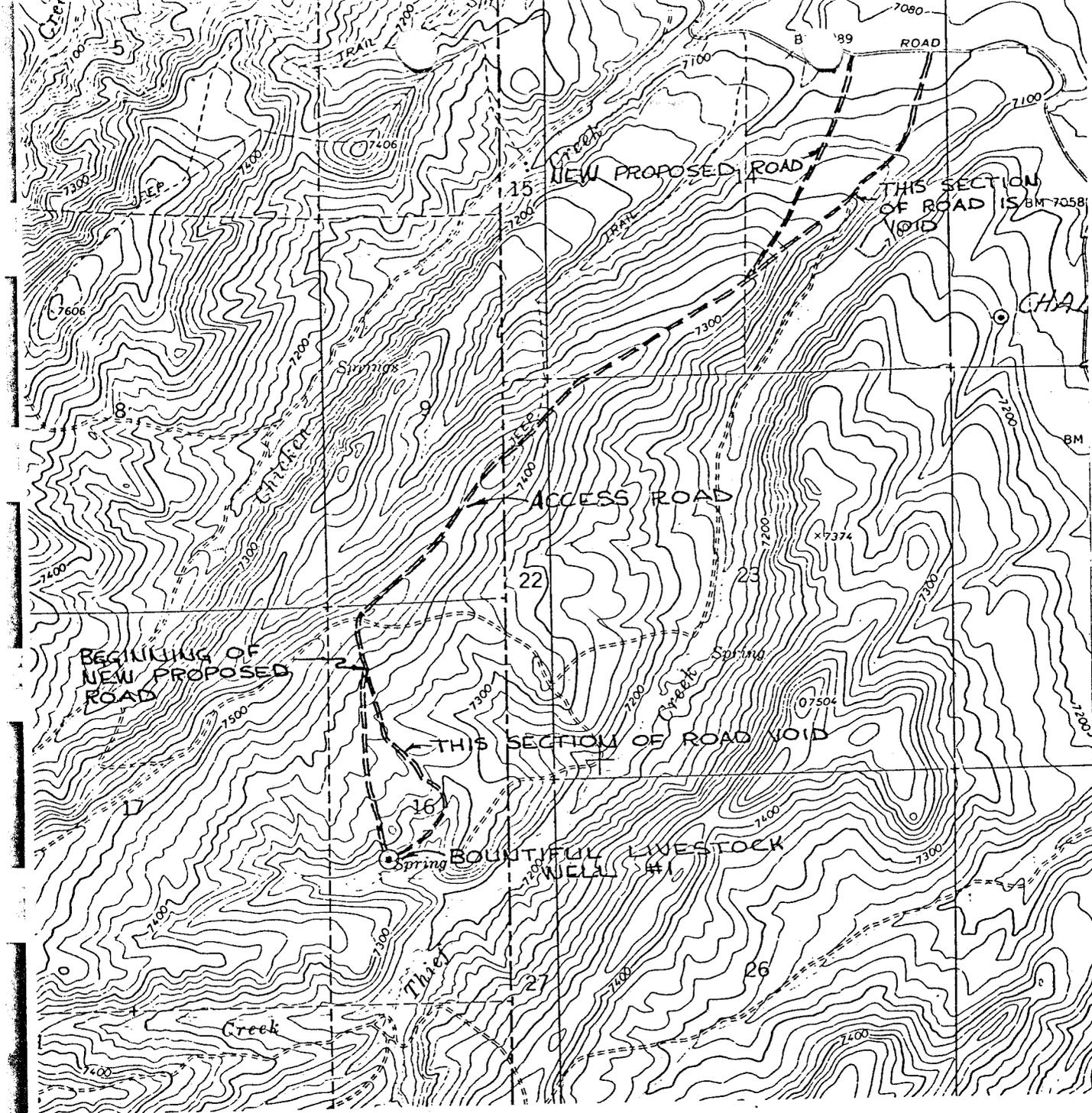
I, John A. Proffit of Evanston, Wyoming certify that in accordance with a request from R.C. Buckley of Evanston, Wyoming for Amoco Production Company I made a survey on the 24th day of January, 19 79 for Location and Elevation of the Bountiful Livestock Well #1 as shown on the above map, the wellsite is in the NW $\frac{1}{4}$ SW $\frac{1}{4}$  of Section 16, Township 4 North, Range 8 East of the Salt Lake Base Meridian, Summit County, State of Utah, Elevation is 7305 Feet top of hub Datum U.S.G.S. Quadrangle - Porcupine Ridge, Utah-Wyo. Spot Elev. 7504 SW $\frac{1}{4}$ SE $\frac{1}{4}$ , Sec. 23, T13N, R121W, 6th P.M. Uinta Co., Wyo

Reference point \_\_\_\_\_  
 Reference point \_\_\_\_\_  
 Reference point \_\_\_\_\_  
 Reference point \_\_\_\_\_

*John A. Proffit* 1/26/79  
 JOHN A. PROFFIT UTAH R.L.S. NO. 2860

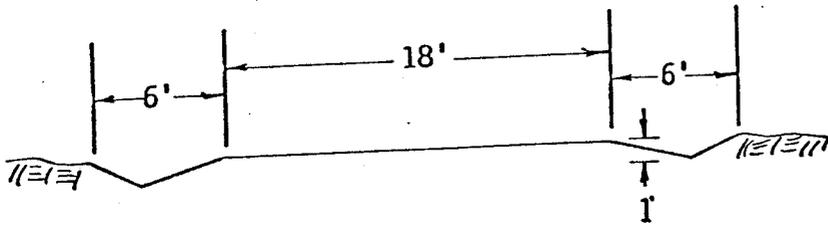
DATE: 1-26-79  
 JOB NO.: 78-10-57

UINTA ENGINEERING & SURVEYING, INC.  
 808 MAIN STREET, EVANSTON, WYOMING



SCALE: 1"=20'

NOTE: Sketch is from a 7½' U.S.G.S. Quadrangle "Porcupine Ridge, Utah-Wyoming"



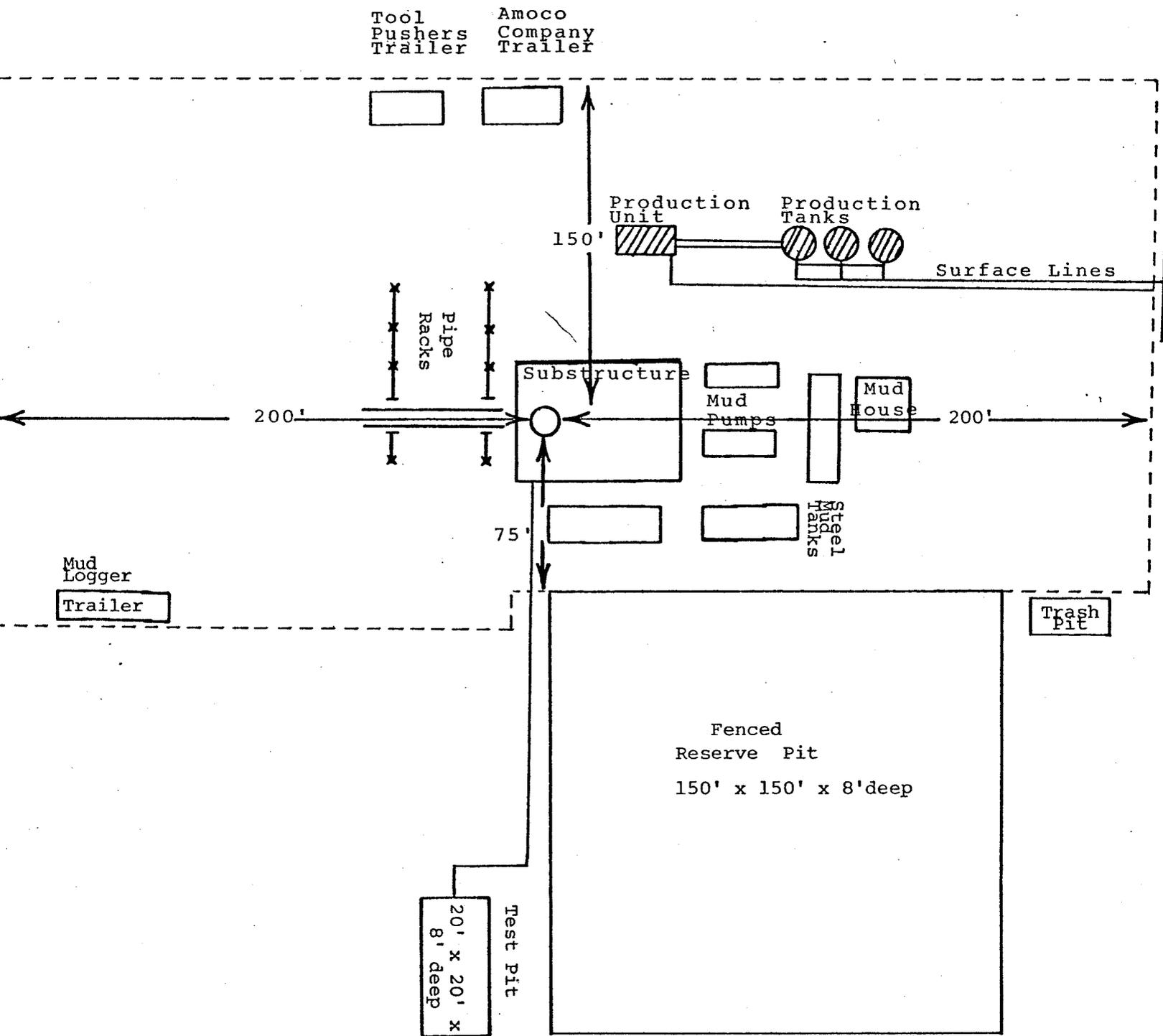
CROSS SECTION OF ACCESS ROAD  
(no scale)

SKETCH MAP OF  
ACCESS ROAD  
FOR  
AMOCO PRODUCTION COMPANY  
(Bountiful Livestock Well #1)  
THROUGH  
Secs. 14, 22, 23, T13N, R121W, 6th  
Uinta County, Wyoming  
Secs. 9 & 16, T4N, R8E, SLBM  
Summit County, Utah  
Uinta Engineering & Surveying, I  
P.O. Box 746 - 808 Main Street  
Evanston, Wyoming 82930

78-10-57

1-11-7

REV. 1-26-79



⊗ = Shows permanent production equipment to be installed after drilling rig has moved out.

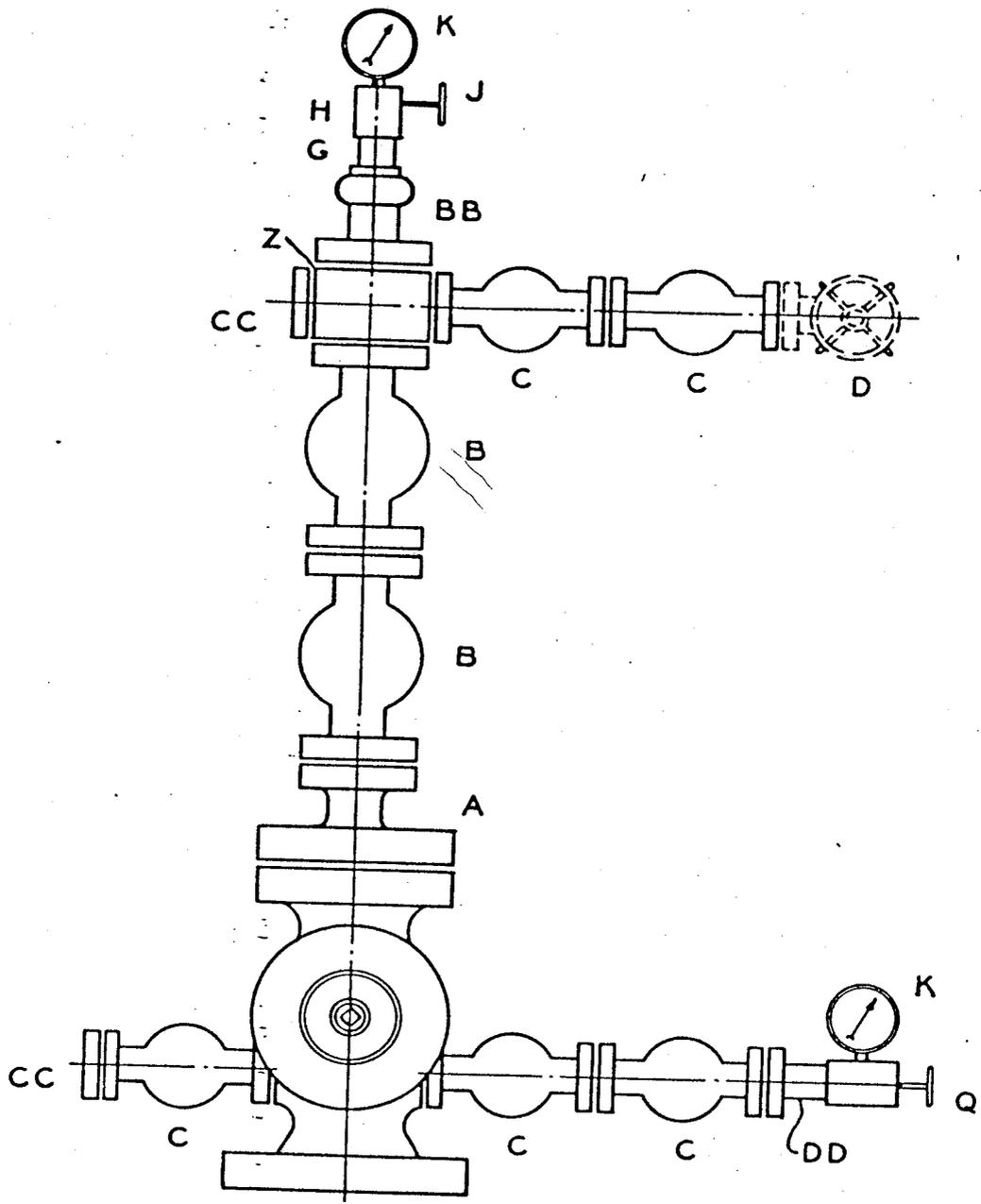
----- Dotted lines indicated perimeter of leveled location.

The fenced pit used for production will be covered if any fluid is present. The drilling and production pads will be constructed with dozers and graders using native material.

TYPICAL  
LOCATION  
LAYOUT

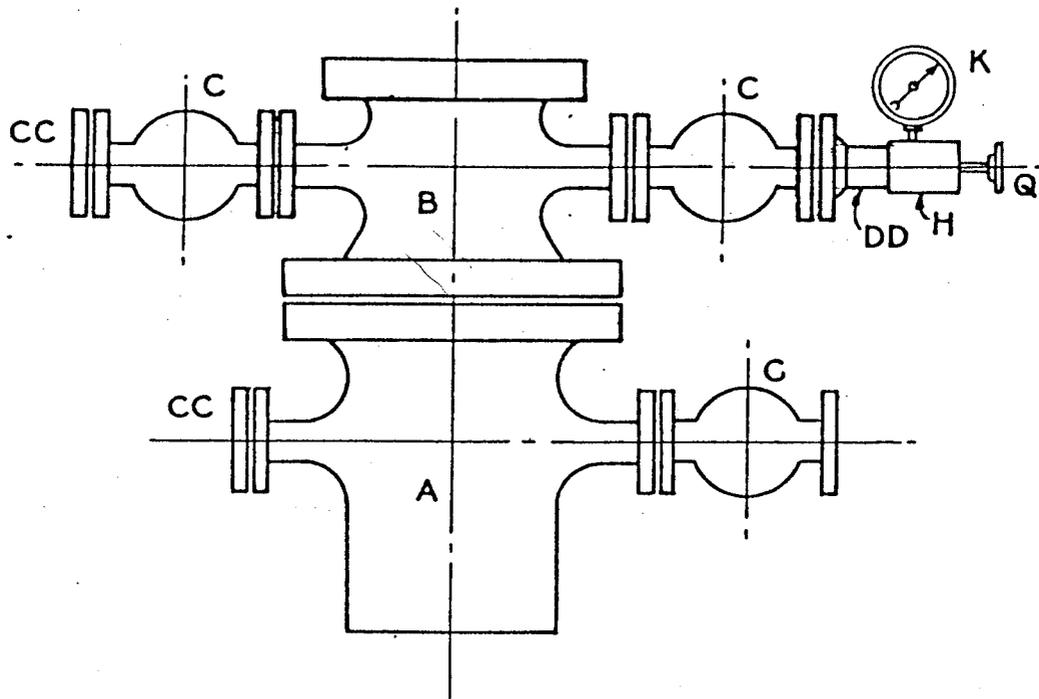
AMOCO PRODUCTION COMPANY  
P. O. Box 17675  
SALT LAKE CITY, UTAL 84117

EXHIBIT "D"



Amoco Production Company  
 STANDARD BASIC WELL HEAD HOOK-UP  
 10,000# W.P.  
 (CHOKE STEM UP STREAM)

SCALE: NONE  
 DR. W. J. F. AP. *WJF*  
 DRG. No. A-8080



FOR 5,000# W. P. PRIMARY CASINGHEAD,  
AND 5,000# W.P. SECONDARY CASINGHEAD.

IF INTERMEDIATE STRING OF CASING NOT REQUIRED,  
LOWER (PRIMARY) HEAD WILL BE ONLY CASINGHEAD USED.

Amoco Production Company

STANDARD BASIC CASINGHEAD HOOK-UP  
5 000 # W. P.

SCALE: NONE

DR. MBB AP.

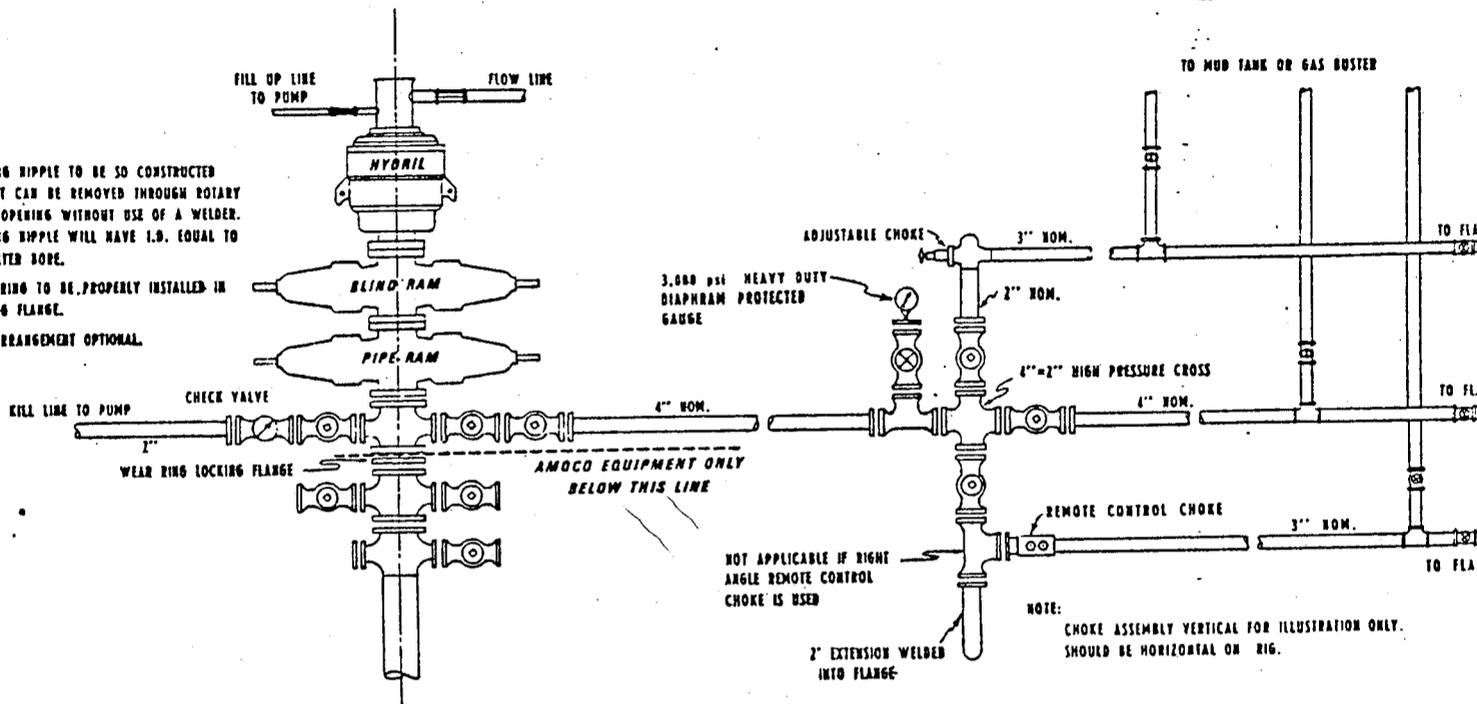
DRG. A-8343  
No.

Amoco Production Company  
 MINIMUM BLOW-OUT PREVENTER REQUIREMENTS  
 3,000 psi W.P.  
 2/78

ARRANGEMENT IF MANIFOLD  
 IS ON SIDE OF RIG

NOTE:

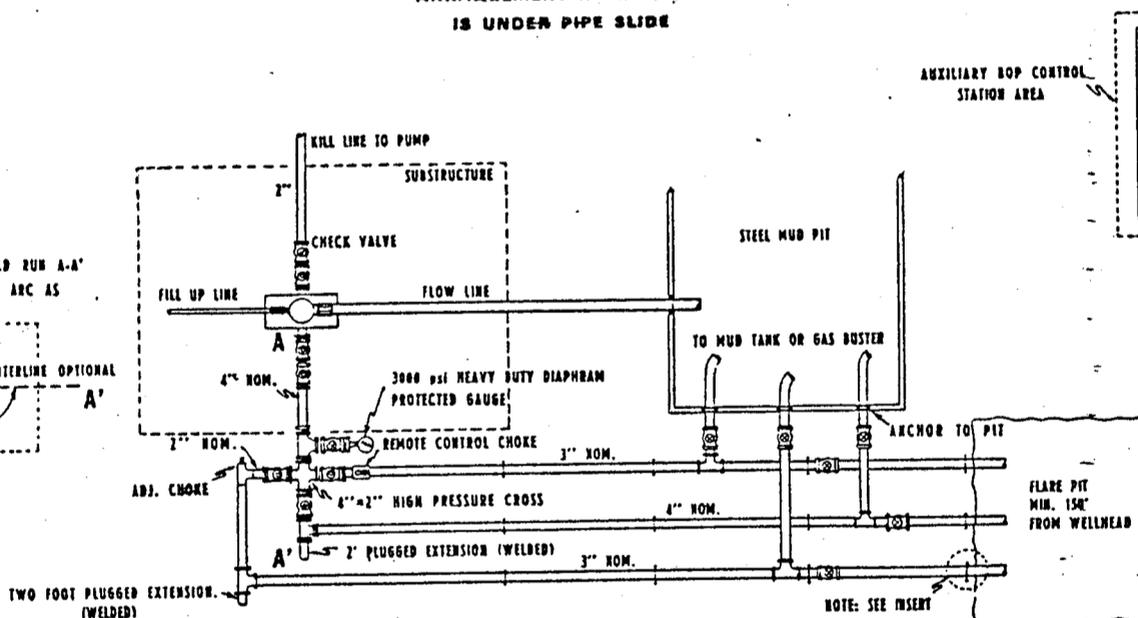
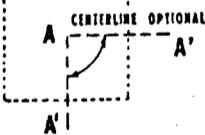
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- 2 WEAR RING TO BE PROPERLY INSTALLED IN LOCKING FLANGE.
- 3 RAM ARRANGEMENT OPTIONAL.



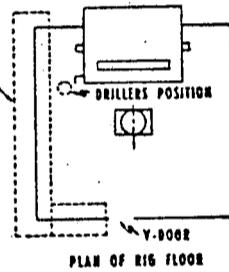
ARRANGEMENT IF MANIFOLD  
 IS UNDER PIPE SLIDE

NOTE:

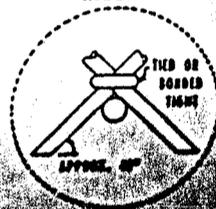
DIRECTION OF MANIFOLD RUN A-A' OPTIONAL WITHIN 90° ARC AS SHOWN BELOW



AUXILIARY BOP CONTROL STATION AREA



INSERT



- 1 BLOW-OUT PREVENTERS, ALL FITTINGS AND PIPE MUST BE 3,000 psi W.P. MINIMUM.
- 2 ALL FITTINGS UPSTREAM OF MANIFOLD TO BE FLANGED. SCREWED OR WELDED CONNECTIONS DOWNSTREAM FROM CROSS PERMISSIBLE. ADJUSTABLE CHOKE MAY HAVE SCREWED CONNECTIONS.
- 3 ALL VALVES TO BE FULL OPENING, PLUG OR GATE - METAL TO METAL SEAL, AND 3,000 psi W.P. MINIMUM.
- 4 SAFETY VALVE MUST BE AVAILABLE ON RIG FLOOR AT ALL TIMES WITH PROPER CONNECTION, VALVE TO BE PRESS. RATED 3,000 psi W.P. MINIMUM.

- 5 ALL LINES DOWNSTREAM OF CHOKE TO BE SECURELY ANCHORED EVERY 30' AND BEAR END OF CHOKE LINES.
- 6 EQUIPMENT THROUGH WHICH BIT MUST PASS SHALL BE AS LARGE AS INSIDE DIAMETER OF THE CASING BEING DRILLED THROUGH.
- 7 KELLY COCK ON KELLY.
- 8 EXTENSION WRENCHES AND HAND WHEELS TO BE PROPERLY INSTALLED AND BRACED AT ALL TIMES.
- 9 AUXILIARY BLOW-OUT PREVENTER CONTROL STATION TO BE LOCATED AS CLOSE TO DRILLERS POSITION AS FEASIBLE.

- 10 BLOW-OUT PREVENTER CHOKES SHOULD BE INSTALLED TO ALLOW ACCUMULATION, AND THE COMPASSION SOURCE OF PUMP POWER ON EACH CLOSING DOWN. INSTRUMENTS TO BE LOCATED AT LEAST 75' FROM STACK ON DOWNLIFT SIDE OF RIG.
- 11 ALL UNMARKED PIPE MINIMUM 3" O.D. NOM. GRADE 5-15 TUBING OR MIN. 3,000 psi W.P. LINE PIPE.
- 12 REMOTE CONTROL CHOKE INSTALLATION AND LINE TO BE STRAIGHT AS POSSIBLE WITH NO 90° TURNS BELOW CHOKE.

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

SUBMIT IN TRIPLICATE\*  
(Other instructions on reverse side)

5. Lease Designation and Serial No.

Fee

6. If Indian, Allottee or Tribe Name

7. Unit Agreement Name

8. Farm or Lease Name

Bountiful Livestock

9. Well No.

1

10. Field and Pool, or Wildcat

Overthrust-Wildcat

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

Sec 16-T4N-R8E

12. County or Parrish 13. State

Summit Utah

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work

DRILL

DEEPEN

PLUG BACK

b. Type of Well

Oil Well

Gas Well

Other

Single Zone

Multiple Zone

2. Name of Operator

Amoco Production Company

3. Address of Operator

P.O. Box 17675, Salt Lake City, Utah 84117

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

NW/4 SW/4 Section 16, 686.1' FWL 2137.4'

At proposed prod. zone

Same

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

18 Road Miles Southwest of Evanston, Wyoming Summit, Utah

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

686.1'

16. No. of acres in lease

17. No. of acres assigned to this well

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

19. Proposed depth

11,500

20. Rotary or cable tools

Rotary to TD

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

7305' Ungraded Ground

22. Approx. date work will start\*

When approved

23. PROPOSED CASING AND CEMENTING PROGRAM

Size of Hole	Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement
	20" (Surface)	133# & 94# (New)	2000'	CL "G" W/2% CaCl <sub>2</sub> to surface
12 1/4"	9 5/8" (Oil String)	43.5, 40 & 36# (New)	9000'	600 Sx CL "G"
17 1/4"	13 5/8" (Intermediate)	88.2, 72, and 61# (New)	7050'	3000 Sx CL "G" W/18% Salt
8 3/4"	7 (Liner)	29#	11500'	600 Sx CL "G"

\* If salt is present, hole will be reamed to 17 1/4" and the 13 3/8" intermediate string will be set. If salt is not present, the 13 3/8" casing will not be run.

Propose to test the Nugget and other Jurassic formations for commercial accumulations of hydrocarbons.

Revision to show a change in location. Location has been moved approximately 157' North of the C-NW/4 SW/4 Sec 16, 660' FWL 1980' FSL-T4N-R8E, as requested by the surface owner. Surface owner requested location move so as to remove the well site from a dry drainage used as a travel route by his cattle.

All other information remains unchanged from that reported in our application of January 17, 1979.

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

24. Signed D.S. Davidson Title District Adm. Supervisor

Date 1/29/79

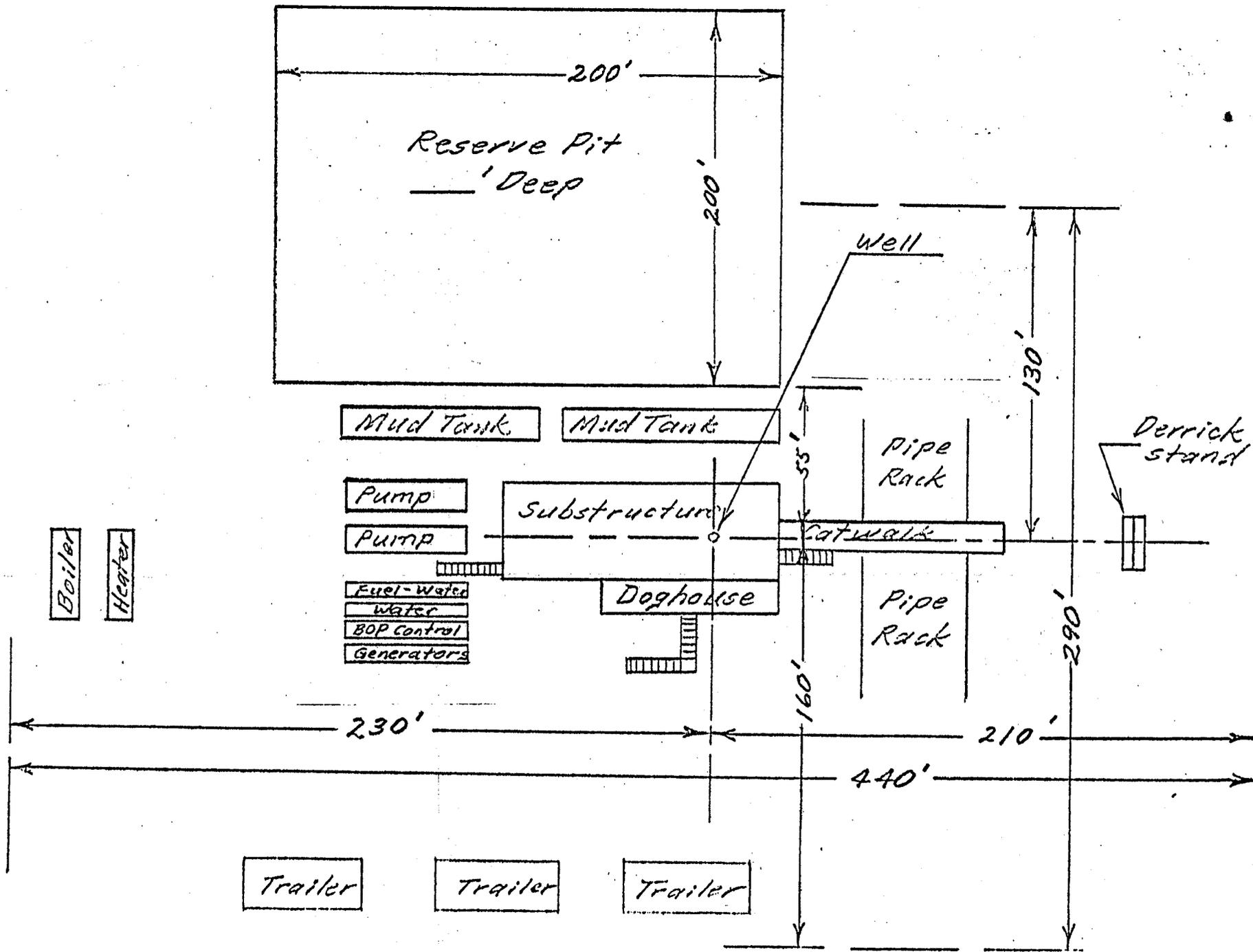
(This space for Federal or State office use)

Permit No. 43-043-30096 Approval Date

Approved by \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_

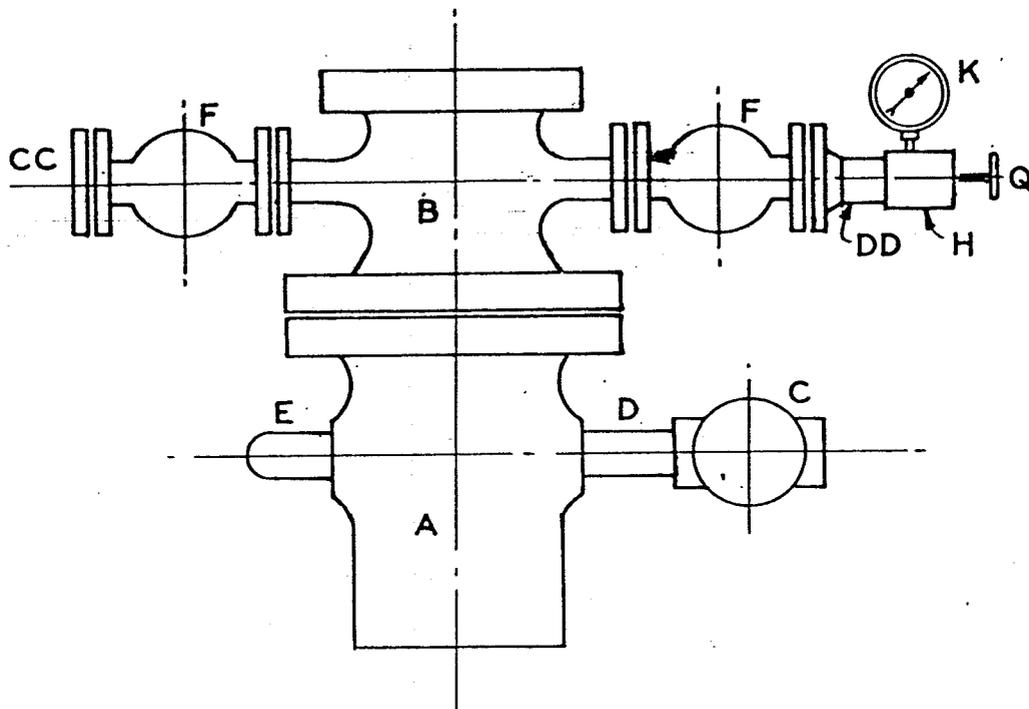
Conditions of approval, if any:





BOMAC DRILLING  
RIG NO. 44

Refers to Specification No. W-8  
Effective Date: June 1, 1973



FOR 2,000# W. P. PRIMARY CASINGHEAD  
AND 3,000# W. P. SECONDARY CASINGHEAD.

OR 3,000# W. P. PRIMARY CASINGHEAD  
AND 3,000# W. P. SECONDARY CASINGHEAD..

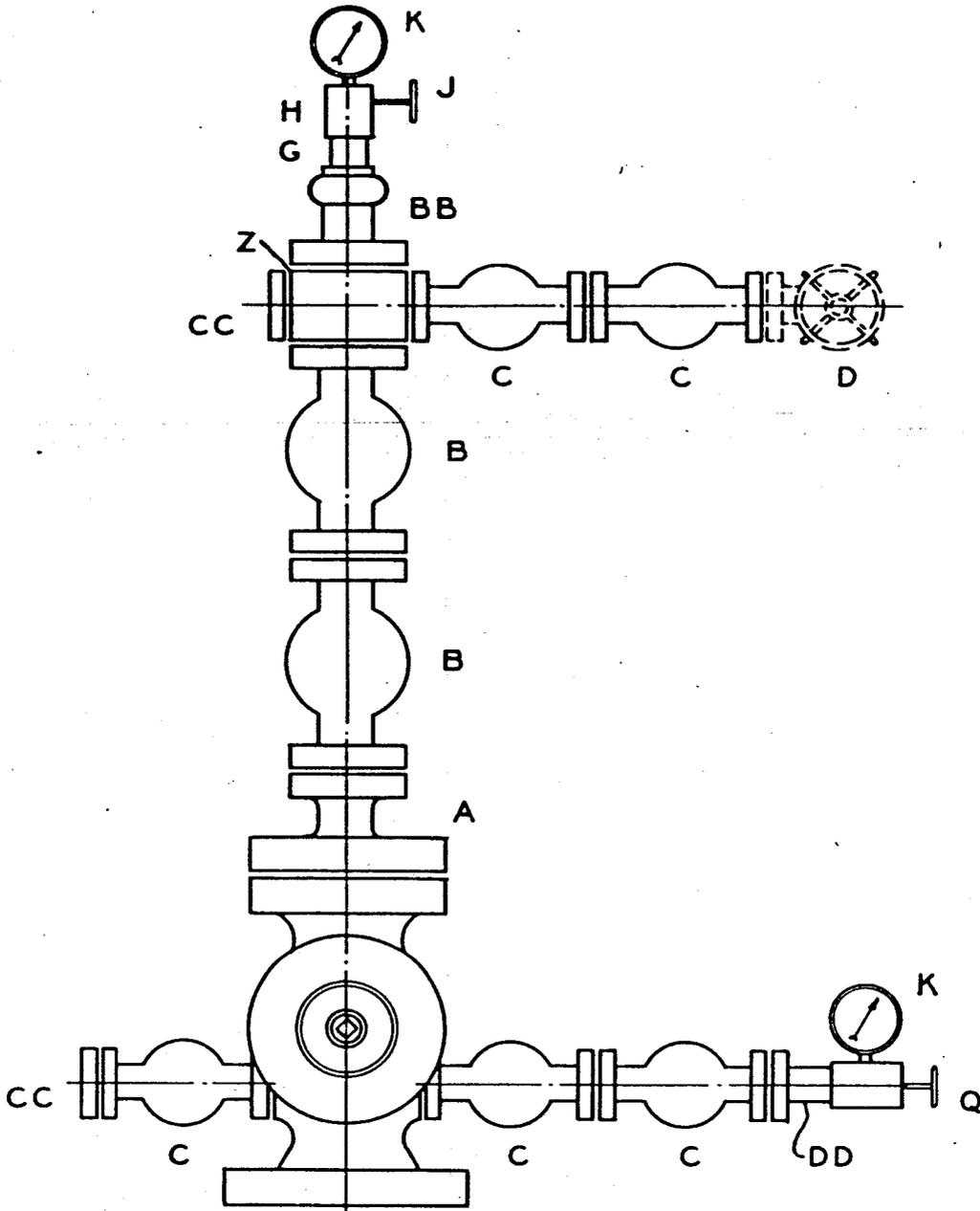
OR 3,000# W. P. PRIMARY CASINGHEAD  
AND 5,000# W. P. SECONDARY CASINGHEAD.

IF INTERMEDIATE STRING OF CASING NOT REQUIRED,  
LOWER (PRIMARY) HEAD WILL BE ONLY CASINGHEAD USED.

Amoco Production Company  
STANDARD BASIC CASINGHEAD HOOK-UP  
2000 # TO 5000 # W. P.

SCALE: NONE  
DR. MBB AP  
DRG. No. A-8344

Refers to Specification No. W-8  
Effective Date: June 1, 1973

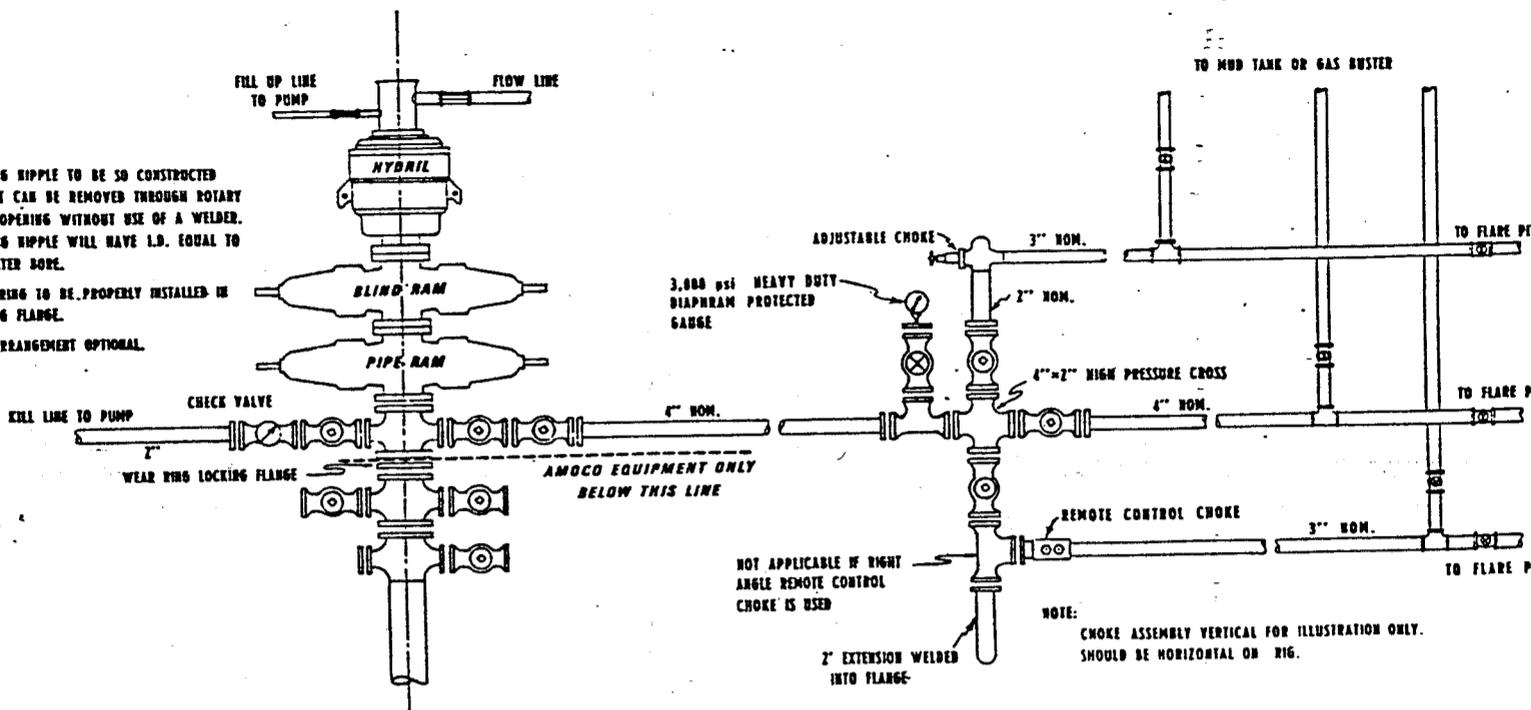


Amoco Production Company  
STANDARD BASIC WELL HEAD HOOK-UP  
10,000# W.P.  
(CHOKE STEM UP STREAM)

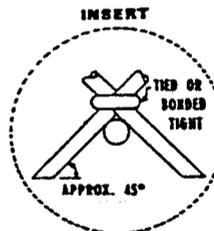
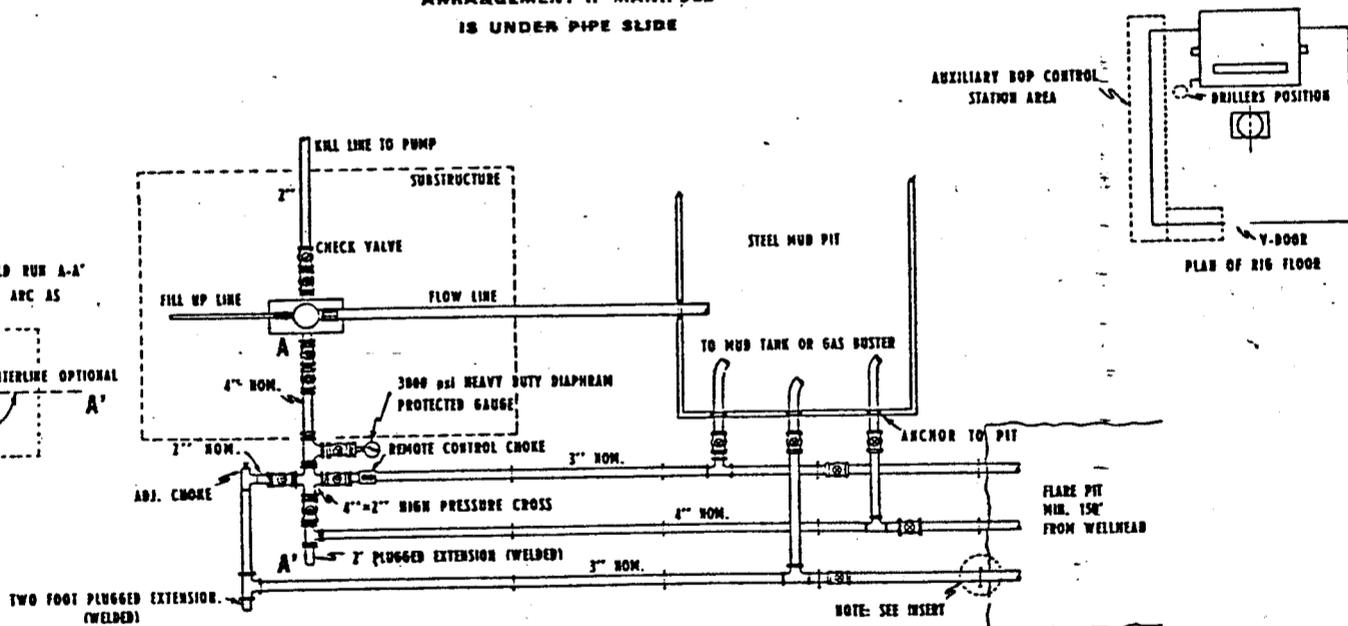
SCALE: NONE  
DR. W.J.F. AP. *B67/CF*  
DRG. No. A-8080

**Amoco Production Company**  
**MINIMUM BLOW-OUT PREVENTER REQUIREMENTS**  
 3,000 psi W.P.  
 2/78

**ARRANGEMENT IF MANIFOLD IS ON SIDE OF RIG**

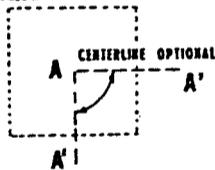


**ARRANGEMENT IF MANIFOLD IS UNDER PIPE SLIDE**



- NOTE:**
- 1 DRILLING RIPLE TO BE SO CONSTRUCTED THAT IT CAN BE REMOVED THROUGH ROTARY TABLE OPENING WITHOUT USE OF A WELDER. DRILLING RIPLE WILL HAVE I.D. EQUAL TO PREVENTER BORE.
  - 2 WEAR RING TO BE PROPERLY INSTALLED IN LOCKING FLANGE.
  - 3 RAM ARRANGEMENT OPTIONAL.

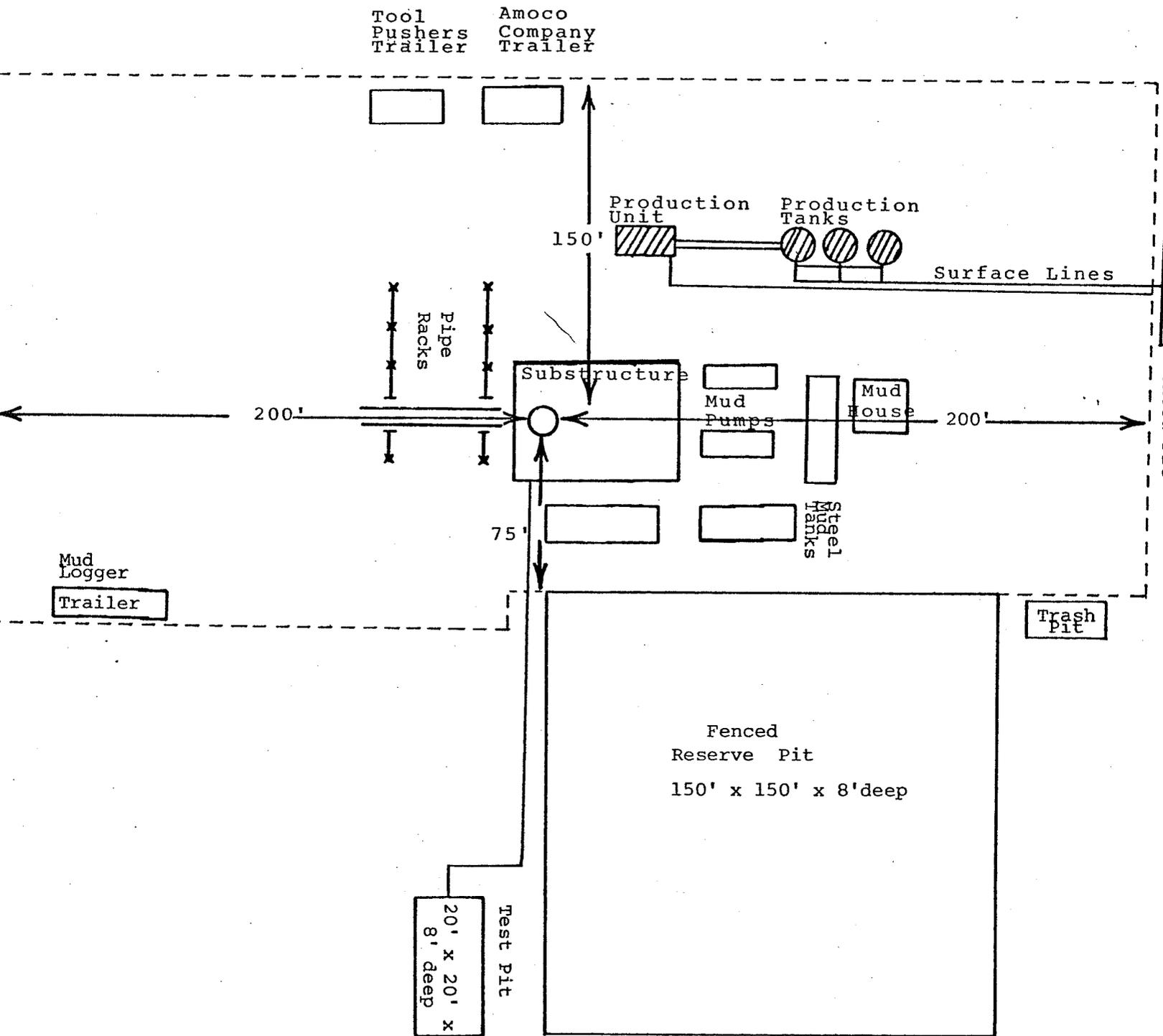
- NOTE:**
- DIRECTION OF MANIFOLD RUN A-A' OPTIONAL WITHIN 90° ARC AS SHOWN BELOW



- NOTE:**
- 1 BLOW-OUT PREVENTERS, ALL FITTINGS AND PIPE MUST BE 3,000 psi W.P. MINIMUM.
  - 2 ALL FITTINGS UPSTREAM OF MANIFOLD TO BE FLANGED. SCREWED OR WELDED CONNECTIONS DOWNSTREAM FROM CHOKES PERMISSIBLE. ADJUSTABLE CHOKES MAY HAVE SCREWED CONNECTIONS.
  - 3 ALL VALVES TO BE FULL OPENING. PLUG OR GATE METAL TO METAL SEAL, AND 3,000 psi W.P. MINIMUM.
  - 4 SAFETY VALVE MUST BE AVAILABLE ON RIG FLOOR AT ALL TIMES WITH PROPER CONNECTION. VALVE TO BE FULL BORE 3,000 psi W.P. MINIMUM.

- 5 ALL LINES DOWNSTREAM OF CHOKES TO BE SECURELY ANCHORED EVERY 30' AND REAR END OF CHOKES LINES.
- 6 EQUIPMENT THROUGH WHICH BIT MUST PASS SHALL BE AS LARGE AS INSIDE DIAMETER OF THE CASING BEING DRILLED THROUGH.
- 7 KELLY COCK ON KELLY.
- 8 EXTENSION WRENCHES AND HAND WHEELS TO BE PROPERLY INSTALLED AND BRACED AT ALL TIMES.
- 9 AUXILIARY BLOW-OUT PREVENTER CONTROL STATION TO BE LOCATED AS CLOSE TO DRILLERS POSITION AS FEASIBLE.

- 10 BLOW-OUT PREVENTER CLOSING EQUIPMENT TO INCLUDE 20 GALLON ACCUMULATION, AND TWO INDEPENDENT SOURCES OF PUMP POWER ON EACH CLOSING UNIT. INSTALLATION TO BE LOCATED AT LEAST 75' FROM STACK ON DRILLERS' SIDE OF RIG.
- 11 ALL UNMARKED PIPE MINIMUM 3" O.D. NOM. GRADE J-55 TUBING OR MIN. 3,000 psi W.P. LINE PIPE.
- 12 REMOTE CONTROL CHOKES INSTALLATION AND LINE TO BE STRAIGHT AS POSSIBLE WITH NO 90° TURNS BELOW CHOKES.



⊗ = Shows permanent production equipment to be installed after drilling rig has moved out.

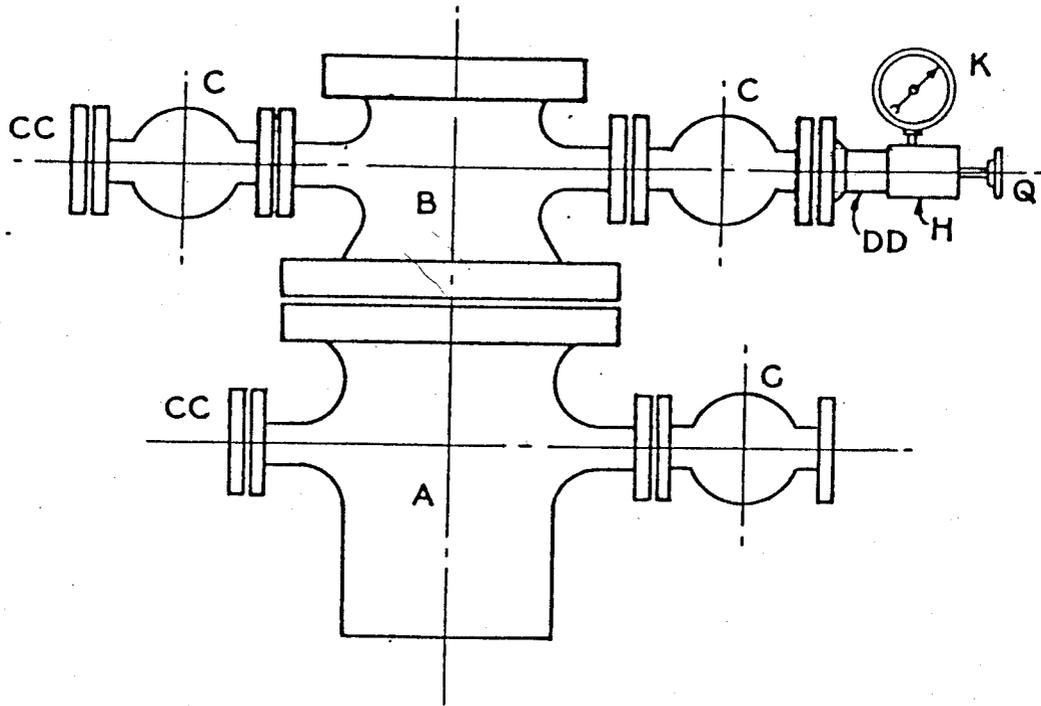
----- Dotted lines indicated perimeter of leveled location.

The fenced pit used for production will be covered if any fluid is present. The drilling and production pads will be constructed with dozers and graders using native material.

TYPICAL  
LOCATION  
LAYOUT

AMOCO PRODUCTION COMPANY  
P. O. Box 17675  
SALT LAKE CITY, UTAH 84117

EXHIBIT "D"

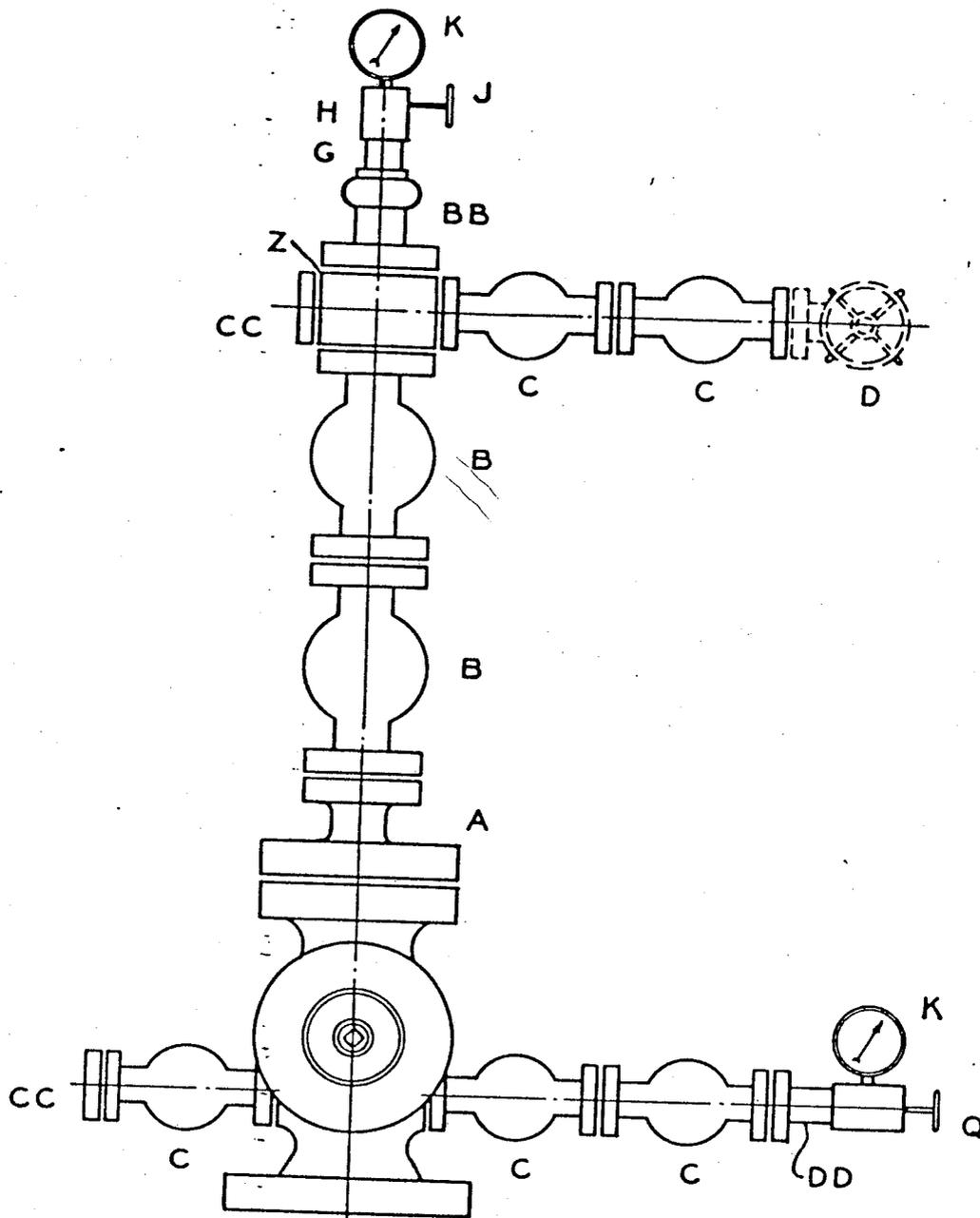


FOR 5,000# W. P. PRIMARY CASINGHEAD,  
 AND 5,000# W.P. SECONDARY CASINGHEAD.

IF INTERMEDIATE STRING OF CASING NOT REQUIRED,  
 LOWER (PRIMARY) HEAD WILL BE ONLY CASINGHEAD USED.

Amoco Production Company  
 STANDARD BASIC CASINGHEAD HOOK-UP  
 5 000 # W. P.

SCALE: NONE  
 DR. MBB AP.  
 DRG. A-8343  
 No.



Amoco Production Company  
STANDARD BASIC WELL HEAD HOOK-UP  
10,000# W.P.  
(CHOKE STEM UP STREAM)

SCALE: NONE  
DR. W. J. F. AP. *Blot ex*  
DRG. No. A-8080

SCOTT M. MATHESON  
Governor



OIL, GAS, AND MINING BOARD

GORDON E. HARMSTON  
Executive Director,  
NATURAL RESOURCES

STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL, GAS, AND MINING

1588 West North Temple

Salt Lake City, Utah 84116

(801) 533-5771

March 15, 1979

CHARLES R. HENDERSON  
Chairman

JOHN L. BELL  
C. RAY JUVELIN  
THADIS W. BOX  
CONSTANCE K. LUNDBERG  
EDWARD T. BECK  
E. STEELE McINTYRE

CLEON B. FEIGHT  
Director

Amoco Production Company  
P.O. Box 17675  
Salt Lake City, Utah 84117

Re: Well No. Bountiful Livestock  
No. 1  
Sec. 16, T. 4 N., R. 8 E,  
Summit County, Utah

Gentlemen:

Insofar as this office is concerned, approval to drill the above referred to well is hereby granted in accordance with Rule C-3(c), General Rules and Regulations and Rules of Practice and Procedure.

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

MICHAEL T. MINDER, Geological Engineer  
HOME: 876-3001  
OFFICE: 533-5771

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

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

The APT number assigned to this well is 43-043-30096.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

CLEON B. FEIGHT  
Director

STATE OF UTAH  
OIL & GAS CONSERVATION COMMISSION

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK  
 DRILL  DEEPEN  PLUG BACK

b. TYPE OF WELL  
 OIL WELL  GAS WELL  OTHER  SINGLE ZONE  MULTIPLE ZONE

2. NAME OF OPERATOR  
 Amoco Production Company

3. ADDRESS OF OPERATOR  
 P. O. Box 17675, Salt Lake City, Utah 84117

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*)  
 At surface  
 NW/4 SW/4 Section 16, 686.1' FWL 2137.4' FSL  
 At proposed prod. zone  
 Section 16, 1340' FWL 1237' FSL

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
 18 road miles southwest of Evanston, Wyoming

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. line, if any) 686.1'

16. NO. OF ACRES IN LEASE

17. NO. OF ACRES ASSIGNED TO THIS WELL

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 11,500'

19. PROPOSED DEPTH 11,500'

20. ROTARY OR CABLE TOOLS Rotary to TD

21. ELEVATIONS (Show whether DF, RT, GR, etc.) 7305' Ungraded Ground

22. APPROX. DATE WORK WILL START\* Well will spud 3/29/79

5. LEASE DESIGNATION AND SERIAL NO.  
 Fee

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME  
 Bountiful Livestock

9. WELL NO.  
 1

10. FIELD AND POOL, OR WILDCAT  
 Overthrust-Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
 Sec. 16-T4N-R8E

12. COUNTY OR PARISH  
 Summit,

13. STATE  
 Utah

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
26"	20" Conductor	94 & 133#	30'	C1"G" w/2% CaCl <sub>2</sub> to surface
17 1/2"	13 3/8" Surface	68,72,88.2#	2000'	1500 Sx Lite Tain w/300SxC1"G
12 1/4"	9 5/8" Intermediate	40-53.5#	9100'	1000 Sx C1"G" w/18% Salt
8 3/4"	7" Liner	26-35#	11500'	600 Sx C1"G"

Revision to show changes in bottom hole location, casing program, cementing program, mud program and approx. formation tops. Amoco controls all oil and gas leases within Sec. 16-T4N-R8E. All other information remains as previously reported in our "Application For Permit to Drill" submitted 1/29/79. Bomac Drilling Company will be the drilling contractor on this well and their rig #44 is presently on location rigging up. Attached is a location diagram showing the rig layout of Bomac Rig #44 as well as an inventory sheet showing the rigs basic equipment.

Attachments

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

24. Original Signed By  
 SIGNED D. S. DAVIDSON TITLE Dist. Adm. Super. DATE March 29, 1979

(This space for Federal or State office use)

PERMIT NO. 43-043-30096 APPROVAL DATE March 15, 1979

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
 CONDITIONS OF APPROVAL, IF ANY:

ATTACHMENT TO FORM OGC-1a  
BOUNTIFUL LIVESTOCK WELL #1

1. Geologic name of the surface formation: Wasatch.

2. Estimated tops of geological markers:

Evanston	- 2400'	Stump	- 7700'
Frontier	- 3200'	Preuss	- 8000'
Aspen	- 4000'	Twin Creek	- 9100'
Bear River	- 5150'	Nuggett	- 10600'
Gannett	- 5900'		

3. Estimated depths anticipated to encounter water, oil, gas or other mineral-bearing formations:

Water, oil and gas anticipated at 2400'

4. Casing Program - see Form OGC-1a item #23.

5. Operators minimum specifications for pressure control equipment are explained on attached schematic diagram. Testing of such is to be performed daily and noted on the IADC Daily Drilling Report. After running surface casing and prior to drilling out, BOP and other pressure equipment will be tested to the full working pressure rating as shown on the attached diagram. Thereafter, the BOP will be checked daily for mechanical operations only and will be noted on the IADC Daily Drilling Report.

6. Mud Program:

Surface to 2000'	-	Native 8.4-8.5#/gal
2000' to 9100'	-	LSND, 8.4-8.6#/gal, nugget to be penetrated w/minimum obtainable mud weight.
9100' - TD	-	LSND, 8.4-8.7#/gal, nugget to be penetrated w/minimum obtainable mud weight.

7. Auxiliary Equipment

Kelly Cock: floor sub with a full opening valve. 3" choke manifold with remote control choke, 2500 psi wp.

Mud loggers (2-man unit) on location from surface to total depth.

8. Testing Program:

Drill stem tests to be conducted as determined by Amoco's Denver Division Exploration Department.

Attachment to Form OGC-1a  
Bountiful Livestock Well #1

Logging Program:

DIL-GR\* - Base of surface casing to total depth  
DLL-MSFL\*\* - Base of surface casing to total depth  
Sonic-GR - Base of surface casing to total depth  
CNL-FDC-GR - Base of surface casing to total depth  
FIL-Dipmeter - Over zones of interest

\* Fresh Mud  
\*\* Salty Mud

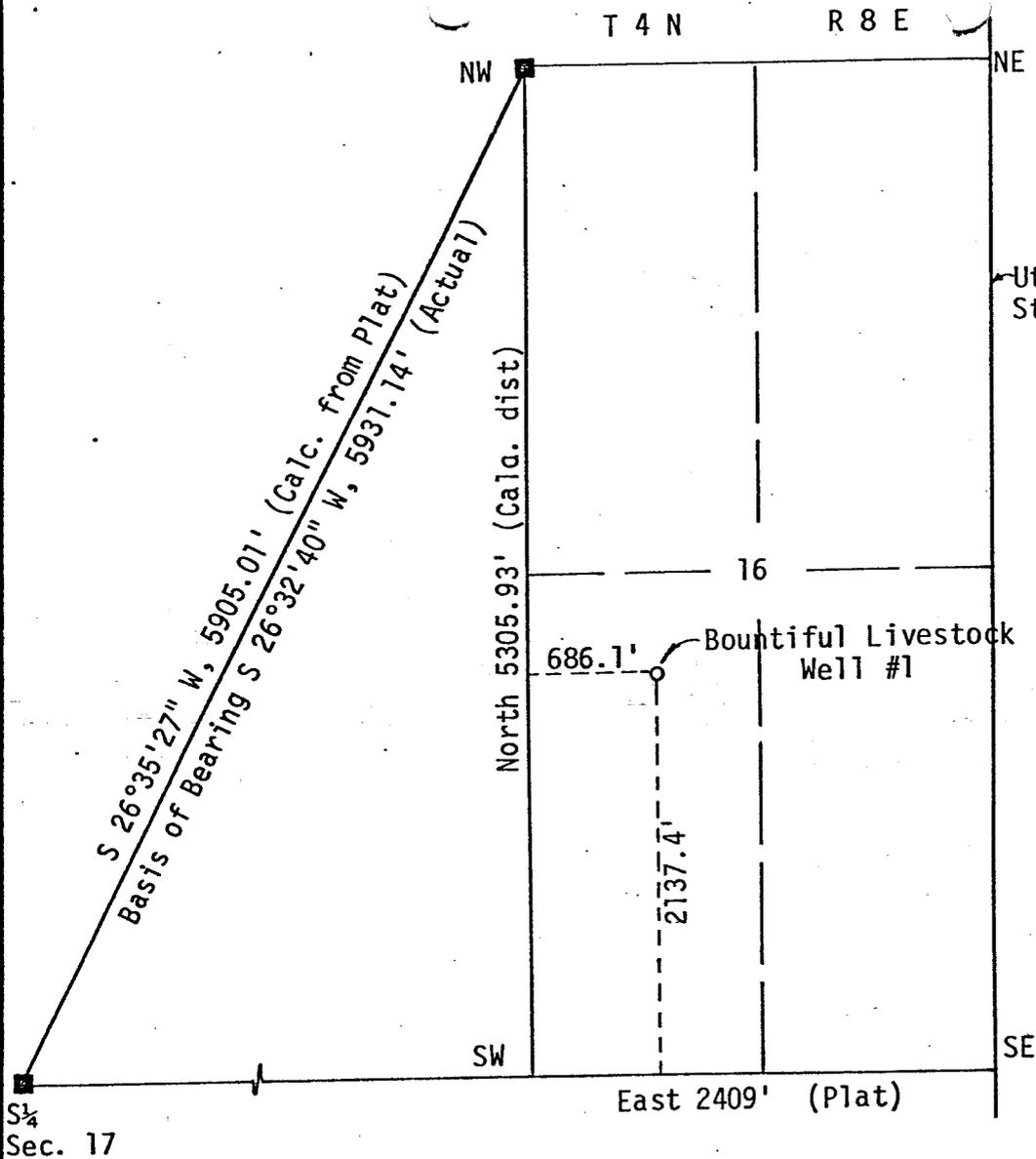
Coring Program

Propose to take cores within the Nugget, actual core point and interval to be determined by wellsite geologist.

Stimulation Program

After evaluation of open hole logs to determine possible productive zones, anticipate stimulating 3 zones within the Twin Creek and Nugget. Each zone to be stimulated w/approximately 5000 gal 15% HCL acid.

9. No abnormal pressure or temperature or potential hazards are anticipated. Anticipated bottom hole pressure - 6300 psi - casing head 13 3/8" 3000# WP. Tubing head, 10" x 5000# x 7-1/16" 10,000# WP.
10. The anticipated starting date will be when approved. The duration of the operations will be approximately sixty days.



Utah/Wyoming  
Stateline

SCALE: 1" = 1000'

- Found Brass Cap
- Found Stone
- ⊙ Set Brass Cap
- ⊖ Found Stone - Set Brass Cap
- Hub and Tack

S 1/4  
Sec. 17

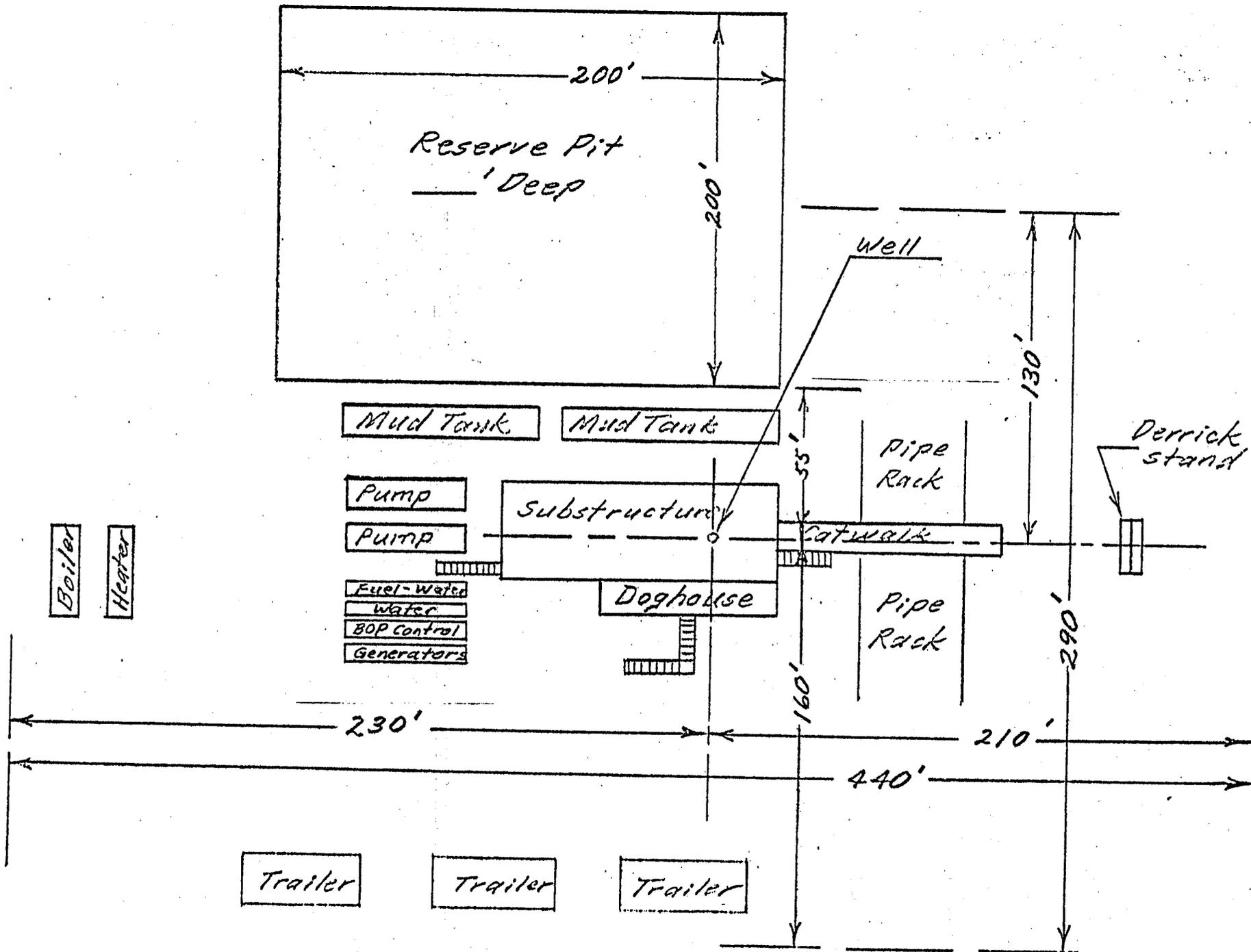
I, John A. Proffit of Evanston, Wyoming certify that in accordance with a request from R.C. Buckley of Evanston, Wyoming for Amoco Production Company I made a survey on the 24th day of January, 19 79 for Location and Elevation of the Bountiful Livestock Well #1 as shown on the above map, the wellsite is in the NW 1/4 SW 1/4 of Section 16, Township 4 North, Range 8 East of the Salt Lake Base Meridian, Summit County, State of Utah, Elevation is 7305 Feet top of hub Datum U.S.G.S. Quadrangle - Porcupine Ridge, Utah-Wyo. Spot Elev. 7504 SW 1/4 SE 1/4, Sec. 23, T13N, R121W, 6th P.M. Uinta Co., Wyo

Reference point \_\_\_\_\_  
 Reference point \_\_\_\_\_  
 Reference point \_\_\_\_\_  
 Reference point \_\_\_\_\_

*John A. Proffit* 1/26/79  
 JOHN A. PROFFIT UTAH R.L.S. NO. 2860

DATE: 1-26-79  
 JOB NO.: 78-10-57

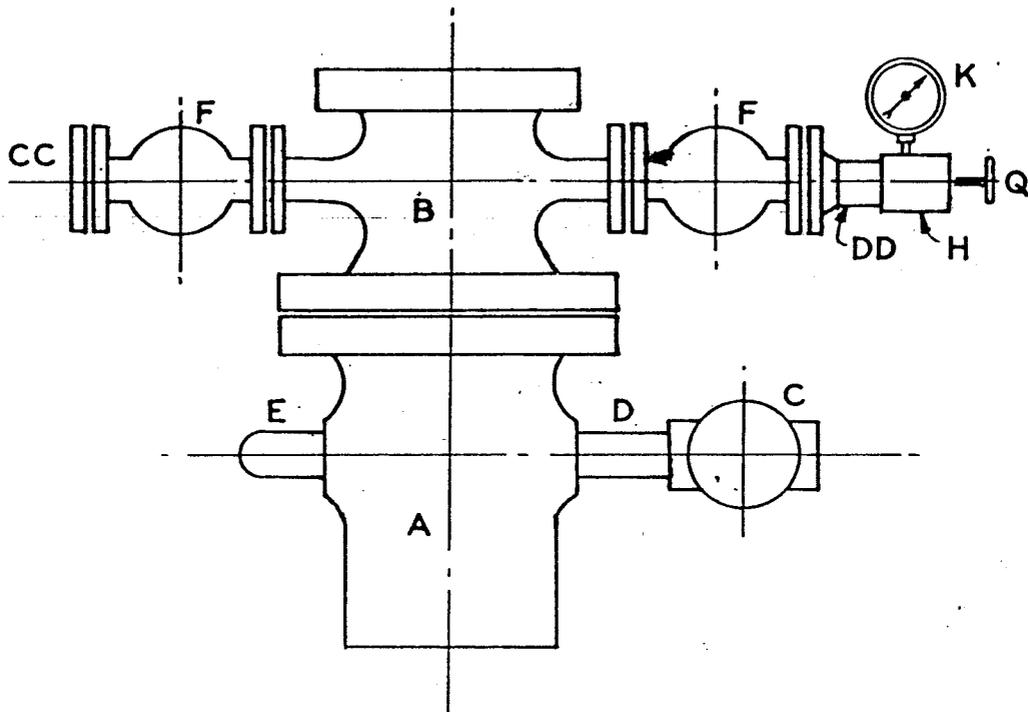
UINTA ENGINEERING & SURVEYING, INC.  
 808 MAIN STREET, EVANSTON, WYOMING



BOMAC DRILLING  
RIG NO. 44



Refers to Specification No. W-8  
Effective Date: June 1, 1973



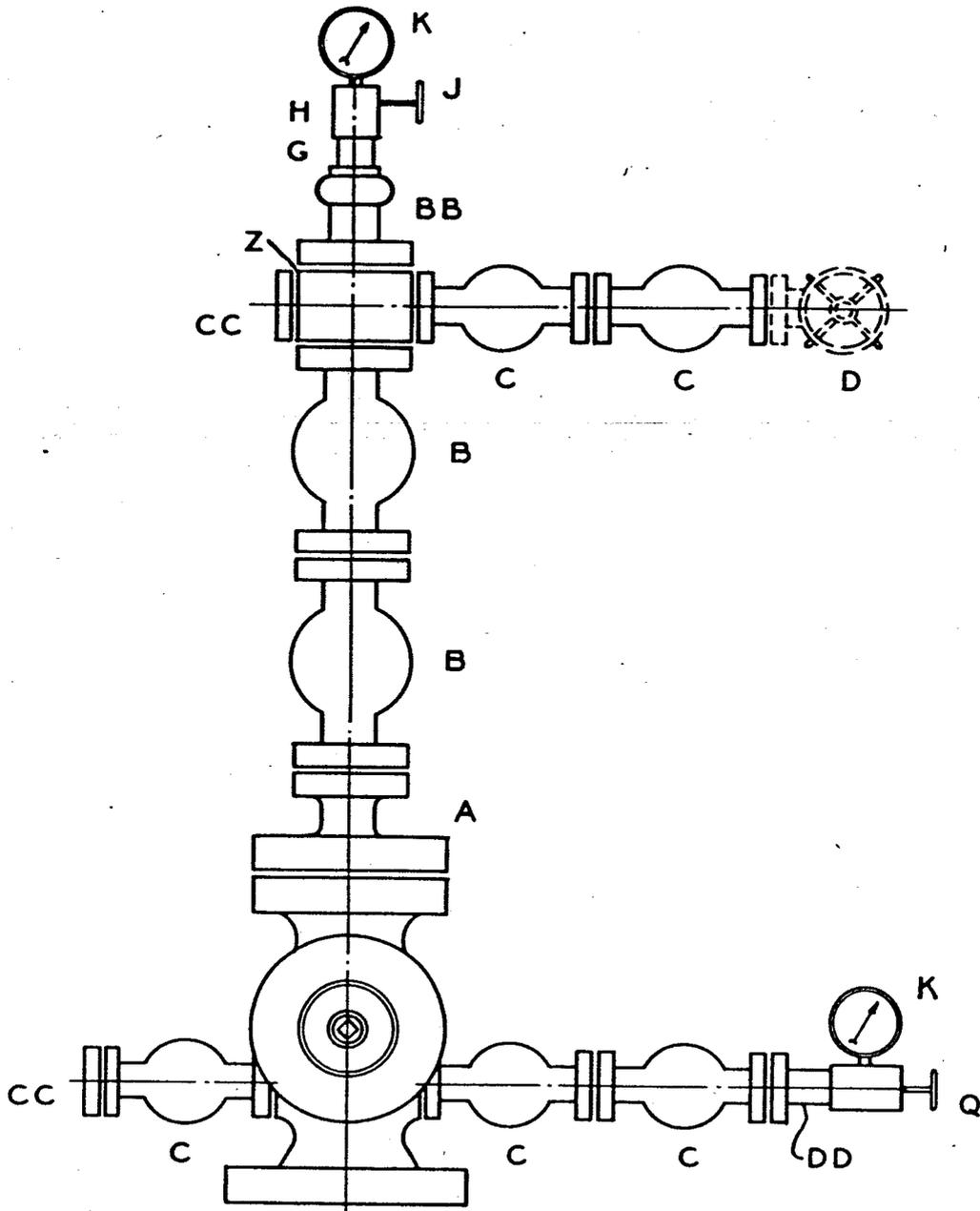
FOR 2,000# W. P. PRIMARY CASINGHEAD  
AND 3,000# W. P. SECONDARY CASINGHEAD.  
OR 3,000# W. P. PRIMARY CASINGHEAD  
AND 3,000# W. P. SECONDARY CASINGHEAD.  
OR 3,000# W. P. PRIMARY CASINGHEAD  
AND 5,000# W. P. SECONDARY CASINGHEAD.

IF INTERMEDIATE STRING OF CASING NOT REQUIRED,  
LOWER (PRIMARY) HEAD WILL BE ONLY CASINGHEAD USED.

Amoco Production Company  
STANDARD BASIC CASINGHEAD HOOK-UP  
2000# TO 5000# W. P.

