



Project: SEC 33 T2N R64W
Site: Jackson 02N-64W-33 Pad
Well: Jackson 33-4H
Wellbore: OH
Design: Plan 2
Lat: 40.1015000
Long: -104.5617100

LP_Jackson 33-4H(0 FNL 1200 FWL)

9 5/8"

-500

0

-500

-1000

-1500

-2000

-2500

-3000

-3500

-4000

-4500

-5000

-5500

South(-)/North(+) (1000 ft/in)

SEC 33

5 1/2"

PBHL_Jackson 33-4H(0 FSL 1200 FWL)

-3000 -2500 -2000 -1500 -1000 -500 0 500

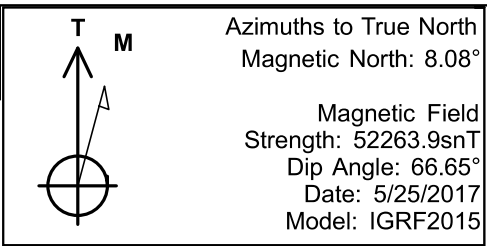
West(-)/East(+) (1000 ft/in)

Vertical Section at 178.65° (1300 ft/in)

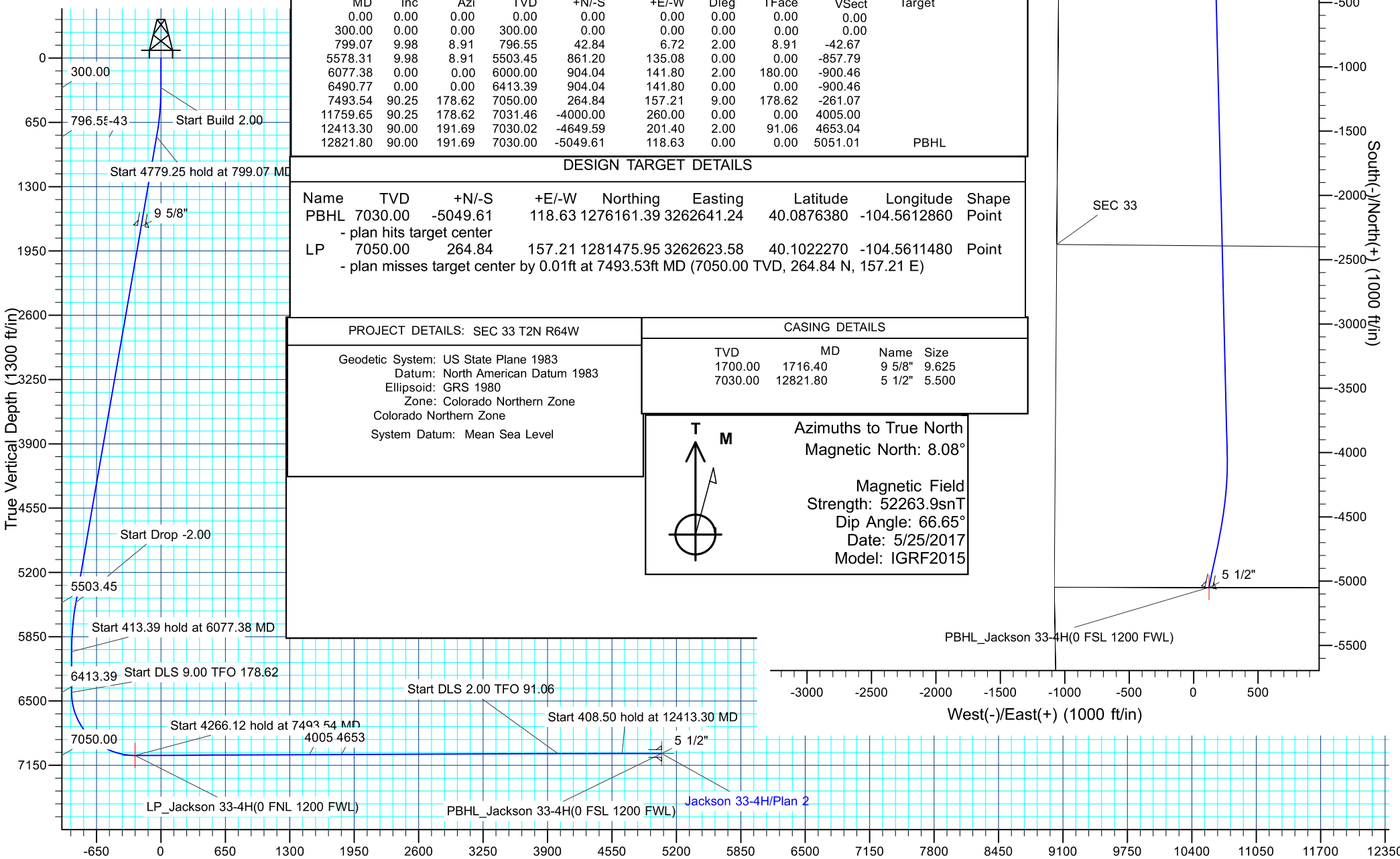
SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
799.07	9.98	8.91	796.55	42.84	6.72	2.00	8.91	-42.67	
5578.31	9.98	8.91	5503.45	861.20	135.08	0.00	0.00	-857.79	
6077.38	0.00	0.00	6000.00	904.04	141.80	2.00	180.00	-900.46	
6490.77	0.00	0.00	6413.39	904.04	141.80	0.00	0.00	-900.46	
7493.54	90.25	178.62	7050.00	264.84	157.21	9.00	178.62	-261.07	
11759.65	90.25	178.62	7031.46	-4000.00	260.00	0.00	0.00	4005.00	
12413.30	90.00	191.69	7030.02	-4649.59	201.40	2.00	91.06	4653.04	
12821.80	90.00	191.69	7030.00	-5049.61	118.63	0.00	0.00	5051.01	PBHL

