

UTAH OIL AND GAS CONSERVATION COMMISSION

REMARKS: WELL LOG ELECTRIC LOGS WATER SANDS LOCATION INSPECTED SUB. REPORT/abd.

880401 Added BHL off 4-11-88
 DATE FILED 3-10-88

LAND: FEE & PATENTED STATE LEASE NO. PUBLIC LEASE NO. U-52333 INDIAN

DRILLING APPROVED: 3-18-88 (Exception Location)

SPUDDED IN: 3-28-88

COMPLETED: PUT TO PRODUCING:

INITIAL PRODUCTION:

GRAVITY A.P.I.

GOR:

PRODUCING ZONES:

TOTAL DEPTH:

WELL ELEVATION: Confidential

DATE ABANDONED:

FIELD: KIVA

UNIT:

COUNTY: SAN JUAN

WELL NO. NAVAJO FEDERAL 12-4

API #43-037-31395

LOCATION 2260' FNL FT. FROM (N) (S) LINE, 440' FWL FT. FROM (E) (W) LINE. SW NW 1/4 - 1/4 SEC. 4

BHL 01600 FNL 300 FWL

TWP.	RGE.	SEC.	OPERATOR	TWP.	RGE.	SEC.	OPERATOR
				39S	25E	4	MERIDIAN OIL INC.

MERIDIAN OIL

March 8, 1988

RECEIVED
MAR 10 1988

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

DIVISION OF
OIL, GAS & MINING

Attention: Arlene Sollis

Re: Application for Permit to Drill
12-4 Navajo-Federal
SWNW Section 4-39S-25E
San Juan County, Utah
Federal Lease No. U-52333

Gentlemen:

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

An Exception request will be forthcoming from our Land Department in Englewood, Colorado in the near future.

Water appropriation will be Water User Claim No. 09-1499.

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,



Suzann S. Nelson
Sr. Operations Technician

/ssn/1771N

Encl

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 WATER INJECTION

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 regulations)
 At surface: SWNW (2260' FNL - 440' FWL)
 At proposed prod. zone: Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
 6 miles east Hatch Trading Post

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)
 440'

16. NO. OF ACRES IN LEASE
 2920.8

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.
 1100'

19. PROPOSED DEPTH
 5860' *aksh*

20. ROTARY OR CABLE TOOLS
 Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
 4852' GL (graded)

22. APPROX. DATE WORK WILL START*
 April 1, 1988

MAR 10 1988
 DIVISION OF OIL, GAS & MINING

5. LEASE DESIGNATION AND SERIAL NO.
 U-52333

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

7. UNIT AGREEMENT NAME
~~Navajo~~

8. FARM OR LEASE NAME
 Navajo-Federal

9. WELL NO.
 12-4

10. FIELD AND POOL, OR WILDCAT
 Kiva

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
 Section 4-39S-25E

12. COUNTY OR PARISH
 San Juan

13. STATE
 Utah

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	54.5#	80'	Redi-Mix to surface
12-1/4	9-5/8	36 #	3300'	Cement to surface w/560 sx
8-3/4	5-1/2	15.5#	5860'	Single stage. TOC @ 5300' Caliper log + 2% excess.

CONFIDENTIAL INFORMATION

Oil and Gas Order #1

Attachments:

Survey Plat, Eight Point Drilling Plan, Thirteen Point Surface Use Plan.

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 J. R. Harris TITLE Regional Drilling Engineer DATE 3/8/88

(This space for Federal or State office use)

PERMIT NO. 43-037-31395 APPROVAL DATE 3-15-88

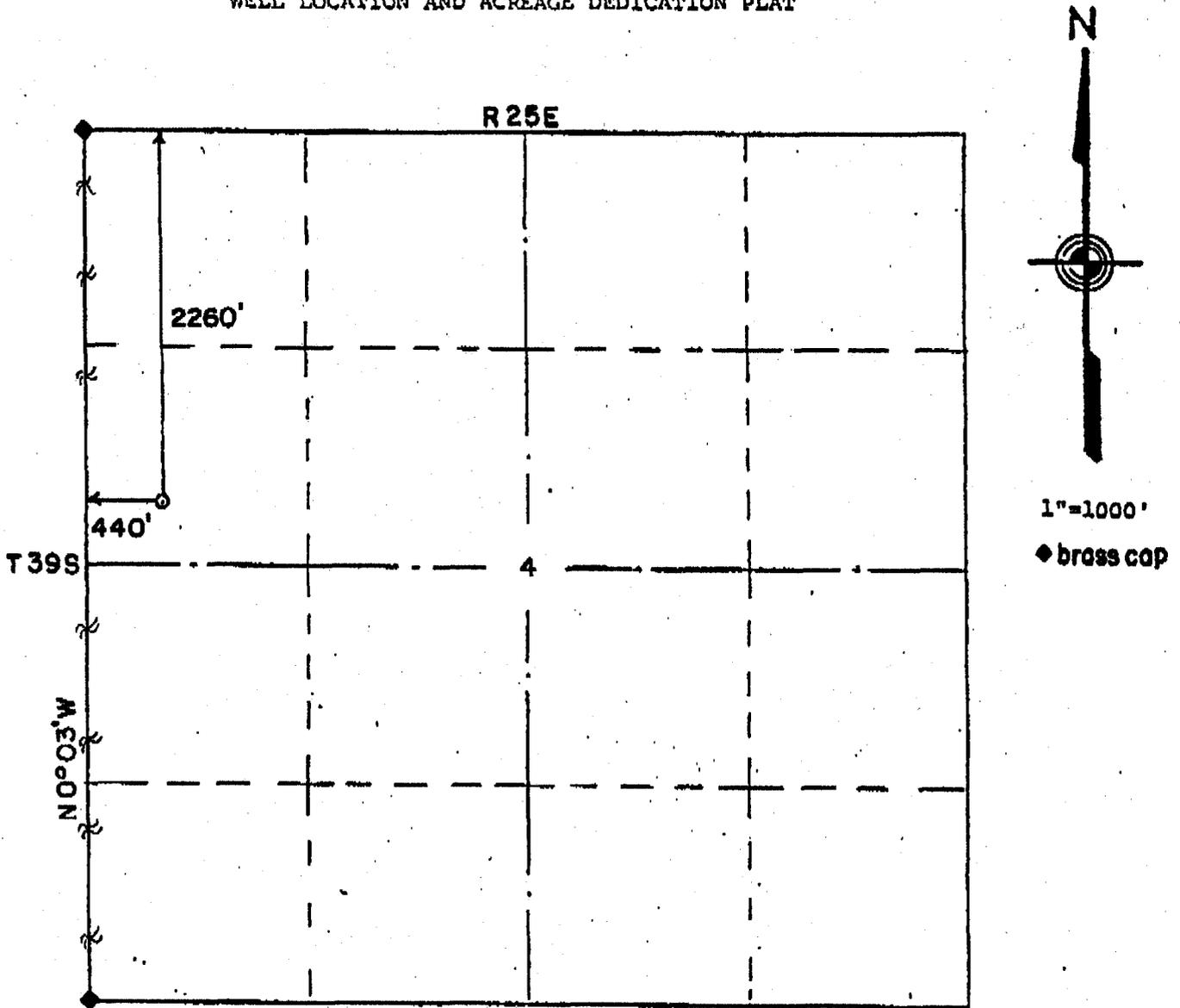
APPROVED BY _____ TITLE _____

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY THE STATE
 OF UTAH DIVISION OF
 OIL, GAS, AND MINING
 DATE: 3-15-88
 BY: John R. Dava
 WELL SPACING: Rules-2-3

*See Instructions On Reverse Side

WELL LOCATION AND ACREAGE DEDICATION PLAT



WELL LOCATION DESCRIPTION:
Meridian Oil, #12-4 Navajo Federal
2260' FNL & 440' FWL
Section 4, T.39 S., R.25 E., SLM
San Juan County, Utah
4855' grd. elevation
Alternate: 2290' FN & 680' FW 4853' grd.



THE ABOVE PLAT IS TRUE AND CORRECT TO MY KNOWLEDGE AND BELIEF

Gerald G. Huddleston
Gerald G. Huddleston, LS

16 February 1988

MERIDIAN OIL

March 9, 1988

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: 3/13/88
BY: [Signature]

RE: Request for Exception
#12-4 Navajo Federal
Location: SW/4NW/4
Sec. 4, T39S-R25E, SLM

Gentlemen:

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

2260' FNL, 440' FWL, Section 4, T39S-R25E, SLM
San Juan County, Utah

This well will be drilled to a depth sufficient to test the Desert Creek Formation. As indicated on the plat attached hereto as Exhibit "A", Meridian has established the Kiva Waterflood Unit for the Ismay Formation. Since the Ismay interval is unitized, an exception location is not required for the Ismay interval.

As to the Desert Creek Formation, however, this location requires approval of an exception location under Rule 302.1 of the Oil and Gas Conservation General Rules effective December 1, 1985. Under the Rules, this exception may be granted administratively. Please note that Meridian owns 100% leasehold working interest in the proposed drillsite and within a 460' radius thereof. Therefore, a notice to other parties is not required.

The reason for the requested exception location is geological. As shown on Exhibit "A" to the attached affidavit, it is not possible to drill the optimum location on the geological feature by drilling a legal location. Therefore, Meridian Oil proposes to move the surface location as close as possible to the geological structure in order to derive the optimum bottom hole location.

DIVISION OF OIL, GAS AND MINING

March 9, 1988

Page 2

Exhibit "A" to the attached affidavit also depicts the boundaries of the Kiva Field Ismay Unit and leasehold information. This information is proprietary and very sensitive and therefore, it is requested that the State maintain this plat in a confidential file.

Thank you or your consideration in this matter.

Very truly yours,

MERIDIAN OIL INC.



William C. Mitchell
Landman

Doc. 926
Attachments

AFFIDAVIT

STATE OF COLORADO)
) ss.
COUNTY OF ARAPAHOE)

TO WIT:

Now, this 9th day of March, 1988, comes the affiant herein, WILLIAM C. MITCHELL, being of lawful age and the first duly sworn, and does not 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 plat attached hereto and made a part hereof as "Exhibit A" is accurate to scale and reflects pertinent data required pursuant to Oil & Gas Conservation Rule No. 302.1,

THAT Meridian Oil Inc. owns 100% of the drilling rights in the proposed 12-4 Navajo Federal drillsite and within a 460 foot radius thereof. The proposed 12-4 Navajo Federal drillsite is located 2260 feet from the north line and 440 feet from the west line of Section 4, Township 39 South, Range 25 East, San Juan County, Utah.

THAT no other parties are required to be notified in accordance with Rule Number 302.1(a)(2) of the General Conservation Rules of the Utah Board of Oil, Gas and Mining.

Further affiant sayeth not.

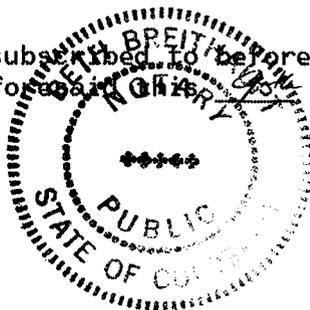
William C. Mitchell

William C. Mitchell

* * * * *

Taken, sworn and subscribed to before me, a Notary Public in and for the County and State aforesaid, this 9th day of March, 1988.

My commission expires: 9-9-88



John Greubaupt

Notary Public

R 25 E

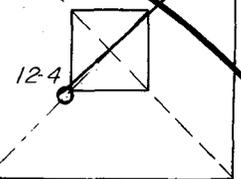
Meridian Oil, Inc.
100%
10/30/95

Meridian Oil, Inc.
100%
HBP

Kiva Waterflood
Unit Boundary
(Ismay Unit)

Hathaway
⊕ 1

MOI
42-5 ●
Meridian Oil, Inc.
100%
HBP



MOI
43-5
△

MOI
4-4 ●

MOI
14-4
△

MOI
23-4 ●

MOI
4-1 ●

MOI
4-2 ●

MOI
21-9
△

MOI
9-1 ●

MOI
9-2
⊕

MOI
42-9
⊕

U-57895

U-58728

U-52333

9

SCHEDULE "A"

MERIDIAN OIL

KIVA FIELD

San Juan County, Utah

- U-XXXX Federal Lease Unit Number
- Federal Acreage Contained In Kiva Waterflood Unit
- Proposed 12-4 Navajo Federal, 2260' FNL, 440' FWL, sec: 4
- Producing Well
- △ Injection Well



400 ft. "WINDOW" pursuant to order #302

T
39
S

MERIDIAN OIL INC.

LEASE NAME: 12-4 Navajo-Federal
 LEASE NO. U-52333
 LOCATION: SWNW Section 4-39S-25E
 2260' FNL - 440' FWL
 San Juan County, Utah
 Kiva Field

All lease/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil and Gas Orders, and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished the field representative to ensure compliance.

A. EIGHT POINT DRILLING PROGRAM1. & 2. Estimated Tops:

Morrison	Surface	
Entrada	639	
Navajo	829	fresh water
Chinle	1544	
Shinarump	2424	
Cutler	2609	
Hermosa	4484	
Upper Ismay	5405	oil
Top Porosity	5517	oil
Hovenweep	5597	
Lower Ismay	5624	
Desert Creek	5704	oil
Chimney Rock	5771	
Akah	5800	
TD	5860	

All fresh water and prospectively valuable minerals encountered during drilling will be recorded by depth, cased, and cemented. All oil and gas shows will be tested to determine commercial potential.

3. Pressure Control Equipment:

- a. A 3000 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. Annular preventer will be tested to 1500 psi against casing. Pipe and blind rams, choke line and manifold will be tested to 1500 psi against casing. Casing will be tested to 1500 psi prior to drilling float shoe.
- b. BOP systems will be consistent with API RP 53. 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.

4. Casing program:

Anticipated cement tops will be reported as to depth, not the expected number of sacks.

<u>Hole Size</u>	<u>Size</u>	<u>Depth</u>	<u>Casing</u>				<u>Condition</u>	<u>Cementing Program</u>
			<u>Weight</u>	<u>Grade</u>	<u>Thrd</u>	<u>Cond</u>		
17-1/2	13-3/8	80'	54.5#	H-40	ST&C	New	Redi-Mix to surface	
12-1/4	9-5/8	3,300'	36#	K-55	ST&C	New	Cement to sfc w/560 sx.	
8-3/4	5-1/2	5,860'	15.5#	K-55	LT&C	New	Single stage. TOC @ 5300'. Caliper log + 20% excess.	

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 3500' to TD.

6. Coring, Logging and Testing Program:

Coring

None

Logging

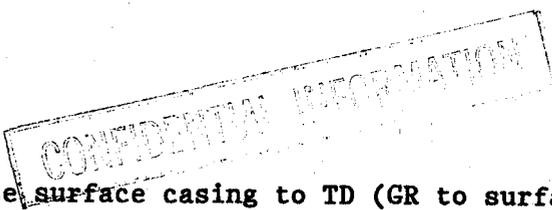
GR/DLL/MSFL
 GR/LDT/CNL
 GR/BHC/Sonic
 Strat Dipmeter

Base surface casing to TD (GR to surface)
 Base surface casing to TD
 Base surface casing to TD (GR to surface display)
 Minimum op charge.

Testing

Upper Ismay - Probable
 Desert Creek - Possible

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 to the District Office not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs, core descriptions, core analyses, 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. Samples (cuttings, fluids, and/or gases) will be submitted when requested by the Moab 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

Required verbal notifications are summarized in Table I, attached. Written notification in the form of a Sundry Notice (Form 3160-5) will be submitted to the District Office within twenty-four (24) hours after spudding. If the spudding occurs on a weekend or holiday, the written report 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 3160-6, "Monthly Report of Operations", starting with the month in which operations commence and continuing each month until the well is physically plugged and abandoned. This report will be filed directly with the BLM, Moab 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.

Should the well is successfully completed for production, 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.

A first production conference will be scheduled within fifteen (15) days after receipt of the first production report. The Resource Area Office will coordinate the field conference.

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 Area Manager or his representative, or the appropriate surface managing agency.

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.

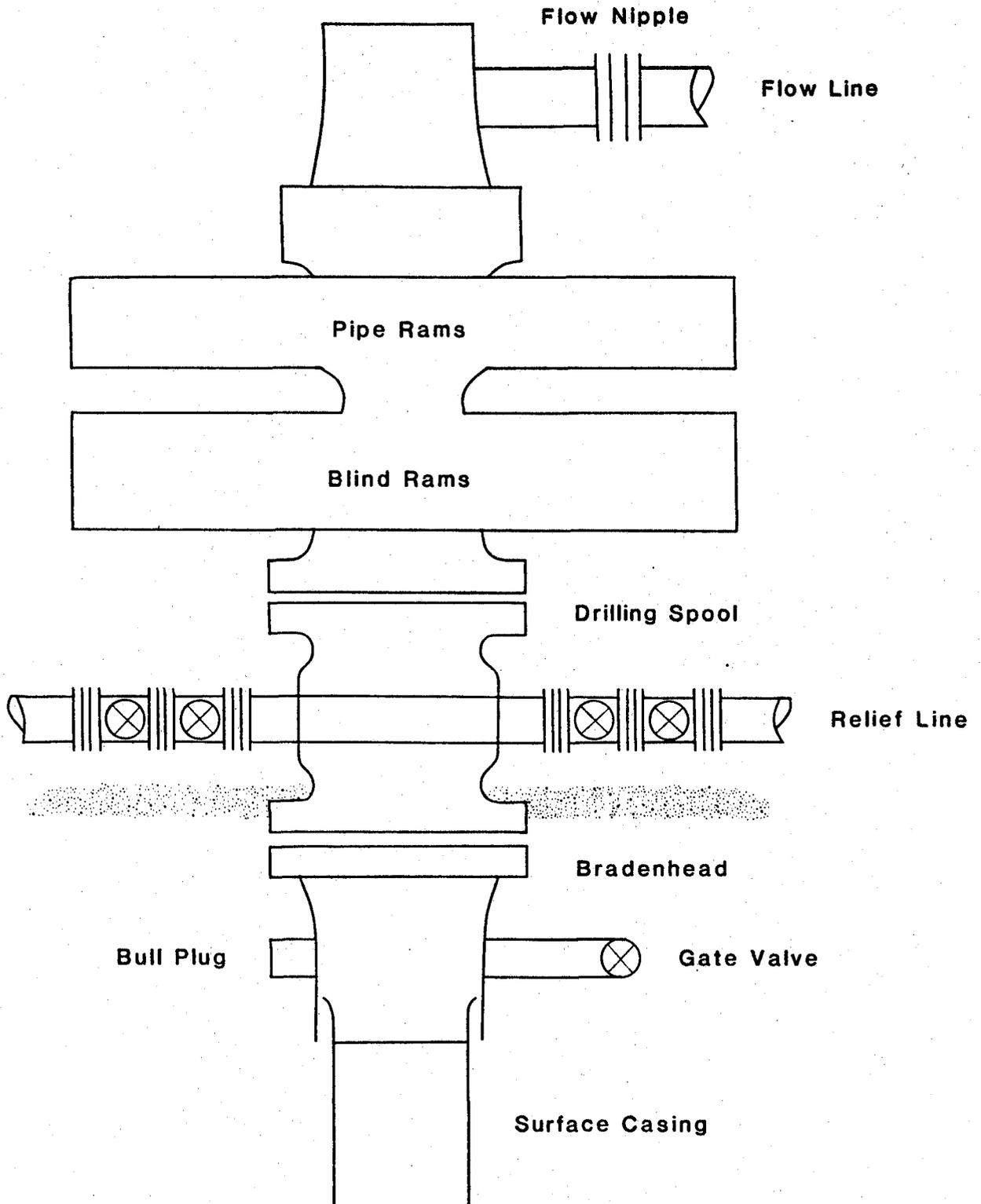
O&G Order No. 1
12-4 Navajo-Federal
1813N/Page 4

Upon completion of approved plugging, a regulation marker will be erected in accordance with 43 CFR 3162.6. The marker will be constructed as follows:

Above ground pipe, information beaded-on with a welding torch. The top of the marker will be closed or capped.

The following minimum information will be permanently placed on the marker with a plate, cap, or beaded-on with a welding torch: "Fed" or "Ind", as applicable. "Well number, location by 1/4 1/4 section, township and range". "Lease number".

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.

B. THIRTEEN POINT SURFACE USE PLAN

1. Existing Roads (Yellow)

- a. Location of proposed well in relation to town or other reference point: 6 miles east 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 Dept. (801) 587-2231, Ext 43.

2. Planned Access Roads (Blue)

- a. The maximum total width will be 30 feet for approximately 600'.
- b. Maximum grade is N/A.
- c. Turnouts will be constructed as needed.
- d. Road is centerline flagged from existing lease roads.
- e. Road will be drained as needed.
- f. Access will be built to Class III road standards (18' wide Running Surface, 6" pit run surface material).

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

The access road will be rehabilitated or brought to Class III Road Standards within sixty (60) days of dismantling of the drilling rig. If this time frame cannot be met, the Area Manager will be notified so that temporary drainage control can be installed along the access road.

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

Injection facilities will be located on well pad.

All permanent (onsite for six (6) months or longer) structures constructed or installed (including oil well 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 six (6) months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) may be excluded. The color will be Desert Tan with Brown trim.

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

All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed.

Gas meter runs for each well will be located within five hundred (500) feet of the wellhead. The gas flowline will be buried from the wellhead to the meter and downstream for the remainder of the pad. 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 prior to any deliveries. Tests for meter accuracy will be conducted monthly for the first three (3) months on new meter installations and at least quarterly thereafter. The 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 Resource Area Office. 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.

A temporary water use permit for this operation will be obtained from the Utah State Engineer, Mark Page, Price, Utah (657-1303).

Water obtained on private land, or land administered by another agency, will require approval from the owner or agency for use of the land.

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 3610.1-3.

7. Methods for Handling Waste Disposal

The reserve pit will be lined with commercial bentonite.

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.

All trash must be contained and disposed of by a trash basket. Basket must be totally enclosed with a fine wire mesh before the rig moves in. The road and pad will be kept litter free.

If burning is required, a permit will be obtained from the State Fire Warden, George Kensley, (801) 587-2237. (Permit required May 1 - October 31)

Produced waste water will be confined to a (lined) pit for a period not to exceed ninety (90) days after initial production. During the ninety (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 North side of location.

The top 6 inches of soil material will be removed from the location and stockpiled separately on the back end of pad.

Topsoil along the access will be reserved in place adjacent to the road.

Access to the well pad will be from the laydown end.

10. Plans for Restoration of Surface:

Immediately on completion of drilling, the location and surrounding area will be cleared of all remaining debris, materials, trash and junk not required for production.

Before any dirt work to restore the location takes place, the reserve pit must be completely dry.

All disturbed areas will be recontoured to to the approximate natural contours.

The stockpiled topsoil will be spread evenly over the disturbed contours.

Prior to reseeding, all disturbed area, including the access rods, will be scarified and left with a rough surface. Disturbed areas will be scarified six (6) inches deep, with rips eighteen (18) inches apart.

Seed will be broadcast at a time specified by the BLM. Between October 1 and February 28.

3 lbs/acre crested wheatgrass (Agropyron desertorum)
2 lbs/acre Indian Ricegrass
2 lbs/acre Fourwing saltbush (Atriplex canenscens)
1/2 lbs/acre Yellow sweetclover.

If broadcast, double rate will be required.

The reserve pit and that portion of the location and access road not needed for production or production facilities will be reclaimed.

11. Surface Ownership: Federal
Mineral Ownership: Federal

12. Other Information

Archeological site located near right front corner and access road will be fenced.

There will be no deviation from the proposed drilling and/or workover program without prior approval from the District Manager. Safe drilling and operating practices must be observed. All wells, whether drilling, producing, suspended, or abandoned will be identified in accordance with 43 CFR 3162.3-2.

"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 3162.3-2.

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

All persons in the area who are associated with the project will be informed by the Operator that they will be subject to prosecution for disturbing archaeological sites or collecting artifacts. If subsurface cultural material is exposed during construction, work at that spot will stop immediately and the BLM, San Juan Resource Area Office will be contacted (801) 587-2141. The Operator will be responsible for the cost of evaluation of the discovery and proper mitigation measures. Any decision as to proper mitigation shall be made by the authorized officer after consulting with the Operator.

This permit will be valid for a period of one (1) year from the date of approval. After permit termination a new application will be filed for approval for any future operations.

If at any time the facilities located on public land authorized by the terms of the lease are not longer included in the lease (due to a contraction in the unit or other lease or unit boundary change) the BLM will process a change in authorization to the appropriate statute. The authorization will be subject to appropriate rental, or other financial obligation determined by the authorized officer.

13. Lessee or Operator's Field Representative and Certification

Meridian Oil Inc.

P. O. Box 1855

Billings, Montana 59103

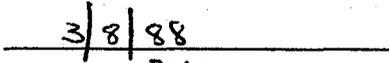
1. Johnny L. Wright, Drilling Manager	406-256-4175	406-252-2889
2. Steve Cruickshank, Drilling Eng.	406-256-4164	406-252-0701
3. Douglas R. Harris, Reg. Drilling Eng.	406-256-4025	406-652-2381
4. John Pulley, Completion Supt.	406-256-4124	406-259-6156

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.



Douglas R. Harris
Regional Drilling Engineer



Date

TABLE 1

NOTIFICATIONS

Notify the San Juan Resource Area, at (801) 587-2141 for the following:

- 2 days prior to commencement of dirt work, construction or reclamation;
- 1 day prior to spudding;
- 1 day prior to running and cementing surface casing;
- 1 day prior to pressure testing of BOPE and/or surface casing.

Notify the Moab District Office, Branch of Fluid Minerals at (801) 259-6111 for the following:

No well abandonment operations will be commenced without the prior approval of the District Manager. In the case of newly drilled dry holes, and in emergency situations, verbal approval can be obtained by calling the following individuals, in the order listed:

Steven Jones, Petroleum Engineer	Office Phone: (801) 259-6111
	Home Phone: (801) 259-7404
Lynn Jackson, Chief, Branch of Fluid Minerals	Office Phone: (801) 259-6111
	Home Phone: (801) 259-7990
Paul Brown, I&E Coordinator	Office Phone: (801) 259-6111
	Home Phone: (801) 259-7018

24 HOURS ADVANCE NOTICE IS REQUIRED FOR ALL ABANDONMENTS.

WELL PAD CROSS-SECTION

12-4 Navajo Federal

Cut 
Fill 

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

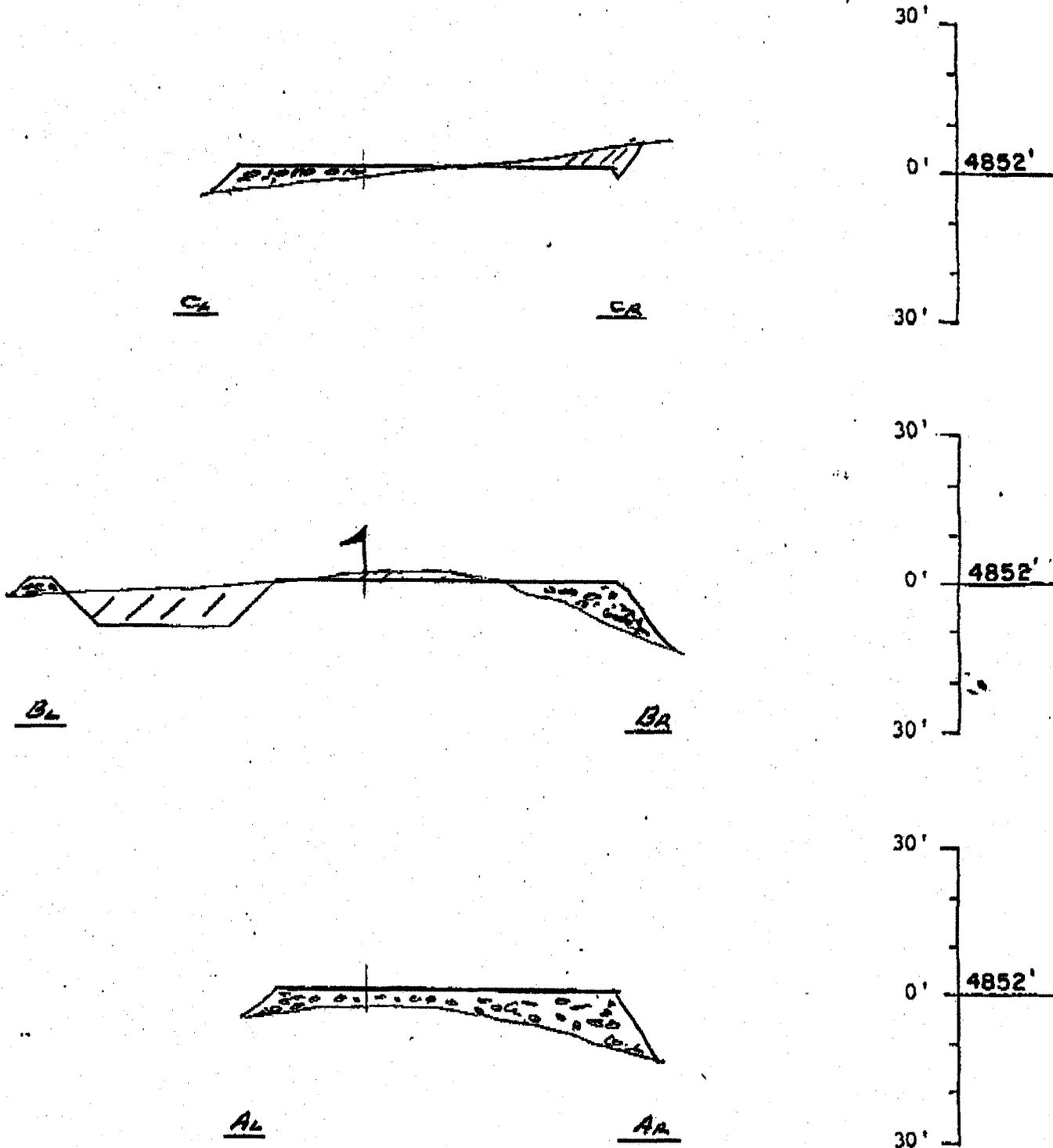


EXHIBIT "9b"
Cross-Section

CONFIDENTIAL

032502

OPERATOR Meridian Oil Inc. DATE 3-15-88

WELL NAME Navajo Fed 12-4

SEC SW NW 4 T 39S R 25E COUNTY San Juan

43-037-31395
API NUMBER

Federal
TYPE OF LEASE

CHECK OFF:

PLAT

BOND

NEAREST WELL

LEASE

FIELD

POTASH OR OIL SHALE

PROCESSING COMMENTS:

* Unit Well - POD OK - Deusa 3/17/88
Need water permit - Water R - # 09-1499
Exp. loc. requested for Decret Creek formation
* Approved an exp. loc. - also OK for unit purposes.
Isamay formation.

APPROVAL LETTER:

SPACING: R615-2-3 UNIT R615-3-2

CAUSE NO. & DATE

R615-3-3

STIPULATIONS:

1 - ~~Water permit~~

CONFIDENTIAL
PERIOD
EXPIRED
ON 8-16-89



March 18, 1988

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

Gentlemen:

Re: Navajo Federal 12-4 - SW NW Sec. 4, T. 39S, R. 25E
2260' FNL, 440' FWL - San Juan County, Utah

Approval to drill the referenced well is hereby granted in accordance with Rule R615-3-3, Oil and Gas Conservation General Rules.

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 of an Entity Action Form to the Division within five working days of the time that the well is spudded or a change in operations or interests necessitates a change in entity status.
3. Submittal to the Division of completed Form OGC-8-X, Report of Water Encountered During Drilling.
4. 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 Jim Thompson, Lead Inspector, (Home) 298-9318.
5. Compliance with the requirements of Rule R615-3-22, Gas Flaring or Venting, Oil and Gas Conservation General Rules.

Page 2

Meridian Oil Incorporated
Navajo Federal 12-4
March 18, 1988

6. Prior to commencement of the proposed drilling operations, plans for toilet facilities and the disposal of drilling 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 (602) 238-6100.
7. This approval shall expire one (1) year after the issuance unless substantial and continuous operations are underway or an application for an extension is filed prior to the approval expiration date.

The API number assigned to this well is 43-037-31397

Sincerely,



R. J. Farth
Associate Director, Oil & Gas

as
Enclosures
cc: Branch of Fluid Minerals
D. R. Nielson
8139T



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

March 19, 1988

San Juan Record
P.O. Box 879
937 East Highway 666
Monticello, Utah 84535

Gentlemen:

Re: Cause No. UIC-109

Enclosed is a Notice of Application of Administrative Approval before the Division of Oil, Gas and Mining, Department of Natural Resources, State of Utah.

It is requested that this notice be published ONCE ONLY, as soon as possible, but no later than the 27th day of April. In the event that said notice cannot be published by this date, please notify me immediately by calling 538-5340.

Upon completion of this request, please send proof of publication and statement of cost to the Division of Oil, Gas and Mining, 355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Utah 84180-1203.

Sincerely,

A handwritten signature in cursive script that reads "Marjorie L. Anderson".

Marjorie L. Anderson
Administrative Assistant

tc

Enclosure



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

March 19, 1988

Newspaper Agency Corporation
Legal Advertising
157 Regent Street
Salt Lake City, Utah 84110

Gentlemen:

Re: Cause No. UIC-109

Enclosed is a Notice of Application of Administrative Approval before the Division of Oil, Gas and Mining, Department of Natural Resources, State of Utah.

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Sincerely,

A handwritten signature in cursive script that reads "Marjorie L. Anderson".

Marjorie L. Anderson
Administrative Assistant

tc

Enclosure

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>			5. LEASE DESIGNATION AND SERIAL NO. U-52333 <i>Dr. 1.</i>	
b. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER WATER INJECTION <input type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>			6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A 033005	
2. NAME OF OPERATOR MERIDIAN OIL INC.			7. UNIT AGREEMENT NAME Kiva	
3. ADDRESS OF OPERATOR P. O. Box 1855, Billings, MT 59103			8. FARM OR LEASE NAME Navajo-Federal	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements) At surface SWNW (2260' FNL - 440' FWL) SECTION OF OIL, GAS & MINING			9. WELL NO. 12-4	
At proposed prod. zone Same			10. FIELD AND POOL, OR WILDCAT Kiva	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 6 miles east Hatch Trading Post 43-037-31395			11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Section 4-39S-25E	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 440'		16. NO. OF ACRES IN LEASE 2920.8	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. 1100'		19. PROPOSED DEPTH 5860'	20. ROTARY OR CABLE TOOLS Rotary	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 4852' GL (graded)			22. APPROX. DATE WORK WILL START* April 1, 1988	
23. PROPOSED CASING AND CEMENTING PROGRAM				

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 J. R. Harris TITLE Regional Drilling Engineer DATE 3/8/88
(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE MAR 25 1988
APPROVED BY /S/ GENE NODINE TITLE DEPUTY MANAGER
CONDITIONS OF APPROVAL, IF ANY: _____ DATE _____

CONDITIONS OF APPROVAL ATTACHED

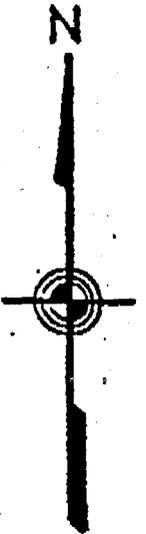
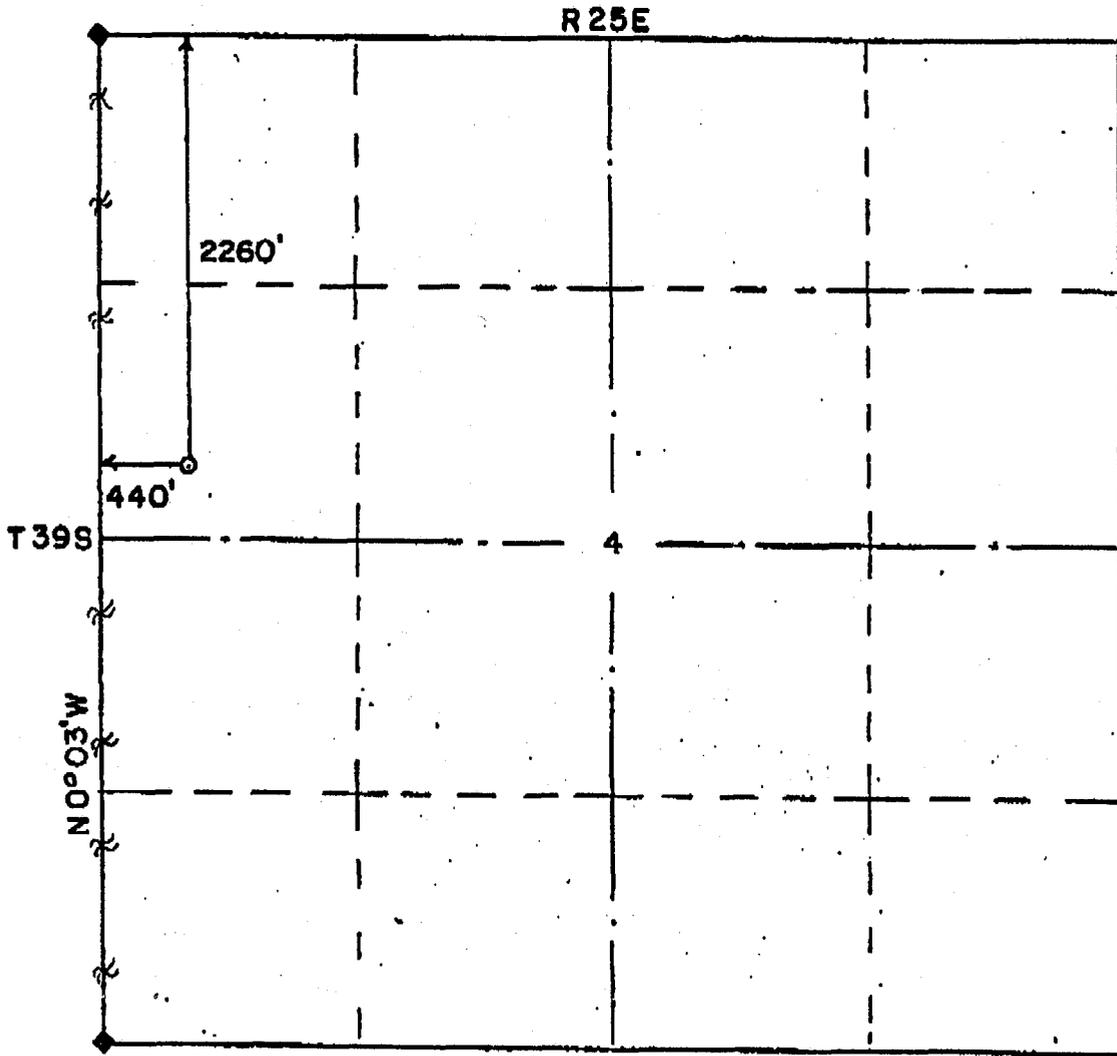
*See Instructions On Reverse Side

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

CC: STRA 3/8/88
FLARING OR VENTING OF
GAS SUBJECT TO NTL 4-A
DATED 1/1/80

DOGMA

WELL LOCATION AND ACREAGE DEDICATION PLAT



1"=1000'

◆ brass cap

WELL LOCATION DESCRIPTION:
 Meridian Oil, #12-4 Navajo Federal
 2260' FNL & 440' FWL
 Section 4, T.39 S., R.25 E., SLM
 San Juan County, Utah
 4855' grd. elevation
 Alternate: 2290' FN & 680' FW 4853 grd.



