

Scout Report sent out

Noted in the NID File

Location map pinned

Approval or Disapproval Letter

Date Completed, P. & A, or operations suspended

Pin changed on location map

Affidavit and Record of A & P

Water Shut-Off Test

Gas-Oil Ratio Test

Well Log Filed

2 ✓
1 ✓
1 ✓
1 ✓

FILE NOTATIONS

Entered in NID File

Entered On S R Sheet

Location Map Pinned

Card Indexed

I W R for State or Fee Land

✓
✓
✓
✓

Checked by Chief

Copy NID to Field Office

Approval Letter

Disapproval Letter

✓

COMPLETION DATA:

Date Well Completed

OW ✓ WW TA

GW OS PA

3-2-58

Location Inspected

Bond released

State of Fee Land

LOGS FILED

Driller's Log 4-22-58

Electric Logs (No.) 4

E I E-L ✓ GR GR-N Micro 3 ✓
Lat. Mi-L. Sonic Other 3

(SUBMIT IN TRIPLICATE)

Indian Agency Navajo

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Allottee Tribal

Lease No. 14-20-603-355

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)

Denver, Colorado December 18, 19 57

Navajo "A"
Well No. 6 is located 1820 ft. from N line and 500 ft. from W line of sec. 15

SW/4 NW/4 Sec. 15 41S 24E S.L.M.
(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)
White Mesa San Juan Utah
(Field) (County or Subdivision) (State or Territory)

The elevation of the ~~bottom~~ ^{ground} floor above sea level is 4667 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 1400', set 8-5/8" casing and cement to surface. Drill 7-7/8" hole to TD of 5700', run 5 1/2" casing and cement with approximately 300 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 1200 Denver Club Building

Denver 2, Colorado

By W. M. Schul
Title Division Supt.

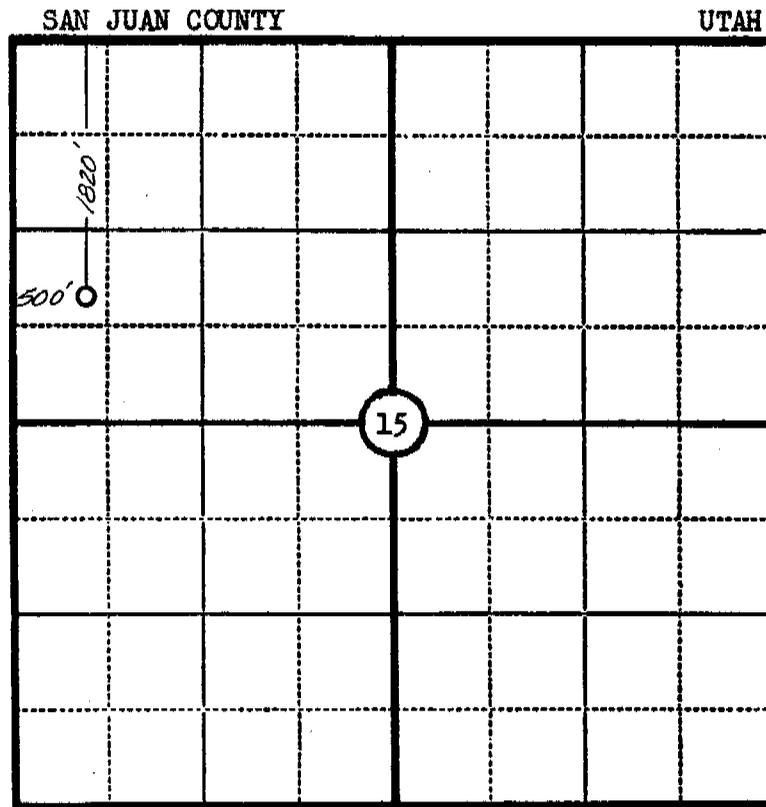
Company..... PHILLIPS PETROLEUM COMPANY

Lease..... NAVAJO Well No. A-6

Sec..... 15 T 41 SOUTH R 24 EAST S.L.M.

Location..... 1820' FROM THE NORTH LINE AND 500' FROM
THE WEST LINE.

Elevation..... 4666.6 UNGRADED GROUND



Scale—4 inches equal 1 mile.

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

James P. Lee

Seal:

Registered Land Surveyor.

JAMES P. LEESE

UTAH REG. NO. 1472

Surveyed 15 DECEMBER , 19.57

SAN JUAN ENGINEERING COMPANY, FARMINGTON, N. M.

December 20, 1957

Phillips Petroleum Company
1200 Denver Club Building
Denver 2, Colorado

Attention: W. M. Schul, Division Superintendent

Gentlemen:

This is to acknowledge receipt of your notice of intention to drill Well No. Navajo A-6, which is to be located 1820 feet from the north line and 500 feet from the west line of Section 15, Township 41 South, Range 24 East, SEEM, San Juan County, Utah.

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

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

Yours very truly,

OIL & GAS CONSERVATION COMMISSION

CLEON B. FREIGHT
SECRETARY

GNF:cn

cc: Phil McGrath
USGS, Farmington,
New Mexico

2

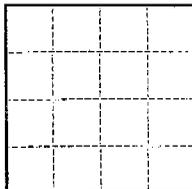
(SUBMIT IN TRIPLICATE)

Indian Agency Navajo

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Allottee Tribal

Lease No. 14-20-603-355



SUNDRY NOTICES AND REPORTS ON WELLS

Handwritten: 27-58

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)

Denver, Colorado January 10, 1958

Navajo "A"
Well No. 6 is located 1820 ft. from N line and 500 ft. from W line of sec. 15

SW/4 NW/4 Sec. 15
(¼ Sec. and Sec. No.)

41S
(Twp.)

24E
(Range)

S.L.M.
(Meridian)

White Horse
(Field)

San Juan
(County or Subdivision)

Utah
(State or Territory)

The elevation of the derrick floor above sea level is 4679 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 to 1502'. Ran 8-5/8" OD 24# J-55 casing set at 1501' RKB. Cemented with 350 cu.ft. 12.4# slurry; 20% Biscol "D", 2% calcium chloride, plus 2# per sack Tuf Plug and 1/4# per sack Flocale, plus 150 cu.ft. neat cement; equals 145 sacks Ideal, 55 sacks Biscol "D", 290# Tuf Plug, 36# Flocale and 272# calcium Chloride plus 145 sacks Ideal regular. Pumped plug to 149' at 1:30 A.M. December 26, 1957. WOC 24 hours, tested casing with 500# for 30 minutes, held 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 Company

Address 1200 Denver Club Building

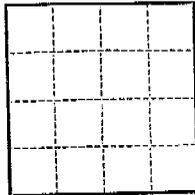
Denver 2, Colorado

By *W. M. Schul*
W. M. Schul
Title Division Superintendent

Handwritten: W 15

(SUBMIT IN TRIPLICATE)

Indian Agency Navajo



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Allottee Tribal

Lease No. 14-20-603-355

71-17
2-17

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)

Denver, Colorado February 7, 1958

Well No. 6 is located 1820 ft. from N line and 500 ft. from EX line of sec. 15

SW/4 N1/4 Sec. 15 41S 24E S.L.M.
(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)
White Mesa San Juan Utah
(Field) (County or Subdivision) (State or Territory)

The elevation of the derrick floor above sea level is 4679 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 to 5715'. Ran 5-1/2" CD 15.5# and 1 1/2" J-55 casing set 5713' RKB. Cemented with 323 sacks Ideal regular cement, 244 sacks Dical "D", 1218# calcium chloride. Pumped plug to 5679' at 4:55 a.m. 1-16-58. WOC 24 hours, tested casing with 500# for 30 minutes, held 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 Company

Address 1200 Denver Club Building

Denver 2, Colorado

By [Signature]
W. M. Schell
Division Superintendent

Title _____

cc W

PHILLIPS PETROLEUM COMPANY

1200 Denver Club Building
Denver 2, Colorado

April 24, 1958

Mr. Cleon B. Feight
Secretary
Utah Oil & Gas Conservation Commission
State Capitol Building
Salt Lake City, Utah

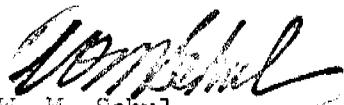
Dear Mr. Feight:

Enclosed herewith you will find two copies of each of the following logs run on Phillips Petroleum - Aztec Oil and Gas Company's Navajo "A" #6, San Juan County, Utah.

1. Schlumberger Induction-Electric Log (Run #1)
2. Schlumberger Induction-Electric Log (Run #2)
3. Schlumberger Micro Log (Run #1)
4. Schlumberger Micro Log (Run #2)
5. Welox Gamma-Ray Neutron Log

Very truly yours,

PHILLIPS PETROLEUM COMPANY


W. M. Schul
Division Superintendent

CCK:lb

Enclosures

Confidential
cc of 4-30-58

(SUBMIT IN TRIPLICATE)

Indian Agency Navajo

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Allottee Tribal
Lease No. 14-20-603-355

SUNDRY NOTICES AND REPORTS ON WELLS

1-27-58

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)

Denver, Colorado December 18, 19 58

Well No. Navajo "A" 6 is located 1820 ft. from N line and 500 ft. from W line of sec. 15
SW/4 NW/4 Sec. 15 41S 24E S.L.M.
(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)
White Mesa San Juan Utah
(Field) (County or Subdivision) (State or Territory)

The elevation of the derrick floor above sea level is 4679 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 17 1/2" h/c to 182'. Ran 13-3/8" ID 27.1# SW SJ casing set at 175', cemented with 175 sacks Ideal regular cement. Pumped plug to 152', had 30 sacks returns. WOC 24 hours, tested casing with 500# for 30 minutes, held OK. Drilled plug, tested again with 500# for 30 minutes, held 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 Company
 Address 1200 Denver Club Building
Denver 2, Colorado

By [Signature]
W. N. Setal
 Title Division Superintendent

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

14-20-603-355

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Navajo

7. UNIT AGREEMENT NAME

SH-I-4192

8. FARM OR LEASE NAME

Rutherford Unit

9. WELL NO.

15-12

10. FIELD AND POOL, OR WILDCAT

Greater Aneth

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

Sec. 15-T41S-R24E SIM

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
1820' FWL & 540' FWL, Sec. 15

14. PERMIT NO.

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

4678 RKB

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

WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
RECOMPLETION ACIDIZING <input checked="" type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
(Other) <input type="checkbox"/>	

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

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

See Attached for Details of Job

Production Before: 73 BOPD, Gas - No Test, 8 MFPD

Production After: 160 BOPD, Gas - No Test, 37 MFPD

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

Original signed by:

SIGNED F. C. MORGAN

TITLE Production Superintendent

DATE May 24, 1973

(This space for Federal or State office use)

APPROVED BY _____
CONDITIONS OF APPROVAL, IF ANY:

TITLE _____

DATE _____

- 3 - USGS, Farmington, New Mexico
- 2 - Utah O&G CC, Salt Lake City, Utah
- 1 - Superior Oil Co., Cortez, Colo. *See Instructions on Reverse Side
- 1- File

- 1 - B'Ville E&P
- 1 - Denver E&P
- 1 - C. M. Boles
- 1 - File

ANNUAL REPORT INDIVIDUAL WELL STATUS

Lease Ratherford Unit Well No. 15-12 Authorization No. Expense

Summary of Work Performed:

May 7 through May 19, 1973 - Acidize Desert Creek Zone I Perfs 5508 to 5581 OA with 10,000 gals Regular 15% HCL Acid in 4 stages with 800 gals oil with 2#/gal blocking agent containing 1/4# Wide Range, 1/2# Buttons and 1-1/4# Moth Balls.

AVERAGE DAILY PRODUCTION				
	Field and Formation	Oil	Gas	Water
Before Work	Greater Aneth - Paradox (Desert Creek Zone I)	73	NT	8
After Work	Greater Aneth - Paradox (Desert Creek Zone I)	160	NT	37
Before Work				
After Work				

DATE P.T.D.

DAILY REPORT OF WORK PERFORMED

1973
MAY
10

RATHERFORD UNIT NO. 15-12 PTD 5675 PREP TO RUN FREE PT. FIRST REPORT 5/8/73 AUTHORITY--EXPENSE. RKB ELEV 4678. MI AND RU R AND R WELL SERVICE UNIT 5/7/73 TO ACIDIZE DESERT CREEK ZONE I PERFS. 5508 TO 5581 OA WITH 10,000 GAL. REG. 15 PER CENT HCL ACID IN 4 STAGES W/ 800 GAL OIL W/ 2 LBS/GAL BLOCKING AGENT CONTAINING 1/4 LB WIDE RANGE, 1/2 LB BUTTONS AND 1-1/4 LB MOTHBALLS. LOCATION--1820 FT FNL, 500 FT FWL. SEC. 15-41S-24E SAN JUAN COUNTY, UTAH. PULLED RODS AND PUMP. UNABLE TO PULL TBG. TBG STUCK. LAST WELL TEST--3/1/73. PMPD 73 B0, 8 BW IN 24 HRS. PMPD FROM BTM. LAST DAY PRODUCED 5/6/73..

11

RATHERFORD UNIT NO. 15-12 PTD 5675. 5/9/73 PREP TO ACIDIZE. PMPD 150 BW DOWN TBG AND DID NOT FREE STUCK TBG. RU MCCULLOUGH T1. CO. RAN FREE POINT INDICATOR - TBG FREE AT SEATING NIPPLE. RAN CHEMICAL TBG CUTTER. CUT OFF 2-7/8" TBG AT 5608. PLD TBG, LEFT /TOP TO BOTTOM/ 5-1/2 FT OF 2-1/2" TBG, 1.18 FT - SEATING NIPPLE, 2.12 FT TBG SUB, 1 - MARSH GAS ANCHOR, 18.20 FT IN HOLE - TOP AT 5608 FT., BOTTOM AT 5635 FT. RAN TBG W/ BAKER RET. BP AND BAKER RET. PKR..

12-14

RATHERFORD UNIT NO. 15-12 PTD 5675. PREP TO ACIDIZE. SET RET. BP AT 5602, RET. PKR AT 5487. BTM TAIL PIPE AT 5558. FILLED ANNULUS W/ OIL. SDON..

15

RATHERFORD 15-12 5675 PTD 5675. ACIDIZED ZONE I PERFORATIONS 5508 FT - 21 FT AND 5544 FT - 81 FT WITH 9500 GALLONS HALLIBURTON 15 PER CENT HCL ACID IN FOUR STAGES AS FOLLOWS--

FIRST STAGE - PMPD 200 GALS OIL WITH 2 LB GAL BLOCKING AGENT, 250 GALS OIL SPACER, 2500 GALS ACID, 2000 GALS OIL FLUSH, 200 GALS OIL WITH 2 LB GAL. BLOCKING AGENT, 250 GALS OIL SPACER. CAUGHT UP WITH FLUID, AND BLOCKING AGENT HIT FORMATION ALMOST SIMULTANEOUSLY. HAD GOOD INCREASE IN PRESSURE, BUT AMOUNT OF INCREASE NOT DEFINITELY DETERMINED. BLOCK IN FORMATION 6 BPM AT 3100 LBS. ACID IN FORMATION 6 BPM AT 3000 LBS. 100 LBS INCREASE WHEN 2ND BLOCK HIT FORMATION.

May 24, 1973
Date Prepared

District Approval

DAILY REPORT DETAILED

LEASE Ratherford Unit WELL NO. 15-12 SHEET NO. 2

DATE TOTAL DEPTH NATURE OF WORK PERFORMED

15
CONT.

SECOND STAGE - 2500 GALS ACID, 2000 GALS OIL FLUSH, 400 GALS OIL WITH 2 LB GAL. BLOCKING AGENT, 250 GALS OIL SPACER. ACID IN FORMATION 4-1/2 BPM AT 3000 LBS. 150 LBS INCREASE WHEN BLOCK HIT FORMATION.

THIRD STAGE - 2500 GALS ACID, 2000 GALS OIL FLUSH, 400 GALS OIL WITH 2 LB/GAL. BLOCKING AGENT, 250 GALS OIL SPACER. ACID IN FORMATION 4-1/2 BPM AT 3100 LBS TO 2500 LBS. 700 LBS INCREASE WHEN BLOCK HIT FORMATION.

FOURTH STAGE - 2000 GALS ACID, 3500 GAL. OIL FLUSH. WITH APPROX 5 BBLS ACID IN FORMATION 4-1/2 BPM AT 3500 LBS, TBG AND CSG ANNULUS COMMUNICATED. PMPD REMAINDER OF ACID AND OIL FLUSH AT 2 TO 3-1/2 BPM AT 1900 LBS TO 1500 LBS TBG PRESSURE, 2250 LBS TO 1700 LBS CSG PRESSURE. ISIP 1500 LBS, 15 MIN SIP 950 LBS. USED 2 GAL. PER 1000 GAL INHIBITOR AND DEMULSIFIER IN ACID.

JOB COMPLETE AT 10/15 A.M. 5/10/73. TOTAL LOAD PMPD 345 BBLS. OIL, 226 BBLS ACID WATER. BLOCKING AGENT USED, 1/4 LB WIDE-RANGE, 1/2 LB UNIBUTTONS AND 1-1/4 LB MOTHBALLS PER GAL OIL. SWABBED 6 HRS, 126 BBLS LOAD OIL, 14 BBLS ACID WATER. SWAB HANGING AT APPROX 4900 FT AND DAMAGING RUBBERS. 219 BBLS LOAD OIL AND 212 BBLS ACID WATER TO RECOVER.

16

RATHERFORD UNIT NO. 15-12 PTD 5675. 5/12/73. PLD TBG AND PKR AND RERAN TBG. 5/13/73. RAN RODS AND PUMP. PMPD 18 HRS. 125 BLO, 26 BAW 11.6-64-1-3/4. 94 BLO 186 BAW LEFT TO REC..

17

RATHERFORD UNIT NO. 15-12 PTD 5675. CONT. TST. 5/14/73 PMPD 24 HRS. 94 BLO, 69 BO, 36 BAW. OIL LOAD REC. 150 BAW LEFT TO REC..

18

RATHERFORD UNIT NO. 15-12 PTD 5675. 5/15/73, PMPD 10 HRS. 100 BO, 15 BAW. DOWN 14 HRS. HIGH LEVEL. 135 BAW LEFT TO REC..

19-21

RATHERFORD UNIT NO. 15-12 PTD 5675. 5/16/73 PMPD 22 HRS. 164 BO, 20 BAW. 115 BAW LEFT TO REC..

22

RATHERFORD UNIT NO. 15-12 PTD 5675. 5/17/73 CONT. TST. PMPD 24 HRS. 142 BO, 68 BAW. 47 BAW LEFT TO RECOVER..

23

RATHERFORD UNIT NO. 15-12 PTD 5675 5/18/73. PMPD 24 HRS. 165 BO, 38 BAW. 9 BAW TO REC. 5/19/73 PMPD 21 HRS. 134 BO, 9 BAW 24 BW. 5/20/73 PMPD 24 HRS. 160 BO, 37 BW 11.6-64-1-3/4. OIL WELL PRODUCING FROM DESERT CREEK ZONE I PERF. 5508-81 0A AND DESERT CREEK ZONE II PERFS. 5629-39 PARADOX FORMATION. GREATER ANETH FIELD, SAN JUAN COUNTY, UTAH. DROP FROM REPORT..

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

14-20-603-355

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Navajo

7. UNIT AGREEMENT NAME

SW - 1 - 4132

8. FARM OR LEASE NAME

Katherford Unit

9. WELL NO.

15-12

10. FIELD AND POOL, OR WILDCAT

Greater Aneth-Paradox

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

Sec. 15-T41S-R24E, SLM

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

1820' FNL and 500' FWL (SW NW)

14. PERMIT NO.

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

4678 RKB

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.)*

It is proposed to perforate the upper Ismay 5368-72 and 5393-5411 Schlumberger Micro Log measurements (5376-80 and 5406-13 Welex GR-Collar Log measurements). Acidize upper Ismay w/6000 gals 15% in two stages/return to commingled Zone I and Ismay production.

Present Production: 126 BOPD, 34 BWP, 65 MCFGPD

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

SIGNED

F. C. Morgan
F. C. Morgan

TITLE

Production Superintendent

DATE

June 17, 1974

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

- 3 - USGS - Farmington, NM
- 2 - Utah O&G CC, Salt Lake City, UT
- 1 - File

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLE
(Other instructions
verse 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 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
1820' FNL and 500' FWL

14. PERMIT NO. _____ 15. ELEVATIONS (Show whether DF, WT, GR, etc.)
RKS 4678

5. LEASE DESIGNATION AND SERIAL NO.
14-20-603-247

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Navajo

7. UNIT AGREEMENT NAME
SW-1-4192

8. FARM OR LEASE NAME
Rotherford Unit

9. WELL NO.
15-12

10. FIELD AND POOL, OR WILDCAT
Greater Aneth

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 15-41S-24E

12. COUNTY OR PARISH
San Juan

13. STATE
Utah

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

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

See attached

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

SIGNED *F. C. Morgan* TITLE Production Superintendent DATE August 22, 1970

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

- 3-USGS Farmington, NM
- 2-Utah O&G CC, SLC
- 1-Denver
- 1-Superior - Cortez
- 1-File

*See Instructions on Reverse Side

FIN REPORT INDIVIDUAL WELL STAT

Lease Rutherford Unit Well No. 5-12 Authorization No. P-9668

Summary of Work Performed:

Perforated 5376-5380 and 5406-5419. Acidized perms w/6000 Gal 15% HCL. Return well to production.

AVERAGE DAILY PRODUCTION				
	<u>Field and Formation</u>	<u>Oil</u>	<u>Gas</u>	<u>Water</u>
Before Work	<u>Greater Aneth Desert Creek</u>	<u>85</u>	<u>27</u>	<u>7</u>
After Work	<u>Greater Aneth Desert Creek & Ismay</u>	<u>120</u>	<u>37</u>	<u>35</u>
Before Work	_____	_____	_____	_____
After Work	_____	_____	_____	_____

DATE _____ P.T.D.

DAILY REPORT OF WORK PERFORMED

See Attached

- 1 - B'Ville E & P
- 1 - Denver
- 1 - File
- 1 - R. N. Hughes
- 1 - G. R. Hudson

August 22, 1974
Date Prepared

[Signature]
District Approval

DAILY REPORT DETAILED

LEASE Ratherford Unit WELL NO. 15-12 SHEET NO. 1

DATE TOTAL DEPTH NATURE OF WORK PERFORMED

1974
July
18

RATHERFORD UNIT NO. 15-12 FIRST REPORT PTD 5675. LOC/ 1820 FNL AND 500 FWL SEC. 15-41S-24E SAN JUAN CO., UTAH. 5 1/2 IN. CSG AT 5714, PERFS 5499 TO 5630. LEASE NO. 933028. SUB AREA CODE 626 AN ACTIVE OIL WELL IN DESERT CREEK RESERVOIR. LAST WELL TEST 7/12/74 85 BOPD, 7 BWPD 27 MCFGD. AUTHORIZATION WP 9668. MI AND RU R AND R WS 7/16/74 12 NOON. PULLED RODS AND TBG. PREP TO PERFORATE. SDON..

18

RATHERFORD UNIT NO. 15-12 PTD 5675. PREP TO ACIDIZE. RU DRESSER ATLAS, PERFORATED 5376-80 AND 5406-19 W/2 JET SHOTS PER FT. 4 IN. GOLDEN JET CSG GUN. RAN RET BP AND PKR, SET BP AT 5450 SDON..

19

RATHERFORD UNIT NO. 15-12 PTD 5675. PREP TO SWAB. TEST BP TO 600 LB. OK, SET PKR AT 5343, TAIL PIPE AT 5408. RU DOWELL WELL, ACIDIZED PERFS 5376-80 AND 5406-19 W/6000 GAL 15 PERCENT HCL AS FOLLOWS, 3000 GAL ACID, 10 BPM AT 2700 PSI, 3000 GAL SW 10 BPM AT 2700 PSI. 800 LB. BLOCK IN 400 GAL SW, RATE DROPPED TO 5 BPM AT 3800 PSI WHEN BLOCK HIT. 300 GAL ACID 5 BPM AT 3800 PSI 4500 GAL SW 9 BPM AT 3300 PSI. BLOCK CONTAINED 1/4 LB. OS-90 WIDE RANGE, 1/2 LB. OS-90 BUTTONS 1 1/4 LB. MOTH BALLS PER EACH 2 LB. ALL FLUID CONTAINED 2 GAL F-75 PER 1000 GAL. ISIP 1700 LB, 15 MIN SIP "0" SWAB 5 HRS. REC 76 BLW. 188 BSW AND 143 BBLs ACID WATER LOAD TO REC. SDON..

20-22

RATHERFORD UNIT NO. 15-12 PTD 5675. PREP TO RUN RODS AND START PMPG 7/20 SWB. 8 HRS. REC 9 BO, 84 BLW. 7/21 COOH W/TREATING PKR AND RET. BP. WIH W/TBG. SDON. 7/22 SD OVER SUNDAY..

23

RATHERFORD UNIT NO. 15-12 PTD 5675. RAN RODS AND PMP. PMPG ON TEST, NO GAUGE..

24

RATHERFORD UNIT NO. 15-12 PTD 5675. CONT. TEST. PMPD 24 HRS. 23 BO, 170 BLW. ALL LOAD WTR REC..

25

RATHERFORD UNIT NO. 15-12 PTD 5675. CONT. TEST. PMPD 24 HRS. 103 BO AND 70 BW..

26

RATHERFORD UNIT NO. 15-12 PTD 5675. CONT. TEST PMPD 24 HRS. 114 BO AND 54 BW..

27-29

RATHERFORD UNIT NO. 15-12 PTD 5675. CONT. TSTG. 7/27/74 PMPD 104 BO, 53 BW, 24 HRS. 7/28/74 PMPD 120 BO, 31 BW, 24 HRS. 7/29/74 PMPD 113 BO, 37 BW, 24 HRS..

30

RATHERFORD UNIT NO. 15-12 PTD 5675. PMPD 120 BO, 35 BW, 24 HRS. COMPLETED AS PRODUCING OIL WELL IN GREATER ANETH FIELD, DESERT CREEK ZONE I, II, AND ISMAY FORMATION. SUR AREA CODE 626. FINAL REPORT..

SUNDRY NOTICES AND REPORTS ON WELLS

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

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

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

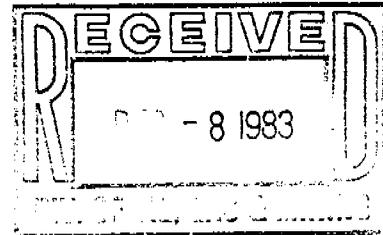
NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	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) <input type="checkbox"/>	

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

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

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.

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:

*See Instructions on Reverse Side

<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

RECEIVED
MAY 16 1986

Attn: R. J. Firth
Associate Director

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

<p>SUNDRY NOTICES AND REPORTS ON WELLS (Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)</p>		<p>3. LEASE DESIGNATION & SERIAL NO.</p>
<p>1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/></p>		<p>6. IF INDIAN, ALLOTTEE OR TRIBE NAME NAVAJO TRIBAL</p>
<p>2. NAME OF OPERATOR MOBIL OIL CORPORATION</p>		<p>7. UNIT AGREEMENT NAME RATHERFORD UNIT</p>
<p>3. ADDRESS OF OPERATOR P. O. BOX 633 MIDLAND, TX 79702</p>		<p>8. FARM OR LEASE NAME</p>
<p>4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface <input type="checkbox"/> At proposed prod. zone <input type="checkbox"/></p>		<p>9. WELL NO.</p>
<p>10. FIELD AND POOL, OR WILDCAT GREATER ANETH</p>		<p>11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA</p>
<p>14. API NO.</p>	<p>15. ELEVATIONS (Show whether DF, RT, GR, etc.)</p>	<p>12. COUNTY SAN JUAN</p>
		<p>13. STATE UTAH</p>

REGISTERED

SEP 15 1993

DIVISION OF OIL, GAS & MINING

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	FULL 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) CHANGE OF OPERATOR <input type="checkbox"/>	
(Other) <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 JULY1, 1993, MOBIL OIL CORPORATION IS THE OPERATOR OF THE RATHERFORD UNIT. ATTACHED ARE THE INDIVIDUAL WELLS.

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

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

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

MONTHLY OIL AND GAS DISPOSITION REPORT

OPERATOR NAME AND ADDRESS:

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

UTAH ACCOUNT NUMBER: N7370

REPORT PERIOD (MONTH/YEAR): 7 / 93

AMENDED REPORT (Highlight Changes)

**931006 updated. jrc*

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								
	OIL								
	GAS								
TOTALS				249710	243825	5885			

RECEIVED

SEP 13 1993

DIVISION OF
OIL, GAS & MINING

COMMENTS: *PLEASE NOTE ADDRESS change. Mobil ~~ASU~~ 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
 Telephone Number: 303.565.2212
~~214.658.2578~~

Name and Signature: L. S. Sheffield

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.

Like Rotherford Unit (GC)

RECEIVED
BLM

JUL 27 AM 11:44

070 FARMINGTON, NM

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

ARES/543

JUL 28 1993

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

MINERALS DIVISION
NO. 188
DATE
BY
RECEIVED
SPS
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 Rotherford 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
DESIGNATION OF OPERATOR

RECEIVED
BLM

JUN 27 11:44

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

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

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
APPROVED BY TITLE DATE
7/9/93

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

100% Indian Lands

TOTAL 12,909.74

100.0000000

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

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

I hereby certify that this report is true and complete to the best of my knowledge. Date: 8/11/93
Name and Signature: PAT KONKEL *Pat Konkell* Telephone Number: 505 599-3452

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/017-93
2	DES 58-FILE
3	VLC
4	RJBY
5	FILE
6	FILE

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: <u>**SEE ATTACHED**</u>	API: <u>4303715715</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

- 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).
- 2. State Lands and the Tax Commission have been notified through normal procedures of entity changes.

BOND VERIFICATION (Fee wells only)

- 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 11-17 1993. If yes, division response was made by letter dated 11-17 1993.

LEASE INTEREST OWNER NOTIFICATION RESPONSIBILITY

- 1. (Rule R615-2-10) The former operator/lessee of any fee lease well listed above has been notified by letter dated 11-17 1993, 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.
- 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 1993.

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/Btm Approved 7-9-93.

