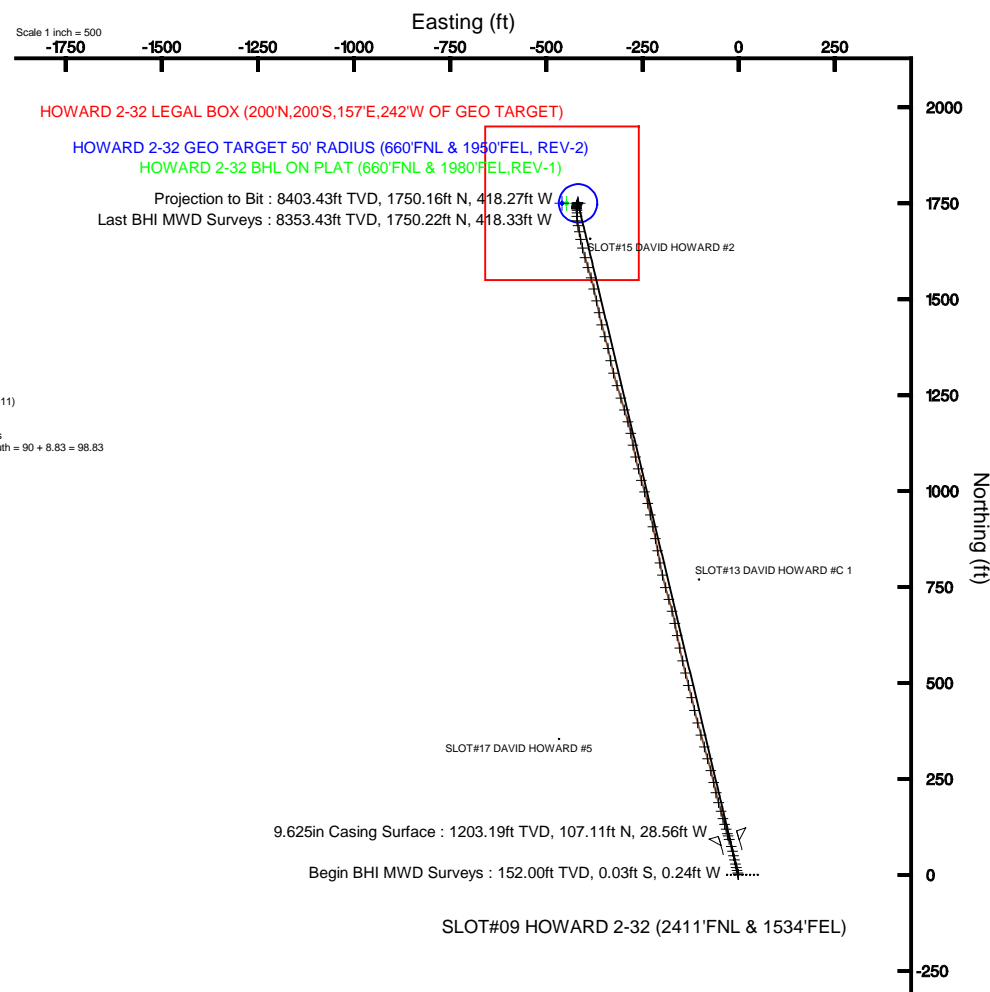
