UTAH OIL AND GAS CONSERVATION COMMISSION

REMARKS: Have File - Well log & Electric Logs
6-3-68 Notice of intention to Squeeze cement & acidize.
7-29-68 Subsequent Report of Squeeze cement & acidize
12/1/83 Operator name change: 931006 Phillips to MEPNA eff. 7-1-93: 950803 Oper Name Fr MEPNA
DC-DAHDI "Horizontal Drl"
950608 Commenced Injection 10-25-95

DATE FILED 11-25-88 1-9-95

LAND: FEE & PATENTED STATE LEASE NO. PUBLIC LEASE NO. INDIAN Nav-14-20-603-353

DRILLING APPROVED: 11-25-58 1-10-95

SPUDDED IN: 12-10-58 3-24-95

COMPLETED: 1-16-59 4-16-95 POW

INITIAL PRODUCTION: 774 BOPD 400 BOPD; 343 MCF;

GRAVITY A. P. I. 42

GOR: 853

PRODUCING ZONES: 5563-5697' (PRDX) 5546-6083 (DSCR)

TOTAL DEPTH: 5759 5537' TVD; 6023' MD

WELL ELEVATION: 4794 DF 4785 GR; 4795.5 KB

DATE ABANDONED:

FIELD OR DISTRICT: ~~Rutherford~~ Aneth

COUNTY: San Juan

WELL NO. DESERT A - 22 (Rutherford 19-32) API 43-037-15743

LOCATION: 1980 FT. FROM (N) LINE, 1980 FT. FROM (E) LINE. SW NE QUARTER - QUARTER SEC. 19

BHL: 737' FNL 820' FEL

TWP.	RGE.	SEC.	OPERATOR	TWP.	RGE.	SEC.	OPERATOR
			MEPNA				
			MOBIL EXPLOR & PROD				

GEOLOGIC TOPS:

QUATERNARY	Star Point	Sinbad	Brazer
Recent	Wahweap	PERMIAN	Pilot shale
Alluvium	Masuk	Kaibab	Madison
Lake beds	Colorado	Coconino	Leadville
Pleistocene	Mancos	Cutler	Redwall
Lake beds	Upper	Hoskinnini 2480	DEVONIAN
TERTIARY	Middle	Decheeny 2650	Upper
Pliocene	Lower	White Rim	Middle
Humboldt	Emery	Organ Rock 2810	Lower
Salt Lake	Blue Gate	Cedar Mesa	Ouray
Miocene	Ferron	Halgaite tongue	Elbert
Bishop conglomerate	Frontier	Phosphoris	Guilmette
Oligocene	Dakota	Park City	Simonson dolomite
Norwood	Burro Canyon	Rico (Goodridge)	Sevy dolomite
Eocene	Cedar Mountain	Supai	North Point
Duchesne River	Buckhorn	Bird Springs	SILURIAN
Uinta	JURASSIC	CARBONIFEROUS	Laketown dolomite
Bridger	Morrison	Pennsylvanian	ORDOVICIAN
Green River	Salt Wash	Oquirrh	Eureka quartzite
Upper	San Rafeal Gr.	Weber	Pogonip limestone
Middle	Summerville	Morgan	CAMBRIAN
Lower	Bluff sandstone	Hermosa	Lynch
Wasatch	Curtis	Upper	Bowman
Colton	Entrade	Lower	Tapeats
Flagstaff	Moab tongue	Molas	Ophir
Almy	Carmel	Paradox 5378	Tintic
Paleocene	Glen Canyon Gr.	A	PRE-CAMBRIAN
Current Creek	Navajo	B	Honaker Trail 4541
North Horn	Kayento	C	
CRETACEOUS	Wingate	Manning Canyon	
Montana	TRIASSIC	Mississippian	
Mesaverde	Chinle 1480	Chainman shale	
Price River	Shinarump 2355	Humbug	
Blackhawk	Moenkapi 3264	Joana limestone	

ACME VISIBLE CROZET VIRGINIA #78846-8

State

Form 9-331 b
(April 1952)

Budget Bureau No. 42-R359.4.
Approval expires 12-31-60.

(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Indian Agency [redacted]

Allottee [redacted]

Lease No. [redacted]

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL	X	SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO REDRILL OR REPAIR WELL		SUBSEQUENT REPORT OF REDRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

Cortez, Colorado November 24, 19 58

Desert "A"
Well No. 22 is located 1980 ft. from {N/S} line and 1980 ft. from {E/W} line of sec. 19

SW, NE Sec. 19 (¼ Sec. and Sec. No.) | A16 (Twp.) | 24 E (Range) | SLM (Meridian)

Rattlesnake (Field) | San Juan County (County or Subdivision) | Utah (State or Territory)

The elevation of the Ungraded ground above sea level is 4776.9 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Drill 17-1/2" hole to approximately 160', set 160' of 13-3/8" conductor pipe and cement to surface. Drill 11" hole to approximately 1600', set 8-5/8" casing and cement to surface. Drill 7-7/8" hole to total depth of 5800 ft., run 5-1/2" casing and cement with approximately 250 sx. cement. Complete in Paradox formation.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Phillips Petroleum Company

Address P. O. Box 548

Cortez, Colorado

By C. M. Boles

Title Dist. supt.

Company PHILLIPS PETROLEUM COMPANY

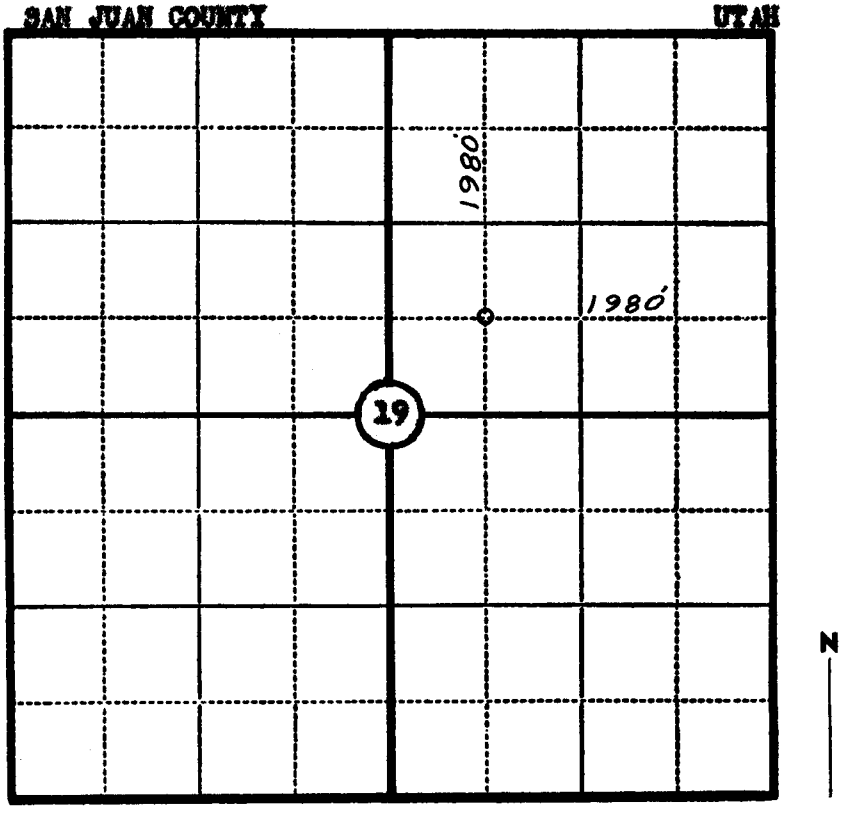
Lease DESERT "A" Well No. 22

Sec. 19, T. 41 S., R. 24 E., S.L.M.

Location 1980' FROM THE NORTH LINE AND 1980' FROM THE EAST LINE.

Elevation 4776.9 UNGRADED GROUND.

SAN JUAN COUNTY UTAH



Scale—4 inches equal 1 mile.

This is to certify that the above plat was prepared from field notes of actual surveys made by me or under my supervision and that the same are true and correct to the best of my knowledge and belief.

James P. Leese

Seal: Registered Land Surveyor.
James P. Leese
Utah Reg. No. 1472

Surveyed 22 December, 19 57

SAN JUAN ENGINEERING COMPANY, FARMINGTON, N. M.

10

November 25, 1958

Phillips Petroleum Company
P. O. Box 548
Cortez, Colorado

Attention: C. M. Boles, District Superintendent

Gentlemen:

This is to acknowledge receipt of your notice of intention to drill Well No. Desert A-22, which is to be located 1980 feet from the north line and 1980 feet from the east line of Section 19, Township 41 South, Range 24 East, SLBM, San Juan County, Utah.

Please be advised that insofar as this office is concerned, approval to drill said well is hereby granted.

This approval terminates within 90 days if the above mentioned well is not spudded in within said period.

Yours very truly,

OIL & GAS CONSERVATION COMMISSION

CLEON B. FEIGHT
SECRETARY

CBF:co

cc: Phil McGrath
USGS, Farmington,
New Mexico

Budget Bureau No. 42-R-359.2.
Approval expires 12-31-55.

Form 9-331 b
(April 1952)

(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Indian Agency Navajo

Allottee Tribal

Lease No. 14-20-603-353

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	X
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO REDRILL OR REPAIR WELL		SUBSEQUENT REPORT OF REDRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

Cortez, Colorado December 16, 1958

Desert "A" Well No. 22 is located 1980 ft. from {N/S} line and 1980 ft. from {E/W} line of sec. 19

SW NE Sec. 19 (¼ Sec. and Sec. No.) 41S (Twp.) 24E (Range) S.L.M. (Meridian)

Ratherford (Field) San Juan County (County or Subdivision) Utah (State or Territory)

The elevation of the ~~derrick floor~~ ungraded ground above sea level is 4776.9 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Spudded 2 AM 12/10/58. Drilled 17-1/4" hole to 174'. Set and cemented 13-3/8" OD 27.1# casing at 174' RKB with 175 sacks regular cement, 2% calcium chloride. Pumped plug to 143' at 2:30 PM 12/10/58. Cement circulated. Waited on cement 24 hours. Tested casing with 750# for 30 minutes. Tested o.k.

Drilled 11" hole to 1495'. Set and cemented 8-5/8" OD 24# casing at 1494.60' RKB with 330 sacks regular cement, 126 sacks Diacel "D", 165# Flecele, 660# Tuff Plug, followed with 125 sacks regular cement on bottom. Pumped plug to 1460' at 2 AM 12/12/58. Cement circulated and dropped back -- cemented to surface down annulus with 69 sacks cement. Waited on cement 24 hours. Tested casing with 750# for 30 minutes. Tested o.k.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company PHILLIPS PETROLEUM COMPANY

Address Box 548
Cortez, Colorado

By C. M. Boles
C. M. Boles
Title District Superintendent

W/

U. S. GOVERNMENT PRINTING OFFICE 16—8437b-7

State

Form 9-331 b
(April 1952)

Budget Bureau No. 42-R359.4.
Approval expires 12-31-60.

(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Indian Agency Navajo

Allottee Tribal

Lease No. 14-20-603-353

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	X
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO REDRILL OR REPAIR WELL		SUBSEQUENT REPORT OF REDRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

Cortez, Colorado February 24, 1959

Desert "A"
Well No. 22 is located 1980 ft. from {N} line and 1980 ft. from {E} line of sec. 19

SW NE Sec. 19 (¼ Sec. and Sec. No.) 41S (Twp.) 24E (Range) SLM (Meridian)

Ratherford (Field) San Juan (County or Subdivision) Utah (State or Territory)

The elevation of the ~~derrick floor~~ ungraded ground above sea level is 4776.9 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Drilled 7-7/8" hole to 2799' and ran Schlumberger Sectional gauge from 2200 to TD. Ran Halliburton DST #1 from 2598-2799 in DeChelly sand. Tool open 2 hrs. Good blow of air immediately, mud to surface in 50 minutes. Flowed at rate of 11.2 barrels slight salty water per hour on 5/8" bottom choke, 1" top choke. Recovered 2560' slightly salty water. 15 minute ISIP 1250#, IFP 525#, FFP 1115#, 15 minute FSIP 1235#, Initial Hydrostatic pressure 1355#. Drilled 7-7/8" hole to 5510', cored from 5510 to 5701'. Reamed core hole and drilled 7-7/8" hole to 5759'. Ran Schlumberger Induction Electric and Sonic Logs to 5761'. Ran Gamma Ray Neutron (Schlumberger) and Micro Caliper Logs to 5762'. Ran Welex Induction Electric Log to 5759', Ran Welex Gamma Ray Neutron Log (Run #1) to 5756'. Set and cemented 5½" casing at 5757.28' w/132 sx neat cement, 100 sx Diacel "D", 496# calcium chloride. Pumped plug to 5726' at 4:55 PM 1/10/59. (Centralizers at 5162, 5262, 5363, 5464, 5564, 5665 and 5750' - 60' of B&W Rotating Scratchers spaced 5510-25, 5615-30', 5718-48. Lost Halliburton Wire Line weight in hole while tagging

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

(cont'd on back)

Company Phillips Petroleum Company

Address P. O. Box 548
Cortez, Colorado

By C. M. Boles
Title District Superintendent

MAR 2 1959

(Continued)

plug - Did not recover. Ran in hole with tubing and checked PBTD at 5722'. Tested casing with 750# for 30 minutes - tested okay.

Form 9-331

Budget Bureau No. 42-R355.4.
Approval expires 12-31-60.

U. S. LAND OFFICE Navajo
SERIAL NUMBER 14-20-603-353
LEASE OR PERMIT TO PROSPECT Tribal

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOCATE WELL CORRECTLY

LOG OF OIL OR GAS WELL

Company Phillips Petroleum Address Box 548, Cortez, Colorado

Lessor or Tract Desert "A" Field Rutherford State Utah

Well No. 22 Sec. 19 T. 41S R. 26E Meridian SLM County San Juan

Location 1980 ft. N. of N Line and 1980 ft. W. of E Line of Sec. 19 Elevation 4794 (Derrick floor relative to sea level)

The information given herewith is a complete and correct record of the well and all work done thereon so far as can be determined from all available records.

Signed [illegible]

Date February 25, 1959 Title District Superintendent

The summary on this page is for the condition of the well at above date.

Commenced drilling December 10, 1958 Finished drilling January 8, 1959

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from ____ to ____ No. 4, from ____ to ____

No. 2, from ____ to ____ No. 5, from ____ to ____

No. 3, from ____ to ____ No. 6, from ____ to ____

IMPORTANT WATER SANDS

In all sands from surface to 1480' and from 2630 to 2810'

No. 1, from ____ to ____ No. 3, from ____ to ____

No. 2, from ____ to ____ No. 4, from ____ to ____

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated From—	Perforated To—	Purpose
13-3/8	27.12	J	Armco	162	Baker		5563	5581	Oil rod.
8-5/8	24	8 rd	J-55	1495	"		5649	5653	" "
5-1/2	14	8 rd	J-55	5784	"		5662	5666	" "
							5679	5697	" "

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
13-3/8	174	175	Circ		
8-5/8	1495	800 cu ft	Circ (Additional 50 sx down annulus)		
5-1/2	5757	550 cu ft	Halliburton		

PLUGS AND ADAPTERS

Heaving plug—Material ____ Length ____ Depth set ____

Adapters—Material ____ Size ____

SHOOTING RECORD

FOLD | MARK

13-3/8	174	175	Circ			
8-5/8	1495	800 cu ft	Circ(additional 50 sx down annulus)			
5-1/2	5757	550 cu ft	Halliburton			

FOLD | MARK

PLUGS AND ADAPTERS

Heaving plug—Material ..... Length ..... Depth set .....

Adapters—Material ..... Size .....

SHOOTING RECORD

Size	Shell used	Explosive used	Quantity	Date	Depth shot	Depth cleaned out

TOOLS USED

Rotary tools were used from 0 feet to 5759 feet, and from ..... feet to ..... feet

Cable tools were used from ..... feet to ..... feet, and from ..... feet to ..... feet

DATES

February 25, 1959 Put to producing January 16, 1959

The production for the first 24 hours was 774 barrels of fluid of which 100 % was oil; ..... % emulsion; ..... % water; and ..... % sediment. Gravity, °Bé. 42

If gas well, cu. ft. per 24 hours ..... Gallons gasoline per 1,000 cu. ft. of gas .....

Rock pressure, lbs. per sq. in. 380-180#

EMPLOYEES

Moran Bros., Inc., Driller ....., Driller

....., Driller ....., Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
1480	2355	875	Chinle
2355	2404	49	Shinarump
2404	2480	76	Moenkopi
2480	2630	150	Cutler - Moskinini Equivalent
2630	2810	180	Cutler - De Chelly Member
2810	4541	1731	Cutler - Organ Rock Member
4541	5759	1218	Honaker Trail
5378	5779	401	Paradox
5779	5722	-57	PBTD - top cement

BROK— NO— LOLVT SEEL (OVER) LOBEV.DIC 1 1—43094-4

FORMATION RECORD—CONTINUED

MAR 2 1959

16—43094-2 U. S. GOVERNMENT PRINTING OFFICE

HISTORY OF OIL OR GAS WELL

It is of the greatest importance to have a complete history of the well. Please state in detail the dates of redrilling, together with the reasons for the work and its results. If there were any changes made in the casing, state fully, and if any casing was "sidetracked" or left in the well, give its size and location. If the well has been dynamited, give date, size, position, and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position, and results of pumping or bailing.

Spudded 2 AM 12/10/58. Drilled 17-1/4" hole to 174'. Set and cemented 13-3/8" OD 27.1# casing at 174' KB with 175 sacks regular cement, 2% calcium chloride. Pumped plug to 143' at 2:30 PM 12/10/58. Cement circulated. Waited on cement 24 hours. Tested casing with 750# for 30 minutes. Tested okay.

Drilled 7-7/8" hole to 1495'. Set and cemented 8-5/8" OD 24# casing at 1494.06' KB with 330 sacks regular cement, 126 sacks Diacel "D", 165# Flocele, 660# Tuff Plug, followed with 125 sacks regular cement on bottom. Pumped plug to 1460' at 2 AM 12/12/58. Cement circulated and dropped back - cemented to surface down annulus with 69 sacks cement. Waited on cement 24 hours. Tested casing with 750# for 30 minutes - tested okay.

Drilled 7-7/8" hole to 2799' and ran Schlumberger sectional gauge from 2200' to TD. Ran Halliburton DST #1 from 2598-2799' in De Chelly sand. Tool open 2 hours. Good blow of air immediately, mud to surface in 50 minutes. Flowed at rate of 11.2 barrels slightly salty water per hour on 5/8" bottom choke, 1" top choke. Recovered 2560' slightly salty water. 15 minute ISIP 1250#, IFP 525#, FFP 1115# 15 minute FSIP 1235#, Initial Hydrostatic pressure 1355#. Drilled 7-7/8" hole to 5510', cored from 5510 to 5701'. Reamed core hole and drilled 7-7/8" hole to 5759'. Ran Schlumberger Induction Electric and Sonic Logs to 5761'. Ran Gamma Ray Neutron (Schlumberger) and Micro Caliper Logs to 5762'. Ran Welex Induction Electric Log to 5759', ran Welex Gamma Ray Neutron Log (Run #1) to 5756'. Set and cemented 5½" casing at 5757.28' with 132 sacks neat cement, 100 sacks Diacel "D", 496 Calcium Chloride. Pumped plug to 5726' at 4:55 PM 1/10/59. (Centralizers at 5162, 5262, 5363, 5464, 5564, 5665 and 5750' - 60' of rotating scratchers spaced 5510-25, 5615-30', 5718-48'). Lost Halliburton wire line weight in hole while tagging plug - did not recover. Ran in hole with tubing and checked PBTD at 5722'. Tested casing with 750# for 30 minutes - tested o.k.

Ran Welex Gamma Ray Neutron Collar Locator log (Run #2) to 5720'. Perforated 5½" casing, 4 Welex Star Jet shots per foot from 5563-81, 5649-53, 5662-66, 5679-97. Perforated 5-1/2" casing 4 Welex Star Jet shots per foot from 5541-57. Ran 2-1/2" EUE tubing and set at 5712.68' with Packer at 5421. Dowell displaced water with 135 BO. Set Packer and acidized perforations with 6000 gallons Dowell regular 15% acid. Flushed with 37 BO. Maximum pressure 4000#, minimum pressure 3650#. Average treating rate 8.23 BPM. Average flush rate 9 BPM. Shut in 5 minutes - bled to 1100#. Job completed at 2:00 P.M. 1/14/59.

GEOLOGICAL SURVEY
DEPARTMENT OF THE INTERIOR
UNITED STATES

U. S. LAND OFFICE

DLM 9-330

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

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.)

5. LEASE DESIGNATION AND SERIAL NO.: 14-20-603-353

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Navajo Tribe

1. OIL WELL [X] GAS WELL [ ] OTHER

7. UNIT AGREEMENT NAME: SW-I-4192

2. NAME OF OPERATOR: Phillips Petroleum Company

8. FARM OR LEASE NAME: Rutherford Unit

3. ADDRESS OF OPERATOR: Drawer 2150, Cortez, Colorado 81321

9. WELL NO.: 19-32

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
1980' FNL; 1980' FEL
SW NE Sec. 19
(Formerly PPCo Desert "A"#22)

10. FIELD AND POOL, OR WILDCAT: Greater Aneth Field

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: 19-41S-24E S.L.M.

14. PERMIT NO.:

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 4776.9' ungraded ground

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	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other)			[ ]
(Other) Squeeze cement and acidize			[X]				

(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.)*

Squeeze cement Zone II and Zone III perforations 5649-97' O.A. (3 intervals), acidize Zone I, 5541-57 and 5563-81', with 6000 gallons 15% in 2 stages, return to production.

PRESENT PRODUCTION: 6 BOPD; 17 MCFPD, 0 BWPD.

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

SIGNED C. M. Boles TITLE District Superintendent DATE

(This space for Federal or State office use)

APPROVED BY TITLE DATE

CONDITIONS OF APPROVAL, IF ANY:

Distribution:
Orig &2cc: USGS, Box 959, Farmington, N.M.
2 cc: Utah O&GCC, SLC
1 cc: B'ville
1 cc: Denver
1 cc: File

*See Instructions on Reverse Side

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.
14-20-603-353

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Navajo Tribe

7. UNIT AGREEMENT NAME
Sw-I-4192

8. FARM OR LEASE NAME
Rutherford Unit

9. WELL NO.
19-32

10. FIELD AND POOL, OR WILDCAT
Greater Aneth Field

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
19-41S-24E S.L.M.

12. COUNTY OR PARISH
San Juan

13. STATE
Utah

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL [X] GAS WELL [ ] OTHER

2. NAME OF OPERATOR
Phillips Petroleum Company

3. ADDRESS OF OPERATOR
Drawer 1150, Cortez, Colorado 81321

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
1980' FNL; 1980' FEL, SW NE Sec. 19
(Formerly PPCo Desert "A" #22)

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
4776.9' ungraded ground

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

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other) Squeeze cmt & acidize			[X]
(Other)				(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.) *

On June 17, 1968 pulled rods and pump, could not release packer, sheared Baker Model AD packer, but still could not pull. Pumped packer with bull plug in bottom into lower Zone II perforations with Halliburton pump truck, chased packer to 5717' and left in hole. Ran Baker Model K cement retainer on tubing, set at 5620'. Squeezed Desert Creek Zone II and III perforations 5649-53, 5662-66 and 5679-97' with 250 sx. Class C cement with .6% HALAD-9 to 4000#, backwashed 2 sacks. Ran tubing with retrievamatic packer set at 5508', acidized Zone I perforations 5541-57 and 5563-81' with 6000 gallons 15% acid in two equal stages separated by 500 gallons oil with 1000# mothball block. Swabbed well, pulled packer, reran tubing with pumping equipment, resumed pumping.

PREVIOUS PRODUCTION: *10 BOPD, 12 MCFGPD, 496 BWPD.

*(Production has been 6 BO, 17 MCF Gas, 0 BW from Zone I only with Zone II isolated by packer).

PRESENT PRODUCTION: 19 BOPD, 43 MCFGPD, 1 BWPD.

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

SIGNED C. H. Boles TITLE District Superintendent DATE 7-24-68

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

Distribution: Orig & 2 - USGS, Farmington
2 cc - Utah O&GCC, SLC
1 cc - B'ville
1 cc - Denver
1 cc - Superior, Cortez
1 cc - File

*See Instructions on Reverse Side

STATE OF UTAH

OIL & GAS CONSERVATION COMMISSION

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL [XX] GAS WELL [ ] OTHER

2. NAME OF OPERATOR: Phillips Oil Company

3. ADDRESS OF OPERATOR: P. O. Box 2920, Casper, WY 82602

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

5. LEASE DESIGNATION AND SERIAL NO.: 96-004192

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Navajo

7. UNIT AGREEMENT NAME: Ratherford Unit

8. FARM OR LEASE NAME:

9. WELL NO.:

10. FIELD AND POOL, OR WILDCAT: N/A

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: See Attached

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

14. PERMIT NO.: See Attached

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

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

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other)			
(Other)				(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.)*

To show change of Operator only. Phillips Oil Company assumed operations effective December 1, 1983 from Phillips Petroleum Company. See attached for list of wells.

RECEIVED - 8 1983

Org. & 3-BLM
1-The Navajo Nation
1-Mary Wiley Black
1-Lawrence E. Brock
1-Cheveron USA
1-Ralph Faxel
1-Royal Hogan
1-W. O. Keller
1-Dee Kelly Corp.
1-Robert Klabzuba
1-Micheal J. Moncrief
1-Richard B. Moncrief
1-Lee W. Moncrief
1-Mary H. Morgan
1-W. A. Moncrief
1-W. A. Moncrief, Jr.
1-L. F. Peterson
1-Shell Oil Co.
1-Southland Royalty Co.
1-Superior Oil Co.
1-Leroy Shave
1-Texaco, Inc.
1-Wade Wiley, Jr.
1-Edwin W. Word, Jr.
1-File

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

SIGNED A. E. Stuart TITLE Area Manager DATE 12/6/83

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

WELL NO.	WELL LOCATION	API NO.	STATUS
E14-12	SW NW Sec.14-T41S-R24E	43-037-15998	Act.
E14-13	NW SW Sec.14-T41S-R24E	43-037-15999	SI
10-44	SE SE Sec.10-T41S-R24E	43-037-30451	Act.
15-12	SW NW Sec.15-T41S-R24E	43-037-15715	Act.
15-14	SW SW Sec.15-T41S-R24E	43-037-15716	SI
15-22	SE NW Sec.15-T41S-R24E	43-037-30449	Act.
15-32	SW NE Sec.15-T41S-R24E	43-037-15717	Act.
15-33	NW SE Sec.15-T41S-R24E	43-037-15718	SI
15-41	NE NE Sec.15-T41S-R24E	43-037-15719	Act.
15-42	SE NE Sec.15-T41S-R24E	43-037-3-448	SI
16-12	SW NW Sec.16-T41S-R24E	43-037-15720	Act.
16-14	SW SW Sec.16-T41S-R24E	43-037-15721	Act.
16-32	SW NE Sec.16-T41S-R24E	43-037-15723	Act.
16-34	SW SE Sec.16-T41S-R24E	43-037-15724	SI
16-41	NE NE Sec.16-T41S-R24E	43-037-15725	Act.
17-12	SW NW Sec.17-T41S-R24E	43-037-15726	Act.
17-14	SW SW Sec.17-T41S-R24E	43-037-15727	Act.
17-23	NE SW Sec.17-T41S-R24E	43-037-15728	Act.
17-32	SW NE Sec.17-T41S-R24E	43-037-15729	Act.
17-34	SW SE Sec.17-T41S-R24E	43-037-15730	Act.
17-41	NE NE Sec.17-T41S-R24E	43-037-15731	Act.
17-44	SE SE Sec.17-T41S-R24E	43-037-15732	Act.
18-11	NW NW Sec.18-T41S-R24E	43-037-15733	SI
18-13	NW SW Sec.18-T41S-R24E	43-037-15734	Act.
18-14	SW SW Sec.18-T41S-R24E	43-037-15735	Act.
18-23	NE SW Sec.18-T41S-R24E	43-037-30244	Act.
18-32	SW NE Sec.18-T41S-R24E	43-037-15736	Act.
18-34	SW SE Sec.18-T41S-R24E	43-037-15737	Act.
19-12	SW NW Sec.19-T41S-R24E	43-037-15739	Act.
19-14	SW SW Sec.19-T41S-R24E	43-037-15740	SI
19-32	SW NE Sec.19-T41S-R24E	43-037-15743	Act.
19-34	SW SE Sec.19-T41S-R24E	43-037-15744	Act.
20-12	SW NW Sec.20-T41S-R24E	43-037-15746	Act.
20-14	SW SW Sec.20-T41S-R24E	43-037-15747	Act.
20-32	SW NE Sec.20-T41S-R24E	43-037-15749	Act.
20-34	SW SE Sec.20-T41S-R24E	43-037-15750	Act.
21-12	SW NW Sec.21-T41S-R24E	43-037-15752	Act.
21-14	SW SW Sec.21-T41S-R24E	43-037-15753	Act.
21-23	NE SW Sec.21-T41S-R24E	43-037-13754	Act.
21-32	SW NE Sec.21-T41S-R24E	43-037-15755	Act.
21-33	NW SE Sec.21-T41S-R24E	43-037-30447	SI
21-34	SW SE Sec.21-T41S-R24E	43-037-15756	Act.
22-12	SW NW Sec.22-T41S-R24E	43-037-15757	SI
22-14	SW SW Sec.22-T41S-R24E	43-037-15758	SI
24-42	SE NE Sec.24-T41S-R24E	43-037-15863	Act.
28-11	NW NW Sec.28-T41S-R24E	43-037-30446	Act.
28-12	SW NW Sec.28-T41S-R24E	43-037-15336	Act.
29-12	SW NW Sec.29-T41S-R24E	43-037-15337	Act.
29-32	SW NE Sec.29-T41S-R24E	43-037-15339	Act.

Mobil Oil Corporation

P.O. BOX 5444
DENVER, COLORADO 80217-5444

May 14, 1986

RECEIVED
MAY 16 1986
DIVISION OF
OIL, GAS & MINING

Utah Board of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Attn: R. J. Firth
Associate Director

SUPERIOR OIL COMPANY MERGER

Dear Mr. Firth:
On September 20, 1984, The Superior Oil Company (Superior) became a wholly owned subsidiary of Mobil Corporation. Since January 1, 1985, Mobil Oil Corporation (MOC), another wholly owned subsidiary of Mobil Corporation, has acted as agent for Superior and has operated the Superior-owned properties.

On April 24, 1986, Superior was merged with Mobil Exploration and Producing North America Inc. (MEPNA), which is also a wholly owned subsidiary of Mobil Corporation. MEPNA is the surviving company of the merger.

This letter is to advise you that all properties held in the name of Superior will now be held in the name of MEPNA; and that these properties will continue to be operated by MOC as agent for MEPNA.

Attached is a listing of all wells and a separate listing of injection-disposal wells, Designation of Agent and an organization chart illustrating the relationships of the various companies. If you have any questions or require additional documentation of this merger, please feel free to contact me at the above address or (303) 298-2577.

Very truly yours,

R. D. Baker
Environmental Regulatory Manager

CNE/rd
CNE8661

2

FORM 10

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

MONTHLY OIL AND GAS PRODUCTION REPORT

RECEIVED
AUG 16 1993
DIVISION OF
OIL, GAS & MINING

OPERATOR NAME AND ADDRESS:

P J KONKEL
PHILLIPS PETROLEUM COMPANY
5525 HWY 64 NBU 3004
FARMINGTON NM 87401

UTAH ACCOUNT NUMBER: N0772

REPORT PERIOD (MONTH/YEAR): 6 / 93

AMENDED REPORT ☐ (Highlight Changes)

Well Name API Number	Entity	Location	Producing Zone	Well Status	Days Oper	Production Volumes OIL(BBL)	GAS(MCF)	WATER(BBL)
#21-23 4303713754	06280	41S 24E 21	DSCR	POW	29	1374	883	58
#3-44 4303715031	06280	41S 24E 3	DSCR	POW	30	111	94	2905
#3-14 4303715124	06280	41S 24E 3	DSCR	POW	30	67	23	302
#9-12 4303715126	06280	41S 24E 9	DSCR	POW	30	112	654	17363
#9-14 4303715127	06280	41S 24E 9	DSCR	POW	30	201	315	423
#28-12 4303715336	06280	41S 24E 28	PRDX	POW	29	112	47	2428
#29-12 4303715337	06280	41S 24E 29	PRDX	POW	29	56	0	672
#29-32 4303715339	06280	41S 24E 29	DSCR	POW	29	1402	287	2224
#29-34 4303715340	06280	41S 24E 29	DSCR	POW	29	757	48	0
#30-32 4303715342	06280	41S 24E 30	DSCR	POW	29	588	1049	3744
#3-12 4303715620	06280	41S 24E 3	DSCR	POW	30	268	11	363
#9-34 4303715711	06280	41S 24E 9	DSCR	POW	30	45	46	9800
#10-12 4303715712	06280	41S 24E 10	DSCR	POW	30	45	23	1088
					TOTALS	5138	3480	41370

COMMENTS: Effective July 1, 1993, Phillips Petroleum Company has sold its interest in the Ratherford Unit to Mobil Exploration and Producing U.S., Incorporated, P. O. Box 633, Midland, Texas 79702. Mobil assumed operations on July 1, 1993.

I hereby certify that this report is true and complete to the best of my knowledge. Date: 8/11/93

Name and Signature: PAT KONKEL Pat Konkel Telephone Number: 505 599-3452

(6/93)

FORM-NR0001.FRM 06/21/93

FORM 9

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

5. LEASE DESIGNATION & SERIAL NO.

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.)

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NAVAJO TRIBAL

1. OIL WELL ☐ GAS WELL ☐ OTHER

7. UNIT AGREEMENT NAME: RATHERFORD UNIT

2. NAME OF OPERATOR: MOBIL OIL CORPORATION

8. FARM OR LEASE NAME

3. ADDRESS OF OPERATOR: P. O. BOX 633 MIDLAND, TX 79702

9. WELL NO.

RECEIVED SEP 13 1993

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.)
At surface
At proposed prod. zone

DIVISION OF OIL, GAS & MINING

10. FIELD AND POOL, OR WILDCAT: GREATER ANETH

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

14. API NO.

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

12. COUNTY: SAN JUAN

13. STATE: UTAH

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐
SHOOT OR ACIDIZE	☐	ABANDON	☐
REPAIR WELL	☐	CHANGE PLANS	☐
(Other)			

APPROX. DATE WORK WILL START _____

SUBSEQUENT REPORT OF:

WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
(Other) CHANGE OF OPERATOR			☐

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

DATE OF COMPLETION _____

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.)

* Must be accompanied by a cement verification report.

AS OF JULY1, 1993, MOBIL OIL CORPORATION IS THE OPERATOR OF THE RATHERFORD UNIT. ATTACHED ARE THE INDIVIDUAL WELLS.

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

SIGNED Shirley Todd TITLE ENV. & REG TECHNICIAN DATE 9-8-93

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

See Instructions On Reverse Side

(3/89)

FORM 11

STATE OF UTAH
/ISION OF OIL, GAS AND MINING

MONTHLY OIL AND GAS DISPOSITION REPORT

OPERATOR NAME AND ADDRESS:

LB Sheffield
~~BRIAN BERRY~~
~~M E P N A~~ MOBIL
~~POB 219031 1807A RENTWR~~ P.O. DRAWER G
DALLAS TX 75221-9031 CORTEZ, Co. 81321

UTAH ACCOUNT NUMBER: N7370

REPORT PERIOD (MONTH/YEAR): 7 / 93

AMENDED REPORT ☐ (Highlight Changes)

*931006 updated. fc

ENTITY NUMBER	PRODUCT	GRAVITY BTU	BEGINNING INVENTORY	VOLUME PRODUCED	DISPOSITIONS TRANSPORTED	USED ON SITE	FLARED/VENTED	OTHER	ENDING INVENTORY
05980	OIL			177609	177609	0			
	GAS			72101	66216	5885			
11174	OIL								
	GAS								
	OIL								
	GAS								
	OIL								
	GAS								
	OIL								
	GAS								
	OIL								
	GAS								
	OIL								
	GAS								
	TOTALS			249710	243825	5885			

RECEIVED
SEP 13 1993
DIVISION OF
OIL, GAS & MINING

COMMENTS: PLEASE NOTE ADDRESS CHANGE. MOBIL ~~ARCO~~ PRODUCTION REPORTS WILL BE COMPILED AND SENT FROM THE CORTEZ, Co. OFFICE IN THE FUTURE.

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

Date: 9/5/93

Name and Signature: Lowell B Sheffield

Telephone Number: ~~214 658 2528~~ 303 565 2212

(6/93)

FORM=NR0003.FRM 07/2

Sept 29, 1993

TO: Lisha Cordova - Utah Mining Oil & Gas

FROM: Janice Easley
BLM Farmington, NM
505 599-6355

Here is copy of Rathertord Unit Successor Operator.

4 pages including this one.

Ratherford Unit (GC)

RECEIVED
BLM
27 AM 11:44
070 FARMINGTON, NM
MINERALS DIV.
1
3
2
ALL SUPV.

Navajo Area Office
P. O. Box 1060
Gallup, New Mexico 87305-1060

ARES/543

JUL 2 0 1993

Mr. G. D. Cox
Mobil Exploration and
Producing North America, Inc.
P. O. Box 633
Midland, Texas 79702

Dear Mr. Cox:

Enclosed for your information and use is the approved Designation of Operator between the Phillips Petroleum Company and Mobil Exploration and Producing North America, Inc. for the Ratherford Unit.

Please note that all other concerned parties will be furnished their copy of the approved document.

Sincerely,

ACTING Area Director

Enclosure

cc: Bureau of Land Management, Farmington District Office w/enc.
TNN, Director, Minerals Department w/enc.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS

RECEIVED
BLM
93 JUN 27 AM 11:44
070 FARMINGTON, NM

DESIGNATION OF OPERATOR

Phillips Petroleum Company is, on the records of the Bureau of Indian Affairs, operator of the Ratherford Unit,

AREA OFFICE: Window Rock, Arizona
LEASE NO: Attached hereto as Exhibit "A"

and, pursuant to the terms of the Ratherford Unit Agreement, is resigning as Unit Operator effective July 1, 1993, and hereby designates

NAME: Mobil Exploration and Producing North America Inc., duly elected pursuant to the terms of the Ratherford Unit Agreement,

ADDRESS: P. O. Box 633, Midland, Texas 79702
Attn: G. D. Cox

as Operator and local agent, with full authority to act on behalf of the Ratherford Unit lessees in complying with the terms of all leases and regulations applicable thereto and on whom the authorized officer may serve written or oral instructions in securing compliance with the Operating Regulations (43 CFR 3160 and 25 CFR 211 and 212) with respect to (described acreage to which this designation is applicable):

Attached hereto as Exhibit "A"

Bond coverage under 25 CFR 211, 212 or 225 for lease activities conducted by the above named designated operator is under Bond Number 05202782 (attach copy). Evidence of bonding is required prior to the commencement of operations.

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

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

Attached is the appropriate documentation relevant to this document.

The designated operator agrees to promptly notify the authorized officer of any change in the operatorship of said Ratherford Unit.

Phillips Petroleum Company

June 17, 1993 By: M. B. [illegible] J.
Attorney-in-Fact

Mobil Exploration and Producing
North America Inc.

June 11, 1993 By: B. D. Martiny
Attorney-in-Fact B.D. MARTINY

[illegible] ACTING AREA DIRECTOR 7/9/93
APPROVED BY TITLE DATE

APPROVED PURSUANT, TO SECRETARIAL REDELEGATION ORDER 209 DM 8 AND 230 DM 3.

This form does not constitute an information collection as defined by 44 U.S.C. 3502 and therefore does not require OMB approval.

EXHIBIT "A"

ATTACHED TO AND MADE A PART OF DESIGNATION OF SUCCESSOR OPERATOR, RATHERFORD UNIT

EXHIBIT "C"

Revised as of September 29, 1992)

SCHEDULE OF TRACT PERCENTAGE PARTICIPATION

Tract Number	Description of Land	Serial Number and Effective Date of Lease	Tract Percentage Participation
1	S/2 Sec. 1, E/2 SE/4 Sec. 2, E/4 Sec. 11, and all of Sec. 12, T-41-S, R-23-E, S.L.M. San Juan County, Utah	14-20-603-246-A Oct. 5, 1953	11.0652565
2	SE/4 and W/2 SW/4 Sec. 5, the irregular SW/4 Sec. 6, and all of Sec. 7 and 8, T-41-S, R-24-E, San Juan County, Utah	14-20-603-368 Oct. 26, 1953	14.4159942
3	SW/4 of Sec. 4, T-41-S, R-24-E, San Juan County, Utah	14-20-603-5446 Sept. 1, 1959	.5763826
4	SE/4 Sec. 4, and NE/4 Sec. 9, T-41-S, R-24-E, San Juan County, Utah	14-20-603-4035 March 3, 1958	1.2587779
5	SW/4 of Sec. 3, T-41-S, R-24-E, S.L.M., San Juan County, Utah	14-20-603-5445 Sept. 3, 1959	.4667669
6	NW/4 of Sec. 9, T-41-S, R-24-E, S.L.M., San Juan County, Utah	14-20-603-5045 Feb. 4, 1959	1.0187043
7	NW/4, W/2 NE/4, and SW/4 Sec. 10, SE/4 Sec. 9, T-41-S, R-24-E, San Juan County, Utah	14-20-603-4043 Feb. 18, 1958	3.5097575
8	SW/4 Sec. 9, T-41-S, R-24-E, S.L.M. San Juan County, Utah	14-20-603-5046 Feb. 4, 1959	1.1141679
9	SE/4 Sec. 10 and S/2 SW/4 Sec. 11 T-41-S, R-24-E, San Juan County, Utah	14-20-603-4037 Feb. 14, 1958	2.6186804
10	All of Sec. 13, E/2 Sec. 14, and E/2 SE/4 and N/2 Sec. 24, T-41-S, R-23-E, S.L.M., San Juan County, Utah	14-20-603-247-A Oct. 5, 1953	10.3108861
11	Sections 17, 18, 19 and 20, T-41-S, R-24-E, San Juan County Utah	14-20-603-353 Oct. 27, 1953	27.3389265
12	Sections 15, 16, 21, and NW/4, and W/2 SW/4 Sec. 22, T-41-S, R-24-E, San Juan County, Utah	14-20-603-355 Oct. 27, 1953	14.2819339
13	W/2 Section 14, T-41-S, R-24-E, San Juan County, Utah	14-20-603-370 Oct. 26,1953	1.8500847
14	N/2 and SE/4, and E/2 SW/4 Sec. 29, NE/4 and E/2 SE/4 and E/2 W/2 irregular Sec. 30, and E/2 NE/4 Sec. 32, T-41-S, R-24-E, San Juan County, Utah	14-20-603-407 Dec. 10, 1953	6.9924969
15	NW/4 Sec. 28, T-41-S, R24-E San Juan County, Utah	14-20-603-409 Dec. 10, 1953	.9416393
16	SE/4 Sec. 3, T-41-S, R-24-E San Juan County, Utah	14-20-0603-6504 July 11, 1961	.5750254
17	NE/4 Sec. 3, T-41-S, R-24-E San Juan County, Utah	14-20-0603-6505 July 11, 1961	.5449292
18	NW/4 Sec. 3, T-41-S, R-24-E San Juan County, Utah	14-20-0603-6506 July 11, 1961	.5482788
19	NE/4 Sec. 4, T-41-S, R24-E San Juan County, Utah	14-20-0603-7171 June 11, 1962	.4720628
20	E/2 NW/4 Sec. 4, T-41-S, R-24-E San Juan County, Utah	14-20-0603-7172 June 11, 1962	.0992482
100% Indian Lands		TOTAL 12,909.74	100.0000000

Division of Oil, Gas and Mining

PHONE CONVERSATION DOCUMENTATION FORM

Route original/copy to:

[] Well File _____

(Location) Sec___Twp___Rng___

(API No.) _____

[] Suspense

(Return Date) _____

(To - Initials) _____

XXX Other

OPERATOR CHANGE

1. Date of Phone Call: 10-6-93 Time: 9:30

2. DOGM Employee (name) L. CORDOVA (Initiated Call XXX)

Talked to:

Name GLEN COX (Initiated Call [ ]) - Phone No. (915)688-2114

of (Company/Organization) MOBIL

3. Topic of Conversation: OPERATOR CHANGE FROM PHILLIPS TO MOBIL "RATHERFORD UNIT".

(NEED TO CONFIRM HOW OPERATOR WANTS THE WELLS SET UP - MEPNA AS PER BIA APPROVAL OR MOBIL OIL CORPORATION AS PER SUNDRY DATED 9-8-93?)

4. Highlights of Conversation:

MR. COX CONFIRMED THAT THE WELLS SHOULD BE SET UNDER ACCOUNT N7370/MEPNA AS PER BIA APPROVAL, ALSO CONFIRMED THAT PRODUCTION & DISPOSITION REPORTS WILL NOW BE HANDLED OUT OF THEIR CORTEZ OFFICE RATHER THAN DALLAS.

MEPNA-

PO DRAWER G

CORTEZ, CO 81321

(303)565-2212

*ADDRESS CHANGE AFFECTS ALL WELLS CURRENTLY OPERATORED BY MEPNA, CURRENTLY REPORTED OUT OF DALLAS (MCELMO CREEK).

Division of Oil, Gas and Mining
OPERATOR CHANGE WORKSHEET

Routing:

1-	VEC/7-SJ
2-	DTS/8-FILE
3-	VLC
4-	RJF
5-	LEC
6-	PL

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

XX 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 DATE: 7-1-93)

TO (new operator) **M E P N A**
(address) **PO DRAWER G**
CORTEZ, CO 81321
GLEN COX (915)688-2114
phone (303) 565-2212
account no. N7370

FROM (former operator) **PHILLIPS PETROLEUM COMPANY**
(address) **5525 HWY 64 NBU 3004**
FARMINGTON, NM 87401
PAT KONKEL
phone (505) 599-3452
account no. N0772(A)

Well(s) (attach additional page if needed): ***RATHERFORD UNIT (NAVAJO)**

Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
SEE ATTACHED	43037 15743					

OPERATOR CHANGE DOCUMENTATION

Lec 1. (Rule R615-8-10) Sundry or other legal documentation has been received from former operator (Attach to this form). (Reg. 8-20-93) (6/93 Prod. Rpt. 8-16-93)

Lec 2. (Rule R615-8-10) Sundry or other legal documentation has been received from new operator (Attach to this form). (Reg. 8-31-93) (Rec'd 9-14-93)

N/A 3. The Department of Commerce has been contacted if the new operator above is not currently operating any wells in Utah. Is company registered with the state? (yes/no) _____ If yes, show company file number: _____.

Lec 4. **(For Indian and Federal Wells ONLY)** The BLM has been contacted regarding this change (attach Telephone Documentation Form to this report). Make note of BLM status in comments section of this form. Management review of **Federal and Indian** well operator changes should take place prior to completion of steps 5 through 9 below.

Lec 5. Changes have been entered in the Oil and Gas Information System (Wang/IBM) for each well listed above. (O&G wells 10-6-93) (WIW's 10-26-93)

Lec 6. Cardex file has been updated for each well listed above. (O&G wells 10-6-93) (WIW's 10-26-93)

Lec 7. Well file labels have been updated for each well listed above. (O&G wells 10-6-93) (WIW's 10-26-93)

Lec 8. Changes have been included on the monthly "Operator, Address, and Account Changes" memo for distribution to State Lands and the Tax Commission. (10-6-93)

Lec 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.

– OVER –

PERATOR CHANGE WORKSHEET (CONTINUED) Initial each item when completed. Write N/A if item is not applicable.

NTITY REVIEW

✓ 1. (Rule R615-8-7) 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).

N/A 2. State Lands and the Tax Commission have been notified through normal procedures of entity changes.

OND VERIFICATION (Fee wells only)

✓ 1. (Rule R615-3-1) 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 operators' bond files.

__ 3. The former operator has requested a release of liability from their bond (yes/no) ___. Today's date _____ 19___. If yes, division response was made by letter dated _____ 19___.

EASE INTEREST OWNER NOTIFICATION RESPONSIBILITY

N/A 1. (Rule R615-2-10) The former operator/lessee of any **fee lease** well listed above has been notified by letter dated _____ 19___, of their responsibility to notify any person with an interest in such lease of the change of operator. Documentation of such notification has been requested.

DTS 11-10-93

N/A 2. Copies of documents have been sent to State Lands for changes involving **State leases**.

ILMING

✓ 1. All attachments to this form have been microfilmed. Date: 11/17 19 93.

ILING

✓ 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 have been filed in the Operator Change file.

