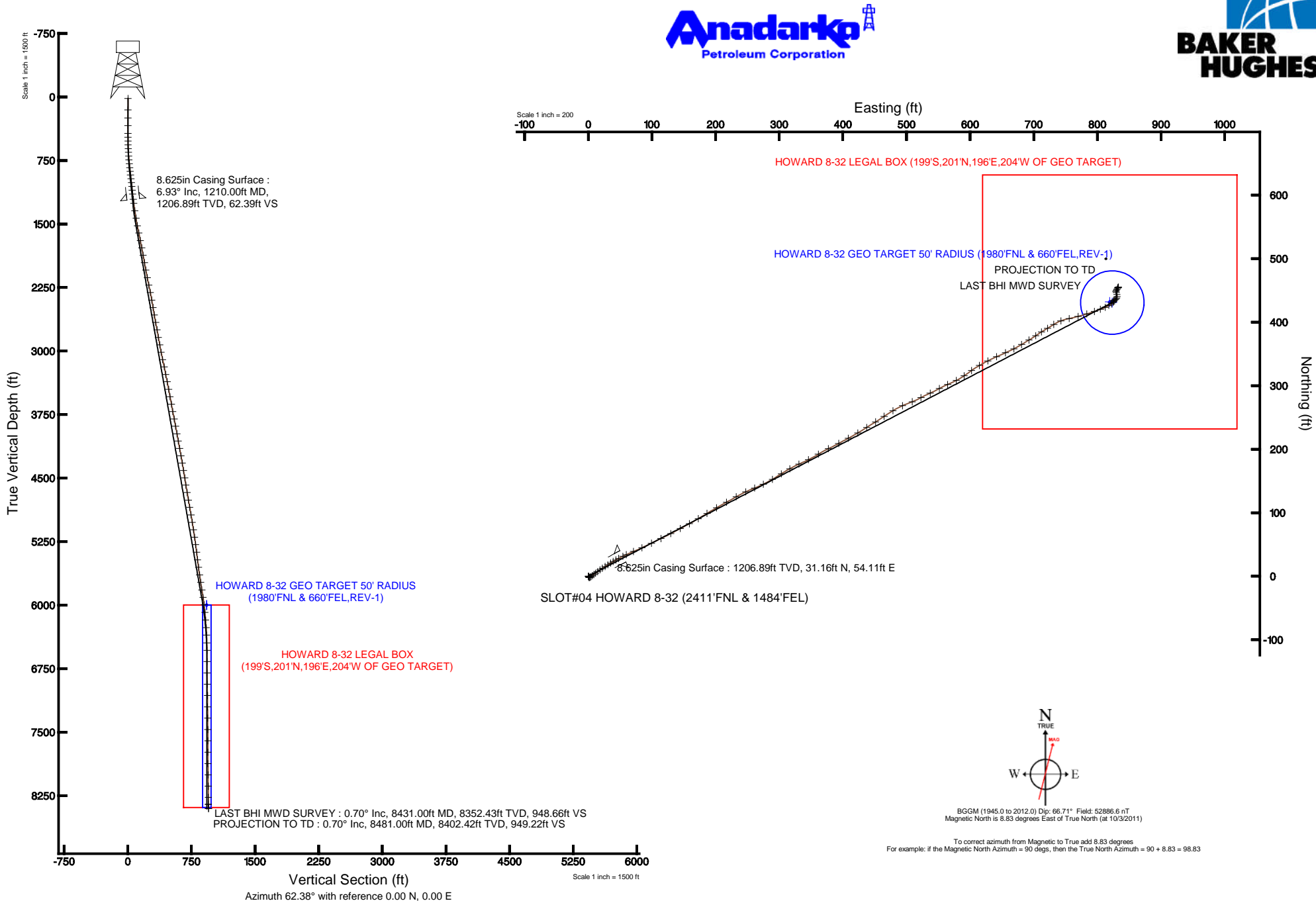


ANADARKO E&P COMPANY LP

Location: COLORADO Slot: SLOT#04 HOWARD 8-32 (2411'FNL & 1484'FEL)
Field: WELD COUNTY (KERR MCGEE) Well: HOWARD 8-32
Facility: SEC.32-T1N-R67W Wellbore: HOWARD 8-32 PWB

