

# NOBLE ENERGY, INC



Location:	COLORADO	Slot:	SLOT#20 GIG-EM STATE Y9-719 (595°FNL&952°FEL,SEC.16)
Field:	WELD COUNTY (NOBLE NAD 83 GRID)	Well:	GIG-EM STATE Y9-719
Facility:	SEC.16-T02N-R64W	Wellbore:	GIG-EM STATE Y9-719 PWB

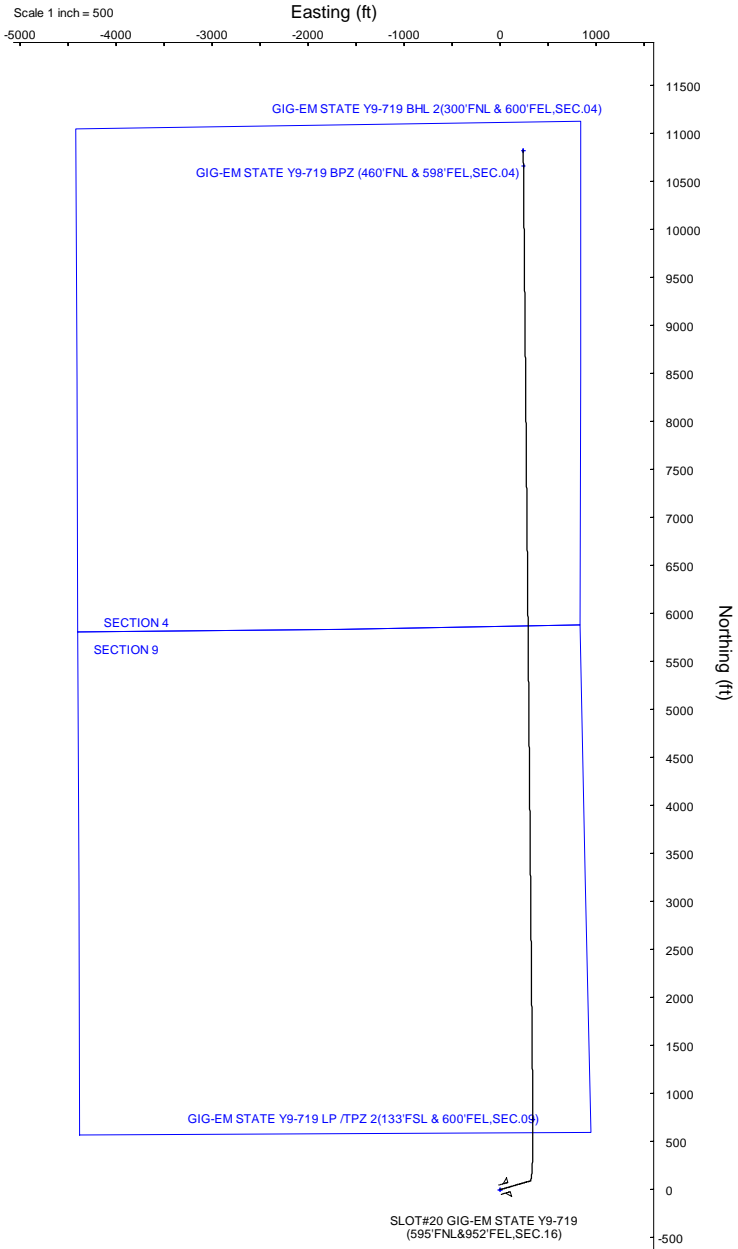
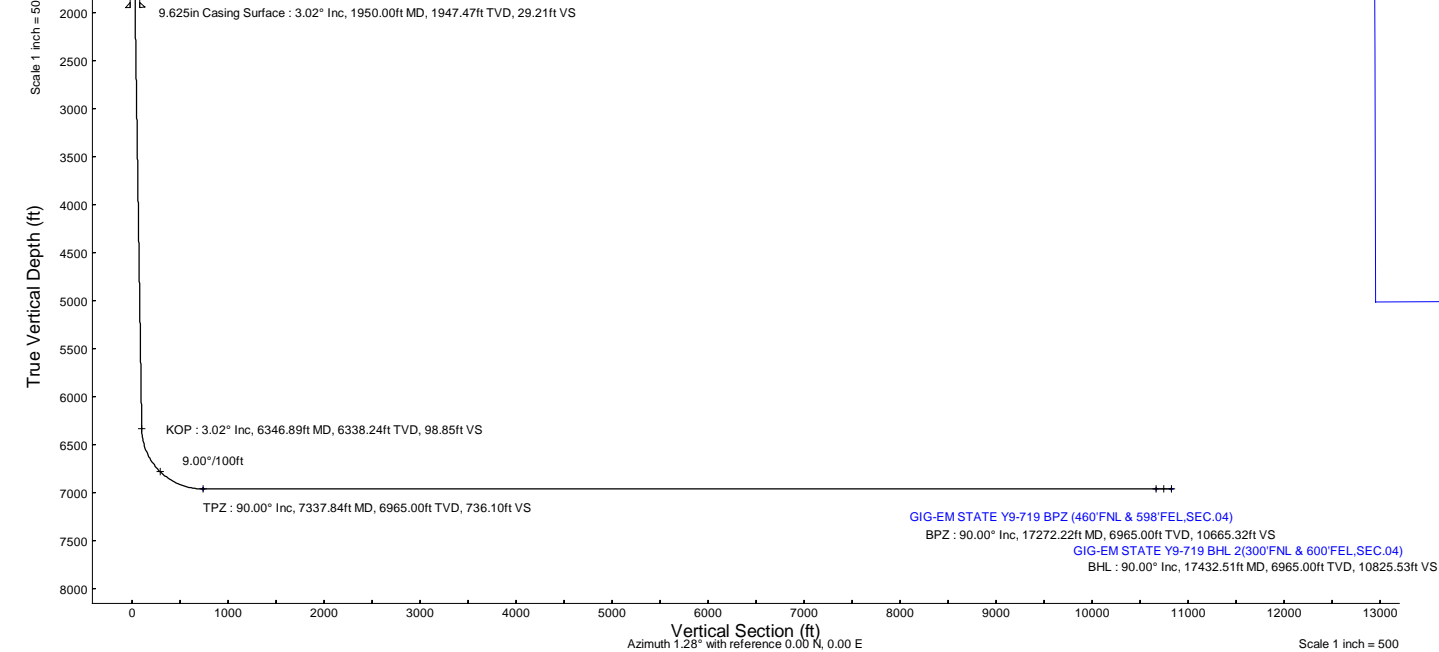
Plot reference wellpath is GIG-EM STATE Y9-719 (REV-B.0) PWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to Rig(30KB) (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to Rig(30KB) (RKB)	Scale: True distance
Rig(30KB) (RKB) to Mean Sea Level: 4973 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: SLOT#20 GIG-EM STATE Y9-719 (595°FNL&952°FEL,SEC.16)): 0 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: guenaler on 2022-05-03; Database: WA_Denver

