

MERIDIAN OIL

RECEIVED
NOV 14 1986

November 12, 1986

DIVISION OF
OIL, GAS & MINING

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

Attention: Arlene Sollis

Re: Application for Permit to Drill
12-17 Supai-Federal
SWNW Section 17-38S-24E
San Juan County, Utah
Federal Lease No. U-57470

Gentlemen:

Enclosed are three copies of Form 3160-3, Application for Permit to Drill with attachments for the above referenced location.

Please be advised that Meridian Oil Inc. requests that all pertinent data for this location be granted TIGHT HOLE status.

If you have any questions, please do not hesitate to call me at 406-256-4122.

Sincerely,



S. S. Nelson
Sr. Operations Technician

ssn

Encl

1175N

CONFIDENTIAL UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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
 MERIDIAN OIL INC.

3. ADDRESS OF OPERATOR
 P. O. Box 1855, Billings, MT 59103

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
 At surface SWNW (1855' FNL - 985' FWL)
 At proposed prod. zone Same

5. LEASE DESIGNATION AND SERIAL NO.
 U-57470

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

7. UNIT AGREEMENT NAME
 N/A

8. FARM OR LEASE NAME
 Supai-Federal

9. WELL NO.
 12-17

10. FIELD AND POOL, OR WILDCAT
 Supai (Wildcat)

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
 Section 17-38S-24E

12. COUNTY OR PARISH
 San Juan

13. STATE
 Utah

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
 5 miles northwest of Hatch Trading Post

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)
 1855'

16. NO. OF ACRES IN LEASE
 4,052.20

17. NO. OF ACRES ASSIGNED TO THIS WELL
 40

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

19. PROPOSED DEPTH
 6,326' *ahah*

20. ROTARY OR CABLE TOOLS
 Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
 5403' GL (graded)

22. APPROX. DATE WORK WILL START*
 4th Quarter, 1986

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2	13-3/8	48#	80'	Redi-Mix to surface
11	8-5/8	24#	2,175'	Single stage. Cmt to sfc w/420 sx "B" + 3% salt + 16% gel + .2% retarder & 110 sx "B" + 2% CaCl ₂ .
7-7/8	5-1/2	15.5#	6,326'	Single stage. TOC @ 1975'. Cal log + 20% excess. "B" + 16% ge. 3% salt, .4% rtrdr & "B" + 3% Kcl + .8% fluid loss.

CONFIDENTIAL INFORMATION

Oil and Gas Order #1
 Attachments:
 Survey Plat
 Eight Point Drilling Program
 Thirteen Point Surface Use Plan

RECEIVED
 NOV 14 1986
 DIVISION OF
 OIL, GAS & 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.

24. SIGNED *B. J. Justice* TITLE Sr. Drilling Engineer DATE 11/12/86

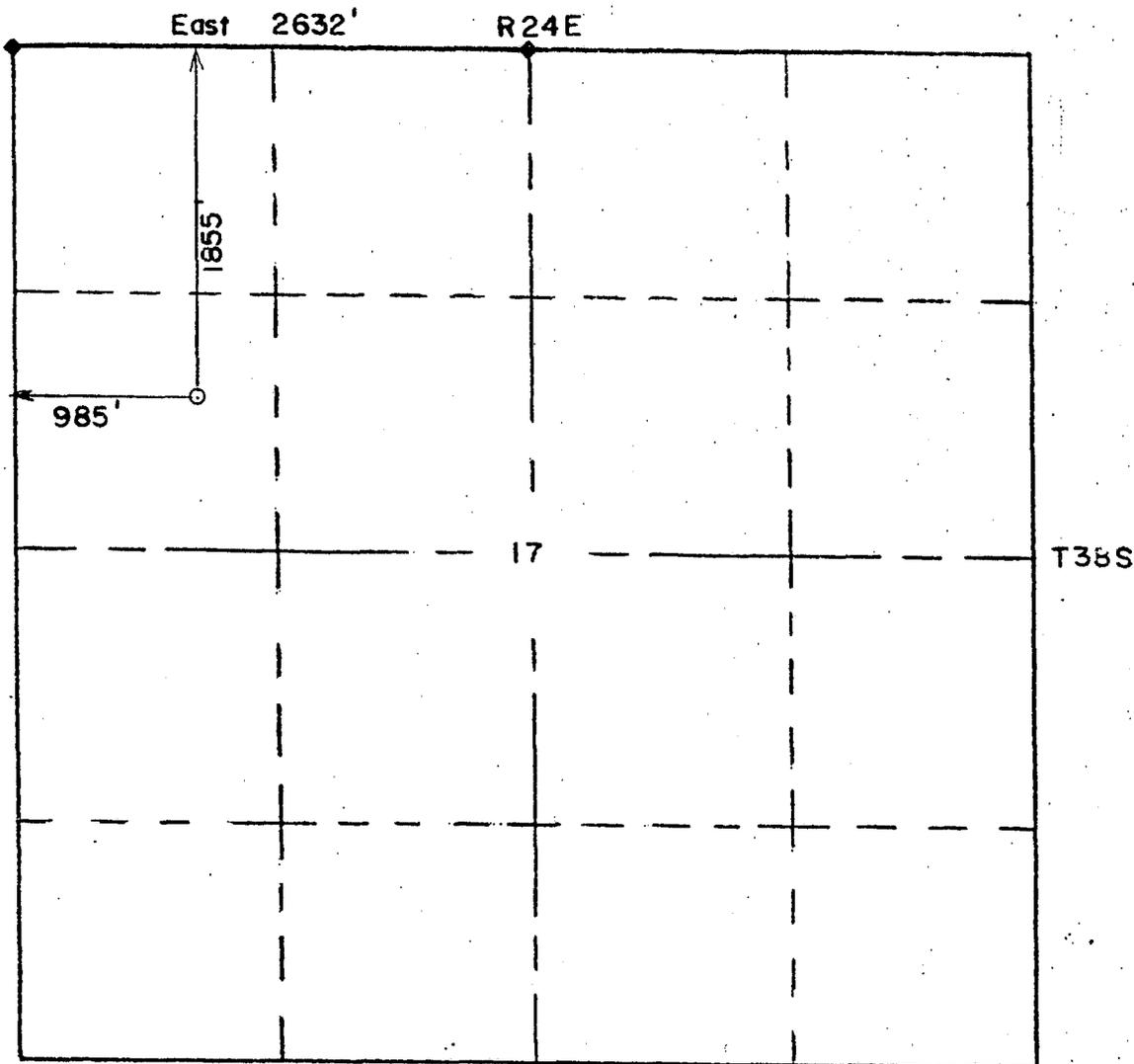
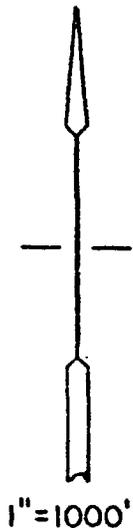
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PERMIT NO. 43-037-31291 APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING

APPROVED BY _____ TITLE _____ DATE: 11/26/86 BY: *[Signature]*

*See Instructions On Reverse Side WELLS CEMENTING: 302.1

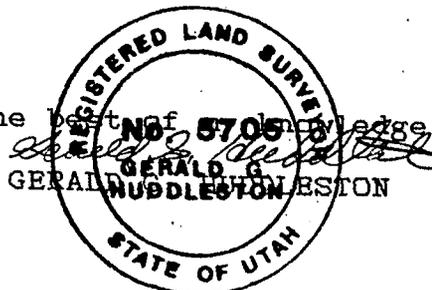
WELL LOCATION PLAT



WELL LOCATION DESCRIPTION:

Meridian Oil Supai Federal 12-17
985'FWL & 1855'FNL
Section 17, T.38 S., R.24 E., SLM
San Juan, Utah
5404' ground elevation
Reference: Superior dry hole
1455'FN & 1620'FW, 5429' grd.
30 Oct. 1985

The above is true to the best of my knowledge.



MERIDIAN OIL

November 24, 1986

DIVISION OF OIL, GAS AND MINING
Department of Natural Resources
State of Utah
355 West North Temple
III Triad Center, Suite 350
Salt Lake City, Utah 84108-1203

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 11/25/86
BY: [Signature]

RE: Request for Exception
#12-17 Supai Federal
Location: SE/4NW/4
Sec. 17, T38S-R24E, SLM

SW

Gentlemen:

Meridian Oil Inc. plans to commence a well at the following location in the near future:

1885' FNL, 985' FWL, Section 17, T38S-R24E, SLM,
San Juan County, Utah

This location requires approval as an exception location under Rule 302.1 of the Oil and Gas Conservation General Rules effective December 2, 1985. Under the Rules, this exception may be granted administratively.

Meridian Oil Inc. and its partners, BWAB 1984-1986 Joint Venture and Maurice Brown jointly own Federal Lease #U-57470 and therefore own within a 460' radius of the proposed well. Further, Meridian Oil Inc. has been formerly designated operator of this tract pursuant to that certain Designation of Operator dated September 9, 1985, a copy of which is attached. Also, see attached Affidavit of William C. Mitchell, Landman with Meridian Oil Inc.

The reason for the requested exception location is geological. As shown on the attached Exhibit "B", it is not possible to drill the optimum location on the geological feature by drilling a legal location. As a result, Meridian Oil proposes to move the location in order to remain on the geological structure and avoid a potential dry hole.

Division of Oil, Gas and Mining
Department of Natural Resources
November 24, 1986
Page 2

A Lease Ownership Plat is attached to the enclosed Affidavit as Exhibit "A". Exhibit "B" depicts the geological feature. This information is proprietary and very sensitive and therefore, it is requested that the State maintain this Plat in a confidential file.

Thank you for your consideration in this matter.

Very truly yours,

MERIDIAN OIL INC.



William C. Mitchell
Landman

1312L/25
Enclosures

(Submit in triplicate to appropriate
Regional Oil and Gas or Mining Supervisor)

47-26000
RECEIVED
JUN 6 1985 7:45 A.M.
Utah Inland Area

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-57470

and hereby designates

NAME: Meridian Oil Inc.
ADDRESS: 5613 DTC Parkway
Englewood, Colorado 80111

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):

Township 38 South, Range 24 East
Section 7: All
Section 9: NE/4
Sections 17, 18, & 22: All
Section 24: S/2
Section 27: All
Section 29: N/2NW/4
Section 30: Lots 3, 4, SE/4NE/4, E/2SW/4, SE/4
Containing 4052.20 acres, m/1
San Juan County, Utah

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.

MAURICE W. BROWN


(Signature of lessee)

614 S. Greeley Highway
Cheyenne, Wyoming 82007
(Address)

9-26-85
(Date)

AFFIDAVIT

STATE OF COLORADO)
) ss.
COUNTY OF ARAPAHOE)

TO WIT:

Now, this 21st day of November, 1986, comes the affiant herein, WILLIAM C. MITCHELL, being of lawful age and the first duly sworn, and does now depose and say:

THAT he is employed as a Landman with Meridian Oil Inc., and in said capacity is acquainted with the facts and allegations herein, and

THAT the plats attached hereto and made a part hereof as "Exhibit A" and "Exhibit B" are accurate to scale and reflects pertinent data required pursuant to oil & gas conservation rule No. 302.1,

And further, THAT to his information and belief, that Meridian Oil Inc., BWAB 1984-1986 Joint Venture and Maurice Brown Jointly own current record title to 100% of the leasehold rights under the following described lands:

Township 38 South, Range 24 East
Section 17: All

THAT BWAB 1984-1986 Joint Venture and Maurice Brown, being the only parties required to be notified, have been properly notified in accordance with rule #302.1(a)(2) of the General Conservation Rules of the Utah Board of Oil, Gas and Mining.

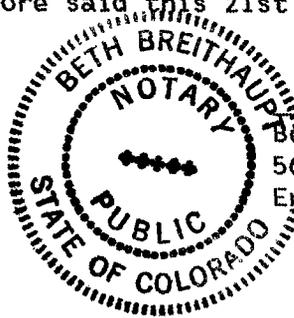
Further affiant sayeth not.

William C. Mitchell

William C. Mitchell

Taken, sworn and subscribed to before me, a Notary Public in and for the County and State afore said this 21st day of November, 1986.

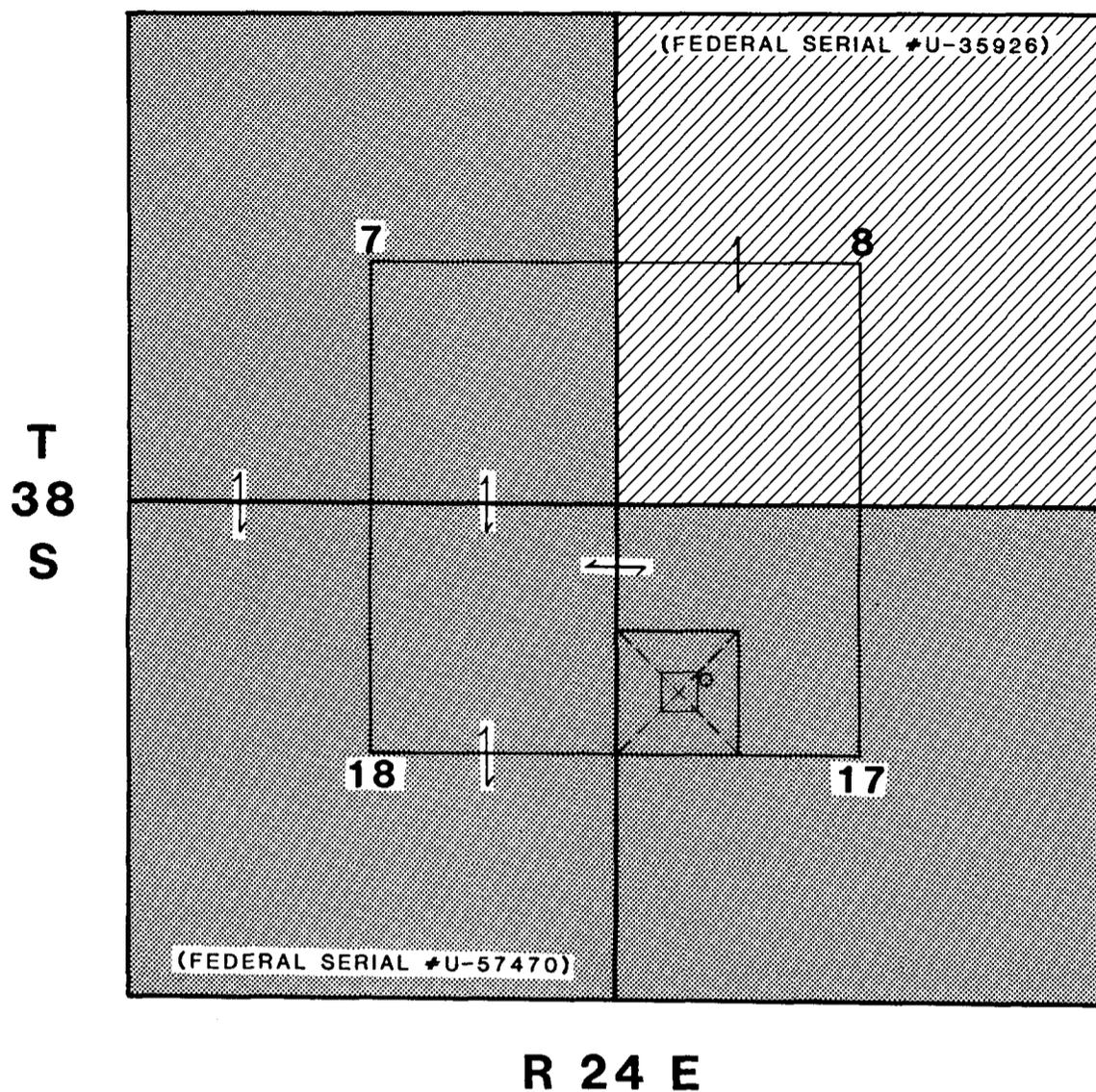
My commission expires 9/9/88



Beth Breithaupt

Beth Breithaupt, Notary Public
5613 DTC Parkway
Englewood, CO 80111

EXHIBIT "A"



KEY: LEASEHOLD OWNERSHIP

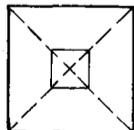


Meridian Oil - 56.25%,
 BWAB 1984-1986 joint venture - 18.75%,
 Mauce Brown - 25%



TXP Operating Co. - 44.17%
 Joan Chorney - 33.33%
 SHV O&G - 7.50%
 Transco 1980 Expl. Co. - 7.50%
 Transco 98 Expl. Co. - 7.50%

○ Proposed Location - #12-17 Supai Federal
 1885' FNL, 985' FWL



400 ft. "Window" per rule #302

MERIDIAN OIL

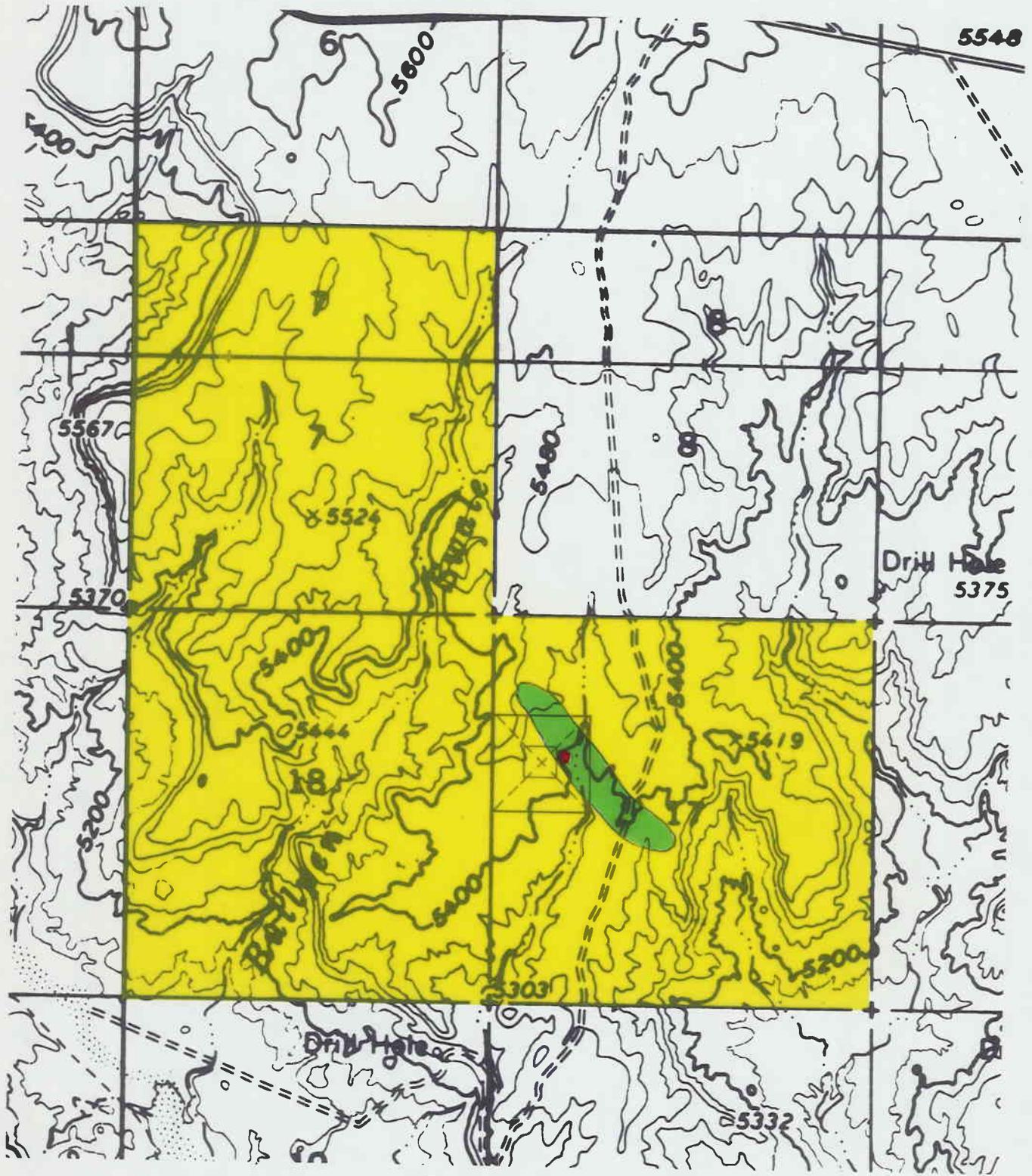
SUPAI PROSPECT

T 38 S R 24 E

SAN JUAN COUNTY, UTAH

Scale: 1"=2000'

EXHIBIT "B"



T
38
S

R 24 E



Meridian Oil - 56.25%
 BWAB 1984-1986 joint venture - 18.75%
 Mauce Brown - 25%



Proposed Location - #12-17 Supai Federal
 sec.17 1885' FNL, 985' FWL



400 ft. "Window"
 center of the swnw, sec.17 T38s-R24E

MERIDIAN OIL

SUPAI PROSPECT

T 38 S R 24 E

SAN JUAN COUNTY, UTAH

Scale: 1"=2000'

1343N

OIL AND GAS ORDER NO. 1

MERIDIAN OIL INC.

LEASE NAME: 12-17 Supai-Federal
LEASE NO. U-57470
LOCATION: SWNW Section 17-38S-24E
1855' FNL - 985' FWL
San Juan County, Utah
Supai Prospect

A. EIGHT POINT DRILLING PROGRAM

1. & 2. Estimated Tops:

Morrison	Surface	
Entrada	1044	
Navajo	1232	fresh water
Chinle	2174	
Shinarump	3164	
Cutler	3284	
Hermosa	5796	
Upper Ismay	5940	oil
Top Porosity	6005	
A Shale	6070	
Lower Ismay	6078	
Desert Creek	6152	oil
Chimney Rock	6240	
Akah	6264	
TD	6326	

3. Pressure Control Equipment:

- a. A 2000 psi WP wellhead will be installed on the surface casing. A 3000 psi WP Annular preventer and 3000 psi WP double gate preventer equipped with blind and pipe rams will be nipped up on wellhead.
- b. BOP systems will be consistent with API RP 53. Annular preventer will be tested to 1500 psi against casing. Pipe and blind rams, choke line and manifold will be tested to 2000 psi against casing. Casing will be tested to 2000 psi prior to drilling float shoe. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. Blowout preventor controls will be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. Preventers will be pressure tested before drilling casing cement plugs. The San Juan Resource Area will be notified 1 day before pressure testing.

4. Casing program:

Anticipated cement tops will be reported as to depth, not the expected number of sacks. The San Juan Resource Area will be notified 1 day before running casing strings and cement.

O&G Order No. 1
12-17 Supai-Federal
1343N/Page 2

<u>Hole Size</u>	<u>Size</u>	<u>Depth</u>	<u>Casing</u>				<u>Cond</u>	<u>Cementing Program</u>
			<u>Weight</u>	<u>Grade</u>	<u>Thrd</u>			
17-1/2	13-3/8	80	48#	H-40	ST&C	New	Redi-Mix to surface.	
11	8-5/8	2,175	24#	K-55	ST&C	New	Single stage. Cement to sfc w/420 sx "B" + 3% salt + 16% gel + .2% retarder & 110 sx "B" + 2% CaCl ₂ .	
7-7/8	5-1/2	6,326	15.5#	K-55	LT&C	New	Single stage. TOC @ 1975'. Caliper log + 20% excess. "B" + 16% gel + 3% salt + .4% retarder & "B" + 3% Kcl + .8% fluid loss.	

5. Proposed drilling mud program:

A water base mud system from surface to TD. Maximum anticipated mud weight is 9.3#/gallon.

A mud logging unit will be on location from 3300' to TD.

