

Mewbourne Oil Co

Eddy County, New Mexico

Sec 9-20S-25E

Long Draw 9 BO Federal Com #1H

Wellbore #1

30-015-38309

Survey: Long Draw 9 BO Fed Com #1H

DDC Survey Report

06 July, 2011



DDC Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Long Draw 9 BO Federal Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3494.0usft (Patterson UTI #101)
Site:	Sec 9-20S-25E	MD Reference:	WELL @ 3494.0usft (Patterson UTI #101)
Well:	Long Draw 9 BO Federal Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Project:	Eddy County, New Mexico		
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:	Sec 9-20S-25E
Site Position:	Northing: 579,246.53 usft Latitude: 32° 35' 32.491 N
From: Map	Easting: 452,285.51 usft Longitude: 104° 29' 17.728 W
Position Uncertainty: 0.0 usft	Slot Radius: 13-3/16 " Grid Convergence: -0.08 °

Well:	Long Draw 9 BO Federal Com #1H
Well Position	+N/-S 0.0 usft Northing: 580,566.17 usft Latitude: 32° 35' 45.551 N
	+E/-W 0.0 usft Easting: 452,330.71 usft Longitude: 104° 29' 17.222 W
Position Uncertainty	0.0 usft Wellhead Elevation: usft Ground Level: 3,475.0 usft

Wellbore:	Wellbore #1
Magnetics	Model Name: IGRF2010 Sample Date: 10/28/2010 Declination (°): 8.11 Dip Angle (°): 60.39 Field Strength (nT): 48,798

Design:	Wellbore #1
Audit Notes:	
Version: 1.0	Phase: ACTUAL Tie On Depth: 0.0

Vertical Section:	Depth From (TVD) (usft) +N/-S (usft) +E/-W (usft) Direction (°)
	0.0 0.0 0.0 180.25

Survey Program		Date: 7/6/2011		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	1,811.0	Scientific Gyro (Wellbore #1)	Good_gyro	Good Gyro
1,928.0	7,507.0	Long Draw 9 BO Fed Com #1H (Wellbore	MWD default	MWD - Standard

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)
Tie-In to Gyro									
1,811.0	1.80	280.25	1,810.8	-6.1	-19.2	6.2	0.00	0.00	0.00
1,928.0	1.80	268.00	1,927.8	-5.8	-22.8	5.9	0.33	0.00	-10.47
1,960.0	2.70	222.20	1,959.8	-6.4	-23.8	6.5	6.05	2.81	-143.13
1,991.0	4.80	201.30	1,990.7	-8.2	-24.8	8.3	7.98	6.77	-67.42
2,023.0	7.40	194.40	2,022.5	-11.4	-25.8	11.5	8.43	8.13	-21.56
2,054.0	10.50	191.20	2,053.1	-16.1	-26.8	16.2	10.12	10.00	-10.32
2,085.0	13.40	187.80	2,083.5	-22.4	-27.9	22.6	9.62	9.35	-10.97
2,116.0	16.20	185.30	2,113.4	-30.3	-28.8	30.4	9.26	9.03	-8.06
2,147.0	19.60	182.40	2,142.9	-39.8	-29.4	39.9	11.34	10.97	-9.35

