

**FILE NOTATIONS**

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

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

**COMPLETION DATA:**

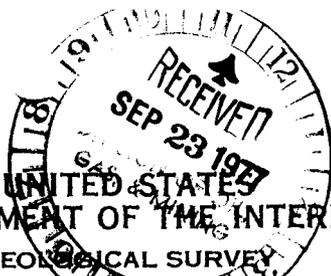
Date Well Completed 11-20-77  
..... TA.....  
GW..... OS..... PA..... ✓

Location Inspected .....  
Bond released  
State or Fee Land .....

**LOGS FILED**

Driller's Log..... ✓  
Electric Logs (No.) ✓.....  
E..... I..... Dual I Lat..... GR-N..... Micro.....  
BHC Sonic GR..... Lat..... MI-L..... Sonic.....  
CBLog..... CCLog..... Others.....

VLC  
#2-11-92



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

Form approved.  
Budget Bureau No. 42-R1425

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  
 J. Hiram Moore  
 3. ADDRESS OF OPERATOR  
 314 Gulf Bldg., Midland, Texas 79701

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*  
 At surface 1935' F.W.L. 1985' F.S.L. Sec. 2 T23S R4E Sevier County, Utah  
 At proposed prod. zone Same as above.

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
 12 miles west - southwest of Emery, Utah

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)  
 18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. no nearby wells

16. NO. OF ACRES IN LEASE  
 1810.38  
 19. PROPOSED DEPTH  
 6000'

17. NO. OF ACRES ASSIGNED TO THIS WELL  
 160  
 20. ROTARY OR CABLE TOOLS  
 Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
 8401 grd. 8411 K.B. (est.)

22. APPROX. DATE WORK WILL START\*  
 Oct. 1, 1977

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/2"	8 5/8"	24#	300'	125 sks. - returns to surface
7 7/8"	5 1/2"	14.5#	to production	cement above top of Ferron

A well is planned at the above location to test the Ferron, Dakota and Cedar Mountain formations for commercial gas production. Approximately 300 feet of surface casing will be set and cemented with returns to the surface to seal off near surface waters. The well will then be drilled with rotary tools using air for circulation. Should significant quantities of water be encountered the circulation media will be changed to mud. Well control equipment will include (1) casing head on top of surface casing (2) blowout preventer (3) rotating head (4) fill and kill lines below the blind rams of the BOP (see attached diagram). The Ferron formation should be encountered at approximately 4610, the Dakota at 5900, and the Morrison at 6000. If commercial production is found in this well 5 1/2" casing (14.5#) will be set thru the productive interval and cemented. The zone will then be perforated and treated.

Note: This irregular location was made because of topographic and Forest Service restrictions & irregular section.

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 M.J. Herwing TITLE Cons. Geologist DATE Sept. 16, 1977

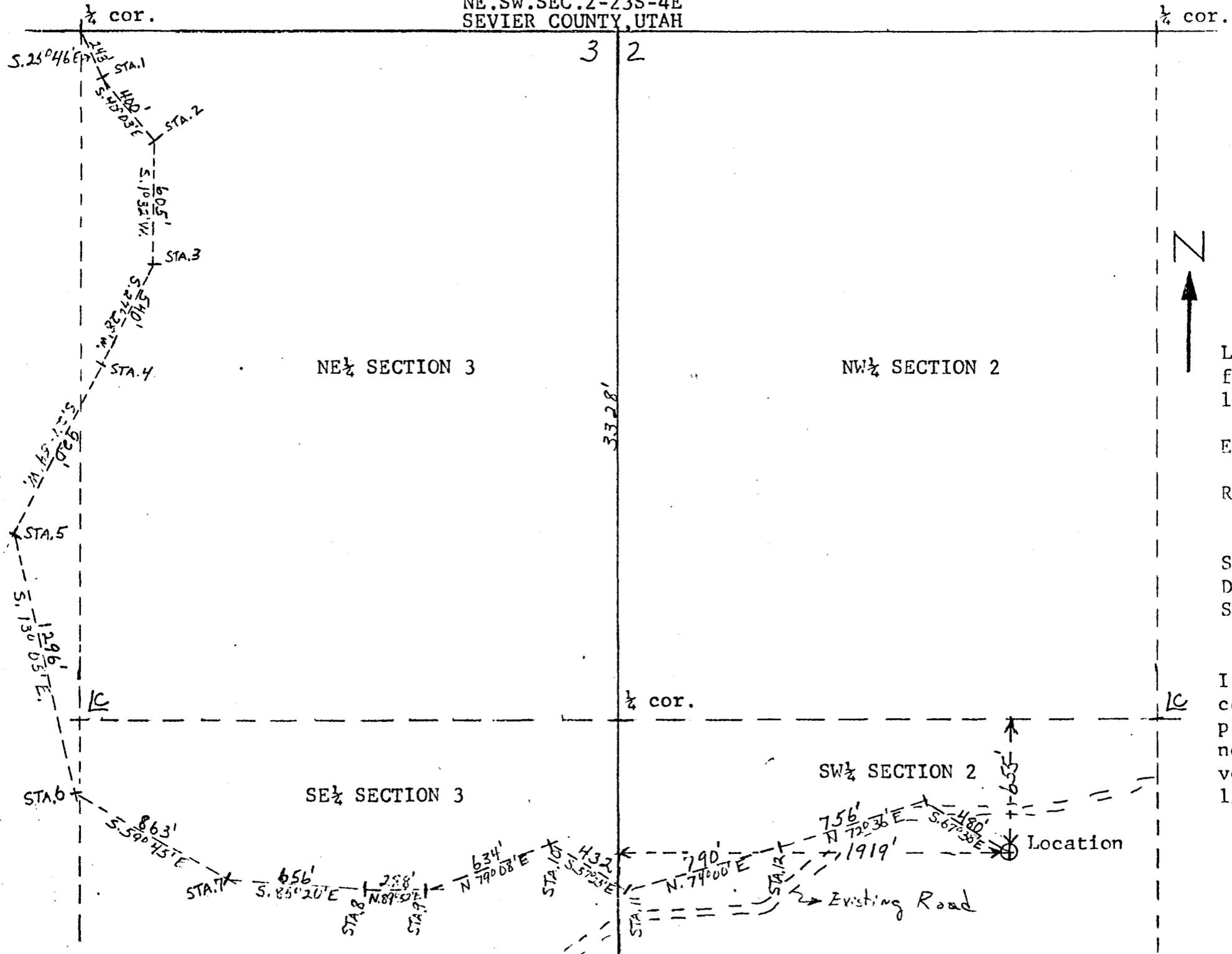
(This space for Federal or State office use)

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

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

CONDITIONS OF APPROVAL, IF ANY:

SURVEY PLAT FOR  
H. MOORE-OLD WOMAN #1 WELL  
NE.SW.SEC.2-23S-4E  
SEVIER COUNTY, UTAH



Location is 1919'  
from the U-line &  
1985' from the S-line.

