

**EXTRACTION**  
Oil & Gas

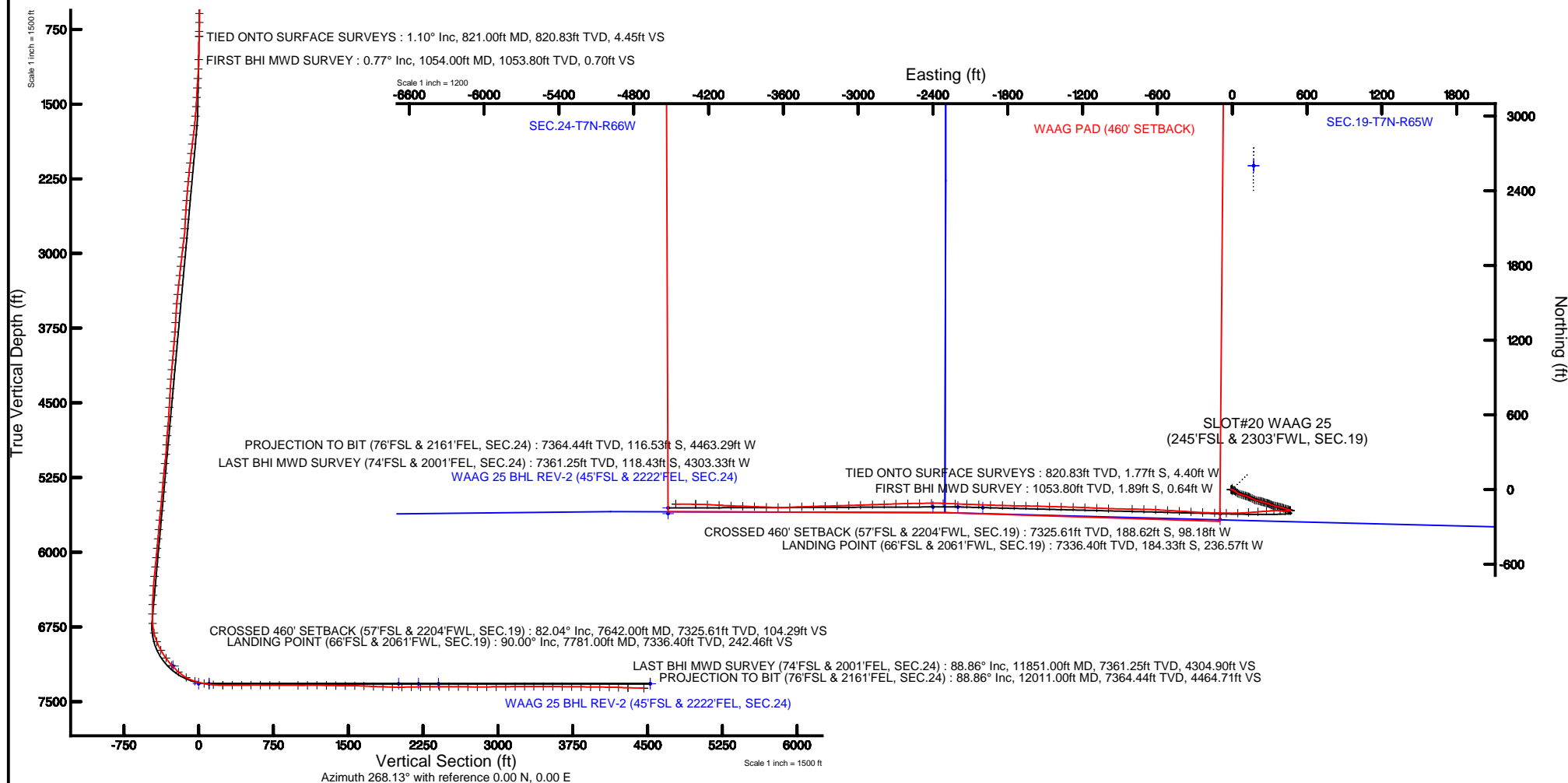


**BAKER  
HUGHES**



To correct azimuth from Magnetic to True add 8.52 degrees

True vertical depths are referenced to SAVANNA 802 (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to SAVANNA 802 (RKB)	North Reference: True north
SAVANNA 802 (RKB) to Mean Sea Level: 4887 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#20 WAAG 25 (245'FSL & 2303'FWL, SEC.19)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: inqmiarn on 9/30/2015





