

# NOBLE ENERGY, INC



Location: COLORADO Slot: SLOT#15 GIG-EM STATE Y9-772 (595'FNL&2588'FWL,SEC.16)

Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: GIG-EM STATE Y9-772

Facility: SEC.16-T02N-R64W Wellbore: GIG-EM STATE Y9-772 PWB

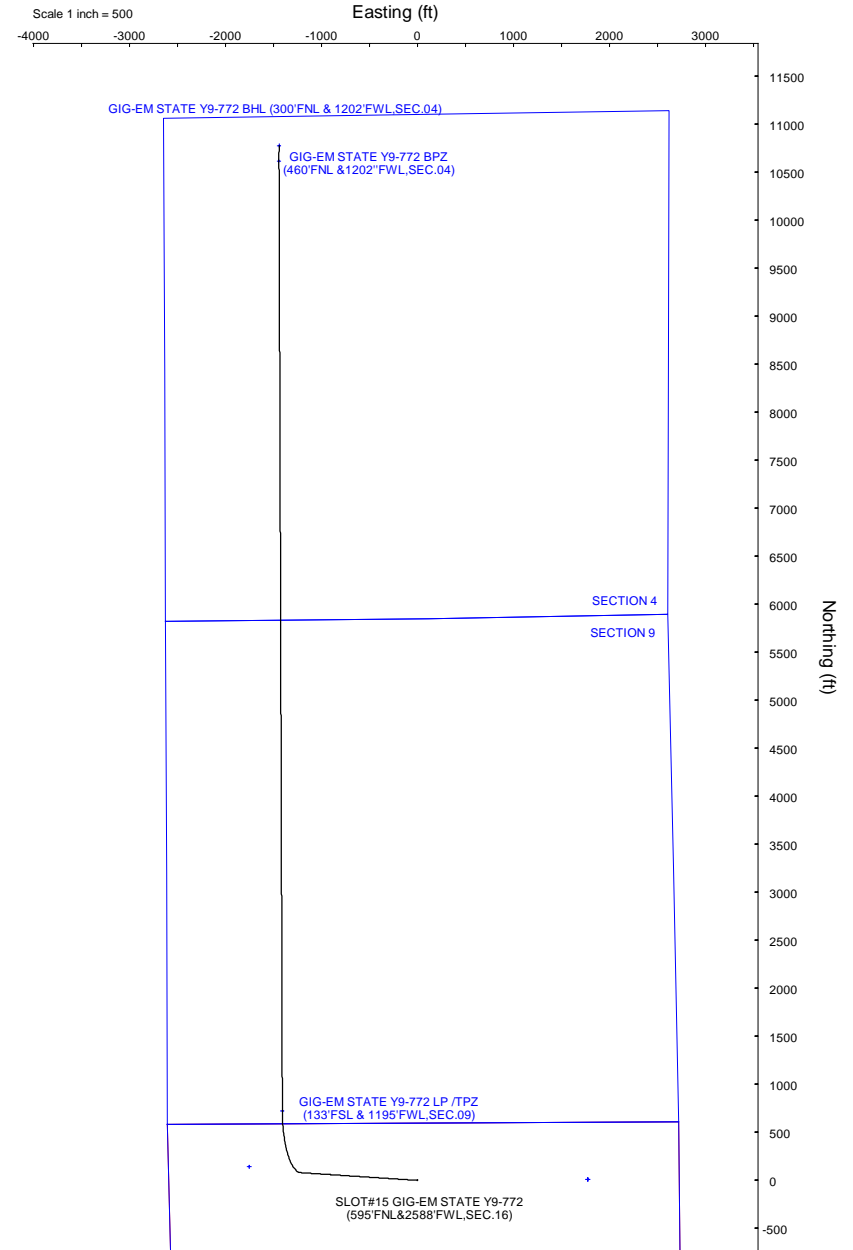
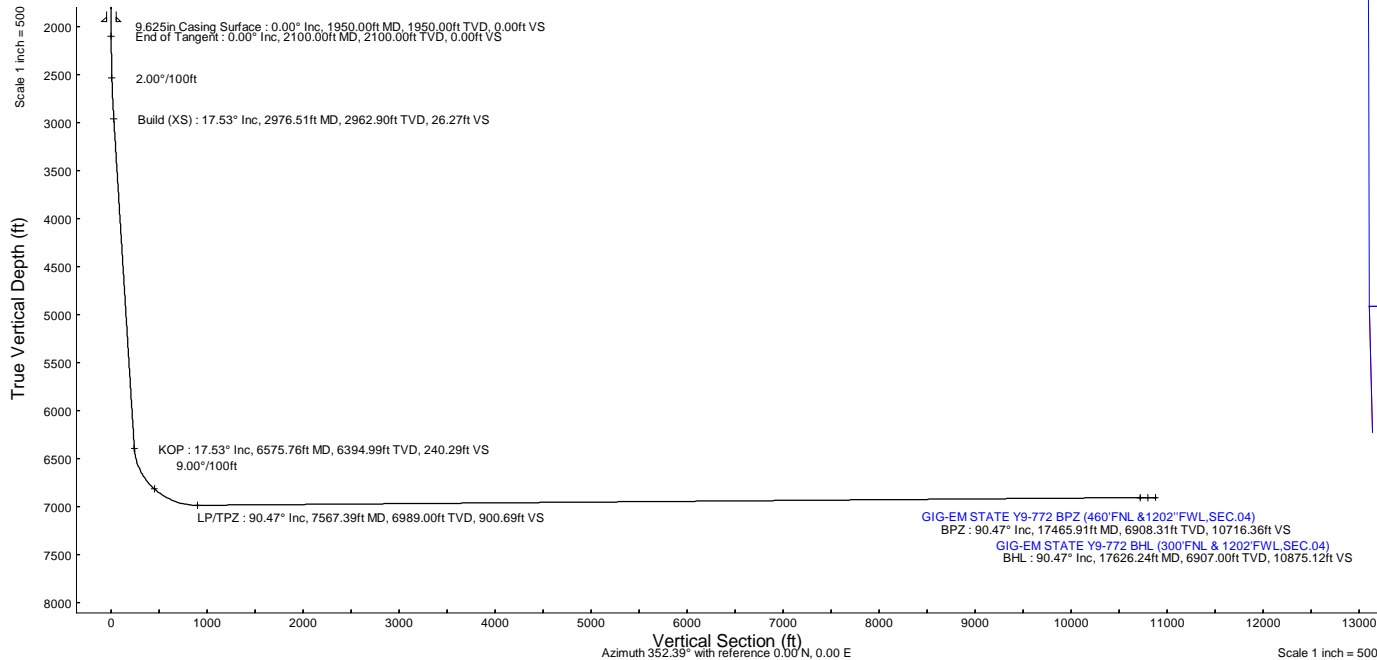
Plot reference wellpath is GIG-EM STATE Y9-772 (REV-B.0) PWP		Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to Rig (30KB) (RKB)		North Reference: Grid north
Reference wellpath measured depths are referenced to Rig (30KB) (RKB)		Scale: True distance
Rig (30KB) (RKB) to Mean Sea Level: 4941 feet		Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: SLOT#15 GIG-EM STATE Y9-772 (595'FNL&2588'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			Grid East (US ft)	Grid North (US ft)	Latitude
SLOT#15 GIG-EM STATE Y9-772 (595'FNL&2588'FWL,SEC.16)	Local N (ft)	Local E (ft)	3263691.415	1296752.525	40°08'38.8680"N
Rig (30KB) (RKB) to Ground level (At Slot: SLOT#15 GIG-EM STATE Y9-772 (595'FNL&2588'FWL,SEC.16))			4941ft		
Mean Sea Level to Ground level (At Slot: SLOT#15 GIG-EM STATE Y9-772 (595'FNL&2588'FWL,SEC.16))			0ft		
Rig (30KB) (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	273.780	30.00	0.00	0.00	0.00	0.00
End of Tangent	2100.00	0.000	273.780	2100.00	0.00	0.00	0.00	0.00
Build (XS)	2976.51	17.530	273.780	2962.90	8.77	-132.76	2.00	26.27
KOP	6575.76	17.530	273.780	6394.99	80.25	-1214.52	0.00	240.29
LP/TPZ	7567.39	90.467	359.798	6989.00	721.01	-1405.58	9.00	900.69
BPZ	17465.91	90.467	359.798	6908.31	10619.14	-1440.44	0.00	10716.36
BHL	17626.24	90.469	0.987	6907.00	10779.45	-1439.34	0.74	10875.12

