

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

5. LEASE DESIGNATION AND MINOR NO.  
U-0146800

6. IF INDIAN, ALLOTTEE OR TRUST CLASS

7. UNIT AGREEMENT NAME  
Sand Ridge II

8. FARM OR LEASE NAME  
Federal

9. WELL NO.  
23-11

10. FIELD AND POOL, OR WILDCAT  
Wildcat

11. SEC., T., R., M., OR B.L.K. AND SURVEY OR AREA  
Sec. 11, T9S, R23E, S

12. COUNTY OR PARISH  
Uintah

13. STATE  
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  
Pacific Transmission Supply Company

3. ADDRESS OF OPERATOR  
P.O. Box 3093, Casper, WY 82602

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*)  
At surface  
2031' FSL, 2034' FWL (NE SW) Section 11, T9S, R23E, SLB&M  
At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
54 miles SE of Vernal, Utah

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any)  
2031'

16. NO. OF ACRES IN LEASE  
1200

17. NO. OF ACRES ASSIGNED TO THIS WELL  
160

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

19. PROPOSED DEPTH  
7240

20. ROTARY OR CABLE TOOLS  
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
4978 GR

22. APPROX. DATE WORK WILL START\*

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
16	13-3/8	54.5	300	390 sx
12-1/4	9-5/8	36	3200	560 sx
7-7/8	4-1/2	11.6	7240	400 sx

Operator proposes to drill to and test the Mesaverde formation. All significant shows of oil and gas will be evaluated. If commercial production is encountered, a string of 4-1/2", 11.6# csg will be run and cemented. Hydraulic stimulation and extended flow testing will then follow. Intermediate csg (9-5/8, 36#) will be run & cemented to protect the oil shale section of the Green River formation. All water flows and significant hydrocarbon shows will be reported. The well will be operated according to the regulations of NTL-6 and all state and county regulations which so apply. Drilling will be accomplished with adequate BOP control including a rotating head and choke manifold when penetrating the Wasatch and Mesaverde formations.

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

NOTICE OF APPROVAL

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.

SIGNED E. E. Mulholland TITLE Operations Engineer DATE 1/4/78  
E. E. Mulholland

(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

APPROVED BY (ORIG. SGD) E. W. GUYNN TITLE DISTRICT ENGINEER DATE FEB 14 1978

CONDITIONS OF APPROVAL, IF ANY:

- 3-USGS - SLC, Utah
- 1-O&GCC - SLC, Utah
- 1-J.L. Wroble
- 1-E.R. Henry
- 1-File

\*See Instructions On Reverse Side

FROM: District Geologist Salt Lake City, Utah

TO: District Engineer, Salt Lake City, Utah

SUBJECT: APD supplemental stipulations

Operator: Pacific Well: 23-11

TRANS. Supply Company

UNITAL co., UTAH

Lease No.: U-0146800

NE 1/4 SW 1/4 sec. 11

T. 9S, R. 23E SMI

1. Operator picked tops are adequate? Yes X, No \_\_\_\_ . If not: The following are estimated tops of important geologic markers:

Formation	Depth

Formation	Depth

2. Possible fresh water aquifers present below surface casing? Yes X, No \_\_\_\_ . If yes: Surface casing program may require adjustment for protection of fresh water aquifers to a depth of approximately 1500 feet.

3. Does operator note all prospectively valuable oil and gas horizons? Yes \_\_\_\_, No X. If not: The following additional horizons will be adequately logged for hydrocarbons:

Unit	Depth
Wasatch Fm.	4500'

Unit	Depth

4. Any other leasable minerals present? Yes X, No \_\_\_\_ . If yes: 1. Logs (Density \*) will be run through the mahogany-green river shale at approximate depths of 500 to 1500 feet to adequately locate and identify anticipated oil shale beds. 2. Logs (Density & Sonic \*) will run through the Green River \*\* at approximate depths of 500 to 1500 feet to adequately locate and identify anticipated bitumen beds. 3. Logs ( ) \*\* will run through the \_\_\_\_\_ at approximate depths of \_\_\_\_\_ to \_\_\_\_\_ feet to adequately locate and identify anticipated \_\_\_\_\_ beds.

5. Any potential problems that should be brought to operators attention (e.g. abnormal temperature, pressure, incompetent beds, H2S)? Yes \_\_\_\_, No X. If yes, what?

6. References and remarks:

within Sand Ridge Unit II

\* From 10 pt or others as necessary. \*\* Members, Formations.

Date: 1-16-78 Signed emp.

OPERATOR Pacific Transmission Supply  
 LEASE # U-0146800  
 WELL NO. 23-11  
 LOC. NE 1/4 SW SEC. 11  
T. 9S R. 23E  
 COUNTY Utah STATE UT  
 FIELD Wildcat  
 USGS EDWNS  
 BLM Ellis  
 REP: Dethlefsen  
 DIRT Cook-Ross Const  
 ENHANCES  
 NO IMPACT  
 MINOR IMPACT  
 MAJOR IMPACT

Construction	Pollution	Drilling Production	Transport Operations	Accidents	Others
Roads, bridges, airports	Burning, noise, junk disposal	Well drilling	Trucks	Spills and leaks	
Transmission lines, pipelines	Liquid effluent discharge	Fluid removal (Prod. wells, facilities)	Pipelines	Operational failure	
Dams & impoundments	Subsurface disposal	Secondary Recovery	Others		
Others (pump stations, compressor stations, etc.)	Others (toxic gases, noxious gas, etc.)	Noise or obstruction of scenic views			

Forestry					
Grazing					
Wilderness					
Agriculture					
Residential-Commercial					
Mineral Extraction					
Recreation					
Scenic Views					
Parks, Reserves, Monuments					
Historical Sites					
Unique Physical Features					
Birds					
Land Animals					
Fish					
Endangered Species					
Trees, Grass, Etc.					
Surface Water					
Underground Water					
Air Quality					
Erosion					
Other					
Effect On Local Economy					
Safety & Health					
Others					

*Orig - full  
 Co. Reg - Review  
 BLM - Review w/ no impact  
 State Oil and Gas*

LEASE U-0146800 DATE Jan 6, 78

WELL NO. 23-11

LOCATION: NE 1/4 SW 1/4, SEC. 11, T. 9S, R. 23E

FIELD Wildcat COUNTY Utah STATE ut

ENVIRONMENTAL IMPACT ANALYSIS - ATTACHMENT 2-B

I. PROPOSED ACTION

Pacific Transmission Supply (COMPANY) PROPOSES TO DRILL AN OIL AND GAS TEST WELL WITH ROTARY TOOLS TO ABOUT 7240 FT. TD. 2) TO CONSTRUCT A

DRILL PAD 300 FT. X 175 FT. AND A RESERVE PIT 125 FT. X 125 FT.

3) TO CONSTRUCT 18 FT. WIDE X 1000 <sup>feet</sup> MILES ACCESS ROAD AND UPGRADE 18'

FT. WIDE X 0.6 MILES ACCESS ROAD FROM AN EXISTING AND IMPROVED ROAD. TO CONSTRUCT

GAS  OIL PRODUCTION FACILITIES ON THE DISTURBED AREA FOR THE DRILL PAD

AND  TRUCK  TRANSPORT THE PRODUCTION THROUGH A PIPELINE TO A TIE-IN IN

SECTION 18, T. 9S, R. 24E (Details should be submitted on tie-in if well is producer.)

2. LOCATION AND NATURAL SETTING (EXISTING ENVIRONMENTAL SITUATION).

(1) TOPOGRAPHY:  ROLLING HILLS  DISSECTED TOPOGRAPHY  DESERT OR PLAINS  STEEP CANYON SIDES  NARROW CANYON FLOORS  DEEP DRAINAGE

IN AREA  SURFACE WATER Well is East of small drainage on

flat area that slopes to north somewhat. Good site for drill pad. Small ridge will be on one edge of drill pad.

(2) VEGETATION:  SAGEBRUSH  PINION-JUNIPER  PINE/FIR  FARMLAND (CULTIVATED)  NATIVE GRASSES  OTHER \_\_\_\_\_

(3) WILDLIFE:  DEER  ANTELOPE  ELK  BEAR  SMALL  
MAMMAL  BIRDS  ENDANGERED SPECIES  OTHER \_\_\_\_\_  
*NONE KNOWN*

(4) LAND USE:  RECREATION  LIVESTOCK GRAZING  AGRICULTURE  
 MINING  INDUSTRIAL  RESIDENTIAL  OIL & GAS OPERATIONS

*Some old corrals + fences were in general area -  
seem abandoned and in disrepair.*

REF: BLM UMBRELLA EAR  
USFS EAR  
OTHER ENVIRONMENTAL ANALYSIS

3. Effects on Environment by Proposed Action (potential impact)

- 1) EXHAUST EMISSIONS FROM THE DRILLING RIG POWER UNITS AND SUPPORT TRAFFIC ENGINES WOULD ADD MINOR POLLUTION TO THE ATMOSPHERE IN THE LOCAL VICINITY.
- 2) MINOR INDUCED AND ACCELERATED EROSION POTENTIAL DUE TO SURFACE DISTURBANCE AND SUPPORT TRAFFIC USE.
- 3) MINOR VISUAL IMPACTS FOR A SHORT TERM DUE TO OPERATIONAL EQUIPMENT AND SURFACE DISTURBANCE.
- 4) TEMPORARY DISTURBANCE OF WILDLIFE AND LIVESTOCK.
- 5) MINOR DISTRACTION FROM AESTHETICS FOR SHORT TERM.
- 6)

4. Alternatives to the Proposed Action

1) NOT APPROVING PROPOSED PERMIT -- THE OIL AND GAS LEASE GRANTS THE LESSEE EXCLUSIVE RIGHT TO DRILL FOR, MINE, EXTRACT, REMOVE AND DISPOSE OF ALL OIL AND GAS DEPOSITS.

2) DENY THE PROPOSED PERMIT AND SUGGEST AN ALTERNATE LOCATION TO MINIMIZE ENVIRONMENTAL IMPACTS. NO ALTERNATE LOCATION ON THIS LEASE WOULD JUSTIFY THIS ACTION.

NO Blading or upgrading in sec 14 of Road use as is till BLM Team Road is approved.

3) LOCATION WAS MOVED \_\_\_\_\_ TO AVOID \_\_\_\_\_

LARGE SIDHILL CUTS  NATURAL DRAINAGE  OTHER \_\_\_\_\_

Fuel line requested sec 18 9S 24E - 2" line - with surface grading should be min. impacts

4) Note. Operator handed 13 pt + 10 pt plan to ~~be~~ be used in field. We felt that we could inspect sight as we were in area in order to save a onsite letter.

Line will be route of pipeline if well produces

5. Adverse Environmental Effects Which Cannot Be Avoided

1) MINOR AIR POLLUTION DUE TO EXHAUST EMISSIONS FROM RIG ENGINES AND SUPPORT TRAFFIC ENGINES.

2) MINOR INDUCED AND ACCELERATED EROSION POTENTIAL DUE TO SURFACE DISTURBANCE AND SUPPORT TRAFFIC USE.

3) MINOR AND TEMPORARY DISTURBANCE OF WILDLIFE.

4) TEMPORARY DISTURBANCE OF LIVESTOCK.

5) MINOR AND SHORT-TERM VISUAL IMPACTS.

6)

6. DETERMINATION:

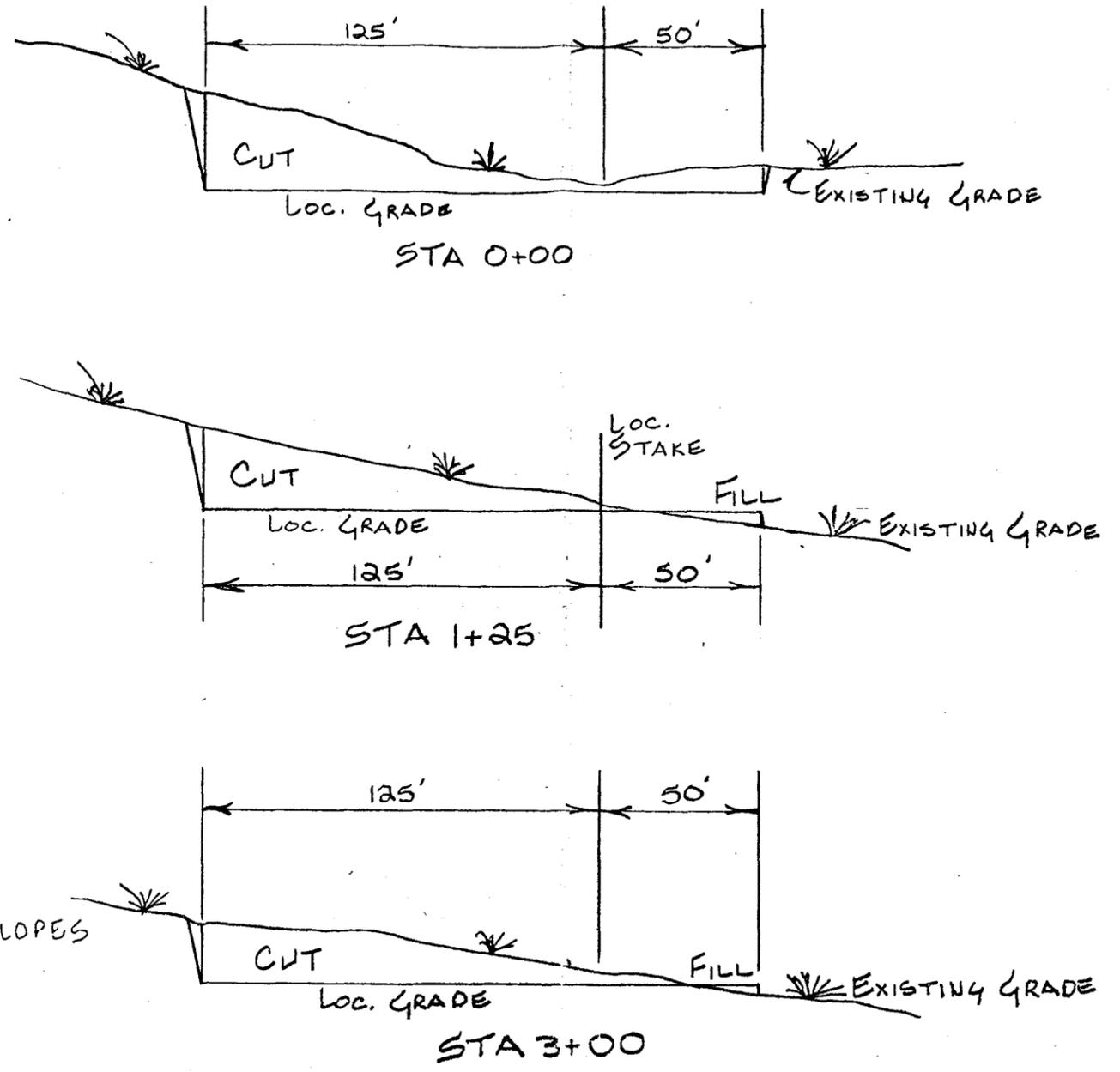
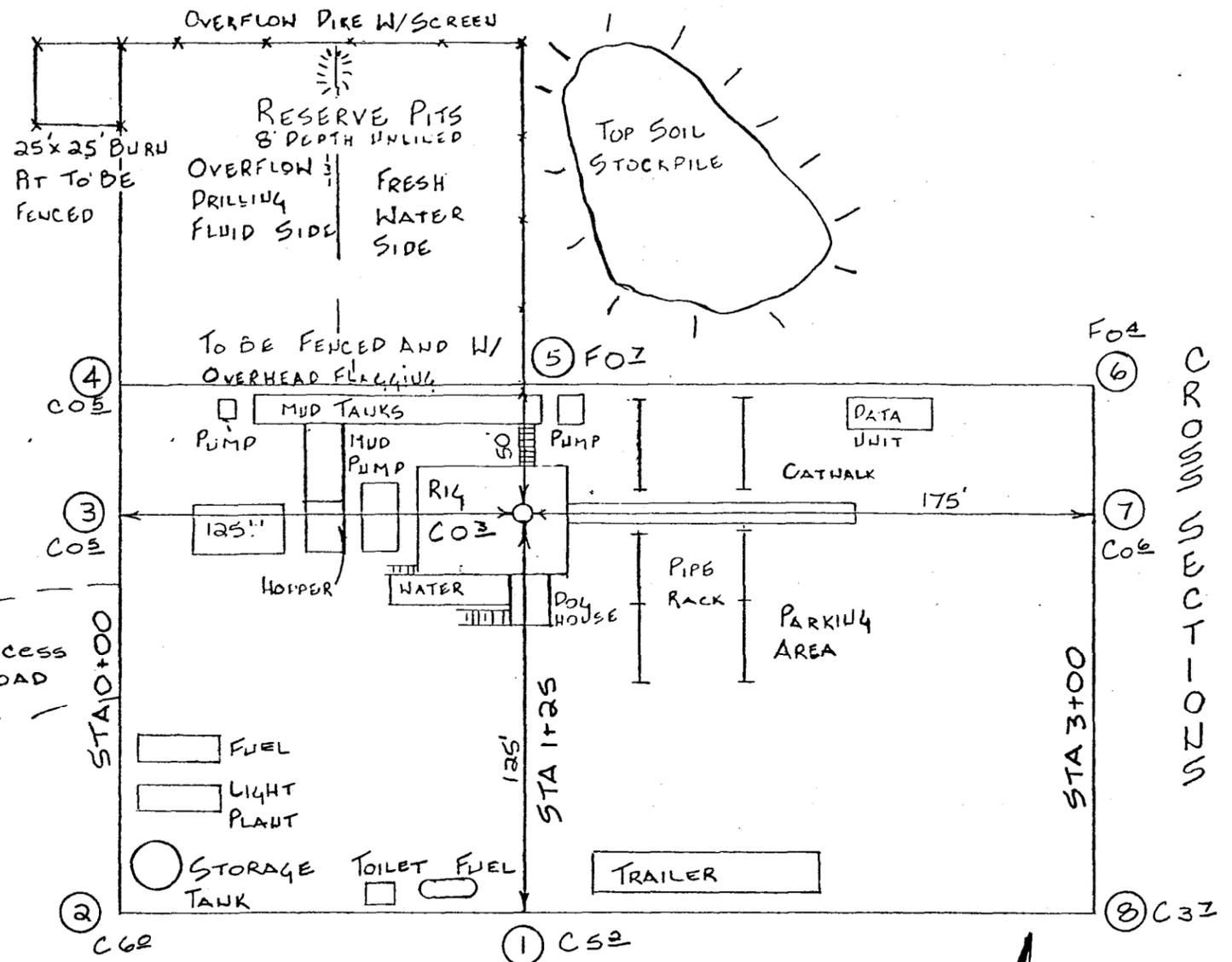
(THIS REQUESTED ACTION ~~will~~ (DOES NOT) CONSTITUTE A MAJOR FEDERAL ACTION SIGNIFICANTLY AFFECTING THE ENVIRONMENT IN THE SENSE OF NEPA, SECTION 102(2) (C).

DATE INSPECTED Jan 6, 78

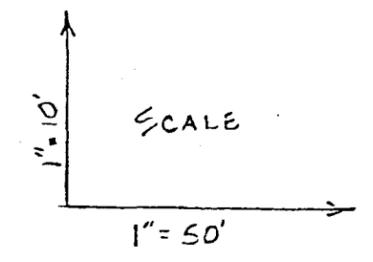
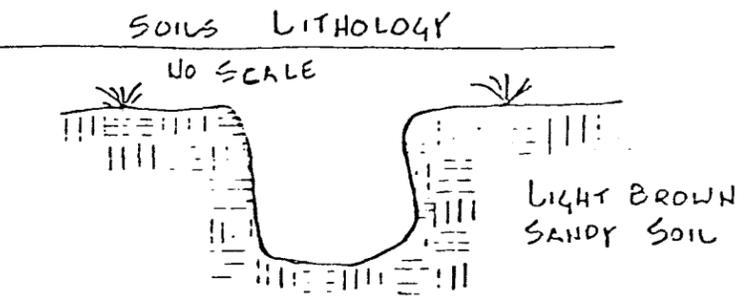
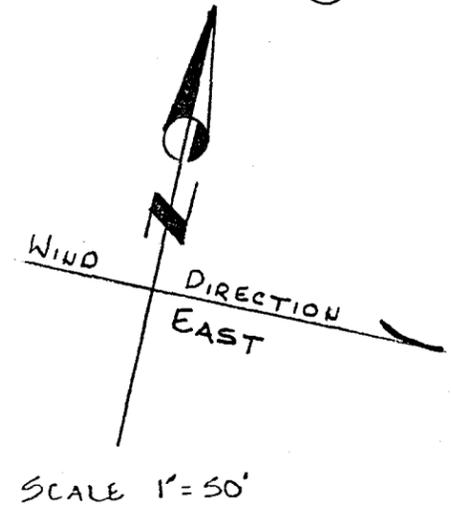
INSPECTOR J. Ewins -

WJ Martin  
U. S. GEOLOGICAL SURVEY  
CONSERVATION DIVISION - OIL & GAS OPERATIONS  
SALT LAKE CITY DISTRICT

PACIFIC TRANSMISSION SUPPLY  
 P.T.S. 23-11-FEDERAL  
 LOC. LAYOUT SHEET



ALL SLOPES 1:1

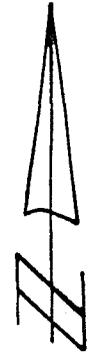


APPROX. YARDAGES	
CUT 3971	CU YDS.
FILL 85	CU YDS.

Pacific Transmission Supply Co.

P.T.S. 23-11-FEDERAL

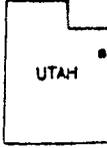
TOPO. MAP "B"



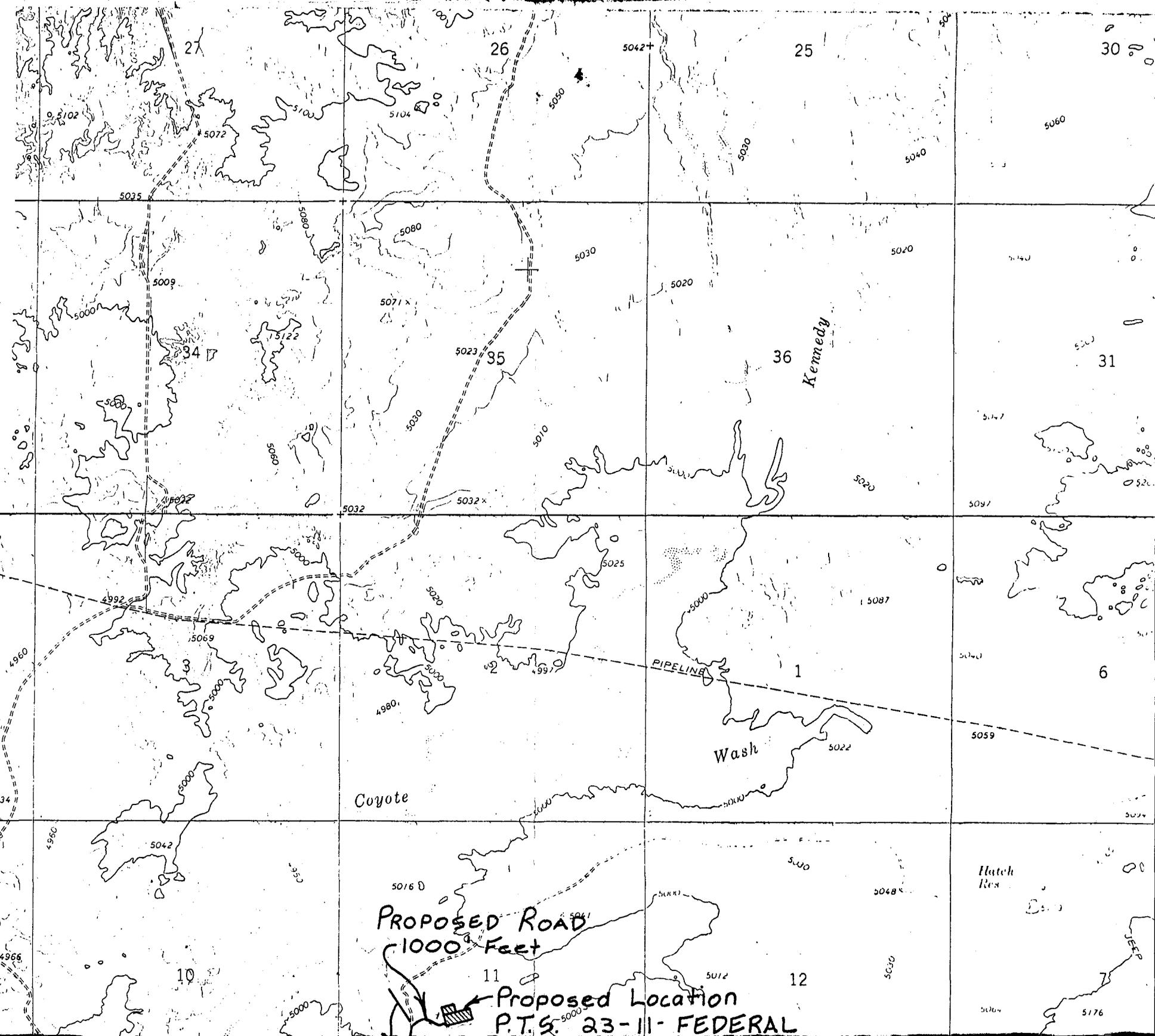
SCALE 1" = 2000'

ROAD CLASSIFICATION

Light-duty road, all weather, improved surface Unimproved road, fair or dry weather

