

NOBLE ENERGY, INC



Location: COLORADO Slot: SLOT#14 Scarecrow Federal LG04-715 (436FNL & 1926FWL,SEC.09)
 Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: Scarecrow Federal LG04-715
 Facility: SEC.09-T08N-R59W Wellbore: Scarecrow Federal LG04-715 PWB

Plot reference wellpath is Scarecrow Federal LG04-715 (REV-B.0) PWP
 Grid System: NAD83 / Lambert Colorado SP, Northern Zone (S01), US feet
 True vertical depths are referenced to (4863GL+30KB@4893RKB) (RKB)
 North Reference: Grid north
 Reference wellpath measured depths are referenced to (4863GL+30KB@4893RKB) (RKB)
 Scale: True distance
 (4863GL+30KB@4893RKB) (RKB) to Mean Sea Level: 4893 feet
 Coordinates are in feet referenced to Slot
 Mean Sea Level to Ground level (At Slot: SLOT#14 Scarecrow Federal LG04-715 (436FNL & 1926FWL,SEC.09)): 0 feet
 Depths are in feet
 Offset wellpath MDs are referenced to each path's default MD datum
 Created by: gualneri on 2024-03-01; Database: WA, Denver

Location Information

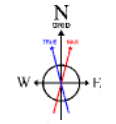
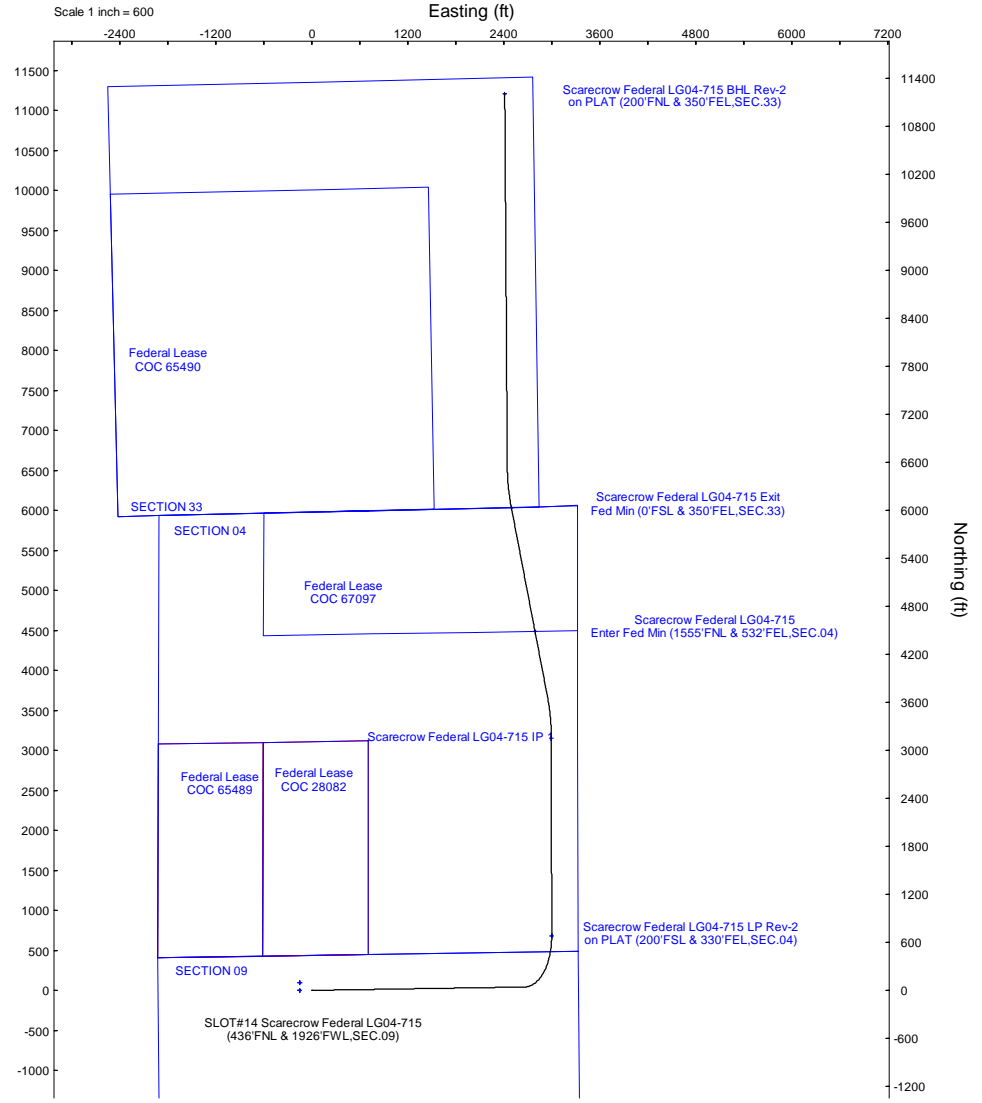
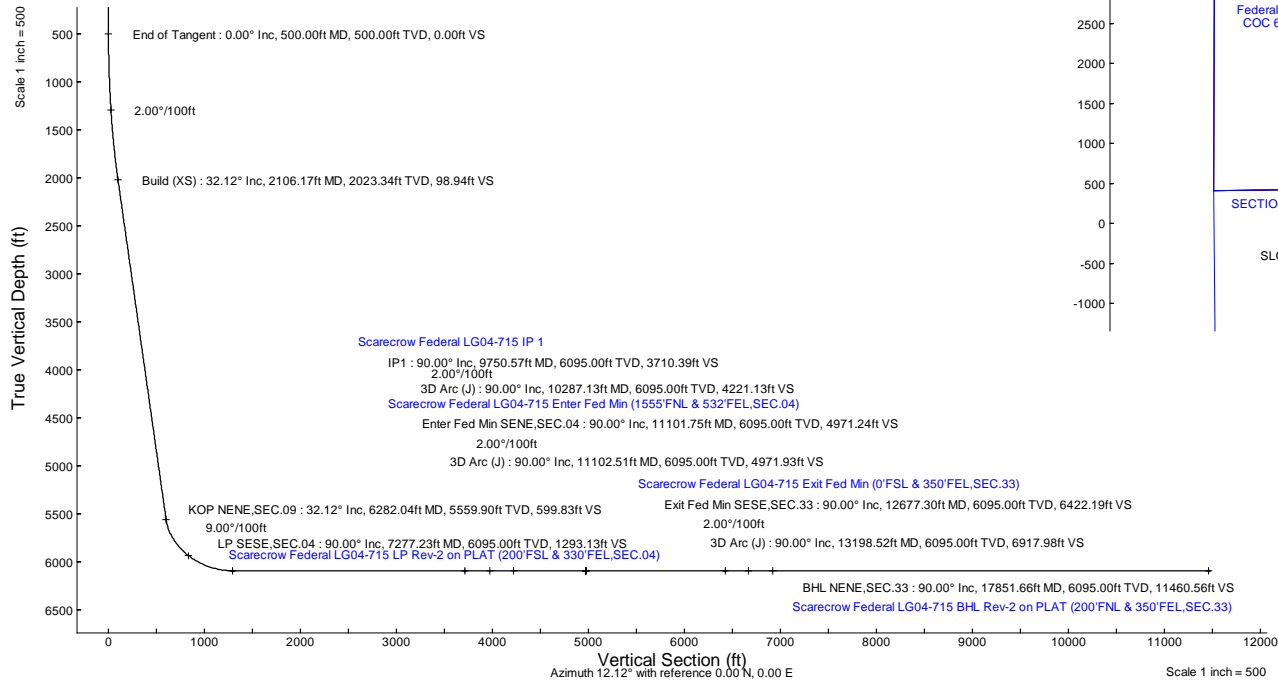
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude		
SEC.09-T08N-R59W	3419979.808	1465319.889	40°40'59.3200"N	103°59'8.3400"W		
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#14 Scarecrow Federal LG04-715 (436FNL & 1926FWL,SEC.09)	-93.22	494.24	342047.042	1465225.674	40°40'58.5156"N	103°59'1.9464"W
(4863GL+30KB@4893RKB) (RKB) to Ground level (At Slot: SLOT#14 Scarecrow Federal LG04-715 (436FNL & 1926FWL,SEC.09))					4893ft	
Mean Sea Level to Ground level (At Slot: SLOT#14 Scarecrow Federal LG04-715 (436FNL & 1926FWL,SEC.09))					0ft	
(4863GL+30KB@4893RKB) (RKB) to Mean Sea Level					4893ft	