The above plat is true and correct to my knowledge and belief.

Gerald G. Huddleston
 Gerald G. Huddleston, LS

16 February 1988

Meridian Oil Inc.
Well No. Navajo-Federal 12-4
Sec. 4, T. 39 S., R. 25 E.
San Juan County, Utah
Lease U-52333

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.

B. THIRTEEN-POINT SURFACE USE PLAN

1. If at any time the facilities located on public lands authorized by the terms of the lease are no longer included in the lease (due to a contraction in the unit or other lease or unit boundry change) the BLM will process a change in authorization to the appropriate statute. The authorization will be subject to appropriate rental, or other financial obligation determined by the authorized officer.

TABLE 1

NOTIFICATIONS

Notify the San Juan Resource Area, at (801) 587-2141 for the following:

- 2 days prior to commencement of dirt work, construction or reclamation;
- 1 day prior to spudding;
- 1 day prior to running and cementing surface casing;
- 1 day prior to pressure testing of BOPE and/or surface casing.

Notify the Moab District Office, Branch of Fluid Minerals at (801) 259-6111 for the following:

No well abandonment operations will be commenced without the prior approval of the District Manager. In the case of newly drilled dry holes, and in emergency situations, verbal approval can be obtained by calling the following individuals, in the order listed:

Steven Jones , Petroleum Engineer DALE MANCHESTER	Office Phone: (801) 259-6111 Home Phone: (801) 259- 7404 6239
Lynn Jackson, Chief, Branch of Fluid Minerals	Office Phone: (801) 259-6111 Home Phone: (801) 259-7990
Paul Brown, I&E Coordinator	Office Phone: (801) 259-6111 Home Phone: (801) 259-7018

24 HOURS ADVANCE NOTICE IS REQUIRED FOR ALL ABANDONMENTS.

032904

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Jrb
API #43-037-31395

NAME OF COMPANY: MERIDIAN OIL

WELL NAME: NAVAJO FEDERAL 12-4

SECTION SW NW 4 TOWNSHIP 39S RANGE 25E COUNTY San Juan

DRILLING CONTRACTOR Araphoe Drilling

RIG # 11

SPUDDED: DATE 3-28-88

TIME 12:00 Noon

HOW Rotary

DRILLING WILL COMMENCE _____

REPORTED BY Keith Muilehead

TELEPHONE #/# _____

DATE 3-28-88 SIGNED JRB

**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

3. LEASE DESIGNATION AND SERIAL NO.

U-52333

8. IF INDIAN, ALLOTTEE OR TRIBE NAME

N/A

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug in a well. Use "APPLICATION FOR PERMIT-" for such proposals.)

1. OIL WELL GAS WELL OTHER **WATER INJECTION**

APR 1 1988

2. NAME OF OPERATOR

MERIDIAN OIL INC.

3. ADDRESS OF OPERATOR

P. O. Box 1855, Billings, MT 59103

DIVISION OF
OIL, GAS & MINING

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

At surface
SWNW (2260' FNL - 440' FWL)

7. UNIT AGREEMENT NAME

Kiva

8. FARM OR LEASE NAME

Navajo-Federal

9. WELL NO.

14-4

10. FIELD AND POOL, OR WILDCAT

Kiva

11. SEC., T., R., M., OR S.E. AND SURVEY OR AREA

Section 4-39S-25E

14. PERMIT NO.

43-03731395

15. ELEVATIONS (Show whether DF, RT, GL, etc.)

4852' GL - 4863' KB

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:

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*

Spud Report

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.)*

Arapahoe, Rig #1 spudded well @ 5:15 PM 3/28/88. Ran 13-3/8" 61# K-55 STC csg, cement w/90 sx Class "R".

I hereby certify that the foregoing is true and correct

SIGNED

Suzanne D. Nelson

TITLE

Sr. Operations Technician

DATE

3/29/88

(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 reverse side)

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL GAS WELL OTHER **WATER INJECTION**

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 (2260' FNL - 440' FWL)**

14. PERMIT NO.
43-03731395

15. ELEVATIONS (Show whether SP, RT, OR, etc.)
4852' GL - 4863' KB

6. LEASE DESIGNATION AND SERIAL NO.
U-52333

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

7. UNIT ASSIGNMENT NAME
Kiva

8. FARM OR LEASE NAME
Navajo-Federal

9. WELL NO.
14-4

10. FIELD AND POOL, OR WILDCAT
Kiva

11. SEC., T., R., M., OR B.L.E. AND SURVEY OR AREA
Section 4-39S-25E

12. COUNTY OR PARISH 13. STATE
San Juan Utah

APR - 1 1988

DIVISION OF
MINING

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

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

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

- PULL OR ALTER CASING
- MULTIPLE COMPLETE
- ABANDON*
- CHANGE PLANS

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

- REPAIRING WELL
- ALTERING CASING
- ABANDONMENT*

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.)*

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I hereby certify that the foregoing is true and correct

SIGNED

Suzanne D. Nelson

TITLE

Sr. Operations Technician

DATE

3/29/88

(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.
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 WATER INJECTION <input type="checkbox"/>		RECEIVED APR - 1 1988 DIVISION OF OIL, GAS & MINING	5. LEASE DESIGNATION AND SERIAL NO. U-52333 <i>Orl.</i>
2. NAME OF OPERATOR MERIDIAN OIL INC.			6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A 040709
3. ADDRESS OF OPERATOR P. O. Box 1855, Billings, MT 59103			7. UNIT AGREEMENT NAME Kiva
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface SWNW (2260' FNL - 440' FWL)			8. FARM OR LEASE NAME Navajo-Federal
9. WELL NO. <u>14-4</u> 5/B 12-4 ? <i>OTS</i>	10. FIELD AND POOL, OR WILDCAT Kiva		11. SEC., T., R., M., OR B.L.E. AND SURVEY OR ABBA Section 4-39S-25E
12. COUNTY OR PARISH San Juan	13. STATE Utah		
14. PERMIT NO. 43-03731395	15. ELEVATIONS (Show whether SP, RT, OR, etc.) 4852' GL - 4863' KB		

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*

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.)

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I hereby certify that the foregoing is true and correct

SIGNED *Suzanne D. Nelson*

TITLE Sr. Operations Technician

DATE 3/29/88

(This space for Federal or State office use)

APPROVED BY _____

TITLE _____

DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

MERIDIAN OIL

RECORDED
APR 11 1988

April 6, 1988

DIVISION OF
OIL, GAS & MINING

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

Attention: Dan Jarvis

Re: Application for Enhanced Recovery **Injection Well**
12-4 Navajo-Federal
SWNW Section 4-39S-25E
San Juan County, Utah

Dear Mr. Jarvis:

Enclosed are original and 6 copies of Form DOGM-UIC-1 for the above
referenced location.

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

Sincerely,



Suzann S. Nelson
Sr. Operations Technician

/ssn/1771N



 BLM, Moab, UT

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

FORM NO. DOGM-UIC-1

IN THE MATTER OF THE APPLICATION OF
MERIDIAN OIL INC.
ADDRESS P. O. Box 1855
Billings, MT ZIP 59103
INDIVIDUAL PARTNERSHIP CORPORATION
FOR ADMINISTRATIVE APPROVAL TO DISPOSE OR
INJECT FLUID INTO THE 12-4 WELL
SEC. 4 TWP. 39S RANGE 25E
San Juan COUNTY, UTAH

CAUSE NO. _____

ENHANCED RECOVERY INJ. WELL	<input checked="" type="checkbox"/>
DISPOSAL WELL	<input type="checkbox"/>

APPLICATION

Comes now the applicant and shows the Division the following:

1. That Rule 1-5 (b) 6 authorizes administrative approval of enhanced recovery injections or disposal operations.
2. That the applicant submits the following information.

Lease Name <u>Navajo-Federal</u>	Well No. <u>12-4</u>	Field <u>Kiva</u>	County <u>San Juan</u>
Location of Enhanced Recovery Injection or Disposal Well <u>SWNW</u> Sec. <u>4</u> Twp. <u>39S</u> Rge. <u>25E</u>			
New Well To Be Drilled Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Old Well To Be Converted Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Casing Test Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Date <u>4-2-88</u>	
Depth-Base Lowest Known Fresh Water Within 1/2 Mile <u>1200'</u>	Does Injection Zone Contain Oil-Gas-Fresh Water Within 1/2 Mile YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		State What oil & gas
Location of Injection Source(s) <u>42-9 Navajo-Federal</u> <u>SENE Sec. 9-39S-25E</u>	Geologic Name(s) and Depth of Source(s) <u>Wingate Sand 1308'-1454'</u> <u>Cutler Sand 2205'-3106'</u>		
Geologic Name of Injection Zone <u>Upper Ismay</u>	Depth of Injection Interval <u>5609</u> to <u>5791'</u> est		
a. Top of the Perforated Interval: <u>5609' est.</u>	b. Base of Fresh Water: <u>1560' est (Wingate)</u>	c. Intervening Thickness (a minus b) <u>4049' est.</u>	
Is the intervening thickness sufficient to show fresh water will be protected without additional data? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
Lithology of Intervening Zones <u>sand stones, shales, limes and anhydrites</u>			
Injection Rates and Pressures Maximum <u>1300</u> B/D <u>3750</u> PSI			
The Names and Addresses of Those To Whom Copies of This Application and Attachments Have Been Sent <u>Bureau of Land Management</u> <u>Moab District</u> <u>P. O. Box 970</u> <u>Moab, UT 84532</u>			

State of MONTANA)
County of YELLOWSTONE)

R. E. Schuyler Sr. Staff Engineer
Applicant

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

Subscribed and sworn to before me this 6th day of April, 19 88

SEAL

My commission expires February 28, 1990

Suzanne S. Nelson
Notary Public in and for Yellowstone County, Montana

(OVER)



O-TECH, INC.

Meridian Oil Company

Cutler 1003

Sample Date:

Lab ID:

Oilfield Chemical Technology

P.O. Box 31272 • Billings, Montana 59107 • Phone (406) 245-4341

Cations	mg/l	meq/l	Anions	mg/l	meq/l
Potassium	ND	ND	Sulfate	1640.00	34.14
Sodium	7182.00	312.40	Chloride	11620.0	327.75
Calcium	1188.00	59.28	Carbonate	0	0
Magnesium	104.00	8.62	Bicarbonate	58.00	0.95
Total Iron	41.00	1.47	Hydroxide	0	0
Diss. Iron	ND	ND	Silica	ND	ND
Barium	ND	ND		0	0
Strontium	ND	ND		0	0
Sum +	8515.0	381.70	Sum -	13318	362.80

Solids

TDS @ 180C	8870	mg/l
Total Solids, Calc less CO3	21800	mg/l
Total Solids, Calc	21800	mg/l
Total Solids, NaCl equiv	20900	mg/l
Suspended Solids, Total	ND	
Suspended Solids, Solvent	ND	
Suspended Solids, acid soluble	ND	

System Conditions

System Operation	Normal
Sample Temperature, 'F	75.00
Sample pH	7.10

Dissolved Gassed

Dissolved Oxygen	ND	
Carbon Dioxide	2	mg/l
Hydrogen Sulfide	0	mg/l

Other Properties

Specific Gravity, measured	1.0069	
Specific Gravity, calculated	1.0161	
Resistivity, measured	ND	
Chloride as NaCl	19200	mg/l
Resistivity calculated from NaCl	ND	
Hardness as calcium carbonate	10	mg/l
Conductivity	ND	
Oil & Grease	ND	

Microbiological

Sulfate Reducing Bacteria	ND	
Aerobic Bacteria	below 1000	colonies/ml

Approved:

Serving The Petroleum Industry Thru Applied Technology

Richard E. Johnson

Wingate 100%

Sample Date:

Lab ID:

Cations	mg/l	meq/l	Anions	mg/l	meq/l
Potassium	ND	ND	Sulfate	541.00	11.26
Sodium	2858.00	124.32	Chloride	4500.00	126.93
Calcium	288.00	14.37	Carbonate	0	0
Magnesium	55.00	4.56	Bicarbonate	284.00	4.64
Total Iron	55.00	1.97	Hydroxide	0	0
Diss. Iron	ND	ND	Silica	ND	ND
Barium	ND	ND		0	0
Strontium	ND	ND		0	0
Sum +	3256.0	145.10	Sum -	5325.0	142.80

Solids

TDS @ 180C	3460	mg/l
Total Solids, Calc less CO ₃	8440	mg/l
Total Solids, Calc	8580	mg/l
Total Solids, NaCl equiv	8070	mg/l
Suspended Solids, Total	ND	
Suspended Solids, Solvent	ND	
Suspended Solids, acid soluble	ND	

System Conditions

System Operation	Normal
Sample Temperature, °F	75.00
Sample pH	6.60

Dissolved Gassed

Dissolved Oxygen	ND	
Carbon Dioxide	2	mg/l
Hydrogen Sulfide	0	mg/l

Other Properties

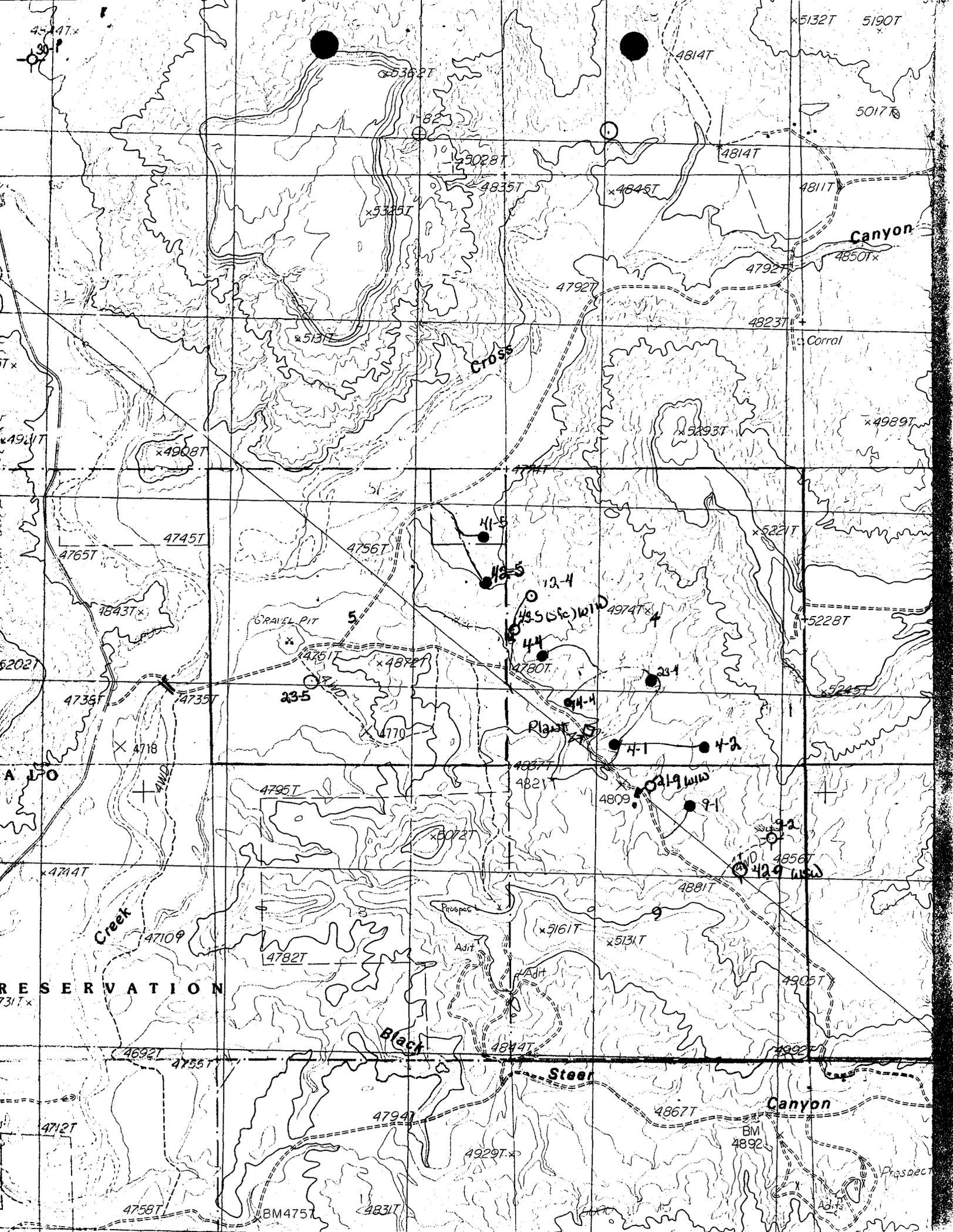
Specific Gravity, measured	1.0028	
Specific Gravity, calculated	1.0067	
Resistivity, measured	ND	
Chloride as NaCl	7420	mg/l
Resistivity calculated from NaCl	ND	
Hardness as calcium carbonate	10	mg/l
Conductivity	ND	
Oil & Grease	ND	

Microbiological

Sulfate Reducing Bacteria	ND
Aerobic Bacteria	below 1000 colonies/ml

Approved:

Richard E. Johnson



45447x

x5132T 5190T

x5332T

4814T

5017T

4835T

4814T

4811T

Canyon

4792T

4850Tx

4792T

4823T

Corral

Cross

x5293T

x4989T

x4908T

4745T

4756T

x5221T

41-5

42-4

x5228T

GRAVEL PIT

5

4950 (sic) W/D

4974Tx

23-5

44

23-1

x5245T

4736T

4735T

x4751T

x4872T

4780T

44-4

4-1

4-2

AJO

x4718

4795T

x8072T

4837T

4821T

4809

42-9 W/D

42

4856T

42-9 W/D

4881T

Creek

47109

4782T

Prospect

x5161T

x5131T

4905T

RESERVATION

4692T

4755T

4844T

Steer

4922T

4794T

4867T

Canyon

4712T

4929Tx

BM 4892

4758T

BM475T

4831T

Prospect

UIC CHECKLIST FOR APPLICATION APPROVAL

OPERATOR Meridian Oil Inc. WELL NUMBER 12-4
 SEC. 4 T. 39S. R. 25E COUNTY SAN JUAN
 API # 43-037-31395

NEW WELL _____ DISPOSAL WELL _____ ENHANCED RECOVERY WELL

- | | | |
|----------------------------------|---|--|
| - Plat showing surface ownership | Yes <input checked="" type="checkbox"/> | No _____ |
| - Application forms complete | Yes <input checked="" type="checkbox"/> | No _____ |
| - Schematic of well bore | Yes _____ | No <input checked="" type="checkbox"/> |
| - Adequate geologic information | Yes <input checked="" type="checkbox"/> | No _____ |
| - Rate and Pressure information | Yes <input checked="" type="checkbox"/> | No _____ |
| - Fluid source | Yes <input checked="" type="checkbox"/> | No _____ |
| - Analysis of formation fluid | Yes <input checked="" type="checkbox"/> | No _____ |
| - Analysis of injection fluid | Yes <input checked="" type="checkbox"/> | No _____ |
| - USDW information | Yes <input checked="" type="checkbox"/> | No _____ |
| - Mechanical integrity test | Yes _____ | No _____ |

Comments: Geologic, Pressure, Rate information on file with other wells in project. Well bore information was submitted

Injection Interval 5609-5791 test.
well is currently being drilled MAX RATE 1300 BPD
max Pressure 3750 PSI

Reviewed by D. James 4/13/88

4 injectors
3 Producers
1 P.A

* need affidavit certifying that Meridian owns all land.
 Suzanne Nelson said she would send.
 4/13/88

8 wells in Area of review

Operator

Meridian Oil

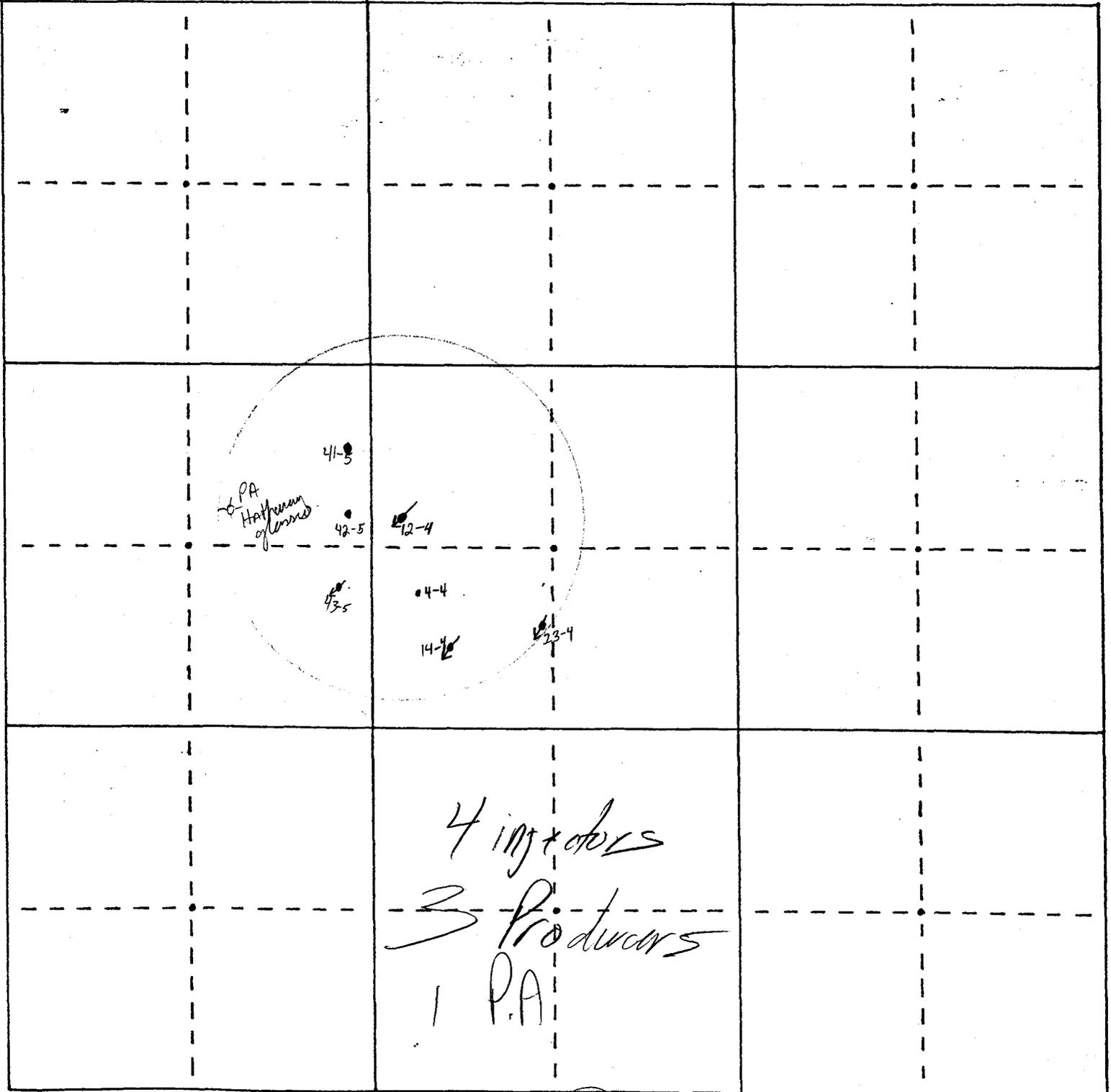
Well

12-4

Location

Sec 4 39S 25E

SAN JUAN COUNTY, UTAH



Revised by D. Davis 4/13/88

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

SUBMIT IN TRIPPLICATE*
(Other instructions on reverse side)

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input checked="" type="checkbox"/> WATER INJECTION		5. LEASE DESIGNATION AND SERIAL NO. U-52333																				
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 (2260' FNL - 440' FWL)		8. FARM OR LEASE NAME Navajo-Federal																				
14. PERMIT NO. 43-037-31395	15. ELEVATIONS (Show whether DF, RT, GR, etc.) 4863' KB	9. WELL NO. 12-4																				
16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data		10. FIELD AND POOL, OR WILDCAT Kiva																				
<table border="0" style="width:100%;"> <tr> <td colspan="2" style="text-align:center">NOTICE OF INTENTION TO:</td> <td colspan="2" style="text-align:center">SUBSEQUENT REPORT OF:</td> </tr> <tr> <td>TEST WATER SHUT-OFF <input type="checkbox"/></td> <td>PULL OR ALTER CASING <input type="checkbox"/></td> <td>WATER SHUT-OFF <input type="checkbox"/></td> <td>REPAIRING WELL <input type="checkbox"/></td> </tr> <tr> <td>FRACTURE TREAT <input type="checkbox"/></td> <td>MULTIPLE COMPLETE <input type="checkbox"/></td> <td>FRACTURE TREATMENT <input type="checkbox"/></td> <td>ALTERING CASING <input type="checkbox"/></td> </tr> <tr> <td>SHOOT OR ACIDIZE <input type="checkbox"/></td> <td>ABANDON* <input type="checkbox"/></td> <td>SHOOTING OR ACIDIZING <input type="checkbox"/></td> <td>ABANDONMENT* <input type="checkbox"/></td> </tr> <tr> <td>REPAIR WELL <input type="checkbox"/></td> <td>CHANGE PLANS <input checked="" type="checkbox"/></td> <td>(Other) <input type="checkbox"/></td> <td></td> </tr> </table>		NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:		TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>	FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>	SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>	REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input checked="" type="checkbox"/>	(Other) <input type="checkbox"/>		11. SEC., T., R., M., OR S.E., AND SURVEY OR AREA Section 4-39S-25E
NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:																				
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>																			
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>																			
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>																			
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input checked="" type="checkbox"/>	(Other) <input type="checkbox"/>																				
		12. COUNTY OR PARISH San Juan																				
		13. STATE Utah																				

APR 13 1988
DIVISION OF
OIL, GAS & MINING

CONFIDENTIAL
O.G.M.

The vertical hole was plugged back as follows:
Plug back operations commenced at 7:00 PM 4-9-88. 125 sx cement plug from 5627' - 5249'. 20 bbl 50 vis mud plug from 4613' - 4414'. 210 sx cement plug from 4428' - 4023'. Top of plug back was located @ 4090'.

Dale Manchester with the BLM was notified of the following direction plan on 4/9/88:

Permission to assume the top of our plug back as being vertical to surface location was received. Kick Off Point = 4137' (Actual).

Build section = 4137' - 5174' Measured depth @ 2-1/2°/100' to 24°.
TVD @ 5174' MD = 5145'. Departure = 204', South 189' West 78'.

Target = Upper Ismay porosity @ 5571' MD = 5506' TVD.
Departure = 368', South 340' West 140'.

TMD = 5707' = 50' below Hovenweep top.

Proposed Bottom Hole Location = 2600' FNL - 300' FWL.
Existing Surface Location = 2260' FNL - 440' FWL.

I hereby certify that the foregoing is true and correct

SIGNED D.P. Hain TITLE Regional Drilling Engineer DATE 4/11/88

(This space for Federal or State office use)

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

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

Federal approval of this action is required before commencing operations.

*See Instructions on Reverse Side

DATE: 4-15-88
By: [Signature]

Sii DATADRIL
Division of Smith International, Inc.

MERIDIAN OIL INC.
NAVAJO FEDERAL #12-4
SEC 4-T39S-R25E
SAN JUAN COUNTY, UTAH

File Name: MERID124S

***** RECORD OF SURVEY *****
Calculated by Sii DATADRIL's C.A.D.D.S. System

Minimum Curvature Method
All Angles are Decimal
Vertical Section Plane: S 22.38 W

MEASURED DEPTH (FT)	INCL ANGLE (DEG)	D R I F T DIRECTION (DEG)	COURSE LENGTH (FT)	TOTAL VERTICAL DEPTH	T O T A L		VERTICAL SECTION (FT)	C L O S U R E		D O S L E S SEVERITY (DEG/100')
					RECTANGULAR	COORDINATES (FT)		DISTANCE (FT)	DIRECTION (DEG)	
4137.00	0.00	N 0.00 E	0.00	4137.00	0.00 N	0.00 E	0.00	0.00 N	0.00 E	0.00
4177.00	.75	N 87.00 W	40.00	4177.00	.01 N	.26 W	.09	.26 N	87.00 W	1.88
4209.00	2.00	S 33.00 W	32.00	4208.99	.44 S	.77 W	.71	.89 S	60.20 W	5.47
4240.00	4.50	S 34.00 W	31.00	4239.94	1.91 S	1.75 W	2.43	2.59 S	42.55 W	8.07
4271.00	6.75	S 40.00 W	31.00	4270.79	4.31 S	3.60 W	5.36	5.62 S	39.88 W	7.49
4302.00	8.50	S 36.00 W	31.00	4301.51	7.56 S	6.12 W	9.32	9.73 S	38.99 W	5.90
4336.00	9.50	S 29.00 W	34.00	4335.09	12.05 S	8.96 W	14.55	15.01 S	36.63 W	4.36
4396.00	10.75	S 24.00 W	60.00	4394.16	21.49 S	13.63 W	25.06	25.45 S	32.39 W	2.54
4486.00	12.00	S 16.00 W	90.00	4482.40	38.15 S	19.63 W	42.75	42.90 S	27.22 W	2.23
4516.00	12.25	S 13.00 W	30.00	4511.73	44.25 S	21.20 W	48.99	49.07 S	25.60 W	2.26
4547.00	13.50	S 15.00 W	31.00	4541.95	50.95 S	22.88 W	55.82	55.85 S	24.18 W	4.28
4577.00	13.50	S 21.00 W	30.00	4571.12	57.60 S	25.04 W	62.80	62.81 S	23.49 W	4.67
4608.00	15.00	S 26.00 W	31.00	4601.17	64.59 S	28.10 W	70.42	70.43 S	23.51 W	6.25
4682.00	16.00	S 33.00 W	74.00	4672.48	81.75 S	37.85 W	90.00	90.09 S	24.84 W	2.86
4743.00	16.25	S 34.00 W	61.00	4731.08	95.88 S	47.20 W	106.63	106.87 S	26.21 W	.61
4836.00	16.75	S 37.00 W	93.00	4820.25	117.37 S	62.54 W	132.34	132.99 S	28.05 W	1.06
4930.00	16.75	S 40.00 W	94.00	4910.26	138.56 S	79.40 W	158.36	159.70 S	29.81 W	.92
4982.00	16.75	S 43.00 W	52.00	4960.06	149.78 S	89.33 W	172.51	174.40 S	30.81 W	1.66
5075.00	15.00	S 44.00 W	93.00	5049.51	168.24 S	106.83 W	196.24	199.29 S	32.41 W	1.90
5111.00	14.75	S 44.00 W	36.00	5084.30	174.89 S	113.25 W	204.84	208.35 S	32.92 W	.69
5170.00	13.50	S 44.00 W	59.00	5141.52	185.25 S	123.25 W	218.22	222.50 S	33.64 W	2.12

Sii DATADRIL
Division of Smith International, Inc.

MERIDIAN OIL INC.
NAVAJO FEDERAL #12-4

SEC 4-T39S-R25E
SAN JUAN COUNTY, UTAH

MEASURED DEPTH (FT)	INCL ANGLE (DEG)	D R I F T DIRECTION (DEG)	COURSE LENGTH (FT)	TOTAL VERTICAL DEPTH	T O T A L RECTANGULAR COORDINATES (FT)		VERTICAL SECTION (FT)	C L O S U R E DISTANCE (FT) DIRECTION (DEG)		DOGLEG SEVERITY (DEG/100')
5233.00	14.25	S 40.00 W	63.00	5202.68	196.48 S	133.34 W	232.45	237.45	S 34.16 W	1.93
5294.00	15.00	S 39.00 W	61.00	5261.70	208.36 S	143.14 W	247.17	252.79	S 34.49 W	1.30
5418.00	17.00	S 37.00 W	124.00	5380.90	235.31 S	164.15 W	280.09	286.91	S 34.90 W	1.67
5541.00	19.75	S 34.00 W	123.00	5497.62	266.91 S	186.59 W	317.85	325.66	S 34.96 W	2.36
5726.00	24.50	S 31.00 W	185.00	5668.95	325.74 S	223.85 W	386.43	395.24	S 34.50 W	2.64

NOTE: THE FOLLOWING SURVEY HAS BEEN EXTRAPOLATED
USING A STRAIGHT-LINE PROJECTION

5760.00	24.50	S 31.00 W	34.00	5699.89	337.82 S	231.11 W	400.37	409.31	S 34.38 W	0.00
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BOTTOM HOLE CLOSURE: 409.31 Feet at S 34.38 Degrees W

Sii DATADRIL
Division of Smith International, Inc.

MERIDIAN OIL INC.
NAVAJO FEDERAL #12-4
SEC 4-T395-R25E
SAN JUAN COUNTY, UTAH

File Name: MERID124S

*** RECORD OF SURVEY ***
Calculated by Sii DATADRIL's C.A.D.D.S. System

Minimum Curvature Method
All Angles are Decimal
Vertical Section Plane: S 22.38 W

MEASURED DEPTH (FT)	INCL ANGLE (DEG)	D R I F T DIRECTION (DEG)	COURSE LENGTH (FT)	TOTAL VERTICAL DEPTH	T O T A L RECTANGULAR COORDINATES (FT)		VERTICAL SECTION (FT)	C L O S U R E DISTANCE (FT) DIRECTION (DEG)		DOSLEG SEVERITY (DEG/100')
4137.00	0.00	N 0.00 E	0.00	4137.00	0.00 N	0.00 E	0.00	0.00 N	0.00 E	0.00
4177.00	.75	N 87.00 W	40.00	4177.00	.01 N	.26 W	.09	.26 N	87.00 W	1.88
4209.00	2.00	S 33.00 W	32.00	4208.99	.44 S	.77 W	.71	.89 S	60.20 W	5.47
4240.00	4.50	S 34.00 W	31.00	4239.94	1.91 S	1.75 W	2.43	2.59 S	42.55 W	8.07
4271.00	6.75	S 40.00 W	31.00	4270.79	4.31 S	3.60 W	5.36	5.62 S	39.88 W	7.49
4302.00	8.50	S 36.00 W	31.00	4301.51	7.56 S	6.12 W	9.32	9.73 S	38.99 W	5.90
4336.00	9.50	S 29.00 W	34.00	4335.09	12.05 S	8.96 W	14.55	15.01 S	36.63 W	4.36
4396.00	10.75	S 24.00 W	60.00	4394.16	21.49 S	13.63 W	25.06	25.45 S	32.39 W	2.54
4486.00	12.00	S 16.00 W	90.00	4482.40	38.15 S	19.63 W	42.75	42.90 S	27.22 W	2.23
4516.00	12.25	S 13.00 W	30.00	4511.73	44.25 S	21.20 W	48.99	49.07 S	25.60 W	2.26
4547.00	13.50	S 15.00 W	31.00	4541.95	50.95 S	22.88 W	55.82	55.85 S	24.18 W	4.28
4577.00	13.50	S 21.00 W	30.00	4571.12	57.60 S	25.04 W	62.80	62.81 S	23.49 W	4.67
4608.00	15.00	S 26.00 W	31.00	4601.17	64.59 S	28.10 W	70.42	70.43 S	23.51 W	6.25
4682.00	16.00	S 33.00 W	74.00	4672.48	81.75 S	37.85 W	90.00	90.09 S	24.84 W	2.96
4743.00	16.25	S 34.00 W	61.00	4731.08	95.88 S	47.20 W	106.63	106.87 S	26.21 W	.61
4836.00	16.75	S 37.00 W	93.00	4820.25	117.37 S	62.54 W	132.34	132.99 S	28.05 W	1.06
4930.00	16.75	S 40.00 W	94.00	4910.26	138.56 S	79.40 W	158.36	159.70 S	29.81 W	.92
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5075.00	15.00	S 44.00 W	93.00	5049.51	168.24 S	106.83 W	196.24	199.29 S	32.41 W	1.90
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5170.00	13.50	S 44.00 W	59.00	5141.52	185.25 S	123.25 W	218.22	222.50 S	33.64 W	2.12

Sii DATADRIL
 Division of Smith International, Inc.

MERIDIAN OIL INC.
 NAVAJO FEDERAL #12-4

SEC 4-T39S-R25E
 SAN JUAN COUNTY, UTAH

MEASURED DEPTH (FT)	INCL ANGLE (DEG)	D R I F T DIRECTION (DEG)	COURSE LENGTH (FT)	TOTAL VERTICAL DEPTH	T O T A L RECTANGULAR COORDINATES (FT)		VERTICAL SECTION (FT)	C L O S U R E DISTANCE (FT) DIRECTION (DEG)		DOGLEG SEVERITY (DEG/100')
5233.00	14.25	S 40.00 W	63.00	5202.68	196.48 S	133.34 W	232.45	237.45 S	34.16 W	1.93
5294.00	15.00	S 39.00 W	61.00	5261.70	208.36 S	143.14 W	247.17	252.79 S	34.49 W	1.30
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5541.00	19.75	S 34.00 W	123.00	5497.62	266.91 S	186.59 W	317.85	325.66 S	34.96 W	2.36
5726.00	24.50	S 31.00 W	185.00	5668.95	325.74 S	223.85 W	386.43	395.24 S	34.50 W	2.64

NOTE: THE FOLLOWING SURVEY HAS BEEN EXTRAPOLATED USING A STRAIGHT-LINE PROJECTION

5760.00	24.50	S 31.00 W	34.00	5699.89	337.82 S	231.11 W	400.37	409.31 S	34.38 W	0.00
---------	-------	-----------	-------	---------	----------	----------	--------	----------	---------	------

BOTTOM HOLE CLOSURE: 409.31 Feet at S 34.38 Degrees W

Sii DATADRIL
Division of Smith International, Inc.

MERIDIAN OIL INC.
NAVAJO FEDERAL #12-4
SEC 4-T39S-R25E
SAN JUAN COUNTY, UTAH

File Name: MERID124S

***** RECORD OF SURVEY *****
Calculated by Sii DATADRIL's C.A.D.D.S. System

Minimum Curvature Method
All Angles are Decimal
Vertical Section Plane: S 22.38 W

MEASURED DEPTH (FT)	INCL ANGLE (DEG)	D R I F T DIRECTION (DEG)	COURSE LENGTH (FT)	TOTAL VERTICAL DEPTH	T O T A L RECTANGULAR COORDINATES (FT)		VERTICAL SECTION (FT)	C L O S U R E DISTANCE (FT) DIRECTION (DEG)		DOSLEG SEVERITY (DEG/100')
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4177.00	.75	N 87.00 W	40.00	4177.00	.01 N	.26 W	.09	.26 N	87.00 W	1.88
4209.00	2.00	S 33.00 W	32.00	4208.99	.44 S	.77 W	.71	.89 S	60.20 W	5.47
4240.00	4.50	S 34.00 W	31.00	4239.94	1.91 S	1.75 W	2.43	2.59 S	42.55 W	8.07
4271.00	6.75	S 40.00 W	31.00	4270.79	4.31 S	3.60 W	5.36	5.62 S	39.88 W	7.49
4302.00	8.50	S 36.00 W	31.00	4301.51	7.56 S	6.12 W	9.32	9.73 S	38.99 W	5.90
4336.00	9.50	S 29.00 W	34.00	4335.09	12.05 S	8.96 W	14.55	15.01 S	36.63 W	4.36
4396.00	10.75	S 24.00 W	60.00	4394.16	21.49 S	13.63 W	25.06	25.45 S	32.39 W	2.54
4486.00	12.00	S 16.00 W	90.00	4482.40	38.15 S	19.63 W	42.75	42.90 S	27.22 W	2.23
4516.00	12.25	S 13.00 W	30.00	4511.73	44.25 S	21.20 W	48.99	49.07 S	25.60 W	2.26
4547.00	13.50	S 15.00 W	31.00	4541.95	50.95 S	22.88 W	55.82	55.85 S	24.18 W	4.28
4577.00	13.50	S 21.00 W	30.00	4571.12	57.60 S	25.04 W	62.80	62.81 S	23.49 W	4.67
4608.00	15.00	S 26.00 W	31.00	4601.17	64.59 S	28.10 W	70.42	70.43 S	23.51 W	6.25
4682.00	16.00	S 33.00 W	74.00	4672.48	81.75 S	37.85 W	90.00	90.09 S	24.84 W	2.86
4743.00	16.25	S 34.00 W	61.00	4731.08	95.88 S	47.20 W	106.63	106.87 S	26.21 W	.61
4836.00	16.75	S 37.00 W	93.00	4820.25	117.37 S	62.54 W	132.34	132.99 S	28.05 W	1.06
4930.00	16.75	S 40.00 W	94.00	4910.26	138.56 S	79.40 W	158.36	159.70 S	29.81 W	.92
4982.00	16.75	S 43.00 W	52.00	4960.06	149.78 S	89.33 W	172.51	174.40 S	30.81 W	1.66
5075.00	15.00	S 44.00 W	93.00	5049.51	168.24 S	106.83 W	196.24	199.29 S	32.41 W	1.90
5111.00	14.75	S 44.00 W	36.00	5084.30	174.89 S	113.25 W	204.84	208.35 S	32.92 W	.69
5170.00	13.50	S 44.00 W	59.00	5141.52	185.25 S	123.25 W	218.22	222.50 S	33.64 W	2.12

Sii DATADRIL
 Division of Smith International, Inc.

