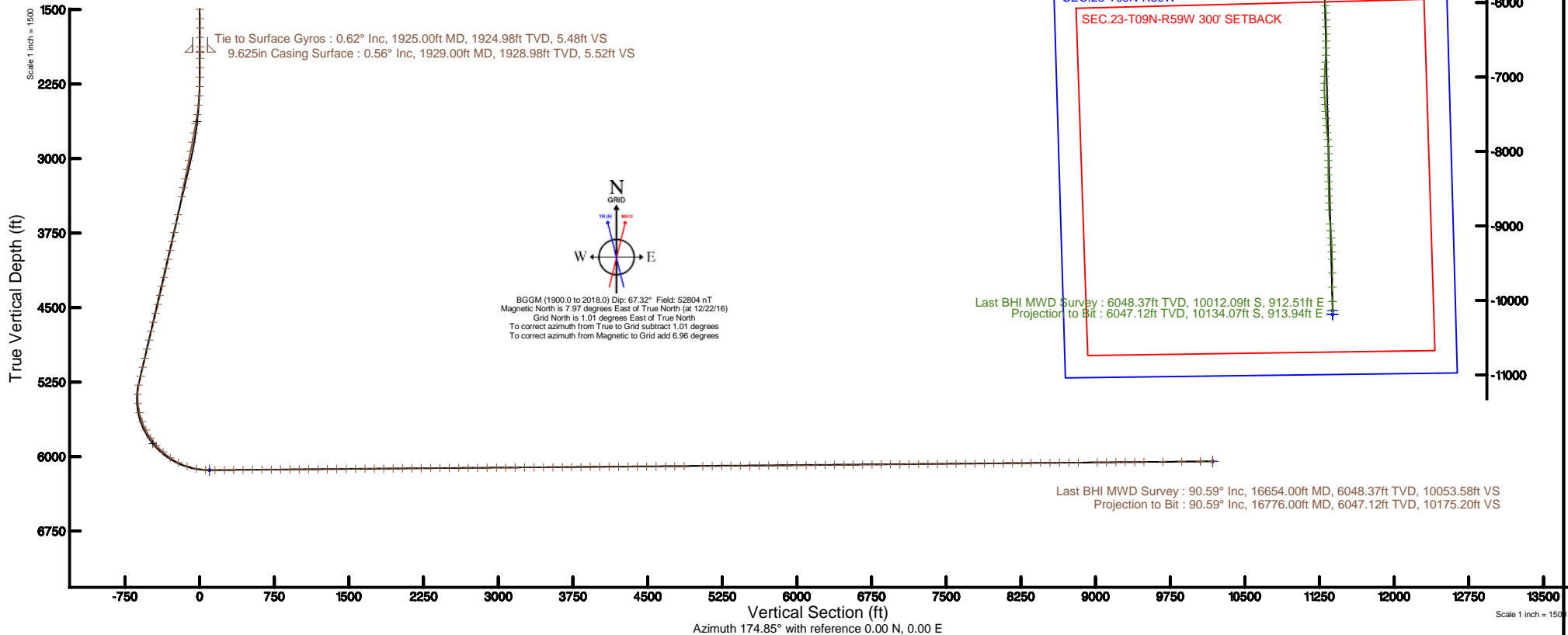


NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#02 EARP FEDERAL LC23-740 (363FSL & 2322FEL, SEC.11)
Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: EARP FEDERAL LC23-740
Facility: SEC.11-T09N-R59W Wellbore: EARP FEDERAL LC23-740 PWB

Plot reference wellpath is EARP FEDERAL LC23-740 (REV-E.0) PWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to H&P 524 (30KB) (RKB)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to H&P 524 (30KB) (RKB)	North Reference: Grid north
H&P 524 (30KB) (RKB) to Mean Sea Level: 4974 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#02 EARP FEDERAL LC23-740 (363FSL & 2322FEL, SEC.11)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: cookdann on 2017-01-11
	Database: WA_DEN_Denver_Defn



REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#02 EARP FEDERAL LC23-740 (363'FSL & 2322'FEL, SEC.11)
Area	COLORADO	Well	EARP FEDERAL LC23-740
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EARP FEDERAL LC23-740 AWB
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 12:45:35 PM
Convergence at slot	1.01° East	Database/Source file	WA_DEN_Denver_Defn/EARP_FEDERAL_LC23-740_AWP.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.68	38.78	3430971.59	1523209.77	40°45'33.192"N	103°56'39.336"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	4974.00ft
Horizontal Reference Pt	Slot	H&P 524 (30'KB) (RKB) to Mean Sea Level	4974.00ft
Vertical Reference Pt	H&P 524 (30'KB) (RKB)	H&P 524 (30'KB) (RKB) to Mud Line at Slot (SLOT#02 EARP FEDERAL LC23-740 (363'FSL & 2322'FEL, SEC.11))	4974.00ft
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	174.85°

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#02 EARP FEDERAL LC23-740 (363'FSL & 2322'FEL, SEC.11)
Area	COLORADO	Well	EARP FEDERAL LC23-740
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EARP FEDERAL LC23-740 AWB
Facility	SEC.11-T09N-R59W		

WELLPATH DATA (152 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
1925.00	0.620	184.150	1924.98	5.48	-5.45	0.49	40°45'33.138"N	103°56'39.331"W	0.19	Tie to Surface Gyros
1991.00	0.370	355.330	1990.98	5.62	-5.60	0.45	40°45'33.137"N	103°56'39.331"W	1.50	
2085.00	0.570	357.570	2084.97	4.84	-4.83	0.40	40°45'33.144"N	103°56'39.332"W	0.21	
2180.00	0.770	17.150	2179.97	3.78	-3.75	0.57	40°45'33.155"N	103°56'39.329"W	0.32	
2275.00	2.730	31.240	2274.92	1.37	-1.20	1.93	40°45'33.180"N	103°56'39.311"W	2.10	
2370.00	5.370	32.190	2369.67	-3.99	4.50	5.48	40°45'33.235"N	103°56'39.264"W	2.78	
2464.00	7.650	34.910	2463.06	-12.27	13.35	11.40	40°45'33.322"N	103°56'39.185"W	2.45	
2559.00	10.600	34.480	2556.85	-23.85	25.74	19.97	40°45'33.443"N	103°56'39.071"W	3.11	
