

UTAH OIL AND GAS CONSERVATION COMMISSION

REMARKS:

12-1-83 Operator Name Change: 931006 Phillips to MEPNA eff. 1-1-93:  
 \* RE-ENTRY (Horizontal Dip): 950803 Oper. Name From MEPNA  
 Wash Commenced Injection 10-1-95

(Name Filed) Well Log & 3 Electric Logs

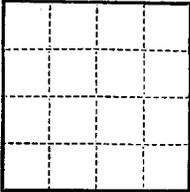
DATE FILED	8-1-58	14-29-94	NAV-14-20-
LAND: FEE & PATENTED	STATE LEASE NO.	PUBLIC LEASE NO.	INDIAN 603-353
DRILLING APPROVED:	8-1-58	5-23-94	
LOGGED IN:	8-14-58	10-23-94 POW	
COMPLETED:	9-4-59		
INITIAL PRODUCTION:	1042 BOPD; 2 BWPD	418 BOPD; 232 MCF; 13 BWPD	
GRAVITY A. P. I.	41°		
GOR:	NWNN	555	
PRODUCING ZONES:	5684-5864 (PROD)	5190-6752' (DSCR)	
TOTAL DEPTH:	5922'	5724' TVD; 10752' MD	
WELL ELEVATION:	4948' GR; 4960 DF	4950 GB	
DATE ABANDONED:			
FIELD OR DISTRICT:	Arcth	RATHERFORD UNIT	
COUNTY:	San Juan		
WELL NO.	DESERT A-16	(Ratherford 20-34)	API 43-037-15750
LOCATION:	660 FT. FROM (W) (S) LINE,	1850 FT. FROM (E) (W) LINE.	SW SE QUARTER - QUARTER SEC. 20
* BHL	774' FNL	117' FWL	NWNNW
WP.	RGE.	SEC.	OPERATOR MEPNA
			TWP. RGE. SEC. OPERATOR

## GEOLOGIC TOPS:

QUATERNARY	Star Point	Sinbad	Brazer
Recent	Wahweap	PERMIAN	Pilot shale
Alluvium	Masuk	Kaibab	Madison
Lake beds	Colorado	Coconino	Leadville
Pleistocene	Mancos	Cutler 2652'	Redwall
Lake beds	Upper	Hoskinnini	DEVONIAN
TERTIARY	Middle	DeChelly 2796'	Upper
Pliocene	Lower	White Rim	Middle
Humboldt	Emery	Organ Rock 2985'	Lower
Salt Lake	Blue Gate	Cedar Mesa	Ouray
Miocene	Ferron	Halgaita tongue	Elbert
Bishop conglomerate	Frontier	Phosphorite	Guilmette
Oligocene	Dakota	Park City	Simonsen 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 Rafael Gr.	Weber	Pogonip limestone
Middle	Summerville	Morgan	CAMBRIAN
Lower	Bluff sandstone	Hermosa E 4718'	Lynch
Wasatch	Curtis	Upper	Bowman
Colton	Entrade	Lower	Tapeats
Flagstaff	Moab tongue	Molas	Ophir
Almy	Carmel	Paradox 5672'	Tintic
Paleocene	Glen Canyon Gr.	A	PRE-CAMBRIAN
Current Creek	Nava jo	B	
North Horn	Kayento	C	
CRETACEOUS	Wingate	Manning Canyon	
Montana	TRIASSIC	Mississippian	
Mesaverde	Chinle 1666'	Chainman shale	
Price River	Shinarump 2195'	Humbug	
Blackhawk	Moenkapi 4'	Joana limestone	

(SUBMIT IN TRIPLICATE)

Indian Agency Navajo



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Allottee Tribal

Lease No. 14-20-603-353

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL	<input checked="" type="checkbox"/>	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)

Desert "A" Cortez, Colorado July 30, 19 58  
Well No. 16 is located 660 ft. from South line and 1850 ft. from E line of sec. 20  
SW/4 SE/4 Sec. 20 41S 24E S1M  
(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)  
Rutherford San Juan Utah  
(Field) (County or Subdivision) (State or Territory)

The elevation of the ungraded ground above sea level is 4943 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 17-1/4" hole to approximately 150', set 150' of 13-3/8" conductor pipe and cement to surface. Drill 11" hole to approximately 1500', set 8-5/8" casing and cement to surface. Drill 7-7/8" hole to total depth of approximately 5800', run 5-1/2" casing and cement with approximately 250 sacks. 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 Box 548

Cortez, Colorado

By [Signature]

Title District Superintendent



August 1, 1958

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

Attention: C. E. Johnson, District Superintendent

Gentlemen:

This is to acknowledge receipt of your notice of intention to drill Well No. Desert A-16, which is to be located 660 feet from the south line and 1850 feet from the east line of Section 20, Township 41 South, Range 24 East, S1EM, San Juan County, Utah.

Please be advised that insofar as this office is concerned approval to drill said well is hereby granted, subject to the following conditions:

As the well location is 36.3 feet N. of land claimed by Continental Oil Company to be included in their Lease No. 14-20-603-407, drilling is approved subject to communitization of the applicable well spacing unit ( $W\frac{1}{2}$   $SW\frac{1}{2}$  or  $SW\frac{1}{2}$   $SW\frac{1}{2}$ , Sec. 20, T. 41 S, R. 24 E, S1EM), if final adjudication of the lease boundary dispute results in diverse ownership in said unit. Said communitization shall be effective after the date of this approval.

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. FREIGHT  
SECRETARY

CBF:cn

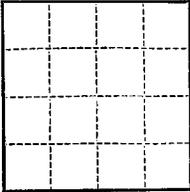
cc: Phil McGrath  
USGS, Farmington,  
New Mexico

Clair M. Senior, Atty  
10 Exchange Place  
Salt Lake City

52

(SUBMIT IN TRIPLICATE)

Indian Agency Navajo



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Allottee Tribal

Lease No. 14-20-603-353

71-K  
8-22

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 August 20, 1958, 19  

Well No. Desert A 16 is located 660 ft. from N/S line and 1350 ft. from E/W line of sec. 20

SW 34 (Section No.) 40E (Range) 6W (Meridian)  
Ratherford (Field) San Juan (County or Subdivision) Utah (State or Territory)

The elevation of the ~~surface~~ shaded ground above sea level is 4948 ft.  
XXXXXXXX

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 17-1/4" hole at 3 M. 8-14-58. Lost returns at 10'. Drilled 17-1/4" hole to 174' and reamed to 20". Set & cemented 4 jts. 13-3/8", 27.1# SWSJ casing at 174' w/ 175 sx. reg. cement. Pumped plug to 142'. Cement circulated. Job completed 9:15 PM 8-15-58. Set in cellar 13'. Tested casing to 500# for 30 min. Tested OK. WOC 24 hrs.

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

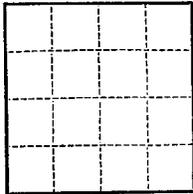
Company Phillips Petroleum Co.

Address Box 548  
Cortez, Colorado

By F. W. Shelton  
Title F. W. Shelton  
Supt.

(SUBMIT IN TRIPLICATE)

Indian Agency Navajo



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Allottee Tribal  
Lease No. 14-20-603-353

*N-H*  
*8-22*

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL.....		SUBSEQUENT REPORT OF WATER SHUT-OFF.....	<input checked="" type="checkbox"/>
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 August 20, 1958

Desert A

Well No. 16 is located 660 ft. from N line and 1850 ft. from E line of sec. 20

SW SE Sec. 20 41S 24E SLM  
(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)  
Ratherford San Juan Utah  
(Field) (County or Subdivision) (State or Territory)

The elevation of the <sup>Ungraded ground</sup> ~~denick floor~~ above sea level is 4948 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 11" hole to 1682'. Set & cemented 55 jts. 8-5/8", 24#, J-55, ST&C, Rg. 2, Casing at 1681.64' RKB w/ 330 sx. Neat Reg. Cement., 126 sx. Diacel "D", 620# Calcium Chloride, 165# Floseal, 660# Tuff plug, 125 sx. Neat Cement on bottom. Pumped plug to 1648' at 7:10 PM 8-18-58. Cement Circulated. Set 11.30' in cellar. ROC 24 hrs. Tested Csg. 30 Min. 750#. Tested OK.

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

Company Phillips Petroleum Co.

Address Box 548

Cortez, Colorado

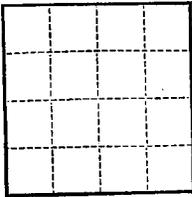
By F. W. Shelton  
F. W. Shelton  
Supt.

Title \_\_\_\_\_

*50*  
*10/*

(SUBMIT IN TRIPLICATE)

Indian Agency Navajo



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

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.....	<input checked="" type="checkbox"/>
NOTICE OF INTENTION TO CHANGE PLANS.....	SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING.....	<input type="checkbox"/>
NOTICE OF INTENTION TO TEST WATER SHUT-OFF.....	SUBSEQUENT REPORT OF ALTERING CASING.....	<input type="checkbox"/>
NOTICE OF INTENTION TO REDRILL OR REPAIR WELL.....	SUBSEQUENT REPORT OF REDRILLING OR REPAIR.....	<input type="checkbox"/>
NOTICE OF INTENTION TO SHOOT OR ACIDIZE.....	SUBSEQUENT REPORT OF ABANDONMENT.....	<input type="checkbox"/>
NOTICE OF INTENTION TO PULL OR ALTER CASING.....	SUPPLEMENTARY WELL HISTORY.....	<input type="checkbox"/>
NOTICE OF INTENTION TO ABANDON WELL.....		<input type="checkbox"/>

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

Cortez, Colorado September 11, 1958 19

Well No. 16 is located 660 ft. from 1500 line and 1050 ft. from E line of sec. 20

SW SE Sec. 20 (1/4 Sec. and Sec. No.) T16 (Twp.) 24E (Range) S.L.M. (Meridian)  
Rutherford (Field) San Juan County (County or Subdivision) Utah (State or Territory)

The elevation of the ~~ground floor~~ <sup>ungraded ground</sup> above sea level is 4942 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 5922'. Ran Schlumberger Induction & Micro Caliper Log to 5922'. Ran and cemented 147 jts. of 5-1/2" OD J-55 8 1/2" S&W "A" Cond. casing (6 jts. 15.5# and 141 jts. 14#) at 5920.76' RKB with 132 sz. Best Reg. Cement, 100 sz. Diesel "D" and 49# Calcium Chloride. Pumped plug to 5000' at 6:50 A.M. 9-5-58. WOC 24 hours. Tested casing with 750# for 30 minutes - tested okay.

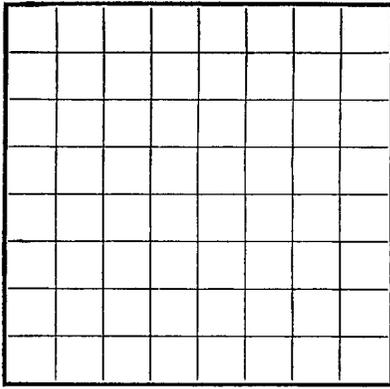
I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Phillips Petroleum Company

Address P. O. Box 548

Cortez, Colorado

By [Signature]  
C. H. Boles  
District Superintendent



LOCATE WELL CORRECTLY

UNITED STATES  
 DEPARTMENT OF THE INTERIOR  
 GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

Company Phillips Petroleum Company Address P. O. Box 548, Cortez, Colorado  
 Lessor or Tract Desert "A" Field Rutherford State Utah  
 Well No. 16 Sec. 20 T. 41S R. 24E Meridian SLM County San Juan  
 Location 660 ft. <sup>[N]</sup> of S Line and 1870 ft. <sup>[W]</sup> of E Line of Sec. 20 Elevation 4960  
(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 \_\_\_\_\_ Title District Superintendent  
 Date January 16, 1959

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

Commenced drilling 8/14, 1958 Finished drilling 9-4, 1958

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from 5684 to 5864 No. 4, from \_\_\_\_\_ to \_\_\_\_\_  
 No. 2, from \_\_\_\_\_ to \_\_\_\_\_ No. 5, from \_\_\_\_\_ to \_\_\_\_\_  
 No. 3, from \_\_\_\_\_ to \_\_\_\_\_ No. 6, from \_\_\_\_\_ to \_\_\_\_\_

IMPORTANT WATER SANDS

No. 1, from Water shows in all to \_\_\_\_\_ No. 3, from \_\_\_\_\_ to \_\_\_\_\_  
sands from surface to 1666'  
 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		Purpose
							From-	To-	
13-3/8"	27.1#	BWSJ	Armco	162	Baker		5684	5727	Oil Prod.
8-5/8"	24	8 rd	J-55	1714	"		5732	5747	" "
5-1/2"	15.5	8 rd	J-55	161	"		5813	5847	" "
5-1/2"	14	8 rd	J-55	5782	"		5857	5864	" "

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
13-3/8"	170	175	Circ.		
8-5/8"	1682	800 cu ft	Circ.		
5-1/2"	5921	550 cu ft	Halliburton		

PLUGS AND ADAPTERS

Heaving plug—Material \_\_\_\_\_ Length \_\_\_\_\_ Depth set \_\_\_\_\_

Adapters—Material \_\_\_\_\_ Size \_\_\_\_\_

SHOOTING RECORD

FOLD MARK

MARK  
FOLD

13-3/8"	170	175	Circ.
8-5/8"	1682	800 cu ft	Circ.
5-1/2"	5921	550 cu ft	Halliburton

**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 5922 feet, and from \_\_\_\_\_ feet to \_\_\_\_\_ feet  
 Cable tools were used from \_\_\_\_\_ feet to \_\_\_\_\_ feet, and from \_\_\_\_\_ feet to \_\_\_\_\_ feet

**DATES**

January 16, 199 Put to producing September 14, 1958

The production for the first 24 hours was 1044 barrels of fluid of which 99.8 % was oil; \_\_\_\_\_ % emulsion; 2 % water; and \_\_\_\_\_ % sediment. Gravity, °Bé. 41

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

Rock pressure, lbs. per sq. in. 240#

**EMPLOYEES**

Moran Bros., Inc., Driller \_\_\_\_\_, Driller  
 \_\_\_\_\_, Driller \_\_\_\_\_, Driller

**FORMATION RECORD**

FROM—	TO—	TOTAL FEET	FORMATION
1666	2497	831	Chinle
2497	2584	87	Shinarump
2584	2652	68	Moenkopi
2652	2796	144	Cutler - Hoskinini Equivalent
2796	2985	189	Cutler - DeChelly Member
2985	4718	1733	Cutler - Organ Rock Member
4718	5922	1204	Hermosa
5672	5922	250	Paradox Member
5922	5888	34	PSTD - Top Cement Plug

*Handwritten mark*

*Handwritten mark*

LOWE/VERNON PETROLEUM CORPORATION

**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 17-1/4" hole at 3 AM 8-14-58. Lost returns at 10'. Drilled 17-1/4" hole to 174' and reamed to 20". Set and cemented 4 jts. 13-3/8", 27.1# S&WJ casing at 174' w/175 sx. regular cement. Pumped plug to 142'. Cement circulated. Job completed 9:15 PM 8-15-58. Set in cellar 13'. Tested casing to 500# for 30 min. Tested o.k. WOC 24 hours.

Drilled 11" hole to 1682'. Set and cemented 55 jts. 8-5/8", 24#, J-55, ST&C, Rg 2, Casing at 1681.64' RKB w/330 sx neat regular cement, 126 sx Diacel "D", 620# Calcium Chloride, 165# Floceal, 660# tuff plug, 125 sx neat cement on bottom. Pumped plug to 1648' at 7:10 PM 8-18-58. Cement circulated. Set 11.30' in cellar. WOC 24 hours. Tested casing 30 minutes 750#. Tested oak.

Drilled 7-7/8" hole to 5922'. Ran Schlumberger Induction & Micro Caliper Log to 5922'. Ran and cemented 147 jts. of 5-1/2" OD J-55 880 54" conditioned casing (6 jts 15.5# and 141 jts. 14#) at 5920.76' RKB with 132 sacks neat regular cement, 100 sx. Diacel "D" and 496# calcium chloride. Pumped plug to 5888' at 6:50 AM 9-5-58. WOC 24 hours. Tested casing with 750# for 30 minutes - tested okay.

Ran PGAC Gamma Ray-Neutron Collar Locator Log to 5887'; perforated 5-1/2" casing with 4-1/2" bullet holes per foot, from 5684' - 5727'; 5732-47, 5843-47, 5857-64; Total 69' - 276 holes. Ran 2-7/8" DE tubing set at 5880.43' with packer at 5590.53' Dowell displaced water with 95 EO. Spotted acid on formation. Set packer at 5592' acidized perforations with 7000 gallons Dowell regular 15% acid. Maximum pressure 3400#, minimum pressure 1400#. Flushed with 38 EO. Average treating rate 6.5 barrels per minute at 1800#, average flush rate 6.3 barrels per minute at 1800#. Well bled to 0# at once after pumps shut down.

FOOTWE MEFT COMBERLTA


**FOOTWE MEFT COMBERLTA**

GEORGEIOWE BOMAEA  
 DEPARTMENT OF THE INTERIOR  
 DIVISION OF OIL AND GAS

THIS WELL IS BEING PRODUCED BY THE  
 COMPANY OF OIL AND GAS  
 COMPANY OF OIL AND GAS  
 COMPANY OF OIL AND GAS

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**

7. UNIT AGREEMENT NAME

**SW-L-1192**

8. FARM OR LEASE NAME

**Ratherford Unit**

9. WELL NO.

**20-34**

10. FIELD AND POOL, OR WILDCAT

**Greater Aneth**

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

**Sec. 20-T41S-R24S**

12. COUNTY OR PARISH

**San Juan**

13. STATE

**Utah**

1. OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR

**Phillips Petroleum Company**

3. ADDRESS OF OPERATOR

**P. O. Box 2920, Casper, Wyoming 82601**

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

**660' PSL & 1850' FEL, Sec. 20**

14. PERMIT NO.

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

**4960 D.F.**

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON\*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT\*

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

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

**Cement squeeze Desert Creek Zone III (5857-64) and Zone II (5843-47). Acidize Zone I (5684-5727 and 5732-47) and return to pumping status.**

**Present Production: Pumping 18 BOPD, 12 MCFGPD, 1 BWPD from Zone I with Zone II and III isolated w/packer. Prior to packer isolation of Zone II and III, the well pumped 50 BOPD, 10 MCFGPD, 861 BWPD, July 1970 from Zones I, II and III.**

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

SIGNED

**P. C. Morgan**

TITLE

**Production Superintendent**

DATE

**February 2, 1973**

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

- 3 - USGS, Farmington, New Mexico
- 2 - State O&G CC, Salt Lake City, Utah
- 1 - File

\*See Instructions on Reverse Side

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIP CASE\*  
(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.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. <b>14-20-603-353</b>
2. NAME OF OPERATOR <b>Phillips Petroleum Company</b>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME <b>Navajo</b>
3. ADDRESS OF OPERATOR <b>Box 2920 - Casper, Wyoming 82601</b>		7. UNIT AGREEMENT NAME <b>SW-1-4192</b>
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface  <b>660' FSL &amp; 1850' FKL Sec 20</b>		8. FARM OR LEASE NAME <b>Rutherford Unit</b>
14. PERMIT NO.		9. WELL NO. <b>20-34</b>
15. ELEVATIONS (Show whether DF, RT, GR, etc.) <b>4960 D. F.</b>		10. FIELD AND POOL, OR WILDCAT <b>Greater Aneth</b>
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA <b>Sec 20-41S-24E</b>
		12. COUNTY OR PARISH <b>San Juan</b>
		13. STATE <b>Utah</b>

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <b>Shutdown Zone II &amp; III &amp; Acidize Zone I</b>	<input checked="" type="checkbox"/>

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

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

**SEE ATTACHED SHEET**

18. I hereby certify that the foregoing is true and correct  
Original Signed By: \_\_\_\_\_  
SIGNED E. C. MORGAN TITLE Production Supt DATE 4-13-73

(This space for Federal or State office use)  
APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:

- 3-USGS, Farmington, N. Mex.
- 2-Utah O&C CC, Salt Lake City, Utah
- 1-Superior Oil Co., Cortez, Colo. See Instructions on Reverse Side
- 1-File

DAILY REPORT DETAILED

1973  
MARCH  
21

RATHERFORD UNIT NO 20-34 PTD 5688 FIRST REPORT. AFE P-9936, RKB ELEV 4962. PLG TBG TO SQUEEZE DESERT CREEK ZONE II PERFS 5843-47 AND ZONE III PERFS 5857-64 AND ACIDIZE ZONE I PERFS. 5684-27 AND 5732-47 IN 2 STAGES. MI AND RU R AND R WELL SERVICE COMPANY UNIT ON 3/20/73. PULLED RODS AND PUMP. INSTALLED BOP, UNSEATED PKR AND STARTED PLG TBG. LAST PROD PRIOR TO WORK OVER 3/20/73. LAST TEST 1/11/73, 1/11/73 PMPD 21 BOPD, 0 BWPD, PLUMPING ZONE I W/ZONE II AND III ISOLATED BELOW PKR GREATER ANETH FIELD, PARADOX FORMATION. LOCATION 660 FT FSL, 1850 FT FEL, SEC 20-41S-24E SAN JUAN COUNTY, UTAH..

22

RATHERFORD UNIT NO 20-34 PTD 5625. PREP TO ACIDIZE. FIN PLG TBG. RAN SLM. CHKD ID AT 5689. RAN BAKER MERCURY MODEL K CI CEMENT RETAINER ON 2-1/2" TBG. SET RET AT 5625 /NEW ID/. RU HOWCO. TSTD TBG TO 4500 LBS. FILLED ANNULUS W/WTR. PR ANNULUS TO 1750 LBS. PMPG INTO UPPER PERFS 4-1/2 BPM. PMPD INTO FORMATION BELOW RETAINER 3-1/2 BPM AT 1000 LBS. MIXED 250 SX CLASS C CMT, .6 PERCENT HALAD 9. SQUEEZED ZONE II AND ZONE III PERFS. 5843-5864 OA W/200 SX AT 3800 LBS. HOLDING PR. REVERSED OUT 50 SX. JOB COMPLETED 12-30 PM 3/21/73. PLD TBG. RAN BAKER RET PKR AND 4 JTS 126 FT OF 2-1/2" TBG TAIL PIPE AND 2-1/2" TBG..

23

RATHERFORD UNIT NO 20-34 PTD 5825. SWBG. RU DOWELL. SET BAKER RET PKR AT 5624. BOTTOM TAIL PIPE 5750 FT. SPOTTED ACID ON BOTTOM. PR ANNLLUS TO 500 LBS. ACIDIZED ZONE I PERFS 5684-5747 OA W/ 12,000 GALS REG HCL ACID IN 3 STAGES AS FOLLOWS - 1ST STAGE, 6500 GALS ACID, 93 BELS LSE OIL, 6 BBL 2 LB/GAL OIL BLOCK, 12 BBL OIL SPACER, ACID IN FORMATION 7 BPM AT 3200 LBS. LITTLE OR NO REACTION FROM BLOCK. 2ND STAGE - 2000 GAL ACID 6 BBL OIL SPACER, 12 BELS 2 LB/GAL OIL BLOCK, 6 BBL OIL SPACER. ACID IN FORMATION 6 BPM AT 3500 LBS. LITTLE OR NO REACTION FROM BLOCK. 3RD STAGE - 3500 GAL ACID 59 BELS OIL FLUSH. DISPLACED W/33 BO. ACID IN FORMATION 6-1/2 BPM AT 3400 LBS. ISIP 2450 LBS, 15 MIN SIP 1400 LBS. JOB COMPLETE 11-40 AM 3/22/73. USED 2 LBS/1000 GAL EACH OF A-170 INHI BITOR AND w-35 ANTI SLUDGE IN ACID. BLKG AGENT USED 1/4 LBS J-203 WIDE RANGE, 1/2 LB J-204 UNIBUTTON AND 1-1/4 LB J-116 MOTHBALLS PER GAL OF OIL. FLOWED 20 BO TO TANK AND DIED. SWBD 5 HRS, 104 BLO, 39 BAW, 93 BLO, 340 BA AND LW TO RECOVER /INCLUDES 93 BLW IN ANNULUS ABOVE PKR/..

24-26

RATHERFORD UNIT NO 20-34 PTD 5825. PMPD 3/24/72. SWBD 10 HRS. 93 BLO, 74 BNO, 123 BLW. 3/25/73 PLD TBG AND PKR AND RERAN TBG W/SN AND BAKER ANCHOR CATCHER. TBG INLET 5679. PMP SN 5676. RAN 1-3/4" PMP. DID NOT PMP. 3/26/73 UNSEATED AND SHOOK UP PMP. STARTED PMPG ON TEST 13-74-1-3/4. 74 BNET OIL CREC 217 BA AND LW TO REC..

27

RATHERFORD UNIT NO. 20-34 PTD 5825 CONT. TST. PMPD 23 HRS. 13-74-1-3/4 136 BO, 157 BLW. 60 BLW LEFT TO REC..

28

RATHERFORD UNIT NO. 20-34 PTD 5825 CONT. TST. PMPD 24 HRS. 214 BO, 18 BLW, 13-74-1-3/4 42 BLW LEFT TO RECOVER..

29

RATHERFORD UNIT NO. 20-34 PTD 5825 CONT. TST. PMPD 24 HRS. 206 BO, 14 ELW 13-74-1-3/4 28 BLW LEFT TO RECOVER..

30

RATHERFORD UNIT NO. 20-34 PTD 5825. CONT. TST. PMPD 24 HRS. 194 BO, 10 BLW 13-74-1-3/4 18 BLW LEFT TO REC..

LEASE Rutherford Unit WELL NO 20-34

DAILY REPORT DETAILED

1473  
MARCH  
31  
& APRIL  
182

RATHERFORD UNIT NO. 20-34 PTD 5825. FMPD 24 HRS. 172 BO, 11 BL.,  
13-74-1-3/4, 7 BLW LEFT TO RECOVER. OIL WELL PRODUCING FROM GREATER  
ANETH PARADOX DESERT CREEK ZONE I PERFS. 5684-5747 OA, SAN JUAN COUNTY  
UTAH. DROP FROM REPORT..

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

**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 Form 9-331-C for such proposals.)

1. oil well  gas well  other  Lease Road

2. NAME OF OPERATOR  
Phillips Petroleum Company

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

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)  
AT SURFACE:  
AT TOP PROD. INTERVAL:  
AT TOTAL DEPTH:

5. CASE 14-20-603-353  
14-20-603-407

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
Navajo

7. UNIT AGREEMENT NAME  
SW-I-4192

8. FARM OR LEASE NAME  
Ratherford Unit

9. WELL NO.

10. FIELD OR WILDCAT NAME  
Greater Aneth

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
Sec 20 and 29, T41S-R24E

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

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)

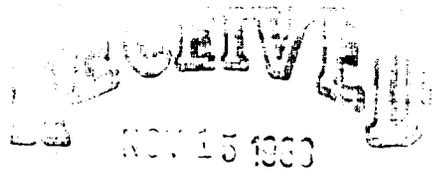
16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	<input type="checkbox"/>		<input type="checkbox"/>
FRACTURE TREAT	<input type="checkbox"/>		<input type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>		<input type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>		<input type="checkbox"/>
PULL OR ALTER CASING	<input type="checkbox"/>		<input type="checkbox"/>
MULTIPLE COMPLETE	<input type="checkbox"/>		<input type="checkbox"/>
CHANGE ZONES	<input type="checkbox"/>		<input type="checkbox"/>
ABANDON*	<input type="checkbox"/>		<input type="checkbox"/>
(other) road construction	<input checked="" type="checkbox"/>		<input type="checkbox"/>

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

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.)\*

Approval is requested, contingent on securing Archaeological clearance and residents approval, to construct an access road as shown on the attached Plat A-1A. Approximately 660' of new lease road will be built. The road construction will be of native soil, approximately 20' wide.



DIVISION OF  
GAS & MINING

Subsurface Safety Valve: Manu. and Type \_\_\_\_\_ Set @ \_\_\_\_\_ Ft.