MERIDIAN OIL INC.
 NAVAJO FEDERAL #12-4

SEC 4-T39S-R25E
 SAN JUAN COUNTY, UTAH

MEASURED DEPTH (FT)	INCL ANGLE (DEG)	D R I F T DIRECTION (DEG)	COURSE LENGTH (FT)	TOTAL VERTICAL DEPTH	T O T A L		VERTICAL SECTION (FT)	C L O S U R E		DOGLEG SEVERITY (DEG/100')
					RECTANGULAR	COORDINATES		DISTANCE	DIRECTION	
5233.00	14.25	S 40.00 W	63.00	5202.68	196.48 S	133.34 W	232.45	237.45	S 34.16 W	1.93
5294.00	15.00	S 39.00 W	61.00	5261.70	208.36 S	143.14 W	247.17	252.79	S 34.49 W	1.30
5418.00	17.00	S 37.00 W	124.00	5380.90	235.31 S	164.15 W	280.09	286.91	S 34.90 W	1.67
5541.00	19.75	S 34.00 W	123.00	5497.62	266.91 S	186.59 W	317.85	325.66	S 34.96 W	2.36
5726.00	24.50	S 31.00 W	185.00	5668.95	325.74 S	223.85 W	386.43	395.24	S 34.50 W	2.64

NOTE: THE FOLLOWING SURVEY HAS BEEN EXTRAPOLATED
 USING A STRAIGHT-LINE PROJECTION

5760.00	24.50	S 31.00 W	34.00	5699.89	337.82 S	231.11 W	400.37	409.31	S 34.38 W	0.00
---------	-------	-----------	-------	---------	----------	----------	--------	--------	-----------	------

BOTTOM HOLE CLOSURE: 409.31 Feet at S 34.38 Degrees W

MERIDIAN OIL

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

April 18, 1988

BUREAU OF LAND MANAGEMENT
P.O. Box 970
Moab, UT 84532

THE NAVAJO NATION
Division of Resources
P.O. Box 308
Window Rock, AZ 86515
Attn: Mr. Harry J. Yazzie

BUREAU OF INDIAN AFFAIRS
Shiprock Agency
P.O. Box 966
Shiprock, NM 87420-0966
Attn: Superintendent

RE: Meridian Oil Navajo Federal Well
SW/4NE/4, Section 4-T39S-R25E
San Juan County, UT

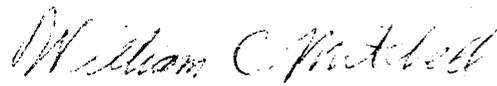
Dear Mr. Yazzie,

Enclosed for your files is a copy of Meridian Oil Inc.'s petition for injection relative to the captioned well. The location of this well is 2,260 feet from the north line and 440 feet from the west line of Section 4, Township 39 South, Range 25 East, San Juan County, Utah

While this well is not located within the boundary of the Navajo Reservation, the Utah Board of Oil, Gas and Mining requires that all surface owners within a one-half mile radius of the proposed drillsite be provided a copy of this petition.

Very truly yours,

MERIDIAN OIL INC.



William C. Mitchell
Sr. Staff Landman

bb/429:5

WCM
APR 18 88

W. J. Schuyler

FORM NO. DOGM-UIC-1

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

RECEIVED
APR 18 88
DENVER LAND

IN THE MATTER OF THE APPLICATION OF
MERIDIAN OIL INC.
ADDRESS P. O. Box 1855
Billings, MT ZIP 59103
INDIVIDUAL PARTNERSHIP CORPORATION X
FOR ADMINISTRATIVE APPROVAL TO DISPOSE OR
INJECT FLUID INTO THE 12-4 WELL
SEC. 4 TWP. 39S RANGE 25E
San Juan COUNTY, UTAH

CAUSE NO. _____

ENHANCED RECOVERY INJ. WELL
DISPOSAL WELL

APPLICATION

- Comes now the applicant and shows the Division the following:
1. That Rule 1-5 (b) 6 authorizes administrative approval of enhanced recovery injections or disposal operations.
 2. That the applicant submits the following information.

Lease Name <u>Navajo-Federal</u>	Well No. <u>12-4</u>	Field <u>Kiva</u>	County <u>San Juan</u>
Location of Enhanced Recovery Injection or Disposal Well <u>SWNW</u> Sec. <u>4</u> Twp. <u>39S</u> Rge. <u>25E</u>			
New Well To Be Drilled Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Old Well To Be Converted Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Casing Test Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Date <u>4-2-88</u>	
Depth-Base Lowest Known Fresh Water Within 1/2 Mile <u>1200'</u>	Does Injection Zone Contain Oil-Gas-Fresh Water Within 1/2 Mile YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		State What oil & gas
Location of Injection Source(s) <u>42-9 Navajo-Federal SENE Sec. 9-39S-25E</u>	Geologic Name(s) and Depth of Source(s) <u>Wingate Sand 1308'-1454'</u> <u>Cutler Sand 2205'-3106'</u>		
Geologic Name of Injection Zone <u>Upper Ismay</u>	Depth of Injection Interval <u>5609</u> to <u>5791'</u> est		
a. Top of the Perforated Interval: <u>5609' est.</u>	b. Base of Fresh Water: <u>1560' est (Wingate)</u>	c. Intervening Thickness (a minus b) <u>4049' est.</u>	
Is the intervening thickness sufficient to show fresh water will be protected without additional data? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
Lithology of Intervening Zones <u>sand stones, shales, limes and anhydrites</u>			
Injection Rates and Pressures Maximum <u>1300</u> B/D <u>3750</u> PSI			
The Names and Addresses of Those To Whom Copies of This Application and Attachments Have Been Sent <u>Bureau of Land Management</u> <u>Moab District</u> <u>P. O. Box 970</u> <u>Moab, UT 84532</u>			

State of MONTANA) R. E. Schuyler Sr. Staff Engineer
County of YELLOWSTONE) Applicant

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

Subscribed and sworn to before me this 6th day of April, 19 88

SEAL

My commission expires February 28, 1990

Notary Public in and for Yellowstone County, Montana

(OVER)



O-TECH, INC.

Meridian Oil Company
Cutler 1003

Sample Date:
Lab ID:

Oilfield Chemical Technology

P.O. Box 31272 • Billings, Montana 59107 • Phone (406) 245-4341

Cations	mg/l	meq/l	Anions	mg/l	meq/l
Potassium	ND	ND	Sulfate	1640.00	34.14
Sodium	7182.00	312.40	Chloride	11620.0	327.75
Calcium	1188.00	59.28	Carbonate	0	0
Magnesium	104.00	8.62	Bicarbonate	58.00	0.95
Total Iron	41.00	1.47	Hydroxide	0	0
Diss. Iron	ND	ND	Silica	ND	ND
Barium	ND	ND		0	0
Strontium	ND	ND		0	0
Sum +	8515.0	381.70	Sum -	13318	362.80

Solids

TDS @ 180C	8870	mg/l
Total Solids, Calc less CO3	21800	mg/l
Total Solids, Calc	21800	mg/l
Total Solids, NaCl equiv	20900	mg/l
Suspended Solids, Total	ND	
Suspended Solids, Solvent	ND	
Suspended Solids, acid soluble	ND	

System Conditions

System Operation	Normal
Sample Temperature, 'F	75.00
Sample pH	7.10

Dissolved Gassed

Dissolved Oxygen	ND	
Carbon Dioxide	2	mg/l
Hydrogen Sulfide	0	mg/l

Other Properties

Specific Gravity, measured	1.0069	
Specific Gravity, calculated	1.0161	
Resistivity, measured	ND	
Chloride as NaCl	19200	mg/l
Resistivity calculated from NaCl	ND	
Hardness as calcium carbonate	10	mg/l
Conductivity	ND	
Oil & Grease	ND	

Microbiological

Sulfate Reducing Bacteria	ND
Aerobic Bacteria	below 1000 colonies/ml

Approved:

Mer. an Oil Company

Wingate 100%

Sample Date:

Lab ID:

Cations	mg/l	meq/l	Anions	mg/l	meq/l
Potassium	ND	ND	Sulfate	541.00	11.26
Sodium	2858.00	124.32	Chloride	4500.00	126.93
Calcium	288.00	14.37	Carbonate	0	0
Magnesium	55.00	4.56	Bicarbonate	284.00	4.64
Total Iron	55.00	1.97	Hydroxide	0	0
Diss. Iron	ND	ND	Silica	ND	ND
Barium	ND	ND		0	0
Strontium	ND	ND		0	0
Sum +	3256.0	145.10	Sum -	5325.0	142.80

Solids

TDS @ 180C	3460	mg/l
Total Solids, Calc less CO3	8440	mg/l
Total Solids, Calc	8580	mg/l
Total Solids, NaCl equiv	8070	mg/l
Suspended Solids, Total	ND	
Suspended Solids, Solvent	ND	
Suspended Solids, acid soluble	ND	

System Conditions

System Operation	Normal
Sample Temperature, °F	75.00
Sample pH	6.60

Dissolved Gassed

Dissolved Oxygen	ND	
Carbon Dioxide	2	mg/l
Hydrogen Sulfide	0	mg/l

Other Properties

Specific Gravity, measured	1.0028	
Specific Gravity, calculated	1.0067	
Resistivity, measured	ND	
Chloride as NaCl	7420	mg/l
Resistivity calculated from NaCl	ND	
Hardness as calcium carbonate	10	mg/l
Conductivity	ND	
Oil & Grease	ND	

Microbiological

Sulfate Reducing Bacteria	ND	
Aerobic Bacteria	below 1000	colonies/ml

Approved:

Richard E. Johnson

MERIDIAN OIL

April 19, 1988

RECEIVED
APR 21 1988

DIVISION OF
OIL, GAS & MINING

DIVISION OF OIL, GAS AND MINING
Department of Natural Resources
State of Utah
355 West North Temple
III Triad Center, Ste. 350
Salt Lake City, UT 84180-1203
Attention: Mr. Dan Jarvis

RE: Meridian Oil 12-4 Navajo
Federal Well
SW/4NW/4 Sec. 4, T39S-R25E
San Juan County, Utah

Dear Mr. Jarvis,

Per our recent discussion, enclosed herewith is an affidavit certifying that all surface owners within a one-half mile radius of the above injection well have been properly notified in accordance with Rule Number 501.9 of the General Conservation rules of the Utah Board of Oil, Gas and Mining.

Very truly yours,

MERIDIAN OIL INC.

William C. Mitchell

William C. Mitchell
Sr. Staff Landman

bb/429:11

cc: Suzanne Nelson, Billings

AFFIDAVIT

STATE OF COLORADO)
) ss.
COUNTY OF ARAPAHOE)

TO WIT:

Now, this 18th day of March, 1988, comes the affiant herein, WILLIAM C. MITCHELL, being of lawful age and the first duly sworn, and does depose and say:

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

THAT the plat attached hereto and made a part hereof as "Exhibit A" is accurate to scale and reflects pertinent data required pursuant to Oil and Gas Conservation Rule No. 302.1,

THAT Meridian Oil Inc. owns 100% of the drilling rights in the proposed 12-4 Navajo Federal drillsite and within a 460 foot radius thereof. The proposed 12-4 Navajo Federal drillsite is located 2260 feet from the north line and 440 feet from the west line of Section 4, Township 39 South, Range 25 East, San Juan County, Utah.

THAT Meridian Oil Inc. has petitioned the Utah Board of Oil, Gas and Mining for approval to utilize the #12-4 well as an injection well.

THAT the Federal Government and the Navajo Indian Tribe are the only surface owners within one-half mile radius of the 12-4 Navajo Federal Well location and that these parties have been provided a copy of the petition for injection.

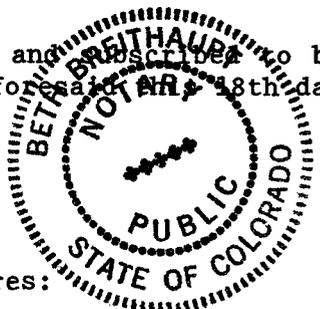
THAT no other parties are required to be notified in accordance with Rule Number 302.1(a)(2) or Rule Number 501.9 of the General Conservation Rules of the Utah Board of Oil, Gas and Mining.

Further affiant sayeth not.

William C. Mitchell
William C. Mitchell

* * * * *

Taken, sworn and subscribed before me, a Notary Public in and for the County and State aforesaid on the 18th day of March, 1988.

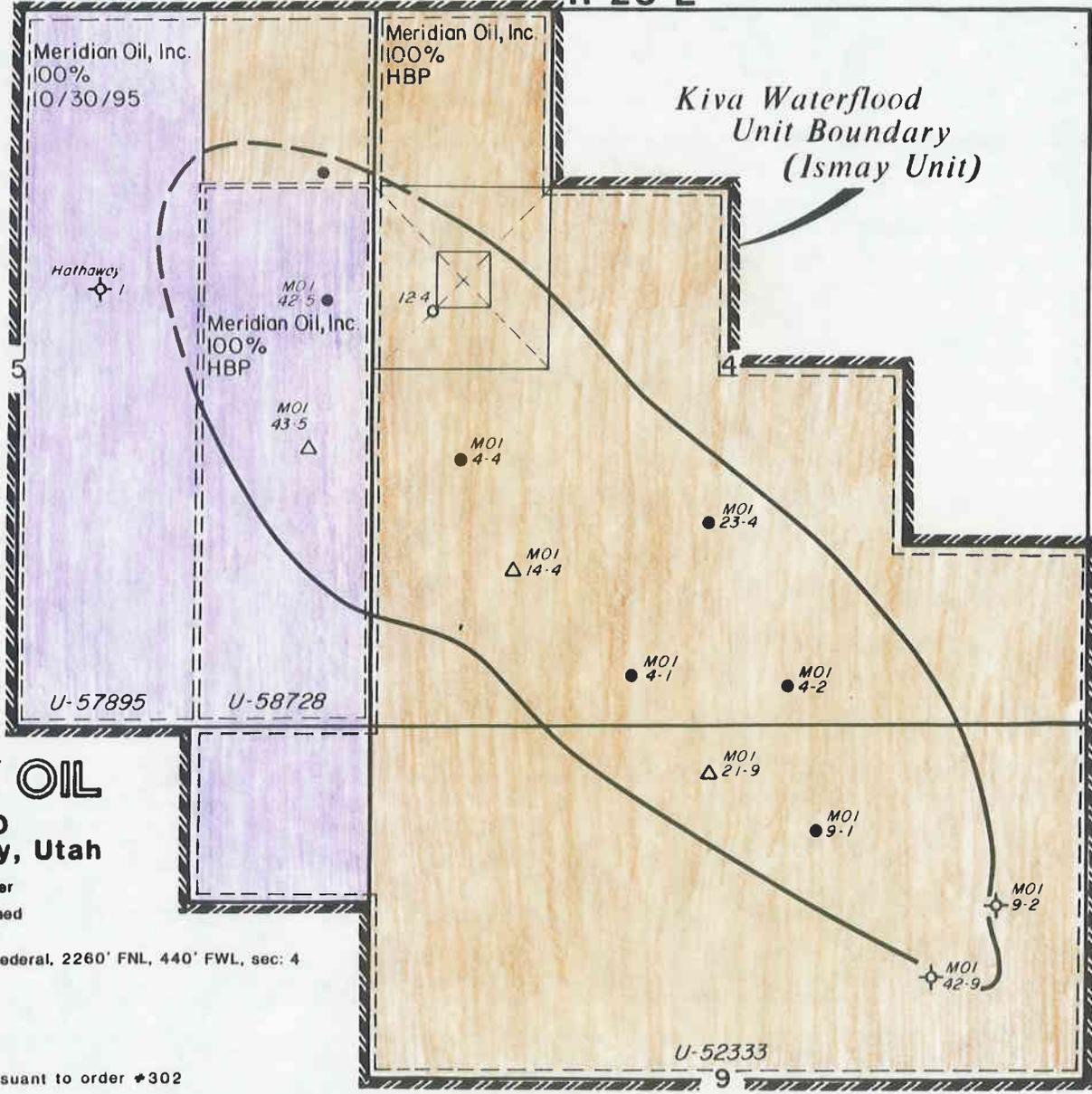


Beth Breithaupt
Beth Breithaupt, Notary Public

bb/429:2

My commission expires:
9/9/88

R 25 E



SCHEDULE "A"

T
39
S

MERIDIAN OIL
KIVA FIELD
San Juan County, Utah

- U-XXXX Federal Lease Unit Number
- Federal Acreage Contained In Kiva Waterflood Unit
- Proposed 12-4 Navajo Federal. 2260' FNL, 440' FWL, sec: 4
- Producing Well
- △ Injection Well

 400 ft. "WINDOW" pursuant to order #302

-  NAVAJO TRIBAL SURFACE
-  FEDERAL SURFACE

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

---oo0oo---

IN THE MATTER OF THE APPLICATION :
OF MERIDIAN OIL INC. FOR :
ADMINISTRATIVE APPROVAL OF : NOTICE OF AGENCY ACTION
THE NAVAJO FEDERAL NO. 12-4 :
WELL LOCATED IN SECTION 4, : CAUSE NO. UIC-109
TOWNSHIP 39 SOUTH, RANGE 25 EAST,
S.L.M., SAN JUAN COUNTY, UTAH, :
AS A CLASS II INJECTION WELL :

---oo0oo---

THE STATE OF UTAH TO ALL PERSONS INTERESTED IN THE ABOVE
ENTITLED MATTER.

Notice is hereby given that the Division is commencing an
informal adjudicative proceeding to consider the application of
Meridian Oil Inc., for administrative approval of the Navajo Federal
Unit No. 12-4 well, Section 4, Township 39 South, Range 25 East, San
Juan County, Utah, as a Class II injection well. The proposed
operating data for this well is:

Injection Interval: Paradox Formation, 5609' to 5791'
Maximum Injection Rate/Surface Pressure: 1300 bwpd @ 3750 psig

Administrative approval of this application will be granted
unless an objection is filed within fifteen days after publication
of this notice by any person authorized to participate as a party in
this adjudicative proceeding. If such objection is received, an
informal adjudicative proceeding will be scheduled before the
presiding officer of the Division.

The application in this matter may be inspected in the office of
the undersigned at the Division of Oil Gas and Mining, 3 Triad
Center, Suite 350, 355 West North Temple, Salt Lake City, Utah.

DATED this 19th day of April, 1988.

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING


MARJORIE L. ANDERSON
Administrative Assistant

AFFIDAVIT OF PUBLICATION

Public notice

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

IN THE MATTER OF THE APPLICATION OF MERIDIAN OIL INC. FOR ADMINISTRATIVE APPROVAL OF THE NAVAJO FEDERAL NO. 12-4 WELL LOCATED IN SECTION 4 TOWNSHIP 39 SOUTH, RANGE 25 EAST, S.L.M., SAN JUAN COUNTY, UTAH, AS A CLASS II INJECTION WELL.

NOTICE OF AGENCY ACTION
CAUSE NO. UIC-109

THE STATE OF UTAH TO ALL PERSONS INTERESTED IN THE ABOVE ENTITLED MATTER.

Notice is hereby given that the Division is commencing an informal adjudicative proceeding to consider the application of Meridian Oil Inc., for administrative approval of the Navajo Federal Unit No. 12-4 well, Section 4, Twonship 39 South, Range 25 East, San Juan County, Utah, as a Class II injection well. The proposed operating data for this well is:

Injection Interval: Paradox Formation,
5609' to 5791'

Maximum Injection Rate/Surface Pressure:
1300 bwpd @ 3750 psig

Administrative approval of this application will be granted unless an objection is filed within fifteen days after publication of this notice by any person authorized to participate as a party in this adjudicative proceeding. If such objection is received, an informal adjudicative proceeding will be scheduled before the presiding officer of the Division.

The application in this matter may be inspected in the office of the undersigned at the Division of Oil Gas and Mining, 3 Triad Center, Suite 350, 355 West North Temple, Salt Lake City, Utah.

DATED this 19th day of April, 1988.

STATE OF UTAH
DIVISION OF OIL,
GAS AND MINING
s/ MARJORIE L. ANDERSON
Administrative Assistant

Published in The San Juan Record April 27,
1988.

I, Joyce Martin, being duly sworn, depose and say that I am the publisher of **The San Juan Record**, a weekly newspaper of general circulation published at Monticello, Utah every Wednesday; that notice of agency action, Cause

No. UIC-109

a copy of which is hereunto attached, was published in the regular and entire issue of each number of said newspaper for a period of one issues, the first publication having been made on April 27, 1988. ~~and the~~ last publication having been made on _____.

Joyce A. Martin
Publisher

Subscribed and sworn to before me this 27th day of April,

A.D. 1988

Ingrid K. Adams
Notary Public residing at Monticello, Utah

My commission expires December 2, 1991

Publication was sent to the following:

Bureau of Land Management
P.O. Box 970
Moab, Utah 84532

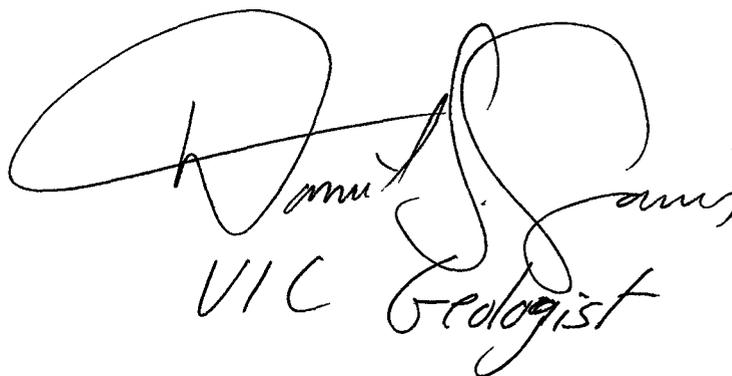
The Navajo Nation
Division of Resources
P.O. Box 308
Window Rock, Az. 86515

Meridian OIL Inc.
175 N. 27th St.
P.O. Box 1855
Billings MT. 59103

Newspaper Agency Corporation
Legal Advertising
157 Regent Street
Salt Lake City, Utah 84110

San Juan Record
P.O. Box 879
937 East Highway 666
Monticello, Utah 84535

U.S.E.P.A.
Region VIII
Denver, Colorado


VIC Geologist

TEMPORARY

RECEIVED
FILING FOR WATER IN THE
STATE OF UTAH JUL 27 1988

Rec. by DL
Fee Rec. 90.00
Receipt # 24646
Microfilmed _____
Roll # _____

AUG 01 1988
WATER RIGHTS
APPLICATION TO APPROPRIATE WATER
SALT LAKE TEMPORARY

For the purpose of acquiring the right to use a portion of the unappropriated water of the State of Utah, application is hereby made to the State Engineer, based upon the following showing of facts, submitted in accordance with the requirements of the Laws of Utah.

* WATER RIGHT NO. 09 1591 * APPLICATION NO. A T63427

1. *PRIORITY OF RIGHT: July 27, 1988 * FILING DATE: July 27, 1988

2. OWNER INFORMATION
Name(s): MERIDIAN OIL INC. * Interest: 100 %
Address: P. O. Box 1855
City: Billings State: MT Zip Code: 59103
Is the land owned by the applicant? Yes _____ No X
(If "No", please explain in EXPLANATORY section.)

3. QUANTITY OF WATER: _____ cfs and/or 350 ac-ft

4. SOURCE: 42-9 Navajo-Federal * DRAINAGE: _____
which is tributary to _____
which is tributary to _____
POINT(S) OF DIVERSION: S. 1850 ft + W. 1140 ft NE Cor COUNTY: San Juan
Location: SENE (1850' FNL - 1140' FEL) Section 9, T39S, R25E
S. 1850 ft. & W. 1140 ft. from NE Cor. Sec. 9, T39S, R25E, SLB&M
(3 miles NE of Hatch Trading Post) Cajon Mesa Quad
Description of Diverting Works: 9-5/8" casing set @ 3285'
* COMMON DESCRIPTION: _____

5. POINT(S) OF REDIVERSION
The water will be rediverted from N/A at a point: _____
Description of Rediverting Works: _____

6. POINT(S) OF RETURN
The amount of water consumed will be _____ cfs or 350 ac-ft
The amount of water returned will be _____ cfs or 0 ac-ft
The water will be returned to the natural stream/source at a point(s): N/A

7. STORAGE
Reservoir Name: N/A Storage Period: from _____ to _____
Capacity: _____ ac-ft. Inundated Area: _____ acres
Height of dam: _____ feet
Legal description of inundated area by 40 acre tract(s): _____

* These items are to be completed by the Division of Water Rights

TEMPORARY

Appropriate

8. List any other water rights which will supplement this application N/A

TEMPORARY

9. NATURE AND PERIOD OF USE

Irrigation:	From _____ to _____
Stockwatering:	From _____ to _____
Domestic:	From _____ to _____
Municipal:	From _____ to _____
Mining:	From _____ to _____
Power:	From _____ to _____
Other: Waterflood:	From <u>July 31, 1988</u> to <u>July 31, 1989</u>

10. PURPOSE AND EXTENT OF USE

Irrigation: _____ acres. Sole supply of _____ acres.
 Stockwatering (number and kind): _____
 Domestic: _____ Families and/or _____ Persons
 Municipal (name): _____
 Mining: _____ Mining District in the _____ Mine
 Ores mined: _____
 Power: Plant name: _____ Type: _____ Capacity: _____
 Other (describe): Secondary Recovery - oil and gas, water source for Kiva Waterflood

11. PLACE OF USE

Legal description of place of use by 40 acre tract(s):
21-9 Navajo-Federal, NENW (330' FNL - 2510' FWL) Section 9, T39S-R25E 43-037-31267(W)
14-4 Navajo-Federal, SWSW (1150' FSL - 1110' FWL) Section 4, T39S, R25E 43-037-31321(W)
43-5 Navajo-Federal, NWSW (2420' FSL - 105' FWL) Section 5, T39S, R25E 43-037-31317(W)
12-4 Navajo-Federal, SWNW (2260' FNL - 440' FWL) Section 4, T39S, R25E 43-037-31375(W)

12. EXPLANATORY

The following is set forth to define more clearly the full purpose of this application. (Use additional pages of same size if necessary): Landowner - Federal Lease #U-52333. Water production from the 42-9 is being utilized for the Kiva Waterflood. Two sands, the Cutler and Wingate, have been completed and pump tested at 2150 BWP and 4000 BWP (est) respective

The applicant(s) hereby acknowledges that he/she/they are a citizen(s) of the United States of America or intends to become such a citizen(s). The quantity of water sought to be appropriated is limited to that which can be beneficially used for the purposes herein described. The undersigned hereby acknowledges that even though he/she/they may have been assisted in the preparation of the above-numbered application through the courtesy of the employees of the Division of Water Rights, all responsibility for the accuracy of the information contained herein, at the time of filing, rests with the applicant(s).

R. E. Schuyler
 Signature of Applicant(s)
 R. E. Schuyler

TEMPORARY

TEMPORARY

STATE ENGINEER'S ENDORSEMENT

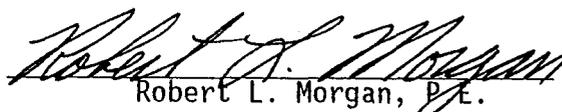
WATER RIGHT NUMBER: 09 - 1591

APPLICATION NO. T63427

1. July 27, 1988 Application received by MP.
 2. July 28, 1988 Application designated for APPROVAL by MP and KLJ.
 3. Comments:
-
-

Conditions:

This application is hereby APPROVED, dated September 2, 1988, subject to prior rights and this application will expire on September 2, 1989.


Robert L. Morgan, P.E.
State Engineer

RECEIVED
MAY 2 1988

DEPARTMENT OF
OIL, GAS & MINING

MERIDIAN OIL INC.
12-4 NAVAJO FEDERAL
SECTION 4-T39S-R25E
SAN JUAN CO. - UTAH

CONFIDENTIAL

GEOLOGIC REPORT
BY
ART CURTIS
ROCKY MOUNTAIN GEO-ENGINEERING COMPANY

T A B L E O F C O N T E N T S

WELL SUMMARY-----	3
WELL CHRONOLOGY-----	4
BIT RECORD-----	5
DEVIATION SURVEY-----	6
MUD RECORD-----	7
SAMPLE DESCRIPTIONS-----	8
SHOW SHEET REPORTS-----	31
FORMATION TOPS-----	33
GEOLOGIC SUMMARY & ZONES OF INTEREST-----	34

WELL SUMMARY

OPERATOR: MERIDIAN OIL INC.
 WELL NAME: 12-4 NAVAJO FEDERAL
 LOCATION: 2280' FNL, 700' FWL
 SECTION 4 - T39S - R25E
 COUNTY: SAN JUAN
 STATE: UTAH
 FIELD: KIVA
 ELEVATION: 4852' GL - 4865' KB
 SPUD DATE: 29 MARCH, 1988
 COMPLETION DATE: 9 APRIL, 1988
 COMPANY MAN: KEITH MUIRHEAD
 GEOLOGY: ROCKY MOUNTAIN GEO-ENGINEERING COMPANY
 WELLSITE GEOLOGIST: ART CURTIS AND LEE AMOROSO
 CONTRACTOR: ARAPAHOE DRILLING, RIG #11
 TOOL PUSHER: A. W. FRANK
 HOLE SIZE: 17½" TO 80'; 12¼" TO 3322'; 8 3/4" TO T.D.
 CASING RECORD: 9 5/8" TO 3300'
 MUD LOGGING: ROCKY MOUNTAIN GEO-ENGINEERING COMPANY
 MUD LOGGERS: ART CURTIS, DENNIS SPRINGER, LEE AMOROSO
 ELECTRIC LOGGING: SCHLUMBERGER
 TYPE OF LOGS RUN: DLL-MSFL-GR, LDT-CNL-GR-FEF, BHC SONIC-GR
 TOTAL DEPTH: 5832' DRILLER - 5829' LOGGER
 STATUS: PLUG BACK & WHIPSTOCK

SIDETRACK #1

DRILLING CONSULTANT: LES JOHNS
 DIRECTIONAL DRLG: DATA DRILL (SMITH INTERNATIONAL)
 COMPLETION DATE: 25 APRIL, 1988
 ELECTRIC LOGGING: SCHLUMBERGER
 TYPE OF LOGS RUN: DLL-MSFL-LDT-CNL-GR-PEF
 TOTAL DEPTH: 5760'
 STATUS: AWAITING COMPLETION

MERIDIAN OIL INC.
 12-4 NAVAJO FEDERAL
 SECTION 4-T39S-R25E
 SAN JUAN CO. - UTAH

WELL CHRONOLOGY

DATE & # DAYS	DAILY OPERATIONS
4/ 3/88 (1)	GEOLOGIST W/ LOGGING UNIT ON LOCATION & RIGGED UP @ 7:00PM - NIP UP NEW HYDRIL - PRESS TEST - TIH
4/ 4/88 (2)	TIH - DRL CMT & SHOE - DRLG AHEAD
4/ 5/88 (3)	DRLG AHEAD TO 4564' - TOH - TIH W/ NB#6 - DRLG
4/ 6/88 (4)	DRLG - REPACK SWIVEL - DRLG
4/ 7/88 (5)	DRLG TO 5434' - TOH - TIH W/ NB#7 - DRLG
4/ 8/88 (6)	DRLG TO 5832' (TD) - CIRC - TOH FOR LOGS - LOGGING
4/ 9/88 (7)	LOGGING - GEOLOGIST & LOGGING UNIT RELEASED

SIDETRACK #1

4/16/88 (1)	GEOLOGIST & LOGGING UNIT ON LOCATION & RIGGED UP @ 4620' - DRLG W/ MUD MOTAR & BENT SUB TO 4653' - TOH
4/17/88 (2)	TOH - TIH W/ NB#16 - REAM TO BOTTOM - ROTARY DRILLING
4/18/88 (3)	DRLG TO 5030' - TOH - CHANGE BHA - TIH - DRLG TO 5160'
4/19/88 (4)	TOH - CHANGE BHA - TIH - DRLG
4/20/88 (5)	DRLG - REPAIR DRAWWORKS MOTOR - DRLG - 10 STD SHORT TRIP @ 5479' - DRLG TO 5529' - UNPLUG FLOWLINE - DRLG
4/21/88 (6)	DRLG TO 5645' - TOH - SLIP & CUT DRLG LINE - TIH W/ NB#17 - DRLG TO 5760' (TD) - SURVEY - DIFFERENTIALLY STUCK
4/22/88 (7)	SPOT 42 BBL OIL - WORK PIPE
4/23/88 (8)	WK STUCK PIPE
4/24/88 (9)	WK STUCK PIPE - RIG UP HOWCO - FREPT ABOVE DC'S - TOH - RIG REPAIR - TOH - P/U HOWCO DOUBLE PACKER - TIH W/ TOOLS
4/25/88 (10)	TIH - SEAT PACKERS - PIPE FREE AT 1/30 - TOH W/ TOOLS - RIG DOWN HOWCO - TOH W/ DRILL PIPE & COLLARS - L/D DC'S & IBS - TIH W/ BIT - BREAK CIRC @ 4500' - TIH TO 5554' - TIGHT HOLE - REAM 206' TO BOTTOM - CIRC & COND MUD FOR E-LOGS - TOH FOR LOGS - RUN E-LOGS - TIH TO CONDITION MUD FOR CSG

DEVIATION SURVEY

COMPANY NAME: MERIDIAN OIL INC. COUNTY: SAN JUAN

WELL NAME: 12-4 NAVAJO FEDERAL & STATE: UTAH
12-4X NAVAJO FEDERAL SIDETRACK

DEPTH	DEV.	DIR.	DEPTH	DEV.	DIR.	DEPTH	DEV.	DIR.
4300	1							
4564	1/2							
5434	3/4							
5832	1							
SIDETRACK #1								
4177	3/4	N87W	5418	17	S37W	TVD 5381		
4209	2	S33W	5541	19 3/4	S34W	5497		
4240	4 1/2	S34W	5726	24 1/2	S31W	5669		
4276	6 3/4	S40W						
4302	8 1/2	S36W						
4336	9 1/2	S29W						
4396	10 3/4	S29W						
4519	12	S16W						
4561	12 1/4	S13W						
4592	13 1/2	S15W						
4622	14 1/4	S21W						
4653	15	S26W						
4682	16	S33W						
4743	16 1/4	S34W						
4930	16 3/4	S40W						
4982	16 3/4	S43W	TVD 4959.82					
5075	15	S44W	5049					
5111	14 3/4	S44W	5084					
5171	13 1/2	S44W	5142					
5233	14 1/4	S40W	5202					
5294	15	S49W	5261					

MERIDIAN OIL INC.
 12-4 NAVAJO FEDERAL
 SECTION 4-T39S-R25E
 SAN JUAN CO. - UTAH

SAMPLE DESCRIPTIONS

3500-3520	50%	SH orng redbrn-red sbblky rthy slty sft calc
	40%	SLTST orng redbrn sndy fri-frn calc
	10%	SS wh clr frst vf-fg sbrdd wsrt fri uncon ip calc NFSOC
3520-3530	60%	SH redbrn orng red sbblky-blky rthy slty sft calc
	40%	SLTST
3530-3550	60%	SH AA
	40%	SLTST orng redbrn sndy mic ip fri calc
3550-3560	40%	SH AA
	40%	SLTST
	20%	SS wh clr frst vf-fg sbang-sbrdd msrt fri uncon ip calc NFSOC
3560-3570	40%	SH orng redbrn sbblky-blky rthy slty sft calc
	40%	SLTST orng redbrn sndy fri calc
	20%	SS AA
3570-3580	40%	SH AA
	40%	SLTST AA
	20%	SS wh clr ltorng vf-fg occ mg sbang-ang msrt fri calc NFSOC
3580-3590	40%	SLTST AA
	30%	SH AA
	TR	LS pk tn crpxl dns NFSOC
3590-3600	40%	SLTST orng red redbrn sndy mic fri calc
	30%	SH AA
	30%	SS clr wh frst fg-vfg sbang msrt fri calc NFSOC
3600-3610	40%	SLTST AA
	30%	SS AA
	30%	SH orng redbrn sbblky rthy slty sft calc
3610-3620	40%	SH redbrn orng red sbblky-blky rthy sft calc
	30%	SLTST AA
	30%	SS AA
3620-3630	40%	SH AA
	30%	SLTST redbrn orng sndy mic fri calc
	30%	SS AA
3630-3650	40%	SH AA
	30%	SLTST AA
	30%	SS AA
3650-3660	40%	SLTST AA
	30%	SH red-redbrn orng-redorng slty sbwxy ip calc sbplty-sbblky sft
	30%	SS AA
3660-3670	50%	SLTST redbrn redorng sdy sl-mcalc arg ip fri

	30% SS AA
	20% SH AA
3670-3680	50% SLTST AA
	30% SS AA
	20% SH AA
3680-3690	60% SLTST AA sdy ip
	30% SS orng-clr occ wh-trnsl vf-mg ang-sbang psrt calc ip slty ip fri NFSOC
	10% SH AA
3690-3700	40% SLTST AA
	40% SH redorng-redbrn sl-mclac slty rthy sbblky-sbplty sft
	20% SS AA
3700-3720	60% SLTST redbrn orng sl-mcalc arg ip sdy ip fri
	20% SH AA
	20% SS AA
3720-3730	50% SLTST AA
	30% SS AA
	20% SH AA
3730-3740	40% SS clr-wh trnsl pk-orng vf-fg occ mg ang-sbang psrt pred uncons calc ip slty ip fri NFSOC
	40% SLTST AA
	20% SH AA
3740-3750	40% SS orng-redorng wh-trnsl occ clr vf-fg occ mg ang-sbang p-msrt n-mcalc slty ip uncons ip fri NFSOC
	40% SLTST AA
	20% SH AA
3750-3770	40% SS AA
	30% SLTST AA
	30% SH AA
3770-3780	50% SLTST redbrn-redorng calc arg sdy ip occ mica fri
	30% SS AA
	20% SH AA
3780-3800	40% SS redbrn orng-redorng wh-trnsl clr vf-mg ang-sbang psrt slty ip arg ip uncons ip fri NFSOC
	40% SLTST AA
	20% SH AA
3800-3810	50% SLTST AA
	30% SS AA
	20% SH redbrn redorng occ pale gn n-mcalc slty sbplty-sbblky sft
3810-3820	40% SS clr-trnsl wh pk-orng m-fg ang-sbang psrt pcmt-uncons ooc slty occ arg /TR dk mnrl incl fri NFSOC
	40% SLTST AA sdy
	20% SH AA