Elev.: 8401'grd.

Ref.pts. are 200'N & S.

Scale: 1 in. = 600 ft.

Date: Sept. 19, 1977

Surveyed by: W. Don Cuiquley

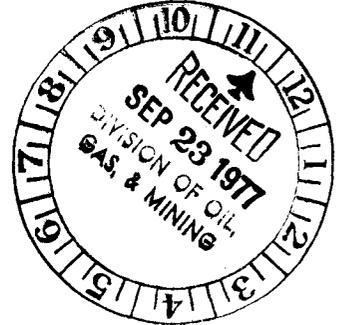
W. Don Cuiquley

I, W. Don Cuiquley,  
certify that this  
plat was plotted from  
notes of a field sur-  
vey made by me on Sept  
15, 1977

*W. Don Cuiquley*

Plat No. 1

# DESIGNATION OF OPERATOR



The undersigned is, on the records of the Bureau of Land Management, holder of lease

DISTRICT LAND OFFICE: Salt Lake City, Utah  
SERIAL NO.: U-20497

and hereby designates

NAME: J. Hiram Moore  
ADDRESS: 314 Gulf Bldg.  
Midland, Texas 79701

as his operator and local agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the supervisor or his representative may serve written or oral instructions in securing compliance with the Operating Regulations with respect to (describe acreage to which this designation is applicable): U-20497

Township 23 South, Range 4 East, S.L.M., Sevier County, Utah  
Section 1: A11  
Section 2: A11  
Section 3: Lots 1,2,7,8, S $\frac{1}{2}$  NE $\frac{1}{4}$ , SE $\frac{1}{4}$   
Containing 1810.38 acres

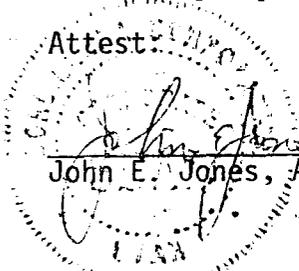
It is understood that this designation of operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

The lessee agrees promptly to notify the supervisor of any change in the designated operator.

Attest:

Cordillera Corporation



John E. Jones, Asst. Secy.

By

Laurence W. Watson, Exec. V.P.  
2334 East Third Avenue  
Denver, Colorado 80206

September 16, 1977

(Date)

(Address)

SURFACE USE AND OPERATIONS PLAN  
FOR  
J. HIRAM MOORE-OLD WOMAN #1  
NE.SW.SEC.2-23S-4E  
SEVIER COUNTY, UTAH

1. Location and Lease: A survey plat showing the exact location of the well is attached hereto. (See Plat No. 1). The location is adjacent to an existing road in a clear area covered with sage brush. The oil & gas lease on which the well is located covers all of Section 2. The attached Map No. 1 shows the roads that will be used to reach the location.
2. Access Road: No additional road will be required to get to the location. It is near an existing road.
3. Location of Existing Wells: No other wells are nearby and none are planned or applied for at the present time. The closest wells are Skelly Oil Co. No. 1 Emery Unit well some five miles east, northeast in Section 34 T 22S R5E, a 10,740 foot Mississippian test and J. Hiram Moore's No. 1 Johnson well in Section 31 T22S R5E a 3,340 foot Morrison test some five and one half miles south southeast.
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: Water for rig use and drilling operations will be obtained from Ivie Creek on Interstate Highway 70. This is approximately 6 miles from the location. The water will be hauled to the location by truck.
6. Road Material: No additional road material, gravel, or culverts will be required.
7. Waste Disposal: A reserve pit and burn pit will be constructed at the well site as shown on Plat No. 3. 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 which will be fenced with chicken wire to prevent spreading of debris by the wind. A toilet will be furnished for human waste.
8. Camp Facilities and Airstrip: No camp facilities other than two or three house trailers at the well site will be needed. The airstrip which was used for the transporting of crews to the Johnson No. 1 well in Section 31-23S-5E will also be used for the same purpose on this well. The airstrip is on private land.

9. Well Site Plan: 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 and the pits dug as shown. The pits will be unlined and will have 4-ft. banks made from the dozed material from the pits. A minimum of work will be required in the preparation of the site, since it is already cleared and fairly level. Some brush will have to be pushed aside.
10. Restoration: After drilling operations have been completed and the equipment removed, the well site 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. In the event there is a lot of fluid in the reserve pit, it will be necessary to allow this to evaporate some prior to folding in the pit. In this case the pit will be fenced before leaving the location.
11. Land Description: The proposed well site is in the Fish Lake National Forest. It is surrounded by cedar, pine, and juniper trees. However the drill site is clear of trees, covered only by sage brush. There is a very gentle slope to the west and a minimum of leveling and filling will be required on the west side. An archeological search and inspection has been made and a copy of the findings is attached.
12. Representative: The operator's representative at the well site will probably be a geologist working for J. Hiram Moore & Company. The road and location work will probably be accomplished by company equipment and hired personnel. J. Hiram Moore representative is M. J. Herring, 444-17th St. Rm. 902, Denver, Colorado, 80202.
13. Certification:  
I hereby certify that I, or persons under my direct supervision have inspected the well 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 J. Hiram Moore and Company personnel and it's contractors in conformity with this plan and terms and conditions under which it is approved.
14. Date: Sept 19, 1977 M. J. Herring  
M. J. Herring

Note: It is anticipated that the work outlined herein will be accomplished in approximately 15 days.

CULTURAL RESOURCE EVALUATION

FOR

HYRUM MOORE CO.

Well

OLD WOMAN #1

By

Dale L. Berge  
Archaeologist

September 1977

## INTRODUCTION

On Wednesday, September 14, an archaeological survey of one drill hole site on the Fish Lake National Forest was completed. This land is to be impacted by the scheduled construction of a drill hole pad by Hyrum Moore Co.

The area had previously been flagged by the Hyrum Moore Co. with a 200 foot boundry around the drill hole proper. The survey was conducted by Dr. Dale L. Berge, Brigham Young University with field assistance by Alan Spencer.

