

VERDAD RESOURCES

**WATTENBERG FIELD
2N-64W-28 GEORGENE PAD
GEORGENE 2828-03H**

Wellbore #1

Plan: Design #2

Standard Planning Report

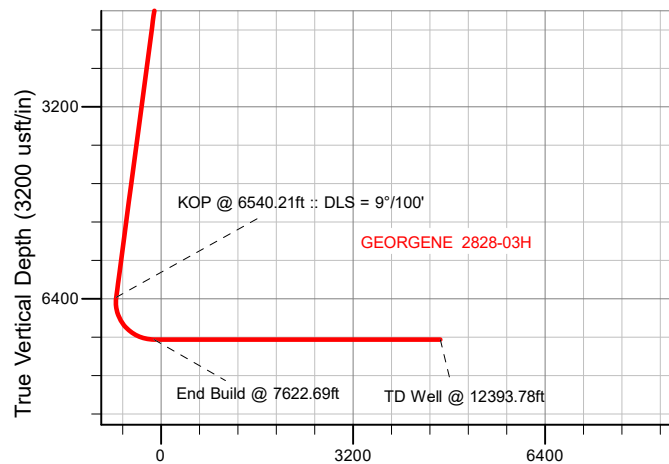
09 July, 2020

Project: WATTENBERG FIELD
Site: 2N-64W-28 GEORGENE PAD
Well: GEORGENE 2828-03H
Wellbore: Wellbore #1
Design: Design #2

VERDAD RESOURCES

CASING DETAILS

TVD	MD	Name	Size
1700.00	1725.01	9 5/8"	9-5/8



SHL
292' FSL
598' FEL

LP
1600' FSL
460' FEL

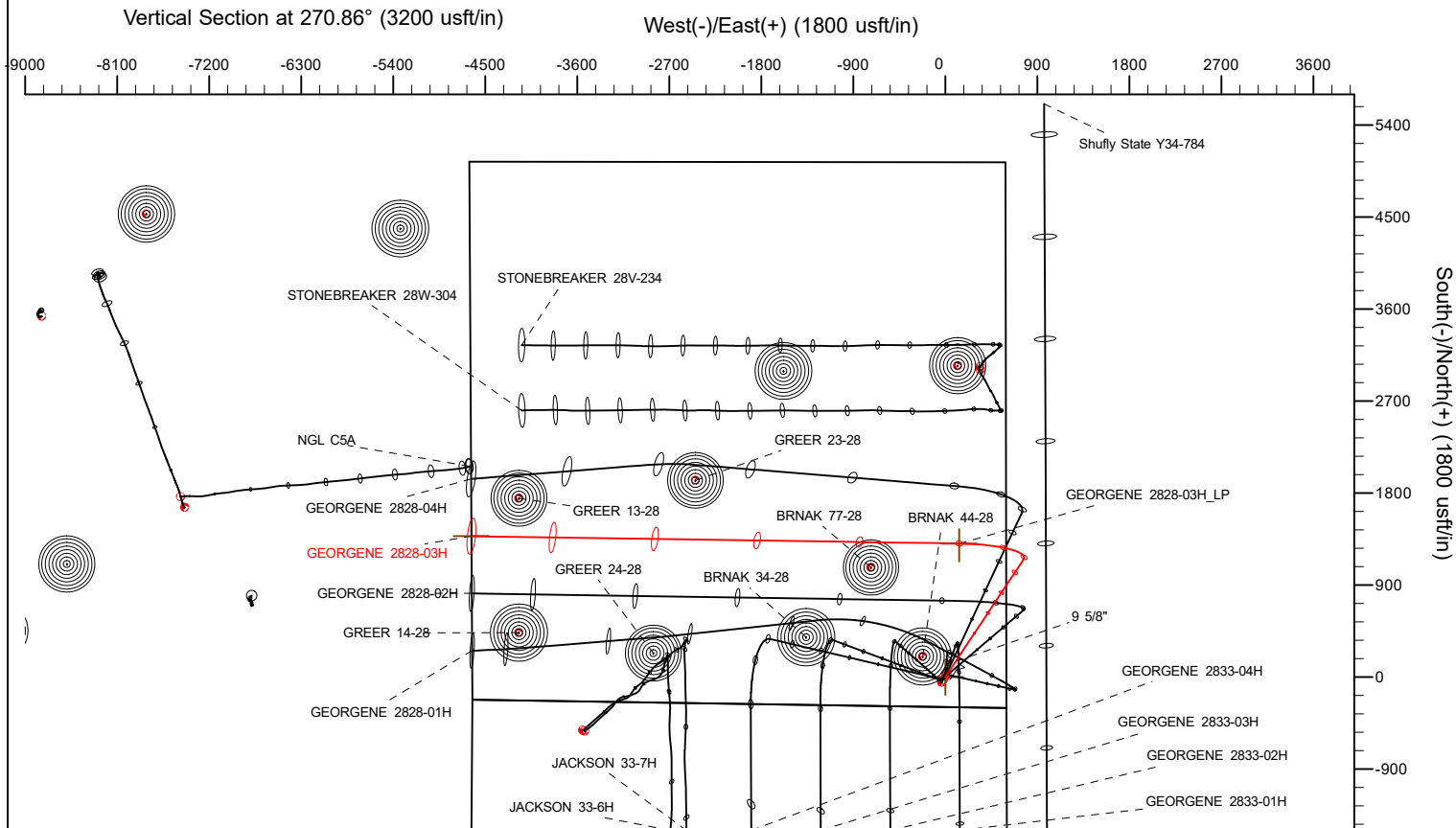
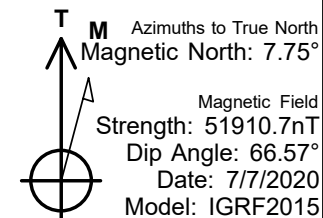
BHL
1600' FSL
0' FWL

