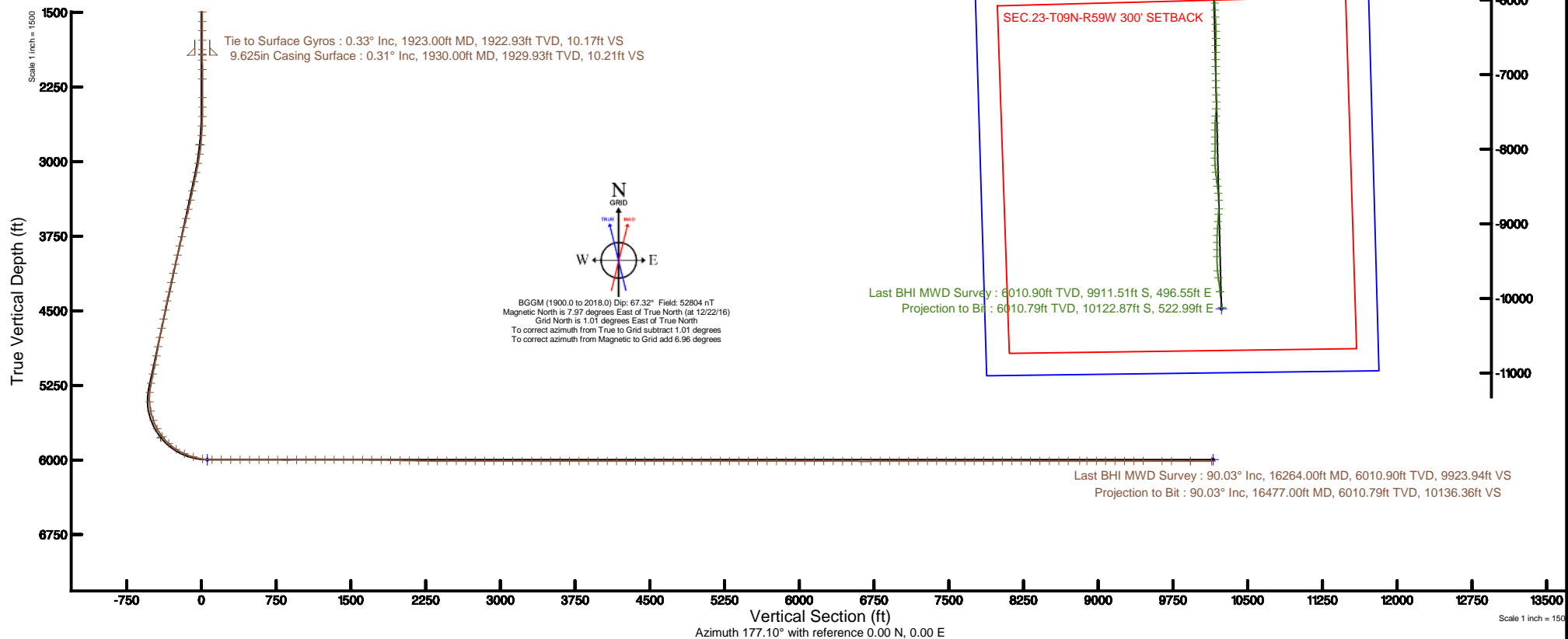


Location:	COLORADO	Slot:	SLOT#03 EARP FEDERAL LC23-745 (363'FSL & 2360'FEL, SEC.11)
Field:	WELD COUNTY (NOBLE NAD 83 GRID)	Well:	EARP FEDERAL LC23-745
Facility:	SEC.11-T09N-R59W	Wellbore:	EARP FEDERAL LC23-745 PWB
Plot reference wellpath is EARP FEDERAL LC23-745 PWP (REV-C.0)		Grid System: NAD83 / Lambert Colorado SP, Northern Zone (601), US feet	
True vertical depths are referenced to H&P 524 (30'KB) (RKB)		* = Wellpath was transformed from a different geodetic datum	
Measured depths are referenced to H&P 524 (30'KB) (RKB)		North Reference: Grid north	
H&P 524 (30'KB) (RKB) to Mean Sea Level: 4975 feet		Scale: True distance	
Mean Sea Level to Mud line (At Slot: SLOT#03 EARP FEDERAL LC23-745 (363'FSL & 2360'FEL, SEC.11)): 0 feet		Depths are in feet	
Coordinates are in feet referenced to Slot		Created by: cookdianm on 2017-01-11	
		Database: WA_DEN_Denver_Defn	



