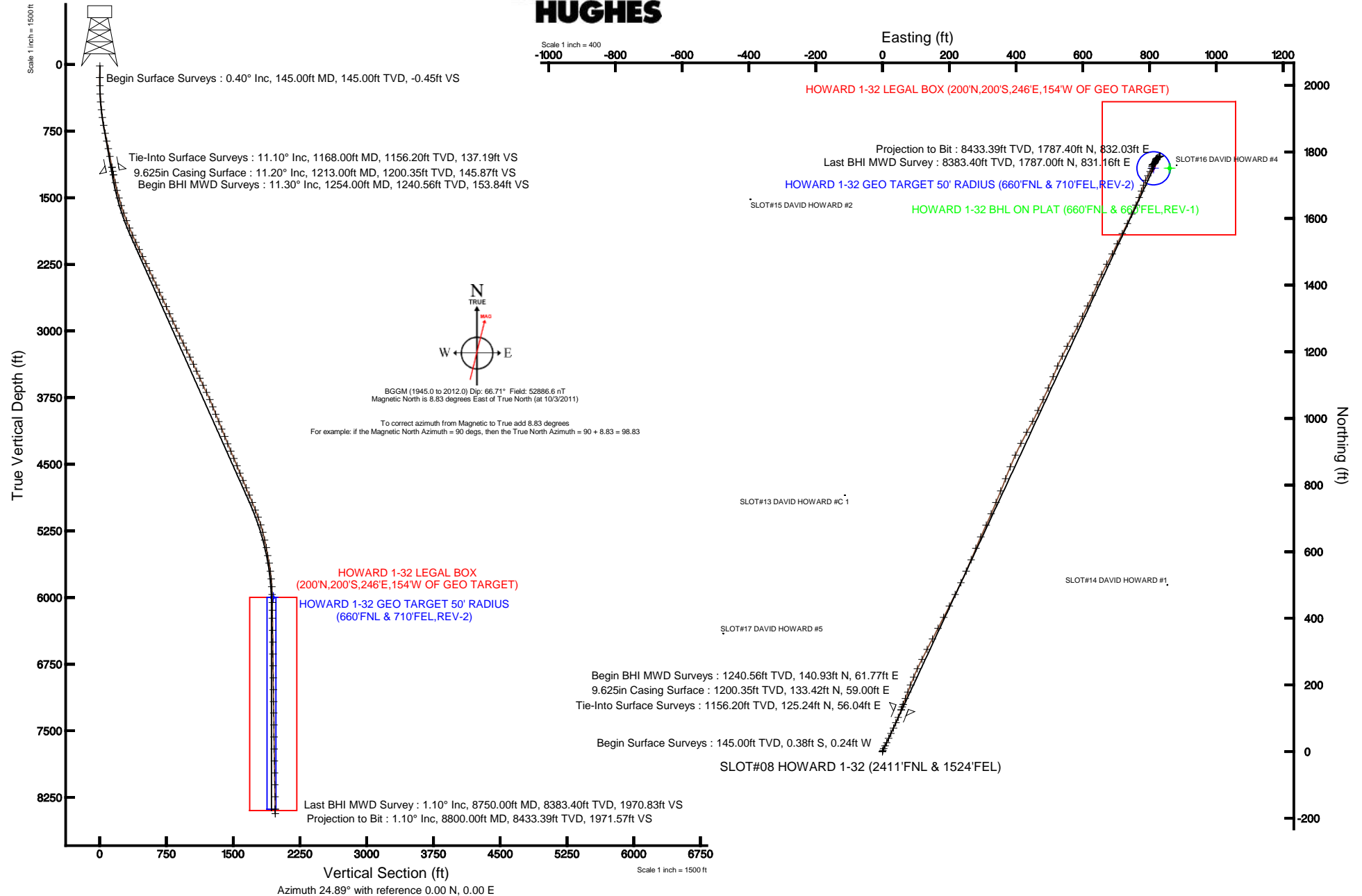


Location:	COLORADO	Slot:	SLOT#08 HOWARD 1-32 (2411'FNL & 1524'FEL)
Field:	WELD COUNTY (KERR MCGEE)	Well:	HOWARD 1-32
Facility:	SEC.32-T1N-R67W	Wellbore:	HOWARD 1-32 PWB