✓ 12W-44	43-037-16405	14-20-603-246A	SEC. 12, T41S, R23E	SE/SE 660 FSL; 660 FEL
✓ 12W-44A	43-037-31543	14-20-603-246A	SEC. 12, T41S, R23E	SE/SE 807 FEL; 772 FSL
✓ 13-11W	43-037-31152	14-20-603-247A	SEC. 13, T41S, R23E	NW/NW 500 FNL; 660 FWL
✓ 13-12	43-037-31127	14-20-603-247A	SEC. 13, T41S, R23E	SW/NW 1705 FNL; 640 FWL
✓ 13W-13	43-037-15851	14-20-603-247A	SEC. 13, T41S, R23E	NW/SW 1980 FSL; 4620 FEL
✓ 13-14	43-037-31589	14-20-603-247A	SEC. 13, T41S, R23E	660 FSL; 660 FWL
✓ 13-21	43-037-31128	14-20-603-247A	SEC. 13, T41S, R23E	NE/NW 660 FNL; 1920 FWL
✓ 13W-22	43-037-15852	14-20-603-247A	SEC. 13, T41S, R23E	SE/NW 1988 FNL; 3300 FEL
✓ 13-23	43-037-31129	14-20-603-247A	SEC. 13, T41S, R23E	NE/SW 1980 FSL; 1930 FWL
13W-44	43-037-15853	14-20-603-247	SEC. 13, T41S, R23E	600 FSL; 3300 FEL
✓ 13W-32	43-037-16406	14-20-603-247A	SEC. 13, T41S, R23E	1881 FNL; 1979 FEL
✓ 13W-33	43-037-15855	14-20-603-247A	SEC. 13, T41S, R23E	NW/SE 1970 FSL; 1979 FEL
✓ 13W-34	43-037-31130	14-20-603-247A	SEC. 13, T41S, R23E	SW/SE 660 FSL; 1980 FEL
✓ 13-41	43-037-15856	14-20-603-247A	SEC. 13, T41S, R23E	NE/NE 660 FNL; 660 FEL
✓ 13W-42	43-037-15857	14-20-603-247A	SEC. 13, T41S, R23E	SE/NE 2139; 585 FEL
✓ 13-43	43-037-31131	14-20-603-247A	SEC. 13, T41S, R23E	NE/SE 1700 FSL; 960 FEL
✓ 13W-44	43-037-16407	14-20-603-247A	SEC. 13, T41S, R23E	SE/SE 635 FSL; 659 FEL
14-02	NA	14-20-603-4037	SEC. 11, T41S, R23E	SW/SW 660 FSL; 660 FEL
✓ 14-32	43-037-15858	14-20-603-247A	SEC. 14, T41S, R23E	2130 FNL; 1830 FEL
✓ 14-41	43-037-31623	14-20-603-247A	SEC. 14, T41S, R23E	NE/NE 521 FEL; 810 FNL
✓ 14W-42	43-037-15860	14-20-603-247A	SEC. 14, T41S, R23E	SE/NE 1976 FNL; 653 FEL
✓ 14W-43	43-037-16410	14-20-603-247A	SEC. 14, T41S, R23E	3300 FSL; 4770 FEL
✓ 14-33	43-037-15859	14-20-603-247	SEC. 14, T41S, R23E	2130 FSL; 1830 FEL
✓ 15-12	43-037-15715	14-20-603-355	SEC. 15, T41S, R24E	1820 FNL; 500 FWL
✓ 15W-21	43-037-16411	14-20-603-355	SEC. 15, T41S, R24E	660 FNL; 1820 FWL
✓ 15-22	43-037-30449	14-20-603-355	SEC. 15, T41S, R24E	SE/NW, 1980 FNL; 2050 FWL
✓ 15-32	43-037-15717	14-20-603-355A	SEC. 15, T41S, R24E	1980 FNL; 1980 FEL
✓ 15-33	43-037-15718	14-20-603-355	SEC. 15, T41S, R24E	NW/SE 1650 FSL; 1980 FEL
✓ 15-41	43-037-15719	14-20-603-355	SEC. 15, T41S, R24E	660 FNL; 660' FEL
✓ 15-42	43-037-30448	14-20-603-355	SEC. 15, T41S, R24E	SE/NE 2020 FNL; 820 FEL
✓ 16W-12	43-037-15720	14-20-603-355	SEC. 16, T41S, R24E	SW/NW 1880 FNL; 660 FWL
✓ 16-13	43-037-31168	14-20-603-355	SEC. 16, T41S, R24E	1980 FSL; 660 FWL
✓ 16W-14	43-037-15721	14-20-603-355	SEC. 16, T41S, R24E	SW/SW 660 FSL; 660 FWL
✓ 16W-21	43-037-16414	14-20-603-355	SEC. 16, T41S, R24E	NE/NW 660 FNL; 1880 FWL
✓ 16W-23	43-037-15722	14-20-603-355	SEC. 16, T41S, R24E	NE/SW 1980 FSL; 1980 FWL
✓ 16-32	43-037-15723	14-20-603-355	SEC. 16, T41S, R24E	1980 FNL; 1980' FEL
✓ 16-34	43-037-15724	14-20-603-355	SEC. 16, T41S, R24E	660 FNL; 1980' FEL
✓ 16-41	43-037-15725	14-20-603-355	SEC. 16, T41S, R24E	660 FNL; 660 FEL
✓ 16W-43	43-037-16415	14-20-603-355	SEC. 16, T41S, R24E	NE/SE 2140 FSL; 820 FEL
✓ 17-11	43-037-31169	14-20-603-353	SEC. 17, T41S, R24E	NW/NW 1075' FNL; 800' FWL
✓ 17W-12	43-037-15726	14-20-603-353	SEC. 17, T41S, R24E	SW/NW 1980' FNL; 510' FWL
✓ 17-13	43-037-31133	14-20-603-353	SEC. 17, T41S, R24E	NW/SW 2100' FSL; 660' FWL
✓ 17W-14	43-037-15727	14-20-603-353	SEC. 17, T41S, R24E	SW/SW 660' FSL; 660' FWL
✓ 17W-21	43-037-16416	14-20-603-353	SEC. 17, T41S, R24E	510' FNL; 1830' FWL
✓ 17-22	43-037-31170	14-20-603-353	SEC. 17, T41S, R24E	1980' FNL; 1980' FWL
✓ 17W-23	43-037-15728	14-20-603-353	SEC. 17, T41S, R24E	NE/SW 1980' FWL; 1880' FSL
✓ 17-31	43-037-31178	14-20-603-353	SEC. 17, T41S, R24E	NW/NE 500' FNL; 1980' FEL
✓ 17-32W	43-037-15729	14-20-603-353	SEC. 17, T41S, R24E	SW/NE 1830' FNL; 2030' FEL
✓ 17-33	43-037-31134	14-20-603-353	SEC. 17, T41S, R24E	NW/SE 1980' FSL; 1845' FEL
✓ 17-34W	43-037-15730	14-20-603-353	SEC. 17, T41S, R24E	SW/SE 560' FSL; 1880' FEL
✓ 17W-41	43-037-15731	14-20-603-353	SEC. 17, T41S, R24E	610' FNL; 510' FEL
✓ 17-42	43-037-31177	14-20-603-353	SEC. 17, T41S, R24E	SE/NE 1980; FNL, 660' FEL
✓ 17-44	43-037-15732	14-20-603-353	SEC. 17, T41S, R24E	660 FSL; 660' FEL
✓ 17W-43	43-037-16417	14-20-603-353	SEC. 17, T41S, R24E	NE/SE 1980' FSL; 660' FEL
✓ 18-11	43-037-15733	14-20-603-353	SEC. 18, T41S, R24E	NW/NW 720' FNL; 730' FWL
✓ 18-12W	43-037-31153	14-20-603-353	SEC. 18, T41S, R24E	SW/NW 1980' FNL; 560' FWL
✓ 18W-21	43-037-16418	14-20-603-353	SEC. 18, T41S, R24E	NE/NW 660' FNL; 1882' FWL
✓ 18-22	43-037-31236	14-20-603-353	SEC. 18, T41S, R24E	SW/NW 2200' FNL; 2210' FWL
✓ 18W-23	43-037-30244	14-20-603-353	SEC. 18, T41S, R24E	NE/SW 2385' FSL; 2040' FWL
✓ 18W-14	43-037-15735	14-20-603-353	SEC. 18, T41S, R24E	SW/SW 810' FSL; 600' FWL
✓ 18-24	43-037-31079	14-20-603-353	SEC. 18, T41S, R24E	SE/SW 760' FSL; 1980' FWL
✓ 18-31	43-037-31181	14-20-603-353	SEC. 18, T41S, R24E	NW/NE 795' FNL; 2090; FEL
✓ 18W-32	43-037-15736	14-20-603-353	SEC. 18, T41S, R24E	SW/NE 2140' FNL; 1830' FEL
✓ 18-33	43-037-31135	14-20-603-353	SEC. 18, T41S, R24E	NW/SE 1870' FSL; 1980' FEL
✓ 18-34W	43-037-15737	14-20-603-353	SEC. 18, T41S, R24E	SW/SE 780' FSL; 1860 FEL
✓ 18W-41	43-037-15738	14-20-603-353	SEC. 18, T41S, R24E	NE/NE 660' FNL; 660' FEL
✓ 18-42	43-037-31182	14-20-603-353	SEC. 18, T41S, R24E	SE/NE 2120' FNL; 745' FEL
✓ 18W-43	43-037-16419	14-20-603-353	SEC. 18, T41S, R24E	NE/SE 1980' FSL; 660' FEL
✓ 18-44	43-037-31045	14-20-603-353	SEC. 18, T41S, R24E	SE/SE 660' FSL; 660' FEL
✓ 19-11	43-037-31080	14-20-603-353	SEC. 19, T41S, R24E	NW/NW 660' FNL; 660' FWL
✓ 19-12	43-037-15739	14-20-603-353	SEC. 19, T41S, R24E	600' FWL; 1980' FNL
✓ 19-14	43-037-15740	14-20-603-353	SEC. 19, T41S, R24E	600' FSL; 660' FEL

PA'd

PA'd

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)
#9-34								
4303715711	06280	41S 24E 9	DSCR					
#10-12								
4303715712	06280	41S 24E 10	DSCR					
#10-14								
4303715713	06280	41S 24E 10	DSCR					
#10-32								
4303715714	06280	41S 24E 10	DSCR					
#15-12								
4303715715	06280	41S 24E 15	PRDX					
#15-32								
4303715717	06280	41S 24E 15	DSCR					
5-33								
4303715718	06280	41S 24E 15	IS-DC					
#15-41								
4303715719	06280	41S 24E 15	DSCR					
#16-32								
4303715723	06280	41S 24E 16	PRDX					
#16-34								
4303715724	06280	41S 24E 16	HNKRT					
#16-41								
4303715725	06280	41S 24E 16	PRDX					
#17-44								
4303715732	06280	41S 24E 17	DSCR					
#18-11								
4303715733	06280	41S 24E 18	PRDX					
TOTALS								

COMMENTS: _____

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

Date: _____

Name and Signature: _____

Telephone Number: _____

Division of Oil, Gas and Mining
PHONE CONVERSATION DOCUMENTATION FORM

Route original/copy to:

Well File _____ Suspense _____ Other _____
(Location) Sec _____ Twp _____ Rng _____ (Return Date) _____ OPER NM CHG _____
(API No.) _____ (To - Initials) _____

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-DES	9-FILE
4-VLC	
5-RJP	
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: ** SEE ATTACHED **	API: <u>037-15715</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.
- Lee 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. 8-21-95
- Lee 7. Well file labels have been updated for each well listed above. 9-28-95
- Lee 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)
- Lee 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) ___. 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. *DTJ 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 UIC 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

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

5. Lease Designation and Serial No.

14-20-603-355

6. If Indian, Allottee or Tribe Name

NAVAJO TRIBAL

7. If Unit or CA, Agreement Designation

RATHERFORD UNIT

8. Well Name and No.

RATHERFORD -15-12

9. API Well No.

43-037-15712-15715

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. 15, T41S, R24E
1820' FNL & 500' FWL

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

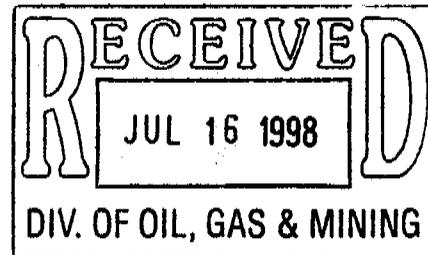
(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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 #1; 1167' SOUTH & 1167' EAST FROM SURFACE SPOT (ZONE 1a). 65228.4 x 4120615.9 1710 FNL 1691 FSL
LATERAL #2; 972' NORTH & 1007' WEST FROM SURFACE SPOT (ZONE 1a). 652651.5 x 4121255.4 473 FNL 1427 FNL
296 307 562.6 415 246

SEE ATTACHED PROCEDURE.



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

Signed Shirley Houchins for Title SHIRLEY HOUCHINS/ENV & REG TECH Date 7-14-98

(This space for Federal or State office use)

Approved by Bradley G. Hill Title BRADLEY G. HILL RECLAMATION SPECIALIST III Date 7/22/98
Conditions of approval, if any: Federal Approval of this Action is Necessary

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 Well #15-12 Horizontal Drilling Procedure

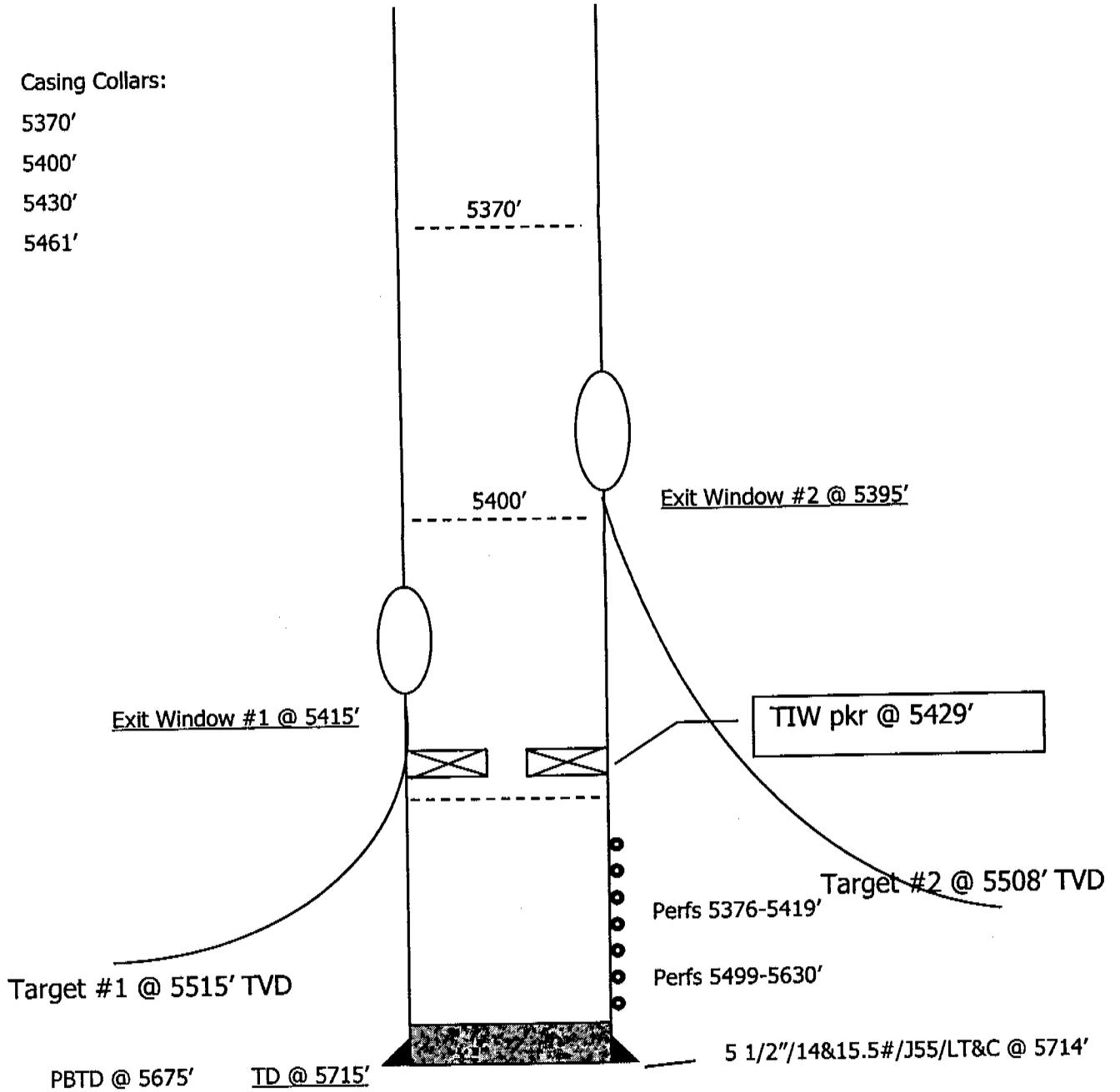
The objective of this procedure is to prepare this wellbore for sidetracking, sidetrack the subject well and drill multilateral short radius horizontal laterals (1400-1700 feet).

1. Prepare location and dig working pit.
2. MIRU WSU, reverse unit, and H2S equipment. Bullhead kill weight fluid down tubing.
3. ND wellhead and NU BOP's. Pressure test BOP's to working pressure.
4. Continue to POH with related equipment (tubing and rods for producers or tubing and packer for injectors).
5. RU wireline to run any logs desired and run gage ring for casing size and weight.
6. Set retrievable bridge plug at 5200' and pressure test casing to 1000 psi.
7. RDMO WSU.
8. MIRU 24 hr. WSU. NU BOP's and pressure test with chart.
9. PU tubing, drilling collars, and drill pipe in derrick and run in hole. Then POH and stand back.
10. Run packer on wireline and set using GR/CCL log to correlate with. RD wireline.
11. PU drillpipe with UBHO sub in string and latch into packer to survey the hole and obtain orientation of keyway. POH w/gyro and drill string.
12. Orient whipstock on surface to desired bearing and RIH on drill pipe. Latch into packer. Shear starter mill bolt and make starter cut.
13. POH w/ starter mill and pick up window mill and watermelon mill and continue to mill window. Drill 1-2 ft of formation
14. POH w/ mills and PU curve building assembly and drill string with UBHO sub in string and RIH.
15. RU gyro to assist in time drilling and starting out of the casing window. POH w/ gyro when inclination dictates it must be pulled.
16. Finish drilling the curve using the MWD.
17. POH once curve is finished and PU lateral motor to drill the lateral using MWD.
18. Once lateral TD is reached, POH w/ directional equipment.
19. PU retrieving hook and RIH on drill pipe. Retrieve whipstock and PU new whipstock oriented for desired bearing to start in hole.
20. Repeat steps 12 through 19 for each subsequent lateral.

Ratherford Unit #15-12

Casing Collars:

- 5370'
- 5400'
- 5430'
- 5461'

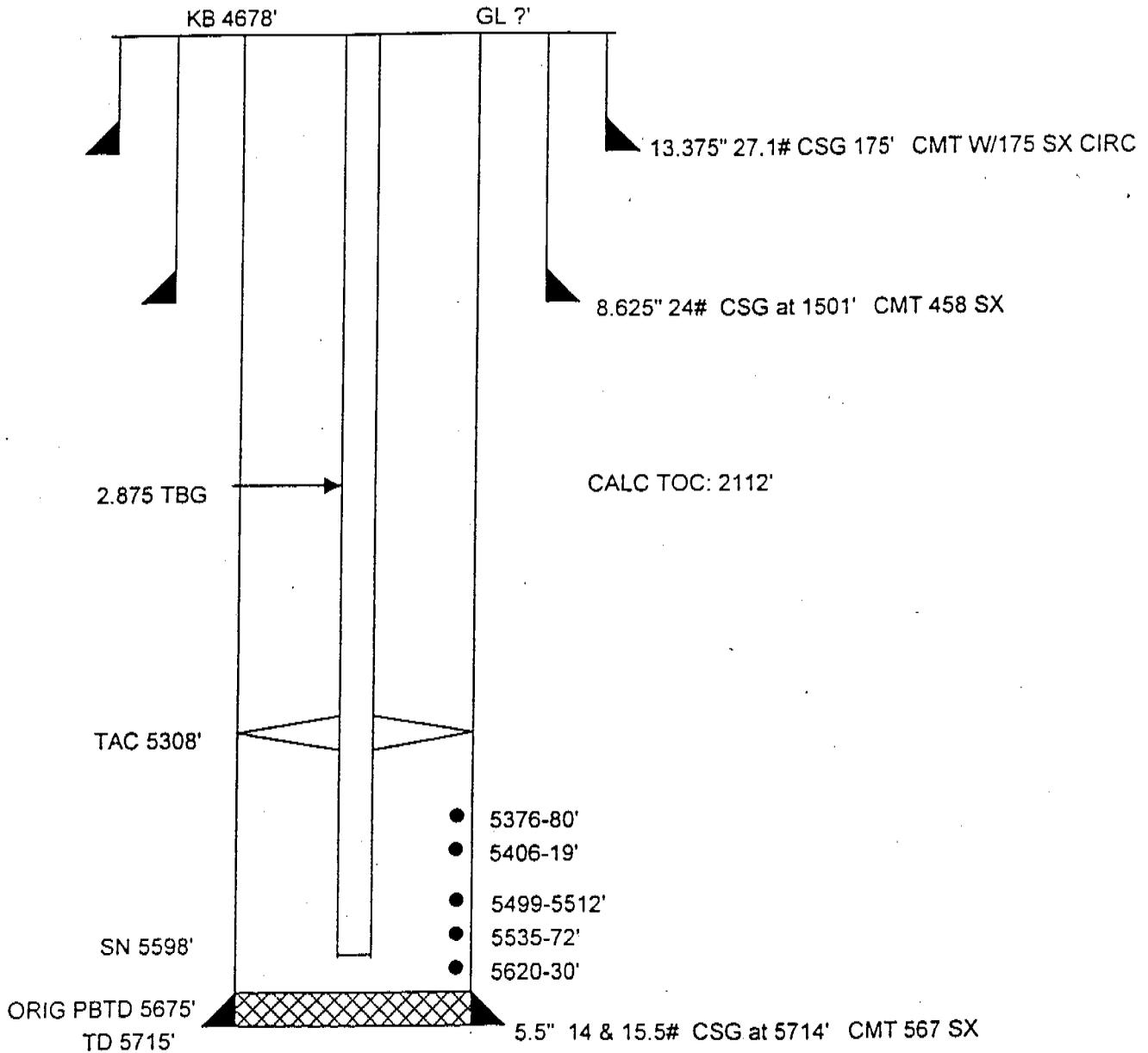


Window	Btm-Top of Window	Ext length	Curve Radius	Bearing	Horiz Displ
1	5415-09	-----	100	135	1650
2	5408-02	20	113	314	1400

The double spline is 2.42 ft long and the bottom of the whipstock, the latch, the debris and the shear sub are 8.68 ft long. These lengths must be added to the extension lengths to determine the entire whipstock assembly length.

RATHERFORD UNIT 15-12
GREATER ANETH FIELD
1820' FNL & 500' FWL
SEC 15-T41S-R24E
SAN JUAN COUNTY UTAH
API 43-037-15715
PRISM 0043026

PRODUCER



K M McCLELLAN 9-22-94
LA Tucker 5-23-96

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 07/16/98

API NO. ASSIGNED: 43-037-15715

WELL NAME: RATHERFORD 15-12 MULTI-LEG
 OPERATOR: MOBIL EXPL & PROD (N7370)
 CONTACT: _____

PROPOSED LOCATION:
 SWNW 15 - T41S - R24E
 SURFACE: 1820-FNL-0500-FWL
 BOTTOM: 1427-FNL-0473-FEL
 SAN JUAN COUNTY
 GREATER ANETH FIELD (365)

INSPECT LOCATION BY: / /		
TECH REVIEW	Initials	Date
Engineering	<i>MA</i>	
Geology	<i>MA</i>	
Surface	<i>MA</i>	

LEASE TYPE: IND
 LEASE NUMBER: 14-20-603-355
 SURFACE OWNER: NAVAJO TRIBE

PROPOSED FORMATION: DSCR

RECEIVED AND/OR REVIEWED:

Plat

Bond: Federal State Fee
 (No. ALREADY IN PLACE)

Potash (Y/N)

Oil Shale (Y/N) *190-5(B)

Water Permit
 (No. NAVAJO ALLOTMENT)

RDCC Review (Y/N)
 (Date: _____)

St/Fee Surf Agreement (Y/N)

LOCATION AND SITING:

R649-2-3. Unit RATHERFORD UNIT

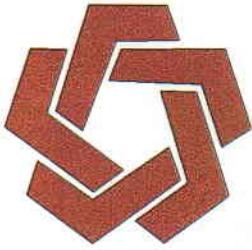
R649-3-2. General

R649-3-3. Exception

Drilling Unit
 Board Cause No: _____
 Date: _____

COMMENTS: _____

STIPULATIONS: ① FEDERAL APPROVAL
② DIRECTIONAL DRILLING



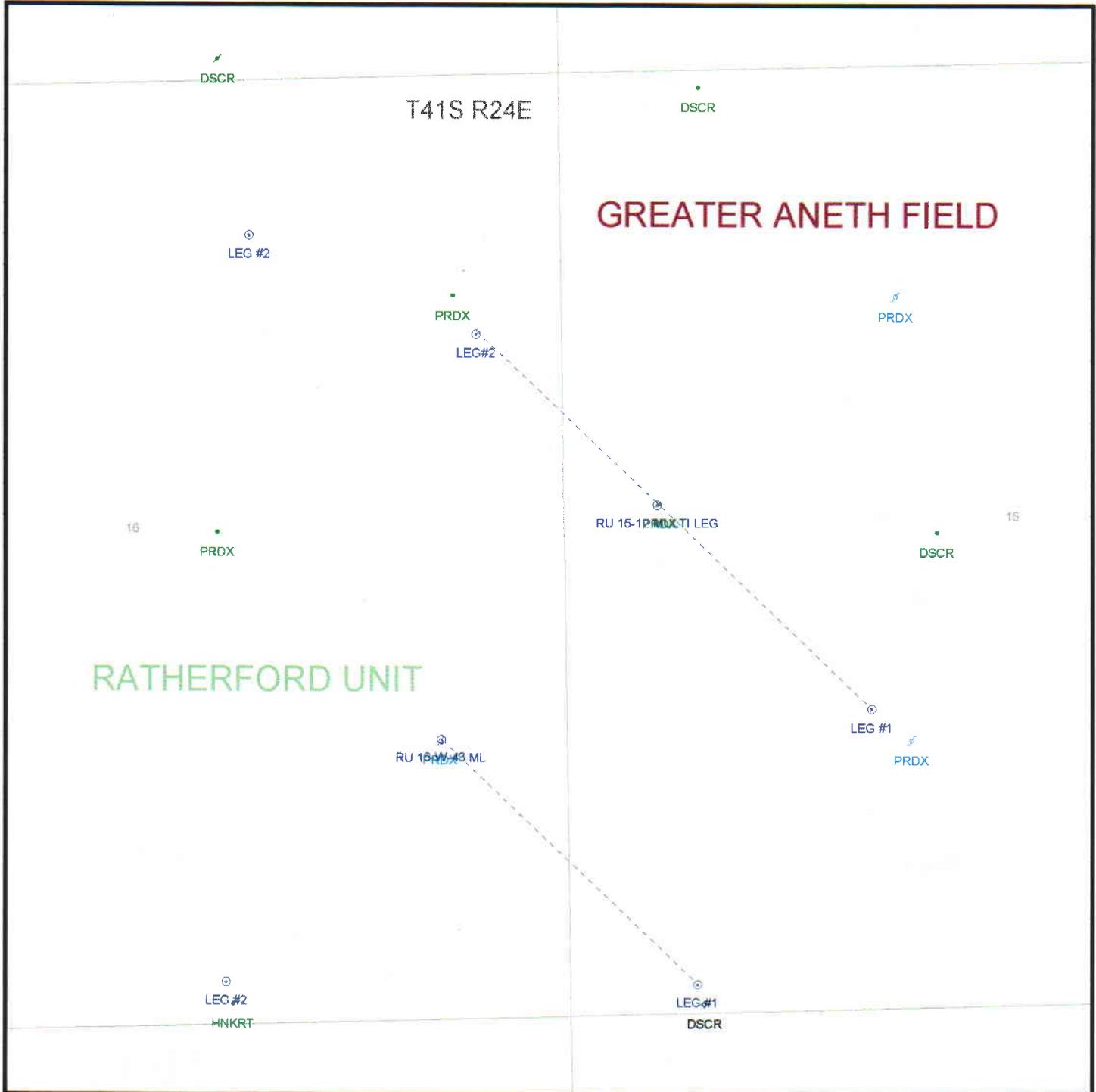
DIVISION OF OIL, GAS & MINING

OPERATOR: MOBIL EXPL & PROD (N7370)

FIELD: GREATER ANETH (365)

SEC. 15, TWP 41S, RNG 24E

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



DATE PREPARED:
21-JULY-1998



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

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

Michael O. Leavitt
Governor
Lowell P. Braxton
Division Director

July 22, 1998

Mobil Exploration & Producing
P.O. Box 633
Midland, TX 79702

Re: Ratherford 15-12, 1820' FNL, 500' FWL, SW NW, Sec. 15,
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 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 43-037-15715.

Sincerely,

A handwritten signature in black ink 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
Well Name & Number: Ratherford 15-12
API Number: 43-037-15715
Lease: 14-20-603-355
Location: SW NW Sec. 15 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 prior to 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 Dan Jarvis at (801) 538-5338 or Robert Krueger at (801) 538-5274.

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. State approval of this well does not supercede the required federal approval which must be obtained prior to drilling.

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1998

5. Lease Designation and Serial No.
14-20-603-355

6. If Indian, Allottee or Tribe Name
NAVAJO TRIBAL

7. If Unit or CA, Agreement Designation
RATHERFORD UNIT

8. Well Name and No.
RATHERFORD 15-12

9. API Well No.
43-037-~~15712~~ 15715

10. Field and Pool, or exploratory Area
GREATER ANETH

11. County or Parish, State
SAN JUAN UT

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 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. 15, T41S, R24E
1820' FNL & 500' FWL

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

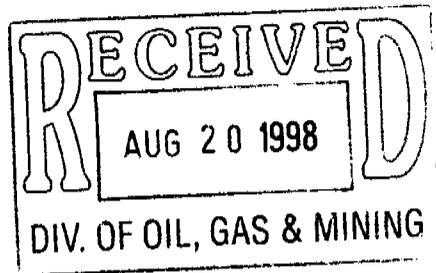
TYPE OF SUBMISSION	TYPE OF ACTION
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input checked="" type="checkbox"/> Other CASING REPAIR
	<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 PROCEDURE FOR CASING REPAIR.

VERBAL APPROVAL FROM WAYNE TOWNSEND/ BLM @ 11:30 AM 8-18-98



Federal Approval of ~~COM~~ SENT TO OPERATOR
Action is Necessary Date: 9.1.98
Initials: KDR

14. I hereby certify that the foregoing is true and correct
Signed Shirley Houchins Title SHIRLEY HOUCHINS/ENV & REG TECH Date 8-18-98

(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**

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly to 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.

FOR RECORD ONLY See Instruction on Reverse Side

IV. Supplemental Procedure

The goal of this procedure is to run a CET log from 3500-surface, to shoot perforations at the most likely place to obtain circulation, and to circulate cement behind pipe to surface.

As an overview, there is a ¼ bpm flow from the surface by production casing annulus. Once the repair is completed the well will be cleaned out and acidized with coiled tubing and put back on production.

1. RU Schlumberger and run CET log (minimum footage) 3500-surface. Have log sent to Wendy Storbeck same day.
2. Dump bail 10 ft of sand on top of RTBP set at 5300'.
3. RDMO to prep 21-21.
4. RU WSU and wireline to perf 4 spf at desired depth approximately 1000'.
5. PU pkr and set at 975' to obtain circulation.
6. If circulation is obtained at the surface, POH w/ pkr and RIH w/ cement retainer and set at 975'. If not call to discuss.
7. RU Dowell to cement:

Cement Slurry: 175 sx Class 'G' + 2% CaCl₂ + .25 pps celloflake

*Have 50 sx neat on location in case it is needed.

Density: 15.4 ppg

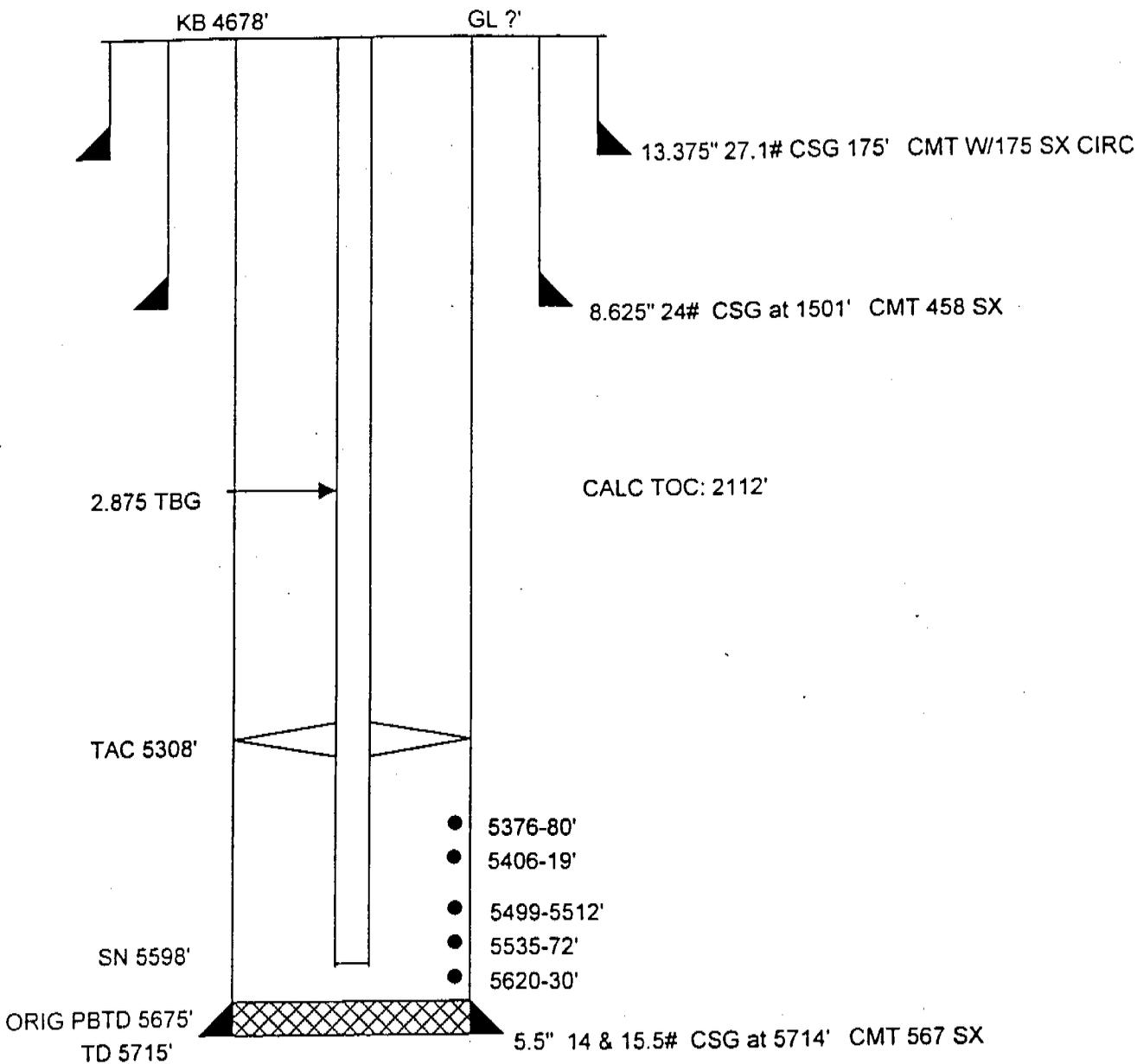
Yield: 1.25 ft³/sk

Fluid Loss: 570 cc/30 min

- a) Test workstring RIH and sting into retainer and then sting back out to make sure retainer is operative.
 - b) Pump cement at 1-2 bpm.
 - c) Displace with 5.65 bbls of fresh water.
 - d) POH and reverse out cleaning up top of retainer.
8. RD DS and POH with 2 7/8" tubing.
 9. WOC overnight. PU 4 3/4" bit, 6-8 3 1/8" drill collars, and workstring to drill out retainer.
 10. DO retainer and cmt and continue in hole to top of sand to reverse out sand to top of RTBP at 5300'.
 11. POH w/bit and drill collars and PU retrieving head for RTBP. RIH to retrieve.
 12. RBIH w/ bit to top of RTBP at 5602'. POH w/ bit.
 13. RU Dowell to acidize with coiled tubing. Acidize with 2000 gals 15% HCl.
 14. POH w/ coiled tubing and PU production equipment to run back in hole.
 15. ND BOP's. RDMO.

