

VERDAD RESOURCES

WATTENBERG FIELD

9N-60W-25 PEGGY 2501 PAD

PEGGY 2501-12H

Plan B

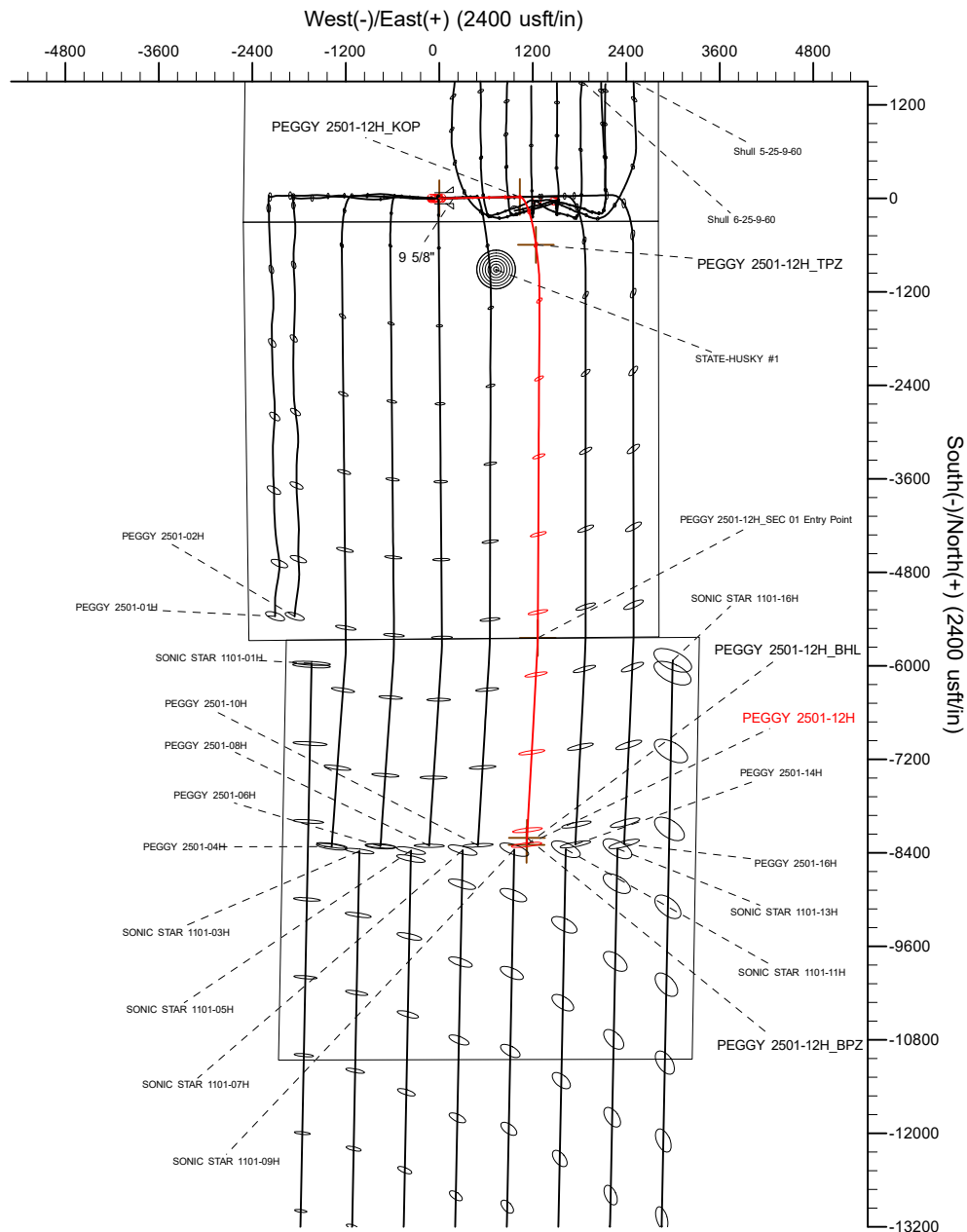
Plan: Design #1

Standard Planning Report

11 October, 2021

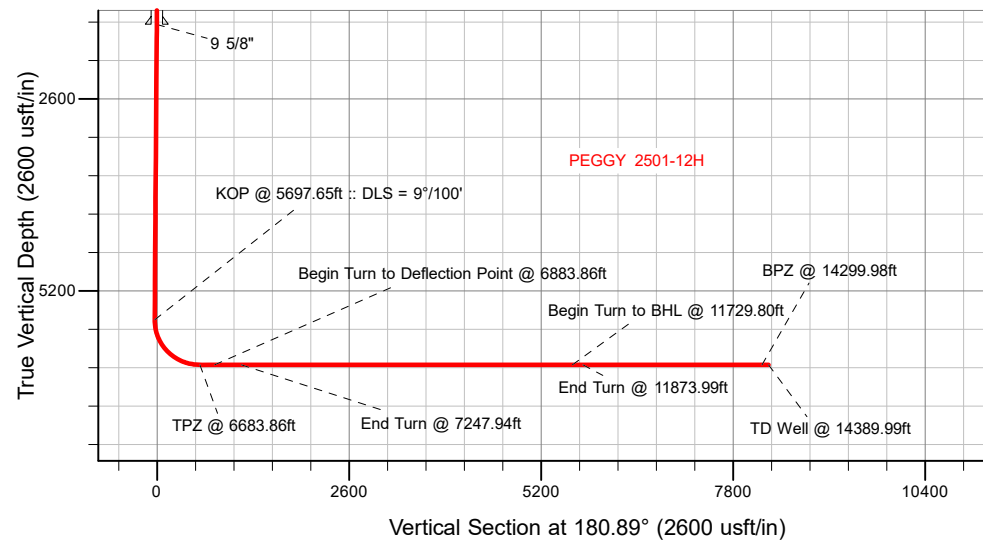
VERDAD RESOURCES

CASING DETAILS			
TVD	MD	Name	Size
1560.00	1576.26	9 5/8"	9-5/8




SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	436.15	0.00	0.00	436.15	0.00	0.00	0.00	0.00	0.00	
3	1038.15	12.04	88.96	1033.73	1.14	63.01	2.00	88.96	-2.12	
4	5697.65	12.04	88.96	5590.73	18.79	1034.79	0.00	0.00	-34.86	
5	6683.86	90.00	173.00	6200.00	-597.19	1240.64	9.00	84.17	577.85	
6	6883.86	90.00	173.00	6200.00	-795.70	1265.02	0.00	0.00	775.95	
7	7247.94	90.00	180.28	6200.00	-1158.90	1286.34	2.00	90.00	1138.78	
8	11729.80	90.00	180.28	6200.00	-5640.72	1264.32	0.00	0.00	5620.40	PEGGY 2501-12H_SEC 01 Entry Point