6. Testing program:

Upper Ismay - Probable
Desert Creek - Possible

Logging program:

GR/DLL/MSFL Base surface casing to TD (GR to surface)
GR/CNL/FDC Base surface casing to TD
GR/Sonic Base surface casing to TD (GR to surface display)
Directional Survey Base surface casing to TD
Dipmeter: If Desert Creek indicates productive.

Coring program:

None planned.

Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (Form 3160-4) will be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3164. Two copies of all logs, core descriptions, core analysis, well-test data, geologic summaries, sample description, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, will be filed with Form 3160-4. If requested, samples (cuttings, fluids, and/or gases) will be submitted to the District Manager.

7. Anticipated abnormal BHP or BHT:

No abnormal BHP or BHT are expected in this well.

Potentially hazardous conditions anticipated:

No H₂S has been found, reported or is known to exist at these depths in this area.

8. Anticipated Starting Dates and Notifications of Operations

The operator will contact the San Juan Resource Area at 801-587-2141, 48 hours before beginning any dirt work.

No location will be constructed or moved, no well will be plugged, and no drilling or workover equipment will be removed from a well to be placed in a suspended status without prior approval of the District Manager. If operations are to be suspended, prior approval of the District Manager will be obtained and notification given before resumption of operations.

The spud date will be reported orally to the San Juan Area Manager, a minimum of 24 hours before spudding. A Sundry Notice (Form 3160-5) will be sent within 24 hours after spudding, reporting the spud date and time. The Sundry will be sent to the District Manager. If the spudding is on a weekend or holiday, the Sundry will be submitted on the following regular work day.

In accordance with Onshore Oil and Gas Order No. 1, this well will be reported on Form 9-329 "Monthly Report of Operations," starting with the month in which operations begin and continue each month until the well is physically plugged and abandoned. This report will be sent to the BLM District Office, P. O. Box 970, Moab, Utah 84532.

Immediate Report: Spills, blowouts, fires, leaks, accidents, or any other unusual occurrences shall be promptly reported to the Resource Area in accordance with requirements of NTL-3A.

If a replacement rig is planned for completion operations, a Sundry Notice (Form 3160-5) to that effect will be filed, for prior approval of the District Manager. All conditions of this approved plan are applicable during all operations conducted with the replacement rig. In emergencies, verbal approval can be given by the District Petroleum Engineer.

If the well is successfully completed for production, then the District Manager will be notified when the well is placed in a producing status. Such notification will be sent by telegram or other written communication, not later than 5 business days following the date on which the well is placed on production.

No well abandonment operations will begin without the prior approval of the District Manager. In the case of newly drilled dry holes or failures, and in emergencies, oral approval will be obtained from the District Petroleum Engineer. A "Subsequent Report of Abandonment" (Form 3160-5), will be filed with the District Manager, within 30 days following completion of the well for abandonment. This report will indicate where plugs were placed and the current status of surface restoration.

Final abandonment will not be approved until the surface reclamation work required by the approved APD or approved abandonment notice has been completed to the satisfaction of the San Juan Area Manager, or the appropriate surface manager.

Approval to vent/flare gas during initial well evaluation will be obtained from the District Office. This preliminary approval will not exceed 30 days or 50 MMCF gas. Approval to vent/flare beyond this initial test period will require District Office approval pursuant to guidelines in NTL-4A.

Upon completion of approved plugging, a regulation marker will be erected in accordance with 43 CFR 3162.6. The following information will be permanently beaded-on with a welding torch: Fed, well number, location by 1/4 1/4 section, township and range, Lease number.

A first production conference will be scheduled within 15 days after receipt of the first production notice. The San Juan Area Manager will schedule the conference.

Other: A separate rig will be used for completion operations.

The following may be inspected and/or witnessed:

1. The cementing and testing of surface casing.
2. (Dry Hole) Setting and testing of surface casing shoe plug.
3. (Depleted Producer) The setting and testing of plugs across the producing horizon and if applicable, the surface casing shoe plug and/or annulus (casing to formation) squeeze jobs.

Notify the San Juan Resource Area (Mike Wade) one day or on dry hole as soon as possible prior to the above at (801) 587-2201 (Home) (801) 587-2026 or if unable to reach Mike, call Moab District office Greg Noble at (801) 259-6111 (Home) (801) 259-8811.

B. THIRTEEN POINT SURFACE USE PLAN

1. Existing Roads (Yellow)

- a. Location of proposed well in relation to town or other reference point:
5 miles northwest of Hatch Trading Post.
- b. Proposed route to location. (See attached Exhibit "1").
- c. Existing and new access shall be maintained in good or better condition.
- d. An encroachment permit will be obtained from the San Juan County Road Department.

2. Planned Access Roads (Blue)

- a. The maximum total width will be 30 feet for 3/8 miles.
- b. Maximum grade is 0%.
- c. Turnouts will be constructed as needed.
- d. Road is centerline flagged.
- e. Road will be drained as needed.
- f. If access is utilized during wet winter weather, road surfacing may be required to prevent road maintenance problems.
- g. Access road will follow flagged seismic line from dry hole to county road. Access road will be on west side of pipeline.

Surface disturbance and vehicular travel will be limited to the approved location and approved access route. Any additional area needed will be approved in advance by the San Juan Area Manager.

The access road will be water barred or brought to Class III Road Standards within 60 days of dismantling of the drill rig. If this time frame cannot be met, the San Juan Area Manager will be notified so that temporary drainage control can be installed along the access road.

The Class III Road Standards which ensure drainage control over the entire road through the use of natural, rolling topography; ditch turnouts; drainage dips; outsloping; crowning; low water crossing; and culverts will be determined at the appropriate field inspection.

3. Location of Existing Wells (1 mile radius)

- a. Existing wells in the area are shown on attached Exhibit "1".

4. Location of Existing and/or Proposed Facilities if Well is Productive

Battery facility is shown on attached Exhibit "4".

All permanent (on site for 6 months or longer) above ground facilities (including pump jacks) will be painted a flat, nonreflective, earthtone color to match the standard environmental colors, as determined by the Rocky Mountain 5-State Interagency Committee. All facilities will be painted within 6 months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded. The color will be Desert Brown.

All flowlines will be buried parallel to existing roads unless authorized otherwise by BLM.

If a tank battery is constructed on this lease, it will be surrounded by a dike of sufficient capacity to contain 1-1/2 times the storage capacity of the battery.

All loading lines will be placed inside the berm surrounding the tank battery.

All site security guidelines identified in 43 CFR 3162.7 regulations will be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed.

All off-lease storage, off-lease measurement, or commingling on-lease or off-lease will have prior written approval from the District Manager.

Gas meter runs for each well will be located within 500 feet of the wellhead. The gas flowline will be buried from the wellhead to the meter and 500 feet downstream of the meter run or any production facilities. Meter runs will be housed and/or fenced.

The oil and gas measurement facilities will be installed on the well location. The oil and gas meters will be calibrated in place before any deliveries. Tests for meter accuracy will be conducted monthly for the first 3 months on new meter installations and at least quarterly thereafter. The San Juan Area Manager will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports will be submitted to the San Juan Area Manager. All meter measurement facilities will conform with the API standards for liquid hydrocarbons and the AGA standard for natural gas measurement.

5. Location and Type of Water Supply

All water needed for drilling purposes will be hauled by Hay Hot Oil Service, a commercial water hauler, from a private source.

Use of water for this operation will be approved by obtaining a temporary use permit from the Utah State Engineer, (801) 637-1303 and by receiving permission from the landowner or surface management agency to use the land containing the water source.

6. Source of Construction Materials

Native soil materials from drilling location and access trail, which is available, will be used. Any additional materials needed will be hauled in from authorized commercial sources.

The use of materials under BLM jurisdiction will conform to 43 CFR 3610.2-3.

7. Methods for Handling Waste Disposal

The reserve pit will be lined with commercial bentonite sufficient to prevent seepage. NOTE: May need BLM to inspect for plastic pit liner. At least half of the capacity will be in cut.

Three sides of the reserve pit will be fenced with four strands of barbed wire before drilling starts. The fourth side will be fenced as soon as the drilling is completed. The fence will be kept in good repair while the pit is drying.

A trash pit will be constructed near the mud tanks and dug at least six feet into solid undisturbed material. It will be totally enclosed with a fine wire mesh before the rig moves in. The road and pad will be kept litter free.

A burning permit is required for burning trash between May 1 and October 31. This can be acquired by contacting the San Juan County Sheriff (801) 587-2237.

Produced waste water will be confined to a (lined) pit for a period not to exceed 90 days after initial production. During the 90 day period, an application for approval of a permanent disposal method and location, along with the required water analysis, will be submitted for the District Manager's approval pursuant to Onshore Oil and Gas Order No. 3 (NTL-2B).

8. Ancillary Facilities

Camp facilities will not be required.

9. Well Site Layout

Rig layout is shown on attached Exhibit "9a".

Cuts and fills are shown on attached Exhibit "9b".

The reserve pit will be located on the south side of the well pad.

The top 3 - 4 inches of soil material will be removed from the location and stockpiled on the north side of well pad. Topsoil along the access will be reserved in place.

Access to the well pad will be from the east.

10. Reclamation:

- a. Immediately on completion of drilling, all trash and debris will be collected from the location and surrounding area. All trash and debris will be disposed of in the trash pit and will then be compacted and buried under a minimum of two feet of compacted soil.
- b. The operator/holder or his contractor will contact the San Juan Resource Area office in Monticello, Utah, (801) 587-2141, 48 hours before starting reclamation work that involves earthmoving equipment and upon completion of restoration measures.
- c. Before any dirt work to restore the location takes place, the reserve pit must be completely dry.
- d. All disturbed areas will be recontoured to blend as nearly as possible with the natural topography. This includes removing all berms and refilling all cuts.
- e. The stockpiled topsoil will be spread evenly over the disturbed area. All disturbed areas will be ripped 12 inches deep with the contour.

- f. Water bars will be built as follows to control erosion.

<u>Grade</u>	<u>Spacing</u>
2%	Every 200 feet
2-4%	Every 100 feet
4-5%	Every 75 feet
5+%	Every 50 feet

- g. Seed will be broadcast between October 1 and February 28 with the following prescription. A harrow or similar implement will be dragged over the area to assure seed cover.

<u>6</u>	lbs/acre crested wheatgrass (<u>Agropyron desertorum</u>)
<u>2</u>	lbs/acre Fourwing saltbush (<u>Atriplex canescens</u>)
<u>2</u>	lbs/acre Desert bitterbrush (<u>Purshia glandulosa</u>)

- h. After seeding is complete, the stockpiled trees will be scattered evenly over the disturbed areas. The access will be blocked to prevent vehicular access.
- i. The reserve pit and that portion of the location and access road not needed for production or production facilities will be reclaimed as described in the reclamation section. Enough topsoil will be kept to reclaim the remainder of the location at a future date. This remaining stockpile of topsoil will be seeded in place using the prescribed seed mixture.

11. Surface Ownership: Federal
Mineral Ownership: Federal

12. Other Information

Archeological site on NW side of location will be fenced prior to construction.

There will be no change from the proposed drilling and/or workover program without prior approval from the District Manager. Safe drilling and operating practices must be used. All wells, whether drilling, producing, suspended, or abandoned will be identified in accordance with 43 CFR 3162.2.

"Sundry Notice and Report on Wells" (Form 3160-5) will be filed for approval for all changes of plans and other operations in accordance with 43 CFR 3164.

The dirt contractor will be provided with an approved copy of the surface use plan.

If subsurface cultural materials are exposed during construction, work in that spot will stop immediately and the San Juan Resource Area Office will be contacted. All people who are in the area will be informed by the operator/holder that they are subject to prosecution for disturbing archaeological sites or picking up artifacts. Salvage or excavation of identified archaeological sites will be done by a BLM approved archaeologist only if damage occurs.

This permit will be valid for a period of one year from the date of approval. After permit termination a new application will be filed for approval for any future operations.

Your contact with the District Office is: Greg Noble
Office Phone: 801-259-6111 Address: P. O. Box 970, Moab, UT 84532

Resource Area Manager's Address and contacts:
Address: P. O. Box 7, Monticello, UT 84535

Your contact is: Rich McClure
Office Phone: 801-587-2141

13. Lessee or Operator's Field Representative and Certification

Meridian Oil Inc.
P. O. Box 1855
Billings, Montana 59103

- | | | | |
|----|---------------------------------------|--------------|--------------|
| 1. | Johnny L. Wright, Drilling Supt. | 406-256-4175 | 406-252-2889 |
| 2. | Bill Lloyd, Drilling Engineer | 406-256-4129 | 406-252-2328 |
| 3. | John Pulley, Completion Supt | 406-256-4124 | 406-259-6156 |
| 4. | Barry Winstead, Sr. Drilling Engineer | 406-256-4030 | 406-656-7521 |

O&G Order No. 1
12-17 Supai-Federal
1343N/Page 10

CERTIFICATION:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct, and, that the work associated with the operations proposed herein will be performed by Meridian Oil Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.



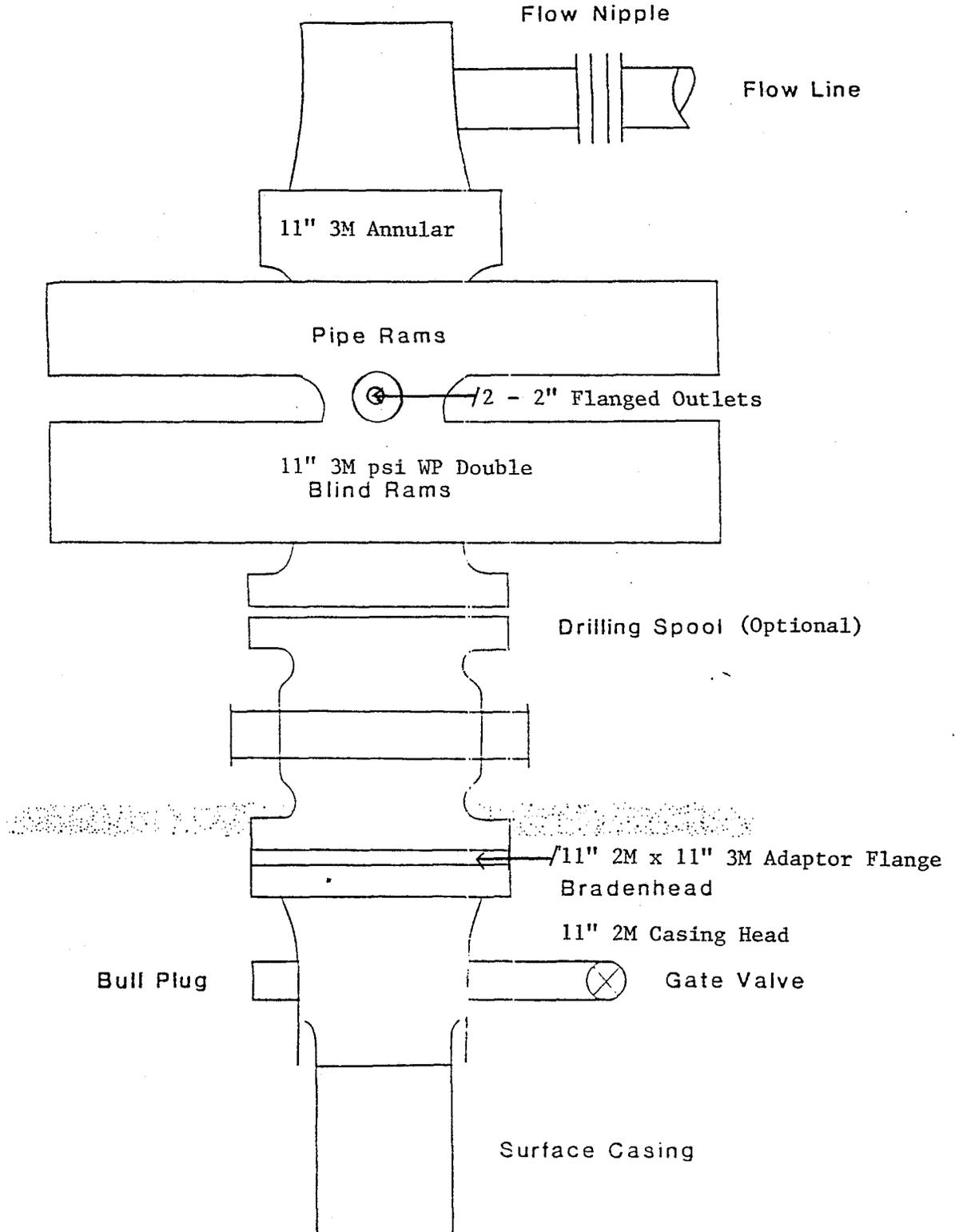
Barry J. Winstead
Sr. Drilling Engineer

11/12/86

Date

ssn

TYPICAL B.O.P. INSTALLATION



Series 900 Double Gate B.O.P.,
rated at 3000 psi Working Pressure.

When gas drilling operations begin a Shaffer type 50 or equivalent rotating head is installed on top of the flow nipple and the flow line is converted into a blowie line.

WELL PAD CROSS-SECTION

Cut 
Fill 

Scales: 1" = 60' H.
1" = 30' V.

Supai Federal 12-17

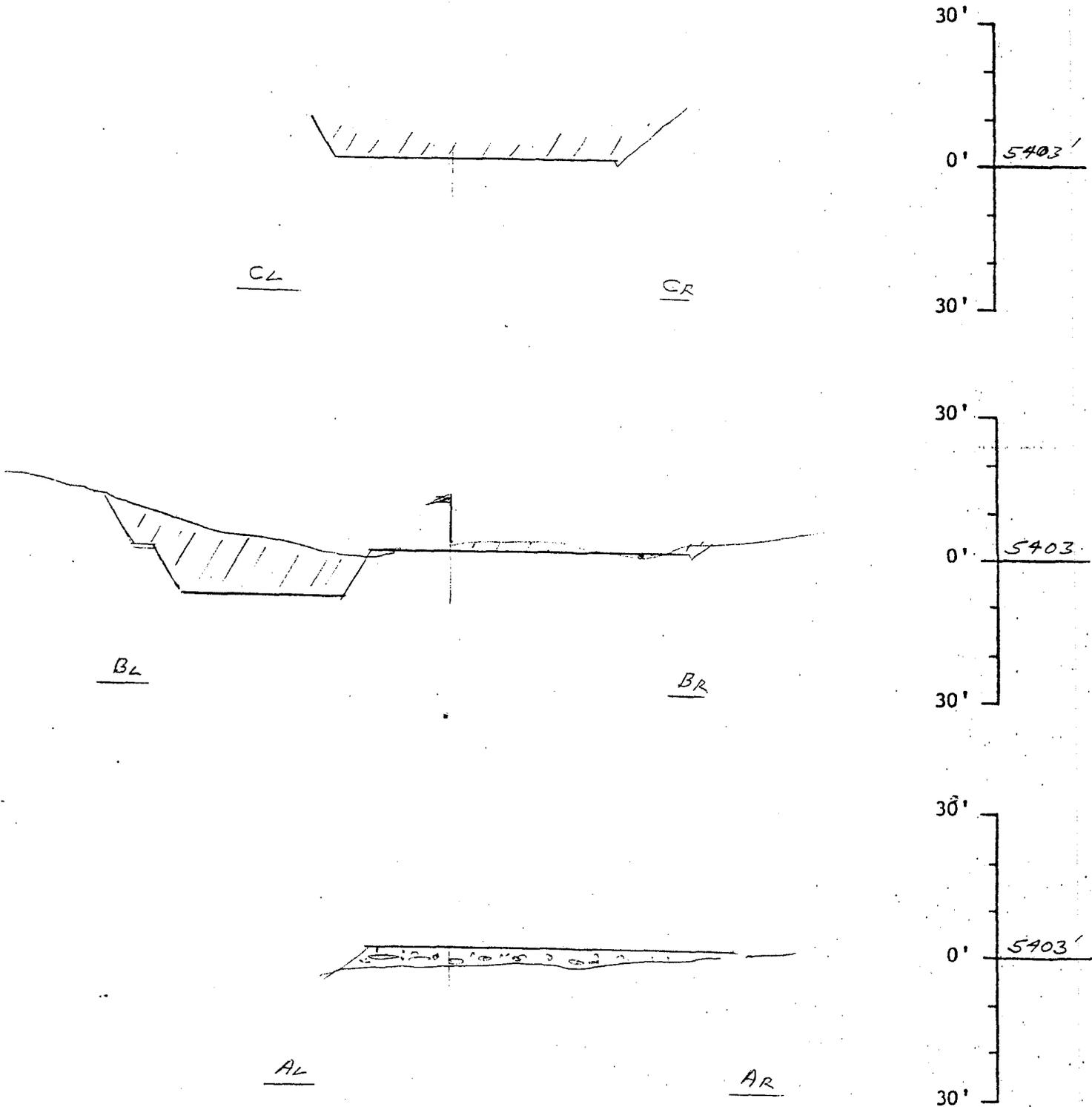


EXHIBIT "9b"
Cross Sections

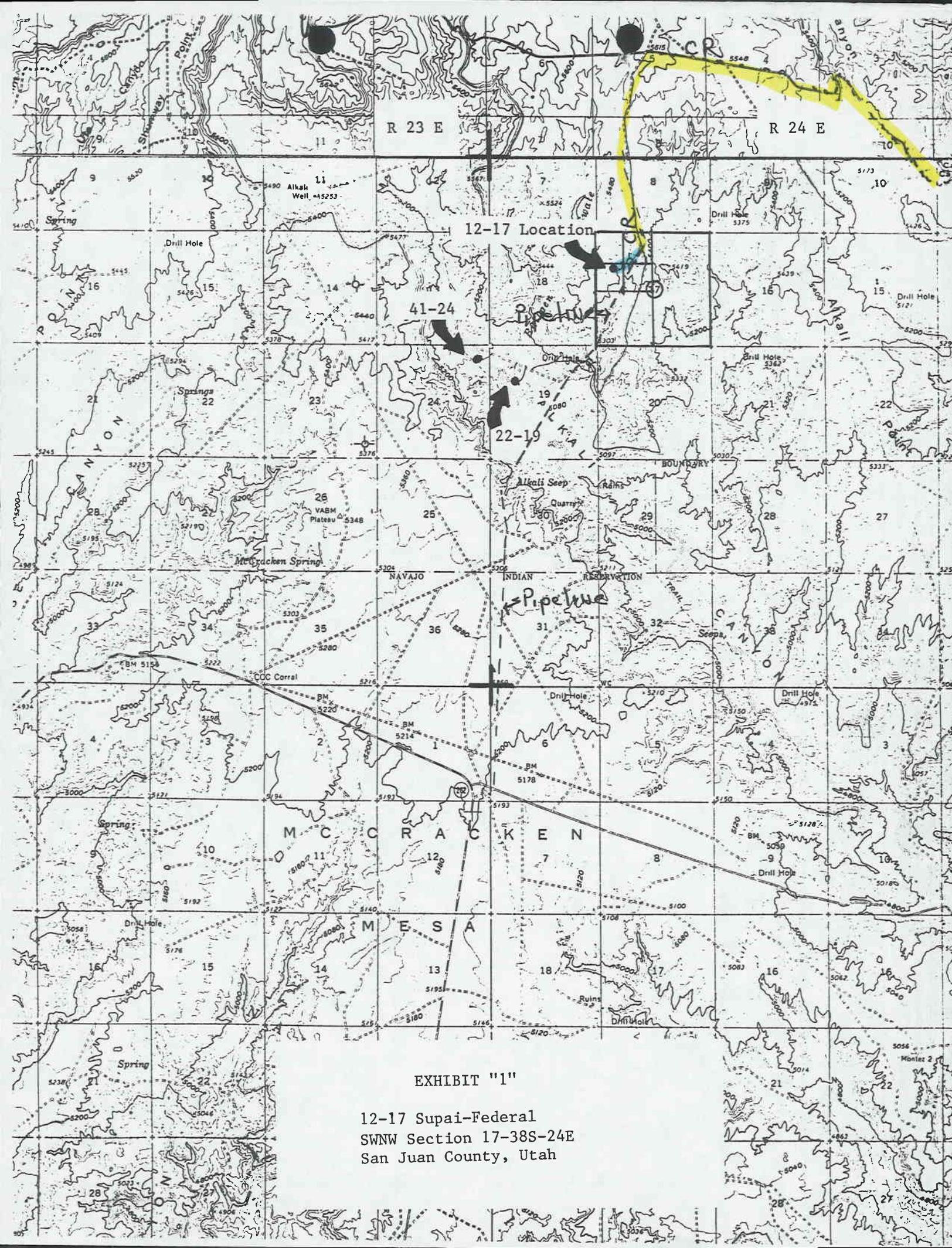


EXHIBIT "1"

12-17 Supai-Federal
SWNW Section 17-38S-24E
San Juan County, Utah

~~CONFIDENTIAL~~

93013-Off Corp.