OMMENTS

931006 BIA/B&M Approved 7-9-93.

E71/34-35

19W-21	43-037-15741	14-20-603-353	SEC. 19, T41S, R24E	NE/NW 660' FNL 1860' FWL	
19-22	43-037-31046	14-20-603-353	SEC. 19, T41S, R24E	SE/NW 1840' FNL; 1980' FWL	
19W-23	43-037-15742	14-20-603-353	SEC. 19, T41S, R24E	NE/SW 2080' FSL; 1860' FWL	
19-31	43-037-31047	14-20-603-353	SEC. 19, T41S, R24E	NW/NE 510' FNL; 1980' FEL	
19-32	43-037-15743	14-20-603-353	SEC. 19, T41S, R24E	SW/NE 1980' FNL; 1980' FEL	
19-33	43-037-31048	14-20-603-353	SEC. 19, T41S, R24E	NW/SE 1980' FSL; 1980' FEL	
19-34	43-037-15744	14-20-603-353	SEC. 19, T41S, R24E	SW/SE 660' FSL; 1980' FEL	
19W-41	43-037-15745	14-20-603-353	SEC. 19, T41S, R24E	NE/NE 660' FNL; 660' FEL	
19-42	43-037-30916	14-20-603-353	SEC. 19, T41S, R24E	SE/NE 1880' FNL, 660' FEL	
19W-43	43-037-16420	14-20-603-353	SEC. 19, T41S, R24E	NE/SE 1980' FSL; 760' FEL	
19-44	43-037-31081	14-20-603-353	SEC. 19, T41S, R24E	SE/SE 660' FSL; 660' FEL	
19-97	43-037-31596	14-20-603-353	SEC. 19, T41S, R24E	2562' FNL, 30' FEL	
20-11	43-037-31049	14-20-603-353	SEC. 20, T41S, R24E	NW/NW 500' FNL; 660' FWL	
20-12	43-037-15746	14-20-603-353	SEC. 20, T41S, R24E	1980' FNL, 660' FWL	
20-13	43-037-30917	14-20-603-353	SEC. 20, T41S, R24E	NW/SW 2140' FSL, 500' FWL	
20-14	43-037-15747	14-20-603-353	SEC. 20, T41S, R24E	660' FSL; 660' FWL	
20W-21	43-037-16423	14-20-603-353	SEC. 20, T41S, R24E	660' FNL; 1880' FWL	
20-22	43-037-30930	14-20-603-353	SEC. 20, T41S, R24E	SE/NW 2020' FNL; 2090' FWL	
20W-23	43-037-15748	14-20-603-353	SEC. 20, T41S, R24E	NW/SW 2080; 2120' FWL	
20-24	43-037-30918	14-20-603-353	SEC. 20, T41S, R24E	SE/SW 820' FSL; 1820' FWL	
20-31	43-037-31050	14-20-603-353	SEC. 20, T41S, R24E	NW/NE 660' FNL; 1880' FEL	
20-32	43-037-15749	14-20-603-353	SEC. 20, T41S, R24E	SW/NE 1980' FNL, 1980' FEL	
20-33	43-037-30931	14-20-603-353	SEC. 20, T41S, R24E	NW/SE 1910' FSL; 2140' FEL	
20-34	43-037-15750	14-20-603-353	SEC. 20, T41S, R24E	660' FSL; 1850' FEL	
20W-41	43-037-15751	14-20-603-353	SEC. 20, T41S, R24E	NE/NE 660' FNL; 660' FEL	PA'd
20-42	43-037-31051	14-20-603-353	SEC. 20, T41S, R24E	SE/NE 1980 ' FNL; 660' FEL	
20W-43	43-037-16424	14-20-603-353	SEC. 20, T41S, R24E	2070' FSL; 810' FEL	
20-44	43-037-30915	14-20-603-353	SEC. 20, T41S, R24E	SE/SE 620' FSL; 760' FEL	
20-66	43-037-31592	14-20-603-353	SEC. 20, T41S, R24E	SW/NW 1221' FWL; 1369' FNL	
21-11	43-037-31052	14-20-603-355	SEC. 21, T41S, R24E	NW/NW 660' FNL; 660 FWL	
21-12	43-037-15752	14-20-603-355	SEC. 21, T41S, R24E	2080' FNL; 660' FWL	
21-13	43-037-30921	14-20-603-355	SEC. 21, T41S, R24E	NW/SW 2030' FSL; 515' FWL	
21-14	43-037-15753	14-20-603-355	SEC. 21, T41S, R24E	SW/SW 660' FSL; 460' FWL	
21W-21	43-037-16425	14-20-603-355	SEC. 21, T41S, R24E	NE/NW 660' FNL; 2030' FWL	
21-32	43-037-15755	14-20-603-355	SEC. 21, T41S, R24E	SW/NE 1880' FNL; 1980' FEL	
~~21-33~~	~~NA~~	~~14-20-603-355~~	~~SEC. 21, T41S, R24E~~	~~2000 FSL; 1860' FEL~~	
21-34	43-037-15756	14-20-603-355	SEC. 21, T41S, R24E	SW/SE 660' FSL; 1980' FEL	
21W-41	43-037-16426	14-20-603-355	SEC. 21, T41S, R24E	660' FNL; 810' FEL	PA'd
21W-43	43-037-16427	14-20-603-355	SEC. 21, T41S, R24E	NE/NE 1980' FSL; 660' FEL	
24-11	43-037-15861	14-20-603-247A	SEC. 24, T41S, R24E	510' FNL; 810' FWL	PA'd
24W-21	43-037-16429	14-20-603-247	SEC. 24, T41S, R24E	4695' FSL; 3300' FEL	PA'd
24W-43	43-037-16430	14-20-603-247	SEC. 24, T41S, R24E	2080' FSL; 660' FEL	
24-31W	43-037-15862	14-20-603-247A	SEC. 24, T41S, R24E	NW/NE 560' FNL; 1830' FEL	
24-32	43-037-31593	14-20-603-247A	SEC. 24, T41S, R24E	SW/NE 2121' FNL; 1846' FEL	
24-41	43-037-31132	14-20-603-247A	SEC. 24, T41S, R24E	NE/NE 660' FNL; 710' FEL	
24W-42	43-037-15863	14-20-603-247A	SEC. 24, T41S, R24E	660' FSL; 1980' FNL	
28-11	43-037-30446	14-20-603-409	SEC. 28, T41S, R24E	NW/NW 520' FNL; 620' FWL	
28-12	43-037-15336	14-20-603-409B	SEC. 28, T41S, R24E	SW/SE/NW 2121' FNL; 623' FWL	
29-11	43-037-31053	14-20-603-407	SEC. 29, T41S, R24E	NW/NW 770' FNL; 585' FWL	
29W-21	43-037-16432	14-20-603-407	SEC. 29, T41S, R24E	NE/NW 667' FNL; 2122' FWL	
29-22	43-037-31082	14-20-603-407	SEC. 29, T41S, R24E	SE/NW 2130' FNL; 1370' FWL	
29W-23	43-037-15338	14-20-603-407	SEC. 29, T41S, R24E	NE/SW 1846' FSL; 1832' FWL	
29-31	43-037-30914	14-20-603-407	SEC. 29, T41S, R24E	NW/NE 700' FNL; 2140' FEL	
29-32	43-037-15339	14-20-603-407	SEC. 29, T41S, R24E	1951' FNL; 1755' FEL	
29-33	43-037-30932	14-20-603-407	SEC. 29, T41S, R24E	NW/SE 1860' FSL; 1820' FEL	
29-34	43-037-15340	14-20-603-407	SEC. 29, T41S, R24E	817 FSL; 2096' FEL	
29W-41	43-037-16433	14-20-603-407	SEC. 29, T41S, R24E	557' FNL; 591' FEL	
29W-42	43-037-30937	14-20-603-407	SEC. 29, T41S, R24E	SE/NE 1850' FNL; 660' FEL	
29W-43	43-037-16434	14-20-603-407	SEC. 29, T41S, R24E	NE/SE 1980' FSL; 660' FEL	
30-21W	43-037-16435	14-20-603-407	SEC. 30, T41S, R24E	660' FNL; 1920' FWL	
30-32	43-037-15342	14-20-603-407	SEC. 30, T41S, R24E	SW/NE 1975' FNL; 2010' FEL	
30W-41	43-037-15343	14-20-603-407	SEC. 30, T41S, R24E	NE/NE 660' FNL; 660' FEL	
9-34	NA 43037157 11	NA 14206034043	NA Sec. 9 T. 41S R. 24E	NA SWSE 660' FSL 1980 FEL	
12-43	43-307-31202	14-20-603-246	SEC. 12. T41S. R23E	2100' FSL;660 FEL	
12W31	43-037-15847	14-20-603-246	SEC. 12, T41S, R23E	661' FNL;, 1981' FEL	
13W24	43-037-15853	14-20-603-247	SEC. 13, T41S, R23E	SE/SW 660' FSL;3300'FEL	
15W23	43-037-16412	14-20-603-355	SEC. 15, T41S, R24E	2140' FSL;1820' FWL	
17-24	43-037-31044	14-20-603-353	SEC. 17, T41S, R24E	SE/SW 720' FSL; 1980' FWL	
18-13	43-037-15734	14-20-603-353	SEC. 18, T41S, R24E	NW/NW 1980' FSL;500' FWL	
18W32	43-037-15736	14-20-603-353	SEC. 18, T41S, R24E	SW/NE2140'FNL;1830' FEL	
20-68	43-037-31591	14-20-603-353	SEC. 20, T41S, R24E	NW/SW 1276' FWL;1615' FSL	
21-23	43-037-13754	14-20-603-355	SEC. 21, T41S, R24E	NE/SW 1740 FSL 1740 FWL	
28W21	43-037-16431	14-20-603-409	SEC.29, T41S, R24E	660' FNL; 2022' FWL	

Form 3160-5
(June 1990)

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 reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: 14-20-603-353
6. If Indian, Allottee or Tribe Name: Navajo
7. If Unit or CA, Agreement Designation: Ratherford
8. Well Name and No.: RU 19-32
9. API Well No.: 43-037-15743
10. Field and Pool, or Exploratory Area: Greater Aneth
11. County or Parish, State: San Juan, Ut.

1. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other
2. Name of Operator: MEPUS for MPT&NM and MEPNA* (915) 688-2114
3. Address and Telephone No.: P.O. Box 633, Midland, Tx. 79702 Attn: Glen Cox
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Surface: SWNE19-41s-24e
BHL: N/A

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

TYPE OF SUBMISSION	TYPE OF ACTION	
☑ Notice of Intent	☐ Abandonment	☐ Change of Plans
☐ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☑ Other Pipeline	☐ Dispose Water (Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)*

*Mobil Exploration & Producing U. S. Inc. as agent for Mobil Producing Texas & New Mexico Inc. and Mobil Exploration & Producing North America Inc.

Will bury water injection pipeline ≈30" deep. (Application to convert well will be filed separately.) Pipeline will be ≈1100' long and run north from well to existing injection pipeline just south of 19-31. All in unit. All on Navajo Tribal Trust. All sites avoided.

Pipeline will be ≈3-1/2" OD coiled steel tubing. Wall thickness is 0.190". Pipe rated to API5LX42. Maximum operating pressure will be ≈500 psi. Hydrotested to ≈5800 psi. Burst pressure is ≈7200 psi. Tubing will be unreeled from spool mounted on bulldozer.

cc: BIA, BLM, Cox, UDOGM

14. I hereby certify that the foregoing is true and correct
Signed [signature] Title Consultant Date 6-20-94

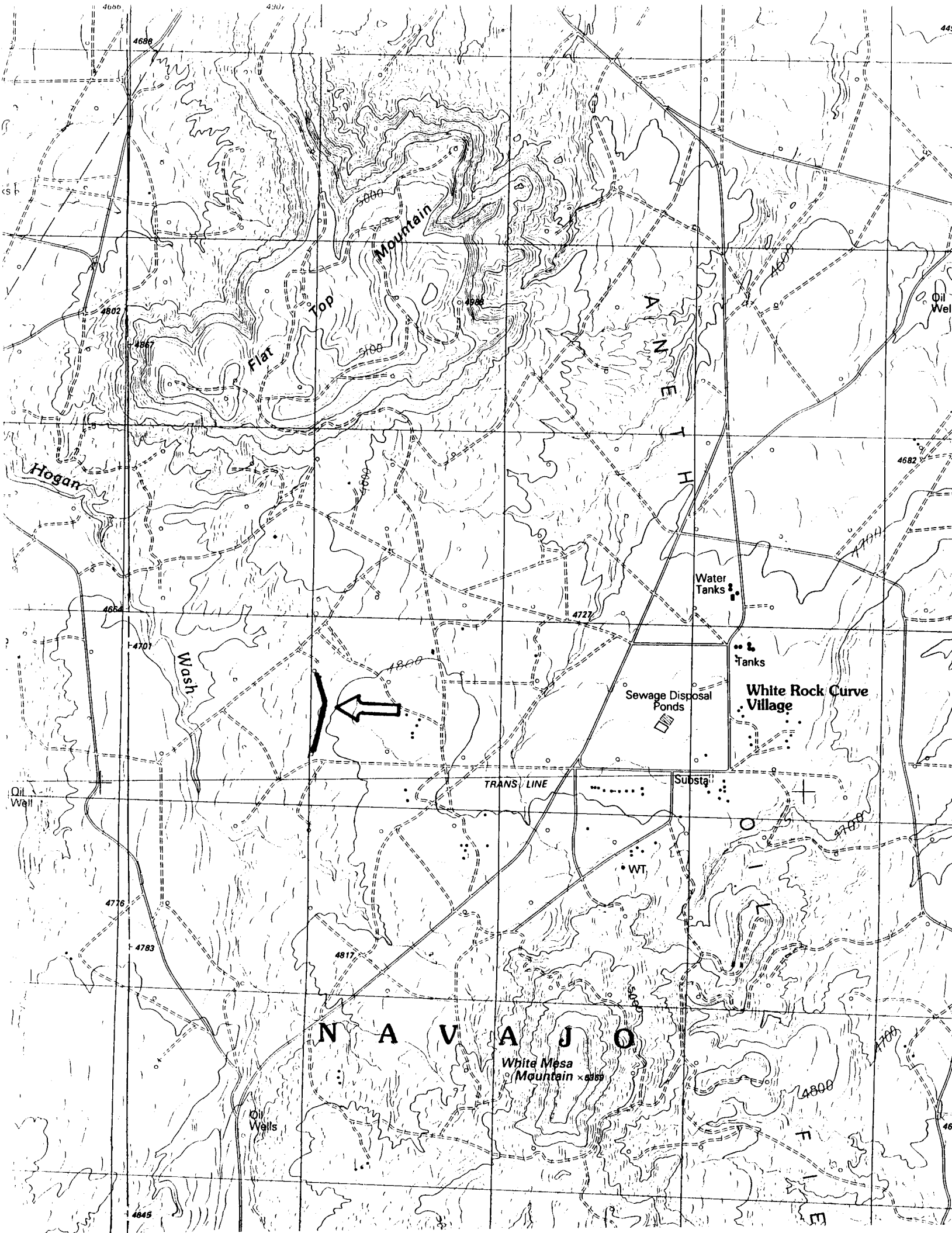
Accepted by the Utah Division of Oil, Gas and Mining

(This space for Federal or State office use)
Approved by _____ Title _____ Date _____
Conditions of approval, if any:

FOR RECORD ONLY

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.

*See Instruction on Reverse Side


Flat Top Mountain
Hogan Wash
Water Tanks
Tanks
Sewage Disposal Ponds
White Rock Curve Village
TRANS. LINE
Substa
WT
Oil Well
Oil Wells
N A V A J O
White Mesa Mountain
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4654
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Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JAN - 9 1995

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 reentry to a different reservoir.
Use "APPLICATION FOR PERMIT - " for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.
14-20-603-353

6. If Indian, Allottee or Tribe Name
NAVAJO TRIBAL

7. If Unit or CA, Agreement Designation
RATHERFORD UNIT

1. Type of Well
[X] Oil Well [ ] Gas Well [ ] Other

8. Well Name and No.
19-32

2. Name of Operator Mobil Exploration & Producing U.S. Inc.
as Agent for Mobil Producing TX & NM Inc.

9. API Well No.
43-037-15743

3. Address and Telephone No.
P.O. Box 633, Midland, TX 79702 (915) 688-2585

10. Field and Pool, or exploratory Area
GREATER ANETH

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SEC. 19, T41S, R24E
1980' FNL, 1980' FEL

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	
[X] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
	[ ] Recompletion	[ ] New Construction
[ ] Subsequent Report	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
[ ] Final Abandonment Notice	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other SIDETRACK	[ ] Dispose Water
		(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)*

SEE ATTACHMENT

1-10-95
FN Matthews

14. I hereby certify that the foregoing is true and correct
Signed Shirley Todd Title ENV. & REG. TECHNICIAN Date 1-6-95

(This space for Federal or State office use)
Approved by _____ Title _____ Date _____
Conditions 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 statements or representations as to any matter within its jurisdiction.

* See Instruction on Reverse Side

Generic Ratherford Unit
Horizontal Drilling Procedure

The objective of this procedure is to prepare this wellbore for sidetracking, sidetrack the subject well and drill a short radius horizontal well with a 1000' lateral.

1. Prepare location and dig working pit.

2. MIRU DDPU (daylight workover rig), reverse unit and H2S equipment.

3. TOH and LD rods.

4. ND wellhead, release TAC, and NU BOPs.

5. TIH with bit and casing scraper to PBTD. TOH with bit and scraper.

6. Attempt to load hole and establish an injection rate (if the injection pressure is > 500 psi, a packer should be run to establish an injection rate).

7. MIRU wireline truck. Run gauge ring and junk basket to PBTD. Run a gyro survey from PBTD to surface. Run and set a cement retainer ±100' above the top perforation. RD wireline truck.

8. TIH with star guide and stop ±30' above the cement retainer. Circulate until well is static and free of oil and gas. Sting into cement retainer and establish injection rate. Pressure annulus to 500 psi. Squeeze cement the existing Desert Creek perforations. Pull out of retainer leaving 1 bbl of cement on top of the retainer and reverse out. TOH with star guide laying down tubing.

9. TIH with bit and drill collars picking up 2 7/8" 10.40 ppf E-75 AOH workstring. Drill cement retainer and cement to the original PBTD. Circulate hole clean and them mud-up system until a yield point of 40-50 is obtained. TOH with bit.

10. TIH with section mill dressed with cutter arms for 5 1/2" or 7" casing. Mill a 30' section in the casing just below the Gothic shale. Circulate the hole clean and TOH with section mill.

11. TIH with bit and clean out to TD. Circulate hole clean and TOH with bit.

12. TIH with 10 jts 2 3/8" tubing on 2 7/8" DP to TD. Circulate the well until static and free of oil and gas. Spot a balanced cement kick-off plug. TOH with workstring. WOC a minimum of 12 hours.

13. TIH and tag cement plug and re-spot plug if the top is to low. TOH and LD workstring . ND BOPs and NU wellhead. RDMO daylight workover rig.

14. MIRU 24 hour DDPU with drilling package. TIH with MT bit, DCs, and 2 7/8", 10.4 ppf, AOH drillpipe.

15. Dress off cement plug to the kick off point. Treat water and mud up. POOH.

16. PU curve drilling assembly and TIH on 2 7/8" DP to PBTD.

17. RU power swivel and wireline. Latch into gyro tool and orient BHA.

18. Sidetrack wellbore using gyro orientation. Switch to Magnetic steering tool when free of magnetic interference from casing.

19. Drill curve section using steering tool for orientation. POOH and LD curve drilling motor.

20. PU lateral drilling motor and new bit.

21. TIH with lateral drilling assembly. Steer assembly as necessary with steering tool to reach target. Make bit trips as necessary. Circulate wellbore clean and POOH.

22. Complete well as per operations Engineering.

Exhibit 2FT

PRODUCER
9-13-93
TVE

Rutherford Unit 19-32

Present Setting

KB: 4795' Z: 10' AGL GL: 4834'

13-3/8", 27.1#/ft csg
Cmtd w/ 175 sx cmt.
Circ to surface.

174'

8-5/8", 24#/ft J-55
Cmtd w/ 455 sx reg cmt.
Circ to surface.

1495'

Tubing Detail:

174 jts 2-7/8" 6.5# tbg
2-7/8" x 5.5" TAC
3 jts 2-7/8" 6.5# tbg
2.5" SN
strainer nipple

Rod Detail:

1.5" x 22' PR w/ liner
7/8" pony rods as needed
(58) 1" steel rods
(68) 7/8" steel rods
(96) 3/4" steel rods
2.5" x 1.5" x 18' pump

TAC @ 5500'

Perfs:

4 SPF 5541-59'
4 SPF 5563-81'

SN @ 5596'

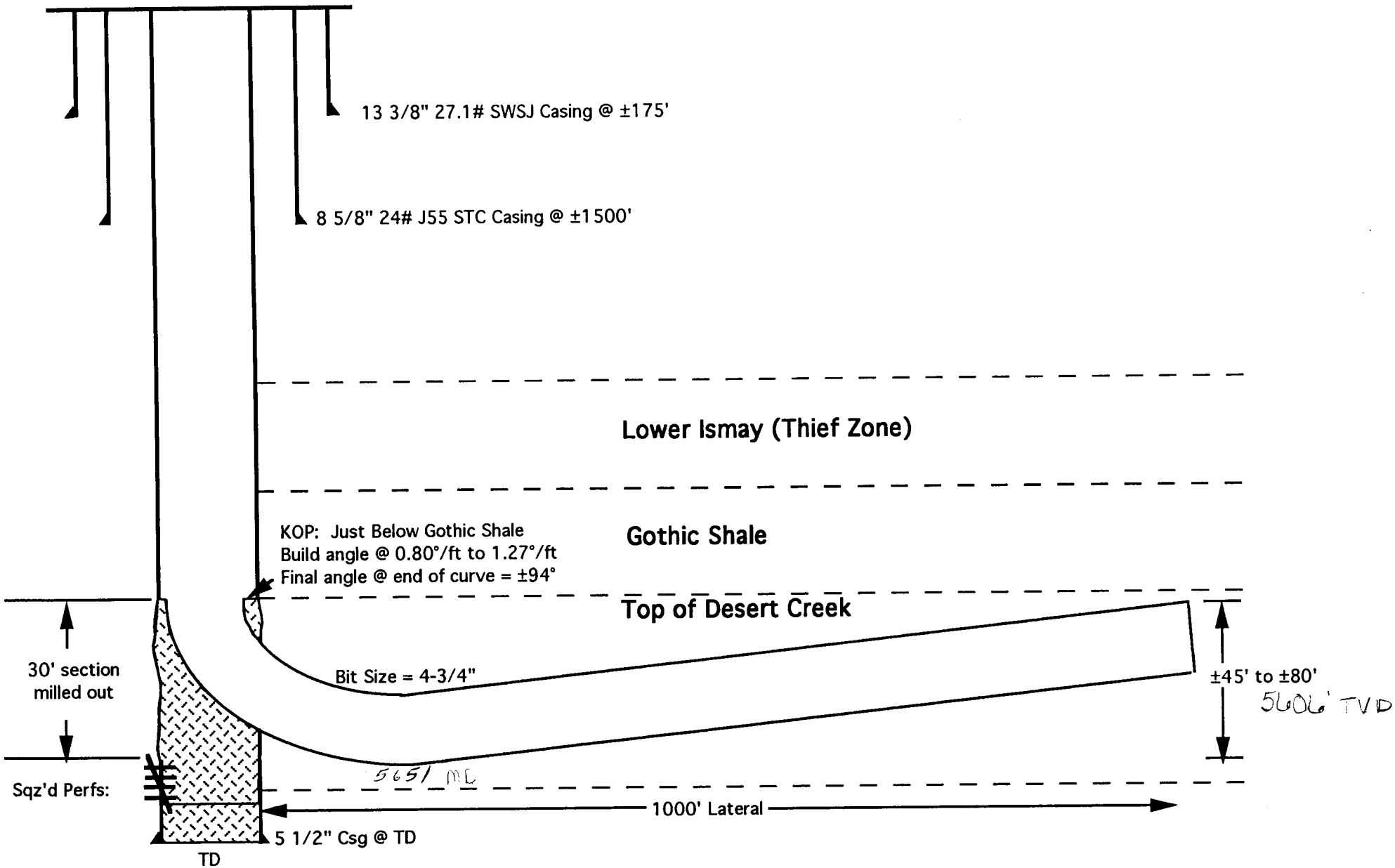
PBTD: 5621'

4 SPF 5649-53'
4 SPF 5662-66'
4 SPF 5674-97'

5.5", 14#/ft J-55
Cmtd w/ 550 cu ft reg cmt.

TD: 5759'

GENERIC HORIZONTAL RATHERFORD UNIT PRODUCER WITH 5 1/2" CASING



Form 3160-5
(June 1990)

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

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SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: 14-20-603-353
6. If Indian, Allottee or Tribe Name: NAVAJO TRIBAL
7. If Unit or CA, Agreement Designation: RATHERFORD UNIT
8. Well Name and No.: 19-32
9. API Well No.: 43-037-15743
10. Field and Pool, or exploratory Area: GREATER ANETH
11. County or Parish, State: SAN JUAN UT

1. Type of Well: [X] Oil Well [ ] Gas Well [ ] Other
2. Name of Operator: Mobil Exploration & Producing U.S. Inc. as Agent for Mobil Producing TX & NM Inc.
3. Address and Telephone No.: P.O. Box 633, Midland, TX 79702 (915) 688-2585
4. Location of Well (Footage, Sec., T., R., M., or Survey Description): SEC. 19, T41S, R24E 1980' FNL, 1980' FEL

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

TYPE OF SUBMISSION	TYPE OF ACTION	
[ ] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[X] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other WORKOVER	[ ] Dispose Water

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

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.)*

2-06-95 MIRU RIH W/POWER SWIVEL. MILL OVER CICR AT 5621'. CUT OVER CICR AND PUSHED DNHOLE. LAY DOWN SWIVEL.. RIH W/ BIT & CSG SCRAPPER. CIBP SET AT 5638

2-07-95 PERF W/4SPF 5615-5630. SET PKR AT 5600' PRESS TEST TO 2000 LBS. CIBP & PKR HOLDING. PUMP 6 BBLS 15% ACID DN TBG. SET OVERNITE.

2-08-95 ACDZ NEW PERFS W/3000 GAL 15% HCL ACID. SWABBED FL TO 5300' W/SN AT 5600'. FLUID RECOVERED.

2-09-95 REL PKR AND WORKSTRING. RIH W/PROD. TBG. BTM OF TBG SET AT 5636' SN SET AT 5414'. PRESS. TEST TO 400 LBS/OK. RDMO.

RECEIVED
FEB 21 1995
DIV OF OIL, GAS & MINING

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

Signed Shirley Robertson Title ENV. & REG. TECHNICIAN Date 02-14-95

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____

Conditions 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 statements or representations as to any matter within its jurisdiction.

* See Instruction on Reverse Side

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
MAY 3 1995
DIV. OF OIL, GAS & MINING

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 reentry to a different reservoir.
Use "APPLICATION FOR PERMIT - " for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: 14-20-603-353
6. If Indian, Allottee or Tribe Name: NAVAJO TRIBAL
7. If Unit or CA, Agreement Designation: RATHERFORD UNIT
8. Well Name and No.: 19-32
9. API Well No.: 43-037-15743
10. Field and Pool, or exploratory Area: GREATER ANETH
11. County or Parish, State: SAN JUAN UT

1. Type of Well: [ ] Oil Well [ ] Gas Well [X] Other INJECTOR
2. Name of Operator: Mobil Exploration & Producing U.S. Inc. as Agent for Mobil Producing TX & NM Inc.
3. Address and Telephone No.: P.O. Box 633, Midland, TX 79702 (915) 688-2585
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SEC. 19, T41S, R24E
1980' FNL, 1980' FEL
BHL 737.5 FNL, 822.4 FWL

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

TYPE OF SUBMISSION	TYPE OF ACTION	
[X] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[X] Conversion to Injection
	[ ] Other _____	[ ] Dispose Water

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

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 WILL COMMENCE UPON APPROVAL OF AREA WIDE PERMIT FROM EPA.

SEE ATTACHMENT

14. I hereby certify that the foregoing is true and correct
Signed Shirley Robertson Title ENV. & REG. TECHNICIAN Date 4-27-95

(This space for Federal or State office use)
Approved by _____ Title _____ Date _____
Conditions 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 statements or representations as to any matter within its jurisdiction.

* See Instruction on Reverse Side

Ratherford Unit 19-32
Injection Well Conversion

AFE # 4AD4

1. Lock and tag out all power sources. Clamp off polish rod. Remove horse head. RU pump and pump lines to casing annulus and kill well with lease water.

2. MI workover rig. ND pump tee. NU and PT BOP's. POH with sucker rods and rod pump laying down same. Release tubing anchor and POH standing back production tubing.

3. RIH with 4-3/4" rock bit without nozzles and casing scraper for 5-1/2", 14 lb/ft casing on 2-7/8" tubing to 5520'. POH.

4. RIH with squeeze packer on 2-7/8" tubing and set at 5510'. PT casing to 1000 psi. If PT fails, locate and squeeze casing leak using a RBP with sand dumped on top to isolate completion interval, and 100 sxs of class B cement containing 2 percent calcium chloride. Clean out cement and retest casing string to 1000 psi. Resqueeze as necessary. Wash sand off RBP and retrieve same. POH laying down workstring.

5. RIH with a Guiberson G-6 injection packer on new 2-7/8", 6.5 lb/ft J-55 KCTS (Threadmasters Torque Ring) Fluorolined Tubing to 5492'. Reverse circulate fresh water packer fluid containing 1 percent by volume of Tretolite CRW137 corrosion inhibitor/oxygen scavenger. Set packer at 5492'. PT backside to 1000 psi. ND BOP's. NU injection head (Ken Britton with Big Red Tool at 505/325-5045).

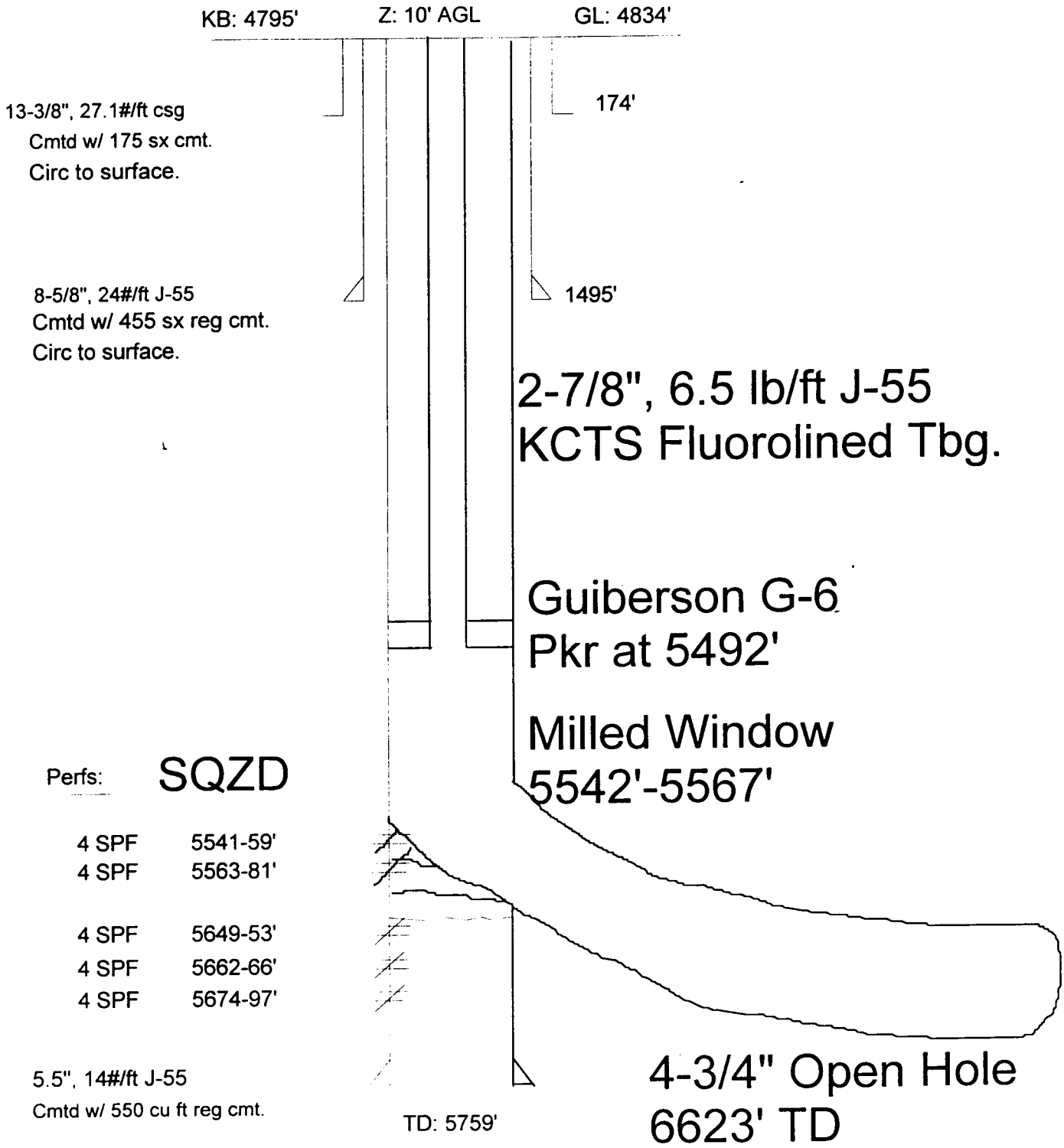
NOTE: A. All new KCTS tubing to be torque turned to 2250 ft-lbs (Tong Rentals at 512/668-9774). All connections of seal assembly and tubing to be made up using permiserts, permetek, and Baker Super B thread compound. Supervision of make-up/running KCTS tubing from Bill Allman with Permian Enterprises at 505/632-8702.

B. Rabbit tubing with 2.0" O.D. rabbit.

6. Perform Mechanical Integrity Test (MIT) for EPA. Contact Jim Walker of the Navajo EPA in Shiprock at 505/368-1040 to witness. Use chart recorder to record test. Send copies of chart to Shirley Todd, Midland - 1206 MOB, Ed Barber, Aneth, and Ratherford files. After obtaining an acceptable MIT, place well on water injection at 500 BWPD.

4AD4

Ratherford Unit 19-32
Proposed

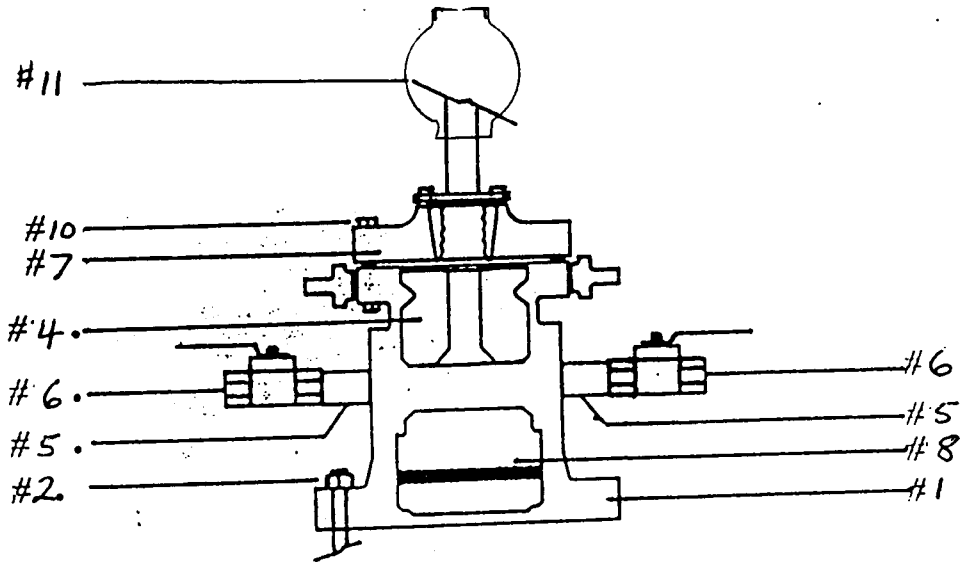


2010 SAN JUAN BLVD.
P.O. BOX 288
FARMINGTON, N.M. 87401

BIG RED TOOL, INC.
Farmington, N.M.

OFFICE & WAREHOUSE:
(505) 325-5045

RESIDENCE:
(505) 325-6219



Mobil - Water Injection

Form 3160-4
(July 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE*
(See other instructions on reverse side)

FORM APPROVED
OMB NO. 1004-0137
Expires: February 28, 1995

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.: 14-20-603-353

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NAVAJO TRIBAL

7. UNIT AGREEMENT NAME: RATHERFORD UNIT

8. FARM OR LEASE NAME, WELL NO.: RATHERFORD 19-32

9. API WELL NO.: 43-037-15743

10. FIELD AND POOL, OR WILDCAT: GREATER ANETH

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: SEC. 19, T41S,R24E

1a. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] DRY [ ] Other

b. TYPE OF COMPLETION: NEW WELL [ ] WORK OVER [ ] DEEP-EN [ ] PLUG BACK [ ] DIFF. RESVR. [ ] Other SIDETRACK

2. NAME OF OPERATOR: Mobil Exploration & Producing U.S. Inc. as Agent for Mobil Producing TX & NM Inc.

3. ADDRESS AND TELEPHONE NO.: P.O. Box 633, Midland, TX 79702 (915) 688-2585

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface: 1980' FNL, 1980' FEL
At top prod. interval reported below
At total depth: BHL 737 FNL, 822 FEL

14. PERMIT NO.: NA
DATE ISSUED: NA

12. COUNTY OR PARISH: SAN JUAN
13. STATE: UT

15. DATE SPUDDED: ~~12, 1958~~ 3/29/95
16. DATE T.D. REACHED: 4-13-95
17. DATE COMPL. (*Ready to prod.*): 4-16-95
18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*: GL-4785' RKB-4795.5'
19. ELEV. CASINGHEAD:

20. TOTAL DEPTH, MD & TVD: TVD-5537' TVD
21. PLUG, BACK T.D., MD & TVD: 6623' MD
22. IF MULTIPLE COMPL., HOW MANY*:
23. INTERVALS DRILLED BY →: ROTARY TOOLS: CABLE TOOLS:

24. PRODUCING INTERVAL(S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD)*: OH 5546-6623 DESERT CREEK

25. WAS DIRECTIONAL SURVEY MADE: YES

26. TYPE ELECTRIC AND OTHER LOGS RUN:

27. WAS WELL CORED: NO

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

CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
13 3/8	27.1#	174'		175SX SURF.	NONE
8 5/8	24#	1495'		455SX SURF.	NONE
5 1/2	14#	5759'		550FT3 EST. TOC 5500'	NONE

29. LINER RECORD

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

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 7/8	SN @ 5501'	5508'

31. PERFORATION RECORD (*Interval, size and number*)
OH 5546-6623

MAY 1 1 1995

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5542-5568	CUT WINDOW
5450	CICR CMT W/200SX CL G CMT
	W/2.5# MICROBONB +0.5% CRF-3
	@17.1PPG 11 BBLS SLUR TO SUR

33.* PRODUCTION

DATE FIRST PRODUCTION:
PRODUCTION METHOD (*Flowing, gas lift, pumping - size and type of pump*):
WELL STATUS (*Producing or shut-in*): PRODUCING

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL - BBL.	GAS - MCF.	WATER - BBL.	GAS - OIL RATIO
5-5-95	24			402	343	0	853

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

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

35. LIST OF ATTACHMENTS
(SEE BACK)

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

SIGNED Shelley Robertson TITLE ENV. & REG TECHNICIAN DATE 05-08-95

*(See Instructions and Spaces for Additional Data 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 jurisdicton.

MICROFICHE

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

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
			5546' KOP 6623' TD 5546'-6623' ACDZ. W/265 BBLS 15% ACID W/ADDITIVES

38. GEOLOGIC MARKERS

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH

U.S. GOVERNMENT PRINTING OFFICE: 1992-774-672

Form 3160-5
(June 1990)

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 reentry to a different reservoir.
Use "APPLICATION FOR PERMIT - " for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: 14-20-603-353
6. If Indian, Allottee or Tribe Name: NAVAJO TRIBAL
7. If Unit or CA, Agreement Designation: RATHERFORD UNIT
8. Well Name and No.: 19-32
9. API Well No.: 43-037-15743
10. Field and Pool, or exploratory Area: GREATER ANETH
11. County or Parish, State: SAN JUAN UT

1. Type of Well: [X] Oil Well [ ] Gas Well [ ] Other
2. Name of Operator: Mobil Exploration & Producing U.S. Inc. as Agent for Mobil Producing TX & NM Inc.
3. Address and Telephone No.: P.O. Box 633, Midland, TX 79702 (915) 688-2585
4. Location of Well (Footage, Sec., T., R., M., or Survey Description): SEC. 19, T41S, R24E
1980' FNL, 1980' FEL
BHL 737.5 FNL, 822.4 FWL

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

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[X] Subsequent Report	[ ] Recompletion	[ ] New Construction
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	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[ ] Other SIDETRACK	[ ] Dispose Water

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

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.)*

(SPUD)
03-24-95 MIRU LAY DOWN RODS & PUMP. OOOH W/TBG. RIH W/BIT & SCRAPER ON 168 JTS.
03-25-95 SONTINUE W/BIT AND CSG SCRAPPER TO PBD OF 5647'. POH W/ PROD. TBG.
03-27-95 RU POWER SWIVEL
03-28-95 CUT WINDOW FROM 5542-5568' CIRC. HOLE CLEAN.
03-29-95 PRESS. TEST DP TO 3000# RIH W/4 3/4" BIT, DRILL COLLARS TO 5540'.
03-30-95 DRILL ON CICR AT 5450'. DRILL CICR & PUSH DOWNHOLE TO 5628'. RIH W/CICR ON 2 7/8" DP TO 5450.
03-31-95 SET CICR AT 5450'. PRESS. TEST ANN. TO 500#/OK PUMP 10 BBLS CACL2 WTR. CMT W/200 SX CL 'G' C,T W/2.5PPS MICROBOND + 0.5% CER-3 AT 17.1 PPG. CIRC. OUT APPROX. 11 BBLS SLURRY TO SURF. RIH W. 4 3/4" BIT.
04-07-95 KOP AT 5546'. DRILL FROM 5546-5558.
04-08-95 TIME DRILL FROM 5558-5569' 5569-5572, 5572-5575.
04-09-95 DRILL CURVE FROM 5575-5626. DRILL FROM 5626-5644, 5644-5685.
04-10-95 DRILL FROM 5685-5923.
04-11-95 DRILL FROM 5923-6064, 6064-6211. DRILLING IN 'A' POROSITY OF DESERT CREEK.
04-12-95 DRILL FROM 6211-6425.
04-13-95 DRILL FROM 6424-6623 TD. PUMP 5 BBS FW 6 BBLS 15% INHIBITED HCL.
(SEE BACK)
04-14-95 ND BOP RDMO.

14. I hereby certify that the foregoing is true and correct
Signed Shelby Robertson Title ENV. & REG. TECHNICIAN Date 05-08-95

(This space for Federal or State office use)
Approved by _____ Title _____ Date _____
Conditions of approval, if any:

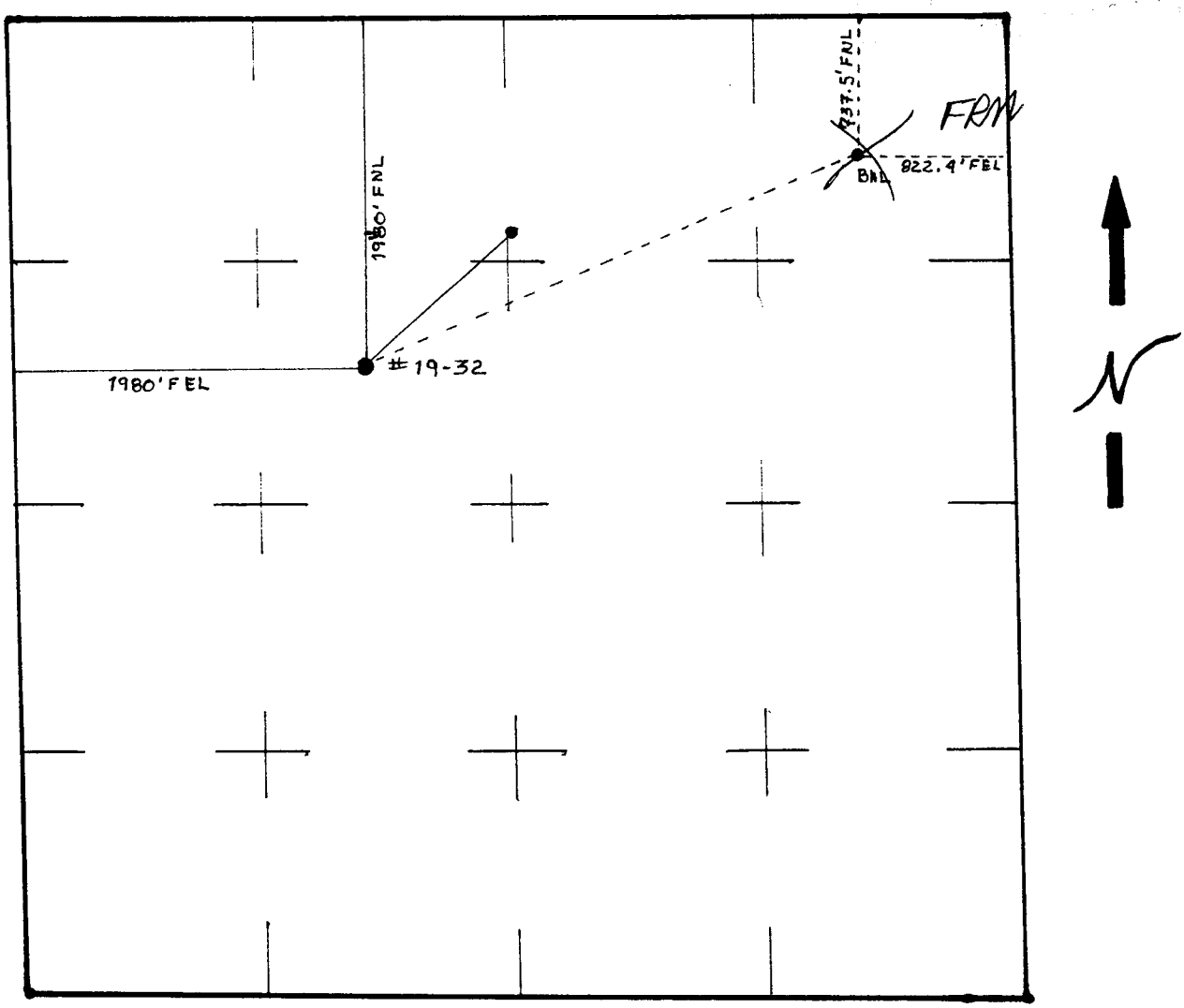
Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

* See Instruction on Reverse Side

43-037-15745

MOBIL EXPLORATION & PRODUCING U.S. INC.
as Agent for MEPNA & Mobil Oil Corp.

MAY 11 1995



RATHERFORD UNIT #19-32
SEC. 19, T41s, R24E
San Juan County, Utah

BHL - 822.4 FEL, 737.5' FNL

Scale 1" = 1,000'

BECFIELD SURVEY CALCULATION PROGRAM

OPERATOR: Mobil Exploration and Production
WELL: Ratherford Unit No. 19-32
JOB NO: 253059
FIELD: Greater Aneth
LOCATION: San Juan County, Utah

START: 04/07/95
FINISH: 04/13/95
COORDINATOR
W.E. Sheridan
Ken Meddux

Survey No. 0 is a tie-in to a
SCIENTIFIC DRILLING INTERNATIONAL
FINDER gyro survey run on 4/7/95

EAST DECLINATION: 12.3

PROPOSED DIRECTION: 310.00

MINIMUM CURVATURE CALCULATIONS (SPE-3362)

NO.	MD	INC.	TRUE AZIMUTH	TVD	N-S	E-W	SECT.	DLS/ 100
0	5,537	0.24	170.58	5,536.17	32.21	-69.61	74.0	0.14
1	5,546	0.8	305.3	5,545.2	32.2	-69.7	74.1	10.93
2	5,548	1.6	299.8	5,547.2	32.2	-69.7	74.1	40.37
3	5,550	2.8	296.1	5,549.2	32.3	-69.8	74.2	60.39
4	5,552	4.3	294.5	5,551.2	32.3	-69.9	74.3	75.16
5	5,554	6.3	294.1	5,553.2	32.4	-70.0	74.5	100.02
6	5,556	8.6	293.4	5,555.1	32.5	-70.3	74.7	115.09
7	5,558	11.2	293.8	5,557.1	32.7	-70.6	75.1	130.04
8	5,560	14.0	294.2	5,559.1	32.8	-71.0	75.5	140.07
9	5,562	17.1	294.5	5,561.0	33.1	-71.5	76.0	155.05
10	5,564	20.4	294.5	5,562.9	33.3	-72.1	76.6	165.00
11	5,566	23.5	294.5	5,564.7	33.6	-72.7	77.3	155.00
12	5,568	26.5	294.5	5,566.5	34.0	-73.5	78.2	150.00
13	5,570	29.4	294.5	5,568.3	34.4	-74.4	79.1	145.00
14	5,572	32.2	294.5	5,570.0	34.8	-75.3	80.0	140.00
15	5,574	34.5	294.5	5,571.7	35.3	-76.3	81.1	115.00
16	5,576	37.0	294.5	5,573.3	35.7	-77.4	82.2	125.00
17	5,578	39.1	294.9	5,574.9	36.3	-78.5	83.4	105.72
18	5,580	41.1	295.8	5,576.4	36.8	-79.6	84.7	104.11
19	5,582	44.0	296.5	5,577.9	37.4	-80.9	86.0	146.92
20	5,584	46.0	296.8	5,579.3	38.0	-82.1	87.4	100.56
21	5,586	48.5	297.2	5,580.7	38.7	-83.4	88.8	125.86
22	5,588	50.5	297.2	5,582.0	39.4	-84.8	90.3	100.00
23	5,590	53.0	297.2	5,583.2	40.1	-86.2	91.8	125.00
24	5,592	55.2	297.1	5,584.4	40.9	-87.6	93.4	110.07
25	5,594	57.4	296.9	5,585.5	41.6	-89.1	95.0	110.31
26	5,596	59.7	296.7	5,586.5	42.4	-90.6	96.7	115.32
27	5,604	69.6	294.3	5,590.0	45.5	-97.1	103.7	126.67
28	5,620	87.5	292.9	5,593.1	51.7	-111.5	118.6	112.20
29	5,630	93.3	293.4	5,593.1	55.7	-120.7	128.2	58.21
30	5,640	96.0	294.5	5,592.2	59.7	-129.8	137.8	29.14
31	5,650	97.2	295.6	5,591.1	63.9	-138.8	147.4	16.23
32	5,660	97.0	296.5	5,589.9	68.3	-147.7	157.0	9.15
33	5,670	95.6	298.1	5,588.8	72.8	-156.5	166.7	21.19
34	5,680	96.2	299.2	5,587.7	77.6	-165.2	176.5	12.48

BECFIELD SURVEY CALCULATION PROGRAM

OPERATOR:	Mobil Exploration and Production	START:	04/07/95
WELL:	Ratherford Unit No. 19-32	FINISH:	04/13/95
JOB NO:	253059	COORDINATOR	
FIELD:	Greater Aneth	W.E. Sheridan	
LOCATION:	San Juan County, Utah	Ken Maddux	

Survey No. 0 is a tie-in to a
SCIENTIFIC DRILLING INTERNATIONAL
FINDER gyro survey run on 4/7/95.

EAST DECLINATION: 12.3

PROPOSED DIRECTION: 310.00

MINIMUM CURVATURE CALCULATIONS (SPE-3362)

NO.	MD	INC	TRUE AZIMUTH	TVD	N-S	E-W	SECT.	DLS/ 100
35	5,690	98.0	300.0	5,586.5	82.5	-173.9	186.2	19.67
36	5,700	98.6	300.3	5,585.1	87.5	-182.4	196.0	6.69
37	5,710	98.6	300.5	5,583.6	92.5	-190.9	205.7	1.98
38	5,720	97.8	301.4	5,582.1	97.6	-199.4	215.5	11.97
39	5,730	95.0	303.9	5,581.0	102.9	-207.8	225.3	37.43
40	5,740	94.7	304.5	5,580.2	108.5	-216.0	235.3	6.69
41	5,750	94.2	304.9	5,579.4	114.2	-224.2	245.2	6.40
42	5,760	94.1	304.5	5,578.7	119.9	-232.4	255.1	4.11
43	5,770	95.0	303.8	5,577.9	125.5	-240.7	265.0	11.39
44	5,780	94.1	303.3	5,577.1	131.0	-249.0	274.9	10.29
45	5,790	90.9	303.2	5,576.6	136.5	-257.4	284.9	32.02
46	5,800	87.1	302.9	5,576.8	141.9	-265.7	294.8	38.12
47	5,810	85.4	303.3	5,577.5	147.4	-274.1	304.7	17.46
48	5,820	85.9	304.2	5,578.2	152.9	-282.4	314.6	10.27
49	5,830	88.2	306.4	5,578.7	158.7	-290.5	324.5	31.81
50	5,840	89.7	307.3	5,578.9	164.7	-298.5	334.5	17.49
51	5,850	90.0	307.6	5,579.0	170.7	-306.5	344.5	4.24
52	5,860	89.0	307.9	5,579.0	176.9	-314.4	354.5	10.44
53	5,870	87.6	308.3	5,579.3	183.0	-322.2	364.5	14.56
54	5,880	87.1	308.8	5,579.8	189.3	-330.1	374.5	7.07
55	5,890	88.3	310.1	5,580.2	195.6	-337.8	384.5	17.68
56	5,900	89.9	311.3	5,580.4	202.1	-345.3	394.5	20.00
57	5,910	91.2	313.1	5,580.3	208.8	-352.8	404.5	22.20
58	5,920	92.4	315.8	5,580.0	215.8	-359.9	414.4	29.53
59	5,930	92.2	316.9	5,579.6	223.1	-366.8	424.4	11.17
60	5,940	92.3	317.8	5,579.2	230.4	-373.6	434.3	9.05
61	5,950	94.6	318.9	5,578.6	237.9	-380.2	444.1	25.49
62	5,960	98.7	320.9	5,577.4	245.5	-386.6	453.9	45.56
63	5,970	99.0	321.0	5,575.9	253.1	-392.8	463.6	3.16
64	5,980	98.6	322.0	5,574.3	260.9	-399.0	473.3	10.86
65	5,990	98.3	321.5	5,572.9	268.6	-405.1	483.0	5.78
66	6,000	98.2	321.0	5,571.4	276.4	-411.3	492.7	5.05
67	6,010	98.9	320.9	5,569.9	284.0	-417.5	502.4	7.07
68	6,020	98.6	321.1	5,568.4	291.7	-423.7	512.1	3.59
69	6,030	97.7	321.7	5,567.0	299.5	-429.9	521.8	10.78

BECFIELD SURVEY CALCULATION PROGRAM

OPERATOR: Mobil Exploration and Production
WELL: Ratherford Unit No. 19-32
JOB NO: 253059
FIELD: Greater Aneth
LOCATION: San Juan County, Utah

START: 04/07/95
FINISH: 04/13/95
COORDINATOR
W.E. Sheridan
Ken Maddux

Survey No. 0 is a tie-in to a
SCIENTIFIC DRILLING INTERNATIONAL
FINDER gyro survey run on 4/7/95.

