

MARATHON OIL COMPANY

Location:	COLORADO	Slot:	SLOT#01 CROW VALLEY 7-62-27-2H (468'FNL & 1836'FWL, SEC.34)
Field:	WELD COUNTY (NAD 83, GRID NORTH)	Well:	CROW VALLEY 7-62-27-2H
Facility:	SEC.34-T7N-R62W	Wellbore:	CROW VALLEY 7-62-27-2H pwb

Plot reference wellpath is CROW VALLEY 7-62-27-2H (REV-F.0) PWP (VERT TO KOP)

True vertical depths are referenced to Rig on SLOT#01 CROW VALLEY 7-62-27-2H (468'FNL & 1836'FWL, SEC.34) (RKB)

Measured depths are referenced to Rio on SLO 501 CROW VALLEY EY 3.63-77-254 (468EML & 1926EML) SEC 34.6

Rig on SLOT #01 CROW VALLEY 7-62-27-2H (468 FNL & 1836 FWL, SEC.34) (RRB) to Mean Sea Level: 4946 feet

Mean Sea Level to Mud line (At Slot: SLOT#01 CROW VALLEY 7-52-27-2H (468'FNL & 1836'FWL, SEC.34)): 0 feet

Coordinates are in feet referenced to Slot

Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet

North Reference: Grid north

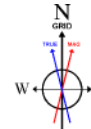
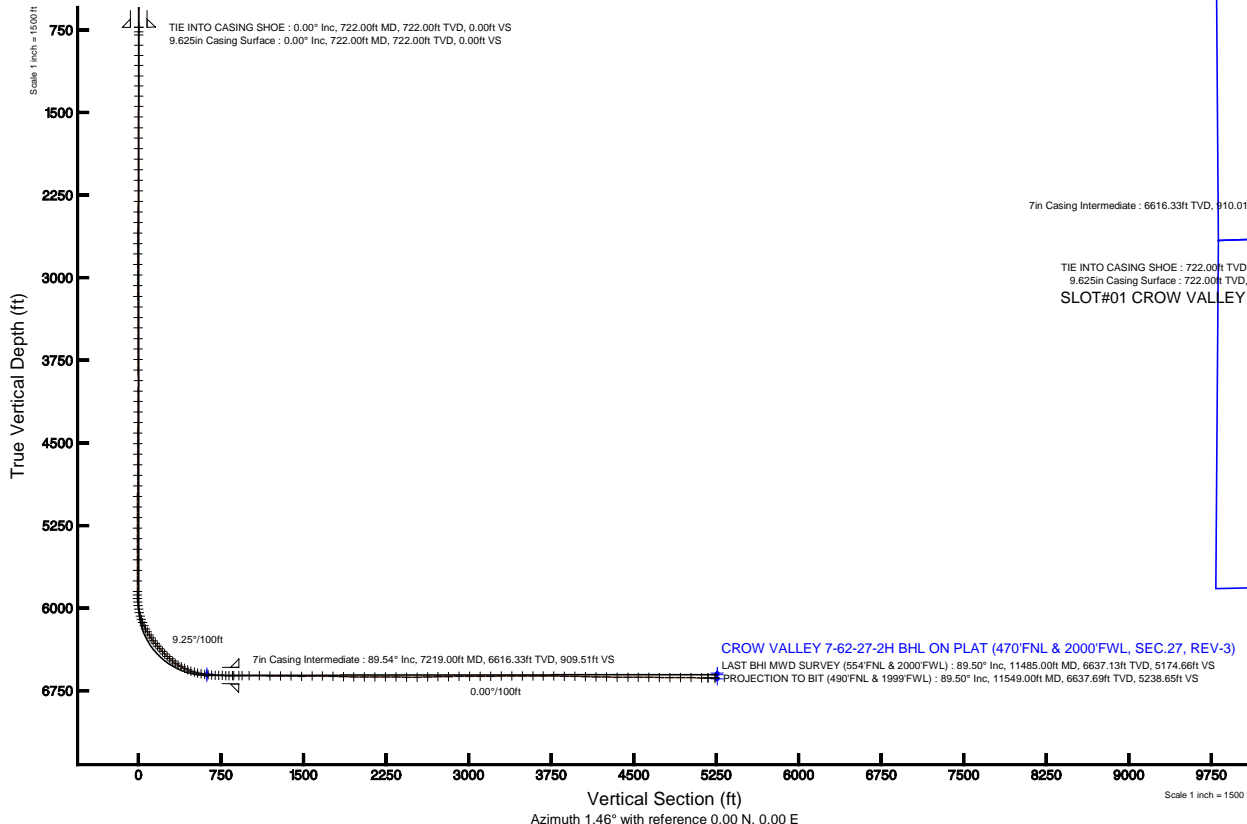
Scale: True distance

