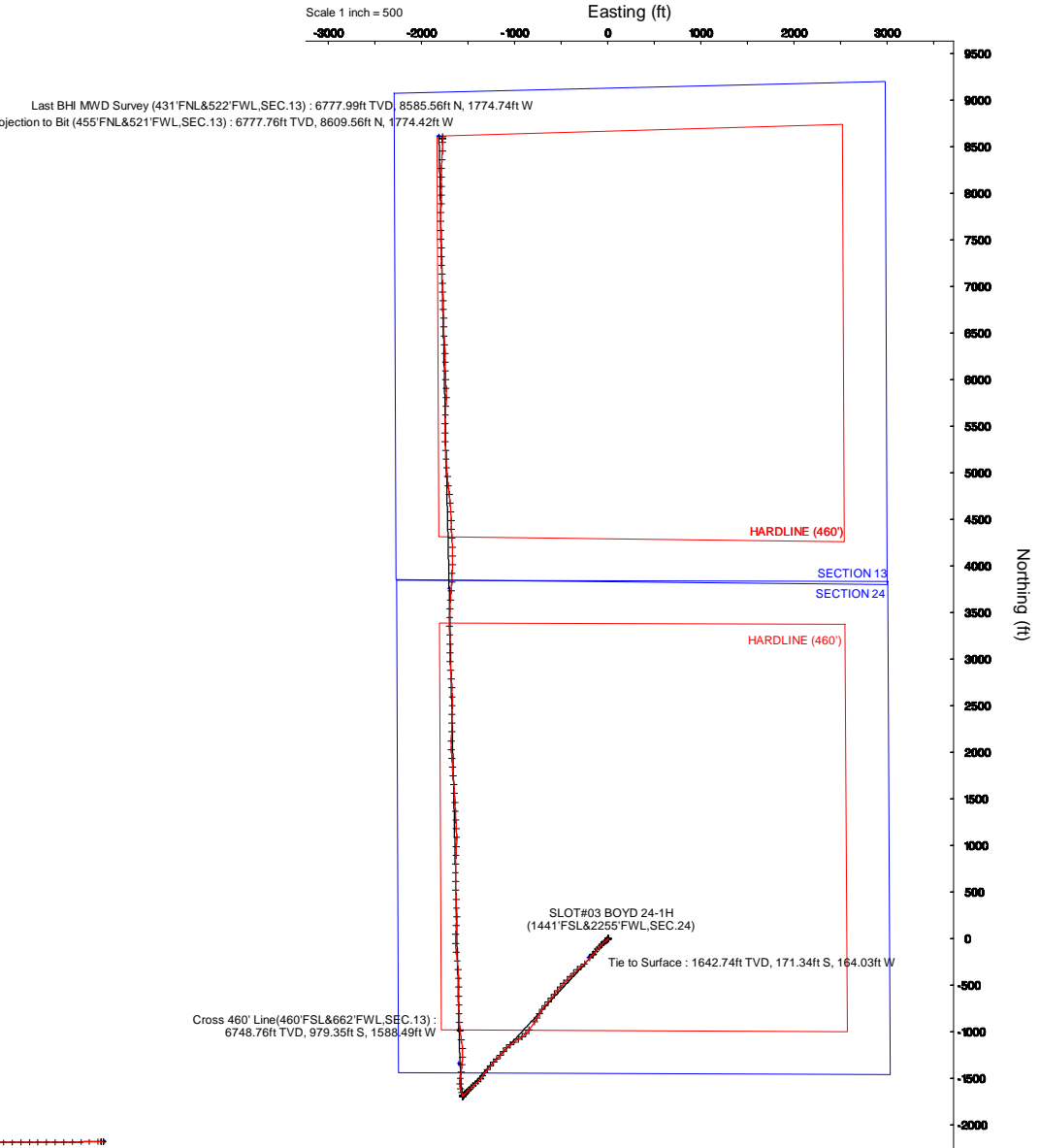
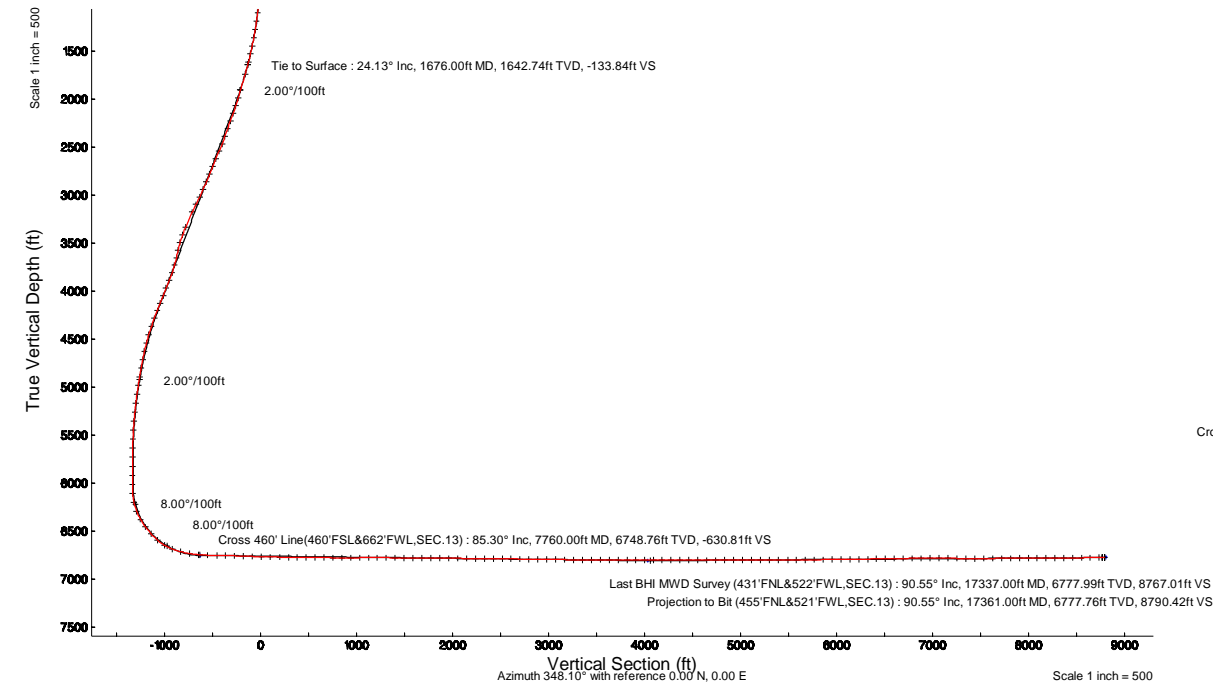


