

VERDAD RESOURCES

**WATTENBERG FIELD
2N-64W-28 GEORGENE PAD
GEORGENE 2833-01H**

Wellbore #1

Plan: Design #3

Standard Planning Report

17 September, 2020

Project: WATTENBERG FIELD
Site: 2N-64W-28 GEORGENE PAD
Well: GEORGENE 2833-01H
Wellbore: Wellbore #1
Design: Design #3

VERDAD RESOURCES

CASING DETAILS

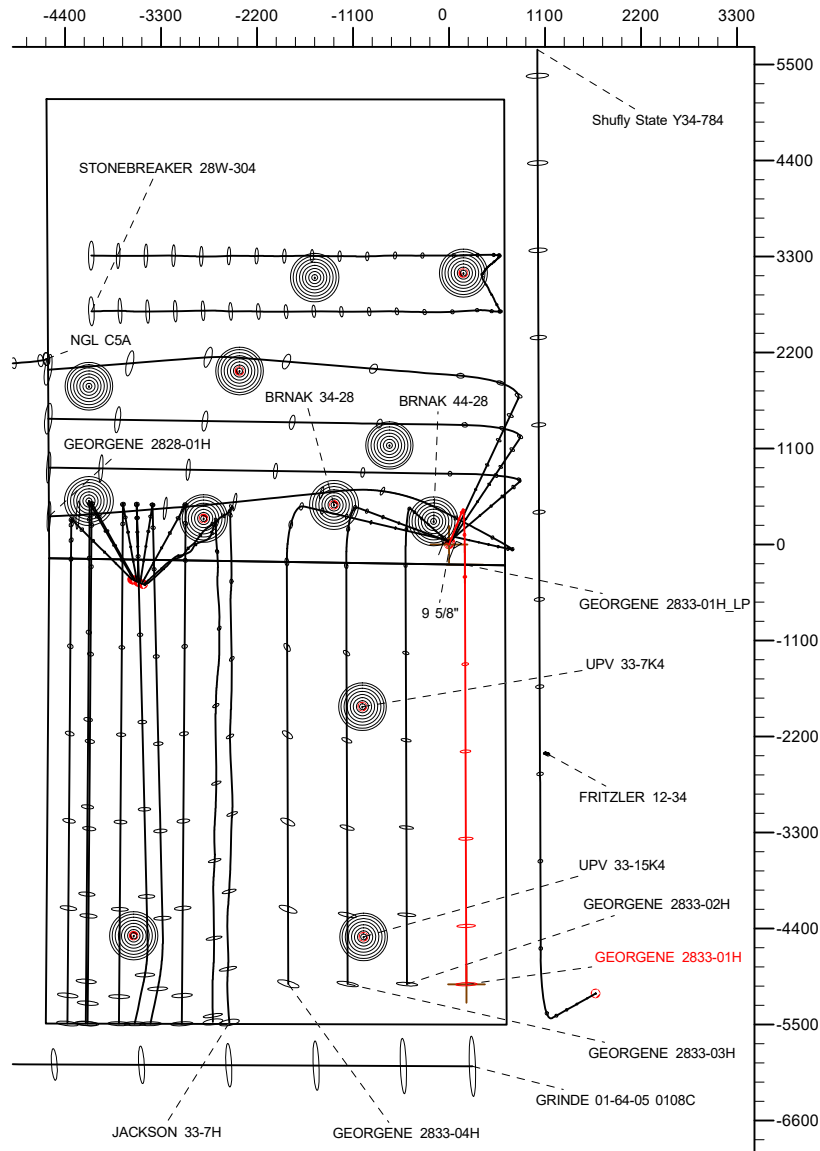
TVD	MD	Name	Size
1700.00	1702.33	9 5/8"	9-5/8