EAST
DECLINATION: 12.3

PROPOSED
DIRECTION: 310.00

MINIMUM CURVATURE CALCULATIONS (SPE-3362)

NO	MD	INC	TRUE AZIMUTH	TVD	N-S	E-W	SECT.	DLS/ 100
70	6,040	97.6	321.7	5,565.7	307.2	-436.1	531.5	1.00
71	6,050	98.3	322.0	5,564.3	315.0	-442.2	541.2	7.60
72	6,060	98.1	322.2	5,562.9	322.8	-448.2	550.9	2.81
73	6,070	97.2	322.4	5,561.5	330.7	-454.3	560.6	9.22
74	6,080	97.7	322.4	5,560.2	338.5	-460.4	570.3	5.00
75	6,090	99.0	322.4	5,558.8	346.4	-466.4	579.9	13.00
76	6,100	99.0	322.1	5,557.2	354.2	-472.4	589.6	2.98
77	6,110	99.3	321.8	5,555.6	362.0	-478.5	599.2	4.22
78	6,120	98.8	320.7	5,554.1	369.7	-484.7	608.9	11.96
79	6,130	98.5	319.8	5,552.5	377.3	-491.0	618.7	9.39
80	6,140	98.4	317.4	5,551.1	384.7	-497.6	628.4	23.76
81	6,150	98.3	316.5	5,549.6	391.9	-504.3	638.3	8.96
82	6,160	97.5	316.0	5,548.3	399.1	-511.2	648.1	9.41
83	6,170	97.4	314.7	5,547.0	406.1	-518.1	658.0	12.93
84	6,180	97.6	312.8	5,545.7	413.0	-525.3	667.9	18.94
85	6,190	96.7	311.2	5,544.4	419.6	-532.7	677.8	18.25
86	6,200	92.6	309.2	5,543.6	426.0	-540.3	687.7	45.59
87	6,210	89.0	307.3	5,543.5	432.2	-548.1	697.7	40.70
88	6,220	86.5	306.1	5,543.8	438.2	-556.2	707.7	27.73
89	6,230	85.4	305.8	5,544.6	444.1	-564.2	717.7	11.40
90	6,240	85.1	306.2	5,545.4	449.9	-572.3	727.6	4.99
91	6,250	85.0	307.3	5,546.2	455.9	-580.3	737.5	11.00
92	6,260	83.9	308.9	5,547.2	462.0	-588.1	747.5	19.35
93	6,270	83.3	310.4	5,548.3	468.4	-595.8	757.4	16.07
94	6,280	82.9	311.2	5,549.5	474.8	-603.3	767.4	8.89
95	6,290	84.0	312.4	5,550.7	481.5	-610.7	777.3	16.22
96	6,300	86.9	315.9	5,551.5	488.4	-617.8	787.2	45.37
97	6,310	89.4	315.4	5,551.8	495.6	-624.8	797.2	25.49
98	6,320	91.8	316.7	5,551.7	502.8	-631.8	807.1	27.29
99	6,330	92.2	316.9	5,551.3	510.0	-638.6	817.0	4.47
100	6,340	91.3	317.7	5,551.0	517.4	-645.4	827.0	12.04
101	6,350	91.7	318.5	5,550.8	524.8	-652.0	836.8	8.94
102	6,360	93.4	319.6	5,550.3	532.4	-658.6	846.7	20.24
103	6,370	94.4	320.1	5,549.6	540.0	-665.0	856.5	11.18
104	6,380	93.9	320.3	5,548.9	547.7	-671.4	866.4	5.38

BECFIELD SURVEY CALCULATION PROGRAM

OPERATOR: Mobil Exploration and Production
WELL: Ratherford Unit No. 19-32
JOB NO. 253059
FIELD: Greater Aneth
LOCATION: San Juan County, Utah

START: 04/07/95
FINISH: 04/13/95
COORDINATOR
W.E. Sheridan
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Survey No. 0 is a tie-in to a
SCIENTIFIC DRILLING INTERNATIONAL
FINDER gyro survey run on 4/7/95.

EAST
DECLINATION: 12.3

PROPOSED
DIRECTION: 310.00

MINIMUM CURVATURE CALCULATIONS (SPE-3362)

NO.	MD	INC.	TRUE AZIMUTH	TVD	N-S	E-W	SECT.	DLS/ 100
105	6,390	93.3	320.2	5,548.3	555.3	-677.8	876.2	6.08
106	6,400	93.7	321.0	5,547.7	563.0	-684.1	886.0	8.93
107	6,410	94.9	320.4	5,546.9	570.8	-690.4	895.8	13.41
108	6,420	95.4	321.0	5,546.0	578.5	-696.8	905.6	7.79
109	6,430	95.3	321.3	5,545.1	586.2	-703.0	915.3	3.15
110	6,440	94.5	321.5	5,544.2	594.0	-709.2	925.1	8.24
111	6,450	94.1	321.8	5,543.5	601.8	-715.4	934.9	4.99
112	6,460	93.9	322.2	5,542.8	609.7	-721.5	944.6	4.46
113	6,470	93.3	322.8	5,542.2	617.6	-727.6	954.4	8.48
114	6,480	93.1	323.3	5,541.6	625.6	-733.6	964.1	5.38
115	6,490	93.3	323.6	5,541.1	633.6	-739.6	973.8	3.60
116	6,500	93.4	323.6	5,540.5	641.6	-745.5	983.5	1.00
117	6,510	93.0	323.2	5,539.9	649.7	-751.4	993.2	5.65
118	6,520	92.1	322.4	5,539.5	657.6	-757.5	1003.0	12.04
119	6,530	90.5	321.5	5,539.2	665.5	-763.6	1012.8	18.36
120	6,540	89.7	320.7	5,539.2	673.3	-769.9	1022.6	11.31
121	6,550	89.8	320.6	5,539.3	681.0	-776.3	1032.4	1.41
122	6,560	90.8	320.8	5,539.2	688.7	-782.6	1042.2	10.20
123	6,570	92.0	321.0	5,539.0	696.5	-788.9	1052.0	12.17
124	6,580	92.5	321.1	5,538.6	704.3	-795.2	1061.8	5.10
125	6,590	93.0	321.2	5,538.1	712.1	-801.4	1071.6	5.10
126	6,623	92.0	320.0	5,536.7	737.5	-822.4	1104.0	4.73

Survey No.'s 1- 125 BY TENSOR STEERING TOOL
Survey No. 126 is a projection to TD.
Bottom Hole Location (from Surface Location)
Horizontal Displacement = 1104.6 feet
Displacement Bearing = North 48.1° West (TRUE)
Displacement Azimuth = 311.9° (TRUE)

FORM 10

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING
355 West North Temple, 3 Triad, Suite 350, Salt Lake City, UT 84180-1203

MONTHLY OIL AND GAS PRODUCTION REPORT

OPERATOR NAME AND ADDRESS:

C/O MOBIL OIL CORP
M E P N A
PO DRAWER G
CORTEZ CO 81321

UTAH ACCOUNT NUMBER: N7370

REPORT PERIOD (MONTH/YEAR): 6 / 95

AMENDED REPORT ☐ **(Highlight Changes)**

Well Name API Number	Entity	Location	Producing Zone	Well Status	Days Oper	Production Volumes OIL(BBL)	GAS(MCF)	WATER(BBL)
#18-13 4303715734	06280	41S 24E 18	PRDX					
#19-12 4303715739	06280	41S 24E 19	PRDX					
#19-14 4303715740	06280	41S 24E 19	DSCR					
RATHERFORD UNIT 19-32 (RE-ENTRY) 4303715743	06280	41S 24E 19	DSCR					
RATHERFORD UNIT 19-34 (RE-ENTRY) 4303715744	06280	41S 24E 19	DSCR					
RATHERFORD 20-12 (RE-ENTRY) 4303715746	06280	41S 24E 20	DSCR					
THERFORD UNIT 20-14 (RE-ENTRY) 4303715747	06280	41S 24E 20	DSCR					
RATHERFORD UNIT 20-32 (RE-ENTRY) 4303715749	06280	41S 24E 20	DSCR					
RATHERFORD 20-34 (RE-ENTRY) 4303715750	06280	41S 24E 20	DSCR					
#21-12 4303715752	06280	41S 24E 21	DSCR					
RATHERFORD UNIT 21-14 (RE-ENTRY) 4303715753	06280	41S 24E 21	DSCR					
#21-32 4303715755	06280	41S 24E 21	DSCR					
#21-34 4303715756	06280	41S 24E 21	DSCR					
					TOTALS			

OMMENTS:

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

me and Signature: Telephone Number:

2/93)

Division of Oil, Gas and Mining
OPERATOR CHANGE WORKSHEET

Routing:
1- LEC 7-PL
2- LWP 8-SJ
3- DTS 9-FILE
4- VLC
5- RJF
6- LWP

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 XXX Operator Name Change Only

The operator of the well(s) listed below has changed (EFFECTIVE DATE: 8-2-95)

TO (new operator) MOBIL EXPLOR & PROD
(address) C/O MOBIL OIL CORP
PO DRAWER G
CORTEZ CO 81321
phone (303) 564-5212
account no. N7370

FROM (former operator) M E P N A
(address) C/O MOBIL OIL CORP
PO DRAWER G
CORTEZ CO 81321
phone (303) 564-5212
account no. N7370

Well(s) (attach additional page if needed):

Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
** SEE ATTACHED **	037-15743					

OPERATOR CHANGE DOCUMENTATION

N/A 1. (Rule R615-8-10) Sundry or other legal documentation has been received from former operator (Attach to this form).

N/A 2. (Rule R615-8-10) Sundry or other legal documentation has been received from new operator (Attach to this form).

N/A 3. The Department of Commerce has been contacted if the new operator above is not currently operating any wells in Utah. Is company registered with the state? (yes/no) _____ If yes, show company file number: _____.

N/A 4. **(For Indian and Federal Wells ONLY)** The BLM has been contacted regarding this change (attach Telephone Documentation Form to this report). Make note of BLM status in comments section of this form. Management review of **Federal and Indian** well operator changes should take place prior to completion of steps 5 through 9 below.

Lec 5. Changes have been entered in the Oil and Gas Information System (Wang/IBM) for each well listed above. (8-3-95)

LWP 6. Cardex file has been updated for each well listed above. 8-31-95

LWP 7. Well file labels have been updated for each well listed above. 9-28-95

Lec 8. Changes have been included on the monthly "Operator, Address, and Account Changes" memo for distribution to State Lands and the Tax Commission. (8-3-95)

Lec 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.

– OVER –

OPERATOR CHANGE WORKSHEET (CONTINUED) Initial each item when completed. Write N/A if item is not applicable.

ENTITY REVIEW

Lec 1. (Rule R615-8-7) 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).

N/A 2. State Lands and the Tax Commission have been notified through normal procedures of entity changes.

BOND VERIFICATION (Fee wells only) * No Fee Lease Wells at this time!

N/A/Lec 1. (Rule R615-3-1) 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 operators' bond files.

___ 3. The former operator has requested a release of liability from their bond (yes/no) ___. Today's date _____ 19___. If yes, division response was made by letter dated _____ 19___.

LEASE INTEREST OWNER NOTIFICATION RESPONSIBILITY

N/A 1. (Rule R615-2-10) The former operator/lessee of any **fee lease** well listed above has been notified by letter dated _____ 19___, of their responsibility to notify any person with an interest in such lease of the change of operator. Documentation of such notification has been requested.

VTS 8/5/95

N/A 2. Copies of documents have been sent to State Lands for changes involving **State leases**.

FILMING

✓ 1. All attachments to this form have been microfilmed. Date: October 6 19 95.

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 have been filed in the Operator Change file.

COMMENTS

950803 UIC F5/Not necessary!

WE71/34-35

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
OCT 31 1995
DIV. OF OIL, GAS & MINING

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 reentry to a different reservoir.
Use "APPLICATION FOR PERMIT - " for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.
14-20-603-353

6. If Indian, Allottee or Tribe Name
NAVAJO TRIBAL

7. If Unit or CA, Agreement Designation
RATHERFORD UNIT

1. Type of Well
[ ] Oil Well [ ] Gas Well [X] Other INJECTOR

8. Well Name and No.
19-32

2. Name of Operator Mobil Exploration & Producing U.S. Inc.
as Agent for Mobil Producing TX & NM Inc.

9. API Well No.
43-037-15743

3. Address and Telephone No.
P.O. Box 633, Midland, TX 79702 915-688-2585

10. Field and Pool, or exploratory Area
GREATER ANETH

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SEC.19, T41S, R24E
1980' FNL, 1980' FEL
BHL 738' N, 822' W FROM SURF LOCATION

11. County or Parish, State
SAN JUAN UT

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

TYPE OF SUBMISSION	TYPE OF ACTION	
[ ] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[X] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other COMMENCED INJECTION	[ ] Dispose Water

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

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.)*

COMMENCED INJECTION ON 10-25-95

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

Signed Shirley Robertson Title ENV. & REG. TECHNICIAN Date 10-26-95

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____

Conditions 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 statements or representations as to any matter within its jurisdiction.

* See Instruction on Reverse Side

Form 3160-5
(June 1990)

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 reentry to a different reservoir.
Use "APPLICATION FOR PERMIT - " for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: 14-20-603-353
6. If Indian, Allottee or Tribe Name: NAVAJO TRIBAL
7. If Unit or CA, Agreement Designation: RATHERFORD UNIT
8. Well Name and No.: RATHERFORD 19-W-32
9. API Well No.: 43-037-15743
10. Field and Pool, or exploratory Area: GREATER ANETH
11. County or Parish, State: SAN JUAN UT

1. Type of Well: [ ] Oil Well [ ] Gas Well [X] Other
2. Name of Operator: MOBIL PRODUCING TX & NM INC.*
*MOBIL EXPLORATION & PRODUCING US INC. AS AGENT FOR MPTM
3. Address and Telephone No.: P.O. Box 633, Midland TX 79702 (915) 688-2585
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SEC. 19, T41S, R24E
(SW/NE)1980' FNL & 1980' FEL
BHL: LATERAL #1 738' FNL & 822' FWL

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

TYPE OF SUBMISSION	TYPE OF ACTION	
[X] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
	[ ] Recompletion	[ ] New Construction
[ ] Subsequent Report	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
[ ] Final Abandonment Notice	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other INJECTOR/SIDETRACK	[ ] Dispose Water (Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)*

BHL:

LATERAL #2; 1189' SOUTH & 1071' EAST FROM SURFACE SPOT (ZONE 1a).

SEE ATTACHED PROCEDURE.

COPY SENT TO OPERATOR
Date: 9.9.98
Initials: KDR

Federal Approval of this Action is Necessary

Approved by the
Utah Division of
Oil, Gas and Mining
Date: 9/9/98
By:

RECEIVED
AUG 19 1998
DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct
Signed: Joe Moseley for Title: SHIRLEY HOUCHINS/ENV & REG TECH Date: 8-17-98

(This space for Federal or State office use)
Approved by _____ Title _____ Date _____
Conditions of approval, if any:

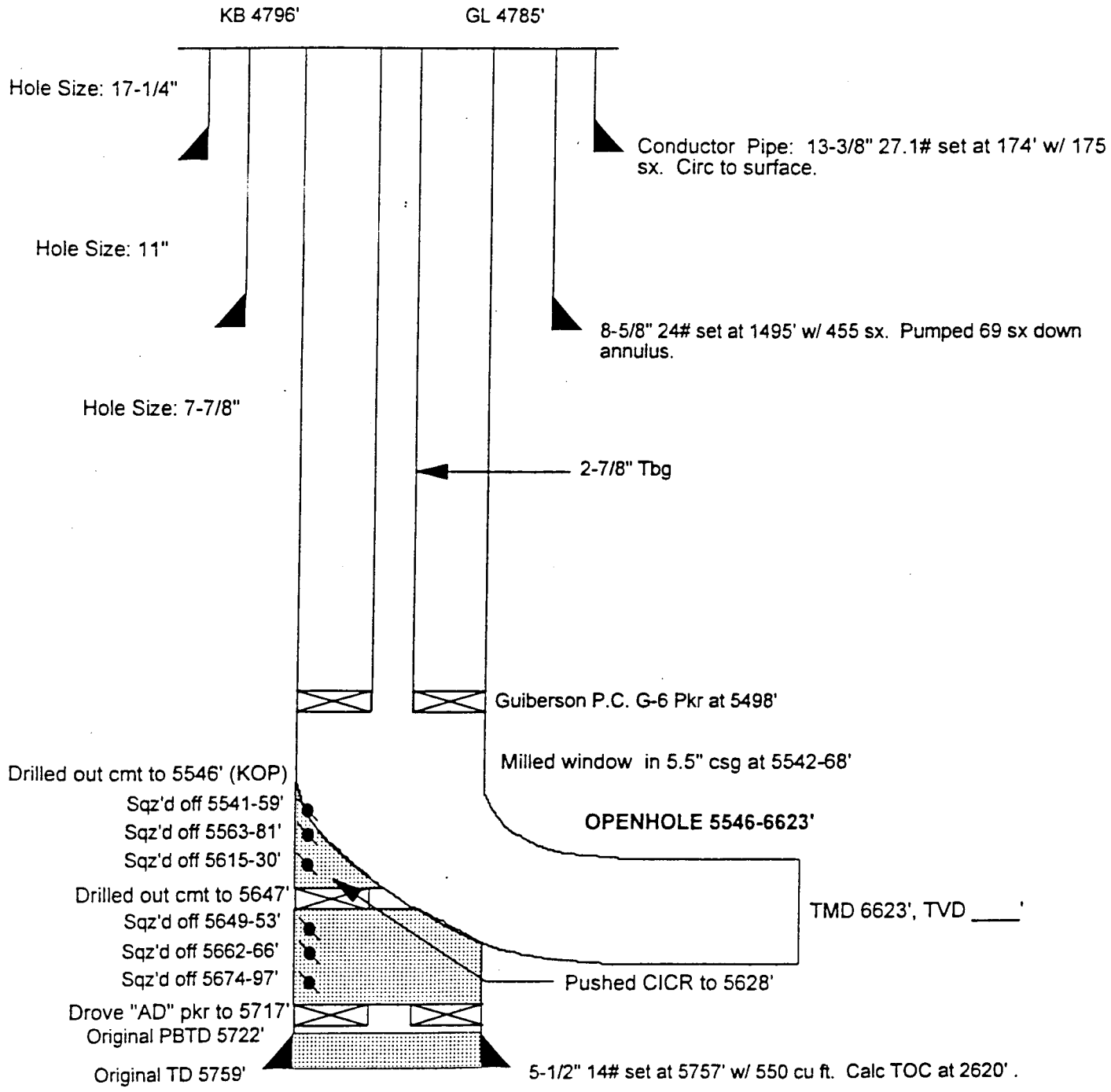
Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

* See Instruction on Reverse Side

RATHERFORD UNIT # 19-32

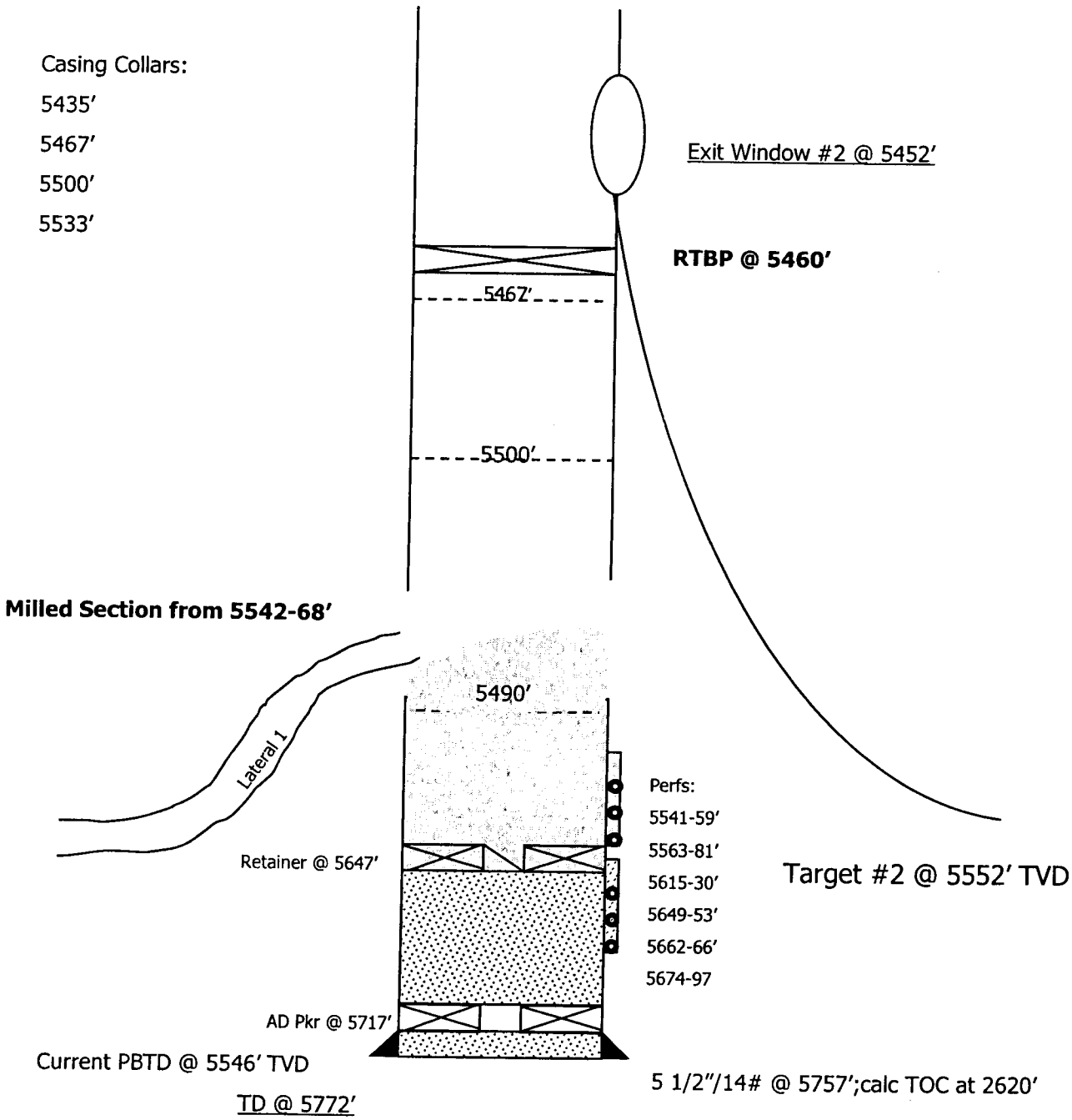
INJECTOR

GREATER ANETH FIELD
Surface Location: 1980' FNL, 1980' FEL
BH Location: 738' FNL, 822' FWL Sec 19.
SEC 19-T41S-R24E
SAN JUAN COUNTY, UTAH
API 43-037-15743
PRISM 0043083



L. A. TUCKER 5-13-96 R.U. # 19-32

Ratherford Unit #19-32



Window	Btm-Top of Window	Ext length	Curve Radius	Bearing	Horiz Displ
2	5452-44	-----	100	138	1600

Ratherford Unit Well #19-32
Horizontal Drilling Procedure

The objective of this procedure is to prepare this wellbore for sidetracking, sidetrack the subject well and drill an additional short radius horizontal lateral (1600 feet).

1. Prepare location and dig working pit.

2. MIRU WSU, reverse unit, and H2S equipment. Bullhead kill weight fluid down tubing.

3. ND wellhead and NU BOP's. Pressure test BOP's to working pressure.

4. Continue to POH with related equipment (tubing and rods for producers or tubing and packer for injectors).

5. RU wireline to run any logs desired and run gage ring for casing size and weight.

6. Set retrievable bridge plug and pressure test casing to 1000 psi.

7. RDMO WSU.

8. MIRU 24 hr. WSU. NU BOP's and pressure test with chart.

9. PU tubing, drilling collars, and drill pipe in derrick and run in hole. Then POH and stand back.

10. PU drillpipe with UBHO sub and whipstock and starter mill

11. Run gyro and obtain orientation of whipstock face. Set whipstock. POH w/gyro.

12. Shear pilot mill bolt and start milling window.

13. POH w/ starter mill and pick up window mill and watermelon mill and continue to mill window. Drill 1-2 ft of formation

14. POH w/ mills and PU curve building assembly and drill string with UBHO sub in string and RIH.

15. RU gyro to assist in time drilling and starting out of the casing window. POH w/ gyro when inclination dictates it must be pulled.

16. Finish drilling the curve using the MWD.

17. POH once curve is finished and PU lateral motor to drill the lateral using MWD.

18. Once lateral TD is reached, POH w/ directional equipment.

19. PU RTBP and set at 5400' RDMO.

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 08/17/98

API NO. ASSIGNED: 43-037-15743

WELL NAME: RATHERFORD 19-W-32 MULTI-LEG
OPERATOR: MOBIL EXPL & PROD (N7370)
CONTACT: SHIRLEY HOUCHINS 915-688-2585

PROPOSED LOCATION:
SWNE 19 - T41S - R24E
SURFACE: 1980-FNL-1980-FEL
BOTTOM: 2080-FSL-0760-FEL
SAN JUAN COUNTY
GREATER ANETH FIELD (365)

LEASE TYPE: IND
LEASE NUMBER: 14-20-603-353
SURFACE OWNER: NAVAJO NATION

PROPOSED FORMATION: DSCR

INSPECT LOCATION BY: / /		
TECH REVIEW	Initials	Date
Engineering		
Geology		
Surface		

RECEIVED AND/OR REVIEWED:

✓ Plat
✓ Bond: Federal [✓] State [] Fee []
(No. ALREADY IN PLACE)
N Potash (Y/N)
N Oil Shale (Y/N) *190-5(B)
✓ Water Permit
(No. NAVAJO ALLOCATION)
N RDCC Review (Y/N)
(Date: _____)

NA St/Fee Surf Agreement (Y/N)

LOCATION AND SITING:

✓ R649-2-3. Unit RATHERFORD UNIT

___ R649-3-2. General

___ R649-3-3. Exception

___ Drilling Unit
Board Cause No: _____
Date: _____

COMMENTS: _____

STIPULATIONS: _____

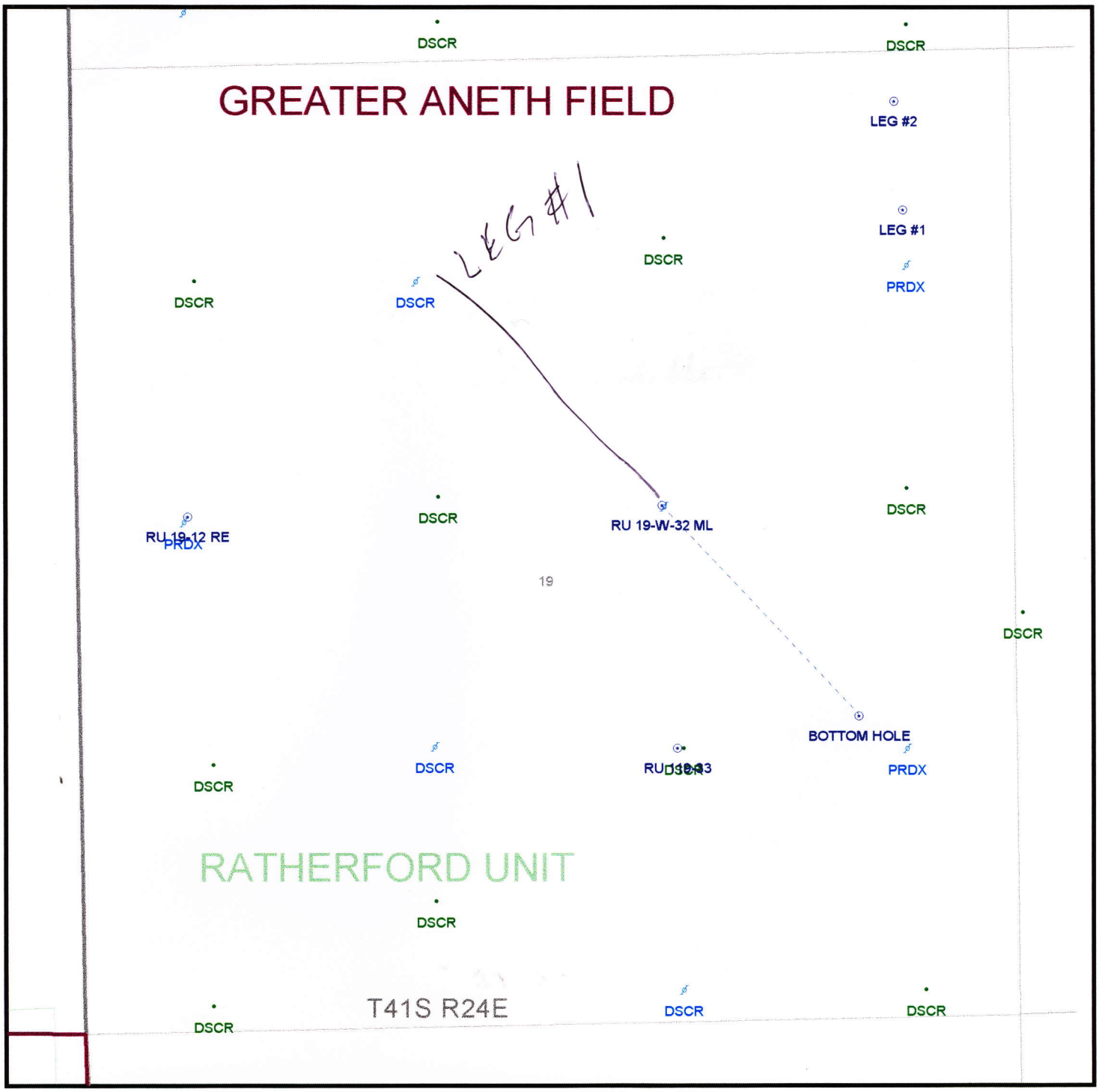
DIVISION OF OIL, GAS & MINING

OPERATOR: MOBLI EXPL & PROD (N7370)

FIELD: GREATER ANETH (365)

SEC. 19, TWP 41S, RNG 24E

COUNTY: SAN JUAN R649-3-2 RATHERFORD UNIT



DATE PREPARED:
26-AUG-1998

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Company: MOBIL E & P

Well Name: RATHERFORD UNIT 19-32 (RE-ENTRY)

Api No. 43-037-15743 Lease Type: INDIAN

Section 19 Township 41S Range 24E County SAN JUAN

Drilling Contractor BIG "A" RIG# 25

SPUDDED:

Date 9/22/98

Time

How ROTARY

Drilling will commence

Reported by SIMON

Telephone #

Date: 9/24/98 Signed: JLT

Pason

ROCKY MOUNTAIN GEO-ENGINEERING

Electronic Rig Monitoring Systems • Well Logging • Consulting Geology • Coal Bed Methane Services

PASON ROCKY MOUNTAIN GEO-ENGINEERING CORP.

2450 INDUSTRIAL BLVD. • GRAND JUNCTION, CO 81505

(970) 243-3044 • (FAX) 241-1085

RECEIVED
NOV 03 1998
DIV. OF OIL, GAS & MINING

Friday, October 30, 1998

Division of Oil & Gas Mining
State of Utah
1594 West North Temple
3 Triad Center, Ste. 1210
Salt Lake City, UT 84116

Re: Ratherford Unit #19-32 Leg 2
Sec. 20, T41S, R24E
San Juan County, Utah

43-037-15743

Dear Sirs:

Enclosed is the final computer colored log and geology report for the above referenced well.

We appreciate the opportunity to be of service to you and look forward to working with you again in the near future.

If you have any questions regarding the enclosed data, please contact us.

Sincerely,

Bill Nagel

Bill Nagel
Senior Geologist

BN/dn

Enc. 1 Final Computer Colored Log and Geology Report For Each Leg

cc Letter Only; Dana Larson; Mobil E & P U.S., Inc.; Midland, TX

RECEIVED
NOV 03 1998
DIV. OF OIL, GAS & MINING

MOBIL

RATHERFORD UNIT #19-32
SE HORIZONTAL LATERAL LEG #2
UPPER 1-A POROSITY BENCH
DESERT CREEK MEMBER
PARADOX FORMATION
SECTION 19, T41S, R24E
SAN JUAN, UTAH

GEOLOGY REPORT
prepared by

LUKE TITUS
PASON/ROCKY MOUNTAIN GEO-ENGINEERING CORP.
GRAND JUNCTION, COLORADO
(970) 243-3044

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WELL SUMMARY

OPERATOR:	MOBIL EXPLORATION & PRODUCTION U.S. INC.
NAME:	RATHERFORD UNIT #19-32 SE HORIZONTAL LATERAL LEG #2 IN 1-A UPPER POROSITY BENCH, DESERT CREEK
LOCATION:	SECTION 19, T41S, R24E
COUNTY/STATE:	SAN JUAN, UTAH
ELEVATION:	KB:4796' GL:4785'
SPUD DATE:	9/24/98
COMPLETION DATE:	9/29/98
DRILLING ENGINEER:	BENNY BRIGGS / SIMON BARRERA
WELLSITE GEOLOGY:	MARVIN ROANHORSE/LUKE TIUS
MUDLOGGING ENGINEERS:	LUKE TITUS/MARVIN ROANHORSE
CONTRACTOR:	BIG "A" RIG 25
TOOLPUSHER:	J. DEES
HOLE SIZE:	4 ¾"
CASING RECORD:	SIDETRACK IN WINDOW AT 5443' MEASURED DEPTH
DRILLING MUD:	M-I
ENGINEER:	RON WESTENBERG / MIKE PITTSINGER
MUD TYPE:	FRESH WATER & BRINE WATER W/ POLYMER SWEEPS
DIRECTIONAL DRILLING CO:	SPERRY-SUN
ELECTICAL LOGGING:	NA
TOTAL DEPTH:	7172' MEASURED DEPTH; TRUE VERTICAL DEPTH-5553.5'
STATUS:	L.D. TOOLS-RIG DOWN-PREPARE TO MOVE RIG

DRILLING CHRONOLOGY
RATHERFORD UNIT #19-32
1-A SE HORIZONTAL LATERAL LEG #2

DATE	DEPTH	DAILY	ACTIVITY
9/23/98	7762'	TD	DRLG AHEAD & SURVEYING; TD NW LAT. LEG #2 @ 5:00 AM (MST);PMP SWP & CIRC OUT-L.D. 2 JNTS-TOOH TO WINDOW-PMP 20 BBLS BRINE-TOOH-L.D. LAT. ASSEM-P.U. SUPERHOOK-TIH;LATCH ONTO W/STOCK #2-TIH;PREPARE TO MOVE RIG
9/24/98	0'	0'	RIG-UP;PU & ORIENT W/STOCK-PU DC's & DP-TIH;RU & RUN GYRO-ORIENT TOOL FACE –SET DOWN 20' TO TBG.-MEASUREMENT UNABLE TO GET DEEPER-RIG DOWN GYRO DATA –TOOH W/ W/STOCK & LD;MU WINDOW MILL-TIH-SWIVEL UP-BREAK CIRC.-WASHOUT-TOOH-LD MILLS;PU MILLS & ORIENT-TIH W/MILLS
9/25/98	5443'	0' (MILLING)	RU GYRO DATA & RIH;ORIENT & POOH-SET & SHEAR W/STOCK @ 5436'-PU SWIVEL & BRK CIRC-TOOH;PU STRTR MILL-TIH-MILL F/5436' T/5438'-CIRC BTMS UP & HANG SWIVEL-TOOH-LD STRTR MILL;PU WATERMELON MILLS-TIH-BRK CIRC-MILL F/5436' T/5443'
9/26/98	5443'	25'	CIRC & PMP SWP-HANG SWIVEL-TOOH-LD WATERMELON MILLS;MU CRVE ASSEM.-TEST & ORIENT-TIH-SWIVEL UP & BRK CIRC & CLN PIPE;RU GYRO DATA-TIME GRLG F/5443' T/5446';DIR DRLG & WIRELINE SURVEYS T/5468'-PULL GYRO-RIG DOWN GYRO DATA
9/27/98	5468'	191'	POOH W/GYRO DATA-DIR DRLG & SURVEYING F/5468' T/5621'-PUMP & CIRC OUT SMPLS-LD CURVE ASSY-PU LATERAL ASSY,ORIENT, & TEST-CUT 70' DRLG LINE-RIG SERVICE-TIH W/LATERAL ASSY-SWIVEL UP & BREAK CIRC-DIR DRLG F/5621' T/5659'
9/28/98	5659'	1381'	DIR DRLG & SURVEYING F/5659' T/7040'
9/29/98	7040'	TD	DIR DRLG & SURVEYING F/7040 T/7172'-TOTAL DEPTH REACHED @2:00 AM (MST);PMP SWP & CIRC OUT SMPL-POOH TO WINSOW-LD. 28 JNTS-DISPLACE HOLE W/110 BBLS #10 BRINE-TOOH-L.D. CRV ASSEM;PREPARE TO RIG DOWN & MOVE RIG

DAILY ACTIVITY

Operator: MOBIL
Well Name: RATHERFORD UNIT #19-32 SE 1-A HORIZONTAL LATERAL LEG #2

DATE	DEPTH	DAILY	DATE	DEPTH	DAILY
9/23/98	7762'	TD- 20-66			
9/24/98	0'	0'			
9/25/98	0'	0'			
9/26/98	5443'	25'			
9/27/98	5468'	191'			
9/28/98	5659'	1381'			
9/29/98	7040'	TD			

BIT RECORD

OPERATOR: MOBIL
WELL NAME: RATHERFORD UNIT #19-32 SE 1-A HORIZONTAL LATERAL LEG #2

RUN	SIZE	MAKE	TYPE	IN/OUT	FTG	HRS	FT/HR
#1 (RR)	4 3/4"	STC	MF3P	5443'/ 5621'	178'	19	10
#2	4 3/4"	STC	MF3P	5621'/ 7172	1551'	26	60

MUD REPORT

OPERATOR: MOBIL
WELL NAME: RATHERFORD UNIT #19-32 SE 1-A HORIZONTAL LATERAL LEG #2

DATE	DEPTH	WT	VIS	PLS	YLD	GEL	PH	WL	CK	CHL	CA	SD	OIL	WTR
9/27/98	5540'	8.5	26	1	1	0/0	8.0	NC	NC	11k	400	0%	0%	100%
9/28/98	6030'	8.8	26	1	1	0/0	12.5	NC	NC	46k	560	0%	1%	99%
NONE														

SPERRY-SUN DRILLING SERVICES
SURVEY DATA

Customer ... : Mobil Utah
Platform ... : RATHERFORD UNIT
Slot/Well .. : BA25/19-32 2A1

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	TVD	NORTHINGS FEET	EASTINGS FEET	VERTICAL SECTION	DOG LEG
5400.00	0.13	249.95	5399.17	32.41 N	66.80 W	-68.78	0.00
5435.00	0.07	279.70	5434.17	32.40 N	66.86 W	-68.82	0.22
5443.00	4.90	138.00	5442.16	32.15 N	66.64 W	-68.48	61.94
5453.00	10.70	138.65	5452.06	31.13 N	65.74 W	-67.12	58.01
5463.00	16.60	138.84	5461.78	29.36 N	64.18 W	-64.76	59.00
5473.00	22.30	138.94	5471.20	26.85 N	61.99 W	-61.44	57.00
5483.00	28.10	139.00	5480.25	23.64 N	59.20 W	-57.18	58.00
5493.00	32.90	144.90	5488.86	19.64 N	56.09 W	-52.12	56.52
5503.00	35.80	141.20	5497.12	15.13 N	52.69 W	-46.51	35.72
5513.00	39.20	145.00	5505.05	10.26 N	49.05 W	-40.45	41.11
5523.00	42.80	144.60	5512.60	4.90 N	45.27 W	-33.93	36.10
5533.00	44.90	144.80	5519.81	0.75 S	41.26 W	-27.05	21.05
5543.00	49.40	148.80	5526.61	6.88 S	37.26 W	-19.81	53.70
5553.00	53.20	146.80	5532.86	13.49 S	33.10 W	-12.13	41.08
5563.00	57.90	143.60	5538.52	20.25 S	28.39 W	-3.95	53.89
5573.00	62.80	141.10	5543.46	27.12 S	23.08 W	4.71	53.60
5583.00	68.70	139.80	5547.57	34.15 S	17.27 W	13.82	60.18
5593.00	74.90	139.20	5550.69	41.37 S	11.11 W	23.31	62.26
5621.00	88.20	142.90	5554.80	62.87 S	6.25 E	50.90	49.26
5657.00	87.70	139.60	5556.09	90.92 S	28.77 E	86.81	9.27
5688.00	89.70	139.30	5556.79	114.47 S	48.91 E	117.79	6.52
5720.00	91.00	139.60	5556.59	138.78 S	69.72 E	149.78	4.17
5752.00	91.50	141.30	5555.90	163.45 S	90.09 E	181.75	5.54
5784.00	91.40	138.50	5555.09	187.92 S	110.69 E	213.71	8.75
5815.00	91.30	138.30	5554.35	211.09 S	131.26 E	244.70	0.72
5847.00	92.20	138.50	5553.38	235.01 S	152.50 E	276.69	2.88
5879.00	92.50	137.30	5552.07	258.73 S	173.94 E	308.66	3.86
5911.00	92.50	136.60	5550.67	282.09 S	195.76 E	340.63	2.19
5943.00	91.80	136.90	5549.47	305.39 S	217.67 E	372.59	2.38
5974.00	91.60	138.20	5548.55	328.25 S	238.58 E	403.58	4.24
6006.00	88.20	138.50	5548.61	352.16 S	259.85 E	435.57	10.67
6037.00	88.60	138.00	5549.47	375.27 S	280.48 E	466.56	2.07
6069.00	89.40	139.20	5550.03	399.27 S	301.64 E	498.55	4.51
6101.00	91.10	140.60	5549.89	423.75 S	322.25 E	530.53	6.88
6132.00	88.50	139.90	5550.00	447.58 S	342.07 E	561.51	8.69
6164.00	86.70	138.30	5551.34	471.75 S	363.00 E	593.47	7.52
6195.00	88.00	137.50	5552.77	494.72 S	383.76 E	624.44	4.92
6226.00	89.50	137.10	5553.45	517.50 S	404.78 E	655.43	5.01

SPERRY-SUN DRILLING SERVICES
SURVEY DATA

Customer ... : Mobil Utah
Platform ... : RATHERFORD UNIT
Slot/Well .. : BA25/19-32 2A1

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	TVD	NORTHINGS FEET	EASTINGS FEET	VERTICAL SECTION	DOG LEG
6258.00	88.30	135.90	5554.06	540.71 S	426.80 E	687.41	5.30
6289.00	90.00	135.40	5554.52	562.87 S	448.47 E	718.38	5.72
6321.00	91.30	135.90	5554.16	585.75 S	470.84 E	750.35	4.35
6353.00	90.40	135.20	5553.68	608.59 S	493.24 E	782.31	3.56
6385.00	89.40	136.10	5553.74	631.47 S	515.61 E	814.29	4.20
6416.00	91.40	135.40	5553.52	653.68 S	537.24 E	845.26	6.84
6448.00	91.50	135.90	5552.71	676.55 S	559.60 E	877.22	1.59
6480.00	90.10	137.60	5552.27	699.86 S	581.52 E	909.21	6.88
6512.00	89.10	137.30	5552.49	723.43 S	603.16 E	941.21	3.26
6544.00	88.70	137.30	5553.10	746.94 S	624.86 E	973.20	1.25
6576.00	88.70	136.80	5553.83	770.36 S	646.66 E	1005.19	1.56
6607.00	89.00	136.20	5554.45	792.84 S	667.99 E	1036.17	2.16
6639.00	90.30	136.10	5554.65	815.92 S	690.16 E	1068.15	4.07
6671.00	89.20	135.90	5554.79	838.93 S	712.39 E	1100.13	3.49
6703.00	88.20	135.70	5555.51	861.87 S	734.69 E	1132.10	3.19
6734.00	89.30	136.10	5556.19	884.13 S	756.26 E	1163.07	3.78
6766.00	88.30	137.10	5556.86	907.37 S	778.24 E	1195.05	4.42
6798.00	88.20	137.30	5557.84	930.84 S	799.97 E	1227.03	0.70
6830.00	89.40	138.00	5558.51	954.48 S	821.53 E	1259.03	4.34
6862.00	90.90	138.30	5558.42	978.32 S	842.87 E	1291.03	4.78
6894.00	91.70	138.70	5557.70	1002.28 S	864.07 E	1323.02	2.79
6925.00	92.50	139.40	5556.56	1025.68 S	884.38 E	1353.99	3.43
6956.00	92.20	138.70	5555.29	1049.07 S	904.68 E	1384.96	2.45
6988.00	90.30	137.80	5554.59	1072.94 S	925.98 E	1416.95	6.57
7020.00	89.30	137.60	5554.70	1096.60 S	947.51 E	1448.95	3.19
7052.00	90.40	138.00	5554.79	1120.31 S	969.01 E	1480.95	3.66
7083.00	90.60	139.40	5554.52	1143.60 S	989.47 E	1511.94	4.56
7115.00	90.70	140.30	5554.15	1168.05 S	1010.10 E	1543.92	2.83
7138.00	90.70	140.50	5553.87	1185.78 S	1024.76 E	1566.90	0.87
* 7172.00	90.70	140.50	5553.46	1212.01 S	1046.38 E	1600.87	0.00 *

THE DOGLEG SEVERITY IS IN DEGREES PER 100.00 FEET.
N/E COORDINATE VALUES GIVEN RELATIVE TO WELL SYSTEM REFERENCE POINT.
TVD COORDINATE VALUES GIVEN RELATIVE TO WELL HEAD.
THE VERTICAL SECTION ORIGIN IS WELL HEAD.
THE VERTICAL SECTION WAS COMPUTED ALONG 138.00 (TRUE).
CALCULATION METHOD: MINIMUM CURVATURE.

