

FILE NOTATIONS

Entered in NID File _____
Entered On S R Sheet _____
Location Map Pinned _____
Card Indexed _____
I W R for State or Fee Land _____

Checked by Chief _____
Copy NID to Field Office _____
Approval Letter _____
Disapproval Letter _____

COMPLETION DATA:

Date Well Completed _____
OW _____ WW _____ TA _____
GW _____ OS _____ PA _____

Location Inspected _____
Bond released _____
State of Fee Land _____

LOGS FILED

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

E _____ I _____ E-I _____ GR _____ GR-N _____ Micro _____
Lat _____ Mi-L _____ Sonic _____ Others _____

Plugged & abandoned 10-25-77

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
 Willard Pease Oil & Gas Company

3. ADDRESS OF OPERATOR
 570 Kennecott Bldg., Salt Lake City, Utah 84111

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*
 At surface Ne. SE.SEC.23,T.17 S.,R.25 E.,S.L.M.
 At proposed prod. zone 667' from E-line & 2073' from S-line.

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
 Approx. 18 miles NW. of Mack, Colo.

10. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any) 667'

16. NO. OF ACRES IN LEASE 640 ac

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

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED OR APPLIED FOR, ON THIS LEASE, FT. 10 other well

19. PROPOSED DEPTH 2700'

20. ROTARY OR CABLE TOOLS Rotary tools.

21. ELEVATIONS (Show whether DF, RT, GR, etc.) 5180'grd.; 5190'K.B.

22. APPROX. DATE WORK WILL START* June 30, 1977

5. LEASE DESIGNATION AND SERIAL NO.
 U-16918

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME
 Bar Creek

8. FARM OR LEASE NAME
 Federal

9. WELL NO.
 Anschutz #3 Bar Ck.

10. FIELD AND POOL, OR WILDCAT
 Stateline

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
 NE.SE.Sec.23-17S-25E S.L.M.

12. COUNTY OR PARISH
 Grand

13. STATE
 Utah

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
9-3/4"	7-5/8"	24.00#	150"	85 sks circulated to sur.
6-3/4"	4 1/2"	10.50#	to production	Cemented to 200' above Kd.

It is planned to drill a well at the above location to test the natural gas production possibilities of the sands in the Dakota, Cedar Mountain, and Morrison formations. The well will be drilled 50 ft. below the top of the Entrada, unless good and sizable production is obtained prior. The well will be drilled with rotary tools using air for circulation. The surface casing will be set at about 150' and cemented with returns to the surface. A blowout preventer and rotating head will be installed on top of the casing head. Fill and kill lines (2") will be connected to the casing head below the blind rams. Any gas encountered will be flared at the end of the blowline and roughly checked for volume thru 2" lines off the casing head after the pipe rams have been closed. A float valve will be used in the drill collars at all times and a safety valve that can be stabbed in the drill pipe or collars will be kept handy. In the event of commercial production, 4 1/2" casing will be run thru the pay zones and cemented with sufficient cement to bring the cement top about 200' above the top of the Dakota.

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

24. SIGNED H. Roy Guynn TITLE Cons. Geol. DATE May 25, 1977

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____
 (ORIG. SCD.) E. W. GUYNN DISTRICT ENGINEER
 APPROVED BY _____ TITLE _____ DATE SEP 12 1977

CONDITIONS OF APPROVAL, IF ANY:
Approval notice Utah State Oil and Gas

WILLARD PEASE OIL & GAS COMPANY
 ANSCHUTZ #3 BAR CK. WELL
 NE. SE. SEC. 23-17S-25E
 GRAND COUNTY, UTAH

Location: NE. SE. Sec. 23, T. 17 S., R. 25 E., S. L. M., Grand County, Utah
 (667' from E-line & 2073' from S-line).

Elevation: 5180' grd.; 5190' K.B.

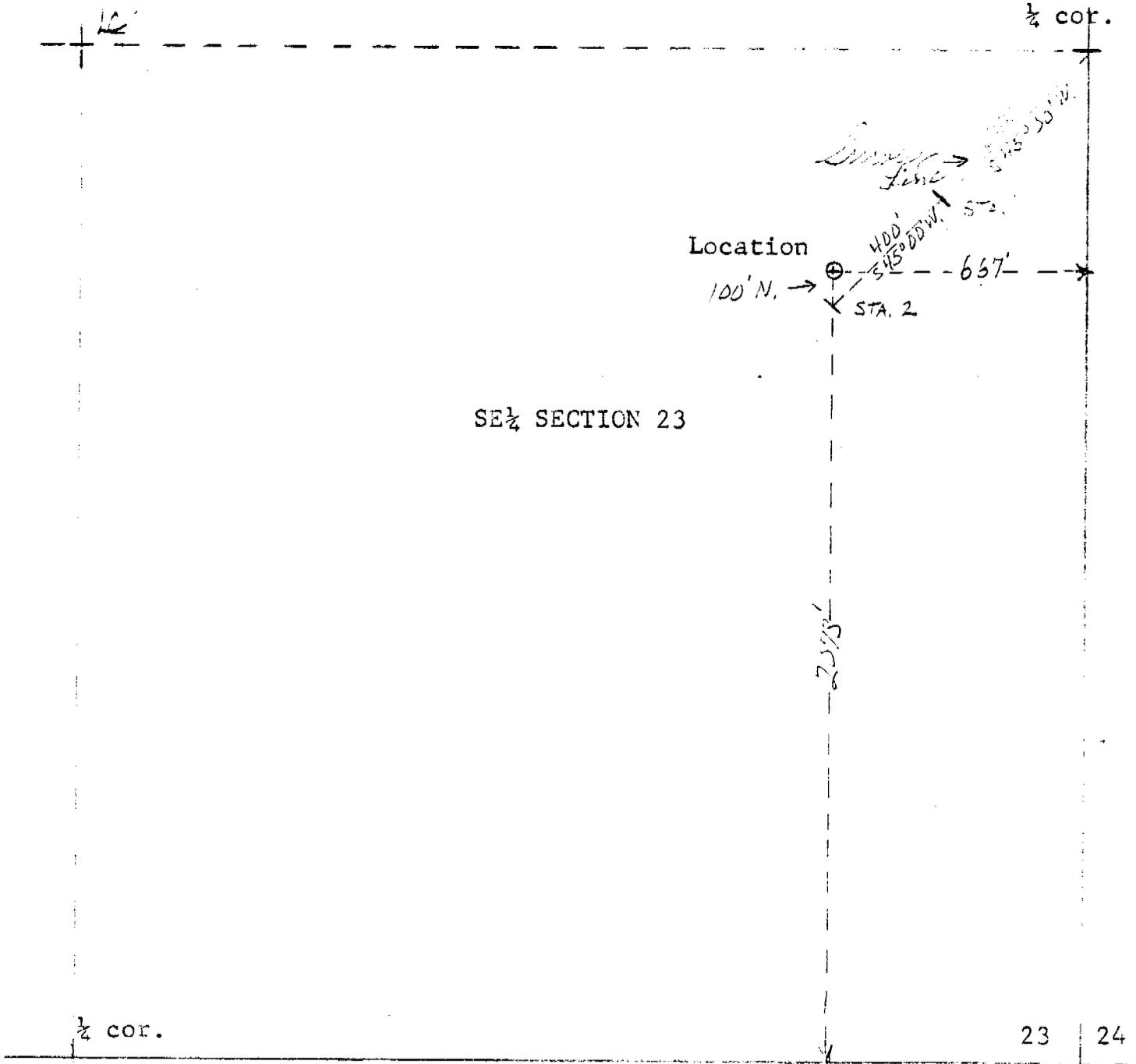
Surface Casing: 150 ft. of 7 5/8" O.D., 26.40#, J-55, 8 Rd, LTC, new;
 set and cemented with returns to the surface.

Expected Formation Tops:

<u>Formation</u>	<u>Depth to top</u>	<u>Thickness</u>	<u>Datum</u>
Mancos	Surface	2070'	5070' K.B.
Dakota	2070'	125'	3000'
Cedar Mountain	2195'	75'	2875'
Morrison	2270'	250'	2800'
Salt Wash	2520'	270'	2550'
Curtis	2790'	60'	2280'
Entrada	2850'	-----	2220'
Total Depth	2900'		

1. It is planned to drill a 9 3/4" surface hole for the surface casing down to a depth of about 150 ft. and set 7 5/8" casing with approx. 60 sks of cement with returns to the surface. A casing head will be mounted on top of the surface casing and a blowout preventer with blind and pipe rams (hydraulic) will be mounted on the casing head. A rotating head will then be mounted on top of the blowout preventer. A blewie line, at least 100 ft. long, will then be attached to the rotating head and extended into the reserve pit.
2. A 6 3/4" hole will then be drilled below the surface casing , using air for circulation. A flare will be maintained at the end of the blewie line at all times while drilling below 1000'. This will insure that no gas will be missed. The air drilling will also minimize the damage to the hydrocarbon reservoir.
3. Samples of the cuttings will begin at 1000'. 30-ft. samples will be taken from 1000' to 2000', and then 10-ft. samples will be taken from 2000' to total depth.
4. It is planned to drill the well to a depth which is 50 ft. below the top of the Entrada formation unless good commercial flow of gas (250 MCF or more) is obtained above this depth.