9	11873.99	90.00	183.17	6200.00	-5784.83	1259.98	2.00	90.00	5764.56	
10	14389.99	90.00	183.17	6200.00	-8296.99	1121.06	0.00	0.00	8278.57	PEGGY 2501-12H_BHL

WELLBORE TARGET DETAILS (LAT/LONG)						
Name	MD	TVD	+N/-S	+E/-W	Latitude	Longitude
PEGGY 2501-12H_SHL	0.00	0.00	0.00	0.00	40.714775	-104.040481
PEGGY 2501-12H_KOP	5697.65	5590.73	18.79	1034.79	40.714827	-104.036748
PEGGY 2501-12H_TPZ	6683.86	6200.00	-597.20	1240.63	40.713136	-104.036005
PEGGY 2501-12H_SEC 01 Entry Point	11729.80	6200.00	-5640.72	1264.32	40.699293	-104.035921
PEGGY 2501-12H_BPZ	14299.98	6200.00	-8207.11	1125.91	40.692248	-104.036421
PEGGY 2501-12H_BHL	14389.99	6200.00	-8296.99	1121.06	40.692002	-104.036438



SHL	KOP	TPZ	SEC 01 Entry	BPZ	BHL
300' FSL	317' FSL	300' FNL	0' FSL	2565' FNL	2655' FNL
2512' FWL	1778' FEL	1572' FEL	1555' FEL	2168' FEL	2171' FEL