Depths are in feet

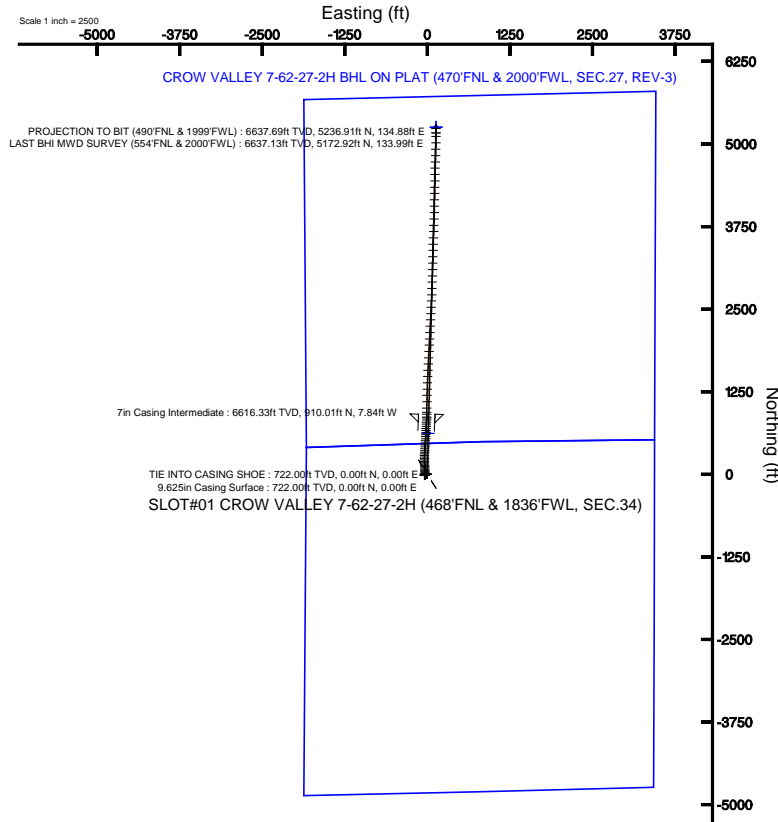
Created by: adamkat on 5/7/2012

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	31.00	0.000	1.455	31.00	0.00	0.00	0.00	0.00
End of Tangent	5994.72	0.000	1.455	5994.72	0.00	0.00	0.00	0.00
End of Build	6968.44	90.089	1.455	6614.00	620.04	15.75	9.25	620.24
End of 3D Arc	11607.08	90.084	1.461	6607.00	5257.17	133.76	0.00	5258.87



BGGM (1945.0 to 2013.0) Dip: 67.19° Field: 53161.9 nT
Magnetic North is 8.51 degrees East of True North (at 3/21/2012)
Grid North is 0.77 degrees East of True North
To correct azimuth from True to Grid subtract 0.77 degrees
To correct azimuth from Magnetic to Grid add 7.74 degrees
For example: if the Magnetic North Azimuth = 90 degs. then the Grid North Azimuth = 90 + 7.74 = 97.74



CROW VALLEY 7-62-27-2H BHL ON PLAT (470'FNL & 2000'FWL, SEC.27, REV-3

LAST BHI MWD SURVEY (554'FNL & 2000'FWL) : 89.50° Inc, 11485.00ft MD, 6637.13ft TVD, 5174.66ft VS
PROJECTION TO BIT (490'FNL & 1999'FWL) : 89.50° Inc, 11549.00ft MD, 6637.69ft TVD, 5238.65ft VS

PROJECTION TO BIT (490'FNL & 1999'FWL) : 89.50° Inc, 11549.00ft MD, 6637.69ft TVD, 5238.65ft VS



Actual Wellpath Report

CROW VALLEY 7-62-27-2H AWP

Page 1 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	MARATHON OIL COMPANY	Slot	SLOT#01 CROW VALLEY 7-62-27-2H (468'FNL & 1836'FWL, SEC.34)
Area	COLORADO	Well	CROW VALLEY 7-62-27-2H
Field	WELD COUNTY (NAD 83, GRID NORTH)	Wellbore	CROW VALLEY 7-62-27-2H AWB
Facility	SEC.34-T7N-R62W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 3.0.2
North Reference	Grid	User	Adamkat
Scale	0.999969	Report Generated	5/7/2012 at 4:32:45 PM
Convergence at slot	0.77° East	Database/Source file	WA_DENVER/CROW_VALLEY_7-62-27-2H_AWB.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	0.00	3330443.86	1440569.53	40°32'12.058"N	104°18'39.955"W
Facility Reference Pt			3330443.86	1440569.53	40°32'12.058"N	104°18'39.955"W
Field Reference Pt			3476081.76	1512960.14	40°43'43.704"N	103°46'55.829"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on SLOT#01 CROW VALLEY 7-62-27-2H
Horizontal Reference Pt	Slot	Rig on SLOT#01 CROW VALLEY 7-62-27-2H
Vertical Reference Pt	Rig on SLOT#01 CROW VALLEY 7-62-27-2H (468'FNL & 1836'FWL, SEC.34) (RKB)	Rig on SLOT#01 CROW VALLEY 7-62-27-2H
MD Reference Pt	Rig on SLOT#01 CROW VALLEY 7-62-27-2H (468'FNL & 1836'FWL, SEC.34) (RKB)	Section Origin
Field Vertical Reference	Mean Sea Level	Section Azimuth



