

UTAH OIL AND GAS CONSERVATION COMMISSION

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

10-24-88 Put on Cart.

DATE FILED 10-03-88

LAND: FEE & PATENTED STATE LEASE NO. PUBLIC LEASE NO. U-56186 INDIAN

DRILLING APPROVED: 10-11-88

SPUDDED IN: 10-20-88

COMPLETED: PUT TO PRODUCING:

Confidential

INITIAL PRODUCTION:

GRAVITY A.P.I.

GOR:

PRODUCING ZONES:

TOTAL DEPTH:

WELL ELEVATION:

DATE ABANDONED:

FIELD: KACHINA

UNIT: KACHINA-SECONDARY RECOVERY

COUNTY: SAN JUAN

WELL NO. HAVASU FEDERAL 11-19 API NO. 43-037-31458

LOCATION 940' FNL FT. FROM (N) (S) LINE. 590' FWL FT. FROM (E) (W) LINE. NWNW 1/4 - 1/4 SEC. 19

TWP.	RGE.	SEC.	OPERATOR	TWP.	RGE.	SEC.	OPERATOR
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38S	24E	19	MERIDIAN OIL INC.				
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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 WELL

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 applicable regulations)
 At surface: NWNW (940' FNL - 590' FWL)
 At proposed prod. zone: Same

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

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any) 590'

16. NO. OF ACRES IN LEASE 3427.68

17. NO. OF ACRES ASSIGNED TO THIS WELL N/A

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 1200'

19. PROPOSED DEPTH 6000' *Isma*

20. ROTARY OR CABLE TOOLS Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.) 5093' GL (graded)

22. APPROX. DATE WORK WILL START* October 15, 1988

RECEIVED
OCT 03 1988

5. LEASE DESIGNATION AND SERIAL NO.
U-56186

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

7. UNIT AGREEMENT NAME
 Kachina

8. FARM OR LEASE NAME
Havasu-Federal

9. WELL NO.
11-19

10. FIELD AND POOL, OR WILDCAT
 Kachina

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Section 19, T38S, R24E

12. COUNTY OR PARISH San Juan

13. STATE Utah

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2	13-3/8	54.5	80'	Redi-Mix to surface
11	8-5/8	24	1900'	Cement to sfc w/480 sx
7-7/8	5-1/2	15.5	6000'	Single stage. TOC @ 1800'. Caliper log + 25% excess

Oil and Gas Order No. 1

- Attachments:
- EXHIBIT "A" - Survey Plat
 - EXHIBIT "B" - Eight Point Drilling Program
 - EXHIBIT "C" - BOP Diagram
 - EXHIBIT "D" - Thirteen Point Surface Use Plan
 - EXHIBIT "E" - Vicinity Map
 - EXHIBIT "G" - Cross-Sections
 - EXHIBIT "H" - Rig Layout

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. *DAS 9/28/88*
 SIGNED *D.R. Harris* TITLE Regional Drilling Engineer DATE 9/28/88

(This space for Federal or State office use)

PERMIT NO. 43-037-31458 APPROVAL DATE _____

APPROVED BY _____ TITLE _____

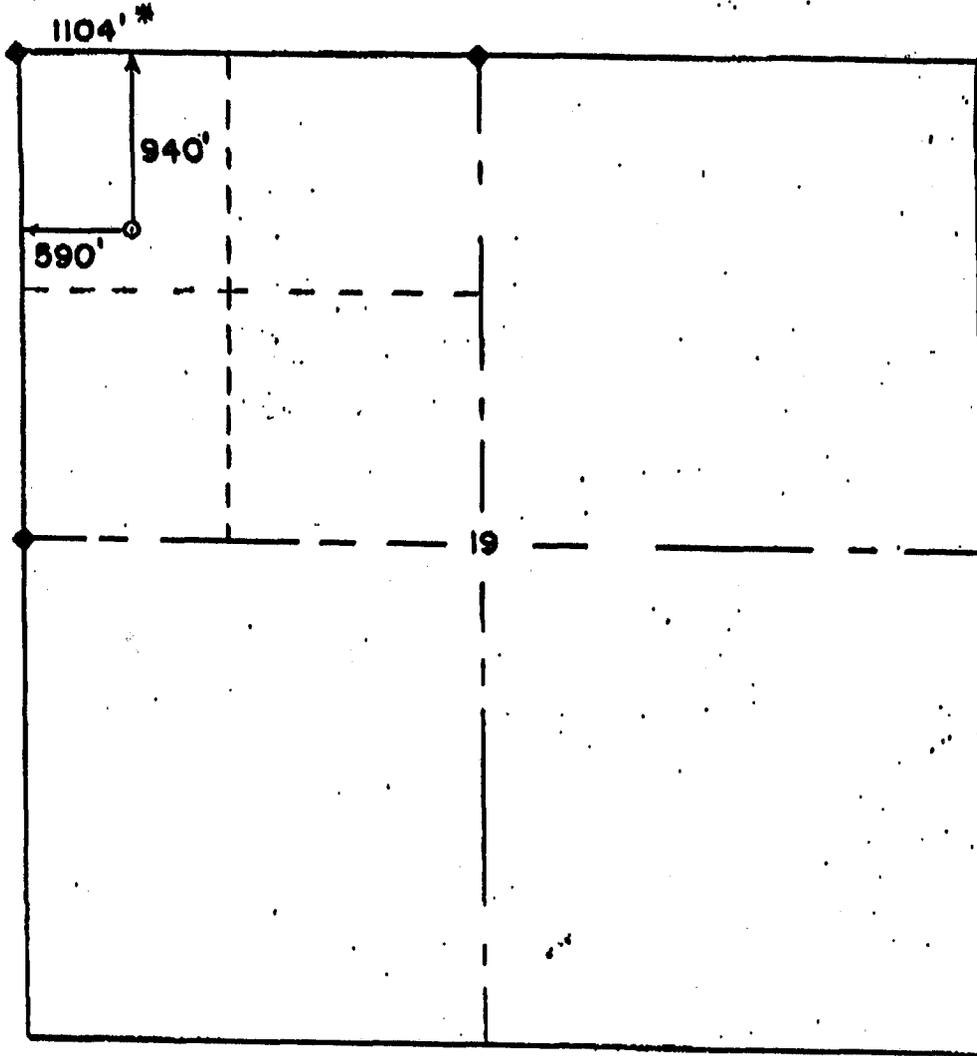
CONDITIONS OF APPROVAL, IF ANY:

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

DATE: 10-11-88
 BY: *John R. B...*
 WELL SPACING: R615-2-3

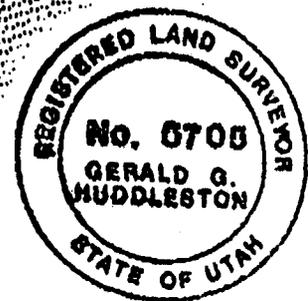
*See Instructions On Reverse Side

Well Location Plat



1" = 1000'
◆ brass cap
* measured

WELL LOCATION DESCRIPTION:
Meridian Oil, #11-19 Havana Federal
940'FNL & 590'FWL
Section 19, T.38 S., R.24 E., SLM
San Juan County, Utah
5093' ground elevation
Alternate: 940'FN & 800'FW, 5094' grd.



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

5 September 1988

Gerald G. Huddleston
Gerald G. Huddleston, LS

OIL AND GAS ORDER NO. 1

MERIDIAN OIL INC.

LEASE NAME: 11-19 Havasu-Federal
 LEASE NO. U-56186
 LOCATION: NWNW Section 19-38S-24E
 940' FNL - 590' FWL
 San Juan County, Utah
 Kachina 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 PROGRAM

1.& 2. Estimated Tops:

Morrison	Surface	
Entrada	745	
Navajo	915	fresh water
Chinle	1845	
Shinarump	2825	
Cutler	2955	
Hermosa	4715	
Upper Ismay	5775	oil
TD	6000	

All fresh water and prospectively valuable minerals encountered during drilling will be recorded by depth, cased, and cemented.

3. Pressure Control Equipment:

- a. A 5000 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 at 500 psi and 200 psi (low pressure/high pressure) 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>Casing Size</u>	<u>Depth</u>	<u>Casing</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
11	8-5/8	1,900'	24#	K-55	ST&C	New	Cement to sfc w/480 sx.
7-7/8	5-1/2	6,000'	15.5#	K-55	LT&C	New	Single stage. TOC @ 1800'. Caliper log + 25% excess.

5. Proposed drilling mud program:

A water base mud system from surface to TD. Maximum anticipated mud weight is 9.0#/gallon.

A mud logging unit will be on location from 4500' to TD.

6. Coring, Logging and Testing Program:

Coring

None

Logging

GR/DLL/MSL	Base surface casing to TD (GR to surface)
GR/FDC/CNL	Base surface casing to TD
GR/BHC Sonic	Base surface casing to TD (GR to surface display)

Testing

None

Whether the well is completed as a dry hole or as an injector, "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
11-19 Havasu-Federal
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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".

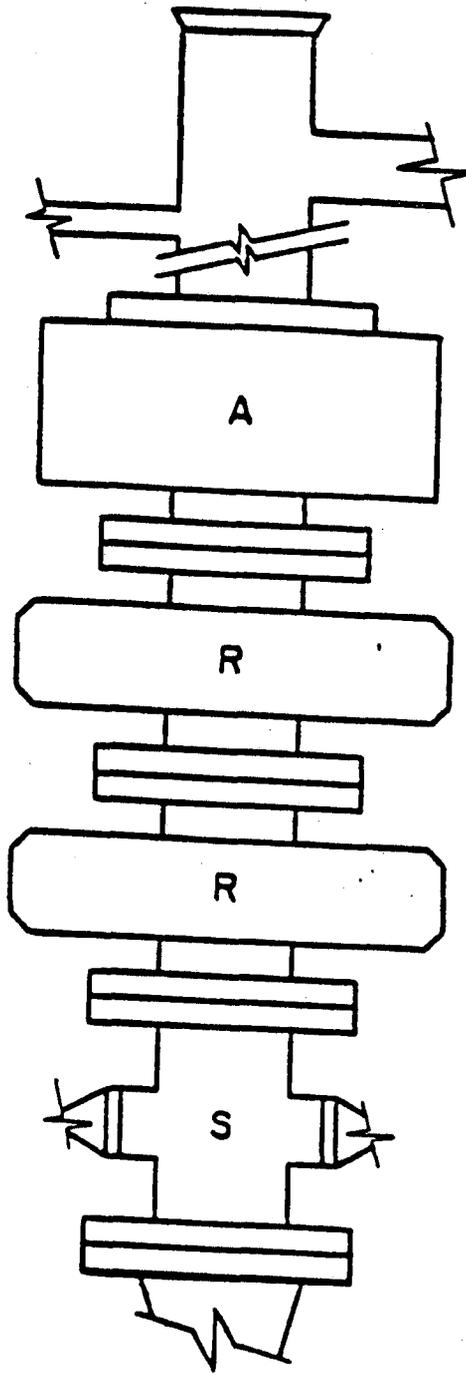


FIG. 2.C.5
ARRANGEMENT SRRA
Double Ram Type Preventers, R_d , Optional.

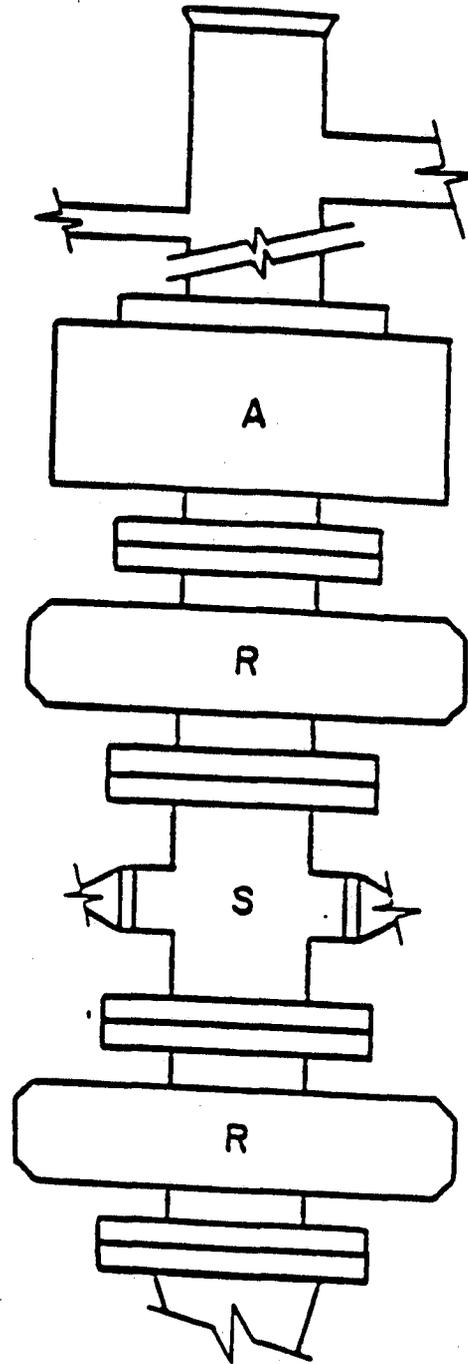


FIG. 2.C.6
ARRANGEMENT RSRA

TYPICAL BLOWOUT PREVENTER
ARRANGEMENTS FOR 3M AND 5M RATED
WORKING PRESSURE SERVICE—
SURFACE INSTALLATION

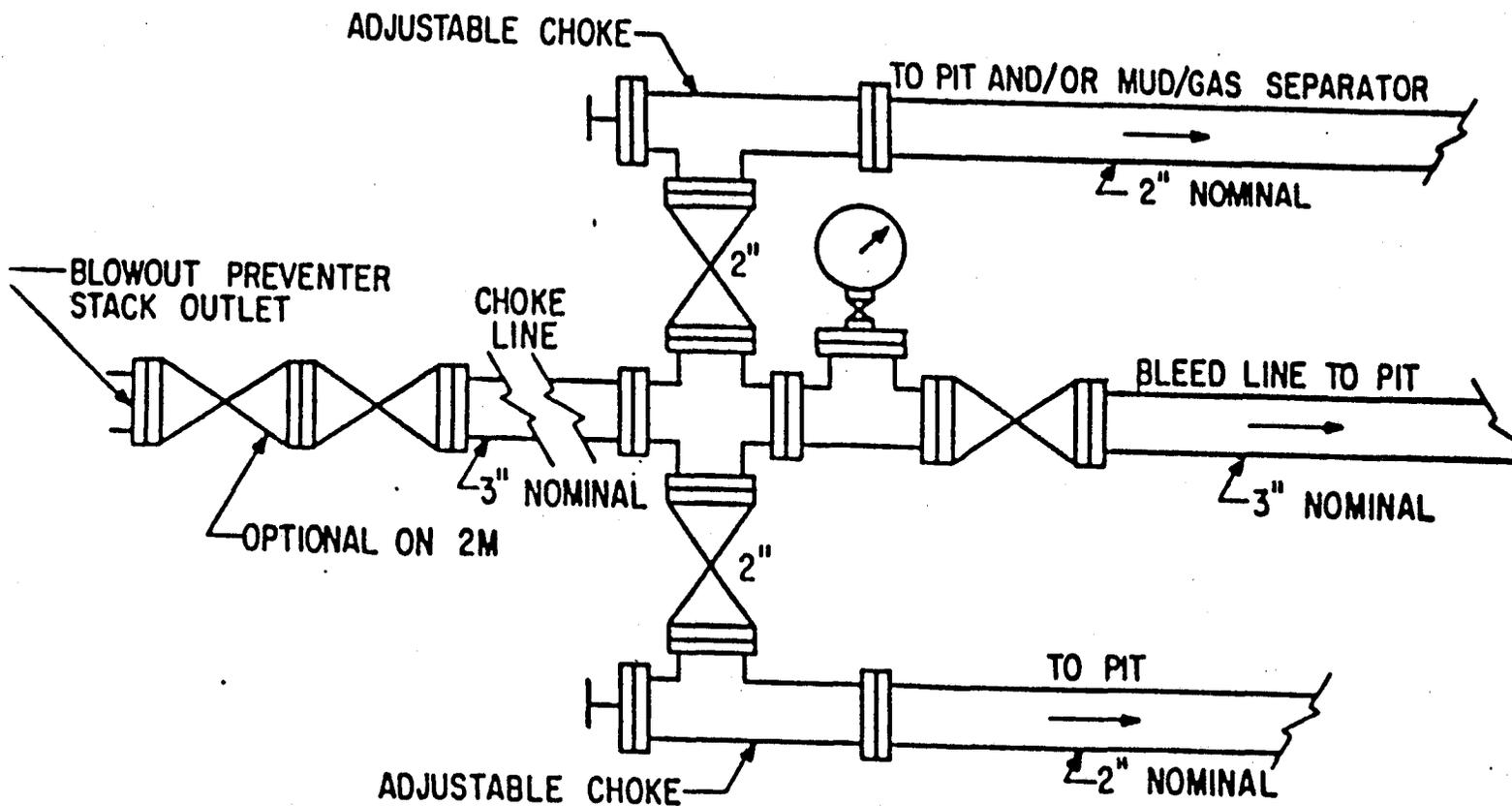


FIG. 3.A.1

TYPICAL CHOKES MANIFOLD ASSEMBLY
FOR 2M AND 3M RATED WORKING
PRESSURE SERVICE — SURFACE INSTALLATION

EXHIBIT "D"

B. THIRTEEN POINT SURFACE USE PLAN

1. Existing Roads (Yellow)

- a. Location of proposed well in relation to town or other reference point: 5 miles northwest of Hatch Trading Post.
- b. Proposed route to location. (See attached Exhibit "E").
- c. Normal maintenance of existing lease roads.

2. Planned Access Roads (Blue)

- a. The maximum total width will be 30 feet.
- b. Maximum grade is N/A.
- c. Turnouts will be constructed as needed.
- d. Road is centerline flagged from existing lease roads.
- e. No drainage will be required for drilling. Three feet of material will be used to pad over the road crossing of the Unocal and Western pipelines and a 18" culvert may be needed when upgrading the road.
- f. Surface road with rock after injection line has been buried along side of road.
- g. A water injection line will be buried 30 feet from the centerline of the road and will increase surface disturbance 15 - 20 feet from the edge of the road disturbance.
- h. Surface disturbance and vehicular travel will be limited to the approved location and approved location and access road. Any additional area needed will be approved in advance by the Area Manager in advance.
- i. The access road will be rehabilitated or brought to Resource (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 "E".

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

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.

Water injection well with limited surface facilities.

The water injection line from the water injection plant will be buried at least 30 inches deep parallel to the access road and then parallel to the Unocal and Western pipelines back to the injection plant.

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 not be lined.

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.

If burning is required, a permit will be obtained from the Sheriff's Office of San Juan County (801) 587-2237. (Permit required May 1 - October 31)

Produced waste water will be confined to a (unlined) 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 "H".

Cuts and fills are shown on attached Exhibit "G".

The reserve pit will be located on Northwest side of location.

The top 6 inches of soil material will be removed from the location and stockpiled with the brush between the pit and pad.

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

Access to the well pad will be from the rear end of the location (West end).

The left front corner of the location will be rounded and a diversion will be cut to channel runoff around the location.

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 roads, will be scarified and left with a rough surface. Rip six (6) inches deep with rips eighteen (18) inches apart.

Seed will be broadcast at a time specified by the BLM. If broadcast, a harrow or some other implement will be dragged over the seeded area to assure seed coverage. (October 1 - February 28).

The following seed mixture will be used on the buried pipeline and location when reclaimed:

1/2 lbs/acre Sand dropseed
1/2 lbs/acre Alkali Sakaton
3 lbs/acre Fourwing saltbush
6 lbs/acre Domestic Wheat

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

The two archaeological sites flagged in blue (east of location) will be avoided during construction. (See attached Exhibit "H")

Where injection line parallels Unocal and Western pipelines, injection line will be 30 feet or closer to the pipeline. Surface disturbance during burying of the injection line will be 30 feet wide. (See attached Exhibit "E").

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 paleontological sites, or collecting artifacts or fossils.

Any cultural and/or paleontological resource discovered by the operator, or any person working on his behalf, on public or federal land shall be immediately reported to the authorized office (BLM-San Juan Resource Area Office (801) 587-2141). The operator shall immediately suspend all operations in the area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The operator will be responsible for the cost of evaluation of the discovery and of any required mitigation measures. Any decision as to proper mitigation measures will be made by the authorized officer after consulting with the operator and other affected parties.

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. Dan Sodersten, Drilling Engineer | 406-256-4073 | 406-947-5035 |
| 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.

DAS 9/28/68

D. R. Harris
Douglas R. Harris
Regional Drilling Engineer

9/28/68
Date

/ssn

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:

Dale Manchester, Petroleum Engineer Office Phone: (801) 259-6111

Home Phone: (801) 259-6239

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.

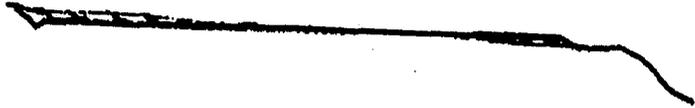
Cross Section.

11-19 Navasu Federal

Cut ////
Fill

1"=50' Horz. & Vert.