Location Information						
Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.16-T02N-R64W			3261942.561	1296894.275	40°08'40.4520"N	104°33'46.8000"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#20 GIG-EM STATE Y9-719 (595°FNL&952°FEL,SEC.16)	-130.06	3527.00	3265469.403	1296764.216	40°08'38.7960"N	104°33'1.4040"W
Rig(30KB) (RKB) to Ground level (At Slot: SLOT#20 GIG-EM STATE Y9-719 (595°FNL&952°FEL,SEC.16))					4973ft	
Mean Sea Level to Ground level (At Slot: SLOT#20 GIG-EM STATE Y9-719 (595°FNL&952°FEL,SEC.16))					0ft	
Rig(30KB) (RKB) to Mean Sea Level					4973ft	

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	73.803	30.00	0.00	0.00	0.00	0.00
Build (XS)	181.15	3.023	73.803	181.08	1.11	3.83	2.00	1.20
KOP	6346.89	3.023	73.803	6338.24	91.81	316.09	0.00	98.85
TPZ	7337.84	90.000	359.434	6965.00	728.65	341.67	9.00	736.10
BPZ	17272.22	90.000	359.434	6965.00	10662.54	243.53	0.00	10665.32
BHL	17432.51	90.000	359.337	6965.00	10822.83	241.81	0.06	10825.53

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	-3.00	-1.89	-0.38	3265469.02	1296762.33	40°08'38.7774"N	104°33'1.4092"W
Rubicon State Y16-718 SECTION 9	N/A	-3.00	-1.89	-0.38	3265469.02	1296762.33	40°08'38.7774"N	104°33'1.4092"W
GIG-EM STATE Y9-719 BHL (300°FNL & 600°FEL,SEC.04)	N/A	6965.00	10821.73	241.54	3265710.94	1307585.48	40°10'25.7052"N	104°32'56.7996"W
GIG-EM STATE Y9-719 BHL 2(300°FNL & 600°FEL,SEC.04)	17432.51	6965.00	10822.83	241.81	3265711.21	1307586.57	40°10'25.7160"N	104°32'56.7960"W
GIG-EM STATE Y9-719 BPZ (460°FNL & 598°FEL,SEC.04)	17272.22	6965.00	10662.54	243.53	3265712.93	1307428.30	40°10'24.1320"N	104°32'56.7960"W
GIG-EM STATE Y9-719 LP /TPZ (133°FSL & 600°FEL,SEC.09)	N/A	6965.00	728.07	342.83	3265812.22	1297492.26	40°08'45.9541"N	104°32'56.8891"W
GIG-EM STATE Y9-719 LP /TPZ 2(133°FSL & 600°FEL,SEC.09)	7337.84	6965.00	728.65	341.67	3265811.06	1297492.84	40°08'45.9600"N	104°32'56.9040"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	Longitude
17432.51	90.000	359.337	6965.00	10822.83	241.81	3265711.21	1307586.57	40°10'25.7160"N	104°32'56.7960"W





