



# Actual Wellpath Report

HOWARD 41-32 AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANADARKO E&P COMPANY LP	Slot	SLOT#06 HOWARD 41-32 (2411'FNL & 1504'FEL)
Area	COLORADO	Well	HOWARD 41-32
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 41-32 AWB
Facility	SEC.32-T1N-R67W		

## REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 3.0.0
North Reference	True	User	Wilsjef02
Scale	0.999966	Report Generated	1/10/2012 at 9:38:28 AM
Convergence at slot	0.38° East	Database/Source file	WA_ANADARKO/HOWARD_41-32_AWB.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	80.12	44.54	3165206.18	1246389.83	40°00'29.585"N	104°54'36.814"W
Facility Reference Pt			3165162.17	1246309.41	40°00'28.793"N	104°54'37.386"W
Field Reference Pt			3197771.84	1268891.29	40°04'09.600"N	104°47'36.000"W

## WELLPATH DATUM

Calculation method	Minimum curvature	XTREME 15 (RKB) to Facility Vertical Datum	5076.00ft
Horizontal Reference Pt	Slot	XTREME 15 (RKB) to Mean Sea Level	5076.00ft
Vertical Reference Pt	XTREME 15 (RKB)	XTREME 15 (RKB) to Mud Line at Slot (SLOT#06 HOWARD 41-32 (2411'FNL & 1504'FEL))	5076.00ft
MD Reference Pt	XTREME 15 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	53.09°