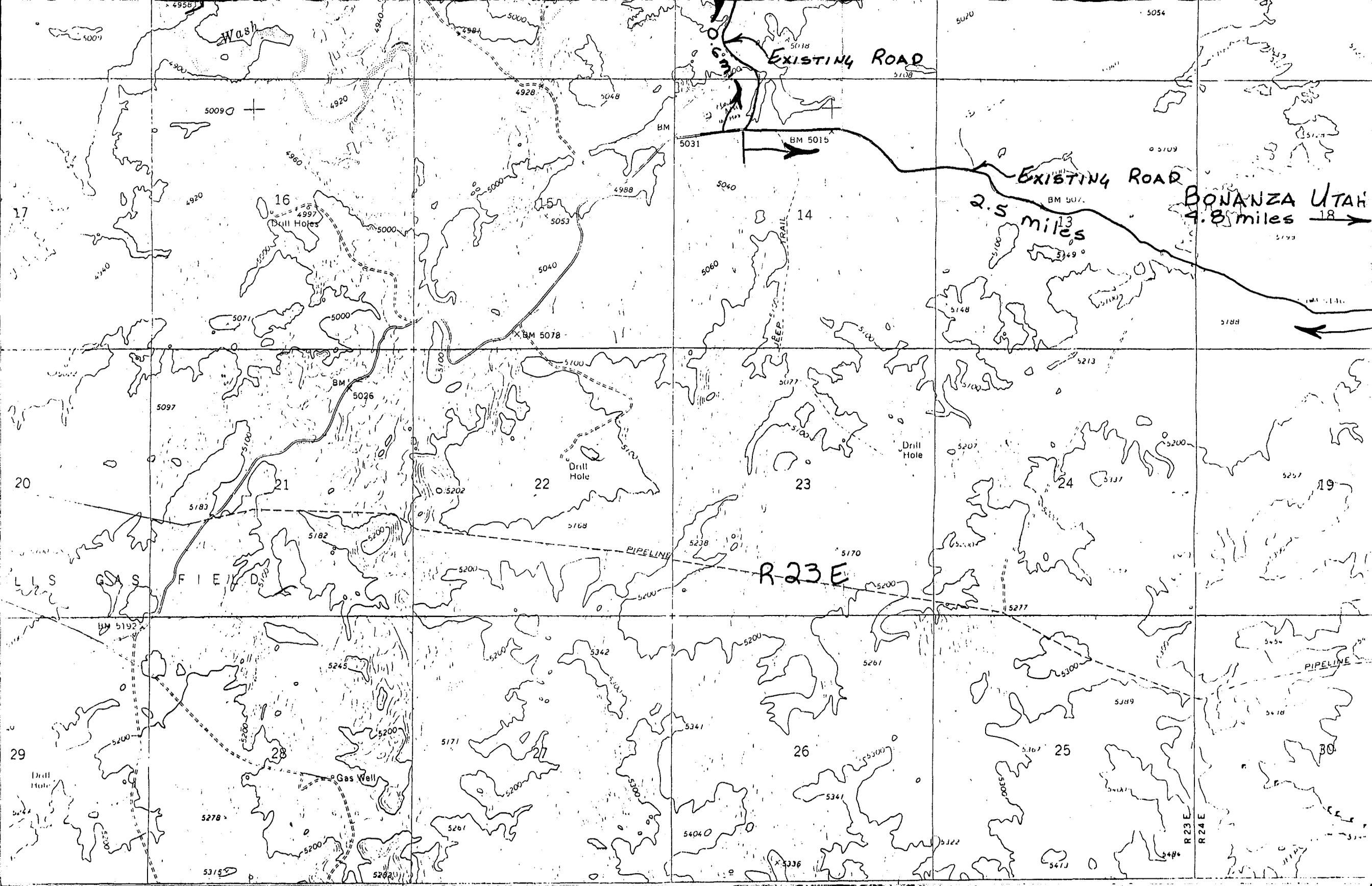


UTAH



PROPOSED ROAD  
1000 Feet

Proposed Location  
P.T.S. 23-11-FEDERAL



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

**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  
**Pacific Transmission Supply Company**

3. ADDRESS OF OPERATOR  
**P.O. Box 3093, Casper, WY 82602**

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*)  
 At surface  
**2031' FSL, 2034' FWL (NE SW) Section 11, T9S, R23E, SLB&M**  
 At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
**54 miles SE of Vernal, Utah**

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any)      **2031'**

16. NO. OF ACRES IN LEASE      **1200**

17. NO. OF ACRES ASSIGNED TO THIS WELL      **160**

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

19. PROPOSED DEPTH      **7240**

20. ROTARY OR CABLE TOOLS      **Rotary**

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
**4978 GR**

22. APPROX. DATE WORK WILL START\*

5. LEASE DESIGNATION AND SERIAL NO.  
**U-0146800**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME  
**Sand Ridge II** *ll*

8. FARM OR LEASE NAME  
**Federal**

9. WELL NO.  
**23-11**

10. FIELD AND POOL, OR WILDCAT  
**Wildcat**

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
**Sec. 11, T9S, R23E, SLM**

12. COUNTY OR PARISH      13. STATE  
**Uintah      Utah**

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
16	13-3/8	54.5	300	390 sx
12-1/4	9-5/8	36	3200	560 sx
7-7/8	4-1/2	11.6	7240	400 sx

Operator proposes to drill to and test the Mesaverde formation. All significant shows of oil and gas will be evaluated. If commercial production is encountered, a string of 4-1/2", 11.6# csg will be run and cemented. Hydraulic stimulation and extended flow testing will then follow. Intermediate csg (9-5/8, 36#) will be run & cemented to protect the oil shale section of the Green River formation. All water flows and significant hydrocarbon shows will be reported. The well will be operated according to the regulations of NTL-6 and all state and county regulations which so apply. Drilling will be accomplished with adequate BOP control including a rotating head and choke manifold when penetrating the Wasatch and Mesaverde formations.

APPROVED BY THE DIVISION OF  
OIL, GAS, AND MINING  
 DATE: 1/9/78  
 BY: C. B. [Signature]

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.

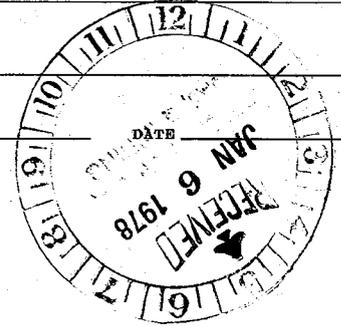
SIGNED E. E. Mulholland TITLE Operations Engineer DATE 1/4/78

(This space for Federal or State office use) 4  
 PERMIT NO. B-017-5035B APPROVAL DATE

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_

- CONDITIONS OF APPROVAL, IF ANY:
- 3-USGS - SLC, Utah
  - 1-O&GCC - SLC, Utah
  - 1-J.L. Wroble
  - 1-E.R. Henry      1-File

\*See Instructions On Reverse Side

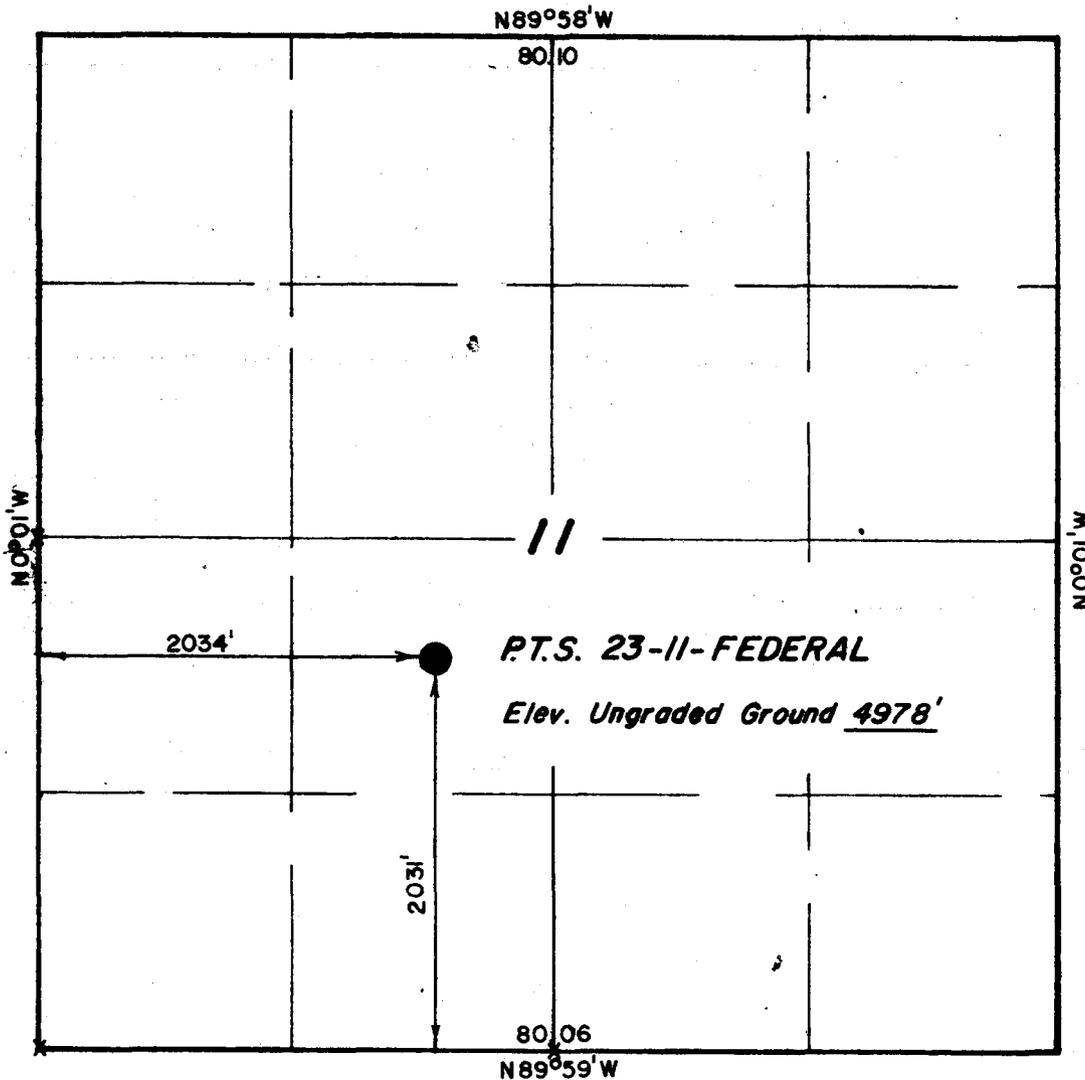
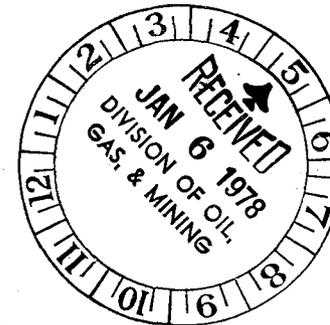


**T 9 S , R 2 3 E , S . L . B & M .**

PROJECT

**PACIFIC TRANSMISSION SUPPLY**

Well located, *P.T.S. 23-11-FED.*,  
located as shown in the, NE 1/4 SW 1/4,  
Section 11, T9S, R23E, S.L.B&M.,  
Uintah County, Utah.



CERTIFICATE

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

*[Signature]*

REGISTERED LAND SURVEYOR  
REGISTRATION NO 2454  
STATE OF UTAH

X = Section Corners Located.

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

SCALE	1" = 1000	DATE	12/12/77
PARTY	NM JS	REFERENCES	GLO PLAT
WEATHER	Cool Fair	FILE	PACIFIC TRANSMISSION



WELL PROGNOSIS

Pacific Transmission Supply Company  
Federal #23-11  
Sand Ridge II Unit

Location: 2031 feet from South line, 2034 feet from West line, Section  
11, T9S, R23E, SLM, Uintah County, Utah

Lease: U-0146800

Elevation: 4978 Ungraded Ground

Formation Tops and Datum:

<u>Formation</u>	<u>Depth</u>	<u>Datum</u>
Green River	1413	+3565
Parachute Creek Member	1565	+3413
H-Marker	3129	+1849
Wasatch	4563	+ 415
Mesaverde	6738	-1760
Total Depth.	7238	-2260

Casing Program:

<u>Depth</u>	<u>Length</u>	<u>Size</u>	<u>Weight</u>	<u>Grade</u>	<u>Condition</u>	<u>Cement</u>
Surface to 300	300	13-3/8	54.5#/ft	J-55	New	390 sx.
Surface to 3200	3200	9-5/8	36#/ft.	J-55	New	560 sx.
Surface to TD	7240	4-1/2	11.6#/ft	N-80	New	400 sx.

Pressure Control Specifications:

See attached schematic diagram. A 12", 3000 psi, Hydraulic, double gate preventer with pipe and blind rams and a 12", 3000 psi annular preventer will be used from surface casing to intermediate csg depth at 3200. A 10", 5000 psi Hydraulic double gate preventer with pipe and blind rams and a 10", 5000 psi annular preventer will be used from intermediate casing to TD. All BOP equipment to include choke line and manifold. BOP equipment used below intermediate depth will also include a 2000 psi rotating head with hydraulic valve, upper and lower kelly cocks, drill pipe stabbing valve, pit level indicators with alarms, and a mud-gas separator. Accumulators shall maintain a pressure capacity reserve at all times to provide for operation of the hydraulic preventers and valves.

-Continued-

## Type and Characteristic of Drilling Fluid:

<u>Interval</u>	<u>Mud Wt #/gal</u>	<u>Vis</u>	<u>Fluid Loss</u>	<u>Type</u>
0-300	8.5 - 9.0	35-50	No control	Native
300-3200	8.7 - 9.0	28-30	No control	Salt Water
3200-6700	8.7 - 9.0	28-30	No control	Salt Water
6700-TD	9.2 - 9.5	35-45	12 cc/less	Salt Mud

## Sample Collection:

10' samples from under surface to TD. Samples to be collected by drilling crew for the wellsite geologist. One cut of samples to be sent to Amstrat. One cut of samples in the Green River section (only) to be sent to ERDA, Laramie, Wyoming.

## Testing and Logging Program:

Drill Stem Test - 2 DST's anticipated in Mesaverde. Use floor manifold with 6" positive choke nipple, jars, safety joint, reverse sub, sample chamber and dual packers. Sample of all fluids recovered shall be collected for analysis.

Logging Program - 300' to TD with dual induction electrical, compensated gamma ray - sonic, compensated formation density and manned mud log unit.

## Drilling Program:

- 1) Move in percussion air drilling rig and drill 16" hole for surface casing. Set surface and WOC. Surface to be 13-3/8" 54.5 #/ft., K55. Air compressors and a booster should be on standby and rigged up to areate the mud system in the event loss circulation occurs. ARRANGEMENTS FOR AIR EQUIPMENT SHOULD BE CONFIRMED A MINIMUM OF 30 DAYS IN ADVANCE OF SPUD DATE.
- 2) Move on rotary drilling rig and drill out front under 13-3/8 casing with 12-1/4 hole to 3200'. Log and prepare hole for intermediate casing.
- 3) Set 3200' of 9-5/8", 36 #/ft., K55 and 40 #/ft., N80 casing, WOC.
- 4) Drill out from under 9-5/8" casing with 7-7/8" hole to TD. Log and evaluate well.
- 5) In the event that the Mesaverde and/or Wasatch is found productive, a string of 4-1/2", 11.6 #/ft., K55 casing will be run and cemented across the potential zones.
- 6) Release rig and develop completion procedure.

Personal and Mailing Information:

Wellsite Geologist

Dee E. Beardsley  
Pacific Transmission Supply Co.  
P. O. Box 3093  
Casper, WY 82602  
Telephone: Office (307)265-1027  
Home (307)234-7666

Engineer

E. E. Mulholland  
Pacific Transmission Supply Co.  
P. O. Box 3093  
Casper, WY 82602  
Telephone: Office (307)265-1027  
Home (307)265-4191

Notification of Shows, DST's Unusual Problems:

Dee E. Beardsley	(307) 265-1027	Home (307) 234-7666
E.E. Mulholland	(307) 265-1027	Home (307) 265-4191
Sam Boltz	(303) 573-5858	Home (303) 355-4881
B.W. Allen	(307) 234-3571	Home (307) 237-9023

Distribution of Information:

PACIFIC TRANSMISSION SUPPLY COMPANY  
First of Denver Plaza  
633 17th Street, Suite 2140  
Denver, CO 80202  
Attn: Mr. J. L. Wroble

PACIFIC TRANSMISSION SUPPLY COMPANY  
P. O. Box 3093  
Casper, WY 82602  
Attn: Mr. Dee E. Beardsley

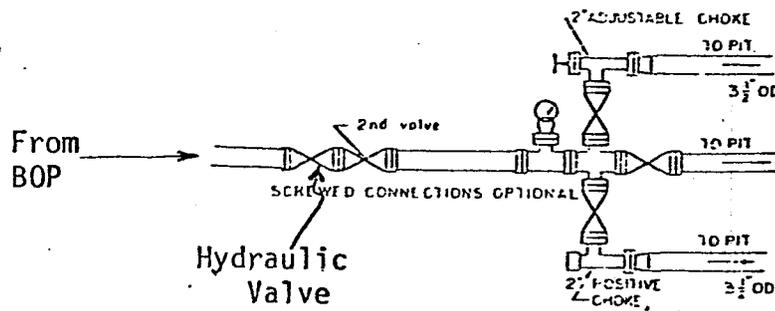
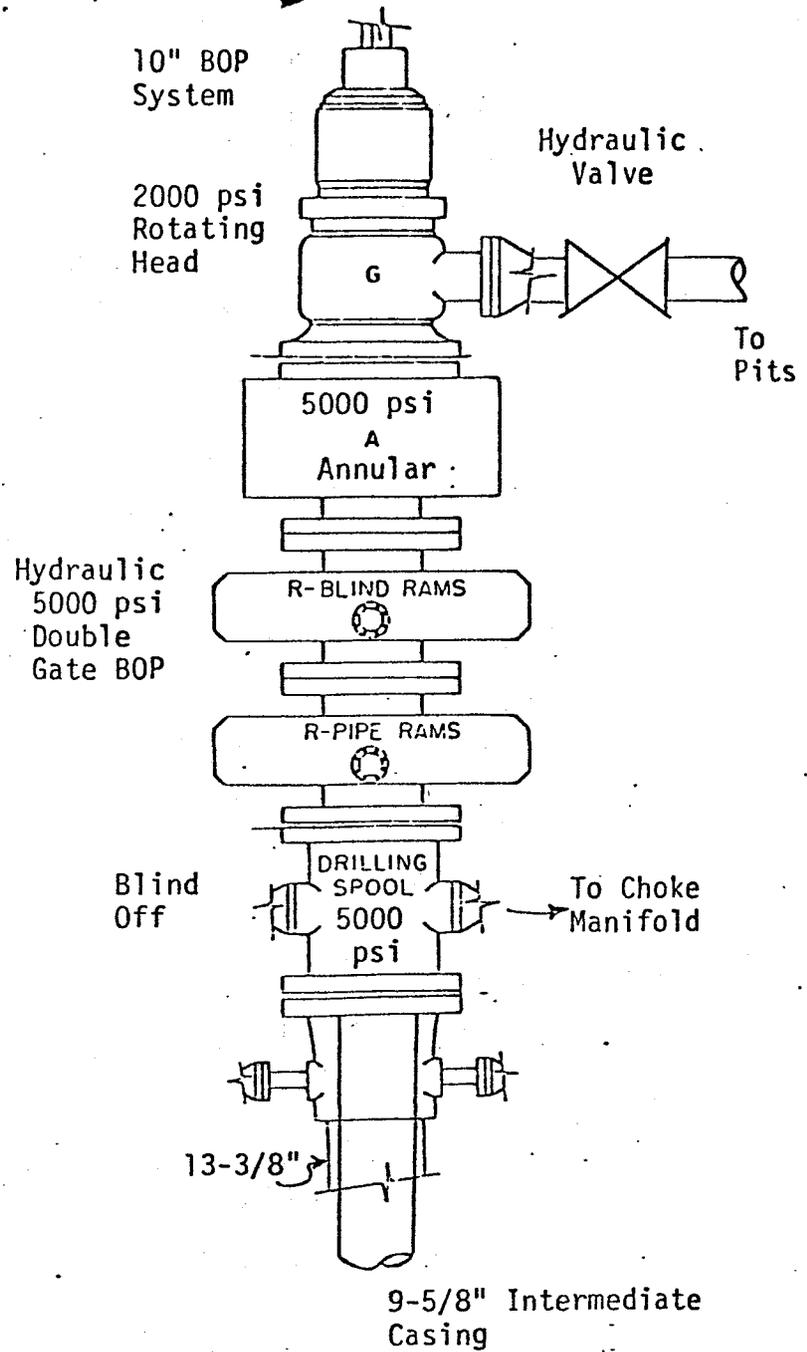
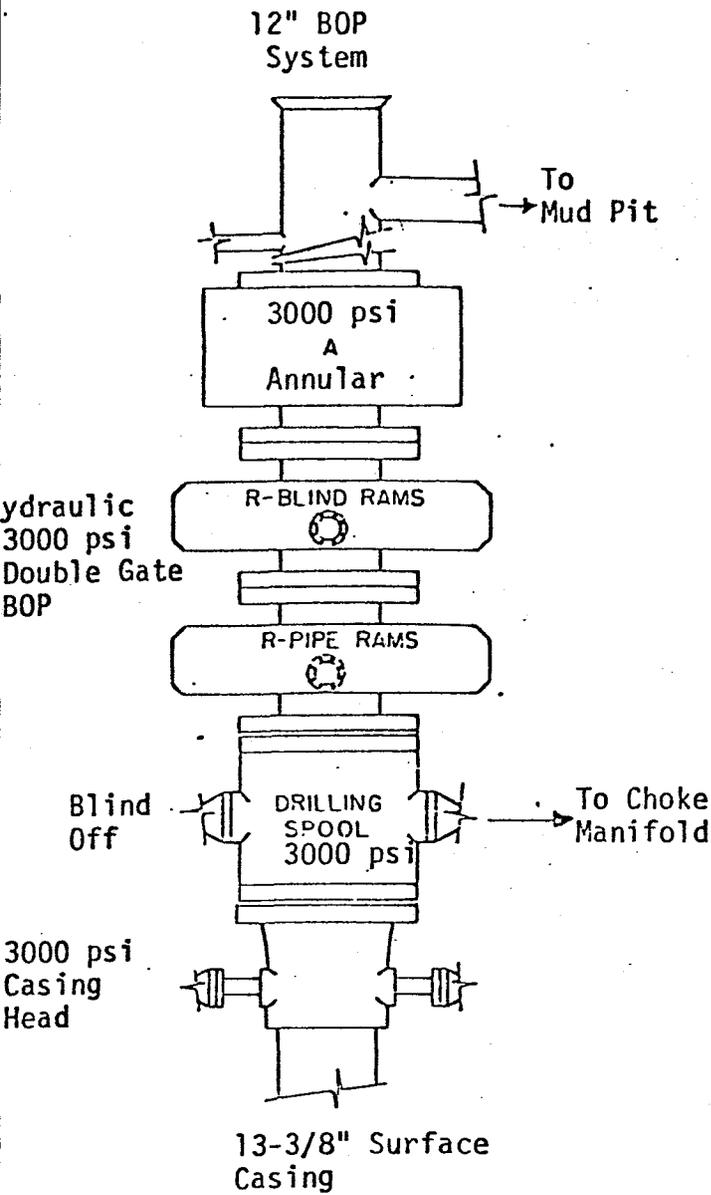
CHORNEY OIL COMPANY  
401 Lincoln Tower Building  
Denver, CO 80203  
Attn: Mr. Sam Boltz

MR. B. W. ALLEN  
P. O. Box 2352  
Casper, WY 82602

DIVISION OF OIL, GAS & MINING  
1588 West  
North Temple  
Salt Lake City, UT 84116  
Attn: Mr. Patrick L. Driscoll  
Chief Petroleum Engineer

U.S. GEOLOGICAL SURVEY  
8426 Federal Building  
Salt Lake City, UT 84138  
Attn: Mr. Edgar W. Guynn  
District Engineer

# PRESSURE CONTROL SPECIFICATIONS AND TEST FREQUENCY



## TEST SCHEDULE

- 12" BOP system & 13-3/8" casing to 2500 psi
- 10" BOP system & choke manifold to 5000 psi
- 9-5/8" Casing to 3500 psi

## 5000 PSI CHOKE MANIFOLD

PACIFIC TRANSMISSION SUPPLY COMPANY

13 Point Surface Use Plan

for

Well Location

P.T.S. 23-11-Federal

Located In

Section 11, T9S, R23E, S.L.B. & M.

1. EXISTING ROADS

See attached Topographic Map "A", to reach the Pacific Transmission Supply Company well location, P.T.S. 23-11-Federal, located in Section 11, T9S, R23E, S.L.B.&M., from Vernal, Utah.

Proceed East out of Vernal, Utah along U.S. Highway 40, 24 miles to the junction of this Highway and Utah State Highway 45 to the South; proceed South along this road 22 miles to Bonanza, Utah and the junction of this road and a gravel surface road to the West; proceed Westerly along this road 7.3 miles to the junction of this road and a dirt road to the North; proceed along this road 0.6 miles to the junction of this road and the proposed access road to be discussed in Item #2.

There is no construction anticipated on any of the above described road. It will meet the standards necessary, for the hauling of equipment during the drilling and production of this well.

2. PLANNED ACCESS ROAD

See Topographic Map "B".