C²



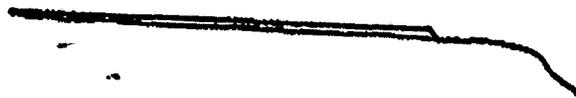
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B²



BR

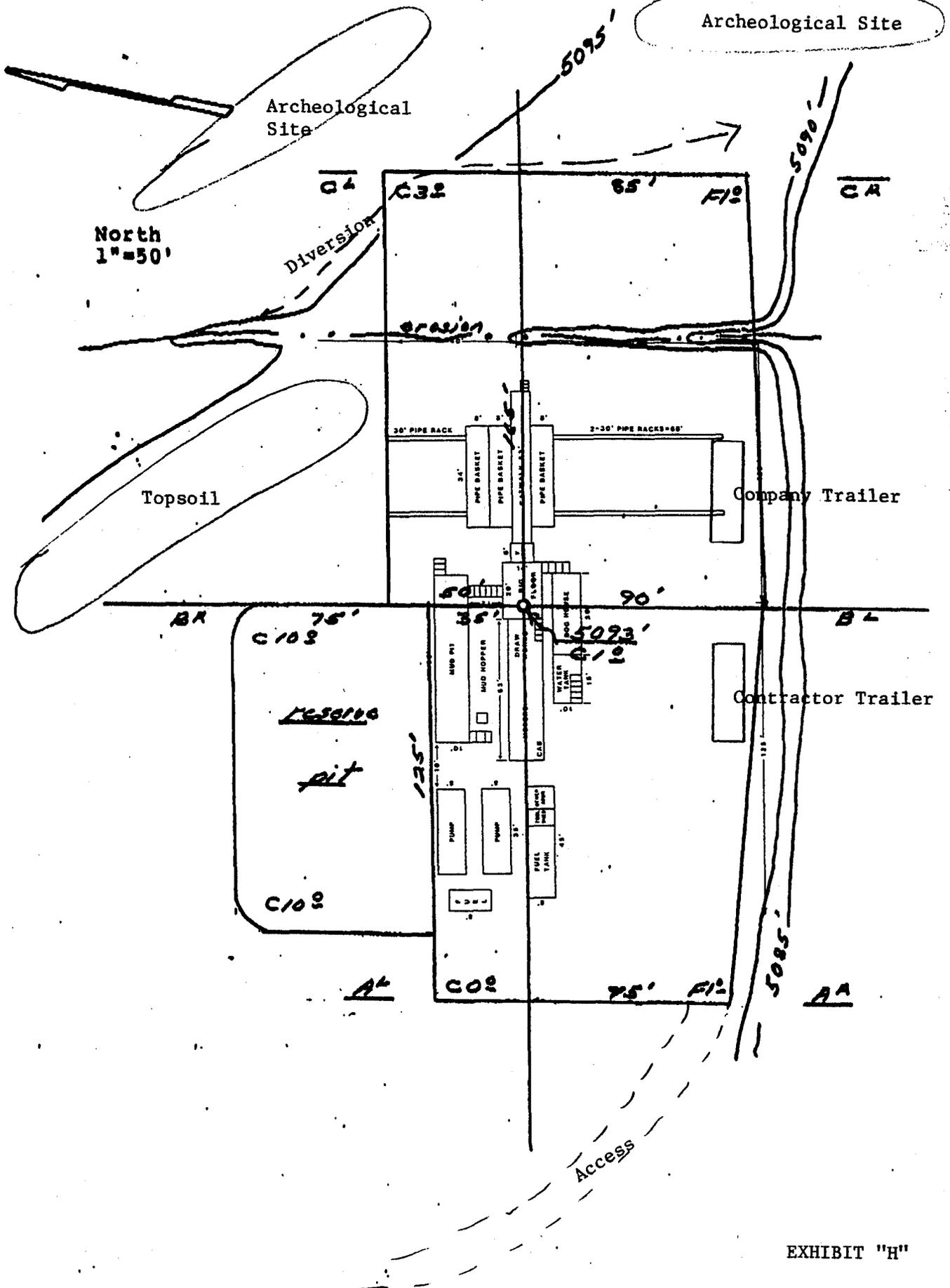
C²

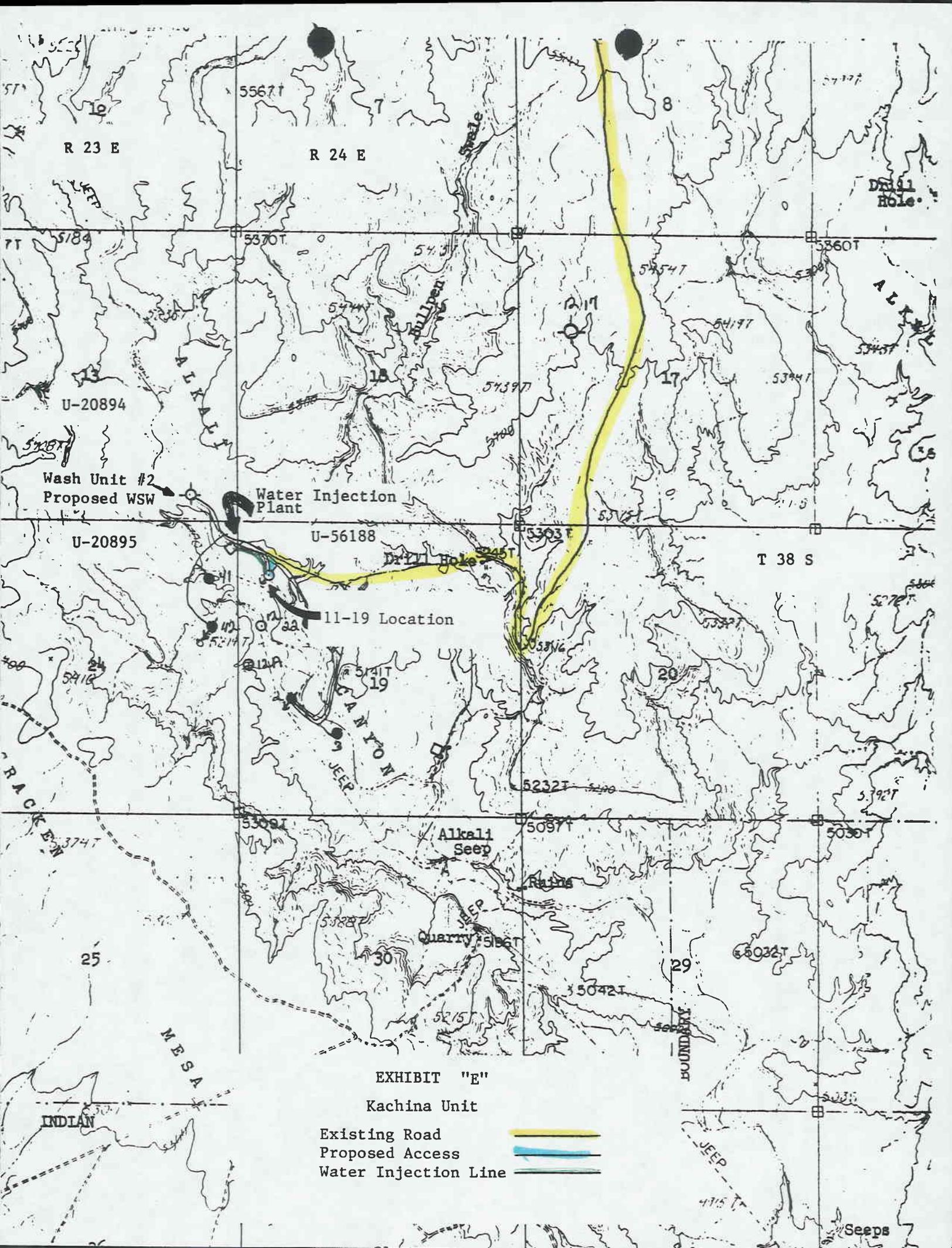


CR

Plan View Sketch

11-19 Havasu Federal





R 23 E

R 24 E

T 38 S

Wash Unit #2
Proposed WSW

Water Injection
Plant

Drill Hole

11-19 Location

Alkali
Seep

Quarry

INDIAN

MESA

BOUNDARY

JEEP

Seeps

Drill
Hole

ALAKA

JEEP
CANYON

RACK

U-20894

U-20895

U-56188

U-5303T

U-5097T

U-5067T

U-5042T

U-5035T

U-5032T

U-5030T

U-5027T

U-5024T

U-5021T

U-5018T

U-5015T

U-5012T

U-5009T

U-5006T

U-5003T

U-5000T

U-4997T

U-4994T

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U-4796T

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U-4775T

U-4772T

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U-4766T

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U-4760T

U-4757T

U-4754T

U-4751T

U-4748T

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U-4592T

U-4589T

U-4586T

U-4583T

U-4580T

U-4577T

U-4574T

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U-4523T

U-4520T

U-4517T

U-4514T

U-4511T

U-4508T

U-4505T

U-4502T

U-4499T

U-4496T

U-4493T

U-4490T

U-4487T

U-4484T

U-4481T

U-4478T

U-4475T

U-4472T

U-4469T

U-4466T

U-4463T

U-4460T

U-4457T

U-4454T

U-4451T

U-4448T

U-4445T

U-4442T

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U-4415T

U-4412T

U-4409T

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U-4364T

U-4361T

U-4358T

U-4355T

U-4352T

U-4349T

U-4346T

U-4343T

U-4340T

U-4337T

U-4334T

U-4331T

U-4328T

U-4325T

U-4322T

U-4319T

U-4316T

U-4313T

U-4310T

CONFIDENTIAL

OPERATOR Meridian Oil Corp. DATE 10-3-88
WELL NAME Havasu Federal 11-19
SEC NWNW 19 T 38S R 24E COUNTY San Juan

43-037-31458
API NUMBER

Fed.
TYPE OF LEASE

CHECK OFF:

- | | | |
|---|---|---|
| <input checked="" type="checkbox"/> PLAT | <input checked="" type="checkbox"/> BOND | <input checked="" type="checkbox"/> NEAREST WELL |
| <input checked="" type="checkbox"/> LEASE | <input checked="" type="checkbox"/> FIELD | <input checked="" type="checkbox"/> POTASH OR OIL SHALE |

PROCESSING COMMENTS:

Nearest well ok under Unit Agreement
Need Water Permit
Kachina - Secondary Recovery Unit - Lease Basis per BLM (Moeb)
P.O.D. received 1988. (Dale Manchester)

CONFIDENTIAL PERIOD

EXPIRED

ON 10-17-90

APPROVAL LETTER:

SPACING: R615-2-3 Kachina Sec. Rec. R615-3-2
UNIT
 CAUSE NO. & DATE R615-3-3

STIPULATIONS:

1- Water Permit
2- Prior to commencement of water injection, the operator shall apply ~~for~~ to and receive approval of injection operations from the Underground Injection Control Program of the Division.

MERIDIAN OIL

October 10, 1988

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

RE: Request for approval for three Class II water injection wells for the Kachina Unit Waterflood, San Juan County, Utah.

Dear Sirs:

Please find enclosed the information required by Rule R615-5-2 as directed by your letter of September 21, 1988. We are requesting approval to inject water into the Ismay formation in the Kachina Unit (located in Section 24, T38S, R23E and Section 19, T38S, R24E) for the purpose of increasing the ultimate oil recovery. We plan to drill one new well (11-19 Havasu Federal) and convert two existing wells (42-24 Havasu Federal and the Abrabian Federal #2) to water injectors. The information required is as follows:

R615-5-2.0: Form DOGM-UIC-1 (Attachment 1, 2 & 3)

- 2.1: A plat showing the location of the injection wells (Attachment 4).
- 2.2: Copies of all logs run on the injection wells. The logs of the two existing wells (42-24 and ABO #2) are on file with the state and the logs of the new well (11-19) will be filed when they are run after the well is drilled.
- 2.3: Copies of the cement bond logs on the injection wells. Bond logs of the existing wells are on file and the new well will be logged and filed with the State when the well is drilled.
- 2.5: Description of the casing and proposed method for testing the casing before use as an injection well.

42-24 Havasu Federal (existing well)
Surface casing: 8-5/8" 24# J-55 set @ 1906'.
Cemented to surface.

Production casing: 5-1/2" 17# J-55 set @ 6117'.
Cemented with 650 sxs Class "B" with 16% gel followed by 162 sxs Class "B" cement.

Arabian Federal #2 (existing well)

Surface casing: 8-5/8" 24# J-55 set @ 1954'.
Cemented to surface.

Production casing: 5-1/2" 15.5# J-55 set @ 6095'.
Cemented with 350 sxs Class "H" cement.

11-19 Havasu Federal (proposed well)

Surface casing: 8-5/8" 24# K-55 set @ 1900'.
Cemented to surface.

Production casing: 5-1/2" 15.5# K-55 set @ 5950'.
Cemented with 365 sxs Class "B" with 16% gel followed
by 100 sxs Class "B" cement.

The casing in all wells will be pressure tested to
2500 psi prior to starting injection into the Ismay
formation.

- 2.6 The water to be used for injection in these wells will
be produced from the Cutler and Wingate formations in
the Wash Unit #2 well located SESE Section 13, T39S,
R23E. We will attempt to produce approximately 6000
BWPD from this well and inject a maximum of 2000 BWPD
per injection well.
- 2.7 The recompletion of the proposed water source well
(Wash Unit #2) has not been completed at this time.
The proposed water source formations and the injection
zone are the same as our existing waterflood in the
Kiva Field located in Sections 4, 5, & 9, T39S, R25E.
Upon completion of the water source well, we will
sample the source well and submit this information to
you.
- 2.8 The proposed maximum injection pressure will be 3750
psi and average injection pressure will be 3700 psi.
- 2.9 After the two existing proposed injection wells are
converted to injectors, we will run a step-rate test
on each well to determine the fracture gradient in the
area. This information will be forwarded to you as
soon as possible.
- 2.10 Water injection in the Kachina waterflood will be into
Upper Ismay zone of the Pennsylvanian Paradox
formation. Kachina is a NWSE trending carbonate
stratigraphic trap which is approxiamtely 1 mile long
and 1/2 mile wide. It is bounded on all sides and
overlain by an impermeable anhydrite. The reservoir
is underlain by the Hovenweep Shale. Maximum net
thickness is 132' at an average depth of 5800'.

2.11 There are (5) existing wells in the Kachina Field which penetrate the Ismay reservoir. The minimum amount of cement used in any of these wells was 350 sxs in the Arabian Federal #2. This amount of cement would cover over 3000' above the Ismay formation and should be more than enough to mechanically isolate the reservoir from any possible migration outside the casing string.

2.12 Affidavit certifying that a copy of this application has been provided to all operators, owners, and surface owners within a 1/2 miles radius of the proposed injection wells (Attachment 5).

If you has any questions or require additional data regarding the proposed Kachina waterflood, please call me at (406)-256-4030. Thank you for your prompt attention to our application.

Sincerely,



Ron Schuyler
Senior Production Engineer

Attachments

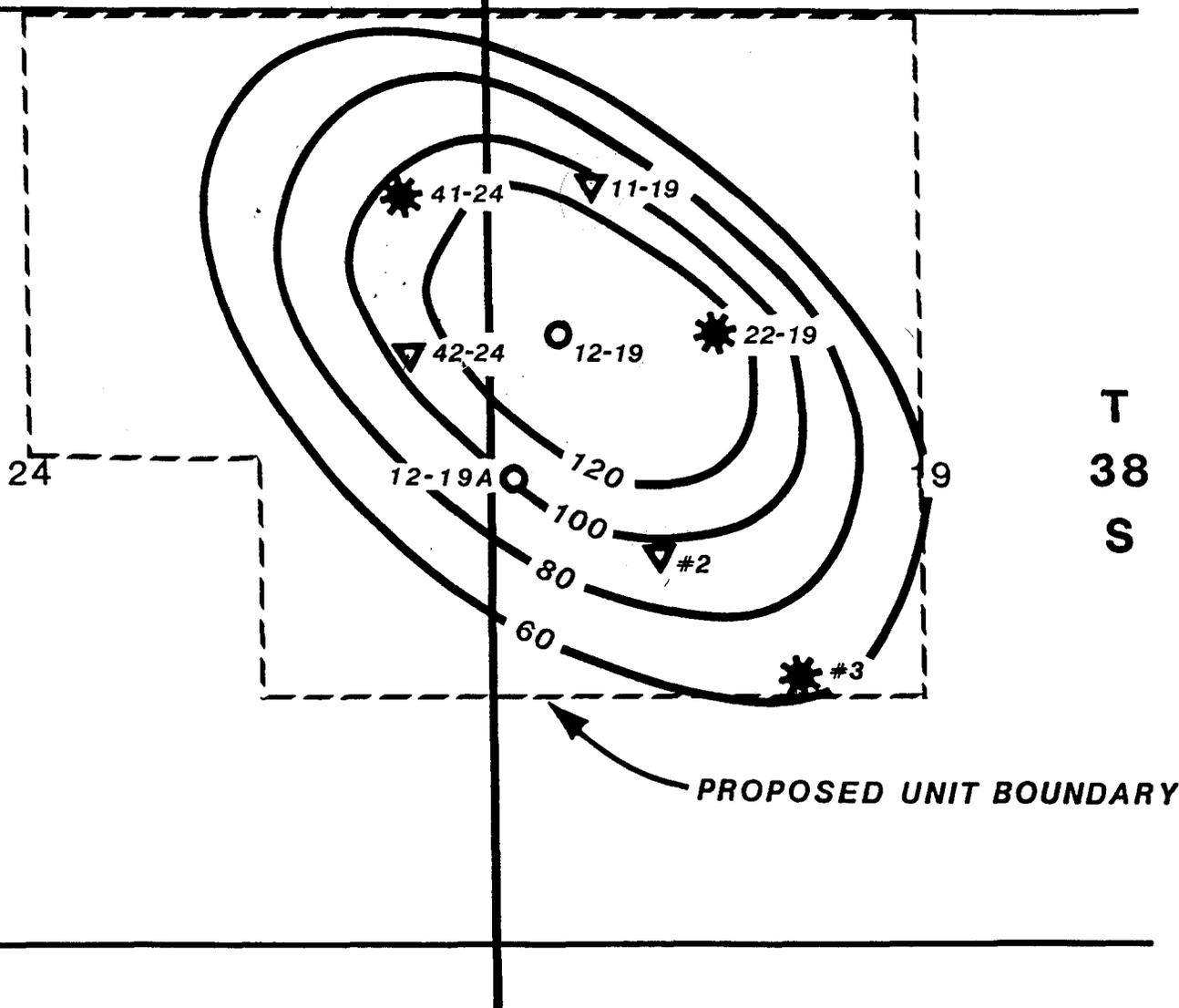
RES/njl

R 23 E

R 24 E

⊕ 13-34

⊕ Wash Unit #2



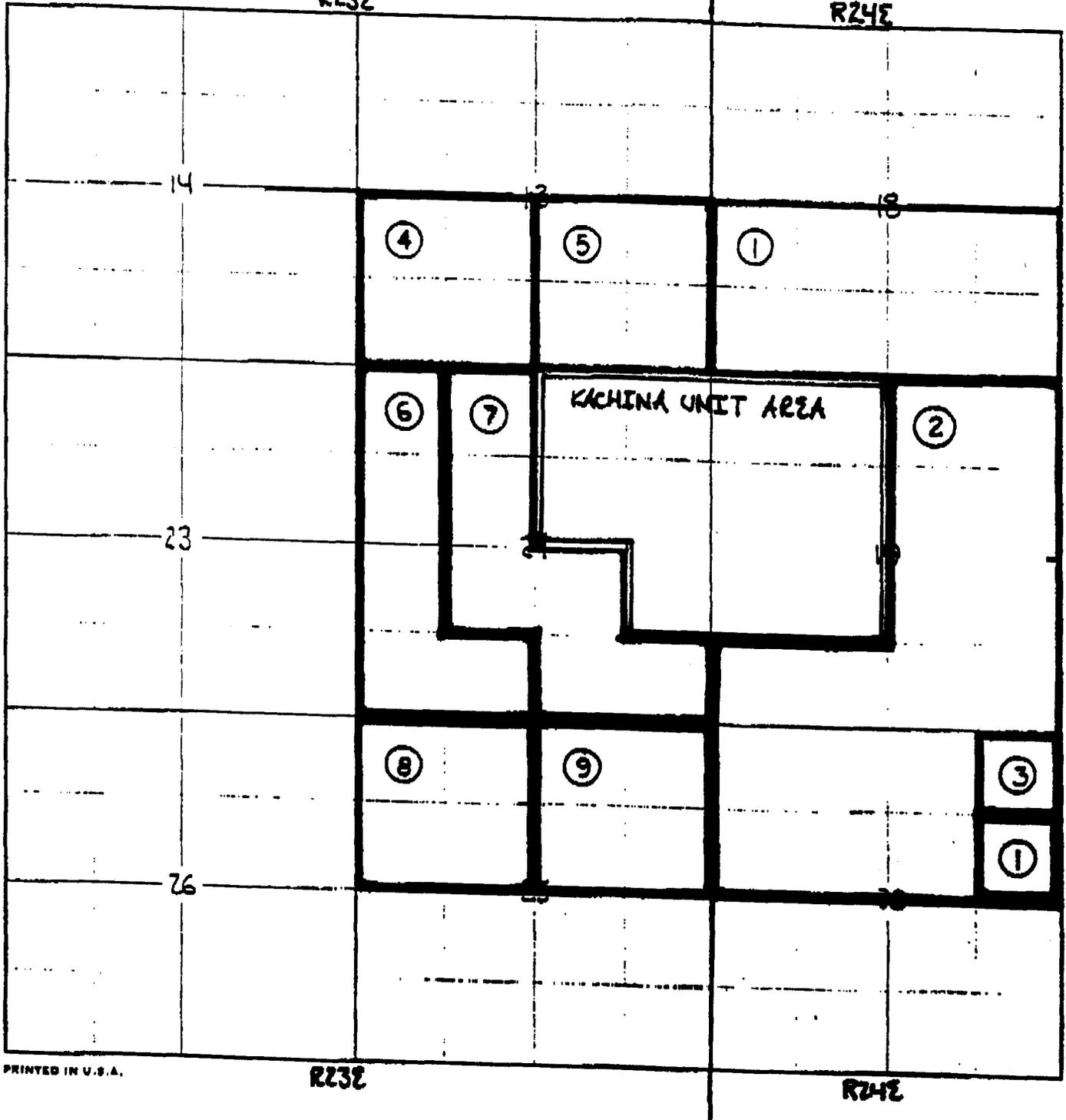
KACHINA FIELD

SAN JUAN COUNTY, UTAH

▽ Proposed Injector

○ Proposed Producer

TOWNSHIP 38 SOUTH RANGE 23-24 EAST COUNTY SAN JUAN STATE UTAH



T38S

PRINTED IN U.S.A.

I, Suzann S. Nelson do hereby certify that the following owners/operators have been sent certified copies of the Request for Approval for three (3) Class II Water Injection wells for the Kachina Unit Waterflood in San Juan County, Utah.

Maurice W. Brown
614 Greeley Highway
Cheyenne, WY 82007

Peggy A. Yates
c/o ABO Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210

BWAB 1984-1986 Joint Venture
1801 California
Suite 1000
Denver, CO 80202

Union Pacific Resources Co.
P.O. Box 1257
Englewood, CO 80150

Samedan Oil Corporation
2550 Security Life Building
1616 Glenarm Place
Denver, CO 80202

OXY USA, INC.
P.O. Box 1919
Midland, TX 79702

Wintershall Petroleum Corporation
5251 DTC Parkway
Suite 500
Englewood, CO 80111

Raymond T. Duncan
1777 South Harrison Street
Penthouse 1
Denver, CO 80210

Comdisco Resources, Inc.
c/o Raymond T. Duncan
1777 S. Harrison Street
Penthouse 1
Denver, CO 80210

Hartwell Corporation 83
5941 S. Middleton Road
Suite 103
Littleton, CO 80123

Tenneco Oil Company
P.O. Box 3249
Englewood, CO 80155

Duncan Exploration
1777 South Harrison Street
Penthouse 1
Denver, CO 80210

Texaco Producing Inc.
P.O. Box 2100
Denver, CO 80201

Chorney Oil Company
Suite 1000
555 Seventeenth
Denver, CO 80202-3910

William C. Armor, Jr.
3422 South Energy Lane
Casper, WY 82604

Synergy Exploration Inc.
1777 S. Harrison
Penthouse 1
Denver, CO 80210

Richard C. Perkins
184 North 100 West (16-4)
Blanding, UT 84511

United States of America
Bureau of Land Management
Utah State Office
Suite 301
324 South State Street
Salt Lake City, UT 84111

ABO Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210

Western Gas Processors
Suite 609
10701 Melody Drive
Denver, CO 80234

Notary Seal

Notary Public *[Signature]*
State of Montana
County of Yellowstone
My Commission expires 2-28-90



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Norman H. Bangertter

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

October 11, 1988

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

Gentlemen:

Re: Havasu Federal 11-19 - NW NW Sec. 19, T. 38S, R. 24E - San Juan County, Utah
940' FNL, 590' FWL

Approval to drill the referenced well is hereby granted in accordance with Section 40-6-18, Utah Code Annotated, as amended 1983; and predicated on Rule R615-2-3, Oil and Gas Conservation General Rules, subject to the following stipulations:

1. Prior to commencement of drilling, receipt by the Division of evidence providing assurance of an adequate and approved supply of water as required by Chapter 3, Title 73, Utah Code Annotated.
2. Prior to commencement of water injection, the operator shall apply to and receive approval of injection operations from the Underground Injection Control Program of the Division.

