

VERDAD RESOURCES

**WATTENBERG FIELD
2N-64W-28 GEORGENE PAD
GEORGENE 2833-02H**

Wellbore #1

Plan: Design #3

Standard Planning Report

17 September, 2020

Project: WATTENBERG FIELD
Site: 2N-64W-28 GEORGENE PAD
Well: GEORGENE 2833-02H
Wellbore: Wellbore #1
Design: Design #3

VERDAD RESOURCES

CASING DETAILS

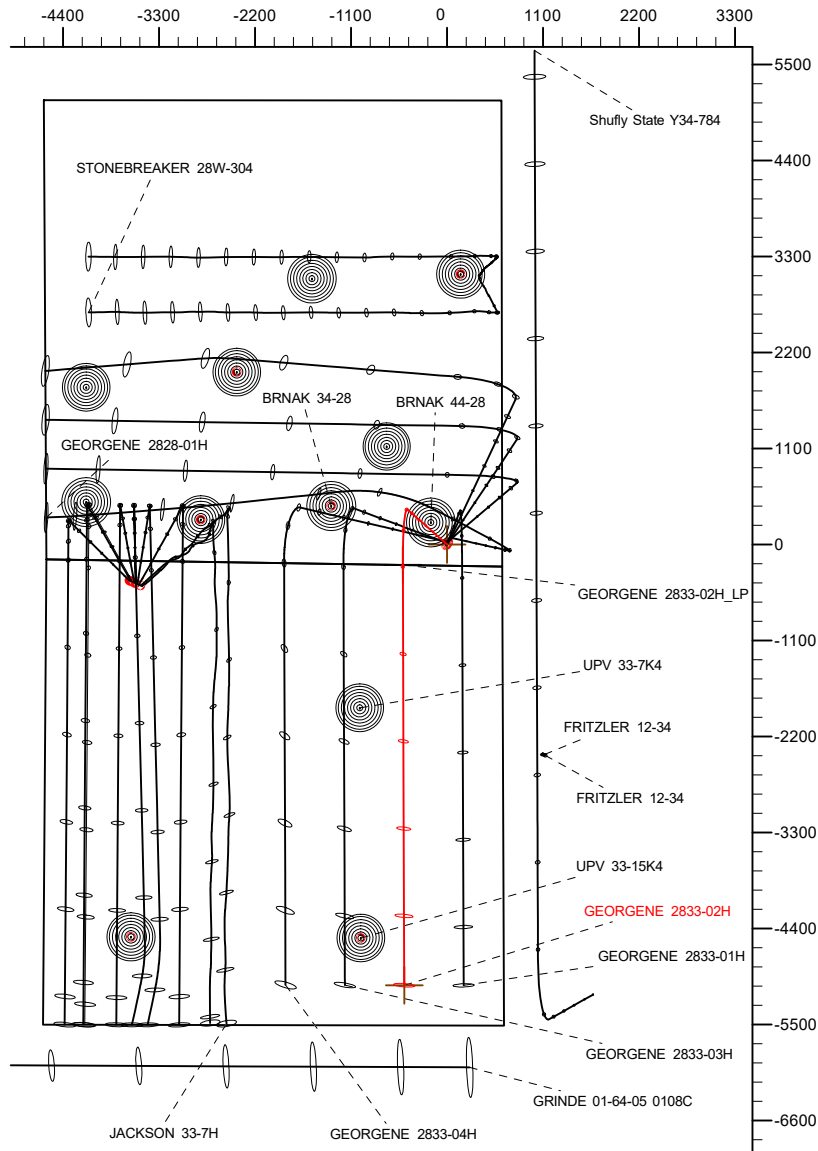
TVD	MD	Name	Size
1700.00	1704.93	9 5/8"	9-5/8

SHL
242' FSL
632' FEL

LP
0' FNL
1140' FEL

BHL
461' FSL
1140' FEL

West(-)/East(+) (2200 usft/in)