 <p> T Azimuths to True North M Magnetic North: 7.46° Magnetic Field Strength: 52156.9nT Dip Angle: 66.99° Date: 10/7/2021 Model: IGRF2020 </p>	WELL DETAILS: PEGGY 2501-12H
	GL = 4894'
	RKB = 16' @ 4910.00usft (RIG)
	Plan: Design #1 (PEGGY 2501-12H/Plan B)
Date: 10/08/2021	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well PEGGY 2501-12H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 16' @ 4910.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 16' @ 4910.00usft (RIG)
Site:	9N-60W-25 PEGGY 2501 PAD	North Reference:	True
Well:	PEGGY 2501-12H	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-60W-25 PEGGY 2501 PAD			
Site Position:		Northing:	1,506,564.37 usft	Latitude: 40.714775
From:	Lat/Long	Easting:	3,404,485.26 usft	Longitude: -104.040843
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	

Well	PEGGY 2501-12H			
Well Position	+N/-S	0.00 usft	Northing:	1,506,566.23 usft
	+E/-W	0.00 usft	Easting:	3,404,585.51 usft
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft
Grid Convergence:		0.94 °	Ground Level:	4,894.00 usft

Wellbore	Plan B				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF202013	10/7/2021	7.46	66.99	52,156.91889498

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	180.89	

Plan Survey Tool Program		Date	10/11/2021		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	1,560.00	Design #1 (Plan B)	ISCWSA MWD	Fixed:v2:standard declination
2	1,560.00	14,389.99	Design #1 (Plan B)	ISCWSA MWD	Fixed:v2:standard declination

Planning Report

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Project:	WATTENBERG FIELD	MD Reference:	RKB = 16' @ 4910.00usft (RIG)
Site:	9N-60W-25 PEGGY 2501 PAD	North Reference:	True
Well:	PEGGY 2501-12H	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	
436.15	0.00	0.00	436.15	0.00	0.00	0.00	0.00	0.00	0.00	
1,038.15	12.04	88.96	1,033.73	1.14	63.01	2.00	2.00	0.00	88.96	
5,697.65	12.04	88.96	5,590.73	18.79	1,034.79	0.00	0.00	0.00	0.00	
6,683.86	90.00	173.00	6,200.00	-597.19	1,240.64	9.00	7.91	8.52	84.17	
6,883.86	90.00	173.00	6,200.00	-795.70	1,265.02	0.00	0.00	0.00	0.00	
7,247.94	90.00	180.28	6,200.00	-1,158.90	1,286.34	2.00	0.00	2.00	90.00	
11,729.80	90.00	180.28	6,200.00	-5,640.72	1,264.32	0.00	0.00	0.00	0.00	PEGGY 2501-12H_SI
11,873.99	90.00	183.17	6,200.00	-5,784.83	1,259.98	2.00	0.00	2.00	90.00	
14,389.99	90.00	183.17	6,200.00	-8,296.99	1,121.06	0.00	0.00	0.00	0.00	PEGGY 2501-12H_BI