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	
3	1090.50	13.81	33.63	1083.83	68.95	45.86	2.00	33.63	-44.82	
4	6540.21	13.81	33.63	6376.01	1152.09	766.32	0.00	0.00	-748.94	
5	7622.69	90.00	270.86	7080.00	1307.07	137.29	9.00	-122.01	-117.66	
6	12393.78	90.00	270.86	7080.00	1378.79	-4633.26	0.00	0.00	4653.43	GEORGENE 2828-03H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
GEORGENE 2828-03H_SHL	0.00	0.00	0.00	40.102885	-104.548906
GEORGENE 2828-03H_BHL	7080.00	1378.79	-4633.26	40.106669	-104.565470



WELL DETAILS: GEORGENE 2828-03H

GL = 5016'

RKB = 24' @ 5040.00usft (RIG)

Plan: Design #2 (GEORGENE 2828-03H/Wellbore #1)

Date: 7/08/2020

HP

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well GEORGENE 2828-03H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5040.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5040.00usft (RIG)
Site:	2N-64W-28 GEORGENE PAD	North Reference:	True
Well:	GEORGENE 2828-03H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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 2828-03H			
Well Position	+N/-S	0.00 usft	Northing:	1,281,752.30 usft
	+E/-W	0.00 usft	Easting:	3,266,045.43 usft
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft
Grid Convergence:		0.61 °	Ground Level:	5,016.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	7/7/2020	7.75	66.57	51,910.74893496

Design	Design #2				
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	270.86	

Plan Survey Tool Program	Date	7/9/2020			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	1,700.00	Design #2 (Wellbore #1)	ISCWSA MWD	
				Fixed:v2:standard declination	
2	1,700.00	12,393.78	Design #2 (Wellbore #1)	ISCWSA MWD	
				Fixed:v2:standard declination	

HP

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Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5040.00usft (RIG)
Site:	2N-64W-28 GEORGENE PAD	North Reference:	True
Well:	GEORGENE 2828-03H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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	
1,090.50	13.81	33.63	1,083.83	68.95	45.86	2.00	2.00	0.00	33.63	
6,540.21	13.81	33.63	6,376.01	1,152.09	766.32	0.00	0.00	0.00	0.00	
7,622.69	90.00	270.86	7,080.00	1,307.07	137.29	9.00	7.04	-11.34	-122.01	
12,393.78	90.00	270.86	7,080.00	1,378.79	-4,633.26	0.00	0.00	0.00	0.00	GEORGENE 2828-03