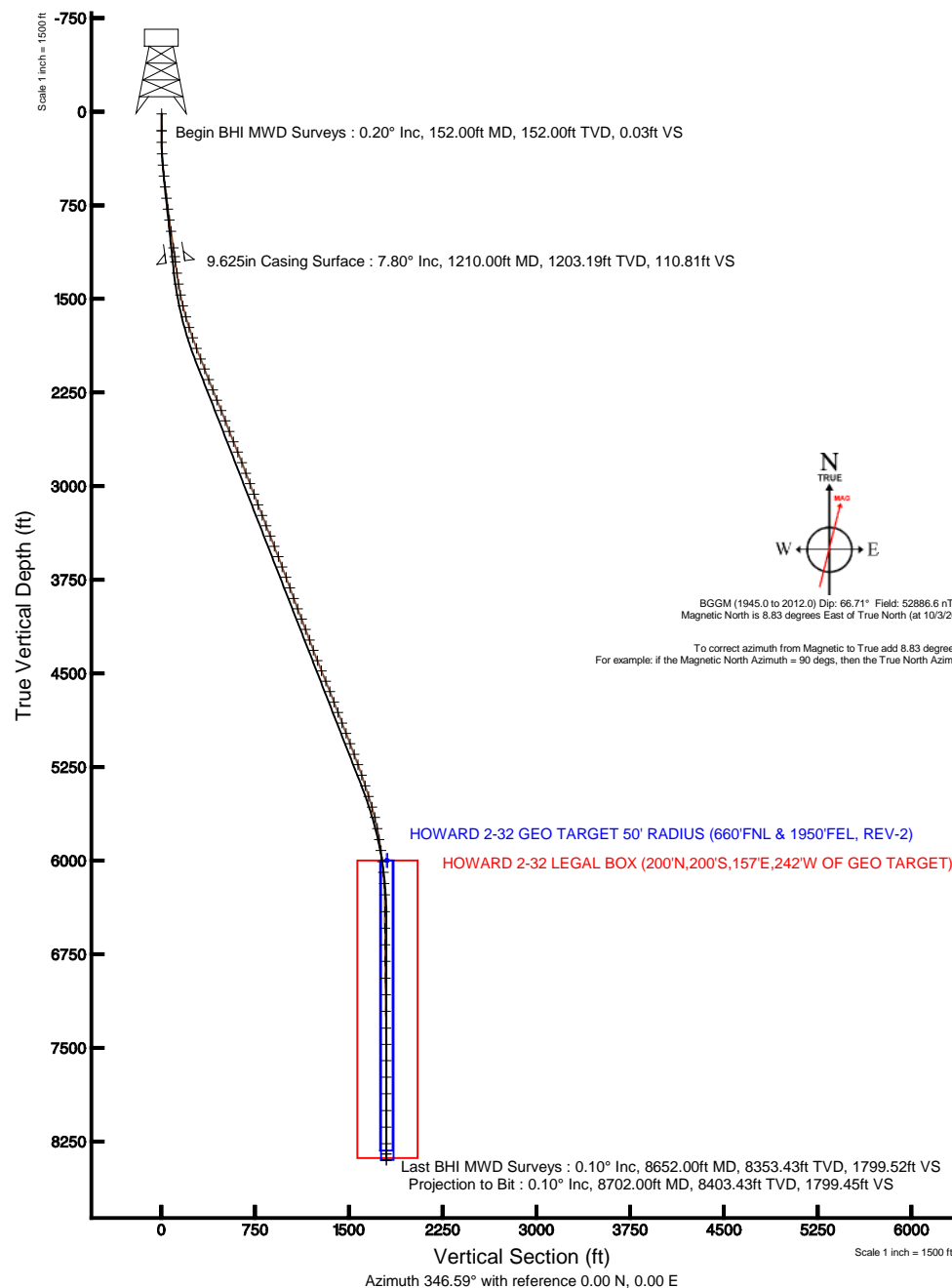


