

NOBLE ENERGY, INC



Location:	COLORADO	Slot:	SLOT#16 GIG-EM STATE Y9-761 (595'FNL&2610'FWL,SEC.16)
Field:	WELD COUNTY (NOBLE NAD 83 GRID)	Well:	GIG-EM STATE Y9-761
Facility:	SEC.16-T02N-R64W	Wellbore:	GIG-EM STATE Y9-761 PWB

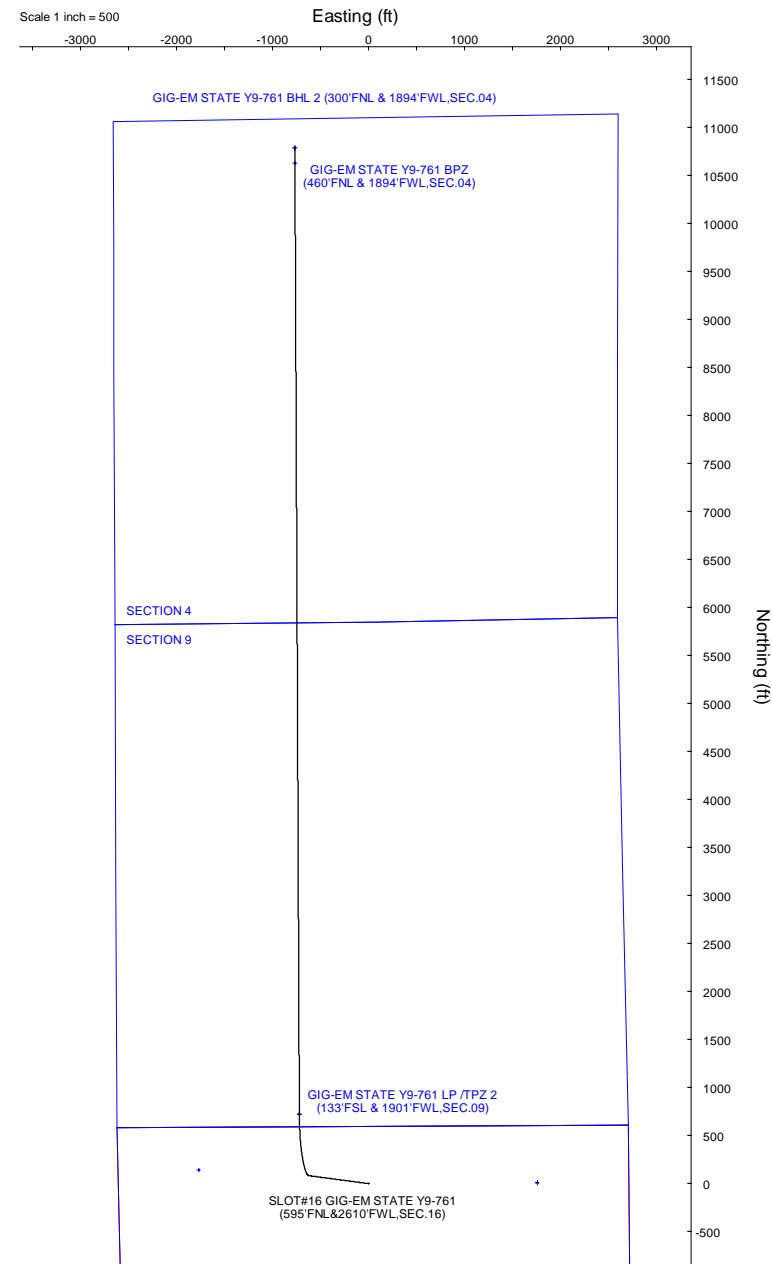
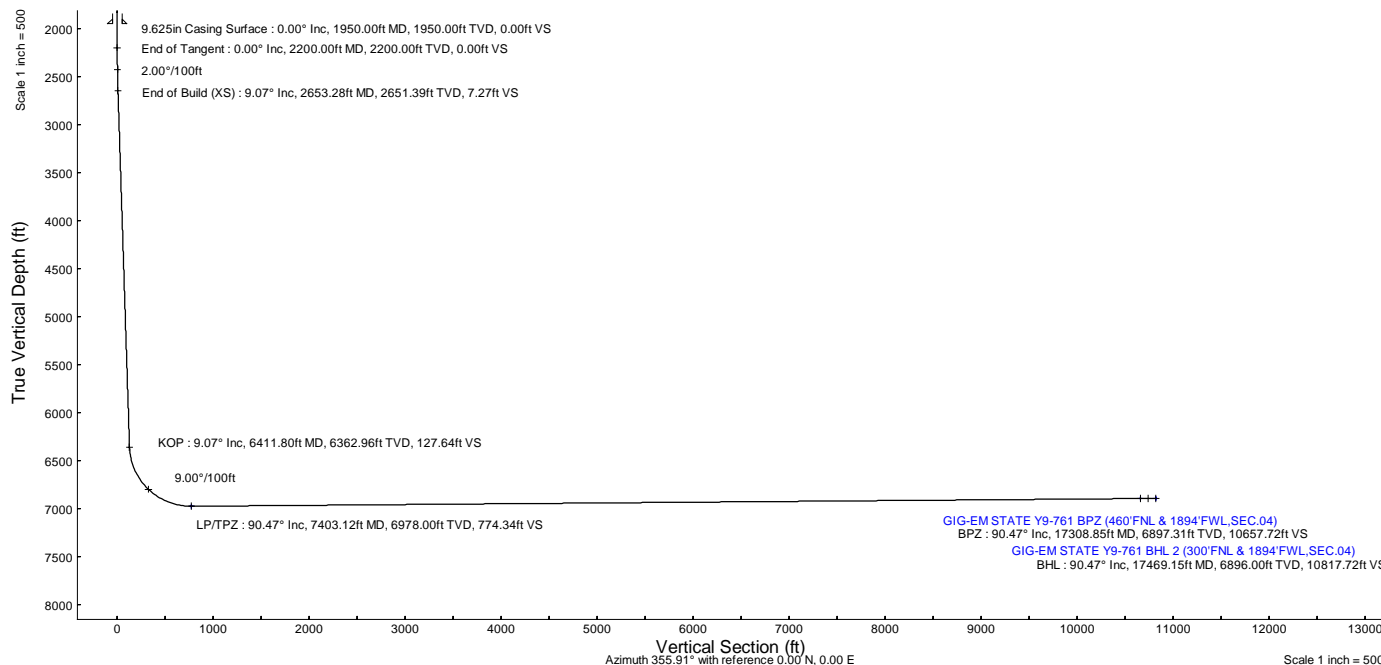
Plot reference wellpath is GIG-EM STATE Y9-761 (REV-B.0) PWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to Rig(30'KB) (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to Rig(30'KB) (RKB)	Scale: True distance
Rig(30'KB) (RKB) to Mean Sea Level: 4941 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: SLOT#16 GIG-EM STATE Y9-761 (595'FNL&2610'FWL,SEC.16)): 0 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: guenaler on 2023-05-03; Database: WA_Denver