SHL
230' FSL
641' FEL

LP
0' FNL
460' FEL

BHL
461' FSL
460' FEL

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

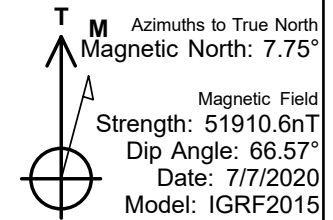
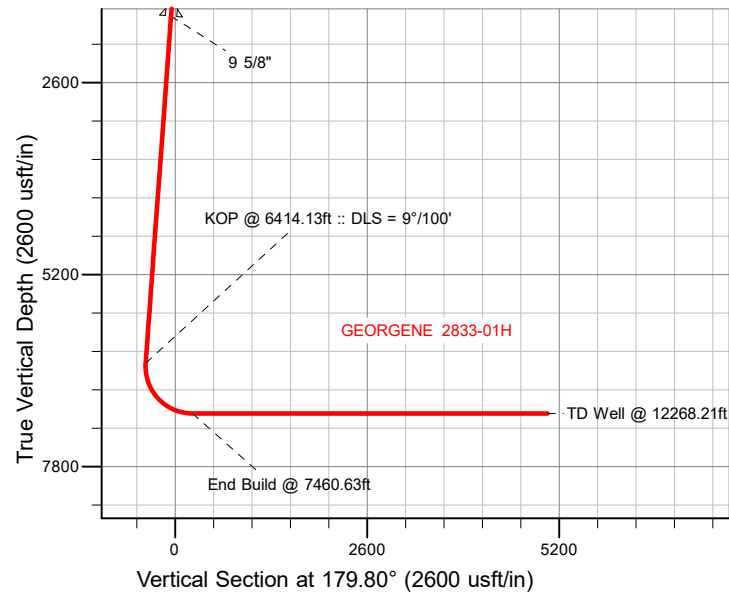


SECTION DETAILS

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	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	
1025.50	4.51	21.66	1025.27	8.24	3.27	2.00	21.66	-8.23	
6414.13	4.51	21.66	6397.21	402.05	159.67	0.00	0.00	-401.49	
7460.63	90.00	179.80	7080.00	-232.80	181.95	9.00	158.08	233.43	
12268.21	90.00	179.80	7080.00	-5040.35	198.82	0.00	0.00	5041.02	GEORGENE 2833-01H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
GEORGENE 2833-01H_SHL	0.00	0.00	0.00	40.102717	-104.549059
GEORGENE 2833-01H_BHL	7080.00	-5040.35	198.82	40.088880	-104.548348



WELL DETAILS: GEORGENE 2833-01H

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

Plan: Design #3 (GEORGENE 2833-01H/Wellbore #1)

Date: 9/17/2020

HP

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well GEORGENE 2833-01H
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 2833-01H	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 2833-01H			
Well Position	+N/-S	0.00 usft	Northing:	1,281,690.31 usft
	+E/-W	0.00 usft	Easting:	3,266,003.18 usft
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft
Grid Convergence:		0.61 °	Ground Level:	5,018.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	7/7/2020	7.75	66.57	51,910.62950321

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	12,268.22	Design #3 (Wellbore #1)	ISCWSA MWD	Fixed:v2:standard declination

HP

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Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5042.00usft (RIG)
Site:	2N-64W-28 GEORGENE PAD	North Reference:	True
Well:	GEORGENE 2833-01H	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	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,025.50	4.51	21.66	1,025.27	8.24	3.27	2.00	2.00	0.00	21.66	
6,414.13	4.51	21.66	6,397.21	402.05	159.67	0.00	0.00	0.00	0.00	
7,460.63	90.00	179.80	7,080.00	-232.80	181.95	9.00	8.17	15.11	158.08	
12,268.22	90.00	179.80	7,080.00	-5,040.35	198.82	0.00	0.00	0.00	0.00	GEORGENE 2833-01

