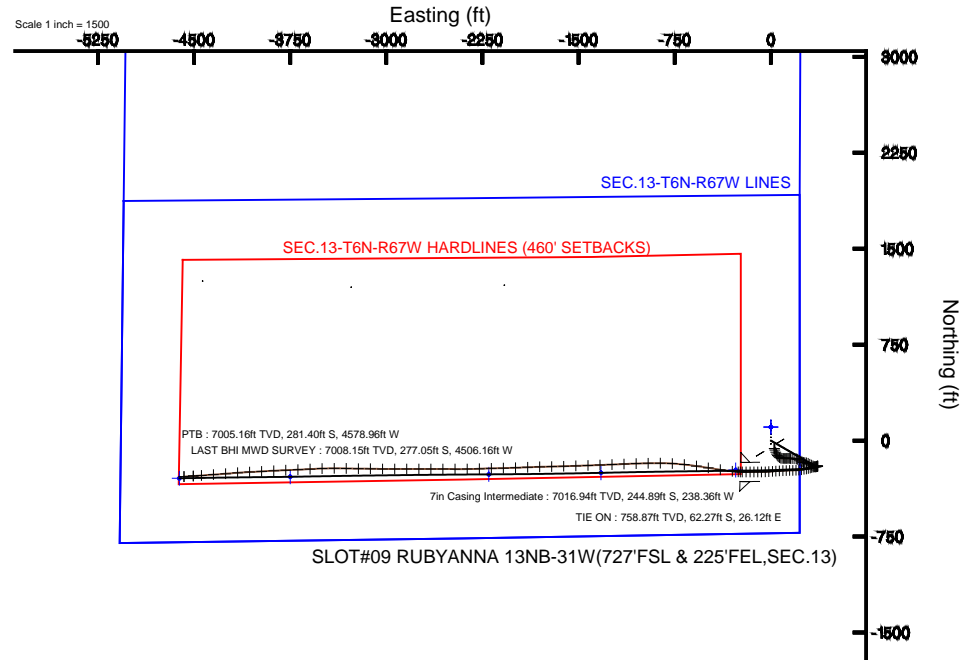


# EXTRACTION OIL & GAS

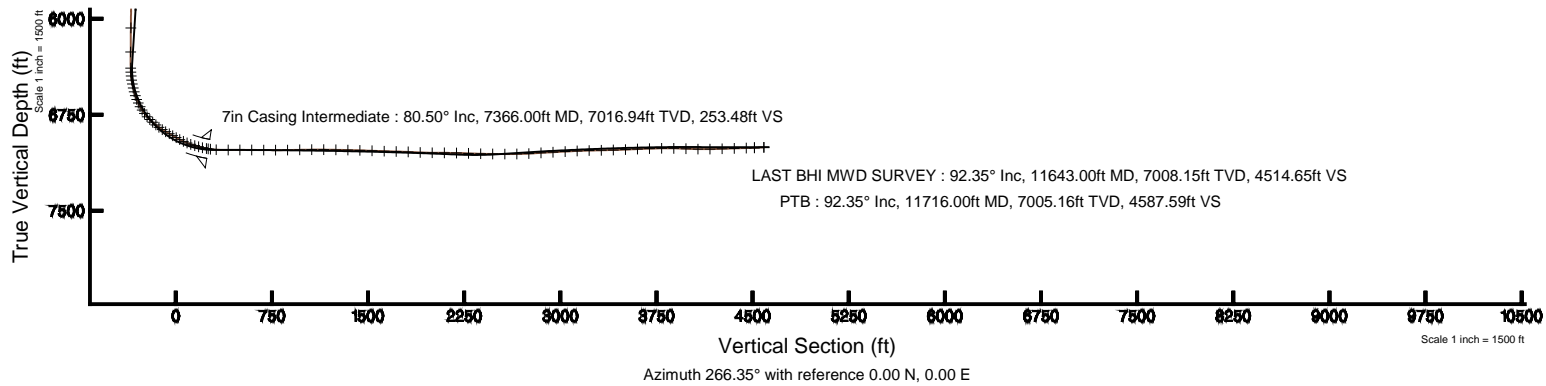
Location: COLORADO Slot: SLOT#09 RUBYANNA 13NB-31W(727'FSL & 225'FEL,SEC.13)  
 Field: WELD COUNTY (NAD83/TRUE NORTH) Well: RUBYANNA 13NB-31W  
 Facility: SEC.13-T6N-R67W Wellbore: RUBYANNA 13NB-31W PWB