SCALE: NONE  
DR. MBB AP  
DRG. No. A-8344

Refers to Specification No. W-8  
Effective Date: June 1, 1973

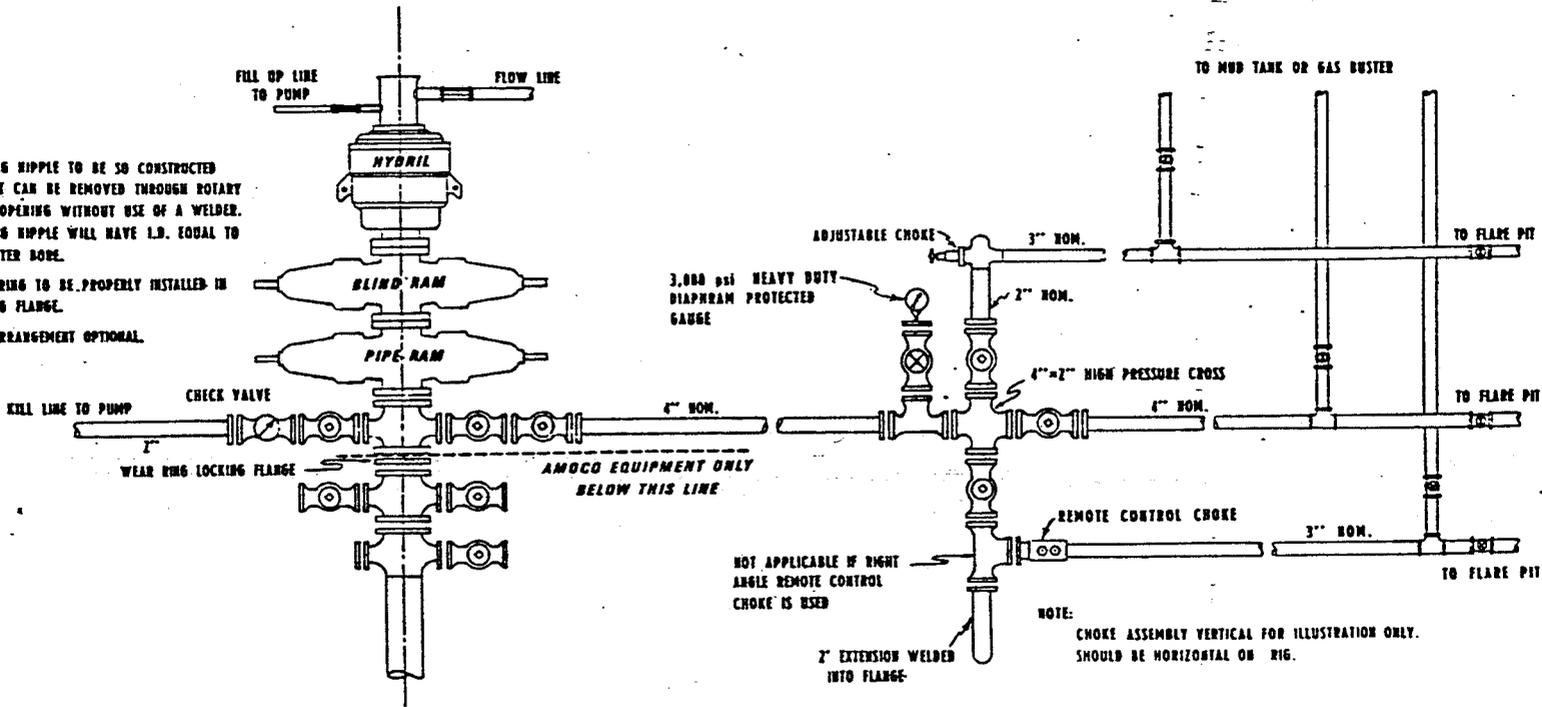


Amoco Production Company  
STANDARD BASIC WELL HEAD HOOK-UP  
10,000# W.P.  
(CHOKE STEM UP STREAM)

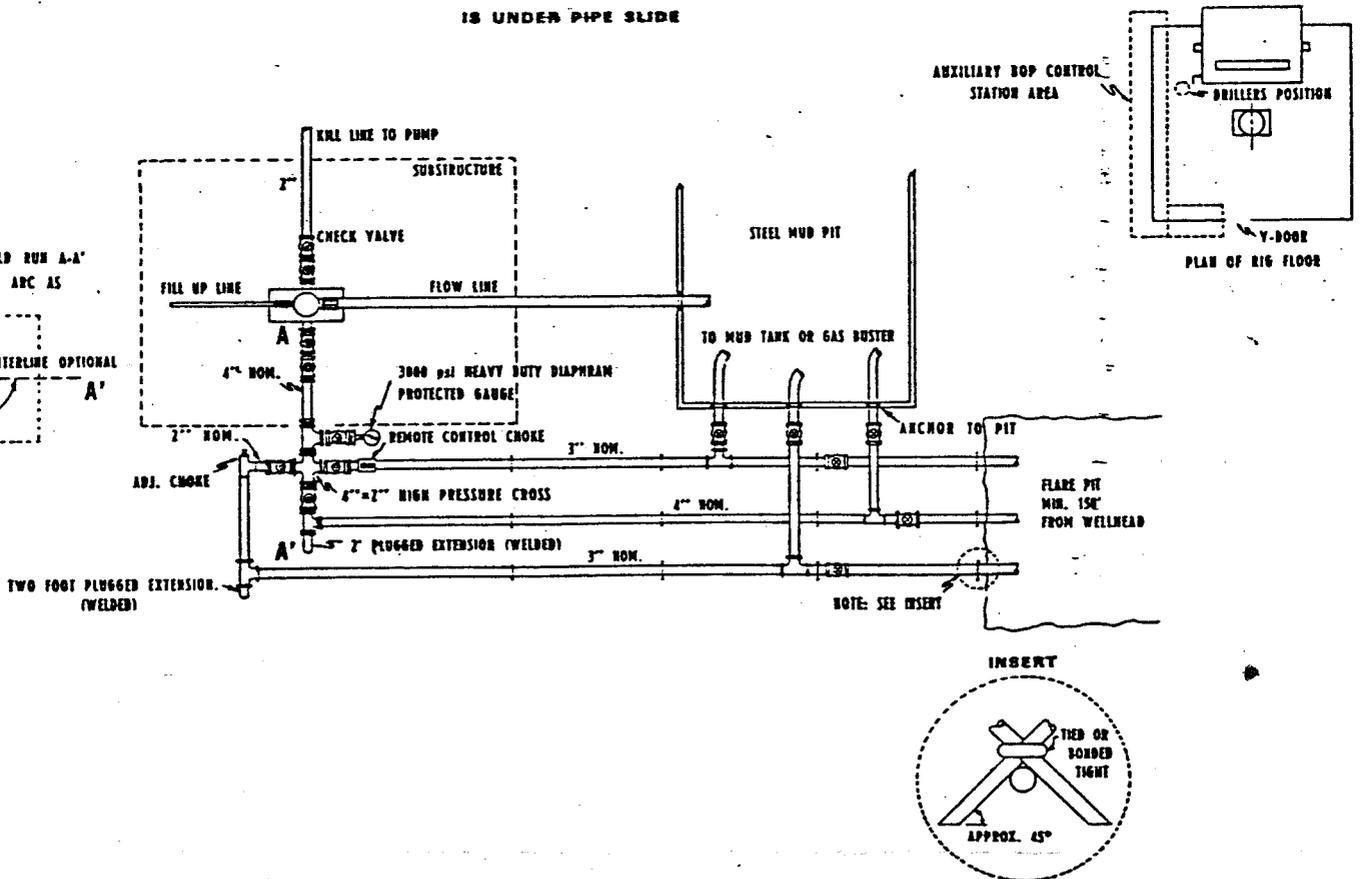
SCALE: NONE  
DR. W. J. F. AP. *WJF*  
DRG. No. A-8080

**Amoco Production Company**  
**MINIMUM BLOW-OUT PREVENTER REQUIREMENTS**  
 3,000 psi W.P.  
 2/78

**ARRANGEMENT IF MANIFOLD IS ON SIDE OF RIG**



**ARRANGEMENT IF MANIFOLD IS UNDER PIPE SLIDE**



- NOTE:**
- 1 BLOW-OUT PREVENTERS, ALL FITTINGS AND PIPE MUST BE 3,000 psi W.P. MINIMUM.
  - 2 ALL FITTINGS UPSTREAM OF MANIFOLD TO BE FLANGED, SCREWED OR WELDED CONNECTIONS DOWNSTREAM FROM CHOKES PERMISSIBLE. ADJUSTABLE CHOKES MAY HAVE SCREWED CONNECTIONS.
  - 3 ALL VALVES TO BE FULL OPENING, PLUGS OR GATE METAL TO METAL SEAL, AND 3,000 psi W.P. MINIMUM.
  - 4 SAFETY VALVE MUST BE AVAILABLE ON 2ND FLOOR AT ALL TIMES WITH PROPER CONNECTION, VALVE TO BE FULL BORE 3,000 psi W.P. MINIMUM.

- 5 ALL LINES DOWNSTREAM OF CHOKES TO BE SECURELY ANCHORED EVERY 30' AND REAR END OF CHOKES LINES.
- 6 EQUIPMENT THROUGH WHICH BIT MUST PASS SHALL BE AS LARGE AS INSIDE DIAMETER OF THE CASING BEING DRILLED THROUGH.
- 7 KELLY COCK ON KELLY.
- 8 EXTENSION WRENCHES AND HAND WHEELS TO BE PROPERLY INSTALLED AND BRACED AT ALL TIMES.
- 9 AUXILIARY BLOW-OUT PREVENTER CONTROL STATION TO BE LOCATED AS CLOSE TO DRILLERS POSITION AS FEASIBLE.

- 10 BLOW-OUT PREVENTER CLOSING EQUIPMENT TO INCLUDE 50 GALLON ACCUMULATOR, AND TWO INDEPENDENT SOURCES OF PUMP POWER ON EACH CLOSING UNIT. INSTALLATION TO BE LOCATED AT LEAST 75' FROM STACK OR DRILLERS' SIDE OF RM.
- 11 ALL UNMARKED PIPE MINIMUM 3" O.D. NOM. GRADE J-55 TUBING OR MIN. 3,000 psi W.P. LINE PIPE.
- 12 REMOTE CONTROL CHOKES INSTALLATION AND LINE TO BE STRAIGHT AS POSSIBLE WITH NO 90° TURNS BELOW CHOKES.



ATTACHMENT TO FORM OGC-1R

BOUNTIFUL LIVESTOCK WELL #1

1. Geologic name of the surface formation: Wasatch.

2. Estimated tops of geological markers:

Evanston - 1365'	Stump (subthrust) - 7600'
Gannett - 3840'	Preuss (subthrust) - 7900'
Stump - 5515'	Twin Creek (subthrust) - 9000'
Preuss - 5815'	Nuggett (subthrust) - 10,000'
Twin Creek - 7000'	
Gannett (subthrust) - 7400'	

3. Estimated depths anticipated to encounter water, oil, gas or other mineral-bearing formations:

Water, oil and gas anticipated at 7000'

4. Casing Program - see Form OGC-1a item #23

5. Operators minimum specifications for pressure control equipment are explained on attached schematic diagram. Testing of such is to be performed daily and noted on the IADC Daily Drilling Report. After running surface casing and prior to drilling out, BOP and other pressure equipment will be tested to the full working pressure rating as shown on the attached diagram. Thereafter, the BOP will be checked daily for mechanical operations only and will be noted on the IADC Daily Drilling Report.

6. Mud Program:

Surface to 2000'	- Native 8.4-8.5#/gal
2000'-7050'	- LSND, 8.4-8.6#/gal, nugget to be penetrated w/minimum obtainable mud weight.
7050-TD	- LSND, 8.4-8.7#/gal, nugget to be penetrated w/minimum obtainable mud weight.

7. Auxiliary Equipment

Kelly Cock: floor sub with a full opening valve. 3" choke manifold with remote control choke, 2500 psi wp.

Mud loggers (2-man unit) on location from surface to total depth.

8. Testing Program:

Drill stem tests to be conducted as determined by Amoco's Denver Division Exploration Department.

Logging Program:

DIL-GR*	- Base of surface casing to total depth
DLL-MSFL**	- Base of surface casing to total depth
Sonic-GR	- Base of surface casing to total depth
CNL-FDC-GR	- Base of surface casing to total depth

Logging Program Continued:

FIL-Dipmeter - Over zones of interest

- \* Fresh Mud
- \*\* Salty Mud

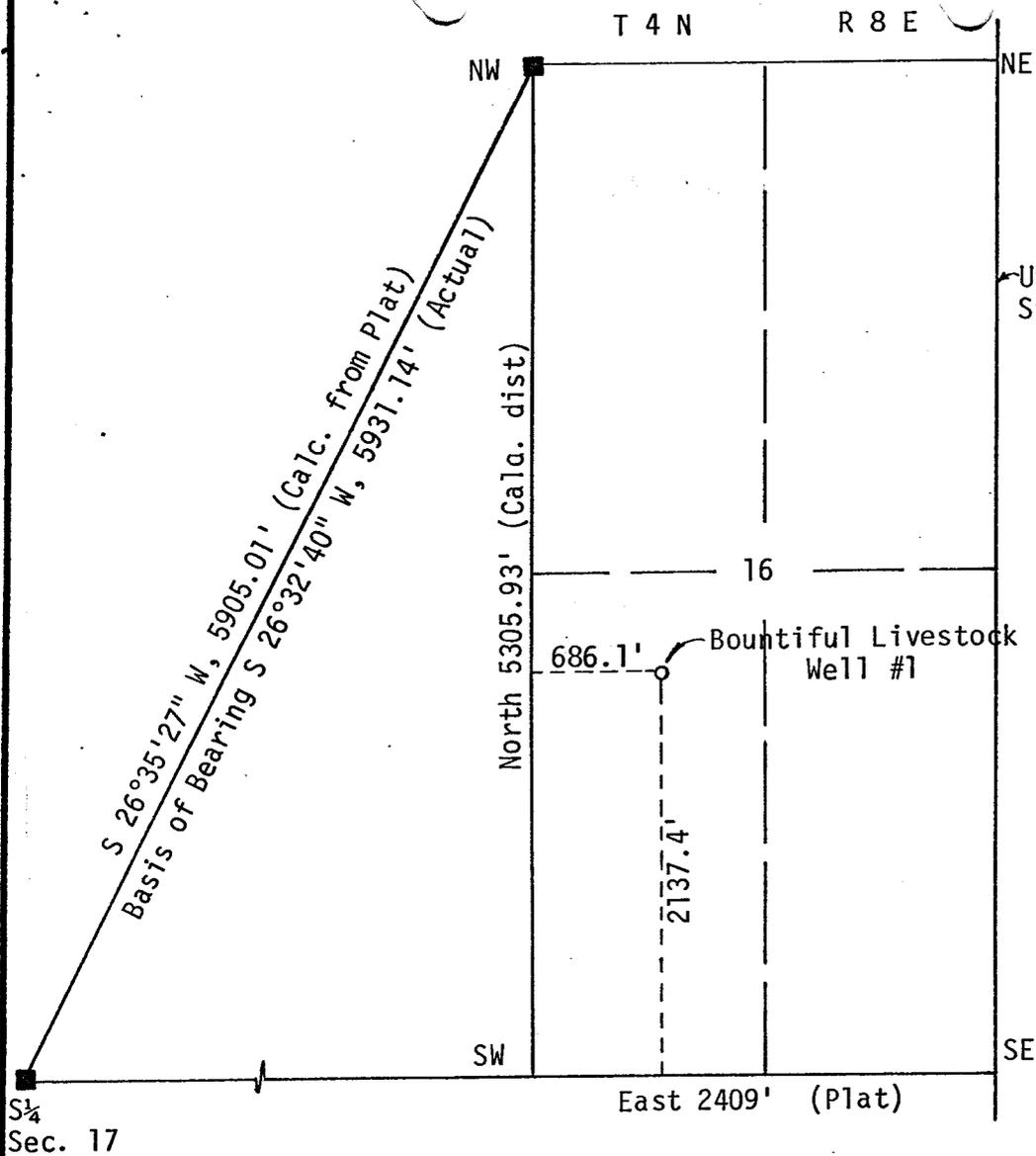
Coring Program:

Propose to take cores within the Nugget, actual core point and interval to be determined by wellsite geologist.

Stimulation Program

After evaluation of open hole logs to determine possible productive zones, anticipate stimulating 3 zones within the Twin Creek and Nugget. Each zone to be stimulated w/approximately 5000 gal 15% HCL acid.

9. No abnormal pressure or temperature or potential hazards are anticipated. Anticipated bottom hole pressure - 6300 psi - casing head 9-5/8" 5000# wp. Tubing head, 10" x 5000# x 7-1/16" 10,000# wp.
10. The anticipated starting date will be when approved. The duration of the operations will be approximately sixty days.



Utah/Wyoming Stateline



SCALE: 1" = 1000'

- Found Brass Cap
- Found Stone
- ⊙ Set Brass Cap
- ⊖ Found Stone - Set Brass Cap
- Hub and Tack

S<sup>1</sup>/<sub>4</sub> Sec. 17

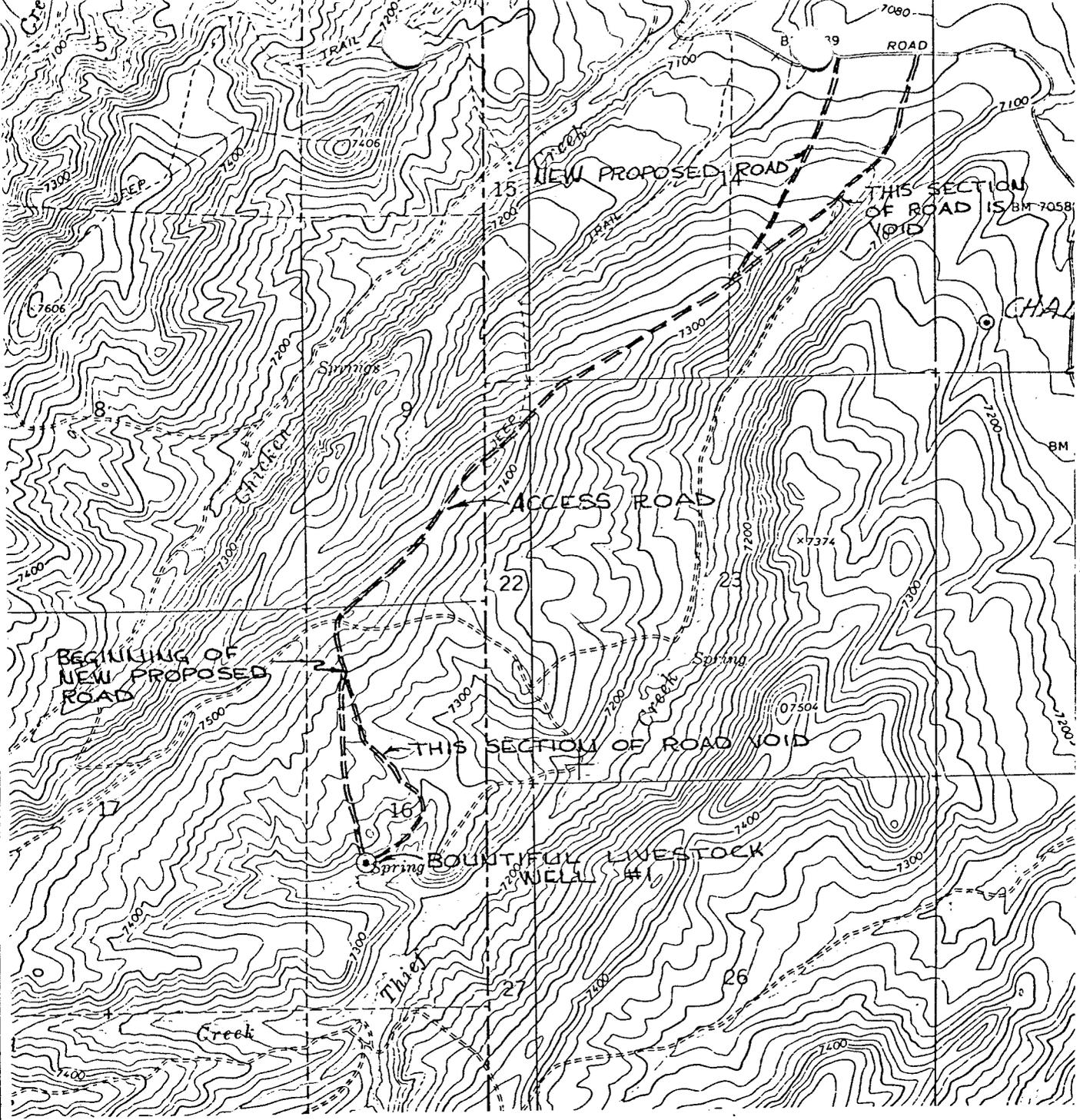
I, John A. Proffit of Evanston, Wyoming certify that in accordance with a request from R.C. Buckley of Evanston, Wyoming for Amoco Production Company I made a survey on the 24th day of January, 19 79 for Location and Elevation of the Bountiful Livestock Well #1 as shown on the above map, the wellsite is in the NW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> of Section 16, Township 4 North, Range 8 East of the Salt Lake Base Meridian, Summit County, State of Utah, Elevation is 7305 Feet top of hub Datum U.S.G.S. Quadrangle - Porcupine Ridge, Utah-Wyo. Spot Elev. 7504 SW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>, Sec. 23, T13N, R121W, 6th P.M. Uinta Co., Wyo

Reference point \_\_\_\_\_  
 Reference point \_\_\_\_\_  
 Reference point \_\_\_\_\_  
 Reference point \_\_\_\_\_

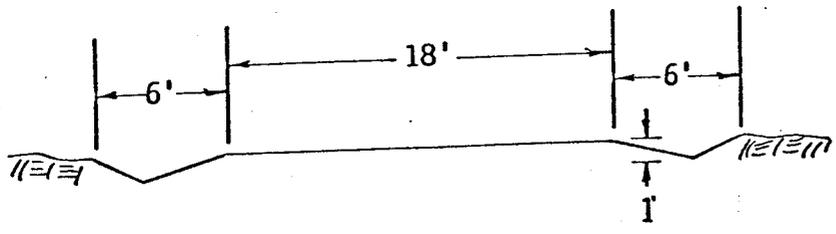
*John A. Proffit* 1/26/79  
 JOHN A. PROFFIT UTAH R.L.S. NO. 2860

DATE: 1-26-79  
 JOB NO.: 78-10-57

UINTA ENGINEERING & SURVEYING, INC.  
 808 MAIN STREET, EVANSTON, WYOMING



NOTE: Sketch is from a 7½' U.S.G.S. Quadrangle "Porcupine Ridge, Utah-Wyoming"



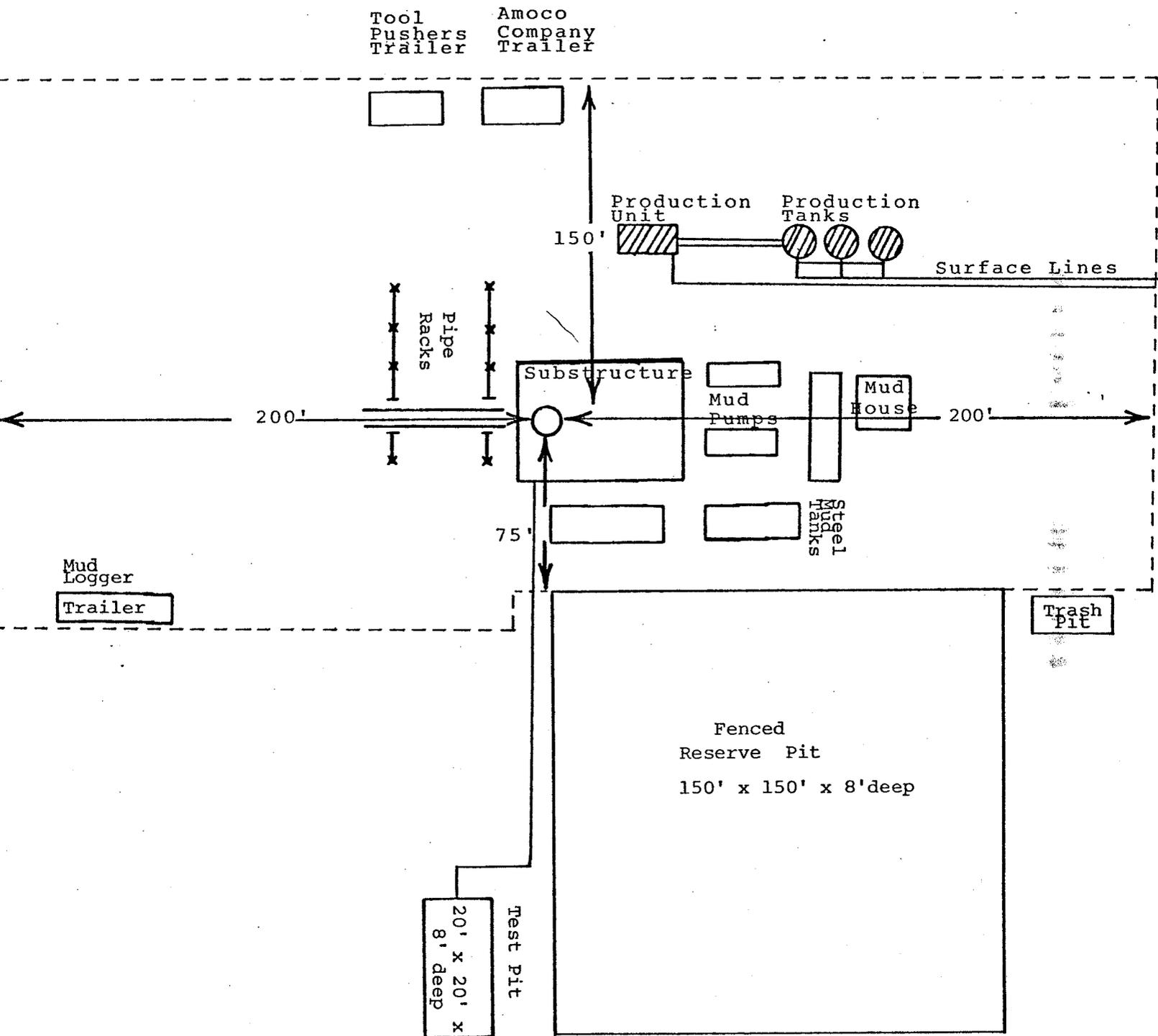
CROSS SECTION OF ACCESS ROAD  
(no scale)

SKETCH MAP OF  
ACCESS ROAD  
FOR  
AMOCO PRODUCTION COMPANY  
(Bountiful Livestock Well #1)  
THROUGH  
Secs. 14, 22, 23, T13N, R121W, 6th  
Utah County, Wyoming  
Secs. 9 & 16, T4N, R8E, SLBM  
Summit County, Utah  
Uinta Engineering & Surveying, Inc.  
P.O. Box 746 - 808 Main Street  
Evanston, Wyoming 82930

78-10-57

1-11-79

REV. 1-26-79



⊗ = Shows permanent production equipment to be installed after drilling rig has moved out.

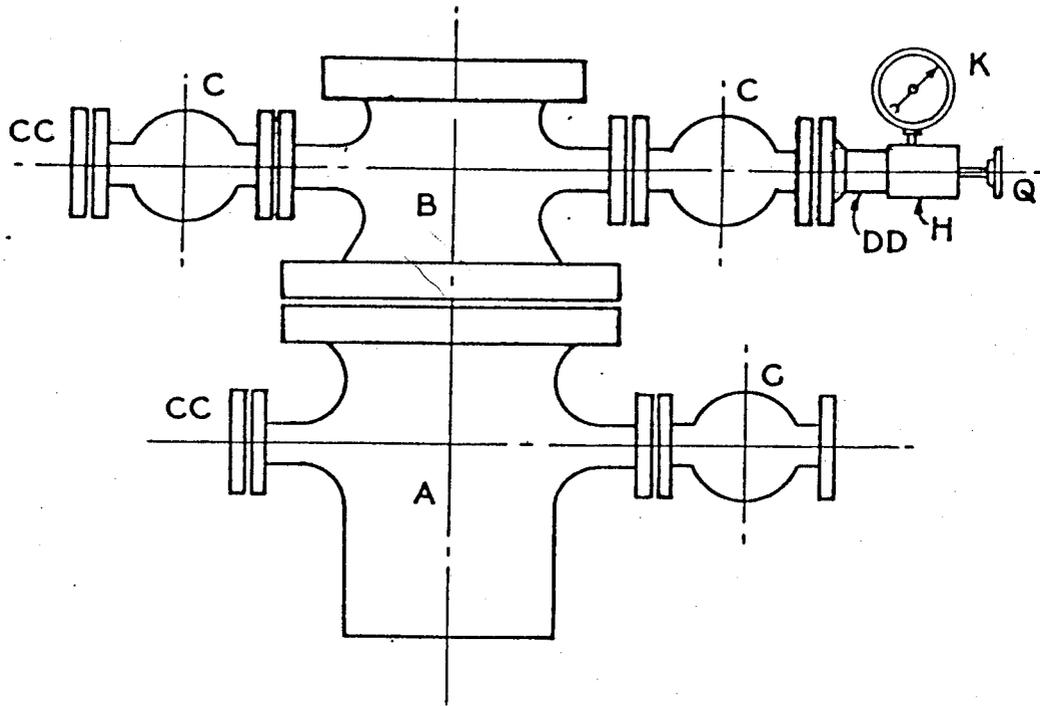
----- Dotted lines indicated perimeter of leveled location.

The fenced pit used for production will be covered if any fluid is present. The drilling and production pads will be constructed with dozers and graders using native material.

TYPICAL  
LOCATION  
LAYOUT

AMOCO PRODUCTION COMPANY  
P. O. Box 17675  
SALT LAKE CITY, UTAH 84117

EXHIBIT "D"



FOR 5,000# W. P. PRIMARY CASINGHEAD,  
AND 5,000# W.P. SECONDARY CASINGHEAD.

IF INTERMEDIATE STRING OF CASING NOT REQUIRED,  
LOWER (PRIMARY) HEAD WILL BE ONLY CASINGHEAD USED.

Amoco Production Company  
STANDARD BASIC CASINGHEAD HOOK-UP  
5 000 # W. P.

SCALE: NONE  
DR. MBB AP.  
DRG. A-8343  
No.

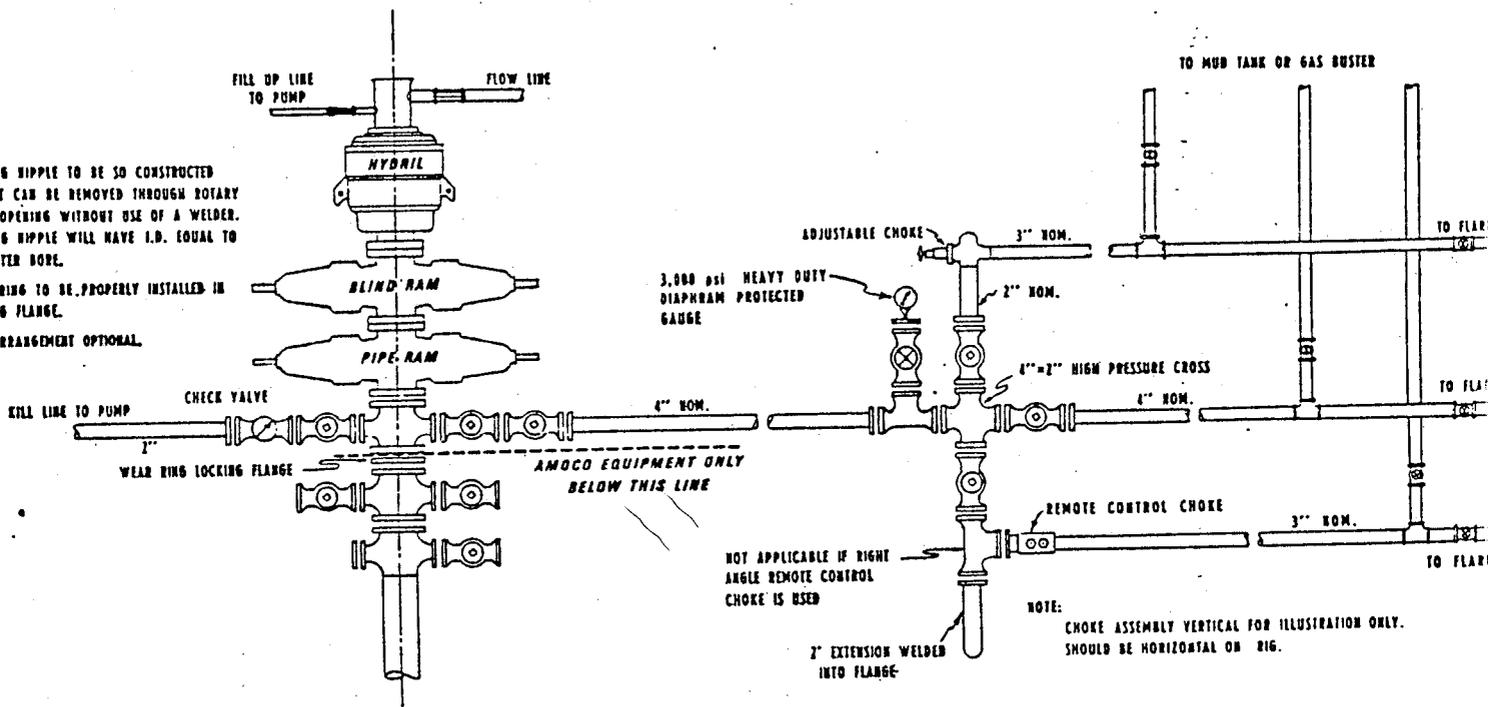


**Amoco Production Company**  
**MINIMUM BLOW-OUT PREVENTER REQUIREMENTS**  
 3,000 psi W.P.  
 2/78

**ARRANGEMENT IF MANIFOLD IS ON SIDE OF RIG**

**NOTE:**

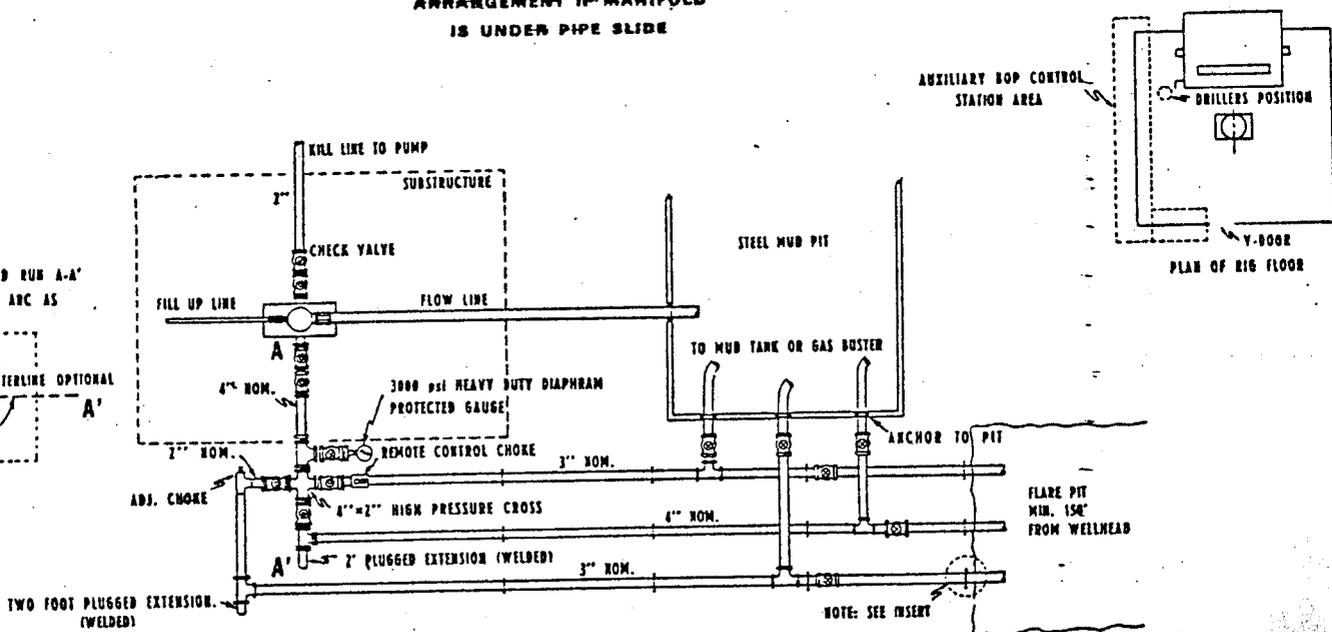
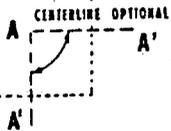
- 1 DRILLING NIPPLE TO BE SO CONSTRUCTED THAT IT CAN BE REMOVED THROUGH ROTARY TABLE OPERING WITHOUT USE OF A WELDER. DRILLING NIPPLE WILL HAVE I.D. EQUAL TO PREVENTER BORE.
- 2 WEAR RING TO BE PROPERLY INSTALLED IN LOCKING FLANGE.
- 3 RAM ARRANGEMENT OPTIONAL.



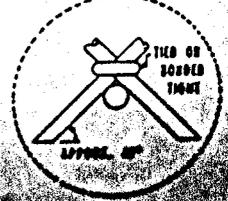
**ARRANGEMENT IF MANIFOLD IS UNDER PIPE SLIDE**

**NOTE:**

DIRECTION OF MANIFOLD RUN A-A' OPTIONAL WITHIN 90° ARC AS SHOWN BELOW



**INSERT**



- 1 BLOW-OUT PREVENTERS, ALL FITTINGS AND PIPE MUST BE 3,000 psi W.P. MINIMUM.
- 2 ALL FITTINGS UPSTREAM OF MANIFOLD TO BE FLANGED. SCREWED OR WELDED CONNECTIONS DOWNSTREAM FROM CROSS PERMISSIBLE. ADJUSTABLE CHOKE MAY HAVE SCREWED CONNECTIONS.
- 3 ALL VALVES TO BE FULL OPENING, PLUG OR GATE METAL TO METAL SEAL, AND 3,000 psi W.P. MINIMUM.
- 4 SAFETY VALVE MUST BE AVAILABLE ON RIG FLOOR AT ALL TIMES WITH PROPER CONNECTION, VALVE TO BE FULL BORE 3,000 psi W.P. MINIMUM.

- 5 ALL LINES DOWNSTREAM OF CHOKE TO BE SECURELY ANCHORED EVERY 30' AND BEAR END OF CHOKE LINE.
- 6 EQUIPMENT THROUGH WHICH BIT MUST PASS SHALL BE AS LARGE AS INSIDE DIAMETER OF THE CASING BEING DRILLED THROUGH.
- 7 KELLY COCK ON KELLY.
- 8 EXTENSION WRENCHES AND HAND WHEELS TO BE PROPERLY INSTALLED AND BRACED AT ALL TIMES.
- 9 AUXILIARY BLOW-OUT PREVENTER CONTROL STATION TO BE LOCATED AS CLOSE TO DRILLERS POSITION AS FEASIBLE.

- 10 BLOW-OUT PREVENTER CLOSING EQUIPMENT TO CONTROL OR GALLIE ACCUMULATOR, AND PUMP OPERATOR STATIONS OR PUMP POWER ON EACH CLOSING LINE, OPERATIONS TO BE LOCATED AT LEAST 75' FROM STAGE OR DRILLERS' END OF RIG.
- 11 ALL UNMARKED PIPE MINIMUM 3" O.D. NOM. GALVAN 5-55 TUBING OR MIN. 3,000 psi W.P. LINE PIPE.
- 12 REMOTE CONTROL CHOKE INSTALLATION AND LINE TO BE STRAIGHT AS POSSIBLE WITH NO 90° TURNS BELOW CHOKE.

**REVISION**

STATE OF UTAH  
OIL & GAS CONSERVATION COMMISSION

**APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK**

1a. TYPE OF WORK  
 DRILL       DEEPEN       PLUG BACK

b. TYPE OF WELL  
 OIL WELL       GAS WELL       OTHER       SINGLE ZONE       MULTIPLE ZONE

2. NAME OF OPERATOR  
 Amoco Production Company

3. ADDRESS OF OPERATOR  
 P. O. Box 17675, Salt Lake City, Utah 84117

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*  
 At surface  
 NW/4 SW/4 Section 16, 686.1' FWL 2137.4' FSL  
 At proposed prod. zone  
 Section 16, 1340' FWL 1237' FSL

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
 18 road miles southwest of Evanston, Wyoming

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. line, if any)      686.1'

16. NO. OF ACRES IN LEASE

17. NO. OF ACRES ASSIGNED TO THIS WELL

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.      11,500'

19. PROPOSED DEPTH

20. ROTARY OR CABLE TOOLS  
 Rotary to TD

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
 7305' Ungraded Ground

22. APPROX. DATE WORK WILL START\*  
 Well will spud 3/29/79

5. LEASE DESIGNATION AND SERIAL NO.  
 Fee

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME  
 Bountiful Livestock

9. WELL NO.  
 1

10. FIELD AND POOL, OR WILDCAT  
 Overthrust-Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
 Sec. 16-T4N-R8E

12. COUNTY OR PARISH      13. STATE  
 Summit,      Utah

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
26"	20" Conductor	94 & 133#	30'	1" G" w/2% CaCl <sub>2</sub> to surface
17 1/2"	13 3/8" Surface	68, 72, 88.2#	2000'	500 Sx Lite Talin w/300 Sx 1" G
12 1/2"	9 5/8" Intermediate	40-53.5#	9100'	1000 Sx 1" G" w/18% Salt
8 3/4"	7" Liner	26-35#	11500'	600 Sx 1" G"

Revision to show changes in bottom hole location, casing program, cementing program, mud program and approx. formation tops. Amoco controls all oil and gas leases within Sec. 16-T4N-R8E. All other information remains as previously reported in our "Application For Permit to Drill" submitted 1/29/79. Bomac Drilling Company will be the drilling contractor on this well and their rig #44 is presently on location rigging up. Attached is a location diagram showing the rig layout of Bomac Rig #44 as well as an inventory sheet showing the rigs basic equipment.

APR 2 1979

Attachments

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

24. SIGNED [Signature] TITLE Dist. Adm. Super. DATE March 29, 1979

(This space for Federal or State office use)

PERMIT NO. 43-043-30096 APPROVAL DATE March 15, 1979

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
 CONDITIONS OF APPROVAL, IF ANY:

ATTACHMENT TO FORM OGC-1a

BOUNTIFUL LIVESTOCK WELL #1

1. Geologic name of the surface formation: Wasatch.

2. Estimated tops of geological markers:

Evanston	- 2400'	Stump	- 7700'
Frontier	- 3200'	Preuss	- 8000'
Aspen	- 4000'	Twin Creek	- 9100'
Bear River	- 5150'	Nuggett	- 10600'
Gannett	- 5900'		

3. Estimated depths anticipated to encounter water, oil, gas or other mineral-bearing formations:

Water, oil and gas anticipated at 2400'

4. Casing Program - see Form OGC-1a item #23.

5. Operators minimum specifications for pressure control equipment are explained on attached schematic diagram. Testing of such is to be performed daily and noted on the IADC Daily Drilling Report. After running surface casing and prior to drilling out, BOP and other pressure equipment will be tested to the full working pressure rating as shown on the attached diagram. Thereafter, the BOP will be checked daily for mechanical operations only and will be noted on the IADC Daily Drilling Report.

6. Mud Program:

Surface to 2000'	-	Native 8.4-8.5#/gal
2000' to 9100'	-	LSND, 8.4-8.6#/gal, nugget to be penetrated w/minimum obtainable mud weight.
9100' - TD	-	LSND, 8.4-8.7#/gal, nugget to be penetrated w/minimum obtainable mud weight.

7. Auxiliary Equipment

Kelly Cock: floor sub with a full opening valve. 3" choke manifold with remote control choke, 2500 psi wp.

Mud loggers (2-man unit) on location from surface to total depth.

8. Testing Program:

Drill stem tests to be conducted as determined by Amoco's Denver Division Exploration Department.

Attachment to Form OGC-1a  
Bountiful Livestock Well #1

Logging Program:

DIL-GR\* - Base of surface casing to total depth  
DLL-MSFL\*\* - Base of surface casing to total depth  
Sonic-GR - Base of surface casing to total depth  
CNL-FDC-GR - Base of surface casing to total depth  
FIL-Dipmeter - Over zones of interest

\* Fresh Mud

\*\* Salty Mud

Coring Program

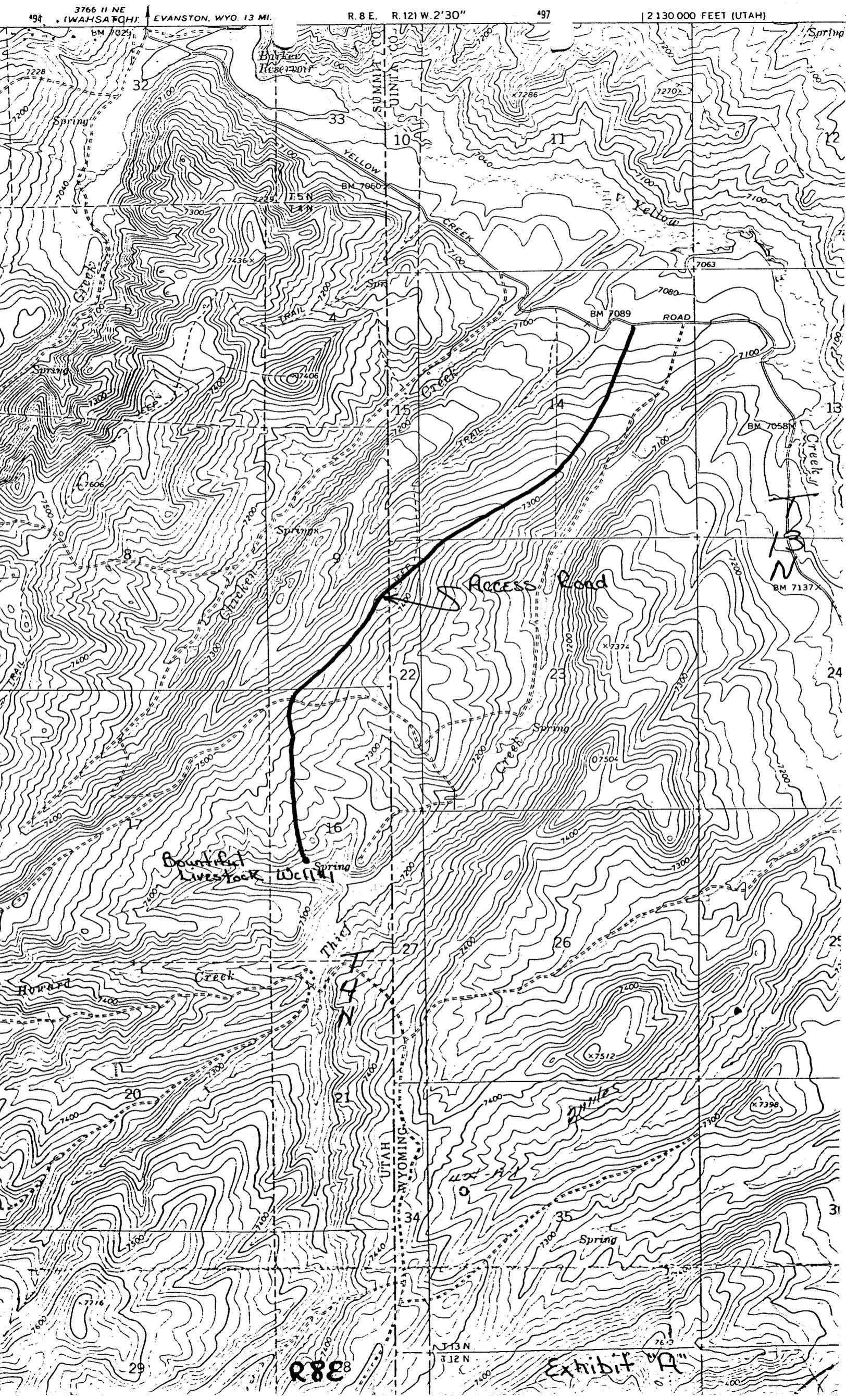
Propose to take cores within the Nugget, actual core point and interval to be determined by wellsite geologist.

Stimulation Program

After evaluation of open hole logs to determine possible productive zones, anticipate stimulating 3 zones within the Twin Creek and Nugget. Each zone to be stimulated w/approximately 5000 gal 15% HCL acid.

9. No abnormal pressure or temperature or potential hazards are anticipated. Anticipated bottom hole pressure - 6300 psi - casing head 13 3/8" 3000# WP. Tubing head, 10" x 5000# x 7-1/16" 10,000# WP.
10. The anticipated starting date will be when approved. The duration of the operations will be approximately sixty days.





Access Road

Bountiful Livestock Well

Exhibit "A"

R888

13 N

14 N

15 N

16 N

17 N

18 N

19 N

20 N

21 N

22 N

23 N

24 N

25 N

26 N

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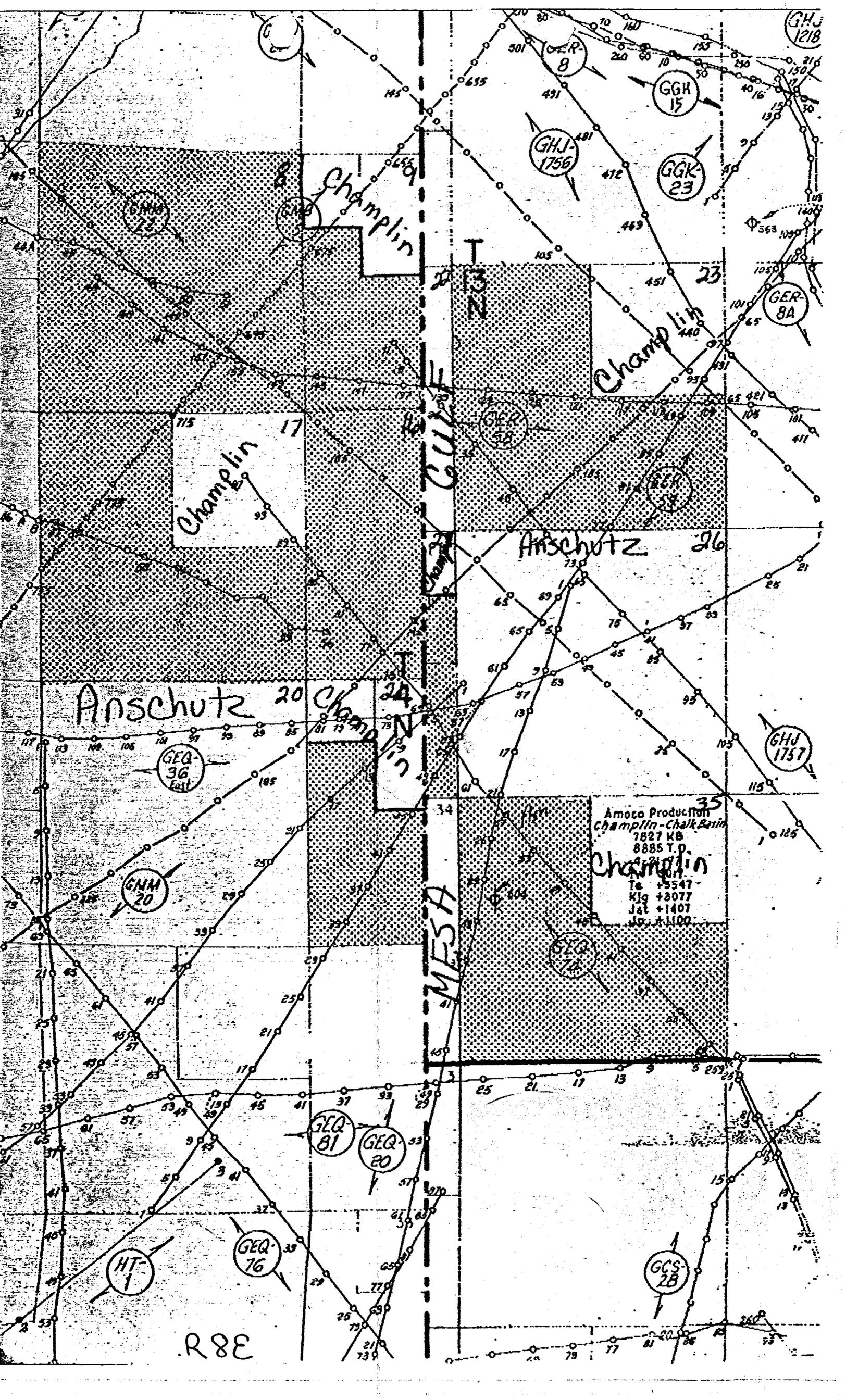
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STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS, AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. FEE
2. NAME OF OPERATOR Amoco Production Company		6. IF INDIAN, ALLOTTEE OR TRIBE NAME
3. ADDRESS OF OPERATOR P. O. Box 17675, Salt Lake City, UT 84117		7. UNIT AGREEMENT NAME
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface  NW/4 SW/4 Section 16, 686.1' FWL 2137.4' FSL		8. FARM OR LEASE NAME Bountiful Livestock
14. PERMIT NO.	15. ELEVATIONS (Show whether DF, ST, GR, etc.) 7305' Ungraded Ground	9. WELL NO. 1
		10. FIELD AND POOL, OR WILDCAT Overthrust-Wildcat
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 16, T4N, R8E
		12. COUNTY OR PARISH Summit
		13. STATE Utah

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

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

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

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

This Sundry Notice is provided as clarification to the revised "Application for Permit to Drill" submitted on subject well and dated March 29, 1979. The quantity of cement reported under #23, "Proposed Casing and Cementing Program" for the 13 3/8" Surface Casing will be sufficient to cement the casing to the surface.

APPROVED BY THE DIVISION OF  
OIL, GAS, AND MINING  
DATE: 5-2-79  
BY: [Signature]

18. I hereby certify that the foregoing is true and correct  
Original Signed By  
SIGNED D. S. DAVIDSON TITLE Dist. Adm. Supervisor DATE April 11, 1979

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:



**Amoco Production Company**

Post Office Box 17675  
Salt Lake City, Utah 84117  
801 - 272-9253

W. M. Jones  
District Superintendent

April 18, 1979

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



File: WMJ-607-982.22/WF

Request for Permission to Directionally Drill the Bountiful Livestock Well #1,  
Located NW/4 SW/4 Section 16-T4N-R8E, Summit County, Utah

Please accept this letter as Amoco Production Company's request for permission to intentionally deviate from the vertical while drilling a wildcat well designated as the Bountiful Livestock Well #1. The surface and anticipated bottom hole locations for subject well were previously provided in the "Revised Application for Permit to Drill" dated March 29, 1979 and are given below:

Surface Location - NW/4 SW/4 Section 16, 686.1' FWL 2137.4' FSL  
T4N-R8E, Summit County, Utah

Anticipated Bottom Hole Location - 1340' FWL 1237' FSL Section 16-T4N-R8E,  
Summit County, Utah

As support of our proposal to deviate the Bountiful Livestock Well #1 we offer the following additional information:

1. Amoco controls ownership of all oil and gas leases within a 500' radius of the proposed bottom hole location. Attached is a copy of the lease ownership in the immediate area.
2. Amoco has determined that due to terrain considerations that it is more economical as well as being less disruptive to the present ecology of the area to directionally drill subject well.
3. Section 16 while being a narrow section, approx. 2409', further complicates the above situation.

APPROVED BY THE DIVISION OF  
OIL, GAS, AND MINING

DATE: 4-25-79

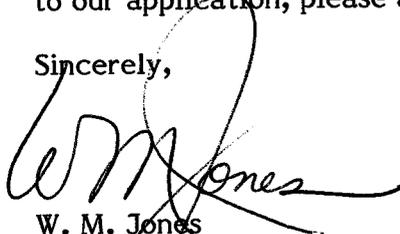
BY: M. J. Windsor

The State of Utah  
Department of Natural Resources  
Page 2

4. No other known producing wells are within one (1) mile of the Bountiful Livestock Well #1.
5. Copies of the directional survey on subject well will be provided to the Department of Natural Resources upon completion of drilling operations.

Based on the above, we feel that Administrative Approval of our application should be granted. Should you have questions or require additional information pertaining to our application, please advise us accordingly as soon as possible.

Sincerely,



W. M. Jones  
District Superintendent

Attachments



SCOTT M. MATHESON  
Governor

GORDON E. HARMSTON  
Executive Director,  
NATURAL RESOURCES

CLEON B. FEIGHT  
Director

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS, AND MINING  
1588 West North Temple  
Salt Lake City, Utah 84116  
(801) 533-5771

OIL, GAS, AND MINING BOARD

CHARLES R. HENDERSON  
Chairman

JOHN L. BELL  
C. RAY JUVELIN  
THADIS W. BOX  
CONSTANCE K. LUNDBERG  
EDWARD T. BECK  
E. STEELE McINTYRE

December 26, 1979

Amoco Production Co.  
P. O. Box 17675  
Salt Lake City, Utah 84117

RE: Well No. Bountiful Livestock #1  
Sec. 16, T. 4N, R. 8E,  
Summit County, Utah

Gentlemen:

This letter is to advise you that the Well Completion or Recompletion Report and Log for the above referred to well is due and has not been filed with this office as required by our rules and regulations.

Please complete the enclosed Form OGC-3, in duplicate, and forward them to this office as soon as possible.

Thank you for your cooperation relative to the above.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

*Debbie Beauregard*  
DEBBIE BEAUREGARD  
CLERK-TYPIST

12

STATE OF UTAH  
OIL & GAS CONSERVATION COMMISSION

SUBMIT IN DUPLICATE\*

(See other instructions on reverse side)

5. LEASE DESIGNATION AND SERIAL NO.

Fee

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Bountiful Livestock

9. WELL NO.

#1

10. FIELD AND POOL, OR WILDCAT

Wildcat Anschutz Ranch & USF

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

Sec. 16, T4N, R8E S1EM

12. COUNTY OR PARISH

Summit

13. STATE

Utah

WELL COMPLETION OR RECOMPLETION REPORT AND LOG \*

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

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

2. NAME OF OPERATOR  
AMOCO PRODUCTION COMPANY

3. ADDRESS OF OPERATOR  
P.O. Box 17675 Salt Lake City, Utah 84117

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)\*  
At surface C NW/4 SW/4 2137.4' FSL & 686.1' FWL  
At top prod. interval reported below  
At total depth 902' FSL & 1400' FWL Bottom hole loc - 1237' FSL & 1340' FWL

14. PERMIT NO. 43-043-30096 DATE ISSUED 3/15/79

12. COUNTY OR PARISH

Summit

13. STATE

Utah

15. DATE SPUDDED 3/29/79 16. DATE T.D. REACHED 12/13/79 17. DATE COMPL. (Ready to prod.) 12/31/79 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)\* 7305' GR 19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD 14,050' 21. PLUG, BACK T.D., MD & TVD 13,874' 22. IF MULTIPLE COMPL., HOW MANY\* 23. INTERVALS DRILLED BY Surf. - TD 24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)\* 12,796' - 13,874' Nugget 25. WAS DIRECTIONAL SURVEY MADE Yes

26. TYPE ELECTRIC AND OTHER LOGS RUN CNL-FDC-GR, DIL, BHC/Sonic, HDT-FIL-GR, ICS, TDT, Temp. Survey, Tracer 27. WAS WELL CORED No

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
9 5/8"	40-47-53.5#	10,679'	12 1/4"	2180 sx	
13 3/8"	68-61#	2040'	17 1/4"	2000 sx	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
7 5/8"	10,330'	11,310'	650 sx	
4 1/2"	10,500'	14,045'	250 sx	

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 7/8"		13,290'
2 3/8"		

31. PERFORATION RECORD (Interval, size and number)

13,400' - 13,430' .38" 2JSPF

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

DEPTH INTERVAL (MD)	DESCRIPTION
None	

RECEIVED  
JAN 27 1980

33.\* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
12/25/79	Flowing	48/64	→	195	940	5	4821:1
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
12/30/79	18.25	48/64	→	195	940	5	4821:1
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)	
220		→	256	1235	5.5		

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

35. LIST OF ATTACHMENTS None

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

SIGNED D. J. Davidson TITLE Dist. Admin. Supervisor DATE 12/31/79

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

# INSTRUCTIONS

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

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

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

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

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

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

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

### 37. SUMMARY OF POROUS ZONES:

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

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
DST #1	12,824'	12,850'	Rec. 2500' wtr. cushion, 1240' condensate

### 38. GEOLOGIC MARKERS

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH
Watson Canyon Boundary Ridge	11,972'	
Ridge	12,326'	
Ridge	12,384'	
Sliderock	12,644'	
Gypsum Springs	12,710'	
Nugget	12,796'	

SCIENTIFIC DRILLING CONTROLS  
720 S. COLORADO BLVD. #800 DENVER, COLO.

GYROSCOPIC DIRECTIONAL SURVEY  
FOR

\*\*\*\*\*  
\* AMOCO \*  
\*\*\*\*\*

JOB NUMBER: GMS-ALV-117  
WELL NAME: BOUNTIFUL LIVESTOCK #1  
LOCATION: EVANSTON, WYO.  
SURVEY DATE: 27 SEPT 79  
SURVEY ENGINEER: A. VOSHALL  
GYRO REFERENCE BEARING: N65-00W  
TIE-IN COORDINATES AT: 2000  
TAKEN FROM: OIL WELL DRILLING CONTROL, INC. GYRO SURVEY  
METHOD OF CALCULATION: RADIUS OF CURVATURE  
\*\*\*DEPTH MEASURED IN FEET\*\*\*  
COMMENTS: 3 INCH GYRO RUN INSIDE 9 5/8 INCH CASING

RECEIVED  
DENVER

JAN 21 1980

DIVISION OF  
OIL, GAS & MINING



SCIENTIFIC  
DRILLING  
CONTROLS

\*\*\*\*\*  
\*THIS SURVEY IS CORRECT TO THE \*  
\*BEST OF MY KNOWLEDGE AND IS \*  
\*SUPPORTED BY ACTUAL FIELD DATA.\*  
\*  
\* *[Signature]* \*  
\* \*\*\*\*\* \*  
\* COMPANY REPRESENTATIVE \*  
\*\*\*\*\*

SCIENTIFIC DRILLING CONTROLS  
720 S. COLORADO BLVD. #800 DENVER, COLO.

JOB NUMBER: GMS-ALV-16-017

BOUNTIFUL LIVESTOCK

DATE: 27 SEPT 79

INRUN SURVEY

BY

RADIUS OF CURVATURE

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	COURSE DEV.	INC D M	BEARING D M	COORDINATES		D-LEG PER 100
						LATITUDE	DEPARTURE	
2000.0	1999.80	0.00	0.65	00-30	N 50-00 E	4.15 N	10.15 E	0.00
2100.0	2099.80	2.82	1.09	00-45	N 64-39 E	4.74 N	11.07 E	0.29
2200.0	2199.79	2.99	1.09	00-30	N 59-47 E	5.25 N	12.03 E	0.26
2300.0	2299.79	3.02	0.87	00-30	N 49-55 E	5.75 N	12.74 E	0.09
2400.0	2399.78	3.04	0.87	00-30	N 60-02 E	6.25 N	13.46 E	0.09
2500.0	2499.78	3.22	1.09	00-45	N 65-10 E	6.75 N	14.43 E	0.26
2600.0	2599.77	3.60	1.31	00-45	N 75-18 E	7.19 N	15.66 E	0.13
2700.0	2699.76	4.41	1.53	01-00	S 84-34 E	7.31 N	17.17 E	0.39
2800.0	2799.75	5.74	1.75	01-00	S 69-27 E	6.92 N	18.87 E	0.26
2900.0	2899.73	7.34	1.75	01-00	S 49-19 E	6.04 N	20.36 E	0.35
3000.0	2999.72	9.08	1.75	01-00	S 34-11 E	4.74 N	21.52 E	0.26
3100.0	3099.70	10.82	1.75	01-00	S 39-03 E	3.34 N	22.56 E	0.08
3200.0	3199.68	12.78	1.96	01-15	S 26-56 E	1.70 N	23.63 E	0.34
3300.0	3299.66	14.88	2.18	01-15	S 16-48 E	0.33 S	24.44 E	0.22
3400.0	3399.63	16.92	2.18	01-15	S 14-32 E	2.43 S	25.03 E	0.05
3500.0	3499.61	19.06	2.40	01-30	S 05-47 E	4.79 S	25.45 E	0.33
3600.0	3599.57	21.36	2.62	01-30	S 10-39 E	7.38 S	25.82 E	0.13
3700.0	3699.54	23.77	2.62	01-30	S 17-31 E	9.91 S	26.46 E	0.18
3800.0	3799.50	26.52	2.84	01-45	S 27-23 E	12.53 S	27.54 E	0.37
3900.0	3899.45	29.55	3.05	01-45	S 32-08 E	15.18 S	29.06 E	0.14
4000.0	3999.40	32.81	3.27	02-00	S 46-59 E	17.70 S	31.14 E	0.54
4100.0	4099.33	36.36	3.71	02-15	S 58-51 E	19.93 S	34.09 E	0.50

SCIENTIFIC DRILLING CONTROLS  
720 S. COLORADO BLVD. #800 DENVER, COLO.

JOB NUMBER: GMS-ALV-16-017

BOUNTIFUL LIVESTOCK

DATE: 27 SEPT 79

INRUN SURVEY

BY

RADIUS OF CURVATURE

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	COURSE DEV.	INC. D M	BEARING D M	COORDINATES LATITUDE	DEPARTURE	D-LEG PER 100
4200.0	4199.24	40.33	4.36	02-45	S 63-44 E	22.02 S	37.91 E	0.54
4300.0	4299.12	44.76	5.02	03-00	S 65-27 E	24.18 S	42.44 E	0.26
4400.0	4398.96	49.81	5.67	03-30	S 62-12 E	26.68 S	47.53 E	0.53
4500.0	4498.73	55.89	6.76	04-15	S 63-04 E	29.78 S	53.53 E	0.75
4600.0	4598.40	63.14	8.06	05-00	S 62-16 E	33.49 S	60.70 E	0.75
4700.0	4697.97	71.57	9.37	05-45	S 63-01 E	37.79 S	69.02 E	0.75
4800.0	4797.27	82.29	11.75	07-45	S 58-53 E	43.50 S	79.29 E	2.06
4900.0	4896.30	95.32	13.92	08-15	WEST 55-46 E	51.01 S	91.00 E	0.66
5000.0	4995.30	108.51	14.13	08-00	S 59-37 E	58.56 S	102.95 E	0.60
5100.0	5094.32	121.43	13.92	08-00	S 57-30 E	65.82 S	114.82 E	0.29
5200.0	5193.41	133.82	13.49	07-30	S 62-26 E	72.57 S	126.49 E	0.83
5300.0	5292.58	145.39	12.84	07-15	S 62-30 E	78.50 S	137.87 E	0.25
5400.0	5391.81	156.60	12.40	07-00	S 61-35 E	84.32 S	148.83 E	0.27
5500.0	5491.07	167.74	12.19	07-00	S 59-40 E	90.29 S	159.45 E	0.23
5600.0	5590.35	178.64	11.97	06-45	S 62-44 E	96.06 S	169.94 E	0.44
5700.0	5689.68	189.05	11.54	06-30	S 61-48 E	101.43 S	180.15 E	0.27
5800.0	5789.07	198.98	11.10	06-15	S 64-52 E	106.41 S	190.07 E	0.42
5900.0	5888.47	208.58	10.89	06-15	S 64-56 E	111.03 S	199.93 E	0.01
6000.0	5987.83	218.54	11.32	06-45	S 65-20 E	115.79 S	210.20 E	0.50
6100.0	6087.11	229.05	11.97	07-00	S 65-24 E	120.78 S	221.08 E	0.25
6200.0	6186.34	239.83	12.40	07-15	S 67-26 E	125.75 S	232.45 E	0.36

SCIENTIFIC DRILLING CONTROLS

SCIENTIFIC DRILLING CONTROLS  
720 S. COLORADO BLVD. #800 DENVER, COLO.

JOB NUMBER: GMS-ALV-16-017

BOUNTIFUL LIVESTOCK

DATE: 27 SEPT 79

INRUN SURVEY

BY

RADIUS OF CURVATURE

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	COURSE DEV.	INC D M	BEARING D M	COORDINATES		D-LEG PER 100
						LATITUDE	DEPARTURE	
6300.0	6285.63	250.11	11.97	06-30	S 67-32 E	130.33 S	243.51 E	0.75
6400.0	6385.01	259.70	11.10	06-15	S 66-36 E	134.66 S	253.73 E	0.27
6500.0	6484.44	268.90	10.67	06-00	S 67-40 E	138.80 S	263.56 E	0.27
6600.0	6583.94	278.10	10.02	05-30	S 51-49 E	143.83 S	272.19 E	1.66
6700.0	6683.44	287.96	10.02	06-00	S 40-52 E	150.74 S	279.43 E	1.20
6800.0	6782.89	298.37	10.45	06-00	S 42-43 E	158.53 S	286.39 E	0.19
6900.0	6882.36	308.50	10.24	05-45	S 47-33 E	165.75 S	293.65 E	0.55
7000.0	6981.88	318.09	9.80	05-30	S 49-25 E	172.25 S	300.99 E	0.31
7100.0	7081.40	327.69	9.80	05-45	S 47-18 E	178.76 S	308.31 E	0.33
7200.0	7180.76	338.96	11.32	07-15	S 27-19 E	187.72 S	315.14 E	2.69
CONTROLS								
7300.0	7279.82	352.27	13.70	08-30	S 19-18 E	200.29 S	320.55 E	1.66
7400.0	7378.59	367.23	15.64	09-30	S 20-14 E	215.02 S	325.85 E	1.01
7500.0	7477.07	383.85	17.36	10-30	S 19-33 E	231.34 S	331.75 E	1.01
7600.0	7575.10	402.75	19.72	12-15	S 20-35 E	249.87 S	338.52 E	1.76
7700.0	7672.68	423.84	21.86	13-00	S 22-30 E	270.20 S	346.55 E	0.86
7800.0	7770.12	445.68	22.50	13-00	S 23-22 E	290.92 S	355.31 E	0.19
7900.0	7867.61	467.40	22.28	12-45	S 24-12 E	311.31 S	364.30 E	0.31
8000.0	7965.14	489.01	22.07	12-45	S 26-02 E	331.29 S	373.66 E	0.41
8100.0	8062.73	510.48	21.86	12-30	S 25-53 E	350.94 S	383.23 E	0.25
8200.0	8160.26	532.19	22.07	13-00	S 26-48 E	370.72 S	393.02 E	0.54
8300.0	8257.18	556.44	24.61	15-30	S 26-55 E	392.68 S	404.14 E	2.50

SCIENTIFIC DRILLING CONTROLS  
720 S. COLORADO BLVD. #800 DENVER, COLO.

JOB NUMBER: GMS-ALV-16-017

DATE: 27 SEPT 79

BOUNTIFUL LIVESTOCK

INRUN SURVEY

BY

RADIUS OF CURVATURE

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	COURSE DEV.	INC D M	BEARING D M	COORDINATES		D-LEG PER 100
						LATITUDE	DEPARTURE	
8400.0	8353.49	582.97	26.93	15-45	S 26-49 E	416.71 S	416.31 E	0.25
8500.0	8449.67	609.95	27.35	16-00	S 27-41 E	441.03 S	428.84 E	0.35
8600.0	8545.80	637.27	27.56	16-00	S 30-28 E	465.12 S	442.24 E	0.77
8700.0	8642.10	664.04	26.93	15-15	S 30-17 E	488.35 S	455.86 E	0.75
8800.0	8738.58	690.17	26.30	15-15	S 30-09 E	511.08 S	469.09 E	0.03
8900.0	8835.06	716.27	26.30	15-15	S 29-02 E	533.95 S	482.08 E	0.29
9000.0	8931.71	741.79	25.67	14-30	S 32-06 E	556.06 S	495.14 E	1.09
9100.0	9028.42	767.20	25.46	15-00	S 33-58 E	577.40 S	509.01 E	0.69
9200.0	9125.01	793.06	25.88	15-00	S 35-46 E	598.64 S	523.81 E	0.47
9300.0	9221.72	818.51	25.46	14-30	S 34-38 E	619.44 S	538.49 E	0.58
9400.0	9318.59	843.31	24.83	14-15	S 33-31 E	640.00 S	552.40 E	0.38
9500.0	9415.57	867.69	24.40	14-00	S 34-21 E	660.25 S	566.02 E	0.32
9600.0	9512.59	891.86	24.19	14-00	S 34-13 E	680.24 S	579.65 E	0.03
9700.0	9609.68	915.77	23.98	13-45	S 30-55 E	700.45 S	592.55 E	0.83
9800.0	9706.71	939.83	24.19	14-15	S 30-22 E	721.26 S	604.89 E	0.52
9900.0	9803.69	964.11	24.40	14-00	S 31-44 E	742.17 S	617.47 E	0.41
10000.0	9900.72	988.22	24.19	14-00	S 32-08 E	762.70 S	630.27 E	0.10
10100.0	9997.70	1012.50	24.40	14-15	S 29-37 E	783.65 S	642.79 E	0.66
10200.0	10094.67	1036.60	24.40	14-00	S 26-06 E	805.22 S	654.20 E	0.90
10300.0	10191.76	1060.15	23.98	13-45	S 25-29 E	826.81 S	664.63 E	0.29
10400.0	10288.84	1083.60	23.98	14-00	S 23-58 E	848.59 S	674.66 E	0.44

CONTROLS

SCIENTIFIC DRILLING CONTROLS  
720 S. COLORADO BLVD. #800 DENVER, COLO.

JOB NUMBER: GMS-ALV-16-017

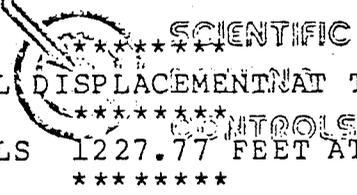
DATE: 27 SEPT 79

BOUNTIFUL LIVESTOCK  
INRUN SURVEY

BY

RADIUS OF CURVATURE

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	COURSE DEV.	INC D M	BEARING D M	COORDINATES LATITUDE	DEPARTURE	D-LEG PER 100
10500.0	10385.87	1107.17	24.19	14-00	S 23-26 E	870.75 S	684.38 E	0.13
10600.0	10483.01	1130.32	23.77	13-30	S 23-47 E	892.53 S	693.90 E	0.51
10700.0	10580.34	1152.75	22.92	13-00	S 26-06 E	913.31 S	703.57 E	0.73
10800.0	10677.68	1175.15	22.92	13-30	S 23-02 E	934.15 S	713.10 E	0.86
10900.0	10775.22	1196.71	22.07	12-00	S 25-43 E	954.25 S	722.20 E	1.61
11000.0	10872.89	1217.58	21.43	12-45	S 21-39 E	973.87 S	730.81 E	1.15
11050.0	10921.76	1227.77	10.61	11-45	S 19-21 E	983.81 S	734.52 E	2.22



THE HORIZONTAL DISPLACEMENT AT THE DEPTH OF  
 11050.0 FEET EQUALS 1227.77 FEET AT S 36-45 E







OIL-WELL DRILLING CONTROL, INC.

RECORD OF SURVEY - RADIUS OF CURVATURE METHOD

AMOCO PRODUCTION COMPANY  
BOUTIFUL LIVESTOCK, WELL NO. 1  
SUMMIT COUNTY, UTAH

GYROSCOPIC MULTIPLE SHOT SURVEY NO: 03-02-G-1479 (5/6/79)  
MAGNETIC MULTIPLE SHOT SURVEY NO: 03-02-S-4879 (5/6/79)  
MAGNETIC SINGLE SHOT SURVEY NO: 15-D-279 (5/4 THRU 5/22/79)

MAGNETIC DECLINATION :15 DEGREES EAST (TRUE)  
KBE =:0  
AZIMUTH OF PLANE OF PROPOSED SECTION =:143.75

ALL CALCULATIONS MADE BY OIL - WELL COMPUTER

THIS SURVEY CERTIFIED TRUE AND CORRECT  
AS REPRESENTED BY FIELD NOTES.  
OIL-WELL DRILLING CONTROL, INC.  
P.O. BOX 705  
BROUSSARD, LOUISIANA 70518  
1-318-837-1145

SUB SEA DEPTH	MEAS. DEPTH	DRIFT		TRUE	VERTICAL SECTION	DRIFT DIRECT DEG	TOTAL	COORDINATES	C L O S U R E S			DOG-LEG SEVERITY DEG/100FT.	
		ANGLE D	M	VERTICAL DEPTH					DISTANCE	ANGLE D M S			
0.0	0	0	0	0.0	0.0	N 0 W	0.0 N	0.0 E	0.0	N	0 0 0	E	0.00
100.0	100	0	0	100.0	0.0	N 0 W	0.0 N	0.0 E	0.0	N	0 0 0	E	0.00
200.0	200	0	0	200.0	0.0	N 0 W	0.0 N	0.0 E	0.0	N	0 0 0	E	0.00
300.0	300	0	0	300.0	0.0	N 0 W	0.0 N	0.0 E	0.0	N	0 0 0	E	0.00
400.0	400	0	15	400.0	-0.2	N 10 W	0.2 N	0.0 W	0.2	N	10 0 0	W	0.25
500.0	500	0	15	500.0	-0.4	N 50 E	0.6 N	0.1 E	0.6	N	9 47 21	E	0.1
600.0	600	0	30	600.0	-0.6	N 35 E	1.1 N	0.5 E	1.2	N	26 38 20	E	0.27
700.0	700	0	15	700.0	-0.2	S 10 E	1.0 N	1.0 E	1.4	N	46 59 11	E	0.29
800.0	800	0	30	800.0	0.3	N 54 E	0.8 N	1.6 E	1.7	N	63 37 30	E	0.36
900.0	900	0	30	900.0	0.1	N 32 E	1.4 N	2.1 E	2.6	N	56 47 10	E	0.19
1000.0	1000	0	30	1000.0	0.2	N 80 E	1.9 N	2.8 E	3.4	N	56 35 28	E	0.41
1100.0	1100	0	30	1100.0	0.6	N 88 E	2.0 N	3.7 E	4.2	N	62 4 1	E	0.07
1200.0	1200	0	30	1200.0	0.8	N 46 E	2.3 N	4.5 E	5.1	N	62 54 54	E	0.36
1300.0	1300	0	15	1300.0	0.6	N 26 E	2.8 N	4.9 E	5.6	N	59 54 25	E	0.28
1400.0	1400	0	30	1400.0	0.7	S 80 E	3.1 N	5.4 E	6.3	N	60 13 31	E	0.41
1500.0	1500	0	30	1500.0	1.2	N 70 E	3.2 N	6.3 E	7.0	N	63 9 4	E	0.09
1600.0	1600	0	15	1600.0	1.3	N 70 E	3.4 N	6.9 E	7.7	N	63 44 55	E	0.25
1700.0	1700	0	30	1700.0	1.7	S 80 E	3.5 N	7.5 E	8.3	N	65 21 6	E	0.1
1800.0	1800	0	45	1800.0	2.1	N 55 E	3.7 N	8.6 E	9.3	N	66 43 24	E	0.36
1900.0	1900	0	15	1900.0	2.2	N 65 E	4.1 N	9.3 E	10.2	N	66 9 3	E	0.51
2000.0	2000	0	30	2000.0	2.2	N 50 E	4.5 N	9.9 E	10.9	N	65 38 58	E	0.27
2153.9	2154	0	45	2153.9	2.3	N 65 E	5.4 N	11.3 E	12.5	N	64 33 53	E	0.19
2246.9	2247	0	45	2246.9	2.4	N 47 E	6.1 N	12.3 E	13.7	N	63 48 43	E	0.25
2339.9	2340	0	45	2339.9	2.2	N 45 E	6.9 N	13.2 E	14.9	N	62 22 46	E	0.03
2432.9	2433	0	45	2432.9	2.0	N 45 E	7.8 N	14.0 E	16.0	N	61 4 56	E	0.00
2524.9	2525	0	45	2524.9	1.9	N 50 E	8.6 N	14.9 E	17.2	N	60 8 34	E	0.07
2617.9	2618	1	0	2617.9	2.0	N 65 E	9.3 N	16.1 E	18.6	N	59 56 36	E	0.36

SUB SEA DEPTH	MEAS. DEPTH	DRIFT		TRUE VERTICAL DEPTH	VERTICAL SECTION	DRIFT DIRECT DEG	TOTAL	COORDINATES	CLOSURES				DOG-LEG SEVERITY DEG/100FT.	
		ANGLE D	M						DISTANCE	ANGLE D	M	S		
2711.9	2712	1	0	2711.9	2.6	N 87 E	9.7 N	17.7 E	20.2	N 61	12	24	E	0.41
2804.9	2805	1	0	2804.9	3.6	S 85 E	9.7 N	19.3 E	21.6	N 63	21	31	E	0.04
2897.9	2898	1	0	2897.9	4.9	S 57 E	9.2 N	20.8 E	22.8	N 66	14	1	E	0.52
2990.8	2991	1	0	2990.8	6.4	S 62 E	8.4 N	22.2 E	23.8	N 69	25	38	E	0.09
3082.8	3083	1	15	3082.8	8.1	S 53 E	7.4 N	23.8 E	24.9	N 72	44	1	E	0.33
3175.8	3176	1	15	3175.8	10.1	S 45 E	6.1 N	25.3 E	26.0	N 76	32	2	E	0.7
3268.8	3269	1	30	3268.8	12.3	S 45 E	4.5 N	26.9 E	27.2	N 80	32	12	E	0.27
3361.7	3362	1	45	3361.7	14.9	S 35 E	2.5 N	28.6 E	28.7	N 85	4	27	E	0.41
3454.7	3455	2	0	3454.7	17.9	S 24 E	0.2 S	30.1 E	30.1	S 89	39	11	E	0.47
3548.6	3549	2	0	3548.6	21.1	S 25 E	3.2 S	31.4 E	31.6	S 84	15	42	E	0.04
3641.6	3642	2	0	3641.6	24.3	S 31 E	6.0 S	32.9 E	33.5	S 79	38	35	E	0.23
3733.5	3734	1	45	3733.5	27.4	S 36 E	8.5 S	34.6 E	35.6	S 76	8	16	E	0.32
3826.5	3827	1	45	3826.5	30.2	S 40 E	10.8 S	36.4 E	37.9	S 73	29	15	E	0.13
3919.4	3920	2	0	3919.4	33.2	S 50 E	12.9 S	38.5 E	40.6	S 71	27	32	E	0.44
4012.4	4013	2	15	4012.4	36.5	S 58 E	15.0 S	41.3 E	43.9	S 70	6	41	E	0.42
4104.3	4105	2	30	4104.3	40.0	S 58 E	17.0 S	44.5 E	47.7	S 69	8	4	E	0.27
4197.2	4198	3	0	4197.2	44.0	S 69 E	19.0 S	48.5 E	52.1	S 68	39	11	E	0.78
4291.1	4292	3	0	4291.1	48.1	S 71 E	20.6 S	53.1 E	57.0	S 68	46	10	E	0.7
4383.9	4385	3	0	4383.9	52.1	S 69 E	22.3 S	57.7 E	61.9	S 68	52	58	E	0.11
4476.8	4478	4	0	4476.8	56.9	S 67 E	24.4 S	63.0 E	67.5	S 68	48	36	E	1.08
4569.5	4571	5	0	4569.5	63.1	S 69 E	27.2 S	69.7 E	74.8	S 68	43	58	E	1.09
4662.1	4664	5	15	4662.1	70.2	S 67 E	30.3 S	77.4 E	83.2	S 68	39	40	E	0.33
4732.7	4735	6	0	4732.7	76.3	S 65 E	33.1 S	83.8 E	90.1	S 68	26	25	E	1.09
4826.1	4829	7	45	4826.1	86.0	S 67 E	37.7 S	94.1 E	101.3	S 68	10	10	E	1.88
4885.5	4889	8	15	4885.5	93.3	S 65 E	41.1 S	101.7 E	109.7	S 68	0	16	E	0.95
4942.9	4947	8	15	4942.9	100.5	S 66 E	44.5 S	109.3 E	118.0	S 67	50	40	E	0.25
5034.9	5040	8	15	5034.9	112.1	S 67 E	49.9 S	121.5 E	131.3	S 67	42	35	E	0.15

SUB SEA DEPTH	MEAS. DEPTH	DRIFT		TRUE	VERTICAL SECTION	DRIFT DIRECT DEG	TOTAL	COORDINATES	CLOSURE			DOG-LEG SEVERITY DEG/100FT.	
		ANGLE D M	DEPTH	DISTANCE					ANGLE D M S				
5128.0	5134	8	0	5128.0	123.4	S 68 E	54.9 S	133.8 E	144.6	S 67	41 31	E	0.31
5220.2	5227	7	15	5220.2	133.8	S 70 E	59.4 S	145.3 E	157.0	S 67	47 46	E	0.86
5280.7	5288	7	15	5280.7	140.2	S 71 E	61.9 S	152.6 E	164.7	S 67	54 23	E	0.21
5371.9	5380	7	30	5371.9	149.9	S 70 E	65.9 S	163.7 E	176.5	S 68	5 48	E	0.31
5466.1	5475	7	0	5466.1	159.8	S 71 E	69.9 S	175.0 E	188.4	S 68	14 2	E	0.51
5554.5	5564	7	0	5554.5	168.6	S 73 E	73.2 S	185.3 E	199.3	S 68	26 20	E	0.
5645.8	5656	6	30	5645.8	177.2	S 75 E	76.2 S	195.7 E	210.0	S 68	43 29	E	0.60
5707.4	5718	6	30	5707.4	182.7	S 73 E	78.1 S	202.5 E	217.0	S 68	54 42	E	0.37
5804.8	5816	6	15	5804.8	191.3	S 75 E	81.1 S	212.9 E	227.9	S 69	8 18	E	0.34
5895.3	5907	6	0	5895.3	198.9	S 75 E	83.7 S	222.3 E	237.5	S 69	23 40	E	0.27
6017.6	6030	6	30	6017.6	209.3	S 75 E	87.1 S	235.2 E	250.8	S 69	41 38	E	0.41
6135.8	6149	7	0	6135.8	220.2	S 76 E	90.6 S	248.8 E	264.8	S 69	59 4	E	0.43
6228.1	6242	7	0	6228.1	229.0	S 75 E	93.5 S	259.7 E	276.0	S 70	13 38	E	0.13
6361.2	6376	6	0	6361.2	240.5	S 78 E	97.0 S	274.5 E	291.1	S 70	32 15	E	0.79
6407.9	6423	6	15	6407.9	244.4	S 72 E	98.3 S	279.3 E	296.1	S 70	37 47	E	1.46
6496.5	6512	5	45	6496.5	252.0	S 72 E	101.2 S	288.2 E	305.4	S 70	39 19	E	0.56
6551.2	6567	6	0	6551.2	256.6	S 72 E	102.9 S	293.5 E	311.1	S 70	41 46	E	0.45
BOTTOM HOLE CLOSURE							311.1 FEET AT S 70 41 46 E						

March 6, 1980

Amoco Production Co.  
P.O. Box 17675  
Salt Lake City, Utah

Re: Well No. Bountiful Livestock 1  
Sec. 16, T. 4N, R. 8E.  
Summit County, Utah

Gentlemen:

According to our records, a "Well Completion Report" filed with this office 12-31-79, from above referred to well indicates the following electric logs were run: CNL-FDC-GR, DIL, BHC/SONIC, HDT-FIL-GR, ICS, TDT, Temp. SUEVEY, TRACER. As of todays date this office has only received the TEMP. SURVEY.