# Actual Wellpath Report

WAAG 25 AWP

Page 1 of 6



## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#20 WAAG 25 (245'FSL & 2303'FWL, SEC.19)
Area	COLORADO	Well	WAAG 25
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	WAAG 25 AWB
Facility	SEC.19-T07N-R65W		

## REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 4.1.1
North Reference	True	User	Ingmjmr
Scale	0.999971	Report Generated	9/30/2015 at 10:09:34 AM
Convergence at slot	0.51° East	Database/Source file	WA_DEN_Denver_Defn/WAAG_25_AWB.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-2743.34	-172.29	3220192.41	1445701.62	40°33'14.940"N	104°42'27.288"W
Facility Reference Pt			3220340.15	1448446.32	40°33'42.048"N	104°42'25.056"W
Field Reference Pt			3185481.27	1419166.81	40°28'55.560"N	104°49'59.556"W

## WELLPATH DATUM

Calculation method	Minimum curvature	SAVANNA 802 (RKB) to Facility Vertical Datum	4887.00ft
Horizontal Reference Pt	Slot	SAVANNA 802 (RKB) to Mean Sea Level	4887.00ft
Vertical Reference Pt	SAVANNA 802 (RKB)	SAVANNA 802 (RKB) to Mud Line at Slot (SLOT#20 WAAG 25 (245'FSL & 2303'FWL, SEC.19))	4887.00ft
MD Reference Pt	SAVANNA 802 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	268.50°



# Actual Wellpath Report

WAAG 25 AWP

Page 2 of 6



## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#20 WAAG 25 (245'FSL & 2303'FWL, SEC.19)
Area	COLORADO	Well	WAAG 25
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	WAAG 25 AWB
Facility	SEC.19-T07N-R65W		

## WELLPATH DATA (117 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
821.00	1.100	99.100	820.83	4.44	-1.77	-4.40	0.33	TIED ONTO SURFACE SURVEYS
1054.00	0.770	81.620	1053.80	0.69	-1.89	-0.64	0.19	FIRST BHI MWD SURVEY
1148.00	3.690	105.470	1147.72	-2.83	-2.61	2.90	3.19	
1243.00	3.880	115.250	1242.52	-8.63	-4.79	8.75	0.71	
1338.00	4.090	122.820	1337.29	-14.29	-8.00	14.51	0.60	
1433.00	3.860	127.390	1432.06	-19.58	-11.78	19.90	0.41	
1528.00	3.810	128.300	1526.85	-24.50	-15.68	24.91	0.08	
1622.00	7.430	125.760	1620.38	-31.73	-21.17	32.30	3.86	
1717.00	7.200	127.000	1714.61	-41.28	-28.34	42.04	0.29	
1812.00	7.880	105.630	1808.80	-52.17	-33.68	53.07	3.02	
1906.00	7.140	107.370	1902.00	-63.85	-37.16	64.85	0.82	
2001.00	6.990	108.190	1996.27	-74.88	-40.72	75.97	0.19	
2096.00	6.630	108.370	2090.60	-85.48	-44.26	86.67	0.38	
2191.00	6.390	106.780	2184.99	-95.66	-47.51	96.94	0.32	
2286.00	5.770	107.380	2279.46	-105.20	-50.46	106.55	0.66	
2381.00	5.300	107.360	2374.01	-113.87	-53.20	115.30	0.49	
2475.00	4.650	109.720	2467.66	-121.53	-55.78	123.03	0.72	
2570.00	4.230	111.430	2562.37	-128.35	-58.36	129.92	0.46	
2665.00	3.540	118.580	2657.16	-134.11	-61.04	135.75	0.89	
2760.00	3.370	119.180	2751.98	-139.05	-63.81	140.77	0.18	
2855.00	7.000	111.700	2846.58	-146.78	-67.31	148.59	3.88	
2950.00	8.190	115.660	2940.74	-158.12	-72.38	160.06	1.37	
3045.00	7.940	118.120	3034.81	-169.85	-78.40	171.95	0.45	
3140.00	6.840	118.620	3129.01	-180.44	-84.21	182.70	1.16	
3234.00	6.670	98.590	3222.38	-190.66	-87.70	193.02	2.50	
3329.00	6.290	98.250	3316.77	-201.22	-89.27	203.62	0.40	
3424.00	5.920	100.820	3411.23	-211.14	-90.94	213.58	0.48	
3518.00	4.690	101.460	3504.83	-219.62	-92.61	222.11	1.31	
3613.00	3.930	105.990	3599.56	-226.51	-94.28	229.05	0.88	
3708.00	3.160	114.830	3694.37	-231.96	-96.28	234.56	0.99	
3803.00	4.930	103.510	3789.14	-238.25	-98.33	240.90	2.04	
3898.00	5.010	105.170	3883.78	-246.17	-100.37	248.87	0.17	
3993.00	4.990	107.950	3978.42	-254.04	-102.73	256.81	0.26	
4087.00	5.040	108.790	4072.06	-261.77	-105.32	264.61	0.09	
4183.00	5.250	104.540	4167.67	-269.94	-107.78	272.85	0.45	
4277.00	4.660	105.370	4261.32	-277.73	-109.87	280.69	0.63	
4372.00	3.720	108.240	4356.06	-284.33	-111.86	287.34	1.01	
4467.00	3.420	113.800	4450.88	-289.79	-113.97	292.86	0.48	
4562.00	4.380	112.640	4545.66	-295.66	-116.51	298.80	1.01	
4656.00	3.660	122.620	4639.43	-301.42	-119.51	304.64	1.07	
4751.00	6.270	106.030	4734.07	-308.88	-122.58	312.18	3.11	
4846.00	4.400	110.760	4828.65	-317.20	-125.30	320.58	2.02	
4940.00	3.030	116.720	4922.45	-322.73	-127.70	326.17	1.51	
5035.00	5.240	94.720	5017.21	-329.25	-129.18	332.74	2.82	
5129.00	6.740	104.550	5110.69	-338.82	-130.92	342.36	1.93	