Plot reference wellpath is RUBYANNA 13NB-31W (REV-A.0) PWP	
True vertical depths are referenced to RIG (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to RIG (RKB)	North Reference: True north
RIG (RKB) to Mean Sea Level: 4853 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#09 RUBYANNA 13NB-31W(727'FSL & 225'FEL,SEC.13)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 5/27/2014



BGGM (1945.0 to 2015.0) Dip: 66.99° Field: 52817.7 nT  
 Magnetic North is 8.56 degrees East of True North (at 5/16/2014)

To correct azimuth from Magnetic to True add 8.56 degrees





# Actual Wellpath Report

RUBYANNA 13NB-31W AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#09 RUBYANNA 13NB-31W(727'FSL & 225'FEL,SEC.13)
Area	COLORADO	Well	RUBYANNA 13NB-31W
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	RUBYANNA 13NB-31W AWB
Facility	SEC.13-T06N-R67W		

## REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 4.0.0
North Reference	True	User	Painsetr
Scale	0.999965	Report Generated	5/27/2014 at 1:41:18 PM
Convergence at slot	n/a	Database/Source file	WA_Denver/RUBYANNA_13NB-31W_AWB.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-105.65	0.00	3185482.07	1419061.16	40°28'54.516"N	104°49'59.556"W
Facility Reference Pt			3185481.27	1419166.81	40°28'55.560"N	104°49'59.556"W
Field Reference Pt			3185481.27	1419166.81	40°28'55.560"N	104°49'59.556"W

## WELLPATH DATUM

Calculation method	Minimum curvature	RIG (RKB) to Facility Vertical Datum	4853.00ft
Horizontal Reference Pt	Slot	RIG (RKB) to Mean Sea Level	4853.00ft
Vertical Reference Pt	RIG (RKB)	RIG (RKB) to Mud Line at Slot (SLOT#09 RUBYANNA 13NB-31W(727'FSL & 225'FEL,SEC.13))	4853.00ft
MD Reference Pt	RIG (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	266.35°



# Actual Wellpath Report

RUBYANNA 13NB-31W AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#09 RUBYANNA 13NB-31W(727'FSL & 225'FEL,SEC.13)
Area	COLORADO	Well	RUBYANNA 13NB-31W
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	RUBYANNA 13NB-31W AWB
Facility	SEC.13-T06N-R67W		