Planning Report

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Project:	WATTENBERG FIELD	MD Reference:	RKB = 16' @ 4910.00usft (RIG)
Site:	9N-60W-25 PEGGY 2501 PAD	North Reference:	True
Well:	PEGGY 2501-12H	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
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
436.15	0.00	0.00	436.15	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 436.15ft									
500.00	1.28	88.96	499.99	0.01	0.71	-0.02	2.00	2.00	0.00
600.00	3.28	88.96	599.91	0.09	4.68	-0.16	2.00	2.00	0.00
700.00	5.28	88.96	699.63	0.22	12.14	-0.41	2.00	2.00	0.00
800.00	7.28	88.96	799.02	0.42	23.07	-0.78	2.00	2.00	0.00
900.00	9.28	88.96	897.98	0.68	37.46	-1.26	2.00	2.00	0.00
1,000.00	11.28	88.96	996.37	1.00	55.30	-1.86	2.00	2.00	0.00
1,038.15	12.04	88.96	1,033.73	1.14	63.01	-2.12	2.00	2.00	0.00
Hold Tangent @ 1038.15ft									
1,100.00	12.04	88.96	1,094.22	1.38	75.91	-2.56	0.00	0.00	0.00
1,200.00	12.04	88.96	1,192.02	1.76	96.76	-3.26	0.00	0.00	0.00
1,300.00	12.04	88.96	1,289.82	2.14	117.62	-3.96	0.00	0.00	0.00
1,400.00	12.04	88.96	1,387.62	2.51	138.48	-4.66	0.00	0.00	0.00
1,500.00	12.04	88.96	1,485.42	2.89	159.33	-5.37	0.00	0.00	0.00
1,576.26	12.04	88.96	1,560.00	3.18	175.24	-5.90	0.00	0.00	0.00
9 5/8"									
1,600.00	12.04	88.96	1,583.22	3.27	180.19	-6.07	0.00	0.00	0.00
1,700.00	12.04	88.96	1,681.02	3.65	201.04	-6.77	0.00	0.00	0.00
1,800.00	12.04	88.96	1,778.82	4.03	221.90	-7.47	0.00	0.00	0.00
1,900.00	12.04	88.96	1,876.62	4.41	242.76	-8.18	0.00	0.00	0.00
2,000.00	12.04	88.96	1,974.42	4.79	263.61	-8.88	0.00	0.00	0.00
2,100.00	12.04	88.96	2,072.22	5.16	284.47	-9.58	0.00	0.00	0.00
2,200.00	12.04	88.96	2,170.02	5.54	305.32	-10.28	0.00	0.00	0.00
2,300.00	12.04	88.96	2,267.82	5.92	326.18	-10.99	0.00	0.00	0.00
2,400.00	12.04	88.96	2,365.62	6.30	347.04	-11.69	0.00	0.00	0.00
2,500.00	12.04	88.96	2,463.42	6.68	367.89	-12.39	0.00	0.00	0.00
2,600.00	12.04	88.96	2,561.22	7.06	388.75	-13.09	0.00	0.00	0.00
2,700.00	12.04	88.96	2,659.02	7.44	409.60	-13.80	0.00	0.00	0.00
2,800.00	12.04	88.96	2,756.82	7.81	430.46	-14.50	0.00	0.00	0.00
2,900.00	12.04	88.96	2,854.62	8.19	451.32	-15.20	0.00	0.00	0.00
3,000.00	12.04	88.96	2,952.42	8.57	472.17	-15.90	0.00	0.00	0.00
3,100.00	12.04	88.96	3,050.22	8.95	493.03	-16.61	0.00	0.00	0.00
3,200.00	12.04	88.96	3,148.02	9.33	513.88	-17.31	0.00	0.00	0.00
3,300.00	12.04	88.96	3,245.82	9.71	534.74	-18.01	0.00	0.00	0.00
3,400.00	12.04	88.96	3,343.62	10.09	555.60	-18.71	0.00	0.00	0.00
3,500.00	12.04	88.96	3,441.42	10.46	576.45	-19.42	0.00	0.00	0.00
3,600.00	12.04	88.96	3,539.22	10.84	597.31	-20.12	0.00	0.00	0.00
3,700.00	12.04	88.96	3,637.02	11.22	618.16	-20.82	0.00	0.00	0.00
3,800.00	12.04	88.96	3,734.82	11.60	639.02	-21.52	0.00	0.00	0.00
3,900.00	12.04	88.96	3,832.62	11.98	659.88	-22.23	0.00	0.00	0.00
4,000.00	12.04	88.96	3,930.43	12.36	680.73	-22.93	0.00	0.00	0.00
4,100.00	12.04	88.96	4,028.23	12.74	701.59	-23.63	0.00	0.00	0.00
4,200.00	12.04	88.96	4,126.03	13.11	722.44	-24.33	0.00	0.00	0.00
4,300.00	12.04	88.96	4,223.83	13.49	743.30	-25.04	0.00	0.00	0.00
4,400.00	12.04	88.96	4,321.63	13.87	764.16	-25.74	0.00	0.00	0.00
4,500.00	12.04	88.96	4,419.43	14.25	785.01	-26.44	0.00	0.00	0.00
4,600.00	12.04	88.96	4,517.23	14.63	805.87	-27.14	0.00	0.00	0.00