Actual Wellpath Report

CROW VALLEY 7-62-27-2H AWP

Page 2 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	MARATHON OIL COMPANY	Slot	SLOT#01 CROW VALLEY 7-62-27-2H (468'FNL & 1836'FWL, SEC.34)
Area	COLORADO	Well	CROW VALLEY 7-62-27-2H
Field	WELD COUNTY (NAD 83, GRID NORTH)	Wellbore	CROW VALLEY 7-62-27-2H AWB
Facility	SEC.34-T7N-R62W		

WELLPATH DATA (145 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
722.00	0.000	0.000	722.00	0.00	0.00	0.00	40°32'12.058"N	104°18'39.955"W	0.00	TIE INTO CASING SHOE
763.00	0.700	58.800	763.00	0.14	0.13	0.21	40°32'12.059"N	104°18'39.952"W	1.71	
793.00	0.500	57.100	793.00	0.31	0.30	0.48	40°32'12.061"N	104°18'39.948"W	0.67	
886.00	0.100	122.700	886.00	0.49	0.47	0.89	40°32'12.063"N	104°18'39.943"W	0.50	
979.00	0.600	284.500	978.99	0.56	0.55	0.49	40°32'12.063"N	104°18'39.948"W	0.75	
1071.00	1.300	247.500	1070.98	0.25	0.27	-0.94	40°32'12.061"N	104°18'39.967"W	0.97	
1165.00	1.700	262.200	1164.95	-0.41	-0.33	-3.31	40°32'12.055"N	104°18'39.998"W	0.59	
1257.00	1.700	258.200	1256.91	-0.94	-0.79	-6.00	40°32'12.051"N	104°18'40.033"W	0.13	
1350.00	1.800	263.900	1349.87	-1.45	-1.23	-8.80	40°32'12.047"N	104°18'40.069"W	0.22	
1443.00	1.800	263.800	1442.82	-1.84	-1.54	-11.71	40°32'12.044"N	104°18'40.107"W	0.00	
1539.00	1.600	263.300	1538.78	-2.23	-1.86	-14.54	40°32'12.042"N	104°18'40.143"W	0.21	
1636.00	1.500	263.300	1635.74	-2.60	-2.17	-17.14	40°32'12.039"N	104°18'40.177"W	0.10	
1731.00	1.200	277.700	1730.72	-2.67	-2.18	-19.36	40°32'12.039"N	104°18'40.206"W	0.47	
1827.00	1.400	278.000	1826.69	-2.43	-1.88	-21.52	40°32'12.042"N	104°18'40.234"W	0.21	
1922.00	0.600	301.600	1921.68	-2.04	-1.46	-23.09	40°32'12.047"N	104°18'40.254"W	0.93	
2019.00	1.700	261.400	2018.66	-2.04	-1.41	-24.95	40°32'12.047"N	104°18'40.278"W	1.34	
2115.00	1.700	256.100	2114.61	-2.67	-1.96	-27.74	40°32'12.042"N	104°18'40.314"W	0.16	
2211.00	1.900	253.200	2210.57	-3.54	-2.76	-30.64	40°32'12.035"N	104°18'40.352"W	0.23	
2307.00	1.000	223.800	2306.54	-4.66	-3.83	-32.75	40°32'12.025"N	104°18'40.380"W	1.19	
2402.00	1.000	222.900	2401.52	-5.89	-5.03	-33.89	40°32'12.013"N	104°18'40.394"W	0.02	
