

VERDAD RESOURCES

**WATTENBERG FIELD
2N-64W-28 GEORGENE PAD
GEORGENE 2833-03H**

Wellbore #1

Plan: Design #3

Standard Planning Report

17 September, 2020

Project: WATTENBERG FIELD
Site: 2N-64W-28 GEORGENE PAD
Well: GEORGENE 2833-03H
Wellbore: Wellbore #1
Design: Design #3

VERDAD RESOURCES

CASING DETAILS

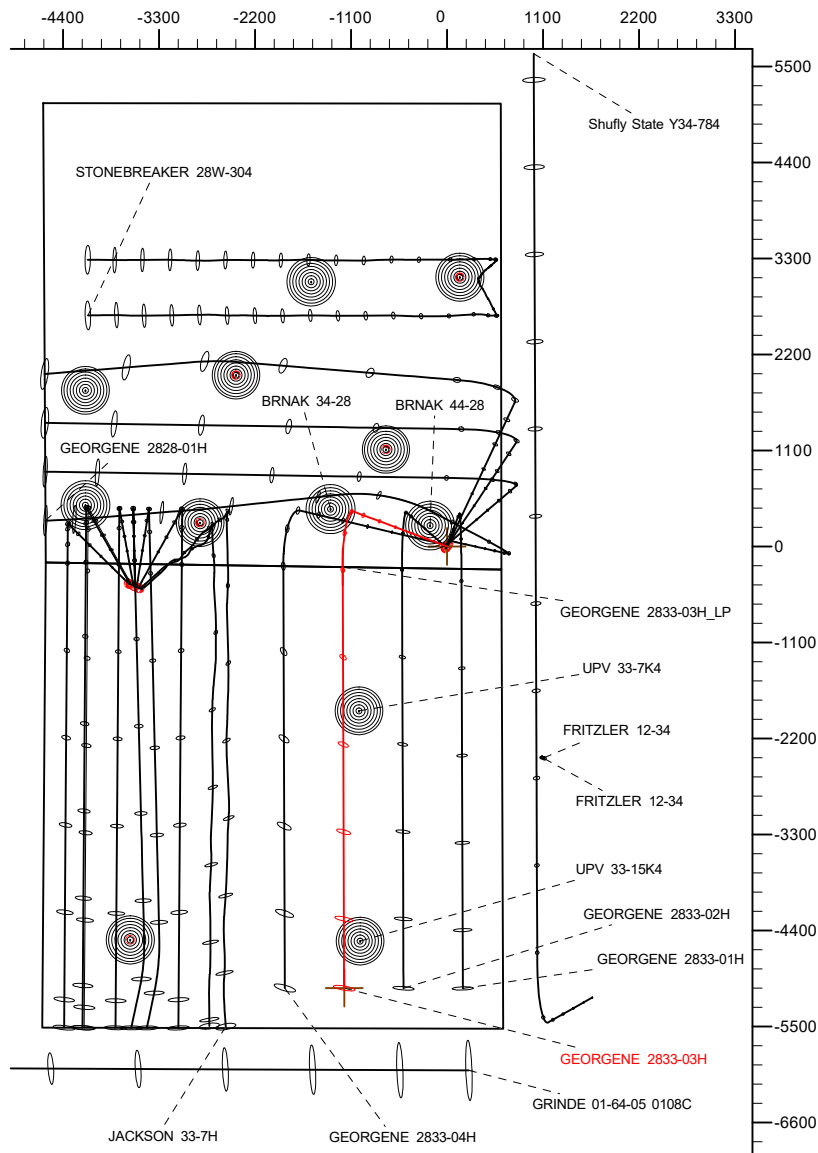
TVD	MD	Name	Size
1700.00	1718.26	9 5/8"	9-5/8