## SURVEY

Drill hole "Old Woman #1" is located in T. 23S, R. 4E SE $\frac{1}{4}$  of NE $\frac{1}{4}$  of SW $\frac{1}{4}$  of Sec. 2 (see attached map). It is located on a sagebrush-mountain mahogany flat on the north rim of the head of Saleratus Canyon. Its elevation is approximately 8430 feet above sea level. Access is via an established jeep trail that branches off the main graded dirt road approximately one mile south of South Water Hollow.

An intensive archaeological survey was conducted by zig-zagging across the entire flagged drill pad area. No cultural resources were observed in the proposed impact area. In the event that sub-surface cultural resources are discovered by construction, a qualified archaeologist should be consulted.

## RECOMMENDATIONS

Well: Old Woman #1

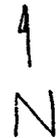
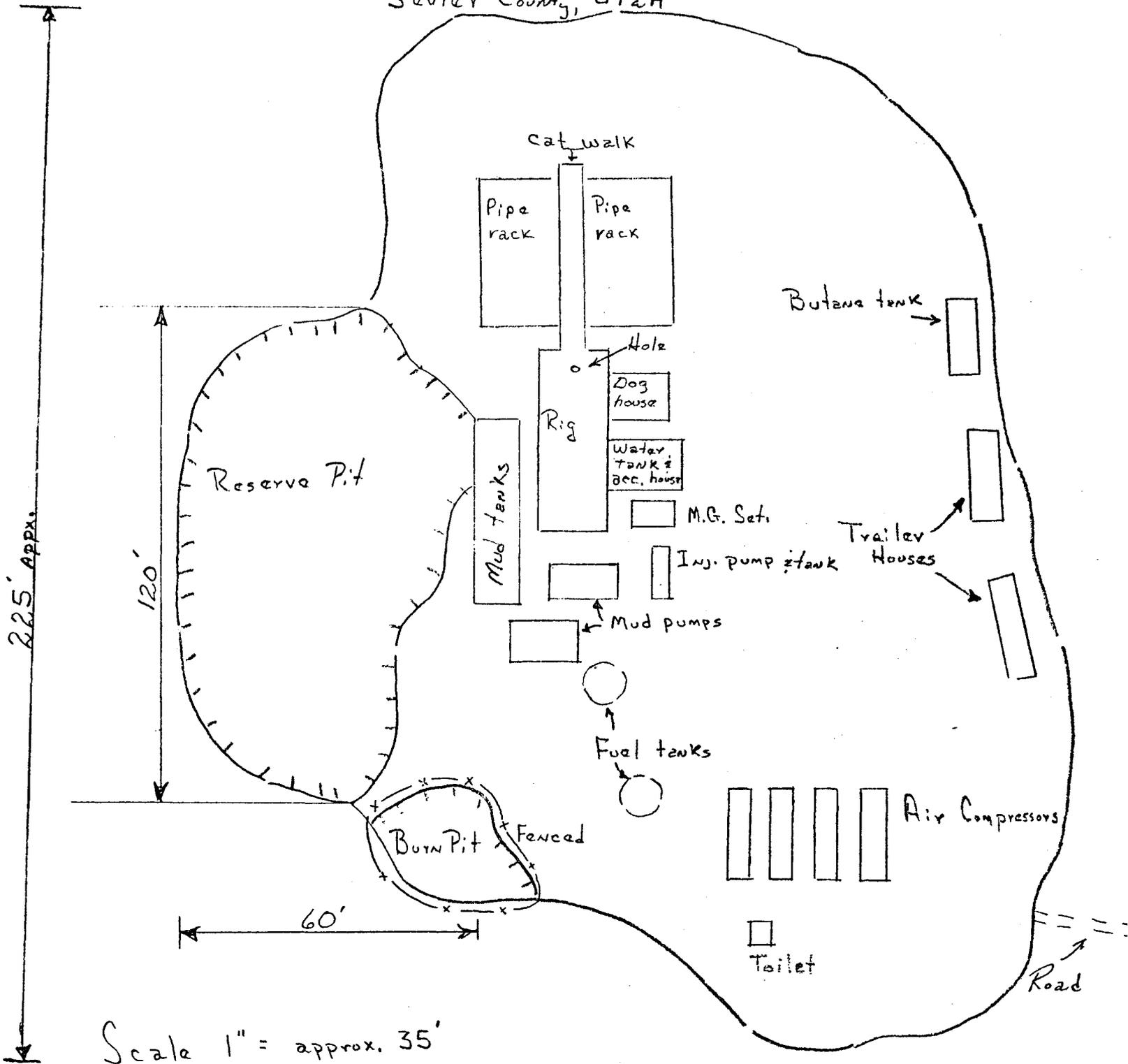
Location: T.23S, R.4E  
SE $\frac{1}{4}$  of NE $\frac{1}{4}$  of SW $\frac{1}{4}$  of Sec. 2  
Sevier County, Utah  
Fish Lake National Forest  
Map Reference: Old Woman Plateau Quadrangle, 7.5 Series, USGS

Clearance Status: Recommended.

Total acreage: 200' x 200'

Because no cultural materials were discovered in the proposed impact area, it is recommended that Hyrum Moore Co. be granted cultural resource clearance for this construction work.

Location Plan For  
J. Fivam Moore - Old Woman No. 7  
NE/SW Sec. 2-23S-R4E  
Sevier County, Utah



Plat No. 3

WELL CONTROL EQUIPMENT FOR  
J. Hiram Moore Old Woman #1 Well  
Sevier 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 12 $\frac{1}{4}$ "
  - B. Setting depth for surface casing is approx. 300 ft.
  - C. Casing specs. are: 8 5/8" O.D., J-55, 24.00#, 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 80 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 $\frac{1}{2}$ " 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 $\frac{1}{2}$ " 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 4000' to 6000' in the area have been measured at about 1000# to 2000# maximum.
7. Drilling fluids:

Air or fresh gel-mud will be used to drill the subject well. In case of excessive water and/or oil, it may be necessary to convert to mud. See prognosis for details.