HP

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well GEORGENE 2828-03H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5040.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5040.00usft (RIG)
Site:	2N-64W-28 GEORGENE PAD	North Reference:	True
Well:	GEORGENE 2828-03H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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	33.63	499.98	1.45	0.97	-0.94	2.00	2.00	0.00
600.00	4.00	33.63	599.84	5.81	3.86	-3.78	2.00	2.00	0.00
700.00	6.00	33.63	699.45	13.07	8.69	-8.49	2.00	2.00	0.00
800.00	8.00	33.63	798.70	23.21	15.44	-15.09	2.00	2.00	0.00
900.00	10.00	33.63	897.47	36.24	24.10	-23.56	2.00	2.00	0.00
1,000.00	12.00	33.63	995.62	52.12	34.67	-33.88	2.00	2.00	0.00
1,090.50	13.81	33.63	1,083.83	68.95	45.86	-44.82	2.00	2.00	0.00
Hold Tangent @ 1090.50ft									
1,100.00	13.81	33.63	1,093.06	70.84	47.12	-46.05	0.00	0.00	0.00
1,200.00	13.81	33.63	1,190.17	90.72	60.34	-58.97	0.00	0.00	0.00
1,300.00	13.81	33.63	1,287.28	110.59	73.56	-71.89	0.00	0.00	0.00
1,400.00	13.81	33.63	1,384.39	130.47	86.78	-84.81	0.00	0.00	0.00
1,500.00	13.81	33.63	1,481.50	150.34	100.00	-97.73	0.00	0.00	0.00
1,600.00	13.81	33.63	1,578.61	170.22	113.22	-110.65	0.00	0.00	0.00
1,700.00	13.81	33.63	1,675.71	190.09	126.44	-123.57	0.00	0.00	0.00
1,725.01	13.81	33.63	1,700.00	195.06	129.75	-126.80	0.00	0.00	0.00
9 5/8"									
1,800.00	13.81	33.63	1,772.82	209.97	139.66	-136.49	0.00	0.00	0.00
1,900.00	13.81	33.63	1,869.93	229.84	152.88	-149.41	0.00	0.00	0.00
2,000.00	13.81	33.63	1,967.04	249.72	166.10	-162.33	0.00	0.00	0.00
2,100.00	13.81	33.63	2,064.15	269.59	179.32	-175.25	0.00	0.00	0.00
2,200.00	13.81	33.63	2,161.26	289.47	192.54	-188.17	0.00	0.00	0.00
2,300.00	13.81	33.63	2,258.37	309.34	205.76	-201.09	0.00	0.00	0.00
2,400.00	13.81	33.63	2,355.48	329.22	218.98	-214.01	0.00	0.00	0.00
2,500.00	13.81	33.63	2,452.59	349.09	232.20	-226.93	0.00	0.00	0.00
2,600.00	13.81	33.63	2,549.70	368.97	245.42	-239.86	0.00	0.00	0.00
2,700.00	13.81	33.63	2,646.81	388.84	258.64	-252.78	0.00	0.00	0.00
2,800.00	13.81	33.63	2,743.92	408.72	271.86	-265.70	0.00	0.00	0.00
2,900.00	13.81	33.63	2,841.03	428.59	285.08	-278.62	0.00	0.00	0.00
3,000.00	13.81	33.63	2,938.14	448.47	298.30	-291.54	0.00	0.00	0.00
3,100.00	13.81	33.63	3,035.24	468.34	311.52	-304.46	0.00	0.00	0.00
3,200.00	13.81	33.63	3,132.35	488.22	324.74	-317.38	0.00	0.00	0.00
3,300.00	13.81	33.63	3,229.46	508.09	337.96	-330.30	0.00	0.00	0.00
3,400.00	13.81	33.63	3,326.57	527.97	351.18	-343.22	0.00	0.00	0.00
3,500.00	13.81	33.63	3,423.68	547.85	364.40	-356.14	0.00	0.00	0.00
3,600.00	13.81	33.63	3,520.79	567.72	377.62	-369.06	0.00	0.00	0.00
3,700.00	13.81	33.63	3,617.90	587.60	390.84	-381.98	0.00	0.00	0.00
3,800.00	13.81	33.63	3,715.01	607.47	404.06	-394.90	0.00	0.00	0.00
3,900.00	13.81	33.63	3,812.12	627.35	417.28	-407.82	0.00	0.00	0.00
4,000.00	13.81	33.63	3,909.23	647.22	430.50	-420.74	0.00	0.00	0.00
4,100.00	13.81	33.63	4,006.34	667.10	443.72	-433.66	0.00	0.00	0.00
4,200.00	13.81	33.63	4,103.45	686.97	456.94	-446.58	0.00	0.00	0.00
4,300.00	13.81	33.63	4,200.56	706.85	470.16	-459.50	0.00	0.00	0.00
4,400.00	13.81	33.63	4,297.66	726.72	483.38	-472.42	0.00	0.00	0.00
4,500.00	13.81	33.63	4,394.77	746.60	496.60	-485.34	0.00	0.00	0.00
4,600.00	13.81	33.63	4,491.88	766.47	509.82	-498.26	0.00	0.00	0.00
4,700.00	13.81	33.63	4,588.99	786.35	523.04	-511.18	0.00	0.00	0.00