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#03 EARP FEDERAL LC23-745 (363'FSL & 2360'FEL, SEC.11)
Area	COLORADO	Well	EARP FEDERAL LC23-745
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EARP FEDERAL LC23-745 AWP
Facility	SEC.11-T09N-R59W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Cookdanm
Scale	0.999996	Report Generated	1/11/17 at 12:48:16 PM
Convergence at slot	1.01° East	Database/Source file	WA_DEN_Denver_Defn/EARP_FEDERAL_LC23-745_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	3430932.81	1523209.09	40°45'33.192"N	103°56'39.840"W
Facility Reference Pt			3430932.81	1523209.09	40°45'33.192"N	103°56'39.840"W
Field Reference Pt			3000000.00	4454105.15	48°46'34.315"N	105°30'00.000"W

WELLPATH DATUM			
Calculation method	Minimum curvature	H&P 524 (30'KB) (RKB) to Facility Vertical Datum	4975.00ft
Horizontal Reference Pt	Slot	H&P 524 (30'KB) (RKB) to Mean Sea Level	4975.00ft
Vertical Reference Pt	H&P 524 (30'KB) (RKB)	H&P 524 (30'KB) (RKB) to Mud Line at Slot (SLOT#03 EARP FEDERAL LC23-745 (363'FSL & 2360'FEL, SEC.11))	4975.00ft
MD Reference Pt	H&P 524 (30'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	177.10°

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#03 EARP FEDERAL LC23-745 (363'FSL & 2360'FEL, SEC.11)
Area	COLORADO	Well	EARP FEDERAL LC23-745
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EARP FEDERAL LC23-745 AWB
Facility	SEC.11-T09N-R59W		