ANADARKO E&P COMPANY LP

Location: COLORADO Slot: SLOT#09 HOWARD 2-32 (2411'FNL & 1534'FEL)
Field: WELD COUNTY (KERR MCGEE) Well: HOWARD 2-32
Facility: SEC.32-T1N-R67W Wellbore: HOWARD 2-32 PWB

Plot reference wellpath is HOWARD 2-32 (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#09 HOWARD 2-32 (2411'FNL & 1534'FEL)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: wilsjef02 on 1/9/2012





Actual Wellpath Report

HOWARD 2-32 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANADARKO E&P COMPANY LP	Slot	SLOT#09 HOWARD 2-32 (2411'FNL & 1534'FEL)
Area	COLORADO	Well	HOWARD 2-32
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 2-32 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	1/9/2012 at 2:19:30 PM
Convergence at slot	0.38° East	Database/Source file	WA_ANADARKO/HOWARD_2-32_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	14.57	3165176.20	1246389.63	40°00'29.585"N	104°54'37.199"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#09 HOWARD 2-32 (2411'FNL & 1534'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	346.59°



Actual Wellpath Report

HOWARD 2-32 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANADARKO E&P COMPANY LP	Slot	SLOT#09 HOWARD 2-32 (2411'FNL & 1534'FEL)
Area	COLORADO	Well	HOWARD 2-32
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 2-32 AWB
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	263.400	0.00	0.00	0.00	0.00	40°00'29.585"N	104°54'37.199"W	0.00	
15.00	0.000	263.400	15.00	0.00	0.00	0.00	40°00'29.585"N	104°54'37.199"W	0.00	
152.00	0.200	263.400	152.00	0.03	-0.03	-0.24	40°00'29.585"N	104°54'37.202"W	0.15	Begin BHI MWD Surveys
244.00	1.300	351.300	243.99	1.09	0.99	-0.55	40°00'29.595"N	104°54'37.206"W	1.42	
337.00	3.300	341.400	336.91	4.81	4.57	-1.57	40°00'29.630"N	104°54'37.219"W	2.18	
427.00	4.800	342.500	426.68	11.14	10.61	-3.53	40°00'29.690"N	104°54'37.244"W	1.67	
516.00	5.700	346.700	515.31	19.28	18.47	-5.66	40°00'29.767"N	104°54'37.272"W	1.10	
604.00	6.800	348.100	602.79	28.85	27.82	-7.74	40°00'29.860"N	104°54'37.298"W	1.26	
693.00	7.000	347.000	691.14	39.54	38.26	-10.05	40°00'29.963"N	104°54'37.328"W	0.27	
783.00	7.600	346.700	780.41	50.98	49.39	-12.65	40°00'30.073"N	104°54'37.361"W	0.67	
871.00	8.200	345.600	867.58	63.07	61.13	-15.55	40°00'30.189"N	104°54'37.399"W	0.70	
961.00	8.100	344.600	956.67	75.83	73.46	-18.83	40°00'30.311"N	104°54'37.441"W	0.19	
1096.00	8.300	344.200	1090.29	95.07	92.01	-24.01	40°00'30.494"N	104°54'37.507"W	0.15	
1165.00	7.800	342.800	1158.61	104.72	101.27	-26.75	40°00'30.586"N	104°54'37.543"W	0.78	
1300.00	7.800	342.800	1292.36	123.00	118.78	-32.17	40°00'30.759"N	104°54'37.612"W	0.00	
1388.00	9.000	343.200	1379.41	135.83	131.07	-35.92	40°00'30.880"N	104°54'37.660"W	1.37	
1478.00	11.300	344.900	1468.00	151.67	146.32	-40.26	40°00'31.031"N	104°54'37.716"W	2.58	
1568.00	13.700	344.900	1555.86	171.14	165.13	-45.33	40°00'31.217"N	104°54'37.781"W	2.67	
1658.00	16.300	344.200	1642.78	194.42	187.58	-51.55	40°00'31.438"N	104°54'37.861"W	2.90	
1748.00	18.100	346.700	1728.76	221.02	213.34	-58.20	40°00'31.693"N	104°54'37.947"W	2.16	
1835.00	19.700	347.000	1811.06	249.20	240.78	-64.61	40°00'31.964"N	104°54'38.029"W	1.84	
