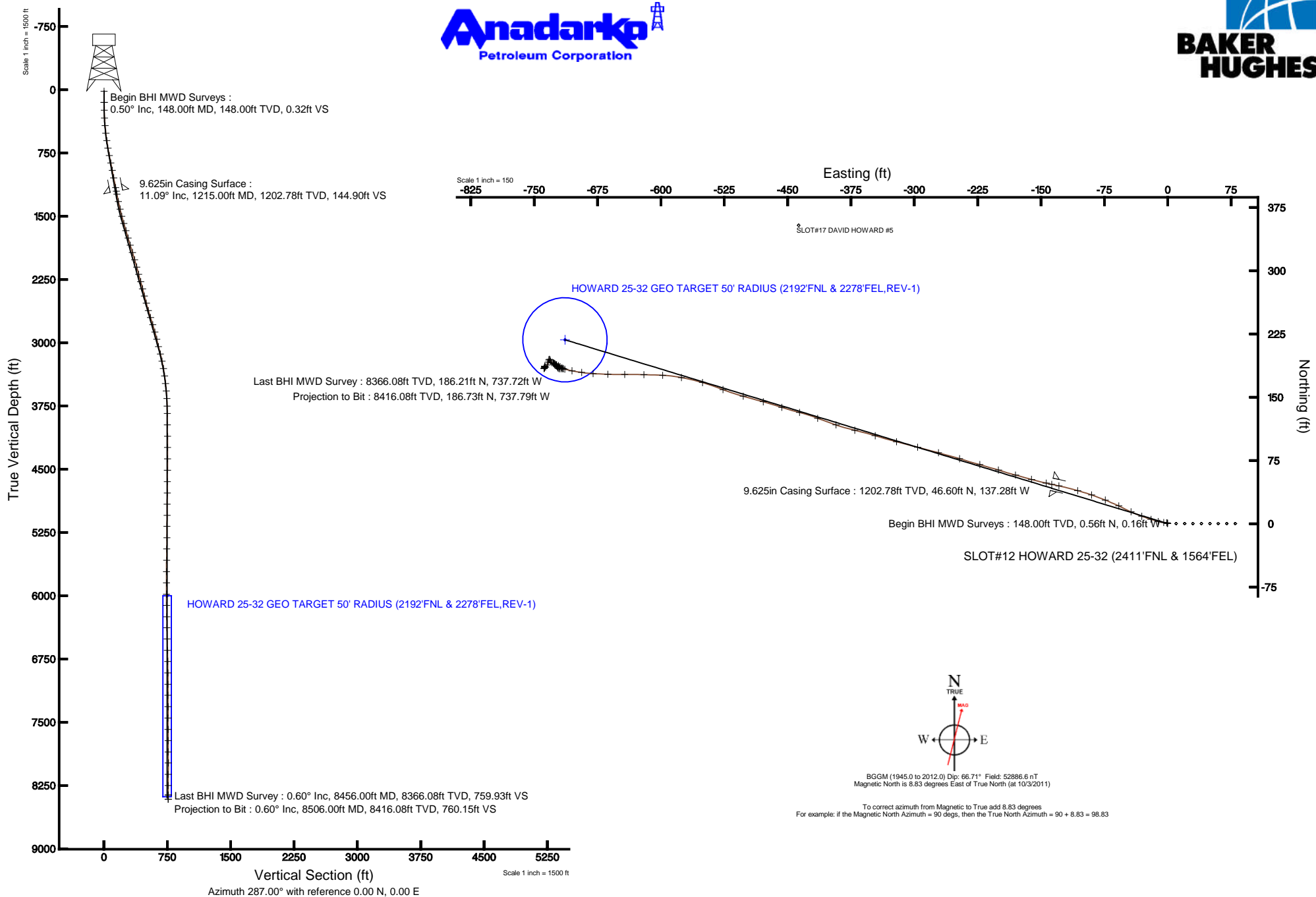


Location:	COLORADO	Slot:	SLOT#12 HOWARD 25-32 (2411'FNL & 1564'FEL)
Field:	WELD COUNTY (KERR MCGEE)	Well:	HOWARD 25-32
Facility:	SEC 32-T1N-R67W	Wellbore:	HOWARD 25-32 PWB

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#12 HOWARD 25-32 (2411'FNL & 1564'FEL)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: wilsief02 on 1/10/2012





# Actual Wellpath Report

HOWARD 25-32 AWP

Page 1 of 4



## REFERENCE WELLPATH IDENTIFICATION

Operator	ANADARKO E&P COMPANY LP	Slot	SLOT#12 HOWARD 25-32 (2411'FNL & 1564'FEL)
Area	COLORADO	Well	HOWARD 25-32
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 25-32 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 12:46:18 PM
Convergence at slot	0.38° East	Database/Source file	WA_ANADARKO/HOWARD_25-32_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	-15.41	3165146.23	1246389.43	40°00'29.585"N	104°54'37.584"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#12 HOWARD 25-32 (2411'FNL & 1564'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	287.00°