# Actual Wellpath Report

WAAG 25 AWP

Page 3 of 6



## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#20 WAAG 25 (245'FSL & 2303'FWL, SEC.19)
Area	COLORADO	Well	WAAG 25
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	WAAG 25 AWB
Facility	SEC.19-T07N-R65W		

## WELLPATH DATA (117 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
5225.00	6.430	105.190	5206.06	-349.38	-133.74	353.00	0.33	
5320.00	4.450	107.170	5300.63	-357.97	-136.23	361.65	2.09	
5415.00	5.820	103.370	5395.24	-366.12	-138.43	369.86	1.49	
5509.00	4.340	100.810	5488.87	-374.20	-140.20	377.99	1.59	
5604.00	6.710	103.520	5583.42	-383.08	-142.17	386.92	2.51	
5698.00	4.800	95.760	5676.95	-392.28	-143.85	396.17	2.19	
5793.00	5.310	115.890	5771.58	-400.13	-146.17	404.08	1.93	
5887.00	6.380	113.020	5865.09	-408.74	-150.11	412.80	1.18	
5982.00	4.880	104.130	5959.64	-417.44	-153.16	421.58	1.82	
6077.00	6.540	105.090	6054.16	-426.52	-155.55	430.72	1.75	
6172.00	4.930	101.040	6148.68	-435.69	-157.75	439.95	1.75	
6267.00	6.570	111.100	6243.20	-444.69	-160.48	449.03	2.02	
6362.00	4.390	114.950	6337.76	-452.96	-163.97	457.40	2.33	
6457.00	3.260	116.030	6432.55	-458.61	-166.69	463.12	1.19	
6551.00	1.760	105.900	6526.46	-462.36	-168.26	466.91	1.66	
6646.00	1.050	110.490	6621.43	-464.56	-168.97	469.13	0.76	
6740.00	3.310	267.660	6715.39	-462.65	-169.38	467.23	4.57	
6835.00	13.400	264.400	6809.26	-448.89	-170.57	453.49	10.63	
6929.00	21.740	267.940	6898.80	-420.57	-172.26	425.21	8.94	
7024.00	29.540	276.010	6984.40	-379.68	-170.44	384.26	8.98	
7118.00	35.260	265.780	7063.79	-329.52	-170.01	334.07	8.41	
7212.00	42.700	266.370	7136.82	-270.49	-174.03	275.12	7.92	
7307.00	48.480	265.770	7203.27	-202.71	-178.69	207.45	6.10	
7402.00	60.470	265.620	7258.37	-125.63	-184.49	130.49	12.62	
7496.00	72.780	268.220	7295.60	-39.55	-189.03	44.50	13.34	
7591.00	80.230	270.990	7317.75	52.73	-189.63	-47.80	8.34	
7642.00†	82.044	271.319	7325.61	103.07	-188.62	-98.18	3.61	CROSSED 460' SETBACK (57'FSL & 2204'FWL, SEC.19)
7686.00	83.610	271.600	7331.10	146.66	-187.50	-141.82	3.61	
7781.00	90.000	272.230	7336.40	241.30	-184.33	-236.57	6.76	LANDING POINT (66'FSL & 2061'FWL, SEC.19)
7876.00	89.970	274.170	7336.42	335.97	-179.03	-331.41	2.04	
7970.00	90.890	273.160	7335.72	429.59	-173.02	-425.22	1.45	
8064.00	90.860	273.250	7334.28	523.26	-167.77	-519.06	0.10	
8159.00	89.230	273.450	7334.21	617.92	-162.22	-613.89	1.73	
8254.00	89.820	270.680	7334.99	712.72	-158.79	-708.82	2.98	
8348.00	89.480	270.870	7335.57	806.65	-157.52	-802.81	0.41	
8537.00	89.780	272.110	7336.79	995.38	-152.61	-991.74	0.67	
8632.00	90.340	272.610	7336.69	1090.17	-148.70	-1086.66	0.79	
8726.00	90.150	272.200	7336.29	1183.95	-144.75	-1180.57	0.48	
8821.00	88.800	271.600	7337.16	1278.77	-141.60	-1275.51	1.56	
8916.00	88.920	271.320	7339.05	1373.63	-139.18	-1370.46	0.32	
9011.00	89.010	271.550	7340.76	1468.49	-136.80	-1465.42	0.26	
9106.00	90.150	271.850	7341.46	1563.34	-133.99	-1560.37	1.24	
9200.00	87.170	270.570	7343.66	1657.19	-132.00	-1654.31	3.45	
9295.00	87.690	271.280	7347.92	1752.01	-130.47	-1749.20	0.93	
9389.00	88.310	271.630	7351.20	1845.83	-128.08	-1843.12	0.76	