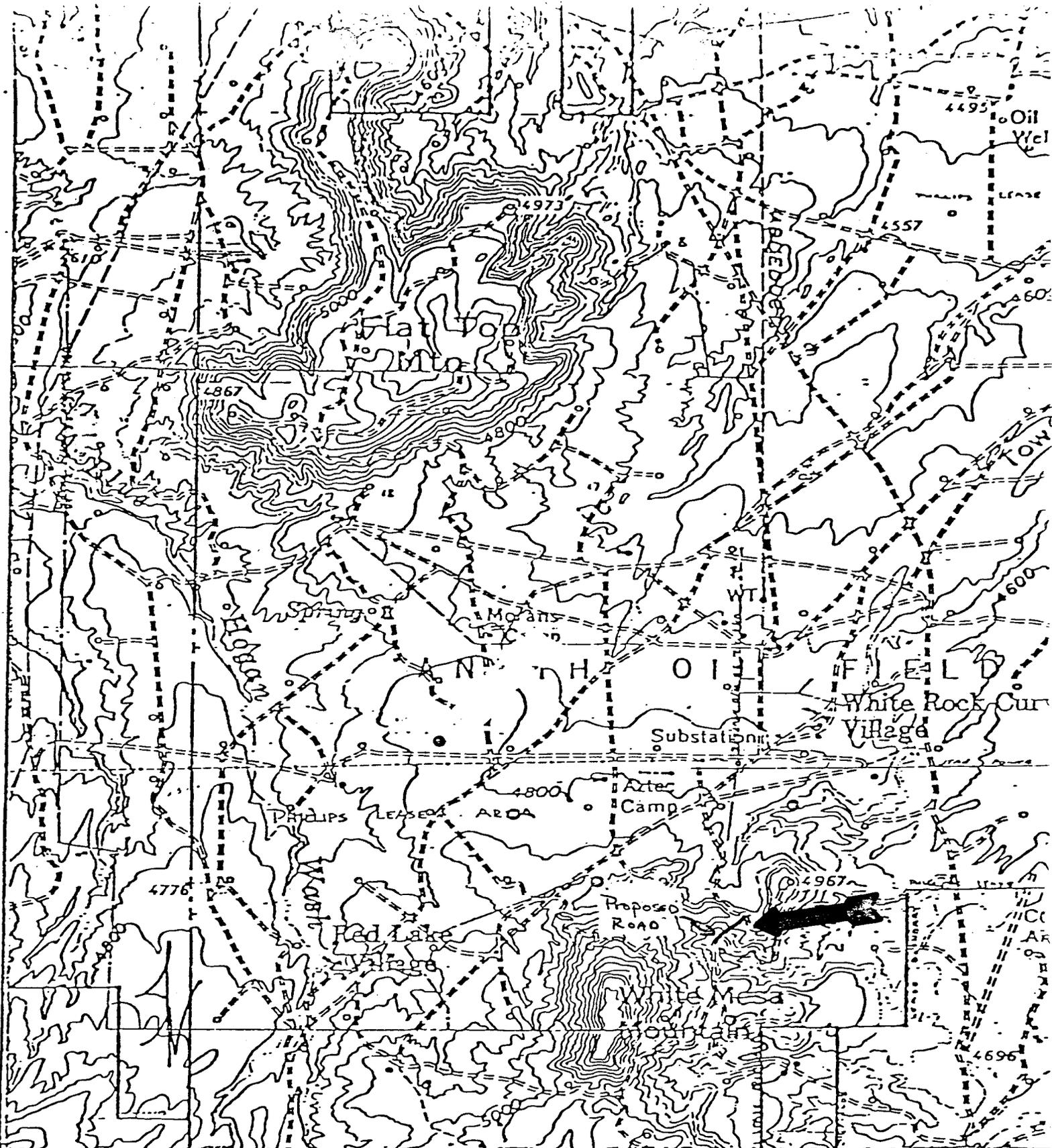
18. I hereby certify that the foregoing is true and correct

SIGNED A. E. Stuart TITLE Area Manager DATE November 10, 1983

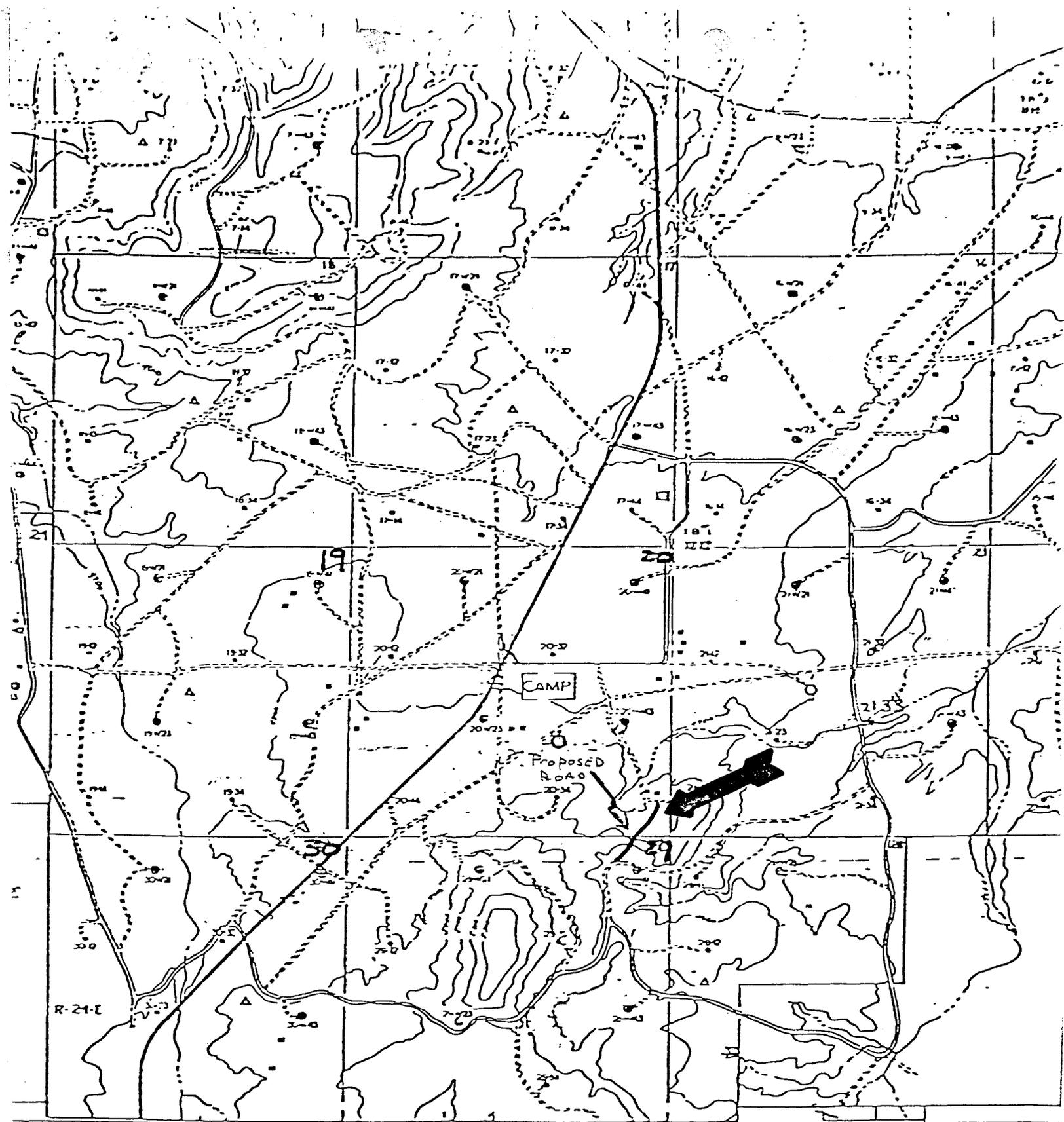
(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:

- 5- BLM Farmington
  - ✓ 1- Utah O&G CC SLC, Utah
  - 1- J. L. Whitmire (r) T.C. Doughty
  - 1- G. W. Berk
  - 1- T. M. Isaacs
  - 1- File
- \*See Instructions on Reverse Side



NO.	REVISION	BY	DATE	CHKD	APP
FOR BIDS	PHILLIPS PETROLEUM COMPANY			JA NO.	FILE CO
FOR APPR				AFE NO.	SCALE 1" = 24' MIN
FOR CONST	RATHERFORD UNIT PROPOSED ROAD T4IS-R24E SAN JUAN CO. UTAH			DWG NO.	
DRAWN				SH NO.	
CHECKED					
APP'D					



REVISION		BY	DATE	CHKD	APP'D
DESIGN					
APP'R					
CONST					
DRAWN	CJW				
CHECKED					
DATE					

 <b>PHILLIPS PETROLEUM COMPANY</b> BARTLESVILLE, OKLAHOMA			JOB NO. SCALE $2\frac{1}{4}'' = 1 \text{ mi}$
<b>RATHERFORD UNIT</b> <b>PROPOSED ROAD</b>		<b>T41S-R24E</b>	
<b>SAN JUAN CO., UTAH</b>		DWG. NO. <b>A-1A</b>	

**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. <b>OIL WELL</b> <input checked="" type="checkbox"/> <b>GAS WELL</b> <input type="checkbox"/> <b>OTHER</b> <input type="checkbox"/>		5. <b>LEASE DESIGNATION AND SERIAL NO.</b> 96-004192 ✓
2. <b>NAME OF OPERATOR</b> Phillips Oil Company		6. <b>IF INDIAN, ALLOTTEE OR TRIBE NAME</b> Navajo
3. <b>ADDRESS OF OPERATOR</b> P. O. Box 2920, Casper, WY 82602		7. <b>UNIT AGREEMENT NAME</b> Ratherford Unit ✓
4. <b>LOCATION OF WELL</b> (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface See Attached		8. <b>FARM OR LEASE NAME</b>
14. <b>PERMIT NO.</b> See Attached	15. <b>ELEVATIONS</b> (Show whether DF, XT, GR, etc.)	9. <b>WELL NO.</b>
16. <b>Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data</b>		10. <b>FIELD AND POOL, OR WILDCAT</b> N/A
		11. <b>SBC, T., R., M., OR BLK. AND SURVEY OR AREA</b> See Attached
		12. <b>COUNTY OR PARISH</b>   13. <b>STATE</b> San Juan   Utah

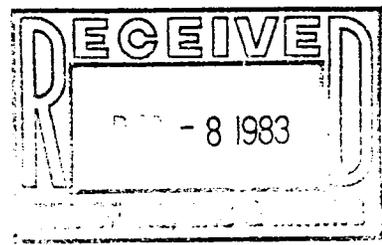
16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

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

*2-1-84  
100 wells*



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

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:

<u>WELL NO.</u>	<u>WELL LOCATION</u>	<u>API NO.</u>	<u>STATUS</u>
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

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

RECEIVED  
MAY 16 1986

DIVISION OF  
OIL, GAS & MINING

## 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,



CNE/rd  
CNE8661

R. D. Baker  
Environmental Regulatory Manager

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

MONTHLY OIL AND GAS PRODUCTION REPORT

OPERATOR NAME AND ADDRESS:

ACCOUNT NUMBER: N0772

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

RECEIVED

AUG 16 1993

REPORT PERIOD (MONTH/YEAR):

6 / 93

DIVISION OF  
OIL, GAS & MINING

AMENDED REPORT  (Highlight Changes)

Well Name						Producing Zone	Well Status	Days Oper	Production Volumes				
API Number	Entity	Location			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 Konkell*

Telephone Number: 505 599-3452

# MONTHLY OIL AND GAS DISPOSITION REPORT

OPERATOR NAME AND ADDRESS:

*L B Sheffield*  
~~BRIAN BERRY~~  
~~M E P N A MOBIL~~  
~~POB 219031 1807A RENTWR~~ *P.O. DRAWER 6*  
 DALLAS TX 75221-9031 *CORTEZ, Co. 81321*

UTAH ACCOUNT NUMBER: N7370

REPORT PERIOD (MONTH/YEAR): 7 / 93

AMENDED REPORT  (Highlight Changes)

*X931006 updated. fee*

ENTITY NUMBER	PRODUCT	GRAVITY BTU	BEGINNING INVENTORY	VOLUME PRODUCED	DISPOSITIONS				ENDING INVENTORY
					TRANSPORTED	USED ON SITE	FLARED/VENTED	OTHER	
05980	OIL			177609	177609	0			
	GAS			72101	66216	5885			
11174	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. All in ~~new~~ 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: Lwell B Sheffield

Telephone Number: 303 565 2212  
244 658 2528

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.

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

10. FIELD AND POOL, OR WILDCAT  
GREATER ANETH

At proposed prod. zone

DIVISION OF  
OIL, GAS & MINING

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 <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>
(Other) <input type="checkbox"/>	

SUBSEQUENT REPORT OF:

WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
(Other) <u>CHANGE OF OPERATOR</u> <input type="checkbox"/>	
(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

APPROX. DATE WORK WILL START \_\_\_\_\_

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 JULY 1, 1993, MOBIL OIL CORPORATION IS THE OPERATOR OF THE RATHERFORD UNIT. ATTACHED ARE THE INDIVIDUAL WELLS.

3. 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

Sept 29, 1993

TO: Lisha Cordova - Utah Mining  
Oil & Gas

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

Here is copy of Rutherford Unit  
Successor Operator,

4 pages including this one.

*File Rutherford Unit (GC)*

RECEIVED  
BLM

JUL 27 11:44

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

070 FARMINGTON, NM

ARES/543

JUL 29 1993

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

MINERALS DIVISION
NO. 182
DATE
BY
REMARKS
FILE
ALL SUPV.
FILE

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 Rutherford 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

DESIGNATION OF OPERATOR

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

JUN 27 11:44

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

070 FARMINGTON, NM

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. [Signature]  
Attorney-in-Fact

Mobil Exploration and Producing  
North America Inc.

June 11, 1993

By: B. D. [Signature]  
Attorney-in-Fact B.D. MARTINY

[Signature] ACTING AREA DIRECTOR TITLE DATE  
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

<u>Tract Number</u>	<u>Description of Land</u>	<u>Serial Number and Effective Date of Lease</u>	<u>Tract Percentage Participation</u>
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.H. 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.H., 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.H., 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.H. 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.H., 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

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) \_\_\_\_\_

Other  
**OPERATOR CHANGE**

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

2. DOGM Employee (name) L. CORDOVA (Initiated Call   
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 OPERATED BY MEPNA, CURRENTLY

REPORTED OUT OF DALLAS (MCELMO CREEK).

Division of Oil, Gas and Mining  
**OPERATOR CHANGE WORKSHEET**

Routing:

1-VLC/817-SJ
2-DES/58-FILE
3-VLC
4-RJFY
5-IMC
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.

- 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)	<u>M E P N A</u>	FROM (former operator)	<u>PHILLIPS PETROLEUM COMPANY</u>
(address)	<u>PO DRAWER G</u>	(address)	<u>5525 HWY 64 NBU 3004</u>
	<u>CORTEZ, CO 81321</u>		<u>FARMINGTON, NM 87401</u>
	<u>GLEN COX (915)688-2114</u>		<u>PAT KONKEL</u>
phone	<u>(303)565-2212</u>	phone	<u>(505)599-3452</u>
account no.	<u>N7370</u>	account no.	<u>N0772(A)</u>

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

Name: <b>**SEE ATTACHED**</b>	API: <u>43037-15750</u>	Entity: _____	Sec. _____	Twp. _____	Rng. _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec. _____	Twp. _____	Rng. _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec. _____	Twp. _____	Rng. _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec. _____	Twp. _____	Rng. _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec. _____	Twp. _____	Rng. _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec. _____	Twp. _____	Rng. _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec. _____	Twp. _____	Rng. _____	Lease Type: _____

**OPERATOR CHANGE DOCUMENTATION**

- Sec 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)
- Sec 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: \_\_\_\_\_.
- Sec 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.
- Sec 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)
- Sec 6. Cardex file has been updated for each well listed above. (O&G wells 10-6-93) (Wiw's 10-26-93)
- Sec 7. Well file labels have been updated for each well listed above. (O&G wells 10-6-93) (Wiw's 10-26-93)
- Sec 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)
- Sec 9. A folder has been set up for the Operator Change file, and a copy of this page has been placed there for reference during routing and processing of the original documents.

ENTITY REVIEW

Yes 1. (Rule R615-8-7) Entity assignments have been reviewed for all wells listed above. Were entity changes made? (yes/no) no (If entity assignments were changed, attach copies of Form 6, Entity Action Form).

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

BOND VERIFICATION (Fee wells only)

Yes 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  .

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.  
Yes  
11-10-93

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:   11-17   19  93  .

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

931006 BIA/Bhm Approved 7-9-93.

✓ 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
✓ 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
✓ 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
✓ 24W-21	43-037-16429	14-20-603-247	SEC. 24, T41S, R24E	4695' FSL; 3300' FEL
✓ 24W-23	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-22	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
✓ 3-34	NA 4303715711	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/NE 2140' 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

PAID

PAID

PAID

PAID

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK  
 DRILL                       DEEPEN                       PLUG BACK

b. TYPE OF WELL  
 OIL WELL                       GAS WELL                       OTHER HORIZONTAL                       SINGLE ZONE                       MULTIPLE ZONE

2. NAME OF OPERATOR  
**MOBIL EXPLORATION & PRODUCING U.S. AS AGENT FOR MEPNA**

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

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*  
 At surface  
**660' FSL, 1850' FEL**  
 At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
**5 MILES SSE OF MONTEZUMA CREEK, UT**

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)  
**43-037-15750**

16. NO. OF ACRES IN LEASE  
**5921'**

17. NO. OF ACRES ASSIGNED TO THIS WELL  
**ROTARY**

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

19. PROPOSED DEPTH  
**5921'**

20. ROTARY OR CABLE TOOLS  
**ROTARY**

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
**GL: 4950**

22. APPROX. DATE WORK WILL START\*  
**05-06-94**

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

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

7. UNIT AGREEMENT NAME  
**SW-I-4192**

8. FARM OR LEASE NAME  
**RATHERFORD UNIT**

9. WELL NO.  
**20-34**

10. FIELD AND POOL, OR WILDCAT  
**GREATER ANETH**

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
**SEC 20, T41S, R24E**

12. COUNTY OR PARISH | 13. STATE  
**SAN JUAN | UT**

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2	13-3/8	27.1#	174'	175 SX CMT
N/A	8-5/8	24 #	1682'	N/A
8-3/4	5-1/2	15.5 & 14#	5797'	N/A

SEE ATTACHED PROCEDURE FOR **HORIZONTAL** RE-ENTRY.

APPROVED BY: \_\_\_\_\_  
 OF UNITED STATES OF  
 OIL, GAS, AND MINING  
 DATE: **5-23-94**  
 BY: **JM Matthew**  
 WELL SPACING: **R-649-2-3**

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED Shelby Dodd TITLE Env. & Reg DATE 4-22-94

(This space for Federal or State office use)

PERMIT NO. 43-037-15750 APPROVAL DATE \_\_\_\_\_

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
 CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions On Reverse Side

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

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

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

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1. TYPE OF WORK  
DRILL  DEEPEN  PLUG BACK

2. TYPE OF WELL  
OIL WELL  GAS WELL  OTHER  HORIZONTAL  SINGLE ZONE  MULTIPLE ZONE

3. NAME OF OPERATOR  
MOBIL EXPLORATION & PRODUCING U.S. AS AGENT FOR MEPNA

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

5. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)  
At surface  
660' FSL, 1850' FEL  
At proposed prod. zone

6. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
5 MILES SSE OF MONTEZUMA CREEK, UT 43-037-15750

7. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE FT.  
(Also to nearest U.S. well hole, if any.)

8. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL DRILLING COMPLETED OR APPLIED FOR ON THIS LEASE FT.  
5921'

9. ELEVATIONS (Show whether DP, RT, GR, etc.)  
GL: 4950

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

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
NAVAJO TRIBAL

7. UNIT AGREEMENT NAME  
SW-1-4192

8. FARM OR LEASE NAME  
RATHERFORD UNIT

9. WELL NO.  
20-34

10. FIELD AND FOOD OR WILDCAT  
GREATER ANETH

11. SEC. T. R. M. OR BLK. AND SURVEY OR AREA  
SEC 20, T41S, R24E

12. COUNTY OR PARISH 13. STATE  
SAN JUAN UT

19. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2	13-3/8	27.1#	174'	175 SX CMT
N/A	8-5/8	24 #	1682'	N/A
8-3/4	5-1/2	15.5 & 14#	5797' 5420'	N/A

SEE ATTACHED PROCEDURE FOR HORIZONTAL RE-ENTRY.

\* ABOVE SPACE (SCALE OF 1/8" PER FOOT PERMISSIBLE) If proposal is to deepen or plug back, give data on present productive zone and proposed new production zone. If proposal is to drill or deepen, give vertical data on subsurface locations and measured and true vertical depths. Give blow prevention program, if any.

APPROVED BY: Thurley J. Reed TITLE: Env. & Reg. DATE: 4-22-94

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

**APPROVED**  
**APR 28 1994**  
DISTRICT MANAGER

\*See instructions On Reverse Side

## **Ratherford Unit #20-34 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 4 3/4" bit and casing scraper to PBTD @ 5825'. 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 @ 5825'. Run a gyro survey from PBTD to surface. Run and set a cement retainer ±5630'. RD wireline truck.
8. TIH with star guide @ ±5630'. 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 4 3/4" bit and drill collars picking up 2 7/8" 10.40 ppf E-75 AOH workstring. Drill cement retainer and cement to 5825'. Circulate hole clean and them mud-up system until a yield point of 40-50 is obtained. TOH with bit.
10. TIH with 4 1/2" section mill dressed with cutter arms for 5 1/2" casing to 5650'. Mill section in casing from 5680' - 5710'. Circulate the hole clean and TOH with section mill.
11. TIH with 4 3/4" 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 too low. TOH and LD workstring. ND BOPs and NU wellhead. RDMO daylight workover rig.
14. MIRU 24 hour DDPU with drilling package. TIH with 4 3/4" MT bit, DCs, and 2 7/8", 10.4ppf, AOH drillpipe.

15. Dress off cement plug to the kick off point @ 5690'. Treat water and mud up with XC polymer. 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.

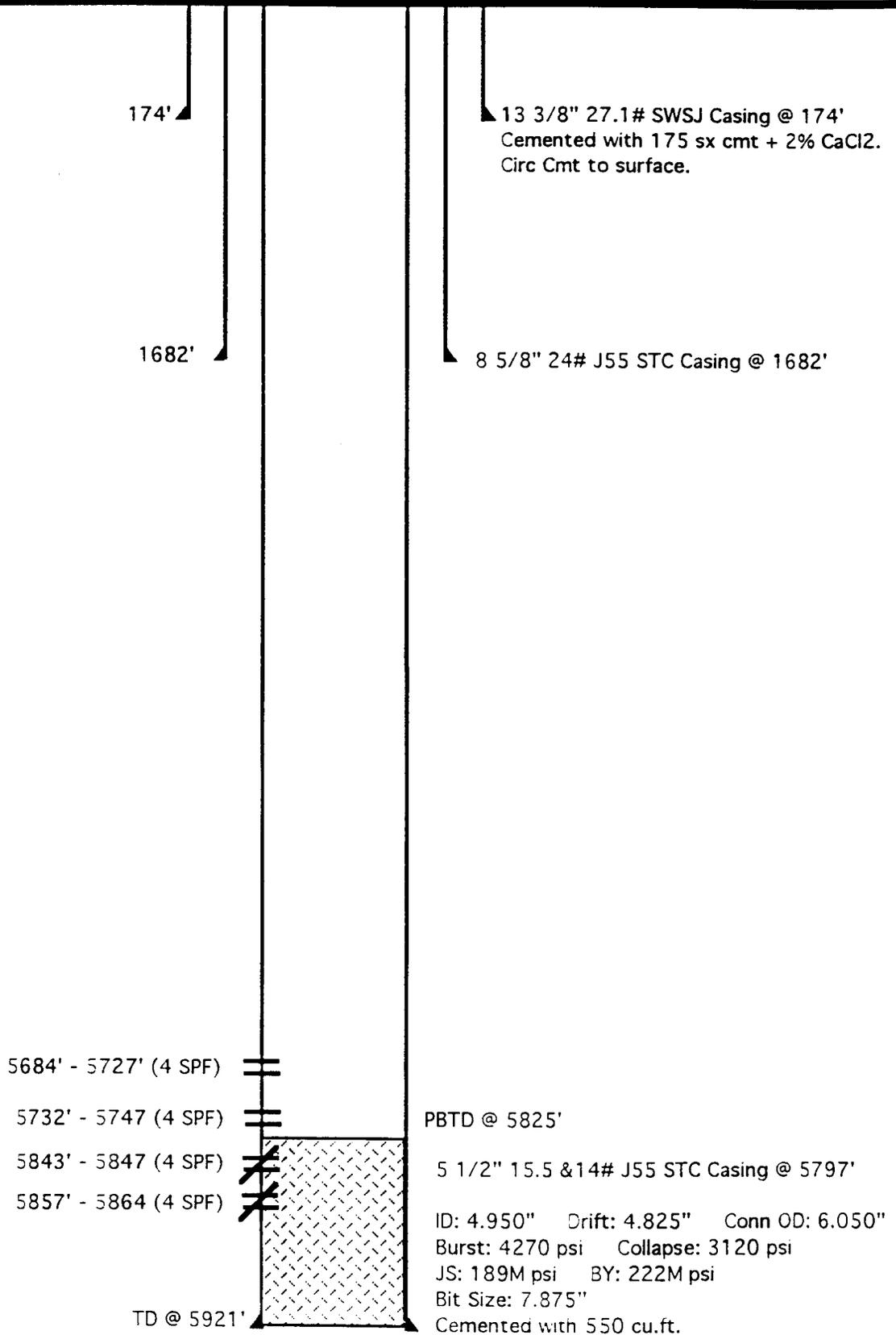
San Juan County, Utah  
Sec 20, TWP 41S, RNG 24E  
1850' FEL & 660' FSL  
5 miles SSE of Montezuma Creek, Utah

### RATHERFORD UNIT No. 20-34 EXISTING WELLSKETCH

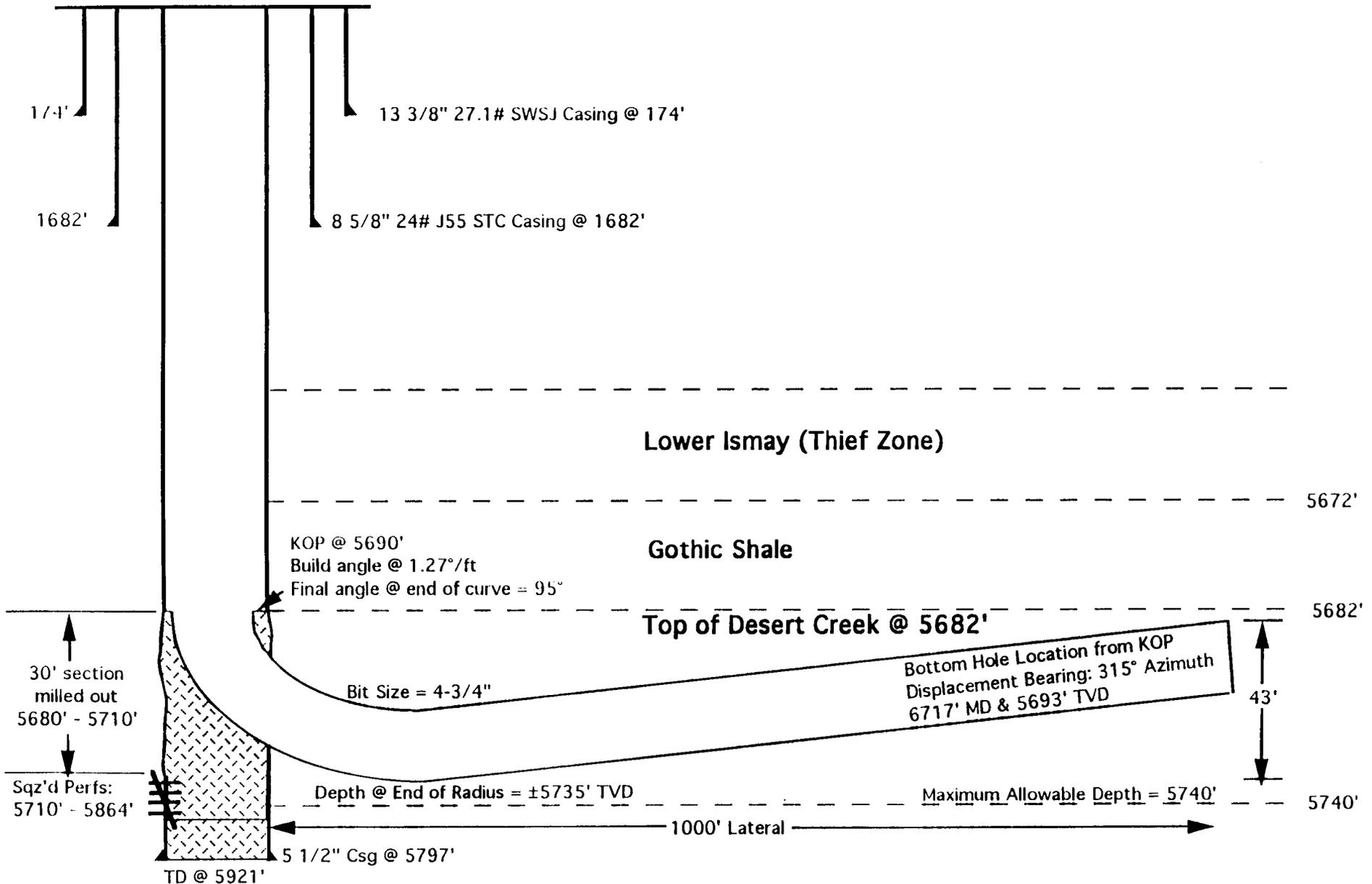
GL: 4950'  
KB: 4961'  
ZERO: 11' AGL

API No. 4303715750  
Latitude: -109.3019116  
Longitude: 37.202170092

Soud Date: 8/14/58



# PROPOSED HORIZONTAL RATHERFORD UNIT #20-34 WIW



WORKSHEET  
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 04/29/94

API NO. ASSIGNED: 43-037-15750

WELL NAME: RATHERFORD 20-34 (RE ENTRY)  
OPERATOR: MOBIL EXPL & PROD NA (N7370)

PROPOSED LOCATION:  
SWSE 20 - T41S - R24E  
SURFACE: 0660-FSL-1850-FEL  
BOTTOM:  
SAN JUAN COUNTY  
GREATER ANETH FIELD (365)

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

LEASE TYPE: IND  
LEASE NUMBER: 14-20-603-353

PROPOSED PRODUCING FORMATION: DSCR

RECEIVED AND/OR REVIEWED:

Y Plat  
 \_\_\_ Bond: Federal[] State[] Fee[]  
       (Number \_\_\_\_\_)  
N Potash (Y/N)  
N Oil shale (Y/N)  
 \_\_\_ Water permit  
       (Number \_\_\_\_\_)  
N RDCC Review (Y/N)  
       (Date: \_\_\_\_\_)

LOCATION AND SITING:

R649-2-3. Unit: UTU 68931A  
 \_\_\_ R649-3-2. General.  
 \_\_\_ R649-3-3. Exception.  
 \_\_\_ Drilling Unit.  
 \_\_\_ Board Cause no: \_\_\_\_\_  
 \_\_\_ Date: \_\_\_\_\_

COMMENTS: Re entry - short radius horizontal lateral (1000').