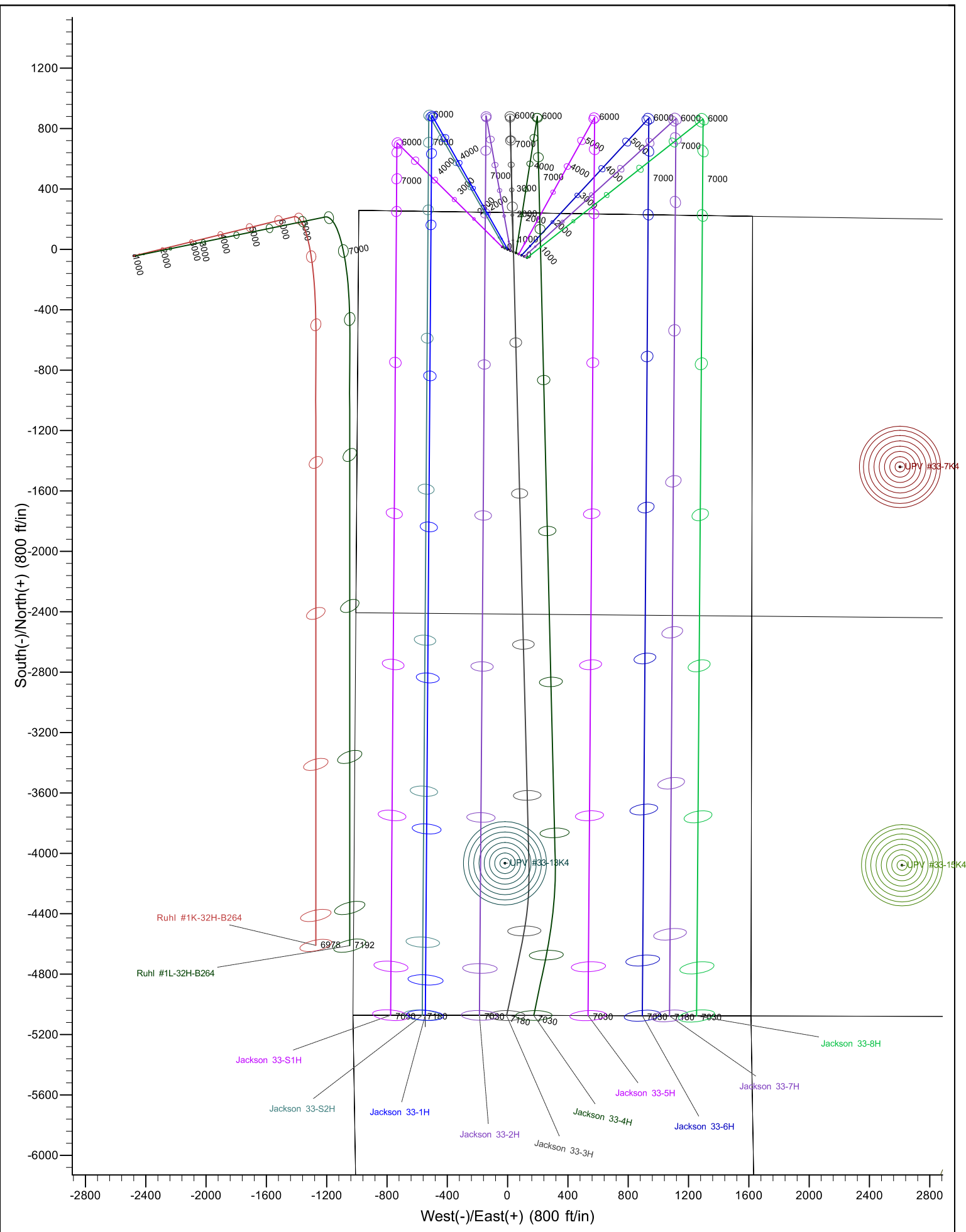
DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
PBHL	7030.00	-5049.61	118.63	1276161.39	3262641.24	40.0876380	-104.5612860	Point	
- plan hits target center									
LP	7050.00	264.84	157.21	1281475.95	3262623.58	40.1022270	-104.5611480	Point	
- plan misses target center by 0.01ft at 7493.53ft MD (7050.00 TVD, 264.84 N, 157.21 E)									