LOCATION PLAT FOR
 WILLARD PEASE OIL & GAS COMPANY
 ANSCHUTZ #3 BAR CK. WELL
 NE. SE. SEC. 23-17S-25E
 GRAND COUNTY, UTAH
 Elev.: 5180' grd.



SE 1/4 SECTION 23

Ref. pts. are 200' N. & 200' S.

Scale: 1 in. = 400 ft.

I, W. Don Quigley, do hereby certify that this plat was plotted from notes of a field survey made by me on May 21, 1977

Date: May 25, 1977

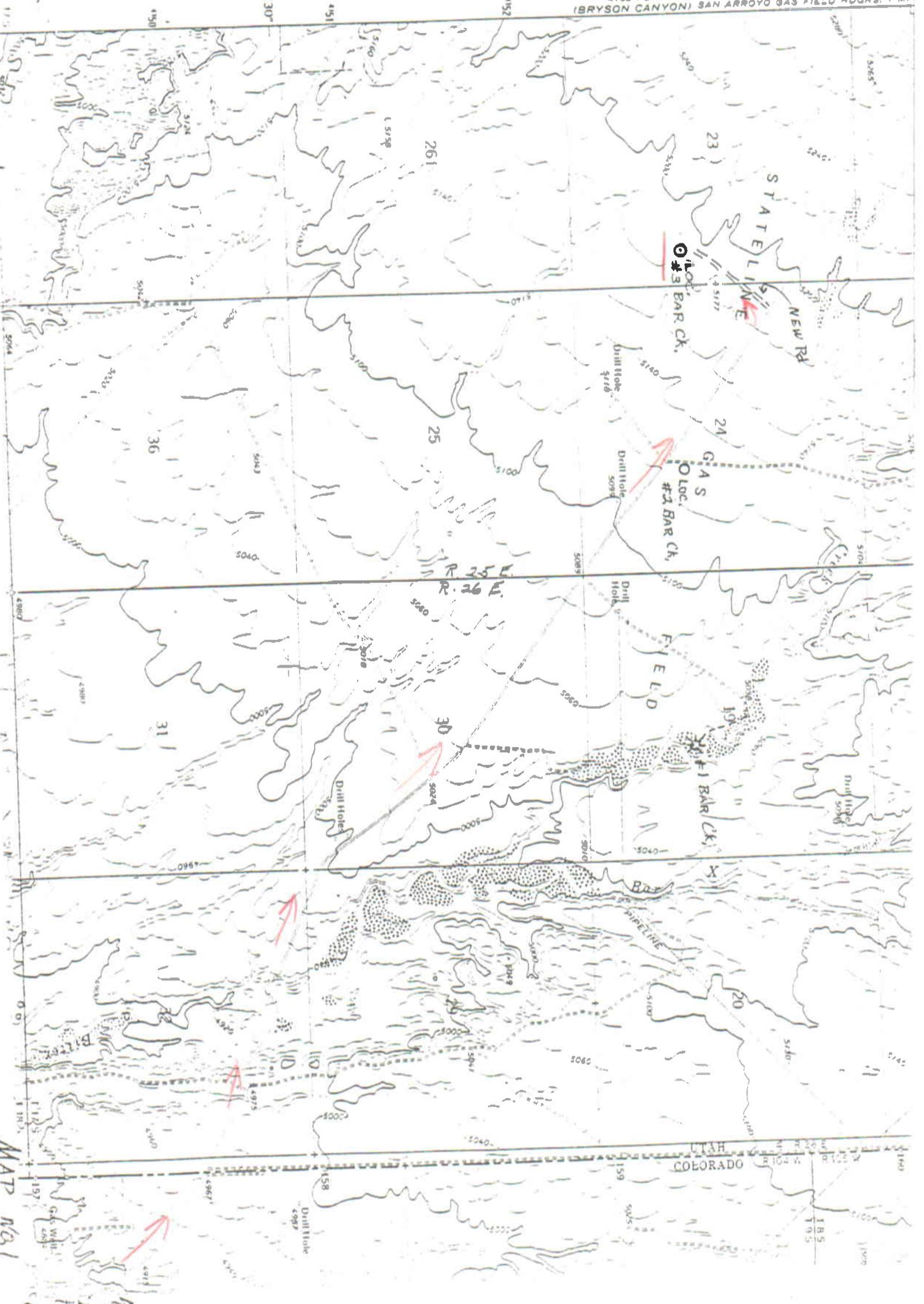
Surveyed by: W. Don Quigley

W. Don Quigley
 W. Don Quigley

PLAT NO. 1

23	24
26	25

F. 117
S.



MAP No. 1
From
TO
HWY
6-50

Utah State

UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO. U-16918
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
7. UNIT AGREEMENT NAME Bar Creek
8. FARM OR LEASE NAME Federal
9. WELL NO.
10. FIELD AND POOL, OR WILDCAT Stateline
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA NE. SE. Sec. 23-17S-25E S. L. M.
12. COUNTY OR PARISH Grand
13. STATE Utah

1a. TYPE OF WORK DRILL [X] DEEPEN [] PLUG BACK []
b. TYPE OF WELL OIL WELL [] GAS WELL [X] OTHER [] SINGLE ZONE [] MULTIPLE ZONE []
2. NAME OF OPERATOR Willard Fease Oil & Gas Company
3. ADDRESS OF OPERATOR 570 Kennecott Bldg., Salt Lake City, Utah 84111
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)* At surface Ne. SE. SEC. 23, T. 17 S., R. 25 E., S. L. M. At proposed prod. zone 667' from E-line & 2073' from S-line.
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18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED OR APPLIED FOR, ON THIS LEASE, FT. No other well
19. PROPOSED DEPTH 2700'
20. ROTARY OR CABLE TOOLS Rotary tools.
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 5180' grd.; 5190' K.B.
22. APPROX. DATE WORK WILL START* June 30, 1977

PROPOSED CASING AND CEMENTING PROGRAM

Table with 5 columns: SIZE OF HOLE, SIZE OF CASING, WEIGHT PER FOOT, SETTING DEPTH, QUANTITY OF CEMENT. Row 1: 9-3/4", 7-5/8", 24.00#, 150', 85 sks circulated to sur. Row 2: 6-3/4", 4 1/2", 10.50#, to production Cemented to 200' above Kd.

It is planned to drill a well at the above location to test the natural gas production possibilities of the sands in the Dakota, Cedar Mountain, and Morrison formations. The well will be drilled 50 ft. below the top of the Entrada, unless good and sizable production is obtained prior. The well will be drilled with rotary tools using air for circulation. The surface casing will be set at about 150' and cemented with returns to the surface. A blowout preventer and rotating head will be installed on top of the casing head. Fill and kill lines (2") will be connected to the casing head below the blind rams. Any gas encountered will be flared at the end of the blowline and roughly checked for volume thru 2" lines off the casing head after the pipe rams have been closed. A float valve will be used in the drill collars at all times and a safety valve that can be stabbed in the drill pipe or collars will be kept handy. In the event of commercial production, 4 1/2" casing will be run thru the pay zones and cemented with sufficient cement to bring the cement top about 200' above the top of the Dakota.

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

24. SIGNED H. Don Guidry TITLE Cons. Geol. DATE May 25, 1977

PERMIT NO. 43-016-36360 APPROVAL DATE

APPROVED BY TITLE DATE

CONDITIONS OF APPROVAL, IF ANY:

PROGNOSIS FOR BAR CREEK

WILLARD PEASE OIL & GAS COMPANY
 ANSCHUTZ #3 BAR CK.WELL
 NE.SE.SEC.23-17S-25E
 GRAND COUNTY, UTAH

Location: NE.SE. Sec.23, T.17 S.,R.25 E.,S.L.M., Grand County, Utah
 (657' from E-line & 2073' from S-line).

Elevation: 5180'grd.; 5190'K.B.

Surface Casing:150 ft.of 7 5/8" O.D.,26.40#, J-55,8 Rd, LTC, new;
 set and cemented with returns to the surface.