HP

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well GEORGENE 2833-01H
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 2833-01H	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
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 800.00ft									
900.00	2.00	21.66	899.98	1.62	0.64	-1.62	2.00	2.00	0.00
1,000.00	4.00	21.66	999.84	6.49	2.58	-6.48	2.00	2.00	0.00
1,025.50	4.51	21.66	1,025.27	8.24	3.27	-8.23	2.00	2.00	0.00
Hold Tangent @ 1025.50ft									
1,100.00	4.51	21.66	1,099.54	13.69	5.44	-13.67	0.00	0.00	0.00
1,200.00	4.51	21.66	1,199.23	21.00	8.34	-20.97	0.00	0.00	0.00
1,300.00	4.51	21.66	1,298.92	28.30	11.24	-28.27	0.00	0.00	0.00
1,400.00	4.51	21.66	1,398.61	35.61	14.14	-35.56	0.00	0.00	0.00
1,500.00	4.51	21.66	1,498.30	42.92	17.05	-42.86	0.00	0.00	0.00
1,600.00	4.51	21.66	1,597.99	50.23	19.95	-50.16	0.00	0.00	0.00
1,700.00	4.51	21.66	1,697.68	57.54	22.85	-57.46	0.00	0.00	0.00
1,702.33	4.51	21.66	1,700.00	57.71	22.92	-57.63	0.00	0.00	0.00
9 5/8"									
1,800.00	4.51	21.66	1,797.37	64.85	25.75	-64.75	0.00	0.00	0.00
1,900.00	4.51	21.66	1,897.06	72.15	28.65	-72.05	0.00	0.00	0.00
2,000.00	4.51	21.66	1,996.75	79.46	31.56	-79.35	0.00	0.00	0.00
2,100.00	4.51	21.66	2,096.44	86.77	34.46	-86.65	0.00	0.00	0.00
2,200.00	4.51	21.66	2,196.13	94.08	37.36	-93.95	0.00	0.00	0.00
2,300.00	4.51	21.66	2,295.82	101.39	40.26	-101.24	0.00	0.00	0.00
2,400.00	4.51	21.66	2,395.51	108.69	43.17	-108.54	0.00	0.00	0.00
2,500.00	4.51	21.66	2,495.20	116.00	46.07	-115.84	0.00	0.00	0.00
2,600.00	4.51	21.66	2,594.89	123.31	48.97	-123.14	0.00	0.00	0.00
2,700.00	4.51	21.66	2,694.58	130.62	51.87	-130.44	0.00	0.00	0.00
2,800.00	4.51	21.66	2,794.27	137.93	54.78	-137.73	0.00	0.00	0.00
2,900.00	4.51	21.66	2,893.96	145.23	57.68	-145.03	0.00	0.00	0.00
3,000.00	4.51	21.66	2,993.65	152.54	60.58	-152.33	0.00	0.00	0.00
3,100.00	4.51	21.66	3,093.34	159.85	63.48	-159.63	0.00	0.00	0.00
3,200.00	4.51	21.66	3,193.03	167.16	66.39	-166.93	0.00	0.00	0.00
3,300.00	4.51	21.66	3,292.72	174.47	69.29	-174.22	0.00	0.00	0.00
3,400.00	4.51	21.66	3,392.41	181.77	72.19	-181.52	0.00	0.00	0.00
3,500.00	4.51	21.66	3,492.11	189.08	75.09	-188.82	0.00	0.00	0.00
3,600.00	4.51	21.66	3,591.80	196.39	77.99	-196.12	0.00	0.00	0.00
3,700.00	4.51	21.66	3,691.49	203.70	80.90	-203.42	0.00	0.00	0.00
3,800.00	4.51	21.66	3,791.18	211.01	83.80	-210.71	0.00	0.00	0.00
3,900.00	4.51	21.66	3,890.87	218.32	86.70	-218.01	0.00	0.00	0.00
4,000.00	4.51	21.66	3,990.56	225.62	89.60	-225.31	0.00	0.00	0.00
4,100.00	4.51	21.66	4,090.25	232.93	92.51	-232.61	0.00	0.00	0.00
4,200.00	4.51	21.66	4,189.94	240.24	95.41	-239.90	0.00	0.00	0.00
4,300.00	4.51	21.66	4,289.63	247.55	98.31	-247.20	0.00	0.00	0.00
4,400.00	4.51	21.66	4,389.32	254.86	101.21	-254.50	0.00	0.00	0.00
4,500.00	4.51	21.66	4,489.01	262.16	104.12	-261.80	0.00	0.00	0.00
4,600.00	4.51	21.66	4,588.70	269.47	107.02	-269.10	0.00	0.00	0.00
4,700.00	4.51	21.66	4,688.39	276.78	109.92	-276.39	0.00	0.00	0.00

