

Scout Report sent out

Noted in the MIC 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

Log Filed

11-19-39 water Injection well

See Yearning, Gille
Ann 23

9-7-32 water injection into this well was
discontinued. Well shut down until such time it is
needed.

FILE NOTATIONS

Entered in NID File

Entered On S R Sheet

Location Map Pinned

Card Indexed

IWR for State or Fee Land

Checked by Chief

Copy NID to Field Office

Approval Letter

Disapproval Letter

COMPLETION DATA:

Date Well Completed 11-27-59

OW _____ WW _____ TA _____

GW _____ OS _____ PA _____

Location Inspected _____

Bond released _____

State of Fee Land _____

LOGS FILED

Driller's Log 2-29-60

Electric Logs (No.) 4-

E _____ I _____ E-I

Lat _____ Mi-L _____

GR _____

GR-N 2 Micro 2

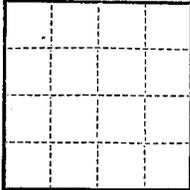
Others 2 Perforating Formation Gollar Chart

6-28-65 Notice of Intention to Plug Back and Reconvert to Producing Oil Well.

Navajo

(SUBMIT IN TRIPLICATE)

Indian Agency _____



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Tribal

Allottee **14-20-603-333**

Lease No. _____

SUNDRY NOTICES AND REPORTS ON WELLS

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

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

Desert "A"

Cortez, Colorado July 29, 19 59

Well No. **W-1** is located **660** ft. from **N** line and **660** ft. from **E** line of sec. **17**
SE SE **Sec. 17** **41S** **24E** **31M**
(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)
Rutherford **San Juan** **Utah**
(Field) (County or Subdivision) (State or Territory)

The elevation of the derrick floor above sea level is ~~4717.6~~ **4717.6** ft.

DETAILS OF WORK

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

Drill 17-1/2" hole to approximately 160', set 160' of 13-3/8" conductor pipe and cement to surface. Drill 11" hole to approximately 1600', set 8-5/8" casing and cement to surface. Drill 7-7/8" hole to total depth of approximately 5800', run 5-1/2" casing and cement with approximately 250 sacks cement. Complete as water injection well in Desert Creek Formation.

Note: This well to be drilled for the purpose of injecting water into and conducting water flood operations in the Desert Creek Formation. Hearing Cause No. 23, before the Oil & Gas Conservation Commission of the State of Utah has been scheduled on the application of Phillips Petroleum Company and Artee Oil & Gas Co. to be held at 10:00 A.M. August 4, 1959.

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**
Box 1150, Cortez, Colorado
 Address _____
 By **C. M. Boles**
District Superintendent
 Title _____

20

11 00 19 59

Company PHILLIPS PETROLEUM COMPANY

Lease MINERAL DESERT #1 Well No. 141

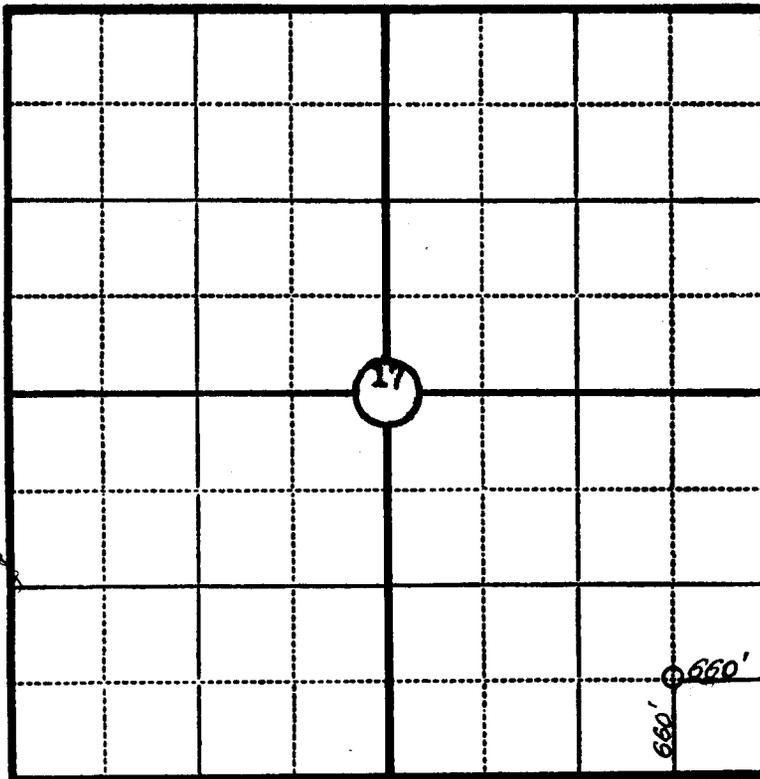
Sec. 17, T. 41S, R. 24E, S.L.M.

Location 660' FROM THE SOUTH LINE 660' FROM THE EAST LINE

Elevation 4717.6 UNGRADED GROUND

SAN JUAN COUNTY

UTAH



Scale—4 inches equal 1 mile.

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

Seal:

James P. Leese

Registered Land Surveyor.

JAMES P. LEESE

UTAH REG. No. 1472

Surveyed 17 DECEMBER, 19 57

SAN JUAN ENGINEERING COMPANY, FARMINGTON, N. M.

JUL

30

BEFORE THE OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF UTAH

.....

IN THE MATTER OF THE APPLICATION OF	:	
PHILLIPS PETROLEUM COMPANY AND	:	
AZTEC OIL AND GAS COMPANY FOR	:	FINDINGS OF FACT,
AUTHORITY TO DRILL A WATER INPUT	:	CONCLUSIONS OF LAW
WELL ON THE SE/4 OF THE SE/4 OF	:	AND ORDER
SECTION 17, TOWNSHIP 41 SOUTH,	:	
RANGE 24 EAST, SLBM, SAN JUAN COUNTY,	:	Cause No. 23
UTAH, FOR THE PURPOSE OF CONDUCTING	:	
WATERFLOOD OPERATIONS IN THE DESERT	:	
CREEK FORMATION IN THE GREATER ANETH	:	
AREA	:	

.....

REPORT OF THE COMMISSION

This cause came on for hearing before the Oil and Gas Conservation Commission of the State of Utah, on August 4, 1959, at 10:00 o'clock A. M. with all commissioners sitting.

Cecil C. Hamilton and Quilman B. Davis, Attorneys, appeared for the applicants, Phillips Petroleum Company and Aztec Oil and Gas Company; other appearances were made as follows: Clair M. Senior, attorney for Texaco, Inc.; Robert C. Hawley, attorney for Continental Oil Company; Max C. Gardner, attorney for Shell Oil Company; Elmer Patman, attorney for Superior Oil Company.

When the case was called for hearing, all parties announced ready and the Commission proceeded to hear the evidence. The Commission, upon consideration of all the evidence and being fully advised in the premises, finds as follows:

FINDINGS

1. That this is an application of Phillips Petroleum Company and Aztec Oil and Gas Company for authority to drill and use a water input well in the Southeast Quarter of the Southeast Quarter (SE/4 of SE/4) of Section 17, Township 41 South, Range 24 East, SLBM, San Juan County, Utah, for the purpose of conducting waterflood operations in the Desert Creek Formation.

2. That the Commission has jurisdiction over the subject matter herein, and notice has been given in all respects as required by law and the rules of the Commission.

3. That applicants are the owners of an oil and gas leasehold estate covering the land above described, together with certain adjoining lands, which oil and gas leasehold estate is underlain by an oil and gas producing formation known as the Desert Creek Formation; that the evidence herein indicates the desirability of early determination as to whether waterflooding of said formation is feasible; that the desirability of such early determination warrants the drilling proposed and that applicants should be permitted to drill and use a well in the approximate center of the above particularly described land for the purpose of injecting water into the Desert Creek Formation and that said well should be cased with safe and adequate casing to prevent leakage and should be set or cemented so as not to damage oil, gas or fresh water resources.

4. That the drilling of said pilot well and the use thereof for the purpose of conducting waterflood operations in the Desert Creek Formation will not create inequities or distort correlative rights.

O R D E R

IT IS, THEREFORE, ORDERED by the Oil and Gas Conservation Commission of the State of Utah, as follows:

1. That Phillips Petroleum Company and Aztec Oil and Gas Company be, and they are hereby, authorized to drill and use a well in the approximate Center of the Southeast Quarter of the Southeast Quarter (SE/4 of SE/4) of Section 17, Township 41 South, Range 24 East, SLBM, San Juan County, Utah, for the purpose of conducting waterflood operations in the Desert Creek Formation.

2. That said well be so cased and said waterflood operations be operated in such a manner that no damage will be done to any oil, gas

or fresh water bearing formation.

3. That said well shall be used only for purposes of fluid injection and shall not be produced.

DONE AND PERFORMED this 5th day of August, 1959.

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF UTAH

/s/ Edward W. Clyde
Commissioner Presiding

/s/ C. R. Henderson
Commissioner

/s/ C. S. Thomson
Commissioner

/s/ M. V. Hatch
Commissioner

/s/ W. G. Mann
Commissioner

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August 5, 1959

Phillips Petroleum Company
P. O. Box 1150
Cortez, Colorado

Attention: C. M. Boles,
District Superintendent

Gentlemen:

With reference to your notice of intention to drill Well No. Desert A - W-1, 660 feet from the south line and 660 feet from the east line of Section 17, Township 41 South, Range 24 East, N14E, San Juan County, Utah, please be advised that approval to drill said well is hereby granted, as per the attached Order issued in Cause No. 13 on this date.

Yours very truly,

UTAH OIL & GAS CONSERVATION COMMISSION

CLYDE B. FEENEY
EXECUTIVE SECRETARY

CBF:co

cc: U. S. Geological Survey
Farmingdon, New Mexico

Phillips Petroleum Company
Bartlesville, Oklahoma
Attn: Cecil C. Hamilton

Abtec Oil & Gas Company
Dallas, Texas
Attn: Quinlan B. Davis

R
7

PHILLIPS PETROLEUM COMPANY

P. O. Drawer 1150
Cortez, Colorado

August 24, 1959

In re: Intention to Drill Phillips Petroleum Company
Desert "A" Well No. W-33

U.S. Geological Survey
P. O. Box 965
Farmington, New Mexico

Attention: Mr. P. T. McGrath

Dear Sir:

Please refer to our Intention to Drill Phillips Petroleum Company
Desert "A" W-1 located 660' from South Line, 660' from East Line of Section
17-41S-24E, San Juan County, Utah, dated July 29, 1959.

We have been advised by our main office the number of this well
has been changed from Desert "A" Well No. W-1 to Desert "A" Well No. W-33.

We would appreciate being advised if subject form can be changed
in your office to reveal the correct well number, or if another Intention
to Drill form should be filed to reveal the correct well number.

Yours very truly,
PHILLIPS PETROLEUM COMPANY

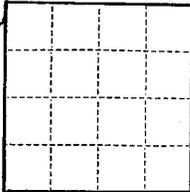


C. M. Boles
District Superintendent

HGC:bh

cc: Utah Oil & Gas Conservation Commission
Salt Lake City, Utah
Mr. Earl Griffin
Bartlesville Office

4
6



(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Indian Agency Navajo
Allottee Tribal
Lease No. 14-20-603-353

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL	SUBSEQUENT REPORT OF WATER SHUT-OFF
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	
<u>Notice of Intention to Change Well X</u>	

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

Desert "A" Cortes, Colorado August 27 19 59

Well No. #-33 is located 660 ft. from S line and 660 ft. from E line of sec. 17

SE SE Sec. 17 41S 24E SLM
(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)
Ratherford San Juan Utah
(Field) (County or Subdivision) (State or Territory)

The elevation of the ~~Derrick floor~~ ungraded ground above sea level is 4717.6 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)

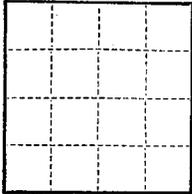
This report covers the change in well designation only of Desert "A" Well to Desert "A" W-33. Refer Form 9-331b "Notice of Intention to Drill" Desert "A" Well dated July 29, 1959

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

Company Phillips Petroleum Company
Address P. O. Box 1150
Cortes, Colorado
By C. H. Boles
Title District Superintendent

(SUBMIT IN TRIPLICATE)

Indian Agency Navajo



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Allottee Tribal
14-20-609-953
Lease No. _____

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)

Desert "A" Cortez, Colorado December 1, 19 59

Well No. W-33 is located 660 ft. from XX line and 660 ft. from EW line of sec. 17

SE, SE Sec. 17 41S 24E 51M
(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)
Rutherford San Juan Utah
(Field) (County or Subdivision) (State or Territory)

The elevation of the ~~identifies~~ ingraded ground above sea level is 4717.6 ft.

DETAILS OF WORK

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

Spudded 1:30 A.M. 10-13-59. Drilled 17-1/4" hole to 176' at 10:15 A.M. 10-13-59. Set and cemented 14 jts. 19-3/8" OD 27.1# Armo SW SJ casing with Howe Texas Pattery Guide Shoe at 176' with 175 sz. regular cement with 2% Calcium Chloride. Pumped plug to 146'. Circulated estimated 100 sz. cement. Completed cementing 2:00 P.M. 10-13-59.

Drilled 11" hole to 1497' at 6:00 A.M. 10-15-59. Corrected total depth to 1503' with drill pipe strapping. Set and cemented 49 jts. 8-5/8" OD 24# J-55 casing at 1500.47 with 390 sz. cement, 124 sz. Diacel D, 620# Calcium Chloride, 165# Floccs, 330# Tuff Plug followed with 125 sz. regular cement around shoe. Pumped plug to 1468'. Circulated 150 sz. Cement fell back in annulus, filled annulus with 90 sz. regular cement, 2% Calcium Chloride. Completed cementing 12:00 noon 10-15-59. W.O.C. Tested casing to 1300# - 30 minutes - O.K.

(Continued on reverse side)

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

Company Phillips Petroleum Company
Address P. O. Drawer 1150
Cortez, Colorado
By C. N. Boies
Title District Superintendent

DEC 2 1959

Drilled 7-7/8" hole to 5527'. Cored from 5527-78, recovered 39-1/2'. Cored from 5578 to 5634', recovered 54'. Cored from 5634 to 5675', recovered 41'. Cored from 5675 to 5620, recovered 30'. Reamed cored hole to 7-7/8". Ran Schlumberger ES Induction Micro log and G-R Neutron logs to 5732 at 5:00 P.M. 11-3-59. Set and cemented 184 jts. 5-1/2", 14#, J-55 casing with Restor fill collar and guide shoe at 5732.98' with 480 sk. cement, 1086 cu. ft. Diacel "D", 1222# Calcium Chloride. Circulated 55 sk. cement out. Pumped plug to 5709' at 5:30 A.M. 11-4-59. W.O.C. 24 hours. Tested casing 1000# 30 minutes - O.K.

(SUBMIT IN TRIPLICATE)

Indian Agency Navajo

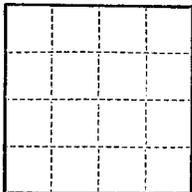
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Tribal

Allottee

14-20-603-353

Lease No.



SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL	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	<input checked="" type="checkbox"/>
NOTICE OF INTENTION TO PULL OR ALTER CASING	SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL		

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

Desert "A" Cortez, Colorado December 1, 19 59

Well No. W-33 is located 660 ft. from N line and 660 ft. from E line of sec. 17

SE, SE, Sec. 17 41S 24E SLM

(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)

Rutherford San Juan Utah

(Field) (County or Subdivision) (State or Territory)

The elevation of the ~~derick floor~~ ungraded ground above sea level is 4727.6 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)

Tagged bottom with tubing at 5705'. Ran 182 lbs. 2-7/8" OD EUE 6.5# J-55 tubing with bit and set tubing at 5695.56'. Released rotary 2:30 P.M. 11-4-59. Laid water injection line. Moved in well service unit and pulled tubing. Ran Gamma Ray Correlation log. Perforated Desert Creek zone with 4 jet shots per foot RL and RL measurement from 5510-34, 5558-76, 5582-5618, 5626-54, 5662-74. Ran 2-7/8" OD EUE tubing and set tubing at 5673.85, hookwall packer at 5421.05'. Stubbed tubing dry to 5421'. Shut in 5:00 P.M. 11-16-59, for HHP. HHP 1224 @ -900. Acidized above perforations with 16,000 gallons 15% regular acid and 900 gallons temporary block, followed with 40 barrels oil flush. Maximum pressure 3700#, minimum 0#. Treating rate 9.4 EFM, flush rate 10 EFM. First block pressure increased from 1900 to 2300#, no increase in pressure on 2nd and 3rd block. Shut in - vacuum immediately. Stubbed to test tank 57 barrels fluid. Shut in 13 hours overnight. 11-19-59. Stubbed and flowed 360 barrels acid water and oil to test tank in 9-3/4 hours. Switched to tank battery 4:45 P.M.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced. 11-19-59. (continued on back)

Company Phillips Petroleum Company

Address P. O. Drawer 1150
Cortez, Colorado

By G. M. Boies
District Superintendent

Title _____

DEC 2 1959

Flowed 14 hours, TP 345-325# - 3/4" choke, 0 water, GOR 876, 11-20-59. Flowed 10 hours 3/4" choke, 237 BO, 0 water, FTP 250# - total for 24 hours on 3/4" choke: 891 BO, 0 water, GOR 844, FTP 345-250#. Flowed 14 hours - 1/2" choke, 346 BO, 0 water, 250# FTP. 11-21-59. Flowed 24 hours through 1/2" choke.

1st 10 hours - 230 BO, next 14 hours 350 BO - total 24 hours: 580 BO, 0 water, GOR 524, FTP 260#.

11/22/59 Flowed 4 hours 1/2" choke, 99 BO, 0 water, GOR 506, FTP 225#. Ran productivity index test and shut in for BHP 11-23, 24/59.

Moved in well service unit. Pulled and laid down tubing and started water injection 4:00 P.M. 11-27-59. Injected 787 barrels water in 14 hours at 100#.

11/28/59: Injected 916 barrels water in 24 hours at 90#.

11/29/59: Injected 930 barrels water in 24 hours at 60#.

11-30-59 : Injected 961 barrels water in 24 hours at 65#.

PHILLIPS PETROLEUM COMPANY

P. O. Drawer 1150
Cortez, Colorado

December 1, 1959

MSG

In re: Phillips Petroleum Company Desert "A" W-33 -
Initial Salt Water Injection

Utah Oil & Gas Conservation Commission
310 Newhouse Building
Salt Lake City, 11, Utah

Attention: Mr. Cleon B. Feight

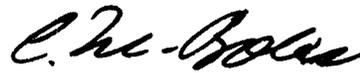
Gentlemen:

In compliance with State of Utah Oil and Gas Conservation Commission, Unit Operations and Secondary Recovery Projects, Rule E-4 (a) (1), this is to advise that initial injection of water was made into Desert Creek formation at Phillips Petroleum Company Desert "A" W-33 at 4:00 P.M. November 27, 1959. Location of this well on the Phillips Desert "A" Lease (Navajo Tribal No. 14-20-603-353) is 660' FSL, 660' FEL, Sec. 17-41S-24E, San Juan County, Utah.

On November 27th, 787 barrels of water was injected into the well at 1000 psi pressure, and is being injected at the rate of approximately 930 barrels per day at present.

In order to obtain reservoir information, production tests were performed prior to completing a water injection well for secondary recovery purposes. (See U.S.G.S. Form 9-331b, Sundry Notices and Reports on Wells, submitted this date, for details.) During test procedures, 1910 barrels of oil was produced. This volume of oil will be reported on appropriate forms and is deducted from the Desert "A" November Lease allowable.

Yours truly,
PHILLIPS PETROLEUM COMPANY



C. M. Boles
District Superintendent

CMB:bh

cc: U.S. Geological Survey
Farmington, New Mexico

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PHILLIPS PETROLEUM COMPANY

P. O. Drawer 1150
Cortez, Colorado

December 1, 1959

In re: Phillips Petroleum Company
Forecast of Wells Connected to Gas
Facilities - Aneth Area - January 31, 1960

Utah Oil & Gas Conservation Commission
Room 310 Newhouse Building
Salt Lake City 11, Utah

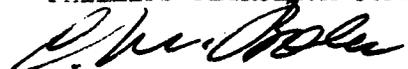
Attention: Mr. Cleon B. Feight

Dear Sir:

In accord with Field Operating Rules for Aneth Area, Rule 2.2, this is to advise that as of January 31, 1960, we expect to have a total of seventy-one (71) wells connected to gas facilities and capable of producing oil and casing head gas. Leases and number of wells on each lease are tabulated below:

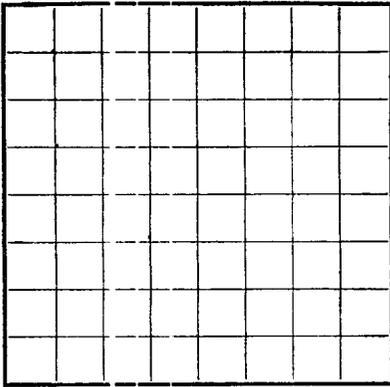
	<u>No. Wells</u>
Phillips-Aztec Desert "A" Lease Tribal 14-20-603-353	32
Phillips-Aztec Navajo "A" Lease Tribal 14-20-603-355	28
Phillips Navajo "B" Lease Tribal 14-20-603-4043	7
Phillips Navajo "C" Lease Tribal 14-20-603-4495	2
Phillips Navajo "D" Lease Tribal 14-20-603-5449	1
Phillips Navajo "E" Lease Tribal 14-20-603-5448	1
	<hr/> 71

Yours very truly,
PHILLIPS PETROLEUM COMPANY


C. M. Boles
District Superintendent

CMB:bh
cc; Mr. Earl Griffin - Bartlesville Office

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



LOCATE WELL CORRECTLY

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

Company Phillips Petroleum Address Drawer 1150, Cortez, Colorado
Lessor of Tract Desert "A" Field Rutherford State Utah
Well No. 33 Sec. 17 T. 41S R. 24E Meridian SLM County San Juan
Location 660 ft. ^[N.] of S Line and 660 ft. ^[E.] of E Line of Sec. 17 Elevation 4731.15
(Derrick floor relative to sea level)

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

Signed E. H. [Signature]

Date February 25, 1960 Title District Superintendent

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

Commenced drilling October 13, 1959 Finished drilling November 3, 1959

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from _____ to _____ No. 4, from _____ to _____
No. 2, from _____ to _____ No. 5, from _____ to _____
No. 3, from _____ to _____ No. 6, from _____ to _____

IMPORTANT WATER SANDS

Navajo and Wingate formations, Shinarump formation apparently fresh water wet. The DeChelly

No. 1, from _____ to _____ No. 3, from _____ to _____
No. 2, from _____ to _____ No. 4, from _____ to _____

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated		Purpose
							From—	To—	
13-3/8	21.1	8	Phillips	175	None	5626	5651	Drilling	
8-5/8	13.0	8	Phillips	800 cu ft	None	5651	5674	Drilling	
5-1/2	57.33	8	Phillips	480 reg com	None	5674		Drilling	
				360 Diace D					

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
13-3/8	176	175	Circulated		
8-5/8	1300	800 cu ft	Circulated-filled annulus w/50 sx cement, 2% CC		
5-1/2	5733	480 reg com	Circulated		
		360 Diace D			

PLUGS AND ADAPTERS

Heaving plug Material OXI Length 2222 Depth set _____
Adapter Material Steel Size _____

FOLD

FOLD

360 miscel

1222 Calcium Chloride PLUGS AND ADAPTERS

Heaving plug—Material _____ Length _____ Depth set _____
 Adapters—Material _____ Size _____

SHOOTING RECORD

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

TOOLS USED

Rotary tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet
 Cable tools were used from _____ feet to 5732 feet, and from _____ feet to _____ feet

DATES

Put to producing _____, 19____
 The production for the first 24 hours was _____ barrels of fluid of which _____% was oil; _____%
 emulsion; _____% water; and _____% sediment. 391 Gravity, °Bé, 100
 If gas well, cu. ft. per 24 hours _____ Gallons gasoline per 1,000 cu. ft. of gas _____
 Rock pressure, lbs. per sq. in. _____

FTP 345-259 converted to water input 4:00 P.M. 11-27-

Driller _____
 Driller _____
 Driller _____

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
1486	2320	834	Chinle
2320	2398	78	Chinarump
2398	2494	96	Moenkopi
2494	2610	116	Cutler-Joskinini Equivalent
2610	2780	170	Cutler-DeChelly Member
2780	4551	1771	Cutler-Organ Took Member
4551	5505	954	Honaker Trail
5505	5732	227	Desert Creek Zone - Paradox

FORMATION RECORD—Continued

HISTORY OF OIL OR GAS WELL

FORMATION RECORD - Continued //

10-3203-4

FROM -	TO -	TOTAL FEET	FORMATION
<p>Spudded 1:30 A.M. 10-13-59. Drilled 17-1/4" hole to 176' at 10:15 A.M. 10-13-59. Set and cemented 14 jts. 13-3/8" OD 27.1# Amco LW SJ casing with Howco Texas Pattern Guide Shoe at 176' with 175 sx. regular cement with 2% Calcium Chloride. Pumped plug to 146'. Circulated estimated 100 sx. cement. Completed cementing 2:00 P.M. 10-13-59.</p>			
<p>Drilled 11" hole to 1497' at 6:00 A.M. 10-15-59. Corrected total depth to 1503' with drill pipe strapping. Set and cemented 49 jts. 8-5/8" OD 24# J-55 casing at 1500.47 with 330 sx. cement, 124 sx. Diacel D, 620# Calcium Chloride, 165# Flocele, 330# Tuff Plug followed with 125 sx. regular cement around shoe. Pumped plug to 1468'. Circulated 150 sx. Cement fell back in annulus, filled annulus with 50 sx. regular cement, 2% Calcium Chloride. Completed cementing 12:00 noon 10-15-59. 1000 Tested casing to 1300# - 30 minutes - O.K.</p>			
<p>Drilled 7-7/8" hole to 5527'. Cored from 5527-78, recovered 39-1/2". Cored from 5578 to 5634', recovered 54'. Cored from 5634 to 5675', recovered 41'. Cored from 5675 to 5680, recovered 30'. Reamed cored hole to 7-7/8". Ran Schlumberger AS Induction Micro logs and C-R Neutron logs to 5732' at 5:00 P.M. 11-3-59. Set and cemented 184 jts. 5-1/2", 14#, J-55 casing with Rector fill collar and guide shoe at 5732.98' with 480 sx. cement, 1086 cu. ft. Diacel "D", 1222# Calcium Chloride. Circulated 55 sx. cement out. Pumped plug to 5709' at 5:30 A.M. 11-4-59. 1000 24 hours. Tested casing 1000# 30 minutes - O.K.</p>			
<p>Tagged bottom with tubing at 5705'. Ran 182 jts. 2-7/8" OD ML J-55 6.5# tubing with bit and sep tubing at 5695.56'. Released rotary 2:30 P.M. 11-4-59. Laid water injection line. Moved in well service unit and pulled tubing. Ran Gamma Ray Correlation log. Perforated desert creek zone with cone jet shots per foot RL and RL measurement from 5510-34, 5558-76, 5582-5618, 5626-54, 5662-74. Ran 2-7/8" OD tubing and set tubing at 5673.85, hookwall packer at 5421.05'. Swabbed tubing dry to 5421'. Shut in 5:00 P.M. 11-16-59 for SHP. DHP 1284 at -900'. Acidized above perforations with 16,000 gallons 15% regular acid and 800 gallons temporary block, followed with 40 barrels oil flush. Maximum pressure 3700#, minimum 0#. Treating rate 9.4 BPM. Flush rate 10 BPM. First block pressure increased from 1900 to 2300#, no increase in pressure on 2nd and 3rd block. Shut in vacuum immediately. Swabbed to test tank 57 barrels fluid. Shut in 13 hours overnight. 11-19-59. Swabbed and flowed 360 barrels acid water and oil to test tank in 9-3/4 hours. Switched to tank battery 4:45 P.M. 11-19-59. Flowed 14 hrs, 3/4" choke, 0 water, GOR 876, 11-20-59. Flowed 10 hours, 3/4" choke, 237 BBL 0 water, GOR 844, RTP 250# - total for 24 hours on 3/4" choke: 891 BBL 0 water, GOR 844, RTP 345-250#. Flowed 14 hours, 1/2" choke, 346 BBL 0 water, 250# RTP. 11-21-59. Flowed 24 hours through 1/2" choke, ... 1st 10 hours - 237 BBL, next 14 hours 350 BBL - total 24 hours: 580 BBL 0 water, GOR 524, RTP 220#. 11/22/59. Flowed 4 hours 1/2" choke, 88 BBL 0 water, GOR 506, RTP 225#. Ran productivity index test and shut in for SHP 11-23, 24/59.</p>			
<p>Moved in well service unit. Pulled and laid down tubing and started water injection 4:00 A.M. 11-27-59. Injected 787 barrels water in 14 hours at 100%.</p>			
<p>11/28/59: Injected 916 barrels water in 24 hours at 90%.</p>			
<p align="center">SHOOLING RECORD</p>			
<p>11/29/59: Injected 930 barrels water in 24 hours at 60%.</p>			
<p>11/30/59: Injected 961 barrels water in 24 hours at 65%.</p>			

AM | 11/30/59

Navajo

Indian Agency

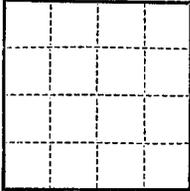
(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Tribal

Allottee 14-20-603-353

Lease No.



SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL	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		
Notice of Intention to Bridge Off Part of Water Injection Zone		X

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

Cortez, Colorado July 19 60

Desert "A" W-33

Well No. W-33 is located 660 ft. from ~~XXX~~ line and 660 ft. from ~~XXX~~ line of sec. 17

SE, SE. Sec. 17 41S 24E SLM

(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)
Rutherford San Juan Utah
(Field) (County or Subdivision) (State or Territory)

The elevation of the ~~ground~~ ungraded ground above sea level is 4717.6 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)

Inject Perma Plug bridging material into perforations 5626 to 5654' to plug off vugular permeability channels.

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

Company Phillips Petroleum Co.

Address Box 1150

Cortez, Colorado

By C. M. Boles
Dist. Supt.

Title

Navajo

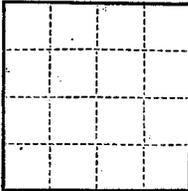
(SUBMIT IN TRIPLICATE)

Indian Agency _____

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Allottee Tribal

Lease No. 14-20-603-353



SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL _____	SUBSEQUENT REPORT OF WATER SHUT-OFF _____	
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 _____	<u>Attempt to bridge off part of</u>	
	<u>Water Injection zone</u>	<u>X</u>

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

Desert "A" W-33 Cortez, Colorado September 27, 1960

Well No. W-33 is located 660 ft. from KN line and 660 ft. from EW line of sec. 17
SE SE Sec. 17 41S 24E SLM
(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)
Ratherford San Juan Utah
(Field) (County or Subdivision) (State or Territory)

The elevation of the ~~drill floor~~ ungraded ground above sea level is 4717.6 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)

Mixed and displaced 180# S-3, 735# S-4, 280# S-2 and 365# Special Bradford Chemical Company Perma Plug in 40 stages in an attempt to plug off vugular permeability channels from 5626 to 5654 feet.

Previous Injection at 1870 BHPD: 372# @ 3000'
1703# @ 5623'

Present Injection at 1650 BHPD: 695# @ 3500'

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

Company PHILLIPS PETROLEUM COMPANY

Address P. O. Drawer 1150

Cortez, Colorado

By C. M. Boles

Title District Superintendent

PHILLIPS PETROLEUM COMPANY

P. O. Drawer 1150
Cortez, Colorado

September 12, 1962

Oil & Gas Conservation Commission
State of Utah
310 Newhouse Building
Salt Lake City 11, Utah

Dear Sirs:

In accordance with Rule E-4 (a) (2) of the Oil & Gas Conservation Commission General Rules and Regulations, we wish to advise that water injection into Ratherford Unit 17W44, located in the SE/4, SE/4 Section 17-41S-24E, San Juan County, Utah, was discontinued September 7, 1962.

Boles

Produced water formerly injected into the above mentioned well is now being pumped to Ratherford Unit Water Flood Pump Station for injection with fresh water from three water supply wells into Ratherford Unit Wells Nos. 21W21, 16W43, 16W21, 8W43, 17W21, and 17W43.

Yours very truly,

PHILLIPS PETROLEUM COMPANY

C. M. Boles
C. M. Boles
District Superintendent

HGC:bh

September 25, 1962

Phillips Petroleum Company
P. O. Drawer 1150
Cortez, Colorado

Attention: C. M. Boles,
District Superintendent

Re: Well No. Ratherford Unit
17W44, Sec. 17, T. 41 S,
R. 24 E., SLBM, San Juan
County, Utah

Gentlemen:

We are in receipt of your letter of September 12, 1962, which advised us that water injection into the above well has now been discontinued.

In order that we may keep our files up-to-date and accurate, it would be greatly appreciated if you would advise us of the future status of this well.

Very truly yours,

OIL & GAS CONSERVATION COMMISSION

CONNIE F. PALOUKOS
STATISTICIAN

cfp

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6-

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PHILLIPS PETROLEUM COMPANY

PHS
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P. O. Drawer 1150
Cortez, Colorado

October 5, 1962

In re: Well No. Ratherford Unit
17W44, Sec. 17, T.41S, R.24E,
SLBM, San Juan County, Utah

The State of Utah
Oil & Gas Conservation Commission
310 Newhouse Building
Salt Lake City 11, Utah

Attention: Connie F. Paloukos

Gentlemen:

In reply to your letter of September 25, 1962 regarding the future status of the subject well, we wish to advise that we do not have any definite plans at this time, and therefore intend to keep it in its present status of being shut down until such time it is needed.

This office will advise at such time any change of status is made to this well.

Yours very truly,

PHILLIPS PETROLEUM COMPANY



C. M. Boles
District Superintendent

HGC:bh

September 25, 1962

Phillips Petroleum Company
P. O. Drawer 1150
Cortez, Colorado

Attention: C. M. Boles,
District Superintendent

Re: Well No. Ratherford Unit
17W44, Sec. 17, T. 41 S,
R. 24 E., SLBM, San Juan
County, Utah

Gentlemen:

We are in receipt of your letter of September 12, 1962, which advised us that water injection into the above well has now been discontinued.

In order that we may keep our files up-to-date and accurate, it would be greatly appreciated if you would advise us of the future status of this well.

