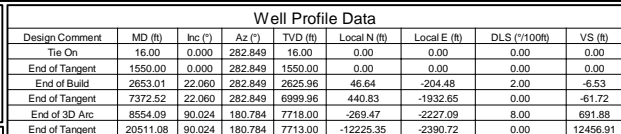


Location:	COLORADO	Slot:	SLOT#05 HOMESTEAD 5 (2444FSL & 1454FEL, SEC.34)
Field:	WELD COUNTY (NAD83/TN)	Well:	HOMESTEAD 5
Facility:	SEC.34-TIN-R66W	Wellbore:	HOMESTEAD 5 PWB

Plot reference wellpath is HOMESTEAD 5 (REV-A.0) PWP	
Vertical depths are referenced to XTREME 20 (16/RKB+5138/GL) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to XTREME 20 (16/RKB+5138/GL) (RKB)	* -- Wellpath was transformed from a different geoidic datum
XTREME 20 (16/RKB+5138/GL) (RKB) to Mean Sea Level: 5154 feet	North Reference: True north
XTREME 20 (16/RKB+5138/GL) (RKB) to Mean Sea Level: 5154 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#05 HOMESTEAD 5 (2444FSL & 1454FEL, SEC.34): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: gunealer on 2018-01-31
	Database: WA_DEN_Denver_Dein

Location Information						
Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC 34 T14N R60W			3207958.837	1246340.128	40°00'25.920"N	104°46'27.386"W
Spot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT05S HOME15AD S (2444FSL & 1454FSL-SEC34)	0.00	-403.39	3207555.472	1246338.754	40°00'25.920"N	104°46'32.588"W
XTREME 20 (16R0N & 5138L) (R08) to Mud line (At Slot: SLOT06S HOME15AD S (2444FSL & 1454FSL-SEC34))					5154ft	
Mean Sea Level to Mud line (At Slot: SLOT06S HOME15AD S (2444FSL & 1454FSL-SEC34))					0ft	
XTREME 20 (16R0N & 5138L) (R08) to Mean Sea Level					5154ft	

Bottom Hole Location									
MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
20511.08	90.024	180.784	7713.00	-12225.35	-2390.72	3205267.07	1234092.30	39°58'25.104"N	104°46'03.288"W

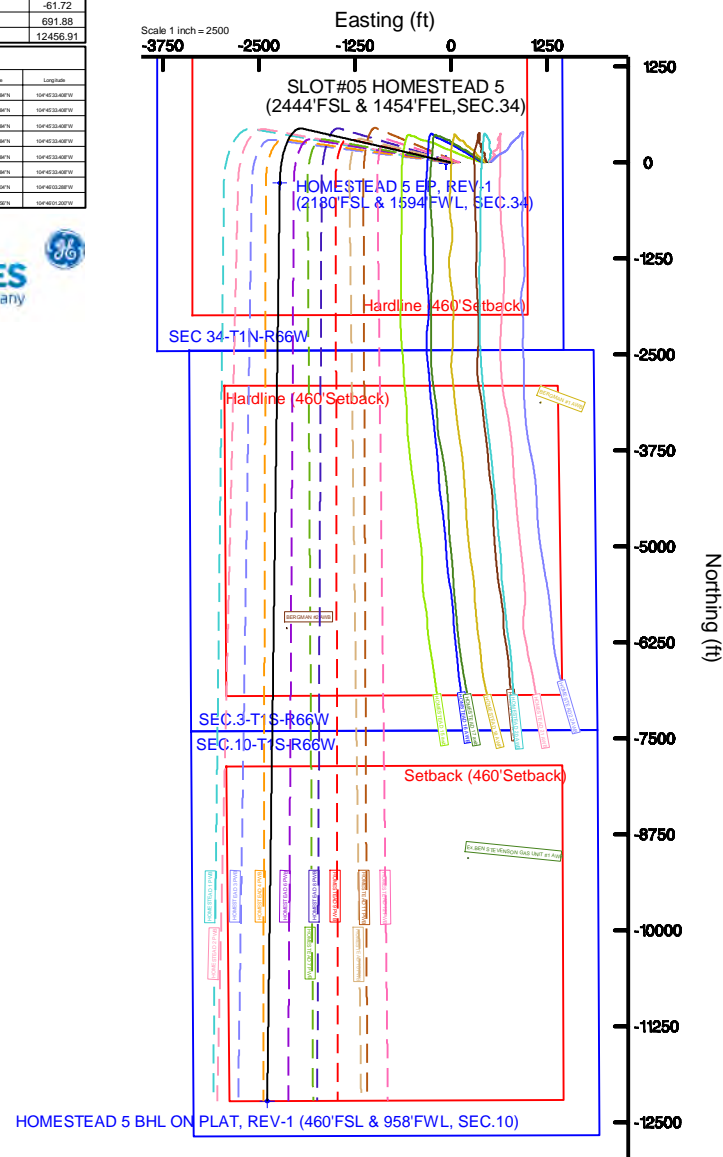
[illegible]

BGGM (1900.0 to 2019.0) Dip: 66.54° Field: 52093.4 nT
Magnetic North is 8.30 degrees East of True North (at 1/25/2018)

To correct azimuth from Magnetic to True add 8.30 degrees



Survey Program					
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
16.00	20511.08	BHI NaviTrak	BHI NaviTrak (Rotating+Axial Corr)		HOMESTEAD 5 PWB





