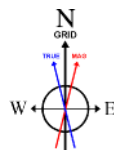


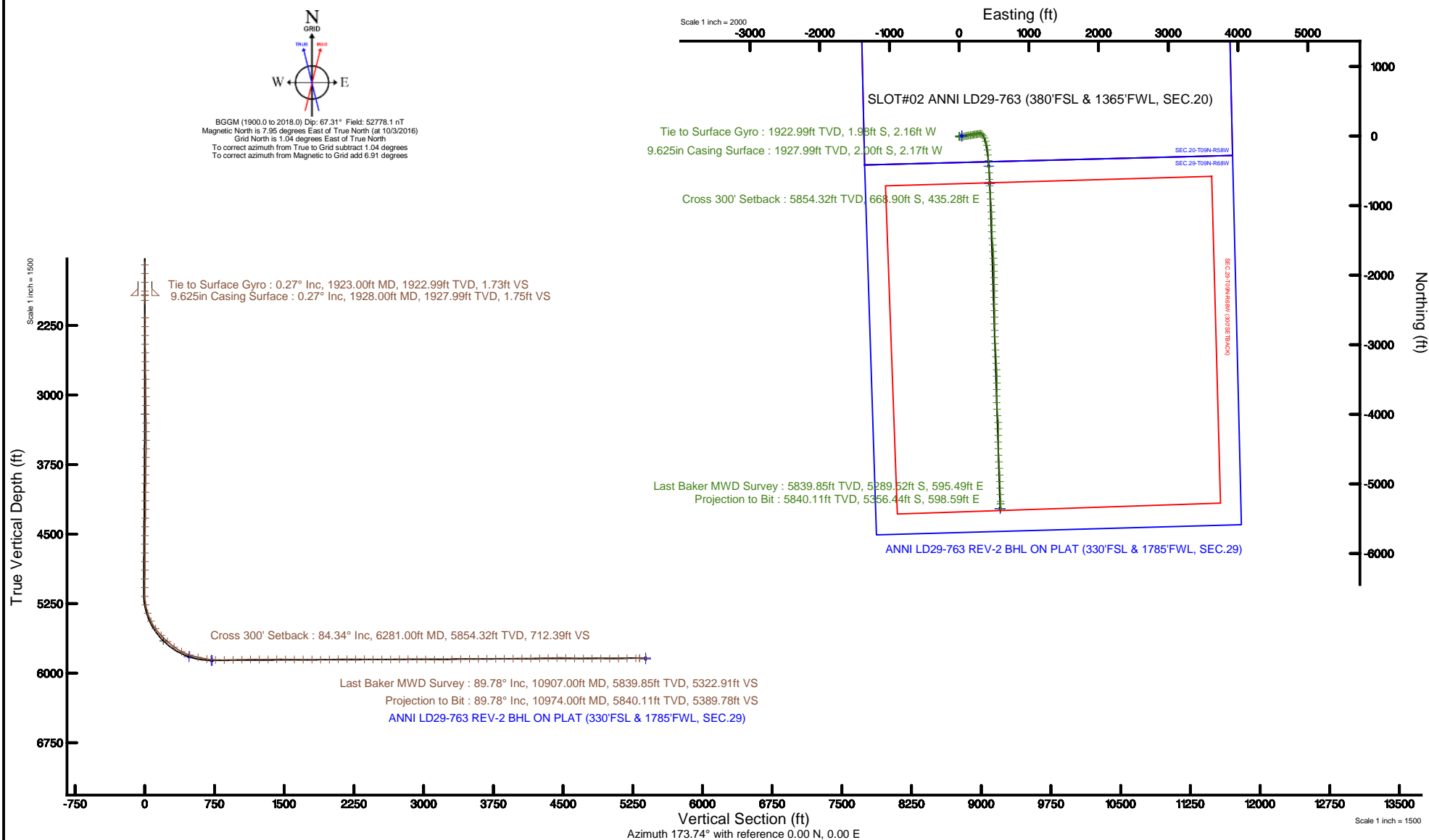
Location:	COLORADO	Slot:	SLOT#02 ANNI LD29-763 (380'FSL & 1365'FWL, SEC.20)
Field:	WELD COUNTY (NOBLE NAD 83 GRID)	Well:	ANNI LD29-763
Facility:	SEC.20-T09N-R58W	Wellbore:	ANNI LD29-763 PWB



Plot reference wellpath is ANNI LD29-763 PWP (REV-B.0)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to H&P 517 (30KB) (RKB)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to H&P 517 (30KB) (RKB)	North Reference: Grid north
H&P 517 (30KB) (RKB) to Mean Sea Level: 4895 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT #02 ANNI LD29-763 (380'FSL & 1365'FWL, SEC.20)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: ingmjmr on 2016-11-04
	Database: WA DEN Deriver: Dfnr