PROJECT DETAILS: SEC 33 T2N R64W		CASING DETAILS			
Geodetic System: US State Plane 1983 Datum: North American Datum 1983 Ellipsoid: GRS 1980 Zone: Colorado Northern Zone Colorado Northern Zone System Datum: Mean Sea Level		TVD	MD	Name	Size
		1700.00	1716.40	9 5/8"	9.625
		7030.00	12821.80	5 1/2"	5.500
		<div><div><div>T</div><div>M</div></div><div><div></div><div></div></div></div> <div>Azimuths to True North Magnetic North: 8.08°</div>			



Magnetic Field
Strength: 52263.9snT
Dip Angle: 66.65°
Date: 5/25/2017
Model: IGRF2015







Verdad Resources LLC

SEC 33 T2N R64W

Jackson 02N-64W-33 Pad

Jackson 33-4H

OH

Plan: Plan 2

Standard Planning Report

28 December, 2017





Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Jackson 33-4H
Company:	Verdad Resources LLC	TVD Reference:	WELL @ 5017.00ft (Original Well Elev)
Project:	SEC 33 T2N R64W	MD Reference:	WELL @ 5017.00ft (Original Well Elev)
Site:	Jackson 02N-64W-33 Pad	North Reference:	True
Well:	Jackson 33-4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 2		

Project	SEC 33 T2N R64W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	Jackson 02N-64W-33 Pad			
Site Position:		Northing:	1,281,248.57 usft	Latitude: 40.1016100
From:	Lat/Long	Easting:	3,262,377.29 usft	Longitude: -104.5620370
Position Uncertainty:	3.28 ft	Slot Radius:	13.200 in	Grid Convergence: 0.61 °