Very truly yours,

OIL & GAS CONSERVATION COMMISSION

CONNIE F. PALOUKOS
STATISTICIAN

cfp

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4



PHILLIPS PETROLEUM COMPANY
BARTLESVILLE, OKLAHOMA

May 12, 1965

Ratherford Unit
San Juan County, Utah
Revision of Pressure
Maintenance Plans

Utah Oil and Gas Conservation Commission (2)
310 Newhouse Building
Salt Lake City, Utah

Gentlemen:

The Oil and Gas Conservation Commission of the State of Utah, by its order entered in Cause 63 dated September 13, 1961, approved Phillips Petroleum Company's application for approval of a pressure maintenance program for the Ratherford Unit. Subsequent approvals have been given for modifications in the injection program as originally submitted. At this time approval is requested for the following additional modifications:

1. Convert Well 19-M21 to a Producing Status. Well 19-M21 has been unsatisfactory as an injection well in that it will not accept a sufficient volume of water to effectively move oil to producing wells located in Section 19 and, consequently, is incapable of deterring the possible movement of waterflood oil from Section 18 to producing wells in Section 19. In an effort to correct this situation, a total of 8,000 gallons of acid was used in selective treatments of injection perforations in Well 19-M21 during the period March 1 through March 11. Within one week after acidizing, the injection rate had declined to 61 BPD, an increase of only 24 BPD over the prior rate. Working Interest Owners owning 91.25 per cent of the Ratherford Unit voting interest have agreed in this recommendation. No negative votes have been received.
2. Convert Well 17-M14 to a Producing Status. Well 17-M14 was completed in November, 1959 as a water injection well in the initial Ratherford Unit pilot waterflood program. It was shut down in September, 1962 after injecting an accumulated volume of water totaling 1,661,287 barrels. The well has remained on shut down status since that time. It is the desire of the Ratherford Unit Working Interest Owners to make an attempt to complete in the interval 5510-34' in the Desert Creek formation and 5483-92' in the Imay formation. Working Interest Owners owning 72.50 per cent of the voting interest in the Ratherford Unit have approved this proposal. No negative votes have been received.

Utah Oil and Gas Conservation Commission
In re: Rutherford Unit, San Juan County, Utah -
Revision of Pressure Maintenance Plans

May 12, 1965

Page 2

These modifications will result in improved flood patterns and should account for increased oil recovery from the unit. Your early approval will be appreciated.

Very truly yours,

PHILLIPS PETROLEUM COMPANY



M. J. Kaufman, Chairman
Working Interest Owners Committee
Rutherford Unit

JEC:lmw

1965

//

AP
BMP

May 20, 1965

Phillips Petroleum Company
Bartlesville,
Oklahoma

Attention: Mr. M. J. Kaufman, Chairman

Dear Sir:

The following changes in your pressure maintenance program for the Rutherford Unit are hereby approved as per your request.

1. Convert Well 19W21 to a Producing Status.
2. Convert Well 17W44 to a Producing Status.

Very truly yours,

OIL & GAS CONSERVATION COMMISSION

CLEON B. FREIGHT
EXECUTIVE DIRECTOR

CBF:kgw

5

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK
 DRILL DEEPEN PLUG BACK

b. TYPE OF WELL
 OIL WELL GAS WELL OTHER Water Injection SINGLE ZONE MULTIPLE ZONE

2. NAME OF OPERATOR
Phillips Petroleum Company

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

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*
 At surface 660' PSL, 660' PSL, Sec. 17-11S-24E, 31EM, San Juan County, Utah
 At proposed prod. zone Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
N.A.

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

16. NO. OF ACRES IN LEASE 2527.50

17. NO. OF ACRES ASSIGNED TO THIS WELL 80

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

19. PROPOSED DEPTH PB 5540

20. ROTARY OR CABLE TOOLS Well Service Unit

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
4731.15 D.F.

22. APPROX. DATE WORK WILL START*
6-30-65

5. LEASE DESIGNATION AND SERIAL NO.
14-20-603-393

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Navajo Tribal

7. UNIT AGREEMENT NAME
14-1-1192

8. FARM OR LEASE NAME
Rutherford Unit

9. WELL NO.
1744

10. FIELD AND POOL, OR WILDCAT
Greater Anoth - Paradox

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
17-11S-24E 31EM

12. COUNTY San Juan 13. STATE Utah

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13-3/8"	27.1	176	175 sq ft 2 1/2 CC - Circulated
11"	8-5/8"	24	1500	330 sq ft 1 1/2" 124 sq ft 1 1/2" D. 620/ CC. 16 1/2" floater 3 1/2" full plug follow 1 1/2" 1 1/2" at 1225' at 1225' around shoe, circ 150 sq.
7-7/8"	5-1/2"	14	5764	- 480 sq ft, 1086 sq. ft. Miscel D, 1225' CC - circ. 55 sq ft.

PROPOSAL TO PLUG BACK AND SHUT OFF LOWER DESERT CREEK AND CONVERT TO A PRODUCING OIL WELL FROM ISMAY AND UPPER DESERT CREEK RESERVOIRS.

Plug back to 5540' with bridge plug, test for communication between upper and lower Desert Creek perforations, perforate Ismay 5483-92 and return well to producing status from Ismay and upper Desert Creek perforations (5483-92) and (5510-34).

If communication exists between upper and lower Desert Creek perforations, squeeze cement, reverse out to 5540, perforate Desert Creek 5510-33 and Ismay 5483-92 and return well to oil producing status.

Present Injection Status: Water Injection well shut down 9-7-62.

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

24. SIGNED [Signature] TITLE District Superintendent DATE 6-23-65
G. H. Doles
 (This space for Federal or State office use)

PERMIT NO. _____ APPROVED BY UTAH OIL AND GAS CONSERVATION COMMISSION
 APPROVED BY _____ TITLE _____ DATE 6-28-65 by [Signature] CHIEF PETROLEUM ENGINEER
 CONDITIONS OF APPROVAL, IF ANY: _____

*See Instructions On Reverse Side

NIT STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN PLIC.
(Other instructions on
reverse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. 14-20-603-353
2. NAME OF OPERATOR Phillips Petroleum Company		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Navajo Tribal
3. ADDRESS OF OPERATOR P. O. Drawer 1150, Cortez, Colorado 81321		7. UNIT AGREEMENT NAME SE-I-4192
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 660' From South Line; 660' From East Line Section 17		8. FARM OR LEASE NAME Rutherford Unit
14. PERMIT NO.	15. ELEVATIONS (Show whether DF, RT, GR, etc.) 4731.15' DF	9. WELL NO. 17-44
		10. FIELD AND POOL, OR WILDCAT Greater Aneth
		11. SEC., T., E., M., OR BLK. AND SURVEY OR AREA 19-418-24E S12M
		12. COUNTY OR PARISH Salt Lake
		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 checked="" 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.)*

Pull rods and tubing, run tubing with packer and acidize Imay and subzone I with 10,000 gallons 28% acid, swab test, pull tubing and packer, run tubing and rods and return well to production.

Present Production: 6 BOPD, 2 BWPD, 6 MCFOPD

18. I hereby certify that the foregoing is true and correct
SIGNED G. W. Bolon TITLE District Superintendent DATE 7-23-66

(This space for Federal or State office use)

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

Sharon

THE STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL & GAS CONSERVATION

OIL & GAS CONSERVATION BOARD

Delbert M. Draper, Jr.
Chairman

Charles R. Henderson
Guy N. Cardon
Robert R. Norman
Wallace D. Yardley

348 East South Temple
Suite 301
Salt Lake City, Utah 84111

328-5771

July 31, 1967

Cleon B. Feight
Director
Paul W. Burchell
Chief Petroleum Engineer

Phillips Petroleum Company
P. O. Drawer 1150
Cortez, Colorado 81321

Re: Wells No. Rutherford Unit #17-44,
Sec. 17, T. 41 S., R. 24 E. and
Rutherford Unit # 19-21
Sec. 19, T. 41 S., R. 24 E.,
San Juan County, Utah.

Gentlemen:

This letter is to advise you that the Subsequent Reports of Shooting and Acidizing for the above named wells are due and have not been filed with this office.

Please submit to this office the above named reports.

Thank you for your cooperation in this matter

Very Truly yours,

DIVISION OF OIL & GAS CONSERVATION

To — *Sharon Cameron*
SHARON CAMERON
RECORDS CLERK

SC:cam

8/7/67
Acidizing of the subject wells will not be performed at this time. therefore, the applications should be cancelled. Forms 9-33, officially cancelling will be submitted at an early date - H B Cook, Ofc Mgrs -

8/1/67
H B

July 31, 1967

Phillips Petroleum Company
P. O. Drawer 1150,
Cortez, Colorado 81321

Re: Wells No. Ratherford Unit #17-44,
Sec. 17, T. 41 S., R. 24 E. and
Ratherford Unit # 19-21
Sec. 19, T. 41 S., R. 24 E.,
San Juan County, Utah.

Gentlemen:

This letter is to advise you that the Subsequent Reports of Shooting and Acidizing for the above named wells are due and have not been filed with this office.

Please submit to this office the above named reports.

Thank you for your cooperation in this matter

Very Truly yours,

DIVISION OF OIL & GAS CONSERVATION

SHARON CAMERON
RECORDS CLERK

SC:cam

2

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN
(Other instru-
reverse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. 14-20-603-353
2. NAME OF OPERATOR Phillips Petroleum Company		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Navajo Tribal
3. ADDRESS OF OPERATOR P.O. Drawer 1150, Cortez, Colorado 81321		7. UNIT AGREEMENT NAME SW-1-4192
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 660' from Fourth Line; 660' from East Line Section 17		8. FARM OR LEASE NAME Rutherford Unit
14. PERMIT NO.	15. ELEVATIONS (Show whether DF, RT, GR, etc.) 4731.15 DF	9. WELL NO. 17-44
		10. FIELD AND POOL, OR WILDCAT Greater Aneth
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA 17-413-24E SLB M
		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) <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 cancell application, dated 9-23-66 to pull rods and tubing, run tubing with packer and acidize Ismay and Subzone I with 10,000 gallons 28% acid, snab test, pull tubing and packer, run tubing and rods and return well to production

18. I hereby certify that the foregoing is true and correct
SIGNED G.M. Roles TITLE District Superintendent DATE 8-21-67

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. 14-20-603-353
2. NAME OF OPERATOR Phillips Petroleum Company		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Navajo - Tribal
3. ADDRESS OF OPERATOR P. O. Box 2920, Casper, Wyoming 82601		7. UNIT AGREEMENT NAME SW-I-4192
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 660' FSL & 660' FEL		8. FARM OR LEASE NAME Ratherford Unit
14. PERMIT NO.	15. ELEVATIONS (Show whether DF, RT, GR, etc.) 4731.15' DF	9. WELL NO. 17-44
		10. FIELD AND POOL, OR WILDCAT Greater Aneth
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 17-T41S-R24E
		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"/>	

(Other) **Perf. Additional Zone I, Acidize & Return to Pumping.**

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

17. DESCRIBE PROPOSED WORK (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 drill out cement from 5540-5610', perforate additional Zone I 5560-64', 5568-76', 5582-90', 5595-98' and 5601-06', with bridge plug and packer. Acidize new perms as well as present perms. Return to pumping.

Present Production - 18 BOPD, 0 BWPD, 59 MCFGPD

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

SIGNED *F. C. Morgan* TITLE Area Superintendent DATE June 20, 1975

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

- 3 - USGS, Farmington, N. Mexico
 - 2 - Utah O&G CC, Salt Lake City, Utah
 - 1 - R. N. Hughes
 - 1 - File
- *See Instructions on Reverse Side

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.

14-20-603-353

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Navajo Tribal

7. UNIT AGREEMENT NAME

SW-I-4192

8. FARM OR LEASE NAME

Ratherford Unit

9. WELL NO.

17-44

10. FIELD AND POOL, OR WILDCAT

Greater Aneth

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

17-T41S-R24E

12. COUNTY OR PARISH 13. STATE

San Juan

Utah

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL GAS WELL OTHER

2. NAME OF OPERATOR
Phillips Petroleum Company

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

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)
At surface
660' FSL & 660' FEL (SE SE)

14. PERMIT NO. 15. ELEVATIONS (Show whether DF, RT, GR, etc.)
4731.15' DF

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

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

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

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

(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 Area Superintendent DATE February 2, 1976

(This space for Federal or State office use)

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

- 3-USGS, Farmington NM
- 2-Utah OGCC, Salt Lake City UT
- 1-Superior Oil Company, Cortez CO
- 1-R. N. Hughes
- 1-File

*See Instructions on Reverse Side

FINAL REPORT INDIVIDUAL WELL STATUS

Lease Ratherford Unit Well No. 17-44 Authorization No. P-9872
 Summary of Work Performed:

1/6/76 Drilled out cmt from 5540-5610'. Perfd lower Zone I 5560-64', 5568-76', 5582-90', & 5595-98'. Acidized w/3000 gal 28% HCL in 3 stages. Acidized lower Ismay 5483-92' and upper Zone I 5510-34' w/5000 gal 28% HCL in 3 stages.

AVERAGE DAILY PRODUCTION

	Field and Formation	Oil	Gas	Water
Before Work	Greater Aneth - Paradox Lower Ismay-Desert Crk Zone I	17 BPD	55	2 BPD
After Work	" " " "	242 BPD	363	35 BPD
Before Work				
After Work				

DATE | P.T.D. | DAILY REPORT DETAILED

1976
 Jan. 6 RATHERFORD UNIT NO. 17-44 PTD 5540. /INITIAL REPORT/ PREP TO GRW W/BIT AND DRILL CMT IN PIPE. MI R AND P WS UNIT 1/5/76. PLD RODS AND PMP. START COH W/TRG. AFF P-9872 ISSUED TO DRILL OUT CMT PLUG, PERF ZONE I 5560-5606 OA, W/HP AND PKR, ACIDIZE NEW AND PRESENT PERFS AND RETURN TO PMPG. LOCATION - 660 FT FSL AND 660 FT FFL, SE SE, SEC. 17-T41S-R24E, SAN JUAN CO., UTAH. SUR AREA CODE 626. ELEV. 4734 FT PKB. LAST TEST - 17 BOPD, 2 BOPD. DATE LAST PRODUCED 1/4/76..

7 RATHERFORD UNIT NO. 17-44 PTD 5540. PREP TO DRILL CMT. FIN COOH W/TRG. W/ 1/4-3/4" BIT AND CSG SCRAPER. PU REVERSE CIRC EQUIP. SDON..

8 RATHERFORD UNIT NO. 17-44 PTD 5540. PREP TO DRILL TO 5610 FT AND PRESS TEST PERFS. FIN PU REVERSE CIRC EQUIP. TAGGED CMT AT 5544 FT. DRLD CMT FROM 5544-5600 FT. SDON..

9 RATHERFORD UNIT NO. 17-44 PTD 5540. PREP TO PRESSURE TEST SOZ PERFS. DRLD CMT FROM 5600-5610 FT. CIRC HOLE CLEAN. COOH W/BIT. W/ W/BAKER RETRIEVAMATIC PKR AND TRG TESTER SET AT 5545 FT. SDON..

10 RATHERFORD UNIT NO. 17-44 PTD 5610 /CORRECTED/ PREP TO ACIDIZE UPPER PERFS 5483-92 AND 5510-34 FT. 1/10/76 - UNABLE TO SET BAKER PKR. COOH W/BAKER. W/ W/TRG, BAKER RETRIEVAMATIC PKR AND TRG TESTER. SET PKR AT 5545 FT. TSTD TRG TO 3500 LB, OK. WPPD 10 BW DN TRG AND COMMUNICATED W/ANNULUS. MP 100 LB. RESET PKR AT 5540 FT. COMMUNICATED W/ANNULUS. RESET PKR AT 5550 FT. PRESS UP TO 1000 LB, OK. RESET AT 5555 FT TO PRESS TEST SOZD PERFS 5558-5608 FT. PRESS UP TO 3200 LB, BLEED TO 2700 LB IN 5 MIN. PRESS UP TO 3500 LB, BLEED TO 2900 LB IN 5 MIN AND 2600 LB IN 10 MIN. NOT COMMUNICATED W/ZONE 11. COOH W/TRG AND PKR. SDON.

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

February 2, 1976

Date Prepared

District Approval

DAILY REPORT DETAILED

LEASE Ratherford Unit

WELL NO. 17-44

SHEET NO. 2

DATE TOTAL DEPTH
NATURE OF WORK PERFORMED

1/11/76 - RU

Jan. 11-12
SCH., PERFORATE FOLLOWING W/4" HYPER JET 11, 2 SPF - 5595-98, 5582-90, 5568-76 AND 5560-64 FT. SCH. PPTD 5601 FT. WITH W/PET BP AND PKR. SET BP AT 5599 FT, PKR AT 5555 FT. RU DOWELL. ACIDIZED W/3000 GAL 28 PERCENT HCL IN 3 STAGES - STEP 1 - SPOTTED 1000 GAL 28 PERCENT HCL, PRESS UP TO 3200 LB. PERFS BROKE IN 1 HR, 10 MIN. STEP 2 - PMPD 2000 GAL WATER, 1/4 BPM AT 2900 LB TO 2-1/2 BPM AT 1900 LB. STEP 3 - PMPD 1000 GAL 28 PERCENT HCL, 200 LB UNIREADS AND MOTH BALLS IN 100 GAL, 2-1/2 BPM AT 2200 LB. PRESS INCR TO 2-1/2 BPM AT 2750 LB WHEN BLOCK HIT FORMATION. STEP 4 - PMPD 2000 GAL WTR, 2-1/2 BPM AT 2750 LB. STEP 5 - PMPD 1000 GAL 28 PERCENT HCL, 100 LB UNIREADS AND MOTH BALLS IN FIRST 100 GAL ACID. PRESS INCR FROM 2600 LB TO 3000 LB WHEN BLOCK HIT FORMATION. STEP 6 - PMPD 3200 GAL WTR. FINAL RATE 2 BPM AT 3000 LB. ISIP 2800 LB, 15 MIN SIP 2250 LB. 243 BL AND AW TO REC. OPENED WELL TO PIT. FLWD 113 BL AND AW. LOAD TO REC 130 BL AND AW. 1/12/76 - OPEN TO TANK 6 HRS, FLWD 6 RW AND DIED. SION. 124 BL AND AW TO REC..

13
RATHERFORD UNIT NO. 17-44 PTD 5610. PREP TO PUT WELL TO PMPG. OPENED WELL, FLWD 10 RO AND DIED. CIRC HOLE W/45 RW. RESET BP AT 5555 FT, RESET PER AT 5445 FT. RU DOWELL. ACIDIZED W/5000 GAL 28 PERCENT HCL IN 3 STAGES. STEP 1 - PMPD 24 BBL GELLED WTR AT 1-1/4 BPM AT 2700 LB. STEP 2 - PMPD 2000 GAL 28 PERCENT HCL, 1-1/4 BPM AT 2700 LB. PRESS BROKE TO 1100 LB W/2 BA IN FORMATION. STEP 3 - PMPD 50 BBL GELLED WTR, 4 RPM AT 1100-1850 LB. STEP 4 - PMPD 2000 GAL 28 PERCENT HCL W/300 LB UNIREADS AND MOTH BALLS IN FIRST 150 GAL, 4 RPM AT 1850-2600 LB. 300 LB INCR WHEN PLUG HIT PERFS. STEP 5 - PMPD 72 RW, 4 RPM AT 2900-2500 LB. STEP 6 - PMPD 1000 GAL 28 PERCENT HCL. FIRST 150 GAL CONTAINED 300 LB UNIREADS AND MOTH BALLS, 4 RPM AT 2700 LB. STEP 7 - PMPD 75 RW, 4-2 RPM AT 2800-2400 LB. ISIP 2300 LB, 15 MIN SIP 1750 LB. TOTAL LOAD 340 BBL. OPENED WELL TO PIT. FLWD 140 RW. STARTED MAKING OIL. FLWD TO TANK 2 HRS, REC 60 RO, 50 BLW. FLED TO BATTERY OVERNIGHT, NO GAUGE. 214 BL AND AW TO REC..

14
RATHERFORD UNIT NO. 17-44 PTD 5610. PREP TO RUN PODS AND PUMP. COOH W/PKR AND BP. WITH W/TRG AND TRG ANCHOR. 214 BL AND AW TO REC..

15
RATHERFORD UNIT NO. 17-44 PTD 5610. PMPG. RAN PODS AND PUMP. PUT WELL TO PMPG 1/14/76. PMPD 15 HRS, REC 2 RO, 113 BLW. FL 1367 FT. 101 BL AND AW TO REC..

16
RATHERFORD UNIT NO. 17-44 PTD 5610. PMPG. PMPD 24 HRS, NO TEST ON OIL, METER MALFUNCTION, 69 BLW. 32 BL AND AW TO REC..

17-19
RATHERFORD UNIT NO. 17-44 PTD 5610. PMPG ON TEST. 1/17/76 - PMP FAILED COOH W/PODS AND PMP. NO TEST. SDOH. 1/18/76 - WITH W/PODS AND PMP. PMPG ON TEST - NO GAUGE. 1/19/76 - PMPD 24 HRS, REC 144 RO, 32 BLW, 6 RW. ALL LOAD REC..

20
RATHERFORD UNIT NO. 17-44 PTD 5610. PMPG ON TEST. PMPD 24 HRS, REC 112 RO, 10 RW..

21
RATHERFORD UNIT NO. 17-44 PTD 5610. PMPG ON TEST. PMPD 24 HRS, REC 115 RO, 10 RW..

DAILY REPORT DETAILED

LEASE Ratherford Unit WELL NO. 17-44 SHEET NO. 3

DATE TOTAL DEPTH
NATURE OF WORK PERFORMED

Jan. 22 RATHERFORD UNIT NO. 17-44 PTD 5610. PMPG ON TEST. PMPD AND FLWD 24 HRS
REC 295 RO, 7 RW..

23 RATHERFORD UNIT NO. 17-44 PTD 5610. PMPG ON TEST. PMPD AND FLWD
24 HRS, REC 334 RO, 20 RW. INCREASED SPEED TO 14-44 SPW 1/1-3/4" PMP..

24-26 RATHERFORD UNIT NO. 17-44 PTD 5610. /FINAL REPORT SUMMARY/ DRPD OUT
CMT FROM 5540-5610 FT. PERFORATED LOWER ZONE 1 5560-64 FT, 5568-76 FT,
5582-90 FT, AND 5595-98 FT. ACIDIZED W/3000 GAL 28 PERCENT HCL IN 3
STAGES. ACIDIZED LOWER ISMAY 5483-92 FT AND UPPER ZONE 1 5510-34 FT W/
5000 GAL 28 PERCENT HCL IN 3 STAGES. RELEASED P AND R WS UNIT 1/14/76.
RETURNED TO PRODUCING OIL WELL FROM LOWER ISMAY AND DESEPT CREEK ZONE 1
PERFS 5483-5598 FT OA IN PARADOX FORMATION, GREATER ANETH FIELD, SAN
JUAN CO., UTAH, WITH A FINAL TEST OF 242 ROPD, 35 BWPD. /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. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. 96-004192 ✓	
2. NAME OF OPERATOR Phillips Oil Company		6. IF INDIAN, ALLOTTED 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 OF, AT, 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**

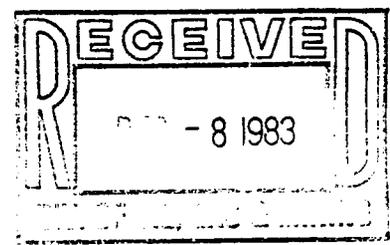
NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>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

*120
17-44*



- | | | |
|---------------------|-----------------------|-------------------------|
| 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

WELL NO.WELL LOCATIONAPI NO.STATUS

E14-12	SW NW Sec.14-T41S-R24E	43-037-15998	Act.
E14-13	NW SW Sec.14-T41S-R24E	43-037-15999	SI
10-44	SE SE Sec.10-T41S-R24E	43-037-30451	Act.
15-12	SW NW Sec.15-T41S-R24E	43-037-15715	Act.
15-14	SW SW Sec.15-T41S-R24E	43-037-15716	SI
15-22	SE NW Sec.15-T41S-R24E	43-037-30449	Act.
15-32	SW NE Sec.15-T41S-R24E	43-037-15717	Act.
15-33	NW SE Sec.15-T41S-R24E	43-037-15718	SI
15-41	NE NE Sec.15-T41S-R24E	43-037-15719	Act.
15-42	SE NE Sec.15-T41S-R24E	43-037-3-448	SI
16-12	SW NW Sec.16-T41S-R24E	43-037-15720	Act.
16-14	SW SW Sec.16-T41S-R24E	43-037-15721	Act.
16-32	SW NE Sec.16-T41S-R24E	43-037-15723	Act.
16-34	SW SE Sec.16-T41S-R24E	43-037-15724	SI
16-41	NE NE Sec.16-T41S-R24E	43-037-15725	Act.
17-12	SW NW Sec.17-T41S-R24E	43-037-15726	Act.
17-14	SW SW Sec.17-T41S-R24E	43-037-15727	Act.
17-23	NE SW Sec.17-T41S-R24E	43-037-15728	Act.
17-32	SW NE Sec.17-T41S-R24E	43-037-15729	Act.
17-34	SW SE Sec.17-T41S-R24E	43-037-15730	Act.
17-41	NE NE Sec.17-T41S-R24E	43-037-15731	Act.
17-44	SE SE Sec.17-T41S-R24E	43-037-15732	Act.
18-11	NW NW Sec.18-T41S-R24E	43-037-15733	SI
18-13	NW SW Sec.18-T41S-R24E	43-037-15734	Act.
18-14	SW SW Sec.18-T41S-R24E	43-037-15735	Act.
18-23	NE SW Sec.18-T41S-R24E	43-037-30244	Act.
18-32	SW NE Sec.18-T41S-R24E	43-037-15736	Act.
18-34	SW SE Sec.18-T41S-R24E	43-037-15737	Act.
19-12	SW NW Sec.19-T41S-R24E	43-037-15739	Act.
19-14	SW SW Sec.19-T41S-R24E	43-037-15740	SI
19-32	SW NE Sec.19-T41S-R24E	43-037-15743	Act.
19-34	SW SE Sec.19-T41S-R24E	43-037-15744	Act.
20-12	SW NW Sec.20-T41S-R24E	43-037-15746	Act.
20-14	SW SW Sec.20-T41S-R24E	43-037-15747	Act.
20-32	SW NE Sec.20-T41S-R24E	43-037-15749	Act.
20-34	SW SE Sec.20-T41S-R24E	43-037-15750	Act.
21-12	SW NW Sec.21-T41S-R24E	43-037-15752	Act.
21-14	SW SW Sec.21-T41S-R24E	43-037-15753	Act.
21-23	NE SW Sec.21-T41S-R24E	43-037-13754	Act.
21-32	SW NE Sec.21-T41S-R24E	43-037-15755	Act.
21-33	NW SE Sec.21-T41S-R24E	43-037-30447	SI
21-34	SW SE Sec.21-T41S-R24E	43-037-15756	Act.
22-12	SW NW Sec.22-T41S-R24E	43-037-15757	SI
22-14	SW SW Sec.22-T41S-R24E	43-037-15758	SI
24-42	SE NE Sec.24-T41S-R24E	43-037-15863	Act.
28-11	NW NW Sec.28-T41S-R24E	43-037-30446	Act.
28-12	SW NW Sec.28-T41S-R24E	43-037-15336	Act.
29-12	SW NW Sec.29-T41S-R24E	43-037-15337	Act.
29-32	SW NE Sec.29-T41S-R24E	43-037-15339	Act.

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

SUBMIT IN TRIPlicate
(Other instructions on reverse side)

Budget Bureau No. 1004-0138
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

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

<p style="font-size: 2em; opacity: 0.5;">RECEIVED</p> <p style="font-size: 1.5em;">MAY 06 1985</p>		<p>1. LEASE DESIGNATION AND SERIAL NO. 14-20-603-353 14-20-603-355</p> <p>2. WELLS, ALLOTTS OR TRACT NAME Navajo</p> <p>3. WELL AGREEMENT NAME SW-I-4192</p> <p>4. NAME OF LEASE NAME Ratherford Unit</p> <p>5. WELL NO. 17.44</p> <p>6. FIELD AND POOL, OR WILDCAT Greater Aneth</p> <p>7. SEC., T., R., E., OR NE. AND SUBST. OR AREA Sec. 16 & 17 T41S-R24E</p> <p>8. COUNTY OR PARISH San Juan Co.</p> <p>9. STATE Utah</p>
<p>1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input checked="" type="checkbox"/> Flowline</p> <p>2. NAME OF OPERATOR Phillips Oil Company</p> <p>3. ADDRESS OF OPERATOR P. O. Box 2920 Casper, WY 82602</p> <p>4. LOCATION OF WELL (Report location clearly and in accordance with any State regulations. See also space 17 below.) At surface SW SW Sec. 16 & SE SE Sec. 17 of T41S-R24E San Juan Co., Utah</p> <p>10. PERMIT NO.</p>	<p>11. ELEVATIONS (Show whether of, to, or, etc.) 4760' MSL</p>	

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	SEPARATING 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 ACIDISE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDISING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) _____	(Other) _____
(Other) <u>Install flowline</u> <input checked="" type="checkbox"/>		(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log Form.)	

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

Phillips Oil Company requests approval to install a flowline as shown on the attached Plat A-2A. This flowline will connect Tank Battery 1 with the Water Injection Plant. The line will be used to carry oil-water emulsion from the Water Injection Plant to Tank Battery 1. The proposed flowline will parallel an existing water line connecting the two locations.

- 5- BLM, Farmington
- 2- Utah O&GCC, Salt Lake City, Utah
- 1- P. J. Adamson
- 1- B. Conner, 318-B-TRW
- 1- J. R. Weichbrodt
- 1- C. M. Anderson
- 1- P. Rooney
- 1- File

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

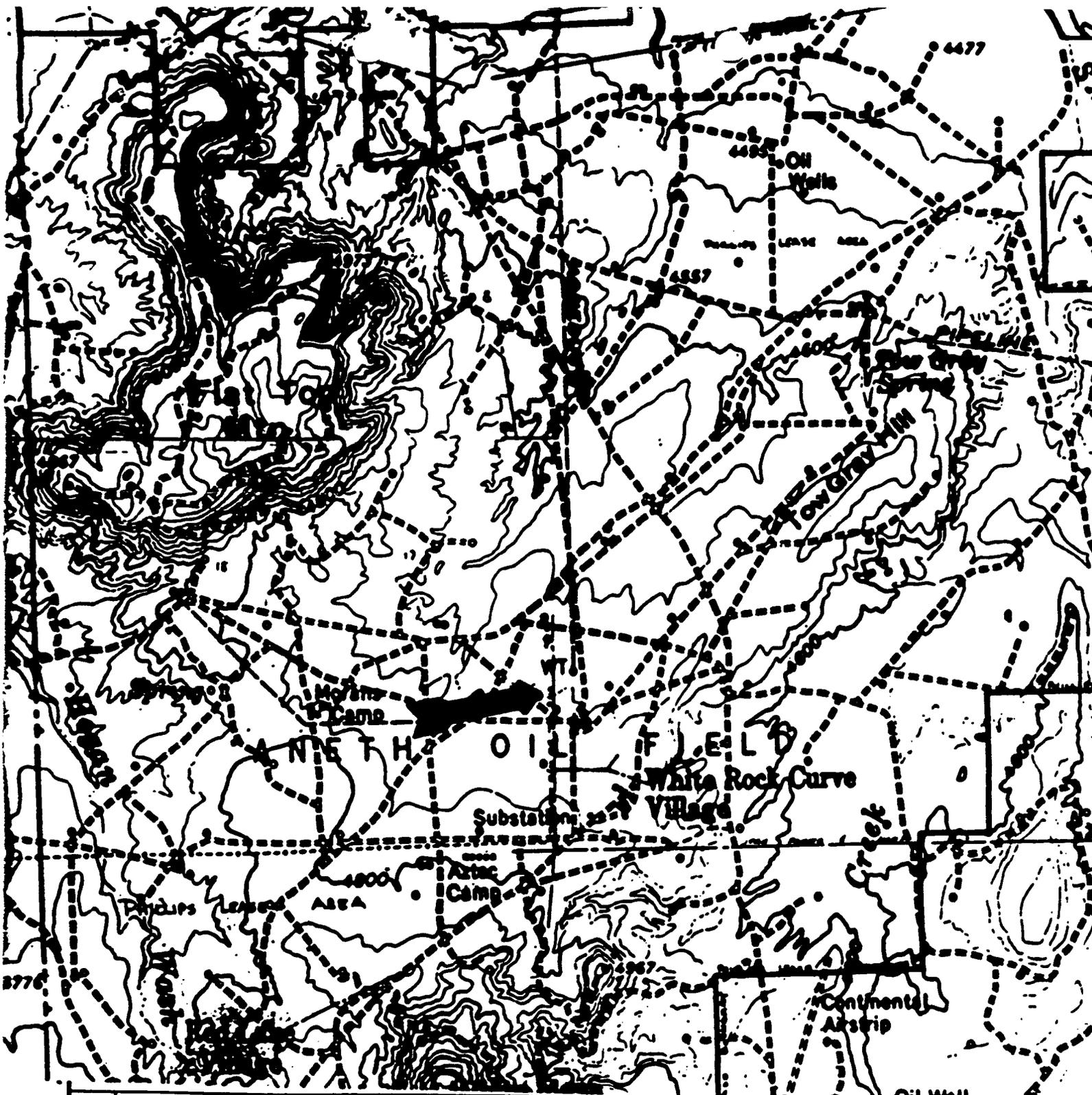
SIGNED A. E. Stuart TITLE Area Manager DATE February 4, 1985

(This space for Federal or State office use)

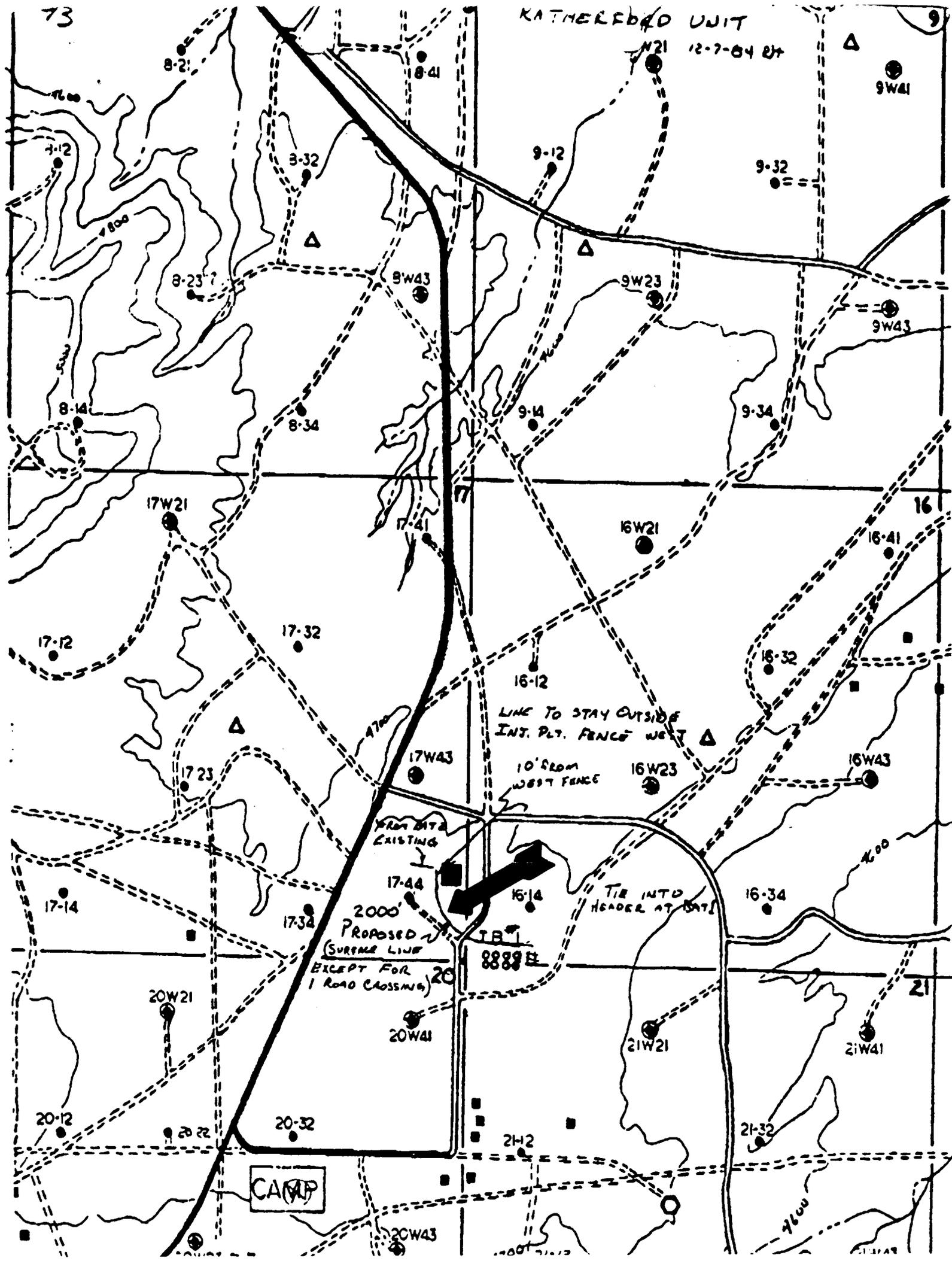
APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side



NO.	REVISION	BY	DATE	CHKD	APP'D
FOR BIDS	 PHILLIPS PETROLEUM COMPANY BARTLESVILLE, OKLAHOMA		JA NO	FILE CODE	
FOR APPR			AFE NO	SCALE	
FOR CONST				2.2" = 1 mi	
DRAWN	RATHERFORD UNIT PROPOSED FLOWLINE PLAT SEC. 16 & 17 T41S-R24E SAN JUAN CO., UTAH		DWG NO	A 2 A	
CHECKED			SH NO.		
APP'D					



73

9

8-21

8-41

9-21

12-7-84 BT

9W41

7-12

8-32

9-12

9-32

800

8-23

8W43

9W23

9W43

8-14

8-34

9-14

9-34

17W21

17-41

16W21

16

17-12

17-32

16-12

16-32

LINE TO STAY OUTSIDE
INT. PLY. FENCE WEST

10' FROM
WEST FENCE

16W23

16W43

FROM DATA
EXISTING

17-44

16-14

TIE INTO
HEADER AT 1541

16-34

2000'
PROPOSED
(SURVEY LINE
EXCEPT FOR
1 ROAD CROSSING)

T.B.I.
8888

21

17-14

17-34

20W21

20W41

21W21

21W41

20-12

20-22

20-32

21-12

21-32

CAMP

20W43

7600

1000

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

SUBMIT IN TRIPLICATE

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other	3. Lease Designation and Serial No. 14-20-603-353
2. Name of Operator Phillips Petroleum Company	6. If Indian, Allottee or Tribe Name Navajo Tribal
3. Address and Telephone No. 5525 Hwy 64 NBU 3004, Farmington, NM 87401 (505) 599-3412	7. If Unit or CA, Agreement Designation Ratherford Unit SW-I-4192
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 660' FSL & 660' FEL Sec. 17, T41S, R24E	8. Well Name and No. Ratherford Unit #17-44
	9. API Well No. 43-037-15732
	10. Field and Pool, or Exploratory Area Greater Aneth
	11. County or Parish, State San Juan, Utah

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

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

10-7-91 thru 10-14-91
MI & RU DDU. Pulled rods, pump and tubing. Cleaned out well to PBDT of 5610'.
Hydrotested tubing and acidized well with 5600 gals. 15% gelled acid w/250 gals.
2#/gal. salt divert. Swabbed well clean and RWTP.

