

VERDAD OIL & GAS CORPORATION

Location: COLORADO Slot: SLOT#04 HOMESTEAD 4 (2444'FSL & 1470'FEL, SEC.34)
Field: WELD COUNTY (NAD83/TN) Well: HOMESTEAD 4
Facility: SEC.34-T1N-R66W Wellbore: HOMESTEAD 4 PWB

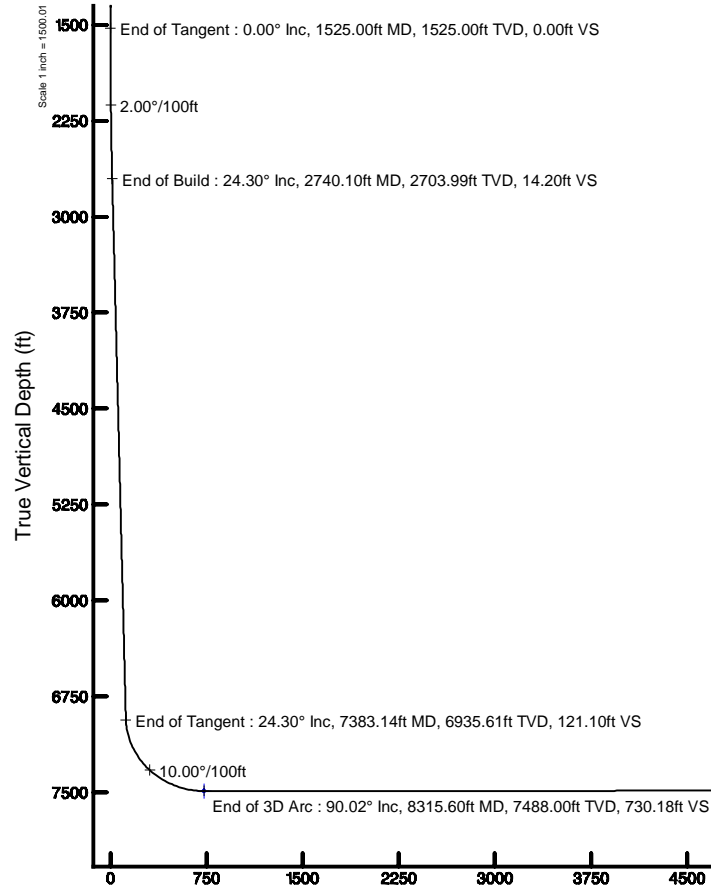
Plot reference wellpath is HOMESTEAD 4 (REV-A.0) PWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to XTREME 20 (16'RKB+513'GL) (RKB)	" = Wellpath was transformed from a different geoidic datum
Measured depths are referenced to XTREME 20 (16'RKB+513'GL) (RKB)	North Reference: True north
XTREME 20 (16'RKB+513'GL) (RKB) to Mean Sea Level: 5154 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#04 HOMESTEAD 4 (2444'FSL & 1470'FEL, SEC.34)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: guenaler on 2018-01-31
	Database: WA_DEN_Denver_Defn

Location Information

Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
SEC.34-T1N-R66W		3207958.837	1246340.126	40°00'25.920"N	104°46'27.396"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#04 HOMESTEAD 4 (2444'FSL & 1470'FEL, SEC.34)	0.00	-420.20	3207938.665	1246338.614	40°00'25.920"N	104°46'32.796"W
XTREME 20 (16'RKB+513'GL) (RKB) to Mud line (At Slot: SLOT#04 HOMESTEAD 4 (2444'FSL & 1470'FEL, SEC.34))						5154ft
Mean Sea Level to Mud line (At Slot: SLOT#04 HOMESTEAD 4 (2444'FSL & 1470'FEL, SEC.34))						0ft
XTREME 20 (16'RKB+513'GL) (RKB) 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
20271.54	90.024	180.167	7483.00	-12225.34	-2427.16	3205213.82	1234091.86	39°58'25.104"N	104°46'03.972"W



Well Profile Data

Design Comment	MD (ft)	Inc (")	Az (")	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	16.00	0.000	278.022	16.00	0.00	0.00	0.00	0.00
End of Tangent	1525.00	0.000	278.022	1525.00	0.00	0.00	0.00	0.00
End of Build	2740.10	24.302	278.022	2703.99	35.43	-251.37	2.00	14.20
End of Tangent	7383.14	24.302	278.022	6935.61	302.09	-2143.50	0.00	121.10
End of 3D Arc	8315.60	90.024	180.167	7488.00	-269.46	-2392.37	10.00	730.18
End of Tangent	20271.54	90.024	180.167	7483.00	-12225.34	-2427.16	0.00	12463.95