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (*/100ft)	VS (ft)
SHL NENW,SEC.09	30.00	0.000	89.087	30.00	0.00	0.00	0.00	0.00
End of Tangent	500.00	0.000	89.087	500.00	0.00	0.00	0.00	0.00
Build (XS)	2106.17	32.123	89.087	2023.34	6.99	438.53	2.00	98.94
KOP NENE,SEC.09	6282.04	32.123	89.087	5559.90	42.38	2658.75	0.00	599.83
LP SESE,SEC.04	7277.23	90.000	359.901	6095.00	679.57	2993.58	9.00	1293.13
IP1	9750.57	90.000	359.901	6095.00	3152.90	2989.29	0.00	3710.39
3D Arc (J)	10287.13	90.000	349.169	6095.00	3686.24	2938.26	2.00	4221.13
Enter Fed Min SENE,SEC.04	11101.75	90.000	349.169	6095.00	4486.35	2785.19	0.00	4971.24
3D Arc (J)	11102.51	90.000	349.184	6095.00	4487.09	2785.05	2.00	4971.93
Exit Fed Min SESE,SEC.33	12677.30	90.000	349.184	6095.00	6033.91	2489.54	0.00	6422.19
3D Arc (J)	13198.52	90.000	359.609	6095.00	6551.93	2438.72	2.00	6917.98
BHL NENE,SEC.33	17851.66	90.000	359.609	6095.00	11204.96	2406.95	0.00	11460.56

Survey Program

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
30.00	1950.00	OWSG MWD rev2	OWSG MWD rev2 (MS+IFR1)		Scarecrow Federal LG04-715 PWB
1950.00	17903.40	OWSG MWD rev2	OWSG MWD rev2 (MS+IFR1)		Scarecrow Federal LG04-715 PWB



BGGM (1900.0 to 2024.0) Dip: 66.80° Field: 51940.1 nT
 Magnetic North is 7.42 degrees East of True North (at 4/20/2023)
 Grid North is 0.98 degrees East of True North
 To correct azimuth from True to Grid subtract 0.98 degrees
 To correct azimuth from Magnetic to Grid add 6.44 degrees



Planned Wellpath Report

Scarecrow Federal LG04-715 (REV-B.0) PWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Scarecrow Federal LG04-715
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.09-T08N-R59W	Wellbore	Scarecrow Federal LG04-715 PWB
Slot	SLOT#14 Scarecrow Federal LG04-715 (436'FNL & 1926'FWL,SEC.09)		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Guenaler
Scale	0.999985	Report Generated	3/1/2024 at 10:08:54 AM
Convergence at slot	0.98° East	Database	WellArchitectDB

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-93.22	494.24	3420474.04	1495225.87	40°40'58.5156"N	103°59'1.9464"W
Facility Reference Pt			3419979.81	1495319.09	40°40'59.5200"N	103°59'8.3400"W
Field Reference Pt			3000000.00	4454105.15	48°46'34.3150"N	105°30'0.0000"W

WELLPATH DATUM			
Calculation method	Minimum curvature	(4863'GL+30'KB@4893'RKB) (RKB) to Facility Vertical Datum	4893.00ft
Horizontal Reference Pt	Slot	(4863'GL+30'KB@4893'RKB) (RKB) to Mean Sea Level	4893.00ft
Vertical Reference Pt	(4863'GL+30'KB@4893'RKB) (RKB)	(4863'GL+30'KB@4893'RKB) (RKB) to Ground Level at Slot (SLOT#14 Scarecrow Federal LG04-715 (436'FNL & 1926'FWL,SEC.09))	4893.00ft
MD Reference Pt	(4863'GL+30'KB@4893'RKB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	12.12°



Planned Wellpath Report

Scarecrow Federal LG04-715 (REV-B.0) PWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Scarecrow Federal LG04-715
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.09-T08N-R59W	Wellbore	Scarecrow Federal LG04-715 PWB
Slot	SLOT#14 Scarecrow Federal LG04-715 (436'FNL & 1926'FWL,SEC.09)		

WELLPATH DATA (205 stations) † = interpolated, ‡ = extrapolated station										
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MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	89.087	0.00	0.00	0.00	0.00	40°40'58.5156"N	103°59'1.9464"W	0.00	
30.00	0.000	89.087	30.00	0.00	0.00	0.00	40°40'58.5156"N	103°59'1.9464"W	0.00	SHL NENW,SEC.09
130.00†	0.000	89.087	130.00	0.00	0.00	0.00	40°40'58.5156"N	103°59'1.9464"W	0.00	
230.00†	0.000	89.087	230.00	0.00	0.00	0.00	40°40'58.5156"N	103°59'1.9464"W	0.00	
330.00†	0.000	89.087	330.00	0.00	0.00	0.00	40°40'58.5156"N	103°59'1.9464"W	0.00	
430.00†	0.000	89.087	430.00	0.00	0.00	0.00	40°40'58.5156"N	103°59'1.9464"W	0.00	FOXHILLS-BASE PROD
500.00	0.000	89.087	500.00	0.00	0.00	0.00	40°40'58.5156"N	103°59'1.9464"W	0.00	End of Tangent
530.00†	0.600	89.087	530.00	0.04	0.00	0.16	40°40'58.5156"N	103°59'1.9444"W	2.00	
630.00†	2.600	89.087	629.96	0.67	0.05	2.95	40°40'58.5156"N	103°59'1.9081"W	2.00	
730.00†	4.600	89.087	729.75	2.08	0.15	9.23	40°40'58.5155"N	103°59'1.8266"W	2.00	
830.00†	6.600	89.087	829.27	4.28	0.30	18.98	40°40'58.5154"N	103°59'1.7000"W	2.00	
865.99†	7.320	89.087	865.00	5.27	0.37	23.34	40°40'58.5153"N	103°59'1.6434"W	2.00	PIERRE (UPPER)AQUIFER TOP
930.00†	8.600	89.087	928.39	7.27	0.51	32.21	40°40'58.5152"N	103°59'1.5283"W	2.00	
1030.00†	10.600	89.087	1026.98	11.03	0.78	48.88	40°40'58.5150"N	103°59'1.3119"W	2.00	
1130.00†	12.600	89.087	1124.93	15.56	1.10	68.98	40°40'58.5148"N	103°59'1.0509"W	2.00	
1230.00†	14.600	89.087	1222.13	20.87	1.47	92.49	40°40'58.5145"N	103°59'0.7457"W	2.00	
1330.00†	16.600	89.087	1318.44	26.93	1.90	119.38	40°40'58.5142"N	103°59'0.3966"W	2.00	
1430.00†	18.600	89.087	1413.75	33.75	2.39	149.61	40°40'58.5139"N	103°59'0.0042"W	2.00	
1475.76†	19.515	89.087	1457.00	37.12	2.62	164.55	40°40'58.5137"N	103°58'59.8103"W	2.00	PIERRE (UPPER) AQUIFER BASE
1530.00†	20.600	89.087	1507.95	41.32	2.92	183.15	40°40'58.5135"N	103°58'59.5688"W	2.00	
1630.00†	22.600	89.087	1600.93	49.62	3.51	219.96	40°40'58.5131"N	103°58'59.0910"W	2.00	
1730.00†	24.600	89.087	1692.56	58.65	4.14	259.99	40°40'58.5126"N	103°58'58.5714"W	2.00	
1830.00†	26.600	89.087	1782.74	68.40	4.83	303.19	40°40'58.5121"N	103°58'58.0106"W	2.00	
1930.00†	28.600	89.087	1871.35	78.85	5.57	349.51	40°40'58.5116"N	103°58'57.4093"W	2.00	
2030.00†	30.600	89.087	1958.30	89.99	6.36	398.89	40°40'58.5110"N	103°58'56.7682"W	2.00	
2106.17	32.123	89.087	2023.34	98.94	6.99	438.53	40°40'58.5105"N	103°58'56.2536"W	2.00	Build (XS)
2130.00†	32.123	89.087	2043.52	101.79	7.19	451.20	40°40'58.5104"N	103°58'56.0892"W	0.00	
2230.00†	32.123	89.087	2128.21	113.79	8.04	504.37	40°40'58.5098"N	103°58'55.3990"W	0.00	
2330.00†	32.123	89.087	2212.90	125.78	8.89	557.54	40°40'58.5092"N	103°58'54.7088"W	0.00	
2430.00†	32.123	89.087	2297.59	137.78	9.74	610.70	40°40'58.5085"N	103°58'54.0186"W	0.00	
2530.00†	32.123	89.087	2382.28	149.77	10.58	663.87	40°40'58.5079"N	103°58'53.3284"W	0.00	
2601.70†	32.123	89.087	2443.00	158.37	11.19	701.99	40°40'58.5075"N	103°58'52.8335"W	0.00	PIERRE_MBR_A_SD_TOP
2630.00†	32.123	89.087	2466.97	161.77	11.43	717.04	40°40'58.5073"N	103°58'52.6382"W	0.00	
2730.00†	32.123	89.087	2551.66	173.76	12.28	770.21	40°40'58.5067"N	103°58'51.9480"W	0.00	
2830.00†	32.123	89.087	2636.35	185.76	13.13	823.37	40°40'58.5060"N	103°58'51.2578"W	0.00	
2930.00†	32.123	89.087	2721.04	197.75	13.97	876.54	40°40'58.5054"N	103°58'50.5676"W	0.00	
3030.00†	32.123	89.087	2805.73	209.75	14.82	929.71	40°40'58.5048"N	103°58'49.8774"W	0.00	
3130.00†	32.123	89.087	2890.42	221.74	15.67	982.88	40°40'58.5042"N	103°58'49.1872"W	0.00	
3230.00†	32.123	89.087	2975.11	233.74	16.52	1036.04	40°40'58.5035"N	103°58'48.4970"W	0.00	
3239.31†	32.123	89.087	2983.00	234.86	16.60	1041.00	40°40'58.5035"N	103°58'48.4327"W	0.00	PIERRE_MBR_A_SD_BASE
3330.00†	32.123	89.087	3059.80	245.73	17.36	1089.21	40°40'58.5029"N	103°58'47.8068"W	0.00	
3430.00†	32.123	89.087	3144.49	257.73	18.21	1142.38	40°40'58.5023"N	103°58'47.1166"W	0.00	
3530.00†	32.123	89.087	3229.18	269.72	19.06	1195.55	40°40'58.5016"N	103°58'46.4264"W	0.00	
3630.00†	32.123	89.087	3313.87	281.72	19.91	1248.72	40°40'58.5010"N	103°58'45.7362"W	0.00	
3645.50†	32.123	89.087	3327.00	283.58	20.04	1256.96	40°40'58.5009"N	103°58'45.6292"W	0.00	PARKMAN