RECEIVED

NOV 18 1991

DIVISION OF
OIL GAS & MINING

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

Signed *D. Robinson* Title Sr. Drlg. & Prod. Engr. Date 11-15-91
D. ROBINSON
(This space for Federal or State office use)

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

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

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>5. 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 At proposed prod. zone</p>		<p>9. WELL NO.</p>
<p>14. API NO.</p>		<p>10. FIELD AND POOL, OR WILDCAT GREATER ANETH</p>
<p>15. ELEVATIONS (Show whether DF, RT, GR, etc.)</p>		<p>11. SEC., T., R., N., OR BLK. AND SURVEY OR AREA</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:				
<table style="width:100%;"> <tr> <td style="width: 50%;"> <p>TEST WATER SHUT-OFF <input type="checkbox"/></p> <p>FRACTURE TREAT <input type="checkbox"/></p> <p>SHOOT OR ACIDIZE <input type="checkbox"/></p> <p>REPAIR WELL <input type="checkbox"/></p> <p>(Other) _____</p> </td> <td style="width: 50%;"> <p>PULL OR ALTER CASING <input type="checkbox"/></p> <p>MULTIPLE COMPLETE <input type="checkbox"/></p> <p>ABANDON <input type="checkbox"/></p> <p>CHANGE PLANS <input type="checkbox"/></p> </td> </tr> </table>	<p>TEST WATER SHUT-OFF <input type="checkbox"/></p> <p>FRACTURE TREAT <input type="checkbox"/></p> <p>SHOOT OR ACIDIZE <input type="checkbox"/></p> <p>REPAIR WELL <input type="checkbox"/></p> <p>(Other) _____</p>	<p>PULL OR ALTER CASING <input type="checkbox"/></p> <p>MULTIPLE COMPLETE <input type="checkbox"/></p> <p>ABANDON <input type="checkbox"/></p> <p>CHANGE PLANS <input type="checkbox"/></p>	<table style="width:100%;"> <tr> <td style="width: 50%;"> <p>WATER SHUT-OFF <input type="checkbox"/></p> <p>FRACTURE TREATMENT <input type="checkbox"/></p> <p>SHOOTING OR ACIDIZING <input type="checkbox"/></p> <p>(Other) <u>CHANGE OF OPERATOR</u></p> <p>(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)</p> </td> <td style="width: 50%;"> <p>REPAIRING WELL <input type="checkbox"/></p> <p>ALTERING CASING <input type="checkbox"/></p> <p>ABANDONMENT* <input type="checkbox"/></p> </td> </tr> </table>	<p>WATER SHUT-OFF <input type="checkbox"/></p> <p>FRACTURE TREATMENT <input type="checkbox"/></p> <p>SHOOTING OR ACIDIZING <input type="checkbox"/></p> <p>(Other) <u>CHANGE OF OPERATOR</u></p> <p>(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)</p>	<p>REPAIRING WELL <input type="checkbox"/></p> <p>ALTERING CASING <input type="checkbox"/></p> <p>ABANDONMENT* <input type="checkbox"/></p>
<p>TEST WATER SHUT-OFF <input type="checkbox"/></p> <p>FRACTURE TREAT <input type="checkbox"/></p> <p>SHOOT OR ACIDIZE <input type="checkbox"/></p> <p>REPAIR WELL <input type="checkbox"/></p> <p>(Other) _____</p>	<p>PULL OR ALTER CASING <input type="checkbox"/></p> <p>MULTIPLE COMPLETE <input type="checkbox"/></p> <p>ABANDON <input type="checkbox"/></p> <p>CHANGE PLANS <input type="checkbox"/></p>				
<p>WATER SHUT-OFF <input type="checkbox"/></p> <p>FRACTURE TREATMENT <input type="checkbox"/></p> <p>SHOOTING OR ACIDIZING <input type="checkbox"/></p> <p>(Other) <u>CHANGE OF OPERATOR</u></p> <p>(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)</p>	<p>REPAIRING WELL <input type="checkbox"/></p> <p>ALTERING CASING <input type="checkbox"/></p> <p>ABANDONMENT* <input type="checkbox"/></p>				
<p>APPROX. DATE WORK WILL START _____</p>	<p>DATE OF COMPLETION _____</p>				

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

* Must be accompanied by a cement verification report.

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

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:

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; 1973 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 FS.; 960 FEL
13W-44	43-037-16407	14-20-603-247A	SEC. 13, T41S, R23E	SE/SE 635 FSL; 659 FEL
14-03	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 1975 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' FS.; 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' FS.; 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' FS.; 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

MONTHLY OIL AND GAS DISPOSITION REPORT

OPERATOR NAME AND ADDRESS:

Sheffield
~~BRIAN BERRY~~
~~MEPNA MOBIL~~
 POB 219031 1807A RENTWY *7.0. DRAWER G*
 DALLAS TX 75221-9031 *CORTEZ, CO. 81321*

UTAH ACCOUNT NUMBER: N7370

REPORT PERIOD (MONTH/YEAR): 7 / 93

AMENDED REPORT (Highlight Changes)

X931006 updated. Joe

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

RECEIVED

SEP 13 1993

DIVISION OF OIL, GAS & MINING

COMMENTS: *PLEASE NOTE ADDRESS CHANGE. MOBIL ALSO 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

Name and Signature: *Lwell B Sheffield*

Date: 9/5/93
 Telephone Number: 303 865 2210
~~244 658 2528~~

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 11:44

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

070 FARMINGTON, NM

ARES/543

JUL 26 1993

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

MINERALS	SEARCHED
INDEXED	FILED
SERIALIZED	FILED
JUL 26 1993	
FBI - FARMINGTON	
ALL COPY	
FILED	

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

RECEIVED
BLM

DESIGNATION OF OPERATOR

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

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

070 FARMINGTON, NM

and, pursuant to the terms of the Rutherford 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 Rutherford 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 Rutherford 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 Rutherford 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. Martiny
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

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/17-93	✓
2-DTS/58-93	✓
3-VLC	✓
4-RJF	✓
5-IBP	✓
6-PL	✓

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

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

The operator of the well(s) listed below has changed (EFFECTIVE DATE: 7-1-93)

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

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

Name: **SEE ATTACHED**	API: <u>43-037-15732</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

- See 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)
- See 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: _____.
- See 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.
- See 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)
- See 6. Cardex file has been updated for each well listed above. (O&G wells 10-6-93) (wiw's 10-26-93)
- See 7. Well file labels have been updated for each well listed above. (O&G wells 10-6-93) (wiw's 10-26-93)
- See 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)
- See 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.

MICROFILMING

- 1. All attachments to this form have been microfilmed. Date: 11-17 1993.

FILED

- 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.

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

MONTHLY OIL AND GAS PRODUCTION REPORT

OPERATOR NAME AND ADDRESS:

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

UTAH ACCOUNT NUMBER: N7370

REPORT PERIOD (MONTH/YEAR): 6 / 95

AMENDED REPORT (Highlight Changes)

Well Name API Number	Entity	Location	Producing Zone	Well Status	Days Oper	Production Volumes		
						OIL(BBL)	GAS(MCF)	WATER(BBL)
#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: _____

PHONE CONVERSATION DOCUMENTATION FORM

Route original/copy to:

Well File _____
(Location) Sec ___ Twp ___ Rng ___
(API No.) _____

Suspense
(Return Date) _____
(To - Initials) _____

Other
OPER NM CHG _____

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

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

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

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

4. Highlights of Conversation: _____

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

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,



R. D. Baker
Environmental Regulatory Manager

CNE/rd
CNE8661

Division of Oil, Gas and Mining
OPERATOR CHANGE WORKSHEET

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

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

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

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

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

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

Name: <u>** SEE ATTACHED **</u>	API: <u>037-15732</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

- 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
- LWP 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*) ____ (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. *UTS 8/5/95*
- N/A* 2. Copies of documents have been sent to State Lands for changes involving State leases.

FILMING

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

FILING

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

COMMENTS

950803 UIC F5/Not necessary!

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

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

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

5. Lease Designation and Serial No.

14-20-603-353

6. If Indian, Allottee or Tribe Name

NAVAJO TRIBAL

7. If Unit or CA, Agreement Designation

RATHERFORD UNIT

8. Well Name and No.

RATHERFORD 17-44

9. API Well No.

43-037-15732

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. 17, T41S, R24E
(SE/SE) 660' FSL & 660' FEL

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

TYPE OF SUBMISSION

Notice of Intent
 Subsequent Report
 Final Abandonment Notice

TYPE OF ACTION

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

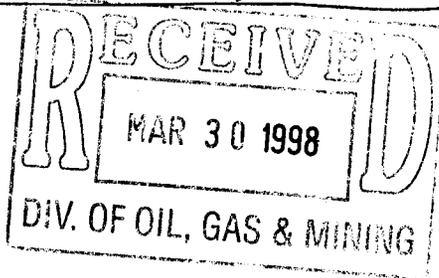
(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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

BHL:

LATERAL #1: 771' NORTH & 919' WEST FROM SURFACE SPOT (ZONE 1b). 650747.6 4120329.4 288 FSL 440 FEL 21 415 24E
LATERAL #2: 1131' SOUTH & 1131' EAST FROM SURFACE SPOT (ZONE 1a). 651396.4 4119754.5 912 FNL 590 FNL
LATERAL #3: 600' NORTH & 1039' WEST FROM SURFACE SPOT (ZONE 1a). 650702.7 4120295.5
Handwritten notes: 235, 280, 345, 345, 183, 317, 651019.1, 4120086.9

SEE ATTACHED PROCEDURE.



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

Signed Shirley Houchins Title SHIRLEY HOUCHINS/ENV & REG TECH Date 3-25-98

Approved by the State **APPROVED BY THE STATE**
of Utah Division of **OF UTAH DIVISION OF**
Oil, Gas and Mining **OIL, GAS, AND MINING**
DATE: 4/22/98

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.

By: [Signature] * See instruction on Reverse Side

Federal Approval of this Action is Necessary

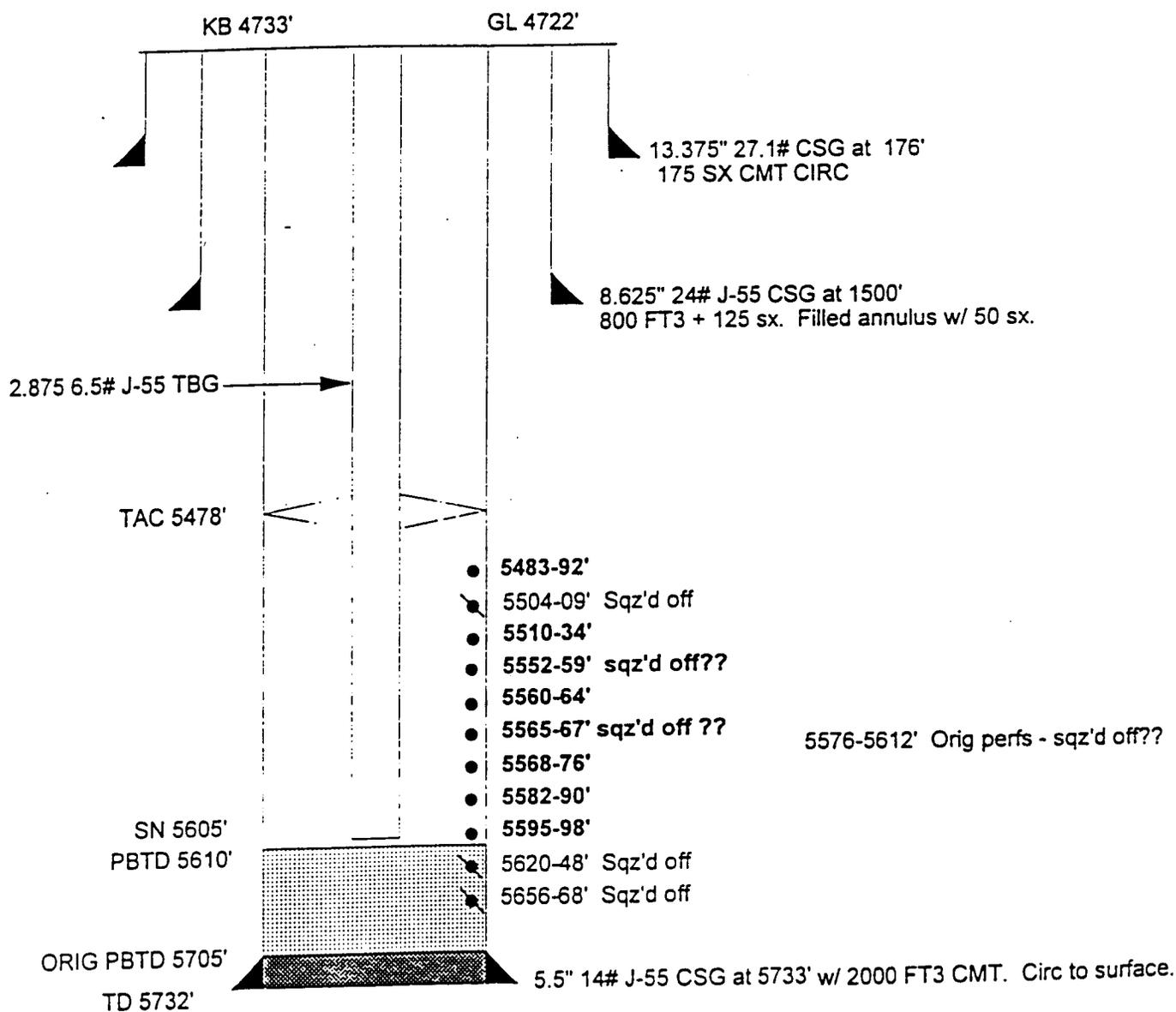
Ratherford Unit Well #17-44 Horizontal Drilling Procedure

The objective of this procedure is to prepare this wellbore for sidetracking, sidetrack the subject well and drill multilateral short radius horizontal laterals (1200-1600 feet).

1. Prepare location and dig working pit.
2. MIRU WSU, reverse unit, and H2S equipment. Bullhead kill weight fluid down tubing.
3. ND wellhead and NU BOP's. Pressure test BOP's to working pressure.
4. Continue to POH with related equipment (tubing and rods for producers or tubing and packer for injectors).
5. RU wireline to run any logs desired and run gage ring for casing size and weight.
6. Set retrievable bridge plug at 5300'.
7. Pressure test casing to 1000 psi. 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 17-44
 GREATER ANETH FIELD UTAH
 660' FSL & 660' FEL
 SEC 17-T41S-R24E
 SAN JUAN COUNTY UTAH
 API 43-037-15732
 PRISM 0043059

PRODUCER



TOM COCHRANE 9-22-94

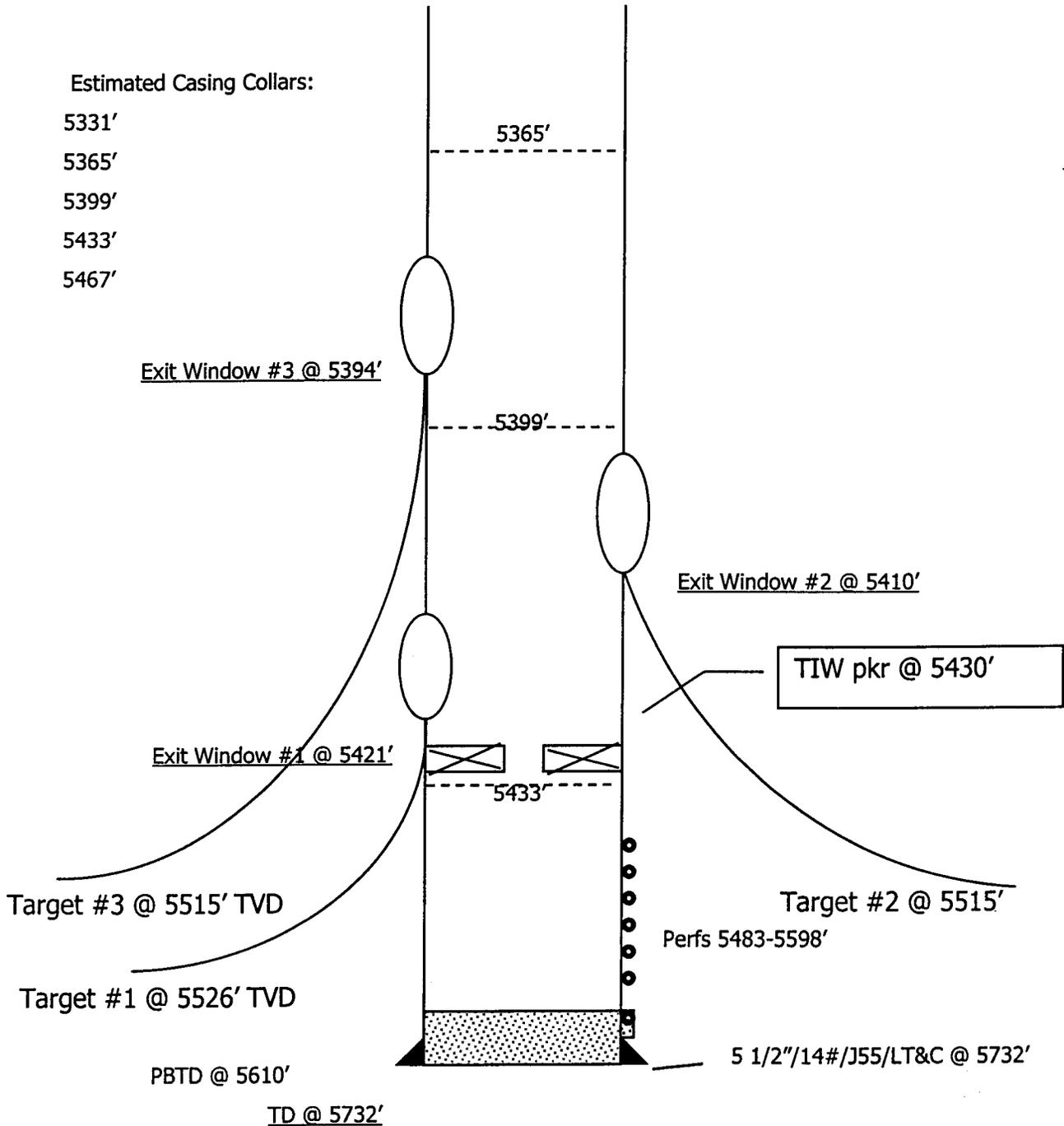
LAT 6-17-96

R.U. #17-4

Ratherford Unit #17-44

Estimated Casing Collars:

- 5331'
- 5365'
- 5399'
- 5433'
- 5467'



Window	Btm-Top of Window	Ext length	Curve Radius	Bearing	Horiz Displ
1	5421-15	-----	105	310	1200
2	5410-04	11	105	135	1600
3	5394-88	27	121	300	1200

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.

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 03/30/98

API NO. ASSIGNED: 43-037-15732

WELL NAME: RATHERFORD 17-44 (MULTI-LEG)
 OPERATOR: MOBIL EXPLOR & PROD (N7370)
 CONTACT: _____

PROPOSED LOCATION:
 SESE 17 - T41S - R24E
 SURFACE: 0660-FSL-0660-FEL
 BOTTOM: ~~0912-FNL-0590-FWL~~ (Multi-lateral)
 SAN JUAN COUNTY
 GREATER ANETH FIELD (365)

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

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

PROPOSED FORMATION: DSCR

RECEIVED AND/OR REVIEWED:

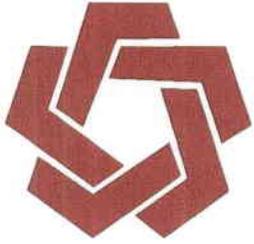
Plat
 Bond: Federal [State [] Fee []
 (No. ALREADY BONDED)
 Potash (Y/N)
 Oil Shale (Y/N) *190-5(B)
 Water Permit
 (No. NAVAJO ALLOCATION)
 RDCC Review (Y/N)
 (Date: _____)
 _____ St/Fee Surf Agreement (Y/N)

LOCATION AND SITING:

R649-2-3. Unit RATHERFORD
 _____ R649-3-2. General
 _____ R649-3-3. Exception
 _____ Drilling Unit
 Board Cause No: _____
 Date: _____

COMMENTS: _____

STIPULATIONS: ① FEDERAL APPROVAL
② DIRECTIONAL DRILLING



DIVISION OF OIL, GAS & MINING

OPERATOR: MOBIL PRODUCING (N7370)
FIELD: GREATER ANETH (365)
SEC. 17, TWP. 41S, RNG. 24E,
COUNTY: SAN JUAN UAC: R649-2-3 RATHERFORD UNIT



DATE PREPARED:
9-APR-1998

```

04/09/98          D E T A I L   W E L L   D A T A          menu: opt 00
api num:  4303715732      prod zone: DSCR          sec   twnshp   range   qr-qr
entity:   6280   : RATHERFORD UNIT                17   41.0 S   24.0 E   SESE
well name: #17-44
operator:  N7370 : MOBIL EXPLOR & PROD            meridian: S
field:     365   : GREATER ANETH
confidential flag: confidential expires:          alt addr flag:
      * * * application to drill, deepen, or plug back * * *
lease number: INDIAN          lease type: 2          well type:      OW
surface loc:  0660 FSL 0660 FEL  unit name: RATHERFORD
prod zone loc: 0660 FSL 0660 FEL  depth:          5800      proposed zone: DSCR
elevation:    4731' DF          apd date:        590805  auth code:
* * completion information * *  date recd:          la/pa date:
spud date:    591013          compl date: 591103  total depth: 5732'
producing intervals: 5510-5610'
bottom hole:  0660 FSL 0660 FEL  first prod: 591119  well status:   POW
24hr oil: 891    24hr gas:          24hr water:          gas/oil ratio:
      * * well comments:          directionl:          api gravity:
(14-20-603-353):591127 CONV WIW;INJ 787BW;14 HRS;100#:650628 APPRV INT PB:
931006 OPER FR PHILLIPS EFF 7/93:950803 OPER NM FR MEPNA:961210 1995 CUM BASE
ADJ:
opt: 21 api: 4303715732 zone:          date (yymm):          enty          acct: N9890

```



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

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
Lowell P. Braxton
Division Director

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)

April 23, 1998

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

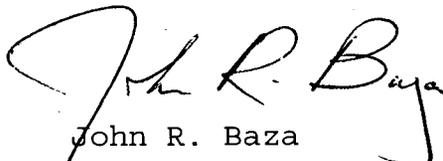
Re: Ratherford 17-44 (Re-Entry), 0660' FSL, 0660' FEL, SE SE,
Sec. 17, T. 41 S., R. 24 E., San Juan County, Utah

Gentlemen:

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

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-037-15732.

Sincerely,


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 17-44 (Re-Entry)
API Number: 43-037-15732
Lease: 14-20-603-353
Location: SE SE Sec. 17 T. 41 S. R. 24 E.

Conditions of Approval

1. General

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

2. Notification Requirements

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

Notify the Division prior to commencing operations to plug and abandon the well. Contact Dan Jarvis at (801) 538-5338 or John R. Baza at (801)538-5334.

3. Reporting Requirements

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

4. 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.

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Company: MOBIL E & P

Well Name: RATHERFORD 17-44 (RE-ENTRY)

Api No. 43-037-15732

Section 17 Township 41S Range 24E County SAN JUAN

Drilling Contractor BIG "A"

Rig # 25

SPUDDED:

Date 7/1/98

Time _____

How ROTARY

Drilling will commence _____

Reported by BENNY

Telephone # _____

Date: 7/1/98 Signed: JLT

✓



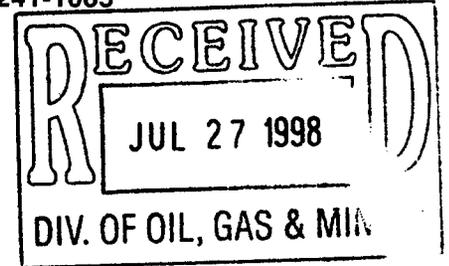
ROCKY MOUNTAIN GEO-ENGINEERING

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



Tuesday, July 21, 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 #17-44 Legs 1, 2 **43037 13732**
Sec. 17, T41S, R24E **DRL (RE-ENTRY)**
San Juan County, Utah

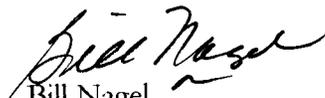
Dear Sirs:

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

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

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

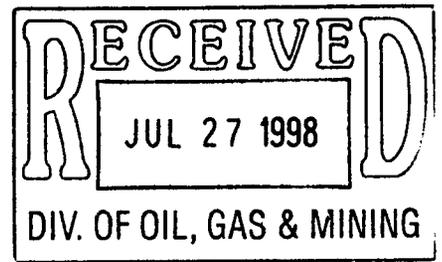
Sincerely,


Bill Nagel
Senior Geologist

BN/dn

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

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



MOBIL

**RATHERFORD UNIT #17-44
NW HORIZONTAL LATERAL LEG #1
UPPER 1-A POROSITY BENCH
DESERT CREEK MEMBER
PARADOX FORMATION
SECTION 17, T41S, R24E
SAN JUAN, UTAH**

**GEOLOGY REPORT
by
DAVE MEADE & MARVIN ROANHORSE
ROCKY MOUNTAIN GEO-ENGINEERING CORP.
GRAND JUNCTION, COLORADO
(970) 243-3044**

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WELL SUMMARY

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

NAME: RATHERFORD UNIT #17-44 NW HORIZONTAL LATERAL
LEG #1 IN 1-A UPPER POROSITY BENCH, DESERT CREEK

LOCATION: SECTION 17, T41S, R24E

COUNTY/STATE: SAN JUAN, UTAH

ELEVATION: KB:4733' GL:4722'

SPUD DATE: 7/02/98

COMPLETION DATE: 7/06/98

DRILLING ENGINEER: SIMON BARRERA / BENNY BRIGGS

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 5416' MEASURED DEPTH

DRILLING MUD: M-I
ENGINEER: DANE BEASON/RON WESTENBERGE
MUD TYPE: FRESH WATER & BRINE WATER W/ POLYMER SWEEPS

DIRECTIONAL DRILLING CO: SPERRY-SUN

ELECTICAL LOGGING: NA

TOTAL DEPTH: 6636' MEASURED DEPTH; TRUE VERTICAL DEPTH-5511'

STATUS: TOH & LAY DOWN TOOLS - PREPARE WELL FOR SE LEG #2

DRILLING CHRONOLOGY
RATHERFORD UNIT #17-44
1-A NW HORIZONTAL LATERAL LEG #1

DATE	DEPTH	DAILY	ACTIVITY
7/1/98	5410'	0'	RIG DOWN & MOVE RIG TO R.U. 17-44 LOC.-RIG UP-NIPPLE UP-PRESSURE BOP & SUPER CHOKE-TEST BOP-RIG UP
7/2/98	5410'	0'	RIG UP-P.U. DRL CLRS OFF RACK & STRAP-REPAIR HYDRAULIC HOSE-TIH-LEVEL DERRICK & RIG-STRAP DRL PIPE, P.U. & TIH-LATCH ON TO BRIDGE PLUG-TOOH-L.D. BRIDGE PLUG- CUT 60' DRL LINE-R.U. SCHLUMBERGER WIRELINE-RUN IN & SET PACKER W/WIRE LINE-RIG DOWN SCHLUMBERGER-TIH W/ANCHOR LATCH & UBHO-STING IN TO PACKER W/ LATCH ASSM.-RIG UP GYRO DATA
7/3/98	5442'	3'	RUN GYRO TO BTM-PULL GYRO & R.D.-PUMP TWO 25 BBL MEGAFIBER SWEEPS (NO RETURNS)-WAIT ON LCM & MIX LCM SLUG-MIX & PUMP 60 BBL LCM-TOH & L.D. ANCHOR LATCH ASSEMBLY-M. U. WHIPSTOCK & ORIENT-TIH W/WHIPSTOCK & SET @ 5410',-SHEAR OFF @ 15K-P.U. SWIVEL & BREAK CIRC.-MILL W/STARTER MILL 5409'-5411'
7/4/98	5413'	69'	MILL WINDOW-5413'-5417'-PUMP SWEEP & CIR OUT-L.D. 13 JNTS AOH-TOH-L.D. MILLS-P.U. CURVE ASSEMBLY & TEST MWD & MUD MTR- TIH-REPAIR DRUM CLUTCH LINE-TIH-CIR & CLEAN PIPE- RIG UP GYRODATA & RUN GYRO-TIME DRLG FROM 5417'-5421'- DIR DRLG W/WIRELINE SURVEYS FROM 5421'-5447'-PULL GYRO,L.D. 1 BAD JNT AOH & PUP JNT-DIR DRLG & SURVEYS TO 5482'
7/5/98	5482'	384'	DIR DRLG & SURVEYS-PUMP SWEEP & CIR OUT SPLS @ 5572' (TD OF CURVE)-L.D. 13 JTS AOH PIPE-TOH-L.D. CURVE ASSEMBLY-P.U. LATERAL BHA W/BIT #2 & TEST MWD / MUD MOTOR-TIH-P.U. 44 JNTS PH6 - TIH W/ LATERAL ASSEMBLY-PICK UP 50 JTS PH6-CIR BTMS UP-DIR DRLG & SURVEYS
7/6/98	5866'	770'	DIR DRLG & SURVEYS TO 6636'-PUMP SWEEP & CIR OUT SPLS-TOH-L.D. LATERAL ASSEMBLY-P.U. RETRIEVING HOOK-TIH-LATCH INTO & RETRIEVE WHIPSTOCK-TOH
7/17/98	6636'	TD	SEE LEG #2 GEO-REPORT

DAILY ACTIVITY

Operator: MOBIL
Well Name: RATHERFORD UNIT #17-44 NW 1-A HORIZONTAL LATERAL LEG #1

DATE	DEPTH	DAILY	DATE	DEPTH	DAILY
7/1/98	5410'	0'			
7/2/98	5410'	0'			
7/3/98	5410'	3'			
7/4/98	5413'	69'			
7/5/98	5482'	384'			
7/6/98	5866'	770'			
7/7/98	6636'	TD			

BIT RECORD

OPERATOR: MOBIL
WELL NAME: RATHERFORD UNIT #17-44 NW 1-A HORIZONTAL LATERAL LEG #1

RUN	SIZE	MAKE	TYPE	IN/OUT	FTG	HRS	FT/HR
#1	4 3/4"	STC	MF-3P	5417'/	155'	20	7.8
(RR)				5572'			
#2	4 3/4"	STC	MF-15GP	5572'/	1064'	19.5	54.6
				6636'			

MUD REPORT

OPERATOR: MOBIL
WELL NAME: RATHERFORD UNIT #17-44 NW 1-A HORIZONTAL LATERAL LEG #1

DATE	DEPT H	WT	VIS	PLS	YLD	GEL	PH	WL	CK	CHL	CA	SD	OIL	WTR
7/01/98	0'	NO	CHECK	-	-	-	-	-	-	-	-	-	-	-
7/02/98	5410'	NO	CHECK	-	-	-	-	-	-	-	-	-	-	-
7/03/98	5410'	NO	CHECK	-	-	-	-	-	-	-	-	-	-	-
7/04/98	5420'	8.4	26	1	0	0/0	7.2	NC	NC	1300	80	-	0%	100%
7/05/98	5572'	8.4	26	1	0	0/0	7.2	NC	NC	1800	120	-	0%	100%
7/06/98	5690'	8.4	26	1	0	0/0	11.7	NC	NC	2600	80	-	0%	100%