DDC Survey Report



Company: Mewbourne Oil Co
Project: Eddy County, New Mexico
Site: Sec 9-20S-25E
Well: Long-Draw 9 BO Federal Com #1H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Long Draw 9 BO Federal Com #1H
TVD Reference: WELL @ 3494.0usft (Patterson UTI #101)
MD Reference: WELL @ 3494.0usft (Patterson UTI #101)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
2,179.0	23.20	178.90	2,172.7	-51.5	-29.5	51.6	11.93	11.25	-10.94
2,211.0	26.60	177.10	2,201.7	-64.9	-29.0	65.1	10.88	10.63	-5.63
2,241.0	29.60	176.50	2,228.2	-79.0	-28.2	79.2	10.04	10.00	-2.00
2,273.0	32.80	176.90	2,255.6	-95.6	-27.3	95.7	10.02	10.00	1.25
2,304.0	35.90	177.10	2,281.1	-113.1	-26.3	113.2	10.01	10.00	0.65
2,336.0	38.90	178.10	2,306.6	-132.5	-25.5	132.6	9.56	9.38	3.13
2,367.0	41.50	179.70	2,330.2	-152.5	-25.2	152.6	9.02	8.39	5.16
2,399.0	43.70	180.40	2,353.8	-174.1	-25.2	174.2	7.03	6.88	2.19
2,430.0	46.30	180.30	2,375.7	-196.1	-25.3	196.2	8.39	8.39	-0.32
2,463.0	49.20	179.90	2,397.9	-220.5	-25.4	220.6	8.83	8.79	-1.21
2,494.0	52.20	180.00	2,417.5	-244.5	-25.3	244.6	9.68	9.68	0.32
2,526.0	55.50	180.20	2,436.4	-270.3	-25.4	270.4	10.32	10.31	0.63
2,557.0	58.90	180.30	2,453.2	-296.4	-25.5	296.5	10.97	10.97	0.32
2,588.0	62.50	180.10	2,468.4	-323.4	-25.6	323.5	11.63	11.61	-0.65
Cross Lease Line @ 2596' MD									
2,596.0	63.47	180.13	2,472.0	-330.5	-25.6	330.6	12.19	12.19	0.32
2,620.0	66.40	180.20	2,482.2	-352.3	-25.7	352.4	12.19	12.19	0.31
2,651.0	70.50	180.60	2,493.6	-381.1	-25.9	381.2	13.28	13.23	1.29
2,683.0	73.50	181.20	2,503.4	-411.5	-26.3	411.6	9.54	9.38	1.88
2,713.0	76.20	181.80	2,511.3	-440.4	-27.1	440.6	9.20	9.00	2.00
2,745.0	79.40	181.80	2,518.0	-471.7	-28.1	471.8	10.00	10.00	0.00
2,777.0	83.00	181.30	2,522.9	-503.3	-28.9	503.4	11.36	11.25	-1.56
2,808.0	85.80	180.90	2,526.0	-534.2	-29.5	534.3	9.12	9.03	-1.29
2,881.0	89.50	181.70	2,529.0	-607.1	-31.2	607.2	5.19	5.07	1.10
2,913.0	90.10	181.60	2,529.1	-639.0	-32.1	639.2	1.90	1.88	-0.31
Cross Hardline @ 2933' MD									
2,933.0	90.29	181.85	2,529.0	-659.0	-32.7	659.2	1.56	0.94	1.25
2,945.0	90.40	182.00	2,528.9	-671.0	-33.1	671.2	1.56	0.94	1.25
2,976.0	89.70	181.30	2,528.9	-702.0	-34.0	702.2	3.19	-2.26	-2.26
3,008.0	89.80	181.10	2,529.0	-734.0	-34.7	734.2	0.70	0.31	-0.63
3,040.0	89.20	180.60	2,529.3	-766.0	-35.2	766.2	2.44	-1.88	-1.56
3,071.0	89.20	180.50	2,529.7	-797.0	-35.5	797.2	0.32	0.00	-0.32
3,103.0	89.10	179.70	2,530.2	-829.0	-35.5	829.1	2.52	-0.31	-2.50
3,135.0	88.90	179.60	2,530.8	-861.0	-35.3	861.1	0.70	-0.63	-0.31
3,166.0	90.00	178.80	2,531.1	-892.0	-34.9	892.1	4.39	3.55	-2.58
3,198.0	89.90	178.40	2,531.1	-924.0	-34.1	924.1	1.29	-0.31	-1.25
3,230.0	91.00	178.30	2,530.9	-956.0	-33.2	956.1	3.45	3.44	-0.31
3,324.0	91.30	178.10	2,529.0	-1,049.9	-30.2	1,050.0	0.38	0.32	-0.21
3,388.0	90.80	179.00	2,527.8	-1,113.9	-28.6	1,114.0	1.61	-0.78	1.41
3,452.0	89.90	178.80	2,527.4	-1,177.9	-27.4	1,178.0	1.44	-1.41	-0.31
3,515.0	89.80	179.60	2,527.6	-1,240.8	-26.5	1,241.0	1.28	-0.16	1.27
3,578.0	89.80	179.30	2,527.8	-1,303.8	-25.9	1,303.9	0.48	0.00	-0.48
3,641.0	90.00	180.10	2,527.9	-1,366.8	-25.6	1,366.9	1.31	0.32	1.27