BGGM (1900.0 to 2018.0) Dip: 67.31° Field: 52778.1 nT
Magnetic North is 7.95 degrees East of True North (at 10/3/2016)
Grid North is 1.04 degrees East of True North
To correct azimuth from True to Grid subtract 1.04 degrees
To correct azimuth from Magnetic to Grid add 6.91 degrees



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#02 ANNI LD29-763 (380'FSL & 1365'FWL, SEC.20)
Area	COLORADO	Well	ANNI LD29-763
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	ANNI LD29-763 AWB
Facility	SEC.20-T09N-R58W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Ingmjmr
Scale	0.999992	Report Generated	11/4/2016 at 1:04:11 PM
Convergence at slot	1.04° East	Database/Source file	WA_DEN_Denver_Defn/ANNI_LD29-763_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-0.70	-38.80	3445446.89	1512933.48	40°43'49.116"N	103°53'33.684"W
Facility Reference Pt			3445485.69	1512934.19	40°43'49.116"N	103°53'33.180"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 517 (30'KB) (RKB) to Facility Vertical Datum	4895.00ft
Horizontal Reference Pt	Slot	H&P 517 (30'KB) (RKB) to Mean Sea Level	4895.00ft
Vertical Reference Pt	H&P 517 (30'KB) (RKB)	H&P 517 (30'KB) (RKB) to Mud Line at Slot (SLOT#02 ANNI LD29-763 (380'FSL & 1365'FWL, SEC.20))	4895.00ft
MD Reference Pt	H&P 517 (30'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	173.74°

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#02 ANNI LD29-763 (380'FSL & 1365'FWL, SEC.20)
Area	COLORADO	Well	ANNI LD29-763
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	ANNI LD29-763 AWB
Facility	SEC.20-T09N-R58W		

WELLPATH DATA (98 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
1923.00	0.270	209.760	1922.99	1.73	-1.98	-2.16	40°43'49.097"N	103°53'33.713"W	0.16	Tie to Surface Gyro
1979.00	0.340	159.400	1978.99	2.00	-2.25	-2.17	40°43'49.094"N	103°53'33.713"W	0.48	
2168.00	0.830	105.680	2167.98	3.05	-3.14	-0.65	40°43'49.085"N	103°53'33.693"W	0.36	
2263.00	0.940	85.800	2262.97	3.34	-3.27	0.79	40°43'49.084"N	103°53'33.675"W	0.34	
2357.00	0.530	159.610	2356.96	3.79	-3.62	1.71	40°43'49.080"N	103°53'33.663"W	1.00	
2452.00	0.660	179.820	2451.95	4.76	-4.58	1.86	40°43'49.070"N	103°53'33.661"W	0.26	
2546.00	0.630	211.950	2545.95	5.70	-5.56	1.59	40°43'49.061"N	103°53'33.665"W	0.38	
2641.00	0.620	217.060	2640.94	6.49	-6.42	1.01	40°43'49.052"N	103°53'33.672"W	0.06	
2736.00	0.680	203.370	2735.94	7.35	-7.34	0.47	40°43'49.043"N	103°53'33.680"W	0.17	
2830.00	0.650	202.920	2829.93	8.30	-8.35	0.04	40°43'49.034"N	103°53'33.685"W	0.03	
2925.00	0.920	201.190	2924.92	9.45	-9.55	-0.44	40°43'49.022"N	103°53'33.692"W	0.29	
3019.00	0.360	132.700	3018.92	10.34	-10.46	-0.50	40°43'49.013"N	103°53'33.693"W	0.91	
3114.00	2.640	94.850	3113.88	10.99	-10.85	1.90	40°43'49.009"N	103°53'33.662"W	2.49	
3209.00	5.320	94.640	3208.64	12.24	-11.39	8.47	40°43'49.002"N	103°53'33.577"W	2.82	
3303.00	8.170	91.360	3301.98	13.95	-11.90	19.50	40°43'48.995"N	103°53'33.434"W	3.06	
3398.00	9.970	84.080	3395.79	14.90	-11.21	34.43	40°43'48.999"N	103°53'33.240"W	2.24	
3492.00	10.590	80.730	3488.28	14.49	-8.98	51.05	40°43'49.018"N	103°53'33.023"W	0.92	
3587.00	10.710	80.840	3581.65	13.59	-6.17	68.38	40°43'49.043"N	103°53'32.797"W	0.13	
3681.00	9.940	78.290	3674.12	12.37	-3.13	84.94	40°43'49.070"N	103°53'32.582"W	0.95	
3776.00	9.250	78.170	3767.80	10.85	0.10	100.45	40°43'49.099"N	103°53'32.379"W	0.73	
3871.00	9.140	78.570	3861.57	9.43	3.16	115.31	40°43'49.127"N	103°53'32.186"W	0.13	
3965.00	9.020	79.360	3954.40	8.20	6.00	129.87	40°43'49.152"N	103°53'31.996"W	0.18	
4060.00	9.460	80.980	4048.16	7.25	8.60	144.90	40°43'49.175"N	103°53'31.800"W	0.54	
4154.00	9.910	83.520	4140.82	6.85	10.72	160.57	40°43'49.193"N	103°53'31.596"W	0.66	
4249.00	9.290	82.610	4234.49	6.67	12.63	176.30	40°43'49.209"N	103°53'31.391"W	0.67	
4343.00	8.340	77.340	4327.38	5.76	15.10	190.47	40°43'49.231"N	103°53'31.207"W	1.33	
4438.00	7.740	74.810	4421.45	4.00	18.29	203.37	40°43'49.260"N	103°53'31.039"W	0.73	
4533.00	8.130	78.740	4515.54	2.42	21.28	216.13	40°43'49.287"N	103°53'30.872"W	0.70	
4627.00	8.250	81.840	4608.58	1.62	23.53	229.33	40°43'49.307"N	103°53'30.700"W	0.49	
4722.00	7.870	85.250	4702.64	1.56	25.04	242.55	40°43'49.320"N	103°53'30.528"W	0.64	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#02 ANNI LD29-763 (380'FSL & 1365'FWL, SEC.20)
Area	COLORADO	Well	ANNI LD29-763
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	ANNI LD29-763 AWB
Facility	SEC.20-T09N-R58W		