RATHERFORD UNIT 15-12
GREATER ANETH FIELD
1820' FNL & 500' FWL
SEC 15-T41S-R24E
SAN JUAN COUNTY UTAH
API 43-037-15715
PRISM 0043026

PRODUCER



K M McCLELLAN 9-22-94
LA Tucker 5-23-96

WELL HISTORY

RATHERFORD UNIT #15-12
GREATER ANETH FIELD
1820' FNL, 500' FWL SWNE
SEC 15, T41S, R24E
SAN JUAN COUNTY, UTAH

API #43-037-15715
PRISM ID 0043026

TD 5715' ORIG PBTD 5675'
KB 4678' GL: '

- 12-21-57 SPUD
175' 13.375" 27.1# 175 SX CIRC
1501' 8.625" 24# w/ 458 sx
5714' 5.5" 14 & 15.5# w/ 567 sx. Calc TOC at 2112'.
- 3-2-58 ORIGINAL COMPLETION
CO WELL TO PBTD 5675'. PERFED 5499-5512' 5535-72' 5620-30' 4 SPM. ACIDIZED
W/5000 GALS REG, TP 4500-4100#, AIR 6.5 BPM. IP F 1042 BOPD
- 5-12-73 LEFT FISH IN WELL, ACIDIZED: LEFT SN, TBG, GA, TAC IN HOLE ON BOTTOM, TOP
OF FISH 5608'. SET RBP @ 5602'. ACIDIZED W/9500 GALS. POH W/RBP. RTP
- 7-23-74 ADDED UPPER PERFS: PERFED 5376-80' 5406-19' 2 SPF. ISOLATED 5376-5419',
ACIDIZED W/6000 GALS 15% HCL, OIL SOLUBLE DIVERTER, IR 10-5 BPM, TP 2700-
3800-3300#, ISIP 1700#, 15 MIN 0#. RTP
- 6-9-92 2.875" TBG, SN 5598', TAC 5308'

TOM COCHRANE 2-24-94
Checked by LA Tucker 5-23-96

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Company: MOBIL E & P

Well Name: RATHERFORD UNIT 15-12 (RE-ENTRY)

Api No. 43-037-15715 Lease Type: INDIAN

Section 15 Township 41S Range 24E County SAN JUAN

Drilling Contractor BIG "A" RIG # 25

SPUDDED:

Date 9/1/98

Time _____

How ROTARY

Drilling will commence _____

Reported by BENNY BRIGGS

Telephone # _____

Date: 9/2/98 Signed: JLT

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS

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Use "APPLICATION FOR PERMIT -" for such proposals

5. Lease Designation and Serial No.

14-20-603-355

6. If Indian, Allottee or Tribe Name

NAVAJO TRIBAL

7. If Unit or CA, Agreement Designation

RATHERFORD UNIT

8. Well Name and No.

RATHERFORD 15-12

9. API Well No.

43-037-1571¹⁵

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. 15, T41S, R24E
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12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

- Notice of Intent
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 Final Abandonment Notice

TYPE OF ACTION

- Abandonment
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 Altering Casing
 Other CASING REPAIR
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 Water Shut-Off
 Conversion to Injection
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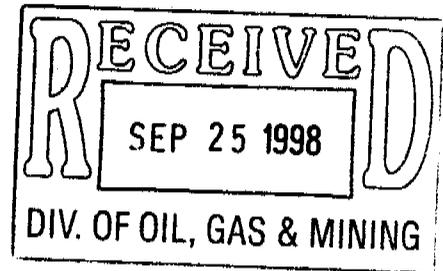
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13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

SEE ATTACHED (8-10-98 -- 8-28-98) SUNDRY

8-27-98 ORIGINAL CHART ATTACHED

VERBAL APPROVAL FROM WAYNE TOWNSEND/ BLM @ 11:30 AM 8-18-98



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

Signed

Shirley Houchins

Title SHIRLEY HOUCHINS/ENV & REG TECH

Date 9-22-98

(This space for Federal or State office use)

Approved by

Title

Date

Conditions of approval, if any:

ATTACHMENT - FORM 3160-5
RATHERFORD UNIT - WELL #15-12
14-20-603-355
NAVAJO TRIBAL
SAN JUAN COUNTY, UTAH

CASING REPAIR

- 08-10-98 MIRU NAVAJO WEST #15, BLED GAS OFF (WELL DEAD) UNHANG WELL, UNSEAT PUMP, POOH LD RODS, PUMP & GAS ANCHOR. ND WH, NU BOP & C/O RAMS TO 2 7/8", TALLY OUT HOLE PROD TBG. RIH W/OET TO 2350', SI, SDFN.
- 08-11-98 FIN. RIH W/OET @ 5602', RU PUMP. SPOT GELLED PLUG, POOH W/EOT @ 4980', ATTEMPT TO CIRC., UNABLE TO CIRC, RIH W/EOT @ 5602'. SI, SDFN.
- 08-12-98 PUMP FW GELL PILL W/MAGMAFIBER, ATTEMPT TO CIRC, UNABLE TO CIRC, SPOT FW GELL PILL W/MAGMAFIBER & MEDIUM CALC. CARB., POOH W/EOT @ 4362'. ATTEMPT TO CIRC., LOST PLUG. SD PUMP. POOH W/2 7/8" TBG. SI, SDFN.
- 08-13-98 RIH W/ 5 1/2" RPB & PKR ON 2 7/8" TBG. SET RBP @ 5466', PKR @ 5436', LOAD & TEST TBG & RBP 1000#, HELD GOOD. UNSEP PKR BREAK CIRC., REL RBP & POOH RIH W/OET @ 5490', STBY F/LCM PILL, SPOT GELLED FW W/30# CALC CARB & 16# MAGMAFIBER PER BBL. DISPLACE W/FW, POOH W/EOT @ 2762', BREAK CIRC. CIRC DN TBG RETURN APX 1 BPM, SI, SDFN.
- 08-14-98 LOAD HOLE W/FW, CK CIRC, UNABLE TO GET FULL RETURNS, RIH W/OET @ 5490'. STBY FOR LCM, SPOT LCM PILL, POOH W/EOT @ 2762', LOAD HOLE W/FW, BROKE CIRC 100%, PRESS 500# OK, RIH W/OET @ 5466', REVERSE OUT W/120 BBLs FW, CIRC CLEAN. POOH TO 5280'. SI, SDFN.
- 08-15-98 LOAD HOLE W/FW, PRESS UP ON CSG & LCM 500#, HELD 250#. POOH W/2 7/8" TBG. RIH W/5 1/2" RBP, PUO & SET RBP @ 5300', PRESS TEST RBP/PKR 500# OK. CIRC HOLE W/FW, SPOT FLOAT TO LD WS. SI SDFN, RIG REPAIRS.
- 08-17-98 POOH LD 2 7/8" TBG ON FLOAT. ND BOP, OPEN BRAIDEN HEAD, HAD .25 BPM FLOW, CHANGE OUT WELL HEAD, LAND 5 1/2" CSG W/86000 LBS TENSION. BACKOFF & TEST WH 1000#, SI, SDFN/NO ORDERS.
- 08-18-98 VERBAL APPROVAL FROM WAYNE TOWNSEND/BLM @ 11:30 AM. CK PRESS ON BRAIDEN HEAD 30#, RU SCHLUMBERGER RAN C.E.T. F/3500' TO SURFACE. CLEAR F/ 8 5/8" @1501' TO SURFACE / CIRC CMT. TIGHT SPOT @ 200', STBY FOR & POUR 2 SXS OF SAND DN 5 1/2" CSG TO COVER RBP. RDMO UT.
- 08-22-98 MIRU NAVAJO WEST #15, NU BOPE, RU SCHLUMBERGER WL, PERF 5 1/2" CSG @ 1548' TO 1552' W/4 JSPF (16 HOLES). RD WL. RIH W/5 1/2" GUIBERSON PKR SET @ 1483'. RU REV PUMP. PRESS 1000# BREAK CIRC, CIRC HOLE W/FW, CIRC 75 BBLs, 1 BPM @ 200#. GOOD CIRC. SI, SDFN.
- 08-24-98 UNSET PKR, POOH, RIH W/5 1/2" CIRC ON 2 7/8" TBG, RU HALLIBURTON, PUT THRU RET W/8 BBLs FWM SET CIRC @ 1451', LOAD & PRESS TEST TBG 2000# HELD GOOD, LOAD CSG PRESS 500#, EIR DN TBG PUMP 300 SXS OF CLASS "B" CMT, .4% HALLAD 322, MIXED @ 15.2#, 1.24 YIELD, & 100 SXS OF TAIL CMT CLASS "B" CMT (NEAT), MIXED @ 15.6# 1.18 YIELD, CIRC 10 BBLs (45 SXS) TO PIT., NOT GETTING FULL CIRC. DISPLACE 2W/FW, TBG PRESS 460#. SD PUMP BRAIDEN HEAD ON SLIGHT VAC, STUNG OUT OF RET., REV OUT W/35 BBLs OF FW, REV APX 2 BBLs OR 9.5 SXS OF TAIL CMT TO PIT. LEFT APX 10' OF CMT ON TOP OF RET., POOH W/ 2 7/8" TBG & SETTING TOOL, SI, SDFN.
- 08-25-98 RIH W/BIT, TAG CMT @ 1446', RU SWIVEL, DRILL OUT 4' OF CMT, DRILL ON RET, MADE 1', CIRC CLEAN. SI, SDFN.

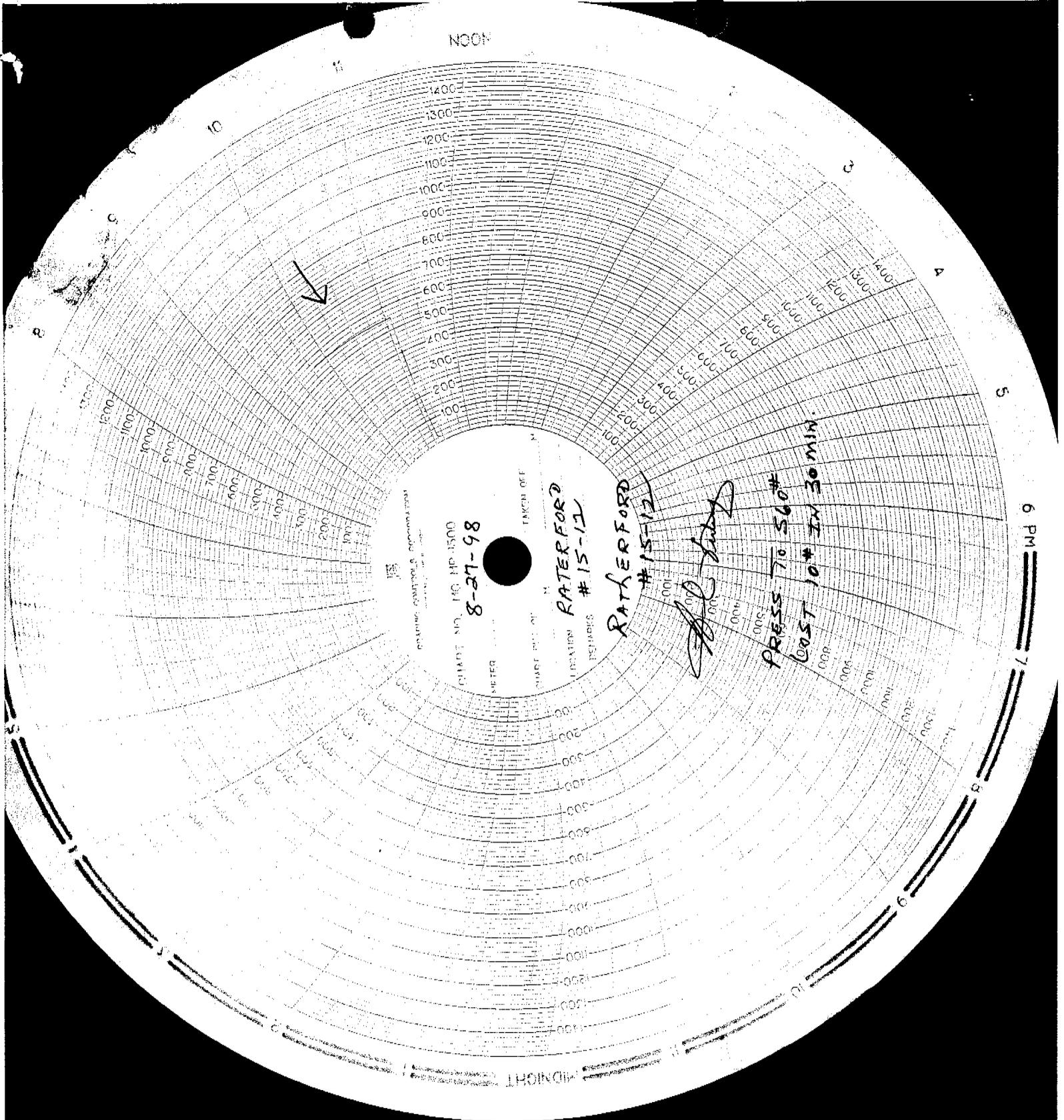
**ATTACHMENT - FORM 3160-5
RATHERFORD UNIT - WELL #15-12
14-20-603-355
NAVAJO TRIBAL
SAN JUAN COUNTY, UTAH
PAGE 2**

08-26-98 FIN. DRLG. CMT RET. F/1452-1454' & CMT F/1452-1573'. FELL THROUGH. RAN BIT TO 1645'. CIRC CLEAN, PRESS TEST TO 500#. LOST 20# IN 30 MIN. RD POWER SWIVEL & POOH W/BIT.

08-27-98 RIH W/TOOTH BIT, CSG SCRAPPER & DC'S ON 2 7/8" TBG TO 1868'. PRESS TEST CSG & SQZ HOLES F/1548-1552' TO 560#. LOST 10# IN 30 MIN. (CHART ATTACHED). FIN RIH W/BIT TO 5270' WASH F/5270-5284', TOP OF 5 1/2" RBP, REV. CIRC. HOLE CLEAN. RD POWER SWIVEL, POOH W/2 7/8" TBG, DC, SCRAPPER & BIT. LD. SI, SDFN.

08-28-98 ND BOP'S & NU TBG. FLANGE W/BALL VALVE IN PLACE RD, RELEASE NAVAJO WEST UNIT #15.

NOON



REGISTERING CONVENTIONS

CITADEL NO. 110 HP 1500
8-27-98



TANGENT OFF

LOCATION
RATERFORD
#15-12

RATERFORD
#15-12

Handwritten signature

PRESS TO 560#
LAST 10* IN 30 MIN.

6 PM



ROCKY MOUNTAIN GEO-ENGINEERING

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

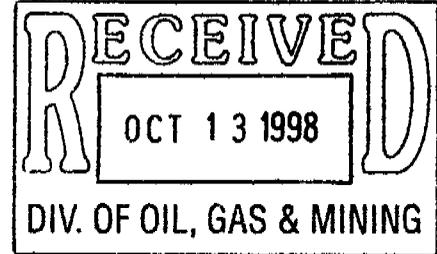
PASON ROCKY MOUNTAIN GEO-ENGINEERING CORP.

2450 INDUSTRIAL BLVD. • GRAND JUNCTION, CO 81505

(970) 243-3044 • (FAX) 241-1085

Thursday, October 08, 1998

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



Re: Ratherford Unit #15-12, Legs 1 & 2
Sec. 21, T41S, R24E
San Juan County, Utah

43-039-15715

Dear Sirs:

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

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

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

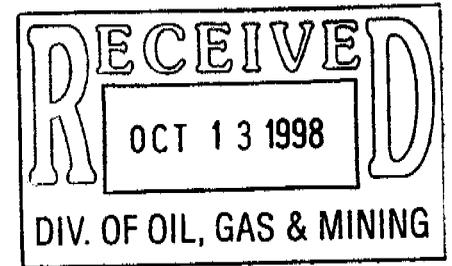
Sincerely,

Bill Nagel
Senior Geologist

BN/dn

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

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



MOBIL

**RATHERFORD UNIT #15-12
NW HORIZONTAL LATERAL LEG #1
UPPER 1-A POROSITY BENCH
DESERT CREEK MEMBER
PARADOX FORMATION
SECTION 15, T41S, R24E
SAN JUAN, UTAH**

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

TABLE OF CONTENTS

WELL SUMMARY.....	3
DRILLING CHRONOLOGY.....	4
DAILY ACTIVITY.....	5
BIT RECORD.....	5
MUD RECORD.....	5
SURVEY RECORD.....	6
SAMPLE DESCRIPTIONS.....	8
FORMATION TOPS.....	15
GEOLOGIC SUMMARY AND ZONES OF INTEREST.....	16
WELL PLOTS.....	21

WELL SUMMARY

OPERATOR: MOBIL EXPLORATION & PRODUCTION U.S. INC.

NAME: RATHERFORD UNIT #15-12 NW HORIZONTAL LATERAL
LEG #1 IN 1-A LOWER POROSITY BENCH, DESERT CREEK

LOCATION: SECTION 15, T41S, R24E

COUNTY/STATE: SAN JUAN, UTAH

ELEVATION: KB:4678' GL:4667'

SPUD DATE: 8/31/98

COMPLETION DATE: 9/05/98

DRILLING ENGINEER: BENNY BRIGGS / SIMON BARRERA

WELLSITE GEOLOGY: DAVE MEADE / MARVIN ROANHORSE

MUDLOGGING ENGINEERS: DAVE MEADE / MARVIN ROANHORSE

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

HOLE SIZE: 4 3/4"

CASING RECORD: SIDETRACK IN WINDOW AT 5395' MEASURED DEPTH

DRILLING MUD: M-I
ENGINEER: RON WESTENBERG / MIKE PITTSINGER
MUD TYPE: FRESH WATER & BRINE WATER W/ POLYMER SWEEPS

DIRECTIONAL DRILLING CO: SPERRY-SUN

ELECTICAL LOGGING: NA

TOTAL DEPTH: 6875' MEASURED DEPTH; TRUE VERTICAL DEPTH-5509.9'

STATUS: PREPARING WELL FOR SE LATERAL #2

DRILLING CHRONOLOGY
RATHERFORD UNIT #15-12
1-A NW HORIZONTAL LATERAL LEG #1

DATE	DEPTH	DAILY	ACTIVITY
8/31/98	0'	0'	NIPPLE DOWN-RIG DOWN-MOVE RIG TO R.U. #15-12 LOCATION- RIG UP-NIPPLE UP BOP
9/01/98	0'	0'	RIG UP FLOW LINE-PRESURE TEST-P.U. 20 DC & STD BACK 5 STDS-P.U. & STRAP DRL PIPE-TIH-CIR & WASH ON TO BRIDGE PLUG-TOH-LD PLUG-R.U. SCHLUMBERGER "J"-SET WIRE LINE PACKER @ 5429'-R.D. WIRE LINE-PICK UP ANCHOR LATCH-TIH-LATCH INTO ANCHOR-CIR & CLEAN PIPE-P.U. & RUN GYRO DATA-ORIENT ANCHOR-TOH
9/02/98	5429'	6'	CHANGE OUT ANCHOR LATCH-TIH-RERUN GYRO & ORIENT ANCHOR-RIG DOWN GYRO DATA-TOH-P.U. WHIPSTOCK #1 & STARTER MILL-ORIENT-TIH-SET WHIPSTOCK @ 5388' - MILL W/STARTER MILL 5388' TO 5390'-TOH-L.D. STARTER MILL- P.U. WINDOW MILL & WATER MELON MILLS-TIH-MILL W/WINDOW MILLS 5388' TO 5390'-TOH-P.U. WINDOW MILLS- TIH-MILL 5388' TO 5395'-CIR-L.D. 13 JTS PIPE-TOH-CHANGE OUT MILLS-TIH
9/03/98	5394'	146'	TIH-MILL 5394' TO 5395'-CIR OUT-L.D. 13 JTS PIPE TOH-L.D. MILLS-P.U. CURVE ASSEM.-ORIENT & TEST-TIH-R.U. GYRO DATA & RIH W/ GYRO-TIME DRLG 5395' TO 5398'-DIR DRLG & WIRELINE SURVEYS TO 5427'-PULL GYRO & RIG DOWN GYRO DATA-DIR DRLG & SURVEYS
9/04/98	5540'	768'	DIR DRLG & SURVEYS TO 5590' (T.D. CURVE)-PUMP SWEEP & CIR OUT-PUMP 20 BBLs BRINE-L.D. 44 JTS AOH-TOH-WORK ON AIR CONTROLS-TOH-L.D. CURVE ASSEM.-P.U. LATERAL ASSEMBLY- ORIENT & TEST-P.U. 44 JTS PIPE-TIH-DIR DRLG & SURVEYS
9/05/98	6308'	567'	DIR DRLG & SURVEYS TO 6875' (TD LATERAL #1)-PUMP SWEEP & CIR SPLS-L.D. 2 JTS PIPE-TOH TO WINDOW-CIR OUT GAS-TOH-L.D. LATERAL ASSEMBLY-P.U. RETRIEVING HOOK- TIH-HOOK WHIPSTOCK-TOH

DAILY ACTIVITY

Operator: MOBIL

Well Name: RATHERFORD UNIT #15-12 NW 1-A HORIZONTAL LATERAL LEG #1

DATE	DEPTH	DAILY	DATE	DEPTH	DAILY
8/31/98	0'	0'			
9/01/98	0'	0'			
9/02/98	5429'	6'			
9/03/98	5394'	146'			
9/04/98	5540'	768'			
9/05/98	6308'	567'			
	6875'	TD			

BIT RECORD

OPERATOR: MOBIL

WELL NAME: RATHERFORD UNIT #15-12 NW 1-A HORIZONTAL LATERAL LEG #1

RUN	SIZE	MAKE	TYPE	IN/OUT	FTG	HRS	FT/HR
#1 (RR)	4 3/4"	STC	MF-2GP	5395'/ 5590'	193'	14.5	13.3
#2	4 3/4"	STC	MF-2GP	5590'/ 6875'	1285'	26	49.4

MUD REPORT

OPERATOR: MOBIL

WELL NAME: RATHERFORD UNIT #15-12 NW 1-A HORIZONTAL LATERAL LEG #1

DATE	DEPT H	WT	VIS	PLS	YLD	GEL	PH	WL	CK	CHL	CA	SD	OIL	WTR
8/31/98	0'	NO	CHECK	-	-	-	-	-	-	-	-	-	-	-
9/01/98	0'	NO	CHECK	-	-	-	-	-	-	-	-	-	-	-
9/02/98	5388'	8.4	26	1	1	0/0	8.0	NC	NC	1000	120	0%	0%	100%
9/03/98	5395'	8.4	26	1	1	0/0	8.0	NC	NC	1000	120	0%	0%	100%
9/04/98	5590'	8.4	26	1	1	0/0	13.0	NC	NC	1100	80	0%	0%	100%
9/05/98	6635'	8.5	26	1	1	0/0	12.0	NC	NC	1100	400	1%	0%	99%

SPERRY-SUN DRILLING SERVICES
SURVEY DATA

Customer ... : Mobil Utah
Platform ... : RATHERFORD UNIT
Slot/Well .. : BA25/15-12 1A1

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	TVD	NORTHINGS FEET	EASTINGS FEET	VERTICAL SECTION	DOG LEG
5200.00	0.20	66.84	5199.86	6.19 S	3.09 W	-2.08	0.00
5388.00	0.28	56.08	5387.86	5.81 S	2.41 W	-2.30	0.05
5395.00	3.30	314.00	5394.85	5.66 S	2.54 W	-2.10	48.14
5405.00	6.90	331.02	5404.81	4.93 S	3.04 W	-1.24	38.67
5415.00	11.50	335.63	5414.68	3.50 S	3.74 W	0.26	46.55
5425.00	16.10	337.76	5424.39	1.30 S	4.68 W	2.46	46.27
5435.00	20.50	339.00	5433.88	1.62 N	5.83 W	5.32	44.17
5445.00	25.20	339.81	5443.10	5.25 N	7.19 W	8.82	47.10
5455.00	30.30	340.40	5451.94	9.63 N	8.77 W	13.00	51.07
5465.00	35.00	339.90	5460.36	14.70 N	10.61 W	17.84	47.08
5475.00	39.60	340.40	5468.31	20.40 N	12.66 W	23.28	46.10
5485.00	44.60	340.50	5475.73	26.72 N	14.91 W	29.28	50.00
5495.00	49.40	340.20	5482.55	33.60 N	17.36 W	35.83	48.05
5505.00	54.50	339.10	5488.71	40.98 N	20.10 W	42.93	51.73
5515.00	59.30	339.30	5494.17	48.81 N	23.08 W	50.51	48.03
5525.00	63.00	338.80	5498.99	56.99 N	26.21 W	58.44	37.26
5535.00	67.30	336.70	5503.20	65.38 N	29.65 W	66.75	47.03
5545.00	70.60	333.20	5506.79	73.83 N	33.60 W	75.46	46.43
5555.00	75.20	329.90	5509.73	82.23 N	38.16 W	84.57	55.77
5565.00	79.40	326.80	5511.93	90.53 N	43.27 W	94.02	51.75
5590.00	88.70	318.70	5514.52	110.28 N	58.31 W	118.55	49.19
5609.00	89.20	316.60	5514.87	124.32 N	71.10 W	137.51	11.36
5640.00	90.20	314.30	5515.03	146.41 N	92.85 W	168.49	8.09
5672.00	89.30	314.50	5515.17	168.79 N	115.71 W	200.49	2.88
5704.00	88.80	315.00	5515.70	191.32 N	138.43 W	232.48	2.21
5736.00	88.70	315.20	5516.40	213.98 N	161.02 W	264.47	0.70
5768.00	88.80	315.00	5517.10	236.64 N	183.60 W	296.46	0.70
5799.00	89.30	315.50	5517.61	258.66 N	205.42 W	327.44	2.28
5831.00	89.40	315.50	5517.97	281.48 N	227.85 W	359.43	0.31
5863.00	91.10	316.20	5517.83	304.44 N	250.14 W	391.41	5.75
5894.00	90.70	315.70	5517.35	326.71 N	271.69 W	422.39	2.07
5926.00	90.50	314.30	5517.01	349.34 N	294.31 W	454.38	4.42
5958.00	91.10	313.80	5516.56	371.59 N	317.31 W	486.38	2.44
5989.00	89.90	313.20	5516.29	392.92 N	339.80 W	517.38	4.33
6021.00	90.90	314.10	5516.07	415.01 N	362.95 W	549.38	4.20
6053.00	88.70	312.00	5516.18	436.85 N	386.33 W	581.37	9.50
6085.00	87.60	310.80	5517.22	458.00 N	410.32 W	613.32	5.09
6116.00	88.80	311.50	5518.19	478.39 N	433.65 W	644.26	4.48

SPERRY-SUN DRILLING SERVICES
SURVEY DATA

Customer ... : Mobil Utah
Platform ... : RATHERFORD UNIT
Slot/Well .. : BA25/15-12 1A1

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	TVD	NORTHINGS FEET	EASTINGS FEET	VERTICAL SECTION	DOG LEG
6148.00	90.90	311.80	5518.27	499.66 N	457.56 W	676.23	6.63
6180.00	91.80	311.50	5517.52	520.92 N	481.46 W	708.20	2.96
6212.00	90.20	310.60	5516.96	541.93 N	505.59 W	740.15	5.74
6243.00	90.10	310.40	5516.88	562.06 N	529.17 W	771.09	0.72
6274.00	90.40	310.80	5516.74	582.24 N	552.70 W	802.04	1.61
6306.00	90.60	310.60	5516.47	603.10 N	576.96 W	833.98	0.88
6338.00	91.30	310.10	5515.93	623.82 N	601.35 W	865.91	2.69
6369.00	91.50	309.50	5515.18	643.65 N	625.15 W	896.82	2.04
6401.00	90.60	310.10	5514.59	664.13 N	649.74 W	928.73	3.38
6432.00	89.10	310.30	5514.67	684.14 N	673.41 W	959.66	4.88
6464.00	88.60	310.10	5515.31	704.79 N	697.85 W	991.58	1.68
6495.00	90.40	311.10	5515.58	724.97 N	721.38 W	1022.52	6.64
6527.00	93.30	311.50	5514.55	746.07 N	745.41 W	1054.47	9.15
6559.00	88.80	310.10	5513.97	766.97 N	769.62 W	1086.40	14.73
6591.00	88.90	309.20	5514.61	787.39 N	794.26 W	1118.30	2.83
6622.00	88.60	308.10	5515.28	806.74 N	818.46 W	1149.16	3.68
6653.00	89.30	307.30	5515.85	825.70 N	842.98 W	1179.97	3.43
6684.00	88.80	306.00	5516.37	844.20 N	867.85 W	1210.71	4.49
6716.00	88.20	305.20	5517.20	862.82 N	893.86 W	1242.35	3.12
6748.00	92.10	306.70	5517.12	881.60 N	919.76 W	1274.03	13.06
6780.00	94.70	309.20	5515.22	901.24 N	944.95 W	1305.79	11.26
6812.00	94.70	308.30	5512.60	921.21 N	969.82 W	1337.55	2.80
6841.00	91.80	307.30	5510.96	938.95 N	992.69 W	1366.33	10.58
6875.00	91.80	307.30	5509.89	959.54 N	1019.73 W	1400.08	0.00

THE DOGLEG SEVERITY IS IN DEGREES PER 100.00 FEET.
N/E COORDINATE VALUES GIVEN RELATIVE TO WELL SYSTEM REFERENCE POINT.
TVD COORDINATE VALUES GIVEN RELATIVE TO WELL HEAD.
THE VERTICAL SECTION ORIGIN IS WELL HEAD.
THE VERTICAL SECTION WAS COMPUTED ALONG 314.00 (TRUE).
CALCULATION METHOD: MINIMUM CURVATURE.