Well	Jackson 33-4H, 252 FNL 1008 FWL			
Well Position	+N/-S	-40.08 ft	Northing:	1,281,209.45 usft
	+E/-W	91.47 ft	Easting:	3,262,469.19 usft
Position Uncertainty		3.28 ft	Wellhead Elevation:	Ground Level: 5,017.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/25/2017	8.08	66.65	52,264

Design	Plan 2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	178.65

Plan Survey Tool Program	Date	12/22/2017		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	12,821.75 Plan 2 (OH)	MWD	
			OWSG MWD - Standard	



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Site:	Jackson 02N-64W-33 Pad	North Reference:	True
Well:	Jackson 33-4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 2		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
799.07	9.98	8.91	796.55	42.84	6.72	2.00	2.00	0.00	8.91	
5,578.31	9.98	8.91	5,503.45	861.20	135.08	0.00	0.00	0.00	0.00	
6,077.38	0.00	0.00	6,000.00	904.04	141.80	2.00	-2.00	0.00	180.00	
6,490.77	0.00	0.00	6,413.39	904.04	141.80	0.00	0.00	0.00	0.00	
7,493.54	90.25	178.62	7,050.00	264.84	157.21	9.00	9.00	17.81	178.62	
11,759.65	90.25	178.62	7,031.46	-4,000.00	260.00	0.00	0.00	0.00	0.00	
12,413.30	90.00	191.69	7,030.02	-4,649.59	201.40	2.00	-0.04	2.00	91.06	
12,821.80	90.00	191.69	7,030.00	-5,049.62	118.63	0.00	0.00	0.00	0.00	PBHL_Jackson 33-4H