Planned Wellpath Report

GIG-EM STATE Y9-719 (REV-B.0) PWP

Page 1 of 7



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-719
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-719 PWB
Slot	SLOT#20 GIG-EM STATE Y9-719 (595'FNL&952'FEL,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 2:39:15 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	-130.06	3527.00	3265469.40	1296764.22	40°08'38.7960"N	104°33'1.4040"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	4973.00ft
Horizontal Reference Pt	Slot	Rig(30'KB) (RKB) to Mean Sea Level	4973.00ft
Vertical Reference Pt	Rig(30'KB) (RKB)	Rig(30'KB) (RKB) to Ground Level at Slot (SLOT#20 GIG-EM STATE Y9-719 (595'FNL&952'FEL,SEC.16))	4973.00ft
MD Reference Pt	Rig(30'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	1.28°



Planned Wellpath Report  
GIG-EM STATE Y9-719 (REV-B.0) PWP  
Page 2 of 7



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-719
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-719 PWB
Slot	SLOT#20 GIG-EM STATE Y9-719 (595'FNL&952'FEL,SEC.16)		

WELLPATH DATA (181 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	73.803	0.00	0.00	0.00	0.00	40°08'38.7960"N	104°33'1.4040"W	0.00	
30.00	0.000	73.803	30.00	0.00	0.00	0.00	40°08'38.7960"N	104°33'1.4040"W	0.00	SHL
130.00†	2.000	73.803	129.98	0.52	0.49	1.68	40°08'38.8006"N	104°33'1.3824"W	2.00	
181.15	3.023	73.803	181.08	1.20	1.11	3.83	40°08'38.8066"N	104°33'1.3546"W	2.00	Build (XS)
230.00†	3.023	73.803	229.86	1.97	1.83	6.30	40°08'38.8134"N	104°33'1.3226"W	0.00	
330.00†	3.023	73.803	329.72	3.55	3.30	11.37	40°08'38.8274"N	104°33'1.2572"W	0.00	
430.00†	3.023	73.803	429.58	5.14	4.77	16.43	40°08'38.8414"N	104°33'1.1918"W	0.00	
530.00†	3.023	73.803	529.44	6.72	6.24	21.50	40°08'38.8554"N	104°33'1.1264"W	0.00	
630.00†	3.023	73.803	629.31	8.31	7.71	26.56	40°08'38.8694"N	104°33'1.0609"W	0.00	
730.00†	3.023	73.803	729.17	9.89	9.19	31.62	40°08'38.8834"N	104°33'0.9955"W	0.00	
830.00†	3.023	73.803	829.03	11.47	10.66	36.69	40°08'38.8974"N	104°33'0.9301"W	0.00	
930.00†	3.023	73.803	928.89	13.06	12.13	41.75	40°08'38.9114"N	104°33'0.8647"W	0.00	
1030.00†	3.023	73.803	1028.75	14.64	13.60	46.82	40°08'38.9254"N	104°33'0.7993"W	0.00	
1130.00†	3.023	73.803	1128.61	16.23	15.07	51.88	40°08'38.9394"N	104°33'0.7339"W	0.00	
1230.00†	3.023	73.803	1228.47	17.81	16.54	56.95	40°08'38.9534"N	104°33'0.6685"W	0.00	
1330.00†	3.023	73.803	1328.33	19.39	18.01	62.01	40°08'38.9674"N	104°33'0.6031"W	0.00	
1430.00†	3.023	73.803	1428.19	20.98	19.48	67.08	40°08'38.9814"N	104°33'0.5376"W	0.00	
1530.00†	3.023	73.803	1528.05	22.56	20.95	72.14	40°08'38.9954"N	104°33'0.4722"W	0.00	