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Site:	Sec 9-20S-25E	MD Reference:	WELL @ 3494.0usft (Patterson UTI #101)
Well:	Long Draw 9 BO Federal Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)
3,705.0	90.10	180.20	2,527.8	-1,430.8	-25.7	1,430.9	0.22	0.16	0.16
3,768.0	90.10	180.20	2,527.7	-1,493.8	-26.0	1,493.9	0.00	0.00	0.00
3,832.0	89.60	180.10	2,527.9	-1,557.8	-26.1	1,557.9	0.80	-0.78	-0.16
3,895.0	89.40	180.40	2,528.5	-1,620.8	-26.4	1,620.9	0.57	-0.32	0.48
3,958.0	89.20	180.40	2,529.2	-1,683.8	-26.8	1,683.9	0.32	-0.32	0.00
4,022.0	89.10	180.30	2,530.2	-1,747.8	-27.2	1,747.9	0.22	-0.16	-0.16
4,086.0	90.10	180.20	2,530.6	-1,811.8	-27.5	1,811.9	1.57	1.56	-0.16
4,149.0	90.10	179.80	2,530.5	-1,874.8	-27.5	1,874.9	0.63	0.00	-0.63
4,213.0	90.10	179.60	2,530.4	-1,938.8	-27.2	1,938.9	0.31	0.00	-0.31
4,277.0	89.90	179.40	2,530.4	-2,002.8	-26.6	2,002.9	0.44	-0.31	-0.31
4,340.0	90.10	179.30	2,530.4	-2,065.8	-25.9	2,065.9	0.35	0.32	-0.16
4,404.0	90.30	179.60	2,530.2	-2,129.8	-25.3	2,129.9	0.56	0.31	0.47
4,467.0	90.00	180.20	2,530.0	-2,192.8	-25.2	2,192.9	1.06	-0.48	0.95
4,531.0	89.50	180.60	2,530.3	-2,256.8	-25.6	2,256.9	1.00	-0.78	0.63
4,593.0	89.40	180.50	2,530.9	-2,318.8	-26.2	2,318.9	0.23	-0.16	-0.16
4,657.0	89.10	180.40	2,531.7	-2,382.8	-26.7	2,382.9	0.49	-0.47	-0.16
4,721.0	90.20	180.90	2,532.1	-2,446.8	-27.4	2,446.9	1.89	1.72	0.78
4,784.0	90.00	181.70	2,532.0	-2,509.8	-28.9	2,509.9	1.31	-0.32	1.27
4,847.0	90.10	182.10	2,531.9	-2,572.7	-31.0	2,572.8	0.65	0.16	0.63
4,911.0	89.80	180.90	2,532.0	-2,636.7	-32.6	2,636.8	1.93	-0.47	-1.88
