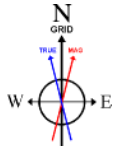


Location:	COLORADO	Slot:	SLOT#01 CROW VALLEY 7-62-31-2H (407FSL & 2142FWL, SEC.30)
Field:	WELD COUNTY (NAD 83, GRID NORTH)	Well:	CROW VALLEY 7-62-31-2H
Facility:	SEC.30-T7N-R62W	Wellbore:	CROW VALLEY 7-62-31-2H PWB

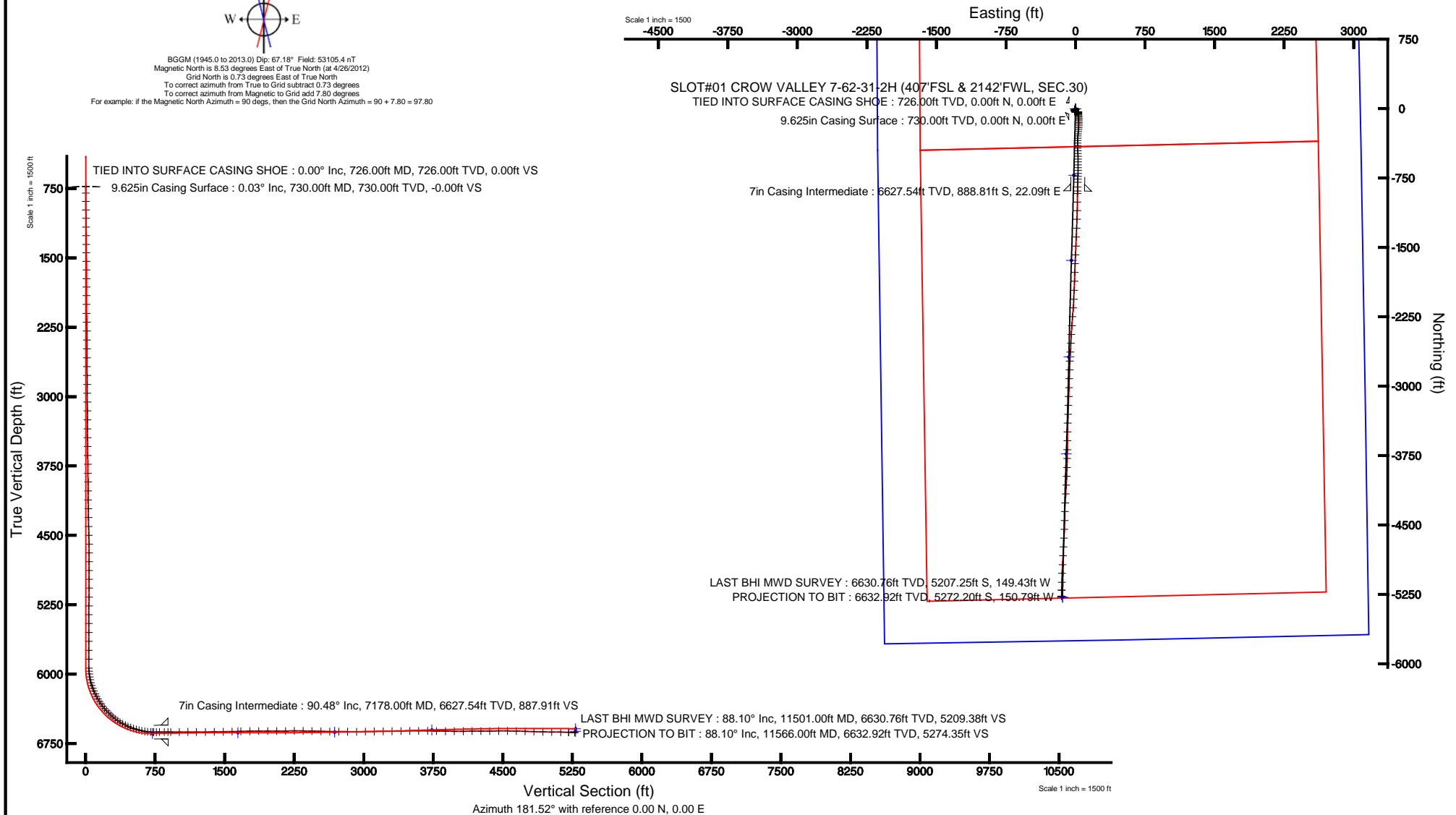
Location:	COLORADO	Slot:	SLOT#01 CROW VALLEY 7-62-31-2H (407FSL & 2142FWL, SEC.30)
Field:	WELD COUNTY (NAD 83, GRID NORTH)	Well:	CROW VALLEY 7-62-31-2H
Facility:	SEC.30-T7N-R62W	Wellbore:	CROW VALLEY 7-62-31-2H PWB