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	9.80	1777.68	3265469.02	1296762.33	40°08'38.7774"N	104°33'1.4092"W
Rubicon State Y16-718 SECTION 9	N/A	-35.00	9.80	1777.68	3265469.02	1296762.33	40°08'38.7774"N	104°33'1.4092"W
HULLABALOO Y21-787 SECTION 16	N/A	28.00	141.76	-1748.93	3261942.56	1296894.28	40°08'40.4520"N	104°33'46.8000"W
GIG-EM STATE Y9-772 BHL (300'FNL & 1202'FWL,SEC.04)	17626.24	6907.00	10779.45	-1439.34	3262252.13	1307531.50	40°10'25.5360"N	104°33'41.3640"W
GIG-EM STATE Y9-772 BPZ (460'FNL & 1202'FWL,SEC.04)	17465.91	6908.31	10619.14	-1440.44	3262251.04	1307371.20	40°10'23.9520"N	104°33'41.4000"W
GIG-EM STATE Y9-772 LP /TPZ (133'FSL & 1195'FWL,SEC.09)	7567.39	6989.00	721.01	-1405.58	3262285.90	1297473.50	40°08'46.1400"N	104°33'42.3000"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
17626.24	90.469	0.987	6907.00	10779.45	-1439.34	3262252.13	1307531.50	40°10'25.5360"N



GIG-EM STATE Y9-772 BPZ (460'FNL & 1202'FWL,SEC.04)  
BPZ : 90.47° Inc, 17465.91ft MD, 6908.31ft TVD, 10716.36ft VS  
GIG-EM STATE Y9-772 BHL (300'FNL & 1202'FWL,SEC.04)  
BHL : 90.47° Inc, 17626.24ft MD, 6907.00ft TVD, 10875.12ft VS



Planned Wellpath Report

GIG-EM STATE Y9-772 (REV-B.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-772
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-772 PWB
Slot	SLOT#15 GIG-EM STATE Y9-772 (595'FNL&2588'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 2:12:50 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	-141.76	1748.93	3263691.42	1296752.53	40°08'38.8680"N	104°33'24.3000"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#15 GIG-EM STATE Y9-772 (595'FNL&2588'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	352.39°



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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-772
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-772 PWB
Slot	SLOT#15 GIG-EM STATE Y9-772 (595'FNL&2588'FWL,SEC.16)		