SHL
255' FSL
624' FEL

LP
0' FNL
1820' FEL

BHL
461' FSL
1820' FEL

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

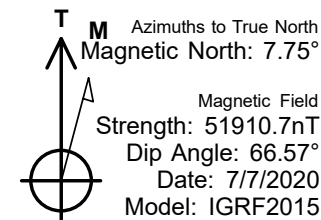
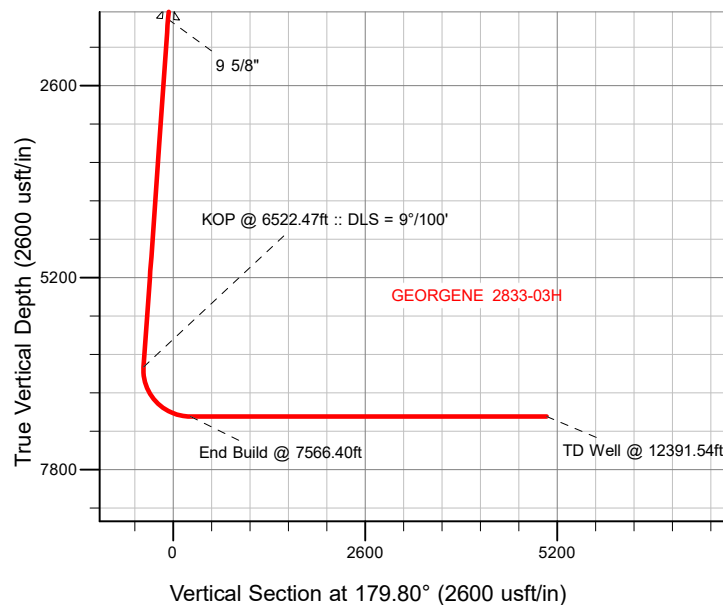


SECTION DETAILS

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	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	
965.00	11.30	290.40	961.34	19.36	-52.05	2.00	290.40	-19.54	
6522.47	11.30	290.40	6411.08	398.94	-1072.72	0.00	0.00	-402.68	
7566.40	90.00	179.80	7080.00	-236.61	-1195.57	9.00	-110.24	232.43	
12391.54	90.00	179.80	7080.00	-5061.71	-1178.38	0.00	0.00	5057.57	GEORGENE 2833-03H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
GEORGENE 2833-03H_SHL	0.00	0.00	0.00	40.102784	-104.548998
GEORGENE 2833-03H_BHL	7080.00	-5061.71	-1178.38	40.088889	-104.553209



WELL DETAILS: GEORGENE 2833-03H

GL = 5017'

RKB = 24' @ 5041.00usft (RIG)

Plan: Design #3 (GEORGENE 2833-03H/Wellbore #1)

Date: 9/17/2020

HP

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well GEORGENE 2833-03H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5041.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5041.00usft (RIG)
Site:	2N-64W-28 GEORGENE PAD	North Reference:	True
Well:	GEORGENE 2833-03H	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 2833-03H			
Well Position	+N/-S	0.00 usft	Northing:	1,281,715.12 usft
	+E/-W	0.00 usft	Easting:	3,266,020.09 usft
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft
Grid Convergence:		0.61 °	Ground Level:	5,017.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	7/7/2020	7.75	66.57	51,910.67889980

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	179.80

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	12,391.54	Design #3 (Wellbore #1)	ISCWSA MWD	
				Fixed:v2:standard declination	

HP

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Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5041.00usft (RIG)
Site:	2N-64W-28 GEORGENE PAD	North Reference:	True
Well:	GEORGENE 2833-03H	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	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
965.00	11.30	290.40	961.34	19.36	-52.05	2.00	2.00	0.00	290.40	
6,522.47	11.30	290.40	6,411.08	398.94	-1,072.72	0.00	0.00	0.00	0.00	
7,566.40	90.00	179.80	7,080.00	-236.61	-1,195.57	9.00	7.54	-10.59	-110.24	
12,391.54	90.00	179.80	7,080.00	-5,061.71	-1,178.38	0.00	0.00	0.00	0.00	GEORGENE 2833-03