Plot reference wellpath is CROW VALLEY 7-62-31-2H (REV-B.O) PWP	
True vertical depths are referenced to H&P 321 (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to H&P 321 (RKB)	North Reference: Grid north
H&P 321 (RKB) to Mean Sea Level: 4842 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOTH01 CROW VALLEY 7-62-31-2H (407FSL & 2142FWL, SEC 30)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: cookdani on 5/23/2012



BGGM (1945.0 to 2013.0) Dip: 67.18° Field: 53105.4 nT  
 Magnetic North is 8.53 degrees East of True North (at 4/26/2012)  
 Grid North is 0.73 degrees East of True North  
 To correct azimuth from True to Grid subtract 0.73 degrees  
 To correct azimuth from Magnetic to Grid add 7.80 degrees  
 For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth =  $90 + 7.80 = 97.80$





# Actual Wellpath Report

CROW VALLEY 7-62-31-2H AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	MARATHON OIL COMPANY	Slot	SLOT#01 CROW VALLEY 7-62-31-2H (407'FSL & 2142'FWL, SEC.30)
Area	COLORADO	Well	CROW VALLEY 7-62-31-2H
Field	WELD COUNTY (NAD 83, GRID NORTH)	Wellbore	CROW VALLEY 7-62-31-2H AWB
Facility	SEC.30-T7N-R62W		

## REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 4.0.0
North Reference	Grid	User	Cookdanm
Scale	0.999969	Report Generated	5/23/2012 at 12:17:41 PM
Convergence at slot	0.73° East	Database/Source file	WA_Denver/CROW_VALLEY_7-62-31-2H__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	3314856.91	1441100.96	40°32'19.325"N	104°22'01.733"W
Facility Reference Pt			3314856.91	1441100.96	40°32'19.325"N	104°22'01.733"W
Field Reference Pt			3476081.76	1512960.14	40°43'43.704"N	103°46'55.829"W

## WELLPATH DATUM

Calculation method	Minimum curvature	H&P 321 (RKB) to Facility Vertical Datum	4842.00ft
Horizontal Reference Pt	Slot	H&P 321 (RKB) to Mean Sea Level	4842.00ft
Vertical Reference Pt	H&P 321 (RKB)	H&P 321 (RKB) to Mud Line at Slot (SLOT#01 CROW VALLEY 7-62-31-2H (407'FSL & 2142'FWL, SEC.30))	4842.00ft
MD Reference Pt	H&P 321 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	181.52°



# Actual Wellpath Report

## CROW VALLEY 7-62-31-2H AWP

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### REFERENCE WELLPATH IDENTIFICATION

Operator	MARATHON OIL COMPANY	Slot	SLOT#01 CROW VALLEY 7-62-31-2H (407'FSL & 2142'FWL, SEC.30)
Area	COLORADO	Well	CROW VALLEY 7-62-31-2H
Field	WELD COUNTY (NAD 83, GRID NORTH)	Wellbore	CROW VALLEY 7-62-31-2H AWB
Facility	SEC.30-T7N-R62W		