# Actual Wellpath Report

WAAG 25 AWP

Page 4 of 6



## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#20 WAAG 25 (245'FSL & 2303'FWL, SEC.19)
Area	COLORADO	Well	WAAG 25
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	WAAG 25 AWB
Facility	SEC.19-T07N-R65W		

## WELLPATH DATA (117 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
9484.00	87.940	271.720	7354.31	1940.63	-125.31	-1938.02	0.40	
9579.00	91.260	272.420	7354.97	2035.43	-121.88	-2032.95	3.57	
9674.00	90.740	271.740	7353.31	2130.23	-118.43	-2127.87	0.90	
9769.00	91.050	272.700	7351.83	2225.02	-114.75	-2222.78	1.06	
9864.00	90.830	272.250	7350.27	2319.78	-110.65	-2317.68	0.53	
9959.00	90.000	269.020	7349.58	2414.70	-109.60	-2412.66	3.51	
10054.00	89.910	269.220	7349.66	2509.69	-111.06	-2507.65	0.23	
10148.00	89.420	268.850	7350.21	2603.69	-112.64	-2601.63	0.65	
10243.00	88.950	267.770	7351.56	2698.68	-115.44	-2696.58	1.24	
10337.00	90.000	268.250	7352.42	2792.67	-118.70	-2790.52	1.23	
10432.00	90.430	268.180	7352.06	2887.66	-121.66	-2885.47	0.46	
10527.00	90.120	267.750	7351.61	2982.66	-125.04	-2980.41	0.56	
10622.00	91.200	268.590	7350.51	3077.65	-128.07	-3075.35	1.44	
10716.00	91.380	268.260	7348.40	3171.62	-130.65	-3169.29	0.40	
10811.00	89.600	268.750	7347.58	3266.62	-133.13	-3264.25	1.94	
10905.00	89.880	268.400	7348.01	3360.62	-135.47	-3358.22	0.48	
11000.00	90.520	268.060	7347.68	3455.61	-138.40	-3453.18	0.76	
11095.00	88.950	266.840	7348.12	3550.59	-142.63	-3548.08	2.09	
11189.00	89.230	271.590	7349.61	3644.55	-143.92	-3642.03	5.06	
11283.00	89.540	272.250	7350.62	3738.37	-140.77	-3735.97	0.78	
11378.00	89.380	271.720	7351.52	3833.19	-137.48	-3830.91	0.58	
11473.00	89.970	272.160	7352.05	3928.02	-134.26	-3925.85	0.77	
11567.00	88.430	272.180	7353.37	4021.82	-130.70	-4019.77	1.64	
11662.00	90.060	273.600	7354.62	4116.52	-125.91	-4114.64	2.28	
11756.00	86.520	272.410	7357.42	4210.17	-120.99	-4208.45	3.97	
11851.00	88.860	270.680	7361.25	4304.95	-118.43	-4303.33	3.06	LAST BHI MWD SURVEY (74'FSL & 2001'FEL, SEC.24)
12011.00	88.860	270.680	7364.44	4464.81	-116.53	-4463.29	0.00	PROJECTION TO BIT (76'FSL & 2161'FEL, SEC.24)