* 7172 EXTRAPOLATED TO BIT

SAMPLE DESCRIPTIONS

OPERATOR: MOBIL
WELL NAME: RATHERFORD UNIT #19-32 SE 1-A HORIZONTAL LATERAL LEG #2

DEPTH	LITHOLOGY
5443.00 5450.00	"LS tan-ltbrn,ltgybrn,occ crm-wh,crpxl-sl micxl,chky/tr prtgs,sl mrly-anhy,tt,v sl intxl POR,NFSOC,w/rr thn intbd DOL mgy-mgybrn,micxl,rthy-sl arg,sl lmy,grdg to dol SH,tt,NFSOC,rr scat SH,blk,sbblky,mfrm-brit,calc-dol,sl carb,mica ip & brn-dkbrn CHT frag"
5450.00 5460.00	"LS ltgybrn-ltgy-ltbrn,occ crm,AA,bcmg incr mrly,cln-dns ip,tt,NFSOC,w/intbd DOL dkbrngy-brn,shy-arg,sl lmy grdg to dol SH,tr SH AA & CHT frag AA"
5460.00 5470.00	"LS tan-ltbrn,ltgybrn-ltgy,occ crm-off wh,crpxl-micxl,v mrly-grdg to MRLST,occ cln-dns ip,tt,NFSOC,w/decr DOL AA,rthy-arg,sl lmy grdg to dol SH,rr SH AA & CHT frag AA"
5470.00 5480.00	"LS m-ltgybrn,occ dkgybrn,tan,ltgy,dkbrn,micxl-crpxl,rthy-slty-sl mot,arg,sl chk-anhy,tr CRIN,dol-occ grdg to lmy DOL,dns,tt,NFSOC w/thn SH,blk,plty,carb,sl calc-dol,pp mica,rr ltbrn CHT frag"
5480.00 5500.00	"LS crm-tn,rthy,mdns-dns mtx,sl slty-slty,sl dolo grdg to DOL LS/DOL-dkbn-bn,sl suc mtx-mdns mtx,occ sl dolo ip,ARG LS grdg to MARLY LS-crm,sft,rthy/arg,slty,chlky,sl anhy;pred rthy/compact xln/interxln fab POR,no CUT,no vis-pr blk o STN,dul yel-grn FLOR"
5500.00 5510.00	"LS,ltbn-tn-crm,mdns-sl slty-dns mtx,dolo to sl dolo,sl rthy/arg grdg to ARG LS to sft slty MRLY LS,tr dkbn-bn sl suc DOL,rr ltbn CHT frgs,NFSOC"
5510.00 5520.00	"DOL LS,ltgy-gy-ofwht-crm,mdns-slty-arg mtx,occ grn mtx,dolo rich to sl dol,tr dkbn-bn sl suc DOL,occ rthy-pred cln, occ MRLY LS,NFSOC"
5520.00 5530.00	"DOL LS,incr in grn mtx,slty-mdns, sl dol,pred compact to m-interxln fab POR,NFSOC,tr ANHY xls,v rr ltbn CHT frgs,chlky/anhy"
5530.00 5540.00	"LS,ltbn-tn-crm-ofwht,mic xln-vf xln,mdns-dns,sl dolo to occ dolo ip,tr DOL-dkbn-bn-microsuc,sl chlky/anhy,tr chlky mat,interxln fab POR,spty yel FLOR,no CUT,no o STN"
5540.00 5560.00	"SH,blk-dkbn-dkgybn,sft-mfrm,soty,rthy/arg,sl slty to slty,sl dolo,carbonacous,sl plty/sbblky,v sl fiss,rr pyr incl,rr LS-tn-crm,mdns-sl rthy/arg grdg to ARG LS ip,tr DOL-dkbn-bn,microsuc,v sl ool;pred rthy fab POR"
5560.00 5570.00	"SH grdg to LS,ltbn-tn-bn-crm,sl dol to grdg to DOL,tr foss frgs,poss intraclastic,sl plty,mdns-nds mtx,sl slty/microsuc mtx,SH AA,pred interxln fab POR,v-dul yel FLOR,no vis CUT,v pr bn mtx o STN"

DEPTH	LITHOLOGY

5570.00 5580.00 "LS intrbd w/SH,incr in mdns-dns, sl dol grdg to dkbn microsuc DOL,SH AA,sl chlky,rr ANHY xls,tr foss frgs,sl ool/pel,dul yel spty FLOR,no vis CUT,pr o STN,rr blk res"

5580.00 5600.00 "LS,ltbn-tn-bn-crm,mic-vf xln,mdns-dns mtx,rr DOL-dkbn,sl dol,poss intraclastic,rr dkbn-blk SH,sl ool,rr foss frgs,sl anhy,tr ofwht chlky mat,tr calc frac flgs,rr ltbn CHT fgs;pred interxln fab POR,spty dul yelgld FLOR,sl dif pr CUT,pr ltbn o STN"

5600.00 5615.00 "LS,ltbn-tn,mott,mic-vf xln,mdns-grn mtx,v sl microsuc mtx,pred ool rich oom/ooc GRNST,tr dns sl plty sl dolo sl ool PCKST,rr foss frgs,tr pel;pred mg-g oom/ooc fab POR w/intrxln fab POR ip,mf-dul-mbri yelgld FLOR,flushed-ltbn o STN"

5615.00 5621.00 "pr fst to mf-slo strmg dif CUT"

5621.00 5640.00 "bri/scat spty bri yel FLOR,mg ltbrn-fr brn STN,g fast stmg mlky CUT w/tr SH blk,plty,carb & dkbrn CHT cvgs"

5621.00 5640.00 "LS ltbrn,occ crm,tan,tr dkbrn,ltgy-gybrn,wh,vfxl-gran-sl micsuc,micxl-crpxl ip,pred ool-sl om GRNST,rr dns sl ool PKST/tr gran tex,chky-v sl anhy/tr POR fl-rr xln ANH,sl dol/rr DOL cmt strk,g ool-oom/tr intxl POR,g-mg even mod"

5640.00 5650.00 "LS ltbrn-brn,tr tan,dkbrn,crm,AA,pred ool-oom GRNST/rr PKST AA,sl chky-anhy/rr POR fl-xln ANHY,sl-occ v dol/tr DOL rich cmt-strk,POR AA,g even mod bri-bri yel FLOR,g-mg brn-ltbrn/tr dkbrn & blk dd o STN,CUT AA"

5650.00 5670.00 "LS AA,ool-oom/tr dns GRNST,tr scat-occ intbd dns sl ool PKST/occ gran tex,sl chky-anhy/tr POR fl-xln ANHY,sl dol/tr DOL cmt,g ool-oom/tr intxl POR,FLOR AA,g ltbrn-brn/tr dkbrn-blk dd o STN,CUT AA"

5670.00 5690.00 "LS AA,vfxl-micsuc-gran,occ micxl-crpxl,ool-oom GRNST,incr tr PKST AA,sl chky-anhy AA/rr plty prtgs,sl dol/rr DOL cmt,POR-FLOR-STN-CUT AA,w/tr SLTST ltgy-gy,mfrm-hd,sl calc,arg,occ grdg to vf gr SS,tr pp LS & xln ANHY incl,vrr tan-bf CHT frag"

5690.00 5720.00 "LS ltbrn-brn,occ tan,tr crm,dkbrn,vfxl-gran-micsuc,occ micxl-tr crpxl,ool-oom GRNST,tr intbd dns sl ool PKST/occ gran tex,sl chky-anhy/tr POR fl-rr xln ANHY,sl dol/tr DOL cmt,mg-g ool-sl oom-fr intxl POR,g even mod bri-bri yel FLOR,mg"

5690.00 5720.00 "-g ltbrn-brn/tr scat dkbrn & blk dd o STN,g fast stmg mlky CUT"

DEPTH	LITHOLOGY

5720.00 5740.00 "LS AA,pred ool-oom GRNST/tr dns strk,tr dns sl ool PKST,sl chky-anhy/rr POR fl-xln ANHY,sl-occ dol/rr DOL cmt,v rr ltbrn CHT,POR AA,g even mod bri/incr scat bri yel FLOR,g-mg ltbrn-brn/tr dkbrn-rr blk dd o STN,g fast stmg-sl blooming mlky CUT"

5740.00 5760.00 "LS AA,vfxl-gran-micsuc,micxl-tr crpxl,pred ool-oom GRNST/occ dns strk,tr dns sl ool PKST/tr gran tex,sl chky-anhy AA,dol/tr DOL cmt,POR AA,mg-g even mod bri/scat bri yel FLOR,g-mg ltbrn-brn/sl incr dkbrn-tr blk dd o STN,g fast-mod fast stmg mlky CUT"

5760.00 5780.00 "LS ltbrn-brn,occ tan,tr crm,dkbrn,AA,ool-oom GRNST,tr intbd PKST AA,sl chky-anhy/tr POR fl-rr xln ANHY,rr plty prtgs,sl dol/tr DOL rich cmt,g ool-oom/tr intxl POR,mg-g dull-mod bri/tr scat spty bri yel FLOR,g ltbrn-brn/tr dkbrn-blk dd o STN,CUT AA"

5780.00 5810.00 "LS AA,vfxl-micsuc-gran,tr micxl-crpxl,pred ool-oom GRNST,tr intbd-occ scat dns sl ool PKST,sl chky-anhy/tr POR fl-rr xln ANHY,sl dol/decr DOL cmt,POR-FLOR AA,g-mg ltbrn-brn/sl incr dkbrn-rr blk dd o STN,g fast stmg-sl blooming mlky CUT"

5810.00 5840.00 "LS,ltbn-tn-occ bn,mic-pred vf xln,mdns mtx ip-microsuc,pred ool GRNST,rr carb mat,rr chlky/anhy xls,v sl dolo;pred mf-g oom/ooc w/interxln fab POR ip,even dul-scat mbri yelgld FLOR,f-fst to mf-slo strmg CUT,pred mf-f ltbn-bn-occ dkbn o STN"

5840.00 5870.00 "LS AA,pred oom/ooc fab POR w/interxln fab POR ip,dul-mbri yelgld FLOR,fst-mf slo strmg CUT,pred mf-ltbn-bn o STN w/tr blk dd o STN res"

5870.00 5900.00 "LS,ltbn-bn-tn-dkbn,mottled,mic-pred vf xln,mdns mtx-grn-microsuc mtx,pred ool rich oom/ooc GRNSt w/tr dns sl ool sl chlky sl anhy PCKST,v sl dolo,rr buf CHT frgs,ool/pel,rr foss frgs;pred oom/ooc to interxln w/rr introol fab POR,even dul-mbri-spty bri"

5900.00 5910.00 "yelgld FLOR,pred mf-ltbn o STN,tr dkbn mtx o STN,tr dd blk o STN fld cast/pel/foss casts,rr calc frac flgs,sl rthy"

5910.00 5940.00 "LS AA,pred ool rich GRNST,FLOR AA,sl decr in o STN-pred ltbn o STN,mf slo strmg CUT,scat dns sl ool PCKST"

5940.00 5970.00 "LS,ltbn-tn-crm,sl mott-mott,microxln-vf xln,mdns mtx-tr dns,grn-microsucr,pred sl ool oom/ooc GRNST w/dns sl ool PCKST,sl dolo,v rr ANHY xls;pred reduced to oomoldic w/scat ooc to interxln fab POR ip,mf-f ltbn-bn-tr dkbn o STN,spty bri-dul-mbri yel FLOR"

5970.00 6000.00 "LS AA,incr in dns sl ool ool tan-crm PCKST,spty bri-mbri yelgld FLOR,tr slo strmg dif CUT,dec in o STN o ltn-tn,v rr blk dd o STN "

6000.00 6030.00 "LS,ltbn-tn,sl mott-mott,pred sl ool sl oom/ooc GRNST intrbd PCKST AA,sl chlky/sl anhy,tr buf CHT frgs,tr carb SH prtgs,spty mbri-bri yelgld FLOR,tr-slo strmg sl dif CUT,pr-m tn mtx o STN"

DEPTH		LITHOLOGY
6030.00	6060.00	"LS,ltbn-bn-tn-crm,sl mott-mott,mic-pred vf xln,tr crypt xln,mdns-dns mtx,grn mtx,pred ool GRNST,tr sl plty dns tt PCKST,rr ofwht chlky mat;pred interxln fab POR ip w/mf-f oom/ooc fab POR,mbri-yelgld FLOR,tr-mf ltbn mtx o STN,m-slo strmg dif sl milky CUT"
6060.00	6090.00	"LS AA,FLOR AA,CUT AA,o STN AA,rr buf CHT frgs,v sl dol"
6090.00	6120.00	"LS AA,pred ool rich oom/ooc mdns GRNST,tr sl ool sl plty dns PCKST-occ tt mtx,even dul-scat mbri-bri yelgld FLOR,fst to m-slo strmg dif/milky ring CUT,pred m-ltbn o STN"
6120.00	6150.00	"LS,ltbn-tn-crm,mott,mic-vf xln,pred oom/ooc GRNSt,sl dol,rr CHT frgs,sl chlky,tr chlky mat,rr calc frac flg,sme chlky/calc fld casts,occ microsuc mtx;pred oom/ooc fab POR w/interxln fab POR ip,mf-f ltbn o STN,sme blk dd o STN flg casts"
6150.00	6180.00	"LS AA,pred oom/ooc fab POR w/interxln fab POR ip,dul-mbri yelgld FLOR,fst-mf slo strmg CUT,pred mf-ltbn-bn o STN w/tr blk dd o STN res"
6180.00	6210.00	"LS,ltbn-tn-occ bn,mic-pred vf xln,mdns mtx ip-microsuc,pred ool GRNST,rr carb mat,rr chlky/anhy xls,v sl dolo;pred mf-g oom/ooc w/interxln fab POR ip,even dul-scat mbri yelgld FLOR,f-fst to mf-slo strmg CUT,pred mf-f ltbn-bn-occ dkbn o STN"
6210.00	6240.00	"LS AA,pred oom/ooc fab POR w/interxln fab POR ip,dul-mbri yelgld FLOR,fst-mf slo strmg CUT,pred mf-ltbn-bn o STN w/tr blk dd o STN res"
6240.00	6270.00	"LS,ltbn-tn-crm,mott,mic-vf xln,mdns-dns mtx,tr microsuc mtx-grn mtx,sl dolo,pred ool rich oom/ooc GRNSt to te sl ool dns PCKST;pred oom/ooc fab POR w/interxln fab POR ip,tr blk dd o STN flg casts,pred mf-f ltbn-tn o STN,FLOR AA,CUT AA"
6270.00	6300.00	"LS AA,pred oom/ooc fab POR w/interxln fab POR ip,dul-mbri-w/spty bri yel FLOR,flushed-tr-f ltbn o STN,fst to m-slo strmg CUT,sl milky ring"
6300.00	6330.00	"LS,pred ool rich oom/ooc GRNST w/rr dns sl ool sl plty PCKST,mbri-bri yelgld FLOR,fst dif CUT,pred flushed to ltbn o STN"
6330.00	6360.00	"LS,ltbn-tn-crm,mott,ool rich vf xln oom/ooc GRNST,tr ool PCKST,reduced oom fab POR to mg-g oom/ooc fab POR,FLOR AA,o STN AA,v rr blk dd o STN res,fst dif CUT-mf-slo strmg CUT"
6360.00	6390.00	"LS,ltbn-tn-crm,sl mott-mott,mic-pred vf xln,mdns-grn-dns-occ tt mtx,pred ool rich oom/ooc GRNST,tr dns sl ool to ool sl plty PCKST,sl chlky;pred oom/ooc fab POR,scat interxln fab POR,bri yelgld FLOR,fst to mf-slo strmg CUT"
6390.00	6420.00	"mod bri yel FLOR,mg-g ltbrn/tr brn-rr blk dd o STN,g fast-mod fast stmg mlky CUT"

DEPTH	LITHOLOGY

6390.00 6420.00 "LS ltbrn-tan-crm,tr brn,vfxl-gran-micsuc,tr micxl-crpxl-xln ip,pred ool-oom GRNST/tr dns strk,tr scat-intbd dns sl ool PKST/tr gran tex,chky-sl anhy/tr POR fl-rr xln ANHY,dol/tr DOL cmt,rr tan-crm CHT,g ool-sl oom/tr intxl POR,g even bri-FLOR"

6420.00 6450.00 "LS AA,vfxl-gran-micsuc,tr micxl-crpxl-xln,pred GRNST AA,tr dns sl ool PKST/tr gran tex ip,chky-sl anhy AA,dol/tr DOL rich cmt,tr CHT incl AA,POR-FLOR AA,mg-g ltbrn/tr brn-rr blk dd o STN,g fast-mod fast stmg mlky CUT"

6450.00 6480.00 "LS AA,pred ool-oom GRNST,tr dns sl ool PKST/tr gran tex ip,chky-sl anhy/tr POR fl-rr xln ANHY-v rr plty frag,dol/tr DOL rich cmt,tr crm-tan CHT incl,POR AA,g even bri-mod bri yel FLOR,mg-g ltbrn/tr brn-rr blk dd o STN,g fast-mod fast stmg mlky CUT"

6480.00 6510.00 "LS AA,vfxl-gran-micsuc,tr micxl-crpxl-xln,pred GRNST AA,tr dns sl ool PKST/tr gran tex ip,chky-sl anhy AA,dol/tr DOL rich cmt,tr CHT incl AA,POR-FLOR AA,mg-g ltbrn/tr brn-rr blk dd o STN,g fast-mod fast stmg mlky CUT"

6510.00 6540.00 "yel FLOR,mg-fr ltbrn/tr brn-rr pp blk dd o STN,g mod fast-fast stmg mlky CUT"

6510.00 6540.00 "LS ltbrn-tan-crm,tr brn,vfxl-gran-micsuc,tr micxl-crpxl-xln ip,pred ool-oom GRNST/tr dns strk,tr scat-intbd PKST AA/tr gran tex,chky-sl anhy/tr POR fl-rr xln ANHY,dol/tr DOL cmt,rr tan-crm CHT,g ool-sl oom/tr intxl POR,g even bri-mod bri"

6540.00 6570.00 "LS AA,vfxl-gran-micsuc,tr micxl-crpxl-xln ip,pred GRNST AA/tr dns strk,tr scat-intbd dns sl ool PKST/tr gran tex,chky-sl anhy/tr POR fl-rr xln ANHY,dol/tr DOL cmt,rr tan-crm CHT,g ool-sl oom/tr intxl POR,FLOR-STN-CUT AA"

6570.00 6590.00 "LS tan-ltbrn-crm,tr brn,rr wh,AA,pred ool-sl oom GRNST/tr dns strk,tr scat-intbd dns sl ool PKST/tr gran tex,chky-sl anhy/tr POR fl-rr xln ANHY,sl dol/tr DOL cmt,mg-g ool-sl oom/tr intxl POR,g even mod bri-bri yel FLOR,mg ltbrn-tr brn-rr blk STN,CUT AA"

6590.00 6620.00 "LS tan-crm-ltbrn,tr brn,AA,pred ool-sl oom GRNST/tr dns strk,tr scat-intbd PKST AA/tr gran tex,chky-sl anhy/tr POR fl-xln ANHY,sl dol/tr DOL cmt,mg ool-sl oom/tr intxl POR,g even mod bri-bri yel FLOR,STN AA/rr pp blk STN,g mod fast-sl slow stmg mlky CUT"

6620.00 6660.00 "-rr blk pp dd o STN,g-mg slow-mod fast stmg mlky CUT"

6620.00 6660.00 "LS AA,pred ool-oom GRNST/tr dns strk,tr scat-intbd dns sl ool PKST/tr gran tex,chky-sl anhy/tr POR fl-rr xln ANHY & v rr plty prtgs,dol/tr DOL cmt,v rr crm CHT,mg-g ool-sl oom/tr intxl POR,g even mod bri-bri yel FLOR,mg-fr ltbrn-tr brn"

DEPTH	LITHOLOGY

6660.00 6680.00 "intxl POR,g even bri-mod bri yel FLOR,STN AA,g fast stmg mlky CUT"

6660.00 6680.00 "LS tan-crm-ltbrn,tr brn,off wh,vfxl-gran-micsuc ip,tr micxl-crpxl-xln ip,ool-sl oom GRNST/sl dns strk,tr dns sl ool PKST/tr gran tex,bcmg sl chky-anhy/tr xln ANHY-POR fl,bcmg incr dol/tr DOL cmt,v rr tan-crm CHT incl,g-mg ool-sl oom/tr"

6680.00 6730.00 "LS AA,vfxl-gran-micsuc,tr micxl-crpxl-xln ip,ool-sl oom-ooc GRNST/tr dns strk,tr scat-intbd dns sl ool PKST/occ gran tex,sl chky-anhy/tr POR fl-xln ANHY-v rr plty prtgs,dol/tr DOL cmt,rr tan-crm-brn CHT incl,g-mg ool-sl oom/tr intxl POR,g even mod bri-FLOR"

6680.00 6730.00 "scat bri yel FLOR,mg-fr ltbrn/sl incr scat tr brn-rr blk pp dd o STN,g fast stmg mlky CUT"

6730.00 6760.00 "LS tan-ltbrn-crm,tr brn,rr off wh,vfxl-gran-micsuc ip,sl incr crpxl-tr micxl,pred GRNST AA,sl incr scat-tr intbd dns sl ool PKST/tr gran tex,chky-sl anhy/tr POR fl-xln ANHY,dol/tr DOL cmt,mg-g ool-sl oom POR,mg-g mod bri-scat bri yel FLOR"

6730.00 6760.00 ",mg-fr ltbrn/fr brn-tr blk pp dd o STN,g mod fast-fast stmg mlky CUT"

6760.00 6780.00 "LS ltbrn-tan,occ crm,brn,vfxl-gran-micsuc,tr crpxl-micxl ip,pred ool-oom GRNST/tr dns strk,tr scat-intbd dns sl ool PKST,chky-sl anhy/tr POR fl-xln ANHY,dol/tr DOL cmt,rr crm CHT,g-mg ool-sl oom/tr intxl POR,FLOR-STN-CUT AA"

6780.00 6800.00 "mg-g slow stmg/tr mod fast stmg mlky CUT"

6780.00 6800.00 "LS tan-crm,occ ltbrn,tr brn,rr wh,AA,pred ool-sl oom GRNST,tr intbd-scat dns sl ool PKST/gran tex,-occ grdg to dns GRNST,sl chky-anhy/tr xln ANHY-POR fl,dol/tr DOL rich cmt,tr crm-tan CHT,POR AA,mg-g mod bri-dull/tr scat bri yel FLOR,STN AA,"

6800.00 6830.00 "LS tan-crm-ltbrn,tr brn,rr wh,vfxl-gran-micsuc,tr micxl-crpxl,ool-oom GRNST/occ dns strk,tr scat-intbd PKST AA/tr gran tex,chky-sl anhy/tr POR fl-xln ANHY,dol/tr DOL cmt,tr tan-crm CHT,g ool-sl oom/tr intxl POR,g even mod bri-bri yel"

6800.00 6830.00 "FLOR,mg-fr ltbrn-tr brn-rr blk pp dd o STN,g mod fast-slow stmg mlky CUT"

DEPTH	LITHOLOGY
6830.00 6870.00	"LS AA,ool-oom GRNST/occ dns strk,tr scat-intbd dns sl ool PKST/tr gran tex,chky-sl anhy/tr POR fl-xln ANHY,dol/tr DOL cmt,tr tan-crm CHT,g ool-sl oom/tr intxl POR,mg-g mod bri-dull/fr scat bri yel FLOR,mg ltbrn-sl incr brn & blk pp dd o STN,CUT AA"
6870.00 6910.00	"LS AA,vfxl-gran-micsuc,tr micxl-crpxl,pred GRNST AA,tr dns sl ool PKST/tr gran tex,chky-sl anhy AA,dol/tr DOL rich cmt,tr CHT AA,POR-FLOR AA,mg-fr ltbrn/tr brn-blk pp dd o STN,g mod fast-slow stmg mlky CUT"
6910.00 6950.00	"/tr scat bri yel FLOR,mg-fr ltbrn/tr scat brn-blk pp dd o STN,mg slow-mod fast stmg mlky CUT"
6910.00 6950.00	"LS tan-crm-ltbrn,tr brn,vfxl-gran-micsuc,tr micxl-crpxl,ool-oom GRNST/occ dns strk,tr scat-intbd dns sl ool PKST/tr gran tex,chky-sl anhy/tr POR fl-xln ANHY,dol/tr DOL cmt,tr tan-brn-crm CHT,g ool-sl oom/tr intxl POR,g even mod bri-dull"
6950.00 6980.00	"LS AA,vfxl-gran-micsuc,tr micxl-crpxl-rr xln incl,ool-oom GRNST/occ dns strk,tr scat-intbd PKST AA/tr gran tex,sl chky-anhy/tr POR fl-xln ANHY,dol/tr DOL cmt,tr CHT AA,g-mg ool-sl oom/tr intxl POR,g even mod bri-bri yel FLOR,STN-CUT AA"
6980.00 7010.00	"LS AA,ool-oom GRNST/tr dns strk,tr scat-intbd PKST AA/tr gran tex,sl chky-anhy/tr POR fl-rr xln ANHY,dol AA,rr tan-crm CHT,g-mg ool-sl oom/tr intxl POR,g even bri-mod bri yel FLOR,mg ltbrn-sl incr brn-rr blk pp dd o STN,g fast-sl blooming mlky CUT"
7010.00 7040.00	"STN AA,g fast-mod fast stmg mlky CUT"
7010.00 7040.00	"LS tan-crm,occ ltbrn,tr brn,rr wh,AA,ool-oom GRNST/tr dns strk,tr scat-intbd dns sl ool PKST/tr gran tex,sl incr chky-sl anhy/tr POR fl-xln ANHY,dol/tr DOL cmt,tr tan-crm CHT,mg-g ool-sl ooc-oom/tr intxl POR,g even mod bri-bri yel FLOR,"
7040.00 7060.00	"LS AA,vfxl-gran-sl micsuc,micxl-sl crpxl,ool-oom GRNST/occ dns strk,tr scat-intbd PKST AA/tr gran tex,chky-sl anhy/tr POR fl-xln ANHY,sl dol/tr DOL cmt,rr CHT AA,POR AA,g even mod bri-bri yel FLOR,mg-fr ltbrn-brn/r pp blk dd o & dkbrn STN,CUT AA"
7060.00 7080.00	"mod bri-dull/fr scat bri yel FLOR,STN AA,g mod fast-slow stmg mlky CUT"
7060.00 7080.00	"LS tan-crm,occ ltbrn,tr brn,wh,vfxl-gran,micxl-crpxl,sl micsuc,ool-oom GRNST/sl incr dns strk,sl incr scat-intbd PKST AA/tr gran tex,incr chky-sl anhy/POR fl-tr xln ANHY,sl dol/tr DOL cmt,tr tan-crm CHT,mg-g ool-sl oom/tr intxl POR,g even"

DEPTH	LITHOLOGY

7080.00 7120.00 "LS AA,vfxl-gran,micxl-crpxl,sl micsuc,ool-ooc-sl oom GRNST/occ dns strk,tr scat-intbd PKST AA/sl gran tex,chky-sl anhy AA,dol/tr DOL cmt,tr tan-crm CHT,mg-fr ool-sl oom-ooc/tr intxl POR,g even mod bri-dull/sl incr scat bri yel FLOR,mg-fr ltbrn/tr brn STN"

7080.00 7120.00 "& rr blk pp dd o STN,g mod fast-slow stmg mlky CUT"

7120.00 7150.00 "g even mod bri-dull/scat bri yel FLOR,mg-fr ltbrn/tr brn-rr blk pp dd o STN,g slow-mod fast stmg mlky CUT"

7120.00 7150.00 "LS tan-crm,ltbrn,tr brn,rr wh,vfxl-gran,micxl-crpxl,sl micsuc,ool-sl oom-ooc GRNST/incr dns strk,tr scat-intbd dns sl ool PKST/tr gran tex,sl incr chky-sl anhy/POR fl-tr xln ANHY,dol/tr DOL cmt,tr CHT AA,mg-fr ool-sl oom-ooc/tr intxl POR,"

7150.00 7172.00 "LS AA,vfxl-gran,micxl-crpxl,sl micsuc,ool-sl oom-ooc GRNST/fr dns strk,tr scat-intbd dns sl ool PKST/tr gran tex,chky-sl anhy/POR fl-tr xln ANHY,dol/tr DOL cmt,tr crm-tan CHT,mg-fr ool-sl oom-ooc/tr intxl POR,FLOR-STN-CUT AA"

FORMATION TOPS

OPERATOR: MOBIL
WELL NAME: RATHERFORD UNIT #19-32 SE 1-A HORIZONTAL LATERAL LEG #2

FORMATION NAME		SAMPLES	SAMPLES	DATUM
		MEASURED DEPTH	TRUE VERTICAL DEPTH	KB:4785'
LOWER ISMAY		5474'	5472'	-687'
GOTHIC SHALE		5539'	5524'	-739'
DESERT CREEK		5565'	5540'	-755'
UPPER 1-A POROSITY BENCH		5574'	5544'	-759'

GEOLOGICAL SUMMARY

AND

ZONES OF INTEREST

The Mobil Exploration and Production U.S., Inc., Ratherford Unit #19-32 Southeast Horizontal Lateral Leg #2 was a re-entry of the Mobil Ratherford Unit #19-32 located in Section 19, T41S, R24E, and was sidetracked in a southeasterly direction from 5443' measured depth, 5442' true vertical depth, on September 26, 1998. The lateral reached a measured depth of 7172', true vertical depth of 5553.5' at total depth, with a horizontal displacement of 1600' bearing 140.5 degrees on September 29, 1998. The lateral was terminated in the 1-A porosity bench in the Upper Desert Creek Member of the Paradox Formation. The curve and lateral were drilled with fresh water and brine water with polymer sweeps as the drilling fluid. The proposed target line was used as a reference point throughout the lateral and a gamma-neutron log was used to define contacts between formations and their members.

The objective of the Ratherford Unit #19-32 Southeast lateral leg #2 was to penetrate and maintain the Desert Creek 1-A porosity bench for 1600' horizontally. Evaluation of porosity and effective permeability, various carbonate facies, hydrocarbon and gas potential and lithology was defined throughout the lateral as well as its overall thickness. The curve section began in the Pennsylvanian Upper Ismay carbonate cycle before encountering the typical stratigraphic section of the Lower Ismay carbonate cycle, Gothic Shale, Desert Creek transition zone and Upper 1-A porosity bench of the Upper Paradox Formation of the Hermosa Group.

The curve section began in the Upper Ismay carbonate cycle of the Upper Paradox Formation and was penetrated from a measured depth of 5443', true vertical depth 5442', to a measured depth of 5474', true vertical depth 5472'. This lower 30' of the Upper Ismay Formation was predominately a limestone that graded to a marly limestone in part. This facies was light gray brown, occasionally dark gray brown, light gray, light brown, tan, cream to off-white, cryptocrystalline to microcrystalline, moderately dense, dense to tight, occasionally silty, soft to firm, occasionally clean, earthy, argillaceous grading to a marly limestone in part, slightly dolomitic, infrequently anhydritic and uncommonly chalky. Associated with this limestone facies was black moderately firm sub-blocky calcareous to dolomitic carbonaceous shale stringers and dark gray brown to brown argillaceous slightly limy dolomite that graded to a dolomitic shale and dolomitic marlstone. Rare to trace dark brown to brown chert fragments, trace crinoid stems, rare to trace anhydrite crystals and no visible staining, cut and fluorescence was logged for this carbonate cycle. Porosity development was predominately earthy, compact crystalline to poor intercrystalline. A decrease in the rate of penetration and an increase in black to dark brown soft shale at a measured depth 5474', true vertical depth 5472', represented the Hovenweep Shale member that defines the contact between the Upper and Lower Ismay carbonate cycles. This member was approximately three feet in this southeast curve.

The top of the Lower Ismay carbonate cycle of the Upper Paradox Formation was picked at a measured depth of 5474', true vertical depth 5472', based primarily on sample identification, projected tops on the gamma-neutron log and the Hovenweep Shale member. This carbonate cycle was 52 feet thick at this location and was predominately clean chalky and anhydritic limestone to dolomitic limestone. The limestone facies was light brown, tan to cream, microcrystalline to very fine crystalline, moderately dense to dense, silty, chalky and anhydritic, slightly earthy, soft to firm,

slightly dolomitic and occasionally graded to a marlstone. An increase in dolomitzation and dolomitic limestones was marked by a decrease in penetration rate at a measured depth of 5502; true vertical depth 5494' as the bit penetrated a cycle of anhydritic stringers. Once this cycle was drilled the rate of penetration increased and dolomitic limestones became the predominant facies. This facies was light gray, gray, light brown to tan, microcrystalline to very fine crystalline, moderately dense to microsucrosic, silty, occasionally grainy, chalky to anhydritic, occasionally argillaceous, and slightly calcareous. Noted throughout this interval were thin streaks of dark brown to brown dolomites and soft silty argillaceous limestones. Rare to trace amounts of buff to light brown chert fragments, off-white chalky matter, anhydrite crystals, no visible to a dull yellow-gold fluorescence, no visible oil staining and cut was associated with this carbonate cycle. The overall porosity development through the Lower Ismay was compact-crystalline, earthy and intercrystalline. An increase in argillaceous limestones and shale cuttings in the samples represented the contact between the Lower Ismay and Gothic Shale.

The Gothic Shale was penetrated at a measured depth of 5539', true vertical depth 5524' through a measured depth of 5565', true vertical depth 5540'. The top of the Gothic was picked by a significant increase in the amount of black carbonaceous shale in the cuttings and the gamma-neutron log because it was not determined by the rate of penetration. This shale member was sixteen feet thick in this southeasterly direction and was black to dark brown, carbonaceous, occasionally grainy to silty, soft to slightly firm, sooty, slightly fissile, subblocky to subplaty, calcareous to slightly dolomitic and slightly micaceous. Very thin cyclic deposits of dense slightly argillaceous limestones and occasionally dolomites to dolomitic limestones were associated with this shale member.

The top of the Desert Creek Member of the Upper Paradox Formation was picked at a measured depth of 5565', true vertical depth 5540' through a measured depth of 5574', true vertical depth 5544'. This transition zone had a true vertical thickness of approximately four feet. The transition zone between the Gothic Shale and the top of the Upper Desert Creek 1-A porosity bench was predominately interbedded dolomites, limestones and shales. The limestones were light brown to tan, microcrystalline to very fine crystalline, moderately dense, occasionally grainy, chalky/anhydritic, very slightly oolitic/pellatal and slightly dolomitic. The dolomites were brown, very fine crystalline, microsucrosic too silty and moderately dense. These carbonates contained intraclasts of calcite crystals and Gothic Shale partings. Associated with this transition zone was Gothic Shale partings, rare buff chert fragments, trace fossil fragments, rare anhydrite crystals and trace calcite fracture fill. An intercrystalline to slightly earthy fabric porosity was developed in these carbonates. A poor light brown to dead black oil stain, dull spotty yellow-gold fluorescence and no cut was exhibited in this transition zone.

The top of the Desert Creek Upper 1-A porosity bench was encountered at a measured depth of 5574', true vertical depth of 5544', at a horizontal displacement of approximately 5'. A marked drill off and an increase in background gas picked the top. The predominate grainstone facies penetrated was light brown to tan, mottled, microcrystalline to predominately very fine crystalline, moderately dense to grainy, very slightly dolomitic and uncommonly chalky and anhydritic. Rare buff to light brown chert fragments, very rare fossil fragments, rare to trace anhydrite crystals, trace calcite fracture fill and rare carbonaceous partings was associated with this portion of the Desert Creek 1-A porosity bench. Oil staining was moderate to moderately fair, appeared flushed and was associated with a black residue or bitchimum filling oolitic casts. A dull to spotty moderately bright yellow-gold fluorescence and fast to moderately fair slow streaming diffused cut was observed in this grainstone facies. Porosity development was a moderately good to good oomoldic to oolicastic with an intercrystalline fabric in part.

The curve portion of the lateral was completed at a measured depth of 5621', true vertical depth 5554.8', at a horizontal displacement of 57', bearing 142.1 degrees, with an inclination of 88.2 degrees, on September 27, 1998, in the Desert Creek 1-A porosity bench of the Upper Paradox Formation. At this point a trip was made to lay down the curve assembly and pickup the lateral assembly.

Drilling of the southeast lateral was resumed also on September 27, 1998, in the Desert Creek 1-A porosity bench of the Upper Paradox Formation. Approximately 70' of sliding was required to put the lateral assembly out far enough to begin rotating. For the first 400' of this southeast lateral, the bit slowly built across the Desert Creek 1-A porosity bench and encountering the top at a true vertical depth 5548' at a horizontal displacement of 400'. This bounce reoriented the bit down before it was brought back to horizontal. During this process the bit again glanced off the top of the bench at a true vertical depth of 5550' at a horizontal displacement of 530'. Calculations suggested at this point in the lateral that the bench was trending down at approximately 89 degrees. At 670' of horizontal displacement between the true vertical depths of 5552' and 5554' the bit began to bounce up and down. This bouncing was caused by thin hard streaks that had trapped the bit in a small pay zone, caused an inconsistent rate of penetration and numerous swivel stalls for 450'. It was thought that the bit would eventually break free, but at 1120' out in the lateral the bit was intentionally oriented down to get out and away from the stringers. Once a consistent drill rate was found at 5552.5 true vertical depth the bit trended at 89-90 degree angle for the next 330' at less than half-a-minute a foot. It appeared that the stringers either pinched out or trended up very abruptly. At a true vertical depth of 5558' at a horizontal displacement of 1230' the bit began to build and cut back across the upper portion of the Desert Creek 1-A porosity bench. It appeared that the bit was stair stepping through stringers as it cut across the bench because of the sharp changes in inclination from survey to survey. Likewise, the gamma-neutron log insinuated that there were several stringers in the 38' pay-zone of the 19-43 well bore. The bit was eventually recovered back to horizontal at a true vertical depth 5554.6' at a horizontal displacement of 1450' but slowly built in angle until the termination of the southeast lateral at 5553.5' true vertical depth with 1600' of horizontal displacement.

Throughout the entire length of this lateral the limestones were a consistent homogenous oolitic rich grainstone facies with associated slightly oolitic dense packstones. The predominate and oil affluent grainstone facies was brown, light brown, tan to cream, slightly mottled to mottled, microcrystalline to very fine crystalline, moderately dense in part and predominately microsucrosic to grainy. This grainstone facies also variegated with a slightly dolomitic with occasional dolomitic rich cement, very slightly anhydritic with an intermittent anhydritic rich cement and slightly chalky texture. Associated with this facies were rare to trace amounts of light brown to buff colored chert fragments, rare to trace anhydrite crystals, translucent calcite fracture fill, fossil fragments, oolites, rare to trace pellets, off-white chalky matter, very rare black carbonaceous matter and calcite, anhydrite to chalky filled casts. The grainstones had a moderately fair, moderately good to occasionally reduced oomoldic to oolicastic fabric porosity with a moderately fair intercrystalline fabric porosity development in part. The rare to occasionally common packstone facies were penetrated or encountered briefly near the top of the Desert Creek 1-A porosity bench and when the bit was caught up between stringers as noted above. This facies was light brown to tan, occasionally off-white, slightly mottled, cryptocrystalline to microcrystalline, moderately dense to dense, slightly dolomitic, infrequently platy, deficient in oolites and fossil fragments, slightly chalky to chalky, slightly anhydritic to anhydritic and uncommonly dolomitic. These packstones had a compact crystalline to moderately fair intercrystalline fabric porosity development.

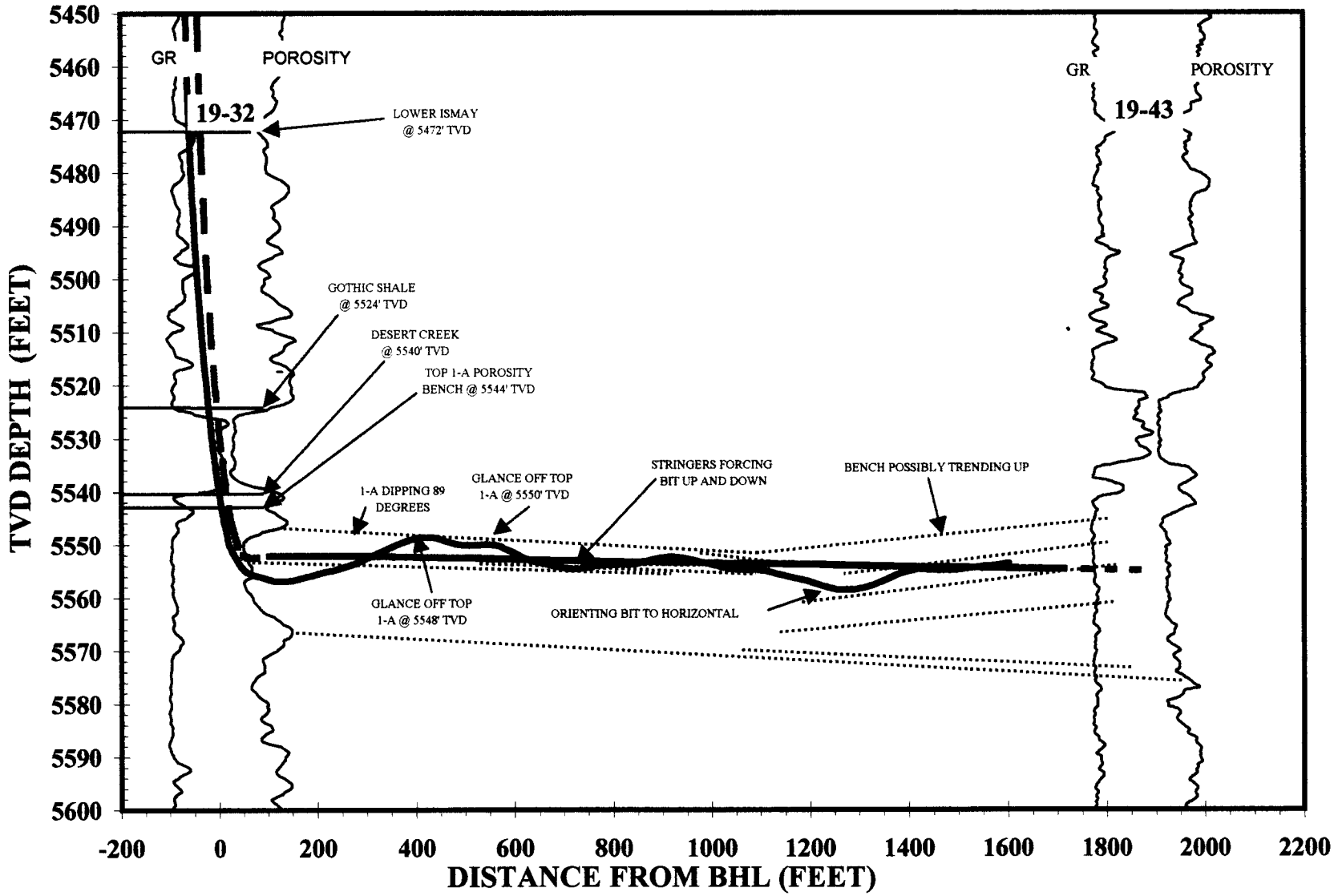
When the Desert Creek 1-A porosity bench was first penetrated in the curve section oil shows were moderate to moderately fair, but appeared flushed. Once the lateral commenced and the bit began to penetrate out towards the 19-43 well bore, shows steadily increased. As the bit neared the top of the 1-A bench and when the bit was trapped in the stringers, shows decreased as expected. Once the bit was clear of these less lucrative oil zones, shows stayed moderately fair to moderately good for the

remainder of the southeast lateral. Associated with the predominately brown, medium brown to light brown oil stain was the black bitchimum that filled or coated oolite, pellet, fossil casts and was in some cases coating calcite fracture fill. In the less lucrative oil zones fluorescence was dull to moderately bright and had a trace to moderate slow streaming very slightly diffused cut. The moderately fair to moderately good oil zones had a moderately bright to bright yellow-gold fluorescence and a fair to good fast to fair to good slow blooming milky ring cut. Gas shows averaged 2000 to 9000 units with an intermittent two to ten foot flare.

The Ratherford Unit 19-32 southeast lateral leg #2 was completed on September 29, 1998 in the Desert Creek 1-A porosity bench and was terminated at a measured depth of 7172', true vertical depth 5553.5' with a horizontal displacement of 1600' bearing 140.3 in 27 hours. The entire length of the lateral was a homogenous grainstone facies with a reduced to good oomoldic to oolicastic with an intercrystalline fabric porosity development in part with good shows overall. Thin streaks of dense packstone were penetrated on occasion and will contribute insignificantly to production as a whole. The thickness of the Desert Creek 1-A porosity bench ranged between 22' to 38' thick based on gamma-neutron logs. The bottom of the bench was never encountered in this lateral, primarily because of stringers keeping the bit towards the top of the bench. However, the bit did encounter the top of the bench twice, but in both cases penetrated back into porosity. Gas shows averaged 2000 to 9000 units with an intermittent two to ten foot flare. This re-entry should make an important contribution to the overall performance of the Ratherford Unit when it is returned to the water-flood plan. From this stimulation, better movement of hydrocarbons, gas and production water between the 19-32 and 19-43 well bore will help increase production, reserves and benefits for Mobil E & P.

*The black residual staining has been called by Dr. Dave Eby & others as "bitchimum" and is also known as "dead oil" ("dd o stn" on mud logs). This staining is associated with the movement of oil over long periods of time and is a good indicator of producable hydrocarbons when associated with productive porosities, but can also be found in porosities that have been filled by anhydrites and other material at later dates.

MOBIL, Ratherford #19-32, Southeast Lateral



Form 3160-5
(June 1990)

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 reentry to a different reservoir.
Use "APPLICATION FOR PERMIT - " for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: 14-20-603-353
6. If Indian, Allottee or Tribe Name: NAVAJO TRIBAL
7. If Unit or CA, Agreement Designation: RATHERFORD UNIT
8. Well Name and No.: RATHERFORD 19-W-32
9. API Well No.: 43-037-15743
10. Field and Pool, or exploratory Area: GREATER ANETH
11. County or Parish, State: SAN JUAN UT

1. Type of Well: [ ] Oil Well [ ] Gas Well [X] Other
2. Name of Operator: MOBIL PRODUCING TX & NM INC.*
*MOBIL EXPLORATION & PRODUCING US INC. AS AGENT FOR MPTM
3. Address and Telephone No.: P.O. Box 633, Midland TX 79702 (915) 688-2585
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SEC. 19, T41S, R24E
(SW/NE)1980' FNL & 1980' FEL
BHL: LATERAL #1 738' FNL & 822' FWL

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

TYPE OF SUBMISSION	TYPE OF ACTION	
[X] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other INJECTOR/SIDETRACK	[ ] Dispose Water

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

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.)*

BHL:

LATERAL #2: 1189' SOUTH & 1071' EAST FROM SURFACE SPOT (ZONE 1a). 648753.15 E
LATERAL #3: 1472' NORTH & 850' WEST FROM SURFACE SPOT (ZONE 1a). (NENW) 4119539.18 N
449 259

SEE ATTACHED PROCEDURE FOR LATERAL #3

2640
190
2450 FWL
508 FNL

Federal Approval of this Action is Necessary

Approved by the Utah Division of Oil, Gas and Mining
Date: 12/24/98
By:

COPY SENT TO OPERATOR
Date: 12-28-98
Initials: CHD

RECEIVED
NOV 18 1998
DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct
Signed: Shirley Houchins for Title: SHIRLEY HOUCHINS/ENV & REG TECH Date: 11-16-98

(This space for Federal or State office use)
Approved by _____ Title _____ Date _____
Conditions 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 statements or representations as to any matter within its jurisdiction.

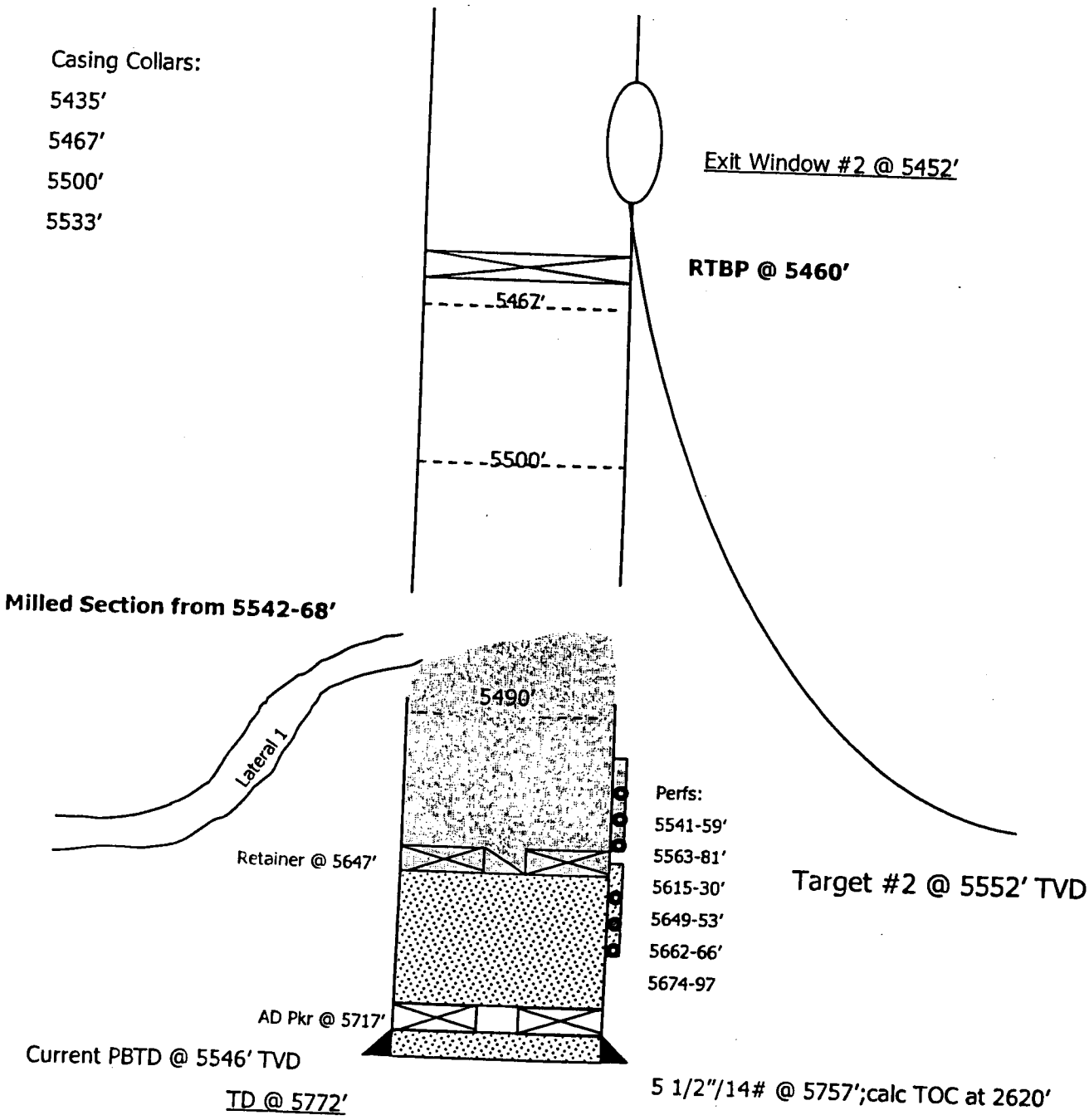
* See Instruction on Reverse Side

Ratherford Unit Well #19-32
Horizontal Drilling Procedure

The objective of this procedure is to add an additional lateral to this wellbore, #3, with a short radius horizontal lateral (1700 feet).

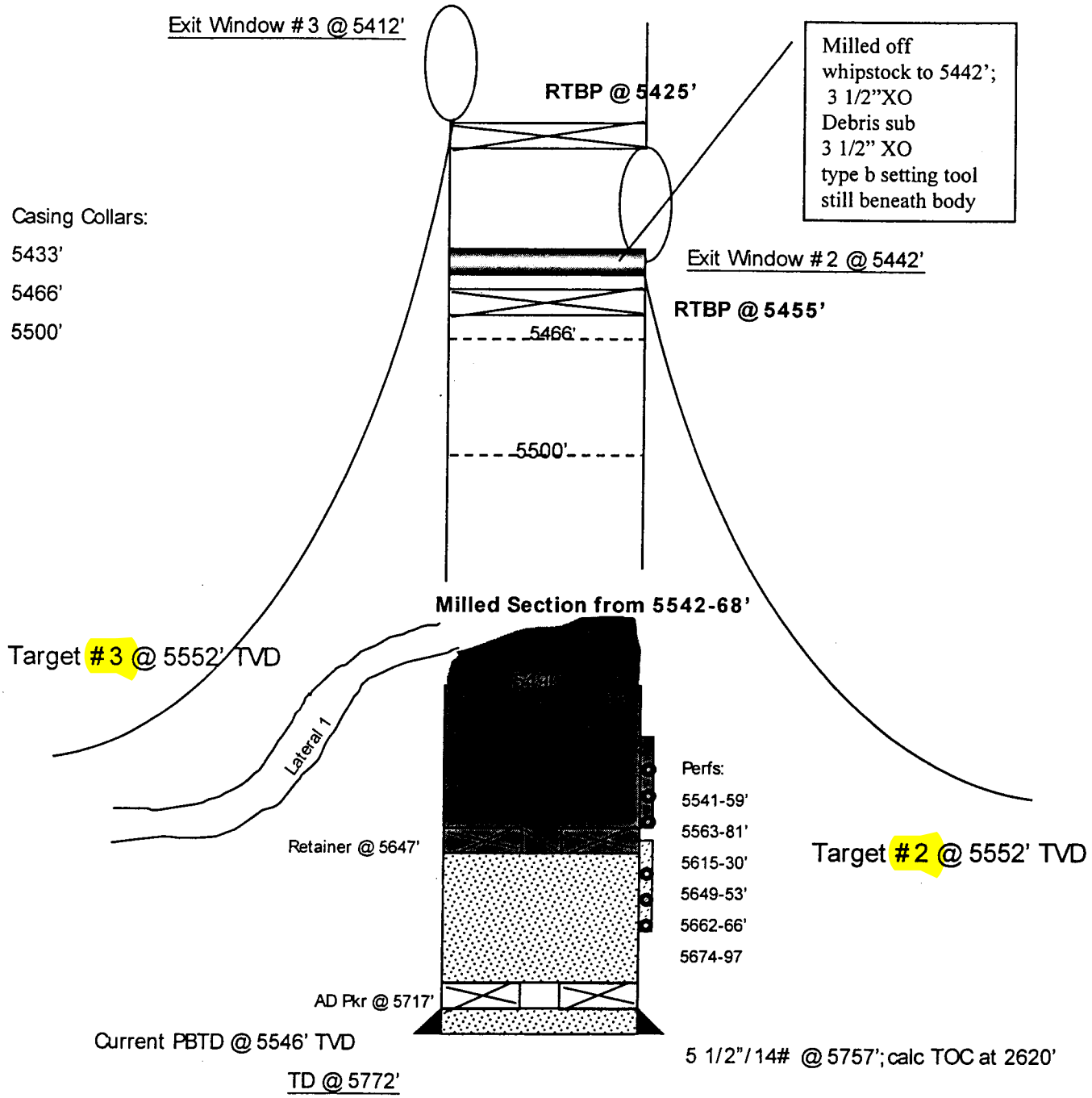
1. Prepare location and dig working pit.
2. MIRU WSU, reverse unit, and H2S equipment. Bullhead kill weight fluid down tubing.
3. ND wellhead and NU BOP's. Pressure test BOP's to working pressure.
4. Continue to POH with related equipment (tubing and rods for producers or tubing and packer for injectors).
5. RU wireline to run any logs desired and run gage ring for casing size and weight.
6. Set retrievable bridge plug and pressure test casing to 1000 psi.
7. RDMO WSU.
8. MIRU 24 hr. WSU. NU BOP's and pressure test with chart.
9. PU tubing, drilling collars, and drill pipe in derrick and run in hole. Then POH and stand back.
10. PU drillpipe with UBHO sub and whipstock and starter mill
11. Run gyro and obtain orientation of whipstock face. Set whipstock. POH w/gyro.
12. Shear pilot mill bolt and start milling window.
13. POH w/ starter mill and pick up window mill and watermelon mill and continue to mill window. Drill 1-2 ft of formation
14. POH w/ mills and PU curve building assembly and drill string with UBHO sub in string and RIH.
15. RU gyro to assist in time drilling and starting out of the casing window. POH w/ gyro when inclination dictates it must be pulled.
16. Finish drilling the curve using the MWD.
17. POH once curve is finished and PU lateral motor to drill the lateral using MWD.
18. Once lateral TD is reached, POH w/ directional equipment.
19. PU RTBP and set at 5400' RDMO.