Planning Report

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Company:	VERDAD RESOURCES	TVD Reference:	RKB = 16' @ 4910.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 16' @ 4910.00usft (RIG)
Site:	9N-60W-25 PEGGY 2501 PAD	North Reference:	True
Well:	PEGGY 2501-12H	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	12.04	88.96	4,615.03	15.01	826.72	-27.85	0.00	0.00	0.00
4,800.00	12.04	88.96	4,712.83	15.39	847.58	-28.55	0.00	0.00	0.00
4,900.00	12.04	88.96	4,810.63	15.77	868.44	-29.25	0.00	0.00	0.00
5,000.00	12.04	88.96	4,908.43	16.14	889.29	-29.95	0.00	0.00	0.00
5,100.00	12.04	88.96	5,006.23	16.52	910.15	-30.66	0.00	0.00	0.00
5,200.00	12.04	88.96	5,104.03	16.90	931.00	-31.36	0.00	0.00	0.00
5,300.00	12.04	88.96	5,201.83	17.28	951.86	-32.06	0.00	0.00	0.00
5,400.00	12.04	88.96	5,299.63	17.66	972.72	-32.77	0.00	0.00	0.00
5,500.00	12.04	88.96	5,397.43	18.04	993.57	-33.47	0.00	0.00	0.00
5,600.00	12.04	88.96	5,495.23	18.42	1,014.43	-34.17	0.00	0.00	0.00
5,697.65	12.04	88.96	5,590.73	18.79	1,034.79	-34.86	0.00	0.00	0.00
KOP @ 5697.65ft :: DLS = 9°/100'									
5,700.00	12.06	89.97	5,593.03	18.79	1,035.29	-34.87	9.00	0.99	42.84
5,750.00	13.36	109.68	5,641.83	16.85	1,045.95	-33.09	9.00	2.58	39.42
5,800.00	15.85	124.64	5,690.22	11.02	1,057.01	-27.44	9.00	4.98	29.92
5,850.00	19.07	135.15	5,737.93	1.34	1,068.40	-17.94	9.00	6.45	21.03
5,900.00	22.72	142.56	5,784.64	-12.12	1,080.03	-4.65	9.00	7.30	14.82
5,950.00	26.62	147.96	5,830.07	-29.30	1,091.85	12.33	9.00	7.80	10.80
6,000.00	30.68	152.05	5,873.95	-50.07	1,103.78	32.92	9.00	8.11	8.17
6,050.00	34.83	155.25	5,915.99	-74.31	1,115.74	56.97	9.00	8.31	6.41
6,100.00	39.05	157.84	5,955.95	-101.88	1,127.67	84.35	9.00	8.44	5.19
6,150.00	43.32	160.00	5,993.57	-132.60	1,139.48	114.89	9.00	8.54	4.32
6,200.00	47.63	161.84	6,028.62	-166.29	1,151.11	148.39	9.00	8.61	3.68
6,250.00	51.96	163.45	6,060.89	-202.73	1,162.48	184.65	9.00	8.66	3.21
6,300.00	56.31	164.87	6,090.18	-241.70	1,173.52	223.44	9.00	8.70	2.85
6,350.00	60.67	166.16	6,116.31	-282.96	1,184.18	264.54	9.00	8.73	2.57
6,400.00	65.05	167.34	6,139.12	-326.26	1,194.37	307.67	9.00	8.75	2.36
6,450.00	69.43	168.43	6,158.46	-371.33	1,204.03	352.59	9.00	8.77	2.20
6,500.00	73.82	169.47	6,174.21	-417.89	1,213.12	399.00	9.00	8.78	2.08
6,550.00	78.22	170.46	6,186.29	-465.66	1,221.56	446.63	9.00	8.79	1.98
6,600.00	82.62	171.43	6,194.61	-514.33	1,229.32	495.18	9.00	8.80	1.92
6,650.00	87.02	172.37	6,199.12	-563.62	1,236.33	544.35	9.00	8.80	1.88
6,683.86	90.00	173.00	6,200.00	-597.19	1,240.64	577.85	9.00	8.80	1.87
TPZ @ 6683.86ft									
6,700.00	90.00	173.00	6,200.00	-613.21	1,242.61	593.83	0.00	0.00	0.00
6,800.00	90.00	173.00	6,200.00	-712.46	1,254.80	692.89	0.00	0.00	0.00
