

NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#06 STARS FEDERAL LD17-740 (380°FSL & 1470°FEL, SEC.05)
 Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: STARS FEDERAL LD17-740
 Facility: SEC.05-T09N-R58W Wellbore: STARS FEDERAL LD17-740 PWB

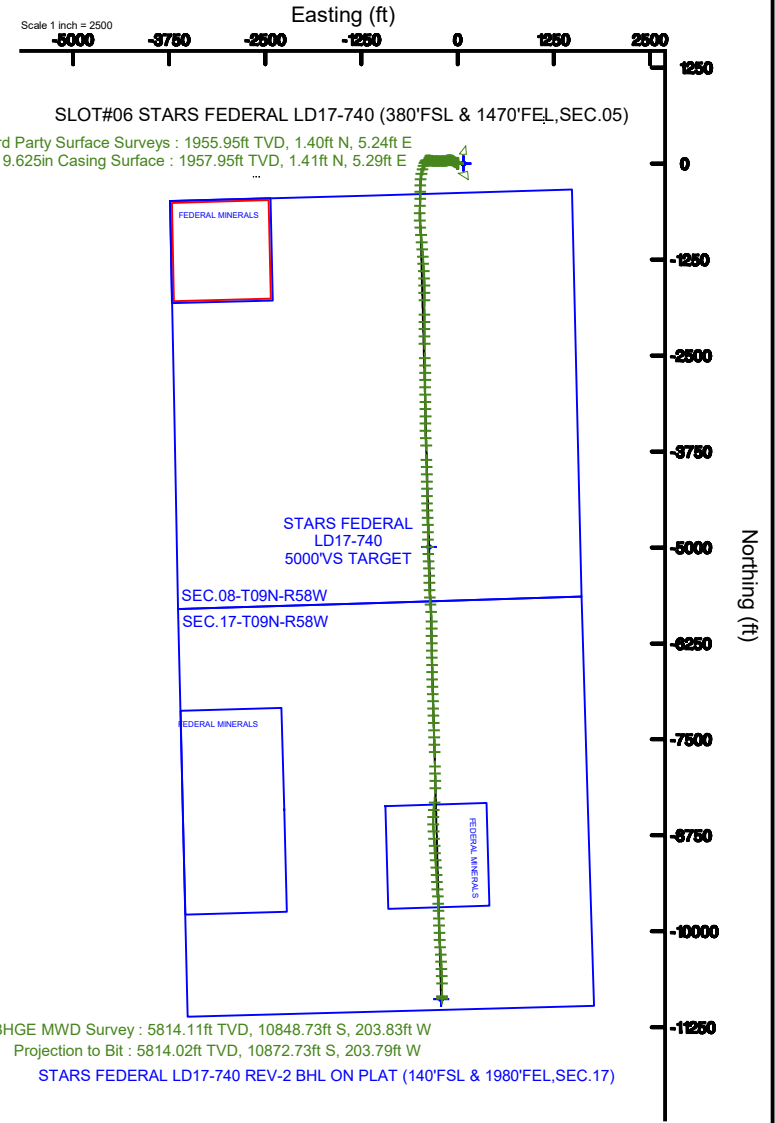
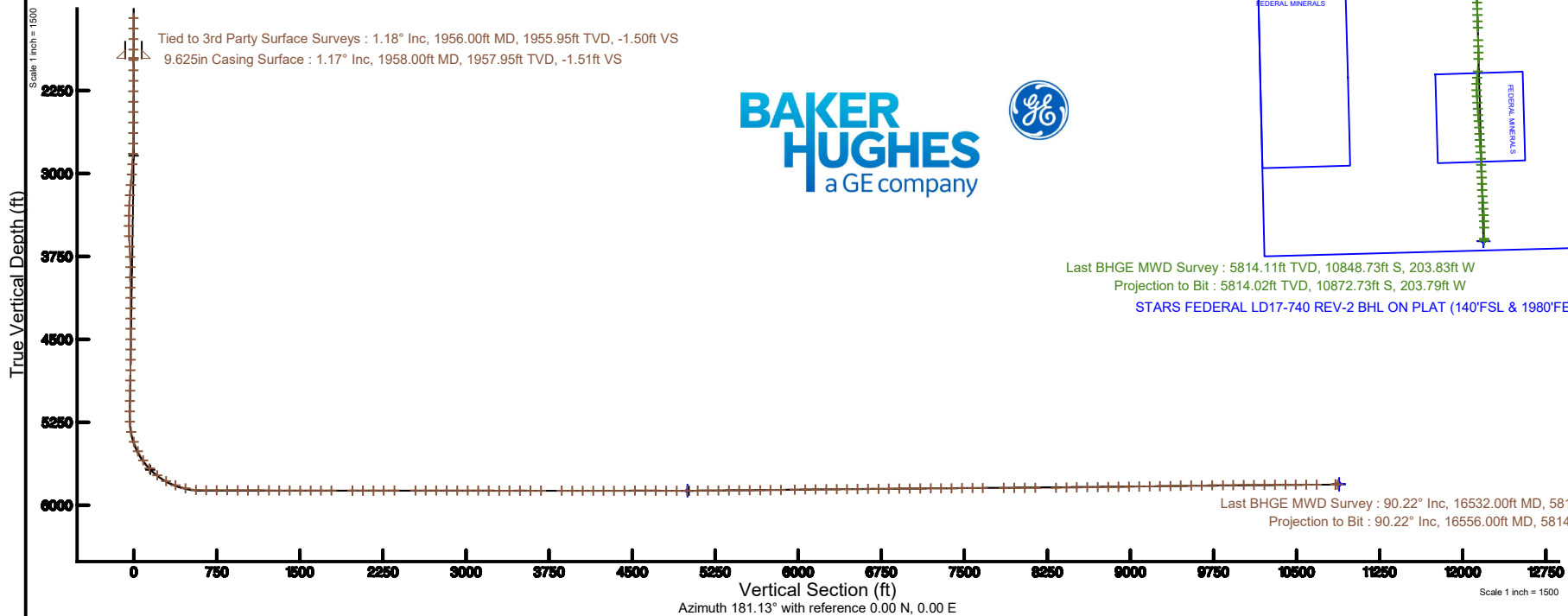
Plot reference wellpath is STARS FEDERAL LD17-740 (REV-C.0) PWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to RIG (30') (RKB)	North Reference: Grid north
Measured depths are referenced to RIG (30') (RKB)	Scale: True distance
RIG (30') (RKB) to Mean Sea Level: 4827 feet	Depths are in feet
Mean Sea Level to Mud line (At Slot: SLOT#06 STARS FEDERAL LD17-740 (380°FSL & 1470°FEL, SEC.05)): 0 feet	Created by: doddanna on 2019-07-30
Coordinates are in feet referenced to Slot	Database: WellArchitectDB1