1925.00	20.600	345.600	1895.56	280.20	270.90	-71.96	40°00'32.262"N	104°54'38.124"W	1.13	
2015.00	21.500	344.900	1979.55	312.52	302.15	-80.20	40°00'32.571"N	104°54'38.229"W	1.04	
2103.00	21.100	344.600	2061.54	344.46	332.99	-88.60	40°00'32.876"N	104°54'38.337"W	0.47	
2193.00	21.100	344.200	2145.50	376.84	364.20	-97.32	40°00'33.184"N	104°54'38.449"W	0.16	
2282.00	22.100	345.300	2228.25	409.58	395.81	-105.93	40°00'33.496"N	104°54'38.560"W	1.21	
2371.00	22.200	346.700	2310.68	443.14	428.37	-114.04	40°00'33.818"N	104°54'38.664"W	0.60	
2460.00	22.200	346.300	2393.09	476.76	461.07	-121.89	40°00'34.141"N	104°54'38.765"W	0.17	
2550.00	21.400	346.000	2476.65	510.19	493.52	-129.89	40°00'34.462"N	104°54'38.868"W	0.90	
2640.00	21.300	346.300	2560.47	542.95	525.33	-137.74	40°00'34.776"N	104°54'38.969"W	0.16	
2730.00	22.100	347.000	2644.10	576.23	557.71	-145.42	40°00'35.096"N	104°54'39.068"W	0.93	
2820.00	22.100	348.400	2727.48	610.08	590.79	-152.63	40°00'35.423"N	104°54'39.160"W	0.59	
2910.00	21.000	348.800	2811.19	643.12	623.19	-159.17	40°00'35.743"N	104°54'39.244"W	1.23	
3001.00	21.100	348.800	2896.12	675.78	655.26	-165.51	40°00'36.060"N	104°54'39.326"W	0.11	
3091.00	20.700	346.300	2980.20	707.87	686.60	-172.43	40°00'36.370"N	104°54'39.415"W	1.09	
3181.00	20.800	343.200	3064.36	739.73	717.36	-180.81	40°00'36.674"N	104°54'39.523"W	1.23	
3272.00	21.200	345.300	3149.32	772.31	748.74	-189.66	40°00'36.984"N	104°54'39.636"W	0.94	
3363.00	21.200	347.000	3234.16	805.21	780.69	-197.54	40°00'37.300"N	104°54'39.737"W	0.68	
3452.00	21.400	349.500	3317.08	837.52	812.33	-204.12	40°00'37.613"N	104°54'39.822"W	1.04	
3541.00	21.500	349.800	3399.92	870.02	844.35	-209.96	40°00'37.929"N	104°54'39.897"W	0.17	
3630.00	21.100	348.800	3482.84	902.31	876.12	-215.96	40°00'38.243"N	104°54'39.974"W	0.61	
3718.00	21.200	347.400	3564.91	934.05	907.18	-222.51	40°00'38.550"N	104°54'40.058"W	0.59	
3807.00	20.600	349.100	3648.06	965.79	938.26	-228.98	40°00'38.857"N	104°54'40.142"W	0.96	
3895.00	20.300	345.600	3730.52	996.52	968.25	-235.70	40°00'39.153"N	104°54'40.228"W	1.43	
3985.00	20.000	343.500	3815.01	1027.49	998.13	-243.96	40°00'39.449"N	104°54'40.334"W	0.87	
4075.00	19.900	344.900	3899.61	1058.17	1027.68	-252.32	40°00'39.741"N	104°54'40.442"W	0.54	
4165.00	21.000	345.300	3983.93	1089.61	1058.06	-260.40	40°00'40.041"N	104°54'40.545"W	1.23	
4253.00	21.000	348.100	4066.09	1121.14	1088.75	-267.66	40°00'40.344"N	104°54'40.639"W	1.14	
4342.00	20.800	349.100	4149.24	1152.86	1119.87	-273.93	40°00'40.652"N	104°54'40.719"W	0.46	
4431.00	20.500	348.100	4232.52	1184.23	1150.63	-280.13	40°00'40.956"N	104°54'40.799"W	0.52	
4520.00	20.600	343.500	4315.86	1215.45	1180.90	-287.80	40°00'41.255"N	104°54'40.897"W	1.82	
4608.00	21.700	344.600	4397.93	1247.16	1211.43	-296.51	40°00'41.556"N	104°54'41.010"W	1.33	
4696.00	21.900	342.100	4479.64	1279.79	1242.73	-305.88	40°00'41.866"N	104°54'41.130"W	1.08	
4787.00	22.200	343.500	4563.98	1313.87	1275.36	-315.98	40°00'42.188"N	104°54'41.260"W	0.67	
4876.00	21.800	345.600	4646.50	1347.18	1307.49	-324.86	40°00'42.506"N	104°54'41.374"W	0.99	
4966.00	21.300	348.400	4730.22	1380.23	1339.69	-332.30	40°00'42.824"N	104°54'41.470"W	1.27	