The proposed access road leaves the existing access road described in Item #1 in the NW 1/4 SW 1/4 Section 11, T9S, R23E, S.L.B. & M. and proceeds in a Easterly direction 1000' to the proposed well location site.

In order to facilitate the anticipated traffic flow necessary to drill and produce this well, the following standards will be met.

This proposed access road will be an 18' crown road (9' either side of the center-line) with drain ditches along either side of the proposed road where it is determined necessary in order to handle any run-off from any normal meteorological conditions that are prevalent to this area.

Back slopes along the cut areas of the road will be 1 1/2 to 1 slopes and terraced.

The road will be centerline flagged prior to the commencement of construction.

The grade of this road will vary from flat to 8%, but will not exceed this amount. This road will be constructed from native borrow accumulated during construction.

If deemed necessary by the local governmental agencies or their representatives turnouts will be installed for safety purposes every 0.25 miles or on the top or ridges that will provide the greatest sight distance. These turnouts will be 200' in length and 12' in width and will be tapered from the shoulder of the road for a distance of 50' in length at both the access and the outlet end.

Any fences that are encountered along this access road will be cut and replaced with a cattleguard with a minimum width of 18' and a loading factor large enough to facilitate the heavy trucks required in the drilling and production of this well.

If cattleguards are to be located at existing gates, they will be installed with the above requirements and with a new gate installed at one end of the cattleguard.

2. PLANNED ACCESS ROAD - continued

The access from the road to the gate will be of such a nature that there will be no impedance of traffic flow along the main access road and no difficulties encountered by traffic utilizing the gate, either leaving or entering the proposed access road.

The terrain that is traversed by this road is relatively flat and is vegetated with sparse amounts of sagebrush and grasses.

3. LOCATION OF EXISTING WELLS

As shown on Topographic Map "B", there are no other wells within a one mile radius of the proposed well site. (See location plat for placement of Pacific Transmission Supply Co., well within the Section.)

4. LOCATION OF TANK BATTERIES, PRODUCTION FACILITIES, AND PRODUCTION GATHERING AND SERVICE LINES

All petroleum production facilities are to be contained within the proposed location site. There are no other Pacific Transmission Supply Co. flow gathering, injection, or disposal lines within a one-mile radius of this location.

In the event production is established, plans for a gas flow line from this location to existing gathering lines or a main production line shall be submitted to the appropriate agencies for approval.

The rehabilitation of the disturbed area that is not required for the production of this well, will meet the requirements of Items #7 and #10 and these requirements and standards will be adhered to.

5. LOCATION AND TYPE OF WATER SUPPLY

Water for this well will be hauled by truck from an existing loading ramp on the White River in the NE 1/4 of Section 17, T9S, R22E, S.L.B.&M. approximately 14 miles to the South-East from the proposed well location.

6. SOURCE OF CONSTRUCTION MATERIALS

All construction materials for this location site and access road shall be borrow materials accumulated during construction of the location site and access road. No additional road gravels or pit lining material from other sources are anticipated at this time, but if they are required, the appropriate actions will be taken to acquire them from private sources.

7. METHODS FOR HANDLING WASTE DISPOSAL

See location layout Sheet.

A reserve and burn pit will be constructed.

The reserve pit will be approximately 8' deep and at least one half of this depth shall be below the surface of the existing ground.

7. METHODS FOR HANDLING WASTE DISPOSAL

One half of the reserve pit will be used as a fresh water storage area during the drilling of this well and the other one half will be used to store non-flammable materials such as cuttings, salts, drilling fluids, chemicals, produced fluids, etc.

If deemed necessary by the agencies concerned, to prevent contamination to surrounding areas, the reserve pits will be lined with a gel.

The pits will have an overhead flagging installed at such time as deemed necessary to protect the water fowl, wildlife, and domesticated animals.

At the onset of drilling, this reserve pit will be fenced on three sides and at the time the drilling activities are completed, it will be fenced on the fourth side and allowed to dry completely prior to the time that backfilling and reclamation activities are attempted.

When the reserve pit dries and the reclamation activities commence, the pits will be covered with a minimum of four feet of soil and all requirements in Item #10 will be followed.

The burn pits will be constructed and fenced on all four sides with a small mesh wire to prevent any flammable materials from escaping and creating a fire hazard.

All flammable materials will be burned and then buried upon completion of this well.

A portable chemical toilet will be supplied for human waste.

8. ANCILLARY FACILITIES

There are no ancillary facilities planned for at the present time and none foreseen in the near future.

9. WELL SITE LAYOUT

See Location Layout Sheet.

The B.L.M. District Manager shall be notified before any construction begins on the proposed location site.

As mentioned in Item #7, the pits will be unlined unless it is determined by the representatives of the agencies involved that the materials are too porous and would cause contamination to the surrounding area; then the pits will be lined with a gel and any other type material necessary to make it safe and tight.

When drilling activities commence, all work shall proceed in a neat and orderly sequence.

10. PLANS FOR RESTORATION OF SURFACE

As there is some topsoil on the location site, all topsoil shall be stripped and stockpiled. See Location Layout Sheet and Item #9. When all drilling production activities have been completed, and the location site and access road will be reshaped to the original contour and stockpiled topsoil spread over the disturbed area.

Any drainages re-routed during the construction activities shall be re-stored to their original line of flow as near as possible. Fences around pits are to be removed upon completion of drilling activities and all waste being contained in the trash pit shall be buried with a minimum of 5' of cover.

As mentioned in Item #7, the reserve pit will be completely fenced and wired and overhead wire and flagging installed, if there is oil in the pits, and then allowed to completely dry before covering.

Restoration activities shall begin within 90 days after completion of the well. Once completion activities have begun, they shall be completed within 30 days.

When restoration activities have been completed, the location site and access ramp shall be reseeded with a seed mixture recommended by the B.L.M. District Manager when the moisture content of the soil is adequate for germination. The Lessee further covenants and agrees that all of said cleanup and restoration activities shall be done and performed in a diligent and most workmanlike manner and in strict conformity with the above mentioned Item #7 and #10.

11. OTHER INFORMATION

The Topography of the General Area (See Topographic Map "A")

The area is a basin formed by the Blue Mountain Plateau and Green River to the North and White River and Roan Plateau to the South.

The basin floor is interlaced with numerous canyons and ridges formed by the non-perennial streams of the area. The sides of these canyons are steep and ledges formed in sandstones, conglomerates and shale deposits are extremely common to the area.

The geologic structures of the area that are visible are of the Uintah formation (Eocene Epoch) Tertiary Period in the upper elevations and the cobblestone and younger Alluvial deposits from the Quaternary Period.

Outcrops of sandstone ledges, conglomerate deposits and shale are common in this area.

The topsoil in the area range from a light brownish-gray sandy clay (SM-ML) type soil poorly graded gravels to a clayey (OL) type soil.

The majority of the numerous washes and streams in the area are of a non-perennial nature flowing during the early spring run-off and extremely heavy rain storms of long duration which are extremely rare as the normal annual rainfall in the area is only 8".

11. OTHER INFORMATION - continued

The White River to the South of this location is the only perennial stream that is affected by this location site.

Due to the low precipitation average, climate conditions and the marginal types of soils, the vegetation that is found in the area is common of the semi-arid region we are located in. It consists of areas of sagebrush, rabbit brush, some grasses and cacti as the primary flora. This is also true for the lower elevations.

The fauna of the area consists predominantly of the mule deer, coyotes, rabbits and varieties of small ground squirrels and other types of rodents. The area is used by man for the primary purpose of grazing domesticated sheep and cattle.

The birds of the area are raptors, finches, ground sparrows, magpies, crows, and jays.

The Topography of the Immediate Area (Topographic Map "B").

P.T.S. 23-11 Federal, is located on a relatively flat area approximately 3000' South of Coyote Wash.

The majority of the drainages in the area around this location run in a Northerly direction into the aforesaid Coyote Wash which is a tributary to the White River and are non-perennial streams.

The terrain in the vicinity of the location slopes to the North from a small ridge through the location site at approximately a 4% grade into a small wash to the North.

The vegetation in the immediate area surrounding the location site is predominantly sagebrush, and grasses. There is a pipeline approximately 6500' North of the proposed location site. There are no other occupied dwellings or other facilities of this nature in the general area. There are no visible archaeological, historical, or cultural sites within any reasonable proximity of the proposed location site. (See Topographic Map "B")

12. LESSEE'S OR OPERATORS REPRESENTATIVE

Dee E. Beardsley, Operations Manager  
Pacific Transmission Supply Company  
P. O. Box 3093  
Casper, Wyoming 82602  
TELE: (307) 265-1027

13. CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge and belief, true and correct; that the work associated with the operations proposed herein will be performed by Pacific Transmission Supply Co. and its Contractors and Sub-contractors in conformity with this plan and terms and conditions under which it is approved.

Date

Dee E. Beardsley, Operations Manager

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

\*\* FILE NOTATIONS \*\*

Date: Jan. 9-  
Operator: Pacific Transmission  
Well No: Sand Ridge Unit 23-11  
Location: Sec. 11 T. 9S R. 23E County: Uintah

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

API NUMBER: B-047-30354

CHECKED BY:

Administrative Assistant [Signature]  
Remarks: No other wells in Sec. 11 -

Petroleum Engineer [Signature]  
Remarks:

Director 7  
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. Sand Wash Unit

Other:

Letter Written/Approved

# PACIFIC TRANSMISSION SUPPLY COMPANY

212 GOODSTEIN BUILDING  
P. O. BOX 3093  
CASPER, WYOMING 82602  
(307) 265-1027

February 21, 1978

Mr. E. W. Guynn  
U. S. Geological Survey  
8426 Federal Building  
Salt Lake City, UT 84138

Re: U.S.G.S. Form 9-331 - Sundry Notice  
PTS #23-11 Federal  
Sec. 11, T9S, R23E, SLM  
Uintah County, Utah

Dear Mr. Guynn:

Please find attached U. S. Geological Survey's Form 9-331 Sundry Notice informing you of the spud data for the captioned well.

Very truly yours,

Original Signed By  
E. E. Mulholland

E. E. Mulholland  
Operations Engineer

ks  
cc: Oil, Gas & Mining Div. - SLC, Utah

E. R. Henry  
J. L. Wroble

Attach.



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

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

Form approved.  
Budget Bureau No. 42-R1424.

**SUNDRY NOTICES AND REPORTS ON WELLS**  
(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1.  OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR  
**PACIFIC TRANSMISSION SUPPLY COMPANY**

3. ADDRESS OF OPERATOR  
**P.O. Box 3093, Casper, WY 82602**

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\* See also space 17 below.)  
At surface  
**2031' FSL, 2034' FWL (NE SW) Section 11, T9S, R23E**

14. PERMIT NO.  
**43-047-30353**

15. ELEVATIONS (Show whether DF, RT, OR, etc.)  
**4978 GR**

5. LEASE DESIGNATION AND SERIAL NO.  
**U-0146800**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME  
**Sand Ridge II**

8. FARM OR LEASE NAME  
**Federal**

9. WELL NO.  
**23-11**

10. FIELD AND POOL, OR WILDCAT  
**Wildcat**

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
**Sec. 11, T9S, R23E, SLM**

12. COUNTY OR PARISH  
**Uintah**

13. STATE  
**Utah**

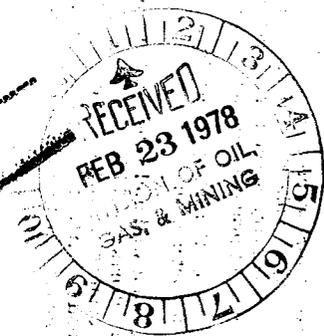
16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

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

Spudded with dry hole digger at 9:00 A.M., 2/18/78. Drilled 17½" hole to 328. Ran 8 joints 13-3/8", 54.5#, K-55 new casing to 328 and cemented with 250 sx. Class G cement containing 2% calcium chloride. Plug down at 3:00 P.M., 2/19/78. Circulated hole with water prior to pumping cement. Good returns throughout. Cement circulated to surface. Drilled rat and mouse holes and rigged down dry hole equipment. Currently moving in rotary tools to drill out 2/22/78.

**APPROVED BY THE DIVISION OF  
OIL, GAS, AND MINING**  
DATE: Feb 23, 1978  
BY: [Signature]



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

SIGNED E. E. Mulholland TITLE Operations Engineer DATE 2/21/78  
(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:  
3-USGS-SLC,UT  
2-OG&M Div. -SLC,UT  
1-E.R. Henry, 1-J.L. Wroble  
1-File, 1-Partners

\*See Instructions on Reverse Side

Contractor Anderson Drilling Co. Top Choke 1/4"  
 Rig No. 10 Bottom Choke 3/4"  
 Spot NE-SW Size Hole 7 7/8"  
 Sec. 11 Size Rat Hole --  
 Twp. 9 S Size & Wt. D. P. 4 1/2" 16.60  
 Rng. 23 E Size Wt. Pipe --  
 Field Natural Buttes I. D. of D. C. 2 1/4"  
 County Uintah Length of D. C. --  
 State Utah Total Depth 6682'  
 Elevation 4978' "Ground" Interval Tested 6512-6682'  
 Formation Mesa Verde Type of Test Bottom Hole  
Conventional

Flow No. 1 15 Min.  
 Shut-in No. 1 60 Min.  
 Flow No. 2 90 Min.  
 Shut-in No. 2 210 Min.  
 Flow No. 3 -- Min.  
 Shut-in No. 3 -- Min.  
 Bottom Hole Temp. 148°F  
 Mud Weight 9.6  
 Gravity --  
 Viscosity 38

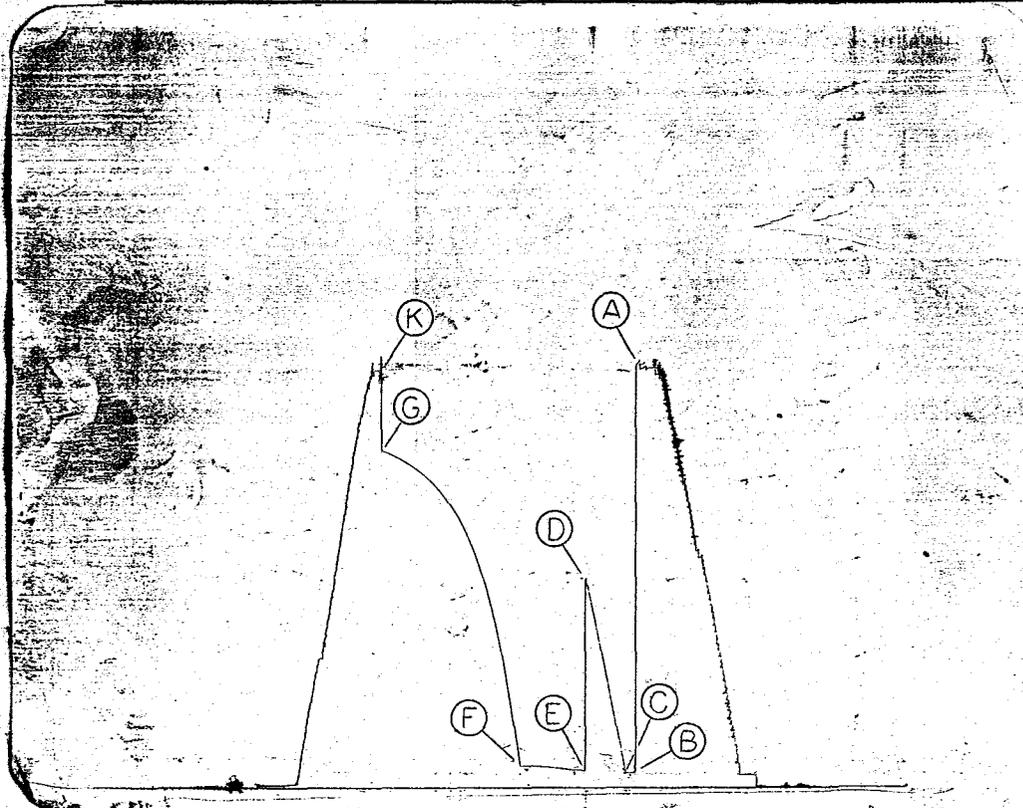
Tool opened @ 10:31 PM.

**Inside Recorder**

PRD Make Kuster AK-1  
 No. 5563 Cap. 6100 @ 6498'

	Press	Corrected
Initial Hydrostatic	A	3256
Final Hydrostatic	K	3246
Initial Flow	B	125
Final Initial Flow	C	131
Initial Shut-in	D	1664
Second Initial Flow	E	145
Second Final Flow	F	182
Second Shut-in	G	2694
Third Initial Flow	H	--
Third Final Flow	I	--
Third Shut-in	J	--

Lynes Dist.: Rock Springs, Wy.  
 Our Tester: Charles Tuzicka  
 Witnessed By R.J. Firth



Did Well Flow - Gas Yes Oil No Water No  
 RECOVERY IN PIPE: 410' Drilling mud

1st Flow - Tool opened with a strong blow, increased to bottom of bucket in 1 minute and continued to increase thru remainder of flow period.  
 2nd Flow - Tool opened with a strong blow, increased to a 14.0 psig blow in 60 minutes, Gas to surface in 80 minutes, see gas volume report.

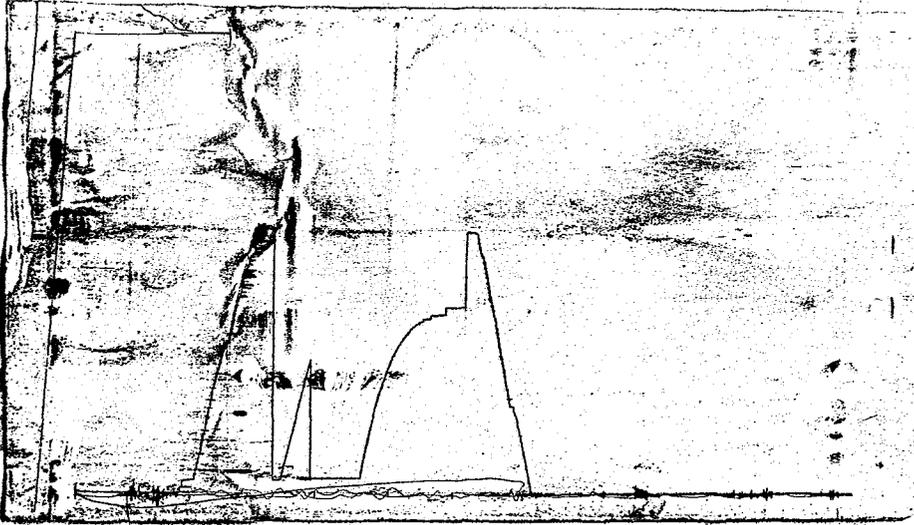
REMARKS:



Operator Pacific Transmission Supply Co. Well Name and No. Sand Ridge Unit #23-11  
 Address See Distribution Ticket No. 10360 Date 3-21-78  
 No. Final Copies 6

# LYNES, INC.

Operator Pacific Transmission Supply Co. lease & No. Sand Ridge Unit #23-11 DST No. 1



### Outside Recorder

PRD Make Kuster K-3  
 No. 9737 Cap. 5900 @ 6679'

	Press	Corrected
Initial Hydrostatic	A	3419
Final Hydrostatic	K	3354
Initial Flow	B	174
Final Initial Flow	C	180
Initial Shut-in	D	1674
Second Initial Flow	E	192
Second Final Flow	F	205
Second Shut-in	G	2705
Third Initial Flow	H	--
Third Final Flow	I	--
Third Shut-in	J	--

Pressure Below Bottom  
Packer Bled To

PRD Make \_\_\_\_\_  
 No. \_\_\_\_\_ Cap. \_\_\_\_\_ @ \_\_\_\_\_

	Press	Corrected
Initial Hydrostatic	A	
Final Hydrostatic	K	
Initial Flow	B	
Final Initial Flow	C	
Initial Shut-in	D	
Second Initial Flow	E	
Second Final Flow	F	
Second Shut-in	G	
Third Initial Flow	H	
Third Final Flow	I	
Third Shut-in	J	

Pressure Below Bottom  
Packer Bled To



# LYNES, INC.

## Fluid Sample Report

Date 3-21-78 Ticket No. 10360  
Company Pacific Transmission Supply Co. DST No. 1  
Well Name & No. Sand Ridge Unit #23-11 State Utah  
County Uintah Test Interval 6512-6682'

Pressure in Sampler 600 PSIG BHT 149 °F

Total Volume of Sampler: 2000 cc.  
Total Volume of Sample: 1600 cc.  
Oil: None cc.  
Water: None cc.  
Mud: 1600 cc.  
Gas: 2.5 cu. ft.  
Other: None

R.W. 6.0 @ 90°F = 700 ppm. chl.

### Resistivity

Make Up Water 6.0 @ 100°F of Chloride Content 650 ppm.

Mud Pit Sample 1.8 @ 70°F of Chloride Content 3200 ppm.

Gas/Oil Ratio \_\_\_\_\_ Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F

Where was sample drained \_\_\_\_\_

Remarks: Recovery: - R.W. 0.17 @ 90°F = 32000 ppm. chl.

# LYNES, INC.

Operator Pacific Transmission Lease & No. Sand Ridge Unit #23-11 DST No. 1  
Supply Company

Comments relative to the analysis of the pressure chart from DST #1, Interval: 6512-6682', which was run in the captioned well located in the NE SW Section 11, T9S-R23E, Uintah County, Utah:

Because of the essentially 100% gas recovery of this formation test, this analysis has been made by the use of the Horner method of pressure build-up curve extrapolation and the gas equations shown on the inside of the back cover of this report folder.

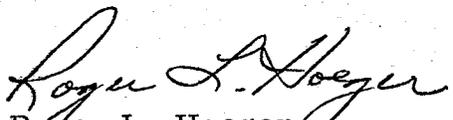
For purposes of this analysis, the following gas and reservoir properties and test parameters have been used:

$T_f = 608^\circ\text{R}$ ,  $\mu_g = 0.015 \text{ cp.}$ ,  $Z = 0.85$ ,  $h = 10 \text{ feet (estimated)}$ ,  
 $t = 105 \text{ minutes}$ ,  $m = 17,783.3 \times 10^3 \text{ psi}^2 / \log \text{ cycle}$ .

1. The character of the Initial Shut-in pressure build-up curve indicates that "steady-state" conditions were not attained during this shut-in period. It therefore is impossible to determine a reliable extrapolated Initial Shut-in pressure.

Extrapolation of the Final Shut-in pressure build-up curve indicates a maximum reservoir pressure of 3223 psi at the recorder depth of 6498 feet. This indicated maximum reservoir pressure is reasonably consistent with original reservoir pressures which were found in the Mesaverde formation at comparable depths and earlier dates in the general area of this formation test.

2. The Average Production Rate which was used in this analysis, 39.2 MCFPD, is based upon the reported stabilized flow rate which was gauged during the last 10 minutes of the Final Flow period.
3. The calculated Estimated Damage Ratio (EDR) of 0.1 indicates that no significant well-bore damage was present at the time of this formation test.
4. The calculated Effective Transmissibility of 1.9 md.-ft./cp. indicates an Average Permeability to gas of 0.003 md. for the estimated 10 feet of effective porosity within the total 170 feet of interval tested.
5. The evaluation criteria used in the DST Analysis System indicate that the results obtained in this analysis should be reliable within reasonable limits relative to the assumptions which have been made.

  
Roger L. Hoeger  
Consultant for Lynes, Inc.

# LYNES INC.

REPORT # 304

WELL NAME - SAND RIDGE UNIT 23-11

WELL OPERATOR - PACIFIC TRANSMISSION SUPPLY CO.

DST NUMBER - 1

RECORDER NUMBER - 5563

## FIRST SHUT IN PRESSURE

<u>TIME(MIN)</u> <u>PHI</u>	<u>(T+PHI)</u> <u>/PHI</u>	<u>PSIG</u>	<u>PSIG<sup>2</sup></u> <u>/10<sup>6</sup></u>
.0	.0000	131	.0172
6.0	3.5000	280	.0784
12.0	2.2500	441	.1945
18.0	1.8333	607	.3684
24.0	1.6250	753	.5670
30.0	1.5000	914	.8354
36.0	1.4167	1070	1.1449
42.0	1.3571	1233	1.5203
48.0	1.3125	1372	1.8824
54.0	1.2778	1518	2.3043
60.0	1.2500	1664	2.7689

# LYNES INC.

REPORT # 304

WELL NAME - SAND RIDGE UNIT 23-11

WELL OPERATOR - PACIFIC TRANSMISSION SUPPLY CO.

DST NUMBER - 1

RECORDER NUMBER - 5563

## SECOND SHUT IN PRESSURE

TIME (MIN)	(T+PHI) /PHI	PSIG	PSIG <sup>2</sup> /10 <sup>6</sup>
.0	.0000	182	.0331
21.0	6.0000	827	.6839
42.0	3.5000	1346	1.8117
63.0	2.6667	1730	2.9929
84.0	2.2500	2001	4.0040
105.0	2.0000	2216	4.9107
126.0	1.8333	2376	5.6454
147.0	1.7143	2489	6.1951
168.0	1.6250	2574	6.6255
189.0	1.5556	2644	6.9907
210.0	1.5000	2694	7.2576

FITTED LINE:  $\text{LOG}((T+PHI)/PHI) = -.05623 \text{ PSIG}^2/10^6 + .58421$

EXTRAPOLATION OF SECOND SHUT IN = 3223.21 M = 17783316.00

## RESERVOIR PARAMETERS:

RESERVR TEMP	608.000	BTTM HDL TMP	148.000	SPEC GRAVITY	.700
VISCOSITY	.015	Z FACTOR	.850	DST GAS RATE	39.200
WELL RADIUS	.328	PAY THICKNES	10.000	SURSEA DEPTH	-1520.000
WATER GRADNT	.433				

# LYNES INC.

REPORT # 304

WELL NAME - SAND RIDGE UNIT 23-11

WELL OPERATOR - PACIFIC TRANSMISSION SUPPLY CO.

