Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS

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

SUBMIT IN TRIPLICATE - Other instructions on page 2

5. Lease Serial No.
NMNM77005

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
ROCK SPUR 27 B2DM FED COM 1H

2. Name of Operator
MEWBOURNE OIL COMPANY
Contact: JACKIE LATHAN
E-Mail: jlathan@mewbourne.com

9. API Well No.
30-015-43944-00-X1

3a. Address
P O BOX 5270
HOBBS, NM 88241

3b. Phone No. (include area code)
Ph: 575-393-5905

Carlsbad Field Office

10. Field and Pool or Exploratory Area
WILLOW LAKE-BONE SPRING, SE

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 27 T24S R28E NWNW 185FNL 330FWL

OCD Artesia

11. County or Parish, State
EDDY COUNTY, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change to Original APD
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

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

MOC requests a change in the following:

Change name from Rock Spur 27 B2DM Fed Com #1H (317062) to Rock Spur 27 W0DM Fed Com #2H (325414)

Change formation from Bone Springs to Wolfcamp

Change BHL from 330'FSL & 330'FWL to 330'FSL & 440'FWL

All csg/cement, casing assumptions, drilling program, drilling plan, drilling plot, C101, and plats attached.

RECEIVED

APR 01 2019

DISTRICT II-ARTESIA O.C.D.

All previous COAs still apply except a 5M BOP will be install and tested per OO#2 before drilling out the intermediate hole. (12¼)

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

Electronic Submission #455069 verified by the BLM Well Information System
For MEWBOURNE OIL COMPANY, sent to the Carlsbad
Committed to AFMSS for processing by PRISCILLA PEREZ on 02/22/2019 (19PP1090SE)

Name *(Printed/Typed)* PAUL HREBICEK — Title PRODUCTION ENGINEER

Signature (Electronic Submission) — Date 02/19/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By ZOTA STEVENS — Title PETROLEUM ENGINEER — Date 03/24/2019

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

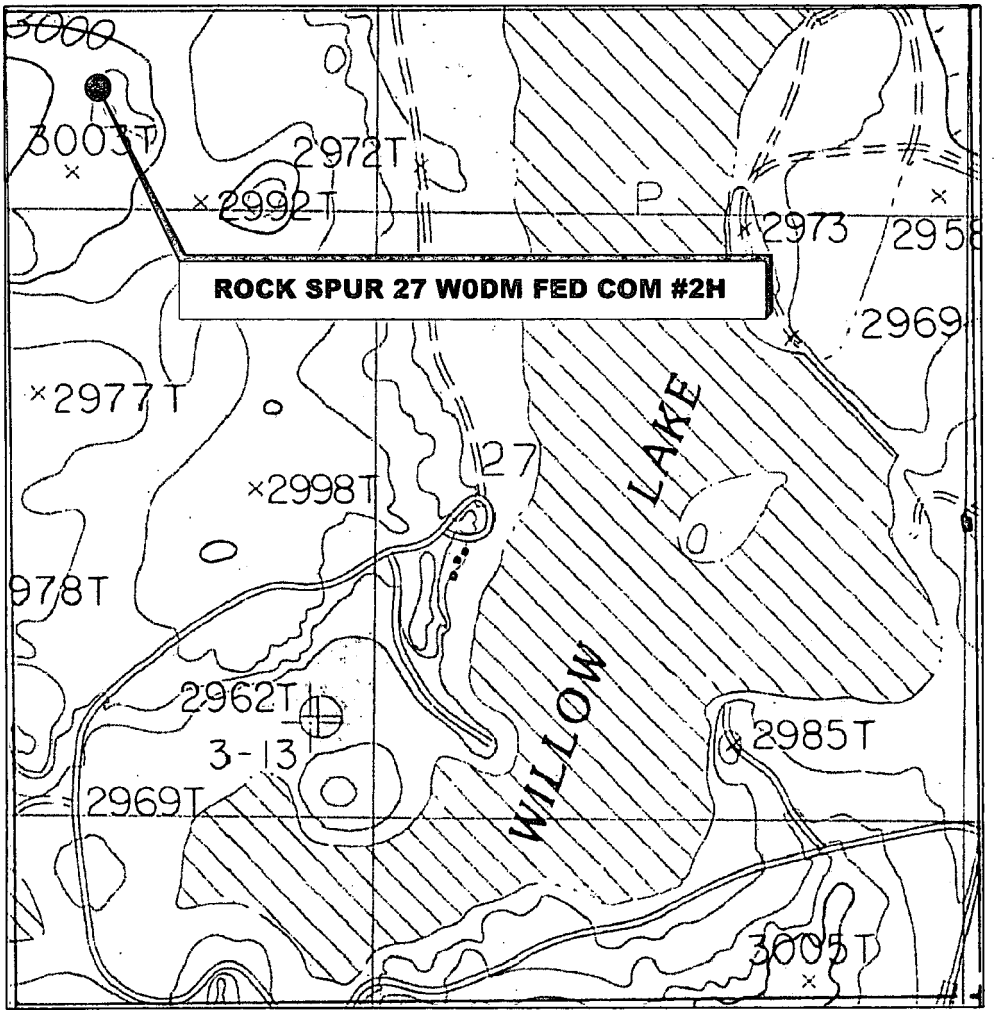
Office Carlsbad

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

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

LOCATION VERIFICATION MAP



SECTION 27, TWP. 24 SOUTH, RGE. 28 EAST,
N. M. P. M., EDDY COUNTY, NEW MEXICO

OPERATOR: Mewbourne Oil Company
LEASE: Rock Spur 27 WODM Fed Com
WELL NO.: 2H
ELEVATION: 3007'

LOCATION: 400' FNL & 530' FWL
CONTOUR INTERVAL: 10'
USGS TOPO. SOURCE MAP:
Malaga, NM (P.E. 1985)