SPERRY-SUN DRILLING SERVICES
SURVEY DATA

Customer ... : Mobil (Utah)
Platform ... : RATHERFORD UNIT
Slot/Well .. : BA25/17-44, 1A1

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	TVD	NORTHINGS FEET	EASTINGS FEET	VERTICAL SECTION	DOG LEG
5400.00	0.48	72.15	5399.40	44.88 N	11.32 W	32.24	0.00
5410.00	0.38	65.06	5409.40	44.91 N	11.25 W	32.20	1.13
5417.00	4.20	300.00	5416.39	45.05 N	11.45 W	32.44	63.27
5427.00	9.80	313.21	5426.32	45.81 N	12.39 W	33.64	57.90
5437.00	16.70	316.43	5436.04	47.44 N	14.00 W	35.85	69.37
5447.00	24.00	317.90	5445.41	49.99 N	16.36 W	39.16	73.17
5457.00	30.60	318.80	5454.29	53.42 N	19.40 W	43.51	66.13
5467.00	36.20	316.60	5462.64	57.48 N	23.11 W	48.76	57.29
5477.00	37.10	306.50	5470.67	61.43 N	27.57 W	54.59	60.90
5487.00	41.40	308.30	5478.41	65.27 N	32.59 W	60.86	44.48
5497.00	48.70	307.30	5485.47	69.60 N	38.18 W	67.87	73.34
5507.00	56.40	306.10	5491.55	74.34 N	44.54 W	75.75	77.58
5517.00	62.50	304.10	5496.63	79.29 N	51.59 W	84.32	63.38
5527.00	66.80	299.60	5500.91	84.05 N	59.26 W	93.35	59.17
5537.00	70.40	304.50	5504.56	88.99 N	67.15 W	102.65	58.10
5547.00	76.80	305.50	5507.38	94.49 N	75.00 W	112.20	64.71
5572.00	91.80	304.30	5509.86	108.68 N	95.35 W	136.91	60.19
5611.00	89.80	300.10	5509.31	129.45 N	128.34 W	175.87	11.93
5642.00	90.30	303.40	5509.29	145.76 N	154.69 W	206.85	10.77
5673.00	90.90	300.80	5508.96	162.23 N	180.95 W	237.83	8.61
5705.00	89.40	299.90	5508.88	178.40 N	208.57 W	269.82	5.47
5737.00	88.30	299.40	5509.52	194.23 N	236.37 W	301.82	3.78
5768.00	88.60	299.40	5510.36	209.44 N	263.37 W	332.80	0.97
5799.00	90.70	299.60	5510.55	224.71 N	290.35 W	363.80	6.80
5831.00	91.90	299.60	5509.82	240.51 N	318.16 W	395.79	3.75
5863.00	90.00	298.70	5509.29	256.09 N	346.10 W	427.78	6.57
5895.00	89.70	298.40	5509.38	271.39 N	374.21 W	459.77	1.33
5926.00	90.80	298.50	5509.24	286.15 N	401.47 W	490.76	3.56
5958.00	90.40	298.50	5508.91	301.42 N	429.59 W	522.74	1.25
5990.00	90.10	298.40	5508.77	316.67 N	457.72 W	554.73	0.99
6022.00	89.90	299.10	5508.77	332.06 N	485.78 W	586.73	2.28
6054.00	85.80	299.40	5509.97	347.68 N	513.67 W	618.69	12.85
6085.00	87.00	300.10	5511.91	363.03 N	540.53 W	649.63	4.48
6116.00	87.10	300.60	5513.51	378.67 N	567.25 W	680.59	1.64
6148.00	88.70	301.20	5514.68	395.10 N	594.69 W	712.56	5.34
6180.00	91.10	301.20	5514.74	411.67 N	622.06 W	744.55	7.50
6211.00	91.80	301.20	5513.95	427.72 N	648.57 W	775.54	2.26
6243.00	90.90	300.60	5513.20	444.15 N	676.02 W	807.52	3.38

SPERRY-SUN DRILLING SERVICES
SURVEY DATA

Customer ... : Mobil (Utah)
Platform ... : RATHERFORD UNIT
Slot/Well .. : BA25/17-44, 1A1

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	TVD	NORTHINGS FEET	EASTINGS FEET	VERTICAL SECTION	DOG LEG
6275.00	89.00	299.40	5513.23	460.15 N	703.73 W	839.52	7.02
6307.00	89.30	299.60	5513.70	475.91 N	731.57 W	871.52	1.13
6338.00	89.60	299.10	5514.00	491.10 N	758.59 W	902.51	1.88
6370.00	89.70	298.40	5514.19	506.49 N	786.65 W	934.50	2.21
6402.00	88.90	298.00	5514.58	521.61 N	814.85 W	966.49	2.80
6434.00	90.40	297.70	5514.78	536.56 N	843.14 W	998.46	4.78
6466.00	92.10	298.00	5514.08	551.51 N	871.43 W	1030.43	5.39
6496.00	92.30	297.70	5512.93	565.51 N	897.93 W	1060.39	1.20
6528.00	91.30	297.80	5511.92	580.40 N	926.24 W	1092.35	3.14
6560.00	90.50	297.50	5511.42	595.25 N	954.58 W	1124.31	2.67
6601.00	90.40	297.30	5511.10	614.12 N	990.98 W	1165.27	0.55
6636.00	90.40	297.30	5510.86	630.17 N	1022.08 W	1200.23	0.00

THE DOGLEG SEVERITY IS IN DEGREES PER 100.00 FEET.
N/E COORDINATE VALUES GIVEN RELATIVE TO WELL HEAD.
TVD COORDINATE VALUES GIVEN RELATIVE TO WELL HEAD.
THE VERTICAL SECTION ORIGIN IS WELL HEAD.
THE VERTICAL SECTION WAS COMPUTED ALONG 300.00 (TRUE).
CALCULATION METHOD: MINIMUM CURVATURE.

LAST SURVEY PROJECTED TO THE BIT.

SAMPLE DESCRIPTIONS

OPERATOR: MOBIL

WELL NAME: RATHERFORD UNIT #17-44 NW 1-A HORIZONTAL LATERAL

DEPTH	LITHOLOGY
5417.00 5430.00	"LS dk-mbrngy, brn-dkbrn, ltgy, occ ltbrn, crpxl-micxl, dns, sl shy/tr chky-v sl slty-mrly prtgs, scat dkbrn-brnblk CHT, tt-tr intxl POR, NFSOC"
5430.00 5440.00	"LS brn-ltbrn, ltgybrn-ltgy, tr dkbrn-brnblk, crpxl-micxl, dns-occ shy ip, tr prtgs AA/rr sl carb arg shy frag-occ grd to carb lmy SH, CHT AA, tt-tr intxl POR, NFSOC"
5440.00 5450.00	"LS AA, crpxl-micxl, dns-occ shy ip, rr prtgs AA, v rr sl carb arg shy frag-occ grd to carb lmy SH, tr CHT AA, tt-tr intxl POR, NFSOC"
5450.00 5460.00	"LS mbrn, m-ltgybrn, occ ltbrn, ltgy, tr dkbrn-brnblk, rr wh, crpxl-micxl, dns-occ rthy, tr chky-sl anhy-sl mrly prtgs, v rr sl carb arg shy frag grd to SH AA, tr CHT AA, tt-tr intxl POR, rr v dull orng mnrl FLOR, NSOC"
5460.00 5470.00	"LS AA, crpxl-micxl, dns-occ rthy, tr chky-sl anhy-mrly prtgs, v rr sl carb-arg shy frag grd to lmy SH, tr CHT AA, POR-FLOR AA, NSOC"
5470.00 5480.00	"LS AA, dns-occ rthy, tr prtgs AA, rr sl carb arg shy frag grd to SH AA, tr CHT AA, tt-tr intxl POR, NFSOC"
5480.00 5490.00	"LS tan-ltbrngy-off wh, occ brn, ltgy, crpxl-micxl, chky-sl anhy, dns/tr slty-sl sdy strk grd to vf gr SS/lmy mtx, tr mic fos, rr SH & CHT AA, POR AA, NFSOC"
5490.00 5500.00	"DOL ltbrn-tan/tr crm-off wh strk, tr brn, mgybrn, crpxl-micxl-occ micsuc tex, dns-rthy, sl chky/tr chky-anhy prtgs, sl arg, rr xln ANHY, f-mg intxl/rr pp vug POR, g even mod bri yel FLOR, fr ltbrn-rr brn STN, g dif/tr slow stmg mlky CUT"
5500.00 5510.00	"LS wh-tan-ltbrn, crpxl-micxl, cln-dns, occ rthy, v sl dol, arg-mrly ip, w/thn brn crpxl-micxl DOL intbds, v sl anhy, tt-tr intxl POR, rr spty dull-bri yel FLOR, n-v rr spty STN, n-v p slow dif CUT"
5510.00 5520.00	"SH dkgy-blk, sbblky-sbplty, sl slty-rthy, mica, calc-dol, carb-sooty, w/v rr scat LS-DOL lams"
5520.00 5540.00	"SH AA, w/scat sl mrly LS & DOL frag, bcmg pred LS PKST-crm-tan-ltbrn, occ gybrn, crpxl-micxl, dns-cln, rr brn CHT frag, sl arg-sl slty, dol, occ chky, w/thn brn-gybrn micxl tt DOL incl, n vis POR-FLOR-STN-CUT"
5540.00 5550.00	"LS PKST AA, w/v rr dns sl mrly DOL frag & v thn blk carb SH lams, bcmg pred crm-tan, ltbrn-brn micxl-vfxl, gran-micsuc, ooc-oom v sl alg GRNST, w/tr-mg intxl-ool-rr alg POR, n-mg dull-bri yel FLOR, tr spty ltbrn-brn STN, n-slow-occ mod fast stmg CUT"

DEPTH	LITHOLOGY
5550.00 5572.00	"LS tan-ltbrn,crm-brn-rr wh ip crpxl-vfxl,gran-micsuc,oom-oom v sl alg GRNST,scat ANHY xl-trnsl-gy CHT frag,occ dol-DOL rich cmt,rr SH lams,fr-mg intxl-ool-rr alg POR,tr-fr dull-bri yel FLOR,tr spty ltbrn-brn-rr blk STN,mfr-g mod fast stmg mlky CUT"
5572.00 5600.00	"LS AA,gran-vfxl-micsuc,tr crpxl,GRNST AA/scat dns PCKST,sl chky-anhy/tr POR fl-rr xl ANHY,tr crm-tan-ltbrn CHT,sl dol,POR AA,g even mod bri-bri yel FLOR,fr-g ltbrn-tr brn-rr blk STN,g mod fast-fast stmg mlky CUT"
5600.00 5620.00	"LS ltbrn,occ tan-crm,brn,gran-vfxl-micsuc,tr crpxl,oom-oom GRNST/tr intbd-scat dns sl ool PCKST,rr chky plty prtgs,sl anhy/tr xln ANHY-POR fl,intbd/tan CHT,g oom-oom/tr pp vug POR,g even bri-mod bri yel FLOR,g ltbrn-brn/incr scat blk dd o STN,CUT AA"
5620.00 5650.00	"LS brn,occ ltbrn-tan,tr crm incl,rr off wh-ltgy,gran-vfxl-micsuc,rr crpxl,oom-ool GRNST,rr intbd-scat dns sl ool PCKST,sl chky-anhy/tr POR fl-v rr xln ANHY,v rr CHT AA,sl dol strk,POR AA,g mod bri-spty bri yel FLOR,g brn-ltbrn/tr blk dd o STN, g fast stmg mlky-sl blooming CUT"
5650.00 5660.00	"LS ltbrn,occ tan-crm,brn,AA,oom-oom GRNST/tr intbd-scat PCKST AA,rr chky plty prtgs,sl anhy/tr xln ANHY-POR fl,rr tan CHT,POR AA,g even bri-mod bri yel FLOR,g ltbrn-brn/tr scat blk dd o STN,CUT AA"
5660.00 5680.00	"LS AA,gran-vfxl-micsuc,tr crpxl,oom-oom GRNST/tr intbd-scat dns sl ool PCKST,rr chky-sl anhy prtgs-incl,tr xln ANHY-POR fl,rr intbd tan CHT,g oom-oom/rr pp vug POR,g even mod bri-bri yel FLOR,g ltbrn-brn/sl incr scat blk dd o STN,g fast-tr mod fast stmg mlky CUT "
5680.00 5700.00	"LS ltbrn-brn/occ crm incl,tr tan,gran-vfxl-micsuc,tr crpxl,oom-oom GRNST/tr intbd-scat PCKST AA,rr wh chky-sl anhy prtgs/tr xln ANHY-POR fl,rr tan CHT,g oom-oom/rr pp vug POR,FLOR AA,g ltbrn-brn/tr scat blk dd o STN,g mod fast-fast stmg mlky CUT"
5700.00 5720.00	"LS ltbrn-tan/tr crm incl,occ brn,AA,oom-oom GRNST/tr intbd-scat dns sl ool PCKST,tr wh-ltgy chky plty prtgs-frag,sl anhy/tr xln ANHY-POR fl,sl incr intbd CHT AA,g oom-oom/tr pp vug POR,g even mod bri-bri yel FLOR,g ltbrn-brn/tr blk dd o STN,CUT AA"
5720.00 5740.00	"LS AA,oom-oom GRNST/sl incr intbd-scat dns sl ool PCKST,sl chky-anhy/rr prtgs-frag,tr xln ANHY-POR fl,rr intbd tan-crm CHT,g oom-oom/tr intxl POR,FLOR AA,g ltbrn-brn/tr blk dd o STN,g mod fast fast stmg mlky CUT"
5740.00 5760.00	"LS ltbrn-tan-crm,tr brn,gran-vfxl-micsuc,occ micxl-crpxl,oom-oom GRNST/tr intbd-scat dns sl ool PCKST,chky-sl anhy/rr wh chky prtgs-frag,sl anhy/tr xln ANHY-POR fl,rr intbd CHT AA,POR-FLOR AA,fr-g ltbrn/tr brn & blk dd o STN,g fast stmg mlky CUT"

DEPTH	LITHOLOGY
5760.00 5780.00	"LS AA,pred ool-oom GRNST occ dns ip,sl incr scat-intbd dns sl ool PCKST/occ gran tex,bcmg chky-sl anhy/tr POR fl-xln ANHY,rr crm-off wh CHT/rr ool incl,rr chky prtgs,fr-g oom-ool/tr intxl POR,g mod bri/scat bri yel FLOR,g-fr ltbrn/scat blk dd o STN,g-fr fast-mod fast stmg mlky CUT"
5780.00 5800.00	"LS tan-crm,occ ltbrn,rr brn,vfxl-gran,micxl-crppl,sl micsuc,pred ool-oom GRNST,sl incr scat-intbd dns sl ool PCKST,chky-sl anhy/sl incr POR fl-tr xln ANHY,tr rhmb xln CALC,v sl dol ip,fr-g ool-sl oom/tr intxl POR,g-fr dull-mod bri/tr scat bri yel FLOR,STN AA,fr-g mod fast dif/tr slow stmg mlky CUT"
5800.00 5830.00	"LS AA,vfxl-gran,micxl-crppl,sl micsuc,pred ool-sl oom GRNST,scat-intbd dns sl ool PCKST,incr chky-sl anhy/POR fl-tr xln ANHY,tr rhmb xln CALC,tr crm-tan CHT incl,sl dol ip,fr-g ool-sl oom/tr intxl POR,g-fr dull-mod bri/rr scat bri yel FLOR,fr ltbrn/rr brn STN,tr scat spty blk dd o STN,g mod fast-tr fast stmg mlky CUT"
5830.00 5850.00	"LS tan-ltbrn-crm,tr brn,wh,vfxl-gran-sl micsuc,micxl-crppl,pred GRNST AA,tr scat-intbd dns sl ool PCKST/occ gran tex,chky-sl anhy/POR fl-tr xln ANHY-plty prtgs,tr CHT AA,rr CALC AA,sl dol ip,POR-FLOR-STN AA,g mod fast stmg mlky CUT"
5850.00 5870.00	"LS AA,vfxl-gran-micxl,crppl,sl micsuc,pred ool-sl oom GRNST,sl incr scat-intbd dns sl ool-sl dol PCKST/occ gran tex,chky-sl anhy/POR fl-tr xln ANHY & prtgs,tr CHT AA,tr CALC AA,fr-mg ool-sl oom/tr intxl POR,FLOR AA,fr-mg ltbrn/tr brn-rr blk STN,CUT AA"
5870.00 5890.00	"LS AA,pred ool-sl oom GRNST,scat-intbd dns sl ool PCKST-occ sl dol ip,chky-sl anhy/POR fl-tr xln ANHY,tr wh chky prtgs,sl incr tan-crm CHT,tr rhmb xl CALC,mg-fr ool-sl oom/tr intxl POR,g dull-mod bri/scat bri yel FLOR,mg ltbrn-tr brn-blk STN,CUT AA"
5890.00 5910.00	"LS tan-ltbrn-crm,tr brn,wh,vfxl-gran-sl micsuc,micxl-crppl,pred GRNST AA,scat-intbd dns sl ool-sl dol PCKST/occ gran tex,chky-sl anhy/POR fl-tr xln ANHY-plty prtgs,tr CHT AA,rr CALC AA,POR-FLOR-STN AA,g mod fast-slow stmg mlky CUT"
5910.00 5930.00	"LS AA,vfxl-gran-micxl,incr crppl,sl micsuc ip,pred GRNST AA/incr scat-intbd dns ool-agl mat PCKST-sl dol ip,chky-sl anhy/POR fl-tr xln ANHY,rr chky prtgs,CHT AA,fr-mg ool/tr intxl POR-occ tt,FLOR AA,g mod fast stmg mlky CUT"
5930.00 5950.00	"LS ltbrn,occ tan-crm,brn,vfxl-gran-sl micsuc,crppl,oom-oom GRNST/tr intbd-scat PCKST AA,sl-occ v chk/v rr plty prtgs,sl anhy/tr xln ANHY-POR fl,CHT AA,POR AA,g evenmod bri-spty bri yel FLOR,g brn-ltbrn/tr blk dd o STN,g fast-sl blooming mlky CUT"

DEPTH	LITHOLOGY
5950.00 5960.00	"LS ltbrn-tan,occ brn,crm ip,AA,pred ool-sl ooc GRNST/intbd-scat dns sl ool/tr agl mat PCKST-occ sl dol,chky AA,sl anhy/tr xln ANHY-POR fl,tr crm-tan CHT,v rr xl CALC,mg ool-sl oom/rr pp vug POR,FLOR-STN AA,g fast stmg-sl blooming mlky CUT"
5960.00 5980.00	"LS AA,pred ool-sl oom GRNST/intbd-scat dns sl ool/tr agl mat PCKST-occ sl dol,chky AA,sl anhy/tr xln ANHY-POR fl,tr crm-tan CHT,v rr xl CALC,mg ool-sl oom/rr pp vug POR,FLOR-STN-CUT AA"
5980.00 6000.00	"LS tan-ltbrn,rr crm-wh,crpxl-vfvl,gran-micsuc ip,pred ooc-oom v sl alg GRNST,w/thn sl ool dns chy-plty ip PKST stks,occ DOL rich cmt,rr scat ltbrn CHT frag,occ ANHY xl,tr-g ool-intxl-rr alg POR,mg bri yel FLOR,fr-mg ltbrn-rr blk STN,mg mod fast CUT"
6000.00 6010.00	"LS AA,decr sl ool dns PKST frag,pred ooc-oom v sl alg GRNST AA,POR-FLOR-STN-CUT AA"
6010.00 6030.00	"LS pred tan-brn ooc-oom GRNST AA,v rr scat PKST AA,w/g ool-intxl POR,v rr alg POR,fr-g yel FLOR,fr-mg ltbrn STN,rr-tr spty blk dd o STN,fr-mg mod fast-fast stmg CUT"
6030.00 6050.00	"LS tan-ltbrn,rr crm-wh,crpxl-vfvl,gran-micsuc ip,pred ooc-oom v sl alg GRNST,w/thn sl ool dns chy-plty ip PKST stks,occ DOL rich cmt,rr scat ltbrn CHT frag,occ ANHY xl,tr-g ool-intxl-rr alg POR,mg bri yel FLOR,fr-mg ltbrn-rr blk STN,mg mod fast CUT"
6050.00 6070.00	"LS AA,pred ooc-oom sl alg GRNST,v rr scat sl ool dns PKST,fr-mg intxl-ool POR,fr-mg dull-bri yel FLOR,fr-mg ltbrn STN-tr-fr blk dd o STN,fr-mg mod fast-fast stmg mlky CUT"
6070.00 6090.00	"LS AA,v sl incr PKST frag-sl incr ANHY xl & trnsl CHT frag,v sl decr POR,FLOR-STN-CUT AA"
6090.00 6110.00	"LS tan-ltbrn,rr crm-wh,crpxl-vfvl,gran-micsuc ip,pred ooc-oom v sl alg GRNST,w/thn sl ool dns chy-plty ip PKST stks,occ DOL cmt,rr scat ltbrn CHT & trnsl ANHY xl,fr-g ool-intxl- v rr alg POR,fr bri yel FLOR,fr ltbrn-tr blk STN,mg mod fast-fast CUT"
6110.00 6140.00	"LS AA,micxl-vfvl,gran-micsuc-occ v sl suc,pred ooc-oom v sl alg GRNST,w/v rr v sl ool dns occ plty-chk PKST frag,fr-mg ool-intxl-v sl alg POR,mg bri-rr dull FLOR,fr-mg ltbrn STN-mfr blk dd o STN,fr-mg fast-mod fast stmg mlky CUT"
6140.00 6180.00	"LS pred ooc-oom-v sl alg GRNST,w/v sl incr scat sl ool occ chk-plty PKST frag,m-vg ool-intxl-v sl alg POR,FLOR-STN-CUT AA"
6180.00 6210.00	"LS tan-ltbrn-crm,v rr wh,micrpxl-vfvl,gran-micsuc ip,pred ooc-oom v sl alg GRNST,w/v rr sl ool crpxl chy-plty ip PKST frag,occ DOL cmt,v rr ltbrn CHT,tr trnsl ANHY xl,fr-g ool-intxl-v rr alg POR,fr bri yel FLOR,fr ltbrn-tr blk STN,mg mod fast-fast CUT"

DEPTH	LITHOLOGY
6210.00 6240.00	"LS AA,v g intxl-ool POR,v rr alg POR,mg bri-tr dull yel FLOR,fr-mg ltbrn-brn STN,tr-fr blk dd o STN,fr-g mod fast-fast stmg CUT"
6240.00 6250.00	"LS AA,sl decr ooc-oom GRNST,incr crm-wh crpxl dns occ plty-chk sl ool PKST,tr ANHY xl-rr-tr trns1 CHT frag,fr ool-mg intxl POR,fr bri-tr dull yel FLOR,fr ltbrn-rr blk STN,mfr-fr slow-fast stmg CUT"
6250.00 6270.00	"LS tan-ltbrn-crm,v rr wh,micrpxl-vf1x1,gran-micsuc ip,pred ooc-oom v sl alg GRNST,w/v rr sl ool crpxl chy-plty ip PKST frag,occ DOL cmt,v rr ltbrn CHT,tr trns1 ANHY xl,fr-g ool-intxl-v rr alg POR,fr bri yel FLOR,fr ltbrn-tr blk STN,mg mod fast-fast CUT"
6270.00 6290.00	"LS AA,v g intxl-ool POR,v rr alg POR,mg bri-tr dull yel FLOR,fr-mg ltbrn-brn STN,tr-fr blk dd o STN,fr-g mod fast-fast stmg CUT"
6290.00 6310.00	"LS AA,v g intxl-mfr-fr ool POR-sl tr alg POR,FLOR-STN-CUT AA"
6310.00 6330.00	"LS tan-ltbrn,occ crm-v rr wh,crpxl-vf1x1,gran-micsuc,occ suc,pred ooc-oom GRNST,v sl alg,w/rr-tr scat crpxl dns chk ip sl ool PKST,tr ANHY xl-rr CHT frag,sl dol,mfr-mg ool-fr intxl POR,fr bri-rr dull yel FLOR,fr ltbrn-tr blk STN,mfr-mg mod fast-fast CUT"
6330.00 6350.00	"LS AA,sl incr PKST frag,POR-FLOR-STN-CUT AA"
6350.00 6370.00	"LS tan-ltbrn,occ crm-v rr wh,micxl-vf1x1,gran-micsuc,occ suc,pred ooc-oom GRNST,v sl alg,w/rr scat crpxl dns chk ip sl ool PKST,tr ANHY xl-rr CHT frag,sl dol,mg intxl-fr ool POR,fr bri-tr dull yel FLOR,fr-mg ltbrn-tr blk STN,fr-mg mod fast-fast stmg CUT"
6370.00 6390.00	"LS AA,sl incr ool-alg POR,FLOR-STN-CUT AA"
6390.00 6410.00	"LS AA,fr-g intxl-ool POR,mg bri-tr dull yel FLOR,fr ltbrn-tr brn STN,tr-mfr blk dd o STN,fr-g mod fast-fast stmg mlky CUT"
6410.00 6430.00	"LS AA,v sl incr crm-wh cprxl occ rthy-chk v sl ool PKST frag,POR-FLOR-STN-CUT AA"
6430.00 6450.00	"LS tan-ltbrn,tr crm-v rr wh,crpxl-vf1x1,gran-micsuc,occ suc,pred ooc-oom GRNST,v sl alg,w/tr crpxl dns rthy-chk ip sl ool PKST frag,rr ANHY xl-vrr CHT frag,sl dol,fr-mg ool-fr intxl POR,mg bri-tr dull yel FLOR,fr ltbrn-tr blk STN,mfr-mg mod fast-fast CUT"
6450.00 6500.00	"LS tan-ltbrn-crm,crpxl-vf1x1,gran-micsuc ip,pred ooc-oom GRNST,v sl alg,w/rr-tr crpxl dns chk-rthy ip sl ool PKST,tr ANHY xl-v rr CHT frag,sl dol cmt,fr-mg ool-mfr intxl POR,mg bri-tr dull yel FLOR,fr ltbrn STN-mfr blk STN,fr-mg mod fast-fast stmg CUT"
6500.00 6540.00	"LS AA,tr scat crpxl dns chk-rthy ip sl ool PKST,tr ANHY xl-v rr CHT frag,fr-mg ool-mfr intxl-v rr alg POR,mg bri-rr dull yel FLOR,fr ltbrn STN-fr blk dd o STN,mg mod fast-fast stmg mlky CUT"

DEPTH**LITHOLOGY**

6540.00 6570.00 "LS tan-crm-ltbrn,crpxl-vfxl,occ gran-micsuc,pred ooc-oom-v
sl alg GRNST,w/dns sl ool occ sl anhy PKST,v rr scat ANHY xl-trnsl CHT
frag,occ sl DOL cmt,fr-mg ool-fr intxl POR,mg bri-tr dull yel FLOR,tr-fr
ltbrn-mfr blk STN,fr-mg mod fast-fast stmg mlky CUT"

6570.00 6600.00 "LS AA,bcmg suc ip,sl incr intxl POR-pred ool-v sl alg
POR,fr-g bri yel FLOR,fr ltbrn-rr brn STN-mfr blk dd o STN,fr-g mod fast-fast
stmg mlky CUT"

6600.00 6636.00 "LS tan-crm-ltbrn,crpxl-vfxl,occ gran-micsuc,pred ooc-oom-v
rr alg GRNST,rr dns sl ool occ sl anhy PKST,rr scat ANHY xl-v rr trnsl CHT
frag,sl DOL cmt,fr-mg ool-mfr intxl POR,mg bri-tr dull yel FLOR,fr ltbrn-mfr
blk STN,fr-g mod fast-fast stmg mlky CUT"

FORMATION TOPS

OPERATOR: MOBIL

WELL NAME: RATHERFORD UNIT #17-44 NW 1-A HORIZONTAL LATERAL LEG #1

FORMATION NAME	SAMPLES	SAMPLES	DATUM
	MEASURED DEPTH	TRUE VERTICAL DEPTH	KB:4733'
LOWER ISMAY	5444'	5443'	-710'
GOTHIC SHALE	5509'	5493'	-760'
DESERT CREEK	5526'	5500'	-767'
DC 1-A ZONE	5543'	5506'	-773'

GEOLOGICAL SUMMARY

AND

ZONES OF INTEREST

The Mobil Exploration and Production U.S., Inc., Ratherford Unit #17-44 Horizontal Lateral Leg #1 was a re-entry of the Mobil Ratherford Unit #17-44 located in Section 17, T41S, R24E, and was sidetracked in a northwesterly direction from a 5417' measured depth, 5417' true vertical depth, on July 3, 1998. The lateral reached a measured depth of 6636', true vertical depth of 5511' at total depth, with a horizontal displacement of 1200' and true vertical plane of 297.3 degrees, on July 6, 1998; in the upper Desert Creek 1-A porosity zone, when the full horizontal displacement was reached and the lateral was terminated. The curve and lateral sections were drilled with no significant problems and remained in the purposed 1-A porosity zone throughout the length of the lateral. The lateral leg was drilled with fresh water and brine water with polymer sweeps as the drilling fluid. A minor amount of oil was noted on the pits while drilling the 1-A zone in the lateral section. During the lateral section through the 1-A porosity zone, the background gases noted on the accompanying mud log, showed a marked increase when the Upper Desert Creek 1-A porosity zone was penetrated in the curve. During the lateral section, the background gas started low and increased as the lateral progressed and averaged 6600' units throughout. Minor problems occurred early in the well preparation prior to the drilling of Leg #1. The problems were leveling the rig due to the very sandy location and the lost circulation encountered while orienting the packer. Minor problems in getting gas readings were encountered due to the gas line pinched in several places at different times. The lower gas readings early in the lateral section might be attributed to the increasing amount of flushing near the vertical well bore. The samples showed moderately good to good oil shows throughout the drilling of the lateral in the 1-A zone, until reaching termination.

The objectives of the Ratherford Unit #17-44 Leg 1 horizontal lateral were to identify and define the porosity zone of the 1-A bench of the Desert Creek Member of the Upper Paradox Formation, and to evaluate porosity and reservoir properties. These objectives were accomplished and it became apparent that the 1-A zone in this lateral direction was a single predominately homogeneous unit, with only minor vertical variation. After completing the curve section of the lateral, the lateral section required minimal amounts of sliding to maintain vertical and horizontal plane direction. The borehole remained within 3 to 4 feet of the proposed target line, until near the end of the lateral where the difference became approximately 9 feet and in the 1-A porosity zone throughout its length.

The basal Upper Ismay, Lower Ismay, Gothic Shale, the transition zone at the top of the Desert Creek, and the 1-A porosity zone were encountered while drilling the curve section of the lateral. Kick off point for this lateral was 5417' measured and true vertical depth, in the dense limestones and very thin marls near the base of the Upper Ismay.

The top of the Upper Ismay was not seen while drill the curve portion of Leg #1, but was estimated to be at approximately a measured depth of 5340', true vertical depth of 5340'. The basal 27' of the Upper Ismay formation was characterized by clean to occasionally argillaceous dense limestone and scattered thin streaks of calcareous to dolomitic, dark gray to black, slightly carbonaceous shales. The limestone was brown to dark brown, occasionally light gray to dark gray brown, microcrystalline to cryptocrystalline, clean to argillaceous, some chalky to slightly marly, occasionally slightly silty and very slightly anhydritic. Scattered brown to dark brown cherts were noted in the limestones. The limestones showed no to very rare streaks of very poor intercrystalline

porosity, but had no visible sample shows. The very base of the Upper Ismay from a measured depth of 5440' to the top of the Lower Ismay at a measured depth of 5444' is a very tight and marly dolomitic limestone, grading into the very thin Hovenweep Shale marker between the Upper and Lower Ismay members. The Hovenweep Shale was extremely poorly represented in the samples in this lateral. A very minor increase in gray brown to dark gray, calcareous to slightly dolomitic, very slightly carbonaceous shales was noted in the samples from a measured depth of 5440' to 5450'.

The top of the Lower Ismay was picked at 5444' measured depth, 5443' true vertical depth, at the base of the very thin Hovenweep shale. This pick was based on the vertical well electric logs as well as a slight change in the lithology, was at the very thin Hovenweep Shale to Lower Ismay contact. The upper Lower Ismay limestones from 5444' to 5488' were predominately tan to medium brown, with some light gray brown to dark brown, microcrystalline to cryptocrystalline, clean to earthy, chalky in part, and very slightly silty. Minor amounts of chert and rare scattered microfossils were also observed. These limestone had streaks of poorly developed intercrystalline porosity, but no visible sample shows. Thinly interbedded in the limestones were rare streaks of light to dark brown, minor dolomites, which were microcrystalline, earthy to clean, with poor intercrystalline porosity, and no visible sample show. From a measured depth of 5488' to 5502', the Lower Ismay was a tan to light brown, occasionally brown to gray brown, microcrystalline to cryptocrystalline, dense, some microsucrosic texture, earthy to chalky, limy, with some streaks of anhydrite, and rare algal material. This dolomite showed some moderately good intercrystalline and rare vuggy porosity, with fair sample show, but only a slight increase in the background gas noted. The very base of the Lower Ismay from a measured depth of 5502' to the top of the Gothic Shale at a measured depth of 5509', was interbedded limestones and dolomites. The limestones are white to tan to light brown, cryptocrystalline to microcrystalline, dense, earthy to chalky, dolomitic and becoming increasingly marly with depth. The dolomites are brown to gray brown, slightly mottled, cryptocrystalline to microcrystalline, and clean to argillaceous. With depth the limestones and dolomites became increasingly shaley, and grading into calcareous to dolomitic, carbonaceous shale, and had no visible porosity or sample shows. The basal Lower Ismay limestones and dolomites lay gradationally over the Gothic Shale.

Penetration of the Gothic Shale occurred at 5509' measured depth, 5493' true vertical depth. The Gothic Shale was predominantly dark gray to black to dark gray brown, carbonaceous, silty, brittle to firm, subblocky to fissile, calcareous to slightly dolomitic and slightly micaceous, with minor silty material, and had rare dense limestone and earthy dolomite laminations. The top of the Gothic was gradational from the very thin interbedding of very argillaceous, dolomitic limestones and limy dolomites, to the very dolomitic to calcareous, carbonaceous shale. The top of the Gothic was picked predominantly by a slight decrease in penetration rate and an increase in the percentage of shale in the samples. The base of the Gothic Shale overlays the Desert Creek with a rather sharp contact.

A gradational transitional zone appears between the Gothic Shale and the top of the Desert Creek Porosity members of the Paradox Formation; and it is within this zone where the top of the Desert Creek member is commonly picked due to a very noticeable facies and penetration rate change. In this lateral leg, the top of the Desert Creek was picked at a measured depth of 5526' and at a true vertical depth of 5500'. The zone was predominately a slightly dolomitic, very dense limestone packstone, with thinly interbedded brown, limy, argillaceous, microcrystalline to cryptocrystalline dolomites and very thin carbonaceous shales. The limestones were cream to tan to brown, cryptocrystalline to microcrystalline, argillaceous, with very rare intercrystalline porosity, but only very rare, spotty, dull mineral fluorescence, with no visible stain or cut. The interbedded dolomites were microcrystalline to granular, slightly silty and had a very poor visible porosity and a very minor sample show. The very slightly oolitic, dense limestone packstones at the very base of the Desert Creek transition zone graded into the oolitic to oomoldic limestone grainstones and the thin dense limestone packstones of the 1-A porosity zone.