Location Information

Facility Name					
SEC.05-T09N-R58W		Grid East (US R)	Grid North (US R)	Latitude	Longitude
		3448481.809	1533139.636	40°47'08.196"N	103°52'49.476"W
Slot		Local N (R)	Local E (R)	Grid East (US R)	Grid North (US R)
SLOT#06 STARS FEDERAL LD17-740 (380°FSL & 1470°FEL, SEC.05)		-1194.14	-995.45	3447486.356	1528945.498
RIG (30') (RKB) to Mud line (At Slot: SLOT#06 STARS FEDERAL LD17-740 (380°FSL & 1470°FEL, SEC.05))				4827R	
Mean Sea Level to Mud line (At Slot: SLOT#06 STARS FEDERAL LD17-740 (380°FSL & 1470°FEL, SEC.05))				0ft	
RIG (30') (RKB) to Mean Sea Level				4827R	

Survey Program

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
30.00	16564.27	OWSG MWD rev2	OWSG MWD rev2 + IFR1 + Multi-Station Correction		STARS FEDERAL LD17-740 PWB



Last BHGE MWD Survey : 90.22° Inc, 16532.00ft MD, 5814.11ft TVD, 10850.64ft VS
 Projection to Bit : 90.22° Inc, 16556.00ft MD, 5814.02ft TVD, 10874.64ft VS

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#06 STARS FEDERAL LD17-740 (380'FSL & 1470'FEL,SEC.05)
Area	COLORADO	Well	STARS FEDERAL LD17-740
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	STARS FEDERAL LD17-740 AWB
Facility	SEC.05-T09N-R58W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Doddanna
Scale	0.999999	Report Generated	7/30/2019 at 9:37:15 AM
Convergence at slot	1.04° East	Database/Source file	WellArchitectDB1/STARS_FEDERAL_LD17-740_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4194.14	-995.45	3447486.36	1528945.50	40°46'26.940"N	103°53'03.408"W
Facility Reference Pt			3448481.81	1533139.64	40°47'08.196"N	103°52'49.476"W
Field Reference Pt			3000000.00	4454105.15	48°46'34.315"N	105°30'00.000"W

WELLPATH DATUM			
Calculation method	Minimum curvature	RIG (30') (RKB) to Facility Vertical Datum	4827.00ft
Horizontal Reference Pt	Slot	RIG (30') (RKB) to Mean Sea Level	4827.00ft
Vertical Reference Pt	RIG (30') (RKB)	RIG (30') (RKB) to Mud Line at Slot (SLOT#06 STARS FEDERAL LD17-740 (380'FSL & 1470'FEL,SEC.05))	4827.00ft
MD Reference Pt	RIG (30') (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	181.13°

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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	STARS FEDERAL LD17-740 AWB
Facility	SEC.05-T09N-R58W		