1630.00†	3.023	73.803	1627.91	24.14	22.43	77.20	40°08'39.0094"N	104°33'0.4068"W	0.00	
1730.00†	3.023	73.803	1727.77	25.73	23.90	82.27	40°08'39.0234"N	104°33'0.3414"W	0.00	
1830.00†	3.023	73.803	1827.64	27.31	25.37	87.33	40°08'39.0374"N	104°33'0.2760"W	0.00	
1930.00†	3.023	73.803	1927.50	28.90	26.84	92.40	40°08'39.0514"N	104°33'0.2106"W	0.00	
2030.00†	3.023	73.803	2027.36	30.48	28.31	97.46	40°08'39.0654"N	104°33'0.1452"W	0.00	
2130.00†	3.023	73.803	2127.22	32.06	29.78	102.53	40°08'39.0794"N	104°33'0.0798"W	0.00	
2230.00†	3.023	73.803	2227.08	33.65	31.25	107.59	40°08'39.0934"N	104°33'0.0143"W	0.00	
2330.00†	3.023	73.803	2326.94	35.23	32.72	112.66	40°08'39.1074"N	104°32'59.9489"W	0.00	
2430.00†	3.023	73.803	2426.80	36.81	34.19	117.72	40°08'39.1214"N	104°32'59.8835"W	0.00	
2530.00†	3.023	73.803	2526.66	38.40	35.66	122.78	40°08'39.1354"N	104°32'59.8181"W	0.00	
2630.00†	3.023	73.803	2626.52	39.98	37.14	127.85	40°08'39.1494"N	104°32'59.7527"W	0.00	
2730.00†	3.023	73.803	2726.38	41.57	38.61	132.91	40°08'39.1634"N	104°32'59.6873"W	0.00	
2830.00†	3.023	73.803	2826.24	43.15	40.08	137.98	40°08'39.1774"N	104°32'59.6219"W	0.00	
2930.00†	3.023	73.803	2926.10	44.73	41.55	143.04	40°08'39.1914"N	104°32'59.5565"W	0.00	
3030.00†	3.023	73.803	3025.97	46.32	43.02	148.11	40°08'39.2054"N	104°32'59.4910"W	0.00	
3130.00†	3.023	73.803	3125.83	47.90	44.49	153.17	40°08'39.2194"N	104°32'59.4256"W	0.00	
3230.00†	3.023	73.803	3225.69	49.49	45.96	158.24	40°08'39.2334"N	104°32'59.3602"W	0.00	
3330.00†	3.023	73.803	3325.55	51.07	47.43	163.30	40°08'39.2474"N	104°32'59.2948"W	0.00	
3430.00†	3.023	73.803	3425.41	52.65	48.90	168.36	40°08'39.2614"N	104°32'59.2294"W	0.00	
3530.00†	3.023	73.803	3525.27	54.24	50.38	173.43	40°08'39.2754"N	104°32'59.1640"W	0.00	
3630.00†	3.023	73.803	3625.13	55.82	51.85	178.49	40°08'39.2894"N	104°32'59.0986"W	0.00	
3730.00†	3.023	73.803	3724.99	57.40	53.32	183.56	40°08'39.3034"N	104°32'59.0332"W	0.00	
3830.00†	3.023	73.803	3824.85	58.99	54.79	188.62	40°08'39.3174"N	104°32'58.9677"W	0.00	
3930.00†	3.023	73.803	3924.71	60.57	56.26	193.69	40°08'39.3314"N	104°32'58.9023"W	0.00	
4030.00†	3.023	73.803	4024.57	62.16	57.73	198.75	40°08'39.3454"N	104°32'58.8369"W	0.00	
4130.00†	3.023	73.803	4124.43	63.74	59.20	203.82	40°08'39.3594"N	104°32'58.7715"W	0.00	
4230.00†	3.023	73.803	4224.30	65.32	60.67	208.88	40°08'39.3734"N	104°32'58.7061"W	0.00	



Planned Wellpath Report  
GIG-EM STATE Y9-719 (REV-B.0) PWP  
Page 3 of 7



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 Y9-719 PWB
Slot	SLOT#20 GIG-EM STATE Y9-719 (595'FNL&952'FEL,SEC.16)		