DST NUMBER - 1

RECORDER NUMBER - 5563

## CALCULATIONS: SECOND SHUT IN

EXTRAPOLATED RESERVOIR PRESS.(PSIG) .....	3223.2
NO. OF POINTS ENTERED.....	11.0
NO. OF POINTS USED IN EXTRAPOLATION .....	3.0
ROOT MEAN SQUARE DEVIATION OF BEST FIT LINE(PST) .	.001
TOTAL FLOW TIME(MIN) .....	105.0
TRANSMISSIBILITY(MD-FT/CP) .....	1.9
IN SITU CAPACITY(MD-FT) .....	.03
AVERAGE EFFECTIVE PERMEABILITY(MD) .....	.003
RADIUS OF INVESTIGATION(FT).....	1.0
ACTUAL CAPACITY(MD-FT) .....	.03
ESTIMATED DAMAGE RATIO .....	.1
MAXIMUM AOF(MCF/D) .....	39.3
MINIMUM AOF(MCF/D) .....	39.3
DRAWDOWN FACTOR(%) .....	.0
POTENTIOMETRIC SURFACE(FT) .....	5923.9

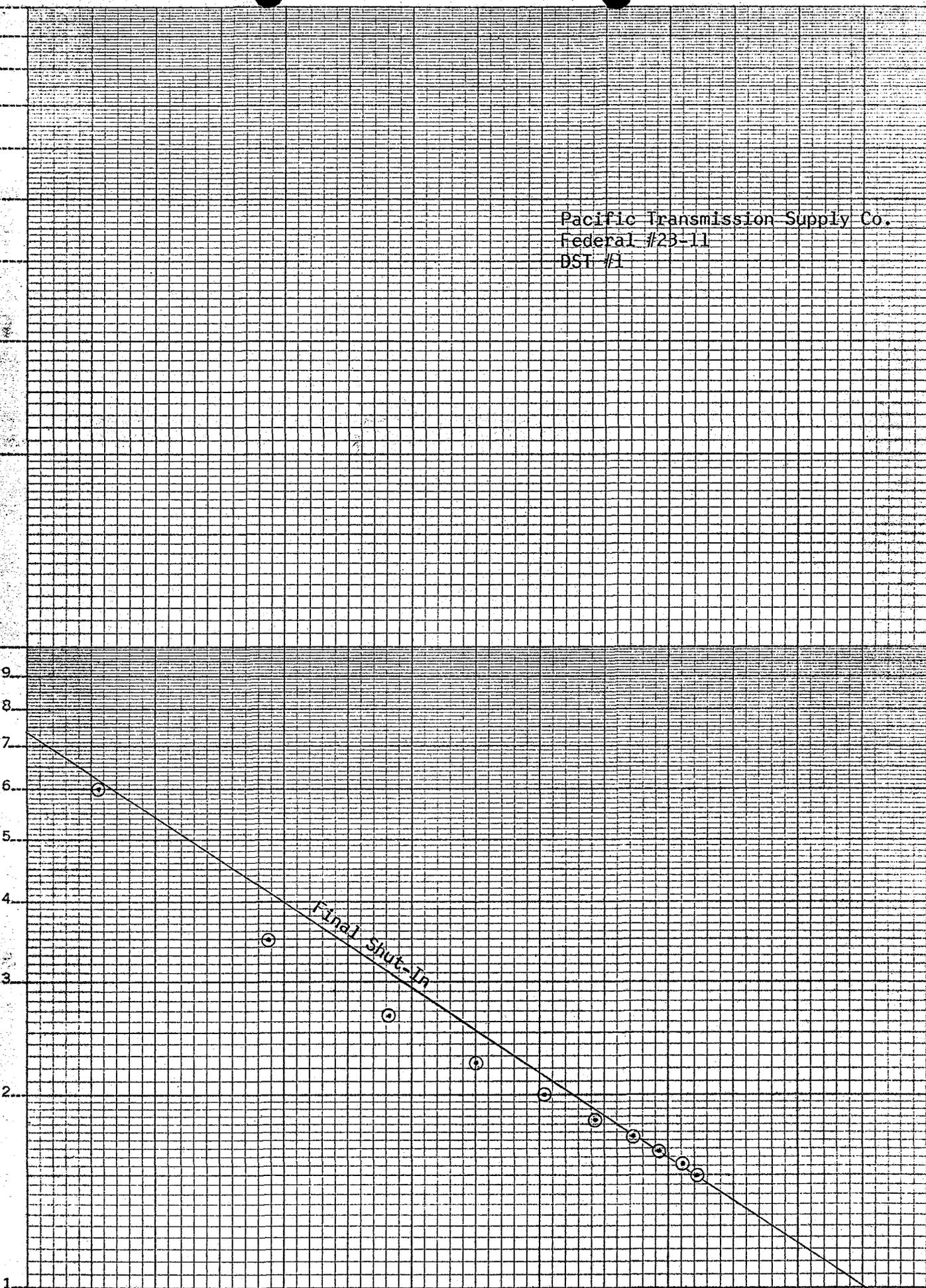
Pacific Transmission Supply Co.  
Federal #23-11  
DST #1

$\frac{T + \text{PHI}}{\text{PHI}}$

Semi-Logarithmic  
2 Cycles x 10 to the inch

1000 1400 1800 2200 2600 3000 3400  
psig

Final Shut-In



# LYNES, INC.

## Distribution of Final Reports

Operator Pacific Transmission Supply Co. Well Name and No. Sand Ridge Unit #1

Original: Pacific Transmission Supply Co., Box 3093, Casper, Wyoming 82602 Attn:

Dee Beardsley

1 copy: Pacific Transmission Supply Co., 633 17th St., Suite 2140, Denver, Colorado

80202 J.L. Worble

1 copy: Chorney Oil Co., 401 Lincoln Tower Bldg., Denver, Colorado 80295 Attn:

L. Stanley

1 copy: B.W. Allen, % Almac Operating Co., Box 2352, Casper, Wyoming 80295

1 copy: U.S.G.S., 8426 Federal Bldg., Salt Lake City, Utah 84138 Attn: E.W. Guynn

1 copy: Wyoming Oil & Gas Comm., 1588 West, North Temple, Salt Lake City, Utah 84116

Attn: P.L. Driscoll

Contractor Anderson Drlg. Co.  
 Rig No. 10  
 Spot NE-SW  
 Sec. 11  
 Twp. 9 S  
 Rng. 23 E  
 Field Natural Buttes  
 County Uintah  
 State Utah  
 Elevation 4978' "Ground"  
 Formation Mesa Verde

Top Choke 1/4"  
 Bottom Choke 5/8"  
 Size Hole 7 7/8"  
 Size Rat Hole --  
 Size & Wt. D. P. 4 1/2" 16.60  
 Size Wt. Pipe --  
 I. D. of D. C. 2 1/4"  
 Length of D. C. 341'  
 Total Depth 7700'  
 Interval Tested 7462-7700'  
 Type of Test Bottom Hole Conventional

Flow No. 30\* Min.  
 Shut-in No. 90 Min.  
 Flow No. 2 Min.  
 Shut-in No. 180 Min.  
 Flow No. 3 Min.  
 Shut-in No. -- Min.  
 Bottom Hole Temp. 178°F  
 Mud Weight 10.0  
 Gravity --  
 Viscosity 39

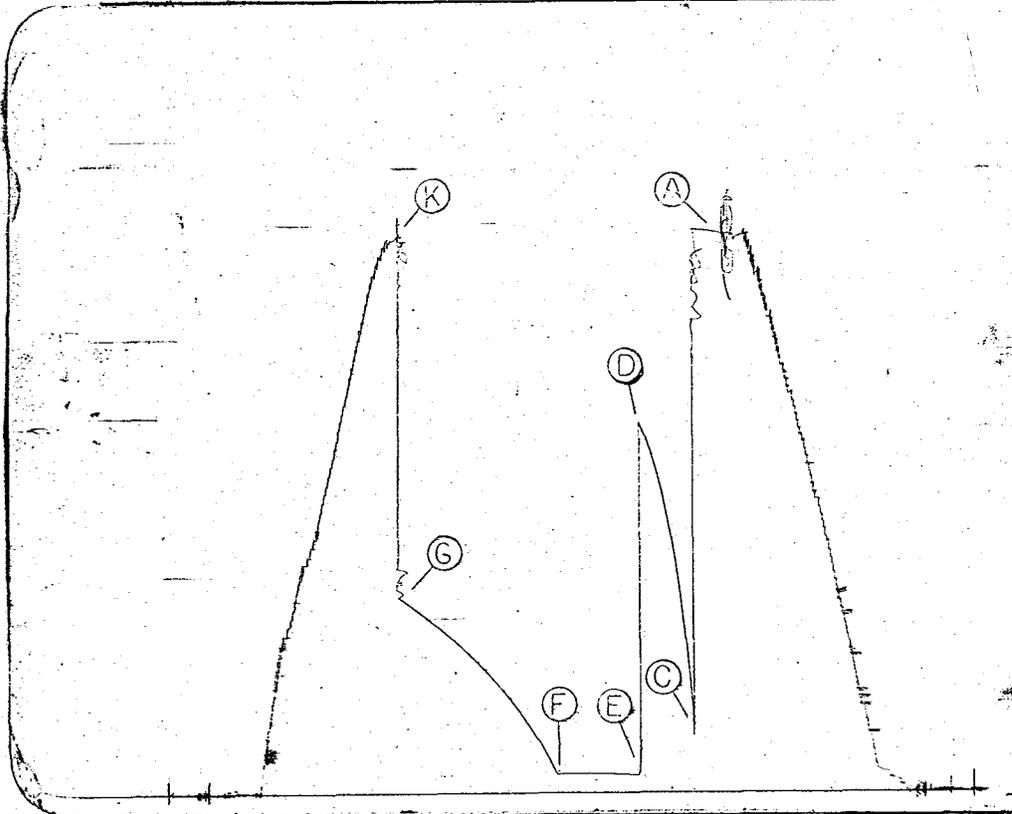
Tool opened @ 11:40 PM.

**Inside Recorder**

PRD Make Kuster AK-1  
 No. 2559 Cap. 5400 @ 7444'

	Press	Corrected
Initial Hydrostatic	A	3892
Final Hydrostatic	K	3877
Initial Flow	B	**
Final Initial Flow	C	409
Initial Shut-in	D	2579
Second Initial Flow	E	121
Second Final Flow	F	126
Second Shut-in	G	1367
Third Initial Flow	H	--
Third Final Flow	I	--
Third Shut-in	J	--

Lynes Dist.: Rock Springs, Wy.  
 Our Tester: Charles Tuzicka  
 Witnessed By David Hadden



Did Well Flow - Gas Yes Oil No Water No  
 RECOVERY IN PIPE: 360' Mud = 1.76 bbl.

1st Flow - Tool opened with a weak blow and remained thru flow period.  
 2nd Flow - Tool opened with a strong blow, increased to bottom of bucket in 1 minute and continued to increase to a 15.0 psig blow in 5 minutes. Gas to surface in 50 minutes, see gas volume report.

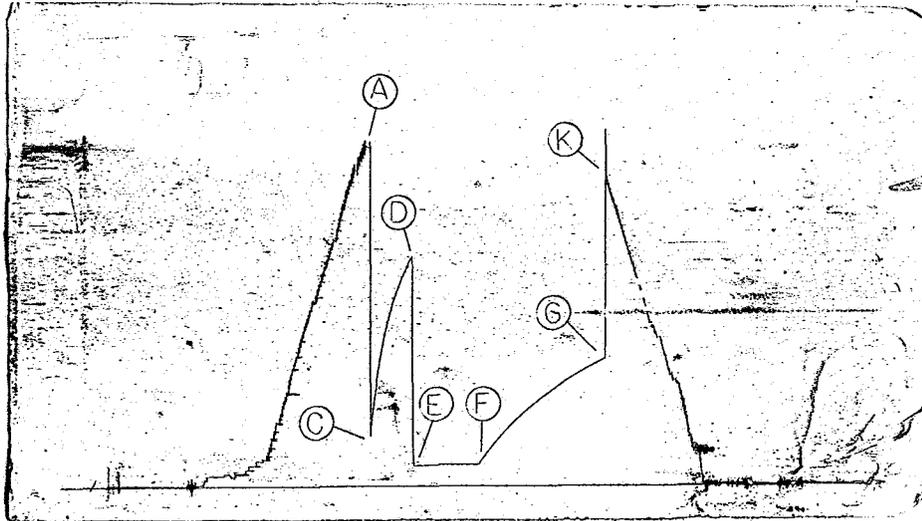
REMARKS:

\*\* Charts indicate tool was only open momentarily before the initial shut-in.

Operator Pacific Transmission Supply Co. Well Name and No. Sand Ridge Unit #23-11  
 Address See Distribution  
 Ticket No. 10361  
 Date 3-29-78  
 No. Final Copies 6  
 DST No. 2

# LYNES, INC.

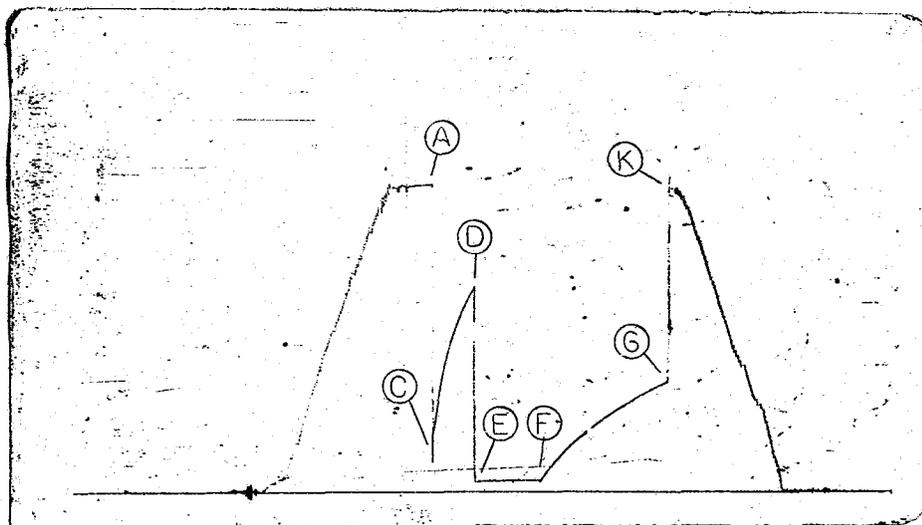
Operator Pacific Transmission Supply Co Lease & No. Sand Ridge Unit #23-11 DST No. 2



**Outside Recorder**

PRD Make Kuster K-3  
 No. 15239 Cap. 5500 @ 7694'

	Press	Corrected
Initial Hydrostatic	A	4043
Final Hydrostatic	K	4002
Initial Flow	B	**
Final Initial Flow	C	602
Initial Shut-in	D	2731
Second Initial Flow	E	232
Second Final Flow	F	246
Second Shut-in	G	1510
Third Initial Flow	H	--
Third Final Flow	I	--
Third Shut-in	J	--
Pressure Below Bottom Packer Bled To		



**Inside Recorder**

PRD Make Kuster K-3  
 No. 12983 Cap. 5950 @ 7439'

	Press	Corrected
Initial Hydrostatic	A	3905
Final Hydrostatic	K	3871
Initial Flow	B	**
Final Initial Flow	C	390
Initial Shut-in	D	2596
Second Initial Flow	E	126
Second Final Flow	F	133
Second Shut-in	G	1390
Third Initial Flow	H	--
Third Final Flow	I	--
Third Shut-in	J	--
Pressure Below Bottom Packer Bled To		

# LYNES, INC.

Operator Pacific Transmission Supply Co Lease & No. Sand Ridge Unit #23-11 DST No. 2

Recorder No. 2559 @ 7444'

## Initial Shut-In

0 min.	409	psig.
6 "	869	"
12 "	1172	"
18 "	1485	"
24 "	1758	"
30 "	1943	"
36 "	2143	"
42 "	2275	"
48 "	2396	"
54 "	2501	"
60 "	2579	"

## Final Shut-In

0 min.	126	psig.
18 "	336	"
36 "	519	"
54 "	656	"
72 "	786	"
90 "	908	"
108 "	1014	"
126 "	1114	"
144 "	1204	"
162 "	1289	"
180 "	1367	"



# LYNES, INC.

## Fluid Sample Report

Date 3-29-78 Ticket No. 10361  
Company Pacific Transmission Supply Co. DST No. 2  
Well Name & No. Sand Ridge Unit #23-11 State Utah  
County Uintah Test Interval 7462-7700'

Pressure in Sampler 10 PSIG BHT 178 °F

Total Volume of Sampler: 2000 cc.  
Total Volume of Sample: -- cc.  
Oil: None cc.  
Water: None cc.  
Mud: Too thick to measure cc.  
Gas: None cu. ft.  
Other: None

### Resistivity

Make Up Water 7.0 @ 85°F of Chloride Content 625 ppm.  
Mud Pit Sample .14 @ 78°F of Chloride Content 45000 ppm.  
Gas/Oil Ratio \_\_\_\_\_ Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F

Where was sample drained \_\_\_\_\_

Remarks: Recovery - Top Sample - R.W. .1 @ 75°F = 72,000 ppm. chl.  
Middle Sample - R.W. .14 @ 65°F = 55,000 ppm. chl.  
Bottom Sample - R.W. .14 @ 70°F = 51,000 ppm. chl.

# LYNES, INC.

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Attn: P.L. Driscoll

Contractor Anderson-Myers Drlg. Co. Top Choke 1/4"  
 Rig No. 3 Bottom Choke 9/16"  
 Spot NE-SW Size Hole 7 7/8"  
 Sec. 17 Size Rat Hole --  
 Twp. 8 S Size & Wt. D. P. 4 1/2" 16.60  
 Rng. 23 E Size Wt. Pipe --  
 Field Wildcat I. D. of D. C. 2 1/4"  
 County Uintah Length of D. C. 590'  
 State Utah Total Depth 7224'  
 Elevation -- Interval Tested 7171-7224'  
 Formation Wasatch Type of Test Bottom Hole  
Conventional

Flow No. 1 15 Min.  
 Shut-in No. 1 60 Min.  
 Flow No. 2 120 Min.  
 Shut-in No. 2 120 Min.  
 Flow No. 3 -- Min.  
 Shut-in No. 3 -- Min.

Bottom Hole Temp. 155°  
 Mud Weight 9.4  
 Gravity --  
 Viscosity 33

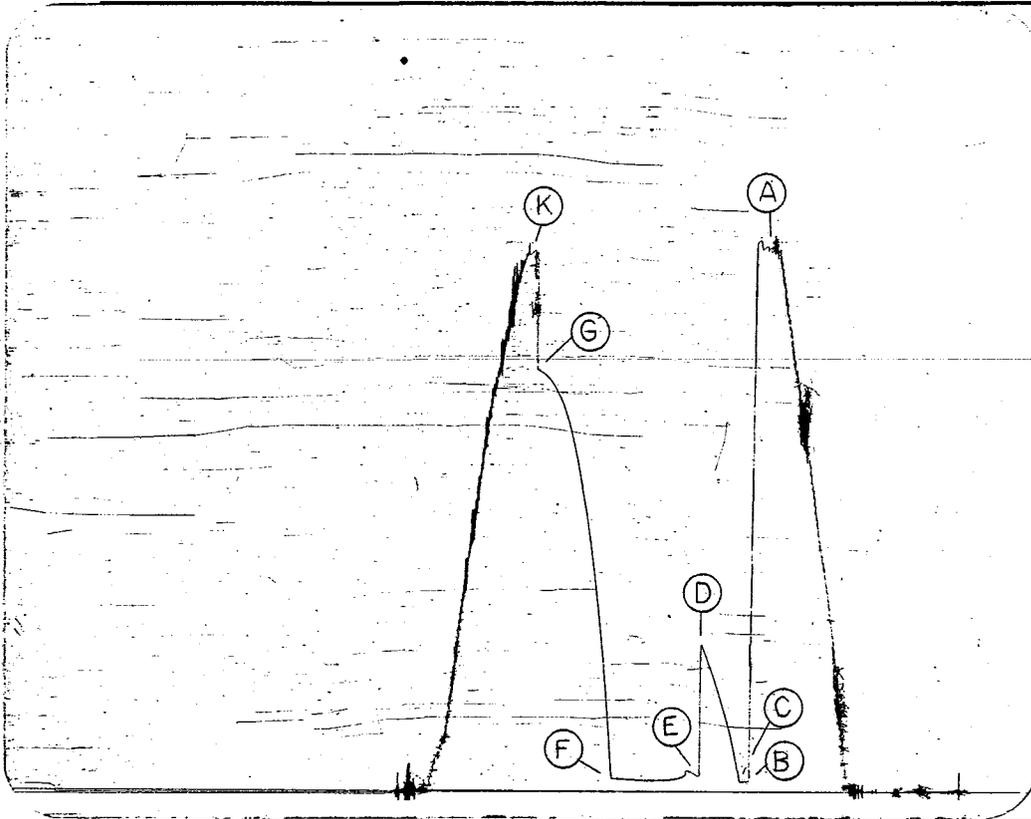
Tool opened @ 10:31 AM

**Inside Recorder**

PRD Make Kuster AK-1  
 No. 2559 Cap. 5050 @ 7150'

	Press	Corrected
Initial Hydrostatic	A	3528
Final Hydrostatic	K	3487
Initial Flow	B	74
Final Initial Flow	C	67
Initial Shut-in	D	965
Second Initial Flow	E	109
Second Final Flow	F	89
Second Shut-in	G	2754
Third Initial Flow	H	--
Third Final Flow	I	--
Third Shut-in	J	--

Lynes Dist: Rock Springs, Wy.  
 Our Tester: Steve Ogden  
 Witnessed By: Don Bowden



Did Well Flow - Gas Yes Oil No Water No  
 RECOVERY IN PIPE: 79' Gas cut mud = 0.38 bbl.

Top Sample: R.W. .15 @ 65° = 51,000 ppm. chl.  
 Middle Sample: R.W. .90 @ 60° = 7800 ppm. chl.

**Blow Description:**

1st Flow: Tool opened with a strong blow, increased to bottom of bucket in 15 seconds, increased to 1 psi. in 30 seconds and remained thru flow period.

2nd Flow: Tool opened with a strong blow, increased to bottom of bucket in 5 seconds, increased to 1 psi. in 30 seconds. Gas to surface in 35 minutes, see Gas Volume Report.

Operator Pacific Transmission Supply Co. Well Name and No. Federal #23-17  
 Address See Distribution Ticket No. 20713 Date 3-20-80  
 No. Final Copies 9 DST No. 1

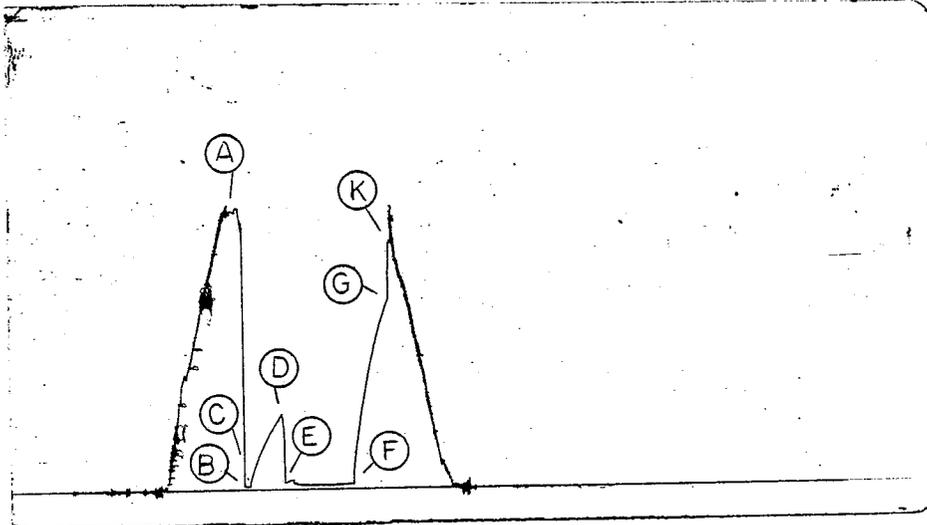
# LYNES, INC.

Pacific Transmission Supply Co.  
Operator

Federal #23-17

Well Name and No.

1  
DST No.



### Inside Recorder

PRD Make Kuster K-3  
No. 20165 Cap. 5900 @ 7155'

	Press	Corrected
Initial Hydrostatic	A	3539
Final Hydrostatic	K	3177
Initial Flow	B	61
Final Initial Flow	C	54
Initial Shut-in	D	956
Second Initial Flow	E	96
Second Final Flow	F	76
Second Shut-in	G	2416*
Third Initial Flow	H	--
Third Final Flow	I	--
Third Shut-in	J	--
Pressure Below Bottom Packer Bled To		

\*Clock stopped 68 minutes into final shut-in period.