3820-3830	50%	SS AA	
	30%	SLTST AA	
	20%	SH AA	
3830-3840	50%	SLTST redornng-redbrn arg calc sdy ip fri	
	30%	SH AA	
	20%	SS AA	
3840-3860	40%	SH ornng-redornng redbrn calc slty ip rthy sbblky vsft-sft	
	40%	SLTST AA	
	20%	SS AA	
3860-3870	30%	SH AA	
	40%	SLTST redornng-ornng redbrn calc arg sdy ip mica ip fri	
	30%	SS AA	
3870-3880	40%	SH AA	
	30%	SLTST AA	
	30%	SS AA	
3880-3890	40%	SS clr-wh trnsl pk-ornng redornng vf-mg ang-sbang psrt uncons ip occ mica slty ip fri NFSOC	
	30%	SLTST AA	
	30%	SH AA	
3890-3910	50%	SLTST redornng-redbrn sl-mcalc arg sdy occ mica fri	
	30%	SLTST AA	
	20%	SS AA	
3910-3920	50%	SS clr-trnsl wh pk-redornng f-vfg occ m-cg ang-sbang p-msrt un- cons ip slty ip occ mica fri NFSOC	
	30%	SLTST AA	
	20%	SH AA	
3920-3930	60%	SS AA incr m-cg uncons	
	20%	SLTST AA	
	20%	SH AA	
3930-3940	40%	SS AA	
	40%	SLTST AA	
	20%	SH AA	
3940-3950	50%	SLTST redornng-redbrn sl-mcalc sdy arg ip mica ip fri	
	30%	SS AA	
	20%	SH AA	
3950-3960	40%	SS AA	
	40%	SLTST AA	
	20%	SH AA	
3960-3970	40%	SS AA	
	40%	SLTST AA	
	20%	SH redbrn redornng w/tr pale gn n-mcalc slty mica ip sbplty-sb blky sft	
3970-3980	50%	SS wh-trnsl clr pk-ornng f-mg sbang-sbrd psrt uncons ip mica ip fri NFSOC	

	30%	SLTST AA
	20%	SH AA
3980-3990	40%	SLTST redorng-redbrn sl-mcalc sdy arg ip mica ip occ dk mnrl incl fri
	30%	SS AA
	30%	SH AA
3990-4000	40%	SS AA
	30%	SLTST AA
	30%	SH AA
4000-4020	40%	SLTST AA
	30%	SS AA
	30%	SH redbrn redorng w/tr pale gn sl-mcalc rthy slty ip mica ip sbplty-sbblky sft
4020-4030	50%	SLTST redbrn-redorng sl-mcalc sdy ip arg ip vmica ip fri
	30%	SH AA
	20%	SS AA
	TR	LS tan ltgy crpxl frm dns
4030-4050	40%	SLTST AA sdy mica
	30%	SS AA
	30%	SH AA
4050-4060	40%	SLTST AA
	40%	SS clr-trnsl wh pale pk orng f-mg sbang psrt pcmt-uncons occ mica fri NFSOC
	20%	SH AA
4060-4070	60%	SS AA
	30%	SLTST AA
	10%	SH AA
4070-4080	70%	SS clr-trnsl pale pk orng m-cg sbang-ang psrt uncons NFSOC
	20%	SLTST AA
	10%	SH AA
4080-4090	50%	SS AA
	30%	SLTST redorng sdy calc mica fri
	20%	SH AA
4090-4100	50%	SS AA
	30%	SLTST AA
	20%	SH redbrn orng slty sl-mcalc mica ip sbblky sft
4100-4110	40%	SS wh-trnsl clr pk ltorng f-mg sbang psrt pcmt-uncons
	30%	SLTST AA
	30%	SH AA
4110-4120	40%	SS AA
	30%	SLTST redorng redbrn calc sdy arg ip mica ip fri
	30%	SH AA
4120-4130	40%	SS AA

MERIDIAN OIL INC.
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- 30% SLTST AA
- 30% SH AA w/orng calc sft

- 4130-4140 50% brn redbrn orng sbblky rthy slty mica ip sft calc
- 30% SLTST AA
- 20% SS AA

- 4140-4160 50% SH AA
- 30% SLTST redbrn redorng sndy mica ip calc
- 20% SS AA

- 4160-4170 40% SH AA
- 40% SLTST AA
- 20% SS wh clr ltorng f-mg sbang m-psrt uncons ip fri calc

- 4170-4180 50% SH brn orng redbrn blky-sbblky rthy slty mica ip sft calc
- 30% SLTST AA
- 20% SS AA

- 4180-4190 50% SH AA
- 30% SLTST brn orng redbrn sndy mica fri calc
- 20% SS AA

- 4190-4200 50% SS clr trnsl wh ltorng f-cg sbang-ang psrt pcmt-uncons cln fri
slcalc
- 30% SLTST AA
- 20% SH AA

- 4200-4220 40% SS AA
- 30% SLTST AA
- 30% SH brn orng blky rthy slty sft calc

- 4220-4230 40% SS clr-trnsl wh vf-cg sbang-ang psrt pcmt uncons cln fri slcalc
- 30% SH AA
- 30% SLTST AA

- 4230-4240 40% SH brn orng grngy sbblky rthy slty sft calc
- 40% SS AA
- 20% SLTST AA

- 4240-4250 40% SH AA
- 40% SS AA
- 20% SLTST brn orng sndy mica fri calc

- 4250-4270 40% SH brn orng ltgy sbblky-slty rthy mica sft calc
- 30% SLTST AA
- 20% SS AA
- 10% LS tan ltbrn crpxl frm

- 4270-4280 40% SH AA
- 20% SLTST brn sndy mica fri calc
- 20% SS AA
- 20% LS tan ltbrn ltgy crpxl arg ip frm

- 4280-4290 50% SH AA
- 30% SLTST AA
- 20% SS AA

4290-4300 50% SH brn orng gy sbbiky-blky rthy slty mica sft calc
30% SLTST AA
20% SS AA

4300-4310 50% SH AA
30% SLTST AA
20% SS clr wh vf-mg sbang-ang psrt pcmt-uncons fri slcalc

4310-4320 50% SH AA
30% SLTST brn gybrn sndy mica fri calc
20% SS AA

4320-4330 40% SS clr wh trnsl vf-fg occ mg sbang-sbrdd msrt pcmt-uncons fri
calc NFSOC
40% SH AA
20% SLTST AA

4330-4340 40% SS AA
40% SH brn orng gy sbbiky rthy mica sft calc
20% SLTST

4340-4350 50% SS AA
40% SH AA
10% SLTST AA

4350-4360 50% SH brn orng gy sbbiky-blky rthy slty mica sft calc
30% SS AA
20% LS tan ltgy ofwh crpxl arg ip frm yel mnrl FLOR

4360-4370 50% SH AA
30% SS clr wh vf-fg sbang msrt pcmt uncons fri calc NFSOC
20% LS AA

4370-4380 50% SH AA
30% SS AA
20% LS w/dul yel mnrl FLOR

4380-4390 40% SH brn orng sbbiky rthy slty mica sft calc
20% SS AA
20% LS AA
20% SLTST AA

4390-4410 40% SH AA
20% SS AA
20% LS ltgy ofwh tan crpxl-mcxl frm dns /yel mnrl FLOR NFOC
20% SLTST brn-gybrn sndy mica fri calc

4410-4420 40% SS clr-trnsl wh vf-fg sbang m-wsrt pcmt fri calc NFSOC
30% LS ltgy-gy ofwh tan crpxl-micxl frm w/sm yel mnrl FLOR
20% SH AA
10% SLTST AA

4420-4440 30% SS AA
30% SH brngy orng sbbiky rthy sft calc
30% LS AA
10% SLTST AA

MERIDIAN OIL INC.
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- 4440-4460 50% SH brn gy gybrn orng sbblky-blky rthy slty mica sft-frm calc
20% SLTST brn gy mica sndy fri calc
20% SS AA
10% LS AA
- 4460-4470 50% SH AA
20% SLTST AA
20% SS clr trnsl wh ltorng vf-mg sbang msrt pcmt fri calc NFSOC
10% LS AA
- 4470-4480 70% LS tan ltgy ofwh ltbrn crp-micxl chlky ip sft frm /sm dul yel
mnr1 FLOR
20% SS AA
10% SH AA
- 4480-4500 80% LS wh ltgy tan ltbrn crp-micxl chlky ip sft-frm w/tr dul yel
mnr1 FLOR
20% SS AA
- 4500-4510 70% LS AA
30% SS clr trnsl wh f-mg sbang-ang psrt uncons occ pcmt calc fri NFSOC
- 4510-4520 60% LS AA
40% SS AA
- 4520-4530 80% LS wh ltgy tan-ltbrn crp-micxl chk ip cln slarg sft-frm dns NFSOC
- 4530-4540 50% LS AA
30% SLTST ofwh-ltgy ltgybrn trnsl calc sdy ip fri
20% SH m-dkgy gybrn calc slty ip sbblky frm
- 4540-4550 40% LS AA
30% SLTST AA
30% SH AA
- 4550-4560 50% LS AA
30% SLTST AA
20% SH AA
- 4560-4570 40% LS tan-ltbrn wh ltgy crp-micxl cln-slarg chk ip occ slty sft-frm
20% SS clr wh-trnsl vf-fg sbang msrt pcmt-uncons calc ip fri NFSOC
- 4570-4580 40% LS AA
20% SLTST AA
20% SH AA
20% SS AA
- 4580-4590 60% LS AA
20% SLTST ltgy-ofwh calc occ sdy fri
20% SS AA
- 4590-4600 60% LS wh-ofwh ltgy-ltgybrn crp-micxl chk ip occ slty sft-frm dns
20% SLTST AA NFSOC
20% SS AA
- 4600-4610 80% LS AA
10% SLTST AA
10% SS AA

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4610-4620 70% LS AA
20% SS AA
10% SLTST ltgy-ltgybrn ofwh calc sdy fri

4620-4630 60% SS lt-mgy gybrn trns1-clr vfg-fg sbang msrt pcmt-uncons calc
ip mica ip fri NFSOC
20% SLTST AA
20% LS AA

4630-4640 60% SS AA
20% SLTST AA
20% LS AA

4640-4650 70% SS wh-trns1 clr ltgy vf-fg sbang-sbrd msrt pcmt-uncons calc ip
s1ty ip fri NFSOC
20% SLTST AA sdy
10% LS AA

4650-4660 80% SS AA
10% SLTST AA
10% LS tan-ltbrn wh-ltgy crp-micx1 sdy ip sft-frm

4660-4670 80% SS AA
10% SLTST AA
10% LS AA

4670-4680 50% SS AA
20% SLTST lt-mgy ofwh calc sdy ip arg ip fri
20% SH m-dkgy gybrn calc slty sbplty-sbblky sft-frm
10% LS AA

4680-4690 40% SS AA
30% SH AA
20% SLTST AA
10% LS AA

4690-4700 40% SH AA
30% SS AA
20% SLTST AA
10% LS AA

4700-4710 70% LS tan ltbrn wh ltgy crp-micx1 sdy ip occ chk pred c1n sft-frm
20% SH AA
10% SS AA

4710-4720 60% LS AA
20% SH AA
10% SS AA
10% CHT trns1 smky

4720-4730 50% LS AA
40% SH m-dkgy gybrn calc rthy slty sbblky-sbplty sft-frm
10% SS AA

4730-4740 50% SH AA
40% LS tan ltbrn wh crp-micx1 slty-sdy occ chk sft-frm w/dul yel
mnr1 FLOR NSOC
10% SS AA

MERIDIAN OIL INC.
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4740-4750 40% SH AA
30% LS AA
30% SS clr wh trnsl vf-fg sbang-sbrd m-wsrt pcmt calc slty fri NFSOC

4750-4760 40% SH brn gybrn gy sbplty rthy slty sft-frm calc
30% SS AA
30% LS AA

4760-4770 40% SS AA
40% SH AA
20% LS AA

4770-4780 50% SS clr wh trnsl vf-fg sbang-sbrd wsrt-pcmt slty fri calc NFSOC
40% SH AA
10% LS AA

4780-4810 50% SH AA
30% LS tan ltbrn gy gybrn crp-micxl slty ip pred cln frm w/yel
mnr1 FLOR NSOC
20% SS AA

4810-4820 50% LS tan ltbrn gybrn crp-micxl occ chk pred cln sft-frm dns w/yel
mnr1 FLOR NFSOC
30% SH AA
20% SS AA

4820-4850 60% LS AA
30% SH gy brn blkyl rthy slty sft-frm calc
10% SS AA

4850-4860 50% SH gy brn gybrn sbplty-sbblky rthy slty sft-frm calc
40% LS AA
10% SS AA

4860-4880 50% SH AA
30% SS clr wh trnsl f-vfg sbang-sbrd m-wsrt pcmt fri calc NFSOC
20% LS AA

4880-4890 50% LS tan gybrn ltgy wh crp-micxl slty ip dns frm yel mnr1 FLOR
NSOC
30% SH AA
20% SS AA

4890-4900 60% LS AA
20% SH AA
20% SS AA

4900-4910 60% LS AA
20% SH gy brn sbblky-sbplty rthy slty sft-frm slcalc
20% SS AA

4910-4920 50% LS AA
40% SH AA
10% SS AA

4920-4930 50% SH m-dkgy gybrn sbplty rthy slty sft-frm slcalc

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4930-4940	50%	SH AA	
	40%	LS AA	
	10%	SS AA	
4940-4950	50%	SH	m-dkgy sbblky rthy slty sft-frm slcalc
	30%	LS AA	
	20%	SS AA	
4950-5970	50%	SH AA	
	30%	LS AA	
	20%	SS	clr ltgy trns1 vf-fg sbrd m-wsrt pcmt fri slcalc NFSOC
4970-4980	60%	SH	m-dkgy gybrn slty calc sbplty frm-sft
	30%	LS AA	
	10%	SS AA	
4980-4990	50%	SH AA	
	40%	LS AA	
	10%	SS AA	
4990-5000	60%	LS	ofwh-ltgy tan-ltbrn crp-micxl slty arg ip frm
	30%	SH AA	
	10%	SS AA	
5000-5010	70%	LS AA	
	20%	SH AA	
	10%	SS AA	
5010-5030	80%	LS	ofwh-ltgy tan-ltbrn ltgybrn trns1 crp-micxl c1n-slarg occ slty sft-frm dns NFSOC
	20%	SH	gy-gybrn calc slty sbplty-sbblky frm
5030-5050	90%	LS	lt-mgy gybrn ofwh-wh occ tan crp-micxl arg ip slty ip fri-frm w/TR dul yel mnr1 <u>FLOR</u> NSOC
	10%	SH AA	
5050-5060	80%	LS AA	
	20%	SH	dkgy gybrn calc slty sbblky frm
5060-5070	70%	LS AA	
	30%	SH AA	
5070-5080	80%	LS AA	
	20%	SLTST	gygybrn trns1 calc arg ip sdy ip fri
5080-5100	60%	LS	ofwh lt-mgy gybrn crp-micxl slty ip occ arg frm NFSOC
	40%	SLTST	AA
5100-5110	70%	LS AA	
	30%	SLTST	AA
5110-5120	90%	LS	mgy-mgybrn ofwh-ltgy occ tan crp-micxl arg ip slty ip occ dol fri-frm NFSOC
	10%	SLTST	AA
5120-5130	80%	LS AA	
	20%	SH	dkgy-dkgybrn occ blk slty calc occ carb sbblky frm-sft

MERIDIAN OIL INC.
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5130-5140	70% LS AA 30% SH AA
5140-5150	50% LS lt-dkgy gybrn crp-micxl arg slty ip frm NFSOC 50% SH AA
5150-5160	80% LS ofwh-wh trnsl lt-mgy lt-mgybrn crp-micxl arg ip slty ip occ fos occ sdy frm NFSOC 20% SH AA
5160-5180	70% LS AA 30% SH m-dkgy gybrn occ blk calc ip slty ip occ carb 30% SH m-dkgy gybrn occ blk calc ip slty ip occ carb sbbly frm-sft
5180-5190	60% LS lt-mgy ofwh gybrn crp-micxl arg occ fos frm dns NFSOC 40% SH AA
5190-5200	70% SH dkgy-dkgybrn mgy m-vcalc slty ip occ mica plty-sbbly frm 30% LS AA arg
5200-5210	80% SH AA 20% LS AA
5210-5220	60% SH AA 40% LS AA
5220-5230	60% LS lt-mgy ofwh ltgybrn crp-micxl cln-arg occ fos m-vfrm dns 40% SH AA
5230-5240	50% LS AA 50% SH m-dkgy gybrn sl-vcalc slty ip plty-blky frm
5240-5250	50% LS ofwh-ltgy lt-mgybrn occ tan crp-micxl w/tr fos occ arg m-v frm dns NFSOC 50% SH AA
5250-5260	70% LS AA 30% SH AA occ blk carb
5260-5270	60% LS ltgy tan gybrn ofwh crp-micxl occ chk arg ip slty ip occ fos frm dns NFSOC 40% SH AA
5270-5280	60% LS AA 40% SH m-dkgy gybrn sbbly-sbplty rthy slty frm calc
5280-5290	40% SH AA 30% LS AA 30% SS grn lt-mgy f-vfg sbang wsrt mcmt slty glau mic sil frm NFSOC
5290-5300	40% LS AA 30% SH AA 30% SS grdg to SLTST AA
5300-5310	60% SH m-dkgy gybrn sbbly-plty rthy slty sft-frm calc 30% LS AA 10% SS AA
5310-5320	70% SH AA 20% LS AA

MERIDIAN OIL INC.
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5320-5330 70% LS ofwh ltgy tan gybrn crp-micxl occ chk anhy ip pred cln sft-
 frm dns w/yel mnrl FLOR NSOC
 30% SH AA

5330-5340 80% LS AA
 20% SH AA

5340-5360 70% LS tan ofwh gybrn AA w/occ micxl
 30% SH AA

5360-5370 60% SH m-dkgy sbblky-sbplty rthy vslty grdg to SLTST frm vcalc
 40% LS AA

5370-5380 50% SH
 50% LS gybrn gy brn tan crp-micxl occ fos slty arg frm w/sm yel
 mnrl FLOR NSOC

5380-5390 60% SH m-dkgy sbblky-blky rthy slty frm vcalc
 40% LS AA

5390-5400 70% LS tan ltbrn ltgy crp-micxl arg ip anhy ip dns sft-frm w/yel
 mnrl FLOR NSOC
 20% CHT smky tan trnsl
 10% SH AA

5400-5410 50% LS AA
 50% SH m-dkgy sbplty-plty rthy slty frm slcalc

5410-5420 60% LS brn gybrn ltgy crp-micxl arg slty dns occ fos anhy ip frm w/
 sm yel mnrl FLOR
 40% SH AA
 TR CHT AA

5420-5430 60% SH m-dkgy sl-mcalc occ slmica plty-sbplty occ sbiky m-vfrm
 40% LS AA

5430-5440 90% SH AA, incr dkgy
 10% LS AA

5440-5450 80% SH AA
 20% LS AA

5450-5460 60% SH AA (VPS - ABNT CVGS)
 40% LS tan-bf ltgybrn crp-micxl cln-slarg frm dns NFSOC

5460-5470 60% LS AA, arg, NFSOC
 40% SH AA
 TR ANHY clr-trnsl wh xln sft-slfrm

5470-5490 80% LS lt-mgy gybrn crp-micxl arg occ dol frm tt NFSOC
 20% SH dkgy occ blky calc sbplty-sbbiky frm
 TR ANHY AA

5490-5500 50% LS AA, anhy ip
 30% ANHY wh-trnsl amor-xln sft
 20% SH AA

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 12-4 NAVAJO FEDERAL

5500-5520 40% LS AA
 40% ANHY AA
 20% SH AA (ABNT CVGS)

5520-5530 40% LS AA
 40% ANHY wh trns1 occ vs1gy amor-x1n sft
 20% SH AA (ABNT CVGS)

5530-5540 40% LS AA
 40% ANHY AA
 20% SH AA (ABNT CVGS)

5540-5550 60% DOL gybrn mic-vfx1 arg occ lmy frm-brit tt-p intx1 ø/mod bri yel-
 gn FLOR/slo strmg lt yel CUT/fr brn STN
 40% LS ltgy-ltgybrn mic-crpx1 arg ip dol ip frm-sft tt NFSOC

5550-5560 70% LS ofwh-ltgy ltgybrn micx1 arg ip dol ip frm-sft tt patchy yel-gn
FLOR/slo strmg ltyel CUT/tr brn STN
 30% DOL AA lmy ip tt-p intx1 & pp vug ø/yel-gn FLOR/slo strmg lt yel
CUT/brn STN

5560-5570 90% LS ltgy ofwh tan ltbrn micx1 arg ip frm p-intx1 ø/yel-gn FLOR/
 slo strmg yel CUT/tr brn STN
 10% DOL AA

5570-5580 100% LS ltgy ofwh tan ltbrn micx1 pred chk crpx1-occ micx1 arg ip frm
 p intx1 ø /yel-gn FLOR/slo strmg yel CUT/tr brn STN

5580-5590 100% LS AA micx1 w/tr fos p intx1 por/decr yel-gn FLOR/slo strmg yel
CUT/tr brn STN

5590-5600 40% DOL brn gybrn micx1 arg lmy frm p intx1 ø yel-gn FLOR/brn STN/v
 slo strmg yel CUT
 60% LS ltgy ofwh tan micx1 arg ip frm tt-p intx1 ø w/tr fos /yel-gn
FLOR/NO VIS STN/slo strmg yel CUT

5600-5610 60% SH dkgy blk blk-pty rthy sooty slty sft-frm vcalc
 30% LS AA
 10% DOL AA

5610-5620 90% SH AA
 10% LS AA

5620-5630 90% SH blk dkgybrn pty-sbb1ky rthy sooty slty carb sft-frm vcalc
 10% LS AA

5630-5640 60% LS ltgy ofwh ltgybrn micx1 suc slty anhy ip tt frm NFSOC
 30% SH AA w/sm mgy
 10% ANHY wh x1

5640-5650 70% LS AA
 30% SH AA

5650-5660 50% ANHY wh trns1 amor-x1 sft
 30% LS AA
 20% SH CVGS

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 12-4 NAVAJO FEDERAL

5660-5670	40% ANHY AA 50% LS gybrn brn tan mcxl anhy arg frm 10% CHT trns1 wh
5670-5680	50% DOL gy gybrn micxl arg slty frm tt NFSOC 30% LS gybrn brn tan micxl arg slty anhy ip tt frm NFSOC 20% SH AA
5680-5690	70% SH dkgy blk blk rthy slty carb frm calc 30% LS brn gybrn frm micxl arg slty frm NFSOC
5690-5700	80% SH AA 20% LS AA
5700-5710	80% SH kdgy blk sbblky-pty rthy slty carb frm calc 20% LS AA
5710-5720	20% LS gybrn brn gy micxl arg slty frm NFSOC 40% DOL gybrn gy dkbrn micxl arg slty frm-hd NFSOC 30% SH AA 10% ANHY wh amor
5720-5730	50% LS gybrn brn tan gy micxl arg anhy frm /gld <u>FLOR</u> NSOC 20% DOL AA 20% SH m-dkgy sbblky rthy slty frm calc 10% ANHY AA
5730-5750	80% LS dkgy gybrn micxl arg anhy ip tt frm NFSOC 20% SH AA
5750-5760	60% DOL gybrn gy arg slty tt frm NFSOC 20% LS AA 20% SH AA TR ANHY AA
5760-5770	50% LS lt-mgybrn gy occ ofwh micxl arg dol ip slty ip frm tt NFSOC 30% DOL AA 20% SH AA
5770-5780	60% SH dkgy-dkgybrn /tr blk dol-calc slty ip /tr carb sbblky-pty frm-sft 20% LS AA 20% DOL AA
5780-5800	90% SH dkgy-blk carb dol-calc sbblky-pty sft-frm 10% LS AA
5800-5810	70% DOL lt-dkgybrn mic-vfxl varg ip slty ip frm-brit tt NFSOC 30% SH AA dol
5810-5820	40% DOL AA 40% LS lt-dkgybrn m-dkbrn crp-vfxl arg ip dol ip brit-mhd tt NFSOC 20% SH AA
5820-5832	50% DOL AA varg ip lmy ip NFSOC 40% LS AA 10% SH AA TR ANHY AA

SIDETRACK #1 SAMPLE DESCRIPTIONS

4620-4630 40% LS wh-offwh occ ltgy-ltgybrn crp-micxl chk ip slty ip sft-slfrm
40% SLTST ltgy-ofwh occ ltgybrn calc sdy ip grdg to vfg SS ip frm-fri
20% SS ofwh-ltgy occ clr-trnsl vfg m-wcmt slty grdg to sdy SLTST ip
calc fri NFSOC

5630-4640 40% SS ltgy-ofwh occ clr-trnsl gybrn vf-fg sbrd m-wsrt m-wcmt calc
slty mica ip fri NFSOC
40% SLTST AA, sdy
20% LS AA pred chk sft (ABNT CVGS)

4640-4650 60% SS AA vmica ip
30% SLTST lt-mgy gybrn calc sdy mica ip fri-frm
10% LS AA
SH red CVGS

4650-4660 60% SH dkredbrn-brnornng blkyl-splty sl-mlsly mica ip slcalc frm
20% SS AA incr slty
10% SLTST AA
10% LS gy-ltbrn crpxl-occ micxl m-wind pred tt frm NFSOC

4660-4670 70% LS AA incr micxl /sm slty & mica
10% SH AA
10% SLTST AA
10% SS ltgy-ltbrn vfg-slty sbang-sbrd wsrt calc/sil cmt mica ip
slty mtx tt-p vis ø NFSOC

4670-4680 50% LS brn-dkbrn-gy crpxl-micxl dns wind tt frm-hd dol ip occ slty
& mica NFSOC
25% SH dkgy-gy-brn splty-blky smth-slsly mica ip slcalc frm
15% SLTST AA
10% SS AA

4680-4690 40% SH AA, pred dkgy AA
35% LS AA
10% SLTST lt-mgy-gybrn slarg sdy ip lmy ip fri-frm
15% SS wh fg-occ vfg & mg sbang-ang occ sbrd mwsrt sil/sl calc cmt
mica ip slty mtx ip tt-p vis ø NFSOC

4690-4700 60% SH AA /sm carb
15% SLTST AA
15% DOL dkgybrn micxl slty txt mica ip frm-hd
10% LS AA

4700-4710 55% SH AA
25% LS dkbrn-brn-gy-crm crpxl-micxl occ chk wind frm tt NFSOC
10% SS wh-ltgy vfg-fg occ mg sbang mwsrt sil/calc cmt dkmmrl & glau
incl mica ip vp vis ø NFSOC
10% SLTST AA

4710-4720 80% LS ofwh ltgy-ltgybrn occ dkbrn-dkgybrn crp-micxl chk ip occ fos
occ arg sl-mfrm dns NFSOC
20% SH dkgy-dkgybrn calc occ dol blkyl frm
TR CHT trnsl ltbrn splty brit

4720-4730 60% SH dkgy occ dkgybrn dol-calc slty ip grdg to arg LS ip sl mica
sblky-plty frm

40% LS m-dkgy gybrn occ ltgy micxl arg grdg to calc sh ip frm dns
NFSOC

4730-4740 70% LS AA, decr arg NFSOC
30% SH AA

4740-4750 50% SLTST ltgy occ ofwh calc sdy ip occ dk mnrl incl fri-frm.
30% LS AA arg ip
20% SH AA

4750-4760 70% SLTST AA, sdy ip
20% LS AA
10% SH AA

4760-4770 60% SLTST lt-mgy gybrn calc sdy ip sl mica ip fri-frm
20% LS ofwh-ltgy ltgybrn crp-micxl arg ip slty ip frm dns NFSOC
20% SH m-dkgy gybrn sl-mcalc slty ip sbblky frm

4770-4780 50% SLTST AA
30% LS lt-mgybrn brngy crp-micxl arg occ slty frm dns NFSOC
20% SH AA
ABNT SH red CVGS

4780-4790 60% SLTST AA
30% LS AA
10% SS offwh-ltgy clr-trnsl vf-fgr occ mgr sbang p-wsrt m-wcmt
calc slty mica ip occ dk mnrl ncl fri NFSOC
ABNT SH red and orng CVGS

4790-4800 60% SLTST AA
30% LS AA
10% SS AA
ABNT CVGS AA

4800-4810 60% SLTST gybrn-brngy gy calc sdy ip arg ip fri
20% LS AA
20% SH gybrn-brngy slcalc slty ip sbblky frm
ABNT CVGS

4810-4820 60% SLTST AA
20% LS tan-brn gybrn crp-micxl arg ip slty ip frm dns NFSOC
20% SH AA
ABNT CVGS

4820-4830 50% SLTST AA
30% SH AA
20% LS AA
ABNT CVGS

4830-4840 50% SLTST AA
30% SH gy gybrn-brngy slcalc slty ip sbplty-sbblky frm
20% LS ltgy-ltgybrn lt-mbrn crp-micxl arg ip frm dns NFSOC
ABNT CVGS

4840-4850 50% LS ofwh ltgy-ltgybrn occ mgy-mgybrn crp-micxl cln-slarg m-vfrm
dns NFSOC

4840-4850	30%	SH m-dkgy gybrn calc slty ip sbply-sbblky frm
	20%	SLTST AA decr CVGS
4850-4860	70%	LS AA
	30%	SH AA
4860-4870	50%	SH dkgybrn-brn-mar blkly-sply occ mica /sm lmy/slcalc frm/sm LS CLASTS
	40%	LS AA
	15%	SS wh-ltgy vfg-slty sbang-sbrd mw-wsrt sil/calc cmt lmy ip scat mica & dk mnrl vp vis ø NFSOC
4870-4880	60%	SH AA
	30%	LS AA
	10%	SS AA
4880-4890	60%	SH AA
	15%	LS ltbrn-tan-crm crpxl-chk /sm micxl/sm ltorng-pk stn arg pred wind frm tt NFSOC
	25%	SS AA
4890-4900	60%	SH AA
	30%	SS wh-ltbrn-ltorng f-vfg /sm mg-vcg sbang m-psrt sil/calc cmt m-v mica scat dk mnrl gr tt p vis ø NFSOC
	10%	LS AA
4900-4910	80%	LS dkgy-gy-brn micxl-occ crpxl m-wind fri-frm tt slarg/slty ip
	10%	SS AA NFSOC
	10%	SH AA
4910-4920	75%	LS AA occ CHT INCL
	15%	SH dkbrn-dkredbrn-dkgy sply-blky sl-occ msly mica ip n-m calc frm
	10%	SS AA incr slty
4920-4930	70%	LS AA lt-mbrn crpxl-sm micxl indst fos /sm chk/spar mtx /occ p vis ø NFSOC
	30%	SH AA
	TR	SS AA
4930-4940	60%	LS tan-ltbrn-gy-crm crpxl-micxl m-wind pred tt-occ p-f ø indst fos /occ foram & pel /sm suc txt shy str /sm dul brn mnrl FLOR NSOC
	40%	SH AA
4940-4950	65%	SH dkbrn-gy-mar pty-blky sbfis ip sl-msly n-vmica n-m calc frm
	25%	LS AA
	10%	SS wh-ltgy vfg-slty sbang wsrt sil/calc cmt dk mnrl gr fri vp vis ø NFSOC
4950-4960	70%	SH AA
	20%	LS AA
	10%	SS AA incr slty
4960-4970	50%	SH AA
	30%	LS gy-ltgy-ltbrn micxl-occ crpxl m-wind occ arg frm tt NFSOC
	20%	SLTST ltbrn-ltgy sl-marg mica ip calc/sil cmt fri-frm

4970-4980 55% SH AA
25% LS AA
20% SLTST AA

4980-4990 50% LS AA /sm pel & shell frags
50% SH brn-gybrn-gy plty-blky fis ip sl-m slty mica ip sl-occ mcalc
frm
TR SS wh f-mg sbang-sbrd mwsrt sil/calc cmt/occ mnrl gr/occ mica p
vis ø NFSOC

4990-5000 60% SH AA
40% LS AA sm orng stn sl arg /sm dol suc txt /occ p vis ø NFSOC

5000-5010 55% SH AA
35% LS dkgy-gy-occ ltgy & brn micxl /occ suc txt /occ indst fos &
coral frags scat smky CHT FRAGS /occ blk asph STN styl NFOC
10% SLTST lt-mgy sl-marg /occ sdy lmy fri

5010-5020 55% SH AA
30% LS AA /sm redbrn shy str w/CHT INCL
15% SLTST AA /sm dkbrn vmica

5020-5030 50% SH brngy-gybrn m-dkgy slcalc occ mcalc slty ip sbplty-sbblky frm
40% LS AA arg ip NFSOC
10% SLTST AA

5030-5040 50% SH AA
50% LS ltgy-ofwh occ lt-mbrn crp-micxl occ arg w/tr indst fos frags
frm tt NFSOC
TR CHT smky splty

5040-5050 60% SH AA
40% LS AA

5050-5060 80% SH dk-mgy gybrn m-vcalc slty slmica plty-splty occ sbblky m-v
frm
20% LS AA arg ip NFSOC

5060-5080 80% SH dkgy-vdkgy m-vcalc slty ip blky-sbplty mfrm
20% LS lt-mgy crp-micxl arg frm tt NFSOC

5080-5090 60% LS lt-mgy ltgybrn occ ofwh crp-micxl arg ip frm tt NFSOC
20% SLTST lt-mgy calc arg slmica ip
TR PYR fri
20% SH AA slty

5090-5100 70% LS AA
20% SLTST AA
10% SH AA

5100-5120 50% LS AA
30% SLTST AA arg
20% SH AA slty w/ABNT CVGS AA

5120-5130 65% LS brn-ltbrn-crm crpxl-occ chk & micxl m-wind tt sl-mfrm slarg
ip occ ltorg STN /sm ltbrn CHT INCL
20% SH AA
15% SLTST AA

5130-5140	75%	LS AA incr CHT
	15%	SH AA
	10%	SLTST AA
5140-5150	45%	SH dkgybrn-dkgy-gy-brn-mar splty-plty smth-slslty mica ip dol/ slcalc rr ANHY INCL frm-hd
	40%	LS AA
	15%	SLTST gy-brn-ltgy sl-marg vfg sdy ip occ carb incl & mica flk calc fri
5150-5160	80%	SH AA
	20%	SLTST AA w/mod SH CVGS AA
5160-5170	75%	SH AA
	15%	SLTST AA
	10%	LS dkbrn-gybrn crpxl-occ mcxl m-w ind tt occ indst fos NFSOC
5170-5180	65%	SH AA
	15%	LS AA
	10%	SLTST wh-ltgy-brn cln marg mica ip vfg sdy ip slcalc fri
	10%	SS wh vfg-slty /occ fg sbang-sbrd mw-wsrt mica ip sil/calc cmt tt-vp vis ø NFSOC
5180-5190	75%	SH AA
	15%	SLTST AA
	10%	LS AA incr gy
5190-5200	60%	LS lt-mgy gybrn crp-micxl arg ip frm-mhd tt /tr dul yel mnrl FLOR NSOC
	40%	SH m-dkgy gybrn calc slty ip sbblky-sbplty frm
5200-5210	60%	LS AA /occ indst fos frags NFSOC
	40%	SH AA lmy ip
5210-5220	70%	LS ltgy-offwh gybrn brn mot ip crp-micxl/occ indst fos frags arg ip frm-mhd tt NFSOC
	30%	SH AA
5220-5230	80%	SH dkgy-dkgybrn m-vcalc slty ip occ slmica sbblky-sbplty occ splty frm
	20%	LS AA
5230-5240	65%	SH AA
	35%	LS mgy-mgybrn crpxl arg frm tt NFSOC
5240-5250	70%	SH AA
	30%	LS AA
5250-5260	80%	SH dkgy-dkgybrn m-vcalc slty ip slmica ip sbblky-plty frm
	20%	LS gy-gybrn crpxl arg frm tt NFSOC
5260-5270	50%	LS ltgy-ltgybrn occ offwh pred crpxl /occ micxl arg ip /tr indst fos frags m-vfrm tt NFSOC
	50%	SH AA
5270-5280	60%	LS AA
	40%	SH AA

5410-5420 55% SH AA
 20% LS AA
 15% SLTST dkgy-gy cln-marg/sm vfg sdy sil cmt ip calc ip fri-frm
 10% SS AA

5420-5430 70% SH dkgy-gybrn sl-mcalc slsly ip occ mica blk-pty frm
 20% LS AA
 10% SLTST AA

5430-5440 55% SH AA
 40% LS ltgy-ltgybrn ltbrn pred crpxl /occ micxl slarg ip frm tt
 NFSOC
 5% CHT smky trns1 splty

5440-5450 65% LS AA
 30% SH AA
 5% CHT AA

5450-5460 70% LS ofwh-ltgy ltbrn-ltgybrn crp-micxl /occ slarg frm tt NFSOC
 30% SH m-dkgy occ gybrn sl-mcalc smth-slsly blk-sbply frm

5460-5470 70% SH dk-mgy sl-mcalc smth-slsly slmica ip pty-sbply /occ sbply
 sl-mfrm
 30% LS AA bcmg arg ip

5470-5480 85% SH AA
 15% LS AA

5480-5490 90% SH dk-gy/occ gybrn sl-mcalc slty ip slmica ip pty-sbply sl-mfrm
 10% LS AA

5490-5500 80% SH AA
 20% LS m-ltgy gybrn crp-micxl arg frm tt NFSOC

5500-5510 50% SH AA
 30% LS AA
 20% ANHY wh-ofwh amor vsft

5510-5530 NS (SHAKER BYPASSED - flowline plugged)

5530-5540 60% ANHY wh-crm-ltbrn chk sft
 30% SH gy-dkgy-blk sl-vsly lmy/dol carb ip sl-mfrm
 10% LS AA

5540-5550 40% ANHY AA /sm wh xl
 25% SH AA
 20% DOL gybrn-brn crpxl/occ micxl dns wind /occ lmy /sm ANHY INCL
 tt-p vis ø NFSOC
 15% LS ltbrn-gybrn crpxl-micxl /sm xl & lithoclastic arg ip indst
 fos /sm smky-blk CHT FRAGS tt NFSOC

5550-5560 60% DOL gybrn-brn micxl-occ crpxl suc ip pel ip /occ algal debris/
 gnbrn 0 STN styl FRAC & sm intrxl ø /sm vug ø /est f-occ g
 vis ø (95% spl bri yel-dul gld FLOR & 10% vis brn-gnbrn 0
 STN inst blu wh stmg CUT /mod 0 ODOR)
 10% LS AA
 20% SH AA
 10% ANHY wh-ltgy xl fri

- 5560-5570 60% DOL AA bcmg ltgy-gywh incr suc /sm lmy (15%) brn 0 STN & (50%)
 FLOR in spl /FLOR & CUT AA
 20% LS Ltgy-wh-crm pred chk crpxl-occ micxl /sm vug \emptyset & ANHY FL /sm
 DOL rex1 /sm brn 0 STN in intrxl \emptyset /pred p vis \emptyset -tt /FLOR &
 CUT AA
 15% SH AA (CVGS)
 5% ANHY AA
- 5570-5580 75% DOL AA (80% FLOR in spl) FLOR & CUT AA
 20% LS AA incr DOL incr suc /sm algal plates
 5% SH AA (CVGS)
- 5580-5590 65% DOL tan-ltgybrn-ltgy micxl-suc mwind arg ip rex1 algal leaves f-
 g vis suc \emptyset /mdkbrn p-p & spty asph 0 STN (20%) /dul yel gld-
 bri yel FLOR in 80% spl /slo dul yelwh CUT
 25% LS AA
 5% ANHY wh xl suc txt fri
 5% SH dkgy splty & orngred blk (CVGS)
- 5590-5600 55% DOL AA
 35% LS crm-gywh-gybrn chk-micxl/sm crpxl m-w ind dul ip sl-marg /sm
 ANHY INCL & FL VOIDS indst fos /sm dkbrn-blk 0 & asph 0 STN
 (15% in spl) /dul yelgld FLOR (80%)/f blwh mlky CUT
 5% ANHY AA
 5% SH AA (CVGS)
- 5600-5610 45% DOL AA
 45% LS AA
 10% SH AA (CVGS)
- 5610-5620 35% DOL brn-gybrn-occ tan micxl-crpxl /sm rthy w/ANHY INCL & FL VUG
 /occ pel & algal debris arg ip /sm vug & suc \emptyset /scat dkbrn
 asph 0 STN in frac & vugs in 10% spl /bri yel-yelgld FLOR in
 85% spl/slo dul yel & blyel CUT
 55% LS crm-gybrn-gy chk-crpxl /occ micxl /sm suc txt indst fos frag
 /occ foram /sm stn pel sl-occ marg /sm dkbrn asph 0 STN in
 vug & intrxl \emptyset /FLOR & CUT as in DOL AA
 TR ANHY wh chk & ltgy xl
 10% SH AA (CVGS)
- 5620-5630 55% LS AA
 45% DOL AA f mlky blwh CUT
 10% SH AA (CVGS)
- 5630-5640 45% LS AA /tr FLOR & CUT AA
 35% SH dkgy-blk carb ip vcalc-lmy sbblk frim-hd
 20% DOL AA /f mlky blwh CUT
- 5640-5650 90% SH vdkgy-blk carb dol-calc plty-blky sft-frm
 10% LS AA
- 5650-5660 100% SH AA carb
- 5660-5670 100% SH vdkgy-blk dkgybrn carb slcalc plty-blky sft-frm
- 5670-5680 80% LS ltgy-ltgybrn /occ mgy mic-vfxl suc txt ip slarg ip slty ip
 frm tt NFSOC
 20% SH AA

5680-5690 100% LS AA

5690-5700 70% LS AA dol ip arg ip
30% ANHY wh-ofwh trns1 amor-suc frm-sft
TR CHT smky trns1

5700-5710 65% LS AA
35% ANHY AA

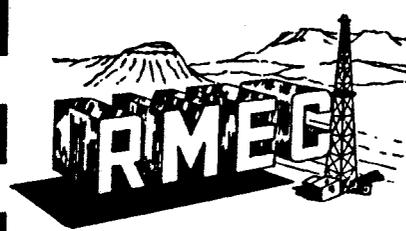
5710-5720 90% DOL dkgy-dkgybrn micx1 occ crpx1 m-varg slty w/tr ANHY fld vns
frm-hd tt NFSOC
10% LS AA w/
TR ANHY AA

5720-5730 60% DOL AA
25% SH dkgybrn-dkgy-brn blk rthy slsly ip lmy /occ dul carb ip
sft-slfrm
15% SLTST ltbrn-ltgybrn arg vcalc/lmy fri-occ sft

5730-5740 40% SH AA
30% DOL AA
30% SLTST AA

5740-5750 60% SH dkgybrn-dkgy-blk-gybrn blk-occ splty sl-mslty pred calc/
lmy /occ dol /occ PYR INCL sft-slfrm
20% DOL AA
20% SLTST AA

5750-5760 90% SH pred dkgybrn-blk AA
10% LS ltbrn-gybrn micx1 /sm chk arg & slty ip /occ ANHY FL vugs
pel ip /occ suc txt vp vis ø NFSOC



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. 12-4 NAVAJO FED.