WELLPATH DATA (183 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	273.780	0.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.3000"W	0.00		
30.00	0.000	273.780	30.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.3000"W	0.00	SHL	
130.00†	0.000	273.780	130.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.3000"W	0.00		
230.00†	0.000	273.780	230.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.3000"W	0.00		
330.00†	0.000	273.780	330.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.3000"W	0.00		
430.00†	0.000	273.780	430.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.3000"W	0.00		
530.00†	0.000	273.780	530.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.3000"W	0.00		
630.00†	0.000	273.780	630.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.3000"W	0.00		
730.00†	0.000	273.780	730.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.3000"W	0.00		
830.00†	0.000	273.780	830.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.3000"W	0.00		
930.00†	0.000	273.780	930.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.3000"W	0.00		
1030.00†	0.000	273.780	1030.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.3000"W	0.00		
1130.00†	0.000	273.780	1130.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.3000"W	0.00		
1230.00†	0.000	273.780	1230.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.3000"W	0.00		
1330.00†	0.000	273.780	1330.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.3000"W	0.00		
1430.00†	0.000	273.780	1430.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.3000"W	0.00		
1530.00†	0.000	273.780	1530.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.3000"W	0.00		
1630.00†	0.000	273.780	1630.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.3000"W	0.00		
1730.00†	0.000	273.780	1730.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.3000"W	0.00		
1830.00†	0.000	273.780	1830.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.3000"W	0.00		
1930.00†	0.000	273.780	1930.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.3000"W	0.00		
2030.00†	0.000	273.780	2030.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.3000"W	0.00		
2100.00	0.000	273.780	2100.00	0.00	0.00	0.00	40°08'38.8680"N	104°33'24.3000"W	0.00	End of Tangent	
2130.00†	0.600	273.780	2130.00	0.03	0.01	-0.16	40°08'38.8681"N	104°33'24.3020"W	2.00		
2230.00†	2.600	273.780	2229.96	0.58	0.19	-2.94	40°08'38.8702"N	104°33'24.3379"W	2.00		
2330.00†	4.600	273.780	2329.75	1.82	0.61	-9.21	40°08'38.8750"N	104°33'24.4185"W	2.00		
2430.00†	6.600	273.780	2429.27	3.75	1.25	-18.94	40°08'38.8824"N	104°33'24.5438"W	2.00		
2530.00†	8.600	273.780	2528.39	6.36	2.12	-32.14	40°08'38.8924"N	104°33'24.7136"W	2.00		
2630.00†	10.600	273.780	2626.98	9.65	3.22	-48.78	40°08'38.9050"N	104°33'24.9277"W	2.00		
2730.00†	12.600	273.780	2724.93	13.62	4.55	-68.84	40°08'38.9202"N	104°33'25.1858"W	2.00		
2830.00†	14.600	273.780	2822.13	18.26	6.10	-92.31	40°08'38.9380"N	104°33'25.4877"W	2.00		
2930.00†	16.600	273.780	2918.44	23.57	7.87	-119.14	40°08'38.9583"N	104°33'25.8329"W	2.00		
2976.51	17.530	273.780	2962.90	26.27	8.77	-132.76	40°08'38.9686"N	104°33'26.0082"W	2.00	Build (XS)	
3030.00†	17.530	273.780	3013.90	29.45	9.83	-148.83	40°08'38.9808"N	104°33'26.2150"W	0.00		
3130.00†	17.530	273.780	3109.26	35.39	11.82	-178.89	40°08'39.0036"N	104°33'26.6017"W	0.00		
3230.00†	17.530	273.780	3204.62	41.34	13.81	-208.94	40°08'39.0264"N	104°33'26.9885"W	0.00		
3330.00†	17.530	273.780	3299.97	47.28	15.79	-239.00	40°08'39.0492"N	104°33'27.3752"W	0.00		
3430.00†	17.530	273.780	3395.33	53.23	17.78	-269.05	40°08'39.0719"N	104°33'27.7619"W	0.00		
3530.00†	17.530	273.780	3490.68	59.18	19.76	-299.11	40°08'39.0947"N	104°33'28.1486"W	0.00		
3630.00†	17.530	273.780	3586.04	65.12	21.75	-329.16	40°08'39.1175"N	104°33'28.5354"W	0.00		
3730.00†	17.530	273.780	3681.40	71.07	23.73	-359.22	40°08'39.1403"N	104°33'28.9221"W	0.00		
3830.00†	17.530	273.780	3776.75	77.02	25.72	-389.28	40°08'39.1630"N	104°33'29.3088"W	0.00		
3930.00†	17.530	273.780	3872.11	82.96	27.71	-419.33	40°08'39.1858"N	104°33'29.6955"W	0.00		
4030.00†	17.530	273.780	3967.46	88.91	29.69	-449.39	40°08'39.2086"N	104°33'30.0822"W	0.00		
4130.00†	17.530	273.780	4062.82	94.85	31.68	-479.44	40°08'39.2314"N	104°33'30.4690"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 Y9-772 PWB
Slot	SLOT#15 GIG-EM STATE Y9-772 (595'FNL&2588'FWL,SEC.16)		