STIPULATIONS: 1. DIRECTIONAL SURVEY SHOWING BOTTOM HOLE LOCATION WILL BE FILED R649-3-11



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

Michael O. Leavitt  
Governor

Ted Stewart  
Executive Director

James W. Carter  
Division Director

355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
801-538-5340  
801-359-3940 (Fax)  
801-538-5319 (TDD)

May 23, 1994

Mobil Exploration & Producing U.S. as Agent for MEPNA  
P.O. Box 633  
Midland, Texas 79702

Re: Ratherford Unit 20-34 Well, 660' FSL, 1850' FEL, SW SE, Sec. 20, T. 41 S., R. 24 E., San Juan County, Utah

Gentlemen:

Pursuant to Utah Code Ann. § 40-6-18, (1953, as amended), Utah Admin. R. 649-2-3, Application of Rules to Unit Agreements and R. 649-3-4, Permitting of Wells to be Drilled, Deepened or Plugged-Back, approval to reenter and horizontally drill the referenced well is hereby granted.

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

1. In accordance with Utah Admin. R. 649-3-11, Directional Drilling, submittal of a complete angular deviation and directional survey report is required.
2. Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules.
3. Notification to the Division within 24 hours after drilling operations commence.
4. Submittal of Entity Action Form, Form 6, within five working days following commencement of drilling operations and whenever a change in operations or interests necessitates an entity status change.
5. Submittal of the Report of Water Encountered During Drilling, Form 7.
6. Prompt notification prior to commencing operations, if necessary, to plug and abandon the well. Notify Frank R. Matthews, Petroleum Engineer, (Office) (801)538-5340, (Home) (801)476-8613, or K. Michael Hebertson, Reclamation Specialist, (Home) (801)269-9212.



Page 2

Mobil Exploration & Producing U.S. as Agent for MEPNA

Ratherford Unit 20-34 Well

May 23, 1994

7. Compliance with the requirements of Utah Admin. R. 649-3-20, Gas Flaring or Venting, if the well is completed for production.

This approval shall expire one year after date of issuance unless substantial and continuous operation is underway or a request for an extension is made prior to the approval expiration date. The API number assigned to this well is 43-037-15750.

Sincerely,



R.J. Firth  
Associate Director

ldc

Enclosures

cc: San Juan County Assessor  
Bureau of Land Management, Moab District Office

WO11



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 20-34**

9. API Well No.  
**43-037-15750**

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  
**MEFUS 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: SWSE 20-41s-24e**  
**BHL: N/A**

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

TYPE OF SUBMISSION	TYPE OF ACTION
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input checked="" type="checkbox"/> Other <u>Pipeline</u>
	<input type="checkbox"/> Change of Plans
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> 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, except for surface rim crossing. (Application to convert well will be filed separately.) Pipeline will be ≈1200' long and run east from well to existing injection pipeline just east of 20-44. 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

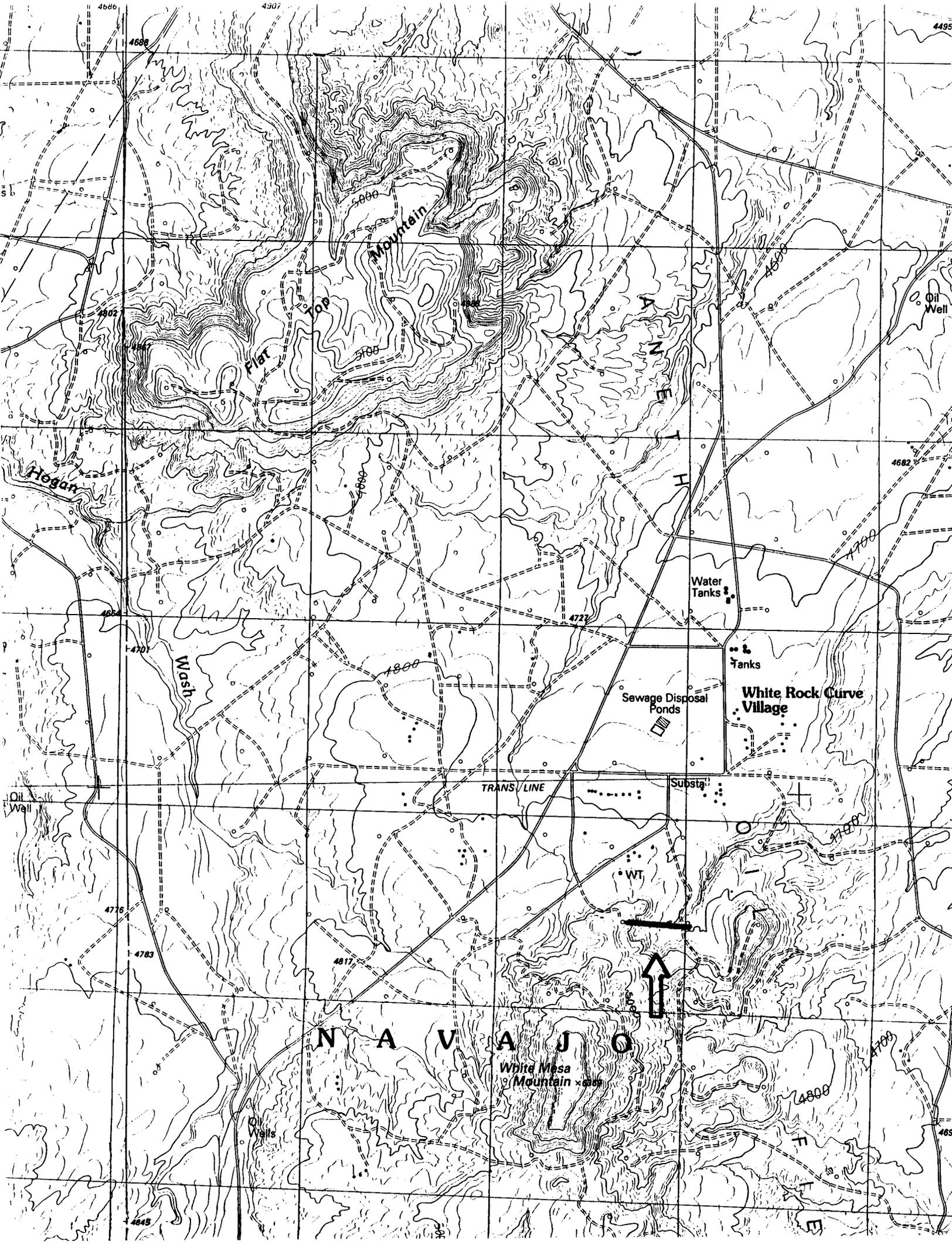
(This space for Federal or State office use)

Approved by \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_

Conditions of approval, if any:

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

**FOR RECORD ONLY**



Mountain

Flat

Hogan

Wash

TRANS LINE

Sewage Disposal Ponds

Water Tanks

White Rock Curve Village

Substa

WT

NAVAJO

White Mesa Mountain

4800



**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\***

1a. TYPE OF WELL: OIL WELL  GAS WELL  DRY  Other \_\_\_\_\_

b. TYPE OF COMPLETION: NEW WELL  WORK OVER  DEEP-EN  PLUG BACK  DIFF. RESVR.  Other RE-ENTRY ✓

2. NAME OF OPERATOR  
**MOBIL EXPLORATION & PRODUCING U.S. INC.**

3. ADDRESS AND TELEPHONE NO.  
**P. O. BOX 633, MIDLAND, TEXAS 79701 915-688-2585**

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)\*  
At surface: **660 FSL, 1850' FEL / SW SEUL 18 1994**  
At top prod. interval reported below: **SAME**  
At total depth: **SAME**

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 UN 20-34**

9. API WELL NO.  
**43-037-15750**

10. FIELD AND POOL, OR WILDCAT  
**GREATER ANETH**

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA  
**20-41S-24E**

12. COUNTY OR PARISH  
**SAN JUAN**

13. STATE  
**UTAH**

14. PERMIT NO. **43-037-15750** DATE ISSUED **N/A**

15. DATE SPUNDED **N/A** 16. DATE T.D. REACHED **06-23-94** 17. DATE COMPL. (Ready to prod.) **06-23-94** 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)\* **4950' GL** 19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD **TVD 5724'** 21. PLUG, BACK T.D., MD & TVD **MD 6752'** 22. IF MULTIPLE COMPL., HOW MANY\* \_\_\_\_\_ 23. INTERVALS DRILLED BY \_\_\_\_\_ ROTARY TOOLS **X** CABLE TOOLS \_\_\_\_\_

24. PRODUCING INTERVAL(S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD)\*  
**5690-6752 OH**

25. WAS DIRECTIONAL SURVEY MADE \_\_\_\_\_

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'	17-1/2	175 SX	
8-5/8	24#	1682'			
5-1/2"	15.5 & 14#	5797'	CSG MILLED	OUT & REMOVED FROM 5684-	5714'

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					2-7/8	5805'	5561'

30. TUBING RECORD

31. PERFORATION RECORD (Interval, size and number)  
**5690-6752' OH**

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5609'	SQZ CMT IN RET. 50 SX LEAD
	PREMIUM CMT + 0.4% HALAD
	(15.8 PPG, 1.15 YIELD) 75 SX
	(cont'd on back)

33.\* PRODUCTION

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

DATE OF TEST **07/04/94** HOURS TESTED **24** CHOKE SIZE \_\_\_\_\_ PROD'N. FOR TEST PERIOD \_\_\_\_\_ OIL - BBL. **418** GAS - MCF. **232** WATER - BBL. **13** GAS - OIL RATIO **555**

FLOW. TUBING PRESS. **400** CASING PRESSURE **0** CALCULATED 24-HOUR RATE \_\_\_\_\_ OIL - BBL. \_\_\_\_\_ GAS - MCF. \_\_\_\_\_ WATER - BBL. \_\_\_\_\_ OIL GRAVITY - API (CORR.) \_\_\_\_\_

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

35. LIST OF ATTACHMENTS \_\_\_\_\_

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

SIGNED Shelby Good TITLE **ENV. & REG. TECHNICIAN** DATE **07/14/94**

\*(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 jurisdiction.

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):

38. GEOLOGIC MARKERS

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP	
					MEAS. DEPTH	TRUE VERT. DEPTH
		5609 (CONT'D)	TAIL PREMIUM CMT + 0.3% HALAD (15.2 PPG, 1.29 YIELD)			
		5684-5747'	SQZ PERFS W/150 SX 'B' CMT W/10% CALSEAL, 0.3% HALAD 344, 0.2 % CACL2, AND 150 SX B NEAT.			
		5690	KICK OFF POINT FOR HORIZONTAL (KOP)			
		5832-5382	SPOT BALANCED PLUG W/50 SX "C" (17.0 PPG, YIELD 1.01)			
		5684-5714	MILLED OUT & REMOVED 5.5" CSG			
		5690-6752	ACIDIZED DESERT CREEK OPEN HOLE W/10,000 HALS 15% NEFE HCL ACID			

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**RECEIVED**  
AUG 18 1994  
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**

1. Type of Well

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)  
**660' FSL, 1850' FEL; SEC 20, T41S, R24E**

5. Lease Designation and Serial No.

**14-20-0603-353**

6. If Indian, Allottee or Tribe Name

**NAVAJO TRIBAL**

7. If Unit or CA, Agreement Designation

**RATHERFORD UNIT**

8. Well Name and No.

**RATHERFORD UNIT 20-34**

9. API Well No.

**43-037-15750**

10. Field and Pool, or exploratory Area

**GREATER ANETH**

11. County or Parish, State

**SAN JUAN UT**

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

TYPE OF SUBMISSION	TYPE OF ACTION
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input type="checkbox"/> Other <b>WORKOVER</b>
	<input type="checkbox"/> Change of Plans
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> 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.)\*

**07/28/94 MIRU. UNSEAT PUMP. HOT-OIL RODS & TBG W/70 BBLS LEASE OIL. POH W/PROD PUMP & RODS. RIH W/PUMP & RODS. SPACED OUT & HUNG WELL ON. TEST TO 500# / OK. RDMO & REL TO PROD.**

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

Signed

*D. Davis for Shirley Jones*

Title

**ENV. & REG. TECHNICIAN**

Date

**08/10/94**

(This space for Federal or State office use)

Approved by \_\_\_\_\_

Title \_\_\_\_\_

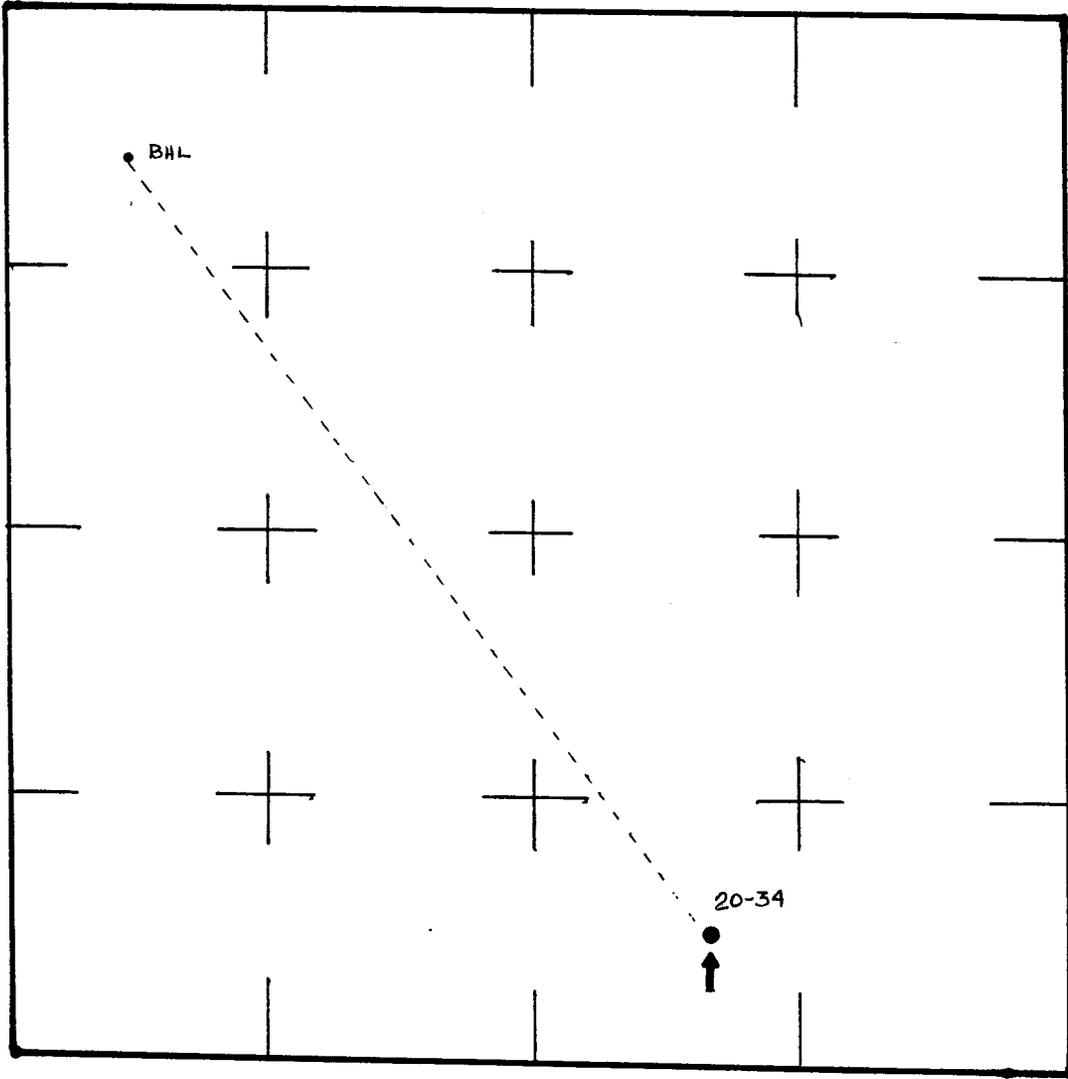
Date \_\_\_\_\_

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

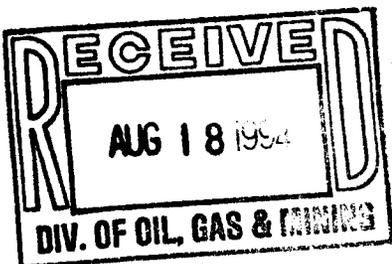
Mobil EXPLORATION & PRODUCING U.S. INC.  
as Agent for MEPNA & Mobil Oil Corp.



RATHERFORD UNIT #20-34  
SEC. 20, T41S, R24E  
660' FSL, 1850' FEL  
BHL 774' FNL, 617' FWL  
321.44° AZIMUTH

Scale 1" = 1,000'

43-037-15750  
REENTRY





**BECFIELD SURVEY & TARGET TRACKING PROGRAM**

<b>OPERATOR:</b>	Mobil Exploration & Production	<b>START:</b>	05/26/94
<b>WELL:</b>	Ratherford Unit # 20-34	<b>FINISH:</b>	06/15/94
<b>LOCATION:</b>	San Juan County, Utah	BecField Directional Coord E. Pruet/N. Sayles	

Survey No. 0 is a tie-in to a  
Gyroscopic survey ran by  
Scientific Drilling on 05-07-94

12.3 DEG applied = TRUE

**MINIMUM CURVATURE CALCULATIONS(SPE-3362) Proposed Direction 319**

SUR NUM	MD	INC	TRUE AZM	TVD	N-S	E-W	SECT	DLS/ 100
45	5806	94.7	5.6	5741.2	123.0	-8.9	98.7	17.9
46	5811	95.1	5.5	5740.8	128.0	-8.4	102.1	8.2
47	5816	95.5	5.4	5740.3	132.9	-7.9	105.5	8.2
48	5821	95.8	5.3	5739.8	137.9	-7.4	108.9	6.3
49	5826	96.1	5.1	5739.3	142.9	-7.0	112.4	7.2
50	5831	95.9	4.9	5738.8	147.8	-6.5	115.8	5.6
51	5836	95.1	4.2	5738.3	152.8	-6.2	119.3	21.2
52	5841	93.8	3.4	5737.9	157.7	-5.8	122.9	30.5
53	5846	93.0	2.9	5737.6	162.7	-5.5	126.4	18.9
54	5851	92.3	2.3	5737.4	167.7	-5.3	130.1	18.4
55	5856	91.9	1.6	5737.2	172.7	-5.2	133.7	16.1
56	5861	91.5	1.0	5737.0	177.7	-5.0	137.4	14.4
57	5866	91.0	0.3	5736.9	182.7	-5.0	141.2	17.2
58	5871	90.5	359.5	5736.9	187.7	-5.0	144.9	18.9
59	5876	90.0	358.7	5736.9	192.7	-5.1	148.8	18.9
60	5881	89.6	357.7	5736.9	197.7	-5.2	152.6	21.5
61	5886	89.5	357.0	5736.9	202.7	-5.5	156.6	14.1
62	5891	89.4	356.2	5737.0	207.7	-5.8	160.5	16.1
63	5896	89.4	355.2	5737.0	212.7	-6.1	164.5	20.0
64	5901	89.4	354.2	5737.1	217.6	-6.6	168.6	20.0
65	5906	89.6	353.2	5737.1	222.6	-7.1	172.7	20.4
66	5911	89.8	352.2	5737.1	227.6	-7.8	176.9	20.4
67	5916	89.8	351.5	5737.1	232.5	-8.5	181.1	14.0
68	5921	89.4	350.8	5737.2	237.5	-9.3	185.3	16.1
69	5926	89.3	350.4	5737.2	242.4	-10.1	189.5	8.2
70	5931	89.3	349.8	5737.3	247.3	-10.9	193.8	12.0
71	5936	89.3	349.2	5737.4	252.2	-11.8	198.1	12.0
72	5941	90.1	347.7	5737.4	257.1	-12.8	202.5	34.0
73	5946	91.2	346.1	5737.3	262.0	-14.0	206.9	38.8
74	5951	92.1	344.9	5737.2	266.8	-15.2	211.4	30.0
75	5956	94.2	339.8	5736.9	271.6	-16.7	216.0	110.2
76	5961	95.3	338.4	5736.5	276.3	-18.5	220.6	35.5
77	5966	96.6	337.0	5736.0	280.9	-20.4	225.4	38.1
78	5971	97.2	335.5	5735.4	285.4	-22.4	230.1	32.1
79	5976	97.7	334.3	5734.7	289.9	-24.5	234.9	25.8
80	5981	97.9	333.2	5734.1	294.3	-26.7	239.6	22.2
81	5986	98.1	331.9	5733.4	298.7	-29.0	244.5	26.1
82	5991	98.5	330.3	5732.6	303.1	-31.4	249.3	32.7
83	5996	98.7	329.2	5731.9	307.3	-33.9	254.2	22.1
84	6001	99.0	328.1	5731.1	311.5	-36.4	259.0	22.6
85	6006	99.1	327.2	5730.3	315.7	-39.1	263.9	17.9
86	6011	99.0	326.5	5729.5	319.9	-41.8	268.8	14.0
87	6016	98.7	325.1	5728.8	323.9	-44.5	273.7	28.3
88	6021	98.0	323.4	5728.0	328.0	-47.4	278.6	36.4
89	6026	97.2	325.1	5727.4	332.0	-50.3	283.6	37.3

**BECFIELD SURVEY & TARGET TRACKING PROGRAM**

**OPERATOR:** Mobil Exploration & Production  
**WELL:** Ratherford Unit # 20-34  
**LOCATION:** San Juan County, Utah

**START:** 05/26/94  
**FINISH:** 06/15/94  
 BecField Directional Coord  
 E. Pruet/N. Sayles

Survey No. 0 is a tie-in to a  
 Gyroscopic survey ran by  
 Scientific Drilling on 05-07-94

12.3 DEG applied = TRUE

**MINIMUM CURVATURE CALCULATIONS(SPE-3362) Proposed Direction 319**

SUR NUM	MD	INC	TRUE AZM	TVD	N-S	E-W	SECT	DLS/ 100
90	6031	96.6	323.7	5726.8	336.0	-53.2	288.5	30.3
91	6036	96.2	322.8	5726.2	340.0	-56.2	293.5	19.6
92	6041	95.7	321.9	5725.7	343.9	-59.2	298.4	20.5
93	6046	94.8	321.0	5725.3	347.8	-62.3	303.4	25.4
94	6051	93.7	319.6	5724.9	351.7	-65.5	308.4	35.5
95	6056	92.3	317.8	5724.6	355.4	-68.8	313.4	45.6
96	6061	90.7	315.8	5724.5	359.1	-72.2	318.4	51.2
97	6066	89.4	314.3	5724.5	362.6	-75.8	323.4	39.7
98	6071	88.4	313.0	5724.6	366.0	-79.4	328.3	32.8
99	6076	87.9	312.2	5724.7	369.4	-83.1	333.3	18.9
100	6081	87.4	311.5	5724.9	372.8	-86.8	338.3	17.2
101	6086	87.1	310.8	5725.2	376.0	-90.5	343.2	15.2
102	6091	87.1	310.0	5725.4	379.3	-94.4	348.1	16.0
103	6096	87.4	309.0	5725.7	382.5	-98.2	353.1	20.9
104	6101	87.7	307.9	5725.9	385.6	-102.1	358.0	22.8
105	6106	88.2	306.9	5726.1	388.6	-106.1	362.9	22.3
106	6111	88.5	306.3	5726.2	391.6	-110.1	367.8	13.4
107	6116	88.6	306.1	5726.3	394.5	-114.1	372.6	4.5
108	6121	88.8	305.7	5726.5	397.5	-118.2	377.5	8.9
109	6126	88.9	305.5	5726.6	400.4	-122.2	382.4	4.5
110	6131	89.0	305.4	5726.6	403.3	-126.3	387.2	2.8
111	6141	89.3	305.5	5726.8	409.1	-134.5	396.9	3.2
112	6151	89.6	305.8	5726.9	414.9	-142.6	406.7	4.2
113	6161	89.4	305.8	5727.0	420.7	-150.7	416.4	2.0
114	6171	89.5	305.6	5727.1	426.6	-158.8	426.1	2.2
115	6181	89.2	304.0	5727.2	432.3	-167.0	435.8	16.3
116	6191	90.5	301.9	5727.2	437.7	-175.4	445.4	24.7
117	6201	91.3	300.7	5727.1	442.9	-184.0	455.0	14.4
118	6211	91.7	299.5	5726.8	447.9	-192.6	464.4	12.6
119	6221	92.1	298.7	5726.5	452.8	-201.3	473.8	8.9
120	6231	92.8	294.9	5726.0	457.3	-210.3	483.1	38.6
121	6241	93.3	294.5	5725.5	461.5	-219.3	492.2	6.4
122	6251	94.1	293.8	5724.9	465.6	-228.4	501.2	10.6
123	6261	94.7	293.4	5724.1	469.5	-237.6	510.2	7.2
124	6271	95.2	293.2	5723.2	473.5	-246.7	519.2	5.4
125	6281	95.8	293.2	5722.3	477.4	-255.9	528.2	6.0
126	6291	96.1	293.4	5721.2	481.3	-265.0	537.1	3.6
127	6301	96.8	296.5	5720.1	485.5	-274.0	546.2	31.6
128	6311	97.0	296.4	5718.9	490.0	-282.9	555.4	2.2
129	6321	97.0	296.2	5717.7	494.4	-291.8	564.5	2.0
130	6331	95.4	297.2	5716.6	498.8	-300.7	573.7	18.8
131	6341	93.8	298.4	5715.8	503.5	-309.5	583.0	20.0
132	6351	89.6	300.7	5715.5	508.4	-318.2	592.4	47.9
133	6361	86.2	302.6	5715.9	513.6	-326.7	602.0	38.9
134	6371	85.0	303.6	5716.6	519.1	-335.1	611.6	15.6



**BECFIELD**  
DRILLING SERVICES

MOBIL EXPL & PROD  
RATHERFORD NO. 20-34  
SAN JUAN COUNTY, UTAH

10908 Metronome Houston, TX 77043  
Off: (713) 973-1700  
Fax: (713) 932-2398

P. O. Box 633 Midland, Texas 79702  
Off: (214) 688-2000  
Fax: (915) 688-1593

Date: 5/23/94

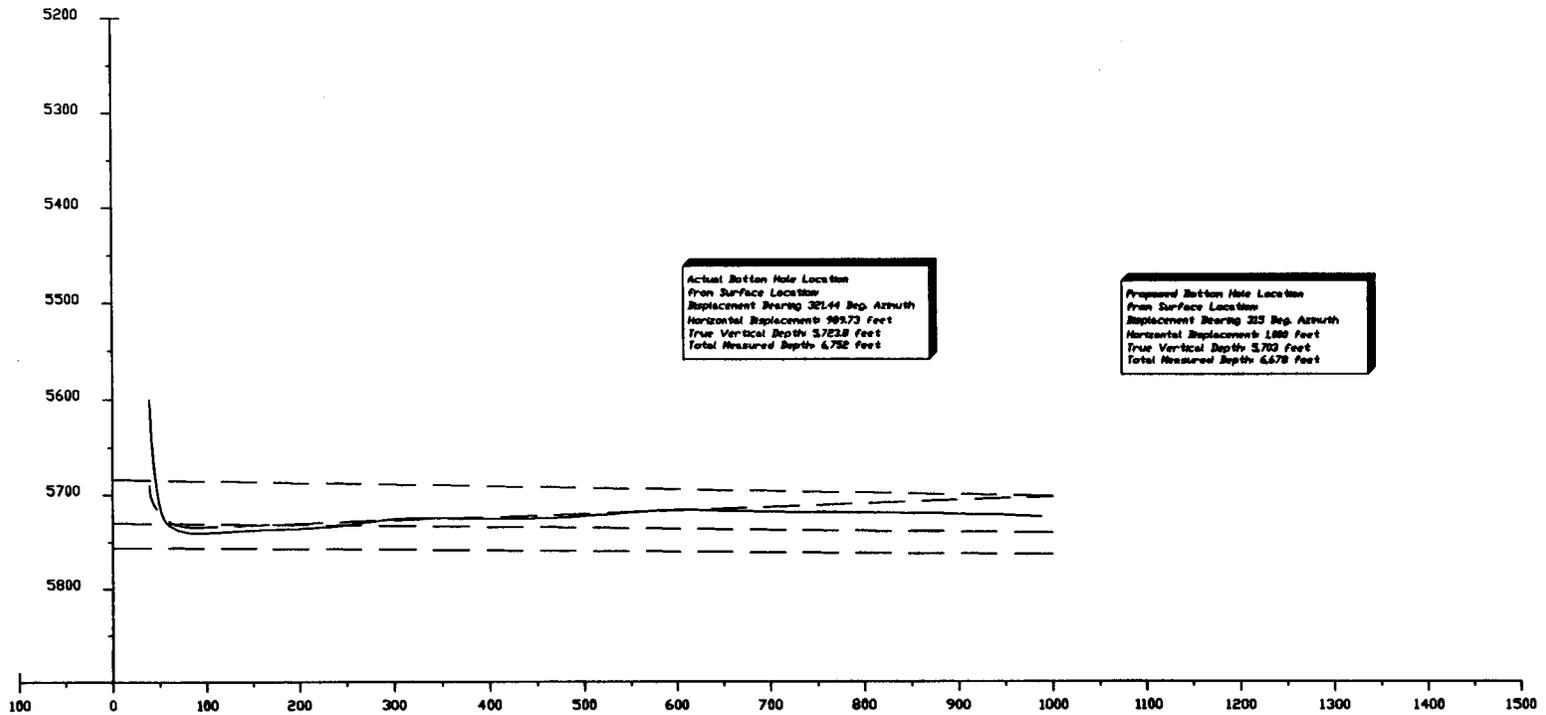
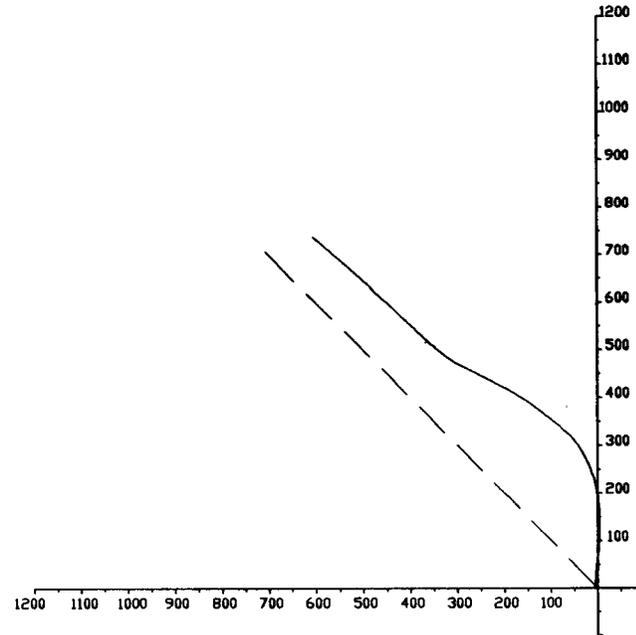
Drawn By: DBG

**HORIZONTAL PROJECTION**

The Surface Location on this drawing is represented by the coordinate 0,0.  
Lease Lines and Well Lines are shown in relation to the Surface Location.