WELLPATH DATA (98 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4817.00	7.820	84.370	4796.76	1.80	26.21	255.47	40°43'49.329"N	103°53'30.360"W	0.14	
4911.00	8.060	78.910	4889.86	1.32	28.10	268.30	40°43'49.346"N	103°53'30.193"W	0.84	
5006.00	9.120	78.020	4983.79	0.01	30.95	282.20	40°43'49.371"N	103°53'30.012"W	1.12	
5100.00	8.830	80.210	5076.64	-1.18	33.72	296.60	40°43'49.396"N	103°53'29.824"W	0.48	
5195.00	8.480	95.550	5170.57	-0.19	34.28	310.76	40°43'49.399"N	103°53'29.640"W	2.45	
5289.00	13.560	131.230	5262.90	9.36	26.34	325.97	40°43'49.318"N	103°53'29.444"W	8.81	
5384.00	19.950	145.010	5353.86	31.82	5.69	343.66	40°43'49.111"N	103°53'29.220"W	7.88	
5478.00	27.990	152.860	5439.70	66.55	-27.14	362.96	40°43'48.783"N	103°53'28.977"W	9.18	
5573.00	36.610	162.320	5519.98	115.27	-74.09	381.78	40°43'48.316"N	103°53'28.743"W	10.49	
5668.00	43.510	167.750	5592.67	175.66	-133.12	397.34	40°43'47.730"N	103°53'28.555"W	8.14	
5762.00	48.260	173.190	5658.11	242.97	-199.63	408.38	40°43'47.071"N	103°53'28.427"W	6.54	
5857.00	53.240	175.300	5718.20	316.50	-272.80	415.70	40°43'46.346"N	103°53'28.350"W	5.52	
5951.00	62.890	176.870	5767.87	396.11	-352.29	421.09	40°43'45.560"N	103°53'28.298"W	10.36	
6046.00	72.320	176.770	5804.02	483.72	-439.90	425.96	40°43'44.694"N	103°53'28.256"W	9.93	
6140.00	76.710	178.090	5829.11	574.09	-530.37	430.01	40°43'43.799"N	103°53'28.225"W	4.86	
6235.00	80.190	177.760	5848.13	666.91	-623.37	433.38	40°43'42.880"N	103°53'28.203"W	3.68	
6281.00†	84.345	177.459	5854.32	712.38	-668.90	435.28	40°43'42.430"N	103°53'28.189"W	9.05	Cross 300' Setback
6329.00	88.680	177.150	5857.24	760.18	-716.75	437.53	40°43'41.957"N	103°53'28.171"W	9.05	
6424.00	90.460	175.610	5857.95	855.07	-811.55	443.53	40°43'41.019"N	103°53'28.115"W	2.48	
6518.00	91.540	175.320	5856.31	949.01	-905.24	450.96	40°43'40.092"N	103°53'28.041"W	1.19	
6613.00	91.350	176.000	5853.91	1043.93	-999.94	458.15	40°43'39.155"N	103°53'27.970"W	0.74	
6707.00	90.220	177.310	5852.63	1137.80	-1093.76	463.63	40°43'38.227"N	103°53'27.921"W	1.84	
6802.00	89.450	179.030	5852.90	1232.51	-1188.71	466.66	40°43'37.289"N	103°53'27.904"W	1.98	
6896.00	90.950	179.130	5852.57	1326.10	-1282.69	468.17	40°43'36.360"N	103°53'27.906"W	1.60	
6991.00	91.200	178.480	5850.79	1420.71	-1377.66	470.15	40°43'35.421"N	103°53'27.903"W	0.73	
7086.00	88.460	175.400	5851.07	1515.54	-1472.50	475.22	40°43'34.483"N	103°53'27.859"W	4.34	
7180.00	89.480	175.430	5852.76	1609.48	-1566.18	482.74	40°43'33.556"N	103°53'27.784"W	1.09	
7275.00	90.120	176.960	5853.09	1704.39	-1660.97	489.04	40°43'32.619"N	103°53'27.724"W	1.75	
7369.00	89.720	177.760	5853.22	1798.20	-1754.87	493.37	40°43'31.690"N	103°53'27.690"W	0.95	
7463.00	89.540	178.110	5853.83	1891.95	-1848.81	496.76	40°43'30.762"N	103°53'27.668"W	0.42	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#02 ANNI LD29-763 (380'FSL & 1365'FWL, SEC.20)
Area	COLORADO	Well	ANNI LD29-763
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	ANNI LD29-763 AWB
Facility	SEC.20-T09N-R58W		