Planned Wellpath Report

HOMESTEAD 5 (REV-A.0) PWP

Page 1 of 11



REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD OIL & GAS CORPORATION	Slot	SLOT#05 HOMESTEAD 5 (2444'FSL & 1454'FEL,SEC.34)
Area	COLORADO	Well	HOMESTEAD 5
Field	WELD COUNTY (NAD83/TN)	Wellbore	HOMESTEAD 5 PWB
Facility	SEC.34-T1N-R66W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.0
North Reference	True	User	Guenaler
Scale	0.999966	Report Generated	1/31/2018 at 4:46:55 PM
Convergence at slot	0.48° East	Database/Source file	WA_DEN_Denver_Defn/HOMESTEAD_5__REV-A.0__PWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	-403.39	3207555.47	1246336.75	40°00'25.920"N	104°45'32.580"W
Facility Reference Pt			3207958.84	1246340.13	40°00'25.920"N	104°45'27.396"W
Field Reference Pt			3242930.13	1254608.21	40°01'44.490"N	104°37'56.946"W

WELLPATH DATUM			
Calculation method	Minimum curvature	XTREME 20 (16'RKB+5138'GL) (RKB) to Facility Vertical Datum	5154.00ft
Horizontal Reference Pt	Slot	XTREME 20 (16'RKB+5138'GL) (RKB) to Mean Sea Level	5154.00ft
Vertical Reference Pt	XTREME 20 (16'RKB+5138'GL) (RKB)	XTREME 20 (16'RKB+5138'GL) (RKB) to Mud Line at Slot (SLOT#05 HOMESTEAD 5 (2444'FSL & 1454'FEL,SEC.34))	5154.00ft
MD Reference Pt	XTREME 20 (16'RKB+5138'GL) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	191.06°



Planned Wellpath Report

HOMESTEAD 5 (REV-A.0) PWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD OIL & GAS CORPORATION	Slot	SLOT#05 HOMESTEAD 5 (2444'FSL & 1454'FEL,SEC.34)
Area	COLORADO	Well	HOMESTEAD 5
Field	WELD COUNTY (NAD83/TN)	Wellbore	HOMESTEAD 5 PWB
Facility	SEC.34-T1N-R66W		

WELLPATH DATA (211 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	282.849	0.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.580"W	0.00	
16.00	0.000	282.849	16.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.580"W	0.00	Tie On
116.00†	0.000	282.849	116.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.580"W	0.00	
216.00†	0.000	282.849	216.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.580"W	0.00	
316.00†	0.000	282.849	316.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.580"W	0.00	
416.00†	0.000	282.849	416.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.580"W	0.00	
516.00†	0.000	282.849	516.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.580"W	0.00	
616.00†	0.000	282.849	616.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.580"W	0.00	
716.00†	0.000	282.849	716.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.580"W	0.00	
816.00†	0.000	282.849	816.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.580"W	0.00	
916.00†	0.000	282.849	916.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.580"W	0.00	
1016.00†	0.000	282.849	1016.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.580"W	0.00	
1116.00†	0.000	282.849	1116.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.580"W	0.00	
1216.00†	0.000	282.849	1216.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.580"W	0.00	
1316.00†	0.000	282.849	1316.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.580"W	0.00	
1416.00†	0.000	282.849	1416.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.580"W	0.00	
1516.00†	0.000	282.849	1516.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.580"W	0.00	
1550.00	0.000	282.849	1550.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.580"W	0.00	End of Tangent
1616.00†	1.320	282.849	1615.99	-0.02	0.17	-0.74	40°00'25.922"N	104°45'32.590"W	2.00	
1716.00†	3.320	282.849	1715.91	-0.15	1.07	-4.69	40°00'25.931"N	104°45'32.640"W	2.00	
1816.00†	5.320	282.849	1815.62	-0.38	2.74	-12.03	40°00'25.947"N	104°45'32.735"W	2.00	
1916.00†	7.320	282.849	1915.01	-0.73	5.19	-22.76	40°00'25.971"N	104°45'32.873"W	2.00	
2016.00†	9.320	282.849	2013.95	-1.18	8.41	-36.87	40°00'26.003"N	104°45'33.054"W	2.00	
2116.00†	11.320	282.849	2112.32	-1.74	12.39	-54.34	40°00'26.042"N	104°45'33.278"W	2.00	
2216.00†	13.320	282.849	2210.02	-2.40	17.14	-75.14	40°00'26.089"N	104°45'33.546"W	2.00	
2316.00†	15.320	282.849	2306.91	-3.17	22.64	-99.25	40°00'26.144"N	104°45'33.855"W	2.00	
2416.00†	17.320	282.849	2402.87	-4.04	28.89	-126.65	40°00'26.205"N	104°45'34.208"W	2.00	
2516.00†	19.320	282.849	2497.80	-5.02	35.88	-157.29	40°00'26.275"N	104°45'34.601"W	2.00	
2616.00†	21.320	282.849	2591.57	-6.10	43.60	-191.14	40°00'26.351"N	104°45'35.036"W	2.00	
2653.01	22.060	282.849	2625.96	-6.53	46.64	-204.48	40°00'26.381"N	104°45'35.208"W	2.00	End of Build



Planned Wellpath Report

HOMESTEAD 5 (REV-A.0) PWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD OIL & GAS CORPORATION	Slot	SLOT#05 HOMESTEAD 5 (2444'FSL & 1454'FEL,SEC.34)
Area	COLORADO	Well	HOMESTEAD 5
Field	WELD COUNTY (NAD83/TN)	Wellbore	HOMESTEAD 5 PWB
Facility	SEC.34-T1N-R66W		