4,975.0	89.70	181.00	2,532.3	-2,700.7	-33.7	2,700.8	0.22	-0.16	0.16
5,037.0	90.70	180.30	2,532.1	-2,762.7	-34.4	2,762.8	1.97	1.61	-1.13
5,101.0	90.80	179.80	2,531.2	-2,826.7	-34.5	2,826.8	0.80	0.16	-0.78
5,164.0	90.80	180.00	2,530.3	-2,889.7	-34.3	2,889.8	0.32	0.00	0.32
5,228.0	90.80	178.60	2,529.5	-2,953.7	-33.6	2,953.8	2.19	0.00	-2.19
5,292.0	90.60	178.80	2,528.7	-3,017.6	-32.1	3,017.8	0.44	-0.31	0.31
5,355.0	90.50	179.40	2,528.1	-3,080.6	-31.1	3,080.7	0.97	-0.16	0.95
5,419.0	90.40	179.50	2,527.6	-3,144.6	-30.5	3,144.7	0.22	-0.16	0.16
5,481.0	89.90	178.90	2,527.4	-3,206.6	-29.6	3,206.7	1.26	-0.81	-0.97
5,545.0	89.70	178.00	2,527.6	-3,270.6	-27.9	3,270.7	1.44	-0.31	-1.41
5,606.0	90.50	178.20	2,527.5	-3,331.6	-25.9	3,331.6	1.35	1.31	0.33
5,668.0	91.60	179.50	2,526.4	-3,393.5	-24.6	3,393.6	2.75	1.77	2.10
5,729.0	91.60	180.00	2,524.7	-3,454.5	-24.4	3,454.6	0.82	0.00	0.82
5,791.0	90.20	180.50	2,523.7	-3,516.5	-24.6	3,516.6	2.40	-2.26	0.81
5,851.0	90.20	181.10	2,523.5	-3,576.5	-25.5	3,576.6	1.00	0.00	1.00
5,911.0	90.50	181.60	2,523.1	-3,636.5	-26.9	3,636.6	0.97	0.50	0.83
5,974.0	89.40	180.70	2,523.2	-3,699.5	-28.2	3,699.6	2.26	-1.75	-1.43
6,036.0	88.00	180.70	2,524.6	-3,761.4	-28.9	3,761.5	2.26	-2.26	0.00
6,097.0	88.00	180.90	2,526.7	-3,822.4	-29.8	3,822.5	0.33	0.00	0.33
6,157.0	88.10	180.60	2,528.8	-3,882.4	-30.6	3,882.5	0.53	0.17	-0.50
6,220.0	88.00	179.00	2,530.9	-3,945.3	-30.3	3,945.4	2.54	-0.16	-2.54
6,283.0	88.60	179.50	2,532.8	-4,008.3	-29.5	4,008.4	1.24	0.95	0.79
6,346.0	90.00	179.50	2,533.5	-4,071.3	-29.0	4,071.4	2.22	2.22	0.00
6,410.0	90.10	179.30	2,533.5	-4,135.3	-28.3	4,135.4	0.35	0.16	-0.31