NO.	REVISION	DATE

JOB NO.: LS18121360
DWG. NO.: 18121360-2

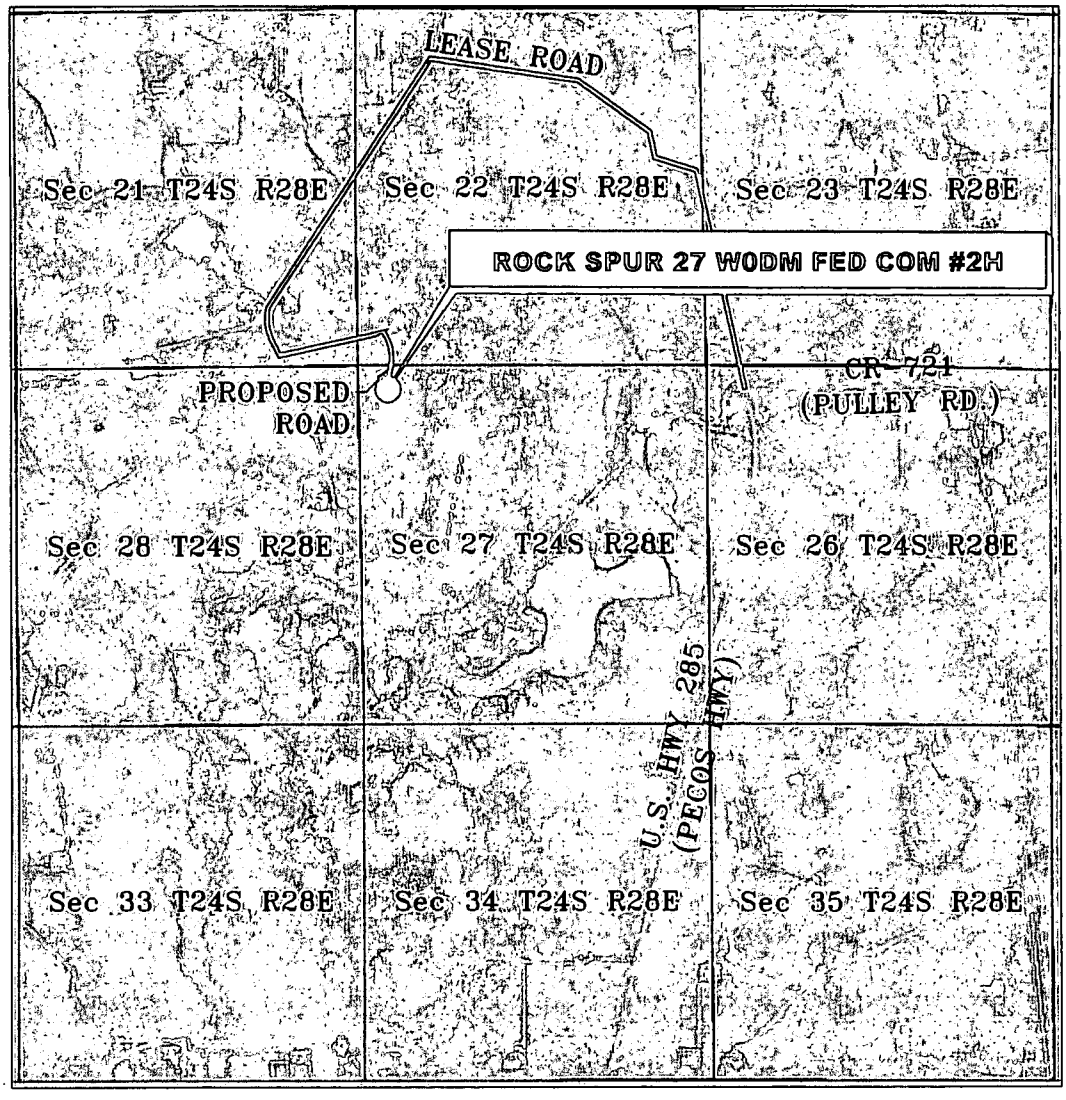
RRC

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 1000'
DATE: 12-12-18
SURVEYED BY: ML/TF
DRAWN BY: GA
APPROVED BY: RMH
SHEET: 1 OF 1

VICINITY MAP

NOT TO SCALE



SECTION 27, TWP. 24 SOUTH, RGE. 28 EAST, N. M. P. M., EDDY COUNTY, NEW MEXICO

OPERATOR: Mewbourne Oil Company
LEASE: Rock Spur 27 WODM Fed Com
WELL NO.: 2H

LOCATION: 400' FNL & 530' FWL
ELEVATION: 3007'

NO.	REVISION	DATE

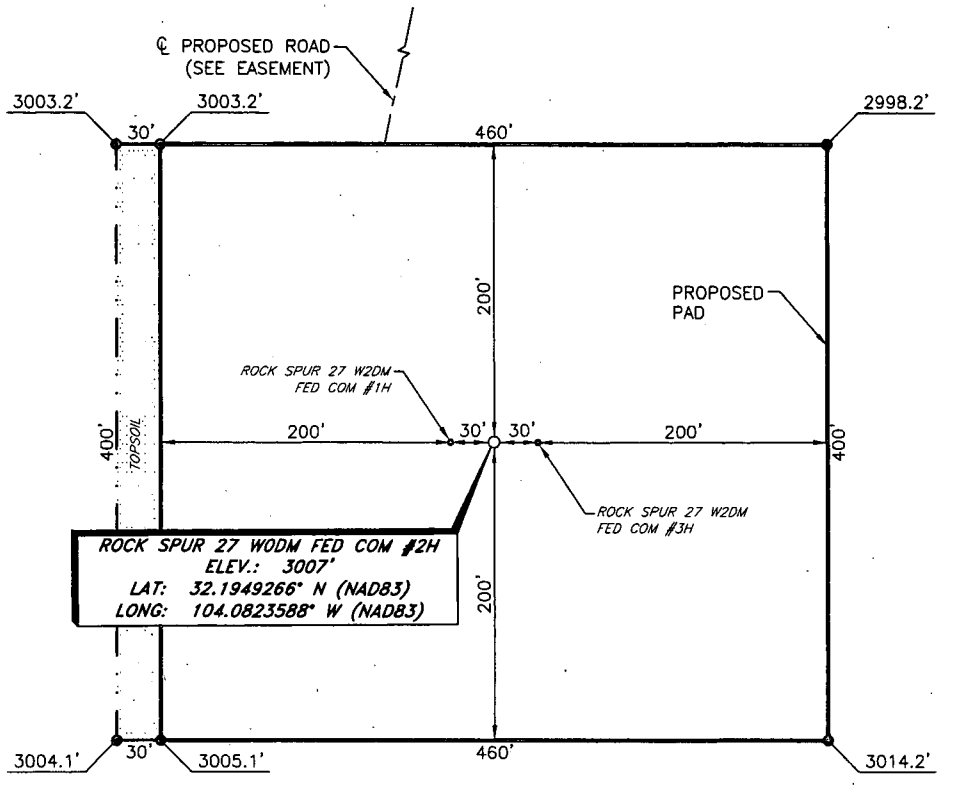
JOB NO.: LS18121360
DWG. NO.: 18121360-3