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Well	Scarecrow Federal LG04-715
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.09-T08N-R59W	Wellbore	Scarecrow Federal LG04-715 PWB
Slot	SLOT#14 Scarecrow Federal LG04-715 (436'FNL & 1926'FWL,SEC.09)		

WELLPATH DATA (205 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3730.00†	32.123	89.087	3398.56	293.71	20.75	1301.88	40°40'58.5004"N	103°58'45.0460"W	0.00	
3830.00†	32.123	89.087	3483.26	305.71	21.60	1355.05	40°40'58.4997"N	103°58'44.3558"W	0.00	
3930.00†	32.123	89.087	3567.95	317.70	22.45	1408.22	40°40'58.4991"N	103°58'43.6656"W	0.00	
4030.00†	32.123	89.087	3652.64	329.70	23.30	1461.39	40°40'58.4985"N	103°58'42.9754"W	0.00	
4130.00†	32.123	89.087	3737.33	341.69	24.14	1514.55	40°40'58.4978"N	103°58'42.2852"W	0.00	
4230.00†	32.123	89.087	3822.02	353.69	24.99	1567.72	40°40'58.4972"N	103°58'41.5950"W	0.00	
4330.00†	32.123	89.087	3906.71	365.68	25.84	1620.89	40°40'58.4965"N	103°58'40.9048"W	0.00	
4430.00†	32.123	89.087	3991.40	377.68	26.69	1674.06	40°40'58.4959"N	103°58'40.2146"W	0.00	
4456.69†	32.123	89.087	4014.00	380.88	26.91	1688.25	40°40'58.4957"N	103°58'40.0304"W	0.00	SUSSEX
4530.00†	32.123	89.087	4076.09	389.67	27.53	1727.23	40°40'58.4952"N	103°58'39.5244"W	0.00	
4630.00†	32.123	89.087	4160.78	401.67	28.38	1780.39	40°40'58.4946"N	103°58'38.8342"W	0.00	
4730.00†	32.123	89.087	4245.47	413.66	29.23	1833.56	40°40'58.4940"N	103°58'38.1440"W	0.00	
4830.00†	32.123	89.087	4330.16	425.66	30.08	1886.73	40°40'58.4933"N	103°58'37.4538"W	0.00	
4930.00†	32.123	89.087	4414.85	437.65	30.93	1939.90	40°40'58.4927"N	103°58'36.7636"W	0.00	
5030.00†	32.123	89.087	4499.54	449.65	31.77	1993.06	40°40'58.4920"N	103°58'36.0734"W	0.00	
5077.77†	32.123	89.087	4540.00	455.38	32.18	2018.46	40°40'58.4917"N	103°58'35.7437"W	0.00	SHANNON
5130.00†	32.123	89.087	4584.23	461.64	32.62	2046.23	40°40'58.4914"N	103°58'35.3832"W	0.00	
5230.00†	32.123	89.087	4668.92	473.64	33.47	2099.40	40°40'58.4907"N	103°58'34.6930"W	0.00	
5330.00†	32.123	89.087	4753.61	485.63	34.32	2152.57	40°40'58.4901"N	103°58'34.0028"W	0.00	
5430.00†	32.123	89.087	4838.30	497.63	35.16	2205.74	40°40'58.4894"N	103°58'33.3126"W	0.00	
5530.00†	32.123	89.087	4922.99	509.62	36.01	2258.90	40°40'58.4887"N	103°58'32.6224"W	0.00	
5630.00†	32.123	89.087	5007.68	521.62	36.86	2312.07	40°40'58.4881"N	103°58'31.9322"W	0.00	
5730.00†	32.123	89.087	5092.37	533.61	37.71	2365.24	40°40'58.4874"N	103°58'31.2420"W	0.00	
5830.00†	32.123	89.087	5177.06	545.61	38.55	2418.41	40°40'58.4868"N	103°58'30.5518"W	0.00	
5930.00†	32.123	89.087	5261.75	557.60	39.40	2471.57	40°40'58.4861"N	103°58'29.8616"W	0.00	
6030.00†	32.123	89.087	5346.44	569.60	40.25	2524.74	40°40'58.4854"N	103°58'29.1714"W	0.00	
6036.56†	32.123	89.087	5352.00	570.39	40.30	2528.23	40°40'58.4854"N	103°58'29.1262"W	0.00	TEPEE BUTES
6130.00†	32.123	89.087	5431.14	581.59	41.10	2577.91	40°40'58.4848"N	103°58'28.4813"W	0.00	
6230.00†	32.123	89.087	5515.83	593.59	41.94	2631.08	40°40'58.4841"N	103°58'27.7911"W	0.00	
6282.04†	32.123	89.087	5559.90	599.83	42.38	2658.75	40°40'58.4838"N	103°58'27.4319"W	0.00	KOP (432'FNL&669'FEL,SEC.09)
6282.04	32.123	89.087	5559.90	599.83	42.38	2658.75	40°40'58.4838"N	103°58'27.4319"W	0.00	KOP NENE,SEC.09
6330.00†	32.433	81.020	5600.47	607.34	44.60	2684.21	40°40'58.5013"N	103°58'27.1009"W	9.00	
6430.00†	34.648	65.190	5683.97	634.13	60.74	2736.61	40°40'58.6519"N	103°58'26.4173"W	9.00	
6530.00†	38.644	51.641	5764.32	675.39	92.11	2787.00	40°40'58.9533"N	103°58'25.7563"W	9.00	
6630.00†	43.929	40.572	5839.54	730.08	137.93	2834.14	40°40'59.3979"N	103°58'25.1343"W	9.00	
6730.00†	50.088	31.579	5907.77	796.88	197.08	2876.87	40°40'59.9750"N	103°58'24.5665"W	9.00	
6777.10†	53.202	27.910	5937.00	832.08	229.14	2895.17	40°41'0.2887"N	103°58'24.3219"W	9.00	INTRA_SHARON_SPGS_MK
6797.46†	54.582	26.417	5949.00	847.97	243.78	2902.68	40°41'0.4320"N	103°58'24.2212"W	9.00	SHARON_SPRING_MKR
6830.00†	56.823	24.135	5967.34	874.14	268.09	2914.15	40°41'0.6702"N	103°58'24.0669"W	9.00	
6844.19†	57.813	23.176	5975.00	885.84	279.03	2918.94	40°41'0.7775"N	103°58'24.0022"W	9.00	NIO A CHALK
6897.72†	61.608	19.737	6002.00	931.44	322.04	2935.82	40°41'1.1996"N	103°58'23.7736"W	9.00	NIO A MARL
6930.00†	63.936	17.783	6016.77	959.94	349.21	2945.04	40°41'1.4664"N	103°58'23.6478"W	9.00	
7030.00†	71.295	12.173	6054.85	1052.19	438.46	2968.79	40°41'2.3441"N	103°58'23.3196"W	9.00	
7094.75†	76.145	8.808	6073.00	1114.28	499.55	2980.08	40°41'2.9457"N	103°58'23.1594"W	9.00	NIO B CHALK
7130.00†	78.806	7.038	6080.64	1148.60	533.63	2984.82	40°41'3.2816"N	103°58'23.0903"W	9.00	