Expected Formation Tops:

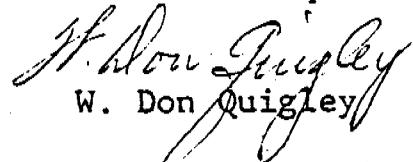
<u>Formation</u>	<u>Depth to top</u>	<u>Thickness</u>	<u>Datum</u>
Mancos	Surface	2070'	5070'K.B.
Dakota	2070'	125'	3000'
Cedar Mountain	2195'	75'	2875'
Morrison	2270'	250'	2800'
Salt Wash	2520'	270'	2550'
Curtis	2790'	60'	2280'
Entrada	2850'	-----	2220'
Total Depth	2900'		

1. It is planned to drill a 9 3/4" surface hole for the surface casing down to a depth of about 150 ft. and set 7 5/8" casing with approx. 60 sks of cement with returns to the surface. A casing head will be mounted on top of the surface casing and a blowout preventer with blind and pipe rams (hydraulic) will be mounted on the casing head. A rotating head will then be mounted on top of the blowout preventer. A blewie line, at least 100 ft. long, will then be attached to the rotating head and extended into the reserve pit.
2. A 6 3/4" hole will then be drilled below the surface casing , using air for circulation. A flare will be maintained at the end of the blewie line at all times while drilling below 1000'. This will insure that no gas will be missed. The air drilling will also minimize the damage to the hydrocarbon reservoir.
3. Samples of the cuttings will begin at 1000'. 30-ft.samples will be taken from 1000'to 2000', and then 10-ft. samples will be taken from 2000' to total depth.
4. It is planned to drill the well to a depth which is 50 ft. below the top of the Entrada formation unless good commercial flow of gas (250 MCF or more) is obtained above this depth.

5. If a high gas flow (several million cubic feet) and/or when the total depth of the well is reached, electric logs will be run. Prior to running logs, high viscosity mud (not less 80 vis.) will be pumped into the hole to provide control of the gas and to provide a conductive medium for the logs. An induction-electrical log will be run from bottom to the top of the hole, and a gamma-density and compensated neutron porosity log will be run from the bottom to a point which is 150' above the top of the Dakota formation.

(Note: In the event a small gas flow (less than 750 MCFO is obtained, it may be desirable to run casing, 4½" O.D., thru the rotating head prior to mudding up and running logs, with cement baskets and DV tool on the casing so that the casing can be cemented above the production zone; thereby preventing any damage to the formation and eliminating considerable completion expense. This is an important consideration when the volume of gas is low and the return from the well would be correspondingly low. The well could then be logged inside the casing with a gamma-neutron log.)

6. If good production (over 750 MCK) is obtained 4½" O.D., 9.50#, J-55 or H-40, new casing will be run and cemented conventionally with sufficient cement to cover 200 ft. above the top of the Dakota formation. The production zone will then be perforated, 2 3/8" O.D. tubing run, and completed conventionally.
7. It is anticipated that the drilling of the well will require less than one week.



W. Don Quigley

Consulting Geologist
Salt Lake City, Utah

SURFACE USE & OPERATIONS PLAN
FOR

WILLARD PEASE OIL & GAS COMPANY
ANSCHUTZ #3 BAR CK.WELL
NE.SE.SEC.23-17S-25E
GRAND COUNTY,UTAH

1. A survey plat showing the location of the proposed well site is attached, (See Plat No.1). Map No.1 shows the route to the well site from Hwy 6-50 at a point just west of the Stateline store. This map shows the secondary roads in the surrounding area. It is about 7 miles to the location from the hiway The road to the location area is in good shape & will support heavy trucks. The location is about 1/3 mile off the main road to the SW.
2. Planned Access Rd.: The access road, see attached map, is across fairly level ground which is covered with sage brush and some grass. Little grading will be required. Rd will be 14 ft. wide.
3. Location of Existing Wells: See Map
4. Location of Production Equipment: A plan for the anticipated production equipment, if the well is successful, is submitted on Plat No.2. When production ceases this equipment will be removed and the land surface graded, levelled and reseeded.
5. Water Supply: Very little water will be required for the drilling operations of the subject due to using air for circulation. The water required will be hauled by truck to the location from West Salt Creek where it crosses under Hwy 6-50 about 2 miles west of Mack, Colorado.
6. Road Material: No additional road material, gravel, sand or culverts, will be required for the proposed drilling operations.
7. Waste Disposal: A reserve and burn pit will be constructed at the well site. All excess water, mud, and drill cuttings will be deposited into the reserve pit. Burnable material and garbage will be put into the burn pit. Both of these pits will be folded in and covered as soon as feasible after the cessation of drilling operations.
8. Camp Facilities and Airstrips: No camp facilities other than two or three house trailers at the well site will be needed. No airstrips will be required.

9. Well Site Layout: A plan for the drilling equipment layout required for the drilling operations is submitted on Plat No. 3. The approximate dimensions of the drill site are shown. The site will be levelled for this equipment. Since the site is quite level, it will not be necessary to make any deep cuts or major surface shift. The reserve pit will be about 4 ft. deep with 4-ft. banks. The sage brush will be removed.
10. Restoration: After the drilling operations have been concluded and the equipment removed, the well site area will be cleaned, levelled and restored to normal. The pits will be covered and the area reseeded, if the well is not successful. Otherwise the site will be levelled and prepared for the placement of the production equipment. This work will be accomplished within 30 days after the drilling equipment has been removed.
11. Land Description : The proposed well site is located beside the present secondary rd. and is on fairly level ground that is covered with heavy sage brush. There is no other natural vegetation on the site area. The surface is Mancos shale, and some gravel from erosion and deposition along the wash. Very little grading to the location will be required.
12. Representative: The operator's representative at the well site will probably be W. Don Quigley, 303 Phillips Petro. Bldg., Salt Lake City, Utah. The location work and restoration work will probably be done by Bob Sasser of Willard Pease Drilling Co.
13. Certification:

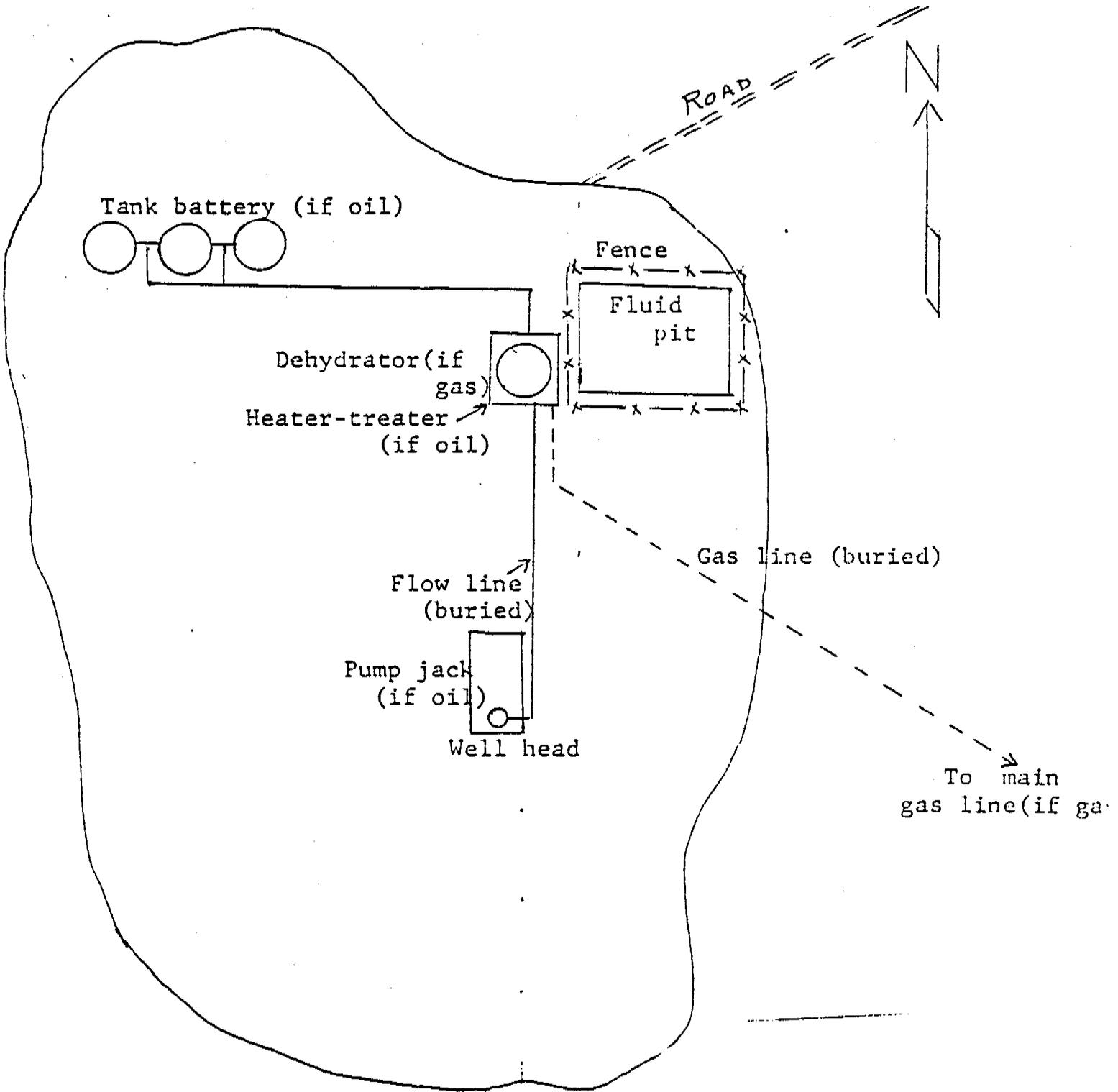
I hereby certify that I, or persons under my direct supervision, have inspected the drill site and access route; that I am familiar with the conditions which presently exist; that statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations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