WELLPATH DATA (172 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	357.390	0.00	0.00	0.00	0.00	40°46'26.940"N	103°53'03.408"W	0.00	
86.00	0.050	357.390	86.00	-0.04	0.04	0.00	40°46'26.940"N	103°53'03.408"W	0.06	
181.00	0.500	296.670	181.00	-0.26	0.26	-0.37	40°46'26.943"N	103°53'03.413"W	0.50	
273.00	0.410	232.710	273.00	-0.23	0.25	-0.99	40°46'26.943"N	103°53'03.421"W	0.53	
368.00	0.220	214.280	367.99	0.14	-0.11	-1.37	40°46'26.939"N	103°53'03.426"W	0.22	
461.00	0.190	199.750	460.99	0.43	-0.40	-1.52	40°46'26.936"N	103°53'03.428"W	0.06	
556.00	0.300	329.350	555.99	0.37	-0.34	-1.70	40°46'26.937"N	103°53'03.430"W	0.47	
650.00	0.410	2.960	649.99	-0.17	0.21	-1.81	40°46'26.942"N	103°53'03.431"W	0.25	
745.00	0.320	165.390	744.99	-0.26	0.29	-1.72	40°46'26.943"N	103°53'03.430"W	0.76	
839.00	0.400	111.910	838.99	0.11	-0.08	-1.35	40°46'26.939"N	103°53'03.426"W	0.35	
933.00	0.400	94.210	932.99	0.24	-0.23	-0.72	40°46'26.938"N	103°53'03.417"W	0.13	
1028.00	0.480	66.930	1027.98	0.10	-0.10	-0.02	40°46'26.939"N	103°53'03.408"W	0.23	
1123.00	0.290	0.010	1122.98	-0.30	0.30	0.34	40°46'26.943"N	103°53'03.403"W	0.48	
1217.00	0.380	353.350	1216.98	-0.85	0.84	0.31	40°46'26.948"N	103°53'03.404"W	0.10	
1312.00	0.140	68.510	1311.98	-1.21	1.20	0.38	40°46'26.952"N	103°53'03.403"W	0.39	
1406.00	0.300	31.540	1405.98	-1.46	1.45	0.61	40°46'26.954"N	103°53'03.400"W	0.22	
1500.00	0.160	85.580	1499.98	-1.69	1.67	0.87	40°46'26.956"N	103°53'03.396"W	0.26	
1595.00	0.280	101.810	1594.98	-1.66	1.63	1.23	40°46'26.956"N	103°53'03.392"W	0.14	
1689.00	0.400	44.150	1688.98	-1.86	1.82	1.68	40°46'26.958"N	103°53'03.386"W	0.37	
1783.00	0.590	119.790	1782.97	-1.86	1.82	2.33	40°46'26.958"N	103°53'03.377"W	0.67	
1878.00	1.140	100.130	1877.96	-1.48	1.41	3.69	40°46'26.953"N	103°53'03.360"W	0.65	
1956.00	1.180	80.770	1955.95	-1.50	1.40	5.24	40°46'26.953"N	103°53'03.340"W	0.50	Tied to 3rd Party Surface Surveys
1973.00	1.110	79.240	1972.94	-1.57	1.46	5.58	40°46'26.953"N	103°53'03.335"W	0.45	
2067.00	0.490	291.810	2066.94	-1.90	1.78	6.10	40°46'26.956"N	103°53'03.328"W	1.64	
2162.00	0.650	351.030	2161.94	-2.57	2.46	5.64	40°46'26.963"N	103°53'03.334"W	0.61	
2256.00	1.260	277.430	2255.92	-3.21	3.12	4.53	40°46'26.970"N	103°53'03.348"W	1.32	
2351.00	1.120	69.470	2350.92	-3.67	3.58	4.37	40°46'26.975"N	103°53'03.350"W	2.43	
2445.00	0.690	145.900	2444.91	-3.55	3.44	5.54	40°46'26.973"N	103°53'03.335"W	1.24	
2540.00	1.000	315.520	2539.90	-3.66	3.55	5.28	40°46'26.974"N	103°53'03.339"W	1.77	
2634.00	0.520	277.830	2633.90	-4.28	4.20	4.29	40°46'26.981"N	103°53'03.351"W	0.71	

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Operator	NOBLE ENERGY, INC	Slot	SLOT#06 STARS FEDERAL LD17-740 (380'FSL & 1470'FEL, SEC.05)
Area	COLORADO	Well	STARS FEDERAL LD17-740
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	STARS FEDERAL LD17-740 AWB
Facility	SEC.05-T09N-R58W		

