

VERDAD RESOURCES

WATTENBERG FIELD

9N-59W-01 TIMBRO 0101 PAD

TIMBRO 0101-13H

Plan B

Plan: Design #1

Standard Planning Report

13 October, 2021

Project: WATTENBERG FIELD
Site: 9N-59W-01 TIMBRO 0101 PAD
Well: TIMBRO 0101-13H
Wellbore: Plan B
Design: Design #1

VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
1600.00	1616.87	9 5/8"	9-5/8

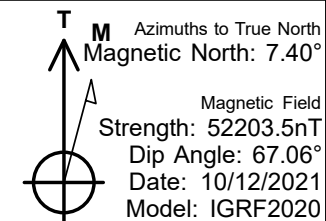
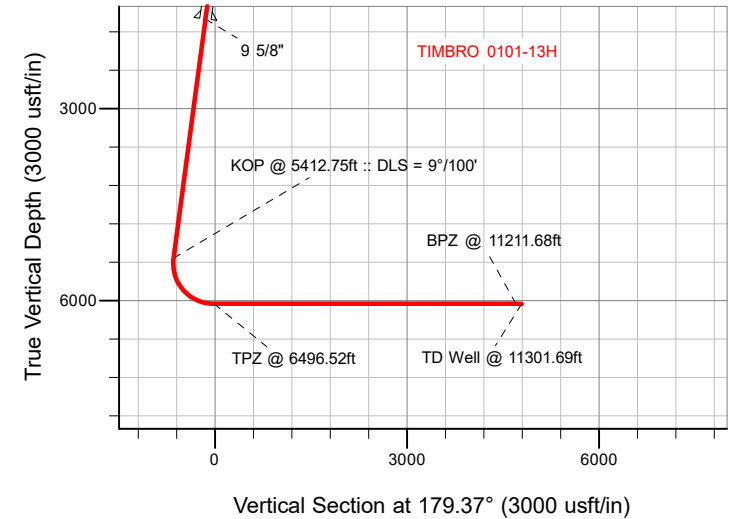
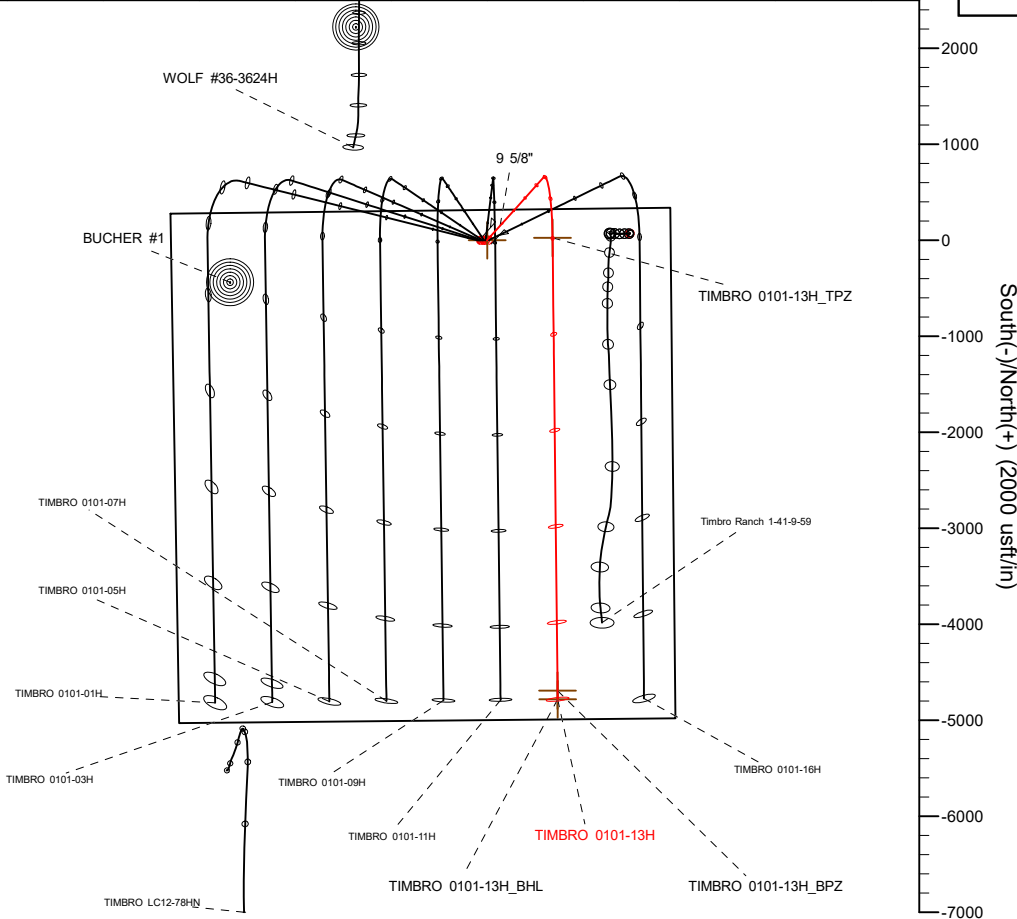
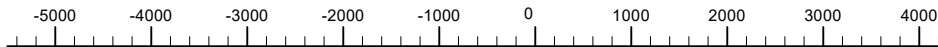
SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
220.00	0.00	0.00	220.00	0.00	0.00	0.00	0.00	0.00	
733.00	10.26	41.92	730.26	34.09	30.60	2.00	41.92	-33.75	
5412.75	10.26	41.92	5335.18	654.30	587.48	0.00	0.00	-647.80	
6496.52	90.00	179.37	6050.00	24.19	681.93	9.00	136.99	-16.69	
11301.69	90.00	179.37	6050.00	-4780.68	734.85	0.00	0.00	4788.47	TIMBRO 0101-13H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
TIMBRO 0101-13H_SHL	0.00	0.00	0.00	40.786594	-103.924229
TIMBRO 0101-13H_BHL	6050.00	-4780.68	734.85	40.773472	-103.921576
TIMBRO 0101-13H_BPZ	6050.00	-4690.68	733.86	40.773719	-103.921580
TIMBRO 0101-13H_TPZ	6050.00	24.19	681.93	40.786660	-103.921767

