

Secretary's Potash

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

HOBBS OGD

DEC 26 2013

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

ATS-13-95

5. Lease Serial No.
Fee (SL), NM 06570 (BHL)

6. If Indian, Allottee or Tribe Name

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

8. Lease Name and Well No.
Marathon Road 15 PA Federal #1H

9. API Well No.

30-025-41575

10. Field and Pool, or Exploratory
Lea Bone Spring (37570) ✓11. Sec., T. R. M. or Blk. and Survey or Area
Sec. 15 T20S R34E12. County or Parish
Lea13. State
NM1a. Type of work: ☒ DRILL ☐ REENTER

RECEIVED

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator Mewbourne Oil Company

3a. Address PO Box 5270
Hobbs, NM 882413b. Phone No. (include area code)
575-393-5905

4. Location of Well (Report location clearly and in accordance with any State requirements.)*

At surface 300' FSL & 330' FEL, Sec. 15 T20S R34E

At proposed prod. zone 330' FNL & 850' FEL, Sec. 15 T20S R34E

14. Distance in miles and direction from nearest town or post office*
25 miles SW of Hobbs, NM15. Distance from proposed*
location to nearest
property or lease line, ft.
(Also to nearest drig. unit line, if any)

300'

16. No. of acres in lease
180
32018. Distance from proposed location*
to nearest well, drilling, completed,
applied for, on this lease, ft. 543' (Laurie D Federal
#002)19. Proposed Depth
15,427' - MD
10,952' - TVD

21. Elevations (Show whether DF, KDB, RT, GL, etc.)

3649' - GL 3052' per plat

22. Approximate date work will start*
09/02/201323. Estimated duration
60 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must be attached to this form:

1. Well plat certified by a registered surveyor.

2. A Drilling Plan.

3. A Surface Use Plan (if the location is on National Forest System Lands, the
SUPO must be filed with the appropriate Forest Service Office).4. Bond to cover the operations unless covered by an existing bond on file (see
Item 20 above).

5. Operator certification

6. Such other site specific information and/or plans as may be required by the
BLM.

25. Signature

Name (Printed/Typed)

Bradley Bishop

Date

07/30/2013

Title

Approved by (Signature)

STATE DIRECTOR

Name (Printed/Typed)

Robert A. Casias (For)

Date

12/23/2013

Office

NM STATE OFFICE

Application approval 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.

Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

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.

(Continued on page 2)

*(Instructions on page 2)

CAPITAN CONTROLLED WATER BASIN

SEE ATTACHED FOR
CONDITIONS OF APPROVALAPPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

DEC 30 2013

bn

Drilling Program
Mewbourne Oil Company
Marathon Road 15 PA Federal #1H
300' FSL & 330' FEL (SHL)
Sec 15-T20S-R34E
Lea County, New Mexico

1. The estimated tops of geological markers are as follows:

Rustler	1600'
Top Salt	1800'
Base Salt	3220'
Yates	3420'
Queen	NP
Capitan	3930'
Grayburg	NP
San Andres	NP
Glorieta	NP
Yeso	NP
Delaware (Lamar)	5440'
Bone Spring	8300'
1 st Bone Spring Sand	9500'
2 nd Bone Spring Sand	9980'
3 rd Bone Spring Sand	10690'

2. Estimated depths of anticipated fresh water, oil, or gas:

Water	Fresh water is anticipated at 150' and will be protected by setting surface casing at 1625' and cementing to surface.
Hydrocarbons	Oil and gas are anticipated in the above (*) formations. These zones will be protected by casing as necessary.

3. Pressure control equipment:

A 2000# WP annular will be installed after running 13 3/8" casing. A 3000# WP double ram BOP and 3000# WP Annular will be installed after running 9 5/8" & 7" casing. Pressure tests will be conducted prior to drilling out under all casing strings. BOP controls will be installed prior to drilling under surface casing and will remain in use until completion of drilling operations. BOPs will be inspected and operated as recommended in Onshore Order #2. A Kelly cock and a sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position when the Kelly is not in use.

Will test the 13 3/8" annular to 1500# and the 9 5/8" & 7" BOPE to 3000# and annular to 1500# with a third party testing company before drilling below each shoe, but will test again, if needed, in 30 days from the 1st test as per BLM Onshore Oil and Gas Order #2.

See
COA

4. Drilling Program:

MOC proposes to drill a vertical wellbore to 10475' & kick off to horizontal @ 10952' TVD. The well will be drilled to 15427' MD (10932' TVD). See attached directional plan.

5. Proposed casing and cementing program:

A. Casing Program:

Hole Size	Casing	Wt/Ft.	Grade	Depth	Jt Type
17 1/2"	13 3/8" (new)	48#	H40	0'-1000'	ST&C
17 1/2"	13 3/8" (new)	54.5#	J55	1000'-1625'	ST&C
12 1/4"	9 5/8" (new)	36#	J55	0'-3400'	LT&C
12 1/4"	9 5/8" (new)	40#	J55	3400'-4400'	LT&C
12 1/4"	9 5/8" (new)	40#	N80	4400'-5400'	LT&C
8 3/4"	7" (new)	26#	P110	0'-10475' MD	LT&C
8 3/4"	7" (new)	26#	P110	10475'-11227' MD	BT&C
6 1/8"	4 1/2" (new)	13.5#	P110	11027'-15427' MD	LT&C

See
COA

Minimum casing design factors: Collapse 1.125, Burst 1.0, Tensile strength 1.8.

*Subject to availability of casing.

B. Cementing Program:

- i. ^{13 3/8"} Surface Casing: 1000 sacks Class "C" (35:65:4) light cement w/ 1% CaCl₂ & LCM additives. Yield at 2.0 cuft/sk. 200 sacks Class "C" cement w/ 1% CaCl₂. Yield at 1.34 cuft/sk. Cmt circulated to surface w/100% excess.
- ii. ^{9 5/8"} Intermediate Casing: 920 sacks Class "C" (35:65:4) light cement w/ salt and LCM additives. Yield at 2.0 cuft/sk. 200 sacks Class "C" cement w/1% CaCl₂. Yield at 1.34 cuft/sk. Cmt circulated to surface w/25% excess.
- iii. ^{7"} Production Casing: 340 sacks Class H light cement (35:65:4) with fluid loss, LCM, & salt additives. Yield at 2.12 cuft/sk. 400 sacks Class H cement containing fluid loss additives. Yield at 1.18 cuft/sk. Cmt calculated to tie back ~~200'~~ into 9 5/8" casing at 5200' w/25% excess.
- iv. ^{4 1/2"} Production Liner: This will be a Packer/Port completion from TD to 200' inside 7" casing with packer type liner hanger.

*Referring to above blends of light cement: (wt% fly ash : wt% cement : wt% bentonite of the total of first two numbers). Generic names of additives are used since the availability of specific company and products are unknown at this time.

6. Mud Program:

See COA

Interval	Type System	Weight	Viscosity	Fluid Loss
0'-1625' ^{1620'}	FW spud mud	8.6-9.0	32-34	NA
1625'-5400'	Brine water	10.0-10.2	28-30	NA
5400'-10475'	FW	8.3-8.6	28-30	NA
10475'- TD	FW w/Polymer	8.5-8.7	32-35	15

*Visual mud monitoring system shall be in place to detect volume changes indicating loss or gain of circulation fluid volume. Sufficient mud materials will be kept on location at all times to combat abnormal conditions.

7. Evaluation Program:

Samples: 10' samples from surface casing to TD
Logging: GR, CN & Gyro 100' above KOP (10375') to surface. GR from 10375' to TD.