DDC Survey Report



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Site:	Sec 9-20S-25E	MD Reference:	WELL @ 3494.0usft (Patterson UTI #101)
Well:	Long Draw 9 BO Federal Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

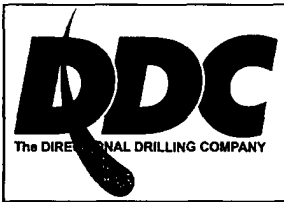
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,474.0	89.80	179.40	2,533.5	-4,199.3	-27.6	4,199.4	0.49	-0.47	0.16
6,538.0	89.70	179.10	2,533.8	-4,263.3	-26.7	4,263.3	0.49	-0.16	-0.47
6,601.0	89.60	179.00	2,534.2	-4,326.3	-25.7	4,326.3	0.22	-0.16	-0.16
6,665.0	89.80	179.00	2,534.5	-4,390.2	-24.6	4,390.3	0.31	0.31	0.00
6,729.0	89.80	179.30	2,534.8	-4,454.2	-23.6	4,454.3	0.47	0.00	0.47
6,792.0	89.90	179.10	2,534.9	-4,517.2	-22.7	4,517.3	0.35	0.16	-0.32
6,855.0	89.80	179.10	2,535.1	-4,580.2	-21.8	4,580.3	0.16	-0.16	0.00
6,918.0	89.90	179.30	2,535.3	-4,643.2	-20.9	4,643.3	0.35	0.16	0.32
6,982.0	90.10	179.40	2,535.3	-4,707.2	-20.1	4,707.3	0.35	0.31	0.16
7,045.0	89.70	179.70	2,535.4	-4,770.2	-19.6	4,770.3	0.79	-0.63	0.48
7,109.0	89.70	179.80	2,535.7	-4,834.2	-19.4	4,834.3	0.16	0.00	0.16
7,173.0	89.60	180.00	2,536.1	-4,898.2	-19.3	4,898.2	0.35	-0.16	0.31
7,236.0	89.40	179.90	2,536.6	-4,961.2	-19.2	4,961.2	0.35	-0.32	-0.16
7,300.0	89.50	180.90	2,537.3	-5,025.2	-19.7	5,025.2	1.57	0.16	1.56
7,363.0	89.80	181.30	2,537.6	-5,088.2	-20.9	5,088.2	0.79	0.48	0.63
7,426.0	90.30	181.80	2,537.6	-5,151.2	-22.6	5,151.2	1.12	0.79	0.79
7,458.0	90.40	181.80	2,537.4	-5,183.2	-23.6	5,183.2	0.31	0.31	0.00
Bit Projection									
7,507.0	90.40	181.80	2,537.1	-5,232.1	-25.1	5,232.2	0.00	0.00	0.00

Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
1,811.0	1,810.8	-6.1	-19.2	Tie-In to Gyro
2,596.0	2,472.0	-330.5	-25.6	Cross Lease Line @ 2596' MD
2,933.0	2,529.0	-659.0	-32.7	Cross Hardline @ 2933' MD
7,507.0	2,537.1	-5,232.1	-25.1	Bit Projection

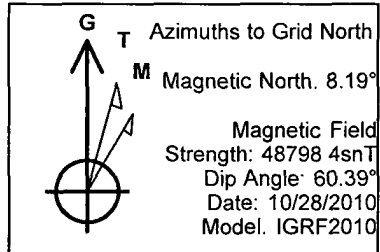
Checked By: _____ Approved By: _____ Date: _____

Long Draw 9 BO Federal Com #1H
Eddy County, New Mexico
Q100752 & WT-11004

Company Name: Mewbourne Oil Co
Long Draw 9 BO Federal Com #1H
Eddy County, New Mexico
Rig Patterson UTI #101
Created By Guthrey Johnson
Date 7/6/2011



