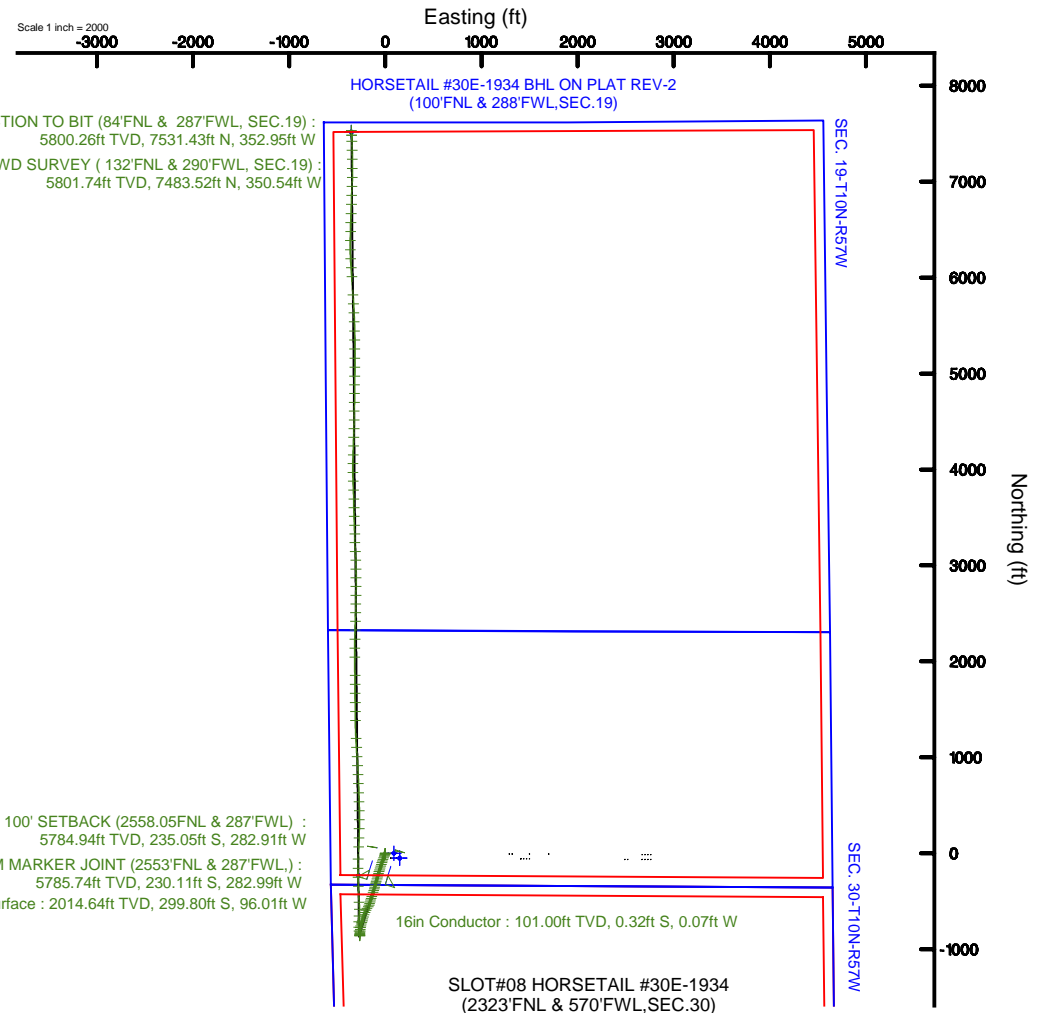
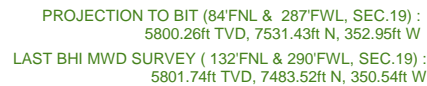


Location:	COLORADO	Slot:	SLOT#08 HORSETAIL #30E-1934 (2323'FNL & 570'FWL,SEC.30)
Field:	WELD COUNTY	Well:	HORSETAIL #30E-1934
Facility:	SEC.30-T10N-R57W	Wellbore:	HORSETAIL #30E-1934 pwb

Plot reference wellpath is HORSETAIL #30E-1934 (REV-A-0) PWP		Grid System: NAD83 / Lambert Colorado SP, Northern Zone (SP1), US feet
True vertical depths are referenced to UNIT 406 (21') (RKB)		~ Wellpath was transformed from a different geoidic datum
Measured depths are referenced to UNIT 406 (21') (RKB)		North Reference: True north
UNIT 406 (21') (RKB) to Mean Sea Level: 4827 feet		Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#08 HORSETAIL #30E-1934 (2323FNL & 570FWSL;SEC.30)) : 0 feet		Depths are in feet
Coordinates are in feet referenced to Slot		Created by: ingmjpm on 2017-01-19
		Database: WellArchitectDB1