PRD Make \_\_\_\_\_  
No. \_\_\_\_\_ Cap. \_\_\_\_\_ @ \_\_\_\_\_

	Press	Corrected
Initial Hydrostatic	A	
Final Hydrostatic	K	
Initial Flow	B	
Final Initial Flow	C	
Initial Shut-in	D	
Second Initial Flow	E	
Second Final Flow	F	
Second Shut-in	G	
Third Initial Flow	H	
Third Final Flow	I	
Third Shut-in	J	
Pressure Below Bottom Packer Bled To		

WELL NAME: FEDERAL 23-17

DST NUMBER: 001

RECORDER NUMBER: 002559

INTERVAL TESTED: 7171FT TO 7224FT

RECORDER DEPTH: 7150.000FT

TOTAL FLOW TIME: 15.0MIN

FIRST SHUT IN PRESSURE (GAS)

TIME (MIN)	(T+PHI) PHI	PRESSURE (PSI)	PRESSURE (PSI <sup>2</sup> )/10 <sup>6</sup>
.0	.0000	67.0	.00449
1.0	16.0000	75.0	.00562
2.0	8.5000	98.0	.00960
3.0	6.0000	119.0	.01416
4.0	4.7500	150.0	.02250
5.0	4.0000	174.0	.03028
6.0	3.5000	195.0	.03802
7.0	3.1429	220.0	.04840
8.0	2.8750	240.0	.05760
9.0	2.6667	260.0	.06760
10.0	2.5000	280.0	.07840
12.0	2.2500	326.0	.10628
14.0	2.0714	364.0	.13250
16.0	1.9375	397.0	.15761
18.0	1.8333	435.0	.18922
20.0	1.7500	466.0	.21716
22.0	1.6818	496.0	.24602
24.0	1.6250	526.0	.27668
26.0	1.5769	554.0	.30692
28.0	1.5357	582.0	.33872
30.0	1.5000	609.0	.37088
35.0	1.4286	635.0	.40322
40.0	1.3750	739.0	.54612
45.0	1.3333	800.0	.64000
50.0	1.3000	856.0	.73274
55.0	1.2727	910.0	.82810
60.0	1.2500	965.0	.93122

Both shut-in pressure build-up curves have insufficient character to permit the use of a Horner plot to determine reliable extrapolated shut-in pressures.

WELL NAME: FEDERAL 23-17

DST NUMBER: 001

RECORDER NUMBER: 002559

INTERVAL TESTED: 7171FT TO 7224FT

RECORDER DEPTH: 7150.000FT

TOTAL FLOW TIME: 135.0MIN

SECOND SHUT IN PRESSURE (GAS)

TIME (MIN)	(T+PHI) /PHI	PRESSURE (PSI)	PRESSURE (PSI <sup>2</sup> )/10 <sup>6</sup>
.0	.0000	89.0	.00792
1.0	136.0000	154.0	.02372
2.0	68.5000	215.0	.04622
3.0	46.0000	274.0	.07508
4.0	34.7500	354.0	.12532
5.0	28.0000	413.0	.17057
6.0	23.5000	469.0	.21996
7.0	20.2857	529.0	.27984
8.0	17.8750	580.0	.33640
9.0	16.0000	629.0	.39564
10.0	14.5000	683.0	.46649
12.0	12.2500	777.0	.60373
14.0	10.6429	879.0	.77264
16.0	9.4375	964.0	.92930
18.0	8.5000	1052.0	1.10670
20.0	7.7500	1132.0	1.28142
22.0	7.1364	1210.0	1.46410
24.0	6.6250	1288.0	1.65894
26.0	6.1923	1364.0	1.86050
28.0	5.8214	1435.0	2.05922
30.0	5.5000	1501.0	2.25300
40.0	4.3750	1808.0	3.26886
50.0	3.7000	2052.0	4.21070
60.0	3.2500	2272.0	5.16198
70.0	2.9286	2440.0	5.95360
80.0	2.6875	2555.0	6.52802
90.0	2.5000	2641.0	6.97488
100.0	2.3500	2698.0	7.27920
110.0	2.2273	2734.0	7.47476
120.0	2.1250	2754.0	7.58452

HORNER PLOT

TEST DATE: 03 20 80

WELL NAME: FEDERAL 23-17

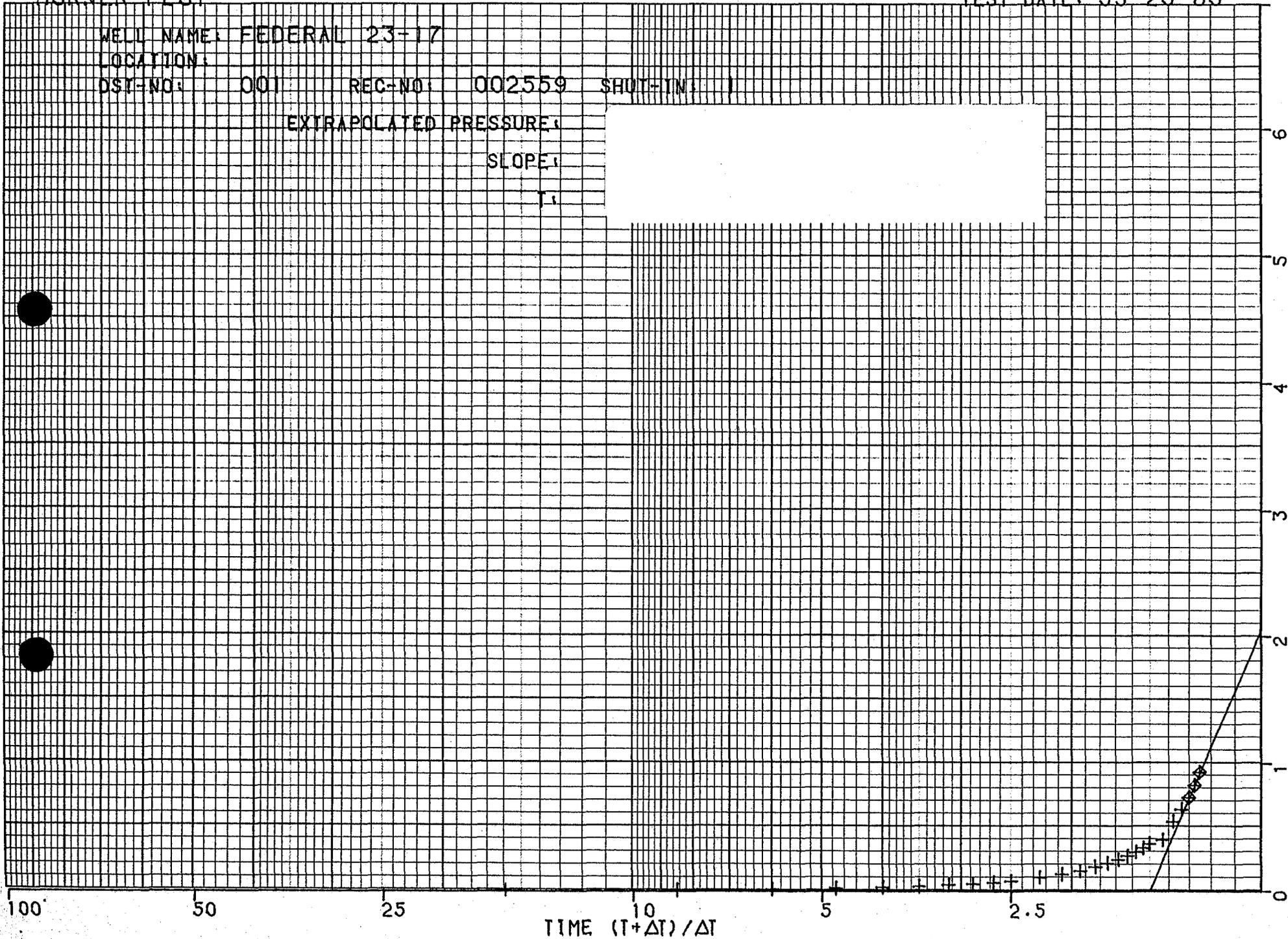
LOCATION:

DST-NO: 001 REC-NO: 002559 SHUT-IN: 1

EXTRAPOLATED PRESSURE:

SLOPE:

T:



100 50 25 10 5 2.5 0  
TIME (T+ΔT) / ΔT

PRESSURE PSI² / 10⁶ GAS





# LYNES, INC.

## Sampler Report

Company Pacific Transmission Supply Co. Date 3-20-80  
Well Name & No. Federal #23-17 Ticket No. 20713  
County Uintah State Utah  
Test Interval 7171-7224' DST No. 1

Total Volume of Sampler: 2100 cc.  
Total Volume of Sample: 950 cc.  
Pressure in Sampler: 60 psig  
Oil: None cc.  
Water: None cc.  
Mud: 950 cc.  
Gas: .125 cu. ft.  
Other: None

Sample: R.W. .30 @ 60° = 24,500 ppm. chl.

### Resistivity

Make Up Water \_\_\_\_\_ @ \_\_\_\_\_ of Chloride Content \_\_\_\_\_ ppm.

Mud Pit Sample .30 @ 70° of Chloride Content 22,000 ppm.

Gas/Oil Ratio \_\_\_\_\_ Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F

Where was sample drained On location

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

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# LYNES, INC.

## Distribution of Final Reports

Operator Pacific Transmission Supply Co. Well Name and No. Federal #23-17

Original &

1 copy: Pacific Transmission Supply Co., 717 17th Street, Suite 2300

Denver, Colorado 80202 Attn: Mr. J. L. Wroble

1 copy: Pacific Transmission Supply Co. P.O. Box 3093, Casper, Wyoming 82602

Attn: D. E. Beardsley

1 copy: Pacific Transmission Supply Co., 245 Market Street, Room 1326, San

Francisco, California 94105 Attn: E. R. Henry

1 copy: Pacific Transmission Supply Co., 85 South, 200 East, Vernal, Utah 84078

Attn: R. J. Firth

1 copy: U.S.G.S. - Conservation Division, Federal Bldg., 8440 Branch of Oil &

Gas, 125 S. State St., Salt Lake City, Utah 84111 Attn: E. W. Guynn

1 copy: Division of Oil, Gas, & Mining, 1588 West North Temple, Salt Lake City,

Utah 84116 Attn: P.L. Driscoll

1 copy: J. Milton Wege, Ralph E Davis & Associates, 500 Jefferson, Suite 2031

Houston, Texas 77002

1 copy: Chorney Oil Co., 401 Lincoln Tower Bldg., Denver, Colorado 80295

Attn: L. S. Stanley

# PACIFIC TRANSMISSION SUPPLY COMPANY

212 GOODSTEIN BUILDING  
P. O. BOX 3093  
CASPER, WYOMING 82602  
(307) 265-1027

GEOLOGICAL WELL REPORT  
PACIFIC TRANSMISSION SUPPLY COMPANY  
PTS #23-11 FEDERAL  
SECTION 11, TOWNSHIP 9 SOUTH, RANGE 23 EAST  
UINTAH COUNTY, UTAH

Submitted by:  
David R. Hadden, Geologist  
Richard J. Van Dyke, Geologist  
Pacific Transmission Supply Co.

April 7, 1978

# PACIFIC TRANSMISSION SUPPLY COMPANY

212 GOODSTEIN BUILDING  
P. O. BOX 3093  
CASPER, WYOMING 82602  
(307) 265-1027

## WELL DATA

PTS #23-11 FEDERAL  
Sec. 11-T9S-R23E  
Uintah County, Utah

OPERATOR: Pacific Transmission Supply Company

WELL NAME: PTS 23-11 Federal

LOCATION: NE-SW Section 11, Township 9 South,  
Range 23 East (2031' FSL, 2034' FWL)

COUNTY and STATE: Uintah County, Utah

ELEVATION: 4978' Ground (ungraded); 4990' K. B.

CONTRACTOR: Anderson-Meyers Drilling Company  
Rig #10  
Toolpusher - Sonny Smith

COMMENCEMENT DATE: February 24, 1978

CEASE DRILLING: April 3, 1978

SURFACE CASING: Size - 13-3/8"  
Depth - 320'  
Cement - 250 sacks Class "G"

INTERMEDIATE CASING: Size - 9-5/8"  
Depth - 3200'  
Cement - 500 sacks Class "G"

HOLE SIZE: 7-7/8" from 3200' to total depth

TOTAL DEPTH: Driller - 7702'  
Logger - 7696'

DRILLING FLUID: Salt water to 5475'  
Salt Gel from 5475' to 6329'  
Salt Mud from 6329' to total depth

LOGGING: Schlumberger

WELL DATE - continued

SAMPLE STORAGE:	American Stratigraphic Company, Casper, Wyo.
DRILLING TIME:	Totco
MUD LOGGING UNIT:	Tooke Engineering Portable Unit
DRILLSTEM TESTS:	DST #1, 6512-6682' (Lynes Testers) DST #2, 7462-7702' (Lynes Testers)
GEOLOGISTS:	David R. Hadden, PTS Richard J. Van Dyke, PTS
STATUS:	Waiting on completion tools

CHRONOLOGICAL WELL HISTORY

<u>Date</u>	<u>Drilled to</u>	<u>Hours Drilling</u>	<u>Activity</u>
2-24-78	612'	17-3/4	Drilling.
2-25-78	1021'	21	Drilling.
2-26-78	1570'	23	Drilling.
2-27-78	1875'	16-1/2	Drilling; trip for bit #2.
2-28-78	2182'	23-1/2	Drilling.
3-1-78	2567'	23-3/4	Drilling.
3-2-78	2900'	23	Drilling.
3-3-78	3128'	17-1/2	Drilling; trip for bit #3.
3-4-78	3200'	9	Drilling; logging (Schlumberger)
3-5-78	3200'	0	Run intermediate casing; nipple up.
3-6-78	3280'	3-3/4	Nipple up; drilling.
3-7-78	3738'	23-1/4	Drilling.
3-8-78	4237'	23-1/4	Drilling.
3-9-78	4600'	21-1/4	Drilling.
3-10-78	4814'	19	Drilling; work on light plant.
3-11-78	5150'	21-3/4	Drilling; trip for bit #5.
3-12-78	5353'	16-1/2	Drilling; trip for bit #5; ream bridges.
3-13-78	5582'	24	Drilling.
3-14-78	5790'	23-1/4	Drilling.
3-15-78	5973'	24	Drilling.
3-16-78	6144'	23-3/4	Drilling.
3-17-78	6290'	23-3/4	Drilling.
3-18-78	6329'	15	Trip for bit #6; drilling.
3-19-78	6468'	23-1/4	Drilling.
3-20-78	6650'	23-3/4	Drilling.
3-21-78	6682'	9	Drilling; trip for DST #1.
3-22-78	6764'	9-1/4	DST #1; drilling.
3-23-78	6935'	23-3/4	Drilling.
3-24-78	7048'	23-1/2	Drilling.
3-25-78	7150'	19-1/2	Drilling; repair compound chains.
3-26-78	7318'	23-3/4	Drilling.
3-27-78	7541'	23-3/4	Drilling.
3-28-78	7613'	13-3/4	Trip for bit #8; drilling.
3-29-78	7700'	11-1/4	Drilling; circulate and trip for DST #2.
3-30-78	7702'	0	Complete DST #2; circulate for logs; logging; (+2' S.L.C. - 7700' = 7702')

MUD PROPERTIES

<u>Date</u>	<u>Depth</u>	<u>Weight</u>	<u>pH</u>	<u>Viscosity</u>	<u>Water Loss</u>	<u>Filter Cake</u>	<u>PV</u>	<u>YP</u>
2-24-78	440'	(Water)						
2-25-78	720'	(Water)						
2-26-78	1187'	(Water)						
2-27-78	1722'	(Water)						
2-28-78	1993'	(Water)						
3-2-78	2830'	(Water)						
3-4-78	3200'	(Water)						
3-6-78		8.9	11.5	(Salt Water)				
3-7-78		9.1	11.5	(Salt Water)				
3-9-78	4475'	9.0	10.5	(Salt Water)				
3-10-78	4704'	9.0	11.5	(Salt Water)				
3-11-78	4936'	9.1	10.0	(Salt Water)				
3-12-78	5185'	9.2	9.5	(Salt Water)				
3-13-78	5475'	9.0	11.0	32 (Salt Gel-Water)				
3-14-78	5696'	9.4	11.0	31 (Salt Gel)				
3-15-78		9.3	9.5	31 (Salt Gel)				
3-16-78	6044'		10.5	33 (Salt Gel)				
3-17-78		9.3	11.0	32 (Salt Gel)				
3-18-78	6329'	9.3	10.0	32	N/C	1/32"	6	7
3-19-78	6421'	9.4	9.5	34	N/C		11	2
3-20-78	6581'	9.7	10.0	36	16	2/32"	8	4
3-21-78	6682'	9.8	10.5	38	14	2/32"	11	2
3-22-78	6682'	9.4	9.0	44	16	2/32"	18	5
3-23-78	6855'	9.5	9.5	40	12	2/32"	10	8
3-24-78	6993'	9.7	9.5	39	14	2/32"	11	1
3-25-78	7117'	9.7	10.0	41	12	2/32"	15	10
3-26-78	7244'	9.7	10.0	36	13	2/32"	11	1
3-27-78	7415'	10.0	9.5	38	16	2/32"	10	8
3-28-78	7547'	9.9	9.5	37	14.8	2/32"	13	7
3-29-78	7699'	9.8	10.0	39	14.0	2/32"	18	10
3-30-78	7700'	9.8	9.5	42	14.2	2/32"	15	5

BIT RECORD

<u>Bit No.</u>	<u>Size</u>	<u>Make</u>	<u>Type</u>	<u>Depth In</u>	<u>Depth Out</u>	<u>Footage</u>	<u>Hours</u>	<u>Jets</u>
1	12-1/4"	HTC	J-22	162'	1781'	1619'	76	3-12's
2	12-1/4"	Smith	F-3	1781'	3015'	1234'	85-3/4	3-12's
3	12-1/4"	Smith	DG	3015'	3200'	185'	18-3/4	3-12's
4	7-7/8"	HTC	J-33	3200'	5150'	1950'	112-1/4	3-11's
5	7-7/8"	STC	F-45	5150'	6329'	1179'	141-3/4	3-11's
6	7-7/8"	STC	F-45	6329'	6682'	353'	64	3-11's
7	7-7/8"	HTC	J-33	6682'	7545'	863'	122-1/2	1-11; 2-12's
8	7-7/8"	Smith	F-2	7545'	7702'	157'	23-1/4	3-11's

DEVIATION SURVEYS

<u>Depth</u>	<u>Survey</u>
533'	1/2 degrees
1063'	1 degrees
1592'	1 degrees
2100'	1/2 degrees
2962'	2 degrees
3404'	2-1/2 degrees
3810'	2 degrees
4373'	2 degrees
5600'	1/2 degrees
6215'	1 degrees
6682'	3/4 degrees
7545'	1-1/2 degrees

FORMATION TOPS

	<u>Sample</u>	<u>Log</u>	<u>Datum</u>
Evacuation Creek			
Parachute Creek			
H-Marker		3175'	(+1815')
K-Marker			
Wasatch	4610'	4612'	(+ 378')
Y-Marker		6160'	(-1170')
Mesaverde		6530'	(-1540')

KB Elevation: 4990'

Total Depth: Driller 7702'  
 Logger 7696'

DRILLSTEM TESTS

DST#1, 6512-6682'

IH 3395#  
 FH 3333#  
 IF 126-110# ( 15 minutes)  
 FF 158-174# ( 90 minutes)  
 ISI 1659# ( 60 minutes)  
 FSI 2696# (210 minutes)

Tool opened with strong blow in one minute to bottom of bucket, in five minutes - 3 psi, in 10 minutes 4 psi, in 15 minutes 4 psi. Flow #2: tool opened with strong blow in one minute at 6 psi, in 30 minutes 10 psi, in 60 minutes 14 psi, in 80 minutes 16 psi. Gas to surface in 80 minutes at the following rates:

<u>Time</u>	<u>Choke Size</u>	<u>Pressure</u>	<u>Rate</u>
80 minutes	1/4"	15#	39.2 MCFD
85 minutes	1/4"	15#	39.2 MCFD
90 minutes	1/4"	15#	39.2 MCFD

Pipe recovery: 410' drilling mud.

Sample chamber recovery: 1600 cc mud, 2.5 cubic feet gas, pressure 600 psig.

Bottom Hole Temperature: 148 degrees F.

Mud in sampler: .6 ohms at 90 degrees, 1100 ppm chloride.

Mud in sample: 1.8 ohms at 70 degrees, 36,000 ppm chloride.

Mud recovery: Top, middle and bottom samples all same - .17 ohms at 90 degrees, 32,000 ppm chloride.

DST #2, 7462'-7702'

IH 3967#  
 FH 3868#  
 F #1 395-395# ( 30 minutes)  
 F #2 123-184# ( 90 minutes)  
 ISIP 2649# ( 60 minutes)  
 FSIP 1384# (180 minutes)  
 BHT 178 degrees F.

(pressures from inside recorder at 7439')

Tool opened with weak blow at initial flow and remained weak throughout flow period - no gas to surface. Blow became strong after initial shut-in and then died. Tool opened with strong blow immediately at second flow, with gas to surface 50 minutes into flow period and continued throughout flow period at the following rates:

DRILLSTEM TESTS - continued

<u>Time</u>	<u>Choke Size</u>	<u>Pressure</u>	<u>Rate</u>
50 minutes	1/4"	22#	50.2 MCFD
55 minutes	1/4"	18#	43.9 MCFD
60 minutes	1/4"	15#	39.2 MCFD
65 minutes	1/4"	13#	35.9 MCFD
70 minutes	1/4"	10#	30.8 MCFD
75 minutes	1/4"	9#	29.9 MCFD
80 minutes	1/4"	9#	29.9 MCFD
85 minutes	1/4"	8#	27.0 MCFD
90 minutes	1/4"	8#	27.0 MCFD

Pipe recovery: 360' mud.

Sample chamber recovery: no recovery.

Resistivity of mud: Drill pipe - Top: .1 ohms at 75 degrees, 75,000 ppm chloride  
 Middle: .14 ohms at 65 degrees, 60,000 ppm chloride  
 Bottom: .14 ohms at 70 degrees, 50,000 ppm chloride

Mud pit sample: .14 ohms at 78 degrees, 45,000 ppm chloride

DRILLING BREAKS

<u>Depth</u>	<u>Thickness</u>	<u>Units-Gas</u>
4815-4830'	15'	0
4860-4870'	10'	0
5065-5080'	15'	30
5110-5140'	30'	0
5175-5185'	10'	0
5245-5260'	15'	60
5360-5380'	20'	50
5700-5720'	20'	20
5750-5760'	10'	0
5775-5780'	5'	0
5890-5895'	5'	0
5975-5995'	20'	0
6030-6090'	60'	0
6395-6400'	5'	0
6500-6550'	50'	150
6560-6580'	20'	20
6590-6630'	40'	30
6700-6710'	10'	0
6720-6730'	10'	0
6745-6765'	20'	0
6790-6800'	10'	0
6830-6840'	10'	10
6900-6920'	20'	0
6950-6960'	10'	35
6980-6990'	10'	0
7035-7040'	5'	30
7055-7060'	5'	70
7085-7105'	20'	0
7165-7205'	40'	200
7230-7240'	10'	35
7265-7275'	10'	130
7330-7335'	5'	40
7345-7355'	10'	150
* 7410-7419'	9'	144
7421-7430'	9'	320
* 7459-7484'	25'	
** (7467-7469')	(2')	(680)
* 7663-7687'	24'	
** (7663-7665')	(2')	(62)

\* Actual "drilling break" time was normally not less than three minutes per foot, and usually longer than three minutes per foot.

\*\* Actual "drilling break" time was one to two minutes per foot.

# Log Analysis



COMPANY: PACIFIC TRANSMISSION SUPPLY CO. WELL: PTS#23-11 FEDERAL  
 FIELD: W/C COUNTY: UTAH STATE: UTAH

DEPTH	R <sub>T</sub>	φ <sub>s</sub>	φ <sub>D</sub>	$\frac{\phi_s - \phi_D}{Q}$	F <sub>s</sub>	R <sub>w</sub>				% POROSITY AVG	% WATER	REMA
62 units DST 2 7652- TD	15	14	14	0	51	.3				14	100	
66 units DST 2 745A- 7539	30	12	9	.25	69					10.5	83	
144- 320 units 7402- 7429	27	12	9	.25	69					10.5	87	
150 units 7340- 7350	27	13	10	.23	59					11.5	81	
7290- 7308	20	11	6	.45	82					8.5	95	
200 units 7168- 7204	20	12	8	.33	69					10	100	
7086- 7097	20	13	8	.38	59					10.5	94	
10 units 6824- 6840	15	13	11	.15	59					12	100	
6780- 6797	15	12	9	.25	69					10.5	100	
6696-6704 6710-6718 6700-29	10 30 10	11 9 13	11 6 10	.21 0 1.23	44 278 59					13 16 11.5	100 100 100	
DST 2 6557- 6633	15	14	10	.28	51					12	100	
150 units DST 1 6506-30 6530-46	80 20	14 17	- -	- -	51 35	.3		F X over		14 17	43 .72	BAD HOLE EFF. FOLY & BLL WAS
6394- 6400	27	15	12	.20	44			F X over		13.5	69	
5992- 5988	12	12	11	.08	69					11.5	100	
10 units 5696- 5718	25	14	10	.28	51			F X over		12	78	WAS
5358-66	10	17	13	.23	35					15	100	
10 units 5306-80	30	10	7	.33	100					8.5	100	
5102- 5133	15	14	10	.28	51					12	100	
10 units 5064- 5078	10	14	11	.21	51					12.5	100	
4816- 4826	10	15	11	.27	44	.3				13	100	
3240- 3250	15	16	14	.12	39	.25				15	80	
3216- 3223	20	18	18	0	31	.25		F X over		18	62	GR
3880 3806	35	21	10	.5	23	.25				15	40	Study

R<sub>w</sub> from Sonic F overlay

All interpretations are opinions based on inferences from electrical and other measurements and we cannot, and do not guarantee the accuracy of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Clause 4 of our General Terms and Conditions as set out in our current Price Schedule.