Mewbourne Oil Company



PROJECT DETAILS Eddy County, New Mexico

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

WELL DETAILS Long Draw 9 BO Federal Com #1H

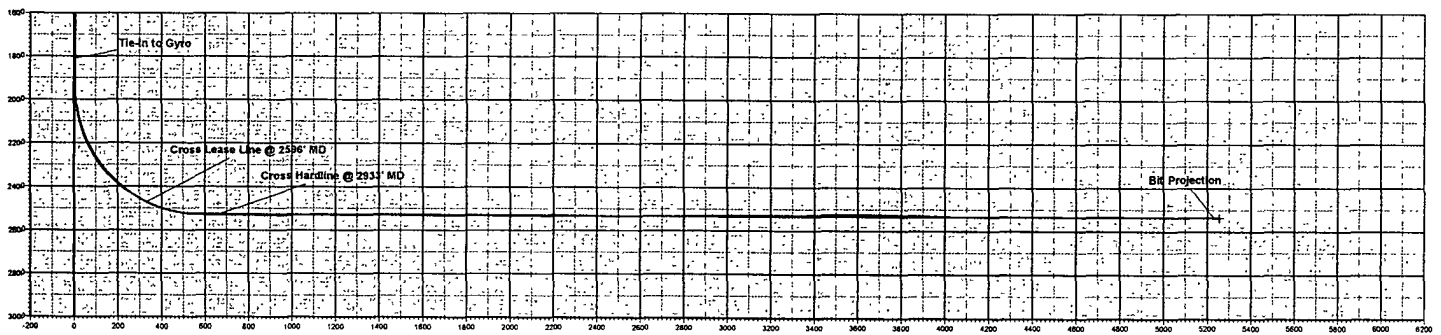
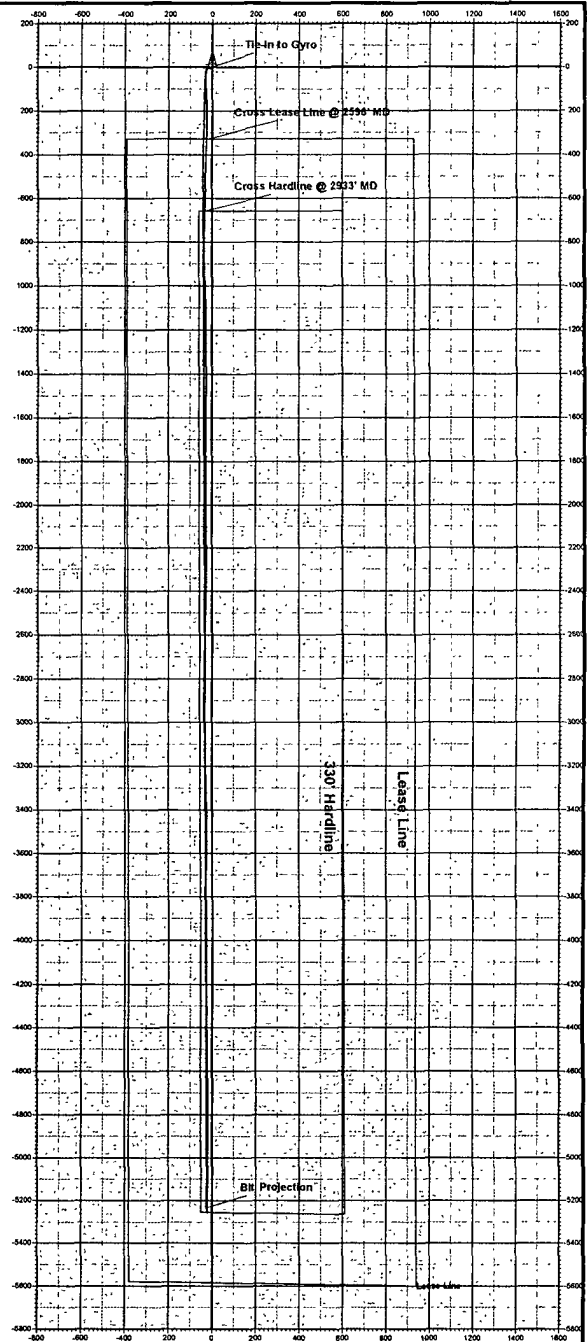
Ground Level		3475.0		Longitude	
+N/-S	+E/-W	North	East	Latitude	Longitude
0.0	0.0	580566.17	452330.71	32° 35' 45.551" N	104° 25' 17.222" W

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
1811.0	1.90	280.25	1810.8	-4.1	-19.2	6.2	21.8	Tie-in to Gyro
2596.0	63.47	180.13	2472.0	-330.5	-25.6	335.6	351.7	Cross Lease Line @ 2596' MD
2833.0	90.28	181.85	2529.0	-459.0	-32.7	659.2	680.3	Cross Hardline @ 2833' MD
7607.0	80.40	181.80	2537.1	-6232.1	-25.1	6232.2	6253.3	Bit Projection

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	North	East	Latitude	Longitude
PBHL Long Draw 9 BO Federal Com #1H	2538.0	-6254.6	-22.9	576311.65	452307.80	32° 34' 53.553" N	104° 28' 17.481" W



Vertical Section at 180.25° (200 usft/in)