HP

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well GEORGENE 2833-03H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5041.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5041.00usft (RIG)
Site:	2N-64W-28 GEORGENE PAD	North Reference:	True
Well:	GEORGENE 2833-03H	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
Begin Nudge @ 400.00ft									
500.00	2.00	290.40	499.98	0.61	-1.64	-0.61	2.00	2.00	0.00
600.00	4.00	290.40	599.84	2.43	-6.54	-2.46	2.00	2.00	0.00
700.00	6.00	290.40	699.45	5.47	-14.71	-5.52	2.00	2.00	0.00
800.00	8.00	290.40	798.70	9.72	-26.13	-9.81	2.00	2.00	0.00
900.00	10.00	290.40	897.47	15.17	-40.79	-15.31	2.00	2.00	0.00
965.00	11.30	290.40	961.34	19.36	-52.05	-19.54	2.00	2.00	0.00
Hold Tangent @ 965.00ft									
1,000.00	11.30	290.40	995.67	21.75	-58.48	-21.95	0.00	0.00	0.00
1,100.00	11.30	290.40	1,093.73	28.58	-76.85	-28.85	0.00	0.00	0.00
1,200.00	11.30	290.40	1,191.79	35.41	-95.21	-35.74	0.00	0.00	0.00
1,300.00	11.30	290.40	1,289.85	42.24	-113.58	-42.64	0.00	0.00	0.00
1,400.00	11.30	290.40	1,387.91	49.07	-131.94	-49.53	0.00	0.00	0.00
1,500.00	11.30	290.40	1,485.97	55.90	-150.31	-56.42	0.00	0.00	0.00
1,600.00	11.30	290.40	1,584.03	62.73	-168.67	-63.32	0.00	0.00	0.00
1,700.00	11.30	290.40	1,682.10	69.56	-187.04	-70.21	0.00	0.00	0.00
1,718.26	11.30	290.40	1,700.00	70.81	-190.39	-71.47	0.00	0.00	0.00
9 5/8"									
1,800.00	11.30	290.40	1,780.16	76.39	-205.41	-77.11	0.00	0.00	0.00
1,900.00	11.30	290.40	1,878.22	83.22	-223.77	-84.00	0.00	0.00	0.00
2,000.00	11.30	290.40	1,976.28	90.05	-242.14	-90.89	0.00	0.00	0.00
2,100.00	11.30	290.40	2,074.34	96.88	-260.50	-97.79	0.00	0.00	0.00
2,200.00	11.30	290.40	2,172.40	103.71	-278.87	-104.68	0.00	0.00	0.00
2,300.00	11.30	290.40	2,270.46	110.54	-297.23	-111.58	0.00	0.00	0.00
2,400.00	11.30	290.40	2,368.53	117.37	-315.60	-118.47	0.00	0.00	0.00
2,500.00	11.30	290.40	2,466.59	124.20	-333.97	-125.37	0.00	0.00	0.00
2,600.00	11.30	290.40	2,564.65	131.03	-352.33	-132.26	0.00	0.00	0.00
2,700.00	11.30	290.40	2,662.71	137.86	-370.70	-139.15	0.00	0.00	0.00
2,800.00	11.30	290.40	2,760.77	144.69	-389.06	-146.05	0.00	0.00	0.00
2,900.00	11.30	290.40	2,858.83	151.52	-407.43	-152.94	0.00	0.00	0.00
3,000.00	11.30	290.40	2,956.90	158.35	-425.79	-159.84	0.00	0.00	0.00
3,100.00	11.30	290.40	3,054.96	165.18	-444.16	-166.73	0.00	0.00	0.00
3,200.00	11.30	290.40	3,153.02	172.01	-462.52	-173.62	0.00	0.00	0.00
3,300.00	11.30	290.40	3,251.08	178.84	-480.89	-180.52	0.00	0.00	0.00
3,400.00	11.30	290.40	3,349.14	185.67	-499.26	-187.41	0.00	0.00	0.00
3,500.00	11.30	290.40	3,447.20	192.50	-517.62	-194.31	0.00	0.00	0.00
3,600.00	11.30	290.40	3,545.26	199.33	-535.99	-201.20	0.00	0.00	0.00
3,700.00	11.30	290.40	3,643.33	206.16	-554.35	-208.10	0.00	0.00	0.00
3,800.00	11.30	290.40	3,741.39	212.99	-572.72	-214.99	0.00	0.00	0.00
3,900.00	11.30	290.40	3,839.45	219.82	-591.08	-221.88	0.00	0.00	0.00
4,000.00	11.30	290.40	3,937.51	226.65	-609.45	-228.78	0.00	0.00	0.00
4,100.00	11.30	290.40	4,035.57	233.48	-627.82	-235.67	0.00	0.00	0.00
4,200.00	11.30	290.40	4,133.63	240.31	-646.18	-242.57	0.00	0.00	0.00
4,300.00	11.30	290.40	4,231.69	247.14	-664.55	-249.46	0.00	0.00	0.00
4,400.00	11.30	290.40	4,329.76	253.97	-682.91	-256.36	0.00	0.00	0.00
4,500.00	11.30	290.40	4,427.82	260.80	-701.28	-263.25	0.00	0.00	0.00
4,600.00	11.30	290.40	4,525.88	267.63	-719.64	-270.14	0.00	0.00	0.00
4,700.00	11.30	290.40	4,623.94	274.46	-738.01	-277.04	0.00	0.00	0.00