WELLPATH DATA (211 stations) † = interpolated/extrapolated station											
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments	
2716.00†	22.060	282.849	2684.34	-7.27	51.90	-227.55	40°00'26.433"N	104°45'35.504"W	0.00		
2816.00†	22.060	282.849	2777.02	-8.44	60.25	-264.16	40°00'26.515"N	104°45'35.975"W	0.00		
2916.00†	22.060	282.849	2869.70	-9.61	68.61	-300.78	40°00'26.598"N	104°45'36.445"W	0.00		
3016.00†	22.060	282.849	2962.37	-10.78	76.96	-337.40	40°00'26.681"N	104°45'36.916"W	0.00		
3116.00†	22.060	282.849	3055.05	-11.94	85.31	-374.02	40°00'26.763"N	104°45'37.386"W	0.00		
3216.00†	22.060	282.849	3147.73	-13.11	93.66	-410.63	40°00'26.846"N	104°45'37.857"W	0.00		
3316.00†	22.060	282.849	3240.41	-14.28	102.02	-447.25	40°00'26.928"N	104°45'38.328"W	0.00		
3416.00†	22.060	282.849	3333.09	-15.45	110.37	-483.87	40°00'27.011"N	104°45'38.798"W	0.00		
3516.00†	22.060	282.849	3425.77	-16.62	118.72	-520.49	40°00'27.093"N	104°45'39.269"W	0.00		
3616.00†	22.060	282.849	3518.45	-17.79	127.07	-557.10	40°00'27.176"N	104°45'39.739"W	0.00		
3716.00†	22.060	282.849	3611.13	-18.96	135.43	-593.72	40°00'27.258"N	104°45'40.210"W	0.00		
3816.00†	22.060	282.849	3703.81	-20.13	143.78	-630.34	40°00'27.341"N	104°45'40.681"W	0.00		
3916.00†	22.060	282.849	3796.48	-21.30	152.13	-666.96	40°00'27.423"N	104°45'41.151"W	0.00		
4016.00†	22.060	282.849	3889.16	-22.47	160.48	-703.57	40°00'27.506"N	104°45'41.622"W	0.00		
4116.00†	22.060	282.849	3981.84	-23.64	168.83	-740.19	40°00'27.588"N	104°45'42.092"W	0.00		
4216.00†	22.060	282.849	4074.52	-24.81	177.19	-776.81	40°00'27.671"N	104°45'42.563"W	0.00		
4316.00†	22.060	282.849	4167.20	-25.98	185.54	-813.43	40°00'27.753"N	104°45'43.033"W	0.00		
4416.00†	22.060	282.849	4259.88	-27.15	193.89	-850.05	40°00'27.836"N	104°45'43.504"W	0.00		
4516.00†	22.060	282.849	4352.56	-28.32	202.24	-886.66	40°00'27.918"N	104°45'43.975"W	0.00		
4616.00†	22.060	282.849	4445.24	-29.49	210.60	-923.28	40°00'28.001"N	104°45'44.445"W	0.00		
4716.00†	22.060	282.849	4537.92	-30.66	218.95	-959.90	40°00'28.084"N	104°45'44.916"W	0.00		
4816.00†	22.060	282.849	4630.60	-31.82	227.30	-996.52	40°00'28.166"N	104°45'45.386"W	0.00		
4916.00†	22.060	282.849	4723.27	-32.99	235.65	-1033.13	40°00'28.249"N	104°45'45.857"W	0.00		
5016.00†	22.060	282.849	4815.95	-34.16	244.01	-1069.75	40°00'28.331"N	104°45'46.327"W	0.00		
5116.00†	22.060	282.849	4908.63	-35.33	252.36	-1106.37	40°00'28.414"N	104°45'46.798"W	0.00		
5216.00†	22.060	282.849	5001.31	-36.50	260.71	-1142.99	40°00'28.496"N	104°45'47.269"W	0.00		
5316.00†	22.060	282.849	5093.99	-37.67	269.06	-1179.60	40°00'28.579"N	104°45'47.739"W	0.00		
5416.00†	22.060	282.849	5186.67	-38.84	277.41	-1216.22	40°00'28.661"N	104°45'48.210"W	0.00		
5516.00†	22.060	282.849	5279.35	-40.01	285.77	-1252.84	40°00'28.744"N	104°45'48.680"W	0.00		
5616.00†	22.060	282.849	5372.03	-41.18	294.12	-1289.46	40°00'28.826"N	104°45'49.151"W	0.00		



Planned Wellpath Report

HOMESTEAD 5 (REV-A.0) PWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD OIL & GAS CORPORATION	Slot	SLOT#05 HOMESTEAD 5 (2444'FSL & 1454'FEL,SEC.34)
Area	COLORADO	Well	HOMESTEAD 5
Field	WELD COUNTY (NAD83/TN)	Wellbore	HOMESTEAD 5 PWB
Facility	SEC.34-T1N-R66W		