## HOLE & CASING SECTIONS - Ref Wellbore: WAAG 25 AWB Ref Wellpath: WAAG 25 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]
9.625in Casing Intermediate	20.00	892.00	872.00	20.00	891.82	0.02	-0.05	-1.93	-3.11
7.875in Open Hole	892.00	12011.00	11119.00	891.82	7364.44	-1.93	-3.11	-116.53	-4463.29
5.5in Casing Production	20.00	12011.00	11991.00	20.00	7364.44	0.02	-0.05	-116.53	-4463.29



# Actual Wellpath Report

WAAG 25 AWP

Page 5 of 6



## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#20 WAAG 25 (245'FSL & 2303'FWL, SEC.19)
Area	COLORADO	Well	WAAG 25
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	WAAG 25 AWB
Facility	SEC.19-T07N-R65W		

## TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.19-T7N-R65W	-24.00	2601.26	172.27	3220341.42	1448304.24	40°33'40.644"N	104°42'25.056"W	polygon
SEC.24-T7N-R66W	-24.00	2601.26	172.27	3220341.42	1448304.24	40°33'40.644"N	104°42'25.056"W	polygon
WAAG PAD (460' SETBACK)	7144.00	2601.26	172.27	3220341.42	1448304.24	40°33'40.644"N	104°42'25.056"W	polygon
WAAG 25 BHL ON PLAT REV-1 (0'FSL & 2222'FEL, SEC.24)	7320.00	-192.68	-4524.01	3215670.44	1445468.54	40°33'13.032"N	104°43'25.896"W	point
WAAG 25 BHL REV-2 (45'FSL & 2222'FEL, SEC.24)	7320.00	-147.89	-4524.01	3215670.04	1445513.32	40°33'13.475"N	104°43'25.896"W	point
WAAG 25 DRILLING CORRIDOR (60')	7320.00	0.00	0.00	3220192.41	1445701.62	40°33'14.940"N	104°42'27.288"W	polygon
WAAG 25 LANDING POINT	7320.00	-240.45	-97.26	3220097.30	1445460.32	40°33'12.564"N	104°42'28.548"W	point
WAAG 25 LANDING POINT REV-1	7320.00	-194.45	-97.26	3220096.89	1445506.32	40°33'13.019"N	104°42'28.548"W	point
WAAG 25 TARGET 1	7320.00	-145.00	-2000.00	3218193.85	1445538.76	40°33'13.506"N	104°42'53.198"W	point
WAAG 25 TARGET 2	7320.00	-140.00	-2200.00	3217993.82	1445541.97	40°33'13.556"N	104°42'55.789"W	point
WAAG 25 TARGET 3	7320.00	-140.00	-2400.00	3217793.83	1445540.19	40°33'13.555"N	104°42'58.380"W	point

## WELLPATH COMPOSITION - Ref Wellbore: WAAG 25 AWB Ref Wellpath: WAAG 25 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	821.00	ISCWSA MWD, Rev. 3 (Standard)	NEWSOCO SURVEYS <141-821>	WAAG 25 AWB
821.00	11851.00	NaviTrak (Standard)	BHI MWD/NAVITRAK (STD) 7.875" HOLE <1054-11851>	WAAG 25 AWB
11851.00	12011.00	Blind Drilling (std)	Projection to bit	WAAG 25 AWB





# Actual Wellpath Report

WAAG 25 AWP

Page 6 of 6



## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#20 WAAG 25 (245'FSL & 2303'FWL, SEC.19)
Area	COLORADO	Well	WAAG 25
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	WAAG 25 AWB
Facility	SEC.19-T07N-R65W		

## WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
821.00	1.100	99.100	820.83	TIED ONTO SURFACE SURVEYS
1054.00	0.770	81.620	1053.80	FIRST BHI MWD SURVEY
7642.00	82.044	271.319	7325.61	CROSSED 460' SETBACK (57'FSL & 2204'FWL, SEC.19)
7781.00	90.000	272.230	7336.40	LANDING POINT (66'FSL & 2061'FWL, SEC.19)
11851.00	88.860	270.680	7361.25	LAST BHI MWD SURVEY (74'FSL & 2001'FEL, SEC.24)
12011.00	88.860	270.680	7364.44	PROJECTION TO BIT (76'FSL & 2161'FEL, SEC.24)