Ratherford Unit #19-32



Window	Btm-Top of Window	Ext length	Curve Radius	Bearing	Horiz Displ
2	5452-44	-----	100	138	1600

Ratherford Unit #19-32



Window	Btm-Top of Window	Ext length	Curve Radius	Bearing	Horiz Displ
2	5442-36	-----	110	138	1600
* 3	5412-06	-----	140	330	1700

* Lateral to be added

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 11/18/98

API NO. ASSIGNED: 43-037-15743

WELL NAME: RATHERFORD 19-W-32 (RNTR LEG3)
OPERATOR: MOBIL EXPL & PROD CO (N7370)
CONTACT: Shirley Hawkins (915) 688-2585

PROPOSED LOCATION:
SWNE 19 - T41S - R24E
SURFACE: 1980-FNL-1980-FEL
BOTTOM: 0508-FNL-2450-FWL
SAN JUAN COUNTY
GREATER ANETH FIELD (365)

LEASE TYPE: IND
LEASE NUMBER: 14-20-603-353
SURFACE OWNER: Navajo Tribe

PROPOSED FORMATION: DSCR

INSPECT LOCATION BY: / /		
TECH REVIEW	Initials	Date
Engineering		
Geology		
Surface		

RECEIVED AND/OR REVIEWED:

✓ Plat
✓ Bond: Federal[] State[] Fee[]
(No. BIA - already in place)
N Potash (Y/N)
N Oil Shale (Y/N) *190-5(B)
✓ Water Permit
(No. Navajo Allocation)
N RDCC Review (Y/N)
(Date:)

N/A Fee Surf Agreement (Y/N)

LOCATION AND SITING:

✓ R649-2-3. Unit Ratherford

___ R649-3-2. General

___ R649-3-3. Exception

___ Drilling Unit
Board Cause No: ___
Date: ___

COMMENTS: ___

STIPULATIONS: ___

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Company: MOBIL E & P

Well Name: RATHERFORD UNIT 19-W-32 (REENTRY)

Api No. 43-037-15743 Lease Type: INDIAN

Secton 19 Township 41S Range 24E County SAN JUAN

Drilling Contractor _____ RIG # BIG "A" 25

SPUDDED:

Date 12/07/98

Time _____

How ROTARY

Drilling will commence _____

Reported by SIMON

Telephone # _____

Date 12/07/98 Signed: JLT

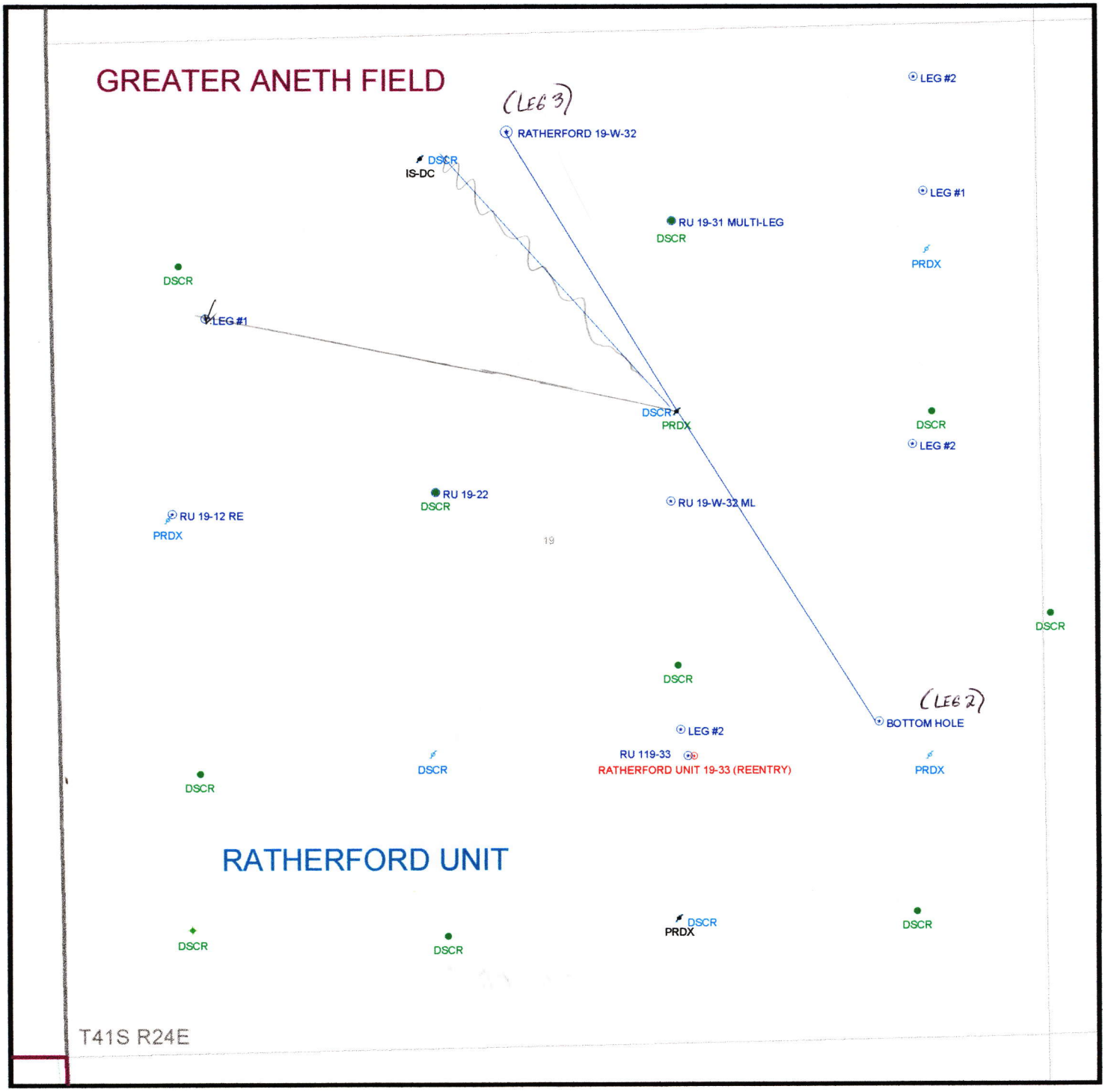
DIVISION OF OIL, GAS & MINING

OPERATOR: MOBIL EXPL & PROD CO. (N7370)

FIELD: GREATER ANETH (365)

SEC. 19 TWP 41S, RNG 24E

COUNTY: SAN JUAN UNIT: RATHERFORD UNIT



DATE PREPARED:
18-DEC-1998

Pason SYSTEMS USA CORP.
Electronic Rig Monitoring Systems • Well Logging • Consulting Geology • Coal Bed Methane Services
2450 INDUSTRIAL BLVD. • GRAND JUNCTION, CO 81505
(970) 243-3044 • (FAX) 241-1085

RECEIVED
JAN 25 1999
DIV. OF OIL, GAS & MINING

Monday, January 18, 1999

43037 15743

Division of Oil & Gas Mining
State of Utah
1594 West North Temple
3 Triad Center, Ste. 1210
Salt Lake City, UT 84116

Re: Ratherford Unit #19-32 Leg #3
Sec. 19, T41S, R24E
San Juan County, Utah

Dear Sirs:

Enclosed is the final computer colored log and geology report for the above referenced well.
Log filed in log file

We appreciate the opportunity to be of service to you and look forward to working with you again in the near future.

If you have any questions regarding the enclosed data, please contact us.

Sincerely,

Bill Nagel

Bill Nagel
Senior Geologist

BN/dn

Enc. 1 Final Computer Colored Log and Geology Report

cc Letter Only; Dana Larson; Mobil E & P U.S., Inc.; Midland, TX

RECEIVED
JAN 25 1999
DIV. OF OIL, GAS & MINING

MOBIL

RATHERFORD UNIT #19-32
NW HORIZONTAL LATERAL LEG #3
UPPER 1-A POROSITY BENCH
DESERT CREEK MEMBER
PARADOX FORMATION
SECTION 19, T41S, R24E
SAN JUAN, UTAH

GEOLOGY REPORT
prepared by

DAVE MEADE
PASON/ROCKY MOUNTAIN GEO-ENGINEERING CORP.
GRAND JUNCTION, COLORADO
(970) 243-3044

MICROFICHE

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WELL SUMMARY

OPERATOR:	MOBIL EXPLORATION & PRODUCTION U.S. INC.
NAME:	RATHERFORD UNIT #19-32 NW HORIZONTAL LATERAL LEG #3 IN 1-A POROSITY ZONE OF DESERT CREEK
LOCATION:	SECTION 19, T41S, R24E
COUNTY/STATE:	SAN JUAN, UTAH
ELEVATION:	KB:4796' GL:4785'
SPUD DATE:	12/04/98
COMPLETION DATE:	12/09/98
DRILLING ENGINEER:	SIMON BARRERA / BENNY BRIGGS
WELLSITE GEOLOGY:	DAVE MEADE / MARVIN ROANHORSE / LUKE TITUS
MUDLOGGING ENGINEERS:	DAVE MEADE / MARVIN ROANHORSE / LUKE TITUS
CONTRACTOR:	BIG "A" RIG 25
TOOLPUSHER:	J. DEES
HOLE SIZE:	4 ¾"
CASING RECORD:	SIDETRACK IN WINDOW AT 5412' MEASURED DEPTH
DRILLING MUD:	M-I
ENGINEER:	MIKE PITTSINGER
MUD TYPE:	FRESH WATER & BRINE WATER W/ POLYMER SWEEPS
DIRECTIONAL DRILLING CO:	SPERRY-SUN
ELECTICAL LOGGING:	NA
TOTAL DEPTH:	7126' MEASURED DEPTH; TRUE VERTICAL DEPTH-5541.95'
STATUS:	PREPARING WELL FOR COMPLETION AT END OF PROJECT

DRILLING CHRONOLOGY
RATHERFORD UNIT #19-32
1-A NW HORIZONTAL LATERAL LEG #3

DATE	DEPTH	DAILY	ACTIVITY
12/05/98	0'	0'	RIG DOWN & PREPARE TO MOVE TO 19-32 LOCATION-RIG UP-NIPPLE UP-RIG UP-PRES. TEST BOP-P.U. DRL COLLARS & SCRAPER ASSEM.-P.U. DRL COLLARS
12/06/98	0'	3'	P.U. DRL COLLARS-TIH-P.U. & STRAP DRLG PIPE-TIH-CIR & WASH 3' TO TOP OF PACKER-CIR. OUT-TOH-L.D. SCRAPER ASSEM.-P.U. WHIPSTOCK & STARTER MILL-ORIENT-TIH-R.U. GYRO DATA & RUN GYRO-PULL GYRO-SET & SHEAR OFF WHIPSTOCK @ 5405'-MILL W/STARTER MILL 5405' TO 5407'-CIR. BTMS UP-TOH-L.D. STARTER MILL-P.U. WINDOW MILLS-TIH-MILL W/WINDOW MILLS 5405' TO 5408'
12/07/98	5408'	113'	MILL W/WINDOW MILLS 5408' TO 5412'-PUMP SWEEP & CIR OUT-L.D. 23 JTS PIPE-TOH-L.D. MILLS-P.U. CURVE ASSEM.-ORIENT & TEST-P.U. 10 JTS PIPE-TIH-R.U. GYRO DATA & RUN GYRO-TIME DRLG 5412' TO 5415'-DIR DRLG & WIRE LINE SURVEYS TO 5450'-PULL GYRO-RIG DOWN & RELEASE GYRO DATA-DIR DRLG & SURVEYS
12/08/98	5521'	409'	DIR DRLG & SURVEYS T0 5643'(T.D. CURVE)-PUMP SWEEP & CIR OUT-L.D. 46 JTS DRL PIPE-TOH-L.D. CURVE ASSEM-P.U. LATERAL ASSEM.-ORIENT & TEST-TIH-P.U. 48 JTS DRL PIPE-TIH-DIR DRLG & SURVEYS
12/09/98	5930'	1196'	DIR DRLG & SURVEYS TO 7126' (T.D. LATERAL)-PUMP SWEEP & CIR SPLS-TOH-L.D. LATERAL ASSEMBLY-P.U. RETRIEVING HOOK-TIH
12/10/98	7126'	0'	TIH TO 5288'-CIR. & DISPLACE HOLE W/10# BRINE WATER-P.U. 4 JTS PIPE-LATCH INTO WHIPSTOCK & RETRIEVE-L.D. WHIPSTOCK-DID NOT RETRIEVE DEBRIS SUB-SHUT IN WELL & W.O. FISHING TOOLS

DAILY ACTIVITY

Operator: MOBIL
Well Name: RATHERFORD UNIT #19-32 NW 1-A HORIZONTAL LATERAL LEG #3

DATE	DEPTH	DAILY	DATE	DEPTH	DAILY
12/05/98	0'	0'			
12/06/98	0'	3'			
12/07/98	5408'	113'			
12/08/98	5521'	409'			
12/09/98	5930'	1196'			
12/10/98	7126'	TD			

BIT RECORD

OPERATOR: MOBIL
WELL NAME: RATHERFORD UNIT #19-32 NW 1-A HORIZONTAL LATERAL LEG #3

RUN	SIZE	MAKE	TYPE	IN/OUT	FTG	HRS	FT/HR
#1 (RR)	4 3/4"	STC	MF-3P	5412'/ 5643'	231'	22.0	10.5'
#2	4 3/4"	STC	MF-3P	5643'/ 7126'	1483'	24.0	61.8'

MUD REPORT

OPERATOR: MOBIL
WELL NAME: RATHERFORD UNIT #19-32 NW 1-A HORIZONTAL LATERAL LEG #3

DATE	DEPTH	WT	VIS	PLS	YLD	GEL	PH	WL	CK	CHL	CA	SD	OIL	WTR
12/05/98	6796'	8.8	26	1	1	0/0	8.0	NC	NC	28000	80	0%	0%	100%
12/06/98	5425'	8.6	26	1	1	0/0	8.0	NC	NC	28000	80	0%	0%	100%
12/07/98	5412'	8.6	26	1	1	0/0	8.0	NC	NC	28000	80	0%	0%	100%
12/08/98	5595'	8.6	26	1	1	0/0	12.0	NC	NC	28000	80	0%	0%	100%
12/09/98	6480	8.6	26	1	1	0/0	11.5	NC	NC	23000	220	0%	0%	100%

SPERRY-SUN DRILLING SERVICES
SURVEY DATA

Customer ... : Mobil (Utah)
Platform ... : RATHERFORD UNIT
Slot/Well .. : BA25/19-32 3A1

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	TVD	NORTHINGS FEET	EASTINGS FEET	VERTICAL SECTION	DOG LEG
5400.00	0.13	249.95	5399.17	32.41 N	66.80 W	61.47	0.00
5404.00	0.12	252.03	5403.17	32.41 N	66.81 W	61.47	0.27
5412.00	4.20	326.00	5411.16	32.65 N	66.98 W	61.77	52.11
5422.00	8.10	329.74	5421.10	33.56 N	67.54 W	62.84	39.18
5432.00	12.20	331.03	5430.94	35.09 N	68.41 W	64.60	41.06
5442.00	15.70	331.69	5440.65	37.21 N	69.56 W	67.01	35.04
5452.00	20.30	332.10	5450.16	39.94 N	71.02 W	70.09	46.02
5462.00	24.40	331.20	5459.40	43.28 N	72.82 W	73.89	41.14
5472.00	28.10	330.80	5468.37	47.15 N	74.97 W	78.32	37.04
5482.00	31.50	329.10	5477.05	51.45 N	77.46 W	83.28	35.03
5492.00	35.40	327.10	5485.39	56.12 N	80.38 W	88.79	40.52
5502.00	39.10	328.00	5493.35	61.23 N	83.62 W	94.84	37.40
5512.00	42.80	329.80	5500.90	66.84 N	87.00 W	101.39	38.83
5522.00	46.80	331.30	5507.99	72.98 N	90.46 W	108.43	41.37
5532.00	51.00	333.40	5514.57	79.65 N	93.96 W	115.96	44.88
5542.00	54.50	334.90	5520.62	86.82 N	97.42 W	123.90	36.98
5552.00	56.90	332.80	5526.25	94.23 N	101.07 W	132.14	29.61
5562.00	59.50	329.90	5531.52	101.69 N	105.14 W	140.63	35.82
5572.00	63.50	329.00	5536.29	109.25 N	109.61 W	149.42	40.77
5582.00	67.50	328.70	5540.44	117.04 N	114.32 W	158.51	40.09
5592.00	71.90	330.30	5543.91	125.12 N	119.07 W	167.89	46.49
5602.00	75.90	331.00	5546.68	133.49 N	123.78 W	177.50	40.56
5612.00	80.40	331.10	5548.74	142.05 N	128.52 W	187.28	45.01
5643.00	90.70	331.80	5551.14	169.16 N	143.27 W	218.13	33.30
5687.00	90.60	327.90	5550.64	207.20 N	165.36 W	262.12	8.87
5719.00	91.60	330.30	5550.02	234.65 N	181.79 W	294.11	8.12
5751.00	90.80	330.10	5549.35	262.41 N	197.69 W	326.10	2.58
5782.00	90.70	330.30	5548.95	289.31 N	213.09 W	357.10	0.72
5814.00	90.10	330.30	5548.72	317.11 N	228.95 W	389.10	1.87
5846.00	90.00	331.20	5548.70	345.03 N	244.58 W	421.09	2.83
5877.00	90.60	331.40	5548.53	372.22 N	259.47 W	452.09	2.04
5909.00	90.50	331.40	5548.23	400.31 N	274.79 W	484.07	0.31
5940.00	90.40	330.50	5547.98	427.41 N	289.84 W	515.07	2.92
5972.00	90.40	331.40	5547.76	455.38 N	305.38 W	547.06	2.81
6004.00	90.60	331.90	5547.48	483.55 N	320.57 W	579.05	1.68
6036.00	90.30	330.80	5547.23	511.63 N	335.91 W	611.04	3.56
6068.00	90.30	330.50	5547.06	539.52 N	351.60 W	643.04	0.94
6099.00	90.40	332.20	5546.87	566.72 N	366.46 W	674.03	5.49

SPERRY-SUN DRILLING SERVICES
SURVEY DATA

Customer ... : Mobil (Utah)
Platform ... : RATHERFORD UNIT
Slot/Well .. : BA25/19-32 3A1

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	TVD	NORTHINGS FEET	EASTINGS FEET	VERTICAL SECTION	DOG LEG
6130.00	90.70	329.80	5546.57	593.83 N	381.49 W	705.02	7.80
6162.00	91.20	329.40	5546.04	621.43 N	397.68 W	737.01	2.00
6194.00	91.70	329.20	5545.23	648.93 N	414.01 W	769.00	1.68
6225.00	90.60	327.80	5544.61	675.36 N	430.20 W	799.98	5.74
6257.00	90.20	327.30	5544.39	702.36 N	447.37 W	831.95	2.00
6289.00	91.10	327.10	5544.03	729.26 N	464.71 W	863.91	2.88
6321.00	91.50	327.10	5543.30	756.12 N	482.08 W	895.86	1.25
6352.00	90.50	327.70	5542.76	782.23 N	498.78 W	926.82	3.76
6384.00	91.40	328.00	5542.23	809.32 N	515.81 W	958.80	2.96
6416.00	91.80	328.00	5541.33	836.45 N	532.76 W	990.76	1.25
6448.00	92.20	327.80	5540.22	863.54 N	549.75 W	1022.72	1.40
6480.00	90.50	330.50	5539.46	891.00 N	566.16 W	1054.71	9.97
6511.00	90.80	330.80	5539.11	918.02 N	581.35 W	1085.70	1.37
6543.00	91.70	331.40	5538.41	946.03 N	596.81 W	1117.69	3.38
6575.00	92.30	331.90	5537.30	974.17 N	612.00 W	1149.66	2.44
6607.00	90.70	331.40	5536.46	1002.32 N	627.19 W	1181.63	5.24
6639.00	91.40	331.70	5535.87	1030.45 N	642.43 W	1213.61	2.38
6670.00	91.50	331.50	5535.09	1057.71 N	657.17 W	1244.59	0.72
6701.00	89.80	329.90	5534.74	1084.74 N	672.34 W	1275.58	7.53
6732.00	89.80	330.60	5534.85	1111.66 N	687.72 W	1306.58	2.26
6764.00	88.50	330.50	5535.32	1139.52 N	703.45 W	1338.58	4.07
6796.00	89.00	330.30	5536.02	1167.34 N	719.25 W	1370.57	1.68
6828.00	89.80	330.30	5536.35	1195.13 N	735.11 W	1402.57	2.50
6859.00	90.60	330.10	5536.25	1222.03 N	750.51 W	1433.57	2.66
6890.00	89.40	329.80	5536.25	1248.86 N	766.04 W	1464.57	3.99
6922.00	89.10	329.60	5536.66	1276.49 N	782.18 W	1496.56	1.13
6954.00	88.20	329.20	5537.42	1304.03 N	798.46 W	1528.55	3.08
6986.00	88.30	329.80	5538.40	1331.59 N	814.70 W	1560.54	1.90
7017.00	88.10	329.90	5539.37	1358.38 N	830.26 W	1591.52	0.72
7049.00	87.20	327.30	5540.68	1385.67 N	846.92 W	1623.48	8.59
7093.00	89.80	328.70	5541.83	1422.96 N	870.22 W	1667.43	6.71
7126.00	89.80	328.70	5541.95	1451.16 N	887.37 W	1700.43	0.00

THE DOGLEG SEVERITY IS IN DEGREES PER 100.00 FEET.
N/E COORDINATE VALUES GIVEN RELATIVE TO WELL HEAD.
TVD COORDINATE VALUES GIVEN RELATIVE TO WELL HEAD.
THE VERTICAL SECTION ORIGIN IS WELL HEAD.
THE VERTICAL SECTION WAS COMPUTED ALONG 330.00 (TRUE).
CALCULATION METHOD: MINIMUM CURVATURE.

LAST SURVEY IS A PROJECTION TO THE BIT AT TD.

SAMPLE DESCRIPTIONS

OPERATOR: MOBIL
WELL NAME: RATHERFORD UNIT #19-32 NW 1-A HORIZONTAL LATERAL LEG #3

DEPTH	LITHOLOGY
5412.00 5420.00	"LS crm-ltbrn,crpxl-micxl,rthy-cln,occ chk-sl plty,dol,scat ANHY incl,tt,NFSOC,w/thn DOL ltbrn-brn crpxl-micxl,rthy-cln,sl lmy,dns,tt,NFSOC scat v thn dkgy-plty sl lmy-dol SH,tr CMT-METAL frag"
5420.00 5430.00	"LS AA,incr intbd dns lmy DOL,w/v rr scat thn dkgy-dkgybrn SH lams & rr tr CMT frag"
5430.00 5440.00	"LS crm-ltgybrn-tan,occ wh-off wh,ltbrn,crpxl-micxl,pred dns-cln,occ chk-sl mrly,sl anhy/rr xl ANHY,tt,NFSOC & scat CHT brn-dkgybrn "
5440.00 5450.00	"DOL m-dkbrn,crpxl-sl micxl,cln,dns-sl arg,sl calc-occ grdg to dol LS ip,tt-r intxl POR,NFSOC w/ LS AA,NFSOC & scat CHT brn-dkbrn"
5450.00 5460.00	"LS tan-ltbrn,ltgybrn-ltgy,occ wh,brn,crpxl-micxl,pred dns-cln,occ chk-sl mrly,sl anhy,sl dol-occ grdg to lmy DOL,sl rthy/tr blk-dkbrnblk SH lam,tt,NFSOC w/scat CHT ltbrn-ltgybrn "
5460.00 5470.00	"SH dkgyblk-gy,occ blk,sbplty-plty,slty,calc-lmy,sl carb/tr blk carb pp-frag incl,calc-sl lmy,occ grdg to rthy-slty sl carb LS,w/ LS AA,tt NFSOC"
5470.00 5480.00	"LS m-ltgybrn-brn,occ ltgy,tan,tr wh,micxl-crpxl,bcmg rthy-slty,sl dol,sl chky-mrly ip,bcmg dkgy-blk dol-calc mica sl carb SH AA,tr GAST,rr brn CHT,tt-rr intxl POR,NFSOC"
5480.00 5500.00	"LS lt-mgybrn,tan,crm-wh,occ ltbrn,micxl-crpxl,pred rthy-sl slty,occ cln-dns,chk-sl mrly,v sl anhy,sl dol,tt-rr intxl POR,NFSOC,w/DOL m-dkbrn,crpxl,dns,sl calc,tt,NFSOC & CHT AA"
5500.00 5510.00	"LS AA,micxl-vfxl-crpxl,rthy-slty,chk-sl mrly ip,incr anhy/scat xl ANHY frag-incl,sl dol ip,tt-rr intxl POR/fl,NFSOC,w/DOL brn-dkbrn,crpxl-micxl,sl calc-arg,pred cln-dns,sl slty/rr blk SH lam-mot,tt,NFSOC"
5510.00 5520.00	"LS ltgy-wh,occ ltgybrn,crm-ltbrn,tr ltbrn,micxl-crpxl,occ vfxl,pred rthy-slty-occ grdg vf gr SS/pp LS intcl & mtx,cln-dns,chk-sl mrly,anhy/scat xl ANHY,v sl dol,tt-rr intxl POR/fl,NFSOC,tr CHT clr-trnsl"
5520.00 5540.00	"LS tan-ltgybrn-ltbrn,occ ltgy-crm,tr brn,micxl-crpxl,dns,cln,sl chk-mrly ip,sl anhy/tr scat xl ANHY,tr rthy-slty-sl sdy frag,tt,NFSOC,w/ DOL brn-dkbrn,crpxl,dns,cln,sl calc-chk,arg,tt,NFSOC"
5540.00 5550.00	"LS crm-tan-ltgy,crpxl,occ micxl,dns,anhy,sl dol,mrly ip,v rr mic fos,tt,NFSOC,thn intbd rthy-arg cln-dns v sl lmy ltbrn-brn occ gybrn DOL-v mrly ip,bcmg blk-dkgy carb sl slty SH"

DEPTH	LITHOLOGY

5550.00 5560.00 "SH blk-dkgy sbblky-sbplty sft-frm mica sl slty calc-dol carb-sooty w/v scat LS & SOL frag AA,NFSOC"

5560.00 5570.00 "SH AA,w/scat crm-tan-ltbrn micxl-crpxl dns sl dol occ mrly v tt LS & gybrn-brn micxl-occ crpxl rthy-arg occ mrly DOL w/NFSOC"

5570.00 5580.00 "SH AA,bcmg pred LS crm-tan-ltbrn,crpxl-micxl,dns,sl dol,occ arg,anhy-tr ANHY xl,v rr mic fos,tt,NFSOC & DOl brn-gybrn,micxl-crpxl,dns-sl rthy,occ arg,v sl lmy,anhy ip,tt,NFSOC"

5580.00 5590.00 "LS tan-ltbrn,occ crm,crpxl-micxl,rr vfxl-gran,pred dns PKST w/rr thn GRNST,sl anhy,occ dol,tt-rr intxl POR,rr-tr spty bri yel FLOR,n-v rr vis STN,rr slow stmg CUT,rr thn brn micxl tt DOL intxl-tr SH CVGS"

5590.00 5610.00 "LS crm-tan-ltbrn,rr wh-ltgy,crpxl-vfxl,occ gran-micsuc,pred sl ooc-rr oom GRNST,scat dns plty-chk PKST intcl-lams,occ DOL cmt,scat ANHY xl-incl,mfr-fr ool-mg intxl POR,fr bri-tr dull yel FLOR,tr-mfr ltbrn STN-rr blk dd o STN,mfr-mg slow-mod fast stmg CUT"

5610.00 5630.00 "LS AA,POR-FLOR-STN-CUT AA,w/scat DOL & SH CVGS AA"

5630.00 5643.00 "LS tan-ltbrn,rr wh-crm,micxl-vfxl,occ gran-micsuc,pred ooc-sl oom GRNST,rr-tr dns plty-chk sl anhy ool ip PKST intcl,tr DOL cmt,rr ANHY xl-incl,fr-mg ool-fr intxl POR,fr bri-tr dull yel FLOR,fr ltbrn STN-rr blk dd o STN,mg slow-mod fast stmg CUT"

5643.00 5660.00 "LS tn-ltbn-occ mbn,mott,mic-vf xln,mdns mtx ip,microsuc-grn mtx,pred oom ool GRNST,tr dns sl chlky/anhy PKST,rr carb mat;pred interxln to ool fab POR w/oom fab POR,mf-ltbn-mbn o STN,mbri yelgld FLOR,mod fst to mod slo CUT"

5660.00 5680.00 "LS AA, pred oom/ooc ool GRNST,fst blmg to mg slo strmg mlky ring CUT,g-mbri-bri yelgld FLOR,mf-mg ltbn o STN tr dd blk o STN"

5680.00 5700.00 "LS, ltbn-tn-crm,occ mbn-ofwht,mott,mic-pred vf xln,grn-microsuc mtx,mnds-rr dns mtx,sl dol,occ anhy/chlky,pred ool oom/ooc GRNST,rr dns sl plty ltgy-ltbn PKST,FLOR AA,CUT AA,o STN AA,pred oom/ooc fab POR w/an intrxln fab POR ip"

5700.00 5730.00 "LS AA,sl decr in ooc fab POR,pred mf-mg interxln to ool fab POR w/scat oom fab POR,g-even bri yelgld FLOR,fst blmg to mg slo strmg mlky ring CUT,pred mf-mg ltbn-mbn rr blk dd o STN"

5730.00 5760.00 "LS,ltbn-tn-crm,occ ofwht-mbn,sl mott-mott,mic-pred vf xln,mdns mtx ip,pred grn-microsuc mtx,rr dns sl chlky occ sl plty sl ool PKST,pred ool mdns sl oom/ooc to oom/ooc GRNST,FLOR AA,CUT AA,o STN AA"

5760.00 5790.00 "LS,ltbn-tn-crm-mbn,mott ip,mic-vf xln,grn-microsuc mtx w/mdns mtx ip,pred ool GRNST,rr dns PKST,rr calc frac flgs,sme chlky/anhy fld casts,sl chlky ip,sl dolo,rr ANHY xls-sl anhy ip,rr carb mat,v rr foss frgs"

DEPTH	LITHOLOGY

5790.00 5820.00 "LS tn-ltbn-occ mbn,mott,mic-vf xln,mdns mtx ip,microsuc-grn mtx,pred oom ool GRNST,tr dns sl chlky/anhy PKST,rr carb mat;pred interxln to ool fab POR w/oom fab POR,mf-ltbn-mbn o STN,rr blk dd o STN mbri yelgld FLOR,mod fst to mod slo strmg mlky ring CUT"

5820.00 5850.00 "LS AA,pred mg-interxln to ool fab POR w/sl oom to ooc fab POR ip,mg-g mbri-bri yelgld FLOR,fst dif to mf-mg slo strmg dif mlky ring CUT,f-mg ltbn-occ mbn o STN w/sme blk dd o STN flg casts"

5850.00 5880.00 "LS,ltbn-tn-mbn,occ ofwht-ltgy,sl mott-mott,mic-pred vf xln,mdns mtx ip,v sl dol to sl DOL cmt,rr foss frgs & calc xl frac flgs,grn-microsuc mtx,pred oom/ooc sl ool to ool GRNST,FLOR AA,CUT AA,o STN AA,pred mg-intrxln to oom/ooc fab POR"

5880.00 5910.00 "LS AA, pred oom/ooc ool GRNST,fst blmg to mg slo strmg mlky ring CUT,g-mbri-bri yelgld FLOR,mf-mg ltbn o STN tr dd blk o STN"

5910.00 5940.00 "LS ltbn-mbn-tn,mott,mic-vf xln,mdns-tr dns mtx,grn mtx,sl microsuc mtx,v sl dol,ool rich oom/ooc GRNST w/scat sl ool to ool dns sl chlky/anh PKST-occ sl plty & ltgy;pred mf-mg tr reduced oom/ooc fab POR w and intrxln fab POR ip,mbri-bri yelgd FLOR"

5940.00 5970.00 "LS AA,reduced to mg-ooomoldic to oolicastic w/ an intrxln fab POR ip,even mbri-bri yelgld FLOR,fst blmg dif to f-slo strmg milky dif CUT,pred ltbn-mbn mtx o STN w/sme dd blk o STN,tr chlky/anhy fld casts"

5970.00 6000.00 "LS,mbn-ltbn-tn,sl mott-mott,mic-pred vf xln,pred ool oom/ooc GRNST,rr ANHY xls-v sl anhy & sl DOL cmt,rr calc frac flgs,v sl rthy;pred mf-mg oom/ooc fab POR,intrxln fab POR ip,poss sme frac POR,fst to mg-slo strmg dif mlky CUT,pred mf-mg ltbn-mbn o STN"

6000.00 6030.00 "LS AA,pred reduced-mg oom to ooc fab POR w/an intrxln fab POR ip,mg-g mbri-bri yelgld FLOR,fst dif to mf-mg slo strmg dif mlky ring CUT,f-mg ltbn-mbn o STN w/sme blk dd o STN flg casts & coating frac flgs"

6030.00 6060.00 "LS,ltbn-mbn,mott ip,mic-vf xln,grn-microsuc mtx w/mdns mtx ip,pred ool GRNST,rr dns sl plty sl ool occ chlky PKST,rr calc frac flgs,sme chlky/anhy fld casts,sl chlky ip,sl dolo,rr ANHY xls-sl anhy ip;pred mg-oom/ooc fab POR,mf-mg ltbn-mbn mtx o STN"

6060.00 6090.00 "LS AA, pred oom/ooc ool GRNST,fst blmg to mg slo strmg mlky ring CUT,even g-mbri-bri yelgld FLOR,mf-mg ltbn o STN rr dd blk flg casts o STN"

6090.00 6120.00 "LS,mbn-ltbn-tn,mott,mic-pred vf xln,pred ool oom/ooc GRNST,rr ANHY xls-v sl anhy & sl DOL cmt,rr calc frac flgs;pred mf-mg oom/ooc fab POR,intrxln fab POR ip,poss sme frac POR,fst to mg-slo strmg dif mlky CUT,pred mf-mg ltbn-mbn o STN"

6120.00 6150.00 "LS AA, pred reduced-mg oom/ooc fab POR,fst to mg slo strmg mlky ring CUT,g-mbri-bri yelgld FLOR,mf-mg ltbn o STN rr dd blk o STN"

DEPTH	LITHOLOGY

6150.00 6180.00 "LS tn-ltbn-mbn,mott,mic-pred vf xln,mdns mtx,microsuc-grn mtx,pred oom/oo ool GRNST,tr dns sl chlky/anhy PKST;pred oom/ooc w/intrxln fab POR,mf-ltbn-mbn o STN,rr blk dd o STN mbri yelgld FLOR,mod fst to mod slo strmg mlky ring CUT"

6180.00 6210.00 "LS ltbrn-ltgybrn,tan,crpxl-vfxl,occ gran-micsuc,pred ooc-sl oom GRNST,rr-sl tr sl ool PKST intcl,occ scat alg mat,v sl dol,v sl anhy-v rr ANHY xl,fr-mg ool-sl tr intxl-alg POR,mg bri yel FLOR,fr ltbrn STN-tr blk dd o STN,mg mod fast stmg mlky CUT"

6210.00 6240.00 "LS AA,v sl incr trnsl ANHY xl,POR-FLOR-STN-CUT"

6240.00 6270.00 "LS AA,v sl incr dns sl ool PKST frag & ANHY xl,sl decr intxl-ool POR,FLOR-STN-CUT AA"

6270.00 6310.00 "LS ltbrn-ltgybrn,tan,crpxl-vfxl,occ gran-micsuc,pred ooc-sl oom GRNST,rr-sl tr sl ool PKST intcl,occ scat alg mat,v sl dol,v sl anhy-v rr ANHY xl,fr-mg ool-sl tr intxl-alg POR,mg bri yel FLOR,fr ltbrn STN-tr blk dd o STN,mg mod fast stmg mlky CUT"

6310.00 6330.00 "LS AA,pred v g ooc-sl oom GRNST,w/rr-sl tr scat dns sl ool anhy v rr chk-plty PKST intcl,rr scat trnsl ANHY xl,sl DOL rich cmt,fr-mg ool-fr intxl POR,mg bri-tr dull yel FLOR,fr brn STN-tr blk dd o STN,mg mod fast-tr fast stmg mlky CUT"

6330.00 6350.00 "LS AA,incr brn STN,sl incr blk dd o STN,POR-FLOR-CUT AA"

6350.00 6390.00 "LS AA,scat dns sl ool occ chk-plty anhy PKST intcl,fr-mg intxl-ool POR,mg bri-tr dull yel FLOR,fr ltbrn-brn STN-tr blk dd o STN,fr-mg mod fast-fast stmg mlky CUT"

6390.00 6450.00 "LS ltbrn-brn,tan,crpxl-vfxl,occ gran-micsuc,pred ooc-sl oom GRNST,tr sl ool dns occ chk-plty PKST intcl,rr alg mat,rr DOL cmt,v sl anhy-v rr ANHY xl,fr-mg ool-fr intxl-v rr alg POR,mg bri yel FLOR,fr ltbrn STN-tr blk dd o STN,mg mod fast stmg mlky CUT"

6450.00 6470.00 "LS pred ooc-sl oom GRNST,v rr vis alg mat,scat dns sl ool chk-plty ip sl anhy PKST intcl-frag,tr DOL cmt,scat trnsl ANHY xl-rr cmt,fr-mg ool-fr intxl POR,fr-mg bri yel-tr dull yel FLOR,fr ltbrn-brn STN-mfr blk dd o STN,mfr-mg mod fast-fast stmg mlky CUT"

6470.00 6480.00 "LS AA,mg intxl-fr ool POR-v rr alg POR,FLOR-STN-CUT AA"

6480.00 6520.00 "LS ltbrn-tan,rr brn,micxl-vfxl,gran-micsuc ip,pred ooc-sl oom GRNST,rr ool dns chk-plty ip PKST intcl,v rr alg mat,tr DOL cmt,sl anhy-v rr ANHY xl,fr-mg ool-intxl-v rr alg POR,mg bri yel FLOR,fr ltbrn STN-tr blk dd o STN,mg mod fast-fast stmg mlky CUT"

6520.00 6550.00 "LS AA,incr gran-micsuc-v rr suc tex,scat dns occ chk-plty ool PKST intcl-frag,fr ool-mg intxl POR,FLOR-STN-CUT AA"

6550.00 6570.00 "LS AA,incr scat dns chk-sl plty occ ool PKST intcl-frag-v rr lams,sl decr intxl POR-pred ool POR AA,FLOR-STN-CUT AA"

DEPTH	LITHOLOGY

6570.00 6600.00 "LS pred ooc-sl oom micsuc GRNST AA,sl incr dns sl ool chk-plty PKST intcl,POR-FLOR-STN-CUT AA"

6600.00 6620.00 "LS ltbrn-tan,rr brn,micxl-vfxl,gran-micsuc ip,pred ooc-sl oom GRNST,rr sl ool dns occ chk-plty crpxl PKST intcl,rr DOL cmt,anhy ip-v rr ANHY xl,fr-mg ool-intxl POR,mg bri yel FLOR,mfr ltbrn STN-rr blk dd o STN,mg mod fast-fast stmg mlky CUT"

6620.00 6660.00 "LS ltbrn-brn-tan,AA,pred ooc-sl oom GRNST,w/rr scat dns sl ool occ chk-plty PKST,rr DOL rich cmt,pred mg intxl-ool POR,mg bri-rr dull yel FLOR,mfr ltbrn-rr brn STN,v rr blk dd o STN,mg mod fast-fast stmg mlky CUT"

6660.00 6690.00 "LS AA,sl incr dns occ chk-plty sl ool PKST intcl,bcmg mg intxl-fr ool POR,FLOR-STN-CUT AA"

6690.00 6720.00 "LS crm-tan-ltbrn,crpxl-vfxl,gran-misuc ip,pred sl ooc-oom GRNST,w/scat dns sl ool anhy chk-plty ip PKST intcl,sl DOL cmt,v rr ANHY xl,mg bri-rr dull yel FLOR,mfr ltbrn-rr brn-v rr blk STN,mg mod fast-fast stmg CUT"

6720.00 6760.00 "LS AA,sl incr gran-micsuc tex,scat trnsl-clr ANHY xl-incl,sl decr ool POR,mg intxl POR,FLOR-STN-CUT AA"

6760.00 6780.00 "LS AA,v rr scat PKST intcl AA,w/POR-FLOR-STN-CUT AA"

6780.00 6810.00 "LS ltbrn-brn,tan,crpxl-vfxl,occ gran-micsuc,pred ooc-sl oom GRNST,scat ool dns chk-plty ip PKST intcl-frag,tr DOL cmt,v sl anhy-v rr ANHY xl,fr-mg ool-fr intxl-v rr alg POR,mg bri yel FLOR,fr ltbrn STN-tr blk dd o STN,mg mod fast stmg mlky CUT"

6810.00 6840.00 "LS pred tan,rr crm,AA,gran-micsuc ip-v rr suc,sl incr trnsl ANHY xl,v rr trnsl CHT frag,mg intxl-fr ool POR,mg bri-rr dull yel FLOR,mfr ltbrn-rr blk STN,fr-mg mod fast-tr fast stmg mlky CUT"

6840.00 6860.00 "LS tan-ltbrn,occ crm,crpxl-vfxl,gran-micsuc ip,rr suc tex,pred sl ooc-oom GRNST,tr dns ool anhy PKST,v rr CHT frag,occ DOL cmt,rr ANHY xl,mg intxl-fr ool POR,mg bri yel FLOR,fr ltbrn-rr brn-rr blk STN,fr-mg mod fast-tr fast stmg mlky CUT"

6860.00 6880.00 "LS AA,rr scat dns PKST intcl,tt-mg intxl-fr ool POR,mg-fr bri yel FLOR,tr ltbrn-brn STN-v rr blk dd o STN,fr-mg mod fast stmg mlky CUT"

6880.00 6920.00 "LS, tn-crm-ltbn,occ bn,sl mott,mic-vf xln,mdns mtx-grn-microsuc mtx,pred sl oom/ooc GRNST w/rr dns sl chlky/anhy dns PKST,v rr buf-ltbn CHT frgs,sl dol;pred intrxln to fr-ool fab POR,fst strmg mlky CUT,even bri yelgld FLOR,pred ltbn-mbn o STN,rr blk res"

6920.00 6950.00 "LS AA,pred mf-mg intrxln to fr-ool fab POR,scat sl oom/ooc fab POR,even bri yelgld FLOR,fst blmg to fr slo strmg mlky ring CUT,mf-mg ltbn mtx o STN,rr blk dd o STN"

DEPTH	LITHOLOGY

6950.00 6980.00 "LS AA,ltbn-tn-crm,occ bn,pred sl ool to ool sl oom/ooc mdns GRNST,rr dns sl ool occ chlky/anhy PKST,v sl dol,tr calc frac flgs;FLOR AA,CUT AA,o STN AA"

6980.00 7010.00 "LS tn-ltbn,mic-vf xln,mdns mtx,microsuc-grn mtx,pred sl oom/ooc GRNST,tr dns sl chlky/anhy PKST;pred scat oom/ooc w/fr-intrxln-ool fab POR,mf-ltbn-mbn o STN,rr blk dd o STN mbri yelgld FLOR,mod fst to mod slo strmg mlky ring CUT"

7010.00 7040.00 "LS AA,decr in dns sl ool sl chlky PKST,pred sl ool sl oom/ooc GRNST,even bri yelgld FLOR,fst dif mg mlky ring CUT,pred ltbn-occ mbn o STN,rr blk dd o STN"

7040.00 7070.00 "LS,ltbn-tn-crm-ofwht-occ mbn,sl mott,mic-vf xln,grn-microsuc-mdns mtx,v sl dolo,rr ANHY xls-sl anhy,occ sl chlky,tr chlky fld casts,pred GRNSt w/v rr dns PCKST;pred mf-mg intrxln to ool fab POR,even yelgld FLOR,fst blmg to mf slo strmg CUT,mg-ltbn o STN"

7070.00 7100.00 "LS AA,pred mf-mg intrxln-mf-f ool fab POR,scat sl oom/ooc fab POR,even mg-g bri yelgld FLOR,fst blmg to mf slo strmg mlky tring CUT,pred mf-mg ltbn-occ bn mtx o STN w/rr blk dd o STN res"

7100.00 7126.00 "LS,ltbn-tn,mic-pred vf xln,pred ool sl oom/ooc GRNST,rr ANHY xls-v sl anhy & sl DOL cmt,rr calc frac flgs;pred mf-mg oom/ooc fab POR,intrxln fab POR ip,poss sme frac POR,fst to fr-slo strmg dif mlky CUT,pred mf-mg ltbn-occ mbn o STN"

FORMATION TOPS

OPERATOR: MOBIL
WELL NAME: RATHERFORD UNIT #19-32 NW 1-A HORIZONTAL LATERAL LEG #3

FORMATION NAME		SAMPLES MEASURED DEPTH	SAMPLES TRUE VERTICAL DEPTH	DATUM KB:4796'
LOWER ISMAY		5480'	5475'	-679'
GOTHIC SHALE		5549'	5524'	-728'
DESERT CREEK		5575'	5538'	-742'
UPPER DC 1-A ZONE		5591'	5548.5'	-752.5'

GEOLOGICAL SUMMARY

AND

ZONES OF INTEREST

The Mobil Exploration and Production U.S., Inc., Ratherford Unit #19-32 Southeast Horizontal Lateral Leg #3 was a re-entry of the Mobil Ratherford Unit #19-32 located in Section 19, T41S, R24E, and was sidetracked in a southeasterly direction from 5412' measured depth, 5411' true vertical depth, on December 7, 1998. The lateral reached a measured depth of 7126', true vertical depth of 5541.95' at total depth, with a horizontal displacement of 1700.4' and true vertical plane of 328.7 degrees on December 9, 1998. The lateral was terminated in the 1-A porosity zone in the Upper Desert Creek Member of the Paradox Formation. The curve and lateral were drilled with fresh water and brine water with polymer sweeps as the drilling fluid. The proposed target line was used as a reference point throughout the lateral. The curve and lateral sections were drilled with no significant mechanical problems. No fluid loss was noted, with only a minor flow noted through the lateral section, with no flow noted in the curve section.

The purpose of the Ratherford Unit #19-32 southeast lateral Leg #3 was to penetrate and drill 1700' horizontally in the Desert Creek 1-A porosity bench. To evaluate the effective porosity and permeability, the hydrocarbon and gas potential, if possible to estimate the thickness of the carbonate facies and to define the lithology of the Desert Creek 1-A zone of the Paradox Formation. In this southeasterly direction, the 1-A porosity bench appears to have a very consistent, a well-developed porosity and an estimated thickness of approximately 12 feet. The curve kicked-off in the Upper Ismay carbonate cycle of the Upper Paradox formation on December 7, 1998 prior to encountering the typical stratigraphic sections of the Lower Ismay carbonate cycle, Gothic Shale, the thin Upper Desert Creek transition zone and the Upper Desert Creek 1-A porosity bench of the Upper Paradox Formation.

The curve section began at a measured depth of 5412', true vertical depth 5411' in the Upper Ismay carbonate cycle of the Upper Paradox Formation. The lower 68' of the Upper Ismay was dense, light brown to tan, cream to light gray brown, occasionally white, tight limestone. This cryptocrystalline to microcrystalline limestone was slightly dolomitic, anhydritic, and had traces of a chalky and argillaceous texture. Associated with this facies are traces anhydrite crystals and inclusions, very rare fossil fragments, very rare thin dark gray to black carbonaceous soft shale and scattered thin interbeds to inclusions of light to dark brown, some medium to dark gray brown, crypto to microcrystalline, earthy to marly dolomite. Scattered through out this lower portion of the Upper Ismay were light to dark brown to dark gray chert fragments. The dense limestone and thin dolomites at the base of the Upper Ismay, beginning at a measured depth of 5476', became increasingly marly and graded into the black to dark gray, slightly to very limey and dolomitic shale of the Hovenweep Shale. The Upper Ismay carbonate had no visible porosity and no sample show. The thin Hovenweep shale was seen as a very minor increase in the penetration rate as well as a slight increase in dark gray to black, very dolomitic shale. The Hovenweep Shale was noted from 5476' to 5480' measured depth, 5473' to 5475' true vertical depth, with the shale being poorly represented in the samples.

The top of the Lower Ismay member of the Upper Paradox Formation was picked at a measured depth of 5473', true vertical depth 5470', based primarily on sample identification and a very slight decrease in the rate of penetration. The upper 21' of the Lower Ismay was predominately a tan to cream, light brown, light to medium gray brown, cryptocrystalline to microcrystalline, very

slightly anhydritic, with very rare thin anhydrite streaks, very slightly fossiliferous, dense limestones. These limestones had thinly interbedded argillaceous to clean, brown to dark brown, microcrystalline dolomites, very thin black carbonaceous shale partings and scattered dark chert fragments. The Lower Ismay, from measured depths of 5501' to 5519', was a white to cream to tan; brown to light gray, crypto to microcrystalline, argillaceous to chalky, occasionally clean to dense, slightly silty to rare very silty streaks. This limestone had interbedded thin anhydrite streaks. Also noted in this interval were thinly interbedded tan to light to dark brown, microcrystalline, dense dolomites with an argillaceous texture and scattered, thin dark gray to black, slightly carbonaceous shale laminations and very rare scattered brown to black chert fragments. As the curve continued from the measured depths of 5519' to 5540', in the Lower Ismay the limestones, were predominately white to cream to light gray, tan to brown, cryptocrystalline to microcrystalline, limestone packstones. These limestones occasionally anhydritic, chalky and occasionally dolomitic, and had rare scattered anhydrite inclusions and were slightly marly. This limestone became increasingly dense with depth and had scattered streaks of microcrystalline, light to medium brown, earthy dolomites. Scattered through out this interval were rare microfossils and translucent to clear chert fragment, and very rare thin black carbonaceous shale partings. The basal 9 feet of the Lower Ismay, from a measured depth of 5540' to a measured depth of 5549', was a very dense, slightly dolomitic limestone packstone and earthy limey dolomites. These limestones and dolomites became slightly to very marly with depth, and had scattered anhydrite interclasts and chert fragments. The basal limestones and thin dolomites were very tight with no visible porosity or sample show. These basal Lower Ismay carbonates graded into limey to dolomitic carbonaceous shales of the Gothic Shale.

The Gothic Shale was penetrated at a measured depth of 5549', true vertical depth 5524', and gradationally underlies the Lower Ismay. The top of the Gothic was picked at a gradual increase in the penetration rate and a significant increase in the amount of black carbonaceous shale in the cuttings. This shale member of the Upper Paradox Formation was seen have a vertical thickness of 14 feet in this northwesterly direction. This shale is black to dark gray shale, carbonaceous, occasionally grainy to silty, soft to slightly firm, sooty, slightly fissile, subblocky to subplaty, calcareous to slightly dolomitic and slightly micaceous. Very thin partings of dense, very slightly argillaceous, occasionally dolomitic limestones and clean to very argillaceous limey dolomites were noted in this shale member. The Gothic overlays the top of the Desert Creek Member with a sharp contact.

The top of the Desert Creek Member of the Upper Paradox Formation was picked at a measured depth of 5575', 5538' true vertical depth, in an rather abrupt decrease in penetration rate and an increase in the amount of dense limestone packstone in the samples. This transition zone had a true vertical thickness of approximately ten feet. The transition zone between the Gothic Shale and the top of the Upper Desert Creek 1-A porosity zone was predominately a dense limestone packstone, which had streaks of a very argillaceous texture and had thinly interbedded argillaceous to dense, slightly limey to marly dolomites. Also noted were very anhydrite inclusions. The limestones of the transition zone are light brown to tan to cream, with some white, cryptocrystalline to microcrystalline, with very rare very finely crystalline streaks, dense to slightly silty, and very slightly dolomitic. Scattered in the limestones are very thin, dark brown, very argillaceous, and slightly marly, limey, dense dolomites, with rare, very thin black, slightly micaceous, calcareous, very slightly carbonaceous shale partings. The limestones of the transition zone had a streak of very poor intercrystalline porosity, with a very poor, weak sample show. The basal two (2) feet of the transition zone the dense limestones became increasingly oolitic and graded in to the oolicastic to oomoldic limestones of the upper 1-A porosity bench.

The top of the Desert Creek Upper 1-A porosity zone was encountered at a measured depth of 5591', true vertical depth of 5548.5'. The top was picked on the lithology becoming predominately a good oolicastic to oomoldic limestone grainstone with a significant increase in the penetration rate, visible porosity and sample show. A slight increase in the background gas was noted due to the amount of oil and gas was noted in the drilling fluid, with a small to moderate 4' to 6' flare as the drilling fluid was put through the gas buster. This oolicastic to oomoldic, very slightly algal limestone

grainstones marked the 1-A porosity zone and were continuos through out the curve section. The 1-A zone has an apparent thickness of almost 12' in this northwesterly direction and thickened to approximately 14 feet as the lateral approached the R.U. #19-21 well location. The limestones grainstones are tan to light brown to cream, microcrystalline to very fine crystalline, with a granular to slightly microsucrosic texture and were very slightly dolomitic. The grainstones have a very minor amount of anhydrite crystal growth in the oolicasts and molds as well as in the intercrystalline matrix and had very rare, scattered translucent anhydrite inclusions. This grainstone facies had a moderately good oolitic to intercrystalline porosity with a very minor amount of possible algal development. The sample show was moderately fair and increased to moderately good, with a trace to fair amount of brown to light brown oil stain and had minor traces of black bitchimum staining* on the crystal faces and in the oolicasts and molds. The oolicastic to oomoldic to slightly algal grainstones had a fair to moderately good bright to occasionally dull yellow fluorescence and a fair moderately fast to a trace fast streaming cut. Scattered with in the porous limestone grainstone were rare very slightly oolitic, dense limestone packstones interclasts and laminations. These packstone are cream to tan, occasionally white, crypto to very slightly microcrystalline, slightly chalky to occasionally platy, clean and very slightly anhydritic. These packstones have no visible porosity or sample show.