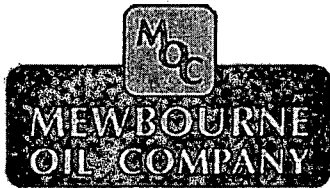
8. Downhole Conditions

Zones of abnormal pressure:	None anticipated
Zones of lost circulation:	Anticipated in surface and intermediate holes
Maximum bottom hole temperature:	120 degree F
Maximum bottom hole pressure:	8.3 lbs/gal gradient or less (.43368 x 10952' = 4750 psi)

9. Anticipated Starting Date:

Mewbourne Oil Company intends to drill this well as soon as possible after receiving approval with approximately 60 days involved in drilling operations and an additional 20 days involved in completion operations on the project.

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Mewbourne Oil Company

LEA COUNTY, NM

Section 15

Marathon Road 15 Pa Federal-1H

OH

Plan: Plan#1

Standard Planning Report

26 June, 2013





Stryker Directional Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Marathon Road 15 Pa Federal-1H
Company:	Mewbourne Oil Company	TVD Reference:	GL 3652 + 20 @ 3672.0usft (Patterson)
Project:	LEA COUNTY, NM	MD Reference:	GL 3652 + 20 @ 3672.0usft (Patterson)
Site:	Section 15	North Reference:	Grid
Well:	Marathon Road 15 Pa Federal-1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan#1		

Project:	LEA COUNTY, NM, NM-EAST		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site		Section 15			
Site Position:		Northing:	570,747.80 usft	Latitude:	32° 33' 59.722 N
From:	Map	Easting:	744,377.70 usft	Longitude:	103° 32' 24.356 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.43 °

Well	Marathon Road 15 Pa Federal-1H					
Well Position	+N-S	0.0 usft	Northing:	570,747.80 usft	Latitude:	32° 33' 59.722 N
	+E-W	0.0 usft	Easting:	744,377.70 usft	Longitude:	103° 32' 24.356 W
Position Uncertainty	0.0 usft	Wellhead Elevation:		Ground Level:	3,652.0 usft	

Wellbore:	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/26/2013	7.35	60.46	48,621

Design:	Plan#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	353.28

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	
10,474.7	0.00	0.00	10,474.7	0.0	0.0	0.00	0.00	0.00	0.00	
11,226.9	90.27	351.64	10,952.1	474.6	-69.8	12.00	12.00	-1.11	351.64	
11,251.9	90.27	351.64	10,952.0	499.3	-73.4	0.00	0.00	0.00	0.00 LP	
11,439.8	90.27	353.52	10,951.1	685.7	-97.7	1.00	0.00	1.00	89.98	
15,426.6	90.27	353.52	10,932.0	4,646.9	-547.9	0.00	0.00	0.00	0.00 BHL	



Stryker Directional Planning Report



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Project:	LEA COUNTY, NM	MD Reference:	GL 3652 + 20 @ 3672.0usft (Patterson)
Site:	Section 15	North Reference:	Grid
Well:	Marathon Road 15 Pa Federal 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan#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
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	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00



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5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,900.0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,100.0	0.00	0.00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,500.0	0.00	0.00	7,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,700.0	0.00	0.00	7,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,800.0	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,900.0	0.00	0.00	7,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,000.0	0.00	0.00	8,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,100.0	0.00	0.00	8,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,200.0	0.00	0.00	8,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,300.0	0.00	0.00	8,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,400.0	0.00	0.00	8,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,500.0	0.00	0.00	8,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,600.0	0.00	0.00	8,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,700.0	0.00	0.00	8,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,800.0	0.00	0.00	8,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,900.0	0.00	0.00	8,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,000.0	0.00	0.00	9,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,100.0	0.00	0.00	9,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,200.0	0.00	0.00	9,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,300.0	0.00	0.00	9,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,400.0	0.00	0.00	9,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,500.0	0.00	0.00	9,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,600.0	0.00	0.00	9,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,700.0	0.00	0.00	9,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,800.0	0.00	0.00	9,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,900.0	0.00	0.00	9,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
10,000.0	0.00	0.00	10,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
10,100.0	0.00	0.00	10,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
10,200.0	0.00	0.00	10,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
10,300.0	0.00	0.00	10,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
10,400.0	0.00	0.00	10,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
10,474.7	0.00	0.00	10,474.7	0.0	0.0	0.0	0.00	0.00	0.00	
10,500.0	3.04	351.64	10,500.0	0.7	-0.1	0.7	12.00	12.00	0.00	
10,525.0	6.04	351.64	10,524.9	2.6	-0.4	2.7	12.00	12.00	0.00	



Stryker Directional Planning Report



Database:	EDM5000.1 Single User Db	Local Co-ordinate Reference:	Well Marathon Road 15 Pal Federal 1H
Company:	Mewbourne Oil Company	TVD Reference:	GL-3652 +20 @ 3672.0usft (Patterson)
Project:	LEA COUNTY, NM	MD Reference:	GL-3652 +20 @ 3672.0usft (Patterson)
Site:	Section 15	North Reference:	Grid
Well:	Marathon Road 15 Pal Federal 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan#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)
10,550.0	9.04	351.64	10,549.7	5.9	-0.9	5.9	12.00	12.00	0.00
10,575.0	12.04	351.64	10,574.3	10.4	-1.5	10.5	12.00	12.00	0.00
10,600.0	15.04	351.64	10,598.6	16.2	-2.4	16.4	12.00	12.00	0.00
10,625.0	18.04	351.64	10,622.5	23.2	-3.4	23.5	12.00	12.00	0.00
10,650.0	21.04	351.64	10,646.1	31.5	-4.6	31.8	12.00	12.00	0.00
10,675.0	24.04	351.64	10,669.2	41.0	-6.0	41.4	12.00	12.00	0.00
10,700.0	27.04	351.64	10,691.7	51.6	-7.6	52.2	12.00	12.00	0.00
10,725.0	30.04	351.64	10,713.7	63.5	-9.3	64.1	12.00	12.00	0.00
10,750.0	33.04	351.64	10,735.0	76.4	-11.2	77.2	12.00	12.00	0.00
10,775.0	36.04	351.64	10,755.6	90.4	-13.3	91.4	12.00	12.00	0.00
10,800.0	39.04	351.64	10,775.4	105.5	-15.5	106.6	12.00	12.00	0.00
10,825.0	42.04	351.64	10,794.4	121.6	-17.9	122.8	12.00	12.00	0.00
10,850.0	45.04	351.64	10,812.5	138.6	-20.4	140.0	12.00	12.00	0.00
10,875.0	48.04	351.64	10,829.7	156.5	-23.0	158.2	12.00	12.00	0.00
10,900.0	51.04	351.64	10,845.9	175.4	-25.8	177.2	12.00	12.00	0.00
10,925.0	54.04	351.64	10,861.1	195.0	-28.7	197.0	12.00	12.00	0.00
10,950.0	57.04	351.64	10,875.3	215.4	-31.7	217.6	12.00	12.00	0.00
10,975.0	60.04	351.64	10,888.3	236.5	-34.8	238.9	12.00	12.00	0.00
11,000.0	63.04	351.64	10,900.2	258.2	-38.0	260.9	12.00	12.00	0.00
11,025.0	66.04	351.64	10,911.0	280.6	-41.2	283.5	12.00	12.00	0.00
11,050.0	69.04	351.64	10,920.5	303.4	-44.6	306.5	12.00	12.00	0.00
11,075.0	72.04	351.64	10,928.9	326.7	-48.0	330.1	12.00	12.00	0.00
11,100.0	75.04	351.64	10,935.9	350.4	-51.5	354.1	12.00	12.00	0.00
11,125.0	78.04	351.64	10,941.8	374.5	-55.1	378.4	12.00	12.00	0.00
11,150.0	81.04	351.64	10,946.3	398.8	-58.6	402.9	12.00	12.00	0.00
11,175.0	84.04	351.64	10,949.5	423.3	-62.2	427.7	12.00	12.00	0.00
11,200.0	87.04	351.64	10,951.5	448.0	-65.9	452.6	12.00	12.00	0.00
11,226.9	90.27	351.64	10,952.1	474.6	-69.8	479.6	12.00	12.00	0.00
11,251.9	90.27	351.64	10,952.0	499.3	-73.4	504.5	0.00	0.00	0.00
LP									
11,300.0	90.27	352.12	10,951.8	547.0	-80.2	552.6	1.00	0.00	1.00
11,400.0	90.27	353.12	10,951.3	646.1	-93.1	652.6	1.00	0.00	1.00
11,439.8	90.27	353.52	10,951.1	685.7	-97.7	692.4	1.00	0.00	1.00
11,500.0	90.27	353.52	10,950.8	745.5	-104.5	752.6	0.00	0.00	0.00
11,600.0	90.27	353.52	10,950.3	844.8	-115.8	852.6	0.00	0.00	0.00
11,700.0	90.27	353.52	10,949.9	944.2	-127.1	952.6	0.00	0.00	0.00
11,800.0	90.27	353.52	10,949.4	1,043.5	-138.4	1,052.6	0.00	0.00	0.00
11,900.0	90.27	353.52	10,948.9	1,142.9	-149.7	1,152.6	0.00	0.00	0.00
12,000.0	90.27	353.52	10,948.4	1,242.3	-160.9	1,252.6	0.00	0.00	0.00
12,100.0	90.27	353.52	10,947.9	1,341.6	-172.2	1,352.6	0.00	0.00	0.00
12,200.0	90.27	353.52	10,947.5	1,441.0	-183.5	1,452.6	0.00	0.00	0.00
12,300.0	90.27	353.52	10,947.0	1,540.3	-194.8	1,552.6	0.00	0.00	0.00
12,400.0	90.27	353.52	10,946.5	1,639.7	-206.1	1,652.6	0.00	0.00	0.00
12,500.0	90.27	353.52	10,946.0	1,739.1	-217.4	1,752.6	0.00	0.00	0.00
12,600.0	90.27	353.52	10,945.5	1,838.4	-228.7	1,852.5	0.00	0.00	0.00
12,700.0	90.27	353.52	10,945.1	1,937.8	-240.0	1,952.5	0.00	0.00	0.00
12,800.0	90.27	353.52	10,944.6	2,037.1	-251.3	2,052.5	0.00	0.00	0.00
12,900.0	90.27	353.52	10,944.1	2,136.5	-262.6	2,152.5	0.00	0.00	0.00
13,000.0	90.27	353.52	10,943.6	2,235.9	-273.9	2,252.5	0.00	0.00	0.00
13,100.0	90.27	353.52	10,943.1	2,335.2	-285.2	2,352.5	0.00	0.00	0.00
13,200.0	90.27	353.52	10,942.7	2,434.6	-296.5	2,452.5	0.00	0.00	0.00
13,300.0	90.27	353.52	10,942.2	2,533.9	-307.8	2,552.5	0.00	0.00	0.00
13,400.0	90.27	353.52	10,941.7	2,633.3	-319.0	2,652.5	0.00	0.00	0.00