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MD Reference: WELL @ 5017.00ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	2.00	8.91	399.98	1.72	0.27	-1.72	2.00	2.00	0.00
500.00	4.00	8.91	499.84	6.89	1.08	-6.87	2.00	2.00	0.00
600.00	6.00	8.91	599.45	15.50	2.43	-15.44	2.00	2.00	0.00
700.00	8.00	8.91	698.70	27.54	4.32	-27.43	2.00	2.00	0.00
799.07	9.98	8.91	796.55	42.84	6.72	-42.67	2.00	2.00	0.00
800.00	9.98	8.91	797.47	43.00	6.74	-42.83	0.00	0.00	0.00
900.00	9.98	8.91	895.95	60.12	9.43	-59.88	0.00	0.00	0.00
1,000.00	9.98	8.91	994.44	77.24	12.12	-76.94	0.00	0.00	0.00
1,100.00	9.98	8.91	1,092.93	94.37	14.80	-93.99	0.00	0.00	0.00
1,200.00	9.98	8.91	1,191.41	111.49	17.49	-111.05	0.00	0.00	0.00
1,300.00	9.98	8.91	1,289.90	128.61	20.17	-128.10	0.00	0.00	0.00
1,400.00	9.98	8.91	1,388.39	145.74	22.86	-145.16	0.00	0.00	0.00
1,500.00	9.98	8.91	1,486.87	162.86	25.54	-162.22	0.00	0.00	0.00
1,600.00	9.98	8.91	1,585.36	179.98	28.23	-179.27	0.00	0.00	0.00
1,700.00	9.98	8.91	1,683.85	197.11	30.92	-196.33	0.00	0.00	0.00
1,716.41	9.98	8.91	1,700.00	199.92	31.36	-199.12	0.00	0.00	0.00
9 5/8"									
1,800.00	9.98	8.91	1,782.33	214.23	33.60	-213.38	0.00	0.00	0.00
1,900.00	9.98	8.91	1,880.82	231.35	36.29	-230.44	0.00	0.00	0.00
2,000.00	9.98	8.91	1,979.31	248.48	38.97	-247.49	0.00	0.00	0.00
2,100.00	9.98	8.91	2,077.79	265.60	41.66	-264.55	0.00	0.00	0.00
2,200.00	9.98	8.91	2,176.28	282.72	44.35	-281.60	0.00	0.00	0.00
2,300.00	9.98	8.91	2,274.77	299.85	47.03	-298.66	0.00	0.00	0.00
2,400.00	9.98	8.91	2,373.25	316.97	49.72	-315.72	0.00	0.00	0.00
2,500.01	9.98	8.91	2,471.74	334.09	52.40	-332.77	0.00	0.00	0.00
2,600.01	9.98	8.91	2,570.23	351.22	55.09	-349.83	0.00	0.00	0.00
2,700.01	9.98	8.91	2,668.71	368.34	57.77	-366.88	0.00	0.00	0.00
2,800.01	9.98	8.91	2,767.20	385.46	60.46	-383.94	0.00	0.00	0.00
2,900.01	9.98	8.91	2,865.69	402.59	63.15	-400.99	0.00	0.00	0.00
3,000.01	9.98	8.91	2,964.17	419.71	65.83	-418.05	0.00	0.00	0.00
3,100.01	9.98	8.91	3,062.66	436.83	68.52	-435.10	0.00	0.00	0.00
3,200.01	9.98	8.91	3,161.15	453.96	71.20	-452.16	0.00	0.00	0.00
3,300.01	9.98	8.91	3,259.63	471.08	73.89	-469.22	0.00	0.00	0.00
3,400.01	9.98	8.91	3,358.12	488.20	76.58	-486.27	0.00	0.00	0.00
3,500.01	9.98	8.91	3,456.61	505.33	79.26	-503.33	0.00	0.00	0.00
3,600.01	9.98	8.91	3,555.09	522.45	81.95	-520.38	0.00	0.00	0.00
3,700.01	9.98	8.91	3,653.58	539.57	84.63	-537.44	0.00	0.00	0.00
3,800.01	9.98	8.91	3,752.07	556.70	87.32	-554.49	0.00	0.00	0.00
3,900.01	9.98	8.91	3,850.55	573.82	90.00	-571.55	0.00	0.00	0.00
4,000.01	9.98	8.91	3,949.04	590.94	92.69	-588.60	0.00	0.00	0.00
4,100.01	9.98	8.91	4,047.53	608.07	95.38	-605.66	0.00	0.00	0.00
4,200.01	9.98	8.91	4,146.01	625.19	98.06	-622.72	0.00	0.00	0.00
4,300.01	9.98	8.91	4,244.50	642.32	100.75	-639.77	0.00	0.00	0.00
4,400.01	9.98	8.91	4,342.99	659.44	103.43	-656.83	0.00	0.00	0.00
4,500.01	9.98	8.91	4,441.47	676.56	106.12	-673.88	0.00	0.00	0.00
4,600.01	9.98	8.91	4,539.96	693.69	108.81	-690.94	0.00	0.00	0.00
4,700.01	9.98	8.91	4,638.45	710.81	111.49	-707.99	0.00	0.00	0.00
4,800.01	9.98	8.91	4,736.93	727.93	114.18	-725.05	0.00	0.00	0.00
4,900.01	9.98	8.91	4,835.42	745.06	116.86	-742.10	0.00	0.00	0.00
5,000.01	9.98	8.91	4,933.91	762.18	119.55	-759.16	0.00	0.00	0.00