Planned Wellpath Report

Scarecrow Federal LG04-715 (REV-B.0) PWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Scarecrow Federal LG04-715
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.09-T08N-R59W	Wellbore	Scarecrow Federal LG04-715 PWB
Slot	SLOT#14 Scarecrow Federal LG04-715 (436'FNL & 1926'FWL,SEC.09)		

WELLPATH DATA (205 stations) † = interpolated, ‡ = extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7230.00†	86.401	2.164	6093.52	1246.81	632.38	2992.73	40°41'4.2559"N	103°58'22.9656"W	9.00	
7277.23	90.000	359.901	6095.00 ¹	1293.13	679.57	2993.58	40°41'4.7220"N	103°58'22.9440"W	9.00	LP SESE,SEC.04
7330.00†	90.000	359.901	6095.00	1344.69	732.33	2993.49	40°41'5.2433"N	103°58'22.9334"W	0.00	
7430.00†	90.000	359.901	6095.00	1442.43	832.33	2993.32	40°41'6.2313"N	103°58'22.9133"W	0.00	
7530.00†	90.000	359.901	6095.00	1540.16	932.33	2993.14	40°41'7.2193"N	103°58'22.8932"W	0.00	
7630.00†	90.000	359.901	6095.00	1637.89	1032.33	2992.97	40°41'8.2073"N	103°58'22.8731"W	0.00	
7730.00†	90.000	359.901	6095.00	1735.63	1132.33	2992.80	40°41'9.1953"N	103°58'22.8530"W	0.00	
7830.00†	90.000	359.901	6095.00	1833.36	1232.33	2992.62	40°41'10.1833"N	103°58'22.8329"W	0.00	
7930.00†	90.000	359.901	6095.00	1931.09	1332.33	2992.45	40°41'11.1713"N	103°58'22.8128"W	0.00	
8030.00†	90.000	359.901	6095.00	2028.83	1432.33	2992.28	40°41'12.1593"N	103°58'22.7927"W	0.00	
8130.00†	90.000	359.901	6095.00	2126.56	1532.33	2992.10	40°41'13.1473"N	103°58'22.7726"W	0.00	
8230.00†	90.000	359.901	6095.00	2224.29	1632.33	2991.93	40°41'14.1353"N	103°58'22.7525"W	0.00	
8330.00†	90.000	359.901	6095.00	2322.03	1732.33	2991.75	40°41'15.1233"N	103°58'22.7324"W	0.00	
8430.00†	90.000	359.901	6095.00	2419.76	1832.33	2991.58	40°41'16.1113"N	103°58'22.7123"W	0.00	
8530.00†	90.000	359.901	6095.00	2517.49	1932.33	2991.41	40°41'17.0993"N	103°58'22.6922"W	0.00	
8630.00†	90.000	359.901	6095.00	2615.23	2032.33	2991.23	40°41'18.0873"N	103°58'22.6721"W	0.00	
8730.00†	90.000	359.901	6095.00	2712.96	2132.33	2991.06	40°41'19.0753"N	103°58'22.6520"W	0.00	
8830.00†	90.000	359.901	6095.00	2810.69	2232.33	2990.89	40°41'20.0633"N	103°58'22.6319"W	0.00	
8930.00†	90.000	359.901	6095.00	2908.42	2332.33	2990.71	40°41'21.0513"N	103°58'22.6118"W	0.00	
9030.00†	90.000	359.901	6095.00	3006.16	2432.33	2990.54	40°41'22.0392"N	103°58'22.5917"W	0.00	
9130.00†	90.000	359.901	6095.00	3103.89	2532.33	2990.37	40°41'23.0272"N	103°58'22.5716"W	0.00	
9230.00†	90.000	359.901	6095.00	3201.62	2632.33	2990.19	40°41'24.0152"N	103°58'22.5515"W	0.00	
9330.00†	90.000	359.901	6095.00	3299.36	2732.33	2990.02	40°41'25.0032"N	103°58'22.5314"W	0.00	
9430.00†	90.000	359.901	6095.00	3397.09	2832.33	2989.85	40°41'25.9912"N	103°58'22.5113"W	0.00	
9530.00†	90.000	359.901	6095.00	3494.82	2932.33	2989.67	40°41'26.9792"N	103°58'22.4912"W	0.00	
9630.00†	90.000	359.901	6095.00	3592.56	3032.33	2989.50	40°41'27.9672"N	103°58'22.4711"W	0.00	
9730.00†	90.000	359.901	6095.00	3690.29	3132.33	2989.33	40°41'28.9552"N	103°58'22.4510"W	0.00	
9750.57	90.000	359.901	6095.00 ²	3710.39	3152.90	2989.29	40°41'29.1584"N	103°58'22.4468"W	0.00	IP1
9830.00†	90.000	358.312	6095.00	3787.78	3232.32	2988.05	40°41'29.9433"N	103°58'22.4452"W	2.00	
9930.00†	90.000	356.312	6095.00	3884.45	3332.20	2983.36	40°41'30.9309"N	103°58'22.4837"W	2.00	
10030.00†	90.000	354.312	6095.00	3980.17	3431.86	2975.19	40°41'31.9169"N	103°58'22.5675"W	2.00	
10130.00†	90.000	352.312	6095.00	4074.83	3531.18	2963.54	40°41'32.9001"N	103°58'22.6965"W	2.00	
10230.00†	90.000	350.312	6095.00	4168.30	3630.03	2948.44	40°41'33.8792"N	103°58'22.8704"W	2.00	
10287.13	90.000	349.169	6095.00	4221.13	3686.24	2938.26	40°41'34.4364"N	103°58'22.9899"W	2.00	3D Arc (J)
10330.00†	90.000	349.169	6095.00	4260.60	3728.35	2930.21	40°41'34.8537"N	103°58'23.0851"W	0.00	
10430.00†	90.000	349.169	6095.00	4352.68	3826.57	2911.42	40°41'35.8273"N	103°58'23.3070"W	0.00	
10530.00†	90.000	349.169	6095.00	4444.76	3924.78	2892.63	40°41'36.8008"N	103°58'23.5290"W	0.00	
10630.00†	90.000	349.169	6095.00	4536.84	4023.00	2873.84	40°41'37.7744"N	103°58'23.7509"W	0.00	
10730.00†	90.000	349.169	6095.00	4628.92	4121.22	2855.05	40°41'38.7480"N	103°58'23.9729"W	0.00	
10830.00†	90.000	349.169	6095.00	4721.01	4219.44	2836.25	40°41'39.7215"N	103°58'24.1948"W	0.00	
10930.00†	90.000	349.169	6095.00	4813.09	4317.66	2817.46	40°41'40.6951"N	103°58'24.4168"W	0.00	
11030.00†	90.000	349.169	6095.00	4905.17	4415.88	2798.67	40°41'41.6687"N	103°58'24.6387"W	0.00	
11101.75	90.000	349.169	6095.00 ³	4971.24	4486.35	2785.19	40°41'42.3672"N	103°58'24.7980"W	0.00	Enter Fed Min SENE,SEC.04
11102.51	90.000	349.184	6095.00	4971.93	4487.09	2785.05	40°41'42.3745"N	103°58'24.7997"W	2.00	3D Arc (J)
11130.00†	90.000	349.184	6095.00	4997.25	4514.10	2779.89	40°41'42.6422"N	103°58'24.8606"W	0.00	



Planned Wellpath Report

Scarecrow Federal LG04-715 (REV-B.0) PWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Scarecrow Federal LG04-715
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.09-T08N-R59W	Wellbore	Scarecrow Federal LG04-715 PWB
Slot	SLOT#14 Scarecrow Federal LG04-715 (436'FNL & 1926'FWL,SEC.09)		

