

VERDAD RESOURCES

WATTENBERG FIELD

9N-59W-01 TIMBRO 0101 PAD

TIMBRO 0101-11H

Plan B

Plan: Design #1

Standard Planning Report

13 October, 2021

Project: WATTENBERG FIELD
Site: 9N-59W-01 TIMBRO 0101 PAD
Well: TIMBRO 0101-11H
Wellbore: Plan B
Design: Design #1

VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
1600.00	1609.78	9 5/8"	9-5/8

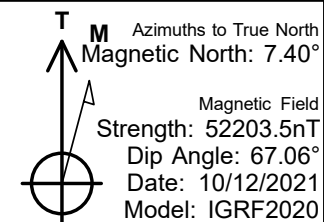
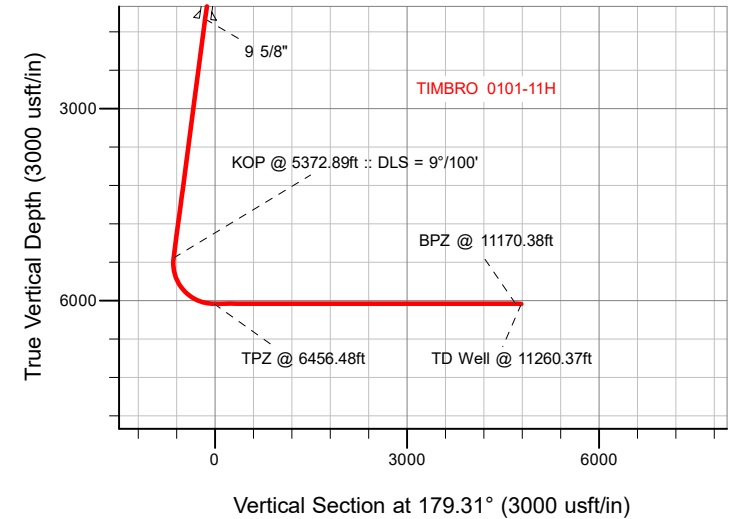
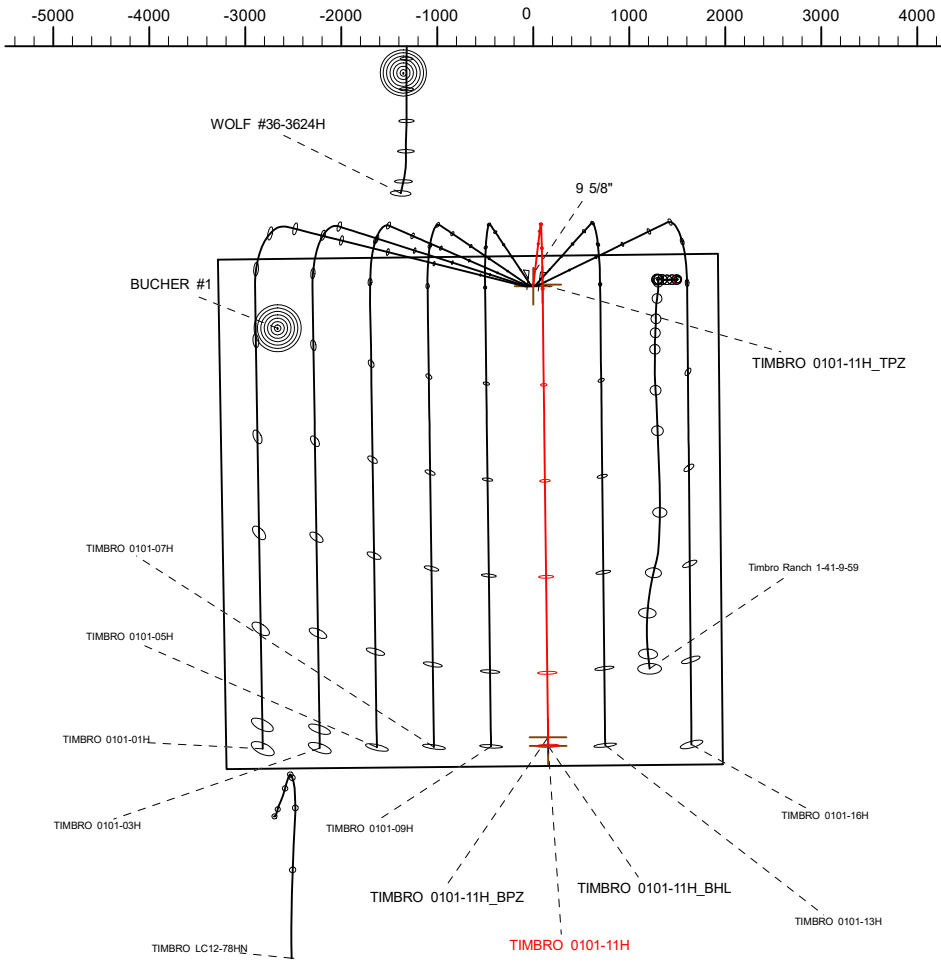
SECTION DETAILS