Rule C-5, General Rules and Regulations and Rules of Practice andpProcedure, requires that a well log ~~ha~~all be filed with the Commission together with a copy of the electric and radioactivity logs.

Your prompt attention to the above will be greatly appreciated.

Sincerely,

DIVISION OF OIL, GAS, AND MINING



JANICE TABISH  
CLERK TYPIST

AIR MONITORING  
COMPLETE GAS SERVICE  
CONSULTING CHEMISTS  
POLLUTION CONTROL  
WATER ANALYSIS

**RECEIVED**  
APR 09 1980

RUN NO. ... 2325

DATE SECURED: 3-10-80

DIVISION OF  
OIL, GAS & MINING

A SAMPLE OF: BOUNTIFUL LIVESTOCK #1 2-22-80 7  
SECURED FROM: AMOCO PRODUCTION CO. SALT LAKE CITY UTAH  
AT: ..... SECURED BY: .....  
SAMPLING CONDITIONS: ..... PRESS: ..... TEMP: ..... TIME: ..... DATE: .....

**FRACTIONAL ANALYSIS**  
@ 14.696 & 60 DEG. F.

	MOL. %	WT. %	LIQ. %			
CARBON DIOXIDE	0.00	0.00	0.00	CALC. SP. GR.	0.6826	PROPANE CALC GPM
NITROGEN				CALC. MOL. WT.	97.091	BUTANES CALC GPM
OXYGEN				CALC. VAP PRES	117.67	PENTANES PLUS GPM
H2S				SP. GR. C 7 +	0.6882	ETHANE CALC GPM
METHANE	2.26	0.37	0.85	MOL. WT. C 7 +	100.20	TOTAL GPM
ETHANE	0.16	0.05	0.08	VAP PRES C 7 +	1.620	
PROPANE	0.55	0.25	0.34	GAL/#MOL C 7 +	17.464	B. T. U. /CU. FT.
ISO-BUTANE	0.32	0.19	0.23	CF/GAL C 7 +	21.729	DRY BASIS
N-BUTANE	0.58	0.35	0.41	LB/GAL C 7 +	5.738	WET BASIS
ISO-PENTANE	0.47	0.35	0.38	26.0 R. P. V.		
N-PENTANE	0.56	0.42	0.45	GASOLINE		26 # PRODUCT
HEXANES	0.90	0.80	0.83	EXCESS C4'S		12 # PRODUCT
HEPTANES	94.20	97.22	96.43	EXCESS C3		
				EXCESS C2		SULFUR ANALYSIS
				12.0 R. V. P.		(GR. /100CU. FT. )
				GASOLINE		HYDROGEN SULFIDE
TOTAL	100.00	100.00	100.00	EXCESS C4'S		MERCAPTANS
				EXCESS C3		SULFIDES
				EXCESS C2		RESIDUAL SULFUR
				12.0 R. V. P.		MOISTURE CONTENT
				GASOLINE		(#/MMCU. FT. )
				EXCESS C4'S		
				EXCESS C3		
				EXCESS C2		

RUN BY: HAUCK                      CHECKED BY: HAUCK                      APPROVED BY: *E. M. Hauck*

**ADDITIONAL DATA AND REMARKS**

API Gravity @ 60°F                      49.5  
Reid Vapor Pressure                      12.6

COPIES TO:

**DS** BOTTOM HOLE PRESSURE/TEMPERATURE SURVEY REPORT

OEC-983

TEST NUMBER <b>1</b>	RUN NUMBER <b>1</b>	AREA <b>Evanston</b>	DEVIATED HOLE? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	DATE (DAY MO YR) <b>15/2/80</b>	PAGE OF <b>1   2</b>
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CUSTOMER <b>Amoco Production Co.</b>	WELL NAME OR NUMBER <b>Bountiful Livestock</b>	KB ELEV. (FT) <b>-</b>	GND ELEV./WATER DEPTH (FT) <b>-</b>	REF. ELEV. (FT.) <b>-</b>	SHUT IN TIME BEFORE SURVEY <b>0</b> (HOURS)
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**UPPER PRESSURE GAUGE**

PRESS. ELEMENT NO. <b>44635</b>	PRESS. ELEMENT RANGE (psi) <b>0-6500</b>	INNER HOUSING NO. <b>37120</b>	CHART TIME RANGE (HRS) <b>0-120</b>	CALIBRATION NO. <b>one</b>	CALIBRATION MODULUS - K <b>3290.0934</b>	CALIBRATION a + P <sub>e</sub> <b>-205277</b>
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**LOWER PRESSURE GAUGE**

PRESS. ELEMENT NO.	PRESS. ELEMENT RANGE (psi)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION MODULUS - K	CALIBRATION a + P <sub>e</sub>
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**TEMPERATURE GAUGE**

TEMP. ELEMENT NO.	TEMP. ELEMENT RANGE (°F)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION FACTOR(S)
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ARRIVED DEPARTED	DEPTH		UPPER PRESSURE GAUGE					LOWER PRESSURE GAUGE					TEMPERATURE GAUGE				
	MEASURED DEPTH (FEET)	DEPTH DIFFERENCE (FEET)	PRESSURE DEFLECTION Y (INCHES)	NON-LINEAR CORRECTION C <sub>L</sub> * (psi)	BOTTOM HOLE PRESSURE P=KY+a+P <sub>e</sub> +C <sub>L</sub> (psig)	PRESSURE DIFFERENCE (psi)	PRESSURE GRADIENT (psi/FT)	PRESSURE DEFLECTION Y (INCHES)	NON-LINEAR CORRECTION C <sub>L</sub> * (psi)	BOTTOM HOLE PRESSURE P=KY+a+P <sub>e</sub> +C <sub>L</sub> (psig)	PRESSURE DIFFERENCE (psi)	PRESSURE GRADIENT (psi/FT)	TEMPERATURE DEFLECTION (INCHES)	CALIBRATION FACTOR (°F/INCH)	BOTTOM HOLE TEMPERATURE (°F)	TEMP. DIFFERENCE (°F)	TEMP. GRADIENT (°F/FT)
	lub		.905		2957.0												
	on bottom																
	Flow test																
0 hr	13,200		1.424		4664.5												
1 hr			1.421		4654.6												
2 hr			1.418		4644.8												
3 hr			1.421		4654.6												
4 hr			1.420		4651.4												
	shut in																
4 hr 4 min			1.525		4993.5												
4 hr 8 min			1.649		5404.8												
5 hr			1.650		5408.6												
6 hr			1.652		5414.7												
7 hr			1.653		5417.9												

Bottom Hole Temperature 212 degrees

NOTE: C<sub>L</sub> USED ONLY WHEN SIGNIFICANT COMPARED TO THE READING ACCURACY OF ± 0.02% FULL SCALE.



15

**BOTTOM HOLE PRESSURE/TEMPERATURE SURVEY REPORT**

TEST NUMBER <b>3</b>	RUN NUMBER <b>1</b>	AREA <b>Evanston</b>	DEVIATED HOLE? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	DATE (DAY MO YR) <b>22/2/80</b>	PAGE OF <b>1</b>   <b>4</b>
CUSTOMER <b>AMOCO PRODUCTION</b>		WELL NAME OR NUMBER <b>Bountiful Livestock #1</b>	KB ELEV. (FT) <b>(FT)</b>	GND ELEV./WATER DEPTH <b>(FT)</b>	REF. ELEV. (FT.)
			SHUT IN TIME BEFORE SURVEY <b>(HOURS)</b>		

UPPER PRESSURE GAUGE						
PRESS. ELEMENT NO. <b>42485</b>	PRESS. ELEMENT RANGE (PSI) <b>0-8000</b>	INNER HOUSING NO.	CHART TIME RANGE (HRS) <b>120 hrs.</b>	CALIBRATION NO.	CALIBRATION MODULUS - K <b>4019.7439</b>	CALIBRATION a + P <sub>e</sub> <b>-35.6442</b>

LOWER PRESSURE GAUGE						
PRESS. ELEMENT NO.	PRESS. ELEMENT RANGE (PSI)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION MODULUS - K	CALIBRATION a + P <sub>e</sub>

TEMPERATURE GAUGE					
TEMP. ELEMENT NO.	TEMP. ELEMENT RANGE (°F)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION FACTOR(S)

TIME ARRIVED DEPARTED	DEPTH		UPPER PRESSURE GAUGE					LOWER PRESSURE GAUGE				TEMPERATURE GAUGE					
	MEASURED DEPTH (FEET)	DEPTH DIFFERENCE (FEET)	PRESSURE DEFLECTION Y (INCHES)	NON LINEAR CORRECTION C <sub>L</sub> * (psi)	BOTTOM HOLE PRESSURE P=KY+at+P <sub>e</sub> +C <sub>L</sub> (psig)	PRESSURE DIFFERENCE (psi)	PRESSURE GRADIENT (psi/FT)	PRESSURE DEFLECTION Y (INCHES)	NON LINEAR CORRECTION C <sub>L</sub> * (psi)	BOTTOM HOLE PRESSURE P=KY+at+P <sub>e</sub> +C <sub>L</sub> (psig)	PRESSURE DIFFERENCE (psi)	PRESSURE GRADIENT (psi/FT)	TEMPERATURE DEFLECTION (INCHES)	CALIBRATION FACTOR (°F/INCH)	BOTTOM HOLE TEMPERATURE (°F)	TEMP. DIFFERENCE (°F)	TEMP. GRADIENT (°F/FT)
P.M. 2:35	12,820		1.273		5081.4								Bottom Hole Temp. 206 degrees				
2:40			1.117		4778.4												
2:45			.586		2333.4												
2:50			.403		1604.3												
2:55			.381		1495.8												
3:00			.379		1487.7												
3:15			.379		1487.7												
3:30			.379		1487.7												
3:45			.381		1495.8												
4:00			.381		1495.8												
4:30			.381		1495.8												
5:00			.381		1495.8												
5:30			.381		1495.8												
6:00			.381		1495.8												

**RECEIVED**  
MAY 5 1980

DIVISION OF  
OIL, GAS & MINING

THIS GAUGE IS CALIBRATED TO THE READING ACCURACY OF ± 0.2% FULL SCALE.



# BOTTOM HOLE PRESSURE/TEMPERATURE SURVEY REPORT

OEC-983

TEST NUMBER 3	RUN NUMBER 1	AREA	DEVIATED HOLE? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	DATE (DAY MO YR) 22/2/80	PAGE OF 2   4	
CUSTOMER AMOCO PRODUCTION		WELL NAME OR NUMBER Bountiful Livestock #1	KB ELEV. (FT) (FT)	GND ELEV./WATER DEPTH (FT)	REF. ELEV. (FT.)	SHUT IN TIME BEFORE SURVEY (HOURS)

## UPPER PRESSURE GAUGE

PRESS. ELEMENT NO. 42485	PRESS. ELEMENT RANGE (PSI) 0-8000	INNER HOUSING NO.	CHART TIME RANGE (HRS) 120 hrs.	CALIBRATION NO.	CALIBRATION MODULUS - K 4019.7439	CALIBRATION a + P <sub>e</sub> -35.6442
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## LOWER PRESSURE GAUGE

PRESS. ELEMENT NO.	PRESS. ELEMENT RANGE (PSI)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION MODULUS - K	CALIBRATION a + P <sub>e</sub>
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## TEMPERATURE GAUGE

TEMP. ELEMENT NO.	TEMP. ELEMENT RANGE (°F)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION FACTOR (S)
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ARRIVED DEPARTED	DEPTH		UPPER PRESSURE GAUGE					LOWER PRESSURE GAUGE					TEMPERATURE GAUGE				
	MEASURED DEPTH (FEET)	DEPTH DIFFERENCE (FEET)	PRESSURE DEFLECTION Y (INCHES)	NON-LINEAR CORRECTION C <sub>L</sub> * (psi)	BOTTOM HOLE PRESSURE P=KY+z+P <sub>e</sub> +C <sub>L</sub> (psig)	PRESSURE DIFFERENCE (psi)	PRESSURE GRADIENT (psi/FT)	PRESSURE DEFLECTION Y (INCHES)	NON-LINEAR CORRECTION C <sub>L</sub> * (psi)	BOTTOM HOLE PRESSURE P=KY+z+P <sub>e</sub> +C <sub>L</sub> (psig)	PRESSURE DIFFERENCE (psi)	PRESSURE GRADIENT (psi/FT)	TEMPERATURE DEFLECTION (INCHES)	CALIBRATION FACTOR (°F/INCH)	BOTTOM HOLE TEMPERATURE (°F)	TEMP. DIFFERENCE (°F)	TEMP. GRADIENT (°F/FT)
6:30			.381		1495.8												
7:00			.381		1495.8												
7:30			.381		1495.8												
8:00			.381		1495.8												
8:05			.480		1893.6												
8:10			.560		2215.4												
8:15			.742		2947.0												
8:20			.817		3258.4												
8:25			.868		3453.4												
8:30			.925		3682.6												
8:35			.977		3891.6												
8:40			1.026		4088.6												
8:45			1.093		4357.6												
8:50			1.139		4542.8												

5 min. readings  
Well shut in

ALL SIGNIFICANT FIGURES ARE TO THE READING ACCURACY OF ± 0.02% FULL SCALE.



# BOTTOM HOLE PRESSURE/TEMPERATURE SURVEY REPORT

OEC-983

TEST NUMBER <b>3</b>	RUN NUMBER <b>1</b>	AREA <b>Evanston</b>	DEVIATED HOLE? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	DATE (DAY MO YR) <b>22/2/80</b>	PAGE OF <b>3</b>   <b>4</b>
WELL NAME OR NUMBER <b>Bountiful Livestock #1</b>		KB ELEV. (FT)	GND ELEV./WATER DEPTH (FT)	REF. ELEV. (FT)	SHUT IN TIME BEFORE SURVEY (HOURS)

AMOCO PRODUCTION

## UPPER PRESSURE GAUGE

PRESS. ELEMENT NO. <b>42485</b>	PRESS. ELEMENT RANGE (PSI) <b>0-8000</b>	INNER HOUSING NO.	CHART TIME RANGE (HRS) <b>120 hrs.</b>	CALIBRATION NO.	CALIBRATION MODULUS - K <b>4019.7439</b>	CALIBRATION a + P <sub>e</sub> <b>-35.6442</b>
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## LOWER PRESSURE GAUGE

PRESS. ELEMENT NO.	PRESS. ELEMENT RANGE (PSI)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION MODULUS - K	CALIBRATION a + P <sub>e</sub>
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## TEMPERATURE GAUGE

TEMP. ELEMENT NO.	TEMP. ELEMENT RANGE (°F)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION FACTOR (S)
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TIME	DEPTH		UPPER PRESSURE GAUGE				LOWER PRESSURE GAUGE				TEMPERATURE GAUGE						
	MEASURED DEPTH (FEET)	DEPTH DIFFERENCE (FEET)	PRESSURE DEFLECTION Y (INCHES)	NON-LINEAR CORRECTION C <sub>L</sub> * (PSI)	BOTTOM HOLE PRESSURE P=KY+a+P <sub>e</sub> +C <sub>L</sub> (PSIG)	PRESSURE DIFFERENCE (PSI)	PRESSURE GRADIENT (PSI/FT)	PRESSURE DEFLECTION Y (INCHES)	NON-LINEAR CORRECTION C <sub>L</sub> * (PSI)	BOTTOM HOLE PRESSURE P=KY+a+P <sub>e</sub> +C <sub>L</sub> (PSIG)	PRESSURE DIFFERENCE (PSI)	PRESSURE GRADIENT (PSI/FT)	TEMPERATURE DEFLECTION (INCHES)	CALIBRATION FACTOR (°F/INCH)	BOTTOM HOLE TEMPERATURE (°F)	TEMP. DIFFERENCE (°F)	TEMP. GRADIENT (°F/FT)
8:55			1.206		4811.8												
9:00			1.245		4968.9												
9:05			1.285		5159.7												
9:10			1.301		5194.0												
9:15			1.305		5210.1												
9:20			1.306		5214.1												
9:25			1.307		5217.6												
9:30			1.307		5217.6												
10:00			1.308		5222.1												
11:00			1.308		5222.1												
12:00			1.308		5222.1												
A.M. 1:00			1.308		5222.1												
2:00			1.308		5222.1												
3:00			1.308		5222.1												

1 hr. readings

Saturday

NOT TO BE USED ONLY WHEN SIGNIFICANT COMPARED TO THE READING ACCURACY OF ± 0.02% FULL SCALE.

# BOTTOM HOLE PRESSURE/TEMPERATURE SURVEY REPORT



OEC-983

TEST NUMBER <b>3</b>	RUN NUMBER <b>1</b>	AREA <b>Evanston</b>	DEVIATED HOLE? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	DATE (DAY MO YR) <b>22/2/80</b>	PAGE OF <b>4</b>   <b>4</b>
WELL NAME OR NUMBER <b>Bountiful Livestock #1</b>		KB ELEV. (FT)	GND ELEV./WATER DEPTH (FT)	REF. ELEV. (FT.)	SHUT IN TIME BEFORE SURVEY (HOURS)

CUSTOMER  
**AMOCO PRODUCTION**

UPPER PRESSURE GAUGE						
PRESS. ELEMENT NO. <b>42485</b>	PRESS. ELEMENT RANGE (psi) <b>0-8000</b>	INNER HOUSING NO.	CHART TIME RANGE (HRS) <b>120 hrs.</b>	CALIBRATION NO.	CALIBRATION MODULUS - K <b>4019.7439</b>	CALIBRATION a + P <sub>e</sub> <b>-35.6442</b>

LOWER PRESSURE GAUGE						
PRESS. ELEMENT NO.	PRESS. ELEMENT RANGE (psi)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION MODULUS - K	CALIBRATION a + P <sub>e</sub>

TEMPERATURE GAUGE						
TEMP. ELEMENT NO.	TEMP. ELEMENT RANGE (°F)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION FACTOR(S)	

TIME	DEPTH		UPPER PRESSURE GAUGE				LOWER PRESSURE GAUGE				TEMPERATURE GAUGE							
	MEASURED DEPTH (FEET)	DEPTH DIFFERENCE (FEET)	PRESSURE DEFLECTION Y (INCHES)	NON-LINEAR CORRECTION C <sub>L</sub> * (psi)	BOTTOM HOLE PRESSURE P=KY+a+P <sub>e</sub> +C <sub>L</sub> (psig)	PRESSURE DIFFERENCE (psi)	PRESSURE GRADIENT (psi/FT)	PRESSURE DEFLECTION Y (INCHES)	NON-LINEAR CORRECTION C <sub>L</sub> * (psi)	BOTTOM HOLE PRESSURE P=KY+a+P <sub>e</sub> +C <sub>L</sub> (psig)	PRESSURE DIFFERENCE (psi)	PRESSURE GRADIENT (psi/FT)	TEMPERATURE DEFLECTION (INCHES)	CALIBRATION FACTOR (°F/INCH)	BOTTOM HOLE TEMPERATURE (°F)	TEMP. DIFFERENCE (°F)	TEMP. GRADIENT (°F/FT)	
ARRIVED																		
DEPARTED																		
0:00			1.309		5226.2			Reading is 7 hrs from last										
1:00			1.309		5226.2			4 hr. readings										
2:00			1.311		5234.2													
3:00			1.311		5234.2													
4:00			1.312		5268.2													
5:00			1.312		5268.2													
6:00			1.313		5242.2													
7:00			1.313		5242.2													
8:00			1.313		5242.2													
9:00			1.313		5242.2													
10:00			1.313		5242.2													
11:00			1.313		5242.2													
12:00			1.313		5242.2													
13:00			1.313		5242.2													
14:00																		

NOTE: C<sub>L</sub> USED ONLY WHEN SIGNIFICANT COMPARED TO THE READING ACCURACY OF ± 0.02% FULL SCALE.



# BOTTOM HOLE PRESSURE/TEMPERATURE SURVEY REPORT

OEC-906

TEST NUMBER <b>3</b>	RUN NUMBER <b>1</b>	AREA <b>Evanston</b>	DEVIATED HOLE? YES <input type="checkbox"/> NO <input type="checkbox"/>	DATE (DAY MO YR) <b>27/2/80</b>	PAGE OF <b>1   8</b>
CUSTOMER <b>AMOCO PRODUCTION</b>		WELL NAME OR NUMBER <b>Bountiful Livestock #1</b>	KB ELEV. (FT) <b>(FT)</b>	GND ELEV./WATER DEPTH <b>(FT)</b>	REF. ELEV. (FT.)
			SHUT IN TIME BEFORE SURVEY <b>(HOURS)</b>		

## UPPER PRESSURE GAUGE

PRESS. ELEMENT NO. <b>42485</b>	PRESS. ELEMENT RANGE (psi) <b>0-8000</b>	INNER HOUSING NO.	CHART TIME RANGE (HRS) <b>120 hrs.</b>	CALIBRATION NO.	CALIBRATION MODULUS - K <b>4019.7439</b>	CALIBRATION $a + P_e$ <b>-35.6442</b>
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## LOWER PRESSURE GAUGE

PRESS. ELEMENT NO.	PRESS. ELEMENT RANGE (psi)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION MODULUS - K	CALIBRATION $a + P_e$
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## TEMPERATURE GAUGE

TEMP. ELEMENT NO.	TEMP. ELEMENT RANGE (°F)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION FACTOR(S)
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T ARRIVED DEPARTED	DEPTH		UPPER PRESSURE GAUGE					LOWER PRESSURE GAUGE					TEMPERATURE GAUGE				
	MEASURED DEPTH (FEET)	DEPTH DIFFERENCE (FEET)	PRESSURE DEFLECTION Y (INCHES)	NON-LINEAR CORRECTION C <sub>L</sub> * (psi)	BOTTOM HOLE PRESSURE P=KY+a+P <sub>e</sub> +C <sub>L</sub> (psig)	PRESSURE DIFFERENCE (psi)	PRESSURE GRADIENT (psi/FT)	PRESSURE DEFLECTION Y (INCHES)	NON-LINEAR CORRECTION C <sub>L</sub> * (psi)	BOTTOM HOLE PRESSURE P=KY+a+P <sub>e</sub> +C <sub>L</sub> (psig)	PRESSURE DIFFERENCE (psi)	PRESSURE GRADIENT (psi/FT)	TEMPERATURE DEFLECTION (INCHES)	CALIBRATION FACTOR (°F/INCH)	BOTTOM HOLE TEMPERATURE (°F)	TEMP. DIFFERENCE (°F)	TEMP. GRADIENT (°F/FT)
P.M. 2:35	12,820		.3082		1203.2												
			.4561		1797.7												
			.4930		1946.0												
			.5350		2114.9												
			.5764		2281.3												
			.6230		2468.6												
			.6608		2620.6												
			.6988		2773.3												
			.7410		2942.9												
			.7811		3104.1												
			.8232		3273.4												
			.8571		3409.6												
			.8979		3573.6												
			.9420		3750.9												

4 min. readings

Revised Bottom hole pressure report

**RECEIVED**  
MAY 5 1980

DIVISION OF OIL, GAS & MINING

\*NOTE: C<sub>L</sub> USED ONLY WHEN SIGNIFICANT COMPARED TO THE READING ACCURACY OF ± 0.02% FULL SCALE.



# BOTTOM HOLE PRESSURE/TEMPERATURE SURVEY REPORT

OEC-906

TEST NUMBER

RUN NUMBER

AREA

DEVIATED HOLE?

YES

NO

DATE (DAY MO YR)

PAGE OF

2 | 8

CUSTOMER

WELL NAME OR NUMBER

KB ELEV. (FT) GND ELEV./WATER DEPTH (FT) REF. ELEV. (FT.)

SHUT IN TIME BEFORE SURVEY

(HOURS)

## UPPER PRESSURE GAUGE

PRESS. ELEMENT NO.	PRESS. ELEMENT RANGE (psi)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION MODULUS - K	CALIBRATION $a + P_0$
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## LOWER PRESSURE GAUGE

PRESS. ELEMENT NO.	PRESS. ELEMENT RANGE (psi)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION MODULUS - K	CALIBRATION $a + P_0$
--------------------	----------------------------	-------------------	------------------------	-----------------	-------------------------	-----------------------

## TEMPERATURE GAUGE

TEMP. ELEMENT NO.	TEMP. ELEMENT RANGE (°F)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION FACTOR (S)
-------------------	--------------------------	-------------------	------------------------	-----------------	------------------------

T ARRIVED DEPARTED	DEPTH		UPPER PRESSURE GAUGE					LOWER PRESSURE GAUGE					TEMPERATURE GAUGE				
	MEASURED DEPTH (FEET)	DEPTH DIFFERENCE (FEET)	PRESSURE DEFLECTION Y (INCHES)	NON-LINEAR CORRECTION $C_L^*$ (psi)	BOTTOM HOLE PRESSURE $P = KY + a + P_0 + C_L$ (psig)	PRESSURE DIFFERENCE (psi)	PRESSURE GRADIENT (psi/FT)	PRESSURE DEFLECTION Y (INCHES)	NON-LINEAR CORRECTION $C_L^*$ (psi)	BOTTOM HOLE PRESSURE $P = KY + a + P_0 + C_L$ (psig)	PRESSURE DIFFERENCE (psi)	PRESSURE GRADIENT (psi/FT)	TEMPERATURE DEFLECTION (INCHES)	CALIBRATION FACTOR (°F/INCH)	BOTTOM HOLE TEMPERATURE (°F)	TEMP. DIFFERENCE (°F)	TEMP. GRADIENT (°F/FT)
			.9825		3913.7												
			1.0135		4038.3												
			1.0599		4224.8												
			1.1000		4386.0												
			1.1389		4542.4												
			1.1732		4680.3												
			1.211		4832.6												
			1.2421		4957.2												
			1.2654		5050.9												
			1.2869		5137.3												
			1.2985		5183.9												
			1.3020		5198.0												
			1.3038		5205.2												
			1.3040		5206.1												

\* NOTE:  $C_L^*$  USED ONLY WHEN SIGNIFICANT COMPARED TO THE READING ACCURACY OF  $\pm 0.02\%$  FULL SCALE.



# BOTTOM HOLE PRESSURE/TEMPERATURE SURVEY REPORT

OEC-906

TEST NUMBER	RUN NUMBER	AREA	DEVIATED HOLE? <input type="checkbox"/> YES <input type="checkbox"/> NO	DATE (DAY MO YR)	PAGE OF 3   8
CUSTOMER		WELL NAME OR NUMBER	KB ELEV. (FT)	GND ELEV./WATER DEPTH (FT)	REF. ELEV. (FT.)
					SHUT IN TIME BEFORE SURVEY (HOURS)

## UPPER PRESSURE GAUGE

PRESS. ELEMENT NO.	PRESS. ELEMENT RANGE (psi)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION MODULUS - K	CALIBRATION $a + P_0$
--------------------	----------------------------	-------------------	------------------------	-----------------	-------------------------	-----------------------

## LOWER PRESSURE GAUGE

PRESS. ELEMENT NO.	PRESS. ELEMENT RANGE (psi)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION MODULUS - K	CALIBRATION $a + P_0$
--------------------	----------------------------	-------------------	------------------------	-----------------	-------------------------	-----------------------

## TEMPERATURE GAUGE

TEMP. ELEMENT NO.	TEMP. ELEMENT RANGE (°F)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION FACTOR(S)
-------------------	--------------------------	-------------------	------------------------	-----------------	-----------------------

ARRIVED	MEASURED DEPTH (FEET)	DEPTH DIFFERENCE (FEET)	UPPER PRESSURE GAUGE				LOWER PRESSURE GAUGE				TEMPERATURE GAUGE						
			PRESSURE DEFLECTION Y (INCHES)	NON-LINEAR CORRECTION $C_L^*$ (psi)	BOTTOM HOLE PRESSURE $P = KY + a + P_0 + C_L$ (psig)	PRESSURE DIFFERENCE (psi)	PRESSURE GRADIENT (psi/FT)	PRESSURE DEFLECTION Y (INCHES)	NON-LINEAR CORRECTION $C_L^*$ (psi)	BOTTOM HOLE PRESSURE $P = KY + a + P_0 + C_L$ (psig)	PRESSURE DIFFERENCE (psi)	PRESSURE GRADIENT (psi/FT)	TEMPERATURE DEFLECTION (INCHES)	CALIBRATION FACTOR (°F/INCH)	BOTTOM HOLE TEMPERATURE (°F)	TEMP. DIFFERENCE (°F)	TEMP. GRADIENT (°F/FT)
DEPARTED			1.3041		5206.5												
			1.3048		5209.3			2 hrs. after shut in									
			1.3050		5201.5												
			1.3050		5210.5												
			1.3051		5210.5												
			1.3052		5210.9												
			1.3052		5210.9												
			1.3052		5210.9												
			1.3052		5210.9												
			1.3053		5211.3			4 hrs. after shut in.									
			1.3053		5211.3												
			1.3053		5211.3												
			1.3056		5212.5												
			1.3056		5212.5												

\*NOTE:  $C_L$  USED ONLY WHEN SIGNIFICANT COMPARED TO THE READING ACCURACY OF  $\pm 0.02\%$  FULL SCALE.



# BOTTOM HOLE PRESSURE/TEMPERATURE SURVEY REPORT

OEC-906

TEST NUMBER	RUN NUMBER	AREA	DEVIATED HOLE? <input type="checkbox"/> YES <input type="checkbox"/> NO	DATE (DAY MO YR)	PAGE OF 4   8
CUSTOMER		WELL NAME OR NUMBER	KB ELEV. (FT)	GND ELEV./WATER DEPTH (FT)	REF. ELEV. (FT.)
					SHUT IN TIME BEFORE SURVEY (HOURS)

## UPPER PRESSURE GAUGE

PRESS. ELEMENT NO.	PRESS. ELEMENT RANGE (psi)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION MODULUS - K	CALIBRATION a + P <sub>g</sub>
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## LOWER PRESSURE GAUGE

PRESS. ELEMENT NO.	PRESS. ELEMENT RANGE (psi)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION MODULUS - K	CALIBRATION a + P <sub>g</sub>
--------------------	----------------------------	-------------------	------------------------	-----------------	-------------------------	--------------------------------

## TEMPERATURE GAUGE

TEMP. ELEMENT NO.	TEMP. ELEMENT RANGE (°F)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION FACTOR(S)
-------------------	--------------------------	-------------------	------------------------	-----------------	-----------------------

T ARRIVED DEPARTED	DEPTH		UPPER PRESSURE GAUGE					LOWER PRESSURE GAUGE					TEMPERATURE GAUGE				
	MEASURED DEPTH (FEET)	DEPTH DIFFERENCE (FEET)	PRESSURE DEFLECTION Y (INCHES)	NON-LINEAR CORRECTION C <sub>L</sub> * (psi)	BOTTOM HOLE PRESSURE P=KY+a+P <sub>g</sub> +C <sub>L</sub> (psig)	PRESSURE DIFFERENCE (psi)	PRESSURE GRADIENT (psi/FT)	PRESSURE DEFLECTION Y (INCHES)	NON-LINEAR CORRECTION C <sub>L</sub> * (psi)	BOTTOM HOLE PRESSURE P=KY+a+P <sub>g</sub> +C <sub>L</sub> (psig)	PRESSURE DIFFERENCE (psi)	PRESSURE GRADIENT (psi/FT)	TEMPERATURE DEFLECTION (INCHES)	CALIBRATION FACTOR (°F/INCH)	BOTTOM HOLE TEMPERATURE (°F)	TEMP. DIFFERENCE (°F)	TEMP. GRADIENT (°F/FT)
			1.3056		5212.5												
			1.3056		5212.5												
			1.3056		5212.5												
			1.3056		5212.5												
			1.3056		5212.5												
			1.3056		5212.5												
			1.3056		5212.5												
			1.3056		5212.5												
			1.3056		5212.5												
			1.3056		5212.5												
			1.3056		5212.5												
			1.3059		5213.7												
			1.3059		5213.7												
			1.3059		5213.7												

12 hrs. after shut in

\*NOTE: C<sub>L</sub> USED ONLY WHEN SIGNIFICANT COMPARED TO THE READING ACCURACY OF ± 0.02% FULL SCALE.



# BOTTOM HOLE PRESSURE/TEMPERATURE SURVEY REPORT

OEC-906

TEST NUMBER	RUN NUMBER	AREA	DEVIATED HOLE? <input type="checkbox"/> YES <input type="checkbox"/> NO	DATE (DAY MO YR)	PAGE OF 5   8
WELL NAME OR NUMBER		KB ELEV. (FT)	GND ELEV./WATER DEPTH (FT)	REF. ELEV. (FT.)	SHUT IN TIME BEFORE SURVEY (HOURS)

## UPPER PRESSURE GAUGE

PRESS. ELEMENT NO.	PRESS. ELEMENT RANGE (psi)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION MODULUS - K	CALIBRATION $a + P_0$
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## LOWER PRESSURE GAUGE

PRESS. ELEMENT NO.	PRESS. ELEMENT RANGE (psi)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION MODULUS - K	CALIBRATION $a + P_0$
--------------------	----------------------------	-------------------	------------------------	-----------------	-------------------------	-----------------------

## TEMPERATURE GAUGE

TEMP. ELEMENT NO.	TEMP. ELEMENT RANGE (°F)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION FACTOR(S)
-------------------	--------------------------	-------------------	------------------------	-----------------	-----------------------

T <sub>1</sub> ARRIVED DEPARTED	DEPTH		UPPER PRESSURE GAUGE					LOWER PRESSURE GAUGE					TEMPERATURE GAUGE				
	MEASURED DEPTH (FEET)	DEPTH DIFFERENCE (FEET)	PRESSURE DEFLECTION Y (INCHES)	NON-LINEAR CORRECTION C <sub>L</sub> * (psi)	BOTTOM HOLE PRESSURE P=KY+a+P <sub>0</sub> +C <sub>L</sub> (psig)	PRESSURE DIFFERENCE (psi)	PRESSURE GRADIENT (psi/FT)	PRESSURE DEFLECTION Y (INCHES)	NON-LINEAR CORRECTION C <sub>L</sub> * (psi)	BOTTOM HOLE PRESSURE P=KY+a+P <sub>0</sub> +C <sub>L</sub> (psig)	PRESSURE DIFFERENCE (psi)	PRESSURE GRADIENT (psi/FT)	TEMPERATURE DEFLECTION (INCHES)	CALIBRATION FACTOR (°F/INCH)	BOTTOM HOLE TEMPERATURE (°F)	TEMP. DIFFERENCE (°F)	TEMP. GRADIENT (°F/FT)
1			1.3059		5213.7												
2			1.3059		5213.7												
3			1.3052		5210.9												
4			1.3052		5210.9												
5			1.3052		5210.9												
6			1.3052		5210.9												
7			1.3060		5214.1												
8			1.3068		5217.3												
9			1.3070		5218.1												
10			1.3071		5218.5												
11			1.3071		5218.5												
12			1.3071		5218.5												
13			1.3071		5218.5												
14			1.3075		5220.4												

\* NOTE: C<sub>L</sub> USED ONLY WHEN SIGNIFICANT COMPARED TO THE READING ACCURACY OF ± 0.02% FULL SCALE.



# BOTTOM HOLE PRESSURE/TEMPERATURE SURVEY REPORT

OEC-906

TEST NUMBER	RUN NUMBER	AREA	DEVIATED HOLE? YES <input type="checkbox"/> NO <input type="checkbox"/>	DATE (DAY MO YR)	PAGE OF 6   8
CUSTOMER	WELL NAME OR NUMBER	KB ELEV. (FT)	GND ELEV./WATER DEPTH (FT)	REF. ELEV. (FT.)	SHUT IN TIME BEFORE SURVEY (HOURS)

## UPPER PRESSURE GAUGE

PRESS. ELEMENT NO.	PRESS. ELEMENT RANGE (psi)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION MODULUS - K	CALIBRATION a + P <sub>0</sub>
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## LOWER PRESSURE GAUGE

PRESS. ELEMENT NO.	PRESS. ELEMENT RANGE (psi)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION MODULUS - K	CALIBRATION a + P <sub>0</sub>
--------------------	----------------------------	-------------------	------------------------	-----------------	-------------------------	--------------------------------

## TEMPERATURE GAUGE

TEMP. ELEMENT NO.	TEMP. ELEMENT RANGE (°F)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION FACTOR (S)
-------------------	--------------------------	-------------------	------------------------	-----------------	------------------------

T ARRIVED DEPARTED	DEPTH		UPPER PRESSURE GAUGE					LOWER PRESSURE GAUGE					TEMPERATURE GAUGE				
	MEASURED DEPTH (FEET)	DEPTH DIFFERENCE (FEET)	PRESSURE DEFLECTION Y (INCHES)	NON-LINEAR CORRECTION C <sub>L</sub> * (psi)	BOTTOM HOLE PRESSURE P=KY+a+P <sub>0</sub> +C <sub>L</sub> (psig)	PRESSURE DIFFERENCE (psi)	PRESSURE GRADIENT (psi/FT)	PRESSURE DEFLECTION Y (INCHES)	NON-LINEAR CORRECTION C <sub>L</sub> * (psi)	BOTTOM HOLE PRESSURE P=KY+a+P <sub>0</sub> +C <sub>L</sub> (psig)	PRESSURE DIFFERENCE (psi)	PRESSURE GRADIENT (psi/FT)	TEMPERATURE DEFLECTION (INCHES)	CALIBRATION FACTOR (°F/INCH)	BOTTOM HOLE TEMPERATURE (°F)	TEMP. DIFFERENCE (°F)	TEMP. GRADIENT (°F/FT)
			1.3075		5220.4												
			1.3075		5220.4												
			1.3075		5220.4												
			1.3075		5220.4												
			1.3075		5220.4												
			1.3076		5220.5												
			1.3076		5220.5												
			1.3079		5221.7												
			1.3079		5221.7												
			1.3079		5221.7												
			1.3079		5221.7												
			1.3080		5222.1												
			1.3080		5222.1												
			1.3080		5222.1												

NOTES: 1. USED ONLY WHEN SIGNIFICANT COMPARED TO THE READING ACCURACY OF ± 0.02% FULL SCALE.



# BOTTOM HOLE PRESSURE/TEMPERATURE SURVEY REPORT

OEC-906

TEST NUMBER

RUN NUMBER

AREA

DEVIATED HOLE?

DATE (DAY MO YR)

PAGE OF

YES

NO

7

8

SHUT IN TIME BEFORE SURVEY

(HOURS)

## UPPER PRESSURE GAUGE

PRESS. ELEMENT NO.	PRESS. ELEMENT RANGE (psi)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION MODULUS - K	CALIBRATION a + P <sub>e</sub>

## LOWER PRESSURE GAUGE

PRESS. ELEMENT NO.	PRESS. ELEMENT RANGE (psi)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION MODULUS - K	CALIBRATION b + P <sub>e</sub>

## TEMPERATURE GAUGE

TEMP. ELEMENT NO.	TEMP. ELEMENT RANGE (°F)	INNER HOUSING NO.	CHART TIME RANGE (HRS)	CALIBRATION NO.	CALIBRATION FACTOR(S)

T ARRIVED DEPARTED	DEPTH		UPPER PRESSURE GAUGE				LOWER PRESSURE GAUGE				TEMPERATURE GAUGE						
	MEASURED DEPTH (FEET)	DEPTH DIFFERENCE (FEET)	PRESSURE DEFLECTION Y (INCHES)	NON-LINEAR CORRECTION C <sub>L</sub> * (psi)	BOTTOM HOLE PRESSURE P=KY+st+P <sub>e</sub> +C <sub>L</sub> (psig)	PRESSURE DIFFERENCE (psi)	PRESSURE GRADIENT (psi/FT)	PRESSURE DEFLECTION Y (INCHES)	NON-LINEAR CORRECTION C <sub>L</sub> * (psig)	BOTTOM HOLE PRESSURE P=KY+st+P <sub>e</sub> +C <sub>L</sub> (psig)	PRESSURE DIFFERENCE (psi)	PRESSURE GRADIENT (psi/FT)	TEMPERATURE DEFLECTION (INCHES)	CALIBRATION FACTOR (°F/INCH)	BOTTOM HOLE TEMPERATURE (°F)	TEMP. DIFFERENCE (°F)	TEMP. GRADIENT (°F/FT)
			1.3080		5222.1												
			1.3080		5222.1												
			1.3081		5222.5												
			1.3081		5222.5												
			1.3081		5222.5												
			1.3081		5222.5												
			1.3081		5222.5												
			1.3081		5222.5												
			1.3081		5222.5												
			1.3081		5222.5												
			1.3084		5223.7												
			1.3084		5223.7												
			1.3084		5223.7												
			1.3084		5223.7												

\*NOTE: C<sub>L</sub> USED ONLY WHEN SIGNIFICANT COMPARED TO THE READING ACCURACY OF ± 0.02% FULL SCALE.



SUBMIT IN DUPLICATE\*

STATE OF UTAH  
OIL & GAS CONSERVATION COMMISSION

(See other instructions on reverse side)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG \*

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

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

2. NAME OF OPERATOR  
Amoco Production Company

3. ADDRESS OF OPERATOR  
P. O. Box 17675, Salt Lake City, Utah 84117

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)\*  
At surface C-NW/4-SW/4 2137.4'FSL and 686.1'FWL  
At top prod. interval reported below 902'FSL and 1400'FWL  
At total depth 880'FSL and 1345'FWL

14. PERMIT NO. 43-043-30096 DATE ISSUED 3/15/79

5. LEASE DESIGNATION AND SERIAL NO.

Fee  
6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME  
Bountiful Livestock Co.

9. WELL NO.  
1

10. FIELD AND POOL, OR WILDCAT  
Wildcat

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

Sec. 16, T4N, R8E, SLBM

12. COUNTY OR PARISH Summit 13. STATE Utah

15. DATE SPUDED 3-29-79 16. DATE T.D. REACHED 12-13-79 17. DATE COMPL. (Ready to prod.) 3-27-80 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)\* 7305 (GR) 7319 (RKB) 19. ELEV. CASINGHEAD 7299'

20. TOTAL DEPTH, MD & TVD 14,050 21. PLUG, BACK T.D., MD & TVD 13630, 13483 22. IF MULTIPLE COMPL., HOW MANY\* 23. INTERVALS DRILLED BY Surf-TD

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)\* 12796-13630 (12660-13483) Nugget 25. WAS DIRECTIONAL SURVEY MADE Yes

26. TYPE ELECTRIC AND OTHER LOGS RUN FDC/CNL/GR, DIL/GR, BHC/GR/TTL, HDT/FIL/GR, TDT Temp, Survey, Tracer 27. WAS WELL CORED No

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13 3/8-	68-61	2040	17 1/2	2000 sx	
9 5/8" X 9 7/8"	40, 47, 53.5, 628	11087	12 1/2	2180 sx	
* Cut window in 9 7/8" @ 10,679' to sidetrack hole					

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
7 5/8	10330	11310	650 sx	
4 1/2	10500	14045	250 sx	

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 7/8	10,500	

31. PERFORATION RECORD (Interval, size and number)

12822-28,	.25",	2 JPF
12172-77,	.25",	2 JPF
13332-76,	.38",	2 JPF
12400-64,	.38",	2 JPF
12500-15,	.38",	2 JPF

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
see attached	

33.\* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)	WELL STATUS (Producing or shut-in)
4-3-80	Flowing	Producing

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
4-18-80	24	27/64	→	1288	4730	22	3672

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
1600		→	1288	4730		53 @ 40° F

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

35. LIST OF ATTACHMENTS  
I) Acid, Shot, Fracture, Cement Squeeze, etc.

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

SIGNED *D. J. Anderson* TITLE District Administrator, OIL & GAS & MINING DIVISION OF OIL & GAS CONSERVATION COMMISSION APR 29 1980

# INSTRUCTIONS

**General:** This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 38, below regarding separate reports for separate completions.

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

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

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

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

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

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

**37. SUMMARY OF POROUS ZONES:**  
SHOW ALL IMPORTANT ZONES OF POROSITY AND COMMENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, COMMENTS, ETC.	GEOLOGIC MARKERS	
				MEAS. DEPTH	TRUE VERT. DEPTH
DST: Nugget	12824	12850	2500' wtr cushion, flow 90 min. FFP FSIP Rec: FFP-140psi @ 527 MCFD and 9.24 BO	10,850	10679
				11,200	11077
				11,972	11846
				12,326	12196
				12,384	12254
				12,644	12511
				12,710	12576
				12,796	12660

**38.**

NAME	GEOLOGIC MARKERS	
	MEAS. DEPTH	TRUE VERT. DEPTH
Salt	10,850	10679
Twin Creek	11,200	11077
Giraffe Cr.	11,972	11846
Watton Canyon	12,326	12196
Boundary Ridge	12,384	12254
Rich	12,644	12511
Sliderock	12,710	12576
Gypsum Spr.		
Nugget	12,796	12660

I) Acid, Shot, Fracture, Cement Squeeze, Etc.

<u>Date</u>	<u>Operation</u>	<u>Interval</u>
12-25-79	Perforate	13,400' - 13,430'
12-26-79	Acidize w/1500 gals 7½% MCA	13,400' - 13,430'
1-14-80	Perforate	13,720' - 13,740'
1-15-80	Acidize w/1500 gals 7½% MCA	13,720' - 13,740'
1-22-80	Cement Squeeze w/50 sx cl "G" Gmt	13,720' - 13,740'
1-23-80	Perforate	13,500' - 13,515'
2-1-80	Acidize w/6750 gals 7½% MCA	13,400' - 13,430' 13,500' - 13,515'
2-11-80	Perforate	13,172' - 13,177'
2-19-80	Perforate	12,822' - 12,828'
2-21-80	Acidize w/500 gals 7½% MCA	12,822' - 12,828'
3-5-80	Cement Squeeze w/50 sx cl "G" Gmt	12,822' - 12,828'
3-12-80	Perforate	13,430' - 13,464'
3-14-80	Acidize w/4000 gals 7½% MCA	13,400' - 13,464' 13,500' - 13,515'
3-16-80	Perforate	13,332' - 13,376'
3-18-80	Acidize w/2200 gals 7½% MCA	13,332' - 13,376'

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APR 29 1980

DIVISION OF  
OIL, GAS & MINING

# CHEMICAL & GEOLOGICAL LABORATORIES

P. O. Box 2794  
Casper, Wyoming 82601

## CRUDE OIL ANALYSIS REPORT

Company	Amoco Production Co.		Date	December 27, 1979		Lab. No.	32890
Well No.	Bountiful Livestock #1		Location	NW SW 16-4N-8E			
Field	Wildcat		Formation	Nugget			
County	Summit		Depth	12824-12850			
State	Utah		Analyzed by	KCM			

DST No. 1 Top November 30, 1979

### GENERAL CHARACTERISTICS

Specific gravity @ 60/60 °F.....	0.8044
A.P.I. gravity @ 60 °F.....	44.4
Saybolt Universal Viscosity @ 70°F., seconds.....	36.8
Saybolt Universal Viscosity @ 100°F., seconds.....	31.8
B. s. and water, % by volume.....	0.3
Pour point, °F.....	15
Total sulphur, % by weight.....	0.18

**REMARKS:**

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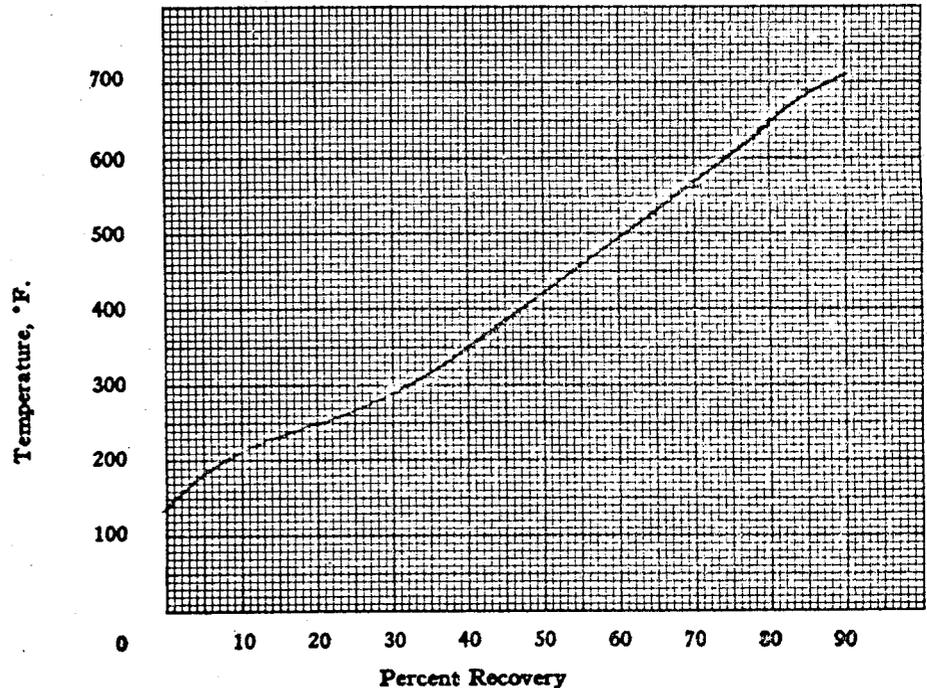
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### ENGLER DISTILLATION

Recovery, %	Temperature, °F.
IBP .....	140
5 .....	183
10 .....	209
15 .....	231
20 .....	250
25 .....	261
30 .....	287
35 .....	319
40 .....	344
45 .....	385
50 .....	422
55 .....	460
60 .....	493
65 .....	527
70 .....	563
75 .....	605
80 .....	646
85 .....	688
90 .....	710
95 .....	
E.P. ....	

Recovery, %.....	95.0
Residue, %.....	4.5
Loss, %.....	0.5

### DISTILLATION GRAPH



<u>Approximate Recovery</u>	
300 EP gasoline, %.....	32.5
392 EP gasoline, %.....	46.0
500 EP distillate, %.....	15.0

# CHEMICAL & GEOLOGICAL LABORATORIES

P. O. Box 2794  
Casper, Wyoming

## WATER ANALYSIS REPORT

OPERATOR	Amoco Production Company	DATE	Dec. 26, 1979	LAB NO.	32891
WELL NO.	Bountiful Livestock No. 1	LOCATION	SEC 16-4N-8E		
FIELD	Wildcat	FORMATION	Nugget		
COUNTY	Summit	INTERVAL	12824 - 12850		
STATE	Utah	SAMPLE FROM	DST No. 1 {Bottom}		
			{November 30, 1979}		

REMARKS & CONCLUSIONS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

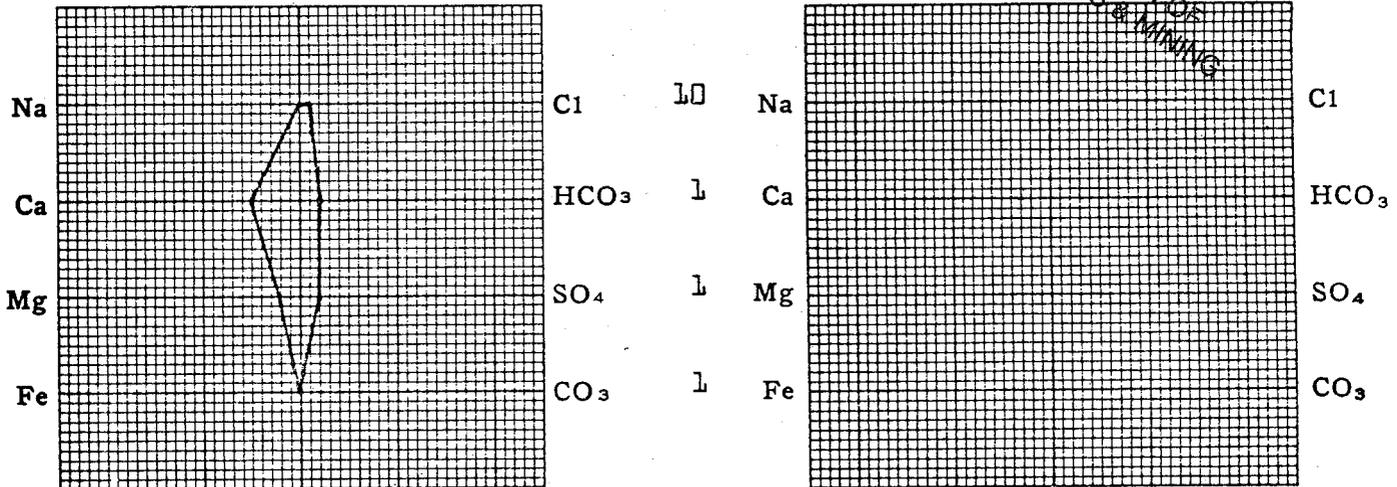
Cations			Anions		
	mg/l	meq/l		mg/l	meq/l
Sodium	195	8.49	Sulfate	120	2.50
Potassium	7	0.19	Chloride	402	11.34
Lithium	-	-	Carbonate	-	-
Calcium	107	5.34	Bicarbonate	156	2.56
Magnesium	29	2.38	Hydroxide	-	-
Iron	-	-	Hydrogen sulfide	-	-
<b>Total Cations</b>		<b>16.40</b>	<b>Total Anions</b>		<b>16.40</b>

Total dissolved solids, mg/l	937	Specific resistance @ 68°F.:	
NaCl equivalent, mg/l	866	Observed	1.4 ohm-meters
Observed pH	5.9	Calculated	ohm-meters

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 JAN 4 1980  
 DIVISION OF  
 OIL, GAS & MINING

### WATER ANALYSIS PATTERN

Sample above described      Scale  
 MEQ per Unit



(Na value in above graphs includes Na, K, and Li)  
 NOTE: Mg/l=Milligrams per liter Meq/l= Milligram equivalents per liter  
 Sodium chloride equivalent=by Dunlap & Hawthorne calculation from components

May 7, 1980

Amoco Production Co.  
P.O. Box 17675  
Salt Lake City, Utah  
ATTN: MARK FEAMSTER

Re: Well No. Bountiful Livestock #1  
Sec. 16, T. 4N. R. 8E.  
Summit County, Utah

Gentlemen:

This letter is concerning the logs that were run on the above mentioned well during the workover that was done.

This office has not received the TEMP. LOG that was run on Jan. 7, 1980. To complete our files, please forward this log as soon as possible.

Thank you for your cooperation in the above.

Sincerely,

DIVISION OF OIL, GAS, AND MINING

  
JANICE TABISH  
CLERK-TYPIST

OIL-WELL DRILLING CONTROL, INC.

RECORD OF SURVEY - RADIUS OF CURVATURE METHOD

AMOCO PRODUCTION COMPANY  
BOUTIFUL LIVESTOCK, WELL NO. 1  
SUMMIT COUNTY, UTAH

GYROSCOPIC MULTIPLE SHOT SURVEY NO: G-1 (5/6/79)  
MAGNETIC MULTIPLE SHOT SURVEY NO: S-1 (5/6/79)

MAGNETIC DECLINATION :15 DEGREES EAST (TRUE)  
KBE =:0  
AZIMUTH OF PLANE OF PROPOSED SECTION =:143.75

ALL CALCULATIONS MADE BY OIL - WELL COMPUTER

THIS SURVEY CERTIFIED TRUE AND CORRECT  
AS REPRESENTED BY FIELD NOTES.  
OIL-WELL DRILLING CONTROL, INC.  
P.O. BOX 705  
BROUSSARD, LOUISIANA 70518  
1-318-837-1145

TOTAL DEPTH AT 4664' M.D.

**PRELIMINARY SURVEY**

**DATE** 5-7-79

D# : M/Z MS 15

*DST - Directional Survey Report*

*M*



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JAN 21 1980

DIVISION OF  
OIL, GAS & MINING  
*Spud Survey*

DO YOU NEED INSTRUCTIONS FOR RUNNING PROGRAM ?N  
WHAT IS THE NAME OF YOUR DEVIATION FILE ?BONTF1\*  
DOES SURVEY CALCULATIONS START FROM SURFACE ?Y  
CALCULATION METHOD (RETURN FOR ANGLE AVG.) ?R  
TARGET DIRECTION ( N45E OR N.44.5.E OR RETURN ) ?S36E  
START PRINTOUT AT WHAT DEPTH (TVD=1) ?100

RADIUS OF CURVATURE METHOD

VERTICAL SECTION OR CLOSURE DIRECTION IS 144.0 DEGREES

BONTF1\* 01/11/80 17:08CST

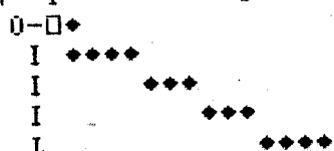
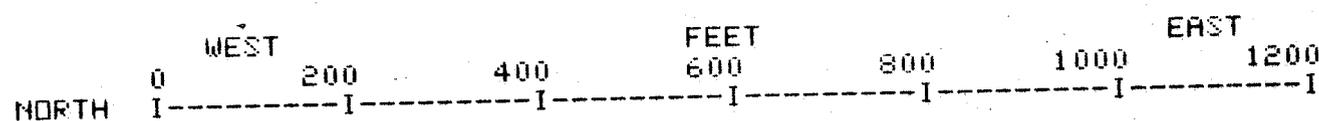
MEAS. DEPTH	DEPTH (TVD)	NORTH -SOUTH	EAST -WEST	VERT. SECTION	DEPARTURE FEET	INCLINATION DIR	DOG LEG	FILE LINE
2000	1999.97	5.61	6.69	-0.61	9	N50E	0.50	N50E 0. 100
2100	2099.97	6.19	7.60	-0.54	10	N51E	0.75	N65E 0.3 110
2200	2199.96	6.70	8.57	-0.38	11	N52E	0.50	N60E 0.3 120
2300	2299.96	7.20	9.28	-0.37	12	N52E	0.50	N50E 0.1 130
2400	2399.95	7.70	10.00	-0.35	13	N52E	0.50	N60E 0.1 140
2500	2499.95	8.20	10.97	-0.19	14	N53E	0.75	N65E 0.3 150
2600	2599.94	8.65	12.19	0.17	15	N55E	0.75	N75E 0.1 160
2700	2699.93	8.91	13.70	0.84	16	N57E	1.00	N85E 0.3 170
2800	2799.91	8.67	15.41	2.04	18	N61E	1.00	S69E 0.4 180
2900	2899.90	7.79	16.91	3.63	19	N65E	1.00	S50E 0.3 190
3000	2999.88	6.50	18.07	5.36	19	N70E	1.00	S34E 0.3 200
3100	3099.87	5.10	19.11	7.11	20	N75E	1.00	S39E 0.1 210
3200	3199.85	3.45	20.18	9.07	20	N80E	1.25	S27E 0.3 220
3300	3299.82	1.43	20.99	11.18	21	N86E	1.25	S17E 0.2 230
3400	3399.80	-0.67	21.59	13.23	22	S88E	1.25	S15E 0.0 240
3500	3499.77	-3.02	22.03	15.39	22	S82E	1.50	S 6E 0.3 250
3600	3599.74	-5.61	22.42	17.71	23	S76E	1.50	S11E 0.1 260
3700	3699.70	-8.14	23.07	20.15	24	S71E	1.50	S18E 0.2 270
3800	3799.66	-10.76	24.16	22.90	26	S66E	1.75	S27E 0.4 280
3900	3899.62	-13.42	25.66	25.94	29	S62E	1.75	S32E 0.2 290
4000	3999.56	-15.93	27.73	29.19	32	S60E	2.00	S47E 0.5 300
4100	4099.49	-18.16	30.69	32.73	36	S59E	2.25	S59E 0.5 310
4200	4199.40	-20.24	34.52	36.67	40	S60E	2.75	S64E 0.5 320
4300	4299.27	-22.40	39.05	41.08	45	S60E	3.00	S65E 0.3 330
4400	4399.11	-24.93	44.12	46.10	51	S61E	3.50	S62E 0.5 340
4500	4498.88	-28.05	50.12	52.15	57	S61E	4.25	S63E 0.8 350
4600	4598.56	-31.78	57.27	59.37	65	S61E	5.00	S62E 0.8 360
4700	4698.12	-36.10	65.58	67.75	75	S61E	5.75	S63E 0.8 370
4800	4797.42	-41.80	75.85	78.40	87	S61E	7.75	S59E 2.1 380
4900	4896.41	-49.39	87.77	91.55	101	S61E	8.50	S56E 0.9 390
5000	4995.38	-56.99	99.94	104.85	115	S60E	8.00	S60E 0.8 400
5100	5094.40	-64.16	111.87	117.66	129	S60E	8.00	S58E 0.3 410
5200	5193.49	-70.90	123.54	129.98	142	S60E	7.50	S62E 0.7 420
5300	5292.66	-76.93	134.88	141.52	155	S60E	7.25	S62E 0.2 430
5400	5391.89	-82.75	145.83	152.66	168	S60E	7.00	S62E 0.2 440
5500	5491.15	-88.66	156.49	163.71	180	S60E	7.00	S60E 0.2 450
5600	5590.43	-94.37	167.01	174.51	192	S61E	6.75	S63E 0.4 460
5700	5689.76	-99.70	177.24	184.84	203	S61E	6.50	S62E 0.3 470
5800	5789.14	-104.65	187.18	194.68	214	S61E	6.25	S65E 0.4 480
5900	5888.55	-109.25	197.04	204.21	225	S61E	6.25	S65E 0. 490
6000	5987.90	-114.04	207.30	214.11	237	S61E	6.75	S65E 0.5 500
6100	6087.18	-119.10	218.15	224.58	249	S61E	7.00	S65E 0.2 510
6200	6186.41	-124.14	229.48	235.32	261	S62E	7.25	S67E 0.4 520
6300	6285.69	-128.72	240.54	245.52	273	S62E	6.50	S68E 0.8 530
6400	6385.07	-132.97	250.80	254.99	284	S62E	6.25	S67E 0.3 540
6500	6484.50	-137.05	260.66	264.09	294	S62E	6.00	S68E 0.3 550
6600	6584.00	-142.05	269.30	273.21	304	S62E	5.50	S52E 1.7 560
6700	6683.50	-148.93	276.56	283.05	314	S62E	6.00	S41E 1.2 570
6800	6782.95	-156.76	283.49	293.45	324	S61E	6.00	S42E 0.1 580
6900	6882.42	-164.00	290.72	303.56	334	S61E	5.75	S48E 0.7 590
7000	6981.94	-170.49	298.06	313.13	343	S60E	5.50	S49E 0.3 600
7100	7081.46	-177.05	305.35	322.71	353	S60E	5.75	S47E 0.3 610
7200	7180.81	-186.04	312.12	333.97	363	S59E	7.25	S27E 2.7 620
7300	7279.87	-198.65	317.47	347.31	374	S58E	8.50	S19E 1.7 630
7400	7378.64	-213.39	322.69	362.31	387	S57E	9.50	S20E 1.0 640
7500	7477.12	-229.71	328.63	379.00	401	S55E	10.50	S20E 1.0 650
7600	7575.15	-248.18	335.54	398.01	417	S54E	12.25	S21E 1.8 660
7700	7672.73	-268.45	343.73	419.21	436	S52E	13.00	S23E 0.9 670
7800	7770.17	-289.15	352.52	441.13	456	S51E	13.00	S23E 0. 680
7900	7867.65	-309.59	361.40	462.89	476	S49E	12.75	S24E 0.3 690
8000	7965.19	-329.59	370.73	484.55	496	S48E	12.75	S26E 0.4 700
8100	8062.77	-349.23	380.31	506.07	516	S47E	12.50	S26E 0.2 710
8200	8160.30	-368.98	390.16	527.84	537	S47E	13.00	S27E 0.5 720

6700	6683.50	-148.93	276.56	283.05	314	362E	6.00	341E	1.6	570
6800	6782.95	-156.76	283.49	293.45	324	361E	6.00	342E	0.1	580
6900	6882.42	-164.00	290.72	303.56	334	361E	5.75	348E	0.7	590
7000	6981.94	-170.49	298.06	313.13	343	360E	5.50	349E	0.3	600
7100	7081.46	-177.05	305.35	322.71	353	360E	5.75	347E	0.3	610
7200	7180.81	-186.04	312.12	333.97	363	359E	7.25	327E	2.7	620
7300	7279.87	-198.65	317.47	347.31	374	358E	8.50	319E	1.7	630
7400	7378.64	-213.39	322.69	362.31	387	357E	9.50	320E	1.0	640
7500	7477.12	-229.71	328.63	379.00	401	355E	10.50	320E	1.0	650
7600	7575.15	-248.18	335.54	398.01	417	354E	12.25	321E	1.8	660
7700	7672.73	-268.45	343.73	419.21	436	352E	13.00	323E	0.9	670
7800	7770.17	-289.15	352.52	441.13	456	351E	13.00	323E	0.	680
7900	7867.65	-309.59	361.40	462.89	476	349E	12.75	324E	0.3	690
8000	7965.19	-329.59	370.73	484.55	496	348E	12.75	326E	0.4	700
8100	8062.77	-349.23	380.31	506.07	516	347E	12.50	326E	0.2	710
8200	8160.30	-368.98	390.16	527.84	537	347E	13.00	327E	0.5	720
8300	8257.22	-390.91	401.33	552.15	560	346E	15.50	327E	2.5	730
8400	8353.52	-414.91	413.56	578.75	586	345E	15.75	327E	0.2	740
8500	8449.71	-439.18	426.19	605.81	612	344E	16.00	328E	0.4	750
8600	8545.83	-463.88	439.55	633.16	639	343E	16.00	330E	0.6	760
8700	8642.14	-488.61	453.02	659.95	665	343E	15.25	330E	0.7	770
8800	8738.62	-509.39	466.17	686.11	690	342E	15.25	330E	0.	780
8900	8835.10	-532.28	479.12	712.24	716	342E	15.25	329E	0.3	790
9000	8931.74	-554.40	492.15	737.79	741	342E	14.50	332E	1.1	800
9100	9028.45	-575.75	506.01	763.22	767	341E	15.00	334E	0.7	810
9200	9125.04	-596.95	520.86	789.09	792	341E	15.00	336E	0.5	820
9300	9221.74	-617.67	535.64	814.55	818	341E	14.50	335E	0.6	830
9400	9318.61	-638.13	549.70	839.37	842	341E	14.25	334E	0.4	840
9500	9415.59	-658.37	563.35	863.76	866	341E	14.00	334E	0.2	850
9600	9512.62	-678.42	576.88	887.94	891	340E	14.00	334E	0.	860
9700	9609.70	-698.65	589.76	911.87	914	340E	13.75	331E	0.8	870
9800	9706.73	-719.49	602.04	935.95	938	340E	14.25	330E	0.6	880
9900	9803.71	-740.41	614.61	960.26	962	340E	14.00	332E	0.5	890
10000	9900.74	-760.92	627.43	984.39	986	340E	14.00	332E	0.	900
10200	10094.80	-803.22	650.87	1032.39	1034	339E	14.00	326E	0.7	920
10300	10192.03	-823.83	661.83	1055.51	1057	339E	13.00	330E	1.4	930
10400	10289.32	-843.86	673.40	1078.51	1080	339E	13.75	330E	0.7	940
10500	10386.50	-864.46	684.82	1101.89	1103	338E	13.50	328E	0.5	950
10600	10483.74	-885.08	695.78	1125.01	1126	338E	13.50	328E	0.	960
10700	10581.08	-905.31	706.54	1147.71	1148	338E	13.00	328E	0.5	970
10800	10679.37	-921.82	714.23	1165.58	1166	338E	8.00	322E	5.1	980
10900	10778.46	-934.41	719.06	1178.61	1179	338E	7.50	320E	0.6	990
11000	10877.74	-945.46	723.64	1190.24	1191	337E	6.25	325E	1.4	1000
11100	10977.26	-954.15	728.17	1194.93	1200	337E	5.00	330E	1.3	1010
11200	11076.87	-961.42	732.98	1208.63	1209	337E	5.00	337E	0.6	1020
11300	11176.49	-968.19	738.46	1217.34	1218	337E	5.00	341E	0.3	1030
11400	11276.09	-975.22	743.96	1226.26	1227	337E	5.25	335E	0.6	1040
11500	11375.69	-982.71	748.82	1235.18	1235	337E	5.00	331E	0.4	1050
11600	11475.31	-990.22	753.24	1243.85	1244	337E	5.00	330E	0.1	1060
11700	11574.93	-998.17	756.78	1252.36	1253	337E	5.00	318E	1.0	1070
11800	11674.53	-1006.74	759.32	1260.78	1261	337E	5.25	315E	0.4	1080
11900	11774.05	-1016.33	761.27	1269.70	1270	337E	6.00	3 8E	1.0	1090
12000	11873.41	-1027.51	763.04	1279.78	1280	337E	7.00	310E	1.0	1100
12100	11972.52	-1040.62	765.12	1291.60	1292	336E	8.25	3 8E	1.3	1110
12200	12071.49	-1054.90	766.49	1303.96	1304	336E	8.25	3 3E	0.7	1120
12300	12170.42	-1069.43	767.51	1316.31	1316	336E	8.50	3 5E	0.4	1130
12400	12269.29	-1084.34	769.03	1329.30	1329	335E	8.75	3 7E	0.4	1140
12500	12368.16	-1099.27	770.51	1342.22	1342	335E	8.50	3 4E	0.5	1150
12600	12466.94	-1114.43	771.71	1355.14	1356	335E	9.00	3 5E	0.5	1160
12700	12565.76	-1130.03	772.93	1368.53	1369	334E	9.00	3 4E	0.2	1170
12800	12664.46	-1146.07	773.92	1382.04	1383	334E	9.50	3 3E	0.5	1180
12900	12763.13	-1162.28	772.78	1394.53	1396	334E	9.25	311W	2.3	1190
13000	12861.86	-1177.66	768.95	1404.72	1406	333E	9.00	317W	1.0	1200
13100	12960.70	-1191.85	763.50	1413.00	1415	333E	8.50	325W	1.3	1210
13200	13059.57	-1204.54	755.57	1418.61	1422	332E	8.75	339W	2.1	1220
13300	13158.26	-1216.09	744.42	1421.39	1426	331E	9.75	349W	1.9	1230
13400	13256.78	-1225.90	730.40	1421.09	1427	331E	10.00	361W	2.1	1240
13500	13355.15	-1233.51	714.09	1417.66	1425	330E	10.75	369W	1.6	1250
13600	13453.18	-1241.06	695.87	1413.06	1423	329E	12.00	366W	1.4	1260
13700	13550.86	-1249.60	676.22	1408.42	1421	328E	12.75	367W	0.8	1270
13780	13628.73	-1256.76	659.34	1404.29	1419	328E	13.75	367W	1.2	1280

CHANGE: TITLE, WELL, METHOD, VERTICAL SECTION, TVD, PLOT, OR STOP ?P

VERTICAL SECTION (SIDE VIEW) OR PLAN (TOP VIEW) ?P

PLAN (TOP) VIEW



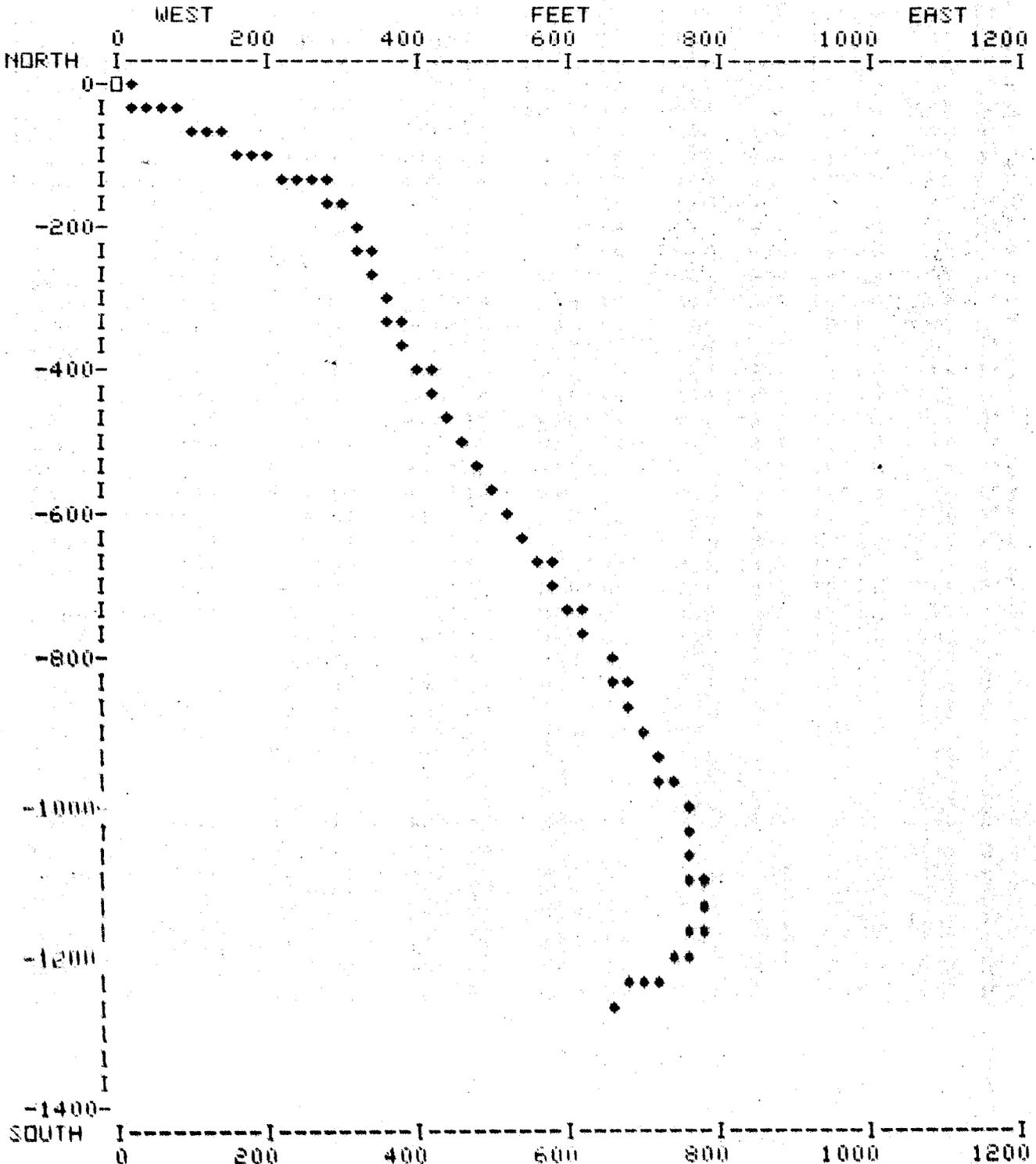
DO YOU NEED INSTRUCTIONS FOR RUNNING PROGRAM ?N

12800	12664.46	-1146.07	773.92	1382.04	1383	S34E	9.50	S 3E	0.5	1170
12900	12763.13	-1162.28	772.78	1394.53	1396	S34E	9.25	S11W	2.3	1190
13000	12861.86	-1177.66	768.95	1404.72	1406	S33E	9.00	S17W	1.8	1200
13100	12960.70	-1191.85	763.50	1413.00	1415	S33E	8.50	S25W	1.3	1210
13200	13059.57	-1204.54	755.57	1418.61	1422	S32E	8.75	S39W	2.1	1220
13300	13158.26	-1216.09	744.42	1421.39	1426	S31E	9.75	S49W	1.9	1230
13400	13256.78	-1225.90	730.40	1421.09	1427	S31E	10.00	S61W	2.1	1240
13500	13355.15	-1233.51	714.09	1417.66	1425	S30E	10.75	S69W	1.6	1250
13600	13453.18	-1241.06	695.87	1413.06	1423	S29E	12.00	S66W	1.4	1260
13700	13550.86	-1249.60	676.22	1408.42	1421	S28E	12.75	S67W	0.8	1270
13780	13628.73	-1256.76	659.34	1404.29	1419	S28E	13.75	S67W	1.2	1280

CHANGE: TITLE, WELL, METHOD, VERTICAL SECTION, TVD, PLOT, OR STOP ?P

VERTICAL SECTION (SIDE VIEW) OR PLAN (TOP VIEW) ?P

PLAN (TOP) VIEW



SUB SEA DEPTH	MEAS. DEPTH	DRIFT		TRUE VERTICAL		VERTICAL		DRIFT		TOTAL	COORDINATES			C L O S U R E S			DOG-LEG SEVERITY DEG/100FT.
		ANGLE	D M	DEPTH	SECTION	DIRECT	DEG	D	M		S	DISTANCE	D	M	S	ANGLE	
0.0	0	0	0	0.0	0.0	N	0 W	0.0 N	0.0 E	0.0 N	0.0 E	0.0 N	0	0	0 E	0.00	
100.0	100	0	0	100.0	0.0	N	0 W	0.0 N	0.0 E	0.0 N	0.0 E	0.0 N	0	0	0 E	0.00	
200.0	200	0	0	200.0	0.0	N	0 W	0.0 N	0.0 E	0.0 N	0.0 E	0.0 N	0	0	0 E	0.00	
300.0	300	0	0	300.0	0.0	N	0 W	0.0 N	0.0 E	0.0 N	0.0 E	0.0 N	0	0	0 E	0.00	
400.0	400	0	15	400.0	-0.2	N	10 W	0.2 N	0.0 W	0.2 N	0.0 W	0.2 N	10	0	0 W	0.25	
500.0	500	0	15	500.0	-0.4	N	50 E	0.6 N	0.1 E	0.6 N	0.1 E	0.6 N	9	47	21 E	0.17	
600.0	600	0	30	600.0	-0.6	N	35 E	1.1 N	0.5 E	1.1 N	0.5 E	1.2 N	26	38	20 E	0.27	
700.0	700	0	15	700.0	-0.2	S	10 E	1.0 N	1.0 E	1.0 N	1.0 E	1.4 N	46	59	11 E	0.29	
800.0	800	0	30	800.0	0.3	N	54 E	0.8 N	1.6 E	0.8 N	1.6 E	1.7 N	63	37	30 E	0.36	
900.0	900	0	30	900.0	0.1	N	32 E	1.4 N	2.1 E	1.4 N	2.1 E	2.6 N	56	47	10 E	0.19	
1000.0	1000	0	30	1000.0	0.2	N	80 E	1.9 N	2.8 E	1.9 N	2.8 E	3.4 N	56	35	28 E	0.41	
1100.0	1100	0	30	1100.0	0.6	N	88 E	2.0 N	3.7 E	2.0 N	3.7 E	4.2 N	62	4	1 E	0.07	
1200.0	1200	0	30	1200.0	0.8	N	46 E	2.3 N	4.5 E	2.3 N	4.5 E	5.1 N	62	54	54 E	0.36	
1300.0	1300	0	15	1300.0	0.6	N	26 E	2.8 N	4.9 E	2.8 N	4.9 E	5.6 N	59	54	25 E	0.28	
1400.0	1400	0	30	1400.0	0.7	S	80 E	3.1 N	5.4 E	3.1 N	5.4 E	6.3 N	60	13	31 E	0.41	
1500.0	1500	0	30	1500.0	1.2	N	70 E	3.2 N	6.3 E	3.2 N	6.3 E	7.0 N	63	9	4 E	0.09	
1600.0	1600	0	15	1600.0	1.3	N	70 E	3.4 N	6.9 E	3.4 N	6.9 E	7.7 N	63	44	55 E	0.25	
1700.0	1700	0	30	1700.0	1.7	S	80 E	3.5 N	7.5 E	3.5 N	7.5 E	8.3 N	65	21	6 E	0.26	
1800.0	1800	0	45	1800.0	2.1	N	55 E	3.7 N	8.6 E	3.7 N	8.6 E	9.3 N	66	43	24 E	0.36	
1900.0	1900	0	15	1900.0	2.2	N	65 E	4.1 N	9.3 E	4.1 N	9.3 E	10.2 N	66	9	3 E	0.51	
2000.0	2000	0	30	2000.0	2.2	N	50 E	4.5 N	9.9 E	4.5 N	9.9 E	10.9 N	65	38	58 E	0.27	
2153.9	2154	0	45	2153.9	2.3	N	65 E	5.4 N	11.3 E	5.4 N	11.3 E	12.5 N	64	33	53 E	0.19	
2246.9	2247	0	45	2246.9	2.4	N	47 E	6.1 N	12.3 E	6.1 N	12.3 E	13.7 N	63	48	43 E	0.25	
2339.9	2340	0	45	2339.9	2.2	N	45 E	6.9 N	13.2 E	6.9 N	13.2 E	14.9 N	62	22	46 E	0.03	
2432.9	2433	0	45	2432.9	2.0	N	45 E	7.8 N	14.0 E	7.8 N	14.0 E	16.0 N	61	4	56 E	0.00	
2524.9	2525	0	45	2524.9	1.9	N	50 E	8.6 N	14.9 E	8.6 N	14.9 E	17.2 N	60	8	34 E	0.07	
2617.9	2618	1	0	2617.9	2.0	N	65 E	9.3 N	16.1 E	9.3 N	16.1 E	18.6 N	59	56	36 E	0.36	

SUB SEA DEPTH	MEAS. DEPTH	DRIFT		TRUE VERTICAL DEPTH	VERTICAL SECTION	DRIFT DIRECT DEG	TOTAL	COORDINATES	CLOSURES				DOG-LEG SEVERITY DEG/100FT.	
		ANGLE D	M						DISTANCE	ANGLE D	M	S		
2711.9	2712	1	0	2711.9	2.6	N 87 E	9.7 N	17.7 E	20.2	N 61	12	24	E	0.41
2804.9	2805	1	0	2804.9	3.6	S 85 E	9.7 N	19.3 E	21.6	N 63	21	31	E	0.04
2897.9	2898	1	0	2897.9	4.9	S 57 E	9.2 N	20.8 E	22.8	N 66	14	1	E	0.52
2990.8	2991	1	0	2990.8	6.4	S 62 E	8.4 N	22.2 E	23.8	N 69	25	38	E	0.09
3082.8	3083	1	15	3082.8	8.1	S 53 E	7.4 N	23.8 E	24.9	N 72	44	1	E	0.33
3175.8	3176	1	15	3175.8	10.1	S 45 E	6.1 N	25.3 E	26.0	N 76	32	2	E	0.19
3268.8	3269	1	30	3268.8	12.3	S 45 E	4.5 N	26.9 E	27.2	N 80	32	12	E	0.27
3361.7	3362	1	45	3361.7	14.9	S 35 E	2.5 N	28.6 E	28.7	N 85	4	27	E	0.41
3454.7	3455	2	0	3454.7	17.9	S 24 E	0.2 S	30.1 E	30.1	S 89	39	11	E	0.47
3548.6	3549	2	0	3548.6	21.1	S 25 E	3.2 S	31.4 E	31.6	S 84	15	42	E	0.04
3641.6	3642	2	0	3641.6	24.3	S 31 E	6.0 S	32.9 E	33.5	S 79	38	35	E	0.23
3733.5	3734	1	45	3733.5	27.4	S 36 E	8.5 S	34.6 E	35.6	S 76	8	16	E	0.32
3826.5	3827	1	45	3826.5	30.2	S 40 E	10.8 S	36.4 E	37.9	S 73	29	15	E	0.13
3919.4	3920	2	0	3919.4	33.2	S 50 E	12.9 S	38.5 E	40.6	S 71	27	32	E	0.44
4012.4	4013	2	15	4012.4	36.5	S 58 E	15.0 S	41.3 E	43.9	S 70	6	41	E	0.42
4104.3	4105	2	30	4104.3	40.0	S 58 E	17.0 S	44.5 E	47.7	S 69	8	4	E	0.27
4197.2	4198	3	0	4197.2	44.0	S 69 E	19.0 S	48.5 E	52.1	S 68	39	11	E	0.78
4291.1	4292	3	0	4291.1	48.1	S 71 E	20.6 S	53.1 E	57.0	S 68	46	10	E	0.1
4383.9	4385	3	0	4383.9	52.1	S 69 E	22.3 S	57.7 E	61.9	S 68	52	58	E	0.11
4476.8	4478	4	0	4476.8	56.9	S 67 E	24.4 S	63.0 E	67.5	S 68	48	36	E	1.08
4569.5	4571	5	0	4569.5	63.1	S 69 E	27.2 S	69.7 E	74.8	S 68	43	58	E	1.09
4662.1	4664	5	15	4662.1	70.2	S 67 E	30.3 S	77.4 E	83.2	S 68	39	40	E	0.33
BOTTOM HOLE CLOSURE							83.2 FEET AT S 68 39 40 E							

HYDROSTATIC PRESSURE TEST - B.O.P.'S  
AMOCO PRODUCTION - BOUNTIFUL LIVESTOCK

BOMRC - RIG 44

SEPTEMBER 2, 1979

by

YELLOW JACKET TOOLS AND SERVICES, INC.