Facility Name			Grid East (U.S.)	Grid North (U.S.)	Latitude	Longitude
SEC30-T10N-R57W			3470348.811	1542643.145	40°48'38.040"N	103°48'02.880"W
Spot	Local N (ft)	Local E (ft)	Grid East (U.S.)	Grid North (U.S.)	Latitude	Longitude
SLOT#08 HORSETAIL #306-1934 (2323FNL & 570FWFL-SEC.30)	49.59	-149.18	3470196.711	1542689.869	40°48'38.530"N	103°48'04.820"W
UNIT 406 (21) (R0B) to Mud line (At Slot: SLOT#08 HORSETAIL #306-1934 (2323FNL & 570FWFL-SEC.30))						4527ft
Mean Sea Level to Mud line (At Slot: SLOT#08 HORSETAIL #306-1934 (2323FNL & 570FWFL-SEC.30))						0ft
UNIT 406 (21) (R0B) to Mean Sea Level						4527ft



SLOT#08 HORSETAIL #30E-1934
(2323'FNL & 570'FWL,SEC.30)

LAST BHI MWD SURVEY (132'FNL & 290'FWL, SEC.19) :
91.76° Inc, 13917.00ft MD, 5801.74ft TVD, 7491.72ft VS
PROJECTION TO BIT (84'FNL & 287'FWL, SEC.19) :
91.76° Inc, 13965.00ft MD, 5800.26ft TVD, 7539.70ft VS

HORSETAIL #30E-1934 BHL ON PLAT REV-2 (100'FNL & 288'FWL, SEC.19)

Scale 1 inch = 1500



Actual Wellpath Report

HORSETAIL #30E-1934 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	WHITING OIL & GAS CORPORATION	Slot	SLOT#08 HORSETAIL #30E-1934 (2323'FNL & 570'FWL, SEC.30)
Area	COLORADO	Well	HORSETAIL #30E-1934
Field	WELD COUNTY	Wellbore	HORSETAIL #30E-1934 AWP
Facility	SEC.30-T10N-R57W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.0
North Reference	True	User	Ingmjmr
Scale	1.000005	Report Generated	1/19/2017 at 11:07:21 AM
Convergence at slot	1.10° East	Database/Source file	WellArchitectDB1/HORSETAIL_#30E-1934_AWP.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	49.59	-149.18	3470199.71	1542689.87	40°48'38.530"N	103°48'04.820"W
Facility Reference Pt			3470349.81	1542643.15	40°48'38.040"N	103°48'02.880"W
Field Reference Pt			3471270.16	1558347.59	40°51'13.010"N	103°47'46.990"W

WELLPATH DATUM

Calculation method	Minimum curvature	UNIT 406 (21') (RKB) to Facility Vertical Datum	4827.00ft
Horizontal Reference Pt	Slot	UNIT 406 (21') (RKB) to Mean Sea Level	4827.00ft
Vertical Reference Pt	UNIT 406 (21') (RKB)	UNIT 406 (21') (RKB) to Mud Line at Slot (SLOT#08 HORSETAIL #30E-1934 (2323'FNL & 570'FWL, SEC.30))	4827.00ft
MD Reference Pt	UNIT 406 (21') (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	357.32°



Actual Wellpath Report

HORSETAIL #30E-1934 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	WHITING OIL & GAS CORPORATION	Slot	SLOT#08 HORSETAIL #30E-1934 (2323'FNL & 570'FWL, SEC.30)
Area	COLORADO	Well	HORSETAIL #30E-1934
Field	WELD COUNTY	Wellbore	HORSETAIL #30E-1934 AWB
Facility	SEC.30-T10N-R57W		