2654.00	12.820	30.380	2649.87	-39.16	42.04	30.25	40°45'33.602"N	103°56'38.933"W	2.49	
2748.00	11.840	26.140	2741.70	-55.88	59.69	39.77	40°45'33.775"N	103°56'38.806"W	1.42	
2843.00	12.350	27.920	2834.59	-72.73	77.42	48.82	40°45'33.948"N	103°56'38.684"W	0.67	
2938.00	12.740	31.770	2927.33	-89.62	95.30	59.09	40°45'34.123"N	103°56'38.546"W	0.97	
3033.00	14.390	34.010	3019.67	-107.15	114.00	71.21	40°45'34.306"N	103°56'38.385"W	1.82	
3127.00	15.100	35.830	3110.58	-125.45	133.60	84.91	40°45'34.497"N	103°56'38.202"W	0.90	
3222.00	16.880	40.380	3201.90	-144.45	154.15	101.09	40°45'34.697"N	103°56'37.987"W	2.29	
3317.00	17.130	45.300	3292.75	-163.03	174.49	119.97	40°45'34.895"N	103°56'37.737"W	1.54	
3411.00	17.370	45.950	3382.52	-180.65	193.99	139.90	40°45'35.084"N	103°56'37.474"W	0.33	
3601.00	17.400	43.720	3563.85	-217.15	234.24	179.92	40°45'35.475"N	103°56'36.945"W	0.35	
3696.00	17.420	41.290	3654.50	-236.29	255.19	199.12	40°45'35.679"N	103°56'36.691"W	0.77	
3790.00	17.320	39.830	3744.21	-255.89	276.51	217.37	40°45'35.886"N	103°56'36.449"W	0.48	
3885.00	17.370	38.620	3834.89	-276.13	298.45	235.28	40°45'36.100"N	103°56'36.211"W	0.38	
3979.00	17.400	38.210	3924.60	-296.48	320.45	252.73	40°45'36.314"N	103°56'35.979"W	0.13	
4074.00	17.280	38.670	4015.28	-316.99	342.63	270.33	40°45'36.530"N	103°56'35.746"W	0.19	
4169.00	17.340	38.660	4105.98	-337.39	364.70	287.99	40°45'36.745"N	103°56'35.511"W	0.06	
4263.00	17.420	39.850	4195.68	-357.45	386.44	305.76	40°45'36.957"N	103°56'35.275"W	0.39	
4358.00	17.220	36.590	4286.38	-378.00	408.65	323.25	40°45'37.173"N	103°56'35.043"W	1.04	
4453.00	17.160	34.330	4377.14	-399.31	431.52	339.54	40°45'37.396"N	103°56'34.826"W	0.71	
4547.00	17.140	34.140	4466.96	-420.73	454.43	355.13	40°45'37.620"N	103°56'34.618"W	0.06	
4642.00	17.220	33.120	4557.72	-442.61	477.79	370.67	40°45'37.848"N	103°56'34.411"W	0.33	
4736.00	17.100	32.420	4647.53	-464.48	501.11	385.68	40°45'38.076"N	103°56'34.211"W	0.25	