## WELLPATH DATA (119 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
763.00	10.500	157.240	758.87	-22.10	-62.27	26.12	0.00	TIE ON
838.00	10.500	157.240	832.61	-26.57	-74.87	31.41	0.00	
933.00	10.550	157.980	926.02	-32.15	-90.92	38.02	0.15	
1025.00	8.700	156.370	1016.72	-37.18	-105.10	43.96	2.03	
1117.00	7.880	145.270	1107.76	-42.81	-116.66	50.35	1.95	
1209.00	7.090	136.100	1198.98	-49.74	-125.93	57.88	1.55	
1302.00	7.440	122.540	1291.24	-58.30	-133.31	66.93	1.88	
1394.00	7.150	100.130	1382.51	-68.67	-137.52	77.59	3.09	
1486.00	6.100	95.340	1473.90	-79.06	-138.98	88.10	1.29	
1578.00	5.300	90.560	1565.44	-88.13	-139.48	97.21	1.01	
1670.00	4.980	88.630	1657.07	-96.36	-139.43	105.45	0.40	
1763.00	4.220	89.330	1749.77	-103.81	-139.29	112.91	0.82	
1855.00	3.850	90.400	1841.54	-110.27	-139.27	119.38	0.41	
1947.00	4.600	84.670	1933.29	-117.04	-138.95	126.15	0.93	
2039.00	4.480	82.720	2025.01	-124.31	-138.15	133.38	0.21	
2131.00	4.570	96.530	2116.72	-131.50	-138.11	140.59	1.19	
2225.00	4.010	98.080	2210.46	-138.41	-139.00	147.56	0.61	
2319.00	3.200	97.580	2304.27	-144.20	-139.81	153.42	0.86	
2508.00	4.240	88.760	2492.87	-156.35	-140.35	165.63	0.63	
2697.00	5.250	95.360	2681.22	-171.87	-141.01	181.23	0.61	
2885.00	4.300	95.680	2868.57	-187.32	-142.51	196.81	0.51	
2980.00	4.420	111.510	2963.30	-194.15	-144.21	203.76	1.27	
3074.00	3.820	111.650	3057.05	-200.26	-146.69	210.04	0.64	
3263.00	4.570	121.830	3245.55	-212.09	-152.98	222.28	0.56	
3452.00	4.160	122.270	3434.00	-223.77	-160.62	234.48	0.22	
3640.00	3.560	125.580	3621.57	-233.81	-167.65	244.99	0.34	
3829.00	3.230	92.970	3810.26	-243.65	-171.34	255.08	1.02	
4018.00	2.970	98.020	3998.98	-253.73	-172.30	265.25	0.20	
4207.00	4.030	96.970	4187.63	-265.05	-173.79	276.69	0.56	
4396.00	4.750	114.150	4376.08	-278.50	-177.80	290.42	0.79	



# Actual Wellpath Report

RUBYANNA 13NB-31W AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#09 RUBYANNA 13NB-31W(727'FSL & 225'FEL,SEC.13)
Area	COLORADO	Well	RUBYANNA 13NB-31W
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	RUBYANNA 13NB-31W AWB
Facility	SEC.13-T06N-R67W		

## WELLPATH DATA (119 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
4585.00	4.430	118.490	4564.47	-291.61	-184.48	303.98	0.25	
4774.00	4.190	118.780	4752.94	-303.61	-191.29	316.45	0.13	
4963.00	3.770	119.920	4941.48	-314.62	-197.71	327.88	0.23	
5151.00	2.710	116.730	5129.18	-323.60	-202.79	337.21	0.57	
5340.00	2.970	104.000	5317.95	-332.12	-205.99	345.95	0.36	
5529.00	1.910	59.820	5506.79	-339.61	-205.59	353.43	1.10	
5716.00	1.600	55.770	5693.70	-344.64	-202.55	358.28	0.18	
5905.00	0.870	60.510	5882.66	-348.21	-200.36	361.71	0.39	
6094.00	0.530	85.540	6071.64	-350.37	-199.59	363.83	0.24	
6282.00	0.350	95.240	6259.64	-351.81	-199.57	365.27	0.10	
6408.00	0.530	240.270	6385.64	-351.67	-199.90	365.14	0.67	
6439.00	2.960	255.090	6416.62	-350.75	-200.17	364.25	7.91	
6470.00	6.060	263.840	6447.52	-348.33	-200.56	361.85	10.21	
6502.00	9.300	262.810	6479.23	-344.06	-201.06	357.60	10.13	
6533.00	11.370	259.670	6509.72	-338.53	-201.92	352.11	6.92	
6565.00	12.570	255.310	6541.03	-331.97	-203.37	345.64	4.69	
6596.00	15.580	255.790	6571.09	-324.57	-205.25	338.34	9.72	
6627.00	18.650	254.730	6600.72	-315.62	-207.58	329.52	9.95	
6659.00	21.690	254.500	6630.75	-304.82	-210.51	318.88	9.50	
6690.00	25.510	254.560	6659.15	-292.67	-213.82	306.92	12.32	
6722.00	29.360	255.680	6687.55	-278.21	-217.59	292.67	12.14	
6753.00	32.760	258.760	6714.10	-262.42	-221.11	277.08	12.10	
6785.00	36.950	261.280	6740.36	-244.25	-224.25	259.07	13.84	
6818.00	41.430	261.430	6765.93	-223.48	-227.39	238.46	13.58	
6848.00	44.860	262.830	6787.81	-203.03	-230.19	218.14	11.87	
6879.00	49.020	267.120	6808.98	-180.40	-232.14	195.59	16.80	
6911.00	52.090	269.080	6829.31	-155.71	-232.95	170.90	10.70	
6942.00	52.740	268.770	6848.22	-131.16	-233.41	146.33	2.24	
6974.00	56.670	267.930	6866.70	-105.07	-234.17	120.23	12.47	
7005.00	60.010	266.940	6882.97	-78.69	-235.35	93.88	11.11	