WELLPATH DATA (151 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
1923.00	0.330	167.710	1922.93	10.17	-9.90	5.56	40°45'33.093"N	103°56'39.770"W	0.15	Tie to Surface Gyros
1979.00	0.490	238.450	1978.93	10.44	-10.18	5.39	40°45'33.090"N	103°56'39.772"W	0.88	
2074.00	0.510	260.650	2073.93	10.68	-10.46	4.63	40°45'33.088"N	103°56'39.782"W	0.20	
2169.00	0.070	188.050	2168.93	10.79	-10.59	4.20	40°45'33.087"N	103°56'39.788"W	0.52	
2358.00	0.130	111.200	2357.93	10.99	-10.78	4.39	40°45'33.085"N	103°56'39.785"W	0.07	
2453.00	0.260	163.650	2452.93	11.24	-11.03	4.55	40°45'33.082"N	103°56'39.783"W	0.22	
2548.00	1.120	22.500	2547.92	10.61	-10.38	4.97	40°45'33.089"N	103°56'39.778"W	1.40	
2642.00	2.450	25.550	2641.87	8.02	-7.71	6.18	40°45'33.115"N	103°56'39.761"W	1.42	
2737.00	4.300	21.670	2736.70	2.99	-2.57	8.37	40°45'33.165"N	103°56'39.732"W	1.96	
2832.00	6.840	19.990	2831.25	-5.46	6.06	11.62	40°45'33.250"N	103°56'39.688"W	2.68	
2926.00	9.310	21.540	2924.31	-17.54	18.39	16.33	40°45'33.371"N	103°56'39.624"W	2.64	
3021.00	11.170	21.880	3017.79	-32.89	34.08	22.58	40°45'33.525"N	103°56'39.539"W	1.96	
3116.00	12.500	20.370	3110.77	-50.69	52.26	29.59	40°45'33.703"N	103°56'39.444"W	1.44	
3211.00	13.400	21.420	3203.35	-70.17	72.14	37.19	40°45'33.898"N	103°56'39.340"W	0.98	
3306.00	13.420	24.720	3295.76	-89.97	92.40	45.82	40°45'34.097"N	103°56'39.224"W	0.81	
3400.00	13.490	24.650	3387.18	-109.35	112.28	54.95	40°45'34.292"N	103°56'39.100"W	0.08	
3495.00	14.020	17.110	3479.47	-129.99	133.35	62.96	40°45'34.499"N	103°56'38.992"W	1.97	
3590.00	14.060	7.040	3571.64	-152.17	155.80	67.76	40°45'34.720"N	103°56'38.924"W	2.57	
3684.00	13.330	354.890	3662.99	-174.25	177.93	68.20	40°45'34.938"N	103°56'38.913"W	3.15	
3779.00	12.930	354.990	3755.51	-195.82	199.43	66.29	40°45'35.151"N	103°56'38.933"W	0.42	
3873.00	13.070	1.630	3847.10	-216.92	220.53	65.68	40°45'35.359"N	103°56'38.936"W	1.60	
3968.00	13.520	8.210	3939.56	-238.53	242.26	67.57	40°45'35.574"N	103°56'38.907"W	1.66	
4063.00	13.720	10.640	4031.89	-260.38	264.32	71.23	40°45'35.791"N	103°56'38.854"W	0.64	
4157.00	13.510	14.380	4123.25	-281.70	285.92	76.02	40°45'36.004"N	103°56'38.787"W	0.96	
4252.00	13.530	19.450	4215.62	-302.57	307.14	82.47	40°45'36.212"N	103°56'38.698"W	1.25	
4347.00	13.570	22.070	4307.98	-322.95	327.95	90.36	40°45'36.416"N	103°56'38.591"W	0.65	
4442.00	13.390	24.580	4400.36	-342.82	348.28	99.13	40°45'36.616"N	103°56'38.473"W	0.64	
4536.00	13.420	28.090	4491.80	-361.82	367.80	108.79	40°45'36.807"N	103°56'38.343"W	0.87	
4630.00	13.440	29.650	4583.23	-380.38	386.92	119.33	40°45'36.994"N	103°56'38.201"W	0.39	
4725.00	13.470	28.980	4675.62	-399.08	406.20	130.15	40°45'37.182"N	103°56'38.056"W	0.17	

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#03 EARP FEDERAL LC23-745 (363'FSL & 2360'FEL, SEC.11)
Area	COLORADO	Well	EARP FEDERAL LC23-745
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EARP FEDERAL LC23-745 AWP
Facility	SEC.11-T09N-R59W		