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#02 EARP FEDERAL LC23-740 (363'FSL & 2322'FEL, SEC.11)
Area	COLORADO	Well	EARP FEDERAL LC23-740
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EARP FEDERAL LC23-740 AWB
Facility	SEC.11-T09N-R59W		

WELLPATH DATA (152 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4831.00	17.240	33.520	4738.30	-486.55	524.64	400.94	40°45'38.306"N	103°56'34.007"W	0.37	
4925.00	17.190	34.880	4828.09	-508.06	547.65	416.58	40°45'38.530"N	103°56'33.799"W	0.43	
5020.00	17.180	34.990	4918.85	-529.53	570.66	432.65	40°45'38.755"N	103°56'33.584"W	0.04	
5115.00	17.070	35.020	5009.64	-550.91	593.57	448.70	40°45'38.978"N	103°56'33.371"W	0.12	
5209.00	17.120	34.590	5099.48	-572.10	616.26	464.47	40°45'39.200"N	103°56'33.161"W	0.14	
5304.00	17.170	35.830	5190.26	-593.43	639.14	480.62	40°45'39.423"N	103°56'32.946"W	0.39	
5399.00	14.560	42.120	5281.64	-612.13	659.37	496.84	40°45'39.620"N	103°56'32.730"W	3.29	
5493.00	12.220	73.270	5373.20	-622.16	671.02	514.32	40°45'39.732"N	103°56'32.501"W	7.96	
5588.00	13.170	111.160	5466.03	-619.37	670.00	534.07	40°45'39.719"N	103°56'32.244"W	8.67	
5682.00	15.190	143.410	5557.30	-604.10	656.23	551.43	40°45'39.580"N	103°56'32.022"W	8.55	
5777.00	21.180	154.400	5647.54	-577.37	630.73	566.28	40°45'39.325"N	103°56'31.835"W	7.24	
5871.00	27.790	158.150	5733.05	-540.42	595.03	581.79	40°45'38.970"N	103°56'31.641"W	7.22	
5966.00	34.630	162.750	5814.26	-492.76	548.64	598.06	40°45'38.508"N	103°56'31.440"W	7.62	
6060.00	41.940	166.180	5888.01	-435.50	492.54	613.50	40°45'37.952"N	103°56'31.252"W	8.10	
6155.00	48.740	169.560	5954.75	-368.48	426.51	627.58	40°45'37.297"N	103°56'31.085"W	7.59	
6250.00	55.080	171.760	6013.33	-293.95	352.77	639.64	40°45'36.566"N	103°56'30.945"W	6.92	
6344.00	62.880	172.940	6061.74	-213.53	272.99	650.32	40°45'35.776"N	103°56'30.824"W	8.37	
6439.00	71.290	174.200	6098.69	-126.13	186.11	660.08	40°45'34.916"N	103°56'30.717"W	8.94	
6534.00	79.600	175.290	6122.55	-34.26	94.63	668.48	40°45'34.011"N	103°56'30.629"W	8.82	
6628.00	85.740	176.680	6134.54	58.91	1.67	675.00	40°45'33.091"N	103°56'30.566"W	6.69	
6723.00	90.620	178.220	6137.55	153.73	-93.15	679.22	40°45'32.154"N	103°56'30.532"W	5.39	
6818.00	90.860	178.190	6136.33	248.56	-188.10	682.20	40°45'31.215"N	103°56'30.515"W	0.25	
6912.00	90.680	179.270	6135.06	342.33	-282.07	684.28	40°45'30.287"N	103°56'30.510"W	1.16	
7007.00	90.650	180.190	6133.96	436.98	-377.06	684.73	40°45'29.348"N	103°56'30.526"W	0.97	
7102.00	90.740	180.240	6132.81	531.56	-472.05	684.37	40°45'28.410"N	103°56'30.552"W	0.11	
7196.00	90.590	179.880	6131.72	625.16	-566.04	684.27	40°45'27.481"N	103°56'30.575"W	0.41	
7291.00	90.650	180.260	6130.69	719.76	-661.04	684.16	40°45'26.543"N	103°56'30.598"W	0.40	
7385.00	90.680	181.050	6129.60	813.28	-755.03	683.08	40°45'25.614"N	103°56'30.633"W	0.84	
7480.00	90.490	181.070	6128.63	907.71	-850.00	681.32	40°45'24.676"N	103°56'30.678"W	0.20	
7574.00	90.490	180.910	6127.82	1001.17	-943.99	679.70	40°45'23.748"N	103°56'30.720"W	0.17	