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Local Co-ordinate Reference: Well Jackson 33-4H
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MD Reference: WELL @ 5017.00ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,100.01	9.98	8.91	5,032.39	779.30	122.23	-776.22	0.00	0.00	0.00
5,200.01	9.98	8.91	5,130.88	796.43	124.92	-793.27	0.00	0.00	0.00
5,300.01	9.98	8.91	5,229.37	813.55	127.61	-810.33	0.00	0.00	0.00
5,400.01	9.98	8.91	5,327.85	830.67	130.29	-827.38	0.00	0.00	0.00
5,500.01	9.98	8.91	5,426.34	847.80	132.98	-844.44	0.00	0.00	0.00
5,578.31	9.98	8.91	5,503.45	861.20	135.08	-857.79	0.00	0.00	0.00
5,600.01	9.55	8.91	5,524.84	864.84	135.65	-861.41	2.00	-2.00	0.00
5,700.01	7.55	8.91	5,623.72	879.52	137.95	-876.04	2.00	-2.00	0.00
5,800.01	5.55	8.91	5,723.07	890.79	139.72	-887.26	2.00	-2.00	0.00
5,900.01	3.55	8.91	5,822.75	898.62	140.95	-895.06	2.00	-2.00	0.00
6,000.01	1.55	8.91	5,922.64	903.01	141.64	-899.43	2.00	-2.00	0.00
6,077.38	0.00	0.00	6,000.00	904.04	141.80	-900.46	2.00	-2.00	0.00
6,100.01	0.00	0.00	6,022.63	904.04	141.80	-900.46	0.00	0.00	0.00
6,200.01	0.00	0.00	6,122.63	904.04	141.80	-900.46	0.00	0.00	0.00
6,300.01	0.00	0.00	6,222.63	904.04	141.80	-900.46	0.00	0.00	0.00
6,400.01	0.00	0.00	6,322.63	904.04	141.80	-900.46	0.00	0.00	0.00
6,490.77	0.00	0.00	6,413.39	904.04	141.80	-900.46	0.00	0.00	0.00
6,500.01	0.83	178.62	6,422.63	903.97	141.80	-900.39	8.99	8.99	0.00
6,600.01	9.83	178.62	6,522.10	894.69	142.03	-891.11	9.00	9.00	0.00
6,700.01	18.83	178.62	6,618.89	869.97	142.62	-866.38	9.00	9.00	0.00
6,800.01	27.83	178.62	6,710.62	830.42	143.57	-826.82	9.00	9.00	0.00
6,900.01	36.83	178.62	6,795.03	777.00	144.86	-773.39	9.00	9.00	0.00
7,000.01	45.83	178.62	6,870.04	711.05	146.45	-707.41	9.00	9.00	0.00
7,100.01	54.83	178.62	6,933.81	634.17	148.30	-630.52	9.00	9.00	0.00
7,200.01	63.83	178.62	6,984.76	548.27	150.37	-544.59	9.00	9.00	0.00
7,300.01	72.83	178.62	7,021.64	455.46	152.61	-451.75	9.00	9.00	0.00
7,400.01	81.83	178.62	7,043.55	358.02	154.96	-354.29	9.00	9.00	0.00
7,493.53	90.25	178.62	7,050.01	264.84	157.21	-261.08	9.00	9.00	0.00
LP_Jackson 33-4H(0 FNL 1200 FWL)									
7,493.54	90.25	178.62	7,050.00	264.84	157.21	-261.07	9.00	9.00	0.00
7,500.02	90.25	178.62	7,049.98	258.36	157.36	-254.59	0.00	0.00	0.00
7,600.02	90.25	178.62	7,049.54	158.39	159.77	-154.59	0.00	0.00	0.00
7,700.02	90.25	178.62	7,049.11	58.42	162.18	-54.60	0.00	0.00	0.00
7,800.02	90.25	178.62	7,048.67	-41.55	164.59	45.40	0.00	0.00	0.00
7,900.02	90.25	178.62	7,048.24	-141.52	167.00	145.40	0.00	0.00	0.00
8,000.02	90.25	178.62	7,047.80	-241.49	169.41	245.40	0.00	0.00	0.00
8,100.02	90.25	178.62	7,047.37	-341.46	171.82	345.40	0.00	0.00	0.00
8,200.02	90.25	178.62	7,046.93	-441.43	174.23	445.40	0.00	0.00	0.00
8,300.02	90.25	178.62	7,046.50	-541.40	176.64	545.40	0.00	0.00	0.00
8,400.02	90.25	178.62	7,046.06	-641.37	179.05	645.40	0.00	0.00	0.00
8,500.02	90.25	178.62	7,045.63	-741.34	181.46	745.40	0.00	0.00	0.00
8,600.02	90.25	178.62	7,045.19	-841.31	183.87	845.40	0.00	0.00	0.00
8,700.02	90.25	178.62	7,044.76	-941.28	186.28	945.40	0.00	0.00	0.00
8,800.02	90.25	178.62	7,044.32	-1,041.25	188.69	1,045.40	0.00	0.00	0.00
8,900.02	90.25	178.62	7,043.89	-1,141.22	191.10	1,145.40	0.00	0.00	0.00
9,000.02	90.25	178.62	7,043.46	-1,241.19	193.51	1,245.40	0.00	0.00	0.00
9,100.02	90.25	178.62	7,043.02	-1,341.16	195.92	1,345.39	0.00	0.00	0.00
9,200.02	90.25	178.62	7,042.59	-1,441.13	198.32	1,445.39	0.00	0.00	0.00
9,300.02	90.25	178.62	7,042.15	-1,541.10	200.73	1,545.39	0.00	0.00	0.00
9,400.02	90.25	178.62	7,041.72	-1,641.07	203.14	1,645.39	0.00	0.00	0.00
9,500.02	90.25	178.62	7,041.28	-1,741.04	205.55	1,745.39	0.00	0.00	0.00
9,600.02	90.25	178.62	7,040.85	-1,841.01	207.96	1,845.39	0.00	0.00	0.00
9,700.02	90.25	178.62	7,040.41	-1,940.98	210.37	1,945.39	0.00	0.00	0.00