EVANSTON, WYOMING

TESTED BY: RANDY BROWN & RANDY BROWN

1980' FSL, 660' FWL  
SECTION 16  
TOWNSHIP 4 N  
RANGE 8 E  
COUNTY SUMMIT

TICKET NO. 20249

September 14, 1979

Amoco Production  
P. O. Box 17675  
Salt Lake City, Utah 84117

Gentlemen,

We made a hydrostatic pressure test on your Bountiful Livestock, located in the Evanston, Wyoming area, in the Salt Lake City, Utah district on September 2, 1979.

Test was made using (plug) 10" OCT or (packer) \_\_\_\_\_ or (both) \_\_\_\_\_.

When we arrived, the rig was nipping up.

These changes were made to BOP hookup since previous test first test.

List any delay observed to operation of BOPs during test: and, loss of closing pressure (other than hydril test) \_\_\_\_\_

(Corrected) \_\_\_\_\_

List items replaced during testing: \_\_\_\_\_

Closures were made using pump \_\_\_\_\_ accumulators \_\_\_\_\_ both x with observed pressure of 2500 for test to ram type BOPs and 1500 for test on Hydril.

Accumulator bottles 14 were pressured to 3000 at end of test.

Control valves operating as indicated on closing unit manifold except: \_\_\_\_\_

Extentions were x or were not \_\_\_\_\_ hooked up to BOPs at end of test.

No test desired to casing and safety valve

Items leaking at the conclusion of testing and/or malfunction of BOPs at end of test: \_\_\_\_\_

A drawing of surface control equipment has been prepared to show any leaks and malfunctions. A report taken from field notes and a pressure chart of the test are also enclosed.

Your comments and suggestions will be appreciated.

Sincerely yours,

Yellow Jacket Tools and Services, Inc.

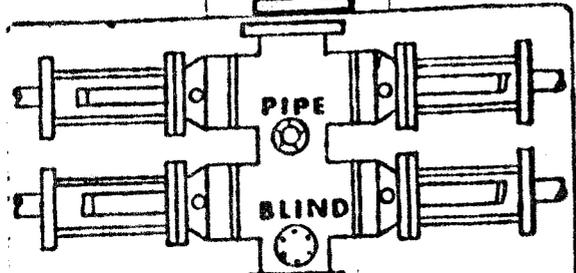
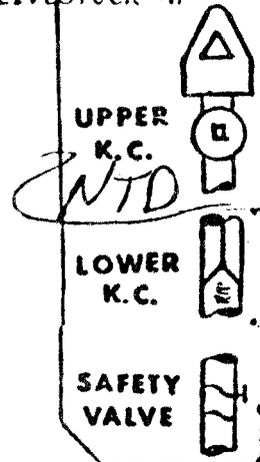
  
Billy Duff

bde/Enclosures



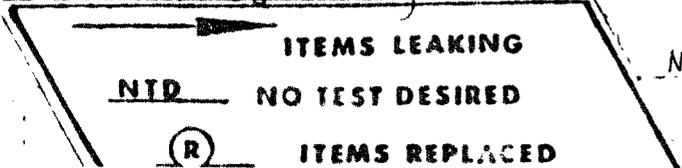


1 3/8  
5000  
shutter



Manifold not hooked up  
will test in a few  
days.

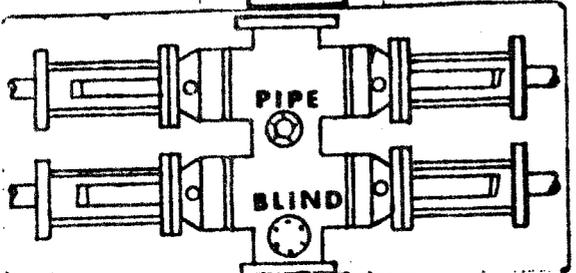
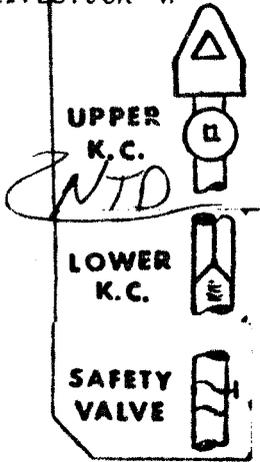
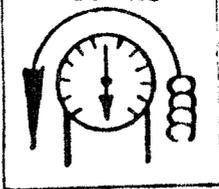
1 3/8 casing



No visible leaks DURING testing 9-2-79

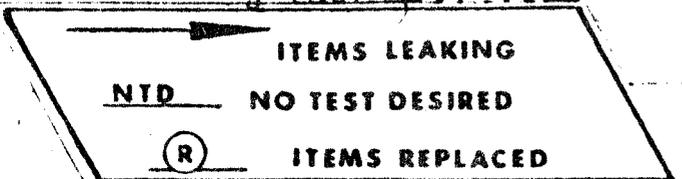


1 3/8  
5000  
shutter

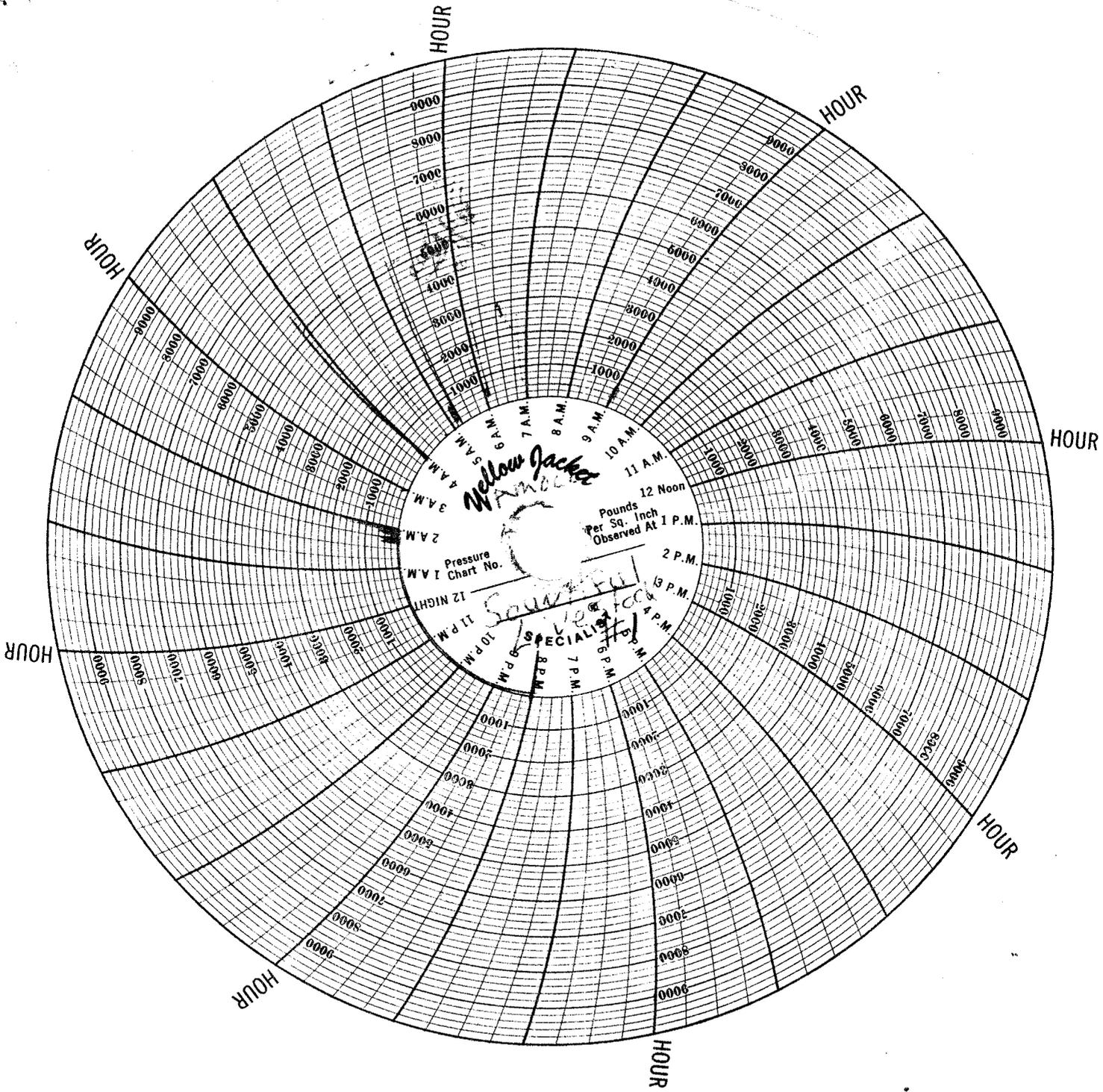


Manifold not hooked up  
will test in a few  
days.

1 3/8 casing



No visible leaks at CONCLUSION of testing  
9-2-79



# REPORT

on

## SUB-SURFACE PRESSURES

<b>BOTTOM HOLE PRESSURE SURVEY</b>	
COMPANY	AMOCO PRODUCTION
WELL NO.	Bountiful Livestock #1
FIELD/STATE	Evanston , Wyo.
DATE OF SURVEY	5/9/80 - 5/11/80

**RECEIVED**  
JUL 07 1980

DIVISION OF  
OIL, GAS & MINING

Help Increase Your Company's Profits... Go With



Men and Equipment

<b>PRESSURE SURVEY</b> OEC-150-D		DATE RUN <b>5/11/80</b>	
COMPANY <b>Amoco Production Co.</b>		FIELD <b>Bountiful Livestock</b>	
LEASE		WELL NUMBER <b>#1</b>	
COUNTY OR PARISH <b>Summit</b>		STATE <b>Utah</b>	

DESCRIPTION	ELEVATION <b>7319 KB</b>	PERFORATION	DATUM	OIL LEVEL
	WATER LEVEL	<input checked="" type="checkbox"/> SHUT-IN <input type="checkbox"/> FLOWING	HOURS	DEPTH REACHED <b>12,800'</b>
	SURFACE PRESS. PSI <b>2962</b>	MAXIMUM PRESSURE <b>5290.0</b>	SURFACE TEMPERATURE <b>65</b> °F	MAXIMUM TEMPERATURE <b>216</b> °F
	TUBING <b>2 7/8"</b>	TUBING DEPTH <b>10,500'</b>	PACKER DEPTH	SLANT HOLE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

DEPTH OR TIME 10 Min.	PRESSURE PSIG	GRADIENT PSI'FT.	REMARKS											
12,800	5290.0													
12,000	5144.5													
11,000	4960.4													
10,000	4770.4													
9,000	4573.5													
8,000	4358.0													
7,000	4151.1													
6,000	3934.7													
5,000	3713.8													
4,000	3528.4													
3,000	3380.8													
2,000	3239.4													
1,000	3102.0													
Surface	2962.4													

INSTRUMENT NO. <b>46029</b>	RANGE <b>10,000#</b>	M.S.O. NUMBER	REMARKS
CLOCK NUMBER	RANGE	LEAD SCREW <input type="checkbox"/> 7 1/2 <input type="checkbox"/> 15	
CALCULATED BY			



ELECTRIC LINE OPERATIONS

OEC-1235

TEST NUMBER

RIG NAME

PAGE OF  
1

CUSTOMER  
AMOCO PRODUCTION CO.

WELL NAME OR NUMBER  
Bountiful Livestock #1

FIELD

AREA

CUSTOMER REPRESENTED BY

OTIS TEST SUPERVISOR

WELLHEAD TEMP.

DATE	TIME	DWT	$\Delta T$	BHP	BHT	CSG.	REMARKS
5/9/80	22:59:48		00:00:00	4136.6	222	+0	Begin BHP BU
"	23:00:00		00:00:12	4160.5	222	+23.55	
"	23:00:12		00:00:24	4184.6	222	+47.98	
"	23:00:24		00:00:36	4214.9	222	+78.31	
"	23:00:36		00:00:48	4248.0	222	+111.40	
"	23:00:48		00:01:00	4279.8	222	+143.20	
"	23:01:00		00:01:12	4306.6	222	+170.00	
"	23:01:12		00:01:24	4337.4	222	+200.80	
"	23:01:24		00:01:36	4366.6	222	+230.07	
"	23:01:36		00:01:48	4395.4	222	+258.86	
"	23:01:48		00:02:00	4423.7	222	+287.16	
"	23:02:00		00:02:12	4449.0	222	+312.47	
"	23:02:12		00:02:24	4474.9	222	+338.28	
"	23:02:24		00:02:36	4501.2	222	+364.59	
"	23:02:36		00:02:48	4527.0	222	+390.40	
"	23:02:48		00:03:00	4554.3	222	+417.69	
"	23:03:00		00:03:12	4579.6	222	+443.00	
"	23:03:12		00:03:24	4605.4	222	+468.81	
"	23:03:24		00:03:36	4631.7	222	+495.11	



# ELECTRIC LINE OPERATIONS

DEC-1235

TEST NUMBER

RIG NAME

PAGE OF

2

CUSTOMER

WELL NAME OR NUMBER

FIELD

AREA

CUSTOMER REPRESENTED BY

OTIS TEST SUPERVISOR

WELLHEAD TEMP.

DATE	TIME	DWT	$\Delta t$	BHP	BHT	CSG.	REMARKS
							1
5/9/80	23:03:36		00:03:48	4653.5	222	+516.95	2
	23:03:48		00:04:00	4677.8	222	+541.26	3
	23:04:00		00:04:12	4700.2	222	+563.59	4
	23:04:12		00:04:24	4722.0	222	+583.43	5
	23:04:24		00:04:36	4746.3	222	+609.74	6
	23:04:36		00:04:48	4766.7	222	+630.08	7
	23:04:48		00:05:00	4788.5	222	+651.91	8
	23:05:00		00:05:12	4810.8	222	+674.24	9
	23:05:00		00:05:24	4831.6	222	+695.08	10
	23:05:24		00:05:36	4853.0	222	+716.41	11
	23:05:36		00:05:48	4871.8	222	+735.27	12
	23:05:48		00:06:00	4889.8	222	+753.13	13
	23:06:00		00:06:12	4909.5	222	+772.97	14
	23:06:12		00:06:24	4925.4	222	+788.84	15
	23:06:24		00:06:36	4943.3	222	+806.7	16
	23:06:36		00:06:48	4960.6	222	+824.07	17
	23:06:48		00:07:00	4976.0	222	+839.44	18
	23:07:00		00:07:12	4992.4	222	+855.81	19
	23:07:12		00:07:24	5006.8	222	+870.20	



# ELECTRIC LINE OPERATIONS

OEC - 1235

TEST NUMBER

RIG NAME

PAGE OF  
3

CUSTOMER

WELL NAME OR NUMBER

FIELD

AREA

CUSTOMER REPRESENTED BY

OTIS TEST SUPERVISOR

WELLHEAD TEMP.

DATE	TIME	DWT	$\Delta t$	BHP	BHT	CSG.	REMARKS
1							
5/9/80	23:07:24		00:07:36	5021.6	222	+885.08	
2							
	23:07:36		00:07:48	5036.0	222	+899.46	
3							
	23:07:48		00:08:00	5050.9	222	+914.35	
4							
	23:08:00		00:08:12	5062.8	222	+926.25	
5							
	23:08:12		00:08:24	5074.7	222	+938.15	
6							
	23:08:24		00:08:36	5085.6	222	+949.07	
7							
	23:08:36		00:08:48	5096.0	222	+959.48	
8							
	23:08:48		00:09:00	5106.5	222	+969.90	
9							
	23:09:00		00:09:12	5116.4	222	+979.82	
10							
	23:09:12		00:09:24	5124.8	222	+988.25	
11							
	23:09:24		00:09:36	5132.8	222	+996.18	
12							
	23:09:36		00:09:48	5140.7	222	+1004.12	
13							
	23:09:48		00:10:00	5148.6	222	+1012.05	
14							
	23:10:00		00:10:12	5155.1	222	+1018.50	
15							
	23:10:12		00:10:24	5162.0	222	+1025.45	
16							
	23:10:24		00:10:36	5168.5	222	+1031.85	
17							
	23:10:36		00:10:48	5173.4	222	+1036.85	
18							
	23:10:48		00:11:00	5178.9	222	+1042.25	
19							
	23:11:00		00:11:12	5183.8	222	+1047.25	



# ELECTRIC LINE OPERATIONS

OEC-1235

TEST NUMBER

RIG NAME

PAGE OF  
4

CUSTOMER

WELL NAME OR NUMBER

FIELD

AREA

CUSTOMER REPRESENTED BY

OTIS TEST SUPERVISOR

WELLHEAD TEMP.

DATE	TIME	DWT	$\Delta\tau$	BHP	BHT	CSG.	REMARKS
1							
2	5/9/80	23:11:12	00:11:24	5188.8	222	+1052.15	
3		23:11:24	00:11:36	5194.3	222	+1057.65	
4		23:11:36	00:11:48	5197.7	222	+1061.15	
5		23:11:48	00:12:00	5202.2	222	+1065.55	
6		23:12:00	00:12:12	5206.8	222	+1070.05	
7		23:12:12	00:12:24	5209.8	222	+1073.2	
8		23:12:24	00:12:36	5213.4	222	+1076.8	
9		23:12:36	00:12:48	5216.6	222	+1079.95	
10		23:12:48	00:13:00	5219.0	222	+1082.45	
11		23:13:00	00:13:12	5222.5	222	+1085.95	
12		23:13:12	00:13:24	5225.0	222	+1088.35	
13		23:13:36	00:13:36	5227.5	222	+1090.85	
14		23:13:36	00:13:48	5229.5	222	+1092.85	
15		23:13:48	00:14:00	5231.4	222	+1094.85	
16		23:14:00	00:14:12	5233.4	222	+1096.85	
17		23:14:12	00:14:24	5235.4	222	+1098.75	
18		23:14:12	00:14:24	5235.4	222	+1098.75	
19		23:14:24	00:14:36	5235.4	222	+1099.25	
20		23:14:36	00:14:48	5237.4	222	+1100.75	



# ELECTRIC LINE OPERATIONS

OEC-1235

TEST NUMBER

RIG NAME

PAGE OF  
5

CUSTOMER

WELL NAME OR NUMBER

FIELD

AREA

CUSTOMER REPRESENTED BY

OTIS TEST SUPERVISOR

WELLHEAD TEMP.

DATE	TIME	DWT	$\Delta\tau$	BHP	BHT	CSG.	REMARKS
5/9/80	23:15:00		00:15:12	5240.4	222	+1103.75	
	23:15:12		00:15:24	5240.4	222	+1103.75	
	23:15:42		00:15:54	5245.3	222	+1108.75	
	23:16:12		00:16:24	5247.2	222	+1110.65	
	23:16:42		00:16:54	5249.6	222	+1113.05	
	23:17:12		00:17:24	5251.6	222	+1115.05	
	23:17:42		00:17:54	5252.5	222	+1115.85	
	23:18:12		00:18:24	5254.1	222	+1117.55	
	23:18:42		00:18:54	5254.5	222	+1117.95	
	23:19:12		00:19:24	5255.6	222	+1118.95	
	23:19:42		00:19:54	5256.5	222	+1119.85	
	23:20:12		00:20:24	5257.5	222	+1120.95	
	23:20:42		00:20:54	5258.4	222	+1121.85	
	23:21:12		00:21:24	5259.1	222	+1122.46	
	23:21:42		00:21:54	5259.5	222	+1122.95	
	23:22:12		00:22:24	5260.1	222	+1123.45	
	23:22:42		00:22:54	5261.3	222	+1124.65	
	23:23:12		00:23:24	5262.0	222	+1125.35	
	23:23:42		00:23:54	5262.8	222	+1126.25	



# ELECTRIC LINE OPERATIONS

OEC - 1235

TEST NUMBER

RIG NAME

PAGE OF  
6

CUSTOMER

WELL NAME OR NUMBER

FIELD

AREA

CUSTOMER REPRESENTED BY

OTIS TEST SUPERVISOR

WELLHEAD TEMP.

DATE	TIME	DWT	$\Delta T$	BHP	BHT	CSG.	REMARKS
1	5/9/80	23:24:12	00:24:24	5263.4	222	+1126.75	
2		23:24:42	00:24:54	5264.9	222	+1128.25	
3		23:25:12	00:25:24	5264.0	222	+1127.45	
4		23:25:42	00:25:54	5265.4	222	+1128.75	
5		23:25:12	00:26:24	5266.4	222	+1129.75	
6		23:26:42	00:26:54	5267.4	222	+1130.75	
7		23:27:12	00:27:24	5267.1	222	+1130.55	
8		23:27:42	00:27:54	5268.8	222	+1132.25	
9		23:28:12	00:28:24	5269.8	222	+1133.15	
10		23:28:42	00:28:54	5270.7	222	+1134.05	
11		23:29:12	00:29:24	5270.7	222	+1134.15	
12		23:29:42	00:29:54	5271.2	222	+1134.55	
13		23:30:12	00:30:24	5272.2	222	+1134.55	
14		23:30:42	00:30:54	5273.1	222	+1136.45	
15		23:31:12	00:31:24	5272.4	222	+1135.75	
16		23:31:42	00:31:54	5272.0	222	+1135.35	
17		23:32:12	00:32:24	5272.1	222	+1135.45	
18		23:32:42	00:32:54	5272.0	222	+1135.35	
19		23:33:12	00:33:24	5273.1	222	+1136.45	



# ELECTRIC LINE OPERATIONS

OEC-1235

TEST NUMBER	RIG NAME	PAGE OF
		7

CUSTOMER	WELL NAME OR NUMBER	FIELD	AREA
CUSTOMER REPRESENTED BY	OTIS TEST SUPERVISOR		WELLHEAD TEMP.

DATE	TIME	DWT	$\Delta T$	BHP	BHT	CSG.	REMARKS
5/9/80	23:33:42		00:33:54	5271.9	222	+1135.25	
	23:34:12		00:34:24	5271.9	222	+1135.25	
	23:34:42		00:34:54	5271.9	222	+1135.25	
	23:35:12		00:35:24	5273.1	222	+1136.45	
	23:35:42		00:35:54	5273.6	222	+1136.95	
	23:36:12		00:36:24	5272.4	222	+1135.75	
	23:36:42		00:36:54	5273.0	222	+1136.35	
	23:37:12		00:37:24	5273.6	222	+1136.95	
	23:37:42		00:37:54	5272.3	222	+1135.75	
	23:38:12		00:38:24	5274.1	222	+1137.55	
	23:38:42		00:38:54	5274.4	222	+1135.85	
	23:39:12		00:39:24	5273.5	222	+1136.85	
	23:39:42		00:39:54	5274.2	222	+1137.55	
	23:40:12		00:40:24	5273.4	222	+1136.85	
	23:40:42		00:40:54	5272.9	222	+1136.25	
	23:41:12		00:41:24	5273.4	222	+1136.75	
	23:41:42		00:41:54	5273.9	222	+1137.25	
	23:42:12		00:42:24	5274.0	222	+1137.35	
	23:42:42		00:42:54	5273.2	222	+1136.65	



# ELECTRIC LINE OPERATIONS

OEC - 1235

TEST NUMBER	RIG NAME	PAGE OF
		8

CUSTOMER	WELL NAME OR NUMBER	FIELD	AREA

CUSTOMER REPRESENTED BY	OTIS TEST SUPERVISOR	WELLHEAD TEMP.

DATE	TIME	DWT	$\Delta\tau$	BHP	BHT	CSG.	REMARKS
1							
2	5/9/80	23:43:12	00:43:24	5273.3	222	+1136.65	
3	"	23:43:42	00:43:24	5274.5	222	+1137.85	
4	"	23:44:12	00:44:24	5274.0	222	+1137.35	
5	"	23:44:42	00:44:54	5273.8	222	+1137.15	
6	"	23:45:12	00:45:24	5274.3	222	+1137.65	
7	"	23:45:42	00:45:54	5273.2	222	+1136.65	
8	"	23:46:12	00:46:24	5274.9	222	+1138.25	
9	"	23:46:42	00:46:54	5273.7	222	+1137.05	
10	"	23:47:12	00:47:24	5273.2	222	+1136.65	
11	"	23:47:42	00:47:54	5273.6	222	+1137.05	
12	"	23:48:12	00:48:24	5274.2	222	+1137.55	
13	"	23:48:42	00:48:54	5274.1	222	+1137.55	
14	"	23:49:12	00:49:24	5273.7	222	+1137.05	
15	"	23:49:42	00:49:54	5274.3	222	+1137.65	
16	"	23:50:12	00:50:24	5274.9	222	+1138.35	
17	"	23:50:42	00:50:54	5273.7	222	+1137.05	
18	"	23:51:12	00:51:24	5274.6	222	+1138.06	
19	"	23:51:42	00:51:54	5275.4	222	+1138.95	
20	"	23:52:12	00:52:24	5273.6	222	+1137.05	





# ELECTRIC LINE OPERATIONS

OEC-1235

TEST NUMBER

RIG NAME

PAGE OF

10

CUSTOMER

WELL NAME OR NUMBER

FIELD

AREA

CUSTOMER REPRESENTED BY

OTIS TEST SUPERVISOR

WELLHEAD TEMP.

DATE	TIME	DWT	$\Delta T$	BHP	BHT	CSG.	REMARKS
5/10/80	00:00:12		01:00:24	5274.7	222	+1138.05	One minute readings
"	00:01:12		01:01:24	5274.2	222	+1137.65	
"	00:02:12		01:02:24	5274.6	222	+1138.05	
"	00:03:12		01:03:24	5275.1	222	+1138.45	
"	00:04:12		01:04:24	5274.7	222	+1138.05	
"	00:05:12		01:05:24	5275.8	222	+1139.25	
"	00:06:12		01:06:24	5275.1	222	+1138.55	
"	00:07:12		01:07:24	5275.6	222	+1139.05	
"	00:08:12		01:08:24	5275.1	222	+1138.55	
"	00:09:12		01:09:24	5274.7	222	+1138.05	
"	00:10:12		01:10:24	5275.6	222	+1139.05	
"	00:11:12		01:11:24	5274.8	222	+1138.15	
"	00:12:12		01:12:24	5275.1	222	+1138.55	
"	00:13:12		01:13:24	5275.1	222	+1138.55	
"	00:14:12		01:14:24	5275.9	222	+1139.25	
"	00:15:12		01:15:24	5275.2	222	+1138.65	
"	00:16:12		01:16:24	5275.3	222	+1138.65	
"	00:17:12		01:17:24	5275.9	222	+1139.25	
"	00:18:12		01:18:24	5276.4	222	+1139.75	



# ELECTRIC LINE OPERATIONS

OEC - 1235

TEST NUMBER

RIG NAME

PAGE OF  
11

CUSTOMER

WELL NAME OR NUMBER

FIELD

AREA

CUSTOMER REPRESENTED BY

OTIS TEST SUPERVISOR

WELLHEAD TEMP.

DATE	TIME	DWT	$\Delta T$	BHP	BHT	CSG.	REMARKS
5/10/80	00:19:12		01:19:24	5275.2	222	+1138.65	
"	00:20:12		01:20:24	5275.9	222	+1139.25	
"	00:21:12		01:21:24	5276.2	222	+1139.55	
"	00:22:12		01:22:24	5276.5	222	+1139.85	
"	00:23:12		01:23:24	5276.9	222	+1140.35	
"	00:24:12		01:24:24	5277.0	222	+1140.35	
"	00:25:12		01:25:24	5275.7	222	+1139.05	
"	00:26:12		01:26:24	5276.2	222	+1139.65	
"	00:27:12		01:27:24	5275.8	222	+1139.15	
"	00:28:12		01:28:24	5277.4	222	+1140.75	
"	00:29:12		01:29:24	5276.7	222	+1140.05	
"	00:34:12		01:04:24	5276.9	222	+1140.25	Five minute readings
"	00:39:12		01:39:24	5276.3	222	+1139.65	
"	00:44:12		01:44:24	5277.6	222	+1141.05	
"	00:49:12		01:49:24	5277.9	222	+1141.25	
"	00:54:12		01:54:24	5278.0	222	+1141.35	
"	00:59:12		01:59:24	5277.5	222	+1140.85	
"	01:04:12		02:04:24	5277.5	222	+1140.85	
"	01:09:12		02:09:24	5278.7	222	+1142.05	



# ELECTRIC LINE OPERATIONS

OEC-1235

TEST NUMBER	RIG NAME	PAGE OF
		12

CUSTOMER	WELL NAME OR NUMBER	FIELD	AREA
CUSTOMER REPRESENTED BY	OTIS TEST SUPERVISOR		WELLHEAD TEMP.

DATE	TIME	DWT	$\Delta T$	BHP	BHT	CSG.	REMARKS
1	5/10/80	01:14:12	02:14:24	5278.0	220	+1141.35	
2	"	01:19:12	02:19:24	5278.7	220	+1142.05	
3	"	01:24:12	02:24:24	5278.7	220	+1142.15	
4	"	01:29:12	02:29:12	5280.6	220	+1144.05	
5	"	01:34:12	02:34:24	5278.9	220	+1142.25	
6	"	01:39:12	02:39:24	5280.0	220	+1143.35	
7	"	01:44:12	02:44:24	5280.0	220	+1143.35	
8	"	01:49:12	02:49:24	5281.2	220	1144.55	
9	"	01:54:12	02:54:24	5279.8	220	+1143.25	
10	"	01:59:12	02:59:24	5280.9	220	+1143.25	
11	"	02:04:12	03:04:24	5279.4	220	+1142.75	
12	"	02:09:12	03:09:24	5282.2	220	+1145.55	
13	"	02:14:12	03:14:24	5280.3	220	1143.75	
14	"	02:19:12	03:19:24	5280.4	220	+1143.75	
15	"	02:24:12	03:24:24	5281.3	220	+1144.65	
16	"	02:29:12	03:29:24	5280.4	220	+1143.75	
17	"	02:34:12	03:34:24	5280.9	220	+1144.35	
18	"	02:39:12	03:39:24	5282.5	220	+1145.85	
19	"	02:44:12	03:44:24	5281.3	220	+1144.65	



# ELECTRIC LINE OPERATIONS

OEC--1235

TEST NUMBER

RIG NAME

PAGE OF  
13

CUSTOMER

WELL NAME OR NUMBER

FIELD

AREA

CUSTOMER REPRESENTED BY

OTIS TEST SUPERVISOR

WELLHEAD TEMP.

DATE	TIME	DWT	$\Delta T$	BHP	BHT	CSG.	REMARKS
5/10/80	02:49:12		03:49:24	5281.8	217	+1145.25	
"	02:54:12		03:54:24	5281.8	217	+1145.35	
"	02:59:12		03:59:24	5282.5	217	+1145.85	
"	03:04:12		04:04:24	5283.5	217	+1146.95	
"	03:09:12		04:09:24	5282.3	217	+1145.65	
"	03:14:12		04:14:24	5282.7	217	+1146.05	
"	03:19:12		04:19:24	5281.8	217	+1145.25	
"	03:24:12		04:24:24	5281.8	217	+1145.25	
"	03:29:12		04:29:24	5282.8	217	+1146.25	
"	03:34:12		04:34:24	5282.2	217	+1145.55	
"	03:39:12		04:39:24	5282.8	217	+1146.25	
"	03:44:12		04:44:24	5283.3	217	+1146.65	
"	03:49:12		04:49:24	5281.7	217	+1145.05	
"	03:54:12		04:54:24	5282.7	217	+1146.15	
"	03:59:12		04:59:24	5283.2	217	+1146.55	
"	04:04:12		05:04:24	5282.8	217	+1146.25	
"	04:09:12		05:09:24	5283.1	217	+1146.55	
"	04:14:12		05:14:24	5283.2	217	+1146.55	
"	04:19:12		05:19:24	5284.4	217	+1147.85	



# ELECTRIC LINE OPERATIONS

OEC - 1235

TEST NUMBER	RIG NAME	PAGE OF
		14

CUSTOMER	WELL NAME OR NUMBER	FIELD	AREA
CUSTOMER REPRESENTED BY	OTIS TEST SUPERVISOR		WELLHEAD TEMP.

DATE	TIME	DWT	$\Delta T$	BHP	BHT	CSG.	REMARKS
1	5/10/80	04:24:12	05:24:24	5283.7	216	+1147.05	1
2	"	04:29:12	05:29:24	5283.2	216	+1146.65	2
3	"	04:34:12	05:34:24	5284.5	216	+1147.85	3
4	"	04:39:12	05:39:24	5282.7	216	+1146.05	4
5	"	04:44:12	05:44:24	5283.8	216	+1147.15	5
6	"	04:49:12	05:49:24	5283.8	216	+1147.25	6
7	"	04:54:12	05:54:24	5283.7	216	+1147.05	7
8	"	04:59:12	05:59:24	5284.2	216	+1147.65	8
9	"	05:04:12	06:04:24	5283.7	216	+1147.15	9
10	"	05:09:12	06:09:24	5283.7	216	+1147.15	10
11	"	05:14:12	06:14:24	5284.4	216	+1148.85	11
12	"	05:19:12	06:19:24	5284.7	216	+1148.05	12
13	"	05:24:12	06:24:24	5284.2	216	+1147.55	13
14	"	05:29:12	06:29:24	5283.6	216	+1147.05	14
15	"	05:34:12	06:34:24	5283.7	216	+1147.05	15
16	"	05:39:12	06:39:24	5284.7	216	+1148.05	16
17	"	05:44:12	06:44:12	5284.7	216	+1148.15	17
18	"	05:49:12	06:49:12	5284.2	216	+1147.65	18
19	"	05:54:12	06:54:12	5284.7	216	+1148.25	19



# ELECTRIC LINE OPERATIONS

OEC - 1235

TEST NUMBER

RIG NAME

PAGE OF  
15

CUSTOMER

WELL NAME OR NUMBER

FIELD

AREA

CUSTOMER REPRESENTED BY

OTIS TEST SUPERVISOR

WELLHEAD TEMP.

DATE	TIME	DWT	$\Delta T$	BHP	BHT	CSG.	REMARKS
5/10/80	05:59:12		06:59:24	5284.8	216	+1148.25	
"	06:59:12		07:59:24	5286.8	216	+1150.25	One Hour Readings
"	07:59:12		08:59:24	5285.6	216	+1148.95	
"	08:59:12		09:59:24	5286.1	216	+1149.55	
"	09:59:12		10:59:24	5287.4	216	+1150.75	
"	10:59:12		11:59:24	5287.1	216	+1150.45	
"	11:59:12		12:59:24	5287.9	216	+1151.25	
"	12:59:12		13:59:24	5287.9	216	+1151.25	
"	13:59:12		14:59:24	5287.1	216	+1150.45	
"	14:59:12		15:59:24	5289.4	216	+1152.75	
"	15:59:12		16:59:24	5289.0	216	+1152.45	
"	16:59:12		17:59:24	5289.1	216	+1152.45	
"	17:59:12		18:59:24	5289.7	216	+1153.15	
"	18:59:12		19:59:24	5288.5	216	+1151.95	
"	19:59:12		20:59:24	5289.1	216	+1152.55	
"	20:59:12		21:59:24	5289.8	216	+1153.25	
"	21:59:12		22:59:24	5289.6	216	+1153.05	
"	22:59:12		23:59:24	5288.6	216	+1152.05	
"	23:59:12		24:59:24	5290.2	216	+1153.65	



V

CORE LABORATORIES, INC.  
*Petroleum Reservoir Engineering*  
DALLAS, TEXAS 75247

Reservoir Fluid Study  
for  
AMOCO PRODUCTION COMPANY

Bountiful Livestock No. 1 Well  
Anschutz Ranch East Field  
Summit County, Utah  
12822-28

April 22, 1980

CORE LABORATORIES, INC.

Reservoir Fluid Analysis



Amoco Production Company  
Security Life Building  
Denver, CO 80202

Attention: Mr. Terry Logan

Subject: Reservoir Fluid Study  
Bountiful Livestock No. 1 Well  
Anschutz Ranch East Field  
Summit County, Utah  
Our File Number: RFL 80185

Gentlemen:

Samples of separator gas and condensate were collected from the subject well during production from the perforated interval 12822 to 12828 feet. These samples were collected for use in a reservoir fluid study and the results of this study are summarized in the following report.

After correcting the separator gas rate for the factors shown on page one, the producing gas-liquid ratio was calculated to be 5568 cubic feet of separator gas at 14.65 psia and 60°F. per barrel of stock tank condensate at 60°F. In the laboratory, this ratio was found to be equivalent to 4751 standard cubic feet of separator gas per barrel of separator liquid at 340 psig and 60°F. The separator products were physically recombined in this gas-liquid ratio and the resulting fluid was used for the entire study. The hydrocarbon composition of the producing well stream material was calculated by using the measured hydrocarbon compositions of the separator products in conjunction with the producing gas-liquid ratio. All of the aforementioned data are summarized on page two.

The recombined sample was initially subjected to constant composition expansion at the reported reservoir temperature of 213°F. During this expansion, a retrograde dew point was observed at 5435 psig. Deviation factor measurements were performed over the entire pressure range investigated and these measurements are shown on page four, along with the density measurements at the reservoir pressure and above and the liquid phase volume measurements at the dew point pressure and below. Graphical interpretations of the deviation factor measurements and liquid volume measurements are presented on pages five and six, respectively.



CORE LABORATORIES, INC.  
*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS 75247

Page 2 of 6

File RFL 80185

Well Bountiful Livestock No. 1

*Entered 12822-28'*

Hydrocarbon Analyses of Separator Products and Calculated Well Stream

Component	Separator Liquid		Separator Gas		Well Stream	
	Mol Percent		Mol Percent	GPM	Mol Percent	GPM
Hydrogen Sulfide	0.00		0.00		0.00	
Carbon Dioxide	0.11		0.37		0.33	
Nitrogen	0.10		2.04		1.73	
Methane	7.86		76.93		65.94	
Ethane	7.69		12.75		11.95	
Propane	10.65		5.28	1.445	6.13	1.677
iso-Butane	3.92		0.86	0.280	1.35	0.439
n-Butane	6.51		0.98	0.307	1.86	0.583
iso-Pentane	2.32		0.19	0.069	0.53	0.193
n-Pentane	3.70		0.30	0.108	0.84	0.303
Hexanes	6.24		0.12	0.049	1.09	0.442
Heptanes	7.73		0.09	0.041	1.30	5.199*
Octanes	13.31		0.05	0.025	2.16	
Nonanes	7.42		0.02	0.011	1.20	
Decanes	4.27		0.01	0.006	0.69	
Undecanes plus	18.17		0.01	0.007	2.90	
<i>C<sub>7+</sub></i>	100.00		100.00	2.348	100.00	8.836
	<i>50.90</i>					

Properties of Heptanes plus

API gravity @ 60°F.	43.0	
Specific gravity @ 60/60°F.	0.8108	0.810
Molecular weight	163	105
		162

Calculated separator gas gravity (air=1.000) = 0.724  
 Calculated gross heating value for separator gas = 1228 BTU  
 per cubic foot of dry gas @ 14.65 psia and 60°F.

Primary separator gas collected @ 360 psig and 86 °F.  
 Primary separator liquid collected @ 340 psig and 87 °F.

Primary separator gas/separator liquid ratio 4751 SCF/Bbl @ 60°F.  
 Primary separator liquid/stock tank liquid ratio 1.172 Bbls @ 60°F./Bbl  
 Primary separator gas/well stream ratio 840.92 MSCF/MMSCF  
 Stock tank liquid/well stream ratio 151.0 Bbls/MMSCF

\*Value for heptanes plus.

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgement of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

## CORE LABORATORIES, INC.

*Petroleum Reservoir Engineering*

DALLAS, TEXAS 75247

Page 3 of 6File RFL 80185

Company Amoco Production Company Formation Nugget  
 Well Bountiful Livestock No. 1 County Summit  
 Field Anschutz Ranch East State Utah

Hydrocarbon Analysis of Heptanes Plus Fraction of Separator Liquid Sample

<u>Component</u>	<u>Weight Percent</u>	<u>Mol Percent</u>
Methylcyclopentane	0.78	1.40
Benzene	0.50	0.96
Cyclohexane	2.40	4.30
Heptanes	5.67	8.52
Methylcyclohexane	6.16	9.45
Toluene	3.76	6.14
Octanes	8.01	10.56
Ethylbenzene	0.30	0.43
Meta & Para Xylenes	3.39	4.80
Orthoxylene	1.04	1.47
Nonanes	6.59	7.86
1,2,4 Trimethylbenzene	1.17	1.46
Decanes	6.53	6.92
Undecanes	6.10	5.89
Dodecanes	4.44	3.93
Tridecanes	5.79	4.73
Tetradecanes	4.50	3.42
Pentadecanes	4.06	2.88
Hexadecanes	3.66	2.44
Heptadecanes	3.90	2.44
Octadecanes	2.58	1.53
Nonadecanes	2.10	1.18
Eicosanes	1.97	1.05
Heneicosanes	1.84	0.93
Docosanes	1.72	0.84
Tricosanes	1.55	0.72
Tetracosanes	1.31	0.58
Pentacosanes	1.32	0.56
Hexacosanes	1.09	0.44
Heptacosanes	0.85	0.40
Octacosanes	0.79	0.31
Nonacosanes	0.68	0.25
Triacotanes plus	3.45	1.21
	<u>100.00</u>	<u>100.00</u>

CORE LABORATORIES, INC.  
*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS 75247

12822 - 824

Page 4 of 6

File RFL 80185

Well Bountiful Livestock No. 1

Pressure-Volume Relations of Reservoir Fluid at 213°F.  
(Constant Composition Expansion)

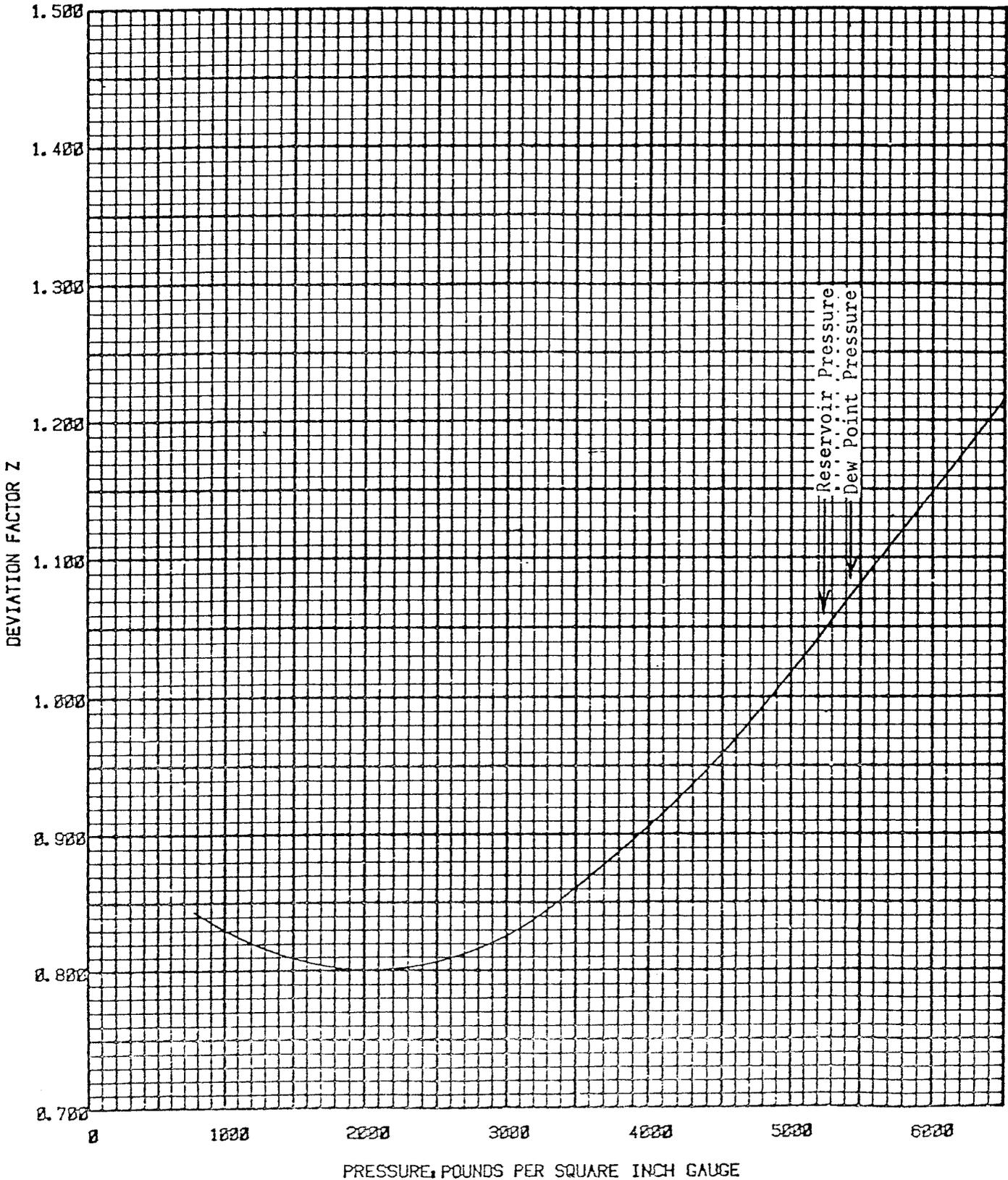
<u>Pressure PSIG</u>	<u>Relative Volume</u>	<u>Deviation Factor Z</u>	<u>Density, Gm/Cc</u>	<u>Liquid Volume Percent(1)</u>
6500	0.9351	1.214	0.4129	
6000	0.9568	1.147	0.4035	
5600	0.9779	1.094	0.3948	
5435 Dew Point Pressure	0.9873	1.072	<u>0.3910</u>	0.0
5350	0.9928	1.061	0.3889	0.2
5242 Reservoir Pressure	1.0000	1.047	0.3861	0.6
<u>5100</u>	1.0101	1.029		2.9
4900	1.0261	1.005		6.7
4600	1.0546	0.970		11.9
4200	1.1029	0.926		16.1
3700	1.1864	0.878		18.6
3200	1.3080	0.838		18.8
2700	1.5025	0.813		17.4
2250	1.7768	0.802		14.9
1750	2.2835	0.803		11.4
1400	2.8803	0.812		8.8
1150	3.5414	0.822		6.9
930	4.4256	0.833		5.4
780	5.3222	0.843		4.4

Note: For pressures below the dew point pressure, the deviation factors shown are those of the two-phase system.

(1) Expressed as a percent of the total volume of gas and liquid at the indicated pressure and temperature.

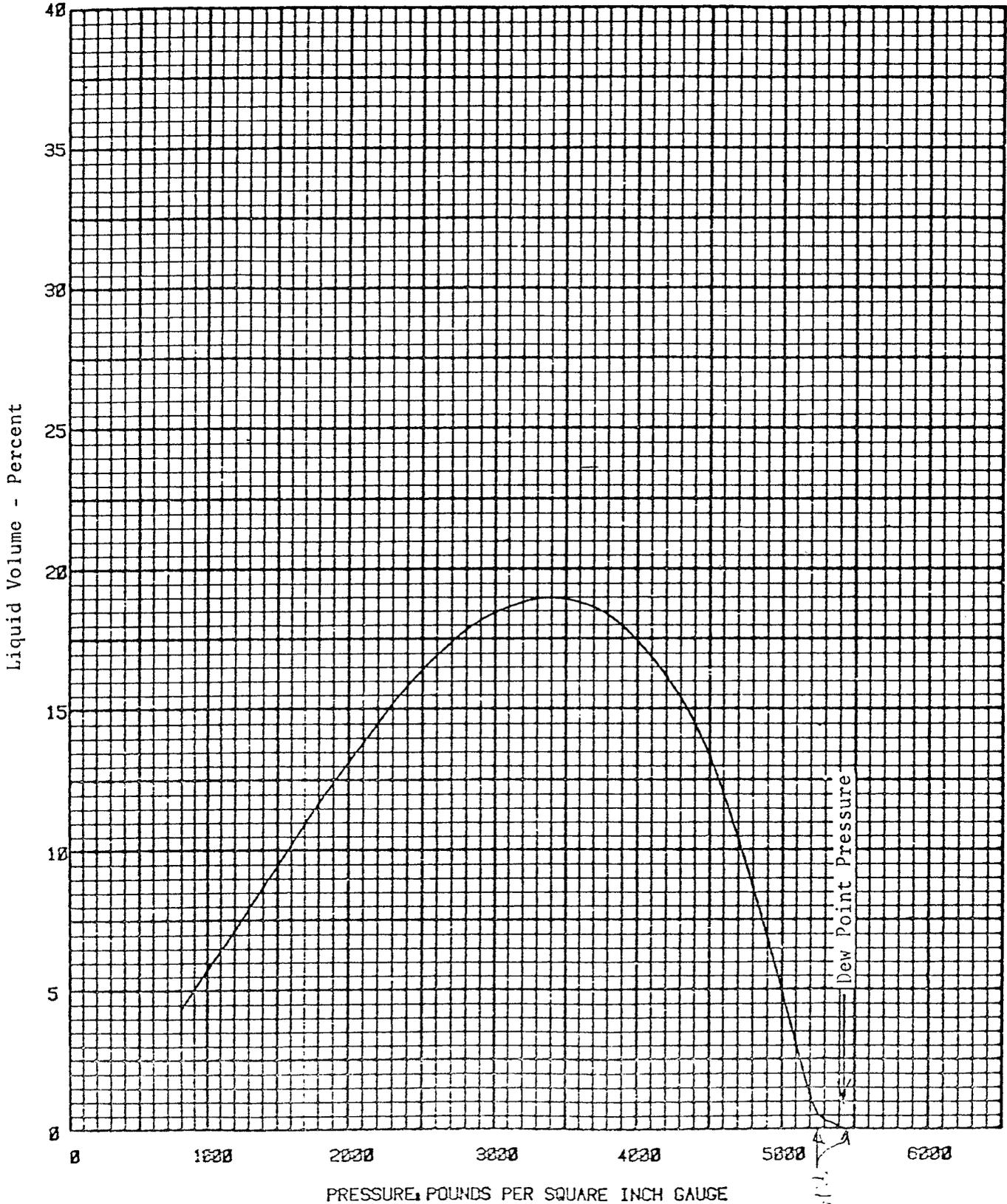
Deviation Factor Z of Reservoir Fluid at 213°F.

Company AMOCO PRODUCTION COMPANY Formation NUGGET  
Well BOUNTIFUL LIVESTOCK NO. 1 County SUMMIT  
Field ANSCHUTZ RANCH EAST State UTAH



Liquid Phase Volume at 213°F.

Company AMOCO PRODUCTION COMPANY Formation NUGGET  
Well BOUNTIFUL LIVESTOCK NO. 1 County SUMMIT  
Field ANSCHUTZ RANCH EAST State UTAH



CORE LABORATORIES, INC.  
*Petroleum Reservoir Engineering*  
DALLAS, TEXAS 75247

Reservoir Fluid Study  
for  
AMOCO PRODUCTION COMPANY

Bountiful Livestock No. 1 Well  
Anschutz Ranch East Field  
Summit County, Utah  
1372-77

**CORE LABORATORIES, INC.**

Reservoir Fluid Analysis



April 22, 1980

Amoco Production Company  
Security Life Building  
Denver, CO 80202

Attention: Mr. Terry Logan

Subject: Reservoir Fluid Study  
Bountiful Livestock No. 1 Well  
Anschutz Ranch East Field  
Summit County, Utah  
Our File Number: RFL 80183

Gentlemen:

Samples of separator gas and condensate were collected from the subject well on February 12, 1980 during production from the perforated interval 13172 to 13177 feet. These samples were submitted to our Dallas laboratory for use in a reservoir fluid study and the results of this study are presented in the following report.

The hydrocarbon composition of the separator gas was measured through pentanes by routine gas chromatography. The hydrocarbon composition of the separator condensate sample was measured through hexanes by low temperature fractional distillation. Through the use of temperature programmed chromatography, the compositional analysis of the separator gas was extended through undecanes plus and the analysis of the separator condensate sample was extended through tricontanes plus.

After correcting the separator gas production rate for the factors shown on page one, the producing gas-liquid ratio was calculated to be 5057 cubic feet of separator gas at 14.65 psia and 60°F. per barrel of stock tank liquid at 60°F. The shrinkage of the separator condensate was measured in the laboratory and the producing gas-liquid ratio was found to be equivalent to 4082 standard cubic feet of separator gas per barrel of separator liquid at 360 psig and 60°F. This gas-liquid ratio was used in conjunction with the measured hydrocarbon compositions of the separator products to calculate the hydrocarbon composition of the producing well stream material. All of the aforementioned data are summarized on page two.

The separator products were then physically recombined in their producing gas-liquid ratio and the resulting fluid was subjected to constant composition expansion at the reported reservoir temperature of 217°F. During this expansion, a retrograde dew point was observed at 5285 psig. The results of the pressure-volume measurements and deviation factor measurements are presented on page four, along with the density measurements at the dew point pressure and above and the liquid phase volume measurements at the dew point pressure and below.

Amoco Production Company  
Bountiful Livestock No. 1 Well

Page Two

Thank you for the opportunity to perform this reservoir fluid study. Should you have any questions or if we may be of further service in any manner, please do not hesitate to call upon us.

Very truly yours,

CORE LABORATORIES, INC.



P. L. Moses, Manager  
Reservoir Fluid Analysis

PLM:JF:bt

3 cc: Addressee

2 cc: Mr. Mark Feemster

Amoco Production Co.

1521 East 3900 South

Salt Lake City, UT 84117

CORE LABORATORIES, INC.  
*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS 75247

Page 1 of 6

File RFL 80183

Company Amoco Production Company Date Sampled February 12, 1980

Well Bountiful Livestock No. 1 County Summit

Field Anschutz Ranch East State Utah

FORMATION CHARACTERISTICS

Formation Name	Nugget
Date First Well Completed	_____ , 19____
Original Reservoir Pressure	_____ PSIG @ _____ Ft.
Original Produced Gas-Liquid Ratio	_____ SCF/Bbl
Production Rate	_____ Bbls/Day
Separator Pressure and Temperature	_____ PSIG _____ °F.
Liquid Gravity at 60°F.	_____ °API
Datum	_____ Ft. Subsea

WELL CHARACTERISTICS

Elevation	_____ Ft.
Total Depth	_____ Ft.
Producing Interval	<u>13172-13177</u> Ft.
Tubing Size and Depth	_____ In. to _____ Ft.
Open Flow Potential	_____ MMSCF/Day
Last Reservoir Pressure	<u>5421</u> PSIG @ _____ Ft.
Date	_____ , 19____
Reservoir Temperature	<u>217</u> °F. @ _____ Ft.
Status of Well	_____
Pressure Gauge	_____

SAMPLING CONDITIONS

Flowing Tubing Pressure	_____ PSIG
Flowing Bottom Hole Pressure	_____ PSIG
Primary Separator Pressure	<u>Gas-380 PSIG; Liquid-360</u> PSIG
Primary Separator Temperature	<u>Gas-56°F.; Liquid-58</u> °F.
Secondary Separator Pressure	_____ PSIG
Secondary Separator Temperature	_____ °F.
Field Stock Tank Liquid Gravity	_____ °API @ 60°F.
Primary Separator Gas Production Rate	_____ MSCF/Day
Pressure Base	<u>14.65</u> PSIA
Temperature Base	<u>60</u> °F.
Compressibility Factor (F <sub>pv</sub> )	<u>1.048</u>
Gas Gravity (Laboratory)	<u>0.706</u>
Gas Gravity Factor (F <sub>g</sub> )	<u>1.1901</u>
Stock Tank Liquid Production Rate @ 60°F.	_____ Bbls/Day
Primary Separator Gas/Stock Tank Liquid Ratio	<u>5057</u> SCF/Bbl
Sampled by	<u>197.7</u> Bbls/MMSCF
	<u>Amoco Production Company</u>

REMARKS:

Separator gas cylinder nos. SS1054 and SS1052.  
 Separator liquid cylinder no. SS1122.

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgement of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

CORE LABORATORIES, INC.  
*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS 75247

Page 3 of 6

File RFL 80183

Company Amoco Production Company Formation Nugget  
 Well Bountiful Livestock No. 1 County Summit  
 Field Anschutz Ranch East State Utah

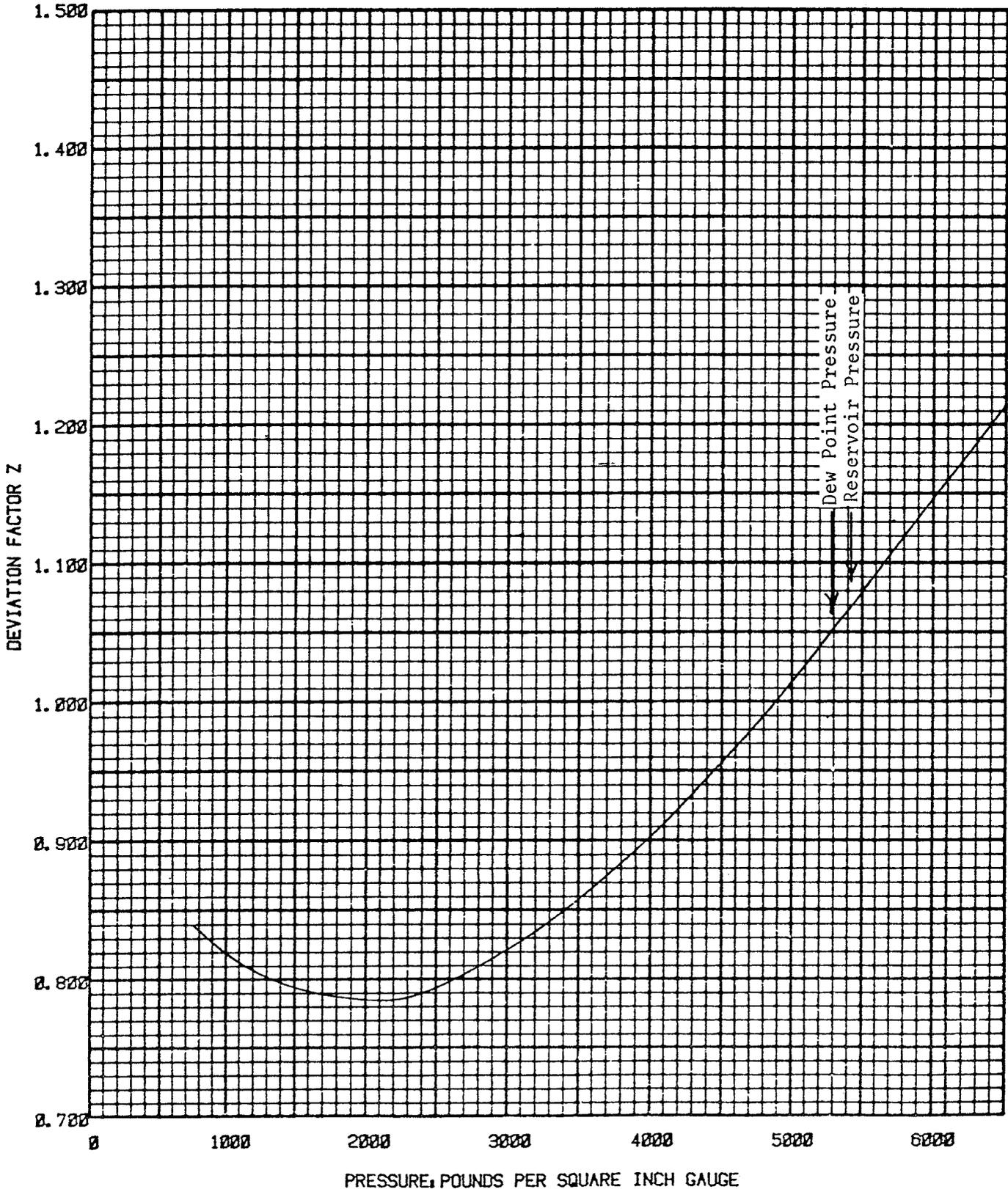
Hydrocarbon Analysis of Heptanes Plus Fraction of Separator Liquid Sample

<u>Component</u>	<u>Weight Percent</u>	<u>Mol Percent</u>
Methylcyclopentane	0.64	1.15
Benzene	0.55	1.07
Cyclohexane	2.97	5.30
Heptanes	5.79	8.70
Methylcyclohexane	5.89	9.02
Toluene	3.73	6.08
Octanes	7.99	10.54
Ethylbenzene	0.37	0.52
Meta & Para Xylenes	3.64	5.15
Orthoxylene	0.93	1.33
Nonanes	6.32	7.40
1,2,4 Trimethylbenzene	1.31	1.63
Decanes	6.46	6.84
Undecanes	5.94	5.71
Dodecanes	4.60	4.05
Tridecanes	5.67	4.62
Tetradecanes	4.40	3.32
Pentadecanes	4.08	2.89
Hexadecanes	3.73	2.47
Heptadecanes	3.79	2.35
Octadecanes	2.53	1.49
Nonadecanes	2.27	1.27
Eicosanes	2.01	1.07
Heneicosanes	1.75	0.89
Docosanes	1.55	0.76
Tricosanes	1.49	0.70
Tetracosanes	1.23	0.54
Pentacosanes	1.36	0.57
Hexacosanes	1.08	0.43
Heptacosanes	0.88	0.34
Octacosanes	0.81	0.31
Nonacosanes	0.65	0.24
Triacotanes plus	3.59	1.25
	<u>100.00</u>	<u>100.00</u>

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgement of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitableness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

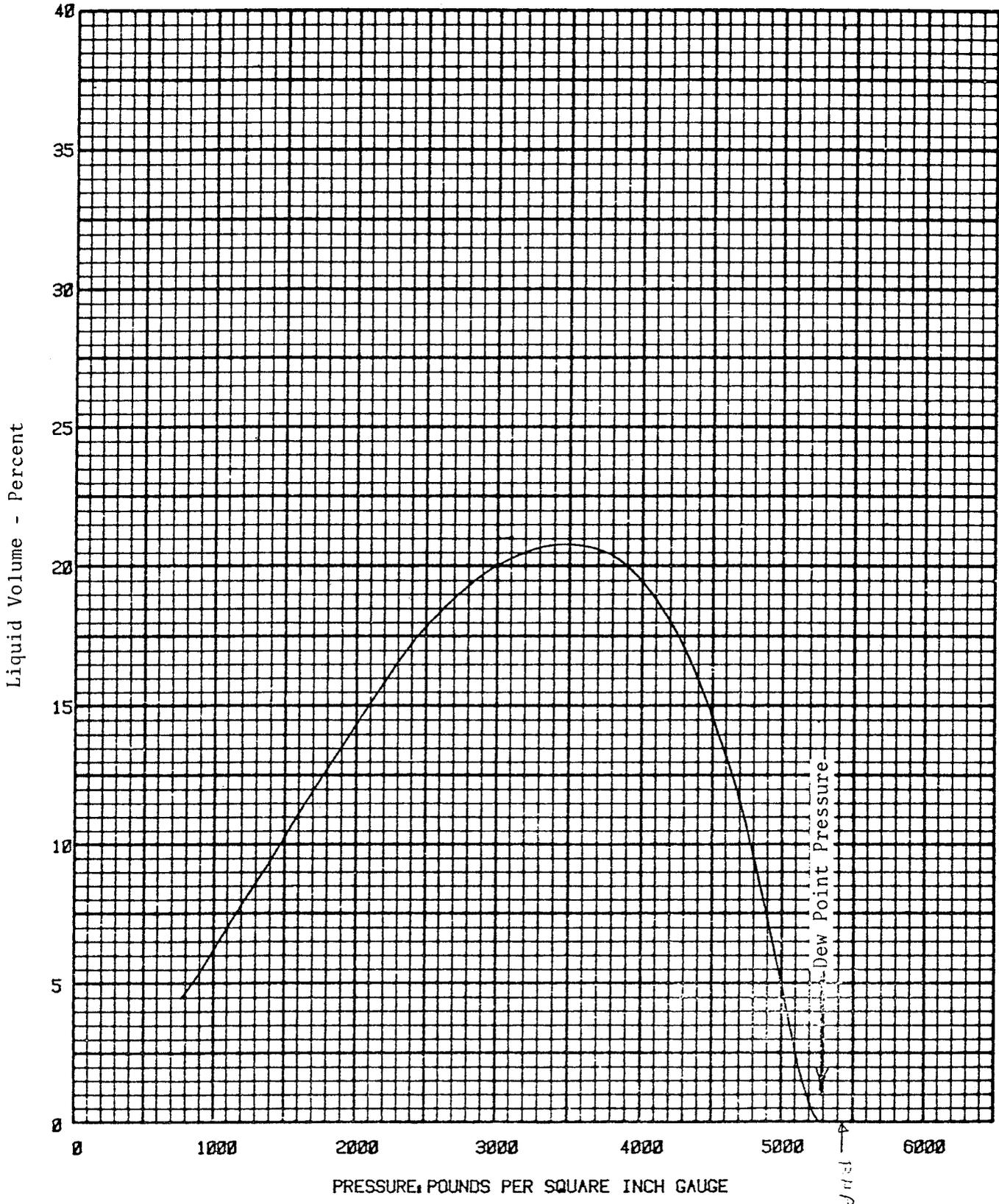
Deviation Factor Z of Reservoir Fluid at 217°F.

Company AMOCO PRODUCTION COMPANY Formation NUGGET  
Well BOUNTIFUL LIVESTOCK NO. 1 County SUMMIT  
Field ANSCHUTZ RANCH EAST State UTAH



Liquid Phase Volume at 217°F.

Company AMOCO PRODUCTION COMPANY Formation NUGGET  
Well BOUNTIFUL LIVESTOCK NO. 1 County SUMMIT  
Field ANSCHUTZ RANCH EAST State UTAH



April 22, 1980

**CORE LABORATORIES, INC.**

Reservoir Fluid Analysis



Amoco Production Company  
Security Life Building  
Denver, CO 80202

Attention: Mr. Terry Logan

Subject: Reservoir Fluid Study  
Bountiful Livestock No. 1 Well  
Anschutz Ranch East Field  
Summit County, Utah  
Our File Number: RFL 80185

Gentlemen:

Samples of separator gas and condensate were collected from the subject well during production from the perforated interval 12822 to 12828 feet. These samples were collected for use in a reservoir fluid study and the results of this study are summarized in the following report.

After correcting the separator gas rate for the factors shown on page one, the producing gas-liquid ratio was calculated to be 5568 cubic feet of separator gas at 14.65 psia and 60°F. per barrel of stock tank condensate at 60°F. In the laboratory, this ratio was found to be equivalent to 4751 standard cubic feet of separator gas per barrel of separator liquid at 340 psig and 60°F. The separator products were physically recombined in this gas-liquid ratio and the resulting fluid was used for the entire study. The hydrocarbon composition of the producing well stream material was calculated by using the measured hydrocarbon compositions of the separator products in conjunction with the producing gas-liquid ratio. All of the aforementioned data are summarized on page two.

The recombined sample was initially subjected to constant composition expansion at the reported reservoir temperature of 213°F. During this expansion, a retrograde dew point was observed at 5435 psig. Deviation factor measurements were performed over the entire pressure range investigated and these measurements are shown on page four, along with the density measurements at the reservoir pressure and above and the liquid phase volume measurements at the dew point pressure and below. Graphical interpretations of the deviation factor measurements and liquid volume measurements are presented on pages five and six, respectively.

Amoco Production Company  
Bountiful Livestock No. 1 Well

Page Two

It has been a pleasure to perform this reservoir fluid study. Should you have any questions or if we may be of further service in any way, please feel free to call upon us.

Very truly yours,

CORE LABORATORIES, INC.



P. L. Moses, Manager  
Reservoir Fluid Analysis

PLM:JF:bt

3 cc: Addressee

2 cc: Mr. Mark Feemster

Amoco Production Co.

1521 East 3900 South

Salt Lake City, UT 84117



CORE LABORATORIES, INC.  
*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS 75247

Page 2 of 6

File RFL 80185

Well Bountiful Livestock No. 1

Hydrocarbon Analyses of Separator Products and Calculated Well Stream

Component	Separator Liquid		Separator Gas		Well Stream	
	Mol Percent		Mol Percent	GPM	Mol Percent	GPM
Hydrogen Sulfide	0.00		0.00		0.00	
Carbon Dioxide	0.11		0.37		0.33	
Nitrogen	0.10		2.04		1.73	
Methane	7.86		76.93		65.94	
Ethane	7.69		12.75		11.95	
Propane	10.65		5.28	1.445	6.13	1.677
iso-Butane	3.92		0.86	0.280	1.35	0.439
n-Butane	6.51		0.98	0.307	1.86	0.583
iso-Pentane	2.32		0.19	0.069	0.53	0.193
n-Pentane	3.70		0.30	0.108	0.84	0.303
Hexanes	6.24		0.12	0.049	1.09	0.442
Heptanes	7.73		0.09	0.041	1.30	5.199*
Octanes	13.31		0.05	0.025	2.16	
Nonanes	7.42		0.02	0.011	1.20	
Decanes	4.27		0.01	0.006	0.69	
Undecanes plus	18.17		0.01	0.007	2.90	
	<u>100.00</u>		<u>100.00</u>	<u>2.348</u>	<u>100.00</u>	<u>8.836</u>

Properties of Heptanes plus

API gravity @ 60°F.	<u>43.0</u>	
Specific gravity @ 60/60°F.	<u>0.8108</u>	<u>0.810</u>
Molecular weight	<u>163</u>	<u>105</u>
		<u>162</u>

Calculated separator gas gravity (air=1.000) = 0.724  
 Calculated gross heating value for separator gas = 1228 BTU  
 per cubic foot of dry gas @ 14.65 psia and 60°F.

Primary separator gas collected @ 360 psig and 86 °F.  
 Primary separator liquid collected @ 340 psig and 87 °F.

Primary separator gas/separator liquid ratio	<u>4751</u>	SCF/Bbl @ 60°F.
Primary separator liquid/stock tank liquid ratio	<u>1.172</u>	Bbls @ 60°F./Bbl
Primary separator gas/well stream ratio	<u>840.92</u>	MSCF/MMSCF
Stock tank liquid/well stream ratio	<u>151.0</u>	Bbls/MMSCF

\*Value for heptanes plus.

CORE LABORATORIES, INC.

*Petroleum Reservoir Engineering*

DALLAS, TEXAS 75247

Page 3 of 6

File RFL 80185

Company Amoco Production Company Formation Nugget  
 Well Bountiful Livestock No. 1 County Summit  
 Field Anschutz Ranch East State Utah

Hydrocarbon Analysis of Heptanes Plus Fraction of Separator Liquid Sample

<u>Component</u>	<u>Weight Percent</u>	<u>Mol Percent</u>
Methylcyclopentane	0.78	1.40
Benzene	0.50	0.96
Cyclohexane	2.40	4.30
Heptanes	5.67	8.52
Methylcyclohexane	6.16	9.45
Toluene	3.76	6.14
Octanes	8.01	10.56
Ethylbenzene	0.30	0.43
Meta & Para Xylenes	3.39	4.80
Orthoxylene	1.04	1.47
Nonanes	6.59	7.86
1,2,4 Trimethylbenzene	1.17	1.46
Decanes	6.53	6.92
Undecanes	6.10	5.89
Dodecanes	4.44	3.93
Tridecanes	5.79	4.73
Tetradecanes	4.50	3.42
Pentadecanes	4.06	2.88
Hexadecanes	3.66	2.44
Heptadecanes	3.90	2.44
Octadecanes	2.58	1.53
Nonadecanes	2.10	1.18
Eicosanes	1.97	1.05
Heneicosanes	1.84	0.93
Docosanes	1.72	0.84
Tricosanes	1.55	0.72
Tetracosanes	1.31	0.58
Pentacosanes	1.32	0.56
Hexacosanes	1.09	0.44
Heptacosanes	0.85	0.40
Octacosanes	0.79	0.31
Nonacosanes	0.68	0.25
Triacotanes plus	3.45	1.21
	<u>100.00</u>	<u>100.00</u>

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgement of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

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*Petroleum Reservoir Engineering*

DALLAS, TEXAS 75247

Page 4 of 6

File RFL 80185

Well Bountiful Livestock No. 1

Pressure-Volume Relations of Reservoir Fluid at 213°F.  
(Constant Composition Expansion)

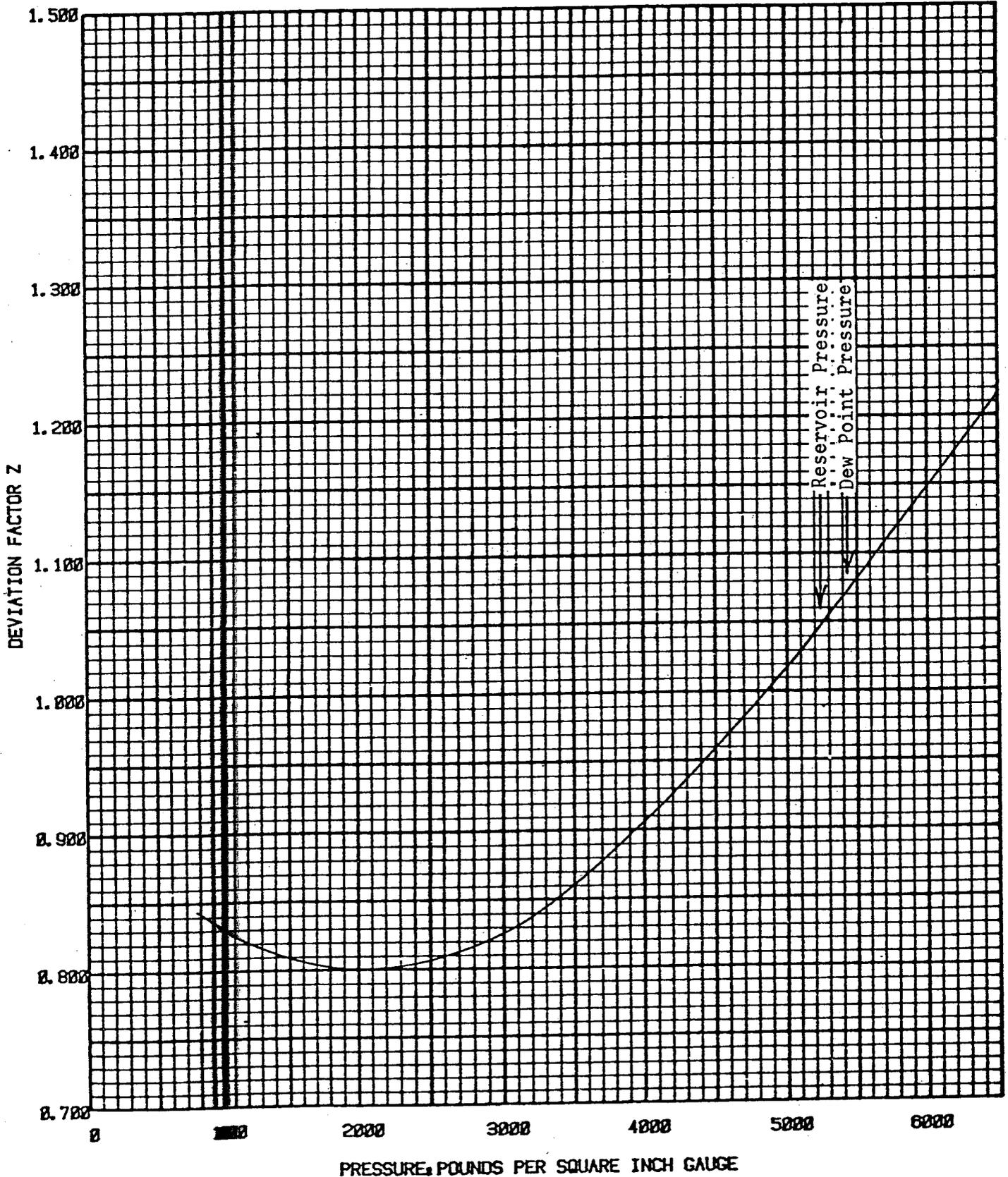
<u>Pressure</u> <u>PSIG</u>	<u>Relative</u> <u>Volume</u>	<u>Deviation</u> <u>Factor</u> <u>Z</u>	<u>Density,</u> <u>Gm/Cc</u>	<u>Liquid</u> <u>Volume</u> <u>Percent(1)</u>
6500	0.9351	1.214	0.4129	
6000	0.9568	1.147	0.4035	
5600	0.9779	1.094	0.3948	
5435 Dew Point Pressure	0.9873	1.072	0.3910	0.0
5350	0.9928	1.061	0.3889	0.2
5242 Reservoir Pressure	1.0000	1.047	0.3861	0.6
5100	1.0101	1.029		2.9
4900	1.0261	1.005		6.7
4600	1.0546	0.970		11.9
4200	1.1029	0.926		16.1
3700	1.1864	0.878		18.6
3200	1.3080	0.838		18.8
2700	1.5025	0.813		17.4
2250	1.7768	0.802		14.9
1750	2.2835	0.803		11.4
1400	2.8803	0.812		8.8
1150	3.5414	0.822		6.9
930	4.4256	0.833		5.4
780	5.3222	0.843		4.4

Note: For pressures below the dew point pressure, the deviation factors shown are those of the two-phase system.

(1) Expressed as a percent of the total volume of gas and liquid at the indicated pressure and temperature.

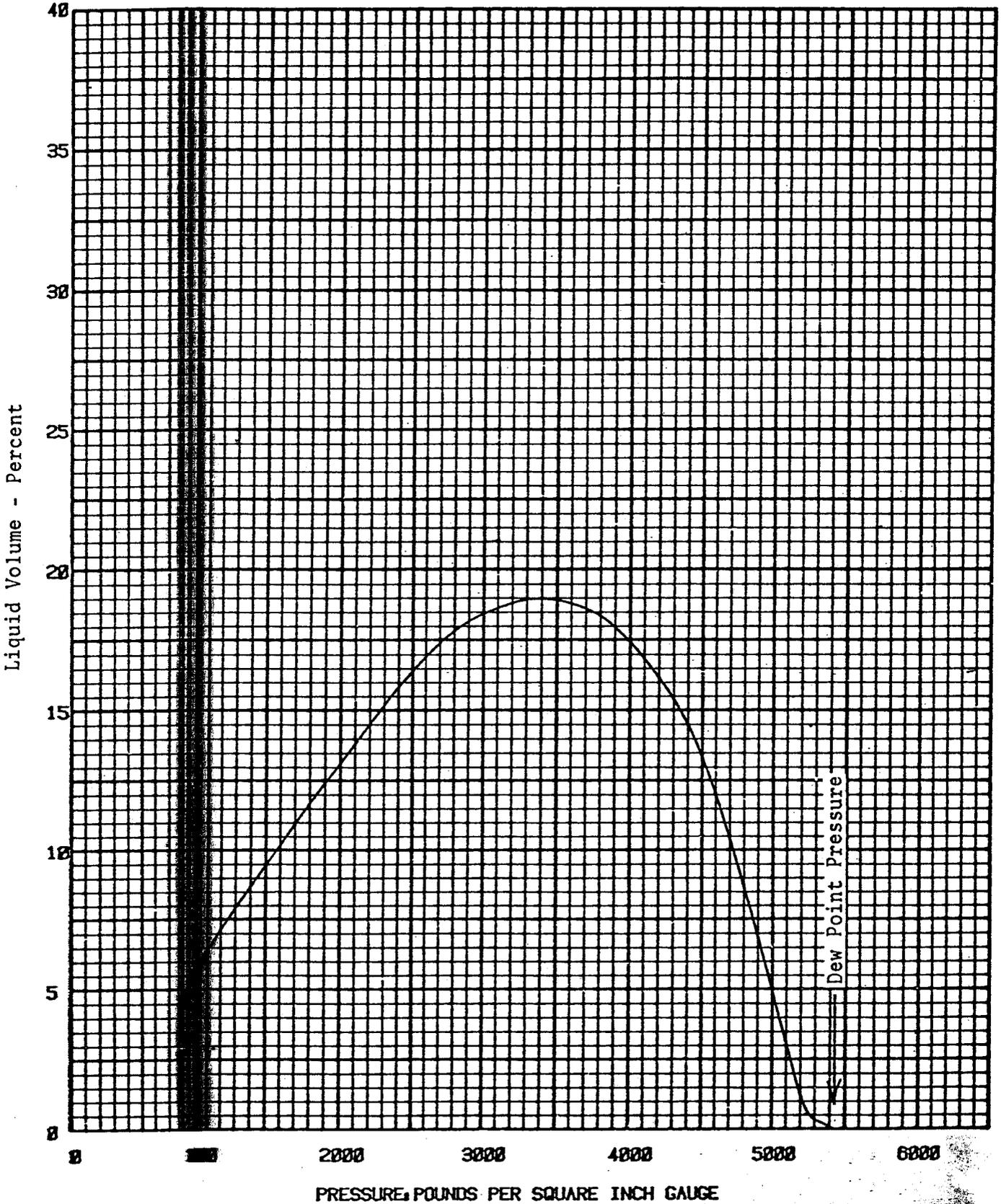
Deviation Factor Z of Reservoir Fluid at 213°F.