RRC

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE: N. T. S.
DATE: 12-12-18
SURVEYED BY: ML/TF
DRAWN BY: GA
APPROVED BY: RMH
SHEET: 1 OF 1

MEWBOURNE OIL COMPANY
ROCK SPUR 27 W0DM FED COM #2H
(400' FNL & 530' FWL)
SECTION 27, T24S, R28E
N. M. P. M., EDDY CO., NEW MEXICO



DIRECTIONS TO LOCATION

From the intersection of CR-721 (Pulley Rd.) and U.S. Hwy 285 (Pecos Hwy.);

Go Northwest on Hwy 285 for approx. 0.6 miles to a lease road on the left;

Turn left on lease road and go West approx. 0.9 miles to a "T";

Turn left at "T" and go Southwest approx. 1.0 miles to a lease road on the left;

Turn left and go Northeast approx. 0.3 miles to a lease road on the right;

Turn right and go South on lease road approx. 0.1 miles to a proposed road on the right;

Go Southwest on proposed road approx. 420 feet to location is on the right.

N

SCALE: 1" = 100'
0 50 100

BEARINGS ARE NAD 83 GRID - NM EAST DISTANCES ARE GROUND.

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this unclassified survey of a well location from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

Robert M. Howett
Robert M. Howett NM PS 19680

ROBERT M. HOWETT
NEW MEXICO
19680
12/17/18
PROFESSIONAL SURVEYOR

NO.	REVISION	DATE

JOB NO.: LS18121360
DWG. NO.: 18121360-4

RRC

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'
DATE: 12-12-18
SURVEYED BY: ML/TF
DRAWN BY: GA
APPROVED BY: RMH
SHEET: 1 OF 1

Mewbourne Oil Company, Rock Spur 27 W0DM Fed Com #2H
Sec 27, T24S, R28E
SL: 400' FNL & 530' FWL
BHL: 330' FSL & 440' FWL

1. Geologic Formations

TVD of target	9,585'	Pilot hole depth	NA
MD at TD:	14,400'	Deepest expected fresh water:	35'

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface		
Castile			
Top of Salt			
Base of Salt			
Lamar			
Bell Canyon			
Cherry Canyon			
Manzanita Marker			
Brushy Canyon			
Bone Spring		Oil/Gas	
1st Bone Spring Sand			
2nd Bone Spring Sand			
3rd Bone Spring Sand			
Abo			
Wolfcamp		Target Zone	
Devonian			
Fusselman			
Ellenburger			
Granite Wash			

*H2S, water flows, loss of circulation, abnormal pressures, etc.

Mewbourne Oil Company, Rock Spur 27 W0DM Fed Com #2H
Sec 27, T24S, R28E
SL: 400' FNL & 530' FWL
BHL: 330' FSL & 440' FWL

2. Casing Program

Hole Size	Casing Interval From	To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
17.5"	0'	400'	13.375"	48	H40	STC	4.21	9.45	16.77	28.18
12.25"	0'	2465'	9.625"	36	J55	LTC	1.58	2.75	5.10	6.36
8.75"	0'	9845'	7"	26	HCP110	LTC	1.65	2.11	2.71	3.24
6.125"	9097'	14400'	4.5"	13.5	P110	LTC	1.65	1.92	4.72	5.89
			BLM Minimum Safety Factor				1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Must have table for contingency casing

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Is casing API approved? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	Y
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H_20 gal/ sk	500# Comp. Strength (hours)	Slurry Description
Surf.	140	12.5	2.12	11	10	Lead: Class C + Salt + Gel + Extender + LCM
	200	14.8	1.34	6.3	8	Tail: Class C + Retarder
Inter.	350	12.5	2.12	11	10	Lead: Class C + Salt + Gel + Extender + LCM
	200	14.8	1.34	6.3	8	Tail: Class C + Retarder
Prod. Stg 1	360	12.5	2.12	11	9	Lead: Class C + Gel + Retarder + Defoamer + Extender
	400	15.6	1.18	5.2	10	Tail: Class H + Retarder + Fluid Loss + Defoamer
ECP/DV Tool @ 3510'						
Prod. Stg 2	270	12.5	2.12	11	10	Lead: Class C + Salt + Gel + Extender + LCM
	100	14.8	1.34	6.3	8	Tail: Class C + Retarder
Liner	215	11.2	2.97	18	16	Class C + Salt + Gel + Fluid Loss + Retarder + Dispersant + Defoamer + Anti-Settling Agent

A copy of cement test will be available on location at time of cement job providing pump times & compressive strengths.

Casing String	TOC	% Excess
Surface	0'	100%
Intermediate	0'	25%
Production	2265'	25%
Liner	9097'	25%

4. Pressure Control Equipment

Y	Variance: A variance is requested for use of a 5000 psi annular BOP with the 10,000 psi BOP stack. Please see attached description and procedure.

BOP installed and tested before drilling which hole?	Size?	System Rated WP	Type	✓	Tested to:
12-1/4"	13-5/8"	10M	Annular	X	5,000#
			Blind Ram	X	10,000#
			Pipe Ram	X	
			Double Ram		
			Other*		

*Specify if additional ram is utilized.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

X	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
N	Are anchors required by manufacturer?
Y	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. • Provide description here: See attached schematic.

5. Mud Program

TVD		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	400	FW Gel	8.6-8.8	28-34	N/C
400	2645	Saturated Brine	10.0	28-34	N/C
2645	9565	Cut Brine	8.6-9.5	28-34	N/C
9088	9585	OBM	10.0-13.0	30-40	<10cc

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	Pason/PVT/Visual Monitoring

6. Logging and Testing Procedures

Logging, Coring and Testing.	
X	Will run GR/CNL from KOP (9,097') to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
	No Logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain
	Coring? If yes, explain

Additional logs planned		Interval
X	Gamma Ray	9,097' (KOP) to TD
	Density	
	CBL	
	Mud log	
	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	6479 psi
Abnormal Temperature	No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers in surface hole. Weighted mud for possible over-pressure in Wolfcamp formation.