VERDAD RESOURCES

Location:	COLORADO	Slot:	SLOT#03 BOYD 24-1H(1441°FSL&2255°FWL,SEC.24)
Field:	WELD COUNTY (NAD83/TN)	Well:	BOYD 24-1H
Facility:	SEC.24-T02N-R64W	Wellbore:	BOYD 24-1H PWB

Plot reference wellpath is BOYD 24-1H (REV-C.0) PWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to RIG (24KB) (RKB)	" = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to RIG (24KB) (RKB)	North Reference: True north
RIG (24KB) to Mean Sea Level: 4947 feet	Scale: True distance
Mean Sea Level to Ground level (At Slot: SLOT#03 BOYD 24-1H(1441°FSL&2255°FWL,SEC.24)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: guenaler on 2019-03-04
	Database: WA_DEN_Denver_Defn

Survey Program					
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
24.00	1676.00	BHI NaviTrak	BHI NaviTrak (Standard)		BOYD 24-1H AWB
1676.00	17341.92	BHI AutoTrak Curve	BHI AutoTrak Curve (Axial Corr, Short spacing)		BOYD 24-1H PWB





Actual Wellpath Report

BOYD 24-1H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#03 BOYD 24-1H(1441'FSL&2255'FWL,SEC.24)
Area	COLORADO	Well	BOYD 24-1H
Field	WELD COUNTY (NAD83/TN)	Wellbore	BOYD 24-1H AWB
Facility	SEC.24-T02N-R64W		

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	0.999959	Report Generated	3/4/2019 at 1:16:07 PM
Convergence at slot	0.65° East	Database/Source file	WA_DEN_Denver_Defn/BOYD_24-1H_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	197.83	202.14	3279352.70	1288352.74	40°07'14.167"N	104°30'03.856"W
Facility Reference Pt			3279152.81	1288152.65	40°07'12.212"N	104°30'06.458"W
Field Reference Pt			3242930.13	1254608.21	40°01'44.490"N	104°37'56.946"W

WELLPATH DATUM			
Calculation method	Minimum curvature	RIG (24'KB) (RKB) to Facility Vertical Datum	4947.00ft
Horizontal Reference Pt	Slot	RIG (24'KB) (RKB) to Mean Sea Level	4947.00ft
Vertical Reference Pt	RIG (24'KB) (RKB)	RIG (24'KB) (RKB) to Ground Level at Slot (SLOT#03 BOYD 24-1H (1441'FSL&2255'FWL,SEC.24))	4947.00ft
MD Reference Pt	RIG (24'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	348.10°



Actual Wellpath Report
BOYD 24-1H AWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#03 BOYD 24-1H(1441'FSL&2255'FWL,SEC.24)
Area	COLORADO	Well	BOYD 24-1H
Field	WELD COUNTY (NAD83/TN)	Wellbore	BOYD 24-1H AWB
Facility	SEC.24-T02N-R64W		