Date: May 25 1977

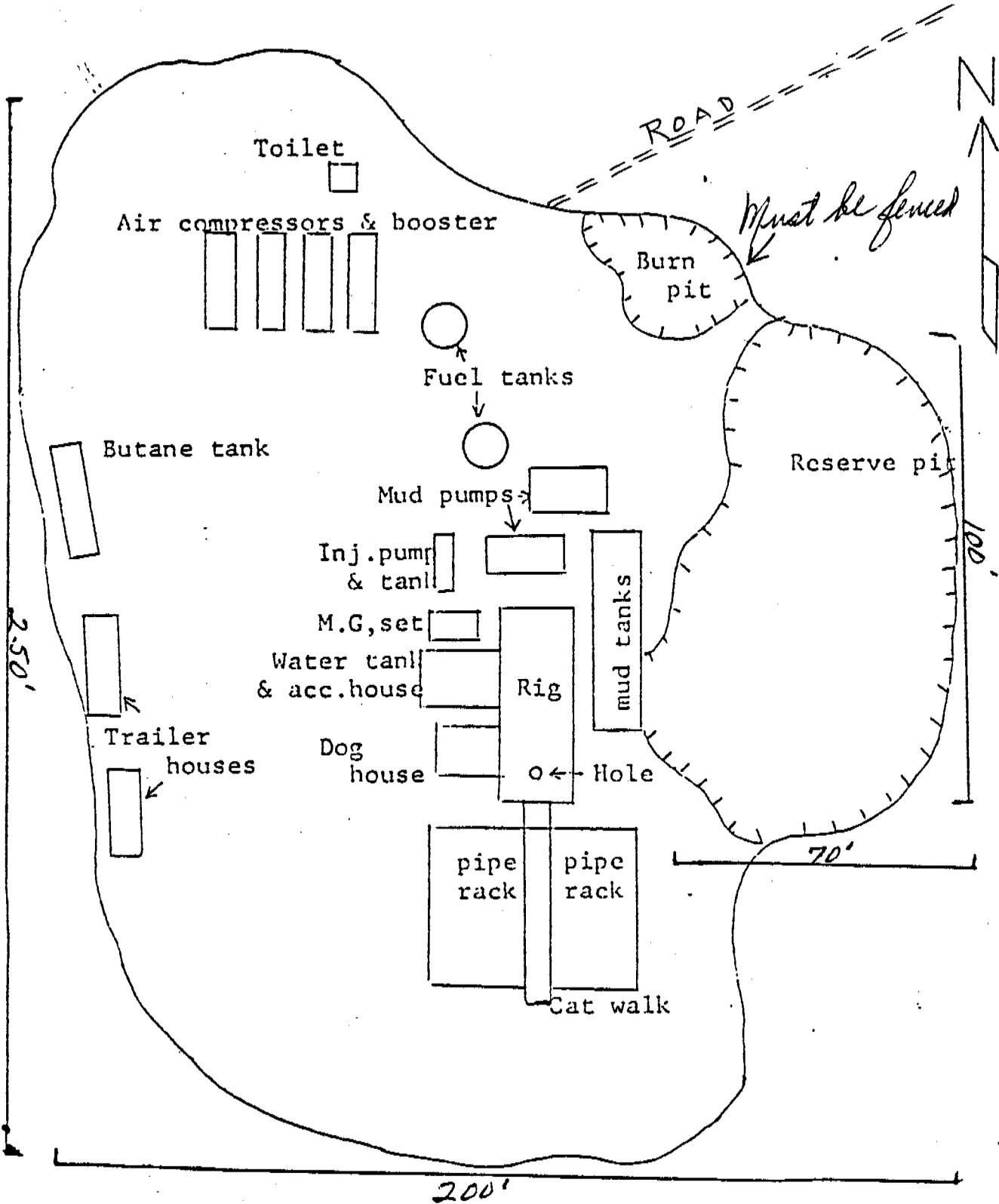
W. Don Quigley
W. Don Quigley, Consultant

PLAN FOR PRODUCTION EQUIPMENT

WILLARD PEASE OIL & GAS COMPANY
ANSCHUTZ #3 BAR CK.WELL
NE.SE.SEC.23-17S-25E
GRAND COUNTY,UTAH



LOCATION PLAN FOR
WILLARD PEASE OIL & GAS COMPANY
ANSCHUTZ #3 BAR CK. WELL
NE. SE. SEC. 23-17S-25E
GRAND COUNTY, UTAH



Scale: 1 in. = approx. 35 ft.

WELL CONTROL EQUIPMENT FOR
WILLARD PEASE OIL & GAS COMPANY
ANSCHUTZ #3 BAR CK.WELL
NE.SE.SEC.23-17S-25E
GRAND COUNTY, UTAH

The following control equipment is planned for the above designated well: (See attached diagram).

1. Surface Casing:
 - A. Hole size for surface casing is 9 3/4"
 - B. Setting depth for surface casing is approx. 150 ft.
 - C. Casing specs. are: 7 5/8" D.D., J-55, 26.40#, 8 rd. thread, new or used.
 - D. Anticipated pressure at setting depth is approx. 20 lbs.
 - E. Casing will be run using three centralizers and a guide shoe, and will be cemented with 60 sks of cement with returns to the surface.
 - F. Top of the casing will be at ground level.
2. Casing Head:

Flange size: 10", A.P.I. Pressure rating: 2000# W.P., Series 600; Cameron, OCT, or equivalent; new or used; equipped w/two 2" ports with nipples and 2", 2000# W.P. ball or plug valves. Casing head and valves set above ground level.
3. Intermediate Casing:

None.
4. Blowout Preventors:
 - A. Double rams; hydraulic; one set of blind rams; one set of rams for 3 1/2" or 4" drill pipe; 10" flange; 2000# or greater W.P.; Series 900; equipped with mechanical wheels and rod for back-up; set on top of casing head flange and securely bolted down, and pressure tested for leaks up to 2000#p.s.i.
 - B. Rotating Head:

Shaffer, Grants or equivalent; set on top of blowout preventor and bolted securely; complete with kelly drive, pressure lubricator; 3 1/2" or 4" rubber for 2000# W.P.; need not have hydril assembly on bottom.
 - C. Fill and Kill Lines:

The fill and kill lines (2" tubing or heavy duty line pipe) are to be connected thru the 2" valves on the casing head.
5. Auxillary Equipment:

A float valve is to be used in the bottom drill collar at all times. A string float will also be used in the drill pipe and kept within 200'-300' of the surface.
6. Anticipated Pressures:

The shut-in pressures of the Dakota, Cedar Mountain, and Morrison formations at depths of 3000' to 4000' in the area have been measured at about 1000# to 1500# maximum.
7. Drilling fluids:

Air-soap-water mist will be used to drill the subject well. In case of excessive caving problems, it may be

necessary to convert to mud.