HP

Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5040.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5040.00usft (RIG)
Site:	2N-64W-28 GEORGENE PAD	North Reference:	True
Well:	GEORGENE 2828-03H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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	13.81	33.63	4,686.10	806.22	536.26	-524.10	0.00	0.00	0.00
4,900.00	13.81	33.63	4,783.21	826.10	549.48	-537.02	0.00	0.00	0.00
5,000.00	13.81	33.63	4,880.32	845.97	562.70	-549.94	0.00	0.00	0.00
5,100.00	13.81	33.63	4,977.43	865.85	575.92	-562.86	0.00	0.00	0.00
5,200.00	13.81	33.63	5,074.54	885.72	589.14	-575.78	0.00	0.00	0.00
5,300.00	13.81	33.63	5,171.65	905.60	602.36	-588.70	0.00	0.00	0.00
5,400.00	13.81	33.63	5,268.76	925.47	615.58	-601.62	0.00	0.00	0.00
5,500.00	13.81	33.63	5,365.87	945.35	628.80	-614.54	0.00	0.00	0.00
5,600.00	13.81	33.63	5,462.98	965.22	642.02	-627.46	0.00	0.00	0.00
5,700.00	13.81	33.63	5,560.09	985.10	655.24	-640.38	0.00	0.00	0.00
5,800.00	13.81	33.63	5,657.19	1,004.97	668.46	-653.30	0.00	0.00	0.00
5,900.00	13.81	33.63	5,754.30	1,024.85	681.68	-666.22	0.00	0.00	0.00
6,000.00	13.81	33.63	5,851.41	1,044.72	694.90	-679.14	0.00	0.00	0.00
6,100.00	13.81	33.63	5,948.52	1,064.60	708.12	-692.06	0.00	0.00	0.00
6,200.00	13.81	33.63	6,045.63	1,084.47	721.34	-704.98	0.00	0.00	0.00
6,300.00	13.81	33.63	6,142.74	1,104.35	734.56	-717.90	0.00	0.00	0.00
6,400.00	13.81	33.63	6,239.85	1,124.22	747.78	-730.82	0.00	0.00	0.00
6,500.00	13.81	33.63	6,336.96	1,144.10	761.00	-743.74	0.00	0.00	0.00
6,540.21	13.81	33.63	6,376.01	1,152.09	766.32	-748.94	0.00	0.00	0.00
KOP @ 6540.21ft :: DLS = 9°/100'									
6,600.00	11.85	10.85	6,434.34	1,164.07	771.43	-753.87	9.00	-3.27	-38.10
6,700.00	13.57	329.77	6,532.08	1,184.34	767.45	-749.59	9.00	1.72	-41.08
6,800.00	19.68	306.15	6,627.96	1,204.45	747.91	-729.74	9.00	6.12	-23.62
6,900.00	27.40	294.37	6,719.62	1,223.92	713.28	-694.83	9.00	7.71	-11.79
7,000.00	35.68	287.59	6,804.80	1,242.26	664.42	-645.70	9.00	8.29	-6.78