WELLPATH DATA (151 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4819.00	12.880	33.310	4767.15	-416.83	424.53	141.21	40°45'37.362"N	103°56'37.908"W	1.22	
4914.00	13.300	35.570	4859.68	-433.93	442.27	153.38	40°45'37.535"N	103°56'37.746"W	0.70	
5009.00	13.260	35.350	4952.14	-451.04	460.04	166.04	40°45'37.708"N	103°56'37.578"W	0.07	
5103.00	13.280	32.890	5043.63	-468.27	477.90	178.14	40°45'37.883"N	103°56'37.416"W	0.60	
5198.00	13.310	30.420	5136.09	-486.25	496.49	189.60	40°45'38.064"N	103°56'37.263"W	0.60	
5293.00	13.370	28.060	5228.53	-504.81	515.62	200.31	40°45'38.251"N	103°56'37.120"W	0.58	
5387.00	8.390	45.000	5320.83	-518.74	530.07	210.28	40°45'38.392"N	103°56'36.987"W	6.24	
5482.00	5.020	138.040	5415.38	-520.16	531.88	217.98	40°45'38.409"N	103°56'36.887"W	10.52	
5577.00	11.720	172.410	5509.36	-507.30	519.21	222.04	40°45'38.283"N	103°56'36.837"W	8.51	
5671.00	19.110	180.710	5599.93	-482.39	494.32	223.11	40°45'38.037"N	103°56'36.828"W	8.19	
5765.00	29.380	177.880	5685.53	-443.87	455.79	223.77	40°45'37.656"N	103°56'36.829"W	10.99	
5860.00	37.580	176.460	5764.70	-391.51	403.50	226.43	40°45'37.139"N	103°56'36.806"W	8.67	
5954.00	47.070	179.000	5834.12	-328.31	340.33	228.81	40°45'36.515"N	103°56'36.790"W	10.26	
6049.00	57.360	180.070	5892.25	-253.40	265.36	229.37	40°45'35.774"N	103°56'36.799"W	10.87	
6144.00	66.300	179.150	5937.05	-169.82	181.70	229.96	40°45'34.947"N	103°56'36.811"W	9.45	
6238.00	73.520	176.910	5969.32	-81.61	93.53	233.03	40°45'34.076"N	103°56'36.791"W	8.00	
6333.00	81.220	174.620	5990.08	10.99	1.16	239.90	40°45'33.162"N	103°56'36.723"W	8.44	
6428.00	89.260	175.090	5997.96	105.51	-93.05	248.38	40°45'32.230"N	103°56'36.634"W	8.48	
6522.00	90.120	179.500	5998.47	199.48	-186.92	252.82	40°45'31.302"N	103°56'36.598"W	4.78	
6617.00	90.000	182.840	5998.37	294.23	-281.89	250.88	40°45'30.364"N	103°56'36.645"W	3.52	
6712.00	89.940	179.660	5998.42	388.97	-376.85	248.81	40°45'29.426"N	103°56'36.693"W	3.35	
6806.00	89.750	176.850	5998.67	482.94	-470.80	251.67	40°45'28.497"N	103°56'36.678"W	3.00	
6901.00	89.820	176.420	5999.03	577.93	-565.63	257.24	40°45'27.559"N	103°56'36.627"W	0.46	
6996.00	89.910	176.290	5999.25	672.93	-660.44	263.28	40°45'26.622"N	103°56'36.570"W	0.17	
7090.00	89.660	176.390	5999.61	766.92	-754.25	269.28	40°45'25.694"N	103°56'36.513"W	0.29	
7185.00	90.060	177.060	5999.84	861.91	-849.09	274.71	40°45'24.756"N	103°56'36.464"W	0.82	
7279.00	90.340	175.590	5999.51	955.90	-942.89	280.74	40°45'23.828"N	103°56'36.408"W	1.59	
7374.00	89.940	176.780	5999.28	1050.89	-1037.68	287.06	40°45'22.890"N	103°56'36.347"W	1.32	
7469.00	90.120	173.310	5999.23	1145.81	-1132.31	295.26	40°45'21.954"N	103°56'36.262"W	3.66	
7563.00	90.060	170.130	5999.08	1239.39	-1225.32	308.80	40°45'21.033"N	103°56'36.107"W	3.38	

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#03 EARP FEDERAL LC23-745 (363'FSL & 2360'FEL, SEC.11)
Area	COLORADO	Well	EARP FEDERAL LC23-745
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EARP FEDERAL LC23-745 AWB
Facility	SEC.11-T09N-R59W		