# Actual Wellpath Report

RUBYANNA 13NB-31W AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#09 RUBYANNA 13NB-31W(727'FSL & 225'FEL,SEC.13)
Area	COLORADO	Well	RUBYANNA 13NB-31W
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	RUBYANNA 13NB-31W AWB
Facility	SEC.13-T06N-R67W		

## WELLPATH DATA (119 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
7037.00	60.500	266.320	6898.85	-50.91	-236.99	66.14	2.27	
7068.00	60.740	266.240	6914.06	-23.89	-238.74	39.19	0.81	
7099.00	61.050	265.640	6929.14	3.19	-240.66	12.17	1.96	
7131.00	61.940	265.810	6944.41	31.31	-242.75	-15.87	2.82	
7162.00	65.410	267.960	6958.16	59.09	-244.26	-43.61	12.80	
7194.00	68.200	270.080	6970.76	88.46	-244.75	-73.02	10.63	
7225.00	70.550	269.960	6981.68	117.41	-244.74	-102.03	7.59	
7257.00	72.600	269.480	6991.79	147.72	-244.89	-132.38	6.56	
7288.00	75.200	269.600	7000.39	177.46	-245.13	-162.17	8.40	
7320.00	77.330	269.900	7007.99	208.48	-245.27	-193.25	6.72	
7351.00	79.180	270.490	7014.30	238.76	-245.16	-223.60	6.25	
7383.00	82.000	272.950	7019.53	270.19	-244.21	-255.15	11.63	
7429.00	87.580	277.060	7023.70	315.45	-240.21	-300.75	15.04	
7524.00	90.170	278.240	7025.57	408.58	-227.57	-394.88	3.00	
7618.00	89.960	279.260	7025.46	500.38	-213.27	-487.78	1.11	
7712.00	90.060	278.100	7025.45	592.21	-199.08	-580.71	1.24	
7807.00	89.090	275.900	7026.15	685.56	-187.51	-674.99	2.53	
7901.00	89.840	273.830	7027.03	778.52	-179.53	-768.64	2.34	
7995.00	91.050	269.820	7026.30	872.07	-176.54	-862.57	4.46	
8090.00	91.270	269.070	7024.38	966.91	-177.46	-957.54	0.82	
8184.00	90.550	268.120	7022.88	1060.82	-179.77	-1051.50	1.27	
8278.00	89.400	267.560	7022.92	1154.79	-183.31	-1145.43	1.36	
8372.00	88.790	267.480	7024.41	1248.75	-187.38	-1239.33	0.65	
8466.00	89.040	267.910	7026.19	1342.71	-191.16	-1333.24	0.53	
8560.00	88.110	268.060	7028.53	1436.64	-194.46	-1427.15	1.00	
8655.00	88.110	267.930	7031.66	1531.55	-197.78	-1522.04	0.14	
8749.00	88.170	268.500	7034.71	1625.45	-200.71	-1615.95	0.61	
8843.00	88.450	268.800	7037.48	1719.33	-202.92	-1709.88	0.44	
8937.00	87.510	268.260	7040.80	1813.21	-205.33	-1803.79	1.15	
9031.00	87.650	267.650	7044.76	1907.09	-208.68	-1897.64	0.67	