Magnetic Dec: 12.3° E



**Actual Bottom Hole Location From Surface Location**  
Bearing Bearing 321.44 Deg. Azimuth  
Horizontal Displacement 989.73 feet  
True Vertical Depth 5723.8 feet  
Total Measured Depth 6752 feet

**Proposed Bottom Hole Location From Surface Location**  
Bearing Bearing 323 Deg. Azimuth  
Horizontal Displacement 1180 feet  
True Vertical Depth 5703 feet  
Total Measured Depth 6678 feet

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED  
MAR - 6 1995

FORM APPROVED  
Budget Bureau No. 1004-0155  
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

DIV. OF OIL, GAS & MINING

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

Indian, Allottee or Tribe Name

Navajo

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

7. If Unit or CA, Agreement Designation  
Ratherford

1. Type of Well

Oil Well  Gas Well  Other

8. Well Name and No.

RU 20-34

2. Name of Operator

MEPUS for MPT&NM and MEPNA\* (915) 688-2114

9. API Well No.

43-037-15750

3. Address and Telephone No.

P.O. Box 633, Midland, Tx. 79702 Attn: Glen Cox

10. Field and Pool, or Explorer/ Area

Greater Aneth

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

Surface: SWSE 20-41s-24e

11. County or Parish, State

San Juan,

BHL: N/A

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

TYPE OF SUBMISSION

- Notice of Intent
- Subsequent Report
- Final Abandonment Notice

TYPE OF ACTION

- Abandonment
- Recompletion
- Plugging Back
- Casing Repair
- Altering Casings Pipeline
- Other
- Change of Plans
- New Construction
- Non-Routine Fracturing
- Water Shut-Off
- Conversion to 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.)\*

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

Will bury ≈2,149' long injection pipeline ≈30" deep along road and then cross country. This Sundry replaces previous Sundry dated 6-20-94 for same project. Pipe has been rerouted so it can be buried. All in unit. All on Navajo Tribal Trust. All sites avoid

Pipeline will be ≈3-1/2" OD coiled steel tubing. Wall thickness is 0.190". Pipe is welded to API5LX42. Maximum operating pressure will be ≈500 psi. Hydrotested to ≈580 psi. Burst pressure is ≈7200 psi. Tubing will be unreel from spool mounted on bulldozer.

cc: BIA, BLM, Cox, Pena, UDOGM

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

Signed

*Ryan Wood*

Title

Consultant (505) 466-8120

Date

3-4-95

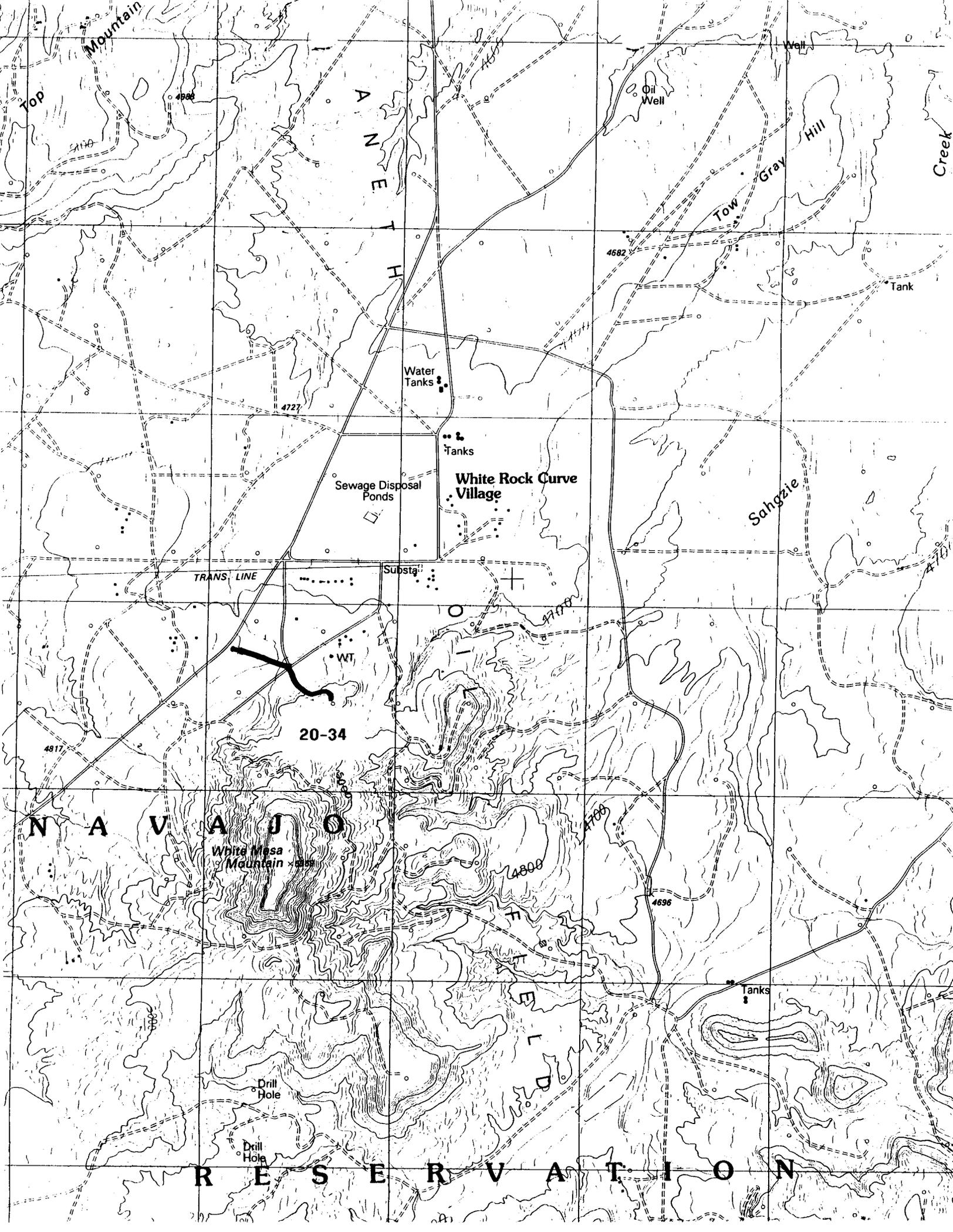
(This space for Federal or State office use)

Approved by

Title

Date

Conditions of approval, if any:



Mountain

TOP

N  
A  
V  
A  
J  
O

Oil Well

TOW

Gray Hill

Creek

Water Tanks

Tanks

Sewage Disposal Ponds

White Rock Curve Village

Sahgzie

TRANS. LINE

Substa.

20-34

WT

N  
A  
V  
A  
J  
O

White Mesa Mountain

4800

4700

4696

Drill Hole

Drill Hole

Tanks

R  
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UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**RECEIVED**  
MAY 3 1995

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

SUNDRY NOTICES AND REPORTS ON WELLS

DIV. OF OIL, GAS & MINING

5. Lease Designation and Serial No.  
**14-20-603-353**  
6. Allottee or Tribe Name

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

**NAVAJO TRIBAL**

**SUBMIT IN TRIPLICATE**

7. If Unit or CA, Agreement Designation  
**RATHERFORD UNIT**

1. Type of Well

Oil Well  Gas Well  Other **INJECTOR**

8. Well Name and No.

**RATHERFORD 20-34**

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

9. API Well No.

**43-037-15750**

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)

**660' FSL; 1850' FEL  
BHL 774' FNL, 617' FWL  
SEC. 20, T41S, R24E**

11. County or Parish, State

**SAN JUAN UT**

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> Notice of Intent  <input type="checkbox"/> Subsequent Report  <input type="checkbox"/> Final Abandonment Notice	<table style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Abandonment  <input type="checkbox"/> Recompletion  <input type="checkbox"/> Plugging Back  <input type="checkbox"/> Casing Repair  <input type="checkbox"/> Altering Casing  <input type="checkbox"/> Other _____                             </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Change of Plans  <input type="checkbox"/> New Construction  <input type="checkbox"/> Non-Routine Fracturing  <input type="checkbox"/> Water Shut-Off  <input checked="" type="checkbox"/> Conversion to Injection  <input type="checkbox"/> Dispose Water                             </td> </tr> </table>	<input type="checkbox"/> Abandonment <input type="checkbox"/> Recompletion <input type="checkbox"/> Plugging Back <input type="checkbox"/> Casing Repair <input type="checkbox"/> Altering Casing <input type="checkbox"/> Other _____	<input type="checkbox"/> Change of Plans <input type="checkbox"/> New Construction <input type="checkbox"/> Non-Routine Fracturing <input type="checkbox"/> Water Shut-Off <input checked="" type="checkbox"/> Conversion to Injection <input type="checkbox"/> Dispose Water
<input type="checkbox"/> Abandonment <input type="checkbox"/> Recompletion <input type="checkbox"/> Plugging Back <input type="checkbox"/> Casing Repair <input type="checkbox"/> Altering Casing <input type="checkbox"/> Other _____	<input type="checkbox"/> Change of Plans <input type="checkbox"/> New Construction <input type="checkbox"/> Non-Routine Fracturing <input type="checkbox"/> Water Shut-Off <input checked="" type="checkbox"/> Conversion to Injection <input type="checkbox"/> 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 Tax credit  
7/26/95

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.

Ratherford Unit 20-34  
Injection Well Conversion

AFE # 4AD9

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", 15.5/14 lb/ft casing on 2-7/8" tubing to 5670'. POH.
4. RIH with squeeze packer on 2-7/8" tubing and set at 5660'. 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 5634'. Reverse circulate fresh water packer fluid containing 1 percent by volume of Tretolite CRW137 corrosion inhibitor/oxygen scavenger. Set packer at 5634'. 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.

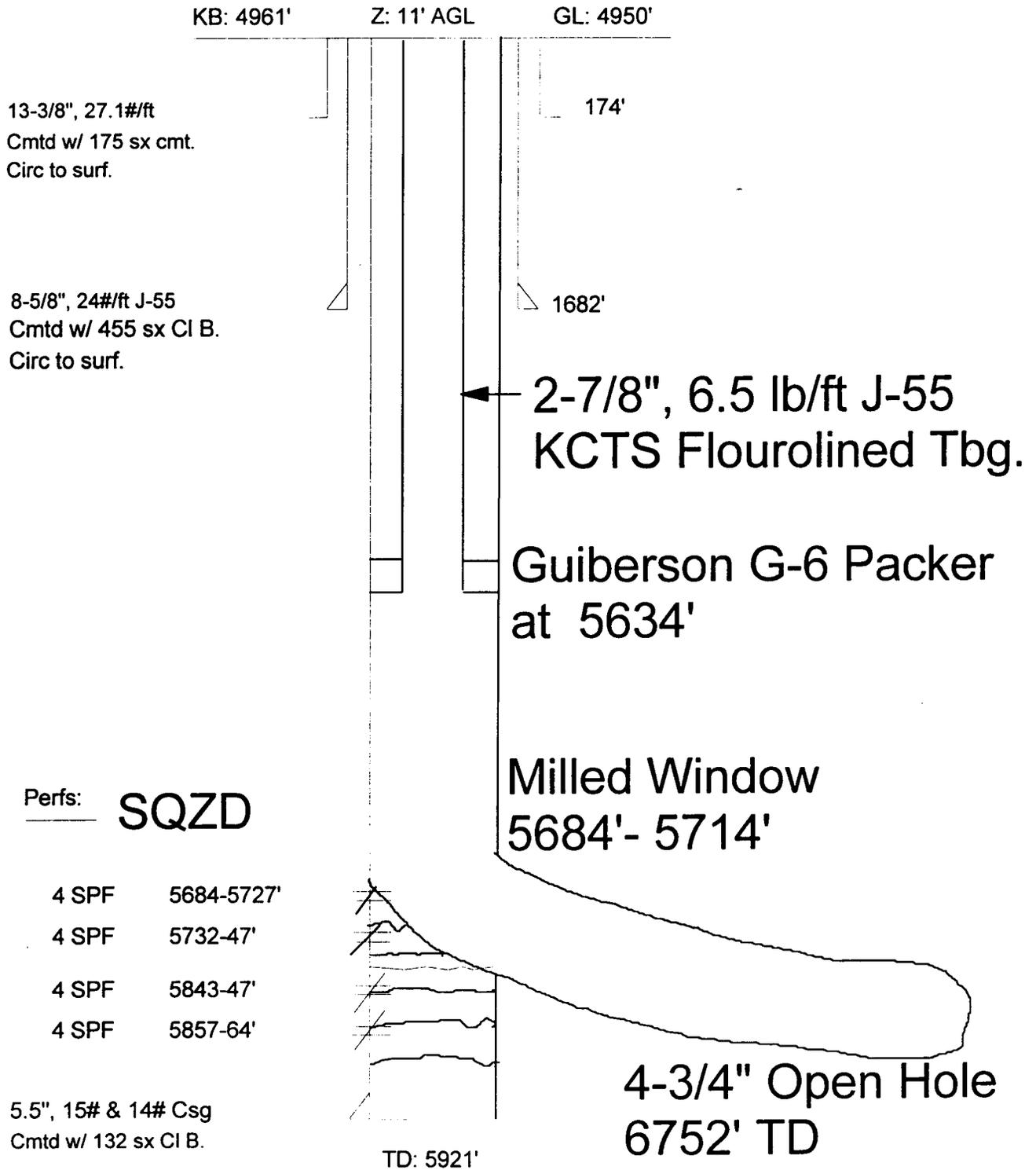
B. Rabbit tubing with 2.0" O.D. rabbit.

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 BWP.

PREPARED BY: S. S. Murphy

4AD9

# Ratherford Unit 20-34 Proposed



**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			Producing Zone	Well Status	Days Oper	Production Volumes		
API Number	Entity	Location				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					
RATHERFORD 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					
<b>TOTALS</b>								

COMMENTS: \_\_\_\_\_

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

Date: \_\_\_\_\_

Name and Signature: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

PHONE CONVERSATION DOCUMENTATION FORM

Route original/copy to:

Well File \_\_\_\_\_  
(Location) Sec \_\_\_ Twp \_\_\_ Rng \_\_\_  
(API No.) \_\_\_\_\_

Suspense  
(Return Date) \_\_\_\_\_  
(To - Initials) \_\_\_\_\_

Other  
OPER NM CHG \_\_\_\_\_

1. Date of Phone Call: 8-3-95 Time: \_\_\_\_\_

2. DOGM Employee (name) L. CORDOVA (Initiated Call )  
Talked to:

Name R. J. FIRTH (Initiated Call ) - Phone No. (      )  
of (Company/Organization) \_\_\_\_\_

3. Topic of Conversation: M E P N A / N7370

4. Highlights of Conversation: \_\_\_\_\_

OPERATOR NAME IS BEING CHANGED FROM M E P N A (MOBIL EXPLORATION AND PRODUCING NORTH AMERICA INC) TO MOBIL EXPLOR & PROD. THE NAME CHANGE IS BEING DONE AT THIS TIME TO ALLEVIATE CONFUSION, BOTH IN HOUSE AND AMONGST THE GENERAL PUBLIC. \*SUPERIOR OIL COMPANY MERGED INTO M E P N A 4-24-86 (SEE ATTACHED).

Division of Oil, Gas and Mining  
**OPERATOR CHANGE WORKSHEET**

Routing	
1-LEC	7-PL ✓
2-LWP	8-SJ ✓
3-DBS	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                               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: <b>** SEE ATTACHED **</b>	API: <u>037-15750</u>	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____

**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.
- Yes 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
- WFP 7. Well file labels have been updated for each well listed above. 9-28-95
- Yes 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)
- Yes 9. A folder has been set up for the Operator Change file, and a copy of this page has been placed there for reference during routing and processing of the original documents.

**ENTITY REVIEW**

- Lee* 1. (Rule R615-8-7) Entity assignments have been reviewed for all wells listed above. Were entity changes made? (yes/no) no (If entity assignments were changed, attach copies of Form 6, Entity Action Form).
- N/A* 2. 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/ Lee* 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) 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.   
*DTS 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 1995.

**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 LIC F5/Not necessary!*

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

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

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 20-34

9. API Well No.

43-037-15750

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 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)  
660' FSL, 1850' FEL  
SEC.20, T41S, R24E  
BHL 774' N, 617'W FROM SURFACE LOCATION

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

TYPE OF SUBMISSION

- Notice of Intent  
 Subsequent Report  
 Final Abandonment Notice

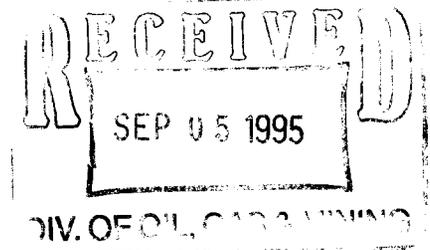
TYPE OF ACTION

- Abandonment  
 Recompletion  
 Plugging Back  
 Casing Repair  
 Altering Casing  
 Other \_\_\_\_\_
- Change of Plans  
 New Construction  
 Non-Routine Fracturing  
 Water Shut-Off  
 Conversion to 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.)\*

7-18-95 MIRU POOH W/TBG. RIH W/BIT & SCRAPER.  
7-19-95 LOAD CSG W/FW PRESS. TEST CSG 1000 PSI/30 MIN/OK.  
7-20-95 CUT OFF CSG. HEAD AND WELD TO 5 1/2" CSG 8"X11X3000# DOUBLE STUDDED ADAPTOR, NU 11" X 3000# X 7 1/16" X 3000# CSG HEAD PRESS TEST CSG HEAD TO 1000#/30 MIN/OK.  
7-21-95 RIH W/178 JTS 2 7/8" KCTS TBG. SET PKR AT 5634', FILL CSG W/PKR FLUID. PRESS TEST CSG TO 1000#/30 MIN/OK RDMO.



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

Signed Shirley Robertson

Title ENV. & REG. TECHNICIAN

Date 8-31-95

(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

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

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

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 20-34**

9. API Well No.  
**43-037-15750**

10. Field and Pool, or exploratory Area  
**GREATER ANETH**

11. County or Parish, State  
**SAN JUAN UT**

**SUBMIT IN TRIPLICATE**

1. Type of Well  
 Oil Well     Gas Well     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 (Footage, Sec., T., R., M., or Survey Description)  
**660X' FSL & 1850 FEL  
 SEC.20, T41S, R24E.**

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

TYPE OF SUBMISSION	TYPE OF ACTION	
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment	<input type="checkbox"/> Change of Plans
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion	<input type="checkbox"/> New Construction
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Altering Casing	<input type="checkbox"/> Conversion to Injection
	<input checked="" type="checkbox"/> Other <b>SIDETRACK</b>	<input type="checkbox"/> Dispose Water

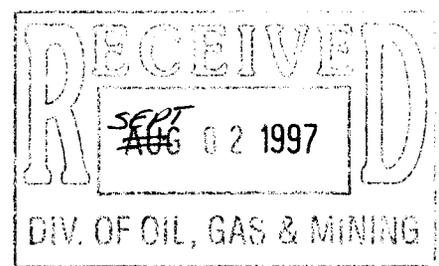
(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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: **EXISTING LATERAL** 774' NORTH & 617' WEST/SURFACE LOCATION TD 6752'

BHL: LATERAL #1 **(NEW)** <sup>306</sup> 1005' SOUTH & <sup>339</sup> 1115' EAST F/SURFACE SPOT (ZONE 1a).

*202.001 & 669 FSL - SIC 29*  
*269.001 N 881 FSL*



SEE ATTACHED PROCEDURE.

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

Signed *Shelley Houchens* Title ENV. & REG. TECHNICIAN Date 08-27-97

(This space for Federal or State office use)  
 Approved by *John R. Dyer* Title Associate Director Date 9/23/97  
 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.

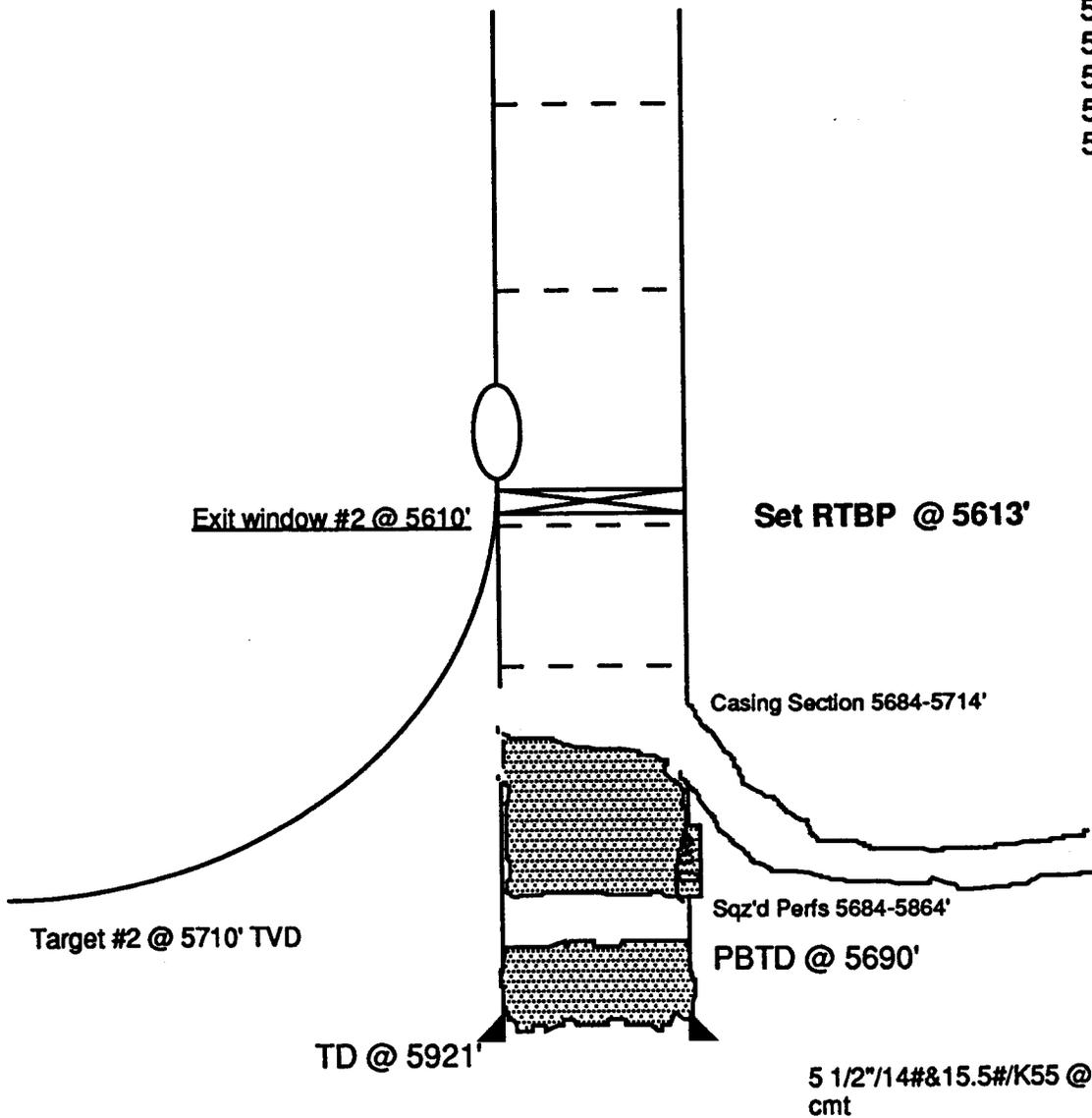
## **Rutherford Unit Well #20-34 Horizontal Drilling Procedure**

The objective of this procedure is to prepare this wellbore for sidetracking, sidetrack the subject well and short radius horizontal lateral (1500 ft).

1. Prepare location and dig working pit.
2. MIRU WSU, reverse unit, and H<sub>2</sub>S equipment. Bullhead kill weight fluid down tubing.
3. Release packer, and pick up on wellhead to remove. ND wellhead and NU BOP's. Pressure test BOP's.
4. Continue to POH with tubing.
5. TIH with full gauge bit and casing scraper to PBSD. TOH with bit and scraper.
6. Ensure well will circulate, and set RTBP above perms. Pressure test casing to 1000 psi.
7. RDMO WSU.
8. MIRU 24 hr WSU.
9. PU tubing, drill collars, and drill pipe in derrick and run in hole. Then POH and stand back.
10. Run RTBP on wireline and set using GR/CCL log to correlate with. RD wireline.
11. PU drillpipe with UBHO sub and whipstock and starter mill.
12. Run gyro and obtain orientation of whipstock face. Set whipstock.
13. Shear pilot mill bolt and start milling window.
14. POH and PU window mill and watermelon mill to finish window and drill 2 ft of formation.
15. POH w/ mills and RBIH w/ new mills to clean up window.
16. PU drill pipe, MWD, and directional motors to drill curve. Use the gyro to drill until the inclination dictates that the gyro must be pulled.
17. Finish drilling the curve using the MWD.
18. POH once curve is finished and PU lateral motor to drill the lateral using MWD.
19. Once lateral TD is reached, POH w/ directional equipment.
20. PU RTBP and set at 5500'. RDMO.

Whipstock plan for Ratherford #20-34

Casing collars@  
 5491',  
 5532+',  
 5575',  
 5618',  
 5658'



Window	Btm-Top of window	Extension length	Curve radius	Bearing	Horiz Displ
2	5610-5594	-	100	132	1500

## WELL HISTORY

**RATHERFORD UNIT #20-W-34**  
**GREATER ANETH FIELD**  
**660' FSL, 1850' FEL**  
**SEC 20, T41S, R24E**  
**SAN JUAN COUNTY, UTAH**

**API #43-037-15750**  
**PRISM ID 0043102**

**KB: 4961' GL: 4950'**  
**TD: 5922' PBSD: 5888'**

- 8-14-58 **Spud well.**  
Drill 17-1/4" hole to 174'. Ran & set 13-3/8", 27.1# conductor pipe. Cmtd w/ 175 sx cmt. Circ to surf.  
  
Drill 11" hole to 1682'. Ran & set 8-5/8", 24#/ft K-55 surf csg. Cmtd w/ 330 sx reg cmt & tailed w/ 125 sx reg cmt. Circulated to surface.  
  
Drill 7-7/8" hole to TD @ 5921'. Ran & set 5.5", 15.5# & 14# K-55 prod csg. Cmtd w/ 132 sx reg cmt.
- 09-14-58 **Initial Completion: DO/CO to PBSD @ 5888'. Perfed 5684-5727', 5732-47', 5843-47', & 5957-64' w/4 SPF. Acidized w/ 7000 gals reg HCl. TTP 3400-1400#, AIR 6.5 BPM, ISIP ?#.**
- 12-17-58 Install artificial lift.
- 3-24-73 **Remove pkr/sqz Zones II & III/stimulate. POOH w/ rods, pump, & tbg. LD pkr. GIH w/ 5.5" cmt retrn to 5889'. Sqzd Zone II & III w/ 250 sx Cl C. New PBSD @ 5825'. GIH w/5.5" pkr, acidized w/ 6500 gals 15% HCl w/ 1.25#/gal mothballs + 5500 gals 15% HCl. GIH w/ TAC & tbg. RWTP.**
- 4-28-87 **CO & Acidize. POOH w/ tbg. GIH w/ bit & CS to btm @ 5831'- did not hit anything. GIH w/ 5.5" pkr to 5550' w/ tailpipe to 5682'. Acidized Zone I w/ 6000 gals 28% HCl. POOH w/ pkr. GIH w/ 5.5" TAC on 183 jts 2-7/8" tbg. TAC @ 5656', SN @ 5748' & put on prod.**
- 2-18-88 **No production. POOH w/ rods & pump, found pmp holddown broken. POOH w/ tbg. Changed SN & set TAC @ 5645'. RWTP.**
- 05-04-94 **HORIZONTAL RECOMPLETION**  
TO  
06-23-94 **RU HALLBURTON & SQZ PERF INTERVAL 5684-5747' THRU CMT RET SET @ 5609' W/125 SX PREMIUM CMT, (DIDNT SQZ). HOWCO SQZ PERF INTERVALS AGAIN W/300 SX CLS B CMT, @2 BPM W/1000# DISP RIH W/BIT & CS, TOC @ 4954', DO CMT FROM 4954-5747'. CO TO PBSD 5825' TEST CSG TO 1000#. RIH W/4 1/2" SECTION MILL & TEN 3 1/2" DC'S ON 145 JTS 2 7/8 DP. CUT & MILL CSG FROM 5684-5714'. HALLIBURTON SPOT PLUG FROM 5832-5382' W/50 SX CLS G CMT. TAG TOC @ 5565' DO GOOD CMT TO 5690' (6' BELOW TOP OF WINDOW). DRILLED 4-3/4" HORIZONTAL WELL FROM KOP 5690', CURVE 5690-5764', SLIDE DRILL 5764 TO TD 6752' MD, 5734' TVD. EOW IS 774' N & 617' W OF VERTICAL SEC. INCLINATION 88 DEGREES, AZIMUTH 309.3 DEGREES. SECTION=989'. POOH W/DP, DC'S & MOTOR STATER, LEFT 60% OF MOTOR IN HOLE. COULDN'T FISH MOTOR, SHOVED TO MTD 6752'. RIH W/PROD EQUIP. SWAB. RAN BHP'S. RWTP.**

07-06-94 ACIDIZE W/COIL TUBING: POOH W/PROD RODS, PUMP & TBG. RIH W/4 JTS 2.875" 8.7#/FT OPEN ENDED + X-OVER & 2 JTS 2.875" J55 TBG + MS 5.50" MODEL R PKR + SN + 174 JTS J55 TBG. SET PKR @ 5561', EOTP @ 5805'. RU CUDD & DOWELL. RIH W/1.25" COIL TBG TO 6741'. ACIDIZED DC OPEN HOLE 5690-6752' W/10,000 GAL 15%NEFE HCL ACID, TCTP 4200# @.8 BPM, SITP 0# ON VAC. SWABBED WELL TO FLOW & PUT TO PROD. FOR 12 DAYS. 07-19-94 POOH PKR. RIH W/PROD TBG, PUMP & RODS HANG ON.