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#02 EARP FEDERAL LC23-740 (363'FSL & 2322'FEL, SEC.11)
Area	COLORADO	Well	EARP FEDERAL LC23-740
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EARP FEDERAL LC23-740 AWB
Facility	SEC.11-T09N-R59W		

WELLPATH DATA (152 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7669.00	90.460	180.610	6127.04	1095.66	-1038.98	678.44	40°45'22.810"N	103°56'30.758"W	0.32	
7764.00	90.460	181.040	6126.27	1190.14	-1133.96	677.07	40°45'21.872"N	103°56'30.798"W	0.45	
7858.00	90.520	180.500	6125.47	1283.64	-1227.95	675.81	40°45'20.943"N	103°56'30.836"W	0.58	
7953.00	90.550	179.920	6124.58	1378.22	-1322.94	675.46	40°45'20.005"N	103°56'30.862"W	0.61	
8047.00	90.550	178.800	6123.68	1471.92	-1416.93	676.51	40°45'19.076"N	103°56'30.870"W	1.19	
8142.00	90.550	178.250	6122.77	1566.72	-1511.90	678.96	40°45'18.137"N	103°56'30.860"W	0.58	
8237.00	90.460	178.150	6121.93	1661.56	-1606.85	681.94	40°45'17.199"N	103°56'30.843"W	0.14	
8331.00	90.550	180.030	6121.10	1755.29	-1700.83	683.43	40°45'16.270"N	103°56'30.845"W	2.00	
8426.00	90.370	179.540	6120.34	1849.94	-1795.82	683.79	40°45'15.332"N	103°56'30.862"W	0.55	
8521.00	90.460	179.850	6119.65	1944.59	-1890.82	684.29	40°45'14.393"N	103°56'30.877"W	0.34	
8615.00	90.400	180.710	6118.95	2038.17	-1984.81	683.84	40°45'13.464"N	103°56'30.904"W	0.92	
8710.00	90.430	181.990	6118.26	2132.55	-2079.78	681.60	40°45'12.527"N	103°56'30.955"W	1.35	
8804.00	90.550	182.080	6117.45	2225.81	-2173.72	678.26	40°45'11.599"N	103°56'31.020"W	0.16	
8899.00	90.490	182.290	6116.59	2320.03	-2268.65	674.64	40°45'10.662"N	103°56'31.089"W	0.23	
8993.00	90.460	179.600	6115.81	2413.49	-2362.62	673.09	40°45'09.734"N	103°56'31.130"W	2.86	
9088.00	90.460	176.430	6115.05	2508.33	-2457.55	676.38	40°45'08.795"N	103°56'31.109"W	3.34	
9183.00	90.370	172.550	6114.36	2603.31	-2552.09	685.50	40°45'07.860"N	103°56'31.012"W	4.09	
9277.00	90.400	171.250	6113.73	2697.18	-2645.15	698.74	40°45'06.938"N	103°56'30.861"W	1.38	
9372.00	90.460	173.560	6113.02	2792.08	-2739.31	711.30	40°45'06.006"N	103°56'30.720"W	2.43	
9467.00	90.460	176.440	6112.25	2887.07	-2833.93	719.58	40°45'05.069"N	103°56'30.634"W	3.03	
9562.00	90.400	176.530	6111.54	2982.03	-2928.75	725.40	40°45'04.132"N	103°56'30.580"W	0.11	
9656.00	90.430	177.340	6110.86	3075.96	-3022.61	730.43	40°45'03.203"N	103°56'30.536"W	0.86	
9751.00	90.400	176.840	6110.17	3170.89	-3117.49	735.25	40°45'02.265"N	103°56'30.495"W	0.53	
9846.00	90.340	176.140	6109.56	3265.85	-3212.31	741.06	40°45'01.327"N	103°56'30.441"W	0.74	
9940.00	90.340	174.560	6109.00	3359.84	-3305.99	748.68	40°45'00.401"N	103°56'30.363"W	1.68	
10035.00	90.400	175.470	6108.39	3454.83	-3400.63	756.94	40°44'59.464"N	103°56'30.278"W	0.96	
10130.00	90.310	178.720	6107.80	3549.75	-3495.49	761.75	40°44'58.526"N	103°56'30.237"W	3.42	
10224.00	90.400	180.650	6107.22	3643.41	-3589.49	762.27	40°44'57.597"N	103°56'30.252"W	2.06	
10319.00	90.400	181.970	6106.55	3737.80	-3684.46	760.10	40°44'56.659"N	103°56'30.302"W	1.39	
10414.00	90.520	183.170	6105.79	3831.93	-3779.36	755.84	40°44'55.723"N	103°56'30.379"W	1.27	