6,883.86	90.00	173.00	6,200.00	-795.70	1,265.02	775.95	0.00	0.00	0.00
Begin Turn to Deflection Point @ 6883.86ft									
6,900.00	90.00	173.32	6,200.00	-811.72	1,266.94	791.95	2.00	0.00	2.00
7,000.00	90.00	175.32	6,200.00	-911.23	1,276.83	891.29	2.00	0.00	2.00
7,100.00	90.00	177.32	6,200.00	-1,011.02	1,283.25	990.96	2.00	0.00	2.00
7,200.00	90.00	179.32	6,200.00	-1,110.97	1,286.17	1,090.86	2.00	0.00	2.00
7,247.94	90.00	180.28	6,200.00	-1,158.90	1,286.34	1,138.78	2.00	0.00	2.00
End Turn @ 7247.94ft									
7,300.00	90.00	180.28	6,200.00	-1,210.97	1,286.08	1,190.85	0.00	0.00	0.00
7,400.00	90.00	180.28	6,200.00	-1,310.97	1,285.59	1,290.84	0.00	0.00	0.00
7,500.00	90.00	180.28	6,200.00	-1,410.97	1,285.10	1,390.83	0.00	0.00	0.00
7,600.00	90.00	180.28	6,200.00	-1,510.96	1,284.61	1,490.83	0.00	0.00	0.00
7,700.00	90.00	180.28	6,200.00	-1,610.96	1,284.12	1,590.82	0.00	0.00	0.00
7,800.00	90.00	180.28	6,200.00	-1,710.96	1,283.63	1,690.82	0.00	0.00	0.00
7,900.00	90.00	180.28	6,200.00	-1,810.96	1,283.13	1,790.81	0.00	0.00	0.00
8,000.00	90.00	180.28	6,200.00	-1,910.96	1,282.64	1,890.81	0.00	0.00	0.00
8,100.00	90.00	180.28	6,200.00	-2,010.96	1,282.15	1,990.80	0.00	0.00	0.00
8,200.00	90.00	180.28	6,200.00	-2,110.96	1,281.66	2,090.79	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well PEGGY 2501-12H
Company:	VERDAD RESOURCES	TVD Reference:	RKB = 16' @ 4910.00usft (RIG)
Project:	WATTENBERG FIELD	MD Reference:	RKB = 16' @ 4910.00usft (RIG)
Site:	9N-60W-25 PEGGY 2501 PAD	North Reference:	True
Well:	PEGGY 2501-12H	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)
8,300.00	90.00	180.28	6,200.00	-2,210.96	1,281.17	2,190.79	0.00	0.00	0.00
8,400.00	90.00	180.28	6,200.00	-2,310.95	1,280.68	2,290.78	0.00	0.00	0.00
8,500.00	90.00	180.28	6,200.00	-2,410.95	1,280.19	2,390.78	0.00	0.00	0.00
8,600.00	90.00	180.28	6,200.00	-2,510.95	1,279.69	2,490.77	0.00	0.00	0.00
8,700.00	90.00	180.28	6,200.00	-2,610.95	1,279.20	2,590.77	0.00	0.00	0.00
8,800.00	90.00	180.28	6,200.00	-2,710.95	1,278.71	2,690.76	0.00	0.00	0.00
8,900.00	90.00	180.28	6,200.00	-2,810.95	1,278.22	2,790.76	0.00	0.00	0.00
9,000.00	90.00	180.28	6,200.00	-2,910.95	1,277.73	2,890.75	0.00	0.00	0.00
9,100.00	90.00	180.28	6,200.00	-3,010.95	1,277.24	2,990.74	0.00	0.00	0.00
9,200.00	90.00	180.28	6,200.00	-3,110.95	1,276.75	3,090.74	0.00	0.00	0.00
9,300.00	90.00	180.28	6,200.00	-3,210.94	1,276.26	3,190.73	0.00	0.00	0.00
9,400.00	90.00	180.28	6,200.00	-3,310.94	1,275.76	3,290.73	0.00	0.00	0.00
9,500.00	90.00	180.28	6,200.00	-3,410.94	1,275.27	3,390.72	0.00	0.00	0.00
9,600.00	90.00	180.28	6,200.00	-3,510.94	1,274.78	3,490.72	0.00	0.00	0.00
9,700.00	90.00	180.28	6,200.00	-3,610.94	1,274.29	3,590.71	0.00	0.00	0.00
9,800.00	90.00	180.28	6,200.00	-3,710.94	1,273.80	3,690.70	0.00	0.00	0.00