WELLPATH DATA (181 stations) † = interpolated, ‡ = extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4330.00†	3.023	73.803	4324.16	66.91	62.14	213.94	40°08'39.3874"N	104°32'58.6407"W	0.00	
4430.00†	3.023	73.803	4424.02	68.49	63.61	219.01	40°08'39.4014"N	104°32'58.5753"W	0.00	
4530.00†	3.023	73.803	4523.88	70.07	65.09	224.07	40°08'39.4154"N	104°32'58.5099"W	0.00	
4630.00†	3.023	73.803	4623.74	71.66	66.56	229.14	40°08'39.4294"N	104°32'58.4444"W	0.00	
4730.00†	3.023	73.803	4723.60	73.24	68.03	234.20	40°08'39.4434"N	104°32'58.3790"W	0.00	
4830.00†	3.023	73.803	4823.46	74.83	69.50	239.27	40°08'39.4574"N	104°32'58.3136"W	0.00	
4930.00†	3.023	73.803	4923.32	76.41	70.97	244.33	40°08'39.4714"N	104°32'58.2482"W	0.00	
5030.00†	3.023	73.803	5023.18	77.99	72.44	249.39	40°08'39.4854"N	104°32'58.1828"W	0.00	
5130.00†	3.023	73.803	5123.04	79.58	73.91	254.46	40°08'39.4994"N	104°32'58.1174"W	0.00	
5230.00†	3.023	73.803	5222.90	81.16	75.38	259.52	40°08'39.5134"N	104°32'58.0520"W	0.00	
5330.00†	3.023	73.803	5322.76	82.74	76.85	264.59	40°08'39.5274"N	104°32'57.9866"W	0.00	
5430.00†	3.023	73.803	5422.63	84.33	78.32	269.65	40°08'39.5414"N	104°32'57.9211"W	0.00	
5530.00†	3.023	73.803	5522.49	85.91	79.80	274.72	40°08'39.5554"N	104°32'57.8557"W	0.00	
5630.00†	3.023	73.803	5622.35	87.50	81.27	279.78	40°08'39.5694"N	104°32'57.7903"W	0.00	
5730.00†	3.023	73.803	5722.21	89.08	82.74	284.85	40°08'39.5834"N	104°32'57.7249"W	0.00	
5830.00†	3.023	73.803	5822.07	90.66	84.21	289.91	40°08'39.5974"N	104°32'57.6595"W	0.00	
5930.00†	3.023	73.803	5921.93	92.25	85.68	294.97	40°08'39.6114"N	104°32'57.5941"W	0.00	
6030.00†	3.023	73.803	6021.79	93.83	87.15	300.04	40°08'39.6254"N	104°32'57.5287"W	0.00	
6130.00†	3.023	73.803	6121.65	95.42	88.62	305.10	40°08'39.6394"N	104°32'57.4632"W	0.00	
6230.00†	3.023	73.803	6221.51	97.00	90.09	310.17	40°08'39.6534"N	104°32'57.3978"W	0.00	
6330.00†	3.023	73.803	6321.37	98.58	91.56	315.23	40°08'39.6674"N	104°32'57.3324"W	0.00	
6346.89	3.023	73.803	6338.24	98.85	91.81	316.09	40°08'39.6698"N	104°32'57.3214"W	0.00	KOP
6430.00†	8.787	18.643	6420.92	105.58	98.45	320.23	40°08'39.7349"N	104°32'57.2672"W	9.00	
6530.00†	17.530	8.699	6518.21	127.85	120.62	324.96	40°08'39.9535"N	104°32'57.2032"W	9.00	
6630.00†	26.444	5.303	6610.85	165.07	157.75	329.30	40°08'40.3200"N	104°32'57.1421"W	9.00	
6730.00†	35.399	3.538	6696.55	216.33	208.94	333.15	40°08'40.8253"N	104°32'57.0855"W	9.00	
6830.00†	44.370	2.414	6773.21	280.36	272.91	336.42	40°08'41.4571"N	104°32'57.0346"W	9.00	
6930.00†	53.349	1.603	6838.93	355.58	348.10	339.02	40°08'42.1998"N	104°32'56.9907"W	9.00	
7030.00†	62.333	0.962	6892.10	440.15	432.65	340.89	40°08'43.0351"N	104°32'56.9550"W	9.00	
7130.00†	71.319	0.419	6931.42	531.99	524.48	341.98	40°08'43.9424"N	104°32'56.9282"W	9.00	
7230.00†	80.307	359.932	6955.90	628.82	621.33	342.27	40°08'44.8994"N	104°32'56.9111"W	9.00	
7330.00†	89.295	359.470	6964.95	728.27	720.81	341.75	40°08'45.8825"N	104°32'56.9041"W	9.00	
7337.84	90.000	359.434	6965.00 <sup>1</sup>	736.10	728.65	341.67	40°08'45.9600"N	104°32'56.9040"W	9.00	TPZ
7430.00†	90.000	359.434	6965.00	828.21	820.81	340.76	40°08'46.8707"N	104°32'56.9030"W	0.00	
7530.00†	90.000	359.434	6965.00	928.16	920.80	339.78	40°08'47.8589"N	104°32'56.9019"W	0.00	
7630.00†	90.000	359.434	6965.00	1028.11	1020.80	338.79	40°08'48.8471"N	104°32'56.9008"W	0.00	
7730.00†	90.000	359.434	6965.00	1128.06	1120.79	337.80	40°08'49.8353"N	104°32'56.8997"W	0.00	
7830.00†	90.000	359.434	6965.00	1228.01	1220.79	336.81	40°08'50.8236"N	104°32'56.8987"W	0.00	
7930.00†	90.000	359.434	6965.00	1327.95	1320.78	335.82	40°08'51.8118"N	104°32'56.8976"W	0.00	
8030.00†	90.000	359.434	6965.00	1427.90	1420.78	334.84	40°08'52.8000"N	104°32'56.8965"W	0.00	
8130.00†	90.000	359.434	6965.00	1527.85	1520.77	333.85	40°08'53.7882"N	104°32'56.8954"W	0.00	
8230.00†	90.000	359.434	6965.00	1627.80	1620.77	332.86	40°08'54.7764"N	104°32'56.8943"W	0.00	
8330.00†	90.000	359.434	6965.00	1727.75	1720.76	331.87	40°08'55.7646"N	104°32'56.8932"W	0.00	
8430.00†	90.000	359.434	6965.00	1827.70	1820.76	330.88	40°08'56.7528"N	104°32'56.8921"W	0.00	
8530.00†	90.000	359.434	6965.00	1927.64	1920.75	329.90	40°08'57.7410"N	104°32'56.8910"W	0.00	