The top of the Desert Creek 1-A porosity zone was picked at 5543' measured depth, 5506' true vertical depth and was noted by sample identification and a significant increase in the penetration rate. The top of the 1-A porosity in this lateral was in an oolitic to oomoldic, very slightly dolomitic, occasionally anhydritic limestone grainstone with some scattered dense limestone packstone and very rare, very thin, dense limy dolomites near the top. Lithology of the 1-A porosity zone consisted of light brown to tan to medium brown to occasionally dark brown, microcrystalline to very fine crystalline, granular to microsugrosic with traces of sugrosic streaks, oolitic to oomoldic limestone grainstone. These oolitic limestones were had traces of dolomitic rich cement, slightly anhydritic to traces of crystal anhydrite inclusions and some porosity filling. Very thinly interbedded throughout the grainstones, in minor amounts were very rare scattered tan to light brown, white to cream to rare light gray brown, cryptocrystalline to microcrystalline, dense occasionally oolitic, chalky, platy, anhydritic packstones, which had no to very poor porosity and no visible sample show. The limestone grainstones had a fair to good oolitic to intercrystalline porosity, with fair to good bright to traces of dull yellow fluorescence, fair to good light brown to brown stain with traces of dark brown to black bichimum staining* and a good slow to moderately fast to fast streaming milky cut. The 1-A porosity zone was projected to be 12' (true vertical thickness) thick based on the Rutherford Unit 17-44 vertical well electric logs. Scattered in the good limestone grainstones were minor dense, slightly oolitic limestone packstones, which was seen in varying amounts throughout the section. Also noted were very rare brown to gray brown, translucent to clear chert fragments, as well as some very rare, very thin, black carbonaceous shale cavings to partings.

At a measured depth of 5572' and a true vertical depth of 5509.8' the curve was landed at an inclination of 91.8° and a horizontal displacement of 137 feet, in the 1-A porosity zone, 3' above the proposed target line. After landing curve section with in the 1-A porosity zone, on July 5, 1998; drilling of the lateral section was commenced in a northwesterly direction also on July 5th, with the well bore being slowly slid downward to reach an angle of approximately 90 degrees. The lithology of the 1-A porosity zone from the top of the zone to the landing of the curve was constant and consisted of brown to light brown to tan, oolitic to oomoldic grainstone limestones, with traces of dense to very rare chalky to platy slightly oolitic packstones. Sample shows were good to fair in the oolitic to oomoldic, intercrystalline and very slightly algal porosities.

On July 5, 1998, at the measured depth of 5572', the northwesterly lateral section in the 1-A porosity zone was commenced. The well bore was oriented downward at a very shallow angle to bring the well path level. The well path remained approximately level in the good oolitic to oomoldic limestones grainstones, with good sample shows until reaching a measured depth of 5828', true vertical depth of 5509.8', with a horizontal displacement of 390', approximately 2.5' above the proposed target line. Until this point the average angle of declination was 90 degrees. At the measured depth of 5828', to a measured depth of 6043', 5509.5 true vertical depth, with a horizontal displacement of 607', the well path began encountering some very streaky porosity and the formation began trying to bump the well path upward. This interval, near the top of the 1-A bench, was interpreted to be that the well bore was bumping and scraping along the top of a thin hard streak with in the 1-A porosity. As the well bore was slid downward through the "hard streak", a significant change in the penetration rate was noted as well as a significant increase in the quality of the porosity in the oolitic to oomoldic and slightly algal limestone grainstones. This change was noted at a measured depth of 6053', 5510' true vertical depth, and a horizontal displacement of 618'. At this point the angle of inclination dropped to 85.8 degrees.

After dropping below the presumed hard streak, the well path was allowed to slowly drop downward in 1-A porosity bench, in the very good oolitic to oomoldic, slightly algal limestone grainstones until reaching a measured depth of 6430', 5515' true vertical depth, with a horizontal displacement of 995'. At this point the angle of inclination rose to 92.1 degrees. There was a very slight change in the penetration rate, but only a very minor increase in the amount of dense limestone packstones in the samples. It was interpreted that the bit had glanced off a tight streak of packstone within the 1-A bench or possibly the base of the zone. If the base of the bench was bumped, the base

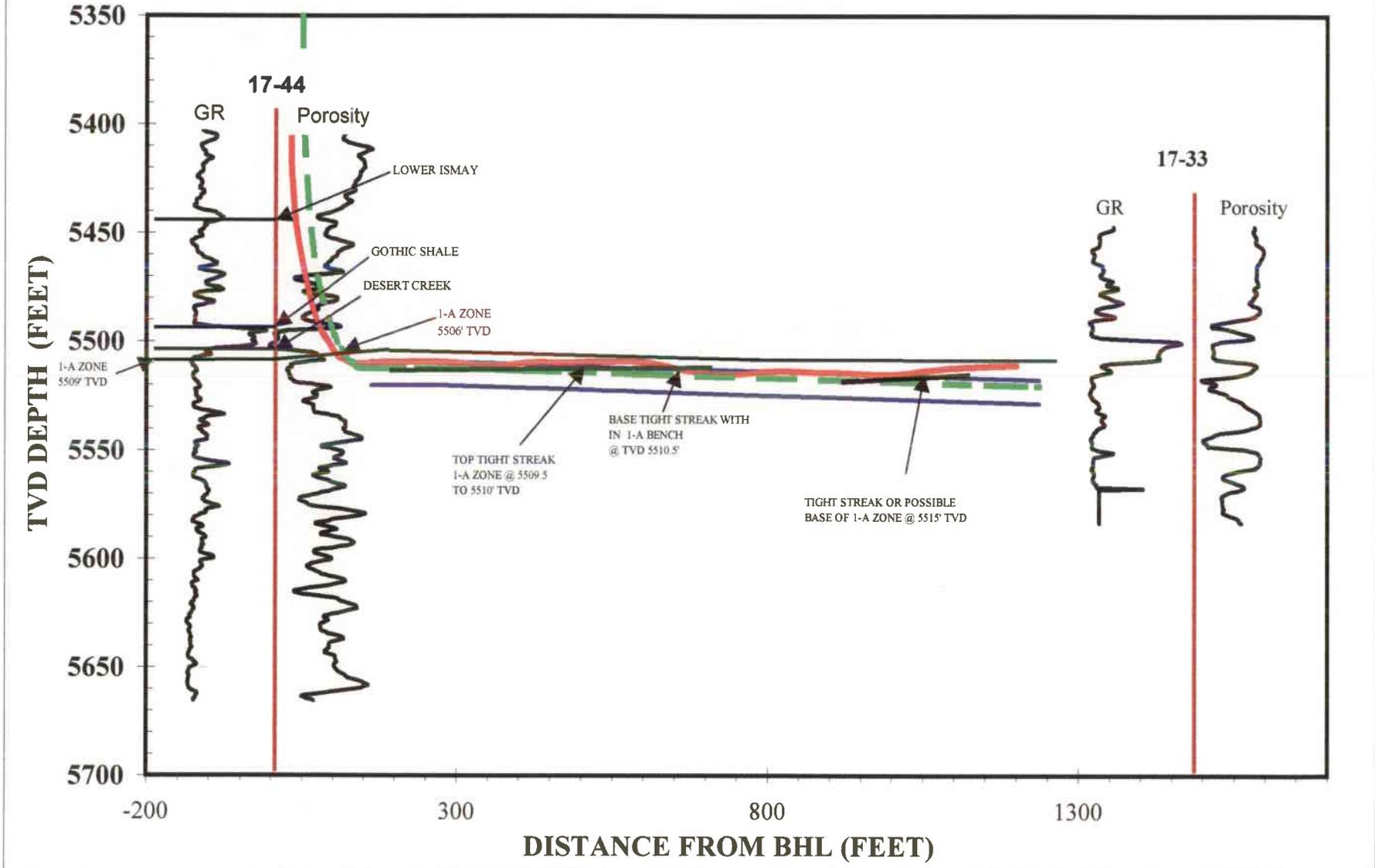
was trending slightly upward with a dip of 90.5 degrees rather than the presumed down dip of 89.5 degrees. At this time a series of short slides to control the rate of climb and to bring the well path approximately level was begun. The well path was continued in the very good oolitic to oomoldic, slightly algal limestones to the lateral's total measured depth of 6636', 5511' true vertical depth, and its maximum horizontal displacement of 1200'. At this point the Ratherford Unit 17-44 northwesterly lateral Leg #1 was terminated on July 6, 1998. The lithology throughout the interval from 6430' to 6636' measured depth, was in the tan to light brown, occasionally cream, very fine crystalline to microcrystalline, granular to microsugrosic, with varying amounts of sugrosic streaks, oolitic to oomoldic, occasionally algal, very slightly dolomitic to anhydritic limestone grainstones. The interval had minor amounts of dense, occasionally chalky to platy, slightly oolitic, very slightly anhydritic limestone packstones. Throughout this interval the sample shows remained fair to good.

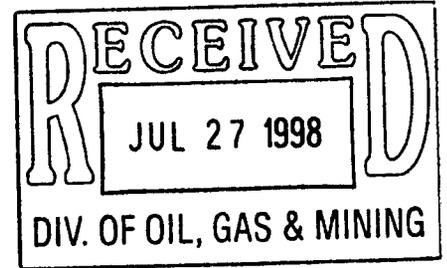
In tracking the northwesterly lateral in the 1-A porosity zone in this area, the oolitic to oomoldic limestone porosities are consistent throughout the bench, with only very minor vertical changes noted. Having a minor effect on the porosity, were the minor amounts of anhydrite filled porosity and the scattered, very thin, dense, chalky to platy slightly oolitic limestone packstones interbedded throughout the 1-A bench. As having a very minor effect were the very thin tight streak(s) encountered within the lateral. Staining was fair to good throughout, with sections having a trace to fair amount of staining, and the amount of black dead oil staining trapped in the oolitic to oomoldic porosity ranging being predominately a trace amount to interval having a fair amount. The fluorescence and cuts remained predominately good throughout the lateral. The lateral used the proposed target line as a reference point through the 1-A bench. The well bore was allowed to follow the line of best porosity after entering the 1-A porosity zone which resulted in the lateral remaining an average of 3' above the target line until reaching a horizontal displacement of 995'. From 995' of horizontal displacement to the lateral's termination, when the well path was forced upward by the formation and the lateral rose in true vertical depth until the lateral was terminated approximately 9' above the proposed target line.

While drilling the curve and lateral sections, the very minor increases in background gas was due to the dolomite porosity encountered while drilling the Lower Ismay as well as the oil encountered in the 1-A porosity zone in the curve. The moderate increase in the background gases was noted when the 1-A zone was penetrated at a measured depth of 5543' in the curve section which diminished slowly was probably due to the flushing near the vertical well bore. The significant increase noted after fixing the gas line at measured depth of 6250', was due to the oil encountered while drilling the lateral at some distance from the 17-44 vertical well bore. The flare and oil noted on the pits and seen in the samples was fairly constant throughout the lateral to the lateral's termination. While this lateral was drilled as a northwesterly sidetrack of the Ratherford Unit 17-44 production well in the Upper Desert Creek 1-A porosity zone, it was seen to have very good reservoir qualities that have yet to be flushed by the offsetting injector wells. This lateral appears to have porosities that are well enough developed, in this northwesterly direction to enhance the overall production performance of the 1-A porosity zone.

*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, Ratherform Unit #17-44, Northwest Laterals





MOBIL

**RATHERFORD UNIT #17-44
SE HORIZONTAL LATERAL LEG #2
UPPER 1-A POROSITY BENCH
DESERT CREEK MEMBER
PARADOX FORMATION
SECTION 17, T41S, R24E
SAN JUAN, UTAH**

**GEOLOGY REPORT
by
DAVE MEADE & MARVIN ROANHORSE
ROCKY MOUNTAIN GEO-ENGINEERING CORP.
GRAND JUNCTION, COLORADO
(970) 243-3044**

WELL SUMMARY

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

NAME: RATHERFORD UNIT #17-44 SE HORIZONTAL LATERAL
LEG #2 IN 1-A UPPER POROSITY BENCH, DESERT CREEK

LOCATION: SECTION 17, T41S, R24E

COUNTY/STATE: SAN JUAN, UTAH

ELEVATION: KB:4733' GL:4722'

SPUD DATE: 7/02/98

COMPLETION DATE: 7/11/98

DRILLING ENGINEER: SIMON BARRERA / BENNY BRIGGS

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 5397' MEASURED DEPTH

DRILLING MUD: M-I
ENGINEER: DANE BEASON/RON WESTENBERGE
MUD TYPE: FRESH WATER & BRINE WATER W/ POLYMER SWEEPS

DIRECTIONAL DRILLING CO: SPERRY-SUN

ELECTICAL LOGGING: NA

TOTAL DEPTH: 7102' MEASURED DEPTH; TRUE VERTICAL DEPTH-5547.5'

STATUS: TOH & LAY DOWN TOOLS - PREPARE TO MOVE RIG TO NEW LOCATION

DRILLING CHRONOLOGY
RATHERFORD UNIT #17-44
1-A SE HORIZONTAL LATERAL LEG #2

DATE	DEPTH	DAILY	ACTIVITY
7/7/98	6636'	0'	TOH-WHIPSTOCK SHEARED OFF @ SHEAR SUB-P.U. OVERSHOT & JARS-TIH-CIR OUT THRU CHOKE-WELL FLOWING-DISPLACE W/80 BBLs 10# BRINE-JAR ON FISH-TOH W/FISH-L.D. FISHING TOOLS-P.U. & ORIENT WHIPSTOCK #2-TIH-BREAK CIR.-MILL W/STARTER MILL 5389' TO 5391'-PUMP 20 BBLs BRINE-L.D. 1 JT AOH-TOH-L.D. STARTER MILL-P.U. WINDOW & WATERMELLON MILLS-TIH-MILL 5391' TO 5397'
7/8/98	5397'	139'	PUMP SWEEP & CIR OUT-L.D. 15 JTS AOH-TOH-L.D. MILLS-P.U. CURVE ASSEMBLY & TEST MWD & MUD MTR- TIH-CIR & CLEAN PIPE-RIG UP GYRODATA & RUN GYRO-TIME DRLG FROM 5397'-5401'- DIR DRLG W/WIRELINE SURVEYS FROM 5401'-5430'-PULL GYRO-DIR DRLG & SURVEYS
7/9/98	5536'	332'	DIR DRLG & SURVEYS TO 5590'-PUMP SWEEP & CIR OUT SPLS-L.D. 48 JTS AOH-TOH-L.D. CURVE ASSEMBLY-P.U. LATERAL ASSEMBLY-ORIENT & TEST MWD & MUD MOTOR-P.U. 14 JTS PH-6-TIH-CIR-DIR DRLG & SURVEYS
7/10/98	5868'	1090'	DIR DRLG & SURVEYS
7/11/98	6958'	144'	DIR DRLG & SURVEYS-PUMP 10 BBL SWEEP & CIR OUT SPLS @ 7102' (TD OF LATERAL)-CIR & W.O. WATER TRUCKS-DISPLACE HOLE W/BRINE-TOH TO WINDOW-DISPLACE HOLE W/BRINE-TOH-L.D. LATERAL ASSEMBLY-TIH-RETRIEVE WHIPSTOCK -PREPARE WELL FOR RIG MOVE TO R.U. #16-23 LOCATION

DAILY ACTIVITY

Operator: MOBIL
Well Name: RATHERFORD UNIT #17-44 SE 1-A HORIZONTAL LATERAL LEG #2

DATE	DEPTH	DAILY	DATE	DEPTH	DAILY
7/7/98	6636'	8'			
7/8/98	5397'	139'			
7/9/98	5536'	332'			
7/10/98	5868'	1090'			
7/11/98	6958'	144'			
TD	7102'				

BIT RECORD

OPERATOR: MOBIL
WELL NAME: RATHERFORD UNIT #17-44 SE 1-A HORIZONTAL LATERAL LEG #2

RUN	SIZE	MAKE	TYPE	IN/OUT	FTG	HRS	FT/HR
#1	4 3/4"	STC	MF-3P	5397'/	193'	16	12.1
(RR)				5590'			
#2	4 3/4"	STC	MF-3P	5590'/	1522'	42	36.0
				7102'			

MUD REPORT

OPERATOR: MOBIL
WELL NAME: RATHERFORD UNIT #17-44 SE 1-A HORIZONTAL LATERAL LEG #2

DATE	DEPT	WT	VIS	PLS	YLD	GEL	PH	WL	CK	CHL	CA	SD	OIL	WTR
	H													
7/07/98	5260'	9.3	26	1	0	0/0	10.5	NC	NC	110K	600	0%	0%	100%
7/08/98	5430'	8.8	26	1	0	0/0	11.7	NC	NC	52K	400	0%	0%	100%
7/09/98	5640'	NO	CHECK	-	-	-	-	-	-	-	-	-	-	-
7/10/98	6005'	8.8	26	1	0	0/0	11.6	NC	NC	49K	520	--	0%	100%
7/11/98	7102'	NOT	AVAIL	AT	TIME	OF	RPT	-	-	-	-	-	-	-

SPERRY-SUN DRILLING SERVICES
SURVEY DATA

Customer ... : Mobil (Utah)
Platform ... : RATHERFORD UNIT
Slot/Well .. : BA25/17-44, 2A1

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	TVD	NORTHINGS FEET	EASTINGS FEET	VERTICAL SECTION	DOG LEG
5200.00	0.41	153.00	5199.40	45.26 N	12.44 W	-40.80	0.00
5390.00	0.45	74.67	5389.40	44.85 N	11.41 W	-39.79	0.29
5397.00	4.70	135.00	5396.39	44.66 N	11.18 W	-39.49	64.20
5407.00	9.20	128.60	5406.31	43.87 N	10.27 W	-38.28	45.59
5417.00	14.60	126.60	5416.09	42.62 N	8.63 W	-36.24	54.15
5427.00	20.20	125.60	5425.63	40.86 N	6.21 W	-33.29	56.08
5437.00	25.60	125.00	5434.84	38.61 N	3.04 W	-29.45	54.05
5447.00	30.60	131.60	5443.66	35.68 N	0.64 E	-24.78	58.81
5457.00	35.60	134.80	5452.04	31.94 N	4.61 E	-19.32	52.95
5467.00	39.40	130.90	5459.97	27.81 N	9.08 E	-13.24	44.79
5477.00	42.20	124.50	5467.54	23.82 N	14.25 E	-6.77	50.30
5487.00	45.10	128.00	5474.78	19.74 N	19.81 E	0.05	37.74
5497.00	46.90	122.80	5481.73	15.58 N	25.67 E	7.13	41.50
5507.00	50.90	125.20	5488.30	11.36 N	31.91 E	14.53	43.89
5517.00	56.00	127.50	5494.25	6.60 N	38.38 E	22.47	54.24
5527.00	60.60	127.30	5499.51	1.43 N	45.13 E	30.90	46.03
5537.00	66.00	126.50	5504.00	3.93 S	52.28 E	39.74	54.47
5547.00	71.70	125.70	5507.60	9.42 S	59.81 E	48.95	57.49
5557.00	76.10	125.10	5510.38	14.98 S	67.64 E	58.42	44.38
5567.00	81.10	124.50	5512.35	20.57 S	75.69 E	68.07	50.34
5590.00	93.20	125.40	5513.50	33.71 S	94.48 E	90.64	52.75
5623.00	88.70	129.00	5512.95	53.65 S	120.75 E	123.32	17.46
5655.00	88.20	131.90	5513.81	74.40 S	145.09 E	155.20	9.19
5687.00	94.70	134.40	5513.00	96.27 S	168.41 E	187.16	21.76
5719.00	94.10	134.70	5510.55	118.65 S	191.15 E	219.06	2.10
5750.00	91.80	134.70	5508.95	140.42 S	213.16 E	250.02	7.42
5782.00	90.20	134.50	5508.40	162.89 S	235.94 E	282.01	5.04
5814.00	89.60	134.40	5508.45	185.30 S	258.78 E	314.01	1.90
5845.00	88.40	134.20	5508.99	206.94 S	280.96 E	345.00	3.92
5877.00	88.30	133.80	5509.91	229.16 S	303.97 E	376.98	1.29
5909.00	85.80	132.40	5511.56	251.00 S	327.30 E	408.92	8.95
5941.00	84.00	130.70	5514.41	272.14 S	351.15 E	440.73	7.72
5973.00	89.60	133.70	5516.19	293.59 S	374.81 E	472.63	19.84
6005.00	88.90	133.30	5516.61	315.62 S	398.02 E	504.62	2.52
6036.00	88.00	133.50	5517.45	336.91 S	420.53 E	535.59	2.97
6068.00	86.60	134.90	5518.96	359.19 S	443.45 E	567.55	6.18
6100.00	88.80	134.50	5520.24	381.68 S	466.17 E	599.52	6.99
6132.00	89.50	135.40	5520.71	404.28 S	488.82 E	631.52	3.56

SPERRY-SUN DRILLING SERVICES
SURVEY DATA

Customer ... : Mobil (Utah)
Platform ... : RATHERFORD UNIT
Slot/Well .. : BA25/17-44, 2A1

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	TVD	NORTHINGS FEET	EASTINGS FEET	VERTICAL SECTION	DOG LEG
6164.00	84.30	135.60	5522.44	427.07 S	511.21 E	663.46	16.26
6195.00	83.80	135.10	5525.66	449.00 S	532.88 E	694.29	2.27
6226.00	86.00	134.50	5528.41	470.76 S	554.78 E	725.17	7.35
6258.00	88.40	134.90	5529.98	493.24 S	577.50 E	757.13	7.60
6290.00	89.60	134.70	5530.54	515.78 S	600.20 E	789.12	3.80
6321.00	89.70	134.40	5530.72	537.53 S	622.30 E	820.12	1.02
6353.00	87.50	134.20	5531.51	559.87 S	645.19 E	852.11	6.90
6385.00	87.40	134.20	5532.93	582.16 S	668.11 E	884.07	0.31
6416.00	87.90	134.90	5534.20	603.89 S	690.18 E	915.04	2.77
6448.00	87.60	136.60	5535.46	626.79 S	712.49 E	947.01	5.39
6480.00	87.30	136.60	5536.88	650.02 S	734.46 E	978.97	0.94
6512.00	88.50	136.30	5538.05	673.19 S	756.49 E	1010.94	3.87
6543.00	89.20	137.20	5538.68	695.77 S	777.73 E	1041.92	3.68
6575.00	89.00	137.30	5539.18	719.26 S	799.44 E	1073.89	0.70
6607.00	88.60	137.30	5539.85	742.78 S	821.14 E	1105.86	1.25
6638.00	89.20	136.60	5540.44	765.42 S	842.30 E	1136.83	2.97
6670.00	90.60	136.80	5540.50	788.71 S	864.24 E	1168.82	4.42
6701.00	90.80	136.80	5540.12	811.31 S	885.46 E	1199.80	0.65
6732.00	90.30	136.80	5539.82	833.91 S	906.68 E	1230.78	1.61
6764.00	89.10	135.80	5539.99	857.04 S	928.79 E	1262.77	4.88
6796.00	89.60	135.40	5540.35	879.90 S	951.18 E	1294.77	2.00
6827.00	89.40	135.40	5540.63	901.97 S	972.94 E	1325.77	0.65
6859.00	89.60	135.10	5540.90	924.70 S	995.47 E	1357.77	1.13
6891.00	89.60	134.90	5541.13	947.33 S	1018.10 E	1389.76	0.63
6923.00	89.10	134.50	5541.49	969.83 S	1040.84 E	1421.76	2.00
6954.00	88.70	134.00	5542.09	991.46 S	1063.04 E	1452.75	2.07
6986.00	88.50	134.40	5542.87	1013.76 S	1085.98 E	1484.74	1.40
7017.00	88.90	134.20	5543.57	1035.41 S	1108.16 E	1515.73	1.44
7048.00	86.40	134.70	5544.84	1057.10 S	1130.27 E	1546.70	8.22
7067.00	87.30	135.40	5545.89	1070.52 S	1143.67 E	1565.67	6.00
* 7102.00	87.30	135.40	5547.53	1095.42 S	1168.22 E	1600.63	0.00 *

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

* 7102 EXTRAPOLATED TO BIT

SAMPLE DESCRIPTIONS

OPERATOR: MOBIL

WELL NAME: RATHERFORD UNIT #17-44 SE 1-A HORIZONTAL LATERAL LEG #2

DEPTH	LITHOLOGY
5397.00 5400.00	"LS tan,occ ltgy-brn-crm,crpxl-micxl,rthy-chk,occ arg-v sl slty,rr mic fos,chtty-tr trnsl-bf CHT frag,sl dol-rr brn micxl arg tt DOL incl,anhy ip,tt-v rr frac POR,NFSOC"
5400.00 5410.00	"LS pred PKST AA,tt,NFSOC,w/v rr micxl arg lmy DOL stks & xl ANHY,sl tr mic fos,scat trnsl-mbrn CHT frag"
5410.00 5430.00	"LS crm-tan-brn,occ ltgy-gybrn,crpxl-micxl,rthy-cln,occ chk,anhy ip,sl dol,chtty-scat ltgy-mbrn CHT frag,tt,NFSOC,rr brn micxl rthy-arg sl mrly lmy DOL incl n vis POR-NFSOC w/v rr thn blk sbplty carb SH frag"
5430.00 5440.00	"LS AA,incr brn-mbrn,bcmg incr mrly-dol,grdg to v lmy DOL,DOL AA,scat CHT AA,tt,NFSOC"
5440.00 5452.00	"LS AA,bcmg v dol-arg mrly ip,tt,NFSOC,w/scat CHT AA,incr brn-mbrn micxl-sl gran rthy lmy arg mic fos anhy ip occ v mrly tt-rr intxl POR,NFSOC & sl incr blk-dkgybrn carb sbblky mica calc-dol SH lams"
5450.00 5460.00	"LS AA,incr brn-dkbrn,crpxl-micxl,v rthy,occ cln-dns,chk ip,sl anhy-anhy,shy-mrly,tt-v rr intxl POR,NFSOC,w/incr amnts DOL W/POR AA,NFSOC,scat mic fos,tr gy-brn CHT frag,n-v rr SH lams"
5460.00 5470.00	"DECR DOL-CHT AA,pred LS crm-tan,occ brn,crpxl-micxl,rthy-chk,anhy-sl dol,cln,tt,NFSOC"
5470.00 5490.00	"LS crm-tan-brn-gybrn,occ mbrn,crpxl-micxl,occ sl gran-slty,rthy-cln,chk ip,sl anhy,dol-shy ip,grdg to lmy MRLST ip,tt-v rr intxl POR,NFSOC,w/tr m-dkbrn micxl rthy arg sl lmy DOL bcmg dol MRLST ip,tt-rr intxl POR,NFSOC,scat CHT FRAG AA,occ thn carb SH LAM"
5490.00 5500.00	"LS crm-tan-brn,occ gybrn-gy,crpxl-micxl,gran-sl slty,rthy-chk ip,occ arg,v sl anhy,dol ip,occ mrly,grdg to lmy SLTST ip,tt-v rr intxl POR,v p bri yel FLOR,n vis STN-CUT,scat thn DOL-CHT-SH AA"
5500.00 5510.00	"LS AA,incr dol-v mrly ip,POR-FLOR-STN-CUT AA,w/incr brn-mbrn micxl rthy lmy DOL w/v rr mic fos sl mrly tr intxl POR,rr spty bri yel FLOR,n vis STN v p slow CUT,sl incr blk carb calc-dol SH lams"
5510.00 5520.00	"LS & DOL AA,scat tr intxl POR,rr bri-dull yel FLOR,n-v p vis STN,p slow dif CUT,incr & grdg to blk carb SH"
5520.00 5530.00	"SH blk-dkgy,sbblky,rthy,sl slty,calc-dol,carb-sooty,w/thn crm-wh crpxl arg-sl mrly LS & brn-dkgybrn micxl-crpxl rthy shy sl mrly dns DOL incl-rr gy CHT frag,grdg to dns LS & v arg-mrly DOL w/depth"

DEPTH	LITHOLOGY
5540.00 5560.00	"LS crm-tan-brn-gybrn,crpxl-micxl,cln-dns,rthy-chk ip,rr micfos,sl anhy,tt,NFSOC,dol ip,w/thn brn-mgybn-dkbrn micxl rthy arg lmy sl mrly DOL fos ip,tt-v rr intxl POR,NFSOC,v rr gy-brn CHT frag-v thn dkgy-blk carb SH ptgs"
5560.00 5570.00	"LS tan-ltbrn,occ brn-crm,crpxl-vfxl,occ gran-micsuc,pred ooc-oom v sl alg GRNST,occ anhy-rr ANHY xl,tr dns sl ool anhy occ chk PKST,sl dol,v rr CHT frag,tt-g intxl-ool-v rr alg POR,mfr bri yel FLOR,tr ltbrn STN-rr blk dd o STN,mg slow-tr fast stmg CUT"
5570.00 5590.00	"LS tan-ltbrn-crm,occ brn,crpxl-vfxl,gran-micsuc ip,ooc-oom GRNST,rr-tr alg mat,w/rr scat dns sl ool occ chk PKST,rr DOL cmt,rr ANHY xl,rr gy-trnsl CHT frag,fr-mg ool-tr intxl POR,fr bri-tr dull yel FLOR,fr ltbrn-tr blk STN,mg slow-tr fast stmg mlky CUT"
5590.00 5610.00	"LS crm-tan-ltbrn,occ ltgy-rr wh,crpxl-vfxl,gran-micsuc ip,pred ooc-oom GRNST,rr alg mat,tr dns sl ool chk ip crpxl PKST incl,sl dol,occ anhy-rr ANHY xl,fr-mg ool-intxl POR,mfr-fr bri yel FLOR,tr brn STN,rr blk dd o STN,mfr-fr slow-fast CUT,rr DOL-SH frag"
5610.00 5630.00	"LS AA,pred ooc-oom v sl alg GRNST AA,sl incr wh-crm-tan crpxl cln occ chky sl ool dns v sl anhy PKST,fr bri yel FLOR,mg-ool-intxl POR,mfr-fr ltbrn-brn STN,tr blk dd o STN,mg slow stmg-tr mod fast-fast stmg mlky CUT"
5630.00 5660.00	"LS pred ooc-oom sl alg GRNST AA bcmg incr brn,w/sl incr chky-occ plty PKST AA,fr-mg ool-fr intxl-rr alg POR,mfr bri-tr dull yel FLOR,mfr-fr ltbrn-brn STN,rr-tr blk dd o STN,CUT AA,w/scat trnsl-bf CHT frag,rr blk carb SH CVGS"
5660.00 5680.00	"LS tan-ltbrn,occ crm,tr brn,vfxl-gran,micxl-rpxl,ool-oom GRNST/tr scat-occ intbd dns PKST,chky-sl anhy/tr POR fl-ptrgs,tr brn CHT,rr trnsl xl CALC,g ool/tr intxl POR,g scat mod bri-spty bri yel FLOR,fr-mg ltbrn-brn/tr blk dd o STN,g slow stmg mlky CUT"
5680.00 5700.00	"LS AA,pred ool-oom GRNST/sl incr scat-occ intbd dns PKST,chky-sl anhy/tr POR fl-ptrgs,g ool/tr intxl POR,g scat mod bri-spty bri yel FLOR,fr-mg ltbrn-brn/tr blk dd o STN,g slow stmg mlky CUT"
5700.00 5720.00	"LS tan-ltbrn-crm,tr brn,vfxl-gran,micxl-crpxl,ool-oom GRNST/scat-occ intbd dns sl ool-tr agl mat PKST,chky-sl anhy/tr POR fl-ptrgs,rr trnsl xl CALC,mg ool/tr intxl POR,FLOR-STN AA,g slow stmg mlky CUT"
5720.00 5730.00	"LS AA,pred ool-sl oom GRNST/PKST AA,f-mg ool-sl oom/tr intxl POR,g scat modbri-spty bri yel FLOR,fr ltbrn/tr brn & pp blk dd o STN,g mod fast stmg mlky CUT"
5730.00 5750.00	"LS AA,vfxl-gran,micxl-crpxl,ool-oom GRNST/scat-occ intbd dns sl ool-tr agl mat PKST,chky-sl anhy/tr POR fl-ptrgs,tr trnsl rhmb xl CALC,tr mic fos,mg ool/tr intxl POR,FLOR-STN AA,g mod fast-slow stmg mlky CUT"

DEPTH	LITHOLOGY
5750.00 5770.00	"LS AA,ool-oom GRNST/scat-occ intbd dns sl ool-tr agl mat PKST,chky-sl anhy/tr POR fl-ptrgs,tr CALC AA,tr mic fos,tr brn CHT incl,mg ool-sl oom/tr intxl POR,g scat mod bri-spty bri yel FLOR,STN AA,g mod fast-slow stmg mlky CUT"
5770.00 5800.00	"LS ltbrn-tan-crm,tr brn,vfxl-gran,micxl-crppl,ool-oom GRNST/scat-occ intbd dns sl ool-tr agl mat PKST,chky-sl anhy/tr POR fl-ptrgs,rr trnsl xl CALC,mg ool/tr intxl POR,g scat mod bri-spty bri yel FLOR,STN AA,g slow stmg mlky CUT"
5800.00 5810.00	"LS AA,ool-oom GRNST/sl incr scat-intbd dns sl ool-tr agl mat PKST,bcmg incr chky-sl anhy/thn plty prtgs-occ POR fl,tr brn CHT incl,rr CALC AA,fr-mg ool/tr intxl POR,FLOR-STN AA,g mod fast stmg mlky CUT"
5810.00 5820.00	"LS AA/incr brn,ool-oom GRNST/PKST AA,incr scat chky-sl anhy plty prtgs,tr CHT & CALC AA,tt-fr ool-intxl POR,tr scat bri yel FLOR,fr-g ltbrn/tr brn STN,g slow stmg mlky CUT"
5820.00 5840.00	"LS AA,vfxl-gran-micxl,crppl,ool-oom GRNSTintbd/dns sl ool PKST,chky-anhy/POR fl-rr xln ANHY,tr thn plty prtgs,tr xl CALC,tr ltbrn CHT incl,scat fr-mg ool/tr intxl POR,sl incr scat FLOR AA,fr ltbrn/tr brn-rr blk dd o STN,g fast stmg mlky CUT"
5840.00 5860.00	"LS tan-ltbrn-crm,occ wh,brn,crppl-micxl,vfxl-gran ip,dns sl ool-tr agl mat PKST/occ gran tex,tr ool GRNST frag,chky-anhy/tr POR fl-ptrgs,rr CALC AA,bcmg dol ip,tr-fr intxl/rr ool POR,no-rr dull-mod bri yel FLOR,fr ltbrn-brn STN,v p dif/v fnt res ring CUT"
5860.00 5890.00	"LS AA,pred sl ool-rr agl mat PKST,rr scat ool GRNST,chky-sl anhy/thn plty prtgs-occ POR fl,tr crm-brn CHT incl,no vis-rr intxl POR,tr scat dull-spty mod bri yel FLOR,STN-CUT AA"
5890.00 5910.00	"LS AA,pred dns v sl ool/rr agl mat PKST,sl arg ip,chky-sl anhy/thn plty prtgs-tr POR fl,tr CHT AA,tt-rr intxl-v rr ool POR,no-v rr spty dull-mod bri yel FLOR,fr ltbrn/tr brn STN,CUT AA,w/tr blk SH cvgs"
5910.00 5940.00	"LS ltbrn-tan,tr brn,crm-wh,micxl-vfxl-gran ip,crppl,ool-sl oom GRNST,intbd dns sl ool-tr agl mat PKST/tr gran tex,chky-sl anhy/tr POR fl-ptrgs,rr trnsl xl CALC,mg intxl-sl ool POR,g scat mod bri-spty bri yel FLOR,STN AA,g slow stmg mlky CUT"
5940.00 5970.00	"fr-mg brn-ltbrn STN,g mod fast stmg mlky CUT"
5940.00 5970.00	"LS ltbrn-brn,occ tan,tr crm-wh,gran-vfxl,occ micxl-crppl,ool-v sl oom GRNST,scat-occ intbd dns ool PKST/occ agl mat,tr mic fos,sl chky-anhy/rr POR fl,tr xl CALC,tr brn CHT incl,dol ip,fr-mg intxl/tr ool POR,g even mod bri-spty bri yel FLOR,"
5970.00 5980.00	"LS AA,w/incr dns v sl ool occ chk anhy-v anhy PKST frag,rr trnsl-bf CHT frag,occ tt-mfr-mg ool-intxl-v rr alg POR,n-mg bri yel FLOR,n-fr ltbrn-brn STN,spty blk dd o STN,n-mg mod fast stmg CUT"