WELLPATH DATA (205 stations) † = interpolated, ‡ = extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11230.00†	90.000	349.184	6095.00	5089.35	4612.32	2761.12	40°41'43.6158"N	103°58'25.0822"W	0.00	
11330.00†	90.000	349.184	6095.00	5181.44	4710.55	2742.36	40°41'44.5894"N	103°58'25.3039"W	0.00	
11430.00†	90.000	349.184	6095.00	5273.53	4808.77	2723.60	40°41'45.5630"N	103°58'25.5255"W	0.00	
11530.00†	90.000	349.184	6095.00	5365.62	4906.99	2704.83	40°41'46.5367"N	103°58'25.7471"W	0.00	
11630.00†	90.000	349.184	6095.00	5457.71	5005.22	2686.07	40°41'47.5103"N	103°58'25.9687"W	0.00	
11730.00†	90.000	349.184	6095.00	5549.81	5103.44	2667.30	40°41'48.4839"N	103°58'26.1904"W	0.00	
11830.00†	90.000	349.184	6095.00	5641.90	5201.66	2648.54	40°41'49.4575"N	103°58'26.4120"W	0.00	
11930.00†	90.000	349.184	6095.00	5733.99	5299.89	2629.77	40°41'50.4311"N	103°58'26.6337"W	0.00	
12030.00†	90.000	349.184	6095.00	5826.08	5398.11	2611.01	40°41'51.4047"N	103°58'26.8553"W	0.00	
12130.00†	90.000	349.184	6095.00	5918.17	5496.33	2592.24	40°41'52.3783"N	103°58'27.0769"W	0.00	
12230.00†	90.000	349.184	6095.00	6010.27	5594.56	2573.48	40°41'53.3519"N	103°58'27.2986"W	0.00	
12330.00†	90.000	349.184	6095.00	6102.36	5692.78	2554.71	40°41'54.3255"N	103°58'27.5202"W	0.00	
12430.00†	90.000	349.184	6095.00	6194.45	5791.01	2535.95	40°41'55.2991"N	103°58'27.7419"W	0.00	
12530.00†	90.000	349.184	6095.00	6286.54	5889.23	2517.18	40°41'56.2727"N	103°58'27.9635"W	0.00	
12630.00†	90.000	349.184	6095.00	6378.63	5987.45	2498.42	40°41'57.2463"N	103°58'28.1852"W	0.00	
12677.30	90.000	349.184	6095.00‡	6422.19	6033.91	2489.54	40°41'57.7068"N	103°58'28.2900"W	0.00	Exit Fed Min SESE, SEC.33
12730.00†	90.000	350.238	6095.00	6470.91	6085.76	2480.13	40°41'58.2207"N	103°58'28.4006"W	2.00	
12830.00†	90.000	352.238	6095.00	6564.34	6184.59	2464.90	40°41'59.1997"N	103°58'28.5763"W	2.00	
12930.00†	90.000	354.238	6095.00	6658.95	6283.89	2453.12	40°42'0.1827"N	103°58'28.7069"W	2.00	
13030.00†	90.000	356.238	6095.00	6754.63	6383.54	2444.82	40°42'1.1686"N	103°58'28.7924"W	2.00	
13130.00†	90.000	358.238	6095.00	6851.27	6483.42	2440.01	40°42'2.1562"N	103°58'28.8326"W	2.00	
13198.52	90.000	359.609	6095.00	6917.98	6551.93	2438.72	40°42'2.8332"N	103°58'28.8341"W	2.00	3D Arc (J)
13230.00†	90.000	359.609	6095.00	6948.71	6583.41	2438.50	40°42'3.1443"N	103°58'28.8298"W	0.00	
13330.00†	90.000	359.609	6095.00	7046.34	6683.40	2437.82	40°42'4.1323"N	103°58'28.8163"W	0.00	
13430.00†	90.000	359.609	6095.00	7143.96	6783.40	2437.14	40°42'5.1204"N	103°58'28.8029"W	0.00	
13530.00†	90.000	359.609	6095.00	7241.58	6883.40	2436.46	40°42'6.1085"N	103°58'28.7894"W	0.00	
13630.00†	90.000	359.609	6095.00	7339.21	6983.40	2435.77	40°42'7.0965"N	103°58'28.7759"W	0.00	
13730.00†	90.000	359.609	6095.00	7436.83	7083.39	2435.09	40°42'8.0846"N	103°58'28.7625"W	0.00	
13830.00†	90.000	359.609	6095.00	7534.46	7183.39	2434.41	40°42'9.0726"N	103°58'28.7490"W	0.00	
13930.00†	90.000	359.609	6095.00	7632.08	7283.39	2433.73	40°42'10.0607"N	103°58'28.7355"W	0.00	
14030.00†	90.000	359.609	6095.00	7729.70	7383.39	2433.04	40°42'11.0487"N	103°58'28.7221"W	0.00	
14130.00†	90.000	359.609	6095.00	7827.33	7483.39	2432.36	40°42'12.0368"N	103°58'28.7086"W	0.00	
14230.00†	90.000	359.609	6095.00	7924.95	7583.38	2431.68	40°42'13.0249"N	103°58'28.6951"W	0.00	
14330.00†	90.000	359.609	6095.00	8022.58	7683.38	2430.99	40°42'14.0129"N	103°58'28.6816"W	0.00	
14430.00†	90.000	359.609	6095.00	8120.20	7783.38	2430.31	40°42'15.0010"N	103°58'28.6682"W	0.00	
14530.00†	90.000	359.609	6095.00	8217.82	7883.38	2429.63	40°42'15.9890"N	103°58'28.6547"W	0.00	
14630.00†	90.000	359.609	6095.00	8315.45	7983.37	2428.95	40°42'16.9771"N	103°58'28.6412"W	0.00	
14730.00†	90.000	359.609	6095.00	8413.07	8083.37	2428.26	40°42'17.9651"N	103°58'28.6278"W	0.00	
14830.00†	90.000	359.609	6095.00	8510.70	8183.37	2427.58	40°42'18.9532"N	103°58'28.6143"W	0.00	
14930.00†	90.000	359.609	6095.00	8608.32	8283.37	2426.90	40°42'19.9412"N	103°58'28.6008"W	0.00	
15030.00†	90.000	359.609	6095.00	8705.94	8383.36	2426.22	40°42'20.9293"N	103°58'28.5874"W	0.00	
15130.00†	90.000	359.609	6095.00	8803.57	8483.36	2425.53	40°42'21.9174"N	103°58'28.5739"W	0.00	
15230.00†	90.000	359.609	6095.00	8901.19	8583.36	2424.85	40°42'22.9054"N	103°58'28.5604"W	0.00	
15330.00†	90.000	359.609	6095.00	8998.82	8683.36	2424.17	40°42'23.8935"N	103°58'28.5469"W	0.00	
15430.00†	90.000	359.609	6095.00	9096.44	8783.35	2423.49	40°42'24.8815"N	103°58'28.5335"W	0.00	



Planned Wellpath Report

Scarecrow Federal LG04-715 (REV-B.0) PWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Scarecrow Federal LG04-715
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.09-T08N-R59W	Wellbore	Scarecrow Federal LG04-715 PWB
Slot	SLOT#14 Scarecrow Federal LG04-715 (436'FNL & 1926'FWL,SEC.09)		