# Actual Wellpath Report

RUBYANNA 13NB-31W AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#09 RUBYANNA 13NB-31W(727'FSL & 225'FEL,SEC.13)
Area	COLORADO	Well	RUBYANNA 13NB-31W
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	RUBYANNA 13NB-31W AWB
Facility	SEC.13-T06N-R67W		

## WELLPATH DATA (119 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
9125.00	89.280	267.930	7047.28	2001.02	-212.31	-1991.54	1.76	
9220.00	90.000	268.710	7047.88	2095.96	-215.09	-2086.49	1.12	
9314.00	88.610	268.640	7049.02	2189.87	-217.26	-2180.46	1.48	
9408.00	87.590	267.770	7052.14	2283.77	-220.21	-2274.36	1.43	
9503.00	88.760	269.510	7055.16	2378.64	-222.46	-2369.28	2.21	
9597.00	89.260	270.330	7056.79	2472.44	-222.59	-2463.26	1.02	
9692.00	90.180	270.250	7057.25	2567.21	-222.11	-2558.26	0.97	
9786.00	90.370	270.240	7056.80	2661.00	-221.71	-2652.26	0.20	
9880.00	93.570	269.610	7053.57	2754.74	-221.83	-2746.19	3.47	
9975.00	93.160	269.880	7047.99	2849.41	-222.25	-2841.03	0.52	
10069.00	92.820	269.960	7043.09	2943.10	-222.38	-2934.90	0.37	
10164.00	93.230	270.800	7038.08	3037.73	-221.76	-3029.76	0.98	
10258.00	92.710	271.110	7033.21	3131.30	-220.19	-3123.62	0.64	
10352.00	91.170	270.100	7030.02	3224.99	-219.20	-3217.56	1.96	
10447.00	91.200	271.480	7028.06	3319.68	-217.89	-3312.53	1.45	
10541.00	91.540	269.880	7025.81	3413.38	-216.77	-3406.49	1.74	
10636.00	92.590	268.010	7022.39	3508.22	-218.52	-3501.41	2.26	
10730.00	92.430	266.860	7018.27	3602.11	-222.72	-3595.22	1.23	
10824.00	91.690	267.450	7014.89	3696.04	-227.39	-3689.04	1.01	
10919.00	91.050	267.760	7012.62	3790.99	-231.36	-3783.93	0.75	
11013.00	88.760	267.120	7012.78	3884.96	-235.55	-3877.83	2.53	
11108.00	87.590	266.550	7015.80	3979.91	-240.80	-3972.64	1.37	
11202.00	88.720	267.370	7018.83	4073.85	-245.78	-4066.45	1.49	
11296.00	91.300	265.490	7018.81	4167.84	-251.63	-4160.26	3.40	
11390.00	91.940	265.460	7016.15	4261.79	-259.04	-4253.93	0.68	
11485.00	91.450	266.280	7013.34	4356.74	-265.88	-4348.64	1.01	
11579.00	91.950	265.490	7010.56	4450.70	-272.62	-4442.35	0.99	
11643.00	92.350	266.580	7008.15	4514.65	-277.05	-4506.16	1.81	LAST BHI MWD SURVEY
11716.00	92.350	266.580	7005.16	4587.59	-281.40	-4578.96	0.00	PTB