WELLPATH DATA (172 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2729.00	3.330	290.010	2728.83	-5.23	5.20	1.27	40°46'26.991"N	103°53'03.390"W	2.97	
2823.00	6.260	290.870	2822.49	-7.84	7.96	-6.09	40°46'27.020"N	103°53'03.485"W	3.12	
2918.00	8.530	295.220	2916.70	-12.47	12.81	-17.31	40°46'27.070"N	103°53'03.630"W	2.46	
3012.00	9.330	292.440	3009.56	-18.08	18.69	-30.66	40°46'27.130"N	103°53'03.802"W	0.97	
3107.00	10.300	309.020	3103.19	-26.10	26.98	-44.37	40°46'27.215"N	103°53'03.978"W	3.13	
3201.00	9.840	297.930	3195.75	-34.88	36.03	-58.00	40°46'27.306"N	103°53'04.153"W	2.12	
3296.00	9.970	283.190	3289.35	-40.26	41.71	-73.18	40°46'27.365"N	103°53'04.349"W	2.67	
3390.00	10.610	276.870	3381.84	-42.83	44.60	-89.70	40°46'27.397"N	103°53'04.563"W	1.38	
3485.00	10.050	269.310	3475.30	-43.44	45.55	-106.67	40°46'27.409"N	103°53'04.783"W	1.54	
3579.00	10.550	261.430	3567.79	-41.73	44.17	-123.38	40°46'27.399"N	103°53'05.001"W	1.59	
3674.00	10.410	251.980	3661.21	-37.45	40.22	-140.14	40°46'27.363"N	103°53'05.220"W	1.81	
3768.00	9.730	253.420	3753.76	-32.24	35.32	-155.83	40°46'27.317"N	103°53'05.425"W	0.77	
3863.00	10.010	275.130	3847.39	-30.38	33.77	-171.76	40°46'27.305"N	103°53'05.632"W	3.91	
3957.00	10.230	271.450	3939.93	-30.99	34.71	-188.24	40°46'27.317"N	103°53'05.846"W	0.73	
4052.00	10.140	269.160	4033.43	-30.75	34.80	-205.03	40°46'27.321"N	103°53'06.064"W	0.44	
4146.00	9.920	268.220	4126.00	-30.06	34.43	-221.40	40°46'27.320"N	103°53'06.277"W	0.29	
4241.00	9.280	268.660	4219.66	-29.31	34.00	-237.24	40°46'27.319"N	103°53'06.483"W	0.68	
4335.00	9.380	271.020	4312.42	-28.97	33.96	-252.47	40°46'27.321"N	103°53'06.681"W	0.42	
4430.00	9.340	271.220	4406.16	-28.97	34.26	-267.92	40°46'27.327"N	103°53'06.882"W	0.05	
4524.00	9.280	269.020	4498.92	-28.70	34.29	-283.12	40°46'27.330"N	103°53'07.079"W	0.38	
4619.00	9.330	270.720	4592.67	-28.36	34.26	-298.48	40°46'27.332"N	103°53'07.279"W	0.29	
4713.00	9.260	270.220	4685.43	-28.19	34.38	-313.67	40°46'27.336"N	103°53'07.476"W	0.11	
4808.00	9.710	282.810	4779.15	-29.69	36.19	-329.12	40°46'27.357"N	103°53'07.677"W	2.23	
4902.00	9.600	276.500	4871.82	-32.03	38.83	-344.64	40°46'27.386"N	103°53'07.878"W	1.13	
4997.00	9.400	273.040	4965.51	-33.03	40.14	-360.26	40°46'27.401"N	103°53'08.080"W	0.64	
5091.00	9.500	276.960	5058.24	-34.07	41.49	-375.62	40°46'27.417"N	103°53'08.280"W	0.69	
5186.00	9.560	277.970	5151.93	-35.81	43.53	-391.22	40°46'27.440"N	103°53'08.482"W	0.19	
5280.00	9.440	255.390	5244.67	-34.64	42.67	-406.41	40°46'27.435"N	103°53'08.679"W	3.94	
5374.00	13.290	216.270	5336.94	-23.70	31.99	-420.29	40°46'27.332"N	103°53'08.862"W	8.93	
5469.00	20.500	200.760	5427.83	0.94	7.59	-432.67	40°46'27.093"N	103°53'09.029"W	8.89	

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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	STARS FEDERAL LD17-740 AWB
Facility	SEC.05-T09N-R58W		