TVE 8-24-93

KMM 11-15-94 UPDATE

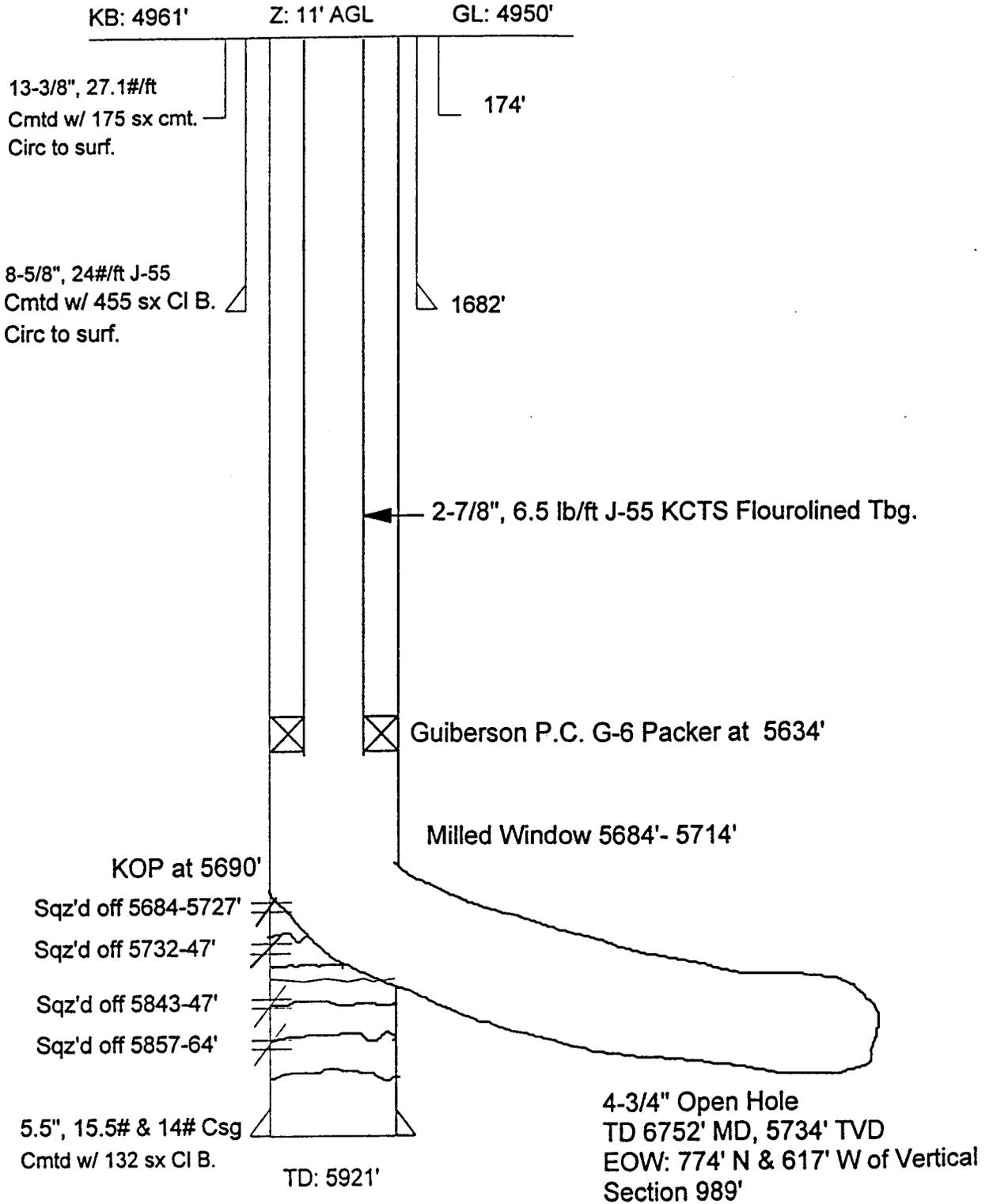
Checked by LA Tucker 7-25-96

7-21-95 SET RBP AT 5660'. TEST CSG TO 1000# FOR 30 MIN - OK. POOH RBP. CHANGE OUT WELLHEAD. SET GUIBERSON PC G-6 PKR AT 5634', W/ 2-7/8" KCTS TBG. MIT. COMMENCED INJECTION ON \_\_\_-\_\_\_-95.

LAT 7-25-96

Ratherford Unit #20-34  
 Greater Aneth Field  
 660' FSL & 1850' FEL Surface Loc.  
 BHL: 774' N & 617' W of Vertical

API #43-037-15750  
 PRISM ID 0043102  
 SEC 20, T41S, R24E  
 SAN JUAN COUNTY, UTAH



WORKSHEET  
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 09/02/97

API NO. ASSIGNED: 43-037-15750

WELL NAME: RATHERFORD 20-34 MULTI-LEG  
 OPERATOR: MOBIL EXPL & PROD (N7370)

PROPOSED LOCATION:  
 SWSE 20 - T41S - R24E  
 SURFACE: 0660-FSL-1850-FEL  
 BOTTOM: 0881-FNL-0665-FEL  
 SAN JUAN I COUNTY  
 GREATER ANETH FIELD (365)

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

LEASE TYPE: IND  
 LEASE NUMBER: 14-20-603-353

PROPOSED PRODUCING FORMATION: DSCR

RECEIVED AND/OR REVIEWED:

Plat

Bond: Federal  State  Fee   
 (Number NAVAJO TRIBAL)

Potash (Y/N)

Oil shale (Y/N)

Water permit  
 (Number NAVAJO ALLOTMENT)

RDCC Review (Y/N)  
 (Date: \_\_\_\_\_)

LOCATION AND SITING:

R649-2-3. Unit: RATHERFORD

R649-3-2. General.

R649-3-3. Exception.

Drilling Unit.  
 Board Cause no: \_\_\_\_\_  
 Date: \_\_\_\_\_

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

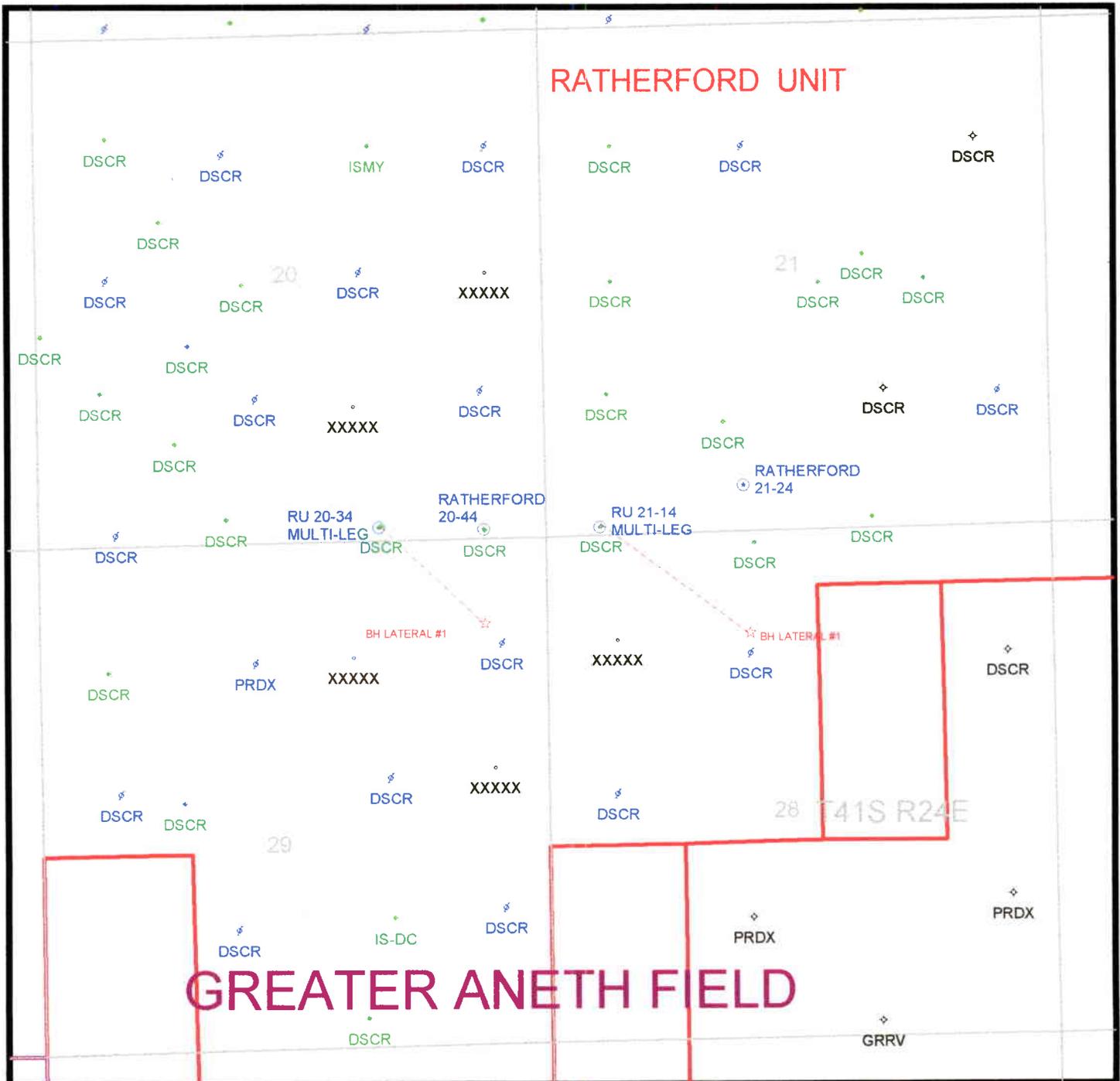
STIPULATIONS: 1. Directional drilling  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

OPERATOR: MOBIL EXPL & PROD (N7370)

FIELD: GREATER ANETH (365)

SEC, TWP, RNG: SEC. 20 & 21, T41S, R24E

COUNTY: SAN JUAN UAC: R649-2-3 RATHERFORD UNIT



PREPARED:  
DATE: 15-SEP-97



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

Michael O. Leavitt  
Governor  
Ted Stewart  
Executive Director  
James W. Carter  
Division Director

1594 West North Temple, Suite 1210  
Box 145801  
Salt Lake City, Utah 84114-5801  
801-538-5340  
801-359-3940 (Fax)  
801-538-7223 (TDD)

September 24, 1997

Mobil Exploration & Producing U.S., Inc.  
P.O. Box 633  
Midland, Texas 79702

Re: Ratherford 20-34 (Re-entry) Well, 660' FSL, 1850' FEL,  
SW SE, Sec. 20, T. 41 S., R. 24 E., San Juan County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. 40-6-1 et seq., Utah Administrative Code R649-3-1 et seq., and the attached Conditions of Approval, approval to re-enter and drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-037-15750.

Sincerely,

A handwritten signature in cursive script that reads "John R. Baza".  
John R. Baza  
Associate Director

lwp

Enclosures

cc: San Juan County Assessor  
Bureau of Land Management, Moab District Office

Operator:                     Mobil Exploration & Producing U.S., Inc.  
Well Name & Number:           Ratherford 20-34 (Re-entry)            
API Number:                     43-037-15750                      
Lease:                             14-20-603-353                      
Location:           SW SE           Sec.           20           T.           41 S.           R.           24 E.          

### Conditions of Approval

1. General

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for Permit to Drill.

2. Notification Requirements

Notify the Division within 24 hours following spudding the well or commencing drilling operations. Contact Jim Thompson at (801)538-5336.

Notify the Division prior to commencing operations to plug and abandon the well. Contact John R. Baza (801)538-5334.

3. Reporting Requirements

All required reports, forms and submittals shall be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. In accordance with Utah Admin. R. 649-3-11, Directional Drilling, submittal of a complete angular deviation and directional survey report is required.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

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

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 20-W-34

9. API Well No.

43-037-15750

10. Field and Pool, or exploratory Area

GREATER ANETH

11. County or Parish, State

SAN JUAN UT

SUBMIT IN TRIPLICATE

1. Type of Well

Oil Well  Gas Well  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)  
660' FSL & 1850 FEL  
SEC.20, T41S, R24E  
BHL: LATERAL #1 774' FNL & 617 FWL/SURFACE LOCATION (TD 6752')

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

TYPE OF SUBMISSION

- Notice of Intent
- Subsequent Report
- Final Abandonment Notice

TYPE OF ACTION

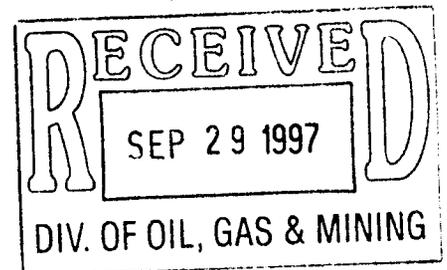
- Abandonment
- Recompletion
- Plugging Back
- Casing Repair
- Altering Casing
- Other SIDETRACK
- Change of Plans
- New Construction
- Non-Routine Fracturing
- Water Shut-Off
- Conversion to Injection
- Dispose Water

(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.)\*

BHL: LATERAL #2 (NEW) 1005' SOUTH & 1115' EAST F/SURFACE SPOT (ZONE 1a).

SUNDRY FILED TO CORRECT LATERAL NUMBER.



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

Signed Shirley Houchins  
SHIRLEY HOUCHINS

Title ENV. & REG. TECHNICIAN

Date 09-26-97

(This space for Federal or State office use)

Approved by \_\_\_\_\_  
Conditions of approval, if any:

Title \_\_\_\_\_ Date \_\_\_\_\_

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.

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Company: MOBIL E & P

Well Name: RATHERFORD UNIT 20-34 (RE-ENTRY)

Api No. 43-037-15750

Section: 20 Township: 41S Range: 24E County: SAN JUA

Drilling Contractor: BIG "A"

Rig # 25

SPUDDED:

Date: 10/22/97

Time: \_\_\_\_\_

How: ROTARY

Drilling will commence: \_\_\_\_\_

Reported by: BENNY BRIGGS

Telephone NO.: \_\_\_\_\_

Date: 10/22/97 Signed: JLT

✓



# ROCKY MOUNTAIN GEO-ENGINEERING

Well Logging • Consulting Geology • Coal Bed Methane Services • Computerized Logging Equipment & Software

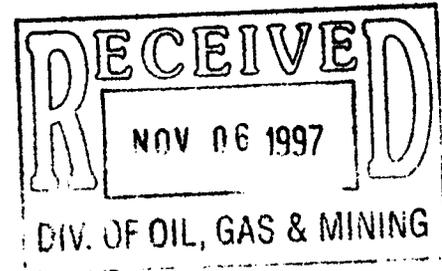
**ROCKY MOUNTAIN GEO-ENGINEERING CORP.**

2450 INDUSTRIAL BLVD. • GRAND JUNCTION, CO 81505

(970) 243-3044 • (FAX) 241-1085

Tuesday, November 04, 1997

Division of Oil & Gas Mining  
State of Utah  
1636 W. North Temple  
Salt Lake City, UT 84116



Re: Ratherford Unit #20-34, Leg 2  
SEC 20 ~~Sec 4~~ T41S, ~~R23E~~ R24E  
San Juan County, Utah  
1303715750  
Dear Sirs: DRL

Enclosed are the final computer colored logs and geology reports for the above referenced well.  
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.

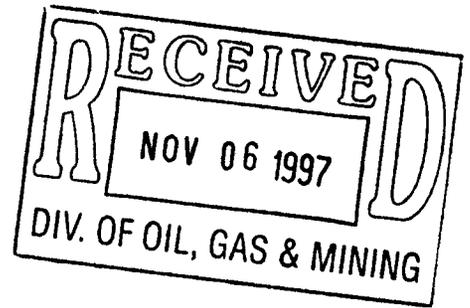
Sincerely,

Bill Nagel  
Senior Geologist

BN/dn

Enc. 1 Final Computer Colored Log & 1 Geology Report

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



**MOBIL**

**RATHERFORD UNIT #20-34  
SE HORIZONTAL LATERAL LEG #2  
1-A POROSITY BENCH  
DESERT CREEK MEMBER  
PARADOX FORMATION  
SECTION 1, T41S, R23E  
SAN JUAN, UTAH**

**GEOLOGY REPORT  
by  
DAVE MEADE / MARVIN ROANHORSE  
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 #20-34 SE HORIZONTAL LATERAL  
LEG #2 IN 1-A POROSITY BENCH, DESERT CREEK

**LOCATION:** SECTION 20, T41S, R24E

**COUNTY/STATE:** SAN JUAN, UTAH

**ELEVATION:** KB: 4961' GL: 4950'

**SPUD DATE:** 10/22/97

**COMPLETION DATE:** 10/27/97

**DRILLING ENGINEER:** BENNY BRIGGS

**WELLSITE GEOLOGY:** DAVE MEADE

**MUDLOGGING  
ENGINEERS:** DAVE MEADE / MARVIN ROANHORSE

**CONTRACTOR:** BIG "A" RIG 25  
**TOOLPUSHER:** J. DEES

**HOLE SIZE:** 4 3/4"

**CASING RECORD:** KICK OFF POINT IN WINDOW AT 5598' MEASURED DEPTH

**DRILLING MUD:** M-I  
**ENGINEER:** DANNE BEASON  
**MUD TYPE:** FRESH WATER & BRINE WATER W/ POLYMER SWEEPS

**DIRECTIONAL  
DRILLING CO:** SPERRY-SUN

**ELECTICAL LOGGING:** NA

**TOTAL DEPTH:** 7211' MEASURED DEPTH; 5701.68' TVD

**STATUS:** TOH TO WINDOW & KILL WELL PRLOR TO LAYING DOWN  
TOOLS - PREPARE FOR RIG MOVE

**DRILLING CHRONOLOGY**  
**RATHERFORD UNIT #20-34**  
**1-A SE HORIZONTAL LATERAL LEG #2**

<b>DATE</b>	<b>DEPTH</b>	<b>DAILY</b>	<b>ACTIVITY</b>
10/22/97	5600'	0'	MOVE RIG & RIG UP-SET BOP & PRES TEST
10/23/97	5590'	2'	PRES TEST BOP-CASING & RAMS-PICK UP WHIPSTOCK & STARTER MILL-ORIENT-TIH-PICK UP 123 JTS AOH-CIR-RIG UP GYRO DATA & RUN WIRE LINE-ORIENT & WHIPSTOCK-TOH-RIG DOWN GYRO DATA-MILL 5590'-5592'-CIR OUT-TOH-LD STARTER MILL-PICK UP WINDOW & WATERMELLON MILLS-TIH-CIR
10/24/97	5592'	49'	MILL 5592'-5598'-CIR OUT-TOH-L.D. MILLS-P.U. CURVE ASSEMBLY-TEST MUD MOTOR & MWD-ORIENT MOTOT-TIH-CIR-RIG UP GYRO DATA & ORIENT-TIME DRLG @ 2 M/N 5598'-5602'-DIR DRLG & SURVEYS TO 5632'-PULL GYRO & RIG DOWN GYRO DATA-DIR DRLG & SURVEYS
10/25/97	5641'	144'	DIR DRLG & SURVEYS TO 5785'-L.D. 7 JTS DP-WELL FLOWING-SHUT IN WELL W/ 450 PSI & INCR TO 600 PSI ON CHOKE IN 2.5 HRS & FLOWING @ 120+ BBLs PRODUCTION WATER / HR-L.D. 37 JTS AOH-TOH W/WELL FLOWING(5 ppm H <sub>2</sub> S)-L.D. CURVE ASSEMBLY- P.U. LATERAL ASSEMBLY/NB #2 & ORIENT, P.U. PH6 TBG OFF RACK, TIH
10/26/97	5785'	1426'	P.U. SWIVEL,INSTALL CORR. RING,BREAK CIR-DIR DRLG & SURVEYS TO TD OF 7211'
10/27/97	7211'	0	PUMP HIGH VIS SWEEP & SMPLS OUT,PUMP 7 BBLs FRESH WATER DOWN DP-L.D. DP TO 5560'-P.U. SWIVEL & BREAK CIR. - SHUT IN WELL & CHECK PRESSURES ON CHOKE-WELL FLOWING +/- 120 BBLs/HR AT TD

## DAILY ACTIVITY

**Operator: MOBIL**

**Well Name: RATHERFORD UNIT #20-34 SE 1-A HORIZONTAL LATERAL LEG #2**

DATE	DEPTH	DAILY	DATE	DEPTH	DAILY
10/22/97	5600'	0'			
10/23/97	5590'	2'			
10/24/97	5592'	49'			
10/25/97	5641'	144'			
10/26/97	5785'	1426'			
10/27/97	7211'	0'			
TD	7211'				

# BIT RECORD

**OPERATOR: MOBIL**

**WELL NAME: RATHERFORD UNIT #20-34 SE 1-A HORIZONTAL LATERAL LEG #2**

RUN	SIZE	MAKE	TYPE	IN/OUT	FTG	HRS	FT/HR
#1 RR	4 3/4"	STC	MF-3P	5598'/ 5785'	187'	16.5	11.3
#2	4 3/4"	HTC	STR-20	5785'/ 7211'	1426'	24	59.4

SPERRY-SUN DRILLING SERVICES  
SURVEY DATA

Customer ... : Mobil (Utah)  
Platform ... : RATHERFORD UNIT  
Slot/Well .. : BA25/20-34, 2A1

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	TVD	NORTHINGS FEET	EASTINGS FEET	VERTICAL SECTION	DOG LEG
5500.00	0.15	161.74	5499.89	38.51 N	16.59 W	-38.10	0.00
5591.00	0.21	122.98	5590.89	38.31 N	16.41 W	-37.83	0.15
5598.00	4.10	137.10	5597.88	38.12 N	16.23 W	-37.57	55.67
5608.00	9.20	137.50	5607.81	37.26 N	15.45 W	-36.42	51.00
5618.00	15.20	137.60	5617.58	35.71 N	14.02 W	-34.31	60.00
5628.00	21.30	137.70	5627.08	33.39 N	11.91 W	-31.20	61.00
5638.00	26.40	140.20	5636.22	30.34 N	9.27 W	-27.19	51.98
5648.00	31.20	143.50	5644.98	26.55 N	6.30 W	-22.45	50.55
5658.00	35.00	145.60	5653.36	22.10 N	3.14 W	-17.12	39.69
5668.00	38.70	141.30	5661.36	17.29 N	0.44 E	-11.24	45.08
5678.00	41.10	136.70	5669.03	12.45 N	4.65 E	-4.88	38.02
5688.00	45.10	134.10	5676.33	7.59 N	9.45 E	1.94	43.76
5698.00	49.40	132.00	5683.12	2.59 N	14.81 E	9.28	45.68
5708.00	53.70	131.90	5689.33	2.65 S	20.64 E	17.11	43.01
5718.00	59.10	131.40	5694.87	8.18 S	26.86 E	25.43	54.16
5728.00	64.40	129.30	5699.60	13.88 S	33.57 E	34.24	56.13
5738.00	69.70	127.60	5703.50	19.60 S	40.78 E	43.42	55.26
5748.00	74.50	126.70	5706.57	25.34 S	48.37 E	52.90	48.76
5758.00	79.20	125.70	5708.84	31.09 S	56.22 E	62.59	48.00
5785.42	90.70	125.90	5711.25	47.04 S	78.34 E	89.69	41.95
5816.17	91.70	129.60	5710.61	65.86 S	102.64 E	120.35	12.46
5847.26	93.70	132.90	5709.14	86.33 S	125.99 E	151.39	12.40
5878.92	93.40	135.50	5707.18	108.36 S	148.64 E	182.97	8.25
5909.92	91.10	135.60	5705.97	130.47 S	170.33 E	213.88	7.43
5940.99	90.90	135.80	5705.42	152.70 S	192.03 E	244.88	0.91
5972.84	91.20	135.30	5704.84	175.44 S	214.33 E	276.67	1.83
6004.70	90.70	135.30	5704.31	198.08 S	236.73 E	308.47	1.57
6036.56	90.30	135.10	5704.03	220.69 S	259.18 E	340.28	1.40
6068.37	89.00	134.40	5704.23	243.08 S	281.77 E	372.05	4.64
6100.18	89.10	133.70	5704.76	265.19 S	304.63 E	403.83	2.22
6131.90	89.10	133.90	5705.25	287.15 S	327.52 E	435.53	0.63
6162.86	89.20	135.30	5705.71	308.88 S	349.56 E	466.46	4.53
6194.68	88.90	133.90	5706.24	331.22 S	372.22 E	498.24	4.50
6226.56	88.10	134.40	5707.08	353.42 S	395.08 E	530.09	2.96
6258.34	87.90	133.90	5708.18	375.54 S	417.87 E	561.83	1.69
6290.24	88.10	133.20	5709.30	397.51 S	440.98 E	593.69	2.28
6321.98	89.80	132.50	5709.88	419.09 S	464.24 E	625.42	5.79
6353.64	89.10	128.40	5710.18	439.62 S	488.33 E	657.06	13.14

SPERRY-SUN DRILLING SERVICES  
SURVEY DATA

Customer ... : Mobil (Utah)  
Platform ... : RATHERFORD UNIT  
Slot/Well .. : BA25/20-34, 2A1

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	TVD	NORTHINGS FEET	EASTINGS FEET	VERTICAL SECTION	DOG LEG
6385.39	90.40	127.40	5710.32	459.12 S	513.38 E	688.73	5.17
6417.01	92.50	127.40	5709.52	478.32 S	538.49 E	720.24	6.64
6448.83	92.80	127.40	5708.05	497.63 S	563.74 E	751.92	0.94
6479.88	93.30	127.20	5706.40	516.42 S	588.41 E	782.82	1.73
6511.69	93.70	127.20	5704.46	535.61 S	613.70 E	814.46	1.26
6543.49	93.00	130.20	5702.60	555.46 S	638.47 E	846.15	9.67
6574.47	92.10	132.80	5701.22	575.97 S	661.65 E	877.10	8.87
6606.23	90.50	133.70	5700.50	597.72 S	684.77 E	908.84	5.78
6638.08	89.60	134.00	5700.47	619.79 S	707.74 E	940.67	2.98
6669.85	90.60	133.30	5700.42	641.72 S	730.73 E	972.43	3.84
6701.68	90.40	132.60	5700.14	663.40 S	754.03 E	1004.25	2.29
6733.57	90.30	131.80	5699.94	684.82 S	777.65 E	1036.14	2.53
6765.22	90.40	131.80	5699.75	705.92 S	801.24 E	1067.79	0.32
6797.05	90.60	132.10	5699.47	727.19 S	824.91 E	1099.62	1.13
6828.86	90.40	131.80	5699.19	748.46 S	848.57 E	1131.43	1.13
6859.84	90.90	130.70	5698.84	768.88 S	871.86 E	1162.40	3.90
6891.64	90.10	131.40	5698.57	789.77 S	895.84 E	1194.20	3.34
6922.61	88.30	130.70	5699.00	810.10 S	919.19 E	1225.16	6.24
6954.39	88.90	131.10	5699.77	830.90 S	943.21 E	1256.92	2.27
6986.13	89.50	130.90	5700.22	851.72 S	967.16 E	1288.65	1.99
7017.86	89.70	130.50	5700.44	872.41 S	991.22 E	1320.38	1.41
7049.64	89.90	130.90	5700.55	893.14 S	1015.31 E	1352.15	1.41
7081.51	89.40	130.00	5700.74	913.81 S	1039.56 E	1384.00	3.23
7113.40	89.60	130.40	5701.02	934.40 S	1063.92 E	1415.88	1.40
7145.28	89.80	130.20	5701.19	955.02 S	1088.23 E	1447.74	0.89
7177.01	89.50	130.00	5701.38	975.45 S	1112.50 E	1479.45	1.14
7211.00	89.50	130.00	5701.68	997.30 S	1138.54 E	1513.42	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 SYSTEM REFERENCE POINT.  
THE VERTICAL SECTION ORIGIN IS WELL HEAD.  
THE VERTICAL SECTION WAS COMPUTED ALONG 132.00 (TRUE).  
CALCULATION METHOD: MINIMUM CURVATURE.