Stryker Directional Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Marathon Road 15 Pa Federal-1H
Company:	Mewbourne Oil Company	TVD Reference:	GL 3652 + 20 @ 3672.0usft (Patterson)
Project:	LEA COUNTY, NM	MD Reference:	GL 3652 + 20 @ 3672.0usft (Patterson)
Site:	Section 15	North Reference:	Grid
Well:	Marathon Road 15 Pa Federal-1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan#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)
13,500.0	90.27	353.52	10,941.2	2,732.6	-330.3	2,752.5	0.00	0.00	0.00
13,600.0	90.27	353.52	10,940.8	2,832.0	-341.6	2,852.5	0.00	0.00	0.00
13,700.0	90.27	353.52	10,940.3	2,931.4	-352.9	2,952.5	0.00	0.00	0.00
13,800.0	90.27	353.52	10,939.8	3,030.7	-364.2	3,052.5	0.00	0.00	0.00
13,900.0	90.27	353.52	10,939.3	3,130.1	-375.5	3,152.5	0.00	0.00	0.00
14,000.0	90.27	353.52	10,938.8	3,229.4	-386.8	3,252.5	0.00	0.00	0.00
14,100.0	90.27	353.52	10,938.4	3,328.8	-398.1	3,352.5	0.00	0.00	0.00
14,200.0	90.27	353.52	10,937.9	3,428.2	-409.4	3,452.5	0.00	0.00	0.00
14,300.0	90.27	353.52	10,937.4	3,527.5	-420.7	3,552.5	0.00	0.00	0.00
14,400.0	90.27	353.52	10,936.9	3,626.9	-432.0	3,652.5	0.00	0.00	0.00
14,500.0	90.27	353.52	10,936.4	3,726.2	-443.3	3,752.5	0.00	0.00	0.00
14,600.0	90.27	353.52	10,936.0	3,825.6	-454.6	3,852.5	0.00	0.00	0.00
14,700.0	90.27	353.52	10,935.5	3,925.0	-465.9	3,952.5	0.00	0.00	0.00
14,800.0	90.27	353.52	10,935.0	4,024.3	-477.1	4,052.5	0.00	0.00	0.00
14,900.0	90.27	353.52	10,934.5	4,123.7	-488.4	4,152.5	0.00	0.00	0.00
15,000.0	90.27	353.52	10,934.0	4,223.0	-499.7	4,252.5	0.00	0.00	0.00
15,100.0	90.27	353.52	10,933.6	4,322.4	-511.0	4,352.5	0.00	0.00	0.00
15,200.0	90.27	353.52	10,933.1	4,421.8	-522.3	4,452.5	0.00	0.00	0.00
15,300.0	90.27	353.52	10,932.6	4,521.1	-533.6	4,552.5	0.00	0.00	0.00
15,400.0	90.27	353.52	10,932.1	4,620.5	-544.9	4,652.5	0.00	0.00	0.00
15,426.6	90.27	353.52	10,932.0	4,646.9	-547.9	4,679.1	0.00	0.00	0.00
BHL									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
BHL	0.00	0.00	10,932.0	4,646.9	-547.9	575,394.73	743,829.78	32° 34' 45.743 N	103° 32' 30.354 W
- plan hits target center									
- Point									
LP	0.00	0.00	10,952.0	499.3	-73.4	571,247.13	744,304.29	32° 34' 4.668 N	103° 32' 25.170 W
- plan hits target center									
- Point									



Mewbourne Oil Company

LEA COUNTY, NM

Section 15

Marathon Road 15 Pa Federal-1H

OH

Plan: Plan#1

Standard Planning Report - Geographic

26 June, 2013





Stryker Directional

Planning Report - Geographic



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Marathon Road 15 Pa Federal-1H
Company:	Mewbourne Oil Company	TVD Reference:	GL 3652 + 20 @ 3672.0usft (Patterson)
Project:	LEA COUNTY, NM	MD Reference:	GL 3652 + 20 @ 3672.0usft (Patterson)
Site:	Section 15	North Reference:	Grid
Well:	Marathon Road 15 Pa Federal-1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan#1		

Project:	LEA COUNTY, NM, NM-EAST		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site:	Section 15		
Site Position:		Northing:	570,747.80 usft
From:	Map	Easting:	744,377.70 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 33' 59.722 N
		Longitude:	103° 32' 24.356 W
		Grid Convergence:	0.43 °

Well:	Marathon Road 15 Pa Federal-1H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	Ground Level:
			3,652.0 usft

Wellbore:	OH		
Magnetics	Model/Name	Sample Date	Declination
			(°)
	IGRF2010	6/26/2013	7.35
			Dip Angle
			(°)
			60.46
			Field Strength
			(nT)
			48,621