WELLPATH DATA (187 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	104.590	0.00	0.00	0.00	0.00	40°07'14.167"N	104°30'03.856"W	0.00	
24.00	0.000	104.590	24.00	0.00	0.00	0.00	40°07'14.167"N	104°30'03.856"W	0.00	
116.00	0.090	104.590	116.00	-0.03	-0.02	0.07	40°07'14.167"N	104°30'03.855"W	0.10	
206.00	0.210	77.660	206.00	-0.06	0.00	0.30	40°07'14.167"N	104°30'03.852"W	0.15	
296.00	0.590	112.600	296.00	-0.32	-0.14	0.89	40°07'14.166"N	104°30'03.845"W	0.48	
386.00	0.190	144.510	386.00	-0.72	-0.44	1.40	40°07'14.163"N	104°30'03.838"W	0.49	
476.00	0.240	125.240	475.99	-1.00	-0.67	1.64	40°07'14.160"N	104°30'03.835"W	0.10	
566.00	1.770	196.530	565.98	-2.36	-2.11	1.40	40°07'14.146"N	104°30'03.838"W	1.90	
656.00	2.680	225.210	655.91	-4.72	-4.93	-0.49	40°07'14.118"N	104°30'03.862"W	1.57	
746.00	4.340	222.160	745.74	-7.87	-8.94	-4.27	40°07'14.079"N	104°30'03.911"W	1.86	
836.00	5.800	234.020	835.39	-11.72	-14.13	-10.23	40°07'14.027"N	104°30'03.988"W	1.99	
926.00	7.790	237.600	924.75	-15.71	-20.07	-19.06	40°07'13.969"N	104°30'04.101"W	2.26	
1016.00	10.350	230.710	1013.62	-21.57	-28.46	-30.47	40°07'13.886"N	104°30'04.248"W	3.08	
1106.00	13.900	226.240	1101.60	-31.00	-41.06	-44.54	40°07'13.761"N	104°30'04.429"W	4.08	
1196.00	14.820	224.790	1188.79	-43.03	-56.71	-60.46	40°07'13.607"N	104°30'04.634"W	1.10	
1286.00	15.820	224.770	1275.59	-56.09	-73.59	-77.21	40°07'13.440"N	104°30'04.850"W	1.11	
1376.00	18.160	222.820	1361.66	-70.93	-92.59	-95.38	40°07'13.252"N	104°30'05.084"W	2.68	
1466.00	19.080	219.970	1446.95	-88.12	-114.15	-114.37	40°07'13.039"N	104°30'05.328"W	1.44	
1556.00	20.480	221.700	1531.64	-106.55	-137.18	-134.29	40°07'12.811"N	104°30'05.585"W	1.69	
1646.00	22.960	220.910	1615.24	-126.50	-162.21	-156.26	40°07'12.564"N	104°30'05.867"W	2.77	
1676.00	24.130	219.860	1642.74	-133.84	-171.34	-164.03	40°07'12.474"N	104°30'05.967"W	4.14	Tie to Surface
1786.00	24.940	220.370	1742.81	-161.95	-206.26	-193.46	40°07'12.129"N	104°30'06.346"W	0.76	
1975.00	29.100	225.790	1911.17	-210.93	-268.71	-252.25	40°07'11.512"N	104°30'07.103"W	2.56	
2070.00	33.250	231.720	1992.45	-234.86	-300.97	-289.28	40°07'11.193"N	104°30'07.580"W	5.43	
2164.00	33.310	229.030	2071.04	-258.86	-333.86	-328.99	40°07'10.868"N	104°30'08.091"W	1.57	
2259.00	33.270	223.820	2150.47	-286.22	-369.77	-366.74	40°07'10.513"N	104°30'08.577"W	3.01	
2354.00	33.110	223.790	2229.97	-315.52	-407.30	-402.74	40°07'10.142"N	104°30'09.040"W	0.17	
2448.00	33.300	226.410	2308.62	-343.55	-443.63	-439.20	40°07'09.783"N	104°30'09.509"W	1.54	
2543.00	33.290	225.610	2388.03	-371.26	-479.85	-476.72	40°07'09.425"N	104°30'09.992"W	0.46	
2638.00	33.390	221.530	2467.41	-400.84	-517.66	-512.68	40°07'09.051"N	104°30'10.455"W	2.36	



Actual Wellpath Report
BOYD 24-1H AWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#03 BOYD 24-1H(1441'FSL&2255'FWL,SEC.24)
Area	COLORADO	Well	BOYD 24-1H
Field	WELD COUNTY (NAD83/TN)	Wellbore	BOYD 24-1H AWB
Facility	SEC.24-T02N-R64W		

WELLPATH DATA (187 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2732.00	33.310	217.460	2545.94	-433.07	-557.52	-545.54	40°07'08.657"N	104°30'10.878"W	2.38	
2827.00	33.200	217.530	2625.38	-466.97	-598.85	-577.25	40°07'08.249"N	104°30'11.286"W	0.12	
2921.00	33.240	219.220	2704.02	-499.89	-639.22	-609.21	40°07'07.850"N	104°30'11.698"W	0.99	
3016.00	33.300	219.630	2783.45	-532.45	-679.48	-642.31	40°07'07.452"N	104°30'12.124"W	0.25	
3110.00	33.310	219.370	2862.01	-564.66	-719.31	-675.14	40°07'07.059"N	104°30'12.546"W	0.15	
3205.00	33.520	215.560	2941.32	-598.72	-760.81	-706.95	40°07'06.648"N	104°30'12.956"W	2.22	
3300.00	33.200	212.040	3020.67	-635.18	-804.21	-736.00	40°07'06.220"N	104°30'13.330"W	2.06	
3394.00	33.230	209.680	3099.32	-672.98	-848.40	-762.41	40°07'05.783"N	104°30'13.670"W	1.38	
3489.00	33.340	211.910	3178.73	-711.30	-893.18	-789.10	40°07'05.340"N	104°30'14.013"W	1.29	
3678.00	33.240	218.890	3336.78	-781.55	-977.62	-849.10	40°07'04.506"N	104°30'14.785"W	2.03	
3772.00	33.310	224.900	3415.39	-811.98	-1015.96	-883.50	40°07'04.127"N	104°30'15.228"W	3.51	
3867.00	33.110	230.890	3494.89	-838.14	-1050.82	-922.06	40°07'03.783"N	104°30'15.724"W	3.46	
3962.00	33.310	238.160	3574.41	-858.91	-1080.96	-964.37	40°07'03.485"N	104°30'16.269"W	4.19	
4056.00	33.270	237.540	3652.98	-876.77	-1108.41	-1008.05	40°07'03.213"N	104°30'16.831"W	0.36	
4151.00	33.410	231.990	3732.37	-897.44	-1138.51	-1050.65	40°07'02.916"N	104°30'17.380"W	3.21	
4245.00	33.600	225.130	3810.78	-922.99	-1172.81	-1089.49	40°07'02.577"N	104°30'17.880"W	4.03	
4340.00	33.180	217.850	3890.13	-954.11	-1211.90	-1124.08	40°07'02.191"N	104°30'18.325"W	4.24	
4434.00	33.350	222.230	3968.74	-985.87	-1251.35	-1157.24	40°07'01.801"N	104°30'18.752"W	2.56	
4529.00	33.310	224.850	4048.12	-1015.48	-1289.18	-1193.19	40°07'01.427"N	104°30'19.214"W	1.52	
4623.00	33.240	221.900	4126.71	-1044.85	-1326.65	-1228.60	40°07'01.057"N	104°30'19.670"W	1.72	
4718.00	33.180	220.130	4206.20	-1076.22	-1365.91	-1262.74	40°07'00.669"N	104°30'20.110"W	1.02	
4812.00	30.330	218.550	4286.12	-1107.17	-1404.15	-1294.12	40°07'00.291"N	104°30'20.513"W	3.16	
4907.00	27.460	216.050	4369.29	-1137.12	-1440.62	-1321.96	40°06'59.930"N	104°30'20.872"W	3.28	
5002.00	23.890	214.610	4454.89	-1165.04	-1474.18	-1345.79	40°06'59.599"N	104°30'21.178"W	3.81	
5097.00	23.390	220.830	4541.93	-1189.70	-1504.28	-1369.05	40°06'59.301"N	104°30'21.478"W	2.68	
5191.00	22.150	226.410	4628.62	-1210.32	-1530.62	-1394.09	40°06'59.041"N	104°30'21.800"W	2.65	
5286.00	22.320	229.860	4716.56	-1228.26	-1554.60	-1420.85	40°06'58.804"N	104°30'22.144"W	1.39	
5380.00	20.110	229.630	4804.18	-1244.41	-1576.58	-1446.81	40°06'58.587"N	104°30'22.479"W	2.35	
5475.00	18.210	227.080	4893.92	-1259.85	-1597.27	-1470.12	40°06'58.382"N	104°30'22.779"W	2.18	
5569.00	15.870	225.050	4983.78	-1274.43	-1616.35	-1489.98	40°06'58.194"N	104°30'23.034"W	2.57	