West(-)/East(+) (2000 usft/in)



WELL DETAILS: TIMBRO 0101-13H

GL = 4937'

RKB = 24' @ 4961.00usft (RIG)

Plan: Design #1 (TIMBRO 0101-13H/Plan B)

Date: 10/13/2021

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well TIMBRO 0101-13H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 4961.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 4961.00usft (RIG)
Site:	9N-59W-01 TIMBRO 0101 PAD	North Reference:	True
Well:	TIMBRO 0101-13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
Design:	Design #1		

Project	WATTENBERG FIELD		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		9N-59W-01 TIMBRO 0101 PAD				
Site Position:		Northing:	1,533,230.40	usft	Latitude:	40.786474
From:	Lat/Long	Easting:	3,436,039.96	usft	Longitude:	-103.925326
Position Uncertainty:		0.00	usft	Slot Radius:	13-3/16	"

Well		TIMBRO 0101-13H				
Well Position	+N/-S	0.00 usft	Northing:	1,533,279.44 usft	Latitude:	40.786594
	+E/-W	0.00 usft	Easting:	3,436,342.65 usft	Longitude:	-103.924230
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft	Ground Level:	4,937.00 usft
Grid Convergence:		1.02 °				

Wellbore	Plan B				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF202013	10/12/2021	7.40	67.06	52,203.45927228

Design	Design #1				
Audit Notes:					
Version:		Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	179.37	

Plan Survey Tool Program	Date	10/12/2021			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	1,600.00	Design #1 (Plan B)	ISCWSA MWD	
				Fixed:v2:standard declination	
2	1,600.00	11,301.69	Design #1 (Plan B)	ISCWSA MWD	
				Fixed:v2:standard declination	

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Site:	9N-59W-01 TIMBRO 0101 PAD	North Reference:	True
Well:	TIMBRO 0101-13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
Design:	Design #1		