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

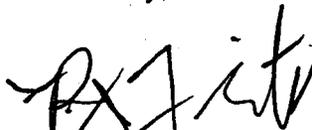
1. Spudding notification within 24 hours after drilling operations commence.
2. Submittal of an Entity Action Form within five working days following spudding and whenever a change in operations or interests necessitates an entity status change.
3. Submittal of the Report of Water Encountered During Drilling, Form OGC-8-X.
4. Prompt notification if it is necessary to plug and abandon the well. Notify John R. Baza, Petroleum Engineer, (Office) (801) 538-5340, (Home) 298-7695, or Jim Thompson, Lead Inspector, (Home) 298-9318.

Page 2
Meridian Oil Incorporated
Havasu Federal 11-19
October 11, 1988

5. Compliance with the requirements of Rule R615-3-22, Gas Flaring or Venting, Oil and Gas Conservation General Rules.
6. Prior to commencement of the proposed drilling operations, plans for facilities for disposal of sanitary wastes at the drill site shall be submitted to the local health department. These drilling operations and any subsequent well operations must be conducted in accordance with applicable state and local health department regulations. A list of local health departments and copies of applicable regulations are available from the Division of Environmental Health, Bureau of General Sanitation, telephone (801) 538-6121.
7. This approval shall expire one (1) year after date of issuance unless substantial and continuous operation is underway or an application for an extension is made prior to the approval expiration date.

The API number assigned to this well is 43-037-31458.

Sincerely,



R. J. Firth
Associate Director, Oil & Gas

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

UIC CHECKLIST FOR APPLICATION APPROVAL

well to be drilled.

OPERATOR Meridian WELL NUMBER Havas Federal 11-19
 SEC. 19 T. 38S R. 24E COUNTY San Juan
 API # 43-037-31458

NEW WELL DISPOSAL WELL _____ ENHANCED RECOVERY WELL

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

Comments: Injection interval 5750 - 5850 (est) Ismay (PRDV)
rate 2000 Bwpd est pressure 3700

2 producers, 2 proposed injectors 1 SI well to be converted to WSW.

2 proposed producers are to be drilled

Reviewed by (H) Samis 10/17/88

(over)

Operator

Meridian Oil

Well

42-24, 11-19 & Arabian #2

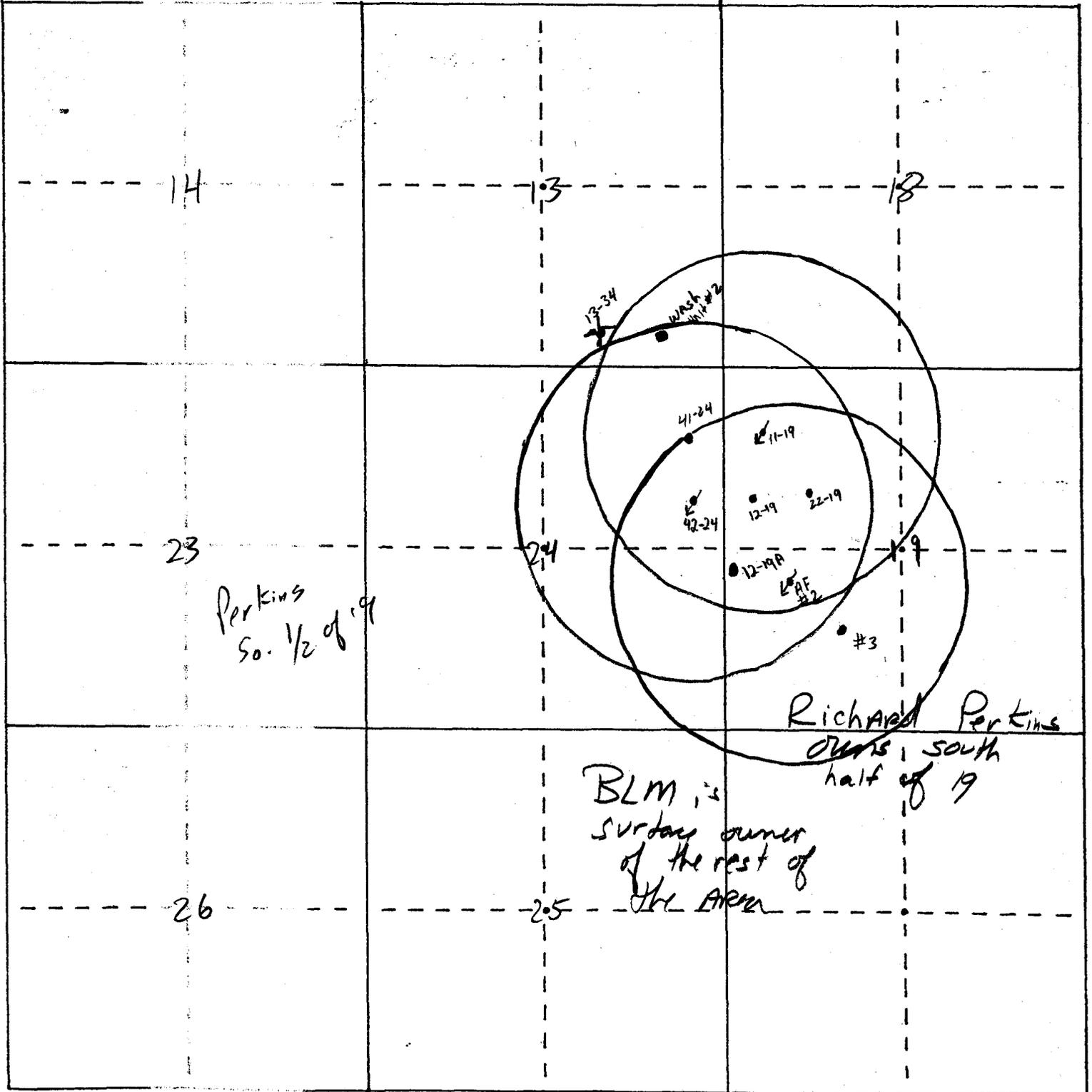
Location

T38S, R23+24E

Sec 19, 24 San Juan County

23E

24E



14

23

18

23

24

19

Perkins
So. 1/2 of 19

Richard Perkins
owns south
half of 19

BLM is
surface owner
of the rest of
the Area

26

25

DATE 10/18/88 WELL NO. 22-19 LEASE 38-4E FIELD well 19

13 ³/₈" \odot 75' 17 ¹/₂" hole
94 SX cement

8 ⁵/₈" 1698' 11" hole 440 SX
cement

5 ¹/₂" \odot 6072' 7 ⁷/₈" hole
900 SX cement

 BRIDGE PLUG   PACKER  CENTRALIZER  SCRATCHER  BASKET  PERFORATION

(Use reverse side for additional remarks & sketches.)

DATE 10/18/88

WELL NO. Arabian #3

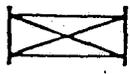
LEASE 385 24E sec 19

FIELD

13 3/8" @ 85 17 1/2" hole
125 SXS cement.

8 5/8" @ 198 12 1/4" hole
1125 SX of cement

5 1/2" @ 6082' 7 7/8" hole
375 SX cement



BRIDGE PLUG



PACKER



CENTRALIZER



SCRATCHER



BASKET



PERFORATION

(Use reverse side for additional remarks & sketches.)

MERIDIAN OIL

October 17, 1988

RECEIVED
OCT 19 1988

DIVISION OF
OIL, GAS & MINING

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

Attn: Dan Jarvis

Re: **Produced Water Analysis, Kachina Field,
San Juan County, Utah**

Dear Mr. Jarvis:

Please find enclosed a copy of the produced water analysis from 4 of the existing producing oil wells in the above referenced field. I am sending these copies in response to your telephone call this morning. If you require additional data, please call me at (406) 256-4030.

Sincerely,



Ron Schuyler
Senior Production Engineer

Enclosure

cc: S.S. Nelson
T.C. Lechner

RES:DRB:23+

LCR

Form 3160-3
(November 1983)
(formerly 9-331C)

SUBMIT IN TRIPLICATE*
(Other instructions on
reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.	U-56186
6. IF INDIAN, ALLOTTEE OR TRIBE NAME	N/A
7. UNIT AGREEMENT NAME	Kachina
8. FARM OR LEASE NAME	Havasu-Federal
9. WELL NO.	11-19
10. FIELD AND POOL, OR WILDCAT	Kachina
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA	Section 19, T38S, R24E
12. COUNTY OR PARISH	San Juan
13. STATE	Utah

1a. TYPE OF WORK
DRILL DEEPEN PLUG BACK

b. TYPE OF WELL
OIL WELL GAS WELL OTHER WATER INJECTION SINGLE ZONE MULTIPLE ZONE

2. NAME OF OPERATOR
MERIDIAN OIL INC.

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

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)
At surface NWNW (940' FNL - 590' FWL)
At proposed prod. zone Same

RECEIVED
OCT 20 1988
DIVISION OF OIL, GAS & MINING

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

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any)
590'

16. NO. OF ACRES IN LEASE
3427.68

17. NO. OF ACRES ASSIGNED TO THIS WELL
N/A

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.
1200'

19. PROPOSED DEPTH
6000'

20. ROTARY OR CABLE TOOLS
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
5093' GL (graded)

22. APPROX. DATE WORK WILL START*
October 15, 1988

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT

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. *DAS 9/23/88*
SIGNED *D.R. Henni* TITLE Regional Drilling Engineer DATE 9/28/88

(This space for Federal or State office use)

PERMIT NO. 43-037-31458 APPROVAL DATE OCT 17 1988

APPROVED BY /S/ GENE NODINE TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY: _____

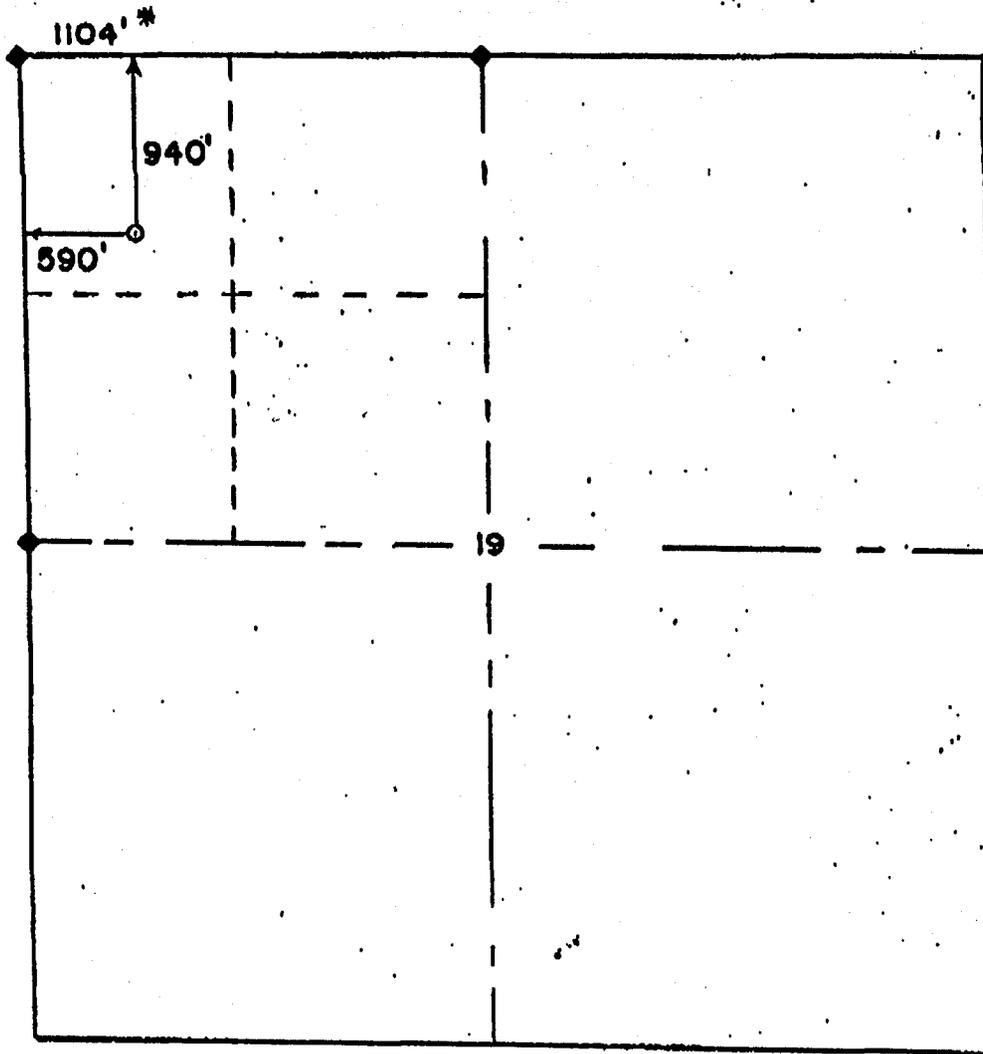
CONDITIONS OF APPROVAL ATTACHED

*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.

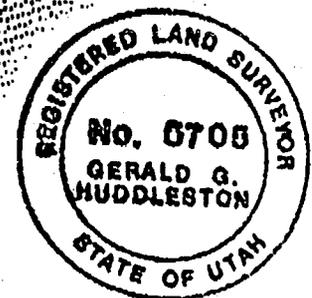
DOBW

Well Location Plat



1" = 1000'
◆ brass cap
* measured

WELL LOCATION DESCRIPTION:
Meridian Oil, #11-19 Havana Federal
940'FNL & 590'FWL
Section 19, T.38 S., R.24 E., SLM
San Juan County, Utah
5093' ground elevation
Alternate: 940'FN & 800'FW, 5094' grd.



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

5 September 1988

Gerald G. Huddleston
Gerald G. Huddleston, LS

Meridian Oil Inc.
Well No. Havasu-Federal 11-19
Sec. 19, T. 38 S., R. 24 E.
San Juan County, Utah
Lease U-56186

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.

Be advised that Meridian Oil Inc., is considered to be the operator of the above well, and is responsible under the terms and conditions of the lease for the operations conducted on the leased lands.

Bond coverage for this well is provided by Bond No. 184986F1871/0-31780 (Bonded Principle - Meridian Oil Inc.) via surety consent as provided for in 43 CFR 3104.3.

This office will hold the aforementioned operator and bond liable until the provisions of 43 CFR 3106.7-2 continuing responsibility are met.

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:

Dale Manchester, Petroleum Engineer Office Phone: (801) 259-6111

Home Phone: (801) 259-6239

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.

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

API NO. 43-037-31458

NAME OF COMPANY: MERIDIAN OIL

WELL NAME: HAVASU FEDERAL 11-19

SECTION NWNW 19 TOWNSHIP 38S RANGE 24E COUNTY SAN JUAN

DRILLING CONTRACTOR AZTEC (FARMINGTON NM)

RIG #

SPUDDED: DATE 10/22/88

TIME 2:30 p.m.

HOW ROTARY

DRILLING WILL COMMENCE 10-23-88

REPORTED BY HOWARD BAKER

TELEPHONE # 801-678-2278

DATE 10/21/88

SIGNED

TAS TAKEN BY: VLC

MERIDIAN OIL

RECEIVED
OCT 26 1988

DIVISION OF
OIL, GAS & MINING

October 24, 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

Attention: Arlene Sollis

Re: Applications for Permit to Drill
11-19 Havasu-Federal 43-037-31458
12-19 Havasu-Federal 43-037-31457
12-19A Havasu-Federal 43-037-31459
Section 19-38S-24E
San Juan County, Utah
Federal Lease No. U-56186

Gentlemen:

The above referenced Application for Permits to Drill have been approved by your office. "Confidential Status" was inadvertently left off the permits, therefore, we are requesting "CONFIDENTIAL STATUS" for these wells at this time.

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

cc: Bill Mitchell

ENTITY ACTION FORM - DOGM FORM 6

RECEIVED
OCT 27 1988

DIVISION OF
OIL, GAS & MINING

OPERATOR MERIDIAN OIL INC.
ADDRESS P.O. Box 1855
Billings, MT 59103-1855

OPERATOR CODE N7230
PHONE NO. 406, 256-4122

OPERATORS MUST COMPLETE FORM UPON SPUDDING NEW WELL OR WHEN CHANGE IN OPERATIONS OR INTERESTS NECESSITATES CHANGE IN EXISTING ENTITY NUMBER ASSIGNMENT.

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		
E	99999	10654	4303731458	11-19 Havasu-Federal	NWNW	19	38S	24E	San Juan	10-22-88	
COMMENTS: This well is being drilled as a water injection well for the Kachina Unit.											
COMMENTS: Field-Kachina Proposed Zone-Ismy Federal-Lease (assign entity 10654 to match other Unit wells.) Unit-Kachina-Sec.Recovery 11-17-88 for											
COMMENTS: CONFIDENTIAL											
COMMENTS:											
COMMENTS:											

- ACTION CODES:
- A - ESTABLISH NEW ENTITY FOR NEW WELL
 - B - ADD NEW WELL TO EXISTING ENTITY
 - C - RE-ASSIGN WELL FROM ONE EXISTING ENTITY TO ANOTHER EXISTING ENTITY
 - D - RE-ASSIGN WELL FROM ONE EXISTING ENTITY TO A NEW ENTITY
 - E - OTHER (EXPLAIN IN COMMENTS SECTION)
(SEE INSTRUCTIONS)

Suzanne J. Nelson
SIGNATURE

Sr. Operations Technician 10/25/88
TITLE DATE

11-7-88
SRB

Cement Calculations:

Well No. 22-19

$$1. \text{ Vol. between } 5\frac{1}{2}'' \text{ csg \& } 7\frac{7}{8}'' \text{ hole} = 0.1733 \text{ ft}^3/\text{ft.}$$

$$\text{Typical slurry volume (assuming Class G w/ 2\% bentonite)} \\ = 1.34 \text{ ft}^3/\text{sx}$$

$$\text{Cement pumped} = 900 \text{ sx} \times 1.34 \text{ ft}^3/\text{sx}$$

$$= 1,206 \text{ ft}^3 \\ (50\% \text{ exc.}) \implies 1,206 \div 1.5 = 804 \text{ ft}^3$$

$$\text{Height of cement column} = 1,206 \div 0.1733 \\ = 6,959'$$

$$(50\% \text{ exc.}) \implies 4,639'$$

It is likely that cement top on 5 1/2" casing overlaps setting depth of 8 5/8" casing.

$$2. \text{ Vol. between } 8\frac{5}{8}'' \text{ casing \& } 11'' \text{ hole} = 0.2542 \text{ ft}^3/\text{ft.}$$

$$\text{Cement pumped} = 440 \text{ sx} \times 1.34 \text{ ft}^3/\text{sx}$$

$$= 590 \text{ ft}^3$$

$$(50\% \text{ exc.}) \implies 393 \text{ ft}^3$$

$$\text{Height of cement column} = 590 \div 0.2542 \\ = 2,321'$$

$$(50\% \text{ exc.}) \implies 1,546'$$

It is likely that cement top on 8 5/8" casing is back to surface.

Arabian Fed. Well No. 3

1. Vol. between 5 1/2" csg. & 7 7/8" hole = 0.1733 ft³/ft.

$$\begin{aligned} \text{Cement pumped} &= 375 \text{ sk} \times 1.34 \text{ ft}^3/\text{sk} \\ &= 503 \text{ ft}^3 \end{aligned}$$

$$(50\% \text{ exc.}) \implies 335 \text{ ft}^3$$

$$\begin{aligned} \text{Height of cement column} &= 503 \div 0.1733 \\ &= 2,902' \end{aligned}$$

$$(50\% \text{ exc.}) \implies 1,933'$$

The cement top probably exists at a depth of 4,000' - 4,150'.

2. Vol. between 8 5/8" csg. & 12 1/4" hole = 0.4127 ft³/ft.

$$\begin{aligned} \text{Cement pumped} &= 1125 \text{ sk} \times 1.34 \text{ ft}^3/\text{sk} \\ &= 1508 \text{ ft}^3 \end{aligned}$$

$$(50\% \text{ exc.}) \implies 1,005 \text{ ft}^3$$

$$\begin{aligned} \text{Height of cement column} &= 1508 \div 0.4127 \\ &= 3,654' \end{aligned}$$

$$(50\% \text{ exc.}) \implies 2,435'$$

The cement top is at surface.

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

---0000---

IN THE MATTER OF THE APPLICATION	:	NOTICE OF AGENCY ACTION
OF MERIDIAN OIL FOR ADMINISTRATIVE	:	
APPROVAL OF THE HAVASU FEDERAL	:	CAUSE NO. UIC-114
NO. 11-19 AND NO. 42-24 WELLS AND	:	
ARABIAN FEDERAL NO. 2 LOCATED IN	:	
SECTIONS 19 AND 24 TOWNSHIP 38 SOUTH,	:	
RANGE 24 AND 23 EAST, S.L.M.,	:	
SAN JUAN COUNTY, UTAH, AS CLASS II	:	
INJECTION WELLS	:	

---0000---

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 Incorporated for administrative approval of the Havasu Federal No. 11-19 and No. 42-24 wells, and Arabian Federal No. 2 well located in Sections 19 and 24, Township 38 South, Range 24 and 23 East SLM, San Juan County, Utah, for conversion to Class II injection wells. The proceeding will be conducted according to the provisions of the Administrative Procedures rules, R615-10.

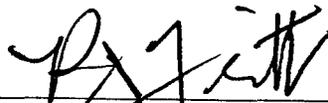
The operating data for the wells is as follows:

Injection Interval: Paradox Formation, 5723' to 5850'
Maximum Injection Rate/Surface Pressure: 2000 bwpd @ 3700 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 an objection is received by the Division, a formal adjudicative proceeding will be scheduled before the Board of Oil, Gas and Mining.

DATED this 27th day of October, 1988

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING



R. J. Firth
Associate Director, Oil and Gas

Publications sent to the following

Meridian Oil Inc.
P.O. Box 1855
Billings, Montana 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 84535-0879

Bureau of Land Management
Moab District Office
P. O. Box 970
Moab, Utah 94532

U.S. EPA
999 18th Street Suite 500
Denver, Colorado 80202-2405

Richard C. Perkins
184 North 100 West (16-4)
Blanding, Utah 84511


Barbara Dumas
Oil and Gas Technician
October 12, 1988



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

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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

October 27, 1988

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

Gentlemen:

Re: Cause No. UIC-114

Enclosed is a Notice Action 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 9th day of November, 1988. 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 "Barbara Dumas".