Actual Wellpath Report

BOYD 24-1H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#03 BOYD 24-1H(1441'FSL&2255'FWL,SEC.24)
Area	COLORADO	Well	BOYD 24-1H
Field	WELD COUNTY (NAD83/TN)	Wellbore	BOYD 24-1H AWB
Facility	SEC.24-T02N-R64W		

WELLPATH DATA (187 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5664.00	14.190	223.230	5075.53	-1288.18	-1634.01	-1507.15	40°06'58.019"N	104°30'23.255"W	1.84	
5759.00	11.850	223.760	5168.08	-1300.34	-1649.54	-1521.87	40°06'57.866"N	104°30'23.445"W	2.47	
5853.00	9.280	221.990	5260.48	-1310.25	-1662.15	-1533.62	40°06'57.741"N	104°30'23.596"W	2.76	
5948.00	6.990	218.300	5354.52	-1318.47	-1672.38	-1542.33	40°06'57.640"N	104°30'23.708"W	2.47	
6042.00	5.140	219.200	5447.99	-1324.77	-1680.13	-1548.54	40°06'57.563"N	104°30'23.788"W	1.97	
6137.00	3.310	212.170	5542.73	-1329.42	-1685.75	-1552.69	40°06'57.508"N	104°30'23.841"W	2.00	
6232.00	3.970	234.750	5637.54	-1332.69	-1689.97	-1556.83	40°06'57.466"N	104°30'23.895"W	1.65	
6326.00	1.570	205.760	5731.43	-1335.00	-1693.01	-1560.05	40°06'57.436"N	104°30'23.936"W	2.88	
6421.00	0.030	262.820	5826.42	-1336.03	-1694.19	-1560.64	40°06'57.424"N	104°30'23.944"W	1.64	
6516.00	0.240	157.170	5921.41	-1336.22	-1694.37	-1560.59	40°06'57.423"N	104°30'23.943"W	0.26	
6610.00	0.070	133.660	6015.41	-1336.46	-1694.60	-1560.47	40°06'57.420"N	104°30'23.941"W	0.19	
6705.00	5.120	351.910	6110.29	-1332.28	-1690.44	-1561.02	40°06'57.461"N	104°30'23.949"W	5.45	
6800.00	11.790	345.540	6204.21	-1318.34	-1676.83	-1564.05	40°06'57.596"N	104°30'23.988"W	7.08	
6894.00	21.780	341.580	6294.09	-1291.35	-1650.91	-1571.98	40°06'57.852"N	104°30'24.090"W	10.69	
6989.00	29.330	345.960	6379.74	-1250.52	-1611.56	-1583.21	40°06'58.241"N	104°30'24.234"W	8.19	
7084.00	36.990	358.500	6459.30	-1199.02	-1560.28	-1589.62	40°06'58.748"N	104°30'24.317"W	10.79	
7178.00	42.540	5.890	6531.57	-1140.87	-1500.32	-1587.09	40°06'59.340"N	104°30'24.284"W	7.75	
7273.00	51.420	9.030	6596.33	-1075.47	-1431.56	-1577.95	40°07'00.020"N	104°30'24.167"W	9.65	
7368.00	60.670	5.800	6649.34	-1001.16	-1353.50	-1567.91	40°07'00.791"N	104°30'24.038"W	10.14	
7462.00	69.960	2.940	6688.57	-919.25	-1268.44	-1561.49	40°07'01.632"N	104°30'23.955"W	10.26	
7557.00	75.030	354.970	6717.17	-830.37	-1177.97	-1563.23	40°07'02.526"N	104°30'23.977"W	9.61	
7652.00	81.600	351.080	6736.41	-737.75	-1085.70	-1574.56	40°07'03.437"N	104°30'24.123"W	7.99	
7746.00	84.790	353.600	6747.55	-644.68	-993.22	-1586.99	40°07'04.351"N	104°30'24.283"W	4.31	
7760.00†	85.304	354.016	6748.76	-630.81	-979.35	-1588.49	40°07'04.488"N	104°30'24.303"W	4.71	Cross 460' Line(460'FSL&662'FWL,SEC.13)
7841.00	88.280	356.410	6753.29	-550.57	-898.77	-1595.24	40°07'05.285"N	104°30'24.390"W	4.71	
7936.00	88.860	358.670	6755.66	-456.89	-803.90	-1599.32	40°07'06.222"N	104°30'24.442"W	2.46	
8031.00	89.420	359.670	6757.09	-363.67	-708.92	-1600.69	40°07'07.161"N	104°30'24.460"W	1.21	
8125.00	88.030	359.240	6759.18	-271.54	-614.95	-1601.58	40°07'08.089"N	104°30'24.472"W	1.55	
8220.00	87.970	358.920	6762.49	-178.33	-520.02	-1603.11	40°07'09.028"N	104°30'24.491"W	0.34	
8315.00	87.720	357.840	6766.07	-84.92	-425.13	-1605.79	40°07'09.965"N	104°30'24.526"W	1.17	