2497.00	1.100	219.500	2496.51	-7.23	-6.34	-35.03	40°32'12.000"N	104°18'40.410"W	0.12	
2593.00	0.200	214.700	2592.50	-8.10	-7.19	-35.71	40°32'11.992"N	104°18'40.418"W	0.94	
2689.00	0.300	312.800	2688.50	-8.07	-7.16	-35.99	40°32'11.992"N	104°18'40.422"W	0.40	
2784.00	0.100	225.700	2783.50	-7.97	-7.05	-36.23	40°32'11.993"N	104°18'40.425"W	0.33	
2880.00	0.100	223.300	2879.50	-8.09	-7.17	-36.35	40°32'11.992"N	104°18'40.427"W	0.00	
2975.00	0.300	263.700	2974.50	-8.19	-7.26	-36.65	40°32'11.991"N	104°18'40.431"W	0.25	
3072.00	0.300	263.600	3071.50	-8.26	-7.31	-37.16	40°32'11.991"N	104°18'40.437"W	0.00	
3169.00	0.500	42.800	3168.49	-7.97	-7.03	-37.12	40°32'11.993"N	104°18'40.437"W	0.78	
3265.00	0.500	25.000	3264.49	-7.27	-6.34	-36.66	40°32'12.000"N	104°18'40.431"W	0.16	
3361.00	0.600	67.900	3360.49	-6.69	-5.77	-36.02	40°32'12.006"N	104°18'40.422"W	0.43	
3456.00	0.600	64.200	3455.48	-6.26	-5.37	-35.11	40°32'12.010"N	104°18'40.410"W	0.04	
3553.00	0.300	83.100	3552.48	-5.99	-5.12	-34.40	40°32'12.012"N	104°18'40.401"W	0.34	
3648.00	0.500	58.300	3647.48	-5.73	-4.87	-33.80	40°32'12.014"N	104°18'40.393"W	0.27	
3743.00	0.500	51.600	3742.47	-5.24	-4.40	-33.12	40°32'12.019"N	104°18'40.384"W	0.06	
3839.00	0.100	53.900	3838.47	-4.92	-4.09	-32.73	40°32'12.022"N	104°18'40.379"W	0.42	
3934.00	0.200	30.800	3933.47	-4.72	-3.90	-32.58	40°32'12.024"N	104°18'40.377"W	0.12	
4030.00	0.700	223.900	4029.47	-5.01	-4.17	-32.90	40°32'12.021"N	104°18'40.382"W	0.93	
4124.00	0.800	228.800	4123.46	-5.88	-5.02	-33.79	40°32'12.013"N	104°18'40.393"W	0.13	
4221.00	0.800	234.800	4220.45	-6.74	-5.86	-34.85	40°32'12.005"N	104°18'40.407"W	0.09	
4317.00	0.800	236.000	4316.44	-7.53	-6.62	-35.96	40°32'11.997"N	104°18'40.422"W	0.02	
4412.00	0.600	260.200	4411.44	-8.01	-7.07	-37.00	40°32'11.993"N	104°18'40.435"W	0.37	
4508.00	0.600	265.000	4507.43	-8.17	-7.20	-37.99	40°32'11.992"N	104°18'40.448"W	0.05	
4605.00	0.200	317.400	4604.43	-8.10	-7.12	-38.61	40°32'11.993"N	104°18'40.456"W	0.52	
4700.00	0.800	232.300	4699.42	-8.40	-7.41	-39.25	40°32'11.990"N	104°18'40.464"W	0.85	
4797.00	0.800	232.200	4796.42	-9.26	-8.23	-40.32	40°32'11.982"N	104°18'40.478"W	0.00	