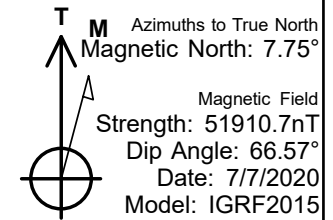
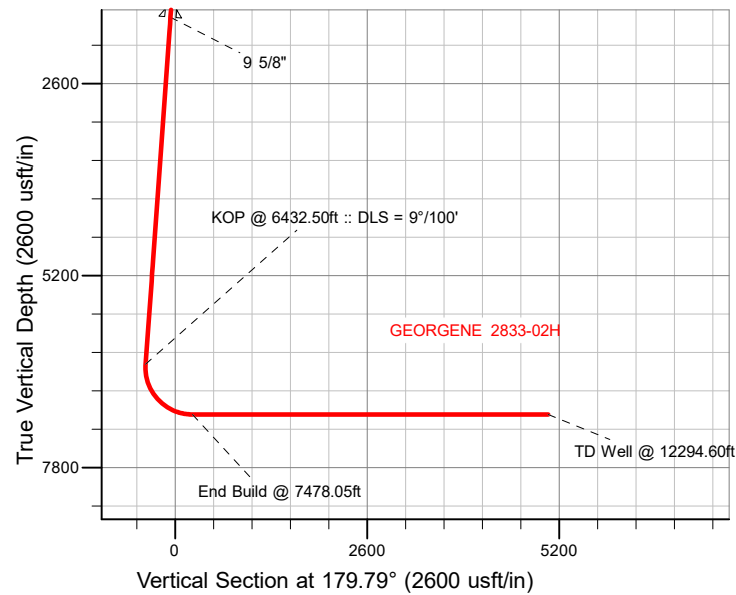


SECTION DETAILS

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	
650.00	0.00	0.00	650.00	0.00	0.00	0.00	0.00	0.00	
959.00	6.18	311.40	958.40	11.01	-12.49	2.00	311.40	-11.06	
6432.50	6.18	311.40	6400.09	400.68	-454.48	0.00	0.00	-402.34	
7478.05	90.00	179.79	7080.00	-234.51	-507.23	9.00	-131.44	232.65	
12294.60	90.00	179.79	7080.00	-5051.03	-489.80	0.00	0.00	5049.20	GEORGENE 2833-02H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
GEORGENE 2833-02H_SHL	0.00	0.00	0.00	40.102750	-104.549028
GEORGENE 2833-02H_BHL	7080.00	-5051.03	-489.80	40.088884	-104.550779



WELL DETAILS: GEORGENE 2833-02H

GL = 5018'
RKB = 24' @ 5042.00usft (RIG)

Plan: Design #3 (GEORGENE 2833-02H/Wellbore #1)

Date: 9/17/2020

HP

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well GEORGENE 2833-02H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5042.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5042.00usft (RIG)
Site:	2N-64W-28 GEORGENE PAD	North Reference:	True
Well:	GEORGENE 2833-02H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

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		2N-64W-28 GEORGENE PAD				
Site Position:		Northing:	1,281,723.49	usft	Latitude:	40.102807
From:	Lat/Long	Easting:	3,266,028.51	usft	Longitude:	-104.548967
Position Uncertainty:		0.00	usft	Slot Radius:	13-3/16	"

Well		GEORGENE 2833-02H				
Well Position	+N/-S	0.00 usft	Northing:	1,281,702.72 usft	Latitude:	40.102750
	+E/-W	0.00 usft	Easting:	3,266,011.64 usft	Longitude:	-104.549029
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft	Ground Level:	5,018.00 usft
Grid Convergence:		0.61 °				

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	7/7/2020	7.75	66.57	51,910.65021607

Design	Design #3				
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	179.79	

Plan Survey Tool Program		Date	9/17/2020		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	1,700.00	Design #3 (Wellbore #1)	ISCWSA MWD	
				Fixed:v2:standard declination	
2	1,700.00	12,294.60	Design #3 (Wellbore #1)	ISCWSA MWD	
				Fixed:v2:standard declination	

HP

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well GEORGENE 2833-02H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5042.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5042.00usft (RIG)
Site:	2N-64W-28 GEORGENE PAD	North Reference:	True
Well:	GEORGENE 2833-02H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