Actual Wellpath Report
BOYD 24-1H AWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#03 BOYD 24-1H(1441'FSL&2255'FWL,SEC.24)
Area	COLORADO	Well	BOYD 24-1H
Field	WELD COUNTY (NAD83/TN)	Wellbore	BOYD 24-1H AWB
Facility	SEC.24-T02N-R64W		

WELLPATH DATA (187 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8410.00	87.780	356.350	6769.80	8.83	-330.32	-1610.60	40°07'10.902"N	104°30'24.588"W	1.57	
8504.00	89.420	353.130	6772.09	102.16	-236.76	-1619.22	40°07'11.827"N	104°30'24.699"W	3.84	
8599.00	89.380	354.510	6773.09	196.68	-142.32	-1629.44	40°07'12.760"N	104°30'24.831"W	1.45	
8693.00	89.420	357.580	6774.07	289.76	-48.56	-1635.93	40°07'13.687"N	104°30'24.914"W	3.27	
8788.00	89.450	3.670	6775.01	382.45	46.38	-1634.89	40°07'14.625"N	104°30'24.901"W	6.41	
8882.00	89.350	4.120	6776.00	472.90	140.16	-1628.51	40°07'15.552"N	104°30'24.819"W	0.49	
8977.00	89.110	0.380	6777.27	564.99	235.06	-1624.78	40°07'16.489"N	104°30'24.771"W	3.94	
9071.00	89.230	357.330	6778.63	657.32	329.02	-1626.66	40°07'17.418"N	104°30'24.795"W	3.25	
9166.00	89.420	357.230	6779.75	751.10	423.91	-1631.16	40°07'18.356"N	104°30'24.853"W	0.23	
9261.00	89.910	358.140	6780.31	844.77	518.83	-1635.00	40°07'19.294"N	104°30'24.903"W	1.09	
9356.00	90.300	358.380	6780.13	938.28	613.78	-1637.88	40°07'20.232"N	104°30'24.940"W	0.48	
9450.00	90.340	0.240	6779.61	1030.48	707.77	-1639.02	40°07'21.161"N	104°30'24.955"W	1.98	
9545.00	90.220	1.870	6779.15	1123.06	802.75	-1637.27	40°07'22.099"N	104°30'24.932"W	1.72	
9639.00	90.310	3.750	6778.71	1213.98	896.63	-1632.66	40°07'23.027"N	104°30'24.873"W	2.00	
9734.00	89.140	2.480	6779.17	1305.73	991.49	-1627.50	40°07'23.964"N	104°30'24.806"W	1.82	
9829.00	89.350	359.630	6780.42	1398.29	1086.45	-1625.75	40°07'24.903"N	104°30'24.784"W	3.01	
9923.00	89.260	357.380	6781.56	1490.74	1180.41	-1628.20	40°07'25.831"N	104°30'24.816"W	2.40	
10018.00	89.600	355.740	6782.50	1584.69	1275.23	-1633.90	40°07'26.768"N	104°30'24.889"W	1.76	
10112.00	89.600	358.030	6783.16	1677.58	1369.08	-1639.01	40°07'27.696"N	104°30'24.955"W	2.44	
10207.00	89.420	357.410	6783.97	1771.24	1464.00	-1642.79	40°07'28.634"N	104°30'25.004"W	0.68	
10302.00	89.480	356.700	6784.88	1865.08	1558.87	-1647.67	40°07'29.571"N	104°30'25.067"W	0.75	
10396.00	89.780	355.050	6785.49	1958.21	1652.62	-1654.43	40°07'30.498"N	104°30'25.154"W	1.78	
10491.00	89.660	355.250	6785.96	2052.49	1747.28	-1662.46	40°07'31.433"N	104°30'25.257"W	0.25	
10586.00	89.320	355.450	6786.80	2146.73	1841.96	-1670.16	40°07'32.369"N	104°30'25.356"W	0.42	
10680.00	89.450	356.080	6787.81	2239.89	1935.70	-1677.10	40°07'33.295"N	104°30'25.446"W	0.68	
10775.00	89.540	359.080	6788.65	2333.57	2030.60	-1681.11	40°07'34.233"N	104°30'25.498"W	3.16	
10869.00	89.200	1.050	6789.68	2425.52	2124.59	-1681.01	40°07'35.162"N	104°30'25.496"W	2.13	
10964.00	89.420	1.690	6790.83	2517.98	2219.56	-1678.74	40°07'36.100"N	104°30'25.467"W	0.71	
11058.00	89.260	0.980	6791.91	2609.48	2313.52	-1676.55	40°07'37.029"N	104°30'25.439"W	0.77	
11153.00	89.140	1.150	6793.24	2702.05	2408.50	-1674.78	40°07'37.967"N	104°30'25.416"W	0.22	