Actual Wellpath Report

CROW VALLEY 7-62-27-2H AWP

Page 3 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	MARATHON OIL COMPANY	Slot	SLOT#01 CROW VALLEY 7-62-27-2H (468'FNL & 1836'FWL, SEC.34)
Area	COLORADO	Well	CROW VALLEY 7-62-27-2H
Field	WELD COUNTY (NAD 83, GRID NORTH)	Wellbore	CROW VALLEY 7-62-27-2H AWB
Facility	SEC.34-T7N-R62W		

WELLPATH DATA (145 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4893.00	0.500	176.300	4892.41	-10.10	-9.06	-40.82	40°32'11.974"N	104°18'40.485"W	0.69	
4988.00	0.400	178.600	4987.41	-10.84	-9.81	-40.79	40°32'11.967"N	104°18'40.485"W	0.11	
5084.00	0.400	172.300	5083.40	-11.51	-10.48	-40.73	40°32'11.960"N	104°18'40.484"W	0.05	
5180.00	0.300	172.500	5179.40	-12.09	-11.06	-40.66	40°32'11.954"N	104°18'40.483"W	0.10	
5275.00	0.200	140.900	5274.40	-12.46	-11.43	-40.52	40°32'11.950"N	104°18'40.481"W	0.18	
5371.00	0.100	135.500	5370.40	-12.64	-11.62	-40.35	40°32'11.949"N	104°18'40.479"W	0.11	
5468.00	0.400	129.300	5467.40	-12.91	-11.90	-40.03	40°32'11.946"N	104°18'40.475"W	0.31	
5564.00	0.600	77.700	5563.40	-13.00	-12.00	-39.28	40°32'11.945"N	104°18'40.466"W	0.49	
5661.00	1.000	82.200	5660.39	-12.74	-11.78	-37.95	40°32'11.947"N	104°18'40.448"W	0.42	
5757.00	1.200	88.200	5756.37	-12.55	-11.63	-36.11	40°32'11.948"N	104°18'40.424"W	0.24	
5852.00	1.500	107.000	5851.34	-12.83	-11.97	-33.93	40°32'11.944"N	104°18'40.396"W	0.56	
5885.00	1.200	80.000	5884.33	-12.87	-12.03	-33.18	40°32'11.944"N	104°18'40.386"W	2.10	
5917.00	2.800	19.500	5916.32	-12.06	-11.24	-32.59	40°32'11.951"N	104°18'40.379"W	7.64	
5949.00	5.100	6.600	5948.24	-9.90	-9.09	-32.16	40°32'11.973"N	104°18'40.373"W	7.66	
5981.00	8.300	0.700	5980.02	-6.18	-5.36	-31.97	40°32'12.009"N	104°18'40.370"W	10.22	
6013.00	11.000	357.700	6011.56	-0.82	0.00	-32.06	40°32'12.062"N	104°18'40.370"W	8.58	
6045.00	13.400	356.200	6042.84	5.92	6.75	-32.43	40°32'12.129"N	104°18'40.374"W	7.56	
6078.00	16.600	355.900	6074.71	14.42	15.27	-33.02	40°32'12.213"N	104°18'40.380"W	9.70	
6109.00	19.500	356.000	6104.18	23.98	24.85	-33.70	40°32'12.308"N	104°18'40.387"W	9.36	
6141.00	21.900	356.300	6134.11	35.24	36.13	-34.46	40°32'12.420"N	104°18'40.395"W	7.51	
6172.00	25.300	356.500	6162.51	47.61	48.52	-35.24	40°32'12.542"N	104°18'40.403"W	10.97	
6204.00	27.800	357.000	6191.14	61.86	62.80	-36.04	40°32'12.683"N	104°18'40.411"W	7.84	
6236.00	30.000	357.000	6219.15	77.28	78.24	-36.85	40°32'12.836"N	104°18'40.418"W	6.87	
6269.00	32.900	356.800	6247.30	94.44	95.43	-37.79	40°32'13.006"N	104°18'40.428"W	8.79	
6300.00	35.400	358.200	6272.95	111.80	112.81	-38.54	40°32'13.178"N	104°18'40.434"W	8.45	
6332.00	37.500	358.400	6298.69	130.78	131.82	-39.10	40°32'13.366"N	104°18'40.438"W	6.57	
6364.00	39.600	358.800	6323.72	150.70	151.75	-39.59	40°32'13.563"N	104°18'40.441"W	6.61	
6396.00	41.300	358.400	6348.07	171.43	172.51	-40.10	40°32'13.768"N	104°18'40.444"W	5.37	
6428.00	42.600	358.500	6371.87	192.79	193.89	-40.67	40°32'13.979"N	104°18'40.448"W	4.07	
6460.00	43.000	0.400	6395.35	214.52	215.63	-40.88	40°32'14.194"N	104°18'40.447"W	4.22	
6492.00	44.400	1.100	6418.48	236.62	237.73	-40.59	40°32'14.412"N	104°18'40.439"W	4.63	
6524.00	45.800	0.900	6441.07	259.29	260.40	-40.19	40°32'14.636"N	104°18'40.430"W	4.40	
6556.00	48.000	0.700	6462.93	282.65	283.76	-39.87	40°32'14.867"N	104°18'40.422"W	6.89	
6588.00	51.200	1.100	6483.67	307.02	308.12	-39.48	40°32'15.108"N	104°18'40.413"W	10.05	
6620.00	54.700	1.500	6502.95	332.55	333.65	-38.90	40°32'15.360"N	104°18'40.401"W	10.98	
6651.00	59.500	2.500	6519.78	358.57	359.65	-37.99	40°32'15.617"N	104°18'40.384"W	15.72	
6684.00	61.700	5.600	6535.98	387.28	388.32	-35.95	40°32'15.900"N	104°18'40.353"W	10.55	
6716.00	64.300	5.200	6550.51	415.73	416.71	-33.27	40°32'16.180"N	104°18'40.313"W	8.20	
6748.00	67.300	5.200	6563.62	444.85	445.77	-30.62	40°32'16.467"N	104°18'40.274"W	9.37	
6780.00	71.000	4.600	6575.01	474.69	475.56	-28.07	40°32'16.761"N	104°18'40.236"W	11.69	
6812.00	73.300	3.200	6584.82	505.12	505.95	-26.00	40°32'17.061"N	104°18'40.204"W	8.31	
6843.00	77.500	2.700	6592.63	535.11	535.90	-24.46	40°32'17.356"N	104°18'40.178"W	13.64	
6876.00	80.300	2.600	6598.99	567.48	568.25	-22.96	40°32'17.676"N	104°18'40.153"W	8.49	
6908.00	82.400	3.100	6603.80	599.10	599.84	-21.39	40°32'17.988"N	104°18'40.128"W	6.74	
6940.00	84.100	3.700	6607.56	630.86	631.56	-19.51	40°32'18.301"N	104°18'40.098"W	5.63	