8. Production Casing:

A. Hole size for production casing will be 6 3/4".

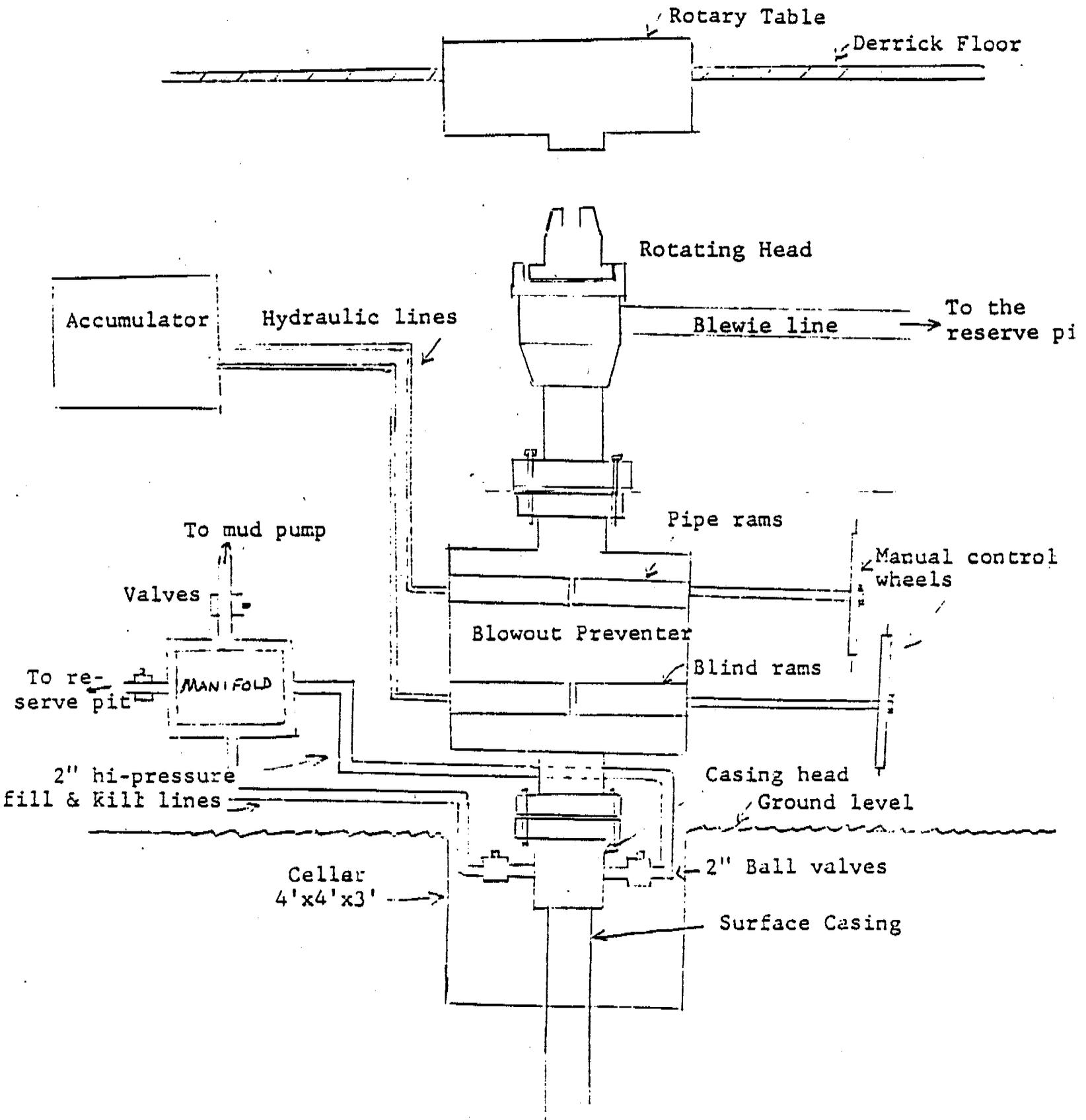
B. Approx. setting depth will be about 2700'

C. Casing Specs. are: 4 1/2" O.D.; J-55; 9.50#, 8-rd thread; new.

D. If good production is obtained, the casing will be run with a guide shoe at the bottom and about six centralizers and cemented conventionally with sufficient cement to cover 200 ft. above the top of the Dakota formation. The production zone will be perforated, 2 3/8" O.D. tubing will be run, and the well completed conventionally. In the event the production is small, it may be desirable to minimize the damage to the formation by keeping all mud and cement off the formation. In this case the procedure outlined below will be used.

E. Casing will be run with about six centralizers and a Lynes packer and DV tool set above the production zone. There will be sufficient casing to extend thru the production zone below the Lynes packer and a blind guide shoe on the bottom. The casing will be cemented above the packer with about 85 sks of cement (sufficient to cement thru the Dakota formation). The cement will be allowed to cure at least 48 hrs. The plug can then be drilled out and the casing perforated below the packer. Two inch tubing will be run and secured in the tubing head prior to perforating.

**SCHEMATIC DIAGRAM OF
 CONTROL EQUIPMENT FOR THE
 WILLARD PEASE OIL & GAS COMPANY
 ANSCHUTZ #3 BAR CK. WELL
 NE. SE. SEC. 23-17S-25E
 GRAND COUNTY, UTAH**



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
Willard Pease Oil & Gas Company

3. ADDRESS OF OPERATOR
570 Kennecott Bldg., Salt Lake City, Utah 84111

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*
 At surface **Ne. SE.SEC.23,T.17 S.,R.25 E.,S.L.M.**
 At proposed prod. zone **667' from E-line & 2073' from S-line.**

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
Approx. 18 miles NW. of Mack, Colo.

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) **667'**

16. NO. OF ACRES IN LEASE
640 ac

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

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED OR APPLIED FOR, ON THIS LEASE, FT. **No other well**

19. PROPOSED DEPTH
2700'

20. ROTARY OR CABLE TOOLS
Rotary tools.

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
5180'grd.; 5190'K.B.

22. APPROX. DATE WORK WILL START*
June 30, 1977

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
9-3/4"	7-5/8"	24.00#	150'	85 sks circulated to sur.
6-3/4"	4 1/2"	10.50#	to production	Cemented to 200' above Kd.

It is planned to drill a well at the above location to test the natural gas production possibilities of the sands in the Dakota, Cedar Mountain, and Morrison formations. The well will be drilled 50 ft. below the top of the Entrada, unless good and sizable production is obtained prior. The well will be drilled with rotary tools using air for circulation. The surface casing will be set at about 150' and cemented with returns to the surface. A blowout preventer and rotating head will be installed on top of the casing head. Fill and kill lines (2") will be connected to the casing head below the blind rams. Any gas encountered will be flared at the end of the blowline and roughly checked for volume thru 2" lines off the casing head after the pipe rams have been closed. A float valve will be used in the drill collars at all times and a safety valve that can be stabbed in the drill pipe or collars will be kept handy. In the event of commercial production, 4 1/2" casing will be run thru the pay zones and cemented with sufficient cement to bring the cement top about 200' above the top of the Dakota.

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

24. SIGNED W. Don Gungley TITLE Cons. Geol. DATE May 25, 1977

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

SUBMIT IN TRIPPLICATE (Other instructions on reverse side)

Form approved, Budget Bureau No. 42-R1425.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

TYPE OF WORK: DRILL [X], DEEPEN [], PLUG BACK []

TYPE OF WELL: OIL WELL [], GAS WELL [X], OTHER []

NAME OF OPERATOR: Willard Pease Oil & Gas Company

ADDRESS OF OPERATOR: 570 Kennecott Bldg., Salt Lake City, Utah 84111

LOCATION OF WELL: Ne. SE. SEC. 23, T. 17 S., R. 25 E., S.L.M. At proposed prod. zone 667' from E-line & 2073' from S-line.

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DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT.: 557'

16. NO. OF ACRES IN LEASE: 640 ac

17. NO. OF ACRES ASSIGNED TO THIS WELL: 160 ac.

DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL, DRILLING, COMPLETE OR APPLIED FOR, ON THIS LEASE, FT.: No other well

19. PROPOSED DEPTH: 2700'

20. ROTARY OR CABLE TOOLS: Rotary tools.

ELEVATIONS (Show whether DF, RT, GR, etc.): 5180' grd.; 5190' K.B.

22. APPROX. DATE WORK WILL START: June 30, 1977

PROPOSED CASING AND CEMENTING PROGRAM

Table with 5 columns: SIZE OF HOLE, SIZE OF CASING, WEIGHT PER FOOT, SETTING DEPTH, QUANTITY OF CEMENT. Includes rows for 9-3/4" and 6-3/4" hole sizes.

It is planned to drill a well at the above location to test the natural gas production possibilities of the sands in the Dakota, Cedar Mountain, and Morrison formations. The well will be drilled 50 ft. below the top of the Entrada, unless good and sizable production is obtained prior. The well will be drilled with rotary tools using air for circulation. The surface casing will be set at about 150' and cemented with returns to the surface. A blowout preventer and rotating head will be installed on top of the casing head. Fill and kill lines (2") will be connected to the casing head below the blind rams. Any gas encountered will be flared at the end of the blowline and roughly checked for volume thru 2" lines off the casing head after the pipe rams have been closed. A float valve will be used in the drill collars at all times and a safety valve that can be stabbed in the drill pipe or collars will be kept handy. In the event of commercial production, 4 1/2" casing will be run thru the pay zones and cemented with sufficient cement to bring the cement top about 5 200' above the top of the Dakota.

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: H. Now Guigley, TITLE: Cons. Geol., DATE: May 25, 1977

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY: _____

STATE OF UTAH
DIVISION OF OIL, GAS, AND MINING

** FILE NOTATIONS **

Date: May 27 -
Operator: Willard Rose Oil & Gas
Well No: Auschutz #3 Bar Creek #1
Location: Sec. 23 T. 17S R. 25E County: Grand

File Prepared Entered on N.I.D. AP No.
Card Indexed Completion Sheet

CHECKED BY:

Administrative Assistant [Signature]
Remarks: No other wells in Sec. 23 ⁵⁻²²⁻⁶⁴
Petroleum Engineer [Signature]
Remarks: 7
Director [Signature]
Remarks:

INCLUDE WITHIN APPROVAL LETTER:

Bond Required Survey Plat Required
Order No. 165-1 Surface Casing Charge
to _____
Rule C-3(c), Topographic exception/company owns or controls acreage within a 660' radius of proposed site
O.K. Rule C-3 O.K. In Bar Creek Unit

Other:

Letter Written/Approved

June 1, 1977

Willard Pease Oil & Gas Co.
570 Kennecott Building
Salt Lake City, Utah 84111

Re: Well No. Anschutz #3 Bar Creek
Sec. 23, T. 17 S, R. 25 E,
Grand County, Utah

Gentlemen:

Insofar as this office is concerned, approval to drill the above referred to well is hereby granted in accordance with the Order issued in Cause No. 165-1.