# Actual Wellpath Report

HOWARD 25-32 AWP

Page 2 of 4



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANADARKO E&P COMPANY LP	Slot	SLOT#12 HOWARD 25-32 (2411'FNL & 1564'FEL)
Area	COLORADO	Well	HOWARD 25-32
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 25-32 AWB
Facility	SEC.32-T1N-R67W		

## WELLPATH DATA (80 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	343.900	0.00	0.00	0.00	0.00	40°00'29.585"N	104°54'37.584"W	0.00	
15.00	0.000	343.900	15.00	0.00	0.00	0.00	40°00'29.585"N	104°54'37.584"W	0.00	
148.00	0.500	343.900	148.00	0.32	0.56	-0.16	40°00'29.590"N	104°54'37.586"W	0.38	Begin BHI MWD Surveys
240.00	1.100	276.400	239.99	1.40	1.04	-1.15	40°00'29.595"N	104°54'37.599"W	1.11	
333.00	3.100	273.600	332.92	4.73	1.30	-4.55	40°00'29.598"N	104°54'37.642"W	2.15	
424.00	5.200	285.200	423.68	11.24	2.53	-10.98	40°00'29.610"N	104°54'37.725"W	2.47	
513.00	6.500	287.300	512.22	20.31	5.09	-19.69	40°00'29.635"N	104°54'37.837"W	1.48	
603.00	8.100	289.000	601.48	31.74	8.67	-30.54	40°00'29.670"N	104°54'37.977"W	1.79	
693.00	9.700	295.400	690.40	45.58	13.99	-43.39	40°00'29.723"N	104°54'38.142"W	2.09	
782.00	11.100	295.700	777.93	61.47	20.92	-57.88	40°00'29.792"N	104°54'38.328"W	1.57	
872.00	11.200	291.800	866.24	78.74	27.92	-73.81	40°00'29.861"N	104°54'38.532"W	0.85	
962.00	11.000	289.000	954.55	96.04	33.96	-90.04	40°00'29.920"N	104°54'38.741"W	0.64	
1052.00	11.200	285.900	1042.87	113.36	39.15	-106.56	40°00'29.972"N	104°54'38.953"W	0.70	
1170.00	11.200	282.300	1158.63	136.23	44.73	-128.78	40°00'30.027"N	104°54'39.239"W	0.59	
1250.00	11.000	282.700	1237.13	151.59	48.07	-143.82	40°00'30.060"N	104°54'39.432"W	0.27	
1339.00	12.100	285.500	1324.33	169.38	52.43	-161.09	40°00'30.103"N	104°54'39.654"W	1.39	
1430.00	12.900	285.200	1413.17	189.07	57.64	-180.09	40°00'30.154"N	104°54'39.898"W	0.88	
1518.00	14.800	286.900	1498.61	210.13	63.48	-200.32	40°00'30.212"N	104°54'40.158"W	2.21	
1606.00	15.600	285.900	1583.53	233.20	69.99	-222.46	40°00'30.276"N	104°54'40.443"W	0.96	
1696.00	16.700	286.600	1669.97	258.23	77.00	-246.49	40°00'30.346"N	104°54'40.752"W	1.24	
1786.00	16.700	285.200	1756.18	284.09	84.09	-271.36	40°00'30.416"N	104°54'41.071"W	0.45	
1876.00	16.300	284.500	1842.47	309.63	90.64	-296.07	40°00'30.481"N	104°54'41.389"W	0.50	
1966.00	17.100	284.800	1928.68	335.47	97.18	-321.09	40°00'30.545"N	104°54'41.710"W	0.89	
2056.00	16.900	286.600	2014.74	361.77	104.30	-346.42	40°00'30.615"N	104°54'42.036"W	0.63	
2146.00	15.300	283.400	2101.21	386.71	110.79	-370.51	40°00'30.680"N	104°54'42.345"W	2.03	
2236.00	14.400	288.700	2188.21	409.75	117.13	-392.66	40°00'30.742"N	104°54'42.630"W	1.81	
2326.00	15.500	290.800	2275.16	432.93	124.99	-414.50	40°00'30.820"N	104°54'42.911"W	1.36	