Barbara Dumas
Office Technician

bd
Enclosure
UI2/6



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Norman H. Bangarter
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

October 27, 1988

San Juan Record
P.O. Box 879
937 East Highway 666
Monticello, Utah 84535-0879

Gentlemen:

Re: Cause No. UIC-114

Enclosed is a Notice Action 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 9th day of November, 1988. 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 "Barbara Dumas".

Barbara Dumas
Office Technician

bd
Enclosure
UI2/6

RECEIVED
FILING FOR WATER IN THE STATE OF UTAH

RECEIVED
NOV 21 1988
DIV. OF OIL, GAS & MIN.

NOV 02 1988

OCT 17 1988

Rec. by L.K.
Fee Rec. 30.00
Receipt # 25189
Microfilmed _____
Roll # _____

APPLICATION TO APPROPRIATE WATER RIGHTS
SALT LAKE TEMPORARY PRICE

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 USER CLAIM NO. 09 - 1604 * APPLICATION NO. A T63641

1. PRIORITY OF RIGHT: October 17, 1988 * FILING DATE: October 17, 1988

2. OWNER INFORMATION

Name(s): MERIDIAN OIL INC. * Interest: 100 %
Address: P.O. Box 1855, Billings, MT 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 2.5 AF ac-ft

4. SOURCE: Wash Unit #2 * DRAINAGE: _____

which is tributary to _____
which is tributary to _____
POINT(S) OF DIVERSION: _____ COUNTY: San Juan
Location: SESE (470' FSL - 850' FEL) Section 13, T38S, R23E
N. 470 ft. & W. 850 ft. from SE Cor. Sec. 13, T38S, R23E, SLB&M

Description of Diverting Works: 9-5/8" casing set @ 1913'
* COMMON DESCRIPTION: 9 miles NW of Hatch Trading Post Montezuma Creek Quad

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 is _____ cfs or 350 ac-ft
The amount of water returned is _____ 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: _____

* These items are to be complete by Division of Water Rights

8. List any other water rights which are or will supplement this application _____

9. NATURE AND PERIOD OF USE

Stockwatering: From _____ to _____
Domestic: From _____ to _____
Municipal: From _____ to _____
Mining: From _____ to _____
Power: From _____ to _____
Other: Drilling and completing From October 15, 1988 to October 15, 1989
Irrigation: From _____ to _____

10. PURPOSE AND EXTENT OF USE

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): Drill and complete one injection well and 2 oil wells
Irrigation: _____ acres. Sole supply of _____ acres
Legal description of irrigated area by 40 acre tract: _____

11. PLACE OF USE

Legal description of areas of use other than irrigation, if not the same as irrigated area above, by 40 acre tract:
11-19 Havasu-Federal, NWNW (940' FNL-590' FWL) Section 19, T38S,R25E
12-19 Havasu-Federal, SWNW (1840' FNL-410' FWL) Section 19, T38S, R25E
12-19A Havasu-Federal, SWNW (2520' FNL-200' FWL) Section 19,T38S, R25E
See NOTE below.

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-20894. The Wash Unit #2 well will be converted to a water source well prior to the drilling of the three wells. Proposed water formations will be Cutler and Wingate.

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).

[Signature]
Signature of Applicant(s)
D. R. Harris
Regional Drilling Engineer

(11-19) 43-037-31458
(12-19) 43-037-31457
(12-19A) 43-037-31459
NOTE: #11

- 1) 11-19 Havasu Federal: S. 940 ft. & E. 590 ft. from NW Cor. Sec.19,T38S,R25E,SLB&M (NW1/4NW1/4)
2) 12-19 Havasu Federal: S. 1840 ft. & E. 410 ft. from NW Cor. Sec.19,T38S,R25E,SLB&M (SW1/4NW1/4)
3) 12-19A Havasu Federal: S.2520 ft. & E. 200 ft. from NW Cor. Sec.19,T38S,R25E,SLB&M (SW1/4NW1/4)

TEMPORARY

STATE ENGINEER'S ENDORSEMENT

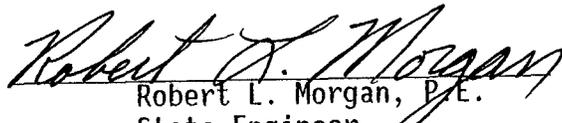
WATER RIGHT NUMBER: 09 - 1604

APPLICATION NO. T63641

1. October 17, 1988 Application received by MP.
 2. November 1, 1988 Application designated for APPROVAL by MP and KLJ.
 3. Comments:
-
-

Conditions:

This application is hereby APPROVED, dated November 18, 1988, subject to prior rights and this application will expire on November 18, 1989.


Robert L. Morgan, P.E.
State Engineer

RECEIVED
NOV 30 1988

FILING FOR WATER IN THE STATE OF UTAH

NOV 17 1988

NOV 17 1988
DIVISION OF OIL, GAS & MINING
Rec. by J.K.
90.00

TEMPORARY

APPLICATION TO APPROPRIATE WATER
SALT LAKE
WATER RIGHTS
Receipt # 25260
Microfilmed

TEMPORARY

Roll #

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 USER CLAIM NO. 09 1615 * APPLICATION NO. A T63657

1. PRIORITY OF RIGHT: November 14, 1988 * FILING DATE: November 14, 1988

2. OWNER INFORMATION
Name(s): MERIDIAN OIL INC. * Interest: %
Address: P.O. Box 1855, Billings, MT 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 300 ac-ft

4. SOURCE: Wash Unit Well No. 2 * DRAINAGE:
which is tributary to
which is tributary to
POINT(S) OF DIVERSION: COUNTY: San Juan
470' FSL - 850' FEL, Section 13, T38S, R23E
N. 470 ft. & W. 850 ft. from SE Cor. Sec. 13, T38S, R23E, SLB&M.

Description of Diverting Works: 5-1/2" casing set @ 6064'
* COMMON DESCRIPTION: 13 miles SE of Blanding Montezuma Creek Quad

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 is cfs or 300 ac-ft
The amount of water returned is cfs or ac-ft
The water will be returned to the natural stream/source at a point(s):

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:

TEMPORARY

* These items are to be complete by Division of Water Rights

8. List any other water rights which are or will supplement this application _____

9. NATURE AND PERIOD OF USE

Stockwatering: From _____ to _____
Domestic: From _____ to _____
Municipal: From _____ to _____
Mining: From _____ to _____
Power: From _____ to _____
Other: Waterflood From November 11 to November 11, 1989
Irrigation: From 1988 to _____

10. PURPOSE AND EXTENT OF USE

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 - Water source for Kachina Waterflood
Irrigation: _____ acres. Sole supply of _____ acres
Legal description of irrigated area by 40 acre tract: _____

11. PLACE OF USE

Legal description of areas of use other than irrigation, if not the same as irrigated area above, by 40 acre tract: 42-24 Havasu Federal, SENE Section 24, T38S, R23E 43-037-31298 - Sow
11-19 Havasu Federal, NWNW Section 19, T38S, R24E 43-037-31458 - Dr.
ABO #2 Arabian Federal, NWSW Section 19, T38S, R24E 43-037-31282 - Sow

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 No. U-20894. Water production will be utilized for injection into the Ismay formation for enhanced recovery. Water production is from the Shinarump formation (2850'-2948') and is brackish (see attached analysis).

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).

William G. Breece
Signature of Applicant(s)

TEMPORARY

RECEIVED

STATE ENGINEER'S ENDORSEMENT

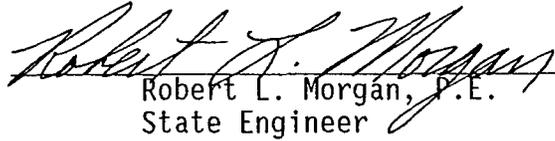
WATER RIGHT NUMBER: 09 - 1615

APPLICATION NO. T63657

1. November 14, 1988 Application received by MP.
 2. November 15, 1988 Application designated for APPROVAL by MP and KLJ.
 3. Comments:
-
-

Conditions:

This application is hereby APPROVED, dated November 29, 1988, subject to prior rights and this application will expire on November 29, 1989.


Robert L. Morgan, P.E.
State Engineer



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Norman H. Bangarter
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

November 23, 1988

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

Gentlemen:

RE: Havasu Federal No. 11-19, Arabian Federal No. 2 and Havasu No. 42-24 Wells
Located in Sections 19 and 24, Township 38 South, Range 24 and 23 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 wells 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,

Dianne R. Nielson
Director

bd
cc: BLM, Moab

UI40/6

**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 back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. <input type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER Water Injection		7. UNIT AGREEMENT NAME Kachina	
2. NAME OF OPERATOR MERIDIAN OIL INC.		8. FARM OR LEASE NAME Havasu-Federal	
3. ADDRESS OF OPERATOR P. O. Box 1855, Billings, MT 59103		9. WELL NO. 11-19	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface NWNW (940' FNL - 590' FWL)		10. FIELD AND POOL, OR WILDCAT Kachina	
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Section 19, T38S, R24E	
14. PERMIT NO. 43-037-31458	15. ELEVATIONS (Show whether DP, RT, GR, etc.) 5106' 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:		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 (Other) <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <u>Spud Report/First Injection</u> <input checked="" type="checkbox"/>	

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

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

Aztec, Rig #124, spudded well @ 6:00 PM October 22, 1988.
First water injection November 16, 1988.

CONFIDENTIAL

RECEIVED
DEC 15 1988

DIVISION OF
OIL, GAS & MINING

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

SIGNED *[Signature]* TITLE Production Superintendent DATE 12/13/88

(This space for Federal or State office use)

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

BLM (3), UOG&M (3), WGB, RES, File

*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.)

<p>1. <input type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER Water Injection</p> <p>2. NAME OF OPERATOR MERIDIAN OIL INC.</p> <p>3. ADDRESS OF OPERATOR P. O. Box 1855, Billings, MT 59103</p> <p>4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface NWNW (940' FNL - 590' FWL) MUDHOLE</p> <p>14. PERMIT NO. 43-037-31458</p>	<p>5. LEASE DESIGNATION AND SERIAL NO. U-56186</p> <p>6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A</p> <p>7. UNIT AGREEMENT NAME Kachina</p> <p>8. FARM OR LEASE NAME Havasu-Federal</p> <p>9. WELL NO. 11-19</p> <p>10. FIELD AND POOL, OR WILDCAT Kachina</p> <p>11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Section 19, T38S, R24E</p> <p>12. COUNTY OR PARISH San Juan</p> <p>13. STATE Utah</p>
<p>15. ELEVATIONS (Show whether DR, RT, OR, etc.) 5106' KB</p>	

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

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

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

Aztec, Rig #124, spudded well @ 6:00 PM October 22, 1988.
First water injection November 16, 1988.

CONFIDENTIAL

RECEIVED
DEC 15 1988

DIVISION OF
OIL, GAS & MINING

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

SIGNED *W. J. Brown* TITLE Production Superintendent DATE 12/13/88

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

BLM (3), UOG&M (3), WGB, RES, File

*See Instructions on Reverse Side

MERIDIAN OIL

December 15, 1988

RECEIVED
DEC 19 1988

DIVISION OF
OIL, GAS & MINING

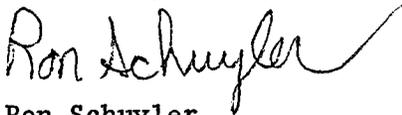
State of Utah
Division of Oil, Gas & Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, UT 84180-1203
Attention: Dan Jarvis

Re: Water Supply Well Water Analysis
Kachina Waterflood, San Juan County, Utah

Dear Mr. Jarvis:

Please find enclosed a copy of the analysis for make up water to be used in waterflooding the Ismay formation in the Kachina waterflood. As I mentioned in our telephone conversation this afternoon, we have not been able to run the step rate tests on the injection wells due to mechanical problems. As soon as we obtain this data, we will forward it to you. If you have any questions, please contact me at (406) 256-4030.

Sincerely,



Ron Schuyler
Senior Production Engineer

RS/mm/104+

Enclosure

cc: S. S. Nelson
T. C. Lechner



Meridian Oil Company
Havasue F
WSW Shinerump Formation
Lab No.: 88-593
11/07/88

*Perfs: 2948-2880' and
2866-2850'*

WATER ANALYSIS REPORT

Cations	mg/L	Anions	mg/L
Potassium	ND.	Sulfate	5,250.0
Sodium	9,195.0	Chloride	12,700.0
Calcium	992.0	Carbonate	0.0
Magnesium	248.0	Bicarbonate	161.0
Total Iron	0.35	Hydroxide	ND.
Diss. Iron	ND.	Silica	ND.
Barium	0.0		
Strontium			

System Conditions
System Operation:
Sample Temperature, °F
Sample pH

Normal
ND.
6.3

Total Hardness 3,500.0

Oilfield Chemical Technology

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

4

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 PLUG BACK DIFF. RENVR. Other

2. NAME OF OPERATOR
MERIDIAN OIL INC.

3. ADDRESS OF OPERATOR
P.O. BOX 1855, BILLINGS, MT 59103

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface NWNW (940' FNL - 590' FWL)

At top of interval reported below Same

At total depth Same

RECEIVED
JAN 23 1989

DIVISION OF
OIL, GAS & MINING

CONFIDENTIAL

14. PERMIT NO. 43-037-31458 DATE ISSUED 10-11-88

15. DATE SPUDDED 10-22-88 16. DATE T.D. REACHED 10-31-88 17. DATE COMPL. (Ready to prod.) 11-17-88 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 5106' 19. ELEV. CASINGHEAD 5093'

20. TOTAL DEPTH, MD & TVD 5910' 21. PLUG, BACK T.D., MD & TVD 5825' 22. IF MULTIPLE COMPL., HOW MANY* → 23. INTERVALS DRILLED BY → ROTARY TOOLS X CABLE TOOLS

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 5727' - 5808' (Upper Ismay) 25. WAS DIRECTIONAL SURVEY MADE No

26. TYPE ELECTRIC AND OTHER LOGS RUN BHCS, DLL, ODCN, CBL 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
13-3/8"	61#	70'	17-1/2"	120 SXS "B"	---
8-5/8"	24#	1890'	12-1/4"	775 SXS "B"	---
5-1/2"	15.5#	5909'	7-7/8"	730 SXS "B"	---

29. LINER RECORD					30. TUBING RECORD		
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					2-7/8"	5678'	5671'

31. PERFORATION RECORD (Interval, size and number)	32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.
DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5727' - 5734' - 28 holes	5727' - 5808' 5500 gals 15% HCL
5752' - 5754' - 8 holes	
5756' - 5766' - 40 holes	
5772' - 5779' - 28 holes	
5784' - 5800' - 63 holes	
5806' - 5808' - 8 holes	

33.* PRODUCTION
DATE FIRST PRODUCTION 11-18-88 PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Injecting WELL STATUS (Producing or shut-in) Shut In

DATE OF TEST 1-16-89 HOURS TESTED 24 CHOKER SIZE → PROD'N. FOR TEST PERIOD → OIL—BBL. 0 GAS—MCF. 0 WATER—BBL. 579 GAS-OIL RATIO ---

FLUX TUBING PRESS. 2917 CASING PRESSURE → CALCULATED 24-HOUR RATE → OIL—BBL. 0 GAS—MCF. 0 WATER—BBL. 579 OIL GRAVITY-API (CORR.) ---

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

35. LIST OF ATTACHMENTS

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records
SIGNED J.P. Harris TITLE Regional Drilling Engineer DATE 1-16-89

*(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-stems, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries);

38. GEOLOGIC MARKERS

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	TOP	
				MEAS. DEPTH	TRUE VERT. DEPTH
				1860'	
				2845'	
				2970'	
				5677'	
				5832'	

NAME
 Chinle
 Shinarump
 Cutler
 Upper Ismay
 Lower Ismay

OIL AND GAS	
DRN	RJF
JRB	GLH
DTS	SLS
I-TAS	✓
MICROFILM	
2-	FILE

MERIDIAN OIL INC.
HAVASU FEDERAL #11-19
SECTION 19, T38S-R24E
SAN JUAN COUNTY, UTAH

GEOLOGIC REPORT
BY
DAVE MEADE
ROCKY MOUNTAIN GEO-ENGINEERING COMPANY

WELL SUMMARY

OPERATOR: MERIDIAN OIL INC.
WELL NAME: HAVASU FEDERAL #11-19
FIELD: KACHINA
LOCATION: 590' FWL - 940' FNL
SECTION 19, T38S-R24E
COUNTY/STATE: SAN JUAN, UTAH
ELEVATION: GL 5093' - KB 5196'
SPUD DATE: 10/22/88
COMPLETION DATE: 10/31/88
DRILLING ENGINEER: HOWARD BAKER
DRILLING CONTRACTOR: AZTEC WELL SERVICE, RIG #124
TOOL PUSHER: BUDDY DAVIS
HOLE SIZE: 17½" TO 89'; 12¼" TO 1890'; 7 7/8" TO T.D.
CASING RECORD: 13 3/8" TO 69'; 8 5/8" TO 1890'
WELLSITE GEOLOGY: ROCKY MOUNTAIN GEO-ENGINEERING COMPANY
WELLSITE GEOLOGIST: DAVE MEADE
DRILLING MUD COMPANY: SUMMIT DRILLING FLUIDS
MUD ENGINEER: MIKE MALOVICK/ERIC BERTOCH
ELECTRIC LOGGING CO.: GEARHART
ENGINEER: JOHN CHAPMAN
TYPE OF LOGS: DIL/GR/MSFL/FDC/CNL/BHC
MUD LOGGING COMPANY: ROCKY MOUNTAIN GEO-ENGINEERING COMPANY
LOGGING ENGINEER: DAVE MEADE
DRILL STEM TEST: NONE
CORES: NONE
OBJECTIVES: UPPER ISMAY
TOTAL DEPTH: 5910'
WELL STATUS: RUN 5½" PRODUCTION CASING

MERIDIAN OIL INC.
 HAVASU FEDERAL #11-19
 SECTION 19, T38S-R24E
 SAN JUAN COUNTY, UTAH

WELL CHRONOLOGY

DATE & # DAYS	MDNT DEPTH	FTG/ DAY	DAILY OPERATIONS
10/22/88 (1)	-0-	80	MOVE RIG ON LOCATION & RIG UP - DRL 17½" COND HOLE - CIR - SURV - TOH - RUN 13 3/8" CSG - CMT - WOC
10/23 (2)	80	1058	WOC - DRLG OUT CMT - DRLG - SURV - DRLG - SURV & DRL AHEAD
10/24 (3)	1138	752	DRLG - SURV - DRLG w/80% RETURNS - TOH 3 STDS-MIX GEL & LCM - DRLG w/FULL RETURNS - CIR & MUD UP - TOH & RUN 8 5/8" CSG - CMT - WOC
10/25 (4)	1890	357	WOC - NIP UP - TEST HYDRIL & BOP - TIH - DRL CMT - DRLG AHEAD
10/26 (5)	2247	940	DRLG - SURV - DRLG - SURV - DRLG
10/27 (6)	3217	778	DRLG - SURV - DRLG AHEAD
10/28 (7)	3995	683	DRLG - SURV - DRLG AHEAD
10/29 (8)	4678	446	DRLG - MIX HIGH VIS FLUSH - CIR BTMS UP - DRLG - SURV - TOH W/BIT #3 - WORK ON PUMPS - TIH W/NB#4 - WASH 150' TO BTM - DRLG AHEAD
10/30 (9)	5124	496	DRLG - SURV - DRLG AHEAD
10/31 (10)	5620	290	DRLG - SURV - DRLG - TD WELL - CIR CUP SPLS - CIR - WO LOGGERS - TOH - RIG UP LOGGERS
11/1 (11)	5910	-0-	LOGGING - RMEC UNIT #37 RELEASE FROM LOCATION

MERIDIAN OIL INC.
 HAVASU FED. #11-19
 SEC. 19, T38S, R24E
 SAN JUAN CO. - UTAH

SAMPLE DESCRIPTION

4500-4510	80%	SH redorng,gn, mot, brn, lav, sbplty-sbblky, sft-mfrm, slsly, mica, slbent, sl-ncalc
	20%	SLTST redbrn, redorng, fri-mfrm, mica, sdy, sl-ncalc
	TR	SS ltgy-pale orng, vf-fgr, sbang-sbrd, wsrt, mcmt, calc-ncalc cmt, slty, mica, arg
4510-4520	70%	SH AA, purp ip, wh
	20%	SLTST AA
	10%	LS pk, wh, redorng, micxl, mfrm-frm, slsly-arg, TT
	TR	SS AA
4520-4530	50%	SH AA
	40%	SLTST AA, occ purp
	10%	SS AA, vsly ip
4530-4540	60%	SH redorng-redbrn, gn, gygn, lav, ltbrn, wh, purp, sbplty, sbblky, sft-slfrm, sl-ncalc, mica, slsly, occ sbwxy, bent ip
	40%	SLTST redorng-redbrn, mot red-gn, purp, fri-slfrm, mica sdy, slcalc, arg
	TR	LS wh, ltbrn, orng, crpxl, mfrm-frm, dns, slsly, arg
	TR	SS wh-trnsl, clr, vf-mgr, sbang-sbrd, w-msrt, m-pcmt, calc-ncalc cmt, cly mtx ip, slsly mica NFSOC
4540-4550	50%	SH AA
	30%	SLTST AA
	10%	LS AA, occ bf
	10%	SS AA, uncons
4550-4560	50%	SH AA
	40%	SLTST AA
	10%	LS AA
	TR	SS AA
4560-4570	60%	SH AA
	30%	SLTST AA
	10%	LS AA
	TR	SS AA
4570-4580	40%	SH redorng-redbrn, ltbrn, occ gn-lav, purp, sbblky-sbplty, sft-mfrm, mica, sl-ncalc, slty ip, slbent, sbwxy ip
	40%	SLTST AA
	10%	SS clr, wh, vf-fgr, sbrd-sbang, wsrt, m-pcmt, sl-ncalc cmt, cly mtx ip, slty, mica
	10%	LS AA, bf-wh ip, crpxl, TT dns cln