WELL CONTROL EQUIPMENT

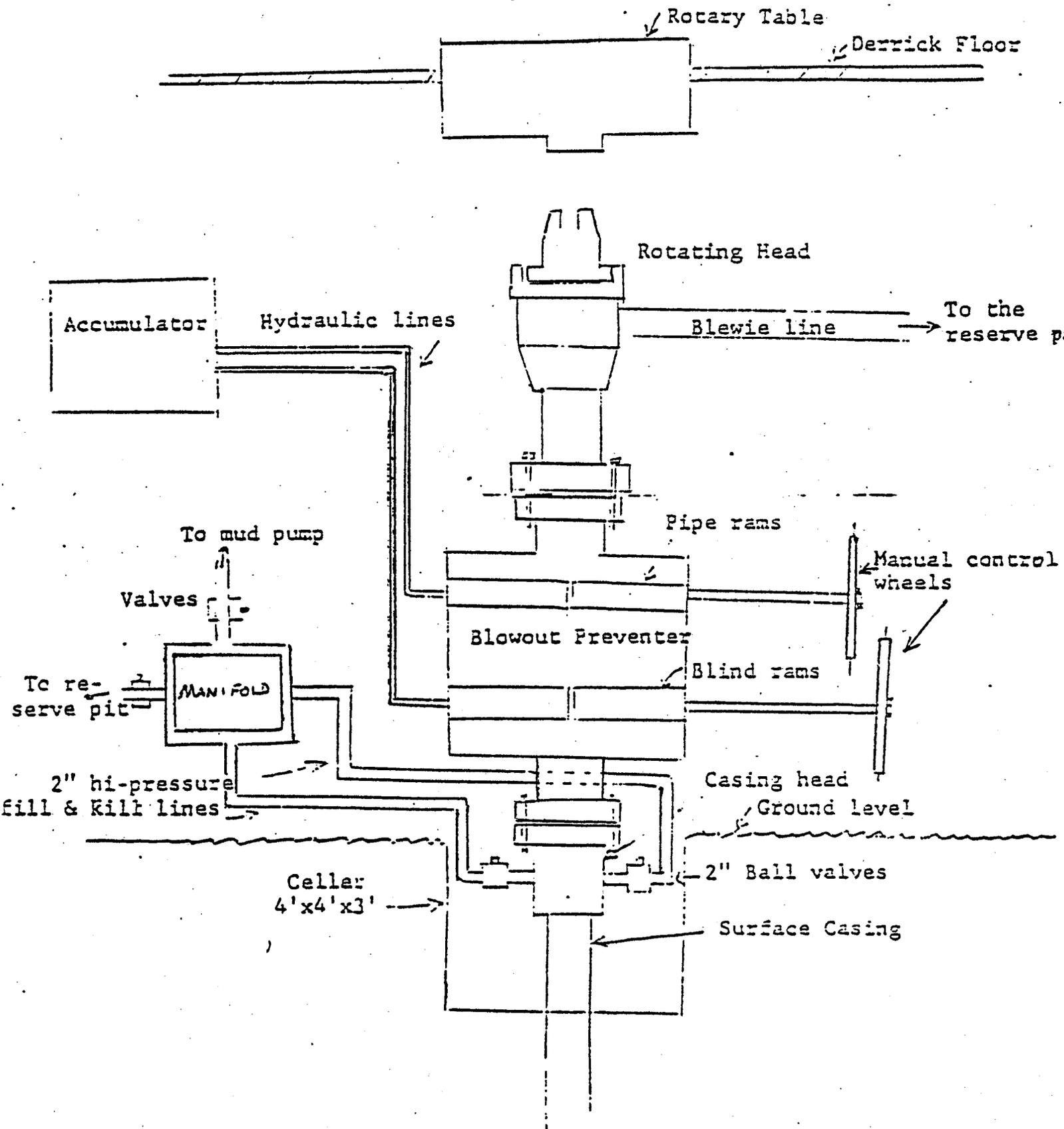
J. Hiram Moore Old Woman #1 Well  
Sevier County, Utah

Page 2

8. Production Casing:

- A. Hole size for production casing : 7 7/8"
- B. Approx. setting depth: 6000'
- C. Casing specs.: 5½" O.D., 14.50#, J-55, new.
- D. Casing will be set thru the pay zones and cemented with sufficient thixotropic or RFC cement to bring the cement top about 100 ft. above the top of the Ferron formation.
- E. The pay zones will be perforated, and treated, if necessary. The required surface equipment will then be installed.