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Facility	SEC.32-T1N-R67W		

## WELLPATH DATA (91 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	214.800	0.00	0.00	0.00	0.00	40°00'29.585"N	104°54'36.814"W	0.00	
15.00	0.000	214.800	15.00	0.00	0.00	0.00	40°00'29.585"N	104°54'36.814"W	0.00	
154.00	0.100	214.800	154.00	-0.12	-0.10	-0.07	40°00'29.584"N	104°54'36.814"W	0.07	Begin BHI MWD Surveys
247.00	1.200	69.300	246.99	0.74	0.18	0.80	40°00'29.587"N	104°54'36.803"W	1.38	
340.00	2.600	54.900	339.94	3.79	1.74	3.43	40°00'29.602"N	104°54'36.769"W	1.58	
432.00	4.500	58.800	431.76	9.46	4.80	8.23	40°00'29.632"N	104°54'36.708"W	2.08	
521.00	6.200	57.300	520.37	17.73	9.21	15.26	40°00'29.676"N	104°54'36.618"W	1.92	
610.00	8.300	55.200	608.65	28.95	15.47	24.58	40°00'29.738"N	104°54'36.498"W	2.38	
701.00	9.900	53.100	698.50	43.33	23.92	36.23	40°00'29.821"N	104°54'36.348"W	1.80	
792.00	11.300	52.200	787.95	60.07	34.08	49.53	40°00'29.922"N	104°54'36.177"W	1.55	
881.00	11.300	52.100	875.22	77.51	44.78	63.30	40°00'30.027"N	104°54'36.000"W	0.02	
968.00	11.300	52.100	960.54	94.55	55.25	76.75	40°00'30.131"N	104°54'35.827"W	0.00	
1058.00	11.100	51.400	1048.82	112.03	66.08	90.48	40°00'30.238"N	104°54'35.651"W	0.27	
1148.00	11.100	50.300	1137.14	129.34	77.01	103.92	40°00'30.346"N	104°54'35.478"W	0.24	
1225.00	9.900	50.300	1212.85	143.36	85.98	114.71	40°00'30.434"N	104°54'35.339"W	1.56	
1301.00	10.500	49.300	1287.65	156.79	94.67	124.99	40°00'30.520"N	104°54'35.207"W	0.82	
1389.00	11.900	49.600	1373.97	173.85	105.78	137.98	40°00'30.630"N	104°54'35.040"W	1.59	
1479.00	13.800	53.500	1461.71	193.85	118.18	153.68	40°00'30.753"N	104°54'34.839"W	2.32	
1567.00	16.900	53.500	1546.56	217.14	132.03	172.40	40°00'30.890"N	104°54'34.598"W	3.52	
1656.00	19.500	53.500	1631.10	244.93	148.56	194.74	40°00'31.053"N	104°54'34.311"W	2.92	
1746.00	21.400	53.500	1715.43	276.38	167.27	220.02	40°00'31.238"N	104°54'33.986"W	2.11	
1833.00	22.200	52.800	1796.21	308.69	186.65	245.87	40°00'31.429"N	104°54'33.654"W	0.97	
1922.00	22.800	51.400	1878.43	342.74	207.57	272.74	40°00'31.636"N	104°54'33.309"W	0.90	
2012.00	23.700	53.100	1961.12	378.26	229.31	300.83	40°00'31.851"N	104°54'32.947"W	1.25	
2101.00	23.300	52.400	2042.74	413.74	250.79	329.08	40°00'32.063"N	104°54'32.584"W	0.55	
2192.00	22.500	50.300	2126.57	449.13	272.89	356.74	40°00'32.282"N	104°54'32.229"W	1.26	
2282.00	23.600	51.400	2209.38	484.34	295.14	384.07	40°00'32.501"N	104°54'31.878"W	1.31	
2372.00	24.000	52.800	2291.73	520.65	317.44	412.73	40°00'32.722"N	104°54'31.509"W	0.77	
2461.00	24.000	54.900	2373.04	556.84	338.79	441.96	40°00'32.933"N	104°54'31.134"W	0.96	
2550.00	23.400	54.900	2454.53	592.60	359.36	471.22	40°00'33.136"N	104°54'30.758"W	0.67	
2641.00	22.200	53.800	2538.42	627.85	379.91	499.88	40°00'33.339"N	104°54'30.389"W	1.40	
2731.00	23.600	53.100	2621.32	662.87	400.77	528.01	40°00'33.545"N	104°54'30.028"W	1.58	
2821.00	22.900	54.200	2704.02	698.39	421.83	556.62	40°00'33.753"N	104°54'29.660"W	0.92	
2909.00	22.200	48.600	2785.30	732.09	442.84	582.98	40°00'33.961"N	104°54'29.321"W	2.57	
2999.00	21.800	49.600	2868.74	765.72	464.91	608.46	40°00'34.179"N	104°54'28.994"W	0.61	
3089.00	21.800	52.100	2952.31	799.11	486.01	634.38	40°00'34.388"N	104°54'28.661"W	1.03	
3176.00	22.100	54.200	3033.00	831.63	505.51	660.40	40°00'34.580"N	104°54'28.327"W	0.97	
3266.00	22.700	55.600	3116.21	865.90	525.22	688.46	40°00'34.775"N	104°54'27.966"W	0.89	
3355.00	23.000	54.500	3198.23	900.44	545.02	716.78	40°00'34.971"N	104°54'27.602"W	0.59	
3444.00	23.500	55.200	3280.00	935.56	565.25	745.51	40°00'35.171"N	104°54'27.233"W	0.64	
3534.00	23.100	57.400	3362.66	971.10	585.00	775.12	40°00'35.366"N	104°54'26.852"W	1.06	
3624.00	21.000	58.100	3446.08	1004.77	603.04	803.69	40°00'35.544"N	104°54'26.485"W	2.35	
3714.00	20.700	61.200	3530.18	1036.58	619.22	831.32	40°00'35.704"N	104°54'26.130"W	1.27	
3805.00	20.200	63.000	3615.45	1067.98	634.10	859.41	40°00'35.851"N	104°54'25.769"W	0.88	
3893.00	21.900	60.200	3697.58	1099.24	649.16	887.19	40°00'36.000"N	104°54'25.412"W	2.24	
3984.00	21.100	60.900	3782.24	1132.31	665.56	916.23	40°00'36.162"N	104°54'25.039"W	0.92	
4073.00	23.500	60.200	3864.58	1165.79	682.17	945.63	40°00'36.326"N	104°54'24.661"W	2.71	
4162.00	25.900	55.900	3945.44	1202.82	701.89	977.13	40°00'36.521"N	104°54'24.256"W	3.37	
4251.00	25.300	57.000	4025.70	1241.21	723.15	1009.18	40°00'36.731"N	104°54'23.844"W	0.86	
4339.00	24.000	54.200	4105.68	1277.87	743.86	1039.46	40°00'36.936"N	104°54'23.455"W	1.99	
4429.00	22.000	51.400	4188.53	1313.02	765.08	1067.49	40°00'37.145"N	104°54'23.095"W	2.53	
4519.00	23.000	52.100	4271.68	1347.45	786.40	1094.54	40°00'37.356"N	104°54'22.747"W	1.15	
4609.00	22.300	56.300	4354.74	1382.08	806.68	1122.62	40°00'37.556"N	104°54'22.386"W	1.96	
4697.00	21.800	54.900	4436.30	1415.09	825.34	1149.88	40°00'37.741"N	104°54'22.036"W	0.82	
4788.00	21.200	53.500	4520.97	1448.43	844.84	1176.93	40°00'37.934"N	104°54'21.688"W	0.87	
4877.00	23.000	53.100	4603.43	1481.91	864.86	1203.77	40°00'38.131"N	104°54'21.343"W	2.03	
4966.00	21.700	48.200	4685.75	1515.70	886.27	1229.95	40°00'38.343"N	104°54'21.007"W	2.55	