DATE: 3-31-78 LOCATION: VERNAL UTAH ENGINEER: Brian S Bradley  
 SWS-1325-D

SAMPLE DESCRIPTION - continued

- 1740-1860' Marlstone, tan, dark tan; sandstone, gray, light gray, very fine grain, well sorted, sub-angular, clay-filled, calcareous; occasional siltstone, light gray.
- 1860-1960' Marlstone, gray-tan, gray, brown.
- 1960-2060' No sample.
- 2060-2090' Marlstone, light tan to brown.
- 2090-2230' Marlstone, light tan, brown, light gray, scattered black, soft and firm to brittle, faint cut on brown-colored marlstone when crushed; trace varved marlstone.
- 2230-2410' Marlstone, tan, brown, brown-gray, light gray, scattered black, soft and firm to brittle, rare varved marlstone; trace shale, black, gray, silty; trace shale, cream, very soft (no sample - 2250-2260'; 2290-2300'; 2330-2360').
- 2410-2450' Marlstone, brown, tan, soft, firm to brittle, rare varved marlstone, trace micro-fossils; trace shale, cream, very soft, scattered black shale, hard; trace sandstone, brown, very fine grain, hard and tight.
- 2450-2560' Marlstone, tan, brown, rare black, firm to brittle, trace micro-fossils; trace varved marlstone; occasional limestone, dark tan.
- 2560-2600' Marlstone, white, cream, light tan, scattered brown, occasionally black, medium soft, firm, brittle; occasional limestone, dark tan.
- 2600-2720' Marlstone, dark tan, tan, cream, very light gray, firm, brittle; shale, dark gray, black, argillaceous (i.e., trashy), carbonaceous, commonly calcareous (shale becomes less common at 2700').
- 2720-2860' Marlstone, light gray, light tan, firm, brittle; shale, light gray, gray, rare slightly silty, rare very dark gray and carbonaceous; scattered limestone, light gray to white; scattered sandstone, white, very fine grain, sub-angular, well sorted, hard and tight, occasionally calcareous; occasionally with pyrite.
- 2860-2950' Sandstone, very light gray, very fine grain, sub-angular to angular, well sorted, silty, calcareous, hard and tight; trace fluorescence, no cut; marlstone, tan, firm to brittle; shale, gray, brown, white, firm to soft.
- 2950-3030' Shale, gray, dark gray, brown, occasionally white, soft to firm; marlstone, dark tan to light tan; sandstone, white, light gray, very fine grain, sub-angular to angular, well sorted, calcareous, commonly clay-filled, hard and tight.

SAMPLE DESCRIPTION

<u>Depth</u>	<u>Lithology</u>
	(10' samples)
1040-1120'	Sandstone, light gray, medium grain to fine grain, occasionally very fine grain and coarse grain, sub-angular to sub-rounded, poorly sorted, occasionally well sorted, occasionally clay-filled; scattered siltstone and shale, light gray-green; trace carbonaceous material; trace pyrite.
1120-1170'	Sandstone, light gray to gray, very fine grain to medium grain, sub-angular to sub-rounded, poor sorting, occasionally well sorted; scattered siltstone and shale, gray-green to gray; scattered argillaceous limestone, tan; slight trace coal and carbonaceous material.
1170-1230'	Sandstone, light gray, very fine grain to medium grain, sub-angular to sub-rounded, occasionally rounded, poorly sorted, occasionally well sorted, occasionally clay-filled; scattered siltstone and shale, gray to gray-green; trace carbonaceous material and coal; trace pyrite.
1230-1340'	Sandstone, light gray, very fine grain to fine grain, occasionally medium grain, sub-angular to sub-rounded, occasionally rounded, fair to poor sorting, occasionally well sorted, occasionally clay-filled; scattered siltstone and shale, gray-green, gray-tan; occasional argillaceous limestone, tan; slight trace carbonaceous material (1260-1270' - no sample).
1340-1410'	Sandstone, light gray, very fine grain to fine grain, sub-angular fair to well sorted, occasionally clay-filled, slightly calcareous; trace carbonaceous material; trace siltstone and shale, light green.
1410-1600'	Sandstone, light gray to light brown, very fine grain to fine grain, sub-angular, fair to well sorted, occasionally clay-filled, slightly calcareous; trace siltstone, tan.
1600-1680'	Sandstone, light gray, white, very fine grain to fine grain, sub-angular, fair to well sorted, occasionally clay-filled; occasional marlstone, tan; trace shale, green.
1680-1730'	Sandstone, tan, light gray, very fine grain to fine grain, sub-angular, well to fair sorting, occasionally clay-filled, occasionally calcareous; marlstone, tan.
1730-1740'	Sandstone, gray, tan, green, very fine grain to fine grain, fair to well sorted, sub-angular, occasionally clay-filled, occasionally calcareous; siltstone, green, gray; marlstone, tan.

SAMPLE DESCRIPTION - continued

- 3030-3090' Shale, light gray to dark gray, occasionally white, firm, occasionally soft, slightly calcareous; marlstone, dark tan to light tan, occasionally dark gray; rare sandstone, light gray, white, very fine grain, sub-angular, well sorted, clay-filled, hard and tight.
- 3090-3150' Marlstone, tan, dark tan, gray, light gray, hard; shale, gray, brown-gray, dark gray, soft to firm, calcareous; trace sandstone, light gray, white, very fine grain, sub-angular, well sorted, clay-filled, hard and tight, scattered marcasite.
- 3150-3190' Shale, very light gray, light gray to gray, occasionally dark gray, calcareous, silty, firm to soft; occasional marlstone, tan to light tan, occasionally brown; slight trace sandstone, light gray, very fine grain, sub-angular, fair sorting, clay-filled, calcareous.
- 3190-3200' No sample.
- 3200-3220' Shale, brown, dark brown, calcareous, silty, marly; siltstone, light gray, calcareous; marlstone, brown, silty, hard.
- 3220-3250' Marlstone, brown, buff, silty.
- 3250-3260' Shale, gray, calcareous, silty; marlstone as above.
- 3260-3270' Marlstone, tan to buff, silty; shale as above.
- 3270-3550' Shale, gray, brown-gray, very silty, calcareous; occasional siltstone, gray; occasional marlstone, tan to buff, silty; rare sandstone, gray, very fine grain, calcareous.
- 3550-3600' Marlstone, dark brown, brown, rare tan, hard, brittle; occasional shale, gray, silty, calcareous.
- 3600-3610' No sample.
- 3610-3620' Shale, gray, very silty, calcareous; occasional sandstone, gray, very fine grain, calcareous.
- 3620-3690' Marlstone, dark brown, brown, hard, brittle; shale as above; sandstone as above.
- 3690-3740' Shale, gray, brown gray, silty, calcareous; marlstone, dark brown, brown, hard.
- 3740-3770' Shale, gray, silty, calcareous; sandstone, very fine grain, light gray, tight; marlstone, dark brown, hard.
- 3770-3800' Silstone, gray, shaley, calcareous; sandstone, light gray, very fine grain, calcareous, tight; occasional marlstone as above.

SAMPLE DESCRIPTION - continued

- 3800-3900' Shale, gray, silty, calcareous; occasional marlstone, as above.
- 3900-3990' Shale, gray, brown-gray, silty, calcareous; marlstone, brown, gray-brown, hard.
- 3990-4150' Marlstone, dark brown, brown, hard, slightly calcareous.
- 4150-4180' No sample.
- 4180-4250' Shale, brown-gray, gray, gray-brown, slightly calcareous, silty, marly, pyritic; marlstone as above.
- 4250-4280' Marlstone, brown, dark brown, slightly calcareous; shale, gray, brown-gray, silty, slightly calcareous.
- 4280-4420' Shale, gray, brown-gray, calcareous, silty; marlstone, as above; coal, rare; sandstone, rare, light gray, white, very fine grain, well sorted, tight.
- 4420-4470' As above, except coal increasing (about 10% of sample).
- 4470-4510' Siltstone, gray, brown-gray, some brown, calcareous; occasional sandstone, gray, buff, white, very fine grain, tight, fair sorting.
- 4510-4530' As above, except with trace of green siltstone.
- 4530-4600' Siltstone, tan-gray, tan, brown-gray, brown, some green, marly, calcareous; occasional sandstone, white to gray, very fine grain.
- 4600-4640' Siltstone, gray-brown, brown, gray, rare green, calcareous; sandstone, very fine to fine grain, fair to poor sorting, white to gray, some salt and pepper, tight, no shows; occasional marlstone, brown, dark brown, calcareous.
- 4640-4710' Siltstone, gray, green-gray, gray-green, green, maroon, pyritic, shaley, calcareous; occasional sandstone as above.
- 4710-4880' As above, except with trace of coal and some brown-yellow siltstone.
- 4880-4890' Sandstone, salt and pepper, white to gray, medium grain, fairly well sorted, well cemented, tight, calcareous, no show; shale, green-gray, gray, maroon-gray, yellow-gray, calcareous, some silty.
- 4890-5080' Shale, gray, green-gray, maroon-gray, yellow, brick-red, green, brown, calcareous, silty; occasional sandstone as above.

SAMPLE DESCRIPTION - continued

- 5080-5220' Shale, mainly gray and darkgray, varicolored, silty, calcareous, some pyritic; rare sandstone, salt and pepper to gray, very fine grain, tight.
- 5220-5270' As above, except sandstone more abundant (approximately 10% of sample), no show.
- 5270-5320' As above, except sandstone now fine to medium grain and poorly sorted (still only about 10% of sample).
- 5320-5360' As above, except sandstone now rare.
- 5360-5430' Shale, mainly gray, multicolored, silty, calcareous; siltstone, mainly gray, multicolored, argillaceous, calcareous; occasional sandstone, salt and pepper to gray, very fine grain, moderately well sorted, sub-angular, tight, no show.
- 5430-5450' As above, except now rare coal.
- 5450-5550' As above, except no coal.
- 5550-5560' No sample.
- 5560-5720' As above.
- 5720-5740' Sandstone, salt and pepper, white to gray, fine grain, some medium grain, fairly well sorted, sub-angular to sub-rounded, calcareous, tight, no show; shale and siltstone, as above.
- 5740-5800' Shale, mainly gray, multicolored, silty, calcareous; siltstone, mainly gray, multicolored, argillaceous, calcareous; sandstone, salt and pepper, white to gray, fine grain, calcareous, fairly well sorted, tight, sub-angular, no show.
- 5800-5860' As above, except decreasing siltstone and sandstone and increasing shale.
- 5860-6140' Shale, gray, dark gray, brick-red, maroon, yellow-gray, silty, calcareous, some pyritic, waxy appearance; occasional sandstone, white, salt and pepper, fine to medium grain, angular to sub-angular, fairly poorly sorted, tight, calcareous, no show.
- 6140-6190' As above, except with occasional greenish-gray siltstone, argillaceous, calcareous.
- 6190-6320' Siltstone, gray, brown-gray, brick-red, maroon-gray, calcareous, argillaceous; shale, multicolored, waxy, highly calcareous, silty; sandstone, white to gray, salt and pepper, very fine grain, fairly well sorted, sub-angular to sub-rounded, calcareous, argillaceous, tight, no show.

SAMPLE DESCRIPTION - continued

- 6320-6330' Limestone, brown, crypto-crystalline, argillaceous, some slightly silty.
- 6330-6350' Siltstone, gray, brick-red, maroon, brown-gray, highly calcareous, argillaceous, pyritic.
- 6350-6380 Siltstone, as above; sandstone, salt and pepper, very fine grain to medium grain, poorly sorted, sub-angular, argillaceous, calcareous, no show.
- 6380-6400' Sandstone, salt and pepper, very fine to medium grain, poorly sorted, sub-angular to sub-rounded, calcareous, argillaceous, tight, no show.
- 6400-6470' Siltstone, gray, brick-red, maroon-gray, calcareous, argillaceous, pyritic; occasional sandstone, as above.
- 6470-6540' Shale, gray, brown, maroon, calcareous, silty; siltstone, gray, red-brown, calcareous, argillaceous.
- 6540-6580' Siltstone, gray, brown, maroon, calcareous, pyritic, argillaceous; sandstone, white to gray, fine grain, fairly well sorted, sub-rounded, calcareous, tight, no show.
- 6580-6600' Sandstone, white, salt and pepper, fine to medium grain, poorly sorted, sub-rounded, calcareous, tight, no show; siltstone, gray, brown, brick-red, calcareous, argillaceous.
- 6600-6640' Siltstone, gray, red-brown, yellow-gray, calcareous, argillaceous, hard, blocky; sandstone, white, salt and pepper, fine to medium grain, medium sorting, sub-rounded, calcareous, tight, no show; occasional shale, gray, red-brown, silty, calcareous.
- 6640-6670' As above, except decreasing sandstone.
- 6670-6680' Siltstone, gray, red-gray, red-brown, calcareous, argillaceous; coal, black, brown-black, hard, angular, blocky; occasional sandstone, salt and pepper, fine grain, fair sorting, angular, calcareous, tight, no show.
- 6680-6710' Siltstone, gray, maroon-gray, red-gray, calcareous; sandstone, salt and pepper, fine grain, some medium grain, fair sorting, sub-rounded, calcareous, tight, no show; occasional coal.
- 6710-6740' Sandstone, salt and pepper, gray, very fine to fine grain, poorly sorted, sub-angular to angular, some silty, calcareous, tight, no show; siltstone, gray, occasional red-brown, red-gray, calcareous, argillaceous.

SAMPLE DESCRIPTION - continued

- 6740-6800' As above, except sandstone increasing (also some medium grain) and red and brown siltstones decreasing (now rare).
- 6800-6810' Siltstone; gray, some sandy, calcareous, argillaceous.
- 6810-6840' Sandstone, salt and pepper, gray, very fine to medium grain, some silty, very poorly sorted, sub-rounded to sub-angular, calcareous, tight, no show; siltstone, gray, some sandy, calcareous, argillaceous; occasional shale, gray, silty, calcareous.
- 6840-6870' Siltstone, gray, calcareous, argillaceous, some sandy; sandstone, salt and pepper, very fine to medium grain, poorly sorted, sub-angular, tight, no show.
- 6870-6890' Sandstone, as above; siltstone, as above.
- 6890-6910' Siltstone, as above; sandstone, as above.
- 6910-6930' Sandstone, salt and pepper, gray, very fine to fine grain, fair sorting, sub-angular to sub-rounded, calcareous, tight, no show; siltstone, as above.
- 6930-7020' Siltstone, as above; occasional sandstone, as above.
- 7020-7200' Siltstone, brown-gray, brown, gray, highly calcareous, pyritic, argillaceous, some sandy; occasional sandstone, as above; occasional shale, brown-gray, silty, calcareous.
- 7200-7220' Sandstone, salt and pepper, very fine to medium grain, poorly sorted, sub-angular, calcareous, argillaceous, tight, no show; siltstone, brown-gray, gray, brown, brick-red, calcareous, argillaceous; occasional shale, brown-gray, gray, calcareous, silty.
- 7220-7250' Siltstone, gray-brown, brown, gray, maroon-gray, calcareous, argillaceous, some sandy; sandstone, salt and pepper, fine to medium grain, fair to poor sorting, sub-angular to sub-rounded, calcareous, argillaceous, tight, no show.
- 7250-7310' Shale, brown-gray, brown, gray, red-brown, calcareous, silty, hard; sandstone, salt and pepper, fine grain, fair sorting, sub-angular to sub-rounded, calcareous, argillaceous, tight, no show.
- 7310-7320' Sandstone, salt and pepper, fine grain, fair to good sorting, sub-rounded, calcareous, argillaceous, tight, no show; shale, as above.
- 7320-7350' Shale, gray, brown-gray, brown, red-brown, some silty, calcareous, hard; occasional sandstone, as above.

SAMPLE DESCRIPTION - continued

- 7350-7400' Shale, gray, dark gray, red-brown, firm, occasionally slightly silty; sandstone, light gray, white, salt and pepper, fine grain, sub-rounded to sub-angular, fair sorting, slightly calcareous, occasionally silty, clay-filled; siltstone, dark gray, trace pyrite.
- 7400-7450' No sample.
- 7450-7500' Shale, gray, dark gray, scattered ochre, soft to firm; rare sandstone, white, light gray, salt and pepper, fine grain, occasionally very fine grain, sub-rounded to sub-angular, fair sorting, slightly calcareous, clay-filled.
- 7500-7540' Shale, gray, light gray, green-gray, scattered ochre, occasionally dark gray, carbonaceous; sandstone, white, salt and pepper, rarely gray, fine grain, rare very fine grain, sub-rounded to sub-angular, fair to well sorted, calcareous, clay-filled; trace coal.
- 7540-7640' Shale, gray, green-gray, very ochre, firm to soft, occasionally carbonaceous; sandstone, white, light gray, gray, salt and pepper, fine grain to very fine grain, sub-rounded to sub-angular, fair sorting, clay-filled, calcareous; trace fluorescence, no cut; rare to occasional coal; scattered siltstone, dark gray, sandy.
- 7640-7700' Sandstone, white, salt and pepper, light gray, very fine grain, sub-angular, fair sorting, clay-filled, calcareous to slightly calcareous; occasional shale, gray, firm to soft, occasionally carbonaceous; scattered siltstone, dark gray, occasionally carbonaceous; trace coal.

# PACIFIC TRANSMISSION SUPPLY COMPANY

212 GOODSTEIN BUILDING  
P. O. BOX 3093  
CASPER, WYOMING 82602  
(307) 265-1027

2

April 11, 1978

Mr. L. Stanley  
CHORNEY OIL COMPANY  
401 Lincoln Tower Building  
Denver, Colorado 80295

Reference: PTS #23-11 Federal  
NE-SW Sec. 11-T9S-R23E  
Uintah County, Utah  
SAND RIDGE II UNIT



Dear Mr. Stanley,

We are enclosing herewith your required number of copies of the GEOLOGICAL WELL REPORT and DRILLING TIME AND GAS DETECTOR LOG for the captioned well.

Very truly yours,

A handwritten signature in cursive script that reads "Dee E. Beardsley".

DEE E. BEARDSLEY  
Manager of Operations

DEB:a

cc: Mr. J. L. Wroble  
Mr. E. R. Henry  
Mr. E. E. Mulholland  
Mr. B. W. Allen  
Mr. E. W. Gynn (U. S. Geological Survey)  
Mr. P. L. Driscoll (Div. of Oil, Gas & Mining)

encl.

May 18, 1978

MEMO TO FILE

Re: Pacific Transmission Supply Company  
Well No. PTS Federal #23-11  
NE SW Sec. 11, T. 9S., R. 23E.  
Uintah County, Utah

This recently drilled well was visited on the above date. At the time of the visit, PTS had just completed a massive water frac. The break-down and treating pressures were quite similar to other wells in the area so treated. The blow-back on return of introduced fluids is quite larger than anything previously noted, and it is hoped that this may be a superior well.



PATRICK L. DRISCOLL  
CHIEF PETROLEUM ENGINEER  
DIVISION OF OIL, GAS, & MINING

PLD/ksw

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
(FORM 9-329)  
(2/76)  
OMB 42-RO 356

MONTHLY REPORT  
OF  
OPERATIONS

Lease No. 71-140800  
Communitization Agreement No. \_\_\_\_\_  
Field Name \_\_\_\_\_  
Unit Name Sand Ridge II  
Participating Area \_\_\_\_\_  
County Uintah State Utah  
Operator Pacific Transmission Supply Company  
 Amended Report

The following is a correct report of operations and production (including status of all unplugged wells) for the month of AUGUST, 1978

(See Reverse of Form for Instructions)

This report is required by law (30 U.S.C. 189, 30 U.S.C. 359, 25 U.S.C. 396 d), regulation (30 CFR 221.60), and the terms of the lease. Failure to report can result in the assessment of liquidated damages (30 CFR 221.54 (j)), shutting down operations, or basis for recommendation to cancel the lease and forfeit the bond (30 CFR 221.53).

Well No.	Sec. & 1/4 of 1/4	TWP	RNG	Well Status	Days Prod.	*Barrels of Oil	*MCF of Gas	*Barrels of Water	Remarks
23-11	NESW 11	9S	23E	DRG	NONE	NONE	NONE	NONE	DEPTH 7,700'

\*If none, so state.

DISPOSITION OF PRODUCTION (Lease, Participating Area, or Communitized Area basis)

	Oil & Condensate (BBLs)	Gas (MCF)	Water (BBLs)
*On hand, Start of Month	<u>NONE</u>	<u>XXXXXXXXXXXXXXXXXXXX</u>	<u>XXXXXXXXXXXXXXXXXXXX</u>
*Produced	<u>NONE</u>	<u>NONE</u>	<u>NONE</u>
*Sold	<u>NONE</u>	<u>NONE</u>	<u>XXXXXXXXXXXXXXXXXXXX</u>
*Spilled or Lost	<u>NONE</u>	<u>XXXXXXXXXXXXXXXXXXXX</u>	<u>XXXXXXXXXXXXXXXXXXXX</u>
*Flared or Vented	<u>XXXXXXXXXXXXXXXXXXXX</u>	<u>NONE</u>	<u>XXXXXXXXXXXXXXXXXXXX</u>
*Used on Lease	<u>NONE</u>	<u>NONE</u>	<u>XXXXXXXXXXXXXXXXXXXX</u>
*Injected	<u>NONE</u>	<u>NONE</u>	<u>NONE</u>
*Surface Pits	<u>XXXXXXXXXXXXXXXXXXXX</u>	<u>XXXXXXXXXXXXXXXXXXXX</u>	<u>NONE</u>
*Other (Identify)	<u>NONE</u>	<u>NONE</u>	<u>NONE</u>
*On hand, End of Month	<u>NONE</u>	<u>XXXXXXXXXXXXXXXXXXXX</u>	<u>XXXXXXXXXXXXXXXXXXXX</u>
*API Gravity/BTU Content	<u>NONE</u>	<u>NONE</u>	<u>XXXXXXXXXXXXXXXXXXXX</u>

Authorized Signature: [Signature] Address: 245 Market St., San Francisco, Ca 94105  
Title: Manager, Contract Administration Page 1 of 1  
COG 110392

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

**SUNDRY NOTICES AND REPORTS ON WELLS**

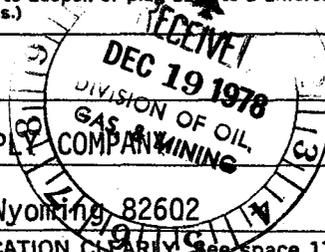
(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well  gas well  other

2. NAME OF OPERATOR  
PACIFIC TRANSMISSION SUPPLY COMPANY

3. ADDRESS OF OPERATOR  
P. O. Box 3093, Casper, Wyoming, 82602

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)  
AT SURFACE: 2031' FSL, 2034' FWL, NESW, Sec. 11, T9S,  
AT TOP PROD. INTERVAL: R23E, S.L.B. & M.  
AT TOTAL DEPTH:



16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:	SUBSEQUENT REPORT OF:
TEST WATER SHUT-OFF <input type="checkbox"/>	<input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	<input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	<input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	<input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	<input type="checkbox"/>
MULTIPLE COMPLETE <input type="checkbox"/>	<input type="checkbox"/>
CHANGE ZONES <input type="checkbox"/>	<input type="checkbox"/>
ABANDON* <input type="checkbox"/>	<input type="checkbox"/>
(other) Progress Report <input type="checkbox"/>	<input type="checkbox"/>

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.)\*

9/5/78 thru 10/17/78 -- Mesaverde formation intervals individually perforated and acidized as follows:

7176'-86'	2SPF	1500 gallons 7-1/2% HCl Acid
7340'-50'	2SPF	1500 gallons 7-1/2% HCl Acid
7417'-28'	2SPF	1500 gallons 7-1/2% HCl Acid
7466'-92'	2SPF	2500 gallons 7-1/2% HCl Acid

Individual intervals were extensively flow and swab tested following acidizing operations using bridge plug and packer.

10/18/78 thru 11/15/78 -- Flow and swab tested entire perforated and acidized Mesaverde Formation intervals.

11/16/78 -- Frac treatment--Mesaverde--w/102,000 gallons cross-linked synthetic polymer (BJ Services Krystal Frac D-40), containing 5% hydrocarbon phase and 208,000# 20-40 mesh sand. Average injection pressure 4600 psig, average injection rate 19.2 bpm. (Continued on Page 2)

Subsurface safety valve: Make and Type \_\_\_\_\_ Set @ \_\_\_\_\_ Ft.

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

SIGNED R. J. Firth TITLE Petroleum Engr. DATE 12/15/78

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:  
1-USGS, SLC, Ut.; 1-St. of Ut., Div. of OG&M; 1-JLWroble; 1-ERHenry; 1-EEMulholland; 1-WGStelling; 1-File.

5. LEASE  
U-1046800

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME  
Sand Ridge #1

8. FARM OR LEASE NAME  
Federal

9. WELL NO.  
23-11

10. FIELD OR WILDCAT NAME

11. SEC., T., R., M. OR BLK. AND SURVEY OR AREA  
Section 11, T9S, R23E

12. COUNTY OR PARISH  
Utah

13. STATE  
Utah

14. API NO.

15. ELEVATIONS (SHOW DEPTH, KDB, AND WD)  
4990' KB

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Cont'd)

11/17/78 thru 12/5/78 -- Swab and flow tested well following frac treatment.  
Average gas volume 175-200 MCF/D rate with 4 bbls. water per hr.