WELLPATH DATA (150 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	191.670	0.00	0.00	0.00	0.00	40°48'38.530"N	103°48'04.820"W	0.00	
21.00	0.000	191.670	21.00	0.00	0.00	0.00	40°48'38.530"N	103°48'04.820"W	0.00	
147.00	0.740	191.670	147.00	-0.79	-0.80	-0.16	40°48'38.522"N	103°48'04.822"W	0.59	
237.00	0.940	179.130	236.99	-2.09	-2.10	-0.27	40°48'38.509"N	103°48'04.824"W	0.30	
328.00	1.000	171.750	327.97	-3.63	-3.64	-0.15	40°48'38.494"N	103°48'04.822"W	0.15	
419.00	2.440	203.490	418.93	-6.15	-6.20	-0.80	40°48'38.469"N	103°48'04.830"W	1.84	
510.00	4.910	205.070	509.74	-11.34	-11.50	-3.23	40°48'38.416"N	103°48'04.862"W	2.72	
601.00	6.690	203.050	600.27	-19.56	-19.91	-6.95	40°48'38.333"N	103°48'04.910"W	1.97	
693.00	8.420	201.070	691.47	-30.56	-31.13	-11.47	40°48'38.222"N	103°48'04.969"W	1.90	
784.00	10.680	201.650	781.20	-44.34	-45.18	-16.98	40°48'38.084"N	103°48'05.041"W	2.49	
876.00	12.430	199.160	871.33	-61.30	-62.46	-23.37	40°48'37.913"N	103°48'05.124"W	1.98	
967.00	11.910	198.150	960.29	-79.17	-80.64	-29.51	40°48'37.733"N	103°48'05.204"W	0.62	
1058.00	11.400	197.220	1049.41	-96.40	-98.15	-35.10	40°48'37.560"N	103°48'05.276"W	0.60	
1150.00	12.190	197.290	1139.47	-114.08	-116.11	-40.68	40°48'37.383"N	103°48'05.349"W	0.86	
1241.00	12.480	198.080	1228.37	-132.30	-134.63	-46.59	40°48'37.200"N	103°48'05.426"W	0.37	
1333.00	12.320	198.630	1318.22	-150.74	-153.38	-52.81	40°48'37.014"N	103°48'05.507"W	0.22	
1424.00	12.370	198.710	1407.12	-168.86	-171.81	-59.04	40°48'36.832"N	103°48'05.588"W	0.06	
1516.00	12.930	196.680	1496.88	-187.75	-191.00	-65.15	40°48'36.643"N	103°48'05.667"W	0.78	
1607.00	12.180	194.570	1585.71	-206.52	-210.05	-70.49	40°48'36.455"N	103°48'05.737"W	0.97	
1699.00	11.410	193.880	1675.76	-224.51	-228.28	-75.11	40°48'36.274"N	103°48'05.797"W	0.85	
1792.00	11.720	196.450	1766.88	-242.25	-246.27	-79.99	40°48'36.097"N	103°48'05.860"W	0.65	
1883.00	13.540	196.480	1855.67	-261.05	-265.35	-85.63	40°48'35.908"N	103°48'05.934"W	2.00	
2005.00	12.300	197.040	1974.58	-286.77	-291.47	-93.49	40°48'35.650"N	103°48'06.036"W	1.02	
2123.00	12.070	195.570	2089.92	-310.32	-315.37	-100.49	40°48'35.414"N	103°48'06.127"W	0.33	
2218.00	11.900	194.780	2182.85	-329.10	-334.41	-105.65	40°48'35.226"N	103°48'06.194"W	0.25	
2312.00	11.490	194.350	2274.90	-347.29	-352.85	-110.45	40°48'35.044"N	103°48'06.256"W	0.45	
2406.00	10.630	191.790	2367.15	-364.64	-370.41	-114.54	40°48'34.870"N	103°48'06.310"W	1.05	
2500.00	11.830	197.210	2459.35	-382.10	-388.10	-119.16	40°48'34.695"N	103°48'06.370"W	1.70	
2595.00	13.910	199.500	2551.96	-401.83	-408.17	-125.85	40°48'34.497"N	103°48'06.457"W	2.25	
2690.00	13.670	199.550	2644.22	-422.79	-429.51	-133.42	40°48'34.286"N	103°48'06.555"W	0.25	



Actual Wellpath Report

HORSETAIL #30E-1934 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	WHITING OIL & GAS CORPORATION	Slot	SLOT#08 HORSETAIL #30E-1934 (2323°FNL & 570°FWL, SEC.30)
Area	COLORADO	Well	HORSETAIL #30E-1934
Field	WELD COUNTY	Wellbore	HORSETAIL #30E-1934 AWP
Facility	SEC.30-T10N-R57W		