WELLPATH DATA (211 stations) † = interpolated/extrapolated station											
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments	
5716.00†	22.060	282.849	5464.71	-42.35	302.47	-1326.07	40°00'28.909"N	104°45'49.622"W	0.00		
5816.00†	22.060	282.849	5557.39	-43.52	310.82	-1362.69	40°00'28.991"N	104°45'50.092"W	0.00		
5916.00†	22.060	282.849	5650.06	-44.69	319.18	-1399.31	40°00'29.074"N	104°45'50.563"W	0.00		
6016.00†	22.060	282.849	5742.74	-45.86	327.53	-1435.93	40°00'29.156"N	104°45'51.033"W	0.00		
6116.00†	22.060	282.849	5835.42	-47.03	335.88	-1472.54	40°00'29.239"N	104°45'51.504"W	0.00		
6216.00†	22.060	282.849	5928.10	-48.20	344.23	-1509.16	40°00'29.321"N	104°45'51.974"W	0.00		
6316.00†	22.060	282.849	6020.78	-49.37	352.59	-1545.78	40°00'29.404"N	104°45'52.445"W	0.00		
6416.00†	22.060	282.849	6113.46	-50.54	360.94	-1582.40	40°00'29.486"N	104°45'52.916"W	0.00		
6516.00†	22.060	282.849	6206.14	-51.71	369.29	-1619.02	40°00'29.569"N	104°45'53.386"W	0.00		
6616.00†	22.060	282.849	6298.82	-52.87	377.64	-1655.63	40°00'29.651"N	104°45'53.857"W	0.00		
6716.00†	22.060	282.849	6391.50	-54.04	385.99	-1692.25	40°00'29.734"N	104°45'54.327"W	0.00		
6816.00†	22.060	282.849	6484.17	-55.21	394.35	-1728.87	40°00'29.816"N	104°45'54.798"W	0.00		
6916.00†	22.060	282.849	6576.85	-56.38	402.70	-1765.49	40°00'29.899"N	104°45'55.269"W	0.00		
7016.00†	22.060	282.849	6669.53	-57.55	411.05	-1802.10	40°00'29.981"N	104°45'55.739"W	0.00		
7116.00†	22.060	282.849	6762.21	-58.72	419.40	-1838.72	40°00'30.064"N	104°45'56.210"W	0.00		
7216.00†	22.060	282.849	6854.89	-59.89	427.76	-1875.34	40°00'30.147"N	104°45'56.680"W	0.00		
7316.00†	22.060	282.849	6947.57	-61.06	436.11	-1911.96	40°00'30.229"N	104°45'57.151"W	0.00		
7372.52	22.060	282.849	6999.96	-61.72	440.83	-1932.65	40°00'30.276"N	104°45'57.417"W	0.00	End of Tangent	
7416.00†	21.642	273.563	7040.32	-60.93	443.14	-1948.62	40°00'30.299"N	104°45'57.622"W	8.00		
7516.00†	22.666	252.415	7133.08	-49.26	438.46	-1985.45	40°00'30.252"N	104°45'58.095"W	8.00		
7616.00†	26.095	234.807	7224.27	-24.10	419.93	-2021.85	40°00'30.069"N	104°45'58.563"W	8.00		
7716.00†	31.142	221.780	7312.11	14.09	387.92	-2057.11	40°00'29.753"N	104°45'59.016"W	8.00		
7816.00†	37.151	212.330	7394.90	64.54	343.05	-2090.54	40°00'29.309"N	104°45'59.446"W	8.00		
7916.00†	43.723	205.274	7471.01	126.28	286.20	-2121.50	40°00'28.747"N	104°45'59.844"W	8.00		
8016.00†	50.634	199.768	7538.96	198.11	218.46	-2149.37	40°00'28.078"N	104°46'00.202"W	8.00		
8116.00†	57.757	195.270	7597.45	278.63	141.16	-2173.62	40°00'27.314"N	104°46'00.513"W	8.00		
8216.00†	65.016	191.435	7645.32	366.27	55.80	-2193.78	40°00'26.470"N	104°46'00.772"W	8.00		
8316.00†	72.363	188.032	7681.65	459.32	-35.95	-2209.45	40°00'25.564"N	104°46'00.974"W	8.00		
8416.00†	79.763	184.898	7705.72	555.98	-132.32	-2220.32	40°00'24.611"N	104°46'01.113"W	8.00		
8516.00†	87.192	181.908	7717.07	654.36	-231.41	-2226.20	40°00'23.632"N	104°46'01.189"W	8.00		



Planned Wellpath Report

HOMESTEAD 5 (REV-A.0) PWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD OIL & GAS CORPORATION	Slot	SLOT#05 HOMESTEAD 5 (2444'FSL & 1454'FEL,SEC.34)
Area	COLORADO	Well	HOMESTEAD 5
Field	WELD COUNTY (NAD83/TN)	Wellbore	HOMESTEAD 5 PWB
Facility	SEC.34-T1N-R66W		