Company AMOCO PRODUCTION COMPANY Formation NUGGET  
Well BOUNTIFUL LIVESTOCK NO. 1 County SUMMIT  
Field ANSCHITZ RANCH EAST State UTAH



Liquid Phase Volume at 213°F.

Company PRODUCTION COMPANY Formation NUGGET  
Well BENEFICIAL LIVESTOCK NO. 1 County SUMMIT  
Field HUTZ RANCH EAST State UTAH



CORE LABORATORIES, INC.  
*Petroleum Reservoir Engineering*  
DALLAS, TEXAS 75247

Reservoir Fluid Study  
for  
AMOCO PRODUCTION COMPANY

Bountiful Livestock No. 1 Well  
Anschutz Ranch East Field  
Summit County, Utah

**RECEIVED**  
MAY 7 1980

DIVISION OF  
OIL, GAS & MINING

April 22, 1980

**CORE LABORATORIES, INC.**

Reservoir Fluid Analysis



Amoco Production Company  
Security Life Building  
Denver, CO 80202

Attention: Mr. Terry Logan

Subject: Reservoir Fluid Study  
Bountiful Livestock No. 1 Well  
Anschutz Ranch East Field  
Summit County, Utah  
Our File Number: RFL 80183

Gentlemen:

Samples of separator gas and condensate were collected from the subject well on February 12, 1980 during production from the perforated interval 13172 to 13177 feet. These samples were submitted to our Dallas laboratory for use in a reservoir fluid study and the results of this study are presented in the following report.

The hydrocarbon composition of the separator gas was measured through pentanes by routine gas chromatography. The hydrocarbon composition of the separator condensate sample was measured through hexanes by low temperature fractional distillation. Through the use of temperature programmed chromatography, the compositional analysis of the separator gas was extended through undecanes plus and the analysis of the separator condensate sample was extended through triacontanes plus.

After correcting the separator gas production rate for the factors shown on page one, the producing gas-liquid ratio was calculated to be 5057 cubic feet of separator gas at 14.65 psia and 60°F. per barrel of stock tank liquid at 60°F. The shrinkage of the separator condensate was measured in the laboratory and the producing gas-liquid ratio was found to be equivalent to 4082 standard cubic feet of separator gas per barrel of separator liquid at 360 psig and 60°F. This gas-liquid ratio was used in conjunction with the measured hydrocarbon compositions of the separator products to calculate the hydrocarbon composition of the producing well stream material. All of the aforementioned data are summarized on page two.

The separator products were then physically recombined in their producing gas-liquid ratio and the resulting fluid was subjected to constant composition expansion at the reported reservoir temperature of 217°F. During this expansion, a retrograde dew point was observed at 5285 psig. The results of the pressure-volume measurements and deviation factor measurements are presented on page four, along with the density measurements at the dew point pressure and above and the liquid phase volume measurements at the dew point pressure and below.

Amoco Production Company  
Bountiful Livestock No. 1 Well

Page Two

Thank you for the opportunity to perform this reservoir fluid study. Should you have any questions or if we may be of further service in any manner, please do not hesitate to call upon us.

Very truly yours,

CORE LABORATORIES, INC.

A handwritten signature in black ink, appearing to read "P. L. Moses". The signature is stylized with a large, looping initial "P" and a cursive "L. Moses".

P. L. Moses, Manager  
Reservoir Fluid Analysis

PLM:JF:bt

3 cc: Addressee

2 cc: Mr. Mark Feemster

Amoco Production Co.

1521 East 3900 South

Salt Lake City, UT 84117



CORE LABORATORIES, INC.  
*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS 75247

Page 2 of 6

File RFL 80183

Well Bountiful Livestock No. 1

Hydrocarbon Analyses of Separator Products and Calculated Well Stream

Component	Separator Liquid		Separator Gas		Well Stream	
	Mol Percent		Mol Percent	GPM	Mol Percent	GPM
Hydrogen Sulfide	0.00		0.00		0.00	
Carbon Dioxide	0.13		0.43		0.37	
Nitrogen	0.06		2.01		1.64	
Methane	9.51		78.34		65.41	
Ethane	9.17		12.47		11.85	
Propane	12.33		4.77	1.305	6.19	1.694
iso-Butane	4.34		0.72	0.234	1.40	0.455
n-Butane	6.19		0.79	0.248	1.80	0.564
iso-Pentane	3.56		0.16	0.058	0.80	0.291
n-Pentane	4.03		0.12	0.043	0.85	0.306
Hexanes	4.94		0.07	0.028	0.99	0.402
Heptanes	7.42		0.06	0.028	1.44	5.482*
Octanes	11.72		0.03	0.015	2.23	
Nonanes	6.59		0.01	0.006	1.25	
Decanes	3.88		0.01	0.006	0.74	
Undecanes plus	16.13		0.01	0.007	3.04	
	<u>100.00</u>		<u>100.00</u>	<u>1.978</u>	<u>100.00</u>	<u>9.194</u>

Properties of Heptanes plus

API gravity @ 60°F.	43.0	
Specific gravity @ 60/60°F.	<u>0.8110</u>	<u>0.810</u>
Molecular weight	<u>163</u>	<u>162</u>

Calculated separator gas gravity (air=1.000) = 0.706  
 Calculated gross heating value for separator gas = 1199 BTU  
 per cubic foot of dry gas @ 14.65 psia and 60°F.

Primary separator gas collected @ 380 psig and 56 °F.  
 Primary separator liquid collected @ 360 psig and 58 °F.

Primary separator gas/separator liquid ratio	<u>4082</u>	SCF/Bbl @ 60°F.
Primary separator liquid/stock tank liquid ratio	<u>1.239</u>	Bbls @ 60°F./Bbl
Primary separator gas/well stream ratio	<u>812.05</u>	MSCF/MMSCF
Stock tank liquid/well stream ratio	<u>160.6</u>	Bbls/MMSCF

\*Value for heptanes plus.

CORE LABORATORIES, INC.  
*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS 75247

Page 3 of 6

File RFL 80183

Company Amoco Production Company Formation Nugget  
 Well Bountiful Livestock No. 1 County Summit  
 Field Anschutz Ranch East State Utah

Hydrocarbon Analysis of Heptanes Plus Fraction of Separator Liquid Sample

<u>Component</u>	<u>Weight Percent</u>	<u>Mol Percent</u>
Methylcyclopentane	0.64	1.15
Benzene	0.55	1.07
Cyclohexane	2.97	5.30
Heptanes	5.79	8.70
Methylcyclohexane	5.89	9.02
Toluene	3.73	6.08
Octanes	7.99	10.54
Ethylbenzene	0.37	0.52
Meta & Para Xylenes	3.64	5.15
Orthoxylene	0.93	1.33
Nonanes	6.32	7.40
1,2,4 Trimethylbenzene	1.31	1.63
Decanes	6.46	6.84
Undecanes	5.94	5.71
Dodecanes	4.60	4.05
Tridecanes	5.67	4.62
Tetradecanes	4.40	3.32
Pentadecanes	4.08	2.89
Hexadecanes	3.73	2.47
Heptadecanes	3.79	2.35
Octadecanes	2.53	1.49
Nonadecanes	2.27	1.27
Eicosanes	2.01	1.07
Heneicosanes	1.75	0.89
Docosanes	1.55	0.76
Tricosanes	1.49	0.70
Tetracosanes	1.23	0.54
Pentacosanes	1.36	0.57
Hexacosanes	1.08	0.43
Heptacosanes	0.88	0.34
Octacosanes	0.81	0.31
Nonacosanes	0.65	0.24
triacontanes plus	3.59	1.25
	<u>100.00</u>	<u>100.00</u>

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgement of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

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*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS 75247

Page 4 of 6

File RFL 80183

Well Bountiful Livestock No. 1

Pressure-Volume Relations of Reservoir Fluid at 217°F.  
 (Constant Composition Expansion)

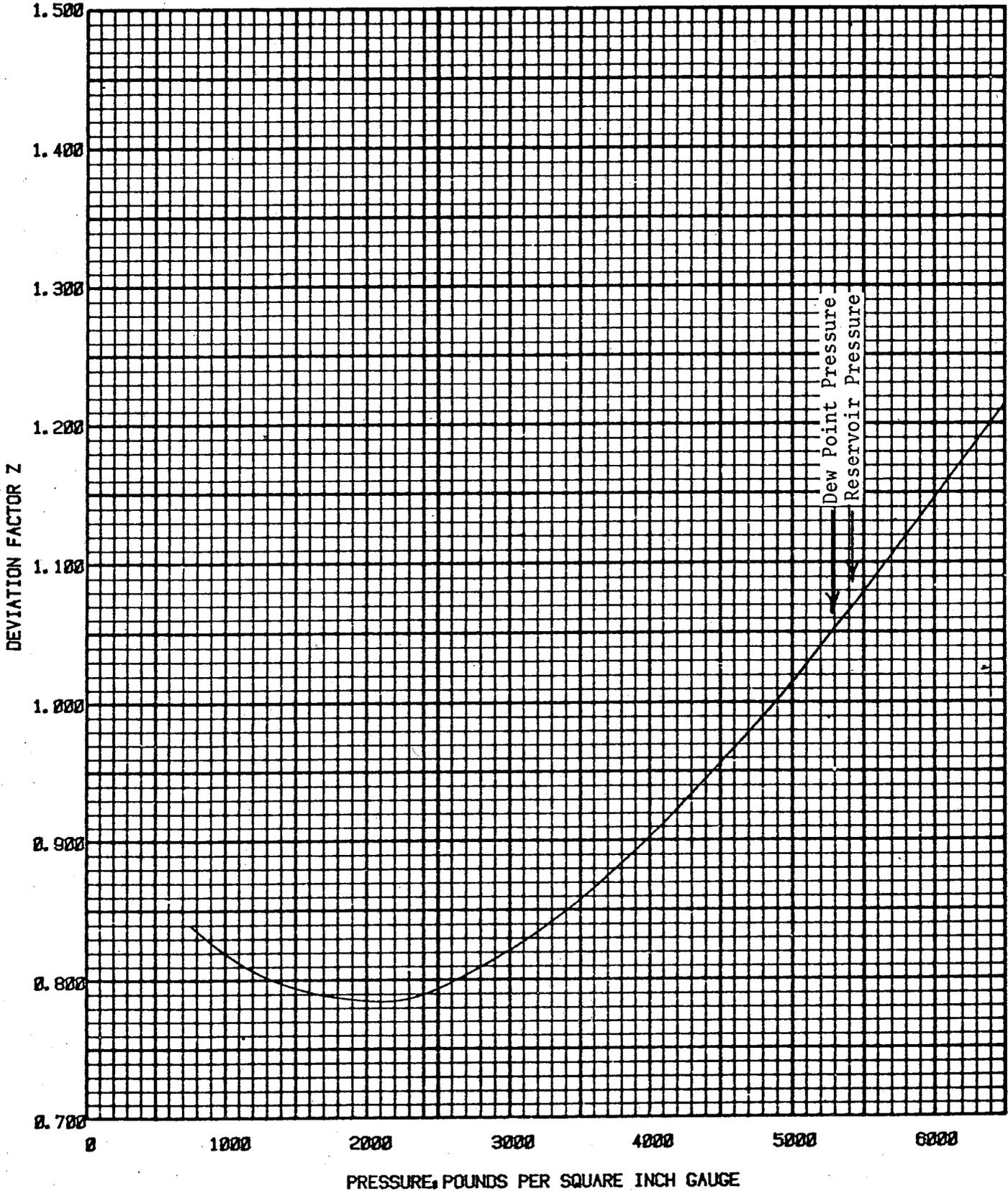
<u>Pressure PSIG</u>	<u>Relative Volume</u>	<u>Deviation Factor Z</u>	<u>Density, Gm/Cc</u>	<u>Liquid Volume Percent(1)</u>
6500	0.9395	1.213	0.4194	
6000	0.9608	1.146	0.4101	
5600	0.9813	1.092	0.4015	
5421 Reservoir Pressure	0.9910	1.068	0.3976	
5285 Dew Point Pressure	1.0000	1.051	0.3940	0.0
5200	1.0057	1.040		0.6
5100	1.0131	1.027		2.4
4950	1.0245	1.008		6.0
4750	1.0421	0.984		10.5
4500	1.0682	0.956		14.6
4200	1.1053	0.923		18.0
3700	1.1884	0.875		20.6
3200	1.3100	0.835		20.5
2800	1.4517	0.810		19.3
2300	1.7156	0.787		16.6
1900	2.0699	0.786		13.6
1600	2.4709	0.791		11.2
1350	2.9531	0.799		9.1
1160	3.4680	0.808		7.6
920	4.4476	0.824		5.7
750	5.5396	0.840		4.5

Note: For pressures below the dew point pressure, the deviation factors shown are those of the two-phase system.

(1) Expressed as a percent of the total volume of gas and liquid at the indicated pressure and temperature.

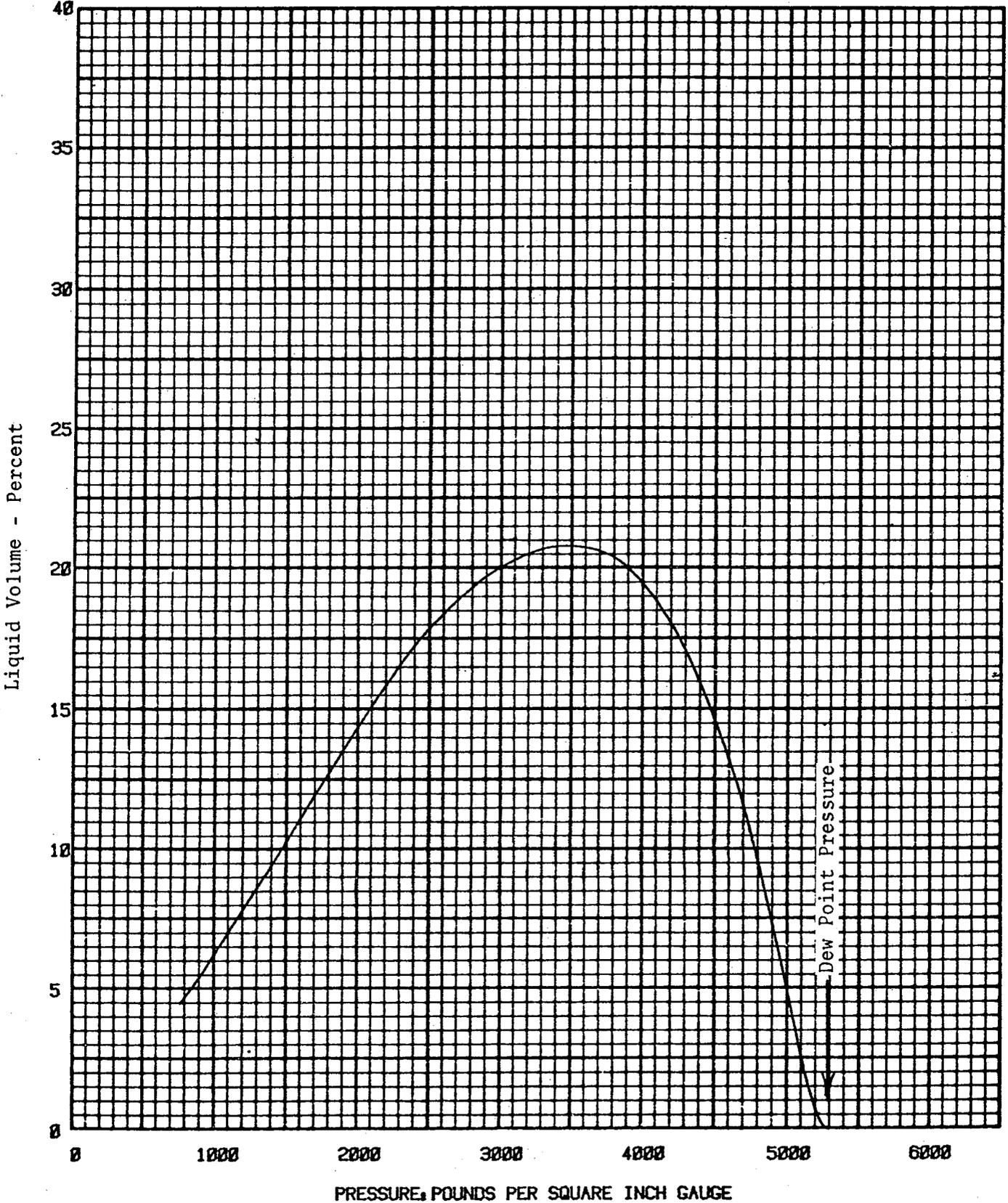
Deviation Factor Z of Reservoir Fluid at 217°F.

Company AMOCO PRODUCTION COMPANY Formation NUGGET  
Well BOUNTIFUL LIVESTOCK NO. 1 County SUMMIT  
Field ANSCHUTZ RANCH EAST State UTAH



Liquid Phase Volume at 217°F.

Company AMOCO PRODUCTION COMPANY Formation NUGGET  
Well BOUNTIFUL LIVESTOCK NO. 1 County SUMMIT  
Field ANSCHUTZ RANCH EAST State UTAH



CORE LABORATORIES, INC.  
*Petroleum Reservoir Engineering*  
DALLAS, TEXAS 75247

Reservoir Fluid Study  
for  
AMOCO PRODUCTION COMPANY

Bountiful Livestock No. 1 Well  
Anschutz Ranch East Field  
Summit County, Utah

**RECEIVED**

MAY 7 1980

DIVISION OF  
OIL, GAS & MINING

CORE LABORATORIES, INC.

Reservoir Fluid Analysis



April 22, 1980

Amoco Production Company  
Security Life Building  
Denver, CO 80202

Attention: Mr. Terry Logan

Subject: Reservoir Fluid Study  
Bountiful Livestock No. 1 Well  
Anschutz Ranch East Field  
Summit County, Utah  
Our File Number: RFL 80205

Gentlemen:

On March 18, 1980, samples of separator gas and condensate were collected during production from the Nugget SS formation. These samples were forwarded to our Dallas laboratory for use in a reservoir fluid study and the results of this study are presented in the following report.

After correcting the separator gas rate for the factors shown on page one, the producing gas-liquid ratio was calculated to be 3693 cubic feet of separator gas at 14.65 psia and 60°F. per barrel of stock tank condensate at 60°F. In the laboratory, this ratio was found to be equivalent to 3432 standard cubic feet of separator gas per barrel of separator condensate at 170 psig and 60°F. This gas-liquid ratio was used in conjunction with the measured hydrocarbon compositions of the separator products to calculate the hydrocarbon composition of the producing well stream material. All of these data are summarized on page two.

The separator gas and condensate samples were then physically recombined in their producing gas-liquid ratio and the resulting fluid was examined in a high pressure visual cell at the reported reservoir temperature of 218°F. During a constant composition expansion at this temperature, a retrograde dew point was observed at 4890 psig. Presented on page four of this report are the results of the deviation factor measurements, density measurements and liquid phase volume measurements performed during the constant composition expansion.

Thank you for the opportunity to perform this reservoir fluid study. It is always a pleasure to serve Amoco Production Company and we look forward to assisting you again in the near future.

Very truly yours,

CORE LABORATORIES, INC.

A handwritten signature in dark ink, appearing to read "P. L. Moses", written over a horizontal line.

P. L. Moses, Manager  
Reservoir Fluid Analysis

PLM:JF:bt

3 cc: Addressee

2 cc: Mr. Mark Feemster

Amoco Production Co.

1521 East 3900 South

Salt Lake City, UT 84117

CORE LABORATORIES, INC.  
*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS 75247

Page 1 of 6

File RFL 80205

Company Amoco Production Company Date Sampled March 18, 1980  
 Well Bountiful Livestock No. 1 County Summit  
 Field Anschutz Ranch East State Utah

FORMATION CHARACTERISTICS

Formation Name	Nugget SS
Date First Well Completed	_____ , 19____
Original Reservoir Pressure	_____ PSIG @ _____ Ft.
Original Produced Gas-Liquid Ratio	_____ SCF/Bbl
Production Rate	_____ Bbls/Day
Separator Pressure and Temperature	_____ PSIG _____ °F.
Liquid Gravity at 60°F.	_____ °API
Datum	_____ Ft. Subsea

WELL CHARACTERISTICS

Elevation	_____ Ft.
Total Depth	_____ Ft.
Producing Interval	<u>13332-13376</u> Ft.
Tubing Size and Depth	_____ In. to _____ Ft.
Open Flow Potential	_____ MMSCF/Day
Last Reservoir Pressure	<u>5512</u> PSIG @ _____ Ft.
Date	_____ , 19____
Reservoir Temperature	<u>218</u> °F. @ _____ Ft.
Status of Well	_____
Pressure Gauge	_____

SAMPLING CONDITIONS

Flowing Tubing Pressure	_____ PSIG
Flowing Bottom Hole Pressure	_____ PSIG
Primary Separator Pressure	<u>Gas-180 PSIG; Liquid-170</u> PSIG
Primary Separator Temperature	<u>Gas-110°F.; Liquid-111</u> °F.
Secondary Separator Pressure	_____ PSIG
Secondary Separator Temperature	_____ °F.
Field Stock Tank Liquid Gravity	_____ °API @ 60°F.
Primary Separator Gas Production Rate	_____ MSCF/Day
Pressure Base	<u>14.65</u> PSIA
Temperature Base	<u>60</u> °F.
Compressibility Factor (F <sub>pv</sub> )	<u>1.018</u>
Gas Gravity (Laboratory)	<u>0.768</u>
Gas Gravity Factor (F <sub>g</sub> )	<u>1.1411</u>
Stock Tank Liquid Production Rate @ 60°F.	_____ Bbls/Day
Primary Separator Gas/Stock Tank Liquid Ratio	<u>3693</u> SCF/Bbl
or	<u>270.8</u> Bbls/MMSCF
Sampled by	<u>Amoco Production Company</u>

REMARKS:

Separator gas cylinder nos. SS1097 and SS1138.  
 Separator liquid cylinder no. SS1098.

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CORE LABORATORIES, INC.

*Petroleum Reservoir Engineering*

DALLAS, TEXAS 75247

Page 2 of 6

File RFL 80205

Well Bountiful Livestock No. 1

Hydrocarbon Analyses of Separator Products and Calculated Well Stream

Component	Separator Liquid	Separator Gas		Well Stream	
	Mol Percent	Mol Percent	GPM	Mol Percent	GPM
Hydrogen Sulfide	0.00	0.00		0.00	
Carbon Dioxide	0.04	0.56		0.46	
Nitrogen	0.10	1.90		1.57	
Methane	3.17	72.85		60.10	
Ethane	3.91	13.87		12.05	
Propane	6.80	6.67	1.825	6.69	1.830
iso-Butane	2.90	1.28	0.416	1.58	0.514
n-Butane	4.97	1.61	0.505	2.22	0.696
iso-Pentane	2.83	0.42	0.153	0.86	0.313
n-Pentane	3.02	0.35	0.126	0.84	0.303
Hexanes	6.72	0.22	0.089	1.41	0.572
Heptanes	9.87	0.16	0.073	1.94	8.021*
Octanes	15.82	0.08	0.041	2.96	
Nonanes	9.24	0.02	0.011	1.71	
Decanes	5.63	0.01	0.006	1.04	
Undecanes plus	24.98	Trace	Trace	4.57	
	<u>100.00</u>	<u>100.00</u>	<u>3.245</u>	<u>100.00</u>	<u>12.249</u>

Properties of Heptanes plus

API gravity @ 60°F.	<u>41.8</u>		
Specific gravity @ 60/60°F.	<u>0.8163</u>		<u>0.816</u>
Molecular weight	<u>171</u>	<u>96</u>	<u>170</u>

Calculated separator gas gravity (air=1.000) = 0.768  
 Calculated gross heating value for separator gas = 1296 BTU  
 per cubic foot of dry gas @ 14.65 psia and 60°F.

Primary separator gas collected @ 180 psig and 110 °F.  
 Primary separator liquid collected @ 170 psig and 111 °F.

Primary separator gas/separator liquid ratio 3432 SCF/Bbl @ 60°F.  
 Primary separator liquid/stock tank liquid ratio 1.076 Bbls @ 60°F./Bbl  
 Primary separator gas/well stream ratio 816.98 MSCF/MMSCF  
 Stock tank liquid/well stream ratio 221.2 Bbls/MMSCF

\*Value for heptanes plus.

CORE LABORATORIES, INC.

*Petroleum Reservoir Engineering*

DALLAS, TEXAS 75247

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File RFL 80205

Company Amoco Production Company Formation Nugget SS

Well Bountiful Livestock No. 1 County Summit

Field Anschutz Ranch East State Utah

Hydrocarbon Analysis of Heptanes Plus Fraction of Separator Liquid Sample

<u>Component</u>	<u>Weight Percent</u>	<u>Mol Percent</u>
Methylcyclopentane	0.85	1.58
Benzene	0.60	1.21
Cyclohexane	2.22	4.11
Heptanes	5.22	8.16
Methylcyclohexane	5.14	8.18
Toluene	3.28	5.56
Octanes	7.61	10.41
Ethylbenzene	0.34	0.50
Meta & Para Xylenes	3.34	4.91
Orthoxylene	0.85	1.25
Nonanes	6.10	7.44
1,2,4 Trimethylbenzene	1.25	1.63
Decanes	6.33	6.97
Undecanes	5.81	5.81
Dodecanes	4.58	4.20
Tridecanes	5.61	4.76
Tetradecanes	4.31	3.39
Pentadecanes	4.25	3.12
Hexadecanes	3.37	2.33
Heptadecanes	4.22	2.72
Octadecanes	2.73	1.67
Nonadecanes	2.31	1.34
Eicosanes	2.12	1.16
Heneicosanes	1.94	1.02
Docosanes	1.88	0.94
Tricosanes	1.73	0.83
Tetracosanes	1.40	0.63
Pentacosanes	1.46	0.65
Hexacosanes	1.25	0.53
Heptacosanes	1.15	0.48
Octacosanes	1.05	0.42
Nonacosanes	0.76	0.29
Triacotanes plus	4.94	1.80
	<u>100.00</u>	<u>100.00</u>

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File RFL 80205

Well Bountiful Livestock No. 1

Pressure-Volume Relations of Reservoir Fluid at 218°F.  
(Constant Composition Expansion)

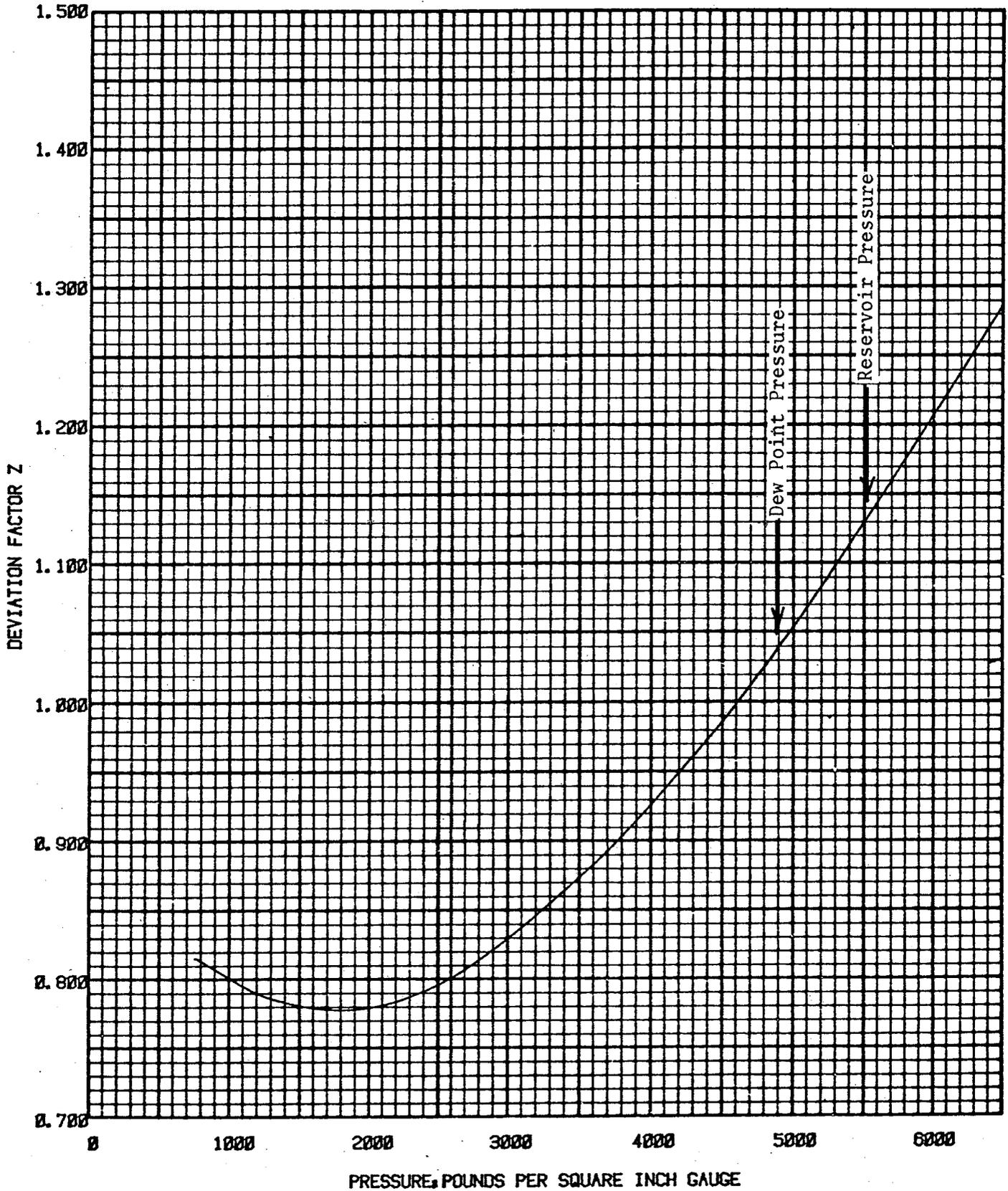
<u>Pressure</u> <u>PSIG</u>	<u>Relative</u> <u>Volume</u>	<u>Deviation</u> <u>Factor</u> <u>Z</u>	<u>Density,</u> <u>Gm/Cc</u>	<u>Liquid</u> <u>Volume</u> <u>Percent(1)</u>
6500	0.9319	1.284	0.4724	
6000	0.9482	1.206	0.4643	
5512 Reservoir Pressure	0.9673	1.131	0.4551	
5200	0.9819	1.083	0.4484	
5000	0.9929	1.053	0.4434	
4890 Dew Point Pressure	1.0000	1.038	0.4403	0.0
4850	1.0028	1.032		28.7
4750	1.0108	1.019		34.7
4550	1.0276	0.992		38.6
4200	1.0650	0.950		40.6
3800	1.1205	0.904		39.9
3300	1.2201	0.856		36.5
2800	1.3681	0.815		31.6
2300	1.6100	0.788		26.1
1800	2.0255	0.778		20.0
1400	2.6165	0.783		14.9
1120	3.3029	0.793		11.4
900	4.1635	0.806		8.6
760	4.9738	0.815		7.0

Note: For pressures below the dew point pressure, the deviation factors shown are those of the two-phase system.

(1) Expressed as a percent of the total volume of gas and liquid at the indicated pressure and temperature.

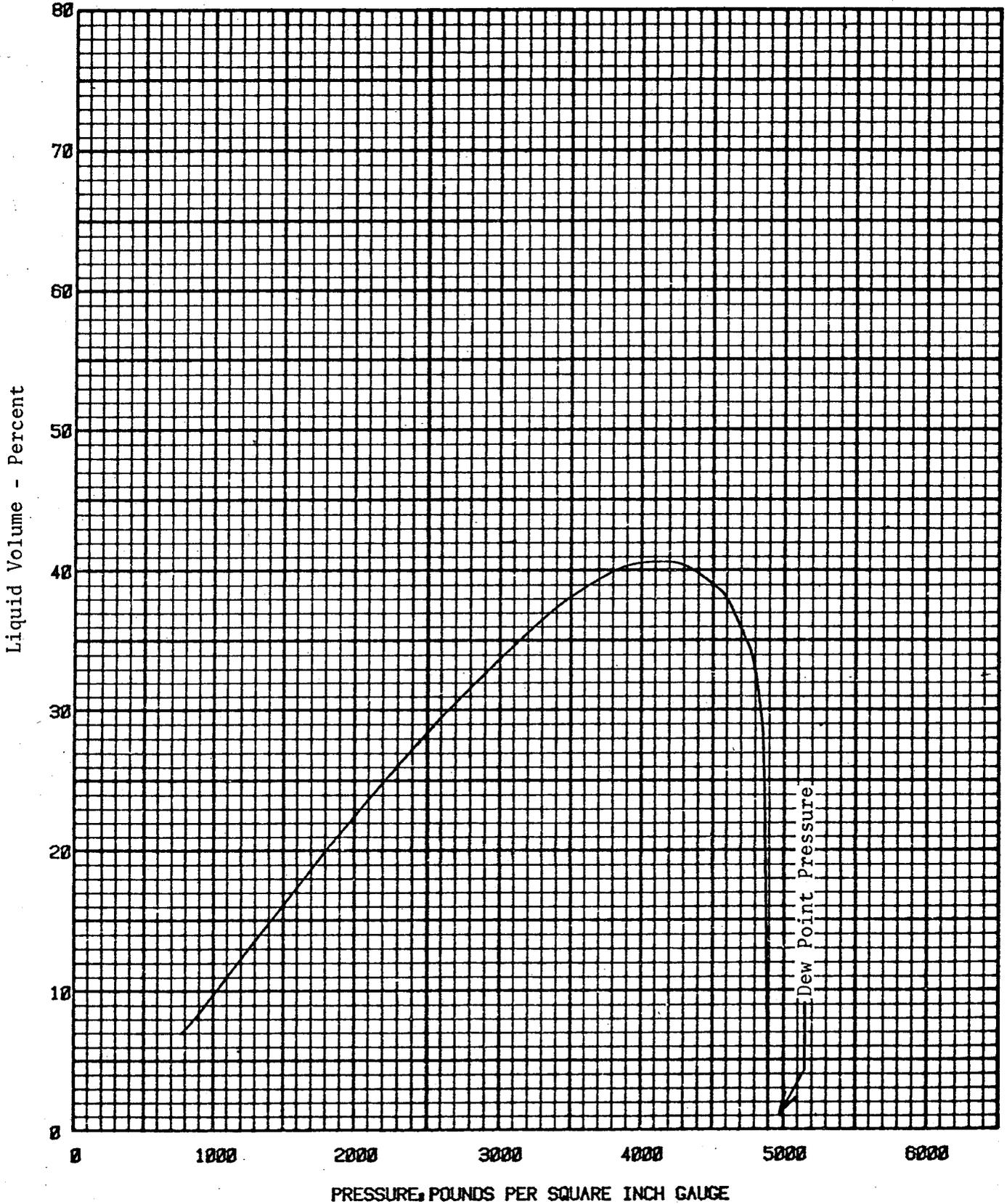
Deviation Factor Z of Reservoir Fluid at 218°F.

Company	<u>AMOCO PRODUCTION COMPANY</u>	Formation	<u>NUGGET SS</u>
Well	<u>BOUNTIFUL LIVESTOCK NO. 1</u>	County	<u>SUMMIT</u>
Field	<u>ANSCHUTZ RANCH EAST</u>	State	<u>UTAH</u>



Liquid Phase Volume at 218°F.

Company AMOCO PRODUCTION COMPANY Formation NUGGET SS  
Well BOUNTIFUL LIVESTOCK NO. 1 County SUMMIT  
Field ANSCHUTZ RANCH EAST State UTAH



CORE LABORATORIES, INC.  
*Petroleum Reservoir Engineering*  
DALLAS, TEXAS 75247

Reservoir Fluid Study  
for  
AMOCO PRODUCTION COMPANY

Bountiful Livestock No. 1 Well  
Anschutz Ranch East Field  
Summit County, Utah

**RECEIVED**  
MAY 7 1980

DIVISION OF  
OIL, GAS & MINING

**CORE LABORATORIES, INC.**

Reservoir Fluid Analysis



April 22, 1980

Amoco Production Company  
Security Life Building  
Denver, CO 80202

Attention: Mr. Terry Logan

Subject: Reservoir Fluid Study  
Bountiful Livestock No. 1 Well  
Anschutz Ranch East Field  
Summit County, Utah  
Our File Number: RFL 80185

Gentlemen:

Samples of separator gas and condensate were collected from the subject well during production from the perforated interval 12822 to 12828 feet. These samples were collected for use in a reservoir fluid study and the results of this study are summarized in the following report.

After correcting the separator gas rate for the factors shown on page one, the producing gas-liquid ratio was calculated to be 5568 cubic feet of separator gas at 14.65 psia and 60°F. per barrel of stock tank condensate at 60°F. In the laboratory, this ratio was found to be equivalent to 4751 standard cubic feet of separator gas per barrel of separator liquid at 340 psig and 60°F. The separator products were physically recombined in this gas-liquid ratio and the resulting fluid was used for the entire study. The hydrocarbon composition of the producing well stream material was calculated by using the measured hydrocarbon compositions of the separator products in conjunction with the producing gas-liquid ratio. All of the aforementioned data are summarized on page two.

The recombined sample was initially subjected to constant composition expansion at the reported reservoir temperature of 213°F. During this expansion, a retrograde dew point was observed at 5435 psig. Deviation factor measurements were performed over the entire pressure range investigated and these measurements are shown on page four, along with the density measurements at the reservoir pressure and above and the liquid phase volume measurements at the dew point pressure and below. Graphical interpretations of the deviation factor measurements and liquid volume measurements are presented on pages five and six, respectively.

Amoco Production Company  
Bountiful Livestock No. 1 Well

Page Two

It has been a pleasure to perform this reservoir fluid study. Should you have any questions or if we may be of further service in any way, please feel free to call upon us.

Very truly yours,

CORE LABORATORIES, INC.



P. L. Moses, Manager  
Reservoir Fluid Analysis

PLM:JF:bt

3 cc: Addressee

2 cc: Mr. Mark Feemster

Amoco Production Co.

1521 East 3900 South

Salt Lake City, UT 84117



CORE LABORATORIES, INC.

*Petroleum Reservoir Engineering*

DALLAS, TEXAS 75247

Page 2 of 6

File RFL 80185

Well Bountiful Livestock No. 1

Hydrocarbon Analyses of Separator Products and Calculated Well Stream

Component	Separator Liquid	Separator Gas		Well Stream	
	Mol Percent	Mol Percent	GPM	Mol Percent	GPM
Hydrogen Sulfide	0.00	0.00		0.00	
Carbon Dioxide	0.11	0.37		0.33	
Nitrogen	0.10	2.04		1.73	
Methane	7.86	76.93		65.94	
Ethane	7.69	12.75		11.95	
Propane	10.65	5.28	1.445	6.13	1.677
iso-Butane	3.92	0.86	0.280	1.35	0.439
n-Butane	6.51	0.98	0.307	1.86	0.583
iso-Pentane	2.32	0.19	0.069	0.53	0.193
n-Pentane	3.70	0.30	0.108	0.84	0.303
Hexanes	6.24	0.12	0.049	1.09	0.442
Heptanes	7.73	0.09	0.041	1.30	5.199*
Octanes	13.31	0.05	0.025	2.16	
Nonanes	7.42	0.02	0.011	1.20	
Decanes	4.27	0.01	0.006	0.69	
Undecanes plus	18.17	0.01	0.007	2.90	
	<u>100.00</u>	<u>100.00</u>	<u>2.348</u>	<u>100.00</u>	<u>8.836</u>

Properties of Heptanes plus

API gravity @ 60°F.	<u>43.0</u>	
Specific gravity @ 60/60°F.	<u>0.8108</u>	<u>0.810</u>
Molecular weight	<u>163</u>	<u>105</u>
		<u>162</u>

Calculated separator gas gravity (air=1.000) = 0.724  
 Calculated gross heating value for separator gas = 1228 BTU  
 per cubic foot of dry gas @ 14.65 psia and 60°F.

Primary separator gas collected @ 360 psig and 86 °F.  
 Primary separator liquid collected @ 340 psig and 87 °F.

Primary separator gas/separator liquid ratio 4751 SCF/Bbl @ 60°F.  
 Primary separator liquid/stock tank liquid ratio 1.172 Bbls @ 60°F./Bbl  
 Primary separator gas/well stream ratio 840.92 MSCF/MMSCF  
 Stock tank liquid/well stream ratio 151.0 Bbls/MMSCF

\*Value for heptanes plus.

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*Petroleum Reservoir Engineering*

DALLAS, TEXAS 75247

Page 3 of 6

File RFL 80185

Company Amoco Production Company Formation Nugget  
 Well Bountiful Livestock No. 1 County Summit  
 Field Anschutz Ranch East State Utah

Hydrocarbon Analysis of Heptanes Plus Fraction of Separator Liquid Sample

<u>Component</u>	<u>Weight Percent</u>	<u>Mol Percent</u>
Methylcyclopentane	0.78	1.40
Benzene	0.50	0.96
Cyclohexane	2.40	4.30
Heptanes	5.67	8.52
Methylcyclohexane	6.16	9.45
Toluene	3.76	6.14
Octanes	8.01	10.56
Ethylbenzene	0.30	0.43
Meta & Para Xylenes	3.39	4.80
Orthoxylene	1.04	1.47
Nonanes	6.59	7.86
1,2,4 Trimethylbenzene	1.17	1.46
Decanes	6.53	6.92
Undecanes	6.10	5.89
Dodecanes	4.44	3.93
Tridecanes	5.79	4.73
Tetradecanes	4.50	3.42
Pentadecanes	4.06	2.88
Hexadecanes	3.66	2.44
Heptadecanes	3.90	2.44
Octadecanes	2.58	1.53
Nonadecanes	2.10	1.18
Eicosanes	1.97	1.05
Heneicosanes	1.84	0.93
Docosanes	1.72	0.84
Tricosanes	1.55	0.72
Tetracosanes	1.31	0.58
Pentacosanes	1.32	0.56
Hexacosanes	1.09	0.44
Heptacosanes	0.85	0.40
Octacosanes	0.79	0.31
Nonacosanes	0.68	0.25
Triacontanenes plus	3.45	1.21
	<u>100.00</u>	<u>100.00</u>

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File RFL 80185

Well Bountiful Livestock No. 1

Pressure-Volume Relations of Reservoir Fluid at 213°F.  
(Constant Composition Expansion)

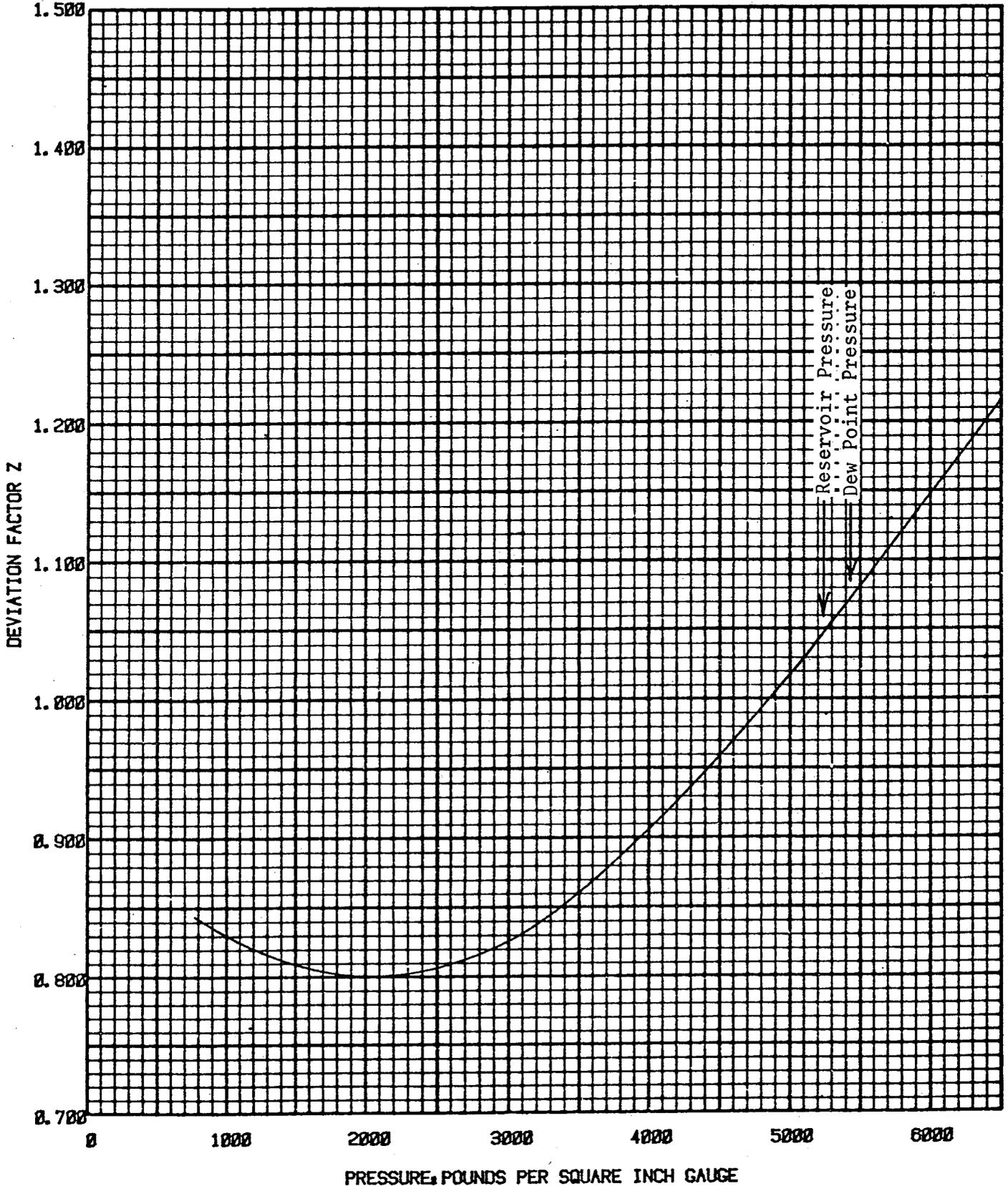
<u>Pressure</u> <u>PSIG</u>	<u>Relative</u> <u>Volume</u>	<u>Deviation</u> <u>Factor</u> <u>Z</u>	<u>Density,</u> <u>Gm/Cc</u>	<u>Liquid</u> <u>Volume</u> <u>Percent(1)</u>
6500	0.9351	1.214	0.4129	
6000	0.9568	1.147	0.4035	
5600	0.9779	1.094	0.3948	
5435 Dew Point Pressure	0.9873	1.072	0.3910	0.0
5350	0.9928	1.061	0.3889	0.2
5242 Reservoir Pressure	1.0000	1.047	0.3861	0.6
5100	1.0101	1.029		2.9
4900	1.0261	1.005		6.7
4600	1.0546	0.970		11.9
4200	1.1029	0.926		16.1
3700	1.1864	0.878		18.6
3200	1.3080	0.838		18.8
2700	1.5025	0.813		17.4
2250	1.7768	0.802		14.9
1750	2.2835	0.803		11.4
1400	2.8803	0.812		8.8
1150	3.5414	0.822		6.9
930	4.4256	0.833		5.4
780	5.3222	0.843		4.4

Note: For pressures below the dew point pressure, the deviation factors shown are those of the two-phase system.

(1) Expressed as a percent of the total volume of gas and liquid at the indicated pressure and temperature.

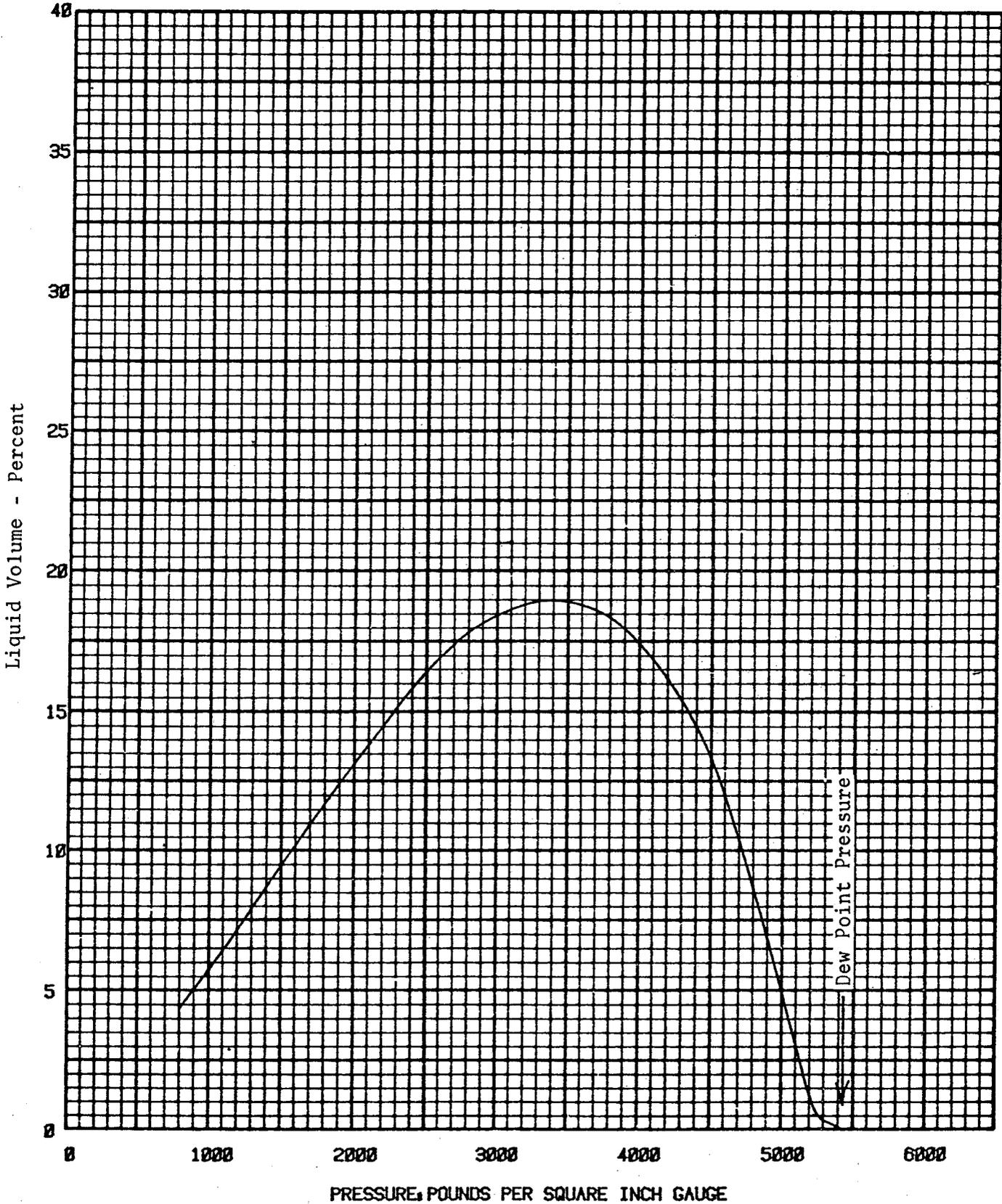
Deviation Factor Z of Reservoir Fluid at 213°F.

Company AMOCO PRODUCTION COMPANY Formation NUGGET  
Well BOUNTIFUL LIVESTOCK NO. 1 County SUMMIT  
Field ANSCHUTZ RANCH EAST State UTAH



Liquid Phase Volume at 213°F.

Company	AMOCO PRODUCTION COMPANY	Formation	NUGGET
Well	BOUNTIFUL LIVESTOCK NO. 1	County	SUMMIT
Field	ANSCHUTZ RANCH EAST	State	UTAH



CORE LABORATORIES, INC.  
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Reservoir Fluid Study  
for  
AMOCO PRODUCTION COMPANY

Bountiful Livestock No. 1 Well  
Anschutz Ranch East Field  
Summit County, Utah

13332-76

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Page 1 of 6

File RFL 80205

Company Amoco Production Company Date Sampled March 18, 1980  
 Well Bountiful Livestock No. 1 County Summit  
 Field Anschutz Ranch East State Utah

FORMATION CHARACTERISTICS

Formation Name	<u>Nugget SS</u>
Date First Well Completed	<u>                    </u> , 19 <u>      </u>
Original Reservoir Pressure	<u>                    </u> PSIG @ <u>                    </u> Ft.
Original Produced Gas-Liquid Ratio	<u>                    </u> SCF/Bbl
Production Rate	<u>                    </u> Bbls/Day
Separator Pressure and Temperature	<u>                    </u> PSIG <u>                    </u> °F.
Liquid Gravity at 60°F.	<u>                    </u> °API
Datum	<u>                    </u> Ft. Subsea

WELL CHARACTERISTICS

Elevation	<u>                    </u> Ft.
Total Depth	<u>                    </u> Ft.
Producing Interval	<u>13332-13376</u> Ft.
Tubing Size and Depth	<u>                    </u> In. to <u>                    </u> Ft.
Open Flow Potential	<u>                    </u> MMSCF/Day
Last Reservoir Pressure	<u>5512</u> PSIG @ <u>                    </u> Ft.
Date	<u>                    </u> , 19 <u>      </u>
Reservoir Temperature	<u>218</u> °F. @ <u>                    </u> Ft.
Status of Well	<u>                    </u>
Pressure Gauge	<u>                    </u>

SAMPLING CONDITIONS

Flowing Tubing Pressure	<u>                    </u> PSIG
Flowing Bottom Hole Pressure	<u>                    </u> PSIG
Primary Separator Pressure	<u>Gas-180 PSIG; Liquid-170</u> PSIG
Primary Separator Temperature	<u>Gas-110°F.; Liquid-111</u> °F.
Secondary Separator Pressure	<u>                    </u> PSIG
Secondary Separator Temperature	<u>                    </u> °F.
Field Stock Tank Liquid Gravity	<u>                    </u> °API @ 60°F.
Primary Separator Gas Production Rate	<u>                    </u> MSCF/Day
Pressure Base	<u>14.65</u> PSIA
Temperature Base	<u>60</u> °F.
Compressibility Factor (F <sub>pv</sub> )	<u>1.018</u>
Gas Gravity (Laboratory)	<u>0.768</u>
Gas Gravity Factor (F <sub>g</sub> )	<u>1.1411</u>
Stock Tank Liquid Production Rate @ 60°F.	<u>3693</u> Bbls/Day
Primary Separator Gas/Stock Tank Liquid Ratio	<u>270.8</u> SCF/Bbl
or	<u>                    </u> Bbls/MMSCF
Sampled by	<u>Amoco Production Company</u>

REMARKS:

Separator gas cylinder nos. SS1097 and SS1138.  
 Separator liquid cylinder no. SS1098.

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Page 2 of 6

File RFL 80205

*Interval 13332-76'*

Well Bountiful Livestock No. 1

Hydrocarbon Analyses of Separator Products and Calculated Well Stream

Component	Separator Liquid		Separator Gas		Well Stream	
	Mol Percent		Mol Percent	GPM	Mol Percent	GPM
Hydrogen Sulfide	0.00		0.00		0.00	
Carbon Dioxide	0.04		0.56		0.46	
Nitrogen	0.10		1.90		1.57	
Methane	3.17		72.85		60.10	
Ethane	3.91		13.87	3.483	12.05	
Propane	6.80		6.67	1.825	6.69	1.830
iso-Butane	2.90		1.28	0.416	1.58	0.514
n-Butane	4.97		1.61	0.505	2.22	0.696
iso-Pentane	2.83		0.42	0.153	0.86	0.313
n-Pentane	3.02		0.35	0.126	0.84	0.303
Hexanes	6.72		0.22	0.089	1.41	0.572
Heptanes	9.87		0.16	0.073	1.94	8.021*
Octanes	15.82		0.08	0.041	2.96	
Nonanes	9.24		0.02	0.011	1.71	
Decanes	5.63		0.01	0.006	1.04	
Undecanes plus	24.98		Trace	Trace	4.57	
	<u>100.00</u>		<u>100.00</u>	<u>3.245</u>	<u>100.00</u>	<u>12.249</u>
<i>C<sub>7+</sub></i>						
<u>Properties of Heptanes plus</u>						
API gravity @ 60°F.	41.8					
Specific gravity @ 60/60°F.	0.8163				0.816	
Molecular weight	171		96		170	

Calculated separator gas gravity (air=1.000) = 0.768  
 Calculated gross heating value for separator gas = 1296 BTU  
 per cubic foot of dry gas @ 14.65 psia and 60°F.

Primary separator gas collected @ 180 psig and 110 °F.  
 Primary separator liquid collected @ 170 psig and 111 °F.

Primary separator gas/separator liquid ratio = 3432 SCF/Bbl @ 60°F.  
 Primary separator liquid/stock tank liquid ratio = 1.076 Bbls @ 60°F./Bbl  
 Primary separator gas/well stream ratio = 816.98 MSCF/MMSCF  
 Stock tank liquid/well stream ratio = 221.2 Bbls/MMSCF

\*Value for heptanes plus.

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 DALLAS, TEXAS 75247

13332-376

Page 4 of 6

File RFL 80205

Well Bountiful Livestock No. 1

Pressure-Volume Relations of Reservoir Fluid at 218°F.  
 (Constant Composition Expansion)

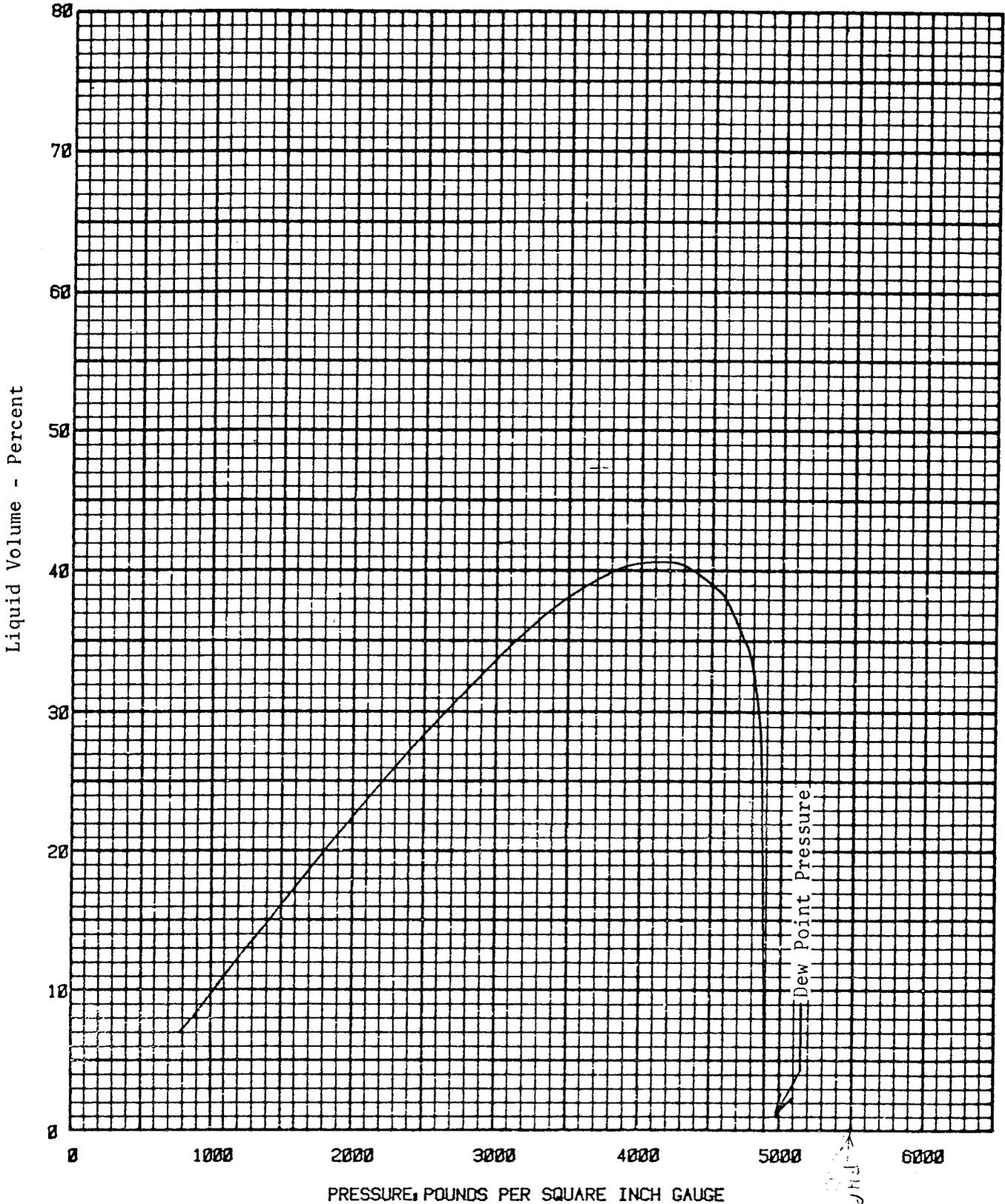
Pressure PSIG	Relative Volume	Deviation Factor Z	Density, Gm/Cc	Liquid Volume Percent(1)
6500	0.9319	1.284	0.4724	
6000	0.9482	1.206	0.4643	
5512 Reservoir Pressure	0.9673	-1.131	<u>0.4551</u>	
5200	0.9819	-1.083	0.4484	
5000	0.9929	1.053	0.4434	
4890 Dew Point Pressure	1.0000	1.038	0.4403	0.0
4850	1.0028	1.032		28.7
4750	1.0108	1.019		34.7
4550	1.0276	0.992		38.6
4200	1.0650	0.950		40.6
3800	1.1205	0.904		39.9
3300	1.2201	0.856		36.5
2800	1.3681	0.815		31.6
2300	1.6100	0.788		26.1
1800	2.0255	0.778		20.0
1400	2.6165	0.783		14.9
1120	3.3029	0.793		11.4
900	4.1635	0.806		8.6
760	4.9738	0.815		7.0

Note: For pressures below the dew point pressure, the deviation factors shown are those of the two-phase system.

(1) Expressed as a percent of the total volume of gas and liquid at the indicated pressure and temperature.

Liquid Phase Volume at 218°F.

Company AMOCO PRODUCTION COMPANY Formation NUGGET SS  
Well BOUNTIFUL LIVESTOCK NO. 1 County SUMMIT  
Field ANSCHUTZ RANCH EAST State UTAH



Dew Pt

4775

Attachment V

1400

4900

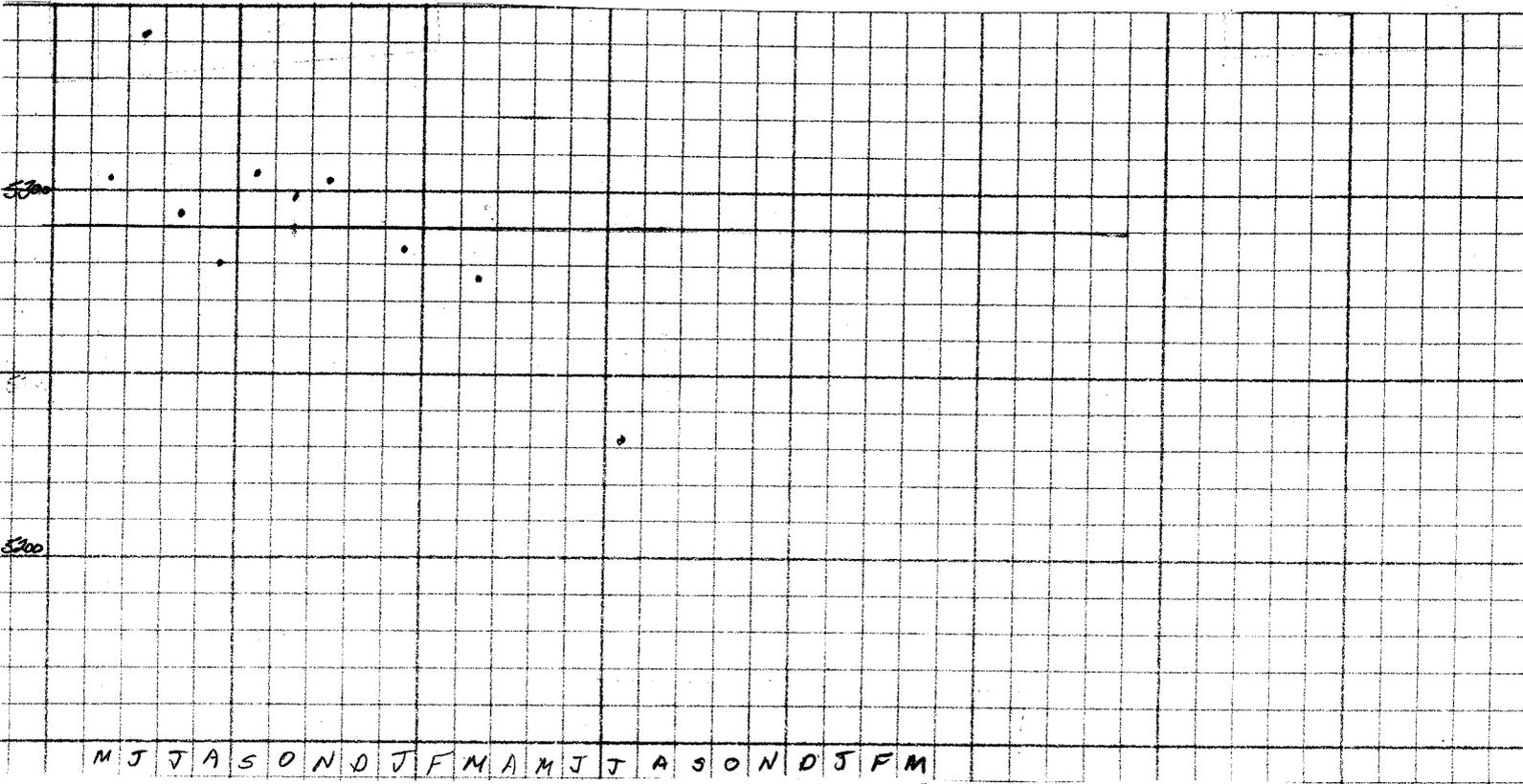
ANSCHUTZ RANCH EAST FIELD

Bountiful Livestock No. 1

Bottomhole Pressure History

ALC 10/10/80

<u>Date</u>	<u>Bomb Depth Ft.</u>	<u>P* psig @ 12,800</u>
May 10, 1980	12,800	5302
June 6, 1980	12,800	5342
July 7, 1980	12,800	5295
August 12, 1980	<del>13,400</del>	<del>5280</del>
September 10, 1980	13,400	<del>5304</del>
October 10, 1980	12,800	5299
November 11, 1980	12,800	5304
January 8, 1981	10,000	Insufficient Data
January 22, 1981	12,800	5286
March 9, 1981	12,800	5278
July 27, 1981	12,800	5231



# CHEMICAL & GEOLOGICAL LABORATORIES

P.O. Box 2794  
Casper, Wyoming 82602

## GAS ANALYSIS REPORT

Company Amoco Production Company Date 7-21-80 Lab. No. 34785-3  
Well No. Bountiful Livestock Co. #1 Location Section 16-4N-8E  
Field Anschutz Ranch East Formation Nugget  
County Summit Depth 13172-13515  
State Utah Sampling point High pressure Separator  
Line pressure 780 psig; Sample pressure 750 psig; Temperature \_\_\_\_\_ ° F; Container number RC1988  
Remarks \_\_\_\_\_

Component	Mole % or Volume %	Gallons per MCF
Oxygen.....	0	
Nitrogen.....	2.18	
Carbon dioxide.....	0.54	
Hydrogen sulfide.....	*	
Methane.....	79.70	
Ethane.....	12.09	1.202
Propane.....	4.38	
Iso-butane.....	0.51	0.166
N-butane.....	0.53	0.167
Iso-pentane.....	0.04	0.015
N-pentane.....	0.02	0.007
Hexanes & higher.....	0.01	0.005
Total.....	100.00	1.562

GPM of pentanes & higher fraction..... 0.027  
Gross btu/cu. ft. @60° F. & 14.7 psia (dry basis)..... 1167  
Specific gravity (calculated from analysis)..... 0.686  
Specific gravity (measured)..... 0.685

Remarks:

\* = H<sub>2</sub>S negative to lead acetate paper.

# CHEMICAL & GEOLOGICAL LABORATORIES

P.O. Box 2794  
Casper, Wyoming 82602

## GAS ANALYSIS REPORT

Company	Amoco Production Company	Date	7-21-80	Lab. No.	34785-4
Well No.	Bountiful Livestock Co. #1	Location	Section 16-4N-8E		
Field	Anschutz Ranch East	Formation	Nugget		
County	Summit	Depth	13172-13515		
State	Utah	Sampling point	Heater-Treater		
Line pressure <u>43</u> psig; Sample pressure <u>50</u> psig; Temperature _____ ° F; Container number _____					
Remarks _____					

Component	Mole % or Volume %	Gallons per MCF
Oxygen.....	0	
Nitrogen.....	1.40	
Carbon dioxide.....	0.51	
Hydrogen sulfide.....	*	
	65.26	
Methane.....	15.05	
Ethane.....	10.08	2.765
Propane.....	2.24	0.731
Iso-butane.....	3.38	1.063
N-butane.....	1.17	0.427
Iso-pentane.....	0.79	0.286
N-pentane.....	0.12	0.055
Hexanes & higher.....		
	Total.....	5.327

GPM of pentanes & higher fraction.....	0.768
Gross btu/cu. ft. @ 60° F. & 14.7 psia (dry basis).....	1449
Specific gravity (calculated from analysis).....	0.858
Specific gravity (measured).....	0.860

Remarks: \_\_\_\_\_

\* = H<sub>2</sub>S negative to lead acetate paper.

\_\_\_\_\_

\_\_\_\_\_

# CHEMICAL & GEOLOGICAL LABORATORIES

P. O. Box 2794  
Casper, Wyoming 82601

## CRUDE OIL ANALYSIS REPORT

<b>Company</b>	<u>Amoco Production Company</u>	<b>Date</b>	<u>7-22-80</u>	<b>Lab. No.</b>	<u>34785-2A</u>
<b>Well No.</b>	<u>Bountiful Livestock Co. #1</u>	<b>Location</b>	<u>Section 16-4N-8E</u>		
<b>Field</b>	<u>Anschutz Ranch East</u>	<b>Formation</b>	<u>Nugget</u>		
<b>County</b>	<u>Summit</u>	<b>Depth</b>	<u>13172-13515</u>		
<b>State</b>	<u>Utah</u>	<b>Analyzed by</b>	<u>KCM</u>		

Dumpline (7-7-80)

### GENERAL CHARACTERISTICS

Specific gravity @ 60/60 °F.....	_____
A.P.I. gravity @ 60 °F.....	_____
Saybolt Universal Viscosity @ 70°F., seconds.....	_____
Saybolt Universal Viscosity @ 100°F., seconds.....	_____
B. s. and water, % by volume.....	_____
Pour point, °F.....	<u>Below zero</u>
Total sulphur, % by weight.....	_____

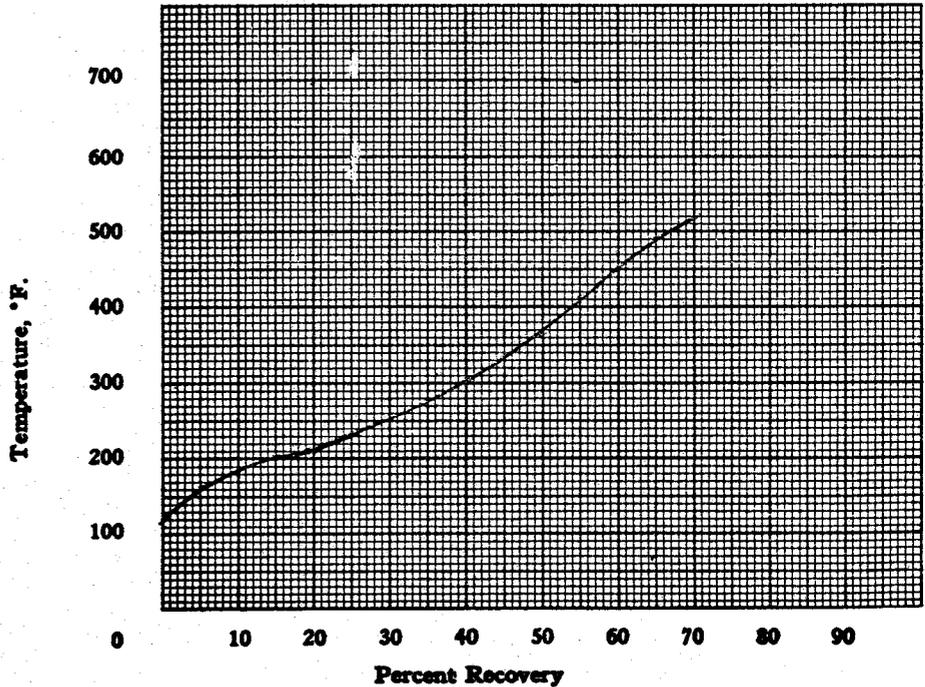
**REMARKS:** Sample drained from liquid container after chromatographic analysis was made.

Thermal cracking began @540°F and distillation was not continued.

### ENGLER DISTILLATION

Recovery, %	Temperature, °F.
IBP .....	<u>122</u>
5 .....	<u>164</u>
10 .....	<u>184</u>
15 .....	<u>205</u>
20 .....	<u>217</u>
25 .....	<u>235</u>
30 .....	<u>253</u>
35 .....	<u>278</u>
40 .....	<u>302</u>
45 .....	<u>335</u>
50 .....	<u>365</u>
55 .....	<u>417</u>
60 .....	<u>451</u>
65 .....	<u>492</u>
70 .....	<u>518</u>
75 .....	_____
80 .....	_____
85 .....	_____
90 .....	_____
95 .....	_____
E.P. ....	_____

### DISTILLATION GRAPH



Recovery, %.....	<u>71.0</u>
Residue, %.....	<u>29.0</u>
Loss, %.....	<u>0.0</u>

<u>Approximate Recovery</u>	
300 EP gasoline, %.....	<u>39.5</u>
392 EP gasoline, %.....	<u>53.0</u>
500 EP distillate, %.....	<u>14.0</u>

# CHEMICAL & GEOLOGICAL LABORATORIES

P. O. Box 2794  
Casper, Wyoming 82601

## CRUDE OIL ANALYSIS REPORT

Company <u>Amoco Production Company</u>	Date <u>7-22-80</u>	Lab. No. <u>34785-1A</u>
Well No. <u>Boutiful Livestock Co. #1</u>	Location <u>Section 16-4N-8E</u>	
Field <u>Anschultz Ranch East</u>	Formation <u>Nugget</u>	
County <u>Summit</u>	Depth <u>13172-13515</u>	
State <u>Utah</u>	Analyzed by <u>KCM</u>	

H.P. Separator 510psig  
(7-7-80)

### GENERAL CHARACTERISTICS

Specific gravity @ 60/60 °F.....	_____
A.P.I. gravity @ 60 °F.....	_____
Saybolt Universal Viscosity @ 70°F., seconds.....	_____
Saybolt Universal Viscosity @ 100°F., seconds.....	_____
B. s. and water, % by volume.....	_____
Pour point, °F.....	<u>below zero</u>
Total sulphur, % by weight.....	_____

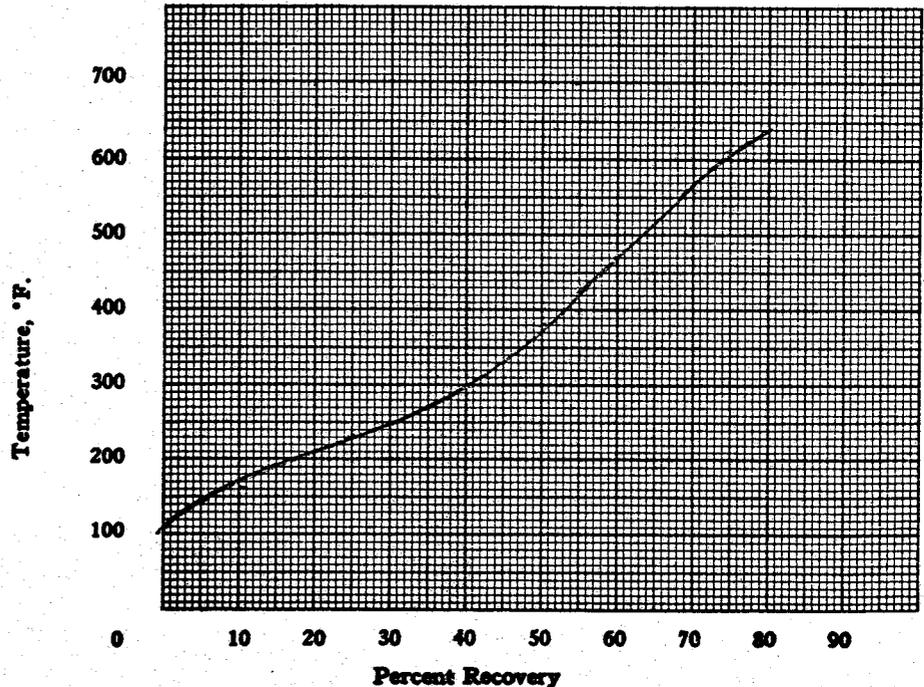
**REMARKS:**

Sample drained from liquid container after chromatographic analysis was made.

### ENGLER DISTILLATION

Recovery, %	Temperature, °F.
IBP .....	<u>05</u>
5 .....	<u>141</u>
10 .....	<u>164</u>
15 .....	<u>191</u>
20 .....	<u>210</u>
25 .....	<u>231</u>
30 .....	<u>249</u>
35 .....	<u>270</u>
40 .....	<u>297</u>
45 .....	<u>337</u>
50 .....	<u>378</u>
55 .....	<u>430</u>
60 .....	<u>475</u>
65 .....	<u>520</u>
70 .....	<u>557</u>
75 .....	<u>613</u>
80 .....	<u>640</u>
85 .....	_____
90 .....	_____
95 .....	_____
E.P. ....	_____

### DISTILLATION GRAPH



Recovery, %.....	<u>83.0</u>
Residue, %.....	<u>2.5</u>
Loss, %.....	_____

Approximate Recovery

300 EP gasoline, %.....	<u>40.5</u>
392 EP gasoline, %.....	<u>52.0</u>
500 EP distillate, %.....	<u>11.5</u>

**CHEMICAL & GEOLOGICAL LABORATORIES**

**P. O. Box 2794  
Casper, Wyoming**

**ANALYTICAL REPORT**

**RECEIVED**  
JUL 23 1980

From Amoco Production Company Product Condensate  
 Address Salt Lake City, Utah Date 7-17-80 DIVISION OF OIL, GAS & MINING  
 Other Pertinent Data \_\_\_\_\_  
 Analyzed by RC, CED Date 7-21-80 Lab No. 34785-1

HYDROCARBON ANALYSIS

*Anschutz Ranch East, Utah  
 Bountiful Livestock Co. #1  
 Section 16-4N-8E  
 Nugget 13172-13515  
 High Pressure Separator  
 510psig RC1993*

*Sample taken July 7, 1980*

	<u>LIQUID VOLUME PERCENT</u>	<u>MOLE PERCENT</u>
Methane -----	11.93	20.66
Ethane -----	15.78	17.32
Propane -----	18.85	20.16
Iso-butane -----	6.92	6.22
N-butane -----	11.79	10.98
Iso-pentane -----	6.14	4.92
N-pentane -----	6.74	5.46
Hexanes -----	6.89	4.92
Heptanes & Higher -----	14.96	9.36
<b>TOTAL</b>	<b>100.00</b>	<b>100.00</b>
 Specific gravity @60/60°F (calculated) -----		 0.525

## CHEMICAL &amp; GEOLOGICAL LABORATORIES

P. O. Box 2794

Casper, Wyoming

## ANALYTICAL REPORT

From Amoco Production Company Product Condensate  
 Address Salt Lake City, Utah Date 7-17-80  
 Other Pertinent Data \_\_\_\_\_  
 Analyzed by RC, CED Date 7-21-80 Lab No. 34785-2

HYDROCARBON ANALYSIS

Anschutz Ranch East, Utah  
 Bountiful Livestock Co. #1  
 Section 16-4N-8E  
 Nugget 13172-13515  
 Dump Line  
 Opsig RC1962

Sample taken July 7, 1980

	<u>LIQUID VOLUME PERCENT</u>	<u>MOLE PERCENT</u>
Methane -----	0	0
Ethane -----	0.54	0.78
Propane -----	5.57	7.81
Iso-butane -----	4.23	4.99
N-butane -----	10.81	13.21
Iso-pentane -----	10.68	11.23
N-pentane -----	16.36	17.40
Hexanes -----	17.56	16.46
Heptanes & Higher -----	34.25	28.12
<b>TOTAL</b>	<b>100.00</b>	<b>100.00</b>
Specific gravity @60/60°F (calculated) -----		0.640

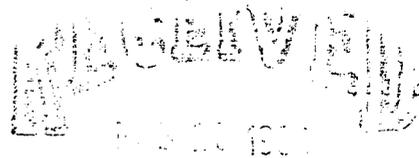


**Amoco Production Company**

Post Office Box 17675  
Salt Lake City, Utah 84117  
801-272-9253

T. G. Doss  
District Superintendent

February 9, 1983



State of Utah  
Division of Oil, Gas, and Mining  
4241 State Office Building  
Salt Lake City, Utah 84114

DIVISION OF  
OIL, GAS & MINING

File: DSD-251-031.190

Anschutz Ranch East Unit Operations - Summit County, Utah

Amoco Production Company herewith advises that the following wells within the subject unit have been renamed as noted:

<u>Old Well Name:</u>	<u>New Well Name/Location:</u>
✓ Anschutz U2-30	Anschutz Ranch East Unit W30-02 Sec. 30, T4N, R8E
Anschutz U6-20	Anschutz Ranch East Unit W20-06 Sec. 20, T4N, R8E
Anschutz U30-06	Anschutz Ranch East Unit W30-06 Sec. 30, T4N, R8E
Anschutz U8-20	Anschutz Ranch East Unit W20-08 Sec. 20, T4N, R8E
Anschutz U8-30	Anschutz Ranch East Unit W30-08 Sec. 30, T4N, R8E
Anschutz U10-20	Anschutz Ranch East Unit W20-10 Sec. 20, T4N, R8E
Anschutz U10-30	Anschutz Ranch East Unit W30-10 Sec. 30, T4N, R8E
Anschutz U12-20	Anschutz Ranch East Unit W20-12 Sec. 20, T4N, R8E

<u>Old Well Name:</u>	<u>New Well Name/Location:</u>
Anschutz U14-20	Anschutz Ranch East Unit W20-14 Sec. 20, T4N, R8E
Anschutz U14-30	Anschutz Ranch East Unit W30-14 Sec. 30, T4N, R8E
Anschutz U16-20	Anschutz Ranch East Unit W20-16 Sec. 20, T4N, R8E
Anschutz U16-30	Anschutz Ranch East Unit W30-16 Sec. 30, T4N, R8E
Bountiful Livestock #1	Anschutz Ranch East Unit W16-14 Sec. 16, T4N, R8E
Bountiful Livestock "A" #1	Anschutz Ranch East Unit W16-06 Sec. 16, T4N, R8E
Champlin 458 Amoco "D" #1	Anschutz Ranch East Unit W29-04 Sec. 29, T4N, R8E
Champlin 458 Amoco "D" #2	Anschutz Ranch East Unit W29-02 Sec. 29, T4N, R8E
Champlin 458 Amoco "D" #3	Anschutz Ranch East Unit W29-12 Sec. 29, T4N, R8E
✓Champlin 458 Amoco "D" #5	Anschutz Ranch East Unit W29-14 Sec. 29, T4N, R8E
Champlin 458 Amoco "D" #6	Anschutz Ranch East Unit W29-06 Sec. 29, T4N, R8E
Champlin 458 Amoco "E" #1	Anschutz Ranch East Unit W31-08 Sec. 31, T4N, R8E
Champlin 458 Amoco "E" #2	Anschutz Ranch East Unit W31-04 Sec. 31, T4N, R8E
✓Champlin 458 Amoco "E" #5	Anschutz Ranch East Unit W31-02 Sec. 31, T4N, R8E
Champlin 458 Amoco "E" #6	Anschutz Ranch East Unit W31-06 Sec. 31, T4N, R8E
Champlin 458 Amoco "F" #1	Anschutz Ranch East Unit W21-04 Sec. 21, T4N, R8E
Champlin 458 Amoco "F" #2	Anschutz Ranch East Unit E21-14 Sec. 21, T4N, R8E
Island Ranching "E" #2	Anschutz Ranch East Unit W36-08 Sec. 36, T3N, R7E
Thousand Peaks Ranches #1	Anschutz Ranch East Unit W32-04 Sec. 32, T4N, R8E

For your information the letter preceding the well number (W-E) refers to the West/East Nugget structure within the Anschutz Ranch East Unit. Should you have questions concerning the well name changes, please contact Scheree Wilcox at this office, 801-264-2200.