WELLPATH DATA (205 stations) † = interpolated, ‡ = extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
15530.00†	90.000	359.609	6095.00	9194.07	8883.35	2422.80	40°42'25.8696"N	103°58'28.5200"W	0.00	
15630.00†	90.000	359.609	6095.00	9291.69	8983.35	2422.12	40°42'26.8576"N	103°58'28.5065"W	0.00	
15730.00†	90.000	359.609	6095.00	9389.31	9083.35	2421.44	40°42'27.8457"N	103°58'28.4931"W	0.00	
15830.00†	90.000	359.609	6095.00	9486.94	9183.35	2420.75	40°42'28.8337"N	103°58'28.4796"W	0.00	
15930.00†	90.000	359.609	6095.00	9584.56	9283.34	2420.07	40°42'29.8218"N	103°58'28.4661"W	0.00	
16030.00†	90.000	359.609	6095.00	9682.19	9383.34	2419.39	40°42'30.8098"N	103°58'28.4526"W	0.00	
16130.00†	90.000	359.609	6095.00	9779.81	9483.34	2418.71	40°42'31.7979"N	103°58'28.4392"W	0.00	
16230.00†	90.000	359.609	6095.00	9877.43	9583.34	2418.02	40°42'32.7859"N	103°58'28.4257"W	0.00	
16330.00†	90.000	359.609	6095.00	9975.06	9683.33	2417.34	40°42'33.7740"N	103°58'28.4122"W	0.00	
16430.00†	90.000	359.609	6095.00	10072.68	9783.33	2416.66	40°42'34.7621"N	103°58'28.3987"W	0.00	
16530.00†	90.000	359.609	6095.00	10170.31	9883.33	2415.98	40°42'35.7501"N	103°58'28.3853"W	0.00	
16630.00†	90.000	359.609	6095.00	10267.93	9983.33	2415.29	40°42'36.7382"N	103°58'28.3718"W	0.00	
16730.00†	90.000	359.609	6095.00	10365.55	10083.32	2414.61	40°42'37.7262"N	103°58'28.3583"W	0.00	
16830.00†	90.000	359.609	6095.00	10463.18	10183.32	2413.93	40°42'38.7143"N	103°58'28.3449"W	0.00	
16930.00†	90.000	359.609	6095.00	10560.80	10283.32	2413.24	40°42'39.7023"N	103°58'28.3314"W	0.00	
17030.00†	90.000	359.609	6095.00	10658.43	10383.32	2412.56	40°42'40.6904"N	103°58'28.3179"W	0.00	
17130.00†	90.000	359.609	6095.00	10756.05	10483.32	2411.88	40°42'41.6784"N	103°58'28.3044"W	0.00	
17230.00†	90.000	359.609	6095.00	10853.67	10583.31	2411.20	40°42'42.6665"N	103°58'28.2910"W	0.00	
17330.00†	90.000	359.609	6095.00	10951.30	10683.31	2410.51	40°42'43.6545"N	103°58'28.2775"W	0.00	
17430.00†	90.000	359.609	6095.00	11048.92	10783.31	2409.83	40°42'44.6426"N	103°58'28.2640"W	0.00	
17530.00†	90.000	359.609	6095.00	11146.55	10883.31	2409.15	40°42'45.6306"N	103°58'28.2505"W	0.00	
17630.00†	90.000	359.609	6095.00	11244.17	10983.30	2408.47	40°42'46.6187"N	103°58'28.2371"W	0.00	
17730.00†	90.000	359.609	6095.00	11341.79	11083.30	2407.78	40°42'47.6067"N	103°58'28.2236"W	0.00	
17795.99†	90.000	359.609	6095.00	11406.22	11149.29	2407.33	40°42'48.2588"N	103°58'28.2147"W	0.00	
17851.66	90.000	359.609	6095.00 [‡]	11460.56	11204.96	2406.95	40°42'48.8088"N	103°58'28.2072"W	0.00	BHL NENE,SEC.33

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Scarecrow Federal LG04-715
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.09-T08N-R59W	Wellbore	Scarecrow Federal LG04-715 PWB
Slot	SLOT#14 Scarecrow Federal LG04-715 (436'FNL & 1926'FWL,SEC.09)		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SECTION 04 LG09-03-785	N/A	2.00	96.79	-157.27	3420316.77	1495322.66	40°40'59.4984"N	103°59'3.9660"W	polygon
2D Polygon: dimensions not calculated									
SECTION 09 LG09-03-785	N/A	2.00	96.79	-157.27	3420316.77	1495322.66	40°40'59.4984"N	103°59'3.9660"W	polygon
2D Polygon: dimensions not calculated									
SECTION 33 LG09-03-785	N/A	2.00	96.79	-157.27	3420316.77	1495322.66	40°40'59.4984"N	103°59'3.9660"W	polygon
2D Polygon: dimensions not calculated									
LG09-03-715 BHL (200'FNL & 350'FEL,SEC.33)	N/A	6095.00	11205.03	2407.06	3422881.06	1506430.72	40°42'48.8095"N	103°58'28.2058"W	point
LG09-03-715 LP (200'FSL & 330'FEL,SEC.04)	N/A	6095.00	679.60	2993.62	3423467.61	1495905.46	40°41'4.7223"N	103°58'22.9435"W	point
5) Scarecrow Federal LG04-715 BHL Rev-2 on PLAT (200'FNL & 350'FEL,SEC.33)	17851.66	6095.00	11204.96	2406.95	3422880.95	1506430.64	40°42'48.8088"N	103°58'28.2072"W	point
3) Scarecrow Federal LG04-715 Enter Fed Min (1555'FNL & 532'FEL,SEC.04)	11101.75	6095.00	4486.35	2785.19	3423259.19	1499712.15	40°41'42.3672"N	103°58'24.7980"W	point
4) Scarecrow Federal LG04-715 Exit Fed Min (0'FSL & 350'FEL,SEC.33)	12677.30	6095.00	6033.91	2489.54	3422963.54	1501259.68	40°41'57.7068"N	103°58'28.2900"W	point
2) Scarecrow Federal LG04-715 IP 1	9750.57	6095.00	3152.90	2989.29	3423463.28	1498378.72	40°41'29.1584"N	103°58'22.4468"W	point
1) Scarecrow Federal LG04-715 LP Rev-2 on PLAT (200'FSL & 330'FEL,SEC.04)	7277.23	6095.00	679.57	2993.58	3423467.57	1495905.43	40°41'4.7220"N	103°58'22.9440"W	point

SURVEY PROGRAM - Ref Wellbore: Scarecrow Federal LG04-715 PWB Ref Wellpath: Scarecrow Federal LG04-715 (REV-B.0) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
30.00	1950.00	OWSG MWD rev2 (MS+IFR1)		Scarecrow Federal LG04-715 PWB
1950.00	17903.40	OWSG MWD rev2 (MS+IFR1)		Scarecrow Federal LG04-715 PWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Scarecrow Federal LG04-715
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.09-T08N-R59W	Wellbore	Scarecrow Federal LG04-715 PWB
Slot	SLOT#14 Scarecrow Federal LG04-715 (436'FNL & 1926'FWL,SEC.09)		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
430.00	0.000	89.087	430.00	FOXHILLS-BASE PROD
865.99	7.320	89.087	865.00	PIERRE (UPPER)AQUIFER TOP
1475.76	19.515	89.087	1457.00	PIERRE (UPPER) AQUIFER BASE
2601.70	32.123	89.087	2443.00	PIERRE_MBR_A_SD_TOP
3239.31	32.123	89.087	2983.00	PIERRE_MBR_A_SD_BASE
3645.50	32.123	89.087	3327.00	PARKMAN
4456.69	32.123	89.087	4014.00	SUSSEX
5077.77	32.123	89.087	4540.00	SHANNON
6036.56	32.123	89.087	5352.00	TEPEE BUTES
6282.04	32.123	89.087	5559.90	KOP (432'FNL&669'FEL,SEC.09)
6777.10	53.202	27.910	5937.00	INTRA_SHARON_SPGS_MK
6797.46	54.582	26.417	5949.00	SHARON_SPRING_MKR
6844.19	57.813	23.176	5975.00	NIO A CHALK
6897.72	61.608	19.737	6002.00	NIO A MARL
7094.75	76.145	8.808	6073.00	NIO B CHALK

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
30.00	0.000	89.087	30.00	SHL NENW,SEC.09
500.00	0.000	89.087	500.00	End of Tangent
2106.17	32.123	89.087	2023.34	Build (XS)
6282.04	32.123	89.087	5559.90	KOP NENE,SEC.09
7277.23	90.000	359.901	6095.00	LP SESE,SEC.04
9750.57	90.000	359.901	6095.00	IP1
10287.13	90.000	349.169	6095.00	3D Arc (J)
11101.75	90.000	349.169	6095.00	Enter Fed Min SENE,SEC.04
11102.51	90.000	349.184	6095.00	3D Arc (J)
12677.30	90.000	349.184	6095.00	Exit Fed Min SESE,SEC.33
13198.52	90.000	359.609	6095.00	3D Arc (J)
17851.66	90.000	359.609	6095.00	BHL NENE,SEC.33



Closest Approach Clearance Summary Report

Scarecrow Federal LG04-715 (REV-B.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Scarecrow Federal LG04-715
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.09-T08N-R59W	Wellbore	Scarecrow Federal LG04-715 PWB
Slot	SLOT#14 Scarecrow Federal LG04-715 (436'FNL & 1926'FWL,SEC.09)		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Guenaler
Scale	0.999985	Report Generated	3/1/2024 at 10:28:43 AM
Convergence at slot	0.98° East	Database	WellArchitectDB

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-93.22	494.24	3420474.04	1495225.87	40°40'58.5156"N	103°59'1.9464"W
Facility Reference Pt			3419979.81	1495319.09	40°40'59.5200"N	103°59'8.3400"W
Field Reference Pt			3000000.00	4454105.15	48°46'34.3150"N	105°30'0.0000"W