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
220.00	0.00	0.00	220.00	0.00	0.00	0.00	0.00	0.00	0.00	
733.00	10.26	41.92	730.26	34.09	30.60	2.00	2.00	0.00	41.92	
5,412.75	10.26	41.92	5,335.18	654.30	587.48	0.00	0.00	0.00	0.00	
6,496.52	90.00	179.37	6,050.00	24.19	681.93	9.00	7.36	12.68	136.99	
11,301.69	90.00	179.37	6,050.00	-4,780.68	734.85	0.00	0.00	0.00	0.00	TIMBRO 0101-13H_E

Planning Report

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Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 4961.00usft (RIG)
Site:	9N-59W-01 TIMBRO 0101 PAD	North Reference:	True
Well:	TIMBRO 0101-13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
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)
0.00	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
220.00	0.00	0.00	220.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 220.00ft									
300.00	1.60	41.92	299.99	0.83	0.75	-0.82	2.00	2.00	0.00
400.00	3.60	41.92	399.88	4.21	3.78	-4.16	2.00	2.00	0.00
500.00	5.60	41.92	499.55	10.17	9.13	-10.07	2.00	2.00	0.00
600.00	7.60	41.92	598.89	18.73	16.81	-18.54	2.00	2.00	0.00
700.00	9.60	41.92	697.76	29.85	26.80	-29.55	2.00	2.00	0.00
733.00	10.26	41.92	730.26	34.09	30.60	-33.75	2.00	2.00	0.00
Hold Tangent @ 733.00ft									
800.00	10.26	41.92	796.19	42.97	38.58	-42.54	0.00	0.00	0.00
900.00	10.26	41.92	894.59	56.22	50.48	-55.66	0.00	0.00	0.00
1,000.00	10.26	41.92	992.99	69.47	62.38	-68.78	0.00	0.00	0.00
1,100.00	10.26	41.92	1,091.39	82.72	74.28	-81.90	0.00	0.00	0.00
1,200.00	10.26	41.92	1,189.80	95.98	86.18	-95.02	0.00	0.00	0.00
1,300.00	10.26	41.92	1,288.20	109.23	98.08	-108.15	0.00	0.00	0.00
1,400.00	10.26	41.92	1,386.60	122.48	109.98	-121.27	0.00	0.00	0.00
1,500.00	10.26	41.92	1,485.00	135.74	121.88	-134.39	0.00	0.00	0.00
1,600.00	10.26	41.92	1,583.40	148.99	133.78	-147.51	0.00	0.00	0.00
1,616.87	10.26	41.92	1,600.00	151.23	135.78	-149.72	0.00	0.00	0.00
9 5/8"									
1,700.00	10.26	41.92	1,681.80	162.24	145.68	-160.63	0.00	0.00	0.00
1,800.00	10.26	41.92	1,780.20	175.50	157.57	-173.75	0.00	0.00	0.00
1,900.00	10.26	41.92	1,878.60	188.75	169.47	-186.88	0.00	0.00	0.00
2,000.00	10.26	41.92	1,977.00	202.00	181.37	-200.00	0.00	0.00	0.00
2,100.00	10.26	41.92	2,075.40	215.26	193.27	-213.12	0.00	0.00	0.00
2,200.00	10.26	41.92	2,173.80	228.51	205.17	-226.24	0.00	0.00	0.00
2,300.00	10.26	41.92	2,272.21	241.76	217.07	-239.36	0.00	0.00	0.00
2,400.00	10.26	41.92	2,370.61	255.02	228.97	-252.48	0.00	0.00	0.00
2,500.00	10.26	41.92	2,469.01	268.27	240.87	-265.60	0.00	0.00	0.00
2,600.00	10.26	41.92	2,567.41	281.52	252.77	-278.73	0.00	0.00	0.00
2,700.00	10.26	41.92	2,665.81	294.78	264.67	-291.85	0.00	0.00	0.00
2,800.00	10.26	41.92	2,764.21	308.03	276.57	-304.97	0.00	0.00	0.00
2,900.00	10.26	41.92	2,862.61	321.28	288.47	-318.09	0.00	0.00	0.00
3,000.00	10.26	41.92	2,961.01	334.53	300.37	-331.21	0.00	0.00	0.00
3,100.00	10.26	41.92	3,059.41	347.79	312.27	-344.33	0.00	0.00	0.00
3,200.00	10.26	41.92	3,157.81	361.04	324.17	-357.46	0.00	0.00	0.00
3,300.00	10.26	41.92	3,256.22	374.29	336.07	-370.58	0.00	0.00	0.00
3,400.00	10.26	41.92	3,354.62	387.55	347.97	-383.70	0.00	0.00	0.00
3,500.00	10.26	41.92	3,453.02	400.80	359.87	-396.82	0.00	0.00	0.00
3,600.00	10.26	41.92	3,551.42	414.05	371.77	-409.94	0.00	0.00	0.00
3,700.00	10.26	41.92	3,649.82	427.31	383.67	-423.06	0.00	0.00	0.00
3,800.00	10.26	41.92	3,748.22	440.56	395.57	-436.18	0.00	0.00	0.00
3,900.00	10.26	41.92	3,846.62	453.81	407.47	-449.31	0.00	0.00	0.00
4,000.00	10.26	41.92	3,945.02	467.07	419.37	-462.43	0.00	0.00	0.00
4,100.00	10.26	41.92	4,043.42	480.32	431.27	-475.55	0.00	0.00	0.00
4,200.00	10.26	41.92	4,141.82	493.57	443.17	-488.67	0.00	0.00	0.00
4,300.00	10.26	41.92	4,240.23	506.83	455.07	-501.79	0.00	0.00	0.00
4,400.00	10.26	41.92	4,338.63	520.08	466.97	-514.91	0.00	0.00	0.00
4,500.00	10.26	41.92	4,437.03	533.33	478.87	-528.04	0.00	0.00	0.00
4,600.00	10.26	41.92	4,535.43	546.59	490.77	-541.16	0.00	0.00	0.00