SCHEMATIC DIAGRAM OF  
 J. HIRAM MOORE - OLD WOMAN NO. 1  
 NE/SW SEC. 2 - 23S - 24E  
 SEVIER COUNTY, UTAH

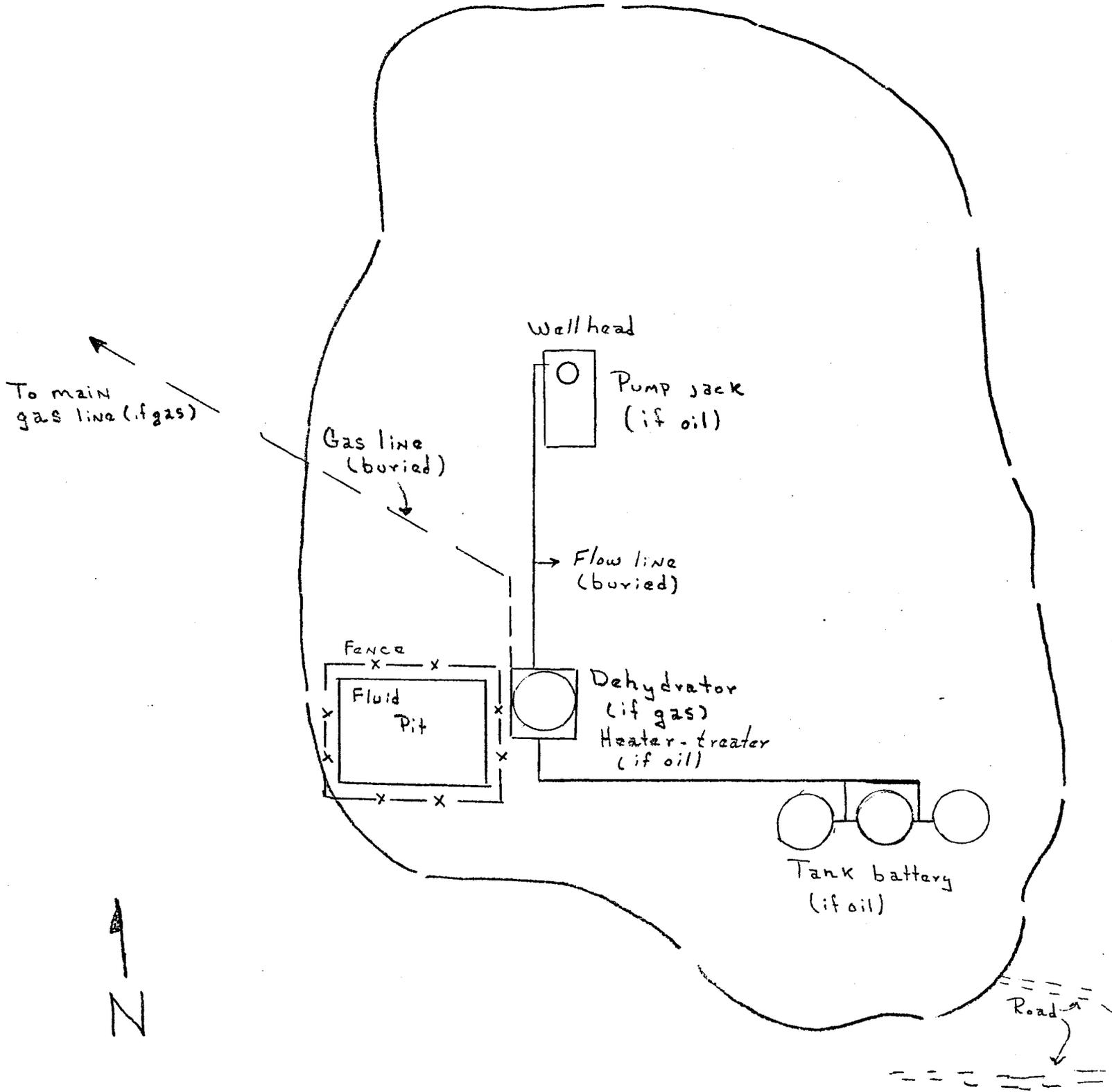


# Plan for Production Equipment

J. Hiram Moore - Old Woman No. 1

NE/SW Sec. 2 - 23S - 4E

Savies County, Utah



Plat No. 2

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

\*\* FILE NOTATIONS \*\*

Date: Sept. 26  
Operator: J. Hiram Moore  
Well No: Old Woman #1  
Location: Sec. 2 T. 23S R. 4E County: Sevier

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

API NUMBER: B-04-30017

CHECKED BY:

Administrative Assistant [Signature]

Remarks: [Signature]

Petroleum Engineer [Signature]

Remarks:

Director \_\_\_\_\_

Remarks:

*Change Surface Cement from 125 Sacks to 200 Sacks.*

INCLUDE WITHIN APPROVAL LETTER:

Bond Required:

Survey Plat Required:

Order No.

Surface Casing Change to 200 5x Cement

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

O.K. Rule C-3

O.K. In \_\_\_\_\_ Unit

Other:

[Signature] Letter Written/Approved

September 27, 1977

J. Hiram Moore  
314 Gulf Bldg.  
Midland, Texas 79701

Re: Well No. Old Woman Federal #1  
Sec. 2, T. 23 S, R. 4 E,  
Sevier County, Utah

Gentlemen:

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

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

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

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

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

The API Number assigned to this well is 43-041-30017.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

CLEON B. FEIGHT  
Director

cc: U.S. Geological Survey  
Note: Please change surface cement to be set from 125 sacks to 200 sacks minimum.

NO!  
**CONFIDENTIAL**

OCT 1 1977

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  
J. Hiram Moore

3. ADDRESS OF OPERATOR  
314 Gulf Bldg., Midland, Texas 79701

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*  
At surface  
1919' F.W.L. 1985' F.S.L. Sec. 2 T23S R4E Sevier County, Utah  
At proposed prod. zone  
Same as above.

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
12 miles west - southwest of Emery, Utah

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

16. NO. OF ACRES IN LEASE  
1810.38

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.  
no nearby wells

19. PROPOSED DEPTH  
6000'

20. ROTARY OR CABLE TOOLS  
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
8401 grd. 8411 K.B. (est.)

22. APPROX. DATE WORK WILL START\*  
Oct. 1, 1977

PROPOSED CASING AND CEMENTING PROGRAM

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7 7/8"	5 1/2"	14.5#	to production	cement above top of Ferron

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Note: This irregular location was made because of topographic and Forest Service restrictions & irregular section.

APPROVED BY THE DIVISION OF  
OIL, GAS, AND MINING

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.

23. SIGNED M. J. Harris TITLE Cons. Geologist DATE Sept. 16, 1977

(This space for Federal or State office use)

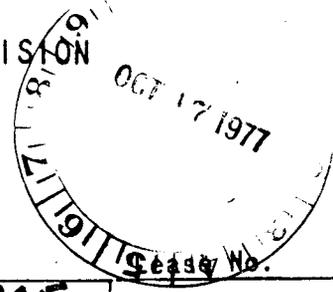
PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

APPROVED BY (ORIG. SGD.) E. W. GUYNN TITLE DISTRICT ENGINEER DATE OCT 13 1977

CONDITIONS OF APPROVAL, IF ANY:  
Dept of Nat'l Resources  
O, G, and Mining, State Office, UT.  
\*See Instructions On Reverse Side

FROM: DISTRICT GEOLOGIST, SALT LAKE CITY, UTAH

TO: DISTRICT ENGINEER, SALT LAKE CITY, UTAH



Well Location

J. HIRAM MOORE 1919 F&L, 1985' F&L, S. 2 T23S R4E,  
 # Old Woman #1 SW 1/4, Sevier Co, UTAH T23E R401' U-20497

1. Stratigraphy and Potential Oil and Gas Horizons. *Surface rocks are of the Blackhawk formation. Well is to test the Ferron, Dakota and Cedar Mt. formations for gas.*

2. Fresh Water Sands.

*NO!*  
~~CONFIDENTIAL~~

*WRD report on page 2.*

3. Other Mineral Bearing Formations. *Coal will be encountered in the Blackhawk formation & also thin beds of coal in the Ferron S.S. of the ~~Manito~~ <sup>Manito</sup> fm.*

4. Possible Lost Circulation Zones.

*unknown.*

5. Other Horizons Which May Need Special Mud, Casing, or Cementing Programs.

*unknown.*

6. Possible Abnormal Pressure Zones and Temperature Gradients.

*unknown.*

7. Competency of Beds at Proposed Casing Setting Points.

*Probably competent.*

8. Additional Logs or Samples Needed.

*Logs to identify coal horizons in the Blackhawk & Manco Shd*

9. References and Remarks

*none*

Date: 9-26-77

Signed: *emp*

(D-21-1) 24 area  
56  
Depths of fresh-water zones:

Phillips Petroleum Co., Wasatch Plateau Unit No. 1, Wildcat  
1, 321 ft fel, 1, 253 ft fsl, sec, 24, T. 21 S., R. 1, E., SLB&M, Sevier Co, Utah  
Elev. 7, 414 ft, proposed depth 9, 000 ft

Stratigraphic units

Green River Fm            surface

Colton Fm

Flagstaff Fm

North Horn Fm

Price River Fm

Castlegate Ss

Blackhawk Grp

There are no water wells of record in the near vicinity of the proposed test. Thicknesses and depths of aquifers are not known with any degree of accuracy. Fresh water may be found in water-bearing zones as deep as the Blackhawk Group. Useable water is reported to be present in the Blackhawk about 10 miles southeast of the test site. Water in units of the Mancos Shale and below is probably saline or brine.