WELLPATH DATA (150 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2784.00	12.910	197.330	2735.71	-442.94	-450.00	-140.27	40°48'34.084"N	103°48'06.644"W	0.97	
2878.00	12.320	198.550	2827.44	-462.16	-469.53	-146.59	40°48'33.891"N	103°48'06.726"W	0.69	
2973.00	11.870	199.160	2920.33	-480.67	-488.37	-153.02	40°48'33.704"N	103°48'06.810"W	0.49	
3067.00	10.460	197.800	3012.55	-497.64	-505.63	-158.80	40°48'33.534"N	103°48'06.885"W	1.53	
3161.00	10.210	188.450	3105.03	-513.81	-521.99	-162.63	40°48'33.372"N	103°48'06.935"W	1.80	
3255.00	11.800	208.000	3197.33	-530.26	-538.73	-168.37	40°48'33.207"N	103°48'07.010"W	4.29	
3350.00	12.720	207.520	3290.16	-547.65	-556.58	-177.76	40°48'33.030"N	103°48'07.132"W	0.97	
3444.00	13.930	215.580	3381.64	-565.48	-574.96	-189.13	40°48'32.849"N	103°48'07.280"W	2.36	
3538.00	14.380	210.090	3472.79	-584.18	-594.26	-201.57	40°48'32.658"N	103°48'07.441"W	1.51	
3632.00	16.570	198.120	3563.40	-606.53	-617.11	-211.59	40°48'32.432"N	103°48'07.572"W	4.11	
3726.00	15.410	197.440	3653.76	-630.79	-641.77	-219.50	40°48'32.189"N	103°48'07.674"W	1.25	
3821.00	13.770	196.070	3745.69	-653.35	-664.67	-226.42	40°48'31.962"N	103°48'07.764"W	1.76	
3915.00	12.250	197.490	3837.28	-673.31	-684.94	-232.51	40°48'31.762"N	103°48'07.844"W	1.65	
4010.00	11.140	201.070	3930.30	-691.17	-703.11	-238.84	40°48'31.583"N	103°48'07.926"W	1.40	
4104.00	10.560	198.990	4022.62	-707.48	-719.73	-244.91	40°48'31.418"N	103°48'08.005"W	0.74	
4199.00	12.090	194.380	4115.77	-725.09	-737.60	-250.21	40°48'31.242"N	103°48'08.074"W	1.87	
4292.00	11.870	192.500	4206.75	-743.63	-756.37	-254.70	40°48'31.056"N	103°48'08.132"W	0.48	
4386.00	11.380	189.110	4298.82	-762.04	-774.97	-258.26	40°48'30.873"N	103°48'08.178"W	0.89	
4481.00	10.240	184.530	4392.14	-779.59	-792.64	-260.41	40°48'30.698"N	103°48'08.206"W	1.50	
4575.00	9.520	185.680	4484.74	-795.57	-808.71	-261.84	40°48'30.539"N	103°48'08.225"W	0.79	
4669.00	8.830	185.310	4577.54	-810.40	-823.63	-263.28	40°48'30.392"N	103°48'08.244"W	0.74	
4763.00	7.170	183.800	4670.62	-823.38	-836.66	-264.33	40°48'30.263"N	103°48'08.257"W	1.78	
4858.00	4.540	187.970	4765.12	-832.97	-846.30	-265.25	40°48'30.168"N	103°48'08.269"W	2.80	
4952.00	3.530	188.310	4858.88	-839.46	-852.85	-266.18	40°48'30.103"N	103°48'08.282"W	1.07	
5047.00	2.830	183.760	4953.74	-844.66	-858.09	-266.76	40°48'30.051"N	103°48'08.289"W	0.78	
5140.00	1.970	101.350	5046.68	-847.33	-860.69	-265.34	40°48'30.026"N	103°48'08.271"W	3.47	
5235.00	5.590	0.450	5141.52	-843.11	-856.38	-263.70	40°48'30.068"N	103°48'08.249"W	6.60	
5329.00	14.940	341.210	5233.93	-826.85	-840.29	-267.58	40°48'30.227"N	103°48'08.300"W	10.46	
5423.00	22.470	353.310	5322.93	-797.24	-810.93	-273.59	40°48'30.517"N	103°48'08.378"W	8.97	
5518.00	30.360	359.350	5407.96	-755.06	-768.82	-275.98	40°48'30.933"N	103°48'08.409"W	8.76	



Actual Wellpath Report

HORSETAIL #30E-1934 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	WHITING OIL & GAS CORPORATION	Slot	SLOT#08 HORSETAIL #30E-1934 (2323'FNL & 570'FWL, SEC.30)
Area	COLORADO	Well	HORSETAIL #30E-1934
Field	WELD COUNTY	Wellbore	HORSETAIL #30E-1934 AWB
Facility	SEC.30-T10N-R57W		

