

#### BSPG Production Circles

- Avalon Sand
- Avalon Shale
- 1st BSPG Sd
- 2nd BSPG Sd
- Harkey Sd

AVLN HZ

2<sup>nd</sup> BS  
Sand HZ

2300                    0                    2300 ft



Net Sd  
Producing Zone  
(MRRW, 1<sup>st</sup> BSPG, 2<sup>nd</sup> BSPG, etc.)

BSPG Cum BCF  
BSPG Cum MBO  
BSPG Cum MBW

TD



**Mewbourne Oil Company**

Yardbirds 34 PA Fee IH  
Net Isopach and Structure Map Exhibit  
Net Isopach Lower 2<sup>nd</sup> BSPG Sand (C.I. 10')  
Structure Base of 2<sup>nd</sup> BSPG Sand (C.I. 100')

6/27/2016	Eddy County	New Mexico
Wells <3000' Filtered Out	1 Inch = 2300 Feet	N.Class

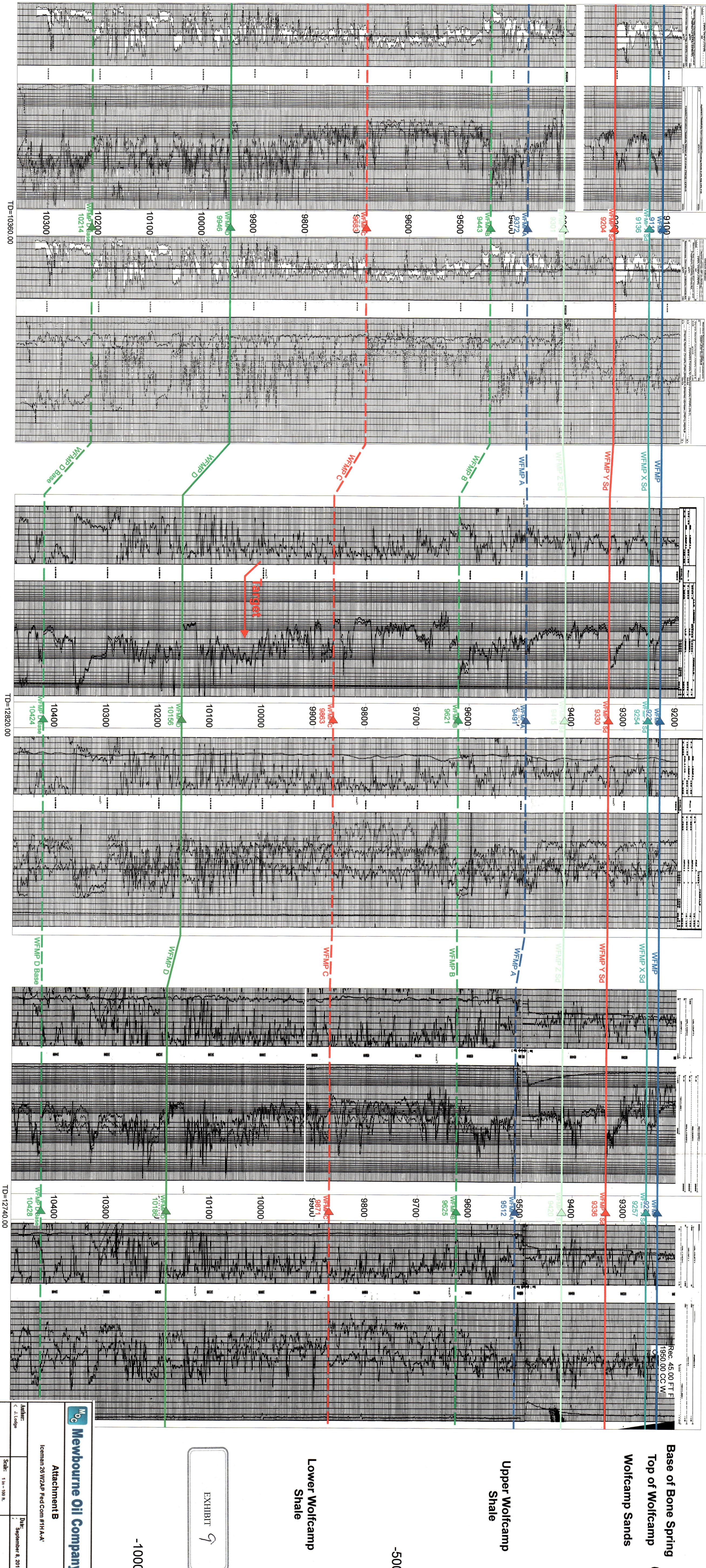
A

COG OPERATING LIMITED LIABILITY CORP  
CHAIKA STATE 3H  
190' SL 1980 FFL  
TWP-23 S. Range-27 E. Sec. 26  
Datum-3170.00

300154289400

26N

8113 ft



A'

EOG RESOURCES INCORPORATED  
CHARTERED 23  
25' NU 1990 FFL  
TWP-23 S. Range-27 E. Sec. 25  
Reference KB  
Datum-3120.00

300152447600

25H

READ & STEVENS INCORPORATED  
CASS DRAW 1  
1980' SL 1980 FFL  
TWP-23 S. Range-27 E. Sec. 24  
Reference KB  
Datum-3106.00

300152406000

24I

<b>Yardbirds 34 PA Fee 1H - Offset 2nd Bone Spring Sand Production Table</b>									
<b>Well Name</b>	<b>Operator</b>	<b>API</b>	<b>Location</b>	<b>Vertical/Horizontal</b>	<b>BSPG Completion Date</b>	<b>Cum Oil (mbo)</b>	<b>Cum Gas (bcf)</b>	<b>Cum Water (mbw)</b>	<b>BSPG Zone</b>
Layla 35 PA FEE 1H	Mewbourne Oil	3001540967	35PA/23S/28E	Horizontal	2/15/2014	81.0	0.1	210.0	2nd BSPG Sd