HP

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Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5042.00usft (RIG)
Site:	2N-64W-28 GEORGENE PAD	North Reference:	True
Well:	GEORGENE 2833-01H	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	4.51	21.66	4,788.08	284.09	112.82	-283.69	0.00	0.00	0.00
4,900.00	4.51	21.66	4,887.77	291.40	115.72	-290.99	0.00	0.00	0.00
5,000.00	4.51	21.66	4,987.46	298.70	118.63	-298.29	0.00	0.00	0.00
5,100.00	4.51	21.66	5,087.15	306.01	121.53	-305.59	0.00	0.00	0.00
5,200.00	4.51	21.66	5,186.84	313.32	124.43	-312.88	0.00	0.00	0.00
5,300.00	4.51	21.66	5,286.53	320.63	127.33	-320.18	0.00	0.00	0.00
5,400.00	4.51	21.66	5,386.22	327.94	130.24	-327.48	0.00	0.00	0.00
5,500.00	4.51	21.66	5,485.91	335.24	133.14	-334.78	0.00	0.00	0.00
5,600.00	4.51	21.66	5,585.60	342.55	136.04	-342.08	0.00	0.00	0.00
5,700.00	4.51	21.66	5,685.29	349.86	138.94	-349.37	0.00	0.00	0.00
5,800.00	4.51	21.66	5,784.98	357.17	141.85	-356.67	0.00	0.00	0.00
5,900.00	4.51	21.66	5,884.67	364.48	144.75	-363.97	0.00	0.00	0.00
6,000.00	4.51	21.66	5,984.36	371.78	147.65	-371.27	0.00	0.00	0.00
6,100.00	4.51	21.66	6,084.05	379.09	150.55	-378.57	0.00	0.00	0.00
6,200.00	4.51	21.66	6,183.75	386.40	153.46	-385.86	0.00	0.00	0.00
6,300.00	4.51	21.66	6,283.44	393.71	156.36	-393.16	0.00	0.00	0.00
6,400.00	4.51	21.66	6,383.13	401.02	159.26	-400.46	0.00	0.00	0.00
6,414.13	4.51	21.66	6,397.21	402.05	159.67	-401.49	0.00	0.00	0.00
KOP @ 6414.13ft :: DLS = 9°/100'									
6,500.00	3.92	154.43	6,482.98	402.54	162.19	-401.97	9.00	-0.68	154.62
6,600.00	12.65	172.28	6,581.85	388.57	165.14	-387.99	9.00	8.73	17.85
6,700.00	21.61	175.55	6,677.32	359.30	168.05	-358.71	9.00	8.95	3.26
6,800.00	30.59	176.95	6,767.03	315.45	170.84	-314.85	9.00	8.98	1.40
6,900.00	39.57	177.76	6,848.79	258.10	173.44	-257.49	9.00	8.99	0.81
7,000.00	48.57	178.31	6,920.56	188.66	175.79	-188.05	9.00	8.99	0.55
7,100.00	57.56	178.73	6,980.60	108.84	177.83	-108.22	9.00	8.99	0.42
7,200.00	66.55	179.07	7,027.41	20.61	179.52	-19.98	9.00	9.00	0.34
7,300.00	75.55	179.37	7,059.85	-73.87	180.80	74.50	9.00	9.00	0.30
7,400.00	84.55	179.64	7,077.11	-172.26	181.65	172.89	9.00	9.00	0.27
7,460.63	90.00	179.80	7,080.00	-232.80	181.95	233.43	9.00	9.00	0.27
End Build @ 7460.63ft									
7,500.00	90.00	179.80	7,080.00	-272.17	182.09	272.80	0.00	0.00	0.00
7,600.00	90.00	179.80	7,080.00	-372.17	182.44	372.80	0.00	0.00	0.00
7,700.00	90.00	179.80	7,080.00	-472.17	182.79	472.80	0.00	0.00	0.00
7,800.00	90.00	179.80	7,080.00	-572.17	183.14	572.80	0.00	0.00	0.00
7,900.00	90.00	179.80	7,080.00	-672.16	183.49	672.80	0.00	0.00	0.00
8,000.00	90.00	179.80	7,080.00	-772.16	183.84	772.80	0.00	0.00	0.00
8,100.00	90.00	179.80	7,080.00	-872.16	184.19	872.80	0.00	0.00	0.00
8,200.00	90.00	179.80	7,080.00	-972.16	184.55	972.80	0.00	0.00	0.00
8,300.00	90.00	179.80	7,080.00	-1,072.16	184.90	1,072.80	0.00	0.00	0.00
8,400.00	90.00	179.80	7,080.00	-1,172.16	185.25	1,172.80	0.00	0.00	0.00
8,500.00	90.00	179.80	7,080.00	-1,272.16	185.60	1,272.80	0.00	0.00	0.00
8,600.00	90.00	179.80	7,080.00	-1,372.16	185.95	1,372.80	0.00	0.00	0.00
8,700.00	90.00	179.80	7,080.00	-1,472.16	186.30	1,472.80	0.00	0.00	0.00
8,800.00	90.00	179.80	7,080.00	-1,572.16	186.65	1,572.80	0.00	0.00	0.00
8,900.00	90.00	179.80	7,080.00	-1,672.16	187.00	1,672.80	0.00	0.00	0.00
9,000.00	90.00	179.80	7,080.00	-1,772.16	187.35	1,772.80	0.00	0.00	0.00
9,100.00	90.00	179.80	7,080.00	-1,872.16	187.70	1,872.80	0.00	0.00	0.00
9,200.00	90.00	179.80	7,080.00	-1,972.16	188.05	1,972.80	0.00	0.00	0.00
9,300.00	90.00	179.80	7,080.00	-2,072.16	188.40	2,072.80	0.00	0.00	0.00
9,400.00	90.00	179.80	7,080.00	-2,172.16	188.76	2,172.80	0.00	0.00	0.00
9,500.00	90.00	179.80	7,080.00	-2,272.15	189.11	2,272.80	0.00	0.00	0.00
9,600.00	90.00	179.80	7,080.00	-2,372.15	189.46	2,372.80	0.00	0.00	0.00
9,700.00	90.00	179.80	7,080.00	-2,472.15	189.81	2,472.80	0.00	0.00	0.00