120215 - APD

OPERATOR Meridian Oil Inc DATE 11-17-86

WELL NAME Syni. Fed. 12-17

SEC SWNW 17 T 38S R 24E COUNTY San Juan

43-037-31291
API NUMBER

Fed.
TYPE OF LEASE

CHECK OFF:

PLAT

BOND

NEAREST WELL

LEASE

FIELD

POTASH OR OIL SHALE

PROCESSING COMMENTS:

No other wells in sec. 17
Need water permits
Exp. for reg. rec. 11/25/86

APPROVAL LETTER:

SPACING: 203 _____ UNIT _____ 302

_____ CAUSE NO. & DATE _____ 302.1

STIPULATIONS:

1- Water



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Norman H. Bangerter, Governor
Dee C. Hansen, Executive Director
Dianne R. Nielson, Ph.D., Division Director

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

November 26, 1986

Meridian Oil, Inc.
P. O. Box 1855
Billings, Montana 59103

Gentlemen:

Re: Supai Federal 12-17 - SW NW Sec. 17, T. 38S, R. 24E
1855' FNL, 985' FWL - San Juan County, Utah

Approval to drill the referenced well is hereby granted in accordance with Rule 302.1, Oil and Gas Conservation General Rules, subject to the following stipulations:

1. Prior to commencement of drilling, receipt by the Division of evidence providing assurance of an adequate and approved supply of water as required by Chapter 3, Title 73, Utah Code Annotated.

In addition, the following actions are necessary to fully comply with this approval:

1. Spudding notification to the Division within 24 hours after drilling operations commence.
2. Submittal to the Division of completed Form OGC-8-X, Report of Water Encountered During Drilling.
3. Prompt notification to the Division should you determine that it is necessary to plug and abandon this well. Notify John R. Baza, Petroleum Engineer, (Office) (801) 538-5340, (Home) 298-7695, or R. J. Firth, Associate Director, (Home) 571-6068.
4. Compliance with the requirements and regulations of Rule 311.3, Associated Gas Flaring, Oil and Gas Conservation General Rules.

Page 2
Meridian Oil, Inc.
Supai Federal 12-17
November 26, 1986

5. Prior to commencement of the proposed drilling operations, plans for toilet facilities and the disposal of sanitary waste at the drill site shall be submitted to the local health department having jurisdiction. Any such drilling operations and any subsequent well operations must be conducted in accordance with applicable State and local health department regulations. A list of all local health departments and copies of applicable regulations are available from the Division of Environmental Health, Bureau of General Sanitation, telephone (801) 533-6163.
6. This approval shall expire one (1) year after date of issuance unless substantial and continuous operation is underway or an application for an extension is made prior to the approval expiration date.

The API number assigned to this well is 43-037-31291.

Sincerely,



R. J. Firth
Associate Director, Oil & Gas

as
Enclosures
cc: Branch of Fluid Minerals
D. R. Nielson
8159T

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Conf 21084

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
 MERIDIAN OIL, INC.

3. ADDRESS OF OPERATOR
 P. O. Box 1855, Billings, MT 59103

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*
 At surface SWNW (1855' FNL - 985' FWL)
 At proposed prod. zone Same

5. LEASE DESIGNATION AND SERIAL NO.
 U-57470

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

7. UNIT AGREEMENT NAME
 N/A

8. FARM OR LEASE NAME
 Supai-Federal

9. WELL NO.
 12-17

10. FIELD AND POOL, OR WILDCAT
 Supai (Wildcat)

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
 Section 17-38S-24E

12. COUNTY OR PARISH 13. STATE
 San Juan Utah

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
 5 miles northwest of Hatch Trading Post

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 1855'

16. NO. OF ACRES IN LEASE 4,052.20

17. NO. OF ACRES ASSIGNED TO THIS WELL 40

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

19. PROPOSED DEPTH 6,326'

20. ROTARY OR CABLE TOOLS
 Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
 5403' GL (graded)

22. APPROX. DATE WORK WILL START*
 4th Quarter, 1986

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2	13-3/8	48#	80'	Redi-Mix to surface
11	8-5/8	24#	2,175'	Single stage. Cmt to sfc w/420

RECEIVED
DEC 05 1986

DIVISION OF
OIL, GAS & 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.

24. SIGNED [Signature] TITLE Sr. Drilling Engineer DATE 11/12/86

(This space for Federal or State office use)

PERMIT NO. 4303731291 APPROVAL DATE _____
Kenneth V. Rhea

APPROVED BY _____ TITLE Acting DISTRICT MANAGER DATE DEC 04 1986

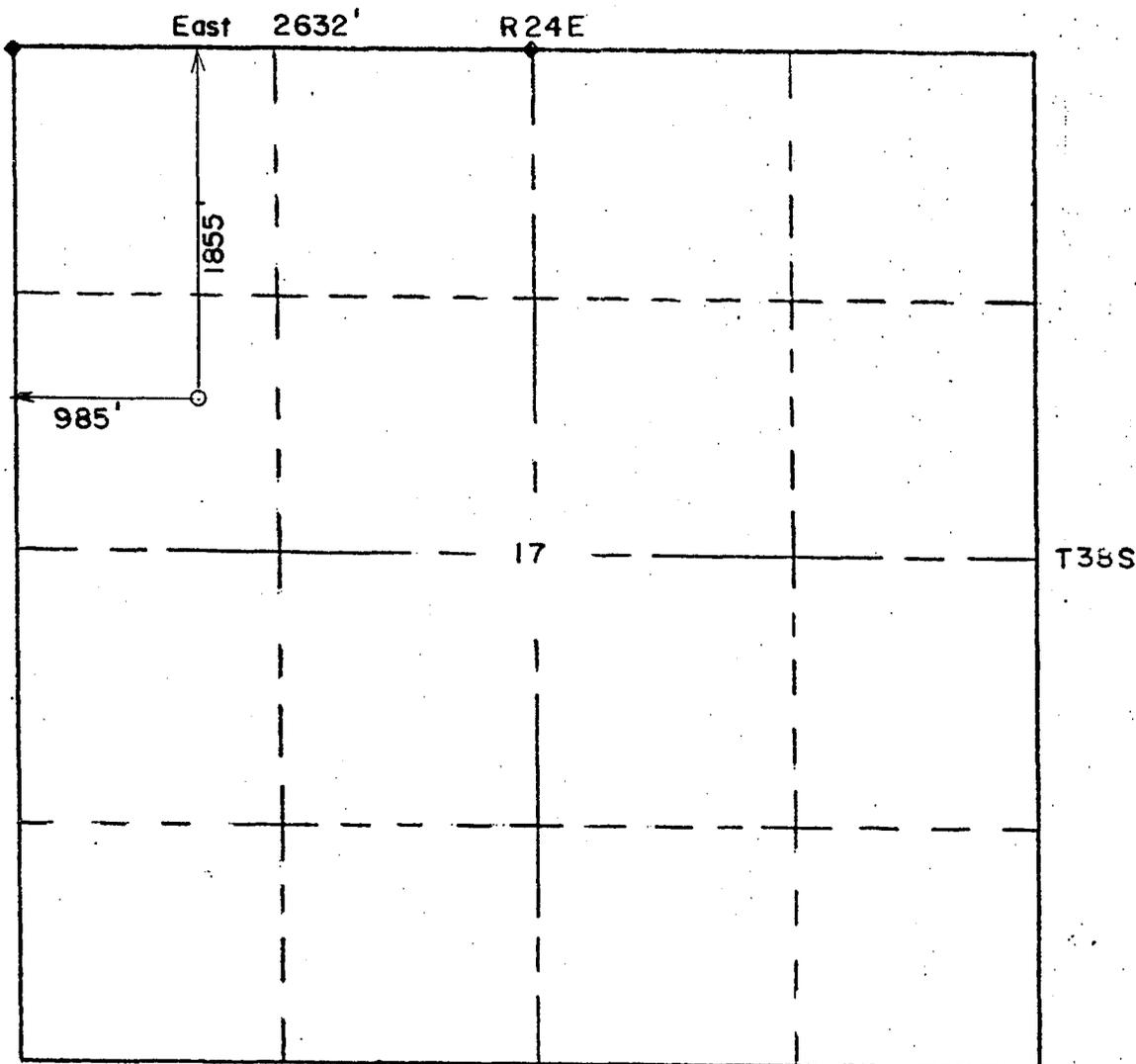
CONDITIONS OF APPROVAL, IF ANY:

FLARING OR VENTING OF GAS IS SUBJECT OF NTL 4-A DATED 1/1/80

CONDITIONS OF APPROVAL ATTACHED

*See Instructions On Reverse Side

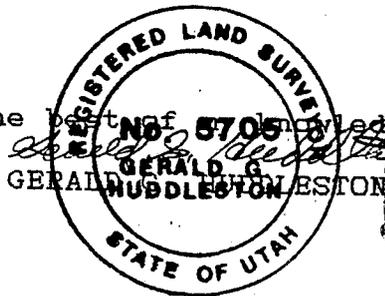
WELL LOCATION PLAT



WELL LOCATION DESCRIPTION:

Meridian Oil Supai Federal 12-17
 985' FWL & 1855' FNL
 Section 17, T.38 S., R.24 E., SLM
 San Juan, Utah
 5404' ground elevation
 Reference: Superior dry hole
 1455' FN & 1620' FW, 5429' grd.
 30 Oct. 1985

The above is true to the best of my knowledge



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DEC 05 1986

DIVISION OF
OIL, GAS & MINING

Meridian Oil, Inc.
Well No. Supai-Federal 12-17
Sec. 17, T. 38 S., R. 24 E.
San Juan County, Utah
Lease U-57470

CONDITIONS OF APPROVAL

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Meridian Oil Inc., is the bonded entity as designated operator on this application. If any assignments or designations change, liability will remain with Meridian Oil Inc., until we are formally notified by letter of the new bonded entity in reference to this Application for Permit to Drill.

RECEIVED
DEC 05 1986

DIVISION OF
OIL, GAS & MINING

PEA



116 State Capitol Building
Salt Lake City, UT 84114
Telephone 801-533-5245

office of planning and budget

Norman H. Bangerter, Governor Dale C. Hatch, C.P.A., J.D., Director Michael E. Christensen, Ph.D., Deputy Director

RECEIVED
DEC 09 1986

DIVISION OF
OIL, GAS & MINING

December 8, 1986

Mr. John Baza
Division of Oil, Gas and Mining
3 Triad Center, Suite 350
355 West North Temple
Salt Lake City, Utah 84180-1203

SUBJECT: Application for Permit to Drill
State Application Identifier #UT861125-010

Dear John:

The Resource Development Coordinating Committee of the State of Utah has reviewed this proposed action and no comments have been indicated.

Thank you for the opportunity of reviewing this document. Please address any other questions regarding this correspondence to Carolyn Wright (801) 533-4971.

Sincerely,

Michael E. Christensen

Michael E. Christensen
Deputy Director

MEC/jw

STATE ACTIONS

14 01 09

Mail to: A-95 Coordinator, State Clearinghouse, 124 State Capitol, SLC, Utah 84114, 533-4971

1. Applicant DIVISION OF OIL, GAS AND MINING 3 TRIAD CENTER, SUITE 350 SALT LAKE CITY, UTAH 84180-1203	2. State Application Identifier Number 3. Approximate date project will start 4th Quarter of 1986
---	---

4. Areawide clearinghouse(s) receiving copy of STATE ACTION: (to be sent out by applicant)
 SOUTHEASTERN UTAH ASSOCIATION OF LOCAL GOVERNMENTS

5. Type of action: Lease Permit License Land Acquisition
 Land Sale Land Exchange Other: _____

6. Title of proposed action: APPLICATION FOR PERMIT TO DRILL

7. Description:

Meridian Oil Inc., intends to drill a wildcat well on federal lease number U-57470 in San Juan County, Utah. The Division of Oil, Gas and Mining has reviewed the application and is prepared to issue state approval to drill. This action is being presented to RDCC for consideration of resource issues affecting state interests. The U.S. Bureau of Land Management is the primary review agency in this case and must also issue approval to drill before operations can commence.

8. Land affected (Site location map required) (Indicate county)

SW/4, NW/4, Sec.17, T.38S, R.24E, San Juan County, Utah

43-037-31291

9. Has the city/county been contacted regarding necessary zoning & building permits? Unknown

10. Possible significant impacts likely to occur:

No significant impacts are likely to occur

11. Name and phone number of district representative from your agency near project site, if applicable. Mr. William Hutchinson 1-259-8151

12. For further information, contact:

Phone: John Baza, 538-5340

13. Signature and title of authorized official

John R. Baza, Petroleum Engineer

Date: 11-21-86

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

2. NAME OF OPERATOR
 MERIDIAN OIL INC.

3. ADDRESS OF OPERATOR
 P. O. Box 1855, Billings, MT 59103

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*
 At surface SWNW (1855' FNL - 985' FWL)
 At proposed prod. zone Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
 5 miles northwest of Hatch Trading Post

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 1855'

16. NO. OF ACRES IN LEASE 4,052.20

17. NO. OF ACRES ASSIGNED TO THIS WELL 40

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

19. PROPOSED DEPTH 6,326'

20. ROTARY OR CABLE TOOLS Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.) 5403' GL (graded)

22. APPROX. DATE WORK WILL START* 4th Quarter, 1986

5. LEASE DESIGNATION AND SERIAL NO.
 U-57470

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

7. UNIT AGREEMENT NAME
 N/A

8. FARM OR LEASE NAME
 Supai-Federal

9. WELL NO.
 12-17

10. FIELD AND POOL, OR WILDCAT
 Supai (Wildcat)

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
 Section 17-38S-24E

12. COUNTY OR PARISH
 San Juan

13. STATE
 Utah

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2	13-3/8	48#	80'	Redi-Mix to surface
11	8-5/8	24#	2,175'	Single stage. Cmt to sfc w/420 sx "B" + 3% salt + 16% gel + .2% retarder & 110 sx "B" + 2% CaCl ₂ .
7-7/8	5-1/2	15.5#	6,326'	Single stage. TOC @ 1975'. Cal log + 20% excess. "B" + 16% ge 3% salt, .4% rtrdr & "B" + 3% Kcl + .8% fluid loss.

CONFIDENTIAL INFORMATION

Oil and Gas Order #1
 Attachments:
 Survey Plat
 Eight Point Drilling Program
 Thirteen Point Surface Use Plan

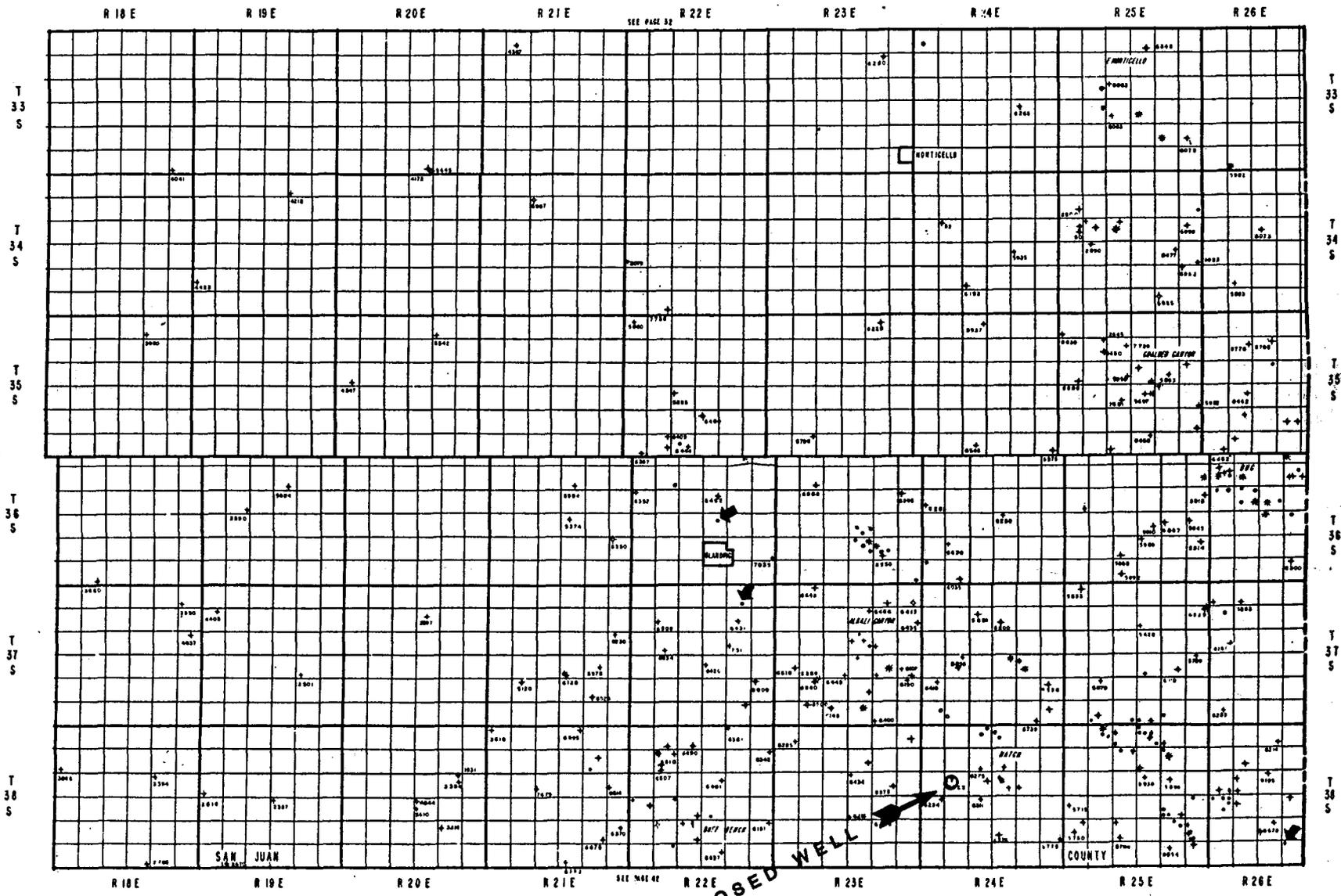
RECEIVED
 NOV 14 1986
 DIVISION OF
 OIL, GAS & MINING

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.

24. SIGNED B. J. Justice TITLE Sr. Drilling Engineer DATE 11/12/86
 (This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____
 APPROVED BY _____ TITLE _____ DATE _____
 CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side



PROPOSED WELL

121612

CONFIDENTIAL

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

API #43-037-31291

NAME OF COMPANY: MERIDIAN OIL

WELL NAME: Supai #12-17

SECTION SW NW 17 TOWNSHIP 38S RANGE 24E COUNTY San Juan

DRILLING CONTRACTOR Aztec

RIG # 301

SPUDDED: DATE 12-12-86

TIME 5:00 AM

How Rotary

DRILLING WILL COMMENCE _____

REPORTED BY Nancy

TELEPHONE # (406) 256-4005

DATE 12-15-86

SIGNED SBH

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(Other instructions on re-
verse side)

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. U-57470
2. NAME OF OPERATOR MERIDIAN OIL INC.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A
3. ADDRESS OF OPERATOR P. O. Box 1855, Billings, MT 59103		7. UNIT AGREEMENT NAME N/A
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface SWNW (1855' FNL - 985' FWL)		8. FARM OR LEASE NAME Supai-Federal
14. PERMIT NO. c 43-037-31291	15. ELEVATIONS (Show whether DF, RT, GR, etc.) 5415' KB	9. WELL NO. 12-17
		10. FIELD AND POOL, OR WILDCAT Supai (Wildcat)
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Section 17-38S-24E
		12. COUNTY OR PARISH San Juan
		13. STATE Utah

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

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

(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.)*

Aztec, Rig #301, spudded well @ 5:00 AM 12-12-86. Ran 13-3/8" casing, set @ 80', cement w/80 sx cement.

CONFIDENTIAL INFORMATION

RECEIVED
DEC 22 1986

DIVISION OF
OIL, GAS & MINING

18. I hereby certify that the foregoing is true and correct
SIGNED Suzanne S. Wilson TITLE Sr. Operations Technician DATE 12/16/86
(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(Other instructions on re-
verse side)

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

SUNDRY NOTICES AND REPORTS ON WELLS

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Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. U-57470
2. NAME OF OPERATOR MERIDIAN OIL INC.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A 122412
3. ADDRESS OF OPERATOR P. O. Box 1855, Billings, MT 59103		7. UNIT AGREEMENT NAME N/A
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface SNNW (1855' FNL - 985' FWL)		8. FARM OR LEASE NAME Supai-Federal
14. PERMIT NO. 43-037-31291	15. ELEVATIONS (Show whether DF, RT, OR, etc.) 5415' KB	9. WELL NO. 12-17
		10. FIELD AND POOL, OR WILDCAT Supai (Wildcat)
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Section 17-38S-24E
		12. COUNTY OR PARISH San Juan
		13. STATE Utah

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

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF <input type="checkbox"/>	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 type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>
(Other) <input type="checkbox"/>	

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 type="checkbox"/>
(Other) <input type="checkbox"/> Spud Report	

(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.)*

Aztec, Rig #301, spudded well @ 5:00 AM 12-12-86. Ran 13-3/8" casing, set @ 80', cement w/80 sx cement.