### WELLPATH DATA (140 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
726.00	0.000	21.100	726.00	0.00	0.00	0.00	3314856.91	1441100.96	40°32'19.325"N	104°22'01.733"W	0.00	TIED INTO SURFACE CASING SHOE
798.00	0.500	21.100	798.00	-0.30	0.29	0.11	3314857.02	1441101.25	40°32'19.328"N	104°22'01.731"W	0.69	
889.00	0.800	176.400	889.00	-0.04	0.03	0.30	3314857.21	1441100.99	40°32'19.326"N	104°22'01.729"W	1.40	
980.00	0.900	161.700	979.99	1.27	-1.28	0.56	3314857.47	1441099.68	40°32'19.313"N	104°22'01.726"W	0.26	
1072.00	0.600	184.100	1071.98	2.43	-2.45	0.75	3314857.66	1441098.51	40°32'19.301"N	104°22'01.724"W	0.45	
1165.00	0.600	173.800	1164.97	3.40	-3.42	0.77	3314857.68	1441097.54	40°32'19.291"N	104°22'01.724"W	0.12	
1259.00	0.300	206.000	1258.97	4.11	-4.13	0.72	3314857.63	1441096.83	40°32'19.284"N	104°22'01.724"W	0.41	
1353.00	0.500	193.500	1352.97	4.73	-4.75	0.51	3314857.42	1441096.21	40°32'19.278"N	104°22'01.727"W	0.23	
1444.00	0.800	211.000	1443.96	5.68	-5.68	0.09	3314857.00	1441095.28	40°32'19.269"N	104°22'01.733"W	0.39	
1537.00	0.500	229.800	1536.96	6.51	-6.50	-0.55	3314856.36	1441094.46	40°32'19.261"N	104°22'01.741"W	0.39	
1630.00	0.400	219.700	1629.95	7.04	-7.01	-1.07	3314855.84	1441093.95	40°32'19.256"N	104°22'01.748"W	0.14	
1723.00	0.500	233.200	1722.95	7.54	-7.50	-1.60	3314855.31	1441093.46	40°32'19.251"N	104°22'01.755"W	0.16	
1815.00	0.400	229.400	1814.95	8.01	-7.95	-2.17	3314854.74	1441093.01	40°32'19.247"N	104°22'01.762"W	0.11	
1908.00	0.600	277.700	1907.95	8.17	-8.10	-2.90	3314854.01	1441092.86	40°32'19.246"N	104°22'01.772"W	0.48	
2003.00	0.700	292.400	2002.94	7.91	-7.81	-3.93	3314852.98	1441093.15	40°32'19.249"N	104°22'01.785"W	0.20	
2099.00	1.300	224.700	2098.93	8.50	-8.36	-5.23	3314851.68	1441092.60	40°32'19.243"N	104°22'01.802"W	1.27	
2195.00	1.300	222.000	2194.90	10.12	-9.95	-6.73	3314850.18	1441091.02	40°32'19.228"N	104°22'01.822"W	0.06	
2291.00	0.800	203.100	2290.89	11.57	-11.37	-7.72	3314849.19	1441089.59	40°32'19.214"N	104°22'01.835"W	0.63	
2388.00	0.400	203.600	2387.88	12.52	-12.30	-8.12	3314848.79	1441088.66	40°32'19.205"N	104°22'01.840"W	0.41	
2483.00	0.100	88.900	2482.88	12.82	-12.61	-8.17	3314848.74	1441088.35	40°32'19.202"N	104°22'01.841"W	0.47	
2580.00	0.200	107.800	2579.88	12.86	-12.66	-7.93	3314848.99	1441088.30	40°32'19.201"N	104°22'01.838"W	0.11	
2675.00	0.400	170.900	2674.88	13.24	-13.03	-7.71	3314849.20	1441087.93	40°32'19.198"N	104°22'01.835"W	0.38	
2771.00	0.500	227.000	2770.88	13.86	-13.65	-7.97	3314848.94	1441087.31	40°32'19.192"N	104°22'01.838"W	0.45	
2867.00	0.500	200.600	2866.87	14.55	-14.33	-8.42	3314848.49	1441086.63	40°32'19.185"N	104°22'01.844"W	0.24	
2963.00	0.400	174.700	2962.87	15.28	-15.05	-8.54	3314848.37	1441085.91	40°32'19.178"N	104°22'01.846"W	0.23	
3059.00	0.600	195.600	3058.87	16.10	-15.87	-8.64	3314848.27	1441085.09	40°32'19.170"N	104°22'01.847"W	0.28	
3154.00	0.300	180.600	3153.86	16.83	-16.60	-8.78	3314848.13	1441084.36	40°32'19.162"N	104°22'01.849"W	0.34	
3251.00	0.300	158.200	3250.86	17.31	-17.09	-8.69	3314848.22	1441083.87	40°32'19.158"N	104°22'01.848"W	0.12	
3348.00	0.300	158.000	3347.86	17.78	-17.56	-8.50	3314848.41	1441083.40	40°32'19.153"N	104°22'01.846"W	0.00	
3443.00	0.700	175.000	3442.86	18.59	-18.37	-8.35	3314848.56	1441082.59	40°32'19.145"N	104°22'01.844"W	0.44	
3540.00	0.600	184.300	3539.85	19.68	-19.47	-8.34	3314848.57	1441081.49	40°32'19.134"N	104°22'01.844"W	0.15	
3636.00	0.800	196.000	3635.84	20.83	-20.61	-8.56	3314848.35	1441080.35	40°32'19.123"N	104°22'01.847"W	0.26	
3731.00	0.900	167.300	3730.83	22.20	-21.98	-8.58	3314848.33	1441078.98	40°32'19.109"N	104°22'01.848"W	0.46	
3828.00	0.600	142.800	3827.82	23.33	-23.13	-8.11	3314848.80	1441077.84	40°32'19.098"N	104°22'01.842"W	0.45	
3923.00	0.600	150.900	3922.82	24.15	-23.96	-7.56	3314849.35	1441077.00	40°32'19.090"N	104°22'01.835"W	0.09	
4019.00	0.600	137.600	4018.81	24.94	-24.77	-6.98	3314849.93	1441076.19	40°32'19.082"N	104°22'01.827"W	0.14	
4116.00	0.700	150.600	4115.81	25.82	-25.66	-6.35	3314850.56	1441075.30	40°32'19.073"N	104°22'01.819"W	0.18	
4212.00	0.700	166.700	4211.80	26.89	-26.74	-5.93	3314850.99	1441074.22	40°32'19.062"N	104°22'01.814"W	0.20	
4307.00	1.300	167.300	4306.79	28.49	-28.36	-5.55	3314851.36	1441072.61	40°32'19.046"N	104°22'01.810"W	0.63	
4404.00	1.500	164.900	4403.76	30.78	-30.65	-4.98	3314851.93	1441070.31	40°32'19.023"N	104°22'01.803"W	0.21	
4500.00	1.200	163.100	4499.73	32.93	-32.83	-4.36	3314852.55	1441068.13	40°32'19.002"N	104°22'01.795"W	0.32	
4596.00	1.500	137.200	4595.70	34.79	-34.71	-3.22	3314853.69	1441066.25	40°32'18.983"N	104°22'01.780"W	0.70	
4691.00	1.400	97.900	4690.68	35.80	-35.78	-1.22	3314855.69	1441065.18	40°32'18.972"N	104°22'01.755"W	1.03	
4786.00	1.500	84.200	4785.65	35.78	-35.82	1.16	3314858.07	1441065.14	40°32'18.971"N	104°22'01.724"W	0.38	
4881.00	1.600	78.400	4880.61	35.32	-35.43	3.70	3314860.61	1441065.53	40°32'18.975"N	104°22'01.691"W	0.20	