WELLPATH DATA (183 stations) † = interpolated, ‡ = extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4230.00†	17.530	273.780	4158.17	100.80	33.66	-509.50	40°08'39.2542"N	104°33'30.8557"W	0.00	
4330.00†	17.530	273.780	4253.53	106.75	35.65	-539.55	40°08'39.2769"N	104°33'31.2424"W	0.00	
4430.00†	17.530	273.780	4348.89	112.69	37.64	-569.61	40°08'39.2997"N	104°33'31.6291"W	0.00	
4530.00†	17.530	273.780	4444.24	118.64	39.62	-599.66	40°08'39.3225"N	104°33'32.0159"W	0.00	
4630.00†	17.530	273.780	4539.60	124.59	41.61	-629.72	40°08'39.3453"N	104°33'32.4026"W	0.00	
4730.00†	17.530	273.780	4634.95	130.53	43.59	-659.77	40°08'39.3680"N	104°33'32.7893"W	0.00	
4830.00†	17.530	273.780	4730.31	136.48	45.58	-689.83	40°08'39.3908"N	104°33'33.1760"W	0.00	
4930.00†	17.530	273.780	4825.67	142.42	47.57	-719.88	40°08'39.4136"N	104°33'33.5627"W	0.00	
5030.00†	17.530	273.780	4921.02	148.37	49.55	-749.94	40°08'39.4364"N	104°33'33.9495"W	0.00	
5130.00†	17.530	273.780	5016.38	154.32	51.54	-779.99	40°08'39.4591"N	104°33'34.3362"W	0.00	
5230.00†	17.530	273.780	5111.73	160.26	53.52	-810.05	40°08'39.4819"N	104°33'34.7229"W	0.00	
5330.00†	17.530	273.780	5207.09	166.21	55.51	-840.11	40°08'39.5047"N	104°33'35.1096"W	0.00	
5430.00†	17.530	273.780	5302.44	172.16	57.49	-870.16	40°08'39.5275"N	104°33'35.4964"W	0.00	
5530.00†	17.530	273.780	5397.80	178.10	59.48	-900.22	40°08'39.5502"N	104°33'35.8831"W	0.00	
5630.00†	17.530	273.780	5493.16	184.05	61.47	-930.27	40°08'39.5730"N	104°33'36.2698"W	0.00	
5730.00†	17.530	273.780	5588.51	190.00	63.45	-960.33	40°08'39.5958"N	104°33'36.6565"W	0.00	
5830.00†	17.530	273.780	5683.87	195.94	65.44	-990.38	40°08'39.6185"N	104°33'37.0433"W	0.00	
5930.00†	17.530	273.780	5779.22	201.89	67.42	-1020.44	40°08'39.6413"N	104°33'37.4300"W	0.00	
6030.00†	17.530	273.780	5874.58	207.83	69.41	-1050.49	40°08'39.6641"N	104°33'37.8167"W	0.00	
6130.00†	17.530	273.780	5969.94	213.78	71.40	-1080.55	40°08'39.6868"N	104°33'38.2034"W	0.00	
6230.00†	17.530	273.780	6065.29	219.73	73.38	-1110.60	40°08'39.7096"N	104°33'38.5901"W	0.00	
6330.00†	17.530	273.780	6160.65	225.67	75.37	-1140.66	40°08'39.7324"N	104°33'38.9769"W	0.00	
6430.00†	17.530	273.780	6256.00	231.62	77.35	-1170.71	40°08'39.7552"N	104°33'39.3636"W	0.00	
6530.00†	17.530	273.780	6351.36	237.57	79.34	-1200.77	40°08'39.7779"N	104°33'39.7503"W	0.00	
6575.76	17.530	273.780	6394.99	240.29	80.25	-1214.52	40°08'39.7883"N	104°33'39.9273"W	0.00	KOP
6630.00†	18.497	289.301	6446.60	245.80	83.63	-1230.80	40°08'39.8235"N	104°33'40.1365"W	9.00	
6730.00†	22.965	311.620	6540.25	267.79	101.87	-1260.42	40°08'40.0068"N	104°33'40.5153"W	9.00	
6830.00†	29.485	325.789	6630.00	304.65	135.25	-1288.90	40°08'40.3396"N	104°33'40.8775"W	9.00	
6930.00†	36.986	334.923	6713.63	355.45	182.94	-1315.54	40°08'40.8137"N	104°33'41.2140"W	9.00	
7030.00†	44.975	341.270	6789.10	418.95	243.78	-1339.69	40°08'41.4174"N	104°33'41.5166"W	9.00	
7130.00†	53.228	346.033	6854.53	493.58	316.27	-1360.74	40°08'42.1359"N	104°33'41.7779"W	9.00	
7230.00†	61.634	349.857	6908.33	577.51	398.61	-1378.20	40°08'42.9514"N	104°33'41.9914"W	9.00	
7330.00†	70.131	353.113	6949.16	668.67	488.79	-1391.61	40°08'43.8439"N	104°33'42.1518"W	9.00	
7430.00†	78.681	356.035	6976.03	764.82	584.58	-1400.66	40°08'44.7914"N	104°33'42.2553"W	9.00	
7530.00†	87.257	358.786	6988.26	863.58	683.63	-1405.11	40°08'45.7706"N	104°33'42.2991"W	9.00	
7567.39	90.467	359.798	6989.00†	900.69	721.01	-1405.58	40°08'46.1400"N	104°33'42.3000"W	9.00	LP/TPZ
7630.00†	90.467	359.798	6988.49	962.78	783.61	-1405.80	40°08'46.7586"N	104°33'42.2943"W	0.00	
7730.00†	90.467	359.798	6987.67	1061.94	883.61	-1406.15	40°08'47.7468"N	104°33'42.2852"W	0.00	
7830.00†	90.467	359.798	6986.86	1161.10	983.60	-1406.50	40°08'48.7349"N	104°33'42.2761"W	0.00	
7930.00†	90.467	359.798	6986.04	1260.27	1083.60	-1406.85	40°08'49.7231"N	104°33'42.2670"W	0.00	
8030.00†	90.467	359.798	6985.23	1359.43	1183.59	-1407.21	40°08'50.7112"N	104°33'42.2580"W	0.00	
8130.00†	90.467	359.798	6984.41	1458.59	1283.59	-1407.56	40°08'51.6994"N	104°33'42.2489"W	0.00	
8230.00†	90.467	359.798	6983.60	1557.75	1383.59	-1407.91	40°08'52.6875"N	104°33'42.2398"W	0.00	
8330.00†	90.467	359.798	6982.78	1656.92	1483.58	-1408.26	40°08'53.6757"N	104°33'42.2307"W	0.00	
8430.00†	90.467	359.798	6981.97	1756.08	1583.58	-1408.61	40°08'54.6638"N	104°33'42.2216"W	0.00	