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	
650.00	0.00	0.00	650.00	0.00	0.00	0.00	0.00	0.00	0.00	
959.00	6.18	311.40	958.40	11.01	-12.49	2.00	2.00	0.00	311.40	
6,432.50	6.18	311.40	6,400.09	400.68	-454.48	0.00	0.00	0.00	0.00	
7,478.05	90.00	179.79	7,080.00	-234.51	-507.23	9.00	8.02	-12.59	-131.44	
12,294.60	90.00	179.79	7,080.00	-5,051.03	-489.80	0.00	0.00	0.00	0.00	GEORGENE 2833-02

HP

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well GEORGENE 2833-02H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5042.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5042.00usft (RIG)
Site:	2N-64W-28 GEORGENE PAD	North Reference:	True
Well:	GEORGENE 2833-02H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

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
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
650.00	0.00	0.00	650.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 650.00ft									
700.00	1.00	311.40	700.00	0.29	-0.33	-0.29	2.00	2.00	0.00
800.00	3.00	311.40	799.93	2.60	-2.95	-2.61	2.00	2.00	0.00
900.00	5.00	311.40	899.68	7.21	-8.18	-7.24	2.00	2.00	0.00
959.00	6.18	311.40	958.40	11.01	-12.49	-11.06	2.00	2.00	0.00
Hold Tangent @ 959.00ft									
1,000.00	6.18	311.40	999.16	13.93	-15.80	-13.99	0.00	0.00	0.00
1,100.00	6.18	311.40	1,098.58	21.05	-23.87	-21.14	0.00	0.00	0.00
1,200.00	6.18	311.40	1,198.00	28.17	-31.95	-28.28	0.00	0.00	0.00
1,300.00	6.18	311.40	1,297.42	35.29	-40.02	-35.43	0.00	0.00	0.00
1,400.00	6.18	311.40	1,396.84	42.41	-48.10	-42.58	0.00	0.00	0.00
1,500.00	6.18	311.40	1,496.26	49.52	-56.17	-49.73	0.00	0.00	0.00
1,600.00	6.18	311.40	1,595.68	56.64	-64.25	-56.88	0.00	0.00	0.00
1,700.00	6.18	311.40	1,695.09	63.76	-72.32	-64.03	0.00	0.00	0.00
1,704.93	6.18	311.40	1,700.00	64.11	-72.72	-64.38	0.00	0.00	0.00
9 5/8"									
1,800.00	6.18	311.40	1,794.51	70.88	-80.40	-71.18	0.00	0.00	0.00
1,900.00	6.18	311.40	1,893.93	78.00	-88.48	-78.33	0.00	0.00	0.00
2,000.00	6.18	311.40	1,993.35	85.12	-96.55	-85.47	0.00	0.00	0.00
2,100.00	6.18	311.40	2,092.77	92.24	-104.63	-92.62	0.00	0.00	0.00
2,200.00	6.18	311.40	2,192.19	99.36	-112.70	-99.77	0.00	0.00	0.00
2,300.00	6.18	311.40	2,291.61	106.48	-120.78	-106.92	0.00	0.00	0.00
2,400.00	6.18	311.40	2,391.03	113.60	-128.85	-114.07	0.00	0.00	0.00
2,500.00	6.18	311.40	2,490.45	120.72	-136.93	-121.22	0.00	0.00	0.00
2,600.00	6.18	311.40	2,589.86	127.84	-145.00	-128.37	0.00	0.00	0.00
2,700.00	6.18	311.40	2,689.28	134.95	-153.08	-135.51	0.00	0.00	0.00
2,800.00	6.18	311.40	2,788.70	142.07	-161.15	-142.66	0.00	0.00	0.00
2,900.00	6.18	311.40	2,888.12	149.19	-169.23	-149.81	0.00	0.00	0.00
3,000.00	6.18	311.40	2,987.54	156.31	-177.30	-156.96	0.00	0.00	0.00
3,100.00	6.18	311.40	3,086.96	163.43	-185.38	-164.11	0.00	0.00	0.00
3,200.00	6.18	311.40	3,186.38	170.55	-193.45	-171.26	0.00	0.00	0.00
3,300.00	6.18	311.40	3,285.80	177.67	-201.53	-178.41	0.00	0.00	0.00
3,400.00	6.18	311.40	3,385.22	184.79	-209.60	-185.56	0.00	0.00	0.00
3,500.00	6.18	311.40	3,484.63	191.91	-217.68	-192.70	0.00	0.00	0.00
3,600.00	6.18	311.40	3,584.05	199.03	-225.75	-199.85	0.00	0.00	0.00
3,700.00	6.18	311.40	3,683.47	206.15	-233.83	-207.00	0.00	0.00	0.00
3,800.00	6.18	311.40	3,782.89	213.27	-241.90	-214.15	0.00	0.00	0.00
3,900.00	6.18	311.40	3,882.31	220.38	-249.98	-221.30	0.00	0.00	0.00
4,000.00	6.18	311.40	3,981.73	227.50	-258.05	-228.45	0.00	0.00	0.00
4,100.00	6.18	311.40	4,081.15	234.62	-266.13	-235.60	0.00	0.00	0.00
4,200.00	6.18	311.40	4,180.57	241.74	-274.20	-242.75	0.00	0.00	0.00
4,300.00	6.18	311.40	4,279.99	248.86	-282.28	-249.89	0.00	0.00	0.00
4,400.00	6.18	311.40	4,379.40	255.98	-290.35	-257.04	0.00	0.00	0.00
4,500.00	6.18	311.40	4,478.82	263.10	-298.43	-264.19	0.00	0.00	0.00
4,600.00	6.18	311.40	4,578.24	270.22	-306.50	-271.34	0.00	0.00	0.00