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
	H2S is present
X	H2S Plan attached

8. Other facets of operation

Is this a walking operation? If yes, describe.
Will be pre-setting casing? If yes, describe.

Attachments
___ Directional Plan
___ Other, describe

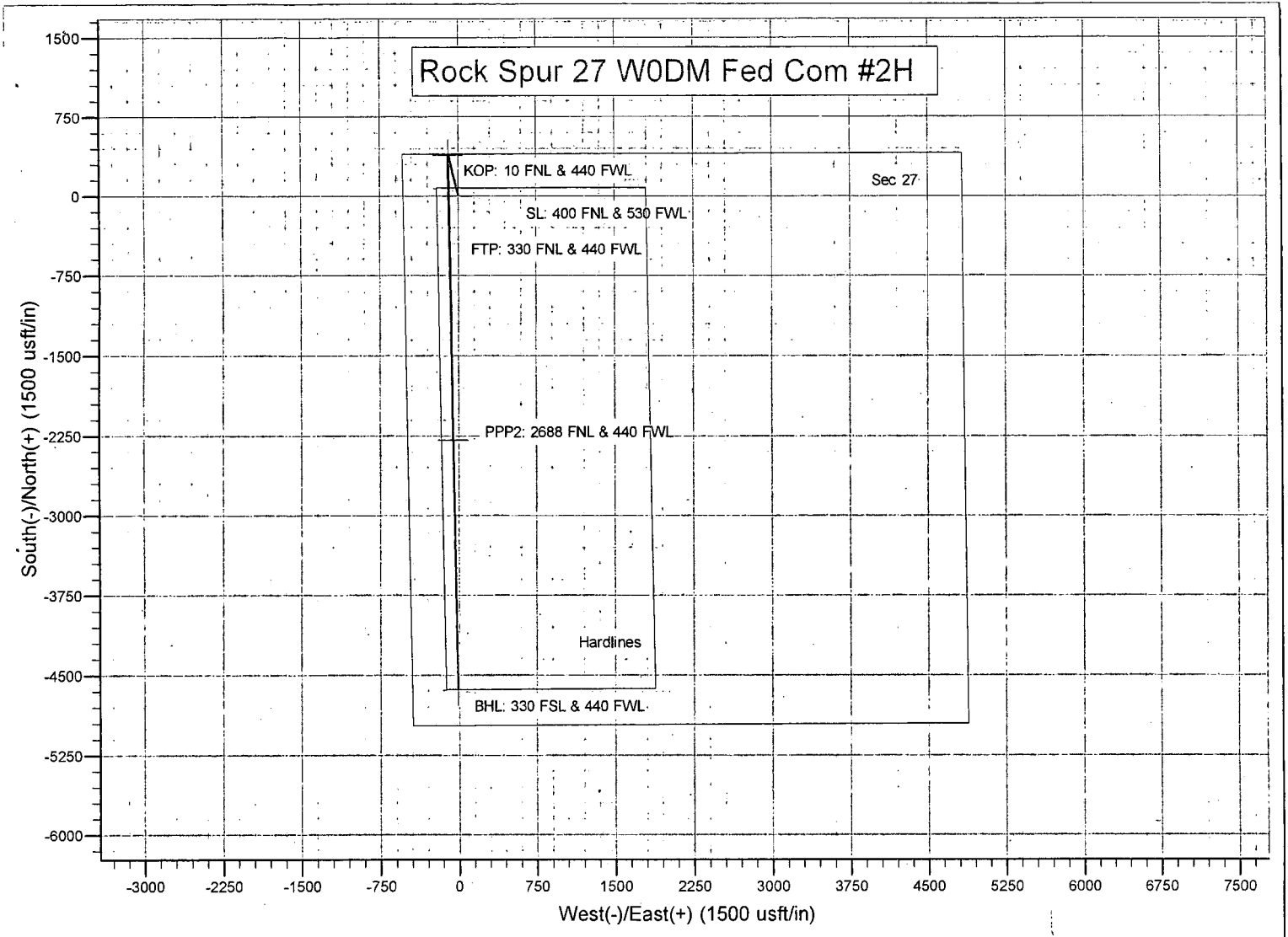
Mewbourne Oil Company

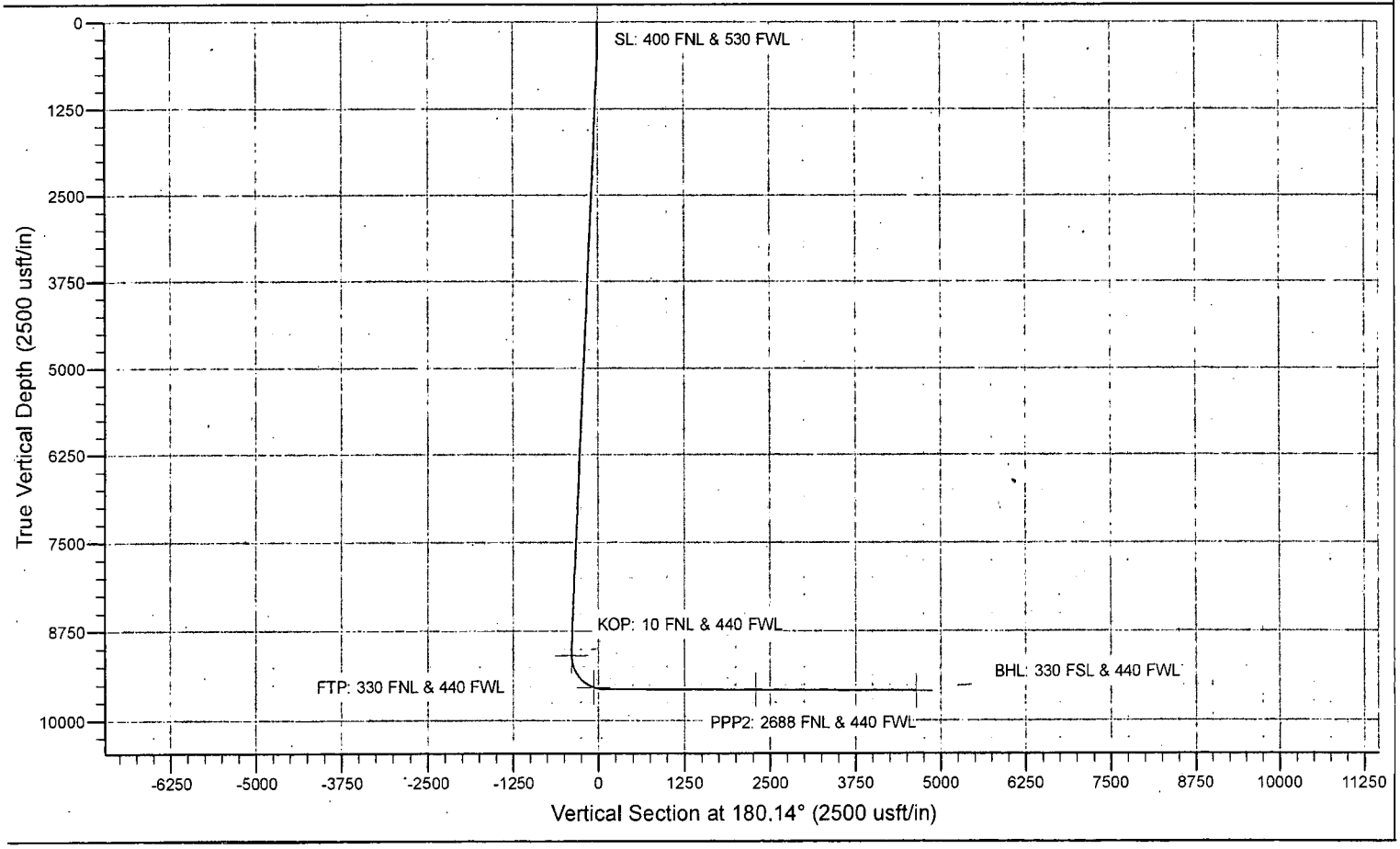
Eddy County, New Mexico NAD 83
Rock Spur 27 W0DM Fed Com #2H
SL: 400 FNL & 530 FWL
Sec 27, T24S, R28E
BHL: 330 FSL & 440 FWL

Plan: Design #1

Standard Planning Report

28 December, 2018


Rock Spur 27 W0DM Fed Com #2H
KOP: 10 FNL & 440 FWL
Sec 27
SL: 400 FNL & 530 FWL
FTP: 330 FNL & 440 FWL
PPP2: 2688 FNL & 440 FWL
Hardlines
BHL: 330 FSL & 440 FWL
South(-)/North(+) (1500 usft/in)
West(-)/East(+) (1500 usft/in)
1500
750
0
-750
-1500
-2250
-3000
-3750
-4500
-5250
-6000
-3000
-2250
-1500
-750
0
750
1500
2250
3000
3750
4500
5250
6000
6750
7500


SL: 400 FNL & 530 FWL
KOP: 10 FNL & 440 FWL
FTP: 330 FNL & 440 FWL
BHL: 330 FSL & 440 FWL
PPP2: 2688 FNL & 440 FWL
True Vertical Depth (2500 usft/in)
Vertical Section at 180.14° (2500 usft/in)
0
1250
2500
3750
5000
6250
7500
8750
10000
-6250
-5000
-3750
-2500
-1250
0
1250
2500
3750
5000
6250
7500
8750
10000
11250

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Rock Spur 27 W0DM Fed Com #2H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3034.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 3034.0usft (Original Well Elev)