Plot reference wellpath is HOWARD 1-32 (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#08 HOWARD 1-32 (2411\FNL & 1524\FEL)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: wilsjell02 on 1/5/2012





Actual Wellpath Report

HOWARD 1-32 AWB

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANADARKO E&P COMPANY LP	Slot	SLOT#08 HOWARD 1-32 (2411'FNL & 1524'FEL)
Area	COLORADO	Well	HOWARD 1-32
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 1-32 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 1:35:47 PM
Convergence at slot	0.38° East	Database/Source file	WA_ANADARKO/HOWARD_1-32_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	24.65	3165186.29	1246389.69	40°00'29.585"N	104°54'37.069"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#08 HOWARD 1-32 (2411'FNL & 1524'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	24.89°



Actual Wellpath Report

HOWARD 1-32 AWB

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANADARKO E&P COMPANY LP	Slot	SLOT#08 HOWARD 1-32 (2411'FNL & 1524'FEL)
Area	COLORADO	Well	HOWARD 1-32
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 1-32 AWB
Facility	SEC.32-T1N-R67W		

WELLPATH DATA (79 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
1168.00	11.100	19.700	1156.20	137.19	125.24	56.04	40°00'30.822"N	104°54'36.349"W	0.56	Tie-Into Surface Surveys
1254.00	11.300	20.400	1240.56	153.84	140.93	61.77	40°00'30.978"N	104°54'36.275"W	0.28	Begin BHI MWD Surveys
1344.00	13.000	20.400	1328.54	172.72	158.69	68.37	40°00'31.153"N	104°54'36.191"W	1.89	
1435.00	14.200	21.100	1416.99	194.06	178.69	75.96	40°00'31.351"N	104°54'36.093"W	1.33	
1522.00	15.600	21.500	1501.06	216.39	199.53	84.09	40°00'31.557"N	104°54'35.989"W	1.61	
1612.00	17.000	22.200	1587.44	241.61	222.97	93.50	40°00'31.788"N	104°54'35.868"W	1.57	
1701.00	19.500	24.700	1671.96	269.47	248.52	104.62	40°00'32.041"N	104°54'35.725"W	2.94	
1791.00	21.300	27.800	1756.32	300.82	276.63	118.52	40°00'32.319"N	104°54'35.546"W	2.33	
1881.00	22.700	25.700	1839.76	334.51	306.74	133.68	40°00'32.616"N	104°54'35.351"W	1.78	
1970.00	23.400	28.500	1921.66	369.32	337.75	149.56	40°00'32.923"N	104°54'35.147"W	1.46	
2059.00	25.000	26.800	2002.84	405.76	370.07	166.47	40°00'33.242"N	104°54'34.930"W	1.96	
2146.00	25.000	27.800	2081.68	442.49	402.74	183.34	40°00'33.565"N	104°54'34.713"W	0.49	
2234.00	25.800	26.100	2161.18	480.21	436.39	200.43	40°00'33.897"N	104°54'34.493"W	1.23	
2323.00	26.500	26.400	2241.07	519.42	471.56	217.78	40°00'34.245"N	104°54'34.270"W	0.80	
2412.00	25.400	25.700	2321.09	558.36	506.55	234.89	40°00'34.591"N	104°54'34.051"W	1.28	
2501.00	25.400	23.200	2401.49	596.53	541.29	250.69	40°00'34.934"N	104°54'33.848"W	1.20	
2590.00	24.500	23.200	2482.19	634.05	575.80	265.48	40°00'35.275"N	104°54'33.657"W	1.01	
2680.00	24.300	22.500	2564.15	671.21	610.06	279.91	40°00'35.614"N	104°54'33.472"W	0.39	
2768.00	25.700	23.900	2643.90	708.38	644.24	294.57	40°00'35.951"N	104°54'33.283"W	1.73	
2859.00	25.000	24.700	2726.14	747.34	679.75	310.60	40°00'36.302"N	104°54'33.077"W	0.86	
2947.00	24.500	23.200	2806.06	784.17	713.41	325.56	40°00'36.635"N	104°54'32.885"W	0.91	