WELLPATH DATUM			
Calculation method	Minimum Curvature	(4863'GL+30'KB@4893'RKB) (RKB) to Facility Vertical Datum	4893.00ft
Horizontal Reference Pt	Slot	(4863'GL+30'KB@4893'RKB) (RKB) to Mean Sea Level	4893.00ft
Vertical Reference Pt	(4863'GL+30'KB@4893'RKB) (RKB)	(4863'GL+30'KB@4893'RKB) (RKB) to Ground Level at Slot (SLOT#14 Scarecrow Federal LG04-715 (436'FNL & 1926'FWL,SEC.09))	4893.00ft
MD Reference Pt	(4863'GL+30'KB@4893'RKB) (RKB)		
Field Vertical Reference	Mean Sea Level		

POSITIONAL UNCERTAINTY CALCULATION SETTINGS					
Ellipse Confidence Limit	3.50 Std Dev	Ellipse Start MD	30.00ft	Surface Position Uncertainty	included
Declination	7.42° East of TN	Dip Angle	66.80°	Mag Field Strength	51940 nT
Slot Surface Uncertainty @1SD		Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD		Horizontal	8.200ft	Vertical	3.000ft
Positional Uncertainty values in the WELLPATH DATA table are the projection of the ellipsoid of uncertainty onto the vertical and horizontal planes					



Closest Approach Clearance Summary Report

Scarecrow Federal LG04-715 (REV-B.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Scarecrow Federal LG04-715
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.09-T08N-R59W	Wellbore	Scarecrow Federal LG04-715 PWB
Slot	SLOT#14 Scarecrow Federal LG04-715 (436'FNL & 1926'FWL,SEC.09)		

PROXIMITY-SCAN RULE			
Rule Name	SPE WPTS Stop Drilling HSE Risk (2017)	Rule Based On	Ratio
Plane of Rule	Closest Approach	Threshold Value	1.00
Include Casing & Hole Size	yes	Apply Cone of Safety	no

SURVEY PROGRAM - Ref Wellbore: Scarecrow Federal LG04-715 PWB Ref Wellpath: Scarecrow Federal LG04-715 (REV-B.0) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
30.00	1950.00	OWSG MWD rev2 (MS+IFR1)		Scarecrow Federal LG04-715 PWB
1950.00	17903.40	OWSG MWD rev2 (MS+IFR1)		Scarecrow Federal LG04-715 PWB



Closest Approach Clearance Summary Report

Scarecrow Federal LG04-715 (REV-B.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Scarecrow Federal LG04-715
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.09-T08N-R59W	Wellbore	Scarecrow Federal LG04-715 PWB
Slot	SLOT#14 Scarecrow Federal LG04-715 (436'FNL & 1926'FWL,SEC.09)		

CALCULATION RANGE & CUTOFF		
From: 30.00ft MD	To: 17851.66ft MD	C-C Cutoff: (none)

OFFSET WELL CLEARANCE SUMMARY (34 Offset Wellpaths selected) Ratios are calculated in Closest Approach plane												
Offset Facility	Offset Slot	Offset Well	Offset Wellbore	Offset Wellpath	Wellbore Status	C-C Clearance Distance			Rule Separation Ratio			
						Ref MD [ft]	Min C-C Clear Dist [ft]	Diverging from MD [ft]	Ref MD of Min Ratio [ft]	Min Ratio	Min Ratio Dvrg from [ft]	Rule Status
SEC.04-T08N-R59W	SLOT#06 Ex.GREY #1(660'FSL&660'FEL,SEC.04) (PA)	Ex.GREY #1 (05-123-38758)	Ex.GREY #1 AWB	Ex.GREY #1 AWP	Drilling	7678.52	322.42	7678.52	7676.44	1.63	7676.44	PASS
SEC.33-T09N-R59W	SLOT#01 Ptasnik PC LC33-68HN	Ptasnik PC LC33-68HN (05-123-33945)	Ptasnik PC LC33-68HN	Ptasnik PC LC33-68HN AWP	Drilling	17435.65	310.52	17435.65	17385.01	1.78	17385.01	PASS
SEC.04-T08N-R59W	SLOT#07 BULLEIT FEDERAL PC LG04-62HN (430'FSL&300'FEL,SEC.04) (PR)	BULLEIT FEDERAL PC LG04-62HN (05-123-38758)	BULLEIT FEDERAL PC LG04-62HN AWB	BULLEIT FEDERAL PC LG04-62HN AWP	Drilling	7770.65	112.90	7770.65	7702.65	2.31	15630.00	PASS
SEC.09-T08N-R59W	SLOT#13 Scarecrow Federal LG04-725 (436'FNL & 1904'FWL,SEC.09)	Scarecrow Federal LG04-725	Scarecrow Federal LG04-725 PWB	Scarecrow Federal LG04-725 (REV-C.0) PWP	Planned	30.00	22.47	13030.00	540.28	2.56	17851.66	PASS
SEC.09-T08N-R59W	SLOT#05 McCLELLAN PC LG09-72HN(360'FNL&275'FEL,SEC.09)	Ex.McCLELLAN PC LG09-72HN (05-123-36972)	Ex.McCLELLAN PC LG09-72HN AWB	Ex.McCLELLAN PC LG09-72HN AWP	Drilling	6611.82	155.76	6611.82	6594.41	2.79	6594.41	PASS
LC Section 34	(Castor LC34-68HN)	Castor LC34-68HN (05-123-33451)	Original Drilling	Original Drilling\Original Drilling - As Drilled	Drilling	17431.50	651.47	17431.50	17467.37	3.56	17467.37	PASS
LC Section 34	(Faith LC34-785)	Faith LC34-785 (05-123-40647)	Original Drilling	Original Drilling\Original Drilling - As Drilled	Drilling	16060.22	620.31	16060.22	16526.28	3.91	17030.00	PASS
LC Section 34	(Jessica LC27-785)	Jessica LC27-785 (05-123-40642)	Original Drilling	Original Drilling\Original Drilling - As Drilled	Drilling	17851.66	728.70	17851.66	17799.98	4.12	17851.66	PASS
SEC.09-T08N-R59W	SLOT#12 Scarecrow Federal LG04-735 (436'FNL & 1881'FWL,SEC.09)	Scarecrow Federal LG04-735	Scarecrow Federal LG04-735 PWB	Scarecrow Federal LG04-735 (REV-C.0) PWP	Planned	30.00	44.93	13030.00	592.78	5.57	17851.66	PASS
SEC.03-T08N-R59W	SLOT#01 MCCLELLAN FEDERAL PC #LG03-78HN	MCCLELLAN FEDERAL PC #LG03-78HN (05-123-34351)	MCCLELLAN FEDERAL PC #LG03-78HN AWB	MCCLELLAN FEDERAL PC #LG03-78HN AWP	Drilling	8419.49	1037.58	9750.57	12094.03	8.05	12094.03	PASS
SEC.09-T08N-R59W	SLOT#11 Scarecrow Federal LG04-745 (436'FNL & 1859'FWL,SEC.09)	Scarecrow Federal LG04-745	Scarecrow Federal LG04-745 PWB	Scarecrow Federal LG04-745 (REV-C.0) PWP	Planned	30.00	67.40	13030.00	648.99	8.46	17851.66	PASS
SEC.09-T08N-R59W	SLOT#10 Scarecrow Federal LG04-755 (436'FNL & 1837'FWL,SEC.09)	Scarecrow Federal LG04-755	Scarecrow Federal LG04-755 PWB	Scarecrow Federal LG04-755 (REV-C.0) PWP	Planned	30.00	89.86	13030.00	706.58	11.22	17851.66	PASS
SEC.04-T08N-R59W	SLOT#04 Ex.USA #1 (817'FNL&1970'FWL,SEC.04) (DA)	Ex.USA #1 (05-123-07092)	Ex.USA #1 AWB	Ex.USA #1 AWP	Drilling	12328.74	2560.86	12328.74	12374.96	12.10	12374.96	PASS
SEC.04-T08N-R59W	SLOT#01 DOROTHY STATE LG16-729(350'FSL&1460'FEL,SEC.04)	DOROTHY STATE LG16-729 (05-123-34243)	DOROTHY STATE LG16-729 AWB	DOROTHY STATE LG16-729 AWP	Drilling	6412.07	775.83	6412.07	6546.88	12.27	6546.88	PASS
SEC.09-T08N-R59W	SLOT#09 Scarecrow Federal LG04-765 (436'FNL & 1814'FWL,SEC.09)	Scarecrow Federal LG04-765	Scarecrow Federal LG04-765 PWB	Scarecrow Federal LG04-765 (REV-C.0) PWP	Planned	30.00	112.61	13030.00	766.09	13.90	17851.66	PASS
SEC.04-T08N-R59W	SLOT#02 DOROTHY STATE LG16-739(350'FSL&1497'FEL,SEC.04)	DOROTHY STATE LG16-739 (05-123-33457)	DOROTHY STATE LG16-739 AWB	DOROTHY STATE LG16-739 AWP	Drilling	4530.96	805.70	7330.00	4668.25	14.83	6430.00	PASS
SEC.04-T08N-R59W	SLOT#03 DOROTHY STATE LG16-748(350'FSL&1535'FEL,SEC.04)	DOROTHY STATE LG16-748 (05-123-47703)	DOROTHY STATE LG16-748 AWB	DOROTHY STATE LG16-748 AWP	Drilling	4053.53	796.27	7430.00	4153.04	15.47	6630.00	PASS
SEC.09-T08N-R59W	SLOT#08 Scarecrow Federal LG04-775 (436'FNL & 1792'FWL,SEC.09)	Scarecrow Federal LG04-775	Scarecrow Federal LG04-775 PWB	Scarecrow Federal LG04-775 (REV-C.0) PWP	Planned	30.00	135.07	13030.00	758.45	16.57	17851.66	PASS
SEC.09-T08N-R59W	SLOT#07 Scarecrow Federal LG04-785 (436'FNL & 1769'FWL,SEC.09)	Scarecrow Federal LG04-785	Scarecrow Federal LG04-785 PWB	Scarecrow Federal LG04-785 (REV-C.0) PWP	Planned	30.00	157.54	13030.00	17851.66	19.67	17851.66	PASS
SEC.04-T08N-R59W	SLOT#05 Ex.McCLELLAN PC LG04-15 (830'FSL&1810'FEL,SEC.04) (PA)	Ex.McCLELLAN PC LG04-15 (05-123-10256)	Ex.McCLELLAN PC LG04-15 AWB	Ex.McCLELLAN PC LG04-15 AWP	Drilling	3999.46	1267.39	7930.00	7380.60	22.29	7930.00	PASS
SEC.09-T08N-R59W	SLOT#06 Ex.KIRCHNER #1 (660'FSL&660'FEL,SEC.09) (PA)	Ex.KIRCHNER #1 (05-123-05575)	Ex.KIRCHNER #1 AWB	Ex.KIRCHNER #1 AWP	Drilling	6248.62	4234.32	6248.62	6797.93	25.00	6797.93	PASS
SEC.09-T08N-R59W	SLOT#01 DOROTHY STATE LG16-757(335'FNL&1433'FWL,SEC.09)	DOROTHY STATE LG16-757 (05-123-47612)	DOROTHY STATE LG16-757 AWB	DOROTHY STATE LG16-757 AWP	Drilling	516.73	501.68	516.73	6130.00	49.77	6130.00	PASS
SEC.09-T08N-R59W	SLOT#02 DOROTHY STATE LG16-766(335'FNL&1395'FWL,SEC.09)	DOROTHY STATE LG16-766 (05-123-47610)	DOROTHY STATE LG16-766 AWB	DOROTHY STATE LG16-766 AWP	Drilling	30.00	541.06	30.00	1672.62	58.10	5930.00	PASS
SEC.09-T08N-R59W	SLOT#02 DOROTHY STATE LG16-766(335'FNL&1395'FWL,SEC.09)	DOROTHY STATE LG16-766 (05-123-47610)	DOROTHY STATE LG16-766 ST01 AWB	DOROTHY STATE LG16-766 ST01 AWP	Drilling	30.00	541.06	30.00	1672.62	58.10	5930.00	PASS
SEC.09-T08N-R59W	SLOT#03 DOROTHY STATE LG16-776(335'FNL&1358'FWL,SEC.09)	DOROTHY STATE LG16-776 (05-123-47609)	DOROTHY STATE LG16-776 AWB	DOROTHY STATE LG16-776 AWP	Drilling	30.00	576.51	430.00	1743.74	60.82	6830.00	PASS