SAMPLE DESCRIPTIONS

OPERATOR: MOBIL

WELL NAME: RATHERFORD UNIT #15-12 NW 1-A HORIZONTAL LATERAL LEG #1

DEPTH	LITHOLOGY
5395.00 5400.00	"LS crm-tan-brn, occ gybrn, micxl-crppl, rthy-arg, chk ip, dns, sl chty, occ dol, anhy, tt, NFSOC, w/scat gy-bf CHT frag, rr thn blk sl carb, calc-dol mica SH & gybrn-dkbrn micxl arg lmy tt DOL incl, occ CMT-redorng SH CVGS"
5400.00 5410.00	"LS pred crm-tan-wh, crppl-micxl, AA, occ plty-chk, Crin fos, v rr frag POR, n-v rr spty bri yel FLOR, occ dkbrn STN, n-v p slow dif CUT, scatbf CHT, SH AA, tr lmy arg-rthy DOL w/v rr intxl POR, n-v p FLOR-STN-CUT"
5410.00 5420.00	"LS AA/tr blk shy mot, crppl-micxl, tr vfxl, chk-occ plty-sl anhy/tr POR fl, mic fos, agl-rr frac POR, tr-rr spty bri yel FLOR, fr ltbrn-rr dkbrn STN, g mod fast stmg mlky CUT, scat CHT & SH AA"
5420.00 5430.00	"LS AA/incr dkbrn-brnblk-blk mot incl, POR AA, tr-rr mod bri-dull yel FLOR, STN-CUT AA"
5430.00 5440.00	"LS crm-wh-tan, dkbrn-brnblk, occ lt-mgy, crppl-micxl, chk-sl anhy/tr POR fl-xl ANHY, tr tan-bf CHT, rr GAST-mic fos, sl dol/tr DOL incl, tt-tr intxl POR, rr dull-bri yel FLOR, rr brn STN, tr slow stmg mlky CUT"
5440.00 5450.00	"DOL brn-dkbrn, occ ltbrn, crppl-micxl ip, dns, rthy-sl slty ip, occ shy-sl arg, grdg to dol SH ip, tt, NFSOC"
5450.00 5460.00	"LS tan-crm-wh, tr brn, rr blk mot, crppl-micxl, chky-sl anhy, thn blk SH lam, tr bf CHT, rr mic fos, tt-v rr intxl POR, n-v rr dull yel FLOR, tr ltbrn-brn STN, n CUT"
5460.00 5470.00	"LS m-ltgybrn, dkbrngy, tr ltgy, tan, crm-wh, incr blk SH mot, crppl-micxl, sl chky-anhy, thn blk SH lam, rr CHT AA, tt-v rr intxl POR, NFSOC, w/scat SH, blk, frm-mhd, calc-sl dol, sl carb, sl arg"
5470.00 5490.00	"LS ltbrngy-tan, crm-wh, occ ltbrn, tr ltgy, rr brn, v sl mot, micxl-crppl-occ vfxl, chky-sl anhy/incr POR fl-rr xln ANHY, occ slty-grdg to vf gr lmy SS ip, tr brn-bf CHT, v rr SH frag AA, tt-v rr intxl POR, NFSOC"
5490.00 5500.00	"LS ltbrngy-tan-crm, occ wh, rr ltbrn, ltgy, micxl-crppl, occ vfxl, chky-sl anhy/POR fl-rr xln ANHY, occ slty strk AA, tr agl-mic fos, tt-v rr intxl POR, tr dull-spty mod bri yel FLOR, n-rr ltbrn STN, fr dif/fnt res ring-tr mod fast stmg CUT, rr DOL AA, NFSOC"
5500.00 5510.00	"LS crm-tan-ltgy, occ wh, rr ltbrn, AA, chky-sl anhy/POR fl-rr xln ANHY, sl slty, rr agl-mic fos, tt-v rr intxl POR, FLOR-STN-CUT AA"
5510.00 5520.00	"LS AA, chky-sl anhy/POR fl-rr xln ANHY, rr slty strk, rr agl, rr trns-l-wh CHT, tt-rr intxl-sl agl POR, rr dull orng-yel FLOR, rr ltbrn STN, tr dif/v fnt res ring CUT, w/tr SH, blk-dkbrn-dkbrnblk, frm-sft, sl lmy, carb"

DEPTH	LITHOLOGY
5520.00 5530.00	"SH dkbrnblk-blk-dkbrn, frm-mhd-sft, plty-sbblky, carb, sl calc-lmy ip, rr pp mica, sooty"
5530.00 5540.00	"LS ltgybrn-tan, crm-wh-ltgy, tr ltbrn, micxl-crpxl, occ vfxl, chky-sl anhy/POR fl, occ slty strk, tt-v rr intxl POR, NFSOC"
5540.00 5560.00	"LS brn-ltbrn, occ tan-crm, tr ltgybrn, rr wh, gran-vfxl-micxl, tr crpxl, sl ool-oom-occ dns GRNST, intbd/dns sl ool PKST/tr gran tex, sl chky-anhy/rr POR fl-xln ANHY, sl dol, rr xln CALC & PYR, tr ltbrn CHT, g ool-sl oom-intxl/rr pp vug POR, g spty bri yel FLOR, g brn-ltbrn STN, g mod fast stmg mlky CUT"
5560.00 5570.00	"LS ltbrn-tan-brn, occ crm-wh, micxl-gran, crpxl, pred GRNST AA/incr scat dns sl ool-chky plty PKST, sl anhy/incr POR fl, tr brn CHT, mg ool-sl oom-intxl POR, tr mod bri yel FLOR, mg-fr brn-ltbrn STN, fr slow-mod fast stmg mlky CUT"
5570.00 5590.00	"LS AA, vfxl-gran, micxl-crpxl, pred ool-sl oom GRNST, tr scat-intbd dns sl ool-rr chky plty PKST, sl anhy/tr POR fl-rr xln ANHY, tr CHT AA, sl dol, mg ool-sl oom-intxl POR, fr-mg mod bri yel FLOR, mg-g brn-ltbrn/tr blk STN, g fast-mod fast stmg mlky CUT"
5590.00 5610.00	"LS tan-ltbrn, rr gybrn-wh-crm, micxl-vfxl, gran-micsuc, pred ooc-oom sl alg GRNST, w/tr dns rr chky-plty sl ool PKST lams, rr ANHY-CALC xl, sl dol cmt, mg-fr intxl-ool-rr alg POR, fr dull-bri yel FLOR, fr ltbrn STN-sl tr blk dd o STN, mfr mod fast-fr slow stmg CUT, scat blk-sl carb mica & red-redorng SH CVGS"
5610.00 5620.00	"LS AA, decr PKST frag, POR-FLOR-STN-CUT AA & red-blk SH cvgs"
5620.00 5640.00	"LS tan-ltbrn, rr wh-crm, micxl-vfxl, gran-micsuc, pred ooc-oom sl alg GRNST, w/rr dns sl chky-plty sl ool PKST frag, rr ANHY-CALC xl, sl dol cmt, mg intxl-mfr ool-rr alg POR, mg bri-dull yel FLOR, fr ltbrn STN-rr blk dd o STN, tr mod fast-g slow stmg CUT, rr SH CVGS"
5640.00 5660.00	"LS tan-ltbrn, v rr brn-crm-wh, pred sl ooc-oom occ alg GRNST AA, rr scat dns PKST frag, g intxl-tr ool-rr alg POR, mg dull-bri yel FLOR, fr ltbrn-rr blk STN, mfr-fr slow-tr mod fast stmg mlky CUT"
5660.00 5670.00	"LS AA, v rr redorng-orng-rr blk SH CVGS, POR-FLOR-STN-CUT AA"
5670.00 5690.00	"LS tan-ltbrn, rr gybrn-crm, micxl-vfxl, gran-micsuc, pred sl ooc-oom-alg GRNST, w/rr dns sl chky-plty rr ool PKST frag, rr ANHY xl, sl dol cmt, mg intxl-tr ool-alg POR, mg bri-dull yel FLOR, mfr ltbrn STN-rr blk dd o STN, fr slow-mfr mod fast stmg CUT, rr SH CVGS"
5690.00 5710.00	"LS tan-ltbrn, occ brn, rr crm-off wh, gran-vfxl, micxl-crpxl, ool-sl oom-occ dns GRNST, tr scat-occ intbd dns sl ool/gran tex PKST, chky-sl anhy/tr POR fl-rr xln ANHY, rr ltbrn CHT, mg intxl-fr sl ool-agl POR, g even mod bri-dull /scat bri yel FLOR, g ltbrn-brn/rr blk dd o STN, g mod fast-fast stmg mlky CUT"

DEPTH

LITHOLOGY

5710.00 5730.00 "LS AA,gran-vfxl,micxl-crpxl-sl xln,ool-sl oom-agl-occ dns GRNST,tr scat-occ intbd dns sl ool/gran tex PKST,sl chky-anhy/tr POR fl-rr xln ANHY,rr CHT AA,sl dol/tr DOL cmt,POR-FLOR AA,mg-fr ltbrn-tr brn-rr blk dd o STN,CUT AA"

5730.00 5750.00 "LS ltbrn-brn-occ tan,rr crm-off wh,vfxl-gran,micxl-crpxl-sl xln,sl ool-oom-occ dns GRNST,tr dns sl ool/gran tex PKST,chky-sl anhy/tr POR fl-rr xln ANHY,tr ltbrn CHT,sl dol ip,mg intxl-fr sl ool-tr agl POR,g even dull-mod bri/tr scat bri yel FLOR,g ltbrn-brn/tr blk dd o STN,mg-g mod fast-fast stmg mlky CUT"

5750.00 5770.00 "LS tan-ltbrn,tr brn,gran-vfxl-sl mic suc,tr micxl-crpxl,pred ool-sl oom-tr dns GRNST,tr dns sl ool/gran tex PKST,sl chky-anhy/tr POR fl-rr xln ANHY,tr tan-crm CHT,sl dol,mg intxl-ool-rr agl POR,g mod bri-dull/scat bri yel FLOR,STN-CUT AA"

5770.00 5790.00 "LS ltbrn-tan,occ brn,tr crm,vfxl-gran-sl micsuc,micxl-crpxl,pred GRNST AA,tr dns sl ool PKST/tr gran tex,chky-sl anhy/tr POR fl,tr CHT AA,rr xln ANHY,sl dol,mg ool-sl oom-intxl POR,FLOR-STN AA,g mod fast-fast stmg mlky CUT"

5790.00 5810.00 "LS AA,vfxl-gran-sl micsuc,micxl-crpxl,pred sl ool-oom-occ dns GRNST,tr dns sl ool-agl PKST/tr gran tex,sl incr chky-anhy/tr POR fl,rr CHT AA,v rr xln ANHY,sl dol,mg-fr ool-sl oom-intxl POR,mg-fr dull-mod bri/tr spty bri yel FLOR,mg ltbrn-brn/tr blk dd o STN,g-mg slow-tr mod fast stmg mlky CUT"

5810.00 5830.00 "LS AA,pred ool-sl oom-occ dns GRNST,tr scat-occ intbd dns sl ool PKST/tr gran tex,incr chky-sl anhy/tr POR fl,tr-rr CHT AA,v rr xln ANHY,sl dol,POR-FLOR-STN-CUT AA"

5830.00 5860.00 "LS ltbrn-tan,occ brn,tr crm,vfxl-gran,micxl-crpxl,pred GRNST AA,tr dns sl ool PKST/tr gran tex,chky-sl anhy/tr POR fl,tr crm-bf CHT,v rr xln ANHY,sl dol/tr DOL cmt,g-mg ool-sl oom-intxl POR,g-mg dull-mod bri/scat spty bri yel FLOR,STN AA,g mod fast stmg mlky CUT"

5860.00 5890.00 "LS AA,vfxl-gran-sl micsuc,micxl-crpxl,pred GRNST AA,tr dns sl ool PKST/tr gran tex,chky-sl anhy/tr POR fl,tr CHT AA,rr xln ANHY,sl dol/tr DOL cmt ip,mg ool-sl oom-intxl POR,FLOR-STN AA,g mod fast-fast stmg mlky CUT"

5890.00 5910.00 "LS ltb rn-tan,occ brn,rr crm,vfxl-gran-sl micsuc,micxl-crpxl-sl xln,pred ool-sl oom-occ dns GRNST,tr dns sl ool PKST/tr gran tex,sl chky-anhy/rr POR fl,rr CHT AA,v rr xln ANHY,sl dol,mg ool-sl oom-intxl POR,mg-g mod bri-dull/tr spty bri yel FLOR,mg ltbrn-brn/tr-fr scat blk dd o STN,g fast-mod fast stmg mlky CUT"

5910.00 5930.00 "LS AA,vfxl-gran-sl micsuc,micxl-crpxl,occ xln ip,pred GRNST AA,tr dns sl ool PKST/tr gran tex,chky-sl anhy/tr POR fl-xln ANHY,rr crm-bf CHT,n-v sl dol,mg-g ool-sl oom/tr intxl POR,mg-g mod bri-dull/incr scat spty bri yel FLOR,STN-CUT AA"

DEPTH	LITHOLOGY
5930.00 5950.00	"LS AA,pred ool-sl oom-occ dns GRNST,tr scat-occ intbd dns sl ool PKST/tr gran tex,chky-sl anhy/tr POR fl-xln ANHY,rr CHT AA,sl dol,POR-FLOR-STN-CUT AA"
5950.00 5970.00	"LS ltbrn-tan-occ brn,tr crm-off wh,vfxl-gran-occ sl micsuc,micxl-crpxl,rr xln frag,pred ool-sl oom GRNST/tr dns strk,tr intbd-scat sl ool dns PKST,chky-sl anhy/tr POR fl-rr xln ANHY,rr crm CHT,sl dol ip,g-mg ool-sl oom/tr intxl POR,g-mg mod bri-dull/scat spty bri yel FLOR,mg-fr ltbrn/tr brn & blk dd o STN,g fast stmg mlky CUT"
5970.00 5990.00	"LS AA,pred ool-sl oom-occ dns GRNST,scat-intbd dns sl ool PKST/tr gran tex,sl chky-anhy/tr POR fl-rr xln ANHY,sl-v sl dol ip,rr CHT AA,POR-FLOR-STN-CUT AA"
5990.00 6010.00	"LS AA,pred GRNST AA,tr scat-occ intbd dns sl ool PKST/tr gran tex,chky-sl anhy/tr POR fl-rr xln ANHY,tr-rr CHT AA,sl dol,POR-FLOR-STN-CUT AA"
6010.00 6020.00	"LS AA,vfxl-gran-sl micsuc,micxl-crpxl,pred ool-sl oom-occ dns GRNST,tr PKST AA/tr gran tex,sl chky-anhy/rr POR fl-xln ANHY,incr tan-bf CHT,sl dol/tr DOL cmt,POR AA,g-mg dull-mod bri/scat spty bri yel FLOR,mg-g ltbrn-tr brn & scat blk dd o STN,CUT AA"
6020.00 6030.00	"LS AA,pred GRNST AA/tr PKST AA & rr thn plty chky frag,sl anhy/rr POR fl-xln ANHY,sl dol AA,POR-FLOR-STN AA,g-mg fast-mod fast stmg mlky CUT"
6030.00 6050.00	"LS ltbrn-tan-occ brn,rr crm-wh,AA,pred GRNST AA,tr dns sl ool-agl PKST/tr gran tex,chky-sl anhy/tr POR fl-rr plty frag-xln ANHY,tr tan-bf CHT incl,sl dol/tr DOL cmt,g-mg ool-sl oom-intxl POR,FLOR-STN AA,g mod fast-tr fast stmg mlky CUT"
6050.00 6080.00	"LS AA,vfxl-gran-sl micsuc,micxl-crpxl,pred ool-sl oom-tr dns GRNST,tr PKST AA/tr gran tex,incr chky-sl anhy/tr POR fl,tr CHT AA,sl dol/tr DOL cmt,mg ool-sl oom-intxl POR,mg-fr dull-mod bri/tr scat spty bri yel FLOR,g-mg ltbrn-brn/tr blk dd o STN,g mod fast-tr fast stmg mlky CUT"
6080.00 6120.00	"LS ltbrn-tan,occ brn,tr crm,rr wh,vfxl-gran-sl micsuc,micxl-tr crpxl,pred ool-sl oom-tr dns GRNST,tr intbd dns v sl ool PKST/tr gran tex,sl chky-anhy/tr POR fl-rr xln ANHY,tr crm-tan CHT,sl dol/tr DOL cmt,g-mg ool-sl oom/tr intxl-rr pp vug POR,mg-fr dull-mod bri/tr scat spty bri yel FLOR,mg-g ltbrn-brn/rr blk dd o STN,g fast-mod fast stmg mlky CUT"
6120.00 6150.00	"LS tan-ltbrn,tr brn,crm,rr wh,vfxl-gran,micxl-crpxl,pred GRNST AA,tr dns sl ool PKST/tr gran tex,sl chky-anhy/tr POR fl-rr xln ANHY,tr crm-bf CHT,sl dol,mg-g ool-sl oom/incr intxl POR,sl incr FLOR AA,fr-mg ltbrn/tr brn-rr pp blk dd o STN,g mod fast/tr slow stmg mlky CUT"
6150.00 6180.00	"LS AA,vfxl-gran,micxl-crpxl,sl micsuc ip,rr xln incl,pred GRNST AA,tr dns sl ool PKST/tr gran tex,incr chk-sl anhy/tr POR fl-rr xln ANHY,tr CHT AA,sl dol,mg ool-sl oom-intxl POR,g-mg mod bri-dull/scat spty bri yel FLOR,STN-CUT AA"

DEPTH	LITHOLOGY
6180.00 6200.00	"LS ltbrn-tan,occ brn,tr crm,vfxl-gran-sl micsuc,micxl-crpxl,sl ool-oom-occ dns GRNST,tr PKST AA/tr gran tex,dec chk-sl anhy/tr POR fl-rr ANHY,tr CHT AA,sl dol,POR-FLOR AA,mg-fr ltbrn-scat brn/rr blk dd o STN,g mod fast stmg mlky CUT,w/tr SLTST & SH cvgs"
6200.00 6220.00	"LS AA/rr crm-wh,vfxl-gran-sl micsuc,micxl-crpxl,pred ool-sl oom-tr dns GRNST,tr PKST AA,chk-sl anhy/tr POR fl-rr xln ANHY,rr crm CHT,sl dol ip,mg-fr ool-sl oom-intxl POR,g mod bri-dull/scat spty bri yel FLOR,STN AA,g fast-mod fast stmg mlky CUT"
6220.00 6260.00	"LS tan-ltbrn,occ brn,tr crm,rr wh,vfxl-gran-micxl,crpxl,pred GRNST AA,sl incr dns sl ool PKST/tr gran tex,chk-sl anhy/tr POR fl-rr xln ANHY,tr crm CHT,sl dol ip,mg-g intxl-fr ool-sl oom POR,mg-g dull-mod bri/incr spty bri yel FLOR,fr-mg ltbrn/tr brn-rr blk dd o STN,g fast-mod fast stmg mlky CUT"
6260.00 6280.00	"LS AA,vfxl-micxl-gran,crpxl,sl micsuc-rr xln,pred sl ool-oom-incr dns GRNST,scat-occ intbd dns sl ool PKST/tr gran tex,chk-sl anhy/sl incr POR fl-rr xln ANHY,sl dol-rr DOL cmt ip,tr ltbrn-crm CHT,POR-FLOR AA,fr-mg ltbrn/scat brn-tr blk dd o STN,CUT AA"
6280.00 6310.00	"LS tan-ltbrn,tr brn,crm,rr wh,vfxl-gran-micxl,crpxl,pred dns-sl ool-oom GRNST,scat-intbd dns sl ool PKST/tr gran tex,chk-sl anhy/sl incr POR fl-tr xln ANHY,tr ltbrn-crm CHT,sl dol/tr DOL cmt ip,mg-g intxl-ool-tr oom POR,g mod bri-dull/scat spty bri yel FLOR,mg-fr ltbrn/tr brn-rr blk dd o STN,g fast-mod fast stmg mlky CUT"
6310.00 6340.00	"LS AA,pred GRNST AA,tr scat-occ intbd dns sl ool PKST/tr gran tex,chk-sl anhy/tr POR fl-rr xln ANHY,tr CHT AA,sl dol/tr DOL cmt ip,POR-FLOR-STN-CUT AA"
6340.00 6380.00	"LS tan-ltbrn,occ crm,tr brn,vfxl-gran-micxl,occ crpxl,rr micsuc,pred dns-sl ool-oom GRNST,scat-occ intbd dns v sl ool PKST/tr gran tex,chk-sl anhy/sl incr POR fl-rr xln ANHY,tr crm-tan CHT,sl dol/rr DOL cmt ip,fr-mg intxl-ool-sl oom POR,mg-g dull-mod bri/tr scat spty bri yel FLOR,fr-mg ltbrn/tr brn-rr blk dd o STN,g fast-mod fast stmg mlky CUT"
6380.00 6410.00	"LS pred tan,crm-wh ip, rr ltbrn-brn,crpxl-micxl,occ vfxl-gran,rr micsuc,pred dns occ chk-plty v sl ool chty ip PKST,w/scat stks sl ooc-oom GRNST,occ ANHY-rr CALC xl,v sl DOL cmt,sl tr bf-trnsl CHT frag,tt-sl tr intxl-rr ool POR,rr-tr spty bri-dull yel FLOR,tr ltbrn-v rr blk STN,fr slow dif-rr slow stmg mlky CUT w/scat blk GOTHIC SH & red-redorng CUTLER SH CVGS"
6410.00 6430.00	"LS AA,incr sl ooc-oom GRNST,incr POR-FLOR-STN,mfr-fr slow dif-mfr slow stmg CUT,decr scat SH CVGS AA"
6430.00 6470.00	"LS tan,crm-wh ip,rr ltbrn,crpxl-vfxl-gran,rr micsuc,intbd dns sl chk-plty v sl ool chty ip PKST & sl ooc-oom GRNST,occ ANHY-rr CALC xl,v sl DOL cmt,sl tr bf-trnsl CHT frag,tt-sl tr intxl-rr ool POR,rr-tr spty bri-dull yel FLOR,rr-mfr ltbrn-rr blk STN,fr slow dif-tr-mfr slow stmg mlky CUT w/scat blk GOTHIC SH & red-redorng CUTLER SH CVGS"

DEPTH	LITHOLOGY
6470.00 6490.00	"LS AA,bcmg pred dns-occ clky-plty PKST,w/decr sl ooc-oom GRNST,tt-fr intxl-rr ool POR,tr-mfr dull-bri yel FLOR,tr ltbrn-rr blk STN,mfr slow dif-tr slow stmg mlky CUT,sl tr blk-red & redornng SH CVGS"
6490.00 6510.00	"LS tan-crm,occ wh-ltbrn-rr gybrn,crpxl-vfxl,occ gran-sl micsuc,bcmg pred sl ooc-oom GRNST w/decr dns sl ool chk-plty anhy PKST incl,rr CHT FRAG,tt-fr intxl-rr ool POR,tr-mfr dull-bri yel FLOR,spty tr ltbrn-brn-rr blk STN,fr slow dif-sl tr stmg mlky CUT; rr scat blk-red-redornng SH CVGS"
6510.00 6540.00	"LS pred tan-ltgybrn,occ crm-wh,crpxl-vfxl,gran-micsuc ip,pred v sl ooc-oom GRNST,w/rr dns chk-plty sl ool anhy PKST frag,rr DOL cmt,rr CHT frag-ANHY xl,mfr-mg intxl-sl ool POR,mg bri-dull yel FLOR,mfr ltbrn-rr blk STN,mfr-mg slow-mod fast CUT,TR SH CVGS"
6540.00 6560.00	"LS AA,POR-FLOR-STN-CUT AA,w/sl tr SH CVGS"
6560.00 6590.00	"LS tan,rr crm-wh-ltbrn,micxl-vfxl,gran-micsuc ip,pred sl ooc-oom GRNST,w/rr scat dns crpxl occ chk-plty PKST,v rr trnsf-bf CHT frag,scat ANHY xl,v sl DOL cmt,fr-mg intxl-rr ool POR,fr-g bri-dull yel FLOR,tr ltbrn STN-rr blk dd STN,fr slow-mod fast CUT,v rr scat blk GOTHIC SH & red-redornng CUTLER SH CVGS"
6590.00 6620.00	"LS tan-brn,occ brn GRNST AA,POR AA,mg-g bri-rr dull yel FLOR,fr ltbrn-rr brn STN,sl tr blk dd o STN,mfr mod fast-fr slow stmg mlky CUT,v rr scat SH CVGS AA"
6620.00 6650.00	"LS tan-ltbrn-brn,occ wh-crm,crpxl-vfxl,occ gran-micsuc,pred dns tt sl ool chty rr chk-plty PKST w/stks sl ooc-oom GRNST,trnsf-bf-rr brn CHT frag,scat ANHY xl-POR fl,tt-sl tr intxl-rr ool POR,mfr bri-dull yel FLOR,sl tr ltbrn-brn-rr blk STN,mfr slow-rr mod fast stmg CUT,fr slow dif CUT, W/V RR SCAT SH CVGS"
6650.00 6660.00	"LS AA,w/incr sl ooc GRNST,rr trnsf-bf-brn CHT frag,decr ANHY fl POR,v rr DOL cmt,tt-mfr intxl-tr ool POR,tr-mfr dull-rr bri yel FLOR,sl tr ltbrn STN-v rr blk dd o STN,mfr slow dif-tr slow stmg CUT,rr SH CVGS"
6660.00 6680.00	"LS tan-ltbrn-gybrn,crpxl-vfxl,occ gran-micsuc,pred sl ooc GRNST,w/tr dns sl ool anhy cht ip sl chky-plty PKST frag,sl dol cmt,rr trnsf-bf CHT frag,scat SH CVGS,fr-mg intxl-tr ool POR,fr dull-bri yel FLOR,sl tr ltbrn-v rr blk STN,fr slow-mfr mod fast CUT"
6680.00 6700.00	"LS AA,fr intxl-tr ool POR,fr dull-tr bri yel FLOR,sl tr-tr ltbrn-v rr brn STN,rr blk dd o STN,fr slow-mfr mod fast stmg mlky CUT,v rr scat vari col SH cvgs"
6700.00 6730.00	"LS brn-ltbrn,occ ltgybrn,rr wh-crm,micxl-vfxl,occ crpxl,gran-micsuc,occ suc,pred ooc-oom GRNST,rr scat dns anhy sl ool chty PKST,v rr DOL cmt,tr ANHY xl-rr POR fl,rr trnsf-bf CHT frag,fr-mg intxl-mfr ool POR,mg bri-dull yel FLOR,fr ltbrn-v rr brn STN-rr blk dd o STN,mg slow-mfr mod fast stmg mlky CUT,sl tr redornng-blk SH CVGS"

DEPTH	LITHOLOGY
6730.00 6760.00	"LS AA,w/incr dns PKST incl & CHT frag,v sl incr ANHY fl POR,fr-mg intxl-mfr ool POR-occ dns tt,fr-mg dull-fr bri yel FLOR,STN-CUT AA,v rr scat SH CVGS"
6760.00 6780.00	"LS AA,pred GRNST AA,w/sl tr alg mat,v rr scat PKST frag,v rr trnsl-bf CHT frag,decr ANHY fl POR,tt-mg intxl-tr-mfr ool-v rr alg POR,FLOR-STN AA,fr-mg slow-mfr mod fast stmg mlky CUT,v rr SH CVGS"
6780.00 6820.00	"LS tan-ltbrn,occ brn,rr crm-wh,micxl-vfxl,gran-micsuc,rr suc,pred sl ooc-oom GRNST,w/scat dns sl ool occ anhy chty ip sl chky-plty PKST,v sl DOL cmt,sl tr trnsl-bf-brn CHT frag,mfr-mg intxl-mfr ool POR,mg dull-bri yel FLOR,tr-mfr ltbrn-brn STN,rr blk dd o STN,fr-mg slow-mfr mod fast stmg mlky CUT,v rr blk-redorng-red SH CVGS"
6820.00 6840.00	"LS AA,v sl incr dns sl ool PKST,POR-FLOR-STN-CUT AA,v rr SH CVGS"
6840.00 6860.00	"LS tan-ltbrn,occ brn,rr crm-wh,micxl-vfxl,gran-micsuc,rr suc,pred sl ooc-oom GRNST,w/scat dns sl ool occ anhy chty ip sl chky-plty PKST,v sl DOL cmt,sl tr trnsl-bf-brn CHT frag,mfr-mg intxl-mfr ool POR,mg dull-bri yel FLOR,tr-mfr ltbrn-brn STN,rr blk dd o STN,fr-mg slow-mfr mod fast stmg mlky CUT,v rr blk-redorng-red SH CVGS"
6860.00 6875.00	"LS AA,pred sl ooc-oom GRNST,rr scat dns PKST AA,POR-FLOR-STN-CUT AA,n-v rr orng-redorng-red-blk SH CVGS"

FORMATION TOPS

OPERATOR: MOBIL

WELL NAME: RATHERFORD UNIT #15-12 NW 1-A HORIZONTAL LATERAL LEG #1

FORMATION NAME		SAMPLES MEASURED DEPTH	SAMPLES TRUE VERTICAL DEPTH	DATUM KB:4678'
LOWER ISMAY		5465'	5460'	-782'
GOTHIC SHALE		5513'	5492'	-814'
DESERT CREEK		5530'	5501'	-823'
UPPER DC 1-A ZONE		5544'	5506'	-828'
LOWER DC 1-A ZONE		5568'	5512'	-834'

GEOLOGICAL SUMMARY

AND

ZONES OF INTEREST

The Mobil Exploration and Production U.S., Inc., Ratherford Unit #15-12 Northwest Horizontal Lateral Leg #1 was a re-entry of the Mobil Ratherford Unit #15-12 located in Section 15, T41S, R24E, and was sidetracked in a northwesterly direction from 5395' measured depth, 5395' true vertical depth, on September 3, 1998. The lateral reached a measured depth of 6875', true vertical depth of 5509.9' at total depth, with a horizontal displacement of 1400' and true vertical plane of 307.3 degrees on September 5, 1998. The lateral was terminated in the Lower 1-A porosity zone in the Upper Desert Creek Member of the Paradox Formation. The curve and lateral were drilled with fresh water and brine water with polymer sweeps as the drilling fluid. The proposed target line was used as a reference point throughout the lateral. The curve and lateral sections were drilled with no significant mechanical problems. There was no measurable flow or loss of fluid throughout the lateral and curve sections.

The objective of the Ratherford Unit #15-12 southeast lateral Leg #1 was to penetrate and drill 1400' horizontally in the lower bench of the Desert Creek 1-A porosity zone; to identify and define its lithology, and to evaluate the effective porosity and permeability of the zone. In this northwesterly direction, the lower 1-A porosity zone appeared to have more consistent, as well as better developed porosity, thus was targeted for this lateral. These objectives were met in this lower pay zone of the Desert Creek 1-A porosity bench. At the measured depth of 6361', 5515.5' true vertical depth, the lateral was oriented upward at a shallow angle and encountered a thin hard streak, above which very streaky porosity near the top of the lower 1-A porosity bench was noted. The porosity penetrated in predominately the lower 1-A zone, in this northwesterly lateral had consistent lithology, until reaching the measured depth of 6362'. The lower 1-A porosity penetrated in this northwesterly lateral was predominately an oolitic to oomoldic limestone grainstone facies, and had a fair hydrocarbon and gas show, with good visible effective porosity and permeability. As the lateral bumped the top of the zone or penetrated the hard streaks and streaky porosity within the 1-A zone, a minor to significant increase in the dense, very slightly oolitic, occasionally platy and chalky limestone packstone was noted. These packstones had no to very minor porosities and no to extremely poor sample and gas shows.

The curve was started in the lower portion of the Upper Ismay before encountering the typical sections of the Lower Ismay, Gothic Shale, Desert Creek and the 1-A porosity bench carbonate cycle of the Upper Paradox Formation.

The curve section was begun in the upper half of the Upper Ismay carbonate cycle of the Upper Paradox Formation and was penetrated from a measured depth of 5395', true vertical depth 5395', to a measured depth of 5465', true vertical depth 5460'. The 70' of the Upper Ismay Formation penetrated was predominately a clean to dense, occasionally argillaceous, tight limestones, with scattered interbeds of earthy to argillaceous dolomites, very thin black carbonaceous shale partings and scattered chert fragments. The limestones were cream to white, some light gray to medium gray brown to brown, cryptocrystalline to microcrystalline, clean and dense, with streaks of an earthy to argillaceous to chalky texture, and were occasionally marly. These limestones had very rare streaks of fracture to very minor intercrystalline porosity, but had no visible sample shows. The thin interbedded dolomites were brown to medium brown, cryptocrystalline to microcrystalline, earthy

to argillaceous, limey, becoming marly with depth, and had scattered Crinoid fossils. The dolomites had traces of minor intercrystalline to earthy porosity, but as with the limestones, no visible porosity and no sample shows. The shale parting were black to dark gray, some light gray, subblocky to subplaty, occasionally fissile, very slightly silty, micaceous, and calcareous to slightly dolomitic, and had very minor Crinoid fossils. Scattered throughout the Upper Ismay carbonates were translucent to buff to dark brown chert fragments. The basal carbonates became increasingly marly and graded into the thin, very fossiliferous, carbonaceous Hovenweep Shale. The Hovenweep Shale, which defines the Upper and Lower Ismay contact, was represented by an moderate increase in the black carbonaceous, dolomitic to calcareous, occasionally silty shale. This contact was moderately well represented in the samples from measured depths of 5460' and 5465', true vertical depths 5456' to 5460'.

The top of the Lower Ismay member of the Upper Paradox Formation was picked at a measured depth of 5465', true vertical depth 5460', based primarily on sample identification and a decrease in the rate of penetration. The upper 15' of the Lower Ismay was predominately medium to light gray brown, occasionally tan to cream, rare white, dense, very slightly anhydritic, fossiliferous limestones, some very limey, argillaceous, brown to medium brown dolomites, with very thin black carbonaceous shale partings and rare chert fragments. The Lower Ismay, from measured depths of 5480' to 5505', became a white to cream to light gray, cryptocrystalline to microcrystalline, with granular streaks, chalky, slightly to very silty, occasionally anhydritic, chalky and occasionally dolomitic in part. This limestone showed a slight increase in the penetration rate, with streaks of well cemented very silty limestone grainstones, some scattered translucent to light to dark brown chert fragments, and very rare thin brown, earthy dolomites. It was also noted that these limestones occasionally graded to very limey siltstones, and had very rare microfossils and some algal material. Associated with the limestones were very rare streaks of intercrystalline porosity, but had no visible sample show. The basal 8 feet of the Lower Ismay, from a measured depth of 5505' to a measured depth of 5513', was a very dense, slightly dolomitic limestone packstone and earthy limey dolomites. These limestones and dolomites became slightly to very marly with depth, and had scattered anhydrite interclasts and chert fragments. The basal limestones and thin dolomites had thin streaks of intercrystalline porosity, with no visible sample show. The basal limestones and dolomites of the Lower Ismay carbonates graded into limey to dolomitic carbonaceous shales of the Gothic Shale.

The Gothic Shale was penetrated at a measured depth of 5513', true vertical depth 5592', and gradationally underlies the Lower Ismay. The top of the Gothic was picked by a decrease in the penetration rate and a significant increase in the amount of black carbonaceous shale in the cuttings. This shale member of the Upper Paradox Formation was seen to have a true vertical thickness of nine feet thick in this northwesterly direction. This shale is black to dark gray shale, carbonaceous, occasionally grainy to silty, soft to slightly firm, sooty, slightly fissile, subblocky to subplaty, calcareous to slightly dolomitic and slightly micaceous. Very thin partings of dense, very slightly argillaceous, occasionally dolomitic limestones and clean to very argillaceous limey dolomites were noted in this shale member. The Gothic overlays the top of the Desert Creek Member with a sharp contact.

The top of the Desert Creek Member of the Upper Paradox Formation was picked at a measured depth of 5530', 5501' true vertical depth, at an increase in penetration rate and an increase in the amount of dense limestone packstone in the samples. This transition zone had a true vertical thickness of approximately five feet. The transition zone between the Gothic Shale and the top of the Upper Desert Creek 1-A porosity zone in this well is predominately a dense limestone packstone, which became very argillaceous and very slightly oolitic with depth and has thinly interbedded argillaceous limey marlstones and black carbonaceous shale partings. The limestones of the transition zone are light brown to cream to white to light gray, some medium brown, cryptocrystalline to microcrystalline, with very rare very finely crystalline streaks, dense to slightly silty, and very slightly dolomitic. Scattered in the limestones are very thin, dark brown, very argillaceous, very shaley, limey marlstones; some black, dolomitic, slightly micaceous, calcareous, very slightly carbonaceous shales and rare brown, microcrystalline, limey, argillaceous dolomite interbeds. The transition zone had poor

to a slight trace of intercrystalline porosity, with a very poor, weak sample show. Near the base of the transition zone the dense limestones became increasingly oolitic and graded in to the oolitic to oomoldic limestones of the upper 1-A porosity bench.

The top of the Desert Creek Upper 1-A porosity zone was encountered at a measured depth of 5544', 5506' true vertical depth, with a horizontal displacement of approximately 76'. The top was picked on the lithology becoming predominately a good oolitic to oomoldic limestone grainstone with a significant increase in the penetration rate and background gas. These oolitic to oomoldic limestone grainstones marked the upper 1-A porosity zone, which was split in to two benches. The upper porosity streak had a true vertical thickness of 4 ½ feet in this northwesterly direction. These limestone grainstones are tan to light brown to cream, microcrystalline to very fine crystalline, with a granular to slightly microsugrosic texture around the oolitic and oomoldic fabric and were very slightly dolomitic. The grainstones have a very minor amount of anhydrite crystal growth in the oolitic and molds as well as in the intercrystalline matrix and very rare light brown chert fragments. The grainstone facies had a moderately good oomoldic to oolitic fabric, with a moderately fair oolitic to fair intercrystalline porosity development. The sample show was moderately fair with a trace of brown to light brown oil stain and had minor traces of black bitchimum stain* on the crystal faces and in the oolitic and molds. The grainstones had a spotty trace of bright to occasionally dull yellow fluorescence and a moderately fair slow streaming to trace fast streaming cut.