LAST SURVEY BIT PROJECTION ONLY



## SAMPLE DESCRIPTIONS

**OPERATOR: MOBIL**

**WELL NAME: RATHERFORD UNIT #20-34 SE 1-A HORIZONTAL LATERAL LEG #2**

DEPTH	LITHOLOGY
5598.00 5610.00	"LS ltgy,m-ltbrngy,occ brn-dkbrn,tan,crpxl,micxl-occ vfxl,rthy-chky-occ sl arg,vrr ANHY prtgs,sl chty-sil/scat dkbrn CHT frag,tr slty strk,tt,occ dns,vrr dull orng mnrl FLOR,NSOC"
5610.00 5620.00	"LS lt-mbrn,ltbrngy,ltgy,occ dkbrn,tan,crpxl,micxl-occ vfxl,rthy-chky,occ sl arg-anhy,vrr IVAN fos,sl chty-sil/CHT AA,tr blk SH incl,rr slty strk,tt,dns,NFSOC"
5620.00 5630.00	"LS m-dkgy-gyblk,ltgy-m gybrn,occ brn-tan,crpxl,micxl-occ vfxl,rthy-shy-sl slty,sl chky,occ grdg to shy LS,sl chty-sil/scat CHT AA,tt,dns,NFSOC/scat blk carb SH"
5630.00 5640.00	"LS AA,sl incr chky,NFSOC/scat blk-dkgyblk carb SH,tr dkbrn-tan CHT frag,"
5640.00 5650.00	"LS m-ltgy,mgybrn-brn,occ dkbrn,crpxl,micxl-vfxl,rthy/occ slty strk,sl chky,vrr ANHY & sl dol prtgs,scat dkbrn CHT frag,tt,occ dns,NFSOC"
5650.00 5660.00	"LS m-ltgy,m-ltbrngy,occ brn-dkbrn,crpxl-micxl,occ vfxl,rthy/occ slty strk-grdg to lmy SLTST,sl chky,vrr xln ANHY incl,tr dkbrn CHT,tt,occ dns,NFSOC/ltgy calc-lmy sl chky SLTST"
5660.00 5670.00	"LS AA,decr slty,mrly-sl dol ip,tt,NFSOC,w/thn DOL dkbrn-gybrn,micxl,arg,sl lmy,anhy,tt,NFSOC,scat trnsl-clr CHT frag & xl ANHY incl; LS & DOL grdg to v rr blk carb calc-dol SH"
5670.00 5680.00	"SH blk-dkgy,blky-sbplty,dol-calc,carb,mica,v sl slty,w/LS crm-ltgy-tan,crpxl-micxl,arg,sl dol, chty,tt-v rr intxl POR,tr dull yel FLOR,n-v rr ltbrn STN,tr slow stmg CUT & DOL ltbrn-brn,micxl,lmy,anhy,rr intxl POR,v p dull FLOR,rr ltbrn STN,v p slow CUT"
5690.00 5710.00	"LS crm-tan,ltbrn,crpxl-vfxl,gran-micsuc ip,v sl alg,pred ooc-oom GRNST,w/v rr thn dns anhy PKST,rr v thn brn micxl lmy DOL PKST,scat trnsl ANHY xl-incl,v rr trnsl-bf CHT frag,tt-g intxl-ool POR,fr dull-bri yel FLOR,fr ltbrn-rr blk STN,fr-g mod fast CUT"
5710.00 5730.00	"LS crm-tan-brn,crpxl-vfxl,gran-micsuc,v sl alg,pred ooc-oom GRNST,intbd dns-chty PKST,w/rr scat dkbrn crpxl lmy DOL PKST,scat dkbrn-trnsl CHT frag & thn trnsl ANHY xl-POR fl,tr-fr intxl-tr ool POR,fr dull-bri yel FLOR,fr-g brn STN,fr-g mod fast-fast CUT"
5730.00 5740.00	"LS AA,v sl incr dkbrn-brn CHT frag,v rr scat dns tt lmy dkbrn DOL lams,POR-FLOR-STN CUT AA"
5740.00 5750.00	"LS brn-mbrn,AA,pred ooc-oom sl dol GRNST,scat PKST,tr scat trnsl-dkbrn CHT frag,n-v rr vis ANHY xl-POR fl,fr-g ool-fr intxl POR,tr-fr dull-bri yel FLOR,g lt-dkbrn STN,tr-fr slow-mod fast stmg CUT"
5750.00 5760.00	"LS tan-brn,occ crm,crpxl-vfxl,gran-micsuc ip,pred ooc-oom GRNST,occ chk-dns crm-bf PKST,scat trnsl-brn CHT frag,v sl dol-DOL cmt,rr ANHY xl,fr-g ool-intxl POR,fr dull-bri yel FLOR,fr brn-v rr blk STN,fr-g mod fast-fast stmg CUT"
5760.00 5772.00	"LS AA,pred ooc-oom GRNST AA,fr-g intxl-ool POR,fr-g dull-bri yel FLOR,fr-g brn STN,v rr blk dd o STN,g mod fast-fast stmg CUT"

DEPTH	LITHOLOGY
5772.00	5785.00 "NO SAMPLE-SPLS NOT CIR OUT PRIOR TO SHUTING IN WELL DUE TO HEAVY FLOW OF PRODUCTION WATER"
5785.00	5790.00 "BEGIN CATCHING 20' SMPLS,LAGGED BY LOGGERS. ABNT WH CHKY LS PCKST & BLK CARB SH CVGS"
5790.00	5800.00 "LS lt-mbrn,tan,occ dkbrn,crm,vfxl-gran-micsuc,crpxl,ool-oom GRNST,tr intbd dns PKST AA,vrr CHT AA,v sl dol,sl anhy/rr ANHY xl incl,g ool-intxl-ool POR,g even dull/scat bri yel FLOR,g-fr brn-tr blk STN,g fast stmg mlky CUT"
5800.00	5820.00 "LS lt-mbrn,tan-orm,occ dkbrn,vfxl-gran-micsuc,crpxl,ool-oom GRNST,tr intbd-scat PKST,sl chky/occ POR fl-rr chky plty frag,occ sl dol,sl anhy/rr ANHY xl incl,g ool-ool-intxl POR,g even dull/scat spty bri yel FLOR,STN AA,g mod fast-slow stmg mlky CUT"
5820.00	5850.00 "LS AA,vfxl-gran-micsuc,occ crpxl,ool-oom-ool GRNST,tr intbd-occ scat sl dol crpxl-scat chky plty PCKST,sl anhy/rr ANHY xl incl,g ool-intxl-ool POR/tr chky-anhy POR fl,g even dull-spty bri yel FLOR,g-fr brn-tr blk STN,g slow-mod fast stmg mlky CUT"
5850.00	5880.00 "LS lt-mbrn,tan-orm,occ dkbrn,vfxl-gran-micsuc,crpxl,ool-oom-ool GRNST,tr intbd-scat PKST AA/occ POR fl,sl anhy/vrr ANHY xl incl,g ool-ool-intxl POR,g even dull/scat spty bri yel FLOR,g-fr brn/tr dkbrn-blk STN,g dif/slow-mod fast stmg mlky CUT"
5880.00	5900.00 "LS AA,ool-oom-sl ool GRNST,tr intbd-occ scat sl dol crpxl-vrr chky plty PCKST,sl anhy/vrr ANHY xl incl,g ool-ool-intxl POR/tr chky POR fl,g even dull-spty bri yel FLOR,g-fr brn-dkbrn-tr blk STN,g dif/slow-mod fast stmg mlky CUT"
5900.00	5920.00 "LS m-ltbrn,tan-orm,occ dkbrn,vfxl-gran-micsuc,crpxl,ool-oom-ool GRNST/incr intbd-scat sl chky dns PKST,sl anhy/vrr ANHY xl incl,g-fr ool-ool-intxl POR,g even mod bri/spty bri yel FLOR,g-fr brn/tr dkbrn-blk STN,g slow-mod fast stmg mlky CUT"
5920.00	5940.00 "LS AA,ool-oom-sl ool GRNST/scat-intbd dns-sl ool-chky crpxl PCKST,sl anhy/rr xl ANHY incl,g-fr ool-oom/tr intxl POR,fr-g dull/scat spty bri yel FLOR,g brn/scat dkbrn-sl incr blk STN,g fast-mod fast stmg CUT"
5940.00	5960.00 "LS lt-mbrn,brn,occ ltgybrn-orm,crpxl-vfxl,gran-micsuc ip,pred ool-oom GRNST,w/scat ool-v sl fos PKST,v sl chty,v rr ANHY xl-ool fl,sl dol-occ DOL cmt,fr-g ool-tr intxl POR,fr-g dull-bri yel FLOR,fr-g brn STN,tr blk dd o STN,fr-g mod fast-fast stmg CUT"
5960.00	5980.00 "LS AA,sl incr micxl-micsuc ool PKST,POR-FLOR-STN-CUT AA"
5980.00	5990.00 "LS AA,pred misuc ool-oom GRNST,POR-FLOR-STN-CUT AA"
5990.00	6000.00 "LS lt-mbrn,brn,occ ltgybrn-orm,crpxl-vfxl,gran-micsuc ip,pred ool-oom GRNST,w/scat ool-v sl fos PKST,v sl chty,v rr ANHY xl-ool fl,sl dol-occ DOL cmt,fr-g ool-tr intxl POR,fr-g dull-bri yel FLOR,fr-g brn STN,tr blk dd o STN,fr-g mod fast-fast stmg CUT"
6000.00	6020.00 "LS AA,scat ool-fos PKST,POR-FLOR-STN-CUT AA"

DEPTH	LITHOLOGY
6330.00 6350.00	"LS AA,v sl anhy-v rr ANHY fl POR,v rr scat CHT frag,fr-g intxl-fr ool POR,fr-g dull-bri yel FLOR,fr ltbrn STN,tr blk dd o STN,fr-g mod fast-fast stmg CUT"
6350.00 6370.00	"LS AA,incr gran-micsuc,occ suc ooc-oom GRNST,AA,v sl incr brn CHT frag,POR-FLOR-STN-CUT AA"
6370.00 6400.00	"LS tan-gybrn,occ brn-mbrn,rr crm,crpxl-vfxl,occ gran-micsuc,pred ooc-oom GRNST w/rr sl ool WKST & tr sl fos PKST,dol-rr DOL rich cmt,tr brn CHT frag,sl anhy-rr ANHY xl-incl,fr-g ool-g intxl POR,fr dull-bri yel FLOR,fr ltbrn-rr blk STN,g mod fast-fast CUT"
6400.00 6410.00	"LS AA,POR-FLOR-STN-CUT AA"
6410.00 6440.00	"LS ltbrn-brn,occ mbrn-gybrn,micxl-vfxl,gran-micsuc,occ suc,pred ooc-oom GRNST w/scat sl ool WKST/PKST,sl anhy-scat CHT frag,sl dol-DOL rich cmt,tt-g intxl-ool POR,fr-g dull-bri yel FLOR,fr-g ltbrn-brn STN,tr spty blk dd o STN,fr-g mod fast-fast stmg CUT"
6440.00 6480.00	"LS pred ltbrn-tan,occ brn-rr ltgybrn,micxl-vfxl,occ gran-suc,pred ooc-oom GRNST,w/v rr scat sl ool-anhy PKST-WKST lams-incl,scat ANHY xl-rr CHT frag,sl dol-occ DOL rich cmt,fr-g intxl-ool POR,fr-g dull-bri yel FLOR,fr ltbrn-rr spty blk STN,g mod fast CUT"
6480.00 6530.00	"LS pred ltbrn-tan,occ brn-rr ltgybrn,micxl-vfxl,occ gran-suc,pred ooc-oom GRNST,w/v rr scat sl ool-anhy PKST-WKST lams-incl,scat ANHY xl-rr CHT frag,sl dol-occ DOL rich cmt,fr-g intxl-ool POR,fr-g dull-bri yel FLOR,fr ltbrn-rr spty blk STN,g mod fast CUT"
6530.00 6560.00	"LS AA,v sl incr sl ool WKST/PKST,POR-FLOR-STN-CUT AA"
6560.00 6590.00	"LS pred ltbrn-tan,occ brn-rr ltgybrn,micxl-vfxl,occ gran-suc,pred ooc-oom GRNST,w/v rr scat sl ool-anhy PKST-WKST lams-incl,scat ANHY xl-rr CHT frag,sl dol-occ DOL rich cmt,fr-g intxl-ool POR,fr-g dull-bri yel FLOR,fr ltbrn-rr spty blk STN,g mod fast CUT"
6590.00 6620.00	"LS pred ltbrn-ltgybrn,occ brn,crpxl-vfxl,gran-micsuc ip,pred ooc-oom GRNST,w/scat v sl ool WKST/PKST,AA,v sl decr intxl POR,FLOR-STN-CUT AA"
6620.00 6640.00	"LS ltbrn-tan,occ m-dkbrn-rr ltgybrn,micxl-vfxl,gran-micsuc,ooc-oom GRNST,w/rr scat sl ool-anhy PKST-WKST lams-incl,rr scat ANHY xl-rr CHT frag,vsl dol-occ DOL rich cmt,fr-g intxl-ool POR,fr-g dull-bri yel FLOR,fr ltbrn-rr spty blk STN,g mod fast CUT"
6640.00 6650.00	"LS AA,ooc-oom GRNST/tr scat PCKST-WKST AA,POR-FLOR-STN-CUT AA"
6650.00 6670.00	"LS AA,micxl-vfxl,occ gran-suc,pred ooc-oom GRNST,w/sl inccr scat sl ool-anhy PKST-WKST lams-incl,scat ANHY xl-rr CHT frag,sl dol-occ DOL rich cmt,fr-g intxl-ool POR,fr-g dull-bri yel FLOR,fr ltbrn-rr spty blk STN,g mod fast CUT"
6670.00 6700.00	"LS ltbrn-tan,occ m-dkbrn,ltgybrn,micxl-vfxl,gran-micsuc,crpxl,ooc-oom GRNST,w/rr scat-intbd PKST-WKST,sl chky-anhy/vrr ANHY xl,vsl dol-tr DOL cmt,fr-g oom-ooc-tr intxl-ool POR,fr-g dull-scat bri yel FLOR,fr ltbrn-brn/tr dkbrn-blk STN,g slow-mod fast CUT"
6700.00 6730.00	"LS AA,micxl-vfxl,gran-micsuc,crpxl,ooc-oom GRNST,w/sl inccr scat-intbd PKST-WKST,sl chky-anhy/vrr ANHY xl,v sl dol,fr-g oom-ooc-intxl,g dull-mod bri/tr spty bri yel FLOR,fr ltbrn-tr brn/scat dkbrn-blk STN,g mod fast-slow stmg milky CUT"

DEPTH	LITHOLOGY
6730.00 6760.00	"LS ltbrn-tan,occ m-dkbrn,rr ltgybrn,micxl-crpxl,vfxl-gran,occ micsuc,pred oom-oom GRNST/incr scat-intbd PKST-WKST,sl chky-anhy/rr ANHY xl,vsl dol,fr-g oom-oom-tr intxl POR,fr-g dull/scat bri yel FLOR,fr ltbrn-brn/tr dkbrn-blk STN,fr-g slow stmg CUT"
6760.00 6780.00	"LS tan,ltbrn,occ brn,rr crm,crpxl-micxl,vfxl-gran,occ micsuc,pred dns oom-oom PCKST-WKST intbd/GRNST AA,chky-sl anhy/tr POR fl,vrr xl ANHY frag,occ sl dol ip,fr-g oom-oom/tr intxl POR,g-fr mod bri-bri yel FLOR,fr-g ltbrn/tr brn-dkbrn-blk STN,CUT AA"
6780.00 6800.00	"LS AA,pred dns oom-oom PKST-WKST grd to oom-oom GRNST,sl chky-anhy/vrr ANHY xl,v sl dol,fr-g oom-oom-intxl POR/tr POR fl,fr-g mod bri-bri yel FLOR,fr ltbrn-brn/tr dkbrn-pp blk STN,g mod fast-slow stmg mlky CUT"
6800.00 6820.00	"LS ltbrn-tan,occ m-dkbrn,ltgybrn,micxl-crpxl-vfxl,gran-micsuc,pred oom-oom GRNST/scat-intbd PKST-WKST,sl chky-anhy/rr ANHY xl,vsl dol,fr-g oom-oom-tr intxl POR,fr-g dull/scat bri yel FLOR,fr ltbrn-brn/tr dkbrn-blk STN,g dif/fr slow stmg mlky CUT"
6820.00 6840.00	"LS AA,pred oom-oom GRNST occ grd to oom-oom PCKST,intbd/dns crpxl sl chky PCKST-WKST ip,sl anhy/tr xl ANHY incl,g-fr oom-oom POR/tr intxl POR & chky-anhy fl,FLOR-STN AA,g-fr dif/tr slow stmg mlky CUT"
6840.00 6860.00	"LS ltbrn-tan-crm,occ mbrn,ltgybrn,micxl-crpxl-vfxl,gran-sl micsuc,oom-oom GRNST intbd & scat dns oom-oom chky PCKST,rr WKST frag,anhy/tr xln ANHY,sl dol,g oom-oom-intxl POR,g-fr mod bri-scat bri yel FLOR,fr ltbrn-brn/tr blk STN,fr dif/tr slow stmg CUT"
6860.00 6880.00	"LS tan-ltbrn-crm,occ mbrn,ltgybrn,micxl-vfxl-gran,crpxl-sl micsuc,oom-oom GRNST intbd/PCKST AA,occ grd to WKST,chky-anhy/tr xln ANHY,sl dol,g-fr oom-oom/tr intxl POR,g mod bri-scat bri yel FLOR,fr-g ltbrn-brn/tr pp blk STN,g mod fast dif-slow stmg CUT"
6880.00 6900.00	"LS ltbrn-tan-crm,occ m-dkbrn,micxl-crpxl,vfxl-gran,pred oom-oom GRNST grd to oom-oom PCKST,intbd/dns crpxl PCKST-rr WKST,chky-anhy/tr xl ANHY,g-fr oom-oom POR/tr intxl POR & chky-anhy fl,FLOR-STN AA,g mod fast dif/tr slow stmg mlky CUT"
6900.00 6930.00	"LS tan-crm-ltgybrn,ltbrn,occ brn,micxl-crpxl-vfxl,gran-sl micsuc,pred dns chky oom-oom-ool PCKST,intbd/oom-oom GRNST,v chky-sl anhy/tr xl ANHY,fr-g oom-oom POR/tr intxl POR/chky-anhy fl,g-fr mod bri-bri yel FLOR,STN AA,g fast dif/tr slow stmg mlky CUT"
6930.00 6950.00	"LS AA,pred dns-chky oom-oom-sl ool PCKST,scat GRNST frag-prtgs,rr WKST,chky-anhy/tr xl ANHY,fr-g oom-oom/tr intxl POR & chky-anhy fl,g-fr mod bri-bri yel FLOR,g ltbrn-tr brn & scat pp blk dd o STN,g fast dif/tr slow stmg mlky CUT"
6950.00 6980.00	"LS tan-crm,ltbrn,occ brn,ltgybrn,micxl-crpxl-vfxl,gran,sl micsuc ip,pred oom-oom GRNST occ grd to chky oom-oom-sl ool PCKST,intbd-scat dns crpxl PCKST-WKST,v chky-sl anhy/tr xl ANHY & POR fl,fr-g oom-oom /tr intxl POR,FLOR-STN AA,fr-g dif/slow stmg CUT"
6980.00 7000.00	"LS tan-ltbrn-crm,occ brn,micxl-crpxl,vfxl-gran,pred oom-oom GRNST grd to oom-oom-sl ool PCKST,incr intbd-scat dns chky PCKST-rr WKST,v chky-sl anhy/tr xl ANHY,g-fr oom-oom POR/tr intxl POR & chky-anhy fl,FLOR-STN AA,g fast dif/fr slow stmg mlky CUT"
7000.00 7020.00	"LS tan-crm-ltbrn,occ brn,micxl-vfxl-crpxl,gran-sl micsuc,pred oom-oom GRNST/scat-intbd oom-oom-sl ool dns chky PCKST,occ v chky-sl anhy AA,g-fr oom-oom POR/tr intxl POR & chky-anhy fl,FLOR AA,g ltbrn/incr brn STN,rr pp blk STN,g slow stmg mlky CUT"

DEPTH	LITHOLOGY
7020.00	7050.00 "LS AA,pred oom-oc GRNST,tr scat-intbd oom-oc-oc ool dns chky PCKST,sl anhy/tr xl ANHY incl,g-fr oom-oc tr intxl POR & chky-anhy fl,g-fr mod bri-bri yel FLOR,g-fr ltbrn-scat brn/tr blk pp STN,g-fr slow-mod fast stmg mlky CUT"
7050.00	7080.00 "LS tan-crm-ltbrn,occ m-dkbrn,ltgybrn,micxl-crpxl,vfxl-gran,pred oom-oc GRNST,scat-intbd oom-oc-ool dns chky PCKST,occ v chky-sl anhy/tr xl ANHY,g-fr oom-oc/tr intxl POR & chky-anhy fl,FLOR-STN-CUT AA"
7080.00	7100.00 "LS AA,pred oom-oc GRNST,sl incr scat-intbd oom-oc-oc ool dns chky PCKST,sl anhy/tr xl ANHY incl,g-fr oom-oc tr intxl POR & chky-anhy fl,g-fr mod bri-bri yel FLOR,g-fr ltbrn-scat brn/tr blk pp STN,g-fr slow-mod fast stmg mlky CUT"
7100.00	7130.00 "LS tan-ltgybrn-crm,occ lt-mbrn,crpxl-micxl,vfxl-gran-sl micsuc,oom-oc GRNST intbd/dns ooc-oom-sl ool chky PCKST grd to WKST,anhy/tr xln ANHY,oc sl dol,fr-g oom-oc/tr intxl POR,g mod bri-bri yel FLOR,fr ltbrn/tr brn & rr blk STN,fr dif/tr slow CUT"
7130.00	7150.00 "LS AA,crpxl-micxl,vfxl-gran-sl micsuc,pred oom-oc GRNST intbd/dns ooc-oom-sl ool chky PCKST grd to WKST,anhy/tr xln ANHY,oc sl dol,fr-g oom-oc/tr intxl POR,FLOR-STN AA,fr-g dif/tr slow stmg CUT"
7150.00	7180.00 "LS tan-crm-ltbrn,ltbrngy,occ mbrn,micxl-vfxl-crpxl,gran-occ micsuc,pred oom-oc GRNST/decr scat-occ intbd PCKST,rr WKST frag,chky-sl anhy/tr POR fl,rr xln ANHY incl,oc v sl dol,fr-g oom-oc-intxl POR,FLOR-STN AA,g dif/tr slow stmg mlky CUT"
7180.00	7211.00 "LS tan-crm-ltbrngy,ltbrn,occ mbrn,micxl-vfxl-gran,crpxl-sl micsuc,pred oom-oc GRNST/tr scat-occ intbd oom-oc PCKST-rr WKST frag,sl-occ v chky,anhy/tr POR fl,rr xln ANHY incl,oc v sl dol,fr-g oom-oc-intxl POR,g mod bri-scat bri yel FLOR,fr-g ltbrn/tr brn STN,tr scat blk-pp blk dd o STN,g fast dif-tr mod fast stmg mlky CUT"

### FORMATION TOPS

OPERATOR: MOBIL

WELL NAME: RATHERFORD UNIT #20-34 SE 1-A HORIZONTAL LATERAL LEG #2

FORMATION NAME		SAMPLES	SAMPLES	DATUM
		MEASURED DEPTH	TRUE VERTICAL DEPTH	KB:4961'
LOWER ISMAY		5630'	5629'	-688'
GOTHIC SHALE		5677'	5668'	-707'
DESERT CREEK		5685'	5673'	-712'
DC 1-A ZONE		5691'	5678'	-717'

## GEOLOGICAL SUMMARY

### AND

## ZONES OF INTEREST

The Mobil Exploration and Production U.S. Inc., Ratherford Unit #20-34 Southeast Horizontal Lateral Leg 2 was a re-entry of the Mobil Ratherford Unit #20-34 located in Section 20, T41S, R24E. The southwest Lateral Leg #2 was begun on October 22, 1997, with lateral leg #2 being drilled in June of 1994. The curve section was completed on October 25, 1997 at a measured depth of 5785', 5711' true vertical depth, 10 feet into the 1-A porosity and the lateral section was begun in the 1-A porosity zone. The lateral reached a measured depth of 7211', true vertical depth of 5701.68', with a horizontal displacement of 1513.4' and true vertical plane of 130.2 degrees, on October 27, 1997 in the upper Desert Creek 1-A zone. There were no mechanical problems encountered while drilling this lateral. However up penetrating the 1-A porosity zone while drilling the curve section, a water flow of up to 120 barrels of production water per hour, with up to 600 psi of pressure on the choke was encountered. The well had to be shut in prior to tripping out of the hole with the curve assembly, while the water produced while drilling the curve was being hauled off. There was a constant water flow while drilling the lateral, but only minor quantities of oil was produced starting at a measured depth of about 6200', vertical section of 502'. The water produced was from prior and existing injection, with the oil produced appeared to be from a partially flushed reservoir. This lateral used primarily production and fresh water with polymer sweeps as the drilling fluid. The background gases noted on the accompanying mud log were rather erratic due to the water flows fluctuating through the lateral section. The samples had good oil shows through out the 1-A zone drilled. Sample shows prior to this depth showed minimal amounts of flushed with varying amounts of black staining in the samples.

The primary objective of the Ratherford Unit #20-34 Leg 2 horizontal lateral was the effective porosity, staining and reservoir properties in the 1-A zone of the Desert Creek Member of the Upper Paradox Formation. The very basal portion of the Upper Ismay, the Lower Ismay, the Gothic Shale and the transition zone at the top of the Desert Creek were penetrated while drilling the curve section. The curve was landed feet into the 1-A porosity horizon. Kick off point for this lateral was at a measured depth of 5598', 5597.9' true vertical depth, near the base of the Upper Ismay member of the Paradox Formation.

The Upper Ismay seen in the curve section of this well was predominately light gray to tan to gray brown, occasionally medium to dark brown, cryptocrystalline to microcrystalline, very rare very fine crystalline, chalky to clean and slightly argillaceous to occasionally silty limestone with scattered anhydrite crystals and occasional fracture filling. Dark brown to smoky gray chert fragments and thin interbeds of dark gray to black shale were noted in the section. No porosity, no staining or gas increases and only mineral fluorescence were noted. The Hovenweep marker between the Upper Ismay and Lower Ismay was very poorly developed in this lateral.

The top of the Lower Ismay was picked at 5630' measured depth, 5629' true vertical depth, and was based primarily on the slight change in lithology as well as comparison to the well log for the original well bore. The Lower Ismay was predominately limestone, gray brown to medium to light gray, slightly mottled, micro to cryptocrystalline, dense to slightly chalky, slightly fossiliferous with scattered tan translucent chert and rare black carbonaceous shale partings. No shows were noted in these limestones. Scattered through out the Lower Ismay were cream to light gray, slightly sandy, very

limy siltstones were noted as very thin interbeds and laminations, with in the limestone. These siltstones had a very limestone rich cement and graded to a very silty to very slightly sandy limestone but displayed no shows. The basal portion of the Lower Ismay from 5660' to the top of the Gothic Shale was a interbedded light to medium gray brown to medium gray, dense, slightly anhydritic, dolomitic limestone with interbedded and grading to dark brown to gray brown, cryptocrystalline, very argillaceous to clean, dense dolomite with no sample shows.

The top of the Gothic Shale was encountered at 5677' measured depth, 5668' true vertical depth and was predominantly gray brown to black, silty, carbonaceous, soft to moderately firm, calcareous to slightly dolomitic and slightly micaceous. Scattered within the Gothic were very thin, cryptocrystalline to microcrystalline, earthy, limestone and dolomite partings and inclusions, with very rare scattered anhydrite crystals. The top of the Gothic was a fairly gradational contact with no visible decrease or increase in penetration rate noted. The base of the Gothic was marked by an abrupt decrease in penetration rate as well as a sharp lithology change. The top of the Gothic was marked by an slight increase in shale in the samples

The top of the Desert Creek is commonly picked at the Gothic Shale to transition zone facies change, which in this lateral occurred at a measured depth of 5685' and a true vertical depth of 5673' and was marked by a significant decrease in penetration rate and marked increase in limestones and dolomites in the samples. The lithology of the transition zone in this well was primarily limestone, light gray to cream to tan, mottled, cryptocrystalline to microcrystalline, platy, argillaceous to very slightly silty in part, slightly anhydritic with occasional carbonaceous shale partings. Also thin interbedded light brown to brown, cryptocrystalline to microcrystalline, argillaceous, very limy dolomites were seen. Only very minor intercrystalline porosity was noted, with a very weak sample show and gas increase noted at the base of the transition zone, just above the 1-A porosity zone.