Location Information				
Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude
SEC.16-T02N-R64W		3261942.561	1296894.275	40°08'40.4520"N
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
SLOT#16 GIG-EM STATE Y9-761 (595'FNL&2610'FWL,SEC.16)	-141.52	1771.30	3263713.779	1296752.763
Rig(30'KB) (RKB) to Ground level (At Slot: SLOT#16 GIG-EM STATE Y9-761 (595'FNL&2610'FWL,SEC.16))				4941ft
Mean Sea Level to Ground level (At Slot: SLOT#16 GIG-EM STATE Y9-761 (595'FNL&2610'FWL,SEC.16))				0ft
Rig(30'KB) (RKB) to Mean Sea Level				4941ft

Well Profile Data								
Design Comment	MD (ft)	Inc (")	Az (")	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
SHL	30.00	0.000	277.638	30.00	0.00	0.00	0.00	0.00
End of Tangent	2200.00	0.000	277.638	2200.00	0.00	0.00	0.00	0.00
End of Build (XS)	2653.28	9.066	277.638	2651.39	4.76	-35.47	2.00	7.27
KOP	6411.80	9.066	277.638	6362.96	83.46	-622.42	0.00	127.64
LP/TPZ	7403.12	90.467	359.732	6978.00	724.59	-723.44	9.00	774.34
BPZ	17308.85	90.467	359.732	6897.31	10629.88	-769.84	0.00	10657.72
BHL	17469.15	90.470	359.052	6896.00	10790.17	-771.54	0.42	10817.72

Targets								
Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Rubicon State Y16-718 SECTION 4	N/A	-35.00	9.56	1755.32	3265469.02	1296762.33	40°08'38.7774"N	104°33'1.4092"W
Rubicon State Y16-718 SECTION 9	N/A	-35.00	9.56	1755.32	3265469.02	1296762.33	40°08'38.7774"N	104°33'1.4092"W
HULLABALOO Y21-787 SECTION 16	N/A	28.00	141.52	-1771.30	3261942.56	1296894.28	40°08'40.4520"N	104°33'46.8000"W
GIG-EM STATE Y9-761 BHL (300'FNL & 1894'FWL,SEC.04)	N/A	6896.00	10790.09	-769.81	3262944.01	1307542.39	40°10'25.5711"N	104°33'32.4497"W
GIG-EM STATE Y9-761 BHL 2 (300'FNL & 1894'FWL,SEC.04)	17469.15	6896.00	10790.17	-771.54	3262942.27	1307542.46	40°10'25.5720"N	104°33'32.4720"W
GIG-EM STATE Y9-761 BPZ (460'FNL & 1894'FWL,SEC.04)	17308.85	6897.31	10629.88	-769.84	3262943.97	1307382.19	40°10'23.9880"N	104°33'32.4720"W
GIG-EM STATE Y9-761 LP /TPZ (133'FSL & 1901'FWL,SEC.09)	N/A	6978.00	723.72	-722.91	3262990.90	1297476.46	40°08'46.0954"N	104°33'33.2214"W
GIG-EM STATE Y9-761 LP /TPZ 2 (133'FSL & 1901'FWL,SEC.09)	7403.12	6978.00	724.59	-723.44	3262990.37	1297477.32	40°08'46.1040"N	104°33'33.2280"W

Bottom Hole Location								
MD (ft)	Inc (")	Az (")	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude
17469.15	90.470	359.052	6896.00	10790.17	-771.54	3262942.27	1307542.46	40°10'25.5720"N





Planned Wellpath Report

GIG-EM STATE Y9-761 (REV-B.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-761
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-761 PWB
Slot	SLOT#16 GIG-EM STATE Y9-761 (595'FNL&2610'FWL,SEC.16)		

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	0.999959	Report Generated	5/3/2022 at 2:16:48 PM
Convergence at slot	0.61° East	Database	WA_Denver

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-141.52	1771.30	3263713.78	1296752.76	40°08'38.8680"N	104°33'24.0120"W
Facility Reference Pt			3261942.56	1296894.28	40°08'40.4520"N	104°33'46.8000"W
Field Reference Pt			3000000.00	4454105.15	48°46'34.3150"N	105°30'0.0000"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig(30'KB) (RKB) to Facility Vertical Datum	4941.00ft
Horizontal Reference Pt	Slot	Rig(30'KB) (RKB) to Mean Sea Level	4941.00ft
Vertical Reference Pt	Rig(30'KB) (RKB)	Rig(30'KB) (RKB) to Ground Level at Slot (SLOT#16 GIG-EM STATE Y9-761 (595'FNL&2610'FWL,SEC.16))	4941.00ft
MD Reference Pt	Rig(30'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	355.91°



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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-761
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-761 PWB
Slot	SLOT#16 GIG-EM STATE Y9-761 (595'FNL&2610'FWL,SEC.16)		