MERIDIAN OIL INC.
HAVASU FED. #11-19

4580-4590	40%	SH AA
	30%	SLTST redorng-redbrn, ltbrn, fri-mfrm, sdy, varg, slcalc, mica
	20%	LS wh-bf, pale orng-pk, crpxl, mfrm-frm, slsly, cln ip, TT, arg ip
	10%	SS AA
4590-4600	50%	SH AA
	30%	LS AA
	20%	SLTST AA
	TR	SS AA
4600-4610	70%	SH ltgy-gygn ip, AA
	20%	SLTST ltgy-ltgybrn ip, AA, slcalc sdy
	10%	LS AA, vsly ip
4610-4620	60%	SH AA, pale orng ip
	15%	LS AA, occ tan
	25%	SLTST AA
	TR	CHT orng, hd
	TR	SS clr-trnsl, vf-mgr, sbang-sbrd, w-msrt, p-mcmt, sl-ncalc cmt, occ cly mtx, slsly mica ip
4620-4630	70%	SH pred orng-redorng, brk red, brn, sbblky-sbply, sft-slfrm, mica, vsl-ncalc, slsly
	20%	SLTST redorng-purp, fri-slfrm, sdy, mica, sl-ncalc, arg
	10%	LS orng-wh, tan, pk, crpxl, mfrm-frm, rthy-slsly ip, occ cln, dns
	ABNT	CVGS
4640-4650	90%	SH AA
	10%	LS AA
	TR	SLTST AA
4650-4660	70%	SH AA
	30%	SLTST redbrn, orng-redorng, brn, purp, fri-slfrm, slsly-sdy, mica slcalc-calc, arg
	TR	LS AA
	TR	SS clr, trnsl, sbang-sbrd, w-msrt, pcmt-uncons, sl-ncalc cmt, slty mica, arg ip
4660-4670	60%	SH AA
	30%	SLTST AA
	10%	LS bf-tan, ltbrn, orng-pkip, crpxl, micxl, mfrm-mhd, cln-TT, dns, slarg, vsly, TR STYOL?
	ABNT	CVGS
4670-4680	ABNT	CVGS
	60%	SH incr ltgy-brn, AA
	20%	SLTST AA, bcmg ltgy, sdy
	20%	LS AA
	TR	CHT

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4680-4690	70%	SH orng-redorng, brn, ltgy ip, occ purp-gygn, sbblky-plty, sft-frm, sl-ncalc sl mica, slty ip, occ sbwxy
	30%	SLTST orng, ltgy, purp, mot orng-gn, ltgygn, fri-slfrm, mica, sdy, arg, slcalc
	TR	LS pred orng-orngbrn, occ tan-ltbrn, crpxl, mfrm-mhd, slchty, sl-vsly ip, occ rthy
4690-4700	80%	SH AA, incr ltbrn-ltgy
	20%	SLTST AA
	TR	LS AA, incr ltbrn
4700-4710	ABNT	CVGS
	90%	SH AA
	10%	SLTST AA
	TR	LS AA
4710-4720	80%	SH AA, occ wh bent
	10%	SLTST AA, pred purp-ltbrn
	10%	LS AA, sl incr wh-tan
	ABNT	SH CVGS redorng-gn
4720-4730	70%	SH orng-redorng, brn, sbblky-sbplty, sft-slfrm, sl-ncalc, mica, slsly, bcmg ltgy-slcalc
	20%	SLTST mot orng-gn, orng, redorng AA
	10%	LS AA, incr mbrn, cln-TT
4730-4740	60%	SH AA
	30%	SLTST AA, bcmg ltgy ip, vsdy
	10%	LS wh-bf, ltbrn, occ orng, crpxl, mfrm-mhd, cln, slsly ip, TT, dns
	ABNT	SH CVGS
4740-4750	60%	SH AA
	25%	SLTST redorng-redbrn, gybrn-brn, fri-slfrm, mica, sdy-slssdy, slcalc
	15%	LS AA
4750-4760	65%	SH AA, occ ltgygn, incr calc
	15%	SLTST AA
	20%	LS AA
	ABNT	SH CVGS
4760-4770	60%	SH redorng-orng, brn, bcmg pred ltgy-gygn, sbblky-plty, sft-mfrm, slcalc-calc, ncalc ip, mica, slty ip
	20%	SLTST AA
	20%	LS wh, bf-tan, ltgy, crpxl, mfrm-frm, vsly-cln, dns TT
	ABNT	CVGS
4770-4780	60%	SH AA, incr brn, ltgy
	10%	SLTST redorng, brn, ltgy, fri-slfrm, vmica ip, slsdy, calc-slcalc
	20%	LS AA
	10%	SS clr-wh, vf-fgr, sbang-sbrd, wsrt, m-pcmt, uncons ip, sl-ncalc cmt, ABNT cly mtx, slsly mica NFSOC

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4780-4790	50%	SH	bcmg pred ltgy-brn, vmica, slcalc
	30%	LS	AA, pred cln, varg ip, TR dol fos
	20%	SLTST	AA
		TR	SS AA
4790-4800	60%	SH	AA
	40%	LS	AA
		TR	SLTST AA
4800-4810	60%	SH	ltgy, occ mgy-brn, sbplty-sbblky, sft-frm, mica, slcalc, slsly, ABNT SH CVGS redorng-orng-gn
	40%	LS	wh-bf-ltgy, tan, crpxl, occ micxl, frm-mhd, pred cln-dns, vslsly, vsl fos
		TR	SLTST AA
		TR	SS clr, ltgy, vf-fgr, sbang, wsrt, pcmt, sl-ncalc cmt, vslsly, mica NFSOC
4810-4820	50%	SH	AA
	40%	LS	AA
	10%	SLTST	ltgy-gybrn, fri-frm, sdy, vmica, lmy, grdg to slty LS
4820-4830	60%	SH	AA
	30%	LS	AA
	10%	SLTST	AA
		ABNT	SH CVGS redorng
4830-4840	ABNT	CVGS	
	50%	SH	AA
	50%	LS	AA, slchty, incr arg-slty
		TR	CHT trns1-clr, hd
		TR	SLTST AA
4840-4850	50%	SH	lt-mgy, occ brn, mar, sbblky-sbplty, sft-slfrm, mica, sl-ncalc, slsly
	40%	LS	wh-bf, tan ip, crpxl, frm-mhd, vslsly, pred cln, dns
	10%	SLTST	ltgy-gybrn-brn, fri, slfrm, shly, sllmy, sdy ip, mica
		ABNT	SH CVGS redorng
4850-4860	40%	SH	AA
	50%	LS	AA, sl fos, arg ip, slchty
	10%	SLTST	AA
		TR	SS clr-trns1, vf-mgr, sbang-sbrd, wsrt, m-pcmt, slcalc-calc cmt, cly mtx ip, mica ip, slsly
4860-4870	30%	SH	AA
	40%	LS	AA
	10%	SLTST	AA
	20%	SS	AA, pred uncons
4870-4880	50%	LS	AA, TR pyr incl
	20%	SLTST	AA
	30%	SH	occ dkgy-blk, carb, AA
		TR	SS AA
		TR	CHT mot blk-brn, trns1,
4880-4890	40%	LS	tan-brn, wh-ltgy ip, occ mbrn, crpxl-micxl, mfrm-mhd cln-rthy, slsly ip, occ chk, slchty, sl-mod fos
	30%	SH	lt-mgy, sbplty-sbblky, sft-mfrm, mica, slsly, slcalc occ vs1 mry
	20%	SLTST	AA
	10%	CHT	trns1-bf, hd
		TR	SS mgr AA

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4890-4900	50%	SH AA
	30%	LS AA
	20%	SLTST AA
	TR	SS AA
	TR	CHT AA
4900-4910	ABNT	CVGS VERY POOR SAMPLE
	50%	SH AA
	50%	LS AA, slpyr ip
	TR	SS clr, vfgr, sbang, wsrt, wcmt, slcalc cmt, v pyr ip, vslmica
	TR	PYR frag
	TR	SLTST AA, slpyr
4910-4920	40%	SH lt-dkgy, blkysbplty, sft-frm, mica, pyr incl, slcalc-slcarb
	60%	LS wh-bf, ltbrn, crpxl, frm-mhd, slarg, cln, TR pyr incl, ABNT pk LS CVGS
	TR	SLTST ltgybrn, fri, mica, calc, slsdy
	TR	SS AA
	TR	PYR frag
4920-4930	ABNT	BENT CLYST CVGS gn
	45%	LS wh-bf, brn, crpxl, frm-mhd, cln, dns, TR pyr incl
	40%	SH ltgybrn, blkysbplty, sft-slfrm, vmica, slcalc, slsly
	15%	SS clr, wh, vf-mgr, sbang-rd, w-msrt, mcmt, slcalc cmt, cly mtz ip, pyr, slsly
	TR	SLTST AA
	TR	PYR frag
4930-4940	ABNT	CVGS AA VERY POOR SAMPLE
	50%	LS AA, vfos ip
	30%	SH AA
	20%	SS AA
	TR	CHT trns1, hd
4940-4950	ABNT	CVGS VERY POOR SAMPLE
	40%	LS AA, vslfos, TR pyr incl, slchty ip
	20%	SH AA
	40%	SLTST ltgybrn-ltgy, fri-slfrm, vmica, slsdy, lmy
	TR	SS AA
4950-4960	ABNT	CVGS
	60%	LS wh-bf-tan-ltgybrn, crpxl, frm-mhd, cln, dns, vslsly
	20%	SH ltgy, sbplty, sft-frm, slcalc, mica, slsly
	20%	SS clr, trns1, vf-mgr, sbang-sbrd, w-psrt, m-pcmt, slncalc cmt, cln, NFSOC
	TR	SLTST AA
4960-4970	ABNT	CVGS
	60%	LS AA, fos ip
	30%	SH AA, mgy ip
	10%	SLTST lt-mgy, fri-mfrm, sdy, lmy, slmica
4970-4980	50%	LS AA
	30%	SH AA
	10%	SLTST AA
	10%	SS ltgy-clr, vf-fgr, sbang, wsrt, m-pcmt, slcalc cmt, slty-pyr
4980-4990	ABNT	CVGS VERY POOR SAMPLE
	70%	LS bf-wh, ltgy-brn ip, crpxl, frm-mhd, cln, dns, TT, TR pyr xl

MERIDIAN OIL INC.
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4990-5000	60%	LS AA, rthy-chk ip
	40%	SH AA
	TR	SS wh, trnsl, vf-mgr, sbang-rd, w-msrt, m-pcmt, slcalc cmt, cly mt-, slsly
	ABNT	PYR frag
5000-5010	ABNT	CVGS VERY POOR SAMPLE
	70%	LS AA, bcmg mbrn, micxl, slsly, arg ip
	30%	SH AA
	ABNT	PYR frag
5010-5020	60%	LS AA, slty ip
	30%	SH AA
	10%	SS clr-vf-mgr, sbang-sbrd, msrt, m-pcmt, ncalc cmt, slsly
	TR	SLTST lt-mgy, fri, sdy, mica, arg
5020-5030	50%	LS wh-bf-brn, crpxl, micxl ip, frm-mhd, slsly ip, occ chk ip, pred cln
	50%	SH lt-mgy, sbblky-sbplty, sft-mfrm, mica, slcalc, vsly, occ carb
	TR	CHT trnsl, hd
	TR	PYR frag
5030-5040	50%	LS AA
	50%	SH AA
	TR	CHT AA
	TR	PYR frag
	ABNT	CVGS
5040-5050	ABNT	CVGS VERY POOR SAMPLE
	50%	LS AA, occ slsly, vsly
	30%	SH AA
	10%	SLTST ltgy-ltgybrn, fri, mica, sdy ip, lmy
	10%	SS clr-trnsl, vfgr, sbang-sbrd, wsrt, pcmt-uncons, slcalc cmt, mica, slty
5050-5060	60%	LS wh-ltbrn, crpxl, frm, cln, dns, vsly-sly
	40%	SH lt-mgy, gybrn, sbplty, sft-mfrm, mica, calc, slcarb
	TR	SLTST AA
5060-5070	70%	LS AA, chty ip, sly
	30%	SH ltgy-ltgybrn, AA
	TR	SLTST AA
	TR	CHT trnsl-hd
5070-5080	50%	LS AA
	50%	SH lt-mgy, AA
	TR	SLTST AA
5080-5090	ABNT	SH CVGS redorng
	70%	LS wh-brn, gybrn, crpxl, occ micxlm frm-mhd, rthy-cln, vsly, arg ip, vsly
	30%	SH AA, occ dkgy-blk
	TR	SLTST lt-mgy, fri-frm, slsly, lmy, mica, arg
5090-5100	100%	CVGS SPL - INTERP FROM DRILL RATE
	60%	SH AA
	40%	LS AA
5100-5110	ABNT	CVGS VERY POOR SAMPLE
	70%	LS AA
	30%	SH ltgy, sbplty-blky, sft-frm, mica, calc, slcarb
5110-5120	50%	LS AA
	50%	SH AA
	TR	CHT trnsl

MERIDIAN OIL INC.
HAVASU FED. #11-19

5120-5130	70%	SH AA
	30%	LS AA
	TR	CHT AA
5130-5140	ABNT	CVGS
	50%	LS wh-brn, crpxl, mhd, cln-slrthy, chty ip, TT
	50%	SH lt-mgy, sbply-sbply, sft-frm, mica, calc, vslsty, carb ip
	TR	CHT trns hd
5140-5150	50%	LS AA
	50%	SH AA
	ABNT	SH CVGS redorng, 98% of SPL
5150-5160	60%	SH AA
	40%	LS AA
	ABNT	CVGS AA
5160-5170	70%	SH AA
	30%	LS AA
	ABNT	CVGS
5170-5180	70%	SH lt-mgy, sbply-sbply, mfrm-frm, mica, calc, slcarb, slty ip
	30%	LS wh-bf, tan, crpxl, occ micxl, frm-mhd, slty, arg, slchty
	ABNT	CVGS
5180-5190	100%	CVGS VERY POOR SAMPLE
	80%	SH AA?
	20%	LS AA?
5190-5200	50%	LS AA
	50%	SH AA
	ABNT	CVGS
5200-5210	40%	LS AA, ltgy-ltbrn ip
	40%	SH AA
	20%	SLTST ltgy, ltgybrn, fri-slfrm, mica, sdy, arg, calc
	ABNT	CVGS
5210-5220	70%	LS wh-bf, brn, crpxl-micxl, mfrm-mhd, rthy, occ cln, chk, slarg, TR coral fos
	30%	SH lt-dkgy, sbply-sbply, mfrm-frm, mica, calc, slty, carb ip
	TR	SLTST AA
	ABNT	CVGS
5220-5230	30%	LS AA, incr slty
	50%	SH AA
	20%	SLTST ltgy, fri, sdy, mica, lmy
	ABNT	CVGS
5230-5240	70%	SH AA
	30%	LS AA
	TR	SLTST AA, ltbrn ip
	ABNT	CVGS
5240-5250	50%	SH AA
	50%	LS AA
	ABNT	CVGS
5250-5260	50%	SH AA
	50%	LS AA
	TR	SLTST AA
	ABNT	CVGS

MERIDIAN OIL INC.
 HAVASU FED. #11-19

5260-5270	60%	LS	bf-wh, ltgy-gybrn, micxl-crpxl, frm-mhd, cln, TT, occ rthy-slslty, vslfos
	40%	SH	AA
	TR	SLTST	ltgy, fri-frm, mica, calc, arg, sdy
5270-5280	100%	LS	AA
	TR	SH	AA
	ABNT	CVGS	
5280-5290	30%	LS	AA
	70%	SH	pred ltgy, occ mgy, sbplty-sbblky, sft-frm, mica, calc, carb, slty
	ABNT	CVGS	
5290-5300	60%	SH	lt-mgy, sbplty-sbblky, sft-frm, calc, slcarb, mica, slsly
	40%	LS	wh-tan, bf, crpxl-micxl, frm-mhd, slfos, slty, rthy-chk ip, occ cln
	TR	SLTST	AA
	ABNT	CVGS	
5300-5310	50%	SH	AA
	50%	LS	AA
	TR	CHT	trns1, mbrn, hd
	ABNT	CVGS	
5310-5320	60%	LS	AA, gygn, vrthy ip
	40%	SH	AA
	TR	SLTST	ltgy-gybrn, fri-slfrm, sdy, mica, vlmy, grd g to slty LS
5320-5330	50%	SH	AA
	40%	LS	AA
	10%	SLTST	AA
5330-5340	60%	LS	AA
	40%	SH	AA
5340-5350	50%	LS	wh-ltgy-brn, crpxl-micxl, frm-mhd, rthy-chk, occ cln, dns, vs1sly, vslfos ip
	50%	SH	lt-mgy, gybrn, blky-sbplty, mfrm-frm, calc, carb, mica, slty
	TR	SLTST	ltgy-ltgybrn, fri-frm, sdy, calc, arg, mica
	ABNT	CVGS	
5350-5360	50%	LS	AA, sdy ip, slchty
	50%	SH	AA, vcarb
	TR	SLTST	AA
5360-5370	60%	LS	AA
	40%	SH	AA, carb
	ABNT	CVGS	
5370-5380	70%	LS	wh-bf, brn-gybrn, micxl, crpxl ip, frm-mhd, slty-rthy ip, sl mrly, vrr intxl Ø, NFSOC
	30%	SH	AA, slty-vsly, carb dol
	TR	SLTST	AA
	ABNT	CVGS	
5380-5390	50%	LS	AA, TT N VIS Ø, vs1anhy
	50%	SH	lt-mgy, occ dkgy-gybrn, sbblky-sbplty, mfrm-frm, occ brit, calc-carb ip, slsly, mica, vs1 dol
	ABNT	CVGS	
5390-5400	50%	LS	AA, occ dkbrn mrly, slty, slanhy grd g to lmy sh ip
	30%	SH	AA, slty-mrly
	20%	SLTST	lt-mgy, mbrn, fri-frm, mica, var g, vlmy, sdy ip, grd g to slty LS
	ABNT	CVGS	

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5400-BEGIN MUD UP

5400-5410	30%	LS wh,brn, mot ltbrn-brn, micxl-crpxl, mfrm-mhd, cln-rthy, occ vslsly, slfos, occ chk, slchty
	70%	SH lt-dkgy, blk, occ gybrn, sbblky-sbply, sft-frm, mica, calc-carb, slsly
	TR	SLTST AA, mbrn
5410-5420	60%	SH AA
	40%	LS AA, vrthy, rr intxl Ø NFSOC
	TR	SLTST AA, carb ip
	ABNT	CVGS
5420-5430	50%	SH dkgy, occ dkgybrn, sbblky-sbply, mfrm-brit, mica calc, carb, mrly, sooty
	30%	LS bf-brn, wh, crpxl-micxl, frm-mhd, rthy-cln, slsly ip, chty
	20%	SLTST AA
	TR	CHT trnscl-clr, hd
5430-5440	60%	SH AA
	40%	LS AA
5440-5450	ABNT	CVGS
	60%	LS wh-brn, ltgy, AA, chty ip
	40%	SH AA, mrly
	TR	SLTST AA
	TR	CHT trnscl-clr, hd
5450-5460	50%	SH lt-mgy, occ dkgy-blk, sbply,sbblky ip, sft-frm, occ brit, mica, calc, carb, slty, sldol
	40%	LS wh, ltgy, occ br-ltbrn, micxl-crpxl, mfrm-mhd, rthy, slsly, occ chk, cln ip, vslmrly, slfos
	10%	CHT trnscl, clr, occ br-smky brn, hd
5460-5470	40%	SH AA
	60%	LS AA, incr ltgy, ltgybrn
	TR	CHT clr-hd
5470-5480	50%	SH AA
	50%	LS AA, vrr intxl Ø NFSOC, mrly ip
	TR	MNRL FLOR
5480-5490	45%	LS wh-bf, crpxl-micxl, frm-mhd, rthy, vfos, occ cln, TT, slmrly
	55%	SH lt-mgy, occ dkgy-dkgybrn, sbblky-sbply, sft-brit, mica, carb, calc, occ vsly
	TR	SLTST brn, dkgybrn, frm, carb, vlmy, slmica, slsdy, shly
5490-5500	70%	SH AA, mrly
	30%	LS AA, grdg to lmy SH ip
5500-5510	60%	SH lt-dkgy, occ gybrn, sbblky-pty, sft-frm, mica, calc, carb, slsly, sooty
	40%	LS pred bf-brn, occ gybrn, wh ip, micxl, occ crpxl, frm-mhd, rthy, slsly, arg-grdg to lmy SH-mrly, slchty, occ chk, cln ip, slfos
	TR	SLTST gy-gybrn, frm, lmy, vsldy, mica, calc-slcarb
5510-5520	65%	SH lt-mgy, occ dkgy-blk, dkgybrn, sbblky-sbply, sft-frm, slty, calc, carb, sooty, mica, sldol
	35%	LS wh-bf, tan, occ brn-gy, crpxl-micxl, rthy-chk, occ cln, chty, slfos, slty ip, vslanhy
	TR	SLTST gy-ltgybrn, fri-vsl frm, mica, calc, sdy, vsicarb
	TR	CHT trnscl, hd

MERIDIAN OIL INC.
HAVASU FED. #11-19

5520-5530 80% SH AA
20% LS AA, TR brac fos
TR SLTST AA

5530-5540 60% LS AA, vs1 fos
30% SH AA
10% SLTST AA

5540-5550 50% LS AA pred bf-ltbrn,rthy-chky
50% SH AA incr ltgy
TR SLTST AA grdg to slty LS

5550-5560 70% LS bf-brn,ltgybrn,micxl,occ crpxl,frm-mhd,rthy-slslty,sl fos,
occ sl anhy
30% SH AA

5560-5570 80% LS AA pred cIn dns
20% SH lt-mgy,occ blk,plty-sbblky,sft-frm,mica,calc,carb,soty,
slsly
TR SLTST ltgybrn,fri,sdy,mica,calc,vs1carb,arg

5570-5580 50% LS AA bf-fos ip
30% SH AA dol
20% SLTST AA

5580-5590 40% LS AA
30% SH AA
20% SLTST AA
10% CH bf-brn,hd

5590-5600 70% LS wh-bf,ltbrn-gybrn,crp-micxl,frm-mhd,rthy-cln,vs1slty,vs1
fos,cht
20% SH AA
10% CHT bf-trns,occ clr,hd

5600-5610 60% LS incr brn-gybrn AA rthy-slty,slmrly,grdg to lmy SLTST
40% SH lt-dkgy,blk,sbplty-sbblky,sft-frm,mica,calc,sldol,carb,
sooty,vs1slty
TR CHT AA
TR SLTST gy-gybrn,fri,mica,vlmy,slsdy,vs1dol,arg

5610-5620 80% LS wh-brn AA fos slcht rr intxl ø,NFSOC vs1do-anhy ip
10% SH AA
10% CHT AA
TR SLTST AA grdg to slty LS

5620-5630 70% LS AA vchty
20% SH AA
10% CHT AA mot-brn

5630-5640 60% LS bf-brn,ltgy-gybrn,crpxl,occ micxl,frm-hd,cht,slfos,
occ slrthy pred cIn,vs1 slty ip,bcmg dkbrn-mrly
40% SH lt-mgy,occ dkgy-blk,plty-sbblky,sft-frm,calc,vs1carb,
slmica vs1slty,occ mrly

5640-5650 70% SH dkgy-blk AA,carb mica,sldol,soty,sft-mfrm,brit
30% LS AA
TR CHT trns1-bf,hd
TR SLTST mgy,occ ltgy,fri-slfrm,mica,calc,carb ip,sldol,slsdy