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
HOMESTEAD 1 SEC 34-T1N-R66W	-1.00	-3.04	-47.82	307991.08	124633.07	40°00'25.920"N	104°46'32.796"W	
HOMESTEAD 1 SEC 10-T1S-R66W	-1.00	-3.04	-47.82	307991.08	124633.07	40°00'25.920"N	104°46'32.796"W	
HOMESTEAD 1 SEC 3-T1S-R66W	-1.00	-3.04	-47.82	307991.08	124633.07	40°00'25.920"N	104°46'32.796"W	
HOMESTEAD 4BHL ON PLAT, REV-1 (460'FSL & 903'FWL, SEC.10)	20271.54	7483.00	-12225.34	-2427.16	3205213.82	1234091.86	39°58'25.104"N	104°46'03.972"W
HOMESTEAD 4BHL ON PLAT, REV-1 (460'FSL & 903'FWL, SEC.10)	8315.60	7488.00	-269.46	-2392.37	3205213.82	1234091.86	39°58'25.104"N	104°46'03.972"W
HOMESTEAD 1 SEC 34-T1N-R66W Hardline (460' Setback)	7383.14	6935.61	-47.82	307991.08	124633.07	40°00'25.920"N	104°46'32.796"W	
HOMESTEAD 1 SEC 10-T1S-R66W Hardline (460' Setback)	7383.14	6935.61	-47.82	307991.08	124633.07	40°00'25.920"N	104°46'32.796"W	
HOMESTEAD 1 SEC 3-T1S-R66W Hardline (460' Setback)	7383.14	6935.61	-47.82	307991.08	124633.07	40°00'25.920"N	104°46'32.796"W	

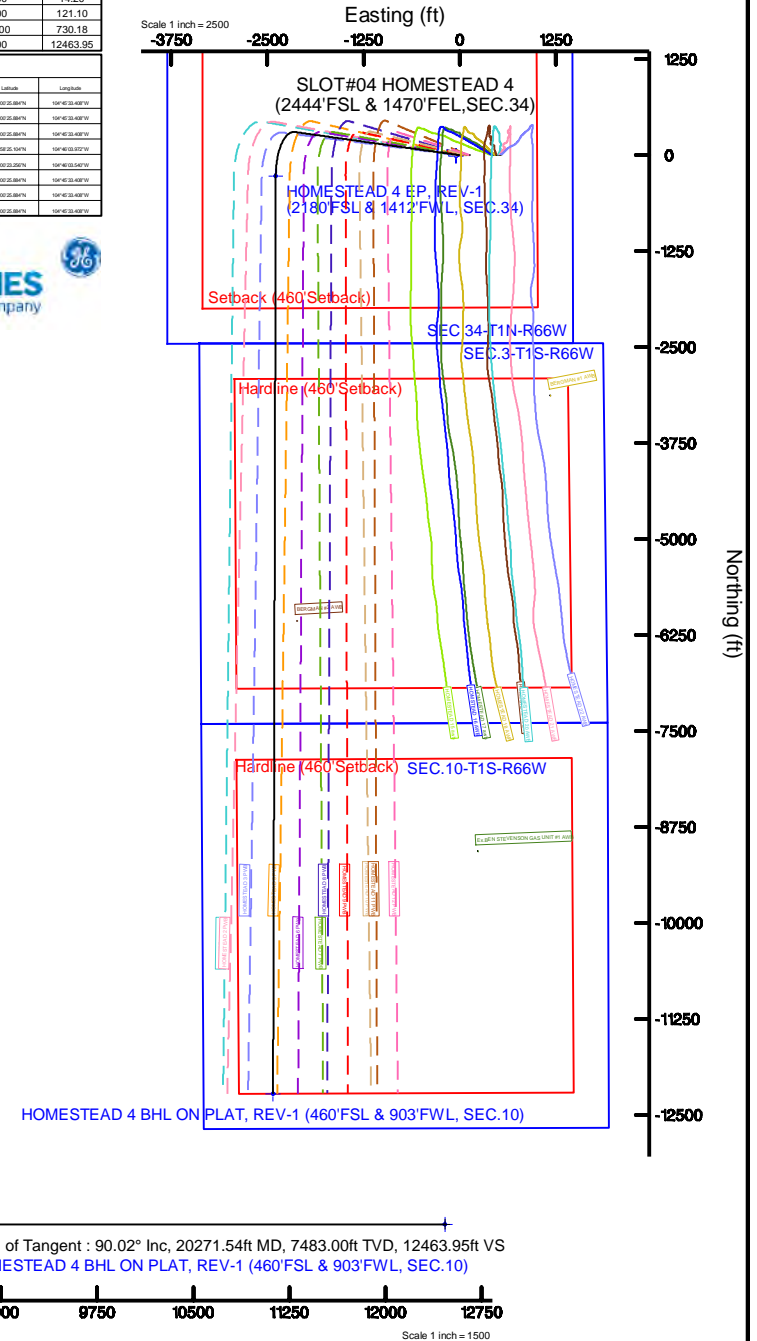


BGGM (1900.0 to 2019.0) Dip: 66.54° Field: 52093.7 nT
Magnetic North is 8.30 degrees East of True North (at 1/24/2018)

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	20271.54	BHI NavTrak	BHI NavTrak (Rotating+Axial Corr)		HOMESTEAD 4 PWB