WELLPATH DATA (182 stations) † = interpolated, ‡ = extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	277.638	0.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.0120"W	0.00	
30.00	0.000	277.638	30.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.0120"W	0.00	SHL
130.00†	0.000	277.638	130.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.0120"W	0.00	
230.00†	0.000	277.638	230.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.0120"W	0.00	
330.00†	0.000	277.638	330.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.0120"W	0.00	
430.00†	0.000	277.638	430.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.0120"W	0.00	
530.00†	0.000	277.638	530.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.0120"W	0.00	
630.00†	0.000	277.638	630.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.0120"W	0.00	
730.00†	0.000	277.638	730.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.0120"W	0.00	
830.00†	0.000	277.638	830.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.0120"W	0.00	
930.00†	0.000	277.638	930.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.0120"W	0.00	
1030.00†	0.000	277.638	1030.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.0120"W	0.00	
1130.00†	0.000	277.638	1130.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.0120"W	0.00	
1230.00†	0.000	277.638	1230.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.0120"W	0.00	
1330.00†	0.000	277.638	1330.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.0120"W	0.00	
1430.00†	0.000	277.638	1430.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.0120"W	0.00	
1530.00†	0.000	277.638	1530.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.0120"W	0.00	
1630.00†	0.000	277.638	1630.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.0120"W	0.00	
1730.00†	0.000	277.638	1730.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.0120"W	0.00	
1830.00†	0.000	277.638	1830.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.0120"W	0.00	
1930.00†	0.000	277.638	1930.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.0120"W	0.00	
2030.00†	0.000	277.638	2030.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.0120"W	0.00	
2130.00†	0.000	277.638	2130.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.0120"W	0.00	
2200.00	0.000	277.638	2200.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.0120"W	0.00	End of Tangent
2230.00†	0.600	277.638	2230.00	0.03	0.02	-0.16	40°08'38.8682"N	104°33'24.0140"W	2.00	
2330.00†	2.600	277.638	2329.96	0.60	0.39	-2.92	40°08'38.8722"N	104°33'24.0496"W	2.00	
2430.00†	4.600	277.638	2429.75	1.88	1.23	-9.15	40°08'38.8811"N	104°33'24.1296"W	2.00	
2530.00†	6.600	277.638	2529.27	3.86	2.52	-18.82	40°08'38.8949"N	104°33'24.2539"W	2.00	
2630.00†	8.600	277.638	2628.39	6.55	4.28	-31.92	40°08'38.9137"N	104°33'24.4225"W	2.00	
2653.28	9.066	277.638	2651.39	7.27	4.76	-35.47	40°08'38.9187"N	104°33'24.4680"W	2.00	End of Build (XS)
2730.00†	9.066	277.638	2727.15	9.73	6.36	-47.45	40°08'38.9359"N	104°33'24.6221"W	0.00	
2830.00†	9.066	277.638	2825.90	12.93	8.46	-63.07	40°08'38.9582"N	104°33'24.8229"W	0.00	
2930.00†	9.066	277.638	2924.65	16.14	10.55	-78.68	40°08'38.9805"N	104°33'25.0237"W	0.00	
3030.00†	9.066	277.638	3023.41	19.34	12.65	-94.30	40°08'39.0029"N	104°33'25.2245"W	0.00	
3130.00†	9.066	277.638	3122.16	22.54	14.74	-109.92	40°08'39.0252"N	104°33'25.4253"W	0.00	
3230.00†	9.066	277.638	3220.91	25.74	16.83	-125.53	40°08'39.0475"N	104°33'25.6260"W	0.00	
3330.00†	9.066	277.638	3319.66	28.95	18.93	-141.15	40°08'39.0699"N	104°33'25.8268"W	0.00	
3430.00†	9.066	277.638	3418.41	32.15	21.02	-156.77	40°08'39.0922"N	104°33'26.0276"W	0.00	
3530.00†	9.066	277.638	3517.16	35.35	23.12	-172.38	40°08'39.1145"N	104°33'26.2284"W	0.00	
3630.00†	9.066	277.638	3615.91	38.55	25.21	-188.00	40°08'39.1369"N	104°33'26.4292"W	0.00	
3730.00†	9.066	277.638	3714.66	41.76	27.30	-203.62	40°08'39.1592"N	104°33'26.6300"W	0.00	
3830.00†	9.066	277.638	3813.41	44.96	29.40	-219.23	40°08'39.1815"N	104°33'26.8308"W	0.00	
3930.00†	9.066	277.638	3912.16	48.16	31.49	-234.85	40°08'39.2039"N	104°33'27.0316"W	0.00	
4030.00†	9.066	277.638	4010.91	51.36	33.59	-250.47	40°08'39.2262"N	104°33'27.2324"W	0.00	
4130.00†	9.066	277.638	4109.66	54.57	35.68	-266.08	40°08'39.2485"N	104°33'27.4332"W	0.00	



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REFERENCE WELLPATH IDENTIFICATION			
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Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-761 PWB
Slot	SLOT#16 GIG-EM STATE Y9-761 (595'FNL&2610'FWL,SEC.16)		

WELLPATH DATA (182 stations) † = interpolated, ‡ = extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4230.00†	9.066	277.638	4208.42	57.77	37.77	-281.70	40°08'39.2709"N	104°33'27.6340"W	0.00	
4330.00†	9.066	277.638	4307.17	60.97	39.87	-297.32	40°08'39.2932"N	104°33'27.8348"W	0.00	
4430.00†	9.066	277.638	4405.92	64.18	41.96	-312.93	40°08'39.3155"N	104°33'28.0356"W	0.00	
4530.00†	9.066	277.638	4504.67	67.38	44.06	-328.55	40°08'39.3379"N	104°33'28.2364"W	0.00	
4630.00†	9.066	277.638	4603.42	70.58	46.15	-344.17	40°08'39.3602"N	104°33'28.4372"W	0.00	
4730.00†	9.066	277.638	4702.17	73.78	48.25	-359.78	40°08'39.3825"N	104°33'28.6380"W	0.00	
4830.00†	9.066	277.638	4800.92	76.99	50.34	-375.40	40°08'39.4049"N	104°33'28.8388"W	0.00	
4930.00†	9.066	277.638	4899.67	80.19	52.43	-391.02	40°08'39.4272"N	104°33'29.0395"W	0.00	
5030.00†	9.066	277.638	4998.42	83.39	54.53	-406.63	40°08'39.4495"N	104°33'29.2403"W	0.00	
5130.00†	9.066	277.638	5097.17	86.59	56.62	-422.25	40°08'39.4719"N	104°33'29.4411"W	0.00	
5230.00†	9.066	277.638	5195.92	89.80	58.72	-437.86	40°08'39.4942"N	104°33'29.6419"W	0.00	
5330.00†	9.066	277.638	5294.68	93.00	60.81	-453.48	40°08'39.5165"N	104°33'29.8427"W	0.00	
5430.00†	9.066	277.638	5393.43	96.20	62.90	-469.10	40°08'39.5389"N	104°33'30.0435"W	0.00	
5530.00†	9.066	277.638	5492.18	99.40	65.00	-484.71	40°08'39.5612"N	104°33'30.2443"W	0.00	
5630.00†	9.066	277.638	5590.93	102.61	67.09	-500.33	40°08'39.5835"N	104°33'30.4451"W	0.00	
5730.00†	9.066	277.638	5689.68	105.81	69.19	-515.95	40°08'39.6059"N	104°33'30.6459"W	0.00	
5830.00†	9.066	277.638	5788.43	109.01	71.28	-531.56	40°08'39.6282"N	104°33'30.8467"W	0.00	
5930.00†	9.066	277.638	5887.18	112.21	73.38	-547.18	40°08'39.6505"N	104°33'31.0475"W	0.00	
6030.00†	9.066	277.638	5985.93	115.42	75.47	-562.80	40°08'39.6729"N	104°33'31.2483"W	0.00	
6130.00†	9.066	277.638	6084.68	118.62	77.56	-578.41	40°08'39.6952"N	104°33'31.4491"W	0.00	
6230.00†	9.066	277.638	6183.43	121.82	79.66	-594.03	40°08'39.7175"N	104°33'31.6499"W	0.00	
6330.00†	9.066	277.638	6282.18	125.02	81.75	-609.65	40°08'39.7398"N	104°33'31.8507"W	0.00	
6411.80	9.066	277.638	6362.96	127.64	83.46	-622.42	40°08'39.7581"N	104°33'32.0149"W	0.00	KOP
6430.00†	9.430	287.592	6380.93	128.49	84.11	-625.26	40°08'39.7647"N	104°33'32.0514"W	9.00	
6530.00†	14.862	323.113	6478.78	142.32	96.87	-640.80	40°08'39.8925"N	104°33'32.2498"W	9.00	
6630.00†	22.660	337.418	6573.44	171.43	124.97	-655.93	40°08'40.1717"N	104°33'32.4407"W	9.00	
6730.00†	31.092	344.467	6662.58	215.10	167.72	-670.27	40°08'40.5957"N	104°33'32.6195"W	9.00	
6830.00†	39.754	348.707	6744.01	272.24	224.07	-683.47	40°08'41.1539"N	104°33'32.7818"W	9.00	
6930.00†	48.523	351.628	6815.71	341.47	292.63	-695.21	40°08'41.8326"N	104°33'32.9236"W	9.00	
7030.00†	57.348	353.846	6875.93	421.06	371.71	-705.20	40°08'42.6151"N	104°33'33.0414"W	9.00	
7130.00†	66.206	355.663	6923.17	509.06	459.36	-713.19	40°08'43.4821"N	104°33'33.1323"W	9.00	
7230.00†	75.081	357.245	6956.29	603.30	553.43	-718.98	40°08'44.4122"N	104°33'33.1940"W	9.00	
7330.00†	83.967	358.701	6974.45	701.47	651.60	-722.44	40°08'45.3827"N	104°33'33.2251"W	9.00	
7403.12	90.467	359.732	6978.00†	774.34	724.59	-723.44	40°08'46.1040"N	104°33'33.2280"W	9.00	LP/TPZ
7430.00†	90.467	359.732	6977.78	801.16	751.47	-723.56	40°08'46.3696"N	104°33'33.2259"W	0.00	
7530.00†	90.467	359.732	6976.97	900.94	851.47	-724.03	40°08'47.3578"N	104°33'33.2183"W	0.00	
7630.00†	90.467	359.732	6976.15	1000.71	951.46	-724.50	40°08'48.3459"N	104°33'33.2107"W	0.00	
7730.00†	90.467	359.732	6975.34	1100.49	1051.46	-724.97	40°08'49.3341"N	104°33'33.2031"W	0.00	
7830.00†	90.467	359.732	6974.52	1200.26	1151.45	-725.44	40°08'50.3223"N	104°33'33.1954"W	0.00	
7930.00†	90.467	359.732	6973.71	1300.03	1251.45	-725.90	40°08'51.3104"N	104°33'33.1878"W	0.00	
8030.00†	90.467	359.732	6972.89	1399.81	1351.44	-726.37	40°08'52.2986"N	104°33'33.1802"W	0.00	
8130.00†	90.467	359.732	6972.08	1499.58	1451.44	-726.84	40°08'53.2867"N	104°33'33.1725"W	0.00	
8230.00†	90.467	359.732	6971.26	1599.36	1551.43	-727.31	40°08'54.2749"N	104°33'33.1649"W	0.00	
8330.00†	90.467	359.732	6970.45	1699.13	1651.43	-727.78	40°08'55.2630"N	104°33'33.1573"W	0.00	
8430.00†	90.467	359.732	6969.64	1798.91	1751.43	-728.25	40°08'56.2512"N	104°33'33.1497"W	0.00	