LOCATION Sec 4 T39S R25E San Juan Utah

ZONE OF INTEREST NO. 1

INTERVAL: From 5542 To 5596

DRILL RATE: Abv 3 m/ft Thru 1-2 m/ft Below 3 1/2 m/ft

MUD GAS-CHROMATOGRAPH DATA

	TOTAL	C ₁	C ₂	C ₃	C ₄	C ₅	OTHER
Before	32	2200	525	310	180		
During	560	35000	15800	11000	4860		
After	170	9900	3300	2100	1080		

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 40
Poor
Fair % in show lithology 70
Good COLOR: yel-gn

CUT: None Streaming
Poor Slow
Fair Mod
Good Fast
COLOR: lt yel

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

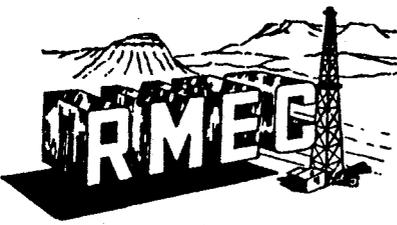
POROSITY: Poor Fair Good Kind Intercrystalline & pp vuggy

LITHOLOGY DOL gybrn mic-vfxln arg lmy ip frm: LS ltgy offwh ltgybrn micxl Dol ip
arg ip frm SAMPLE QUALITY Good

NOTIFIED Art Moore @ 0745 HRS. DATE: 4/8/88

REMARKS Upper Ismay Porosity

ZONE DESCRIBED BY Art Curtis



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. 12-4 NAVAJO FEDERAL

LOCATION SEC 4 T39S R25E

ZONE OF INTEREST NO. 1X

INTERVAL: From 5551 To 5632

DRILL RATE: Abv 5.1 min/ft Thru 1.5-4 min/ft Below 4.5 min/ft.

MUD GAS-CHROMATOGRAPH DATA

	TOTAL	C ₁	C ₂	C ₃	C ₄	C ₅	OTHER
Before	240	14,520	2860	1470	675		
During	615	57,750	16,500	10,500	8100		
After	480	43,200	9200	6100	1900		

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 CUT: None Streaming
 None % in total sample 90 Poor Slow
 Poor Fair Mod
 Fair % in show lithology 95 Good Fast
 Good COLOR: bri yel-dull yelgold COLOR: blue wh

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

POROSITY: Poor Fair Good Kind intr xl& vuggy

LITHOLOGY DOL gybrn-brn micxl-occ crpxl suc&pel ip occ ALGAL debris gnbrn o stn styl,
frac& intr xl ø SAMPLE QUALITY fair

NOTIFIED Art Moore @ 0750 HRS. DATE: 4/21/88

REMARKS moderate oil odor in spls

ZONE DESCRIBED BY LEE AMOROSO

MERIDIAN OIL INC.
12-4 NAVAJO FEDERAL
SAN JUAN CO. - UTAH

FORMATION TOPS			
FORMATION	SAMPLE TOP	E-LOG TOP	KB: 4865' SUB SEA
HERMOSA	4472'	4476'	+ 389'
UPPER ISMAY	5452'	5453'	- 588'
V.I. POROSITY	5542'	5538'	- 673'
"A" SHALE	5596'	5601'	- 736'
LOWER ISMAY	5628'	5625'	- 760'
GOTHIC SHALE	5684'	5676'	- 811
DESERT CREEK	5706'	5701'	- 836'
DESERT CREEK Ø	5760'	5759'	- 894'
CHIMNEY ROCK SH	5772'	5773'	- 908'
AKAH	5800'	5796'	- 931'
SALT	5830'	--	--
TOTAL DEPTH	5832'	5829'	--

12-4X NAVAJO FEDERAL SIDETRACK			
UPPER ISMAY	5493'	5491'	- 626'
V.I. POROSITY	5551'	5545'	- 680'
"A" SHALE	5633'	5631'	- 766'
LOWER ISMAY	5676'	5663'	- 798'
GOTHIC SHALE	5732'	5722'	- 857'
DESERT CREEK	5758'	--	--

GEOLOGIC SUMMARY
AND
ZONES OF INTEREST

Meridian Oil Incorporated's well, 12-4 Navajo Federal, Section 4-T39S-R25E, San Juan County, Utah, was spudded on 29 March, 1988 in the Lower Cretaceous Morrison Formation and drilled to a total depth of 5832' in the Pennsylvanian Paradox Salt on 8 March, 1988. After E-Logs were run, the well was plugged back to 4200' and whipstocked, then a sidetrack was drilled to a total depth (measured) of 5760' in the top of the Pennsylvanian Desert Creek on 21 March, 1988.

HERMOSA (4476' - 5453')

The Pennsylvanian Hermosa Group consisted of tan-to-light brown, gray brown, cryptocrystalline-to-microcrystalline, occasionally silty, variably argillaceous limestone; gray-to-gray brown, variably silty, slightly-to-very calcareous shale; gray-to-gray-brown, variably sandy, variably argillaceous, calcareous siltstone; and clear-to-translucent, white-to-gray, very fine-to-medium grained, calcareous, occasionally silty sandstone.

Total gas ranged from 2-to-90 units in the Hermosa. No significant shows were encountered.

UPPER ISMAY (5453' - 5538')

The top of the Upper Ismay member of the Pennsylvanian Paradox Formation was picked with the appearance of light-to-medium gray, gray brown, cryptocrystalline-to-microcrystalline, clean-to-slightly argillaceous, occasionally anhydritic limestone interbedded with thin beds of clear-to-translucent crystalline anhydrite. This upper carbonate zone was drilled from 5453'-5490'. At 5490' a massive anhydrite was encountered. The base of this anhydrite was at 5536', the top of the Upper Ismay Porosity.

The porosity of the Upper Ismay "mound facies" consisted of thin beds of gray brown-to-brown, microcrystalline-to-very fine crystalline, argillaceous, occasionally limy dolomite with poor-to-fair visible intercrystalline and pinpoint vuggy porosity, moderately bright yellow-green oil fluorescence, slowly streaming light yellow cut and patchy brown oil stain. This dolomite was interbedded with off white-to-light gray, microcrystalline, argillaceous limestone with poor visible porosity, patchy yellow-green fluorescence and slowly streaming light yellow cut.

On the E-logs the gross porosity interval was from 5536'-5601'. However the good porosity in this interval was present only in thin benches of 2-4 foot thickness, (5536-38', 5544-46', 5564-68' and 5586-89'). Porosities in these thin intervals ranged from 13%-to-20% with the remainder of the mound facies averaging less than 5% porosity.

At the top of the porosity interval, total gas increased from a background of 35 units through the massive anhydrite to a maximum of 560 units.

Because not enough porosity was encountered, the decision was made to plug back and whipstock the well closer to the mound to the southwest in hopes of finding more porosity in the sidetrack.

"A" SHALE (5601' - 5625')

Samples showed the "A" Shale to be dark gray-to-black, slightly-to-noncalcareous, sooty and carbonaceous in part. Total gas was 160-to-400 units throughout the "A" Shale.

LOWER ISMAY (5625' - 5676')

The Lower Ismay on this well was composed of light gray-to-off white, light gray brown, microcrystalline, occasionally anhydritic limestone in the upper 20 feet; white-to-translucent, amorphous-to-crystalline anhydrite in the middle 15 feet; and gray-to-gray brown, microcrystalline, argillaceous dolomite in the lower 10 feet.

Total gas ranged from 300-to-400 units through the Lower Ismay. No significant shows were observed in this interval.

GOTHIC (5676' - 5701')

The Gothic consisted of dark gray-to-black, calcareous, carbonaceous, soft-to-firm shale. Background gas was 380-to-400 units with no significant shows noted.

DESERT CREEK (5701' - 5773')

The Desert Creek was composed of gray brown, dark brown, microcrystalline, argillaceous, silty dolomite; white-to-translucent, amorphous anhydrite; and gray brown-to-tan, microcrystalline, argillaceous, occasionally anhydritic limestone.

On the electric logs the Desert Creek porosity interval was from 5759'-5773'. However no visible porosity, oil shows or significant gas increases were observed in this interval.

Total gas ranged from 220-to-470 units in the Desert Creek.

CHIMNEY ROCK (5773' - 5796')

The Chimney Rock was a dark gray, gray brown, black, dolomitic-to-calcareous, variably carbonaceous, occasionally silty, soft-to-firm shale.

Total gas was 170-to-400 units in the Chimney Rock with no shows.

AKAH (5796' - T.D.)

Interbedded light-to-dark gray brown, microcrystalline-to-very fine crystalline, very argillaceous, silty dolomite and light-to-dark brown, brown, cryptocrystalline-to-very fine crystalline, variably argillaceous, variably dolomitic limestone made up the Akah on this well.

The top of the Paradox Salt was picked with a drilling break from 6 minutes/foot-to-1 minute/foot. Two feet of the salt were penetrated and drilling operations were suspended. Total gas ranged from 80-to-360 units and no significant shows were observed.

GEOLOGIC SUMMARY
AND
ZONES OF INTEREST

Geologic coverage of Meridian Oil Incorporated's well, 12-4 Federal, Sidetrack #1, Section 4-T39S-R25E, San Juan County, Utah, started in the Honaker Trail Formation on 16 April, 1988 at a depth of 4620'. The well was drilled while building angle to a total depth of 5760'. Tops listed below are E-log tops unless otherwise noted.

HONAKER TRAIL FM

Geologic coverage commenced within the Honaker Trail Formation of the Hermosa Group. The Honaker Trail consisted of interbedded shales, siltstones and sandstones with thin to massive limestones. Sample quality was poor in this interval due to abundant cavings. No significant drilling breaks or hydrocarbon shows were observed.

UPPER ISMAY CYCLE (TOP @ 5491')

The top of the Upper Ismay Cycle was marked by argillaceous gray non-porous limestones on top of a massive anhydrite interval. The Upper Ismay porosity at 5551' (sample) was marked by an increased penetration rate and grayish brown microcrystalline and sucrosic dolomite. Pelletal texture and occasional algal debris was observed. Greenish brown-to-brown oil staining with bright yellow-to-dull gold fluorescence and fast, milky, blue-white cut was seen in the sucrosic and intercrystalline/vuggy porosity. (See Show Report 1X.)

Electric log porosities were streaky with greater than 18 feet of porosities greater than 6%. Gas readings were fairly steady throughout the porosity interval to 5590' at 360-to-420 units. After a tight streak at 5592'-5598', the gas readings increased to 600-to-680 units. Methane through butane was detected.

"A" SHALE (TOP @ 5631')

The "A" Shale was a dark gray-to-black carbonaceous, limy and earthy shale with no shows of interest seen. Background gas decreased from 600 units to less than 400 units.

LOWER ISMAY CYCLE (TOP @ 5663')

The Lower Ismay Cycle was a microcrystalline-to-very finely crystalline and tight limestone in the uppermost portion overlying a thick anhydrite section. The lower part of the Lower Ismay was a dark grayish brown, microcrystalline-to-occasionally cryptocrystalline dolomite with anhydrite filled veins. No drilling breaks, sample shows or significant gas increases were observed.

GOTHIC SHALE (TOP @ 5722')

The Gothic Shale was a silty, dolomitic shale, being dark gray-to-black and carbonaceous in part. No sample shows were observed and background gas was constant at 350 units throughout.

DESERT CREEK CYCLE (SAMPLE TOP @ 5758')

The Desert Creek was tagged shortly before TD of 5760'. A small quantity of light brown-to-gray brown microcrystalline limestone was found in samples, but no sample or significant gas shows were detected.



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

May 16, 1988

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

Gentlemen:

RE: Navajo Federal 12-4 Well located in Section 4, Township 39
South, Range 25 East, S.L.M., San Juan County, Utah

In accordance with Rule R615-5-3(3), Oil and Gas Conservation General Rules, administrative approval for the referenced Class II injection well is granted.

The following actions are necessary to fully comply with this approval:

- 1) Compliance with the UIC requirements for operation, maintenance and reporting for Class II injection wells.
- 2) Conformance with all conditions of the submitted application.

If you have any questions regarding this approval or the necessary requirements, please contact this office.

Best regards,

A handwritten signature in cursive script that reads "Dianne R. Nielson".

Dianne R. Nielson
Director

tc
7627U

**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-4" for such proposals.)

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input checked="" type="checkbox"/> WATER INJECTION	RECEIVED MAY 19 1988 DIV. OIL, GAS, MINING
2. NAME OF OPERATOR MERIDIAN OIL INC.	
3. ADDRESS OF OPERATOR P.O. Box 1855, Billings, MT 59103	

5. LEASE DESIGNATION AND SERIAL NO. U-52333
6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A
7. UNIT AGREEMENT NAME N/A
8. FARM OR LEASE NAME Navajo-Federal
9. WELL NO. 12-4

1. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)
At surface
SWNW (2260' FNL - 440' FWL)

10. FIELD AND POOL, OR WILDCAT Kiva
11. SEC., T., R., M., OR BLM. AND SURVEY OR AREA Section 4-39S-25E

14. PERMIT NO. 43-037-31395	15. ELEVATIONS (Show whether DF, RT, OR, etc.) 4863' KB
---------------------------------------	---

12. COUNTY OR PARISH San Juan	13. STATE Utah
---	--------------------------

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <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>Commencement of Injection</u> <input checked="" type="checkbox"/>	

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

Meridian Oil's 12-4 Navajo-Federal commenced injecting water @ 3:30 pm
May 16, 1988.

CONFIDENTIAL

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

SIGNED *W. G. Brown* TITLE Production Superintendent DATE 5/17/88

(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 DUPLICATE*

(See other In-
structions on
reverse side)

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

5

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL GAS WELL DRY Other Water Injection

b. TYPE OF COMPLETION:
NEW WELL WORK OVER DEEP-EN PITG BACK DIFF. RESVR.

RECEIVED
MAY 27 1988

5. LEASE DESIGNATION AND SERIAL NO.

U-52333

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

N/A

7. UNIT AGREEMENT NAME

N/A

8. FARM OR LEASE NAME

Navajo-Federal

9. WELL NO.

12-4

10. FIELD AND POOL, OR WILDCAT

Kiva

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

Sec. 4-39S-25E

12. COUNTY OR PARISH

San Juan

13. STATE

Utah

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 regulations)
At surface SWNW (2260' FNL - 440' FWL)

DIVISION OF
OIL, GAS & MINING

At top prod. interval reported below SWNW (2527' FNL - 253' FWL)

At total depth SWNW (2938' FNL - 209' FWL)

14. PERMIT NO. 43-037-31395
DATE ISSUED 4-20-88

15. DATE SPUDDED 3-28-88
16. DATE T.D. REACHED 4-21-88
17. DATE COMPL. (Ready to prod.) 5-16-88
18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 4852' GL
19. ELEV. CASINGHEAD 4865' KB

20. TOTAL DEPTH, MD & TVD 5760' MD
21. PLUG, BACK T.D., MD & TVD 5717' MD
22. IF MULTIPLE COMPL., HOW MANY*
23. INTERVALS DRILLED BY
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
5544'-5621' (Ismay) - Injecting Interval

25. WAS DIRECTIONAL SURVEY MADE Yes
26. TYPE ELECTRIC AND OTHER LOGS RUN 880601
DLL/MSFL/GR, LDT/CNL/GR/FEF, BHC/GR, CBL/VDL/GR
27. WAS WELL CORRED No

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
9-5/8"	36#	3313'	12-1/4"	1120 sxs	
5-1/2"	15.5#	5759'	8-3/4"	643 sxs	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2-7/8"	5508'	5515'

31. PERFORATION RECORD (Interval, size and number)

5544'-5621' 4" HSC, 4 jspf

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5249'-5627'	125 sxs "G"
4414'-4613'	High vis mud plug
4023'-4428'	210 sxs "B"
5544'-5621'	4250 gals 15% HCL

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)	WELL STATUS (Producing or shut-in)
5-16-88	Injecting	Water Injection

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
5-23-88	24	N/A	→	N/A	N/A	1100	N/A

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
2827	N/A	→	0	0	1100	N/A

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)
N/A
TEST WITNESSED BY
David Overgaard

35. LIST OF ATTACHMENTS
Directional Survey

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

SIGNED D.R. Hawn TITLE Regional Drilling Engineer DATE May 25, 1988

*(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.
None			

38. GEOLOGIC MARKERS

NAME	MEAS. DEPTH	TOP
Hermosa	4476'	TRUE VERT. DEPTH +389'
Upper Ismay	5453'	-588'
V.I. Ø	5538'	-673'
"A" Shale	5635'	-736'
Lower Ismay	5670'	-760'
Gothic Shale	5701'	-811'
Desert Cree	5759'	-836'
Desert Cree	5773'	-894'
Chimney Rock	5796'	-908'
Akah		-931'
SIDETRACK	5545'	-626'
Upper Ismay	5631'	-680'
V.I. Ø	5663'	-766'
"A" Shale	5772'	-798'
Lower Ismay		-857'
Gothic Shale		



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Norman H. Bangerter
Governor

Dee C. Hansen
Executive Director

Dianne R. Nielson, Ph.D.
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

August 11, 1992

Meridian Oil Inc.
5613 DTC Parkway
Englewood, Colorado 80111

Gentlemen:

Re: Pressure Test for Mechanical Integrity, Class II Injection Wells in the Kiva and Kachina Units, San Juan County, Utah

The Underground Injection Control Program which the Division of Oil, Gas and Mining (DOGM) administers in Utah, requires that all Class II injection wells demonstrate mechanical integrity. It has been past policy of the Division to require pressure testing of all Class II salt water disposal wells and other injection wells not reporting monthly annulus pressures in accordance with rule R649-5-5.3 of the Oil and Gas Conservation General Rules. This rule requires that the casing-tubing annulus above the packer be pressure tested at a pressure equal to the maximum authorized injection pressure or 1,000 psi, whichever is lesser, provided that no test pressure is less than 300 psi. This test shall be performed at least every five year period beginning October, 1982. Our records indicate the above referenced wells are due for testing for the second five year period. Attached is a list of wells which need to be tested according to our records. Please make arrangements and ready the wells for testing during the week of September 21, 1992 as outlined below:

1. Operator must furnish connections, and accurate pressure gauges, hot oil truck (or other means of pressuring annulus), as well as personnel to assist in opening valves etc.
2. The casing-tubing annulus shall be filled prior to the test date to expedite testing, as each well will be required to hold pressure for a minimum of 15 minutes.
3. If mechanical difficulties or workover operations make it impossible for the wells to be tested on this date the tests may be rescheduled.

Page 2
Pressure Test
August 11, 1992

4. Company personnel should meet DOGM representatives at the field office or other location as negotiated.
5. All bradenhead valves with exception of the tubing on the injection wells must be shut in 24 hours prior to testing.

Please contact Mr. Dan Jarvis at (801)538-5340 to arrange a meeting time and place or negotiate a different date if this one is unacceptable.

Sincerely,



Gil Hunt
UIC Program Manager

ldc
Attachment
WO152

WELLS TO BE TESTED

Kiva Unit

#14-4
21-9
23-4
12-4

Kachina Unit

#11-19
42-24
2

Utah Division of Oil, Gas, and Mining
 Casing - ~~Bradenhead~~ Test

Pressure

Operator: MERIDIAN OIL COMPANY Field/Unit: KIVA
 Well: NAVAJO FEDERAL 12-4 Township: 39S Range: 25E Sect: 4
 API: 43-037-31395 Welltype: INJW Max Pressure: 3750
 Lease type: FEDERAL Surface Owner: BLM

Test Date: 9/23/92
 8:31 AM

CASING STRING	SIZE	SET AT	PRESSURE	OBSERVATIONS
Surface:	133/8	84		
Intermediate:	9 5/8	3314		
Production:	5 1/2	5860	0 PSI at start	0 PSI after test.
Other:		0		
Tubing:	2 7/8		550 2600 PSI	- pumps shut down right before
Packer:		5609		

Recommendations:

pressured to 1000 PSI held 15 min - no pressure loss

Bob Bialpando - Meridian - witness

*D. Jarvis
 Gil Hunt - Dobm 1995*

Passed MIT

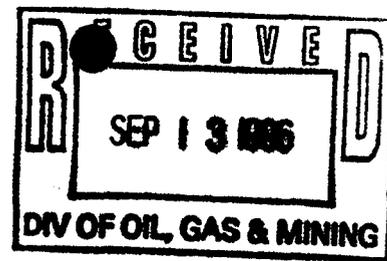
D. Jarvis

STATE OF UTAH
INVENTORY OF INJECTION WELLS

OPERATOR	API NO.	WELL	TNS	RGE	SE	WELLTYPE	INDIAN COUNT
*****	*****	*****	***	***	**	*****	*****
EQUITABLE RE	43-013-31370	FEDERAL 13-5	09S	17E	5	INJW	Y
EQUITABLE RE	43-013-31195	ALLEN FEDERA	09S	17E	6	INJW	N
EQUITABLE RE	43-013-31492	11-7J	09S	17E	7	INJW	Y
EQUITABLE RE	43-013-31405	31-7J	09S	17E	7	INJW	Y
EQUITABLE RE	43-047-20252	E. RED WASH	08S	25E	5	INJW	N
EQUITABLE RE	43-047-20261	ERW 4-6	08S	25E	6	INJW	Y
EQUITABLE RE	43-047-32346	42-6X	08S	25E	6	INJW	N
EQUITABLE RE	43-047-20245	AMERADA GUIN	08S	25E	7	INJW	Y
GERRITY OIL	43-047-30566	FEDERAL 14-1	09S	24E	10	INJD	Y
GIANT EXPLOR	43-037-15042	GOTHIC MESA	41S	23E	16	INJD	Y
GIANT EXPLOR	43-037-31095	CAVE CANYON	38S	24E	3	INJW	N
GIANT EXPLOR	43-037-20292	SENTINEL PEA	41S	26E	27	INJD	Y
GIANT EXPLOR	43-037-16452	9-24	41S	23E	9	INJI	Y
HAY HOT OIL	43-037-30521	MCCRACKEN PT	40S	23E	19	INSD	N
HAY HOT OIL	43-037-30575	FED. 23-32	40S	22E	23	INJI	N
HELD BY PROD	43-013-15122	UTE #1-A	03S	06W	18	INJD	Y
INLAND PRODU	43-013-30843	MONUMENT BUT	08S	16E	34	INJW	Y
INLAND PRODU	43-013-30693	FEDERAL 3-33	08S	16E	33	INJW	N
INLAND PRODU	43-013-30686	FEDERAL 5-35	08S	16E	35	INJW	N
INLAND PRODU	43-013-30745	MONUMENT BUT	08S	16E	35	INJW	N
INLAND PRODU	43-013-30608	MONUMENT BUT	08S	16E	35	INJW	N
INLAND PRODU	43-013-30606	MONUMENT BUT	08S	16E	35	INJW	N
INLAND PRODU	43-013-31264	MONUMENT FED	08S	16E	35	INJW	N
INLAND PRODU	43-013-30605	MONUMENT BUT	08S	16E	35	INJW	N
INLAND PRODU	43-013-30624	STATE 5-36	08S	16E	36	INJW	N
INLAND PRODU	43-013-30592	STATE 1-36	08S	16E	36	INJW	N
INLAND PRODU	43-013-30787	12-32	08S	17E	32	INJW	Y
INLAND PRODU	43-013-31372	14A-28	08S	16E	28	INJW	N
INLAND PRODU	43-013-30779	FED 15-28	08S	16E	28	INJW	N
INLAND PRODU	43-013-31523	GILSONITE 14	08S	17E	32	INJW	Y
INLAND PRODU	43-013-31403	GILSONITE ST	08S	17E	32	INJW	Y
INLAND PRODU	43-013-30658	GILSONITE 7-	08S	17E	32	INJW	Y
JN EXPLORATI	43-043-30223	LOGAN FEDERA	03N	07E	26	INJD	N
MEDALLION EX	43-013-30372	ALTAMONT SWD	03S	06W	24	INJD	Y
✓ MERIDIAN OIL	43-037-31112	NAV FED 4-1	39S	25E	4	INJW	N
✓ MERIDIAN OIL	43-037-31321	14-4 NAV.FED	39S	25E	4	INJW	N
→ MERIDIAN OIL ←	43-037-31395	NAVAJO FEDER	39S	25E	4	INJW	N
✓ MERIDIAN OIL	43-037-31259	FEDERAL 23-4	39S	25E	4	INJW	N
✓ MERIDIAN OIL	43-037-31267	21-9 NAV.FED	39S	25E	9	INJW	N
✓ MERIDIAN OIL	43-037-31298	HAVASU FED.	38S	23E	24	INJW	N
✓ MERIDIAN OIL	43-037-31282	ARABIAN FED.	38S	24E	19	INJW	N
✓ MERIDIAN OIL	43-037-31458	HAVASU FED.	38S	24E	19	INJW	N
MISSION OIL	43-013-31202	UTE 25-6	05S	04W	25	INJI	Y
MOBIL EXPLOR	43-037-16350	H-11	40S	24E	36	INJW	Y
MOBIL EXPLOR	43-037-15617	F-11	40S	24E	36	INJW	Y
MOBIL EXPLOR	43-037-15618	G-12	40S	24E	36	INJI	Y
MOBIL EXPLOR	43-037-15619	I-12	40S	24E	36	INJW	Y
MOBIL EXPLOR	43-037-16377	T-8	40S	25E	28	INJW	Y
MOBIL EXPLOR	43-037-16366	P-7	40S	25E	29	INJW	Y
MOBIL EXPLOR	43-037-16362	N-7	40S	25E	29	INJW	Y
MOBIL EXPLOR	43-037-16359	L-9	40S	25E	31	INJW	Y
MOBIL EXPLOR	43-037-16354	J-11	40S	25E	31	INJW	Y
MOBIL EXPLOR	43-037-15958	L-11	40S	25E	31	INJW	Y
✓ MERIDIAN OIL	43-037-31317	NAV.FED. 43-5	39S	25E	4	INJW	N

Kiva Unit
Kiva Unit
Kiva Unit
Kiva Unit
Kiva Unit
Kachina Unit
Kachina Unit
Kachina Unit

MERIDIAN OIL



September 10, 1996

State of Utah
Division of Oil, Gas and Mining
355 ~~1594~~ West North Temple
Salt Lake City, UT 84180

Re: Name Change from Meridian Oil Inc. to
Burlington Resources Oil & Gas Co.

Gentlemen:

Please be advised effective July 11, 1996 Meridian Oil Inc. changed their name and address to:

Burlington Resources Oil & Gas Co.
3300 North "A" St., Bldg. 6
Midland, TX 79710-1810

Please see the attached list of wells that Burlington Resources operates in the State of Utah. If you should have any questions, please contact me at (303) 930-9393 or after September 30th at (915) 688-6800.

Sincerely,

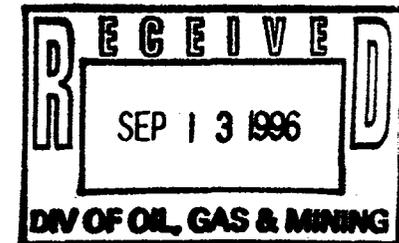
BURLINGTON RESOURCES OIL & GAS CO.

A handwritten signature in cursive script that reads "Eileen Danni Dey".

Eileen Danni Dey
Senior Regulatory Compliance Representative

Enclosure

FIELD	WELL NAME	WELL NO	FORMATION/POOL	COUNTY	OCATIO	SEC	TWN	RGE	API NUMBER	FEDERAL LEASE NUMBER	STATE CONTROL NO.
BANNOCK	BANNOCK FEDERAL	21-33	ISMAY	SAN JUAN	NENW	33	038S	024E	43-037-3142500	UTU60786A	10923
CEDAR MOUNTAIN	EAST CANYON UNIT	33-18	CEDAR MOUNTAIN	GRAND	NWSE	18	016S	025E	43-019-1620300	UTU05059	9515
EAST MOUNTAIN	EAST MOUNTAIN FEDERAL	13-35	FERRON	EMERY	NWSW	35	016S	006E	43-015-3023000	57287U6920	10789
EAST MOUNTAIN	EAST MOUNTAIN FEDERAL	32-23	FERRON	EMERY	SWNE	23	016S	006E	43-015-3023100	57287U6920	11075
FERRON	INDIAN CREEK UNIT	1	FERRON	EMERY	SWNW	02	017S	006E	43-015-3008200	57287U6920	02585
FERRON	INDIAN CREEK UNIT	3	FERRON	EMERY	SWSW	02	017S	006E	43-015-3107500	57287U6920 30175	02585
FERRON	INDIAN CREEK UNIT 10176	5	FERRON	EMERY	SENE	10	017S	006E	43-015-3011700	57287U6920	02585
FERRON	INDIAN CREEK UNIT 14176	2	FERRON	EMERY	SWNE	14	017S	006E	43-015-3009100	UTU15202	10907
KACHINA	ARABIAN FEDERAL (wiw)	2	ISMAY	SAN JUAN	NWSW	19	038S	024E	43-037-3128200	UTU56186	10654
KACHINA	ARABIAN FEDERAL	3	ISMAY	SAN JUAN	NESW	19	038S	024E	43-037-3128700	UTU56186	10654
KACHINA	HAVASU FEDERAL (wiw)	11-19	UPPER ISMAY	SAN JUAN	NWNW	19	038S	024E	43-037-3145800	UTU56186	10654
KACHINA	HAVASU FEDERAL	12-19	UPPER ISMAY	SAN JUAN	SWNW	19	038S	024E	43-037-3145700	UTU56186	10654
KACHINA	HAVASU FEDERAL	12-19A	ISMAY	SAN JUAN	SWNW	19	038S	024E	43-037-3145900	UTU56186	10654
KACHINA	HAVASU FEDERAL	22-19	UPPER ISMAY	SAN JUAN	SENE	19	038S	024E	43-037-3127800	UTU56186	10654
KACHINA	HAVASU FEDERAL	41-24	UPPER ISMAY	SAN JUAN	NENE	24	038S	023E	43-037-3127900	UTU20895	10654
KACHINA	HAVASU FEDERAL (wiw)	42-24	UPPER ISMAY	SAN JUAN	SENE	24	038S	023E	43-037-3129800	UTU20895	10654
KACHINA	WASH UNIT (wsw)	2	CUTLER	SAN JUAN	SESE	13	038S	023E	43-037-3132400	UTU20894	10654
KIVA (DESERT CREEK)	NAVAJO FEDERAL	41-5	DESERT CREEK	SAN JUAN	NENE	05	039S	025E	43-037-3542100	UTU57895 31358	10810
KIVA (UPPER ISMAY)	KIVA FEDERAL	24-4	ISMAY	SAN JUAN	SESW	04	039S	025E	43-037-3174500	83687U6890	09975
KIVA (UPPER ISMAY)	NAVAJO FEDERAL (wiw)	12-4	ISMAY	SAN JUAN	SWNW	04	039S	025E	43-037-3139500	83687U6890	09975
KIVA (UPPER ISMAY)	NAVAJO FEDERAL (wiw)	14-4	ISMAY	SAN JUAN	SWSW	04	039S	025E	43-037-3132100	83687U6890	09975
KIVA (UPPER ISMAY)	NAVAJO FEDERAL (wiw)	21-9	ISMAY	SAN JUAN	NENW	09	039S	025E	43-037-3126700	83687U6890	09975
KIVA (UPPER ISMAY)	NAVAJO FEDERAL (wiw)	23-4	UPPER ISMAY	SAN JUAN	NESW	04	039S	025E	43-037-3125900	83687U6890	09975
KIVA (UPPER ISMAY)	NAVAJO FEDERAL	4-2	ISMAY	SAN JUAN	SWSE	04	039S	025E	43-037-3116100	83687U6890	09975
KIVA (UPPER ISMAY)	NAVAJO FEDERAL	4-4	ISMAY	SAN JUAN	NWSW	04	039S	025E	43-037-3117900	83687U6890	09975
KIVA (UPPER ISMAY)	NAVAJO FEDERAL	42-5	UPPER ISMAY	SAN JUAN	SENE	05	039S	025E	43-037-3126100	83687U6890	10655
KIVA (UPPER ISMAY)	NAVAJO FEDERAL (wsw)	42-9	WINGATE/CUTLER	SAN JUAN	SENE	09	039S	025E	43-037-3126300	83687U6890	09975
KIVA (UPPER ISMAY)	NAVAJO FEDERAL	9-1	UPPER ISMAY	SAN JUAN	NWNE	09	039S	025E	43-037-3100100	83687U6890	09975
KIVA (UPPER ISMAY)	NAVAJO FEDERAL (WIW)	4-1	ISMAY	SAN JUAN	SESW	04	039S	025E	43-037-3111200	83687U6890	09975
KIVA (UPPER ISMAY)	NAVAJO FEDERAL (WIW)	43-5	ISMAY	SAN JUAN	NWSW	05	039S	025E	43-037-3131700	83687U6890	09975
MON MESA	HATCH POINT FEDERAL	27-1A	CANE CREEK	SAN JUAN	NESW	27	027S	021E	43-037-3051800	8910184250	02815

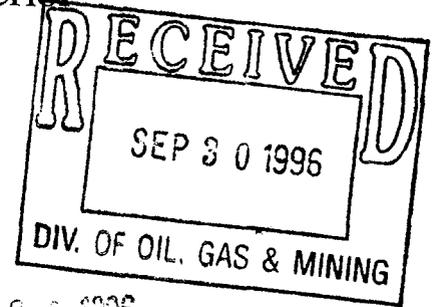




United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155



In Reply Refer To
3100
SL-071010C
(UT-932)

SEP 28 1996

NOTICE

Burlington Resources Oil & Gas Company : Oil and Gas
801 Cherry Street, Suite 900 : SL-071010C
Fort Worth, Texas 76102 :

Corporate Name Change Recognized

Acceptable evidence has been filed in this office concerning the corporate name change from Meridian Oil Inc. to Burlington Resources Oil & Gas Company.

For our purposes, the name change is recognized effective July 12, 1996, the date the Secretary of State of Delaware certified the name change.

The oil and gas lease files identified on the enclosed exhibit have been noted as to the name change. We are notifying the Minerals Management Service and all applicable Bureau of Land Management offices of the change by a copy of this notice. If additional documentation for changes of operator are required by our field offices, you will be contacted by them.

A rider to Bond No. 400IA9059 (BLM Bond No. MT0719) has been accepted by the Montana State office as of September 16, 1996, its date of receipt. The rider changed the name on the bond from Meridian Oil Inc. to Burlington Resources Oil & Gas Company.