Layla 35 OB Fee Com 1H	Mewbourne Oil	3001540988	35OB/23S/28E	Horizontal	5/21/2013	76.0	0.1	219.0	2nd BSPG Sd
Layla 35 B2NC Fee 2H	Mewbourne Oil	3001542353	35NC/23S/28E	Horizontal	9/4/2014	64.0	0.1	170.0	2nd BSPG Sd





MEWBOURNE  
OIL COMPANY

## Mewbourne Oil Company .

Eddy County, New Mexico  
Section 34-23S-28E Yardbird 34 PA Fee #1H  
Yardbird 34 PA Fee #1H

Original Hole

Plan: Plan#2

## Standard Planning Report

02 October, 2015

SL: 150 FSL & 610 FEL  
LP: 681 FSL & 610 FEL  
BHL: 330 FNL & 500 FEL

EXHIBIT / 1





# Stryker Directional

## Planning Report



<b>Database:</b>	Stryker_EDM	<b>Local Co-ordinate Reference:</b>	Well Yardbird 34 PA Fee #1H
<b>Company:</b>	Newbourne Oil Company .	<b>TVD Reference:</b>	3020 + 20 @ 3040.0usft (Patterson # 187)
<b>Project:</b>	Eddy County, New Mexico	<b>MD Reference:</b>	3020 + 20 @ 3040.0usft (Patterson # 187)
<b>Site:</b>	Section 34-23S-28E Yardbird 34 PA Fee #1H	<b>North Reference:</b>	Grid
<b>Well:</b>	Yardbird 34 PA Fee #1H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	Plan#2		

<b>Project</b>	Eddy County, New Mexico	
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)	Mean Sea Level
<b>Map Zone:</b>	New Mexico East 3001	

<b>Site</b>	Section 34-23S-28E Yardbird 34 PA Fee #1H				
<b>Site Position:</b>		<b>Northing:</b>	456,421.70 usft	<b>Latitude:</b>	32° 15' 16.350 N
<b>From:</b>	Map	<b>Easting:</b>	581,995.80 usft	<b>Longitude:</b>	104° 4' 5.129 W
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.14 °