*T.G. Doss*

T.G. Doss  
District Superintendent

SW/

cc: State of Wyoming  
Oil and Gas Conservation Commission  
P.O. Box 2640  
Casper, Wyoming 82601

STATE OF UTAH  
DIVISION OF OIL, GAS, AND MINING  
ROOM 4241 STATE OFFICE BUILDING  
SALT LAKE CITY, UTAH 84114  
(801) 533-5771  
(RULE 1-5 & RULE 1-4)

FORM NO. DOGM-UIC-1  
(Revised 1982)

IN THE MATTER OF THE APPLICATION OF  
Amoco Production Company, USA  
ADDRESS P O Box 17675  
Salt Lake City, Utah ZIP 84117  
INDIVIDUAL  PARTNERSHIP  CORPORATION   
FOR ADMINISTRATIVE APPROVAL TO DISPOSE OR  
INJECT FLUID INTO THE ARE W16-14 WELL  
SEC. 16 TWP. 4N RANGE 8E  
Summit COUNTY, UTAH

CAUSE NO. \_\_\_\_\_

ENHANCED RECOVERY INJ. WELL	<input checked="" type="checkbox"/>
DISPOSAL WELL	<input type="checkbox"/>
LP GAS STORAGE	<input type="checkbox"/>
EXISTING WELL (RULE 1-4)	<input type="checkbox"/>

APPLICATION

Comes now the applicant and shows the Corporation Commission the following:

1. That Rule 1-5 (g) (iv) authorizes administrative approval of enhanced recovery injections, disposal or LP Gas storage operations.
2. That the applicant submits the following information.

Lease Name <u>Bountiful Livestock</u>	Well No. <u>ARE W16-14</u>	Field <u>Anschutz Ranch East</u>	County <u>Summit</u>
Location of Enhanced Recovery Injection or Disposal Well <u>NW-SW</u> Sec. <u>16</u> Twp. <u>4N</u> Rge. <u>8E</u>			
New Well To Be Drilled Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Old Well To Be Converted Yes <input type="checkbox"/> No <input type="checkbox"/>	Casing Test Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Date <u>3/80</u>	
Depth-Base Lowest Known Fresh Water Within 1/2 Mile <u>1500'</u>	Does Injection Zone Contain Oil-Gas-Fresh Water Within 1/2 Mile YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		State What <u>Gas</u>
Location of Injection Source(s) <u>Nitrogen Extraction Plant Uinta County, Wyoming</u>	Geologic Name(s) and Depth of Source(s) <u>Nitrogen Extraction via Atmosphere</u>		
Geologic Name of Injection Zone <u>Nugget</u>	Depth of Injection Interval <u>12794</u> to <u>13722</u>		
a. Top of the Perforated Interval: <u>12816</u>	b. Base of Fresh Water: <u>1500'</u>	c. Intervening Thickness (a minus b) <u>11316'</u>	
Is the intervening thickness sufficient to show fresh water will be protected without additional data? <u>X</u> YES NO			
Lithology of Intervening Zones <u>Gannet (clay stone); Preuss (sandstone/shale); Salt; Twin Creek (Limestone)</u>			
Injection Rates and Pressures Maximum <u>35 MMSCFD</u> B/D <u>5500 ps:</u> PSI			
The Names and Addresses of Those to Whom Notice of Application Should be Sent. <u>All interest owners in Anschutz Ranch East are members of a unit agreement.</u>			

State of Utah ) Amoco Production Company, USA  
County of Salt Lake ) Applicant

Before me, the undersigned authority, on this day personally appeared \_\_\_\_\_ known to me to be the person whose name is subscribed to the above instrument, who being by me duly sworn on oath states, that he is duly authorized to make the above report and that he has knowledge of the facts stated therein, and that said report is true and correct.

Suscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_\_

SEAL \_\_\_\_\_  
My commission expires \_\_\_\_\_ Notary Public in and for \_\_\_\_\_

(OVER)

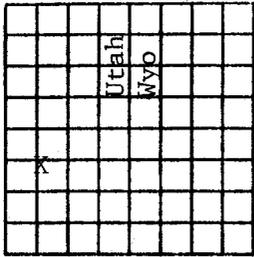
(To be filed within 30 days after drilling is completed)

DEPARTMENT OF NATURAL RESOURCES AND ENERGY

COUNTY  
LEASE NO.

DIVISION OF OIL, GAS, AND MINING  
Room 4241 State Office Building  
Salt Lake City, Utah 84114

API NO. \_\_\_\_\_  
640 Acres  
N



Locate Well Correctly  
and Outline Lease

COUNTY Summit SEC. 16 TWP. 4N RGE. 8E  
COMPANY OPERATING Amoco Production Company  
OFFICE ADDRESS P O Box 17675  
Salt Lake City STATE Utah ZIP 84117  
FARM NAME Bountiful Livestock WELL NO. ARE W16-14  
DRILLING STARTED 3 19 79 DRILLING FINISHED 12 19 79  
DATE OF FIRST PRODUCTION 4/80 COMPLETED 3/80  
WELL LOCATED C 1/4 NW 1/4 SW 1/4  
2137.4 FT. FROM SE OF 1/4 SEC. & 686.1 FT. FROM WL OF 1/4 SEC.  
ELEVATION DERRICK FLOOR 7324' GROUND 7305'

TYPE COMPLETION

Single Zone X  
Multiple Zone \_\_\_\_\_  
Comingled \_\_\_\_\_

LOCATION EXCEPTION

OIL OR GAS ZONES

Name	From	To	Name	From	To
Nugget	12794	13722			

CASING & CEMENT

Casing Set				Csg. Test	Cement			
Size	Wgt.	Grade	Feet	Pal	Sex	Fillup	Top	
13 3/8"	68	J-55	2040	-	-		-	
9 7/8"	62.8	S-105	11091	-	2180		9650'	
7"	23-29	N-80	10330	3000	330		-	
7 5/8"	39	P-110	11310	-	400		-	
4 1/2"	13.5	P-110	14045	2500	500		-	

TOTAL DEPTH 14050

PACKERS SET 10552'  
DEPTH \_\_\_\_\_

NOTE: THIS FORM MUST ALSO BE ATTACHED WHEN FILING PLUGGING FORM DOGM-UIC-6

COMPLETION & TEST DATA BY PRODUCING FORMATION

FORMATION	1	2	3
Nugget			
SPACING & SPACING ORDER NO.			
CLASSIFICATION (DISPOSAL WELL, ENHANCED RECOVERY, LP GAS STORAGE)	Enhanced Recovery		
PERFORATED	12816-13515		
INTERVALS			
ACIDIZED?	No		
FRACTURE TREATED?	No		

INITIAL TEST DATA

Date	12-24-82		
Oil, bbl./day	1900		
Oil Gravity	52°		
Gas, Cu. Ft./day	8,000,000 CF	CF	CF
Gas-Oil Ratio Cu. Ft./Bbl.	4200		
Water-Bbl./day	30		
Pumping or Flowing	Flowing		
CHOKE SIZE	32/64		
FLOW TUBING PRESSURE	2650		

A record of the formations drilled through, and pertinent remarks are presented on the reverse.  
(use reverse side)

I, the undersigned, being first duly sworn upon oath, state that this well record is true, correct and complete according to the records of this office and to the best of my knowledge and belief.

Telephone \_\_\_\_\_  
Name and title of representative of company \_\_\_\_\_

Subscribed and sworn before me this \_\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_\_

ARE W16 - 14 - Operating Data

Twin Creek

lithology - limestone  
thickness - 1596'  
depth - 11265'

Nugget

lithology - sandstone  
thickness - 1274'  
depth - 12796'

Ankareh

lithology - sandstone  
thickness - not determined due to lack of penetration  
depth - not determined due to lack of penetration

CLASS II FILE NOTATIONS

\*\*\*\*\*

Bountiful livestock

DATE FILED: 4-8-83 OPERATOR: Amoco Prod Co. USA WELL NO. \_\_\_\_\_

Sec. 16 T. 4N R. 8E QRT/QRT: NW/SE COUNTY: Summit

New Well? \_\_\_\_\_ Conversion? X Disposal \_\_\_\_\_ Enhanced Recovery X

\*\*\*\*\*

SURETY/Bond? yes Card Indexed? \_\_\_\_\_ API Number: 43-043-30096

APPLICATION FILE COMPLETION

Completed Form DOGM-UIC-1? yes

Plat identifying location and total depth of the following, Rule I-5(b)(1):

Surface Owner(s): \_\_\_\_\_ Operators: \_\_\_\_\_ water well(s) \_\_\_\_\_, abandoned well(s) \_\_\_\_\_, producing wells or drilling well(s) //, dry holes \_\_\_\_\_.

Completed Rule I-5(b)(2)? yes, (i) \_\_\_\_\_, (ii) \_\_\_\_\_

Schematic diagram of Well: TD: 14050', PBTD: \_\_\_\_\_, Depth of Inj/Disp interval: 12794-13722, geologic name of inj/dis interval Nugget, Casing and cement: top Surface bottom \_\_\_\_\_, Size of: casing 13 3/8" @ 2040' 9 5/8" @ 11091, 7" @ 10330, 7 1/8" tubing, depth of packer: \_\_\_\_\_

Assessment of existing cement bond: \_\_\_\_\_ Location of Bottomhole: \_\_\_\_\_ MAXIMUM INJECTION RATE: 35 MMSCFD MAXIMUM SURFACE INJECTION PRESSURE: 5500 psi.

Proposed Operating Data:

Procedure for controlling injection rates and pressures: yes Geologic name: Nitrogen Extraction, depth, N/A, location of injection fluid source. Analysis of water to be injected N/A tds, water of injection formation N/A tds., EXEMPTION REQUIRED? N/A.

Injection zone and confining zone data: lithologic description clay stone / sandstone shale + limestone geologic name \_\_\_\_\_, (thickness 1500', depth \_\_\_\_\_, lateral extent centering 11316'

USDW's that may be affected by injection: geologic name \_\_\_\_\_, lateral extent \_\_\_\_\_, depth to the top and bottom of all known USDW's Base of fresh water > 1500'

Contingency plans? Yes - See Unit file

Results of formation testing? Yes \* Description of mechanical integrity test\* \_\_\_\_\_, injection procedure \_\_\_\_\_

\*\*\*\*\*

CHECKED BY: UIC ADMINISTRATOR: \_\_\_\_\_

UIC GEOLOGIST: \_\_\_\_\_

Application Complete? yes Notice Published \_\_\_\_\_, Date: / /. DIRECTOR: Approved? yes, approval letter sent \_\_\_\_\_, Requires hearing \_\_\_\_\_.



STATE OF UTAH  
NATURAL RESOURCES & ENERGY  
Oil, Gas & Mining

Scott M. Matheson, Governor  
Temple A. Reynolds, Executive Director  
Cleon B. Feight, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

April 26, 1983

Newspaper Agency Corp.  
Legal Advertising  
146 South Main  
Salt Lake City, UT

Re: CAUSE NO. UIC-020

Gentlemen:

Attached hereto is a Notice of Hearing/Order to Show Cause, before the Board of Oil, Gas and Mining, Department of Natural Resources and Energy, State of Utah.

It is requested that this notice be published ONCE ONLY, as soon as possible but no later than the 3rd day of May, 1983. In the event that said notice cannot be published by this date, please notify this office immediately by calling 533-5771.

Upon completion of this request, please send proof of publication and statement of cost to the Division of Oil, Gas and Mining, 4241 State Office Building, Salt Lake City, Utah 84114.

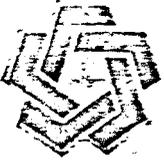
Very truly yours,

DIVISION OF OIL, GAS AND MINING

*TP for*  
*Paula J. Frank*

PAULA FRANK  
Secretary of the Board

Attachment



STATE OF UTAH  
NATURAL RESOURCES & ENERGY  
Oil, Gas & Mining

Scott M. Matheson, Governor  
Temple A. Reynolds, Executive Director  
Cleon B. Feight, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

April 26, 1983

Park Record  
Legal Advertising  
Park City, UT 84060

RE: CAUSE NO. UIC-020

Gentlemen:

Attached hereto is a Notice of Hearing/Order to Show Cause, before the Board of Oil, Gas and Mining, Department of Natural Resources and Energy, State of Utah.

It is requested that this notice be published ONCE ONLY, as soon as possible but no later than the 3rd day of May, 1983. In the event that said notice cannot be published by this date, please notify this office immediately by calling 533-5771.

Upon completion of this request, please send proof of publication and statement of cost to the Division of Oil, Gas and Mining, 4241 State Office Building, Salt Lake City, Utah 84114.

Very truly yours,

DIVISION OF OIL, GAS AND MINING

*TP for*  
*Paula J. Frank*

PAULA FRANK  
Secretary of the Board

Attachment



STATE OF UTAH  
NATURAL RESOURCES & ENERGY  
Oil, Gas & Mining

Scott M. Matheson, Governor  
Temple A. Reynolds, Executive Director  
Cleon B. Feight, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

April 26, 1983

Summitt County Bee  
Legal Advertising  
Coalville, UT 84017

Re: CAUSE NO. UIC-020

Gentlemen:

Attached hereto is a Notice of Hearing/Order to Show Cause, before the Board of Oil, Gas and Mining, Department of Natural Resources and Energy, State of Utah.

It is requested that this notice be published ONCE ONLY, as soon as possible but no later than the 3rd day of May, 1983. In the event that said notice cannot be published by this date, please notify this office immediately by calling 533-5771.

Upon completion of this request, please send proof of publication and statement of cost to the Division of Oil, Gas and Mining, 4241 State Office Building, Salt Lake City, Utah 84114.

Very truly yours,

DIVISION OF OIL, GAS AND MINING

*TP for*  
*Paula J. Frank*

PAULA FRANK  
Secretary of the Board

Attachment

BEFORE THE DIVISION OF OIL, GAS AND MINING  
Room 4241 State Office Building  
Salt Lake City, Utah 84114

-----  
IN THE MATTER OF THE APPLICATION )  
OF AMOCO PRODUCTION COMPANY U.S.A., ) CAUSE NO. UIC-020  
FOR ADMINISTRATIVE APPROVAL TO )  
INJECT GAS INTO WELLS LOCATED )  
IN SUMMIT COUNTY, UTAH. )  
-----

THE STATE OF UTAH TO ALL PERSONS, OWNERS, PRODUCERS, OPERATORS,  
PURCHASERS AND TAKERS OF OIL AND GAS AND ALL OTHER INTERESTED PERSONS,  
PARTICULARLY IN SUMMIT COUNTY, UTAH:

NOTICE IS HEREBY GIVEN that Amoco Production Company U.S.A., P.O.  
Box 17675, Salt Lake City, Utah, 84117, is requesting that the Division  
authorize the approval to convert the wells mentioned below, to gas  
injection wells as follows:

Township 4 North, Range 7 East

Sec. 36 Well # ARE W36-08  
Sec. 16 Well # ARE W16-14

Township 4 North, Range 8 East

Sec. 20 Well # ARE W20-14  
Sec. 29 Well # ARE W29-12  
Sec. 20 Well # ARE W20-08

INJECTION ZONE: Nugget Formation

MAXIMUM INJECTION PRESSURE: 5500 psi

MAXIMUM INJECTION RATE: 35 MMSCFD

This application will be granted unless objections are filed with  
the Division of Oil, Gas and Mining within fifteen days after publication  
of this Notice. Objections if any, should be mailed to: Division of  
Oil, Gas and Mining, Room 4241 State Office Building, Salt Lake City,  
Utah 84114.

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

  
PAULA J. FRANK  
Secretary of the Board



STATE OF UTAH  
NATURAL RESOURCES & ENERGY  
Oil, Gas & Mining

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

Scott M. Matheson, Governor  
Temple A. Reynolds, Executive Director  
Cleon B. Feight, Division Director

May 31, 1983

Amoco Production Company, USA  
P.O. Box 17675  
Salt Lake City, UT 84117

Re: Class II Injection Well  
Approval  
Cause No. UIC-020

Gentlemen:

Please be advised that administrative approval has been granted for gas injection into the wells mentioned below. This approval is conditional upon adhering to the UIC rules and regulations adopted by the Board of Oil, Gas and Mining and by not exceeding the maximum authorized pressures and rates.

Township 4 North, Range 7 East

Sec. 36 Well #ARE W36-08  
Sec. 16 Well #ARE W16-14

Township 4 North, Range 8 East

Sec. 20 Well #ARE W20-14  
Sec. 29 Well #ARE W29-12  
Sec. 20 Well #ARE W20-08

If you have any questions concerning this matter, please do not hesitate to call or write.

Sincerely,

  
Dr. G.A. (Jim) Shirazi  
Director

GS/TP/tp

CAUSE NO. UIC-020

Notice of hearing was sent to the following:

Newspaper Agency Corp.  
Summitt County Bee  
Park Record

Amoco Production Company, USA  
P.O. Box 17675  
Salt Lake City, UT 84117

Anschutz Land & Livestock Co., Inc.  
c/o The Anschutz Corp.  
2400 Anaconda Tower  
555 17th Street  
Denver, CO 80202

Amoco Prod. Co.  
Amoco Building  
1670 Broadway  
Denver, CO 80202

Bountiful Livestock Co.  
1162 East 15th South  
Woods Cross, UT 84087

Champlin Petroleum Co.  
5800 S. Quebec,  
Box 1257  
Englewood, CO 80150

Minerals Management Service  
2000 Administration Bldg.  
1745 West 1700 South  
Salt Lake City, UT 84104

U.S. Environmental Protection Agency  
Attn: Mike Strieby  
1860 Lincoln Street  
Denver, CO 80295

UT. Dept. of Health  
Bureau of Water Pollution Control  
Attn: Jerry Riding  
Room 410  
150 West North Temple  
Salt Lake City, UT 84103

# DOUBLE "D" ENTERPRISES

RECEIVED

MAY 13 1985

B.O.P. Test Report

DIVISION OF OIL  
GAS & MINING

B.O.P. TEST PERFORMED ON (DATE) 4-5-85

OIL CO.: Amoco

WELL NAME & NUMBER Bountiful 16-14 W 16-14

SECTION 16 Gas Injection

TOWNSHIP 4N

RANGE 8E

COUNTY Summit

DRILLING CONTRACTOR Cannon #9

INVOICES BILLED FROM: **DOUBLE "D" ENTERPRISES, INC.**  
213 Pine Street - Box 560  
Shoshoni, Wyoming 82649  
Phone: (307) 876-2308 or (307) 876-2234

TESTED BY: **DOUBLE "D" ENTERPRISES, INC.**  
Box 2097  
Evanston, Wyoming 82930  
Phone: (307) 789-9213 or (307) 789-9214

OIL CO. SITE REPRESENTATIVE

RIG TOOL PUSHER

TESTED OUT OF Evanston, Wyoming

NOTIFIED PRIOR TO TEST:

COPIES OF THIS TEST REPORT SENT COPIES TO: Site Representative

Utah Oil & Gas

B.L.M.

ORIGINAL CHART & TEST REPORT ON FILE AT: Evanston OFFICE

# DOUBLE "D" ENTERPRISES, INC.

P.O. Box 560  
Shoshoni, Wyoming 82649  
307-876-2308

DELIVERY TICKET

No 3152

Date 4-5-85  
Operator AMOLS Contractor CANON Rig No. 9  
Ordered By \_\_\_\_\_ Lease Beautiful Well No. 16-14  
Section \_\_\_\_\_ Township \_\_\_\_\_ Range \_\_\_\_\_

Items Tested:

	Low Test	Time Held	High Test	Time Held	Comments
Top Pipe Rams	<u>300</u>	<u>5 MIN</u>	<u>5,000</u>	<u>15 MIN</u>	<u>OK OK</u>
Bottom Pipe Rams					
Blind Rams					
Annualar B.O.P.					
Choke Manifold					
Choke Line					
Kill Line					
Super Choke					
Upper Kelly					
Lower Kelly					
Floor Valve					
Dart Valve					

*Change  
OUT RAM  
TO 4 1/2*

Closing Unit Psi 3000 PSI Closing Time of Rams 3 SEC. Closing Time of Hydril \_\_\_\_\_  
Closed Casing Head Valve \_\_\_\_\_ Set Wear Sleeve \_\_\_\_\_  
Comments 4 1/2 CS HYDRIL PIPE

COMPANY

LEASE AND WELL NAME #

DATE OF TEST

RIG # AND NAME

AMOCO

CANON #9

TEST #

TIME

ARRIVED ON LOCATION @ 9:00  
 RIG STILL COMING OUT OF HOLE  
 WAIT ON RIG UNTILL 12:30

12:30

PICK UP JOINT OF 4 1/2 CS HYDRA  
 MAKE UP TIW

1:00

SET PLUG

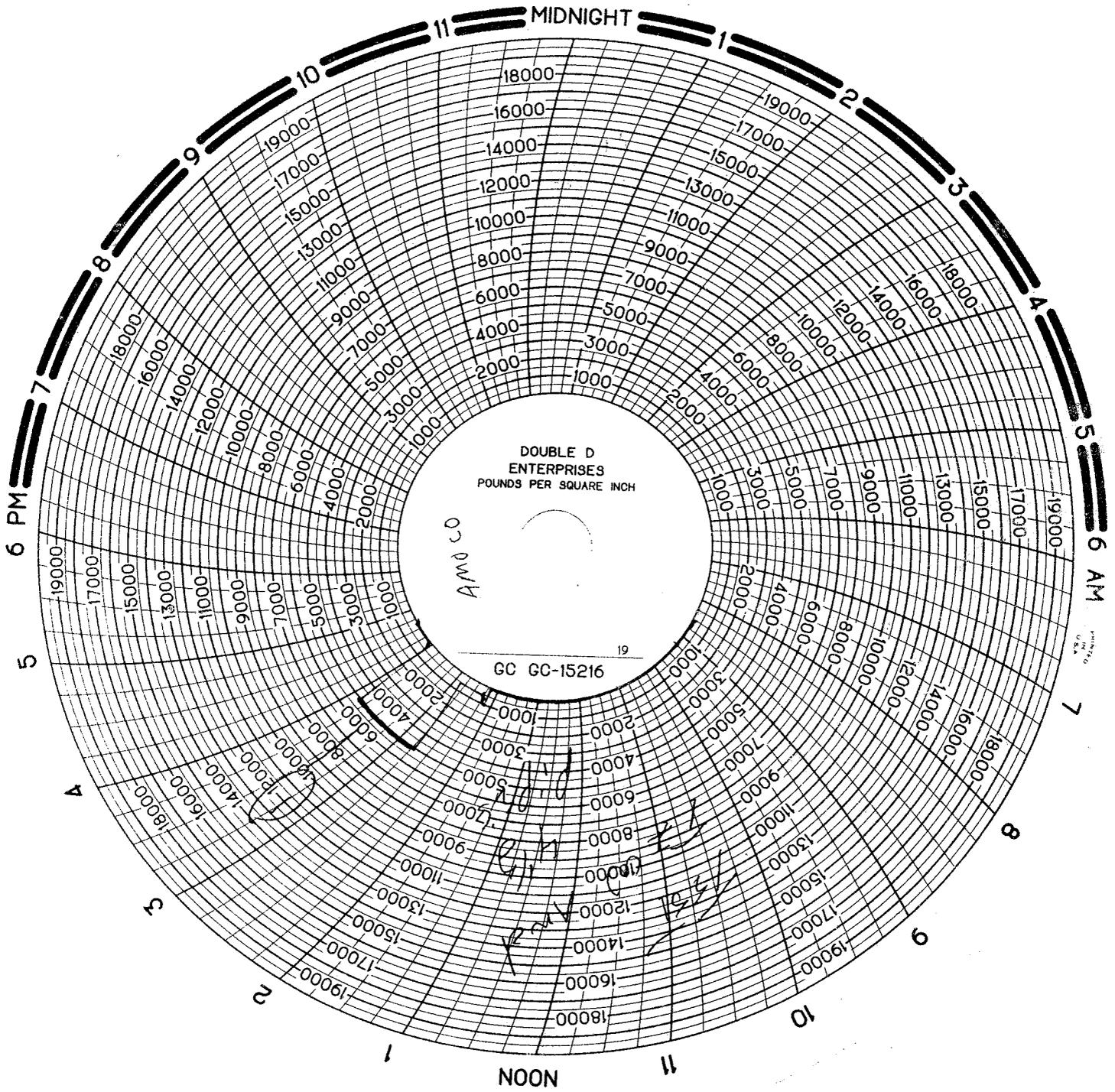
1:00 - 1:30

TEST - 4 1/2 PIPE'S - TIW  
 300 PSL 5 MIN - OK 500 PSL 15 MIN - OK

1:30

PULL PLUG  
 RIG DOWN

2:00 LOAD TRUCK



DOUBLE D  
ENTERPRISES  
POUNDS PER SQUARE INCH

*A.M.D. CO.*

GC GC-15216

MADE IN U.S.A.



Amoco Production Company

May 16, 1986

RECEIVED  
MAY 21 1986

Utah Division of Oil, Gas & Mining  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180

DIVISION OF  
OIL, GAS & MINING

Re: **Name change on wells being brought into the Anschutz Ranch East Unit**

Attn: Claudia Jones

Dear Claudia:

The following is a list of all wells, East & West Lobe (production and Injection) at Anschutz Ranch East referenced by well name, API No. and legal description, that should be rolled over from Amoco Production Company to Amoco Rockmount Company upon completion and being brought into the Unit.

Production wells

<u>Well Name</u>	<u>API No.</u>	<u>Legal Description</u>
W01-04	43-043-30270	NWNW, Sec 1, T3N, R7E
W01-06	43-043-30188	SEnw, Sec 1, T3N, R7E
W01-12	43-043-30271	NWSW, Sec 1, T3N, R7E
W20-04	43-043-30238	NWNW, Sec 20, T4N, R8E
W16-60 06	43-043-30138	NENE, Sec 16, T4N, R8E
W16-12	43-043-30231	SWNW, Sec 16, T4N, R8E
<del>W17-1216?</del>	43-043-30176	NWSE, Sec 17, T4N, R8E
W19-16	43-043-95008 ? 30204	SWSE, Sec 19, T4N, R8E
W20-02	43-043-30228	NWNE, Sec 20, T4N, R8E
W20-06	43-043-30159	NWNW, Sec 20, T4N, R8E
W20-10	43-043-30229	SEnw, Sec 20, T4N, R8E
W20-12	43-043-30220	NWSW, Sec 20, T4N, R8E
W20-16	43-043-30148	SWSE, Sec 20, T4N, R8E
W21-04	43-043-30135	NWNW, Sec 21, T4N, R8E
W29-04	43-043-30129	NWNW, Sec 29, T4N, R8E
W29-06A	43-043-30250	SEnw, Sec 29, T4N, R8E
W29-14A	43-043-30251	NWSW, Sec 29, T4N, R8E
W30-06	43-043-30273	NESW, Sec 30, T4N, R8E
W30-08	43-043-30183	SENE, Sec 30, T4N, R8E
W30-10	43-043-30215	NWSE, Sec 30, T4N, R8E
W30-14	43-043-30185	SESW, Sec 30, T4N, R8E
W30-16	43-043-30156	NESE, Sec 30, T4N, R8E

Production wells (cont.)

<u>Well Name</u>	<u>API NO.</u>	<u>Legal Description</u>
W31-04	43-043-30165	NWNW, Sec 31, T4N, R8E
W31-06	43-043-30217	SESW, Sec 31, T4N, R8E
W31-08	43-043-30164	NWNE, Sec 31, T4N, R8E
W31-12	43-043-30190	SWNW, Sec 31, T4N, R8E
W32-04	43-043-30162	NWNW, Sec 32, T4N, R8E
W36-10	43-043-30227	NESW, Sec 36, T4N, R7E
W36-16	43-043-30157	SESE, Sec 36, T4N, R7E

Injection wells

W01-02	43-043-30209	? NWNE, Sec 1, T3N, R7E
W02-10	43-043-30265	NWSE, Sec 2, T3N, R7E
W16-14	43-043-30096	NWSW, Sec 16, T4N, R8E
W19-08	43-043-30272	SENE, Sec 19, T4N, R8E
W20-08	43-043-30212 ? 30123	SWNW, Sec 20, T4N, R8E
W20-14	43-043-30145	NWSW, Sec 20, T4N, R8E
W29-02	43-043-30220 ? 30136	NWNE, Sec 29, T4N, R8E
W29-12	43-043-30154	NWSW, Sec 29, T4N, R8E
W30-02	43-043-95014 ? 30218	NWNE, Sec 30, T4N, R8E
W30-12A	43-043-30248 ? 30230	NWSW, Sec 30, T4N, R8E
W30-15	43-043-95012 ? 30216 ?	NWNE, Sec 30, T4N, R8E
W36-08	43-043-30167	SENE, Sec 36, T4N, R7E
W36-14	43-043-30255	SESW, Sec 36, T4N, R7E

This should help to clarify your files and if any changes are necessary we will notify you of such.

If further information is needed please contact Louis F. Lozzie of this office at 307-789-1700 ext. 2226.

Thank you,



R. M. Ramsey  
District Admn. Supervisor

/kg

cc: Pam Collier - Amoco Denver



STATE OF UTAH  
NATURAL RESOURCES  
Oil, Gas & Mining

Norman H. Bangerter, Governor  
Dee C. Hansen, Executive Director  
Dianne R. Nielson, Ph.D., Division Director

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

July 22, 1987

Mr. Reed Smith  
Amoco Production Company  
Post Office Box 829  
Evanston, Wyoming 82930

Dear Mr. Smith:

A review of the Class II injection wells which Amoco operates in the Anschutz Ranch and Anschutz Ranch East Fields, has revealed that required pressure test information has not been submitted to the Division for five injection wells. The Division requires a pressure test to be conducted at least once every five years for certain Class II injection wells and submittal of the test results should be made to the Division.

The five wells in question are the AREU #W29-12, AREU #W16-14, AREU #20-08, AREU #W20-14, and AREU #W36-08. The Division has no record of a pressure test having been conducted on these five wells during the past five years.

If a pressure test has been conducted on any of these wells, please submit a copy of the test results and the date of the test. If no pressure test has been conducted in the past five years, arrangements need to be made to have these tests performed. Rule 505 of the Oil and Gas Conservation Rules details the testing requirements.

Please notify the UIC staff if any pressure tests are to be conducted so that the staff may have an opportunity to witness the tests. If there are any questions regarding this request, please contact the UIC staff at (801)538-5340.

Sincerely,

A handwritten signature in cursive script that reads "Dorothy B. Swindel".

Dorothy B. Swindel  
UIC Geologist

mfp  
0256U/41



**Amoco Production Company**

Post Office Box 829  
Evanston, Wyoming 82930  
307-789-1700

N. E. Spencer  
District Manager

August 20, 1987

Natural Resources Oil and Gas  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, UT 84180-1203

Attn: Dorothy Swindle

File: LOB-107-537.5

Casing Integrity Testing  
Anschutz Ranch East Nitrogen Injection Wells

Your office has recently indicated that no documentation of casing integrity testing has been provided for five Anschutz Ranch East nitrogen injection wells. A review of our records indicates the wells in question were tested as follows:

<u>Well</u>	<u>Testing Date</u>	<u>Test Pressure</u>	<u>Test Duration</u>	<u>Reason for Testing</u>
W29-12	10-15-84	1500 psi	15 min.	Tubing Upsize
W16-14	4-14-85	1500 psi	15 min.	Tubing Upsize
W20-08	12-3-84	1500 psi	15 min.	Tubing Upsize
W20-14	3-29-86	1500 psi	15 min.	Tubing Upsize
W36-08	5-24-86	1500 psi	15 min.	Tubing Upsize

A copy of the daily work reports which reflect the above dates and pressures can be provided upon your request. If additional testing is deemed necessary, a rapid response is requested such that any testing can be performed prior to your October 1987 deadline.

Any questions or comments regarding this matter should be directed to Dan Polson at (307) 783-2316.

N. E. Spencer

DNP/djw

cc: Kathy Bauman - Denver  
Reid Smith - Evanston

RECEIVED  
AUG 24 1987  
DIVISION OF OIL  
GAS & MINING



**Amoco Production Company**

Post Office Box 829  
Evanston, Wyoming 82930  
307-789-1700

N. E. Spencer  
District Manager

August 20, 1987

Natural Resources Oil and Gas  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, UT 84180-1203

Attn: Dorothy Swindle

File: LOB-107-537.5

Casing Integrity Testing  
Anschutz Ranch East Nitrogen Injection Wells

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<u>Well</u>	<u>Testing Date</u>	<u>Test Pressure</u>	<u>Test Duration</u>	<u>Reason for Testing</u>
43-043-30154 W29-12 ✓	10-15-84	1500 psi	15 min.	Tubing Upsize
43-043-30096 W16-14 ✓	4-14-85	1500 psi	15 min.	Tubing Upsize
43-043-30123 W20-08 ✓	12-3-84	1500 psi	15 min.	Tubing Upsize
43-043-30145 W20-14 ✓	3-29-86	1500 psi	15 min.	Tubing Upsize
43-043-30167 W36-08 ✓	5-24-86	1500 psi	15 min.	Tubing Upsize

*Sec 16, TAN, RBE*

A copy of the daily work reports which reflect the above dates and pressures can be provided upon your request. If additional testing is deemed necessary, a rapid response is requested such that any testing can be performed prior to your October 1987 deadline.

Any questions or comments regarding this matter should be directed to Dan Polson at (307) 783-2316.

N. E. Spencer

DNP/djw

cc: Kathy Bauman - Denver  
Reid Smith - Evanston

9/11/87  
AUG 24 1987  
DIVISION OF OIL  
GAS & MINING



**Amoco Production Company**

Post Office Box 829  
Evanston, Wyoming 82930  
307-789-1700

N. E. Spencer  
District Manager

August 28, 1987

Natural Resources Oil and Gas  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, UT 84180-1203

Attn: Dorothy Swindle

File: LOB-108-537.5

Casing Integrity Testing  
Anschutz Ranch East Nitrogen Injection Wells

Per your phone conversation of 8/27/87 with Dan Polson, attached are the daily work reports which document the testing of the W29-12, W16-14, W20-08, W20-14, and W36-08. If there are any questions concerning this matter, please contact Dan Polson at (307) 783-2316.

*N.E. Spencer* 204  
N. E. Spencer

DNP/djw

Attachments

RECEIVED

AUG 31 1987

DIVISION OF OIL  
GAS & MINING





# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Norman H. Bangerter  
Governor

Dee C. Hansen  
Executive Director

Dianne R. Nielson, Ph.D.  
Division Director

355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
801-538-5340

July 14, 1992

Amoco Production Company  
P.O. Box 800  
Denver, Colorado 80201

Gentlemen:

Re: Pressure Test for Mechanical Integrity, Class II Injection Wells in the Anschutz Ranch East Unit, Summit County, Utah

The Underground Injection Control Program which the Division of Oil, Gas and Mining (DOGM) administers in Utah, requires that all Class II injection wells demonstrate mechanical integrity. It has been past policy of the Division to require pressure testing of all Class II salt water disposal wells and other injection wells not reporting monthly annulus pressures in accordance with rule R649-5-5.3 of the Oil and Gas Conservation General Rules. This rule requires that the casing-tubing annulus above the packer be pressure tested at a pressure equal to the maximum authorized injection pressure or 1,000 psi, whichever is lesser, provided that no test pressure is less than 300 psi. This test shall be performed at least every five year period beginning October, 1982. Our records indicate the above referenced wells are due for testing for the second five year period. Attached is a list of wells which need to be tested according to our records. Please make arrangements and ready the wells for testing during the week of August 10, 1992, as outlined below:

1. Operator must furnish connections, and accurate pressure gauges, hot oil truck (or other means of pressuring annulus), as well as personnel to assist in opening valves etc.
2. The casing-tubing annulus shall be filled prior to the test date to expedite testing, as each well will be required to hold pressure for a minimum of 15 minutes.
3. If mechanical difficulties or workover operations make it impossible for the wells to be tested on this date the tests may be rescheduled.

Page 2  
Pressure Test  
July 14, 1992

4. Company personnel should meet DOGM representatives at the field office or other location as negotiated.
5. All bradenhead valves with exception of the tubing on the injection wells must be shut in 24 hours prior to testing.

Please contact Mr. Dan Jarvis at (801)538-5340 to arrange a meeting time and place or negotiate a different date if this one is unacceptable.

Sincerely,



Gil Hunt  
UIC Program Manager

ldc  
Attachment  
WOI52

WELLS TO BE TESTED

#W20-02  
W29-02  
W29-12  
W29-14A  
W02-10  
W16-14  
W19-08  
W20-08  
W20-14  
W30-08  
W30-14  
W36-08  
W31-05

TO WEST GATE

TO EMANSTON

BLACK A-1

BOUNTIFULL B-1

ISLAND RANCH D-1

GRAVEL PIT

ASC EAST PLANT SITE  
NITROGEN PLANT

ISLAND RANCH B-1

ISLAND RANCH B-2

ISLAND RANCH C-1

458 I-1

4N7E

4N8E

3N73

3N8E

2

6

5

W 2-10

W 1-04

W 1-02

W 1-06

W 1-12

W 12-04

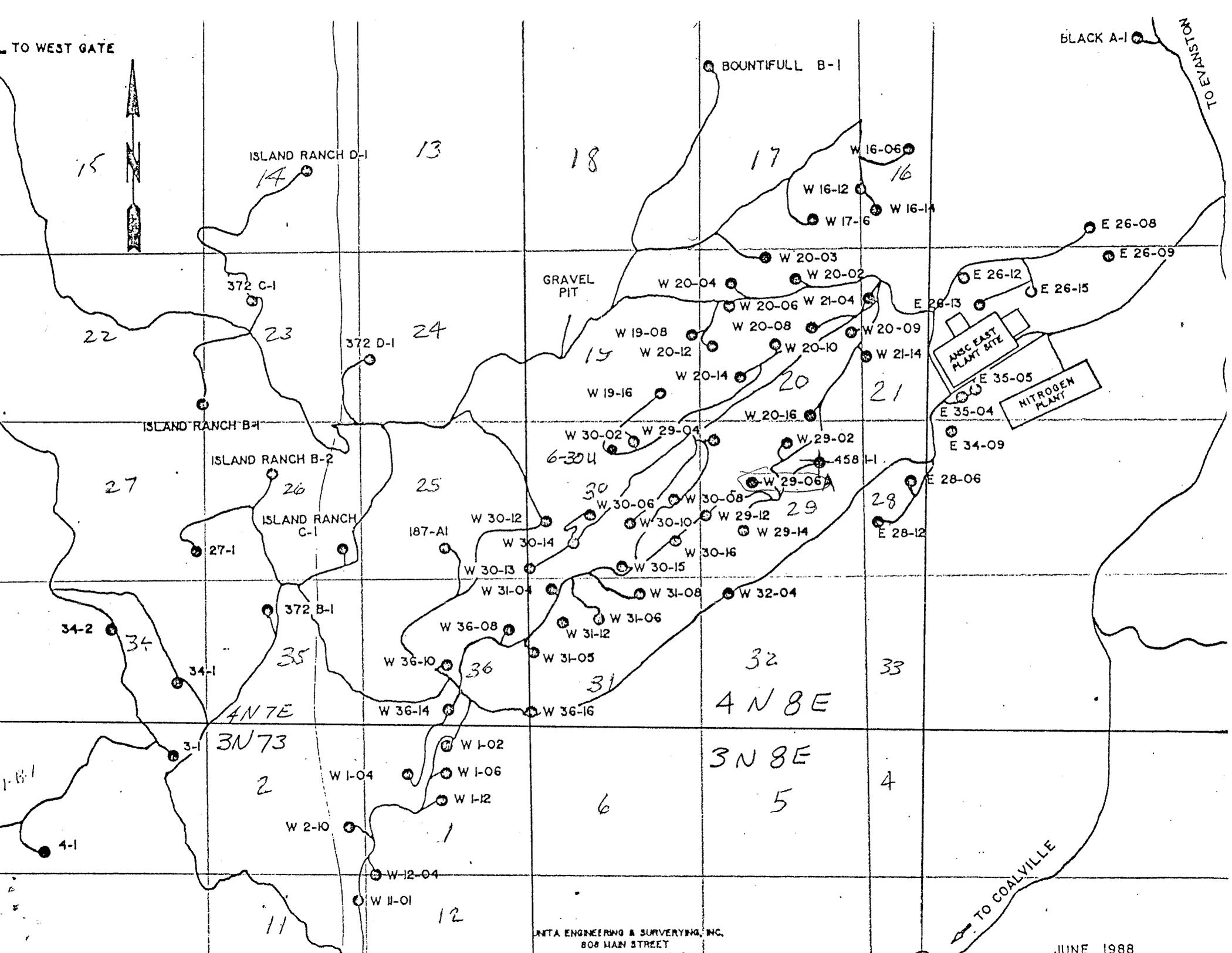
W 11-01

12

ANTA ENGINEERING & SURVEYING, INC.  
808 MAIN STREET

JUNE 1988

TO COALVILLE



STATE OF UTAH

DIVISION OF OIL, GAS AND MINING

INJECTION WELL - PRESSURE TEST  
\*\*\*\*\*

TEST DATE: 8-11-92 WELL OWNER/OPERATOR: Amoco Rockmont  
DISPOSAL WELL:        ENHANCED RECOVERY WELL:  OTHER:         
API NO: 43-043-30096 WELL NAME/NUMBER: ARELL #W 16-14A  
SECTION: 16 TOWNSHIP: 4N RANGE: 8E

INITIAL CONDITIONS:

TUBING - rate:                      pressure: 5400  
CASING/TUBING ANNULUS - pressure: 750

CONDITIONS DURING TEST:

TUBING pressure: 5400 psi for 15 minutes  
CASING/TUBING ANNULUS pressure: 1000 psi 15 min  
annulus pressure drop during test: None psi

CONDITIONS AFTER TEST:

TUBING pressure: 5400 psi  
CASING/TUBING ANNULUS pressure: 750 psi

REMARKS:

OK  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Russell L. Branger  
OPERATOR REPRESENTATIVE

John A. Bennett  
DOG M WITNESS

PRINTED IN U.S.A.

TESTED BY # 3  
**DOUBLE-D-ENTERPRISES**

SHOSHONI  
876-2308

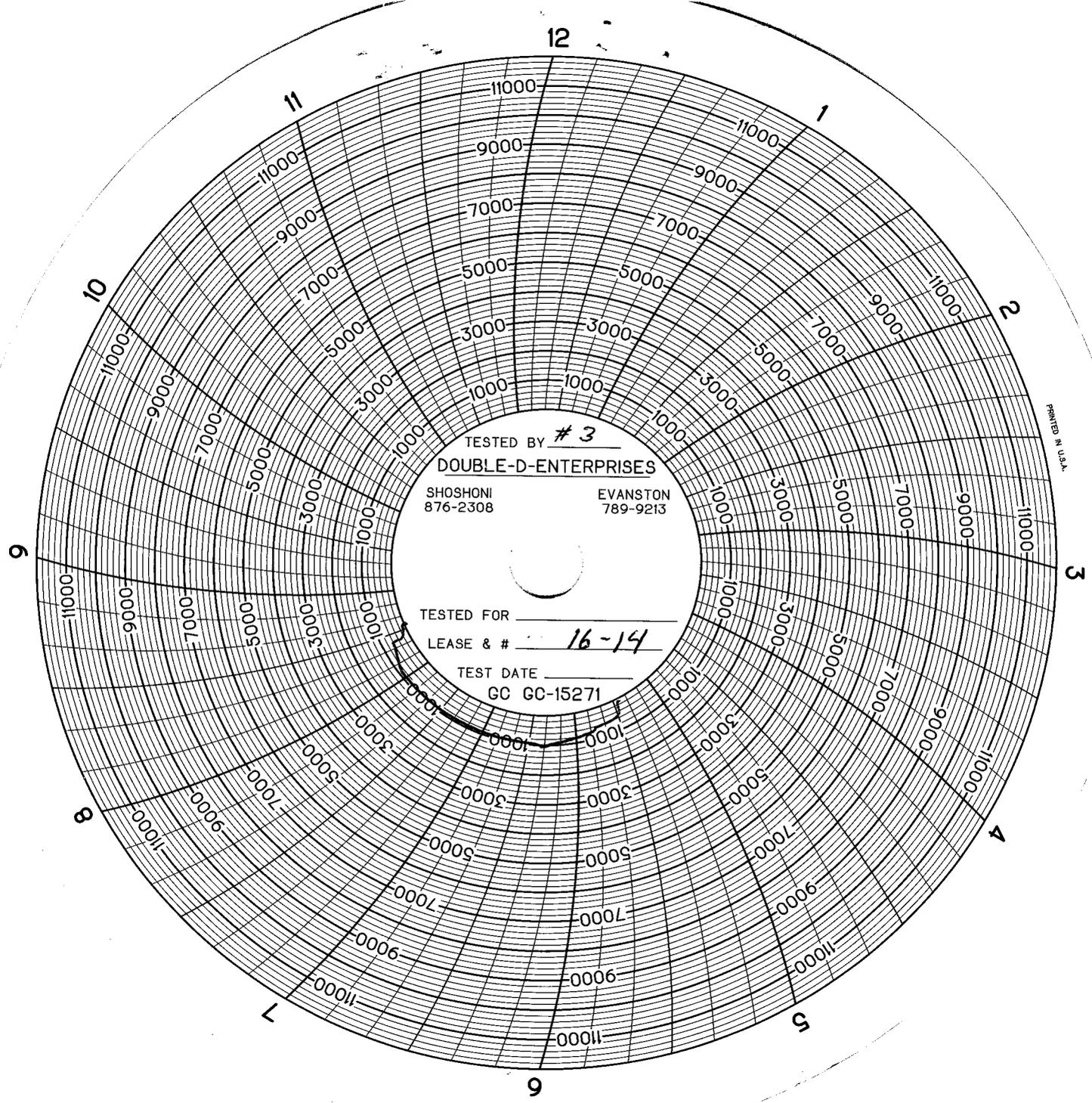
EVANSTON  
789-9213

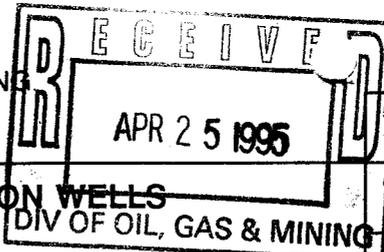
TESTED FOR \_\_\_\_\_

LEASE & # 16-14

TEST DATE \_\_\_\_\_

GC GC-15271





5. Lease Designation and Serial Number:

6. If Indian, Allottee or Tribe Name:

7. Unit Agreement Name:

**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.

Anschutz Ranch East

1. Type of Well: OIL  GAS  OTHER:

8. Well Name and Number:

ARE W16-14

2. Name of Operator:

Amoco Production Company

9. API Well Number:

43-043-30096

3. Address and Telephone Number:

P.O. Box 800, Room 2195, Denver, CO 80201

10. Field and Pool, or Wildcat:

West Nugget

4. Location of Well

Footages 2137' FSL x 686' FWL

County: Summit

QQ, Sec., T., R., M.: NW SW Sec. 16-T4N-R8E

State: Utah

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

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

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

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

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

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

Date of work completion January 19, 1995

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

\* Must be accompanied by a cement verification report.

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

Amoco Production Company converted injector well ARE W16-14 to a producer effective January 19, 1995. This required no procedure work it only required flipping a switch so the well would start producing.

If you need any additional information, please call Rick Ross (Engineer) at (303) 830-4952 or Sheryl Lebsack (303) 830-5523.

13. Name & Signature: Sheryl Lebsack

Title: Regulatory Analyst

Date: 4/17/95

(This space for State use only)

**RECEIVED**  
NOV 30 1995  
DIV. OF OIL, GAS & MINING

5. Lease Designation and Serial Number:  
FEE  
6. If Indian, Allottee or Tribe Name:

**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.

7. Unit Agreement Name:  
Anschutz Ranch East

1. Type of Well: OIL  GAS  OTHER:

8. Well Name and Number:  
Anschutz Ranch East #W16-14

2. Name of Operator: Amoco Production Company

9. API Well Number:  
43-043-30096

3. Address and Telephone Number:  
P.O. Box 800 Room 1720A Denver, CO 80201

10. Field and Pool, or Wildcat:  
Anschutz Ranch East

4. Location of Well  
Footages: 2137' FSL x 686' FWL  
QQ, Sec., T., R., M.: Sec 16 T4N-R8E

County: Summit  
State: Utah

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

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

- Abandonment
- Casing Repair
- Change of Plans
- Conversion to Injection
- Fracture Treat
- Multiple Completion
- Other \_\_\_\_\_
- New Construction
- Pull or Alter Casing
- Recompletion
- Shoot or Acidize
- Vent or Flare
- Water Shut-Off

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

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

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

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

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

\* Must be accompanied by a cement verification report.

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

Amoco Production Company requests authorization to allow gas injection into the subject well. We desire to expand existing gas injection operations to increase ultimate recovery in the Nugget formation.

If you require additional information, please contact Raelene Krcil @ (303) 830-5399.

13. Name & Signature: Raelene K. Krcil Title: Regulatory Analyst Date: 11/28/95

(This space for State use only)

**APPROVED BY THE STATE  
OF UTAH DIVISION OF  
OIL, GAS, AND MINING  
DATE: 12-28-95  
BY: [Signature]**

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

INJECTION WELL - PRESSURE TEST

Test Date: <u>11/13/97</u>	Well Owner/Operator: <u>AMOCO ROCKMONT CO.</u>	
Disposal Well: _____	Enhanced Recovery Well: _____	Other: <u>GIW</u>
API No.: <u>43-043-30096</u>	Well Name/Number: <u>ANSCHUTZ RANCH EAST W 16-14</u>	
Section: <u>16</u>	Township: <u>4N</u>	Range: <u>8E</u>

Initial Conditions:

Tubing - Rate: Shut in Pressure: 3500 psi

Casing/Tubing Annulus - Pressure: 175 psi

Conditions During Test:

<u>Time (Minutes)</u>	<u>Annulus Pressure</u>	<u>Tubing Pressure</u>
0	<u>1250</u>	<u>3500</u>
5	<u>1250</u>	<u>3500</u>
10	<u>1250</u>	<u>3500</u>
15	<u>1250</u>	<u>3500</u>
20	_____	_____
25	_____	_____
30	_____	_____

Results: Pass/Fail

Conditions After Test:

Tubing Pressure: 3500 psi

Casing/Tubing Annulus Pressure: 175 psi

REMARKS:

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\_\_\_\_\_  
Operator Representative

JIM THOMPSON Date: 11/13/97  
DOG M Witness

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

5. Lease Designation and Serial Number:  
**None**

6. If Indian, Allottee or Tribe Name:

7. Unit Agreement Name:  
**Anschutz Ranch East**

8. Well Name and Number:  
**16-14**

9. API Well Number:  
**43-043-30096**

10. Field and Pool, or Wildcat:  
**ANSCHUTZ RANCH EAST**

**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:  
**Amoco Production Company**

3. Address and Telephone Number:  
**P. O. Box 800, Denver CO 80201, Suite 1033**

4. Location of Well  
Footages: **2137' FSL & 6862' FWL** County: **SUMMIT**  
QQ, Sec., T.,R.,M.: **SEC. 16, T4N, R8E** State: **UTAH**

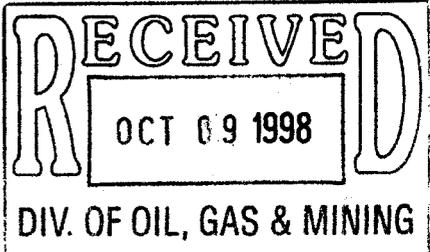
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT (Submit in Duplicate)	SUBSEQUENT REPORT (Submit Original Form Only)
<input type="checkbox"/> Abandonment <input type="checkbox"/> Casing Repair <input type="checkbox"/> Change of Plans <input type="checkbox"/> Conversion to Injection <input type="checkbox"/> Fracture Treat <input type="checkbox"/> Multiple Completion <input type="checkbox"/> Other _____  Approximate date work will start _____	<input type="checkbox"/> Abandonment* <input type="checkbox"/> Casing Repair <input type="checkbox"/> Change of Plans <input type="checkbox"/> Conversion to Injection <input type="checkbox"/> Fracture Treat <input checked="" type="checkbox"/> Other <b>Conversion from injection to producing</b>  Date of work completion <b>08/20/98</b>  <small>Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form. * Must be accompanied by a cement verification report.</small>
<input type="checkbox"/> New Construction <input type="checkbox"/> Pull or Alter Casing <input type="checkbox"/> Recompletion <input type="checkbox"/> Shoot or Acidize <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"/> Shoot or Acidize <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 subject well was converted from an injection well to a producing well on 08/20/98

13. Signature: W. E. Hadlock Title: **Regulatory Analyst** Date: **10/07/98**

(This space for State use only)



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

FORM 9

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER:
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
		7. UNIT or CA AGREEMENT NAME: See Attached
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>See Attached</u>	8. WELL NAME and NUMBER: See Attached	
2. NAME OF OPERATOR: Amoco Production Company		9. API NUMBER: Attached
3. ADDRESS OF OPERATOR: 501 Westlake Park Blvd, CITY Houston STATE TX ZIP 77079	PHONE NUMBER: (281) 366-5328	10. FIELD AND POOL, OR WILDCAT: See Attached
4. LOCATION OF WELL FOOTAGES AT SURFACE: <u>See Attached</u>		COUNTY: <u>See Attached</u>
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:		STATE: <u>UTAH</u>

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate)  Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only)  Date of work completion: _____	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>Operator Name Change</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Amoco Production Company proposes to change its name to BP America Production Company, effective December 31, 2001. Mailing addresses and designated agents shall remain the same.

Attached to this sundry is a listing of wells currently operated by Amoco Production Company. This list includes all wells with the exception of those wells which have a plugged or D&A status.

Also attached for the Board's file is a copy of the Board Resolution approving the name change.

NAME (PLEASE PRINT) <u>Alan Wood</u>	TITLE <u>Regulatory Engineer</u>
SIGNATURE	DATE <u>12/11/2001</u>

(This space for State use only)

**RECEIVED**

DEC 13 2001

DIVISION OF  
OIL, GAS AND MINING

UNITED STATES OF AMERICA     §  
STATE OF TEXAS                 §  
COUNTY OF HARRIS           §  
CITY OF HOUSTON             §

**CERTIFICATE**

M. S. Haskins, of lawful age, first being duly sworn on oath, deposes and says:

1. That she is the duly elected, qualified and acting Assistant Secretary of Amoco Production Company, a corporation organized and existing under the laws of the State of Delaware, U.S.A.;

2. That on November 12, 2001, by consent action of the Board of Directors of Amoco Production Company (hereinafter referred to as "Company"), the following resolutions were adopted:

WHEREAS, in connection with BP America Inc.'s ("BP") integration of Atlantic Richfield Company ("ARCO") and Vastar Resources, Inc. ("Vastar"), BP has elected to reorganize, consolidate and merge its upstream onshore Lower 48 assets into a single legal entity to align BP's legal structure with its business organization and to improve operating efficiencies; and

WHEREAS, BP desires Amoco Production Company ("Company") to be such single legal entity for the purposes of such reorganization, consolidation and merger; and

WHEREAS such reorganization, consolidation and merger shall be accomplished by December 31, 2001 pursuant to a Reorganization Agreement ("Agreement") by and between ARCO and BP Company North America Inc. ("BP Company NA"), the parent of Company, resulting in ARCO's upstream onshore Lower 48 assets being transferred to Company and Vastar being merged into Company; and

WHEREAS, pursuant to such Agreement, asset, stock and liability transfers will occur in consideration for Class B common stock of BP Company NA and Company's agreement to assume all obligations and indemnify ARCO for all past and future liabilities relating to such transfers; and

WHEREAS, in connection with such reorganization, Company desires to change its name to BP America Production Company, effective December 31, 2001 with corporate seal as follows; and



WHEREAS all officers and directors of Company will remain unchanged.

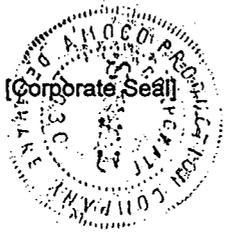
NOW, THEREFORE, BE IT,

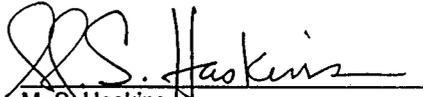
RESOLVED, Company will accept asset, stock and liability transfers effective December 31, 2001 pursuant to the Agreement and will assume all obligations and indemnify ARCO for all past or future liabilities relating to such transfers.

FURTHER RESOLVED, Company will change its name and corporate seal to BP America Production Company, effective December 31, 2001 and all officers and directors will remain unchanged.

3. That the aforesaid resolutions have not been amended, rescinded, or annulled, but remain in full force and effect on the date hereof.

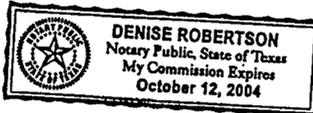
EXECUTED in the City of Houston, State of Texas, on this the 13 day of November, 2001.

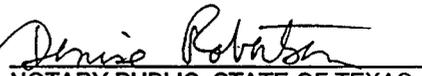


  
M. S. Haskins

SUBSCRIBED and sworn to before me this 13 day of November, 2001.

(Notary Seal)



  
NOTARY PUBLIC, STATE OF TEXAS

API Well Number	Operator	Well Name	Well Type	Well Status	Field Name	Sec	Twp-Rng
43-043-30096-00-00	AMOCO PRODUCTION CO	ANSCHUTZ RANCH EAST W16-14	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	16	4N-8E
43-043-30106-00-00	AMOCO PRODUCTION CO	ANSCHUTZ RANCH EAST 34-2	SWD	Active Well	ANSCHUTZ RANCH EAST	34	4N-7E
43-043-30123-00-00	AMOCO PRODUCTION CO	ARE W20-08	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	20	4N-8E
43-043-30129-00-00	AMOCO PRODUCTION CO	ARE 29-04ST1	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	29	4N-8E
43-043-30130-00-00	AMOCO PRODUCTION CO	ANSCHUTZ RANCH EAST E21-14	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	21	4N-8E
43-043-30135-00-00	AMOCO PRODUCTION CO	ANSCHUTZ RANCH EAST W21-04	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	21	4N-8E
43-043-30136-00-00	AMOCO PRODUCTION CO	ARE W29-02	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	29	4N-8E
43-043-30138-00-00	AMOCO PRODUCTION CO	ANSCHUTZ RANCH EAST W16-06	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	16	4N-8E
43-043-30139-00-00	AMOCO PRODUCTION CO	ISLAND RANCHING C-1	SWD	Active Well	ANSCHUTZ RANCH EAST	26	4N-7E
43-043-30143-00-00	AMOCO PRODUCTION CO	CHAMPLIN 372 AMOCO C 1	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	23	4N-7E
43-043-30145-00-00	AMOCO PRODUCTION CO	ARE W20-14	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	20	4N-8E
43-043-30148-00-00	AMOCO PRODUCTION CO	ARE W20-16	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	20	4N-8E
43-043-30154-00-00	AMOCO PRODUCTION CO	ARE W29-12	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	29	4N-8E
43-043-30156-00-00	AMOCO PRODUCTION CO	ARE W30-16	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	30	4N-8E
43-043-30157-00-00	AMOCO PRODUCTION CO	ARE W36-16	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	36	4N-7E
43-043-30159-00-00	AMOCO PRODUCTION CO	ANSCHUTZ RANCH EAST W20-06	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	20	4N-8E
43-043-30161-00-00	AMOCO PRODUCTION CO	ISLAND RANCHING D-1	Gas Well	Shut_In	WEBER FORMATION	14	4N-7E
43-043-30162-00-00	AMOCO PRODUCTION CO	ARE W32-04	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	32	4N-8E
43-043-30164-00-00	AMOCO PRODUCTION CO	ARE W31-08	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	31	4N-8E
43-043-30165-00-00	AMOCO PRODUCTION CO	ANSCHUTZ RANCH EAST W31-04 E	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	31	4N-8E
43-043-30167-00-00	AMOCO PRODUCTION CO	ARE W36-08	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	36	4N-7E
43-043-30168-00-00	AMOCO PRODUCTION CO	CHAMPLIN 387 B1A	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	9	3N-7E
43-043-30170-00-00	AMOCO PRODUCTION CO	CHAMPLIN 372 D-1	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	23	4N-7E
43-043-30176-00-00	AMOCO PRODUCTION CO	ANSCHUTZ RANCH EAST W17-16	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	17	4N-8E
43-043-30183-00-00	AMOCO PRODUCTION CO	ARE W30-08	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	30	4N-8E
43-043-30185-00-00	AMOCO PRODUCTION CO	ANSCHUTZ RANCH EAST W30-14	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	30	4N-8E
43-043-30188-00-00	AMOCO PRODUCTION CO	ARE W01-06	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	1	3N-7E
43-043-30190-00-00	AMOCO PRODUCTION CO	ANSCHUTZ RANCH EAST W31-12	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	31	4N-8E
43-043-30204-00-00	AMOCO PRODUCTION CO	ANSCHUTZ RANCH EAST W19-16	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	19	4N-8E
43-043-30209-00-00	AMOCO PRODUCTION CO	ARE W1-02	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	1	3N-7E
43-043-30215-00-00	AMOCO PRODUCTION CO	ARE W30-10	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	30	4N-8E
43-043-30216-00-00	AMOCO PRODUCTION CO	ARE W30-15	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	30	4N-8E
43-043-30217-00-00	AMOCO PRODUCTION CO	ARE W31-06	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	31	4N-8E
43-043-30218-00-00	AMOCO PRODUCTION CO	ARE W30-02	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	30	4N-8E



**OPERATOR CHANGE WORKSHEET**

**ROUTING**

1. GLH		4-KAS
2. CDW	✓	5-LP
3. JLT		6-FILE

Enter date after each listed item is completed

Change of Operator (Well Sold)

Designation of Agent

**X Operator Name Change**

Merger

The operator of the well(s) listed below has changed, effective: **12-31-2001**

<b>FROM: (Old Operator):</b>
AMOCO PRODUCTION COMPANY
Address: 501 WESTLAKE PARK BLVD
HOUSTON, TX 77079
Phone: 1-(281)-366-5328
Account N0050

<b>TO: (New Operator):</b>
BP AMERICA PRODUCTION COMPANY
Address: 501 WESTLAKE PARK BLVD
HOUSTON, TX 77079
Phone: 1-(281)-366-5328
Account N1990

**CA No.**

**Unit: ANSCHUTZ RANCH EAST**

**WELL(S)**

NAME	API NO.	ENTITY NO.	SEC. TWN RNG	LEASE TYPE	WELL TYPE	WELL STATUS
ANSCHUTZ RANCH EAST W01-06	43-043-30188	4540	01-3N-7E	FEE	GW	P
ANSCHUTZ RANCH EAST W01-02	43-043-30209	4540	01-3N-7E	FEE	GW	P
ANSCHUTZ RANCH EAST W01-04	43-043-30270	4540	01-3N-7E	FEE	GW	S
ANSCHUTZ RANCH EAST W01-12	43-043-30271	4540	01-3N-7E	FEE	GW	S
ANSCHUTZ RANCH EAST W12-04	43-043-30283	4540	02-3N-7E	FEE	GW	P
ANSCHUTZ RANCH EAST W11-1	43-043-30277	4540	11-3N-7E	FEE	GW	S
ANSCHUTZ RANCH EAST W30-13	43-043-30279	4540	25-4N-7E	FEE	GW	S
ANSCHUTZ RANCH EAST W36-08	43-043-30167	4540	36-4N-7E	FEE	GW	P
ANSCHUTZ RANCH EAST W36-16	43-043-30157	4540	36-4N-7E	FEE	GW	P
ANSCHUTZ RANCH EAST W36-10	43-043-30227	4540	36-4N-7E	FEE	GW	P
ANSCHUTZ RANCH EAST W36-14	43-043-30255	4540	36-4N-7E	FEE	GW	S
ANSCHUTZ RANCH EAST W16-06	43-043-30138	4540	16-4N-8E	FEE	GW	S
ANSCHUTZ RANCH EAST W16-12	43-043-30231	4540	16-4N-8E	FEE	GW	S
ANSCHUTZ RANCH EAST W16-14	43-043-30096	4540	16-4N-8E	FEE	GW	S
ANSCHUTZ RANCH EAST W17-16	43-043-30176	4540	17-4N-8E	FEE	GW	S
ANSCHUTZ RANCH EAST W19-16	43-043-30204	4540	19-4N-8E	FEE	GW	S
ANSCHUTZ RANCH EAST W20-08	43-043-30123	4540	20-4N-8E	FEE	GW	P
ANSCHUTZ RANCH EAST W20-14	43-043-30145	4540	20-4N-8E	FEE	GW	P
ANSCHUTZ RANCH EAST W20-06	43-043-30159	4540	20-4N-8E	FEE	GW	S
ANSCHUTZ RANCH EAST W20-16	43-043-30148	4540	20-4N-8E	FEE	GW	P

**OPERATOR CHANGES DOCUMENTATION**

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 12/13/2001
2. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 12/13/2001



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

FORM 9

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER: <b>FEE</b>
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: <b>NA</b>
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		7. UNIT or CA AGREEMENT NAME: <b>ANSCHUTZ RANCH EAST</b>
2. NAME OF OPERATOR: <b>BP AMERICA PRODUCTION COMPANY SUITE A</b>		8. WELL NAME and NUMBER: <b>ARE W16-14</b>
3. ADDRESS OF OPERATOR: <b>1013 CHEYENNE DR. CITY EVANSTON STATE WY ZIP 82930</b>		9. API NUMBER: <b>4304330096</b>
4. LOCATION OF WELL FOOTAGES AT SURFACE: <b>2137 FSL x 686 FWL</b>		10. FIELD AND POOL, OR WILDCAT: <b>ANSCHUTZ RANCH EAST</b>
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>NWSW 16 4N 8E</b>		COUNTY: <b>SUMMIT</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: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input checked="" type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The ARE W16-14 is shut in and has not been plugged and abandoned due to potential for sidetrack or deep drill. BP's plan is to hold these wells in a Temporarily Abandoned status until this potential is verified or eliminated. Upon elimination of potential, the wells will be plugged and abandoned. As for mechanical integrity: These wells all have packers installed and casing pressure is monitored by our field personnel. The wellhead valves are also on a regular PM for greasing and testing.

Please call Kris Lee at 303-423-5749 or Clark Lawler at 307-783-2406 if you have questions.

COPY SENT TO OPERATOR  
Date: 11-17-03  
Initials: CHN

**RECEIVED**  
**MAR 27 2003**

**THIS SUNDRY IS BEING RETURNED; INSUFFICIENT DATA WAS SUBMITTED TO APPROVE THE REQUESTED ACTION (see attached sheet).**

*[Signature]*  
November 19, 2003  
Utah Division of Oil, Gas and Mining

NAME (PLEASE PRINT) <u>Kristina A. Lee</u>	TITLE <u>Regulatory Specialist</u>
SIGNATURE <i>[Signature]</i>	DATE <u>3/17/2003</u>

(This space for State use only)

## ***INFORMATION REQUIRED TO EXTEND SI/TA OF WELL***

Well Name and Number: ARE W16-14  
API Number: 43-043-30096  
Operator: Merit Energy Company  
Reference Document: Original Sundry dated March 17, 2003, received by  
DOGGM on March 27, 2003

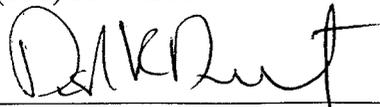
The well has been Shut-in/Temporarily Abandoned for 7 years 11 months. Insufficient information was submitted to the Division to approve the referenced well for continued Shut-in or Temporary Abandonment (SI/TA). The following requirements of R649-3-36 have not been met with this request for SI/TA approval.

1. The length of time the well is expected to be SI/TA (R649-3-36-1.2), and
2. An explanation and supporting data if necessary, for showing the well has integrity, meaning that the casing, cement, equipment condition, static fluid level, pressure, existence or absence of Underground Sources of Drinking Water and other factors do not make the well a risk to public health and safety or the environment. (R649-3-36-1.3)

Submitting the information suggested below may help show well integrity and may help qualify your well for extended SI/TA. **Note: As of July 1, 2003, wells in violation of the SI/TA rule R649-3-36 may be subject to full cost bonding (R649-3-1-4.2, 4.3).**

1. Wellbore diagram and;
2. Copy of recent casing pressure test and/or;
3. Current pressures on the wellbore (tubing pressure, casing pressure, and casing/casing annuli pressure) showing wellbore has integrity and;
4. Fluid level in the wellbore and;
5. An explanation of how the submitted information proves integrity.

If the required information is not received within 30 days of the date of this notice, further actions may be initiated. If you have any questions concerning this matter, please contact me at (801) 538-5281.



\_\_\_\_\_  
Dustin K. Doucet  
Petroleum Engineer

\_\_\_\_\_  
November 19, 2003  
Date

**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.

<b>1. TYPE OF WELL</b> OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>See Attached</u>		5. LEASE DESIGNATION AND SERIAL NUMBER:
<b>2. NAME OF OPERATOR:</b> BP America Production Company		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
<b>3. ADDRESS OF OPERATOR:</b> 501 WestLake Park Blv, CITY Houston    STATE TX    ZIP 77079		7. UNIT or CA AGREEMENT NAME: See Attached
PHONE NUMBER: (281) 366-2000		8. WELL NAME and NUMBER: See Attached
<b>4. LOCATION OF WELL</b> FOOTAGES AT SURFACE: See Attached		9. API NUMBER: Attached
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:		10. FIELD AND POOL, OR WILDCAT: See Attached
COUNTY: See Attached		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"/> <b>NOTICE OF INTENT</b> (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"/> <b>SUBSEQUENT REPORT</b> (Submit Original Form Only)  Date of work completion: _____	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input 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 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.

BP America Production Company, effective May 1, 2003, has transferred its interest in the attached list of properties to :

Merit Energy Company  
13727 Noel Road, Suite 500  
Dallas, TX 75240

Transfer of operations is effective July 1, 2003.

By Merit Energy Company

Name Fred N. Dign Title V.P.

Signature [Signature] Date 7/1/03

BP America Production Company, NAME (PLEASE PRINT) David G. Peterson TITLE Attorney-In-Fact

SIGNATURE [Signature] DATE 6/26/03

(This space for State use only)

**RECEIVED**  
**JUL 03 2003**

BP OPERATED PROPERTIES TRANSFERRED TO MERIT ENERGY COMPANY

API Well Number	Operator	Well Name	Well Type	Well Status	Field Name	County Name	Location (Twp-Rng)	Section	Qtr/Qtr	Ft. NS	NS	Ft. EW	EW
43-043-30096-00-00	BP AMERICA PRODUCTION CO	ARE W16-14	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	16	NWSW	2137	S	686	W
43-043-30106-00-00	BP AMERICA PRODUCTION CO	ARE 34-2	Water Disposal	Active Well	ANSCHUTZ RANCH	SUMMIT	4N-7E	34	NWNW	1036	N	1100	W
43-043-30123-00-00	BP AMERICA PRODUCTION CO	ARE W20-08	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	20	SENE	2202	N	1592	E
43-043-30129-00-00	BP AMERICA PRODUCTION CO	ARE 29-04ST1	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	29	NWNW	627	N	435	W
43-043-30130-00-00	BP AMERICA PRODUCTION CO	ARE E21-14	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	21	NWSW	2365	S	200	W
43-043-30135-00-00	BP AMERICA PRODUCTION CO	ARE W21-04	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	21	NWNW	1063	N	401	W
43-043-30136-00-00	BP AMERICA PRODUCTION CO	ARE W29-02	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	29	NWNE	662	N	2460	E
43-043-30138-00-00	BP AMERICA PRODUCTION CO	ARE W16-06	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	16	SENE	1314	N	618	E
43-043-30139-00-00	BP AMERICA PRODUCTION CO	ISLAND RANCHING C-1	Water Disposal	Active Well	ANSCHUTZ RANCH	SUMMIT	4N-7E	26	SWSE	1324	S	1722	E
43-043-30143-00-00	BP AMERICA PRODUCTION CO	CHAMPLIN 372 AMOCO C 1	Gas Well	Shut_In	ANSCHUTZ RANCH	SUMMIT	4N-7E	23	NWNW	860	N	536	W
43-043-30145-00-00	BP AMERICA PRODUCTION CO	ARE W20-14	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	20	NWSW	1518	S	1283	W
43-043-30148-00-00	BP AMERICA PRODUCTION CO	ARE W20-16	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	20	SWSE	257	S	1640	E
43-043-30154-00-00	BP AMERICA PRODUCTION CO	ARE W29-12	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	29	NWSW	2204	S	22	W
43-043-30156-00-00	BP AMERICA PRODUCTION CO	ARE W30-16	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	30	NESE	1345	S	968	E
43-043-30157-00-00	BP AMERICA PRODUCTION CO	ARE W36-16	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	SUMMIT	4N-7E	36	SESE	890	S	447	E
43-043-30159-00-00	BP AMERICA PRODUCTION CO	ARE W20-06	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	20	NWNW	1291	N	936	W
43-043-30162-00-00	BP AMERICA PRODUCTION CO	ARE W32-04	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	32	NWNW	642	N	791	W
43-043-30164-00-00	BP AMERICA PRODUCTION CO	ARE W31-08	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	31	NWNE	468	N	2201	E
43-043-30165-00-00	BP AMERICA PRODUCTION CO	ARE W31-04E	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	31	NWNW	111	N	737	W
43-043-30167-00-00	BP AMERICA PRODUCTION CO	ARE W36-08	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	SUMMIT	4N-7E	36	SENE	1641	N	1183	E
43-043-30168-00-00	BP AMERICA PRODUCTION CO	CHAMPLIN 387 B1A	Gas Well	Shut_In	ANSCHUTZ RANCH	SUMMIT	3N-7E	9	SWNW	1837	N	1286	W
43-043-30170-00-00	BP AMERICA PRODUCTION CO	CHAMPLIN 372 D-1	Gas Well	Producing Well	ANSCHUTZ RANCH	SUMMIT	4N-7E	23	NESE	2170	S	680	E
43-043-30176-00-00	BP AMERICA PRODUCTION CO	ARE W17-16	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	17	NWSE	1765	S	1444	E
43-043-30183-00-00	BP AMERICA PRODUCTION CO	ARE W30-08	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	30	SENE	2109	N	665	E
43-043-30185-00-00	BP AMERICA PRODUCTION CO	ARE W30-14	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	30	SESW	1195	S	1405	W
43-043-30188-00-00	BP AMERICA PRODUCTION CO	ARE W01-06	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	SUMMIT	3N-7E	1	SENW	1777	N	1666	W
43-043-30190-00-00	BP AMERICA PRODUCTION CO	ARE W31-12	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	31	SWNW	1778	N	640	W
43-043-30204-00-00	BP AMERICA PRODUCTION CO	ARE W19-16	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	19	SWSE	1229	S	1350	E
43-043-30209-00-00	BP AMERICA PRODUCTION CO	ARE W01-02	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	SUMMIT	3N-7E	1	NENW	386	N	2013	W
43-043-30215-00-00	BP AMERICA PRODUCTION CO	ARE W30-10	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	30	NWSE	2230	S	2432	E
43-043-30216-00-00	BP AMERICA PRODUCTION CO	ARE W30-15	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	30	SESW	626	S	2848	E
43-043-30217-00-00	BP AMERICA PRODUCTION CO	ARE W31-06	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	31	SENW	1397	N	2181	W
43-043-30218-00-00	BP AMERICA PRODUCTION CO	ARE W30-02	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	30	NWNE	715	N	2182	E
43-043-30220-00-00	BP AMERICA PRODUCTION CO	ARE W20-12	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	20	NWSW	2531	S	7	W
43-043-30226-00-00	BP AMERICA PRODUCTION CO	ARE E28-06	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	28	SENW	1900	N	1652	W
43-043-30227-00-00	BP AMERICA PRODUCTION CO	ARE W36-10	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	SUMMIT	4N-7E	36	NESW	2315	S	3185	E
43-043-30228-00-00	BP AMERICA PRODUCTION CO	ARE W20-02	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	20	NWNE	319	N	2000	E
43-043-30229-00-00	BP AMERICA PRODUCTION CO	ARE W20-10	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	20	SENW	2560	N	2567	W
43-043-30231-00-00	BP AMERICA PRODUCTION CO	ARE W16-12	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	16	SWNW	2756	S	454	W
43-043-30238-00-00	BP AMERICA PRODUCTION CO	ARE W20-04	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	20	NWNW	702	N	414	W
43-043-30248-00-00	BP AMERICA PRODUCTION CO	ARE W30-12A	Gas Injection	Inactive Well	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	30	NWSW	1886	S	47	W
43-043-30250-00-00	BP AMERICA PRODUCTION CO	ARE W29-06A	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	29	SENW	1513	N	1548	W
43-043-30251-00-00	BP AMERICA PRODUCTION CO	ARE W29-14A	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	29	NWSW	1786	S	795	W
43-043-30255-00-00	BP AMERICA PRODUCTION CO	ARE W36-14	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	SUMMIT	4N-7E	36	SESW	901	S	1780	W
43-043-30257-00-00	BP AMERICA PRODUCTION CO	ARE E28-12	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	28	NWSW	1994	S	806	W
43-043-30265-00-00	BP AMERICA PRODUCTION CO	ARE W2-10	Gas Injection	Inactive Well	ANSCHUTZ RANCH EAST	SUMMIT	3N-7E	2	NWSE	1959	S	1463	E
43-043-30270-00-00	BP AMERICA PRODUCTION CO	ARE W01-04	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	SUMMIT	3N-7E	1	SWNW	697	N	465	W
43-043-30271-00-00	BP AMERICA PRODUCTION CO	ARE W01-12	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	SUMMIT	3N-7E	1	NWSW	2072	S	1669	W
43-043-30272-00-00	BP AMERICA PRODUCTION CO	ARE W19-08	Gas Injection	Inactive Well	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	19	SENE	2227	N	301	E

**BP OPERATED PROPERTIES TRANSFERRED TO MERIT ENERGY COMPANY**

43-043-30273-00-00	BP AMERICA PRODUCTION CO	ARE W30-06	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	30 SENW	2393 S	1645 W
43-043-30277-00-00	BP AMERICA PRODUCTION CO	ARE W11-1	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	SUMMIT	3N-7E	11 NENE	533 N	1486 E
43-043-30279-00-00	BP AMERICA PRODUCTION CO	ARE W30-13	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	SUMMIT	4N-7E	25 SESE	597 S	382 E
43-043-30280-00-00	BP AMERICA PRODUCTION CO	ARE W31-05	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	31 SWNW	2361 N	282 E
43-043-30283-00-00	BP AMERICA PRODUCTION CO	ARE W12-04	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	SUMMIT	3N-7E	2 SESE	373 S	865 E
43-043-30286-00-00	BP AMERICA PRODUCTION CO	ARE W20-09	Gas Well	Producing Well	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	20 SENE	2360 N	430 E
43-043-30291-00-00	BP AMERICA PRODUCTION CO	ARE W20-03	Gas Well	Shut_In	ANSCHUTZ RANCH EAST	SUMMIT	4N-8E	20 SESW	641 S	1810 W



# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

1594 West North Temple, Suite 1210

PO Box 145801

Salt Lake City, Utah 84114-5801

(801) 538-5340 telephone

(801) 359-3940 fax

(801) 538-7223 TTY

[www.nr.utah.gov](http://www.nr.utah.gov)

Michael O. Leavitt  
Governor

Robert L. Morgan  
Executive Director

Lowell P. Braxton  
Division Director

August 26, 2003

Bruce Williams  
BP America Production Company  
501 WestLake Park Blvd  
Houston, TX 77079

Subject: Notification of Sale or Transfer of Fee Lease Interest

Dear Mr. Williams:

The Division has processed your request for an operator change from BP America Production Company to Merit Energy Company effective July 1, 2003 for the attached list of fee wells.

Utah Administrative Code Rule R649-2-10 states: "The owner of a lease shall provide notification to any person with an interest in such lease, when all or part of that interest in the lease is sold or transferred".

This letter is written to advise you of your responsibility to notify all individuals with an interest in these leases (royalty interest and working interest) of the changer. Please provide written documentation of this notification to:

Utah Royalty Owners Association  
PO Box 1292  
Roosevelt, Utah 84066

Your assistance in this matter is appreciated.

Sincerely,

Earlene Russell  
Engineering Technician

Attachment

cc: Merit Energy Company  
Utah Royalty Owners Association



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: n/a

8. **Federal and Indian Units:**  
The BLM or BIA has approved the successor of unit operator for wells listed on: n/a

9. **Federal and Indian Communization Agreements ("CA"):**  
The BLM or BIA has approved the operator for all wells listed within a CA on: n/a

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: n/a

**DATA ENTRY:**

- 1. Changes entered in the **Oil and Gas Database** on: 8/26/2003
- 2. Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 8/26/2003
- 3. Bond information entered in RBDMS on: 8/26/2003
- 4. Fee wells attached to bond in RBDMS on: 8/26/2003

**STATE WELL(S) BOND VERIFICATION:**

- 1. State well(s) covered by Bond Number: n/a

**FEDERAL WELL(S) BOND VERIFICATION:**

- 1. Federal well(s) covered by Bond Number: n/a

**INDIAN WELL(S) BOND VERIFICATION:**

- 1. Indian well(s) covered by Bond Number: n/a

**FEE WELL(S) BOND VERIFICATION:**

- 1. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number 103912218
- 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

**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: 8/26/2003

**COMMENTS:**

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



State of Utah

Department of  
Natural Resources

Division of  
Oil, Gas & Mining

ROBERT L. MORGAN  
*Executive Director*

LOWELL P. BRAXTON  
*Division Director*

MICHAEL O. LEAVITT  
*Governor*

OLENE S. WALKER  
*Lieutenant Governor*

January 22, 2004

CERTIFIED MAIL #7002 0510 0003 8602 4798

Lance Taylor  
Merit Energy Company  
13727 Noel Road, Suite 500  
Dallas, TX 75240-7312

Re: Extended Shut-in and Temporary Abandoned Well Requirements for Fee or State Leases.

Dear Mr. Taylor:

Merit Energy Company, as of January 2004, has twenty-four (24) Fee Lease Wells (see attachment A) that are currently in non-compliance for extended shut-in or temporary abandonment status. This includes twenty (20) Fee Lease Wells with returned Sundry Notices and attached requirement sheet dated November 19, 2003. Wells SI/TA beyond twelve (12) consecutive months requires filing a Sundry Notice (R649-3-36-1). Wells with five (5) years non-activity or non-productivity shall be plugged, unless the Division grants approval for extended shut-in time upon a showing of good cause by the operator (649-3-36-1.3.3). For extended SI/TA consideration the operator shall provide the Utah Division of Oil, Gas & Mining with the following:

1. Reasons for SI/TA of the well (R649-3-36-1.1).
2. The length of time the well is expected to be SI/TA (R649-3-36-1.2), and
3. An explanation and supporting data if necessary, for showing the well has integrity, meaning that the casing, cement, equipment condition, static fluid level, pressure, existence or absence of Underground Sources of Drinking Water and other factors do not make the well a risk to public health and safety or the environment (R649-3-36-1.3).