An approximately one and one-half foot thick hard streak that split the Upper 1-A zone was noted from a measured depth of 5560', 5510.5' true vertical depth, to a measured depth of 5568', 5512' true vertical depth. This dense, slightly oolitic limestone packstone facies were cream to tan, occasionally white, cryptocrystalline to very slightly microcrystalline, slightly chalky to occasionally platy, clean and very slightly anhydritic. These packstones had very minor streaks of very slightly oolitic to oomoldic limestone grainstone, with a very poor sample show. The base of this thin hard streak graded into the Lower 1-A porosity bench.

The top of the lower bench of the Upper 1-A porosity zone was penetrated at a measured depth of 5568', true vertical depth 5512', with a horizontal displacement of approximately 96'. The lithology of this lower bench was a very good oolitic limestone grainstone, like the upper bench as described above. However, porosity is much thicker and has better developed porosity, in this northwesterly direction, with a fair to moderately good sample show. As soon as the 1-A porosity bench was penetrated a slight increase in the background gases noted and also trace of oil was noted on the pits. This lower zone in the Upper 1-A was the target zone for the entire northwest lateral, as it appeared to be better developed as well as thicker on the vertical well log for the Ratherford #16-W-43 well as well as the offset logs.

The curve portion of the lateral was completed on September 4, 1998, at a measured depth of 5590', true vertical depth of 5514.5', with a horizontal displacement of 119', in the lower porosity bench of the Desert Creek 1-A porosity zone. At this point a trip was made to lay down the curve assembly and pickup the lateral assembly.

Drilling of the northwest lateral was resumed also on September 4, 1998, in the lower pay zone of the Upper Desert Creek 1-A porosity bench of the Upper Paradox Formation. The lateral was slid for the first 52' in order to control the vertical depth, establish horizontal plane direction and to put the lateral assembly out far enough to begin rotating. The lateral was begun in the good oolitic to oomoldic limestone grainstone facies. This limestone grainstone was a tan to light brown, some brown, microcrystalline to very fine crystalline, granular to microsugrosic, oolitic to oomoldic, slightly dolomitic, with occasionally calcite and anhydrite cement and cast filling. These grainstones had a fair to good oolitic to intercrystalline porosity, a moderately good bright yellow fluorescence, a moderately fair light brown to brown oil stain, with trace to poor black bitchimum* stain, and a moderate to moderately fair fast to slow streaming cut. Increases in dense, very slightly oolitic, and

occasionally chalky to platy packstone was noted when hard steaks were bumped and "glanced" off of, or penetrated. A small 1' to 3' flare was noted at the start of the lateral section.

As the well path was rotated ahead, the porosity zone dipped downward at a shallow angle of 89.8°, as the well path was allowed to dip at 89° until reaching a measured depth of 5850' with a true vertical depth of 5518'. At this point the surveys indicated that the formation had turned the well path upward. No indication of a "glance" was noticed in the penetration rate or in the samples. The well path was continued to be rotated ahead at a shallow upward angle averaging 90.7 ° in the good oolitic to oomoldic limestone grainstone until glancing off the top of the porosity zone at a measured depth of 6028', 5516' true vertical depth, turning the well path downward. The well path continued downward at a very shallow angle and was slowly leveled. As the lateral continued in the good oolitic to oomoldic limestone grainstones, the well bore was allowed to slowly drift upward with only one slide to control the rate of climb, until reaching a measured depth of 6361'. At the measured depth of 6361', 5515.5' true vertical depth, as the well path neared the top of the Lower 1-A porosity zone, the well bore encountered and penetrated a thin hard streak, above which the porosity thinner and slightly streaky. This interval was from 889' to 1180' in horizontal displacement, 6631' to 6658' measured depths, and from 5515.5' to 5514' true vertical depths.

As the well path reached the measured depth of 6361', with the true vertical depth of 5515.5', base of a one foot thick slightly down dipping hard streak was encountered and penetrated. Due to the hard streak having a slight down dip, as the well path was turned downward to move away from the hard streak, the well path remained in the tight dense limestone packstones with minor traces of oolitic to oomoldic grainstones. This lithology remained consistent until the well bore was allowed to level. The good oolitic to oomoldic limestone grainstones above the hard streak were reacquired at a measured depth of 6498', 5515.5' true vertical depth. As the lateral continued, the well path turned upward in the good porosity until slid away from and glanced off the top of the Lower 1-A bench, turning the well path downward. As the well path continued downward at an average angle of 88.8 °, the hard streak below this thin, upper most porosity streak was again encountered and penetrated. The hard streak was still approximately one foot thick, and was noted from measured depths of 6621' to 6658', 5515.3' to 5516' true vertical depths. Throughout this upper interval of tight streaks and thin porosity, a slow steady decrease in the background gas was noted, although the flare remained rather consistent ranging from 2' to 6' in height.

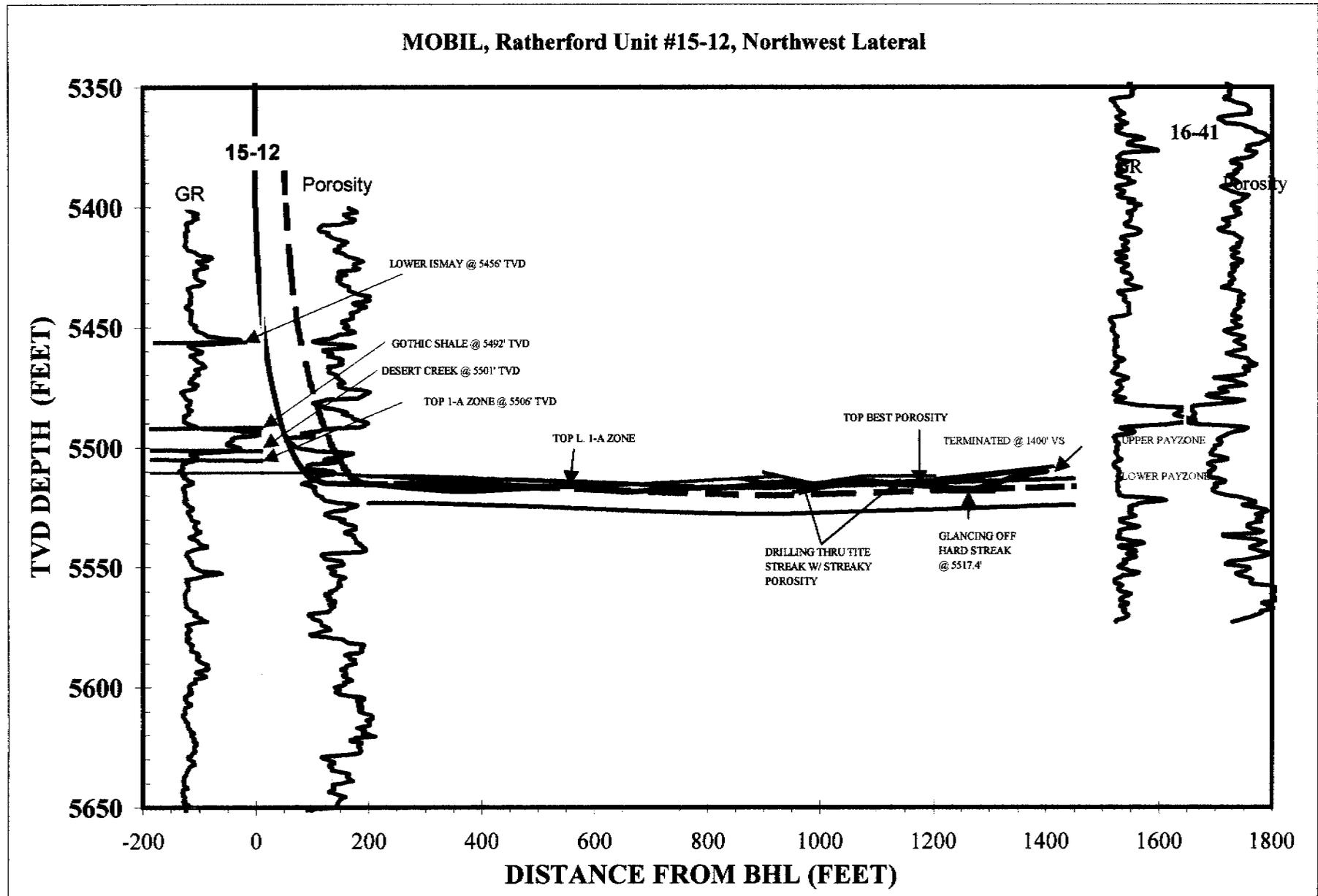
At the measured depth of 6658', the very good oolitic to oomoldic limestone grainstones were encountered. The well path remained in this lithology of the Lower 1-A zone to the lateral's termination. A hard streak was encountered at a measured depth of 6737', 5517' true vertical depth, which turned the well path upward. As the hard streak was bumped the lithology, show a marked increase in the dense, cryptocrystalline, cream to white, occasionally chalky, platy, limestone packstones, with some thin interbedded oolitic to oomoldic limestone grainstones. The well path was allowed to continue upward, in the oolitic to oomoldic limestone grainstone porosity, until nearing the top of the Lower 1-A zone, when a slide was made to control the rapidly increasing angle, and move the well path away from the top of the zone. Upon reaching a measured depth of 6875', 5510' true vertical depth, and a horizontal displacement of 1400', the lateral was terminated on September 9, 1998.

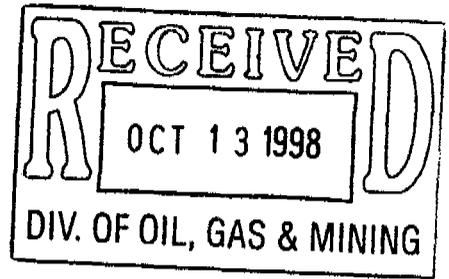
In tracking the lateral in this northwesterly direction, the oolitic to oomoldic limestone grainstone porosity had good sample shows, which remained fairly consistent until reaching the measured depth of 6361', as the formation appeared to be trending slightly downward, and the well path trending upward. The oolitic to oomoldic limestone grainstones of the lower 1-A porosity bench showed predominately good oolitic to intergranular porosity. There were decreases in the amount of porosity and increases in the tight dense limestone packstone, when the top of the zone and the random tight streaks were encountered. The lateral at its termination, was approximately 3' above the proposed target and in the very good oolitic to oomoldic limestone grainstone porosity of the Lower 1-A Desert Creek porosity zone. The well path tracked the proposed target line, until reaching

a horizontal displacement of approximately 700', when the well path rose above the proposed well and remained to the laterals termination. Of note was the hard streak and thin porosity near the top of the Lower 1-A bench noted in the lateral from 889' to 1180' in horizontal displacement. This tight streak appeared to disappear laterally or turn upward near the end of the lateral.

From the beginning of the 15-12 northwest lateral leg #1 to its termination on September 9, 1998, at a measured depth of 6875', 5510' true vertical depth and a horizontal displacement of 1400', the porosities appear to be well enough developed to enhance the overall performance of the R. U. 15-12 injection well. The interval from the measured depth of 6361' to 6658', even though the porosities are very thin, with associated hard streaks, this interval will contribute to the overall performance, after acidization and returned to water flood.

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





MOBIL

**RATHERFORD UNIT #15-12
SE HORIZONTAL LATERAL LEG #2
UPPER 1-A POROSITY BENCH
DESERT CREEK MEMBER
PARADOX FORMATION
SECTION 15, T41S, R24E
SAN JUAN, UTAH**

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

TABLE OF CONTENTS

WELL SUMMARY..... 3
DRILLING CHRONOLOGY 4
DAILY ACTIVITY 5
BIT RECORD..... 5
MUD RECORD..... 5
SURVEY RECORD 6
SAMPLE DESCRIPTIONS 8
FORMATION TOPS 15
GEOLOGIC SUMMARY AND ZONES OF INTEREST 16
WELL PLOTS 20

WELL SUMMARY

OPERATOR: MOBIL EXPLORATION & PRODUCTION U.S. INC.

NAME: RATHERFORD UNIT #15-12 SE HORIZONTAL LATERAL
LEG #2 IN 1-A LOWER POROSITY BENCH, DESERT CREEK

LOCATION: SECTION 15, T41S, R24E

COUNTY/STATE: SAN JUAN, UTAH

ELEVATION: KB:4678' GL:4667'

SPUD DATE: 8/31/98

COMPLETION DATE: 9/09/98

DRILLING ENGINEER: BENNY BRIGGS / SIMON BARRERA

WELLSITE GEOLOGY: DAVE MEADE / MARVIN ROANHORSE

**MUDLOGGING
ENGINEERS:** DAVE MEADE / LUKE TITUS

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

HOLE SIZE: 4 3/4"

CASING RECORD: SIDETRACK IN WINDOW AT 5381' MEASURED DEPTH

**DRILLING MUD:
ENGINEER:** M-I
RON WESTENBERG / MIKE PITTSINGER
MUD TYPE: FRESH WATER & BRINE WATER W/ POLYMER SWEEPS

**DIRECTIONAL
DRILLING CO:** SPERRY-SUN

ELECTICAL LOGGING: NA

TOTAL DEPTH: 7100' MEASURED DEPTH; TRUE VERTICAL DEPTH-5541.3'

STATUS: PREPARING WELL FOR COMPLETION AND RIG FOR MOVE TO
R.U. #20-66 LOCATION

DRILLING CHRONOLOGY
RATHERFORD UNIT #15-12
1-A SE HORIZONTAL LATERAL LEG #2

DATE	DEPTH	DAILY	ACTIVITY
9/06/98	6875'/ 5372'	29'	TOH W/WHIPSTOCK #1-P.U. WHIPSTOCK #2 & STARTER MILL-ORIENT-TIH-SET WHIPSTOCK #2-MILL W/STARTER MILL 5372' TO 5374'-TOH-L.D. STARTER MILL-P.U. WINDOW MILL & WATER MELON MILLS-TIH-MILL W/WINDOW MILLS 5372' TO 5381'-CIR-L.D. 12 JTS PIPE-TOH-P.U. CURVE ASSEM.-ORIENT & TEST MOTOR & MWD-TIH-FILL & WASH THRU PIPE-R.U. GYRO DATA-RUN IN HOLE W/GYRO-DIR DRLG & WIRE LINE SURVEYS
9/07/98	5401'	183'	DIR DRLG & WIRE LINE SURVEYS TO 5410'-PULL GYRO-DIR DRLG & SURVEYS TO 5539'-PUMP SWEEP & CIR SPLS-L.D. 7 JTS PIPE-PUMP 20 BBLs BRINE-TOH-CHANGE OUT MUD MOTOR & BIT-TEST-TIH-DIR DRLG & SURVEYS
9/08/98	5584'	747'	DIR DRLG & SURVEYS TO 5595'-PUMP SWEEP & CIR. OUT SPLS-PUMP 20 BBLs BRINE-L.D. 50 JTS AOH-TOH-L.D. CURVE ASSEM.-P.U. LATERAL ASSEMBLY- ORIENT & TEST-CUT 75' DRLG LINE-TIH-DIR DRLG & SURVEYS
9/09/98	6331'	769'	DIR DRLG & SURVEYS TO 7100' PUMP SWEEP & CIR SPLS-TOH-L.D. LATERAL ASSEM.-PREPARE WELL FOR COMPLETION & PREPARE RIG FOR MOVE TO R.U. 20-66 LOCATION

DAILY ACTIVITY

Operator: MOBIL

Well Name: RATHERFORD UNIT #15-12 SE 1-A HORIZONTAL LATERAL LEG #2

DATE	DEPTH	DAILY	DATE	DEPTH	DAILY
9/06/98	6875'	29'			
	5372'				
9/07/98	5401'	183'			
9/08/98	5584'	747'			
9/09/98	6331'	769'			
	7100'	TD'			

BIT RECORD

OPERATOR: MOBIL

WELL NAME: RATHERFORD UNIT #15-12 SE 1-A HORIZONTAL LATERAL LEG #2

RUN	SIZE	MAKE	TYPE	IN/OUT	FTG	HRS	FT/HR
#1 (RR)	4 3/4"	STC	MF-2GP	5395'/ 5539'	158'	17	13.3
#2 (RR)	4 3/4"	STC	MF-2GP	5539'/ 5595'	56'	5	49.4
#3	4 3/4"	STC	MF-2GP	5595'/ 7100'	1285'	26	49.4

MUD REPORT

OPERATOR: MOBIL

WELL NAME: RATHERFORD UNIT #15-12 SE 1-A HORIZONTAL LATERAL LEG #2

DATE	DEPT H	WT	VIS	PLS	YLD	GEL	PH	WL	CK	CHL	CA	SD	OIL	WTR
9/06/98	5373'	8.7	26	1	1	0/0	11.0	NC	NC	38000	560	1%	0%	99%
9/07/98	5485'	8.8	26	1	1	0/0	11.0	NC	NC	38000	400	1%	0%	99%
9/08/98	5601'	8.9	26	1	1	0/0	10.5	NC	NC	56000	600	1%	2%	97%
9/09/98	6781'	9.0	26	1	1	0/0	11.0	NC	NC	60000	1200	1%	2%	97%

SPERRY-SUN DRILLING SERVICES
SURVEY DATA

Customer ... : Mobil Utah
Platform ... : RATHERFORD UNIT
Slot/Well .. : BA25/15-12 2A1

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	TVD	NORTHINGS FEET	EASTINGS FEET	VERTICAL SECTION	DOG LEG
5200.00	0.20	66.84	5199.86	6.20 S	3.09 W	2.20	0.00
5373.00	0.27	56.69	5372.86	5.86 S	2.47 W	2.39	0.05
5381.00	4.50	135.00	5380.85	6.07 S	2.23 W	2.71	55.66
5391.00	8.80	135.98	5390.78	6.90 S	1.43 W	3.87	43.01
5401.00	12.90	136.33	5400.60	8.26 S	0.12 W	5.75	41.01
5411.00	17.40	136.51	5410.25	10.15 S	1.68 E	8.36	45.00
5421.00	21.70	136.62	5419.67	12.58 S	3.98 E	11.71	43.00
5431.00	25.50	136.70	5428.83	15.49 S	6.72 E	15.71	38.00
5441.00	29.60	136.75	5437.70	18.86 S	9.89 E	20.33	41.00
5451.00	33.40	136.80	5446.22	22.66 S	13.47 E	25.55	38.00
5461.00	37.70	142.20	5454.36	27.09 S	17.23 E	31.34	53.21
5471.00	42.10	144.60	5462.03	32.24 S	21.05 E	37.68	46.61
5481.00	46.00	146.20	5469.21	37.96 S	25.00 E	44.52	40.55
5491.00	50.40	145.30	5475.88	44.12 S	29.19 E	51.84	44.51
5501.00	54.40	143.20	5481.98	50.55 S	33.82 E	59.66	43.32
5511.00	59.10	141.60	5487.46	57.17 S	38.93 E	67.95	48.87
5521.00	63.70	140.40	5492.25	63.99 S	44.45 E	76.68	47.19
5531.00	68.20	139.90	5496.32	71.00 S	50.30 E	85.77	45.23
5541.00	71.60	138.50	5499.76	78.11 S	56.44 E	95.14	36.45
5551.00	74.70	140.70	5502.65	85.39 S	62.64 E	104.67	37.47
5561.00	78.70	142.30	5504.96	93.01 S	68.69 E	114.34	42.92
5571.00	82.90	143.90	5506.55	100.90 S	74.62 E	124.11	44.87
5595.00	89.20	142.70	5508.21	120.09 S	88.92 E	147.79	26.72
5631.00	86.90	137.70	5509.43	147.72 S	111.94 E	183.61	15.28
5663.00	87.80	135.00	5510.91	170.85 S	134.00 E	215.56	8.89
5695.00	89.30	135.70	5511.72	193.60 S	156.49 E	247.55	5.17
5726.00	87.50	135.20	5512.59	215.69 S	178.22 E	278.54	6.03
5758.00	87.10	134.50	5514.09	238.23 S	200.88 E	310.50	2.52
5790.00	88.60	134.50	5515.29	260.64 S	223.69 E	342.48	4.69
5822.00	87.50	134.50	5516.38	283.06 S	246.50 E	374.46	3.44
5854.00	88.20	133.80	5517.58	305.33 S	269.45 E	406.43	3.09
5885.00	88.20	133.60	5518.56	326.74 S	291.85 E	437.41	0.64
5917.00	88.30	133.10	5519.54	348.69 S	315.11 E	469.38	1.59
5949.00	86.00	132.00	5521.13	370.31 S	338.65 E	501.31	7.97
5980.00	86.00	131.70	5523.29	390.94 S	361.68 E	532.18	0.97
6012.00	89.30	132.70	5524.60	412.41 S	385.37 E	564.11	10.77
6044.00	89.10	132.40	5525.05	434.05 S	408.94 E	596.08	1.13
6075.00	89.30	132.20	5525.48	454.91 S	431.86 E	627.04	0.91

SPERRY-SUN DRILLING SERVICES
SURVEY DATA

Customer ... : Mobil Utah
Platform ... : RATHERFORD UNIT
Slot/Well .. : BA25/15-12 2A1

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	TVD	NORTHINGS FEET	EASTINGS FEET	VERTICAL SECTION	DOG LEG
6107.00	89.80	131.70	5525.73	476.30 S	455.66 E	659.00	2.21
6139.00	90.40	131.10	5525.68	497.46 S	479.67 E	690.93	2.65
6171.00	90.50	131.30	5525.42	518.54 S	503.74 E	722.86	0.70
6203.00	88.90	133.40	5525.59	540.09 S	527.39 E	754.82	8.25
6234.00	89.10	133.90	5526.13	561.49 S	549.82 E	785.81	1.74
6266.00	89.50	134.30	5526.52	583.76 S	572.79 E	817.81	1.77
6298.00	89.20	134.50	5526.89	606.14 S	595.66 E	849.80	1.13
6330.00	89.60	134.80	5527.22	628.63 S	618.42 E	881.80	1.56
6361.00	89.80	133.90	5527.38	650.30 S	640.59 E	912.80	2.97
6393.00	87.40	133.10	5528.17	672.32 S	663.79 E	944.77	7.91
6425.00	89.30	133.40	5529.09	694.24 S	687.09 E	976.74	6.01
6456.00	90.30	135.40	5529.20	715.92 S	709.23 E	1007.74	7.21
6488.00	89.20	135.50	5529.33	738.73 S	731.68 E	1039.74	3.45
6520.00	88.60	134.80	5529.95	761.41 S	754.25 E	1071.73	2.88
6551.00	88.80	134.70	5530.65	783.23 S	776.26 E	1102.72	0.72
6582.00	90.00	135.00	5530.98	805.09 S	798.23 E	1133.72	3.99
6614.00	89.70	135.70	5531.06	827.86 S	820.72 E	1165.72	2.38
6646.00	88.90	135.20	5531.45	850.66 S	843.17 E	1197.72	2.95
6678.00	88.20	134.50	5532.26	873.22 S	865.85 E	1229.71	3.09
6710.00	89.50	134.70	5532.90	895.68 S	888.63 E	1261.70	4.11
6741.00	91.00	135.00	5532.77	917.54 S	910.60 E	1292.70	4.93
6773.00	91.30	134.30	5532.13	940.03 S	933.36 E	1324.69	2.38
6805.00	90.90	133.10	5531.51	962.13 S	956.49 E	1356.67	3.95
6837.00	89.10	131.50	5531.51	983.67 S	980.16 E	1388.64	7.53
6869.00	89.80	130.80	5531.82	1004.72 S	1004.26 E	1420.56	3.09
6900.00	89.50	130.40	5532.01	1024.90 S	1027.79 E	1451.47	1.61
6932.00	89.50	133.80	5532.29	1046.35 S	1051.53 E	1483.42	10.62
6963.00	87.90	133.90	5532.99	1067.82 S	1073.88 E	1514.41	5.17
6995.00	86.00	132.70	5534.69	1089.73 S	1097.13 E	1546.35	7.02
7027.00	86.10	133.40	5536.90	1111.52 S	1120.46 E	1578.25	2.20
7058.00	86.50	133.90	5538.90	1132.88 S	1142.85 E	1609.18	2.06
* 7100.00	87.00	133.90	5541.28	1161.95 S	1173.06 E	1651.10	1.19 *

THE DOGLEG SEVERITY IS IN DEGREES PER 100.00 FEET.
N/E COORDINATE VALUES GIVEN RELATIVE TO WELL SYSTEM REFERENCE POINT.
TVD COORDINATE VALUES GIVEN RELATIVE TO WELL HEAD.
THE VERTICAL SECTION ORIGIN IS WELL HEAD.
THE VERTICAL SECTION WAS COMPUTED ALONG 135.00 (TRUE).
CALCULATION METHOD: MINIMUM CURVATURE.

* 7100 EXTRAPOLATED TO BIT

SAMPLE DESCRIPTIONS

OPERATOR: MOBIL

WELL NAME: RATHERFORD UNIT #15-12 SE 1-A HORIZONTAL LATERAL LEG #2

DEPTH	LITHOLOGY
5381.00 5390.00	"LS wh-crm,tan-ltbrn,crpxl-sl micxl,chk-sl anhy,cln,dns,sl agl-rr mic fos,chyt/scat tan-bf CHT,tt-rr intxl POR/chk fl,tr mod bri-bri yel FLOR,n-tr ltbrn STN,fr-mg dif-slow stmg mlky CUT,w/redorng-orng CULTER SLTST-SH CVGS"
5390.00 5400.00	"LS AA,chk,y,dns,cht/CHT AA,tt-rr intxl POR/chk fl,POR-FLOR-STN-CUT AA,w/CVGS AA"
5400.00 5410.00	"DOL lttan-ltbrn,micxl-crpxl,agl ip,sl chk-anhy/POR fl,tr mic fos,sl calc-lmy,occ intbd/LS AA,tt-tr sl agl POR,n-tr mod bri yel FLOR,fr ltbrn STN,mg slow stmg mlky CUT"
5410.00 5430.00	"LS ltgybrn-crm-wh,tan,tr ltbrn-brn,crpxl-micxl,chk-sl anhy/POR fl-rr xln ANHY,agl/tr mic fos,tr ltgy-gybrn CHT,rr dkbrn-blk dol SH lam,tt-tr agl-intxl POR,incr FLOR AA,fr ltbrn STN,g mod fast stmg mlky CUTw/rr CUTLER CVGS AA"
5430.00 5440.00	"LS crm-tan-ltbrn-gybrn,AA,occ v mrly,scat mic fos-Crin fos,tt-v rr intxl POR,v rr spty FLOR,n vis STN-CUT,v rr blk-dkgy lmy-sl dol mrly SH frag w/rr Crin fos frag & rr v thn ltbrn-gybrn micxl mrly tt DOL,rr smkygy CHT"
5440.00 5450.00	"LS crm-tan-ltbrn,rr gybrn,crpxl-micxl,v sl gran,dol,sl anhy,arg-mrly ip,sl chty,tt,NFSOC,w/scat DOL-SH lams AA,scat brn CHT frag"
5450.00 5460.00	"LS AA,incr gybrn-brn,v arg-rthy,dol-v sl slty ip,incr mrly-grdg to gybrn-brn lmy MRLST w/DOL ltgybrn-ltgy,micxl,lmy,arg-rthy,mrly,occ dol MRLST-n vis POR-NFSOC & blk sl carb calc-dol mica SH,rr CHT frag"
5460.00 5470.00	"LS AA,v sl slty occ gran-incr slty txt tt NFSOC,scat micxl rthy DOL NFSOC,decr SH AA,v rr CHT frag"
5470.00 5490.00	"LS tan,ltgy,occ wh-brn,crm ip,crpxl-micxl,gran ip,v sl dol,mica ip,occ anhy,slty-bcmg incr slty & grdg to v lmy SLTST,decr SH,rr scat brn-dkbrn CHT frag"
5490.00 5500.00	"LS ltgy-crm-wh,rr tan,crpxl-micxl,rthy-chk,dol ip,arg-sl slty ip,occ dns,v rr mic fos,tt-rr p intxl POR,v rr spty yel FLOR,n vis STN-CUT,w/incr DOL ltbrn-tan,micxl,rthy,v sl arg,lmy,v rr mic fos,tt-v rr intxl POR,rr spty bri yel FLOR,n-v p dif CUT,rr CHT"
5500.00 5510.00	"LS AA,sl-v dol ip,v rr mic fos,tt-v rr intxl POR,v spty yel FLOR,n vis STN-CUT,v rr SH LAMS-trnsl CHT frag,intbd DOL tan,micxl,rthy,v sl arg,rr mic fos,lmy,tt-v rr intxl POR,n-v p spty bri yel FLOR,n vis STN,n-v p slow dif CUT"

DEPTH	LITHOLOGY
5510.00 5520.00	"LS crm-wh-ltgy,rr tan,AA,v arg-cln,v sl slty,rr intxl POR,NFSOC,w/DOL AA,v lmy,v sl slty,arg,v sl mica,rr intxl POR,v p FLOR,NSOC"
5520.00 5530.00	"LS sl incr ltgy AA,incr slty,v sl dol,pred chk-v plty,anhy ip,sl incr mrly,tt,NFSOC,scat DOL AA,v rthy-lmy,v rr slty txt,tt,incr mrly,tt,NFSOC,w/sl tr SH dkgy-blk,sl carb"
5530.00 5540.00	"LS & DOL AA,v slty ip,bcmg v mrly & grdg to MRLST & SH w/depth,bcmg pred SH blk-dkgy,sbblky,sl mica,v sl slty carb dol-calc"
5540.00 5560.00	"SH dkbrnblk-blk-dkbrn,mfrm-sft-hd,carb,sl calc-lmy,tr pp mica,w/m abnt redornq-orng-tr pk CUTLER CVGS & tr LS-DOL AA"
5560.00 5570.00	5556"LS ltgy,lt-mgybrn,occ crm,tr wh,brn,vfxl-micxl-tr crpxl,pred rthy-sl slty,chk-sl anhy/tr fl-rr xln ANHY,scat thn plty sl mot frag,rr crm CHT,v rr sl agl frag,v sl dol ip,tt-v rr intxl POR,NFSOC,w/scat SH AA"
5570.00 5580.00	"LS ltbrn-ltgybrn,ltgy-crm,tr ltbrn,rr wh,brn,vfxl-gran,crpxl-micxl,pred rthy-sl slty-v sl mot,tr dns sl dol-arg & thn chky plty PKST,rr sl agl/mic fos frag,sl anhy/tr xln ANHY-POR fl,POR AA,NFSOC,w/abnt v col CVGS"
5580.00 5595.00	"LS AA,pred rthy-sl slty,tr dns sl dol-arg & thn chky plty PKST,rr sl agl-ool/mic fos GRNST,sl anhy/tr xln ANHY-POR fl,tr crm-bf CHT,tt-rr intxl/vrr agl-sl ool POR,n-rr bri-dull yel FLOR,n-v rr ltbrn STN,v p slow dif-rr mod fast CUT,w/incr v col SH CVGS"
5595.00 5610.00	"ABNT VARI COL SH CVGS AFTER TRIP LS tan-crm-ltgy-gybrn AA,v rr alg-ool mat,tt-v rr intxl-rthy POR,n-v p spty yel FLOR,n vis STN-CUT,v rr intbd rthy brn-gybrn lmy DOL pred tt-NFSOC,scat CHT frag"
5610.00 5630.00	"LS crm-ltgy,tan,occ wh,crpxl-micxl,rr vfxl-sl gran,rthy-cln,sl slty,v rr ool-arg mat,sl chty,dol ip,anhy ip,tt-v rr intxl-rthy POR,NFSOC,v thn ltbrn-brn micxl DOL-lmy arg rthy tt NFSOC,rr trnsl-ltbrn CHT frag,sl tr SH cvgs"
5630.00 5640.00	"LS pred tan-ltbrn AA,bcmg pred vfxl-gran,micsuc ip,v sl ool,occ anhy-chty,tt-fr intxl-rr ool POR,mfr-fr bri-dull yel FLOR,tr ltbrn-rr blk STN,mg slow dif-rr slow stmg CUT"
5640.00 5650.00	"LS tan-ltbrn,crm-wh,crpxl-micxl,v rr vfxl-gran,v rr mic suc,decr v sl ool GRNST,bcmg pred dns sl ool plty-chk anhy PKST,tt-sl tr intxl POR,tr bri yel FLOR,rr spty ltbrn-blk STN,n-v p slow dif CUT"
5650.00 5660.00	"LS AA,incr vfxl-gran,bcmg pred sl ool GRNST,decr PKST,scat CHT frag,mfr-fr intxl-sl ool POR,mfr-fr bri-tr dull yel FLOR,mfr-fr ltbrn STN-rr spty blk dd o STN,n-fr slow-mfr mod fast stmg CUT"