WELLPATH DATA (151 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7658.00	89.940	168.590	5999.08	1333.52	-1318.68	326.34	40°45'20.107"N	103°56'35.901"W	1.63	
7753.00	90.030	170.660	5999.11	1427.71	-1412.13	343.44	40°45'19.181"N	103°56'35.700"W	2.18	
7847.00	89.940	173.530	5999.13	1521.34	-1505.22	356.37	40°45'18.259"N	103°56'35.553"W	3.05	
7942.00	89.910	177.750	5999.26	1616.29	-1599.93	363.59	40°45'17.322"N	103°56'35.481"W	4.44	
8036.00	89.020	181.750	6000.13	1710.16	-1693.90	364.00	40°45'16.394"N	103°56'35.497"W	4.36	
8131.00	89.260	182.530	6001.56	1804.78	-1788.82	360.46	40°45'15.457"N	103°56'35.565"W	0.86	
8225.00	89.200	183.260	6002.82	1898.29	-1882.69	355.71	40°45'14.530"N	103°56'35.648"W	0.78	
8320.00	88.830	182.840	6004.46	1992.77	-1977.55	350.65	40°45'13.594"N	103°56'35.735"W	0.59	
8415.00	89.110	182.620	6006.16	2087.29	-2072.42	346.13	40°45'12.657"N	103°56'35.816"W	0.37	
8509.00	88.920	182.760	6007.78	2180.83	-2166.30	341.72	40°45'11.731"N	103°56'35.894"W	0.25	
8604.00	89.080	181.240	6009.44	2275.47	-2261.23	338.40	40°45'10.793"N	103°56'35.959"W	1.61	
8698.00	90.060	179.650	6010.14	2369.30	-2355.22	337.67	40°45'09.865"N	103°56'35.990"W	1.99	
8793.00	90.060	179.890	6010.04	2464.20	-2450.22	338.06	40°45'08.926"N	103°56'36.007"W	0.25	
8887.00	89.940	180.450	6010.04	2558.06	-2544.22	337.78	40°45'07.998"N	103°56'36.032"W	0.61	
8982.00	90.120	180.770	6009.99	2652.88	-2639.21	336.77	40°45'07.059"N	103°56'36.067"W	0.39	
9077.00	89.970	181.100	6009.92	2747.67	-2734.20	335.22	40°45'06.121"N	103°56'36.108"W	0.38	
9171.00	89.940	180.810	6009.99	2841.45	-2828.19	333.65	40°45'05.193"N	103°56'36.150"W	0.31	
9266.00	89.910	180.430	6010.12	2936.27	-2923.18	332.62	40°45'04.255"N	103°56'36.185"W	0.40	
9361.00	89.970	179.510	6010.22	3031.15	-3018.18	332.67	40°45'03.316"N	103°56'36.206"W	0.97	
9455.00	89.880	177.910	6010.34	3125.11	-3112.15	334.79	40°45'02.387"N	103°56'36.200"W	1.70	
9550.00	89.880	177.540	6010.54	3220.11	-3207.08	338.56	40°45'01.449"N	103°56'36.173"W	0.39	
9645.00	89.970	178.640	6010.66	3315.09	-3302.02	341.72	40°45'00.510"N	103°56'36.153"W	1.16	
9739.00	89.940	176.860	6010.74	3409.08	-3395.95	345.41	40°44'59.582"N	103°56'36.127"W	1.89	
9834.00	90.030	177.510	6010.76	3504.08	-3490.83	350.08	40°44'58.644"N	103°56'36.088"W	0.69	
9929.00	89.970	177.690	6010.76	3599.08	-3585.75	354.06	40°44'57.705"N	103°56'36.058"W	0.20	
10024.00	90.000	178.080	6010.79	3694.07	-3680.68	357.56	40°44'56.767"N	103°56'36.034"W	0.41	
10118.00	90.280	178.470	6010.56	3788.05	-3774.64	360.39	40°44'55.838"N	103°56'36.019"W	0.51	
10213.00	89.850	178.690	6010.45	3883.02	-3869.61	362.75	40°44'54.899"N	103°56'36.010"W	0.51	
10308.00	89.780	178.210	6010.76	3977.99	-3964.58	365.32	40°44'53.961"N	103°56'35.998"W	0.51	
10403.00	90.000	177.840	6010.94	4072.98	-4059.52	368.59	40°44'53.022"N	103°56'35.977"W	0.45	

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#03 EARP FEDERAL LC23-745 (363'FSL & 2360'FEL, SEC.11)
Area	COLORADO	Well	EARP FEDERAL LC23-745
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EARP FEDERAL LC23-745 AWB
Facility	SEC.11-T09N-R59W		