Planned Wellpath Report  
GIG-EM STATE Y9-719 (REV-B.0) PWP  
Page 4 of 7



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-719
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-719 PWB
Slot	SLOT#20 GIG-EM STATE Y9-719 (595'FNL&952'FEL,SEC.16)		

WELLPATH DATA (181 stations) † = interpolated, ‡ = extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8630.00†	90.000	359.434	6965.00	2027.59	2020.75	328.91	40°08'58.7292"N	104°32'56.8900"W	0.00	
8730.00†	90.000	359.434	6965.00	2127.54	2120.74	327.92	40°08'59.7174"N	104°32'56.8889"W	0.00	
8830.00†	90.000	359.434	6965.00	2227.49	2220.74	326.93	40°09'0.7056"N	104°32'56.8878"W	0.00	
8930.00†	90.000	359.434	6965.00	2327.44	2320.73	325.94	40°09'1.6938"N	104°32'56.8867"W	0.00	
9030.00†	90.000	359.434	6965.00	2427.38	2420.73	324.96	40°09'2.6820"N	104°32'56.8856"W	0.00	
9130.00†	90.000	359.434	6965.00	2527.33	2520.72	323.97	40°09'3.6702"N	104°32'56.8845"W	0.00	
9230.00†	90.000	359.434	6965.00	2627.28	2620.72	322.98	40°09'4.6584"N	104°32'56.8834"W	0.00	
9330.00†	90.000	359.434	6965.00	2727.23	2720.71	321.99	40°09'5.6467"N	104°32'56.8823"W	0.00	
9430.00†	90.000	359.434	6965.00	2827.18	2820.71	321.01	40°09'6.6349"N	104°32'56.8813"W	0.00	
9530.00†	90.000	359.434	6965.00	2927.12	2920.70	320.02	40°09'7.6231"N	104°32'56.8802"W	0.00	
9630.00†	90.000	359.434	6965.00	3027.07	3020.70	319.03	40°09'8.6113"N	104°32'56.8791"W	0.00	
9730.00†	90.000	359.434	6965.00	3127.02	3120.70	318.04	40°09'9.5995"N	104°32'56.8780"W	0.00	
9830.00†	90.000	359.434	6965.00	3226.97	3220.69	317.05	40°09'10.5877"N	104°32'56.8769"W	0.00	
9930.00†	90.000	359.434	6965.00	3326.92	3320.69	316.07	40°09'11.5759"N	104°32'56.8758"W	0.00	
10030.00†	90.000	359.434	6965.00	3426.87	3420.68	315.08	40°09'12.5641"N	104°32'56.8747"W	0.00	
10130.00†	90.000	359.434	6965.00	3526.81	3520.68	314.09	40°09'13.5523"N	104°32'56.8737"W	0.00	
10230.00†	90.000	359.434	6965.00	3626.76	3620.67	313.10	40°09'14.5405"N	104°32'56.8726"W	0.00	
10330.00†	90.000	359.434	6965.00	3726.71	3720.67	312.11	40°09'15.5287"N	104°32'56.8715"W	0.00	
10430.00†	90.000	359.434	6965.00	3826.66	3820.66	311.13	40°09'16.5169"N	104°32'56.8704"W	0.00	
10530.00†	90.000	359.434	6965.00	3926.61	3920.66	310.14	40°09'17.5051"N	104°32'56.8693"W	0.00	
10630.00†	90.000	359.434	6965.00	4026.55	4020.65	309.15	40°09'18.4933"N	104°32'56.8682"W	0.00	