Actual Wellpath Report

CROW VALLEY 7-62-27-2H AWP

Page 4 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	MARATHON OIL COMPANY	Slot	SLOT#01 CROW VALLEY 7-62-27-2H (468'FNL & 1836'FWL, SEC.34)
Area	COLORADO	Well	CROW VALLEY 7-62-27-2H
Field	WELD COUNTY (NAD 83, GRID NORTH)	Wellbore	CROW VALLEY 7-62-27-2H AWB
Facility	SEC.34-T7N-R62W		

WELLPATH DATA (145 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
6972.00	84.700	3.600	6610.68	662.68	663.34	-17.48	40°32'18.615"N	104°18'40.066"W	1.90	
7003.00	86.800	3.200	6612.98	693.58	694.20	-15.64	40°32'18.919"N	104°18'40.037"W	6.90	
7035.00	88.700	2.900	6614.23	725.54	726.13	-13.94	40°32'19.234"N	104°18'40.009"W	6.01	
7067.00	89.100	2.500	6614.85	757.53	758.09	-12.44	40°32'19.550"N	104°18'39.984"W	1.77	
7099.00	89.300	2.200	6615.30	789.52	790.06	-11.12	40°32'19.866"N	104°18'39.962"W	1.13	
7131.00	89.500	1.800	6615.63	821.52	822.04	-10.01	40°32'20.182"N	104°18'39.942"W	1.40	
7163.00	89.500	1.500	6615.91	853.52	854.02	-9.09	40°32'20.497"N	104°18'39.924"W	0.94	
7173.00	89.600	1.500	6615.99	863.52	864.02	-8.82	40°32'20.596"N	104°18'39.919"W	1.00	
7248.00	89.500	0.600	6616.58	938.51	939.00	-7.45	40°32'21.337"N	104°18'39.888"W	1.21	
7312.00	89.600	0.600	6617.08	1002.50	1003.00	-6.78	40°32'21.969"N	104°18'39.868"W	0.16	
7407.00	89.800	1.400	6617.58	1097.50	1097.98	-5.12	40°32'22.907"N	104°18'39.830"W	0.87	
7503.00	89.500	2.100	6618.16	1193.49	1193.93	-2.19	40°32'23.855"N	104°18'39.776"W	0.79	
7599.00	89.700	1.500	6618.83	1289.49	1289.88	0.83	40°32'24.803"N	104°18'39.720"W	0.66	
7694.00	88.900	2.100	6620.00	1384.48	1384.83	3.81	40°32'25.740"N	104°18'39.665"W	1.05	
7790.00	89.900	3.200	6621.00	1480.45	1480.72	8.25	40°32'26.687"N	104°18'39.591"W	1.55	
7885.00	90.800	3.100	6620.42	1575.41	1575.57	13.47	40°32'27.624"N	104°18'39.507"W	0.95	
7979.00	88.900	2.000	6620.67	1669.38	1669.47	17.65	40°32'28.551"N	104°18'39.436"W	2.34	
8074.00	88.600	2.200	6622.74	1764.35	1764.39	21.13	40°32'29.488"N	104°18'39.375"W	0.38	
8170.00	88.500	3.100	6625.17	1860.30	1860.25	25.57	40°32'30.435"N	104°18'39.301"W	0.94	
8266.00	88.800	3.000	6627.43	1956.24	1956.09	30.67	40°32'31.381"N	104°18'39.218"W	0.33	
8361.00	90.000	3.200	6628.42	2051.19	2050.94	35.81	40°32'32.318"N	104°18'39.135"W	1.28	
8458.00	90.500	2.900	6628.00	2148.15	2147.80	40.97	40°32'33.274"N	104°18'39.051"W	0.60	
8553.00	90.400	3.000	6627.26	2243.12	2242.68	45.86	40°32'34.211"N	104°18'38.971"W	0.15	
8649.00	88.600	2.700	6628.09	2339.08	2338.55	50.63	40°32'35.157"N	104°18'38.893"W	1.90	
8744.00	89.100	2.500	6630.00	2434.04	2433.43	54.94	40°32'36.094"N	104°18'38.821"W	0.57	
8840.00	90.700	2.800	6630.17	2530.02	2529.33	59.38	40°32'37.041"N	104°18'38.746"W	1.70	
8936.00	91.100	2.700	6628.66	2625.98	2625.20	63.99	40°32'37.988"N	104°18'38.670"W	0.43	
9031.00	91.800	2.200	6626.26	2720.94	2720.09	68.05	40°32'38.925"N	104°18'38.601"W	0.91	
9126.00	90.600	2.300	6624.27	2815.90	2814.99	71.77	40°32'39.862"N	104°18'38.536"W	1.27	
9222.00	91.000	1.900	6622.93	2911.89	2910.92	75.29	40°32'40.809"N	104°18'38.474"W	0.59	
9317.00	90.200	1.800	6621.93	3006.88	3005.86	78.36	40°32'41.747"N	104°18'38.418"W	0.85	
9413.00	90.000	1.100	6621.76	3102.88	3101.83	80.79	40°32'42.695"N	104°18'38.370"W	0.76	
9509.00	90.300	1.800	6621.51	3198.88	3197.80	83.22	40°32'43.643"N	104°18'38.322"W	0.79	
9605.00	90.900	1.500	6620.51	3294.87	3293.75	85.98	40°32'44.591"N	104°18'38.269"W	0.70	
9701.00	89.800	1.400	6619.92	3390.87	3389.72	88.41	40°32'45.538"N	104°18'38.221"W	1.15	
9797.00	89.800	1.800	6620.26	3486.87	3485.68	91.09	40°32'46.486"N	104°18'38.170"W	0.42	
9893.00	90.200	1.100	6620.26	3582.87	3581.65	93.52	40°32'47.434"N	104°18'38.121"W	0.84	
9988.00	89.500	2.700	6620.50	3677.86	3676.59	96.67	40°32'48.372"N	104°18'38.064"W	1.84	
10084.00	90.200	1.700	6620.76	3773.85	3772.52	100.35	40°32'49.319"N	104°18'38.000"W	1.27	
10180.00	89.600	2.400	6620.92	3869.84	3868.46	103.79	40°32'50.267"N	104°18'37.939"W	0.96	
10276.00	89.100	1.000	6622.01	3965.83	3964.40	106.64	40°32'51.214"N	104°18'37.885"W	1.55	
10373.00	87.900	1.300	6624.55	4062.80	4061.35	108.58	40°32'52.172"N	104°18'37.843"W	1.28	
10469.00	88.700	1.400	6627.40	4158.75	4157.28	110.84	40°32'53.119"N	104°18'37.797"W	0.84	
10565.00	88.900	1.000	6629.41	4254.73	4253.24	112.85	40°32'54.067"N	104°18'37.754"W	0.47	
10661.00	89.800	1.500	6630.50	4350.72	4349.21	114.95	40°32'55.015"N	104°18'37.711"W	1.07	