<b>Well</b>	Yardbird 34 PA Fee #1H				
<b>Well Position</b>	+N/S +E/W	0.0 usft 0.0 usft	<b>Northing:</b> <b>Easting:</b>	456,421.70 usft 581,995.80 usft	<b>Latitude:</b> <b>Longitude:</b>
<b>Position Uncertainty</b>		0.0 usft	<b>Wellhead Elevation:</b>	20.0 usft	<b>Ground Level:</b>
					3,020.0 usft

<b>Wellbore</b>	Original Hole
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	9/21/2015	7.37	60.03	48,084

<b>Design</b>	Plan#2
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<b>Audit Notes:</b>				
<b>Version:</b>				
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/S (usft)</b>	<b>+E/W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	1.75

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	
7,400.0	2.48	18.18	7,398.1	40.1	-26.3	0.00	0.00	0.00	0.00	0.00	
7,799.7	2.48	18.18	7,797.5	56.5	-20.9	0.00	0.00	0.00	0.00	0.00	
8,527.6	89.73	1.96	8,255.0	530.9	0.8	12.00	11.99	-2.23	-16.24		
12,827.0	89.73	1.96	8,275.0	4,827.7	147.5	0.00	0.00	0.00	0.00	PBHL Yardbird 34 F	









# Stryker Directional

## Planning Report



<b>Database:</b>	Stryker_EDM	<b>Local Co-ordinate Reference:</b>	Well Yardbird 34 PA Fee #1H
<b>Company:</b>	Mewbourne Oil Company .	<b>TVD Reference:</b>	3020 + 20 @ 3040.0usft (Patterson # 187)
<b>Project:</b>	Eddy County, New Mexico	<b>MD Reference:</b>	3020 + 20 @ 3040.0usft (Patterson # 187)
<b>Site:</b>	Section 34-23S-28E Yardbird 34 PA Fee #1H	<b>North Reference:</b>	Grid
<b>Well:</b>	Yardbird 34 PA Fee #1H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	Plan#2		

### Design Targets

#### Target Name

- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/S (usft)	+E/W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
LP Yardbird 34 PA Fe	0.00	0.00	8,255.0	477.1	16.6	456,898.84	582,012.37	32° 15' 21.072 N	104° 4' 4.922 W
- plan misses target center by 17.9usft at 8474.8usft MD (8251.9 TVD, 478.2 N, -1.0 E)									
- Point									
PBHL Yardbird 34 PA	0.00	0.00	8,275.0	4,827.7	147.5	461,249.41	582,143.31	32° 16' 4.123 N	104° 4' 3.272 W
- plan hits target center									
- Point									

### Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			Comment
		+N/S (usft)	+E/W (usft)		
7,400.0	7,398.1	40.1	-26.3	7400' MD Gyro Tie-In	
7,799.7	7,797.5	56.5	-20.9	7799.7' MD KOP	
8,527.6	8,255.0	530.8	0.8	8527.6' MD LP	
12,827.0	8,275.0	4,827.7	147.5	12827' MD PBHL	



COMPANY: Mewbourne Oil Company .  
 WELL: Yardbird 34 PA Fee #1H  
 COUNTY: Eddy County, New Mexico  
 DATUM: NAD 1927 (NADCON CONUS)  
 RIG: Patterson Patterson # 187

GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 7.23°



OFFICE: 936.582.7296

GEODETIC ZONE: New Mexico East 3001 3020 + 20 @ 3040 0usft (Patterson # 187) GROUND ELEVATION: 3020.0									
+N-S 0.0	+E-W 0.0	Northing 456421.70	Easting 581995.80	Latitude 32° 15' 16.350 N	Longitude 104° 4' 5.129 W				Slot

PLAN SECTIONS										
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Ddeg	TFace	VSect	Target
1	7400.0	2.48	18.18	7398.1	40.1	-26.3	0.00	0.00	39.3	
2	7799.7	2.48	18.18	7797.5	56.5	-20.9	0.00	0.00	55.9	
3	8527.6	89.73	1.96	8255.0	530.9	0.8	12.00	-16.24	530.7	
4	12827.0	89.73	1.96	8275.0	4827.7	147.5	0.00	0.00	4830.0	PBHL Yardbird 34 PA Fee #1H

SHL 150' FSL; 610' FEL  
 Section 34-23S-28E  
 PBHL 330' FNL; 500' FEL  
 Section 34-23S-28E