7,100.00	44.22	283.13	6,881.41	1,259.03	602.54	-583.57	9.00	8.54	-4.46
7,200.00	52.88	279.86	6,947.55	1,273.80	529.15	-509.97	9.00	8.66	-3.26
7,300.00	61.61	277.27	7,001.61	1,286.23	446.06	-426.71	9.00	8.73	-2.59
7,400.00	70.39	275.08	7,042.24	1,295.99	355.33	-335.83	9.00	8.78	-2.19
7,500.00	79.19	273.12	7,068.45	1,302.85	259.17	-239.59	9.00	8.80	-1.96
7,600.00	88.00	271.27	7,079.60	1,306.65	159.97	-140.34	9.00	8.81	-1.85
7,622.69	90.00	270.86	7,080.00	1,307.07	137.29	-117.66	9.00	8.81	-1.82
End Build @ 7622.69ft									
7,700.00	90.00	270.86	7,080.00	1,308.24	59.99	-40.35	0.00	0.00	0.00
7,800.00	90.00	270.86	7,080.00	1,309.74	-40.00	59.65	0.00	0.00	0.00
7,900.00	90.00	270.86	7,080.00	1,311.24	-139.99	159.65	0.00	0.00	0.00
8,000.00	90.00	270.86	7,080.00	1,312.74	-239.97	259.65	0.00	0.00	0.00
8,100.00	90.00	270.86	7,080.00	1,314.25	-339.96	359.65	0.00	0.00	0.00
8,200.00	90.00	270.86	7,080.00	1,315.75	-439.95	459.65	0.00	0.00	0.00
8,300.00	90.00	270.86	7,080.00	1,317.25	-539.94	559.65	0.00	0.00	0.00
8,400.00	90.00	270.86	7,080.00	1,318.76	-639.93	659.65	0.00	0.00	0.00
8,500.00	90.00	270.86	7,080.00	1,320.26	-739.92	759.65	0.00	0.00	0.00
8,600.00	90.00	270.86	7,080.00	1,321.76	-839.91	859.65	0.00	0.00	0.00
8,700.00	90.00	270.86	7,080.00	1,323.27	-939.90	959.65	0.00	0.00	0.00
8,800.00	90.00	270.86	7,080.00	1,324.77	-1,039.88	1,059.65	0.00	0.00	0.00
8,900.00	90.00	270.86	7,080.00	1,326.27	-1,139.87	1,159.65	0.00	0.00	0.00
9,000.00	90.00	270.86	7,080.00	1,327.78	-1,239.86	1,259.65	0.00	0.00	0.00
9,100.00	90.00	270.86	7,080.00	1,329.28	-1,339.85	1,359.65	0.00	0.00	0.00
9,200.00	90.00	270.86	7,080.00	1,330.78	-1,439.84	1,459.65	0.00	0.00	0.00
9,300.00	90.00	270.86	7,080.00	1,332.29	-1,539.83	1,559.65	0.00	0.00	0.00
9,400.00	90.00	270.86	7,080.00	1,333.79	-1,639.82	1,659.65	0.00	0.00	0.00
9,500.00	90.00	270.86	7,080.00	1,335.29	-1,739.81	1,759.65	0.00	0.00	0.00
9,600.00	90.00	270.86	7,080.00	1,336.80	-1,839.79	1,859.65	0.00	0.00	0.00
9,700.00	90.00	270.86	7,080.00	1,338.30	-1,939.78	1,959.65	0.00	0.00	0.00