Planned Wellpath Report  
GIG-EM STATE Y9-772 (REV-B.0) PWP  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-772
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-772 PWB
Slot	SLOT#15 GIG-EM STATE Y9-772 (595'FNL&2588'FWL,SEC.16)		

WELLPATH DATA (183 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	359.798	6981.15	1855.24	1683.58	-1408.97	40°08'55.6520"N	104°33'42.2125"W	0.00	
8630.00†	90.467	359.798	6980.34	1954.41	1783.57	-1409.32	40°08'56.6401"N	104°33'42.2034"W	0.00	
8730.00†	90.467	359.798	6979.52	2053.57	1883.57	-1409.67	40°08'57.6283"N	104°33'42.1943"W	0.00	
8830.00†	90.467	359.798	6978.71	2152.73	1983.56	-1410.02	40°08'58.6164"N	104°33'42.1852"W	0.00	
8930.00†	90.467	359.798	6977.89	2251.90	2083.56	-1410.38	40°08'59.6046"N	104°33'42.1762"W	0.00	
9030.00†	90.467	359.798	6977.08	2351.06	2183.56	-1410.73	40°09'0.5927"N	104°33'42.1671"W	0.00	
9130.00†	90.467	359.798	6976.26	2450.22	2283.55	-1411.08	40°09'1.5809"N	104°33'42.1580"W	0.00	
9230.00†	90.467	359.798	6975.45	2549.38	2383.55	-1411.43	40°09'2.5690"N	104°33'42.1489"W	0.00	
9330.00†	90.467	359.798	6974.63	2648.55	2483.54	-1411.78	40°09'3.5572"N	104°33'42.1398"W	0.00	
9430.00†	90.467	359.798	6973.82	2747.71	2583.54	-1412.14	40°09'4.5453"N	104°33'42.1307"W	0.00	
9530.00†	90.467	359.798	6973.00	2846.87	2683.54	-1412.49	40°09'5.5335"N	104°33'42.1216"W	0.00	
9630.00†	90.467	359.798	6972.19	2946.04	2783.53	-1412.84	40°09'6.5216"N	104°33'42.1125"W	0.00	
9730.00†	90.467	359.798	6971.37	3045.20	2883.53	-1413.19	40°09'7.5098"N	104°33'42.1034"W	0.00	
9830.00†	90.467	359.798	6970.56	3144.36	2983.52	-1413.55	40°09'8.4979"N	104°33'42.0943"W	0.00	
9930.00†	90.467	359.798	6969.74	3243.53	3083.52	-1413.90	40°09'9.4861"N	104°33'42.0853"W	0.00	
10030.00†	90.467	359.798	6968.93	3342.69	3183.52	-1414.25	40°09'10.4742"N	104°33'42.0762"W	0.00	
10130.00†	90.467	359.798	6968.11	3441.85	3283.51	-1414.60	40°09'11.4624"N	104°33'42.0671"W	0.00	
10230.00†	90.467	359.798	6967.30	3541.01	3383.51	-1414.95	40°09'12.4505"N	104°33'42.0580"W	0.00	
10330.00†	90.467	359.798	6966.48	3640.18	3483.50	-1415.31	40°09'13.4387"N	104°33'42.0489"W	0.00	
10430.00†	90.467	359.798	6965.66	3739.34	3583.50	-1415.66	40°09'14.4268"N	104°33'42.0398"W	0.00	
10530.00†	90.467	359.798	6964.85	3838.50	3683.50	-1416.01	40°09'15.4150"N	104°33'42.0307"W	0.00	
10630.00†	90.467	359.798	6964.03	3937.67	3783.49	-1416.36	40°09'16.4031"N	104°33'42.0216"W	0.00	
10730.00†	90.467	359.798	6963.22	4036.83	3883.49	-1416.72	40°09'17.3913"N	104°33'42.0125"W	0.00	
10830.00†	90.467	359.798	6962.40	4135.99	3983.48	-1417.07	40°09'18.3794"N	104°33'42.0034"W	0.00	
10930.00†	90.467	359.798	6961.59	4235.16	4083.48	-1417.42	40°09'19.3676"N	104°33'41.9943"W	0.00	
11030.00†	90.467	359.798	6960.77	4334.32	4183.48	-1417.77	40°09'20.3557"N	104°33'41.9853"W	0.00	
11130.00†	90.467	359.798	6959.96	4433.48	4283.47	-1418.12	40°09'21.3439"N	104°33'41.9762"W	0.00	
11230.00†	90.467	359.798	6959.14	4532.64	4383.47	-1418.48	40°09'22.3320"N	104°33'41.9671"W	0.00	
11330.00†	90.467	359.798	6958.33	4631.81	4483.46	-1418.83	40°09'23.3202"N	104°33'41.9580"W	0.00	
11430.00†	90.467	359.798	6957.51	4730.97	4583.46	-1419.18	40°09'24.3083"N	104°33'41.9489"W	0.00	
11530.00†	90.467	359.798	6956.70	4830.13	4683.46	-1419.53	40°09'25.2965"N	104°33'41.9398"W	0.00	
11630.00†	90.467	359.798	6955.88	4929.30	4783.45	-1419.89	40°09'26.2846"N	104°33'41.9307"W	0.00	
11730.00†	90.467	359.798	6955.07	5028.46	4883.45	-1420.24	40°09'27.2728"N	104°33'41.9216"W	0.00	
11830.00†	90.467	359.798	6954.25	5127.62	4983.45	-1420.59	40°09'28.2609"N	104°33'41.9125"W	0.00	
11930.00†	90.467	359.798	6953.44	5226.79	5083.44	-1420.94	40°09'29.2490"N	104°33'41.9034"W	0.00	
12030.00†	90.467	359.798	6952.62	5325.95	5183.44	-1421.29	40°09'30.2372"N	104°33'41.8943"W	0.00	
12130.00†	90.467	359.798	6951.81	5425.11	5283.43	-1421.65	40°09'31.2253"N	104°33'41.8852"W	0.00	
12230.00†	90.467	359.798	6950.99	5524.27	5383.43	-1422.00	40°09'32.2135"N	104°33'41.8762"W	0.00	
12330.00†	90.467	359.798	6950.18	5623.44	5483.43	-1422.35	40°09'33.2016"N	104°33'41.8671"W	0.00	
12430.00†	90.467	359.798	6949.36	5722.60	5583.42	-1422.70	40°09'34.1898"N	104°33'41.8580"W	0.00	
12530.00†	90.467	359.798	6948.55	5821.76	5683.42	-1423.06	40°09'35.1779"N	104°33'41.8489"W	0.00	
12630.00†	90.467	359.798	6947.73	5920.93	5783.41	-1423.41	40°09'36.1661"N	104°33'41.8398"W	0.00	
12730.00†	90.467	359.798	6946.92	6020.09	5883.41	-1423.76	40°09'37.1542"N	104°33'41.8307"W	0.00	
12830.00†	90.467	359.798	6946.10	6119.25	5983.41	-1424.11	40°09'38.1424"N	104°33'41.8216"W	0.00	
12930.00†	90.467	359.798	6945.29	6218.42	6083.40	-1424.46	40°09'39.1305"N	104°33'41.8125"W	0.00	