USGS - WRD  
6-17-71

ATTACHMENT 2-A

SUMMARY OF ENVIRONMENTAL IMPACT EVALUATION EIA NO. 725  
DATE 10-7-77

OPERATOR JHiram Moore  
LEASE # U-20497  
WELL NO. Old Woman #1  
LOC. NE 8W SEC. 2  
T. 23N R. 4E  
COUNTY Sevier STATE Utah  
FIELD Wildcat  
USGS Cook  
BLM Allred  
REP: Price  
DIRT

- ENHANCES
- NO IMPACT
- MINOR IMPACT
- MAJOR IMPACT

	Construction				Pollution				Drilling Production			Transport Operations			Accidents		Others		
	Roads, bridges, airports	Transmission lines, pipelines	Dams & impoundments	Others (pump stations, compressor stations, etc.)	Burning, noise, junk disposal	Liquid effluent discharge	Subsurface disposal	Others (toxic gases, noxious gas, etc.)	Well drilling	Fluid removal (Prod. wells, facilities)	Secondary Recovery	Noise or obstruction of scenic views	Mineral processing (ext. facilities)	Others	Trucks	Pipelines	Others	Spills and leaks	Operational failure
Forestry	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Grazing	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Wilderness	N.P.																		
Agriculture	N.P.																		
Residential-Commercial	WA																		
Mineral Extraction	N.D.																		
Recreation	0	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Scenic Views	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Parks, Reserves, Monuments	N.P.																		
Historical Sites		none known																	
Unique Physical Features	NA																		
Birds	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Land Animals	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Fish	N.P.																		
Endangered Species		none known																	
Trees, Grass, Etc.	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Surface Water	N.P.																		
Underground Water	?																		
Air Quality	/				/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Erosion	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Other																			
Effect On Local Economy	0	0						0						0					
Safety & Health	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Others																			

Loc. marked  
50' SW

LEASE U-20497 DATE 10-2-77WELL NO. Old Women #1LOCATION: NE 1/4 SW 1/4, SEC. 2, T. 23N, R. 4EFIELD Wildcat COUNTY Sevier STATE UtahENVIRONMENTAL IMPACT ANALYSIS - ATTACHMENT 2-BI. PROPOSED ACTIONJ. Hiram Moore  
(COMPANY)

PROPOSES TO DRILL AN OIL AND

GAS TEST WELL WITH ROTARY TOOLS TO ABOUT 6000 FT. TD. 2) TO CONSTRUCT ADRILL PAD 150 FT. X 300 FT. AND A RESERVE PIT 100 FT. X 200 FT.3) TO CONSTRUCT 0 FT. WIDE X 0 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 PADAND  TRUCK  TRANSPORT THE PRODUCTION THROUGH A PIPELINE TO A TIE-IN IN

There is plenty of room at drill site  
 To build location larger so in agreement  
 with The Forest Service I ~~am~~ recommend  
 That location be built 150' x 300' and  
 reserve pit be allowed 100' x 200'

SALT LAKE CITY, UTAH

OCT 12 1977

RECEIVED  
 SALT LAKE CITY, UTAH  
 OCT 12 1977

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 50 ft South TO AVOID  
 LARGE SIDEHILL CUTS     NATURAL DRAINAGE     OTHER Existing Road

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 10-2-77

INSPECTOR A. R. Cook

E. W. [Signature]

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

LEASE U-20497 DATE 10-7-77

WELL NO. Old Woman #1

LOCATION: NE 1/4 SW 1/4, SEC. 2 T. 23N R. 4E

FIELD Wildcat COUNTY Sevier STATE Utah

ENVIRONMENTAL IMPACT ANALYSIS - ATTACHMENT 2-B

I. PROPOSED ACTION

J. Hiram Moore PROPOSES TO DRILL AN OIL AND  
 (COMPANY)  
 GAS TEST WELL WITH ROTARY TOOLS TO ABOUT 6000 FT. TD. 2) TO CONSTRUCT A  
 DRILL PAD 150 FT. X 300 FT. AND A RESERVE PIT 100 FT. X 200 FT.  
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 FT. WIDE X MILES ACCESS ROAD FROM AN EXISTING AND IMPROVED ROAD, TO  
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 AND  TRUCK  TRANSPORT THE PRODUCTION THROUGH A PIPELINE TO A TIE-IN IN

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 That location be built 150' x 300' and  
 reserve pit be allowed 100' x 200'

SALT LAKE CITY, UTAH  
 OCT 12 1977  
 RECEIVED  
 OFFICE OF THE STATE ENGINEER  
 DIVISION OF OIL AND GAS

(3) WILDLIFE:  DEER  ANTELOPE  ELK  BEAR  SMALL  
MAMMAL  BIRDS  ENDANGERED SPECIES  OTHER \_\_\_\_\_

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

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

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

REF: ~~DEM 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)

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

D

**CIRCULATE TO:**

DIRECTOR	-----	<input checked="" type="checkbox"/>	P
PETROLEUM ENGINEER	-----	<input checked="" type="checkbox"/>	S
MINE COORDINATOR	-----	<input type="checkbox"/>	
ADMINISTRATIVE ASSISTANT	-----	<input checked="" type="checkbox"/>	
ALL	-----	<input type="checkbox"/>	
RETURN TO	<i>Kathy Wells</i>		
	FOR FILING		

October 25, 1977

Memo To File:

Re: J. Hiram Moore  
 Old Woman Federal #1  
 Sec. 2, T. 23S, R. 4E,  
 Sevier County, Utah

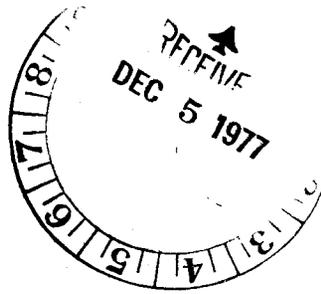
This office was informed today of the spudding of above well on October 24, 1977 at 10:p.m.