10730.00†	90.000	359.434	6965.00	4126.50	4120.65	308.16	40°09'19.4815"N	104°32'56.8671"W	0.00	
10830.00†	90.000	359.434	6965.00	4226.45	4220.64	307.17	40°09'20.4697"N	104°32'56.8660"W	0.00	
10930.00†	90.000	359.434	6965.00	4326.40	4320.64	306.19	40°09'21.4579"N	104°32'56.8650"W	0.00	
11030.00†	90.000	359.434	6965.00	4426.35	4420.63	305.20	40°09'22.4462"N	104°32'56.8639"W	0.00	
11130.00†	90.000	359.434	6965.00	4526.29	4520.63	304.21	40°09'23.4344"N	104°32'56.8628"W	0.00	
11230.00†	90.000	359.434	6965.00	4626.24	4620.62	303.22	40°09'24.4226"N	104°32'56.8617"W	0.00	
11330.00†	90.000	359.434	6965.00	4726.19	4720.62	302.24	40°09'25.4108"N	104°32'56.8606"W	0.00	
11430.00†	90.000	359.434	6965.00	4826.14	4820.61	301.25	40°09'26.3990"N	104°32'56.8595"W	0.00	
11530.00†	90.000	359.434	6965.00	4926.09	4920.61	300.26	40°09'27.3872"N	104°32'56.8584"W	0.00	
11630.00†	90.000	359.434	6965.00	5026.03	5020.60	299.27	40°09'28.3754"N	104°32'56.8573"W	0.00	
11730.00†	90.000	359.434	6965.00	5125.98	5120.60	298.28	40°09'29.3636"N	104°32'56.8563"W	0.00	
11830.00†	90.000	359.434	6965.00	5225.93	5220.59	297.30	40°09'30.3518"N	104°32'56.8552"W	0.00	
11930.00†	90.000	359.434	6965.00	5325.88	5320.59	296.31	40°09'31.3400"N	104°32'56.8541"W	0.00	
12030.00†	90.000	359.434	6965.00	5425.83	5420.58	295.32	40°09'32.3282"N	104°32'56.8530"W	0.00	
12130.00†	90.000	359.434	6965.00	5525.78	5520.58	294.33	40°09'33.3164"N	104°32'56.8519"W	0.00	
12230.00†	90.000	359.434	6965.00	5625.72	5620.57	293.34	40°09'34.3046"N	104°32'56.8508"W	0.00	
12330.00†	90.000	359.434	6965.00	5725.67	5720.57	292.36	40°09'35.2928"N	104°32'56.8497"W	0.00	
12430.00†	90.000	359.434	6965.00	5825.62	5820.56	291.37	40°09'36.2810"N	104°32'56.8487"W	0.00	
12530.00†	90.000	359.434	6965.00	5925.57	5920.56	290.38	40°09'37.2692"N	104°32'56.8476"W	0.00	
12630.00†	90.000	359.434	6965.00	6025.52	6020.55	289.39	40°09'38.2574"N	104°32'56.8465"W	0.00	
12730.00†	90.000	359.434	6965.00	6125.46	6120.55	288.40	40°09'39.2456"N	104°32'56.8454"W	0.00	
12830.00†	90.000	359.434	6965.00	6225.41	6220.54	287.42	40°09'40.2338"N	104°32'56.8443"W	0.00	
12930.00†	90.000	359.434	6965.00	6325.36	6320.54	286.43	40°09'41.2220"N	104°32'56.8432"W	0.00	
13030.00†	90.000	359.434	6965.00	6425.31	6420.53	285.44	40°09'42.2103"N	104°32'56.8421"W	0.00	