CONFIDENTIAL

RECEIVED
DEC 22 1986

DIVISION OF
OIL, GAS & MINING

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

SIGNED [Signature] TITLE Sr. Operations Technician DATE 12/16/86

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

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

SUBMIT IN TRIPPLICATE*
(Other instructions on re-
verse side)

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. <input type="checkbox"/> OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER		5. LEASE DESIGNATION AND SERIAL NO. U-57470
2. NAME OF OPERATOR MERIDIAN OIL INC.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A
3. ADDRESS OF OPERATOR P. O. Box 1855, Billings, MT 59103		7. UNIT AGREEMENT NAME N/A
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface SNNW (1855' FNL - 985' FWL)		8. FARM OR LEASE NAME Supai-Federal
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		12. COUNTY OR PARISH 13. STATE San Juan Utah

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <u>Spud Report</u>	<input checked="" type="checkbox"/>
(Other) <input type="checkbox"/>		(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

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CONFIDENTIAL INFORMATION

RECEIVED
DEC 22 1986

DIVISION OF
OIL, GAS & MINING

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

SIGNED *Suzanne S. Wilson* TITLE Sr. Operations Technician DATE 12/16/86

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIP DATE*
(Other instructions on re-
verse side)

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

5. LEASE DESIGNATION AND SERIAL NO.
U-57470

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

7. UNIT AGREEMENT NAME
N/A

8. FARM OR LEASE NAME
Supai-Federal

9. WELL NO.
12-17

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Supai (Wildcat)

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Section 17-38S-24E

12. COUNTY OR PARISH
San Juan

13. STATE
Utah

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL GAS WELL OTHER Dry Hole

2. NAME OF OPERATOR
MERIDIAN OIL INC.

3. ADDRESS OF OPERATOR
P.O. Box 1855, Billings, MT 59105

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)
At surface
SWNW (1855' FNL - 985' FWL)

14. PERMIT NO.
43-037-31291

15. ELEVATIONS (Show whether DF, RT, OR, etc.)
5415' KB

RECEIVED
JAN 05 1987

DIVISION OF
OIL, GAS & MINING

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 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 type="checkbox"/>
(Other) <input checked="" type="checkbox"/> Progress Report-December 86	

(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.)*

Drilled to 6,083' Ran DST #1 (5949' - 6048') U. Ismay. Times: 15-60-90-180. BHT 132°F. No cushion. Pipe rcvry: 180' SGCM, 314' GCO. Sample Chamber: 2100 cc volume, 150 psi, 2000 cc total volume, 1200 cc oil, no wtr, 800 cc mud, .89 cfg. HP 3879 - 2959; FP 75 - 75, 102 - 104; SIP 1685 - 1713. Drilled to 6,328' TD 12/23/86, logged w/Schlumberger. Ran DST #2 (6055' - 6075') U. Ismay. Times: 15-60-90-180. BHT 135°F. No cushion. Pipe rcvry: 60' mud w/few gas bubbles. Sample Chamber: 2300 cc volume, 24 psi, 2300 cc total volume, 2300 cc mud, tr gas, too small to measure. HP 3020; FP 71 - 82, 82 - 82; SIP 123 - 123. Pump 101 sx Class "B", set plugs 6200' - 5900', LDDP. Pump 30 sx "B", plug @ 2250' - 2150'. LDDP, ND BOP. Plug sfc w/10 sx. Rig down. Rig released @ 1:00 AM 12-26-86. Plug and abandon well 12/26/86.

CONFIDENTIAL INFORMATION

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

SIGNED *Reginald Wilson* TITLE Sr. Operations Technician DATE 1/2/87

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPlicate*
(Other instructions on re-
verse side)

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> Dry Hole		5. LEASE DESIGNATION AND SERIAL NO. U-57470
2. NAME OF OPERATOR MERIDIAN OIL INC.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A
3. ADDRESS OF OPERATOR P.O. Box 1855, Billings, MT 59103		7. UNIT AGREEMENT NAME N/A
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface SWNW (1855' FNL - 985' FWL)		8. FARM OR LEASE NAME Supai-Federal
14. PERMIT NO. 43-037-31291		9. WELL NO. 12-17
15. ELEVATIONS (Show whether DF, RT, GR, etc.) 5415' KB		10. FIELD AND POOL, OR WILDCAT Supai (Wildcat)
		11. SEC. T., R., M., OR BLK. AND SURVEY OR AREA Section 17-38S-24E
		12. COUNTY OR PARISH San Juan
		13. STATE Utah

RECEIVED
JAN 05 1987
DIVISION OF
OIL, GAS & MINING

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <u>Progress Report-December 86</u>	<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.)*

Drilled to 6,083' Ran DST #1 (5949' - 6048') U. Ismay. Times: 15-60-90-180. BHT 132°F. No cushion. Pipe rcvry: 180' SGCM, 314' GCO. Sample Chamber: 2100 cc volume, 150 psi, 2000 cc total volume, 1200 cc oil, no wtr, 800 cc mud, .89 cfg. HP 3879 - 2959; FP 75 - 75, 102 - 104; SIP 1685 - 1713. Drilled to 6,328' TD 12/23/86, logged w/Schlumberger. Ran DST #2 (6055' - 6075') U. Ismay. Times: 15-60-90-180. BHT 135°F. No cushion. Pipe rcvry: 60' mud w/few gas bubbles. Sample Chamber: 2300 cc volume, 24 psi, 2300 cc total volume, 2300 cc mud, tr gas, too small to measure. HP 3020; FP 71 - 82, 82 - 82; SIP 123 - 123. Pump 101 sx Class "B", set plugs 6200' - 5900', LDDP. Pump 30 sx "B", plug @ 2250' - 2150'. LDDP, ND BOP. Plug sfc w/10 sx. Rig down. Rig released @ 1:00 AM 12-26-86. Plug and abandon well 12/26/86.

CONFIDENTIAL INFORMATION

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

SIGNED *Gregory Wilson* TITLE Sr. Operations Technician DATE 1/2/87

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY: _____

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIP DATE*
(Other instructions on re-
verse side)

Form approved *[Signature]*
Budget Bureau No. 1004-0135
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.
U-57470 010886

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

7. UNIT AGREEMENT NAME
N/A

8. FARM OR LEASE NAME
Supai-Federal

9. WELL NO.
12-17

10. FIELD AND POOL, OR WILDCAT
Supai (Wildcat)

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Section 17-38S-24E

12. COUNTY OR PARISH 13. STATE
San Juan Utah

1. OIL WELL GAS WELL OTHER Dry Hole

2. NAME OF OPERATOR
MERIDIAN OIL INC.

3. ADDRESS OF OPERATOR
P. O. Box 1855, Billings, MT 59103

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.)
At surface
SWNW (1855' FNL - 985' FWL)

RECEIVED
JAN 05 1987

DIVISION OF
OIL, GAS & MINING

14. PERMIT NO.
43-037-31291

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
5415' KB

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF
FRACTURE TREAT
SHOOT OR ACIDIZE
REPAIR WELL
(Other)

PULL OR ALTER CASING
MULTIPLE COMPLETE
ABANDON*
CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF
FRACTURE TREATMENT
SHOOTING OR ACIDIZING
(Other)

REPAIRING WELL
ALTERING CASING
ABANDONMENT*

(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.)*

Set plugs as follows:

6200' - 5900' w/101 sx "B"
2250' - 2150' w/30 sx
Surface Plug w/10 sx

CONFIDENTIAL INFORMATION

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

SIGNED *[Signature]* TITLE Sr. Operations Technician DATE 1/2/87

(This space for Federal or State office use)

APPROVED BY _____
CONDITIONS OF APPROVAL, IF ANY:

TITLE _____

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

DATE: 1-7-87
BY: *[Signature]*

Federal approval of this action
is required before commencing
operations.

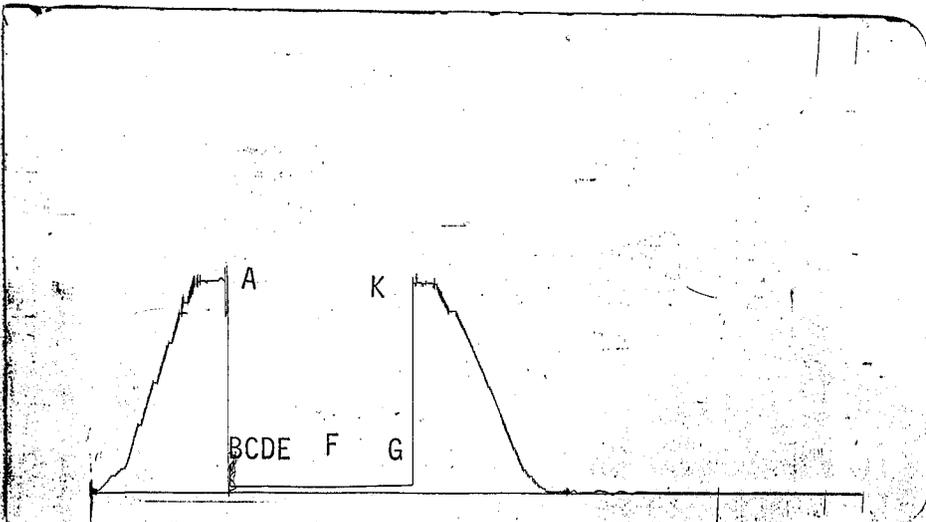
*See Instructions on Reverse Side

Contractor <u>Aztec Drilling</u>	Top Choke <u>1/2"</u>	Flow No. 1 <u>15</u> Min.
Rig No. <u>#301</u>	Bottom Choke <u>3/4"</u>	Shut-in No. 1 <u>60</u> Min.
Spot <u>--</u>	Size Hole <u>7 7/8"</u>	Flow No. 2 <u>90</u> Min.
Sec. <u>17</u>	Size Rat Hole <u>--</u>	Shut-in No. 2 <u>180</u> Min.
Twp. <u>38S</u>	Size & Wt. D. P. <u>4 1/2" XH 16.60#</u>	Flow No. 3 <u>--</u> Min.
Rng. <u>23E</u>	Size Wt. Pipe <u>--</u>	Shut-in No. 3 <u>--</u> Min.
Field <u>Wildcat</u>	I. D. of D. C. <u>2 1/4"</u>	Bottom Hole Temp. <u>0</u> <u>135 F</u>
County <u>San Juan</u>	Length of D. C. <u>613 ft</u>	Mud Weight <u>9.4</u>
State <u>Utah</u>	Total Depth <u>6325 ft</u>	Gravity <u>--</u>
Elevation <u>--</u>	Interval Tested <u>6055-6075 ft</u>	Viscosity <u>41</u>
Formation <u>Tsmay</u>	Type of Test <u>Inflate</u>	Tool opened @ <u>10:20 pm</u>
	<u>Straddle</u>	

Operator Meridian Oil
Address 175 North 27th Street
Billings, MT 59101

Well Name and No. #12-17 Supai Federal
Ticket No. 21210

Date 12-25-86
DST No. 2
No. Final Copies 12



Outside Recorder

PRD Make Kuster K-3
No. 24519 Cap. 6650 @ 6065'

	Press	Corrected
Initial Hydrostatic	A	3025
Final Hydrostatic	K	3025
Initial Flow	B	74
Final Initial Flow	C	74
Initial Shut-in	D	74
Second Initial Flow	E	80
Second Final Flow	F	80
Second Shut-in	G	102
Third Initial Flow	H	--
Third Final Flow	I	--
Third Shut-in	J	--

Lynes Dist. Farmington, NM
Our Tester: David Dolyniuk
Witnessed By: Jim Reeder

Did Well Flow - Gas No Oil No Water No

RECOVERY IN PIPE: 62 ft. Mud with slightly gas bubbles = .30 bbl.

Blow Description:
1st flow: Tool opened with a 1" blow increased to 3" in 1 minute and remained throughout the flow.
2nd flow: Tool opened with a 1" blow decreased to 1/2" at the end of the flow.

Comments: The test results indicate a mechanically successful test. The flow and shut-in curves suggest virtually no permeability within the zone tested.

ERIDIAN OIL
DST#: 2
#12-17 SUPAI FEDERAL
6055 - 6075ft.

Location: 17-38S-23E
Test Type: INFLATE STRADDLE
Formation: ISMAY

Recorder Number: 24645
Recorder Depth: 6040

SAMPLE DATA

SAMPLE CHAMBER:

Capacity of sample chamber	2300	cc
Volume of sample.....	2300	cc
Pressure in sampler.....	24	psig
Where sampler was drained...	on location	

Sampler contained:
Mud 2300 cc

RESISTIVITY DATA:

Top.....	5000 PPM NACL
Middle.....	5000 PPM NACL
Bottom.....	5000 PPM NACL
Sampler.....	6000 PPM NACL
Mud pit.....	5000 PPM NACL
Make-up Water...	5000 PPM NACL

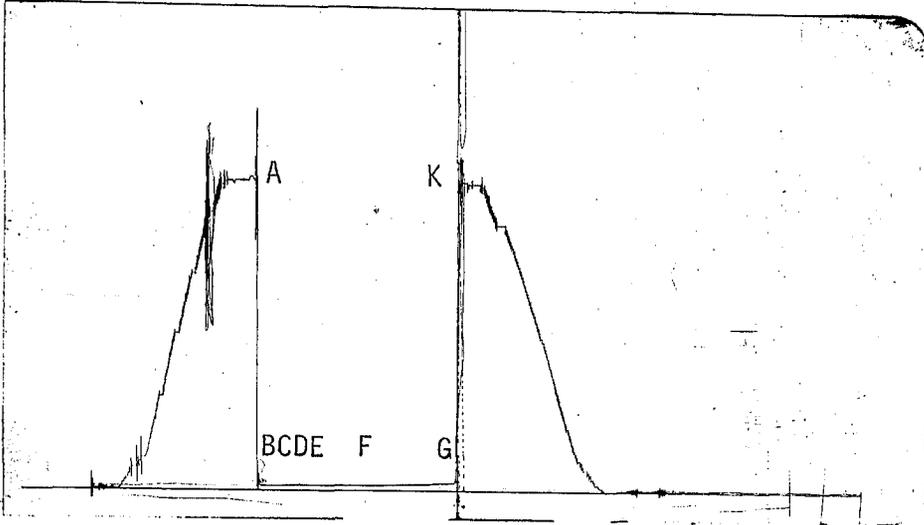
MERIDIAN OIL
DST#: 2
#12-17 SUPAI FEDERAL
6055 - 6075ft.

PRESSURE RECORDER NUMBER : 24645

DEPTH : 6040.00ft. LOCATION : INSIDE
TYPE : K-3 CAPACITY : 4450.00psi

PRESSURE
psi

A)Initial Hydro : 3000.0
B)1st Flow Start: 35.0
C)1st Flow End : 35.0
D)END 1st Shutin: 49.0
E)2nd Flow Start: 45.0
F)2nd Flow End : 45.0
G)END 2nd Shutin: 71.0
Q)Final Hydro. : 2981.0



TEST TIMES(MIN)
1st FLOW : 15
SHUTIN: 60
2nd FLOW : 90
SHUTIN: 180

Contractor <u>Aztec Drilling</u>	Top Choke <u>1/2"</u>	Flow No. 1 <u>15</u> Min.
Rig No. <u>#301</u>	Bottom Choke <u>3/4"</u>	Shut-in No. 1 <u>60</u> Min.
Spot <u>1855' FNL 985' FWL</u>	Size Hole <u>7 7/8"</u>	Flow No. 2 <u>90</u> Min.
Sec. <u>17</u>	Size Rat Hole <u>--</u>	Shut-in No. 2 <u>180</u> Min.
Twp. <u>38S</u>	Size & Wt. D. P. <u>4 1/2" XH 16.60#</u>	Flow No. 3 <u>--</u> Min.
Rng. <u>24E</u>	Size Wt. Pipe <u>--</u>	Shut-in No. 3 <u>--</u> Min.
Field <u>Hauasu</u>	I. D. of D. C. <u>2 1/4"</u>	Bottom Hole Temp. <u>132^oF</u>
County <u>San Juan</u>	Length of D. C. <u>554 ft</u>	Mud Weight <u>9.0</u>
State <u>Utah</u>	Total Depth <u>6048 ft</u>	Gravity <u>--</u>
Elevation <u>5415 ft</u>	Interval Tested <u>5946-6048 ft</u>	Viscosity <u>46</u>
Formation <u>Upper Ismay</u>	Type of Test <u>Bottom Hole Conventional</u>	Tool opened @ <u>12:35 pm</u>

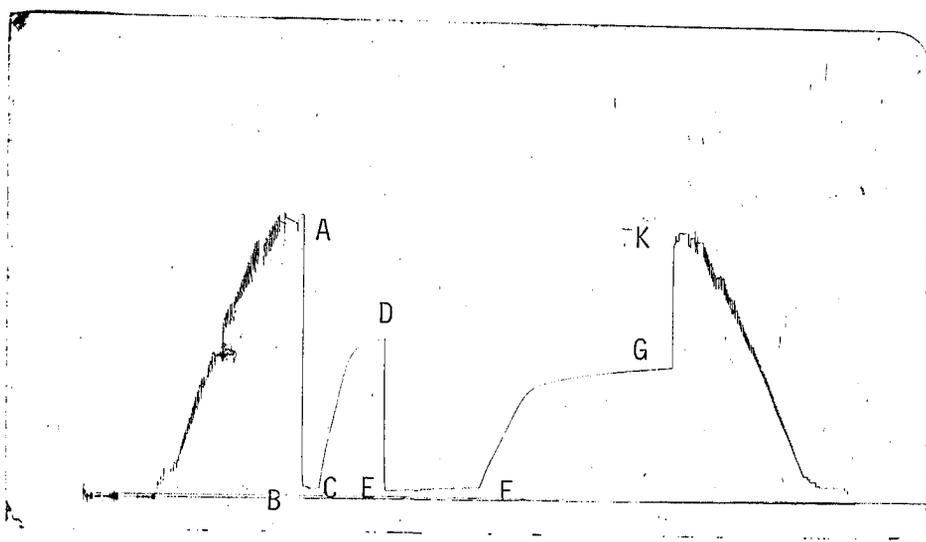
Operator Meridian Oil
 Address 175 N. 27th Street
Billings, MT 59103
 Well Name and No. #12-17 Supai Federal
 Ticket No. 21288
 Date 12-21-86
 DST No. 1
 No. Final Copies 12

Inside Recorder

PRD Make Kuster K-3
 No. 7661 Cap. 4900 @ 5961'

	Press	Corrected
Initial Hydrostatic	A	3004
Final Hydrostatic	K	2834
Initial Flow	B	131
Final Initial Flow	C	117
Initial Shut-in	D	1698
Second Initial Flow	E	96
Second Final Flow	F	143
Second Shut-in	G	1420
Third Initial Flow	H	--
Third Final Flow	I	--
Third Shut-in	J	--

Lynes Dist. Farmington, NM
 Our Tester: David Dolyniuk
 Witnessed By: Jim Reeder



Did Well Flow - Gas Yes Oil No Water No
 RECOVERY IN PIPE:

494 ft. Total Recovery = 2.42 bbls.
 180 ft. Slightly gas cut mud = .88 bbl.
 314 ft. Slightly mud cut gas and oil = 1.54 bbls.

Blow Description:

1st flow: Tool opened with a 6" blow increased to 8 psi at the end of the flow.

2nd flow: Tool opened with a 6" blow with gas to surface in 3 minutes, see gas volume report.

Comments:

The test results indicate a mechanically successful test. The flow and shut-in curves suggest low permeability within the zone tested.

Location: 17-38S-24E
Test Type: BOTTOM HOLE CONVENTIONAL
Formation: UPPER ISMAY

Recorder Number: 7661
Recorder Depth: 5961 ft.

TIME-PRESSURE LISTING

CHART LABEL	COMMENTS	TIME MIN.	DELTA P psi	PRESSURE (T+dt)/dt psi	ABSCISSA	PRESSURE SQUARED psi ² /10 ⁶
A	INITIAL HYDROSTATIC	0.00		3004.0		
B	START OF 1st FLOW	0.00		131.0		
C	END OF 1st FLOW	15.00		117.0		
	1st SHUTIN PERIOD	0.00	0.0	117.0	0.0000	
		2.00	133.0	250.0	8.5000	
		4.00	279.0	396.0	4.7500	
		6.00	401.0	518.0	3.5000	
		8.00	501.0	618.0	2.8750	
		10.00	593.0	710.0	2.5000	
		12.00	687.0	804.0	2.2500	
		14.00	779.0	896.0	2.0714	
		16.00	871.0	988.0	1.9375	
		18.00	981.0	1098.0	1.8333	
		20.00	1077.0	1194.0	1.7500	
		25.00	1287.0	1404.0	1.6000	
		30.00	1405.0	1522.0	1.5000	
		35.00	1480.0	1597.0	1.4286	
		40.00	1514.0	1631.0	1.3750	
		45.00	1538.0	1655.0	1.3333	
		50.00	1554.0	1671.0	1.3000	
		55.00	1569.0	1686.0	1.2727	
D	END OF 1st SHUTIN	60.00	1581.0	1698.0	1.2500	
E	START OF 2nd FLOW	0.00		96.0		
F	END OF 2nd FLOW	90.00		143.0		
	2nd SHUTIN PERIOD	0.00	0.0	143.0	0.0000	
		2.00	54.0	197.0	53.5000	
		4.00	111.0	254.0	27.2500	
		6.00	177.0	320.0	18.5000	
		8.00	232.0	375.0	14.1250	
		10.00	275.0	418.0	11.5000	
		12.00	322.0	465.0	9.7500	
		14.00	363.0	506.0	8.5000	
		16.00	404.0	547.0	7.5625	
		18.00	455.0	598.0	6.8333	
		20.00	496.0	639.0	6.2500	
		25.00	614.0	757.0	5.2000	
		30.00	731.0	874.0	4.5000	

MERIDIAN OIL
 DST#: 1
 #12-17 SUPAI FEDERAL
 5946 - 6048ft.

Location: 17-38S-24E
 Test Type: BOTTOM HOLE CONVENTIONAL
 Formation: UPPER ISMAY

Recorder Number: 7661
 Recorder Depth: 5961 ft.