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Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 4961.00usft (RIG)
Site:	9N-59W-01 TIMBRO 0101 PAD	North Reference:	True
Well:	TIMBRO 0101-13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
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)
4,700.00	10.26	41.92	4,633.83	559.84	502.67	-554.28	0.00	0.00	0.00
4,800.00	10.26	41.92	4,732.23	573.09	514.57	-567.40	0.00	0.00	0.00
4,900.00	10.26	41.92	4,830.63	586.35	526.47	-580.52	0.00	0.00	0.00
5,000.00	10.26	41.92	4,929.03	599.60	538.37	-593.64	0.00	0.00	0.00
5,100.00	10.26	41.92	5,027.43	612.85	550.27	-606.76	0.00	0.00	0.00
5,200.00	10.26	41.92	5,125.83	626.10	562.17	-619.89	0.00	0.00	0.00
5,300.00	10.26	41.92	5,224.23	639.36	574.07	-633.01	0.00	0.00	0.00
5,400.00	10.26	41.92	5,322.64	652.61	585.97	-646.13	0.00	0.00	0.00
5,412.75	10.26	41.92	5,335.18	654.30	587.48	-647.80	0.00	0.00	0.00
KOP @ 5412.75ft :: DLS = 9°/100'									
5,450.00	8.13	58.30	5,371.96	658.16	591.94	-651.61	9.00	-5.71	43.97
5,500.00	6.99	91.94	5,421.55	659.91	597.99	-653.30	9.00	-2.29	67.29
5,550.00	8.47	124.09	5,471.11	657.74	604.09	-651.06	9.00	2.97	64.30
5,600.00	11.62	142.83	5,520.35	651.66	610.18	-644.92	9.00	6.30	37.49
5,650.00	15.44	153.07	5,568.96	641.71	616.24	-634.90	9.00	7.65	20.48
5,700.00	19.55	159.21	5,616.64	627.94	622.23	-621.07	9.00	8.22	12.28
5,750.00	23.80	163.26	5,663.10	610.45	628.11	-603.51	9.00	8.49	8.09
5,800.00	28.12	166.13	5,708.04	589.34	633.84	-582.33	9.00	8.64	5.74
5,850.00	32.49	168.29	5,751.20	564.74	639.40	-557.67	9.00	8.73	4.32
5,900.00	36.89	169.98	5,792.30	536.79	644.74	-529.67	9.00	8.79	3.39
5,950.00	41.30	171.36	5,831.10	505.69	649.83	-498.51	9.00	8.83	2.76
6,000.00	45.73	172.52	5,867.35	471.61	654.64	-464.38	9.00	8.86	2.31
6,050.00	50.17	173.51	5,900.83	434.76	659.14	-427.49	9.00	8.88	1.99
6,100.00	54.62	174.38	5,931.34	395.38	663.31	-388.07	9.00	8.89	1.74
6,150.00	59.07	175.16	5,958.68	353.71	667.12	-346.35	9.00	8.90	1.56