WELLPATH DATA (98 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7558.00	91.790	178.280	5852.73	1986.65	-1943.75	499.75	40°43'29.823"N	103°53'27.652"W	2.38	
7652.00	91.660	179.230	5849.90	2080.25	-2037.68	501.79	40°43'28.895"N	103°53'27.647"W	1.02	
7747.00	89.940	179.270	5848.57	2174.79	-2132.66	503.03	40°43'27.956"N	103°53'27.654"W	1.81	
7841.00	88.800	179.390	5849.61	2268.34	-2226.65	504.13	40°43'27.028"N	103°53'27.662"W	1.22	
7936.00	90.060	179.490	5850.55	2362.86	-2321.63	505.06	40°43'26.089"N	103°53'27.672"W	1.33	
8030.00	89.480	179.460	5850.93	2456.39	-2415.63	505.92	40°43'25.160"N	103°53'27.683"W	0.62	
8125.00	89.570	179.760	5851.72	2550.89	-2510.62	506.57	40°43'24.222"N	103°53'27.697"W	0.33	
8219.00	91.200	179.830	5851.08	2644.36	-2604.62	506.91	40°43'23.293"N	103°53'27.715"W	1.74	
8314.00	90.400	178.820	5849.76	2738.90	-2699.60	508.03	40°43'22.354"N	103°53'27.723"W	1.36	
8408.00	88.980	178.440	5850.27	2832.55	-2793.57	510.27	40°43'21.426"N	103°53'27.715"W	1.56	
8503.00	90.250	178.130	5850.90	2927.25	-2888.52	513.12	40°43'20.487"N	103°53'27.701"W	1.38	
8598.00	88.520	177.040	5851.92	3022.03	-2983.43	517.12	40°43'19.549"N	103°53'27.671"W	2.15	
8692.00	89.230	177.010	5853.77	3115.85	-3077.28	522.00	40°43'18.621"N	103°53'27.630"W	0.76	
8787.00	90.490	176.730	5854.00	3210.71	-3172.14	527.18	40°43'17.683"N	103°53'27.585"W	1.36	
8881.00	92.430	176.850	5851.61	3304.54	-3265.96	532.44	40°43'16.755"N	103°53'27.539"W	2.07	
8976.00	91.390	177.230	5848.44	3399.33	-3360.77	537.35	40°43'15.817"N	103°53'27.498"W	1.17	
9070.00	90.250	179.460	5847.09	3493.01	-3454.72	540.06	40°43'14.888"N	103°53'27.484"W	2.66	
9165.00	91.230	179.440	5845.87	3587.53	-3549.71	540.97	40°43'13.950"N	103°53'27.495"W	1.03	
9260.00	90.550	181.360	5844.39	3681.87	-3644.69	540.31	40°43'13.012"N	103°53'27.526"W	2.14	
9354.00	90.180	181.910	5843.79	3774.98	-3738.65	537.63	40°43'12.084"N	103°53'27.583"W	0.71	
9449.00	89.970	177.690	5843.67	3869.42	-3833.62	537.96	40°43'11.145"N	103°53'27.601"W	4.45	
9544.00	90.520	176.360	5843.26	3964.26	-3928.49	542.89	40°43'10.207"N	103°53'27.559"W	1.51	
9638.00	90.520	173.000	5842.41	4058.23	-4022.07	551.60	40°43'09.281"N	103°53'27.468"W	3.57	
9733.00	91.450	176.320	5840.78	4153.19	-4116.63	560.44	40°43'08.345"N	103°53'27.376"W	3.63	
9827.00	91.110	181.340	5838.67	4246.77	-4210.56	562.36	40°43'07.417"N	103°53'27.373"W	5.35	
9922.00	90.800	180.350	5837.09	4341.03	-4305.53	560.96	40°43'06.479"N	103°53'27.414"W	1.09	
10017.00	91.080	180.670	5835.53	4435.35	-4400.51	560.11	40°43'05.541"N	103°53'27.447"W	0.45	
10111.00	88.240	178.370	5836.09	4528.86	-4494.49	560.90	40°43'04.612"N	103°53'27.459"W	3.89	
10206.00	87.320	177.100	5839.77	4623.55	-4589.35	564.65	40°43'03.675"N	103°53'27.433"W	1.65	
10301.00	88.770	176.560	5843.01	4718.35	-4684.14	569.90	40°43'02.737"N	103°53'27.387"W	1.63	