WELLPATH DATA (150 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5612.00	39.250	1.160	5485.07	-701.54	-715.22	-275.64	40°48'31.463"N	103°48'08.405"W	9.52	
5706.00	43.990	5.340	5555.34	-639.50	-652.94	-272.00	40°48'32.078"N	103°48'08.357"W	5.84	
5801.00	47.370	359.320	5621.73	-571.86	-585.10	-269.34	40°48'32.749"N	103°48'08.323"W	5.76	
5895.00	56.760	355.950	5679.47	-497.82	-511.13	-272.54	40°48'33.480"N	103°48'08.364"W	10.38	
5989.00	64.440	357.860	5725.58	-415.99	-429.42	-276.90	40°48'34.287"N	103°48'08.421"W	8.36	
6083.00	72.910	357.950	5759.73	-328.51	-342.00	-280.10	40°48'35.151"N	103°48'08.463"W	9.01	
6178.00	79.520	358.870	5782.36	-236.32	-249.82	-282.65	40°48'36.062"N	103°48'08.496"W	7.02	
6193.00†	80.626	359.095	5784.94	-221.55	-235.05	-282.91	40°48'36.208"N	103°48'08.499"W	7.52	CROSSED 100' SETBACK (2558.05FNL & 287'FWL)
6198.00†	80.994	359.170	5785.74	-216.62	-230.11	-282.99	40°48'36.256"N	103°48'08.500"W	7.52	BOTTOM MARKER JOINT (2553'FNL & 287'FWL.)
6272.00	86.450	0.260	5793.83	-143.15	-156.58	-283.35	40°48'36.983"N	103°48'08.505"W	7.52	
6367.00	91.480	1.530	5795.55	-48.39	-61.64	-281.86	40°48'37.921"N	103°48'08.486"W	5.46	
6496.00	90.860	2.520	5792.91	80.15	67.25	-277.31	40°48'39.194"N	103°48'08.426"W	0.91	
6590.00	90.620	1.960	5791.70	173.79	161.17	-273.63	40°48'40.122"N	103°48'08.379"W	0.65	
6685.00	88.060	0.780	5792.79	268.54	256.12	-271.36	40°48'41.061"N	103°48'08.349"W	2.97	
6779.00	89.110	0.770	5795.11	362.34	350.08	-270.09	40°48'41.989"N	103°48'08.333"W	1.12	
6872.00	87.900	358.560	5797.54	455.22	443.04	-270.63	40°48'42.908"N	103°48'08.340"W	2.71	
6967.00	89.230	358.490	5799.92	550.17	537.98	-273.08	40°48'43.846"N	103°48'08.371"W	1.40	
7061.00	90.430	358.310	5800.20	644.15	631.94	-275.70	40°48'44.774"N	103°48'08.406"W	1.29	
7155.00	89.820	357.410	5799.99	738.14	725.87	-279.21	40°48'45.702"N	103°48'08.451"W	1.16	
7249.00	91.360	357.320	5799.02	832.14	819.77	-283.53	40°48'46.630"N	103°48'08.507"W	1.64	
7343.00	87.160	357.000	5800.24	926.11	913.62	-288.19	40°48'47.557"N	103°48'08.568"W	4.48	
7437.00	87.780	356.980	5804.39	1020.01	1007.40	-293.12	40°48'48.484"N	103°48'08.632"W	0.66	
7532.00	88.580	356.710	5807.40	1114.96	1102.21	-298.35	40°48'49.421"N	103°48'08.700"W	0.89	
7626.00	89.910	356.610	5808.64	1208.95	1196.04	-303.82	40°48'50.348"N	103°48'08.771"W	1.42	
7814.00	88.460	359.910	5811.32	1396.87	1383.90	-309.53	40°48'52.204"N	103°48'08.846"W	1.92	
7909.00	89.290	359.490	5813.18	1491.77	1478.88	-310.03	40°48'53.143"N	103°48'08.852"W	0.98	
8002.00	90.150	358.700	5813.64	1584.72	1571.87	-311.50	40°48'54.061"N	103°48'08.871"W	1.26	
8096.00	90.310	359.470	5813.26	1678.67	1665.85	-313.00	40°48'54.990"N	103°48'08.891"W	0.84	
8191.00	89.320	0.300	5813.57	1773.58	1760.85	-313.19	40°48'55.929"N	103°48'08.893"W	1.36	
8285.00	89.660	358.450	5814.40	1867.51	1854.84	-314.21	40°48'56.857"N	103°48'08.907"W	2.00	



Actual Wellpath Report

HORSETAIL #30E-1934 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	WHITING OIL & GAS CORPORATION	Slot	SLOT#08 HORSETAIL #30E-1934 (2323°FNL & 570°FWL, SEC.30)
Area	COLORADO	Well	HORSETAIL #30E-1934
Field	WELD COUNTY	Wellbore	HORSETAIL #30E-1934 AWP
Facility	SEC.30-T10N-R57W		