TIME-PRESSURE LISTING

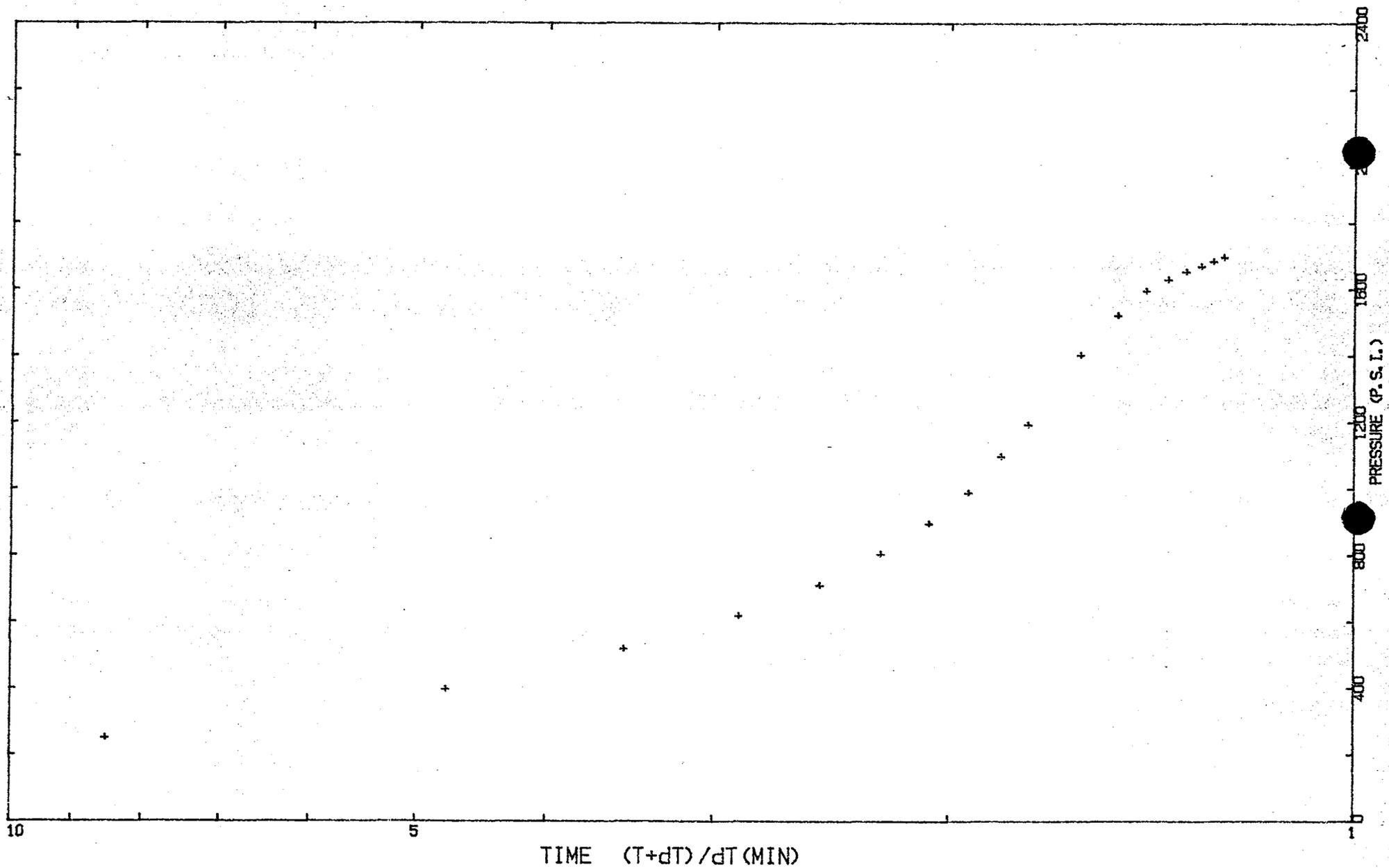
CHART LABEL	COMMENTS	TIME MIN.	DELTA P psi	PRESSURE (T+dt)/dt psi	PRESSURE SQUARED psi ² /10 ⁶
		35.00	837.0	980.0	4.0000
		40.00	931.0	1074.0	3.6250
		45.00	1006.0	1149.0	3.3333
		50.00	1051.0	1194.0	3.1000
		55.00	1082.0	1225.0	2.9091
		60.00	1100.0	1243.0	2.7500
		70.00	1131.0	1274.0	2.5000
		80.00	1155.0	1298.0	2.3125
		90.00	1177.0	1320.0	2.1667
		100.00	1192.0	1335.0	2.0500
		110.00	1206.0	1349.0	1.9545
		120.00	1220.0	1363.0	1.8750*
		140.00	1245.0	1388.0	1.7500*
		160.00	1261.0	1404.0	1.6563*
G	END OF 2nd SHUTIN	180.00	1277.0	1420.0	1.5833*
Q	FINAL HYDROSTATIC	0.00		2834.0	

* VALUES USED FOR EXTRAPOLATIONS

2nd SHUT-IN
 HORNER EXTRAPOLATION 1573.18 PSI
 HORNER SLOPE 767.89 psi/cycle

OPERATOR: MERIDIAN OIL
WELL NAME: #12-17 SUPAI FEDERAL
LOCATION: 17-38S-24E
FIRST SHUT-IN
RECORDER: 7661

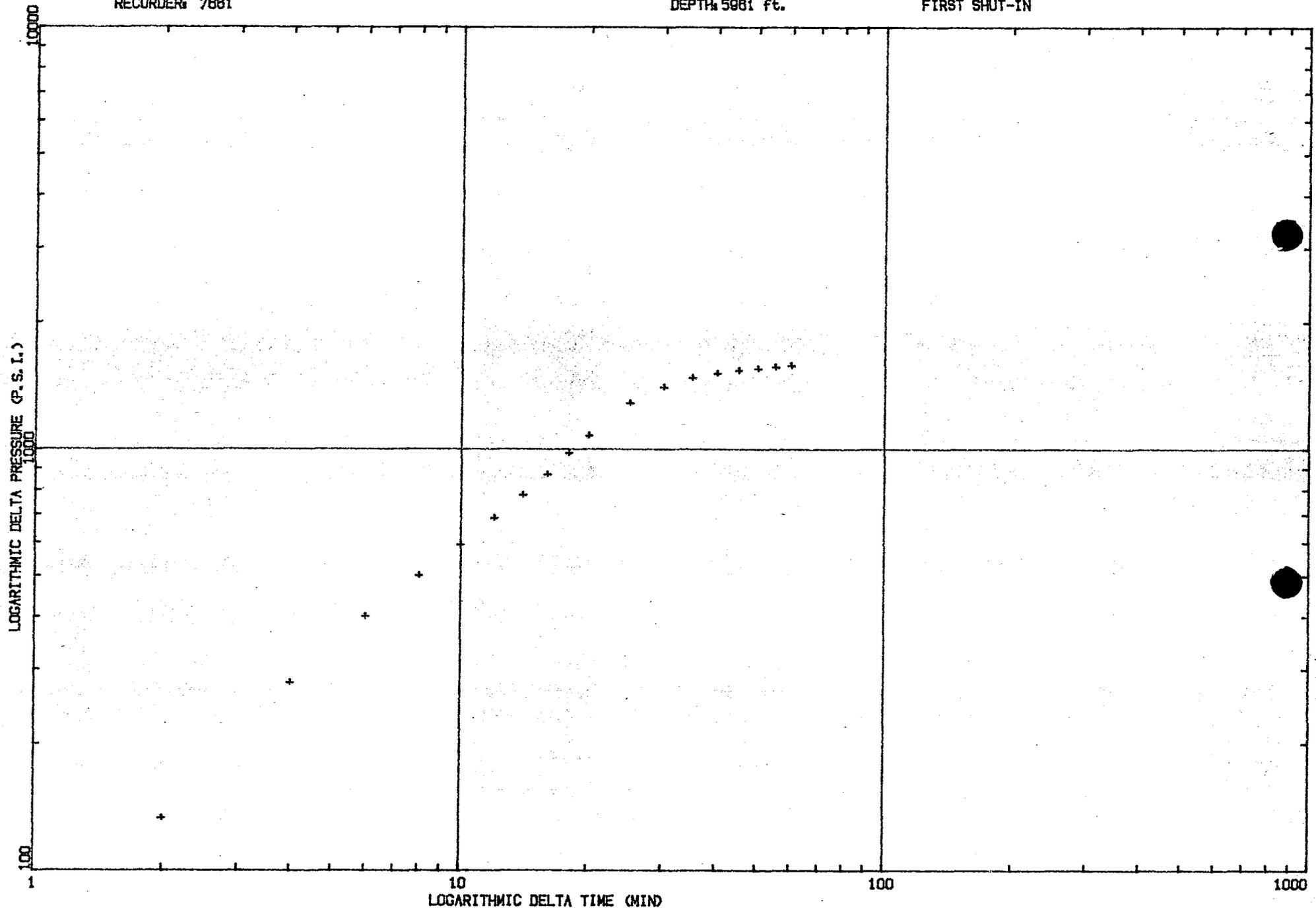
DST #: 1
DEPTH: 5961 ft.



OPERATOR: MERIDIAN OIL
LOCATION: 17-38S-24E
RECORDER: 7881

WELL NAME: #12-17 SUPAI FEDERAL
DST #: 1
DEPTH: 5981 ft.

FIRST SHUT-IN

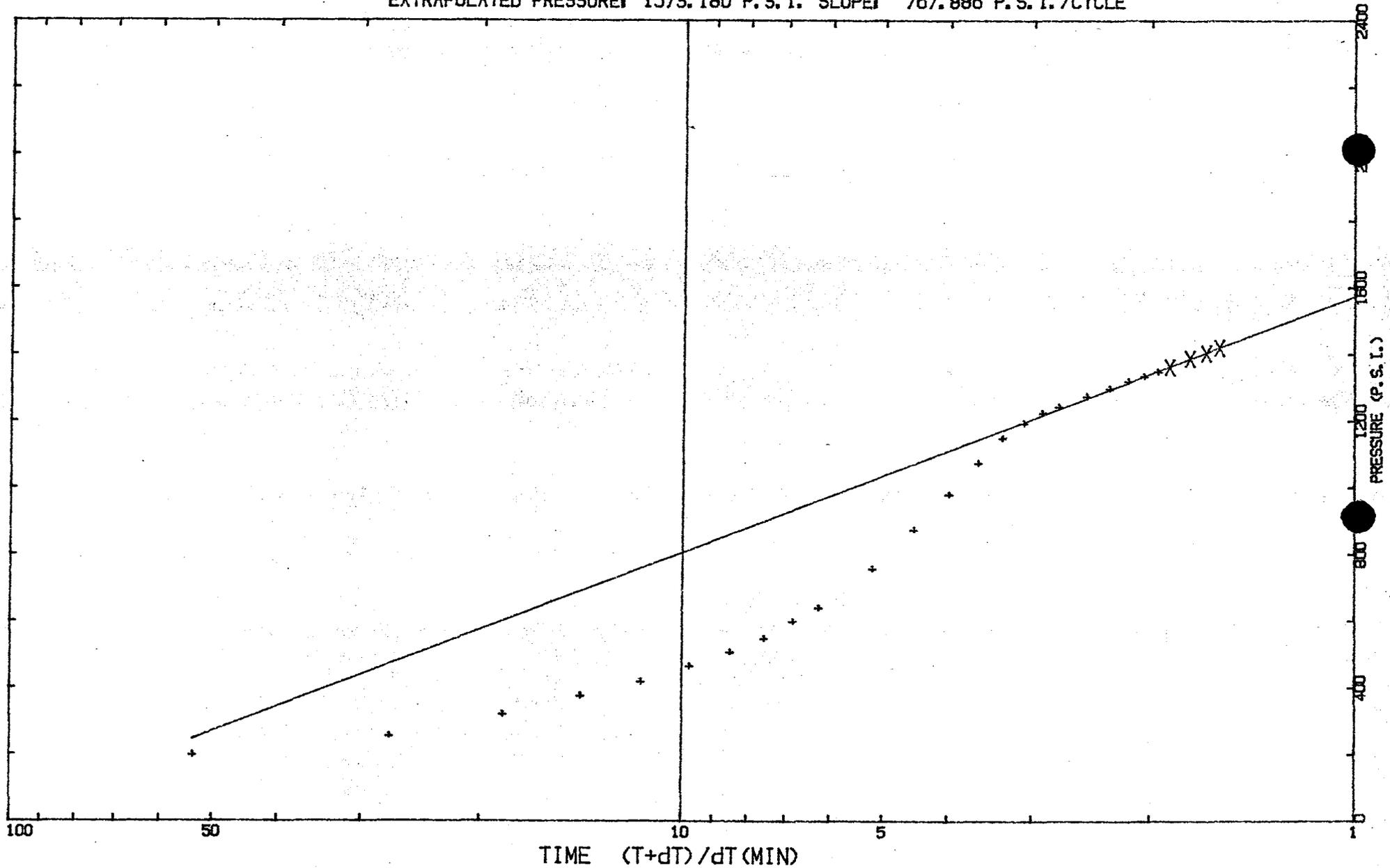


OPERATOR: MERIDIAN OIL
WELL NAME: #12-17 SUPAI FEDERAL
LOCATION: 17-38S-24E
SECOND SHUT-IN
RECORDER: 7661

DST #: 1

DEPTH: 5961 ft.

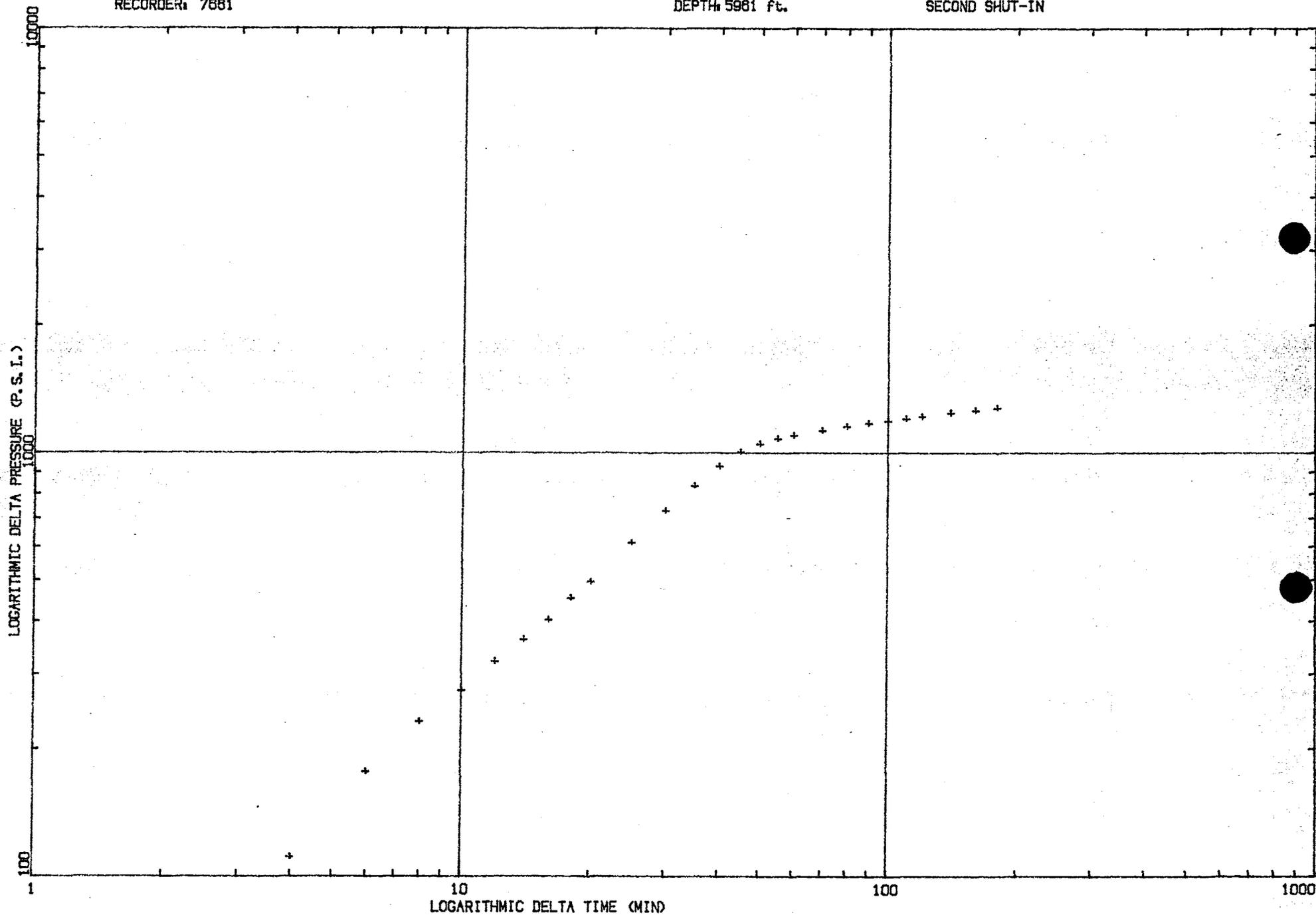
EXTRAPOLATED PRESSURE: 1573.180 P. S. I. SLOPE: 767.886 P. S. I. /CYCLE



OPERATOR: MERIDIAN OIL
LOCATION: 17-38S-24E
RECORDER: 7861

WELL NAME: #12-17 SUPAI FEDERAL
DST #: 1
DEPTH: 5961 ft.

SECOND SHUT-IN



MERIDIAN OIL
DST#: 1
#12-17 SUPAI FEDERAL
5946 - 6048ft.

Location: 17-38S-24E
Test Type: BOTTOM HOLE CONVENTIONAL
Formation: UPPER ISMAY

Recorder Number: 7661
Recorder Depth: 5961 ft.

SAMPLE DATA

SAMPLE CHAMBER:

Capacity of sample chamber 2100 cc
Volume of sample..... 2000 cc
Pressure in sampler..... 150 psig
Where sampler was drained... on location

Sampler contained:

Oil 1200 cc 65 @ 42 Degrees F
Mud 800 cc
Gas .89 cu-ft
GOR 118.67

RESISTIVITY DATA:

Top.....: 9500 PPM NACL
Middle.....: OIL
Bottom.....: OIL
Sampler.....:
Mud pit.....: 9500 PPM NACL
Make-up Water...: 9500 PPM NACL

MERIDIAN OIL
DST#: 1
#12-17 SUPAI FEDERAL
5946 - 6048ft.

GAS MEASUREMENTS

Device: FLOOR MANIFOLD

Riser: 0.0 in.

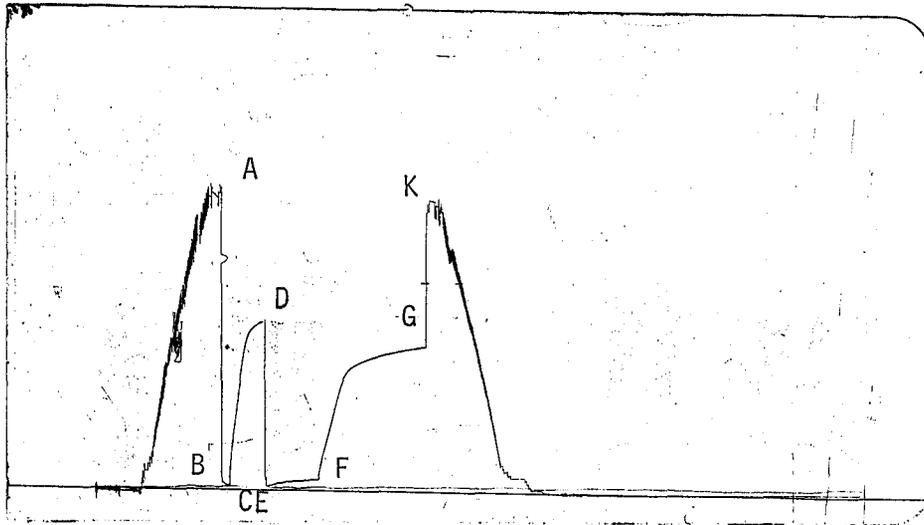
Bomb #:
Sent to:

FLOW #	TIME (min)	READING(psi)	CHOKE (in)	Mcf/d
2	5	6.0	.250	30.9
2	10	6.0	.250	30.9
2	15	5.0	.250	29.4
2	25	4.0	.250	28.0
2	30	3.0	.250	26.5
2	45	3.0	.250	26.5
2	60	2.0	.250	25.0
2	90	1.5	.250	23.2

MERIDIAN OIL
DST#: 1
#12-17 SUPAI FEDERAL
5946 - 6048ft.

PRESSURE RECORDER NUMBER : 24645

DEPTH : 5925.00ft. LOCATION : INSIDE
TYPE : K-3 CAPACITY : 4450.00psi

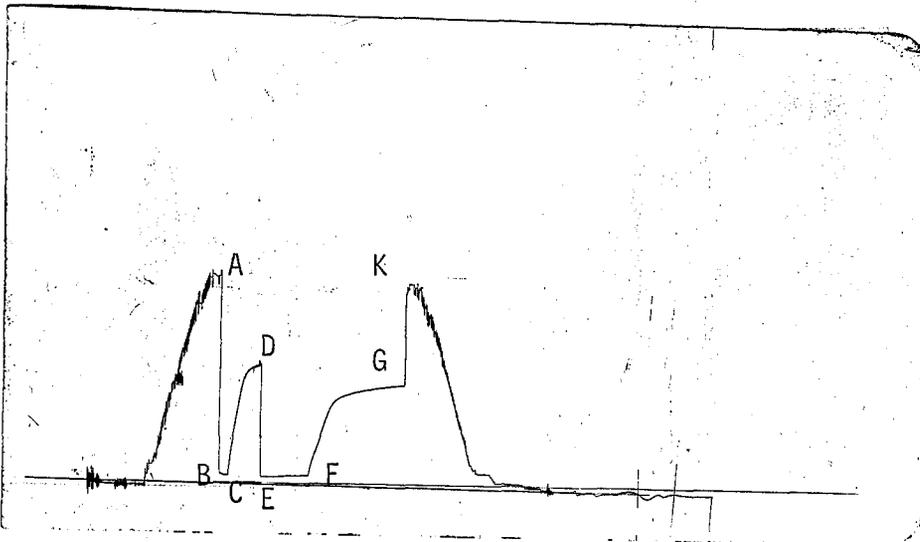


PRESSURE
psi
A)Initial Hydro : 2950.0
B)1st Flow Start: 85.0
C)1st Flow End : 56.0
D)END 1st Shutin: 1656.0
E)2nd Flow Start: 47.0
F)2nd Flow End : 118.0
G)END 2nd Shutin: 1409.0
Q)Final Hydro. : 2842.0

TEST TIMES(MIN)
1st FLOW : 15
SHUTIN: 60
2nd FLOW : 90
SHUTIN: 180

PRESSURE RECORDER NUMBER : 24552

DEPTH : 6045.00ft. LOCATION : OUTSIDE
TYPE : K-3 CAPACITY : 6625.00psi



PRESSURE
psi
A)Initial Hydro : 3055.0
B)1st Flow Start: 173.0
C)1st Flow End : 154.0
D)END 1st Shutin: 1738.0
E)2nd Flow Start: 140.0
F)2nd Flow End : 173.0
G)END 2nd Shutin: 1488.0
Q)Final Hydro. : 2922.0

MERIDIAN OIL, INC.
12-17 SUPAI FEDERAL
SECTION 17, T38S, R24E
SAN JUAN COUNTY - UTAH

GEOLOGIC REPORT
BY
BILL NAGEL
ROCKY MOUNTAIN GEO-ENGINEERING COMPANY

WELL SUMMARY

OPERATOR: MERIDIAN OIL INC.
WELL NAME: 12-17 SUPAI FEDERAL
LOCATION: SE/NW SECTION 17-T38S-R24E
1855' FNL - 985' FWL
COUNTY: SAN JUAN
STATE: UTAH
ELEVATION: 5404' GL - 5416' KB
SPUD DATE: 12/12/86
COMPLETION DATE: 12/22/86
HOLE SIZE: 17½" TO 79'; 12¼" TO 2232'; 7 7/8" TO T.D.
CASING RECORD: 13 3/8" TO 79'; 8 5/8" SET @ 2219'
DRILLING ENGINEER: JIMMY REEDER
WELLSITE GEOLOGY: ROCKY MOUNTAIN GEO-ENGINEERING COMPANY
WELLSITE GEOLOGIST: BILL NAGEL
DRILLING CONTRACTOR: AZTEC #301
TOOL PUSHER: BUDDY DAVIS
MUD COMPANY: THUNDERBIRD MUD COMPANY
MUD ENGINEER: BOB ROBERTSON
ELECTRIC LOGGING: SCHLUMBERGER
TYPE OF LOGS RUN: DLL-MSFL, FDC-CNL, BHC, HDT
DRILL STEM TESTING: LYNOS
OBJECTIVES: ISMAY & DESERT CREEK
TOTAL DEPTH: 6328' DRILLER, 6330' LOGGER

MERIDIAN OIL, INC.
12-17 SUPAI FEDERAL
SEC. 17, T38S, R24E
SAN JUAN CO. - UTAH

WELL CHRONOLOGY

DATE & # DAYS	MDNT DEPTH	FTG/ DAY	DAILY OPERATIONS
12/12/86 (1)	-0-	509	DRL MOUSE HOLE - DRL SURFACE - POOH & RUN COND PP - CMT - WOC - NIP UP & DRL AHEAD
12/13/86 (2)	509	1542	DRL - CIRC - POOH - RIH - LOST CIRC - DRL - POOH - LOST CIRC - MIX MUD - RIH
12/14/86 (3)	2051	167	DRL - CIRC - POOH - RUN CSG - CMT - NIP UP
12/15/86 (4)	2218	1055	NIP UP - TEST BOP - RIH - DRL CMT - DRLG AHEAD
12/16/86 (5)	3273	943	DRLG AHEAD
12/17/86 (6)	4216	959	DRLG AHEAD
12/18/86 (7)	5193	408	DRLG - POOH - RIH - CUT DRLG LINE - RIH - DRL AHEAD
12/19/86 (8)	5601	212	DRLG AHEAD
12/20/86 (9)	5813	179	DRLG - POOH - RIH - DRL AHEAD
12/21/86 (10)	5992	57	DRLG - CIRC SPL - POOH - PICK UP DST TOOLS - RIH - RUN TEST - POOH & LAY DOWN DST - RIH
12/22/86 (11)	6048	279	RIH - CIRC - RIH - CIRC - DRLG - CIRC - POOH FOR LOGS - RIG UP SCHLUMBERGER
12/23/86 (12)	6328	-0-	WAIT ON FISH TOOLS - PICKUP TOOL & RIH - WORK ON FISH - POOH W/FISH - RIH & CIRC - POOH - RUN E-LOGS
12/24/86 (13)	6328	-0-	RUN E-LOGS