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	
240.65	0.00	0.00	240.65	0.00	0.00	0.00	0.00	0.00	
620.15	7.59	6.90	619.04	24.92	3.02	2.00	6.90	-24.88	
5372.89	7.59	6.90	5330.14	648.13	78.43	0.00	0.00	-647.14	
6456.48	90.00	179.31	6050.00	17.19	98.66	9.00	172.35	-16.00	
11260.37	90.00	179.31	6050.00	-4786.36	156.26	0.00	0.00	4787.90	TIMBRO 0101-11H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
TIMBRO 0101-11H_SHL	0.00	0.00	0.00	40.786593	-103.924287
TIMBRO 0101-11H_BHL	6050.00	-4786.36	156.26	40.773456	-103.923723
TIMBRO 0101-11H_BPZ	6050.00	-4696.37	155.18	40.773703	-103.923727
TIMBRO 0101-11H_TPZ	6050.00	17.19	98.66	40.786641	-103.923931

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



WELL DETAILS: TIMBRO 0101-11H

GL = 4937'

RKB = 24' @ 4961.00usft (RIG)

Plan: Design #1 (TIMBRO 0101-11H/Plan B)

Date: 10/13/2021

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well TIMBRO 0101-11H
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 0101-11H	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 0101-11H				
Well Position	+N/-S	0.00 usft	Northing:	1,533,278.96 usft	Latitude:	40.786593
	+E/-W	0.00 usft	Easting:	3,436,326.65 usft	Longitude:	-103.924288
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	52,203.45336674

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	179.31	

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	11,260.37	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 0101-11H	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	
240.65	0.00	0.00	240.65	0.00	0.00	0.00	0.00	0.00	0.00	
620.15	7.59	6.90	619.04	24.92	3.02	2.00	2.00	0.00	6.90	
5,372.89	7.59	6.90	5,330.14	648.13	78.43	0.00	0.00	0.00	0.00	
6,456.48	90.00	179.31	6,050.00	17.19	98.66	9.00	7.61	15.91	172.35	
11,260.37	90.00	179.31	6,050.00	-4,786.36	156.26	0.00	0.00	0.00	0.00	TIMBRO 0101-11H_B