WELLPATH DATA (150 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8473.00	90.460	359.380	5814.21	2055.43	2042.80	-317.77	40°48'58.715"N	103°48'08.953"W	0.65	
8568.00	90.340	1.470	5813.54	2150.28	2137.79	-317.07	40°48'59.653"N	103°48'08.944"W	2.20	
8662.00	91.820	0.900	5811.77	2244.05	2231.75	-315.13	40°49'00.582"N	103°48'08.918"W	1.69	
8757.00	89.410	1.730	5810.75	2338.81	2326.71	-312.95	40°49'01.520"N	103°48'08.890"W	2.68	
8847.00	90.310	1.500	5810.97	2428.55	2416.67	-310.41	40°49'02.409"N	103°48'08.857"W	1.03	
8937.00	88.800	1.210	5811.67	2518.32	2506.64	-308.28	40°49'03.298"N	103°48'08.830"W	1.71	
9028.00	90.120	1.290	5812.53	2609.10	2597.62	-306.30	40°49'04.197"N	103°48'08.804"W	1.45	
9119.00	90.890	0.180	5811.73	2699.94	2688.60	-305.13	40°49'05.096"N	103°48'08.789"W	1.48	
9211.00	88.950	0.220	5811.86	2791.81	2780.60	-304.81	40°49'06.005"N	103°48'08.784"W	2.11	
9301.00	89.010	359.850	5813.46	2881.70	2870.58	-304.75	40°49'06.894"N	103°48'08.784"W	0.42	
9393.00	90.030	359.630	5814.23	2973.61	2962.58	-305.17	40°49'07.803"N	103°48'08.789"W	1.13	
9485.00	90.680	357.570	5813.66	3065.58	3054.54	-307.42	40°49'08.712"N	103°48'08.818"W	2.35	
9576.00	90.550	356.790	5812.68	3156.58	3145.43	-311.89	40°49'09.610"N	103°48'08.877"W	0.87	
9668.00	92.840	358.580	5809.96	3248.52	3237.30	-315.61	40°49'10.517"N	103°48'08.925"W	3.16	
9759.00	89.660	358.700	5807.98	3339.47	3328.24	-317.77	40°49'11.416"N	103°48'08.953"W	3.50	
9850.00	90.030	358.580	5808.22	3430.44	3419.22	-319.93	40°49'12.315"N	103°48'08.981"W	0.43	
9941.00	90.430	358.210	5807.86	3521.42	3510.18	-322.48	40°49'13.214"N	103°48'09.014"W	0.60	
10033.00	91.050	358.350	5806.67	3613.40	3602.13	-325.24	40°49'14.122"N	103°48'09.050"W	0.69	
10124.00	90.370	359.040	5805.54	3704.37	3693.10	-327.31	40°49'15.021"N	103°48'09.077"W	1.06	
10216.00	89.510	358.450	5805.64	3796.34	3785.08	-329.33	40°49'15.930"N	103°48'09.103"W	1.13	
10308.00	89.970	356.990	5806.05	3888.33	3877.00	-332.99	40°49'16.838"N	103°48'09.151"W	1.66	
10400.00	90.590	359.100	5805.60	3980.32	3968.94	-336.12	40°49'17.747"N	103°48'09.192"W	2.39	
10493.00	91.630	1.310	5803.80	4073.18	4061.91	-335.79	40°49'18.665"N	103°48'09.188"W	2.63	
10584.00	90.340	2.150	5802.24	4163.89	4152.86	-333.04	40°49'19.564"N	103°48'09.152"W	1.69	
10675.00	91.230	1.210	5800.99	4254.62	4243.81	-330.38	40°49'20.463"N	103°48'09.117"W	1.42	
10765.00	90.090	1.850	5799.96	4344.37	4333.77	-327.97	40°49'21.352"N	103°48'09.086"W	1.45	
10856.00	90.620	1.680	5799.39	4435.09	4424.72	-325.17	40°49'22.250"N	103°48'09.050"W	0.61	
10947.00	91.320	0.810	5797.85	4525.86	4515.68	-323.19	40°49'23.149"N	103°48'09.024"W	1.23	
11039.00	92.100	0.390	5795.11	4617.67	4607.64	-322.23	40°49'24.058"N	103°48'09.011"W	0.96	
11130.00	89.720	0.460	5793.66	4708.52	4698.62	-321.56	40°49'24.957"N	103°48'09.003"W	2.62	



Actual Wellpath Report

HORSETAIL #30E-1934 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	WHITING OIL & GAS CORPORATION	Slot	SLOT#08 HORSETAIL #30E-1934 (2323'FNL & 570'FWL, SEC.30)
Area	COLORADO	Well	HORSETAIL #30E-1934
Field	WELD COUNTY	Wellbore	HORSETAIL #30E-1934 AWP
Facility	SEC.30-T10N-R57W		