# Actual Wellpath Report

CROW VALLEY 7-62-31-2H AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	MARATHON OIL COMPANY	Slot	SLOT#01 CROW VALLEY 7-62-31-2H (407'FSL & 2142'FWL, SEC.30)
Area	COLORADO	Well	CROW VALLEY 7-62-31-2H
Field	WELD COUNTY (NAD 83, GRID NORTH)	Wellbore	CROW VALLEY 7-62-31-2H AWB
Facility	SEC.30-T7N-R62W		

## WELLPATH DATA (140 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4977.00	1.600	82.900	4976.57	34.81	-34.99	6.34	3314863.25	1441065.97	40°32'18.979"N	104°22'01.657"W	0.13	
5071.00	1.800	83.400	5070.53	34.40	-34.66	9.11	3314866.02	1441066.30	40°32'18.982"N	104°22'01.621"W	0.21	
5168.00	1.900	85.300	5167.48	34.01	-34.35	12.23	3314869.14	1441066.61	40°32'18.984"N	104°22'01.580"W	0.12	
5263.00	1.700	81.500	5262.44	33.60	-34.02	15.19	3314872.10	1441066.95	40°32'18.987"N	104°22'01.542"W	0.25	
5360.00	2.100	83.500	5359.38	33.10	-33.60	18.38	3314875.29	1441067.36	40°32'18.991"N	104°22'01.500"W	0.42	
5455.00	2.000	80.400	5454.32	32.54	-33.13	21.74	3314878.65	1441067.83	40°32'18.995"N	104°22'01.457"W	0.16	
5552.00	1.100	85.700	5551.28	32.12	-32.78	24.34	3314881.25	1441068.19	40°32'18.998"N	104°22'01.580"W	0.94	
5648.00	1.000	88.500	5647.27	31.98	-32.68	26.10	3314883.01	1441068.28	40°32'18.999"N	104°22'01.400"W	0.12	
5744.00	0.500	100.000	5743.26	32.00	-32.74	27.35	3314884.26	1441068.23	40°32'18.998"N	104°22'01.384"W	0.54	
5840.00	0.600	110.300	5839.26	32.22	-32.98	28.23	3314885.14	1441067.98	40°32'18.996"N	104°22'01.373"W	0.15	
5937.00	1.000	149.400	5936.25	33.10	-33.89	29.14	3314886.05	1441067.07	40°32'18.987"N	104°22'01.423"W	0.68	
5969.00	3.800	172.300	5968.22	34.38	-35.18	29.42	3314886.33	1441065.78	40°32'18.974"N	104°22'01.358"W	9.08	
6001.00	6.700	175.800	6000.08	37.29	-38.09	29.70	3314886.61	1441062.87	40°32'18.945"N	104°22'01.355"W	9.11	
6032.00	9.400	175.800	6030.77	41.61	-42.42	30.02	3314886.93	1441058.54	40°32'18.902"N	104°22'01.351"W	8.71	
6064.00	12.700	175.700	6062.17	47.71	-48.54	30.48	3314887.38	1441052.42	40°32'18.842"N	104°22'01.346"W	10.31	
6096.00	15.600	175.800	6093.20	55.49	-56.34	31.05	3314887.96	1441044.62	40°32'18.765"N	104°22'01.340"W	9.06	
6129.00	18.200	175.400	6124.77	65.03	-65.90	31.79	3314888.70	1441035.06	40°32'18.670"N	104°22'01.332"W	7.89	
6160.00	20.700	176.600	6154.00	75.31	-76.20	32.51	3314889.41	1441024.77	40°32'18.568"N	104°22'01.325"W	8.17	
6193.00	23.300	177.100	6184.59	87.63	-88.54	33.18	3314890.09	1441012.42	40°32'18.446"N	104°22'01.318"W	7.90	
6225.00	25.900	177.600	6213.69	100.91	-101.85	33.80	3314890.70	1440999.12	40°32'18.315"N	104°22'01.312"W	8.15	
6256.00	28.000	178.700	6241.32	114.93	-115.89	34.24	3314891.15	1440985.08	40°32'18.176"N	104°22'01.309"W	6.96	
6288.00	29.900	179.300	6269.32	130.41	-131.37	34.51	3314891.42	1440969.59	40°32'18.023"N	104°22'01.308"W	6.01	
6320.00	31.900	179.400	6296.78	146.83	-147.80	34.70	3314891.61	1440953.16	40°32'17.861"N	104°22'01.308"W	6.25	
6351.00	34.400	180.700	6322.73	163.77	-164.75	34.68	3314891.59	1440936.21	40°32'17.693"N	104°22'01.311"W	8.38	
6383.00	37.100	181.600	6348.70	182.47	-183.44	34.30	3314891.21	1440917.52	40°32'17.509"N	104°22'01.319"W	8.60	
6415.00	40.200	182.600	6373.68	202.45	-203.41	33.56	3314890.47	1440897.55	40°32'17.311"N	104°22'01.332"W	9.88	
6447.00	42.500	185.300	6397.71	223.56	-224.50	32.09	3314889.00	1440876.47	40°32'17.103"N	104°22'01.354"W	9.09	
6480.00	44.900	186.000	6421.56	246.30	-247.18	29.84	3314886.75	1440853.78	40°32'16.879"N	104°22'01.387"W	7.42	
6512.00	47.300	185.800	6443.75	269.29	-270.12	27.47	3314884.38	1440830.85	40°32'16.653"N	104°22'01.422"W	7.51	
6544.00	49.700	183.500	6464.95	293.22	-294.00	25.54	3314882.45	1440806.97	40°32'16.417"N	104°22'01.451"W	9.23	
6576.00	52.000	183.200	6485.16	318.02	-318.77	24.09	3314881.00	1440782.20	40°32'16.173"N	104°22'01.474"W	7.22	
6608.00	54.700	182.400	6504.26	343.68	-344.41	22.84	3314879.75	1440756.56	40°32'15.919"N	104°22'01.494"W	8.67	
6640.00	57.700	180.700	6522.06	370.27	-370.99	22.13	3314879.04	1440729.98	40°32'15.657"N	104°22'01.508"W	10.36	
6672.00	60.700	178.400	6538.44	397.73	-398.47	22.35	3314879.26	1440702.50	40°32'15.385"N	104°22'01.509"W	11.22	
6704.00	63.700	177.600	6553.36	425.98	-426.76	23.34	3314880.25	1440674.22	40°32'15.106"N	104°22'01.501"W	9.63	
6735.00	66.600	177.800	6566.39	454.05	-454.86	24.47	3314881.38	1440646.11	40°32'14.828"N	104°22'01.491"W	9.37	
6767.00	68.300	177.200	6578.66	483.53	-484.38	25.76	3314882.67	1440616.59	40°32'14.536"N	104°22'01.479"W	5.59	
6799.00	71.200	177.700	6589.74	513.47	-514.37	27.10	3314884.01	1440586.60	40°32'14.240"N	104°22'01.467"W	9.18	
6831.00	74.100	179.200	6599.28	543.97	-544.90	27.92	3314884.83	1440556.08	40°32'13.938"N	104°22'01.462"W	10.11	
6862.00	75.600	179.100	6607.38	573.86	-574.82	28.36	3314885.27	1440526.16	40°32'13.642"N	104°22'01.461"W	4.85	
6894.00	77.300	180.500	6614.88	604.96	-605.93	28.47	3314885.38	1440495.05	40°32'13.335"N	104°22'01.464"W	6.81	
6926.00	80.400	180.400	6621.07	636.34	-637.32	28.22	3314885.13	1440463.66	40°32'13.025"N	104°22'01.473"W	9.69	
6957.00	83.900	180.900	6625.30	667.04	-668.02	27.88	3314884.78	1440432.96	40°32'12.721"N	104°22'01.482"W	11.40	
6989.00	86.900	181.500	6627.86	698.94	-699.91	27.21	3314884.12	1440401.08	40°32'12.406"N	104°22'01.496"W	9.56	
7021.00	90.100	181.800	6628.70	730.92	-731.88	26.29	3314883.19	1440369.10	40°32'12.091"N	104°22'01.514"W	10.04	