Planned Wellpath Report

HOMESTEAD 4 (REV-A.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD OIL & GAS CORPORATION	Slot	SLOT#04 HOMESTEAD 4 (2444'FSL & 1470'FEL,SEC.34)
Area	COLORADO	Well	HOMESTEAD 4
Field	WELD COUNTY (NAD83/TN)	Wellbore	HOMESTEAD 4 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 4:43:49 PM
Convergence at slot	0.48° East	Database/Source file	WA_DEN_Denver_Defn/HOMESTEAD_4__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	-420.20	3207538.67	1246336.61	40°00'25.920"N	104°45'32.796"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#04 HOMESTEAD 4 (2444'FSL & 1470'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	191.23°



Planned Wellpath Report

HOMESTEAD 4 (REV-A.0) PWP



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Area	COLORADO	Well	HOMESTEAD 4
Field	WELD COUNTY (NAD83/TN)	Wellbore	HOMESTEAD 4 PWB
Facility	SEC.34-T1N-R66W		

WELLPATH DATA (209 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	278.022	0.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.796"W	0.00	
16.00	0.000	278.022	16.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.796"W	0.00	Tie On
116.00†	0.000	278.022	116.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.796"W	0.00	
216.00†	0.000	278.022	216.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.796"W	0.00	
316.00†	0.000	278.022	316.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.796"W	0.00	
416.00†	0.000	278.022	416.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.796"W	0.00	
516.00†	0.000	278.022	516.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.796"W	0.00	
616.00†	0.000	278.022	616.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.796"W	0.00	
716.00†	0.000	278.022	716.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.796"W	0.00	
816.00†	0.000	278.022	816.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.796"W	0.00	
916.00†	0.000	278.022	916.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.796"W	0.00	
1016.00†	0.000	278.022	1016.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.796"W	0.00	
1116.00†	0.000	278.022	1116.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.796"W	0.00	
1216.00†	0.000	278.022	1216.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.796"W	0.00	
1316.00†	0.000	278.022	1316.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.796"W	0.00	
1416.00†	0.000	278.022	1416.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.796"W	0.00	
1516.00†	0.000	278.022	1516.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.796"W	0.00	
1525.00	0.000	278.022	1525.00	0.00	0.00	0.00	40°00'25.920"N	104°45'32.796"W	0.00	End of Tangent
1616.00†	1.820	278.022	1615.98	0.08	0.20	-1.43	40°00'25.922"N	104°45'32.814"W	2.00	
1716.00†	3.820	278.022	1715.86	0.36	0.89	-6.30	40°00'25.929"N	104°45'32.877"W	2.00	
1816.00†	5.820	278.022	1815.50	0.83	2.06	-14.62	40°00'25.940"N	104°45'32.984"W	2.00	
1916.00†	7.820	278.022	1914.79	1.49	3.72	-26.38	40°00'25.957"N	104°45'33.135"W	2.00	
2016.00†	9.820	278.022	2013.60	2.35	5.86	-41.56	40°00'25.978"N	104°45'33.330"W	2.00	
2116.00†	11.820	278.022	2111.82	3.40	8.48	-60.15	40°00'26.004"N	104°45'33.569"W	2.00	
2216.00†	13.820	278.022	2209.32	4.64	11.57	-82.12	40°00'26.034"N	104°45'33.851"W	2.00	
2316.00†	15.820	278.022	2305.99	6.07	15.14	-107.45	40°00'26.070"N	104°45'34.177"W	2.00	
2416.00†	17.820	278.022	2401.70	7.69	19.18	-136.10	40°00'26.110"N	104°45'34.545"W	2.00	
2516.00†	19.820	278.022	2496.35	9.49	23.68	-168.04	40°00'26.154"N	104°45'34.956"W	2.00	
2616.00†	21.820	278.022	2589.82	11.48	28.64	-203.24	40°00'26.203"N	104°45'35.408"W	2.00	
2716.00†	23.820	278.022	2681.99	13.65	34.05	-241.64	40°00'26.257"N	104°45'35.901"W	2.00	



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HOMESTEAD 4 (REV-A.0) PWP

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Field	WELD COUNTY (NAD83/TN)	Wellbore	HOMESTEAD 4 PWB
Facility	SEC.34-T1N-R66W		