Page 2  
January 22, 2004  
Lance Taylor

Submitting the information suggested below may help show well integrity and may help qualify your well for extended SI/TA. **Note: As of July 1, 2003, wells in violation of the SI/TA rule R649-3-36 may be subject to full cost bonding (R649-3-1-4.2, 4.3).**

1. Wellbore diagram, and
2. Copy of recent casing pressure test, and
3. Current pressures on the wellbore (tubing pressure, casing pressure, and casing/casing annuli pressure) showing wellbore has integrity, and
4. Fluid level in the wellbore, and
5. An explanation of how the submitted information proves integrity.

If the required information is not received within 30 days of the date of this notice, further actions may be initiated. If you have any questions concerning this matter, please contact me at (801) 538-5281.

Sincerely,



Dustin K. Doucet  
Petroleum Engineer

jc  
cc: John Baza  
Well File

	Well Name	API	Lease Type	Years Inactive
1	ARE W20-06	43-043-30159	Fee	1 Year 2 Months
2	ARE W31-04E	43-043-30165	Fee	1 Year 3 Months
3	ARE W36-10	43-043-30227	Fee	1 Year 3 Months
4	ARE W36-08	43-043-30167	Fee	1 Year 7 Months

Wells with returned Sundry Notices and attached requirement sheet dated November 19, 2003

1	ARE W21-04	43-043-30135	Fee	1 Year 10 Months
2	Champlin 372 Amoco C1	43-043-30143	Fee	1 Year 11 Months
3	ARE W16-06	43-043-30138	Fee	1 Year 11 Months
4	ARE W01-12	43-043-30271	Fee	2 Years 4 Months
5	ARE W30-02	43-043-30218	Fee	3 Years 2 Months
6	ARE W36-14	43-043-30255	Fee	4 Years 5 Months
7	ARE W30-06	43-043-30273	Fee	5 Years 4 Months
8	ARE W20-02	43-043-30228	Fee	5 Years 4 Months
9	ARE W30-13	43-043-30279	Fee	5 Years 6 Months
10	ARE W19-16	43-043-30204	Fee	5 Years 8 Months
11	ARE W20-4	43-043-30238	Fee	6 Years 3 Months
12	ARE W31-12	43-043-30190	Fee	7 Years 3 Months
13	ARE W01-04	43-043-30270	Fee	7 Years 4 Months
14	ARE W11-01	43-043-30277	Fee	7 Years 4 Months
15	ARE W20-03	43-043-30291	Fee	8 Years 1 Month
16	ARE W16-14	43-043-30096	Fee	8 Years 1 Month
17	ARE 16-12	43-043-30231	Fee	8 Years 3 Months
18	Champlin 387 B1A	43-043-30168	Fee	8 Years 6 Months
19	ARE W17-16	43-043-30176	Fee	8 Years 7 Months
20	ARE E21-14	43-043-30130	Fee	10 Years 8 Months



State of Utah

Department of  
Natural Resources

Division of  
Oil, Gas & Mining

ROBERT L. MORGAN  
*Executive Director*

LOWELL P. BRAXTON  
*Division Director*

MICHAEL O. LEAVITT  
*Governor*

OLENE S. WALKER  
*Lieutenant Governor*

January 22, 2004

CERTIFIED MAIL #7002 0510 0003 8602 4798

Lance Taylor  
Merit Energy Company  
13727 Noel Road, Suite 500  
Dallas, TX 75240-7312

Re: Extended Shut-in and Temporary Abandoned Well Requirements for Fee or State Leases.

Dear Mr. Taylor:

Merit Energy Company, as of January 2004, has twenty-four (24) Fee Lease Wells (see attachment A) that are currently in non-compliance for extended shut-in or temporary abandonment status. This includes twenty (20) Fee Lease Wells with returned Sundry Notices and attached requirement sheet dated November 19, 2003. Wells SI/TA beyond twelve (12) consecutive months requires filing a Sundry Notice (R649-3-36-1). Wells with five (5) years non-activity or non-productivity shall be plugged, unless the Division grants approval for extended shut-in time upon a showing of good cause by the operator (649-3-36-1.3.3). For extended SI/TA consideration the operator shall provide the Utah Division of Oil, Gas & Mining with the following:

1. Reasons for SI/TA of the well (R649-3-36-1.1).
2. The length of time the well is expected to be SI/TA (R649-3-36-1.2),  
and
3. An explanation and supporting data if necessary, for showing the well has integrity, meaning that the casing, cement, equipment condition, static fluid level, pressure, existence or absence of Underground Sources of Drinking Water and other factors do not make the well a risk to public health and safety or the environment (R649-3-36-1.3).

Page 2  
January 22, 2004  
Lance Taylor

Submitting the information suggested below may help show well integrity and may help qualify your well for extended SI/TA. **Note: As of July 1, 2003, wells in violation of the SI/TA rule R649-3-36 may be subject to full cost bonding (R649-3-1-4.2, 4.3).**

1. Wellbore diagram, and
2. Copy of recent casing pressure test, and
3. Current pressures on the wellbore (tubing pressure, casing pressure, and casing/casing annuli pressure) showing wellbore has integrity, and
4. Fluid level in the wellbore, and
5. An explanation of how the submitted information proves integrity.

If the required information is not received within 30 days of the date of this notice, further actions may be initiated. If you have any questions concerning this matter, please contact me at (801) 538-5281.

Sincerely,



Dustin K. Doucet  
Petroleum Engineer

jc  
cc: John Baza  
Well File

	Well Name	API	Lease Type	Years Inactive
1	ARE W20-06	43-043-30159	Fee	1 Year 2 Months
2	ARE W31-04E	43-043-30165	Fee	1 Year 3 Months
3	ARE W36-10	43-043-30227	Fee	1 Year 3 Months
4	ARE W36-08	43-043-30167	Fee	1 Year 7 Months

Wells with returned Sundry Notices and attached requirement sheet dated November 19, 2003

1	ARE W21-04	43-043-30135	Fee	1 Year 10 Months
2	Champlin 372 Amoco C1	43-043-30143	Fee	1 Year 11 Months
3	ARE W16-06	43-043-30138	Fee	1 Year 11 Months
4	ARE W01-12	43-043-30271	Fee	2 Years 4 Months
5	ARE W30-02	43-043-30218	Fee	3 Years 2 Months
6	ARE W36-14	43-043-30255	Fee	4 Years 5 Months
7	ARE W30-06	43-043-30273	Fee	5 Years 4 Months
8	ARE W20-02	43-043-30228	Fee	5 Years 4 Months
9	ARE W30-13	43-043-30279	Fee	5 Years 6 Months
10	ARE W19-16	43-043-30204	Fee	5 Years 8 Months
11	ARE W20-4	43-043-30238	Fee	6 Years 3 Months
12	ARE W31-12	43-043-30190	Fee	7 Years 3 Months
13	ARE W01-04	43-043-30270	Fee	7 Years 4 Months
14	ARE W11-01	43-043-30277	Fee	7 Years 4 Months
15	ARE W20-03	43-043-30291	Fee	8 Years 1 Month
16	ARE W16-14	43-043-30096	Fee	8 Years 1 Month
17	ARE 16-12	43-043-30231	Fee	8 Years 3 Months
18	Champlin 387 B1A	43-043-30168	Fee	8 Years 6 Months
19	ARE W17-16	43-043-30176	Fee	8 Years 7 Months
20	ARE E21-14	43-043-30130	Fee	10 Years 8 Months



Date: February 13, 2004

Subject: Extended Shut-in wells in the Anschutz Ranch East Field

Dear Mr. Doucet:

In response to your letter dated January 22, 2004, I would like to submit the attached supporting documentation regarding our extended shut-in wells. Merit Energy Company purchased an operating interest in the Anschutz Ranch East Unit from BP Production Company effective July 1, 2003, and has spent the last seven months evaluating the production capability of all active and inactive wells in the field. This process has resulted in workovers that have reestablished production in several of these wells, and revealed future opportunities for all of the others. Here is a quick synopsis of our plans for each well.

- **ARE W20-06-** Workover is planned to immediately reactive this well by running smaller tubing, and putting the well on gas lift. Should be reactivated by mid year 2004.
- **ARE W31-04-** BP attempted a directional reentry of this wellbore in 2001, during which time the drill pipe was inadvertently cemented in the horizontal section of the wellbore. Merit is investigating methods to effectively stimulate this wellbore and return it to production. If unable to do so, it will be plugged.
- **ARE W36-10-** This well will be the first test candidate for an experimental production method for artificial lifting gas wells. An electric submersible pump will be run in this well in the next couple of months in an attempt to reestablish production by removing large volumes of water from the formation. If this project is successful it could lead to the reactivation of virtually every inactive well in the field. The project is approved internally, and we are waiting on equipment and supplies before mobilizing a service rig.
- **ARE W36-08-** This well has been reactivated following a workover last fall. A sundry notice was filed and approved by the Utah Oil and Gas Commission.
- **ARE W21-04-** Surface tubing pressure indicates this well may be capable of producing again. However attempts to return this well to production with the current wellbore configuration have not been successful. Merit plans to install smaller tubing and gas lift on this well. If that is unsuccessful, this well is also a candidate for an electric submersible pump installation. If all attempts to reactivate the Nugget formation fail, this well is a recompletion candidate in the Twin Creek formation.
- **Champlin 372 C-1-** This well is capable of producing for a few days at a time, but quickly loads up with water and dies. Again, this well is a candidate for an electric submersible pump installation, or may be used as a salt water disposal well if additional capacity is needed due to the ESP program.
- **ARE W16-06-** This well will have an electric submersible pump installed if the program is successful. Otherwise it will be plugged.
- **ARE W01-12-** This well will have an electric submersible pump installed if the program is successful. It is also considered for an uphole recompletion.
- **ARE W30-02-** An attempt was made to return this well to production last fall, but was unsuccessful due to high water production. Pending the success of the W36-10, this well will also have an electric submersible pump installed.
- **ARE W36-14-** This well will have an electric submersible pump installed if the program is successful. It is also considered for an uphole recompletion.
- **ARE W30-06-** This well will have an electric submersible pump installed if the program is successful. It is also considered for an uphole recompletion.
- **ARE W20-02-** A workover has been approved internally to reactivate this well, and should begin in the next few weeks. A sundry notice was filed and approved by the Utah Oil and Gas Commission.
- **ARE W30-13-** This well will have an electric submersible pump installed if the program is successful. It is also considered for an uphole recompletion.
- **ARE W19-16-** This well will have an electric submersible pump installed if the program is successful. It is also considered for an uphole recompletion.

RECEIVED

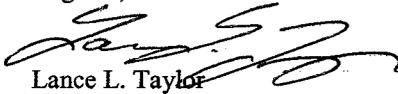
FEB 20 2004

DIV. OF OIL, GAS & MINING

- **ARE W20-04-** This well will have an electric submersible pump installed if the program is successful. It is also considered for an uphole recompletion.
- **ARE W31-12-** An attempt was made to reactivate this well in late 2003, but was unsuccessful. A sundry notice was filed and approved by the Utah Oil and Gas Commission. An uphole recompletion in the Twin Creek formation is planned and will be completed in the next few months.
- **ARE W01-04-** This well will have an electric submersible pump installed if the program is successful. It is also considered for an uphole recompletion.
- **ARE W11-01-** This well will have an electric submersible pump installed if the program is successful. Otherwise it will be plugged.
- **ARE W20-03-** This well will have an electric submersible pump installed if the program is successful. It is also considered for an uphole recompletion.
- **ARE W16-14-** This well will have an electric submersible pump installed if the program is successful. It is also considered for salt water disposal well if additional capacity is needed.
- **ARE W16-12-** This well will have an electric submersible pump installed if the program is successful. It is also considered for salt water disposal well if additional capacity is needed.
- **Champlin 387 B-1A-** Merit Energy is in the process of obtaining records from BP for this well. Once historical information is obtained, we will evaluate all feasible methods to return this well to producing status. Otherwise it will be plugged.
- **ARE W17-16-** This well will have an electric submersible pump installed if the program is successful. It is also considered for salt water disposal well if additional capacity is needed.
- **ARE E21-14-** This well was returned to producing status on 12/19/03.

In addition to this information, I have enclosed pressure data for all wells, and a wellbore schematic for all wells except the Champlin 387 B-1A. The static bottom hole pressures and static fluid levels were collected in September 2003 with bottom hole gauges. If you need any further information, please contact me at 972-628-1651 or electronically at [lance.taylor@meritenergy.com](mailto:lance.taylor@meritenergy.com).

Regards,



Lance L. Taylor  
Operations Engineer

Cc: Rusty Ginnetti  
Arlene Valliquette  
Dennis Longwell

Attachments: (1) page of pressure data, (23) wellbore schematics

Return-path: <Lance.Taylor@meritenergy.com>  
Received: from imail.meritenergy.com [208.133.141.18]  
by UTSTDP13.state.ut.us; Tue, 24 Feb 2004 07:06:49 -0700  
Subject: Anschutz Ranch East Unit  
To: clintondworshak@utah.gov  
Cc: Rusty Ginnetti <Rusty.Ginnetti@meritenergy.com>,  
Arlene Valliquette <Arlene.Valliquette@meritenergy.com>,  
Dennis Longwell <Dennis.Longwell@meritenergy.com>  
X-Mailer: Lotus Notes Release 5.0.10 March 22, 2002  
Message-ID: <OF2FAC50A1.BE12C251-ON86256E44.004B0584-  
86256E44.004D8670@meritenergy.com>  
From: Lance Taylor <Lance.Taylor@meritenergy.com>  
Date: Tue, 24 Feb 2004 08:06:46 -0600  
X-MIMETrack: Serialize by Router on imail/Meritenergy(Release 6.0.3|September 26, 2003) at  
02/24/2004 08:06:49 AM  
MIME-Version: 1.0  
Content-type: text/plain; charset=US-ASCII

Mr. Dworshak,

I'd like to confirm our 2/23/04 telephone conversation in response to my letter dated 2/13/04 regarding extended shut in and temporarily abandoned wellbores in the Anschutz Ranch East Unit ("ARE Unit") of Summit county Utah. It is Merit Energy Company's intention to utilize each wellbore to it's full capacity. As such, Merit is in the process of attempting to reactivate the wellbores in question. Several wellbore specific workovers have been identified, and the approximate timing of each is mentioned in my original letter.

However, the majority of the reactivation work depends on the successful utilization of electric submersible pumps for artificial lift. It is the timing of this project that I would like to address. As you know, this is a capital intensive project, so Merit plans to do the appropriate research prior to implementation. Merit intends to test the idea on the ARE W36-10 within the next 8-12 weeks. Following a 4-12 week test period, Merit will perform a strenuous economic and operational evaluation. If it is determined that the project is valid, full scale implementation could begin as early as June. However, due to the complexity of the equipment, depth of the wells, and unavailability of service rigs, Merit anticipates this project will take several months, possibly one year, to complete. Due to the large volumes of water to be produced by this project, it is likely that one or more of the shut in wells will need to be reactivated as salt water disposal wells. All regulatory and state documentation will be completed prior to SWD conversion.

Finally, if the ESP project is unsuccessful, several of these wellbore have recompletion potential in shallower formations. Specifically, Merit has identified the Jurassic aged Twin Creek formation as a possible recompletion target. Completion practices must be researched and developed in order to ensure economic quantities of hydrocarbons. Again, all state and federal permits will be approved prior to project implementation.

If after all our efforts to economically reactivate these wells fail, Merit Energy will begin the plug and abandonment process. I trust this will clear up any issues of timing. If you have further questions or concerns please feel free to contact me at any of the numbers below.

Regards,

Lance L. Taylor  
Operations Engineer-Rockies Region  
Merit Energy Company  
direct: 972-628-1651  
fax: 972-701-0351  
mobile: 972-998-9116  
lance.taylor@meritenergy.com



State of Utah

Department of  
Natural Resources

Division of  
Oil, Gas & Mining

ROBERT L. MORGAN  
*Executive Director*

LOWELL P. BRAXTON  
*Division Director*

MICHAEL O. LEAVITT  
*Governor*

OLENE S. WALKER  
*Lieutenant Governor*

March 5, 2004

CERTIFIED RETURN RECEIPT NO. 7002 0510 0003 8602 4880

Mr. Lance Taylor  
Merit Energy Company  
13727 Noel Road, Suite 500  
Dallas, TX 75240

Re: Extended Shut-in and Temporary Abandoned Well Requirements for Fee or State Leases dated January 22, 2004.

Dear Mr. Taylor,

The Division of Oil, Gas and Mining (DOGM) is in receipt of your letter dated February 13, 2004 in regards to the twenty-four (24) shut-in wells operated by Merit Energy Company (Merit). DOGM accepts Merit's plan of action to recomplete all twenty-four wells by year-end 2004. Many of the recompletions are dependent upon the success of electric submersible pumps; if this experimental procedure is not successful, keep the Division advised of any changes in Merit's plan of action. Based upon the plan of action and other information provided, DOGM approves the twenty-four (24) wells for extended shut-in until January 1, 2005. Please submit recompletion procedures and notice of intent sundries upon finalization.

For reference, Attachment A lists the wells subject to this request. If you have any questions or need additional assistance in regards to the above matters please contact me at (801) 538-5281.

Sincerely,

Dustin Doucet  
Petroleum Engineer

	Well Name	API	Lease Type	Years Inactive
1	ARE W20-06	43-043-30159	Fee	1 Year 2 Months
2	ARE W31-04E	43-043-30165	Fee	1 Year 3 Months
3	ARE W36-10	43-043-30227	Fee	1 Year 3 Months
4	ARE W36-08	43-043-30167	Fee	1 Year 7 Months

Wells with returned Sundry Notices and attached requirement sheet dated November 19, 2003

1	ARE W21-04	43-043-30135	Fee	1 Year 10 Months
2	Champlin 372 Amoco C1	43-043-30143	Fee	1 Year 11 Months
3	ARE W16-06	43-043-30138	Fee	1 Year 11 Months
4	ARE W01-12	43-043-30271	Fee	2 Years 4 Months
5	ARE W30-02	43-043-30218	Fee	3 Years 2 Months
6	ARE W36-14	43-043-30255	Fee	4 Years 5 Months
7	ARE W30-06	43-043-30273	Fee	5 Years 4 Months
8	ARE W20-02	43-043-30228	Fee	5 Years 4 Months
9	ARE W30-13	43-043-30279	Fee	5 Years 6 Months
10	ARE W19-16	43-043-30204	Fee	5 Years 8 Months
11	ARE W20-4	43-043-30238	Fee	6 Years 3 Months
12	ARE W31-12	43-043-30190	Fee	7 Years 3 Months
13	ARE W01-04	43-043-30270	Fee	7 Years 4 Months
14	ARE W11-01	43-043-30277	Fee	7 Years 4 Months
15	ARE W20-03	43-043-30291	Fee	8 Years 1 Month
16	ARE W16-14	43-043-30096	Fee	8 Years 1 Month
17	ARE 16-12	43-043-30231	Fee	8 Years 3 Months
18	Champlin 387 B1A	43-043-30168	Fee	8 Years 6 Months
19	ARE W17-16	43-043-30176	Fee	8 Years 7 Months
20	ARE E21-14	43-043-30130	Fee	10 Years 8 Months



MERIT ENERGY COMPANY

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13727 Noel Road · Suite 500 · Dallas, Texas 75240  
Ph 972.701.8377 · Fx 972.960.1252 · [www.meritenergy.com](http://www.meritenergy.com)

January 7, 2005

State of Utah – Department of Natural Resources  
Division of Oil, Gas, & Mining  
Attn: Mr. Dustin Doucet  
PO Box 145801  
Salt Lake City, UT 84114-5801

Dear Mr. Doucet:

This letter is in response to a telephone conversation that I had with Clint Dworshak on December 6, 2004. At that time, he requested that I provide information on Merit Energy Company's shut-in wells at Anschutz Ranch East, proving that the ground waters are protected.

Enclosed, please find a summary sheet, as well as wellbore diagrams for the subject wells.

If you have any questions or wish to discuss this further, please contact me at (972) 628-1550 or electronically at [mike.mercer@meritenergy.com](mailto:mike.mercer@meritenergy.com).

Sincerely,

Michael L. Mercer  
Engineering

# UTAH DOGM – SI WELL LIST

## Wells to be Reactivated in 2005

- CHAMPLIN 372 C1
  - Packer at 8,320 (MD) 6,648 (TVD)
  - Top of cement (TOC) at 4,906
  - Tubing Pressure 1250#
  - Casing Pressure 0#
  - The 4-1/2" liner is cemented in place at 5090 (below the TOC). The tubing pressure and casing pressure are different. Therefore, the casing and tubing are not in communication and the ground waters are protected.
- ARE W16-06
  - Packer at 13,398
  - Top of cement (TOC) at 12,640
  - Tubing Pressure 0#
  - Casing Pressure 0#
  - The packer is located below the TOC. When Merit set the packer in October 2004, we pressure tested the annulus to 500 psi and it held. Therefore, the casing has integrity and the ground waters are protected.
- ARE W30-02
  - Packer at none
  - Top of cement (TOC) at 12,452
  - Tubing Pressure 0#
  - Casing Pressure 0#
  - Fluid Level 8200' from Surface
  - On 09/02/03, Merit ran a packer in this well and sat it at 13055' (below the TOC). The casing and packer were pressure tested to 1500 psi and held. The packer has since been removed and there is open-ended tubing in the well. However, the casing has integrity and the ground waters are protected.
- ARE W36-14
  - Packer at 13,988
  - Top of cement (TOC) at 13,700
  - Tubing Pressure 400#
  - Casing Pressure 0#
  - The packer is set below the TOC. The tubing pressure and casing pressure are different. Therefore, the casing and tubing are not in communication and the ground waters are protected.
- ARE W30-06
  - Packer at 13,450
  - Top of cement (TOC) at 11,200 (7" casing)
  - Tubing Pressure 0#
  - Casing Pressure 0#
  - The packer is set below the TOC. The 9-5/8" casing string has cement f/ 11911-7940. The 13-3/8" casing has cement f/ 5745-1200. With no pressure on the casing, and three strings of casing (7", 9-5/8", 13-3/8"), the ground waters are protected.
- ARE W30-13
  - Packer at 12,320
  - Top of cement (TOC) at 12,200
  - Tubing Pressure 300#
  - Casing Pressure 0#
  - The packer is set below the TOC. The tubing pressure and casing pressure are different. Therefore, the casing and tubing are not in communication and the ground waters are protected.

# UTAH DOGM – SI WELL LIST

- ARE W31-12
  - Packer at none
  - Top of cement (TOC) at 10,700
  - Casing Pressure 100#
  - Fluid Level 1000' from Surface
  - There is not a packer or tubing in this well. The static fluid level is 1000' from surface. There is a 13-3/8" casing string set at 2846', a 9-5/8" casing string set at 10272', and a 7" tie-back casing string set at 9919'. These three casing strings are protecting the ground waters.

## Wells with No Immediate Plans

- ARE W31-04
  - Packer at 14,000
  - Top of cement (TOC) at 11,900
  - Tubing Pressure 1100#
  - Casing Pressure 50#
  - This well is a horizontal sidetrack. The primary cement job on the original production casing had a TOC at 11,900. The kick-off point for the horizontal leg is below this depth. Additionally, the drill string was cemented in the horizontal section with the TOC estimated to be between 13126 and 13310. Based on the fact that the tubing and casing pressures are different, the two are not in communication and therefore, the ground waters are protected.
- ARE W01-12
  - Packer at 14,317
  - Top of cement (TOC) at 14,290
  - Tubing Pressure 300#
  - Casing Pressure 0#
  - The packer is located below the TOC. The tubing pressure and casing pressure are different. Therefore, the casing and tubing are not in communication and the ground waters are protected.
- ARE W19-16
  - Packer at 9,756
  - Top of cement (TOC) at unknown
  - Tubing Pressure 1000#
  - Casing Pressure 0#
  - The packer is located in the "Tie-Back" casing string. The tubing pressure and casing pressure are different. Therefore, the casing and tubing are not in communication and the ground waters are protected.
- ARE W20-04
  - Packer (PBR) at 10,489
  - Top of cement (TOC) at 9,415 (9-5/8" & 9-7/8" casing string)
  - Tubing Pressure 0#
  - Casing Pressure 0#
  - Fluid Level 9600' from Surface
  - The tubing is tied into the 5" liner with a polish bore receptacle (PBR) at 10,489. The TOC for the intermediate casing is above this point (at 9,415). The static fluid level is at 9600' (below the TOC), therefore, the ground waters are protected.
- ARE W01-04
  - Packer at 13,891
  - Top of cement (TOC) at 13,600
  - Tubing Pressure 1400#
  - Casing Pressure 100#
  - The packer is located below the TOC. The tubing pressure and casing pressure are different. Therefore, the casing and tubing are not in communication and the ground waters are protected.

# UTAH DOGM – SI WELL LIST

- ARE W11-01
  - Packer at 12,733
  - Top of cement (TOC) at 12,100
  - Tubing Pressure 1500#
  - Casing Pressure 50#
  - The packer is located below the TOC. The tubing pressure and casing pressure are different. Therefore, the casing and tubing are not in communication and the ground waters are protected.
- ARE W20-03
  - Packer at 13,271
  - Top of cement (TOC) at 12,600
  - Tubing Pressure 1400#
  - Casing Pressure 75#
  - The packer is located below the TOC. The tubing pressure and casing pressure are different. Therefore, the casing and tubing are not in communication and the ground waters are protected.
- ARE W16-14
  - Packer (PBR) at 10,500
  - Top of cement (TOC) at 9,650 (9-5/8" casing)
  - Tubing Pressure 1500#
  - Casing Pressure 850#
  - The tubing is tied into the 4-1/2" liner with a PBR at 10,500. This is below the TOC for the 9-5/8" casing string. The tubing pressure and casing pressure are different. Therefore, the casing and tubing are not in communication and the ground waters are protected.
- ARE W16-12
  - Packer at 10,304
  - Top of cement (TOC) at 10,100 (9-5/8" casing)
  - Tubing Pressure 50#
  - Casing Pressure 0#
  - The packer is located below the TOC. The tubing pressure and casing pressure are different. Therefore, the casing and tubing are not in communication and the ground waters are protected.
- CHAMPLIN 387 B1A
  - Tubing Pressure 0#
  - Casing Pressure 0#
  - Fluid Level 5200' from surface
  - Merit has no wellfiles regarding this well. We are currently trying to obtain information on this well
- ARE W17-16
  - Packer (PBR) at 10,237
  - Top of cement (TOC) at 10,371 (7-5/8" casing)
  - Tubing Pressure 0#
  - Casing Pressure 0#
  - Fluid Level 8400' from Surface
  - The tubing is tied into the 5" liner with a PBR at 10,237. There is a 13-3/8" casing string set at 2526', a 9-5/8" casing string set at 10701', and a 7" tie-back casing string set at 10237'. These three casing strings are protecting the ground waters.



# MERIT ENERGY COMPANY

## Anschutz Ranch East Unit

	WELLS	API Number	Tubing Pressure	Casing Pressure	STATUS ON / OFF	Static BHP	Static Fluid Level
1	ARE# W20-06	43-043-30159	100	200	Shut In	1835	7500-9000'
2	ARE# W31-04E	43-043-30165	1200	0	Shut In	?	?
3	ARE# W36-10	43-043-30227	100	0	Shut In	3042	7500-9000'
4	ARE# W36-08	43-043-30167	100	100	Producing	2844	6000-7500'
Wells with returned Sundry Notices and attached requirement sheet dated November 19, 2003							
1	ARE# W21-04	43-043-30135	1850	450	Shut In	4130	12000'
2	Champlin 372 Amoco #C-1	43-043-30143	0	0	Shut In	?	?
3	ARE# W16-06	43-043-30138	0	0	Shut In	?	?
4	ARE# W01-12	43-043-30271	600	0	Shut In	4181	7500-9000'
5	ARE# W30-02	43-043-30218	0	0	Shut In	?	?
6	ARE# W36-14	43-043-30255	2200	1500	Shut In	3420	Perfs
7	ARE# W30-06	43-043-30273	0	0	Shut In	2397	6000-7500'
8	ARE# W20-02	43-043-30228	100	100	Shut In	?	?
9	ARE# W30-13	43-043-30279	900	0	Shut In	3030	7500-9000'
10	ARE# W19-16	43-043-30204	1400	0	Shut In	2645	Perfs
11	ARE# W20-04	43-043-30238	0	0	Shut In	?	?
12	ARE# W31-12	43-043-30190	20	450	Shut In	3494	4500-6000'
13	ARE# W01-04	43-043-30270			Shut In	4505	7500-9000'
14	ARE# W11-01	43-043-30277	1300	50	Shut In	4575	6000-7500'
15	ARE# W20-03	43-043-30291	1800	75	Shut In	3890	10500'
16	ARE# W16-14	43-043-30096	0	800	Shut In	4570	6000-7500'
17	ARE#16-12	43-043-30231	0	0	Shut In	4781	1500-3000'
18	Champlin 387 #B-1A	43-043-30168	0	0	Shut In	?	?
19	ARE# W17-16	43-043-30176	1100	0	Shut In	4734	3000-4500'
20	ARE# E21-14	43-043-30130	200	150	Producing	3926	Perfs

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# MERIT ENERGY COMPANY

## Anschutz Ranch East Unit

	WELLS	API Number	Tubing Pressure	Casing Pressure	STATUS ON / OFF	Static BHP	Static Fluid Level
1	ARE# W20-06	43-043-30159	100	200	Shut In	1835	7500-9000'
2	ARE# W31-04E	43-043-30165	1200 <sup>1100</sup>	0 <sup>50</sup>	Shut In	?	?
3	ARE# W36-10	43-043-30227	100	0	Shut In	3042	7500-9000'
4	ARE# W36-08	43-043-30167	100	100	Producing	2844	6000-7500'

Wells with returned Sundry Notices and attached requirement sheet dated November 19, 2003

1	ARE# W21-04 Champlin 372	43-043-30135	1850 1250	450 0	Shut In Perfs 6648'	4130	12000'
2	Amoco #C-1	43-043-30143	0	0	Shut In	?	?
3	ARE# W16-06	43-043-30138	0	0	Shut In	?	± 2100'
4	ARE# W01-12	43-043-30271	600 <sup>300</sup>	0	Shut In	4181	7500-9000'
5	ARE# W30-02	43-043-30218	0	0	Shut In	?	?
6	ARE# W36-14	43-043-30255	2200 <sup>400</sup>	1500 <sup>0</sup>	Shut In Perfs 14066'	3420	Perfs
7	ARE# W30-06	43-043-30273	0	0	Shut In	2397	6000-7500'
8	ARE# W20-02	43-043-30228	100	100	Shut In	?	?
9	ARE# W30-13	43-043-30279	900 <sup>300</sup>	0	Shut In	3030	7500-9000'
10	ARE# W19-16	43-043-30204	1400 <sup>1000</sup>	0	Shut In	2645	Perfs
11	ARE# W20-04	43-043-30238	0	0	Shut In	?	?
12	ARE# W31-12	43-043-30190	20 <sup>100</sup>	450 <sup>100</sup>	Shut In supacker	3494	4500-6000'
13	ARE# W01-04	43-043-30270	1400	100	Shut In	4505	7500-9000'
14	ARE# W11-01	43-043-30277	1300 <sup>1500</sup>	50 <sup>50</sup>	Shut In	4575	6000-7500'
15	ARE# W20-03	43-043-30291	1800 <sup>1400</sup>	75 <sup>75</sup>	Shut In	3890	10500'
16	ARE# W16-14	43-043-30096	0 <sup>1500</sup>	800 <sup>850</sup>	Shut In Perfs 12816'	4570	6000-7500'
17	ARE#16-12 Champlin 387	43-043-30231	0 <sup>50</sup>	0	Shut In	4781	1500-3000'
18	#B-1A	43-043-30168	0	0	Shut In	?	?
19	ARE# W17-16	43-043-30176	1100 <sup>0</sup>	0	Shut In Perfs 13806'	4734	3000-4500'
20	ARE# E21-14	43-043-30130	200	150	Producing	3926	Perfs

Champlin 372 → Pressure from 0 to 1250 psi (tubing) No FL Perfs @ 6648' ?? BHP

ARE# W36-14 → pressure from 1500 to 0  
 pressure from 2200 to 400  
 FL @ 4066' Perfs @ 14066' BHP = 3420 psi (1432 psi surf)  
 Grad = 0.0867 psi/ft  
 Cur FL @ 11000'

ARE# W16-14 → Tbg from 0 to 1500 psi  
 csg remained @ ± 850 psi  
 FL @ 600' Perfs @ 12816' BHP = 24570 psi Grad = 0.17 psi/ft  
 Cur FL @ 11000'

ARE# W17-16 → Tbg from 1100 to 0  
 FL from 4000' to 8400'  
 FL @ 4000' Perfs @ 13806' BHP = 4734 psi Grad = 0.315 psi/ft  
 Cur FL @ 8400'

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 Grad = 0.0867 psi/ft  
 Cur FL @ 11000'

**From:** Mike Mercer <Mike.Mercer@meritenergy.com>  
**To:** "Dustin Doucet" <dustindoucet@utah.gov>  
**Date:** 4/7/2005 3:12:05 PM  
**Subject:** Re: SI/TA integrity questions

On the W16-14, the production foreman did have to replace the gauge to get the new (correct) reading.

On the W17-16, the pressures and fluid levels were actually taken off of a swab report (they did not get "static" readings), which explains why the fluid level (and tubing pressure) was so much lower.

Hope this takes care of you, if not, please call.

Thanks

Michael L. Mercer  
Engineering  
Merit Energy Company  
13727 Noel Road, Suite 500  
Dallas, TX 75240  
(972) 628-1550 Direct  
(972) 960-1252 Fax

"Dustin Doucet"  
<dustindoucet@utah.gov>  
03/11/2005 04:14 PM  
To  
<Mike.Mercer@meritenergy.com>  
cc  
Subject  
Re: SI/TA integrity questions

Mike,

Thanks for the info. A couple more questions. On the 16-14 and 17-16 do you figure the readings or gauges were incorrect last year or is there some other reason for the change in pressures?

Dustin

>>> Mike Mercer <Mike.Mercer@meritenergy.com> 03/11/05 1:48 PM >>>

Dustin,

Sorry it has taken me so long to get back with you...in response to your email, most are easily explained...(see below in red)

Regarding the W30-14, we are installing ESPs on either side of this well, we have a service company designing gas lift for this well and are evaluating a reactivation following the ESP installations. If we do not have the well reactivated in the next couple of months, I will provide you with the wellbore diagram, pressures, and fluid level.

Let me know if you need anything else. Thanks

Michael L. Mercer  
Engineering  
Merit Energy Company  
13727 Noel Road, Suite 500  
Dallas, TX 75240  
(972) 628-1550 Direct  
(972) 960-1252 Fax

"Dustin Doucet"

<dustindoucet@uta

h.gov>

To

<mike.mercer@meritenergy.com>

02/16/2005 04:04

cc

PM

Subject

SI/TA integrity questions

Mike,

I finally looked at the packet you provided us at our January 10th meeting and had questions that you may be able to answer on four wells.

My questions deal with pressure and fluid level changes that I didn't have enough info to explain why they changed. Also, I want to give you

a heads up that another well came on to the SI/TA list this year. It is the ARE W 30-14 (API 43-043-30185). A similar plan/integrity scenario will have to be followed on this well as we've done with the current SI/TA wells. The four wells that I had questions on are as follows:

Champlin 372 - Tbg pressure went from 0 last year to 1250 psi this year ~~SWAB TESTED 2004~~

ARE W 36-14 - Tbg pressure went from 2200 to 400 psi, csg pressure went -

from 1500 to 0 WE PULLED THE OLD PKR, RAN A TEST PKR, ~~SWABBED TESTED, AND~~

~~RAN THE ESP (WE HAVE HAD PROBLEMS; BUT WE HAVE ESTABLISHED COMMERCIAL PRODUCTION)~~

ARE W 16-14 - Tbg pressure went from 0 to 1500 psi, csg pressure did stay constant at ~ 850psi which is probably good, although pressure on the backside doesn't make me feel all warm and fuzzy WE HAVE NOT DONE ANYTHING

ARE W 17-16 - Tbg pressure went from 1100 to 0 psi, FL went from 4000' to 8400' opposite of what you would expect hydrostatically based off

of the pressure change ~~SWAB TESTED 2004 (FUTURE ESP INSTALLATION)~~

All in all I don't have a lot of concern for lack of integrity, but if you could provide me with some explanations as to why some of these changes occurred on these 4 wells, I would appreciate it. The good news

is that you are reactivating two of the four wells this year.

Hopefully, this email makes some sense. Give me a call if you like and

we can discuss or respond via email. Thanks.

Dustin

Dustin Doucet  
Petroleum Engineer



November 10, 2004

State of Utah – Department of Natural Resources  
Division of Oil, Gas, & Mining  
Attn: Mr. Dustin Doucet  
PO Box 145801  
Salt Lake City, UT 84114-5801

Dear Mr. Doucet:

In a letter dated February 13, 2004, Merit Energy Company informed the DOGM of plans to reactivate twenty-four (24) shut-in wells. Based on this information, on March 5, 2004, the DOGM granted Merit a shut-in extension until January 1, 2005. In April, the engineer working the Anschutz Ranch East (Anschutz) field left Merit. He was replaced by a second engineer that left Merit in August. As a result of this turnover, there has been no continuity at Anschutz. Regretfully, Merit will not have these wells reactivated by January 1, 2005.

I took over as the Operations Engineer at Anschutz in August. On October 6, 2004, I called to discuss this situation with you. You requested that Merit submit a letter stating what work has been completed as well as our future plans.

The largest problem at Anschutz is water. Several wells have loaded up and died as a result of water production. Merit has been investigating several methods to remove the water and reestablish commercial gas production.

“Co-production”

As outlined in the February letter, Merit had plans to attempt “co-production” at Anschutz. “Co-production” is simply utilizing an electric submersible pump (ESP) to remove the water. Our first test candidate was the ARE W36-10. On July 15, 2004, we started the ESP. To date, results have been exceptional. The maximum gas rate that we have seen is 355 mcf/d. This is more than enough to justify the cost of the installation. Average production has been 200 mcf/d and 1200 bwpd.

The only drawback to “co-production” is installing power to location. Without knowing how the well will perform, Merit is hesitant to invest the capital upfront for power installation. Additionally, it took the power company approximately six months to perform the installation.

Although Merit is pleased with the results of “co-production”, we have developed a new plan. We are currently preparing a generator to provide temporary power to location. Future installations will be performed on a temporary basis. If the well proves to be a success, an order for permanent power will be placed with the power company. This allows Merit the flexibility to test several shut-in wells without spending unnecessary capital.

We are currently in the process of preparing the ARE W16-06 for an ESP installation. Additional wells that are currently identified for potential ESP installations are the ARE W30-02, W30-06, W30-13, and W36-14. Merit anticipates having these wells tested during 2005. Further installations will be determined based on the success of the above mentioned wells.

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Capillary Strings

Merit has also begun utilizing capillary strings to inject soap downhole to assist the well in lifting the produced water. We currently have five (5) capillary strings in service at Anschutz and are planning on installing four (4) more before the end of the year.

Gas Lift

Although gas lift is not new to Anschutz, Merit has been trying to extend its capabilities. Our first hurdle regarding gas lift is obtaining additional lift gas capacity. We currently utilize sales gas for gas lift. Based on our current compression, we are limited to 4 mmcf of lift gas. In addition to increasing our gas lift capability, Merit is exploring the idea of utilizing nitrogen for gas lift.

With that being said, we currently have seventeen wells capable of being gas lifted. Due to our limited lift gas capacity, only six (6) wells are currently being gas lifted.

Additionally, Merit is working with several service companies to explore ways to gas lift from below the packer. There are several wells at Anschutz that have one to two thousand feet of pay. As a result, conventional gas lift may or may not be effective. We have tried one method of gas lifting from below the packer and the results are great. However, this method is not a "cure-all". It will only work on select wells. We will continue to look for wells capable of being lifted in this manner. We are in the process of identifying a candidate to test another method of gas lifting from below the packer. As soon as the well is identified, the installation will be performed.

While Merit is still in the early phase of developing completion techniques to adequately produce the wells at Anschutz, we are making great progress. We have had to think "out-of-the-box" to come up with creative ways to remove the water and increase the gas and are exhausting all resources to improve production and reduce idle wellbores.

I have attached the February 13 letter as well as our current plans for the 24 wells.

If you have any questions or require additional information, please contact me at (972) 628-1550 or electronically at [mike.mercer@meritenergy.com](mailto:mike.mercer@meritenergy.com).

Sincerely,



Michael L. Mercer  
Operations Engineering



**MERIT ENERGY COMPANY**

---

13727 Noel Road, Suite 500  
Dallas, TX 75240  
Ph: 972-701-8377 Fx: 972-960-1252  
www.meritenergy.com

Date: February 13, 2004

Subject: Extended Shut-in wells in the Anschutz Ranch East Field

Dear Mr. Doucet:

In response to your letter dated January 22, 2004, I would like to submit the attached supporting documentation regarding our extended shut-in wells. Merit Energy Company purchased an operating interest in the Anschutz Ranch East Unit from BP Production Company effective July 1, 2003, and has spent the last seven months evaluating the production capability of all active and inactive wells in the field. This process has resulted in workovers that have reestablished production in several of these wells, and revealed future opportunities for all of the others. Here is a quick synopsis of our plans for each well.

- **ARE W20-06-** Workover is planned to immediately reactive this well by running smaller tubing, and putting the well on gas lift. Should be reactivated by mid year 2004.
- **ARE W31-04-** BP attempted a directional reentry of this wellbore in 2001, during which time the drill pipe was inadvertently cemented in the horizontal section of the wellbore. Merit is investigating methods to effectively stimulate this wellbore and return it to production. If unable to do so, it will be plugged.
- **ARE W36-10-** This well will be the first test candidate for an experimental production method for artificial lifting gas wells. An electric submersible pump will be run in this well in the next couple of months in an attempt to reestablish production by removing large volumes of water from the formation. If this project is successful it could lead to the reactivation of virtually every inactive well in the field. The project is approved internally, and we are waiting on equipment and supplies before mobilizing a service rig.
- **ARE W36-08-** This well has been reactivated following a workover last fall. A sundry notice was filed and approved by the Utah Oil and Gas Commission.
- **ARE W21-04-** Surface tubing pressure indicates this well may be capable of producing again. However attempts to return this well to production with the current wellbore configuration have not been successful. Merit plans to install smaller tubing and gas lift on this well. If that is unsuccessful, this well is also a candidate for an electric submersible pump installation. If all attempts to reactivate the Nugget formation fail, this well is a recompletion candidate in the Twin Creek formation.
- **Champlin 372 C-1-** This well is capable of producing for a few days at a time, but quickly loads up with water and dies. Again, this well is a candidate for an electric submersible pump installation, or may be used as a salt water disposal well if additional capacity is needed due to the ESP program.
- **ARE W16-06-** This well will have an electric submersible pump installed if the program is successful. Otherwise it will be plugged.
- **ARE W01-12-** This well will have an electric submersible pump installed if the program is successful. It is also considered for an uphole recompletion.
- **ARE W30-02-** An attempt was made to return this well to production last fall, but was unsuccessful due to high water production. Pending the success of the W36-10, this well will also have an electric submersible pump installed.
- **ARE W36-14-** This well will have an electric submersible pump installed if the program is successful. It is also considered for an uphole recompletion.
- **ARE W30-06-** This well will have an electric submersible pump installed if the program is successful. It is also considered for an uphole recompletion.
- **ARE W20-02-** A workover has been approved internally to reactivate this well, and should begin in the next few weeks. A sundry notice was filed and approved by the Utah Oil and Gas Commission.
- **ARE W30-13-** This well will have an electric submersible pump installed if the program is successful. It is also considered for an uphole recompletion.
- **ARE W19-16-** This well will have an electric submersible pump installed if the program is successful. It is also considered for an uphole recompletion.

- **ARE W20-04-** This well will have an electric submersible pump installed if the program is successful. It is also considered for an uphole recompletion.
- **ARE W31-12-** An attempt was made to reactivate this well in late 2003, but was unsuccessful. A sundry notice was filed and approved by the Utah Oil and Gas Commission. An uphole recompletion in the Twin Creek formation is planned and will be completed in the next few months.
- **ARE W01-04-** This well will have an electric submersible pump installed if the program is successful. It is also considered for an uphole recompletion.
- **ARE W11-01-** This well will have an electric submersible pump installed if the program is successful. Otherwise it will be plugged.
- **ARE W20-03-** This well will have an electric submersible pump installed if the program is successful. It is also considered for an uphole recompletion.
- **ARE W16-14-** This well will have an electric submersible pump installed if the program is successful. It is also considered for salt water disposal well if additional capacity is needed.
- **ARE W16-12-** This well will have an electric submersible pump installed if the program is successful. It is also considered for salt water disposal well if additional capacity is needed.
- **Champlin 387 B-1A-** Merit Energy is in the process of obtaining records from BP for this well. Once historical information is obtained, we will evaluate all feasible methods to return this well to producing status. Otherwise it will be plugged.
- **ARE W17-16-** This well will have an electric submersible pump installed if the program is successful. It is also considered for salt water disposal well if additional capacity is needed.
- **ARE E21-14-** This well was returned to producing status on 12/19/03.

In addition to this information, I have enclosed pressure data for all wells, and a wellbore schematic for all wells except the Champlin 387 B-1A. The static bottom hole pressures and static fluid levels were collected in September 2003 with bottom hole gauges. If you need any further information, please contact me at 972-628-1651 or electronically at [lance.taylor@meritenergy.com](mailto:lance.taylor@meritenergy.com).

Regards,

  
Lance L. Taylor  
Operations Engineer

Cc: Rusty Ginnetti  
Arlene Valliquette  
Dennis Longwell

Attachments: (1) page of pressure data, (23) wellbore schematics

	<b>Well Name</b>	<b>API</b>	<b>Lease Type</b>	<b>Years Inactive</b>
1	ARE W20-06	43-043-30159	Fee	1 Year 2 Months
2	ARE W31-04E	43-043-30165	Fee	1 Year 3 Months
3	ARE W36-10	43-043-30227	Fee	1 Year 3 Months
4	ARE W36-08	43-043-30167	Fee	1 Year 7 Months

Wells with returned Sundry Notices and attached requirement sheet dated November 19, 2003

1	ARE W21-04	43-043-30135	Fee	1 Year 10 Months
2	Champlin 372 Amoco C1	43-043-30143	Fee	1 Year 11 Months
3	ARE W16-06	43-043-30138	Fee	1 Year 11 Months
4	ARE W01-12	43-043-30271	Fee	2 Years 4 Months
5	ARE W30-02	43-043-30218	Fee	3 Years 2 Months
6	ARE W36-14	43-043-30255	Fee	4 Years 5 Months
7	ARE W30-06	43-043-30273	Fee	5 Years 4 Months
8	ARE W20-02	43-043-30228	Fee	5 Years 4 Months
9	ARE W30-13	43-043-30279	Fee	5 Years 6 Months
10	ARE W19-16	43-043-30204	Fee	5 Years 8 Months
11	ARE W20-4	43-043-30238	Fee	6 Years 3 Months
12	ARE W31-12	43-043-30190	Fee	7 Years 3 Months
13	ARE W01-04	43-043-30270	Fee	7 Years 4 Months
14	ARE W11-01	43-043-30277	Fee	7 Years 4 Months
15	ARE W20-03	43-043-30291	Fee	8 Years 1 Month
16	ARE W16-14	43-043-30096	Fee	8 Years 1 Month
17	ARE 16-12	43-043-30231	Fee	8 Years 3 Months
18	Champlin 387 B1A	43-043-30168	Fee	8 Years 6 Months
19	ARE W17-16	43-043-30176	Fee	8 Years 7 Months
20	ARE E21-14	43-043-30130	Fee	10 Years 8 Months

## UTAH DOGM – SI WELL LIST

- **ARE W20-06** – worked over in 2004, selectively swab tested individual zones. Installed gas lift (GL) equipment. Currently intermittently producing when lift gas is available.
- **ARE W31-04** – no immediate plans, will evaluate for reactivation.
- **ARE W36-10** – installed ESP. The well is producing.
- **ARE W36-08** – the well was reactivated in the fall of 2003. A capillary string was installed in September 2004. The well is producing.
- **ARE W21-04** – worked over in 2004. Installed GL equipment. Currently intermittently producing when lift gas is available.
- ✓ **CHAMPLIN 372 C1** – swabbed in October 2004. Swab results were encouraging. There are no production facilities or flowlines in place. We are in the process of purchasing a gas testing unit. Once the unit is in our possession, we will flow test this well and evaluate the economics of installing surface facilities.
- ✓ **ARE W16-06** – swabbed in November 2004. Currently sizing ESP and reconditioning generator for test. Anticipate having ESP running by end of the year.
  - **ARE W01-12** – no immediate plans, will evaluate for reactivation.
  - **ARE W30-02** – plan to install ESP in 2005 for test.
  - **ARE W36-14** – plan to install ESP in 2005 for test.
  - **ARE W30-06** – plan to install ESP in 2005 for test.
  - **ARE W20-02** – worked over in 2004. Installed GL equipment. Currently intermittently producing when lift gas is available.
  - **ARE W30-13** – plan to install ESP in 2005 for test.
  - **ARE W19-16** – no immediate plans, will evaluate for reactivation.
  - **ARE W20-04** – no immediate plans, will evaluate for reactivation.
- ✓ **ARE W31-12** – plan to test the Nugget, if unsuccessful, will attempt a Twin Creek completion.
  - **ARE W01-04** – no immediate plans, will evaluate for reactivation.
  - **ARE W11-01** – no immediate plans, will evaluate for reactivation.
  - **ARE W20-03** – no immediate plans, will evaluate for reactivation.
  - **ARE W16-14** – no immediate plans, will evaluate for reactivation.
  - **ARE W16-12** – no immediate plans, will evaluate for reactivation.
  - **CHAMPLIN 387 B1A** – no immediate plans, will evaluate for reactivation.
  - **ARE W17-16** – no immediate plans, will evaluate for reactivation.
  - **ARE E21-14** – the well was reactivated in December 2003. The well is producing.



## State of Utah

### Department of Natural Resources

MICHAEL R. STYLER  
*Executive Director*

### Division of Oil, Gas & Mining

MARY ANN WRIGHT  
*Acting Division Director*

JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

April 8, 2005

Merit Energy Company  
Attn: Michael L. Mercer  
13727 Noel Road, Suite 500  
Dallas, Texas 75240

Re: Approval for Extension of Shut-in or Temporarily Abandoned Status for Wells on Fee or State Leases

Dear Mr. Mercer:

The Division of Oil, Gas and Mining (the "Division") is in receipt of your letters dated November 10, 2004 (received by the Division on November 12, 2004) and January 7, 2005 (received by the Division on January 10, 2005) in regards to the twenty-four (24) shut-in wells operated by Merit Energy Company ("Merit"). The Division understands that six of these wells were put back into production in 2004. Merit's original plan was to return all twenty-four wells to production in 2004. Because of power restrictions, etc., Merit was unable to achieve that target. It is now the Division's understanding that Merit plans to return seven more wells to production in 2005 by installing an ESP. The Division understands that Merit is also investigating other methods to assist in lifting the water (e.g. capillary strings). Depending on the success of the wells with ESP's installed, the wells currently on Gas Lift, and the success of the other methods, the remaining 11 wells will either be plugged or put into production.

Based on the submitted information and plan of action, the Division approves your request for extended SI/TA for the eighteen (18) remaining SI/TA wells (see attachment A) until January 1, 2006. The operator should continue to monitor the wells by documenting pressures and fluid levels on a periodic basis. Any significant change in pressure or fluid level should be reported to the Division immediately. Remedial action may be necessary.

In addition to the twenty-four wells mentioned above, Merit also has one new well for 2005 that requires approval for extended SI/TA. The well is the ARE W30-14 (API # 43-043-30185). Our records indicate that this well has been SI/TA since February of 2003. Merit must submit their future plans for this well and information that demonstrates the well has integrity and is not a risk to public health and safety or the environment (R649-3-36-1.1 to 1.3).

Page 2  
Merit Energy Company  
April 8, 2005

The required information should be submitted to the Division within 30 days of the date of this letter or further actions may be initiated. If you have any questions or need additional assistance in regards to the above matters please contact me at (801) 538-5281.

Sincerely,

A handwritten signature in black ink, appearing to read "Dustin Doucet". The signature is stylized with a large initial "D" and a long horizontal stroke at the end.

Dustin Doucet  
Petroleum Engineer

DKD:jc  
Attachment  
cc: Well File

# ATTACHMENT A

*4N8E16*

	Well Name	API	Lease Type	Years Inactive
1	ARE W31-04E	43-043-30165	Fee	2 Year 3 Months
2	Champlin 372 Amoco C 1	43-043-30143	Fee	2 Year 11 Months
3	ARE W16-06	43-043-30138	Fee	2 Year 11 Months
4	ARE W01-12	43-043-30271	Fee	3 Years 4 Months
5	ARE W30-02	43-043-30218	Fee	4 Years 2 Months
6	ARE W36-14	43-043-30255	Fee	5Years 5 Months
7	ARE W30-06	43-043-30273	Fee	6 Years 4 Months
8	ARE W30-13	43-043-30279	Fee	6 Years 6 Months
9	ARE W19-16	43-043-30204	Fee	6 Years 8 Months
10	ARE W20-04	43-043-30238	Fee	7 Years 3 Months
11	ARE W31-12	43-043-30190	Fee	8 Years 3 Months
12	ARE W01-04	43-043-30270	Fee	8 Years 4 Months
13	ARE W11-01	43-043-30277	Fee	8 Years 4 Months
14	ARE W20-03	43-043-30291	Fee	9 Years 1 Month
15	ARE W16-14	43-043-30096	Fee	9 Years 1 Month
16	ARE W16-12	43-043-30231	Fee	9 Years 3 Months
17	Champlin 387 B1A	43-043-30168	Fee	9 Years 6 Months
18	ARE W17-16	43-043-30176	Fee	9 Years 7 Months



JON M. HUNTSMAN, JR.  
Governor

GARY R. HERBERT  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

August 26, 2008

CERTIFIED MAIL NO. 7004 2510 0004 1824 6053

Mr. Michael Mercer  
Merit Energy Company  
13727 Noel Road, Suite 500  
Dallas, TX 75240

43 043 300916  
ARE W16-14  
4N 8E 16

Re: Third Notice of Extended Shut-in and Temporarily Abandoned Well Requirements for Fee or State Leases

Dear Mr. Mercer:

As of July 2008, Merit Energy Company has fifteen (15) Fee Lease Wells that are in non-compliance with the requirements for extended shut-in or temporarily abandoned (SI/TA) status (see attachment A). All wells SI/TA beyond twelve (12) consecutive months require the filing of a Sundry Notice in accordance with R649-3-36-1 for Utah Division of Oil, Gas & Mining ("Division") approval. Wells with five (5) years non-activity or non-productivity shall be plugged, unless the Division grants approval for extended shut-in time upon a showing of good cause by the operator (R649-3-36-1.3.3).

On January 22, 2004 the Division notified Merit by certified mail 24 wells were on the SI/TA list. Merit responded by letters of February 13, 2004, November 10, 2004, and January 5, 2005, with evaluation plans for each of the 24 wells. By the time an extension of SI/TA status was granted to Merit by the Division on April 8, 2005, six of the original 24 wells had been returned to production.

To date, 10 of the original 24 wells remain as SI/TA. Two wells were producing briefly in 2005 but have since returned to SI/TA status. These wells are listed as number 8 and number 10 on Attachment A. Two additional wells (ARE W36-08 API# 43-043-30167 & ARE 29-04 ST1 API# 43-043-30129) were producing briefly for 3 months in 2007, but are now showing as SI, and will soon be added to this list.

Five (5) new wells have been added to the current list. These are the wells numbered 11 through 15 on Attachment A



Page 2  
August 26, 2008  
Mr. Mercer

Please submit your plans to produce or plug these wells to DOGM within 30 days of this notice or a Notice of Violation (NOV) will be issued.

For extended SI/TA consideration of each well on the SI/TA list, the operator shall provide the Division with the following:

1. Reasons for SI/TA of the well (R649-3-36-1.1).
2. The length of time the well is expected to be SI/TA (R649-3-36-1.2), and
3. An explanation and supporting data if necessary, showing the well has integrity, meaning that the casing, cement, equipment condition, static fluid level, pressure, existence/or absence of Underground Sources of Drinking Water, and other factors do not make the well a risk to public health and safety or the environment (R649-3-36-1.3).

Submitting the information suggested below may help show well integrity and may help qualify your well for extended SI/TA. **Note: As of July 1, 2003, wells in violation of the SI/TA rule R649-3-36 may be subject to full cost bonding (R649-3-1-4.2, 4.3).**

1. Wellbore diagram, and
2. Copy of recent casing pressure test, and
3. Current pressures on the wellbore (tubing pressure, casing pressure, and casing/casing annuli pressure) showing wellbore has integrity, and
4. Fluid level in the well bore, and
5. An explanation of how the submitted information proves integrity.

If the required information is not received within 30 days of the date of this notice, further actions will be initiated. If you have any questions concerning this matter, please contact me at (801) 538-5281.

Sincerely,



Dustin K. Doucet  
Petroleum Engineer

JP/js  
Attachment  
cc: Well File  
Operator Compliance File

### ATTACHMENT A

	Well Name	API	Lease Type	Years Inactive
1	CHAMPLIN 387 B1A	43-043-30168	Fee	14 Years 3 Months
2	ARE W16-12	43-043-30231	Fee	12 Years 11 Months
3	ARE W16-14	43-043-30096	Fee	12 Years 9 Months
4	ARE W31-12	43-043-30190	Fee	11 Years 11 Months
5	ARE W31-04E	43-043-30165	Fee	5 Years 10 Months
6	CHAMPLIN 372 AMOCO C 1	43-043-30143	Fee	6 Years 8 Months
7	ARE W16-06	43-043-30138	Fee	3 Years 1 Month
8	ARE W20-06	43-043-30159	Fee	2 Years 10 Months
9	ARE W17-16	43-043-30176	Fee	1 Year 9 Months
10	ARE W20-02	43-043-30228	Fee	2 Years 0 Months
<b>Newly Added</b>				
11	ARE W20-12	43-043-30220	Fee	2 Years 3 Months
12	ARE W31-06	43-043-30217	Fee	1 Year 5 Months
13	ARE W31-08	43-043-30164	Fee	1 Year 6 Months
14	ARE W36-16	43-043-30157	Fee	1 Year 3 Months
15	ARE E28-06	43-043-30226	Fee	1 Year 1 Month

RECEIVED

MAR 31 2009

FORM 9

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

DIV. OF OIL, GAS & MINING

5. LEASE DESIGNATION AND SERIAL NUMBER:

FEE

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:

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  GAS WELL  OTHER \_\_\_\_\_

8. WELL NAME and NUMBER:

ARE W16-14

2. NAME OF OPERATOR:

Merit Energy Company

9. API NUMBER:

4304330096

3. ADDRESS OF OPERATOR:

13727 Noel Road, Suite 500 CITY Dallas STATE TX ZIP 75240

PHONE NUMBER:

(972) 628-1658

10. FIELD AND POOL, OR WILDCAT:

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 2137' FSL & 686' FWL

6th P.M.

COUNTY: Summit

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWSW 16 T4N R8E

STATE:

UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input type="checkbox"/> 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 checked="" type="checkbox"/> OTHER: <u>Continuation of SI status</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Merit Energy Company Requests to keep the aforementioned well in SI status pending ability to perform a workover on the well. Please see attached documentation including planned workover for future utility and an explanation of work and casing integrity.

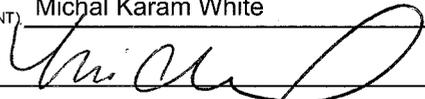
COPY SENT TO OPERATOR

Date: 6.4.2009

Initials: KS

NAME (PLEASE PRINT) Michal Karam White

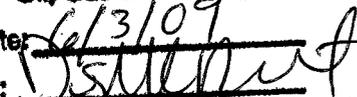
TITLE Regulatory Anlyast

SIGNATURE 

DATE 3/26/2009

REQUEST DENIED  
Utah Division of  
Oil, Gas and Mining

Date: 6/3/09

By: 

(See Instructions on Reverse Side)

\* MIT must be performed to prove integrity for extended SI/TA  
\*\* Recompletion Sundry for Twin Creek recomplete may be submitted separately for approval.

(This space for State use only)

(5/2000)

**ARE W16-14**  
**Sec. 16-T4N-R8E**  
**Summit County, Utah**  
**API #43-043-30096**  
**3/25/2009**

**Twin Creek Recomplete**

**Well Data**

Tubing: 3-1/2", 12.7#, VAM @ 66.27'  
4-1/2", 12.7#, N-80 CS Hydril @ 10511.2'  
Casing: 7", 23-29# @ 10,330'  
Liner: 7-5/8", 39# @ 10330' – 11,310'  
4-1/2", 13.5#, S-95 & P-110 @ 10,500' – 14,045'  
TD: 14,050'  
PBTD: 13,516'  
Elevation: 7,324' KB 7,305' GL

Size 80-40 Model G-22 Locator Seal Assembly @ 10511.2', landed w/ 6' out, 11' in

**Open Perforations:**

Nugget 12,816' – 12,864', 12,890' – 12,990', 13,016' – 13,076', 13,100' – 13,180'  
13,202' – 13,250', 13,332' – 13,376', 13,400' – 13,430', 13,430' – 13,464'  
13,500' – 13,515'

CR @ 13,630'

**Squeezed Perforations:**

Nugget 13,720' – 13,740'

**Procedure**

1. MIRU PU. ND WH. NU BOP. Sting out of liner top with seal assembly. (Note: 30,000# to pull out of PBR) TOH lying down.
2. PU 3.795" drift mill and 2-3/8" work string. TIH and clean well out to PBTD.
3. While on bottom RIH with sand line and swab test well for any Nugget potential. TOH.
4. RU WL. PU CIBP. RIH and set CIBP at 12,790'. Dump 2 sacks of cement on top of CIBP. POH.
5. PU casing guns. RIH and perforate well from 12,661' – 12,664' and from 12,708' – 12,710' with 6 spf, correlating to Dual Induction log dated 12/13/1979. POH. RD WL.
6. PU 4-1/2", 13.5# casing, retrievable packer. TIH and set packer at 12,650'.
7. RU Stimulation Company. Acidize well per recommendations. RD Stimulation Company.
8. Attempt to flow well back, swabbing if necessary to put well online.

9. RU WL. RIH with pressure and temperature gauges for pressure build up test per Altec's recommendations. POH. RD WL. Evaluate gas lift potential.
10. If unable to kick well off and/or if gas lift is determined feasible based off build up data, release packer and TOH lying down.
11. PU and TIH with 3-1/2" & 2-3/8" reverse gas lift set according to design (do not run until wellhead and surface work are done). Band 1/4" cap string to 12,660'.
12. ND BOP. NU WH. Kick the well up with gas lift. RDMO PU.

### **Contacts**

Foreman: Don Baucum (307) 380-8300  
Operations Manager: Bruce Vargo (307) 320-5113  
Operations Engineer: Nick Tunnell (972) 628-1084

### **Explanation of Work and Casing Integrity**

Due to the current pricing environment, the proposed project is currently uneconomical. However, as prices come up at a future point and time and as Merit is able to lower operating costs, Merit is confident that the proposed project is still a viable project and there is future utility for the wellbore. Attached is a proposed procedure to recomplete the subject well to the Twin Creek formation. Merit has attempted workovers on two offset wells in which Merit was unable to lower fluid levels low enough to attain economical gas production. Merit suspects that similar results will be seen in the subject well when swab testing the Nugget as planned in the proposed procedure. This data will justify plugging back the Nugget formation and recompleting the well to the Twin Creek formation. Merit currently has one well in the Anschutz field that is producing from the Twin Creek formation and is evaluating Twin Creek potential across the field as the Nugget formation depletes.

The subject well has 850 psi on the casing and 1650# on the tubing. Due to the fact that the tubing and casing pressures do not track while both are shut in, it can be concluded that the tubing is not in communication with the casing. The casing pressure has remained constant over time at 850 psi. Due to the fact that the casing has held 850 psi and not changed since 2005, it can be concluded that the casing has good integrity.





State of Utah
DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil Gas and Mining

JOHN R. BAZA
Division Director

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

January 21, 2009

Mr. Nicholas Tunnell
Merit Energy Company
13727 Noel Road, Suite 500
Dallas, TX 75240

43 043 30096
ARE W31-12
4N 8E 16

Subject: Extended Shut-in and Temporary Abandoned Well Requirements for Fee or State Leases dated August 26, 2008.

Dear Mr. Tunnell:

The Division of Oil, Gas and Mining (the Division) is in receipt of your letter dated October 17, 2008 in regards to the fifteen (15) shut-in or temporarily abandoned (SI/TA) Fee Lease Wells (Attachment A) operated by Merit Energy Company (Merit).

The Division does not object to the proposed work on the said wells. Several of the wells listed look as though they may have integrity. However, due to insufficient evidence the Division is unable to grant extended SI/TA status for these wells. Not enough data was received per R649-3-36 providing proof of integrity or lengths of time wells are expected to be shut-in. The Divisions preferred method of demonstrating well integrity is to perform an MIT. Please submit the necessary information to bring these wells back into compliance. Please note, approval will be necessary prior to continuing with the planned work for these wells.

Please submit an individual sundry for each well along with required information to help expedite approval and documentation processes. If the required information is not received within 30 days of the date of this notice, further actions may be initiated. If you have any questions concerning this matter, please contact me at (801) 538-5281.

Sincerely,

[Handwritten signature of Dustin K. Doucet]

Dustin K. Doucet
Petroleum Engineer

DKD/JP/js
Enclosure
cc: Well Files
Compliance File
N:\O&G Reviewed Docs\ChronFile\PetroleumEngineer\SITA



### ATTACHMENT A

	Well Name	API	Lease Type	Years Inactive
1	CHAMPLIN 387 B1A	43-043-30168	Fee	14 Years 3 Months
2	ARE W16-12	43-043-30231	Fee	12 Years 11 Months
3	ARE W16-14	43-043-30096	Fee	12 Years 9 Months
4	ARE W31-12	43-043-30190	Fee	11 Years 11 Months
5	ARE W31-04E	43-043-30165	Fee	5 Years 10 Months
6	CHAMPLIN 372 AMOCO C 1	43-043-30143	Fee	6 Years 8 Months
7	ARE W16-06	43-043-30138	Fee	3 Years 1 Month
8	ARE W20-06	43-043-30159	Fee	2 Years 10 Months
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12	ARE W31-06	43-043-30217	Fee	1 Year 5 Months
13	ARE W31-08	43-043-30164	Fee	1 Year 6 Months
14	ARE W36-16	43-043-30157	Fee	1 Year 3 Months
15	ARE E28-06	43-043-30226	Fee	1 Year 1 Month



MERIT ENERGY COMPANY

13727 Noel Road · Suite 500 · Dallas, Texas 75240  
Ph 972.701.8377 · Fx 972.960.1252 · www.meritenergy.com

October 17, 2008

State of Utah – Department of Natural Resources  
Division of Oil, Gas, & Mining  
Attn: Mr. Dustin Doucet  
PO Box 145801  
Salt Lake City, UT 84114-5801

Dear Mr. Doucet:

In response to your letter dated August 26, 2008, I would like to submit the attached supporting documentation regarding our extended shut-in wells.

Enclosed, please find a summary sheet with Merit Energy Company's future plans for each of the wells listed in your letter, a sheet with explanations and supporting data showing each well's integrity, as well as wellbore diagrams for the subject wells.

If you have any questions or wish to discuss this further, please contact me at (972) 628-1084 or electronically at [nick.tunnell@meritenergy.com](mailto:nick.tunnell@meritenergy.com).

Sincerely,

Nicholas R. Tunnell  
Operations Engineer  
Merit Energy Company

## UTAH DOGM – SI WELL LIST

Last Work	Integrity	2004	
	NP	✓	<ul style="list-style-type: none"> <li>• <b>CHAMPLIN 387 B1A</b> – Plan to P&amp;A well in March 2009 due to availability of rig. <i>Bridge broken, hissing valves</i></li> </ul>
5/95	OK	✓	<ul style="list-style-type: none"> <li>• <b>ARE W16-12</b> – Plan to run slickline to verify PBDT, swab test Nugget to evaluate potential, if unsuccessful, will attempt a Twin Creek completion.</li> </ul>
	?	✓	<ul style="list-style-type: none"> <li>• <b>ARE W16-14</b> – Plan to run slickline to verify PBDT, swab test Nugget to evaluate potential, if unsuccessful, will attempt a Twin Creek completion.</li> </ul>
1/04		✓	<ul style="list-style-type: none"> <li>• <b>ARE W31-12</b> – Plan to swab test the Nugget, if unsuccessful, will attempt a Twin Creek completion.</li> </ul>
1/99	✓	✓	<ul style="list-style-type: none"> <li>• <b>ARE W31-04</b> – Plan to swab test Nugget, if unsuccessful, will attempt a Twin Creek completion.</li> </ul>
2001	OK	✓	<ul style="list-style-type: none"> <li>• <b>CHAMPLIN 372 C1</b> – Swabbed in October 2004. Swab results were encouraging. There are no production facilities or flowlines in place. Merit is in the process of trying to buy a flowline in the area to tie into, at which point Merit will attempt to reactivate the well in the Nugget or attempt a Twin Creek completion. <i>4 1/2" liner run after watch? Hole in CSG @ 3612 CSG pattern</i></li> </ul>
2001		✓	<ul style="list-style-type: none"> <li>• <b>ARE W16-06</b> – Ran ESP in the well, unsuccessful due to water volumes, will attempt a Twin Creek completion. <i>1 string</i></li> </ul>
2004	OK	✓	<ul style="list-style-type: none"> <li>• <b>ARE W20-06</b> – Tested upper zone of Nugget in 2004, unsuccessful, plan to drill out cement &amp; CIBP and produce lower zone.</li> </ul>
		✓	<ul style="list-style-type: none"> <li>• <b>ARE W17-16</b> – SI due to availability of gas lift gas, gas is available, plan to kick well off with gas lift, if unsuccessful, will attempt a Twin Creek completion.</li> </ul>
2000		✓	<ul style="list-style-type: none"> <li>• <b>ARE W20-02</b> – Installed conventional gas lift, unsuccessful, plan to run survey to evaluate reverse gas lift potential, if unsuccessful, will attempt Twin Creek completion.</li> </ul>
2003			<ul style="list-style-type: none"> <li>• <b>ARE W20-12</b> – Installed conventional gas lift, cycling gas, plan to run survey to evaluate reverse gas lift potential, if unsuccessful, will attempt Twin Creek completion.</li> </ul>
2004	OK		<ul style="list-style-type: none"> <li>• <b>ARE W31-06</b> – Plan to install reverse gas lift to reactivate well, if unsuccessful, will attempt Twin Creek completion. <i>2 strings</i></li> </ul>
	NP		<ul style="list-style-type: none"> <li>• <b>ARE W31-08</b> – Rig on location, squeezed off casing leak, drilling out cement, plan to install reverse gas lift to reactivate well, if unsuccessful, will attempt Twin Creek completion. <i>Titespot @ 10416 (2001)</i></li> </ul>
	✓		<ul style="list-style-type: none"> <li>• <b>ARE W36-16</b> – Coil tubing gas lift design in the well, plan to pull the coil tubing and install reverse gas lift to reactivate well, if unsuccessful, will attempt Twin Creek completion. <i>Titespot @ 11095' to 11099' 2 strings</i></li> </ul>
2005	OK		<ul style="list-style-type: none"> <li>• <b>ARE W28-06</b> – Collapsed casing at 12,678', will attempt a Twin Creek completion. <i>collapse @ 12678 2 strings</i></li> </ul>

# UTAH DOGM – SI WELL LIST

## Wells to be Reactivated in 2009

- |  |                             |     | Tbg  | C19       |
|--|-----------------------------|-----|------|-----------|
| • ARE W16-12   |                             |     |      |           |
| ○ Packer at  | 10,304                      |     | 2007 | 0 0       |
| ○ Top of cement (TOC) at   | 10,100 (9-5/8" casing)      | msf | 2006 | 0 0       |
| ○ Tubing Pressure  | 50#                         |     | 2005 | 0 130     |
| ○ Casing Pressure  | 0#                          |     | 2004 | 100 0     |
| ○ The packer is located below the TOC. The tubing pressure and casing pressure are different. Therefore, the casing and tubing are not in communication and the ground waters are protected.   |                             |     | 2003 | 0 0       |
| • ARE W16-14   |                             |     | 2007 | 0 NA      |
| ○ Packer (PBR) at  | 10,500                      |     | 2006 | 0 NA      |
| ○ Top of cement (TOC) at   | 9,650 (9-5/8" casing)       |     | 2005 | 0 NA      |
| ○ Tubing Pressure  | 1650#                       |     | 2004 | 1500 250  |
| ○ Casing Pressure  | 850#                        |     | 2003 | 100 0     |
| ○ The tubing is tied into the 4-1/2" liner with a PBR at 10,500. This is below the TOC for the 9-5/8" casing string. The tubing pressure and casing pressure are different. Therefore, the casing and tubing are not in communication and the ground waters are protected.   |                             |     | 1990 | 4600 1575 |
| • ARE W31-12   |                             |     | 2007 | NA NA     |
| ○ Packer at  | none                        |     | 2006 | NA NA     |
| ○ Top of cement (TOC) at   | 10,700                      |     | 2005 | NA NA     |
| ○ Casing Pressure  | 100#                        |     | 2004 | NA NA     |
| ○ Fluid Level  | 1000' from Surface          |     | 2003 | 490 0     |
| ○ There is not a packer or tubing in this well. The static fluid level is 1000' from surface. There is a 13-3/8" casing string set at 2846', a 9-5/8" casing string set at 10272', and a 7" tie-back casing string set at 9919'. These three casing strings are protecting the ground waters.  |                             |     |      |           |
| • ARE W31-04   |                             |     | 2007 | 30 20     |
| ○ Packer at  | 14,000                      |     | 2006 | 150 0     |
| ○ Top of cement (TOC) at   | 11,900                      |     | 2005 | 150 30    |
| ○ Tubing Pressure  | 1000#                       |     | 2004 | 1200 25   |
| ○ Casing Pressure  | 0#                          |     | 2003 | 0 0       |
| ○ This well is a horizontal sidetrack. The primary cement job on the original production casing had a TOC at 11,900. The kick-off point for the horizontal leg is below this depth. Additionally, the drill string was cemented in the horizontal section with the TOC estimated to be between 13126 and 13310. Based on the fact that the tubing and casing pressures are different, the two are not in communication and therefore, the ground waters are protected. |                             |     |      |           |
| • CHAMPLIN 372 C1  |                             |     | 2007 | 0 0       |
| ○ Packer at  | 8,320 (MD)      6,648 (TVD) |     | 2006 | 600 0     |
| ○ Top of cement (TOC) at   | 4,906                       |     | 2005 | 0 0       |
| ○ Tubing Pressure  | 0#                          |     | 2004 | 0 0       |
| ○ Casing Pressure  | 0#                          |     | 2003 | 0 0       |
| ○ The 4-1/2" liner is cemented in place at 5090 (below the TOC).   |                             |     |      |           |
| • ARE W16-06   |                             |     | 2007 | NA NA     |
| ○ Packer at  | none                        |     | 2006 | NA NA     |
| ○ Top of cement (TOC) at   | 12,640                      |     | 2004 | NA NA     |
| ○ Casing Pressure  | 0#                          |     | 2003 | 0 0       |
| ○ When Merit set a packer in October 2004, we pressure tested the annulus to 500 psi and it held. Therefore, the casing has integrity and the ground waters are protected.   |                             |     |      |           |
| • ARE W20-06   |                             |     | 2007 | 120 100   |
| ○ Packer at  | 12,858'                     |     | 2006 | 220 250   |
| ○ Top of cement (TOC) at   | 9,650' (9-5/8" casing)      |     | 2005 | 350 350   |
| ○ Tubing Pressure  | 0#                          |     | 2004 | NA 0      |
| ○ Casing Pressure  | 0#                          |     | 2003 | 0 0       |
| ○ When Merit set the packer in June 2004, we pressure tested the annulus to 500 psi and it held. There is a 13-3/8" casing string set at 5411', a 9-5/8" casing string set at 11330',  |                             |     |      |           |

# UTAH DOGM – SI WELL LIST

and a 7" tie-back casing string set at 10079'. These three casing strings are protecting the ground waters.

- ARE W17-16
 

○ Packer	13,747'	2007	1180	1300
○ Top of cement (TOC) at	10,371' (7-5/8" casing)	2006	0	1100
○ Tubing Pressure	78#	2005	0	80
○ Casing Pressure	53#	2004	0	0
		2003	0	0

○ There is a 13-3/8" casing string set at 2526', a 9-5/8" casing string set at 10701', and a 7" tie-back casing string set at 10237'. These three casing strings are protecting the ground waters.
- ARE W20-02
 

○ Packer at	12,646'	2007	464	500
○ Top of cement (TOC) at	8,910' (7" casing)	2006	150	1200
○ Tubing Pressure	384#	2005	100	1150
○ Casing Pressure	310#	2004	0	1000
		2003	0	0
		1990	5500	0

○ There is a 13-3/8" casing string set at 5140', a 9-5/8" casing string set at 10934', and a 7" casing string set at 13928'. These three casing strings are protecting the ground waters.
- ARE W20-12
 

○ Packer at	12,863'	2007	435	1050
○ Top of cement (TOC) at	10,372' (9-5/8" casing)	2005	NA	680
○ Tubing Pressure	912#	2004	180	800
○ Casing Pressure	930#	2003	0	0

○ There is a 13-3/8" casing string set at 5362', a 9-5/8" casing string set at 11245', and a 7" tie-back casing string set at 10109'. These three casing strings are protecting the ground waters.
- ARE W31-06
 

○ Packer at	10284'	2007	0	NA
○ Top of cement (TOC) at	9996' (7" casing)	2006	250	NA
○ Tubing Pressure	0#	2005	0	425
○ Casing Pressure	0#	2004	110	940
		2003	200	920

○ There is a 13-3/8" casing string set at 2301', a 9-5/8" casing string set at 10689', and a 7" casing string set at 14033'. These three casing strings are protecting the ground waters.
- ARE W36-16
 

○ Packer (PBR) at	10,680	2007	1200	0
○ Top of cement (TOC) at	10,172 (7" casing)	2006	250	0
○ Tubing Pressure	1357#	2005	500	100
○ Casing Pressure	0#	2004	250	0
		2003	180	0

○ The packer is located below the TOC. The tubing pressure and casing pressure are different. Therefore, the casing and tubing are not in communication and the ground waters are protected.
- ARE E28-06
 

○ Packer at	none	2007	NA	0
○ Top of cement (TOC) at	11,900' (7" casing)	2005	0	0
○ Tubing Pressure	0#	2004	180	0
○ Casing Pressure	0#	2003	200	1350

○ There is a 13-3/8" casing string set at 3988', a 9-5/8" casing string set at 12990', and a 7" tie-back casing string set at 12313'. These three casing strings are protecting the ground waters.