3036.00	24.600	22.500	2887.01	821.13	747.49	339.92	40°00'36.972"N	104°54'32.701"W	0.35	
3126.00	24.600	22.500	2968.84	858.56	782.10	354.26	40°00'37.314"N	104°54'32.516"W	0.00	
3221.00	25.200	20.800	3055.01	898.49	819.28	369.01	40°00'37.681"N	104°54'32.327"W	0.98	
3310.00	25.800	22.500	3135.34	936.74	854.88	383.15	40°00'38.033"N	104°54'32.145"W	1.06	
3398.00	25.800	24.300	3214.57	975.02	890.03	398.36	40°00'38.380"N	104°54'31.950"W	0.89	
3487.00	26.000	26.400	3294.63	1013.89	925.16	415.00	40°00'38.727"N	104°54'31.736"W	1.05	
3574.00	25.400	28.500	3373.03	1051.58	958.63	432.38	40°00'39.058"N	104°54'31.512"W	1.25	
3661.00	24.800	28.500	3451.81	1088.41	991.07	449.99	40°00'39.379"N	104°54'31.286"W	0.69	
3749.00	24.300	24.700	3531.86	1124.94	1023.74	466.37	40°00'39.702"N	104°54'31.076"W	1.88	
3836.00	25.000	24.700	3610.93	1161.22	1056.70	481.53	40°00'40.027"N	104°54'30.881"W	0.80	
3924.00	25.900	23.600	3690.39	1199.03	1091.21	497.00	40°00'40.368"N	104°54'30.682"W	1.16	
4013.00	23.500	22.200	3771.25	1236.19	1125.46	511.48	40°00'40.707"N	104°54'30.496"W	2.78	
4103.00	21.600	23.600	3854.36	1270.68	1157.25	524.90	40°00'41.021"N	104°54'30.323"W	2.19	
4191.00	22.100	25.700	3936.04	1303.43	1187.01	538.56	40°00'41.315"N	104°54'30.148"W	1.05	
4281.00	21.600	27.800	4019.58	1336.90	1216.92	553.63	40°00'41.611"N	104°54'29.954"W	1.03	
4372.00	22.000	27.100	4104.07	1370.66	1246.91	569.21	40°00'41.907"N	104°54'29.754"W	0.52	
4461.00	21.900	26.800	4186.62	1403.91	1276.57	584.28	40°00'42.200"N	104°54'29.560"W	0.17	
4551.00	22.100	25.400	4270.06	1437.61	1306.84	599.11	40°00'42.499"N	104°54'29.369"W	0.62	
4641.00	23.200	26.800	4353.12	1472.26	1337.96	614.37	40°00'42.807"N	104°54'29.173"W	1.36	
4730.00	23.400	23.600	4434.87	1507.45	1369.81	629.35	40°00'43.122"N	104°54'28.981"W	1.44	
4820.00	21.900	23.200	4517.92	1542.10	1401.61	643.12	40°00'43.436"N	104°54'28.804"W	1.68	
4908.00	22.800	24.700	4599.31	1575.56	1432.19	656.71	40°00'43.738"N	104°54'28.629"W	1.21	
4998.00	22.800	28.200	4682.28	1610.40	1463.40	672.23	40°00'44.046"N	104°54'28.430"W	1.51	
5088.00	22.600	27.100	4765.31	1645.09	1494.16	688.35	40°00'44.350"N	104°54'28.223"W	0.52	
5176.00	22.600	26.000	4846.56	1678.90	1524.41	703.47	40°00'44.649"N	104°54'28.028"W	0.48	
5267.00	21.900	26.800	4930.78	1713.34	1555.28	718.79	40°00'44.954"N	104°54'27.831"W	0.84	
5357.00	22.100	25.700	5014.23	1747.04	1585.52	733.70	40°00'45.253"N	104°54'27.640"W	0.51	
5445.00	20.000	24.300	5096.35	1778.65	1614.15	747.07	40°00'45.536"N	104°54'27.468"W	2.45	
5536.00	17.900	26.100	5182.41	1808.19	1640.90	759.63	40°00'45.801"N	104°54'27.306"W	2.40	
5624.00	14.300	19.400	5266.96	1832.54	1663.30	769.19	40°00'46.022"N	104°54'27.184"W	4.60	
5712.00	12.700	19.400	5352.52	1852.99	1682.68	776.01	40°00'46.213"N	104°54'27.096"W	1.82	
5801.00	11.300	20.400	5439.58	1871.42	1700.08	782.30	40°00'46.385"N	104°54'27.015"W	1.59	
5891.00	10.000	25.400	5528.03	1888.03	1715.40	788.73	40°00'46.537"N	104°54'26.932"W	1.77	
5979.00	10.000	27.800	5614.69	1903.30	1729.06	795.57	40°00'46.672"N	104°54'26.844"W	0.47	
6069.00	7.900	26.400	5703.59	1917.29	1741.52	801.96	40°00'46.795"N	104°54'26.762"W	2.35	