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Local Co-ordinate Reference: Well Jackson 33-4H
TVD Reference: WELL @ 5017.00ft (Original Well Elev)
MD Reference: WELL @ 5017.00ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,800.02	90.25	178.62	7,039.98	-2,040.95	212.78	2,045.39	0.00	0.00	0.00
9,900.02	90.25	178.62	7,039.54	-2,140.92	215.19	2,145.39	0.00	0.00	0.00
10,000.02	90.25	178.62	7,039.11	-2,240.89	217.60	2,245.39	0.00	0.00	0.00
10,100.02	90.25	178.62	7,038.67	-2,340.87	220.01	2,345.39	0.00	0.00	0.00
10,200.02	90.25	178.62	7,038.24	-2,440.84	222.42	2,445.39	0.00	0.00	0.00
10,300.02	90.25	178.62	7,037.80	-2,540.81	224.83	2,545.39	0.00	0.00	0.00
10,400.02	90.25	178.62	7,037.37	-2,640.78	227.24	2,645.38	0.00	0.00	0.00
10,500.02	90.25	178.62	7,036.94	-2,740.75	229.65	2,745.38	0.00	0.00	0.00
10,600.02	90.25	178.62	7,036.50	-2,840.72	232.06	2,845.38	0.00	0.00	0.00
10,700.02	90.25	178.62	7,036.07	-2,940.69	234.47	2,945.38	0.00	0.00	0.00
10,800.02	90.25	178.62	7,035.63	-3,040.66	236.88	3,045.38	0.00	0.00	0.00
10,900.02	90.25	178.62	7,035.20	-3,140.63	239.29	3,145.38	0.00	0.00	0.00
11,000.02	90.25	178.62	7,034.76	-3,240.60	241.70	3,245.38	0.00	0.00	0.00
11,100.02	90.25	178.62	7,034.33	-3,340.57	244.11	3,345.38	0.00	0.00	0.00
11,200.02	90.25	178.62	7,033.89	-3,440.54	246.52	3,445.38	0.00	0.00	0.00
11,300.02	90.25	178.62	7,033.46	-3,540.51	248.93	3,545.38	0.00	0.00	0.00
11,400.02	90.25	178.62	7,033.02	-3,640.48	251.33	3,645.38	0.00	0.00	0.00
11,500.02	90.25	178.62	7,032.59	-3,740.45	253.74	3,745.38	0.00	0.00	0.00
11,600.02	90.25	178.62	7,032.15	-3,840.42	256.15	3,845.38	0.00	0.00	0.00
11,700.02	90.25	178.62	7,031.72	-3,940.39	258.56	3,945.37	0.00	0.00	0.00
11,759.65	90.25	178.62	7,031.46	-4,000.00	260.00	4,005.00	0.00	0.00	0.00
11,800.02	90.23	179.43	7,031.29	-4,040.36	260.69	4,045.37	2.00	-0.04	2.00
11,900.02	90.20	181.43	7,030.91	-4,140.36	259.94	4,145.32	2.00	-0.04	2.00
12,000.02	90.16	183.43	7,030.60	-4,240.26	255.71	4,245.10	2.00	-0.04	2.00
12,100.02	90.12	185.43	7,030.36	-4,339.96	248.00	4,344.59	2.00	-0.04	2.00
12,200.02	90.08	187.42	7,030.18	-4,439.32	236.80	4,443.66	2.00	-0.04	2.00
12,300.02	90.05	189.42	7,030.07	-4,538.24	222.15	4,542.21	2.00	-0.04	2.00
12,400.03	90.01	191.42	7,030.02	-4,636.59	204.06	4,640.10	2.00	-0.04	2.00
12,413.30	90.00	191.69	7,030.02	-4,649.59	201.40	4,653.04	2.00	-0.04	2.00
12,500.03	90.00	191.69	7,030.01	-4,734.52	183.83	4,737.53	0.00	0.00	0.00
12,600.03	90.00	191.69	7,030.01	-4,832.44	163.57	4,834.95	0.00	0.00	0.00
12,700.03	90.00	191.69	7,030.01	-4,930.37	143.31	4,932.38	0.00	0.00	0.00
12,800.03	90.00	191.69	7,030.00	-5,028.30	123.04	5,029.80	0.00	0.00	0.00
12,821.80	90.00	191.69	7,030.00	-5,049.62	118.63	5,051.01	0.00	0.00	0.00