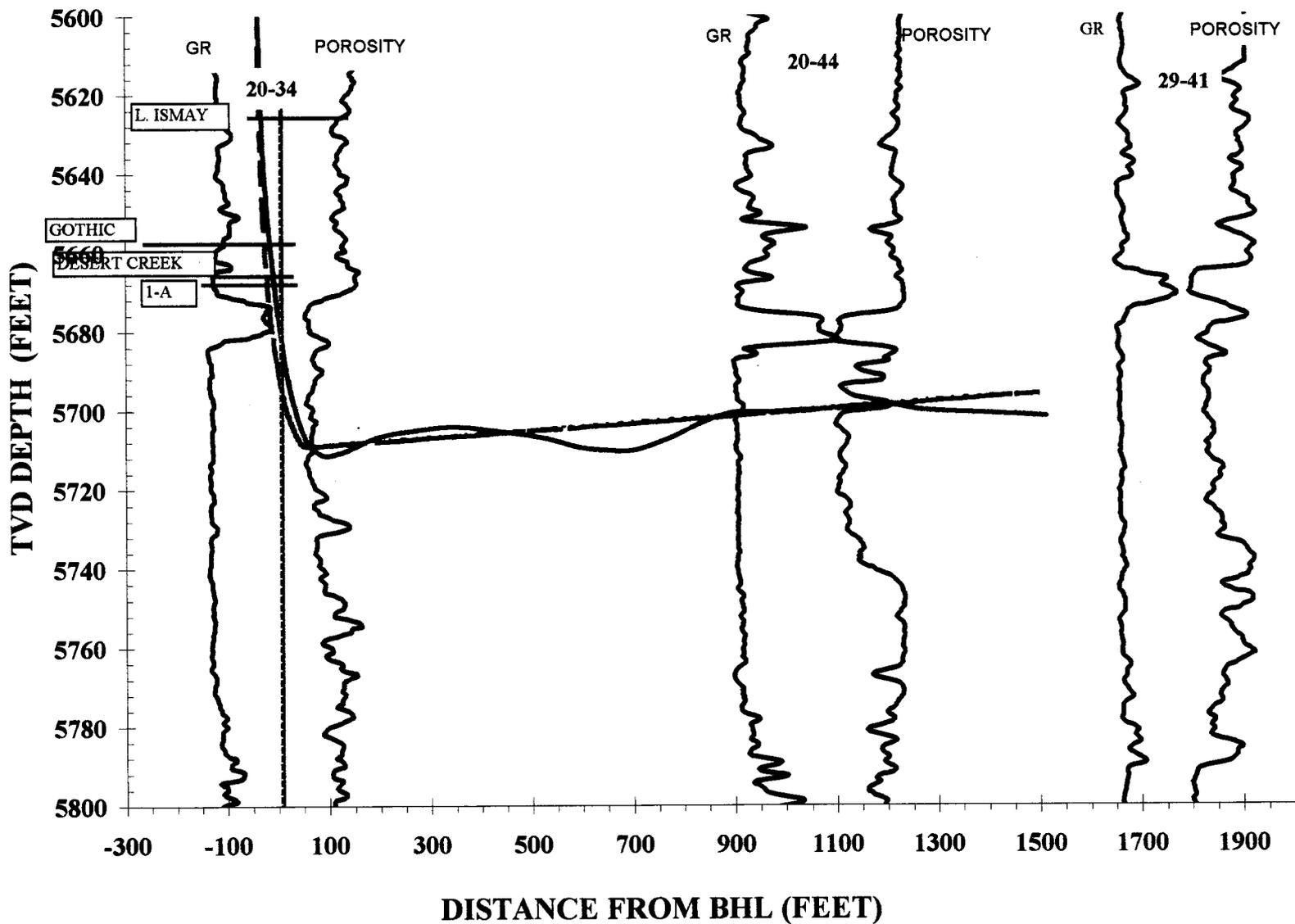
The top of the Desert Creek 1-A zone was picked at 5691' measured depth, 5678' true vertical depth and was based on sample identification as well as the significant increase in the penetration rate. The top of the 1-A zone was approximately 10' high to the top on the porosity log for the 20-34 well. The porosity of the 1-A zone was in an oolitic to oomoldic limestone grainstone, which was tan to brown to medium brown, very rarely cream to white, very fine to cryptocrystalline with a grainy to sucrosic texture, rare scattered translucent to brown chert fragments, rare anhydrite crystals and inclusions, with a dolomite rich cement and displayed well developed oomoldic to oolitic porosity and intercrystalline porosity development. Dark brown to spotty black staining was noted in the samples along with spotty yellow gold fluorescence and a slow to fast streaming to milky cuts were noted through out most of the length of the lateral. As the lateral was continued, the amounts of bitchimum (dead oil staining) decreased and became very rare, over the last 800'. Scattered with in the very good, porous oolitic grainstones were thin, tight, dense limestone packstones, white to cream, some tan in color with no to visible porosity development and had no visible sample show.

The curve section was completed at a measured depth of 5785', 5711' true vertical depth, and a vertical section (horizontal displacement) of 89.69', in the oolitic to oomoldic limestone grainstone porosity, approximately 2' below the proposed target line. The lateral section was drilled through out its length in the porosity zone of the 1-A. The lithology of the 1-A porosity zone through out its length in the lateral remained fairly consistent with only very minor variations in porosity type being noted. From a measured depth of 5785' to a measured depth of 7211', 5701' true vertical depth, and a horizontal section of 1513', the lithology of the 1-A was a light to medium brown, occasionally dark brown, micro to very finely crystalline, microsucrosic, oolitic to oomoldic limestone grainstone, with very rare scattered anhydrite crystals to inclusions, very rare scattered algal material, slightly dolomitic, with a dolomite rich cement, and very thin, scattered cream to tan, cryptocrystalline to microcrystalline, limestone packstone inclusions to laminations.

The 1-A porosity zone had good visible porosity and a good sample show through its length. Of note was that the well flowed production water at a rate in excess of 200 barrels of fluid an hour, beginning almost as soon as the top of the 1-A zone was penetrated. After landing the curve, the lateral section of the 1-A, continued to flow at a rate of approximately 120 barrels of water per hour. At a measured depth of 6200', 5706' true vertical depth, with a horizontal displacement of 502', a minor amount of oil was noticed forming on the pits. The well continued to make a minor amount of oil to termination. Of note was that the background gas in the lateral, as was noticed in the curve, was rather erratic, with the background gases reflecting the amount of water flow. When the rate of flow increased the background gases decreased, and conversely when the flow slowed the gases increased. As noted on the mud log, the gases through the lateral section remained very low until reaching a measured depth of 5880', 5707' true vertical depth, with a horizontal displacement of 184', at which time the background gas increased, but remained erratic to termination. Through out the length of the lateral drilled in the 1-A, the oolitic to oolimoldic limestone grainstones were consistent with the top and base of the 1-A zone not encountered while drilling the lateral. The lateral was terminated, at a measured depth of 7211', 5701.7' true vertical depth and a horizontal displacement of 1513.4' on October 27, 1997.

In tracking the well bore through the 1-A porosity bench, the intercrystalline to oolitic to oolmoldic and minor algal porosity was very good with only very minor changes in rock classification, from predominately intercrystalline and oolitic porosities in the limestone grainstones to very rare, scattered tight limestone packstones in thin laminations and inclusions within the 1-A porosity zone. Sample shows were predominately good and stayed fairly consistent throughout the length of the lateral, except on rare occasions when the water flow increased significantly. The background gases began high in the curve section and decreased rapidly prior to landing the curve, and began low in the lateral section, then increase significantly upon reaching 184' of horizontal displacement. After the background gas increased in the lateral, the gas was very erratic through out the rest of the lateral. The effective or best porosity was associated with the oolitic and oolmoldic to very minor algal limestone grainstone facies, which had fair to good intercrystalline to oolitic, and very minor algal porosities. Minor anhydrite plugging was noted throughout. The well produced significant amounts of water and minor amounts of oil and gas while drilling the 1-A zone.

### MOBIL, Ratherford #20-34, Southeast Lateral



**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\***

1a. TYPE OF WELL: OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> DRY <input type="checkbox"/> Other <input checked="" type="checkbox"/> INJECTOR		5. LEASE DESIGNATION AND SERIAL NO. 14-20-603-353	
b. TYPE OF COMPLETION: NEW WELL <input type="checkbox"/> WORK OVER <input type="checkbox"/> DEEP-EN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> DIFF. RESVR. <input type="checkbox"/> Other <input checked="" type="checkbox"/> SIDETRACK		6. IF INDIAN, ALLOTTEE OR TRIBE NAME NAVAJO TRIBAL	
2. NAME OF OPERATOR MOBIL PRODUCING TX & NM INC.* *MOBIL EXPLORATION & PRODUCING US INC. AS AGENT FOR MPTM		7. UNIT AGREEMENT NAME RATHERFORD UNIT	
3. ADDRESS AND TELEPHONE NO. P.O. Box 633, Midland TX 79702 (915) 688-2585		8. FARM OR LEASE NAME, WELL NO. RATHERFORD 20-W-34	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface 660' FSL & 1850' FEL At top prod. interval reported below		9. API WELL NO. 43-037-15750	
At total depth * #37BHL: LAT #1 774' FNL & 617' FWL		10. FIELD AND POOL, OR WILDCAT GREATER ANETH	
14. PERMIT NO. NA	DATE ISSUED RECOMPLETION	12. COUNTY OR PARISH SAN JUAN	13. STATE UT
15. DATE SPUDDED 10-17-97	16. DATE T.D. REACHED 10-28-97	17. DATE COMPL. (Ready to prod.) 12-09-97	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 4950' GL
20. TOTAL DEPTH, MD & TVD ** #37	21. PLUG, BACK T.D., MD & TVD ** #37	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY →
24. PRODUCING INTERVAL(S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD)* LAT. #2A1 (5711-5701' TVD)(5785-7211' TMD) DSCR			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 1/2"	175 SXS	
8 5/8"	24#	1682'			
5 1/2"	15.5 & 14#	5797'	CSG MILLED OUT	& REMOVED F/5684-5714'	
ORIGINAL	CASING				

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					2 7/8"		5490'

30. TUBING RECORD

PERFORATION RECORD (Interval, size and number)	ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.
LATERAL #2A1 (5711-5701' TVD)( 5785-7211' TMD) OHZ	DEPTH INTERVAL (MD) AMOUNT AND KIND OF MATERIAL USED 5785-7211' TMD LAT #2A1 ACIDIZE W/19,740 GALS

33.\* PRODUCTION

DATE FIRST PRODUCTION 12-10-97	PRODUCTION METHOD (Flowing, gas lift, pumping - size and type of pump) INJECTING	WELL STATUS (Producing or shut-in) INJECTING
DATE OF TEST 12-11-97	HOURS TESTED 24	CHOKE SIZE
FLOW. TUBING PRESS. 2900	CASING PRESSURE	CALCULATED 24-HOUR RATE
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)		TEST WITNESSED BY

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 Shirley Houchins for TITLE SHIRLEY HOUCHINS/ENV & REG TECH DATE 2-18-98

\*(See instructions and spaces for Additional Data on Reverse Side)

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

38. GEOLOGIC MARKERS

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP	
					MEAS. DEPTH	TRUE VERT. DEPTH
*#4			LAT #2A1, 997' FSL & 1138' FEL. F/SURFACE SPOT			
** #20 & 21			LAT #2A1 (5711-5701'TVD)(5785-7211'TMD) OHZ			

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

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 20-W-34

9. API Well No.

43-037-15750

10. Field and Pool, or exploratory Area

GREATER ANETH

11. County or Parish, State

SAN JUAN UT

SUBMIT IN TRIPLICATE

1. Type of Well

Oil Well  Gas Well  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)  
660X' FSL & 1850' FEL  
SEC. 20, T41S, R24E

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

TYPE OF SUBMISSION

- Notice of Intent  
 Subsequent Report  
 Final Abandonment Notice

TYPE OF ACTION

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

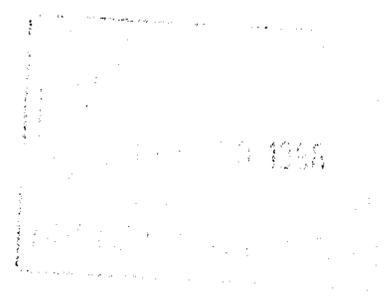
(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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: EXISTING LATERAL 774' NORTH & 617' WEST/SURFACE LOCATION, TD @ 6752'.

BHL: LATERAL #2A1 997' SOUTH & 1138' EAST F/SURFACE LOCATION, TD @ 7211'TMD.

SEE ATTACHED



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

Signed Shirley Houchins for Title SHIRLEY HOUCHINS/ENV & REG TECH Date 2-12-98

(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



**sperry-sun**  
**DRILLING SERVICES**

A DRESSER INDUSTRIES, INC. COMPANY

*Mobil*  
*San Juan County*  
*Utah*  
*Ratherford Unit*  
*R.U. 20-34 - MWD Survey*

***SURVEY REPORT***

*25 November, 1997*

Survey Ref: svy2184

# Sperry-Sun Drilling Services

Survey Report for R.U. 20-34



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)
<b>Gyro</b>							
0.00	0.000	0.000	0.00	0.00 N	0.00 E	0.00	
100.00	0.230	357.430	100.00	0.20 N	0.01 W	-0.14	0.230
200.00	0.290	8.280	200.00	0.65 N	0.02 E	-0.42	0.077
300.00	0.210	24.440	300.00	1.07 N	0.13 E	-0.61	0.106
400.00	0.140	32.950	400.00	1.34 N	0.27 E	-0.68	0.074
500.00	0.190	29.970	500.00	1.58 N	0.42 E	-0.73	0.051
600.00	0.200	29.600	600.00	1.88 N	0.59 E	-0.79	0.010
700.00	0.240	31.090	700.00	2.21 N	0.79 E	-0.87	0.040
800.00	0.280	32.050	799.99	2.60 N	1.02 E	-0.94	0.040
900.00	0.300	22.580	899.99	3.05 N	1.25 E	-1.06	0.052
1000.00	0.310	21.390	999.99	3.54 N	1.45 E	-1.24	0.012
1100.00	0.330	24.810	1099.99	4.05 N	1.67 E	-1.41	0.028
1200.00	0.480	2.900	1199.99	4.73 N	1.81 E	-1.75	0.213
1300.00	0.510	358.780	1299.98	5.60 N	1.83 E	-2.31	0.047
1400.00	0.510	354.600	1399.98	6.48 N	1.77 E	-2.94	0.037
1500.00	0.530	329.780	1499.98	7.33 N	1.50 E	-3.70	0.224
1600.00	0.740	308.770	1599.97	8.13 N	0.76 E	-4.78	0.310
1700.00	0.770	311.390	1699.96	8.98 N	0.24 W	-6.10	0.046
1800.00	0.780	310.650	1799.95	9.87 N	1.26 W	-7.45	0.014
1900.00	0.630	310.470	1899.94	10.67 N	2.20 W	-8.68	0.150
2000.00	0.610	315.950	1999.94	11.41 N	2.99 W	-9.76	0.063
2100.00	0.600	310.000	2099.93	12.13 N	3.76 W	-10.82	0.064
2200.00	0.510	318.870	2199.93	12.80 N	4.45 W	-11.78	0.124
2300.00	0.660	302.620	2299.92	13.44 N	5.23 W	-12.79	0.222
2400.00	0.610	288.850	2399.92	13.93 N	6.22 W	-13.85	0.160
2500.00	0.730	326.350	2499.91	14.63 N	7.08 W	-14.96	0.445
2600.00	0.310	279.180	2599.91	15.20 N	7.70 W	-15.81	0.567
2700.00	0.920	284.800	2699.90	15.45 N	8.74 W	-16.75	0.612
2800.00	1.040	287.110	2799.89	15.92 N	10.38 W	-18.30	0.126
2900.00	1.030	309.020	2899.87	16.75 N	11.95 W	-20.03	0.393
3000.00	1.070	310.710	2999.85	17.93 N	13.35 W	-21.86	0.051
3100.00	0.960	304.170	3099.84	19.01 N	14.76 W	-23.62	0.160
3200.00	0.850	308.990	3199.83	19.95 N	16.03 W	-25.20	0.134
3300.00	0.790	329.710	3299.82	21.01 N	16.95 W	-26.59	0.301
3400.00	0.850	344.060	3399.81	22.32 N	17.50 W	-27.87	0.213
3500.00	0.950	345.390	3499.79	23.83 N	17.91 W	-29.18	0.102
3600.00	1.110	347.670	3599.78	25.58 N	18.33 W	-30.64	0.165
3700.00	1.010	348.920	3699.76	27.39 N	18.71 W	-32.12	0.103
3800.00	0.970	350.570	3799.74	29.09 N	19.01 W	-33.47	0.049
3900.00	0.950	345.470	3899.73	30.73 N	19.36 W	-34.81	0.088

Continued...

# Sperry-Sun Drilling Services

Survey Report for R.U. 20-34



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	0.750	352.380	3999.72	32.18 N	19.66 W	-35.99	0.224
4100.00	0.590	346.120	4099.71	33.33 N	19.87 W	-36.90	0.176
4200.00	0.640	347.950	4199.71	34.37 N	20.11 W	-37.77	0.054
4300.00	0.710	353.560	4299.70	35.54 N	20.29 W	-38.68	0.096
4400.00	0.620	4.790	4399.69	36.69 N	20.32 W	-39.46	0.158
4500.00	0.450	22.290	4499.69	37.59 N	20.12 W	-39.91	0.234
4600.00	0.260	16.990	4599.69	38.17 N	19.91 W	-40.13	0.193
4700.00	0.270	52.080	4699.69	38.54 N	19.65 W	-40.18	0.160
4800.00	0.240	52.590	4799.68	38.81 N	19.30 W	-40.09	0.030
4900.00	0.330	61.750	4899.68	39.07 N	18.88 W	-39.95	0.101
5000.00	0.220	73.340	4999.68	39.26 N	18.44 W	-39.74	0.123
5100.00	0.250	81.410	5099.68	39.35 N	18.05 W	-39.50	0.045
5200.00	0.210	86.620	5199.68	39.39 N	17.65 W	-39.23	0.045
5300.00	0.280	105.000	5299.68	39.34 N	17.23 W	-38.88	0.104
5400.00	0.250	155.890	5399.68	39.08 N	16.90 W	-38.46	0.229
5500.00	0.150	161.740	5499.68	38.76 N	16.77 W	-38.15	0.102

**MWD Survey**

5591.00	0.210	122.980	5590.68	38.55 N	16.59 W	-37.88	0.145
5598.00	4.100	137.100	5597.67	38.36 N	16.41 W	-37.62	55.667
5608.00	9.200	137.500	5607.60	37.51 N	15.63 W	-36.47	51.002
5618.00	15.200	137.600	5617.37	35.95 N	14.20 W	-34.37	60.000
5628.00	21.300	137.700	5626.86	33.64 N	12.10 W	-31.26	61.001
5638.00	26.400	140.200	5636.01	30.58 N	9.45 W	-27.26	51.981
5648.00	31.200	143.500	5644.77	26.79 N	6.48 W	-22.53	50.548
5658.00	35.000	145.600	5653.14	22.34 N	3.32 W	-17.22	39.688
5668.00	38.700	141.300	5661.15	17.53 N	0.26 E	-11.36	45.082
5678.00	41.100	136.700	5668.82	12.70 N	4.47 E	-5.01	38.022
5688.00	45.100	134.100	5676.12	7.84 N	9.27 E	1.81	43.761
5698.00	49.400	132.000	5682.91	2.83 N	14.63 E	9.14	45.677
5708.00	53.700	131.900	5689.12	2.40 S	20.46 E	16.97	43.007
5718.00	59.100	131.400	5694.65	7.93 S	26.68 E	25.30	54.160
5728.00	64.400	129.300	5699.39	13.63 S	33.39 E	34.10	56.131
5738.00	69.700	127.600	5703.28	19.35 S	40.60 E	43.30	55.261
5748.00	74.500	126.700	5706.36	25.10 S	48.19 E	52.78	48.757
5758.00	79.200	125.700	5708.63	30.85 S	56.04 E	62.48	47.998
5785.42	90.700	125.900	5711.04	46.80 S	78.16 E	89.63	41.946
5816.17	91.700	129.600	5710.40	65.62 S	102.46 E	120.31	12.462
5847.26	93.700	132.900	5708.93	86.09 S	125.81 E	151.36	12.401
5878.92	93.400	135.500	5706.97	108.12 S	148.46 E	182.91	8.251
5909.92	91.100	135.600	5705.75	130.23 S	170.15 E	213.80	7.426
5940.99	90.900	135.800	5705.21	152.46 S	191.84 E	244.77	0.910
5972.84	91.200	135.300	5704.63	175.19 S	214.15 E	276.52	1.831

Continued...

# Sperry-Sun Drilling Services

Survey Report for R.U. 20-34



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)
6004.70	90.700	135.300	5704.10	197.84 S	236.55 E	308.30	1.569
6036.56	90.300	135.100	5703.82	220.44 S	259.00 E	340.08	1.404
6068.37	89.000	134.400	5704.02	242.84 S	281.59 E	371.83	4.642
6100.18	89.100	133.700	5704.54	264.95 S	304.45 E	403.59	2.223
6131.90	89.100	133.900	5705.04	286.90 S	327.34 E	435.28	0.630
6162.86	89.200	135.300	5705.50	308.64 S	349.38 E	466.18	4.533
6194.68	88.900	133.900	5706.03	330.98 S	372.04 E	497.94	4.499
6226.56	88.100	134.400	5706.86	353.17 S	394.90 E	529.76	2.959
6258.34	87.900	133.900	5707.97	375.30 S	417.69 E	561.48	1.694
6290.24	88.100	133.200	5709.09	397.26 S	440.80 E	593.34	2.281
6321.98	89.800	132.500	5709.67	418.84 S	464.06 E	625.06	5.792
6353.64	89.100	128.400	5709.97	439.38 S	488.15 E	656.71	13.137
6385.39	90.400	127.400	5710.11	458.88 S	513.20 E	688.40	5.166
6417.01	92.500	127.400	5709.31	478.08 S	538.31 E	719.94	6.641
6448.83	92.800	127.400	5707.84	497.38 S	563.56 E	751.65	0.943
6479.88	93.300	127.200	5706.19	516.17 S	588.23 E	782.59	1.734
6511.69	93.700	127.200	5704.25	535.37 S	613.52 E	814.26	1.257
6543.49	93.000	130.200	5702.39	555.22 S	638.29 E	845.97	9.672
6574.47	92.100	132.800	5701.01	575.72 S	661.47 E	876.92	8.873
6606.23	90.500	133.700	5700.29	597.48 S	684.59 E	908.65	5.780
6638.08	89.600	134.000	5700.26	619.54 S	707.56 E	940.46	2.979
6669.85	90.600	133.300	5700.20	641.47 S	730.55 E	972.21	3.842
6701.68	90.400	132.600	5699.93	663.16 S	753.84 E	1004.02	2.287
6733.57	90.300	131.800	5699.73	684.58 S	777.47 E	1035.90	2.528
6765.22	90.400	131.800	5699.54	705.67 S	801.06 E	1067.55	0.316
6797.05	90.600	132.100	5699.26	726.95 S	824.73 E	1099.38	1.133
6828.86	90.400	131.800	5698.98	748.21 S	848.39 E	1131.18	1.133
6859.84	90.900	130.700	5698.63	768.64 S	871.68 E	1162.16	3.900
6891.64	90.100	131.400	5698.35	789.52 S	895.66 E	1193.96	3.343
6922.61	88.300	130.700	5698.79	809.86 S	919.01 E	1224.92	6.236
6954.39	88.900	131.100	5699.56	830.66 S	943.03 E	1256.69	2.269
6986.13	89.500	130.900	5700.01	851.48 S	966.98 E	1288.43	1.993
7017.86	89.700	130.500	5700.23	872.17 S	991.03 E	1320.16	1.409
7049.64	89.900	130.900	5700.34	892.89 S	1015.13 E	1351.94	1.407
7081.51	89.400	130.000	5700.53	913.57 S	1039.38 E	1383.80	3.230
7113.40	89.600	130.400	5700.81	934.15 S	1063.74 E	1415.69	1.402
7145.28	89.800	130.200	5700.98	954.77 S	1088.05 E	1447.56	0.887
7177.01	89.500	130.000	5701.17	975.21 S	1112.32 E	1479.29	1.136
7211.00	89.500	130.000	5701.47	997.06 S	1138.36 E	1513.27	0.000

Continued...

# Sperry-Sun Drilling Services

Survey Report for R.U. 20-34



**Mobil**  
**San Juan County**

**Utah**  
**Ratherford Unit**

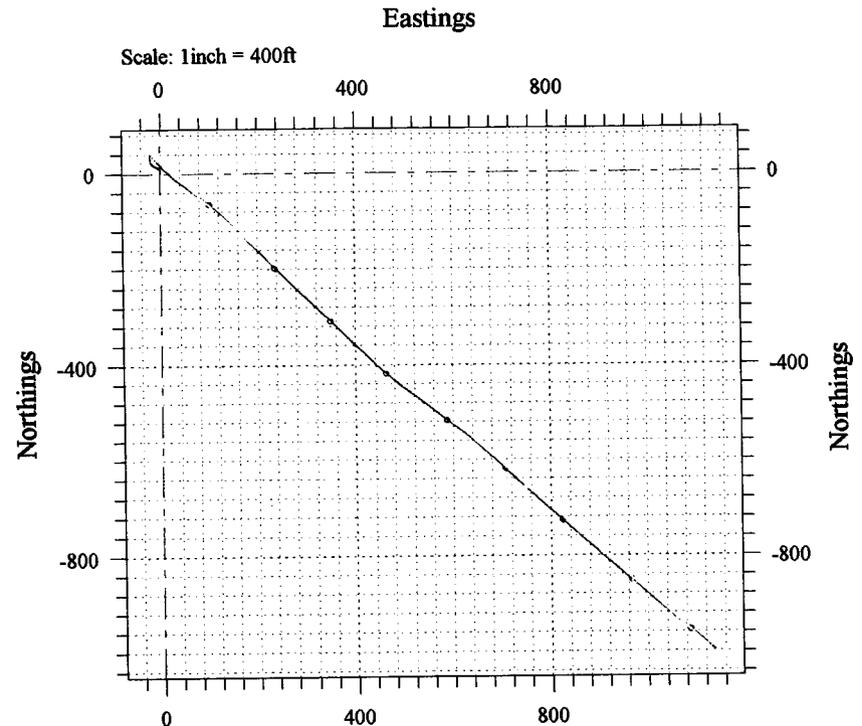
All data is in feet unless otherwise stated. Directions and coordinates are relative to True North.  
Vertical depths are relative to Well. Northings and Eastings are relative to Well.

The Dogleg Severity is in Degrees per 100ft.  
Vertical Section is from Well and calculated along an Azimuth of 131.214° (True).

Based upon Minimum Curvature type calculations, at a Measured Depth of 7211.00ft.,  
The Bottom Hole Displacement is 1513.27ft., in the Direction of 131.214° (True).

**Customer: Mobil**  
**Folder: Mobil**  
**Field: San Juan County**  
**Project: Utah**  
**Structure: Ratherford Unit**  
**Well: R.U. 20-34**

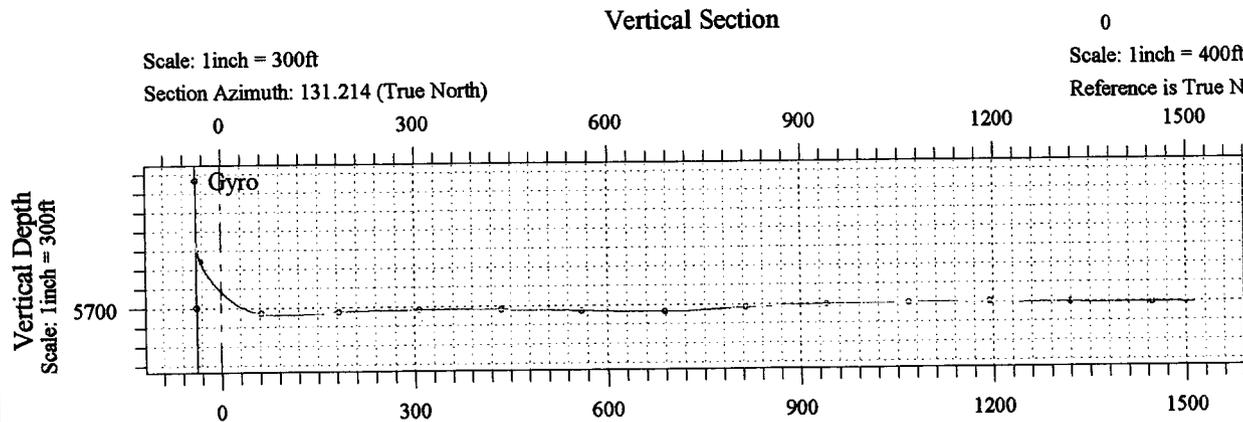
**Mobil**



Scale: 1 inch = 400ft  
 Reference is True North

Eastings

Scale: 1 inch = 300ft  
 Vertical Depth



Scale: 1 inch = 300ft  
 Section Azimuth: 131.214 (True North)

Scale: 1 inch = 300ft  
 Section Azimuth: 131.214 (True North)

Vertical Section

Prepared:

Checked:

Approved:

**ATTACHMENT - FORM 3160-5**  
**RATHERFORD UNIT - WELL #20-34**  
**14-20-603-353**  
**NAVAJO TRIBAL**  
**SAN JUAN, UTAH**

10-17-97 MIRU NAVAJO WEST #15 PRESSURE TEST CSG TO 1000# HELD 30 MIN. TEST GOOD. NDWH NUBOP TEST TO 1000# TEST GOOD.

10-18-97 SITP=100# CSG DEAD, LD CMT LINED PIPE, RU SCHLUMBERGER W/L, RUN 5.5 GUAGE RING, 5.5 RBP & SET @ 5613' TEST RBP & CSG TO 1000# HELD FOR 30 MIN. GOOD TEST. SI & SDFN.

10-9-97 TIH W/ 2 7/8" CMT LINED PIPE, TOH LAYING DOWN NDBOP, NUWH RD UT, CLEAN LOCATION, CMT LINED TBG TO RATHERFORD YARD FOR INSPECTION.

10-22-97 NOTIFY STATE OF UTAH STARTING OPERATIONS @ 5:45 AM TODAY, MIRU NAVAJO WEST #25.

10-23-97 RIH W/WHIPSTOCK, ORIENT & SET WHIPSTOCK ON RBP @ 5613', TOP OF WHIPSTOCK @ 5590'. 132 DEG GYRO TOOL FACE, /POH W/GYRO DATA.

10-23-97 FINISH RIGGING UP. NU BOP, HYDRIL, CHOKE, SINGLE JACK RAN MMS TEST, ON BOP, HYDRIL, CHOKE, POWE SWIVEL, 2000# HIGH PRESS, 250# LOW. FINAL REPORT FOR REENTRY

10-24-97 MILLED WINDOW W/STARTER MILL F/5590-5592', CIRC CLEAN POH W/STARTER MILL, RIH W/WINDOW & WATERMELLON MILL & 2 7/8" AOHDP TO 5590', MILL WINDOW F/5590-5597', CUT FORMATION F/5597-5598', PUMPED SWEEP & CIRC WELL CLEAN. POH W/MILLS, RIH W/CURVE ASSY.

10-25-97 FIN RIH W/BIT, RU GYRO DATA, RAN GYRO, TIME DRILL & SLIDE DRILL CURVE LATERAL #2A1 F/5632-5785'MD, LANDED CURVE @ 5711' TVD 2' BELOW TARGET LINE, HIT TOP OF 1A ZONE @ 5697' MD & 5678' TVD, WELL FLOWING 120 BPH, SIDP=600#, POH & LD AOHDP.

10-26-97 POOH & LD CURVE DRILLING ASSY. RIH W/LATERAL ASSY, SLIDE & ROTATE DRILL LATERAL F/5785-6577'.