6,200.00	63.53	175.87	5,982.68	310.00	670.54	-302.61	9.00	8.91	1.42
6,250.00	67.99	176.53	6,003.21	264.52	673.55	-257.10	9.00	8.92	1.32
6,300.00	72.45	177.15	6,020.13	217.55	676.14	-210.11	9.00	8.92	1.24
6,350.00	76.91	177.74	6,033.34	169.39	678.29	-161.92	9.00	8.93	1.18
6,400.00	81.38	178.31	6,042.75	120.33	679.98	-112.84	9.00	8.93	1.13
6,450.00	85.84	178.86	6,048.31	70.67	681.21	-63.17	9.00	8.93	1.11
6,496.52	90.00	179.37	6,050.00	24.19	681.93	-16.69	9.00	8.93	1.10
TPZ @ 6496.52ft									
6,500.00	90.00	179.37	6,050.00	20.71	681.97	-13.21	0.00	0.00	0.00
6,600.00	90.00	179.37	6,050.00	-79.28	683.07	86.79	0.00	0.00	0.00
6,700.00	90.00	179.37	6,050.00	-179.28	684.17	186.79	0.00	0.00	0.00
6,800.00	90.00	179.37	6,050.00	-279.27	685.27	286.79	0.00	0.00	0.00
6,900.00	90.00	179.37	6,050.00	-379.26	686.37	386.79	0.00	0.00	0.00
7,000.00	90.00	179.37	6,050.00	-479.26	687.47	486.79	0.00	0.00	0.00
7,100.00	90.00	179.37	6,050.00	-579.25	688.57	586.79	0.00	0.00	0.00
7,200.00	90.00	179.37	6,050.00	-679.25	689.67	686.79	0.00	0.00	0.00
7,300.00	90.00	179.37	6,050.00	-779.24	690.78	786.79	0.00	0.00	0.00
7,400.00	90.00	179.37	6,050.00	-879.23	691.88	886.79	0.00	0.00	0.00
7,500.00	90.00	179.37	6,050.00	-979.23	692.98	986.79	0.00	0.00	0.00
7,600.00	90.00	179.37	6,050.00	-1,079.22	694.08	1,086.79	0.00	0.00	0.00
7,700.00	90.00	179.37	6,050.00	-1,179.22	695.18	1,186.79	0.00	0.00	0.00
7,800.00	90.00	179.37	6,050.00	-1,279.21	696.28	1,286.79	0.00	0.00	0.00
7,900.00	90.00	179.37	6,050.00	-1,379.20	697.38	1,386.79	0.00	0.00	0.00
8,000.00	90.00	179.37	6,050.00	-1,479.20	698.48	1,486.79	0.00	0.00	0.00
8,100.00	90.00	179.37	6,050.00	-1,579.19	699.59	1,586.79	0.00	0.00	0.00
8,200.00	90.00	179.37	6,050.00	-1,679.19	700.69	1,686.79	0.00	0.00	0.00
8,300.00	90.00	179.37	6,050.00	-1,779.18	701.79	1,786.79	0.00	0.00	0.00
8,400.00	90.00	179.37	6,050.00	-1,879.17	702.89	1,886.79	0.00	0.00	0.00
8,500.00	90.00	179.37	6,050.00	-1,979.17	703.99	1,986.79	0.00	0.00	0.00