Planned Wellpath Report
GIG-EM STATE Y9-761 (REV-B.0) PWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-761
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-761 PWB
Slot	SLOT#16 GIG-EM STATE Y9-761 (595'FNL&2610'FWL,SEC.16)		

WELLPATH DATA (182 stations) † = interpolated, ‡ = extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8530.00†	90.467	359.732	6968.82	1898.68	1851.42	-728.72	40°08'57.2393"N	104°33'33.1420"W	0.00	
8630.00†	90.467	359.732	6968.01	1998.45	1951.42	-729.18	40°08'58.2275"N	104°33'33.1344"W	0.00	
8730.00†	90.467	359.732	6967.19	2098.23	2051.41	-729.65	40°08'59.2157"N	104°33'33.1268"W	0.00	
8830.00†	90.467	359.732	6966.38	2198.00	2151.41	-730.12	40°09'0.2038"N	104°33'33.1191"W	0.00	
8930.00†	90.467	359.732	6965.56	2297.78	2251.40	-730.59	40°09'1.1920"N	104°33'33.1115"W	0.00	
9030.00†	90.467	359.732	6964.75	2397.55	2351.40	-731.06	40°09'2.1801"N	104°33'33.1039"W	0.00	
9130.00†	90.467	359.732	6963.93	2497.33	2451.39	-731.53	40°09'3.1683"N	104°33'33.0962"W	0.00	
9230.00†	90.467	359.732	6963.12	2597.10	2551.39	-731.99	40°09'4.1564"N	104°33'33.0886"W	0.00	
9330.00†	90.467	359.732	6962.30	2696.87	2651.39	-732.46	40°09'5.1446"N	104°33'33.0810"W	0.00	
9430.00†	90.467	359.732	6961.49	2796.65	2751.38	-732.93	40°09'6.1328"N	104°33'33.0734"W	0.00	
9530.00†	90.467	359.732	6960.67	2896.42	2851.38	-733.40	40°09'7.1209"N	104°33'33.0657"W	0.00	
9630.00†	90.467	359.732	6959.86	2996.20	2951.37	-733.87	40°09'8.1091"N	104°33'33.0581"W	0.00	
9730.00†	90.467	359.732	6959.05	3095.97	3051.37	-734.34	40°09'9.0972"N	104°33'33.0505"W	0.00	
9830.00†	90.467	359.732	6958.23	3195.75	3151.36	-734.80	40°09'10.0854"N	104°33'33.0428"W	0.00	
9930.00†	90.467	359.732	6957.42	3295.52	3251.36	-735.27	40°09'11.0735"N	104°33'33.0352"W	0.00	
10030.00†	90.467	359.732	6956.60	3395.29	3351.36	-735.74	40°09'12.0617"N	104°33'33.0276"W	0.00	
10130.00†	90.467	359.732	6955.79	3495.07	3451.35	-736.21	40°09'13.0499"N	104°33'33.0199"W	0.00	
10230.00†	90.467	359.732	6954.97	3594.84	3551.35	-736.68	40°09'14.0380"N	104°33'33.0123"W	0.00	
10330.00†	90.467	359.732	6954.16	3694.62	3651.34	-737.15	40°09'15.0262"N	104°33'33.0047"W	0.00	
10430.00†	90.467	359.732	6953.34	3794.39	3751.34	-737.62	40°09'16.0143"N	104°33'32.9971"W	0.00	
10530.00†	90.467	359.732	6952.53	3894.17	3851.33	-738.08	40°09'17.0025"N	104°33'32.9894"W	0.00	
10630.00†	90.467	359.732	6951.71	3993.94	3951.33	-738.55	40°09'17.9906"N	104°33'32.9818"W	0.00	
10730.00†	90.467	359.732	6950.90	4093.72	4051.32	-739.02	40°09'18.9788"N	104°33'32.9742"W	0.00	
10830.00†	90.467	359.732	6950.09	4193.49	4151.32	-739.49	40°09'19.9669"N	104°33'32.9665"W	0.00	
10930.00†	90.467	359.732	6949.27	4293.26	4251.32	-739.96	40°09'20.9551"N	104°33'32.9589"W	0.00	
11030.00†	90.467	359.732	6948.46	4393.04	4351.31	-740.43	40°09'21.9433"N	104°33'32.9513"W	0.00	
11130.00†	90.467	359.732	6947.64	4492.81	4451.31	-740.89	40°09'22.9314"N	104°33'32.9436"W	0.00	
11230.00†	90.467	359.732	6946.83	4592.59	4551.30	-741.36	40°09'23.9196"N	104°33'32.9360"W	0.00	
11330.00†	90.467	359.732	6946.01	4692.36	4651.30	-741.83	40°09'24.9077"N	104°33'32.9284"W	0.00	
11430.00†	90.467	359.732	6945.20	4792.14	4751.29	-742.30	40°09'25.8959"N	104°33'32.9207"W	0.00	
11530.00†	90.467	359.732	6944.38	4891.91	4851.29	-742.77	40°09'26.8840"N	104°33'32.9131"W	0.00	
11630.00†	90.467	359.732	6943.57	4991.68	4951.28	-743.24	40°09'27.8722"N	104°33'32.9055"W	0.00	
11730.00†	90.467	359.732	6942.75	5091.46	5051.28	-743.71	40°09'28.8603"N	104°33'32.8978"W	0.00	
11830.00†	90.467	359.732	6941.94	5191.23	5151.28	-744.17	40°09'29.8485"N	104°33'32.8902"W	0.00	
11930.00†	90.467	359.732	6941.12	5291.01	5251.27	-744.64	40°09'30.8367"N	104°33'32.8826"W	0.00	
12030.00†	90.467	359.732	6940.31	5390.78	5351.27	-745.11	40°09'31.8248"N	104°33'32.8750"W	0.00	
12130.00†	90.467	359.732	6939.50	5490.56	5451.26	-745.58	40°09'32.8130"N	104°33'32.8673"W	0.00	
12230.00†	90.467	359.732	6938.68	5590.33	5551.26	-746.05	40°09'33.8011"N	104°33'32.8597"W	0.00	
12330.00†	90.467	359.732	6937.87	5690.10	5651.25	-746.52	40°09'34.7893"N	104°33'32.8521"W	0.00	
12430.00†	90.467	359.732	6937.05	5789.88	5751.25	-746.98	40°09'35.7774"N	104°33'32.8444"W	0.00	
12530.00†	90.467	359.732	6936.24	5889.65	5851.24	-747.45	40°09'36.7656"N	104°33'32.8368"W	0.00	
12630.00†	90.467	359.732	6935.42	5989.43	5951.24	-747.92	40°09'37.7537"N	104°33'32.8292"W	0.00	
12730.00†	90.467	359.732	6934.61	6089.20	6051.24	-748.39	40°09'38.7419"N	104°33'32.8215"W	0.00	
12830.00†	90.467	359.732	6933.79	6188.98	6151.23	-748.86	40°09'39.7301"N	104°33'32.8139"W	0.00	
12930.00†	90.467	359.732	6932.98	6288.75	6251.23	-749.33	40°09'40.7182"N	104°33'32.8063"W	0.00	