PBHL_Jackson 33-4H(0 FSL 1200 FWL)

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL_Jackson 33-4H(0 - plan hits target center - Point	0.00	0.00	7,030.00	-5,049.62	118.63	1,276,161.39	3,262,641.24	40.0876380	-104.5612860
LP_Jackson 33-4H(0 FN - plan misses target center by 0.01ft at 7493.53ft MD (7050.00 TVD, 264.84 N, 157.21 E) - Point	0.00	0.00	7,050.00	264.84	157.21	1,281,475.95	3,262,623.59	40.1022270	-104.5611480



Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Jackson 33-4H
Company:	Verdad Resources LLC	TVD Reference:	WELL @ 5017.00ft (Original Well Elev)
Project:	SEC 33 T2N R64W	MD Reference:	WELL @ 5017.00ft (Original Well Elev)
Site:	Jackson 02N-64W-33 Pad	North Reference:	True
Well:	Jackson 33-4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 2		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)		Name	Casing Diameter (in)	Hole Diameter (in)
1,716.41	1,700.00	9 5/8"		9.625	13.500
12,821.80	7,030.00	5 1/2"		5.500	8.500

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
300.00	300.00	0.00	0.00	Start Build 2.00	
799.07	796.55	42.84	6.72	Start 4779.25 hold at 799.07 MD	
5,578.31	5,503.45	861.20	135.08	Start Drop -2.00	
6,077.38	6,000.00	904.04	141.80	Start 413.39 hold at 6077.38 MD	
6,490.77	6,413.39	904.04	141.80	Start DLS 9.00 TFO 178.62	
7,493.54	7,050.00	264.84	157.21	Start 4266.12 hold at 7493.54 MD	
11,759.65	7,031.46	-4,000.00	260.00	Start DLS 2.00 TFO 91.06	
12,413.30	7,030.02	-4,649.59	201.40	Start 408.50 hold at 12413.30 MD	
12,821.80	7,030.00	-5,049.62	118.63	TD at 12821.80	