Total depth at this time was 78'. Willard Pease is the Drilling Contractor and Rig #2 is on location.

Surface casing has not been set.

PATRICK L. DRISCOLL  
 CHIEF PETROLEUM ENGINEER

PLD/ko



WELL REPORT

FOR

J. HIRAM MOORE

W E L L

J. HIRAM MOORE  
NO. 1 OLD WOMAN - FEDERAL

1935' F.S.L., 1919' F.W.L.

Section 2

T23S, R4E, S.L.M.

Sevier County, Utah

Prepared By:

James K. Price  
Geologist  
Lakewood, Colorado

C O N T E N T S

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W E L L   S U M M A R Y

OPERATOR: J. Hiram Moore

CONTRACTOR: Willard Pease Drilling Company, Rig No. 2,  
Russell Morris, Toolpusher

WELL NAME: No. 1 Old Woman-Federal

LOCATION: 1935' fsl, 1919' fw1, Section 2,  
Township 23 South, Range 4 East,  
Sevier County, Utah

ELEVATION: G.L. 8401'            K.B. 8410'

OBJECTIVE: Ferron Sandstone, Dakota Sandstone and  
Upper Cedar Mountain Formation.

TOTAL DEPTH: 5740' (Driller)

SPUD DATE: October 24, 1977 (10:00 P.M.)

COMPLETION DATE: November 20, 1977

TYPE COMPLETION: P & A

HOLE SIZE: 14-3/4" to 320'  
8-3/4" from 320' to 3703'  
6-1/8" from 3703' to total depth.

CASING: Surface Casing: Ran 9 joints of 10-3/4"  
casing, set at 309' K.B. Cemented with  
220 sacks of cement. Plug down at 8:45  
A.M., October 26, 1977.

Intermediate Casing: Ran 99 joints of  
7" casing, with one guide shoe and back  
float, set at 3615.77' K.B., cemented  
with 100 sacks class G cement with 2%  
CaCl. Plug down at 4:45 A.M., November  
6, 1977.

CORES: None

DRILLSTEM TESTS: None

MUD: Banks Mud Sales, Don Ackers, Grand Junction,  
Colorado.

ELECTRIC LOGS: Schlumberger  
Dual Induction-Laterolog  
F.R. 5721'            L.R. 3617'  
Compensated Neutron-Formation Density Log  
F.R. 5724'            L.R. 3950'  
Compensated Neutron (In 7" casing)  
F.R. 3606'            L.R. 100'

WELLSITE GEOLOGIST: James K. Price, Lakewood, Colorado

WELL REPORT  
NO. 1 OLD WOMAN-FEDERAL

F O R M A T I O N   T O P S (LOGS)

<u>FORMATION</u>	<u>DEPTH</u>	<u>ELEVATION</u>	<u>THICKNESS</u>
Star Point Sandstone	1360	+7050	382
Masuk Shale	1742	+6668	325
Emery Sandstone	2067	+6343	1003
Bluegate Shale	3070	+5340	1080
Ferron Sandstone	4150	+4260	593
Tununk Shale	4743	+3667	824
Dakota Sandstone	5567	+2843	113
Cedar Mountain	5680	+2730	
TOTAL DEPTH	5727' (Logger)	5740' (Driller)	

C H R O N O L O G I C A L   H I S T O R Y

<u>DATE</u>	<u>DEPTH (8:00 A.M.)</u>	<u>DAYS DRILLED</u>	<u>COMMENTS</u>
10-24-77			Spud @ 10:00 P.M.
10-25-77	78'	1	Water at 78'. Mudded up. Lost circulation.
10-26-77	320'	2	Ran surface casing. Plug down @ 8:45 A.M.
10-27-77	385'	3	Drilling with air.
10-28-77	1535'	4	Drilling with mist from 605'.
10-29-77	2365'	5	Drilling with mist.
10-30-77	3255'	6	Drilling with mist.
10-31-77	3673'	7	Attempted to mud up. Lost circulation. Waiting on mud.
11-1-77	3673'	8	Mixing mud. Attempting to gain circulation. Fluid level 700' from surface.
11-2-77	3673'	9	Rigging up to drill with aerated mud.
11-3-77	3673'	10	Attempting to gain circulation with aerated mud.
11-4-77	3673'	11	Bringing out additional compressor.
11-5-77	3703'	12	Drilled with aerated mud. Lost circulation.

WELL REPORT  
NO. 1 OLD WOMAN-FEDERAL

CHRONOLOGICAL HISTORY (Continued)

<u>DATE</u>	<u>DEPTH (8:00 A.M.)</u>	<u>DAYS DRILLED</u>	<u>COMMENTS</u>
11-6-77	3703'	13	Ran 99 joints, 7: casing. Plug down @ 4:45 A.M., 11-6-77.
11-7-77	3801'	14	Drilling with air.
11-8-77	4366'	15	Tripping in with Bit #6. (T/FERRON, 4170'). Convert to mist at 4190'.
11-9-77	4963'	16	Drilling with mist. (T/TUNUNK, 4760').
11-10-77	5184'	17	Mudding up. Unable to go to bottom after shut-down for booster repair.
11-11-77	5184'	18	Tripping for Bit #7. Mud characteristics: Weight: 8.6; Vis.: 100; W.L.: 6; Ph: 8. Cleaned out to 4500'.
11-12-77	5184'	19	Cleaning out to 4945'. Lost and regained circulation.
11-13-77	5184'	20	Cleaned out to 4960'. Tripped for Bit #8. Left two cones in hole. Bypassed cones. Lost and regained circulation.
11-14-77	5184'	21	Waiting on fishing tools. Twisted off 6 joints below rotary table @ 3:00 A.M.
11-15-77	5184'	22	Cleaning out at 5094'. Recovered fish and tripped to unplug Bit #8, Weight: 8.6; Vis.: 200.
11-16-77	5300'	23	Drilling with mud in shale.
11-17-77	5447'	24	Drilling.
11-18-77	5533'	25	Drilling. Weight: 9.1; Vis.: 118.
11-19-77	5655'	26	Drilling. (T/DAKOTA, 5570').
11-20-77	5740'	27	Tripping out for logs.
11-21-77	5740'	28	Coming out, laying down. Preparing to plug and abandon.



WELL REPORT  
NO. 1 OLD WOMAN-FEDERAL

P L U G S

Telephone approval to plug from Mr. E. W. Guynn, U.S.G.S.,  
Salt Lake City, Utah.