WELLPATH DATA (209 stations) † = interpolated/extrapolated station											
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments	
2740.10	24.302	278.022	2703.99	14.20	35.43	-251.37	40°00'26.270"N	104°45'36.026"W	2.00	End of Build	
2816.00†	24.302	278.022	2773.17	15.95	39.79	-282.30	40°00'26.313"N	104°45'36.424"W	0.00		
2916.00†	24.302	278.022	2864.31	18.25	45.53	-323.05	40°00'26.370"N	104°45'36.948"W	0.00		
3016.00†	24.302	278.022	2955.45	20.55	51.27	-363.80	40°00'26.427"N	104°45'37.471"W	0.00		
3116.00†	24.302	278.022	3046.58	22.86	57.02	-404.55	40°00'26.483"N	104°45'37.995"W	0.00		
3216.00†	24.302	278.022	3137.72	25.16	62.76	-445.31	40°00'26.540"N	104°45'38.519"W	0.00		
3316.00†	24.302	278.022	3228.86	27.46	68.50	-486.06	40°00'26.597"N	104°45'39.042"W	0.00		
3416.00†	24.302	278.022	3320.00	29.76	74.25	-526.81	40°00'26.654"N	104°45'39.566"W	0.00		
3516.00†	24.302	278.022	3411.14	32.07	79.99	-567.56	40°00'26.710"N	104°45'40.090"W	0.00		
3616.00†	24.302	278.022	3502.28	34.37	85.73	-608.31	40°00'26.767"N	104°45'40.613"W	0.00		
3716.00†	24.302	278.022	3593.42	36.67	91.48	-649.07	40°00'26.824"N	104°45'41.137"W	0.00		
3816.00†	24.302	278.022	3684.56	38.97	97.22	-689.82	40°00'26.881"N	104°45'41.661"W	0.00		
3916.00†	24.302	278.022	3775.69	41.28	102.96	-730.57	40°00'26.937"N	104°45'42.185"W	0.00		
4016.00†	24.302	278.022	3866.83	43.58	108.71	-771.32	40°00'26.994"N	104°45'42.708"W	0.00		
4116.00†	24.302	278.022	3957.97	45.88	114.45	-812.07	40°00'27.051"N	104°45'43.232"W	0.00		
4216.00†	24.302	278.022	4049.11	48.18	120.19	-852.83	40°00'27.108"N	104°45'43.756"W	0.00		
4316.00†	24.302	278.022	4140.25	50.49	125.93	-893.58	40°00'27.164"N	104°45'44.279"W	0.00		
4416.00†	24.302	278.022	4231.39	52.79	131.68	-934.33	40°00'27.221"N	104°45'44.803"W	0.00		
4516.00†	24.302	278.022	4322.53	55.09	137.42	-975.08	40°00'27.278"N	104°45'45.327"W	0.00		
4616.00†	24.302	278.022	4413.67	57.39	143.16	-1015.83	40°00'27.335"N	104°45'45.851"W	0.00		
4716.00†	24.302	278.022	4504.81	59.70	148.91	-1056.59	40°00'27.391"N	104°45'46.374"W	0.00		
4816.00†	24.302	278.022	4595.94	62.00	154.65	-1097.34	40°00'27.448"N	104°45'46.898"W	0.00		
4916.00†	24.302	278.022	4687.08	64.30	160.39	-1138.09	40°00'27.505"N	104°45'47.422"W	0.00		
5016.00†	24.302	278.022	4778.22	66.60	166.14	-1178.84	40°00'27.562"N	104°45'47.945"W	0.00		
5116.00†	24.302	278.022	4869.36	68.91	171.88	-1219.59	40°00'27.618"N	104°45'48.469"W	0.00		
5216.00†	24.302	278.022	4960.50	71.21	177.62	-1260.35	40°00'27.675"N	104°45'48.993"W	0.00		
5316.00†	24.302	278.022	5051.64	73.51	183.37	-1301.10	40°00'27.732"N	104°45'49.517"W	0.00		
5416.00†	24.302	278.022	5142.78	75.81	189.11	-1341.85	40°00'27.788"N	104°45'50.040"W	0.00		
5516.00†	24.302	278.022	5233.92	78.12	194.85	-1382.60	40°00'27.845"N	104°45'50.564"W	0.00		
5616.00†	24.302	278.022	5325.06	80.42	200.60	-1423.35	40°00'27.902"N	104°45'51.088"W	0.00		



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Field	WELD COUNTY (NAD83/TN)	Wellbore	HOMESTEAD 4 PWB
Facility	SEC.34-T1N-R66W		