WELLPATH DATA (150 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11222.00	88.950	0.730	5794.73	4800.36	4790.61	-320.60	40°49'25.866"N	103°48'08.990"W	0.89	
11313.00	89.170	0.730	5796.22	4891.19	4881.59	-319.44	40°49'26.764"N	103°48'08.975"W	0.24	
11405.00	90.550	0.560	5796.45	4983.03	4973.58	-318.41	40°49'27.673"N	103°48'08.962"W	1.51	
11496.00	92.250	0.490	5794.22	5073.86	5064.54	-317.57	40°49'28.572"N	103°48'08.951"W	1.87	
11591.00	88.860	359.250	5793.30	5168.74	5159.52	-317.79	40°49'29.511"N	103°48'08.954"W	3.80	
11686.00	87.720	0.670	5796.14	5263.59	5254.48	-317.85	40°49'30.449"N	103°48'08.955"W	1.92	
11780.00	88.740	359.180	5799.04	5357.45	5348.43	-317.98	40°49'31.377"N	103°48'08.956"W	1.92	
11875.00	89.510	358.680	5800.49	5452.40	5443.40	-319.75	40°49'32.316"N	103°48'08.979"W	0.97	
11969.00	90.590	357.810	5800.41	5546.38	5537.35	-322.63	40°49'33.244"N	103°48'09.017"W	1.48	
12064.00	91.480	357.010	5798.69	5641.37	5632.24	-326.92	40°49'34.182"N	103°48'09.073"W	1.26	
12158.00	89.910	357.600	5797.55	5735.36	5726.12	-331.34	40°49'35.109"N	103°48'09.130"W	1.78	
12252.00	88.830	356.560	5798.59	5829.35	5819.99	-336.13	40°49'36.037"N	103°48'09.192"W	1.59	
12441.00	88.520	356.650	5802.96	6018.28	6008.61	-347.32	40°49'37.900"N	103°48'09.338"W	0.17	
12534.00	88.700	355.310	5805.21	6111.23	6101.35	-353.84	40°49'38.817"N	103°48'09.423"W	1.45	
12629.00	90.520	357.510	5805.86	6206.20	6196.15	-359.78	40°49'39.754"N	103°48'09.500"W	3.01	
12723.00	90.400	358.930	5805.11	6300.19	6290.10	-362.70	40°49'40.682"N	103°48'09.538"W	1.52	
12818.00	90.620	1.580	5804.26	6395.05	6385.09	-362.28	40°49'41.620"N	103°48'09.533"W	2.80	
12912.00	91.940	0.720	5802.16	6488.81	6479.05	-360.40	40°49'42.549"N	103°48'09.508"W	1.68	
13006.00	90.520	2.030	5800.14	6582.55	6572.99	-358.14	40°49'43.477"N	103°48'09.479"W	2.06	
13100.00	88.370	2.230	5801.05	6676.21	6666.92	-354.65	40°49'44.405"N	103°48'09.433"W	2.30	
13195.00	89.410	1.780	5802.89	6770.87	6761.84	-351.32	40°49'45.343"N	103°48'09.390"W	1.19	
13289.00	90.830	1.350	5802.70	6864.61	6855.80	-348.76	40°49'46.271"N	103°48'09.357"W	1.58	
13383.00	88.060	1.780	5803.61	6958.34	6949.75	-346.19	40°49'47.200"N	103°48'09.323"W	2.98	
13477.00	89.080	0.630	5805.95	7052.09	7043.70	-344.21	40°49'48.128"N	103°48'09.298"W	1.63	
13571.00	90.590	0.060	5806.22	7145.96	7137.69	-343.65	40°49'49.057"N	103°48'09.290"W	1.72	
13666.00	92.340	359.600	5803.79	7240.83	7232.66	-343.93	40°49'49.995"N	103°48'09.294"W	1.90	
13760.00	89.110	358.880	5802.60	7334.76	7326.63	-345.18	40°49'50.924"N	103°48'09.310"W	3.52	
13854.00	90.460	357.910	5802.96	7428.74	7420.59	-347.81	40°49'51.852"N	103°48'09.345"W	1.77	
13917.00	91.760	357.120	5801.74	7491.72	7483.52	-350.54	40°49'52.474"N	103°48'09.380"W	2.41	LAST BHI MWD SURVEY (132'FNL & 290'FWL, SEC.19)
13965.00	91.760	357.120	5800.26	7539.70	7531.43	-352.95	40°49'52.947"N	103°48'09.411"W	0.00	PROJECTION TO BIT (84'FNL & 287'FWL, SEC.19)