HP

Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5041.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5041.00usft (RIG)
Site:	2N-64W-28 GEORGENE PAD	North Reference:	True
Well:	GEORGENE 2833-03H	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)
4,800.00	11.30	290.40	4,722.00	281.29	-756.38	-283.93	0.00	0.00	0.00
4,900.00	11.30	290.40	4,820.06	288.12	-774.74	-290.83	0.00	0.00	0.00
5,000.00	11.30	290.40	4,918.12	294.95	-793.11	-297.72	0.00	0.00	0.00
5,100.00	11.30	290.40	5,016.19	301.78	-811.47	-304.61	0.00	0.00	0.00
5,200.00	11.30	290.40	5,114.25	308.61	-829.84	-311.51	0.00	0.00	0.00
5,300.00	11.30	290.40	5,212.31	315.44	-848.20	-318.40	0.00	0.00	0.00
5,400.00	11.30	290.40	5,310.37	322.27	-866.57	-325.30	0.00	0.00	0.00
5,500.00	11.30	290.40	5,408.43	329.10	-884.94	-332.19	0.00	0.00	0.00
5,600.00	11.30	290.40	5,506.49	335.93	-903.30	-339.09	0.00	0.00	0.00
5,700.00	11.30	290.40	5,604.55	342.76	-921.67	-345.98	0.00	0.00	0.00
5,800.00	11.30	290.40	5,702.62	349.59	-940.03	-352.87	0.00	0.00	0.00
5,900.00	11.30	290.40	5,800.68	356.43	-958.40	-359.77	0.00	0.00	0.00
6,000.00	11.30	290.40	5,898.74	363.26	-976.76	-366.66	0.00	0.00	0.00
6,100.00	11.30	290.40	5,996.80	370.09	-995.13	-373.56	0.00	0.00	0.00
6,200.00	11.30	290.40	6,094.86	376.92	-1,013.50	-380.45	0.00	0.00	0.00
6,300.00	11.30	290.40	6,192.92	383.75	-1,031.86	-387.35	0.00	0.00	0.00
6,400.00	11.30	290.40	6,290.99	390.58	-1,050.23	-394.24	0.00	0.00	0.00
6,500.00	11.30	290.40	6,389.05	397.41	-1,068.59	-401.13	0.00	0.00	0.00
6,522.47	11.30	290.40	6,411.08	398.94	-1,072.72	-402.68	0.00	0.00	0.00
KOP @ 6522.47ft :: DLS = 9°/100'									
6,600.00	11.01	253.77	6,487.24	399.52	-1,086.97	-403.31	9.00	-0.37	-47.25
6,700.00	15.97	220.60	6,584.59	386.37	-1,105.13	-390.23	9.00	4.96	-33.17
6,800.00	23.43	205.36	6,678.73	357.90	-1,122.63	-361.82	9.00	7.46	-15.24
6,900.00	31.67	197.44	6,767.34	314.80	-1,139.05	-318.77	9.00	8.24	-7.92
7,000.00	40.21	192.58	6,848.24	258.13	-1,153.98	-262.15	9.00	8.54	-4.87
7,100.00	48.90	189.19	6,919.44	189.28	-1,167.06	-193.36	9.00	8.68	-3.39