HP

Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 24' @ 5040.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5040.00usft (RIG)
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Well:	GEORGENE 2828-03H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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	270.86	7,080.00	1,339.80	-2,039.77	2,059.65	0.00	0.00	0.00	
9,900.00	90.00	270.86	7,080.00	1,341.31	-2,139.76	2,159.65	0.00	0.00	0.00	
10,000.00	90.00	270.86	7,080.00	1,342.81	-2,239.75	2,259.65	0.00	0.00	0.00	
10,100.00	90.00	270.86	7,080.00	1,344.31	-2,339.74	2,359.65	0.00	0.00	0.00	
10,200.00	90.00	270.86	7,080.00	1,345.82	-2,439.73	2,459.65	0.00	0.00	0.00	
10,300.00	90.00	270.86	7,080.00	1,347.32	-2,539.72	2,559.65	0.00	0.00	0.00	
10,400.00	90.00	270.86	7,080.00	1,348.82	-2,639.70	2,659.65	0.00	0.00	0.00	
10,500.00	90.00	270.86	7,080.00	1,350.33	-2,739.69	2,759.65	0.00	0.00	0.00	
10,600.00	90.00	270.86	7,080.00	1,351.83	-2,839.68	2,859.65	0.00	0.00	0.00	
10,700.00	90.00	270.86	7,080.00	1,353.33	-2,939.67	2,959.65	0.00	0.00	0.00	
10,800.00	90.00	270.86	7,080.00	1,354.83	-3,039.66	3,059.65	0.00	0.00	0.00	
10,900.00	90.00	270.86	7,080.00	1,356.34	-3,139.65	3,159.65	0.00	0.00	0.00	
11,000.00	90.00	270.86	7,080.00	1,357.84	-3,239.64	3,259.65	0.00	0.00	0.00	
11,100.00	90.00	270.86	7,080.00	1,359.34	-3,339.62	3,359.65	0.00	0.00	0.00	
11,200.00	90.00	270.86	7,080.00	1,360.85	-3,439.61	3,459.65	0.00	0.00	0.00	
11,300.00	90.00	270.86	7,080.00	1,362.35	-3,539.60	3,559.65	0.00	0.00	0.00	
11,400.00	90.00	270.86	7,080.00	1,363.85	-3,639.59	3,659.65	0.00	0.00	0.00	
11,500.00	90.00	270.86	7,080.00	1,365.36	-3,739.58	3,759.65	0.00	0.00	0.00	
11,600.00	90.00	270.86	7,080.00	1,366.86	-3,839.57	3,859.65	0.00	0.00	0.00	
11,700.00	90.00	270.86	7,080.00	1,368.36	-3,939.56	3,959.65	0.00	0.00	0.00	
11,800.00	90.00	270.86	7,080.00	1,369.87	-4,039.55	4,059.65	0.00	0.00	0.00	
11,900.00	90.00	270.86	7,080.00	1,371.37	-4,139.53	4,159.65	0.00	0.00	0.00	
12,000.00	90.00	270.86	7,080.00	1,372.87	-4,239.52	4,259.65	0.00	0.00	0.00	
12,100.00	90.00	270.86	7,080.00	1,374.38	-4,339.51	4,359.65	0.00	0.00	0.00	
12,200.00	90.00	270.86	7,080.00	1,375.88	-4,439.50	4,459.65	0.00	0.00	0.00	
12,300.00	90.00	270.86	7,080.00	1,377.38	-4,539.49	4,559.65	0.00	0.00	0.00	
12,393.78	90.00	270.86	7,080.00	1,378.79	-4,633.26	4,653.43	0.00	0.00	0.00	
TD Well @ 12393.78ft										

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,725.01	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
1,090.50	1,083.83	68.95	45.86	Hold Tangent @ 1090.50ft
6,540.21	6,376.01	1,152.09	766.32	KOP @ 6540.21ft :: DLS = 9°/100'
7,622.69	7,080.00	1,307.07	137.29	End Build @ 7622.69ft
12,393.78	7,080.00	1,378.79	-4,633.26	TD Well @ 12393.78ft