HP

Planning Report

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Project:	WATTENBERG FIELD	MD Reference:	RKB = 24' @ 5042.00usft (RIG)
Site:	2N-64W-28 GEORGENE PAD	North Reference:	True
Well:	GEORGENE 2833-01H	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	-2,572.15	190.16	2,572.80	0.00	0.00	0.00	
9,900.00	90.00	179.80	7,080.00	-2,672.15	190.51	2,672.80	0.00	0.00	0.00	
10,000.00	90.00	179.80	7,080.00	-2,772.15	190.86	2,772.80	0.00	0.00	0.00	
10,100.00	90.00	179.80	7,080.00	-2,872.15	191.21	2,872.80	0.00	0.00	0.00	
10,200.00	90.00	179.80	7,080.00	-2,972.15	191.56	2,972.80	0.00	0.00	0.00	
10,300.00	90.00	179.80	7,080.00	-3,072.15	191.91	3,072.80	0.00	0.00	0.00	
10,400.00	90.00	179.80	7,080.00	-3,172.15	192.26	3,172.80	0.00	0.00	0.00	
10,500.00	90.00	179.80	7,080.00	-3,272.15	192.61	3,272.80	0.00	0.00	0.00	
10,600.00	90.00	179.80	7,080.00	-3,372.15	192.97	3,372.80	0.00	0.00	0.00	
10,700.00	90.00	179.80	7,080.00	-3,472.15	193.32	3,472.80	0.00	0.00	0.00	
10,800.00	90.00	179.80	7,080.00	-3,572.15	193.67	3,572.80	0.00	0.00	0.00	
10,900.00	90.00	179.80	7,080.00	-3,672.15	194.02	3,672.80	0.00	0.00	0.00	
11,000.00	90.00	179.80	7,080.00	-3,772.15	194.37	3,772.80	0.00	0.00	0.00	
11,100.00	90.00	179.80	7,080.00	-3,872.14	194.72	3,872.80	0.00	0.00	0.00	
11,200.00	90.00	179.80	7,080.00	-3,972.14	195.07	3,972.80	0.00	0.00	0.00	
11,300.00	90.00	179.80	7,080.00	-4,072.14	195.42	4,072.80	0.00	0.00	0.00	
11,400.00	90.00	179.80	7,080.00	-4,172.14	195.77	4,172.80	0.00	0.00	0.00	
11,500.00	90.00	179.80	7,080.00	-4,272.14	196.12	4,272.80	0.00	0.00	0.00	
11,600.00	90.00	179.80	7,080.00	-4,372.14	196.47	4,372.80	0.00	0.00	0.00	
11,700.00	90.00	179.80	7,080.00	-4,472.14	196.82	4,472.80	0.00	0.00	0.00	
11,800.00	90.00	179.80	7,080.00	-4,572.14	197.18	4,572.80	0.00	0.00	0.00	
11,900.00	90.00	179.80	7,080.00	-4,672.14	197.53	4,672.80	0.00	0.00	0.00	
12,000.00	90.00	179.80	7,080.00	-4,772.14	197.88	4,772.80	0.00	0.00	0.00	
12,100.00	90.00	179.80	7,080.00	-4,872.14	198.23	4,872.80	0.00	0.00	0.00	
12,200.00	90.00	179.80	7,080.00	-4,972.14	198.58	4,972.80	0.00	0.00	0.00	
12,268.22	90.00	179.80	7,080.00	-5,040.35	198.82	5,041.02	0.00	0.00	0.00	
TD Well @ 12268.21ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,702.33	1,700.00	9 5/8"	9-5/8	13-1/2	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
800.00	800.00	0.00	0.00	Begin Nudge @ 800.00ft	
1,025.50	1,025.27	8.24	3.27	Hold Tangent @ 1025.50ft	
6,414.13	6,397.21	402.05	159.67	KOP @ 6414.13ft :: DLS = 9°/100'	
7,460.63	7,080.00	-232.80	181.95	End Build @ 7460.63ft	
12,268.22	7,080.00	-5,040.35	198.82	TD Well @ 12268.21ft	