DEPTH	LITHOLOGY
5980.00 5990.00	"LS tan-ltbrn,rr brn,occ crm-wh,crpxl-micxl,occ vfxl-gran,micsuc ip,pred dns PKST AA,w/decr ooc-oom GRNST,tt-tr intxl-ool-v rr alg POR,mfr-fr bri yel FLOR,tr ltbrn-blk STN,n-v slow stmg-tr mod fast stmg CUT"
5990.00 6020.00	"LS ltbrn-brn-tan,tr crm-wh,micxl-vfxl,micsuc-gran,ooc-oom GRNST,scatintbd dns crpxl sl ool occ chk PKST,rr agl mat,v rr mic fos,v anhy-tr POR fl,scat CALC xl,rr brn CHT incl,dol ip,fr-mg intxl-fr ool POR,mg bri yel FLOR,tr-fr ltbrn-rr blk STN,mg fast CUT"
6020.00 6040.00	"LS AA,w/sl incr dns v anhy PKST w/scat xl ANHY stks,incr ANHY cmt,tr trnsl-bf CHT frag,fr-mg intxl-ool-v rr alg POR bcmg dn tt w/depth,fr-mg bri yel FLOR-n vis FLOR,fr-mg ltbrn-brn STN,tr blk dd o STN,fr-mg slow-mod fast stmg CUT-rr stks n vis CUT"
6040.00 6050.00	"LS tan-ltbrn,rr brn,occ crm-wh,crpxl-vfxl,gran-micsuc ip,bcmg pred dns v anhy sl ool PKST,incr ANHY cmt-POR fl,decr amnt ooc-oom GRNST,scat trnsl-bf CHT frag,rr DOL cmt,decr intxl-ool POR,decr FLOR-STN-CUT"
6050.00 6070.00	"LS tan-ltbrn-brn,v rr crm-wh,micxl-vfxl,occ crpxl,gran-micsuc ip,pred ooc-oom sl alg GRNST,w/scat dns anhy sl ool PKST-chk ip,sl dol,rr trnsl-bf CHT frag,mg-g ool-intxl-v rr alg POR,fr bri yel FLOR,tr-mg brn STN-rr blk dd o STN,fr slow-tr fast stmg CUT"
6070.00 6090.00	"LS AA,sl incr micsuc-gran,decr PKST,decr amnt ANHY cmt,mg ool-intxl POR,mg bri yel FLOR,fr-mg ltbrn-brn STN,rr-tr blk STN,fr-mg slow-mod fast stmg CUT"
6090.00 6120.00	"LS AA,w/sl incr amnt dns ool anhy-v anhy PKST,v sl incr ANHY cmt,pred v g ooc-oom GRNST w/POR-FLOR-STN-CUT AA"
6120.00 6140.00	"LS tan-ltbrn-brn,tr crm-wh,micxl-vfxl,gran-micsuc ip,pred ooc-oom sl alg GRNST,bcmg dns anhy sl ool crpxl sl chk PKST,sl dol,rr trnsl-bf CHT frag,mg-tr ool-intxl-v rr alg POR,mg-fr bri yel FLOR,g-tr brn STN-tr blk dd o STN,fr-tr slow-fr fast stmg CUT"
6140.00 6160.00	"LS pred tan-crm,rr wh,occ ltbrn-brn,crpxl-micxl,occ vfxl-gran,pred dns anhy sl ool chk ip PKST w/thn stks ooc-oom GRNST,sl DOL-abnt ANHY cmt,rr trnsl CHT frag,tt-mg ool-intxl-v rr alg POR,mfr-fr bri yel FLOR,n-fr ltbrn STN-spty blk dd o STN,n-mg slow CUT"
6160.00 6180.00	"LS ltbrn-brn,occ crm-tan,micxl-vfxl,bcmg crpxl,gran-micsuc-rr suc,pred ooc-oom sl alg GRNST,w/amnt PKST AA incr w/depth,tr-incr ANHY cmt,occ DOL cmt,rr CHT frag AA,mg POR-FLOR-STN-CUT decr w/depth"
6180.00 6200.00	"LS ltbrn-brn,crm-wh,tan ip,crpxl,dns,occ chk PKST bcmg g ooc-oom GRNST AA,w/ANHY cmt & CHT frag decr w/depth,tt-g intxl-ool-tr alg POR,tr-g bri yel FLOR,n-mg brn STN-rr blk dd o STN,vp slow stmg-mg mod fast stmg CUT,POR-FLOR-STN-CUT INCR W/DEPTH"

DEPTH	LITHOLOGY
6200.00 6210.00	"LS tan-ltbrn-brn,occ crm,rr wh,micxl-vfxl,gran-micsuc ip,pred ooc-oom GRNST w/tr alg mat-rr sl ool dns crpxl anhy PKST,occ DOL-rr ANHY cmt,v rr CHT frag,fr-mg intxl-ool-v rr alg POR,fr bri yel FLOR,tr-fr ltbrn STN,rr spty blk dd o STN,fr slow-tr fast CUT"
6210.00 6230.00	"LS AA,pred ooc-oom GRNST sl alg,g intxl-fr-mg ool POR,mg bri yel FLOR,fr-mg ltbrn-brn STN,rr-tr blk dd o STN,tr slow-mfr-mg mod fast-fast stmg CUT"
6230.00 6250.00	"LS AA,POR-FLOR-STN-CUT AA"
6250.00 6270.00	"LS tan-ltbrn-brn,rr crm-wh,micxl-vfxl,gran-micsuc ip,pred ooc-oom GRNST w/tr alg mat,rr sl ool dns crpxl anhy PKST,occ DOL-rr ANHY cmt,v rr CHT frag,mg intxl-ool-v rr alg POR,mg bri yel FLOR,fr ltbrn STN-rr spty blk dd o STN,tr slow-fr-mg fast stmg CUT"
6270.00 6300.00	"LS AA,v rr trnsl-bf CHT frag,sl incr intxl POR,mg bri-fr dull yel FLOR,fr-mg ltbrn-brn STN,rr-tr blk dd o STN,mg mod fast-fast stmg mlky CUT"
6300.00 6320.00	"LS tan-ltbrn-brn,rr crm-wh,micxl-vfxl,gran-micsuc ip,pred ooc-oom GRNST w/tr alg mat,rr sl ool dns crpxl anhy PKST,occ DOL-rr ANHY cmt,v rr CHT frag,mg intxl-ool-v rr alg POR,mg bri yel FLOR,fr ltbrn STN-rr spty blk dd o STN,tr slow-fr-mg fast stmg CUT"
6320.00 6350.00	"LS tan-ltbrn-brn,rr crm-wh,micxl-vfxl,gran-micsuc ip,pred ooc-oom GRNST w/rr alg mat,rr sl ool dns crpxl anhy PKST,DOL-rr ANHY cmt ip,tr bf CHT frag,mg intxl-ool-rr alg POR,fr bri-tr dull yel FLOR,fr ltbrn STN-rr blk dd o STN,rr slow-fr-mg fast stmg CUT"
6350.00 6370.00	"LS AA,rr trnsl-bf CHT frag-v rr trnsl ANHY xl,occ v rr scat CALC xl,mfr-g ool-fr intxl POR,mfr-fr bri-tr dull yel FLOR,fr ltbrn-tr brn STN,rr-tr blk dd o STN,mfr-fr slow-tr mod fast-fast stmg mlky CUT"
6370.00 6400.00	"LS pred ooc-oom v sl alg GRNST,v sl incr dns v anhy sl dol occ ool PKST,scat ANHY xl,v rr trnsl CHT frag,v rr scat CALC xl,fr-g intxl-mg ool-v rr alg POR,mfr bri-dull yel FLOR,mfr-fr slow-tr mod fast-fast stmg CUT"
6400.00 6430.00	"LS AA,incr intxl-ool POR,v rr alg POR,fr-mg bri-tr dull yel FLOR,fr-mg ltbrn-brn STN,v rr spty blk dd o STN,fr-mg mod fast-fast stmg-tr slow stmg mlky CUT"
6430.00 6450.00	"LS pred ooc-oom v sl alg GRNST,v sl incr dns v anhy sl dol occ ool PKST,scat ANHY xl,v rr trnsl CHT frag,v rr scat CALC xl,fr-g intxl-mg ool-v rr alg POR,mfr bri-dull yel FLOR,mfr-fr slow-tr mod fast-fast stmg CUT"
6450.00 6470.00	"LS ltbrn-tan-brn,occ crm-ltgybrn,micsuc-vfxl-gran,micxl-tr crpxl,ool-oom GRNST,tr scat-occ intrbd dns sl ool PKST,cky-sl anhy-rr plty prtq/tr POR fl-rr xln ANHY,tr tan-ltbrn CHT incl,rr trnsl-clr rhmb xl CALC,g ool-oom/tr intxl POR,g even mod bri-spty bri yel FLOR,g brn-ltbrn/tr blk dd o STN,g fast-mod fast stmg mlky CUT"

DEPTH	LITHOLOGY
6470.00 6490.00	"LS AA,ool-oom GRNST,tr scat-occ intbd dns sl ool/rr agl mat PKST,chky-sl ANHY/tr POR fl-rr xln ANHY,tr CHT AA,rr xl CALC AA,g ool-oom/tr intxl POR,POR AA,g-mg scat mod bri-spty bri yel FLOR,g ltbrn-brn/rr pp dd o STN,g fast-mod fast stmg mlky CUT "
6490.00 6510.00	"LS ltbrn-tan-brn,occ crm,micsuc-vfxl-gran,micxl-tr crpxl,ool-oom GRNST/tr scat-occ intbd PKST AA,chky-sl anhy-v rr plty prtq/tr POR fl,tr xln ANHY,sl decr tan-ltbrn CHT incl,v rr trnsl rhmb xl CALC,POR-FLOR-STN AA,g mod fast-slow stmg mlky CUT"
6510.00 6530.00	LS AA/tr ltgybrn-off wh incl,micsuc-vfxl-gran,micxl-tr crpxl,ool-oom GRNST,tr scat-occ intbd dns sl ool PKST/occ gran tex,chky-sl anhy-v rr plty prtq/tr POR fl-rr xln ANHY,tr CHT& xl CALC AA,POR-FLOR AA,g ltbr-brn/v rr blk pp dd o STN,g-mg slow-mod fast stmg mlky CUT"
6530.00 6560.00	"LS ltbrn-tan-brn/tr ltgybrn-crm incl,micsuc-vfxl-gran,micxl-tr crpxl,GRNST AA,tr scat-occ intbd PKST/AA,chky-sl anhy/tr plty prtq-POR fl,tr xln ANHY,tr trnsl-clr rhmb xl CALC,rr tan-ltbrn CHT incl,POR-FLOR-STN AA,g slow/tr mod fast stmg mlky CUT"
6560.00 6580.00	"LS ltbrn-tan-brn,occ crm incl,rr ltgybrn,micsuc-vfxl-gran,micxl-tr crpxl,ool-oom GRNST,tr scat-occ intbd dns sl ool PKST/tr gran tex,chky-sl anhy/tr POR fl-rr xln ANHY & plty prtgs,rr tan CHT incl & trnsl-mlky rhmb xl CALC,g ool-sl oom/tr intxl POR,g even mod bri-spty bri yel FLOR,g ltbrn-brn/tr dkbrn-rr blk STN,g mod fast stmg mlky CUT"
6580.00 6600.00	"LS AA,micsuc-vfxl-gran,micxl-tr crpxl,ool-oom GRNST,tr scat-occ intrbd dns sl ool PKST,chky-sl anhy-tr plty prtq,tr POR fl-rr xln ANHY,v rr CALC AA,POR AA,g even mod bri-spty bri yel FLOR,g ltbrn-brn/tr dkbrn-rr blk dd o STN,CUT AA"
6600.00 6630.00	"LS AA/tr crm-ltgybrn incl,micsuc-vfxl-gran,micxl-tr crpxl,GRNST AA,tr PKST AA/occ gran tex,sl chky-anhy-tr plty prtq & POR fl-rr xln ANHY,rr CHT AA,v rr xl CALC AA,g ool-oom/tr intxl POR,g scat mod bri-bri yel FLOR,STN AA,g mod fast-slow stmg mlky CUT"
6630.00 6650.00	"LS ltbrn-brn-tan,rr crm-ltgybrn,micsuc-vfxl-gran,micxl-tr crpxl,ool-oom GRNST,sl incr scat-rr intbd dns sl ool-agl mat PKST/tr gran tex,chky-sl anhy/tr POR fl-rr xln ANHY & prtq,tr xl CALC,rr tan-ltbrn CHT incl,g ool/tr intxl POR,g scat mod bri-spty bri yel FLOR,g ltbrn-brn/tr dkbrn-v rr blk dd o STN,g mod fast stmg mlky CUT"
6650.00 6670.00	"LS AA/tr ltgy-crm frag,micsuc-vfxl-gran,micxl-tr crpxl,ool-oom GRNST,tr scat-occ intrbd dns sl ool-tr agl mat PKST,chky AA-v rr plty prtq,tr POR fl-rr xln ANHY,tr tan-ltbrn CHT incl,rr trnsl-clr rhmb xl CALC,POR-FLOR-STN AA,g-mgslow stmg/tr mod fast stmg mlky CUT"
6670.00 6700.00	"LS AA,pred ool-oom GRNST,scat-occ intbd dns sl ool/tr agl mat PKST,sl chky-anhy/tr plty prtgs-rr POR fl & xln ANHY,rr CHT & xl CALC incl,g ool-oom/tr intxl POR,g scat mod bri-bri yel FLOR,g brn-ltbrn/tr dkbrn-blk dd o STN,g mod fast-slow stmg mlky CUT"

DEPTH	LITHOLOGY
6700.00 6710.00	"LS AA,ool-oom GRNST/scat-occ intbd PKST AA,sl chky-anhy AA,rr CHT & CALC AA,POR-FLOR-STN-CUT AA"
6710.00 6740.00	"LS ltbrn-brn-tan,rr crm,ltgybrn,micsuc-vfxl-gran,micxl-crpxl,ool-oom GRNST,tr scat-rr intbd dns sl ool-agl mat PKST/tr gran tex,chky-sl anhy/tr POR fl & prtgs-rr xln ANHY,v rr xl CALC & tan CHT incl,POR AA,g scat mod bri-spty bri yel FLOR,STN-CUT AA"
6740.00 6770.00	"LS AA,micsuc-vfxl-gran,micxl-crpxl,ool-oom GRNST/tr scat-rr intbd dns sl ool-agl mat PKST/tr gran tex,sl chky-anhy/tr POR fl-rr xln ANHY & prtgs,rr xl CALC,rr tan-ltbrn CHT incl,POR-FLOR AA,g brn-ltbrn/tr dkbrn STN,g mod fast-slow stmg mlky CUT"
6770.00 6800.00	"LS AA,ool-oom GRNST,tr scat-rr intbd dns sl ool-agl mat PKST/rr gran tex,sl chky-anhy/tr POR fl-rr xln ANHY & prtgs,rr xl CALC,rr tan-ltbrn CHT incl,g ool-sl oom/tr intxl POR,g even mod bri-bri yel FLOR,ltbrn-brn/tr dkbrn-rr blk dd o STN,CUT AA"
6800.00 6830.00	"LS ltbrn-brn-tan,rr crm,ltgybrn,micsuc-vfxl-gran,micxl-crpxl,ool-oom GRNST,tr PKSTAA/tr gran tex,sl chky-anhy/tr POR fl & rr prtgs,rr xln ANHY,v rr trns-lclr xl CALC & tan CHT incl,POR AA,g mod bri-spty bri yel FLOR,g ltbrn-brn/tr dkbrn-rr blk pp dd o STN,g mod fast/tr fast stmg mlky CUT"
6830.00 6860.00	"LS ltbrn-brn-tan,tr wh-ltgybrn frag,micsuc-vfxl-gran,micxl-tr crpxl,ool-oom GRNST,rr scat-intbd dns v sl ool PKST,sl chky-anhy/rr POR fl & xln ANHY,tr prtgs,tr CHT AA,rr xl CALC,POR AA,g even bri-mod bri yel FLOR,STN AA,g fast-mod fast stmg CUT"
6860.00 6880.00	"LS ltbrn-brn,occ tan,rr wh-ltgybrn frag,AA,pred ool-oom GRNST/rr PKST AA,sl chky-anhy/tr POR fl & rr xln ANHY,rr plty prtgs,tr tan-wh CHT incl-frag,g ool-sl oom/fr intxl POR,FLOR-STN AA,g fast-mod fast stmg CUT"
6880.00 6910.00	"LS AA,pred ooc-oom GRNST,tr dns ool-tr alg mat PKST,sl chky-anhy/rr xl ANHY,tr xl trns-l CALC,rr trns-l CHT frag,g-mg ool/tr intxl-rr sl alg POR,g-mg scat bri-dull yel FLOR,STN AA,g-mg slow-tr mod fast-fast stmg CUT"
6910.00 6940.00	"LS ltbrn-tan,occ crm,brn,tr wh-ltgy frag,micsuc-gran-vfxl,occ micxl-tr crpxl,pred ool-oom GRNST/tr dns sl ool-rr agl fab PKST,sl chky-anhy/tr POR fl & prtgs,tr xl CALC & tan CHT,g ool-oom-sl agl POR,g scat mod bri-bri yel FLOR,g ltbrn-brn/tr"
6910.00 6940.00	"dkbrn-v rr blk dd o STN,g fast stmg mlky CUT"
6940.00 6960.00	"LS AA,pred ool-sl oom GRNST,sl incr scat-occ intbd dns sl ool-rr agl mat PKST,sl-occ v chky-sl anhy/tr POR fl-rr plty prtgs,tr xl ANHY & CHT AA,v rr xl CALC,POR-FLOR-STN-CUT AA"
6960.00 6990.00	"LS AA,ooc-oom GRNST,tr dns chky sl ool-rr alg mat PKST,sl anhy/rr xl ANHY,tr xl trns-l CALC,rr tan CHT,g-mg ool/fr intxl-rr sl alg POR,g-mg even bri-mod bri yel FLOR,g-fr ltbrn/tr brn-rr blk pp dd o STN,g-mg slow/tr mod fast-fast stmg CUT"

DEPTH	LITHOLOGY
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6990.00 7030.00 "LS ltbrn-tan/occ crm incl, tr brn, rr wh, micsuc-gran-vfxl, occ micxl, tr crpxl, ool-oom GRNST/tr dns sl ool-rr alg fab PKST, sl chky-anhy/tr POR fl & prtgs, rr xl CALC & tan CHT incl, POR AA, g even bri-mod bri yel FLOR, STN AA, g fast stmg mlky CUT"

7030.00 7040.00 "LS AA, ool-oom GRNST, tr scat-occ intbd dns chky sl ool-rr agl mat PKST, sl anhy/tr POR fl-prtgs, tr trnsl rhmb xl CALC, rr xl ANHY, rr tan CHT incl, g even mod bri-scat bri yel FLOR, fr-mg ltbrn-brn/rr dkbrn-vrr blk pp dd o STN, g fast stmg mlky CUT"

7040.00 7070.00 "LS ltbrn-tan-crm, tr brn, wh, micsuc-gran, vfxl-micxl, tr crpxl, pred ool-oom GRNST/sl incr scat PKST AA, chky-sl anhy/tr POR fl & prtgs, tr tan CHT incl, rr xln ANHY, g-mg ool-oom/fr intxl-v sl agl POR, g scat mod bri-bri yel FLOR, STN AA, g fast stmg mlky CUT"

7070.00 7102.00 "LS AA, ool-oom GRNST, tr scat dns sl ool PKST, sl chky-anhy/tr POR fl-rr xln ANHY, tr thn plty prtgs, tr trnsl rhmb xl CALC, tr tan-crm CHT incl, g ool-sl oom/tr intxl-sl agl POR, g scat bri-mod bri yel FLOR, g-mg ltbrn-brn/tr dkbrn-rr blk dd o STN, g fast stmg-sl blooming mlky CUT"

FORMATION TOPS

OPERATOR: MOBIL
WELL NAME: RATHERFORD UNIT #17-44 SE 1-A HORIZONTAL LATERAL LEG #2

FORMATION NAME	SAMPLES		DATUM
	MEASURED DEPTH	TRUE VERTICAL DEPTH	KB:4733'
LOWER ISMAY	5447'	5443'	-710'
GOTHIC SHALE	5518'	5494'	-761'
DESERT CREEK	5537'	5504'	-771'
DC 1-A ZONE	5562'	5511'	-778'

GEOLOGICAL SUMMARY

AND

ZONES OF INTEREST

The Mobil Exploration and Production U.S., Inc., Ratherford Unit #17-44 Horizontal Lateral Leg #2 was a re-entry of the Mobil Ratherford Unit #17-44 located in Section 17, T41S, R24E. This lateral a sidetrack from the original vertical well, in a southeasterly direction beginning at a measured depth of 5397', 5397' true vertical depth, on July 8, 1998. The lateral reached a total measured depth of 7102', true vertical depth of 5547.5', with a horizontal displacement of 1600' and true vertical plane 135.4 degrees, on July 11, 1998; in the upper Desert Creek 1-A porosity bench when the lateral was terminated. The curve and lateral sections were drilled with no significant problems and the lateral remained in the purposed 1-A porosity zone throughout its length. The curve and lateral sections were drilled with fresh water and brine water with polymer sweeps as the drilling fluid. A significant amount of oil was noted on the pits, as well as a very good flare of up to 25' in length was seen while drilling the 1-A zone in the lateral section. An accumulated increase of approximately 2500 barrels of fluid was noted when the lateral section was completed. During the drilling of this southerly leg, the background gases that were noted on the accompanying mud log showed a marked increase when the Upper Desert Creek 1-A porosity zone was penetrated in the curve section. During the lateral section, the background gas started low and increased, as the lateral progressed, to just over 10,000 units. Minor problems occurred early in the well preparation prior to the drilling of Leg #1. As noted in the report for lateral Leg #1, the problems were; leveling the rig due to the very sandy location and the lost circulation encountered while orienting the packer. The lower gas readings early in the lateral section might be attributed to the increasing amount of flushing near the vertical well bore. The samples showed moderately good to good porosity and oil shows throughout the drilling of the lateral in the 1-A zone, until reaching termination.

The objectives of the Ratherford Unit #17-44 Leg #2 horizontal lateral were to identify and define the porosity zone of the 1-A bench of the Desert Creek Member of the Upper Paradox Formation, and to evaluate porosity and reservoir properties. These objectives were accomplished and it became apparent that the 1-A zone in this lateral direction was a single predominately homogeneous unit, with some vertical variation. After completing the curve section of the lateral, the lateral section required occasionally significant amounts of sliding to maintain vertical and horizontal plane direction. The borehole remained within 4 feet or less of the proposed target line, and in the 1-A porosity zone throughout its length.

The basal Upper Ismay, Lower Ismay, Gothic Shale, the transition zone at the top of the Desert Creek, and the 1-A porosity zone were encountered while drilling the curve section of the lateral. Kick off point for this lateral was 5417' measured and true vertical depth, in the dense limestones and very thin marls near the base of the Upper Ismay.

The top of the Upper Ismay was not seen while drill the curve portion of Leg #2, but was estimated to be at approximately a measured depth of 5340', true vertical depth of 5340'. The basal 50' of the Upper Ismay formation was characterized by clean to occasionally argillaceous dense limestone and scattered thin streaks of calcareous to dolomitic, dark gray to black, slightly carbonaceous shales. The limestone was tan to cream to brown, occasionally light gray to dark gray brown to dark brown, microcrystalline to cryptocrystalline, clean to argillaceous, some chalky to slightly marly, occasionally slightly silty and very slightly anhydritic. Scattered brown to dark brown cherts were noted in these tight limestones. The limestones showed no to very rare streaks of very poor intercrystalline porosity, but had no visible sample shows. The very base of the Upper Ismay from a measured depth of 5442' to the top of the Lower Ismay at

a measured depth of 5447' is a very tight and marly dolomitic limestone, grading into the very thin Hovenweep Shale marker between the Upper and Lower Ismay members. The Hovenweep Shale was extremely poorly represented in the samples in this lateral. A very minor increase in gray brown to dark gray, calcareous to slightly dolomitic, very slightly carbonaceous shales and an increase in very argillaceous to marly dark dolomites was noted in the samples from a measured depth of 5440' to 5450'.

The top of the Lower Ismay was picked at 5447' measured depth, 5443' true vertical depth, at the base of the very thin Hovenweep shale. This pick was based on the vertical well electric logs as well as a slight change in the lithology, was at the very thin Hovenweep Shale to Lower Ismay contact. The upper Lower Ismay limestones from 5444' to 5488' were predominately tan to medium brown, with some light gray brown to dark brown, microcrystalline to cryptocrystalline, clean to earthy, chalky in part, and very slightly silty. Varying amounts of chert and rare scattered microfossils were also observed. These limestone had streaks of very poorly developed intercrystalline porosity, but no visible sample shows. Thinly interbedded in the limestones were rare streaks of light to dark brown, minor dolomites, which were microcrystalline, earthy to clean, with poor intercrystalline porosity, and no visible sample show. From a measured depth of 5490' to 5512', the Lower Ismay showed a marked increase in the tan to light brown, occasionally brown to gray brown, microcrystalline to cryptocrystalline dolomites interbedded in the predominately tight limestones. The dolomites were dense, with some microsucrosic texture, slightly earthy to chalky, limey, with some streaks of anhydrite, and rare algal material. This dolomite showed some moderately good intercrystalline and rare vuggular porosity, with fair sample show, but only a slight increase in the background gas noted. The very base of the Lower Ismay from a measured depth of 5512' to the top of the Gothic Shale at a measured depth of 5518', was interbedded dense and increasingly marly limestones and dolomites. The limestones are white to tan to light brown, cryptocrystalline to microcrystalline, dense, earthy to chalky, dolomitic and becoming increasingly marly with depth. The dolomites are brown to gray brown, slightly mottled, crypto to microcrystalline, and clean to argillaceous. With depth the limestones and dolomites became increasingly shaley, and grading into calcareous to dolomitic, carbonaceous shale, and had no visible porosity or sample shows. The basal Lower Ismay limestones and dolomites lay gradationally over the Gothic Shale.

The top of the Gothic Shale was picked at 5509' measured depth, 5493' true vertical depth, with a marked decrease in the rate of penetration. The Gothic Shale was predominantly dark gray to black to dark gray brown, carbonaceous, silty, brittle to firm, subblocky to fissile, calcareous to slightly dolomitic and slightly micaceous, with minor silty material, and had rare dense limestone and earthy dolomite laminations. The top of the Gothic was gradational from the very thin interbedding of very argillaceous, dolomitic limestones and limy dolomites, to the very dolomitic to calcareous, carbonaceous shale. The top of the Gothic was picked predominantly on the decrease in penetration rate and an increase in the percentage of shale in the samples. The base of the Gothic Shale overlays the Desert Creek with a rather sharp contact.

A gradational transitional zone appears between the Gothic Shale and the top of the Desert Creek Porosity members of the Paradox Formation; and it is within this zone where the top of the Desert Creek member is commonly picked due to a very noticeable facies and penetration rate change. In this lateral leg, the top of the Desert Creek was picked at a measured depth of 5535' and at a true vertical depth of 5503'. The zone was predominately a slightly dolomitic, very dense limestone packstone, with thinly interbedded brown, limy, argillaceous, microcrystalline to cryptocrystalline dolomites and very thin carbonaceous shales. The limestones were cream to tan to brown, cryptocrystalline to microcrystalline, argillaceous, with very rare intercrystalline porosity, but only very rare, spotty, dull mineral fluorescence, with no visible stain or cut. The interbedded dolomites were microcrystalline to very slightly granular, with a slightly silty texture and had a very poor visible porosity and a very minor sample show. The slightly oolitic, dense limestone packstones at the very base of the Desert Creek transition zone graded into the good oolitic oomoldic limestone grainstones and the thin dense limestone packstones of the 1-A porosity zone.

The top of the Desert Creek 1-A porosity zone was picked at 5561' measured depth, 5511' true vertical depth and was noted by sample identification and a significant increase in the penetration rate. The top of the 1-A porosity in this southeasterly leg was in an oolitic to oomoldic, very slightly dolomitic, occasionally anhydritic limestone grainstone with some scattered dense limestone packstone and very rare, very thin, dense limy dolomites near the top. Lithology of the 1-A porosity zone as seen in the curve, consisted of light brown to tan to medium brown to occasionally dark brown, microcrystalline to very fine crystalline, granular to microsucrosic with traces of sucrosic streaks, oolitic to oomoldic limestone grainstone. These oolitic limestones had traces of dolomitic rich cement, were slightly anhydritic with traces of crystalline anhydrite inclusions and some porosity filling. Very thinly interbedded throughout the grainstones, in minor amounts were very rare scattered tan to light brown, white to cream to rare light gray brown, cryptocrystalline to microcrystalline, dense occasionally oolitic, chalky, platy, anhydritic packstones, which had no to very poor porosity and no visible sample show. The limestone grainstones had a fair to good oolitic to intercrystalline porosity, with fair to good bright to traces of dull yellow fluorescence, fair to good light brown to brown stain with traces of dark brown to black bitchimum staining* and a good slow to moderately fast to fast streaming milky cut. The 1-A porosity zone was projected to be 12' (true vertical thickness) thick based on the Ratherford Unit 17-44 vertical well electric logs. Scattered in the good limestone grainstones were minor dense, slightly oolitic limestone packstones, which was seen in varying amounts throughout the section. Also noted were very rare brown to gray brown, translucent to clear chert fragments, as well as some very rare, very thin, black carbonaceous shale cavings to partings.

At a measured depth of 5590' and a true vertical depth of 5513.5' the curve was landed with an inclination of 93.2° and a horizontal displacement of 68 feet, in the 1-A porosity zone, 1.5' above the proposed target line. After landing curve section with in the 1-A porosity zone, on July 9, 1998; drilling of the lateral section was commenced in a southeasterly direction also on July 9th, with the well bore being slowly slid downward to reach an angle of approximately 90 degrees. Based on the upward turn of the angle when the curve was landed it was later determined that the well bore had "glanced" off a tight streak with in the 1-A, which showed as a very minor increase in packstones in the samples. The lithology of the 1-A porosity zone from the top of the zone to the landing of the curve was constant and consisted of brown to light brown to tan, oolitic to oomoldic grainstone limestones, with traces of dense to very rare chalky to platy slightly oolitic packstones. Sample shows were good to fair in the oolitic to oomoldic, intercrystalline and very slightly algal porosities.

On July 9, 1998, at the measured depth of 5590', the southeasterly lateral section in the 1-A porosity zone was commenced. The well bore was oriented downward at a very shallow angle to bring the well path approximately level. The well path remained approximately level in the good oolitic to oomoldic limestone grainstones, with good sample shows until reaching a measured depth of 5657', true vertical depth of 5514', with a horizontal displacement of 157', approximately 1 foot above the proposed target line. Until this point the average angle of declination had been 88 degrees. At the measured depth of 5657' the well path began a hard streak with in the upper 1-A zone and the well path was forced upward to the top of the 1-A zone and in to the Upper Desert Creek transition zone with an inclination of 94°. At a measured depth of 5720', 5510.6' true vertical depth, with a horizontal displacement of 220', as the inclination of the well path was lowered, lithology became the dense tight slightly oolitic limestones near the base of the transition zone.

From the measured depth of 5720', to a measured depth of 5912', 5512' true vertical depth, and a horizontal displacement of 410', the well bore was drilled in the lower 2' of the Desert Creek transition zone. The lithology was a tan to brown, some cream, cryptocrystalline to microcrystalline, clean to dense, slightly dolomitic, oolitic limestone packstone, with very rare oolitic to intercrystalline porosity, but only very rare, spotty, dull mineral fluorescence, with no visible stain or cut. Interbedded in these tight packstones were thin streaks oolitic to oomoldic limestone grainstones, which had minor amounts of intercrystalline to oolitic porosity, with a slight sample show. Upon reaching the measured depth of 5912', the top of the upper most 1-A porosity was encountered and the lithology returned to the very good

oolitic to oomoldic limestones, with a very good sample show. As the well bore was continued downward at a very shallow angle, averaging 88.5°, the lithology was predominately the good oolitic to oomoldic limestone grainstones, with tight streaks of dense slightly oolitic limestone packstone. This interval of cyclic deposits composed the upper 4 to 6 feet (true vertical thickness) of the 1-A porosity zone. The tight dense limestone packstone ranged in thickness from ½ to 3½ feet thick and were seen at true vertical depths of 5516' and 5519.5', the measured depths were 5971' and 6133' respectively. Upon reaching a measured depth of 6186' the best porosity of the 1-A zone was encountered.