Plot reference wellpath is HOWARD 8-32 (REV-B.0) PWP

True vertical depths are referenced to XTREME 15 (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to XTREME 15 (RKB)	North Reference: True north
XTREME 15 (RKB) to Mean Sea Level: 5076 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#04 HOWARD 8-32 (2411'FNL & 1484'FEL)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: wilsje02 on 12/14/2011





Actual Wellpath Report

HOWARD 8-32 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANADARKO E&P COMPANY LP	Slot	SLOT#04 HOWARD 8-32 (2411'FNL & 1484'FEL)
Area	COLORADO	Well	HOWARD 8-32
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 8-32 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	12/14/2011 at 11:35:16 AM
Convergence at slot	0.38° East	Database/Source file	WA_DENVER/HOWARD_8-32_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	64.71	3165226.34	1246389.96	40°00'29.585"N	104°54'36.554"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#04 HOWARD 8-32 (2411'FNL & 1484'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	61.35°



Actual Wellpath Report

HOWARD 8-32 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANADARKO E&P COMPANY LP	Slot	SLOT#04 HOWARD 8-32 (2411'FNL & 1484'FEL)
Area	COLORADO	Well	HOWARD 8-32
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 8-32 AWB
Facility	SEC.32-T1N-R67W		

WELLPATH DATA (98 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	195.000	0.00	0.00	0.00	0.00	40°00'29.585"N	104°54'36.554"W	0.00	
15.00	0.000	195.000	15.00	0.00	0.00	0.00	40°00'29.585"N	104°54'36.554"W	0.00	
152.00	0.200	195.000	152.00	-0.17	-0.23	-0.06	40°00'29.583"N	104°54'36.555"W	0.15	
245.00	0.300	147.300	245.00	-0.26	-0.59	0.03	40°00'29.579"N	104°54'36.554"W	0.24	
337.00	0.500	151.600	337.00	-0.24	-1.15	0.35	40°00'29.573"N	104°54'36.550"W	0.22	
428.00	0.400	148.600	427.99	-0.23	-1.77	0.70	40°00'29.567"N	104°54'36.545"W	0.11	
473.00	0.600	127.700	472.99	-0.13	-2.05	0.97	40°00'29.565"N	104°54'36.542"W	0.59	
518.00	1.300	74.600	517.99	0.46	-2.06	1.65	40°00'29.564"N	104°54'36.553"W	2.34	
563.00	1.800	61.600	562.97	1.67	-1.58	2.76	40°00'29.569"N	104°54'36.519"W	1.35	
608.00	2.600	53.800	607.94	3.38	-0.64	4.21	40°00'29.578"N	104°54'36.500"W	1.89	
652.00	3.300	53.100	651.88	5.63	0.70	6.03	40°00'29.592"N	104°54'36.477"W	1.59	
697.00	4.100	53.800	696.78	8.50	2.43	8.36	40°00'29.609"N	104°54'36.447"W	1.78	
742.00	4.900	52.800	741.64	12.00	4.54	11.19	40°00'29.630"N	104°54'36.411"W	1.79	
788.00	5.500	52.100	787.46	16.12	7.09	14.49	40°00'29.655"N	104°54'36.368"W	1.31	
834.00	5.900	53.800	833.23	20.64	9.84	18.14	40°00'29.682"N	104°54'36.321"W	0.94	
877.00	6.300	58.000	875.98	25.18	12.39	21.93	40°00'29.707"N	104°54'36.273"W	1.39	
921.00	6.600	56.600	919.71	30.11	15.06	26.08	40°00'29.734"N	104°54'36.219"W	0.77	
967.00	6.400	58.000	965.41	35.31	17.88	30.47	40°00'29.761"N	104°54'36.163"W	0.55	
1012.00	6.300	57.700	1010.13	40.28	20.53	34.68	40°00'29.788"N	104°54'36.109"W	0.23	
1057.00	6.300	60.200	1054.86	45.21	23.07	38.91	40°00'29.813"N	104°54'36.054"W	0.61	
1101.00	6.400	62.300	1098.59	50.07	25.41	43.18	40°00'29.836"N	104°54'36.000"W	0.57	
1146.00	6.300	61.600	1143.32	55.05	27.75	47.57	40°00'29.859"N	104°54'35.943"W	0.28	
1257.00	7.400	64.400	1253.52	68.28	33.74	59.37	40°00'29.918"N	104°54'35.791"W	1.04	