HP

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well GEORGENE 2833-02H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5042.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5042.00usft (RIG)
Site:	2N-64W-28 GEORGENE PAD	North Reference:	True
Well:	GEORGENE 2833-02H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

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	6.18	311.40	4,677.66	277.34	-314.58	-278.49	0.00	0.00	0.00
4,800.00	6.18	311.40	4,777.08	284.46	-322.65	-285.64	0.00	0.00	0.00
4,900.00	6.18	311.40	4,876.50	291.58	-330.73	-292.79	0.00	0.00	0.00
5,000.00	6.18	311.40	4,975.92	298.70	-338.80	-299.94	0.00	0.00	0.00
5,100.00	6.18	311.40	5,075.34	305.81	-346.88	-307.08	0.00	0.00	0.00
5,200.00	6.18	311.40	5,174.76	312.93	-354.95	-314.23	0.00	0.00	0.00
5,300.00	6.18	311.40	5,274.17	320.05	-363.03	-321.38	0.00	0.00	0.00
5,400.00	6.18	311.40	5,373.59	327.17	-371.10	-328.53	0.00	0.00	0.00
5,500.00	6.18	311.40	5,473.01	334.29	-379.18	-335.68	0.00	0.00	0.00
5,600.00	6.18	311.40	5,572.43	341.41	-387.25	-342.83	0.00	0.00	0.00
5,700.00	6.18	311.40	5,671.85	348.53	-395.33	-349.98	0.00	0.00	0.00
5,800.00	6.18	311.40	5,771.27	355.65	-403.40	-357.13	0.00	0.00	0.00
5,900.00	6.18	311.40	5,870.69	362.77	-411.48	-364.27	0.00	0.00	0.00
6,000.00	6.18	311.40	5,970.11	369.89	-419.55	-371.42	0.00	0.00	0.00
6,100.00	6.18	311.40	6,069.52	377.01	-427.63	-378.57	0.00	0.00	0.00
6,200.00	6.18	311.40	6,168.94	384.13	-435.71	-385.72	0.00	0.00	0.00
6,300.00	6.18	311.40	6,268.36	391.25	-443.78	-392.87	0.00	0.00	0.00
6,400.00	6.18	311.40	6,367.78	398.36	-451.86	-400.02	0.00	0.00	0.00
6,432.50	6.18	311.40	6,400.09	400.68	-454.48	-402.34	0.00	0.00	0.00
KOP @ 6432.50ft :: DLS = 9°/100'									
6,500.00	5.03	246.65	6,467.33	401.91	-459.93	-403.59	9.00	-1.70	-95.93
6,600.00	11.90	202.38	6,566.27	390.61	-467.90	-392.32	9.00	6.87	-44.26
6,700.00	20.48	192.31	6,662.23	363.93	-475.57	-365.67	9.00	8.58	-10.07
6,800.00	29.31	188.08	6,752.85	322.51	-482.76	-324.28	9.00	8.83	-4.23
6,900.00	38.21	185.69	6,835.90	267.39	-489.28	-269.18	9.00	8.90	-2.39
7,000.00	47.15	184.10	6,909.34	199.91	-494.98	-201.72	9.00	8.94	-1.60
7,100.00	56.10	182.91	6,971.36	121.74	-499.72	-123.57	9.00	8.95	-1.19