WELLPATH DATA (151 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10497.00	89.970	178.230	6010.96	4166.96	-4153.46	371.81	40°44'52.093"N	103°56'35.957"W	0.42	
10592.00	89.910	178.640	6011.06	4261.94	-4248.43	374.41	40°44'51.155"N	103°56'35.945"W	0.44	
10686.00	90.120	179.440	6011.04	4355.88	-4342.41	375.98	40°44'50.226"N	103°56'35.946"W	0.88	
10781.00	89.660	180.670	6011.22	4450.75	-4437.41	375.89	40°44'49.287"N	103°56'35.968"W	1.38	
10875.00	90.220	181.020	6011.32	4544.55	-4531.40	374.51	40°44'48.359"N	103°56'36.008"W	0.70	
10970.00	90.060	180.250	6011.09	4639.37	-4626.39	373.45	40°44'47.421"N	103°56'36.043"W	0.83	
11065.00	89.910	179.720	6011.11	4734.25	-4721.39	373.48	40°44'46.482"N	103°56'36.064"W	0.58	
11159.00	89.940	179.300	6011.23	4828.17	-4815.39	374.28	40°44'45.553"N	103°56'36.075"W	0.45	
11253.00	89.940	179.090	6011.33	4922.10	-4909.38	375.60	40°44'44.625"N	103°56'36.080"W	0.22	
11348.00	89.970	179.280	6011.41	5017.04	-5004.37	376.95	40°44'43.686"N	103°56'36.084"W	0.20	
11442.00	90.000	178.830	6011.43	5110.98	-5098.36	378.50	40°44'42.757"N	103°56'36.085"W	0.48	
11537.00	89.850	178.150	6011.56	5205.96	-5193.32	381.01	40°44'41.818"N	103°56'36.074"W	0.73	
11631.00	90.000	176.750	6011.68	5299.95	-5287.23	385.19	40°44'40.890"N	103°56'36.041"W	1.50	
11725.00	90.060	176.050	6011.63	5393.94	-5381.04	391.09	40°44'39.962"N	103°56'35.986"W	0.75	
11819.00	90.090	175.070	6011.51	5487.91	-5474.76	398.37	40°44'39.035"N	103°56'35.913"W	1.04	
11913.00	89.970	175.190	6011.46	5581.85	-5568.42	406.35	40°44'38.108"N	103°56'35.831"W	0.18	
12008.00	89.970	176.070	6011.51	5676.82	-5663.14	413.59	40°44'37.171"N	103°56'35.758"W	0.93	
12103.00	90.060	177.070	6011.48	5771.82	-5757.97	419.27	40°44'36.233"N	103°56'35.706"W	1.06	
12197.00	89.880	178.310	6011.53	5865.81	-5851.89	423.06	40°44'35.305"N	103°56'35.678"W	1.33	
12292.00	90.090	179.390	6011.56	5960.76	-5946.87	424.97	40°44'34.366"N	103°56'35.675"W	1.16	
12387.00	89.750	179.310	6011.69	6055.69	-6041.87	426.04	40°44'33.427"N	103°56'35.683"W	0.37	
12482.00	90.000	177.990	6011.90	6150.65	-6136.84	428.28	40°44'32.489"N	103°56'35.675"W	1.41	
12576.00	90.030	176.840	6011.87	6244.65	-6230.74	432.52	40°44'31.560"N	103°56'35.642"W	1.22	
12671.00	89.940	177.410	6011.90	6339.65	-6325.62	437.29	40°44'30.622"N	103°56'35.601"W	0.61	
12766.00	89.880	177.880	6012.05	6434.64	-6420.54	441.19	40°44'29.684"N	103°56'35.572"W	0.50	
12860.00	89.940	179.330	6012.19	6528.61	-6514.51	443.48	40°44'28.755"N	103°56'35.564"W	1.54	
12955.00	89.910	181.610	6012.32	6623.44	-6609.50	442.70	40°44'27.817"N	103°56'35.596"W	2.40	
13050.00	90.150	181.220	6012.27	6718.17	-6704.47	440.35	40°44'26.879"N	103°56'35.648"W	0.48	
13144.00	90.280	181.150	6011.92	6811.93	-6798.45	438.41	40°44'25.951"N	103°56'35.695"W	0.16	
13239.00	90.000	180.190	6011.68	6906.74	-6893.44	437.30	40°44'25.012"N	103°56'35.731"W	1.05	