7,200.00	57.66	186.60	6,979.19	109.97	-1,177.95	-114.08	9.00	8.76	-2.59
7,300.00	66.46	184.47	7,026.00	22.12	-1,186.39	-26.27	9.00	8.80	-2.13
7,400.00	75.28	182.61	7,058.74	-72.08	-1,192.18	67.92	9.00	8.83	-1.86
7,500.00	84.13	180.90	7,076.60	-170.32	-1,195.17	166.15	9.00	8.84	-1.71
7,566.40	90.00	179.80	7,080.00	-236.61	-1,195.57	232.43	9.00	8.85	-1.66
End Build @ 7566.40ft									
7,600.00	90.00	179.80	7,080.00	-270.20	-1,195.45	266.03	0.00	0.00	0.00
7,700.00	90.00	179.80	7,080.00	-370.20	-1,195.09	366.03	0.00	0.00	0.00
7,800.00	90.00	179.80	7,080.00	-470.20	-1,194.74	466.03	0.00	0.00	0.00
7,900.00	90.00	179.80	7,080.00	-570.20	-1,194.38	566.03	0.00	0.00	0.00
8,000.00	90.00	179.80	7,080.00	-670.20	-1,194.03	666.03	0.00	0.00	0.00
8,100.00	90.00	179.80	7,080.00	-770.20	-1,193.67	766.03	0.00	0.00	0.00
8,200.00	90.00	179.80	7,080.00	-870.20	-1,193.31	866.03	0.00	0.00	0.00
8,300.00	90.00	179.80	7,080.00	-970.20	-1,192.96	966.03	0.00	0.00	0.00
8,400.00	90.00	179.80	7,080.00	-1,070.20	-1,192.60	1,066.03	0.00	0.00	0.00
8,500.00	90.00	179.80	7,080.00	-1,170.20	-1,192.24	1,166.03	0.00	0.00	0.00
8,600.00	90.00	179.80	7,080.00	-1,270.20	-1,191.89	1,266.03	0.00	0.00	0.00
8,700.00	90.00	179.80	7,080.00	-1,370.20	-1,191.53	1,366.03	0.00	0.00	0.00
8,800.00	90.00	179.80	7,080.00	-1,470.19	-1,191.18	1,466.03	0.00	0.00	0.00
8,900.00	90.00	179.80	7,080.00	-1,570.19	-1,190.82	1,566.03	0.00	0.00	0.00
9,000.00	90.00	179.80	7,080.00	-1,670.19	-1,190.46	1,666.03	0.00	0.00	0.00
9,100.00	90.00	179.80	7,080.00	-1,770.19	-1,190.11	1,766.03	0.00	0.00	0.00
9,200.00	90.00	179.80	7,080.00	-1,870.19	-1,189.75	1,866.03	0.00	0.00	0.00
9,300.00	90.00	179.80	7,080.00	-1,970.19	-1,189.40	1,966.03	0.00	0.00	0.00
9,400.00	90.00	179.80	7,080.00	-2,070.19	-1,189.04	2,066.03	0.00	0.00	0.00
9,500.00	90.00	179.80	7,080.00	-2,170.19	-1,188.68	2,166.03	0.00	0.00	0.00
9,600.00	90.00	179.80	7,080.00	-2,270.19	-1,188.33	2,266.03	0.00	0.00	0.00
9,700.00	90.00	179.80	7,080.00	-2,370.19	-1,187.97	2,366.03	0.00	0.00	0.00