5056.00	19.800	47.900	4769.91	1547.46	907.58	1253.66	40°00'38.553"N	104°54'20.702"W	2.11	
5143.00	19.200	50.700	4851.92	1576.43	926.52	1275.67	40°00'38.741"N	104°54'20.419"W	1.28	
5232.00	18.300	47.500	4936.20	1604.96	945.23	1297.29	40°00'38.925"N	104°54'20.141"W	1.54	



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Area	COLORADO	Well	HOWARD 41-32
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 41-32 AWB
Facility	SEC.32-T1N-R67W		

## WELLPATH DATA (91 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5320.00	20.000	48.600	5019.32	1633.71	964.51	1318.77	40°00'39.116"N	104°54'19.865"W	1.97	
5411.00	18.300	48.900	5105.29	1663.48	984.20	1341.21	40°00'39.311"N	104°54'19.577"W	1.87	
5501.00	15.600	47.500	5191.37	1689.62	1001.67	1360.78	40°00'39.483"N	104°54'19.325"W	3.03	
5589.00	12.700	43.600	5276.69	1710.94	1016.67	1376.18	40°00'39.631"N	104°54'19.127"W	3.47	
5678.00	12.200	42.200	5363.60	1729.82	1030.72	1389.25	40°00'39.770"N	104°54'18.959"W	0.66	
5767.00	10.000	41.200	5450.93	1746.62	1043.50	1400.65	40°00'39.897"N	104°54'18.813"W	2.48	
5857.00	8.300	41.200	5539.78	1760.62	1054.27	1410.08	40°00'40.003"N	104°54'18.692"W	1.89	
5944.00	7.000	45.400	5626.00	1772.02	1062.72	1417.99	40°00'40.087"N	104°54'18.590"W	1.63	
6032.00	5.100	43.600	5713.51	1781.20	1069.32	1424.51	40°00'40.152"N	104°54'18.506"W	2.17	
6122.00	4.800	40.800	5803.17	1788.82	1075.06	1429.73	40°00'40.209"N	104°54'18.439"W	0.43	
6211.00	3.800	37.700	5891.92	1795.30	1080.22	1433.96	40°00'40.259"N	104°54'18.385"W	1.15	
6300.00	3.100	35.900	5980.76	1800.45	1084.50	1437.18	40°00'40.302"N	104°54'18.343"W	0.80	
6390.00	1.800	24.700	6070.68	1804.01	1087.75	1439.20	40°00'40.334"N	104°54'18.317"W	1.53	
6479.00	1.800	19.400	6159.63	1806.41	1090.34	1440.24	40°00'40.359"N	104°54'18.304"W	0.19	
6566.00	0.700	36.600	6246.61	1808.05	1092.06	1441.02	40°00'40.376"N	104°54'18.294"W	1.32	
6699.00	0.700	21.800	6379.60	1809.53	1093.47	1441.80	40°00'40.390"N	104°54'18.284"W	0.14	
6878.00	1.300	3.900	6558.57	1811.79	1096.51	1442.35	40°00'40.420"N	104°54'18.277"W	0.37	
7011.00	1.600	355.600	6691.53	1813.77	1099.86	1442.31	40°00'40.454"N	104°54'18.277"W	0.27	
7145.00	0.800	6.400	6825.50	1815.42	1102.66	1442.27	40°00'40.481"N	104°54'18.278"W	0.62	
7279.00	1.400	0.400	6959.48	1817.05	1105.22	1442.38	40°00'40.507"N	104°54'18.276"W	0.46	
7413.00	0.900	353.700	7093.45	1818.58	1107.91	1442.28	40°00'40.533"N	104°54'18.278"W	0.39	
7546.00	1.000	297.100	7226.43	1818.60	1109.47	1441.13	40°00'40.549"N	104°54'18.293"W	0.68	
7728.00	0.400	50.700	7408.42	1818.54	1110.60	1440.21	40°00'40.560"N	104°54'18.304"W	0.67	
7856.00	1.600	344.200	7536.40	1819.63	1112.60	1440.07	40°00'40.579"N	104°54'18.306"W	1.16	
8033.00	1.100	353.400	7713.36	1821.38	1116.67	1439.20	40°00'40.620"N	104°54'18.317"W	0.31	
8166.00	0.400	36.600	7846.34	1822.47	1118.31	1439.33	40°00'40.636"N	104°54'18.316"W	0.64	
8301.00	0.300	75.300	7981.34	1823.25	1118.78	1439.95	40°00'40.640"N	104°54'18.308"W	0.19	
8437.00	0.100	89.000	8117.34	1823.67	1118.87	1440.42	40°00'40.641"N	104°54'18.302"W	0.15	
8569.00	0.300	41.200	8249.34	1824.11	1119.13	1440.76	40°00'40.644"N	104°54'18.297"W	0.19	
8671.00	0.400	86.500	8351.34	1824.66	1119.35	1441.29	40°00'40.646"N	104°54'18.291"W	0.28	Last BHI MWD Survey
8721.00	0.400	86.500	8401.34	1824.95	1119.38	1441.64	40°00'40.646"N	104°54'18.286"W	0.00	Projection to Bit