MERIDIAN OIL, INC.
12-17 SUPAI FEDERAL
SEC. 17, T38S, R24E
SAN JUAN CO. - UTAH

SAMPLE DESCRIPTIONS

3300-3310	60%	SH red tan sft-frm blk-ply occ slty & sndy
	40%	SLTST red tan sft blk varg
3310-3320	50%	SH AA
	50%	SLTST AA
3320-3330	80%	SH red tan lav sft-frm blk-ply occ slty & sndy
	20%	SLTST AA
3330-3340	80%	SH AA
	20%	SLTST tan sft blk varg
3340-3350	70%	SH AA
	20%	SLTST AA
	10%	SS clr uncons msrt sbrd
3350-3360	60%	SH red occ lav sft-frm blk-ply occ slty & sndy
	40%	SLTST red tan sft-frm varg
3360-3370	70%	SH AA
	30%	SLTST AA
3370-3380	70%	SH red occ lav & grn sft-frm blk-ply occ slty & sndy
	30%	SLTST AA
3380-3390	80%	SH AA
	20%	SLTST tan occ red sft-frm varg
3390-3400	70%	SH red occ grn frm-sft blk-ply occ slty
	30%	SLTST AA
3400-3410	60%	SH
	40%	SLTST red frm-sft blk varg occ sndy
3410-3420	70%	SH AA
	30%	SLTST AA
3420-3430	70%	SH AA
	30%	SLTST red frm-sft blk varg occ sndy
3430-3440	80%	SH red occ orng sft-frm blk-ply occ slty & sndy
	20%	SLTST AA
3440-3450	80%	SH red-lav sft-frm blk-ply occ slty & sndy
	20%	SLTST
3450-3460	90%	SH
	10%	SLTST red sft-frm blk varg occ sndy
3460-3470	80%	SH red sft-frm blk-ply occ slty & sndy
	20%	SLTST AA
3470-3480	70%	SH AA

MERIDIAN OIL, INC.
12-17 SUPAI FEDERAL
SAMPLE DESCRIPTIONS CONTINUED

3470-3480	20% SLTST AA 10% SS clr vfg uncons msrt sbrd
3480-3490	70% SH red occ grn frm-sft blk-pty occ slty 30% SLTST AA 10% SS AA
3490-3500	70% SH AA 30% SLTST red frm-sft blk occ pty varg occ sndy
3500-3520	80% SH red occ grn frm-sft blk-pty occ slsly 20% SLTST AA
3520-3540	70% SH red occ tan & grn frm-sft blk-pty occ slty 30% SLTST AA
3540-3550	80% SH AA 20% SLTST red grn frm blk occ arg occ slsndy
3550-3560	70% SH AA 20% SLTST AA 10% SS clr vfg uncons wsrt sbrd-sbang
3560-3570	70% SH red occ grn frm-sft blk-pty occ slty 30% SLTST AA
3570-3580	70% SH AA 30% SLTST red sft-frm blk occ pty mod arg occ sndy
3580-3590	80% SH AA 20% SLTST AA
3590-3600	70% SH red occ mar sft-frm blk-pty occ slty & sndy 30% SLTST AA
3600-3610	60% SH red-mar occ dkbrn frm-sft pty-blk occ slty 40% SLTST
3610-3630	70% SH AA 30% SLTST red sft-frm blk occ pty mod arg occ sndy
3730-3640	60% SH red-mar sft-frm pty-blk occ slty 40% SLTST ltred-mred frm blk mod arg occ slty
3640-3650	60% SH AA 30% SLTST AA 10% SS lcr vfg uncons msrt sbang-sbrd
3650-3660	70% SH red occ dkbrn frm-sft pty-blk occ slsly 20% SLTST 10% SS clr f-vfg uncons msrt sbang-sbrd
3660-3670	60% SH red occ grn sft-frm blk-pty occ slty 20% SLTST AA 20% SS lcr f-vfg uncons msrt sbang-sbrd
3670-3680	70% SH AA

MERIDIAN OIL, INC.
12-17 SUPAI FEDERAL
SAMPLE DESC. CONTINUED

3670-3680	20% 10%	SLTST red sft-frm blk-pty occ sndy SS AA
3680-3690	70% 30%	SH red occ grn ltgy sft-frm pty-blky occ slty SLTST
3690-3700	60% 40%	SH AA SLTST red mgy sft-frm pty-blky occ sndy
3700-3710	80% 20%	SH AA SLTST AA
3710-3720	70% 20% 10%	SH red grn mgy sft-frm pty-blky occ slty SLTST AA SS clr vfg uncons-mcmt msrt sbang-sbrd
3720-3730	80% 20%	SH AA SLTST red mgy sft-frm blk-pty varg
3730-3740	70% 30%	SH red occ mgrn sft-frm occ slty SLTST AA
3740-3750	70% 20% 10%	SH AA SLTST AA SS clr vfg uncons occ mcmt msrt sbang-sbrd
3750-3760	80% 10% 10%	SH red occ mgy & mgrn sft-frm blk-pty SLTST AA SS AA
3760-3770	70% 30%	SH AA SLTST red sft-frm blk-pty occ sndy varg
3770-3780	60% 20% 20%	SH AA SLTST AA SS clr vfg uncons occ mcmt msrt sbang-sbrd
3780-3790	70% 20% 10%	SH red occ grn sft-frm blk-pty occ slty SLTST AA SS AA
3790-3800	60% 20% 20%	SH AA SLT red frm-sft blk-pty sndy ip arg SS AA
3800-3810	70% 20% 10%	SH AA SLT AA SS clr-frst vfg uncons msrt sbang-sbrd
3810-3820	80% 10% 10%	SH red lt-mgy occ grn blk-pty sft-frm SLTST AA SS AA
3820-3830	60% 30% 10%	SH AA SLTST red mgy sft-frm sndy ip blk-pty SS AA

MERIDIAN OIL, INC.
12-17 SUPAI FEDERAL
SAMPLE DESC. CONTINUED

3830-3840	60% SH AA 20% SLTST AA 20% SS clr vfg uncons-mcmt msrt sbang-sbrd
3840-3850	70% SH red occ grn sft-frm blk-ply slty 15% SLTST AA 15% SS AA
3850-3860	80% SH AA 10% SLT red sft-frm blk-ply occ sndy 10% SS AA
3860-3870	60% SH AA 30% SLTST AA 10% SS clr-frst vfg uncons-mcmt msrt sbang-ang
3870-3880	70% SH red lt-mgy occ grn sft-frm blk-ply slty 20% SLTST AA 10% SS AA
3880-3890	80% SH AA 10% SLTST red-orng sft-frm blk-ply shy 10% SS clr-frst vfg uncons-mcmt msrt sbang-sbrd
3890-3900	80% SH AA 10% SLTST AA 10% SS clr-frst vfg uncons-mcmt msrt sbang-sbrd
3900-3910	70% SH red orng ltgy occ grn blk-ply sft-frm slty 20% SLTST AA 10% SS AA
3910-3920	70% SH AA 15% SLTST red occ ltgygrn sft-frm blk-ply shy ip 15% SS AA
3920-3930	60% SH AA 20% SLTST AA 20% SS clr vfg uncons-mcmt msrt sbang-sbrd
3930-3940	60% SH red ltgrn ltgy sft-frm blk-ply slty 30% SLTST AA 10% SS AA
3940-3950	70% SH AA 20% SLTST red sft-frm blk-ply arg shy ip 10% SS AA
3950-3960	80% SH AA 10% SLTST AA 10% SS clr frst-occ amber vfg msrt uncons-mcmt sbang
3960-3970	70% SH red-redorng ltgygrn sft-frm blk-ply slty 15% SLTST AA 15% SS AA
3970-3980	70% SH AA

MERIDIAN OIL, INC.
12-17 SUPAI FEDERAL
SAMPLE DESC. CONTINUED

3970-3980	20% SLTST redorng ltgy sft-frm blky-plty sdy ip 10% SS AA
3980-3990	60% SH AA 30% SLTST AA 10% SS clr vfg uncons-occ mcmt msrt sbang-sbrd
3990-4000	60% SH red ltgy gygrn frm-sft blky-plty slty 20% SLTST AA 20% SS AA
4000-4010	70% SH AA 20% SLTST red-ltorng ltgy frm blky-plty arg 10% SS AA
4010-4020	70% SH AA 20% SLTST AA 10% SS clr-frst vfg uncons-mcmt msrt sbang slty
4020-4030	60% SH red gygrn sft-frm blky-plty shy 30% SLTST AA 10% SS AA
4030-4040	70% SH AA 20% SLTST red ltgry sft-frm blky-plty shy ip arg 10% SS AA
4040-4050	60% SH AA 20% SLTST AA 20% SS clr frst vfg uncons msrt sbang-sbrd slty
4050-4060	60% SH red occ ltgy sft-frm blky-plty slty 30% SLTST AA 10% SS AA
4060-4070	50% SH AA 30% SLTST red-redorng sft-frm blky-plty arg shy 20% SS AA
4070-4080	60% SH AA 20% SLTST AA 20% SS clr vfg uncons lse msrt sbang-sbrd
4080-4090	60% SH red ltgy occ gygrn sft-frm blky-plty slty 30% SLTST AA 10% SS AA
4090-4100	70% SH AA 20% SLTST red ltgy sft-frm blky-plty arg sndy ip 10% SS AA
4100-4110	60% SH AA 20% SLTST AA 20% SS clr vfg uncons-mcmt msrt sbang-sbrd
4110-4120	60% SH red ltgy gygrn frm-sft blky-plty slty 30% SLTST AA 10% SS AA

MERIDIAN OIL, INC.
12-17 SUPAI FEDERAL
SAMPLE DESC. CONTINUED

4120-4130	60% SH AA 20% SLTST red sft-frm blk-pty arg sdy 20% SS AA
4130-4140	50% SH AA 30% SLTST AA 20% SS clr-frst vfg uncons-mcmt msrt sbang slty
4140-4150	60% SH red ltgygrn sft-frm blk-pty slty 30% SLTST AA 10% SS AA
4150-4160	70% SH AA 20% SLTST red occ ltgy sft-frm blk-pty arg 10% SS AA
4160-4170	60% SH AA 20% SLTST AA 20% SS clr-frst vfg uncons msrt sbang-sbrd
4170-4180	60% SH red ltgy-ltgygrn sft-frm slty blk-pty 30% SLTST AA 10% SS AA
4180-4190	60% SH AA 20% SLTST res sft-frm blk-pty arg 20% SS AA
4190-4200	50% SH AA 30% SLTST AA 20% SS clr-trnsl vfg uncons-mcmt msrt sbang-sbrd
4200-4210	60% SH red ltgy sft-frm blk-pty slty 30% SLTST AA 10% SS AA
4210-4220	70% SH AA 20% SLTST red occ ltgy sft-frm blk-pty arg 10% SS AA
4220-4230	60% SH AA 20% SLTST AA 20% SS clr vfg uncons-mcmt msrt sbang slty
4230-4240	50% SH red ltgygrn blk-pty slty sft-frm 30% SLTST AT 20% SS AA
4240-4250	60% SH AA 30% SLTST red-ltgy sft-frm blk-pty arg 10% SS AA
4250-4260	70% SH AA 20% SLTST AA 10% SS clr vfg uncons-mcmt msrt sbang-sbrd
4260-4270	60% SH red ltgy-grygrn sft-frm blk-pty slty

MERIDIAN OIL, INC.
12-17 SUPAI FEDERAL
SAMPLE DESC. CONTINUED

4260-4270	20% SLTST AA 20% SS AA
4270-4280	50% SH AA 30% SS clr f-vfg uncons msrt sbang-sbrd 20% SLTST red sft-frm blk-ply arg occ sndy calc TR LS ltgy frm ply micxl varg
4280-4290	60% SH red-mar occ ltgy & grn sft-frm blk-ply occ slty occ lmy 20% SS AA 20% SLTST AA
4290-4300	40% SH AA 30% SS clr f-vfg uncons msrt sbrd-ang 30% SLTST AA
4300-4310	50% SS AA 30% SLTST red-mar occ purp sft blk occ sndy sl arg 20% SH AA
4310-4320	40% SS AA 30% SLTST AA 30% SH red-mar sft-frm blk-ply occ slty & sndy TR LS orng frm blk micxl dns arg
4320-4330	40% SH AA 30% SLTST AA 30% SS clr f-vfg uncons msrt sbang-sbrd
4330-4340	40% SH AA 30% SLTST red sft-frm blk-ply mod-varg occ sndy 30% SS AA
4340-4350	50% SH red-mar occ ltgy & grn sft-frm blk-ply 30% SLTST AA 20% SS AA
4350-4360	40% SH AA 30% SLTST AA 30% SS clr vfg uncons-pcmt msrt sbang-sbrd TR ANHY wh-ltyel frm ply
4360-4370	50% SH red occ ltgy grn sft-frm blk-ply occ slty & lmy 30% SLTST AA 20% SS AA
4370-4380	50% SH AA 30% SLTST red occ mgy frm blk-ply mod arg occ sndy calc 20% SS
4380-4390	60% SH red-mar occ ltgy sft-frm blk-ply occ slty occ lmy 20% SLTST AA 20% SS AA
4390-4400	70% SH AA 20% SS clr vfg uncons occ pcmt msrt sbang-sbrd 10% SLTST AA

MERIDIAN OIL, INC.
12-17 SUPAI FEDERAL
SAMPLE DESC. CONTINUED

- 13 -

4400-4410	60% SH AA 20% SS AA 20% SLTST red frm blk-ply occ sndy mod arg calc TR LS orng frm ply-blky micxl sl sndy
4410-4420	70% SH red-mar occ ltgy grn lav sft-frm blk-ply occ slty occ lmy 20% SS AA 10% SLTST AA
4420-4430	70% SH AA 20% SLTST AA 10% SS clr vfg uncons occ mcmt sbang-sbrd
4430-4440	60% SH red ltgy grn sft-frm blk-ply occ slty & lmy 20% SS AA 20% SLTST AA
4440-4450	70% SH 20% SLTST red frm-sft blk occ sndy mod arg calc 10% SS AA TR LS ltred-orng frm ply dns micxl
4450-4460	70% SH AA 20% SLTST AA 10% SS clr vfg uncons-mcmt m-wsrt sbang-sbrd
4460-4470	50% SH red occ grn & gy sft-frm blk-ply occ slty & lmy 30% SS clr f-vfg uncons m-wsrt sbang-sbrd 20% SLTST
4470-4480	60% SH AA 20% SS AA 20% SLTST red frm-sft blk-ply mod arg occ sl sndy
4480-4490	60% SH AA 20% SS clr vfg uncons-mcmt m-wsrt sbang-sbrd occ glau incl 20% SLTST AA TR LS pk-orng ply micxl sl arg
4490-4500	70% SH red occ grn lav gy sft-frm blk-ply occ slty occ lmy 20% SLTST AA 10% SS AA
4500-4510	60% SH AA 30% SLTST red sft-frm blk-ply sl arg occ sl sndy 10% SS AA
4510-4520	60% SH AA 20% SS clr vfg uncons-mcmt m-wcmt sbang-sbrd 20% SLTST AA
4520-4530	60% SH AA 30% SLTST red dkbrn sft-frm blk-ply sl arg occ slsndy 10% SS AA
4530-4540	70% SH red occ gy & grn sft-frm blk-ply occ slty occ lmy 20% SS AA 10% SLTST AA

MERIDIAN OIL, INC.
12-17 SUPAI FEDERAL
SAMPLE DESC. CONTINUED

4540-4550	50% SH AA 30% SS clr vfg occ fg uncons-mcmt m-wsrt sbang-sbrd 20% SLTST AA
4550-4560	40% SH AA 40% SS AA 20% SLTST red occ dkbrn sft-frm blk-ply mod arg TR LS ltred frm ply micxl occ arg
4560-4570	50% SH red occ gy & grn sft-frm blk-ply occ lmy & slty 30% SS AA 20% SLTST AA
4570-4580	50% SH AA 30% SS clr vfg occ fg uncons-mcmt msrt sbang-sbrd 20% SLTST AA
4580-4590	60% SH AA 20% SS AA 20% SLTST red dkbrn frm-sft blk-ply occ sndy
4590-4600	70% SH red occ grn dkbrn gy sft-frm blk-ply occ slty occ lmy 20% SS AA 10% SLTST AA
4600-4610	60% SH AA 20% SS clr vfg uncons-mcmt msrt sbang-sbrd 20% SLTST AA TR LS orng frm blk-ply micxl
4610-4620	50% SH AA 30% SLTST red dkbrn frm-sft blk-ply occ arg 20% SS AA
4620-4630	60% SH red occ ltgy lav grn sft-frm blk-ply occ lmy & slty 20% SLTST AA 20% SS AA
4630-4640	50% SH AA 30% SS clr vfg mcmt-uncons msrt sbang-sbrd 20% SLTST AA
4640-4650	60% SH AA 20% SLTST red-redbrn sft-frm blk-ply occ sndy mod arg 20% SS AA TR LS orng
4650-4660	20% SLTST rd-rdbn sft-frm blk-ply occ sndy mod arg 60% SH aa 20% SS aa
4660-4670	80% SH aa 20% SLTST redbrn sft occ frm blk-ply varg
4670-4680	90% SH red mbrn occ grn sft occ frm blk-ply occ slsly 10% SLTST aa

MERIDIAN OIL, INC.
 12-17 SUPAI FEDERAL
 SAMPLE DESC. CONTINUED

4680-4690	70% SH AA 20% SS clr uncons vfg msrt sbang-sbrd 10% SLTST
4690-4700	70% SH AA 20% SS AA 10% SLTST red dkbrn sft-frn blk-ply mod arg sl slty
4700-4710	60% SH red occ brn grn lt gy sft-frm blk-ply occ slty 20% SS AA 20% SLTST AA
4710-4720	40% SS clr vfg uncons-mcmt msrt sbang-sbrd 30% SLTST mbrn sft blk v arg slcalc 30% SH AA
4720-4730	40% SLTST AA 30% SS AA 30% SH red occ brn sft blk-ply occ slty
4730-4740	40% SLTST mbrn sft blk varg mod calc 30% SS AA 30% SH AA
4740-4750	40% SS clr vfg uncons-mcmt msrt sbang-sbrd 30% SLTST AA 20% SH AA
4750-4760	40% SS clr-frst vfg uncons-mcmt msrt sbang-sbrd 30% SLTST AA 30% SH AA
4770-4780	40% SLTST AA 30% SS AA 30% SH red occ mbrn sft blk-ply sm slty
4780-4790	40% SS clr vfg uncons-mcmt msrt sbang-sbrd 30% SLTST AA 30% SH AA
4790-4800	50% SS AA 30% SLTST lt-mbrn sft blk-ply arg mcalc 20% SH AA
4800-4810	50% SS AA 30% SLTST AA 20% SH red ltgy sft blk slty ip
4810-4820	50% SS clr vfg uncons-mcmt msrt sbang-sbrd 30% SLTST AA 20% SH AA
4820-4830	50% SS AA 30% SLTST lt-mbrn sft-frm blk arg mcalc 20% SH AA
4830-4840	60% SS AA

MERIDIAN OIL, INC.
12-17 SUPAI FEDERAL
SAMPLE DESC. CONTINUED

4830-4840	20%	SLTST AA
	20%	SH red occ mgy sft blk-pty slty
4840-4850	60%	SS clr vfg uncons msrt sbang-sbrd
	30%	SLTST AA
	10%	SH AA
4850-4860	40%	SH AA
	30%	SLTST lt-mbrn sft blk-pty shy ip sl calc
	30%	SS AA
4860-4870	40%	SLTST AA
	30%	SH red ltgy sft-frm blk-pty slty
	30%	SS AA
4870-4880	40%	SH AA
	30%	SLTST AA
	30%	SS clr vfg uncons-mcmt msrt sbang-sbrd
4880-4890	50%	SH AA
	30%	SLTST lt-mbrn sft blk-pty shy ip sl calc
	20%	SS AA
4890-4900	40%	SH red ltgy blk-pty sft-frm slty
	30%	SLTST AA
	30%	SS AA
4900-4910	40%	SLTST AA
	30%	SH AA
	30%	SS clr vfg uncons-mcmt sbang-sbrd
4910-4920	50%	SLTST ltbrn sft-frm blk-pty shy ip sl calc
	30%	SH AA
	20%	SS AA
4920-4930	40%	SLTST AA
	40%	SH red lt-mgy sft blk-pty slty ip
	20%	SS AA
4930-4940	40%	SLTST AA
	30%	SH AA
	30%	SS clr vfg uncons-mcmt msrt sbang-sbrd
4940-4950	40%	SLTST mbrn sft blk-pty arg mcalc
	40%	SH AA
	20%	SS AA
4950-4960	50%	SLTST AA
	40%	SH red ltgy sft-frm blk-pty slty
	10%	SS AA
4960-4970	60%	SLTST AA
	30%	SH AA
	10%	SS clr vfg uncons-mcmt msrt sbang-sbrd
4970-4980	40%	SLTST mbrn sft blk-pty arg lmy ip mcalc
	30%	SH AA

MERIDIAN OIL, INC.
12-17 SUPAI FEDERAL
SAMPLE DESC. CONTINUED

4980-4990	40%	SLTST AA
	40%	SS AA
	20%	SH red ltgy sft-frm blk-ply slty ip
4990-5000	50%	SS clr-frst vfg uncons-mcmt sbang-sbrd
	40%	SLTST AA
	10%	SH AA
5000-5010	40%	SLTST AA
	30%	SH AA
	20%	SS clr vfg occ fg mcmt-uncons msrt sbang-sbrd
	10%	LS mgy frm blk mcxl sl arg
5010-5020	50%	SLTST red mbrn sft-frm blk-ply mod arg
	40%	SH AA
	10%	SS AA
	TR	LS AA
5020-5030	40%	SLTST AA
	30%	SH red mgy grn sft-frm blk-ply occ slty
	20%	SS AA
	10%	LS mgy frm blk occ ply micxl sl-m arg
5030-5040	40%	SLTST AA
	30%	SH AA
	20%	SS clr f-vfg uncons-mcmt msrt sbang-sbrd
	10%	LS AA
5040-5050	30%	SLTST AA
	30%	SH AA
	20%	SS AA
	20%	LS mgy frm blk micxl occ sl arg
5050-5060	40%	SH red lt-mgy grn sft-frm blk-ply occ slty occ lmy
	30%	SS AA
	20%	SLTST red dkbrn sft-frm blk sl-m arg occ sl sdy calc
	10%	LS AA
5060-5070	30%	SH AA
	30%	SS clr f-vfg uncons-mcmt msrt sbrd-arg
	20%	SLTST AA
	20%	LS tan-ltgy frm blk-ply micxl w/ TR FOS
5070-5080	30%	SS AA
	30%	SLTST red dkbrn frm blk occ sdy sl arg
	30%	SH AA
	10%	LS AA
5080-5090	30%	SS AA
	30%	SLTST AA
	20%	SH red lt-mgy mbrn mgy sft-frm blk-ply occ slty
	20%	LS AA
5090-5100	30%	SS clr vfg occ fg uncons-mcmt msrt sbang-sbrd
	30%	SLTST AA
	20%	SH AA
	20%	LS tan-ltgy frm blk-ply micxl occ sl arg