ARE W31-08

		2007	1220	NA
		2005	0	0
		2004	NA	0
		2003	180	0

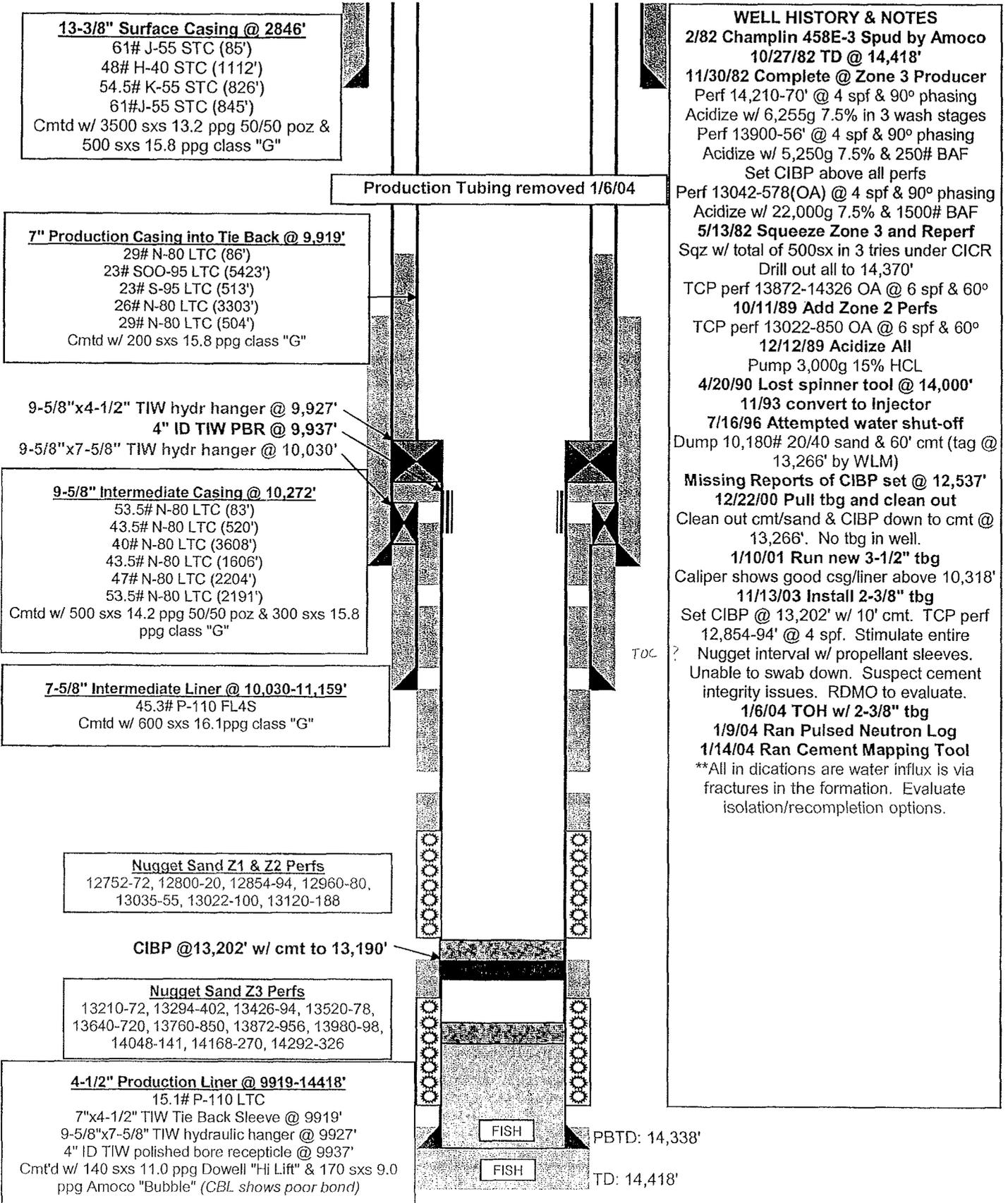




# ANSCHUTZ RANCH EAST UNIT W31-12



Summit County, Utah  
 Location: 640' FWL & 1778' FNL Sec 31-T4N-R8E  
 Elevation: 7870' GL/ 7890' KB  
 Last Updated by LLT 2/12/2004







Ingram Cactus 11" 3M by 7" 5M w/R2 bottom & 6" bowl  
 lbg spool (7" 26# csg stub landed in slips)

9 5/8" 32.3# H-40 ST & C csg set at 1518'

NOTE: HOLE IN CSG AT 3612'  
 (Casing patch set from 3582' to 3635')

Note: Casing pressure tested from 0-3600'  
 to 1000 psig 2/16/01 - passed

2-3/8" 4.7# EUE 8rnd Tubing

Annulus pressure tested to 1000 psig (2/27/2001)

4-1/2" 12.60# Tubing run to surface  
 New Vam Beveled Couplings

4-1/2" Liner Top with BPR  
 Cemented in place at 5090'

Cement top 7" per CBL on 2/15/98  
 logged by Schlumberger at 4906' + -

Whipstock at 5600' MD (5513' TVD)

Inflatable packer  
 8320' MD

ECP 7750' MD

Openhole

Shoe 7850' MD

TD = 8608' MD  
 6648' TVD

**NOTE:**

Twin Creek & Nugget squeezed off as follows,  
 2/12/98 pumped 410 sx "G" + additives no pressure  
 2/13/98 pumped 100 sx "G" neat & 200 sx "G" + additives  
 no pressure  
 2/14/98 pumped 50 sx 10-0 RFC and obtain 1150 psi squeeze  
 2/14/98 pump 20 sx "G" for topout cement cap on top of reliever

**Spacer tube, short string:**

Spacer tube, X-over, 2 3/8" pup, Model "E" hyd  
 trip sub, 2 3/8" pup, Model "F" nipple, Perf'd pup,  
 1 jt 2 3/8" lbg, Baker model "R" nipple, Mule shoe  
 Avg OD's & ID's: ID 1.901" & OD 2.92"  
 Overall length: 48.73'  
 EOT at 6141.54'

Twin Creek Perfs:  
 6155' thru 6980'

Nugget Perfs  
 7056' thru 7098'

FISH: 2 3/8" lbg (25')

**Prod Casing:**

7" 23# & 26# at 7300.25'

7" 26# S-95 & K-55 casing - 2296.62'

Cement cap at 6018.22' - lagged via tbg

Halliburton Model "HCS" cement retainer  
 (set via tbg - Bottom at 6054.11')

Cut off 2 3/8" 4.7# N-80 CS hydrd lbg

X-Over: 2 3/8" CS to 2 3/8" 8rd

Spacer tube

Baker model A-5 dual packer

Spacer tube

X-Over: 2 3/8" to 2 3/8" 10rd to 8rd

X-Over: 2 3/8" to 2 7/8" 8rd

Perf'd tubing: 4 shots (4 spf)

29 jts of 2 7/8" 6.5# 8rd tbg

Baker Model "F" nipple

1 jt of 2 7/8" 6.5# 8rd tbg

Baker model G-22 locator assembly

Baker model "retrieva D" packer

Baker model 80-32 seal assembly

X-Over: 2 3/8" 10rd BX by BX

X-Over: 2 3/8" NU to EU

1 jt of 2 3/8" EU 8rd

Baker model "R" nipple

Mule shoe collar

	MIN ID	MAX OD	
7" 26# S-95 & K-55 casing - 2296.62'			
Cement cap at 6018.22' - lagged via tbg			
Halliburton Model "HCS" cement retainer (set via tbg - Bottom at 6054.11')		5.5"	6051.98'
Cut off 2 3/8" 4.7# N-80 CS hydrd lbg	1.901"	2.375"	6071'
X-Over: 2 3/8" CS to 2 3/8" 8rd	1.901"	3.062"	6089.49'
Spacer tube	1.901"	2.375"	6090.29
Baker model A-5 dual packer	1.901"	6.093"	<b>6092.81'</b>
Spacer tube	1.901"	2.375"	6098.13'
X-Over: 2 3/8" to 2 3/8" 10rd to 8rd	1.901"	2.875"	6099.43'
X-Over: 2 3/8" to 2 7/8" 8rd	1.901"	3.00"	6099.75'
Perf'd tubing: 4 shots (4 spf)			6103.57'
29 jts of 2 7/8" 6.5# 8rd tbg	2.441"	3.668"	6100.07'
Tbg collars: 3.668" - Tube: 2.875"			
Baker Model "F" nipple	1.87"	3.6875"	6994.86'
1 jt of 2 7/8" 6.5# 8rd tbg	2.441"	3.668"	6995.87'
Baker model G-22 locator assembly	2.406"	3.46875"	7023.95'
Baker model "retrieva D" packer	3.25"	6.093"	<b>7025'</b>
Baker model 80-32 seal assembly	2.406"	2.680"	7036.66'
X-Over: 2 3/8" 10rd BX by BX	1.906"	3.062"	7037.09'
X-Over: 2 3/8" NU to EU	1.905"	3.062"	7037.46'
1 jt of 2 3/8" EU 8rd	1.901"	3.062"	7069.12'
Baker model "R" nipple	1.760"	2.92"	7069.89'
Mule shoe collar	1.901"	2.92"	7071.21'

PBTD:

TD: 7300.25'



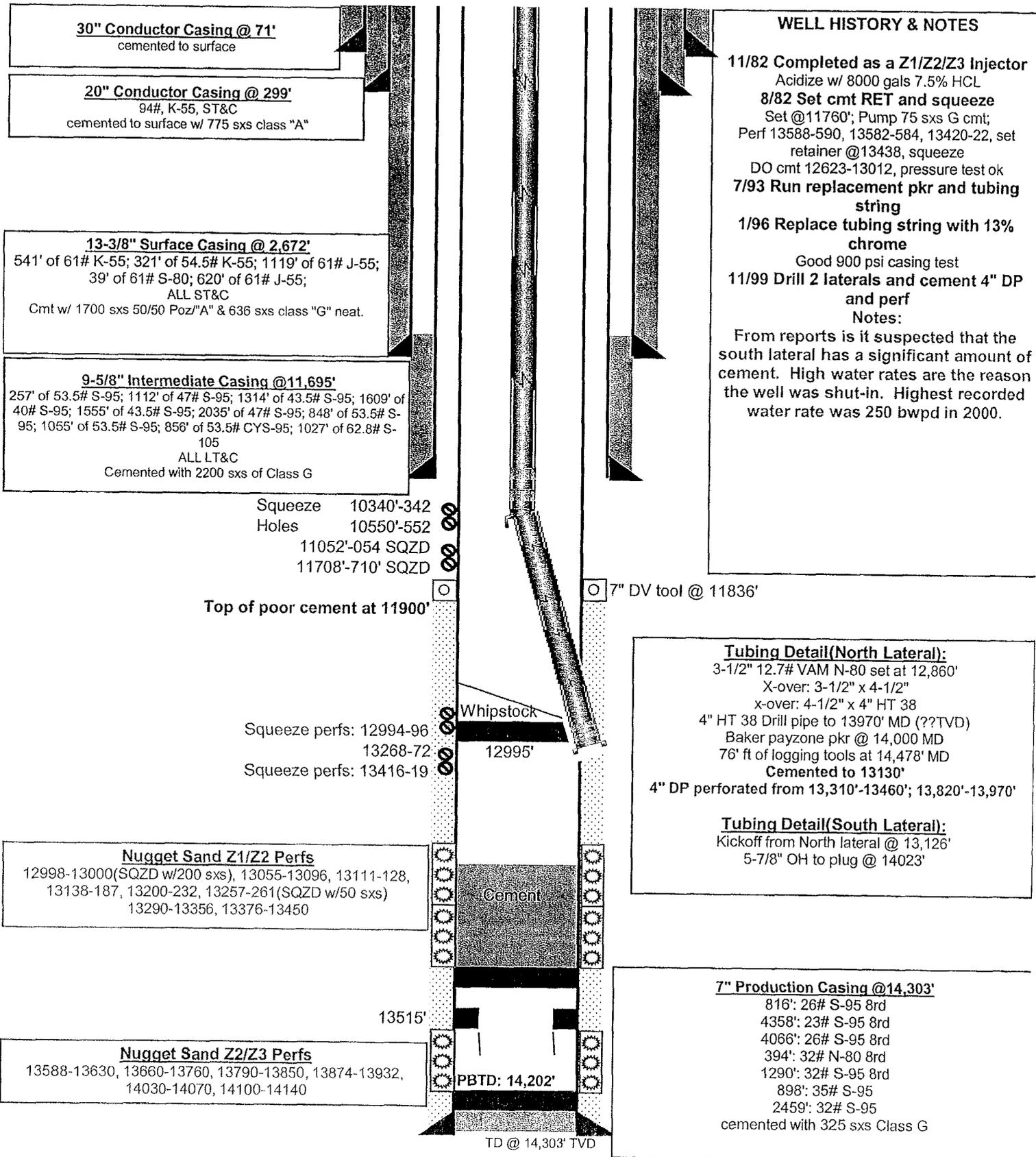
# ANSCHUTZ RANCH EAST UNIT W31-04

Summit County, Utah

Location: 731' FWL & 87' FNL Sec 31-T4N-R7E

Elevation: 7894' GL/ 7926' KB

Last Updated by CAM 12/17/2007







WELL NAME:	ARE W20-02	FIELD:	ANSCHUTZ RANCH EAST
QTR QTR:	SEC: 20	TWN:	4N RNG: 8E
COUNTY:	SUMMIT	ST:	UT SPUD DATE: 05/01/83
KB:	7331	GL:	7310 TD: 13928 PBD: 12950
LAST UPDATED:	11/09/07	BY:	CASEY MORTON

**CASING DETAILS**

PURPOSE	SIZE	WEIGHT	GRADE	SET DEPTH
SURFACE	13-3/8", 13-5/8"	54.5-88.2#	K-55, HC-95	5140'
INTERMEDIATE	9-5/8", 9-7/8"	47-62.8#	MC-95, S-105	10934'
PRODUCTION	7"	32-35#	N-80, S-95	13928'

Has an additional 20" surface casing string set @ 60', not shown on WBS

**TUBING DETAILS**

DESCRIPTION	SIZE	WEIGHT	GRADE	SET DEPTH
KB				21.00
82 JTS	2-7/8"	6.5#	N-80	2,650.53
GLV #7	2-7/8"			2,657.57
78 JTS	2-7/8"	6.5#	N-80	5,139.88
GLV #6	2-7/8"			5,146.91
68 JTS	2-7/8"	6.5#	N-80	7,311.03
GLV #5	2-7/8"			7,318.05
58 JTS	2-7/8"	6.5#	N-80	9,167.66
GLV #4	2-7/8"			9,174.68
48 JTS	2-7/8"	6.5#	N-80	10,692.10
GLV #3	2-7/8"			10,699.12
34 JTS	2-7/8"	6.5#	N-80	11,784.19
GLV #2	2-7/8"			11,791.22
24 JTS	2-7/8"	6.5#	N-80	12,558.46
GLV #1	2-7/8"			12,565.48
1 JT	2-7/8"	6.5#	N-80	12,597.76
X NIPPLE	2.313"			12,598.80
1 JT	2-7/8"	6.5#	N-80	12,631.08
ON/OFF TOOL	2-7/8" X 5-1/2"			12,632.90
PUP JT	2-7/8"	6.5#	N-80	12,638.98
ASI-X PKR	2-7/8" X 7"			12,646.52
PUP JT	2-7/8"	6.5#	N-80	12,652.60
XN NIPPLE	2.313" W/ NO G			12,653.73
PUP JT	2-7/8"	6.5#	N-80	12,659.78
WL REENTY	2-7/8"			12,660.46

Based on 03/18/04 Pulling Report

**WELL HISTORY:**

08/18/83	Perf Z3 f/ 13476-560, acidize w/ 6300g 10% HCL
	Perf Z2 f/ 13004-430 (OA) w/ TCP.
	Acidize all w/ 600 bbls acid
10/17/84	Left 7' of PLT tool in hole
01/08/86	Sqz 13004-108 w/ 150 sxs
	Perf Z1 f/ 12739-924 (OA) w/ TCP (no stimulation)
02/15/86	PLT indicates flow f/ 5 of 11 zones
07/29/86	Test lower Z2 & Z3
09/09/86	Convert to injection, perf Z2 f/ 13005-065, 13080-110
03/01/95	Convert to production
05/18/98	Attempt WSO, spot 27 bbl cmt f/ 12950-13628 (tagged @ 12951)
02/01/04	Set CIBP at 12990? RIH with gas lift

**NUGGET Z1 PERFS**

12739-768, 12778-784  
12792-811, 12831-864  
12890-899, 12912-924

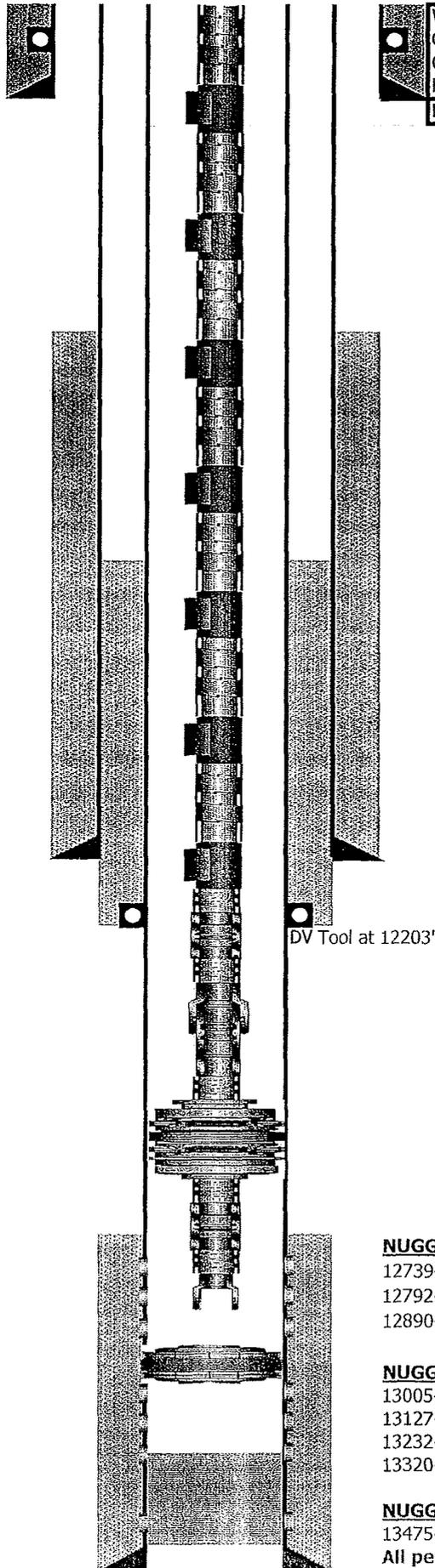
**NUGGET Z2 PERFS**

13005-065, 13080-110 (w/ 1/4 spf, 0 phasing)  
13127-152, 13164-220  
13232-256, 13280-308  
13320-360, 13372-430

**NUGGET Z3 PERFS**

13475-560

All perfs shot w/ 4 spf 90 phasing unless noted otherwise





WELL NAME:	ARE W31-06	FIELD:	ANSCHUTZ RANCH EAST
QTR QTR:	SEC: 31	TWN:	4N RNG: 8E
COUNTY:	SUMMIT	ST:	UT
KB:	7770	GL:	7743
	TD:	14330	PBDT:
			13367
LAST UPDATED:	08/14/08	BY:	CASEY MORTON

**CASING DETAILS**

PURPOSE	SIZE	WEIGHT	GRADE	SET DEPTH
SURFACE	13-3/8"	54.5-61#	K-55	2301'
INTERMEDIATE	9-5/8", 9-7/8"	47-62.8#	N-80, S-105	10689'
PRODUCTION	7"	32-38#	N-80, P-110	14033'

Has an additional 20" surface casing string set @ 107', not shown on WBS

**TUBING DETAILS**

DESCRIPTION	SIZE	WEIGHT	GRADE	SET DEPTH
KB				27.00
326 JTS	2-7/8"	6.5#	N-80	10,269.42
PUP	2-7/8"	6.5#	N-80	10,275.50
ON/OFF				10,277.02
ARROWSET PKR				10,284.73
56 JTS	2-7/8"	6.5#	N-80	12,048.52
X NIPPLE				12,049.72
1 JT	2-7/8"	6.5#	N-80	12,081.06
XN NIPPLE				12,082.34
1 JT	2-7/8"	6.5#	N-80	12,114.74
WL REENTRY				12,115.16

Based on tubing details 12/10/04

**COILED TUBING DETAILS**

	LENGTH	SET DEPTH
1-1/4" CT	8992.0	8,992.00
GLV #8	SJ 40 1" GLV w/ 3/16" PORT	8.0
		9,000.00
1-1/4" CT	942.0	9,942.00
GLV #7	SJ 40 1" GLV w/ 3/16" PORT	8.0
		9,950.00
1-1/4" CT	792.0	10,742.00
GLV #6	SJ 40 1" GLV w/ 3/16" PORT	8.0
		10,750.00
1-1/4" CT	592.0	11,342.00
GLV #5	SJ 40 1" GLV w/ 3/16" PORT	8.0
		11,350.00
1-1/4" CT	542.0	11,892.00
GLV #4	SJ 40 1" GLV w/ 3/16" PORT	8.0
		11,900.00
1-1/4" CT	392.0	12,292.00
GLV #3	SJ 40 1" GLV w/ 3/16" PORT	8.0
		12,300.00
1-1/4" CT	392.0	12,692.00
GLV #2	SJ 40 1" GLV w/ 3/16" PORT	8.0
		12,700.00
1-1/4" CT	392.0	13,092.00
GLV #1	1" GLV w/ 3/16" S/O	8.0
		13,100.00

Based on coiled tubing details 04/14/05

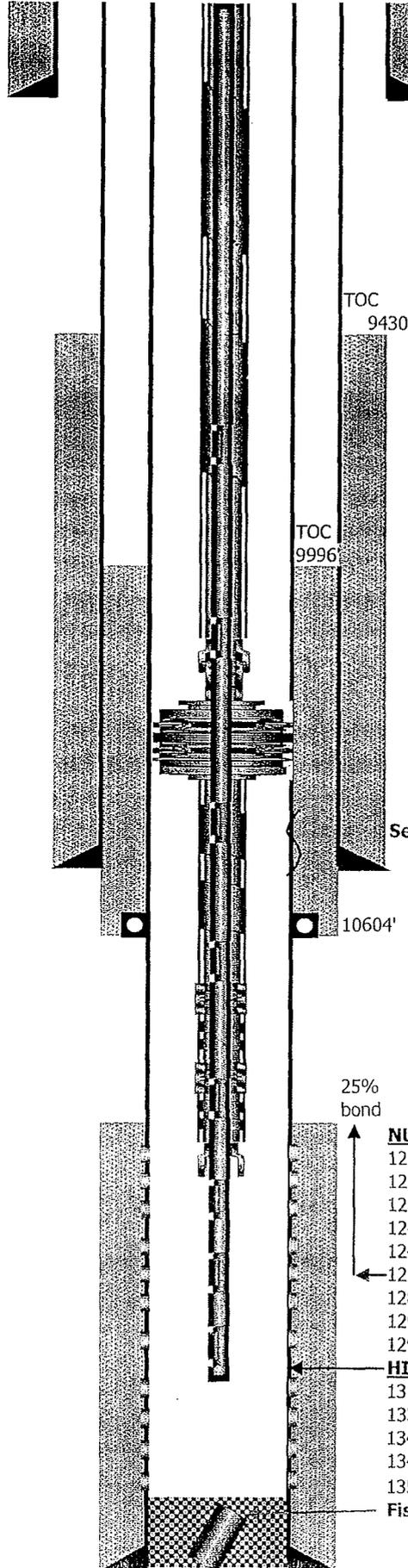
**WELL HISTORY:**

09/01/83	Complete Z2 & Z3
06/01/85	Perf & Acidize Z1
03/01/86	Add Z1, Z2 & OT pay
02/01/89	Add Z3 & OT pay
04/01/89	Close SS - OT only
04/01/90	Open SS - NS/OT
04/01/92	Replace corroded tubing
04/01/95	Replace corroded tubing w/ Chrome
10/01/96	Frac Z1 & Z2
03/28/01	Pulled pkr, ran 2-7/8" tubing (no packer)
07/01/01	Gas lifted ("Poor Boy")
05/01/03	Chemical hot oil for paraffin, net increase 1 mmcf/d
08/01/04	Shut off lift gas (circulating)
09/11/04	WL TD - tagged fill @ 13367' (sand in bailer)
12/01/04	CO Fill to new PBDT 14060'

- NUGGET PERFS**
- 12171-188, 12194-228
  - 12238-254, 12256-262
  - 12270-308, 12310-364
  - 12410-454, 12462-470
  - 12472-548, 12551-618
  - 12638-745, 12746-776
  - 12820-850, 12860-892
  - 12902-940, 12952-974
  - 12992-13058
- HINGELINE**
- 13130-212, 13230-282
  - 13330-450
  - 13460-462 (sqzd)
  - 13471-490, 13508-574
  - 13596-668, 13704-816, 13834-974

Fish @ 14165': Open Hole logging tool (39.1' long, 3-3/8" OD)

**NOTE: TITE SPOT NOTED IN 7" CASING @ 10416' (CALIPER MAR-01)**



Lease & Well No. ARE W36-16 (FKA: Island Ranch E-1)  
Field Name Anschutz Ranch East  
Location Sec. 36, 4N 7E

CPF Name Gas Gathering  
County & State Summit County, UT  
API No.

**Well Information**

Ground Elevation: 8,070'  
KB Elevation: 8,108'  
Spud Date: 2/01/82  
Completion Date: 11/01/83

Plugback Depth: ??  
Total Depth: 14,475'  
Current Prod: Oil - 0 bopd  
Gas - 185 mcfpd  
Water - 175 bwpd

Comments: Schlumberger coiled tubing gas lift setup  
No Merit Reports in PA  
FTP - ?  
FCP - ?  
SITP - ?  
SICP - ?  
SIBHP - ?

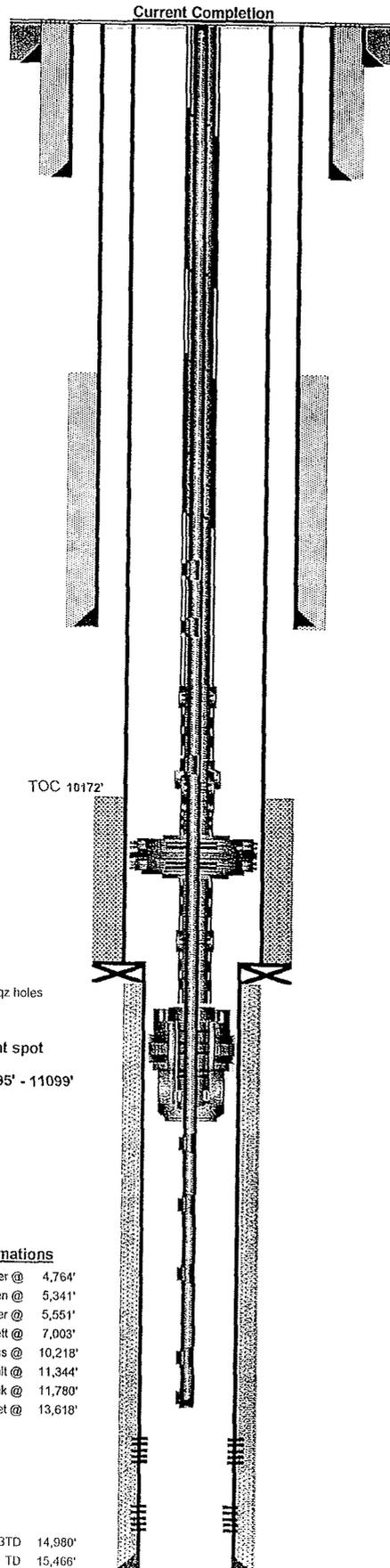
**Pipe Data**

Conductor						
Top	Bottom	Size	Weight	Grade	Sx. Cmt	Comments
0'	0'	0	Unk	Unk	Unk	
Surface						
Top	Bottom	Size	Weight	Grade	Sx. Cmt	Comments
0'	2,888'	13-3/8"	54.5&61#	K-55		
Intermediate 1						
Top	Bottom	Size	Weight	Grade	Sx. Cmt	Comments
0'	6,833'	9-5/8"	47.0#	HC-95	Unk	DV@ 5662
Intermediate 2 and Production Lines						
Top	Bottom	Size	Weight	Grade	Sx. Cmt	Comments
0'	11,817'	7"	32-35#	S-95	Unk	32#-6230', 29#-10489'
10,476'	14,775'	4-1/2"	15.1#	P-110	Unk	4" ID PBR @ 10748'

Tubing Details						
Description	Length	Bottom	Size	Min. ID	Weight	Grade
KB	38.00'	38.00'				
318 jts	9,854.00'	9,892.00'	3-1/2"		10.3#	VAM; N-90
24 jts	743.72'	10,635.72'	3-1/2"		9.2#	Chrome
R-Nipple	1.00'	10,636.72'	3-1/2"	2.562		
1 jt	31.00'	10,667.72'	3-1/2"		9.2#	Chrome
On/Off tool	1.00'	10,668.72'	5-1/2 x 3-1/2"			
Pup joint	6.00'	10,674.72'	3-1/2"			VAM
Baker FHL packer	6.00'	10,680.72'				
1 jt	31.00'	10,711.72'	3-1/2"			VAM
R Nipple	1.00'	10,712.72'	3-1/2"	2.562		
1 jt	31.00'	10,743.72'	3-1/2"			VAM
PBR	4.00'	10,747.72'		4"		
Seal Assmby		10,747.72'				
COILED TUBING DATA						
1-1/4" Coiled tubing	6,766.00'	6,766.00'				
Valve 8		6,767.00'				
Valve 7		8,766.00'				
Valve 6		10,166.00'				
Valve 5		11,016.00'				
Valve 4		11,616.00'				
Valve 3		12,216.00'				
Valve 2		12,716.00'				
Valve 1		13,117.00'				

**Perforations**

Date	Top	Bottom	Gross	Holes	Comments
9/11/1985	13,400'	13,410'	10'	40	Sand Frac(48K lbs.)
9/11/1985	13,420'	13,482'	62'	248	Sand Frac(48K lbs.)
9/11/1985	13,510'	13,516'	6'	24	Sand Frac(48K lbs.)
9/11/1985	13,542'	13,562'	20'	80	Sand Frac(48K lbs.)
9/11/1985	13,562'	13,613'	31'	124	Sand Frac(48K lbs.)
9/11/1985	13,676'	13,690'	14'	56	Sand Frac(48K lbs.)
9/11/1985	13,701'	13,710'	9'	36	Sand Frac(48K lbs.)
	13,750'	13,766'	18'	72	
1/8/1984	13,776'	13,832'	56'	224	All 4 SPF
1/8/1984	13,861'	13,894'	33'	132	All 4 SPF
1/8/1984	13,924'	13,950'	26'	104	All 4 SPF
1/8/1984	13,980'	14,015'	35'	140	All 4 SPF
1/8/1984	14,030'	14,054'	24'	96	All 4 SPF
1/8/1984	14,061'	14,072'	11'	44	All 4 SPF
	14,088'	14,158'	70'	280	All 4 SPF
9/28/1987	14,270'	14,340'	70'	280	All 4 SPF
9/28/1987	14,370'	14,520'	150'	600	All 4 SPF
9/28/1987	14,580'	14,600'	20'	80	All 4 SPF
9/28/1987	14,620'	14,690'	70'	280	All 4 SPF



- Formations**
- Frontier @ 4,764'
  - Aspen @ 5,341'
  - Bear River @ 5,551'
  - Gannett @ 7,003'
  - Preuss @ 10,218'
  - Salt @ 11,344'
  - Twin Creek @ 11,780'
  - Nugget @ 13,618'

PBTD 14,980'  
TD 15,466'

# MERIT ENERGY COMPANY

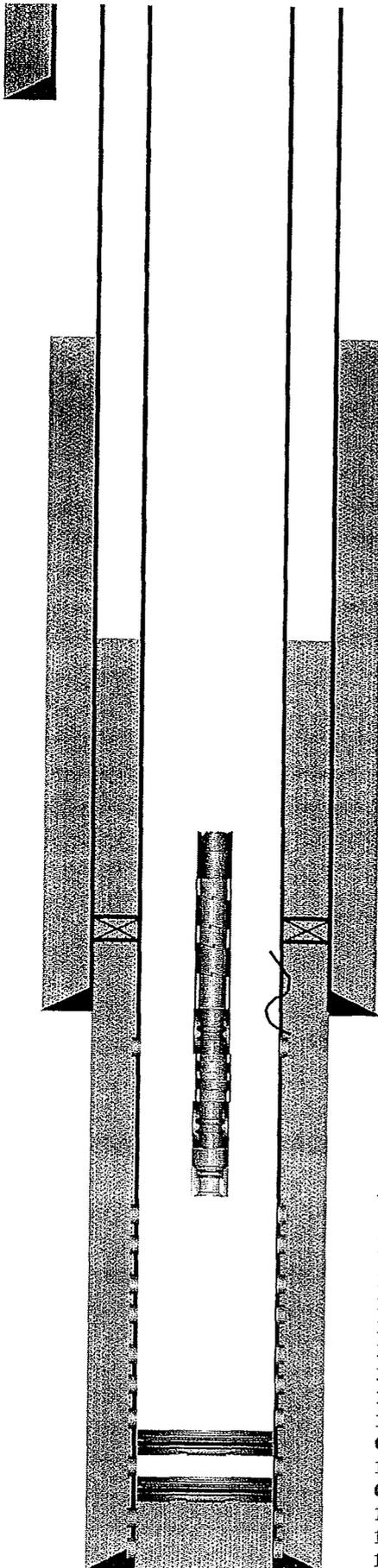
WELL NAME: <b>ARE E28-06</b>		FIELD: <b>ANSCHUTZ RANCH EAST</b>	
QTR QTR:	SEC: <b>28</b>	TWN: <b>4N</b>	RNG: <b>8E</b>
COUNTY: <b>SUMMIT</b>	ST: <b>UT</b>	SPUD DATE:	
KB: <b>7513</b>	GL: <b>7487</b>	TD: <b>15170</b>	PBTD:
LAST UPDATED: <b>09/13/05</b>		BY:	<b>MIKE MERCER</b>

### CASING DETAILS

PURPOSE	SIZE	WEIGHT	GRADE	SET DEPTH
SURFACE	13-3/8"	72#	S95	3988'
INTERMEDIATE	9-5/8", 9-7/8"	47#, 62.8#	S95	12990'
PRODUCTION	7"	32#	L80	F/12313-15160
TIEBACK	7"	32#	N80, S95	F/0-12313'

### TUBING DETAILS

DESCRIPTION	SIZE	WEIGHT	GRADE	SET DEPTH
KB				26.00
<b>TUBING PULLED 07/13/05</b>				



**TOL @ 12313**

**COLLAPSED CASING @ +/-12678'**

**SQZ PERFS**  
12991-12993

#### NUGGET PERFS

14250-14265  
14310-14316  
14325-14332  
14360-14372  
14380-14396  
14466-14482  
14500-14506  
14530-14566  
14594-14630  
14728-14755  
**CICR @ 14802'**  
14814-14866  
**CICR @ 14900'**  
14980-14988 (SQZD)  
14992-15009 (SQZD)  
15018-15024 (SQZD)

FISH: 2-7/8" 6.5# N80 stub, 43 jts 2-7/8" 6.5# N80, X Nipple, 1 jt 2-7/8" 6.5# N80, XN Nipple, WL Re-entry guide (1410.50')

~~INJECTION~~ WELL - PRESSURE TEST

Well Name: ARE W116-14 API Number: 43-043-30096  
 Qtr/Qtr: NW SW Section: 16 Township: 4N Range: 8E  
 Company Name: Merit Energy Co.  
 Lease: State \_\_\_\_\_ Fee  Federal \_\_\_\_\_ Indian \_\_\_\_\_  
 Inspector: Lishe Cordova Date: 8/10/10  
 IPS "Integrated Prod. Services"

Initial Conditions:

Tubing - Rate: N/A 516W Pressure: 1750 psi  
 Casing/Tubing Annulus - Pressure: ~~300~~ 300 psi (IPS Gauge)

Conditions During Test:

Time (Minutes)		Annulus Pressure	Tubing Pressure
0	9:36	<u>1000</u>	_____
5	9:41	<u>1000</u>	_____
10	9:46	<u>1000</u>	_____
15	9:51	<u>1000</u>	_____
20		_____	_____
25		_____	_____
30		_____	_____

Results Pass/Fail

Conditions After Test:

Tubing Pressure: 1750 psi  
 Casing/Tubing Annulus Pressure: \_\_\_\_\_ psi

COMMENTS:

Hole full, packer @ 10,511.21'  
1000# held 15 min - passed.

Don E. Brannon  
 Operator Representative



GARY R. HERBERT  
Governor

GREGORY S. BELL  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

June 6, 2011

43 043 30096  
ARE W16-1A  
4N 8E 16

Ms. Michal K. White  
Merit Energy Company  
13727 Noel Road, Suite 500  
Dallas, TX 75240

Subject: **Notice of Violation: Abandoned Well Requirements for Fee or State Leases**

Dear Ms. White:

The Division of Oil, Gas and Mining (the Division) is reissuing this Notice of Violation (NOV) that originally went out via certified mail to Merit Energy Company (Merit) on July 1, 2010 (see Attachment of original Violation). Merit was given until September 30, 2010, to respond to this NOV. To date the Division has not received any information from Merit showing any attempt to move these wells out of violation status.

As of January 1, 2011, Merit had twenty five (25) wells that were in non-compliance with the requirements for shut-in or temporarily abandoned (SI/TA) status. The Division recognizes that two (2) wells have been plugged and abandoned (PA'd) in March of this year. However the two wells that were PA'd were not part of this NOV. Currently Merit has twenty three (23) wells that are still in non-compliance. Nine (9) of the 23 wells have previously been addressed in this NOV (see Attachment), originally dated June 30, 2010. Six (6) wells have recently been issued an NOV and the remaining eight (8) have also recently being issued a second notice of non-compliance.

Wells with five (5) years non-activity or non-productivity shall be plugged, unless the Division grants approval for extended shut-in time upon a showing of good cause by the operator (R649-3-36-1.3.3).

**IMMEDIATE ACTION REQUIRED: Please submit information required by R649-3-36, plug and abandon or place wells on production.**

Date of service mailing: June 7, 2011  
CERTIFIED MAIL No.: 7005 1820 0001 5562 9832

If you have any questions concerning this matter, please contact me at (801) 538-5281.

Sincerely,

Dustin K. Doucet  
Petroleum Engineer

DKD/JP/js  
Enclosure  
cc: Well Files  
Compliance File

N:\O&G Reviewed Docs\ChronFile\PetroleumEngineer\NOV



UTAH DEPARTMENT OF NATURAL RESOURCES

Division of Oil, Gas & Mining

Oil and Gas Program

1594 West North Temple, Suite 1210, Box 145801

Salt Lake City, Utah 84114-5801

(801) 538-5340 Phone

(801) 359-3940 Fax

**NOTICE OF VIOLATION**  
**STATE OF UTAH**  
**OIL AND GAS CONSERVATION ACT**

\*\*\*\*\*

To the following operator:

Name: MERIT ENERGY COMPANY

Well(s) or Site(s): 1.) <u>ARE W31-04E</u>	API #: <u>43-043-30165</u>
2.) <u>CHAMPLIN 372 AMOCO C1</u>	<u>43-043-30143</u>
3.) <u>ARE W31-12</u>	<u>43-043-30190</u>
→ 4.) <u>ARE W16-14</u>	<u>43-043-30096</u>
5.) <u>ARE 16-12</u>	<u>43-043-30231</u>
6.) <u>CHAMPLIN 387 B1A</u>	<u>43-043-30168</u>
7.) <u>ARE W17-16</u>	<u>43-043-30176</u>
8.) <u>ARE W16-06</u>	<u>43-043-30138</u>
9.) <u>ARE W20-06</u>	<u>43-043-30159</u>
10.) <u>ARE W20-02</u>	<u>43-043-30228</u>

Date and Time of Inspection/Violation: June 30, 2010

Mailing Address: Attn: Michal K. White

13727 Noel Road, Ste 500

Dallas, TX 75240

Under the authority of the Utah Oil and Gas Conservation Act, Section 40-6 et. Seq., Utah Code Annotated, 1953, as amended, the undersigned authorized representative of the Division of Oil, Gas and Mining (Division) has conducted an inspection of the above described site and/or records on the above date and has found alleged violation(s) of the act, rules or permit conditions as described below.

Description of Violation(s):

Rule R649-3-36, Shut-in and Temporarily Abandoned Wells – With the exception of wells 9 and 10 listed above, the above referenced wells have been Shut-in or Temporarily Abandoned (SI/TA) over 5 consecutive years. Wells 9 and 10 are approaching 5 years consecutive shut-in and only produced intermittently from 2004 to 2006 after previously being shut-in in 2000 and 1998 respectively. According to Rule R649-3-36, the operator is required to supply the Division with reasons for extended SI/TA, the length of time for extended SI/TA and proof of well bore integrity for every well SI/TA over 12 consecutive months. After 5 years of continued SI/TA, the wells are to be plugged unless good cause is supplied to the Division for extended SI/TA in addition to the required information just mentioned.

**UTAH DEPARTMENT OF NATURAL RESOURCES**

**Division of Oil, Gas & Mining**

**Oil and Gas Program**

1594 West North Temple, Suite 1210, Box 145801

Salt Lake City, Utah 84114-5801

(801) 538-5340 Phone

(801) 359-3940 Fax

The Division has initiated several contacts with Merit Energy Company (Merit) requesting required documents and action per R649-3-36. All wells listed above had a first notice sent out via certified mail on January 22, 2004 to Merit. Previously in 2003, BP America Production Company (Merits' predecessor) had SI/TA requests denied on all wells listed above except well 1 and well 9. The Division accepted a plan on April 8, 2005 for wells 1 through 8 to bring those wells back into production. After several correspondence and accepted plans to bring wells into production, the Division issued a Third Notice on August 26, 2008. The Division notified Merit on January 21, 2009 that the plan and submitted integrity information was insufficient. By letter dated August 26, 2009, Merit proposed to get proper MIT data and reactivate several of the wells. Our records show nothing has been done to date to move these wells out of violation status. The Division has had numerous other communications by phone and email with Merit and Merit has not provided adequate data to prove mechanical integrity and has not followed through with plans for removing wells from the SI/TA list. Merit has not complied with rule R649-3-36 despite the several years the Division has worked with Merit to bring these wells into compliance. In addition to the wells subject to this NOV, Merit has 15 additional wells SI/TA beyond 12 months without approval. Immediate action must be taken on those wells as well.

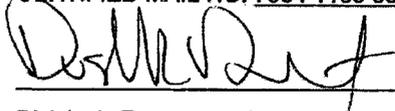
Action: For the well subject to this notice, Merit shall either submit the information required by R649-3-36, plug and abandon or place the wells on production.

This notice shall remain in effect until it is modified, terminated, or vacated by a written notice of an authorized representative of the director of the Division of Oil, Gas and Mining. Failure to comply with this notice will result in the Division pursuing further actions against said operator. Further actions may include initiation of agency actions to order full cost bonding and plugging and abandonment of wells and requests for bond forfeiture and civil penalties.

Compliance Deadline: September 30, 2010

Date of Service Mailing: July 1, 2010

CERTIFIED MAIL NO: 7004 1160 0003 0190 4543



Division's Representative

Operator or Representative

(If presented in person)

6/2005

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> FEE
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  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.	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>  <b>7. UNIT or CA AGREEMENT NAME:</b> ANSCHUTZ RANCH EAST
<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> ARE W16-14
<b>2. NAME OF OPERATOR:</b> MERIT ENERGY COMPANY	<b>9. API NUMBER:</b> 43043300960000
<b>3. ADDRESS OF OPERATOR:</b> 13727 Noel Rd Ste 500 , Dallas, TX, 75240	<b>PHONE NUMBER:</b> 972 628-1540 Ext
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2137 FSL 0686 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSW Section: 16 Township: 04.0N Range: 08.0E Meridian: S	<b>9. FIELD and POOL or WILDCAT:</b> ANSCHUTZ RANCH EAST  <b>COUNTY:</b> SUMMIT  <b>STATE:</b> 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 Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 8/10/2011	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input checked="" type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 50px;" type="text"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Merit Energy Company would like to have this well placed in Temporarily Abandoned status. Please see that attached MIT and WBD.

**REQUEST DENIED**  
**Utah Division of**  
**Oil, Gas and Mining**  
  
**Date:** 09/28/2011  
**By:** *Dark K. Quist*

<b>NAME (PLEASE PRINT)</b> Kim Mercer	<b>PHONE NUMBER</b> 972 628-1023	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 9/1/2011	

Please Review Attached Reasons for Denial



**The Utah Division of Oil, Gas, and Mining**

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices**

**Sundry Conditions of Approval Well Number 43043300960000**

**Please see requirements of R649-3-36 - request must include the reason for extended SI/TA as well as the expected length of time to be SI/TA. Also, MIT was performed in 2010 - information should show how MIT is still valid.**

INSPECTION FORM 6

STATE OF UTAH  
DIVISION OF OIL GAS AND MINING

**INJECTION WELL - PRESSURE TEST**

Well Name: <u>ARE Well-14</u>	API Number: <u>43-043-30096</u>
Qtr/Qtr: <u>NWSW</u> Section: <u>16</u>	Township: <u>4N</u> Range: <u>8E</u>
Company Name: <u>Merit Energy Co.</u>	
Lease: State _____ Fee <input checked="" type="checkbox"/>	Federal _____ Indian _____
Inspector: <u>Lishe Cordova</u>	Date: <u>8/10/10</u>
<u>IPS "Integrated Prod. Services"</u>	

Initial Conditions:

Tubing - Rate: N/A 51660 Pressure: 1750 psi

Casing/Tubing Annulus - Pressure: 300 psi (IPS Gauge)

Conditions During Test:

Time (Minutes)	Annulus Pressure	Tubing Pressure
0	<u>9:36 1000</u>	_____
5	<u>9:41 1000</u>	_____
10	<u>9:46 1000</u>	_____
15	<u>9:51 1000</u>	_____
20	_____	_____
25	_____	_____
30	_____	_____

Results Pass/Fail

Conditions After Test:

Tubing Pressure: 1750 psi

Casing/Tubing Annulus Pressure: \_\_\_\_\_ psi

COMMENTS:

Hole full, packer @ 10,511.21'  
1000# held 15 min - passed.

Don J. Brannon  
Operator Representative



STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> FEE
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
		<b>7. UNIT or CA AGREEMENT NAME:</b> ANSCHUTZ RANCH EAST
<b>1. TYPE OF WELL</b> Gas Well	<b>8. WELL NAME and NUMBER:</b> ARE W16-14	
<b>2. NAME OF OPERATOR:</b> MERIT ENERGY COMPANY	<b>9. API NUMBER:</b> 43043300960000	
<b>3. ADDRESS OF OPERATOR:</b> 13727 Noel Rd Ste 500 , Dallas, TX, 75240	<b>PHONE NUMBER:</b> 972 628-1540 Ext	<b>9. FIELD and POOL or WILDCAT:</b> ANSCHUTZ RANCH EAST
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2137 FSL 0686 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSW Section: 16 Township: 04.0N Range: 08.0E Meridian: S	<b>COUNTY:</b> SUMMIT	
		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:  <input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 8/10/2011  <input type="checkbox"/> SPUD REPORT Date of Spud:  <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	
	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input checked="" type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
<p>Merit Energy Company [MEC] would like to have this well place in Temporarily Abandoned status for one year. MEC will need to complete a reservoir study on the well to determine if the remaining hydrocarbons can be recovered by offset wells or complete a workover on the well to return it to production.</p>		
		<p><b>REQUEST DENIED</b> <b>Utah Division of</b> <b>Oil, Gas and Mining</b></p> <p>Date: <u>11/16/2011</u> By: <u><i>Derek Quist</i></u></p>
<b>NAME (PLEASE PRINT)</b> Kim Mercer	<b>PHONE NUMBER</b> 972 628-1023	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 10/4/2011	

**Please Review Attached Reasons for Denial**

**RECEIVED** Oct. 04, 2011



**The Utah Division of Oil, Gas, and Mining**

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices**

**Sundry Conditions of Approval Well Number 43043300960000**

**Insufficient information provided to approve request. No showing of how integrity is still intact from date of MIT last year to present. Also need submitted plan for work in the future supporting the given reason for extension. Plan should include wells scheduled to be PA'd, returned to production etc. and a timeline for those events.**

INSPECTION FORM 6

STATE OF UTAH  
DIVISION OF OIL GAS AND MINING

**INJECTION WELL - PRESSURE TEST**

Well Name: <u>ARE Well-14</u>	API Number: <u>43-043-30096</u>
Qtr/Qtr: <u>NWSW</u> Section: <u>16</u>	Township: <u>4N</u> Range: <u>8E</u>
Company Name: <u>Merit Energy Co.</u>	
Lease: State _____ Fee <input checked="" type="checkbox"/>	Federal _____ Indian _____
Inspector: <u>Lishe Cordova</u>	Date: <u>8/10/10</u>
<u>IPS "Integrated Prod. Services"</u>	

Initial Conditions:

Tubing - Rate: N/A 51660 Pressure: 1750 psi

Casing/Tubing Annulus - Pressure: 300 psi (IPS Gauge)

Conditions During Test:

Time (Minutes)	Annulus Pressure	Tubing Pressure
0	<u>9:36 1000</u>	_____
5	<u>9:41 1000</u>	_____
10	<u>9:46 1000</u>	_____
15	<u>9:51 1000</u>	_____
20	_____	_____
25	_____	_____
30	_____	_____

Results Pass/Fail

Conditions After Test:

Tubing Pressure: 1750 psi

Casing/Tubing Annulus Pressure: \_\_\_\_\_ psi

COMMENTS:

Hole full, packer @ 10,511.21'  
1000# held 15 min - passed.

Don J. Brannon  
Operator Representative





MERIT ENERGY COMPANY

13727 Noel Road · Suite 500 · Dallas, Texas 75240  
Ph 972.701.8377 · Fx 972.960.1252 · www.meritenergy.com

October 30, 2012

RECEIVED  
NOV 01 2012  
UTAH DEPT. OF NATURAL RESOURCES

Mr. Clinton Dworshak  
Utah Department of Natural Resources  
Division of Oil, Gas & Mining  
1594 W. North Temple, Suite 1210  
Salt Lake City, UT 84114

RE: 2013 Plugging and/or Reactivation Well Plan  
Merit Energy Company

Dear Mr. Dworshak,

This letter is written to follow up our April 26, 2012 meeting in your office regarding shut in and temporarily abandoned wells operated by Merit Energy Company. As discussed in that meeting, Merit will be plugging the wells listed below by the end of the 2012 calendar year.

ARE W 31-04	API 4304330165	Sec 31-T4N-R8E	43 043 30096
ARE W 31-12	API 4304330190	Sec 31-T4N-R8E	ARE W16-1A
ARE W 16-12	API 4304330231	Sec 16-T4N-R8E	AN 8E 16
ARE W 17-16	API 4304330176	Sec 17-T4N-R8E	

Merit is also in the process of applying for approval to convert the Champlin 372 C 1 well to a salt water disposal. Merit has identified the wells on the enclosed list as candidates for plugging or reactivation by the end of the 2013 calendar year. Please be aware as Merit continues its review of the wells on the Extended Shut in and Temporarily Abandoned Well List we may identify potential in other wells which we may want to substitute for wells on the enclosed list.

Merit truly appreciated the opportunity to meet you and your staff in April. If you have any questions regarding the enclosed list or Merit's operations, please contact me at (972) 628-1558 or Kreg Hadley at (972) 628-1617.

Sincerely,

MERIT ENERGY COMPANY

Arlene Valliquette  
North Division Regulatory Manager

Enclosure

Cc: Dustin Doucet – Utah DOGM  
Randy Sanders – Evanston, Wyoming  
Neil Nadrash – Dallas, Texas  
Kreg Hadley – Dallas, Texas

## PROBABLE REACTIVATIONS; POSSIBLE P&A'S

**Well Name: ARE W 20-09**

API: 43-043-30286  
Summit County, Utah  
Perfs: 11,742' – 13,821'

The 20-09 was completed in the Nugget in 1988 and has cummed 590 MBO, 30.1 BCF, and 587 MBW. This well is currently SI with a conventional gas lift with a "go" system. Due to the structural position of this well (very high), Merit hopes to reactivate this well.

**Well Name: ARE W 20-06**

API: 43-043-30159  
Summit County, Utah  
Perfs: 13,008' – 13,860'

The 20-06 was completed in the Nugget in 1982 and has cummed 4.1 MBO, 81.8 BCF, and 152 MBW. This well is currently SI w/ 2-7/8" tbg in the hole w/ pkr at 12,898'. This well is in a good structural position within the field and based on the relatively low volumes of water this well has produced comparably, Merit hopes to reactivate this well.

**Well Name: ARE W 20-08**

API: 43-043-30123  
Summit County, Utah  
Perfs: 11,900' – 12,647' (OA)

The 20-08 was completed in the Nugget in 1981 and has cummed 534 MBO, 31.5 BCF, and 1.2 MMBW. This well is currently SI with a 2-7/8" poor boy gas lift system. The 20-08 has a conventional gas lift system with a hole punched in the tbg @ 10,250'. Due to the high structural positioning of this well, it is likely that this well will be further evaluated for water shut-off and reactivation.

**Well Name: ARE W 20-12**

API: 43-043-30220  
Summit County, Utah  
Perfs: 12,928' – 13,117'

The 20-12 was completed in the Nugget in 1983 and has cummed 5.6 MMBO, 127 BCF, and 742 MBW. This well is currently SI with a 2-3/8" conventional gas lift system. This well is in a good structural position in the field and exhibits SI pressures that would indicate remaining production potential given proper evaluation into water shut-off for reactivation.

## PROBABLE P&A'S

**Well Name: ARE W 16-14**

API: 43-043-30096

Summit County, Utah

Perfs: 12,816' – 13,515'

The 16-14 was spud in March 1979 and brought online as a Nugget producer. The 16-14 IP'd @ 195 bopd, 940 mcfpd, and 5 bwpd. The ARE W 16-14 cummed 15 MBO, 5 BCF, and 50 MBW. Several zones were perf'd, acidized, produced, and then abandoned due to high water volumes. In addition, the 16-14 was converted numerous times from a producer to an injector and vice versa. There are not any active wells in section 16. The ARE W 16-14 would not prove to be the most beneficial reactivation candidate. With all of the combined pieces of information, Merit will proceed with the P&A of this well.

**Well Name: ARE E 21-14**

API: 43-043-30130

Summit County, Utah

Perfs: 10,880' – 11,650'

The 21-14 was originally completed in the Nugget in 1981 and has cummed 56 MBO, 722.5 BCF, and 258 BW. This well was plugged back and recompleted in the Twin Creek formation in 1991 due to poor production. Due to the extremely inferior positioning on the structure for this well, coupled with the fact that the Twin Creek does not appear to hold any future potential in this area either, Merit will likely proceed with the P&A of this well.

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	5. LEASE DESIGNATION AND SERIAL NUMBER: FEE
	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	7. UNIT or CA AGREEMENT NAME: ANSCHUTZ RANCH EAST
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: ARE W16-14
2. NAME OF OPERATOR: MERIT ENERGY COMPANY	9. API NUMBER: 43043300960000
3. ADDRESS OF OPERATOR: 13727 Noel Rd Ste 500 , Dallas, TX, 75240	PHONE NUMBER: 972 628-1540 Ext
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2137 FSL 0686 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 16 Township: 04.0N Range: 08.0E Meridian: S	9. FIELD and POOL or WILDCAT: ANSCHUTZ RANCH EAST
	COUNTY: SUMMIT
	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: <b>12/16/2013</b>	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input checked="" type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

**Approved by the Utah Division of Oil, Gas and Mining**  
  
**Date:** December 05, 2013  
  
**By:** *Derek Duff*

NAME (PLEASE PRINT) Ross King	PHONE NUMBER 972 628-1041	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 12/3/2013	



**The Utah Division of Oil, Gas, and Mining**

- State of Utah  
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

**Sundry Conditions of Approval Well Number 43043300960000**

- 1. Notify the Division at least 24 hours prior to conducting abandonment operations. Please call Dan Jarvis at 801-538-5338.**
- 2. Add Plug #3: A 150' plug ( $\pm 47$  sx) shall be balanced from  $\pm 7550'$  (50' inside stub) to 7400' as required by R649-3-24-3.8.**
- 3. Add Plug #5: A 100' cement plug shall be placed from 4000' to 3900' to isolate the Aspen/Frontier formations. This plug shall be an inside/outside plug. RIH and perforate @ 4000'. Establish circulation down the 9 5/8" casing back up the 9 5/8" x 13 3/8" annulus. If injection into the perfs cannot be established a 150' plug ( $\pm 60$  sx) shall be balanced from  $\pm 4050'$  to 3900'. If injection is established: RIH with CICR and set at 3950'. M&P 100 sx cement, sting into CICR pump 80 sx, sting out and dump 20 sx on top of CICR.**
- 4. Amend Plug #6: A minimum of 30 sx shall be spotted on top of CICR @ 2085'.**
- 5. All balanced plugs shall be tagged to ensure that they are at the depth specified.**
- 6. All annuli shall be cemented from a minimum depth of 100' to the surface.**
- 7. Surface reclamation shall be done in accordance with R649-3-34 – Well Site Restoration.**
- 8. All requirements in the Oil and Gas Conservation General Rule R649-3-24 shall apply.**
- 9. If there are any changes to the procedure or the wellbore configuration, notify Dustin Doucet at 801-538-5281 (ofc) or 801-733-0983 (home) prior to continuing with the procedure.**
- 10. All other requirements for notice and reporting in the Oil and Gas Conservation General Rules shall apply.**



## ARE W 16-14 P&A Procedure

Merit Energy Company

Well Name: ARE W 16-14

API: 43-043-30096

Legals: NW/SW Section 16, T: 4N, R: 8E

Location: Summit County, UT

Surface Casing: 13-3/8" 61/68# at 2,040'; TOC: Surface

Production Casing: 9-5/8" x 9-7/8" 40/62.8# at 11,091'; TOC: 9,650' (per CBL)

Tie back String: 7" 23 and 29# from surface to 10,330' Not cemented

1st Liner: 7-5/8" 39# from 10,330'-11,310' TOC: 10,680' (per CBL)

2nd Liner: 4-1/2" 13.5# from 10,500'-14,045' TOC: 11,570' (per CBL)

Tubing: 3-1/2" 12.7# Vam and 323 joints of 4-1/2" 12.7# CS hydril

Perforations: 12,816'-12,864'; 12,890'-12,990',  
13,016'-13,076'; 13,100'-13,180'  
13,202'-13,250'; 13,332'-13,376'  
13,400'-13,464'; 13,500'-13,515',

PBTD: 13,630' Cement Retainer

TD: 14,050'

1. Prior to MIRU, check rig anchors and blow down well if necessary
2. Conduct pre job safety meeting and complete JSA
3. Dig out around wellhead and check surface casing annulus for pressure
4. MIRU P&A equipment
5. ND well head, NU BOP
6. Pull out of seals and TOH laying down 3-1/2" and 4-1/2" tubing
7. MIRU E-line and run GR/JB down to +/-12,800'. POOH and PU CIBP for 4.5" 13.5#, RIH and set CIBP @ 12,760'.
8. PU work string, TIH to CIBP. Establish circulation and roll the hole, with fluid to surface, SI backside and pressure test casing 500#'s. While on top of CIBP, spot 10 sacks of 15.8# type G neat 1.15 cu.ft/sack yield cement on top of CICR (10 sacks is 137' inside the 4-1/2" liner);
9. PUH to 10,730'. Pump 100 sacks of 15.8# type G neat 1.15 cu.ft/sack yield cement to cover liner tops.
10. After pumping balance plug, PUH 1000'. Allow time for cement to set up and then run back down to tag top of plug. TOOH with workstring standing back.
11. Rig up wireline, RIH to 7,500' and cut 7" liner, and lay down.
12. Rig up wireline, RIH to 7,000' and perforate 9-5/8"
13. PU workstring and 9 5/8" CICR, TIH and set at 6,950'.
14. Pump 80 sacks of 15.8# type G neat 1.15 cuft/sack yield cement for balance plug (80 sacks is 113' in 12-1/4" hole), sting out of CICR and spot 20 sacks on top (52' in the 9-5/8"). TOH w/ workstring standing back.
15. RU wireline, TIH and perforate 9-5/8" casing at 2,090', TOH, RD wireline (50' below surface casing shoe)
16. PU CICR, TIH to 2,085' and set CICR.
17. Establish circulation to annulus
18. Pump 150 sacks of 15.8# type G neat 1.15 cu.ft/sack yield cement into CICR to cover surface casing shoe (150 sacks is 210' in a 12-1/4" hole), sting out
19. Pump 10 sacks of 15.8# type G neat 1.15 cu.ft/sack yield cement on top of

CICR,TOH and lay down workstring (10 sacks is 30' inside the 9-5/8" casing)

20. ND BOP and RD PU.
21. Dig out and cut wellhead 3' below ground level.
22. Run in with 1" poly pipe to 100' and circulate cement to surface in production casing and surface annulus.
23. Weld on dry hole plate w/ legal ID. Backfill cellar and plugging pit.

**Contacts**

Foreman: Joe Sevenski (307) 783-2840

Operations Manager: Randy Sanders (307) 783-2603

Region Manager: Ryan Huddleston (972) 628-1033





<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9  5. LEASE DESIGNATION AND SERIAL NUMBER: FEE
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:  7. UNIT or CA AGREEMENT NAME: ANSCHUTZ RANCH EAST
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: ARE W16-14
2. NAME OF OPERATOR: MERIT ENERGY COMPANY	9. API NUMBER: 43043300960000
3. ADDRESS OF OPERATOR: 13727 Noel Rd Ste 500 , Dallas, TX, 75240	PHONE NUMBER: 972 628-1540 Ext
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2137 FSL 0686 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 16 Township: 04.0N Range: 08.0E Meridian: S	9. FIELD and POOL or WILDCAT: ANSCHUTZ RANCH EAST  COUNTY: SUMMIT  STATE: UTAH

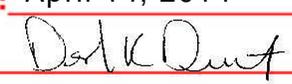
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 4/21/2014  <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:  <input type="checkbox"/> SPUD REPORT Date of Spud:  <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE  <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION  OTHER: <input style="width: 100px;" type="text"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

**Approved by the  
Utah Division of  
Oil, Gas and Mining**

**Date:** April 14, 2014

**By:** 

<b>NAME (PLEASE PRINT)</b> Ross King	<b>PHONE NUMBER</b> 972 628-1041	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 4/14/2014	



**The Utah Division of Oil, Gas, and Mining**

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices**

**Sundry Conditions of Approval Well Number 43043300960000**

**Backside should be tested to 1000 psi. After testing backside, injection into perfs down tubing should be tested. If sufficient injection down tubing is not achieved or if backside does not test, then amendment to first two plugs will not be allowed. Plugging will have to proceed according to original approval.**

**This approval is only for the changes to the first two plugs with the conditions referenced above. Remaining procedure should continue as previously approved.**

## ARE W 16-14 P&A Procedure

### Merit Energy Company

Well Name: ARE W 16-14

API: 43-043-30096

Legals: NW/SW Section 16, T: 4N, R: 8E

Location: Summit County, UT

Surface Casing: 13-3/8" 61/68# at 2,040';	TOC: Surface
Production Casing: 9-5/8" x 9-7/8" 40/62.8# at 11,091';	TOC: 9,650' (per CBL)
Tie back String: 7" 23 and 29# from surface to 10,330'	Not cemented
1st Liner: 7-5/8" 39# from 10,330'-11,310'	TOC:10,680'(per CBL)
2nd Liner: 4-1/2" 13.5# from 10,500'-14,045'	TOC:11,570'(per CBL)

Tubing: 3-1/2" 12.7# Vam and 323 joints of 4-1/2" 12.7# CS hydril

Perforations: 12,816'-12,864'; 12,890'-12,990,  
13,016'-13,076'; 13,100'-13,180'  
13,202'-13,250'; 13,332'-13,376'  
13,400'-13,464'; 13,500'-13,515',

PBTD: 13,630' Cement Retainer

TD: 14,050'

**Note:** Steps 6-10 (highlighted red) are procedure modifications as discussed with Dustin Doucet

1. Prior to MIRU, check rig anchors and blow down well if necessary.
2. Conduct pre job safety meeting and complete JSA.
3. Dig out around wellhead and check surface casing annulus for pressure.
4. MIRU P&A equipment.
5. ND well head, NU BOP.
6. Before pulling out of seals pressure test backside to 500psi, to test liner hanger and packer. Small leak is acceptable.
7. Pull out of seals and TOH laying down 3-1/2" and 4-1/2" tubing.
8. Pick up work string and RIH with cement retainer and land at 10,480'.
9. Pump 15.8# type G neat 1.15 cuft/sack yield cement below retainer need enough to fill wellbore from PBTD to retainer plus leave 20 sacks above retainer. (310 total sacks of cement needed, about 63 bbls)
10. Unstring from retainer leaving 20 sacks (4 bbls) of cement on top of retainer. POOH slowly to keep from dragging cement up well.
11. Rig up wireline, RIH to 7,500' and cut 7" liner, and lay down.
12. Rig up wireline, RIH to 7,000' and perforate 9-5/8".
13. PU workstring and 9 5/8" CICR, TIH and set at 6,950'.

14. Pump 80 sacks of 15.8# type G neat 1.15 cuft/sack yield cement for balance plug (80 sacks is 113' in 12-1/4" hole), sting out of CICR and spot 20 sacks on top (52' in the 9-5/8"). TOH w/ workstring standing back.
15. RU wireline, TIH and perforate 9-5/8" casing at 2,090', TOH, RD wireline (50' below surface casing shoe).
16. PU CICR, TIH to 2,085' and set CICR.
17. Establish circulation to annulus.
18. Pump 150 sacks of 15.8# type G neat 1.15 cu.ft/sack yield cement into CICR to cover surface casing shoe (150 sacks is 210' in a 12-1/4" hole), sting out.
19. Pump 10 sacks of 15.8# type G neat 1.15 cu.ft/sack yield cement on top of CICR,TOH and lay down workstring (10 sacks is 30' inside the 9-5/8" casing).
20. ND BOP and RD PU.
21. Dig out and cut wellhead 3' below ground level.
22. Run in with 1" poly pipe to 100' and circulate cement to surface in production casing and surface annulus.
23. Weld on dry hole plate w/ legal ID. Backfill cellar and plugging pit.

#### Contacts

Foreman: Joe Sevenski (307) 783-2840

Operations Manager: Randy Sanders (307) 783-2603

Region Manager: Ryan Huddleston (972) 628-1033

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>	5. LEASE DESIGNATION AND SERIAL NUMBER: FEE
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
<b>1. TYPE OF WELL</b> Gas Well	<b>7. UNIT or CA AGREEMENT NAME:</b> ANSCHUTZ RANCH EAST
<b>2. NAME OF OPERATOR:</b> MERIT ENERGY COMPANY	<b>8. WELL NAME and NUMBER:</b> ARE W16-14
<b>3. ADDRESS OF OPERATOR:</b> 13727 Noel Rd Ste 500 , Dallas, TX, 75240	<b>9. API NUMBER:</b> 43043300960000
<b>4. LOCATION OF WELL</b> FOOTAGES AT SURFACE: 2137 FSL 0686 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSW Section: 16 Township: 04.0N Range: 08.0E Meridian: S	<b>9. FIELD and POOL or WILDCAT:</b> ANSCHUTZ RANCH EAST
	<b>COUNTY:</b> SUMMIT
	<b>STATE:</b> UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 4/24/2014	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input checked="" type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Merit Energy Company would like to submit a few changes to our previously submitted PA procedure for the ARE W16-14.

**Approved by the Utah Division of Oil, Gas and Mining**

**Date:** April 21, 2014

**By:**

<b>NAME (PLEASE PRINT)</b> Ross King	<b>PHONE NUMBER</b> 972 628-1041	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 4/17/2014	



**The Utah Division of Oil, Gas, and Mining**

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

**Sundry Conditions of Approval Well Number 43043300960000**

**Acceptable rate for pumping cement down tubing into perfs should be attained. If the pressure at that rate is below 550 psi, then cement program for plug 1 should be adequate. If rate is above 550 psi, the operator should note the pressure and also get a rate at the 550 psi and get further instructions/approval from the Division before proceeding with pumping cement. In any case contact Dustin Doucet at 801-538-5281 with the results of the injection tests prior to proceeding with cementing.**

## ARE W 16-14 P&A Procedure

### Merit Energy Company

Well Name: ARE W 16-14

API: 43-043-30096

Legals: NW/SW Section 16, T: 4N, R: 8E

Location: Summit County, UT

Surface Casing: 13-3/8" 61/68# at 2,040';	TOC: Surface
Production Casing: 9-5/8" x 9-7/8" 40/62.8# at 11,091';	TOC: 9,650' (per CBL)
Tie back String: 7" 23 and 29# from surface to 10,330'	Not cemented
1st Liner: 7-5/8" 39# from 10,330'-11,310'	TOC:10,680'(per CBL)
2nd Liner: 4-1/2" 13.5# from 10,500'-14,045'	TOC:11,570'(per CBL)

Tubing: 3-1/2" 12.7# Vam and 323 joints of 4-1/2" 12.7# CS hydril

Perforations: 12,816'-12,864'; 12,890'-12,990,  
13,016'-13,076'; 13,100'-13,180'  
13,202'-13,250'; 13,332'-13,376'  
13,400'-13,464'; 13,500'-13,515',

PBTD: 13,630' Cement Retainer

TD: 14,050'

**Note:** Steps 6-10 (highlighted red) are procedure modifications as discussed with Dustin Doucet

1. Prior to MIRU, check rig anchors and blow down well if necessary.
2. Conduct pre job safety meeting and complete JSA.
3. Dig out around wellhead and check surface casing annulus for pressure.
4. MIRU P&A equipment.
5. ND well head, NU BOP.
6. Pull and lay down 3-1/2" and 4-1/2" tubing.
7. Pick up 2-7/8" work string and RIH with cement retainer to 10,300' and test backside to 1,000psi, per state test requirements. (contact state to be on location during test)
8. After testing backside perform injection test down tubing to check that perf's are taking fluid, per state requirements.
9. If casing and injection tests are good continue with cement job, otherwise need to make corrections.
10. Pump 15.8# type G neat 1.15 cuft/sack yield cement below retainer need enough to fill wellbore from PBTD to retainer plus leave 20 sacks above retainer (360 total sacks of cement needed, about 74 bbls). Unstring from retainer leaving 20 sacks (4 bbls) of cement on top of retainer. POOH slowly to keep from dragging cement up well.
11. Rig up wireline, RIH to 7,500' and cut 7" liner, and lay down.
12. Rig up wireline, RIH to 7,000' and perforate 9-5/8".
13. PU workstring and 9 5/8" CICR, TIH and set at 6,950'.

Updated 4/17/2014

14. Pump 80 sacks of 15.8# type G neat 1.15 cuft/sack yield cement for balance plug (80 sacks is 113' in 12-1/4" hole), sting out of CICR and spot 20 sacks on top (52' in the 9-5/8"). TOH w/ workstring standing back.
15. RU wireline, TIH and perforate 9-5/8" casing at 2,090', TOH, RD wireline (50' below surface casing shoe).
16. PU CICR, TIH to 2,085' and set CICR.
17. Establish circulation to annulus.
18. Pump 150 sacks of 15.8# type G neat 1.15 cu.ft/sack yield cement into CICR to cover surface casing shoe (150 sacks is 210' in a 12-1/4" hole), sting out.
19. Pump 10 sacks of 15.8# type G neat 1.15 cu.ft/sack yield cement on top of CICR,TOH and lay down workstring (10 sacks is 30' inside the 9-5/8" casing).
20. ND BOP and RD PU.
21. Dig out and cut wellhead 3' below ground level.
22. Run in with 1" poly pipe to 100' and circulate cement to surface in production casing and surface annulus.
23. Weld on dry hole plate w/ legal ID. Backfill cellar and plugging pit.

#### Contacts

Foreman: Joe Sevenski (307) 783-2840

Operations Manager: Randy Sanders (307) 783-2603

Region Manager: Ryan Huddleston (972) 628-1033



Max Berglund  
Operations Engineer  
972-628-1530

Updated 4/17/2014

RECEIVED: Apr. 17, 2014



GARY R. HERBERT  
Governor

SPENCER J. COX  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

May 27, 2014

Certified Mail #7003 2260 0003 2358 6960

43 043 30096  
16 4N 8E

Arlene Valliquette  
North Division Regulatory Manager  
Merit Energy Company  
13727 Noel Road, Suite 500  
Dallas, Texas 75240

Subject: Oil and Gas General Conservation Rule R649-3-36 - Shut-in and Temporarily Abandoned Wells

Dear Ms. Valliquette:

The Division of Oil, Gas and Mining (Division) met with Merit Energy Company (Merit), at our offices, on April 26, 2012 to discuss long term plans for Merits' shut-in wells at Anschutz Ranch Field. The Division expressed its concerns regarding the number of shut-in wells Merit operated and the length of time wells have been shut-in. The Division discussed the importance to timely plugging shut-in wells that have no future value and submit extension sundries for shut-in wells that will not be immediately plugged or returned to production. Merit representatives at the meeting indicated they understood the Divisions' concerns. However, Merit required additional time for their engineer, newly assigned to this area, to review the shut-in well list to determine which wells should be returned to production and which wells should be plugged. Merit also needed to present the well review to management for budget approval.

Merit submitted, to the Division, a written 2013 Plugging and/or Reactivation Well Plan dated October 30, 2012. The plan stated Merit was in the process of applying for approval to convert the Champlin 372 Amoco C 1 well to a water disposal well. The plan committed to the plugging of the ARE W31-04E, ARE W31-12, ARE W16-12 and ARE W17-16 wells by the end of the 2012 calendar year. Merit also proposed probable reactivations of the ARE W20-09, ARE W20-06, ARE W20-08 and ARE W20-12 wells and probable plugging and abandonment of the ARE W16-14 and ARE E 21-14 wells. The results are listed below.

Champlin 372 Amoco C 1	Water Disposal Well application never submitted
ARE W31-04E	Plugged 1/9/2013
ARE W31-12	Plugged 1/21/2013
ARE W16-12	Plugged 12/3/2012
ARE W17-16	Plugged 11/16/2012
ARE W20-09	Reactivated April 2013
ARE W20-06	Never Reactivated
ARE W20-08	Never Reactivated
ARE W20-12	Never Reactivated
→ ARE W16-14	Plugged May 2014
ARE E21-14	Plugged April 2014



Ryan Huddleston from your office has indicated in recent conversations with Dustin Doucet that Merit is preparing to reactivate/plug 6-8 more shut-in wells. To date Merit has not submitted a written plan for Division approval.

Merit currently operates twenty-five (25) shut-in wells at Anschutz Ranch Field; see Compliance Attachment. Eleven (11) of the twenty-five total shut-in wells were added between January 2012 and January 2014. The Division has sent Merit several Shut-in and Temporary Abandonment Notices describing Rule 649-3-36 Shut-in and Temporarily Abandoned Well requirements. The Division denied shut-in extension requests for seven (7) wells due to insufficient information. The Division also issued Notices of Violation for ten (10) of the shut-in wells. Merit has not submitted shut-in extensions sundries for the eleven wells added between January 2012 and January 2014, or submitted additional required information for the seven denied shut-in extensions, or resolved the Notices of Violation.

The operator is responsible to file, yearly, for extended shut-in or temporary abandonment for wells shut-in or temporarily abandoned for a period of twelve (12) consecutive months. Merit must file a Sundry Notice providing the following information for each of the twenty-five wells listed on the Compliance Attachment; reasons for shut-in or temporarily abandonment of the well, length of time the well is expected to be shut-in or temporarily abandoned and an explanation and supporting data showing the well has integrity (R649-3-36.1). After review the Division will either approve the continued shut-in or temporarily abandoned status or require remedial action (R649-3-36.2). After five (5) years of non-activity or non-productivity, the well shall be plugged in accordance with R649-3-24, unless approval for extended shut-in time is given by the Division upon a showing of good cause by the operator (R649-3-36.3). Please note, thirteen (13) of the twenty-five wells listed on the Compliance Attachment have been shut-in over five (5) years.

Merit has until **June 30, 2014** to submit sundries, for the subject wells, in accordance with **Oil and Gas Conservation General Rule 649-3-36 Shut-in and Temporarily Abandoned Wells**.

Should Merit not meet shut-in and temporarily abandoned well requirements, the Division is prepared to file a Notice of Agency Action (NAA) for Commencement of Informal Adjudicative Proceedings (R649-10-3) for this matter in accordance with Oil and Gas Conservation General Rule R649-10 Administrative Procedures.

If you have any questions or need further assistance, please feel free to contact me at [clintondworshak@utah.gov](mailto:clintondworshak@utah.gov) or 801-538-5280 or Dustin Doucet, Petroleum Engineer, at [dustindoucet@utah.gov](mailto:dustindoucet@utah.gov) or 801-538-5281.

Sincerely,

  
Clinton Dworshak  
Oil and Gas Compliance Manager

CLD/js  
Enclosure: Compliance History

cc: John Rogers, O&G Associate Director  
Dustin Doucet, Petroleum Engineer  
Compliance File  
Well Files



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  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.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> FEE
		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>1. TYPE OF WELL</b> Gas Well		<b>7. UNIT or CA AGREEMENT NAME:</b> ANSCHUTZ RANCH EAST
<b>2. NAME OF OPERATOR:</b> MERIT ENERGY COMPANY		<b>8. WELL NAME and NUMBER:</b> ARE W16-14
<b>3. ADDRESS OF OPERATOR:</b> 13727 Noel Rd Ste 500 , Dallas, TX, 75240		<b>9. API NUMBER:</b> 43043300960000
<b>PHONE NUMBER:</b> 972 628-1540 Ext		<b>9. FIELD and POOL or WILDCAT:</b> ANSCHUTZ RANCH EAST
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2137 FSL 0686 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSW Section: 16 Township: 04.0N Range: 08.0E Meridian: S		<b>COUNTY:</b> SUMMIT
		<b>STATE:</b> 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 Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 5/7/2014	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input checked="" type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input type="text"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Merit Energy Plugged and Abandoned the above referenced on 5/7/2014 according to the attached Daily Summary. Witnessed by Helen Sadik Macdonald from the Sate of Utah Division of O, D & M.

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY  
June 04, 2015**

<b>NAME (PLEASE PRINT)</b> Katherine McClurkan	<b>PHONE NUMBER</b> 972 628-1660	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 6/4/2015	



## Job Daily Summary- State Report

Support Line: 972-628-1700 #1

**Report Date:**  
**Report #**
**Well Name: ARE W 16 14**

Accounting ID 7608-01	Original Spud Date	Operator MERIT ENERGY COMPANY	SAP API Number 004304330096	Lease ARE- West	Unit Name
Working Interest (%) 59.62	Original KB Elevation (ft)	SAP Latitude 41.0804600000	SAP Longitude -111.0522400000	Total Depth	KB Adjustment (ft)
Field Name ANSCHUTZ RANCH EAST	County SUMMIT	State/Province UTAH	Field Office ANSCHUTZ	Accounting Group Anschutz Ranch Unit	Producing Status Permanently Abd

Job Category Plug & Abandon	Primary Job Type Permanently Abandon Well	Job Start Date 4/16/2014	Job End Date
<b>Daily Operations</b>			
Report Start Date 4/16/2014	Primary Activity MIRU / POH		
Operations Summary SITP 200psi SICP 200psi blow well down to flat tank, pump 6bbls catch pressure pressure test backside 550psi for 30min held good, N/D well head N/U BOPs, P/U on tbg pull to 163K seal assy released, L/D 1jt 3 1/3 12.7 Vam tbg 6' sub, 10' sub, ready to L/D 4 1/2" 12.7# tbg, secure well SDON.			
Report Start Date 4/17/2014	Primary Activity POH L/D 4 1/2 tbg		
Operations Summary SIP Opsi L/D 250jts 4 1/2" tbg 12.75# CS hydril, secure well SDON			
Report Start Date 4/18/2014	Primary Activity POH L/D 4 1/2 tbg		
Operations Summary POH L/D 73 jts 4 1/2 tbg SDFHO			
Report Start Date 4/22/2014	Primary Activity Set CICR / TIH 2 3/8" tbg		
Operations Summary SIP Opsi, stand back 40 stands 2 3/8" tbg, R/U E-line RIH CCL, 5.70 OD GR 10430' log collars POH, RIH CCL, 5.71 OD CICR log and tie in collars set CICR @ 10270' in between collars retag, Lisha Cordova state Utah1-801-386-3902 witnessed, POH R/D E-line, P/U stinger TIH 40 stands 2 3/8" tbg, P/U Talley in 150 jts 2 3/8" tbg EOT 7130'. secure well SDON			
Report Start Date 4/23/2014	Primary Activity TIH 2 3/8" tbg / test csg/ get injection rate		
Operations Summary SIP Opsi, TIH 146 jts 2 3/8" tbg, roll hole 350bbls, pressure test csg 1000psi 15 min good test, sting in to CICR get injection rate 1.5 bpm @ 700psi, 1.0 bpm @ 500 psi test good, Lisha Cordova state Utah1-801-386-3902 witnessed.			
Report Start Date 4/24/2014	Primary Activity Pump #1 cmt plug		
Operations Summary SIP Opsi, Mix and pump total 400 sxs class G cmt 1.15 yield 15.8 ppg slurry of 82 bbls, pump 360 sxs class G cmt 1.15 yield 15.8 ppg slurry of 74 bbls below CICR 1.0bpm 500psi, see final squeeze 1400psi, pump 40 sxs class G cmt 1.15 yield 15.8 ppg slurry of 8 bbls above CICR, reverse out 40 bbls, Lisha Cordova state Utah1-801-386-3902 witnessed, stand back 120 stds 2 3/8" tbg, secure well SDON.			
Report Start Date 4/25/2014	Primary Activity Cut 7" csg		
Operations Summary SIP Opsi R/U E-line RIH ccl, split shot cutter log collars make cut @ 7434' on collar, did not see collar separation on ccl, RIH ccl, split shot cutter recut @ 7434', second shot looked good on ccl, pump 40bbls 2% KCL down 9 5/8" CIRC up 7" to flat tank load hole, N/D 71/16 5000K BOPs make up 7" stinger N/U 11.5 10000K BOPs, POH 7" csg start to L/D, secure well SDON			
Report Start Date 4/26/2014	Primary Activity L/D 7" csg		
Operations Summary L/D 146 jts 7" csg SDON			
Report Start Date 4/27/2014	Primary Activity L/D 7" csg		
Operations Summary L/D 7" csg, change equipment over 2 3/8" SDON			
Report Start Date 4/28/2014	Primary Activity Pump cmt Plug #2		
Operations Summary TIH 122 stands 2 3/8" tbg, Mud up & pump spacer 130bbls 9# mud, Mix & pump balance plug 70sxs 15.8ppg class G cmt slurry of 12bbls 155' cmt TOC 7345', stand back 20 stds 2 3/8" tbg reverse out 30 bbls. SDON			
Report Start Date 4/29/2014	Primary Activity Pump #3 plug		
Operations Summary Tag balance plug 7430' Called Lisha Cordova with state Utah 1-801-386-3902 OK with plug, L/D 17 jts 2 3/8" tbg std back 111 stds 2 3/8" tbg, R/U E-line TIH GR 8.21 OD, ccl, depth 7200' log collars POH, TIH perf gun 4spf, perforate @ 7005' in between collars POH, establish injection rate 1.0bpm @ 600psi, TIH CICR 8.15 OD set @ 6949'in between collars retag good, POH, R/D E-line, TIH 9 5/8" cmt stinger, 111 stds 2 3/8" tbg, Mud up and pump 155 bbls 9# mud, Mix and pump total 100 sxs class G cmt 15ppg slurry of 20 bbls, 16 bbls below CICR, 4 bbls above CICR, TOH L/D 10 jts 2 3/8" tbg reverse cirt out 30 bbls, L/D 30 jts 2 3/8" tbg secure well SDON.			
Report Start Date 4/30/2014	Primary Activity Pump plug #4		
Operations Summary R/U E-line RIH perf gun 4spf 90deg phasing CCL, log collars perforate 4000', POH try to establish injection rate pump 16bbls no good pressured up to 1000psi, TIH 64 stds 2 3/8" tbg, Mud up and pump 150 bbls 9# mud, Mix and pump balance plug total 80 sxs class G cmt 15ppg slurry of 16 bbls, 150' plug, tagged plug @ 3900' SDON. Helen Sadik Macdonald State Utah Witnessed 1-801-538-5357			



## Job Daily Summary- State Report

Support Line: 972-628-1700 #1

Report Date:  
Report #

Well Name: ARE W 16 14

Accounting ID 7608-01	Original Spud Date	Operator MERIT ENERGY COMPANY	SAP API Number 004304330096	Lease ARE- West	Unit Name
Working Interest (%) 59.62	Original KB Elevation (ft)	SAP Latitude 41.0804600000	SAP Longitude -111.0522400000	Total Depth	KB Adjustment (ft)
Field Name ANSCHUTZ RANCH EAST	County SUMMIT	State/Province UTAH	Field Office ANSCHUTZ	Accounting Group Anschutz Ranch Unit	Producing Status Permantly Abd

**Daily Operations**

Report Start Date 5/1/2014	Primary Activity Pump plug #5
Operations Summary Stand back 30 stds 2 3/8" tbg, R/U E-line RIH perf gun 4spf 90 deg phasing CCL log collars, perforate @ 2090' between collars POH, pump 8 bbls fresh water, get injection rate 1.5bpm, 650 psi, RIH 9 5/8" CICR CCL, log collars set CICR @ 2070' between collars POH, TIH 9 5/8" stinger 30 stds 2 3/8" tbg sting into CICR, Mix and pump total 180 sxs class G cmt 1.15 yield 15.8ppg slurry of 37bbls, 150 sxs slurry 31bbls below CICR, 30 sxs slurry 6 bbls above CICR. POH L/D 10 jts reverse out 10 bbls L/D 50 jts, R/D equipment, N/D BOPs. Helen Sadik Macdonald State Utah Witnessed 1-801-538-5357	
Report Start Date 5/7/2014	Primary Activity Pump plug #6
Operations Summary Cut off well head, Mix and pump 73.5 sxs class G cmt 1.15 yield slurry of 15 bbls 100' out 100' in to surface, weld on plate data, Lisha Cordova state Utah1-801-386-3902 witnessed	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>	
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.	
<b>1. TYPE OF WELL</b> Gas Well	<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> FEE
<b>2. NAME OF OPERATOR:</b> MERIT ENERGY COMPANY	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>3. ADDRESS OF OPERATOR:</b> 13727 Noel Rd Ste 500 , Dallas, TX, 75240	<b>7. UNIT or CA AGREEMENT NAME:</b> ANSCHUTZ RANCH EAST
<b>PHONE NUMBER:</b> 972 628-1540 Ext	<b>8. WELL NAME and NUMBER:</b> ARE W16-14
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2137 FSL 0686 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSW Section: 16 Township: 04.0N Range: 08.0E Meridian: S	<b>9. API NUMBER:</b> 43043300960000
	<b>9. FIELD and POOL or WILDCAT:</b> ANSCHUTZ RANCH EAST
	<b>COUNTY:</b> SUMMIT
	<b>STATE:</b> UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 8/1/2017	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input checked="" 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"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Merit Energy request 1 year extension for reclaiming the above referenced well. Merit is waiting on response from the land owner. Merit plan on reclaiming the well once well hear back from the landowner.

**Approved by the**  
**September 02, 2016**  
**Oil, Gas and Mining**

**Date:** \_\_\_\_\_  
**By:** *David Johnson*

<b>NAME (PLEASE PRINT)</b> Katherine McClurkan	<b>PHONE NUMBER</b> 972 628-1660	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 8/2/2016	