The curve portion of the lateral was completed at a measured depth of 5643', true vertical depth 5551', with a horizontal displacement of 218', bearing 3331.8 degrees, with an inclination of 90.7°, on December 8, 1998, near the middle of the 1-A porosity zone. At this point a trip was made to lay down the curve assembly and pickup the lateral assembly.

Drilling of the northwest lateral was resumed also on December 8, 1998, in the Upper Desert Creek 1-A porosity zone of the Upper Paradox Formation. The lateral was slid for the first 62' in order to level the lateral, to control the horizontal plane direction and to put the lateral assembly out far enough to begin rotating. The lateral was begun in the good oolicastic to oomoldic limestone grainstone facies, one (1) foot above the proposed target line. This limestone grainstone, as noted above, was a tan to light brown, some brown, microcrystalline to very fine crystalline, granular to microsucrosic, oolicastic to oomoldic, slightly dolomitic to some dolomite rich cement, with occasionally calcite and anhydrite cement and very rare inclusions. These grainstones had a fair to good oolitic to intercrystalline porosity, some very minor algal porosity, moderately good bright yellow fluorescence, a moderately fair light brown to brown oil stain, with trace to poor black bitchimum* stain, and a moderate to moderately fair fast to slow streaming cut. Traces of dense, very slightly oolitic, and occasionally chalky to platy packstone was noted as the well bore was attempted to be turned upward.

As the well path was continued, the lateral was drilled about 1' to 2' above and parallel to the proposed target line, with a very shallow upward angle. Upon reaching a measured depth of 6130', 5546.6' true vertical depth, with a horizontal displacement of 705' a zone of lower porosity or a very thin streak was encountered tuning the well path upward at an increasing angle. There was no significant change in either the penetration rate or the lithology at this point. The well path was continued upward at an average angle of 91° until reaching a measured depth of measured depth of approximately 6683', a true vertical depth of 5534.5'and a horizontal displacement of 1252', in the oolicastic to oomoldic limestone grainstones. Through out this interval minor dense limestone packstones and zones of lower porosity was noted as the lateral was pushed upward. At this point the lateral was approximately 10' above the target line as the top was approached and bumped. As the top was bumped and scraped, a slight decrease in the penetration rate and an increase in packstone were noted, although no decrease in the sample show or background gas was noted. The well path was continued slowly downward in the good oolicastic to oomoldic limestone grainstone porosity, which had good visible porosity and a fair to moderately good sample show. As the lateral reached a measured depth of 6785', 5536' true vertical depth, with a horizontal displacement of 1360', the lateral was encountered a thin random streak of packstone. This thin lens of packstone helped control the rate of drop and level the lateral. At this point very minor changes in the penetration and porosity were noted as the thin packstone was bumped. As the lateral was continued at an average angle of 90°,

a slight increases in the amount of scattered packstones with no noticeable decrease in the amount of sample show was noted, as the hard streak was bumped and scraped. This random streak of dense, platy, occasionally chalky limestone packstone was bumped until reaching a measured depth of 6890', 5536.2' true vertical depth, and a horizontal displacement of 1450'. Upon reaching the measured depth of 6890', the thin hard streak ended and the lateral again began dropping. The lateral was allowed to continue downward at an average angle of 88.5 degrees, until reaching the laterals termination at a measured depth of 7126'. The last 236' of the lateral was in the good oolicastic to oomoldic limestone grainstones with good visible porosity, sample show and very minor packstone interclasts.

On December 9, 1998, at a measured depth of 7126', 5542' true vertical depth, and a horizontal displacement of 1700.4', the lateral was terminated. The lateral was terminated in the lower half of the 1-A porosity zone, in the good oolicastic to oomoldic limestone grainstone, four (4) feet below the proposed target line. The lithology had good visible porosity and sample show, and the lateral had an 8' to 12' flare at its termination. At the laterals termination the well path was oriented approximately level.

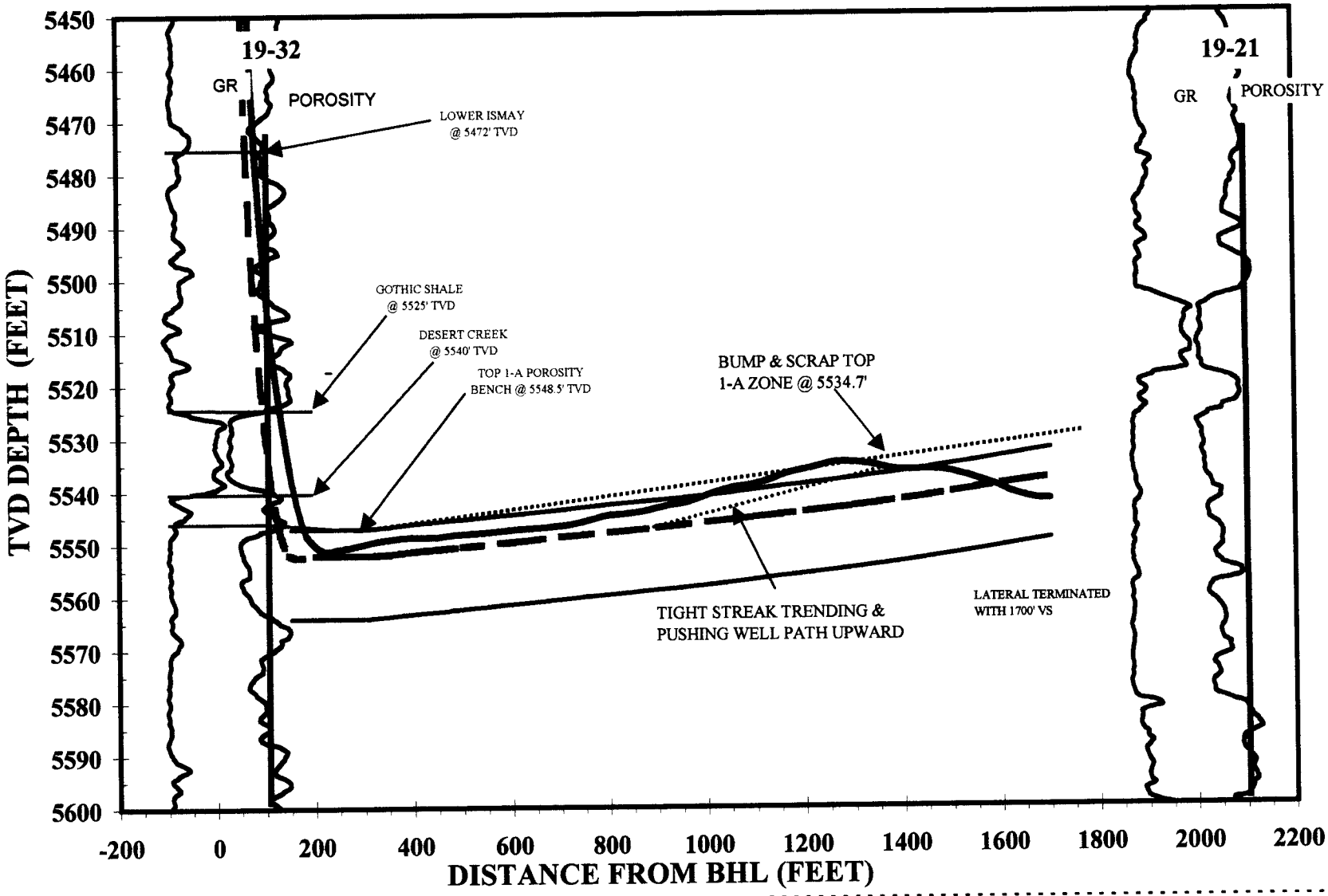
In tracking the lateral in this northwesterly direction, the oolicastic to oomoldic limestone grainstone porosity had good sample shows, which remained very consistent through out the length of the lateral. Even when zones of lower porosity, thin random packstones, and the top of the 1-A zone was approached and bumped, the was no significant to very minor changes in penetration rate noted and only minor visible changes in the sample shows. The oolicastic to oomoldic limestone grainstones of the upper 1-A porosity bench had predominately good oolitic to intergranular porosity, with a good sample show thorough out. The lateral was terminated with an 8' to 12' flare. The lateral predominately above the proposed target line through out the lateral with a maximum deviation of 12' near its midpoint and was 4' below the target line at the laterals termination. The lateral was drilled through out its length in the upper bench of Upper 1-A Desert Creek porosity zone. .

From the beginning of the R. U. 19-32 northwest lateral Leg #3 to its termination on December 9, 1998, at a measured depth of 7126', 5541.95' true vertical depth and a horizontal displacement of 1700', the porosities encountered in the lateral were very well developed. This lateral should enhance the overall performance of the R. U. 19-32 production well, especially after acidization.

*The black residual staining has been called by Dr. Dave Eby & others as "bitchimum" and is also known as "dead oil" ("dd o stn" on mud logs). This staining is associated with the movement of oil over long periods of time and is a good indicator of producable hydrocarbons when associated with productive porosities, but can also be found in porosities that have been filled by anhydrites and other material at later dates.

ROCKY MOUNTAIN GEO-ENGINEERING CORP. 2450 INDUSTRIAL BLVD. GRAND JUNCTION, CO 81505 (970) 243-3044

MOBIL, Ratherford #19-32, Northwest Lateral Leg #3



Form 3160-4
(July 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICAT (See other instructions on reverse side)

FORM APPROVED
OMB NO. 1004-0137
Expires: February 28, 1995

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.: 14-20-603-353

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NAVAJO TRIBAL

7. UNIT AGREEMENT NAME: RATHERFORD UNIT

8. FARM OR LEASE NAME, WELL NO.: RATHERFORD 19-W-32

9. API WELL NO.: 43-037-15743

10. FIELD AND POOL, OR WILDCAT: GREATER ANETH

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: SEC. 19, T41S, R24E

1a. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] DRY [ ] Other ~~X INJECTOR~~

b. TYPE OF COMPLETION: NEW WELL [ ] WORK OVER [ ] DEEP-EN [ ] PLUG BACK [ ] DIFF. RESVR. [ ] Other ~~X SIDETRACK~~

2. NAME OF OPERATOR: MOBIL PRODUCING TX & NM INC.*
*MOBIL EXPLORATION & PRODUCING US INC. AS AGENT FOR MPTM

3. ADDRESS AND TELEPHONE NO.: P.O. Box 633, Midland TX 79702 (915) 688-2585

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface: SW/NE 1980' FNL & 1980' FEL
At top prod. interval reported below: BHL: LAT #1 738' NORTH & 822' WEST F/SURF SPOT
At total depth

14. PERMIT NO. | DATE ISSUED

12. COUNTY OR PARISH: SAN JUAN

13. STATE: UT

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (Ready to prod.)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
9-16-98		12-12-98		

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
*#24	*#24		→	X	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD)*
LAT #2 5443-7172' TMD(5443-5553' TVD) LAT #3 5412-7126' TMD (5412-5542' TVD)

25. WAS DIRECTIONAL SURVEY MADE: YES

26. TYPE ELECTRIC AND OTHER LOGS RUN: NO

27. WAS WELL CORED: NO

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

CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
13 3/8"	27.1#	174'	17 1/4"	175 SXS SURFACE	
8 5/8"	NA	1495'	11"	524 SXS SURFACE	
5 1/2"	14#	5757'	7 7/8"	132 SXS	
ORIGINAL	CASING	UNDISTURBED			

29. LINER RECORD

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

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)

31. PERFORATION RECORD (Interval, size and number)
LAT #2 1212' SOUTH & 1044' EAST F/SURFACE SPOT.
LAT #3 1451' NORTH & 890' WEST F/SURFACE SPOT

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5631-7174'	ACIDIZE LATERAL #1 W/21630 GALS 15% HCL ACID

33.* PRODUCTION

DATE FIRST PRODUCTION | PRODUCTION METHOD (Flowing, gas lift, pumping - size and type of pump) | WELL STATUS (Producing or shut-in): SHUT-IN

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

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

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

TEST WITNESSED BY

RECEIVED
JAN 25 1999
DIV. OF OIL, GAS & MINING

35. LIST OF ATTACHMENTS: DIRECTIONAL SURVEY

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

SIGNED [signature] TITLE SHIRLEY HOUCHINS/ENV & REG TECH DATE 1-22-99

*(See Instructions and Spaces for Additional Data 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 jurisdicton.

Form 3160-5
(June 1990)

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 reentry to a different reservoir.
Use "APPLICATION FOR PERMIT - " for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: 14-20-603-353
6. If Indian, Allottee or Tribe Name: NAVAJO TRIBAL
7. If Unit or CA, Agreement Designation: RATHERFORD UNIT
8. Well Name and No.: RATHERFORD 19-W-32
9. API Well No.: 43-037-15743
10. Field and Pool, or exploratory Area: GREATER ANETH
11. County or Parish, State: SAN JUAN UT

1. Type of Well: [ ] Oil Well [ ] Gas Well [X] Other
2. Name of Operator: MOBIL PRODUCING TX & NM INC.*
*MOBIL EXPLORATION & PRODUCING US INC. AS AGENT FOR MPTM
3. Address and Telephone No.: P.O. Box 633, Midland TX 79702 (915) 688-2585
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SEC. 19, T41S, R24E
(SW/NE)1980' FNL & 1980' FEL
BHL: LATERAL #1 738' FNL & 822' FWL

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

TYPE OF SUBMISSION	TYPE OF ACTION	
[ ] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[X] Subsequent Report	[X] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other INJECTOR/SIDETRACK	[ ] Dispose Water (Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)*

BHL:

LATERAL #2; 1212' SOUTH & 1044' EAST FROM SURFACE SPOT (ZONE 1a).
LATERAL #3; 1451' NORTH & 890' WEST FROM SURFACE SPOT (ZONE 1a).

9-16-98 -- 12-12-98 HORIZONTAL RECOMPLETION

14. I hereby certify that the foregoing is true and correct
Signed [signature] Title SHIRLEY HOUCHINS/ENV & REG TECH Date 1-22-99

(This space for Federal or State office use)
Approved by _____ Title _____ Date _____
Conditions 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 statements or representations as to any matter within its jurisdiction.

*** See Instruction on Reverse Side**

DRILLED FOOTAGE CALCULATION FOR DIRECTIONAL AND HORIZONTAL WELLS

Unit, Well Name:	Ratherford Unit, Well 19-32
API Well #:	43-037-15743
Well Completion:	Horizontal, Injector, 2 Laterals

First leg description:	Lateral #2
KOP MD:	5435.00
EOL MD:	7172.00
Footage drilled:	1737.00
Max. TVD Recorded	5558.51

Second leg description:	Lateral #3
KOP MD:	5404.00
EOL MD:	7126.00
Footage drilled:	1722.00
Max. TVD Recorded	5551.14

Total Footage Drilled (MD):	***3459.00***
Deepest point (TVD):	***5558.51***

c:\excel\19-32-Inj-twolegs.xls

ATTACHMENT - FORM 3160-5
RATHERFORD UNIT - WELL #19-W-32
14-20-603-353
NAVAJO TRIBAL
SAN JUAN, UTAH

09-16-98	CALLED B.L.M. AT 12:09 ON 09-15-98. INFORMED OF INTENT TO PREP. WELL FOR DRLG. TOOLS. TALKED TO ANSWER MACHINCE. CALLED NAVAJO E.P.A. INFORMED OF INTENT TO DIG EARTH PIT AND LINE PIT TALKED TO CHARMAINE HESTEEN.12:20, ON 09-15-98. AT 07:30 SITP WAS 2200 PSI. MIRU NAVAJO WEST RIG #36. RU PUMP, PIT, AND LINES. RU TO KILL WELL. TBG. PRESSURE OF 350 PSI. KILL WELL. ND WELL HEAD. NU BOPE. RU RIG FLOOR. RELEASE PKR. SIFN.
09-17-98	SITP AT 07:30 WAS 150 PSI. SICP AT 07:30 WAS 1750 PSI. RU AND FLOW CSG. ANN. TO 450 PSI. RU TO MUD PUMP. RU TO KILL WELL. CSG. ANN. AND TBG. AT 250 PSI. WORK ON MUD PUMP. SIFN.
09-18-98	SITP AND SICP AT 07:30 WAS 250 PSI. RU/KW. WD. POH W/ CMT. LINED TBG. AND PACKER. MIRU SCHLUMBERGER LOGGING UNIT. RIH W/ GAMMA RAY, CSG. COLLAR LOG TO 5500'. LOG FROM 5500' TO SURFACE. POH. RIH W/ GUIBERSON SHORTY PKR TO 5455'. SET POH. RIH DN MOVE OFF SCHLUMBERGER LOGGING UNIT. RIH W/ CMT. LINED TBG. TO 4100'. SIFN.
09-19-98	SIP AT 07:30 WAS 0 PSI. FINISH IN HOLE W/ CMT. LINED TBG. TO 5407'. RU AND DISPLACE CSG. W/ FRESH WTR. RU AND TEST CSG. AND BRIDGE PLUG TO 1000 PSI. 30 MIN. OK. POH, LAY DN CMT. LINED TBG. ND BOPE, CAP WELL. RD RIG FLOOR. DIG OUT AROUND WELL HEAD.
09-20-98	SIP AT 07:30 WAS 0 PSI. ND WELL HEAD CAP. DN TBG. HEAD. RU CSG. SPEAR. LATCH ONTO CSG. POH 6" STACH OUT ON CSG. SLIPS. DRESS CSG. NU NEW TBG. HEAD. TEST TO 1000 PSI. 30 MIN. OK. WELD ON CELLAR PLATE. SWI.
09-21-98	RDMO NAVAJO WEST RIG #36. CMT. CELLAR PLATE IN PLACE. FINAL PREP. REPORT. TURN WELL OVER TO DRLG. TOOLS.
09-24-98	MI NAVAJO RIG 25. (NOTIFIED JIM THOMPSON W/ STATE OF UTAH AT 0700 HRS. REFERENCE MOVING OFF AND MOVING TO NEXT LOCATION).
09-25-98	FINISH MI AND RU NAVAJO WEST 25. SINGLE JACK TESTED BOP STACK, CHOKE MANIFOLD, VALVES TO 2000 PSI HIGH 250 PSI LOW. PU AND ORIENT BTM. TRIP WHIPSTOCK ASSY. RU GYRO DATA AND ORIENT TOOLFACE. SET DN AT 5433' (SLM) RBP AT 5455' WL. RD GYRO DATA. START OUT OF HOLE W/ WHIPSTOCK.
09-26-98	FINISH OUT OF HOLE W/ WHIPSTOCK AND LAY DOWN. RU CSG. MILL. TIH. WASH FILL FROM 5433' TO 5447' (RBP AT 5455' WL) CIRC. HOLE CLEAN. POOH W/ MILLS AND LAY DOWN. PU WHIPSTOCK ASSY. ORIENT AND TIH. ORIENT WHIPSTOCK TO 138 GTF. CONTINUE IN HOLE AND SET WHIPSTOCK. MILL WINDOW IN CSG. FROM 5436'-5443' (1' FORMATION). CIRC. SWEEP TO SURFACE. TOOH W/ MILLS AND LAY DOWN SAME.
09-27-98	RU GYRO DATA. TIH AND ORIENT TOOLFACE. TIME DRILL FROM 5443'-5468'. RD GYRO DATA. SLIDE/DRILL AND SURVEYS (MWD) FROM 5468' TO TD OF 5621'. CIRC. SWEEP TO SURFACE.
09-28-98	POOH CURVE BUILDING ASSY. SLIDE/ROTATE DRILL AND SURVEYS FROM 5621'-6450'. LAST SURVEY AT 6385' MD, 5553.74' TVD.
09-29-98	SLIDE/ROTATE DRILL AND SURVEYS FROM 5980' TO TD OF 7172'. PROJECTED SURVEY AT 7172' MD, 5553.46 TVD. PUMP AND CIRC. SWEEP TO SURFACE. POH TO WINDOW. CIRC. HOLE (DID NOT KILL). POOH LAYING DOWN LATERAL ASSY. TIH PH6 TBG. GUIBERSON PKR. ON/OFF TOOL AND BLANKING PLUG IN PROFILE. PH-6 TBG. AOHDP TAILPIPE AT 5631' (CURVE LANDED AT 5621') SET PKR. AT 5335' (WINDOW AT 5435') RELEASE ON/OFF TOOL. PRESSURE TEST TO 500 PSI. OK. DISPLACE HOLE W/ 10# BRINE. POOH LAYING DOWN DRILLSTRING.

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09-30-98	FINISH LAYING DOWN DRILLSTRING. ND BOP STACK, GAS SEPERATOR, JET PITS. BEGAN TO RDMO. RIG RELEASED AT 2400 HRS. 9-30-98

COMPLETION

10-17-98	MIRU MONTEZUMA 15.
10-18-98	SHUT WELL DOWN FOR SUNDAY.
10-19-98	PU PH6 TBG. RIH TO 5344' W/ TBG. & ON/OFF TOOL. LATCH ONTO PKR. MIRU TEFTELLER WL. POOH W/ LATCH TOOL AND PLUG, 1050 PSI ON TBG. W/ BRINE IN HOLE, RDMO TEFTELLER WL. MI D/S COILED TBG UNIT PREP TO ACIDIZE LATERAL 2A1 ON 20-OCT-98, SI SDFN.
10-20-98	MIRU DOWELL COILED TBG. UNIT. SITP AT 10:00 WAS 1050 PSI. RIH W/ COILED TBG. TO 7174'. DOWELL ACIDIZE LATERAL 2A1 FROM 7174' TO 5631' W/ 21,630 GAL. OF 15% HCL ACID. POH W/ COILED TBG. RD DOWELL COILED TBG. UNIT. OPEN WELL TO TEST TANK ON FLOW PRESSURE FROM 2050 PSI TO 1700 PSI. FLOW 2 HOURS. RECV. 560 BBLS OF FLUID. SIFN.
10-21-98	MIRU DOWELL PUMP TRUCK TO KILL WELL. PUMPED MUD KILL TBG. RLSD PKR. SD DUE TO HEAVY WIND. ND/MO DOWELL PUMP TRUCK.
10-22-98	KILLED CSG. W/ MUD. KILLED TBG. W/ MUD. POOH W/ PH6 TBG., PKR, AND PH6 TAIL PIPE.
10-23-98	CHECK FOR PRESSURE ON TBG/CSG. NO PRESSURE. RIH W/ FISHING ASSEMBLY. FIND TOP OF WHIPSTOCK W/ SUPERHOOK, FIND KEYWAY IN WHIPSTOCK. CATCH FISH. POOH W/ FSH ASSEMBLY FISH BECAME FREE AND COULD NOT BE CAUGHT. POOH W/ FISHING ASSEMBLY. RIH W/ NEW HOOK, TO 2531.87'. SI SDFN.
10-24-98	FIN RIH W/ FISHING ASSEMBLY TO TOTAL DEPTH OF 5434.78' FISH FOR WHIPSTOCK; FIND TOP OF WHIPSTOCK, FIND KEYWAY, CATCH FISH. FISH BECAME FREE. POOH. PICK UP AND RIH W/ SHOE MILL. NU RIG PUMPS, PIT, TO PREPARE TO MILL ON 25-OCT-98.
10-25-98	CHECK WELL FOR PRESSURE. NO PRESSURE. NU RIG PUMP TO BRK CIRCULATION. BREAK CIRCULATION AT 2456'. RIH TO 4680.87'. ATTEMPTED TO CIRCULATE W/ KEY ENERGY PUMP. MIRU DOWELL PUMP TRUCK TO ATTEMPT TO BREAK CIRCULATION AND MILL. PRESSURE UP ON TBG. TO 3100 PSI. START POOH W/ TBG. & MILL ASSEMBLY. SI SDFN.
10-26-98	CHANGE OUT PUMPS REPAIR RIG. NO CIRC. NO TBG. PSI, SWISDFN.
10-27-98	SITP 0# CSG. 0#. POH TO 1860'. INSTALLED NEW STRIPPER RUBBER RIH WASH OVER TOOLS TO 5400'. P/U R/U 3.5 POWER SWIVEL SWISDFN.
10-28-98	SITP 0# CSG. 0#. BREAK CIRC. TAG WHIPSTOCK @ 5435'. MILL OVER WHIPSTOCK FROM 5435' TO 5438.5'. CIRC. CLEAN SHUT DN PUMP. SWISDFN.
10-29-98	SITP & CSG. 250# BLED DN. KILL WELL. STARTED MILL OVER @ 5438' MILLED OVER TOTAL 4'. CIRC. CLEAN SWISDFN.
10-30-98	SICP 0# TBG. 0# OPEN WELL 1" FLOW. WENT BACK TO MILLING OVER FM 5439'-5442' TOTAL OF 6.5'. FOULED WHIPSTOCK IN SHOE. LAY DN SWIVEL LOST DRAG. LAY DN WASH PIPE PU OS SWISDF WIND/RAIN/LIGHTNING.
10-31-98	SICP 150#. RIH W/ PH-6 TBG. TO 5435'. CIRC. & WELL BORE WELL FLOWING AFTER TRIP. LATCHED ON TO FISH JARED ON FISH. JARED FREE. LAY DN OS/PART FISH. PU RIH W/ PH-6 TBG. SWISDFN.
11-01-98	12 HRS. SICP 0# OPEN WELL. FINISH RIH W/ SHOE BREAK CIRC. @ 5430'. STARTED MILL @ 5442' MILLED 13". LOAD TBG. SWISDFN.

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11-02-98	SI 12 HRS. CSG/TBG 0#. PU 3.5 SWIVEL BREAK CIRC. MILL OVER FISH STARTED @ 5442' TO 5444' MADE 18'. LAY DN SWIVEL CHANGED ELEVATORS. JARED WORKED ON FISH. SWISDFN.
11-03-98	SI 14.5 HRS. CSG/TBG 0#. CONT. JARING ON FISH. CIRC. WELL KILL TBG. POOH SWISDFN.
11-04-98	SI 14.5 HRS TBG. CSG 0#. JARED & WHOOPD DN ON FISH MADE 5". PUT TOOLS UP SWISDFN.
11-05-98	SICP 0# TBG. SLITE FLOW CIRC WELL. POH W/ WL TRUCK & TOOLS TBG. STARTED TO FLOW. CIRC. WELL RIG FLOOR & TIE BACK DRLG. LINE SWISDFN.
11-06-98	15 HR SICP 100# TBG. VAC. BLED OFF. POOH W/ TOOLS. LAY DN SHOT DC. CIRC. TOP FISH TIE BACK CHANGE ELEV. SCREWED INTO FISH @ 5401'. JARES ON FISH. UNABLE TO MOVE FISH SWISDFN.
11-07-98	SICP 0# TBG. JARED ON FISH. CIRC. TO KILL TBG. POOH W/ 80-JTS SWISDFN.
11-08-98	POOH W/ TBG TOOLS. RIH. SCREWED IN TO FISH @ 5402'. TBG STARTED TO FLOW PUMP. PU RIH W/ CUTRIE SHOE, BOWEN JARS, ON PH-6 TBG SWISDFN.
11-09-98	SI 13 HRS TP 0, CSG. PSI 0, RIG SVC. FIN TIH W/ WP AND SHOE. RU POWER SWIVEL. BREAK CIRC. START MILLING TOP BUSHING @ 5406', MADE 1". RD SWIVEL, POH TO 2800', SWIFN.
11-10-98	SI 14 HRS TP/CP 0, RIG SVC. FIN POH W/ WASH PIPE AND SHOE & CUTRITE. RIH W/ NEW CUTRITE SHOE, SAME FISHING ASSY, WORK SHOE OVER TOP OF FISH @ 5370', TAG WEAR BUSHING @ 5406'. PICK UP SWIVEL BRAKE CIRC. MILL ON FM 5406'-5407'. RD SWIVEL. POH W/ 2.875" TBG TO 2800', SWIFN.
11-11-98	SI 13 HRS., TP/CP 0, RIG SVC. FIN POH WASHPIPE AND SHOE. RIH W/ SCREW-IN SUB, JARS, FISH WAS FREE. SET DN ON TOP FISH @ 5407', WORK CUTTER IN TOP, UNABLE TO WORK CUTTER PAST 1 1/2', POH TBG, SWIFN.
11-12-98	SI 13 HRS TP/CP 0, RIG SVC. FIN POH W/ MECH CUTTER, LOST 3 SLIPS OFF OF THE CUTTER, RIH W/ 3 3/4" TAPERED MILL AND MILL TOP WASH PIPE FISH @ 5407' FIN RUN MILL TO 5441', CIRC CLEAN POH RIH W/ BOWEN 4 1/2", 3 1/2" DCS ON 2.875" TBG TO 5300', SWIFN.
11-13-98	SI 13 HRS TP/CP 0, RIG SVC. FIN RIH W CSG CUTTER TO 5428', CUT 4 1/2" WASHPIPE, POH REC 20.41', WASHPIPE CAUGHT ON CUTTER DRAG BLOCKS, LEFT 13' W/ 3.885 GRAPPLE, FISH FOR 3 HRS, SWIFN.
11-14-98	SI 13 HRS TP/CP 0, RIG SVC. WAIT ON WL TRUCK. WEA WL CO RAN STRING SHOT TO 5434'. ATTEMPT TO BACK OFF AT TOP SPEAR, WORK PIPE, CAME FREE, FIN POH W/ WL, LEFT SHOT ROD IN HOLE. POH W/ TBG, SWIFN AND SUNDAY.
11-15-98	SD FOR SUNDAY.
11-16-98	SI 37 HRS. TP/CP 0, RIG SVC. FIN POH W/ 2.875" TBG, BACKED OFF ON TOP SUB OF THE BUMPER SUB, RIH W/ 4 11/16" OVERSHOT W/ 3 3/4" GRAPPLE, DCS ON 2.875" TBG, CIRC. THRU FISH, WEA RAN STRING SHOT ATTEMPT TO BACK OFF @ 5434' NO SUCCESS POH WL, SWIFN.
11-17-98	SIP 0# SERV. UNIT. STRING SHOT BACK OFF, POOH LEFT SPEAR IN WP, SCREWED INTO FISH @ 5434', JARED & WORK. CHAIN PARTED ON DRAWWORK SWISDFN & REPAIRS.
11-18-98	REPAIR GARD & REPLACE CHAIN, POOH W/TOOLS, RIH W/ PILOT MILL & TOOLS, STARTED MILL MILLED 1' CIRC CLEAN SWISDFN.
11-19-98	SIP 0#. STARTED MILLING ON 4.5" WP @ 5428' TO 5432'. CIRC CLEAN SWISDFN.

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11-20-98	SIP 0#. MILLING ON 4.5" WP MADE 3". POOH W/TOOLS. RIH W/ PILOT MILL. MILLING 4.5" WP @ 5434' TOP WINDOW. CIRC CLEAN PICK UP SWISDFN.
11-21-98	SIP 0#, CONT. MILLING ON 4.5" WP FM 5434-5436.5'. CIRC WB CLEAN. LAY DN SWIVEL, RIG TONG TO POOH. POOH W/ TOOLS. REDRESS MILL #2. RIH W/PILOT MILL #2 SAME BHA ON 48-JTS 2.875" PH-6 TBG SWISDFN.
11-22-98	SIP 0#. FIN. RIH W/TOOLS. PU/RU POWER SWIVEL BREAK CIRC. WORKED MILL TO 5441' (BTM WINDOW @ 5442') CIRC WB. POOH W/ TOOLS RIH W/ 4.75" WINDOW MILL SWISDFN.
11-23-98	SHUT IN PRESSURE AT 07:30 WAS 0 PSI. FINISH RIH WITH 4.75" WINDOW MILL TO 5441'. MILL ON TO 5410'. SDFN
11-24-98	SHUT IN TBG. PRESSURE AT 07:30 WAS 0 PSI. RIG UP POWER SWIVEL. TO 5441'. WORK PIPE DH FROM 5441' TO 5444'. POH FROM 5444' TO 5431'. SI FOR NIGHT.
11-25-98	SI PRESSURE AT 07:30 WAS 0 PSI. RIH TO 5441', TAG. UP. RU AND CIRC. WORK TBG. TAILPIPE INTO CURVE FROM 5441' TO 5467.48'. CIRC. HOLE CLEAN. RD POWER SWIVEL. MOVE IN RU HALLIBURTON LOGGING UNIT. RIH WITH GAMMA RAY, CSG. COLLAR LOG TO 5435' LOG FROM 5435' TO 5100' POH. RIH WITH GUIBERSON RETV. BRIDGE PLUG TO 5425', SET OK, POH. RD MOVE OFF HALLIBURTON. (TOP OF BRIDGE PLUG AT 5425') MAKE-UP GUIBERSON 5.5" PACKER, RIH TO 5144.08' SDFN
11-26-98	WELL SI FOR THANKSGIVING DAY AND FRIDAY NOV. 27. WILL RESUME OPERATIONS ON SAT. NOV. 28.
11/28/98	SI PRESSURE AT 07:30 WAS 0 PSI. RU AND RIH W/ PH-6 TBG. TO 5425'. TAG UP ON BRIDGE PLUG. POH FROM 5425' TO 5420'. RU TO CIRC. PUMP FRESH WATER. HOLE CLEAN. RU AND TEST CSG. TO 1000 PSI. 30 MIN. OK. POH, LD TBG. FROM 5420' TO 3600'. POH, LD WORKSTRING. SDFN
11/29/98	SI CSG. PRESSURE AT 07:30 WAS 0 PSI. RIH DRLG. COLLARS AND LD. RIH W/ WASH PIPE, POH AND LD. NIPPLE DN BOPE. CAP WELL. RD MONTEZUMA WELL SERV. RIG #15. MOVE OFF LOCATION FINAL COMPLETION REPORT. TURN WELL OVER TO DRLG. TOOLS. SI.

DRILLING

12-05-98	NOTIFIED JIM THOMPSON W/STATE OF UTAH. MIRU NAVAJO WEST 25.
12-06-98	PRESSURE TEST BOP STACK. TIH W/CLEAN OUT SLEAVE. DC'S, DP & C/O 3' (5422-5425') FILL. POOH. PU BTM. TRIP WHIPSTOCK & STARTER MILL.
12-07-98	FIN IN HOLE W/BTM. TRIP WHIPSTOCK & TAG TOP OF RBP @ 5425', RU GYRO DATA & ORIENT WHIPSTOCK & SET. MILL W/STARTER MILL F/5405-07', LD STARTER MILL. TIH W/CSG & WATERMELON MILL, MILL F/5404-5411' & 1' FORMATION TO 5412'. CIRC. SWEEP TO SURFACE. TOOH. LD DP & MILLS FINAL REPORT LATERAL #3A1.
12-07-98	TIH W/CURVE BUILDING ASSY. RU GYRODATA, ORIENT TOOLFACE. TIME DRILL F/5412-5438' USE GYRO FOR SURVEYS.
12-08-98	SLIDE DRILL & SURVEY W/GYRO F/5438-5452'. RD GYRO DATA WL TRUCK. SLIDE DRILL & SURVEY W/MWD F/5452-5643' TMD, TD CURVE 5551' TVD. CIRC. SWEEP POOH LD DP & CURVE BLDG ASSY. PU LAT ASSY.

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12-09-98	FIN IN HOLE W/LAT ASSY. RU POWER SWIVEL, SLIDE/ROTATE DRILL & SURVEY F/5643-6623' TD OF PREVIOUS LEG (LEG 1, DRILLED BY BECFIELD) CONTINUE TO SLIDE/ROTATE & SURVEY F/6623-6900'.
12-10-98	SLIDE/ROTATE DRILL & SURVEY F/6900-7126' TMD TD LATERAL #3A1. (PROJECTED SURVEY AT TD 5541.95' TVD, 89.80 ANGLE, 328.70 AZ., 1700.43' VERTICAL SECT. POOH W/LAT ASSY. TIH W/SUPERHOOOK & RET. WHIPSTOCK. LOWER PORTION OF WHIPSTOCK LEFT IN HOLE. TRIPPING IN HOLE W/FISHING ASSY.
12-11-98	FIN. IN HOLE W/FISH ASSY. ENAGE FISH & POOH. FULL RECOVERY. TIH W/RBP & SET @ 5300'. DISPLACE HOLE W/BRINE & TEST. OK. POOH LD DS. JET PITS. RD SWACO EQUIP. RETURN TO VENDOR.
12-12-98	FIN. LOADING ALL RENTAL EQUIP. ND BOP STACK. SECURE WELL. RELEASE NAVAJO WEST #25.

Mobil

San Juan County
Utah
Ratherford Unit
RU 19-32 - MWD Leg #2

SURVEY REPORT

15 December, 1998

sperry-sun
DRILLING SERVICES
A DIVISION OF DRESSER INDUSTRIES, INC.

Survey Ref: svy3256

Sperry-Sun Drilling Services

Survey Report for RU 19-32

Mobil **Utah**
San Juan County **Ratherford Unit**

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
Scientific Gyro							
0.00	0.000	0.000	0.00	0.00 N	0.00 E	0.00	
100.00	0.260	229.600	100.00	0.15 S	0.17 W	-0.01	0.260
200.00	0.800	276.810	200.00	0.21 S	1.04 W	-0.54	0.652
300.00	0.770	272.350	299.99	0.10 S	2.40 W	-1.53	0.068
400.00	0.880	283.850	399.98	0.11 N	3.82 W	-2.64	0.198
500.00	1.000	275.840	499.96	0.38 N	5.43 W	-3.92	0.178
600.00	0.960	273.190	599.95	0.52 N	7.14 W	-5.16	0.060
700.00	1.130	287.180	699.93	0.86 N	8.92 W	-6.60	0.305
800.00	1.240	283.010	799.91	1.39 N	10.91 W	-8.34	0.140
900.00	1.500	280.330	899.88	1.87 N	13.26 W	-10.26	0.268
1000.00	1.740	288.640	999.84	2.59 N	15.98 W	-12.62	0.335
1100.00	1.830	290.180	1099.79	3.63 N	18.92 W	-15.35	0.102
1200.00	1.730	286.130	1199.74	4.60 N	21.87 W	-18.05	0.161
1300.00	1.580	279.140	1299.70	5.23 N	24.68 W	-20.40	0.251
1400.00	1.510	273.860	1399.67	5.54 N	27.35 W	-22.42	0.159
1500.00	1.470	279.750	1499.63	5.85 N	29.93 W	-24.37	0.158
1600.00	1.360	285.310	1599.60	6.38 N	32.34 W	-26.38	0.176
1700.00	1.250	282.170	1699.58	6.92 N	34.55 W	-28.26	0.131
1800.00	1.230	284.020	1799.55	7.41 N	36.66 W	-30.04	0.045
1900.00	1.260	279.570	1899.53	7.85 N	38.79 W	-31.79	0.101
2000.00	1.270	289.490	1999.51	8.41 N	40.91 W	-33.62	0.219
2100.00	1.260	290.000	2099.48	9.15 N	42.99 W	-35.57	0.015
2200.00	1.210	297.300	2199.46	10.01 N	44.96 W	-37.53	0.165
2300.00	1.170	299.110	2299.44	10.99 N	46.79 W	-39.48	0.055
2400.00	1.190	301.840	2399.41	12.04 N	48.57 W	-41.44	0.060
2500.00	1.240	299.350	2499.39	13.12 N	50.39 W	-43.47	0.073
2600.00	1.200	304.370	2599.37	14.24 N	52.20 W	-45.51	0.114
2700.00	1.030	315.300	2699.35	15.47 N	53.70 W	-47.43	0.272
2800.00	1.070	321.870	2799.33	16.84 N	54.91 W	-49.25	0.127
2900.00	1.060	324.050	2899.32	18.32 N	56.03 W	-51.11	0.042
3000.00	1.080	322.900	2999.30	19.82 N	57.14 W	-52.96	0.029
3100.00	1.090	328.240	3099.28	21.39 N	58.21 W	-54.84	0.102
3200.00	1.030	331.610	3199.26	22.98 N	59.13 W	-56.65	0.087
3300.00	0.870	347.020	3299.25	24.52 N	59.73 W	-58.19	0.300
3400.00	0.940	346.740	3399.24	26.05 N	60.09 W	-59.57	0.070
3500.00	0.870	351.850	3499.23	27.60 N	60.39 W	-60.92	0.107
3600.00	0.830	339.990	3599.21	29.04 N	60.74 W	-62.22	0.180
3700.00	0.650	354.080	3699.21	30.28 N	61.05 W	-63.35	0.255
3800.00	0.500	339.850	3799.20	31.25 N	61.26 W	-64.22	0.206
3900.00	0.330	322.820	3899.20	31.89 N	61.58 W	-64.91	0.208

Continued...

Sperry-Sun Drilling Services

Survey Report for RU 19-32

Mobil **Utah**
San Juan County **Ratherford Unit**

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
4000.00	0.350	307.500	3999.20	32.31 N	62.00 W	-65.49	0.093
4100.00	0.360	304.530	4099.20	32.67 N	62.50 W	-66.10	0.021
4200.00	0.300	307.930	4199.19	33.01 N	62.96 W	-66.66	0.063
4300.00	0.370	270.170	4299.19	33.17 N	63.49 W	-67.14	0.227
4400.00	0.480	288.170	4399.19	33.30 N	64.21 W	-67.72	0.172
4500.00	0.440	284.470	4499.19	33.53 N	64.98 W	-68.40	0.050
4600.00	0.330	265.550	4599.18	33.61 N	65.64 W	-68.90	0.167
4700.00	0.460	249.880	4699.18	33.44 N	66.31 W	-69.22	0.168
4800.00	0.380	277.430	4799.18	33.35 N	67.01 W	-69.62	0.215
4900.00	0.400	269.070	4899.18	33.39 N	67.69 W	-70.11	0.060
5000.00	0.180	254.210	4999.18	33.34 N	68.19 W	-70.40	0.231
5100.00	0.330	221.800	5099.17	33.08 N	68.53 W	-70.44	0.202
5200.00	0.430	234.860	5199.17	32.65 N	69.03 W	-70.46	0.132
5300.00	0.130	202.840	5299.17	32.33 N	69.38 W	-70.45	0.327
5400.00	0.130	249.950	5399.17	32.19 N	69.53 W	-70.45	0.104
MWD Leg #2							
5435.00	0.070	279.700	5434.17	32.18 N	69.59 W	-70.48	0.221
5443.00	4.900	138.000	5442.16	31.92 N	69.37 W	-70.14	61.939
5453.00	10.700	138.650	5452.06	30.91 N	68.47 W	-68.78	58.006
5463.00	16.600	138.840	5461.78	29.13 N	66.91 W	-66.42	59.002
5473.00	22.300	138.940	5471.20	26.63 N	64.73 W	-63.10	57.001
5483.00	28.100	139.000	5480.25	23.42 N	61.93 W	-58.84	58.001
5493.00	32.900	144.900	5488.86	19.41 N	58.82 W	-53.79	56.525
5503.00	35.800	141.200	5497.12	14.91 N	55.43 W	-48.17	35.722
5513.00	39.200	145.000	5505.05	10.04 N	51.78 W	-42.11	41.110
5523.00	42.800	144.600	5512.60	4.68 N	48.00 W	-35.60	36.095
5533.00	44.900	144.800	5519.81	0.97 S	44.00 W	-28.72	21.046
5543.00	49.400	148.800	5526.61	7.11 S	39.99 W	-21.48	53.696
5553.00	53.200	146.800	5532.86	13.71 S	35.83 W	-13.79	41.077
5563.00	57.900	143.600	5538.52	20.47 S	31.12 W	-5.61	53.892
5573.00	62.800	141.100	5543.46	27.35 S	25.81 W	3.05	53.595
5583.00	68.700	139.800	5547.57	34.37 S	20.01 W	12.16	60.177
5593.00	74.900	139.200	5550.69	41.59 S	13.84 W	21.65	62.261
5621.00	88.200	142.900	5554.80	63.09 S	3.52 E	49.24	49.257
5657.00	87.700	139.600	5556.09	91.14 S	26.03 E	85.15	9.265
5688.00	89.700	139.300	5556.79	114.69 S	46.18 E	116.13	6.524
5720.00	91.000	139.600	5556.59	139.01 S	66.98 E	148.12	4.169
5752.00	91.500	141.300	5555.90	163.67 S	87.35 E	180.08	5.536
5784.00	91.400	138.500	5555.09	188.14 S	107.96 E	212.05	8.753
5815.00	91.300	138.300	5554.36	211.32 S	128.53 E	243.04	0.721
5847.00	92.200	138.500	5553.38	235.23 S	149.77 E	275.03	2.881

Continued...

Sperry-Sun Drilling Services

Survey Report for RU 19-32

Mobil
San Juan County

Utah
Ratherford Unit

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
5879.00	92.500	137.300	5552.07	258.96 S	171.20 E	307.00	3.862
5911.00	92.500	136.600	5550.67	282.32 S	193.03 E	338.96	2.185
5943.00	91.800	136.900	5549.47	305.61 S	214.94 E	370.93	2.380
5974.00	91.600	138.200	5548.55	328.47 S	235.85 E	401.92	4.241
6006.00	88.200	138.500	5548.61	352.38 S	257.11 E	433.91	10.666
6037.00	88.600	138.000	5549.47	375.50 S	277.75 E	464.90	2.065
6069.00	89.400	139.200	5550.03	399.50 S	298.91 E	496.89	4.506
6101.00	91.100	140.600	5549.89	423.97 S	319.52 E	528.87	6.882
6132.00	88.500	139.900	5550.00	447.81 S	339.34 E	559.85	8.686
6164.00	86.700	138.300	5551.34	471.97 S	360.27 E	591.81	7.523
6195.00	88.000	137.500	5552.77	494.95 S	381.03 E	622.77	4.923
6226.00	89.500	137.100	5553.45	517.72 S	402.05 E	653.76	5.008
6258.00	88.300	135.900	5554.06	540.93 S	424.07 E	685.75	5.303
6289.00	90.000	135.400	5554.52	563.09 S	445.74 E	716.72	5.716
6321.00	91.300	135.900	5554.16	585.97 S	468.10 E	748.69	4.353
6353.00	90.400	135.200	5553.68	608.82 S	490.51 E	780.65	3.563
6385.00	89.400	136.100	5553.74	631.70 S	512.88 E	812.62	4.204
6416.00	91.400	135.400	5553.52	653.90 S	534.51 E	843.60	6.835
6448.00	91.500	135.900	5552.71	676.78 S	556.87 E	875.56	1.593
6480.00	90.100	137.600	5552.27	700.08 S	578.79 E	907.55	6.882
6512.00	89.100	137.300	5552.49	723.65 S	600.43 E	939.55	3.263
6544.00	88.700	137.300	5553.11	747.17 S	622.13 E	971.54	1.250
6576.00	88.700	136.800	5553.83	770.58 S	643.93 E	1003.52	1.562
6607.00	89.000	136.200	5554.45	793.06 S	665.26 E	1034.51	2.164
6639.00	90.300	136.100	5554.65	816.14 S	687.43 E	1066.49	4.075
6671.00	89.200	135.900	5554.79	839.16 S	709.66 E	1098.47	3.494
6703.00	88.200	135.700	5555.51	862.09 S	731.96 E	1130.44	3.187
6734.00	89.300	136.100	5556.19	884.35 S	753.53 E	1161.41	3.776
6766.00	88.300	137.100	5556.86	907.60 S	775.51 E	1193.39	4.419
6798.00	88.200	137.300	5557.84	931.06 S	797.24 E	1225.37	0.699
6830.00	89.400	138.000	5558.51	954.71 S	818.79 E	1257.36	4.341
6862.00	90.900	138.300	5558.42	978.54 S	840.14 E	1289.36	4.780
6894.00	91.700	138.700	5557.70	1002.50 S	861.34 E	1321.35	2.795
6925.00	92.500	139.400	5556.56	1025.90 S	881.64 E	1352.33	3.428
6956.00	92.200	138.700	5555.29	1049.29 S	901.94 E	1383.30	2.455
6988.00	90.300	137.800	5554.59	1073.16 S	923.25 E	1415.29	6.570
7020.00	89.300	137.600	5554.71	1096.83 S	944.78 E	1447.28	3.187
7052.00	90.400	138.000	5554.79	1120.53 S	966.28 E	1479.28	3.658
7083.00	90.600	139.400	5554.52	1143.82 S	986.73 E	1510.28	4.562
7115.00	90.700	140.300	5554.16	1168.28 S	1007.37 E	1542.26	2.830

Continued...

Sperry-Sun Drilling Services

Survey Report for RU 19-32

Mobil
San Juan County

Utah
Ratherford Unit

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
7138.00	90.700	140.500	5553.87	1186.00 S	1022.03 E	1565.24	0.870
7172.00	90.700	140.500	5553.46	1212.23 S	1043.65 E	1599.20	0.000

All data is in feet unless otherwise stated. Directions and coordinates are relative to True North.
Vertical depths are relative to Well. Northings and Eastings are relative to Well.

The Dogleg Severity is in Degrees per 100ft.
Vertical Section is from Well and calculated along an Azimuth of 138.000° (True).

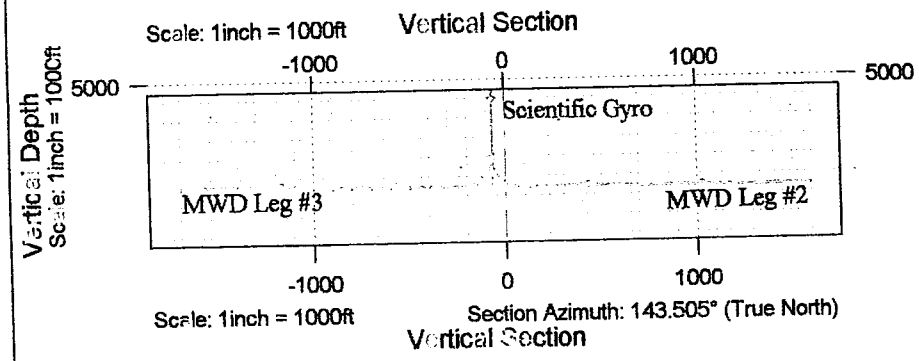
Based upon Minimum Curvature type calculations, at a Measured Depth of 7172.00ft.,
The Bottom Hole Displacement is 1599.60ft., in the Direction of 139.274° (True).

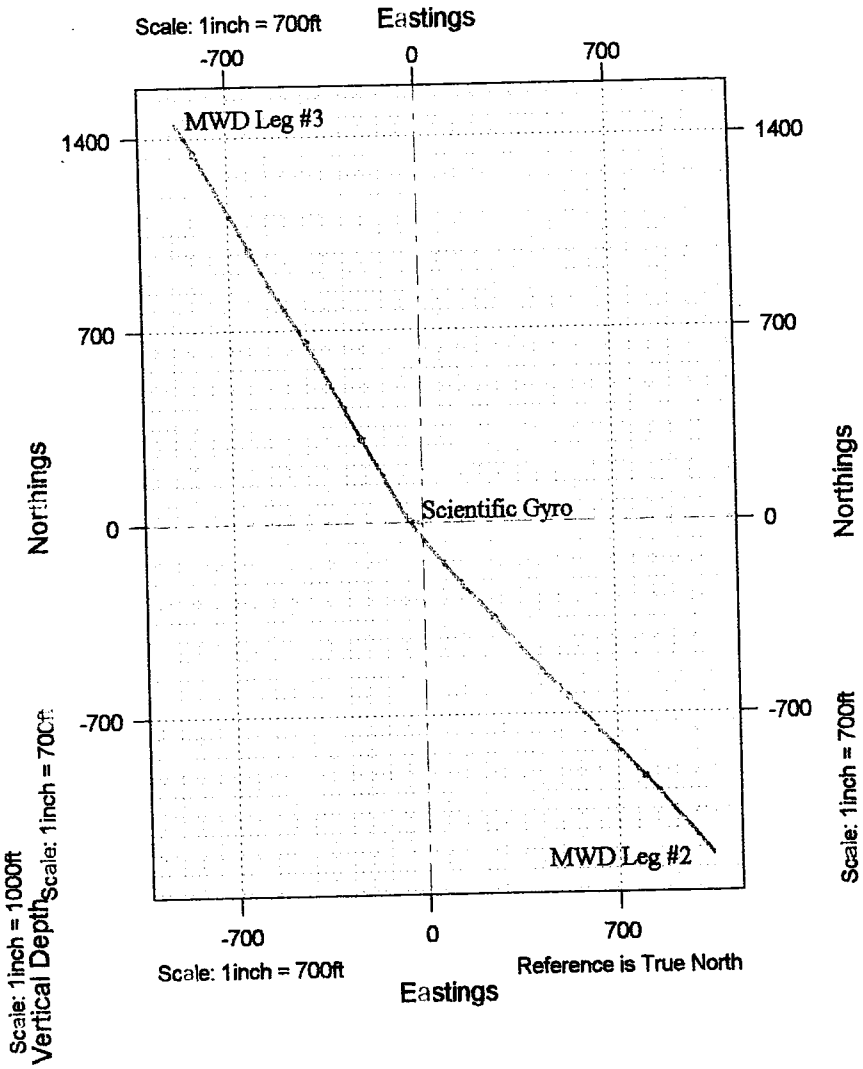
SPERRY-SUN DRILLING SERVICES

Mobil

DrillQuest

San Juan County
Utah
Ratherford Unit
RU 19-32





Prepared:	Checked:	Approved:

Mobil

San Juan County
Utah
Ratherford Unit
RU 19-32 - MWD Leg #3

SURVEY REPORT

15 December, 1998

sperry-sun
DRILLING SERVICES
A DIVISION OF DRESSER INDUSTRIES, INC.