5100-5110	30% SS AA 30% SLTST red dkbrn frm-sft blk-pty occ sndy sl arg 30% SH AA 10% LS AA
5110-5120	30% SS AA 30% SH red lt-mgy sft-frm blk-pty occ slty occ lmy 30% SLTST AA 10% LS AA
5120-5130	40% SS clr occ amber f-vfg uncons occ mcmt msrt sbang-rdd 30% SLTST AA 20% SH AA 10% LS AA
5130-5140	50% SS AA 20% SLTST red mbrn sft-frm blk occ arg occ sndy 20% SH AA 10% LS mgy-tan frm occ sft blk-pty mcxl occ arg
5140-5150	40% SS AA 30% SLTST AA 20% SH red m-ltgy sft-frm blk-pty occ lmy occ slty 10% LS AA
5150-5160	40% SS clr-amber f-vfg mcmt-uncons msrt sbang-rdd 20% SLTST AA 20% SH AA 20% LS AA
5160-5170	40% SH AA 30% SS AA 20% SLTST red-dkbrn sft-frm blk-pty occ arg occ sl sndy 10% LS tan-ltgy frm blk-pty micxl occ sl arg
5170-5180	30% SH red mgy mgrn sft-frm blk-pty occ slty occ lmy 30% SS AA 30% SLTST AA 10% LS AA
5180-5190	40% SS clr-amber f-vfg mcmt-uncons msrt sbang-sbrd 30% SLTST AA 20% SH AA 10% LS AA
5190-5200	40% SS AA 30% SLTST red sft-frm blk-pty m arg mcalc 20% SH AA 10% LS tan-ltgy frm blk-pty micxl m-slarg
5200-5210	40% SLTST AA 20% SH red m-dkgy sft-frm blk-pty occ slty occ lmy 20% SS AA 20% LS AA
5210-5220	40% SLTST dkbrn red sft-frm blk m-lmy 30% SH AA

5210-5220	20% LS tan-ltgy occ mbrn frm blkyy occ plty mcxl-vfxl sl arg 10% SS AA
5220-5230	40% SLTST AA 30% LS AA 20% SH AA 10% SS clr-amb f-vfg mcmt-uncons msrt sbang-sbrd
5230-5240	50% SH red mgrn mgy sft-frm blkyy-plty occ slty occ lmy 30% SLTST AA 20% LS AA
5240-5250	40% SH AA 30% SLTST AA 30% LS tan-ltgy mbrn frm blkyy occ plty mcxl-vfxl occ slty m-arg
5250-5260	40% SH AA 30% SLTST red dkbrn frm-sft blkyy occ sdy sl slmy m-arg 20% LS AA 10% SS clr f-vfg uncons-mcmt msrt sbang-sbrd
5260-5270	40% SH red mgrn mgy sft-frm blkyy-plty occ slty occ lmy 30% SLTST AA 30% LS AA
5270-5280	50% SH AA 30% SLTST AA 20% LS tan-ltgy mbrn frm blkyy mcxl-vfxl occ slty m-arg
5280-5290	50% SH AA 30% SLTST red mbrn frm-sft blkyy occ sdy m-arg sl lmy 20% LS AA
5290-5300	40% SH red lt-mgy grn sft-frm blkyy-plty occ slty occ lmy 30% LS AA 20% SLTST AA 10% SS clr vfg mcmt-uncons m-wsrt sbang-sbrd
5300-5310	50% SH AA 20% SLTST AA 20% LS tan-ltgy mbrn frm blkyy occ plty mcxl-vfxl m-arg 10% SS AA
5310-5320	40% SH AA 30% LS AA 20% SLTST dkbrn red frm-sft blkyy sl-m arg occ lmy 10% SS AA
5320-5330	40% SH red grn lt-mgy sft-frm blkyy-plty occ slty occ lmy 20% LS AA 20% SLTST AA 20% SS clr vfg mcmt-uncons msrt sbang-sbrd
5330-5340	30% SH AA 30% SLTST AA 20% LS tan-ltgy mbrn frm blkyy-plty mcxl-vfxl occ arg 20% SS AA

MERIDIAN OIL, INC.
12-17 SUPAI FEDERAL
SAMPLE DESC. CONTINUED

5340-5350	30% SH AA 30% LS AA 20% SLTST dkbrn red frm-sft blkly m-arg occ sl lmy 20% SS AA
5350-5360	30% SH red mbrn lt-mgy grn sft-frm blkly-pty occ slty occ lmy 30% SLTST AA 20% LS AA 20% SS clr vfg occ fg mcmt-uncons msrt sbang-sbrd
5360-5370	30% SH AA 30% LS tan-ltgy mgy mbrn frm blkly occ pty mcxl-vfxl occ arg 20% SLTST AA 20% SS AA
5370-5380	30% SH AA 30% SLTST red m-dkbrn frm-sft blkly sl-m arg 20% LS AA 20% SS clr vfg mcmt-uncons msrt sbang-sbrd
5380-5390	50% SH red occ grn sft-frm blkly-pty occ lmy occ slty 30% LS tan-ltgy occ pk mgy frm blkly mcxl-vfxl m-arg 10% SLTST AA 10% SS AA
5390-5400	60% SH AA 20% LS AA 10% SLTST red occ dkbrn frm blkly-pty occ lmy occ sdy 10% SS AA
5400-5410	50% SH AA 20% LS AA 20% SLTST AA 10% SS clr vfg occ fg mcmt-uncons msrt sbang-sbrd
5410-5420	60% SH red occ grn sft-frm blkly-pty occ lmy occ slty 30% LS tan-ltgy pk-ltred frm occ hd blkly mcxl-vfxl-fxl m-arg occ sdy 10% SS AA
5420-5430	70% SH AA 30% LS AA
5430-5440	60% SH AA 30% LS tan-ltgy ltred frm blkly occ pty mcxl-vfxl m-arg 20% SS clr vfg mcmt-uncons msrt sbang-sbrd
5440-5450	50% SH red occ ltgrn sft-frm blkly-pty sm lmy slty ip 40% LS AA 10% SS AA
5450-5460	50% SH AA 30% LS AA 20% SS clr-frst vfg uncons-mcmt msrt sbang-sbrd
5460-5470	50% SH AA 30% LS ltgy-bf ltred frm blkly-pty mc-vfxl arg 20% SS AA

5470-5480	60%	SH red ltgy-gygrn sft-frm blk-ply slty ip
	30%	LS AA
	10%	SS AA
5480-5490	50%	SH AA
	30%	LS AA
	20%	SS clr vfg uncons-mcmt msrt sbang-sbrd
5490-5500	70%	SH AA
	20%	LS ltred occ ltgy frm blk mcxl-vfxl arg
	10%	SS AA
5500-5510	40%	SH red occ ltgrn sft-frm blk-ply slty ip lmy
	20%	LS AA
	20%	SLTST red mbrn frm-sft blk sl arg
	20%	SS AA
5510-5520	40%	SH AA
	20%	LS ltred-pk occ ltgy frm-mhd blk mc-vfxl arg
	20%	SLTST AA
	20%	SS clr vfg pred uncons occ mcmt msrt sbang-sbrd
5520-5530	40%	SH AA
	30%	LS AA
	20%	SLTST red m-dkbrn frm-sft blk-ply sl-m arg
	10%	SS AA
5530-5540	30%	SH red ltgrn sft-frm blk-ply slty sm lmy
	30%	LS AA
	30%	SLTST AA
	10%	SS AA
5540-5550	30%	SH AA
	30%	LS ltred-orng occ ltgy frm-mhd blk mc-vfxl m-arg
	30%	SLTST AA
	10%	SS clr vfg uncons-mcmt msrt sbang-sbrd
5550-5560	40%	SH red ltgy blk-ply slty lmy sft-frm
	30%	LS AA
	20%	SLTST red m-dkbrn frm-sft blk arg ip
	10%	SS AA
5560-5570	50%	SH AA
	30%	LS AA
	20%	SLTST AA
	10%	SS clr occ trns1 vfg uncons-mcmt sbang-sbrd
5570-5580	60%	SH red lt-mgy blk-ply sft-frm slty occ lmy
	20%	LS AA
	10%	SLTST red occ mbrn frm-sft blk sl-m arg
	10%	SS AA
5580-5590	30%	SH AA
	30%	LS ltred occ ltgy frm-hd blk mc-vfxl m arg
	30%	SLTST AA
	10%	SS clr vfg mcmt-uncons msrt sbang-sbrd

MERIDIAN OIL INC.
12-17 SUPAI FEDERAL
SAMPLE DESC. CONTINUED

5590-5600	50% SH red occ gy-grn sft-frm blk-pty occ slty occ lmy 30% SLTST AA 20% LS AA
5600-5610	40% SH AA 30% SLTST red occ dkbrn frm blk m-slarg mcalc 20% LS AA 10% SS clr vfg uncons m-wsrt sbang-sbrd occ ang
5610-5620	40% SH AA 30% LS ltred tan-ltgy frm blk mcxl-vfxl m arg 20% SLTST AA 10% SS AA
5620-5630	40% SH red occ grn gy sft-frm blk-pty occ slty occ lmy 30% LS tan-ltgy mgy ltred frm blk occ pty micxl-vfxl m arg 20% SLTST AA 10% SS AA
5630-5640	50% SH AA 20% LS AA 20% SLTST AA 10% SS clr vfg uncons occ mcmt msrt sbang-sbrd
5640-5650	50% SH AA 30% LS tan-ltgy mbrn mgy frm occ hd blk mcxl-vfxl occ arg 20% SLTST red dkbrn frm blk m arg mcalc
5650-5660	60% SH red lt-mgy grn sft-frm blk-pty occ slty occ lmy 30% LS AA 10% SLTST AA
5660-5670	50% SH AA 40% LS tan-wh ltgy-mgy mbrn frm blk mcxl-vfxl occ arg 10% SLTST AA
5670-5680	60% SH red lt-mgy grn sft-frm blk-pty occ slty & sdy occ lmy 40% LS AA
5680-5690	50% SH AA 40% LS AA 10% SLTST red frm blk m arg occ calc
5690-5700	60% SH AA 30% LS tan-wh lt-mgy mbrn frm blk mcxl-vfxl occ arg 10% SLTST AA
5700-5710	70% SH red tan-mgy frm blk-pty occ slty occ lmy 30% LS AA
5710-5720	70% SH AA 30% LS mgy mbrn tan frm-occ hd blk mcxl-vfxl
5720-5730	80% SH red tan-mgy mgrn frm blk-pty occ slty occ lmy 20% LS AA
5730-5740	80% SH AA 20% LS mgy mbrn tan occ hd-frm blk mc-vfxl

MERIDIAN OIL, INC.
12-17 SUPAI FEDERAL
SAMPLE DESC, CONTINUED

5740-5750	80% SH red mgy mgygrn frm blk-ply slty lmy ip 20% LS AA
5750-5760	70% SH AA 30% LS mgy tan-mbrn frm-mhd blk mc-vfxl
5760-5770	60% SH red lt-mgy occ gygrn blk-ply sft-frm slty lmy ip 40% LS AA
5770-5780	80% SH AA 20% LS tan-wh occ lt-mgy frm blk mcx1-vfxl arg
5780-5790	70% SH red lt-mgy occ gygrn sft blk-ply slty 30% LS AA
5790-5800	70% SH AA 30% LS wh-lttan off ltgy frm-hd blk mc-vfxl arg
5800-5810	80% SH red lt-mgy gygrn lav sft-frm blk-ply slty lmy ip 20% LS AA
5810-5820	80% SH AA 20% LS wh-lttan lt-mgy frm-hd blk mc-vfxl arg ip
5820-5830	70% SH red dkbrn m-dkgy frm blk-ply occ lmy occ slty 30% LS AA
5830-5840	80% SH AA 20% LS wh-lttan mgy frm occ mhd blk mc-vfxl occ sndy arg ip
5840-5850	70% SH red dkbrn m-dkgy frm blk-ply occ lmy occ slty 30% LS AA
5850-5860	80% SH AA 20% LS wh-lttan frm occ hd blk mc-vfxl arg ip
5860-5870	70% SH red lt-mgy lt-mbrn sft-frm blk-ply slty lmy ip 30% LS AA
5870-5880	80% SH AA 20% LS wh ltbrn-ltgy frm-hd blk mc-vfxl arg ip slty
5880-5890	70% SH red lt-mgy brn lav sft-frm blk-ply lmy ip slty 30% LS AA
5890-5900	80% SH AA 20% LS ofwh ltbrn frm-mhd blk mc-vfxl slty ip arg
5900-5910	70% SH red ltgrn gygrn lav mbrn sft-frm blk slty lmy ip 30% LS AA
5910-5920	70% SH AA 30% LS ofwh-bf ltbrn-tan frm-hd mc-vfxl arg ip
5920-5930	80% SH red gygrn yel ltbrn-tan lav sft-frm blk-ply lmy ip slty ip 20% LS AA

MERIDIAN OIL, INC.
12-17 SUPAI FEDERAL
SAMPLE DESC. CONTINUED

- 24 -

5930-5940	80% SH AA 20% LS ltbrn-tan bf frm-hd blk mc-vfxl arg ip
5940-5950	70% SH red ltgrn lav sft-frm blk-pty lmy ip slty ip 30% LS AA
5950-5960	60% SH AA 20% LS ltbrn-tan frm-hd blk mc-vfxl arg ip 20% ANHY wh vsft blk
5960-5970	60% SH red ltgy-mgy occ lav blk-pty slty lmy ip 30% LS AA 10% ANHY AA
5970-5980	50% SH AA 30% LS ofwh-ltbrn-tan frm-hd blk mc-vfxl arg ip 20% ANHY wh vsft blk
5980-5990	40% SH red m-ltgy occ dkgy mbrn lav blk-pty sft-frm slty lmy ip 40% LS AA 20% ANHY AA
5990-6000	60% SH AA 30% LS ltbrn-tan occ ofwh frm-hd blk mc-vfxl arg ip slty ip 10% ANHY wh vsft blk
6000-6010	70% SH red m-dkgy occ lav sft-frm blk-pty slty lmy ip 20% LS AA 10% ANHY AA
6010-6020	60% LS lt-mgy tan frm-mhd blk occ pty mc-vfxl occ v sdy 30% SH AA 10% ANHY AA
6020-6030	70% LS lt-mgy occ mbrn frm-mhd blk mc-vfxl occ sdy occ arg 20% SH AA 10% ANHY wh sft-frm blk
6030-6040	70% LS AA 20% SH red m-dkgy occ blk frm-sft occ hd blk-pty occ alty 10% ANHY wh sft-frm
6040-6050	40% LS lt-mgy tan frm-mhd blk mc-vfxl occ arg occ ANHY INCL 30% ANHY wh sft-frm blk 20% DOLO ltgy frm-hd blk vfxl occ lmy 10% SH AA
6050-6060	60% SH red m-dkgy occ blk frm blk-pty occ slty occ lmy(ABNT CVGS) 30% LS lt-mbrn ltgy frm blk mxl dns occ sl slty 10% ANHY AA 10% DOLO AA
6060-6070	70% SH AA 30% LS AA 10% ANHY wh sft-frm blk
6070-6080	50% LS tan-ltgy lt-mbrn frm dns blk occ pty mc-vfxl w/

	TR	FLOR lt yel/CUT yel ring	
	40%	SH AA	
	10%	ANHY AA	
6080-6090	50%	SH m-dkgy red frm blk-pty occ lmy occ sl slty	
	40%	LS tan-ltgy ltblrn frm dns blk occ pty mc-vfxl occ arg	NFSOC
	10%	DOLO ltgy frm dns blk mcxl occ lmy	
6090-6100	70%	SH m-dkgy blk frm blk-pty occ lmy occ sl slty	
	30%	LS AA	
6100-6110	70%	SH AA	
	20%	LS AA	
	10%	ANHY wh sft-frm blk	
6110-6120	60%	SH AA	
	20%	LS dkbrn lt-mgy frm-hd blk occ pty dns mcxl occ arg occ dolo	
	20%	ANHY wh sft-frm blk	
6120-6130	40%	SH m-dkgy red sft-frm occ hd blk-pty occ lmy	
	30%	LS AA	
	30%	ANHY AA	
6130-6140	40%	SH AA	
	40%	LS AA	
	10%	DOLO mgy-mbrn frm-hd blk dns mcxl occ lmy	
	10%	ANHY AA	
6140-6150	40%	SH m-dkgy blk frm-hd blk-pty occ lmy	
	30%	LS mbrn mgy frm-hd blk occ pty mcxl occ dolo	
	20%	DOLO AA	
	10%	ANHY AA	
6150-6160	60%	LS AA	
	40%	SH AA	
6160-6170	50%	SH blk-mgy frm-hd blk-pty mod carb slcalc	
	30%	LS AA	
	10%	DOL AA	
	10%	ANHY wh sft-frm blk	
6170-6180	80%	SH AA	
	20%	LS mgy mbrn frm-hd blk occ pty dns mcxl occ arg occ dolo	
6180-6200	90%	SH blk-dkgy occ mgy frm-hd pty m carb sl-mcalc	
	10%	LS AA	
6200-6210	60%	SH dkgy-mgy blk frm-hd blk-pty occ lmy	
	30%	LS AA	
	10%	DOL mgy frm-hd blk occ pty dns micxl occ lmy	
6210-6220	50%	SH AA	
	40%	LS tan-ltgy frm-hd blk-pty dns mcxl occ arg occ dolo	
	10%	DOL AA	
6220-6230	60%	SH dkgy-mgy mbrn blk frm-hd blk-pty occ lmy	
	30%	LS AA	

MERIDIAN OIL, INC.
12-17 SUPAI FEDERAL
SAMPLE DESC. CONTINUED

6220-6230	10%	DOL AA
6230-6240	60%	SH AA
	40%	LS ltgy-ltbrn frm-hd blk-ply dns mcxl occ arg occ dol
6240-6260	70%	SH red m-dkgy mbrn blk frm-hd blk-ply lmy ip slty
	30%	LS AA
6260-6270	80%	SH red mdkgy mbrn blk frm-hd blk-ply slty lmy ip
	20%	LS ltgy-ltbrn frm-hd blk-ply mcxl dns occ dol
6270-6290	80%	SH AA
	20%	LS ltgy-ltbrn frm-hd blk mcxl dns occ dol
6290-6300	80%	SH AA
	20%	LS AA
6300-6310	90%	SH red m-dkgy blk mbrn frm-hd blk-ply slty lmy ip
	10%	LS AA
6310-6320	60%	SH AA
	20%	LS ltbrn-ltgy blk-occ ply frm-hd mcxl dns occ dol
	20%	DOL mgy frm-hd blk-ply dns mcxl occ lmy
6320-6328	60%	SH red m-dkgy blk mbrn lav blk-ply frm-hd slty lmy ip
	30%	LS AA
	10%	DOL AA



ROCKY MOUNTAIN GEO-ENGINEERING CO.

WELL LOGGING — CORE AND WATER ANALYSIS

2450 INDUSTRIAL BLVD.

PHONE 243-3044

GRAND JUNCTION, COLORADO 81501

COMPANY MERIDAIN OIL INC.

WELL NO. 12-17 SUPAI FEDERAL

LOCATION SEC 17, T40S, R24E SAN JUAN COUNTY, UTAH

ZONE OF INTEREST NO. 1

INTERVAL: From 5949 To 5952

DRILL RATE: Abv 3 min/ft Thru 4 min/ft Below 3 min/ft

MUD GAS-CHROMATOGRAPH DATA

M=1000 ppm

	TOTAL	C ₁	C ₂	C ₃	C ₄	C ₅	OTHER
Before	25	2M	.8M	.4M	.2M		
During	250	16M	9M	8M	1.8M		
After	50	7M	1.0M	.8M	.4M		

Type gas increase: Gradual Sharp

Gas variation within zone: Steady Erratic Increasing Decreasing

CARBIDE HOLE RATIO: $\frac{\text{GRAMS}}{\text{READING}}$ X Min. in Peak = _____

Sensitivity: Poor Fair Good

FLUO: Mineral Even Spotty
 None % in total sample _____
 Poor
 Fair % in show lithology _____
 Good COLOR: _____

CUT: None Streaming _____
 Poor Slow
 Fair Mod
 Good Fast
 COLOR: _____

STAIN: None Poor Fair Good Live Dead Residue Even Spotty Lt. Dk.

POROSITY: Poor Fair Good Kind INTERCRYSTALLINE

LITHOLOGY ANHY: wh sft blk, LS: ltbrn-tan buf frm-hd blk-ply slty lmy ip

SAMPLE QUALITY FAIR

NOTIFIED Cindy Crawley @ 3:00 AM HRS. DATE: 12-21-86

REMARKS DST #1

ZONE DESCRIBED BY Bill Nagel



ROCKY MOUNTAIN GEO-ENGINEERING CO.

WELL LOGGING — CORE AND WATER ANALYSIS

2450 INDUSTRIAL BLVD.

PHONE 243-3044

GRAND JUNCTION, COLORADO 81501

COMPANY MERIDIAN OIL INC.

WELL NO. 12-17 SUPAI FEDERAL

LOCATION SEC 17, T38S, R24E SAN JUAN COUNTY, UTAH

ZONE OF INTEREST NO. 2

INTERVAL: From 5964 To 5975

DRILL RATE: Abv 4 min/ft Thru 3 min/ft Below 4 min/ft

MUD GAS-CHROMATOGRAPH DATA

M=1000 ppm

	TOTAL	C ₁	C ₂	C ₃	C ₄	C ₅	OTHER
Before	50	7M	1M	.8M	.4M		
During	200	12M	4M	1.9M	.8M		
After	25	.3M	.6M	.4M	3M		

Type gas increase: Gradual Sharp

Gas variation within zone: Steady Erratic Increasing Decreasing

CARBIDE HOLE RATIO: $\frac{\text{GRAMS}}{\text{READING}}$ X Min. in Peak = _____ Sensitivity: Poor Fair Good

FLUO: Mineral Even Spotty
None % in total sample _____
Poor
Fair % in show lithology _____
Good COLOR: _____

CUT: None Streaming
Poor Slow
Fair Mod
Good Fast
COLOR: _____

STAIN: None Poor Fair Good Live Dead Residue Even Spotty Lt. Dk.

POROSITY: Poor Fair Good Kind INTERCRYSTALLINE

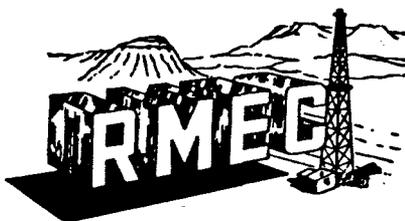
LITHOLOGY LS: offwh-1tbrn tan frm-hd micxln-vfxln arg ip

SAMPLE QUALITY GOOD

NOTIFIED Cindy Crawley @ 3:00 AM HRS. DATE: 12-21-86

REMARKS DST #1

ZONE DESCRIBED BY Bill Nagel



ROCKY MOUNTAIN GEO-ENGINEERING CO.

WELL LOGGING — CORE AND WATER ANALYSIS

2450 INDUSTRIAL BLVD.

PHONE 243-3044

GRAND JUNCTION, COLORADO 81501

COMPANY MERIDIAN OIL INC.

WELL NO. 12-17 SUPAI FEDERAL

LOCATION SEC 17, T38S, R24E SAN JUAN COUNTY, UTAH

ZONE OF INTEREST NO. 3

INTERVAL: From 6070' To 6074'

DRILL RATE: Abv 3.5 MIN/FT Thru 1.5 MIN/FT Below 3.5 MIN/FT

MUD GAS-CHROMATOGRAPH DATA

M=1000 ppm

	TOTAL	C ₁	C ₂	C ₃	C ₄	C ₅	OTHER
Before	50	2.1M	1.2M	1.1M	.68M		
During	220	9.4M	5.2M	5.1M	2.99M		
After	80	3.4M	1.9M	1.8M	1.1M		

Type gas increase: Gradual Sharp

Gas variation within zone: Steady Erratic Increasing Decreasing

CARBIDE HOLE RATIO: $\frac{\text{GRAMS}}{\text{READING}}$ X Min. in Peak = _____ Sensitivity: Poor Fair Good

FLUO: Mineral Even Spotty
None % in total sample 10%
Poor
Fair % in show lithology 5%
Good COLOR: YELLOW

CUT: None Streaming
Poor Slow
Fair Mod
Good Fast
COLOR: YELLOW

STAIN: None Poor Fair Good Live Dead Residue Even Spotty Lt. Dk.