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 0101-11H	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
240.65	0.00	0.00	240.65	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 240.65ft									
300.00	1.19	6.90	300.00	0.61	0.07	-0.61	2.00	2.00	0.00
400.00	3.19	6.90	399.92	4.40	0.53	-4.39	2.00	2.00	0.00
500.00	5.19	6.90	499.65	11.65	1.41	-11.63	2.00	2.00	0.00
600.00	7.19	6.90	599.06	22.35	2.70	-22.31	2.00	2.00	0.00
620.15	7.59	6.90	619.04	24.92	3.02	-24.88	2.00	2.00	0.00
Hold Tangent @ 620.15ft									
700.00	7.59	6.90	698.19	35.39	4.28	-35.33	0.00	0.00	0.00
800.00	7.59	6.90	797.32	48.50	5.87	-48.43	0.00	0.00	0.00
900.00	7.59	6.90	896.44	61.61	7.46	-61.52	0.00	0.00	0.00
1,000.00	7.59	6.90	995.56	74.73	9.04	-74.61	0.00	0.00	0.00
1,100.00	7.59	6.90	1,094.69	87.84	10.63	-87.70	0.00	0.00	0.00
1,200.00	7.59	6.90	1,193.81	100.95	12.22	-100.80	0.00	0.00	0.00
1,300.00	7.59	6.90	1,292.93	114.06	13.80	-113.89	0.00	0.00	0.00
1,400.00	7.59	6.90	1,392.06	127.18	15.39	-126.98	0.00	0.00	0.00
1,500.00	7.59	6.90	1,491.18	140.29	16.98	-140.08	0.00	0.00	0.00
1,600.00	7.59	6.90	1,590.31	153.40	18.56	-153.17	0.00	0.00	0.00
1,609.78	7.59	6.90	1,600.00	154.68	18.72	-154.45	0.00	0.00	0.00
9 5/8"									
1,700.00	7.59	6.90	1,689.43	166.51	20.15	-166.26	0.00	0.00	0.00
1,800.00	7.59	6.90	1,788.55	179.63	21.74	-179.35	0.00	0.00	0.00
1,900.00	7.59	6.90	1,887.68	192.74	23.32	-192.45	0.00	0.00	0.00
2,000.00	7.59	6.90	1,986.80	205.85	24.91	-205.54	0.00	0.00	0.00
2,100.00	7.59	6.90	2,085.93	218.97	26.50	-218.63	0.00	0.00	0.00
2,200.00	7.59	6.90	2,185.05	232.08	28.08	-231.72	0.00	0.00	0.00
2,300.00	7.59	6.90	2,284.17	245.19	29.67	-244.82	0.00	0.00	0.00
2,400.00	7.59	6.90	2,383.30	258.30	31.26	-257.91	0.00	0.00	0.00
2,500.00	7.59	6.90	2,482.42	271.42	32.84	-271.00	0.00	0.00	0.00
2,600.00	7.59	6.90	2,581.54	284.53	34.43	-284.09	0.00	0.00	0.00
2,700.00	7.59	6.90	2,680.67	297.64	36.02	-297.19	0.00	0.00	0.00
2,800.00	7.59	6.90	2,779.79	310.75	37.61	-310.28	0.00	0.00	0.00
2,900.00	7.59	6.90	2,878.92	323.87	39.19	-323.37	0.00	0.00	0.00
3,000.00	7.59	6.90	2,978.04	336.98	40.78	-336.46	0.00	0.00	0.00
3,100.00	7.59	6.90	3,077.16	350.09	42.37	-349.56	0.00	0.00	0.00
3,200.00	7.59	6.90	3,176.29	363.21	43.95	-362.65	0.00	0.00	0.00
3,300.00	7.59	6.90	3,275.41	376.32	45.54	-375.74	0.00	0.00	0.00
3,400.00	7.59	6.90	3,374.54	389.43	47.13	-388.83	0.00	0.00	0.00
3,500.00	7.59	6.90	3,473.66	402.54	48.71	-401.93	0.00	0.00	0.00
3,600.00	7.59	6.90	3,572.78	415.66	50.30	-415.02	0.00	0.00	0.00
3,700.00	7.59	6.90	3,671.91	428.77	51.89	-428.11	0.00	0.00	0.00
3,800.00	7.59	6.90	3,771.03	441.88	53.47	-441.21	0.00	0.00	0.00
3,900.00	7.59	6.90	3,870.16	454.99	55.06	-454.30	0.00	0.00	0.00
4,000.00	7.59	6.90	3,969.28	468.11	56.65	-467.39	0.00	0.00	0.00
4,100.00	7.59	6.90	4,068.40	481.22	58.23	-480.48	0.00	0.00	0.00
4,200.00	7.59	6.90	4,167.53	494.33	59.82	-493.58	0.00	0.00	0.00
4,300.00	7.59	6.90	4,266.65	507.44	61.41	-506.67	0.00	0.00	0.00
4,400.00	7.59	6.90	4,365.77	520.56	62.99	-519.76	0.00	0.00	0.00
4,500.00	7.59	6.90	4,464.90	533.67	64.58	-532.85	0.00	0.00	0.00
4,600.00	7.59	6.90	4,564.02	546.78	66.17	-545.95	0.00	0.00	0.00