# Actual Wellpath Report

CROW VALLEY 7-62-31-2H AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	MARATHON OIL COMPANY	Slot	SLOT#01 CROW VALLEY 7-62-31-2H (407'FSL & 2142'FWL, SEC.30)
Area	COLORADO	Well	CROW VALLEY 7-62-31-2H
Field	WELD COUNTY (NAD 83, GRID NORTH)	Wellbore	CROW VALLEY 7-62-31-2H AWB
Facility	SEC.30-T7N-R62W		

## WELLPATH DATA (140 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7052.00	90.500	182.100	6628.54	761.92	-762.86	25.23	3314882.14	1440338.12	40°32'11.785"N	104°22'01.532"W	1.61	
7084.00	90.600	181.800	6628.23	793.92	-794.84	24.14	3314881.05	1440306.15	40°32'11.469"N	104°22'01.552"W	0.99	
7136.00	90.300	181.100	6627.82	845.91	-846.82	22.83	3314879.74	1440254.17	40°32'10.955"N	104°22'01.577"W	1.46	
7207.00	90.600	180.800	6627.27	916.91	-917.81	21.65	3314878.56	1440183.18	40°32'10.254"N	104°22'01.604"W	0.60	
7300.00	90.200	180.700	6626.62	1009.90	-1010.80	20.43	3314877.34	1440090.19	40°32'09.336"N	104°22'01.636"W	0.44	
7392.00	90.100	181.200	6626.38	1101.89	-1102.79	18.91	3314875.82	1439998.21	40°32'08.427"N	104°22'01.671"W	0.55	
7485.00	89.300	182.100	6626.86	1194.89	-1195.74	16.23	3314873.14	1439905.25	40°32'07.509"N	104°22'01.721"W	1.29	
7581.00	91.000	182.600	6626.61	1290.88	-1291.66	12.29	3314869.20	1439809.34	40°32'06.561"N	104°22'01.787"W	1.85	
7676.00	90.300	182.200	6625.53	1385.86	-1386.57	8.31	3314865.22	1439714.44	40°32'05.624"N	104°22'01.855"W	0.85	
7774.00	91.200	182.400	6624.25	1483.84	-1484.48	4.38	3314861.29	1439616.53	40°32'04.657"N	104°22'01.922"W	0.94	
7869.00	91.300	182.800	6622.18	1578.80	-1579.36	0.07	3314856.98	1439521.65	40°32'03.720"N	104°22'01.973"W	0.43	
7964.00	91.100	182.300	6620.19	1673.76	-1674.25	-4.15	3314852.76	1439426.77	40°32'02.783"N	104°22'02.064"W	0.57	
8060.00	90.800	182.000	6618.60	1769.74	-1770.16	-7.75	3314849.16	1439330.85	40°32'01.836"N	104°22'02.126"W	0.44	
8156.00	90.300	181.700	6617.68	1865.74	-1866.11	-10.85	3314846.06	1439234.91	40°32'00.888"N	104°22'02.182"W	0.61	
8253.00	90.600	182.800	6616.91	1962.73	-1963.03	-14.66	3314842.25	1439137.99	40°31'59.931"N	104°22'02.248"W	1.18	
8350.00	89.300	182.000	6617.00	2059.71	-2059.94	-18.72	3314838.19	1439041.09	40°31'58.974"N	104°22'02.316"W	1.57	
8445.00	91.100	184.600	6616.67	2154.65	-2154.77	-24.19	3314832.72	1438946.26	40°31'58.038"N	104°22'02.403"W	3.33	
8540.00	90.200	184.300	6615.59	2249.52	-2249.48	-31.56	3314825.35	1438851.55	40°31'57.103"N	104°22'02.514"W	1.00	
8636.00	89.300	184.300	6616.01	2345.41	-2345.21	-38.76	3314818.15	1438755.83	40°31'56.158"N	104°22'02.623"W	0.94	
8732.00	89.500	183.400	6617.01	2441.32	-2440.98	-45.20	3314811.71	1438660.06	40°31'55.213"N	104°22'02.722"W	0.96	
8828.00	87.800	182.600	6619.28	2537.26	-2536.82	-50.23	3314806.69	1438564.22	40°31'54.266"N	104°22'02.803"W	1.96	