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#02 EARP FEDERAL LC23-740 (363'FSL & 2322'FEL, SEC.11)
Area	COLORADO	Well	EARP FEDERAL LC23-740
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EARP FEDERAL LC23-740 AWB
Facility	SEC.11-T09N-R59W		

WELLPATH DATA (152 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10508.00	90.460	182.730	6104.99	3924.99	-3873.23	751.00	40°44'54.796"N	103°56'30.463"W	0.47	
10603.00	90.370	181.090	6104.30	4019.27	-3968.17	747.83	40°44'53.859"N	103°56'30.526"W	1.73	
10698.00	90.430	180.240	6103.63	4113.78	-4063.16	746.73	40°44'52.920"N	103°56'30.562"W	0.90	
10792.00	90.430	177.480	6102.93	4207.53	-4157.13	748.60	40°44'51.992"N	103°56'30.559"W	2.94	
10887.00	90.550	175.400	6102.12	4302.49	-4251.94	754.50	40°44'51.054"N	103°56'30.504"W	2.19	
10981.00	90.520	176.780	6101.24	4396.46	-4345.71	760.91	40°44'50.126"N	103°56'30.442"W	1.47	
11076.00	90.460	177.010	6100.43	4491.40	-4440.57	766.06	40°44'49.188"N	103°56'30.397"W	0.25	
11170.00	90.490	177.790	6099.65	4585.30	-4534.47	770.32	40°44'48.260"N	103°56'30.363"W	0.83	
11265.00	90.370	179.200	6098.93	4680.10	-4629.43	772.81	40°44'47.321"N	103°56'30.352"W	1.49	
11359.00	90.460	179.580	6098.25	4773.81	-4723.42	773.81	40°44'46.393"N	103°56'30.361"W	0.42	
11453.00	90.370	179.530	6097.57	4867.49	-4817.42	774.55	40°44'45.464"N	103°56'30.373"W	0.11	
11642.00	90.460	179.730	6096.20	5055.82	-5006.41	775.77	40°44'43.597"N	103°56'30.400"W	0.12	
11736.00	90.400	179.850	6095.50	5149.47	-5100.41	776.11	40°44'42.668"N	103°56'30.417"W	0.14	
11831.00	90.340	182.080	6094.88	5243.92	-5195.38	774.51	40°44'41.730"N	103°56'30.459"W	2.35	
11925.00	90.430	181.580	6094.25	5337.23	-5289.33	771.51	40°44'40.802"N	103°56'30.520"W	0.54	
12019.00	90.340	178.720	6093.62	5430.81	-5383.32	771.26	40°44'39.874"N	103°56'30.544"W	3.04	
12114.00	90.280	177.040	6093.11	5525.67	-5478.25	774.78	40°44'38.935"N	103°56'30.520"W	1.77	
12209.00	90.400	176.730	6092.54	5620.61	-5573.11	779.94	40°44'37.997"N	103°56'30.475"W	0.35	
12304.00	90.430	176.560	6091.86	5715.56	-5667.94	785.50	40°44'37.059"N	103°56'30.424"W	0.18	
12398.00	90.580	175.440	6091.03	5809.54	-5761.71	792.05	40°44'36.132"N	103°56'30.361"W	1.20	
12493.00	90.520	174.470	6090.11	5904.53	-5856.34	800.41	40°44'35.195"N	103°56'30.274"W	1.02	
12588.00	90.680	175.290	6089.12	5999.53	-5950.95	808.89	40°44'34.259"N	103°56'30.185"W	0.88	
12683.00	90.650	175.720	6088.02	6094.52	-6045.65	816.33	40°44'33.322"N	103°56'30.110"W	0.45	
12777.00	90.620	177.270	6086.98	6188.47	-6139.47	822.08	40°44'32.394"N	103°56'30.057"W	1.65	
12872.00	90.580	178.400	6085.98	6283.33	-6234.39	825.67	40°44'31.456"N	103°56'30.032"W	1.19	
12967.00	90.680	179.070	6084.94	6378.11	-6329.36	827.76	40°44'30.517"N	103°56'30.026"W	0.71	
13061.00	90.590	179.910	6083.89	6471.79	-6423.35	828.60	40°44'29.589"N	103°56'30.037"W	0.90	
13156.00	90.550	180.300	6082.95	6566.39	-6518.35	828.43	40°44'28.650"N	103°56'30.061"W	0.41	
13250.00	90.680	181.620	6081.94	6659.85	-6612.33	826.85	40°44'27.722"N	103°56'30.103"W	1.41	
13345.00	90.620	183.950	6080.86	6753.93	-6707.20	822.24	40°44'26.785"N	103°56'30.185"W	2.45	

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#02 EARP FEDERAL LC23-740 (363'FSL & 2322'FEL, SEC.11)
Area	COLORADO	Well	EARP FEDERAL LC23-740
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EARP FEDERAL LC23-740 AWB
Facility	SEC.11-T09N-R59W		