9,900.00	90.00	180.28	6,200.00	-3,810.94	1,273.31	3,790.70	0.00	0.00	0.00
10,000.00	90.00	180.28	6,200.00	-3,910.94	1,272.82	3,890.69	0.00	0.00	0.00
10,100.00	90.00	180.28	6,200.00	-4,010.93	1,272.32	3,990.69	0.00	0.00	0.00
10,200.00	90.00	180.28	6,200.00	-4,110.93	1,271.83	4,090.68	0.00	0.00	0.00
10,300.00	90.00	180.28	6,200.00	-4,210.93	1,271.34	4,190.68	0.00	0.00	0.00
10,400.00	90.00	180.28	6,200.00	-4,310.93	1,270.85	4,290.67	0.00	0.00	0.00
10,500.00	90.00	180.28	6,200.00	-4,410.93	1,270.36	4,390.67	0.00	0.00	0.00
10,600.00	90.00	180.28	6,200.00	-4,510.93	1,269.87	4,490.66	0.00	0.00	0.00
10,700.00	90.00	180.28	6,200.00	-4,610.93	1,269.38	4,590.65	0.00	0.00	0.00
10,800.00	90.00	180.28	6,200.00	-4,710.93	1,268.89	4,690.65	0.00	0.00	0.00
10,900.00	90.00	180.28	6,200.00	-4,810.92	1,268.39	4,790.64	0.00	0.00	0.00
11,000.00	90.00	180.28	6,200.00	-4,910.92	1,267.90	4,890.64	0.00	0.00	0.00
11,100.00	90.00	180.28	6,200.00	-5,010.92	1,267.41	4,990.63	0.00	0.00	0.00
11,200.00	90.00	180.28	6,200.00	-5,110.92	1,266.92	5,090.63	0.00	0.00	0.00
11,300.00	90.00	180.28	6,200.00	-5,210.92	1,266.43	5,190.62	0.00	0.00	0.00
11,400.00	90.00	180.28	6,200.00	-5,310.92	1,265.94	5,290.61	0.00	0.00	0.00
11,500.00	90.00	180.28	6,200.00	-5,410.92	1,265.45	5,390.61	0.00	0.00	0.00
11,600.00	90.00	180.28	6,200.00	-5,510.92	1,264.95	5,490.60	0.00	0.00	0.00
11,700.00	90.00	180.28	6,200.00	-5,610.92	1,264.46	5,590.60	0.00	0.00	0.00
11,729.80	90.00	180.28	6,200.00	-5,640.72	1,264.32	5,620.40	0.00	0.00	0.00
Begin Turn to BHL @ 11729.80ft									
11,800.00	90.00	181.69	6,200.00	-5,710.90	1,263.11	5,690.59	2.00	0.00	2.00
11,873.99	90.00	183.17	6,200.00	-5,784.83	1,259.98	5,764.56	2.00	0.00	2.00
End Turn @ 11873.99ft									
11,900.00	90.00	183.17	6,200.00	-5,810.79	1,258.55	5,790.54	0.00	0.00	0.00
12,000.00	90.00	183.17	6,200.00	-5,910.64	1,253.02	5,890.47	0.00	0.00	0.00
12,100.00	90.00	183.17	6,200.00	-6,010.49	1,247.50	5,990.39	0.00	0.00	0.00
12,200.00	90.00	183.17	6,200.00	-6,110.34	1,241.98	6,090.31	0.00	0.00	0.00
12,300.00	90.00	183.17	6,200.00	-6,210.18	1,236.46	6,190.23	0.00	0.00	0.00
12,400.00	90.00	183.17	6,200.00	-6,310.03	1,230.94	6,290.15	0.00	0.00	0.00
12,500.00	90.00	183.17	6,200.00	-6,409.88	1,225.42	6,390.07	0.00	0.00	0.00
12,600.00	90.00	183.17	6,200.00	-6,509.73	1,219.89	6,489.99	0.00	0.00	0.00
12,700.00	90.00	183.17	6,200.00	-6,609.57	1,214.37	6,589.91	0.00	0.00	0.00
12,800.00	90.00	183.17	6,200.00	-6,709.42	1,208.85	6,689.84	0.00	0.00	0.00
12,900.00	90.00	183.17	6,200.00	-6,809.27	1,203.33	6,789.76	0.00	0.00	0.00
13,000.00	90.00	183.17	6,200.00	-6,909.12	1,197.81	6,889.68	0.00	0.00	0.00
13,100.00	90.00	183.17	6,200.00	-7,008.96	1,192.29	6,989.60	0.00	0.00	0.00