Design:	Plan#1		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			353.28

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	
10,474.7	0.00	0.00	10,474.7	0.0	0.0	0.00	0.00	0.00	0.00	
11,226.9	90.27	351.64	10,952.1	474.6	-69.8	12.00	12.00	-1.11	351.64	
11,251.9	90.27	351.64	10,952.0	499.3	-73.4	0.00	0.00	0.00	0.00 LP	
11,439.8	90.27	353.52	10,951.1	685.7	-97.7	1.00	0.00	1.00	89.98	
15,426.6	90.27	353.52	10,932.0	4,646.9	-547.9	0.00	0.00	0.00	0.00 BHL	



Stryker Directional

Planning Report - Geographic



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Marathon Road 15 Pa Federal-1H
Company:	Mewbourne Oil Company	TVD Reference:	GL 3652 + 20 @ 3672.0usft (Patterson)
Project:	LEA COUNTY, NM	MD Reference:	GL 3652 + 20 @ 3672.0usft (Patterson)
Site:	Section 15	North Reference:	Grid
Well:	Marathon Road 15 Pa Federal-1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan#1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,500.0	0.00	0.00	5,500.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
5,600.0	0.00	0.00	5,600.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
5,700.0	0.00	0.00	5,700.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
5,800.0	0.00	0.00	5,800.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
5,900.0	0.00	0.00	5,900.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
6,000.0	0.00	0.00	6,000.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
6,100.0	0.00	0.00	6,100.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
6,200.0	0.00	0.00	6,200.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
6,300.0	0.00	0.00	6,300.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
6,400.0	0.00	0.00	6,400.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
6,500.0	0.00	0.00	6,500.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
6,600.0	0.00	0.00	6,600.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
6,700.0	0.00	0.00	6,700.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
6,800.0	0.00	0.00	6,800.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
6,900.0	0.00	0.00	6,900.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
7,000.0	0.00	0.00	7,000.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
7,100.0	0.00	0.00	7,100.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
7,200.0	0.00	0.00	7,200.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
7,300.0	0.00	0.00	7,300.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
7,400.0	0.00	0.00	7,400.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
7,500.0	0.00	0.00	7,500.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
7,600.0	0.00	0.00	7,600.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
7,700.0	0.00	0.00	7,700.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
7,800.0	0.00	0.00	7,800.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
7,900.0	0.00	0.00	7,900.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
8,000.0	0.00	0.00	8,000.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
8,100.0	0.00	0.00	8,100.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
8,200.0	0.00	0.00	8,200.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
8,300.0	0.00	0.00	8,300.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
8,400.0	0.00	0.00	8,400.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
8,500.0	0.00	0.00	8,500.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
8,600.0	0.00	0.00	8,600.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
8,700.0	0.00	0.00	8,700.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
8,800.0	0.00	0.00	8,800.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
8,900.0	0.00	0.00	8,900.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
9,000.0	0.00	0.00	9,000.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
9,100.0	0.00	0.00	9,100.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
9,200.0	0.00	0.00	9,200.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
9,300.0	0.00	0.00	9,300.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
9,400.0	0.00	0.00	9,400.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
9,500.0	0.00	0.00	9,500.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
9,600.0	0.00	0.00	9,600.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
9,700.0	0.00	0.00	9,700.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
9,800.0	0.00	0.00	9,800.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
9,900.0	0.00	0.00	9,900.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
10,000.0	0.00	0.00	10,000.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
10,100.0	0.00	0.00	10,100.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
10,200.0	0.00	0.00	10,200.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
10,300.0	0.00	0.00	10,300.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
10,400.0	0.00	0.00	10,400.0	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
10,474.7	0.00	0.00	10,474.7	0.0	0.0	570,747.80	744,377.70	32° 33' 59.722 N	103° 32' 24.356 W
10,500.0	3.04	351.64	10,500.0	0.7	-0.1	570,748.47	744,377.60	32° 33' 59.729 N	103° 32' 24.357 W
10,525.0	6.04	351.64	10,524.9	2.6	-0.4	570,750.43	744,377.31	32° 33' 59.748 N	103° 32' 24.360 W
10,550.0	9.04	351.64	10,549.7	5.9	-0.9	570,753.67	744,376.83	32° 33' 59.780 N	103° 32' 24.366 W
10,575.0	12.04	351.64	10,574.3	10.4	-1.5	570,758.20	744,376.17	32° 33' 59.825 N	103° 32' 24.373 W