WELLPATH DATA (209 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5716.00†	24.302	278.022	5416.19	82.72	206.34	-1464.10	40°00'27.959"N	104°45'51.611"W	0.00	
5816.00†	24.302	278.022	5507.33	85.02	212.08	-1504.86	40°00'28.015"N	104°45'52.135"W	0.00	
5916.00†	24.302	278.022	5598.47	87.32	217.83	-1545.61	40°00'28.072"N	104°45'52.659"W	0.00	
6016.00†	24.302	278.022	5689.61	89.63	223.57	-1586.36	40°00'28.129"N	104°45'53.182"W	0.00	
6116.00†	24.302	278.022	5780.75	91.93	229.31	-1627.11	40°00'28.186"N	104°45'53.706"W	0.00	
6216.00†	24.302	278.022	5871.89	94.23	235.06	-1667.86	40°00'28.242"N	104°45'54.230"W	0.00	
6316.00†	24.302	278.022	5963.03	96.53	240.80	-1708.62	40°00'28.299"N	104°45'54.754"W	0.00	
6416.00†	24.302	278.022	6054.17	98.84	246.54	-1749.37	40°00'28.356"N	104°45'55.277"W	0.00	
6516.00†	24.302	278.022	6145.31	101.14	252.29	-1790.12	40°00'28.413"N	104°45'55.801"W	0.00	
6616.00†	24.302	278.022	6236.44	103.44	258.03	-1830.87	40°00'28.469"N	104°45'56.325"W	0.00	
6716.00†	24.302	278.022	6327.58	105.74	263.77	-1871.62	40°00'28.526"N	104°45'56.848"W	0.00	
6816.00†	24.302	278.022	6418.72	108.05	269.52	-1912.38	40°00'28.583"N	104°45'57.372"W	0.00	
6916.00†	24.302	278.022	6509.86	110.35	275.26	-1953.13	40°00'28.639"N	104°45'57.896"W	0.00	
7016.00†	24.302	278.022	6601.00	112.65	281.00	-1993.88	40°00'28.696"N	104°45'58.420"W	0.00	
7116.00†	24.302	278.022	6692.14	114.95	286.75	-2034.63	40°00'28.753"N	104°45'58.943"W	0.00	
7216.00†	24.302	278.022	6783.28	117.26	292.49	-2075.38	40°00'28.810"N	104°45'59.467"W	0.00	
7316.00†	24.302	278.022	6874.42	119.56	298.23	-2116.14	40°00'28.866"N	104°45'59.991"W	0.00	
7383.14	24.302	278.022	6935.61	121.10	302.09	-2143.50	40°00'28.904"N	104°46'00.342"W	0.00	End of Tangent
7416.00†	24.101	270.016	6965.59	122.79	303.04	-2156.90	40°00'28.914"N	104°46'00.515"W	10.00	
7516.00†	26.002	246.682	7056.40	139.23	294.34	-2197.55	40°00'28.828"N	104°46'01.037"W	10.00	
7616.00†	30.972	228.364	7144.43	172.26	268.51	-2237.02	40°00'28.572"N	104°46'01.544"W	10.00	
7716.00†	37.814	215.376	7227.01	220.87	226.31	-2274.09	40°00'28.155"N	104°46'02.021"W	10.00	
7816.00†	45.686	206.074	7301.63	283.58	169.03	-2307.65	40°00'27.589"N	104°46'02.452"W	10.00	
7916.00†	54.130	199.050	7366.02	358.49	98.42	-2336.67	40°00'26.892"N	104°46'02.825"W	10.00	
8016.00†	62.902	193.409	7418.23	443.33	16.62	-2360.27	40°00'26.083"N	104°46'03.128"W	10.00	
8116.00†	71.867	188.601	7456.66	535.51	-73.89	-2377.75	40°00'25.189"N	104°46'03.352"W	10.00	
8216.00†	80.939	184.268	7480.16	632.23	-170.36	-2388.56	40°00'24.235"N	104°46'03.491"W	10.00	
8315.60	90.024	180.167	7488.00 ¹	730.18	-269.46	-2392.37	40°00'23.256"N	104°46'03.540"W	10.00	End of 3D Arc
8316.00†	90.024	180.167	7488.00	730.56	-269.85	-2392.37	40°00'23.252"N	104°46'03.540"W	0.00	
8416.00†	90.024	180.167	7487.96	828.70	-369.85	-2392.66	40°00'22.264"N	104°46'03.544"W	0.00	



Planned Wellpath Report

HOMESTEAD 4 (REV-A.0) PWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD OIL & GAS CORPORATION	Slot	SLOT#04 HOMESTEAD 4 (2444'FSL & 1470'FEL,SEC.34)
Area	COLORADO	Well	HOMESTEAD 4
Field	WELD COUNTY (NAD83/TN)	Wellbore	HOMESTEAD 4 PWB
Facility	SEC.34-T1N-R66W		