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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-761
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-761 PWB
Slot	SLOT#16 GIG-EM STATE Y9-761 (595'FNL&2610'FWL,SEC.16)		

WELLPATH DATA (182 stations) † = interpolated, ‡ = extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
13030.00†	90.467	359.732	6932.16	6388.53	6351.22	-749.80	40°09'41.7064"N	104°33'32.7986"W	0.00	
13130.00†	90.467	359.732	6931.35	6488.30	6451.22	-750.26	40°09'42.6945"N	104°33'32.7910"W	0.00	
13230.00†	90.467	359.732	6930.54	6588.07	6551.21	-750.73	40°09'43.6827"N	104°33'32.7834"W	0.00	
13330.00†	90.467	359.732	6929.72	6687.85	6651.21	-751.20	40°09'44.6708"N	104°33'32.7757"W	0.00	
13430.00†	90.467	359.732	6928.91	6787.62	6751.21	-751.67	40°09'45.6590"N	104°33'32.7681"W	0.00	
13530.00†	90.467	359.732	6928.09	6887.40	6851.20	-752.14	40°09'46.6471"N	104°33'32.7605"W	0.00	
13630.00†	90.467	359.732	6927.28	6987.17	6951.20	-752.61	40°09'47.6353"N	104°33'32.7528"W	0.00	
13730.00†	90.467	359.732	6926.46	7086.95	7051.19	-753.07	40°09'48.6234"N	104°33'32.7452"W	0.00	
13830.00†	90.467	359.732	6925.65	7186.72	7151.19	-753.54	40°09'49.6116"N	104°33'32.7376"W	0.00	
13930.00†	90.467	359.732	6924.83	7286.49	7251.18	-754.01	40°09'50.5998"N	104°33'32.7299"W	0.00	
14030.00†	90.467	359.732	6924.02	7386.27	7351.18	-754.48	40°09'51.5879"N	104°33'32.7223"W	0.00	
14130.00†	90.467	359.732	6923.20	7486.04	7451.17	-754.95	40°09'52.5761"N	104°33'32.7147"W	0.00	
14230.00†	90.467	359.732	6922.39	7585.82	7551.17	-755.42	40°09'53.5642"N	104°33'32.7070"W	0.00	
14330.00†	90.467	359.732	6921.58	7685.59	7651.17	-755.88	40°09'54.5524"N	104°33'32.6994"W	0.00	
14430.00†	90.467	359.732	6920.76	7785.37	7751.16	-756.35	40°09'55.5405"N	104°33'32.6918"W	0.00	
14530.00†	90.467	359.732	6919.95	7885.14	7851.16	-756.82	40°09'56.5287"N	104°33'32.6841"W	0.00	
14630.00†	90.467	359.732	6919.13	7984.91	7951.15	-757.29	40°09'57.5168"N	104°33'32.6765"W	0.00	
14730.00†	90.467	359.732	6918.32	8084.69	8051.15	-757.76	40°09'58.5050"N	104°33'32.6689"W	0.00	
14830.00†	90.467	359.732	6917.50	8184.46	8151.14	-758.23	40°09'59.4931"N	104°33'32.6612"W	0.00	
14930.00†	90.467	359.732	6916.69	8284.24	8251.14	-758.70	40°10'0.4813"N	104°33'32.6536"W	0.00	
15030.00†	90.467	359.732	6915.87	8384.01	8351.13	-759.16	40°10'1.4695"N	104°33'32.6460"W	0.00	
15130.00†	90.467	359.732	6915.06	8483.79	8451.13	-759.63	40°10'2.4576"N	104°33'32.6383"W	0.00	
15230.00†	90.467	359.732	6914.24	8583.56	8551.13	-760.10	40°10'3.4458"N	104°33'32.6307"W	0.00	
15330.00†	90.467	359.732	6913.43	8683.34	8651.12	-760.57	40°10'4.4339"N	104°33'32.6231"W	0.00	
15430.00†	90.467	359.732	6912.61	8783.11	8751.12	-761.04	40°10'5.4221"N	104°33'32.6154"W	0.00	
15530.00†	90.467	359.732	6911.80	8882.88	8851.11	-761.51	40°10'6.4102"N	104°33'32.6078"W	0.00	
15630.00†	90.467	359.732	6910.99	8982.66	8951.11	-761.97	40°10'7.3984"N	104°33'32.6002"W	0.00	
15730.00†	90.467	359.732	6910.17	9082.43	9051.10	-762.44	40°10'8.3865"N	104°33'32.5925"W	0.00	
15830.00†	90.467	359.732	6909.36	9182.21	9151.10	-762.91	40°10'9.3747"N	104°33'32.5849"W	0.00	
15930.00†	90.467	359.732	6908.54	9281.98	9251.09	-763.38	40°10'10.3628"N	104°33'32.5773"W	0.00	
16030.00†	90.467	359.732	6907.73	9381.76	9351.09	-763.85	40°10'11.3510"N	104°33'32.5696"W	0.00	
16130.00†	90.467	359.732	6906.91	9481.53	9451.09	-764.32	40°10'12.3391"N	104°33'32.5620"W	0.00	
16230.00†	90.467	359.732	6906.10	9581.30	9551.08	-764.79	40°10'13.3273"N	104°33'32.5544"W	0.00	
16330.00†	90.467	359.732	6905.28	9681.08	9651.08	-765.25	40°10'14.3155"N	104°33'32.5467"W	0.00	
16430.00†	90.467	359.732	6904.47	9780.85	9751.07	-765.72	40°10'15.3036"N	104°33'32.5391"W	0.00	
16530.00†	90.467	359.732	6903.65	9880.63	9851.07	-766.19	40°10'16.2918"N	104°33'32.5315"W	0.00	
16630.00†	90.467	359.732	6902.84	9980.40	9951.06	-766.66	40°10'17.2799"N	104°33'32.5238"W	0.00	
16730.00†	90.467	359.732	6902.03	10080.18	10051.06	-767.13	40°10'18.2681"N	104°33'32.5162"W	0.00	
16830.00†	90.467	359.732	6901.21	10179.95	10151.05	-767.60	40°10'19.2562"N	104°33'32.5086"W	0.00	
16930.00†	90.467	359.732	6900.40	10279.72	10251.05	-768.06	40°10'20.2444"N	104°33'32.5009"W	0.00	
17030.00†	90.467	359.732	6899.58	10379.50	10351.05	-768.53	40°10'21.2325"N	104°33'32.4933"W	0.00	
17130.00†	90.467	359.732	6898.77	10479.27	10451.04	-769.00	40°10'22.2207"N	104°33'32.4857"W	0.00	
17230.00†	90.467	359.732	6897.95	10579.05	10551.04	-769.47	40°10'23.2088"N	104°33'32.4780"W	0.00	
17308.85	90.467	359.732	6897.31 ²	10657.72	10629.88	-769.84	40°10'23.9880"N	104°33'32.4720"W	0.00	BPZ
17330.00†	90.467	359.642	6897.14	10678.82	10651.03	-769.95	40°10'24.1970"N	104°33'32.4706"W	0.42	