Well is presently shut in for pressure buildup and additional completion procedure determination.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY



5. LEASE U-1046800

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME Sand Ridge II

8. FARM OR LEASE NAME Federal

9. WELL NO. 23-11

10. FIELD OR WILDCAT NAME

11. SEC., T., R., M. OR BLK. AND SURVEY OR AREA Section 11, T9S, R23E

12. COUNTY OR PARISH Uintah

13. STATE Utah

14. API NO.

15. ELEVATIONS (SHOW DEPT. OF KDB AND WD) 4990' KB

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen a well back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well  gas well  other

2. NAME OF OPERATOR Pacific Transmission Supply Company

3. ADDRESS OF OPERATOR P.O. Box 3093, Casper, Wyoming 82602

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)  
AT SURFACE: 2031' FSL, 2034' FWL, NESW, Sec. 11,  
AT TOP PROD. INTERVAL: T9S, R23E, S.L.B. & M.  
AT TOTAL DEPTH:

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	<input type="checkbox"/>		<input type="checkbox"/>
FRACTURE TREAT	<input type="checkbox"/>		<input type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>		<input type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>		<input type="checkbox"/>
PULL OR ALTER CASING	<input type="checkbox"/>		<input type="checkbox"/>
MULTIPLE COMPLETE	<input type="checkbox"/>		<input type="checkbox"/>
CHANGE ZONES	<input type="checkbox"/>		<input type="checkbox"/>
ABANDON*	<input type="checkbox"/>		<input type="checkbox"/>

(other) Perform further completion operations.

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

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.)\*

Mesaverde formation presently perforated 7176'-86', 7340'-50', 7417'-28' and 7466'-92' w/ 2SPF.

Propose to set bridge plug @ 6700 (+) ft. Perforate 6508'-34', 6558'-62', 6570'-78', 6586'-98' and 6611'-25', acidize and test.

Further fracturing and completion procedures will be determined following testing.

APPROVED BY THE DIVISION OF  
OIL, GAS, AND MINING

DATE: JAN 16, 1979

BY: M. Minder

Subsurface Safety Valve: Manu. and Type \_\_\_\_\_ Ft.

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

SIGNED R. G. Pirth TITLE Petroleum Engr. DATE 1-10-79

(This space for Federal or State office use)

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

1-USGS, SLC, Ut.; 1-St. of Ut., Div. of OG&M; 1-JLWroble; 1-ERHenry; 1-EMulholland; 1-WGStelling; 1-File.

March 17, 1980

Pacific Transmission Supply Co.  
ATTENTION: R.J. Firth  
P.O. Box 3093  
Casper, Wyoming 82602

Re: Well No. Sand Ridge 23-11  
Sec. 11, T. 9S, R. 23E.  
Uintah County, Utah  
February 1979-February 1980

Gentlemen:

In reference to above mentioned well, the monthly reports are due for the months indicated above.

Rule C-22, General Rules and Regulations and Rules of Practice and Procedure, requires that said reports be filed on or before the sixteenth (16) day of the succeeding month. This drilling report may be filed on Form OGC-1B, (U.S. Geological Survey Form 9-331) "Sundry Notices and Reports on Wells", or on company forms containing substantially the same information. We are enclosing forms for your convenience.

Your prompt attention to the above will be greatly appreciated.

Very truly yours,  
DIVISION OF OIL, GAS, AND MINING

  
JANICE TABISH  
CLERK-TYPIST



SCOTT M. MATHESON  
Governor

OIL, GAS, AND MINING BOARD

GORDON E. HARMSTON  
Executive Director,  
NATURAL RESOURCES

STATE OF UTAH

CHARLES R. HENDERSON  
Chairman

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL, GAS, AND MINING

CLEON B. FEIGHT  
Director

1588 West North Temple  
Salt Lake City, Utah 84116  
(801) 533-5771

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

April 15, 1980

Pacific Transmission Supply Co.  
ATTENTION R.J. FIRTH  
P.O. Box 3093  
Casper, Wyoming 82602

Re: See attached sheet for wells

Gentlemen:

Our records indicate that you have not filed the monthly drilling reports for the months indicated above on the subject wells.

Rule C-22, General Rules and Regulations and Rules of Practice and Procedure, requires that said reports be filed on or before the sixteenth (16) day of the succeeding month. This report may be filed on Form OGC-1B, (U.S. Geological Survey Form 9-331) "Sundry Notices and Reports on Wells", or on company forms containing substantially the same information. We are enclosing forms for your convenience.

Your prompt attention to the above will be greatly appreciated.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

*Janice Tabish*

JANICE TABISH  
CLERK-TYPIST

*12-10-80  
are completing will  
send in some forms*

- (1) Well No. Moccasin Trail Unit 13-30  
Sec. 30, T. 15S, R. 25E.  
Uintah County, Utah  
Months due: November 1979-March 1980
  
- (2) Well No. Sand Ridge Unit 23-11  
Sec. 11, T. 9S, R. 23E.  
Uintah County, Utah  
Months due: January 1979-March 1980
  
- (3) Well No. Sand Ridge Fed. 23-17  
Sec. 17, T. 8S, R. 23E.  
Uintah County, Utah  
Months due: February-March 1980

# CHEMICAL & GEOLOGICAL LABORATORIES

P.O. Box 2794  
Casper, Wyoming 82602

## GAS ANALYSIS REPORT

Company Pacific Transmission Supply *and ridge* Date 4-11-80 Lab. No. 33853  
 Well No. 23-1P Devils Playground Federal Location NESW 17-9S-24E  
 Field Natural Buttes Formation \_\_\_\_\_  
 County Wintah Depth \_\_\_\_\_  
 State Utah Sampling point DST No. 2  
 Line pressure \_\_\_\_\_ psig; Sample pressure 10 psig; Temperature \_\_\_\_\_ ° F; Container number 21L  
 Remarks \_\_\_\_\_

Component	Mole % or Volume %	Gallons per MCF
Oxygen.....	0	
Nitrogen.....	1.94	
Carbon dioxide.....	14.44	
Hydrogen sulfide.....	*	
Methane.....	78.03	
Ethane.....	3.71	0.128
Propane.....	1.56	0.026
Iso-butane.....	0.08	0.057
N-butane.....	0.18	0.011
Iso-pentane.....	0.03	0.007
N-pentane.....	0.02	0.005
Hexanes & higher.....	0.01	
<b>Total.....</b>	<b>100.00</b>	<b>0.534</b>

GPM of pentanes & higher fraction..... 0.023  
 Gross btu/cu. ft. @ 60° F. & 14.7 psia (dry basis)..... 905  
 Specific gravity (calculated from analysis)..... 0.739  
 Specific gravity (measured)..... 0.742

Remarks:  
 \*  $H_2S$  = Negative to lead acetate paper.  
 Analysis corrected for 32.74% air contamination.

**RECEIVED**

APR 21 1980

DIVISION OF  
OIL, GAS & MINING

# CHEMICAL & GEOLOGICAL LABORATORIES

P.O. Box 2794  
Casper, Wyoming 82602

*EEM*  
*Distributed*  
*(Including Rpt.)*  
*+ Filed*

**RECEIVED**  
APR 21 1980

## GAS ANALYSIS REPORT

Company NGC-Casper Pacific Transmission Supply Date 4-11-80 Lab. No. 33853  
 Well No. 23-17 Devils Playground Federal Location NESW 17-9S-24E  
 Field Natural Buttes Formation \_\_\_\_\_  
 County Uintah Depth \_\_\_\_\_  
 State Utah Sampling point DST No. 2  
 Line pressure \_\_\_\_\_ psig; Sample pressure 10 psig; Temperature \_\_\_\_\_ ° F; Container number 21L  
 Remarks \_\_\_\_\_

Component	Mole % or Volume %	Gallons per MCF
Oxygen.....	0	
Nitrogen.....	1.94	
Carbon dioxide.....	14.44	
Hydrogen sulfide.....	*	
Methane.....	78.03	
Ethane.....	3.71	0.128
Propane.....	1.56	0.026
Iso-butane.....	0.08	0.057
N-butane.....	0.18	0.011
Iso-pentane.....	0.03	0.007
N-pentane.....	0.02	0.005
Hexanes & higher.....	0.01	
<b>Total.....</b>	<b>100.00</b>	<b>0.534</b>

GPM of pentanes & higher fraction..... 0.023  
 Gross btu/cu. ft. @60° F. & 14.7 psia (dry basis)..... 905  
 Specific gravity (calculated from analysis)..... 0.739  
 Specific gravity (measured)..... 0.742

Remarks:  
 \*  $H_2S$  = Negative to lead acetate paper.  
 Analysis corrected for 32.74% air contamination.

**RECEIVED** *copy received*  
APR 23 1980

DIVISION OF  
OIL, GAS & MINING

June 23, 1981

Pacific Transmission Supply Company  
Attention: R. J. Firth  
P. O. Box 3093  
Casper, Wyoming 82602

Re: Well No. Sand Ridge 23-11  
Sec. 11, T. 9S, R. 23E  
Uintah County, Utah

Gentlemen:

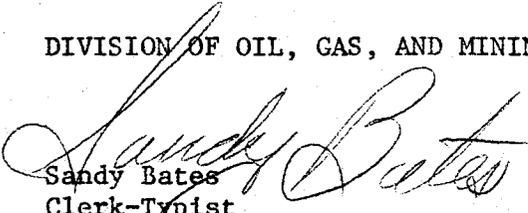
This letter is to advise you that the Well Completion or Recompletion Report and Log for the above mentioned well is due and has not been filed with this office as required by our rules and regulations.

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

  
Sandy Bates  
Clerk-Typist

/lm

Enclosure: Forms

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

SUBMIT IN DUPLICATE

(See other instructions on reverse side)

Form approved.  
Budget Bureau No. 42-R355.5.

5. LEASE DESIGNATION AND SERIAL NO.

U-1046800

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

Sand Ridge II

8. FARM OR LEASE NAME

Federal

9. WELL NO.

23-11

10. FIELD AND POOL, OR WILDCAT

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

Section 11, T9S, R23E

12. COUNTY OR PARISH

Uintah

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  
Natural Gas Corporation of California **PACIFIC TRANSMISSION**

3. ADDRESS OF OPERATOR  
85 South 200 East, Vernal, UT 84078

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)\*  
At surface 2031' FSL, 2034' FWL, NE SW, Section 11, T9S, R23E  
At top prod. interval reported below  
At total depth

14. PERMIT NO. **43-047-30353** | DATE ISSUED **1-9-78**

15. DATE SPUDDED **2-18-78** | 16. DATE T.D. REACHED **4-3-78** | 17. DATE COMPL. (Ready to prod.) | 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)\* **4990' KB** | 19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD **7693'** | 21. PLUG, BACK T.D., MD & TVD | 22. IF MULTIPLE COMPL., HOW MANY\* | 23. INTERVALS DRILLED BY **0-TD** | ROTARY TOOLS | CABLE TOOLS

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)\*  
**7176' - 86'      7417' - 28'**  
**7340' - 50'      7466' - 92'**

25. WAS DIRECTIONAL SURVEY MADE  
**No**

26. TYPE ELECTRIC AND OTHER LOGS RUN  
**Dual Ind/Lateralog, Comp. Form, Density, BH Comp, Sonic**

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
4-1/2	11.6# N-80	7661.47	7-7/8"	275 sxs	
9-5/8	36#, K-55	3198.81	12-1/4"	500 sxs	

29. LINER RECORD					30. TUBING RECORD		
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					2-3/8	6462.02	7414

31. PERFORATION RECORD (Interval, size and number)		32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.	
INTERVAL	SIZE	DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
7176'-86'	2 SPF	7176'-86'	1500 gal 7.5 HCL 102,000 gal.
7340'-50'	2 SPF	7340'-50'	" X-Link Polymer
7417'-28'	2 SPF	7417'-28'	" 208,000# 20/40
7466'-92'	2 SPF	7466'-92'	2500 gal 7.5 HCL Sand

33.\* PRODUCTION  
DATE FIRST PRODUCTION | PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) | WELL STATUS (Producing or shut-in)  
**Shut in**

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
3-6-79	24	20/64	→		155/D	21	
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)	
60	1700	→		155/D	21		

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)  
**Vented** | TEST WITNESSED BY **L. D. Johnson**

35. LIST OF ATTACHMENTS  
**Geological Well Report previously submitted.**

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records  
SIGNED Wm. A. Ryan TITLE Petroleum Engineer DATE July 14, 1981

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

cc: USGS; Div. OG&M; Operations Supt.; C. T. Clark; E. R. Henry; R. Boschee; J. Langman; J.M. Kunz; K. E. Reed; T. Wong; R. B. Edmundson

# 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:** "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.)

FORMATION	TOP	BOTTOM	38.	GEOLOGIC MARKERS
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				
DESCRIPTION, CONTENTS, ETC.			MEAS. DEPTH	TOP TRUE VERT. DEPTH
			H-Marker Wasatch Y-Marker Mesaverde TD	3175' 4612' 6160' 6530' 7693'

NATURAL GAS CORPORATION  
OF CALIFORNIA

85 South 200 East  
Vernal, Utah 84078  
(801) 789-4573

July 15, 1981

2  
sandy,  
✓ on operator name  
change on this please,

Mr. E. W. Guynn  
Geological Survey-Conservation Div.  
2000 Administration Bldg.  
1745 West 1700 South  
Salt Lake City, UT 84104

Mr. R. B. Edmundson  
P.O. Box 1707  
Denver, CO 80201

Mr. Michael T. Minder  
Division of Oil, Gas, & Mining  
1588 West North Temple  
Salt Lake City, UT 84116

Re: NGC #23-11 Federal, Sand Ridge II  
NE SW Section 11, T9S, R23E  
Uintah County, Utah

Gentlemen:

Enclosed are copies of Form 9-330, Well Completion or Recompletion Report and Log, for the above referenced well.

Sincerely,

*Wm Ryan*

W. A. Ryan  
Petroleum Engineer

/kh

Encls.

cc: Operations Supt.  
C. T. Clark  
E. R. Henry  
R. Boschee  
J. Langman  
J. M. Kunz  
K. E. Reed  
T. Wong

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE  
(Other instructions on reverse side)

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

**SUNDRY NOTICES AND REPORTS ON WELLS**

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

1. <input type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER		5. LEASE DESIGNATION AND SERIAL NO. U-1046800
2. NAME OF OPERATOR Natural Gas Corporation of California		6. IF INDIAN, ALLOTTEE OR TRIBE NAME
3. ADDRESS OF OPERATOR 85 South 200 East, Vernal, UT 84078		7. UNIT AGREEMENT NAME Sand Ridge II
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface  2031' FSL 2034' FWL NE SW Section 11, T.9S., R.23E.		8. FARM OR LEASE NAME Federal
14. PERMIT NO. 43-047-3035 <i>X</i>	15. ELEVATIONS (Show whether DF, RT, GR, etc.) 4990' KB	9. WELL NO. 23-11
		10. FIELD AND POOL, OR WILDCAT
		11. SEC., T., E., M., OR BLK. AND SURVEY OR AREA Section 11, T.9S., R.23E.
		12. COUNTY OR PARISH Uintah
		13. STATE Utah

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

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

(Other) Request Temporary Surface Pit *X*

(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.)\*

Operator requests an unlined surface pit per NTL-2B, Sec. VI. The subject pit would be used as a blow down pit when the well is flow tested.

If you require additional information, please contact me at our Vernal office - telephone 789-4573.

**RECEIVED**  
NOV 23 1984

DIVISION OF  
OIL, GAS & MINING

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

SIGNED William A. Ryan TITLE Petroleum Engineer DATE November 15, 1984

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

**ACCEPTED**  
APPROVED BY THE STATE  
OF UTAH DIVISION OF  
OIL, GAS, AND MINING

DATE: 12/20/84  
BY: John R. Deane

**Federal approval of this action is required before commencing operations.**

\*See Instructions on Reverse Side

Natural Gas  
Corporation of  
California

RECEIVED  
JAN 21 1985

January 17, 1985

Division of  
OIL, GAS & MINING

State of Utah  
Division of Oil, Gas & Mining  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203

Attn: Claudia Jones, Well Records Specialist

SUBJECT: Moccasin Trail Unit 13-30  
Section 30, T15S, R25E

Sand Ridge Unit 23-17  
Section 17, T8S, R23E

Sand Ridge Unit 23-11  
Section 11, T9S, R23E

Attached is Form OGC-1b, Sundry Notices and Reports on Wells, notifying you of the change of operator on the Sand Ridge 23-17 well from Pacific Transmission Supply Company to Natural Gas Corporation of California. This change has been in effect for quite some time, sorry it was overlooked to sent out official notification.

The Sand Ridge Unit 23-11 and the Moccasin Trail 13-30 are still operated by Pacific Transmission Supply Company. Attached are amended copies of the Sundries submitted under the wrong operator name for these two wells. Any questions should be directed to this address.

Very truly yours,

*Kathy Knutson*

Kathy Knutson  
Technical Assistant

/kk  
attachments

cc: Files

DEPARTMENT OF THE INTERIOR (verse side)  
BUREAU OF LAND MANAGEMENT

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  GAS WELL  OTHER

2. NAME OF OPERATOR  
NATURAL GAS CORPORATION OF CALIFORNIA

3. ADDRESS OF OPERATOR  
85 South 200 East, Vernal, Utah 84078

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

14. PERMIT NO. \_\_\_\_\_ 15. ELEVATIONS (Show whether DP, RT, GR, etc.) \_\_\_\_\_

5. LEASE DESIGNATION AND SERIAL NO. \_\_\_\_\_

6. IF INDIAN, ALLOTTEE OR TRIBE NAME \_\_\_\_\_

7. UNIT AGREEMENT NAME \_\_\_\_\_

8. FARM OR LEASE NAME \_\_\_\_\_

9. WELL NO. \_\_\_\_\_

10. FIELD AND POOL, OR WILDCAT  
SEE ATTACHED LIST

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

12. COUNTY OR PARISH \_\_\_\_\_ 13. STATE \_\_\_\_\_

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

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

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

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

The attached list will advise you of the designated Operator on several leases for which there has been some confusion in the past as to the actual operator.

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

SIGNED Kathy Krulson TITLE Technical Assistant DATE April 1, 1985

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions on Reverse Side

WELL NO	LOCATION, TWP, RNG, COUNTY	LEASE NUMBER	DES/OPER	DATE	REMARKS
21-22	NE/NW Sec 22, T12S, R15E, Carbon	U-11604	* PTS	1978	
1-11	SW/SE Sec 11, T12S, R14E, Carbon	U-15254	PTS	1984	
41-9	NE/NE Sec 9, T9S, R24E, Uintah	U-5217	** NGC	1977	NGC Unit Operator
23-25	NE/SW Sec 25, T8S, R23E, Uintah	U-7386	NGC	1977	NGC Unit Operator
23-11	NE/SW Sec 11, T9S, R23E, Uintah	U-0146800	NGC	1977	NGC Unit Operator
33-11	NW/SE Sec 11, T16S, R24E, Grand	U-10423	PTS		PTS has CA which overrides NGC's DO
4-5	NE/SE Sec 5, T10S, R23E, Uintah	U-33433	NGC	1984	

\* PACIFIC TRANSMISSION SUPPLY

\*\* NATURAL GAS CORPORATION OF CALIFORNIA



March 10, 1987

**RECEIVED**  
MAR 13 1987

State of Utah  
Natural Resources  
Oil, Gas & Mining  
355 W. North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203

DIVISION OF  
OIL, GAS & MINING

Attention: Ms. Tammy Searing

Reference: Sand Ridge II Unit  
Federal #23-11  
Sec. 11, T9S, R23E  
Uintah County, Utah  
NE/4SW/4, 2031' FSL & 2034' FWL  
API #43 047 30354  
Lease #U-0146800

Dear Ms. Searing:

Enclosed please find three copies of the State of Utah Sundry Notice to change operator on the Sand Ridge II unit well, the Federal #23-11 from Alta Energy Corporation to Columbia Gas Development Corporation, effective March 1, 1987.

Please process this Sundry and issue the necessary documentation for Columbia to assume operator status and report production from this well. It is Columbia's understanding they will be responsible for the production reporting beginning March 1, 1987 which will be due April 30, 1987. Should you require additional information, please contact Ms. Vicki Guidry, Production Technician, at 713/787-3484 or the undersigned. Your assistance is appreciated.

Yours truly,

A handwritten signature in cursive script that reads "Lynn Roque".

Lynn Roque  
Regulatory Technician  
713/787-3482

1r  
Enclosures

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

SUBMIT IN TRIPLICATE  
with instructions on  
reverse side

031612

SGW

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 type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER		5. LEASE DESIGNATION AND SERIAL NO. U-0146800
2. NAME OF OPERATOR Alta Energy Corporation		6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A
3. ADDRESS OF OPERATOR 500 N. Loraine, #900, Midland, Texas 79701		7. UNIT AGREEMENT NAME Sand Ridge II
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface  2031' FSL & 2034' FWL		8. FARM OR LEASE NAME Federal
16. PERMIT NO. 43-047-30354 <del>43-047-30353</del>		9. WELL NO. 23-11
15. ELEVATIONS (Show whether of, to, or, etc.) 4978' GR		10. FIELD AND POOL, OR WILDCAT Undesignated
		11. SEC., T., R., N., OR BLK. AND SUBST OR AREA Sec. 11, T-9-S, R-23-E
		12. COUNTY OR PARISH Uintah
		13. STATE Utah

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

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF

PULL OR ALTER CASING

WATER SHUT-OFF

REPAIRING WELL

FRACTURE TREAT

MULTIPLE COMPLETS

FRACTURE TREATMENT

ALTERING CASING

SHOOT OR ACIDIZE

ABANDON\*

SMOULING OR ACIDIZING

ABANDONMENT\*

REPAIR WELL

CHANGE PLANS

(Other) \_\_\_\_\_

(Other) Operator Change

(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.)

Change Operator from Alta Energy Corporation to Columbia Gas Development Corp.  
P. O. Box 1350  
Houston, Texas 77251-1350

Change of Operator effective March 1, 1987.

RECEIVED  
MAR 13 1987

DIVISION OF  
OIL, GAS & MINING

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

SIGNED R. F. Bailey  
R. F. Bailey

TITLE President

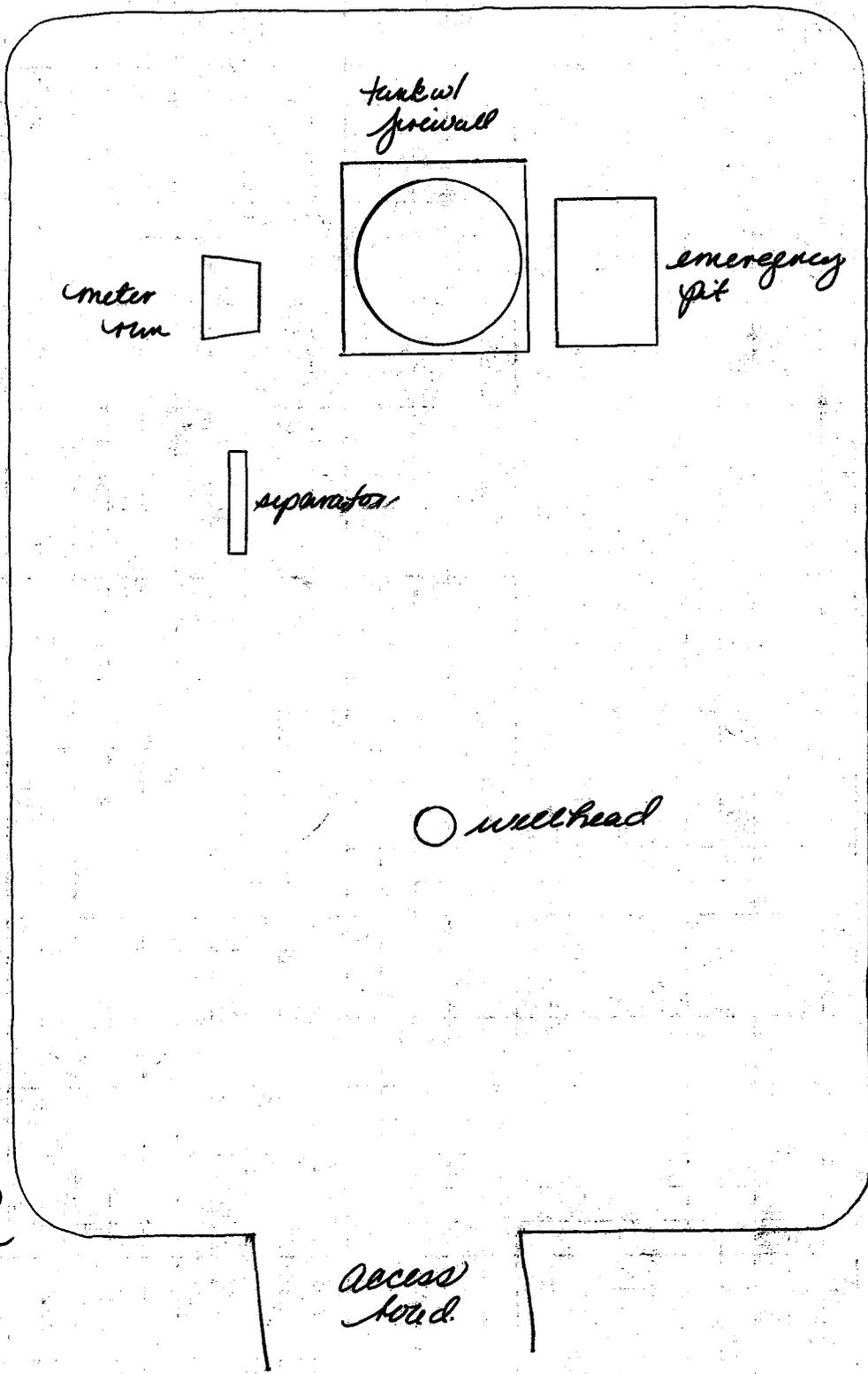
DATE MAR 4 1987

(This space for Federal or State office use)

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

TITLE \_\_\_\_\_

DATE \_\_\_\_\_



12 SHEETS 50 SHEETS 5 SQUARE  
 42 SHEETS 100 SHEETS 5 SQUARE  
 42 SHEETS 200 SHEETS 5 SQUARE  
 MADE IN U.S.A.  
 NATIONAL

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

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

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

**SUNDRY NOTICES AND REPORTS ON WELLS**

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

1. <input type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER		5. LEASE DESIGNATION AND SERIAL NO. <b>U-0146800</b>
2. NAME OF OPERATOR <b>Columbia Gas Development Corporation</b>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME <b>NA</b>
3. ADDRESS OF OPERATOR <b>P. O. Box 1350, Houston, TX 77251-1350</b>		7. UNIT AGREEMENT NAME <b>Sand Ridge II</b>
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface <b>2031' FSL &amp; 2034' FWL</b>		8. FARM OR LEASE NAME <b>Federal</b>
14. PERMIT NO. <b>43-047-30354</b>		9. WELL NO. <b>#23-11</b>
15. ELEVATIONS (Show whether DF, RT, OK, etc.) <b>4978' GR</b>		10. FIELD AND POOL, OR WILDCAT <b>Undesignated</b>
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA <b>Sec. 11, T9S, R23E</b>
		12. COUNTY OR PARISH <b>Uintah</b>
		13. STATE <b>Utah</b>

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

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

Sand Ridge #23-11 Recompletion Procedure

1. MIRU workover rig. Kill well.
2. RIH w/cmt retainer to 7050'. Establish injection & circulation.
3. MIRU Dowell. Test lines. Squeeze Mesaverde perms from 7176'-7492'.  
Rev. circ. hole clean. POOH.
4. RIH w/cmt retainer & establish circ. Test annulus & establish injection.
5. MIRU Dowell. Test lines. Squeeze Mesaverde perms from 6558'-6625' and Wasatch perms from 6508'-6534'. Spot plug on top of the cmt retainer.  
Reverse circ hole clean. POOH.
6. Close BOPs. Test csg. POOH.
7. Log well.
8. Run correlation log.
9. Perf Green River formation as follows: 3598'-3606' 4JSPF - 0.38" holes.
10. Flow well back. Perform buildup test.
11. Based upon results of buildup analysis, acidize well.