7,200.00	65.06	181.95	7,020.43	34.80	-503.38	-36.64	9.00	8.96	-0.96
7,300.00	74.03	181.12	7,055.34	-58.77	-505.87	56.91	9.00	8.97	-0.83
7,400.00	83.00	180.36	7,075.23	-156.66	-507.12	154.80	9.00	8.97	-0.76
7,478.05	90.00	179.79	7,080.00	-234.51	-507.23	232.65	9.00	8.97	-0.73
End Build @ 7478.05ft									
7,500.00	90.00	179.79	7,080.00	-256.46	-507.15	254.60	0.00	0.00	0.00
7,600.00	90.00	179.79	7,080.00	-356.46	-506.79	354.60	0.00	0.00	0.00
7,700.00	90.00	179.79	7,080.00	-456.46	-506.43	454.60	0.00	0.00	0.00
7,800.00	90.00	179.79	7,080.00	-556.46	-506.06	554.60	0.00	0.00	0.00
7,900.00	90.00	179.79	7,080.00	-656.46	-505.70	654.60	0.00	0.00	0.00
8,000.00	90.00	179.79	7,080.00	-756.46	-505.34	754.60	0.00	0.00	0.00
8,100.00	90.00	179.79	7,080.00	-856.46	-504.98	854.60	0.00	0.00	0.00
8,200.00	90.00	179.79	7,080.00	-956.46	-504.62	954.60	0.00	0.00	0.00
8,300.00	90.00	179.79	7,080.00	-1,056.46	-504.25	1,054.60	0.00	0.00	0.00
8,400.00	90.00	179.79	7,080.00	-1,156.46	-503.89	1,154.60	0.00	0.00	0.00
8,500.00	90.00	179.79	7,080.00	-1,256.45	-503.53	1,254.60	0.00	0.00	0.00
8,600.00	90.00	179.79	7,080.00	-1,356.45	-503.17	1,354.60	0.00	0.00	0.00
8,700.00	90.00	179.79	7,080.00	-1,456.45	-502.81	1,454.60	0.00	0.00	0.00
8,800.00	90.00	179.79	7,080.00	-1,556.45	-502.44	1,554.60	0.00	0.00	0.00
8,900.00	90.00	179.79	7,080.00	-1,656.45	-502.08	1,654.60	0.00	0.00	0.00
9,000.00	90.00	179.79	7,080.00	-1,756.45	-501.72	1,754.60	0.00	0.00	0.00
9,100.00	90.00	179.79	7,080.00	-1,856.45	-501.36	1,854.60	0.00	0.00	0.00
9,200.00	90.00	179.79	7,080.00	-1,956.45	-501.00	1,954.60	0.00	0.00	0.00
9,300.00	90.00	179.79	7,080.00	-2,056.45	-500.64	2,054.60	0.00	0.00	0.00
9,400.00	90.00	179.79	7,080.00	-2,156.45	-500.27	2,154.60	0.00	0.00	0.00
9,500.00	90.00	179.79	7,080.00	-2,256.45	-499.91	2,254.60	0.00	0.00	0.00
9,600.00	90.00	179.79	7,080.00	-2,356.45	-499.55	2,354.60	0.00	0.00	0.00

HP

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well GEORGENE 2833-02H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5042.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5042.00usft (RIG)
Site:	2N-64W-28 GEORGENE PAD	North Reference:	True
Well:	GEORGENE 2833-02H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