WELLPATH DATA (209 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8516.00†	90.024	180.167	7487.92	926.85	-469.85	-2392.95	40°00'21.276"N	104°46'03.547"W	0.00	
8616.00†	90.024	180.167	7487.87	1024.99	-569.85	-2393.25	40°00'20.287"N	104°46'03.551"W	0.00	
8716.00†	90.024	180.167	7487.83	1123.13	-669.85	-2393.54	40°00'19.299"N	104°46'03.554"W	0.00	
8816.00†	90.024	180.167	7487.79	1221.27	-769.85	-2393.83	40°00'18.311"N	104°46'03.558"W	0.00	
8916.00†	90.024	180.167	7487.75	1319.41	-869.85	-2394.12	40°00'17.323"N	104°46'03.562"W	0.00	
9016.00†	90.024	180.167	7487.71	1417.56	-969.85	-2394.41	40°00'16.335"N	104°46'03.565"W	0.00	
9116.00†	90.024	180.167	7487.67	1515.70	-1069.85	-2394.70	40°00'15.346"N	104°46'03.569"W	0.00	
9216.00†	90.024	180.167	7487.62	1613.84	-1169.85	-2394.99	40°00'14.358"N	104°46'03.573"W	0.00	
9316.00†	90.024	180.167	7487.58	1711.98	-1269.85	-2395.28	40°00'13.370"N	104°46'03.576"W	0.00	
9416.00†	90.024	180.167	7487.54	1810.12	-1369.85	-2395.57	40°00'12.382"N	104°46'03.580"W	0.00	
9516.00†	90.024	180.167	7487.50	1908.27	-1469.85	-2395.86	40°00'11.393"N	104°46'03.583"W	0.00	
9616.00†	90.024	180.167	7487.46	2006.41	-1569.85	-2396.15	40°00'10.405"N	104°46'03.587"W	0.00	
9716.00†	90.024	180.167	7487.41	2104.55	-1669.85	-2396.45	40°00'09.417"N	104°46'03.591"W	0.00	
9816.00†	90.024	180.167	7487.37	2202.69	-1769.85	-2396.74	40°00'08.429"N	104°46'03.594"W	0.00	
9916.00†	90.024	180.167	7487.33	2300.83	-1869.85	-2397.03	40°00'07.440"N	104°46'03.598"W	0.00	
10016.00†	90.024	180.167	7487.29	2398.97	-1969.85	-2397.32	40°00'06.452"N	104°46'03.601"W	0.00	
10116.00†	90.024	180.167	7487.25	2497.12	-2069.84	-2397.61	40°00'05.464"N	104°46'03.605"W	0.00	
10216.00†	90.024	180.167	7487.21	2595.26	-2169.84	-2397.90	40°00'04.476"N	104°46'03.609"W	0.00	
10316.00†	90.024	180.167	7487.16	2693.40	-2269.84	-2398.19	40°00'03.488"N	104°46'03.612"W	0.00	
10416.00†	90.024	180.167	7487.12	2791.54	-2369.84	-2398.48	40°00'02.499"N	104°46'03.616"W	0.00	
10516.00†	90.024	180.167	7487.08	2889.68	-2469.84	-2398.77	40°00'01.511"N	104°46'03.620"W	0.00	
10616.00†	90.024	180.167	7487.04	2987.83	-2569.84	-2399.06	40°00'00.523"N	104°46'03.623"W	0.00	
10716.00†	90.024	180.167	7487.00	3085.97	-2669.84	-2399.36	39°59'59.535"N	104°46'03.627"W	0.00	
10816.00†	90.024	180.167	7486.95	3184.11	-2769.84	-2399.65	39°59'58.546"N	104°46'03.630"W	0.00	
10916.00†	90.024	180.167	7486.91	3282.25	-2869.84	-2399.94	39°59'57.558"N	104°46'03.634"W	0.00	
11016.00†	90.024	180.167	7486.87	3380.39	-2969.84	-2400.23	39°59'56.570"N	104°46'03.638"W	0.00	
11116.00†	90.024	180.167	7486.83	3478.53	-3069.84	-2400.52	39°59'55.582"N	104°46'03.641"W	0.00	
11216.00†	90.024	180.167	7486.79	3576.68	-3169.84	-2400.81	39°59'54.593"N	104°46'03.645"W	0.00	
11316.00†	90.024	180.167	7486.75	3674.82	-3269.84	-2401.10	39°59'53.605"N	104°46'03.648"W	0.00	
11416.00†	90.024	180.167	7486.70	3772.96	-3369.84	-2401.39	39°59'52.617"N	104°46'03.652"W	0.00	



Planned Wellpath Report

HOMESTEAD 4 (REV-A.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD OIL & GAS CORPORATION	Slot	SLOT#04 HOMESTEAD 4 (2444'FSL & 1470'FEL,SEC.34)
Area	COLORADO	Well	HOMESTEAD 4
Field	WELD COUNTY (NAD83/TN)	Wellbore	HOMESTEAD 4 PWB
Facility	SEC.34-T1N-R66W		