WELLPATH DATA (211 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8554.09	90.024	180.784	7718.00 [†]	691.88	-269.47	-2227.09	40°00'23.256"N	104°46'01.200"W	8.00	End of 3D Arc
8616.00 [†]	90.024	180.784	7717.97	752.81	-331.38	-2227.94	40°00'22.644"N	104°46'01.211"W	0.00	
8716.00 [†]	90.024	180.784	7717.93	851.20	-431.37	-2229.31	40°00'21.656"N	104°46'01.228"W	0.00	
8816.00 [†]	90.024	180.784	7717.89	949.59	-531.36	-2230.67	40°00'20.668"N	104°46'01.246"W	0.00	
8916.00 [†]	90.024	180.784	7717.85	1047.99	-631.35	-2232.04	40°00'19.680"N	104°46'01.263"W	0.00	
9016.00 [†]	90.024	180.784	7717.81	1146.38	-731.34	-2233.41	40°00'18.692"N	104°46'01.281"W	0.00	
9116.00 [†]	90.024	180.784	7717.77	1244.78	-831.33	-2234.78	40°00'17.703"N	104°46'01.298"W	0.00	
9216.00 [†]	90.024	180.784	7717.72	1343.17	-931.33	-2236.15	40°00'16.715"N	104°46'01.316"W	0.00	
9316.00 [†]	90.024	180.784	7717.68	1441.57	-1031.32	-2237.52	40°00'15.727"N	104°46'01.333"W	0.00	
9416.00 [†]	90.024	180.784	7717.64	1539.96	-1131.31	-2238.89	40°00'14.739"N	104°46'01.351"W	0.00	
9516.00 [†]	90.024	180.784	7717.60	1638.36	-1231.30	-2240.25	40°00'13.751"N	104°46'01.368"W	0.00	
9616.00 [†]	90.024	180.784	7717.56	1736.75	-1331.29	-2241.62	40°00'12.763"N	104°46'01.386"W	0.00	
9716.00 [†]	90.024	180.784	7717.51	1835.15	-1431.28	-2242.99	40°00'11.775"N	104°46'01.403"W	0.00	
9816.00 [†]	90.024	180.784	7717.47	1933.54	-1531.27	-2244.36	40°00'10.787"N	104°46'01.420"W	0.00	
9916.00 [†]	90.024	180.784	7717.43	2031.93	-1631.26	-2245.73	40°00'09.798"N	104°46'01.438"W	0.00	
10016.00 [†]	90.024	180.784	7717.39	2130.33	-1731.25	-2247.10	40°00'08.810"N	104°46'01.455"W	0.00	
10116.00 [†]	90.024	180.784	7717.35	2228.72	-1831.24	-2248.47	40°00'07.822"N	104°46'01.473"W	0.00	
10216.00 [†]	90.024	180.784	7717.31	2327.12	-1931.23	-2249.83	40°00'06.834"N	104°46'01.490"W	0.00	
10316.00 [†]	90.024	180.784	7717.26	2425.51	-2031.22	-2251.20	40°00'05.846"N	104°46'01.508"W	0.00	
10416.00 [†]	90.024	180.784	7717.22	2523.91	-2131.21	-2252.57	40°00'04.858"N	104°46'01.525"W	0.00	
10516.00 [†]	90.024	180.784	7717.18	2622.30	-2231.20	-2253.94	40°00'03.870"N	104°46'01.543"W	0.00	
10616.00 [†]	90.024	180.784	7717.14	2720.70	-2331.19	-2255.31	40°00'02.881"N	104°46'01.560"W	0.00	
10716.00 [†]	90.024	180.784	7717.10	2819.09	-2431.18	-2256.68	40°00'01.893"N	104°46'01.578"W	0.00	
10816.00 [†]	90.024	180.784	7717.05	2917.48	-2531.18	-2258.04	40°00'00.905"N	104°46'01.595"W	0.00	
10916.00 [†]	90.024	180.784	7717.01	3015.88	-2631.17	-2259.41	39°59'59.917"N	104°46'01.613"W	0.00	
11016.00 [†]	90.024	180.784	7716.97	3114.27	-2731.16	-2260.78	39°59'58.929"N	104°46'01.630"W	0.00	
11116.00 [†]	90.024	180.784	7716.93	3212.67	-2831.15	-2262.15	39°59'57.941"N	104°46'01.648"W	0.00	
11216.00 [†]	90.024	180.784	7716.89	3311.06	-2931.14	-2263.52	39°59'56.953"N	104°46'01.665"W	0.00	
11316.00 [†]	90.024	180.784	7716.85	3409.46	-3031.13	-2264.89	39°59'55.964"N	104°46'01.682"W	0.00	
11416.00 [†]	90.024	180.784	7716.80	3507.85	-3131.12	-2266.26	39°59'54.976"N	104°46'01.700"W	0.00	



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REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD OIL & GAS CORPORATION	Slot	SLOT#05 HOMESTEAD 5 (2444'FSL & 1454'FEL,SEC.34)
Area	COLORADO	Well	HOMESTEAD 5
Field	WELD COUNTY (NAD83/TN)	Wellbore	HOMESTEAD 5 PWB
Facility	SEC.34-T1N-R66W		