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#03 EARP FEDERAL LC23-745 (363'FSL & 2360'FEL, SEC.11)
Area	COLORADO	Well	EARP FEDERAL LC23-745
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EARP FEDERAL LC23-745 AWB
Facility	SEC.11-T09N-R59W		

WELLPATH DATA (151 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
13334.00	89.970	179.760	6011.71	7001.62	-6988.44	437.34	40°44'24.074"N	103°56'35.752"W	0.45	
13428.00	89.970	178.830	6011.76	7095.55	-7082.43	438.50	40°44'23.145"N	103°56'35.758"W	0.99	
13523.00	90.120	177.910	6011.68	7190.53	-7177.39	441.20	40°44'22.206"N	103°56'35.745"W	0.98	
13618.00	90.150	177.420	6011.46	7285.52	-7272.31	445.07	40°44'21.268"N	103°56'35.716"W	0.52	
13712.00	90.150	179.600	6011.21	7379.49	-7366.28	447.51	40°44'20.339"N	103°56'35.706"W	2.32	
13807.00	90.220	184.390	6010.91	7474.11	-7461.19	444.21	40°44'19.402"N	103°56'35.771"W	5.04	
13901.00	89.970	184.360	6010.75	7567.35	-7554.92	437.04	40°44'18.477"N	103°56'35.885"W	0.27	
13995.00	90.120	182.740	6010.68	7660.76	-7648.73	431.22	40°44'17.551"N	103°56'35.982"W	1.73	
14090.00	90.340	180.490	6010.29	7755.45	-7743.69	428.54	40°44'16.614"N	103°56'36.038"W	2.38	
14184.00	90.060	178.120	6009.97	7849.38	-7837.67	429.68	40°44'15.685"N	103°56'36.045"W	2.54	
14278.00	90.120	181.100	6009.82	7943.28	-7931.66	430.32	40°44'14.756"N	103°56'36.058"W	3.17	
14373.00	89.970	181.860	6009.74	8038.00	-8026.63	427.87	40°44'13.818"N	103°56'36.112"W	0.82	
14468.00	90.030	179.740	6009.74	8132.79	-8121.61	426.54	40°44'12.880"N	103°56'36.151"W	2.23	
14562.00	90.060	176.530	6009.67	8226.77	-8215.55	429.60	40°44'11.952"N	103°56'36.132"W	3.42	
14656.00	89.880	173.680	6009.72	8320.70	-8309.20	437.62	40°44'11.025"N	103°56'36.050"W	3.04	
14751.00	89.820	172.880	6009.97	8415.49	-8403.55	448.74	40°44'10.091"N	103°56'35.927"W	0.84	
14846.00	89.910	172.950	6010.19	8510.23	-8497.82	460.45	40°44'09.158"N	103°56'35.796"W	0.12	
14940.00	90.060	172.680	6010.22	8603.97	-8591.08	472.21	40°44'08.234"N	103°56'35.665"W	0.33	
15035.00	90.030	176.640	6010.14	8698.87	-8685.65	481.05	40°44'07.298"N	103°56'35.571"W	4.17	
15151.00	90.090	184.430	6010.02	8814.57	-8801.56	479.97	40°44'06.153"N	103°56'35.612"W	6.72	
15224.00	89.910	184.220	6010.02	8886.99	-8874.35	474.46	40°44'05.435"N	103°56'35.700"W	0.38	
15319.00	89.940	182.880	6010.15	8981.38	-8969.16	468.58	40°44'04.500"N	103°56'35.798"W	1.41	
15413.00	89.880	185.140	6010.29	9074.69	-9062.93	462.01	40°44'03.574"N	103°56'35.905"W	2.41	
15508.00	89.780	182.130	6010.57	9169.07	-9157.72	455.98	40°44'02.639"N	103°56'36.004"W	3.17	
15602.00	89.820	178.880	6010.90	9262.89	-9251.71	455.16	40°44'01.710"N	103°56'36.037"W	3.46	
15697.00	90.060	180.070	6011.00	9357.80	-9346.70	456.03	40°44'00.772"N	103°56'36.047"W	1.28	
15791.00	90.030	180.550	6010.93	9451.65	-9440.70	455.52	40°43'59.843"N	103°56'36.075"W	0.51	
15980.00	90.000	174.540	6010.88	9640.56	-9629.44	463.61	40°43'57.977"N	103°56'36.013"W	3.18	
16075.00	89.970	173.250	6010.90	9735.41	-9723.90	473.71	40°43'57.042"N	103°56'35.903"W	1.36	
16264.00	90.030	172.870	6010.90	9923.94	-9911.51	496.55	40°43'55.185"N	103°56'35.650"W	0.20	Last BHI MWD Survey