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

SIGNED *Trisha M. Di Clemente* TITLE Regulatory Coordinator DATE May 1, 1989

(This space for Federal or State office use)

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

**Federal approval of this action is required before commencing operations.**

\*See Instructions on Reverse Side

**ACCEPTED BY THE STATE  
OF UTAH DIVISION OF  
OIL, GAS, AND MINING**

DATE 5-12-89  
BY *John R. Bays*

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

5. LEASE DESIGNATION AND SERIAL NO.  
U 0146800 \*

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

**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  GAS WELL  OTHER

2. NAME OF OPERATOR  
Columbia Gas Development Corporation

3. ADDRESS OF OPERATOR  
P. O. Box 1350, Houston, Texas 77251-1350

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\* See also space 17 below.)  
At surface  
  
2031' FSL & 2034' FWL (NE/SW)

14. PERMIT NO. 43-047-30354

15. ELEVATIONS (Show whether OF, RT, OR, etc.)  
4978' GR

7. UNIT AGREEMENT NAME  
Sand Ridge II MV A

8. FARM OR LEASE NAME  
Sand Ridge

9. WELL NO.  
23-11

10. FIELD AND POOL, OR WILDCAT  
Undesignated

11. SEC., T., R., M., OR BLE, AND SURVEY OR AREA  
Sec. 11 T9S R23E

12. COUNTY OR PARISH  
Uintah

13. STATE  
Utah

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

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

Temporarily Abandoned 12-13-89.

\* BLM Agreement Number 891016013A

OIL AND GAS	
DRN	RF
JRB	GLH
DTS	SLS
1-TAS	
2- MICROFILM	<input checked="" type="checkbox"/>
3- FILE	<input checked="" type="checkbox"/>

**RECEIVED**  
JAN 08 1990  
OIL AND GAS DIVISION

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

SIGNED Victoria Guiry TITLE Production Clerk DATE 1-4-90

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

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

PRINT IN TRIPLED AREA  
(Other instructions on reverse side)

5. LEASE DESIGNATION AND SERIAL NO.  
U 0146800 \*

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME  
Sand Ridge II MV A

8. FARM OR LEASE NAME  
Sand Ridge

9. WELL NO.  
23-11

10. FIELD AND POOL, OR WILDCAT  
Undesignated

11. SEC., T., S., M., OR BLM. AND SURVEY OR AREA  
Sec. 11 T9S R23E

12. COUNTY OR PARISH 13. STATE  
Uintah Utah

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  GAS WELL  OTHER

2. NAME OF OPERATOR  
Columbia Gas Development Corporation

3. ADDRESS OF OPERATOR  
P. O. Box 1350, Houston, Texas 77251-1350

4. LOCATION OF WELL (Report location clearly and in accordance with any State regulations. See also space 17 below.)  
At surface  
2031' FSL & 2034' FWL (NE/SW)

5. PERMIT NO.  
43-047-30354 TA

6. ELEVATIONS (Show whether of, at, or, etc.)  
4978' GR

RECEIVED  
JAN 07 1991  
DIVISION OF OIL, GAS & MINING

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

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

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

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

Temporarily Abandoned 12/13/89

\* BLM Agreement No. 891016013A

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

SIGNED Ann O'Neil Perrett TITLE Sr. Prod. Field Clerk DATE 1/03/91

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
COMMENTS OF APPROVAL IF ANY:

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

6. Lease Designation and Serial Number

UTU0146800

7. Indian Allottee or Tribe Name

8. Unit or Communitization Agreement

**SUNDRY NOTICES AND REPORTS ON WELLS**

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

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

9. Well Name and Number

Sand Ridge #23-11

2. Name of Operator  
Columbia Gas Development Corporation

10. API Well Number

4304730354

3. Address of Operator  
P.O. Box 1350, Houston, Texas 77251-1350

4. Telephone Number  
713/871-3400

11. Field and Pool, or Wildcat  
Undesignated

5. Location of Well  
Footage : 2,031' FSL & 2,034' FWL  
QQ, Sec. T., R., M. : NESW, Sec. -11, T-9S, R-23E

County : Uintah  
State : UTAH

12. 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 Annual Status Report
- 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.

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

Well temporarily Abandoned 12/13/89, uneconomical to produce.  
Re-evaluating for stimulation/re-completion/plug & abandonment.

**RECEIVED**

JAN 17 1992

DIVISION OF  
OIL GAS & MINING

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

Name & Signature Carol A. Pruitt

Title Production Clerk Date 1/15/92

(State Use Only)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

**SUNDRY NOTICES AND REPORTS ON WELLS**

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

5. Lease Designation and Serial No.

U-0146800

6. If Indian, Allottee or Tribe Name

N/A

7. If Unit or CA, Agreement Designation

Sand Ridge II

8. Well Name and No.

Sand Ridge 23-11

9. API Well No.

43-047-30353

10. Field and Pool, or Exploratory Area

Undesignated

11. County or Parish, State

Uintah, Utah

**SUBMIT IN TRIPLICATE**

1. Type of Well

Oil Well  Gas Well  Other

2. Name of Operator

Columbia Gas Development Corporation

3. Address and Telephone No.

P.O. Box 1350, Houston, TX 77251-1350

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

2031' FSL & 2034' FWL of Sec.11-T9S-R23E

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

TYPE OF ACTION

Notice of Intent  
 Subsequent Report  
 Final Abandonment Notice

Abandonment  
 Recompletion  
 Plugging Back  
 Casing Repair  
 Altering Casing  
 Other \_\_\_\_\_

Change of Plans  
 New Construction  
 Non-Routine Fracturing  
 Water Shut-Off  
 Conversion to Injection  
 Dispose Water

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

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

See attached for proposed P&A procedure and wellbore diagram.

Well is currently temporarily abandoned.  
Approximate date when plugging operations will commence is 4/16/92.

Geologic Formation tops:	Depth	Datum
Green River	1413	+3565
Parachute Creek Member	1565	+3413
H-Marker	3129	+1849
Wasatch	4563	+ 415
Mesaverde	6738	-1760

**RECEIVED**

'APR 08 1992

DIVISION OF  
OIL GAS & MINING

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

Signed Wendy A. Desormeaux

Title Regulatory Coordinator

Date 4/6/92

(This space for Federal or State office use)

Approved by \_\_\_\_\_  
Conditions of approval, if any:

Title \_\_\_\_\_

Date \_\_\_\_\_

ACCEPTED BY THE STATE  
OIL GAS & MINING  
DATE: 4-13-92  
BY: [Signature]

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

Sand Ridge #23-11  
Sand Ridge Field  
Uintah County, Utah

Plug and Abandonment Procedure

1. Prior to rigging up on well:

- a. Find a source of 9# brine.
- b. Unchain valves on christmas tree and check for pressure.
- c. Notify the BLM of the start of P&A operations.
- d. Coordinate with BLM on requirements to reclaim location and lease road.
- e. Get extra tubing from Jay Haslem.
- f. Everything goes into a tank. No fluids hit the ground.

2. MIRU workover rig. Kill well with 9# brine. ND tree. NU BOP's. Unseat packer and POOH.

3. RIH open ended to 6,400' TD. Change hole over to 9# brine. PU to 3,765'. RU Western. Spot a 30 sack Cl "G" cement plug at 3,650'. Use 5 BBL FW spacers on both sides of the cement slurry. PU to 3,400'. Reverse circulate the hole clean. RD Western. POOH.

slurry weight = 15.8 #/gal  
slurry yield = 1.14 CF/sx  
mix ratio = 4.96 gal/sx

4. RU HLS.

- a. RIH w/ GR/JB to 3,300'. POOH.
- b. RIH w/ 3-1/8" perforating gun and perforate 3,248' to 3,250' with 4 JSPF. POOH.

RD HLS.

5. RIH w/ Baker Service tool cement retainer on 2-7/8" tubing. Set cement retainer at 3,150'. PT annulus to 1,000 psi.

6. Hook up 9-5/8" x 4-1/2" annulus to a tank.

7. RU Western.

- a. Pump 105 sx of Cl "G" neat cement with 5 BBL FW spacers on both sides of the cement. Displace cement with 9# brine. Try to circulate fluid up annulus. Pump 95 sx of cement into the cement retainer.

slurry weight = 15.8 #/gal  
slurry yield = 1.14 CF/sx  
mix ratio = 4.96 gal/sx

- b. PU out of cement retainer. Spot 10 sacks on top of the of the cement retainer.

RD Western.

8. Cut off all casing to a depth of 4' below ground level.
9. Put 10 sacks of cement at the surface of each casing strings (if cement is not already at the surface). Place a permanent monument showing the well number, location and the name of the lease. The monument shall consist of a portion of pipe not less than four inches in diameter and not less than ten feet in length, of which four feet shall be above ground level and the remainder shall be securely embedded in cement. The top of the pipe must be permanently sealed.
10. Haul off all liquids to disposal. Police the area. Coordinate with Lou Kilgore on selling off all surface facilities and recovered downhole equipment. Coordinate with the BLM on surface reclamation. Supervise the surface reclamation and re-seeding operations.

COLUMBIA GAS  
DEVELOPMENT  
SANDRIDGE #23-11  
SANDRIDGE FIELD  
UINTAH COUNTY  
UTAH

3590'- PERF'D W/ 4 SPF & THEN  
3598' ACIDIZED W/ 1000 GAL  
15% MSR. WATER W/ WEAK  
GAS BLOW.

3608'- PERF'D W/ 4 SPF & THEN  
3610' SQZ'D W/ 75 SX CL 'G'.  
RE-SQZ'D W/ 50 SX CL  
'G' WHEN PERFS FAILED.

????'- FISH IN HOLE - DROPPED  
VAN TCP GUN.

6508'- PERF'D W/ 2 SPF & THEN  
6534' ACIDIZED W/ 2000 GAL.  
WATER W/ WEAK GAS BLOW.

6739'- DV TOOL CEMENTED W/  
275 SX.

7176'- PERF'D W/ 2 SPF & THEN  
7186' ACIDIZED W/ 1500 GAL.  
WATER W/ WEAK GAS BLOW.

7417'- PERF'D W/ 2 SPF & THEN  
7428' ACIDIZED W/ 1500 GAL.  
WATER W/ WEAK GAS BLOW.

← 327' 13-3/8", 54.5#, K-55,  
CSG CEMENTED W/ 515  
SX.

← 3200' 9-5/8", 36#, K-55  
CSG CEMENTED W/  
500 SX.

0'-50' Cement Plug

3250'-2950' cement in annulus

3,150' cement ret. - 10 sx on top

3,248'-3250' P&A Perfs

3650'-3400' Cement Plug

6412' SQZ'D 70 SX OF CL 'G'  
CMT THRU EZSV CEMENT  
RETAINER. LEFT 10 SX  
CEMENT ON TOP OF RETAINER.

6558'- 6562'; 6570'-6578'; 6586'-  
6598'; 6611'- 6625'; ALL INTERVALS  
PERF'D W/ 2 SPF AND THEN  
ACIDIZED W/ 3000 GALS

7050' SQZ'D 70 SX OF CL 'G'  
CMT THRU EZSV CEMENT  
RETAINER. LEFT 5 SX  
CEMENT ON TOP OF RETAINER.

← 7340'- PERF'D W/ 2 SPF & THEN  
7350' ACIDIZED W/ 1500 GAL.  
WATER W/ WEAK GAS BLOW.

← 7466'- PERF'D W/ 2 SPF & THEN  
7492' ACIDIZED W/ 2500 GAL.  
WATER W/ WEAK GAS BLOW.

← 7650' 4-1/2", 11.6#, N-80 CSG  
CEMENTED W/ 200 SX.

TD AT 7700'

**COLUMBIA GAS**  
Development



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MAY 06 1992

May 4, 1992

Bureau of Land Management  
Vernal District  
Attn: Mr. Thomas Cleavinger  
170 South 500 East  
Vernal, Utah 84078

DIVISION OF  
OIL GAS & MINING

State of Utah  
Oil, Gas and Mining  
Attn: Mr. Frank Matthews  
355 W. North Temple  
3 Triad Center, Ste. 350  
Salt Lake City, Utah 84180

**Reference: Sand Ridge #23-11  
Sec 11-T9S-R23E  
Uintah County, Utah**

Dear Sirs:

Attached is Columbia's Subsequent Report of Plugging and Abandonment and wellbore diagram on the above-referenced well.

Should you have any questions or require any additional information, please contact me at 713/871-3482.

Sincerely,

**COLUMBIA GAS DEVELOPMENT CORPORATION**

A handwritten signature in cursive script that reads "Wendy G. DesOrmeaux".

Wendy G. DesOrmeaux  
Regulatory Coordinator

WGD

Attachment

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

**SUNDRY NOTICES AND REPORTS ON WELLS**

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

5. Lease Designation and Serial No.  
**U-0146800**

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

**SUBMIT IN TRIPLICATE**

7. If Unit or CA, Agreement Designation

**Sand Ridge II**

1. Type of Well

Oil Well  Gas Well  Other

8. Well Name and No.

**Sand Ridge 23-11**

2. Name of Operator

**Columbia Gas Development Corporation**

9. API Well No.

**43-047-3035<sup>4</sup>**

3. Address and Telephone No.

**P. O. Box 1350, Houston, TX 77251 713/871-3482**

10. Field and Pool, or Exploratory Area

**Undesignated**

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

**2031' FSL & 2034' FWL of Sec.11-T9S-R23E**

11. County or Parish, State

**Uintah, Utah**

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

- Notice of Intent  
 Subsequent Report  
 Final Abandonment Notice

TYPE OF ACTION

- Abandonment  
 Recompletion  
 Plugging Back  
 Casing Repair  
 Altering Casing  
 Other \_\_\_\_\_

- Change of Plans  
 New Construction  
 Non-Routine Fracturing  
 Water Shut-Off  
 Conversion to Injection  
 Dispose Water

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

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

See attached for plug and abandonment procedure.

**RECEIVED**

MAY 06 1992

DIVISION OF  
OIL GAS & MINING

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

Signed Wendy H. DesCineaux

Title Regulatory Coordinator

Date 5/4/92

(This space for Federal or State office use)

Approved by \_\_\_\_\_  
Conditions of approval, if any:

Title \_\_\_\_\_

Date \_\_\_\_\_

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

\*See Instruction on Reverse Side

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SAND RIDGE #23-11  
SAND RIDGE FIELD  
UINTAH COUNTY, UTAH

MAY 06 1992

DIVISION OF  
OIL GAS & MINING

PLUG AND ABANDONMENT PROCEDURE

4/21/92

MIRU workover rig. SITP 180#, SICP 120#. Bled off pressure. Pumped 15 Bbl 9# brine down tbg. ND tree, NU BOP. Released pkr. RIH open ended w/102 jts.

4/22/92

RIH & tag junk @ 5945'. PU to 5938'. Circulate hole clean w/9# brine. PU to 3765'. Spotted 6.05 Bbl Cl "G" cement w/5 Bbl spacers each side. PU to 3391'. Rev out 1/2 Bbl cmt to surface.

Slurry weight = 15.8 #/gal  
Slurry yield = 1.14 CF/sx  
Mix ratio = 4.96 gal/sx

POOH. RU HLS. RIH w/GR/JR to 3300'. POOH. RIH w/3-3/8" gun and perf 3248' to 3250' with 4 JSPF. POOH.

4/23/92

RIH with Baker 2-3/8 X 4-1/2 Model K-1 retainer. Set cement retainer at 3165'. PT annulus to 1,000# - good test. Pump 9.3 bbls Cl "G" neat cement w/5 bbls FW spacers on both sides of cement. Circulated fluid up annulus. Pumped 95 sx cement into retainer.

Slurry weight = 15.8#/Gal  
Slurry yield = 1.14 CF/sx  
Mix ratio = 4.96 gal/sx

PU out of cmt retainer. Spotted 10 sacks on top of cement retainer.

Set three 100' surface plugs as follows: Bullhead 6-1/2 sks Cl "G" cmt @ 1 BPM @ 200# down 13-5/8" csg. Ran 100' of 1" between 4-1/2 & 9-5/8" csg. Pumped 6.18 bbls of 15.8#/gal Cl "G" w/2% CaCl<sub>2</sub> for 100' fill at surface. Pulled out and ran 100' of 1" into 4-1/2" csg. Pumped 1.5 bbls 15.8#/gal Cl "G" w/2% CaCl<sub>2</sub> for 100' fill at surface.

Cut off all casing to depth of 4' below ground level. Welded 1/4" cap plate on to 13-3/8" w/ 1/4" opening not welded (BLM request). Welded 11' of 4" on top of plate. Placed permanent monument with Well number, company name, survey description, and name of lease 4' above ground. Backfilled cellar. RD&R workover rig.

\*\* BLM REPRESENTATIVE ON LOCATION DURING P&A - MR. JERRY BARNES

4/24/92

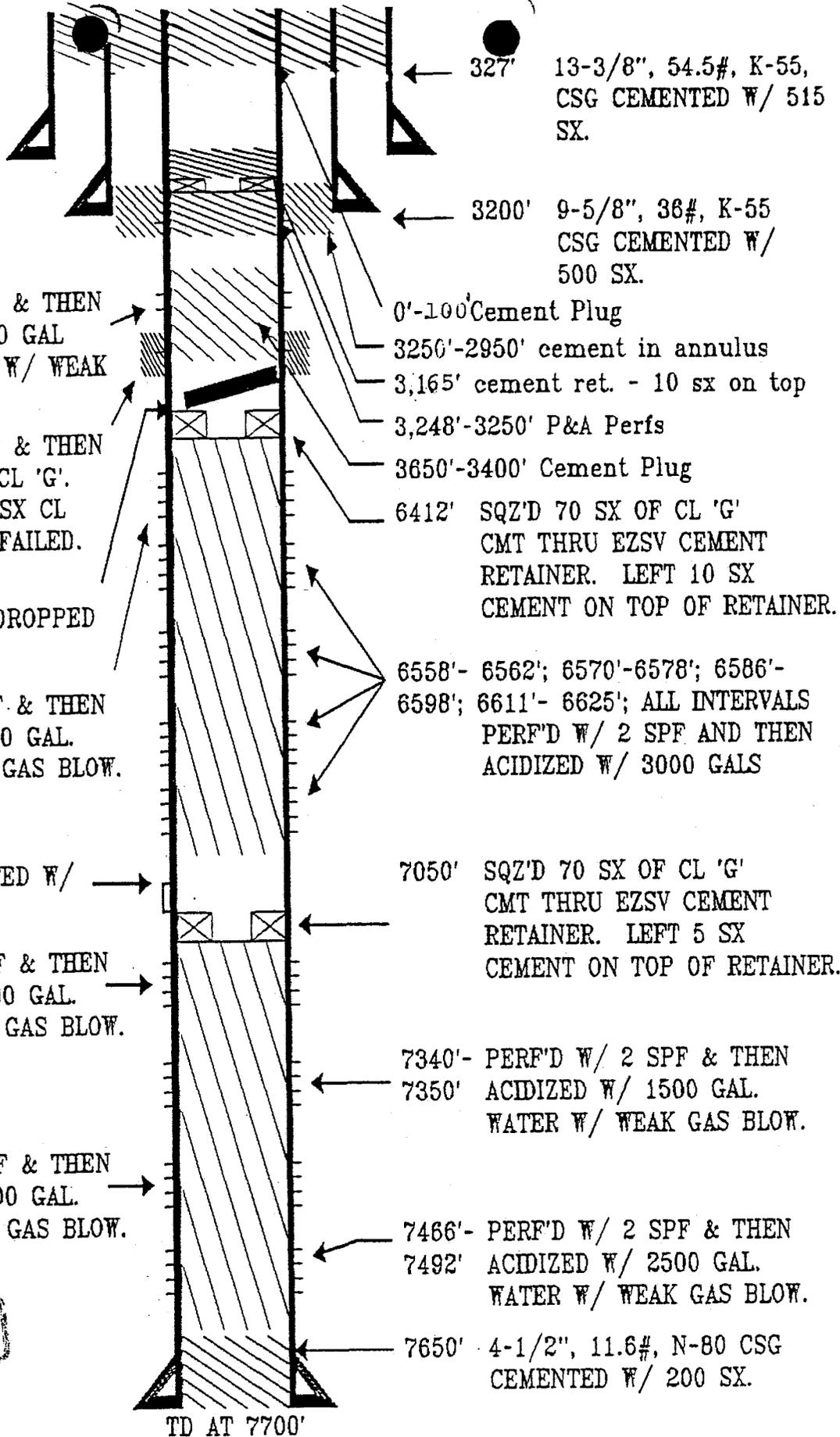
Met w/BLM representative Mr. Byron Tolman on reclaiming location and road. One mile of road to be reclaimed. Location and road to be seeded in fall of this year. Seed mixture to be determined.

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MAY 06 1992

DIVISION OF  
OIL GAS & MINING

COLUMBIA GAS  
DEVELOPMENT  
SANDRIDGE #23-11  
SANDRIDGE FIELD  
UINTAH COUNTY  
UTAH



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3250'-2950' cement in annulus  
3,165' cement ret. - 10 sx on top  
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7650' 4-1/2", 11.6#, N-80 CSG  
CEMENTED W/ 200 SX.

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MAY 06 1992

DIVISION OF  
OIL GAS & MINING

TD AT 7700'

W. J. DITTER - 2/3/88

API # 4047-30354

Form 9-588  
(April 1982)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
CONSERVATION DIVISION

Sec. 11  
T. 9S  
R. 23E  
SLM Mer.  
Ref. No. 17

	11	
	*	

INDIVIDUAL WELL RECORD

PUBLIC LAND:

Date July 21, 1981

Land office Utah State Utah  
Serial No. U-0146800 County Uintah  
Lessee <sup>Joan</sup> Pacific Transmission Supply Co. 66 2/3%  
Raymond Chorney 33 1/3% Field Wildcat (San Ridge II Unit)  
<sup>Columbia Gas Develop. Corp.</sup>  
Operator Pacific Transmission Supply Co. District Salt Lake City  
Well No. 23-11 Subdivision NE SW

Location 2031' FSL, & 2034' FWL

Drilling approved February 14, 1978 Well elevation 4990 KB feet  
Drilling commenced February 18, 1978 Total depth 7693 feet  
Drilling ceased April 3, 1978 Initial production 155 MCFGPD, 21 BWPD  
Completed for production March 6, 1979 Gravity A. P. I. NA  
Abandonment approved May 12, 1993 Initial R. P. FTP-60#, CP-1700#

Geologic Formations		Productive Horizons		
Surface	Lowest tested	Name	Depth	Contents
	<u>Mesaverde</u>	<u>Mesaverde</u>	<u>7176-7492</u>	<u>Gas, Water</u>
			<u>(Selective)</u>	

WELL STATUS

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1978		Spud		TD 7693'								
1979		GSI										
1989					recomplete							
1992				P+A								

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JUN 14 1993

REMARKS Geologic Markers: See Well File

Casing Record: 13 3/8" cc @ 320' w/250 SXS  
9 5/8" cc @ 3199' w/500 SXS  
4 1/2" cc @ 761' w/275 SXS

DIVISION OF  
OIL, GAS & MINING