WELLPATH DATA (211 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11516.00†	90.024	180.784	7716.76	3606.25	-3231.11	-2267.62	39°59'53.988"N	104°46'01.717"W	0.00	
11616.00†	90.024	180.784	7716.72	3704.64	-3331.10	-2268.99	39°59'53.000"N	104°46'01.735"W	0.00	
11716.00†	90.024	180.784	7716.68	3803.04	-3431.09	-2270.36	39°59'52.012"N	104°46'01.752"W	0.00	
11816.00†	90.024	180.784	7716.64	3901.43	-3531.08	-2271.73	39°59'51.024"N	104°46'01.770"W	0.00	
11916.00†	90.024	180.784	7716.59	3999.82	-3631.07	-2273.10	39°59'50.036"N	104°46'01.787"W	0.00	
12016.00†	90.024	180.784	7716.55	4098.22	-3731.06	-2274.47	39°59'49.047"N	104°46'01.805"W	0.00	
12116.00†	90.024	180.784	7716.51	4196.61	-3831.05	-2275.83	39°59'48.059"N	104°46'01.822"W	0.00	
12216.00†	90.024	180.784	7716.47	4295.01	-3931.04	-2277.20	39°59'47.071"N	104°46'01.840"W	0.00	
12316.00†	90.024	180.784	7716.43	4393.40	-4031.03	-2278.57	39°59'46.083"N	104°46'01.857"W	0.00	
12416.00†	90.024	180.784	7716.39	4491.80	-4131.03	-2279.94	39°59'45.095"N	104°46'01.875"W	0.00	
12516.00†	90.024	180.784	7716.34	4590.19	-4231.02	-2281.31	39°59'44.107"N	104°46'01.892"W	0.00	
12616.00†	90.024	180.784	7716.30	4688.59	-4331.01	-2282.68	39°59'43.119"N	104°46'01.910"W	0.00	
12716.00†	90.024	180.784	7716.26	4786.98	-4431.00	-2284.05	39°59'42.130"N	104°46'01.927"W	0.00	
12816.00†	90.024	180.784	7716.22	4885.38	-4530.99	-2285.41	39°59'41.142"N	104°46'01.944"W	0.00	
12916.00†	90.024	180.784	7716.18	4983.77	-4630.98	-2286.78	39°59'40.154"N	104°46'01.962"W	0.00	
13016.00†	90.024	180.784	7716.13	5082.16	-4730.97	-2288.15	39°59'39.166"N	104°46'01.979"W	0.00	
13116.00†	90.024	180.784	7716.09	5180.56	-4830.96	-2289.52	39°59'38.178"N	104°46'01.997"W	0.00	
13216.00†	90.024	180.784	7716.05	5278.95	-4930.95	-2290.89	39°59'37.190"N	104°46'02.014"W	0.00	
13316.00†	90.024	180.784	7716.01	5377.35	-5030.94	-2292.26	39°59'36.202"N	104°46'02.032"W	0.00	
13416.00†	90.024	180.784	7715.97	5475.74	-5130.93	-2293.63	39°59'35.213"N	104°46'02.049"W	0.00	
13516.00†	90.024	180.784	7715.93	5574.14	-5230.92	-2294.99	39°59'34.225"N	104°46'02.067"W	0.00	
13616.00†	90.024	180.784	7715.88	5672.53	-5330.91	-2296.36	39°59'33.237"N	104°46'02.084"W	0.00	
13716.00†	90.024	180.784	7715.84	5770.93	-5430.90	-2297.73	39°59'32.249"N	104°46'02.102"W	0.00	
13816.00†	90.024	180.784	7715.80	5869.32	-5530.89	-2299.10	39°59'31.261"N	104°46'02.119"W	0.00	
13916.00†	90.024	180.784	7715.76	5967.71	-5630.88	-2300.47	39°59'30.273"N	104°46'02.137"W	0.00	
14016.00†	90.024	180.784	7715.72	6066.11	-5730.88	-2301.84	39°59'29.285"N	104°46'02.154"W	0.00	
14116.00†	90.024	180.784	7715.67	6164.50	-5830.87	-2303.20	39°59'28.296"N	104°46'02.172"W	0.00	
14216.00†	90.024	180.784	7715.63	6262.90	-5930.86	-2304.57	39°59'27.308"N	104°46'02.189"W	0.00	
14316.00†	90.024	180.784	7715.59	6361.29	-6030.85	-2305.94	39°59'26.320"N	104°46'02.206"W	0.00	
14416.00†	90.024	180.784	7715.55	6459.69	-6130.84	-2307.31	39°59'25.332"N	104°46'02.224"W	0.00	



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REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD OIL & GAS CORPORATION	Slot	SLOT#05 HOMESTEAD 5 (2444'FSL & 1454'FEL,SEC.34)
Area	COLORADO	Well	HOMESTEAD 5
Field	WELD COUNTY (NAD83/TN)	Wellbore	HOMESTEAD 5 PWB
Facility	SEC.34-T1N-R66W		

WELLPATH DATA (211 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14516.00†	90.024	180.784	7715.51	6558.08	-6230.83	-2308.68	39°59'24.344"N	104°46'02.241"W	0.00	
14616.00†	90.024	180.784	7715.47	6656.48	-6330.82	-2310.05	39°59'23.356"N	104°46'02.259"W	0.00	
14716.00†	90.024	180.784	7715.42	6754.87	-6430.81	-2311.42	39°59'22.368"N	104°46'02.276"W	0.00	
14816.00†	90.024	180.784	7715.38	6853.27	-6530.80	-2312.78	39°59'21.379"N	104°46'02.294"W	0.00	
14916.00†	90.024	180.784	7715.34	6951.66	-6630.79	-2314.15	39°59'20.391"N	104°46'02.311"W	0.00	
15016.00†	90.024	180.784	7715.30	7050.05	-6730.78	-2315.52	39°59'19.403"N	104°46'02.329"W	0.00	
15116.00†	90.024	180.784	7715.26	7148.45	-6830.77	-2316.89	39°59'18.415"N	104°46'02.346"W	0.00	
15216.00†	90.024	180.784	7715.21	7246.84	-6930.76	-2318.26	39°59'17.427"N	104°46'02.364"W	0.00	
15316.00†	90.024	180.784	7715.17	7345.24	-7030.75	-2319.63	39°59'16.439"N	104°46'02.381"W	0.00	
15416.00†	90.024	180.784	7715.13	7443.63	-7130.74	-2320.99	39°59'15.451"N	104°46'02.399"W	0.00	
15516.00†	90.024	180.784	7715.09	7542.03	-7230.73	-2322.36	39°59'14.462"N	104°46'02.416"W	0.00	
15616.00†	90.024	180.784	7715.05	7640.42	-7330.73	-2323.73	39°59'13.474"N	104°46'02.433"W	0.00	
15716.00†	90.024	180.784	7715.01	7738.82	-7430.72	-2325.10	39°59'12.486"N	104°46'02.451"W	0.00	
15816.00†	90.024	180.784	7714.96	7837.21	-7530.71	-2326.47	39°59'11.498"N	104°46'02.468"W	0.00	
15916.00†	90.024	180.784	7714.92	7935.61	-7630.70	-2327.84	39°59'10.510"N	104°46'02.486"W	0.00	
16016.00†	90.024	180.784	7714.88	8034.00	-7730.69	-2329.21	39°59'09.522"N	104°46'02.503"W	0.00	
16116.00†	90.024	180.784	7714.84	8132.39	-7830.68	-2330.57	39°59'08.534"N	104°46'02.521"W	0.00	
16216.00†	90.024	180.784	7714.80	8230.79	-7930.67	-2331.94	39°59'07.546"N	104°46'02.538"W	0.00	
16316.00†	90.024	180.784	7714.75	8329.18	-8030.66	-2333.31	39°59'06.557"N	104°46'02.556"W	0.00	
16416.00†	90.024	180.784	7714.71	8427.58	-8130.65	-2334.68	39°59'05.569"N	104°46'02.573"W	0.00	
16516.00†	90.024	180.784	7714.67	8525.97	-8230.64	-2336.05	39°59'04.581"N	104°46'02.591"W	0.00	
16616.00†	90.024	180.784	7714.63	8624.37	-8330.63	-2337.42	39°59'03.593"N	104°46'02.608"W	0.00	
16716.00†	90.024	180.784	7714.59	8722.76	-8430.62	-2338.79	39°59'02.605"N	104°46'02.625"W	0.00	
16816.00†	90.024	180.784	7714.55	8821.16	-8530.61	-2340.15	39°59'01.617"N	104°46'02.643"W	0.00	
16916.00†	90.024	180.784	7714.50	8919.55	-8630.60	-2341.52	39°59'00.629"N	104°46'02.660"W	0.00	
17016.00†	90.024	180.784	7714.46	9017.94	-8730.59	-2342.89	39°58'59.640"N	104°46'02.678"W	0.00	
17116.00†	90.024	180.784	7714.42	9116.34	-8830.59	-2344.26	39°58'58.652"N	104°46'02.695"W	0.00	
17216.00†	90.024	180.784	7714.38	9214.73	-8930.58	-2345.63	39°58'57.664"N	104°46'02.713"W	0.00	
17316.00†	90.024	180.784	7714.34	9313.13	-9030.57	-2347.00	39°58'56.676"N	104°46'02.730"W	0.00	
17416.00†	90.024	180.784	7714.29	9411.52	-9130.56	-2348.36	39°58'55.688"N	104°46'02.748"W	0.00	