Planning Report

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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 0101-11H	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	7.59	6.90	4,663.15	559.90	67.75	-559.04	0.00	0.00	0.00
4,800.00	7.59	6.90	4,762.27	573.01	69.34	-572.13	0.00	0.00	0.00
4,900.00	7.59	6.90	4,861.39	586.12	70.93	-585.22	0.00	0.00	0.00
5,000.00	7.59	6.90	4,960.52	599.23	72.52	-598.32	0.00	0.00	0.00
5,100.00	7.59	6.90	5,059.64	612.35	74.10	-611.41	0.00	0.00	0.00
5,200.00	7.59	6.90	5,158.77	625.46	75.69	-624.50	0.00	0.00	0.00
5,300.00	7.59	6.90	5,257.89	638.57	77.28	-637.59	0.00	0.00	0.00
5,372.89	7.59	6.90	5,330.14	648.13	78.43	-647.14	0.00	0.00	0.00
KOP @ 5372.89ft :: DLS = 9°/100'									
5,400.00	5.18	10.50	5,357.08	651.11	78.87	-650.11	9.00	-8.88	13.28
5,450.00	1.16	59.25	5,407.00	653.59	79.72	-652.58	9.00	-8.03	97.51
5,500.00	4.04	164.90	5,456.96	652.15	80.62	-651.13	9.00	5.76	211.30
5,550.00	8.48	172.53	5,506.65	646.79	81.55	-645.76	9.00	8.86	15.26
5,600.00	12.96	174.93	5,555.76	637.55	82.53	-636.51	9.00	8.96	4.79
5,650.00	17.44	176.10	5,604.00	624.48	83.53	-623.43	9.00	8.98	2.35
5,700.00	21.94	176.81	5,651.07	607.67	84.56	-606.61	9.00	8.99	1.41
5,750.00	26.43	177.29	5,696.66	587.22	85.61	-586.14	9.00	8.99	0.95
5,800.00	30.93	177.63	5,740.52	563.25	86.67	-562.16	9.00	8.99	0.69
5,850.00	35.43	177.90	5,782.35	535.91	87.73	-534.82	9.00	9.00	0.53
5,900.00	39.93	178.11	5,821.92	505.38	88.80	-504.27	9.00	9.00	0.43
5,950.00	44.43	178.28	5,858.96	471.83	89.85	-470.71	9.00	9.00	0.35
6,000.00	48.92	178.43	5,893.26	435.48	90.89	-434.36	9.00	9.00	0.30
6,050.00	53.42	178.57	5,924.60	396.55	91.91	-395.42	9.00	9.00	0.26
6,100.00	57.92	178.68	5,952.79	355.28	92.90	-354.14	9.00	9.00	0.23
6,150.00	62.42	178.79	5,977.65	311.93	93.86	-310.78	9.00	9.00	0.21
6,200.00	66.92	178.88	5,999.04	266.76	94.77	-265.60	9.00	9.00	0.19
6,250.00	71.42	178.97	6,016.81	220.04	95.65	-218.88	9.00	9.00	0.18
6,300.00	75.92	179.06	6,030.87	172.08	96.47	-170.91	9.00	9.00	0.17
6,350.00	80.42	179.14	6,041.12	123.16	97.24	-121.98	9.00	9.00	0.17
6,400.00	84.92	179.22	6,047.50	73.59	97.94	-72.40	9.00	9.00	0.16
6,450.00	89.42	179.30	6,049.97	23.67	98.58	-22.48	9.00	9.00	0.16
6,456.48	90.00	179.31	6,050.00	17.19	98.66	-16.00	9.00	9.00	0.16
TPZ @ 6456.48ft									
6,500.00	90.00	179.31	6,050.00	-26.33	99.18	27.52	0.00	0.00	0.00
6,600.00	90.00	179.31	6,050.00	-126.32	100.38	127.52	0.00	0.00	0.00
6,700.00	90.00	179.31	6,050.00	-226.32	101.58	227.52	0.00	0.00	0.00
6,800.00	90.00	179.31	6,050.00	-326.31	102.78	327.52	0.00	0.00	0.00
6,900.00	90.00	179.31	6,050.00	-426.30	103.98	427.52	0.00	0.00	0.00
7,000.00	90.00	179.31	6,050.00	-526.29	105.18	527.52	0.00	0.00	0.00
7,100.00	90.00	179.31	6,050.00	-626.29	106.38	627.52	0.00	0.00	0.00
7,200.00	90.00	179.31	6,050.00	-726.28	107.58	727.52	0.00	0.00	0.00
7,300.00	90.00	179.31	6,050.00	-826.27	108.78	827.52	0.00	0.00	0.00
7,400.00	90.00	179.31	6,050.00	-926.26	109.97	927.52	0.00	0.00	0.00
7,500.00	90.00	179.31	6,050.00	-1,026.26	111.17	1,027.52	0.00	0.00	0.00
7,600.00	90.00	179.31	6,050.00	-1,126.25	112.37	1,127.52	0.00	0.00	0.00
7,700.00	90.00	179.31	6,050.00	-1,226.24	113.57	1,227.52	0.00	0.00	0.00
7,800.00	90.00	179.31	6,050.00	-1,326.24	114.77	1,327.52	0.00	0.00	0.00
7,900.00	90.00	179.31	6,050.00	-1,426.23	115.97	1,427.52	0.00	0.00	0.00
8,000.00	90.00	179.31	6,050.00	-1,526.22	117.17	1,527.52	0.00	0.00	0.00
8,100.00	90.00	179.31	6,050.00	-1,626.21	118.37	1,627.52	0.00	0.00	0.00
8,200.00	90.00	179.31	6,050.00	-1,726.21	119.57	1,727.52	0.00	0.00	0.00
8,300.00	90.00	179.31	6,050.00	-1,826.20	120.77	1,827.52	0.00	0.00	0.00
8,400.00	90.00	179.31	6,050.00	-1,926.19	121.96	1,927.52	0.00	0.00	0.00
8,500.00	90.00	179.31	6,050.00	-2,026.19	123.16	2,027.52	0.00	0.00	0.00

Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 4961.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 4961.00usft (RIG)
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Well:	TIMBRO 0101-11H	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	179.31	6,050.00	-2,126.18	124.36	2,127.52	0.00	0.00	0.00	
8,700.00	90.00	179.31	6,050.00	-2,226.17	125.56	2,227.52	0.00	0.00	0.00	
8,800.00	90.00	179.31	6,050.00	-2,326.16	126.76	2,327.52	0.00	0.00	0.00	
8,900.00	90.00	179.31	6,050.00	-2,426.16	127.96	2,427.52	0.00	0.00	0.00	
9,000.00	90.00	179.31	6,050.00	-2,526.15	129.16	2,527.52	0.00	0.00	0.00	
9,100.00	90.00	179.31	6,050.00	-2,626.14	130.36	2,627.52	0.00	0.00	0.00	
9,200.00	90.00	179.31	6,050.00	-2,726.14	131.56	2,727.52	0.00	0.00	0.00	
9,300.00	90.00	179.31	6,050.00	-2,826.13	132.75	2,827.52	0.00	0.00	0.00	
9,400.00	90.00	179.31	6,050.00	-2,926.12	133.95	2,927.52	0.00	0.00	0.00	
9,500.00	90.00	179.31	6,050.00	-3,026.11	135.15	3,027.52	0.00	0.00	0.00	
9,600.00	90.00	179.31	6,050.00	-3,126.11	136.35	3,127.52	0.00	0.00	0.00	
9,700.00	90.00	179.31	6,050.00	-3,226.10	137.55	3,227.52	0.00	0.00	0.00	
9,800.00	90.00	179.31	6,050.00	-3,326.09	138.75	3,327.52	0.00	0.00	0.00	
9,900.00	90.00	179.31	6,050.00	-3,426.09	139.95	3,427.52	0.00	0.00	0.00	
10,000.00	90.00	179.31	6,050.00	-3,526.08	141.15	3,527.52	0.00	0.00	0.00	
10,100.00	90.00	179.31	6,050.00	-3,626.07	142.35	3,627.52	0.00	0.00	0.00	
10,200.00	90.00	179.31	6,050.00	-3,726.06	143.54	3,727.52	0.00	0.00	0.00	
10,300.00	90.00	179.31	6,050.00	-3,826.06	144.74	3,827.52	0.00	0.00	0.00	
10,400.00	90.00	179.31	6,050.00	-3,926.05	145.94	3,927.52	0.00	0.00	0.00	
10,500.00	90.00	179.31	6,050.00	-4,026.04	147.14	4,027.52	0.00	0.00	0.00	
10,600.00	90.00	179.31	6,050.00	-4,126.03	148.34	4,127.52	0.00	0.00	0.00	
10,700.00	90.00	179.31	6,050.00	-4,226.03	149.54	4,227.52	0.00	0.00	0.00	
10,800.00	90.00	179.31	6,050.00	-4,326.02	150.74	4,327.52	0.00	0.00	0.00	
10,900.00	90.00	179.31	6,050.00	-4,426.01	151.94	4,427.52	0.00	0.00	0.00	
11,000.00	90.00	179.31	6,050.00	-4,526.01	153.14	4,527.52	0.00	0.00	0.00	
11,100.00	90.00	179.31	6,050.00	-4,626.00	154.33	4,627.52	0.00	0.00	0.00	
11,170.38	90.00	179.31	6,050.00	-4,696.37	155.18	4,697.90	0.00	0.00	0.00	
BPZ @ 11170.38ft										
11,200.00	90.00	179.31	6,050.00	-4,725.99	155.53	4,727.52	0.00	0.00	0.00	
11,260.37	90.00	179.31	6,050.00	-4,786.36	156.26	4,787.90	0.00	0.00	0.00	
TD Well @ 11260.37ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
1,609.78	1,600.00	9 5/8"		9-5/8	13-1/2

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
240.65	240.65	0.00	0.00	Begin Nudge @ 240.65ft	
620.15	619.04	24.92	3.02	Hold Tangent @ 620.15ft	
5,372.89	5,330.14	648.13	78.43	KOP @ 5372.89ft :: DLS = 9°/100'	
6,456.48	6,050.00	17.19	98.66	TPZ @ 6456.48ft	
11,170.38	6,050.00	-4,696.37	155.18	BPZ @ 11170.38ft	
11,260.37	6,050.00	-4,786.36	156.26	TD Well @ 11260.37ft	