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Project:	WATTENBERG FIELD	MD Reference:	RKB = 16' @ 4910.00usft (RIG)
Site:	9N-60W-25 PEGGY 2501 PAD	North Reference:	True
Well:	PEGGY 2501-12H	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)	
13,200.00	90.00	183.17	6,200.00	-7,108.81	1,186.76	7,089.52	0.00	0.00	0.00	
13,300.00	90.00	183.17	6,200.00	-7,208.66	1,181.24	7,189.44	0.00	0.00	0.00	
13,400.00	90.00	183.17	6,200.00	-7,308.51	1,175.72	7,289.36	0.00	0.00	0.00	
13,500.00	90.00	183.17	6,200.00	-7,408.35	1,170.20	7,389.28	0.00	0.00	0.00	
13,600.00	90.00	183.17	6,200.00	-7,508.20	1,164.68	7,489.20	0.00	0.00	0.00	
13,700.00	90.00	183.17	6,200.00	-7,608.05	1,159.16	7,589.13	0.00	0.00	0.00	
13,800.00	90.00	183.17	6,200.00	-7,707.90	1,153.63	7,689.05	0.00	0.00	0.00	
13,900.00	90.00	183.17	6,200.00	-7,807.74	1,148.11	7,788.97	0.00	0.00	0.00	
14,000.00	90.00	183.17	6,200.00	-7,907.59	1,142.59	7,888.89	0.00	0.00	0.00	
14,100.00	90.00	183.17	6,200.00	-8,007.44	1,137.07	7,988.81	0.00	0.00	0.00	
14,200.00	90.00	183.17	6,200.00	-8,107.29	1,131.55	8,088.73	0.00	0.00	0.00	
14,299.98	90.00	183.17	6,200.00	-8,207.11	1,126.03	8,188.63	0.00	0.00	0.00	
BPZ @ 14299.98ft										
14,300.00	90.00	183.17	6,200.00	-8,207.13	1,126.03	8,188.65	0.00	0.00	0.00	
14,389.99	90.00	183.17	6,200.00	-8,296.99	1,121.06	8,278.57	0.00	0.00	0.00	
TD Well @ 14389.99ft										

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,576.26	1,560.00	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)	
436.15	436.15	0.00	0.00	Begin Nudge @ 436.15ft
1,038.15	1,033.73	1.14	63.01	Hold Tangent @ 1038.15ft
5,697.65	5,590.73	18.79	1,034.79	KOP @ 5697.65ft :: DLS = 9°/100'
6,683.86	6,200.00	-597.19	1,240.64	TPZ @ 6683.86ft
6,883.86	6,200.00	-795.70	1,265.02	Begin Turn to Deflection Point @ 6883.86ft
7,247.94	6,200.00	-1,158.90	1,286.34	End Turn @ 7247.94ft
11,729.80	6,200.00	-5,640.72	1,264.32	Begin Turn to BHL @ 11729.80ft
11,873.99	6,200.00	-5,784.83	1,259.98	End Turn @ 11873.99ft
14,299.98	6,200.00	-8,207.11	1,126.03	BPZ @ 14299.98ft
14,389.99	6,200.00	-8,296.99	1,121.06	TD Well @ 14389.99ft