8924.00	89.200	184.200	6621.79	2633.17	-2632.61	-55.92	3314800.99	1438468.43	40°31'53.321"N	104°22'02.893"W	2.21	
9020.00	89.800	181.800	6622.63	2729.13	-2728.47	-60.94	3314795.97	1438372.58	40°31'52.374"N	104°22'02.973"W	2.58	
9116.00	88.900	181.300	6623.72	2825.12	-2824.43	-63.54	3314793.37	1438276.62	40°31'51.426"N	104°22'03.023"W	1.07	
9212.00	90.400	182.800	6624.30	2921.11	-2920.36	-66.97	3314789.94	1438180.70	40°31'50.479"N	104°22'03.083"W	2.21	
9308.00	90.900	181.200	6623.21	3017.09	-3016.29	-70.32	3314786.59	1438084.77	40°31'49.531"N	104°22'03.143"W	1.75	
9404.00	91.200	182.700	6621.45	3113.07	-3112.22	-73.59	3314783.32	1437988.84	40°31'48.584"N	104°22'03.201"W	1.59	
9500.00	90.400	180.900	6620.11	3209.06	-3208.16	-76.60	3314780.31	1437892.91	40°31'47.637"N	104°22'03.256"W	2.05	
9596.00	91.200	181.900	6618.77	3305.05	-3304.12	-78.95	3314777.96	1437796.95	40°31'46.689"N	104°22'03.302"W	1.33	
9693.00	90.900	183.100	6617.00	3402.01	-3401.00	-83.18	3314773.73	1437700.07	40°31'45.732"N	104°22'03.373"W	1.27	
9787.00	90.500	180.500	6615.85	3496.00	-3494.94	-86.13	3314770.78	1437606.13	40°31'44.804"N	104°22'03.426"W	2.80	
9883.00	90.100	181.000	6615.34	3591.99	-3590.93	-87.39	3314769.53	1437510.14	40°31'43.856"N	104°22'03.459"W	0.67	
9980.00	89.500	180.100	6615.68	3688.97	-3687.93	-88.32	3314768.60	1437413.15	40°31'42.898"N	104°22'03.487"W	1.12	
10076.00	88.700	181.000	6617.19	3784.94	-3783.91	-89.24	3314767.67	1437317.17	40°31'41.949"N	104°22'03.514"W	1.25	
10172.00	89.800	182.100	6618.45	3880.93	-3879.86	-91.84	3314765.08	1437221.22	40°31'41.002"N	104°22'03.564"W	1.62	
10267.00	89.900	181.800	6618.70	3975.93	-3974.81	-95.07	3314761.84	1437126.28	40°31'40.064"N	104°22'03.622"W	0.33	
10364.00	90.100	184.000	6618.70	4072.90	-4071.68	-99.98	3314756.94	1437029.42	40°31'39.107"N	104°22'03.701"W	2.28	
10459.00	90.500	182.700	6618.20	4167.84	-4166.51	-105.53	3314751.39	1436934.58	40°31'38.171"N	104°22'03.789"W	1.43	
10555.00	90.500	183.900	6617.36	4263.79	-4262.35	-111.05	3314745.86	1436838.75	40°31'37.225"N	104°22'03.876"W	1.25	
10650.00	90.400	180.400	6616.61	4358.77	-4357.26	-114.62	3314742.30	1436743.84	40°31'36.287"N	104°22'03.938"W	3.69	
10746.00	90.400	182.900	6615.94	4454.76	-4453.21	-117.38	3314739.53	1436647.89	40°31'35.340"N	104°22'03.990"W	2.60	
10842.00	89.600	180.500	6615.94	4550.75	-4549.16	-120.23	3314736.69	1436551.95	40°31'34.392"N	104°22'04.042"W	2.64	
10937.00	88.700	184.400	6617.35	4645.71	-4644.05	-124.29	3314732.63	1436457.07	40°31'33.455"N	104°22'04.111"W	4.21	
11032.00	88.100	182.100	6620.01	4740.62	-4738.85	-129.67	3314727.24	1436362.27	40°31'32.519"N	104°22'04.196"W	2.50	
11128.00	88.100	183.300	6623.19	4836.55	-4834.69	-134.19	3314722.72	1436266.43	40°31'31.573"N	104°22'04.270"W	1.25	