# Actual Wellpath Report

RUBYANNA 13NB-31W AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#09 RUBYANNA 13NB-31W(727'FSL & 225'FEL,SEC.13)
Area	COLORADO	Well	RUBYANNA 13NB-31W
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	RUBYANNA 13NB-31W AWB
Facility	SEC.13-T06N-R67W		

## HOLE & CASING SECTIONS - Ref Wellbore: RUBYANNA 13NB-31W AWB Ref Wellpath: RUBYANNA 13NB-31W 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 Surface	24.00	768.00	744.00	24.00	763.79	-62.27	26.12	-63.11	26.47
8.75in Open Hole	768.00	7478.00	6710.00	763.79	7025.20	-63.11	26.47	-233.93	-349.33
7in Casing Intermediate	24.00	7366.00	7342.00	24.00	7016.94	-62.27	26.12	-244.89	-238.36
6.125in Open Hole	7366.00	11716.00	4350.00	7016.94	7005.16	-244.89	-238.36	-281.40	-4578.96

## TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.13-T6N-R67W HALF SECTION LINE		0.00	105.65	0.00	3185481.27	1419166.81	40°28'55.560"N	104°49'59.556"W	polygon
SEC.13-T6N-R67W LINES		0.00	105.65	0.00	3185481.27	1419166.81	40°28'55.560"N	104°49'59.556"W	polygon
RUBYANNA 13NB-31W BHL ON PLAT REV-1(500'FSL & 460'FEL,SEC.13)		7004.00	-294.67	-4615.14	3180869.45	1418731.82	40°28'51.600"N	104°50'59.280"W	point
RUBYANNA 13NB-31W WAYPOINT #3		7004.00	-283.00	-3750.00	3181734.44	1418749.99	40°28'51.717"N	104°50'48.084"W	point
SEC.13-T6N-R67W HARDLINES (460' SETBACKS)		7014.00	105.65	0.00	3185481.27	1419166.81	40°28'55.560"N	104°49'59.556"W	polygon
RUBYANNA 13NB-31W LANDING POINT		7025.00	-230.00	-274.00	3185209.81	1418829.12	40°28'52.243"N	104°50'03.102"W	point
RUBYANNA 13NB-31W WAYPOINT #1		7035.00	-252.00	-1325.00	3184159.05	1418799.22	40°28'52.026"N	104°50'16.703"W	point
RUBYANNA 13NB-31W WAYPOINT #2		7062.00	-264.00	-2200.00	3183284.19	1418780.64	40°28'51.906"N	104°50'28.026"W	point



# Actual Wellpath Report

RUBYANNA 13NB-31W AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#09 RUBYANNA 13NB-31W(727'FSL & 225'FEL,SEC.13)
Area	COLORADO	Well	RUBYANNA 13NB-31W
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	RUBYANNA 13NB-31W AWB
Facility	SEC.13-T06N-R67W		

## WELLPATH COMPOSITION - Ref Wellbore: RUBYANNA 13NB-31W AWB Ref Wellpath: RUBYANNA 13NB-31W AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
763.00	7383.00	NaviTrak (Standard)	INTEQ/NAVITRAK MWD 8-3/4" <838-7383>	RUBYANNA 13NB-31W AWB
7383.00	11643.00	NaviTrak (Standard)	INTEQ/NAVITRAK MWD 6-1/8" <7429-11643>	RUBYANNA 13NB-31W AWB
11643.00	11716.00	Blind Drilling (std)	Projection to bit	RUBYANNA 13NB-31W AWB



# Actual Wellpath Report

RUBYANNA 13NB-31W AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#09 RUBYANNA 13NB-31W(727'FSL & 225'FEL,SEC.13)
Area	COLORADO	Well	RUBYANNA 13NB-31W
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	RUBYANNA 13NB-31W AWB
Facility	SEC.13-T06N-R67W		

## WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
763.00	10.500	157.240	758.87	TIE ON
11643.00	92.350	266.580	7008.15	LAST BHI MWD SURVEY
11716.00	92.350	266.580	7005.16	PTB