Planned Wellpath Report

GIG-EM STATE Y9-761 (REV-B.0) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-761
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-761 PWB
Slot	SLOT#16 GIG-EM STATE Y9-761 (595'FNL&2610'FWL,SEC.16)		

WELLPATH DATA (182 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
17430.00†	90.469	359.218	6896.32	10778.63	10751.02	-770.95	40°10'25.1852"N	104°33'32.4697"W	0.42	
17469.15	90.470	359.052	6896.00 ³	10817.72	10790.17	-771.54	40°10'25.5720"N	104°33'32.4720"W	0.42	BHL

HOLE & CASING SECTIONS - Ref Wellbore: GIG-EM STATE Y9-761 PWB Ref Wellpath: GIG-EM STATE Y9-761 (REV-B.0) PWP

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	1950.00	1920.00	30.00	1950.00	0.00	0.00	0.00	0.00

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Rubicon State Y16-718 SECTION 4	N/A	-35.00	9.56	1755.32	3265469.02	1296762.33	40°08'38.7774"N	104°33'1.4092"W	polygon
	2D Polygon: dimensions not calculated								
Rubicon State Y16-718 SECTION 9	N/A	-35.00	9.56	1755.32	3265469.02	1296762.33	40°08'38.7774"N	104°33'1.4092"W	polygon
	2D Polygon: dimensions not calculated								
HULLABALOO Y21-787 SECTION 16	N/A	28.00	141.52	-1771.30	3261942.56	1296894.28	40°08'40.4520"N	104°33'46.8000"W	polygon
	2D Polygon: dimensions not calculated								
GIG-EM STATE Y9-761 BHL (300'FNL & 1894'FWL,SEC.04)	N/A	6896.00	10790.09	-769.81	3262944.01	1307542.39	40°10'25.5711"N	104°33'32.4497"W	point
3) GIG-EM STATE Y9-761 BHL 2 (300'FNL & 1894'FWL,SEC.04)	17469.15	6896.00	10790.17	-771.54	3262942.27	1307542.46	40°10'25.5720"N	104°33'32.4720"W	point
2) GIG-EM STATE Y9-761 BPZ (460'FNL & 1894'FWL,SEC.04)	17308.85	6897.31	10629.88	-769.84	3262943.97	1307382.19	40°10'23.9880"N	104°33'32.4720"W	point
GIG-EM STATE Y9-761 LP /TPZ (133'FSL & 1901'FWL,SEC.09)	N/A	6978.00	723.72	-722.91	3262990.90	1297476.46	40°08'46.0954"N	104°33'33.2214"W	point
1) GIG-EM STATE Y9-761 LP /TPZ 2 (133'FSL & 1901'FWL,SEC.09)	7403.12	6978.00	724.59	-723.44	3262990.37	1297477.32	40°08'46.1040"N	104°33'33.2280"W	point



Planned Wellpath Report

GIG-EM STATE Y9-761 (REV-B.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-761
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-761 PWB
Slot	SLOT#16 GIG-EM STATE Y9-761 (595'FNL&2610'FWL,SEC.16)		

SURVEY PROGRAM - Ref Wellbore: GIG-EM STATE Y9-761 PWB Ref Wellpath: GIG-EM STATE Y9-761 (REV-B.0) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
30.00	1950.00	BH Generic gyro - northseeking (Standard)		GIG-EM STATE Y9-761 PWB
1950.00	20000.00	OWSG MWD rev2 (MS+IFR1)		GIG-EM STATE Y9-761 PWB