Stryker Directional

Planning Report - Geographic



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Marathon Road 15 Pal Federal 1H
Company:	Mewbourne Oil Company	TVD Reference:	GL 3652 + 20 @ 3672.0usft (Patterson)
Project:	LEA COUNTY, NM	MD Reference:	GL 3652 + 20 @ 3672.0usft (Patterson)
Site:	Section 15	North Reference:	Grid
Well:	Marathon Road 15 Pal Federal 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,600.0	15.04	351.64	10,598.6	16.2	-2.4	570,763.99	744,375.32	32° 33' 59.883 N	103° 32' 24.382 W
10,625.0	18.04	351.64	10,622.5	23.2	-3.4	570,771.03	744,374.28	32° 33' 59.952 N	103° 32' 24.394 W
10,650.0	21.04	351.64	10,646.1	31.5	-4.6	570,779.30	744,373.07	32° 34' 0.034 N	103° 32' 24.407 W
10,675.0	24.04	351.64	10,669.2	41.0	-6.0	570,788.78	744,371.67	32° 34' 0.128 N	103° 32' 24.423 W
10,700.0	27.04	351.64	10,691.7	51.6	-7.6	570,799.44	744,370.10	32° 34' 0.234 N	103° 32' 24.440 W
10,725.0	30.04	351.64	10,713.7	63.5	-9.3	570,811.26	744,368.37	32° 34' 0.351 N	103° 32' 24.459 W
10,750.0	33.04	351.64	10,735.0	76.4	-11.2	570,824.20	744,366.47	32° 34' 0.479 N	103° 32' 24.481 W
10,775.0	36.04	351.64	10,755.6	90.4	-13.3	570,838.22	744,364.40	32° 34' 0.618 N	103° 32' 24.503 W
10,800.0	39.04	351.64	10,775.4	105.5	-15.5	570,853.29	744,362.19	32° 34' 0.767 N	103° 32' 24.528 W
10,825.0	42.04	351.64	10,794.4	121.6	-17.9	570,869.36	744,359.83	32° 34' 0.926 N	103° 32' 24.554 W
10,850.0	45.04	351.64	10,812.5	138.6	-20.4	570,886.40	744,357.32	32° 34' 1.095 N	103° 32' 24.582 W
10,875.0	48.04	351.64	10,829.7	156.5	-23.0	570,904.35	744,354.68	32° 34' 1.273 N	103° 32' 24.611 W
10,900.0	51.04	351.64	10,845.9	175.4	-25.8	570,923.17	744,351.92	32° 34' 1.459 N	103° 32' 24.642 W
10,925.0	54.04	351.64	10,861.1	195.0	-28.7	570,942.80	744,349.03	32° 34' 1.654 N	103° 32' 24.674 W
10,950.0	57.04	351.64	10,875.3	215.4	-31.7	570,963.19	744,346.03	32° 34' 1.856 N	103° 32' 24.707 W
10,975.0	60.04	351.64	10,888.3	236.5	-34.8	570,984.29	744,342.93	32° 34' 2.065 N	103° 32' 24.742 W
11,000.0	63.04	351.64	10,900.2	258.2	-38.0	571,006.03	744,339.73	32° 34' 2.280 N	103° 32' 24.777 W
11,025.0	66.04	351.64	10,911.0	280.6	-41.2	571,028.36	744,336.45	32° 34' 2.501 N	103° 32' 24.814 W
11,050.0	69.04	351.64	10,920.5	303.4	-44.6	571,051.22	744,333.09	32° 34' 2.728 N	103° 32' 24.851 W
11,075.0	72.04	351.64	10,928.9	326.7	-48.0	571,074.53	744,329.66	32° 34' 2.959 N	103° 32' 24.889 W
11,100.0	75.04	351.64	10,935.9	350.4	-51.5	571,098.25	744,326.18	32° 34' 3.194 N	103° 32' 24.928 W
11,125.0	78.04	351.64	10,941.8	374.5	-55.1	571,122.30	744,322.64	32° 34' 3.432 N	103° 32' 24.967 W
11,150.0	81.04	351.64	10,946.3	398.8	-58.6	571,146.62	744,319.06	32° 34' 3.673 N	103° 32' 25.006 W
11,175.0	84.04	351.64	10,949.5	423.3	-62.2	571,171.15	744,315.46	32° 34' 3.916 N	103° 32' 25.046 W
11,200.0	87.04	351.64	10,951.5	448.0	-65.9	571,195.80	744,311.83	32° 34' 4.160 N	103° 32' 25.087 W
11,226.9	90.27	351.64	10,952.1	474.6	-69.8	571,222.45	744,307.92	32° 34' 4.424 N	103° 32' 25.130 W
11,251.9	90.27	351.64	10,952.0	499.3	-73.7	571,247.13	744,304.29	32° 34' 4.668 N	103° 32' 25.170 W
DRAINAGE									
11,300.0	90.27	352.12	10,951.8	547.0	-80.2	571,294.76	744,297.49	32° 34' 5.140 N	103° 32' 25.246 W
11,400.0	90.27	353.12	10,951.3	646.1	-93.1	571,393.93	744,284.64	32° 34' 6.122 N	103° 32' 25.387 W
11,439.8	90.27	353.52	10,951.1	685.7	-97.7	571,433.47	744,280.01	32° 34' 6.514 N	103° 32' 25.438 W
11,500.0	90.27	353.52	10,950.8	745.5	-104.5	571,493.27	744,273.21	32° 34' 7.106 N	103° 32' 25.512 W
11,600.0	90.27	353.52	10,950.3	844.8	-115.8	571,592.63	744,261.92	32° 34' 8.090 N	103° 32' 25.635 W
11,700.0	90.27	353.52	10,949.9	944.2	-127.1	571,691.99	744,250.63	32° 34' 9.074 N	103° 32' 25.759 W
11,800.0	90.27	353.52	10,949.4	1,043.5	-138.4	571,791.35	744,239.33	32° 34' 10.058 N	103° 32' 25.882 W
11,900.0	90.27	353.52	10,948.9	1,142.9	-149.7	571,890.71	744,228.04	32° 34' 11.042 N	103° 32' 26.005 W
12,000.0	90.27	353.52	10,948.4	1,242.3	-160.9	571,990.06	744,216.75	32° 34' 12.026 N	103° 32' 26.129 W
12,100.0	90.27	353.52	10,947.9	1,341.6	-172.2	572,089.42	744,205.45	32° 34' 13.010 N	103° 32' 26.252 W
12,200.0	90.27	353.52	10,947.5	1,441.0	-183.5	572,188.78	744,194.16	32° 34' 13.994 N	103° 32' 26.375 W
12,300.0	90.27	353.52	10,947.0	1,540.3	-194.8	572,288.14	744,182.87	32° 34' 14.978 N	103° 32' 26.498 W
12,400.0	90.27	353.52	10,946.5	1,639.7	-206.1	572,387.50	744,171.58	32° 34' 15.962 N	103° 32' 26.622 W
12,500.0	90.27	353.52	10,946.0	1,739.1	-217.4	572,486.86	744,160.28	32° 34' 16.946 N	103° 32' 26.745 W
12,600.0	90.27	353.52	10,945.5	1,838.4	-228.7	572,586.22	744,148.99	32° 34' 17.930 N	103° 32' 26.868 W
12,700.0	90.27	353.52	10,945.1	1,937.8	-240.0	572,685.58	744,137.70	32° 34' 18.914 N	103° 32' 26.992 W
12,800.0	90.27	353.52	10,944.6	2,037.1	-251.3	572,784.94	744,126.40	32° 34' 19.898 N	103° 32' 27.115 W
12,900.0	90.27	353.52	10,944.1	2,136.5	-262.6	572,884.30	744,115.11	32° 34' 20.882 N	103° 32' 27.238 W
13,000.0	90.27	353.52	10,943.6	2,235.9	-273.9	572,983.66	744,103.82	32° 34' 21.866 N	103° 32' 27.362 W
13,100.0	90.27	353.52	10,943.1	2,335.2	-285.2	573,083.02	744,092.53	32° 34' 22.850 N	103° 32' 27.485 W
13,200.0	90.27	353.52	10,942.7	2,434.6	-296.5	573,182.37	744,081.23	32° 34' 23.834 N	103° 32' 27.608 W
13,300.0	90.27	353.52	10,942.2	2,533.9	-307.8	573,281.73	744,069.94	32° 34' 24.818 N	103° 32' 27.732 W
13,400.0	90.27	353.52	10,941.7	2,633.3	-319.0	573,381.09	744,058.65	32° 34' 25.802 N	103° 32' 27.855 W
13,500.0	90.27	353.52	10,941.2	2,732.6	-330.3	573,480.45	744,047.35	32° 34' 26.786 N	103° 32' 27.978 W
13,600.0	90.27	353.52	10,940.8	2,832.0	-341.6	573,579.81	744,036.06	32° 34' 27.770 N	103° 32' 28.102 W
13,700.0	90.27	353.52	10,940.3	2,931.4	-352.9	573,679.17	744,024.77	32° 34' 28.754 N	103° 32' 28.225 W



Stryker Directional

Planning Report - Geographic



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Marathon Road 15 Pa Federal-1H
Company:	Mewbourne Oil Company	TVD Reference:	GL 3652 + 20 @ 3672.0usft (Patterson)
Project:	LEA COUNTY, NM	MD Reference:	GL 3652 + 20 @ 3672.0usft (Patterson)
Site:	Section 15	North Reference:	Grid
Well:	Marathon Road 15 Pa Federal-1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan#1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
13,800.0	90.27	353.52	10,939.8	3,030.7	-364.2	573,778.53	744,013.48	32° 34' 29.738 N	103° 32' 28.348 W
13,900.0	90.27	353.52	10,939.3	3,130.1	-375.5	573,877.89	744,002.18	32° 34' 30.722 N	103° 32' 28.471 W
14,000.0	90.27	353.52	10,938.8	3,229.4	-386.8	573,977.25	743,990.89	32° 34' 31.706 N	103° 32' 28.595 W
14,100.0	90.27	353.52	10,938.4	3,328.8	-398.1	574,076.61	743,979.60	32° 34' 32.690 N	103° 32' 28.718 W
14,200.0	90.27	353.52	10,937.9	3,428.2	-409.4	574,175.97	743,968.30	32° 34' 33.674 N	103° 32' 28.841 W
14,300.0	90.27	353.52	10,937.4	3,527.5	-420.7	574,275.33	743,957.01	32° 34' 34.658 N	103° 32' 28.965 W
14,400.0	90.27	353.52	10,936.9	3,626.9	-432.0	574,374.68	743,945.72	32° 34' 35.642 N	103° 32' 29.088 W
14,500.0	90.27	353.52	10,936.4	3,726.2	-443.3	574,474.04	743,934.43	32° 34' 36.626 N	103° 32' 29.211 W
14,600.0	90.27	353.52	10,936.0	3,825.6	-454.6	574,573.40	743,923.13	32° 34' 37.610 N	103° 32' 29.335 W
14,700.0	90.27	353.52	10,935.5	3,925.0	-465.9	574,672.76	743,911.84	32° 34' 38.594 N	103° 32' 29.458 W
14,800.0	90.27	353.52	10,935.0	4,024.3	-477.1	574,772.12	743,900.55	32° 34' 39.578 N	103° 32' 29.581 W
14,900.0	90.27	353.52	10,934.5	4,123.7	-488.4	574,871.48	743,889.25	32° 34' 40.562 N	103° 32' 29.705 W
15,000.0	90.27	353.52	10,934.0	4,223.0	-499.7	574,970.84	743,877.96	32° 34' 41.546 N	103° 32' 29.828 W
15,100.0	90.27	353.52	10,933.6	4,322.4	-511.0	575,070.20	743,866.67	32° 34' 42.529 N	103° 32' 29.951 W
15,200.0	90.27	353.52	10,933.1	4,421.8	-522.3	575,169.56	743,855.38	32° 34' 43.513 N	103° 32' 30.075 W
15,300.0	90.27	353.52	10,932.6	4,521.1	-533.6	575,268.92	743,844.08	32° 34' 44.497 N	103° 32' 30.198 W
15,400.0	90.27	353.52	10,932.1	4,620.5	-544.9	575,368.28	743,832.79	32° 34' 45.481 N	103° 32' 30.321 W
15,426.6	90.27	353.52	10,932.0	4,646.9	-547.9	575,394.73	743,829.78	32° 34' 45.743 N	103° 32' 30.354 W