ROBERT LOPEZ

Robert Lopez
Group Leader,
Minerals Adjudication Group

Enclosure

Exhibit (1 p)

cc: MMS, Data Management Division, P.O. Box 5860, MS 3113, Denver, Colorado 80217
Moab District Office
Vernal District Office

bc: State of Utah, ATTN: Lisha Cordova, Division of Oil, Gas and Mining, P.O. Box 145801,
Salt Lake City, Utah 84114-5801
Teresa Thompson (UT-931)
Irene Anderson (UT-932)

Exhibit of Leases Affected

SL-071010C	U-8894A	U-40751	U-61752
SL-071595	U-8895A	U-45051	U-62143
U-0681	U-8897A	U-45929	U-62190
U-0683	U-15202	U-46825	U-63181
U-0684	U-15203	U-51045	UTU-64930
U-0685	U-15204	U-51046	UTU-64931
U-0719	U-16962A	U-51047	UTU-65329
U-0725	U-17024	U-52333	UTU-65607
U-0737	U-17623	U-56186	UTU-65750
U-0741	U-19281	U-56932	UTU-65751
U-0744	U-20016	U-56933	UTU-65868 (ROW)
U-03333	U-20895	U-56934	UTU-65940
U-04049	U-24606	U-57895	UTU-65943
U-04049A	U-39832	U-58728	UTU-66025
U-05059	U-40361	U-60428	UTU-66487
U-08107	U-40440	U-60520	UTU-66584
U-062420	U-40544 (ROW)	U-61556	UTU-66708
UTU-66830	UTU-66831	UTU-67565	UTU-67568
UTU-67569	UTU-67570	UTU-68232	UTU-68664
UTU-68676	UTU-69434	UTU-70115 (ROW)	UTU-70196
UTU-72660	U-60786X (Bannock Unit)	U-63089X (East Mountain Unit)	

**BURLINGTON RESOURCES
MID-CONTINENT DIVISION**

**3300 NO. A STREET, BLDG. 6 (79705)
P.O. BOX 51810
MIDLAND, TEXAS 79710-1810**

**DRILLING DEPARTMENT
FAX NO. 915/688-6009**

DATE: 10/30 **TIME:** _____
TO: Lisha **FAX NO:** (801) 359-3940
CITY/STATE: SLE, UT
FROM: Eileen Day **PHONE:** (915) 688-9042
NO. OF PAGES (Including Cover Sheet): 3

SPECIAL INSTRUCTIONS:

Sorry so late!!

Call me if you need anything else!

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

TRANSFER OF AUTHORITY TO INJECT - UIC FORM 5

Well name and number: _____
Field or Unit name: KIVA UNIT API no. _____
Well location: Q0 _____ sections 459 township 39S range 25E county SAN JUAN
Effective Date of Transfer: 7/11/96

CURRENT OPERATOR

Transfer approved by:
Name EILEEN DANNI DEY Company MERIDIAN OIL INC.
Signature Eileen Danni Dey Address 5613 DTC PARKWAY
Title SR. REGULATORY COMPLIANCE REPRESENTATIVE ENGLEWOOD, CO 80111
Date 10/30/96 Phone (303) 930-9393

Comments:

NAME CHANGE ONLY

NEW OPERATOR

Transfer approved by:
Name EILEEN DANNI DEY Company BURLINGTON RESOURCES
Signature Eileen Danni Dey Address P.O. BOX 51810
Title SR. REGULATORY COMPLIANCE REP. MIDLAND, TEXAS 79705-1810
Date 10/30/96 Phone (915) 688-9042

Comments:

Name change only

(State use only)

Transfer approved by [Signature] Title ENVIRONMENTAL MANAGER
Approval Date 10-31-96

*961101 Appr. copy mailed to Burlington, Tx

OPERATOR CHANGE WORKSHEET

Routing:	
1-LEC ✓	6-UCI ✓
2-GLH ✓	7-KDR ✓
3-DTS ✓	8-SJ ✓
4-VLD ✓	9-FILE
5-RJF ✓	

Attach all documentation received by the division regarding this change.
Initial each listed item when completed. Write N/A if item is not applicable.

- Change of Operator (~~well sold~~) Designation of Agent
 Designation of Operator Operator Name Change ~~Only~~

The operator of the well(s) listed below has changed, effective: 7-11-96

TO: (new operator) <u>BURLINGTON RESOURCES O&G CO.</u>	FROM: (old operator) <u>MERIDIAN OIL INC</u>
(address) <u>3300 N "A" ST BLDG 6</u>	(address) <u>PO BOX 3209</u>
<u>MIDLAND TX 79710-1810</u>	<u>ENGLEWOOD CO 80155-3209</u>
<u>EILEEN DANNI DEY</u>	<u>EILEEN DANNI DEY</u>
Phone: <u>(915)688-6800</u>	Phone: <u>(303)930-9393</u>
Account no. <u>N7670</u>	Account no. <u>N7230</u>

WELL(S) attach additional page if needed: *KACHINA, KIVA, EAST MOUNTAIN, BANNOCK UNIT'S

Name: <u>**SEE ATTACHED**</u>	API: _____	Entity: _____	S	T	R	Lease: _____
Name: _____	API: _____	Entity: _____	S	T	R	Lease: _____
Name: _____	API: _____	Entity: _____	S	T	R	Lease: _____
Name: _____	API: _____	Entity: _____	S	T	R	Lease: _____
Name: _____	API: _____	Entity: _____	S	T	R	Lease: _____
Name: _____	API: _____	Entity: _____	S	T	R	Lease: _____
Name: _____	API: _____	Entity: _____	S	T	R	Lease: _____

OPERATOR CHANGE DOCUMENTATION

- 1 1. (r649-8-10) Sundry or other legal documentation has been received from the FORMER operator (attach to this form). *(Rec'd 9-13-96)*
- 2 2. (r649-8-10) Sundry or other legal documentation has been received from the NEW operator (Attach to this form). *(Rec'd 9-13-96)*
- 3 3. The Department of Commerce has been contacted if the new operator above is not currently operating any wells in Utah. Is the company registered with the state? (yes/no) no If yes, show company file number: #096593. *(E.H. 1-29-82)*
- 4 4. FOR INDIAN AND FEDERAL WELLS ONLY. The BLM has been contacted regarding this change. Make note of BLM status in comments section of this form. BLM approval of Federal and Indian well operator changes should ordinarily take place prior to the division's approval, and before the completion of steps 5 through 9 below.
- 5 5. Changes have been entered in the Oil and Gas Information System (3270) for each well listed above. *(i.e. UIC Program)*
(10-3-96)
- 6 6. Cardex file has been updated for each well listed above. *(10-3-96)*
- 7 7. Well file labels have been updated for each well listed above. *(10-3-96)*
- 8 8. Changes have been included on the monthly "Operator, Address, and Account Changes" memo for distribution to Trust Lands, Sovereign Lands, UGS, Tax Commission, etc. *(10-3-96)*
- 9 9. A folder has been set up for the Operator Change file, and a copy of this page has been placed there for reference during routing and processing of the original documents.

ENTITY REVIEW

- Yes 1. (r649-8-7) Entity assignments have been reviewed for all wells listed above. Were entity changes made? (yes/no) no If entity assignments were changed, attach copies of Form 6, Entity Action Form.
- N/A 2. Trust Lands, Sovereign Lands, Tax Commission, etc., have been notified through normal procedures of entity changes.

BOND VERIFICATION - (~~FEE WELLS ONLY~~) *961002 "rides" 80,000 to Burlington rec'd by Trust Lands Admin.

- Yes 1. (r649-3-1) The NEW operator of any ~~fee~~ lease well listed above has furnished a proper bond.
- N/A 2. A copy of this form has been placed in the new and former operator's bond files.
- N/A 3. The FORMER operator has requested a release of liability from their bond (yes/no) _____, as of today's date _____. If yes, division response was made to this request by letter dated _____.

LEASE INTEREST OWNER NOTIFICATION OF RESPONSIBILITY

- N/A 1. Copies of documents have been sent on _____ to _____ at Trust Lands for changes involving State leases, in order to remind that agency of their responsibility to review for proper bonding.
OTS 11/4/96

FILMING

- Yes 1. All attachments to this form have been microfilmed. Today's date: 12-27-96.

FILING

- 1. Copies of all attachments to this form have been filed in each well file.
- 2. The original of this form, and the original attachments are now being filed in the Operator Change file.

COMMENTS

STATE OF UTAH
INVENTORY OF INJECTION WELLS

OPERATOR	API NO.	WELL	TNS	RGE	SE	WELLTYPE	INDIAN COUNT
*****	*****	*****	***	***	**	*****	*****
AMOCO PRODUC	43-043-30139	ISLAND RANCH	04N	07E	26	INJD	N
AMOCO PRODUC	43-043-30106	ANSCHUTZ RAN	04N	07E	34	INJD	N
AMOCO PRODUC	43-043-30209	AREU #W01-02	03N	07E	1	INJG	N
AMOCO PRODUC	43-043-30265	AREU #W02-10	03N	07E	2	INJG	N
AMOCO PRODUC	43-043-30167	AREU #W36-08	04N	07E	36	INJG	N
AMOCO PRODUC	43-043-30255	AREU #W36-14	04N	07E	36	INJG	N
AMOCO PRODUC	43-043-30272	AREU #W19-08	04N	08E	19	INJG	N
AMOCO PRODUC	43-043-30145	AREU #W20-14	04N	08E	20	INJG	N
AMOCO PRODUC	43-043-30154	AREU #W29-12	04N	08E	29	INJG	N
AMOCO PRODUC	43-043-30216	AREU #30-15	04N	08E	30	INJG	N
AMOCO PRODUC	43-043-30248	AREU #W30-12	04N	08E	30	INJG	N
AMOCO PRODUC	43-043-30185	AREU #W30-14	04N	08E	30	INJG	N
AMOCO PRODUC	43-043-30218	AREU #W30-02	04N	08E	30	INJG	N
AMOCO PRODUC	43-043-30280	AREU #W31-05	04N	08E	31	INJG	N
ANADARKO PET	43-007-30167	SHIMMIN TRUS	12S	10E	11	INJI	N
APACHE CORPO	43-037-16169	R-124	40S	25E	24	INJI	Y
APACHE CORPO	43-037-16462	T-316	40S	26E	16	INJI	Y
APACHE CORPO	43-037-16456	T-117	40S	26E	17	INJI	Y
APACHE CORPO	43-037-16188	V-117	40S	26E	17	INJI	Y
APACHE CORPO	43-037-16463	T-317	40S	26E	17	INJI	Y
APACHE CORPO	43-037-16457	T-118	40S	26E	18	INJI	Y
APACHE CORPO	43-037-16458	T-119	40S	26E	19	INJI	Y
APACHE CORPO	43-037-11267	U-421	40S	26E	21	INJI	Y
APACHE CORPO	43-037-16191	V-121	40S	26E	21	INJI	Y
APACHE CORPO	43-037-16194	V-321	40S	26E	21	INJI	Y
APACHE CORPO	43-037-16460	T-121	40S	26E	21	INJW	Y
APACHE CORPO	43-037-16179	T-322	40S	26E	22	INJW	Y
BALLARD & AS	43-037-31293	DEADMAN CANY	37S	24E	20	INJG	N
BARRETT RESO	43-013-15122	UTE #1-A	03S	06W	18	INJD	Y
BAYLESS, ROB	43-043-30198	AAGARD #28-2	03N	08E	28	INJD	N
BERRY VENTUR	43-047-30555	NATURAL DUCK	09S	20E	15	INJW	Y
BERRY VENTUR	43-047-30523	DUCKCREEK 5-	09S	20E	16	INJW	Y
BTA OIL PROD	43-043-30001	FORK D-10	03N	14E	14	INJD	N
BTA OIL PROD	43-043-20186	BRIDGER LAKE	03N	14E	23	INJG	N
BTA OIL PROD	43-043-20010	BRIDGER LAKE	03N	14E	25	INJG	N
BURLINGTON R	43-037-31321	14-4 NAV.FED	39S	25E	4	INJW	N
BURLINGTON R	43-037-31112	NAV FED 4-1	39S	25E	4	INJW	N
BURLINGTON R	43-037-31259	FEDERAL 23-4	39S	25E	4	INJW	N
BURLINGTON R	43-037-31395	NAVAJO FEDER	39S	25E	4	INJW	N
BURLINGTON R	43-037-31317	43-5 NAV.FED	39S	25E	5	INJW	Y
BURLINGTON R	43-037-31267	21-9 NAV.FED	39S	25E	9	INJW	N
BURLINGTON R	43-037-31298	HAVASU FED.	38S	23E	24	INJW	N
BURLINGTON R	43-037-31282	ARABIAN FED.	38S	24E	19	INJW	N
BURLINGTON R	43-037-31458	HAVASU FED.	38S	24E	19	INJW	N
CENTRAL RESO	43-037-31095	CAVE CANYON	38S	24E	3	INJW	N
CHANDLER & A	43-047-15083	WHITE RIVER	08S	22E	9	INJW	Y
CHANDLER & A	43-047-31356	22-20	08S	22E	20	INJW	Y
CHANDLER & A	43-047-32582	STATE 7-16	08S	22E	16	INJW	Y
CHANDLER & A	43-047-32583	GLEN BENCH S	08S	22E	16	INJW	Y
CHANDLER & A	43-047-32756	15-19-8-22	08S	22E	19	INJW	Y
CHEVRON USA	43-047-32306	GYPNUM HILLS	08S	21E	21	INJW	Y
CHEVRON USA	43-047-15219	RWU 100A	07S	22E	21	INJW	Y
CHEVRON USA	43-047-15301	RW #199 (43-	07S	22E	22	INJW	Y

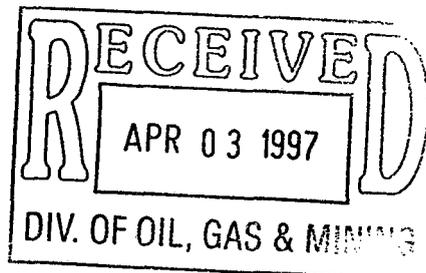
452333
452333
452333
452333
458728
452333
456186
456186

Kiva
chgd 5/97

Kachina
chgd 4/97

MERIT ENERGY COMPANY

12222 MERIT DRIVE, SUITE 1500
DALLAS, TEXAS 75251
(972) 701-8377
(972) 960-1252 Fax



April 2, 1997

Utah Division of Oil, Gas and Mining
Attn: Ms. Lisha Cordova
1594 West North Temple
Suite 1210
Salt Lake City, Utah 84114

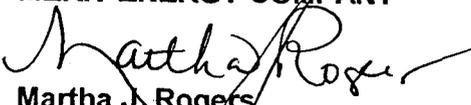
RE: Change of Operator to Merit Energy Company
Emery and San Juan County

Dear Ms. Cordova:

Enclosed please find a copy of Form 3160 executed by both parties, Merit Energy and Burlington Resources.

If additional information or forms are required to process this transaction, please contact me at 972-701-8377.

Yours very truly,
MERIT ENERGY COMPANY


Martha J. Rogers
Manager, Regulatory Affairs

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

SUBMIT IN TRIPLICATE

1. Type of Well

Oil Well Gas Well Other

2. Name of Operator

MERIT ENERGY COMPANY

3. Address and Telephone No (972) 701-8377

12222 MERIT DRIVE, DALLAS, TX 75251

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

2260' FNL - 440' FWL, SWNW
04 039S 025E, SLM

5. Lease Designation and Serial No.

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation
83687U6890

8. Well Name and No.

NAVAJO FEDERAL 12-4

9. API Well No.

43,037,3139500

10. Field and Pool, or Exploratory Area

KIVA (UPPER ISMAY), ISMAY

11. County or Parish, State

SAN JUAN, UT

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

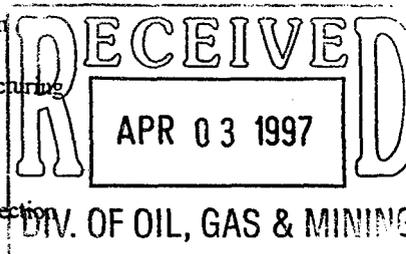
TYPE OF SUBMISSION

- Notice of Intent
 Subsequent Report
 Final Abandonment Notice

TYPE OF ACTION

- Abandonment Change of Plans
 Recompletion New Construction
 Plugging Back Non-Routine Fracturing
 Casing Repair Water Shut-Off
 Altering Casing Conversion to Injection
 Other CHANGE OF OPERATOR Dispose Water

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



13. Described 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.)*

EFFECTIVE AS OF JANUARY 1, 1997, BURLINGTON RESOURCES OIL & GAS COMPANY, THE PRIOR OPERATOR OF RECORD, TRANSFERRED ALL RIGHT, TITLE AND INTEREST IN THE NAVAJO FEDERAL 12-4 WELL TO MERIT PARTNERS, L.P. (AS TO 92.4%) AND MERIT ENERGY PARTNERS III, L.P. (AS TO 7.6%), C/O MERIT ENERGY COMPANY, 12222 MERIT DRIVE, DALLAS, TX 75251. ON APRIL 1, 1997, MERIT ENERGY COMPANY, THE GENERAL PARTNER FOR MERIT PARTNERS, L.P. AND MERIT ENERGY PARTNERS III, L.P., WILL TAKE OVER PHYSICAL OPERATIONS OF SAID WELL ON BEHALF OF SAID LIMITED PARTNERSHIPS AND IS CONSIDERED TO BE THE OPERATOR OF SAID WELL AS OF THAT DATE.

MERIT ENERGY COMPANY IS RESPONSIBLE UNDER THE TERMS AND CONDITIONS OF THE LEASE FOR THE OPERATIONS CONDUCTED UPON THE LEASED LANDS. BOND COVERAGE IN THE AMOUNT OF \$150,000 FOR MERIT ENERGY COMPANY IS PROVIDED UNDER BLM BOND NO. WY3011, IN FAVOR OF THE BUREAU OF LAND MANAGEMENT, U. S. DEPARTMENT OF THE INTERIOR.

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

Signed Martha Rogers Title Manager, Regulatory Affairs Date March 31, 1997

(This space for Federal or State office use)

Approved By _____ Title _____ Date _____
Condition of Approval, If any: _____

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

SUBMIT IN TRIPLICATE

1. Type of Well

Oil Well Gas Well Other

2. Name of Operator

BURLINGTON RESOURCES OIL & GAS COMPANY

3. Address and Telephone No (915)688-6800

P. O. BOX 51810, MIDLAND, TX 79710-1810

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

2260' FNL - 440' FWL, SWNW
04 039S 025E, SLM

5. Lease Designation and Serial No.

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation
83687U6890

8. Well Name and No.
NAVAJO FEDERAL 12-4

9. API Well No.
43,037,3139500

10. Field and Pool, or Exploratory Area
KIVA (UPPER ISMAY), ISMAY

11. County or Parish, State
SAN JUAN, UT

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

TYPE OF SUBMISSION

TYPE OF ACTION

Notice of Intent

Abandonment

Change of Plans

Subsequent Report

Recompletion

New Construction

Final Abandonment Notice

Plugging Back

Non-Routine Fracturing

Casing Repair

Water Shut-Off

Altering Casing

Conversion to Injection

Other CHANGE OF OPERATOR

Dispose Water

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

13. Described 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.)*

EFFECTIVE JANUARY 1, 1997, BURLINGTON RESOURCES OIL & GAS COMPANY, THE OPERATOR OF RECORD OF THE NAVAJO FEDERAL 12-4 WELL, TRANSFERRED ALL OF ITS RIGHT, TITLE AND INTEREST IN SAID WELL TO MERIT PARTNERS, L.P. (AS TO 92.4%) AND MERIT ENERGY PARTNERS III, L.P. (AS TO 7.6%), C/O MERIT ENERGY COMPANY, 12222 MERIT DRIVE, DALLAS, TX 75251.

ON APRIL 1, 1997, MERIT ENERGY COMPANY, GENERAL PARTNER FOR MERIT PARTNERS, L.P. AND MERIT ENERGY PARTNERS III, L.P., WILL TAKE OVER PHYSICAL OPERATIONS OF SAID WELL ON BEHALF OF SAID LIMITED PARTNERSHIPS.

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

Signed [Signature] Title Attorney-in-Fact

Date March 31, 1997

Kent Beers

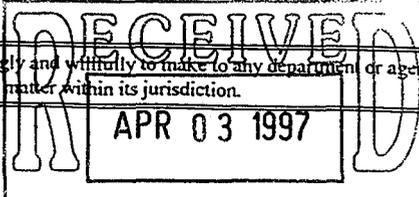
(This space for Federal or State office use)

Approved By _____ Title _____

Date _____

Condition of Approval, If any:

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

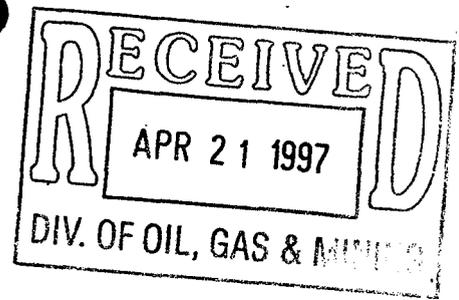


CHANGE OF OPERATOR STATE OF - UT

COUNTY	FIELD NAME	WELL NAME	STR	LSE#	WELLYTYPE	APIWELL	COMM NO.	FED CNTRL	ST CNTRL	
EMERY	EAST MOUNTAIN ,FERRON	EAST MOUNTAIN FEDERAL 13-35	35 016S 006E	ML-27626	GAS WELL	43,015,3023000	UT060P49-87U69	57287U6920	025	U 56933
EMERY	EAST MOUNTAIN ,FERRON	EAST MOUNTAIN FEDERAL 32-23	23 016S 006E		GAS WELL	43,015,3023100	UT060P49-87U69	57287U6920	025	U 17624
EMERY	FERRON ,FERRON	INDIAN CREEK 021762 3	02 017S 006E	ML-27626	GAS WELL	43,015,3017500		57287U6920	025	U 15204
EMERY	FERRON ,FERRON	INDIAN CREEK 1	02 017S 006E	ML-27626	GAS WELL	43,015,3008200		57287U6920	025	ML-27626
EMERY	FERRON ,FERRON	INDIAN CREEK 10176 5	10 017S 006E	ML-27626	GAS WELL	43,015,3011700		57287U6920	025	U 15203
EMERY	FERRON ,FERRON	INDIAN CREEK 14176 1	14 017S 006E	UTU15202	GAS WELL	43,015,3009100		UTU15202	109	U 15202
SAN JUAN	BANNOCK ,ISMAY	BANNOCK FEDERAL 21-33	33 038S 024E	UTU60786	OIL WELL	43,037,3142500	60786A	UTU60786A	109	U 46361
SAN JUAN	KACHINA ,CUTLER	WASH UNIT 2	13 038S 023E	UTU20894	WATER SOURCE	43,037,3132400		UTU20894	106	U 20894 (To Water Rights 4-7-97)
SAN JUAN	KACHINA ,ISMAY	ARABIAN FEDERAL 2	19 038S 024E	UTU56186	WATER INJECTED	43,037,3128200		UTU56186	106	U 56186
SAN JUAN	KACHINA ,ISMAY	HAVASU FEDERAL 11-19	19 038S 024E	UTU56186	WATER INJECTED	43,037,3145800		UTU56186	106	U 56186
SAN JUAN	KACHINA ,ISMAY	HAVASU FEDERAL 12-19	19 038S 024E	UTU56186	OIL WELL	43,037,3145700		UTU56186	106	U 56186
SAN JUAN	KACHINA ,ISMAY	HAVASU FEDERAL 12-19A	19 038S 024E	UTU56186	OIL WELL	43,037,3145900		UTU56186	106	U 56186
SAN JUAN	KACHINA ,ISMAY	HAVASU FEDERAL 22-19	19 038S 024E	UTU56186	OIL WELL	43,037,3127800		UTU56186	106	U 56186
SAN JUAN	KACHINA ,ISMAY	HAVASU FEDERAL 41-24	24 038S 023E	UTU20895	OIL WELL	43,037,3127900		UTU20895	106	U 20895
SAN JUAN	KACHINA ,ISMAY	HAVASU FEDERAL 42-24	24 038S 023E	UTU20895	WATER INJECTED	43,037,3129800		UTU20895	106	U 20895

CHANGE OF OPERATOR STATE OF - UT

<u>COUNTY</u>	<u>FIELD NAME</u>	<u>WELL NAME</u>	<u>STR</u>	<u>LSE#</u>	<u>WELLTYPE</u>	<u>APIWELL</u>	<u>COMM NO.</u>	<u>FED CNTRL</u>	<u>ST CNTRL</u>
SAN JUAN	KIVA ,DESERT CREEK	NAVAJO FEDERAL 41-5	05 039S 025E	UTU57895	OIL WELL	43,037,3135800		UTU57895	108 <i>1157895</i>
SAN JUAN	LION MESA ,CANE CREEK	HATCH POINT FEDERAL 27-1A	27 027S 021E	UTU20016	OIL WELL	43,037,3051800		UTU20016	028 <i>420016</i>



TRANSFER OF AUTHORITY TO INJECT - UIC FORM 5

Well name and number: NAVAJO FEDERAL 12-4
Field or Unit name: KIVA (UPPER ISMAY) API no. 4303731395
Well location: QQ SWNW section 4 township 39S range 25E county SAN JUAN
Effective Date of Transfer: April 1, 1997

CURRENT OPERATOR

Transfer approved by:

Name EILEEN DANNI DEY Company BURLINGTON RESOURCES OIL & GAS
Signature *Eileen Danni Dey* Address P.O. BOX 51810
Title REGULATORY COMPLIANCE SUPERVISOR MIDLAND, TX 79710-1810
Date 4-8-97 Phone (915) 688-9042

Comments: EFFECTIVE DATE OF SALE IS 1-1-97.
EFFECTIVE DATE OF TRANSFER OF OPERATIONS IS 4-1-97..

NEW OPERATOR

Transfer approved by:

Name MARTHA J. ROGERS Company MERIT ENERGY COMPANY
Signature *Martha J. Rogers* Address 12222 Merit Drive
Title Manager, Regulatory Affairs Dallas, Texas 75251
Date 4/15/97 Phone (972) 701-8377

Comments: Eff. date of sale is 1/1/97 and the eff. date of transfer of operations is 4/1/97.

(State use only)

Transfer approved by *[Signature]* Title *Favora Morgan*
Approval Date 6-2-97

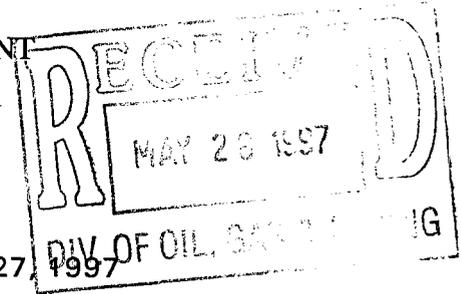
* Appr. copy mailed 6-2-97. Jec



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155



May 27, 1997

Merit Energy Company
12222 Merit Drive, Suite 1500
Dallas, Texas 75251

Re: Kiva (Upper Ismay) Unit
San Juan County, Utah

Gentlemen:

On May 21, 1997, we received an indenture dated April 1, 1997, whereby Burlington Resources Oil and Gas Company resigned as Unit Operator and Merit Energy Company was designated as Successor Unit Operator for the Kiva (Upper Ismay) Unit, San Juan County, Utah.

The indenture was approved by all required parties and the signatory parties have complied with Sections 5 and 6 of the unit agreement. The instrument is hereby approved effective May 27, 1997. In approving this designation, the Authorized Officer neither warrants nor certifies that the designated party has obtained all required approval that would entitle it to conduct operations under Kiva (Upper Ismay) Unit Agreement.

Your nationwide (Wyoming) oil and gas bond No. 3011 will be used to cover all operations within the Kiva (Upper Ismay) Unit.

It is requested that you notify all interested parties of the change in unit operator. Copies of the approved instruments are being distributed to the appropriate federal offices, with one copy returned herewith.

Sincerely,

/s/ Robert A. Henricks

Robert A. Henricks
Chief, Branch of Fluid Minerals

Enclosure

bcc: District Manager - Moab (w/enclosure)
~~Division of Oil, Gas & Mining~~
Minerals Adjudication Group U-932
File - Kiva (Upper Ismay) Unit (w/enclosure)
MMS - Data Management Division
Agr. Sec. Chron
Fluid Chron

U-931:TAThompson:tt:5/27/97

Well Status Report
Utah State Office
Bureau of Land Management

Lease	Api Number	Well Name	QTR	Section	Township	Range	Well Status	Operator
** Inspection Item: 83687U6890								
✓UTU52333	4303731395	12-4 NAVAJO-FEDERAL	SWNW	4	T39S	R25E	WIW	BURLINGTON RESOURCES O + G CO
✓UTU52333	4303731321	14-4 NAVAJO FED	SWSW	4	T39S	R25E	WIW	BURLINGTON RESOURCES O + G CO
✓UTU52333	4303731267	21-9 NAVAJO-FEDERAL	NENW	9	T39S	R25E	WIW	BURLINGTON RESOURCES O + G CO
✓UTU52333	4303731259	23-4 NAVAJO-FEDERAL	NESW	4	T39S	R25E	WIW	BURLINGTON RESOURCES O + G CO
✓UTU52333	4303731745	24-4 KIVAL FEDERAL	SESW	4	T39S	R25E	POW	BURLINGTON RESOURCES O + G CO
✓UTU52333	4303731112	4-1 NAVAJO FEDERAL	SESW	4	T39S	R25E	WIW	BURLINGTON RESOURCES O + G CO
✓UTU52333	4303731161	4-2 NAVAJO FEDERAL	SWSE	4	T39S	R25E	POW	BURLINGTON RESOURCES O + G CO
UTU52333	4303731176	4-3 NAVAJO FEDERAL	NESW	4	T39S	R25E	P+A	BURLINGTON RESOURCES O + G CO
✓UTU52333	4303731179	4-4 NAVAJO FEDERAL	NWSW	4	T39S	R25E	POW	BURLINGTON RESOURCES O + G CO
✓UTU58728	4303731261	42-5 NAVAJO-FEDERAL	SENE	5	T39S	R25E	POW	BURLINGTON RESOURCES O + G CO
UTU52333	4303731263	42-9 NAVAJO-FEDERAL	SENE	9	T39S	R25E	WSW	BURLINGTON RESOURCES O + G CO
✓UTU58728	4303731317	43-5 NAVAJO (BH 5)	NWSW	4	T39S	R25E	OSI	BURLINGTON RESOURCES O + G CO
✓UTU52333	4303731001	9-1 NAVAJO FEDERAL	NWNE	9	T39S	R25E	POW	BURLINGTON RESOURCES O + G CO

ENTITY REVIEW

- 1. (r649-8-7) Entity assignments have been reviewed for all wells listed above. Were entity changes made? (yes/no) ____ If entity assignments were changed, attach copies of Form 6, Entity Action Form.
10655 to 9975 (Kiva Upper Ismay) entity.
- 2. Trust Lands, Sovereign Lands, Tax Commission, etc., have been notified through normal procedures of entity changes.

BOND VERIFICATION - (FEE WELLS ONLY)

- 1. (r649-3-1) The NEW operator of any fee lease well listed above has furnished a proper bond.
- ___ 2. A copy of this form has been placed in the new and former operator's bond files.
- ___ 3. The FORMER operator has requested a release of liability from their bond (yes/no) ____, as of today's date _____. If yes, division response was made to this request by letter dated _____.

LEASE INTEREST OWNER NOTIFICATION OF RESPONSIBILITY

- 1. Copies of documents have been sent on _____ to _____ at Trust Lands for changes involving State leases, in order to remind that agency of their responsibility to review for proper bonding.
- 2. (r649-2-10) The former operator of any fee lease wells listed above has been contacted and informed by letter dated _____ 19 ____, of their responsibility to notify all interest owners of this change.

FILMING

- 1. All attachments to this form have been microfilmed. Today's date: 6.20.97

FILING

- ___ 1. Copies of all attachments to this form have been filed in each well file.
- ___ 2. The original of this form, and the original attachments are now being filed in the Operator Change file.

COMMENTS

970430 Kachina Unit Op. Chg. Aprv. & changed. (Separate change)

970530 Kiva Unit Op. chg. Aprv. 5-27-97.

(East Mtn. Unit & Bannock Unit Not Aprv. Yet - See separate chg.)
when aprv.

INJECTION WELL - PRESSURE TEST

Well Name: NAVAJO FEDERAL 12-4 API Number: 43-037-31395
 Qtr/Qtr: SW/NW Section: 4 Township: 39S Range: 25E
 Company Name: MERIT ENERGY COMPANY
 Lease: State _____ Fee _____ Federal X Indian _____
 Inspector: J THOMPSON Date: 8/31/99 10:00 AM

Initial Conditions:

Tubing - Rate: _____ Pressure: 1350 psi

Casing/Tubing Annulus - Pressure: 0 psi

Conditions During Test:

Time (Minutes)	Annulus Pressure	Tubing Pressure
0	<u>0</u>	<u>1350</u>
5	<u>1000</u>	<u>1350</u>
10	<u>1350</u>	<u>1350</u>
15	<u>1350</u>	<u>1350</u>
20	<u>1350</u>	<u>1350</u>
25	<u>1350</u>	<u>1350</u>
30	<u>1350</u>	<u>1350</u>

Results: Pass/Fail

Conditions After Test:

Tubing Pressure: 1350 psi

Casing/Tubing Annulus Pressure: 0 psi

COMMENTS: _____

[Signature]
 Operator Representative

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

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: See attached
2. NAME OF OPERATOR: Merit Energy Company		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: 12222 Merit Dr., Suite _____ CITY Dallas STATE TX ZIP 75251		7. UNIT or CA AGREEMENT NAME: See attached
4. LOCATION OF WELL FOOTAGES AT SURFACE: See Attached		8. WELL NAME and NUMBER: See attached
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:		9. API NUMBER:
COUNTY: San Juan		10. FIELD AND POOL, OR WILDCAT: See attached
STATE: UTAH		

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input checked="" type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Merit Energy Company advises, effective SEPT. 30, 2000, Journey Operating, L.L.C. will become the operator of the wells on the attached list.

Journey Operating, L.L.C.
1201 Louisiana, Suite 1040
Houston, TX. 77002
(713) 655-0595

By: Brian A. Baer
Brian A. Baer, President

RECEIVED
OCT 20 2000
DIVISION OF
OIL, GAS AND MINING

NAME (PLEASE PRINT) <u>Arlene Valliquette</u>	TITLE <u>Manager - Regulatory Affairs</u>
SIGNATURE <u>Arlene Valliquette</u>	DATE <u>9/29/00</u>

(This space for State use only)

CHANGE OF OPERATOR
from Merit Energy Company to Journey Operating, L.L.C.
San Juan County, Utah

Attachment to Utah Form 19

Well Type	Lease Serial No.	Field Name	Well Name/Number	API Number	Location of Well
Oil Well	UTU-40361	Bannock	Bannock Federal #21-33	43-037-31425	NE NW (685' FNL & 1520' FWL) Sec. 33-T38S-R24E
Injection Well	I-149-IND-9123	Ismay	Ismay Flodine Park R-124	43-037-16169	NE NE (660' FNL & 660' FEL) Sec. 24-T40S-R25E
Oil Well	14-20-603-2055-A	Ismay	Ismay Flodine Park S-216	43-037-15546	SW NW (1820' FNL & 500' FWL) Sec. 16-T40S-R26E
Injection Well	14-20-603-2055-A	Ismay	Ismay Flodine Park T-316	43-037-16462	NE SW (1980' FSL & 1980' FWL) Sec. 16-T40S-R26E
Oil Well	14-20-603-2055-A	Ismay	Ismay Flodine Park S-416	43-037-15544	SW SW (1820' FNL & 500' FWL) Sec. 16-T40S-R26E
Oil Well	14-20-603-2055-A	Ismay	Ismay Flodine Park U-416	43-037-15545	SW SE (660' FSL & 1980' FEL) Sec. 16-T40S-R26E
Injection Well	I-149-IND-9124	Ismay	Ismay Flodine Park T-117	43-037-16456	NE NW (775' FNL & 1995' FWL) Sec. 17-T40S-R26E
Oil Well	I-149-IND-9124	Ismay	Ismay Flodine Park S-217	43-037-16170	SW NW (1980' FNL & 660' FWL) Sec. 17-T40S-R26E
Injection Well	I-149-IND-9124	Ismay	Ismay Flodine Park V-117	43-037-16188	NE NE (660' FNL & 660' FEL) Sec. 17-T40S-R26E
Oil Well	I-149-IND-9124	Ismay	Ismay Flodine Park U-217	43-037-16180	SW NE (1980' FNL & 1820' FEL) Sec. 17-T40S-R26E
Injection Well	I-149-IND-9124	Ismay	Ismay Flodine Park T-317	43-037-16463	NE SW (1980' FSL & 1980' FWL) Sec. 17-T40S-R26E
Oil Well	I-149-IND-9124	Ismay	Ismay Flodine Park U-417	43-037-16185	SW SE (500' FSL & 1820' FEL) Sec. 17-T40S-R26E
Injection Well	I-149-IND-9123	Ismay	Ismay Flodine Park T-118	43-037-16457	NE NW (660' FNL & 1980' FWL) Sec. 18-T40S-R26E
Oil Well	I-149-IND-9123	Ismay	Ismay Flodine Park S-218	43-037-16171	SW NW (1820' FNL & 660' FWL) Sec. 18-T40S-R26E
Oil Well	I-149-IND-9123	Ismay	Ismay Flodine Park T-318	43-037-16464	NE SE (1980' FSL & 1980' FWL) Sec. 18-T40S-R26E
Oil Well	I-149-IND-9123	Ismay	Ismay Flodine Park V-318	43-037-16467	NE SE (1980' FSL & 660' FEL) Sec. 18-T40S-R26E
Oil Well	I-149-IND-9123	Ismay	Ismay Flodine Park U-418	43-037-16186	SW SE (660' FSL & 1980' FEL) Sec. 18-T40S-R26E
Injection Well	I-149-IND-9123	Ismay	Ismay Flodine Park T-119	43-037-16458	NE NW (660' FNL & 1980' FWL) Sec. 19-T40S-R26E
Water Source Well	I-149-IND-9123	Ismay	Ismay Flodine Park V-219	43-037-16519	SE NE (1980' FNL & 560' FEL) Sec. 19-T40S-R26E
Oil Well	I-149-IND-9124	Ismay	Ismay Flodine Park V-120	43-037-16190	NE NE (660' FNL & 660' FEL) Sec. 20-T40S-R26E
Water Source Well	I-149-IND-9124	Ismay	Ismay Flodine Park V-220	43-037-20055	SE NE (1950' FNL & 1120' FEL) Sec. 20-T40S-R26E
Oil Well	I-149-IND-9124	Ismay	Ismay Flodine Park S-121	43-037-31629	NW NW (500' FNL & 660' FWL) Sec. 21-T40S-R26E
Injection Well	I-149-IND-9124	Ismay	Ismay Flodine Park T-121	43-037-16460	NE NW (610' FNL & 2050' FWL) Sec. 21-T40S-R26E
Water Source Well	I-149-IND-9124	Ismay	Ismay Flodine Park U-121	43-037-20056	NW NE (540' FNL & 1980' FEL) Sec. 21-T40S-R26E
Injection Well	I-149-IND-9124	Ismay	Ismay Flodine Park V-121	43-037-16191	NE NE (660' FNL & 660' FEL) Sec. 21-T40S-R26E
Injection Well	I-149-IND-9124	Ismay	Ismay Flodine Park U-421	43-037-11267	SW SE (660' FSL & 1980' FEL) Sec. 21-T40S-R26E
Injection Well	I-149-IND-9124	Ismay	Ismay Flodine Park V-321	43-037-16194	NE SE (1980' FSL & 670' FEL) Sec. 21-T40S-R26E

CHANGE OF OPERATOR
from Merit Energy Company to Journey Operating, L.L.C.
San Juan County, Utah

Attachment to Utah Form 19

Well Type	Lease Serial No.	Field Name	Well Name/Number	API Number	Location of Well
Oil Well	I-149-IND-9124	Ismay	Ismay Flodine Park S-222	43-037-16173	SW NW (2030' FNL & 820' FWL) Sec. 22-T40S-R26E
Injection Well	I-149-IND-9124	Ismay	Ismay Flodine Park T-322	43-037-16179	NE SW (1820' FSL & 1935' FWL) Sec. 22-T40S-26E
Oil Well	I-149-IND-9124	Ismay	Ismay Flodine Park U-422	43-037-16187	SW SE (820' FSL & 2140' FEL) Sec. 22-T40S-R26E
Oil Well	NOG-9904-1324	Ismay	Ismay Flodine Park S-227	43-037-16231	SW NW (2140' FNL & 820' FWL) Sec. 27-T40S-R26E
Oil Well	NOG-9904-1324	Ismay	Ismay Flodine Park U-127	43-037-31648	NE NE (745' FNL & 595' FEL) Sec. 27-T40S-R26E
Oil Well	NOG-9904-1324	Ismay	Ismay Flodine Park U-227	43-037-16234	SW NE (2120' FNL & 1950' FEL) Sec. 27-T40S-R26E
Oil Well	14-20-603-2058-A	Ismay	Ismay Flodine Park U-234	43-037-16184	SW NE (1980' FNL & 2080' FEL) Sec. 34-T40S-R26E
Water Source Well	UTU-20894	Kachina	Wash Unit #2	43-037-31324	SE SE (470' FSL & 850' FEL) Sec. 13-T38S-R23E
Oil Well	UTU-20895	Kachina	Havasus Federal #41-24	43-037-31279	NE NE (1050' FNL & 500' FEL) Sec. 24-T38S-R23E
Injection Well	UTU-20895	Kachina	Havasus Federal #42-24	43-037-31298	SE NE (1970' FNL & 461' FEL) Sec. 24-T38S-R23E
Injection Well	UTU-56186	Kachina	Arabian Federal #2	43-037-31282	NW SW (2180' FSL & 950' FWL) Sec. 19-T38S-R24E
Oil Well	UTU-56186	Kachina	Arabian Federal #3	43-037-31287	NE SW (1470' FSL & 1750' FWL) Sec. 19-T38S-R24E
Injection Well	UTU-56186	Kachina	Havasus Federal #11-19	43-037-31458	NW NW (940' FNL & 590' FWL) Sec. 19-T38S-R24E
Oil Well	UTU-56186	Kachina	Havasus Federal #12-19	43-037-31457	SW NW (1840' FNL & 410' FWL) Sec. 19-T38S-R24E
Oil Well	UTU-56186	Kachina	Havasus Federal #12-19A	43-037-31459	SW NW (2520' FNL & 200' FWL) Sec. 19-T38S-R24E
Oil Well	UTU-56186	Kachina	Havasus Federal #22-19	43-037-31278	SW NW (1850' FNL & 1255' FWL) Sec. 19-T38S-R24E
Injection Well	UTU-52333	Kiva	Navajo Federal #12-4	43-037-31395	SW NW (2260' FNL & 440' FWL) Sec. 4-T39S-R25E
Injection Well	UTU-52333	Kiva	Navajo Federal #14-4	43-037-31321	SW SW (1150' FSL & 1110' FWL) Sec. 4-T39S-R25E
Injection Well	UTU-52333	Kiva	Navajo Federal #23-4	43-037-31259	NE SW (1500' FSL & 2500' FWL) Sec. 4-T39S-R25E
Oil Well	UTU-52333	Kiva	Kiva Federal #24-4	43-037-31745	SE SW (1057' FSL & 1997' FWL) Sec. 4-T39S-R25E
Injection Well	UTU-52333	Kiva	Navajo Federal #4-1	43-037-31112	SE SW (370' FSL & 1940' FWL) Sec. 4-T39S-R25E
Oil Well	UTU-52333	Kiva	Navajo Federal #4-2	43-037-31161	SW SE (300' FSL & 2225' FEL) Sec. 4-T39S-R25E
Oil Well	UTU-52333	Kiva	Navajo Federal #4-4	43-037-31179	NW SW (1980' FSL & 660' FWL) Sec. 4-T39S-R25E
Oil Well	UTU-57895	Kiva	Navajo Federal #42-5	43-037-31261	SE NE (2130' FNL & 320' FEL) Sec. 5-T39S-R25E
Injection Well	UTU-58728	Kiva	Navajo Federal #43-5	43-037-31317	NE SE (1954' FSL & 627' FEL) Sec. 5-T39S-R25E
Oil Well	UTU-52333	Kiva	Navajo Federal #9-1	43-037-31001	NW NE (770' FNL & 2010' FEL) Sec. 9-T39S-R25E

CHANGE OF OPERATOR
from Merit Energy Company to Journey Operating, L.L.C.
San Juan County, Utah

Attachment to Utah Form 19

Well Type	Lease Serial No.	Field Name	Well Name/Number	API Number	Location of Well
● Injection Well	UTU-52333	Kiva	Navajo Federal #21-9	43-037-31267	NE NW (330' FNL & 2510' FWL) Sec. 9-T39S-R25E
Water Source Well	UTU-52333	Kiva	Navajo Federal #42-9	43-037-31263	SE NE (1850' FNL & 1140' FEL) Sec. 9-T39S-R25E



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155

IN REPLY REFER TO
UT-931

January 4, 2001

Journey Operating, L.L.C.
Attn: Sandra Meche
Louisiana Place
1201 Louisiana Street
Houston, Texas 77002

Re: Kiva (Upper Ismay) Unit
San Juan County, Utah

Gentlemen:

We received an indenture dated September 30, 2000, whereby Merit Energy Company resigned as Unit Operator and Journey Operating, L.L.C. was designated as Successor Unit Operator for the Kiva (Upper Ismay) Unit, San Juan County, Utah.