Planned Wellpath Report
GIG-EM STATE Y9-761 (REV-B.0) PWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-761
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-761 PWB
Slot	SLOT#16 GIG-EM STATE Y9-761 (595'FNL&2610'FWL,SEC.16)		

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
30.00	0.000	277.638	30.00	SHL
2200.00	0.000	277.638	2200.00	End of Tangent
2653.28	9.066	277.638	2651.39	End of Build (XS)
6411.80	9.066	277.638	6362.96	KOP
7403.12	90.467	359.732	6978.00	LP/TPZ
17308.85	90.467	359.732	6897.31	BPZ
17469.15	90.470	359.052	6896.00	BHL



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GIG-EM STATE Y9-761 (REV-B.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-761
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-761 PWB
Slot	SLOT#16 GIG-EM STATE Y9-761 (595'FNL&2610'FWL,SEC.16)		

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	0.999959	Report Generated	5/3/2022 at 2:20:47 PM
Convergence at slot	0.61° East	Database	WA_Denver

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-141.52	1771.30	3263713.78	1296752.76	40°08'38.8680"N	104°33'24.0120"W
Facility Reference Pt			3261942.56	1296894.27	40°08'40.4520"N	104°33'46.8000"W
Field Reference Pt			3000000.00	4454105.15	48°46'34.3150"N	105°30'0.0000"W

WELLPATH DATUM			
Calculation method	Minimum Curvature	Rig(30'KB) (RKB) to Facility Vertical Datum	4941.00ft
Horizontal Reference Pt	Slot	Rig(30'KB) (RKB) to Mean Sea Level	4941.00ft
Vertical Reference Pt	Rig(30'KB) (RKB)	Rig(30'KB) (RKB) to Ground Level at Slot (SLOT#16 GIG-EM STATE Y9-761 (595'FNL&2610'FWL,SEC.16))	4941.00ft
MD Reference Pt	Rig(30'KB) (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	7.71° East of TN	Dip Angle	66.43°	Mag Field Strength	51798 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					



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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-761
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-761 PWB
Slot	SLOT#16 GIG-EM STATE Y9-761 (595'FNL&2610'FWL,SEC.16)		

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

HOLE & CASING SECTIONS - Ref Wellbore: GIG-EM STATE Y9-761 PWB Ref Wellpath: GIG-EM STATE Y9-761 (REV-B.0) PWP									
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	1950.00	1920.00	30.00	1950.00	0.00	0.00	0.00	0.00

SURVEY PROGRAM - Ref Wellbore: GIG-EM STATE Y9-761 PWB Ref Wellpath: GIG-EM STATE Y9-761 (REV-B.0) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
30.00	1950.00	BH Generic gyro - northseeking (Standard)		GIG-EM STATE Y9-761 PWB
1950.00	20000.00	OWSG MWD rev2 (MS+IFR1)		GIG-EM STATE Y9-761 PWB



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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-761
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-761 PWB
Slot	SLOT#16 GIG-EM STATE Y9-761 (595'FNL&2610'FWL,SEC.16)		

CALCULATION RANGE & CUTOFF		
From: 30.00ft MD	To: 17469.15ft MD	C-C Cutoff: (none)