DEPTH	LITHOLOGY
5660.00 5690.00	"LS tan-ltbrn,brn,rr wh,micxl-vfxl,incr gran-micsuc,pred sl ool-v sl alg GRNST,rr dns sl ool plty-chk anhy PKST,rr ANHY xl-v rr CHT frag,mg intxl-sl tr ool-rr alg POR,mg bri-rr dull yel FLOR,fr ltbrn STN-rr spty blk STN,fr-mg slow-mod fast stmg CUT"
5690.00 5710.00	"LS pred sl ool-v sl alg GRNST,incr dns occ chk-plty sl ool PKST,scat ANHY xl-rr POR fl,mfr-fr intxl-tr ool-rr alg POR,mfr-fr bri-dull yel FLOR,fr-mfr ltbrn STN-rr blk dd o STN,fr slow-tr mod fast stmg CUT"
5710.00 5730.00	"LS tan-ltbrn,rr brn-wh,micxl-vfxl,gran-micsuc,pred sl ool-v sl alg GRNST,decr dns sl ool plty-chk anhy chty PKST,rr ANHY xl-POR fl,fr-mg intxl-sl tr ool-rr alg POR,fr bri-rr dull yel FLOR,fr ltbrn STN-rr spty blk dd o STN,fr slow-tr mod fast stmg CUT"
5730.00 5740.00	"LS AA,scat bf CHT frag,sl incr ool POR,bcmg mg bri yel FLOR,mfr ltbrn-rr spty blk dd o STN,fr-mg slow-mod fast stmg mlky CUT"
5740.00 5760.00	"LS pred sl ool-v sl alg GRNST,v sl incr ool mat,v rr scat trnsf-bf CHT frag,occ ANHY fl POR,w/POR-FLOR-STN-CUT AA"
5760.00 5780.00	"LS tan,rr crm-ltbrn,micxl-vfxl,gran-sl micsuc-rr suc,pred ooc-oom GRNST,rr scat dns sl ool anhy PKST,v rr CHT frag-ANHY xl,v rr DOL cmt,mfr intxl-mg ool POR,fr-mg bri-rr dull yel FLOR,fr ltbrn-rr blk STN,mg mod fast stmg mlky CUT"
5780.00 5790.00	"LS AA,POR-FLOR-STN-CUT AA"
5790.00 5830.00	"LS tan,occ crm-ltbrn,micxl-vfxl,gran-sl micsuc-rr suc,pred ooc-oom v sl alg GRNST,rr dns sl ool occ chk anhy PKST frag,v rr CHT frag-ANHY xl,rr DOL cmt,fr intxl-mg ool-rr alg POR,mg bri-rr dull yel FLOR,fr ltbrn-tr blk STN,mg mod fast stmg mlky CUT"
5830.00 5850.00	"LS tan/crm-ltgy incl,occ ltbrn,vfxl-gran-sl micsuc ip,tr micxl-crppl,ool-sl oom-agl GRNST,tr dns sl ool-agl PKST,sl chky-anhy/rr POR fl-xln ANHY,dol/tr DOL cmt,mfr-g intxl-ool-rr oom POR,g even mod bri-bri yel FLOR,mg-fr ltbrn-brn/tr blk dd o STN,g fast stmg mlky CUT"
5850.00 5880.00	"LS AA,vfxl-gran-sl micsuc ip,tr micxl-crppl,rr xl,pred ool-sl oom-agl GRNST,tr dns sl ool-agl PKST/v rr thn plty chky frag,sl anhy-chk/rr POR fl-xln ANHY,rr crm CHT,dol/tr DOL cmt,POR-FLOR AA,mg-fr ltbrn-brn/tr blk dd o STN,g fast stmg mlky CUT"
5880.00 5900.00	"LS tan-crm-ltbrn/tr wh incl,tr brn,vfxl-gran-sl micsuc ip,tr micxl-crppl,ool-sl oom-agl GRNST,tr dns sl ool-agl PKST,sl-occ v chky-sl anhy/tr POR fl-rr xln ANHY,dol/tr DOL cmt,mg-g intxl-ool/rr oom POR,g even mod bri-bri yel FLOR,mg-fr ltbrn-fr brn/sl incr blk dd o STN,CUT AA "
5900.00 5940.00	5908.83 0 "LS tan-ltbrn-crm,occ wh incl,tr brn,vfxl-gran-sl micsuc,tr micxl-crppl,ool-sl oom GRNST,rr dns sl ool PKST/tr gran tex,sl chky-anhy/tr POR fl-rr xln ANHY,dol/tr DOL rich CMT,g-mg ool-sl oom/tr intxl POR,g even mod bri-bri yel FLOR,mg ltbrn-fr brn/tr blk dd o STN,g mod fast-fast stmg mlky CUT"

DEPTH	LITHOLOGY
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5940.00 5980.00 "LS tan-ltbrn/tr crm incl, tr brn, v rr wh frag, vfxl-gran-sl micsuc ip, tr micxl-crpxl, pred ool-sl oom-agl GRNST/rr-tr dns sl ool-agl PKST, v sl chky-anhy/rr POR fl-xln ANHY, dol/occ DOL cmt, g-mg ool-tr oom-intxl POR, FLOR AA, mg-g ltbrn-brn/tr blk dd o STN, g fast-mod fast stmg mlky CUT"

5980.00 6020.00 "LS tan-ltbrn -crm, tr brn, rr wh, vfxl-gran-sl micsuc ip, rr micxl-crpxl, pred ool-sl oom-agl GRNST, rr dns sl ool-agl PKST, sl chky-anhy/rr POR fl-xln ANHY, dol/tr DOL cmt, v rr crm-bf CHT, POR AA, g even mod bri-bri yel FLOR, mg-fr ltbrn-brn/tr blk dd o STN, g fast-mod fast stmg mlky CUT"

6020.00 6050.00 "LS tan-crm, ltbrn, tr brn, wh incl, vfxl-gran-sl micsuc ip, rr micxl-crpxl, pred ool-sl oom-agl GRNST/rr PKST AA, sl chky-anhy/rr POR fl-xln ANHY, dol/tr DOL cmt, g-mg ool-sl oom/tr intxl POR, g even mod bri-bri yel FLOR, mg-fr ltbrn-brn/incr blk dd o STN, g fast stmg mlky CUT"

6050.00 6060.00 "LS ltbrn-brn, occ tan-crm, v rr wh, AA, pred ool-sl oom GRNST/tr dns sl ool PKST, sl chk-anhy/tr POR fl-rr xln ANHY, dol/tr DOL rich cmt, rr crm-tan CHT, POR-FLOR AA, mg-fr ltbrn-brn/tr blk dd o STN, g fast stmg mlky CUT"

6060.00 6080.00 "LS AA, vfxl-gran-sl micsuc ip, rr micxl-crpxl, pred GRNST AA, rr dns sl ool-agl PKST, sl chky-anhy/rr POR fl-xln ANHY, dol/tr DOL cmt, n-v rr crm-bf CHT, POR AA, g even mod bri-scat bri yel FLOR, STN-CUT AA"

6080.00 6110.00 "LS ltbrn-tan-crm, occ brn, v rr wh, gran-vfxl-sl micsuc ip, rr micxl-crpxl, ool-sl oom GRNST/rr dns sl ool PKST, sl chky-anhy/rr POR fl-v rr xln ANHY, dol/tr DOL rich cmt, v rr crm CHT-trnsl arg incl, g-mg ool-sl oom/tr intxl POR, g even mod bri-bri yel FLOR, g-mg ltbrn-fr brn/scat blk dd o STN, g fast stmg mlky CUT"

6110.00 6160.00 "LS ltbrn-brn, occ tan-crm, v rr wh, gran-vfxl-sl micsuc, rr micxl-crpxl, xln incl, pred ool-sl oom-rr agl GRNST, rr dns sl ool-agl PKST, sl chky-anhy/rr POR fl-xln ANHY, dol/tr DOL cmt, v rr crm-bf CHT, g ool-sl oom/intxl POR, g even bri-mod bri yel FLOR, g ltbrn-brn/tr blk dd o STN, rr dkbrn STN, g fast stmg mlky CUT "

6160.00 6190.00 "LS ltbrn-tan, occ crm, tr brn, v rr wh, gran-vfxl-sl micsuc ip, tr micxl-crpxl, pred ool-sl oom-agl GRNST, tr dns sl ool-agl PKST, sl chky-anhy/rr POR fl-v rr xln ANHY, dol/tr DOL cmt, v rr crm CHT, POR-FLOR AA, g-mg ltbrn-brn/scat blk dd o STN, CUT AA"

6190.00 6210.00 "LS AA, gran-vfxl, tr micsuc-xl, tr micxl-crpxl, ool-sl oom-rr agl GRNST/tr dns sl ool-rr agl PKST, sl chky-anhy/tr POR fl-rr xln ANHY, dol/tr DOL rich cmt, g ool-fr oom/tr intxl POR, g even mod bri-bri yel FLOR, g-mg ltbrn-fr brn/scat blk dd o STN, g mod fast-fast stmg mlky CUT"

6210.00 6240.00 "LS ltbrn-tan, occ crm, tr brn, v rr wh, gran-vfxl-sl micsuc, tr micxl-crpxl, pred ool-sl oom-rr agl GRNST, tr dns sl ool-rr agl PKST, sl chky-anhy/rr POR fl-v rr xln ANHY, dol/tr DOL cmt, POR-FLOR AA, g-mg ltbrn-brn/tr blk dd o STN, CUT AA"

6240.00 6270.00 "LS tan-occ crm, ltbrn, tr brn, v rr wh, gran-vfxl-sl micsuc ip, tr micxl-crpxl, pred ool-sl oom-agl GRNST, tr dns sl ool-agl PKST, sl chky-anhy/rr POR fl-v rr xln ANHY, dol/tr DOL cmt, v rr crm CHT, POR-FLOR AA, g-mg ltbrn-brn/scat blk dd o STN, CUT AA"

DEPTH

LITHOLOGY

6270.00 6300.00 627"LS AA,gran-vfxl-sl micsuc ip,tr micxl-crpxl,pred ool-sl oom GRNST,tr dns sl ool PKST/tr gran tex,sl chky-anhy/rr POR fl-v rr xln ANHY,dol/tr DOL cmt,POR AA,g even mod bri-bri yel FLOR,mg-g ltbrn-fr brn/tr blk dd o STN,g mod fast-fast stmg mlky CUT"

6300.00 6330.00 "LS tan-ltbrn-crm,tr brn,v rr wh,gran-vfxl-sl micsuc,tr micxl-crpxl,pred ool-sl oom-agl GRNST,tr PKST AA,sl chky-anhy/rr POR fl-xln ANHY,dol/tr DOL cmt,rr crm CHT,g ool-sl oom/tr intxl POR,FLOR AA,mg-g ltbrn-fr brn/rr-tr blk dd o STN,CUT AA,tr v col CVGS"

6330.00 6350.00 "LS AA,pred ool-sl oom-rr agl GRNST,tr dns sl ool PKST,sl chky-anhy/rr POR fl-xln ANHY,dol/tr DOL cmt,rr crm-tan CHT,g ool-sl oom/tr intxl POR,g even mod bri-dull/scat bri yel FLOR,mg-fr ltbrn-fr brn/rr blk dd o STN,g fast stmg mlky CUT,decr CVGS AA"

6350.00 6390.00 "LS ltbrn-brn,occ tan-crm,v rr wh,gran-vfxl-sl micsuc,rr micxl-crpxl,pred ool-sl oom-rr agl GRNST,tr dns sl ool-agl PKST/occ gran tex,sl chky-anhy/rr POR fl-xln ANHY,dol/tr DOL cmt,incr crm-tan CHT,g ool-sl oom/intxl POR,g even mod bri- bri yel FLOR,mg-g ltbrn-brn/rr blk pp dd o STN,g fast stmg mlky CUT "

6370.00 6390.00 "LS AA,pred ool-sl oom GRNST/tr PKST AA,sl chky-anhy/rr POR fl-xln ANHY,dol/tr DOL rich cmt,sl incr ltbrn-tan CHT incl,o ool-sl oom/tr intxl POR,g even mod bri-bri yel FLOR,mg-g ltbrn-brn/v rr blk pp dd o STN,g fast-mod fast stmg mlky CUT,tr v col CVGS"

6420.00 6450.00 "LS AA,gran-vfxl-sl micsuc,rr micxl-crpxl,xln incl,pred ool-sl oom-rr agl GRNST,rr dns sl ool-agl PKST,sl chky-anhy/rr POR fl-xln ANHY,dol/tr DOL cmt,tr ltbrn-tan CHT,g ool-sl oom/intxl POR,g even bri-mod bri yel FLOR,g ltbrn-brn/v rr blk pp dd o STN,CUT AA,w/v rr v col CVGS"

6450.00 6470.00 "LS ltbrn-brn,tr tan,rr crm-wh,gran-vfxl-micsuc,rr micxl-crpxl,xln,pred ool-sl oom-rr agl GRNST,tr dns sl ool PKST,sl chky-anhy/tr POR fl-rr xln ANHY,dol/tr DOL cmt,v rr ltbrn-crm CHT,mg-g ool-sl oom/intxl POR,g even mod bri-bri yel FLOR, STN AA,g mod fast-fast stmg mlky CUT,tr v col CVGS"

6470.00 6501.00 "LS AA,pred ool-sl oom GRNST/tr PKST AA,sl chky-anhy/rr POR fl-xln ANHY,dol/tr DOL rich cmt,rr CHT AA,g ool-sl oom/tr intxl POR,FLOR-STN-CUT AA,w/sl incr tr v col CVGS"

6500.00 6520.00 "LS AA,pred ool-sl oom GRNST/tr PKST AA,sl chky-anhy/rr POR fl-xln ANHY,dol/tr DOL rich cmt,v rr CHT AA,g ool-sl oom/tr intxl POR,g even mod bri-bri yel FLOR,mg-g brn-ltbrn/v rr blk pp dd o STN,g mod fast-fast stmg mlky CUT,incr v col SH-LS-CHT CVGS"

6520.00 6550.00 "LS tan-ltbrn,v rr crm-wh,micxl-vfxl,gran-micsuc,rr suc,pred ooc-oom GRNST,v rr dns occ chk-pty sl ool anhy-v sl chty PKST frag,v rr ANHY xl-bf CHT frag,mg intxl-ool POR,mg bri yel FLOR,fr ltbrn-tr brn STN-rr blk dd o STN,fr-mg mod fast-fast stmg CUT"

6550.00 6570.00 "LS AA,w/sl incr dns PKST frag-incl & trnsf-bf CHT frag,sl decr POR,fr dull-mfr bri yel FLOR,STN-CUT AA"

DEPTH	LITHOLOGY
6570.00 6600.00	"LS AA, pred g ooc-oom GRNST, rr-sl tr PKST AA, v rr scat CHT frag, w/mg POR-FLOR-STN-CUT AA"
6600.00 6630.00	"LS tan-ltbrn, v rr crm, micxl-vfxl, gran-micsuc, rr suc, pred ooc-oom GRNST, v rr dns occ chk-plty sl ool anhy-v sl chty PKST frag, rr ANHY xl-bf CHT frag, rr styl, mg ool-intxl POR, mg bri yel FLOR, fr ltbrn-brn STN-tr blk dd o STN, fr-mg mod fast-fast stmg CUT"
6630.00 6660.00	"LS AA, decr ooc-oom GRNST w/incr ANHY fl POR, incr dns anhy v sl ool occ chty PKST frag, v sl DOL cmt, decr ool-intxl POR, mfr-fr FLOR, tr-mfr ltbrn-rr brn STN, rr-tr blk dd o STN, mg mod fast-tr slow stmg mlky CUT"
6660.00 6710.00	"LS tan-ltbrn, occ brn-v rr crm, micxl-vfxl, gran-micsuc, rr suc, pred ooc-oom GRNST, rr scat dns sl ool occ anhy sl chk v rr chty PKST frag-lams, rr-tr ANHY xl-POR fl, v sl DOL cmt, rr CHT frag, fr-mg bri-dull yel FLOR, mfr ltbrn-rr blk STN, mfr-mg slow-mod fast CUT"
6710.00 6740.00	"LS AA, incr dns sl ool anhy PKST w/v sl incr ANHY fl POR, fr intxl-mfr ool POR, fr bri-tr dull yel FLOR, mfr ltbrn-tr brn STN, sl tr blk dd o STN, mfr-fr mod fast-tr slow stmg mlky CUT"
6740.00 6770.00	"LS AA, w/incr amnt scat dns v sl chky-plty sl ool v anhy PKST incl, incr ANHY fl POR & cmt, incr dns mtz, mg-tr intxl-ool POR, mfr-mg bri-dull yel FLOR, tr ltbrn-rr brn STN-sl tr blk dd o STN, fr-mg slow-fr mod fast-tr fast stmg mlky CUT"
6770.00 6800.00	"LS tan-ltbrn, tr brn-rr ltgybrn, micxl-vfxl, gran-micsuc, pred ooc-oom GRNST, w/incr sl ool occ anhy sl chk crpxl PKST frag-lams, rr-tr ANHY xl-POR fl, v sl DOL cmt, trtrns-l-bf CHT frag, fr intxl-tr ool POR, fr FLOR, tr ltbrn-brn-rr blk STN, mg slow-mod fast CUT"
6800.00 6820.00	"LS pred ooc-oom GRNST AA, w/incr amnts dns crpxl anhy chty ltgybrn-wh chk-sl plty PKST incl, tr trns-l-bf CHT frag, tr ool-fr intxl POR, mfr-fr bri-dull yel FLOR, tr-mfr ltbrn-sl tr brn STN, rr spty blk dd o STN, mg slow-mfr mod fast stmg CUT"
6820.00 6860.00	"LS tan-ltbrn, rr brn-ltgybrn-v rr crm, micxl-vfxl, gran-micsuc, sl suc, pred ooc-oom GRNST, rr dns sl ool anhy ip occ chk PKST frag-lams, rr-tr ANHY xl-POR fl, DOL cmt ip, rr CHT frag, mg intxl-ool POR, mg bri yel FLOR, fr ltbrn-brn-rr blk STN, fr mod fast-fast CUT"
6860.00 6900.00	"LS AA, sl incr dns tt ool PKST, incr ANHY fl POR, rr-sl tr scat trns-l-rr bf CHT frag, mfr-mg intxl-mfr ool POR, fr-mg bri-rr dull yel FLOR, mfr ltbrn-rr brn STN, v rr blk dd o STN, mfr-mg slow-mod fast-tr fast stmg mlky CUT"
6900.00 6930.00	"LS tan-ltbrn, v rr brn-crm, micxl-vfxl, gran, micsuc-suc ip, pred ooc-oom GRNST, w/thn stks sl ool crpxl dns anhy v sl chk PKST, sl dol cmt, rr ANHY xl-POR fl, rr CHT frag, mg-rr tt intxl-ool POR, fr-mg bri-tr dull yel FLOR, tr ltbrn-rr blk STN, mfr-fr mod fast CUT"
6930.00 6950.00	"LS AA, pred ooc-oom GRNST, decr PKST frag-incl ltgybrn ip, rr tt-pred fr-mg intxl-fr ool POR, mg bri-rr dull yel FLOR, tr-mfr ltbrn-rr brn STN, sl tr blk dd o STN, g slow-fr mod fast-occ fast stmg mlky CUT"

DEPTH	LITHOLOGY
6950.00 6970.00	"LS pred ooc-oom GRNST AA,incr dns PKST AA,incr CHT frag,tt-mg intxl-mfr ool POR,tr-mg intxl-tr-mfr ool POR,mfr-fr bri-tr dull yel FLOR,mfr ltbrn-rr brn STN,rr-sl tr blk dd o STN,v g p slow-mfr mod fast-rr fast stmg mlky CUT"
6970.00 7000.00	"LS tan-ltbrn,rr brn-ltgybrn,micxl-vfxl,gran,micsuc-suc ip,pred ooc-oom GRNST,v rr dns sl ool anhy ip occ chk PKST frag-lams,rr-tr ANHY xl-POR fl,DOL cmt ip,rr CHT frag,mg intxl-mfr ool POR,mg bri yel FLOR,fr ltbrn-brn-rr blk STN,fr mod fast-fast CUT"
7000.00 7030.00	"LS AA,incr intxl POR,decr vis ooc-oom mat,mg intxl-tr-mfr ool POR,mg bri-sl tr dull yel FLOR,tr-mfr ltbrn-rr brn STN,tr blk dd o STN,fr-mg mod fast-fast stmg mlky CUT"
7030.00 7070.00	"LS tan-ltbrn,occ crm-wh,micxl-vfxl,gran-micsuc,v rr suc ip,pred sl ooc-oom GRNST,tr sl ool crpxl dns sl anhy PKST,rr scat trnsf-bf CHT frag,occ ANHY xl-POR fl,mfr-fr intxl-mfr ool POR,fr bri-rr dull yel FLOR,mfr-fr ltbrn-sl tr blk STN,tr-fr mod fast CUT"
7070.00 7100.00	"LS AA,decr v g ooc-oom GRNST,incr dns mtx & sl ool anhy dns PKST,scat bf-trnsf CHT frag,decr ool-sl decr intxl POR,mfr-fr bri-sl tr dull yel FLOR,sl tr-mfr ltbrn-rr brn STN-v rr blk dd o STN,mfr mod fast-tr fast stmg CUT,pred fr slow stmg CUT"

FORMATION TOPS

OPERATOR: MOBIL

WELL NAME: RATHERFORD UNIT #15-12 SE 1-A HORIZONTAL LATERAL LEG #2

FORMATION NAME		SAMPLES MEASURED DEPTH	SAMPLES TRUE VERTICAL DEPTH	DATUM KB:4678'
LOWER ISMAY		5465'	5460'	-782'
GOthic SHALE		5513'	5492'	-814'
DESERT CREEK		5530'	5501'	-823'
UPPER DC 1-A ZONE		5544'	5506'	-828'
LOWER DC 1-A ZONE		5570'	5512'	-834'

GEOLOGICAL SUMMARY

AND

ZONES OF INTEREST

The Mobil Exploration and Production U.S., Inc., Ratherford Unit #15-12 Southeast Horizontal Lateral Leg #2 was a re-entry of the Mobil Ratherford Unit #15-12 located in Section 15, T41S, R24E, and was sidetracked in a southeasterly direction from 5381' measured depth, 5381' true vertical depth. Preparations for drilling the southeasterly lateral were begun, late on September 5, 1998. The lateral reached a measured depth of 7100', true vertical depth of 5541.3' at total depth, with a horizontal displacement of 1651' and true vertical plane of 133.9 degrees on September 9, 1998. The lateral was terminated in the Upper 1-A porosity zone of the Upper Desert Creek Member of the Paradox Formation. The curve and lateral were drilled with fresh water and brine water with polymer sweeps as the drilling fluid. The proposed target line was used as a reference point throughout the lateral. During the drilling of the curve portion a trip was made at a measured depth of 5539', in the upper half of the Gothic Shale to replace a mud motor which failed. The lateral section was drilled with no mechanical problems. There was no measurable flow or loss of fluid through out the lateral and curve sections. The small flare noted in lateral leg #1 continued and increased during the drilling of the curve and lateral for leg #2. Of note was the amount of red to red-orange Cutler and Chinle shale and siltstone cavings seen in the samples after trips. This is note worthy due to the fact that both formations are behind casing.

The objective of the Ratherford Unit #15-12 southeast lateral Leg #2 was to drill 1650' horizontally in the upper bench of the Desert Creek 1-A porosity zone; to identify and define its lithology, and to evaluate the effective porosity and permeability of the zone. In this southeasterly direction, the upper 1-A porosity zone appeared to have a more consistent, better-developed porosity, thus was the target for this lateral. These objectives were met in this upper pay zone of the Desert Creek 1-A porosity bench, after reaching a measured depth of 5714', when the well path penetrated the top of what appeared to be the best porosity of the upper 1-A zone. The lateral was dipped downward throughout its length. The porosity penetrated in the lower 1-A zone, in this southeasterly lateral, had consistent lithology throughout the lateral. The lithology of the porosity penetrated in this southeasterly lateral was predominately an oolitic to oomoldic limestone grainstone facies, and had a fair to good hydrocarbon and gas show, with good visible effective porosity and permeability. As the lateral bumped or penetrated random hard streaks with in the 1-A zone, as well as bumping and scraping the top of the zone, a minor to significant increase in the amount of dense, very slightly oolitic, occasionally platy and chalky limestone packstone was noted in the samples. These packstones had no to very minor porosities and no to extremely poor sample and gas shows.

Drilling of the curve portion of the lateral was begun on September 6, 1998 at a measured depth of 5381', true vertical depth of 5380.8'. The curve was begun near the top of the Upper Ismay before encountering the typical sections of the Lower Ismay, Gothic Shale, Desert Creek and the 1-A porosity bench carbonate cycle of the Upper Paradox Formation.

The curve section was began near the top of the Upper Ismay carbonate cycle of the Upper Paradox Formation and was penetrated from a measured depth of 5381', true vertical depth 5422', to a measured depth of 5463', true vertical depth 5456'. The 82' of the Upper Ismay Formation was a predominately a clean to dense, occasionally argillaceous, tight limestones, with scattered interbeds of earthy to argillaceous dolomites, very thin black carbonaceous shale partings and scattered chert

fragments. The limestones were cream to white, some light gray to medium gray brown to brown, cryptocrystalline to microcrystalline, clean and dense, with streaks of an earthy to argillaceous to chalky texture. These limestones had very rare streaks of fracture to very minor intercrystalline porosity, but had no visible sample shows. The thin interbedded dolomites were brown to medium brown, cryptocrystalline to microcrystalline, earthy to argillaceous, limey, becoming marly with depth, and had scattered Crinoid fossils. The dolomites had traces of intercrystalline to very minor algal porosities, but unlike the limestones, the dolomites exhibited minor sample shows, with a slight increase in the background gas. The shale partings were black to dark gray, some light gray, subblocky to subplaty, occasionally fissile, very slightly silty, micaceous, and calcareous to slightly dolomitic, and had very minor Crinoid fossils. Scattered through out the Upper Ismay carbonates were translucent to buff to dark brown chert fragments. The samples from 5436' to 5452' showed a marked increase amount of shale laminations and partings. The basal 11' of the Upper Ismay became increasingly marly and graded into the thin, very fossiliferous, carbonaceous Hovenweep Shale. The Hovenweep Shale, which defines the Upper and Lower Ismay contact, was represented by a moderate increase in the black carbonaceous, dolomitic to calcareous, occasionally silty shale. This contact is only moderately represented in the samples from measured depths of 5459' and 5463', true vertical depths 5453' to 5456'.

The top of the Lower Ismay member of the Upper Paradox Formation was picked at a measured depth of 5463', true vertical depth 5456', based primarily on sample identification and an increase in the rate of penetration. The upper 4' of the Lower Ismay was thinly interbedded tan to light gray dense, very slightly anhydritic, fossiliferous limestones, brown to medium brown, argillaceous dolomites, with very thin black carbonaceous shale partings and rare chert fragments. The Lower Ismay, from measured depths of 5467' to 5506', was a white to cream to light gray, cryptocrystalline to microcrystalline limestone which had some thin granular streaks, chalky, slightly to very silty, occasionally anhydritic to scattered anhydrite inclusions and occasionally dolomitic in part. This limestone a streaks of well cemented very silty limestone grainstones, some scattered translucent to light to dark brown chert fragments, and very rare thin brown, earthy dolomites. It was also noted that these limestones occasionally graded to very limey siltstones. These limestones had no visible porosity or sample shows. The basal 23 feet of the Lower Ismay, from a measured depth of 5506' to a measured depth of 5529', was a very dense, slightly dolomitic limestone packstone and earthy limey dolomites. These limestones and dolomites became slightly to very marly with depth, and had scattered anhydrite interclasts and chert fragments. The basal limestones and thin dolomites had thin streaks of intercrystalline porosity, with no visible sample show. The basal limestones and dolomites of the Lower Ismay carbonates graded into limey to dolomitic carbonaceous shales of the Gothic Shale.

The Gothic Shale was penetrated at a measured depth of 5529', true vertical depth 5495', and gradationally underlies the Lower Ismay. The top of the Gothic was picked by a decrease in the penetration rate and a significant increase in the amount of black carbonaceous shale in the cuttings. This shale member of the Upper Paradox Formation was seen to be ten feet thick in this southeasterly direction. This shale is black to dark gray shale, carbonaceous, occasionally grainy to silty, soft to slightly firm, sooty, slightly fissile, subblocky to subplaty, calcareous to slightly dolomitic, slightly micaceous and silty. Very thin partings of dense, very slightly argillaceous, occasionally dolomitic limestones and clean to very argillaceous limey dolomites were noted in this shale member. The Gothic overlays the top of the Desert Creek Member with a sharp contact.

The top of the Desert Creek Member of the Upper Paradox Formation was picked at a measured depth of 5556', 5504' true vertical depth, in an increase in penetration rate and amount of dense limestone packstone in the samples. This transition zone had a true vertical thickness of approximately five feet. The transition zone between the Gothic Shale and the top of the Upper Desert Creek 1-A porosity zone was predominately a dense limestone packstone. These limestones were occasionally very argillaceous and very slightly oolitic in part and had thinly interbedded argillaceous limey marlstones, argillaceous limey dolomites and very thin black carbonaceous shale partings. The

limestones of the transition zone are light brown to cream to white to light gray, some medium brown, cryptocrystalline to microcrystalline, with very algal material, dense to slightly silty, and very slightly dolomitic. Scattered in the limestones are very thin, dark brown, very argillaceous, very shaley, limey marlstones; some black, dolomitic, slightly micaceous, calcareous, very slightly carbonaceous shales and some brown, microcrystalline, limey, argillaceous dolomite fragments. The transition zone had only very poor visible intercrystalline porosity, with no visible sample show.

The curve portion of the lateral was completed at a measured depth of 5595', true vertical depth 5508', at a horizontal displacement of 148', bearing 142.7 degrees, with an inclination of 89.2 degrees, on September 8, 1998, while still in the Upper Desert Creek transition zone. At this point a trip was made to lay down the curve assembly and pickup the lateral assembly. Drilling of the southeast lateral was resumed also on September 8, 1998, near the base of the Upper Desert Creek transition zone. The lateral was begun in the dense limestones and very thin dolomites of the transition zone. The lateral was slid for the first 79', while turning the lateral downward in order to drop vertical depth, control horizontal plane direction and to put the lateral assembly out far enough to begin rotating. Near the base of the transition zone the dense limestones became increasingly oolitic, with thin interbeds of anhydrite and graded in to the oolitic to oomoldic limestones of the upper 1-A porosity bench.

The top of the Desert Creek Upper 1-A porosity zone was encountered at a measured depth of 5629', true vertical depth of 5509', with a horizontal displacement of approximately 181'. The top was picked on the lithology becoming predominately a good oolitic to oomoldic limestone grainstone with a significant increase in the penetration rate and background gas. These oolitic to oomoldic limestone grainstones marked the upper 1-A porosity zone, which was split in to two benches. The upper porosity streak was approximately ten vertical feet thick in this southeasterly direction. The upper three feet of the Upper 1-A porosity bench was a tan to light brown limestone grainstone, with interbedded white to cream to tan, cryptocrystalline to microcrystalline, dense limestone packstone. The grainstones are microcrystalline to very finely crystalline, with a granular to slightly microsucrosic matrix and were very slightly dolomitic. The grainstones have a very minor amount of anhydrite crystal growth in the oolitic and molds as well as in the intercrystalline matrix and very rare light brown chert fragments. The grainstone facies had a moderately good oolitic to fair intercrystalline porosity development. The interbedded packstones had no to a very poor intercrystalline to oolitic porosity. The sample show was poor to a trace, in the upper 1 vertical foot, and increased with depth to moderately good with a trace of brown to light brown oil stain with minor traces of black bitchimum* stain on the crystal faces, oolitic and molds. The grainstones had a spotty bright to occasionally dull yellow fluorescence and a moderately fair slow streaming to trace fast streaming cut. The staining, fluorescence and cut increased with depth. A less than one foot thick hard streak was noted from measured depths of 5640' to 5655', from true vertical depths of 5509.6' to 5510.5'. This dense, slightly oolitic limestone packstone facies was cream to tan, occasionally white, cryptocrystalline to very slightly microcrystalline, slightly chalky to occasionally platy, clean and very slightly anhydritic. These packstones had only very minor streaks of very slightly oolitic to intercrystalline porosity, with a very minor sample show.

The top of the best porosity of the Upper 1-A porosity zone was penetrated at a measured depth of 5714', true vertical depth 5512', with a horizontal displacement of approximately 266'. The lithology of the best porosity was a very good oolitic limestone grainstone, much like the limestone grainstones as described above. However, porosity was much better developed and had a fair to moderately good sample show. As soon as this best porosity in the upper 1-A zone was penetrated, no noticeable increase in the background gases and a slight increase in the flare was noted. This lower portion of the Upper 1-A was the target zone for the entire southeast lateral, as it appeared to be better developed. The vertical well log for the Ratherford #15-12 well as well as the offset logs, did not show the streaky porosity seen while drilling.