WELLPATH DATA (152 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
13440.00	90.490	183.930	6079.94	6847.73	-6801.97	815.71	40°44'25.850"N	103°56'30.291"W	0.14	
13534.00	90.590	182.420	6079.06	6940.73	-6895.82	810.50	40°44'24.924"N	103°56'30.380"W	1.61	
13629.00	90.580	181.620	6078.09	7034.98	-6990.76	807.15	40°44'23.987"N	103°56'30.445"W	0.84	
13723.00	90.520	181.860	6077.18	7128.30	-7084.71	804.30	40°44'23.059"N	103°56'30.504"W	0.26	
13818.00	90.550	179.450	6076.30	7222.80	-7179.69	803.21	40°44'22.121"N	103°56'30.539"W	2.54	
13912.00	90.520	176.090	6075.42	7316.66	-7273.60	806.87	40°44'21.192"N	103°56'30.513"W	3.57	
14007.00	90.590	176.190	6074.50	7411.64	-7368.38	813.27	40°44'20.255"N	103°56'30.452"W	0.13	
14101.00	90.520	176.270	6073.59	7505.60	-7462.18	819.45	40°44'19.327"N	103°56'30.393"W	0.11	
14195.00	90.580	175.930	6072.69	7599.58	-7555.95	825.84	40°44'18.399"N	103°56'30.331"W	0.37	
14290.00	90.550	176.430	6071.75	7694.55	-7650.74	832.17	40°44'17.462"N	103°56'30.271"W	0.53	
14384.00	90.490	174.170	6070.90	7788.53	-7744.41	839.87	40°44'16.535"N	103°56'30.192"W	2.41	
14479.00	90.490	174.870	6070.08	7883.53	-7838.97	848.94	40°44'15.599"N	103°56'30.096"W	0.74	
14573.00	90.460	177.790	6069.30	7977.48	-7932.77	854.96	40°44'14.672"N	103°56'30.039"W	3.11	
14668.00	91.110	179.140	6068.00	8072.28	-8027.72	857.50	40°44'13.733"N	103°56'30.028"W	1.58	
14762.00	90.590	180.460	6066.61	8165.92	-8121.71	857.83	40°44'12.804"N	103°56'30.045"W	1.51	
14856.00	90.590	180.520	6065.64	8259.46	-8215.70	857.03	40°44'11.876"N	103°56'30.077"W	0.06	
14951.00	90.550	179.670	6064.69	8354.06	-8310.69	856.87	40°44'10.938"N	103°56'30.101"W	0.90	
15046.00	90.490	177.860	6063.83	8448.83	-8405.66	858.92	40°44'09.999"N	103°56'30.096"W	1.91	
15141.00	90.590	178.420	6062.94	8543.67	-8500.61	862.00	40°44'09.060"N	103°56'30.077"W	0.60	
15235.00	90.550	179.610	6062.00	8637.41	-8594.59	863.62	40°44'08.132"N	103°56'30.078"W	1.27	
15330.00	90.520	178.480	6061.11	8732.15	-8689.57	865.20	40°44'07.193"N	103°56'30.079"W	1.19	
15425.00	90.490	178.100	6060.28	8826.98	-8784.52	868.03	40°44'06.254"N	103°56'30.064"W	0.40	
15614.00	90.490	174.780	6058.66	9015.87	-8973.13	879.77	40°44'04.389"N	103°56'29.955"W	1.76	
15708.00	90.550	174.530	6057.81	9109.87	-9066.71	888.52	40°44'03.463"N	103°56'29.862"W	0.27	
15803.00	90.680	176.270	6056.79	9204.85	-9161.40	896.14	40°44'02.526"N	103°56'29.785"W	1.84	
15897.00	90.490	177.520	6055.83	9298.79	-9255.25	901.23	40°44'01.598"N	103°56'29.740"W	1.34	
15992.00	90.650	178.170	6054.88	9393.65	-9350.18	904.80	40°44'00.660"N	103°56'29.715"W	0.70	
16086.00	90.460	178.860	6053.97	9487.46	-9444.15	907.24	40°43'59.731"N	103°56'29.705"W	0.76	
16276.00	90.620	179.570	6052.18	9676.90	-9634.12	909.84	40°43'57.853"N	103°56'29.715"W	0.38	
16465.00	90.550	179.740	6050.25	9865.22	-9823.10	910.98	40°43'55.986"N	103°56'29.743"W	0.10	

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#02 EARP FEDERAL LC23-740 (363'FSL & 2322'FEL, SEC.11)
Area	COLORADO	Well	EARP FEDERAL LC23-740
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EARP FEDERAL LC23-740 AWB
Facility	SEC.11-T09N-R59W		

WELLPATH DATA (152 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16654.00	90.590	179.330	6048.37	10053.58	-10012.09	912.51	40°43'54.119"N	103°56'29.766"W	0.22	Last BHI MWD Survey
16776.00	90.590	179.330	6047.12	10175.20	-10134.07	913.94	40°43'52.913"N	103°56'29.776"W	0.00	Projection to Bit