## HOLE & CASING SECTIONS - Ref Wellbore: HOWARD 41-32 AWB Ref Wellpath: HOWARD 41-32 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]
12.25in Open Hole	15.00	1270.00	1255.00	15.00	1257.16	0.00	0.00	91.04	120.74
9.625in Casing Surface	15.00	1270.00	1255.00	15.00	1257.16	0.00	0.00	91.04	120.74
7.875in Open Hole	1270.00	8721.00	7451.00	1257.16	8401.34	91.04	120.74	1119.38	1441.64



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Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 41-32 AWB
Facility	SEC.32-T1N-R67W		

## TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
HOWARD 41-32 GEO TARGET 50' RADIUS (1320'FNL & 50'FEL,REV- 1)		6000.00	1091.41	1453.23	3166652.07	1247490.83	40°00'40.370"N	104°54'18.137"W	circle
HOWARD 41-32 HARDLINE 50'E OF GEO TARGET		6000.00	1091.44	1503.25	3166702.08	1247491.20	40°00'40.370"N	104°54'17.494"W	point

## WELLPATH COMPOSITION - Ref Wellbore: HOWARD 41-32 AWB Ref Wellpath: HOWARD 41-32 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
15.00	1225.00	NaviTrak (Standard)	BHI MWD SURVEYS 12 1/4" HOLE <154-1225>	HOWARD 41-32 AWB
1225.00	8671.00	NaviTrak (Standard)	BHI MWD SURVEYS 7 7/8" HOLE <1301-8671>	HOWARD 41-32 AWB
8671.00	8721.00	Blind Drilling (std)	Projection to bit	HOWARD 41-32 AWB



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Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 41-32 AWB
Facility	SEC.32-T1N-R67W		

## WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
154.00	0.100	214.800	154.00	Begin BHI MWD Surveys
8671.00	0.400	86.500	8351.34	Last BHI MWD Survey
8721.00	0.400	86.500	8401.34	Projection to Bit