1347.00	8.700	67.900	1342.63	80.83	38.80	70.91	40°00'29.968"N	104°54'35.643"W	1.54	
1435.00	10.100	64.400	1429.45	95.15	44.64	84.03	40°00'30.026"N	104°54'35.474"W	1.72	
1526.00	10.800	64.400	1518.94	111.63	51.77	98.92	40°00'30.096"N	104°54'35.283"W	0.77	
1614.00	11.100	63.300	1605.34	128.33	59.14	113.92	40°00'30.169"N	104°54'35.090"W	0.42	
1704.00	11.100	62.600	1693.66	145.65	67.02	129.35	40°00'30.247"N	104°54'34.892"W	0.15	
1793.00	10.900	62.300	1781.02	162.63	74.88	144.41	40°00'30.325"N	104°54'34.699"W	0.23	
1881.00	10.200	60.900	1867.53	178.74	82.53	158.58	40°00'30.400"N	104°54'34.516"W	0.85	
1971.00	10.400	59.800	1956.08	194.83	90.49	172.57	40°00'30.479"N	104°54'34.337"W	0.31	
2060.00	10.600	58.400	2043.59	211.03	98.82	186.48	40°00'30.561"N	104°54'34.158"W	0.36	
2150.00	11.400	60.500	2131.94	228.19	107.54	201.27	40°00'30.648"N	104°54'33.968"W	0.99	
2240.00	11.800	60.900	2220.10	246.29	116.40	217.06	40°00'30.735"N	104°54'33.765"W	0.45	
2330.00	10.800	60.500	2308.35	263.92	125.03	232.44	40°00'30.820"N	104°54'33.567"W	1.11	
2420.00	10.500	64.700	2396.80	280.54	132.68	247.19	40°00'30.896"N	104°54'33.378"W	0.92	
2509.00	9.300	68.900	2484.48	295.77	138.74	261.23	40°00'30.956"N	104°54'33.197"W	1.57	
2598.00	9.800	64.000	2572.25	310.46	144.65	274.75	40°00'31.014"N	104°54'33.024"W	1.07	
2688.00	11.200	58.800	2660.74	326.85	152.53	289.11	40°00'31.092"N	104°54'32.839"W	1.88	
2778.00	9.900	57.500	2749.22	343.30	161.22	303.11	40°00'31.178"N	104°54'32.659"W	1.47	
2868.00	10.100	60.900	2837.85	358.91	169.21	316.53	40°00'31.257"N	104°54'32.487"W	0.69	
2957.00	10.700	65.800	2925.39	374.95	176.40	330.89	40°00'31.328"N	104°54'32.302"W	1.20	
3046.00	10.900	63.700	3012.81	391.59	183.51	345.97	40°00'31.398"N	104°54'32.108"W	0.50	
3136.00	11.700	58.400	3101.07	409.21	192.06	361.37	40°00'31.483"N	104°54'31.910"W	1.46	
3224.00	12.100	64.000	3187.18	427.34	200.78	377.26	40°00'31.569"N	104°54'31.706"W	1.39	
3314.00	11.000	61.900	3275.36	445.35	208.96	393.31	40°00'31.650"N	104°54'31.500"W	1.31	
3403.00	11.400	61.600	3362.66	462.63	217.14	408.54	40°00'31.731"N	104°54'31.304"W	0.45	
3494.00	10.500	59.500	3452.01	479.91	225.63	423.60	40°00'31.815"N	104°54'31.111"W	1.08	
3583.00	10.700	57.300	3539.49	496.26	234.21	437.54	40°00'31.899"N	104°54'30.931"W	0.51	
3672.00	10.700	58.400	3626.94	512.75	243.00	451.53	40°00'31.986"N	104°54'30.752"W	0.23	
3760.00	10.200	55.600	3713.48	528.66	251.69	464.91	40°00'32.072"N	104°54'30.580"W	0.81	
3849.00	11.100	58.400	3800.95	545.06	260.63	478.71	40°00'32.160"N	104°54'30.402"W	1.17	
3937.00	11.100	66.800	3887.31	561.95	268.40	493.71	40°00'32.237"N	104°54'30.210"W	1.84	
4027.00	10.000	68.200	3975.78	578.34	274.72	508.93	40°00'32.300"N	104°54'30.014"W	1.25	
4115.00	10.100	61.900	4062.44	593.64	281.19	522.83	40°00'32.364"N	104°54'29.835"W	1.25	
4204.00	10.700	65.400	4149.97	609.68	288.31	537.23	40°00'32.434"N	104°54'29.650"W	0.98	
4293.00	10.100	61.200	4237.51	625.73	295.50	551.58	40°00'32.505"N	104°54'29.466"W	1.09	
4380.00	9.400	66.800	4323.26	640.43	301.98	564.80	40°00'32.569"N	104°54'29.296"W	1.35	
4469.00	9.800	64.000	4411.01	655.23	308.16	578.29	40°00'32.630"N	104°54'29.123"W	0.69	
4557.00	9.100	54.200	4497.82	669.62	315.52	590.66	40°00'32.703"N	104°54'28.964"W	1.99	