Actual Wellpath Report

CROW VALLEY 7-62-27-2H AWP

Page 5 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	MARATHON OIL COMPANY	Slot	SLOT#01 CROW VALLEY 7-62-27-2H (468'FNL & 1836'FWL, SEC.34)
Area	COLORADO	Well	CROW VALLEY 7-62-27-2H
Field	WELD COUNTY (NAD 83, GRID NORTH)	Wellbore	CROW VALLEY 7-62-27-2H AWB
Facility	SEC.34-T7N-R62W		

WELLPATH DATA (145 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10758.00	89.800	1.500	6630.84	4447.72	4446.17	117.49	40°32'55.973"N	104°18'37.661"W	0.00	
10853.00	90.200	0.700	6630.84	4542.72	4541.16	119.31	40°32'56.911"N	104°18'37.621"W	0.94	
10949.00	89.000	0.800	6631.51	4638.71	4637.14	120.57	40°32'57.859"N	104°18'37.588"W	1.25	
11044.00	89.700	1.800	6632.58	4733.70	4732.11	122.72	40°32'58.797"N	104°18'37.543"W	1.28	
11141.00	89.800	1.700	6633.01	4830.70	4829.06	125.68	40°32'59.755"N	104°18'37.488"W	0.15	
11237.00	89.500	2.200	6633.59	4926.69	4925.01	128.95	40°33'00.702"N	104°18'37.429"W	0.61	
11333.00	89.000	1.200	6634.85	5022.68	5020.95	131.80	40°33'01.650"N	104°18'37.376"W	1.16	
11429.00	89.100	0.600	6636.44	5118.66	5116.93	133.31	40°33'02.598"N	104°18'37.339"W	0.63	
11485.00	89.500	0.800	6637.13	5174.66	5172.92	133.99	40°33'03.151"N	104°18'37.321"W	0.80	LAST BHI MWD SURVEY (554'FNL & 2000'FWL)
11549.00	89.500	0.800	6637.69	5238.65	5236.91	134.88	40°33'03.783"N	104°18'37.298"W	0.00	PROJECTION TO BIT (490'FNL & 1999'FWL)