WELLPATH DATA (172 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5563.00	26.960	196.650	5513.84	37.02	-28.25	-444.62	40°46'26.741"N	103°53'09.193"W	7.09	
5658.00	35.840	194.280	5594.85	84.95	-75.94	-457.68	40°46'26.272"N	103°53'09.374"W	9.44	
5752.00	43.510	192.640	5667.15	143.54	-134.27	-471.57	40°46'25.698"N	103°53'09.568"W	8.23	
5846.00	52.150	185.800	5730.23	212.42	-202.94	-482.43	40°46'25.022"N	103°53'09.725"W	10.65	
5941.00	61.500	179.830	5782.19	291.76	-282.23	-486.10	40°46'24.239"N	103°53'09.792"W	11.15	
6035.00	69.490	178.650	5821.15	377.17	-367.68	-484.94	40°46'23.395"N	103°53'09.797"W	8.58	
6129.00	77.120	181.740	5848.14	467.12	-457.64	-485.30	40°46'22.506"N	103°53'09.823"W	8.71	
6224.00	85.930	183.270	5862.13	560.96	-551.41	-489.41	40°46'21.580"N	103°53'09.899"W	9.41	
6318.00	89.570	181.380	5865.82	654.85	-645.24	-493.22	40°46'20.654"N	103°53'09.970"W	4.36	
6413.00	89.970	176.700	5866.20	749.76	-740.20	-491.63	40°46'19.716"N	103°53'09.972"W	4.94	
6507.00	90.000	174.810	5866.22	843.34	-833.94	-484.67	40°46'18.788"N	103°53'09.904"W	2.01	
6602.00	89.750	174.380	5866.43	937.72	-928.52	-475.72	40°46'17.852"N	103°53'09.810"W	0.52	
6697.00	90.000	175.980	5866.64	1032.21	-1023.18	-467.74	40°46'16.916"N	103°53'09.729"W	1.70	
6791.00	90.000	175.740	5866.64	1125.81	-1116.93	-460.96	40°46'15.988"N	103°53'09.663"W	0.26	
6886.00	89.720	175.940	5866.87	1220.40	-1211.68	-454.07	40°46'15.051"N	103°53'09.595"W	0.36	
6980.00	89.480	176.060	5867.53	1314.02	-1305.45	-447.51	40°46'14.123"N	103°53'09.532"W	0.29	
7074.00	89.780	175.700	5868.13	1407.63	-1399.21	-440.75	40°46'13.196"N	103°53'09.467"W	0.50	
7169.00	89.940	177.650	5868.37	1502.34	-1494.04	-435.25	40°46'12.258"N	103°53'09.418"W	2.06	
7264.00	90.120	180.540	5868.32	1597.27	-1589.02	-433.74	40°46'11.320"N	103°53'09.421"W	3.05	
7358.00	89.850	179.360	5868.34	1691.24	-1683.02	-433.66	40°46'10.391"N	103°53'09.442"W	1.29	
7453.00	89.880	180.000	5868.56	1786.21	-1778.02	-433.13	40°46'09.452"N	103°53'09.457"W	0.67	
7642.00	89.880	179.880	5868.96	1975.17	-1967.02	-432.93	40°46'07.585"N	103°53'09.500"W	0.06	
7736.00	89.940	180.480	5869.11	2069.16	-2061.01	-433.23	40°46'06.656"N	103°53'09.526"W	0.64	
7831.00	90.150	179.550	5869.03	2164.14	-2156.01	-433.25	40°46'05.718"N	103°53'09.548"W	1.00	
7925.00	90.250	178.800	5868.71	2258.08	-2250.00	-431.90	40°46'04.789"N	103°53'09.553"W	0.80	
8020.00	90.400	178.680	5868.17	2353.00	-2344.98	-429.81	40°46'03.850"N	103°53'09.548"W	0.20	
8210.00	90.000	179.380	5867.50	2542.87	-2534.95	-426.60	40°46'01.973"N	103°53'09.551"W	0.42	
8304.00	89.720	177.670	5867.73	2636.77	-2628.91	-424.18	40°46'01.044"N	103°53'09.542"W	1.84	
8399.00	89.880	179.670	5868.06	2731.67	-2723.88	-421.97	40°46'00.106"N	103°53'09.536"W	2.11	
8493.00	89.720	180.260	5868.39	2825.65	-2817.88	-421.91	40°45'59.177"N	103°53'09.558"W	0.65	

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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	STARS FEDERAL LD17-740 AWB
Facility	SEC.05-T09N-R58W		