Actual Wellpath Report

HOWARD 8-32 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANADARKO E&P COMPANY LP	Slot	SLOT#04 HOWARD 8-32 (2411'FNL & 1484'FEL)
Area	COLORADO	Well	HOWARD 8-32
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 8-32 AWB
Facility	SEC.32-T1N-R67W		

WELLPATH DATA (98 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4644.00	9.800	54.500	4583.64	683.80	323.84	602.27	40°00'32.785"N	104°54'28.814"W	0.81	
4733.00	9.400	60.200	4671.40	698.59	331.85	614.74	40°00'32.864"N	104°54'28.654"W	1.16	
4822.00	9.900	62.300	4759.14	713.50	339.02	627.82	40°00'32.935"N	104°54'28.486"W	0.69	
4910.00	10.000	66.100	4845.82	728.68	345.63	641.51	40°00'33.000"N	104°54'28.310"W	0.75	
5000.00	9.800	66.500	4934.47	744.10	351.85	655.68	40°00'33.062"N	104°54'28.128"W	0.23	
5089.00	9.100	62.600	5022.27	758.68	358.11	668.87	40°00'33.124"N	104°54'27.958"W	1.07	
5179.00	8.700	59.100	5111.18	772.59	364.88	681.03	40°00'33.191"N	104°54'27.802"W	0.75	
5267.00	9.000	58.800	5198.14	786.12	371.87	692.63	40°00'33.260"N	104°54'27.653"W	0.34	
5356.00	7.200	54.500	5286.25	798.61	378.71	703.12	40°00'33.327"N	104°54'27.518"W	2.13	
5446.00	6.600	58.400	5375.59	809.38	384.70	712.12	40°00'33.386"N	104°54'27.403"W	0.85	
5536.00	7.600	60.500	5464.90	820.50	390.34	721.71	40°00'33.442"N	104°54'27.279"W	1.15	
5626.00	7.400	55.600	5554.13	832.21	396.54	731.67	40°00'33.503"N	104°54'27.151"W	0.74	
5716.00	8.500	69.700	5643.28	844.56	402.13	742.69	40°00'33.559"N	104°54'27.010"W	2.48	
5806.00	8.900	78.400	5732.24	857.80	405.83	755.75	40°00'33.595"N	104°54'26.842"W	1.53	
5895.00	9.600	75.300	5820.09	871.58	409.10	769.67	40°00'33.628"N	104°54'26.663"W	0.97	
5984.00	9.000	73.200	5907.92	885.60	413.00	783.52	40°00'33.666"N	104°54'26.485"W	0.77	
6073.00	7.200	70.000	5996.03	897.93	416.92	795.42	40°00'33.705"N	104°54'26.332"W	2.08	
6164.00	5.600	69.300	6086.46	907.96	420.44	804.93	40°00'33.740"N	104°54'26.210"W	1.76	
6254.00	4.600	65.000	6176.10	915.91	423.51	812.31	40°00'33.770"N	104°54'26.115"W	1.19	
6345.00	3.600	62.600	6266.86	922.41	426.37	818.16	40°00'33.798"N	104°54'26.040"W	1.11	
6433.00	2.900	55.200	6354.72	927.39	428.91	822.44	40°00'33.823"N	104°54'25.985"W	0.93	
6525.00	1.700	37.700	6446.65	930.95	431.32	825.18	40°00'33.847"N	104°54'25.950"W	1.50	
6614.00	0.700	347.400	6535.63	932.31	432.90	825.87	40°00'33.863"N	104°54'25.941"W	1.53	
6746.00	0.300	33.100	6667.62	932.84	433.97	825.89	40°00'33.873"N	104°54'25.941"W	0.41	
6880.00	0.500	64.000	6801.62	933.73	434.52	826.60	40°00'33.879"N	104°54'25.931"W	0.21	
7013.00	0.900	55.300	6934.61	935.35	435.37	827.98	40°00'33.887"N	104°54'25.914"W	0.31	
7147.00	0.700	43.300	7068.60	937.18	436.57	829.41	40°00'33.899"N	104°54'25.895"W	0.19	
7282.00	1.000	27.500	7203.58	938.94	438.21	830.52	40°00'33.915"N	104°54'25.881"W	0.28	
7414.00	1.200	5.700	7335.56	940.67	440.61	831.19	40°00'33.939"N	104°54'25.872"W	0.35	
7549.00	1.600	343.900	7470.52	941.88	443.83	830.81	40°00'33.971"N	104°54'25.877"W	0.49	
7682.00	1.000	334.000	7603.49	942.34	446.65	829.78	40°00'33.999"N	104°54'25.891"W	0.48	
7817.00	0.600	2.500	7738.47	942.76	448.42	829.30	40°00'34.016"N	104°54'25.897"W	0.41	
7952.00	0.800	25.000	7873.46	943.88	449.98	829.73	40°00'34.031"N	104°54'25.891"W	0.25	
8084.00	0.800	37.000	8005.45	945.47	451.55	830.67	40°00'34.047"N	104°54'25.879"W	0.13	
8218.00	0.700	31.000	8139.44	947.02	453.00	831.65	40°00'34.061"N	104°54'25.866"W	0.09	
8350.00	0.400	28.900	8271.43	948.11	454.09	832.29	40°00'34.072"N	104°54'25.858"W	0.23	
8431.00	0.700	39.100	8352.43	948.80	454.72	832.74	40°00'34.078"N	104°54'25.853"W	0.39	LAST BHI MWD SURVEY
8481.00	0.700	39.100	8402.42	949.37	455.20	833.13	40°00'34.083"N	104°54'25.848"W	0.00	PROJECTION TO TD