5056.00	21.200	346.300	4814.10	1412.84	1371.52	-339.45	40°00'43.139"N	104°54'41.561"W	0.85	
5146.00	20.900	344.900	4898.09	1445.16	1402.82	-347.48	40°00'43.448"N	104°54'41.665"W	0.65	
5235.00	21.100	346.000	4981.18	1477.05	1433.70	-355.49	40°00'43.753"N	104°54'41.768"W	0.50	
5325.00	20.900	348.100	5065.20	1509.30	1465.12	-362.72	40°00'44.064"N	104°54'41.860"W	0.87	



Actual Wellpath Report

HOWARD 2-32 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANADARKO E&P COMPANY LP	Slot	SLOT#09 HOWARD 2-32 (2411'FNL & 1534'FEL)
Area	COLORADO	Well	HOWARD 2-32
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 2-32 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
5415.00	20.500	347.400	5149.39	1541.10	1496.21	-369.47	40°00'44.371"N	104°54'41.947"W	0.52	
5504.00	20.400	347.700	5232.79	1572.20	1526.58	-376.17	40°00'44.671"N	104°54'42.033"W	0.16	
5594.00	19.100	343.900	5317.49	1602.59	1556.05	-383.60	40°00'44.962"N	104°54'42.129"W	2.03	
5682.00	17.900	342.800	5400.94	1630.47	1582.80	-391.59	40°00'45.227"N	104°54'42.232"W	1.42	
5772.00	17.500	344.900	5486.68	1657.79	1609.08	-399.21	40°00'45.486"N	104°54'42.329"W	0.84	
5861.00	16.300	346.000	5571.84	1683.66	1634.12	-405.71	40°00'45.734"N	104°54'42.413"W	1.40	
5948.00	14.300	348.800	5655.75	1706.61	1656.51	-410.76	40°00'45.955"N	104°54'42.478"W	2.45	
6038.00	11.300	350.500	5743.51	1726.51	1676.11	-414.37	40°00'46.149"N	104°54'42.524"W	3.36	
6128.00	9.300	347.700	5832.05	1742.58	1691.92	-417.38	40°00'46.305"N	104°54'42.563"W	2.29	
6217.00	7.800	353.000	5920.06	1755.78	1704.94	-419.64	40°00'46.433"N	104°54'42.592"W	1.90	
6307.00	6.500	1.100	6009.36	1766.78	1716.09	-420.29	40°00'46.544"N	104°54'42.600"W	1.82	
6394.00	5.500	0.400	6095.88	1775.59	1725.19	-420.17	40°00'46.634"N	104°54'42.599"W	1.15	
6484.00	3.500	358.000	6185.60	1782.48	1732.25	-420.23	40°00'46.703"N	104°54'42.600"W	2.23	
6574.00	0.800	332.600	6275.53	1785.78	1735.55	-420.62	40°00'46.736"N	104°54'42.605"W	3.11	
6708.00	0.400	346.300	6409.52	1787.16	1736.83	-421.16	40°00'46.749"N	104°54'42.612"W	0.32	
6841.00	0.500	331.900	6542.52	1788.18	1737.80	-421.54	40°00'46.758"N	104°54'42.616"W	0.11	
6973.00	0.500	353.000	6674.52	1789.31	1738.88	-421.88	40°00'46.769"N	104°54'42.621"W	0.14	
7106.00	0.700	10.200	6807.51	1790.63	1740.25	-421.81	40°00'46.782"N	104°54'42.620"W	0.20	
7241.00	0.800	18.000	6942.50	1792.19	1741.96	-421.37	40°00'46.799"N	104°54'42.614"W	0.11	
7374.00	0.700	13.000	7075.49	1793.71	1743.64	-420.90	40°00'46.816"N	104°54'42.608"W	0.09	
7507.00	0.800	14.800	7208.47	1795.26	1745.33	-420.48	40°00'46.833"N	104°54'42.603"W	0.08	
7642.00	0.800	20.100	7343.46	1796.87	1747.12	-419.92	40°00'46.850"N	104°54'42.596"W	0.05	
7773.00	0.900	26.800	7474.45	1798.42	1748.90	-419.14	40°00'46.868"N	104°54'42.586"W	0.11	
7903.00	0.400	24.700	7604.44	1799.56	1750.22	-418.49	40°00'46.881"N	104°54'42.577"W	0.38	
8035.00	0.100	44.000	7736.44	1799.98	1750.72	-418.22	40°00'46.886"N	104°54'42.574"W	0.23	
8167.00	0.200	44.700	7868.44	1800.17	1750.97	-417.98	40°00'46.888"N	104°54'42.571"W	0.08	
8303.00	0.200	100.900	8004.44	1800.19	1751.09	-417.58	40°00'46.890"N	104°54'42.566"W	0.14	
8437.00	0.400	230.300	8138.43	1799.89	1750.75	-417.71	40°00'46.886"N	104°54'42.567"W	0.41	
8568.00	0.200	240.200	8269.43	1799.62	1750.35	-418.26	40°00'46.882"N	104°54'42.574"W	0.16	
8652.00	0.100	135.400	8353.43	1799.52	1750.22	-418.33	40°00'46.881"N	104°54'42.575"W	0.29	Last BHI MWD Surveys
8702.00	0.100	135.400	8403.43	1799.45	1750.16	-418.27	40°00'46.880"N	104°54'42.574"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: HOWARD 2-32 AWB Ref Wellpath: HOWARD 2-32 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	1203.19	0.00	0.00	107.11	-28.56
9.625in Casing Surface	15.00	1210.00	1195.00	15.00	1203.19	0.00	0.00	107.11	-28.56
7.875in Open Hole	1210.00	8702.00	7492.00	1203.19	8403.43	107.11	-28.56	1750.16	-418.27