OFFSET WELL CLEARANCE SUMMARY (31 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
Y Section 04	(HSR-Guttersen 03-04)	HSR-Guttersen 03-04	Original Drilling	Original Drilling\Original Drilling - As Drilled	Drilling	17072.21	86.03	17072.21	17074.07	0.52	17074.07	FAIL
SEC.16-T02N-R64W	SLOT#15 GIG-EM STATE Y9-772 (595'FNL&2588'FWL,SEC.16)	GIG-EM STATE Y9-772	GIG-EM STATE Y9-772 PWB	GIG-EM STATE Y9-772 (REV-B.0) PWP	Planned	30.00	22.37	17469.15	2102.25	1.30	17469.15	PASS
SEC.16-T02N-R64W	SLOT#05 HULLABALOO Y21-763(445'FNL&2580'FWL,SEC.16)	HULLABALOO Y21-763	HULLABALOO Y21-763 AWB	HULLABALOO Y21-763 AWP	Drilling	7122.24	92.37	7122.24	7124.74	1.89	7124.74	PASS
SEC.16-T02N-R64W	SLOT#14 GIG-EM STATE Y9-782 (595'FNL&2565'FWL,SEC.16)	GIG-EM STATE Y9-782	GIG-EM STATE Y9-782 PWB	GIG-EM STATE Y9-782 (REV-B.0) PWP	Planned	30.00	44.73	17330.00	2013.50	2.90	17469.15	PASS
SEC.16-T02N-R64W	SLOT#17 GIG-EM STATE Y9-751 (595'FNL&1020'FEL,SEC.16)	GIG-EM STATE Y9-751	GIG-EM STATE Y9-751 PWB	GIG-EM STATE Y9-751 (REV-B.0) PWP	Planned	17316.90	692.47	17316.90	17469.15	3.07	17469.15	PASS
Y Section 04	(Melvin Y04-04)	Melvin Y04-04	Original Drilling	Original Drilling\Original Drilling - As Drilled	Drilling	16858.95	903.71	16858.95	16912.92	5.81	16912.92	PASS
SEC.16-T02N-R64W	SLOT#18 GIG-EM STATE Y9-740 (595'FNL&997'FEL,SEC.16)	GIG-EM STATE Y9-740	GIG-EM STATE Y9-740 PWB	GIG-EM STATE Y9-740 (REV-B.0) PWP	Planned	17370.23	1386.79	17370.23	17469.15	6.17	17469.15	PASS
SEC.16-T02N-R64W	SLOT#06 HULLABALOO Y21-756(445'FNL&2617'FWL,SEC.16)	HULLABALOO Y21-756	HULLABALOO Y-21-756 AWB	HULLABALOO Y-21-756 AWP	Drilling	213.96	148.69	6854.77	6854.77	7.69	6854.77	PASS
Y Section 04	(HSR-Guttersen 07-04)	HSR-Guttersen 07-04	Original Drilling	Original Drilling\Original Drilling - As Drilled	Drilling	15925.36	1207.94	15925.36	15973.52	8.45	15973.52	PASS
Y Section 04	(HSR-Guttersen 02-04)	HSR-Guttersen 02-04	Original Drilling	Original Drilling\Original Drilling - As Drilled	Drilling	17158.82	1354.30	17158.82	17219.34	8.48	17219.34	PASS
Y Section 04	(HSR-Guttersen 05-04)	HSR-Guttersen 05-04	Original Drilling	Original Drilling\Original Drilling - As Drilled	Drilling	15705.40	1199.85	15705.40	15805.72	8.58	15805.72	PASS
SEC.16-T02N-R64W	SLOT#19 GIG-EM STATE Y9-730 (595'FNL&975'FEL,SEC.16)	GIG-EM STATE Y9-730	GIG-EM STATE Y9-730 PWB	GIG-EM STATE Y9-730 (REV-B.0) PWP	Planned	2405.74	1725.22	17430.00	17469.15	9.28	17469.15	PASS
SEC.29-T03N-R64W	SLOT#41 GUTTERSEN STATE Y05-719 (2237'FNL & 538'FEL, SEC.29)	GUTTERSEN STATE Y05-719	GUTTERSEN STATE Y05-719 AWB	GUTTERSEN STATE Y05-719 AWP	Drilling	12837.87	2127.13	17130.00	12593.99	9.65	17430.00	PASS
SEC.16-T02N-R64W	SLOT#04 HULLABALOO Y21-769(445'FNL&955'FWL,SEC.16)	HULLABALOO Y21-769	HULLABALOO Y21-769 AWB	HULLABALOO Y21-769 AWP	Drilling	7091.46	512.68	7091.46	7109.13	10.97	7109.13	PASS
SEC.10-T02N-R64W	SLOT#12 Ex.Oscar #Y10-79HN(2380'FSL&550'FWL,SEC.10)(PR)	Ex.Oscar #Y10-79HN ST01	Ex.Oscar #Y10-79HN ST01 (A) AWB	Ex.Oscar #Y10-79HN ST01 (A) AWP	Drilling	11442.30	3377.62	16230.00	17469.15	11.88	17469.15	PASS
SEC.16-T02N-R64W	SLOT#20 GIG-EM STATE Y9-719 (595'FNL&952'FEL,SEC.16)	GIG-EM STATE Y9-719	GIG-EM STATE Y9-719 PWB	GIG-EM STATE Y9-719 (REV-B.0) PWP	Planned	30.00	1755.85	17430.00	17469.15	12.40	17469.15	PASS
Y Section 04	(HSR-Guttersen 01-04)	HSR-Guttersen 01-04	Original Drilling	Original Drilling\Original Drilling - As Drilled	Drilling	17157.09	2459.23	17157.09	17381.04	15.30	17381.04	PASS
Y Section 09	(Perkins USX Y09-23)	Perkins USX Y09-23	Original Drilling	Original Drilling\Original Drilling - As Drilled	Drilling	8455.43	2118.31	8455.43	9689.30	17.32	9689.30	PASS
SEC.16-T02N-R64W	SLOT#13 Ex.STATE #21(1320'FSL&1170'FWL,SEC.16) (PA) 7700'MD)	Ex.STATE #21	Ex.STATE #21 AWB	Ex.STATE #21 AWP	Drilling	6419.67	3553.53	6419.67	6868.44	18.37	6868.44	PASS
SEC.16-T02N-R64W	SLOT#03 HULLABALOO Y21-775(445'FNL&917'FWL,SEC.16)	HULLABALOO Y21-775	HULLABALOO Y21-775 AWB	HULLABALOO Y21-775 AWP	Drilling	7080.94	928.57	7080.94	7112.00	19.82	7112.00	PASS
SEC.05-T02N-R64W	SLOT#07 PIONEER Y17-715 (398'FSL & 2194'FEL,SEC.05)	PIONEER Y17-715	PIONEER Y17-715 PWB	PIONEER Y17-715 (REV-1.0) PWP	Planned	12306.78	2247.74	12306.78	6766.84	20.70	13030.00	PASS
SEC.16-T02N-R64W	SLOT#07 HULLABALOO Y21-746(445'FNL&1005'FEL,SEC.16)	HULLABALOO Y21-746	HULLABALOO Y21-746 AWB	HULLABALOO Y21-746 AWP	Drilling	6714.66	1040.62	6714.66	6757.55	21.27	6757.55	PASS
Y Section 09	(Perkins 34-09)	Perkins 34-09	Wellbore #1	Wellbore #1\Wellbore #1 - As Drilled	Drilling	587.52	1385.94	7830.00	8003.75	27.22	8003.75	PASS
SEC.16-T02N-R64W	SLOT#02 HULLABALOO Y21-781(445'FNL&880'FWL,SEC.16)	HULLABALOO Y21-781	HULLABALOO Y21-781 AWB	HULLABALOO Y21-781 AWP	Drilling	7185.44	1322.74	7185.44	7278.11	28.40	7278.11	PASS
SEC.10-T02N-R64W	SLOT#12 Ex.Oscar #Y10-79HN(2380'FSL&550'FWL,SEC.10)(PR)	Ex.Oscar #Y10-79HN OWB	Ex.Oscar #Y10-79HN AWB	Ex.Oscar #Y10-79HN (A) AWP	Drilling	10537.02	3434.66	10930.00	11571.84	33.45	11571.84	PASS



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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-761
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-761 PWB
Slot	SLOT#16 GIG-EM STATE Y9-761 (595'FNL&2610'FWL,SEC.16)		

CALCULATION RANGE & CUTOFF		
From: 30.00ft MD	To: 17469.15ft MD	C-C Cutoff: (none)

OFFSET WELL CLEARANCE SUMMARY (31 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.16-T02N-R64W	SLOT#08 HULLABALOO Y21-736(445'FNL&967'FEL,SEC.16)	HULLABALOO Y21-736	HULLABALOO Y21-736 AWB	HULLABALOO Y21-736 AWP	Drilling	6651.19	1670.21	6651.19	6767.26	35.81	6767.26	PASS
SEC.16-T02N-R64W	SLOT#01 HULLABALOO Y21-787(445'FNL&842'FWL,SEC.16)	HULLABALOO Y21-787	HULLABALOO Y21-787 AWB	HULLABALOO Y21-787 AWP	Drilling	7217.95	1735.92	7217.95	7445.69	36.72	7445.69	PASS
SEC.16-T02N-R64W	SLOT#09 HULLABALOO Y21-726(445'FNL&930'FEL,SEC.16)	HULLABALOO Y21-726	HULLABALOO Y21-726 AWB	HULLABALOO Y21-726 AWP	Drilling	2300.67	1780.70	6330.00	7137.19	49.82	7137.19	PASS
SEC.16-T02N-R64W	SLOT#12 Ex.STATE Y #16-5D(1984'FNL&667'FWL,SEC16) (PR) 7725'MD	Ex.STATE Y #16-5D	Ex.STATE Y #16-5D AWB	Ex.STATE Y #16-5D AWP	Drilling	6491.31	1913.51	6491.31	6730.00	51.56	6730.00	PASS
SEC.16-T02N-R64W	SLOT#11 Ex.STATE#1(1351'FNL&1320'FEL,SEC.16) (PR) 7700'MD	Ex.STATE#1	Ex.STATE#1 AWB	Ex.STATE#1 AWP	Drilling	2258.06	1564.58	2258.06	6884.19	55.32	6884.19	PASS
SEC.16-T02N-R64W	SLOT#10 HULLABALOO Y21-716(445'FNL&892'FEL,SEC.16)	HULLABALOO Y21-716	HULLABALOO Y21-716 AWB	HULLABALOO Y21-716 AWP	Drilling	30.00	1820.01	1830.00	7472.17	63.48	7472.17	PASS