BHL

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
BHL	0.00	0.00	10,932.0	4,646.9	-547.9	575,394.73	743,829.78	32° 34' 45.743 N	103° 32' 30.354 W
- plan hits target center									
- Point									
LP	0.00	0.00	10,952.0	499.3	-73.4	571,247.13	744,304.29	32° 34' 4.668 N	103° 32' 25.170 W
- plan hits target center									
- Point									



COMPANY: Mewbourne Oil Company
WELL: Marathon Road 15 Pa Federal-1H
COUNTY: LEA COUNTY, NM
DATUM: NAD 1927 (NADCON CONUS)



OFFICE: 936.582.7296

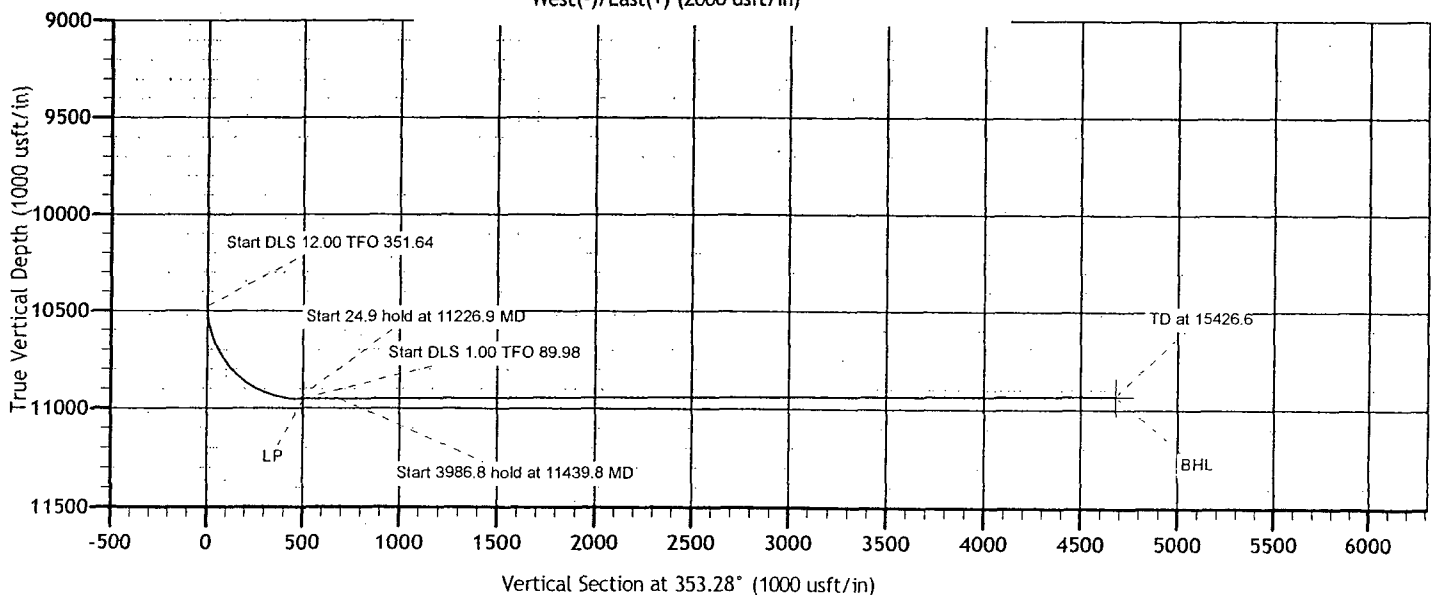
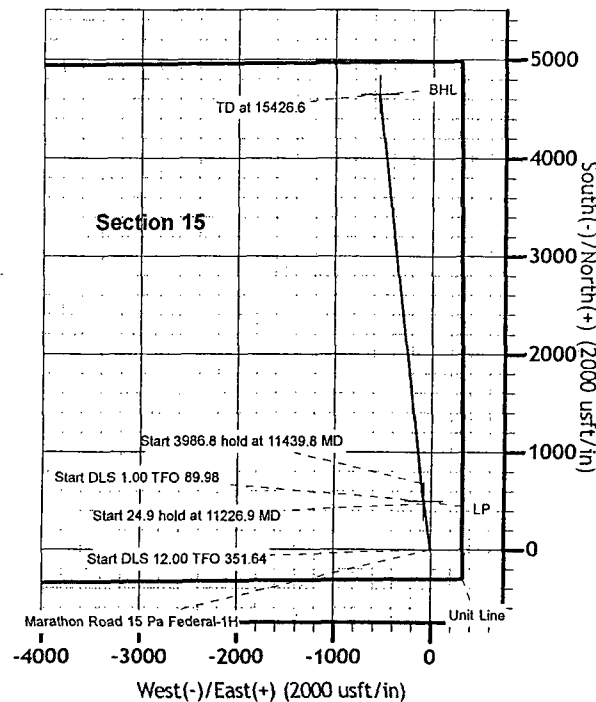
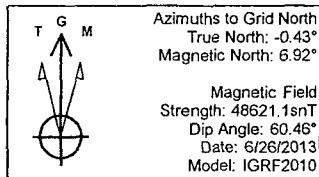
GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 6.92°

GEODETIC ZONE: New Mexico East 3001
GL 3652 + 20 @ 3672.0usft (Patterson)
GROUND ELEVATION: 3652.0