WELLPATH DATA (172 stations)										
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8588.00	89.850	180.140	5868.75	2920.64	-2912.88	-422.25	40°45'58.239"N	103°53'09.584"W	0.19	
8683.00	90.310	178.860	5868.62	3015.60	-3007.87	-421.42	40°45'57.300"N	103°53'09.596"W	1.43	
8778.00	89.780	179.460	5868.54	3110.54	-3102.86	-420.02	40°45'56.361"N	103°53'09.600"W	0.84	
8873.00	89.690	178.580	5868.98	3205.48	-3197.85	-418.40	40°45'55.423"N	103°53'09.602"W	0.93	
8967.00	89.820	180.310	5869.38	3299.43	-3291.84	-417.49	40°45'54.494"N	103°53'09.612"W	1.85	
9061.00	90.090	181.080	5869.46	3393.43	-3385.83	-418.63	40°45'53.565"N	103°53'09.649"W	0.87	
9156.00	90.150	179.930	5869.26	3488.42	-3480.82	-419.47	40°45'52.627"N	103°53'09.683"W	1.21	
9250.00	89.750	174.690	5869.34	3582.18	-3574.69	-415.06	40°45'51.699"N	103°53'09.647"W	5.59	
9345.00	90.000	178.000	5869.55	3676.83	-3669.48	-409.00	40°45'50.761"N	103°53'09.591"W	3.49	
9534.00	90.000	179.970	5869.55	3865.69	-3858.44	-405.65	40°45'48.894"N	103°53'09.592"W	1.04	
9628.00	89.820	176.930	5869.70	3959.58	-3952.40	-403.11	40°45'47.965"N	103°53'09.582"W	3.24	
9722.00	89.820	180.040	5869.99	4053.47	-4046.35	-400.63	40°45'47.037"N	103°53'09.572"W	3.31	
9817.00	90.000	179.540	5870.14	4148.44	-4141.35	-400.28	40°45'46.098"N	103°53'09.589"W	0.56	
9911.00	90.180	179.890	5869.99	4242.41	-4235.35	-399.81	40°45'45.169"N	103°53'09.606"W	0.42	
10006.00	89.600	179.180	5870.17	4337.37	-4330.34	-399.04	40°45'44.231"N	103°53'09.618"W	0.97	
10100.00	90.890	178.840	5869.77	4431.31	-4424.33	-397.41	40°45'43.302"N	103°53'09.619"W	1.42	
10195.00	90.150	177.300	5868.91	4526.16	-4519.27	-394.22	40°45'42.363"N	103°53'09.600"W	1.80	
10289.00	89.880	178.340	5868.89	4620.00	-4613.20	-390.64	40°45'41.435"N	103°53'09.576"W	1.14	
10383.00	89.690	178.400	5869.24	4713.89	-4707.16	-387.97	40°45'40.506"N	103°53'09.563"W	0.21	
10478.00	89.750	180.110	5869.70	4808.84	-4802.15	-386.73	40°45'39.567"N	103°53'09.570"W	1.80	
10572.00	90.030	178.990	5869.88	4902.80	-4896.14	-385.99	40°45'38.639"N	103°53'09.582"W	1.23	
10667.00	90.030	179.000	5869.83	4997.74	-4991.13	-384.33	40°45'37.700"N	103°53'09.583"W	0.01	
10761.00	90.490	177.510	5869.41	5091.61	-5085.08	-381.46	40°45'36.771"N	103°53'09.568"W	1.66	
10855.00	90.680	177.390	5868.45	5185.41	-5178.98	-377.28	40°45'35.843"N	103°53'09.536"W	0.24	
10949.00	90.680	178.520	5867.33	5279.26	-5272.91	-373.93	40°45'34.914"N	103°53'09.515"W	1.20	
11044.00	90.180	177.510	5866.62	5374.12	-5367.85	-370.64	40°45'33.976"N	103°53'09.494"W	1.19	
11138.00	90.340	178.980	5866.19	5468.00	-5461.80	-367.76	40°45'33.047"N	103°53'09.479"W	1.57	
11233.00	90.340	177.590	5865.63	5562.87	-5556.76	-364.92	40°45'32.108"N	103°53'09.465"W	1.46	
11327.00	90.310	176.290	5865.10	5656.62	-5650.62	-359.90	40°45'31.180"N	103°53'09.422"W	1.38	
11421.00	90.990	174.320	5864.03	5750.12	-5744.29	-352.21	40°45'30.253"N	103°53'09.344"W	2.22	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#06 STARS FEDERAL LD17-740 (380'FSL & 1470'FEL, SEC.05)
Area	COLORADO	Well	STARS FEDERAL LD17-740
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	STARS FEDERAL LD17-740 AWB
Facility	SEC.05-T09N-R58W		