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#03 EARP FEDERAL LC23-745 (363'FSL & 2360'FEL, SEC.11)
Area	COLORADO	Well	EARP FEDERAL LC23-745
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EARP FEDERAL LC23-745 AWP
Facility	SEC.11-T09N-R59W		

WELLPATH DATA (151 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16477.00	90.030	172.870	6010.79	10136.36	-10122.87	522.99	40°43'53.092"N	103°56'35.354"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: EARP FEDERAL LC23-745 AWP Ref Wellpath: EARP FEDERAL LC23-745 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	30.00	1930.00	1900.00	30.00	1929.93	-0.04	-0.01	-9.94	5.57	
8.5in Open Hole	1930.00	16478.00	14548.00	1929.93	N/A	-9.94	5.57	N/A	N/A	

REFERENCE WELLPATH IDENTIFICATION			
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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EARP FEDERAL LC23-745 AWB
Facility	SEC.11-T09N-R59W		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.11-T09N-R59W	7.00	1.31	74.79	3431007.60	1523210.40	40°45'33.192"N	103°56'38.868"W	polygon
SEC.14-T09N-R59W	7.00	1.31	74.79	3431007.60	1523210.40	40°45'33.192"N	103°56'38.868"W	polygon
SEC.23-T09N-R59W	7.00	1.31	74.79	3431007.60	1523210.40	40°45'33.192"N	103°56'38.868"W	polygon
EARP FEDERAL LC23-745 BHL REV-3 (860'FSL & 2090'FEL, SEC.23)	5997.00	-10140.23	514.19	3431446.99	1513068.92	40°43'52.922"N	103°56'35.473"W	point
EARP FEDERAL LC23-745 REV-2 LANDING POINT	5997.00	-45.00	270.00	3431202.81	1523164.09	40°45'32.701"N	103°56'36.342"W	point
SEC.11-T09N-R59W 300' SETBACK	6007.00	1.31	74.79	3431007.60	1523210.40	40°45'33.192"N	103°56'38.868"W	polygon
SEC.14-T09N-R59W 300' SETBACK	6007.00	1.31	74.79	3431007.60	1523210.40	40°45'33.192"N	103°56'38.868"W	polygon
SEC.23-T09N-R59W 300' SETBACK	6007.00	1.31	74.79	3431007.60	1523210.40	40°45'33.192"N	103°56'38.868"W	polygon
EARP FEDERAL LC23-745 LANDING POINT	6010.00	-45.00	270.00	3431202.81	1523164.09	40°45'32.701"N	103°56'36.342"W	point

WELLPATH COMPOSITION - Ref Wellbore: EARP FEDERAL LC23-745 AWB					Ref Wellpath: EARP FEDERAL LC23-745 AWP	
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment		Wellbore	
0.00	1923.00	BHI Unknown Tool (Standard)	GyroData Surface Surveys from GyroData <78'-1923'>		EARP FEDERAL LC23-745 AWP	
1923.00	16264.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BHI/ATC 8.5" Hole <1979'-16264'>		EARP FEDERAL LC23-745 AWP	
16264.00	16477.00	Blind Drilling (std)	Projection to bit		EARP FEDERAL LC23-745 AWP	

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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EARP FEDERAL LC23-745 AWP
Facility	SEC.11-T09N-R59W		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
1923.00	0.330	167.710	1922.93	Tie to Surface Gyros	
16264.00	90.030	172.870	6010.90	Last BHI MWD Survey	
16477.00	90.030	172.870	6010.79	Projection to Bit	