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REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#03 BOYD 24-1H(1441'FSL&2255'FWL,SEC.24)
Area	COLORADO	Well	BOYD 24-1H
Field	WELD COUNTY (NAD83/TN)	Wellbore	BOYD 24-1H AWB
Facility	SEC.24-T02N-R64W		

WELLPATH DATA (187 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11247.00	89.320	1.220	6794.50	2793.60	2502.47	-1672.84	40°07'38.896"N	104°30'25.391"W	0.21	
11342.00	89.290	359.330	6795.65	2886.45	2597.46	-1672.38	40°07'39.835"N	104°30'25.386"W	1.99	
11437.00	89.260	356.760	6796.85	2980.01	2692.39	-1675.62	40°07'40.773"N	104°30'25.427"W	2.71	
11531.00	89.080	354.790	6798.21	3073.15	2786.12	-1682.55	40°07'41.699"N	104°30'25.517"W	2.10	
11626.00	89.290	356.610	6799.57	3167.31	2880.84	-1689.67	40°07'42.635"N	104°30'25.608"W	1.93	
11721.00	89.230	357.930	6800.79	3261.08	2975.72	-1694.19	40°07'43.573"N	104°30'25.667"W	1.39	
11815.00	90.280	358.500	6801.20	3353.62	3069.67	-1697.12	40°07'44.501"N	104°30'25.705"W	1.27	
11910.00	90.180	359.570	6800.81	3446.89	3164.65	-1698.72	40°07'45.440"N	104°30'25.725"W	1.13	
12005.00	90.220	359.180	6800.48	3540.06	3259.65	-1699.76	40°07'46.379"N	104°30'25.739"W	0.41	
12099.00	89.450	359.510	6800.75	3632.25	3353.64	-1700.83	40°07'47.307"N	104°30'25.753"W	0.89	
12194.00	89.380	1.170	6801.72	3725.09	3448.63	-1700.27	40°07'48.246"N	104°30'25.745"W	1.75	
12289.00	89.320	2.440	6802.80	3817.37	3543.57	-1697.28	40°07'49.184"N	104°30'25.707"W	1.34	
12384.00	89.420	3.760	6803.85	3909.13	3638.43	-1692.14	40°07'50.122"N	104°30'25.641"W	1.39	
12478.00	90.220	4.340	6804.14	3999.51	3732.19	-1685.50	40°07'51.048"N	104°30'25.556"W	1.05	
12573.00	90.120	3.740	6803.86	4090.86	3826.95	-1678.81	40°07'51.985"N	104°30'25.469"W	0.64	
12667.00	90.090	2.280	6803.69	4181.69	3920.82	-1673.87	40°07'52.912"N	104°30'25.406"W	1.55	
12762.00	90.090	1.540	6803.54	4273.95	4015.77	-1670.70	40°07'53.851"N	104°30'25.365"W	0.78	
12857.00	89.690	0.110	6803.72	4366.61	4110.76	-1669.34	40°07'54.789"N	104°30'25.348"W	1.56	
12951.00	89.630	357.530	6804.28	4458.96	4204.73	-1671.27	40°07'55.718"N	104°30'25.373"W	2.75	
13046.00	89.720	356.560	6804.82	4552.80	4299.60	-1676.17	40°07'56.656"N	104°30'25.436"W	1.03	
13140.00	89.540	358.380	6805.42	4645.54	4393.50	-1680.32	40°07'57.583"N	104°30'25.489"W	1.95	
13235.00	90.280	357.690	6805.57	4739.12	4488.44	-1683.58	40°07'58.522"N	104°30'25.531"W	1.07	
13330.00	90.090	355.900	6805.27	4833.02	4583.29	-1688.89	40°07'59.459"N	104°30'25.600"W	1.89	
13424.00	90.180	355.240	6805.04	4926.22	4677.01	-1696.15	40°08'00.385"N	104°30'25.693"W	0.71	
13519.00	90.120	354.580	6804.80	5020.55	4771.63	-1704.58	40°08'01.320"N	104°30'25.802"W	0.70	
13613.00	90.400	353.530	6804.37	5114.04	4865.12	-1714.31	40°08'02.244"N	104°30'25.927"W	1.16	
13708.00	90.340	354.010	6803.76	5208.58	4959.56	-1724.62	40°08'03.177"N	104°30'26.060"W	0.51	
13803.00	90.250	355.060	6803.27	5302.98	5054.13	-1733.67	40°08'04.112"N	104°30'26.177"W	1.11	
13897.00	90.340	356.970	6802.78	5396.08	5147.89	-1740.20	40°08'05.038"N	104°30'26.261"W	2.03	
13992.00	90.150	357.600	6802.38	5489.86	5242.79	-1744.70	40°08'05.976"N	104°30'26.319"W	0.69	