Closest Approach Clearance Summary Report

Scarecrow Federal LG04-715 (REV-B.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Scarecrow Federal LG04-715
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.09-T08N-R59W	Wellbore	Scarecrow Federal LG04-715 PWB
Slot	SLOT#14 Scarecrow Federal LG04-715 (436'FNL & 1926'FWL,SEC.09)		

CALCULATION RANGE & CUTOFF		
From: 30.00ft MD	To: 17851.66ft MD	C-C Cutoff: (none)

OFFSET WELL CLEARANCE SUMMARY (34 Offset Wellpaths selected) Ratios are calculated in Closest Approach plane												
Offset Facility	Offset Slot	Offset Well	Offset Wellbore	Offset Wellpath	Wellbore Status	C-C Clearance Distance			Rule Separation Ratio			
						Ref MD [ft]	Min C-C Clear Dist [ft]	Diverging from MD [ft]	Ref MD of Min Ratio [ft]	Min Ratio	Min Ratio Dvrg from [ft]	Rule Status
SEC.09-T08N-R59W	SLOT#04 DOROTHY STATE LG16-785(335'FNL&1320'FWL,SEC.09)	DOROTHY STATE LG16-785 (05-123-47611)	DOROTHY STATE LG16-785 AWB	DOROTHY STATE LG16-785 AWP	Drilling	30.00	614.76	530.00	1777.84	63.47	10930.00	PASS
SEC.09-T08N-R59W	SLOT#15 Tinman Federal LG07-685 (2454'FNL & 1339'FWL,SEC.09)	Tinman Federal LG07-685	Tinman Federal LG07-685 PWB	Tinman Federal LG07-685 (REV-C.0) PWP	Planned	1702.27	1983.55	1702.27	7379.92	78.94	8030.00	PASS
SEC.09-T08N-R59W	SLOT#16 Tinman Federal LG07-675 (2470'FNL & 1354'FWL,SEC.09)	Tinman Federal LG07-675	Tinman Federal LG07-675 PWB	Tinman Federal LG07-675 (REV-C.0) PWP	Planned	1573.53	2087.18	1573.53	7379.75	83.23	7379.75	PASS
SEC.09-T08N-R59W	SLOT#17 Tinman Federal LG07-665 (2486'FNL & 1370'FWL,SEC.09)	Tinman Federal LG07-665	Tinman Federal LG07-665 PWB	Tinman Federal LG07-665 (REV-C.0) PWP	Planned	130.00	2128.28	500.00	7379.57	90.48	7379.57	PASS
SEC.09-T08N-R59W	SLOT#18 Tinman Federal LG07-655 (2502'FNL & 1386'FWL,SEC.09)	Tinman Federal LG07-655	Tinman Federal LG07-655 PWB	Tinman Federal LG07-655 (REV-C.0) PWP	Planned	130.00	2139.53	500.00	7379.38	98.96	7379.38	PASS
SEC.09-T08N-R59W	SLOT#19 Tinman Federal LG07-645 (2518'FNL & 1402'FWL,SEC.09)	Tinman Federal LG07-645	Tinman Federal LG07-645 PWB	Tinman Federal LG07-645 (REV-C.0) PWP	Planned	130.00	2151.38	500.00	7379.21	108.34	7379.21	PASS
SEC.09-T08N-R59W	SLOT#20 Tinman Federal LG07-635 (2534'FNL & 1417'FWL,SEC.09)	Tinman Federal LG07-635	Tinman Federal LG07-635 PWB	Tinman Federal LG07-635 (REV-C.0) PWP	Planned	130.00	2162.98	500.00	6430.00	116.38	6430.00	PASS
SEC.09-T08N-R59W	SLOT#21 Tinman Federal LG07-625 (2551'FNL & 1433'FWL,SEC.09)	Tinman Federal LG07-625	Tinman Federal LG07-625 PWB	Tinman Federal LG07-625 (REV-C.0) PWP	Planned	130.00	2175.16	500.00	6430.00	125.78	12830.00	PASS
SEC.09-T08N-R59W	SLOT#22 Tinman Federal LG07-615 (2567'FNL & 1449'FWL,SEC.09)	Tinman Federal LG07-615	Tinman Federal LG07-615 PWB	Tinman Federal LG07-615 (REV-B.0) PWP	Planned	130.00	2187.16	500.00	6430.00	133.31	12730.00	PASS