This indenture was executed by all required parties and the signatory parties have complied with Sections 5 and 6 of the unit agreement. The instrument is hereby approved effective January 4, 2001. In approving this designation, the Authorized Officer neither warrants nor certifies that the designated party has obtained all required approval that would entitle it to conduct operations under the Kiva (Upper Ismay) Unit Agreement.

Your nationwide (Wyoming) oil and gas bond No. 3354 will be used to cover all operations within the Kiva (Upper Ismay) Unit.

It is requested that you notify all interested parties of the change in unit operator. Copies of the approved instruments are being distributed to the appropriate federal offices, with one copy returned herewith.

Sincerely,

/s/ Robert A. Henricks

Robert A. Henricks
Chief, Branch of Fluid Minerals

Enclosure

bcc: Field Manager - Moab (w/enclosure)
Division of Oil, Gas & Mining
Minerals Adjudication Group U-932
File - Kiva (Upper Ismay) Unit (w/enclosure)
MMS - Data Management Division
Agr. Sec. Chron
Fluid Chron

UT931:TAThompson:tt:1/4/01

Results of query for MMS Account Number 83687U6890

API Number	Operator	Well Name	Well Status	Lease or CA Number	Inspection Item	Township	Range	Section	Quarter/Quarter	Field Name	Production Zo
4303731001	MERIT ENERGY COMPANY	9-1 NAVAJO FEDERAL	POW	UTU52333	83687U6890	39S	25E	9	NWNE	KIVA	ISMAY
4303731112	MERIT ENERGY COMPANY	4-1 NAVAJO FEDERAL	WTW	UTU52333	83687U6890	39S	25E	4	SESW	KIVA	DESERT CREE
4303731161	MERIT ENERGY COMPANY	4-2 NAVAJO FEDERAL	POW	UTU52333	83687U6890	39S	25E	4	SWSE	KIVA	ISMAY
4303731176	MERIT ENERGY COMPANY	4-3 NAVAJO FEDERAL	P+A	UTU52333	83687U6890	39S	25E	4	NESW	KIVA	
4303731179	MERIT ENERGY COMPANY	4-4 NAVAJO FEDERAL	POW	UTU52333	83687U6890	39S	25E	4	NWSW	KIVA	ISMAY
4303731259	MERIT ENERGY COMPANY	23-4 NAVAJO-FEDERAL	TA	UTU52333	83687U6890	39S	25E	4	NESW	KIVA	ISMAY-DESER CREEK
4303731261	MERIT ENERGY COMPANY	42-5 NAVAJO-FEDERAL	POW	UTU58728	83687U6890	39S	25E	5	SENE	KIVA	ISMAY
4303731263	MERIT ENERGY COMPANY	42-9 NAVAJO-FEDERAL	WSW	UTU52333	83687U6890	39S	25E	9	SENE	KIVA	
4303731267	MERIT ENERGY COMPANY	21-9 NAVAJO-FEDERAL	WTW	UTU52333	83687U6890	39S	25E	9	NENW	KIVA	ISMAY

4303731317	MERIT ENERGY COMPANY	43-5 NAVAJO (BH 5)	OSI	UTU58728	83687U6890	39S	25E	4	NWSW	KIVA	ISMAY
4303731321	MERIT ENERGY COMPANY	14-4 NAVAJO FED	WIW	UTU52333	83687U6890	39S	25E	4	SWSW	KIVA	ISMAY
4303731395	MERIT ENERGY COMPANY	12-4 NAVAJO-FEDERAL	WIW	UTU52333	83687U6890	39S	25E	4	SWNW	KIVA	ISMAY
4303731745	MERIT ENERGY COMPANY	24-4 KIVAL FEDERAL	POW	UTU52333	83687U6890	39S	25E	4	SESW	KIVA	ISMAY

DISCLAIMER for online data: No warranty is made by the BLM for use of the data for purposes not intended by the BLM.

OPERATOR CHANGE WORKSHEET

ROUTING

1. GLH		4-KAS <input checked="" type="checkbox"/>
2. CDW		5- BT <input checked="" type="checkbox"/>
3. JLT		6-FILE

Enter date after each listed item is completed

X Change of Operator (Well Sold)

Designation of Agent

Operator Name Change (Only)

Merger

The operator of the well(s) listed below has changed, effective: **9-30-2000**

FROM: (Old Operator):
MERIT ENERGY COMPANY
Address: 12222 MERIT DR.
DALLAS, TX 75251
Phone: 1-(972)-701-8377
Account N4900

TO: (New Operator):
JOURNEY OPERATING LLC
Address: 1201 LOUISIANA, SUITE 1040
HOUSTON, TX 77002
Phone: 1-(713)-655-0595
Account N1435

CA No.

Unit: KIVA (UPPER ISMAY)

WELL(S)

NAME	API NO.	ENTITY NO.	SEC. TWN RNG	LEASE TYPE	WELL TYPE	WELL STATUS
NAVAJO FEDERAL 4-1	43-037-31112	9975	04-39S-25E	FEDERAL	WI	A
NAVAJO FEDERAL 12-4	43-037-31395	10864	04-39S-25E	FEDERAL	WI	A
NAVAJO FEDERAL 14-4	43-037-31321	10780	04-39S-25E	FEDERAL	WI	A
NAVAJO FEDERAL 23-4	43-037-31259	9975	04-39S-25E	FEDERAL	WI	A
NAVAJO FEDERAL 43-5	43-037-31317	9975	05-39S-25E	FEDERAL	WI	A
NAVAJO FEDERAL 21-9	43-037-31267	10759	09-39S-25E	FEDERAL	WI	A
KIVA FEDERAL 24-4	43-037-31745	9975	04-39S-25E	FEDERAL	OW	P
NAVAJO FEDERAL 4-2	43-037-31161	9975	04-39S-25E	FEDERAL	OW	P
NAVAJO FEDERAL 4-4	43-037-31179	9975	04-39S-25E	FEDERAL	OW	P
NAVAJO FEDERAL 42-5	43-037-31261	9975	05-39S-25E	FEDERAL	OW	P
NAVAJO FEDERAL 9-1	43-037-31001	9975	09-39S-25E	FEDERAL	OW	P
NAVAJO FEDERAL 42-9	43-037-31263	99998	09-39S-25E	FEDERAL	WSW	I

OPERATOR CHANGES DOCUMENTATION

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 10/23/2000
2. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 10/23/2000
3. The new company has been checked through the **Department of Commerce, Division of Corporations Database** on: 01/05/2001

4. Is the new operator registered in the State of Utah: YES Business Number: 4822566-0161
5. If **NO**, the operator was contacted on: _____
6. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the (merger, name change, or operator change for all wells listed on Federal or Indian leases on: 01/04/2001
7. **Federal and Indian Units:** The BLM or BIA has approved the successor of unit operator for wells listed on: 01/04/2001
8. **Federal and Indian Communization Agreements ("CA"):** The BLM or the BIA has approved the operator change for all wells listed involved in a CA on: N/A
9. **Underground Injection Control ("UIC") Pro:** The Division has approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: 01/08/2001

DATA ENTRY:

1. Changes entered in the **Oil and Gas Database** on: 01/05/2001
2. Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 01/05/2001
3. Bond information entered in RBDMS on: N/A
4. Fee wells attached to bond in RBDMS on: N/A

STATE BOND VERIFICATION:

1. State well(s) covered by Bond No.: N/A

FEE WELLS - BOND VERIFICATION/LEASE INTEREST OWNER NOTIFICATION:

1. (R649-3-1) The **NEW** operator of any fee well(s) listed has furnished a bond: N/A
2. The **FORMER** operator has requested a release of liability from their bond on: N/A
The Division sent response by letter on: N/A
3. (R649-2-10) The **FORMER** operator of the Fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: N/A

FILMING:

1. All attachments to this form have been **MICROFILMED** on: 2-21-01

FILING:

1. **ORIGINALS/COPIES** of all attachments pertaining to each individual well have been filed in each well file on: _____

COMMENTS:

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

UIC FORM 5

TRANSFER OF AUTHORITY TO INJECT

Well Name and Number Navajo Federal #12-4		API Number 4303731395
Location of Well Footage : 2260' FNL & 440' FWL		Field or Unit Name Kiva (Upper Ismay) Unit
County : San Juan	QQ, Section, Township, Range: SWNW 4 39S 25E	Lease Designation and Number UTU-52333
State : UTAH		

EFFECTIVE DATE OF TRANSFER: 9/30/00

CURRENT OPERATOR

Company: <u>Merit Energy Company</u>	Name: <u>Arlene Valliquette</u>
Address: <u>12222 Merit Drive, Suite 1500</u>	Signature: <u>Arlene Valliquette</u>
<u>city Dallas state TX zip 75251</u>	Title: <u>Manager - Regulatory Affairs</u>
Phone: <u>(972) 701-8377</u>	Date: <u>9/29/00</u>
Comments:	

NEW OPERATOR

Company: <u>Journey Operating, L.L.C.</u>	Name: <u>Brian A. Baer</u>
Address: <u>1201 Louisiana, Suite 1040</u>	Signature: <u>Brian A. Baer</u>
<u>city Houston state TX zip 77002</u>	Title: <u>President</u>
Phone: <u>(713) 655-0595</u>	Date: <u>10/6/00</u>
Comments:	

(This space for State use only)

Transfer approved by: [Signature] Approval Date: 11/9/01
Title: Prob. Services Manager

Comments:

Division of Oil, Gas and Mining
OPERATOR CHANGE WORKSHEET

ROUTING

1. DJJ
2. CDW

X Change of Operator (Well Sold)

Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective: **6/9/2006**

FROM: (Old Operator): N1435-Journey Operating, LLC 201 Louisiana, Suite 1040 Houston, TX 77002 Phone: 1 (713) 655-0595	TO: (New Operator): N0265-Citation Oil & Gas Corp 8223 Willow Place South Houston, TX 77070 Phone: 1 (281) 517-7800
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WELL NAME	CA No.			Unit:		KIVA		
	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
NAVAJO FEDERAL 9-1	09	390S	250E	4303731001	9975	Federal	OW	P
NAVAJO FED 4-1	04	390S	250E	4303731112	9975	Federal	WI	A
NAVAJO FEDERAL 4-2	04	390S	250E	4303731161	9975	Federal	OW	S
NAVAJO FEDERAL 4-4	04	390S	250E	4303731179	9975	Federal	OW	P
NAVAJO FED 23-4	04	390S	250E	4303731259	9975	Federal	WI	I
NAVAJO FEDERAL 42-5	05	390S	250E	4303731261	9975	Federal	OW	S
NAVAJO FEDERAL 42-9	09	390S	250E	4303731263	9975	Federal	WS	A
NAVAJO FED 21-9	09	390S	250E	4303731267	9975	Federal	WI	A
NAVAJO FED 43-5	04	390S	250E	4303731317	9975	Federal	WI	A
NAVAJO FED 14-4	04	390S	250E	4303731321	9975	Federal	WI	A
NAVAJO FED 12-4	04	390S	250E	4303731395	9975	Federal	WI	A
24-4 KIVA FEDERAL	04	390S	250E	4303731745	9975	Federal	OW	P

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

- (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 6/23/2006
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 6/23/2006
- The new company was checked on the **Department of Commerce, Division of Corporations Database** on: _____
- Is the new operator registered in the State of Utah: YES Business Number: 793304-0143
- (R649-9-2)Waste Management Plan has been received on: IN PLACE
- Inspections of LA PA state/fee well sites complete on: n/a
- Reports current for Production/Disposition & Sundries on: ok
- Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM 7/6/2006 BIA
- Federal and Indian Units:**
 The BLM or BIA has approved the successor of unit operator for wells listed on: 7/6/2006
- Federal and Indian Communization Agreements ("CA"):**
 The BLM or BIA has approved the operator for all wells listed within a CA on: n/a
- Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: 6/30/2006

DATA ENTRY:

- Changes entered in the **Oil and Gas Database** on: 7/31/2006
- Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 7/31/2006
- Bond information entered in RBDMS on: n/a
- Fee/State wells attached to bond in RBDMS on: n/a
- Injection Projects to new operator in RBDMS on: 7/31/2006
- Receipt of Acceptance of Drilling Procedures for APD/New on: n/a

BOND VERIFICATION:

- Federal well(s) covered by Bond Number: 104061650
- Indian well(s) covered by Bond Number: 104061656

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

5. LEASE DESIGNATION AND SERIAL NUMBER:
See Attached List

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:
See Attached List

8. WELL NAME and NUMBER:
See Attached List

9. API NUMBER:
See Attach

10. FIELD AND POOL, OR WILDCAT:
See Attached List

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL GAS WELL OTHER _____

2. NAME OF OPERATOR:
Journey Operating, L.L.C. **N 1435**

3. ADDRESS OF OPERATOR: 1201 Louisiana, Suite 1040 CITY Houston STATE TX ZIP 77002 PHONE NUMBER: (713) 655-0595

4. LOCATION OF WELL
FOOTAGES AT SURFACE: **See Attached List** COUNTY: San Juan
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input checked="" type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.
Journey Operating, L.L.C. advises, effective June 9, 2006, Citation Oil & Gas Corp. will become the operator of the wells on the attached list.

Citation Oil & Gas Corp. (N0265)
8223 Willow Place South
Houston, TX 77070
(281) 517-7800
Bond No.: 104325628 - \$120,000

BLM BOND = 104061650
BIA BOND = 104061656

By: *Robert T. Kennedy*
Robert T. Kennedy
Sr. Vice President Land

NAME (PLEASE PRINT) Brian A. Baer TITLE President

SIGNATURE *Brian A. Baer* DATE 6/9/2006

(This space for State use only) **APPROVED 7/13/2006**
Earlene Russell
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

RECEIVED
JUN 23 2006
DIV. OF OIL, GAS & MINING

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

UIC FORM 5

TRANSFER OF AUTHORITY TO INJECT

Well Name and Number Navajo Federal #12-4	API Number 4303731395
Location of Well Footage : 2260' FNL & 440' FWL County : San Juan	Field or Unit Name Kiva
QQ, Section, Township, Range: SWNW 4 39S 25E State : UTAH	Lease Designation and Number UTU-52333

EFFECTIVE DATE OF TRANSFER: 6/9/2006

CURRENT OPERATOR

Company: Journey Operating, L.L.C.
Address: 1201 Louisiana, Suite 1040
city Houston state TX zip 77002
Phone: (713) 655-0595
Comments:

Name: Brian A. Baer
Signature: *Brian A. Baer*
Title: President
Date: 6/9/2006

NEW OPERATOR

Company: Citation Oil & Gas Corp.
Address: 8223 Willow Place South
city Houston state TX zip 77070
Phone: (281) 517-7800
Comments:

Name: Robert T. Kennedy
Signature: *Robert T. Kennedy*
Title: Sr. Vice President Land
Date: 6/9/2006

(This space for State use only)

Transfer approved by: *Dan J...*
Title: *UIC Geologist*

Approval Date: 6/30/06

Comments:

RECEIVED

JUN 23 2006

DIV. OF OIL, GAS & MINING

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

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU52333
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Water Injection Well</u>		7. UNIT or CA AGREEMENT NAME: Kiva Unit 83687U6890
2. NAME OF OPERATOR: Citation Oil & Gas Corp.		8. WELL NAME and NUMBER: Navajo Federal 12-4
3. ADDRESS OF OPERATOR: P.O. Box 690688 CITY Houston STATE TX ZIP 77269-0688		9. API NUMBER: 4303731395
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2260' FNL & 440' FWL		10. FIELD AND POOL, OR WILDCAT: Kiva Upper Ismay
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWNW 4 39S 25E		COUNTY: San Juan
		STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: 10/26/2006	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>Well Integrity</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.
A Mechanical Integrity Test was performed on 10/26/2006. A copy of the chart is attached, per telephone conversation with Dan Jarvis, State of Utah DOGM on 10/26/2006.

**Accepted by the
Utah Division of
Oil, Gas and Mining**

Date: 11-07-06
By: [Signature]

COPY SENT TO OPERATOR
Date: 11-8-06
Initials: RM

NAME (PLEASE PRINT) <u>Debra Harris</u>	TITLE <u>Regulatory Compliance Coordinator</u>
SIGNATURE <u>[Signature]</u>	DATE <u>10/27/2006</u>

(This space for State use only)

RECEIVED
OCT 30 2006

PRINTED IN U.S.A.

DAY

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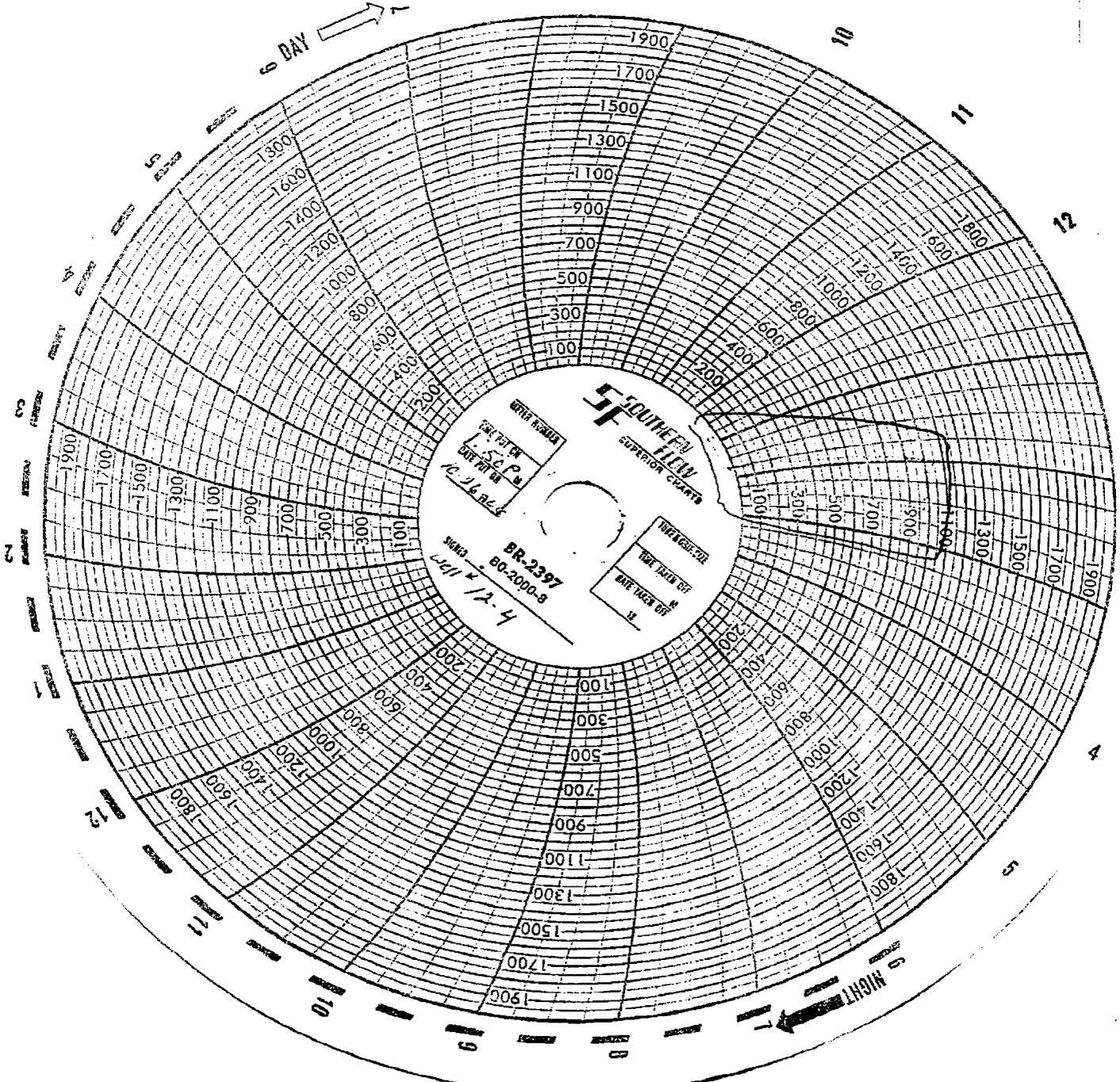
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NIGHT

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8



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

5. LEASE DESIGNATION AND SERIAL NUMBER:

UTU52333

SUNDRY NOTICES AND REPORTS ON WELLS

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:
Kiva Unit 83687U6890

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL GAS WELL OTHER Water Injection Well

8. WELL NAME and NUMBER:
Navajo Federal 12-4

2. NAME OF OPERATOR:
Citation Oil & Gas Corp.

9. API NUMBER:
4303731395

3. ADDRESS OF OPERATOR: P.O. Box 690688 CITY Houston STATE TX ZIP 77269-0688 PHONE NUMBER: (281) 517-7194

10. FIELD AND POOL, OR WILDCAT:
Kiva Upper Ismay

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 2260' FNL & 440' FWL

COUNTY: San Juan

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWNW 4 39S 25E

STATE: UTAH

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	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRAC/URE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: <u>2/12/2007</u>	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
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	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> REAMINATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>Well Integrity</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

A Mechanical Integrity Test was performed on 1/17/2007 after repair of a tubing leak. A copy of the chart is attached for your review.

NAME (PLEASE PRINT) Debra Harris

TITLE Regulatory Compliance Coordinator

SIGNATURE Debra Harris

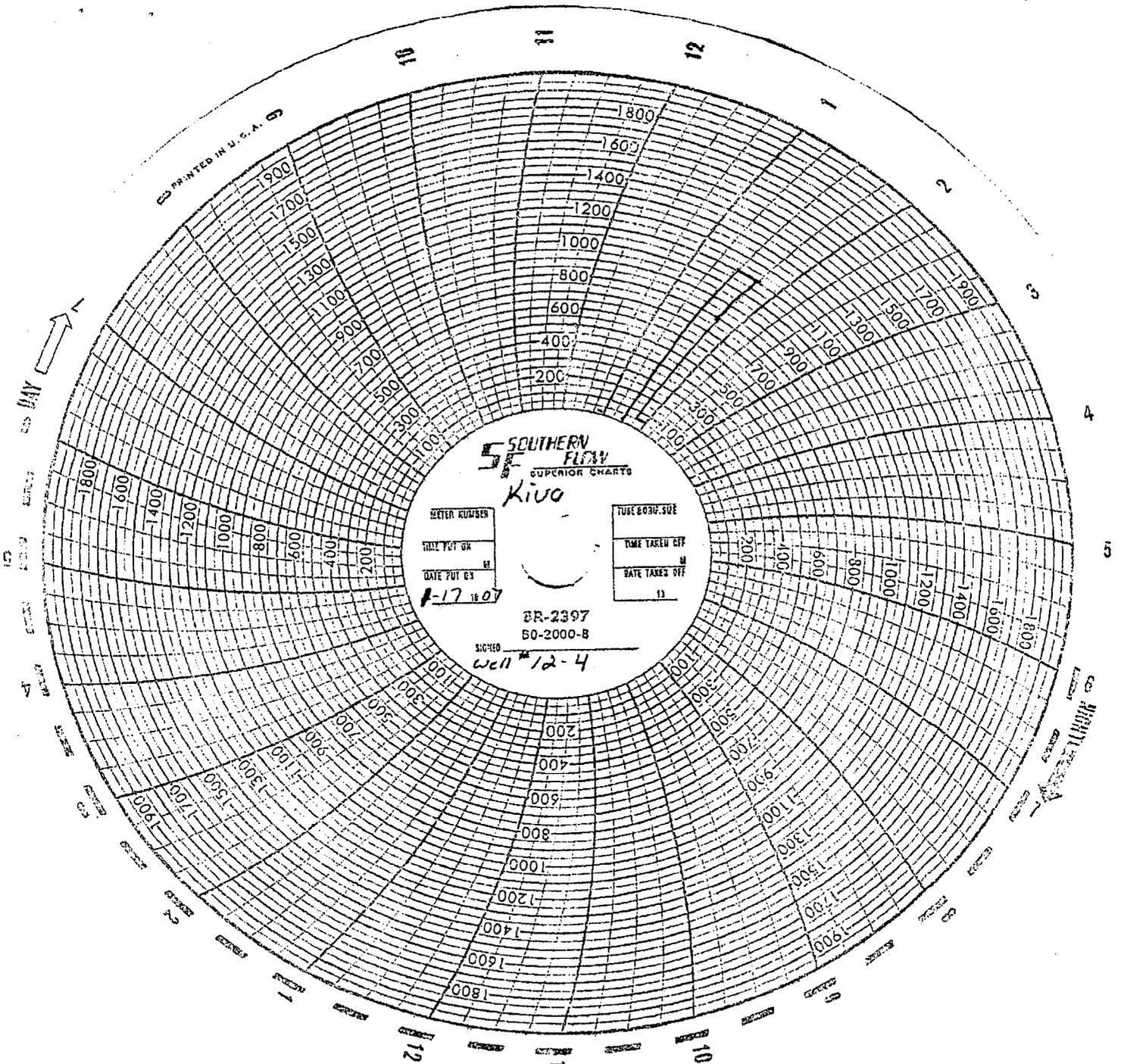
DATE 2/12/2007

(This space for State use only)

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FEB 14 2007

DIV. OF OIL, GAS & MINING



Kiva 12-4 MIT witnessed by BLM.
operator Joe Boganje.



ROD PUMP PULLING REPORT

WELL: Well # 12-4 DATE: 1-15-07 BY: _____

WORKOVER PERIOD: From 1-15-07 to 1-17-07 TOTAL COST: _____

PUMP & ROD DATA

	OUT	IN
Pump Size:	_____	_____
Pump Make:	_____	_____
No., Size, Type:	_____	_____
Sinker Bars:	_____	_____
Reason Pulled:	_____	_____
Condition of Pump:	_____	_____
Condition of Rods:	_____	_____
Pump Service Co.:	_____	_____

FAILURE DETAIL

RODS		PUMP		SURFACE	
Pin _____ # _____		Balls & seats _____		Polish rod _____	
Box _____ # _____		Plunger _____		Motor _____	
Body _____ # _____		Barrel _____		Other _____	
Date RIH _____		Other _____			
		Date RIH _____			

Type: C - Corrosion, F - Fatigue, U - Unscrewed, T - Tensile, S - Stress Riser, B - Bent

TUBING

	OUT	IN
Size & Type: <u>2 7/8"</u>	_____	_____
No. of Joints:	_____	_____
Footage:	_____	_____
Anchors:	_____	_____
Reason Pulled:	_____	_____
Condition:	_____	_____

Remarks: Bleed well down, release packer, come out with tubing and put gel S/N
ran in hole with tubing, testing with standing valve, tubing test good, fish standing
pull tubing out. Run packer in, set packer, load casing, pressure test to 1000 PSI
Tubing Hydrotested: YES NO test good.

SURFACE EQUIPMENT

Pumping Unit: Size _____ Make _____ Sr. No. _____
 Stroke Length: _____ SPM _____ Prime Mover: Size _____
 Sr. No. _____ Make _____ RPM _____ Sheve Size _____

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

FORM 8

SUNDRY NOTICES AND REPORTS ON WELLS		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU52333
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
		7. UNIT or CA AGREEMENT NAME: Kiva Unit 83687U6890
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Water Injection Well</u>	8. WELL NAME and NUMBER: Navajo Federal 12-4	
2. NAME OF OPERATOR: Citation Oil & Gas Corp.		9. API NUMBER: 4303731395
3. ADDRESS OF OPERATOR: P.O. Box 690688 CITY Houston STATE TX ZIP 77269-0688		PHONE NUMBER: (281) 517-7194
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2260' FNL & 440' FWL		10. FIELD AND POOL, OR WILDCAT: Kiva Upper Ismay
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWNW 4 39S 25E		COUNTY: San Juan
		STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

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<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
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	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

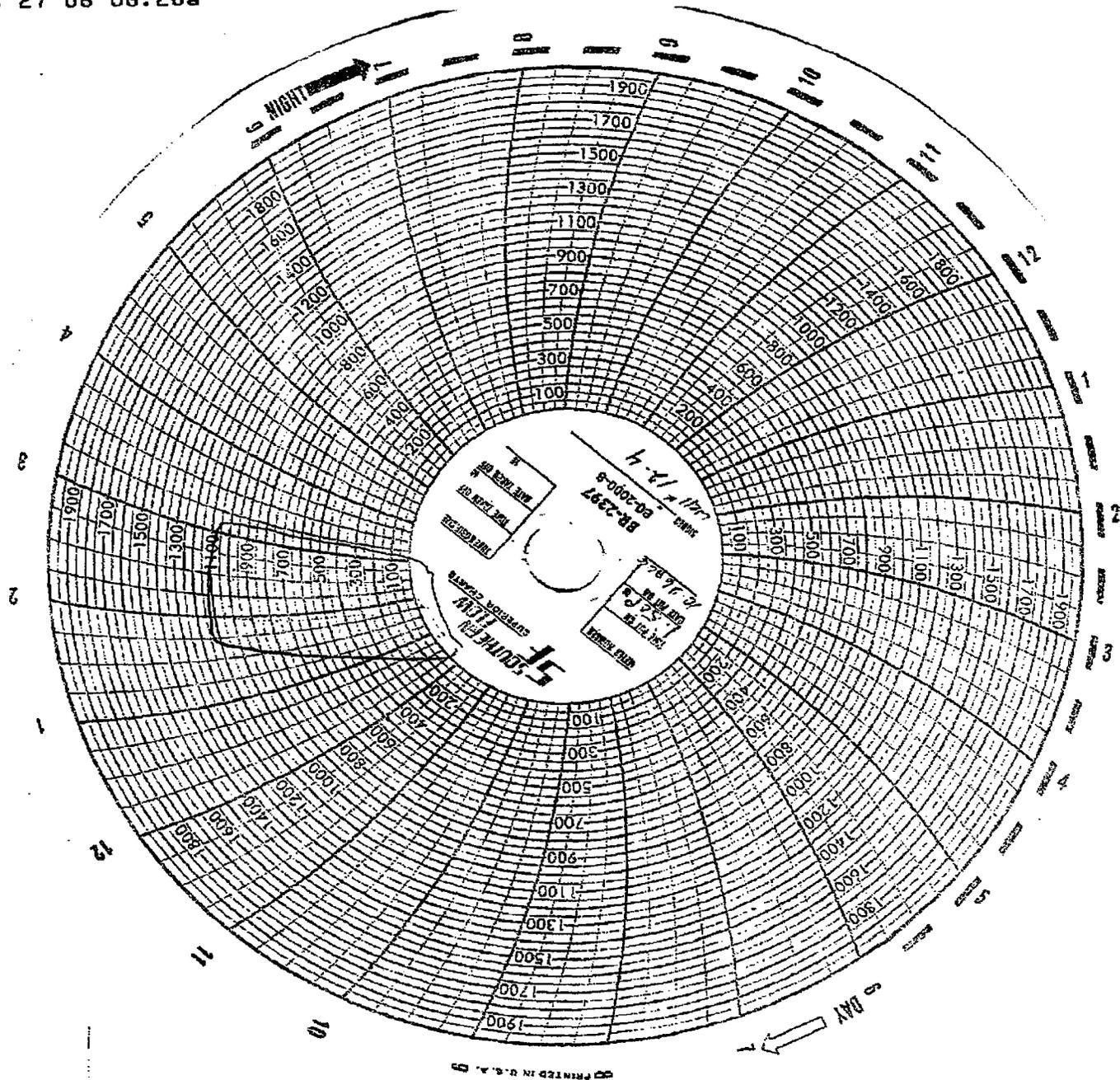
A Mechanical Integrity Test was performed on 10/26/2006. A copy of the chart is attached, per telephone conversation with Dan Jarvis, State of Utah DOGM on 10/26/2006.

NAME (PLEASE PRINT) <u>Debra Harris</u>	TITLE <u>Regulatory Compliance Coordinator</u>
SIGNATURE	DATE <u>10/27/2006</u>

(This space for State use only)

RECEIVED
OCT 27 2006
 DIV. OF OIL, GAS & MINING

Oct 27 06 06:28a





GARY R. HERBERT
Governor

GREGORY S. BELL
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Feb 13, 2012

39S 25E 4

Citation Oil & Gas Corp
P. O. Box 690688
Houston, TX 77269

SUBJECT: Pressure Test for Mechanical Integrity, Multiple Wells, San Juan County, Utah:

To Whom It May Concern:

The Underground Injection Control Program, which the Division of Oil, Gas and Mining (DOGM) administers in Utah, requires that all Class II injection wells demonstrate mechanical integrity. Rule R649-5-5.3 of the Oil and Gas Conservation General Rules requires that the casing-tubing annulus above the packer be pressure tested at a pressure equal to the maximum authorized injection pressure or 1,000 psi, whichever is lesser, provided that no test pressure is less than 300 psi. This test shall be performed at least every five-year period beginning October 1982. The following wells now require a current test:

Navajo Fed 21-9	4303731267
Navajo Fed 12-4	4303731395

Please make arrangements and ready wells for testing during the week of March 26th 2012, as outlined below:

1. Operator must furnish connections, and accurate pressure gauges, hot oil truck (or other means of pressuring annulus), along with personnel to assist in opening valves, etc.
2. The casing-tubing annulus shall be filled prior to the test date to expedite testing, as each well will be required to hold pressure for a minimum of 15 minutes.
3. If mechanical difficulties or workover operations make it impossible for the well(s) to be tested on this date the test(s) may be rescheduled.
4. Company personnel should meet a DOGM representative(s) at the field office or other location as negotiated.



Page 2
February 13, 2012
Citation Oil & Gas Corp

5. All bradenhead valves with exception of the tubing on the injection well(s) must be shut-in 24 hours prior to testing.

Please contact me at (435) 820-0862 to arrange a meeting time and place or to negotiate a different date, if the date(s) specified is unacceptable.

Sincerely,



Bart Kettle
Environmental Scientist

bk/dj/js

cc: Dan Jarvis, Operations Manager
Well File

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

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-52333
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Water Injection Well</u>		7. UNIT or CA AGREEMENT NAME: Kiva Unit 83687U6890
2. NAME OF OPERATOR: Citation Oil & Gas Corp.		8. WELL NAME and NUMBER: Navajo Federal 12-4
3. ADDRESS OF OPERATOR: P O Box 690688 CITY <u>Houston</u> STATE <u>TX</u> ZIP <u>77269I</u>		9. API NUMBER: 4303731395
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2260' FNL & 440' FWL COUNTY: San Juan QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWNW 4 39S 25E STATE: UTAH		10. FIELD AND POOL, OR WILDCAT: Kiva Upper Ismay

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

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	<input type="checkbox"/> CHANGE TUBING	<input checked="" type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
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	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Citation Oil & Gas Corp. requests authorization to plug and abandon this well per the attached procedure and well bore schematics.