6158.00	5.200	22.200	5792.00	1927.43	1750.73	806.21	40°00'46.886"N	104°54'26.708"W	3.08	
6245.00	3.000	8.100	5878.77	1933.55	1756.64	808.02	40°00'46.944"N	104°54'26.684"W	2.76	
6334.00	1.800	9.900	5967.69	1937.13	1760.32	808.59	40°00'46.981"N	104°54'26.677"W	1.35	
6422.00	0.500	57.300	6055.68	1938.79	1761.89	809.15	40°00'46.996"N	104°54'26.670"W	1.71	



Actual Wellpath Report

HOWARD 1-32 AWB

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANADARKO E&P COMPANY LP	Slot	SLOT#08 HOWARD 1-32 (2411'FNL & 1524'FEL)
Area	COLORADO	Well	HOWARD 1-32
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 1-32 AWB
Facility	SEC.32-T1N-R67W		

WELLPATH DATA (79 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
6511.00	0.600	57.000	6144.67	1939.51	1762.35	809.87	40°00'47.001"N	104°54'26.661"W	0.11	
6600.00	1.000	59.800	6233.66	1940.55	1763.00	810.93	40°00'47.007"N	104°54'26.647"W	0.45	
6735.00	1.100	59.100	6368.64	1942.58	1764.25	813.06	40°00'47.020"N	104°54'26.620"W	0.07	
6868.00	0.600	45.000	6501.62	1944.29	1765.40	814.65	40°00'47.031"N	104°54'26.599"W	0.40	
7003.00	0.800	28.900	6636.61	1945.90	1766.73	815.60	40°00'47.044"N	104°54'26.587"W	0.21	
7136.00	0.600	26.100	6769.60	1947.52	1768.16	816.36	40°00'47.058"N	104°54'26.577"W	0.15	
7271.00	0.800	21.800	6904.59	1949.17	1769.67	817.02	40°00'47.073"N	104°54'26.569"W	0.15	
7405.00	0.900	21.500	7038.58	1951.15	1771.52	817.75	40°00'47.091"N	104°54'26.559"W	0.07	
7539.00	0.900	19.700	7172.56	1953.25	1773.49	818.49	40°00'47.111"N	104°54'26.550"W	0.02	
7668.00	0.900	10.900	7301.55	1955.24	1775.44	819.02	40°00'47.130"N	104°54'26.543"W	0.11	
7802.00	0.600	1.100	7435.54	1956.91	1777.18	819.24	40°00'47.147"N	104°54'26.540"W	0.24	
7937.00	0.700	27.800	7570.53	1958.38	1778.61	819.63	40°00'47.161"N	104°54'26.535"W	0.23	
8072.00	0.800	45.000	7705.52	1960.08	1780.01	820.69	40°00'47.175"N	104°54'26.522"W	0.18	
8207.00	1.100	55.900	7840.50	1962.08	1781.40	822.42	40°00'47.189"N	104°54'26.499"W	0.26	
8343.00	1.200	61.900	7976.47	1964.34	1782.80	824.76	40°00'47.203"N	104°54'26.469"W	0.11	
8475.00	1.100	49.300	8108.44	1966.59	1784.28	826.94	40°00'47.217"N	104°54'26.441"W	0.21	