HP

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well GEORGENE 2833-03H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5041.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5041.00usft (RIG)
Site:	2N-64W-28 GEORGENE PAD	North Reference:	True
Well:	GEORGENE 2833-03H	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)	
9,800.00	90.00	179.80	7,080.00	-2,470.19	-1,187.61	2,466.03	0.00	0.00	0.00	
9,900.00	90.00	179.80	7,080.00	-2,570.19	-1,187.26	2,566.03	0.00	0.00	0.00	
10,000.00	90.00	179.80	7,080.00	-2,670.19	-1,186.90	2,666.03	0.00	0.00	0.00	
10,100.00	90.00	179.80	7,080.00	-2,770.19	-1,186.55	2,766.03	0.00	0.00	0.00	
10,200.00	90.00	179.80	7,080.00	-2,870.19	-1,186.19	2,866.03	0.00	0.00	0.00	
10,300.00	90.00	179.80	7,080.00	-2,970.19	-1,185.83	2,966.03	0.00	0.00	0.00	
10,400.00	90.00	179.80	7,080.00	-3,070.18	-1,185.48	3,066.03	0.00	0.00	0.00	
10,500.00	90.00	179.80	7,080.00	-3,170.18	-1,185.12	3,166.03	0.00	0.00	0.00	
10,600.00	90.00	179.80	7,080.00	-3,270.18	-1,184.77	3,266.03	0.00	0.00	0.00	
10,700.00	90.00	179.80	7,080.00	-3,370.18	-1,184.41	3,366.03	0.00	0.00	0.00	
10,800.00	90.00	179.80	7,080.00	-3,470.18	-1,184.05	3,466.03	0.00	0.00	0.00	
10,900.00	90.00	179.80	7,080.00	-3,570.18	-1,183.70	3,566.03	0.00	0.00	0.00	
11,000.00	90.00	179.80	7,080.00	-3,670.18	-1,183.34	3,666.03	0.00	0.00	0.00	
11,100.00	90.00	179.80	7,080.00	-3,770.18	-1,182.98	3,766.03	0.00	0.00	0.00	
11,200.00	90.00	179.80	7,080.00	-3,870.18	-1,182.63	3,866.03	0.00	0.00	0.00	
11,300.00	90.00	179.80	7,080.00	-3,970.18	-1,182.27	3,966.03	0.00	0.00	0.00	
11,400.00	90.00	179.80	7,080.00	-4,070.18	-1,181.92	4,066.03	0.00	0.00	0.00	
11,500.00	90.00	179.80	7,080.00	-4,170.18	-1,181.56	4,166.03	0.00	0.00	0.00	
11,600.00	90.00	179.80	7,080.00	-4,270.18	-1,181.20	4,266.03	0.00	0.00	0.00	
11,700.00	90.00	179.80	7,080.00	-4,370.18	-1,180.85	4,366.03	0.00	0.00	0.00	
11,800.00	90.00	179.80	7,080.00	-4,470.18	-1,180.49	4,466.03	0.00	0.00	0.00	
11,900.00	90.00	179.80	7,080.00	-4,570.18	-1,180.14	4,566.03	0.00	0.00	0.00	
12,000.00	90.00	179.80	7,080.00	-4,670.17	-1,179.78	4,666.03	0.00	0.00	0.00	
12,100.00	90.00	179.80	7,080.00	-4,770.17	-1,179.42	4,766.03	0.00	0.00	0.00	
12,200.00	90.00	179.80	7,080.00	-4,870.17	-1,179.07	4,866.03	0.00	0.00	0.00	
12,300.00	90.00	179.80	7,080.00	-4,970.17	-1,178.71	4,966.03	0.00	0.00	0.00	
12,391.54	90.00	179.80	7,080.00	-5,061.71	-1,178.38	5,057.57	0.00	0.00	0.00	
TD Well @ 12391.54ft										

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,718.26	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)	
400.00	400.00	0.00	0.00	Begin Nudge @ 400.00ft
965.00	961.34	19.36	-52.05	Hold Tangent @ 965.00ft
6,522.47	6,411.08	398.94	-1,072.72	KOP @ 6522.47ft :: DLS = 9°/100'
7,566.40	7,080.00	-236.61	-1,195.57	End Build @ 7566.40ft
12,391.54	7,080.00	-5,061.71	-1,178.38	TD Well @ 12391.54ft