WELLPATH DATA (172 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11516.00	90.830	175.850	5862.52	5844.58	-5838.93	-344.07	40°45'29.317"N	103°53'09.261"W	1.62	
11640.00	91.170	179.170	5860.36	5968.30	-5962.78	-338.68	40°45'28.092"N	103°53'09.220"W	2.69	
11735.00	90.950	180.610	5858.60	6063.25	-6057.76	-338.50	40°45'27.154"N	103°53'09.240"W	1.53	
11829.00	90.520	179.420	5857.39	6157.23	-6151.75	-338.52	40°45'26.225"N	103°53'09.263"W	1.35	
11924.00	90.400	178.850	5856.63	6252.17	-6246.73	-337.09	40°45'25.287"N	103°53'09.266"W	0.61	
12019.00	90.520	179.930	5855.87	6347.12	-6341.72	-336.08	40°45'24.348"N	103°53'09.276"W	1.14	
12113.00	90.400	178.760	5855.11	6441.07	-6435.71	-335.00	40°45'23.419"N	103°53'09.284"W	1.25	
12208.00	90.430	179.160	5854.42	6536.00	-6530.69	-333.28	40°45'22.481"N	103°53'09.284"W	0.42	
12302.00	90.490	179.810	5853.67	6629.95	-6624.69	-332.43	40°45'21.552"N	103°53'09.295"W	0.69	
12397.00	90.520	178.950	5852.83	6724.91	-6719.68	-331.41	40°45'20.613"N	103°53'09.304"W	0.91	
12491.00	90.710	176.230	5851.82	6818.71	-6813.58	-327.45	40°45'19.685"N	103°53'09.275"W	2.90	
12586.00	90.370	177.940	5850.93	6913.47	-6908.45	-322.62	40°45'18.747"N	103°53'09.235"W	1.84	
12680.00	90.430	178.700	5850.27	7007.35	-7002.40	-319.87	40°45'17.818"N	103°53'09.221"W	0.81	
12775.00	90.550	179.190	5849.46	7102.28	-7097.38	-318.12	40°45'16.879"N	103°53'09.221"W	0.53	
12869.00	90.430	177.800	5848.65	7196.17	-7191.35	-315.65	40°45'15.951"N	103°53'09.211"W	1.48	
12963.00	90.340	177.700	5848.02	7290.01	-7285.27	-311.96	40°45'15.022"N	103°53'09.186"W	0.14	
13058.00	90.550	177.350	5847.28	7384.82	-7380.18	-307.86	40°45'14.084"N	103°53'09.155"W	0.43	
13152.00	90.310	179.460	5846.58	7478.70	-7474.14	-305.24	40°45'13.155"N	103°53'09.143"W	2.26	
13247.00	90.430	177.780	5845.97	7573.61	-7569.10	-302.95	40°45'12.216"N	103°53'09.136"W	1.77	
13341.00	90.460	177.470	5845.24	7667.43	-7663.02	-299.06	40°45'11.288"N	103°53'09.107"W	0.33	
13530.00	89.940	179.880	5844.58	7856.24	-7851.95	-294.69	40°45'09.421"N	103°53'09.095"W	1.30	
13624.00	90.280	178.390	5844.40	7950.18	-7945.94	-293.27	40°45'08.492"N	103°53'09.099"W	1.63	
13719.00	89.940	178.390	5844.21	8045.07	-8040.90	-290.60	40°45'07.553"N	103°53'09.087"W	0.36	
13814.00	90.490	179.540	5843.86	8140.00	-8135.88	-288.88	40°45'06.614"N	103°53'09.087"W	1.34	
14003.00	90.550	187.220	5842.14	8328.70	-8324.41	-300.02	40°45'04.754"N	103°53'09.276"W	4.06	
14097.00	90.860	186.150	5840.98	8422.25	-8417.76	-310.96	40°45'03.834"N	103°53'09.440"W	1.19	
14191.00	90.920	181.570	5839.52	8516.11	-8511.51	-317.29	40°45'02.909"N	103°53'09.545"W	4.87	
14285.00	90.620	179.050	5838.26	8610.08	-8605.49	-317.79	40°45'01.980"N	103°53'09.574"W	2.70	
14379.00	90.580	175.350	5837.27	8703.84	-8699.36	-313.20	40°45'01.052"N	103°53'09.536"W	3.94	
14474.00	90.830	175.770	5836.10	8798.39	-8794.06	-305.85	40°45'00.115"N	103°53'09.463"W	0.51	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#06 STARS FEDERAL LD17-740 (380'FSL & 1470'FEL, SEC.05)
Area	COLORADO	Well	STARS FEDERAL LD17-740
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	STARS FEDERAL LD17-740 AWB
Facility	SEC.05-T09N-R58W		

WELLPATH DATA (172 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14568.00	91.080	176.950	5834.54	8892.05	-8887.86	-299.88	40°44'59.187"N	103°53'09.408"W	1.28	
14662.00	90.890	177.590	5832.92	8985.82	-8981.74	-295.41	40°44'58.259"N	103°53'09.372"W	0.71	
14756.00	90.620	172.850	5831.68	9079.28	-9075.38	-287.58	40°44'57.332"N	103°53'09.292"W	5.05	
14851.00	90.800	175.980	5830.50	9173.61	-9169.91	-278.33	40°44'56.397"N	103°53'09.194"W	3.30	
14945.00	90.920	177.950	5829.09	9267.35	-9263.76	-273.36	40°44'55.469"N	103°53'09.152"W	2.10	
15039.00	91.450	177.460	5827.15	9361.16	-9357.66	-269.59	40°44'54.540"N	103°53'09.125"W	0.77	
15133.00	91.690	175.370	5824.57	9454.80	-9451.44	-263.72	40°44'53.613"N	103°53'09.071"W	2.24	
15228.00	90.430	175.950	5822.82	9549.35	-9546.15	-256.53	40°44'52.676"N	103°53'09.000"W	1.46	
15322.00	90.250	179.250	5822.26	9643.16	-9640.05	-252.59	40°44'51.748"N	103°53'08.971"W	3.52	
15416.00	90.860	176.860	5821.35	9737.01	-9733.99	-249.40	40°44'50.819"N	103°53'08.952"W	2.62	
15514.00	90.430	178.590	5820.24	9834.83	-9831.90	-245.51	40°44'49.851"N	103°53'08.925"W	1.82	
15608.00	90.770	177.640	5819.26	9928.69	-9925.84	-242.42	40°44'48.922"N	103°53'08.907"W	1.07	
15702.00	90.650	176.590	5818.10	10022.45	-10019.71	-237.69	40°44'47.994"N	103°53'08.867"W	1.12	
15796.00	90.310	178.600	5817.31	10116.27	-10113.62	-233.75	40°44'47.066"N	103°53'08.838"W	2.17	
15891.00	90.180	174.290	5816.90	10210.92	-10208.42	-227.86	40°44'46.128"N	103°53'08.784"W	4.54	
15985.00	90.150	176.540	5816.63	10304.45	-10302.11	-220.35	40°44'45.201"N	103°53'08.709"W	2.39	
16080.00	90.310	177.110	5816.25	10399.18	-10396.96	-215.08	40°44'44.263"N	103°53'08.663"W	0.62	
16174.00	90.520	177.770	5815.57	10492.98	-10490.87	-210.89	40°44'43.334"N	103°53'08.631"W	0.74	
16268.00	90.120	177.230	5815.04	10586.79	-10584.77	-206.79	40°44'42.406"N	103°53'08.600"W	0.71	
16363.00	90.220	179.770	5814.76	10681.68	-10679.73	-204.30	40°44'41.467"N	103°53'08.590"W	2.68	
16532.00	90.220	179.910	5814.11	10850.64	-10848.73	-203.83	40°44'39.798"N	103°53'08.624"W	0.08	Last BHGE MWD Survey
16556.00	90.220	179.910	5814.02	10874.64	-10872.73	-203.79	40°44'39.561"N	103°53'08.629"W	0.00	Projection to Bit