After acquiring the best porosity of the Upper 1-A zone, as the well path was rotated ahead, the well path dipped downward at a shallow angle due to very minor zones of lower porosity pushing the well path slowly downward. Upon reaching a measured depth of 5984', 5524' true vertical depth, with a horizontal displacement of 536', the well path was slowly leveled within the good oolitic to oomoldic, tan to brown, microcrystalline to very finely crystalline limestone grainstones. At a measured depth of 6193', 5525.5' true vertical depth, the lateral was continued at a shallow downward angle, which averaged 89.4°. At this point a slow increase in the background gas and flare was noted. Upon reaching a measured depth of 6760', 5533' true vertical depth the well bore scraped and glanced off the base of or a hard streak near the base of the upper 1-A porosity bench. At this point the lateral was turned upward at a shallow angle. As the lateral continued very slowly upward, it bumped and scraped along the top of the upper 1-A zone from measured depths of 6806' to 6875', 5531.5 to 5532' true vertical depths, with horizontal displacements of 1357' to 1426'

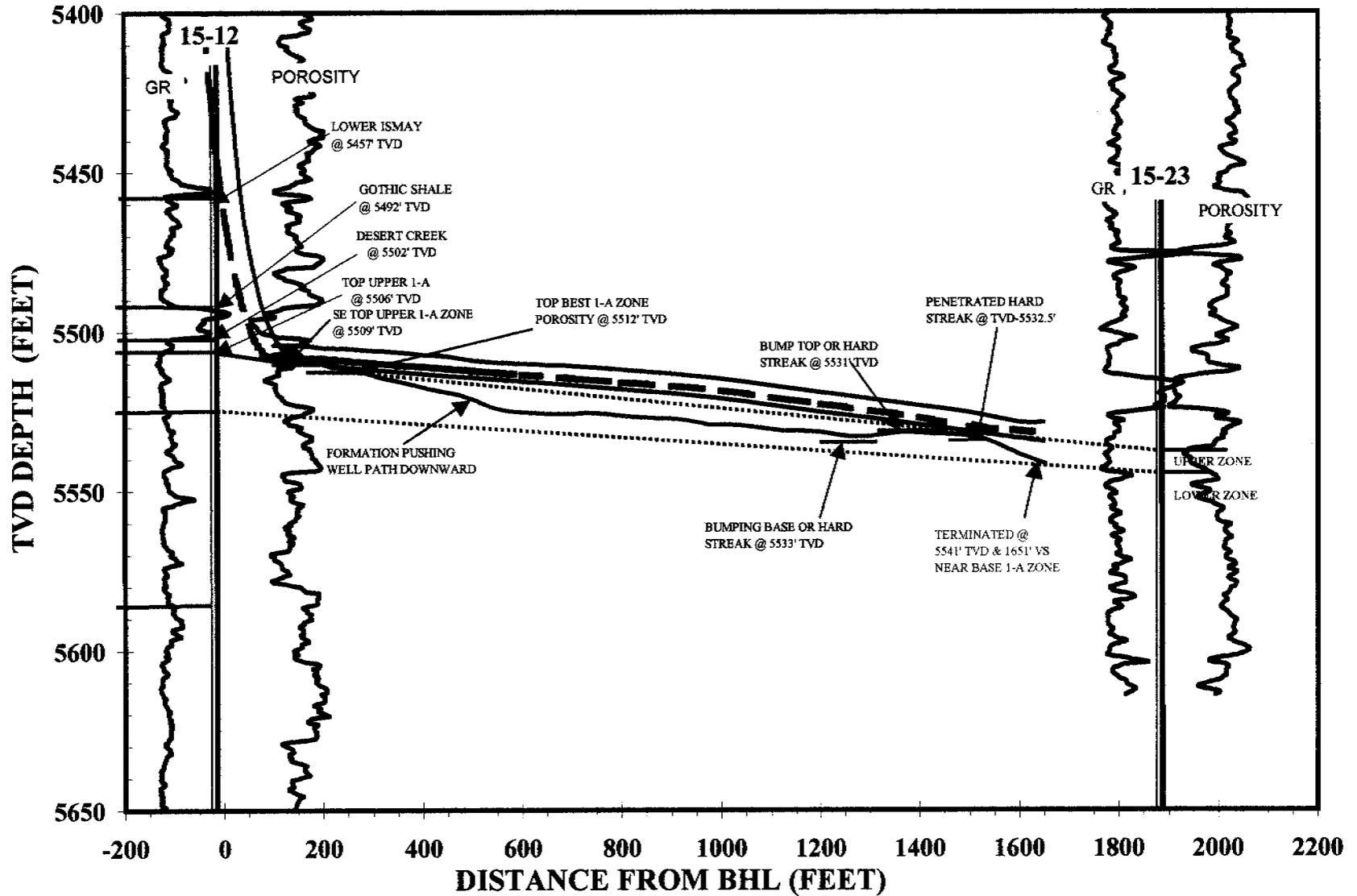
As the well path reached a true vertical depth of 5532.8', 6956' measured depth, 1502' of vertical section, a decrease in the rate of penetration and an increase in dense, tight limestone packstone was noted. This hard streak was penetrated, pulling the well path downward at an increased angle of 87.9°. Upon reaching the measured depth of 6966', 5533' true vertical depth, the well path re-entered the very good oolitic to oomoldic limestone grainstones, with only very minor amounts of packstone, and a very good sample show. The lateral was allowed to continue downward at an angle of 86.5° in this good oolitic to oomoldic limestone with scattered dense limestone packstones. The scattered tight streaks helped maintain the downward path of the lateral. Upon reaching the measured depth of 7100', 5541.3' true vertical depth, with a horizontal displacement of 1651', as the well path neared the base of the Upper 1-A porosity zone, the lateral was terminated. The lateral was terminated on September 9, 1998', 248' from the R.U. 15-23 well which offsets the lateral to the west.

In tracking the lateral in this southeasterly direction, the oolitic to oomoldic limestone grainstone porosity had good sample shows, which remained fairly consistent until reaching the measured depth of 6956', when a very thin packstone streak was penetrated. The good oolitic to oomoldic limestone grainstones of the best porosity of the upper 1-A porosity bench showed predominately good oolitic to intergranular porosity. The zone had only minor decreases in the amount of porosity and increases in the tight dense limestone packstone, when the top or base of the zone, as well as the random tight streaks was encountered. The sample shows within the best porosity remained consistent, with a slow increase in the background gases as well as the small flare, which increased to approximately 6'. The background gas and flare decrease slowly after penetrating the hard streak at the measured depth of 6956'. The lateral at its termination, was 10' below the proposed target, but still in predominately very good porosity, with only very minor packstones noted in the last 55' of the lateral. The well path was consistently below the proposed well path, as much as 10 feet, to remain within the best porosity of the zone.

From the beginning of the 15-12 southeast lateral leg #2 to its termination on September 9, 1998, at a measured depth of 7100', 5541.3' true vertical depth and a horizontal displacement of 1651', the porosities of the Upper 1-A porosity zone appear to be very well developed. The porosity zone has well enough developed porosities that, even with the minor hard streaks encountered, should enhance the overall performance of the R. U. 15-12 injection well, after acidization and returned to water flood.

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

MOBIL, Ratherford #15-12, Southeast Lateral



OPERATOR MOBIL PRODUCING TX & NM INC

OPERATOR ACCT. NO. N 7370

ADDRESS P. O. BOX 633

MIDLAND, TEXAS 79702

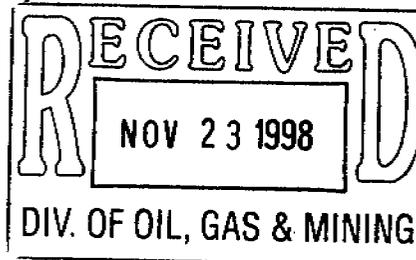
ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		
E	6280 →		43-037-15715	RATHERFORD	15-12	15	41S	24E	SAN JUAN	9-01-98	9-30-98
WELL 1 COMMENTS: <i>990226 entity already added. KDR</i>											
WELL 2 COMMENTS:											
WELL 3 COMMENTS:											
WELL 4 COMMENTS:											
WELL 5 COMMENTS: <i>Horizontal</i>											

ACTION CODES (See instructions on back of form)

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (explain in comments section)

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

(3/89)



Shirley Houchins for
Signature SHIRLEY HOUCHINS
ENV & REG TECHNICIAN 11-13-98
Title _____ Date _____
Phone No. 915 688-2585

**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 checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> DRY <input type="checkbox"/> Other <u>SIDETRACK</u>		5. LEASE DESIGNATION AND SERIAL NO. 14-20-603-355	
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"/> <u>SIDETRACK</u>		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 15-12	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface 1820' FNL & 500' FWL At top prod. interval reported below LAT #1 960' FNL & 1020' FWL/SURF SPOT At total depth LAT #2 1162' FSL & 1173' FEL/SURF SP		9. API WELL NO. 43-037-15715	
14. PERMIT NO. NA DATE ISSUED NA		10. FIELD AND POOL, OR WILDCAT GREATER ANETH	
15. DATE SPUNDED 9-01-98		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA SEC. 15, T41S, R24E	
16. DATE T.D. REACHED 9-11-98		12. COUNTY OR PARISH SAN JUAN	
17. DATE COMPL. (Ready to prod.) 9-30-98		13. STATE UT	
18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 4678' KB		19. ELEV. CASINGHEAD	
20. TOTAL DEPTH, MD & TVD *#24		22. IF MULTIPLE COMPL., HOW MANY*	
21. PLUG, BACK T.D., MD & TVD *#24		23. INTERVALS DRILLED BY X	
24. PRODUCING INTERVAL(S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD)* LAT #1(5395-5510' TVD)(5395-6875' TMD) LAT #2 (5381-5541' TVD)(5381-7100' TMD)		25. WAS DIRECTIONAL SURVEY MADE YES	
26. TYPE ELECTRIC AND OTHER LOGS RUN NO Computer Colored Log (Mud Log), Geology Reports 10-13-98		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#	175'	ORIGINAL	SURFACE 175 SXS	
8 5/8"	24#	1501'	CASING	NA 458 SXS	
5 1/2"	14 & 15.5#	5714'	UNDISTURBED	2112' CALC 567 SXS	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					2 3/8"	5127'	5130' TAC

30. TUBING RECORD

PERFORATION RECORD (Interval, size and number)	ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.
	DEPTH INTERVAL (MD) AMOUNT AND KIND OF MATERIAL USED
	5600-6875' LAT #1/ACIDIZE W/17850 GALS
	15% HCL ACID
	5628-7100' LAT #2/ACIDIZE W/20580 GALS
	15% HCL ACID

33.* PRODUCTION

DATE FIRST PRODUCTION 9-30-98	PRODUCTION METHOD (Flowing, gas lift, pumping - size and type of pump) 2.5" X 2" X 26' PUMPING	WELL STATUS (Producing or shut-in) PRODUCING
DATE OF TEST 9-30-98	HOURS TESTED	CHOKE SIZE
PROD'N. FOR TEST PERIOD 394	OIL - BBL. 105	GAS - MCF. 96
WATER - BBL. 267	GAS - OIL RATIO	
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE
OIL - BBL.	GAS - MCF.	WATER - BBL.
OIL GRAVITY - API (CORR.)		

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

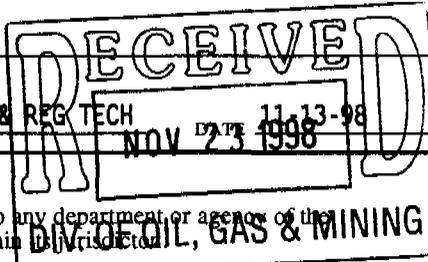
TEST WITNESSED BY

35. LIST OF ATTACHMENTS
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 TITLE **SHIRLEY HOUCHINS/ENV & REG TECH** DATE **11-13-98**

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



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.

14-20-603-355

6. If Indian, Allottee or Tribe Name

NAVAJO TRIBAL

7. If Unit or CA, Agreement Designation

RATHERFORD UNIT

8. Well Name and No.

RATHERFORD 15-12

9. API Well No.

43-037-15715

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. 15, T41S, R24E
1820' FNL & 500' FWL

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

TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment	<input type="checkbox"/> Change of Plans
<input checked="" type="checkbox"/> Subsequent Report	<input checked="" 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 type="checkbox"/> Other <u>SIDETRACK</u>	<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:

LATERAL #1; 960' NORTH & 1020' WEST FROM SURFACE SPOT (ZONE 1a).
LATERAL #2; 1162' SOUTH & 1173' EAST FROM SURFACE SPOT (ZONE 1a).

SEE ATTACHED PROCEDURE.

ACTUAL BOTTOM HOLE LOCATIONS:
LATERAL 1: 0860 FNL 0520 FEL -- SEC 16, T41S, R24E
LATERAL 2: 2298 FSL 1673 FWL -- SEC 15, T41S, R24E

14. I hereby certify that the foregoing is true and correct
Signed Shirley Houchins Title SHIRLEY HOUCHINS/ENV & REG TECH Date 11-13-98

(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.

ATTACHMENT – FORM 3160-5
RATHERFORD UNIT – WELL #15-12
14-20-603-355
NAVAJO TRIBAL
SAN JUAN, UTAH

9-1-98 MIRU NAVAJO RIG #25. NU BOP STACK. SINGLE JACK TESTED BOP OK. PU
TIH W/ RET. HD. ON DC'S AND DP AND RELEASE RBP. NOW POOH.

9-2-98 RIH W/ TIW ANCHOR LATCH ASSEMBLY, WEATHERFORD WHIPSTOCK,
STARTER MILL, 2.875" AOHDP, LATCHED INTO TIW PKR @ 5429' BOLT W/
TOP OF WHIPSTOCK @ 5388' W/ FACE @ 314 DEG. MILLED WINDOW FROM
5388'-5390', CIRC CLEAN. POH W/ STARTER MILL. NOTIFIED JIM
THOMPSON W/ STATE UTAH @ 10:30 AM 9/2/98 ABOUT STARTING DRILLING
OPERATIONS. POH W/ RBP. SCHLUMBERGER RAN TIW BIG BORE
WHIPSTOCK PKR, SET TOP OF PKR @ 5429'. RIH W/ LATCH ASSEMBLY, INTO
PKR @ 5429'. RU GYRO DATA, DID NOT LATCH INTO PKR. RIH W/ ANCHOR
LATCH ASSEMBLY ON SAME BHA, LATCH INTO PKR @ 5429'. RU GYRO
DATA, POH W/ ANCHOR LATCH.

9-3-98 RIH W/ WINDOW & WATERMELLON MILLS. CUT WINDOW FROM 5388'-
5395'. MILLED WINDOW FROM 5388'-5395', UNABLE TO GO DEEPER POH W/
MILLS. FINAL REPORT FOR LATERAL 1.

9-3-98 RU GYRO DATA, RIH W/ GYRO, TIME DRILLED CURVE W/ GYRO FROM 5395'-
5410'

9-4-98 DRILLED CURVE W/ MWD FROM 5410'-5590' MD, 90 ANGLE, 321 DIRECTION,
5414' TVD 118' VS. PUMPED SWEEP & CIRC CLEAN. POH & LD DP, RIH MUD
MOTOR, 2.875" PH6, & 2.875" AOHDP.

9-5-98 SLIDE & ROTATE DRILLED LATERAL 1A1 FROM 5590'-6813'.

9-6-98 SLIDE & ROTATE DRILLED LATERAL 1A1 FROM 6813'-6875' TD, 91.8 ANGLE,
307 DIRECTION, 5510' TVD, 1400' VS. PUMPED SWEEP & CIRC CLEAN. POH
& LD MWD & MUD MOTOR. RIH W/ SUPERHOOK, CAUGHT & REL
WHIPSTOCK @ 5390'. POH W/ WHIPSTOCK. FINAL REPORT FOR LATERAL
1A1. RIH W/ ANCHOR LATCH ASSEMBLY, WEATHERFORD WHIPSTOCK,
STARTING MILL, 2.875" AOHDP, LATCHED INTO TIW PKR @ 5429' W/
KEYWAY @ 322 GTG, SHEARED BOLT W/ TOP OF WHIPSTOCK @ 5373' W/
FACE @ 135 DEG. CUT WINDOW FROM 5373'-5375', CIRC CLEAN. POH W/
STARTER MILL. RIH W/ WINDOW & WATERMELLON MILL. MILLED
WINDOW FROM 5373'-5380' & FORMATION TO 5381'. PUMPED SWEEP &
CIRC CLEAN. POH W/ MILLS. FINAL REPORT FOR LATERAL 2

9-7-98 RIH W/ MUD MOTOR, MWD, 2.875" AOHDP. RU GYRO DATA, RIH W/ GYRO,
GOOD TOOL FACES. SLIDE DRILLED CURVE 2 W/ GYRO FROM 5381'-5410'.
POH & RD GYRO DATA, SLIDE DRILLED CURVE 2 FROM 5410'-5539'.

9-8-98 POH & CHANGED OUT MUD MOTORS, RIH ON SAME BHA. SLIDED DRILLED
CURVE 2A1 FROM 5539'-5595', LANDED CURVE @ 89.2 ANGLE, 142
DIRECTION, 5508' TVD, 147' VS. PUMPED SWEEP & CIRC HOLE CLEAN. LD
CURVE ASSEMBLY. CUT DRILLING LINE. RIH W/ MUD MOTOR PH6 TBG,
2.875" AOHDP TO 5595'. SLIDE DRILLED LATERAL 2A1 FROM 5595'-5645'.

9-9-98 SLIDE & ROTATE DRILLED LATERAL 2A1 5645'-7100' TD, 87 DEG ANGLE, 133
DIRECTION, 5541' TVD, 1651' VS. PUMPED HE POLYMER SWEEP & CIRC
HOLE CLEAN

9-11-98 RDMO NAVAJO WEST #25.

ATTACHMENT - FORM 3160-5
RATHERFORD UNIT - WELL #15-12
14-20-603-355
NAVAJO TRIBAL
SAN JUAN, UTAH
PAGE 2

COMPLETION:

- 9-21-98 MIRU NAVAJO WEST RIG #36. SIP AT 12:30 WAS 0 PSI. ND WELL HEAD CAP. NU BOPE. RU RIG FLOOR. MAKE-UP GUIBER. ON/OFF TOOL. RIH W/ PH-6 WORKSTRING TO 5258'. LATCH ONTO PACKER, RELEASE FROM ON/OFF TOOL, SPACE OUT. RU PUMP, PIT, AND LINES. CIRC. ON TOP OF PACKER. RU AND TEST PACKER TO 300 PSI. MIRU TEFTELLAR SLICKLINE UNIT. RIH TO 5258'. LATCH ONTO 'F' PLUG. RELEASE. POH. RDMO TEFTELLAR SLICKLINE. RIG FLOOR FOR COILED TBG. UNIT. SIFN.
- 9-22-98 MIRU DOWELL COILED TBG. UNIT. SIP AT 08:30 WAS 220 PSI. RIH W/ COILED TBG. TO 7100'. DOWELL ACIDIZE LATERAL 2A1 FROM 7100' TO 5628' W/ 20,580 GAL 15% HCL ACID. POH W/ COILED TBG. RDMO DOWELL. SIFN.
- 9-23-98 SITP AT 06:30 WAS 650 PSI. RU AND KILL WELL, WELL DEAD. RELEASE PKR. OK. POH W/ 2.875" PH-6 TBG., PKR AND TAIL PIPE. LAY DOWN PKR. MAKE-UP RETV. FOR WHIPSTOCK, RIH TO 5373'. LATCH ONTO WHIPSTOCK, RELEASE. POH. PICK-UP RETV. WHIPSTOCK AND ORIENT TO 322 DEG. AZ. FOR T.I.W. PKR AND 314 DEG. AZ. FOR LATERAL 1A1 WINDOW. RIH TO 5429' (T.I.W. PKR DEPTH) SET WHIPSTOCK. POH LAY DN RUNNING TOOLS. RIH PKR AND 2.875" PH-6 TBG. TO 5599.99' SET PKR. AT 5257.57'. RU AND TEST PKR TO 300 PSI. OK. SIFN.
- 9-24-98 MIRU DOWELL COILED TBG. UNIT. SITP AT 07:00 WAS 200 PSI. RIH W/ COILED TBG. TO 6875'. DOWELL ACIDIZE LATERAL 1A1 FROM 6875' TO 5600' W/ 17,850 GAL. OF 15% HCL ACID. RD DOWELL COILED TBG. UNIT. SIFN.
- 9-25-98 SITP AT 06:00 WAS 350 PSI. RU AND KILL WELL. RELEASE PKR. WELL DEAD. POH, LAY DOWN PKR. MAKE-UP RETV TOOLS FOR RETV WHIPSTOCK. RIH TO 5388' LATCH ONTO WHIPSTOCK AND RELEASE. LAY DOWN WORKSTRING, AND RETV. WHIPSTOCK. SURFACE TEST 5.5" TBG. ANCHOR. TBG. ANCHOR WOULD NOT TEST, WOULD NOT EXTEND OUT OR IN. SIFN.
- 9-26-98 SIP AT 07:30 WAS 250 PSI. RU TO PUMP. KILL WELL, WELL DEAD. RIH W/ 2.875" TBG. TO 5354.94'. SIFN.
- 9-27-98 WELL SI FOR SUNDAY. INTENT FOR MONDAY; KILL TBG. ND BOPE. NU PRODUCTION WELL HEAD. RIH W/ RODS.
- 9-28-98 SITP 350# BLED OFF GAS KILL TBG W/ BRINE. RIG DN FLOOR ND HYDRILL/BOP SET TACK W/ 20 PTS TENT, INSTALLED WELL HEAD. SWISDFN.
- 9-29-98 SITP 400# CSG 750# BLED DN TBG KILLED W/ 10# BRINE TBG DEAD. POH W/ TBG FOUND SPLIT. RIH W/ 78-JTS 2.875" TBG FOR KILL STRING.
- 9-30-98 SITP 350# CSG 500#. POH W/ KILL STRING. RIH W/ PRODUCTION TBG, 2.5 X 2" X 26' PUMP, TAC @ 5130.14. TURN TO PRODUCTION.

Mobil

***San Juan County
Utah
Ratherford Unit
RU 15-12 - MWD Survey Leg #1***

SURVEY REPORT

18 September, 1998

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

Survey Ref: svy3155

Sperry-Sun Drilling Services

Survey Report for RU 15-12



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)
Gyro							
0.00	0.000	0.000	0.00	0.00 N	0.00 E	0.00	
200.00	0.440	194.610	200.00	0.74 S	0.19 W	-0.38	0.220
400.00	0.510	185.340	399.99	2.37 S	0.47 W	-1.31	0.052
600.00	0.440	185.910	599.98	4.02 S	0.63 W	-2.34	0.035
800.00	0.440	211.680	799.98	5.44 S	1.11 W	-2.98	0.098
1000.00	0.530	219.540	999.97	6.81 S	2.11 W	-3.21	0.056
1200.00	0.590	250.930	1199.96	7.86 S	3.67 W	-2.82	0.154
1400.00	0.620	253.240	1399.95	8.51 S	5.68 W	-1.82	0.019
1600.00	0.600	250.920	1599.94	9.16 S	7.70 W	-0.82	0.016
1800.00	0.590	247.130	1799.93	9.90 S	9.64 W	0.06	0.020
2000.00	0.470	248.130	1999.92	10.61 S	11.35 W	0.80	0.060
2200.00	0.580	254.130	2199.91	11.19 S	13.09 W	1.64	0.061
2400.00	0.470	237.900	2399.90	11.90 S	14.76 W	2.35	0.092
2600.00	0.030	167.690	2599.90	12.39 S	15.44 W	2.50	0.230
2800.00	0.150	58.910	2799.90	12.31 S	15.20 W	2.39	0.081
3000.00	0.180	64.180	2999.90	12.03 S	14.70 W	2.21	0.017
3200.00	0.310	63.770	3199.90	11.66 S	13.93 W	1.92	0.065
3400.00	0.310	59.900	3399.90	11.15 S	12.98 W	1.59	0.010
3600.00	0.320	69.200	3599.89	10.68 S	11.99 W	1.20	0.026
3800.00	0.340	78.120	3799.89	10.36 S	10.88 W	0.63	0.028
4000.00	0.330	89.380	3999.89	10.23 S	9.73 W	-0.11	0.033
4200.00	0.400	75.100	4199.88	10.04 S	8.48 W	-0.88	0.057
4400.00	0.430	62.080	4399.88	9.51 S	7.14 W	-1.47	0.049
4600.00	0.440	43.510	4599.87	8.60 S	5.95 W	-1.70	0.070
4800.00	0.370	43.980	4799.87	7.58 S	4.97 W	-1.69	0.035
5000.00	0.390	54.800	4999.86	6.73 S	3.96 W	-1.82	0.037
5200.00	0.200	66.840	5199.86	6.20 S	3.09 W	-2.08	0.099
MWD Survey Leg #1							
5388.00	0.280	56.080	5387.86	5.81 S	2.40 W	-2.31	0.049
5395.00	3.300	314.000	5394.85	5.66 S	2.53 W	-2.11	48.139
5405.00	6.900	331.020	5404.81	4.93 S	3.03 W	-1.25	38.665
5415.00	11.500	335.630	5414.68	3.50 S	3.74 W	0.26	46.550
5425.00	16.100	337.760	5424.39	1.31 S	4.67 W	2.45	46.272
5435.00	20.500	339.000	5433.88	1.61 N	5.83 W	5.31	44.170
5445.00	25.200	339.810	5443.09	5.25 N	7.19 W	8.82	47.104
5455.00	30.300	340.400	5451.94	9.62 N	8.77 W	12.99	51.073
5465.00	35.000	339.900	5460.36	14.70 N	10.60 W	17.84	47.077
5475.00	39.600	340.400	5468.31	20.40 N	12.66 W	23.27	46.099

Continued...

Sperry-Sun Drilling Services

Survey Report for RU 15-12



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)
5485.00	44.600	340.500	5475.73	26.71 N	14.90 W	29.27	50.004
5495.00	49.400	340.200	5482.55	33.60 N	17.36 W	35.83	48.050
5505.00	54.500	339.100	5488.71	40.98 N	20.10 W	42.92	51.729
5515.00	59.300	339.300	5494.17	48.81 N	23.07 W	50.50	48.029
5525.00	63.000	338.800	5498.99	56.98 N	26.21 W	58.44	37.258
5535.00	67.300	336.700	5503.19	65.38 N	29.64 W	66.74	47.030
5545.00	70.600	333.200	5506.79	73.83 N	33.60 W	75.45	46.427
5555.00	75.200	329.900	5509.73	82.23 N	38.15 W	84.56	55.769
5565.00	79.400	326.800	5511.93	90.53 N	43.27 W	94.01	51.750
5590.00	88.700	318.700	5514.52	110.27 N	58.30 W	118.54	49.193
5609.00	89.200	316.600	5514.87	124.31 N	71.10 W	137.50	11.360
5640.00	90.200	314.300	5515.03	146.40 N	92.85 W	168.49	8.090
5672.00	89.300	314.500	5515.17	168.79 N	115.71 W	200.48	2.881
5704.00	88.800	315.000	5515.70	191.32 N	138.43 W	232.48	2.210
5736.00	88.700	315.200	5516.40	213.98 N	161.01 W	264.46	0.699
5768.00	88.800	315.000	5517.10	236.64 N	183.60 W	296.45	0.699
5799.00	89.300	315.500	5517.61	258.65 N	205.42 W	327.44	2.281
5831.00	89.400	315.500	5517.97	281.47 N	227.84 W	359.43	0.313
5863.00	91.100	316.200	5517.83	304.43 N	250.13 W	391.41	5.745
5894.00	90.700	315.700	5517.35	326.71 N	271.68 W	422.39	2.065
5926.00	90.500	314.300	5517.01	349.34 N	294.31 W	454.38	4.419
5958.00	91.100	313.800	5516.56	371.58 N	317.31 W	486.37	2.441
5989.00	89.900	313.200	5516.29	392.92 N	339.79 W	517.37	4.328
6021.00	90.900	314.100	5516.07	415.01 N	362.95 W	549.37	4.204
6053.00	88.700	312.000	5516.18	436.85 N	386.33 W	581.36	9.504
6085.00	87.600	310.800	5517.22	458.00 N	410.32 W	613.31	5.086
6116.00	88.800	311.500	5518.19	478.39 N	433.65 W	644.26	4.481
6148.00	90.900	311.800	5518.27	499.65 N	457.56 W	676.23	6.629
6180.00	91.800	311.500	5517.52	520.91 N	481.46 W	708.19	2.965
6212.00	90.200	310.600	5516.96	541.92 N	505.59 W	740.14	5.736
6243.00	90.100	310.400	5516.88	562.06 N	529.16 W	771.08	0.721
6274.00	90.400	310.800	5516.74	582.23 N	552.70 W	802.03	1.613
6306.00	90.600	310.600	5516.46	603.10 N	576.96 W	833.98	0.884
6338.00	91.300	310.100	5515.93	623.81 N	601.34 W	865.91	2.688
6369.00	91.500	309.900	5515.18	643.73 N	625.08 W	896.82	0.912
6401.00	90.600	310.100	5514.59	664.30 N	649.59 W	928.74	2.881
6432.00	89.100	310.300	5514.67	684.31 N	673.27 W	959.67	4.882
6464.00	88.600	310.100	5515.31	704.96 N	697.70 W	991.59	1.683
6495.00	90.400	311.100	5515.58	725.13 N	721.24 W	1022.53	6.642
6527.00	93.300	311.500	5514.55	746.24 N	745.26 W	1054.48	9.148
6559.00	88.800	310.100	5513.96	767.14 N	769.48 W	1086.41	14.727
6591.00	88.900	309.200	5514.61	787.55 N	794.11 W	1118.31	2.829
6622.00	88.600	308.100	5515.28	806.91 N	818.32 W	1149.17	3.677
6653.00	89.300	307.300	5515.85	825.86 N	842.84 W	1179.98	3.429
6684.00	88.800	306.000	5516.37	844.36 N	867.71 W	1210.72	4.492

Continued...

Sperry-Sun Drilling Services

Survey Report for RU 15-12



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)
6716.00	88.200	305.200	5517.20	862.98 N	893.72 W	1242.36	3.124
6748.00	92.100	306.700	5517.12	881.77 N	919.61 W	1274.04	13.058
6780.00	94.700	309.200	5515.22	901.41 N	944.80 W	1305.80	11.262
6812.00	94.700	308.300	5512.60	921.37 N	969.67 W	1337.56	2.803
6841.00	91.800	307.300	5510.96	939.11 N	992.55 W	1366.34	10.576
6875.00	91.800	307.300	5509.89	959.71 N	1019.58 W	1400.09	0.000

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

The Dogleg Severity is in Degrees per 100ft.
Vertical Section is from Well and calculated along an Azimuth of 314.000° (True).

Based upon Minimum Curvature type calculations, at a Measured Depth of 6875.00ft.,
The Bottom Hole Displacement is 1400.21ft., in the Direction of 313.267° (True).

Mobil

***San Juan County
Utah
Ratherford Unit
RU 15-12 - MWD Survey Leg #2***

SURVEY REPORT

21 September, 1998

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

Survey Ref: svy3157

Sperry-Sun Drilling Services

Survey Report for RU 15-12



Mobil
San Juan County

Utah
Rutherford Unit

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
Gyro							
0.00	0.000	0.000	0.00	0.00 N	0.00 E	0.00	
200.00	0.440	194.610	200.00	0.74 S	0.19 W	0.39	0.220
400.00	0.510	185.340	399.99	2.37 S	0.47 W	1.35	0.052
600.00	0.440	185.910	599.98	4.02 S	0.63 W	2.40	0.035
800.00	0.440	211.680	799.98	5.44 S	1.11 W	3.06	0.098
1000.00	0.530	219.540	999.97	6.81 S	2.11 W	3.32	0.056
1200.00	0.590	250.930	1199.96	7.86 S	3.67 W	2.96	0.154
1400.00	0.620	253.240	1399.95	8.51 S	5.68 W	2.00	0.019
1600.00	0.600	250.920	1599.94	9.16 S	7.70 W	1.03	0.016
1800.00	0.590	247.130	1799.93	9.90 S	9.64 W	0.18	0.020
2000.00	0.470	248.130	1999.92	10.61 S	11.35 W	-0.53	0.060
2200.00	0.580	254.130	2199.91	11.19 S	13.09 W	-1.34	0.061
2400.00	0.470	237.900	2399.90	11.90 S	14.76 W	-2.02	0.092
2600.00	0.030	167.690	2599.90	12.39 S	15.44 W	-2.16	0.230
2800.00	0.150	58.910	2799.90	12.31 S	15.20 W	-2.05	0.081
3000.00	0.180	64.180	2999.90	12.03 S	14.70 W	-1.88	0.017
3200.00	0.310	63.770	3199.90	11.66 S	13.93 W	-1.61	0.065
3400.00	0.310	59.900	3399.90	11.15 S	12.98 W	-1.29	0.010
3600.00	0.320	69.200	3599.89	10.68 S	11.99 W	-0.92	0.026
3800.00	0.340	78.120	3799.89	10.36 S	10.88 W	-0.37	0.028
4000.00	0.330	89.380	3999.89	10.23 S	9.73 W	0.36	0.033
4200.00	0.400	75.100	4199.88	10.04 S	8.48 W	1.11	0.057
4400.00	0.430	62.080	4399.88	9.51 S	7.14 W	1.68	0.049
4600.00	0.440	43.510	4599.87	8.60 S	5.95 W	1.88	0.070
4800.00	0.370	43.980	4799.87	7.58 S	4.97 W	1.85	0.035
5000.00	0.390	54.800	4999.86	6.73 S	3.96 W	1.95	0.037
5200.00	0.200	66.840	5199.86	6.20 S	3.09 W	2.20	0.099
MWD Survey Leg #2							
5373.00	0.270	56.690	5372.86	5.85 S	2.47 W	2.39	0.047
5381.00	4.500	135.000	5380.85	6.06 S	2.23 W	2.71	55.664
5391.00	8.800	135.980	5390.78	6.89 S	1.42 W	3.87	43.013
5401.00	12.900	136.330	5400.60	8.25 S	0.12 W	5.75	41.005
5411.00	17.400	136.510	5410.25	10.14 S	1.68 E	8.36	45.002
5421.00	21.700	136.620	5419.67	12.57 S	3.98 E	11.71	43.002
5431.00	25.500	136.700	5428.83	15.48 S	6.73 E	15.71	38.001
5441.00	29.600	136.750	5437.70	18.85 S	9.90 E	20.33	41.001
5451.00	33.400	136.800	5446.22	22.66 S	13.48 E	25.55	38.001
5461.00	37.700	142.200	5454.36	27.08 S	17.24 E	31.34	53.208

Continued...