At the measured depth of 6186', 5524' true vertical depth, with a horizontal displacement of 685', as the well path dropped to an angle of 83.8°, the penetration rate increased and the lithology became the oolitic to oomoldic, slightly algal limestone. After dropping below the last hard streak, the well path was slowly turned upward in the best porosity of the 1-A porosity bench, to a shallower angle of inclination. From the measured depth of 6186' to a measured depth of 7025', 5544' true vertical depth, with a horizontal displacement of 1524', the lateral remained in the very good oolitic to oomoldic, slightly algal limestone grainstones. As described above, these limestone grainstones were tan to light brown, occasionally cream, very fine crystalline to microcrystalline, granular to microsugrosic, with varying amounts of sugrosic streaks, oolitic to oomoldic, occasionally algal, very slightly dolomitic to anhydritic. These limestones had very well developed intercrystalline to oolitic and some algal porosity, with predominately good sample shows. Throughout this interval the well path was rarely allowed to increase to 90° or more. The proposed inclination through the lateral was 88.5°, the actual angle of inclination averaged close to 88.5 degrees once the top of the best porosity was penetrated. Upon reaching the measured depth of 7025', the top of the best porosity zone in the 1-A was "bumped", this was due to the angle being previously allowed to drift upward to just over 90° and average just over 89°. At this point the angle was turned again downward and the lateral moved away from the base of the tight streak. There was a very slight change in the penetration rate, but only a very minor increase in the amount of dense limestone packstones in the samples. It was interpreted that the bit had glanced off a tight streak of packstone within the 1-A bench. The dip angle was calculated to be 88.6° for the top of the best porosity within the 1-A zone. The well path was continued downward in the very good oolitic to oomoldic, slightly algal limestones to the lateral's total measured depth of 7102', 5547.5' true vertical depth, and it's maximum horizontal displacement of 1600.5'. At this point the Ratherford Unit 17-44 southeasterly lateral Leg #2 was terminated on July 11, 1998.

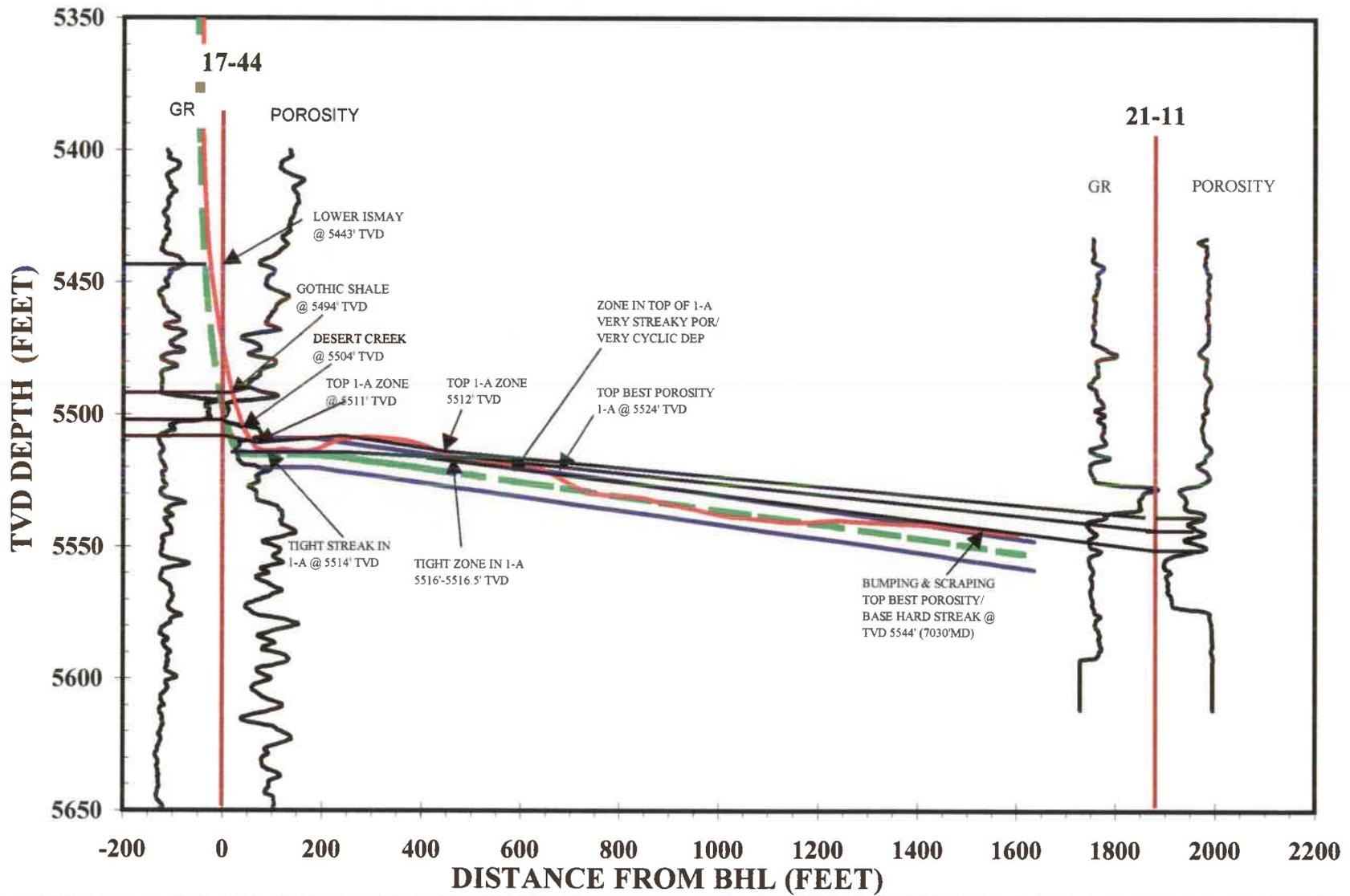
In tracking the southeasterly lateral in the 1-A porosity zone in this area, the oolitic to oomoldic limestone porosities are fairly consistent throughout the bench, with very cyclic deposits in the upper 4 feet of the zone being the only vertical changes noted. Having a minor effect on the porosity, were the minor amounts of anhydrite filled porosity and the thin, dense, chalky to platy slightly oolitic limestone packstones scattered in minor amounts throughout the best porosity of the 1-A zone. Staining was fair to good throughout, with sections having a trace to fair amount of staining, and the amount of black dead oil staining trapped in the oolitic to oomoldic porosity ranging being predominately a trace amount to intervals having an abundant amount. The fluorescence and cuts remained predominately good throughout the lateral. The lateral used the proposed target line as a reference point through the 1-A zone. The well bore was allowed to follow the line of best porosity after entering the 1-A porosity zone which resulted in the lateral remaining an average of 3' above the target line until reaching a horizontal displacement of 700'. From 700' to 1200' of horizontal displacement the lateral followed the target line. At 1200' to the lateral's termination, the well path was allowed to drift upward as it was rotated ahead, and the lateral rose in true vertical depth until the lateral was terminated approximately 6' above the proposed target line.

While drilling the curve section, the very minor increases in background gas was due to the poor limestone and moderately fair dolomite porosity encountered while drilling the Lower Ismay, as well as the minor amounts of oil encountered in the 1-A porosity zone in the curve. The moderate increase in the background gases noted when the 1-A zone was penetrated at a measured depth of 5543' in the curve section was due in part to the flushing near the vertical well bore, as well as the basal portion of the transition zone being penetrated. The significant increase noted at measured depth of 5912' was due to the oil encountered while drilling the lateral at some distance from the 17-44 vertical well bore. The flare and

oil noted on the pits and seen in the samples continued to increase as the lateral progressed its termination, with a flare of up to $\pm 25'$ and an increase of approximately 2500 barrels of fluid. While this lateral was drilled as a southeasterly sidetrack of the Rutherford Unit 17-44 production well in the Upper Desert Creek 1-A porosity zone, it was seen to have very good reservoir qualities that have yet to be flushed by the offsetting injector wells. This lateral appears to have porosities that are well enough developed, in this southeasterly direction to enhance the overall production performance of the 1-A porosity zone for the 17-44 well.

*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 #17-44, Southeast Lateral



Mobil

**San Juan County
Utah
Ratherford Unit
RU 17-44 - MWD Survey Leg #1**

SURVEY REPORT

31 July, 1998

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

Survey Ref: svy3006

Sperry-Sun Drilling Services

Survey Report for RU 17-44



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	0.380	346.250	200.00	0.64 N	0.16 W	0.46	0.190
400.00	0.390	340.280	399.99	1.93 N	0.54 W	1.44	0.021
600.00	0.450	329.150	599.99	3.24 N	1.18 W	2.64	0.051
800.00	0.550	335.790	799.98	4.79 N	1.97 W	4.11	0.058
1000.00	1.410	334.440	999.95	7.89 N	3.43 W	6.91	0.430
1200.00	1.530	331.890	1199.88	12.46 N	5.75 W	11.21	0.068
1400.00	1.620	329.190	1399.81	17.25 N	8.45 W	15.95	0.058
1600.00	1.690	325.800	1599.73	22.11 N	11.56 W	21.07	0.060
1800.00	1.380	335.080	1799.65	26.74 N	14.23 W	25.70	0.198
2000.00	1.430	340.390	1999.59	31.27 N	16.09 W	29.57	0.070
2200.00	1.520	343.760	2199.53	36.17 N	17.66 W	33.38	0.062
2400.00	0.780	335.660	2399.49	39.96 N	18.97 W	36.41	0.378
2600.00	0.600	267.140	2599.47	41.15 N	20.57 W	38.39	0.395
2800.00	0.560	317.430	2799.46	41.81 N	22.28 W	40.20	0.247
3000.00	0.420	328.080	2999.46	43.16 N	23.33 W	41.78	0.083
3200.00	0.270	40.240	3199.45	44.14 N	23.41 W	42.35	0.212
3400.00	0.380	47.720	3399.45	44.94 N	22.62 W	42.06	0.059
3600.00	0.410	44.620	3599.45	45.90 N	21.63 W	41.68	0.018
3800.00	0.480	48.130	3799.44	46.97 N	20.50 W	41.24	0.038
4000.00	0.400	45.520	3999.43	48.02 N	19.38 W	40.79	0.041
4200.00	0.350	69.780	4199.43	48.72 N	18.31 W	40.21	0.083
4400.00	0.510	110.150	4399.43	48.62 N	16.90 W	38.94	0.166
4600.00	0.550	125.800	4599.42	47.75 N	15.28 W	37.11	0.075
4800.00	0.260	124.880	4799.41	46.93 N	14.13 W	35.70	0.145
5000.00	0.360	127.850	4999.41	46.29 N	13.26 W	34.63	0.051
5200.00	0.410	153.000	5199.40	45.26 N	12.44 W	33.41	0.087
5400.00	0.480	72.150	5399.40	44.88 N	11.32 W	32.24	0.290
MWD Survey Leg #1							
5410.00	0.380	65.060	5409.40	44.91 N	11.25 W	32.20	1.131
5417.00	4.200	300.000	5416.39	45.05 N	11.45 W	32.44	63.274
5427.00	9.800	313.210	5426.32	45.81 N	12.39 W	33.64	57.904
5437.00	16.700	316.430	5436.04	47.44 N	14.00 W	35.85	69.367
5447.00	24.000	317.900	5445.41	49.99 N	16.36 W	39.16	73.173
5457.00	30.600	318.800	5454.29	53.42 N	19.40 W	43.51	66.127
5467.00	36.200	316.600	5462.64	57.48 N	23.11 W	48.76	57.286
5477.00	37.100	306.500	5470.67	61.43 N	27.57 W	54.59	60.904
5487.00	41.400	308.300	5478.41	65.27 N	32.59 W	60.86	44.479
5497.00	48.700	307.300	5485.47	69.60 N	38.18 W	67.87	73.340

Continued...

Sperry-Sun Drilling Services

Survey Report for RU 17-44



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)
5507.00	56.400	306.100	5491.55	74.34 N	44.54 W	75.75	77.585
5517.00	62.500	304.100	5496.63	79.29 N	51.59 W	84.32	63.380
5527.00	66.800	299.600	5500.91	84.05 N	59.26 W	93.35	59.172
5537.00	70.400	304.500	5504.56	88.99 N	67.15 W	102.65	58.105
5547.00	76.800	305.500	5507.38	94.49 N	75.00 W	112.20	64.714
5572.00	91.800	304.300	5509.86	108.68 N	95.35 W	136.91	60.189
5611.00	89.800	300.100	5509.32	129.45 N	128.34 W	175.87	11.926
5642.00	90.300	303.400	5509.29	145.76 N	154.69 W	206.85	10.767
5673.00	90.900	300.800	5508.96	162.24 N	180.95 W	237.83	8.607
5705.00	89.400	299.900	5508.88	178.40 N	208.56 W	269.82	5.466
5737.00	88.300	299.400	5509.52	194.23 N	236.37 W	301.82	3.776
5768.00	88.600	299.400	5510.36	209.44 N	263.37 W	332.80	0.968
5799.00	90.700	299.600	5510.55	224.71 N	290.34 W	363.80	6.805
5831.00	91.900	299.600	5509.82	240.51 N	318.16 W	395.79	3.750
5863.00	90.000	298.700	5509.29	256.09 N	346.10 W	427.78	6.570
5895.00	89.700	298.400	5509.38	271.39 N	374.21 W	459.77	1.326
5926.00	90.800	298.500	5509.24	286.15 N	401.47 W	490.76	3.563
5958.00	90.400	298.500	5508.91	301.42 N	429.59 W	522.74	1.250
5990.00	90.100	298.400	5508.77	316.67 N	457.72 W	554.73	0.988
6022.00	89.900	299.100	5508.77	332.06 N	485.78 W	586.72	2.275
6054.00	85.800	299.400	5509.97	347.68 N	513.67 W	618.69	12.847
6085.00	87.000	300.100	5511.91	363.03 N	540.53 W	649.63	4.479
6116.00	87.100	300.600	5513.51	378.67 N	567.25 W	680.59	1.643
6148.00	88.700	301.200	5514.68	395.10 N	594.69 W	712.56	5.340
6180.00	91.100	301.200	5514.74	411.67 N	622.06 W	744.55	7.500
6211.00	91.800	301.200	5513.95	427.73 N	648.56 W	775.54	2.258
6243.00	90.900	300.600	5513.20	444.15 N	676.01 W	807.52	3.380
6275.00	89.000	299.400	5513.23	460.15 N	703.72 W	839.52	7.022
6307.00	89.300	299.600	5513.70	475.91 N	731.57 W	871.52	1.127
6338.00	89.600	299.100	5514.00	491.10 N	758.59 W	902.51	1.881
6370.00	89.700	298.400	5514.20	506.49 N	786.65 W	934.50	2.210
6402.00	88.900	298.000	5514.59	521.61 N	814.85 W	966.48	2.795
6434.00	90.400	297.700	5514.78	536.56 N	843.14 W	998.46	4.780
6466.00	92.100	298.000	5514.08	551.51 N	871.42 W	1030.43	5.395
6496.00	92.300	297.700	5512.93	565.51 N	897.93 W	1060.39	1.201
6528.00	91.300	297.800	5511.93	580.40 N	926.24 W	1092.35	3.141
6560.00	90.500	297.500	5511.42	595.25 N	954.58 W	1124.31	2.670
6601.00	90.400	297.300	5511.10	614.12 N	990.98 W	1165.27	0.545
6636.00	90.400	297.300	5510.86	630.17 N	1022.08 W	1200.23	0.000

Continued...

Sperry-Sun Drilling Services

Survey Report for RU 17-44



Mobil
San Juan County

Utah
Ratherford Unit

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

The Dogleg Severity is in Degrees per 100ft.
Vertical Section is from Well and calculated along an Azimuth of 300.000° (True).

Based upon Minimum Curvature type calculations, at a Measured Depth of 6636.00ft.,
The Bottom Hole Displacement is 1200.73ft., in the Direction of 301.656° (True).

Mobil

**San Juan County
Utah
Ratherford Unit
RU 17-44 - MWD Survey Leg #2**

SURVEY REPORT

31 July, 1998

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

Survey Ref: svy3008

Sperry-Sun Drilling Services

Survey Report for RU 17-44



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	0.380	346.250	200.00	0.64 N	0.16 W	-0.57	0.190
400.00	0.390	340.280	399.99	1.93 N	0.54 W	-1.75	0.021
600.00	0.450	329.150	599.99	3.24 N	1.18 W	-3.13	0.051
800.00	0.550	335.790	799.98	4.79 N	1.97 W	-4.79	0.058
1000.00	1.410	334.440	999.95	7.89 N	3.43 W	-8.00	0.430
1200.00	1.530	331.890	1199.88	12.46 N	5.75 W	-12.88	0.068
1400.00	1.620	329.190	1399.81	17.25 N	8.45 W	-18.17	0.058
1600.00	1.690	325.800	1599.73	22.11 N	11.56 W	-23.81	0.060
1800.00	1.380	335.080	1799.65	26.74 N	14.23 W	-28.97	0.198
2000.00	1.430	340.390	1999.59	31.27 N	16.09 W	-33.49	0.070
2200.00	1.520	343.760	2199.53	36.17 N	17.66 W	-38.07	0.062
2400.00	0.780	335.660	2399.49	39.96 N	18.97 W	-41.67	0.378
2600.00	0.600	267.140	2599.47	41.15 N	20.57 W	-43.64	0.395
2800.00	0.560	317.430	2799.46	41.81 N	22.28 W	-45.32	0.247
3000.00	0.420	328.080	2999.46	43.16 N	23.33 W	-47.01	0.083
3200.00	0.270	40.240	3199.45	44.14 N	23.41 W	-47.77	0.212
3400.00	0.380	47.720	3399.45	44.94 N	22.62 W	-47.77	0.059
3600.00	0.410	44.620	3599.45	45.90 N	21.63 W	-47.75	0.018
3800.00	0.480	48.130	3799.44	46.97 N	20.50 W	-47.71	0.038
4000.00	0.400	45.520	3999.43	48.02 N	19.38 W	-47.65	0.041
4200.00	0.350	69.780	4199.43	48.72 N	18.31 W	-47.39	0.083
4400.00	0.510	110.150	4399.43	48.62 N	16.90 W	-46.33	0.166
4600.00	0.550	125.800	4599.42	47.75 N	15.28 W	-44.57	0.075
4800.00	0.260	124.880	4799.41	46.93 N	14.13 W	-43.18	0.145
5000.00	0.360	127.850	4999.41	46.29 N	13.26 W	-42.11	0.051
5200.00	0.410	153.000	5199.40	45.26 N	12.44 W	-40.80	0.087
MWD Survey Leg #2							
5390.00	0.450	74.670	5389.40	44.85 N	11.41 W	-39.79	0.286
5397.00	4.700	135.000	5396.39	44.66 N	11.18 W	-39.49	64.204
5407.00	9.200	128.600	5406.32	43.87 N	10.27 W	-38.28	45.592
5417.00	14.600	126.600	5416.10	42.62 N	8.63 W	-36.24	54.149
5427.00	20.200	125.600	5425.64	40.86 N	6.21 W	-33.29	56.078
5437.00	25.600	125.000	5434.84	38.62 N	3.04 W	-29.45	54.050
5447.00	30.600	131.600	5443.67	35.68 N	0.64 E	-24.78	58.809
5457.00	35.600	134.800	5452.04	31.94 N	4.61 E	-19.33	52.951
5467.00	39.400	130.900	5459.97	27.81 N	9.08 E	-13.25	44.791
5477.00	42.200	124.500	5467.55	23.83 N	14.25 E	-6.77	50.299

Continued...

Sperry-Sun Drilling Services

Survey Report for RU 17-44



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)
5487.00	45.100	128.000	5474.78	19.74 N	19.81 E	0.05	37.736
5497.00	46.900	122.800	5481.73	15.58 N	25.67 E	7.13	41.500
5507.00	50.900	125.200	5488.30	11.37 N	31.91 E	14.53	43.893
5517.00	56.000	127.500	5494.26	6.60 N	38.38 E	22.47	54.238
5527.00	60.600	127.300	5499.51	1.44 N	45.13 E	30.90	46.031
5537.00	66.000	126.500	5504.00	3.92 S	52.28 E	39.74	54.470
5547.00	71.700	125.700	5507.61	9.42 S	59.81 E	48.95	57.486
5557.00	76.100	125.100	5510.38	14.98 S	67.64 E	58.42	44.376
5567.00	81.100	124.500	5512.36	20.57 S	75.69 E	68.06	50.345
5590.00	93.200	125.400	5513.50	33.71 S	94.48 E	90.64	52.753
5623.00	88.700	129.000	5512.95	53.65 S	120.75 E	123.32	17.460
5655.00	88.200	131.900	5513.82	74.40 S	145.09 E	155.20	9.193
5687.00	94.700	134.400	5513.01	96.26 S	168.41 E	187.16	21.761
5719.00	94.100	134.700	5510.55	118.65 S	191.15 E	219.06	2.095
5750.00	91.800	134.700	5508.96	140.42 S	213.15 E	250.02	7.419
5782.00	90.200	134.500	5508.40	162.89 S	235.94 E	282.01	5.039
5814.00	89.600	134.400	5508.46	185.30 S	258.78 E	314.01	1.901
5845.00	88.400	134.200	5509.00	206.94 S	280.96 E	345.00	3.924
5877.00	88.300	133.800	5509.92	229.16 S	303.97 E	376.98	1.288
5909.00	85.800	132.400	5511.56	251.00 S	327.30 E	408.92	8.951
5941.00	84.000	130.700	5514.41	272.14 S	351.15 E	440.73	7.723
5973.00	89.600	133.700	5516.20	293.59 S	374.81 E	472.63	19.844
6005.00	88.900	133.300	5516.61	315.61 S	398.02 E	504.61	2.519
6036.00	88.000	133.500	5517.45	336.91 S	420.53 E	535.59	2.974
6068.00	86.600	134.900	5518.96	359.19 S	443.45 E	567.55	6.184
6100.00	88.800	134.500	5520.24	381.68 S	466.17 E	599.52	6.988
6132.00	89.500	135.400	5520.72	404.28 S	488.82 E	631.52	3.563
6164.00	84.300	135.600	5522.45	427.07 S	511.21 E	663.46	16.262
6195.00	83.800	135.100	5525.66	449.00 S	532.88 E	694.29	2.275
6226.00	86.000	134.500	5528.42	470.76 S	554.78 E	725.17	7.354
6258.00	88.400	134.900	5529.98	493.24 S	577.50 E	757.12	7.603
6290.00	89.600	134.700	5530.54	515.78 S	600.20 E	789.12	3.802
6321.00	89.700	134.400	5530.73	537.53 S	622.29 E	820.12	1.020
6353.00	87.500	134.200	5531.51	559.87 S	645.19 E	852.10	6.903
6385.00	87.400	134.200	5532.93	582.16 S	668.11 E	884.07	0.313
6416.00	87.900	134.900	5534.21	603.88 S	690.18 E	915.04	2.773
6448.00	87.600	136.600	5535.46	626.79 S	712.49 E	947.01	5.391
6480.00	87.300	136.600	5536.89	650.02 S	734.46 E	978.97	0.938
6512.00	88.500	136.300	5538.06	673.19 S	756.49 E	1010.94	3.865
6543.00	89.200	137.200	5538.68	695.77 S	777.72 E	1041.92	3.678
6575.00	89.000	137.300	5539.18	719.26 S	799.44 E	1073.89	0.699
6607.00	88.600	137.300	5539.85	742.77 S	821.14 E	1105.85	1.250
6638.00	89.200	136.600	5540.45	765.42 S	842.30 E	1136.83	2.974
6670.00	90.600	136.800	5540.50	788.71 S	864.24 E	1168.81	4.419
6701.00	90.800	136.800	5540.13	811.31 S	885.46 E	1199.80	0.645

Continued...

Sperry-Sun Drilling Services

Survey Report for RU 17-44



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)
6732.00	90.300	136.800	5539.83	833.90 S	906.68 E	1230.78	1.613
6764.00	89.100	135.800	5540.00	857.04 S	928.79 E	1262.77	4.881
6796.00	89.600	135.400	5540.36	879.90 S	951.18 E	1294.77	2.001
6827.00	89.400	135.400	5540.63	901.97 S	972.94 E	1325.76	0.645
6859.00	89.600	135.100	5540.91	924.70 S	995.47 E	1357.76	1.127
6891.00	89.600	134.900	5541.13	947.32 S	1018.10 E	1389.76	0.625
6923.00	89.100	134.500	5541.49	969.83 S	1040.84 E	1421.76	2.001
6954.00	88.700	134.000	5542.09	991.46 S	1063.04 E	1452.75	2.065
6986.00	88.500	134.400	5542.87	1013.76 S	1085.98 E	1484.74	1.397
7017.00	88.900	134.200	5543.58	1035.41 S	1108.16 E	1515.73	1.443
7048.00	86.400	134.700	5544.85	1057.09 S	1130.27 E	1546.70	8.224
7067.00	87.300	135.400	5545.89	1070.52 S	1143.67 E	1565.67	5.997
7102.00	87.300	135.400	5547.54	1095.41 S	1168.22 E	1600.63	0.000

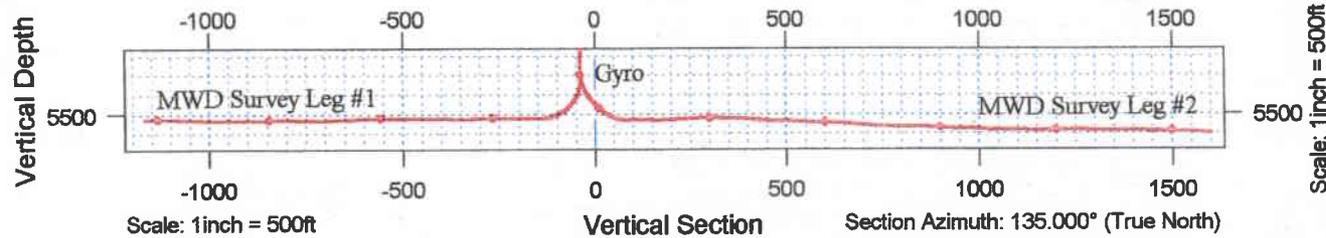
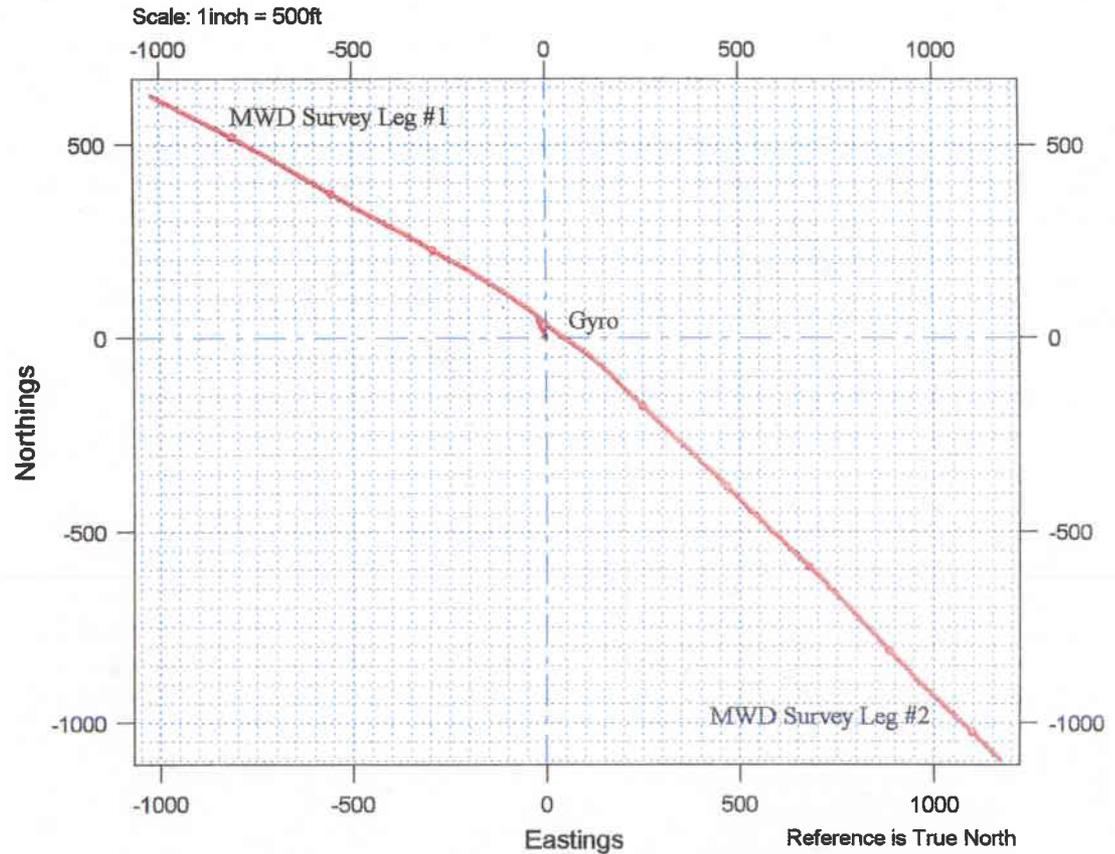
All data is in feet unless otherwise stated. Directions and coordinates are relative to True North.
Vertical depths are relative to Well. Northings and Eastings are relative to Well.

The Dogleg Severity is in Degrees per 100ft.

Vertical Section is from Well and calculated along an Azimuth of 135.000° (True).

Based upon Minimum Curvature type calculations, at a Measured Depth of 7102.00ft.,
The Bottom Hole Displacement is 1601.46ft., in the Direction of 133.158° (True).

San Juan County
Utah
Ratherford Unit
RU 17-44 Legs 1 & 2



Prepared:

Checked:

Approved:

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

5. Lease Designation and Serial No.

14-20-603-353

6. If Indian, Allottee or Tribe Name

NAVAJO TRIBAL

7. If Unit or CA, Agreement Designation

RATHERFORD UNIT

8. Well Name and No.

RATHERFORD 17-44

9. API Well No.

43-037-15732

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. 17, T41S, R24E
(SE/SE) 660' FSL & 660' FEL**

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 type="checkbox"/> Recompletion	<input type="checkbox"/> New Construction
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Altering Casing	<input type="checkbox"/> Conversion to Injection
	<input checked="" type="checkbox"/> Other SIDETRACK	<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; 660' NORTH & 1022' WEST FROM SURFACE SPOT (ZONE 1b).
LATERAL #2; 1095' SOUTH & 1168' EAST FROM SURFACE SPOT (ZONE 1a).**

SEE ATTACHED PROCEDURE.

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

Signed

Shirley Houchins

Title

SHIRLEY HOUCHINS/ENV & REG TECH

Date

9-28-98

(This space for Federal or State office use)

Approved by _____

Title _____

Date _____

Conditions of approval, if any:

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

* See Instruction on Reverse Side

ATTACHMENT – FORM 3160 - 5
RATHERFORD UNIT – WELL # 17-44
14 – 20 – 603 –353
NAVAJO TRIBAL
SAN JUAN, UTAH

- 06-15-98 ROAD RIG & EQUIPMENT TO LOCATION, WAIT ON ORDERS FROM PRODUCTION TO DO PREP WORK.
- 06-16-98 RU NAVAJO WEST 36 UNIT, SET SAFETY & AUX EQUIPMENT. UNSEAT PUMP, NDWH, UNSET TAC, NUBOP & TEST, RU TONGS & FLOOR, TOH W STNDS SI & SDFN-HIGH WINDS.
- 06-17-98 WHP=150, FINISH TOH W TBG. RU SCHLUMBERGER W/L, TIH & RUN CSG INSP LOG-5510' BACK TO 3000', TIH & SET GUIB W.L. SET RBP AT 5360'. TIH W OPEN ENDED TBG TO TOP OF RBP, HOOK UP LINES & TEST CSG TO 1000 #, HELD 15 MIN. SDFN.
- 06-18-98 FINISH L/D OF TBG, LOAD CSG W B/W, AIR & GAS TRAPPED, LEL MTR SHOWED HAZARD, KEPT LOADING, PU RBP IN @ 117', LOAD W F/W. P/U SPEAR, NO MOVEMENT, SLACK OFF CUT 8.625" SURF, SPLIT HEAD, CMT 6-8" DOWN, REL SPEAR, WELD ON NEW SURF HEAD, TBG HEAD & TEST TO 1000# HELD 30 MIN – GOOD. INSTALL BLANKING FLANGE & SDFN.
- 06-19-98 REMOVE BLANKING FLANGE, NUBOP, RUN RETRIEVE RBP, L/D RBP, RDMO. FINAL PREP.
- 07-01-98 JIM THOMPSON W/STATE OF UTAH NOTIFIED @ 08:00 HRS. 7-1-98 OF MOVING ON RATHERFORD UNIT # 17-44. MIRU MONTEZUMA RIG #25.
- 07-02-98 FINISH RU ROTARY RIG. NU BOP STACK, SINGLE JACK TESTED BOP STACK TO 2000 PSI HIGH AND 250 PSI LOW. CONTINUE IN HOLE TO TOP OF RBP @ 5360'. RELEASE RBP.
- 07-03-98 FINISH OUT OF HOLE W/RBP, RU SCHLUMBERGER. RIHW/GUAGE RING TO 5460' WL SET TIW PKR. 5425'. RDWL. TIH W/ANCHOR LATCH ASSY. LATCH INTO TIW PKR. @ 5425'. RU GYRODATA. RIH SURVEY TO SURFACE. RD WL. MIX AND PUMP 60 BBLs. MAG FIBER. REGAINED. CIRC. REDRESS ANCHOR LATCH ASSY. AND PU WHIPSTOCK.
- 07-04-98 TIH W/WHIPSTOCK ASSY. LATCH INTO TIW PKR. @ 5425'. MILL WINDOW W/STARTER MILL FROM 5410'-5412'. POOH W/STARTER MILL. TIH W/CSG. AND WATERMELON MILL. MILL WINDOW IN 5.5" CSG FROM 5408' – 5417' (1 FT. FORMATION.) TOO H LAY DOWN TOOLS. FINAL REPORT PREP FOR LATERAL #1A1. TIH W/BIT, ORIENT SUB, PH6 TBG. & AOHP. TO BTM. GYRO DATA. ORIENT TOOL FACE. TIME DRILL AND DRILL FROM 5417'-5420'.
- 7-05-98 CONTINUE SLIDE DRLG. FROM 5420'-5447'. RD GYRODATA. SLIDE/DRILL AND SURVEYS FROM 5447'-TD OF 5572' LAST SURVEY @ 5547' MD, 5507.38 TVD. (PROJECTED AT BIT AT TD OF 5572 MD, 5510.25 TVD,) PUMP AND CIRC. OUT SWEEP. POOH LAYING DOWN DP. STOOD LAY DOWN CURVE BUILDING TOOLS. PU AND RIH BIT, PH6 TBG. PU/TIH W/ LATERAL BUILDING ASSY.
- 07-06-98 CONTINUE IN HOLE W/LATERAL BUILDING ASSY. SLIDE/ROTATE DRILL AND SURVEYS FROM 5572' TO TD OF 6636' LAST SURVEY @ 6601' MD, 5511.10' TVD, (PROJECTED AT BIT 6636' MD, 90.40 ANGLE, 297.30 AZ., 5510.86 TVD, 1200.23VS) CIRC. SWEEP. HANG SWIVEL BACK. START OUT OF HOLE.