Planned Wellpath Report

GIG-EM STATE Y9-772 (REV-B.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-772
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-772 PWB
Slot	SLOT#15 GIG-EM STATE Y9-772 (595'FNL&2588'FWL,SEC.16)		

WELLPATH DATA (183 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	359.798	6944.47	6317.58	6183.40	-1424.82	40°09'40.1187"N	104°33'41.8034"W	0.00	
13130.00†	90.467	359.798	6943.66	6416.74	6283.39	-1425.17	40°09'41.1068"N	104°33'41.7943"W	0.00	
13230.00†	90.467	359.798	6942.84	6515.90	6383.39	-1425.52	40°09'42.0950"N	104°33'41.7852"W	0.00	
13330.00†	90.467	359.798	6942.02	6615.07	6483.39	-1425.87	40°09'43.0831"N	104°33'41.7761"W	0.00	
13430.00†	90.467	359.798	6941.21	6714.23	6583.38	-1426.23	40°09'44.0713"N	104°33'41.7670"W	0.00	
13530.00†	90.467	359.798	6940.39	6813.39	6683.38	-1426.58	40°09'45.0594"N	104°33'41.7579"W	0.00	
13630.00†	90.467	359.798	6939.58	6912.56	6783.37	-1426.93	40°09'46.0476"N	104°33'41.7489"W	0.00	
13730.00†	90.467	359.798	6938.76	7011.72	6883.37	-1427.28	40°09'47.0357"N	104°33'41.7398"W	0.00	
13830.00†	90.467	359.798	6937.95	7110.88	6983.37	-1427.64	40°09'48.0239"N	104°33'41.7307"W	0.00	
13930.00†	90.467	359.798	6937.13	7210.05	7083.36	-1427.99	40°09'49.0120"N	104°33'41.7216"W	0.00	
14030.00†	90.467	359.798	6936.32	7309.21	7183.36	-1428.34	40°09'50.0001"N	104°33'41.7125"W	0.00	
14130.00†	90.467	359.798	6935.50	7408.37	7283.35	-1428.69	40°09'50.9883"N	104°33'41.7034"W	0.00	
14230.00†	90.467	359.798	6934.69	7507.53	7383.35	-1429.04	40°09'51.9764"N	104°33'41.6943"W	0.00	
14330.00†	90.467	359.798	6933.87	7606.70	7483.35	-1429.40	40°09'52.9646"N	104°33'41.6852"W	0.00	
14430.00†	90.467	359.798	6933.06	7705.86	7583.34	-1429.75	40°09'53.9527"N	104°33'41.6761"W	0.00	
14530.00†	90.467	359.798	6932.24	7805.02	7683.34	-1430.10	40°09'54.9409"N	104°33'41.6670"W	0.00	
14630.00†	90.467	359.798	6931.43	7904.19	7783.33	-1430.45	40°09'55.9290"N	104°33'41.6579"W	0.00	
14730.00†	90.467	359.798	6930.61	8003.35	7883.33	-1430.81	40°09'56.9172"N	104°33'41.6488"W	0.00	
14830.00†	90.467	359.798	6929.80	8102.51	7983.33	-1431.16	40°09'57.9053"N	104°33'41.6397"W	0.00	
14930.00†	90.467	359.798	6928.98	8201.68	8083.32	-1431.51	40°09'58.8935"N	104°33'41.6306"W	0.00	
15030.00†	90.467	359.798	6928.17	8300.84	8183.32	-1431.86	40°09'59.8816"N	104°33'41.6215"W	0.00	
15130.00†	90.467	359.798	6927.35	8400.00	8283.31	-1432.21	40°10'0.8698"N	104°33'41.6125"W	0.00	
15230.00†	90.467	359.798	6926.54	8499.16	8383.31	-1432.57	40°10'1.8579"N	104°33'41.6034"W	0.00	
15330.00†	90.467	359.798	6925.72	8598.33	8483.31	-1432.92	40°10'2.8461"N	104°33'41.5943"W	0.00	
15430.00†	90.467	359.798	6924.91	8697.49	8583.30	-1433.27	40°10'3.8342"N	104°33'41.5852"W	0.00	
15530.00†	90.467	359.798	6924.09	8796.65	8683.30	-1433.62	40°10'4.8224"N	104°33'41.5761"W	0.00	
15630.00†	90.467	359.798	6923.28	8895.82	8783.30	-1433.98	40°10'5.8105"N	104°33'41.5670"W	0.00	
15730.00†	90.467	359.798	6922.46	8994.98	8883.29	-1434.33	40°10'6.7986"N	104°33'41.5579"W	0.00	
15830.00†	90.467	359.798	6921.65	9094.14	8983.29	-1434.68	40°10'7.7868"N	104°33'41.5488"W	0.00	
15930.00†	90.467	359.798	6920.83	9193.31	9083.28	-1435.03	40°10'8.7749"N	104°33'41.5397"W	0.00	
16030.00†	90.467	359.798	6920.02	9292.47	9183.28	-1435.38	40°10'9.7631"N	104°33'41.5306"W	0.00	
16130.00†	90.467	359.798	6919.20	9391.63	9283.28	-1435.74	40°10'10.7512"N	104°33'41.5215"W	0.00	
16230.00†	90.467	359.798	6918.38	9490.79	9383.27	-1436.09	40°10'11.7394"N	104°33'41.5124"W	0.00	
16330.00†	90.467	359.798	6917.57	9589.96	9483.27	-1436.44	40°10'12.7275"N	104°33'41.5033"W	0.00	
16430.00†	90.467	359.798	6916.75	9689.12	9583.26	-1436.79	40°10'13.7157"N	104°33'41.4942"W	0.00	
16530.00†	90.467	359.798	6915.94	9788.28	9683.26	-1437.15	40°10'14.7038"N	104°33'41.4851"W	0.00	
16630.00†	90.467	359.798	6915.12	9887.45	9783.26	-1437.50	40°10'15.6920"N	104°33'41.4760"W	0.00	
16730.00†	90.467	359.798	6914.31	9986.61	9883.25	-1437.85	40°10'16.6801"N	104°33'41.4669"W	0.00	
16830.00†	90.467	359.798	6913.49	10085.77	9983.25	-1438.20	40°10'17.6683"N	104°33'41.4578"W	0.00	
16930.00†	90.467	359.798	6912.68	10184.93	10083.24	-1438.55	40°10'18.6564"N	104°33'41.4487"W	0.00	
17030.00†	90.467	359.798	6911.86	10284.10	10183.24	-1438.91	40°10'19.6445"N	104°33'41.4396"W	0.00	
17130.00†	90.467	359.798	6911.05	10383.26	10283.24	-1439.26	40°10'20.6327"N	104°33'41.4306"W	0.00	
17230.00†	90.467	359.798	6910.23	10482.42	10383.23	-1439.61	40°10'21.6208"N	104°33'41.4215"W	0.00	
17330.00†	90.467	359.798	6909.42	10581.59	10483.23	-1439.96	40°10'22.6090"N	104°33'41.4124"W	0.00	
17430.00†	90.467	359.798	6908.60	10680.75	10583.22	-1440.32	40°10'23.5971"N	104°33'41.4033"W	0.00	