Site:	Rock Spur 27 W0DM Fed Com #2H	**North Reference:**	Grid
Well:	SL: 400 FNL & 530 FWL	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 330 FSL & 440 FWL		
Design:	Design #1		

Project Eddy County, New Mexico NAD 83

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Rock Spur 27 W0DM Fed Com #2H

Site Position:		**Northing:**	434,739.00 usft	**Latitude:**	32.1949258
From:	Map	**Easting:**	618,972.00 usft	**Longitude:**	-104.0823577
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.13 °

Well SL: 400 FNL & 530 FWL

Well Position	**+N/-S**	0.0 usft	**Northing:**	434,739.00 usft	**Latitude:**	32.1949258
	+E/-W	0.0 usft	**Easting:**	618,972.00 usft	**Longitude:**	-104.0823577
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	3,034.0 usft	**Ground Level:**	3,007.0 usft

Wellbore BHL: 330 FSL & 440 FWL

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/28/2018	6.89	59.89	47,797

Design Design #1

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	180.14

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
580.3	2.70	346.03	580.2	4.1	-1.0	1.50	1.50	0.00	346.03	
8,917.1	2.70	346.03	8,907.8	385.9	-96.0	0.00	0.00	0.00	0.00	
9,097.4	0.00	0.00	9,088.0	390.0	-97.0	1.50	-1.50	0.00	180.00	KOP: 10 FNL & 440 F
9,844.6	89.75	179.02	9,565.0	-84.8	-88.9	12.01	12.01	0.00	179.02	
14,399.5	89.75	179.02	9,585.0	-4,639.0	-11.0	0.00	0.00	0.00	0.00	BHL: 330 FSL & 440 I