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

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

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

The API number assigned to this well is 43-019-30360.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

CLEON B. FEIGHT
Director

PLEASE NOTIFY THIS DIVISION WITHIN 24 HRS. OF SPOILING

LEASE U-16918DATE 6-15-77WELL NO. 3LOCATION: NE ¼ SE ¼, SEC. 23, T. 17S, R. 25E,FIELD State Line - Bar Creek COUNTY Grand STATE Utah.ENVIRONMENTAL IMPACT ANALYSIS - ATTACHMENT 2-BI. PROPOSED ACTION

Willard Pease Oil & Gas (COMPANY) PROPOSES TO DRILL AN OIL AND GAS TEST WELL WITH ROTARY TOOLS TO ABOUT 2700 FT. TD. 2) TO CONSTRUCT A DRILL PAD 250 FT. X 200 FT. AND A RESERVE PIT 100 FT. X 70 FT. 3) TO CONSTRUCT 14 FT. WIDE X .3 MILES ACCESS ROAD ~~AND UPGRADE~~ ~~FT. WIDE X~~ MILES ACCESS ROAD FROM AN EXISTING AND IMPROVED ROAD. TO 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 T. R.

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

(2) VEGETATION: SAGEBRUSH PINION-JUNIPER PINE/FIR FARMLAND (CULTIVATED) NATIVE GRASSES OTHER Desert Shrub and assorted Desert grasses. All Very Sparse.

(3) WILDLIFE: DEER ANTELOPE ELK BEAR SMALL
MAMMAL BIRDS ENDANGERED SPECIES OTHER All Very

Sparse -

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

Falls in the Bar creek field.

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 THE 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.

~~3) LOCATION WAS MOVED _____ TO AVOID _____
 LARGE SIDEHILL CUTS NATURAL DRAINAGE OTHER _____~~

4) _____

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.

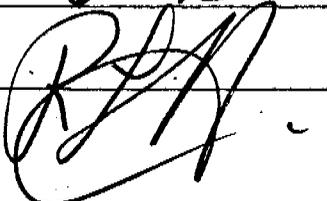
5) MINOR AND SHORT-TERM VISUAL IMPACTS.

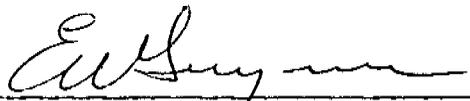
6) _____

6. DETERMINATION:

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

DATE INSPECTED 6-15-77

INSPECTOR 


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

Pat
to file

ed *Ps*

P & A

(W. Pease) On October 25th, a call was received from Mr. Don Quigley, American Quasar, informed this office of the plugging of the Willard Pease Well Chalk Creek #3, Sec. 23, T. 17 S. R. 25 East on the above date.

(W. Pease #3 Well)

Grand

Pertinent Data: *#3 Bar Creek*

T.D. 2,280'
7 7/8" hole, surface casing 8 5/8" set at 179' and cemented to surface.

TOPS:

Dakota	2,458
Cedar Mtn.	2,590
Morrison	2,652
Curtis	3,130
Entrada	3,252

Plug #1 @ 3280' - 3,000'	25 sks.	Entrada
2950' - 2850'	25 sks.	Salt Wash
2600' - 2400'	50 sks.	Dakota

Bottom of the surface casing, plug set 225'-125' w/ 25 sks.

Surface marker placed and plug at the top.

October 25, 1977

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

U-16918

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 Dry

7. UNIT AGREEMENT NAME
Bar Creek

2. NAME OF OPERATOR
Willard Pease Oil & Gas Co.

8. FARM OR LEASE NAME
Federal

3. ADDRESS OF OPERATOR
570 Kennecott Bldg., Salt Lake City, Utah 84111

9. WELL NO. *Anschutz*
Unit #3 *Bar Creek #3*

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.)
At surface NE. SE. SEC. 23, T17S, R25E, S.L.M.
667' from E-line & 2073' from S-line

10. FIELD AND POOL, OR WILDCAT
Stateline

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
NE. SE. SEC. 23-17S-25E

S.L.M.

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, OR, etc.)
5180' grd.; 5190' K.B.

12. COUNTY OR PARISH
Grand

13. STATE
Utah

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input checked="" type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>
(Other) <input type="checkbox"/>	

SUBSEQUENT REPORT OF:

WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <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.)*

Subject well was drilled to a depth of 3280' which was 30' below the top of the Entrada formation. The well was drilled with air and air-mist; and no flow of gas or oil was obtained. 179' of 8- $\frac{1}{8}$ " surface casing were set and cemented with returns to the surface. A 7- $\frac{7}{8}$ " hole was drilled to total depth. Formation tops are as follows: Dakota--2458'; Cedar Mt--2590'; Morrison (Brushy Basin)--2652'; Morrison (Salt Wash)--2926'; Curtis--3130'; & Entrada--3252'.

It is planned to abandon well in the following manner:

- Plug #1--3280' to 3180' (25 sks cement)-- across Entrada
 - Plug #2--2950' to 2850' (25 sks cement)-- across Salt Wash
 - Plug #3--2600' to 2400' (50 sks cement)-- across Dakota
 - Plug #4-- 225' to 125' (25 sks cement)-- across bottom of casing
- Well marker and 10 sks cement in top of surface casing. Fill rat hole and mouse hole. Clean and level location.

Verbal approval of the above plan was received on Oct. 25, 1977; and the hole has been plugged accordingly. The rat and mouse holes have been filled in. The location will be levelled and the pits filled in as soon as a cat is available (within 30 days).

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

SIGNED *H. How Gungley*

TITLE Cons. Geol.

DATE Oct. 26, 1977

(This space for Federal or State office use)

APPROVED BY _____
CONDITIONS OF APPROVAL, IF ANY:

TITLE _____

APPROVED BY THE DIVISION OF
OIL, GAS, AND MINING

DATE: Oct. 28, 1977

BY: *P. L. Inshall*

ATTACHMENT 2-A

SUMMARY OF ENVIRONMENTAL IMPACT EVALUATION EIA NO. 537

DATE

OPERATOR W. Pease Oil & Gas

LEASE # U-16918

WELL NO. 3

LOC. NE 1/4 SEC. 23

T. 17s R. 25E

COUNTY Grand STATE Ut.

FIELD Bar Creek

USGS Alexander

BLM Curwett

REP: Quigley

DIRT Pease

- ENHANCES
- NO IMPACT
- MINOR IMPACT
- MAJOR IMPACT

Construction	Pollution	Drilling Production			Transport Operations		Accidents	Others
		Well drilling	Fluid removal (Prod. wells, facilities)	Secondary Recovery	Noise or obstruction of scenic views	Mineral processing (ext. facilities)		

Forestry	<u>NA</u>												
Grazing	<u>NO</u>	/	/	/	/	/	/	/	/	/	/	/	/
Wilderness	<u>NA</u>												
Agriculture	<u>NA</u>												
Residential-Commercial	<u>NA</u>												
Mineral Extraction	<u>NA</u>												
Recreation	<u>NO</u>	/	/	/	/	/	/	/	/	/	/	/	/
Scenic Views	<u>NO</u>	/	/	/	/	/	/	/	/	/	/	/	/
Parks, Reserves, Monuments	<u>NA</u>												
Historical Sites	<u>NA</u>												
Unique Physical Features	<u>NA</u>												
Birds	<u>L</u>	/	/	/	/	/	/	/	/	/	/	/	/
Land Animals	<u>L</u>	/	/	/	/	/	/	/	/	/	/	/	/
Fish	<u>NA</u>												
Endangered Species	<u>NONE</u>	<u>KNOWN</u>											
Trees, Grass, Etc.	<u>L</u>	/	/	/	/	/	/	/	/	/	/	/	/
Surface Water	<u>NA</u>												
Underground Water	<u>?</u>												
Air Quality	<u>L</u>	/	/	/	/	/	/	/	/	/	/	/	/
Erosion	<u>L</u>	/	/	/	/	/	/	/	/	/	/	/	/
Other													
Effect On Local Economy	<u>NO</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Safety & Health	<u>L</u>	/	/	/	/	/	/	/	/	/	/	/	/
Others	<u>Oil Free</u>												

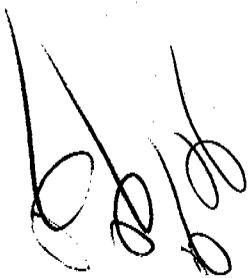
cc: Reg - Pease
 BLM - Pease
 Utah - Pease

DRILLING HISTORY
AND
GEOLOGIC REPORT
ON
BAR CREEK UNIT #3 WELL
GRAND COUNTY, UTAH

By

W. Don Quigley
Consulting Geologist
Salt Lake City, Utah

November 4, 1977



DRILLING HISTORY
AND
GEOLOGIC REPORT
ON
WILLARD PEASE OIL & GAS CO.
BAR CREEK UNIT #3 WELL

Operator: Willard Pease Oil & Gas Co.
570 Kennecott Bldg., Salt Lake City, Utah 84111

Contractor: Willard Pease Drlg. Co.
P.O. Box 548, Grand Junction, Colo. 81501

Location: NE. SE. Sec. 23, T 17S., R 25E., Grand County, Utah
(667' fr. E-line and 2073' fr. S-line).