ATTACHMENT – FORM 3160 - 5
RATHERFORD UNIT – WELL # 17-44
14 – 20 – 603 –353
NAVAJO TRIBAL
SAN JUAN, UTAH
PAGE 2

- 07-07-98 POOH TO WINDOW. TOOHLAY DOWN SPERRY SUN'S TOOLS. PU SUPER HOOK. TIH TO RETRIEVE WHIPSTOCK #1. ENGAGE WHIPSTOCK. POOH W/WHIPSTOCK. (LEFT IN HOLE: FISHING NECK OF SHEAR SUB DEBRI SUB AND ANCHOR LATCH. PU TIH W/OVERSHOT, TO TOP OF FISH. POH,REC ALL OF FISH PU & ORIENT WHIPSTOCK LATERAL 1A1.
- 07-08-98 RIH , W/ WEATHERFORD WHIPSTOCK, W/ STARTER MILL, 2.875" AOHP, 5390' – 5392', CIRC CLEAN. POH W/ STARTER MILL, RIH W/ WINDOW & WATERMELON MILLS ON SAME BHA. MILLED WINDOW FROM LATCHED INTO TIW BIG BORE PKR @ 5425', MILLED WINDOW FROM 5389' – 5396' & FORMATION TO 5397', POH & LD MILLS. FINAL REPORT FOR PREP FOR LATERAL 2A1.
DRILLED CURVE FROM 5397' – 5431', HIGH SIDE W/ MWD, POH W/ GYRO, RD GYRO DATA. RIH W/ BIT, PH6 & 2.875" AOHP, CIRC BOTTOMS UP. RIH W/ GYRO DATA'S.
- 07-08-98 RIH BIT, 2.875" AOHP CIRC RIH W/ GYRODATA'S GYRO, DRILLED CURVE FROM 5397' - 5431', POH W/ GYRO, RD GYRO DATA.
- 07-09-98 DRILLED CURVE 2A1 FROM 5431' – 5590'. POH & LD 2.875" AOHP & CURVE ASSEMBLY. RIH BIT, PH6 TBG, & 2.875" AOHP. SLIDE DRILLED LATERAL 2A1 FROM 5590' – 5648".
- 07-10-98 SLIDE & ROTATE DRILLED LATERAL 2A1 FROM 5648' – 6387'.
- 07-11-98 SLIDE & ROTATE DRILLED LATERAL 2A1 FROM 6387' – 7102' TD, 5447' TVD, WELL FLOWING OIL, GAS & WATER, FLOWED 600 BBLs FLUID IN 5 HRS. PUMPED SWEEP & CIRC HOLE, DISPLACED HOLE W/ 10 # BRINE & KILLED WELL. POH & LD MWD & MUD MOTOR. RIH W/ 2.875" PH6 TBG, 5 1/2" GUIBERSON UNI-6 PKR,
- 07-12-98 FIN RIH W/ RBP ON 2.875" AOHP, PRESS TESTED RBP & CSG TO 1000 #, HELD OK. ND BOP, CHOKE, MUD GAS SEPERATOR & CAPPED WELL W/ FLANGED WELLHEAD & VALVE. RIG DOWN RIG.
- 07-13-98 RD & REL MONTEZUMA 25 @ MIDNIGHT 7/12/98. FINAL REPORT FOR LATERAL 2A1.

COMPLETION:

- 07-24-98 MIRU NAVAJO WEST RIG #36,
SHUT IN TBG. PRESSURE @ 16:30 WAS 0 PSI. ND WH CAP. , NU BOPE.
MAKE UP GUIBERSON ON/OFF TOOL, RIH TO 1850'. SIFN
- 07-25-98 SHUT IN PRESSURE @ 07:30 WAS 0 PSI. PICK-UP 2.875" PH-6 TBG., RIH TO 5225'. TAG UP ON RETV. BRIDGE PLUG, UNLATCH FORM PACKER AND SPACE OUT.
RIG UP AND RECV. CIRC. LATCH ONTO PACKER WITH ON/OFF TOOL. RIG UP AND TEST PACKER AND CSG. TO 500 PSI. OK.
RIG UP TEFTELLAR SLICKLINE RIH TO 5225', TAG 'F' PLUG. RELEASE 'F' PLUG, POH. RDMO SLICKLINE UT, SIFN.

ATTACHMENT - FORM 3160 - 5
RATHERFORD UNIT - WELL # 17-44
14 - 20 - 603 - 353
NAVAJO TRIBAL
SAN JUAN, UTAH
PAGE 3

- 07-27-98 MIRU DOWELL COILED TBG. UNIT. SHUT IN PRESSURE @ 06:00 WAS 750 PSI. RIH WITH COILED TBG. TO 7102'.
DOWELL ACIDIZE LATERAL 2A1 FROM 7102' TO 5600' WITH 21,375 GAL. OF 15% HCL ACID. POH WITH COILED TBG. WELL SHUT IN. POH. RD DOWELL COILED TBG. UNIT. TBG PRESSURE AFTER 1.5 HOURS SHUT IN OF 1900 PSI. OPEN WILL TO TEST TANK, FLOW WELL 3 HOURS. RECV. 460 BBLs FLUID. SIFN.
- 07-28-98 SHUT IN TBG. PRESSURE @ 06:00 WAS 1300 PSI. RUKW, WELL DEAD. RELEASE PACKER. POH LAY DOWN PACKER, MAKE UP RETV. TOOLS FOR WHIPSTOCK, RIH TO 5390'. LATCH ONTO WHIPSTOCK. RELEASE, POH. MAKE UP RETV. WHIPSTOCK, ORIENT WHIPSTOCK TO 300 DEG. AZ. AND 222 DEG. AZ. FOR T.I.W. PACKER. RIH TO 5425'. SET WHIPSTICK. POH FROM 5425' TO 5305'. SIFN.
- 07-29-98 SHUT IN PRESSURE AT 07:30 WAS 650 PSI. RUKW, WELL DEAD. POH. LAY DOWN RUNNING TOOLS FOR RETV. WHIPSTOCK. PICK-UP PH-6 TAIL PIPE MAKE UP PAKER AND X/OVER SUB., RUN ON PH-6 TBG. TO 5542.89', PACKER DEPTH OF 5210.30'. SET PACKER AND TEST TO 500 PSI. OK. RD TBG. TONGS AND FLOW LINES FOR COILED TBG. UNIT. SIFN.
- 07-30-98 MIRU DOWELL ACID AND COILED TBG. UNIT. SHUT IN PRESSURE AT 05:00 WAS 411 PSI. RIH WITH COILED TBG. TO 6636'. CIRC. DOWELL ACIDIZE LATERAL 1A1 FROM 6636' TO 5545' WITH 15,120 GALS. OF 15% HCL ACID DOWN. WELL SHUT IN. POH. RDMO DOWELL COILED TBG. OPEN WELL TO TEST TANK, FLOW WELL, RU KW, WELL DEAD. RELEASE PACKER, POH LAY DOWN PACKER. PICK-UP AND MAKE RETV. TOOLS FOR WHIPSTOCK RIH TO 5350'. SIFN.
- 07-31-98 SHUT IN PRESSURE @ 07:30 WAS 500 PSI, RU KW, WELL DEAD. RU AND RIH WITH 2.875" PH-6 TBG. FROM 5350' TO 5410'. LATCH ONTO RETV. WHIPSTOCK AND RELEASE. POH, LAY DOWN WORKSTRING, WHIPSTOCK, AND RETV. WHIPSTOCK. PU AND RIH WITH BULL PLUG, 2.875" TBG. TO 5385.47'. ND BOPE, SET TBG. ANCHOR @ 5162.21', @ 15,000 # TENSION. NU PRODUCTION HEAD. SIFN.
- 08-01-98 SHUT IN TBG. PRESSURE @ 07:30 WAS 550 PSI. RU KW, WELL DEAD. RIH WITH AXELSON 25' X 2" X 24'. RU AND TEST TBG. AND PUMP SEAL TO 400 PSI. OK. SWI. RDMO NAVAJO RIG # 36. FINAL COMPLETION REPORT. TURN WELL OVER TO PRODUCTION.

**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 _____		5. LEASE DESIGNATION AND SERIAL NO. 14-20-603-353	
b. TYPE OF COMPLETION: NEW WELL <input type="checkbox"/> WORK OVER <input type="checkbox"/> DEEP-EN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> DIFF. RESVR. <input type="checkbox"/> Other <input checked="" type="checkbox"/> SIDETRACK		6. IF INDIAN, ALLOTTEE OR TRIBE NAME NAVAJO TRIBAL	
2. NAME OF OPERATOR MOBIL PRODUCING TX & NM INC.* *MOBIL EXPLORATION & PRODUCING US INC. AS AGENT FOR MPTM		7. UNIT AGREEMENT NAME RATHERFORD UNIT	
3. ADDRESS AND TELEPHONE NO. P.O. Box 633, Midland TX 79702 (915) 688-2585		8. FARM OR LEASE NAME, WELL NO. RATHERFORD 17-44	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface (SE/SE) 660' FSL & 660' FEL At top prod. interval reported below LAT #1 630' FNL & 1022' FWL At total depth LAT #2 1095' FSL & 1168' FEL		9. API WELL NO. 43-037-15732	
14. PERMIT NO. _____ DATE ISSUED _____		10. FIELD AND POOL, OR WILDCAT GREATER ANETH	
15. DATE SPUNDED 06-15-98		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA SEC. 17, T41S, R24E	
16. DATE T.D. REACHED 07-13-98		12. COUNTY OR PARISH SAN JUAN	
17. DATE COMPL. (Ready to prod.) 08-01-98		13. STATE UT	
18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 4722' GR / 4733' KB		19. ELEV. CASINGHEAD _____	
20. TOTAL DEPTH, MD & TVD _____		21. PLUG, BACK T.D., MD & TVD _____	
22. IF MULTIPLE COMPL., HOW MANY* _____		23. INTERVALS DRILLED BY → X	
24. PRODUCING INTERVAL(S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD)* LAT #1 (5416-5511' TVD)(5417-6636'TMD) LAT #2 (5396-5548'TVD)(5397-7102'TMD)		25. WAS DIRECTIONAL SURVEY MADE YES	
26. TYPE ELECTRIC AND OTHER LOGS RUN NO		27. WAS WELL CORED NO	

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

CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
13 3/8"	27.1#	176'	17 1/4"	175 SXS CIRC SURFACE	
8 5/8"	24#	1500'	11"	455 SXS CIRCULATED	
5 1/5"	14#	5733'	7 7/8"	480 SXS CIRCULATED	

29. LINER RECORD					30. TUBING RECORD		
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)

31. PERFORATION RECORD (Interval, size and number)		32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.	
DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED		
5545-6636'	LAT #1A1 ACIDIZE W/15120 GALS 15% HCL ACID		
5600-7102'	LAT #2A1 ACIDIZE W/21375 GALS 15% HCL ACID		

33.* PRODUCTION

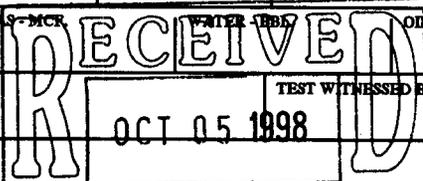
DATE FIRST PRODUCTION 8-08-98		PRODUCTION METHOD (Flowing, gas lift, pumping - size and type of pump) AXELSON 2.5" X 2" X 24"				WELL STATUS (Producing or shut-in) PRODUCING	
DATE OF TEST 8-10-98	HOURS TESTED 24	CHOKE SIZE 	PROD'N. FOR TEST PERIOD →	OIL - BBL 500	GAS - MCF. 200	WATER - BBL 205	GAS - OIL RATIO 400
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.) _____

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 *Kyle Moseley for* TITLE ENVIRONMENTAL & REGULATORY TECH DATE 9-30-98



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

*WTC
2-25-99*

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

38. GEOLOGIC MARKERS

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	MEAS. DEPTH	TOP TRUE VERT. DEPTH

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

5. Lease Designation and Serial No.

14-20-603-353

6. If Indian, Allottee or Tribe Name

NAVAJO TRIBAL

7. If Unit or CA, Agreement Designation

RATHERFORD UNIT

8. Well Name and No.

RATHERFORD 17-44

9. API Well No.

43-037-15732

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. 17, T41S, R24E
(SE/SE) 660' FSL & 660' FEL

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

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

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

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

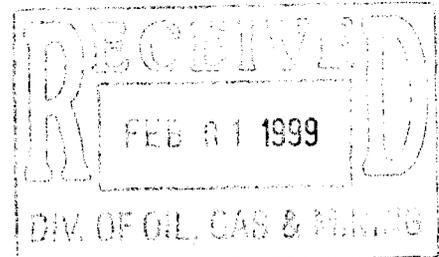
BHL:

LATERAL #1; 660' NORTH & 1022' WEST FROM SURFACE SPOT (ZONE 1b).
LATERAL #2; 1095' SOUTH & 1168' EAST FROM SURFACE SPOT (ZONE 1a).

6-15-98 -- 8-01-98 HORIZONTAL RECOMPLETION.

ATTACHED FORM 15

ACTUAL BOTTOM-HOLE LOCATIONS:
LATERAL 1 -- 1320 FSL 1682 FEL; SEC 17, T41S, R24E
LATERAL 2 -- 0435 FNL 0508 FWL; SEC 21, T41S, R24E



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

Signed Shirley Houchins 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

WTL
2-25-99

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.

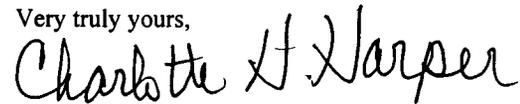
Please note the change of name of MOC to ExxonMobil Oil Corporation in your records pertaining to any MOC permits.

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

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

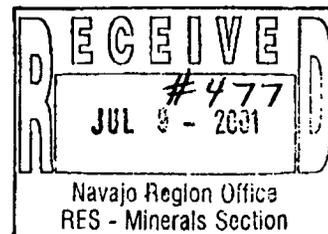
File 7/12/2001
SH
543
File

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.

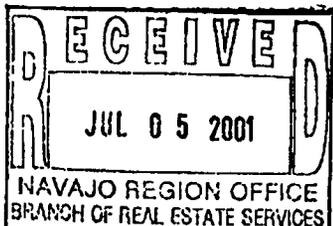
If you have any questions , please contact Alex Correa at (713) 431-1012.

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.

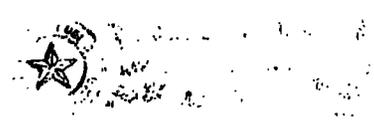
WITNESS, my hand and the seal of the Corporation at Irving, Texas, this 8th day of June, 2001.

S. A. Miller
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

1000 West Loop South, Suite 1900, Houston, Texas 77027-3301
Telephone: (713) 297-4600 • Facsimile: (713) 297-4750

NW Bond

FEDERAL INSURANCE COMPANY RIDER
to be attached to and form a part of

BOND NO 8027 31 97

wherein

Mobil Oil Corporation and Mobil Exploration and Producing U.S., Inc. is
named as Principal and

FEDERAL INSURANCE COMPANY AS SURETY,

in favor of **United States of America, Department of the Interior**
Bureau of Indian Affairs

in the amount of **\$150,000.00**

bond date: 11/01/65

IT IS HEREBY UNDERSTOOD AND AGREED THAT effective June 1, 2001
the name of the Principal is changed

FROM: Mobil Oil Corporation and Mobil Exploration and Producing U.S., Inc.

TO : ExxonMobil Oil Corporation

All other terms and conditions of this Bond are unchanged.

Signed, sealed and dated this 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 }
County of Somerset } ss.

On this 10th day of May, 2001, before me, a Notary Public of New Jersey, personally came Kenneth C. Wendel, to me known to be Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY, the companies which executed the foregoing Power of Attorney, and the said Kenneth C. Wendel being by me duly sworn, did depose and say that he is Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY and knows the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of the By-Laws of said Companies; and that he signed said Power of Attorney as Assistant Secretary of said Companies; 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 that the signature of said Notary Public is in the genuine handwriting of said Notary Public in the presence of said deponent.



Notary Public State of New Jersey
No. 2231647

Commission Expires Oct. 28, 2004

Karen A. Price
Notary Public

Extract from the By-Laws of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY:

"All powers of attorney for and on behalf of the Company may and shall be executed in the name and on behalf of the Company, either by the Chairman or the President or a Vice President or an Assistant Vice President, jointly with the Secretary or an Assistant Secretary, under their respective designations. The signature of such officers may be engraved, printed or lithographed. The signature of each of the following officers: Chairman, President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary and the seal of the Company may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such power of attorney or certificate bearing such facsimile signature and 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
CSC

5184334741

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

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 09:00 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.

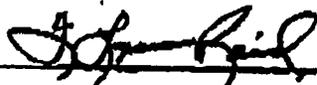
IN WITNESS WHEREOF, this Certificate has been signed this 22nd Day of May, 2001.



F. A. Risch, President 

STATE OF TEXAS)
COUNTY OF DALLAS)

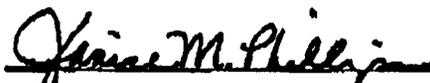
F. L. REID, being duly sworn, deposes and says that he is the Secretary of MOBIL OIL CORPORATION, the corporation mentioned and described in the foregoing instrument; that he has read and signed the same and that the statements contained therein are true.



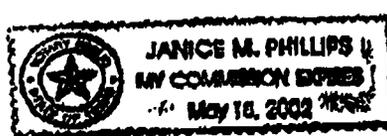
F. L. REID, Secretary

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.153 04/04
F010601000187

CSC 45

CERTIFICATE OF AMENDMENT

OF

MOBIL OIL CORPORATION

Under Section 805 of the Business Corporation Law

SAC

**STATE OF NEW YORK
DEPARTMENT OF STATE**

100 cc

Filed by: EXXONMOBIL CORPORATION
(Name)

FILED JUN 01 2001

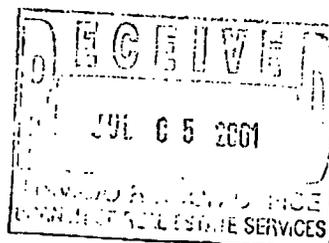
6949 Las Colinas Blvd.
(Mailing address)

TAX \$ _____
BY: *SAC*

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

ny Albany

Case 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**



Special Deputy Secretary of State

OPERATOR CHANGE WORKSHEET

1. GLH
2. CDW ✓
3. FILE

Change of Operator (Well Sold)

Designation of Agent

X Operator Name Change

Merger

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

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

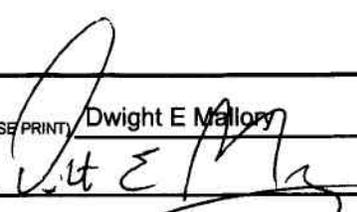
TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
<input checked="" type="checkbox"/> SUBSEQUENT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

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

Effective June 1, 2006 Exxon Mobil Oil Corporation resigns as operator of the Ratherford Unit. Also effective June 1, 2006 Resolute Natural Resources Company is designated as successor operator of the Ratherford Unit.

A list of affected producing and water source wells is attached. A separate of affected injection wells is being submitted with UIC Form 5, Transfer of Authority to Inject.

As of the effective date, bond coverage for the affected wells will transfer to BIA Bond # PA002769.

NAME (PLEASE PRINT) <u>Dwight E 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
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 <i>N1855</i>		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
4. LOCATION OF WELL FOOTAGES AT SURFACE: QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:		8. WELL NAME and NUMBER: Ratherford 9. API NUMBER: attached
		10. FIELD AND POOL, OR WILDCAT: Aneth
		COUNTY: San Juan
		STATE: UTAH

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

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

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

ExxonMobil Oil Corporation is transferring operatorship of Greater Aneth field, Ratherford lease to Resolute Natural Resources Company. All change of operator notices should be made effective as of 7:00 AM MST on June 1, 2006.

Attached please find a listing of producers and water source wells included in the transfer.

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

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: 14-20-603-353
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NAVAJO 7. UNIT or CA AGREEMENT NAME: RATHERFORD
1. TYPE OF WELL Oil Well	8. WELL NAME and NUMBER: 17-44
2. NAME OF OPERATOR: RESOLUTE NATURAL RESOURCES	9. API NUMBER: 43037157320000
3. ADDRESS OF OPERATOR: 1675 Boradway Ste 1950 , Denver, CO, 80202	PHONE NUMBER: 303 534-4600 Ext
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0660 FSL 0660 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 17 Township: 41.0S Range: 24.0E Meridian: S	9. FIELD and POOL or WILDCAT: GREATER ANETH COUNTY: SAN JUAN STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 6/21/2013 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input checked="" type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>

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

Resolute proposes to repair or replace ESP and tubing in the Ratherford Unit 17-44 to put the well back to production. Attached is the proposed procedure and the existing wellbore-tubing diagram.

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

Date: June 20, 2013
By: David K. Quist

NAME (PLEASE PRINT) Sherry Glass	PHONE NUMBER 303 573-4886	TITLE Sr Regulatory Technician
SIGNATURE N/A	DATE 6/19/2013	

RESOLUTE

NATURAL RESOURCES

**Ratherford Unit # 17-44
SESE Sec. 17-T41S-R24E
San Juan County, Utah
43-037-15732**

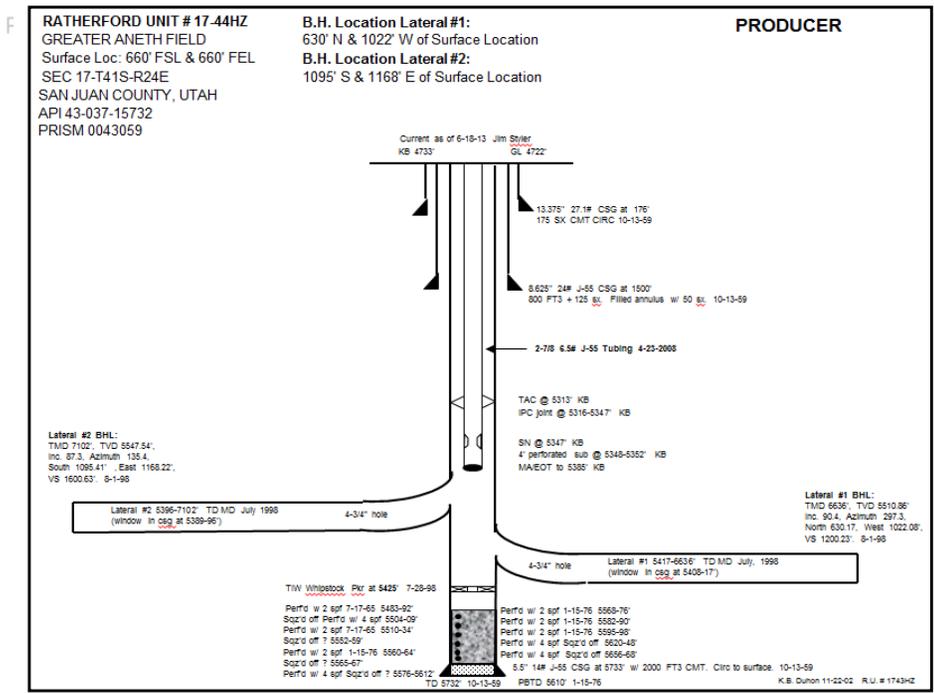
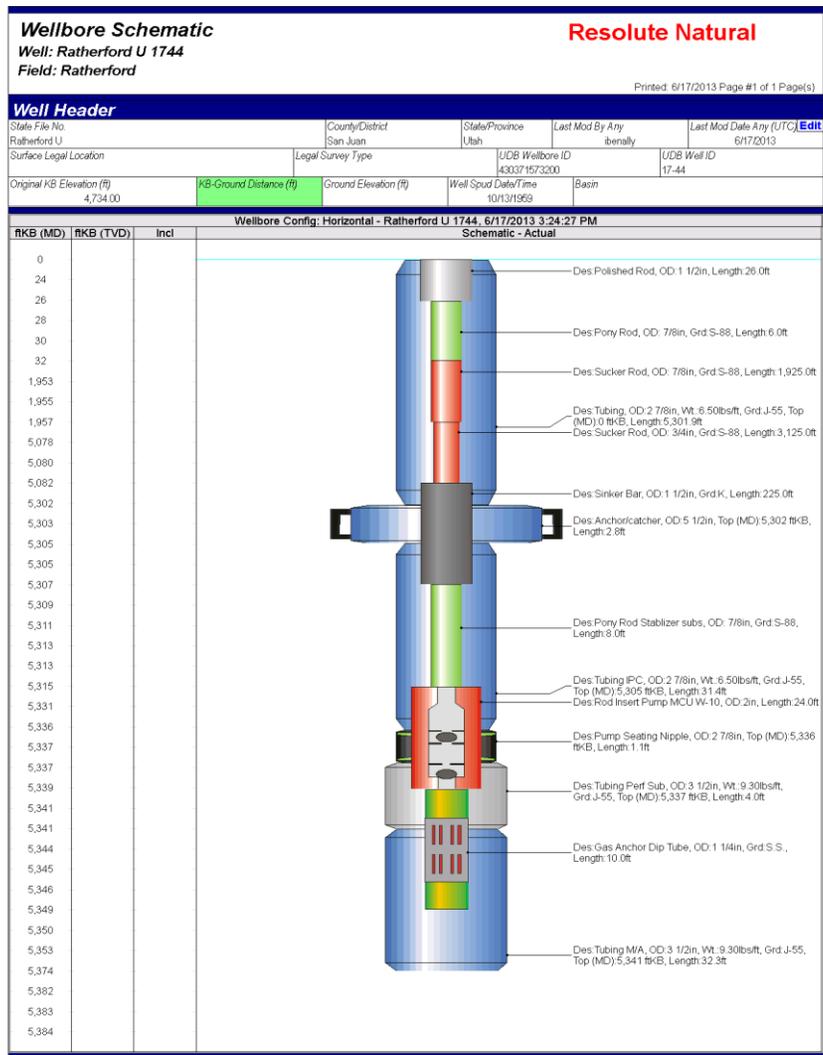
Job Scope

Job Scope: MIRI WSU, PT Tubing, Pull and inspect rods; TIH with fishing tool and retrieve parted rods. PU & TBIH with pump and rods.

Procedure

Horsley Witten: No

1. MIRU WSU, LOTO.
2. Pressure test tubing to 1000 psig.
3. Kill well as necessary.
4. POOH with rods and pump. Stand back rods in derrick. Call and notify Bill Albert (970) 371-9682 for inspection. If unavailable, contact Tech Support: Virgil Holly (435) 444-0020, or Julius Claw (435) 444-0156. Rerun or replace rods per inspection results.
5. Drop standing valve & re-PT the tbg. NU BOPE, prepare to pull tubing.
6. Release the TAC @ 5313' KB. Install a packer. Pressure test BOPE.
7. TIH with extra joints to tag fill; current EOT @ 5385' KB; TIW pkr @ 5425'.
8. TOOH with tubing, standing back. Call & notify Bill Albert to inspect tbg; If unavailable call Virgil Holly or Julius Claw.
9. If needed, RIH with Bit & Scraper and clean out to TOW @ 5389' using Global N2.
10. Per inspection results, re-run or replace tubing with new 2-7/8" J-55 seamless, normalized after upset.
11. TIH w mud anchor, carbon steel SN, tubing, TAC, & tubing to surface; set TAC.
12. NDBOP, NUWH.
13. RIH with rods & new pump. Contact Tech Support for pump and rod details.
14. Long stroke pump to test for good pumping action.
15. Leave enough polished rod for operators to correctly space pump as required.
16. Notify the Area Production Supervisor Billison Rentz (970) 779-9273 that well is ready to return to production.
17. RDMOL. Hook up appropriate chemical treatment.



STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: 14-20-603-353
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SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NAVAJO 7. UNIT or CA AGREEMENT NAME: RATHERFORD
--	--

1. TYPE OF WELL Oil Well	8. WELL NAME and NUMBER: 17-44
------------------------------------	--

2. NAME OF OPERATOR: RESOLUTE NATURAL RESOURCES	9. API NUMBER: 43037157320000
---	---

3. ADDRESS OF OPERATOR: 1700 Lincoln Street, Suite 2800 , Denver, CO, 80203 4535	PHONE NUMBER: 303 534-4600 Ext	9. FIELD and POOL or WILDCAT: GREATER ANETH
--	--	---

4. LOCATION OF WELL FOOTAGES AT SURFACE: 0660 FSL 0660 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 17 Township: 41.0S Range: 24.0E Meridian: S	COUNTY: SAN JUAN STATE: UTAH
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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 Approximate date work will start: 6/25/2016 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input checked="" type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text" value="Rod Repair"/>

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

Resolute Natural Resources respectfully submits this sundry as notice of a Rod Repair on the above well. Attached are the procedures and schematic

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

Date: June 21, 2016
 By: *Derek Duff*

NAME (PLEASE PRINT) Erin Joseph	PHONE NUMBER 303 573-4886	TITLE Sr. Regulatory Analyst
SIGNATURE N/A	DATE 6/20/2016	

Procedure

Horsley Witten: No

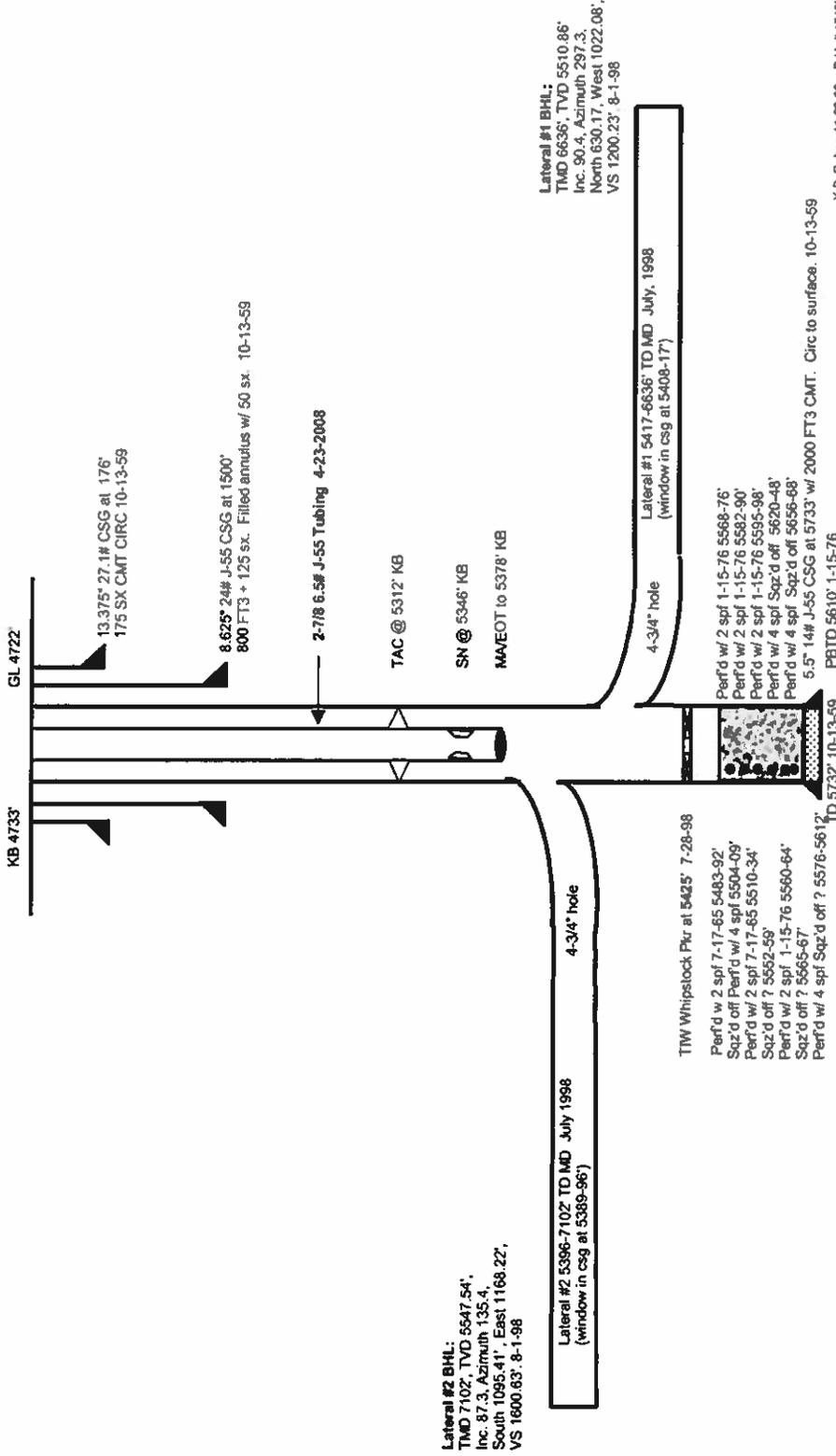
1. MIRU WSU, LOTO,
2. Pressure test tubing to 1000 psig.
3. Kill well as necessary. Low pressure is expected. Well may go on vac.
4. POOH with rods and pump, fish as necessary. LD S-88 rods. Rods were run in 2007. Call Virgil or Nate to document rod break and condition of rods. Inform Kevin Foro, if available.
5. Drop a standing valve. Re-pressure test the tubing to confirm pipe integrity.
6. If the pressure test of the tubing passes, go to step 8, running rods and pump.
7. If a tubing pressure test does not pass, additional steps will be developed.
8. RIH with rods & new 1-3/4" pump. Contact Tech Support for new rod details. If pony rods are used to space out, use the following:
 - Polished Rod
 - Full length sucker rod (25 ft)
 - Longest sub
 - Full length sucker rod (25 ft)
 - Second Longest sub
 - Full length sucker rod (25 ft), etc
9. Long stroke pump to test for good pumping action.
10. Leave enough polished rod for operators to correctly space pump as required.
11. Notify the Area Production Supervisor that well is ready to return to production.
12. RDMOL. Hook up appropriate chemical treatment.

PRODUCER

RATHERFORD UNIT # 17W-44HZ
 GREATER ANETH FIELD
 Surface Loc: 660' FSL & 660' FEL
 SEC 17-T41S-R24E
 SAN JUAN COUNTY, UTAH
 API 43-037-15732

B.H. Location Lateral #1:
 630' N & 1022' W of Surface Location
B.H. Location Lateral #2:
 1095' S & 1168' E of Surface Location

Current as of 6-21-16 RKS



K.B. Dutton 11-22-02 R.U. # 1743RZ

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
		5. LEASE DESIGNATION AND SERIAL NUMBER: 14-20-603-353
SUNDRY NOTICES AND REPORTS ON WELLS		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NAVAJO
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.		7. UNIT or CA AGREEMENT NAME: RATHERFORD
		8. WELL NAME and NUMBER: 17-44
1. TYPE OF WELL Oil Well	9. API NUMBER: 43037157320000	
2. NAME OF OPERATOR: RESOLUTE NATURAL RESOURCES	9. FIELD and POOL or WILDCAT: GREATER ANETH	
3. ADDRESS OF OPERATOR: 1700 Lincoln Street, Suite 2800 , Denver, CO, 80203 4535	PHONE NUMBER: 303 534-4600 Ext	9. FIELD and POOL or WILDCAT: GREATER ANETH
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0660 FSL 0660 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 17 Township: 41.0S Range: 24.0E Meridian: S		COUNTY: SAN JUAN
		STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start: <input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 6/23/2016 <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> WILDCAT WELL DETERMINATION <input checked="" type="checkbox"/> OTHER	
	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input type="text" value="Rod Repair"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
Resolute Natural Resources respectfully submits this sundry as notice that the Rod Repair on the above well was completed on 6/23/2016 according to previously approved procedures		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY July 28, 2016		
NAME (PLEASE PRINT) Erin Joseph	PHONE NUMBER 303 573-4886	TITLE Sr. Regulatory Analyst
SIGNATURE N/A	DATE 7/28/2016	