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REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD OIL & GAS CORPORATION	Slot	SLOT#05 HOMESTEAD 5 (2444'FSL & 1454'FEL,SEC.34)
Area	COLORADO	Well	HOMESTEAD 5
Field	WELD COUNTY (NAD83/TN)	Wellbore	HOMESTEAD 5 PWB
Facility	SEC.34-T1N-R66W		

WELLPATH DATA (211 stations) † = interpolated/extrapolated station											
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments	
17516.00†	90.024	180.784	7714.25	9509.92	-9230.55	-2349.73	39°58'54.700"N	104°46'02.765"W	0.00		
17616.00†	90.024	180.784	7714.21	9608.31	-9330.54	-2351.10	39°58'53.712"N	104°46'02.783"W	0.00		
17716.00†	90.024	180.784	7714.17	9706.71	-9430.53	-2352.47	39°58'52.723"N	104°46'02.800"W	0.00		
17816.00†	90.024	180.784	7714.13	9805.10	-9530.52	-2353.84	39°58'51.735"N	104°46'02.818"W	0.00		
17916.00†	90.024	180.784	7714.09	9903.50	-9630.51	-2355.21	39°58'50.747"N	104°46'02.835"W	0.00		
18016.00†	90.024	180.784	7714.04	10001.89	-9730.50	-2356.58	39°58'49.759"N	104°46'02.852"W	0.00		
18116.00†	90.024	180.784	7714.00	10100.28	-9830.49	-2357.94	39°58'48.771"N	104°46'02.870"W	0.00		
18216.00†	90.024	180.784	7713.96	10198.68	-9930.48	-2359.31	39°58'47.783"N	104°46'02.887"W	0.00		
18316.00†	90.024	180.784	7713.92	10297.07	-10030.47	-2360.68	39°58'46.795"N	104°46'02.905"W	0.00		
18416.00†	90.024	180.784	7713.88	10395.47	-10130.46	-2362.05	39°58'45.806"N	104°46'02.922"W	0.00		
18516.00†	90.024	180.784	7713.83	10493.86	-10230.45	-2363.42	39°58'44.818"N	104°46'02.940"W	0.00		
18616.00†	90.024	180.784	7713.79	10592.26	-10330.44	-2364.79	39°58'43.830"N	104°46'02.957"W	0.00		
18716.00†	90.024	180.784	7713.75	10690.65	-10430.44	-2366.15	39°58'42.842"N	104°46'02.975"W	0.00		
18816.00†	90.024	180.784	7713.71	10789.05	-10530.43	-2367.52	39°58'41.854"N	104°46'02.992"W	0.00		
18916.00†	90.024	180.784	7713.67	10887.44	-10630.42	-2368.89	39°58'40.866"N	104°46'03.010"W	0.00		
19016.00†	90.024	180.784	7713.63	10985.83	-10730.41	-2370.26	39°58'39.878"N	104°46'03.027"W	0.00		
19116.00†	90.024	180.784	7713.58	11084.23	-10830.40	-2371.63	39°58'38.889"N	104°46'03.044"W	0.00		
19216.00†	90.024	180.784	7713.54	11182.62	-10930.39	-2373.00	39°58'37.901"N	104°46'03.062"W	0.00		
19316.00†	90.024	180.784	7713.50	11281.02	-11030.38	-2374.37	39°58'36.913"N	104°46'03.079"W	0.00		
19416.00†	90.024	180.784	7713.46	11379.41	-11130.37	-2375.73	39°58'35.925"N	104°46'03.097"W	0.00		
19516.00†	90.024	180.784	7713.42	11477.81	-11230.36	-2377.10	39°58'34.937"N	104°46'03.114"W	0.00		
19616.00†	90.024	180.784	7713.37	11576.20	-11330.35	-2378.47	39°58'33.949"N	104°46'03.132"W	0.00		
19716.00†	90.024	180.784	7713.33	11674.60	-11430.34	-2379.84	39°58'32.961"N	104°46'03.149"W	0.00		
19816.00†	90.024	180.784	7713.29	11772.99	-11530.33	-2381.21	39°58'31.972"N	104°46'03.167"W	0.00		
19916.00†	90.024	180.784	7713.25	11871.39	-11630.32	-2382.58	39°58'30.984"N	104°46'03.184"W	0.00		
20016.00†	90.024	180.784	7713.21	11969.78	-11730.31	-2383.95	39°58'29.996"N	104°46'03.202"W	0.00		
20116.00†	90.024	180.784	7713.17	12068.17	-11830.30	-2385.31	39°58'29.008"N	104°46'03.219"W	0.00		
20216.00†	90.024	180.784	7713.12	12166.57	-11930.29	-2386.68	39°58'28.020"N	104°46'03.236"W	0.00		
20316.00†	90.024	180.784	7713.08	12264.96	-12030.29	-2388.05	39°58'27.032"N	104°46'03.254"W	0.00		
20416.00†	90.024	180.784	7713.04	12363.36	-12130.28	-2389.42	39°58'26.044"N	104°46'03.271"W	0.00		