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#06 STARS FEDERAL LD17-740 (380'FSL & 1470'FEL,SEC.05)
Area	COLORADO	Well	STARS FEDERAL LD17-740
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	STARS FEDERAL LD17-740 AWB
Facility	SEC.05-T09N-R58W		

HOLE & CASING SECTIONS - Ref Wellbore: STARS FEDERAL LD17-740 AWB Ref Wellpath: STARS FEDERAL LD17-740 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]
13.5in Open Hole	30.00	1958.00	1928.00	30.00	1957.95	0.00	0.00	1.41	5.29
9.625in Casing Surface	30.00	1958.00	1928.00	30.00	1957.95	0.00	0.00	1.41	5.29
8.5in Open Hole	1958.00	16556.00	14598.00	1957.95	5814.02	1.41	5.29	-10872.73	-203.79

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.08-T09N-R58W	3.00	1.36	74.77	3447561.13	1528946.86	40°46'26.940"N	103°53'02.436"W	polygon
SEC.17-T09N-R58W	3.00	1.36	74.77	3447561.13	1528946.86	40°46'26.940"N	103°53'02.436"W	polygon
STARS FEDERAL LD17-720 SEC.17 FEDERAL MINERALS 1	3.00	1.36	74.77	3447561.13	1528946.86	40°46'26.940"N	103°53'02.436"W	polygon
STARS FEDERAL LD17-720 SEC.17 FEDERAL MINERALS 2	3.00	1.36	74.77	3447561.13	1528946.86	40°46'26.940"N	103°53'02.436"W	polygon
STARS FEDERAL LD17-720 SEC.8 FEDERAL MINERALS	3.00	1.36	74.77	3447561.13	1528946.86	40°46'26.940"N	103°53'02.436"W	polygon
STARS FEDERAL LD17-740 BHL ON PLAT (140'FSL & 1980'FEL,SEC.17)	5809.00	-10881.08	-214.66	3447271.70	1518064.45	40°44'39.480"N	103°53'08.772"W	point
STARS FEDERAL LD17-740 REV-2 BHL ON PLAT (140'FSL & 1980'FEL,SEC.17)	5813.55	-10881.08	-214.66	3447271.70	1518064.45	40°44'39.480"N	103°53'08.772"W	point
STARS FEDERAL LD17-740 5000'VS TARGET	5870.00	-4993.64	-371.69	3447114.67	1523951.88	40°45'37.673"N	103°53'09.420"W	point

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#06 STARS FEDERAL LD17-740 (380'FSL & 1470'FEL,SEC.05)
Area	COLORADO	Well	STARS FEDERAL LD17-740
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	STARS FEDERAL LD17-740 AWB
Facility	SEC.05-T09N-R58W		

WELLPATH COMPOSITION - Ref Wellbore: STARS FEDERAL LD17-740 AWB Ref Wellpath: STARS FEDERAL LD17-740 AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	1956.00	Gyrodata standard - Drop gyro or Multi-shot	3rd Party Surface Surveys Gyrodata standard <86'-1956'>	STARS FEDERAL LD17-740 AWB
1956.00	16532.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BH/ATCurve 8.5" Hole OWSG MWD rev2+IFR+MSA <1973'-16532'>	STARS FEDERAL LD17-740 AWB
16532.00	16556.00	Blind Drilling (std)	Projection to bit	STARS FEDERAL LD17-740 AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#06 STARS FEDERAL LD17-740 (380'FSL & 1470'FEL,SEC.05)
Area	COLORADO	Well	STARS FEDERAL LD17-740
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	STARS FEDERAL LD17-740 AWB
Facility	SEC.05-T09N-R58W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1956.00	1.180	80.770	1955.95	Tied to 3rd Party Surface Surveys
16532.00	90.220	179.910	5814.11	Last BHGE MWD Survey
16556.00	90.220	179.910	5814.02	Projection to Bit