COPY SENT TO OPERATOR

Date: 8-9-2012

Initials: _____

NAME (PLEASE PRINT) <u>Mary Torres</u>	TITLE <u>Permitting Analyst</u>
SIGNATURE <u>Mary Jones</u>	DATE <u>6/21/2012</u>

(This space for State use only)

**Accepted by the
Utah Division of
Oil, Gas and Mining**

Date: 8/9/2012
By: [Signature]

Federal Approval Of This
Action Is Necessary

RECEIVED

JUN 22 2012

DIV. OF OIL, GAS & MINING

PLUG AND ABANDONMENT PROCEDURE

NOTE: This well may have H2S

June 4, 2012

Navajo – Federal 12-4

Kiva Field

2260' FNL, 440' FWL, Section 4, T39S, R25E, San Juan County, Utah

API #43-037-31395 / Long: - _____ Lat: _____

Note: All cement volumes use 10% excess per 1000 foot of depth or 100% excess outside pipe and 50' excess inside pipe, whichever is greater. The stabilizing wellbore fluid will be 8.3 ppg, sufficient to balance all exposed formation pressures. All cement will be Class B, mixed at 15.8 ppg with a 1.18 cf/sx yield.

1. This project will use an A-Plus steel tank to handle waste fluids circulated from the well and cement wash up.
2. Install and test location rig anchors. Comply with all Utah State, BLM, and Operator safety regulations. MOL and RU daylight pulling unit. Conduct safety meeting for all personnel on location. Record casing, tubing and bradenhead pressures. NU relief line and blow down well. Kill well with water as necessary and at least pump tubing capacity of water down the tubing. ND wellhead and NU BOP. Function test BOP.
3. Rods: Yes , No , Unknown _____.
Tubing: Yes , No , Unknown _____, Size _____, Length _____.
Packer: Yes , No , Unknown _____, Type _____.
If this well has rods or a packer, then modify the work sequence in step #2 as appropriate. Round trip 5.5" gauge ring or casing scraper to 4580' or as deep as possible.
4. **Plug #1 (Ismay perforations and top, 5612' – 4580')**: PUH tubing workstring (4580'). TIH and set 5.5" cement retainer at 4580'. Pressure test tubing to 1000#. Load casing with water and circulate well clean. Attempt to pressure test 5.5" casing to 800 PSI. *If casing does not test, then spot or tag subsequent plugs as appropriate.* Sting into CR and attempt to establish rate below. If able to establish rate then mix and pump 100 sxs Class B cement and squeeze below CR to isolate Ismay interval. TOH.
5. TIH and perforate 3 squeeze holes at 4570'. Attempt to establish circulation out casing. If able to establish circulation then jet cut tubing at 4569'. PU on tubing and work free. TOH and LD casing.
6. **Plug #2 (top of 5.5" CR and tubing stub, 4580' – 4480')**: TIH and tag CR at 4580'. Mix 71 sxs cement from 4580' to cover the tubing stub. PUH.
7. **Plug #3 (9.625" casing shoe, 3363' – 3263')**: Mix 73 sxs Class B cement to cover the 9.625" casing shoe. PUH.
8. **Plug #4 (Surface, 100' – 0')**: Mix approximately 40 sxs Class B cement from 100' to surface, circulate good cement out 9.625" casing valve. TOH and LD tubing. SI well and WOC.
9. ND BOP and cut off wellhead below surface casing flange. Install P&A marker with cement to comply with regulations. RD, MOL and cut off anchors. Restore location per BLM stipulations.

Navajo-Federal 12-4 Proposed P&A

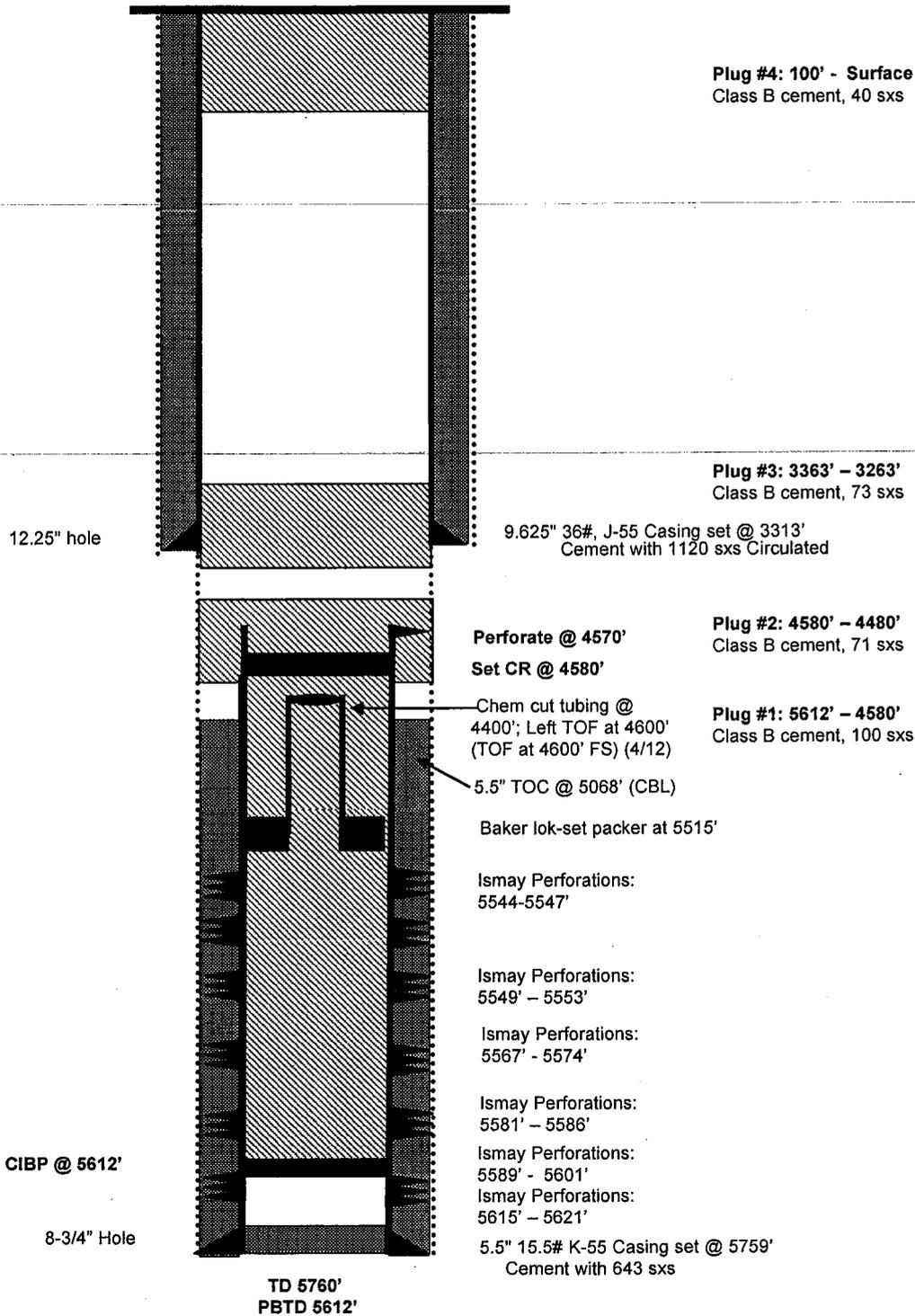
Kiva Field

Surface: 2260' FNL & 440' FWL, Section 4, T-39-S, R-25-E

San Juan County, UT / API #43-037-31395

Lat: _____ / Long: _____

Today's Date: 6/4/12
Spud: 3/28/88
Completed: 5/16/88
Elevation: 4852' GI
4865' KB



Ismay @ 5453'

CIBP @ 5612'

8-3/4" Hole

TD 5760'
PBD 5612'

Navajo-Federal 12-4

Current

Kiva Field

Surface: 2260' FNL & 440' FWL, Section 4, T-39-S, R-25-E

San Juan County, UT / API #43-037-31395

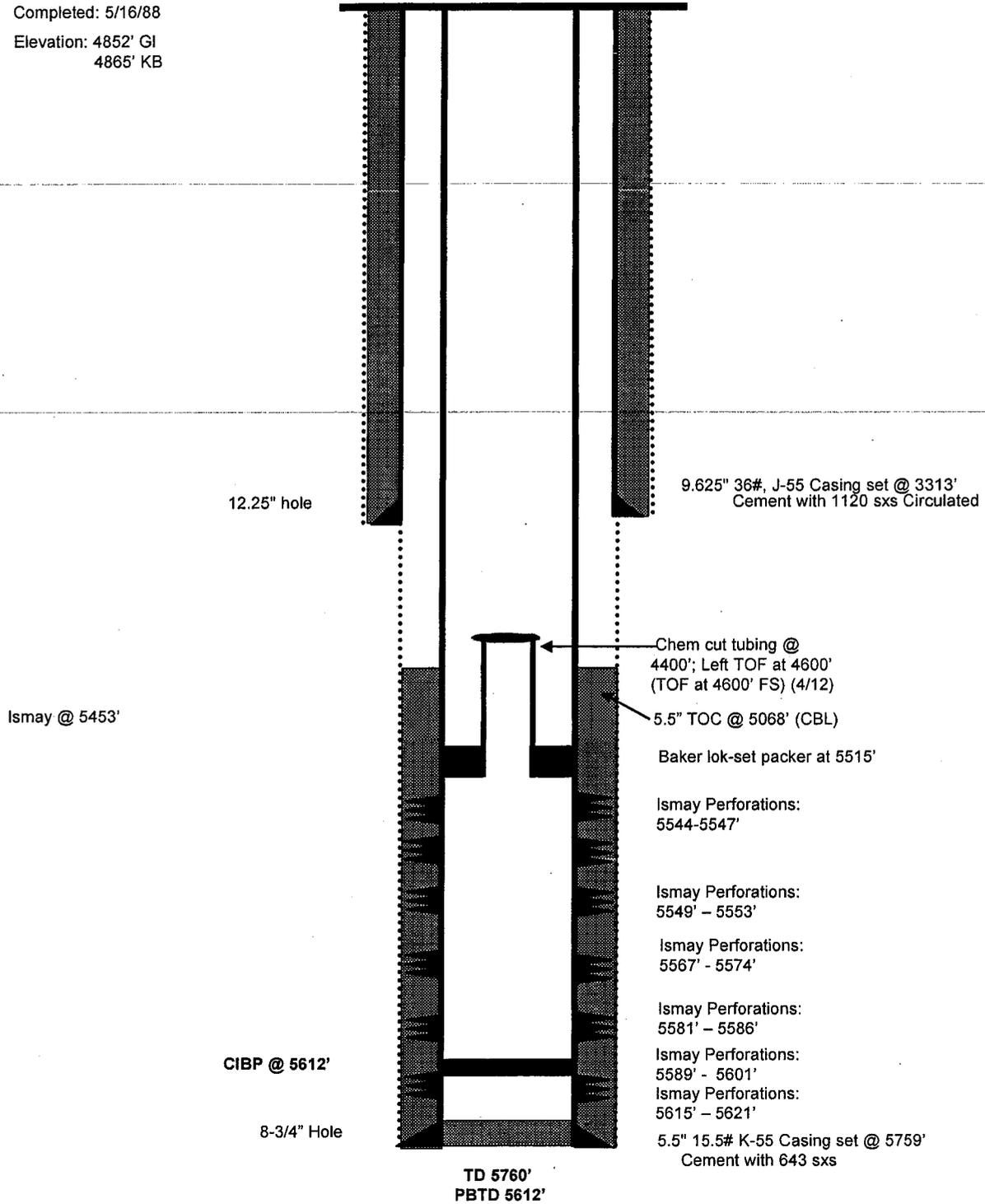
Lat: _____ / Long: _____

Today's Date: 6/4/12

Spud: 3/28/88

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Elevation: 4852' GI
4865' KB



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

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

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1. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-52333
2. NAME OF OPERATOR: Citation Oil & Gas Corp.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: P O Box 690688 CITY Houston STATE TX ZIP 77269		7. UNIT or CA AGREEMENT NAME: Kiva Unit 83687U6890
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2260' FNL & 440' FWL		8. WELL NAME and NUMBER: Navajo Federal 12-4
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWNW 4 39S 25E		9. API NUMBER: 4303731395
COUNTY: San Juan		10. FIELD AND POOL, OR WILDCAT: Kiva
STATE: UTAH		

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input checked="" type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: 8/17/2012	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

MIRU 8/7/2012. PU 5 1/2" stripping mill. TIH tallying 142 jts of 2 3/8" tbg, A-Plus wrk string & tagged up @ 4458'. TOOH & LD the string mill. PU 5 1/2" DHS CR, TIH w/ 141 jts & PU 1- 10' sub, left CR hanging. PU 10' sub & set the DHS CR @ 4448'. Load the tbg w/ 3 bbls & press test to 1000 psi, good test. Loaded the hole w/ 26 bbls & pmp (144 bbls tot). Attempted to pressure test the csg, no test, established a rate of 2 bpm @ 500 psi. Stung into the CR & attempted to established rate below the CR, no rate, locked up @ 1600 psi. Stung out of the CR & started to pmp while stinging into the CR press up to 1600 psi, after pumping an 1/8 of a bbl. TOOH, LD the stinging tool. RIH w/ 3 1/8" HSC & perf 3 holes @ 4435', POOH. Attempted to estab circ out the BH @ 15 bbls, The BH circ @ 84 bbls, clean returns. cut off the wellhead bolts & weld on a 5 1/2" csg collar. PU 5 1/2" DHS CR & TIH to 4397', set DHS CR @ 4397'. Rel f/ & sting out of the CR, load the hole w/ 1/2 bbl & pmp 15 bbls ahead. Attempted press test on the csg, no test, estab rate of 2 bpm @ 500 psi. Stung into the CR. Jeff Brown w/ UT BLM received approval to set the CR & pmp'd cmt on top of the CR on 8/14/12. Plug #2 mixed & pmp'd 61 sxs 15.6# 1.18 yield, 21.98 cu ft Class B cmt f/ 3297' - 3859', TOC. TOOH, LD 18 jts & 61 stands. LD the CR setting tool. TIH w/ plugging sub & 49 stands, EOT @ 3379'. Mixed 40 sxs of Barite, 50 sxs of gel & 1/2 sx of soda ash. TIH w/ 12 stands, PU 3 jts & tag up w/ 20' stick up, TOC @ 3910'. Mixed 11 more sxs of Baroid to incrs'd gel weight to 9.2# w/ a 35 viscosity. Pmp'd 14.5 bbls of 9.2# 35 viscosity gel f/ 3910' - 3413'. RIH w/ 3 1/8" HSC & perf 3 holes @ 3413'. RIH w/ 3 1/8" HSC & perf 3 holes @ 3323'. Isolated holes in the csg to 1384' - 1250'. PU plugging sub & TIH w/ 52 stands & PU 3 jts, EOT @ 3362'. Loaded the hole w/ 1/2 bbl & pmp'd 5 bbls ahead. Pmp # 3 mixed & pmp'd 17 sxs 15.6# 1.8 yield 20.06 cu ft Class B cmt f/ 3362' - 3212' TOC. RIH w/ 3 1/8" HSC & perf 3 holes @ 1600', POOH. PU 5 1/2" wireline, set CR, RIH to 1541' & set the CR, POOH. PU stinger & TIH w/ 24 stands. PU 1 jt & stung into the CR @ 1541'. Established rate into perf of 2.5 bpm @ 500 psi. Pmp # 4 mixed & pmp'd 89 sxs 15.6# 1.18 yield 105.02 cu ft Class B cmt f/ 1600' - 1330' TOC, left 24 sxs above the CR, 7 sxs below the CR & 58 sxs out in the 5 1/2" x 9 5/8". TIH w/ 18 stands & tag TOC @ 1133'. Jeff Brown w/ Utah BLM approved the TOC. Mixed 12 sxs of Baroid to get mud weight back up to 9.2#. Plug #5 mixed & pmp'd 49 sxs 15.6# 1.18 yield Class B cmt f/ 100' to surf w/ 23 sxs in the 9 5/8" x 5 1/2" csg & 12 sxs in the 5 1/2" csg w/ good cmt to the pit. DHM coordinates as follows: N37°, 25.587' W109° 11.116' & elevate 4832'. All cmt @ surf in the 5 1/2" x 9 5/8" x 5 1/2". Well P&A'd 8/17/2012.

NAME (PLEASE PRINT) <u>Tami Troxel</u>	TITLE <u>Permitting Analyst</u>
SIGNATURE	DATE <u>9/13/2012</u>

(This space for State use only)

RECEIVED
SEP 17 2012

INSTRUCTIONS

This form shall be submitted by the operator to show the intention and/or completion of the following:

- miscellaneous work projects and actions for which other specific report forms do not exist;
- all other work and events as identified in section 11, Type of Action, or as required by the Utah Oil and Gas Conservation General Rules, including:
 - minor deepening of an existing well bore,
 - plugging back a well,
 - recompleting to a different producing formation within an existing well bore (intent only),
 - re-perforating the current producing formation,
 - drilling a sidetrack to repair a well,
 - reporting monthly the status of each drilling well.

This form is not to be used for proposals to

- drill new wells,
- reenter previously plugged and abandoned wells,
- significantly deepen existing wells below their current bottom-hole depth,
- drill horizontal laterals from an existing well bore,
- drill hydrocarbon exploratory holes such as core samples and stratigraphic tests.

Use Form 3, Application for Permit to Drill (APD) for such proposals.

NOTICE OF INTENT - A notice of intention to do work on a well or to change plans previously approved shall be submitted in duplicate and must be received and approved by the division before the work is commenced. The operator is responsible for receipt of the notice by the division in ample time for proper consideration and action. In cases of emergency, the operator may obtain verbal approval to commence work. Within five days after receiving verbal approval, the operator shall submit a Sundry Notice describing the work and acknowledging the verbal approval.

SUBSEQUENT REPORT - A subsequent report shall be submitted to the division within 30 days of the completion of the outlined work. Specific details of the work performed should be provided, including dates, well depths, placement of plugs, etc.

WELL ABANDONMENT - Proposals to abandon a well and subsequent reports of abandonment should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, and method of parting of any casing, liner, or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approval of the abandonment.

In addition to any Sundry Notice forms submitted, **Form 8, Well Completion or Recompletion Report and Log** must be submitted to the division to report the results of the following operations:

- completing or plugging a new well,
- reentering a previously plugged and abandoned well,
- significantly deepening an existing well bore below the current bottom-hole depth,
- drilling horizontal laterals from an existing well bore,
- drilling hydrocarbon exploratory holes such as core samples and stratigraphic tests,
- recompleting to a different producing formation.

Send to:

Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

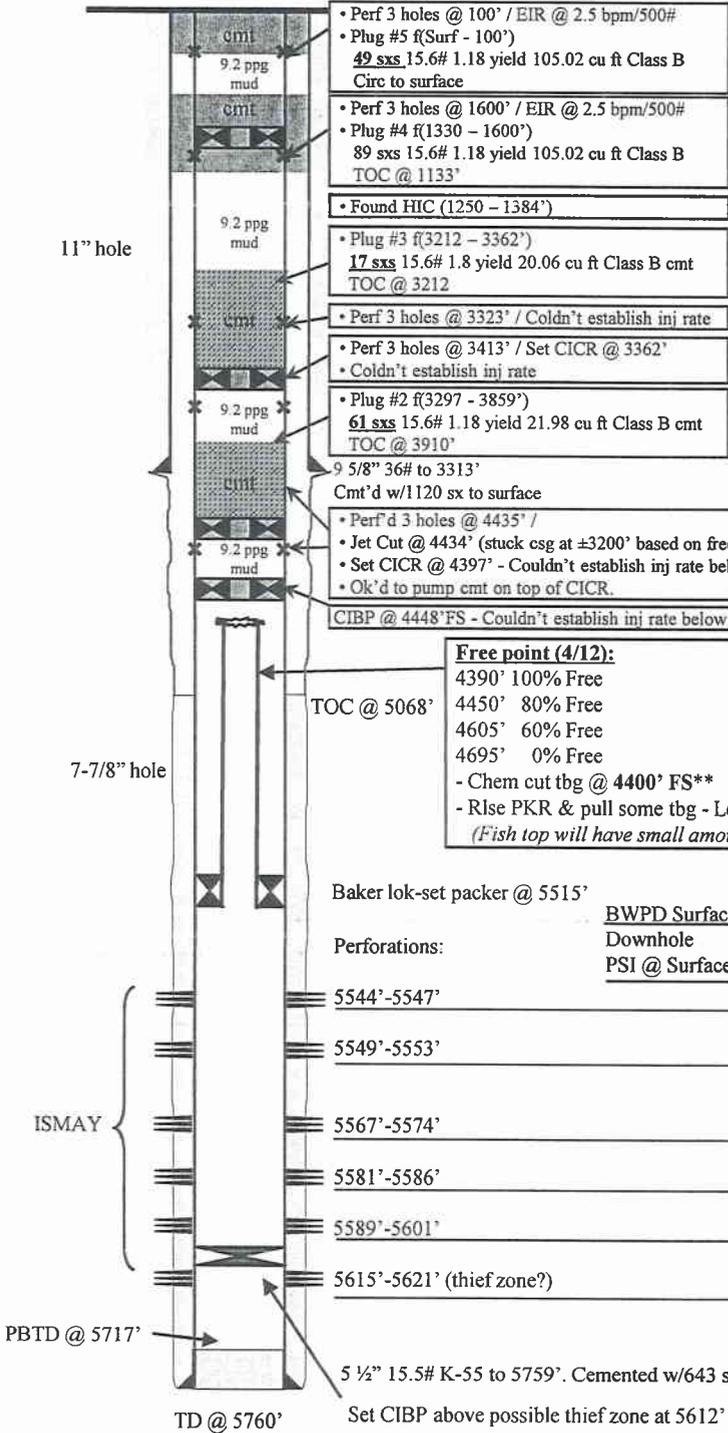
CITATION OIL AND GAS CORPORATION WELLBORE DIAGRAM AND INFORMATION

Well Name: Navajo Federal 12-4 **Field:** Kiva
Date: 08/17/12 (P&A'd) AL **Location:** SW NW Sec.4, T39S R25E
County: San Juan **State:** Utah

Cut off WH. Weld on the DHM
 GPS Coordinates: N37° 25,587' & W109° 11.116'
 Elevation 4832'

Surface: SW NW Sec. 4 T39S R25E
 San Juan County, UT
Completed: 05/1985
Elevation: 4852'
KB: 4865'
API #: 43-037-31395

CASING DETAIL			
Size	Weight	Grade	Depth
9-5/8"	36#		3313'
5-1/2"	15.5#		5759'



- Perf 3 holes @ 100' / EIR @ 2.5 bpm/500#
- Plug #5 f(Surf - 100')
- 49 sxs** 15.6# 1.18 yield 105.02 cu ft Class B Circ to surface
- Perf 3 holes @ 1600' / EIR @ 2.5 bpm/500#
- Plug #4 f(1330 - 1600')
- 89 sxs** 15.6# 1.18 yield 105.02 cu ft Class B TOC @ 1133'
- Found HIC (1250 - 1384')
- Plug #3 f(3212 - 3362')
- 17 sxs** 15.6# 1.8 yield 20.06 cu ft Class B cmt TOC @ 3212
- Perf 3 holes @ 3323' / Coldn't establish inj rate
- Perf 3 holes @ 3413' / Set CICR @ 3362'
- Coldn't establish inj rate
- Plug #2 f(3297 - 3859')
- 61 sxs** 15.6# 1.18 yield 21.98 cu ft Class B cmt TOC @ 3910'
- 9 5/8" 36# to 3313'
- Cmt'd w/1120 sx to surface
- Perf'd 3 holes @ 4435' /
- Jet Cut @ 4434' (stuck csg at ±3200' based on free pipe calc)
- Set CICR @ 4397' - Couldn't establish inj rate below CR.
- Ok'd to pump cmt on top of CICR.
- CIBP @ 4448' FS - Couldn't establish inj rate below CR

Free point (4/12):
 4390' 100% Free
 4450' 80% Free
 4605' 60% Free
 4695' 0% Free
 - Chem cut tbg @ 4400' FS**
 - Rise PKR & pull some tbg - Left **TOF @ 4600' FS**
 (Fish top will have small amount of flare on top)

Perforations:	Injection Profile survey		
	03/89	01/91	03/92
Baker lok-set packer @ 5515'			
	BWPD Surface	1340	650
	Downhole		
	PSI @ Surface	3131	3100
5544'-5547'		0%	20%
5549'-5553'		-7%	0%
5567'-5574'		9%	6%
5581'-5586'		32%	4%
5589'-5601'		46%	0%
5615'-5621' (thief zone?)		20%	70%

Comments:
 03/89: Negative injection rates f/spinner survey indicate Probable scale on top of perforated interval
 01/91: Tools stopped @5609'. Unable to profile perfs below 5609'. Tools would no get passed 5609'
 70% of flow going below this point
 08/91: Pickled tbg, reperforated, Selectively acidized perfs w/ SAP tool. Set CIBP above thief zone @ 5612'

Well P&A'd (08/12)

ISMAY {
 PBTD @ 5717'
 TD @ 5760'
 5 1/2" 15.5# K-55 to 5759'. Cemented w/643 sxs.
 Set CIBP above possible thief zone at 5612'



RICHARDSON OPERATING COMPANY

4725 S. Monaco Street, Suite 200
Denver, Colorado 80237
(303) 830-8000 Fax (303) 830-8009

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AUG 02 2013

DIV. OF OIL, GAS & MINING

July 29, 2013

Attn: Zeke Clements
Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Re: Sundry Notices and Reports on Wells - Change of Operator and Transfers of Authority to Inject

Dear Zeke:

Enclosed for approval by the Utah Division of Oil, Gas and Mining, please find two originally executed Sundry Notices and Reports on Wells on Form 9, for the following 18 leases and wells (API # included):

<u>Lease #</u>	<u>Well Name</u>	<u>API Well No.</u>
UTU-20894	Wash Unit 2	43-037-31324 ✓
UTU-20895	Havasu-Federal 41-24	43-037-31279 ✓
UTU-20895	Havasu-Federal 42-24	43-037-31298 ✓
UTU-40361	Bannock -Fed 21-33	43-037-31425 ✓
UTU-52333	24-4 Kiva Federal	43-037-31745 ✓
UTU-52333	Navajo Federal 12-4	43-037-31395 ✓
UTU-52333	Navajo Federal 14-4	43-037-31321 ✓
UTU-52333	Navajo Federal 21-9	43-037-31267 ✓
UTU-52333	Navajo Federal 4-1	43-037-31112 ✓
UTU-52333	Navajo Federal 4-2	43-037-31161 ✓
UTU-52333	Navajo Federal 42-9	43-037-31263 ✓
UTU-52333	Navajo Federal 4-4	43-037-31179 ✓
UTU-52333	Navajo Federal 9-1	43-037-31001 ✓
UTU-56185	Arabian Federal 3	43-037-31287 ✓
UTU-56186	Havasu-Federal 11-19	43-037-31458 ✓
UTU-56186	Havasu-Federal 22-19	43-037-31278 ✓
UTU-58728	Navajo Federal 42-5	43-037-31261 ✓
UTU-58728	Navajo Federal 43-5	43-037-31317 ✓

APPROVED

AUG 19 2013

DIV. OIL GAS & MINING
BY: Rachael Medina

Also enclosed for the approval by the Utah Division of Oil, Gas and Mining, please find one originally executed Transfer of Authority to Inject on Form UIC Form 5 for the following seven wells:

<u>Lease #</u>	<u>Well Name</u>	<u>API Well No.</u>
UTU-20895	Havasus-Federal 42-24	43-037-31298 ✓
UTU-52333	Navajo Federal 12-4	43-037-31395 ✓
UTU-52333	Navajo Federal 14-4	43-037-31321 ✓
UTU-52333	Navajo Federal 21-9	43-037-31267 ✓
UTU-52333	Navajo Federal 4-1	43-037-31112 ✓
UTU-56186	Havasus-Federal 11-19	43-037-31458 ✓
UTU-58728	Navajo Federal 43-5	43-037-31317 ✓

Please return the approved documents for each well to:

Richardson Operating Company
4725 S. Monaco Street, Suite 200,
Denver, Colorado 80237.

If you have any questions, please do not hesitate to contact me at the number above or via email at land@richardsonoil.com.

Sincerely,



Ann Barthrop
Senior Land Analyst

Enclosures

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AUG 02 2013
Div. of Oil, Gas & Mining

Citation Oil & Gas Corp (N0265) to Richardson Operating Co. (N2400)
Effective 1-April-2013

Well Name	Sec.	Township	Range	API No.	Utah	Mineral	Well Type	Well Status	Unit Name
					Entity No.	Lease Type			
NAVAJO FEDERAL 9-1	09	390S	250E	4303731001	9975	Federal	Oil Well	Producing	KIVA (UPPER MESA)
NAVAJO FED 4-1	04	390S	250E	4303731112	9975	Federal	Water Injection	Active	KIVA (UPPER MESA)
NAVAJO FEDERAL 4-2	04	390S	250E	4303731161	9975	Federal	Oil Well	Producing	KIVA (UPPER MESA)
NAVAJO FEDERAL 4-4	04	390S	250E	4303731179	9975	Federal	Oil Well	Producing	KIVA (UPPER MESA)
NAVAJO FEDERAL 42-5	05	390S	250E	4303731261	9975	Federal	Oil Well	Producing	KIVA (UPPER MESA)
NAVAJO FEDERAL 42-9	09	390S	250E	4303731263	9975	Federal	Water Source	Active	KIVA (UPPER MESA)
NAVAJO FED 21-9	09	390S	250E	4303731267	9975	Federal	Water Injection	Active	KIVA (UPPER MESA)
NAVAJO FED 43-5	04	390S	250E	4303731317	9975	Federal	Water Injection	Active	KIVA (UPPER MESA)
NAVAJO FED 14-4	04	390S	250E	4303731321	9975	Federal	Water Injection	Active	KIVA (UPPER MESA)
NAVAJO FED 12-4	04	390S	250E	4303731395	9975	Federal	Water Injection	Plugged	KIVA (UPPER MESA)
24-4 KIVA FEDERAL	04	390S	250E	4303731745	9975	Federal	Oil Well	Producing	KIVA (UPPER MESA)

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

RECEIVED

AUG 9 2 2013

FORM 9

Div. of Oil, Gas & Mining

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Change of Operator (SWD)</u>			5. LEASE DESIGNATION AND SERIAL NUMBER: Federal UTU-52333
2. NAME OF OPERATOR: Richardson Operating Company			6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
3. ADDRESS OF OPERATOR: 4725 S Monaco St. Suite 200 CITY Denver STATE CO ZIP 80237		PHONE NUMBER: (303) 830-8000	7. UNIT or CA AGREEMENT NAME: NA
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2260 N 440 W			8. WELL NAME and NUMBER: NAVAJO FEDERAL 12-4
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NW 9 39S 25E			9. API NUMBER: 037-31395
			10. FIELD AND POOL, OR WILDCAT: KIVA
			COUNTY: SAN JUAN
			STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input checked="" type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Citation Oil & Gas Corp. has sold the captioned well to Richardson Operating Company and requests that they be named as Operator of Record effective 4/1/2013

Please release this well from coverage under Citation Oil & Gas Corp.'s Utah Statewide Bond # 104325628.

On behalf of Citation Oil & Gas Corp. I hereby certify that the foregoing is true and correct:

Sharon Ward Permitting Manager: Sharon Ward Date: 4/1/2013

By execution of this document, Richardson Operating Company requests the State of Utah to approve them as Operator of Record for the above captioned well and accepts responsibility for this well under it's Statewide Oil and Gas Lease Bond in favor of the United States Department of the Interior, Bureau of Land Management Bond # RLB0002500.

On behalf of Richardson Operating Company, I hereby certify that the foregoing is true and correct:

NAME (PLEASE PRINT) David B. Richardson, Jr. TITLE President

SIGNATURE D.B. Richardson DATE 7-29-2013

(This space for State use only)

Well 13PA

RECEIVED

1-17-16

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

AUG 02 2013

UIC FORM 5

Div. of Oil, Gas & Mining

TRANSFER OF AUTHORITY TO INJECT

Well Name and Number NAVAJO FED 12-4		43-	API Number 03731395
Location of Well		Field or Unit Name KIVA	
Footage: 2260 N 440 W	County: SAN JUAN		Lease Designation and Number Federal UTU-52333
QQ, Section, Township, Range: NW 4 39S 25E	State: UTAH		

EFFECTIVE DATE OF TRANSFER: 4/1/2013

CURRENT OPERATOR

Company: <u>Citation Oil & Gas Corp.</u>	Name: <u>Sharon Ward</u>
Address: <u>14077 Cutten Rd</u>	Signature: <u>Sharon Ward</u>
<u>city Houston state TX zip 77069-2212</u>	Title: <u>Permitting Manager</u>
Phone: <u>(281) 891-1000</u>	Date: <u>4/1/2013</u>
Comments:	

NEW OPERATOR

Company: <u>Richardson Operating Company</u>	Name: <u>David B. Richardson, Jr.</u>
Address: <u>4725 S Monaco St. Suite 200</u>	Signature: <u>D.B. Richardson</u>
<u>city Denver state CO zip 80237</u>	Title: <u>President</u>
Phone: <u>(303) 830-8000</u>	Date: <u>7-29-2013</u>
Comments:	

(This space for State use only)

Transfer approved by: _____
Title: _____

Approval Date: _____

Comments:

This is a P.A. well the transfer of authority cannot be approved
D.B. Richardson 8/7/13



RICHARDSON OPERATING COMPANY

4725 S. Monaco Street, Suite 200
Denver, Colorado 80237
(303) 830-8000 Fax (303) 830-8009

RECEIVED

AUG 02 2013

DIV. OF OIL, GAS & MINING

July 29, 2013

Attn: Zeke Clements
Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

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UTU-58728	Navajo Federal 42-5	43-037-31261 ✓
UTU-58728	Navajo Federal 43-5	43-037-31317 ✓

APPROVED

AUG 19 2013

DIV. OIL GAS & MINING
BY: Rachael Medina

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UTU-52333	Navajo Federal 4-1	43-037-31112 ✓
UTU-56186	Havasu-Federal 11-19	43-037-31458 ✓
UTU-58728	Navajo Federal 43-5	43-037-31317 ✓

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Richardson Operating Company
4725 S. Monaco Street, Suite 200,
Denver, Colorado 80237.

If you have any questions, please do not hesitate to contact me at the number above or via email at land@richardsonoil.com.

Sincerely,



Ann Barthrop
Senior Land Analyst

Enclosures

RECEIVED
AUG 02 2013
Div. of Oil, Gas & Mining

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 Effective 1-April-2013

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NAVAJO FEDERAL 4-4	04	390S	250E	4303731179	9975	Federal	Oil Well	Producing	KIVA (UPPER MESA)
NAVAJO FEDERAL 42-5	05	390S	250E	4303731261	9975	Federal	Oil Well	Producing	KIVA (UPPER MESA)
NAVAJO FEDERAL 42-9	09	390S	250E	4303731263	9975	Federal	Water Source	Active	KIVA (UPPER MESA)
NAVAJO FED 21-9	09	390S	250E	4303731267	9975	Federal	Water Injection	Active	KIVA (UPPER MESA)
NAVAJO FED 43-5	04	390S	250E	4303731317	9975	Federal	Water Injection	Active	KIVA (UPPER MESA)
NAVAJO FED 14-4	04	390S	250E	4303731321	9975	Federal	Water Injection	Active	KIVA (UPPER MESA)
NAVAJO FED 12-4	04	390S	250E	4303731395	9975	Federal	Water Injection	Plugged	KIVA (UPPER MESA)
24-4 KIVA FEDERAL	04	390S	250E	4303731745	9975	Federal	Oil Well	Producing	KIVA (UPPER MESA)

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

RECEIVED

AUG 9 2 2013

FORM 9

Div. of Oil, Gas & Mining

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Change of Operator (SWD)</u>			5. LEASE DESIGNATION AND SERIAL NUMBER: Federal UTU-52333
2. NAME OF OPERATOR: Richardson Operating Company			6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
3. ADDRESS OF OPERATOR: 4725 S Monaco St. Suite 200 CITY Denver STATE CO ZIP 80237		PHONE NUMBER: (303) 830-8000	7. UNIT or CA AGREEMENT NAME: NA
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2260 N 440 W			8. WELL NAME and NUMBER: NAVAJO FEDERAL 12-4
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NW 9 39S 25E			9. API NUMBER: 037-31395
			10. FIELD AND POOL, OR WILDCAT: KIVA
			COUNTY: SAN JUAN
			STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input checked="" type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Citation Oil & Gas Corp. has sold the captioned well to Richardson Operating Company and requests that they be named as Operator of Record effective 4/1/2013

Please release this well from coverage under Citation Oil & Gas Corp.'s Utah Statewide Bond # 104325628.

On behalf of Citation Oil & Gas Corp. I hereby certify that the foregoing is true and correct:

Sharon Ward Permitting Manager: Sharon Ward Date: 4/1/2013

By execution of this document, Richardson Operating Company requests the State of Utah to approve them as Operator of Record for the above captioned well and accepts responsibility for this well under it's Statewide Oil and Gas Lease Bond in favor of the United States Department of the Interior, Bureau of Land Management Bond # RLB0002500.

On behalf of Richardson Operating Company, I hereby certify that the foregoing is true and correct:

NAME (PLEASE PRINT) <u>David B. Richardson, Jr.</u>	TITLE <u>President</u>
SIGNATURE <u>D.B. Richardson</u>	DATE <u>7-29-2013</u>

(This space for State use only)

Well 13PA

RECEIVED

1-17-16

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

AUG 02 2013

UIC FORM 5

Div. of Oil, Gas & Mining

TRANSFER OF AUTHORITY TO INJECT

Well Name and Number NAVAJO FED 12-4		43-	API Number 03731395
Location of Well		Field or Unit Name KIVA	
Footage: 2260 N 440 W	County: SAN JUAN		Lease Designation and Number Federal UTU-52333
QQ, Section, Township, Range: NW 4 39S 25E	State: UTAH		

EFFECTIVE DATE OF TRANSFER: 4/1/2013

CURRENT OPERATOR

Company: <u>Citation Oil & Gas Corp.</u>	Name: <u>Sharon Ward</u>
Address: <u>14077 Cutten Rd</u>	Signature: <u>Sharon Ward</u>
<u>city Houston state TX zip 77069-2212</u>	Title: <u>Permitting Manager</u>
Phone: <u>(281) 891-1000</u>	Date: <u>4/1/2013</u>
Comments:	

NEW OPERATOR

Company: <u>Richardson Operating Company</u>	Name: <u>David B. Richardson, Jr.</u>
Address: <u>4725 S Monaco St. Suite 200</u>	Signature: <u>D. B. Richardson</u>
<u>city Denver state CO zip 80237</u>	Title: <u>President</u>
Phone: <u>(303) 830-8000</u>	Date: <u>7-29-2013</u>
Comments:	

(This space for State use only)

Transfer approved by: _____
Title: _____

Approval Date: _____

Comments:

This is a P.A. well the transfer of authority cannot be approved
D.B. Richardson 8/7/13