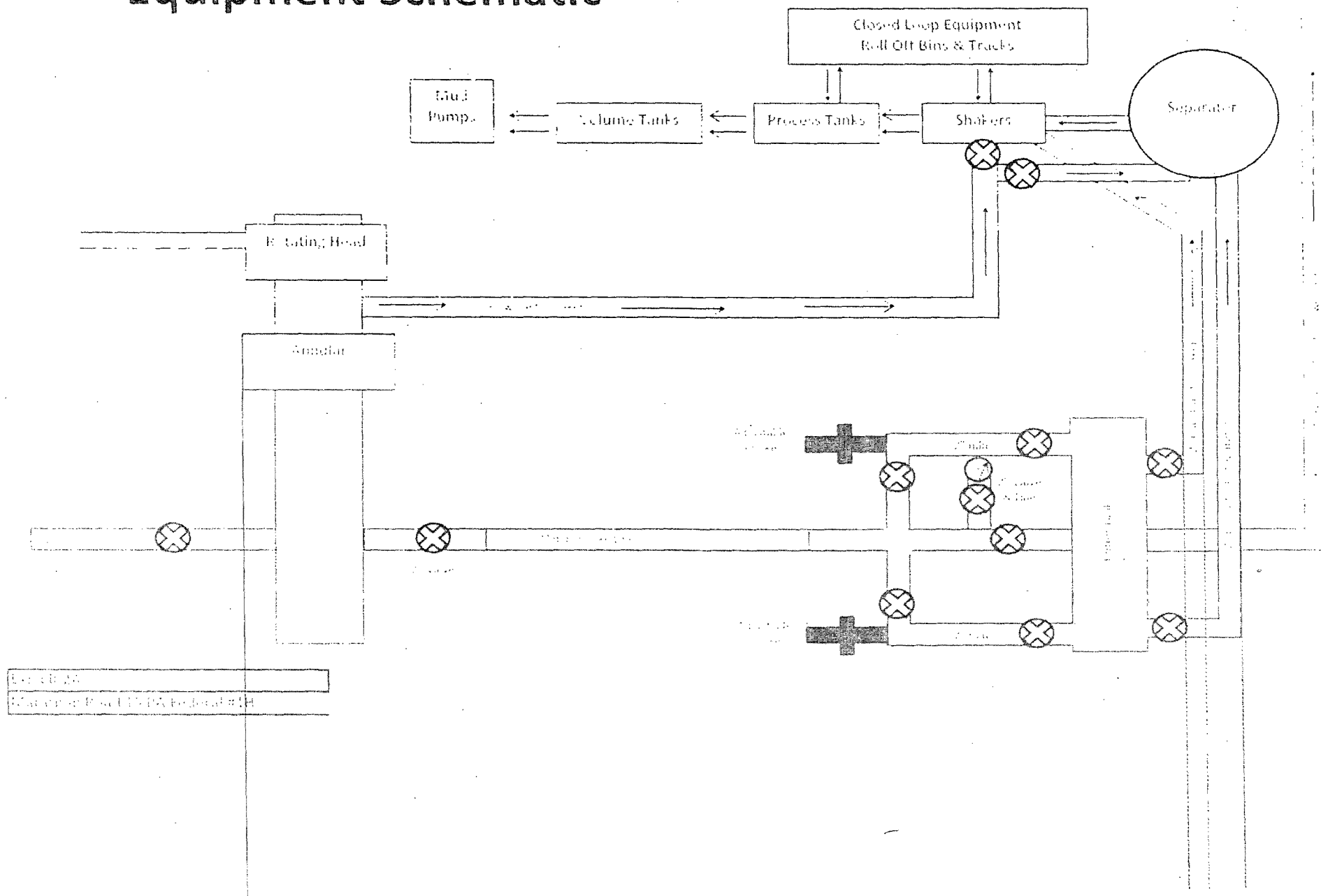
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	570747.80	744377.70	32° 33' 59.722 N	103° 32' 24.356 W	

PLAN SECTIONS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSeet	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	10474.7	0.00	0.00	10474.7	0.0	0.0	0.00	0.00	0.0	
3	11226.9	90.27	351.64	10952.1	474.6	-69.8	12.00	351.64	479.6	
4	11251.9	90.27	351.64	10952.0	499.3	-73.4	0.00	0.00	504.5	LP
5	11439.8	90.27	353.52	10951.1	685.7	-97.7	1.00	89.98	692.4	
6	15426.6	90.27	353.52	10932.0	4646.9	-547.9	0.00	0.00	4679.1	BHL



13 5/8" 2M BOPE & Closed Loop Equipment Schematic



13 5/8" 2M BOPE & Closed Loop Equipment Schematic

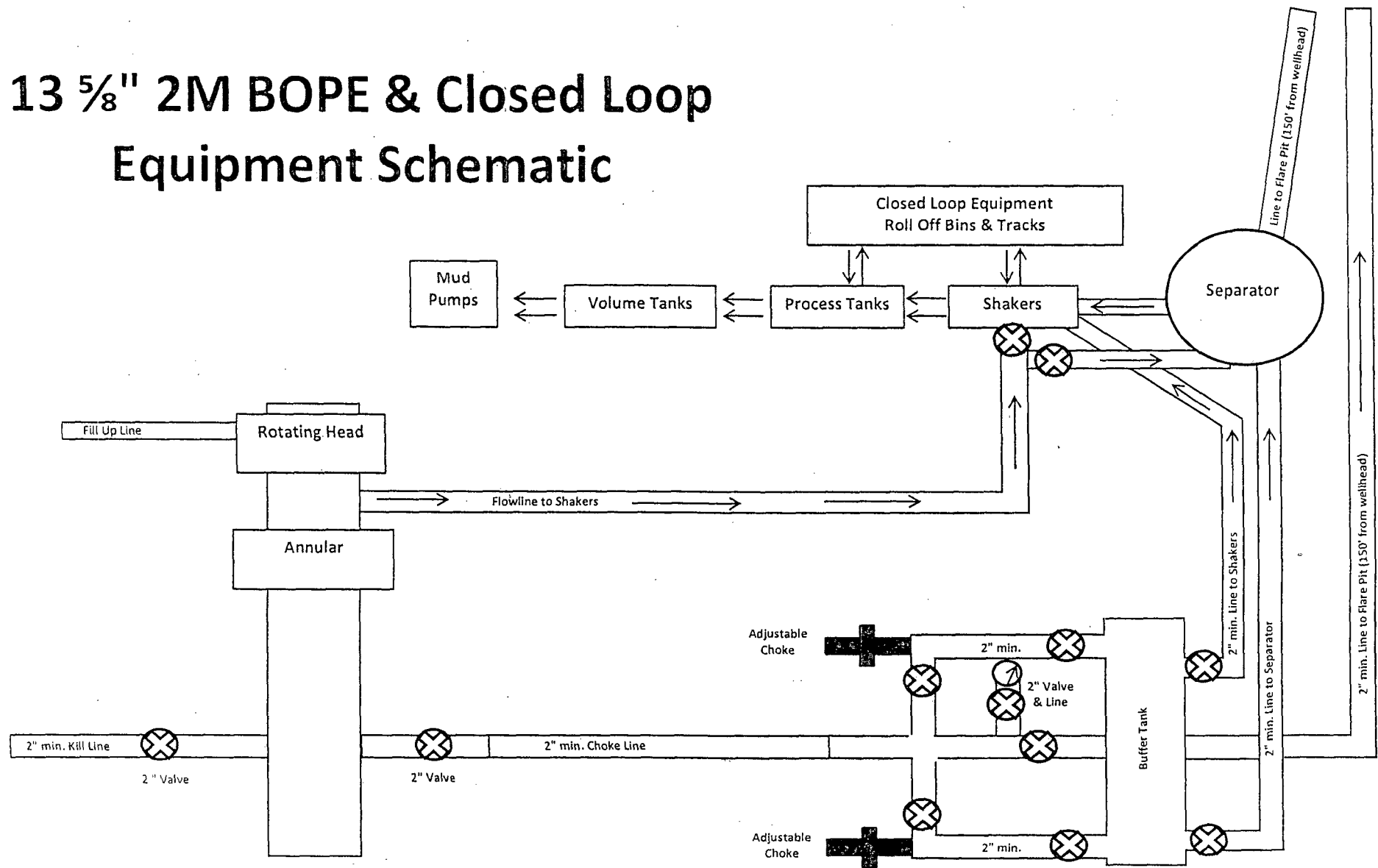
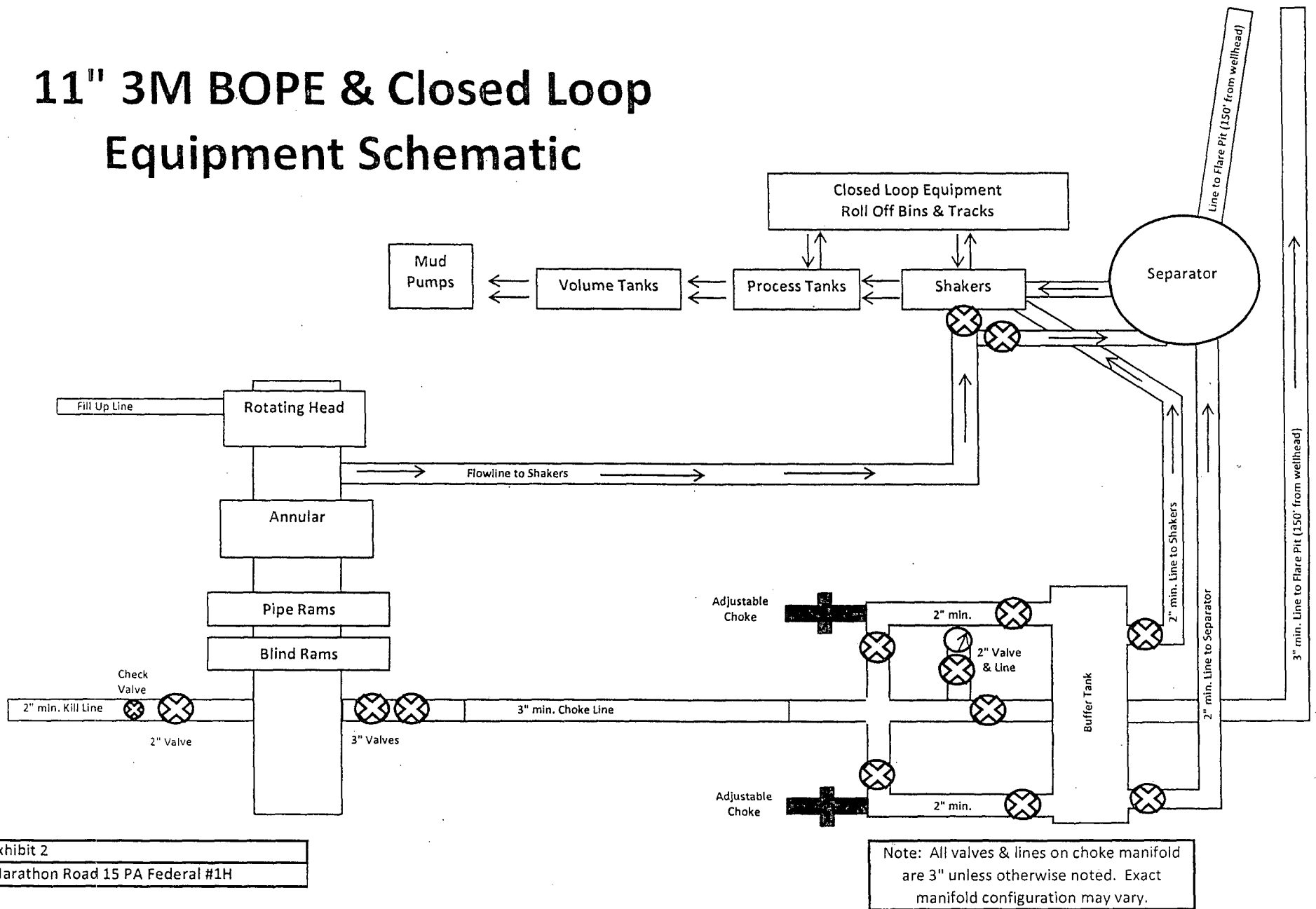