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Rock Spur 27 W0DM Fed Com #2H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3034.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 3034.0usft (Original Well Elev)
Site:	Rock Spur 27 W0DM Fed Com #2H	**North Reference:**	Grid
Well:	SL: 400 FNL & 530 FWL	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 330 FSL & 440 FWL		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
SL: 400 FNL & 530 FWL									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	1.50	346.03	500.0	1.3	-0.3	-1.3	1.50	1.50	0.00
580.3	2.70	346.03	580.2	4.1	-1.0	-4.1	1.50	1.50	0.00
600.0	2.70	346.03	599.9	5.0	-1.3	-5.0	0.00	0.00	0.00
700.0	2.70	346.03	699.8	9.6	-2.4	-9.6	0.00	0.00	0.00
800.0	2.70	346.03	799.7	14.2	-3.5	-14.2	0.00	0.00	0.00
900.0	2.70	346.03	899.6	18.8	-4.7	-18.8	0.00	0.00	0.00
1,000.0	2.70	346.03	999.5	23.3	-5.8	-23.3	0.00	0.00	0.00
1,100.0	2.70	346.03	1,099.4	27.9	-6.9	-27.9	0.00	0.00	0.00
1,200.0	2.70	346.03	1,199.2	32.5	-8.1	-32.5	0.00	0.00	0.00
1,300.0	2.70	346.03	1,299.1	37.1	-9.2	-37.1	0.00	0.00	0.00
1,400.0	2.70	346.03	1,399.0	41.7	-10.4	-41.6	0.00	0.00	0.00
1,500.0	2.70	346.03	1,498.9	46.2	-11.5	-46.2	0.00	0.00	0.00
1,600.0	2.70	346.03	1,598.8	50.8	-12.6	-50.8	0.00	0.00	0.00
1,700.0	2.70	346.03	1,698.7	55.4	-13.8	-55.4	0.00	0.00	0.00
1,800.0	2.70	346.03	1,798.6	60.0	-14.9	-59.9	0.00	0.00	0.00
1,900.0	2.70	346.03	1,898.5	64.6	-16.1	-64.5	0.00	0.00	0.00
2,000.0	2.70	346.03	1,998.4	69.1	-17.2	-69.1	0.00	0.00	0.00
2,100.0	2.70	346.03	2,098.2	73.7	-18.3	-73.7	0.00	0.00	0.00
2,200.0	2.70	346.03	2,198.1	78.3	-19.5	-78.2	0.00	0.00	0.00
2,300.0	2.70	346.03	2,298.0	82.9	-20.6	-82.8	0.00	0.00	0.00
2,400.0	2.70	346.03	2,397.9	87.5	-21.8	-87.4	0.00	0.00	0.00
2,500.0	2.70	346.03	2,497.8	92.0	-22.9	-92.0	0.00	0.00	0.00
2,600.0	2.70	346.03	2,597.7	96.6	-24.0	-96.6	0.00	0.00	0.00
2,700.0	2.70	346.03	2,697.6	101.2	-25.2	-101.1	0.00	0.00	0.00
2,800.0	2.70	346.03	2,797.5	105.8	-26.3	-105.7	0.00	0.00	0.00
2,900.0	2.70	346.03	2,897.3	110.3	-27.4	-110.3	0.00	0.00	0.00
3,000.0	2.70	346.03	2,997.2	114.9	-28.6	-114.9	0.00	0.00	0.00
3,100.0	2.70	346.03	3,097.1	119.5	-29.7	-119.4	0.00	0.00	0.00
3,200.0	2.70	346.03	3,197.0	124.1	-30.9	-124.0	0.00	0.00	0.00
3,300.0	2.70	346.03	3,296.9	128.7	-32.0	-128.6	0.00	0.00	0.00
3,400.0	2.70	346.03	3,396.8	133.2	-33.1	-133.2	0.00	0.00	0.00
3,500.0	2.70	346.03	3,496.7	137.8	-34.3	-137.7	0.00	0.00	0.00
3,600.0	2.70	346.03	3,596.6	142.4	-35.4	-142.3	0.00	0.00	0.00
3,700.0	2.70	346.03	3,696.5	147.0	-36.6	-146.9	0.00	0.00	0.00
3,800.0	2.70	346.03	3,796.3	151.6	-37.7	-151.5	0.00	0.00	0.00
3,900.0	2.70	346.03	3,896.2	156.1	-38.8	-156.0	0.00	0.00	0.00
4,000.0	2.70	346.03	3,996.1	160.7	-40.0	-160.6	0.00	0.00	0.00
4,100.0	2.70	346.03	4,096.0	165.3	-41.1	-165.2	0.00	0.00	0.00
4,200.0	2.70	346.03	4,195.9	169.9	-42.3	-169.8	0.00	0.00	0.00
4,300.0	2.70	346.03	4,295.8	174.5	-43.4	-174.4	0.00	0.00	0.00
4,400.0	2.70	346.03	4,395.7	179.0	-44.5	-178.9	0.00	0.00	0.00
4,500.0	2.70	346.03	4,495.6	183.6	-45.7	-183.5	0.00	0.00	0.00
4,600.0	2.70	346.03	4,595.5	188.2	-46.8	-188.1	0.00	0.00	0.00
4,700.0	2.70	346.03	4,695.3	192.8	-47.9	-192.7	0.00	0.00	0.00
4,800.0	2.70	346.03	4,795.2	197.3	-49.1	-197.2	0.00	0.00	0.00
4,900.0	2.70	346.03	4,895.1	201.9	-50.2	-201.8	0.00	0.00	0.00
5,000.0	2.70	346.03	4,995.0	206.5	-51.4	-206.4	0.00	0.00	0.00
5,100.0	2.70	346.03	5,094.9	211.1	-52.5	-211.0	0.00	0.00	0.00