Planned Wellpath Report

GIG-EM STATE Y9-772 (REV-B.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-772
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-772 PWB
Slot	SLOT#15 GIG-EM STATE Y9-772 (595'FNL&2588'FWL,SEC.16)		

WELLPATH DATA (183 stations) † = interpolated, ‡ = extrapolated station											
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments	
17465.91	90.467	359.798	6908.31 <sup>2</sup>	10716.36	10619.14	-1440.44	40°10'23.9520"N	104°33'41.4000"W	0.00	BPZ	
17530.00†	90.468	0.273	6907.79	10779.88	10683.22	-1440.40	40°10'24.5853"N	104°33'41.3907"W	0.74		
17626.24	90.469	0.987	6907.00 <sup>3</sup>	10875.12	10779.45	-1439.34	40°10'25.5360"N	104°33'41.3640"W	0.74	BHL	

HOLE & CASING SECTIONS - Ref Wellbore: GIG-EM STATE Y9-772 PWB      Ref Wellpath: GIG-EM STATE Y9-772 (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	9.80	1777.68	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	9.80	1777.68	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	141.76	-1748.93	3261942.56	1296894.28	40°08'40.4520"N	104°33'46.8000"W	polygon	
	2D Polygon: dimensions not calculated									
3) GIG-EM STATE Y9-772 BHL (300'FNL & 1202'FWL,SEC.04)	17626.24	6907.00	10779.45	-1439.34	3262252.13	1307531.50	40°10'25.5360"N	104°33'41.3640"W	point	
2) GIG-EM STATE Y9-772 BPZ (460'FNL &1202"FWL,SEC.04)	17465.91	6908.31	10619.14	-1440.44	3262251.04	1307371.20	40°10'23.9520"N	104°33'41.4000"W	point	
1) GIG-EM STATE Y9-772 LP /TPZ (133'FSL & 1195'FWL,SEC.09)	7567.39	6989.00	721.01	-1405.58	3262285.90	1297473.50	40°08'46.1400"N	104°33'42.3000"W	point	

SURVEY PROGRAM - Ref Wellbore: GIG-EM STATE Y9-772 PWB      Ref Wellpath: GIG-EM STATE Y9-772 (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 Y9-772 PWB
1950.00	20000.00	OWSG MWD rev2 (MS+IFR1)		GIG-EM STATE Y9-772 PWB



Planned Wellpath Report  
GIG-EM STATE Y9-772 (REV-B.0) PWP  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-772
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-772 PWB
Slot	SLOT#15 GIG-EM STATE Y9-772 (595'FNL&2588'FWL,SEC.16)		