2414.00	14.200	284.500	2360.23	455.45	131.87	-435.95	40°00'30.888"N	104°54'43.186"W	2.35	
2502.00	14.600	288.000	2445.46	477.32	138.00	-456.94	40°00'30.948"N	104°54'43.456"W	1.09	
2591.00	15.300	285.500	2531.45	500.28	144.60	-478.93	40°00'31.014"N	104°54'43.739"W	1.07	
2680.00	16.700	285.500	2617.00	524.80	151.16	-502.57	40°00'31.079"N	104°54'44.043"W	1.57	
2768.00	16.700	291.100	2701.30	550.05	159.09	-526.55	40°00'31.157"N	104°54'44.351"W	1.83	
2857.00	16.900	286.600	2786.50	575.75	167.39	-550.88	40°00'31.239"N	104°54'44.663"W	1.48	
2948.00	15.800	280.300	2873.83	601.28	173.38	-575.74	40°00'31.298"N	104°54'44.983"W	2.29	
3036.00	13.900	272.900	2958.89	623.43	176.06	-598.09	40°00'31.325"N	104°54'45.270"W	3.05	
3126.00	14.700	271.100	3046.10	644.90	176.82	-620.31	40°00'31.332"N	104°54'45.556"W	1.02	
3217.00	14.200	269.700	3134.22	666.66	176.99	-643.01	40°00'31.334"N	104°54'45.848"W	0.67	
3304.00	12.500	272.200	3218.87	685.95	177.29	-663.09	40°00'31.337"N	104°54'46.106"W	2.06	
3394.00	9.700	272.900	3307.18	702.73	178.05	-680.40	40°00'31.344"N	104°54'46.328"W	3.11	
3482.00	8.300	278.800	3394.09	716.21	179.40	-694.08	40°00'31.358"N	104°54'46.504"W	1.90	
3573.00	6.200	281.300	3484.36	727.60	181.37	-705.39	40°00'31.377"N	104°54'46.649"W	2.33	
3661.00	5.400	283.400	3571.91	736.46	183.26	-714.08	40°00'31.396"N	104°54'46.761"W	0.94	
3750.00	4.000	304.500	3660.62	743.60	185.99	-720.71	40°00'31.423"N	104°54'46.846"W	2.47	
3840.00	0.700	302.000	3750.53	747.13	188.06	-723.77	40°00'31.443"N	104°54'46.885"W	3.67	
3929.00	0.800	323.800	3839.52	748.15	188.85	-724.60	40°00'31.451"N	104°54'46.896"W	0.34	
4063.00	0.400	292.200	3973.51	749.36	189.78	-725.58	40°00'31.460"N	104°54'46.909"W	0.38	
4199.00	0.600	293.600	4109.51	750.54	190.24	-726.67	40°00'31.465"N	104°54'46.923"W	0.15	
4332.00	0.400	291.500	4242.50	751.70	190.69	-727.74	40°00'31.469"N	104°54'46.936"W	0.15	
4466.00	0.700	119.200	4376.50	751.36	190.46	-727.46	40°00'31.467"N	104°54'46.933"W	0.82	
4601.00	0.500	153.000	4511.49	750.15	189.54	-726.48	40°00'31.458"N	104°54'46.920"W	0.29	
4736.00	0.400	129.400	4646.49	749.30	188.71	-725.85	40°00'31.450"N	104°54'46.912"W	0.15	
4871.00	0.500	132.600	4781.48	748.34	188.01	-725.05	40°00'31.443"N	104°54'46.902"W	0.08	
5004.00	0.700	135.700	4914.48	747.10	187.04	-724.05	40°00'31.433"N	104°54'46.889"W	0.15	
5136.00	0.600	132.200	5046.47	745.77	186.00	-722.98	40°00'31.423"N	104°54'46.875"W	0.08	
5268.00	0.600	157.900	5178.46	744.71	184.89	-722.21	40°00'31.412"N	104°54'46.865"W	0.20	
5403.00	0.600	111.800	5313.46	743.56	183.98	-721.28	40°00'31.403"N	104°54'46.853"W	0.35	
5536.00	0.500	76.300	5446.45	742.36	183.85	-720.07	40°00'31.402"N	104°54'46.838"W	0.26	