Planning Report

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Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 4961.00usft (RIG)
Site:	9N-59W-01 TIMBRO 0101 PAD	North Reference:	True
Well:	TIMBRO 0101-13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
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)	
8,600.00	90.00	179.37	6,050.00	-2,079.16	705.09	2,086.79	0.00	0.00	0.00	
8,700.00	90.00	179.37	6,050.00	-2,179.15	706.19	2,186.79	0.00	0.00	0.00	
8,800.00	90.00	179.37	6,050.00	-2,279.15	707.30	2,286.79	0.00	0.00	0.00	
8,900.00	90.00	179.37	6,050.00	-2,379.14	708.40	2,386.79	0.00	0.00	0.00	
9,000.00	90.00	179.37	6,050.00	-2,479.14	709.50	2,486.79	0.00	0.00	0.00	
9,100.00	90.00	179.37	6,050.00	-2,579.13	710.60	2,586.79	0.00	0.00	0.00	
9,200.00	90.00	179.37	6,050.00	-2,679.12	711.70	2,686.79	0.00	0.00	0.00	
9,300.00	90.00	179.37	6,050.00	-2,779.12	712.80	2,786.79	0.00	0.00	0.00	
9,400.00	90.00	179.37	6,050.00	-2,879.11	713.90	2,886.79	0.00	0.00	0.00	
9,500.00	90.00	179.37	6,050.00	-2,979.11	715.00	2,986.79	0.00	0.00	0.00	
9,600.00	90.00	179.37	6,050.00	-3,079.10	716.11	3,086.79	0.00	0.00	0.00	
9,700.00	90.00	179.37	6,050.00	-3,179.09	717.21	3,186.79	0.00	0.00	0.00	
9,800.00	90.00	179.37	6,050.00	-3,279.09	718.31	3,286.79	0.00	0.00	0.00	
9,900.00	90.00	179.37	6,050.00	-3,379.08	719.41	3,386.79	0.00	0.00	0.00	
10,000.00	90.00	179.37	6,050.00	-3,479.08	720.51	3,486.79	0.00	0.00	0.00	
10,100.00	90.00	179.37	6,050.00	-3,579.07	721.61	3,586.79	0.00	0.00	0.00	
10,200.00	90.00	179.37	6,050.00	-3,679.06	722.71	3,686.79	0.00	0.00	0.00	
10,300.00	90.00	179.37	6,050.00	-3,779.06	723.82	3,786.79	0.00	0.00	0.00	
10,400.00	90.00	179.37	6,050.00	-3,879.05	724.92	3,886.79	0.00	0.00	0.00	
10,500.00	90.00	179.37	6,050.00	-3,979.05	726.02	3,986.79	0.00	0.00	0.00	
10,600.00	90.00	179.37	6,050.00	-4,079.04	727.12	4,086.79	0.00	0.00	0.00	
10,700.00	90.00	179.37	6,050.00	-4,179.03	728.22	4,186.79	0.00	0.00	0.00	
10,800.00	90.00	179.37	6,050.00	-4,279.03	729.32	4,286.79	0.00	0.00	0.00	
10,900.00	90.00	179.37	6,050.00	-4,379.02	730.42	4,386.79	0.00	0.00	0.00	
11,000.00	90.00	179.37	6,050.00	-4,479.02	731.52	4,486.79	0.00	0.00	0.00	
11,100.00	90.00	179.37	6,050.00	-4,579.01	732.63	4,586.79	0.00	0.00	0.00	
11,200.00	90.00	179.37	6,050.00	-4,679.00	733.73	4,686.79	0.00	0.00	0.00	
11,211.68	90.00	179.37	6,050.00	-4,690.68	733.86	4,698.47	0.00	0.00	0.00	
BPZ @ 11211.68ft										
11,301.69	90.00	179.37	6,050.00	-4,780.68	734.85	4,788.47	0.00	0.00	0.00	
TD Well @ 11301.69ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
1,616.87	1,600.00	9 5/8"		9-5/8	13-1/2

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
220.00	220.00	+N/-S (usft)	+E/-W (usft)	Begin Nudge @ 220.00ft	
733.00	730.26	34.09	30.60	Hold Tangent @ 733.00ft	
5,412.75	5,335.18	654.30	587.48	KOP @ 5412.75ft :: DLS = 9°/100'	
6,496.52	6,050.00	24.19	681.93	TPZ @ 6496.52ft	
11,211.68	6,050.00	-4,690.68	733.86	BPZ @ 11211.68ft	
11,301.69	6,050.00	-4,780.68	734.85	TD Well @ 11301.69ft	