Planned Wellpath Report

HOMESTEAD 5 (REV-A.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD OIL & GAS CORPORATION	Slot	SLOT#05 HOMESTEAD 5 (2444'FSL & 1454'FEL,SEC.34)
Area	COLORADO	Well	HOMESTEAD 5
Field	WELD COUNTY (NAD83/TN)	Wellbore	HOMESTEAD 5 PWB
Facility	SEC.34-T1N-R66W		

WELLPATH DATA (211 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
20511.08	90.024	180.784	7713.00 ²	12456.91	-12225.35	-2390.72	39°58'25.104"N	104°46'03.288"W	0.00	End of Tangent

TARGETS										
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape	
HOMESTEAD 1 SEC 34-T1N-R66W		-1.00	-3.64	-64.43	3207491.08	1246332.57	40°00'25.884"N	104°45'33.408"W	polygon	
HOMESTEAD 1 SEC.10-T1S-R66W		-1.00	-3.64	-64.43	3207491.08	1246332.57	40°00'25.884"N	104°45'33.408"W	polygon	
HOMESTEAD 1 SEC.3-T1S-R66W		-1.00	-3.64	-64.43	3207491.08	1246332.57	40°00'25.884"N	104°45'33.408"W	polygon	
HOMESTEAD 1 SEC 34-T1N-R66W Hardline (460'Setback)		7599.00	-3.64	-64.43	3207491.08	1246332.57	40°00'25.884"N	104°45'33.408"W	polygon	
HOMESTEAD 1 SEC.10-T1S-R66W Hardline (460'Setback)		7599.00	-3.64	-64.43	3207491.08	1246332.57	40°00'25.884"N	104°45'33.408"W	polygon	
HOMESTEAD 1 SEC.3-T1S-R66W Setback (460'Setback)		7599.00	-3.64	-64.43	3207491.08	1246332.57	40°00'25.884"N	104°45'33.408"W	polygon	
2) HOMESTEAD 5 BHL ON PLAT, REV-1 (460'FSL & 958'FWL, SEC.10)	20511.08	7713.00	-12225.35	-2390.72	3205267.07	1234092.30	39°58'25.104"N	104°46'03.288"W	point	
1) HOMESTEAD 5 EP, REV-1 (2180'FSL & 1594'FWL, SEC.34)	8554.09	7718.00	-269.47	-2227.09	3205330.79	1246048.69	40°00'23.256"N	104°46'01.200"W	point	



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HOMESTEAD 5 (REV-A.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD OIL & GAS CORPORATION	Slot	SLOT#05 HOMESTEAD 5 (2444'FSL & 1454'FEL,SEC.34)
Area	COLORADO	Well	HOMESTEAD 5
Field	WELD COUNTY (NAD83/TN)	Wellbore	HOMESTEAD 5 PWB
Facility	SEC.34-T1N-R66W		

SURVEY PROGRAM - Ref Wellbore: HOMESTEAD 5 PWB Ref Wellpath: HOMESTEAD 5 (REV-A.0) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	20511.08	BHI NaviTrak (Rotating+Axial Corr)		HOMESTEAD 5 PWB



Planned Wellpath Report

HOMESTEAD 5 (REV-A.0) PWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD OIL & GAS CORPORATION	Slot	SLOT#05 HOMESTEAD 5 (2444'FSL & 1454'FEL,SEC.34)
Area	COLORADO	Well	HOMESTEAD 5
Field	WELD COUNTY (NAD83/TN)	Wellbore	HOMESTEAD 5 PWB
Facility	SEC.34-T1N-R66W		

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
16.00	0.000	282.849	16.00	Tie On
1550.00	0.000	282.849	1550.00	End of Tangent
2653.01	22.060	282.849	2625.96	End of Build
7372.52	22.060	282.849	6999.96	End of Tangent
8554.09	90.024	180.784	7718.00	End of 3D Arc
20511.08	90.024	180.784	7713.00	End of Tangent