# Actual Wellpath Report

CROW VALLEY 7-62-31-2H AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	MARATHON OIL COMPANY	Slot	SLOT#01 CROW VALLEY 7-62-31-2H (407'FSL & 2142'FWL, SEC.30)
Area	COLORADO	Well	CROW VALLEY 7-62-31-2H
Field	WELD COUNTY (NAD 83, GRID NORTH)	Wellbore	CROW VALLEY 7-62-31-2H AWB
Facility	SEC.30-T7N-R62W		

## WELLPATH DATA (140 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11224.00	89.100	183.200	6625.54	4932.47	-4930.50	-139.63	3314717.28	1436170.62	40°31'30.627"N	104°22'04.357"W	1.05	
11319.00	89.400	182.600	6626.78	5027.44	-5025.37	-144.44	3314712.48	1436075.75	40°31'29.690"N	104°22'04.434"W	0.71	
11416.00	88.700	181.200	6628.39	5124.42	-5122.30	-147.65	3314709.26	1435978.82	40°31'28.733"N	104°22'04.492"W	1.61	
11501.00	88.100	181.200	6630.76	5209.38	-5207.25	-149.43	3314707.48	1435893.88	40°31'27.893"N	104°22'04.529"W	0.71	LAST BHI MWD SURVEY
11566.00	88.100	181.200	6632.92	5274.35	-5272.20	-150.79	3314706.12	1435828.93	40°31'27.252"N	104°22'04.558"W	0.00	PROJECTION TO BIT