WELLPATH DATA (209 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	180.167	7486.66	3871.10	-3469.84	-2401.68	39°59'51.629"N	104°46'03.656"W	0.00	
11616.00†	90.024	180.167	7486.62	3969.24	-3569.84	-2401.97	39°59'50.641"N	104°46'03.659"W	0.00	
11716.00†	90.024	180.167	7486.58	4067.39	-3669.84	-2402.26	39°59'49.652"N	104°46'03.663"W	0.00	
11816.00†	90.024	180.167	7486.54	4165.53	-3769.84	-2402.56	39°59'48.664"N	104°46'03.667"W	0.00	
11916.00†	90.024	180.167	7486.49	4263.67	-3869.84	-2402.85	39°59'47.676"N	104°46'03.670"W	0.00	
12016.00†	90.024	180.167	7486.45	4361.81	-3969.84	-2403.14	39°59'46.688"N	104°46'03.674"W	0.00	
12116.00†	90.024	180.167	7486.41	4459.95	-4069.84	-2403.43	39°59'45.699"N	104°46'03.677"W	0.00	
12216.00†	90.024	180.167	7486.37	4558.09	-4169.84	-2403.72	39°59'44.711"N	104°46'03.681"W	0.00	
12316.00†	90.024	180.167	7486.33	4656.24	-4269.84	-2404.01	39°59'43.723"N	104°46'03.685"W	0.00	
12416.00†	90.024	180.167	7486.29	4754.38	-4369.83	-2404.30	39°59'42.735"N	104°46'03.688"W	0.00	
12516.00†	90.024	180.167	7486.24	4852.52	-4469.83	-2404.59	39°59'41.747"N	104°46'03.692"W	0.00	
12616.00†	90.024	180.167	7486.20	4950.66	-4569.83	-2404.88	39°59'40.758"N	104°46'03.695"W	0.00	
12716.00†	90.024	180.167	7486.16	5048.80	-4669.83	-2405.17	39°59'39.770"N	104°46'03.699"W	0.00	
12816.00†	90.024	180.167	7486.12	5146.95	-4769.83	-2405.46	39°59'38.782"N	104°46'03.703"W	0.00	
12916.00†	90.024	180.167	7486.08	5245.09	-4869.83	-2405.76	39°59'37.794"N	104°46'03.706"W	0.00	
13016.00†	90.024	180.167	7486.03	5343.23	-4969.83	-2406.05	39°59'36.805"N	104°46'03.710"W	0.00	
13116.00†	90.024	180.167	7485.99	5441.37	-5069.83	-2406.34	39°59'35.817"N	104°46'03.714"W	0.00	
13216.00†	90.024	180.167	7485.95	5539.51	-5169.83	-2406.63	39°59'34.829"N	104°46'03.717"W	0.00	
13316.00†	90.024	180.167	7485.91	5637.65	-5269.83	-2406.92	39°59'33.841"N	104°46'03.721"W	0.00	
13416.00†	90.024	180.167	7485.87	5735.80	-5369.83	-2407.21	39°59'32.852"N	104°46'03.724"W	0.00	
13516.00†	90.024	180.167	7485.83	5833.94	-5469.83	-2407.50	39°59'31.864"N	104°46'03.728"W	0.00	
13616.00†	90.024	180.167	7485.78	5932.08	-5569.83	-2407.79	39°59'30.876"N	104°46'03.732"W	0.00	
13716.00†	90.024	180.167	7485.74	6030.22	-5669.83	-2408.08	39°59'29.888"N	104°46'03.735"W	0.00	
13816.00†	90.024	180.167	7485.70	6128.36	-5769.83	-2408.37	39°59'28.900"N	104°46'03.739"W	0.00	
13916.00†	90.024	180.167	7485.66	6226.51	-5869.83	-2408.67	39°59'27.911"N	104°46'03.742"W	0.00	
14016.00†	90.024	180.167	7485.62	6324.65	-5969.83	-2408.96	39°59'26.923"N	104°46'03.746"W	0.00	
14116.00†	90.024	180.167	7485.57	6422.79	-6069.83	-2409.25	39°59'25.935"N	104°46'03.750"W	0.00	
14216.00†	90.024	180.167	7485.53	6520.93	-6169.83	-2409.54	39°59'24.947"N	104°46'03.753"W	0.00	
14316.00†	90.024	180.167	7485.49	6619.07	-6269.83	-2409.83	39°59'23.958"N	104°46'03.757"W	0.00	
14416.00†	90.024	180.167	7485.45	6717.22	-6369.83	-2410.12	39°59'22.970"N	104°46'03.760"W	0.00	



Planned Wellpath Report

HOMESTEAD 4 (REV-A.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD OIL & GAS CORPORATION	Slot	SLOT#04 HOMESTEAD 4 (2444'FSL & 1470'FEL,SEC.34)
Area	COLORADO	Well	HOMESTEAD 4
Field	WELD COUNTY (NAD83/TN)	Wellbore	HOMESTEAD 4 PWB
Facility	SEC.34-T1N-R66W		