Actual Wellpath Report

HOWARD 2-32 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANADARKO E&P COMPANY LP	Slot	SLOT#09 HOWARD 2-32 (2411'FNL & 1534'FEL)
Area	COLORADO	Well	HOWARD 2-32
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 2-32 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 2-32 BHL ON PLAT (660'FNL & 1980'FEL,REV-1)		6000.00	1750.43	-447.34	3164717.25	1248136.98	40°00'46.883"N	104°54'42.948"W	circle
HOWARD 2-32 GEO TARGET 50' RADIUS (660'FNL & 1950'FEL, REV-2)		6000.00	1750.43	-417.34	3164747.25	1248137.18	40°00'46.883"N	104°54'42.562"W	circle
HOWARD 2-32 LEGAL BOX (200'N,200'S,157'E,242'W OF GEO TARGET)		6000.00	1750.43	-459.34	3164705.25	1248136.90	40°00'46.883"N	104°54'43.102"W	square

WELLPATH COMPOSITION - Ref Wellbore: HOWARD 2-32 AWB Ref Wellpath: HOWARD 2-32 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
15.00	1165.00	NaviTrak (Standard)	BHI MWD SURVEYS 12 1/4" HOLE <152-1165>	HOWARD 2-32 AWB
1165.00	8652.00	NaviTrak (Standard)	BHI MWD SURVEYS 7 7/8" HOLE <1300-8652>	HOWARD 2-32 AWB
8652.00	8702.00	Blind Drilling (std)	Projection to bit	HOWARD 2-32 AWB



Actual Wellpath Report

HOWARD 2-32 AWP

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**REFERENCE WELLPATH IDENTIFICATION**

Operator	ANADARKO E&P COMPANY LP	Slot	SLOT#09 HOWARD 2-32 (2411'FNL & 1534'FEL)
Area	COLORADO	Well	HOWARD 2-32
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 2-32 AWB
Facility	SEC.32-T1N-R67W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
152.00	0.200	263.400	152.00	Begin BHI MWD Surveys
8652.00	0.100	135.400	8353.43	Last BHI MWD Surveys
8702.00	0.100	135.400	8403.43	Projection to Bit