## HOLE & CASING SECTIONS - Ref Wellbore: CROW VALLEY 7-62-31-2H AWB Ref Wellpath: CROW VALLEY 7-62-31-2H 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	730.00	699.00	31.00	730.00	0.00	0.00	0.00	0.00
8.75in Open Hole	730.00	7195.00	6465.00	730.00	6627.39	0.00	0.00	-905.81	21.82
7in Casing Intermediate	31.00	7178.00	7147.00	31.00	6627.54	0.00	0.00	-888.81	22.09
6in Open Hole	7195.00	11566.00	4371.00	6627.39	6632.92	-905.81	21.82	-5272.20	-150.79



# Actual Wellpath Report

CROW VALLEY 7-62-31-2H AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	MARATHON OIL COMPANY	Slot	SLOT#01 CROW VALLEY 7-62-31-2H (407'FSL & 2142'FWL, SEC.30)
Area	COLORADO	Well	CROW VALLEY 7-62-31-2H
Field	WELD COUNTY (NAD 83, GRID NORTH)	Wellbore	CROW VALLEY 7-62-31-2H AWB
Facility	SEC.30-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 31-2H/30-2H SECTION LINES		0.00	0.00	0.00	3314856.91	1441100.96	40°32'19.325"N	104°22'01.733"W	polygon
CROW VALLEY 7-62-31-2H BHL ON PLAT (470'FSL & 1931'FWL, SEC.31, REV-2)		6592.00	-5282.82	-140.60	3314716.31	1435818.31	40°31'27.146"N	104°22'04.427"W	point
CROW VALLEY 7-62-31-2H PT#4 (REV-1)		6605.00	-3733.86	-99.34	3314757.57	1437367.22	40°31'42.445"N	104°22'03.637"W	point
CROW VALLEY 7-62-30-2H HARDLINES (460' SETBACKS)		6620.00	0.00	0.00	3314856.91	1441100.96	40°32'19.325"N	104°22'01.733"W	polygon
CROW VALLEY 7-62-31-2H BHL ON PLAT (470'FSL & 1931'FWL, SEC.31, REV-1)		6620.00	-5282.82	-140.60	3314716.31	1435818.31	40°31'27.146"N	104°22'04.427"W	point
CROW VALLEY 7-62-31-2H HARDLINES (460' SETBACKS)		6620.00	0.00	0.00	3314856.91	1441100.96	40°32'19.325"N	104°22'01.733"W	polygon
CROW VALLEY 7-62-31-2H PT#3 (REV-1)		6629.00	-2685.29	-71.19	3314785.72	1438415.76	40°31'52.802"N	104°22'03.099"W	point
CROW VALLEY 7-62-31-2H PT#2 (REV-1)		6635.00	-1639.71	-44.03	3314812.88	1439461.30	40°32'03.130"N	104°22'02.574"W	point
CROW VALLEY 7-62-31-2H LANDING (REV-1)		6644.00	-719.20	-18.16	3314838.75	1440381.78	40°32'12.222"N	104°22'02.087"W	point

## WELLPATH COMPOSITION - Ref Wellbore: CROW VALLEY 7-62-31-2H AWB Ref Wellpath: CROW VALLEY 7-62-31-2H AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
726.00	7136.00	NaviTrak (Standard)	BHI/NAVITRAK MWD 8.75" HOLE <798-7136>	CROW VALLEY 7-62-31-2H AWB
7136.00	11501.00	NaviTrak (Standard)	BHI/NAVITRAK MWD 6" HOLE <7207-11501>	CROW VALLEY 7-62-31-2H AWB
11501.00	11566.00	Blind Drilling (std)	Projection to bit	CROW VALLEY 7-62-31-2H AWB

**Actual Wellpath Report****CROW VALLEY 7-62-31-2H AWP**

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**REFERENCE WELLPATH IDENTIFICATION**

Operator	MARATHON OIL COMPANY	Slot	SLOT#01 CROW VALLEY 7-62-31-2H (407'FSL & 2142'FWL, SEC.30)
Area	COLORADO	Well	CROW VALLEY 7-62-31-2H
Field	WELD COUNTY (NAD 83, GRID NORTH)	Wellbore	CROW VALLEY 7-62-31-2H AWB
Facility	SEC.30-T7N-R62W		

**WELLPATH COMMENTS**

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
726.00	0.000	21.100	726.00	TIED INTO SURFACE CASING SHOE
11501.00	88.100	181.200	6630.76	LAST BHI MWD SURVEY
11566.00	88.100	181.200	6632.92	PROJECTION TO BIT