Elevations: 5180' grd; 5190' K.B.

Spudded-in: Oct. 21, 1977

Finished Drlg.: Oct. 24, 1977

Total Depth: 3280'

Surface Casing: 8 5/8", 24.00#, J-55 casing set at 179' K.B.
and cemented with 100 sks of Class 'G' cement w/3%
CaCl. Returns to surface.

Production Formation: None

Producing Zone: None

Electric Logs: I E S; Gamma-Density-Neutron

Plugged and Abandoned: Oct. 25, 1977

Drilling History

Oct. 19-20: Moved rig and rigging up.

Oct. 21: Finished rigging up. Drilled rat hole. Drilled 12 1/4"
surface hole to 185 ft. Ran 5 jts. of 8 5/8", 24.00#,
J-55 casing and landed at 179' K.B. Cemented casing
with 100 sks of Clas G cement with 3% CaCl. Had good

returns to the surface. Waiting on cement to cure. Began nipping up.

- Oct. 22: Drilled 185' to 1172' (987'). Finished nipping-up to drill ahead with air. Drilled mouse hole. Went in hole with 7 7/8" bit and began drilling ahead with air. Drilled at rate of 75 ft/hr. in Mancos shale. Dusting good.
- Oct. 23: Drilled 1172' to 2560' (1388'). Made rd-trip at 2163' for new bit. Bit #2 (CP-EH3) made 1978 ft. (185' to 2163') in 27½ hrs. Drilled at an avg. rate of 73 ft/hr. in Mancos shale. Estimate top of Dakota at 2465'. Had a gray, medium-grained, bentonitic sand at this point. Encountered a good m.g. rounded ss. at 2500' to 2520' which had good oil stain, odor, and fluorescence. Samples were oil soaked and the well quit dusting. Air pressure raised 25 lbs. Had to convert to air-mist drilling with soap and water.
- Oct. 24: Drilled 2560' to 3280' (720'). Encountered another porous sand at 2530' which had good fluorescence; but which is probably wet. Sand was fairly continuous to 2580'. Estimate the top of the Cedar Mountain formation at 2590'. Estimate top of the Morrison (Brushy Basin) at 2650', and top of the Salt Wash section at 2930'. The Salt Wash had lots of good porous sands without any shows. Estimate top of Curtis-Summerville at 3120' and top of Entrada at 3250'. Drilled to 3280' which is about 30 ft. below the top of the Entrada. Pumped the hole full of 120-Vis mud and circulated for 2¼ hours. Came out of hole to log. Bit #3 (Reed-FP54) made 1117 ft. (2163' to 3280') in 23½ hours. Drilled at an avg. rate of 48 ft/hr. with air-mist. Began logging hole at 10 P.M. Ran I.E.S., gamma-density, and neutron porosity logs.
- Oct. 25: Finished logging at 0830. Had considerable trouble with density tool. Had to have Vernal send out another tool. Waited 6 hrs. for tool.
0830-1600: Waiting on orders. Laid down collars. Decided to plug hole. Received Anschutz's okey at 4 P.M. Went in hole with drill pipe to 3280'. Placed cement plugs as follows:

Plug #1: 3280' to 3180' - 25 sacks across Entrada formation. Pulled 10 jts.

Plug #2: 2950' to 2850' - 25 sacks across
Salt Wash. Pulled 12 jts.

Plug #3: 2600' to 2400' - 50 sacks across
Dakota. Pulled 77 jts.

Plug #4: 225' to 125' - 25 sacks across
bottom of casing.

Placed well marker and 10 sacks cement in top of surface casing. Began rigging down. Released rig.

GEOLOGIC REPORT

Introduction

The Bar Creek Unit #3 well was located toward the western side of the Bar Creek Unit to determine the production potential of the Dakota, Cedar Mountain and Morrison lenticular sand reservoirs on this side of the Unit. The subject well was approximately one mile west of the Bar Creek Unit #2 well which may be a producing well, but which has not been completed at this date. The #2 well has two favorable zones in the Morrison formation and should make a well.

The Bar Creek Unit #3 well was drilled to a depth of 3280' (3288' according to Schlumberger), which was 30 feet below the top of the Entrada formation. The well was drilled with air and air-mist to total depth and the only hydrocarbon shows encountered were from a limestone and silty zone in the Mancos at 2100' to 2200' and in the Dakota formation at 2450' to 2600'. The shows in the Dakota were in the sandstone benches. The cuttings had good fluorescence and stain; but no gas or free oil were blown to the surface. The later logs also showed a high water percentage in the sands. The well was therefore plugged and abandoned.

The well was drilled within a period of three days and no problems were encountered in the process. Only two bits were used to drill the well below the surface casing. No tests or coring were accomplished on the well.

General Geology

The subject well was located on the westerly plunging axis of the Stateline Anticline. The structure is a symmetrical anticline trending nearly east-west and parallel to the Bar-X structure to

the north. The anticline has several transverse faults trending northeastward with displacements of 50 to 150 feet and downthrown on the west side.

The natural gas reservoirs in the area are found in lenticular sands in the Dakota, Cedar Mountain and Morrison formations. These sand lenses are quite irregular and variable and seem to have limited continuity. In general, they trend northeastward in the area, but tend to have very irregular elongated shapes. They were deposited by aggrading streams and represent stream channels, bar sands, and flood or alluvial sands. Interfingering and overlaps are common. Communication between the lenses tend to be minimal. Because of their erratic nature, one well does not prove or condemn a very large area. Wells on adjacent 40-acre tracts can be quite different.

The subject well was approximately 150 feet lower structurally than the Bar Creek Unit #2 well and was somewhat lower than anticipated, indicating that the Stateline structure is plunging more rapidly to the west or that there is a greater displacement in the intervening fault than estimated.

The subject well encountered a normal sequence of sediments with normal thicknesses and compared reasonably well with the Bar Creek #2 well. The Dakota sands, however, were much better developed and were much thicker in the subject well than in the #2 well. Even so, there were no good recoveries of hydrocarbons to the surface from these sands. It is probable that the top sand may have had some slow seepage of oil which dampened the air cuttings and the well quit dusting, but the amount was too small to provide any recovery at the surface. The middle and lower sands in the Dakota were definitely wet and the lower portion of the hole had to be drilled with air-mist using soap and KCl water. There were no other hydrocarbon shows in the well. The Cedar Mountain formation had a thin sand (15 ft. thick) at the base which was tight and quartzitic and did not have any shows. There were no well developed sands in the Brushy Basin section of the Morrison formation.

The Salt Wash section of the Morrison had about five separate sand lenses, varying in thickness from 8 feet to 30 feet; but none had any hydrocarbon shows. They were either tight and quartzitic or contained water. The Curtis formation had no porous sands and the Entrada contained obvious water.

The formations with their tops, thicknesses, and datum points which were encountered in the subject well, as determined from the

electric logs, are as follows:

<u>Formation</u>	<u>Depth to Top</u>	<u>Thickness</u>	<u>Datum</u>
Mancos	Surface	2458'	5190' K.B.
Dakota	2458'	132'	2732'
Cedar Mountain	2590'	62'	2600'
Morrison (Brushy Basin)	2652'	274'	2538'
(Salt Wash)	2926'	204'	2264'
Curtis	3130'	122'	2060'
Entrada	3252'	—	1938'
Total Depth	3280' (3288' logged depth)		

Comparison of the above datum points with the Bar Creek Unit #2 well is as follows:

Bar Creek Unit #2 Well

Bar Creek Unit #3 Well

<u>Formation</u>	<u>Datum</u>	<u>Datum</u>
Mancos	Surface	Surface
Dakota	2875'	2732'
Cedar Mountain	2783'	2600'
Morrison (B.B.)	2695'	2538'
Morrison (S.W.)	2441'	2264'
Curtis	2263'	2060'
Entrada	2145'*	1938'

* This datum point is extrapolated since the #2 well did not penetrate the top of the Entrada.

A detailed sample log of the cuttings from 1500' to total depth is attached hereto.

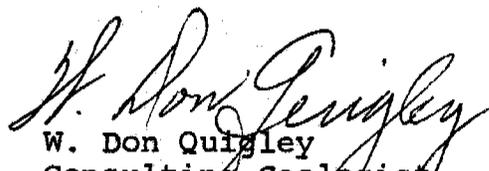
Conclusion

Whereas the Bar Creek Unit #3 well penetrated exceptionally well developed sands in the Dakota formation and good sands in the Salt Wash section of the Morrison, none of the sands contained sufficient hydrocarbons to warrant setting casing and attempting completion of the well. Some good shows were observed in the cuttings of the Dakota sands; but no free hydrocarbons were blown to the surface by the air circulation. Thus the amount was too small to justify further expense.