POROSITY: Poor Fair Good Kind INTERCRYSTALLINE

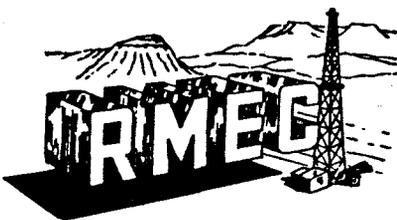
LITHOLOGY LS: tan-ltgy lt-mbrn frm dns blk occ plty micxln-vfxln

TR LT YEL FLOR YEL STRMG CUT SAMPLE QUALITY fair

NOTIFIED CINDY CRAWLEY @ 7:45 AM HRS. DATE: 12-22-86

REMARKS _____

ZONE DESCRIBED BY BILL NAGEL



ROCKY MOUNTAIN GEO-ENGINEERING CO.

WELL LOGGING — CORE AND WATER ANALYSIS

2450 INDUSTRIAL BLVD.

PHONE 243-3044

GRAND JUNCTION, COLORADO 81501

COMPANY MERIDIAN OIL INC.

WELL NO. 12-17 SUPAI FEDERAL

LOCATION SEC 17, T38S, R24E SAN JUAN COUNTY, UTAH

ZONE OF INTEREST NO. 4

INTERVAL: From 6092' To 6096'

DRILL RATE: Abv 3.5 MIN/FT Thru 2 MIN/FT Below 3 MIN/FT

MUD GAS-CHROMATOGRAPH DATA

M=1000 ppm

	TOTAL	C ₁	C ₂	C ₃	C ₄	C ₅	OTHER
Before	50	2.1M	1.2M	1.1M	.68M		
During	150	6.45M	3.55M	3.45M	2.04M		
After	55M	2.2M	1.3M	1.2M	.71M		

Type gas increase: Gradual Sharp

Gas variation within zone: Steady Erratic Increasing Decreasing

CARBIDE HOLE RATIO: $\frac{\text{GRAMS}}{\text{READING}}$ X Min. in Peak = _____

Sensitivity: Poor Fair Good

FLUO: Mineral Even Spotty
 None % in total sample _____
 Poor
 Fair % in show lithology _____
 Good COLOR: _____

CUT: None Streaming
 Poor Slow
 Fair Mod
 Good Fast
 COLOR: _____

STAIN: None Poor Fair Good Live Dead Residue Even Spotty Lt. Dk.

POROSITY: Poor Fair Good Kind INTERCRYSTALLINE

LITHOLOGY LS: tan-ltgy ltbrn frm dns blkcy occ plty micxln-vfxln occ arg NSFOC

SAMPLE QUALITY _____

NOTIFIED CINDY CRAWLEY @ 7:45 AM HRS. DATE: 12-22-86

REMARKS _____

ZONE DESCRIBED BY BILL NAGEL

DST NUMBER: 1

INTERVAL TESTED: 5946'-6048'

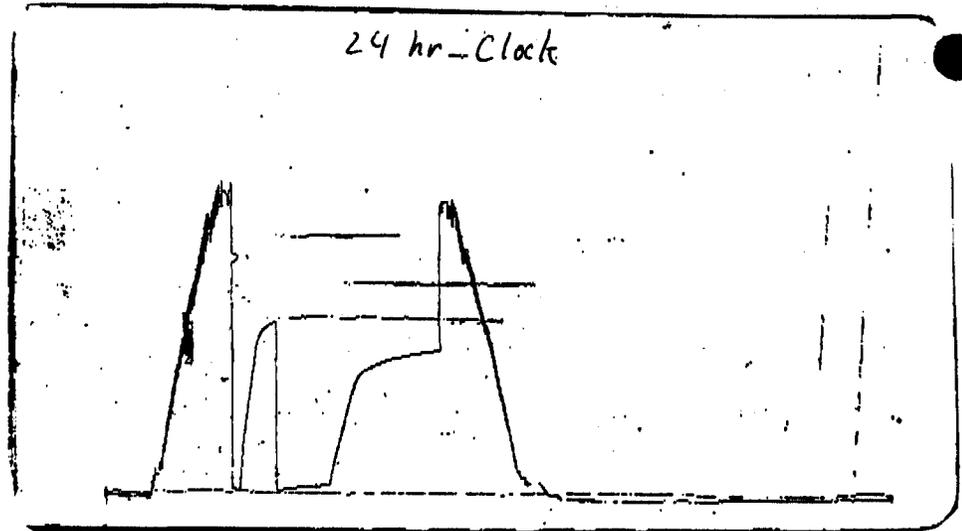
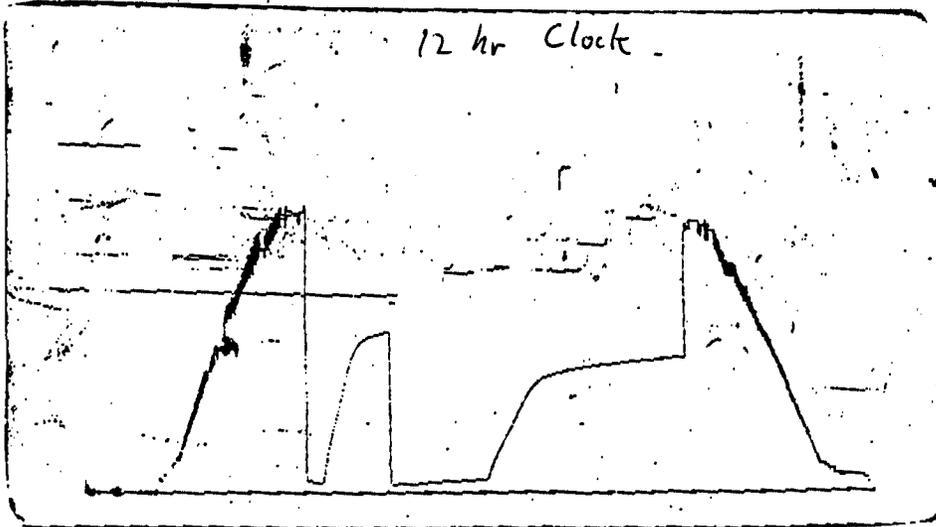
BHT: 132°

	PSI			TIME	
	INSIDE TOP	MIDDLE INSIDE	BOTTOM OUTSIDE		
Initial Hydrostatic:	2879	2959	2922		
Initial Flow:	75-75	102-106	110-110	.15	MIN.
Initial Shut In:	1685	1713	1691	60	MIN.
Final Flow:	84-113	123-143	113-137	90	MIN.
Final Shut In:	1408	1450	1402	180	MIN.
Final Hydrostatic:	2842	2919	2880		

Remarks: IF: open 6" blow build to 8psi in 15 min. ISI: blow dead in 50 min. FF: open with 6" blow gas to surface in 3 min, flow through 1/4" choke, 6 psi in 5 min decreased to 1 1/2 psi in 90 min, FSI: flared gas off no gas after 5 min.

PIPE RECOVERY: 180' = .8 BBLS mud, slightly gas cut, 314'=1.53 BBLS gas cut oil. SAMPLE CHAMBER: top Rw .7 @65° 1000 ppm middle Rw none, bottom Rw=oil .42 @ 65°, sample chamber volume = 2100 cc, recovered 1200 cc oil, 800 cc mud, .69 cu ft gas no water sample chamber pressure = 150 psi

Chart:



MERIDIAN OIL, INC.
12-17 SUPAI FEDERAL
SEC. 17, T38S, R24E
SAN JUAN CO. - UTAH

	FORMATION TOPS		
	SAMPLE TOP	E-LOG TOP	SEA LEVEL DATUM
SHINARUMP	----	3179	+3235
CUTLER	----	3285	+3129
HERMOSA	5025	5048	+1366
UPPER ISMAY	5948	5945	- 529
"A" SHALE	6086	6086	- 670
LOWER ISMAY	6106	6093	- 677
GOTHIC	6164	6161	- 745
DESERT CREEK	6204	6199	- 783
CHIMNEY ROCK	6270	6267	- 851
AKAH	6304	6291	- 875
SALT	6325	----	- 909
TOTAL DEPTH	6328	6330	- 914

GEOLOGIC SUMMARY
AND
ZONES OF INTEREST

The Meridian Oil, Inc. well 12-17 Supai Federal, located in Section 17, T38S, R24E of San Juan County, Utah, was spudded on December 21, 1986 in the Dakota Formation. The well reached a total depth of 6328' in the top of the Paradox Salt on December 22, 1986. This was a wildcat Ismay and Desert Creek test. Geological coverage began at 3300'.

CUTLER (3285' - 5048')

The Cutler Formation was composed of shale, siltstone and sandstone with occasional thin limestone beds. The shale was red, tan, maroon, green, light-to-medium gray, brown, soft-to-firm, blocky-to-platy and occasionally sandy, silty and limy. The siltstone was red, tan, medium gray, green, brown, soft-to-firm, blocky-to-platy, argillaceous, calcareous and occasionally sandy. The sandstone was clear-to-frosted, very fine grained, unconsolidated-to-medium cemented, medium-to-well sorted and subrounded-to-subangular. The Cutler contained no show.

HERMOSA (5048' - 5945')

The Hermosa Formation consisted of interbedded limestone, shale, siltstone and sandstone. The limestone was tan, gray, brown, firm-to-hard, blocky-to-platy, microcrystalline-to-very fine crystalline and moderately argillaceous. The shale was light-to-medium gray, red, firm-to-soft, blocky-to-platy and occasionally silty and limy. The siltstone was brown, red, firm-to-soft, blocky, calcareous and occasionally argillaceous. The sandstone was clear, very fine-to-fine grained, unconsolidated-to-medium cemented, medium-to-well sorted and subrounded-to-subangular.

The Lower Hermosa produced two gas shows: The first gas increase occurred at 5636'-5638' of 45 units with a background of 10 units. The second increase was at 5653'-5655' of 205 units with a background of 13 units.

UPPER ISMAY (5945' - 6086')

The top of the the Upper Ismay was anhydrite with the remainder of the Upper Ismay consisting of interbedded limestone, anhydrite and shale. The limestone was tan, light-to-medium gray, brown, firm-to-hard, blocky-to-platy, dense, microcrystalline and occasionally slightly sandy and moderately argillaceous. The anhydrite was white, soft-to-firm and blocky. The shale was medium-to-dark gray, brown, black, firm, blocky-to-platy and occasionally limy.

There were three big gas shows noted in the Upper Ismay. The first gas increase occurred at 5949'-5952' of 250 units with a background of 25 units from an argillaceous limestone with 4% porosity and 80% water saturation. The second show at 5964'-5975' was 200 units with a background of 50 units coming from an argillaceous limestone with 4% porosity and 50% water saturation. The first two gas shows were tested in DST #1. The third gas show occurred at 6070'-6074' of 220 units with a background of 50 units also coming from an argillaceous limestone and showed a trace of yellow fluorescence and a yellow ring cut. Electric logs showed this zone to have 16% porosity and 55% water saturation. There were no visible porosities in the samples of the formation.

The Upper Ismay was separated from the Lower Ismay by the "A" Shale. The "A" Shale was black, hard, carbonaceous and was located between 6086' and 6093'.

LOWER ISMAY (6093' - 6161')

The Lower Ismay was composed of interbedded limestone and anhydrite with thin shale dolomite beds. The limestone was brown, gray, firm-to-hard, blocky-to-platy, dense, microcrystalline and occasionally dolomitic. The anhydrite was white, firm and blocky. The shale was dark gray-to-black, firm-to-hard and blocky-to-platy. The dolomite was brown, firm-to-hard, blocky, dense, microcrystalline and occasionally limy.

There was one gas show observed in the Lower Ismay which occurred at 6092'-6096' of 150 units with a background of 50 units from a argillaceous limestone with 2% porosity and 88% water saturation.

The Desert Creek was separated from the Lower Ismay by the Gothic Shale at 6161'-6199'. The Gothic Shale was black, hard, carbonaceous and produced a 140 unit gas increase.

DESERT CREEK (6199' - 6267')

The Desert Creek contained limestone with occasional shale and anhydrite beds. The limestone was light gray-to-light gray-to-light brown, firm-to-hard, blocky-to-platy, dense, microcrystalline and occasionally argillaceous and dolomitic. The shale was black, firm-to-hard, blocky-to-platy and carbonaceous. The anhydrite was white, soft-to-firm and blocky.

There were three increases noted: at 6229'-6232' of 50 units, at 6255'-6258' of 35 units and at 6262'-6265' of 20 units. There were no good drilling breaks, fluorescence or cut noted anywhere in the Desert Creek.

CHIMNEY ROCK (6267' - 6291')

The Chimney Rock was predominantly shale with thin limestone beds. The shale was black, firm-to-hard, blocky-to-platy and carbonaceous. The limestone was light gray-to-light brown, firm-to-hard, blocky, dense, microcrystalline and occasionally dolomitic. The background gas increased from 55 units to 200 units in the Chimney Rock.

AKAH (6291' - 6325')

The Akah was composed of interbedded limestone, shale and anhydrite. The limestone was light brown-to-light gray, firm-to-hard, blocky, dense, microcrystalline and occasionally dolomitic. The shale was black, firm-to-hard, platy and carbonaceous. The background gas ranged between 100 and 200 units.

The well was drilled three feet into the top of the Paradox Salt for the total depth.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE*

(See other instructions on reverse side)

Form approved. *State*
Budget Bureau No. 1004-0137
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.
U-57470 012007

6. IF INDIAN ALLOTTEE OR TRIBE NAME
N/A

7. UNIT AGREEMENT NAME
N/A

8. FARM OR LEASE NAME
Supai-Federal

9. WELL NO.
12-17

10. FIELD AND POOL, OR WILDCAT
Supai (Wildcat)

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA
Section 17-38S-24E

12. COUNTY OR PARISH
San Juan

13. STATE
Utah

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL GAS WELL DRY Other _____

b. TYPE OF COMPLETION: NEW WELL WORK OVER DEEP-EN PLUG BACK DIFF. RESRV. Other Dry Hole

2. NAME OF OPERATOR
MERIDIAN OIL INC.

3. ADDRESS OF OPERATOR
P. O. Box 1855, Billings, MT 59103

4. LOCATION OF WELL (Report location clearly and in accordance with State requirements)*
At surface SWNW (1855' FNL - 985' FWL)
At top prod. interval reported below Same
At total depth Same

RECEIVED
JAN 12 1987

DIVISION OF
OIL, GAS & MINING

14. PERMIT NO. 43-037-31291 DATE ISSUED _____

15. DATE SPUDDED 12-12-86 16. DATE T.D. REACHED 12-23-86 17. DATE COMPL. (Ready to prod.) 12-26-86 (P&A) 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 5403' GL 19. ELEV. CASINGHEAD 5415' KB

20. TOTAL DEPTH, MD & TVD 6,328' 21. PLUG BACK T.D., MD & TVD - 22. IF MULTIPLE COMPL. HOW MANY* N/A 23. INTERVALS DRILLED BY N/A ROTARY TOOLS X CABLE TOOLS _____

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* N/A 25. WAS DIRECTIONAL SURVEY MADE No

26. TYPE ELECTRIC AND OTHER LOGS RUN FDC Neutron, BHC Sonic/GR, DLL/MSFL, Dipmeter mud 27. WAS WELL CORED No

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13-3/8	48	80'	17-1/2	80 SX	None
8-5/8	24	2219'	11	575 SX	None

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
N/A				

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
N/A		

31. PERFORATION RECORD (Interval, size and number) N/A

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
Plugs set as follows:	
6200' - 5900' w/101 SX	
2250' - 2150' w/30 SX	
Sfc Plug w/10 SX	

CONFIDENTIAL

33.* PRODUCTION

DATE FIRST PRODUCTION N/A PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) _____ WELL STATUS (Producing or shut-in) _____

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

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

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

35. LIST OF ATTACHMENTS _____

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

SIGNED *[Signature]* TITLE Sr. Drilling Engineer DATE 1/8/87

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

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries);

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
			<p>DST #1 (5949' - 6048') U. Ismay. Times: 15-60-90-180. BHT 132°F. No cushion. Pipe Rcvry: 180' mud, SGC, 314' GCO. Sample Chamber: 2100 cc volume, 150 psi, 2000 cc total volume, 1200 cc oil, no wtr, 800 cc mud, .89 cfg. HP 2879 - 5959; FP 75 - 75, 123 - 143; SIP 1685 - 1713, 1408 - 1450.</p> <p>DST #2 (6055' - 6075') U. Ismay. Times: 15-60-90-180. BHT 135°F. No cushion. Pipe Rcvry: 60' mud w/a few bubbles. Sample Chamber: 2300 cc volume, 24 psi, 2300 cc total volume, 2300 cc mud, tr gas too small to measure. HP 3020; FP 71 - 82, 82 - 82; SIP 123 - 123.</p>

38. GEOLOGIC MARKERS

NAME	MEAS. DEPTH	TOP TRUE VERT. DEPTH
Entrada	978'	
Navajo	1170'	
Chinle	2090'	
Shinarump	3070'	
Cutler	3180'	
Hermosa	4950'	
Upper Ismay	5944'	
Top Porosity	6057'	
A-Shale	6086'	
L. Ismay	6092'	
Desert Creek	6198'	
Chimney Rock	6266'	
Akah	6290'	
TD	6328'	

SOUTHEASTERN UTAH ASSOCIATION OF LOCAL GOVERNMENTS

CALVIN BLACK

Chairman

P. O. Drawer A1 • Price, Utah 84501 • Telephone 637-5444

WILLIAM D. HOWELL

Executive Director

JAN 30 1987

DIVISION OF
OIL, GAS & MINING

AREAWIDE CLEARINGHOUSE A-95 REVIEW

NOI ___ Preapp ___ App ___ State Plan ___ State Action X Subdivision ___ (ASP # 11-1125-11)

Other (indicate) _____ SAI Number UT86125-010

Applicant (Address, Phone Number):

Division of Oil, Gas and Mining
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Federal Funds:

Requested: _____

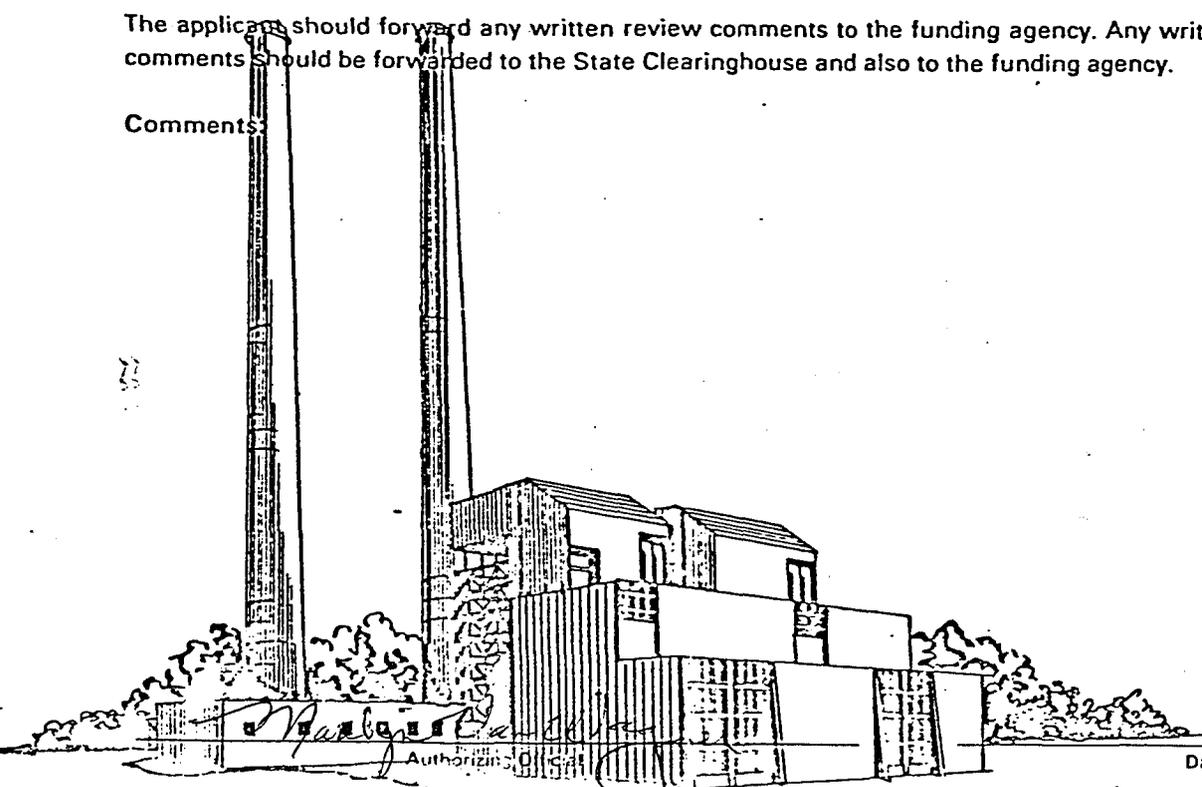
Title:

APPLICATION FOR PERMIT TO DRILL
Meridian Oil Inc.

- No comment Favorable
- See comments below
- No action taken because of insufficient information
- Please send your formal application to us for review. Your attendance is requested

The applicant should forward any written review comments to the funding agency. Any written response to those comments should be forwarded to the State Clearinghouse and also to the funding agency.

Comments:



1-28-87

Date

RECEIVED
FEB 02 1987

TRANSMITTAL LETTER

RECORD OF SHIPMENT OF CONFIDENTIAL INFORMATION

DIVISION OF
OIL, GAS & MINING

TO: Utah Dept. of Natural Resources
Division of Oil, Gas and Mining
4241 State Office Building
Salt Lake City, UT 84114
Attn: Mr. Ron Firth

FROM: C. L. Crawley
Name
Sr. Staff Geologist
Title
DATE: January 28, 1987
VIA: Mail

RE: All information pertains to the Supai Federal 12-17, San Juan Co.,
Utah, 17-38S-24E

QUANTITY	DESCRIPTION
1	Baker DST / Run #1 ✓
1	Baker DST / Run #2 ✓
1	RMGE Mud Log ✓
1	Formation Density-Compensated Neutron / Run #1 ✓
1	Dual Laterolog - MSFL / Run #1 ✓
1	Borehole Compensated Sonic - GR / Run #1 ✓
1	Schlumberger MSD / Run #1 ✓
1	Directional Survey / Run #1 ✓
1	Schlumberger CSB / Run #1 ✓
1	Raw Dipmeter / Run #1 ✓

~~CONFIDENTIAL~~

rec'd
2-2-87

INSTRUCTIONS: Please acknowledge receipt promptly by signing and returning the copy.

RECEIVED BY: _____ DATE: _____

REMARKS: All information pertains to the Supai Federal 12-17, San Juan Co.,
Utah, 17-38S-24E

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

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

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

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or to plug or to abandon a well. Use "APPLICATION FOR PERMIT—" for that purpose.)

RECEIVED
DEC 05 1988

5. LEASE DESIGNATION AND SERIAL NO.
U-57470

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

7. UNIT AGREEMENT NAME
N/A

8. FARM OR LEASE NAME
Supai-Federal

9. WELL NO.
12-17

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Section 17-38S-24E

12. COUNTY OR PARISH
San Juan

13. STATE
Utah

1. OIL WELL GAS WELL OTHER Dry Hole

2. NAME OF OPERATOR
MERIDIAN OIL INC.

3. ADDRESS OF OPERATOR
P. O. Box 1855, Billings, MT 59103

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.)
At surface
SWNW (1855' FNL - 985' FWL)

14. PERMIT NO.
43-037-31291

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
5415' KB

DIVISION OF
OIL, GAS & MINING

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

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

Location has been recontoured and reclaimed and is ready for inspection.

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

SIGNED Suzanne J. Nelson TITLE Sr. Operations Technician DATE 12/1/88

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side