HOLE & CASING SECTIONS

- Ref Wellbore: EARP FEDERAL LC23-740 AWB Ref Wellpath: EARP FEDERAL LC23-740 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	1929.00	1899.00	30.00	1928.98	-0.02	0.02	-5.49	0.49
8.5in Open Hole	1929.00	16776.00	14847.00	1928.98	6047.12	-5.49	0.49	-10134.07	913.94

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#02 EARP FEDERAL LC23-740 (363'FSL & 2322'FEL, SEC.11)
Area	COLORADO	Well	EARP FEDERAL LC23-740
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EARP FEDERAL LC23-740 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	6.00	0.63	36.01	3431007.60	1523210.40	40°45'33.192"N	103°56'38.868"W	polygon
SEC.14-T09N-R59W	6.00	0.63	36.01	3431007.60	1523210.40	40°45'33.192"N	103°56'38.868"W	polygon
SEC.23-T09N-R59W	6.00	0.63	36.01	3431007.60	1523210.40	40°45'33.192"N	103°56'38.868"W	polygon
SEC.11-T09N-R59W 300' SETBACK	6006.00	0.63	36.01	3431007.60	1523210.40	40°45'33.192"N	103°56'38.868"W	polygon
SEC.14-T09N-R59W 300' SETBACK	6006.00	0.63	36.01	3431007.60	1523210.40	40°45'33.192"N	103°56'38.868"W	polygon
SEC.23-T09N-R59W 300' SETBACK	6006.00	0.63	36.01	3431007.60	1523210.40	40°45'33.192"N	103°56'38.868"W	polygon
EARP FEDERAL LC23-740 BHL REV-3 (810'FSL & 1650'FEL, SEC.23)	6048.50	-10186.86	913.30	3431884.89	1513022.97	40°43'52.392"N	103°56'29.796"W	point
EARP FEDERAL LC23-740 BHL REV-4 (860'FSL & 1650'FEL, SEC.23)	6048.90	-10136.86	913.30	3431884.89	1513072.97	40°43'52.886"N	103°56'29.785"W	point
EARP FEDERAL LC23-740 BHL REV-2 (810'FSL & 1650'FEL, SEC.23)	6060.74	-10186.86	913.30	3431884.89	1513022.97	40°43'52.392"N	103°56'29.796"W	point
EARP FEDERAL LC23-740 BHL REV-1 (810'FSL & 1650'FEL, SEC.23)	6076.50	-10186.86	913.30	3431884.89	1513022.97	40°43'52.392"N	103°56'29.796"W	point
EARP FEDERAL LC23-740 LANDING POINT 2	6137.00	-40.00	660.00	3431631.58	1523169.77	40°45'32.682"N	103°56'30.770"W	point
EARP FEDERAL LC23-740 LANDING POINT	6149.30	-40.00	660.00	3431631.58	1523169.77	40°45'32.682"N	103°56'30.770"W	point

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#02 EARP FEDERAL LC23-740 (363'FSL & 2322'FEL, SEC.11)
Area	COLORADO	Well	EARP FEDERAL LC23-740
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EARP FEDERAL LC23-740 AWB
Facility	SEC.11-T09N-R59W		

WELLPATH COMPOSITION - Ref Wellbore: EARP FEDERAL LC23-740 AWB Ref Wellpath: EARP FEDERAL LC23-740 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	1925.00	Gyrodata standard - Drop gyro or Multi-shot	GyroData Surface Gyros <78'-1925'>	EARP FEDERAL LC23-740 AWB
1925.00	16654.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BHI/ATC OWSG MWD +IFR+MSA <1991'-16654'>	EARP FEDERAL LC23-740 AWB
16654.00	16776.00	Blind Drilling (std)	Projection to bit	EARP FEDERAL LC23-740 AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#02 EARP FEDERAL LC23-740 (363'FSL & 2322'FEL, SEC.11)
Area	COLORADO	Well	EARP FEDERAL LC23-740
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EARP FEDERAL LC23-740 AWB
Facility	SEC.11-T09N-R59W		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
1925.00	0.620	184.150	1924.98	Tie to Surface Gyros	
16654.00	90.590	179.330	6048.37	Last BHI MWD Survey	
16776.00	90.590	179.330	6047.12	Projection to Bit	