5650-5660 70% SH dkgy-blk,sbplty-sbblky,frm-brit,calc,carb,mica,slty ip,
sooty,sldol
20% LS AA slmrly
10% SLTST AA gybrn ip

5660-5670 80% SH AA bcmg ltgy-mgy
10% LS AA
10% SLTST AA

5670-5680 60% SH AA pred ltgy,slty
30% LS bf-tn,occ wh,brn,gy,mic-crpxl,frm-mdh,cln,vslrthy,slsly-
slty,vslanhy,/TR cor-crin fos,vrr intxl ø,vfnt dul y STN
n vis FOC
10% SLTST ltgy-gybrn,fri-frm,mica,calc,carb ip,vslsdy,grdg to
slty LS

5680-5690 50% LS pred mbrn-ltbrn AA vrthy-cln,anhy,dol ip,n vis ø,NFSOC
30% ANHY wh-trnsl,occ clr,sft-frm,amor-xl w/TR dol incl
20% SH AA
TR SLTST AA

5690-5700 40% DOL dkbrn,dkgybrn,micxl,crpxl ip,mhd,vanhy-anhy incl,lmy,v
shly,slty,n vis ø,NFSOC
20% LS dkgy-gybrn,micxl AA vsly anhy no ø,NFSOC
20% ANHY AA
20% SH AA

5700-5710 30% ANHY AA
30% DOL AA bcmg ltbrn,rthy,w/rr intxl ø,NFSOC
20% LS AA occ tn-brn crpxl,sldol,anhy cln-tt,NFSOC
10% SH AA
10% SLTST ltgy-gybrn,fri-frm,mica,calc,slsdy,dol

5710-5720 40% DOL lt-dkbrn,gy-gybrn,crp-micxl,frm-mhd,cln-vrthy,slsly,
shly,anhy,vrr intxl ø,vrr vfnt FLOR,NSOC
20% SLTST AA vshly
20% SH m-dkgy,blky,sbblky-sbplty,frm-brit,slmica,dol,calc ip,
carb,soty,vslsly mica
10% ANHY AA

5720-5730 40% DOL AA pred ltbrn micxl,lmy,anhy,anhy fl ø,g intxl-rr pp vug
ø,w/tr bri-dul y-gld FLOR,vrr lt-dkbrn STN,g stmg mlky CUT
30% SH AA
20% SLTST AA
10% ANHY wh-trnsl,amor-xl,sft-frm vrr dol incl
TR LS AA

5730-5740 40% DOL lt-dkbrn,gybrn,micxl,occ crpxl,rthy,occ cln,lmy,slsly,
g intxl-g pp vug ø,w/TR dul-bri y-gld FLOR,lt-dkbrn STN,
occ dd 0 STN,g stmg mlky CUT
30% SH dkgy,blky,occ ltgy,plty-sbblky,frm-brit,mica,carb,calc,dol
10% LS AA
10% ANHY wh,amor-xl,sft-slfrm,/TR dol incl
ABNT CVGS

5740-5750 50% DOL AA vanhy-vshly,vrr intxl ø,vrr FLOR-vrr STN,vp resid
ring CUT
30% SH AA

5750-5760 80% DOL lt-mbrn,occ dkbrn,micxl,occ vfxl,mfrm-mhd,rthy,slmy,
anhy w/TR anhy fl \emptyset ,g intxl-pp vug \emptyset ,g bri yet gld
FLOR,fr lt-dkbrn STN,g stmg mlky CUT
20% ANHY AA
TRS LS & SH AA

5760-5770 50% DOL AA, \emptyset AA, fr FLOR,vp STN,fr mlky-resid ring CUT
35% LS crm-bf,crpxl-micxl,occ vfxl,frm-mhd,sldol,anhy ip,fos ip,
TR anhy xl,fr intxl-g vug \emptyset ,vrr fnt-n vis FLOR or STN,
fnt resid ring CUT
15% ANHY wh-trnsl,sft-mfrm,xl-amor

5770-5780 60% DOL AA /TR FLOR,STN,CUT AA/TR dd 0 STN
30% LS AA vp-n vis \emptyset ,vp FLOR,n vis STN,n CUT
10% ANHY AA (ABNT CVGS)

5780-5790 70% DOL bf,lt-mbrn,micxl-vfxl,mfrm-mhd,rthy,lmy,anhy,TR anhy fl
 \emptyset ,g intxl-g pp vug \emptyset ,rr dul-bri y-gld FLOR,vp ltbrn STN
vrr dd 0 STN,TR g stmg mlky CUT
20% LS AA tt-vrr intxl \emptyset ,NFSOC
10% ANHY AA

5790-5800 90% DOL AA g intxl-g pp vug \emptyset ,g dul-bri y-gld FLOR,TR fnt ltbrn-
dkbrn STN,g stmg mlky CUT
10% LS AA
TR ANHY AA

5800-5810 70% DOL lt-mbrn,occ dkbrn AA,FLOR/CUT & STN AA,TR dd 0 STN
20% LS bf-tn,crm,ltgy,crpxl,frm-hd,slanhy,sldol,fos,tt,NFSOC
10% ANHY wh,sft-slfrm,amor-xl

5810-5820 70% SH dkgy-blk,plty-sbblky,sft-frib,calc,carb,soty,sldol,vsl
slty
20% DOL lt-mbrn,dkgybrn,micxl,occ crpxl,rthy,cln ip,grdg to dol
SH ip,vrr intxl \emptyset =tt,vrr FLOR,vrr dkbrn STN,vp mlky CUT

5820-5830 90% SH AA
10% DOL AA vrr spty FLOR,NSOC
TR LS AA
ABNT CVGS redorng-redbrn SH

5830-5840 70% SH AA
20% LS gybrn,lt-dkbrn,mic-crpxl,frm-mhd,rthy-cln,dol-tt slty ip,
n vis \emptyset ,NFSOC
10% ANHY wh,trnsl,sft-mfrm,xl-amor
ABNT CVGS AA

5840-5850 50% SH AA
30% ANHY AA
20% LS AA
TR DOL lt-mgy,gybrn,micxl,mfrm-mhd,vrthy,lmy,vanhy,vrr intxl
 \emptyset -tt,NFSOC

5850-5860 40% DOL AA pred ltbrn,occ mbrn-bf AA
30% LS bf-ltbrn AA tt,vanhy
15% ANHY AA
15% SH AA

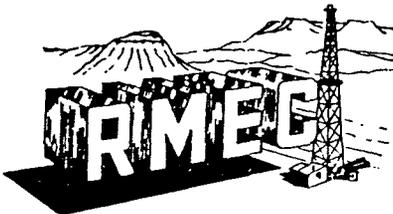
5860-5870 70% LS dkgy-gybrn,occ ltbrn,mot dkbrn-dkgy,micxl,vrthy,dol,
grdg to carb SH,v anhy,NFSOC, TR crin fos
20% DOL AA bcmg m-dkgybrn,vshly,NFSOC
10% SH dkgy-blk,sbplty-sblky,frm-brit,vlmy-dol,carb,slsly,
marly
TR ANHY AA

5870-5880 50% LS AA grdg to lmy-shly dol w/TR ANHY INCL
30% SH AA
20% DOL AA

5880-5890 80% SH blk,sbblky-sbplty,sft-brit,mic,calc,dol,carb,slsly,
sooty
10% LS AA bcmg bf-tn crpxl,dns
10% DOL AA
TR SLTST AA

5890-5900 90% SH AA
10% SLTST lt-dkgy,fri-vsl frm,slsdy,mica,vshly,sldol,calc
TR LS AA
ABNT CVGS SH

5900-5910 100% SH AA
TR SLTST AA
TR LS AA
TR DOL AA
ABNT CVGS AA



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. HAVASU FED. 11-19

LOCATION 19 - T39S - 24E

ZONE OF INTEREST NO. 1

INTERVAL: From 5723 To 5744

DRILL RATE: Abv 4 Thru 1½ - 2 Below 3½

MUD GAS-CHROMATOGRAPH DATA

	TOTAL	C ₁	C ₂	C ₃	C ₄	C ₅	OTHER
Before	8	500ppm	153	84	TR		
During	385	16,750	5100	3570	2130	TR	
After	85	3,250	1190	840	710		

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 30
 Poor
 Fair % in show lithology 40
 Good COLOR: bri-dul y gld

CUT: None Streaming
 Poor Slow
 Fair Mod
 Good Fast
 COLOR: mlky wh

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

POROSITY: Poor Fair Good Kind INTXL-PP VUGULAR

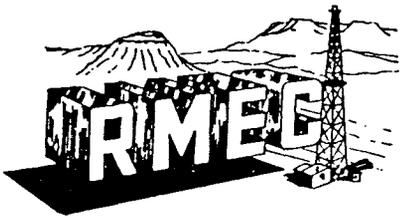
LITHOLOGY DOL lt-dkbrn, rpxl-micxl, lmy, rthy, tr anhy flg in ø

SAMPLE QUALITY GOOD

NOTIFIED ART MOORE @ 1:15 PM HRS. DATE: 10/31/88

REMARKS _____

ZONE DESCRIBED BY DAVE MEADE



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. HAVASU FED 11-19

LOCATION 19 - T38S - R24E

ZONE OF INTEREST NO. 2

INTERVAL: From 5752 To 5763

DRILL RATE: Abv 4 Thru 1 Below 2½

MUD GAS-CHROMATOGRAPH DATA

	TOTAL	C ₁	C ₂	C ₃	C ₄	C ₅	OTHER
Before	40	1400	476	336	213		
During	295	9500	4250	3045	1331	TR	
After	50	1250	680	420	365		

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 50 Poor Slow
 Poor Fair Mod
 Fair % in show lithology 80 Good Fast
 Good COLOR: bri yel gld COLOR: mlky wh

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

POROSITY: Poor Fair Good Kind INTXL-pp vugular

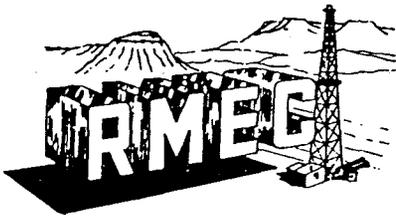
LITHOLOGY DOL lt-mbrn, occ dkbrn, micxl, occ vfxl, mfrm-mhd, rthy, sl lmy, anhy ip, w/tr anhy

flg in ø SAMPLE QUALITY GOOD

NOTIFIED ART MOORE @ 1:15 PM HRS. DATE: 10/31

REMARKS _____

ZONE DESCRIBED BY DAVE MEADE



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. HAVASU FED. 11-19

LOCATION 19 - T38S - R24E

ZONE OF INTEREST NO. 3

INTERVAL: From 5774 To 5782

DRILL RATE: Abv 2½ Thru 1 Below 3

MUD GAS-CHROMATOGRAPH DATA

	TOTAL	C ₁	C ₂	C ₃	C ₄	C ₅	OTHER
Before	50	1750	680	420	365		
During	465	25750	8330	6090	3195	TR	
After	55	2350	1190	976	476		

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 40 Poor Slow
Poor Fair Mod
Fair % in show lithology 50 Good Fast
Good COLOR: du-bri y gld COLOR: mlky wh

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

POROSITY: Poor Fair Good Kind INTXL-pp vug

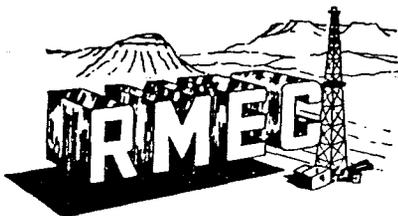
LITHOLOGY DOL lt-mbrn, micxl-vfxl, rthy, sl lmy, angy w/occ anhy flg ø

SAMPLE QUALITY GOOD

NOTIFIED ART MOORE @ 1:15 PM HRS. DATE: 10/31/88

REMARKS _____

ZONE DESCRIBED BY DAVE MEADE



ROCKY MOUNTAIN GEO-ENGINEERING CO.

WELL LOGGING — CORE AND WATER ANALYSIS

2450 INDUSTRIAL BLVD.

PHONE 243-3044

GRAND JUNCTION, COLORADO 81501

COMPANY MERIDIAN OIL

WELL NO. HAVASU FED 11-19

LOCATION 19 - T38S - R24E

ZONE OF INTEREST NO. 4

INTERVAL: From 4783 To 5806

DRILL RATE: Abv 2 Thru 1 - 1½ Below 3½

MUD GAS-CHROMATOGRAPH DATA

	TOTAL	C ₁	C ₂	C ₃	C ₄	C ₅	OTHER
Before	125	4750	2040	1470	1065		
During	455	29250	7820	5250	2130	TR	
After	95	2250	850	630	355		

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 80
 Poor
 Fair % in show lithology 100
 Good COLOR: dul-bri y gld

CUT: None Streaming
 Poor Slow
 Fair Mod
 Good Fast
 COLOR: mlky wh

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

POROSITY: Poor Fair Good Kind INTXL-pp vug

LITHOLOGY DOL lt-mbrn,bf,micxl-vfxl,rthy,lmy,slanhy,tr anhy xl-tr anhy fl ø

SAMPLE QUALITY GOOD

NOTIFIED ART MOORE @ 1:15 PM HRS. DATE: 10/31/88

REMARKS _____

ZONE DESCRIBED BY DAVE MEADE

MERIDIAN OIL INC.
 HAVASU FEDERAL #11-19
 SECTION 19, T38S-R24E
 SAN JUAN COUNTY, UTAH

FORMATION	FORMATION TOPS		"E" LOG TOP	SUBSEA DATUM
	SAMPLE TOP	SUBSEA DATUM		
CUTLER	---	---	2956'	+2150'
HERMOSA	4748'	+358'	4700'	+406'
UPPER ISMAY	5677'	-571'	5677'	-571'
TOP POROSITY	5727'	-621'	5726'	-620'
HOVENWEEP SHALE	5813'	-707'	5812'	-706'
LOWER ISMAY	5830'	-724'	5832'	-726'
GOTHIC SHALE	5896'	-790'	5894'	-788'
TOTAL DEPTH	5910'	-804'	5910'	-804'

GEOLOGIC SUMMARY
AND
ZONES OF INTEREST

The Meridian Oil Inc.'s Havasu Federal #11-19 well in Section 19, T38S, R25E of San Juan County, Utah was spudded on October 22, 1988 and was completed on November 1, 1988 at a total depth of 5910' in the Gothic Shale. This was an Upper Ismay production well in Meridian's Kachina Field. At 69' 13 3/8" conductor pipe was set and at 1890' 8 5/8" casing was set. No core or drill stem test was run. Geological coverage began at 4500' in the Lower Cutler Formation.

CUTLER (2956' - 4700' (+2150'))

The Cutler Formation was predominately red orange-to-orange, occasionally green-to-light gray green, very slightly-to-noncalcareous, subplaty-to-subblocky shale with interbedded red orange-to-red brown, occasionally purple, sandy, very slightly calcareous-to-calcareous siltstone. An occasional thin, white-to-red orange, cryptocrystalline, dense limestone and a clear-to-translucent, very fine-to-medium grained, with some coarse grained sandstone. The Cutler produced no shows and is of no economic interest.

HERMOSA (4700' - 5677') (+406')

The Hermosa was predominately limestone with interbedded shale, siltstone, sandstone and thin scattered chert. Limestone was white-to-brown-to gray brown, cryptocrystalline-to-microcrystalline, clean-to-earthy, occasionally chalky, slightly silty, becoming shaly and cherty with depth. The shale was gray throughout with thin red orange-to-maroon-to-light green gray interbedded in the upper part. Shale was subblocky-to-platy, slightly silty, micaceous, becoming dark gray-to-black, carbonaceous, dolomitic with depth. Siltstone was light-to-medium gray, gray brown, brown, sandy, micaceous, calcareous-to-slightly carbonaceous. Sandstone was clear-to-translucent, very fine-to-medium grained, subangular-to-subrounded, well-to-medium sorted, medium-to-poorly sorted-to-unconsolidated, slightly-to-noncalcareous cement, slightly silty-to-clean, with no fluorescence, stain or cut.

A gas increase of 65 units, from a background of 6 units, was noted at 5377', coming from a limestone with very rare intercrystalline limestone with no fluorescence, cut or stain. Shale in the Lower Hermosa gave several gas increases, but were of no economic interest. No tests were run on any of the gas increases in the Hermosa.

UPPER ISMAY (5677' - 5812') (-571')

The Upper Ismay was limestone, anhydrite, dolomite and thin, black, carbonaceous, dolomite shale and very thin, gray, very limy-to-dolomitic siltstone. The top 49 feet of the Upper Ismay was white-to-brown, earthy-to-silty, very slightly fossiliferous limestone; tight-to-very rare intercrystalline porosity, with no fluorescence, stain or cut; with interbedded amorphous-to-crystalline, dense anhydrite; dark gray-to-black carbonaceous shale and dark brown-to-gray brown, earthy, microcrystalline, anhydritic and thin dolomite at the top and bottom of the anhydrite.

The Upper Ismay porosity, from 5726' - 5812', was a light-to-dark brown, microcrystalline, occasionally very fine crystalline dolomite, with good intercrystalline-to-pinpoint vugular porosity. The porosity showed some anhydrite plugging in the vugs. There was poor-to-good dull-to-bright

yellow gold fluorescence, rare-to-fair light-to-dark brown oil stain, with traces of black dead oil in the vugs and on the crystal faces. The cut was a poor-to-good and slow-to-moderately fast streaming milky cut.

Several shows were recorded while drilling the Upper Ismay, all from the dolomites described above. Show #1, 5723'-5744', had a gas increase of 385 units; Show #2, 5752'-5764', had a gas increase of 295 units; Show #3, 5773'-5782', had a high gas reading of 465 units; and Show #4, 5783'-5806', recorded a high of 455 units. All the shows had C₁ - C₄ on the chromatograph. (See Show Reports #1-#4 for more details.) Scattered through the Upper Ismay pay zone were tight limestones, dense anhydrites and anhydritic tight dolomites.

HOVENWEEP SHALE (5812' - 5832') (-706')

The Hovenweep Shale was a dark gray-to-black carbonaceous dolomitic shale. The shale was occasionally silty and overlaid the Lower Ismay with a sharp contact. Gas increased from 150-to-300 units while drilling.

LOWER ISMAY (5932' - 5894') (-726')

The Lower Ismay was predominately a dense, amorphous-to-crystalline, white-to-translucent anhydrite with very thin dolomite inclusions. Just above the anhydrite was a thin, buff-to-light gray, tight limestone. Below the anhydrite was interbedded, tight, brown-to-buff, very anhydritic, dolomitic limestone and microcrystalline, limy, very shaly, brown dolomite, grading to the dolomitic shales of the Gothic Shale below. There were no shows of interest noted in the Lower Ismay.

GOTHIC SHALE (5894' - T.D.) (-788')

The Gothic Shale was a dark gray-to-black, carbonaceous, dolomitic-to-calcareous and slightly silty shale, with some thin interbedded dark gray sandy siltstone and tight dark gray brown dolomite. The Gothic Shale showed an increase in gas from 70 units to 180 units before drilling was halted 14 feet into the shale at a depth of 5910'. Electric logs were run at that time.

At the time of this report, 5½" production casing had been run on this well and the well is awaiting final completion as an injection well in the Kachina Field.



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Norman H. Bangertter
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.

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
WOI52

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: KACHINA
 Well: HAVASU FED. 11-19 Township: 38S Range: 24E Sect: 19
 API: 43-037-31458 Welltype: INJW Max Pressure: 3700
 Lease type: FEDERAL Surface Owner: BLM

Test Date: *9/23/92*
11:48 Am

CASING STRING	SIZE	SET AT	PRESSURE	OBSERVATIONS
Surface:	8 5/8	1900		
Intermediate:		0		
Production:	5 1/2	5950	<i>start 0°</i>	
Other:		0		
Tubing:			<i>2480 PSI</i>	
Packer:		0		

Recommendations:

Gil Hunt
Don Jarvis } *DOGm*
Bob Vialpando - *Meridian*

Pressured to 1000 PSI
held 15 min no loss

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
MOAB DISTRICT OFFICE
MAR -5 AM 8:21

SUBMIT IN TRIPPLICATE
FORM APPROVED
Bureau No. 1000
Expires September

RECEIVED
MAR 17 1993

5. Lease Designation and Serial No.
UTU56186

SUNDRY NOTICES AND REPORTS ON WELLS OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

DIVISION OF
OIL GAS & MINING

Do not use this form for proposals to drill or re-enter to a different reservoir. Use "Application for Permit: for such proposals.

1. Type of Well
Oil Gas Other Water Injection

2. Name of Operator
Meridian Oil Inc.

3. Address and Telephone No.
5613 DTC Parkway, Englewood, CO 80111 (303) 930-9300

4. Location of Well (Footage, Sec., T.R.M. or Survey Description)
NWNW, 940' FNL - 590' FWL
Sec. 19, T38S-R24E

7. If Unit or CA, Agreement Designation

8. Well Name and No.
HAVASU FEDERAL 11-19

9. API Well No.
43-037-31458

10. Field and Pool, Exploratory Area
Kachina

11. County or Parish, State
San Juan, Utah

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

TYPE OF SUBMISSION	TYPE OF ACTION
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Final Abandonment	<input type="checkbox"/> Plugging Back
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input checked="" type="checkbox"/> Other <u>Install plastic liner</u>
	(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)
	<input type="checkbox"/> Change of Plans
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Conversion to Injection

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.)*

Work performed 10/7/92 to 10/18/92.
Install plastic liner in injection line to facilitate increased injection rates and pressures.

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

Signed Karen F. Riley Title Sr. Production Engineer Date February 12, 1993

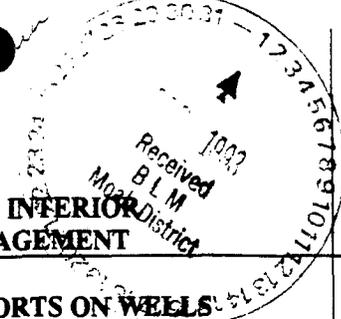
(This space for Federal or State office use)
Approved By ACCEPTED Title Branch of Fluid Minerals Moab District Date MAR 8 1993
Condition of Approval, If any:

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.

SUBMIT IN TRIPPLICATE

CRS

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT



PERMIT IN TRIPLICATE
FORM APPROVED
Budget Bureau No. 1004-0135
Expires September 30, 1990

5. Lease Designation and Serial No.
UTU56186

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.