Plug No. 1	5350-5550	45 Sacks
Plug No. 2	3475-3625	35 Sacks
Plug No. 3	220-320	25 Sacks
Plug No. 4	Surface	10 Sacks
Plug No. 5	Annulus	95 Sacks

Plugs No. 2, 3 and 4 are in the 7" intermediate casing.  
Plug No. 5 is in the annulus between the surface casing and the  
intermediate casing.

S A M P L E   D E S C R I P T I O N

3700-4180      SHALE, grey-tan, slightly silty.  
(Air drilling samples, fine dust)

4180-4190      SANDSTONE, fine to medium grained, loose sand grains  
(T/FERRON SANDSTONE), COAL, black, conchoidal fracture  
surfaces.

4190-4200      SANDSTONE and COAL, as above.

4200-4220      CLAYSTONE, light grey; SHALE, medium to dark grey,  
some silty; COAL, as above; trace medium SAND grains.

4220-4240      Sample, as above, with SILTSTONE, white to light grey,  
tight.

4240-4260      Sample, as above.

4260-4280      Sample, as above, with increase in loose sand fine to  
medium grained.

4280-4300      Sample, as above, with increase in SANDSTONE, very  
fine grained to silt size, tight, calcareous.

4300-4360      Sample, as above.

4360-4380      Sample, as above, decrease in SANDSTONE, as above.

4380-4400      N.S.

4400-4420      Sample, as above, with increase in SANDSTONE, as above.

4420-4550      Sample, as above with varying secondary amounts of  
SANDSTONE and SILTSTONE, as above.

4550-4610      Sample as above, with trace of COAL.

WELL REPORT  
NO. 1 OLD WOMAN-FEDERAL

SAMPLE DESCRIPTION (Continued)

- 4610-4650 Sample, as above, with large increase in COAL, black with concoidal surfaces; SILTSTONE, as above, some very calcareous.
- 4650-4670 SANDSTONE, fine grained, mostly loose grains, no porous clusters, some medium grained, white, some grains frosted; marked decrease in COAL.
- 4670-4690 SANDSTONE, fine grained, carbonaceous, calcareous, tight.
- 4690-4750 SANDSTONE, fine grained, as above, mostly loose grains; SHALE and CLAYSTONE, as above, no shows.
- 4750-4790 SHALE, medium to dark grey; CLAYSTONE, as above; marked decrease in SANDSTONE. (T/TUNUNK SHALE)
- 4790-4830 Sample, as above.
- 4830-4930 SHALE, medium to dark grey, slightly calcareous; trace CLAYSTONE, as above.
- 4930-5170 SHALE, medium to dark grey, as above; occasional trace SILTSTONE, grey, argillaceous.
- 5170-5260 SHALE, dark grey, soft; trace SILTSTONE, as above.
- 5260-5360 Sample, as above.
- 5360-5460 Sample, as above.
- 5460-5540 Sample, as above.
- 5540-5560 SHALE, dark grey, as above; trace fine grained SANDSTONE and SILTSTONE, medium to dark grey, argillaceous, tight.
- 5560-5580 SHALE, dark grey, as above; trace SANDSTONE, as above.
- 5580-5590 SANDSTONE, very fine grained to silt size, light grey-tan, calcareous, tight; SHALE, as above. (T/DAKOTA FORMATION).
- 5590-5600 SANDSTONE, very fine to fine grained, some poorly sorted with shale fragments, tight, calcareous, no fluorescence or shows, some orange-brown iron staining. SHALE; as above.
- 5600-5610 SANDSTONE, as above; also SANDSTONE, very siliceous, slightly calcareous, medium grey, dense and tight.
- 5610-5615 SANDSTONE, very siliceous and dense, as above; SANDSTONE, very fine to fine grained, carbonaceous or black shale grams (salt and pepper), calcareous, tight, as above, no shows.
- 5615-5620 SANDSTONE, as above, some fine to medium grained, siliceous and tight as above.

WELL REPORT  
NO. 1 OLD WOMAN-FEDERAL

SAMPLE DESCRIPTION (Continued)

5620-5650	SANDSTONE, as above, tight, no shows; SHALE, as above.
5650-5680	SANDSTONE, very fine grained, very calcareous, tight, no shows.
5680-5690	Poor Sample.
5690-5740	SANDSTONE, as above, calcareous, tight, no shows.
5740 Circ.	SANDSTONE, light grey-tan, fine-grained, some loose sand, mostly tight, calcareous, no shows.

Form OGC-8-X  
File in Quadruplicate

Jim  
Mike

CIRCULATE TO:  
DIRECTOR  
PETROLEUM ENGINEER  
MINE COORDINATOR  
ADMINISTRATIVE ASSISTANT  
ALL

*Handwritten initials and checkboxes*

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



REPORT TO Kathryn W REPORT OF WATER ENCOUNTERED DURING DRILLING  
FOR PLUG

Well Name & Number Old Woman No.1

Operator J. Hiram Moore

Address 314 Gulf Bldg., Midland, Texas 79701

Contractor Willard Peas Drlg. Company

Address Grand Junction, Colorado

Location NE 1/4 SW 1/4; Sec. 2 ; T. 23 N; R. 4 E; Sevier County

Water Sands:

	<u>Depth:</u> From - To -	<u>Volume:</u> Flow Rate or Head -	<u>Quality:</u> Fresh or Salty -
1.	<u>4150 - 4190</u>	<u>1" flow while drlg.</u>	<u>Fresh</u>
2.			<u>Rw .72 @ 68° F</u>
3.			
4.			
5.			

(Continue on Reverse Side if Necessary)

Formation Tops: Ferron 4150 Dakota 5567

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

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

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Location NE 1/4 SW 1/4; Sec. 2 ; T. 23 <sup>N</sup>/<sub>S</sub>; R. 4 <sup>E</sup>/<sub>W</sub>; Sevier County

Water Sands:

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1.	<u>4150 - 4190</u>	<u>1" flow while drlg.</u>	<u>Fresh</u>
2.	<u></u>	<u></u>	<u>Rw .72 @ 68° F</u>
3.	<u></u>	<u></u>	<u></u>
4.	<u></u>	<u></u>	<u></u>
5.	<u></u>	<u></u>	<u></u>

(Continue on Reverse Side if Necessary)

Formation Tops: Kf 4150 Kd 5567

- NOTE: (a) Upon diminishing supply of forms, please inform this office.  
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