Survey Ref: svy3367

Sperry-Sun Drilling Services

Survey Report for RU 19-32

Mobil — **Utah**
San Juan County — **Ratherford Unit**

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
Scientific Gyro							
0.00	0.000	0.000	0.00	0.00 N	0.00 E	0.00	
100.00	0.260	229.600	100.00	0.15 S	0.17 W	-0.04	0.260
200.00	0.800	276.810	200.00	0.21 S	1.04 W	0.34	0.652
300.00	0.770	272.350	299.99	0.10 S	2.40 W	1.11	0.068
400.00	0.880	283.850	399.98	0.11 N	3.82 W	2.01	0.198
500.00	1.000	275.840	499.96	0.38 N	5.43 W	3.05	0.178
600.00	0.960	273.190	599.95	0.52 N	7.14 W	4.02	0.060
700.00	1.130	287.180	699.93	0.86 N	8.92 W	5.20	0.305
800.00	1.240	283.010	799.91	1.39 N	10.91 W	6.66	0.140
900.00	1.500	280.330	899.88	1.87 N	13.26 W	8.25	0.268
1000.00	1.740	288.640	999.84	2.59 N	15.98 W	10.23	0.335
1100.00	1.830	290.180	1099.79	3.63 N	18.92 W	12.60	0.102
1200.00	1.730	286.130	1199.74	4.60 N	21.87 W	14.91	0.161
1300.00	1.580	279.140	1299.70	5.23 N	24.68 W	16.87	0.251
1400.00	1.510	273.860	1399.67	5.54 N	27.35 W	18.48	0.159
1500.00	1.470	279.750	1499.63	5.85 N	29.93 W	20.03	0.158
1600.00	1.360	285.310	1599.60	6.38 N	32.34 W	21.69	0.176
1700.00	1.250	282.170	1699.58	6.92 N	34.55 W	23.27	0.131
1800.00	1.230	284.020	1799.55	7.41 N	36.66 W	24.75	0.045
1900.00	1.260	279.570	1899.53	7.85 N	38.79 W	26.19	0.101
2000.00	1.270	289.490	1999.51	8.41 N	40.91 W	27.74	0.219
2100.00	1.260	290.000	2099.48	9.15 N	42.99 W	29.42	0.015
2200.00	1.210	297.300	2199.46	10.01 N	44.96 W	31.15	0.165
2300.00	1.170	299.110	2299.44	10.99 N	46.79 W	32.92	0.055
2400.00	1.190	301.840	2399.41	12.04 N	48.57 W	34.71	0.060
2500.00	1.240	299.350	2499.39	13.12 N	50.39 W	36.56	0.073
2600.00	1.200	304.370	2599.37	14.24 N	52.20 W	38.43	0.114
2700.00	1.030	315.300	2699.35	15.17 N	53.70 W	40.24	0.272
2800.00	1.070	321.870	2799.33	16.84 N	54.91 W	42.04	0.127
2900.00	1.060	324.050	2899.32	18.32 N	56.03 W	43.88	0.042
3000.00	1.080	322.900	2999.30	19.82 N	57.14 W	45.74	0.029
3100.00	1.090	328.240	3099.28	21.39 N	58.21 W	47.62	0.102
3200.00	1.030	331.610	3199.26	22.98 N	59.13 W	49.47	0.087
3300.00	0.870	347.020	3299.25	24.52 N	59.73 W	51.10	0.300
3400.00	0.940	346.740	3399.24	26.05 N	60.09 W	52.61	0.070
3500.00	0.870	351.850	3499.23	27.60 N	60.39 W	54.10	0.107
3600.00	0.830	339.990	3599.21	29.04 N	60.74 W	55.52	0.180
3700.00	0.650	354.080	3699.21	30.28 N	61.05 W	56.75	0.255
3800.00	0.500	339.850	3799.20	31.25 N	61.26 W	57.70	0.206
3900.00	0.330	322.820	3899.20	31.89 N	61.58 W	58.41	0.208

Continued...

Sperry-Sun Drilling Services

Survey Report for RU 19-32

Mobil
San Juan County

Utah
Ratherford Unit

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
4000.00	0.350	307.500	3999.20	32.31 N	62.00 W	58.98	0.093
4100.00	0.360	304.530	4099.20	32.67 N	62.50 W	59.54	0.021
4200.00	0.300	307.930	4199.19	33.01 N	62.96 W	60.07	0.063
4300.00	0.370	270.170	4299.19	33.17 N	63.49 W	60.48	0.227
4400.00	0.480	288.170	4399.19	33.30 N	64.21 W	60.95	0.172
4500.00	0.440	284.470	4499.19	33.53 N	64.98 W	61.53	0.050
4600.00	0.330	265.550	4599.18	33.61 N	65.64 W	61.92	0.167
4700.00	0.460	249.880	4699.18	33.44 N	66.31 W	62.12	0.168
4800.00	0.380	277.430	4799.18	33.35 N	67.01 W	62.39	0.215
4900.00	0.400	269.070	4899.18	33.39 N	67.69 W	62.76	0.060
5000.00	0.180	254.210	4999.18	33.34 N	68.19 W	62.97	0.231
5100.00	0.330	221.800	5099.17	33.08 N	68.53 W	62.92	0.202
5200.00	0.430	234.860	5199.17	32.65 N	69.03 W	62.79	0.132
5300.00	0.130	202.840	5299.17	32.33 N	69.38 W	62.69	0.327
5400.00	0.130	249.950	5399.17	32.19 N	69.53 W	62.64	0.104
MWD Leg #3							
5404.00	0.120	252.030	5403.17	32.18 N	69.54 W	62.64	0.274
5412.00	4.200	326.000	5411.16	32.42 N	69.71 W	62.94	52.106
5422.00	8.100	329.740	5421.10	33.34 N	70.27 W	64.01	39.185
5432.00	12.200	331.030	5430.95	34.87 N	71.14 W	65.77	41.060
5442.00	15.700	331.690	5440.65	36.99 N	72.30 W	68.18	35.036
5452.00	20.300	332.100	5450.16	39.71 N	73.75 W	71.27	46.017
5462.00	24.400	331.200	5459.40	43.06 N	75.56 W	75.07	41.141
5472.00	28.100	330.800	5468.37	46.92 N	77.70 W	79.49	37.042
5482.00	31.500	329.100	5477.05	51.22 N	80.19 W	84.46	35.031
5492.00	35.400	327.100	5485.39	55.90 N	83.11 W	89.96	40.524
5502.00	39.100	328.000	5493.35	61.01 N	86.35 W	96.01	37.398
5512.00	42.800	329.800	5500.90	66.62 N	89.74 W	102.56	38.832
5522.00	46.800	331.300	5507.99	72.75 N	93.20 W	109.61	41.371
5532.00	51.000	333.400	5514.57	79.43 N	96.69 W	117.13	44.878
5542.00	54.500	334.900	5520.62	86.59 N	100.16 W	125.07	36.979
5552.00	56.900	332.800	5526.25	94.01 N	103.80 W	133.31	29.611
5562.00	59.500	329.900	5531.52	101.46 N	107.88 W	141.80	35.822
5572.00	63.500	329.000	5536.30	109.03 N	112.34 W	150.59	40.774
5582.00	67.500	328.700	5540.44	116.81 N	117.05 W	159.69	40.093
5592.00	71.900	330.300	5543.91	124.89 N	121.81 W	169.06	46.487
5602.00	75.900	331.000	5546.68	133.26 N	126.51 W	178.67	40.561
5612.00	80.400	331.100	5548.74	141.83 N	131.25 W	188.45	45.011
5643.00	90.700	331.800	5551.14	168.94 N	146.00 W	219.31	33.302
5687.00	90.600	327.900	5550.64	206.98 N	168.09 W	263.29	8.866
5719.00	91.600	330.300	5550.02	234.43 N	184.52 W	295.28	8.124

Continued...

Sperry-Sun Drilling Services

Survey Report for RU 19-32

Mobil
San Juan County

Utah
Ratherford Unit

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
5751.00	90.800	330.100	5549.35	262.19 N	200.42 W	327.27	2.577
5782.00	90.700	330.300	5548.95	289.09 N	215.83 W	358.27	0.721
5814.00	90.100	330.300	5548.72	316.88 N	231.68 W	390.27	1.875
5846.00	90.000	331.200	5548.70	344.80 N	247.32 W	422.27	2.830
5877.00	90.600	331.400	5548.53	371.99 N	262.20 W	453.26	2.040
5909.00	90.500	331.400	5548.23	400.09 N	277.52 W	485.25	0.313
5940.00	90.400	330.500	5547.98	427.19 N	292.57 W	516.24	2.921
5972.00	90.400	331.400	5547.76	455.16 N	308.11 W	548.24	2.812
6004.00	90.600	331.900	5547.48	483.32 N	323.31 W	580.22	1.683
6036.00	90.300	330.800	5547.23	511.40 N	338.65 W	612.21	3.563
6068.00	90.300	330.500	5547.06	539.29 N	354.33 W	644.21	0.937
6099.00	90.400	332.200	5546.87	566.50 N	369.19 W	675.20	5.493
6130.00	90.700	329.800	5546.58	593.61 N	384.22 W	706.19	7.802
6162.00	91.200	329.400	5546.04	621.20 N	400.41 W	738.18	2.001
6194.00	91.700	329.200	5545.24	648.71 N	416.74 W	770.17	1.683
6225.00	90.600	327.800	5544.61	675.13 N	432.94 W	801.15	5.743
6257.00	90.200	327.300	5544.39	702.14 N	450.11 W	833.12	2.001
6289.00	91.100	327.100	5544.03	729.03 N	467.44 W	865.08	2.881
6321.00	91.500	327.100	5543.30	755.89 N	484.82 W	897.03	1.250
6352.00	90.500	327.700	5542.76	782.01 N	501.52 W	928.00	3.762
6384.00	91.400	328.000	5542.23	809.10 N	518.54 W	959.97	2.965
6416.00	91.800	328.000	5541.34	836.22 N	535.49 W	991.94	1.250
6448.00	92.200	327.800	5540.22	863.31 N	552.49 W	1023.90	1.397
6480.00	90.500	330.500	5539.46	890.77 N	568.89 W	1055.88	9.968
6511.00	90.800	330.800	5539.11	917.79 N	584.08 W	1086.87	1.369
6543.00	91.700	331.400	5538.41	945.80 N	599.54 W	1118.86	3.380
6575.00	92.300	331.900	5537.30	973.95 N	614.73 W	1150.83	2.440
6607.00	90.700	331.400	5536.46	1002.10 N	629.92 W	1182.80	5.238
6639.00	91.400	331.700	5535.87	1030.23 N	645.16 W	1214.79	2.380
6670.00	91.500	331.500	5535.09	1057.49 N	659.90 W	1245.76	0.721
6701.00	89.800	329.900	5534.74	1084.52 N	675.07 W	1276.76	7.530
6732.00	89.800	330.600	5534.85	1111.43 N	690.45 W	1307.76	2.258
6764.00	88.500	330.500	5535.32	1139.29 N	706.18 W	1339.75	4.074
6796.00	89.000	330.300	5536.02	1167.11 N	721.99 W	1371.74	1.683
6828.00	89.800	330.300	5536.35	1194.91 N	737.84 W	1403.74	2.500
6859.00	90.600	330.100	5536.25	1221.81 N	753.25 W	1434.74	2.660
6890.00	89.400	329.800	5536.25	1248.64 N	768.77 W	1465.74	3.990
6922.00	89.100	329.600	5536.66	1276.27 N	784.91 W	1497.73	1.127
6954.00	88.200	329.200	5537.42	1303.80 N	801.20 W	1529.72	3.078
6986.00	88.300	329.800	5538.40	1331.36 N	817.43 W	1561.71	1.900

Continued...

Sperry-Sun Drilling Services

Survey Report for RU 19-32

Mobil
San Juan County

Utah
Ratherford Unit

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
7017.00	88.100	329.900	5539.37	1358.15 N	832.99 W	1592.69	0.721
7049.00	87.200	327.300	5540.68	1385.44 N	849.65 W	1624.65	8.591
7093.00	89.800	328.700	5541.83	1422.74 N	872.96 W	1668.61	6.711
7126.00	89.800	328.700	5541.95	1450.94 N	890.10 W	1701.60	0.000

All data is in feet unless otherwise stated. Directions and coordinates are relative to True North.
Vertical depths are relative to Well. Northings and Eastings are relative to Well.

The Dogleg Severity is in Degrees per 100ft.
Vertical Section is from Well and calculated along an Azimuth of 330.000° (True).

Based upon Minimum Curvature type calculations, at a Measured Depth of 7126.00ft.,
The Bottom Hole Displacement is 1702.20ft., in the Direction of 328.472° (True).

DIVISION OF OIL, GAS AND MINING

ENTITY ACTION FORM - FORM 6

OPERATOR MOBIL PRODUCING TX & NM INC

ADDRESS P. O. BOX 633

MIDLAND, TEXAS 79702

OPERATOR ACCT. NO. N 7370

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION QQ	SC	TP	RG	COUNTY	SPUD DATE	EFFECTIVE DATE
D	6280 →		43-037-15743	RATHERFORD 19-W-32	SW/NE	19	41S	24E	SAN JUAN	9-16-98	12-12-98

WELL 1 COMMENTS: 990322 entity already added. KDR

WELL 2 COMMENTS:

RECEIVED JAN 25 1999 DIV OF OIL, GAS & MINING

WELL 3 COMMENTS:

WELL 4 COMMENTS:

WELL 5 COMMENTS:

HORIZONTAL RECOMPLETION

ACTION CODES (See instructions on back of form)

A - Establish new entity for new well (single well only)
B - Add new well to existing entity (group or unit well)
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)

NOTE: Use COMMENT section to explain why each Action Code was selected.

(3/89)

Signature SHIRLEY HOUCHINS

ENV & REG TECHNICIAN — Title

1-22-99 — Date

Phone No. (915) 688-2584

Form 3160-5
(June 1990)

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 reentry to a different reservoir.
Use "APPLICATION FOR PERMIT - " for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: 14-20-603-353
6. If Indian, Allottee or Tribe Name: NAVAJO TRIBAL
7. If Unit or CA, Agreement Designation: RATHERFORD UNIT
8. Well Name and No.: RATHERFORD 19-W-32
9. API Well No.: 43-037-15743
10. Field and Pool, or exploratory Area: GREATER ANETH
11. County or Parish, State: SAN JUAN UT

1. Type of Well: [ ] Oil Well [ ] Gas Well [X] Other
2. Name of Operator: MOBIL PRODUCING TX & NM INC.*
*MOBIL EXPLORATION & PRODUCING US INC. AS AGENT FOR MPTM
3. Address and Telephone No.: P.O. Box 633, Midland TX 79702 (915) 688-2585
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SEC. 19, T41S, R24E
(SW/NE)1980' FNL & 1980' FEL
BHL: LATERAL #1 738' FNL & 822' FWL

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

TYPE OF SUBMISSION	TYPE OF ACTION	
[ ] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[X] Subsequent Report	[X] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other INJECTOR/SIDETRACK	[ ] Dispose Water (Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)*

BHL:

LATERAL #2; 1212' SOUTH & 1044' EAST FROM SURFACE SPOT (ZONE 1a).
LATERAL #3; 1451' NORTH & 890' WEST FROM SURFACE SPOT (ZONE 1a).

9-16-98 -- 12-12-98 HORIZONTAL RECOMPLETION

ATTACHED FORM 15

14. I hereby certify that the foregoing is true and correct
Signed [signature] Title SHIRLEY HOUCHINS/ENV & REG TECH Date 1-28-99

(This space for Federal or State office use)
Approved by _____ Title _____ Date _____
Conditions 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 statements or representations as to any matter within its jurisdiction.

*** See Instruction on Reverse Side**

WTC
3-1-99

Form 3160-5
(June 1990)

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 reentry to a different reservoir.
Use "APPLICATION FOR PERMIT - " for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: 14-20-603-353
6. If Indian, Allottee or Tribe Name: NAVAJO TRIBAL
7. If Unit or CA, Agreement Designation: RATHERFORD UNIT
8. Well Name and No.: RATHERFORD 19-W-32
9. API Well No.: 43-037-15743
10. Field and Pool, or exploratory Area: GREATER ANETH
11. County or Parish, State: SAN JUAN UT

1. Type of Well: [ ] Oil Well [ ] Gas Well [X] Other
2. Name of Operator: MOBIL PRODUCING TX & NM INC.*
*MOBIL EXPLORATION & PRODUCING US INC. AS AGENT FOR MPTM
3. Address and Telephone No.: P.O. Box 633, Midland TX 79702 (915) 688-2585
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SEC. 19, T41S, R24E
(SW/NE)1980' FNL & 1980' FEL
BHL: LATERAL #1 738' FNL & 822' FWL

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

TYPE OF SUBMISSION	TYPE OF ACTION	
[ ] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[X] Subsequent Report	[X] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other INJECTOR/SIDETRACK	[ ] Dispose Water (Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)*

BHL:

LATERAL #2: 1212' SOUTH & 1044' EAST FROM SURFACE SPOT (ZONE 1a).
LATERAL #3: 1451' NORTH & 890' WEST FROM SURFACE SPOT (ZONE 1a).

2-21-99 --3-12-99 ACIDIZE LATERALS

ATTACHED MIT & CHART

RECEIVED
MAR 26 1999
DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct
Signed Sue Moseley for Title SHIRLEY HOUCHINS/ENV & REG TECH Date 3-24-99

(This space for Federal or State office use)
Approved by _____ Title _____ Date _____
Conditions 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 statements or representations as to any matter within its jurisdiction.

* See Instruction on Reverse Side

ATTACHMENT – FORM 3160-5
RATHERFORD UNIT – WELL #19-32
14-20-603-353
NAVAJO TRIBAL
SAN JUAN, UTAH

02-21-99	MIRU MONTEZUMA #36.
02-22-99	SHUT IN PRESSURE AT 09:00 WAS 0 PSI. ND WELL HEAD CAP. ND WELL HEAD CAP. NU BOPE. RIH WITH RETV. HEAD FOR BRIDGE PLUG AND PH-6 TBG. TO 5301.20'. SIFN.
02-23-99	SHUT IN PRESSURE AT 07:30 WAS 750 PSI. RELEASE BRIDGE PLUG. POH. RIH W/ PACKER, AND TBG. TO 5639.06'. SET PACKER AT 5335.08'. RU AND TEST, OK.
02-24-99	MIRU DOWELL COILED TBG. SI TBG PRESSURE AT 07:30 WAS 0 PSI. RIH W/ COILED TBG. TO 7126'. DOWELL ACIDIZE LATERAL 3A1 FROM 7126' TO 5643' WITH 20,790 GALS OF 15% HCL ACID. RD COILED TBG. UNIT. SI PRESSURE OF 1575 PSI. MIRU DOWELL COILED TBG. UNIT. SIFN.
02-25-99	SI PRESSURE AT 07:30 WAS 1300 PSI. RU AND KILL WELL AND RELEASE PACKER. POH W/ PACKER. RIH TO 5425'. LATCH ONTO BRIDGE PLUG AND RELEASE. POH FROM 5425' TO 5041'. SIFN.
02-26-99	SI TBG. AND CSG. PRESSURE AT 07:30 WAS 0 PSI. RIH WITH RETV. HEAD FOR BRIDGE PLUG TO 5041'. LATCH ONTO BRIDGE PLUG. COULD NOT FREE UP. RU AND KILL WELL, WORK PLUG FREE. SIFN.
02-27-99	SI TBG. AND CSG. PRESSURE AT 07:30 WAS 50 PSI. RIG UP AND KILL WELL. RIH TO 5434'. COULD NOT ADVANCE. POH W/ TBG. AND RETV. BRIDGE PLUG. RIH W/ TAIL PIPE, PACKER, AND TBG. TO 5443'.
03-01-99	SITP 100# CSG 200# SITP 2100#. WO KILL FLUID NOT ENOUGH @ MUD PLANT SWISDFD.
03-02-99	SITP 2100# CSG 100#. CIRC KILL FLUID TBG DEAD. POH W/ SI SITP 100# CSG 50#. WO 17# MUD. KILL FLUID ATTEMPT TO STABIZ. WELL STILL FLOW OUT CSG SI SITP 150# 100# CSG.
03-03-99	SITP/CSG 0#. WELL DEAD, POH W/ TBG/PKR/TP, RIG W/ SET TEST PKR OK PREPARE FLOOR FOR D/S SWISDFN.
03-04-99	MIRU D/S EQUIP. RIH W/ COIL TBG TO 5650' SPOT 25 BBLS 15% ACID AND SI PUMP ACID END C.T. SI NO SUCCESS POH RD D/S.
03-05-99	SITP 1500# KILL W/ 20 BBLS 16#, RIH, TAG TOP JUNK @ 5443' WORKED TBG INTO LATERAL #2A1 SET PKR TEST OK.
03-06-99	SITP 0# RU. RIH W/ 1.75' C.T. TO 5981' DN WASH/SPOT ACID/WASHED & WORKED C.T. UNABLE TO MAKE ANY PROGRESS, CALLED IN, POH W/ C.T. RD D/S SWISDFN & SUNDAY.
03-07-99	SHUT-IN SUNDAY
03-08-99	SITP 1500# CSG 0#. RIH W/ INJ PKR ON. SET PKR @ 5324'. LOAD & TEST 200# W/ KILL FLUID. OK SWISDFN.
09-09-99	SIT/CP 0#, POH LAY DN TBG, CHANGE OUT FLOATS, PU CMT LINE TBG DRIFT W/ 2" GOT TOO WINDY TO CONTINUE, PU TBG SWISDFN.
03-10-99	CIRC KILL FLUID OUT W/ F-WTR PKR FLUID LATCH ON SWISDFN.
03-11-99	SIP 0#. PSI 5.5" CSG TO 1180# 40 MIN FOR MIT TEST. OK. WITNESSED BY MELVINA CLAH W/ NAVAJO EPA. SHE PASSED TEST & TOOK CHART. SWISDFN RIG DN CLEAN LOC.
03-12-99	TURN TO PRODUCTION. FINAL REPORT.

ANNULAR PRESSURE TEST
(Mechanical Integrity Test)

Operator Mobil E. & P., Inc. **Date of Test** 3-10-99

Well Name RU # 19W32 **EPA Permit No.**

Location Sec. 19, T41S-R24E **Tribal Lease No.** 1420603353

State and County San Juan County, Utah

Continuous Recorder? YES ☑ NO ☐ **Pressure Gauge?** YES ☑ NO ☐

Bradenhead Opened? YES ☑ NO ☐ **Fluid Flow?** YES ☐ NO ☑

TIME	ANNULUS PRESSURE, psi 0-1500 psi gauge	1500 psi chart recorder	TUBING PRESSURE, psi 0-3000 psi gauge
9:26 AM	1100	1185	0
9:31 AM	1100	1180	0
9:36 AM	1100	1180	0
9:41 AM	1100	1180	0
9:46 AM	1100	1180	0
9:51 AM	1100	1180	0
9:56 AM	1100	1180	0

MAX. INJECTION PRESSURE: 3000 **PSI**

MAX. ALLOWABLE PRESSURE CHANGE: 59.25 **PSI (TEST PRESSURE X 0.05)**

REMARKS: Passed? Failed? **If failed, cease injection until well passes MIT (40CFR§144.21(c)(6)).**

PASSED MIT.

This well had a rentry workover, drilled two laterals.

BENNY THOMPSON THOMAS **COMPANY REPRESENTATIVE:** (Print and Sign) 3-10-99 **DATE**

MELVINA CLAH ~~Melvin Capitan Jr.~~ **INSPECTOR:** (Print and Sign) 3-10-99 **DATE**

REGION-IX-FORM-935 (6/13/96) *USEPA - Region IX (White)* *NEPA-GPCP (Yellow)* *Operator (Pink)*

U.S. ENVIRONMENTAL PROTECTION AGENCY

NOTICE OF INSPECTION

Address (EPA Regional Office)	Inspection Contractor	Firm To Be Inspected
Region 9 Environmental Inspection Agency 75 Hawthorne Street (WTR-9) San Francisco, CA 94105	NAVAJO EPA Groundwater Pollution Control Pgm. P.O. Box 1979 Shiprock, NM 87420-1979	MOBIL E.&P., INC. P.O. BOX DRAWER G CORTEZ, CO

Date 3-11-99
Hour 9 AM

Notice of inspection is hereby given according to Section 1445(b) of the Safe Drinking Water Act (42 U.S.C. §300 f et seq.).

Reason For Inspection

For the purpose of inspecting records, files, papers, processes, controls and facilities, and obtaining samples to determine whether the person subject to an applicable underground injection control program has acted or is acting in compliance with the Safe Drinking Water Act and any applicable permit or rule.

MOBIL E.&P., INC., RATHERFORD UNIT, WELL # 19-32, PASSED MIT

Section 1445(b) of the SDWA (42 U.S.C. §300 j-4 (b) is quoted on the reverse of this form

Receipt of this Notice of Inspection is hereby acknowledged.

Firm Representative	Date	Inspector
G.B. Thompson	3-11-99	Melvina K. Clah

USEPA - Region IX (White) *NEPA-GPCP (Yellow)* *Operator (Pink)*

MAR 26 1999

Form 3160-5
(June 1990)

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 reentry to a different reservoir.
Use "APPLICATION FOR PERMIT - " for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: 14-20-603-353
6. If Indian, Allottee or Tribe Name: NAVAJO TRIBAL
7. If Unit or CA, Agreement Designation: RATHERFORD UNIT
8. Well Name and No.: RATHERFORD 19-32
9. API Well No.: 43-037-15743
10. Field and Pool, or exploratory Area: GREATER ANETH
11. County or Parish, State: SAN JUAN UT

1. Type of Well: [ ] Oil Well [ ] Gas Well [X] Other
2. Name of Operator: MOBIL PRODUCING TX & NM INC.*
*MOBIL EXPLORATION & PRODUCING US INC. AS AGENT FOR MPTM
3. Address and Telephone No.: P.O. Box 633, Midland TX 79702 (915) 688-2585
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SEC. 19, T41S, R24E
(SW/NE) 1980' FNL & 1980' FEL

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

TYPE OF SUBMISSION	TYPE OF ACTION	
[X] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other MIT CHART	[ ] Dispose Water (Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)*

SEE ATTACHED CHART.

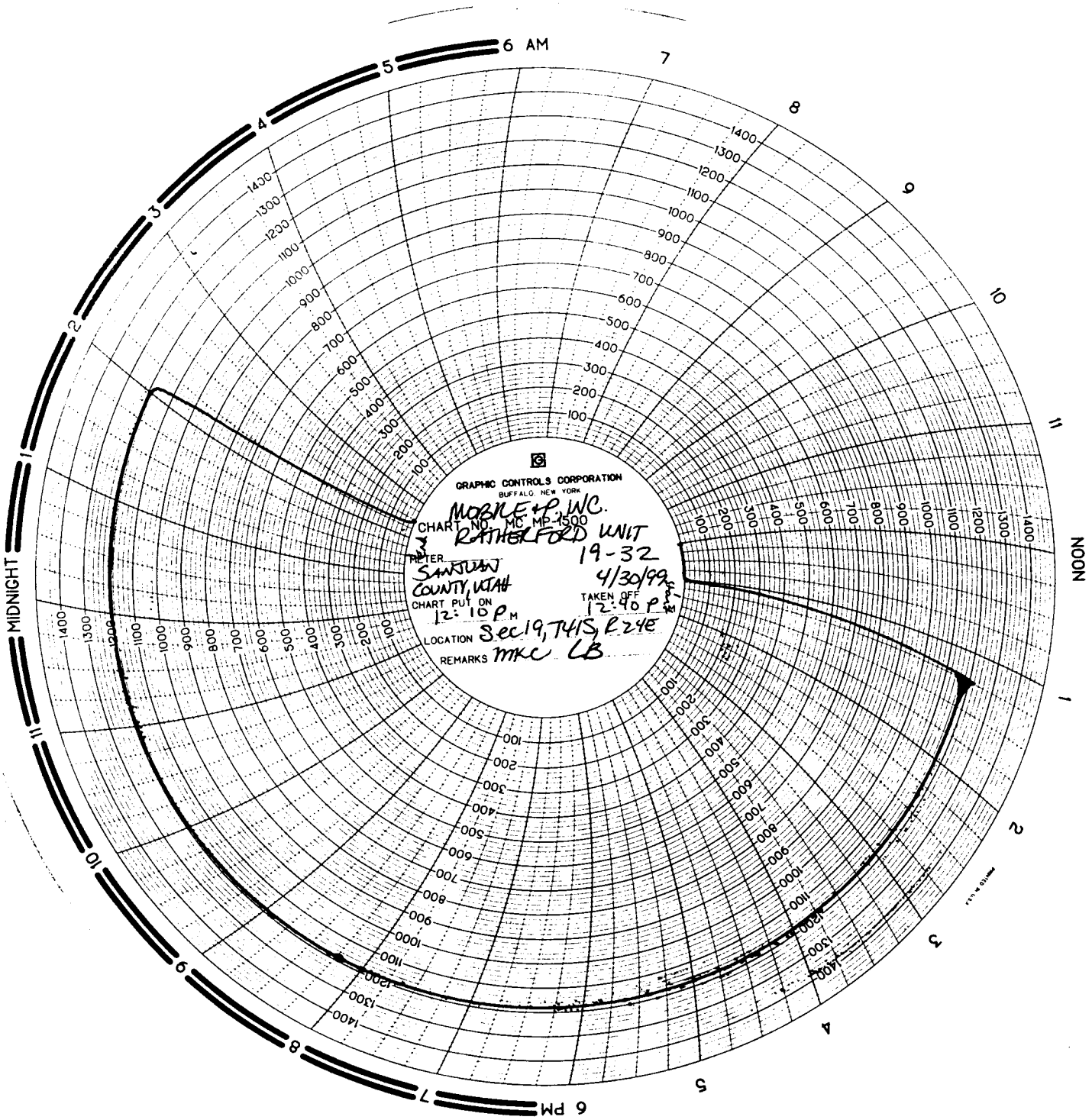
RECEIVED
MAY 14 1999
DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct
Signed Lee Mosley for Title SHIRLEY HOUCHINS/ENV & REG TECH Date 5-12-99

(This space for Federal or State office use)
Approved by _____ Title _____ Date _____
Conditions 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 statements or representations as to any matter within its jurisdiction.

* See Instruction on Reverse Side


GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK
CHART NO. MC MP-1500
METER
CHART PUT ON 12:10 PM
TAKEN OFF 12:40 PM
LOCATION Sec 19, T41S, R24E
REMARKS MKC LB
MOBILE+P, INC.
RATHERFORD UNIT
19-32
SAN JUAN
COUNTY, UTAH
4/30/99
MIDNIGHT
NOON
6 AM
6 PM

ExxonMobil Production Comp
U.S. West
P.O. Box 4358
Houston, Texas 77210-4358

June 27, 2001

ExxonMobil
Production

Mr. Jim Thompson
State of Utah, Division of Oil, Gas and Mining
1549 West North Temple
Suite 1210
Salt Lake City, UT 84114-5801

Change of Name – Mobil Oil Corporation to
ExxonMobil Oil Corporation

Dear Mr. Thompson

Effective June 1, 2001, Mobil Oil Corporation (MOC) changed its name to ExxonMobil Oil Corporation (EMOC). This was a name change only; EMOC is the same corporation as Mobil Oil Corporation, but with a new name. No facility or other asset was transferred from one corporation to another by virtue of the name change. Specifically, EMOC will remain the owner and operator of its existing exploration and production oil and gas properties and facilities, as well as relevant permits.

There is no change to the name of Exxon Mobil Corporation, the ultimate shareholder of EMOC.

Please note the change of name of MOC to ExxonMobil Oil Corporation in your records pertaining to any MOC permits.

The Federal Identification Number for MOC (13-5401570) will remain the same for EMOC.

A copy of the Certification, Bond Rider and a list of wells are attached.

If you have any questions please feel free to call Joel Talavera at 713-431-1010

Very truly yours,

Charlotte H. Harper

Charlotte H. Harper
Permitting Supervisor

ExxonMobil Production Company
a division of Exxon Mobil Corporation,
acting for ExxonMobil Oil Corporation

RECEIVED
[illegible] 2001
DIVISION OF
OIL, GAS AND MINING

United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
XXXXXXXXXXXXXXXX
Navajo Area Office
NAVAJO REGION
P.O. Box 1060
Gallup, New Mexico 87305-1060

IN REPLY REFER TO:

RRES/543

AUG 30 2001

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Charlotte H. Harper, Permitting Supervisor
Exxon Mobil Production Company
U. S. West
P. O. Box 4358
Houston, TX 77210-4358

Dear Ms. Harper:

This is to acknowledge receipt of your company's name change from Mobil Oil Corporation to ExxonMobil Oil Corporation effective June 1, 2001. The receipt of documents includes the Name Change Certification, current listing of Officers and Directors, Listing of Leases, Financial Statement, filing fees of $75.00 and a copy of the Rider for Bond Number 8027 31 97. There are no other changes.

Please note that we will provide copies of these documents to other concerned parties. If you need further assistance, you may contact Ms. Bertha Spencer, Realty Specialist, at (928) 871-5938.

Sincerely,

DENNIS DENETSONE

Regional Realty Officer

cc: BLM, Farmington Field Office w/enclosures
Navajo Nation Minerals Office, Attn: Mr. Akhtar Zaman, Director/w enclosures

MINERAL RESOURCES
ADM 1 DM
NATV AM MIN COORD
SOLID MIN TEAM
PETRO MGMT TEAM 2
O & G INSPECT TEAM
ALL TEAM LEADERS
LAND RESOURCES
ENVIRONMENT
FILES

ExxonMobil Production Company
U.S. West
P.O. Box 4358
Houston, Texas 77210-4358

BR 7/12/2001

GN
543
File

June 27, 2001

ExxonMobil
Production

Certified Mail
Return Receipt Requested

RECEIVED
#477
JUL 9 - 2001
Navajo Region Office
RES - Minerals Section

Ms. Genni Denetsone
United States Department of the Interior
Bureau of Indian Affairs, Navajo Region
Real Estate Services
P. O. Box 1060
Gallup, New Mexico 87305-1060
Mail Code 543

Change of Name –
Mobil Oil Corporation to
ExxonMobil Oil Corporation

Dear Ms. Denetsone:

Effective June 1, 2001, Mobil Oil Corporation (MOC) changed its name to ExxonMobil Oil Corporation (EMOC). This was a name change only; EMOC is the same corporation as Mobil Oil Corporation, but with a new name. No facility or other asset was transferred from one corporation to another by virtue of the name change. Specifically, EMOC will remain the owner and operator of its existing exploration and production oil and gas properties and facilities, as well as relevant permits.

There is no change to the name of Exxon Mobil Corporation, the ultimate shareholder of EMOC.

Please note the change of name of MOC to ExxonMobil Oil Corporation in your records pertaining to any MOC permits.

The Federal Identification Number for MOC (13-5401570) will remain the same for EMOC.

Attached is the Name Change Certification, Current listing of Officers and Directors, Filing Fee of $75/-, Listing of Leases, Financial Statement and a copy of the Rider for Bond number 8027 31 97. The original Bond Rider has been sent to Ms. Barbar Davis at your Washington Office.

If you have any questions , please contact Alex Correa at (713) 431-1012.

Very truly yours,

Charlotte H. Harper

Charlotte H. Harper
Permitting Supervisor

Attachments

RECEIVED
JUL 05 2001
NAVAJO REGION OFFICE
BRANCH OF REAL ESTATE SERVICES

ExxonMobil Production Company
a division of Exxon Mobil Corporation,
acting for ExxonMobil Oil Corporation

NOTE: Check forwarded to Ella Jessie

Bureau of Indian Affairs
Navajo Region Office
Attn: RRES - Mineral and Mining Section
P.O. Box 1060
Gallup, New Mexico 87305-1060

Gentlemen:

The current listing of officers and director of ExxonMobil Oil Corporation (Name of Corporation), of New York (State) is as follows:

OFFICERS

President	F.A. Risch	Address	5959 Las Colinas Blvd. Irving, TX 75039
Vice President	K.T. Koonce	Address	800 Bell Street Houston, TX 77002
Secretary	F.L. Reid	Address	5959 Las Colinas Blvd. Irving, TX 75039
Treasure	B.A. Maher	Address	5959 Las Colinas Blvd. Irving, TX 75039

DIRECTORS

Name	D.D. Humphreys	Address	5959 Las Colinas Blvd. Irving, TX 75039
Name	P.A. Hanson	Address	5959 Las Colinas Blvd. Irving, TX 75039
Name	T.P. Townsend	Address	5959 Las Colinas Blvd. Irving, TX 75039
Name	B.A. Maher	Address	5959 Las Colinas Blvd. Irving, TX 75039
Name	F.A. Risch	Address	5959 Las Colinas Blvd. Irving, TX 75039

Sincerely,

Alex Correa

This is to certify that the above information pertaining to ExxonMobil Oil Corporation (Corporation) is trust and correct as evidenced by the records and accounts covering business for the State of Utah and in the custody of Corporation Service Company (Agent), Phone: 1 (800)927-9800, whose business address is One Utah Center, 201 South Main Street, Salt Lake City, Utah 84111-2218

(CORPORATE SEAL)

Signature

AGENT AND ATTORNEY IN FACT

Title

SAL

CERTIFICATION

I, the undersigned Assistant Secretary of ExxonMobil Oil Corporation. (formerly Mobil Oil Corporation), a corporation organized and existing under the laws of the State of New York, United States of America, DO HEREBY CERTIFY, That, the following is a true and exact copy of the resolutions adopted by the Board of Directors on May 22, 2001:

CHANGE OF COMPANY NAME

WHEREAS, the undersigned Directors of the Corporation deem it to be in the best interest of the Corporation to amend the Certificate of Incorporation of the Corporation to change the name and principal office of the Corporation:

NOW THEREFORE BE IT RESOLVED, That Article 1st relating to the corporate name is hereby amended to read as follows:

"1st The corporate name of said Company shall be,

ExxonMobil Oil Corporation",

FURTHER RESOLVED, That the amendment of the Corporation's Certificate of Incorporation referred to in the preceding resolutions be submitted to the sole shareholder of the Corporation entitled to vote thereon for its approval and, if such shareholder gives its written consent, pursuant to Section 803 of the Business Corporation Law of the State of New York, approving such amendment, the proper officers of the Corporation be, and they hereby are, authorized to execute in the name of the Corporation the Certificate of Amendment of Certificate of Incorporation, in the form attached hereto;

FURTHER RESOLVED, That the proper officers of the Corporation be and they hereby are authorized and directed to deliver, file and record in its behalf, the Certificate of Amendment of Certificate of Incorporation, and to take such action as may be deemed necessary or advisable to confirm and make effective in all respects the change of this Company's name to EXXONMOBIL OIL CORPORATION.

WITNESS, my hand and the seal of the Corporation at Irving, Texas, this 8th day of June, 2001.

S. A. Millican
Assistant Secretary

COUNTY OF DALLAS)
STATE OF TEXAS)
UNITED STATES OF AMERICA)
Sworn to and subscribed before me at Irving, Texas, U. S. A. on this the 8th day of June, 2001.

Janice M. Phillips
Notary Public

LISTING OF LEASES OF MOBIL OIL CORPORATION

	Lease Number
1)	14-20-0603-6504
2)	14-20-0603-6505
3)	14-20-0603-6506
4)	14-20-0603-6508
5)	14-20-0603-6509
6)	14-20-0603-6510
7)	14-20-0603-7171
8)	14-20-0603-7172A
9)	14-20-600-3530
10)	14-20-603-359
11)	14-20-603-368
12)	14-20-603-370
13)	14-20-603-370A
14)	14-20-603-372
15)	14-20-603-372A
16)	14-20-603-4495
17)	14-20-603-5447
18)	14-20-603-5448
19)	14-20-603-5449
20)	14-20-603-5450
21)	14-20-603-5451

6/1/01

CHUBB GROUP OF INSURANCE COMPANIES

[illegible] North, Suite 1400, Houston, Texas 77027-3301
[illegible] (713) 297-4600 • Facsimile: (713) 297-4759

NW Bond

FEDERAL INSURANCE COMPANY RIDER
to be attached to and form a part of

BOND NO 8027 31 97
wherein
Mobil Oil Corporation and Mobil Exploration and Producing U.S., Inc. is named as Principal and

FEDERAL INSURANCE COMPANY AS SURETY,

in favor of United States of America, Department of the Interior Bureau of Indian Affairs

in the amount of **$150,000.00**
bond date: 11/01/65

IT IS HEREBY UNDERSTOOD AND AGREED THAT effective **June 1, 2001** the name of the Principal is changed

FROM: **Mobil Oil Corporation and Mobil Exploration and Producing U.S., Inc.**

TO : **ExxonMobil Oil Corporation**

All other terms and conditions of this Bond are unchanged.

Signed, sealed and dated this 12th of June, 2001.

ExxonMobil Oil Corporation
By: [signature]

FEDERAL INSURANCE COMPANY
By: Mary Pierson
Mary Pierson, Attorney-in-fact

Chubb Surety

POWER OF ATTORNEY

Federal Insurance Company
Vigilant Insurance Company
Pacific Indemnity Company

Attn.: Surety Department
15 Mountain View Road
Warren, NJ 07059

Know All by These Presents, That FEDERAL INSURANCE COMPANY, an Indiana corporation, VIGILANT INSURANCE COMPANY, a New York corporation, and PACIFIC INDEMNITY COMPANY, a Wisconsin corporation, do each hereby constitute and appoint

R.F. Bobo,
Mary Pierson, Philana Berros, and Jody E. Specht of Houston, Texas----------

each as their true and lawful Attorney-in-Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligatory in the nature thereof (other than bail bonds) given or executed in the course of business, and any instruments amending or altering the same, and consents to the modification or alteration of any instrument referred to in said bonds or obligations.

In Witness Whereof, said FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY have each executed and attested these presents and affixed their corporate seals on this 10th day of May, 2001.

Kenneth C. Wendel, Assistant Secretary

Frank E. Robertson, Vice President

STATE OF NEW JERSEY
County of Somerset } ss.

On this 10th day of May, 2001, before me, a Notary Public of New Jersey, personally came Kenneth C. Wendel, to me known to be Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY, the companies which executed the foregoing Power of Attorney, and the said Kenneth C. Wendel being by me duly sworn, did depose and say that he is Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY and knows the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of the By-Laws of said Companies; and that he signed said Power of Attorney as Assistant Secretary of said Companies by like authority; and that he is acquainted with Frank E. Robertson, and knows him to be Vice President of said Companies; and that the signature of Frank E. Robertson, subscribed to said Power of Attorney is in the genuine handwriting of Frank E. Robertson, and was thereto subscribed by authority of said Companies in deponent's presence.

Karen A. Price
Notary Public State of New Jersey
No. 2231647
Commission Expires Oct. 28, 2004

Karen A. Price
Notary Public

CERTIFICATION

Extract from the By-Laws of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY:

"All powers of attorney for and on behalf of the Company may and shall be executed in the name and on behalf of the Company, either by the Chairman or the President or a Vice President or an Assistant Vice President, jointly with the Secretary or an Assistant Secretary, under their respective designations. The signature of such officers may be engraved, printed or lithographed. The signature of each of the following officers: Chairman, President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary and the seal of the Company may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such power of attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached."

I, Kenneth C. Wendel, Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY (the "Companies") do hereby certify that

(i) the foregoing extract of the By-Laws of the Companies is true and correct,
(ii) the Companies are duly licensed and authorized to transact surety business in all 50 of the United States of America and the District of Columbia and are authorized by the U. S. Treasury Department; further, Federal and Vigilant are licensed in Puerto Rico and the U. S. Virgin Islands, and Federal is licensed in American Samoa, Guam, and each of the Provinces of Canada except Prince Edward Island; and
(iii) the foregoing Power of Attorney is true, correct and in full force and effect.

Given under my hand and seals of said Companies at Warren, NJ this 12th day of June, 2001.

Kenneth C. Wendel, Assistant Secretary

IN THE EVENT YOU WISH TO NOTIFY US OF A CLAIM, VERIFY THE AUTHENTICITY OF THIS BOND OR NOTIFY US OF ANY OTHER MATTER, PLEASE CONTACT US AT ADDRESS LISTED ABOVE, OR BY Telephone (908) 903-3485 Fax (908) 903-3656 e-mail: surety@chubb.com

15-10-0225 (Ed. 4-99) CONSENT

CSC 5184334741 06/01 '01 08:46 NO.410 03/05
CSC 06/01 '01 09:06 NO.135 02/04
F010601000187

CSC 45

CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION
OF
MOBIL OIL CORPORATION

(Under Section 805 of the Business Corporation Law)

Pursuant to the provisions of Section 805 of the Business Corporation Law, the undersigned President and Secretary, respectively, of Mobil Oil Corporation hereby certify:

FIRST: That the name of the corporation is MOBIL OIL CORPORATION and that said corporation was incorporated under the name of Standard Oil Company of New York.

SECOND: That the Certificate of Incorporation of the corporation was filed by the Department of State, Albany, New York, on the 10th day of August, 1882.

THIRD: That the amendments to the Certificate of Incorporation effected by this Certificate are as follows:

(a) Article 1st of the Certificate of Incorporation, relating to the corporate name, is hereby amended to read as follows:

"1st The corporate name of said Company shall be,

ExxonMobil Oil Corporation",

(b) Article 7th of the Certificate of Incorporation, relating to the office of the corporation is hereby amended to read as follows:

The office of the corporation within the State of New York is to be located in the County of Albany. The Company shall have offices at such other places as the Board of Directors may from time to time determine.

FOURTH: That the amendments to the Certificate of Incorporation were authorized by the Board of Directors followed by the holder of all outstanding shares entitled to vote on amendments to the Certificate of Incorporation by written consent of the sole shareholder dated May 22, 2001.

IN WITNESS WHEREOF, this Certificate has been signed this 22nd Day of May, 2001.

F. A. Risch, President

STATE OF TEXAS)
COUNTY OF DALLAS)

F. L. REID, being duly sworn, deposes and says that he is the Secretary of MOBIL OIL CORPORATION, the corporation mentioned and described in the foregoing instrument; that he has read and signed the same and that the statements contained therein are true.

F. L. REID, Secretary

SUBSCRIBED AND SWORN TO before me, the undersigned authority, on this the 22nd day of May, 2001.

[SEAL]

NOTARY PUBLIC, STATE OF TEXAS

JANICE M. PHILLIPS
MY COMMISSION EXPIRES
May 16, 2002

CSC
CSC

5184334741

06/01 '01 09:01 NO.411 02/02
06/01 '01 09:06 NO.139 04/04

F010601000187

CSC 45

CERTIFICATE OF AMENDMENT

OF

MOBIL OIL CORPORATION

Under Section 805 of the Business Corporation Law

Sac

100 cc

STATE OF NEW YORK
DEPARTMENT OF STATE
FILED JUN 01 2001
TAX $
BY: Sac
Albany

Filed by: EXXONMOBIL CORPORATION
(Name)

5959 Las Colinas Blvd.
(Mailing address)

Irving, TX 75039-2298
(City, State and Zip code)

Cust Ref # 165578MPJ

RECEIVED
JUL 05 2001
DIVISION OF CORPORATIONS AND STATE SERVICES

010601000195

State of New York }
Department of State } ss:

I hereby certify that the annexed copy has been compared with the original document in the custody of the Secretary of State and that the same is a true copy of said original.