HOLE & CASING SECTIONS - Ref Wellbore: CROW VALLEY 7-62-27-2H AWB Ref Wellpath: CROW VALLEY 7-62-27-2H AWP

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing Surface	31.00	722.00	691.00	31.00	722.00	0.00	0.00	0.00	0.00
8.75in Open Hole	722.00	7173.00	6451.00	722.00	6615.99	0.00	0.00	864.02	-8.82
7in Casing Intermediate	31.00	7219.00	7188.00	31.00	6616.33	0.00	0.00	910.01	-7.84
6in Open Hole	7173.00	11485.00	4312.00	6615.99	6637.13	864.02	-8.82	5172.92	133.99



Actual Wellpath Report

CROW VALLEY 7-62-27-2H AWP

Page 6 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	MARATHON OIL COMPANY	Slot	SLOT#01 CROW VALLEY 7-62-27-2H (468'FNL & 1836'FWL, SEC.34)
Area	COLORADO	Well	CROW VALLEY 7-62-27-2H
Field	WELD COUNTY (NAD 83, GRID NORTH)	Wellbore	CROW VALLEY 7-62-27-2H AWB
Facility	SEC.34-T7N-R62W		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
CROW VALLEY SECTION 27		109.00	201.49	5283.58	3335727.27	1440771.01	40°32'13.343"N	104°17'31.495"W	polygon
CROW VALLEY SECTION 34		109.00	201.49	5283.58	3335727.27	1440771.01	40°32'13.343"N	104°17'31.495"W	polygon
CROW VALLEY 7-62-27-2H BHL ON PLAT (470'FNL & 2000'FWL, SEC.27, REV-2)		6594.00	5257.17	133.76	3330577.62	1445826.53	40°33'03.984"N	104°18'37.309"W	point
CROW VALLEY 7-62-27-2H LANDING (REV-1)		6601.00	620.04	15.75	3330459.61	1441189.55	40°32'18.182"N	104°18'39.643"W	point
CROW VALLEY 7-62-27-2H BHL ON PLAT (470'FNL & 2000'FWL, SEC.27, REV-3)		6607.00	5257.17	133.76	3330577.62	1445826.53	40°33'03.984"N	104°18'37.309"W	point
CROW VALLEY 7-62-27-2H LANDING (REV-2)		6614.00	620.04	15.75	3330459.61	1441189.55	40°32'18.182"N	104°18'39.643"W	point
CROW VALLEY 7-62-27-2H BHL ON PLAT (470'FNL & 2000'FWL, SEC.27, REV-1)		6647.00	5257.17	133.76	3330577.62	1445826.53	40°33'03.984"N	104°18'37.309"W	point
SLOT#03 EXISTING BICKFORD #1 (1984'FNL & 1946'FEL, SEC.34) 500' RADIUS		7271.00	-1509.22	1507.67	3331951.48	1439060.36	40°31'56.946"N	104°18'20.693"W	circle

WELLPATH COMPOSITION - Ref Wellbore: CROW VALLEY 7-62-27-2H AWB Ref Wellpath: CROW VALLEY 7-62-27-2H AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
31.00	722.00	Drift Indicator (Standard)	ASSUME VERTICAL TO CASING SHOE <722>	CROW VALLEY 7-62-27-2H AWB
722.00	5949.00	NaviTrak (Standard)	BHI MWD NAVI 8.75 <763 - 5949>	CROW VALLEY 7-62-27-2H AWB
5949.00	11485.00	NaviTrak (Standard)	BHI MWD NAVI 6 <5981 - 11485>	CROW VALLEY 7-62-27-2H AWB
11485.00	11549.00	Blind Drilling (std)	Projection to bit	CROW VALLEY 7-62-27-2H AWB



Actual Wellpath Report

CROW VALLEY 7-62-27-2H AWP

Page 7 of 7

**REFERENCE WELLPATH IDENTIFICATION**

Operator	MARATHON OIL COMPANY	Slot	SLOT#01 CROW VALLEY 7-62-27-2H (468'FNL & 1836'FWL, SEC.34)
Area	COLORADO	Well	CROW VALLEY 7-62-27-2H
Field	WELD COUNTY (NAD 83, GRID NORTH)	Wellbore	CROW VALLEY 7-62-27-2H AWB
Facility	SEC.34-T7N-R62W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
722.00	0.000	0.000	722.00	TIE INTO CASING SHOE
11485.00	89.500	0.800	6637.13	LAST BHI MWD SURVEY (554'FNL & 2000'FWL)
11549.00	89.500	0.800	6637.69	PROJECTION TO BIT (490'FNL & 1999'FWL)