10-27-97 SLIDE & ROTATE DRILL LATERAL 2A1 F/6577-7211' TD TMD, LATERAL 2A1 IN 1a ZONE F/5785-7211' TMD (5711-5701' TVD). PUMP SWEEP & CIRC HOLE CLEAN. POH & LD AOHDP TO 5568', SWI SIDPP-250#, KILL WELL, POH & LD DP.

10-28-97 POH & LD PH6 TBG, MWD, MUD MOTOR, WELL FLOWING 2 BPM 5% OIL, INSTALL TEST PLUG, ND BOP, CLEAN PITS, RIG DOWN RIG, FINAL REPORT FOR LATERAL 2A1. RIG DOWN, MOVE OUT WO/COMPLETION.

**COMPLETION**

11-12-97 RIG UP UT & AUX EQUIP. RET TEST PLUG, OPEN WELL TO TANK, SET PKR TIE WELL TO F/L FLOW O/N SD UT FOR NIGHT. SDFN.

11-13-97 FLOW WELL O/N DOWN F/L OPENED TO TANK WO/CREW, PSI DN TO 50 KILL WELL. FIN. TIH W/PKR, SET @ 5432.39'. PREP FOR ACID.

11-14-97 RU/DOWELL C/T UNIT & PUMPS, TIH W C/T PUMPING HIT BRIDGE @ 6845' WORKED TO 6967', 244' F/END OF LATERAL 2A1 @ 7211'. ACIDIZE W/19,740 GALS. SI WELL, RD C/T SITP=1200#, OPEN TO TANKS.

11-15-97 SITP=650, OPEN TO TANK, LEFT DOWN FLOWLINE.

ATTACHMENT - FORM 3160-5  
RATHERFORD UNIT - WELL #20-34  
14-20-603-353  
NAVAJO TRIBAL  
SAN JUAN, UTAH  
PAGE 2

- 11-17-97 FLOW WELL DOWN, RIG UP WEATHERFORD W/L RUN F/P SN @ 5356'-WL MEASURE 5332'-100% FREE, 5345'-50% FREE, 5365'-100% STUCK TO LATE TO CUT TBG & HAVE LIGHT, RIG DOWN W/L RU TO F/L OPEN ON 16/64". SDFN.
- 11-18-98 FTP=50#, SICP=180#, KILL TBG W/5BBLs MUD, BLEED OFF CSG, RIG UP W/L TIH W/CHEM CUTTER, CSG STARTED WEAK FLOW, WORK PIPE, PUMP 10# DOWN TBG, WORKED PKR LOOSE RIG DOWN W/L PULL CSG FLOW INCREASE, KILL WELL, POOH W/STNDS SI & SDFN.
- 11-19-97 10 HR SIP=100 OPEN TO TANK DOWN TO 40# FLUID HIT PSI TO 400# FLOW, WO CREW KILL WELL WITH 12.2# & 14.2#. FINISH TOH W/TBG, P/U S/H TIH LATCH IN W/S COULD NOT MOVE, UNLATCH TOH W/120 JTS, SI & SDFN.
- 11-20-97 SIP @ 40, BLED OFF, FIH TOH W/TBG. TIH W/SH, JAR 3 TIMES, SHEARED W/S TOH W/TOP SEC. PU O/S TIH LATCH ON W/S JAR LOOSE TOH W/38 JTS SI & SDFN.
- 11-21-97 WHP=40, BLED OFF TO SLIGHT FLOW FIN. TOH W/TBG LD BOTTOM SEC. OF W/S PU RET HEAD, TIH LATCH ON RBP & REL. TOH LD RBP, TIH W/DC'S LD LOAD OUT ALL F/T'S, TIH W/60 JTS FOR KILLSTING. SI & SDFN.
- 11-22-97 WHP=50#, BLED OFF WELL TOH W/STNDS WHILE MAKING UP SS X-OVER, WO/NEW PROFILE, TIH W/GUIBERSON G-VI PKR SET @ 5490.39', TEST TO 1000#-HELD 30 MIN. GOOD, DRAIN PUMP & LINES. SI & SDFN.
- 11-23-97 WELL DEAD, TOH LD 2 7/8" RENTAL STRING, PH-6 TBG, RD UNIT, CLEAN LOCATION PREP TO MOVE, WAIT ON TREE.
- 12-08-97 MIRU UT & AUX EQUIP. MAKE UP ON/OFF TOOL, P/U & TIH W/2 7/8" FLUOR LINED TBG, CK RINGS, SI & SDFN.
- 12-09-97 FIN TIH W/TBG NDBOP INSTALL L/J SUBS & TREE, CIRC PKR FLUID, LATCH ON PKR LAND TBG & TREE PKR @ 5489.01' TEST TO 1000# 30 MIN ON CHART-GOOD. RIG UP S/L PUNCTURE DISC RET. PROFILE PLUG THEN PUMP OUT PUMP-OUT PLUG @ 2750#, 1750# BELOW SI WELL TTP, RIG DOWN UT, SDFN, WELL TURNED TO PRODUCTION.

OPERATOR MOBIL PRODUCING TX & NM, INC.

OPERATOR ACCT. NO. N

ADDRESS P. O. BOX 633

MIDLAND, TX 79702

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		
			43-037-15750	RATHERFORD #20-W-34		20	41S	24E	SAN JUAN	10-17-97	12-01-97
WELL 1 COMMENTS:											
WELL 2 COMMENTS:											
WELL 3 COMMENTS:											
WELL 4 COMMENTS:											
WELL 5 COMMENTS:											

**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.

*Shirley Houchins*  
Signature **SHIRLEY HOUCHINS**  
ENV & REG TECHNICIAN 2-12-98

Title \_\_\_\_\_ Date \_\_\_\_\_

Phone No. ( 915 ) 688-2585

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

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 20-34

9. API Well No.

43-037-15750

10. Field and Pool, or exploratory Area

GREATER ANETH

11. County or Parish, State

SAN JUAN UT

SUBMIT IN TRIPLICATE

1. Type of Well

Oil Well  Gas Well  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. 20, T41S, R24E  
660' FSL & 1850' FEL  
BHL-774 FNL & 617 FWL

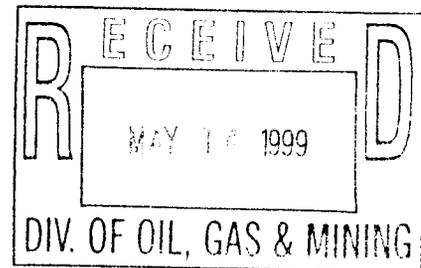
12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input checked="" type="checkbox"/> Other <u>MIT CHART</u>
	<input type="checkbox"/> Change of Plans
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> 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.



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

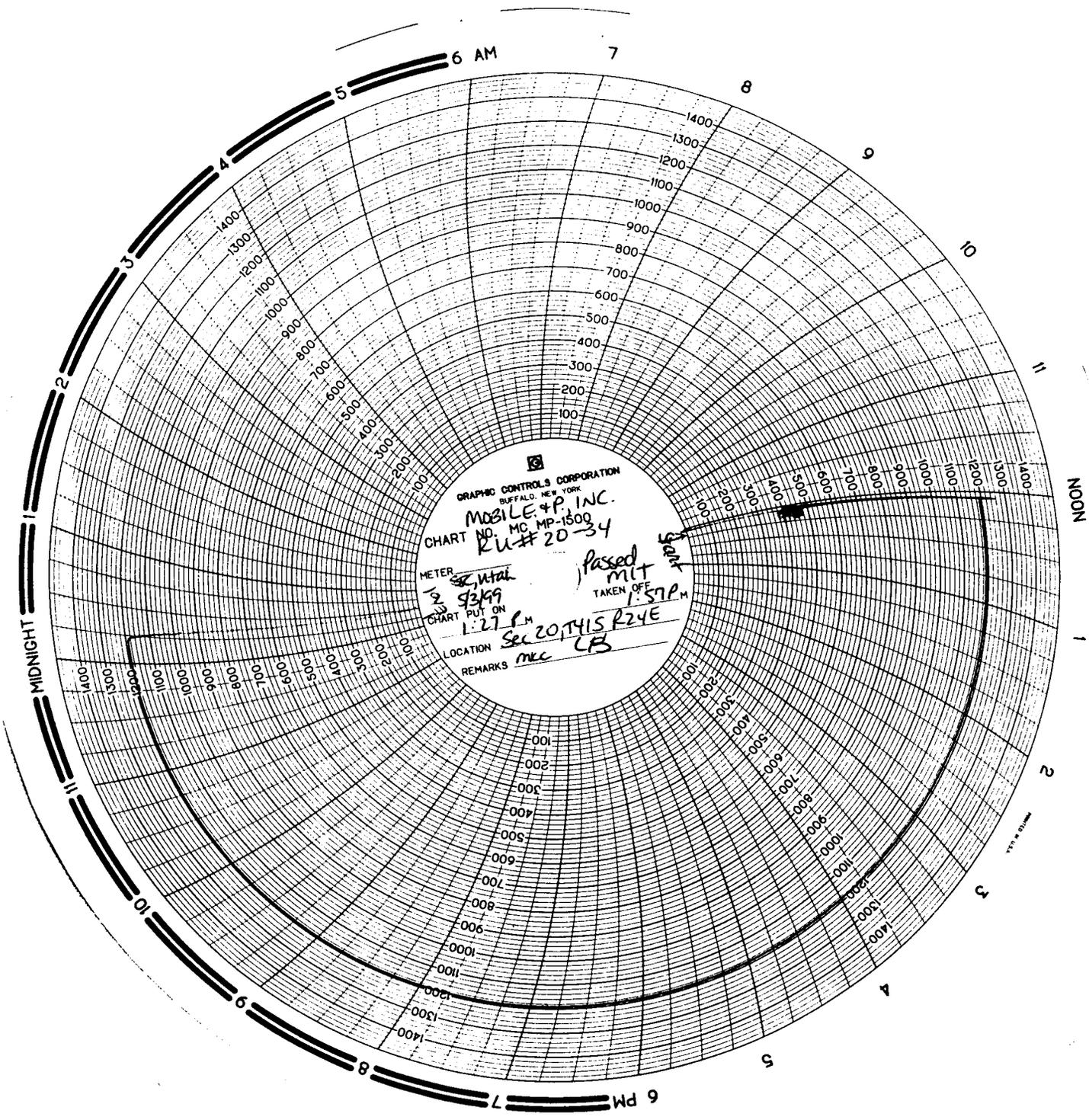
Signed Shirley Houchins for Title SHIRLEY HOUCHINS/ENV & REG TECH Date 5-12-99

(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  
MOBILE & P, INC.  
CHART NO. MC MP-1500  
RU# 20-34  
METER Sec 201415 R24E  
CHART PUT ON 1:27 P.M.  
LOCATION mcc LF  
REMARKS

passed mit  
TAKEN OFF 1:57 P.M.

TYPE B DIALING

**ExxonMobil Production Company**

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.

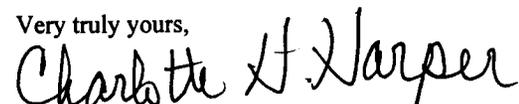
Please note the change of name of MOC to ExxonMobil Oil Corporation in your records pertaining to any MOC permits.

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  
Permitting Supervisor

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

RECEIVED

JUN 27 2001

DIVISION OF  
OIL, GAS AND MINING



# United States Department of the Interior

BUREAU OF INDIAN AFFAIRS  
~~XXXXXXXXXXXX~~  
Navajo Area Office  
NAVAJO REGION

P.O. Box 1060  
Gallup, New Mexico 87305-1060

**AUG 30 2001**

2001-08-30 11:15  
11:15

IN REPLY REFER TO:

RRES/543

**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,

**DEAN 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	<i>DM</i>
NATV AM MIN COORD	_____
SOLID MIN TEAM	_____
PETRO MENT TEAM	<i>2</i>
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

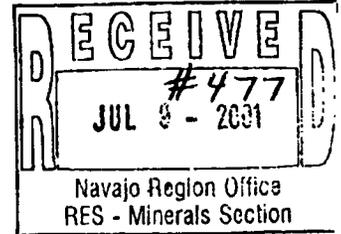
*BB 7/12/2001*  
*SH*  
*543*  
*File*

June 27, 2001

**ExxonMobil**  
Production

Certified Mail  
Return Receipt Requested

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.

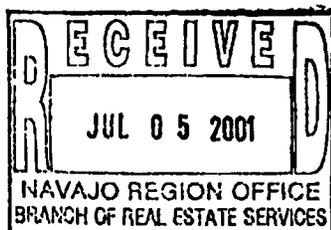
If you have any questions , please contact Alex Correa at (713) 431-1012.

Very truly yours,

*Charlotte H. Harper*

Charlotte H. Harper  
Permitting Supervisor

Attachments



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

*NOTE: Check forwarded to Ella Isaac*

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	<u>F.A. Risch</u>	Address <u>5959 Las Colinas Blvd. Irving, TX 75039</u>
Vice President	<u>K.T. Koonce</u>	Address <u>800 Bell Street Houston, TX 77002</u>
Secretary	<u>F.L. Reid</u>	Address <u>5959 Las Colinas Blvd. Irving, TX 75039</u>
Treasure	<u>B.A. Maher</u>	Address <u>5959 Las Colinas Blvd. Irving, TX 75039</u>

DIRECTORS

Name	<u>D.D. Humphreys</u>	Address <u>5959 Las Colinas Blvd. Irving, TX 75039</u>
Name	<u>P.A. Hanson</u>	Address <u>5959 Las Colinas Blvd. Irving, TX 75039</u>
Name	<u>T.P. Townsend</u>	Address <u>5959 Las Colinas Blvd. Irving, TX 75039</u>
Name	<u>B.A. Maher</u>	Address <u>5959 Las Colinas Blvd. Irving, TX 75039</u>
Name	<u>F.A. Risch</u>	Address <u>5959 Las Colinas Blvd. Irving, TX 75039</u>

Sincerely,



Alex Correa

This is to certify that the above information pertaining to ExxonMobil Oil Corporation (Corporation) is true 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



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.

*D. A. Sullivan*  
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**

	<b>Lease Number</b>
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

One Chubb Plaza, Suite 1900, Houston, Texas 77027-3301  
Telephone: (713) 297-4600 • Facsimile: (713) 297-4750

*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 12<sup>th</sup> of June, 2001.**

**ExxonMobil Oil Corporation**

By:



**FEDERAL INSURANCE COMPANY**

By:

*Mary Pierson*  
Mary Pierson, Attorney-in-fact



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 } ss.  
County of Somerset

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 the deponent's presence.



Notary Public State of New Jersey  
No. 2231647  
Commission Expires Oct 28, 2004

Notary Public

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

CSC

5184334741

06/01 '01 08:46 NO.410 03/05

CSC

06/01 '01 09:06 NO.135 02/04

F010601000187

CERTIFICATE OF AMENDMENT  
OF  
CERTIFICATE OF INCORPORATION  
OF  
MOBIL OIL CORPORATION

CSC 45

(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.

CSC  
CSC

5184334741

06/01 '01 08:47 NO.410 04/05  
06/01 '01 07:06 NO.133 03/04

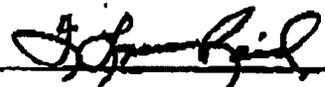
FOURTH: That the amendments to the Certificate of Incorporation were authorized by the Board of Directors followed by the holder of all outstanding shares entitled to vote on amendments to the Certificate of Incorporation by written consent of the sole shareholder dated May 22, 2001.

IN WITNESS WHEREOF, this Certificate has been signed this 22nd Day of May, 2001.

  
\_\_\_\_\_  
F. A. Ritoh, President 

STATE OF TEXAS       )  
COUNTY OF DALLAS    )

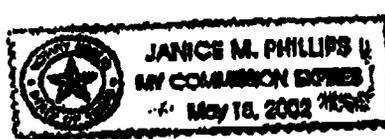
F. L. REID, being duly sworn, deposes and says that he is the Secretary of MOBIL OIL CORPORATION, the corporation mentioned and described in the foregoing instrument; that he has read and signed the same and that the statements contained therein are true.

  
\_\_\_\_\_  
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



CSC  
CSC

5184334741

06/01 '01 09:01 NO.411 02/02  
06/01 '01 09:06 NO.133 07/04  
**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 by: EXXONMOBIL CORPORATION  
(Name)

FILED JUN 01 2001

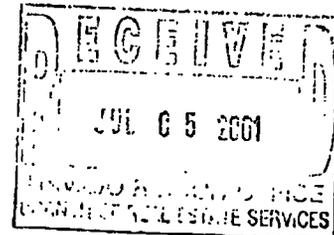
6949 Las Colinas Blvd.  
(Mailing address)

TAX \$ \_\_\_\_\_  
BY: *SAC*

Irving, TX 75039-2298  
(City, State and Zip code)

*ny Albany*

*Cust Ref # 165578 MPJ*



**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**



A handwritten signature in black ink, appearing to read "J. H. ...", is written over a horizontal line.

*Special Deputy Secretary of State*

**OPERATOR CHANGE WORKSHEET**

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**

<b>FROM:</b> (Old Operator):	<b>TO:</b> ( 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:**

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Division of Oil, Gas and Mining  
**OPERATOR CHANGE WORKSHEET**

<b>ROUTING</b>
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:		<b>6/1/2006</b>
<b>FROM:</b> (Old Operator): N1855-ExxonMobil Oil Corporation PO Box 4358 Houston, TX 77210-4358 Phone: 1 (281) 654-1936	<b>TO:</b> ( New Operator): N2700-Resolute Natural Resources Company 1675 Broadway, Suite 1950 Denver, CO 80202 Phone: 1 (303) 534-4600	
<b>CA No.</b>	<b>Unit:</b>	<b>RATHERFORD (UIC)</b>

**OPERATOR CHANGES DOCUMENTATION**

Enter date after each listed item is completed

- (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 4/21/2006
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 4/24/2006
- The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 6/7/2006
- Is the new operator registered in the State of Utah: YES Business Number: 5733505-0143
- If **NO**, the operator was contacted on: \_\_\_\_\_
- (R649-9-2)Waste Management Plan has been received on: requested
- Inspections of LA PA state/fee well sites complete on: n/a
- Reports current for Production/Disposition & Sundries on: ok
- Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM n/a BIA not yet
- Federal and Indian Units:**  
The BLM or BIA has approved the successor of unit operator for wells listed on: not yet
- Federal and Indian Communization Agreements ("CA"):**  
The BLM or BIA has approved the operator for all wells listed within a CA on: n/a
- Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: 6/12/2006

**DATA ENTRY:**

- Changes entered in the **Oil and Gas Database** on: 6/22/2006
- Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 6/22/2006
- Bond information entered in RBDMS on: n/a
- Fee/State wells attached to bond in RBDMS on: n/a
- Injection Projects to new operator in RBDMS on: 6/22/2006
- Receipt of Acceptance of Drilling Procedures for APD/New on: n/a

**BOND VERIFICATION:**

- Federal well(s) covered by Bond Number: n/a
- Indian well(s) covered by Bond Number: PA002769
- (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number n/a
- The **FORMER** operator has requested a release of liability from their bond on: n/a  
The Division sent response by letter on: n/a

**LEASE INTEREST OWNER NOTIFICATION:**

- (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:**

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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	Field or Unit Name Rutherford Unit
QQ, Section, Township, Range: State: UTAH	Lease Designation and Number See attached list

EFFECTIVE DATE OF TRANSFER: 6/1/2006

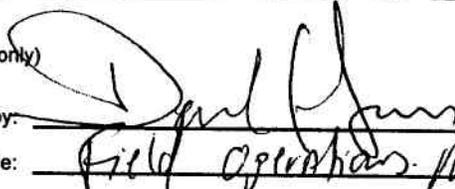
CURRENT OPERATOR

Company: Exxon Mobil Oil Corporation Name: \_\_\_\_\_  
Address: PO Box 4358 Signature: \_\_\_\_\_  
city Houston state TX zip 77210-4358 Title: \_\_\_\_\_  
Phone: (281) 654-1936 Date: \_\_\_\_\_  
Comments: Exxon Mobil has submitted a separate, signed copy of UIC Form 5

NEW OPERATOR

Company: Resolute Natural Resources Company Name: Dwight E Mallory  
Address: 1675 Broadway, Suite 1950 Signature:   
city Denver state CO zip 80202 Title: Regulatory Coordinator  
Phone: (303) 534-4600 Date: 4/20/2006  
Comments: A list of affected UIC wells is attached.  
New bond numbers for these wells are:  
BIA Bond # PA002769 and US EPA Bond # B001252

(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

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

FORM 9

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER: See attached list
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Navajo Tribe
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Unit Agreement</u>		7. UNIT or CA AGREEMENT NAME: Ratherford Unit
2. NAME OF OPERATOR: Resolute Natural Resources Company <u>N2700</u>		8. WELL NAME and NUMBER: See attached list
3. ADDRESS OF OPERATOR: 1675 Broadway, Suite 1950 CITY Denver STATE CO ZIP 80202	PHONE NUMBER: (303) 534-4600	9. API NUMBER: Attached
4. LOCATION OF WELL FOOTAGES AT SURFACE: <u>See attached list</u>		10. FIELD AND POOL, OR WILDCAT: Greater Aneth
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: _____		COUNTY: <u>San Juan</u>
		STATE: <u>UTAH</u>

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

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

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

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) <u>Dwight E Malloy</u>	TITLE <u>Regulatory Coordinator</u>
SIGNATURE	DATE <u>4/20/2006</u>

(This space for State use only)

**APPROVED** 6127106  
*Earlene Russell*  
Division of Oil, Gas and Mining  
Earlene Russell, Engineering Technician

**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

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER:
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: <b>Ship Rock</b>
		7. UNIT or CA AGREEMENT NAME: <b>UTU68931A</b>
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Injection</u>	8. WELL NAME and NUMBER: <b>Ratherford</b>	
2. NAME OF OPERATOR: <b>ExxonMobil Oil Corporation</b> <i>N1855</i>		9. API NUMBER: <b>attached</b>
3. ADDRESS OF OPERATOR: <b>P.O. Box 4358</b> CITY <b>Houston</b> STATE <b>TX</b> ZIP <b>77210-4358</b>	PHONE NUMBER: <b>(281) 654-1936</b>	10. FIELD AND POOL, OR WILDCAT: <b>Aneth</b>
4. LOCATION OF WELL FOOTAGES AT SURFACE:		COUNTY: <b>San Juan</b>
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:		STATE: <b>UTAH</b>

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: <u>6/1/2006</u>	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion:	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input checked="" type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

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

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 S. 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

**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	
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> 14-20-603-353	
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.		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> NAVAJO	
		<b>7. UNIT or CA AGREEMENT NAME:</b> RATHERFORD	
<b>1. TYPE OF WELL</b> Water Injection Well	<b>8. WELL NAME and NUMBER:</b> RATHERFORD U 20-34		
<b>2. NAME OF OPERATOR:</b> RESOLUTE NATURAL RESOURCES	<b>9. API NUMBER:</b> 43037157500000		
<b>3. ADDRESS OF OPERATOR:</b> 1675 Boradway Ste 1950 , Denver, CO, 80202	<b>PHONE NUMBER:</b> 303 534-4600 Ext	<b>9. FIELD and POOL or WILDCAT:</b> GREATER ANETH	
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0660 FSL 1850 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWSE Section: 20 Township: 41.0S Range: 24.0E Meridian: S	<b>COUNTY:</b> SAN JUAN		
		<b>STATE:</b> UTAH	
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:  <input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 1/6/2012  <input type="checkbox"/> SPUD REPORT Date of Spud:  <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input checked="" type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION  OTHER: <input style="width: 100px;" type="text"/>
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.			
<p>The Ratherford Unit 20-34 was plugged and abandoned as follows: 1). A cement bond log was run across the interval 900' to surface. Top of cement was identified as 648'. 2). Perforated the 2 7/8" tubing at 615'. 3). Ran 1" tubing to 5202'. 4). Pumped 37 bbls (150 sx) of cement down the 1" tubing and up the 1" tubing x 2 7/8" tubing until good cement was detected at the surface. Approximately 4 bbls of cement was circulated. Closed the backside valve and continued cementing into the perforations and through the 2 7/8" tubing x 5 1/2" casing annulus until good cement was detected. Circulated approximately 4 bbls to the surface. The Job was witnessed by NNBLM and NNMinerals representatives. 7). Cut the wellhead off and welded a metal plate to the casing stub. Installed a dry hole marker. Filled in around the wellhead with soil. 9). Plugging activity was completed 01/06/2012.</p>			
<b>NAME (PLEASE PRINT)</b> Sherry Glass		<b>PHONE NUMBER</b> 303 573-4886	<b>TITLE</b> Sr Regulatory Technician
<b>SIGNATURE</b> N/A		<b>DATE</b> 3/29/2012	

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY  
March 29, 2012**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB NO. 1004-0135  
Expires: July 31, 2010

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

5. Lease Serial No.  
1420603353

6. If Indian, Allottee or Tribe Name  
SHIPROCK

**SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

7. If Unit or CA/Agreement, Name and/or No.  
7960041920

1. Type of Well  
 Oil Well  Gas Well  Other: INJECTION

8. Well Name and No.  
RATHERFORD 20-34

2. Name of Operator  
RESOLUTE ANETH, LLC  
Contact: SHERRY GLASS  
E-Mail: sglass@resoluteenergy.com

9. API Well No.  
43-037-15750-01-S1

3a. Address  
1675 BROADWAY SUITE 1950  
DENVER, CO 80202

3b. Phone No. (include area code)  
Ph: 303-573-4886 Ext: 1580  
Fx: 303-623-3628

10. Field and Pool, or Exploratory  
ANETH

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
Sec 20 T41S R24E SWSE 0774FNL 0617FWL

11. County or Parish, and State  
SAN JUAN COUNTY, UT

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

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

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

Resolute Aneth, LLC submits that the Ratherford Unit 20-34 was plugged and abandoned as follows:  
 1). A cement bond log was run across the interval 900? to surface. Top of cement was identified as 648?  
 2). Perforated the 2 7/8? tubing at 615?  
 3). Ran 1? tubing to 5202?  
 4). Pumped 37 bbls (150 sx) of cement down the 1? tubing and up the 1? tubing x 2 7/8? tubing until good cement was detected at the surface. Approximately 4 bbls of cement was circulated. Closed the backside valve and continued cementing into the perforations and through the 2 7/8? tubing x 5 ?? casing annulus until good cement was detected. Circulated approximately 4 bbls to the surface. The Job was witnessed by NNBLM and NNMinerals representatives.  
 7). Cut the wellhead off and welded a metal plate to the casing stub. Installed a dry hole marker. Filled in around the wellhead with soil.

14. I hereby certify that the foregoing is true and correct.  
**Electronic Submission #128072 verified by the BLM Well Information System For RESOLUTE ANETH, LLC, sent to the Farmington Committed to AFMSS for processing by STEVE MASON on 01/13/2012 (11SXM1113SE)**

Name (Printed/Typed) SHERRY GLASS Title SR REGULATORY TECHNICIAN

Signature (Electronic Submission) Date 01/12/2012

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved By **ACCEPTED** STEPHEN MASON Title PETROLEUM ENGINEER Date 01/13/2012

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office Farmington

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\***

Sundry Number: 24264 API Well Number: 43037157500000

**Additional data for EC transaction #128072 that would not fit on the form**

**32. Additional remarks, continued**

9). Plugging activity was completed 01/06/2012.

Attachment: Well bore diagram. Final Status.

**Revisions to Operator-Submitted EC Data for Sundry Notice #128072**

	<b>Operator Submitted</b>	<b>BLM Revised (AFMSS)</b>
Sundry Type:	ABD FAN	ABD SR
Lease:	1420603353	1420603353
Agreement:	1420603353	7960041920 (UTU68931A)
Operator:	RESOLUTE ANETH, LLC 1675 BROADWAY SUITE 1950 DENVER, CO 80202 Ph: 303-573-4886	RESOLUTE ANETH, LLC 1675 BROADWAY SUITE 1950 DENVER, CO 80202 Ph: 303.534.4600
Admin Contact:	SHERRY GLASS SR REGULATORY TECHNICIAN E-Mail: sglass@resoluteenergy.com  Ph: 303-573-4886 Ext: 1580 Fx: 303-623-3628	SHERRY GLASS SR REGULATORY TECHNICIAN E-Mail: sglass@resoluteenergy.com  Ph: 303-573-4886 Ext: 1580 Fx: 303-623-3628
Tech Contact:	SHERRY GLASS SR REGULATORY TECHNICIAN E-Mail: sglass@resoluteenergy.com  Ph: 303-573-4886 Ext: 1580 Fx: 303-623-3628	SHERRY GLASS SR REGULATORY TECHNICIAN E-Mail: sglass@resoluteenergy.com  Ph: 303-573-4886 Ext: 1580 Fx: 303-623-3628
Location: State: County:	UT SAN JUAN	UT SAN JUAN
Field/Pool:	GREATER ANETH	ANETH
Well/Facility:	RATHERFORD UNIT 20-34 Sec 20 T41S R24E Mer NAV SWSE 774FNL 617FWL	RATHERFORD 20-34 Sec 20 T41S R24E SWSE 0774FNL 0617FWL

RATHERFORD UNIT # 20-34 HZ  
 GREATER ANETH FIELD  
 Surface Loc: 660' FSL & 1850' FEL  
 SEC 20-T41S-R24E  
 SAN JUAN COUNTY, UTAH  
 API 43-037-15750  
 PRISM 0043102

INJECTOR

Permanent Abandonment

Final

**B.H. Location Lateral #1:**  
 774' N & 617' W of Surface Location

**B.H. Location Lateral #2:**  
 997' S & 1138' E of Surface Location

**Final Plug:**  
 1.00' Tbg set at ~ 5202', cemented inside/outside with 152 sxs (208 cf) class G cement. Circulated 4 bbls of cement each to the surface on tbg x tbg annulus and tbg x csg annulus.