HOLE & CASING SECTIONS - Ref Wellbore: HORSETAIL #30E-1934 AWP Ref Wellpath: HORSETAIL #30E-1934 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]
16in Conductor	21.00	101.00	80.00	21.00	101.00	0.00	0.00	-0.32	-0.07
13.5in Open Hole	21.00	2060.00	2039.00	21.00	2028.33	0.00	0.00	-302.64	-96.85
9.625in Casing Surface	21.00	2046.00	2025.00	21.00	2014.64	0.00	0.00	-299.80	-96.01
8.5in Open Hole	2060.00	13965.00	11905.00	2028.33	5800.26	-302.64	-96.85	7531.43	-352.95



Actual Wellpath Report

HORSETAIL #30E-1934 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	WHITING OIL & GAS CORPORATION	Slot	SLOT#08 HORSETAIL #30E-1934 (2323'FNL & 570'FWL,SEC.30)
Area	COLORADO	Well	HORSETAIL #30E-1934
Field	WELD COUNTY	Wellbore	HORSETAIL #30E-1934 AWB
Facility	SEC.30-T10N-R57W		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC. 19-T10N-R57W	0.00	0.00	89.97	3470289.66	1542691.59	40°48'38.530"N	103°48'03.650"W	polygon
SEC. 30-T10N-R57W NORTHERN	0.00	-49.59	149.18	3470349.81	1542643.15	40°48'38.040"N	103°48'02.880"W	polygon
SEC. 30-T10N-R57W SOUTHERN	0.00	-49.59	149.18	3470349.81	1542643.15	40°48'38.040"N	103°48'02.880"W	polygon
SEC. 31-T10N-R57W	0.00	-49.59	149.18	3470349.81	1542643.15	40°48'38.040"N	103°48'02.880"W	polygon
HORSETAIL #30E-1903 NORTHERN SETBACKS 100'N/S/E & 500'W	5600.00	0.00	89.97	3470289.66	1542691.59	40°48'38.530"N	103°48'03.650"W	polygon
HORSETAIL #30E SOUTHERN SETBACKS (100' N/S/E 100' & 500' W)	5606.00	-49.59	149.18	3470349.81	1542643.15	40°48'38.040"N	103°48'02.880"W	polygon
HORSETAIL #30E-1934 BHL ON PLAT (100'FNL & 288'FWL,SEC.19,REV-1)	5735.00	7515.51	-352.07	3469703.74	1550197.28	40°49'52.790"N	103°48'09.400"W	point
HORSETAIL #30E-1934 BHL ON PLAT REV-2 (100'FNL & 288'FWL,SEC.19)	5800.00	7515.51	-352.07	3469703.74	1550197.28	40°49'52.790"N	103°48'09.400"W	point
HORSETAIL #30E-1934 LP REV-1 (2553'FNL & 290'FWL SEC.30)	5800.00	-230.02	-279.86	3469924.31	1542454.53	40°48'36.257"N	103°48'08.459"W	point

WELLPATH COMPOSITION - Ref Wellbore: HORSETAIL #30E-1934 AWB Ref Wellpath: HORSETAIL #30E-1934 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
21.00	2005.00	Custom BHI NaviTrak (IFR1, Standard Rotating, SAG) (Rockies 0.03Gt model)	BHI NAVITRAK MWD SURCON IFR & SAG 13 1/2"<147-2005>	HORSETAIL #30E-1934 AWB
2005.00	13917.00	Custom BHI NaviTrak (IFR1, Standard Rotating, SAG) (Rockies 0.03Gt model)	BHI NAVITRAK MWD SURCON IFR & SAG 8 1/2" <2123-13917>	HORSETAIL #30E-1934 AWB
13917.00	13965.00	Blind Drilling (std)	Projection to bit	HORSETAIL #30E-1934 AWB



Actual Wellpath Report

HORSETAIL #30E-1934 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	WHITING OIL & GAS CORPORATION	Slot	SLOT#08 HORSETAIL #30E-1934 (2323'FNL & 570'FWL, SEC.30)
Area	COLORADO	Well	HORSETAIL #30E-1934
Field	WELD COUNTY	Wellbore	HORSETAIL #30E-1934 AWB
Facility	SEC.30-T10N-R57W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
6193.00	80.626	359.095	5784.94	CROSSED 100' SETBACK (2558.05FNL & 287'FWL)
6198.00	80.994	359.170	5785.74	BOTTOM MARKER JOINT (2553'FNL & 287'FWL,)
13917.00	91.760	357.120	5801.74	LAST BHI MWD SURVEY (132'FNL & 290'FWL, SEC.19)
13965.00	91.760	357.120	5800.26	PROJECTION TO BIT (84'FNL & 287'FWL, SEC.19)