6. If Indian, Allottee or Tribe Name

1. Type of Well
Oil XX Gas Other

7. If Unit or CA, Agreement Designation

2. Name of Operator
Meridian Oil Inc.

8. Well Name and No.
Havasu Federal 11-19

3. Address and Telephone No.
5613 DTC Parkway, Englewood, CO 80111 (303) 930-9300

9. API Well No.
43-037-31458

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

10. Field and Pool, Exploratory Area
Kachina

NWNW 940' FNL - 590' FWL
Sec. 19, T38S, R24E

11. County or Parish, State
San Juan, Utah

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

TYPE OF SUBMISSION	TYPE OF ACTION
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Final Abandonment	<input type="checkbox"/> Plugging Back
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input checked="" type="checkbox"/> Other <u>Acidize Injection Well</u>

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

RECEIVED
APR 19 1993

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

Work completed 7/28/92 - 8/1/92

1. POOH with tbg and Model 45A4 Inverted Lok-Set packer.
2. Run bit and scraper. C/O to 5823'.
3. Attempt to pickle tbg; got live acid back. L/D entire trbg string - junk.
4. Pickled injection line with 450 gals 90/10 DAD acid in two stages.
5. PU new tbg & isolation tool and RIH. P test csg to 1000 psi - OK. Attempt to acidize - presure activated valve plugged. POOH.
6. Run bit & scraper. Tag fill @ 5815'. C/O to 5823'.
7. RIH with isolation tool. Selectively acidize Ismay Perfs 5727-5808' in 8' intervals with 480 gals DAD acid.
8. Matrix acidize Ismay perfs 5727-5808' with 1000 gals 90/10 DAD acid and 2000 gals LCA28 in two stages using 70Q foam for diversion. Avg rate: 2 BPM. Avg. P: 3000 psi.
9. Flow and swab back load. Run new Inverted Lok-Set packer and tubing. RWTL.

I hereby certify that the foregoing is true and correct.

Signed Karen F. Riley Title Sr. Production Engineer Date January 28, 1993

(This space for Federal or State office use)

Approved By [Signature] Title Branch of Fluid Minerals Moab District Date FEB 2 1993

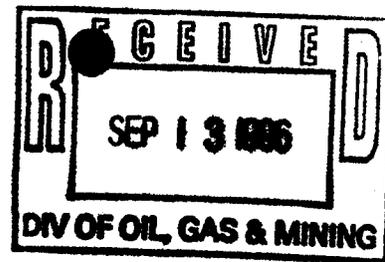
Condition of Approval, If any:

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,

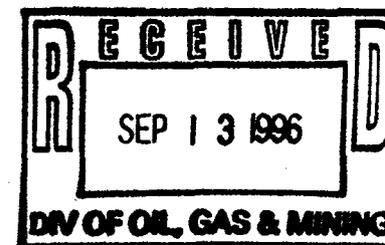
BURLINGTON RESOURCES OIL & GAS CO.

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	43-015-3007500	57287U6920	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	24	038S	023E	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	43-037-3142100	UTU57895	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

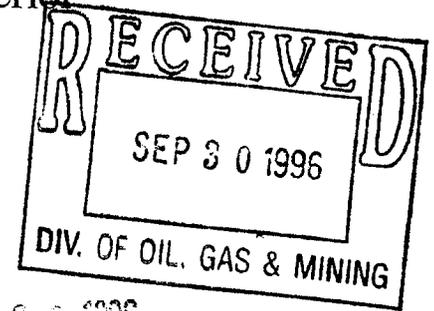




United States Department of the Interior

BUREAU OF LAND MANAGEMENT

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



SEP 28 1996

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

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
SL-071595
U-0681
U-0683
U-0684
U-0685
U-0719
U-0725
U-0737
U-0741
U-0744
U-03333
U-04049
U-04049A
U-05059
U-08107
U-062420
UTU-66830
UTU-67569
UTU-68676
UTU-72660

U-8894A
U-8895A
U-8897A
U-15202
U-15203
U-15204
U-16962A
U-17024
U-17623
U-19281
U-20016
U-20895
U-24606
U-39832
U-40361
U-40440
U-40544 (ROW)
UTU-66831
UTU-67570
UTU-69434
U-60786X (Bannock Unit)

U-40751
U-45051
U-45929
U-46825
U-51045
U-51046
U-51047
U-52333
U-56186
U-56932
U-56933
U-56934
U-57895
U-58728
U-60428
U-60520
U-61556
UTU-67565
UTU-68232
UTU-70115 (ROW)
U-63089X (East Mountain Unit)

U-61752
U-62143
U-62190
U-63181
UTU-64930
UTU-64931
UTU-65329
UTU-65607
UTU-65750
UTU-65751
UTU-65868 (ROW)
UTU-65940
UTU-65943
UTU-66025
UTU-66487
UTU-66584
UTU-66708
UTU-67568
UTU-68664
UTU-70196

OPERATOR CHANGE WORKSHEET

Routing	
1-LEC ✓	6-1-LEC ✓
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: _____

OPERATOR CHANGE DOCUMENTATION

- Sec 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)*
- Sec 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)*
- Sec 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) _____ If yes, show company file number: #096593. *(E.H. 1-29-87)*
- Sec 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.
- Sec 5. Changes have been entered in the Oil and Gas Information System (3270) for each well listed above. *(i. WIC Program)*
- Sec 6. Cardex file has been updated for each well listed above. *(10-3-96)*
- Sec 7. Well file labels have been updated for each well listed above. *(10-3-96)*
- Sec 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)*
- Sec 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

- See 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 "Rider" 80,000 to Burlington rec'd by Trust Lands Admin.

- See 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

- W 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

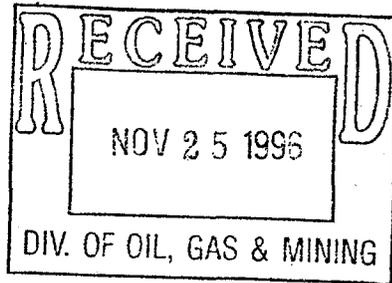
**BURLINGTON RESOURCES
MID-CONTINENT DIVISION****3300 NO. A STREET, BLDG. 6 (79705)
P.O. BOX 51810
MIDLAND, TEXAS 79710-1810****DRILLING DEPARTMENT
FAX NO. 915/688-6009**

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: KACHINA UNIT API no. _____
Well location: QQ _____ section _____ township 385 range 23+24E 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 REPRESENTATIVE MIDLAND, TX 79705-1810
Date 10/30/96 Phone (915) 688-9042

Comments:

Name Change only

(State use only)

Transfer approved by [Signature] Title Environ. Manager

Approval Date 10-31-96

MONTHLY OIL AND GAS PRODUCTION REPORT

OPERATOR NAME AND ADDRESS:

MARALENE SPAWN
 BURLINGTON RESOURCES O&G
 3300 N A ST BLDG 6
 MIDLAND TX 79710-1810

UTAH ACCOUNT NUMBER: N7670

REPORT PERIOD (MONTH/YEAR): 2 / 97

AMENDED REPORT (Highlight Changes)

Well Name API Number	Entity	Location	Producing Zone	Well Status	Days Oper	Production Volumes		
						OIL(BBL)	GAS(MCF)	WATER(BBL)
✓ HAVASU FEDERAL 12-19 4303731457	10654	38S 24E 19	ISMY			U-56186	Kechina Unit	Sec. Recovery
✓ HAVASU FEDERAL 12-19A 4303731459	10654	38S 24E 19	ISMY			U-56186	"	
✓ NAVAJO FEDERAL 42-5 4303731261	10655	39S 25E 5	ISMY			U-58728		
✓ NAVAJO FEDERAL 41-5 4303731358	10810	39S 25E 5	DSCR			U-57895		
✓ INDIAN CREEK 14176 #1 4301530091	10907	17S 06E 14	FRSD			U-15202		
✓ BANNOCK-FEDERAL 21-33 4303731425	10923	38S 24E 33	ISMY			U-40361		
4303731425								
4303731324	99990	38S 23E 13	SPMP	WSW		U-20894	*BLM apr. 4-23-97.	
✓ Arabian Federal 2 4303731282	10654	38S 24E 19	ISMY	W/W		U-56186	Kechina Unit	Sec. Recovery
✓ Havasu Federal 11-19 43-037-31458	10654	38S 24E 19	ISMY	W/W		U-56186	"	
✓ Havasu Federal 42-24 4303731298	10654	38S 23E 24	ISMY	W/W		U-20895	"	
TOTALS								

REMARKS:

I hereby certify that this report is true and complete to the best of my knowledge.

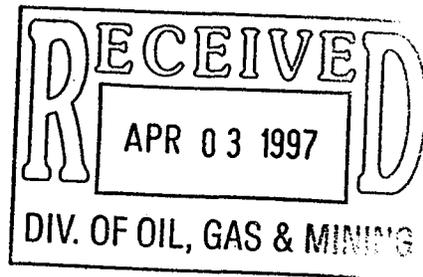
Date: _____

Name and Signature: _____

Telephone Number: _____

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
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)
940' FNL - 590' FWL , NWNW
19 038S 024E, SLM

5. Lease Designation and Serial No.
UTU56186

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.
HAVASU FEDERAL 11-19

9. API Well No.
43,037,3145800

10. Field and Pool, or Exploratory Area
KACHINA ,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
<input type="checkbox"/> Notice of Intent
<input type="checkbox"/> Subsequent Report
<input type="checkbox"/> Final Abandonment Notice

TYPE OF ACTION	
<input type="checkbox"/> Abandonment	<input type="checkbox"/> Change of Plans
<input type="checkbox"/> Recompletion	<input type="checkbox"/> New Construction
<input type="checkbox"/> Plugging Back	<input type="checkbox"/> Non-Routine Fracturing
<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Altering Casing	<input type="checkbox"/> Conversion to Injection
<input checked="" type="checkbox"/> Other <u>CHANGE OF OPERATOR</u>	<input type="checkbox"/> Dispose Water <small>(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)</small>

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 HAVASU FEDERAL 11-19 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.

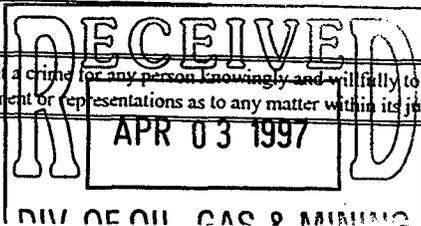
ON APRIL 1, 1997, MERIT ENERGY COMPANY, GENERAL PARTNER FOR MERIT PARTNERS, L.P. AND MERIT ENERGY PARTNERS III, L.P., WILL TAKE OVER PHYSICAL OPERATIONS OF SAID WELL ON BEHALF OF SAID LIMITED PARTNERSHIPS.

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

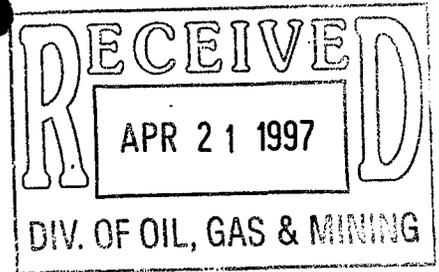
COUNTY	FIELD NAME	WELL NAME	STR	LSE#	WELLTYPE	APIWELL	COMM NO.	FED CNTRL	ST CNTRL
EMERY	EAST MOUNTAIN ,FERRON	EAST MOUNTAIN FEDERAL 13-35	35 016S 008E	? ML-27626	GAS WELL	43,015,3023000	UT060P49-87U69	57287U6920	025 <i>U56933</i>
EMERY	EAST MOUNTAIN ,FERRON	EAST MOUNTAIN FEDERAL 32-23	23 016S 006E		GAS WELL	43,015,3023100	UT060P49-87U89	57287U6920	025 <i>U17624</i>
EMERY	FERRON ,FERRON	INDIAN CREEK 021762 3	02 017S 006E	? ML-27626	GAS WELL	43,015,3017500		57287U6920	025 <i>U15204</i>
EMERY	FERRON ,FERRON	INDIAN CREEK 1	02 017S 008E	ML-27626	GAS WELL	43,015,3008200		57287U6920	025 <i>ML-27626</i>
EMERY	FERRON ,FERRON	INDIAN CREEK 10176 5	10 017S 008E	? ML-27626	GAS WELL	43,015,3011700		57287U6920	025 <i>U15203</i>
EMERY	FERRON ,FERRON	INDIAN CREEK 14176 1	14 017S 008E	UTU15202	GAS WELL	43,015,3009100		UTU15202	109 <i>U15202</i>
SAN JUAN	BANNOCK ,ISMAY	BANNOCK FEDERAL 21-33	33 038S 024E	✓ UTU60786	OIL WELL	43,037,3142500	60786A	UTU60786A	109 <i>U46361</i>
SAN JUAN	KACHINA ,CUTLER	WASH UNIT 2	13 038S 023E	UTU20894	WATER SOURCE	43,037,3132400		UTU20894	106 <i>U20894 (To Water Rights 4797)</i>
SAN JUAN	KACHINA ,ISMAY	ARABIAN FEDERAL 2	19 038S 024E	UTU56186	WATER INJECTED	43,037,3128200		UTU56186	106 <i>U56186</i>
SAN JUAN	KACHINA ,ISMAY	HAVASU FEDERAL 11-19	19 038S 024E	UTU56186	WATER INJECTED	43,037,3145800		UTU56186	106 <i>U56186</i>
SAN JUAN	KACHINA ,ISMAY	HAVASU FEDERAL 12-19	19 038S 024E	UTU56186	OIL WELL	43,037,3145700		UTU56186	106 <i>U56186</i>
SAN JUAN	KACHINA ,ISMAY	HAVASU FEDERAL 12-19A	19 038S 024E	UTU56186	OIL WELL	43,037,3145900		UTU56186	106 <i>U56186</i>
SAN JUAN	KACHINA ,ISMAY	HAVASU FEDERAL 22-19	19 038S 024E	UTU56186	OIL WELL	43,037,3127800		UTU56186	106 <i>U56186</i>
SAN JUAN	KACHINA ,ISMAY	HAVASU FEDERAL 41-24	24 038S 023E	UTU20895	OIL WELL	43,037,3127900		UTU20895	106 <i>U20895</i>
SAN JUAN	KACHINA ,ISMAY	HAVASU FEDERAL 42-24	24 038S 023E	UTU20895	WATER INJECTED	43,037,3128800		UTU20895	106 <i>U20895</i>

CHANGE OF OPERATOR STATE OF - UT

COUNTY	FIELD NAME	WELL NAME	STR	LSE#	WELLTYPE	APIWELL	COMM NO.	FED CNTRL	ST CNTRL
SAN JUAN	KACHINA ,ISMAY-DESERT CREEK	ARABIAN FEDERAL 3	19 038S 024E	UTU58188	OIL WELL	43,037,3128700		UTU58188	106 <i>U56186</i>
SAN JUAN	KIVA (UPPER ISMAY) ,CUTLER	NAVAJO FEDERAL 42-9	09 039S 025E	U-52333	WATER SOURCE	43,037,3126300			<i>U52333 (to water rights 4797)</i>
SAN JUAN	KIVA (UPPER ISMAY) ,ISMAY	KIVA FEDERAL 24-4	04 039S 025E		OIL WELL	43,037,3174500		83687U6890	099 <i>USA-U52333</i>
SAN JUAN	KIVA (UPPER ISMAY) ,ISMAY	NAVAJO FEDERAL (WIW) 4-1	04 039S 025E		WATER INJECTED	43,037,3111200		83687U6890	099 <i>U52333</i>
SAN JUAN	KIVA (UPPER ISMAY) ,ISMAY	NAVAJO FEDERAL (WIW) 43-5	04 039S 025E		WATER INJECTED	43,037,3131700		83687U6890	099 <i>U58728</i>
SAN JUAN	KIVA (UPPER ISMAY) ,ISMAY	NAVAJO FEDERAL 12-4	04 039S 025E		WATER INJECTED	43,037,3139500		83687U6890	099 <i>U52333</i>
SAN JUAN	KIVA (UPPER ISMAY) ,ISMAY	NAVAJO FEDERAL 14-4	04 039S 025E		WATER INJECTED	43,037,3132100		83687U6890	099 <i>U52333</i>
SAN JUAN	KIVA (UPPER ISMAY) ,ISMAY	NAVAJO FEDERAL 21-9	09 039S 025E		WATER INJECTED	43,037,3126700		83687U6890	099 <i>U52333</i>
SAN JUAN	KIVA (UPPER ISMAY) ,ISMAY	NAVAJO FEDERAL 23-4	04 039S 025E		WATER INJECTED	43,037,3125900		83687U6890	099 <i>U52333</i>
SAN JUAN	KIVA (UPPER ISMAY) ,ISMAY	NAVAJO FEDERAL 4-1	04 039S 025E		OIL WELL	43,037,3111200		83687U6890	099 <i>U52333</i>
SAN JUAN	KIVA (UPPER ISMAY) ,ISMAY	NAVAJO FEDERAL 4-2	04 039S 025E		OIL WELL	43,037,3116100		83687U6890	099 <i>U52333</i>
SAN JUAN	KIVA (UPPER ISMAY) ,ISMAY	NAVAJO FEDERAL 4-4	04 039S 025E		OIL WELL	43,037,3117900		83687U6890	099 <i>U52333</i>
SAN JUAN	KIVA (UPPER ISMAY) ,ISMAY	NAVAJO FEDERAL 42-5	05 039S 025E		OIL WELL	43,037,3126100		83687U6890	106 <i>U58728</i>
SAN JUAN	KIVA (UPPER ISMAY) ,ISMAY	NAVAJO FEDERAL 43-5	04 039S 025E		OIL WELL	43,037,3131700		83687U6890	099 <i>U58728</i>
SAN JUAN	KIVA (UPPER ISMAY) ,ISMAY	NAVAJO FEDERAL 9-1	09 039S 025E		OIL WELL	43,037,3100100		83687U6890	099 <i>U52333</i>
SAN JUAN	KIVA (UPPER ISMAY) ,WINGATE	NAVAJO FEDERAL 42-9	09 039S 025E		WATER SOURCE	43,037,3126300		83687U6890	099 <i>U52333 (to water rights 4797)</i>

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>U57895</i>
SAN JUAN	LION MESA ,CANE CREEK	HATCH POINT FEDERAL 27-1A	27 027S 021E	UTU20016	OIL WELL	43,037,3051800		UTU20016	028 <i>U20016</i>



TRANSFER OF AUTHORITY TO INJECT - UIC FORM 5

Well name and number: HAVASU FEDERAL #11-19

Field or Unit name: KACHINA API no. 4303731458

Well location: QQ NWN section 19 township 38S range 24E 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..

NEH OPERATOR

Transfer approved by:

Name Martha J. Rogers Company Merit Energy Company
Signature *Martha Rogers* Address 12222 Merit Drive
Title Manager, Regulatory Affairs Dallas, Texas 75251
Date April 15, 1997 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 *[Signature]*

Approval Date 5-5-97

X 970506 mailed copy to operators. Lec

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.

5. Lease Designation and Serial No.
UTU56186

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

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)
940' FNL - 590' FWL, NWNW
19 038S 024E, SLM

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APR 28 1997
DIV. OF OIL, GAS & MINERAL

8. Well Name and No.
HAVASU FEDERAL 11-19

9. API Well No.
43,037,3145800

10. Field and Pool, or Exploratory Area
KACHINA, 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	
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment	<input type="checkbox"/> Change of Plans
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion	<input type="checkbox"/> New Construction
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Altering Casing	<input type="checkbox"/> Conversion to Injection
	<input checked="" type="checkbox"/> Other <u>CHANGE OF OPERATOR</u>	<input type="checkbox"/> Dispose Water <small>(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)</small>

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 HAVASU FEDERAL 11-19 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

Assistant Field Manager,
Resource Management

(This space for Federal or State use)

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

CONDITIONS OF APPROVAL ATTACHED

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.

Merit Energy Company
Well No. Havasu Federal 11-19
NWNW Sec. 19, T. 38 S., R. 24 E.
San Juan County, Utah

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.

Be advised that Merit Energy Company is considered to be the operator of the above well and is responsible under the terms and conditions of the lease for the operations conducted on the leased land.

Bond coverage for this well is provided by BLM Bond WY3011 (Principle - Merit Energy Company) as provided for in 43 CFR 3104.2.

This office will hold the aforementioned operator and bond liable until the provisions of 43 CFR 3106.7-2 continuing responsibility are met.

OPERATOR CHANGE WORKSHEET

Routing	
1-IEC ✓	6-FILE ✓
2-GLM ✓	7-KAS ✓
3-DPS ✓	8-SI ✓
4-VLD ✓	9-FILE ✓
5-JRB ✓	

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: 4-1-97

<p>TO: (new operator) <u>MERIT ENERGY COMPANY</u> (address) <u>12222 MERIT DR STE 1500</u> <u>DALLAS TX 75251</u> <u>MARTHA ROGERS</u> Phone: <u>(972) 701-8377</u> Account no. <u>N4900 (4-30-97)</u></p>	<p>FROM: (old operator) (address)</p>	<p><u>BURLINGTON RESOURCES O&G</u> <u>3300 N A ST BLDG 6</u> <u>MIDLAND TX 79710-1810</u> <u>MARALENE SPAWN</u> Phone: <u>(915) 688-6800</u> Account no. <u>N7670</u></p>
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WELL(S) attach additional page if needed: *KACHINA UNIT (SECONDARY RECOVERY)

Name: **SEE ATTACHED**	API: <u>43-037-3458</u>	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. (r649-8-10) Sundry or other legal documentation has been received from the FORMER operator (attach to this form). *(Rec'd 4-3-97)*
2. (r649-8-10) Sundry or other legal documentation has been received from the NEW operator (Attach to this form). *(Rec'd 4-3-97)*
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) (yes) If yes, show company file number: #20198545. *(# 3-13-97)*
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. Changes have been entered in the Oil and Gas Information System (3270) for each well listed above. *(4-30-97)*
6. Cardex file has been updated for each well listed above. *(5-30-97)*
7. Well file labels have been updated for each well listed above. *(5-30-97)*
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. *(4-30-97)*
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

- 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.
- 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 BLM / Aprv. 4-23-97.

INJECTION WELL - PRESSURE TEST

Well Name: HAVASU FEDERAL 11-19 API Number: 43-037-31458
 Qtr/Qtr: NW/NW Section: 19 Township: 38S Range: 24E
 Company Name: MERIT ENERGY COMPANY
 Lease: State _____ Fee _____ Federal X Indian _____
 Inspector: J THOMPSON Date: 8/31/99 3:10 PM

Initial Conditions:

Tubing - Rate: _____ Pressure: 1400 psi

Casing/Tubing Annulus - Pressure: 0 psi

Conditions During Test:

Time (Minutes)	Annulus Pressure	Tubing Pressure
0	<u>0</u>	<u>1400</u>
5	<u>1100</u>	<u> </u>
10	<u> </u>	<u> </u>
15	<u> </u>	<u> </u>
20	<u> </u>	<u> </u>
25	<u> </u>	<u> </u>
30	<u> </u>	<u> </u>

Results: Pass/Fail

Conditions After Test:

Tubing Pressure: 1400 psi

Casing/Tubing Annulus Pressure: 0 psi

COMMENTS: _____

[Signature]
 Operator Representative

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 Havasu Federal #11-19	API Number 4303731458
Location of Well Footage : 940' FNL & 590' FWL County : San Juan	Field or Unit Name Kachina
QQ, Section, Township, Range: NWNW 19 38S 23E State : UTAH	Lease Designation and Number UTU-56186

EFFECTIVE DATE OF TRANSFER: 9/30/00

CURRENT OPERATOR

Company: Merit Energy Company
Address: 12222 Merit Dr., Suite 1500
city Dallas state TX zip 75251
Phone: (972) 701-8377
Comments:

Name: Arlene Valliquette
Signature: *Arlene Valliquette*
Title: Mgr - Regulatory Affairs
Date: 9/29/00

NEW 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: 10/6/00

(This space for State use only)

Transfer approved by: *[Signature]*
Title: *TRUCK SERVICES MANAGER*

Approval Date: 1/3/01

Comments:

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
PHONE NUMBER: (972) 701-8377		9. API NUMBER:
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:		10. FIELD AND POOL, OR WILDCAT: See attached

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.