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)	
9,700.00	90.00	179.79	7,080.00	-2,456.45	-499.19	2,454.60	0.00	0.00	0.00	
9,800.00	90.00	179.79	7,080.00	-2,556.45	-498.83	2,554.60	0.00	0.00	0.00	
9,900.00	90.00	179.79	7,080.00	-2,656.45	-498.46	2,654.60	0.00	0.00	0.00	
10,000.00	90.00	179.79	7,080.00	-2,756.45	-498.10	2,754.60	0.00	0.00	0.00	
10,100.00	90.00	179.79	7,080.00	-2,856.44	-497.74	2,854.60	0.00	0.00	0.00	
10,200.00	90.00	179.79	7,080.00	-2,956.44	-497.38	2,954.60	0.00	0.00	0.00	
10,300.00	90.00	179.79	7,080.00	-3,056.44	-497.02	3,054.60	0.00	0.00	0.00	
10,400.00	90.00	179.79	7,080.00	-3,156.44	-496.65	3,154.60	0.00	0.00	0.00	
10,500.00	90.00	179.79	7,080.00	-3,256.44	-496.29	3,254.60	0.00	0.00	0.00	
10,600.00	90.00	179.79	7,080.00	-3,356.44	-495.93	3,354.60	0.00	0.00	0.00	
10,700.00	90.00	179.79	7,080.00	-3,456.44	-495.57	3,454.60	0.00	0.00	0.00	
10,800.00	90.00	179.79	7,080.00	-3,556.44	-495.21	3,554.60	0.00	0.00	0.00	
10,900.00	90.00	179.79	7,080.00	-3,656.44	-494.84	3,654.60	0.00	0.00	0.00	
11,000.00	90.00	179.79	7,080.00	-3,756.44	-494.48	3,754.60	0.00	0.00	0.00	
11,100.00	90.00	179.79	7,080.00	-3,856.44	-494.12	3,854.60	0.00	0.00	0.00	
11,200.00	90.00	179.79	7,080.00	-3,956.44	-493.76	3,954.60	0.00	0.00	0.00	
11,300.00	90.00	179.79	7,080.00	-4,056.44	-493.40	4,054.60	0.00	0.00	0.00	
11,400.00	90.00	179.79	7,080.00	-4,156.44	-493.04	4,154.60	0.00	0.00	0.00	
11,500.00	90.00	179.79	7,080.00	-4,256.44	-492.67	4,254.60	0.00	0.00	0.00	
11,600.00	90.00	179.79	7,080.00	-4,356.43	-492.31	4,354.60	0.00	0.00	0.00	
11,700.00	90.00	179.79	7,080.00	-4,456.43	-491.95	4,454.60	0.00	0.00	0.00	
11,800.00	90.00	179.79	7,080.00	-4,556.43	-491.59	4,554.60	0.00	0.00	0.00	
11,900.00	90.00	179.79	7,080.00	-4,656.43	-491.23	4,654.60	0.00	0.00	0.00	
12,000.00	90.00	179.79	7,080.00	-4,756.43	-490.86	4,754.60	0.00	0.00	0.00	
12,100.00	90.00	179.79	7,080.00	-4,856.43	-490.50	4,854.60	0.00	0.00	0.00	
12,200.00	90.00	179.79	7,080.00	-4,956.43	-490.14	4,954.60	0.00	0.00	0.00	
12,294.60	90.00	179.79	7,080.00	-5,051.03	-489.80	5,049.20	0.00	0.00	0.00	
TD Well @ 12294.60ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
1,704.93	1,700.00	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)		
650.00	650.00	0.00	0.00	Begin Nudge @ 650.00ft	
959.00	958.40	11.01	-12.49	Hold Tangent @ 959.00ft	
6,432.50	6,400.09	400.68	-454.48	KOP @ 6432.50ft :: DLS = 9°/100'	
7,478.05	7,080.00	-234.51	-507.23	End Build @ 7478.05ft	
12,294.60	7,080.00	-5,051.03	-489.80	TD Well @ 12294.60ft	