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REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#03 BOYD 24-1H(1441'FSL&2255'FWL,SEC.24)
Area	COLORADO	Well	BOYD 24-1H
Field	WELD COUNTY (NAD83/TN)	Wellbore	BOYD 24-1H AWB
Facility	SEC.24-T02N-R64W		

WELLPATH DATA (187 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14086.00	90.250	358.110	6802.05	5582.50	5336.72	-1748.22	40°08'06.904"N	104°30'26.364"W	0.55	
14181.00	90.490	358.730	6801.43	5675.96	5431.68	-1750.84	40°08'07.843"N	104°30'26.398"W	0.70	
14276.00	90.620	1.600	6800.51	5768.85	5526.67	-1750.56	40°08'08.781"N	104°30'26.395"W	3.02	
14370.00	90.620	4.030	6799.50	5859.75	5620.54	-1745.95	40°08'09.709"N	104°30'26.335"W	2.58	
14465.00	90.460	2.880	6798.60	5951.36	5715.36	-1740.22	40°08'10.646"N	104°30'26.262"W	1.22	
14560.00	90.430	359.950	6797.86	6043.79	5810.32	-1737.88	40°08'11.585"N	104°30'26.232"W	3.08	
14655.00	90.710	357.940	6796.92	6137.09	5905.29	-1739.63	40°08'12.523"N	104°30'26.254"W	2.14	
14749.00	90.550	357.470	6795.88	6229.76	5999.21	-1743.39	40°08'13.451"N	104°30'26.303"W	0.53	
14844.00	91.630	358.790	6794.08	6323.29	6094.14	-1746.49	40°08'14.389"N	104°30'26.343"W	1.80	
14938.00	91.600	0.130	6791.43	6415.41	6188.10	-1747.38	40°08'15.318"N	104°30'26.354"W	1.43	
15033.00	91.570	356.720	6788.80	6508.82	6283.01	-1749.99	40°08'16.256"N	104°30'26.388"W	3.59	
15127.00	90.370	357.190	6787.21	6601.69	6376.86	-1754.98	40°08'17.183"N	104°30'26.452"W	1.37	
15222.00	90.400	356.820	6786.57	6695.54	6471.73	-1759.94	40°08'18.121"N	104°30'26.516"W	0.39	
15316.00	90.180	358.800	6786.09	6788.19	6565.66	-1763.53	40°08'19.049"N	104°30'26.563"W	2.12	
15411.00	90.270	358.970	6785.72	6881.51	6660.64	-1765.38	40°08'19.987"N	104°30'26.587"W	0.20	
15506.00	90.250	358.420	6785.29	6974.89	6755.61	-1767.55	40°08'20.926"N	104°30'26.615"W	0.58	
15600.00	90.340	357.940	6784.81	7067.44	6849.56	-1770.53	40°08'21.854"N	104°30'26.653"W	0.52	
15695.00	89.290	357.470	6785.11	7161.11	6944.48	-1774.34	40°08'22.792"N	104°30'26.702"W	1.21	
15789.00	89.230	357.100	6786.33	7253.89	7038.37	-1778.79	40°08'23.720"N	104°30'26.760"W	0.40	
15884.00	89.420	357.430	6787.45	7347.67	7133.26	-1783.32	40°08'24.658"N	104°30'26.818"W	0.40	
15978.00	90.340	358.120	6787.64	7440.34	7227.18	-1786.97	40°08'25.586"N	104°30'26.865"W	1.22	
16073.00	90.400	358.860	6787.03	7533.78	7322.15	-1789.47	40°08'26.525"N	104°30'26.897"W	0.78	
16167.00	90.310	358.510	6786.45	7626.18	7416.12	-1791.63	40°08'27.453"N	104°30'26.925"W	0.38	
16262.00	90.280	358.400	6785.96	7719.63	7511.08	-1794.19	40°08'28.392"N	104°30'26.958"W	0.12	
16356.00	90.340	359.070	6785.45	7812.01	7605.06	-1796.27	40°08'29.320"N	104°30'26.985"W	0.72	
16451.00	90.400	0.120	6784.84	7905.10	7700.05	-1796.94	40°08'30.259"N	104°30'26.994"W	1.11	
16546.00	90.310	2.060	6784.25	7997.67	7795.03	-1795.13	40°08'31.198"N	104°30'26.971"W	2.04	
16640.00	90.400	1.820	6783.66	8088.94	7888.98	-1791.95	40°08'32.126"N	104°30'26.930"W	0.27	
16735.00	90.340	1.070	6783.05	8181.37	7983.94	-1789.55	40°08'33.064"N	104°30'26.899"W	0.79	
16829.00	90.520	359.380	6782.35	8273.27	8077.94	-1789.18	40°08'33.993"N	104°30'26.894"W	1.81	



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REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#03 BOYD 24-1H(1441'FSL&2255'FWL,SEC.24)
Area	COLORADO	Well	BOYD 24-1H
Field	WELD COUNTY (NAD83/TN)	Wellbore	BOYD 24-1H AWB
Facility	SEC.24-T02N-R64W		