HOLE & CASING SECTIONS - Ref Wellbore: HOWARD 8-32 AWB Ref Wellpath: HOWARD 8-32 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	1210.00	1195.00	15.00	1206.89	0.00	0.00	31.16	54.11
8.625in Casing Surface	15.00	1210.00	1195.00	15.00	1206.89	0.00	0.00	31.16	54.11
7.875in Open Hole	1210.00	8481.00	7271.00	1206.89	8402.42	31.16	54.11	455.20	833.13

WELLPATH COMPOSITION - Ref Wellbore: HOWARD 8-32 AWB Ref Wellpath: HOWARD 8-32 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
15.00	1146.00	NaviTrak (Standard)	BHI MWD SURVEYS 12 1/4 HOLE <152-1146>	HOWARD 8-32 AWB
1146.00	8431.00	NaviTrak (Standard)	BHI MWD SURVEYS 7 7/8" HOLE <1257-8431>	HOWARD 8-32 AWB
8431.00	8481.00	Blind Drilling (std)	Projection to bit	HOWARD 8-32 AWB



Actual Wellpath Report

HOWARD 8-32 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANADARKO E&P COMPANY LP	Slot	SLOT#04 HOWARD 8-32 (2411'FNL & 1484'FEL)
Area	COLORADO	Well	HOWARD 8-32
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 8-32 AWB
Facility	SEC.32-T1N-R67W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
8431.00	0.700	39.100	8352.43	LAST BHI MWD SURVEY
8481.00	0.700	39.100	8402.42	PROJECTION TO TD