The position of the well on the Stateline structure suggests a rapidly plunging axis to the west with a fair amount of displacement in the northeasterly trending fault located about $\frac{1}{2}$ mile east of the well. Whereas the unsuccessful results of the subject well does not definitely disprove the presence of hydrocarbons in a low structural position, nor definitely indicate the unfavorable nature of the western side of the Bar Creek Unit area, it suggests that further drilling and development of this side of the Unit should be delayed until after several more wells are drilled on the eastern half of the Unit.

The Entrada formation was penetrated approximately 30 feet by the subject well, and proved to be water saturated and contained no hydrocarbons.

As noted above, additional wells on the Bar Creek Unit should be located on the eastern half of the Unit area, until the productive area has been fully outlined. This is not going to be regular or consistent because of the erratic and irregular nature of the lenticular reservoir sands; but the more favorable area will be indicated by the success of the wells drilled.


W. Don Quigley
Consulting Geologist
A.A.P.G. Cert. #1296
A.P.G.S. Cert. #3038

Rilty time
Mans/ depth

Hard Place Hill & Lhas B.

Barbrook Unit # 3 Well

NE SE. Sec. 23-175-25E
Shots 5180' pad / 5190' B.

0 10 20

1500

1600

1700

1800

1900

2000

2100

2200

2300



lt. gray calc. ss.

dk. gray to blk. calc. marl sh.

lt. gray bent. calc. sh.

dk. gray calc. silty sh.

dk. gray bent. calc. sh.

blk. silty calc. sh.

blk. to dk. calc. sh.

blk. calc. sh. (V. dk.)

blk. calc. sh.; blk. to dk. bent. marl & gray veg. calc. ss. - STRONG

blk. silty calc. marl sh.

dk. gray calc. sh. & sand. lg. buff. ss. - DAMP

blk. bent. marl sh.

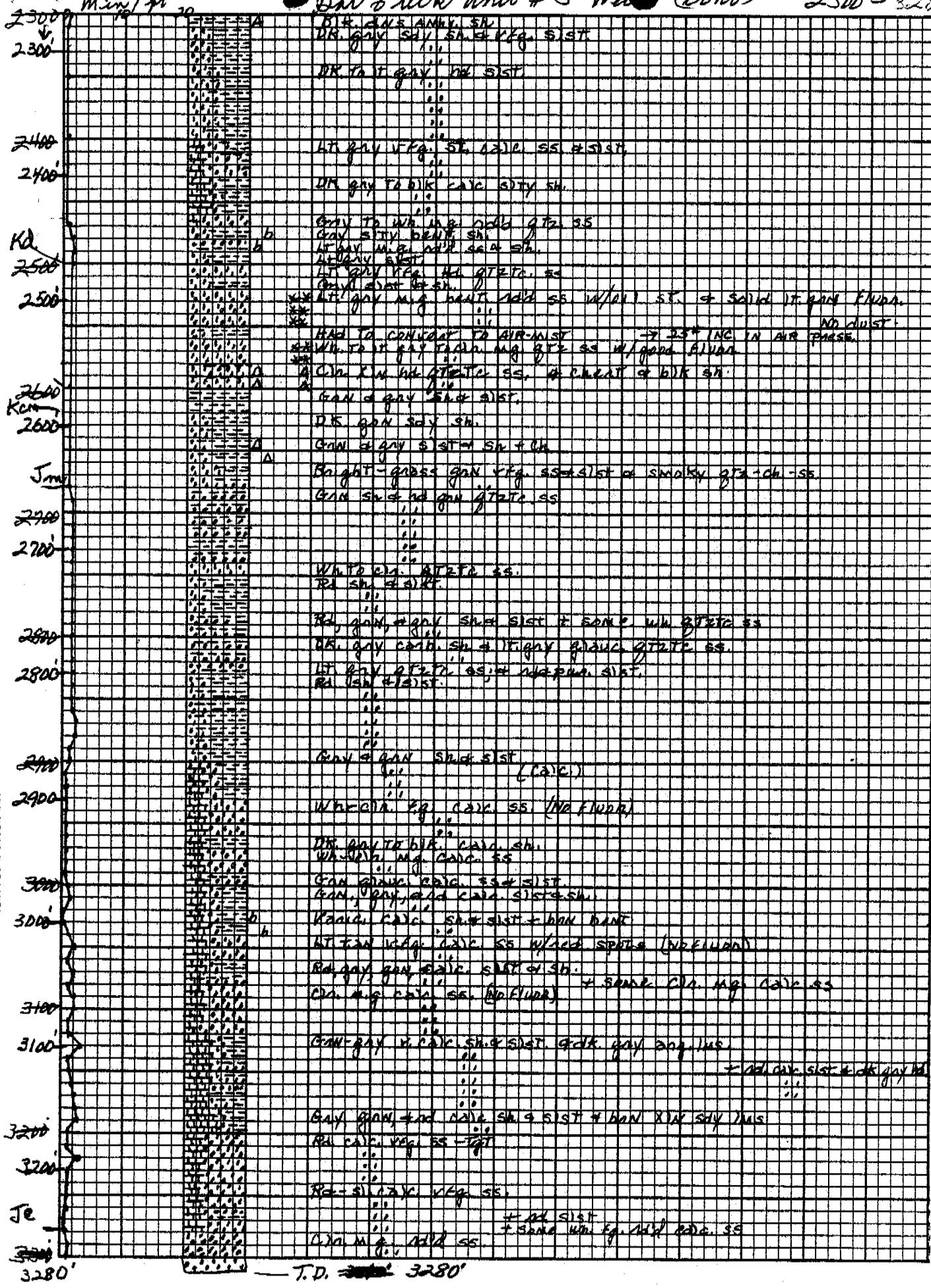
SAMPLES ALL 30' DEEP FROM LOG ON

K&E 5 X 5 TO 1/2 INCH 46 0863
7 X 10 INCHES
MADE IN U. S. A.
KEUFFEL & ESSER CO.

Red Line
Min/ft

Bar Buck Unit # 3 Well (Cont)

2300 - 3280



K-E 5 X 8 TO 1/2 INCH 46 0863 MADE IN U.S.A. KEUFFEL & ESSER CO.

T.D. 3280'

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE

(See instructions on reverse side)

Utah State 9
Form approved.
Budget Bureau No. 42-R355.5

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 Dry Hole

2. NAME OF OPERATOR
Willard Pease Oil & Gas Company

3. ADDRESS OF OPERATOR
570 Kennecott Bldg., Salt Lake City, Utah 84111

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface NE. SE. SEC. 23, T17S, R25E, S.L.M.
At top prod. interval reported below 667' from E-line & 2033'' from S-line
At total depth _____

14. PERMIT NO. _____ DATE ISSUED _____

5. LEASE DESIGNATION AND SERIAL NO.
U-16918

6. IF INDIAN, ALLOTTEE OR TRIBE NAME _____

7. UNIT AGREEMENT NAME
Bar Creek

8. FARM OR LEASE NAME
Federal-Anschutz

9. WELL NO.
Bar Creek Unit #3

10. FIELD AND POOL, OR WILDCAT
Staseline

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA
NE. SE. Sec. 23-17S-25E
S.L.M.

12. COUNTY OR PARISH
Grand

13. STATE
Utah

15. DATE SPUNDED Oct. 21 '77 16. DATE T.D. REACHED Oct. 24 '77 17. DATE COMPL. (Ready to prod.) Oct. 25 '77 18. ELEVATIONS (DF, R&B, RT, GR, ETC.)* 5180' grd.; 5190' K.B. 19. ELEV. CASINGHEAD -----

20. TOTAL DEPTH, MD & TVD 3280' 21. PLUG, BACK T.D., MD & TVD none 22. IF MULTIPLE COMPL., HOW MANY* none 23. INTERVALS DRILLED BY → ROTARY TOOLS 0-3280' CABLE TOOLS _____

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
none

25. WAS DIRECTIONAL SURVEY MADE
no

26. TYPE ELECTRIC AND OTHER LOGS RUN
IES; Gamma-density-neutron

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
<u>8-5/8"</u>	<u>24.00#</u>	<u>179' K.B.</u>	<u>12 1/2"</u>	<u>100 sks.</u>	<u>none</u>

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
<u>none</u>				

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
<u>none</u>		

31. PERFORATION RECORD (Interval, size and number)
none

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
<u>none</u>	

33.* PRODUCTION

DATE FIRST PRODUCTION none PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) none

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
<u>none</u>			<u>→</u>	<u>none</u>	<u>none</u>	<u>none</u>	

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
		<u>→</u>	<u>none</u>	<u>none</u>	<u>none</u>	

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

35. LIST OF ATTACHMENTS
Drilling History & geologic Report.

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

SIGNED H. W. Geigley TITLE Cons. Geol. DATE Nov. 7, 1977

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