WELLPATH DATA (187 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16924.00	90.550	0.280	6781.46	8366.28	8172.93	-1789.47	40°08'34.932"N	104°30'26.898"W	0.95	
17019.00	90.550	0.960	6780.55	8459.02	8267.92	-1788.44	40°08'35.871"N	104°30'26.885"W	0.72	
17113.00	90.400	4.190	6779.77	8550.02	8361.81	-1784.22	40°08'36.799"N	104°30'26.831"W	3.44	
17208.00	90.460	2.840	6779.05	8641.60	8456.63	-1778.39	40°08'37.736"N	104°30'26.756"W	1.42	
17302.00	90.460	0.970	6778.30	8732.87	8550.57	-1775.27	40°08'38.664"N	104°30'26.716"W	1.99	
17337.00	90.550	0.760	6777.99	8767.01	8585.56	-1774.74	40°08'39.010"N	104°30'26.709"W	0.65	Last BHI MWD Survey (431'FNL&522'FWL,SEC.13)
17361.00	90.550	0.760	6777.76	8790.42	8609.56	-1774.42	40°08'39.247"N	104°30'26.705"W	0.00	Projection to Bit (455'FNL&521'FWL,SEC.13)



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REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#03 BOYD 24-1H(1441'FSL&2255'FWL,SEC.24)
Area	COLORADO	Well	BOYD 24-1H
Field	WELD COUNTY (NAD83/TN)	Wellbore	BOYD 24-1H AWB
Facility	SEC.24-T02N-R64W		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
BOYD 24-1H SECTION 13	0.00	0.00	0.00	3279352.70	1288352.74	40°07'14.167"N	104°30'03.856"W	polygon
SECTION 24-T02N-R64W	1.00	-197.79	-202.17	3279152.78	1288152.69	40°07'12.212"N	104°30'06.458"W	polygon
BOYD 24-1H REV-5 LANDING POINT (460'FSL&650'FWL,SEC.24)	6755.00	-979.14	-1600.00	3277763.90	1287355.68	40°07'04.491"N	104°30'24.451"W	point
BOYD 24-1H LANDING POINT ON PLAT (100'FSL&480'FWL,SEC.24)	6767.00	-1339.06	-1768.70	3277599.28	1286993.89	40°07'00.934"N	104°30'26.622"W	point
BOYD 24-1H REV-1 BHL ON PLAT (460'FNL&480'FWL,SEC.13)	6767.00	8615.30	-1815.24	3277440.61	1296946.68	40°08'39.304"N	104°30'27.230"W	point
BOYD 24-1H REV-2 LANDING POINT (100'FSL&648'FWL,SEC.24)	6767.00	-1339.02	-1600.00	3277767.96	1286995.83	40°07'00.934"N	104°30'24.451"W	point
BOYD 24-1H REV-3 LANDING POINT on Plat (460'FSL&480'FWL,SEC.24)	6767.00	-979.14	-1770.35	3277593.57	1287353.76	40°07'04.490"N	104°30'26.644"W	point
BOYD 24-1H REV-4 LANDING POINT (460'FSL&650'FWL,SEC.24)	6767.00	-979.14	-1600.00	3277763.90	1287355.68	40°07'04.491"N	104°30'24.451"W	point
BOYD 24-1H REV-2 BHL ON PLAT (460'FNL&480'FWL,SEC.13)	6778.00	8615.30	-1815.24	3277440.61	1296946.68	40°08'39.304"N	104°30'27.230"W	point
BOYD 24-1H Target 1 4033'VS	6810.00	3762.02	-1706.38	3277604.13	1292095.14	40°07'51.343"N	104°30'25.824"W	point
SECTION 24-T02N-R64W HARDLINE (460'SETBACK)	7001.00	-197.79	-202.17	3279152.78	1288152.69	40°07'12.212"N	104°30'06.458"W	polygon
BOYD 24-1H SECTION 13 HARDLINE (460')	7100.00	0.00	0.00	3279352.70	1288352.74	40°07'14.167"N	104°30'03.856"W	polygon



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REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#03 BOYD 24-1H(1441'FSL&2255'FWL,SEC.24)
Area	COLORADO	Well	BOYD 24-1H
Field	WELD COUNTY (NAD83/TN)	Wellbore	BOYD 24-1H AWB
Facility	SEC.24-T02N-R64W		

WELLPATH COMPOSITION - Ref Wellbore: BOYD 24-1H AWB Ref Wellpath: BOYD 24-1H AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
24.00	1676.00	BHI NaviTrak (Standard)	BH/Navitrak MWD Surface Surveys <24'-1676'>	BOYD 24-1H AWB
1676.00	17337.00	BHI AutoTrak Curve (Axial Corr, Short spacing)	BHI/ATC 8.5" Hole (Axial Corr, Short spacing) <1786'-17337'>	BOYD 24-1H AWB
17337.00	17361.00	Blind Drilling (std)	Projection to bit	BOYD 24-1H AWB



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REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#03 BOYD 24-1H(1441'FSL&2255'FWL,SEC.24)
Area	COLORADO	Well	BOYD 24-1H
Field	WELD COUNTY (NAD83/TN)	Wellbore	BOYD 24-1H AWB
Facility	SEC.24-T02N-R64W		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
1676.00	24.130	219.860	1642.74	Tie to Surface	
7760.00	85.304	354.016	6748.76	Cross 460' Line(460'FSL&662'FWL,SEC.13)	
17337.00	90.550	0.760	6777.99	Last BHI MWD Survey (431'FNL&522'FWL,SEC.13)	
17361.00	90.550	0.760	6777.76	Projection to Bit (455'FNL&521'FWL,SEC.13)	