5671.00	1.100	93.200	5581.44	740.60	183.92	-718.21	40°00'31.402"N	104°54'46.814"W	0.47	
5805.00	0.500	102.700	5715.42	738.77	183.72	-716.35	40°00'31.400"N	104°54'46.790"W	0.46	
5939.00	0.200	359.200	5849.42	738.26	183.83	-715.79	40°00'31.401"N	104°54'46.783"W	0.43	



# Actual Wellpath Report

HOWARD 25-32 AWP

Page 3 of 4



## REFERENCE WELLPATH IDENTIFICATION

Operator	ANADARKO E&P COMPANY LP	Slot	SLOT#12 HOWARD 25-32 (2411'FNL & 1564'FEL)
Area	COLORADO	Well	HOWARD 25-32
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 25-32 AWB
Facility	SEC.32-T1N-R67W		

## WELLPATH DATA (80 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
6072.00	0.400	298.900	5982.42	738.78	184.28	-716.20	40°00'31.406"N	104°54'46.788"W	0.26	
6205.00	0.900	298.200	6115.41	740.26	185.00	-717.52	40°00'31.413"N	104°54'46.805"W	0.38	
6340.00	1.000	305.500	6250.39	742.42	186.19	-719.42	40°00'31.425"N	104°54'46.829"W	0.12	
6471.00	1.000	300.300	6381.37	744.61	187.43	-721.33	40°00'31.437"N	104°54'46.854"W	0.07	
6603.00	1.300	293.200	6513.34	747.22	188.60	-723.70	40°00'31.448"N	104°54'46.885"W	0.25	
6738.00	1.500	293.600	6648.30	750.50	189.91	-726.73	40°00'31.461"N	104°54'46.923"W	0.15	
6871.00	1.100	292.900	6781.27	753.50	191.10	-729.50	40°00'31.473"N	104°54'46.959"W	0.30	
7007.00	1.000	354.400	6917.25	755.25	192.79	-730.82	40°00'31.490"N	104°54'46.976"W	0.79	
7141.00	0.500	318.600	7051.24	756.20	194.39	-731.32	40°00'31.506"N	104°54'46.982"W	0.49	
7273.00	0.400	284.100	7183.24	757.15	194.94	-732.15	40°00'31.511"N	104°54'46.993"W	0.21	
7408.00	0.600	204.300	7318.23	757.71	194.41	-732.90	40°00'31.506"N	104°54'47.003"W	0.49	
7542.00	1.800	192.000	7452.20	757.62	191.71	-733.62	40°00'31.479"N	104°54'47.012"W	0.91	
7677.00	1.400	210.300	7587.15	757.81	188.21	-734.90	40°00'31.445"N	104°54'47.028"W	0.48	
7811.00	1.200	219.400	7721.11	758.73	185.72	-736.61	40°00'31.420"N	104°54'47.050"W	0.21	
7944.00	0.700	236.600	7854.10	759.77	184.19	-738.17	40°00'31.405"N	104°54'47.070"W	0.43	
8076.00	0.200	19.400	7986.09	760.28	183.97	-738.77	40°00'31.403"N	104°54'47.078"W	0.66	
8210.00	0.400	40.800	8120.09	760.08	184.54	-738.39	40°00'31.408"N	104°54'47.073"W	0.17	
8343.00	0.400	31.300	8253.09	759.78	185.29	-737.84	40°00'31.416"N	104°54'47.066"W	0.05	
8456.00	0.600	352.000	8366.08	759.93	186.21	-737.72	40°00'31.425"N	104°54'47.065"W	0.34	Last BHI MWD Survey
8506.00	0.600	352.000	8416.08	760.15	186.73	-737.79	40°00'31.430"N	104°54'47.066"W	0.00	Projection to Bit

## HOLE & CASING SECTIONS - Ref Wellbore: HOWARD 25-32 AWB Ref Wellpath: HOWARD 25-32 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	1215.00	1200.00	15.00	1202.78	0.00	0.00	46.60	-137.28
9.625in Casing Surface	15.00	1215.00	1200.00	15.00	1202.78	0.00	0.00	46.60	-137.28
7.875in Open Hole	1215.00	8506.00	7291.00	1202.78	8416.08	46.60	-137.28	186.73	-737.79

## TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
HOWARD 25-32 GEO TARGET 50' RADIUS (2192'FNL & 2278'FEL,REV-1)		6000.00	218.20	-713.78	3164431.04	1246602.87	40°00'31.741"N	104°54'46.757"W	circle
HOWARD 25-32 HARDLINE 378'W OF GEO TARGET		6000.00	218.22	-1091.76	3164053.08	1246600.38	40°00'31.741"N	104°54'51.615"W	point

## WELLPATH COMPOSITION - Ref Wellbore: HOWARD 25-32 AWB Ref Wellpath: HOWARD 25-32 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
15.00	1170.00	NaviTrak (Standard)	BHI MWD SURVEYS 12 1/4" HOLE <148-1170>	HOWARD 25-32 AWB
1170.00	8456.00	NaviTrak (Standard)	BHI MWD SURVEYS 7 7/8" HOLE <1250-8456>	HOWARD 25-32 AWB
8456.00	8506.00	Blind Drilling (std)	Projection to bit	HOWARD 25-32 AWB



# Actual Wellpath Report

HOWARD 25-32 AWP

Page 4 of 4



## REFERENCE WELLPATH IDENTIFICATION

Operator	ANADARKO E&P COMPANY LP	Slot	SLOT#12 HOWARD 25-32 (2411'FNL & 1564'FEL)
Area	COLORADO	Well	HOWARD 25-32
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 25-32 AWB
Facility	SEC.32-T1N-R67W		

## WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
148.00	0.500	343.900	148.00	Begin BHI MWD Surveys
8456.00	0.600	352.000	8366.08	Last BHI MWD Survey
8506.00	0.600	352.000	8416.08	Projection to Bit