Merit Energy Company advises, effective 10-1 _____, 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)

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

FORM APPROVED
Budget Bureau No.: 1004-0135
Expires: November 30, 2000

SUNDRY NOTICES AND REPORTS ON WELLS
*Do not use this form for proposals to drill or reentry to an
abandoned well. Use Form 3160-3 (APD) for such proposals*

SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of well
 Oil Well Gas Well Other Water Source Well

2. Name of Operator
Journey Operating, L.L.C.

3a. Address and Telephone No.
1201 Louisiana, Suite 1040, Houston, Tx 77002

3b. Phone No. (include area code)
713-655-0595

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

5. Lease Designation and Serial No.
UTU-56186

7. If Unit or CA, Agreement Designation

8. Well Name and No.
See Attached

9. API Number
See Attached

10. Field and Pool or Exploratory Area
Kachina; Ismay

11. County or Parish, State
San Juan County, UT

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <u>Change of Operator</u>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated starting date of starting any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface location and measured and true vertical depths of all pertinent markers and zone. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operations result in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notice shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Journey Operating, L.L.C. hereby accepts the operatorship of this well effective October 1, 2000. Journey Operating, L.L.C. will be responsible under the terms and conditions of the lease(s) for the operations conducted on the leased lands or portions thereof. Journey Operating, L.L.C. bond coverage is provided under Bond No. RLB0002487. *BLM Bond # WY 3354 - Nationwide*

14 I hereby certify that the foregoing is true and correct

Signed: Judith M. Le Title: Sr. Regulatory Analyst Date: 1/17/01

(This space for Federal or State office use)

Approved by: William Hunsger Title: Assistant Field Manager, Division of Resources Date: 1/22/01

Conditions of approval, if any: **CONDITIONS OF APPROVAL ATTACHED**

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

*See Instructions on Reverse Side

cc: DDM 1/22/01

RECEIVED
 JAN 25 2001
 DIVISION OF OIL, GAS AND MINING

Journey Operating, LLC
Well Nos. 2, 3, 11-19, 12-19, 12-19A and 22-19
Sec. 19, T. 38 S., R. 24 E.
Lease UTU56186
San Juan County, Utah

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.

Be advised that Journey Operating, LLC is considered to be the operator of the above wells and is responsible under the terms and conditions of the lease for the operations conducted on the leased lands.

Bond coverage for these wells is provided by WY3354 (Principal - Journey Operating, LLC) via surety consent as provided for in 43 CFR 3104.2.

This office will hold the aforementioned operator and bond liable until the provisions of 43 CFR 3106.7-2 continuing responsibility are met.

RECEIVED

JAN 25 2001

DIVISION OF
OIL, GAS AND MINING

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

OPERATOR CHANGE WORKSHEET

ROUTING

1. GLH		4-KAS ✓
2. CDW		5-SP ✓
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: **10-1-2000**

FROM: (Old Operator):
MERIT ENERGY COMPANY
Address: 12222 MERIT DR. STE 1500
DALLAS, TX 75251
Phone: 1-(972)-701-8377
Account No. N4900

TO: (New Operator):
JOURNEY OPERATING LLC
Address: 1201 LOUISIANA STE 1040
HOUSTON, TX 77002
Phone: 1-(713)-655-0595
Account No. N1435

CA No.

Unit: KACHINA

WELL(S)

NAME	API NO.	ENTITY NO.	SEC. TWN RNG	LEASE TYPE	WELL TYPE	WELL STATUS
HAVASU FEDERAL 11-19	43-037-31458	10654	19-38S-25E	FEDERAL	WI	A
ARABIAN FEDERAL # 2	43-037-31282	10654	19-38S-23E	FEDERAL	WI	A

OPERATOR CHANGES DOCUMENTATION

- (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 10/20/2000
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 01/25/2001
- The new company has been checked through the **Department of Commerce, Division of Corporations Database** on: 02/06/2001
- Is the new operator registered in the State of Utah: YES Business Number: 4822566-0161
- If **NO**, the operator was contacted on: N/A
- 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: 01/22/2001

7. **Federal and Indian Units:** The BLM or BIA has approved the successor of unit operator for wells listed on: N/A
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") Prog:** 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: 01/03/2001

DATA ENTRY:

1. Changes entered in the **Oil and Gas Database** on: 02/06/2001
2. Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 02/06/2001
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 No: _____
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: 01/31/2001

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 filled in each well file on: _____

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
---	---

CA No.

Unit:

KACHINA

WELL NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
HAVASU-FEDERAL 22-19	19	380S	240E	4303731278	10654	Federal	OW	P
HAVASU-FEDERAL 41-24	24	380S	230E	4303731279	10654	Federal	OW	P
ARABIAN FED 2	19	380S	240E	4303731282	10654	Federal	WI	A
ARABIAN FEDERAL 3	19	380S	240E	4303731287	10654	Federal	OW	P
HAVASU FED 42-24	24	380S	230E	4303731298	10654	Federal	WI	A
WASH UNIT 2	13	380S	230E	4303731324	10654	Federal	WS	A
HAVASU FEDERAL 12-19	19	380S	240E	4303731457	10654	Federal	OW	S
HAVASU FED 11-19	19	380S	240E	4303731458	10654	Federal	WI	A
HAVASU FEDERAL 12-19A	19	380S	240E	4303731459	10654	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
- If **NO**, the operator was contacted on: _____
- (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

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

SUNDRY NOTICES AND REPORTS ON WELLS

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:

See Attached List

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 _____

8. WELL NAME and NUMBER:

See Attached List

2. NAME OF OPERATOR:

Journey Operating, L.L.C. N 1435

9. API NUMBER:

See Attach

3. ADDRESS OF OPERATOR:

1201 Louisiana, Suite 1040 Houston TX 77002

PHONE NUMBER:

(713) 655-0595

10. FIELD AND POOL, OR WILDCAT:

See Attached List

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"/> 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.

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 Havasu Federal #11-19	API Number 4303731458
Location of Well Footage : 940' FNL & 590' FWL County : San Juan	Field or Unit Name Kachina
QQ, Section, Township, Range: NWNW 19 38S 24E State : UTAH	Lease Designation and Number UTU-56186

EFFECTIVE DATE OF TRANSFER: 6/9/2006

CURRENT OPERATOR

Company: <u>Journey Operating, L.L.C.</u>	Name: <u>Brian A. Baer</u>
Address: <u>1201 Louisiana, Suite 1040</u>	Signature: <u><i>Brian A. Baer</i></u>
<u>city Houston state TX zip 77002</u>	Title: <u>President</u>
Phone: <u>(713) 655-0595</u>	Date: <u>6/9/2006</u>
Comments:	

NEW OPERATOR

Company: <u>Citation Oil & Gas Corp.</u>	Name: <u>Robert T. Kennedy</u>
Address: <u>8223 Willow Place South</u>	Signature: <u><i>Robert T. Kennedy</i></u>
<u>city Houston state TX zip 77070</u>	Title: <u>Sr. Vice President Land</u>
Phone: <u>(281) 517-7800</u>	Date: <u>6/9/2006</u>
Comments:	

(This space for State use only)

Transfer approved by: *Don Jim*

Title: *UIC Director*

Approval Date: 6/30/06

Comments:

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5. Lease Serial No.
UTU-56186

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No
See Attached List

9. API Well No.
See Attached List

10. Field and Pool, or Exploratory Area
Kachina; Ismay

11. County or Parish, State
San Juan Co., UT

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

1. Type of Well
 Oil Well Gas Well Other

2. Name of Operator
Citation Oil & Gas Corp.

3a. Address
8223 Willow Place South, Houston, TX 77070

3b. Phone No. (include area code)
281-517-7800

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

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Change of Operator
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Effective June 9, 2006, Citation Oil & Gas Corp. will take over as operator of the above captioned lease(s) from Journey Operating, L.L.C.

Citation Oil & Gas Corp. hereby accepts the operatorship of the above captioned lease(s). Citation Oil & Gas Corp. will be responsible under the terms and conditions of the lease(s) for the operations conducted on the leased lands or portion thereof. Citation Oil & Gas Corp. bond coverage is provided under Bond No. 104061650 MTB000053.

RECEIVED
2006 JUN 30
JUL 10 2006
BLM - UT - 950
AM 9:15

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed) **Robert T. Kennedy** Title **Sr. Vice President Land**

Signature *Robert T. Kennedy* Date **06/09/2006**

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by **ACCEPTED** Title **Division of Resources** Date **7/10/06**
 Conditions of approval, if any, are attached. Approval of this notice 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. Office **Moab Field Office**

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make 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.

(Instructions on page 2)

cc: UDDGM *7/10/06*

CONDITIONS OF APPROVAL ATTACHED

CHANGE OF OPERATOR
From Journey Operating, L.L.C. To Citation Oil & Gas Corp.
Federal Lease No.: UTU-56186
Kachina Unit
San Juan County, UT

Well Type	Lease Serial No.	Field Name	Well Name/Number	API Number	Location of Well
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	SE NW (1850' FNL & 1255' FWL) Sec 19-T38S-R24E

Citation Oil and Gas Corporation
All Wells on Lease
Section 19, T38S, R24E
Lease UTU56186
Grand County, Utah

CONDITIONS OF ACCEPTANCE

Acceptance of these applications 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.

Be advised that Citation Oil and Gas Corporation is considered to be the operator of the above wells effective June 9, 2006, and is responsible under the terms and conditions of the lease for the operations conducted on the leased lands.

Bond coverage for these wells is provided by MTB000053 (Principal – Citation Oil and Gas Corporation) via surety consent as provided for in 43 CFR 3104.2.

This office will hold the aforementioned operator and bond liable until the provisions of 43CFR 3106.7-2 continuing responsibility are met.



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

Re: Sundry Notices and Reports on Wells - Change of Operator and Transfers of Authority to Inject

Dear Zeke:

Enclosed for approval by the Utah Divisio 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	Havasus-Federal 41-24	43-037-31279 ✓
UTU-20895	Havasus-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	Havasus-Federal 11-19	43-037-31458 ✓
UTU-56186	Havasus-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: Raehele 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

RECEIVED
AUG 02 2013
Div. of Oil, Gas & Mining

Division of Oil, Gas and Mining
OPERATOR CHANGE WORKSHEET (for state use only)

ROUTING

CDW

X - Change of Operator (Well Sold)

Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective:

4/1/2013

FROM: (Old Operator):

N0265-Citation Oil & Gas Corp
 P O BOX 690688
 Houston, TX. 77269
 Phone: 1 (281) 891-1000

TO: (New Operator):

N2400-Richardson Operating Co.
 4725 S Monaco Street, Suite 200
 Denver, CO. 80237
 Phone: 1 (303)830-8000

CA No. **Unit:** **Kachina**

WELL NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
See Attached List								

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: 8/2/2013
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 8/2/2013
- The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 8/26/2013
- Is the new operator registered in the State of Utah: _____ Business Number: 8776630-0143
- (R649-9-2)Waste Management Plan has been received on: N/A
- Inspections of LA PA state/fee well sites complete on: N/A
- Reports current for Production/Disposition & Sundries on: 8/19/2013
- 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 Not Yet BIA N/A
- Federal and Indian Units:**
The BLM or BIA has approved the successor of unit operator for wells listed on: Not Yet
- Federal and Indian Communization Agreements ("CA"):**
The BLM or BIA has approved the operator for all wells listed within a CA on: Not Yet
- Underground Injection Control ("UIC")** 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: 8/7/2013

DATA ENTRY:

- Changes entered in the **Oil and Gas Database** on: 8/26/2013
- Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 8/26/2013
- Bond information entered in RBDMS on: 8/26/2013
- Fee/State wells attached to bond in RBDMS on: N/A
- Injection Projects to new operator in RBDMS on: 8/26/2013
- Receipt of Acceptance of Drilling Procedures for APD/New on: N/A

BOND VERIFICATION:

- Federal well(s) covered by Bond Number: RLB0002500
- Indian well(s) covered by Bond Number: N/A
- (R649-3-1) The **NEW** operator of any state/fee well(s) listed covered by Bond Number N/A
- The **FORMER** operator has requested a release of liability from their bond on: N/A

LEASE INTEREST OWNER NOTIFICATION:

- (R649-2-10) The **NEW** 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

COMMENTS:

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			
HAVASU-FEDERAL 22-19	19	380S	240E	4303731278	10654	Federal	Oil Well	Producing	KACHINA
HAVASU-FEDERAL 41-24	24	380S	230E	4303731279	10654	Federal	Oil Well	Producing	KACHINA
ARABIAN FEDERAL 3	19	380S	240E	4303731287	10654	Federal	Oil Well	Producing	KACHINA
HAVASU FED 42-24	24	380S	230E	4303731298	10654	Federal	Water Injection	Active	KACHINA
WASH UNIT 2	13	380S	230E	4303731324	9975	Federal	Water Source	Active	KACHINA
HAVASU FED 11-19	19	380S	240E	4303731458	10654	Federal	Water Injection	Active	KACHINA

RECEIVED

FORM 9

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

AUG 02 2013

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.

5. LEASE DESIGNATION AND SERIAL NUMBER:

Federal UTU-56186

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

N/A

7. UNIT or CA AGREEMENT NAME:

NA

1. TYPE OF WELL

OIL WELL []

GAS WELL []

OTHER Change of Operator (SWD)

8. WELL NAME and NUMBER:

HAVASU FED 11-19

2. NAME OF OPERATOR:

Richardson Operating Company

9. API NUMBER:

037-31458

3. ADDRESS OF OPERATOR:

4725 S Monaco St. Suite 200 CITY Denver

STATE CO ZIP 80237

PHONE NUMBER:

(303) 830-8000

10. FIELD AND POOL, OR WILDCAT:

KACHINA

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 940 N 590 W

COUNTY: SAN JUAN

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWNW 19 38S 24E

STATE:

UTAH

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

Table with columns: TYPE OF SUBMISSION, TYPE OF ACTION. Includes checkboxes for NOTICE OF INTENT, SUBSEQUENT REPORT, and various actions like ACIDIZE, DEEPEN, OPERATOR CHANGE, etc.

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

[Handwritten Signature]

DATE

7-29-2013

(This space for State use only)

F.

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

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AUG 02 2013

UIC FORM 5

DIV. OF OIL, GAS & MINING

TRANSFER OF AUTHORITY TO INJECT

Well Name and Number HAVASU FEDERAL 11-19		API Number 4303731458
Location of Well Footage : 940N 590W County : San Juan		Field or Unit Name KACHINA
QQ, Section, Township, Range: NWNW 19 38S 24E State : UTAH		Lease Designation and Number Federal UTU-56186

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><i>Sharon Ward</i></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><i>D.B. Richardson</i></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: *D. Richardson* Approval Date: 8/7/13
Title: *VIC Geologist*

Comments: *A mechanical Integrity test will need to be scheduled for this well. Please contact me to schedule the test.*



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

Re: Sundry Notices and Reports on Wells - Change of Operator and Transfers of Authority to Inject

Dear Zeke:

Enclosed for approval by the Utah Divisio 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: Raehele 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

RECEIVED
AUG 02 2013
Div. of Oil, Gas & Mining

Division of Oil, Gas and Mining
OPERATOR CHANGE WORKSHEET (for state use only)

ROUTING

CDW

X - Change of Operator (Well Sold)

Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective:

4/1/2013

FROM: (Old Operator):

N0265-Citation Oil & Gas Corp
 P O BOX 690688
 Houston, TX. 77269
 Phone: 1 (281) 891-1000

TO: (New Operator):

N2400-Richardson Operating Co.
 4725 S Monaco Street, Suite 200
 Denver, CO. 80237
 Phone: 1 (303)830-8000

CA No. **Unit:** **Kachina**

WELL NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
See Attached List								

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: 8/2/2013
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 8/2/2013
- The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 8/26/2013
- Is the new operator registered in the State of Utah: Business Number: 8776630-0143
- (R649-9-2) Waste Management Plan has been received on: N/A
- Inspections of LA PA state/fee well sites complete on: N/A
- Reports current for Production/Disposition & Sundries on: 8/19/2013
- 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 Not Yet BIA N/A
- Federal and Indian Units:**
The BLM or BIA has approved the successor of unit operator for wells listed on: Not Yet
- Federal and Indian Communization Agreements ("CA"):**
The BLM or BIA has approved the operator for all wells listed within a CA on: Not Yet
- Underground Injection Control ("UIC")** 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: 8/7/2013

DATA ENTRY:

- Changes entered in the **Oil and Gas Database** on: 8/26/2013
- Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 8/26/2013
- Bond information entered in RBDMS on: 8/26/2013
- Fee/State wells attached to bond in RBDMS on: N/A
- Injection Projects to new operator in RBDMS on: 8/26/2013
- Receipt of Acceptance of Drilling Procedures for APD/New on: N/A

BOND VERIFICATION:

- Federal well(s) covered by Bond Number: RLB0002500
- Indian well(s) covered by Bond Number: N/A
- (R649-3-1) The **NEW** operator of any state/fee well(s) listed covered by Bond Number N/A
- The **FORMER** operator has requested a release of liability from their bond on: N/A

LEASE INTEREST OWNER NOTIFICATION:

- (R649-2-10) The **NEW** 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

COMMENTS:

Citation Oil & Gas Corp (N0265) to Richardson Operating Co. (N2400)
Effective 1-April-2013

Well Name	Sec.	Township	Range	API No.	Utah Entity No.	Mineral	Well Type	Well Status	Unit Name
						Lease Type			
HAVASU-FEDERAL 22-19	19	380S	240E	4303731278	10654	Federal	Oil Well	Producing	KACHINA
HAVASU-FEDERAL 41-24	24	380S	230E	4303731279	10654	Federal	Oil Well	Producing	KACHINA
ARABIAN FEDERAL 3	19	380S	240E	4303731287	10654	Federal	Oil Well	Producing	KACHINA
HAVASU FED 42-24	24	380S	230E	4303731298	10654	Federal	Water Injection	Active	KACHINA
WASH UNIT 2	13	380S	230E	4303731324	9975	Federal	Water Source	Active	KACHINA
HAVASU FED 11-19	19	380S	240E	4303731458	10654	Federal	Water Injection	Active	KACHINA

RECEIVED

FORM 9

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

AUG 02 2013

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.

5. LEASE DESIGNATION AND SERIAL NUMBER:

Federal UTU-56186

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

N/A

7. UNIT or CA AGREEMENT NAME:

NA

1. TYPE OF WELL

OIL WELL []

GAS WELL []

OTHER Change of Operator (SWD)

8. WELL NAME and NUMBER:

HAVASU FED 11-19

2. NAME OF OPERATOR:

Richardson Operating Company

9. API NUMBER:

037-31458

3. ADDRESS OF OPERATOR:

4725 S Monaco St. Suite 200 CITY Denver

STATE CO ZIP 80237

PHONE NUMBER:

(303) 830-8000

10. FIELD AND POOL, OR WILDCAT:

KACHINA

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 940 N 590 W

COUNTY: SAN JUAN

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWNW 19 38S 24E

STATE:

UTAH

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

Table with columns: TYPE OF SUBMISSION, TYPE OF ACTION. Includes checkboxes for NOTICE OF INTENT, SUBSEQUENT REPORT, and various actions like ACIDIZE, DEEPEN, OPERATOR CHANGE, etc.

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

[Handwritten Signature]

DATE

7-29-2013

(This space for State use only)

F.

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

RECEIVED

AUG 02 2013

UIC FORM 5

DIV. OF OIL, GAS & MINING

TRANSFER OF AUTHORITY TO INJECT

Well Name and Number HAVASU FEDERAL 11-19		API Number 4303731458
Location of Well Footage : 940N 590W County : San Juan		Field or Unit Name KACHINA
QQ, Section, Township, Range: NWNW 19 38S 24E State : UTAH		Lease Designation and Number Federal UTU-56186

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><i>Sharon Ward</i></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><i>D.B. Richardson</i></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: *D. Richardson* Approval Date: 8/7/13
Title: *VIC Geologist*

Comments: *A mechanical Integrity test will need to be scheduled for this well. Please contact me to schedule the test.*

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2014

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5. Lease Serial No.
N/A **UT4-56186**

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

SUBMIT IN TRIPLICATE - Other instructions on page 2.

7. If Unit of CA/Agreement, Name and/or No.
N/A

1. Type of Well

Oil Well Gas Well Other **WI**

8. Well Name and No.
N/A **HAVASU FED 11-19**

2. Name of Operator
Richardson Operating Company

9. API Well No.
4303731458

3a. Address
4725 S. Monaco St. Ste. 200 Denver, CO 80237

3b. Phone No. (include area code)
(303)830-8000

10. Field and Pool or Exploratory Area
Kachina Field

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Lat: 37.474631 Long: -109.331146
NW 1/4 S-19 T38S R24E

11. County or Parish, State
Garfield County, Utah

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input checked="" type="checkbox"/> Temporarily Abandon WI	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompletable horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletable in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

On May 2nd, 2015 Richardson Operating Company temporarily shut in it's Kachina Field. This includes the following wells:

- Havasu Federal 22-19 - API: 43-037-31278
- Havasu Federal 41-24 - API: 43-037-31279
- Havasu Federal 42-24 - API: 43-037-31298
- Havasu Federal 11-19 - API: 43-037-31458
- Arabian Federal 3 - API 43-037-31287
- Wash Unit 2 - API: 43-037-31324

The field will remain shut-in until economic conditions improve.

Accepted by the
Utah Division of
Oil, Gas and Mining
For Record Only
Federal Approval Of This
Action Is Necessary

RECEIVED
MAY 11 2015

DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)
Cody Niehus

Title Geo Tech

Signature

Date 05/04/2015

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice 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.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make 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.

(Instructions on page 2)



GARY R. HERBERT
Governor

SPENCER J. COX
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

March 3, 2016

Richardson Operating Co.
4725 S Monoco St. suite 200
Denver, CO 80237

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

Gentlemen:

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 4-1,	API 43-037-31112		
Havasu Fed 42-24,	API 43-037-31298		
Navajo Fed 14-4,	API 43-037-31321	19	383
Havasu Fed 11-19,	API 43-037-31458		24E

Please make arrangements and ready wells for testing during the week of April, 25th, 2016, 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.



Page 2
Richardson Operating Co.
March 3, 2016

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.
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) 820-8504 to arrange a meeting time and place or to negotiate a different date, if the date(s) specified is unacceptable.

Sincerely,



Mark Jones
Environmental Scientist

mjl/dj/js

cc: Dan Jarvis, Operations Manager
Well File