Sperry-Sun Drilling Services

Survey Report for RU 15-12



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)
5471.00	42.100	144.600	5462.03	32.23 S	21.06 E	37.68	46.609
5481.00	46.000	146.200	5469.21	37.96 S	25.00 E	44.52	40.553
5491.00	50.400	145.300	5475.88	44.12 S	29.20 E	51.84	44.508
5501.00	54.400	143.200	5481.98	50.54 S	33.83 E	59.66	43.319
5511.00	59.100	141.600	5487.46	57.17 S	38.93 E	67.95	48.865
5521.00	63.700	140.400	5492.25	63.99 S	44.46 E	76.68	47.190
5531.00	68.200	139.900	5496.32	70.99 S	50.31 E	85.77	45.231
5541.00	71.600	138.500	5499.76	78.10 S	56.44 E	95.14	36.452
5551.00	74.700	140.700	5502.65	85.39 S	62.64 E	104.67	37.473
5561.00	78.700	142.300	5504.95	93.00 S	68.70 E	114.34	42.922
5571.00	82.900	143.900	5506.55	100.90 S	74.62 E	124.11	44.870
5595.00	89.200	142.700	5508.21	120.08 S	88.93 E	147.79	26.719
5631.00	86.900	137.700	5509.43	147.71 S	111.95 E	183.61	15.280
5663.00	87.800	135.000	5510.91	170.84 S	134.01 E	215.56	8.885
5695.00	89.300	135.700	5511.72	193.60 S	156.49 E	247.55	5.172
5726.00	87.500	135.200	5512.59	215.68 S	178.23 E	278.53	6.026
5758.00	87.100	134.500	5514.09	238.22 S	200.89 E	310.50	2.517
5790.00	88.600	134.500	5515.29	260.64 S	223.70 E	342.47	4.687
5822.00	87.500	134.500	5516.38	283.05 S	246.51 E	374.45	3.437
5854.00	88.200	133.800	5517.58	305.33 S	269.45 E	406.43	3.092
5885.00	88.200	133.600	5518.56	326.73 S	291.85 E	437.40	0.645
5917.00	88.300	133.100	5519.53	348.69 S	315.11 E	469.38	1.593
5949.00	86.000	132.000	5521.13	370.30 S	338.65 E	501.30	7.965
5980.00	86.000	131.700	5523.29	390.93 S	361.69 E	532.18	0.965
6012.00	89.300	132.700	5524.60	412.41 S	385.37 E	564.11	10.775
6044.00	89.100	132.400	5525.05	434.04 S	408.94 E	596.08	1.127
6075.00	89.300	132.200	5525.48	454.90 S	431.87 E	627.04	0.912
6107.00	89.800	131.700	5525.73	476.30 S	455.67 E	659.00	2.210
6139.00	90.400	131.100	5525.68	497.46 S	479.67 E	690.93	2.652
6171.00	90.500	131.300	5525.42	518.53 S	503.75 E	722.86	0.699
6203.00	88.900	133.400	5525.59	540.09 S	527.39 E	754.82	8.250
6234.00	89.100	133.900	5526.13	561.48 S	549.82 E	785.81	1.737
6266.00	89.500	134.300	5526.52	583.75 S	572.80 E	817.80	1.768
6298.00	89.200	134.500	5526.89	606.14 S	595.66 E	849.80	1.127
6330.00	89.600	134.800	5527.22	628.63 S	618.42 E	881.80	1.562
6361.00	89.800	133.900	5527.38	650.30 S	640.59 E	912.79	2.974
6393.00	87.400	133.100	5528.17	672.31 S	663.79 E	944.77	7.905
6425.00	89.300	133.400	5529.09	694.23 S	687.09 E	976.74	6.011
6456.00	90.300	135.400	5529.20	715.92 S	709.24 E	1007.74	7.213
6488.00	89.200	135.500	5529.33	738.72 S	731.69 E	1039.74	3.452
6520.00	88.600	134.800	5529.95	761.40 S	754.25 E	1071.73	2.881
6551.00	88.800	134.700	5530.65	783.22 S	776.26 E	1102.72	0.721
6582.00	90.000	135.000	5530.98	805.08 S	798.24 E	1133.72	3.990
6614.00	89.700	135.700	5531.06	827.85 S	820.73 E	1165.72	2.380
6646.00	88.900	135.200	5531.45	850.65 S	843.17 E	1197.71	2.948

Continued...

Sperry-Sun Drilling Services

Survey Report for RU 15-12



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)
6678.00	88.200	134.500	5532.26	873.21 S	865.85 E	1229.70	3.093
6710.00	89.500	134.700	5532.90	895.68 S	888.63 E	1261.70	4.110
6741.00	91.000	135.000	5532.77	917.54 S	910.61 E	1292.69	4.935
6773.00	91.300	134.300	5532.13	940.02 S	933.37 E	1324.69	2.380
6805.00	90.900	133.100	5531.51	962.13 S	956.50 E	1356.67	3.952
6837.00	89.100	131.500	5531.51	983.66 S	980.16 E	1388.63	7.526
6869.00	89.800	130.800	5531.82	1004.72 S	1004.26 E	1420.56	3.094
6900.00	89.500	130.400	5532.01	1024.89 S	1027.80 E	1451.47	1.613
6932.00	89.500	133.800	5532.29	1046.34 S	1051.53 E	1483.42	10.625
6963.00	87.900	133.900	5532.99	1067.81 S	1073.88 E	1514.41	5.171
6995.00	86.000	132.700	5534.69	1089.72 S	1097.14 E	1546.35	7.020
7027.00	86.100	133.400	5536.90	1111.52 S	1120.47 E	1578.25	2.205
7058.00	86.500	133.900	5538.90	1132.87 S	1142.85 E	1609.18	2.063
7100.00	87.000	133.900	5541.28	1161.95 S	1173.06 E	1651.10	1.190

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 135.000° (True).

Based upon Minimum Curvature type calculations, at a Measured Depth of 7100.00ft.,

The Bottom Hole Displacement is 1651.12ft., in the Direction of 134.727° (True).

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.
14-20-603-355

6. If Indian, Allottee or Tribe Name
NAVAJO TRIBAL

7. If Unit or CA, Agreement Designation
RATHERFORD UNIT

8. Well Name and No.
RATHERFORD 15-12

9. API Well No.
43-037-15715

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. 15, T41S, R24E
1820' FNL & 500' FWL

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 checked="" 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 SIDETRACK
	<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.)

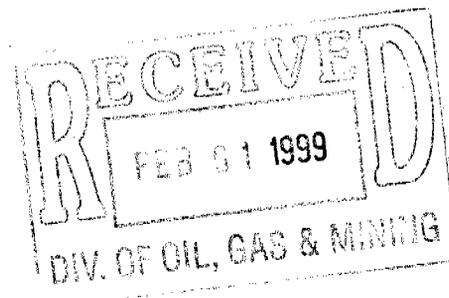
13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to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

BHL:

LATERAL #1: 960' NORTH & 1020' WEST FROM SURFACE SPOT (ZONE 1a).
LATERAL #2: 1162' SOUTH & 1173' EAST FROM SURFACE SPOT (ZONE 1a).

9-01-98 -- 9-30-98 HORIZONTAL RECOMPLETION.

ATTACHED FORM 15



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

Signed *Shirley Houchins* for Title **SHIRLEY HOUCHINS/ENV & REG TECH** Date **1-28-99**

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

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

* See Instruction on Reverse Side

WTC
2-25-99
PSK

ExxonMobil Production Comp

U.S. West

P.O. Box 4358

Houston, Texas 77210-4358

June 27, 2001

ExxonMobil
Production

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

Change of Name – Mobil Oil Corporation to
ExxonMobil Oil Corporation

Dear Mr. Thompson

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

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

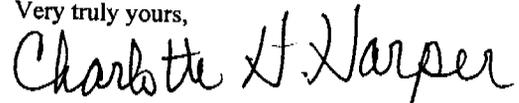
Please note the change of name of MOC to ExxonMobil Oil Corporation in your records pertaining to any MOC permits.

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

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

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

Very truly yours,



Charlotte H. Harper
Permitting Supervisor

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

RECEIVED

JUN 29 2001

DIVISION OF
OIL, GAS AND MINING



United States Department of the Interior

BUREAU OF INDIAN AFFAIRS

XXXXXXXXXXXXXXXXXXXX

Navajo Area Office
NAVAJO REGION

P.O. Box 1060

Gallup, New Mexico 87305-1060

AUG 30 2001

2001-08-30 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,

DEMMI 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>DMC</i>
NATV AM MIN COORD	_____
SOLID MIN TEAM	_____
PETRO MIN 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

File 7/12/2001

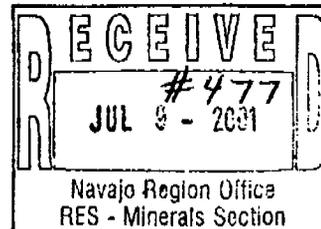
SH
543
File

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.

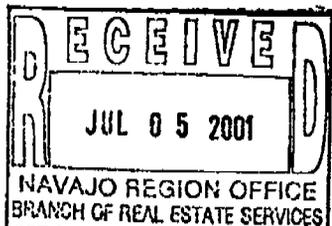
If you have any questions , please contact Alex Correa at (713) 431-1012.

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 Issac

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

CERTIFICATION

I, the undersigned Assistant Secretary of ExxonMobil Oil Corporation. (formerly Mobil Oil Corporation), a corporation organized and existing under the laws of the State of New York, United States of America, DO HEREBY CERTIFY, That, the following is a true and exact copy of the resolutions adopted by the Board of Directors on May 22, 2001:

CHANGE OF COMPANY NAME

WHEREAS, the undersigned Directors of the Corporation deem it to be in the best interest of the Corporation to amend the Certificate of Incorporation of the Corporation to change the name and principal office of the Corporation:

NOW THEREFORE BE IT RESOLVED, That Article 1st relating to the corporate name is hereby amended to read as follows:

"1st The corporate name of said Company shall be,
ExxonMobil Oil Corporation",

FURTHER RESOLVED, That the amendment of the Corporation's Certificate of Incorporation referred to in the preceding resolutions be submitted to the sole shareholder of the Corporation entitled to vote thereon for its approval and, if such shareholder gives its written consent, pursuant to Section 803 of the Business Corporation Law of the State of New York, approving such amendment, the proper officers of the Corporation be, and they hereby are, authorized to execute in the name of the Corporation the Certificate of Amendment of Certificate of Incorporation, in the form attached hereto;

FURTHER RESOLVED, That the proper officers of the Corporation be and they hereby are authorized and directed to deliver, file and record in its behalf, the Certificate of Amendment of Certificate of Incorporation, and to take such action as may be deemed necessary or advisable to confirm and make effective in all respects the change of this Company's name to EXXONMOBIL OIL CORPORATION.

WITNESS, my hand and the seal of the Corporation at Irving, Texas, this 8th day of June, 2001.

S. A. Milligan
Assistant Secretary

COUNTY OF DALLAS)
STATE OF TEXAS)
UNITED STATES OF AMERICA)

Sworn to and subscribed before me at Irving, Texas, U. S. A. on this the 8th day of June, 2001.

Janice M. Phillips
Notary Public



LISTING OF LEASES OF MOBIL OIL CORPORATION**Lease Number**

- 1) 14-20-0603-6504
- 2) 14-20-0603-6505
- 3) 14-20-0603-6506
- 4) 14-20-0603-6508
- 5) 14-20-0603-6509
- 6) 14-20-0603-6510
- 7) 14-20-0603-7171
- 8) 14-20-0603-7172A
- 9) 14-20-600-3530
- 10) 14-20-603-359
- 11) 14-20-603-368
- 12) 14-20-603-370
- 13) 14-20-603-370A
- 14) 14-20-603-372
- 15) 14-20-603-372A
- 16) 14-20-603-4495
- 17) 14-20-603-5447
- 18) 14-20-603-5448
- 19) 14-20-603-5449
- 20) 14-20-603-5450
- 21) 14-20-603-5451

6/1/01

CHUBB GROUP OF INSURANCE COMPANIES

One Chubb Plaza, Suite 1900, Houston, Texas 77027-3301
Telephone: (713) 237-4600 • 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 12th of June, 2001.

ExxonMobil Oil Corporation

By:



FEDERAL INSURANCE COMPANY

By:



Mary Pierson, Attorney-in-fact



**Chubb
Surety**

**POWER
OF
ATTORNEY**

**Federal Insurance Company
Vigilant Insurance Company
Pacific Indemnity Company**

**Attn.: Surety Department
15 Mountain View Road
Warren, NJ 07059**

Know All by These Presents, That FEDERAL INSURANCE COMPANY, an Indiana corporation, VIGILANT INSURANCE COMPANY, a New York corporation, and PACIFIC INDEMNITY COMPANY, a Wisconsin corporation, do each hereby constitute and appoint R. F. Bobo, Mary Pierson, Philana Berros, and Jody E. Specht of Houston, Texas

each as their true and lawful Attorney-in-Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligatory in the nature thereof (other than bail bonds) given or executed in the course of business, and any instruments amending or altering the same, and consents to the modification or alteration of any instrument referred to in said bonds or obligations.

In Witness Whereof, said FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY have each executed and attested these presents and affixed their corporate seals on this 10th day of May, 2001.

Kenneth C. Wendel
Kenneth C. Wendel, Assistant Secretary

Frank E. Robertson
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 presence of the deponent's presence.



Notary Public State of New Jersey
No. 2231647

Karen A. Price
Notary Public

Commission Expires Oct 28, 2004

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
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 09:06 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.

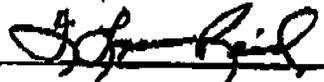
IN WITNESS WHEREOF, this Certificate has been signed this 22nd Day of May, 2001.



F. A. Risch, President 

STATE OF TEXAS)
COUNTY OF DALLAS)

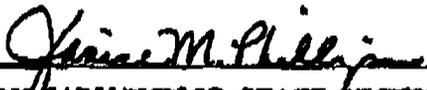
F. L. REID, being duly sworn, deposes and says that he is the Secretary of MOBIL OIL CORPORATION, the corporation mentioned and described in the foregoing instrument; that he has read and signed the same and that the statements contained therein are true.



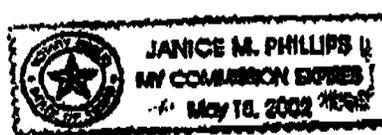
F. L. REID, Secretary

SUBSCRIBED AND SWORN TO before me, the undersigned authority, on this the 22nd day of May, 2001.

[SEAL]



NOTARY PUBLIC, STATE OF TEXAS



CSC
CSC

5184334741

06/01 '01 09:01 NO. 411 02/02
06/01 '01 09:06 NO. 133 04/04
F010601000187

CSC 45

CERTIFICATE OF AMENDMENT

OF

MOBIL OIL CORPORATION

Under Section 805 of the Business Corporation Law

SAC

100 cc
STATE OF NEW YORK
DEPARTMENT OF STATE

Filed by: EXXONMOBIL CORPORATION
(Name)

FILED JUN 01 2001

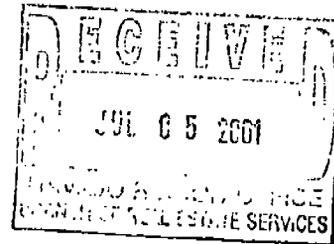
6959 Las Colinas Blvd.
(Mailing address)

TAX \$ _____
BY: *SAC*

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

ny Albany

Cost 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. Leuch", is written over a horizontal line.

Special Deputy Secretary of State

OPERATOR CHANGE WORKSHEET

ROUTING

- | |
|---------|
| 1. GLH |
| 2. CDW |
| 3. FILE |

Change of Operator (Well Sold)

Designation of Agent

X Operator Name Change

Merger

The operator of the well(s) listed below has changed, effective: **06-01-2001**

FROM: (Old Operator):	TO: (New Operator):
MOBIL EXPLORATION & PRODUCTION	EXXONMOBIL OIL CORPORATION
Address: P O BOX DRAWER "G"	Address: U S WEST P O BOX 4358
CORTEZ, CO 81321	HOUSTON, TX 77210-4358
Phone: 1-(970)-564-5212	Phone: 1-(713)-431-1010
Account No. N7370	Account No. N1855

CA No. **Unit:** **RATHERFORD**

WELL(S)

NAME	SEC TWN RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
9-34	09-41S-24E	43-037-15711	6280	INDIAN	OW	S
10-12	10-41S-24E	43-037-15712	6280	INDIAN	OW	P
10-14	10-41S-24E	43-037-15713	6280	INDIAN	OW	S
10-32	10-41S-24E	43-037-15714	6280	INDIAN	OW	S
10-44	10-41S-24E	43-037-30451	6280	INDIAN	OW	S
11-14	11-41S-24E	43-037-16167	6280	INDIAN	OW	P
E14-12	14-41S-24E	43-037-15998	6280	INDIAN	OW	S
RATHERFORD 15-12	15-41S-24E	43-037-15715	6280	INDIAN	OW	P
15-32	15-41S-24E	43-037-15717	6280	INDIAN	OW	S
15-33	15-41S-24E	43-037-15718	6280	INDIAN	OW	P
15-41	15-41S-24E	43-037-15719	6280	INDIAN	OW	S
15-42	15-41S-24E	43-037-30448	6280	INDIAN	OW	P
15-22	15-41S-24E	43-037-30449	6280	INDIAN	OW	P
16-32	16-41S-24E	43-037-15723	6280	INDIAN	OW	P
16-41	16-41S-24E	43-037-15725	6280	INDIAN	OW	P
RATHERFORD UNIT 16-13	16-41S-24E	43-037-31168	6280	INDIAN	OW	P
RATHERFORD 16-77	16-41S-24E	43-037-31768	6280	INDIAN	OW	P
17-44	17-41S-24E	43-037-15732	6280	INDIAN	OW	P
RATHERFORD UNIT 17-24	17-41S-24E	43-037-31044	6280	INDIAN	OW	P
RATHERFORD UNIT 17-13	17-41S-24E	43-037-31133	6280	INDIAN	OW	P

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

- (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 06/29/2001
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 06/29/2001
- The new company has been checked through the **Department of Commerce, Division of Corporations Database** on: 04/09/2002
- Is the new operator registered in the State of Utah: YES Business Number: 579865-0143
- If **NO**, the operator was 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

DATA ENTRY:

1. Changes entered in the **Oil and Gas Database** on: 04/15/2002

2. Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 04/15/2002

3. Bond information entered in RBDMS on: N/A

4. Fee wells attached to bond in RBDMS on: N/A

STATE WELL(S) BOND VERIFICATION:

1. State well(s) covered by Bond Number: N/A

FEDERAL WELL(S) BOND VERIFICATION:

1. Federal well(s) covered by Bond Number: N/A

INDIAN WELL(S) BOND VERIFICATION:

1. Indian well(s) covered by Bond Number: 80273197

FEE WELL(S) BOND VERIFICATION:

1. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number N/A

2. The **FORMER** operator has requested a release of liability from their bond on: N/A
The Division sent response by letter on: N/A

LEASE INTEREST OWNER NOTIFICATION:

3. (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: N/A

COMMENTS:

Division of Oil, Gas and Mining
OPERATOR CHANGE WORKSHEET

ROUTING
1. DJJ
2. CDW

X Change of Operator (Well Sold)

Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective: <u>6/1/2006</u>	
FROM: (Old Operator): N1855-ExxonMobil Oil Corporation PO Box 4358 Houston, TX 77210-4358 Phone: 1 (281) 654-1936	TO: (New Operator): N2700-Resolute Natural Resources Company 1675 Broadway, Suite 1950 Denver, CO 80202 Phone: 1 (303) 534-4600
CA No.	Unit: RATHERFORD

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:

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

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Unit Agreement</u>		5. LEASE DESIGNATION AND SERIAL NUMBER: <u>See attached list</u>
2. NAME OF OPERATOR: <u>Resolute Natural Resources Company</u> <u>N2700</u>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: <u>Navajo Tribe</u>
3. ADDRESS OF OPERATOR: <u>1675 Broadway, Suite 1950</u> CITY <u>Denver</u> STATE <u>CO</u> ZIP <u>80202</u>		7. UNIT or CA AGREEMENT NAME: <u>Ratherford Unit</u>
4. LOCATION OF WELL FOOTAGES AT SURFACE: <u>See attached list</u>		8. WELL NAME and NUMBER: <u>See attached list</u>
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: _____		9. API NUMBER: <u>Attached</u>
COUNTY: <u>San Juan</u>		10. FIELD AND POOL, OR WILDCAT: <u>Greater Aneth</u>
STATE: <u>UTAH</u>		

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

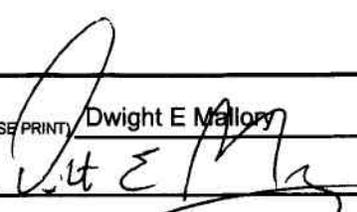
TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input 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 checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

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

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 Mallory</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 (see instructions on Reverse Side)
Earlene Russell, Engineering Technician

RECEIVED
APR 24 2006
DIV. OF OIL, GAS & MINING

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

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER:
2. NAME OF OPERATOR: ExxonMobil Oil Corporation N1855		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ship Rock
3. ADDRESS OF OPERATOR: P.O. Box 4358 CITY Houston STATE TX ZIP 77210-4358		7. UNIT or CA AGREEMENT NAME: UTU68931A
PHONE NUMBER: (281) 654-1936		8. WELL NAME and NUMBER: Ratherford
4. LOCATION OF WELL FOOTAGES AT SURFACE: QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:		9. API NUMBER: attached
COUNTY: San Juan		10. FIELD AND POOL, OR WILDCAT: Aneth
STATE: UTAH		

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: <u>6/1/2006</u>	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<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 producers and water source wells included in the transfer.

NAME (PLEASE PRINT) <u>Laurie Kilbride</u>	TITLE <u>Permitting Supervisor</u>
SIGNATURE <u><i>Laurie B. Kilbride</i></u>	DATE <u>4/19/2006</u>

(This space for State use only) **APPROVED** 6/13/06
Earlene Russell
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

RECEIVED
APR 21 2006
DIV. OF OIL, GAS & MINING

Ratherford Unit - Producer Well List

minus P&A's

Lease	Number	API #	Status	Lease #	Location					
					Sec	T	R	QTR/QTR	NSFoot	EWFoot
Ratherford	01-14	430373116200S1	Producing	1420603246A	1	41S	23E	SWSW	0660FSL	0660FWL
Ratherford	01-34	430371638501S1	SI	1420603246A	1	41S	23E	SWSE	1133FSL	1980FEL
Ratherford	11-41	430373154400S1	Producing	1420603246A	11	41S	23E	NENE	0860FNL	0350FEL
Ratherford	11-43	430373162201S1	Producing	1420603246A	11	41S	23E	NESE	1980FSL	0660FEL
Ratherford	12-12	430373119000S1	Producing	1420603246A	12	41S	23E	SWNW	1850FNL	0660FWL
Ratherford	12-14	430371584400S1	SI	1420603246A	12	41S	23E	SWSW	0660FSL	4622FEL
Ratherford	12-21	430373120100S1	Producing	1420603246A	12	41S	23E	NENW	0660FNL	1980FWL
Ratherford	12-23	430371584601S1	Producing	1420603246A	12	41S	23E	NESW	1958FSL	3300FEL
Ratherford	12-32	430373120300S1	Producing	1420603246A	12	41S	23E	SWNE	1820FNL	1820FEL
Ratherford	12-34	430373112600S1	Producing	1420603246A	12	41S	23E	SWSE	0675FSL	1905FEL
Ratherford	12-43	430373120200S1	SI	1420603246A	12	41S	23E	NESE	2100FSL	0660FEL
Ratherford	13-12	430373112701S1	Producing	1420603247A	13	41S	23E	SWNW	1705FNL	0640FWL
Ratherford	13-14	430373158900S1	Producing	1420603247A	13	41S	23E	SWSW	0660FSL	0660FWL
Ratherford	13-21	430373112801S1	SI	1420603247A	13	41S	23E	NENW	0660FNL	1920FWL
Ratherford	13-23	430373112900S1	Producing	1420603247A	13	41S	23E	NESW	1980FSL	1930FWL
Ratherford	13-34	430373113001S1	Producing	1420603247A	13	41S	23E	SWSE	0660FSL	1980FEL
Ratherford	13-41	430371585601S1	Producing	1420603247A	13	41S	23E	NENE	660FNL	660FEL
Ratherford	13-43	430373113100S1	Producing	1420603247A	13	41S	23E	NESE	1700FSL	0960FEL
Ratherford	14-32	430371585801S1	Producing	1420603247A	14	41S	23E	SWNE	2130FNL	1830FEL
Ratherford	14-41	430373162300S1	Producing	1420603247A	14	41S	23E	NENE	0521FNL	0810FEL
Ratherford	24-32	430373159300S1	Producing	1420603247A	24	41S	23E	SWNE	2121FNL	1846FEL
Ratherford	24-41	430373113200S1	Producing	1420603247A	24	41S	23E	NENE	0660FNL	0710FEL
Ratherford	17-11	430373116900S1	Producing	1420603353	17	41S	24E	NWNW	1075FNL	0800FWL
Ratherford	17-13	430373113301S1	Producing	1420603353	17	41S	24E	NWSW	2100FSL	0660FWL
Ratherford	17-22	430373117001S1	Producing	1420603353	17	41S	24E	SENW	1882FNL	1910FWL
Ratherford	17-24	430373104400S1	Producing	1420603353	17	41S	24E	SESW	0720FSL	1980FWL
Ratherford	17-31	430373117800S1	Producing	1420603353	17	41S	24E	NWNE	0500FNL	1980FEL
Ratherford	17-33	430373113400S1	Producing	1420603353	17	41S	24E	NWSE	1980FSL	1845FEL
Ratherford	17-42	430373117700S1	Producing	1420603353	17	41S	24E	SENE	1980FNL	0660FEL
Ratherford	17-44	430371573201S1	Producing	1420603353	17	41S	24E	SESE	0660FSL	0660FEL
Ratherford	18-11	430371573300S1	SI	1420603353	18	41S	24E	NWNW	0720FNL	0730FWL
Ratherford	18-13	430371573401S1	Producing	1420603353	18	41S	24E	NWSW	1980FSL	0500FWL
Ratherford	18-22	430373123600S1	Producing	1420603353	18	41S	24E	SENW	2200FNL	2210FWL
Ratherford	18-24	430373107900S1	Producing	1420603353	18	41S	24E	SESW	0760FSL	1980FWL
Ratherford	18-31	430373118101S1	Producing	1420603353	18	41S	24E	NWNE	0795FNL	2090FEL
Ratherford	18-33	430373113501S1	Producing	1420603353	18	41S	24E	NWSE	1870FSL	1980FEL
Ratherford	18-42	430373118200S1	Producing	1420603353	18	41S	24E	SENE	2120FNL	0745FEL
Ratherford	18-44	430373104500S1	SI	1420603353	18	41S	24E	SESE	0660FSL	0660FEL
Ratherford	19-11	430373108000S1	Producing	1420603353	19	41S	24E	NWNW	0660FNL	0660FWL
Ratherford	19-13	430373171900S1	Producing	1420603353	19	41S	24E	NWSW	1980FSL	0660FWL
Ratherford	19-22	430373104601S1	Producing	1420603353	19	41S	24E	SENW	1840FNL	1980FWL
Ratherford	19-24	430373175401S1	Producing	1420603353	19	41S	24E	SESW	0600FSL	1980FWL
Ratherford	19-31	430373104701S1	Producing	1420603353	19	41S	24E	NWNE	510FNL	1980FEL
Ratherford	19-33	430373104800S1	Producing	1420603353	19	41S	24E	NWSE	1980FSL	1980FEL
Ratherford	19-42	430373091600S1	Producing	1420603353	19	41S	24E	SENE	1880FNL	0660FEL
Ratherford	19-44	430373108100S1	Producing	1420603353	19	41S	24E	SESE	0660FSL	0660FEL
Ratherford	19-97	430373159600S1	Producing	1420603353	19	41S	24E	SENE	2562FNL	0030FEL
Ratherford	20-11	430373104900S1	Producing	1420603353	20	41S	24E	NWNW	0500FNL	0660FWL
Ratherford	20-13	430373091700S1	Producing	1420603353	20	41S	24E	NWSW	2140FSL	0500FWL
Ratherford	20-22	430373093000S1	Producing	1420603353	20	41S	24E	SENW	2020FNL	2090FWL
Ratherford	20-24	430373091800S1	Producing	1420603353	20	41S	24E	SESW	0820FSL	1820FWL

Ratherford Unit - Producer Well List

minus P&A's

Lease	Number	API #	Status	Lease #	Location					
					Sec	T	R	QTR/QTR	NSFoot	EWFoot
Ratherford	20-31	430373105001S1	Producing	1420603353	20	41S	24E	NWNE	0660FNL	1880FEL
Ratherford	20-33	430373093100S1	Producing	1420603353	20	41S	24E	NWSE	1910FSL	2140FEL
Ratherford	20-42	430373105100S1	Producing	1420603353	20	41S	24E	SENE	1980FNL	0660FEL
Ratherford	20-44	430373091501S1	Producing	1420603353	20	41S	24E	SESE	0620FSL	0760FEL
Ratherford	20-66	430373159201S1	Producing	1420603353	20	41S	24E	SWNW	1369FNL	1221FWL
Ratherford	20-68	430373159100S1	Producing	1420603353	20	41S	24E	NWSW	1615FSL	1276FWL
Ratherford	15-12	430371571501S1	Producing	1420603355	15	41S	24E	SWNW	1820FNL	0500FWL
Ratherford	15-22	430373044900S1	SI	1420603355	15	41S	24E	SENE	1980FNL	2050FWL
Ratherford	15-32	430371571700S1	Producing	1420603355	15	41S	24E	SWNE	1980FNL	1980FEL
Ratherford	15-33	430371571800S1	Producing	1420603355	15	41S	24E	NWSE	1650FSL	1980FEL
Ratherford	15-41	430371571900S1	TA	1420603355	15	41S	24E	NENE	0660FNL	0660FEL
Ratherford	15-42	430373044800S1	Producing	1420603355	15	41S	24E	SENE	2020FNL	0820FEL
Ratherford	16-13	430373116801S1	Producing	1420603355	16	41S	24E	NWSW	1980FSL	660FWL
Ratherford	16-32	430371572300S1	Producing	1420603355	16	41S	24E	SWNE	1980FNL	1980FEL
Ratherford	16-41	430371572500S1	Producing	1420603355	16	41S	24E	NENE	0660FNL	0660FEL
Ratherford	16-77	430373176800S1	Producing	1420603355	16	41S	24E	NESW	2587FSL	2410FWL
Ratherford	21-23	430371375400S1	Producing	1420603355	21	41S	24E	NESW	1740FSL	1740FWL
Ratherford	21-24	430373172001S1	SI	1420603355	21	41S	24E	SESW	487FSL	2064FWL
Ratherford	21-32	430371575500S1	SI	1420603355	21	41S	24E	SWNE	1880FNL	1980FEL
Ratherford	21-77	430373175801S1	SI	1420603355	21	41S	24E	NWSE	2511FSL	2446FEL
Ratherford	07-11	430373116300S1	Producing	1420603368	7	41S	24E	NWNW	0660FNL	0710FWL
Ratherford	07-13	430373116400S1	Producing	1420603368	7	41S	24E	NWSW	2110FSL	0740FWL
Ratherford	07-22	430373116500S1	Producing	1420603368	7	41S	24E	SENE	1980FNL	1980FWL
Ratherford	07-24	430373116600S1	Producing	1420603368	7	41S	24E	SESW	0880FSL	2414FWL
Ratherford	07-44	430373118900S1	SI	1420603368	7	41S	24E	SESE	0737FSL	0555FEL
Ratherford	08-12	430371599100S1	Producing	1420603368	8	41S	24E	SWNW	1909FNL	0520FWL
Ratherford	08-21	430371599300S1	Producing	1420603368	8	41S	24E	NENW	0616FNL	1911FWL
Ratherford	08-23	430371599400S1	Producing	1420603368	8	41S	24E	NESW	1920FSL	2055FWL
Ratherford	08-32	430371599500S1	Producing	1420603368	8	41S	24E	SWNE	1980FNL	1980FEL
Ratherford	08-34	430371599600S1	Producing	1420603368	8	41S	24E	SWSE	0660FSL	1980FEL
Ratherford	04-34	430371616400S1	Producing	14206034035	4	41S	24E	SWSE	0660FSL	1980FEL
Ratherford	11-14	430371616700S1	Producing	14206034037	11	41S	24E	SWSW	0660FSL	0660FWL
Ratherford	09-34	430371571100S1	SI	14206034043	9	41S	24E	SWSE	0660FSL	1980FEL
Ratherford	10-12	430371571200S1	Producing	14206034043	10	41S	24E	SWNW	1980FNL	0660FWL
Ratherford	10-14	430371571300S1	Producing	14206034043	10	41S	24E	SWSW	0510FSL	0710FWL
Ratherford	10-32	430371571400S1	TA	14206034043	10	41S	24E	SWNE	2080FNL	1910FEL
Ratherford	10-44	430373045100S1	TA	14206034043	10	41S	24E	SESE	0820FSL	0510FEL
Ratherford	29-11	430373105300S1	Producing	1420603407	29	41S	24E	NWNW	0770FNL	0585FWL
Ratherford	29-22	430373108200S1	Producing	1420603407	29	41S	24E	SENE	2130FNL	1370FWL
Ratherford	29-31	430373091401S1	Producing	1420603407	29	41S	24E	NWNE	0700FNL	2140FEL
Ratherford	29-33	430373093200S1	SI	1420603407	29	41S	24E	NWSE	1860FSL	1820FEL
Ratherford	29-34	430371534000S1	SI	1420603407	29	41S	24E	SWSE	0817FSL	2096FEL
Ratherford	29-42	430373093700S1	SI	1420603407	29	41S	24E	SENE	1850FNL	0660FEL
Ratherford	30-32	430371534200S1	Producing	1420603407	30	41S	24E	SWNE	1975FNL	2010FEL
Ratherford	28-11	430373044600S1	Producing	1420603409	28	41S	24E	NWNW	0520FNL	0620FWL

Ratherford Unit - Producer Well List

minus P&A's

Lease	Number	API #	Status	Lease #	Location					
					Sec	T	R	QTR/QTR	NSFoot	EWFoot
Ratherford	09-12	430371512600S1	Producing	14206035045	9	41S	24E	SWNW	1865FNL	0780FWL
Ratherford	09-14	430371512700S1	Producing	14206035046	9	41S	24E	SWSW	0695FSL	0695FWL
Ratherford	04-14	430371616300S1	Producing	14206035446	4	41S	24E	SWSW	0500FSL	0660FWL
Ratherford	03-12	430371562000S1	Producing	14206036506	3	41S	24E	SWNW	2140FNL	0660FWL

Water Source Wells (Feb 2006)

RU	S1	4303700001	Active
RU	S2	4303700002	Active
RU	S3	4303700003	Active
RU	S4	4303700004	Active
RU	S5	4303700005	Active
RU	S6	4303700006	Active
RU	S7	4303700007	Active
RU	S8	4303700008	Active
RU	S9	4303700009	Active
RU	S10	4303700010	Active
RU	S11	4303700011	Active
RU	S12	4303700012	Active
RU	S13	4303700013	Active
RU	S14	4303700014	Active
RU	S16	4303700016	Active
RU	S17	4303700017	Active