Database:	Hobbs	Local Co-ordinate Reference:	Site Rock Spur 27 W0DM Fed Com #2H
Company:	Mewbourne Oil Company	TVD Reference:	WELL @ 3034.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	MD Reference:	WELL @ 3034.0usft (Original Well Elev)
Site:	Rock Spur 27 W0DM Fed Com #2H	North Reference:	Grid
Well:	SL: 400 FNL & 530 FWL	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 330 FSL & 440 FWL		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,200.0	2.70	346.03	5,194.8	215.7	-53.6	-215.5	0.00	0.00	0.00
5,300.0	2.70	346.03	5,294.7	220.2	-54.8	-220.1	0.00	0.00	0.00
5,400.0	2.70	346.03	5,394.6	224.8	-55.9	-224.7	0.00	0.00	0.00
5,500.0	2.70	346.03	5,494.5	229.4	-57.1	-229.3	0.00	0.00	0.00
5,600.0	2.70	346.03	5,594.3	234.0	-58.2	-233.8	0.00	0.00	0.00
5,700.0	2.70	346.03	5,694.2	238.6	-59.3	-238.4	0.00	0.00	0.00
5,800.0	2.70	346.03	5,794.1	243.1	-60.5	-243.0	0.00	0.00	0.00
5,900.0	2.70	346.03	5,894.0	247.7	-61.6	-247.6	0.00	0.00	0.00
6,000.0	2.70	346.03	5,993.9	252.3	-62.8	-252.1	0.00	0.00	0.00
6,100.0	2.70	346.03	6,093.8	256.9	-63.9	-256.7	0.00	0.00	0.00
6,200.0	2.70	346.03	6,193.7	261.5	-65.0	-261.3	0.00	0.00	0.00
6,300.0	2.70	346.03	6,293.6	266.0	-66.2	-265.9	0.00	0.00	0.00
6,400.0	2.70	346.03	6,393.5	270.6	-67.3	-270.5	0.00	0.00	0.00
6,500.0	2.70	346.03	6,493.3	275.2	-68.4	-275.0	0.00	0.00	0.00
6,600.0	2.70	346.03	6,593.2	279.8	-69.6	-279.6	0.00	0.00	0.00
6,700.0	2.70	346.03	6,693.1	284.3	-70.7	-284.2	0.00	0.00	0.00
6,800.0	2.70	346.03	6,793.0	288.9	-71.9	-288.8	0.00	0.00	0.00
6,900.0	2.70	346.03	6,892.9	293.5	-73.0	-293.3	0.00	0.00	0.00
7,000.0	2.70	346.03	6,992.8	298.1	-74.1	-297.9	0.00	0.00	0.00
7,100.0	2.70	346.03	7,092.7	302.7	-75.3	-302.5	0.00	0.00	0.00
7,200.0	2.70	346.03	7,192.6	307.2	-76.4	-307.1	0.00	0.00	0.00
7,300.0	2.70	346.03	7,292.4	311.8	-77.6	-311.6	0.00	0.00	0.00
7,400.0	2.70	346.03	7,392.3	316.4	-78.7	-316.2	0.00	0.00	0.00
7,500.0	2.70	346.03	7,492.2	321.0	-79.8	-320.8	0.00	0.00	0.00
7,600.0	2.70	346.03	7,592.1	325.6	-81.0	-325.4	0.00	0.00	0.00
7,700.0	2.70	346.03	7,692.0	330.1	-82.1	-329.9	0.00	0.00	0.00
7,800.0	2.70	346.03	7,791.9	334.7	-83.3	-334.5	0.00	0.00	0.00
7,900.0	2.70	346.03	7,891.8	339.3	-84.4	-339.1	0.00	0.00	0.00
8,000.0	2.70	346.03	7,991.7	343.9	-85.5	-343.7	0.00	0.00	0.00
8,100.0	2.70	346.03	8,091.6	348.5	-86.7	-348.2	0.00	0.00	0.00
8,200.0	2.70	346.03	8,191.4	353.0	-87.8	-352.8	0.00	0.00	0.00
8,300.0	2.70	346.03	8,291.3	357.6	-88.9	-357.4	0.00	0.00	0.00
8,400.0	2.70	346.03	8,391.2	362.2	-90.1	-362.0	0.00	0.00	0.00
8,500.0	2.70	346.03	8,491.1	366.8	-91.2	-366.6	0.00	0.00	0.00
8,600.0	2.70	346.03	8,591.0	371.4	-92.4	-371.1	0.00	0.00	0.00
8,700.0	2.70	346.03	8,690.9	375.9	-93.5	-375.7	0.00	0.00	0.00
8,800.0	2.70	346.03	8,790.8	380.5	-94.6	-380.3	0.00	0.00	0.00
8,900.0	2.70	346.03	8,890.7	385.1	-95.8	-384.9	0.00	0.00	0.00
8,917.1	2.70	346.03	8,907.8	385.9	-96.0	-385.6	0.00	0.00	0.00
9,000.0	1.46	346.03	8,990.6	388.8	-96.7	-388.6	1.50	-1.50	0.00
9,097.4	0.00	0.00	9,088.0	390.0	-97.0	-389.8	1.50	-1.50	0.00
KOP: 10 FNL & 440 FWL									
9,100.0	0.31	179.02	9,090.6	390.0	-97.0	-389.8	12.01	12.01	0.00
9,200.0	12.32	179.02	9,189.8	379.0	-96.8	-378.8	12.01	12.01	0.00
9,300.0	24.33	179.02	9,284.5	347.6	-96.3	-347.4	12.01	12.01	0.00
9,400.0	36.34	179.02	9,370.7	297.2	-95.4	-297.0	12.01	12.01	0.00
9,500.0	48.36	179.02	9,444.5	230.0	-94.3	-229.8	12.01	12.01	0.00
9,600.0	60.37	179.02	9,502.6	148.9	-92.9	-148.7	12.01	12.01	0.00
9,686.8	70.79	179.02	9,538.5	70.0	-91.5	-69.8	12.01	12.01	0.00
FTP: 330 FNL & 440 FWL									
9,700.0	72.38	179.02	9,542.6	57.4	-91.3	-57.2	12.01	12.01	0.00
9,800.0	84.39	179.02	9,562.7	-40.3	-89.6	40.5	12.01	12.01	0.00
9,844.6	89.75	179.02	9,565.0	-84.8	-88.9	85.1	12.01	12.01	0.00
9,900.0	89.75	179.02	9,565.2	-140.2	-87.9	140.4	0.00	0.00	0.00