Exhibit 2A
Marathon Road 15 PA Federal #1H

11" 3M BOPE & Closed Loop Equipment Schematic



H2S Diagram
Closed Loop Pad Dimensions 280' x 320'

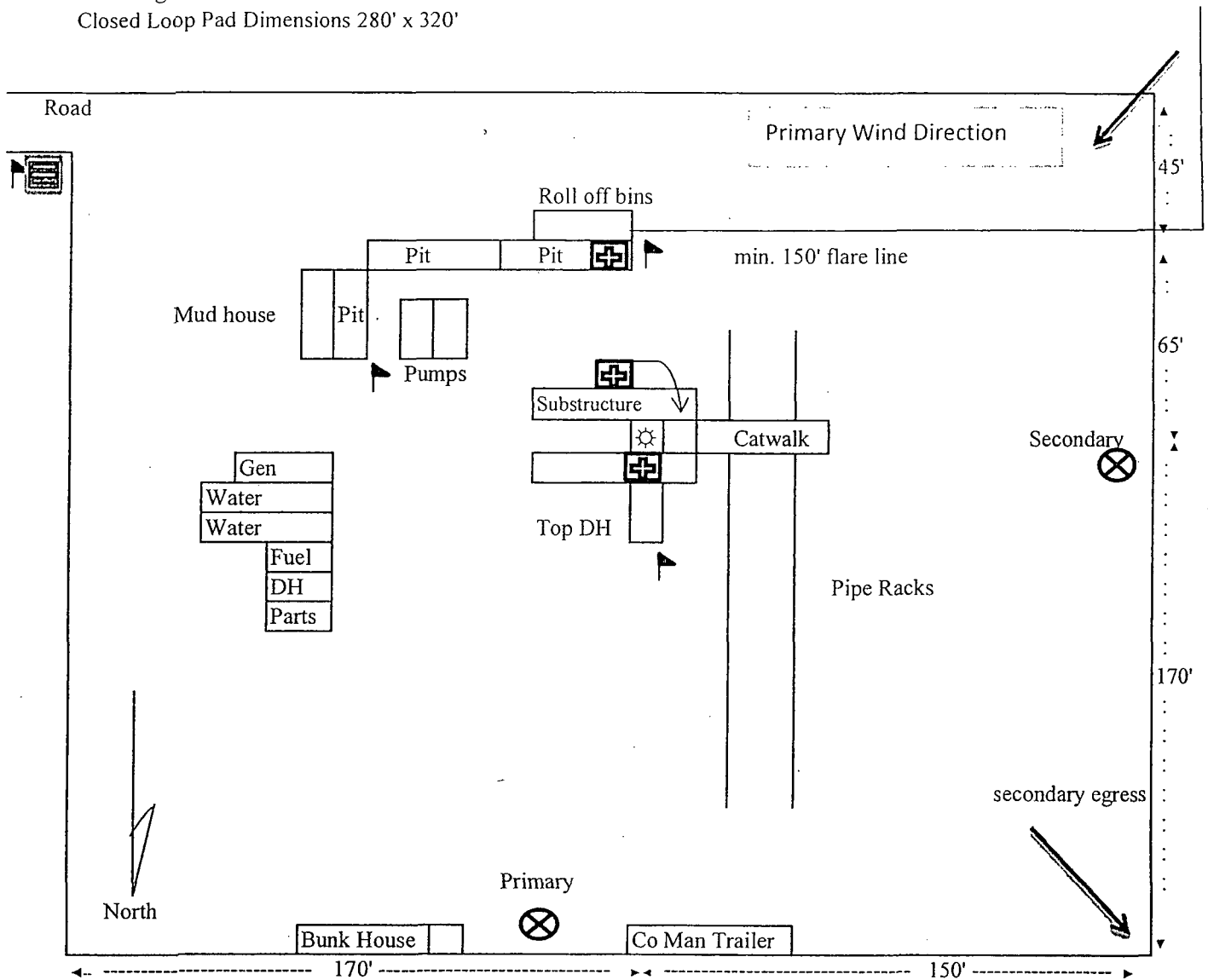


Exhibit 5

Mewbourne Oil Company
Marathon Road 15 PA Federal #1H
300' FSL & 330' FEL
Sec. 15 T20S R34E
Lea County, NM