Witness my hand and seal of the Department of State on JUN 01 2001

Special Deputy Secretary of State

DOS-1266 (7/00)

Division of Oil, Gas and Mining

OPERATOR CHANGE WORKSHEET

ROUTING
1. GLH
2. CDW
3. FILE

Change of Operator (Well Sold) — Designation of Agent

X **Operator Name Change** — Merger

The operator of the well(s) listed below has changed, effective: **06-01-2001**

FROM: (Old Operator):	**TO:** (New Operator):
MOBIL EXPLORATION & PRODUCTION	EXXONMOBIL OIL CORPORATION
Address: P O BOX DRAWER "G"	Address: U S WEST P O BOX 4358
CORTEZ, CO 81321	HOUSTON, TX 77210-4358
Phone: 1-(970)-564-5212	Phone: 1-(713)-431-1010
Account No. N7370	Account No. N1855

CA No. **Unit:** **RATHERFORD**

WELL(S)

NAME	SEC TWN RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
RATHERFORD U 19W21	19-41S-24E	43-037-15741	6280	INDIAN	WI	A
DSRT A-26 (RATHERFORD 19W23)	19-41S-24E	43-037-15742	99990	INDIAN	WI	A
RATHERFORD U 19-32	19-41S-24E	43-037-15743	6280	INDIAN	WI	A
RATHERFORD U 19-34	19-41S-24E	43-037-15744	6280	INDIAN	WI	A
DESERT A-24 (RATHERFORD 19W41)	19-41S-24E	43-037-15745	99990	INDIAN	WI	A
DESERT A-23 (RATHERFORD 19W43)	19-41S-24E	43-037-16420	99990	INDIAN	WI	A
RATHERFORD U 20-12	20-41S-24E	43-037-15746	6280	INDIAN	WI	I
RATHERFORD U 20-14	20-41S-24E	43-037-15747	6280	INDIAN	WI	A
DESERT A-18 (RATHERFORD 20W23)	20-41S-24E	43-037-15748	99990	INDIAN	WI	A
RATHERFORD U 20-32	20-41S-24E	43-037-15749	6280	INDIAN	WI	A
RATHERFORD U 20-34	20-41S-24E	43-037-15750	6280	INDIAN	WI	A
RATHERFORD 20W41 (DESERT A-27)	20-41S-24E	43-037-15751	99990	INDIAN	WI	A
RATHERFORD 20-67	20-41S-24E	43-037-31590	6280	INDIAN	WI	A
RATHERFORD U 21-14	21-41S-24E	43-037-15753	6280	INDIAN	WI	I
RATHERFORD UNIT 21-67	21-41S-24E	43-037-31753	6280	INDIAN	WI	A
RATHERFORD UNIT 28-12	28-41S-24E	43-037-15336	6280	INDIAN	WI	A
NAVAJO A-19 (RATHERFORD 28W21)	28-41S-24E	43-037-16431	99990	INDIAN	WI	A
RATHERFORD U 29-12	29-41S-24E	43-037-15337	6280	INDIAN	WI	A
RATHERFORD U 29-32	29-41S-24E	43-037-15339	6280	INDIAN	WI	A
RATHERFORD 29W21	29-41S-24E	43-037-16432	99990	INDIAN	WI	A
NAVAJO B-5 (RATHERFORD 30W41)	30-41S-24E	43-037-15343	99990	INDIAN	WI	A
NAVAJO B-16 (RATHERFORD 30W21)	30-41S-24E	43-037-16435	99990	INDIAN	WI	I

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 06/29/2001
2. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 06/29/2001
3. The new company has been checked through the **Department of Commerce, Division of Corporations Database on:** 04/09/2002
4. Is the new operator registered in the State of Utah: YES Business Number: 579865-0143

5. If **NO**, the operator was contacted contacted on: N/A

6. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BIA-06/01/01

7. **Federal and Indian Units:**
The BLM or BIA has approved the successor of unit operator for wells listed on: 06/01/2001

8. **Federal and Indian Communization Agreements ("CA"):**
The BLM or BIA has approved the operator for all wells listed within a CA on: N/A

9. **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: N/A
NOTE: EPA ISSUES UIC PERMIT

DATA ENTRY:

1. Changes entered in the **Oil and Gas Database on:** 04/11/2002
2. Changes have been entered on the **Monthly Operator Change Spread Sheet on:** 04/11/2002
3. Bond information entered in RBDMS on: N/A
4. Fee wells attached to bond in RBDMS on: N/A

STATE WELL(S) BOND VERIFICATION:

1. State well(s) covered by Bond Number: N/A

FEDERAL WELL(S) BOND VERIFICATION:

1. Federal well(s) covered by Bond Number: N/A

INDIAN WELL(S) BOND VERIFICATION:

1. Indian well(s) covered by Bond Number: 80273197

FEE WELL(S) BOND VERIFICATION:

1. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number N/A
2. The **FORMER** operator has requested a release of liability from their bond on: N/A
The Division sent response by letter on: N/A

LEASE INTEREST OWNER NOTIFICATION:

3. (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: N/A

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: **6/1/2006**

FROM: (Old Operator):	**TO:** (New Operator):
N1855-ExxonMobil Oil Corporation	N2700-Resolute Natural Resources Company
PO Box 4358	1675 Broadway, Suite 1950
Houston, TX 77210-4358	Denver, CO 80202
Phone: 1 (281) 654-1936	Phone: 1 (303) 534-4600

CA No. **Unit:** **RATHERFORD (UIC)**

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 4/21/2006
2. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 4/24/2006
3. The new company was checked on the **Department of Commerce, Division of Corporations Database on:** 6/7/2006
4. Is the new operator registered in the State of Utah: YES Business Number: 5733505-0143
5. If **NO**, the operator was contacted contacted on:

6a. (R649-9-2)Waste Management Plan has been received on: requested

6b. Inspections of LA PA state/fee well sites complete on: n/a

6c. Reports current for Production/Disposition & Sundries on: ok

7. **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 n/a BIA not yet
8. **Federal and Indian Units:**
   The BLM or BIA has approved the successor of unit operator for wells listed on: not yet
9. **Federal and Indian Communization Agreements ("CA"):**
   The BLM or BIA has approved the operator for all wells listed within a CA on: n/a
10. **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: 6/12/2006

DATA ENTRY:

1. Changes entered in the **Oil and Gas Database on:** 6/22/2006
2. Changes have been entered on the **Monthly Operator Change Spread Sheet on:** 6/22/2006
3. Bond information entered in RBDMS on: n/a
4. Fee/State wells attached to bond in RBDMS on: n/a
5. Injection Projects to new operator in RBDMS on: 6/22/2006
6. Receipt of Acceptance of Drilling Procedures for APD/New on: n/a

BOND VERIFICATION:

1. Federal well(s) covered by Bond Number: n/a
2. Indian well(s) covered by Bond Number: PA002769
3. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number n/a

a. The **FORMER** operator has requested a release of liability from their bond on: n/a
The Division sent response by letter on: n/a

LEASE INTEREST OWNER NOTIFICATION:

4. (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: n/a

COMMENTS:

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

UIC FORM 5

TRANSFER OF AUTHORITY TO INJECT

Well Name and Number See attached list	API Number Attached
Location of Well Footage : See attached list County : San Juan QQ, Section, Township, Range: State : UTAH	Field or Unit Name Ratherford Unit Lease Designation and Number See attached list

EFFECTIVE DATE OF TRANSFER: 6/1/2006

CURRENT OPERATOR

Company: Exxon Mobil Oil Corporation
Address: PO Box 4358
city Houston state TX zip 77210-4358
Phone: (281) 654-1936
Comments: Exxon Mobil has submitted a separate, signed copy of UIC Form 5

Name:
Signature:
Title:
Date:

NEW OPERATOR

Company: Resolute Natural Resources Company
Address: 1675 Broadway, Suite 1950
city Denver state CO zip 80202
Phone: (303) 534-4600
Comments: A list of affected UIC wells is attached.
New bond numbers for these wells are:
BIA Bond # PA002769 and US EPA Bond # B001252

Name: Dwight E Mallory
Signature:
Title: Regulatory Coordinator
Date: 4/20/2006

(This space for State use only)

Transfer approved by:
Title: Field Operations Manager
Approval Date: 6/12/06

Comments:

RECEIVED
APR 24 2006
DIV. OF OIL, GAS & MINING

(5/2000)

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.

5. LEASE DESIGNATION AND SERIAL NUMBER: See attached list
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Navajo Tribe
7. UNIT or CA AGREEMENT NAME: Ratherford Unit
8. WELL NAME and NUMBER: See attached list
9. API NUMBER: Attached
10. FIELD AND POOL, OR WILDCAT: Greater Aneth

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ OTHER Unit Agreement

2. NAME OF OPERATOR: Resolute Natural Resources Company N2700

3. ADDRESS OF OPERATOR: 1675 Broadway, Suite 1950 CITY Denver STATE CO ZIP 80202 PHONE NUMBER: (303) 534-4600

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

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

Effective June 1, 2006 Exxon Mobil Oil Corporation resigns as operator of the Ratherford Unit. Also effective June 1, 2006 Resolute Natural Resources Company is designated as successor operator of the Ratherford Unit.

A list of affected producing and water source wells is attached. A separate of affected injection wells is being submitted with UIC Form 5, Transfer of Authority to Inject.

As of the effective date, bond coverage for the affected wells will transfer to BIA Bond # PA002769.

NAME (PLEASE PRINT) Dwight E Mallory TITLE Regulatory Coordinator
SIGNATURE DATE 4/20/2006

(This space for State use only)

APPROVED 6/27/06
Earlene Russell
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

RECEIVED
APR 24 2006
DIV. OF OIL, GAS & MINING

(5/2000) (See Instructions on Reverse Side)

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.

5. LEASE DESIGNATION AND SERIAL NUMBER:

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ship Rock

7. UNIT or CA AGREEMENT NAME: UTU68931A

8. WELL NAME and NUMBER: Ratherford

9. API NUMBER: attached

10. FIELD AND POOL, OR WILDCAT: Aneth

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ OTHER Injection

2. NAME OF OPERATOR: ExxonMobil Oil Corporation N1855

3. ADDRESS OF OPERATOR: P.O. Box 4358 CITY Houston STATE TX ZIP 77210-4358 PHONE NUMBER: (281) 654-1936

4. LOCATION OF WELL

FOOTAGES AT SURFACE:

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		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start:	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
6/1/2006	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☑ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER:
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

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

ExxonMobil Oil Corporation is transferring operatorship of Greater Aneth field, Ratherford lease to Resolute Natural Resources Company. All change of operator notices should be made effective as of 7:00 AM MST on June 1, 2006.

Attached please find a listing of injection wells included in the transfer.

NAME (PLEASE PRINT) Laurie Kilbride TITLE Permitting Supervisor

SIGNATURE Laurie O. Kilbride DATE 4/19/2006

(This space for State use only) APPROVED 6/27/06
Earlene Russell
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

(See Instructions on Reverse Side)

RECEIVED
APR 21 2006
DIV. OF OIL, GAS & MINING

(5/2000)

GREATER ANETH FIELD UIC WELL LIST
Ratherford lease, San Juan County, Utah

Reg Lease Name	Well ID	API Num	Status	Reg Lease #	Surface Location						
					Qtr 1	Qtr 2	Sec	TN	RNG	NS Foot	EW Foot
RATHERFORD UNIT	1W24	430371583900S1	Shut-in	14-20-603-246A	NE	SE	1	41S	23E	0651FSL	3300FEL
RATHERFORD UNIT	2W44	430371638600S1	Active	14-20-603-246A	SE	SE	2	41S	23E	0810FSL	**0510FEL**
RATHERFORD UNIT	11W42	430371584100S1	Active	14-20-603-246A	SE	NE	11	41S	23E	3290FSL	4617FWL
RATHERFORD UNIT	11W44	430371584200S1	Shut-in	14-20-603-246A	SE	SE	11	41S	23E	0660FSL	0558FEL
RATHERFORD UNIT	12W11	430371584300S1	Active	14-20-603-246A	NW	NW	12	41S	23E	0678FNL	4620FEL
RATHERFORD UNIT	12W13	430371640400S1	Active	14-20-603-246A	NW	SW	12	41S	23E	1980FSL	4620FEL
RATHERFORD UNIT	12W22	430371584501S1	Active	14-20-603-246A	SE	NW	12	41S	23E	1920FNL	2080FWL
RATHERFORD UNIT	12W24	430373115101S1	Active	14-20-603-246A	SE	SW	12	41S	23E	0775FSL	1980FWL
RATHERFORD UNIT	12W31	430371584700S1	Active	14-20-603-246A	NW	NE	12	41S	23E	0661FNL	1981FEL
RATHERFORD UNIT	12W33	430371584800S1	Active	14-20-603-246A	NW	SE	12	41S	23E	1958FSL	3300FEL
RATHERFORD UNIT	12W42	430371585000S1	Active	14-20-603-246A	SE	NE	12	41S	23E	3275FSL	0662FEL
RATHERFORD UNIT	12W44A	430373154300S1	Shut-in	14-20-603-246A	SE	SE	12	41S	23E	0772FSL	0807FEL
RATHERFORD UNIT	13W11	430373115201S1	Active	14-20-603-247A	NW	NW	13	41S	23E	0500FNL	0660FWL
RATHERFORD UNIT	13W13	430371585100S1	Active	14-20-603-247A	NW	SW	13	41S	23E	1980FSL	4620FEL
RATHERFORD UNIT	13W22	430371585200S1	Active	14-20-603-247A	SE	NW	13	41S	23E	1988FNL	3300FEL
RATHERFORD UNIT	13W24	430371585300S1	Active	14-20-603-247A	SE	SW	13	41S	23E	0660FSL	3300FEL
RATHERFORD UNIT	13W33	430371585501S1	Active	14-20-603-247A	NW	SE	13	41S	23E	1970FSL	1979FEL
RATHERFORD UNIT	13W42	430371585700S1	Shut-in	14-20-603-247A	SE	NE	13	41S	23E	2139FNL	0585FEL
RATHERFORD UNIT	13W44	430371640700S1	Active	14-20-603-247A	SE	SE	13	41S	23E	0653FSL	0659FEL
RATHERFORD UNIT	14-31	430373171700S1	Active	14-20-603-247A	NW	NE	14	41S	23E	0754FNL	1604FEL
RATHERFORD UNIT	14W42	430371586001S1	Active	14-20-603-247A	SE	NE	14	41S	23E	1976FNL	653FEL
RATHERFORD UNIT	24W31	430371586200S1	Shut-in	14-20-603-247A	NW	NE	24	41S	24E	0560FNL	1830FEL
RATHERFORD UNIT	24W42	430371586300S1	Shut-in	14-20-603-247A	SE	NE	24	41S	24E	1980FNL	0660FEL
RATHERFORD UNIT	17W12	430371572601S1	Active	14-20-603-353	SW	NW	17	41S	24E	1980FNL	510FWL
RATHERFORD UNIT	17W14	430371572700S1	Active	14-20-603-353	SW	SW	17	41S	24E	0610FSL	0510FWL
RATHERFORD UNIT	17W21	430371641601S1	Active	14-20-603-353	NE	**NW**	17	41S	24E	0510FNL	1830FWL
RATHERFORD UNIT	17W23	430371572801S1	Active	14-20-603-353	NE	SW	17	41S	24E	1880FSL	1980FWL
RATHERFORD UNIT	17W32	430371572900S1	TA'd	14-20-603-353	SW	NE	17	41S	24E	1830FNL	2030FEL
RATHERFORD UNIT	17W34	430371573000S1	Active	14-20-603-353	SW	SE	17	41S	24E	0560FSL	1880FEL
RATHERFORD UNIT	17W41	430371573100S1	Shut-in	14-20-603-353	NE	NE	17	41S	24E	0610FNL	0510FEL
RATHERFORD UNIT	17W43	430371641701S1	Active	14-20-603-353	NE	SE	17	41S	24E	1980FSL	0660FEL
RATHERFORD UNIT	18-43B	430373171801S1	Active	14-20-603-353	NE	SE	18	41S	24E	2023FSL	0651FEL
RATHERFORD UNIT	18W12	430373115301S1	Active	14-20-603-353	SW	NW	18	41S	24E	1980FNL	560FWL
RATHERFORD UNIT	18W14	430371573501S1	Active	14-20-603-353	SW	SW	18	41S	24E	0810FSL	0600FWL
RATHERFORD UNIT	18W21	430371641801S1	Active	14-20-603-353	NE	NW	18	41S	24E	660FNL	1882FWL
RATHERFORD UNIT	18W23	430373024400S1	Shut-in	14-20-603-353	NE	SW	18	41S	24E	2385FSL	2040FWL
RATHERFORD UNIT	18W32	430371573601S1	Active	14-20-603-353	SW	NE	18	41S	24E	2140FNL	1830FEL
RATHERFORD UNIT	18W34	430371573701S1	Active	14-20-603-353	SW	SE	18	41S	24E	780FSL	1860FEL
RATHERFORD UNIT	18W41	430371573800S1	TA'd	14-20-603-353	NE	NE	18	41S	24E	0660FNL	0660FEL
RATHERFORD UNIT	19-12	430371573901S1	Active	14-20-603-353	SW	NW	19	41S	24E	1980FNL	0600FWL
RATHERFORD UNIT	19-32	430371574301S1	Active	14-20-603-353	SW	NE	19	41S	24E	2717FNL	2802FEL
RATHERFORD UNIT	19-34	430371574401S1	Active	14-20-603-353	SW	SE	19	41S	24E	0660FSL	1980FEL
RATHERFORD UNIT	19W21	430371574100S1	Shut-in	14-20-603-353	NE	NW	19	41S	24E	0660FNL	1860FWL
RATHERFORD UNIT	19W23	430371574200S1	Shut-in	14-20-603-353	NE	SW	19	41S	24E	2080FSL	1860FWL
RATHERFORD UNIT	19W43	430371642000S1	Shut-in	14-20-603-353	NE	SE	19	41S	24E	1980FSL	0760FEL
RATHERFORD UNIT	20-12	430371574601S1	Active	14-20-603-353	SW	NW	20	41S	24E	0709FNL	0748FEL
RATHERFORD UNIT	20-14	430371574701S1	Active	14-20-603-353	SW	SW	20	41S	24E	0660FSL	0660FWL
RATHERFORD UNIT	20-32	430371574901S1	Active	14-20-603-353	SW	NE	20	41S	24E	0037FNL	0035FWL
RATHERFORD UNIT	20-34	430371575001S1	Active	14-20-603-353	SW	SE	20	41S	24E	0774FNL	0617FWL
RATHERFORD UNIT	20-67	430373159000S1	Active	14-20-603-353	NE	SW	20	41S	24E	2629FSL	1412FWL
RATHERFORD UNIT	20W21	430371642300S1	Active	14-20-603-353	NE	NW	20	41S	24E	0660FNL	1880FWL
RATHERFORD UNIT	20W23	430371574800S1	Active	14-20-603-353	NW	SW	20	41S	24E	2080FSL	2120FWL
RATHERFORD UNIT	20W41	430371575100S1	Active	14-20-603-353	NE	NE	20	41S	24E	0660FNL	0660FEL
RATHERFORD UNIT	20W43	430371642400S1	TA'd	14-20-603-353	NE	SE	20	41S	24E	2070FSL	0810FEL
RATHERFORD UNIT	16W12	430371572000S1	Active	14-20-603-355	SW	NW	16	41S	24E	1880FNL	0660FWL

GREATER ANETH FIELD UIC WELL LIST
Ratherford lease, San Juan County, Utah

Reg Lease Name	Well ID	API Num	Status	Reg Lease #	Surface Location						
					Qtr 1	Qtr 2	Sec	TN	RNG	NS Foot	EW Foot
RATHERFORD UNIT	16W14	430371572100S1	Shut-in	14-20-603-355	SW	SW	16	41S	24E	0660FSL	0660FWL
RATHERFORD UNIT	16W21	430371641400S1	Active	14-20-603-355	NE	NW	16	41S	24E	0660FNL	1880FWL
RATHERFORD UNIT	16W23	430371572201S1	Active	14-20-603-355	NE	SW	16	41S	24E	1980FSL	1980FWL
RATHERFORD UNIT	16W43	430371641501S1	Active	14-20-603-355	NE	SE	16	41S	24E	2140FSL	0820FEL
RATHERFORD UNIT	21-14	430371575301S1	Active	14-20-603-355	SW	SW	21	41S	24E	0660FSL	0460FWL
RATHERFORD UNIT	21-67	430373175301S1	Active	14-20-603-355	NE	SW	21	41S	24E	2560FSL	1325FWL
RATHERFORD UNIT	21W21	430371642501S1	Active	14-20-603-355	NE	NW	21	41S	24E	0660FNL	2030FWL
RATHERFORD UNIT	**6W14**	430371598400S1	Active	14-20-603-368	NE	SE	6	41S	24E	0660FSL	0660FWL
RATHERFORD UNIT	7W12	430371598500S1	Active	14-20-603-368	NE	SE	7	41S	24E	2140FNL	0585FWL
RATHERFORD UNIT	7W14	430371598600S1	Active	14-20-603-368	NE	SE	7	41S	24E	1065FSL	0660FWL
RATHERFORD UNIT	7W21	430371639400S1	Active	14-20-603-368	**NE**	NW	7	41S	24E	0710FNL	1820FWL
RATHERFORD UNIT	7W34	430371598900S1	Active	14-20-603-368	SW	SE	7	41S	24E	0710FSL	2003FEL
RATHERFORD UNIT	7W43	430371639500S1	Active	14-20-603-368	NE	SE	7	41S	24E	2110FSL	0660FEL
RATHERFORD UNIT	**8W14**	430371599200S1	Active	14-20-603-368	SW	NE	8	41S	24E	0745FSL	0575FWL
RATHERFORD UNIT	10W43	430371640300S1	TA'd	14-20-603-4037	NE	SE	10	41S	24E	1980FSL	0550FEL
RATHERFORD UNIT	29-12	430371533701S1	Active	14-20-603-407	SW	**NW**	29	41S	24E	2870FNL	1422FWL
RATHERFORD UNIT	29-32	430371533901S1	Active	14-20-603-407	SW	NE	29	41S	24E	0694FNL	0685FWL
RATHERFORD UNIT	29W21	430371643200S1	Active	14-20-603-407	NE	NW	29	41S	24E	0667FNL	2122FWL
RATHERFORD UNIT	29W41	430371643300S1	Active	14-20-603-407	NE	NE	29	41S	24E	0557FNL	0591FEL
RATHERFORD UNIT	29W43	430371643400S1	Shut-in	14-20-603-407	NE	SE	29	41S	24E	1980FSL	0660FEL
RATHERFORD UNIT	30W41	430371534300S1	Shut-in	14-20-603-407	NE	NE	30	41S	24E	0660FNL	0660FEL
RATHERFORD UNIT	28-12	430371533601S1	Active	14-20-603-409	SW	SE	28	41S	24E	2121FNL	0623FWL
RATHERFORD UNIT	28W21	430371643100S1	Shut-in	14-20-603-409	NE	NW	28	41S	24E	0660FNL	2022FWL
RATHERFORD UNIT	9W23	430371639800S1	Active	14-20-603-5046	NW	SE	9	41S	24E	1980FSL	1980FWL

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: 14-20-603-353

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.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NAVAJO

7.UNIT or CA AGREEMENT NAME: RATHERFORD

1. TYPE OF WELL Water Injection Well

8. WELL NAME and NUMBER: RATHERFORD U 19-32

2. NAME OF OPERATOR: RESOLUTE NATURAL RESOURCES

9. API NUMBER: 43037157430000

3. ADDRESS OF OPERATOR: 1675 Boradway Ste 1950 , Denver, CO, 80202

PHONE NUMBER: 303 534-4600 Ext

9. FIELD and POOL or WILDCAT: GREATER ANETH

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1980 FNL 1980 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNE Section: 19 Township: 41.0S Range: 24.0E Meridian: S

COUNTY: SAN JUAN

STATE: UTAH

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

TYPE OF SUBMISSION

- ✓ NOTICE OF INTENT — Approximate date work will start: 6/3/2013
- ☐ SUBSEQUENT REPORT — Date of Work Completion:
- ☐ SPUD REPORT — Date of Spud:
- ☐ DRILLING REPORT — Report Date:

TYPE OF ACTION

☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
✓ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

Resolute proposes to perform a UIC repair on the Ratherford Unit 19-32. The wellbore will be cleaned out to stimulate production in the injection unit. Attachment is the procedure, wellbore schematic and current tubing strings schematic.

Accepted by the Utah Division of Oil, Gas and Mining

Date: June 04, 2013

By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Sherry Glass	303 573-4886	Sr Regulatory Technician

SIGNATURE	DATE
N/A	5/21/2013

RECEIVED: May. 21, 2013

UIC Repair
Ratherford Unit 19-32
1980' FNL & 1980' FEL
Sec 19, T41S, R24E
San Juan County, Utah
API 43-037-15743

UIC/Casing Repair Procedure (Sundry – Notice of Intent)

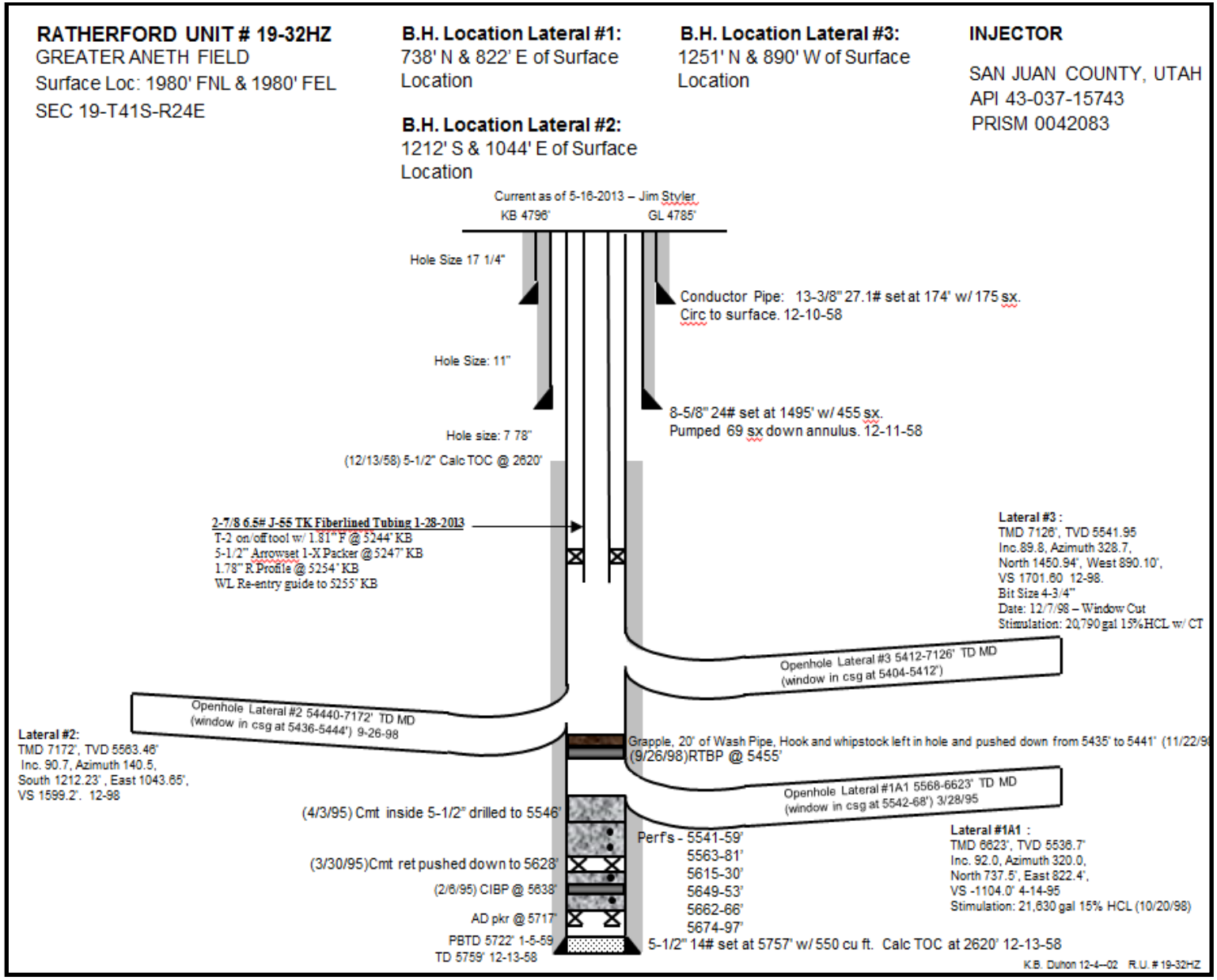
1. MIRU WSU, LOTO.
2. Fill & PT tubing against 1.78 'R' plug at 5254' KB, monitoring backside pressure. If the casing and tbg communicate, bleed any gas off the csg & PT the csg & tbg together to confirm the packer is leaking.
3. RU WL and retrieve the 1.78 'R' plug. RD WL.
4. Establish KWF. Kill well as necessary.
5. ND WH, NU BOPE.
6. Pressure Test BOP against landing donut.
7. J-off packer, circulate KWF.
8. POOH, LD 2-7/8" TK Fiberlined tbg (run in Jan 2013).
9. PU workstring tubing and TIH to recover the 5-1/2" Arrowset 1-X packer.
10. PU bit w/scraper 2 jts above bit, RIH to 5441'/top of fish 11-22-98; scraper to ~5379'; (top of upper window at 5404'). Circulate clean.
11. POOH and LD bit and scraper.
12. RU electric line & run casing inspection caliper log from top of fish at ~5441' to surface.
13. PU, RIH with Arrowset 1-X packer with plug in place.
14. Set packer at ~5240' KB per CIL results/previous set @ 5247' KB.
15. J-off packer, circulate packer fluid up backside.
16. Perform mock MIT to 1000#.
17. POOH LD workstring.
18. PU & RIH new 2-7/8" Duoline tubing and on/off tool. NOTE: Running of injection tbg to be under the direction of those individuals that have been trained; every coupling to be inspected & properly torqued.

RECEIVED: May. 21, 2013

19. Jay onto packer, space out & land tubing. Perform mock MIT after landing tubing.
20. ND BOP, NU WH.
21. MIRU slickline unit. Test lubricator to 2500#
22. RIH gauge ring, shear plug, and retrieve plug. RDMO slickline unit.
23. RD WSU.
24. Schedule MIT w/NNEPA.
25. Notify the Area Production Supervisor that well is ready to return to injection.
26. RDMOL.

Job Scope – Pull tubing & packer, run casing inspection log, and run new injection packer & tubing.

RECEIVED: May. 21, 2013



RECEIVED: May. 21, 2013

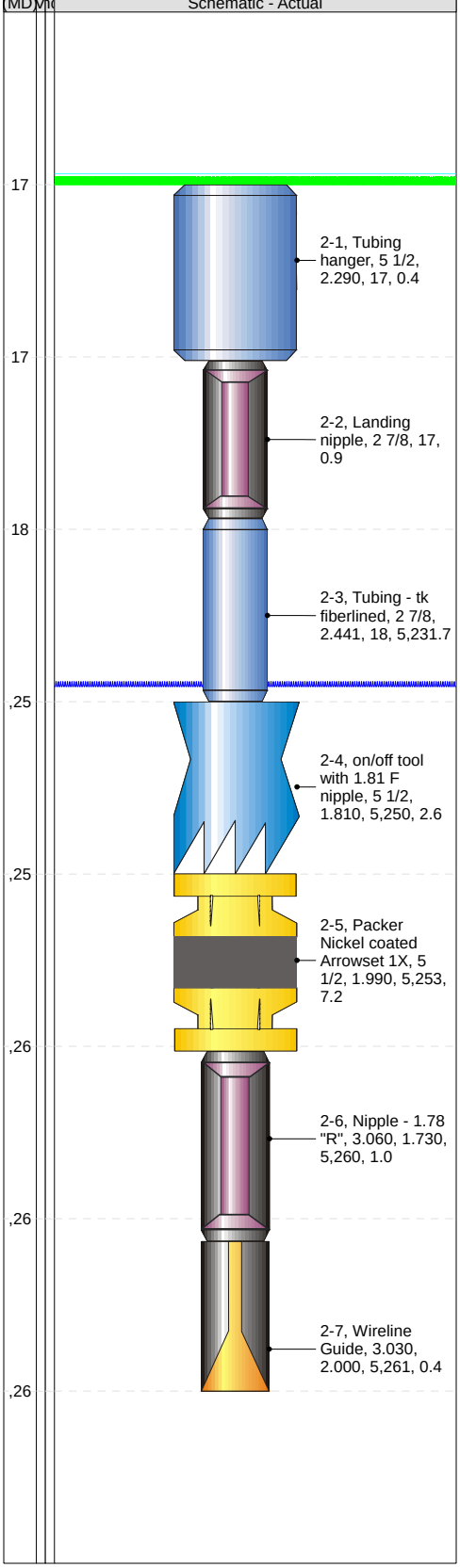
RESOLUTE NATURAL RESOURCES

Tubing Strings

Well Name: Ratherford U 1932

API Number	Surf Loc	Section	Township	Range	Well Spud Date/Time	Field Name	State/Province	Working Interest (%)
43037157430000	NE	19	41S	24E	12/10/1958 00:00	Ratherford	Utah	58.60

Wellbore Config: Horizontal - Ratherford U 1932x, 1/28/2013...



Tubing - Injection set at 5,261.3ftKB on 1/28/2013 06:00

Tubing Description	Set Depth (ftKB)	Run Date	Pull Date
Tubing - Injection	5,261.3	1/28/2013	

Jts	Item Description	OD (in)	ID (in)	Wt (lbs/ft)	Grade	Top Thread	Len (ft)	Top (ftKB)	Btm (ftKB)
1	Tubing hanger	5 1/2	2.290				0.41	17.0	17.4
1	Landing nipple	2 7/8					0.90	17.4	18.3
163	Tubing - tk fiberlined	2 7/8	2.441	6.50	J-55		5,231....	18.3	5,250.0
1	on/off tool with 1.81 F nipple	5 1/2	1.810				2.64	5,250.0	5,252.6
1	Packer Nickel coated Arrowset 1X	5 1/2	1.990				7.25	5,252.6	5,259.9
1	Nipple - 1.78 "R"	3.06	1.730				1.00	5,259.9	5,260.9
1	Wireline Guide	3.03	2.000				0.41	5,260.9	5,261.3

RECEIVED: May. 21, 2013

FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: 14-20-603-353

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.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NAVAJO

7.UNIT or CA AGREEMENT NAME: RATHERFORD

1. TYPE OF WELL Water Injection Well

8. WELL NAME and NUMBER: RATHERFORD U 19-32

2. NAME OF OPERATOR: RESOLUTE NATURAL RESOURCES

9. API NUMBER: 43037157430000

3. ADDRESS OF OPERATOR: 1675 Boradway Ste 1950 , Denver, CO, 80202

PHONE NUMBER: 303 534-4600 Ext

9. FIELD and POOL or WILDCAT: GREATER ANETH

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1980 FNL 1980 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNE Section: 19 Township: 41.0S Range: 24.0E Meridian: S

COUNTY: SAN JUAN

STATE: UTAH

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

TYPE OF SUBMISSION

- ✓ NOTICE OF INTENT — Approximate date work will start: 4/11/2014
- ☐ SUBSEQUENT REPORT — Date of Work Completion:
- ☐ SPUD REPORT — Date of Spud:
- ☐ DRILLING REPORT — Report Date:

TYPE OF ACTION

☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
✓ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

Resolute proposes to attempt UIC repairs on the subject well. The proposed procedure and well bore schematic are attached.

Accepted by the Utah Division of Oil, Gas and Mining

Date: March 31, 2014

By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Sherry Glass	303 573-4886	Sr Regulatory Technician

SIGNATURE	DATE
N/A	3/27/2014

RECEIVED: Mar. 27, 2014

RESOLUTE
NATURAL RESOURCES

Ratherford Unit 19w-32
1980' FNL, 1980' FEL
SWNE section 19-T41S-R24E

43-037-15743

UIC Repair

Recommendation

The production engineer and operations staff at Ratherford Unit recommend moving a workover rig onto Dual Lateral Injector RU 19w-32 for UIC repair. Previous repairs in July 2013 and January 2014 have not prevented casing pressure from re-appearing. The workover is expected to restore injectivity to 500 BWIPD and increase offset production by 40 BOPD and 400 BWPD.

Job Scope

Job Scope: Set WL plug & evaluate packer integrity, Pull tubing & inspect tbg connections & on/off tool. Packer may remain in place if testing proves it has integrity; otherwise replace the packer. Depending upon WL plug results & tbg inspection results, rerun or replace injection tubing.

(Acid planned? **N**; Change of tubing size? N; Paraffin expected? NA.

Work History

1996-1998: Drilled Laterals - Drilled the currently injecting upper two laterals.
12/27/2006: Packer Repair - Killed w/14.5# mud, pulled & LD cmt lined tbg & pkr; Tag fill @ 5313', CO to 5387'; ran new AS 1-X pkr & new 2-7/8" poly lined tubing.
12/18/2012: Wireline - SITP 500, SICP 1350; Ran & set 1.78 R plug at 5281'; Bled down tbg & csg to zero. Monitor 30 min - no buildup.
1/19/2013: UIC Repair - Pulled tbg & packer, ran B&S to top of upper lateral at 5404', Acidized w/3500 gal 20% HCl, ISIP 1311 psi, 785 psi after 15 min. Ran 5-1/2 Arrowset 1-X injection pkr & set at 5255', ran 2-7/8 TK Fiberlined tubing, landed tbg, retrieved WL plug; Witnessed MIT failed; Re-ran 1.81 plug, pulled tubing & changed seals at each coupling, adding new sealant; mock MIT failed; pulled & replaced tubing string with new 2-7/8 TK Fiberlined; re-landed tbg, pulled 1.81 plug; Witnessed MIT Passed.
3/11/2013: Shut in for UIC/high casing pressure.
3/13/2013: TBG/csg 3000 psi. Bled off csg. Flow tbg back (mud and then water). 1760 bbls flowback. RU wireline. Set 1.78" plug @ 5239. Pressure test tbg -ok. Bled off.
3/14/2013: Audio Log - Ran Audio Log w/tbg SI & csg flowing - packer leak indicated.
7/23/2013: 3100 psi TP 2250 psi CP. Flowed back 970 bbls. Csg flows 1" stream.
7/24/2013: UIC Repair - Set new 1.78" plug at 5245', Pressure test tbg to 2060# lost 100# in 30 min, then solid for 15 min. NU BOP. Test csg to 1060 psi, Lost 15# in 30 minutes. POOH with injection tbg and on/off tool. TIH with W/S; on/off, sliding sleeve & latched pkr. WL ruptured disk - 1900 psi, fished 1.78 plug, opened sleeve, circ & kill with 13.2# mud. Release & POOH w/pkr, Ran B&S to 5394', POOH. Ran csg inspection log, RIH new 5-1/2" AS-1X pkr w/1.81 plug in place, WL set at 5240'. TIH w/WS & latch pkr, PT tbg - comm. w/csg; POOH, on/off had heavy scoring; RIH new on/off, latch PT = good. Ran new nickel coated on/off tool & new Duoline tbg. Circ pkr fluid, latch pkr, mock MIT to 1120 - OK; NU tree & test donut to 2500 - good. PT tbg 2050 - good. WL fished 1.81 plug. Witnessed MIT passed on 8/2/2013. Ran BHP gauges to 5400' & pulled. Backflowed lateral line & back on injection 8/8/13.
8/15/2013: Shut in for CP.
8/16/2013 TBG 3000 psi Csg 3000. RIH & set 1.78 plug at 5237. Shear off. POOH. RD eline.

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1/3/2014: UIC Repair - RU & pulled 1.78 plug, Flowed back ~3 days; RIH & set 1.81 plug, J off pkr & POOH w/PLS-20 Duoline injection tbg; found 6 ring barriers missing. RIH WS, circ 13# mud, Jay on, Pulled 1.81 plug, Unset & retrieve AS-1X pkr. **Cause of failure was running into the packer hard due to WSU brake failure 7-29-13 which damaged the on/off seal nipple.** TIH new 5-1/2" AS-1X pkr on WS w/1.81 plug in place & set element at 5220' KB. Circ pkr fluid, mock MIT to 1075/30 min - gain 125 psi. Jay off, TOOH checking each mid-stand connection of inj tubing & installing new 1/2" barrier rings. LD 5 jts w/damaged lining & 2 jts w/damaged flare. Run back in w/PLS-20 Duoline tbg from derrick, installing new 1/2" barrier rings & making up to proper torque. Circ 30 bbls pkr fluid, Jay onto pkr, space out & land tbg w/TC-1A EN hanger, PT csg at 1040/30 min - gain 10 psi; NU tree, test void - good. LD total of 14 jts w/bad lining or bad flare. WL fished 1.81 plug, backflowed tbg for 365 bbls, RDMO WSU. Witnessed MIT passed on 1/10/2014. Lateral line backflushed & back on injection 1/14/2014.

2/19/2014: Shut in for CP.

Recent Injectivity: Prior to shut in 2/19/14 for high casing pressure = 659 BPD @ 2900 psi TP, 100% choke.

Procedure

Horsley Witten: NO

NOTE: Wireline work in step 1 should be completed before WSU arrival.

1. RU WL & set 1.78 plug at 5229.5' KB. Bleed TP off & monitor CP; evaluate packer integrity.
2. MIRU WSU, LOTO.
3. If pkr is good, TOH w/2-7/8 PLS-20 Duoline tbg only, inspecting each connection. Re-run or replace tbg per inspection results - skip to step 8.
4. If pkr is not holding or needs pulled for on/off tool, retrieve 1.78 plug, establish KWF & kill well. ND WH, NU BOPE. PT BOP against landing donut.
5. Unset 5-1/2 AS-1X packer & circulate KWF. POOH standing back PLS-20 Duoline tbg, inspecting each tbg connection; Packer was run 1-8-14, tubing was run 1-9-2014. LD packer.
6. Make bit & scraper run & CO 5-1/2 casing to top of window at 5404' KB.
7. RIH w/ new 5-1/2 AS-1X injection pkr w/1.81 F plug in place on WS & set pkr at 5220' KB/top of pkr. Perform mock MIT. Jay off & POOH LD WS.
8. RIH w/new on-off tool and injection tubing*, circulate packer fluid, jay onto packer, space out & land tubing.
9. Perform mock MIT after landing tbg.
10. ND BOP, NU WH.
11. MIRU slickline unit. Test lubricator to 2500 psi.
12. RIH gauge ring, shear plug, and retrieve 1.81 plug. RDMO slickline unit.
13. RD WSU.
14. Schedule witnessed MIT w/NNEPA.
15. Notify Area Injection Supervisor Pierce Benally (435) 444-9957 that well is ready for backflow & return to injection.

*** Check with Bill Albert - Injection Tubing may be BB-401 or TK-70XT.**

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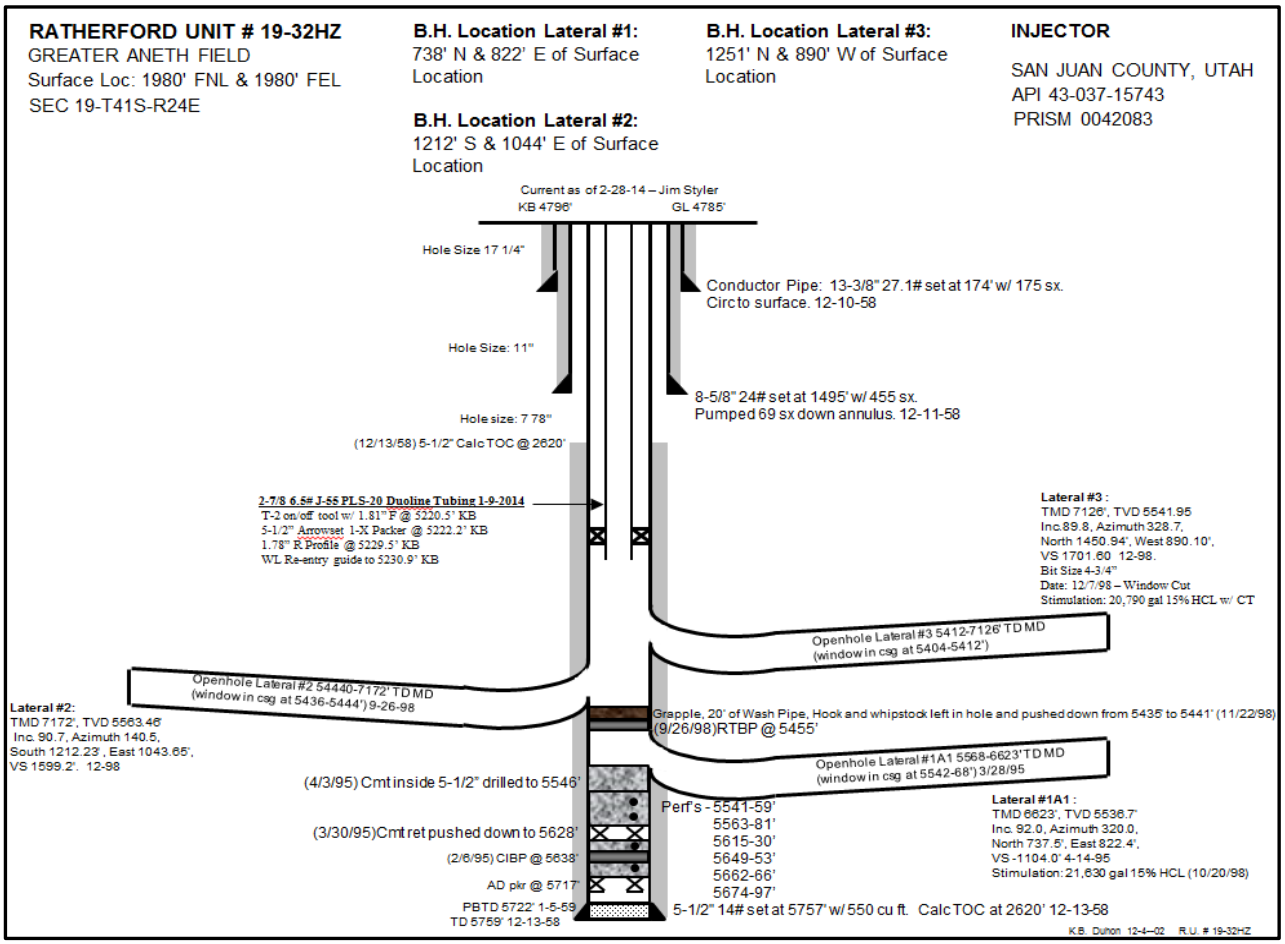

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FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: 14-20-603-353

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.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NAVAJO

7.UNIT or CA AGREEMENT NAME: RATHERFORD

1. TYPE OF WELL Water Injection Well

8. WELL NAME and NUMBER: RATHERFORD U 19-32

2. NAME OF OPERATOR: RESOLUTE NATURAL RESOURCES

9. API NUMBER: 43037157430000

3. ADDRESS OF OPERATOR: 1675 Boradway Ste 1950 , Denver, CO, 80202

PHONE NUMBER: 303 534-4600 Ext

9. FIELD and POOL or WILDCAT: GREATER ANETH

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1980 FNL 1980 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNE Section: 19 Township: 41.0S Range: 24.0E Meridian: S

COUNTY: SAN JUAN

STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 5/22/2014	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ SPUD REPORT Date of Spud:	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	✓ OTHER	OTHER: UIC Repair

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

Resolute Natural Resources respectfully submits this sundry as notice of UIC repair. Attached are the procedures and schematic.

Accepted by the Utah Division of Oil, Gas and Mining
May 22, 2014
Date:
By: Dark K Quant

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Erin Joseph	303 573-4886	Sr. Regulatory Analyst

SIGNATURE	DATE
N/A	5/19/2014

RECEIVED: May. 19, 2014

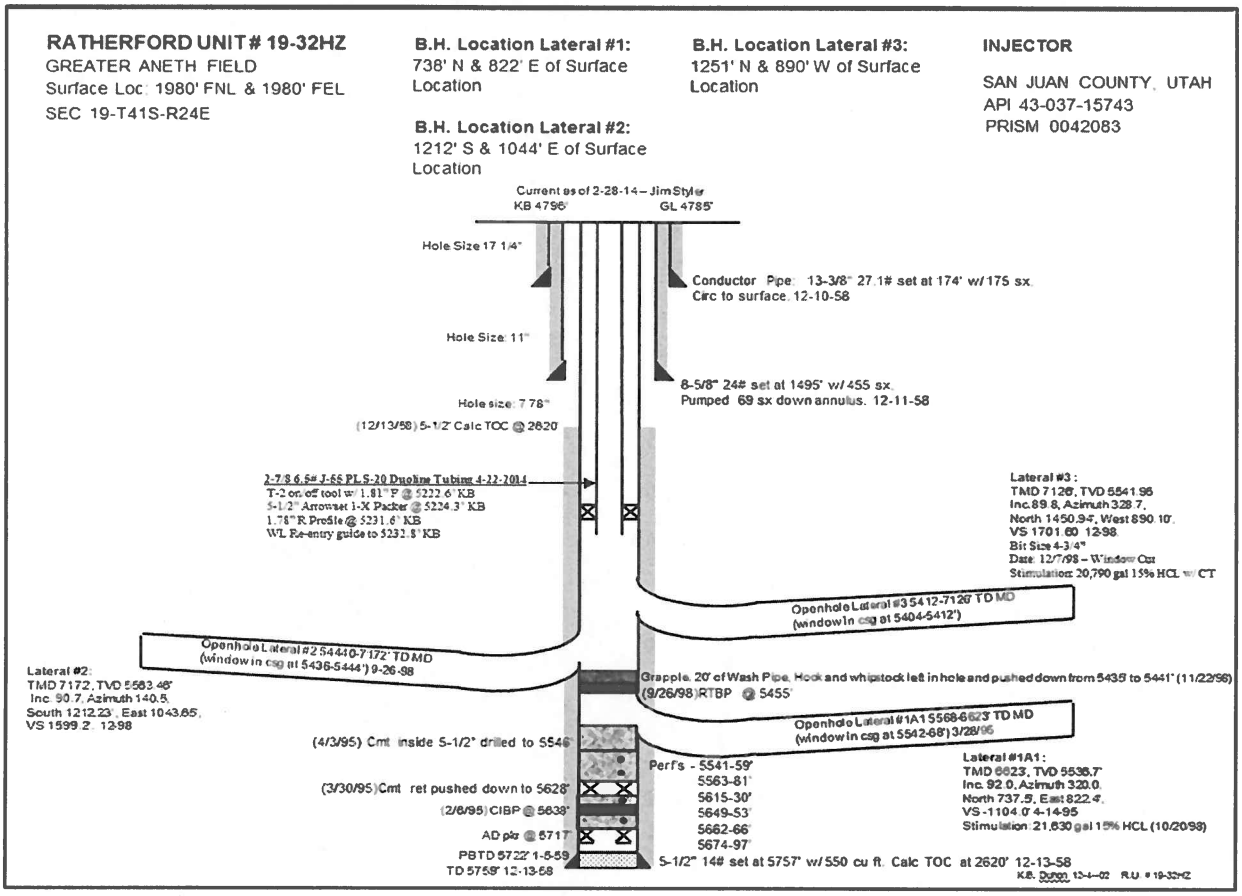
RESOLUTE
NATURAL RESOURCES

Ratherford Unit 19w-32 UIC Repair

Procedure

1. Flow back the well in advance of rig up to reduce SITP. RU 19W-43 shut in was requested 5/12/14 to assist.
2. MIRU WSU, LOTO.
3. RU WL & set 1.78 plug at 5231.6' KB. Bleed down TP. ND WH & NU BOP's. Test BOP's.
4. RU Great White Snubbing Unit & spacer spool.
5. TOH w/2-7/8 PLS-20 Duoline tbg & 5-1/2" AS-1X packer, inspecting each connection (tbg was run 4/22/14, pkr run 1/9/2014), on/off tool, and packer condition. Re-run or replace tbg per inspection results*; replace packer w/5-1/2" Baker Hornet & plan to leave out on/off tool.
6. RIH w/ new 5-1/2 Baker Hornet injection pkr on injection tubing w/1.78 plug (or Baker equivalent) in place below pkr to pkr set depth at 5215' KB/top of pkr. Correlate to 7-27-13 CIL - attached, KB = 10.5', collars at 5200' & 5232' KB.
7. RU WL and retrieve the 1.78 plug. Circulate packer fluid. Re-set the 1.78 plug & set the packer at 5215' KB/top of pkr. Perform mock MIT.
8. Space out & land tubing. Perform second mock MIT.
9. ND BOP, NU WH. RD snubbing unit.
10. MIRU slickline unit. Test lubricator to 2500 psi.
11. RIH gauge ring, shear plug, and retrieve 1.78 plug. RDMO slickline unit.
12. RD WSU. Backflow the lateral line.
13. Schedule witnessed MIT w/NNEPA.
14. Notify Area Injection Supervisor Pierce Benally (435) 444-9957 that well is ready for reconnect & return to injection.

*** Check with Bill Albert - Injection Tubing may be BB-401 or TK-70XT.**


RATHERFORD UNIT # 19-32HZ
GREATER ANETH FIELD
Surface Loc: 1980' FNL & 1980' FEL
SEC 19-T41S-R24E
B.H. Location Lateral #1:
738' N & 822' E of Surface Location
B.H. Location Lateral #2:
1212' S & 1044' E of Surface Location
B.H. Location Lateral #3:
1251' N & 890' W of Surface Location
INJECTOR
SAN JUAN COUNTY, UTAH
API 43-037-15743
PRISM 0042083
Current as of 2-28-14 – Jim Styler
KB 4796'
GL 4785'
Hole Size 17 1/4"
Conductor Pipe: 13-3/8" 27.1# set at 174' w/ 175 sx.
Circ to surface. 12-10-58
Hole Size: 11"
8-5/8" 24# set at 1495' w/ 455 sx.
Pumped 69 sx down annulus. 12-11-58
Hole size: 7 7/8"
(12/13/58) 5-1/2" Calc TOC @ 2620'
2-7/8 6.5# J-55 PL S-20 Duoline Tubing 4-22-2014
T-2 on off tool w/ 1.81" "F" @ 5222.6' KB
5-1/2" Arrowset 1-X Packer @ 5224.3' KB
1.78" R Profile @ 5231.6' KB
WL Re-entry guide to 5232.8' KB
Lateral #3:
TMD 7126', TVD 5541.96
Inc. 89.8, Azimuth 328.7,
North 1450.94', West 890.10',
VS 1701.60 12-98
Bit Size 4-3/4"
Date: 12/7/98 – Window Cut
Stimulation: 20,790 gal 15% HCL w/ CT
Openhole Lateral #3 5412-7126' TD MD
(window in csg at 5404-5412')
Openhole Lateral #2 5444'0-7172' TD MD
(window in csg at 5436-5444') 9-26-98
Lateral #2:
TMD 7172, TVD 5563.46'
Inc. 90.7, Azimuth 140.5,
South 1212.23', East 1043.65',
VS 1599.2' 12-98
Grapple, 20' of Wash Pipe, Hook and whipstock left in hole and pushed down from 5435' to 5441' (11/22/98)
(9/26/98) RTBP @ 5455'
Openhole Lateral #1A1 5568-6623' TD MD
(window in csg at 5542-68') 3/28/95
(4/3/95) Cmt inside 5-1/2" drilled to 5546'
Perf's - 5541-59'
5563-81'
5615-30'
5649-53'
5662-66'
5674-97'
Lateral #1A1:
TMD 6623, TVD 5536.7'
Inc. 92.0, Azimuth 320.0,
North 737.5', East 822.4',
VS -1104.0' 4-14-95
Stimulation: 21,830 gal 15% HCL (10/20/98)
(3/30/95) Cmt ret pushed down to 5628'
(2/6/95) CIBP @ 5638'
AD pkr @ 5717'
PBTD 5722' 1-5-59
TD 5759' 12-13-58
5-1/2" 14# set at 5757' w/ 550 cu ft. Calc TOC at 2620' 12-13-58
K.B. Duncan 12-4-02 R.U. # 19-32HZ