WELLPATH DATA (209 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	180.167	7485.41	6815.36	-6469.83	-2410.41	39°59'21.982"N	104°46'03.764"W	0.00	
14616.00†	90.024	180.167	7485.37	6913.50	-6569.83	-2410.70	39°59'20.994"N	104°46'03.768"W	0.00	
14716.00†	90.024	180.167	7485.32	7011.64	-6669.82	-2410.99	39°59'20.006"N	104°46'03.771"W	0.00	
14816.00†	90.024	180.167	7485.28	7109.78	-6769.82	-2411.28	39°59'19.017"N	104°46'03.775"W	0.00	
14916.00†	90.024	180.167	7485.24	7207.92	-6869.82	-2411.57	39°59'18.029"N	104°46'03.779"W	0.00	
15016.00†	90.024	180.167	7485.20	7306.07	-6969.82	-2411.87	39°59'17.041"N	104°46'03.782"W	0.00	
15116.00†	90.024	180.167	7485.16	7404.21	-7069.82	-2412.16	39°59'16.053"N	104°46'03.786"W	0.00	
15216.00†	90.024	180.167	7485.11	7502.35	-7169.82	-2412.45	39°59'15.064"N	104°46'03.789"W	0.00	
15316.00†	90.024	180.167	7485.07	7600.49	-7269.82	-2412.74	39°59'14.076"N	104°46'03.793"W	0.00	
15416.00†	90.024	180.167	7485.03	7698.63	-7369.82	-2413.03	39°59'13.088"N	104°46'03.797"W	0.00	
15516.00†	90.024	180.167	7484.99	7796.78	-7469.82	-2413.32	39°59'12.100"N	104°46'03.800"W	0.00	
15616.00†	90.024	180.167	7484.95	7894.92	-7569.82	-2413.61	39°59'11.111"N	104°46'03.804"W	0.00	
15716.00†	90.024	180.167	7484.91	7993.06	-7669.82	-2413.90	39°59'10.123"N	104°46'03.807"W	0.00	
15816.00†	90.024	180.167	7484.86	8091.20	-7769.82	-2414.19	39°59'09.135"N	104°46'03.811"W	0.00	
15916.00†	90.024	180.167	7484.82	8189.34	-7869.82	-2414.48	39°59'08.147"N	104°46'03.815"W	0.00	
16016.00†	90.024	180.167	7484.78	8287.48	-7969.82	-2414.77	39°59'07.159"N	104°46'03.818"W	0.00	
16116.00†	90.024	180.167	7484.74	8385.63	-8069.82	-2415.07	39°59'06.170"N	104°46'03.822"W	0.00	
16216.00†	90.024	180.167	7484.70	8483.77	-8169.82	-2415.36	39°59'05.182"N	104°46'03.826"W	0.00	
16316.00†	90.024	180.167	7484.65	8581.91	-8269.82	-2415.65	39°59'04.194"N	104°46'03.829"W	0.00	
16416.00†	90.024	180.167	7484.61	8680.05	-8369.82	-2415.94	39°59'03.206"N	104°46'03.833"W	0.00	
16516.00†	90.024	180.167	7484.57	8778.19	-8469.82	-2416.23	39°59'02.217"N	104°46'03.836"W	0.00	
16616.00†	90.024	180.167	7484.53	8876.34	-8569.82	-2416.52	39°59'01.229"N	104°46'03.840"W	0.00	
16716.00†	90.024	180.167	7484.49	8974.48	-8669.82	-2416.81	39°59'00.241"N	104°46'03.844"W	0.00	
16816.00†	90.024	180.167	7484.45	9072.62	-8769.82	-2417.10	39°58'59.253"N	104°46'03.847"W	0.00	
16916.00†	90.024	180.167	7484.40	9170.76	-8869.82	-2417.39	39°58'58.264"N	104°46'03.851"W	0.00	
17016.00†	90.024	180.167	7484.36	9268.90	-8969.82	-2417.68	39°58'57.276"N	104°46'03.854"W	0.00	
17116.00†	90.024	180.167	7484.32	9367.04	-9069.81	-2417.98	39°58'56.288"N	104°46'03.858"W	0.00	
17216.00†	90.024	180.167	7484.28	9465.19	-9169.81	-2418.27	39°58'55.300"N	104°46'03.862"W	0.00	
17316.00†	90.024	180.167	7484.24	9563.33	-9269.81	-2418.56	39°58'54.312"N	104°46'03.865"W	0.00	
17416.00†	90.024	180.167	7484.19	9661.47	-9369.81	-2418.85	39°58'53.323"N	104°46'03.869"W	0.00	

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	-47.62	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	-47.62	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	-47.62	3207491.08	1246332.57	40°00'25.884"N	104°45'33.408"W	polygon
2) HOMESTEAD 4 BHL ON PLAT, REV-1 (460'FSL & 903'FWL, SEC.10)	20271.54	7483.00	-12225.34	-2427.16	3205213.82	1234091.86	39°58'25.104"N	104°46'03.972"W	point
1) HOMESTEAD 4 EP, REV-1 (2180'FSL & 1412'FWL, SEC.34)	8315.60	7488.00	-269.46	-2392.37	3205148.72	1246047.19	40°00'23.256"N	104°46'03.540"W	point
HOMESTEAD 1 SEC 34-T1N-R66W Hardline (460'Setback)		7599.00	-3.64	-47.62	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	-47.62	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	-47.62	3207491.08	1246332.57	40°00'25.884"N	104°45'33.408"W	polygon

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape

SURVEY PROGRAM - Ref Wellbore: HOMESTEAD 4 PWB Ref Wellpath: HOMESTEAD 4 (REV-A.0) PWP									
Start MD [ft]	End MD [ft]	Positional Uncertainty Model				Log Name/Comment		Wellbore	
16.00	20271.54	BHI NaviTrak (Rotating+Axial Corr)						HOMESTEAD 4 PWB	



Planned Wellpath Report

HOMESTEAD 4 (REV-A.0) PWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD OIL & GAS CORPORATION	Slot	SLOT#04 HOMESTEAD 4 (2444'FSL & 1470'FEL,SEC.34)
Area	COLORADO	Well	HOMESTEAD 4
Field	WELD COUNTY (NAD83/TN)	Wellbore	HOMESTEAD 4 PWB
Facility	SEC.34-T1N-R66W		

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
16.00	0.000	278.022	16.00	Tie On
1525.00	0.000	278.022	1525.00	End of Tangent
2740.10	24.302	278.022	2703.99	End of Build
7383.14	24.302	278.022	6935.61	End of Tangent
8315.60	90.024	180.167	7488.00	End of 3D Arc
20271.54	90.024	180.167	7483.00	End of Tangent