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
30.00	0.000	273.780	30.00	SHL
2100.00	0.000	273.780	2100.00	End of Tangent
2976.51	17.530	273.780	2962.90	Build (XS)
6575.76	17.530	273.780	6394.99	KOP
7567.39	90.467	359.798	6989.00	LP/TPZ
17465.91	90.467	359.798	6908.31	BPZ
17626.24	90.469	0.987	6907.00	BHL





Closest Approach Clearance Summary Report

GIG-EM STATE Y9-772 (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 Y9-772
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-772 PWB
Slot	SLOT#15 GIG-EM STATE Y9-772 (595'FNL&2588'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 2:13:03 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	-141.76	1748.93	3263691.42	1296752.52	40°08'38.8680"N	104°33'24.3000"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#15 GIG-EM STATE Y9-772 (595'FNL&2588'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 Y9-772
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-772 PWB
Slot	SLOT#15 GIG-EM STATE Y9-772 (595'FNL&2588'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 Y9-772 PWB      Ref Wellpath: GIG-EM STATE Y9-772 (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 Y9-772 PWB      Ref Wellpath: GIG-EM STATE Y9-772 (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 Y9-772 PWB
1950.00	20000.00	OWSG MWD rev2 (MS+IFR1)		GIG-EM STATE Y9-772 PWB



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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-772
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-772 PWB
Slot	SLOT#15 GIG-EM STATE Y9-772 (595'FNL&2588'FWL,SEC.16)		

CALCULATION RANGE & CUTOFF		
From: 30.00ft MD	To: 17626.24ft 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#16 GIG-EM STATE Y9-761 (595'FNL&2610'FWL,SEC.16)	GIG-EM STATE Y9-761	GIG-EM STATE Y9-761 PWB	GIG-EM STATE Y9-761 (REV-B.0) PWP	Planned	30.00	22.37	17626.24	2102.25	1.30	17626.24	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	22.37	17465.91	2006.29	1.31	17626.24	PASS
Y Section 04	(Melvin Y04-04)	Melvin Y04-04	Original Drilling	Original Drilling\Original Drilling - As Drilled	Drilling	17023.32	210.18	17023.32	17033.63	1.33	17033.63	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	7189.63	174.46	7189.63	7187.63	3.55	7187.63	PASS
Y Section 04	(HSR-Guttersen 05-04)	HSR-Guttersen 05-04	Original Drilling	Original Drilling\Original Drilling - As Drilled	Drilling	15870.73	506.64	15870.73	15908.12	3.61	15908.12	PASS
Y Section 04	(HSR-Guttersen 03-04)	HSR-Guttersen 03-04	Original Drilling	Original Drilling\Original Drilling - As Drilled	Drilling	17237.81	607.31	17237.81	17230.13	3.81	17230.13	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	7176.29	249.66	7176.29	7174.95	5.05	7174.95	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	6470.35	1354.87	17626.24	17626.24	6.13	17626.24	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	12995.15	1429.01	17330.00	12814.59	6.47	17530.00	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	2730.55	1685.00	17626.24	17626.24	9.23	17626.24	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	1365.87	145.96	7130.00	7135.76	11.62	7135.76	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	2304.28	1754.68	17626.24	17626.24	12.34	17626.24	PASS
Y Section 04	(HSR-Guttersen 02-04)	HSR-Guttersen 02-04	Original Drilling	Original Drilling\Original Drilling - As Drilled	Drilling	17326.00	2047.50	17326.00	17435.08	12.76	17435.08	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	7315.45	636.59	7315.45	7343.51	12.88	7343.51	PASS
Y Section 04	(HSR-Guttersen 07-04)	HSR-Guttersen 07-04	Original Drilling	Original Drilling\Original Drilling - As Drilled	Drilling	16092.34	1902.60	16092.34	16186.57	13.24	16186.57	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	12467.88	1548.88	12467.88	12973.03	14.25	12973.03	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	11613.12	4077.45	17626.24	17626.24	14.25	17626.24	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	202.91	151.49	6575.76	2138.59	14.56	6830.00	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	1778.21	17626.24	17626.24	15.46	17626.24	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	6239.77	3472.59	6239.77	7004.12	17.91	7004.12	PASS
Y Section 04	(HSR-Guttersen 01-04)	HSR-Guttersen 01-04	Original Drilling	Original Drilling\Original Drilling - As Drilled	Drilling	17325.77	3151.51	17325.77	17626.24	19.45	17626.24	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	7366.56	1058.24	7366.56	7440.62	21.07	7440.62	PASS
Y Section 09	(Perkins USX Y09-23)	Perkins USX Y09-23	Original Drilling	Original Drilling\Original Drilling - As Drilled	Drilling	30.00	2320.29	8630.00	10253.66	22.84	10253.66	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	2893.41	1631.03	6530.00	6741.37	32.74	6741.37	PASS
Y Section 09	(Perkins 34-09)	Perkins 34-09	Wellbore #1	Wellbore #1\Wellbore #1 - As Drilled	Drilling	588.31	1397.70	8030.00	8268.38	38.67	8268.38	PASS



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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-772
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-772 PWB
Slot	SLOT#15 GIG-EM STATE Y9-772 (595'FNL&2588'FWL,SEC.16)		

CALCULATION RANGE & CUTOFF		
From: 30.00ft MD	To: 17626.24ft 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#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	6664.10	1577.87	6664.10	6835.26	39.06	6835.26	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	10738.99	4135.57	11130.00	11896.62	39.76	11896.62	PASS
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	2229.93	1764.78	2229.93	6720.20	46.94	6720.20	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	30.00	1806.20	2230.00	7031.16	61.97	7031.16	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	2144.15	1585.66	2144.15	7086.53	66.38	7086.53	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	1842.31	1830.00	7376.84	75.36	8330.00	PASS