8610.00	1.000	57.000	8243.42	1968.77	1785.77	828.91	40°00'47.232"N	104°54'26.416"W	0.13	
8750.00	1.100	65.100	8383.40	1970.83	1787.00	831.16	40°00'47.244"N	104°54'26.387"W	0.13	Last BHI MWD Survey
8800.00	1.100	65.100	8433.39	1971.57	1787.40	832.03	40°00'47.248"N	104°54'26.376"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: HOWARD 1-32 AWB Ref Wellpath: HOWARD 1-32 AWB

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	1213.00	1198.00	15.00	1200.35	0.00	0.00	133.42	59.00
9.625in Casing Surface	15.00	1213.00	1198.00	15.00	1200.35	0.00	0.00	133.42	59.00
8.75in Open Hole	1213.00	8800.00	7587.00	1200.35	8433.39	133.42	59.00	1787.40	832.03

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
HOWARD 1-32 BHL ON PLAT (660'FNL & 660'FEL,REV-1)		6000.00	1751.14	862.44	3166037.04	1248146.47	40°00'46.890"N	104°54'25.985"W	circle
HOWARD 1-32 GEO TARGET 50' RADIUS (660'FNL & 710'FEL,REV-2)		6000.00	1751.15	812.45	3165987.05	1248146.14	40°00'46.890"N	104°54'26.628"W	circle
HOWARD 1-32 LEGAL BOX (200'N,200'S,246'E,154'W OF GEO TARGET)		6000.00	1751.15	858.45	3166033.04	1248146.45	40°00'46.890"N	104°54'26.036"W	square

WELLPATH COMPOSITION - Ref Wellbore: HOWARD 1-32 AWB Ref Wellpath: HOWARD 1-32 AWB

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
15.00	1168.00	ISCWSA MWD, Rev. 2 (Standard)	SURFACE SURVEYS <145-1168>	HOWARD 1-32 AWB
1168.00	8750.00	NaviTrak (Standard)	BHI MWD SURVEYS 7 7/8" HOLE <1254-8750>	HOWARD 1-32 AWB
8750.00	8800.00	Blind Drilling (std)	Projection to bit	HOWARD 1-32 AWB



Actual Wellpath Report

HOWARD 1-32 AWB

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANADARKO E&P COMPANY LP	Slot	SLOT#08 HOWARD 1-32 (2411'FNL & 1524'FEL)
Area	COLORADO	Well	HOWARD 1-32
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 1-32 AWB
Facility	SEC.32-T1N-R67W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
145.00	0.400	212.400	145.00	Begin Surface Surveys
1168.00	11.100	19.700	1156.20	Tie-Into Surface Surveys
1254.00	11.300	20.400	1240.56	Begin BHI MWD Surveys
8750.00	1.100	65.100	8383.40	Last BHI MWD Survey
8800.00	1.100	65.100	8433.39	Projection to Bit