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#02 ANNI LD29-763 (380'FSL & 1365'FWL, SEC.20)
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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	ANNI LD29-763 AWB
Facility	SEC.20-T09N-R58W		

WELLPATH DATA (98 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10395.00	90.860	176.960	5843.31	4812.22	-4777.99	575.22	40°43'01.809"N	103°53'27.340"W	2.26	
10490.00	89.750	177.620	5842.81	4907.03	-4872.88	579.71	40°43'00.871"N	103°53'27.304"W	1.36	
10584.00	89.080	177.560	5843.77	5000.81	-4966.79	583.66	40°42'59.942"N	103°53'27.275"W	0.72	
10679.00	91.660	178.180	5843.16	5095.56	-5061.71	587.19	40°42'59.004"N	103°53'27.251"W	2.79	
10773.00	91.350	178.170	5840.69	5189.24	-5155.63	590.18	40°42'58.075"N	103°53'27.234"W	0.33	
10868.00	89.820	177.530	5839.72	5283.99	-5250.56	593.75	40°42'57.137"N	103°53'27.211"W	1.75	
10907.00	89.780	177.350	5839.85	5322.91	-5289.52	595.49	40°42'56.752"N	103°53'27.197"W	0.47	Last Baker MWD Survey
10974.00	89.780	177.350	5840.11	5389.78	-5356.44	598.59	40°42'56.090"N	103°53'27.173"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: ANNI LD29-763 AWB Ref Wellpath: ANNI LD29-763 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	1928.00	1898.00	30.00	1927.99	0.01	-0.01	-2.00	-2.17
8.5in Open Hole	1928.00	10974.00	9046.00	1927.99	5840.11	-2.00	-2.17	-5356.44	598.59
13.5in Open Hole	30.00	1928.00	1898.00	30.00	1927.99	0.01	-0.01	-2.00	-2.17

WELLPATH COMPOSITION - Ref Wellbore: ANNI LD29-763 AWB Ref Wellpath: ANNI LD29-763 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	1923.00	Gyrodata standard - Drop gyro or Multi-shot	GYRO SURVEYS 13.5" SURFACE<0'-1923">	ANNI LD29-763 AWB
1923.00	10907.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BHI MWD NAVITRAK 8.5" MONOBORE SURVEYS <1979'-10907">	ANNI LD29-763 AWB
10907.00	10974.00	Blind Drilling (std)	Projection to bit	ANNI LD29-763 AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#02 ANNI LD29-763 (380'FSL & 1365'FWL, SEC.20)
Area	COLORADO	Well	ANNI LD29-763
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	ANNI LD29-763 AWB
Facility	SEC.20-T09N-R58W		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
1923.00	0.270	209.760	1922.99	Tie to Surface Gyro	
6281.00	84.345	177.459	5854.32	Cross 300' Setback	
10907.00	89.780	177.350	5839.85	Last Baker MWD Survey	
10974.00	89.780	177.350	5840.11	Projection to Bit	