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Rock Spur 27 W0DM Fed Com #2H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3034.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 3034.0usft (Original Well Elev)
Site:	Rock Spur 27 W0DM Fed Com #2H	**North Reference:**	Grid
Well:	SL: 400 FNL & 530 FWL	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 330 FSL & 440 FWL		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,000.0	89.75	179.02	9,565.7	-240.2	-86.2	240.4	0.00	0.00	0.00
10,100.0	89.75	179.02	9,566.1	-340.2	-84.5	340.4	0.00	0.00	0.00
10,200.0	89.75	179.02	9,566.6	-440.2	-82.8	440.4	0.00	0.00	0.00
10,300.0	89.75	179.02	9,567.0	-540.2	-81.1	540.4	0.00	0.00	0.00
10,400.0	89.75	179.02	9,567.4	-640.2	-79.4	640.3	0.00	0.00	0.00
10,500.0	89.75	179.02	9,567.9	-740.1	-77.7	740.3	0.00	0.00	0.00
10,600.0	89.75	179.02	9,568.3	-840.1	-76.0	840.3	0.00	0.00	0.00
10,700.0	89.75	179.02	9,568.8	-940.1	-74.3	940.3	0.00	0.00	0.00
10,800.0	89.75	179.02	9,569.2	-1,040.1	-72.5	1,040.3	0.00	0.00	0.00
10,900.0	89.75	179.02	9,569.6	-1,140.1	-70.8	1,140.2	0.00	0.00	0.00
11,000.0	89.75	179.02	9,570.1	-1,240.1	-69.1	1,240.2	0.00	0.00	0.00
11,100.0	89.75	179.02	9,570.5	-1,340.0	-67.4	1,340.2	0.00	0.00	0.00
11,200.0	89.75	179.02	9,571.0	-1,440.0	-65.7	1,440.2	0.00	0.00	0.00
11,300.0	89.75	179.02	9,571.4	-1,540.0	-64.0	1,540.2	0.00	0.00	0.00
11,400.0	89.75	179.02	9,571.8	-1,640.0	-62.3	1,640.1	0.00	0.00	0.00
11,500.0	89.75	179.02	9,572.3	-1,740.0	-60.6	1,740.1	0.00	0.00	0.00
11,600.0	89.75	179.02	9,572.7	-1,840.0	-58.9	1,840.1	0.00	0.00	0.00
11,700.0	89.75	179.02	9,573.1	-1,939.9	-57.2	1,940.1	0.00	0.00	0.00
11,800.0	89.75	179.02	9,573.6	-2,039.9	-55.4	2,040.1	0.00	0.00	0.00
11,900.0	89.75	179.02	9,574.0	-2,139.9	-53.7	2,140.0	0.00	0.00	0.00
12,000.0	89.75	179.02	9,574.5	-2,239.9	-52.0	2,240.0	0.00	0.00	0.00
12,048.1	89.75	179.02	9,574.7	-2,288.0	-51.2	2,288.1	0.00	0.00	0.00
PPP2: 2688 FNL & 440 FWL									
12,100.0	89.75	179.02	9,574.9	-2,339.9	-50.3	2,340.0	0.00	0.00	0.00
12,200.0	89.75	179.02	9,575.3	-2,439.9	-48.6	2,440.0	0.00	0.00	0.00
12,300.0	89.75	179.02	9,575.8	-2,539.9	-46.9	2,540.0	0.00	0.00	0.00
12,400.0	89.75	179.02	9,576.2	-2,639.8	-45.2	2,639.9	0.00	0.00	0.00
12,500.0	89.75	179.02	9,576.7	-2,739.8	-43.5	2,739.9	0.00	0.00	0.00
12,600.0	89.75	179.02	9,577.1	-2,839.8	-41.8	2,839.9	0.00	0.00	0.00
12,700.0	89.75	179.02	9,577.5	-2,939.8	-40.1	2,939.9	0.00	0.00	0.00
12,800.0	89.75	179.02	9,578.0	-3,039.8	-38.3	3,039.9	0.00	0.00	0.00
12,900.0	89.75	179.02	9,578.4	-3,139.8	-36.6	3,139.8	0.00	0.00	0.00
13,000.0	89.75	179.02	9,578.9	-3,239.7	-34.9	3,239.8	0.00	0.00	0.00
13,100.0	89.75	179.02	9,579.3	-3,339.7	-33.2	3,339.8	0.00	0.00	0.00
13,200.0	89.75	179.02	9,579.7	-3,439.7	-31.5	3,439.8	0.00	0.00	0.00
13,300.0	89.75	179.02	9,580.2	-3,539.7	-29.8	3,539.8	0.00	0.00	0.00
13,400.0	89.75	179.02	9,580.6	-3,639.7	-28.1	3,639.7	0.00	0.00	0.00
13,500.0	89.75	179.02	9,581.1	-3,739.7	-26.4	3,739.7	0.00	0.00	0.00
13,600.0	89.75	179.02	9,581.5	-3,839.7	-24.7	3,839.7	0.00	0.00	0.00
13,700.0	89.75	179.02	9,581.9	-3,939.6	-23.0	3,939.7	0.00	0.00	0.00
13,800.0	89.75	179.02	9,582.4	-4,039.6	-21.2	4,039.7	0.00	0.00	0.00
13,900.0	89.75	179.02	9,582.8	-4,139.6	-19.5	4,139.6	0.00	0.00	0.00
14,000.0	89.75	179.02	9,583.2	-4,239.6	-17.8	4,239.6	0.00	0.00	0.00
14,100.0	89.75	179.02	9,583.7	-4,339.6	-16.1	4,339.6	0.00	0.00	0.00
14,200.0	89.75	179.02	9,584.1	-4,439.6	-14.4	4,439.6	0.00	0.00	0.00
14,300.0	89.75	179.02	9,584.6	-4,539.5	-12.7	4,539.6	0.00	0.00	0.00
14,399.5	89.75	179.02	9,585.0	-4,639.0	-11.0	4,639.0	0.00	0.00	0.00
BHL: 330 FSL & 440 FWL									

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Rock Spur 27 W0DM Fed Com #2H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3034.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 3034.0usft (Original Well Elev)
Site:	Rock Spur 27 W0DM Fed Com #2H	**North Reference:**	Grid
Well:	SL: 400 FNL & 530 FWL	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 330 FSL & 440 FWL		
Design:	Design #1		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SL: 400 FNL & 530 FWL - plan hits target center - Point	0.00	0.00	0.0	0.0	0.0	434,739.00	618,972.00	32.1949258	-104.0823577
KOP: 10 FNL & 440 FWl - plan hits target center - Point	0.00	0.00	9,088.0	390.0	-97.0	435,129.00	618,875.00	32.1959985	-104.0826684
FTP: 330 FNL & 440 FW - plan hits target center - Point	0.00	0.00	9,538.4	70.0	-91.5	434,809.00	618,880.48	32.1951188	-104.0826531
PPP2: 2688 FNL & 440 I - plan hits target center - Point	0.00	0.00	9,574.7	-2,288.0	-51.2	432,451.00	618,920.80	32.1886367	-104.0825405
BHL: 330 FSL & 440 FW - plan hits target center - Point	0.00	0.00	9,585.0	-4,639.0	-11.0	430,100.00	618,961.00	32.1821738	-104.0824283