Planned Wellpath Report  
GIG-EM STATE Y9-719 (REV-B.0) PWP  
Page 5 of 7



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-719
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-719 PWB
Slot	SLOT#20 GIG-EM STATE Y9-719 (595'FNL&952'FEL,SEC.16)		

WELLPATH DATA (181 stations) † = interpolated, ‡ = extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
13130.00†	90.000	359.434	6965.00	6525.26	6520.53	284.45	40°09'43.1985"N	104°32'56.8410"W	0.00	
13230.00†	90.000	359.434	6965.00	6625.20	6620.52	283.47	40°09'44.1867"N	104°32'56.8400"W	0.00	
13330.00†	90.000	359.434	6965.00	6725.15	6720.52	282.48	40°09'45.1749"N	104°32'56.8389"W	0.00	
13430.00†	90.000	359.434	6965.00	6825.10	6820.51	281.49	40°09'46.1631"N	104°32'56.8378"W	0.00	
13530.00†	90.000	359.434	6965.00	6925.05	6920.51	280.50	40°09'47.1513"N	104°32'56.8367"W	0.00	
13630.00†	90.000	359.434	6965.00	7025.00	7020.50	279.51	40°09'48.1395"N	104°32'56.8356"W	0.00	
13730.00†	90.000	359.434	6965.00	7124.94	7120.50	278.53	40°09'49.1277"N	104°32'56.8345"W	0.00	
13830.00†	90.000	359.434	6965.00	7224.89	7220.50	277.54	40°09'50.1159"N	104°32'56.8334"W	0.00	
13930.00†	90.000	359.434	6965.00	7324.84	7320.49	276.55	40°09'51.1041"N	104°32'56.8323"W	0.00	
14030.00†	90.000	359.434	6965.00	7424.79	7420.49	275.56	40°09'52.0923"N	104°32'56.8313"W	0.00	
14130.00†	90.000	359.434	6965.00	7524.74	7520.48	274.57	40°09'53.0805"N	104°32'56.8302"W	0.00	
14230.00†	90.000	359.434	6965.00	7624.69	7620.48	273.59	40°09'54.0687"N	104°32'56.8291"W	0.00	
14330.00†	90.000	359.434	6965.00	7724.63	7720.47	272.60	40°09'55.0569"N	104°32'56.8280"W	0.00	
14430.00†	90.000	359.434	6965.00	7824.58	7820.47	271.61	40°09'56.0451"N	104°32'56.8269"W	0.00	
14530.00†	90.000	359.434	6965.00	7924.53	7920.46	270.62	40°09'57.0333"N	104°32'56.8258"W	0.00	
14630.00†	90.000	359.434	6965.00	8024.48	8020.46	269.63	40°09'58.0215"N	104°32'56.8247"W	0.00	
14730.00†	90.000	359.434	6965.00	8124.43	8120.45	268.65	40°09'59.0097"N	104°32'56.8236"W	0.00	
14830.00†	90.000	359.434	6965.00	8224.37	8220.45	267.66	40°09'59.9979"N	104°32'56.8226"W	0.00	
14930.00†	90.000	359.434	6965.00	8324.32	8320.44	266.67	40°10'0.9861"N	104°32'56.8215"W	0.00	
15030.00†	90.000	359.434	6965.00	8424.27	8420.44	265.68	40°10'1.9743"N	104°32'56.8204"W	0.00	
15130.00†	90.000	359.434	6965.00	8524.22	8520.43	264.70	40°10'2.9625"N	104°32'56.8193"W	0.00	
15230.00†	90.000	359.434	6965.00	8624.17	8620.43	263.71	40°10'3.9507"N	104°32'56.8182"W	0.00	
15330.00†	90.000	359.434	6965.00	8724.11	8720.42	262.72	40°10'4.9390"N	104°32'56.8171"W	0.00	
15430.00†	90.000	359.434	6965.00	8824.06	8820.42	261.73	40°10'5.9272"N	104°32'56.8160"W	0.00	
15530.00†	90.000	359.434	6965.00	8924.01	8920.41	260.74	40°10'6.9154"N	104°32'56.8149"W	0.00	
15630.00†	90.000	359.434	6965.00	9023.96	9020.41	259.76	40°10'7.9036"N	104°32'56.8139"W	0.00	
15730.00†	90.000	359.434	6965.00	9123.91	9120.40	258.77	40°10'8.8918"N	104°32'56.8128"W	0.00	
15830.00†	90.000	359.434	6965.00	9223.86	9220.40	257.78	40°10'9.8800"N	104°32'56.8117"W	0.00	
15930.00†	90.000	359.434	6965.00	9323.80	9320.39	256.79	40°10'10.8682"N	104°32'56.8106"W	0.00	
16030.00†	90.000	359.434	6965.00	9423.75	9420.39	255.80	40°10'11.8564"N	104°32'56.8095"W	0.00	
16130.00†	90.000	359.434	6965.00	9523.70	9520.38	254.82	40°10'12.8446"N	104°32'56.8084"W	0.00	
16230.00†	90.000	359.434	6965.00	9623.65	9620.38	253.83	40°10'13.8328"N	104°32'56.8073"W	0.00	
16330.00†	90.000	359.434	6965.00	9723.60	9720.37	252.84	40°10'14.8210"N	104°32'56.8062"W	0.00	
16430.00†	90.000	359.434	6965.00	9823.54	9820.37	251.85	40°10'15.8092"N	104°32'56.8052"W	0.00	
16530.00†	90.000	359.434	6965.00	9923.49	9920.36	250.86	40°10'16.7974"N	104°32'56.8041"W	0.00	
16630.00†	90.000	359.434	6965.00	10023.44	10020.36	249.88	40°10'17.7856"N	104°32'56.8030"W	0.00	
16730.00†	90.000	359.434	6965.00	10123.39	10120.35	248.89	40°10'18.7738"N	104°32'56.8019"W	0.00	
16830.00†	90.000	359.434	6965.00	10223.34	10220.35	247.90	40°10'19.7620"N	104°32'56.8008"W	0.00	
16930.00†	90.000	359.434	6965.00	10323.28	10320.34	246.91	40°10'20.7502"N	104°32'56.7997"W	0.00	
17030.00†	90.000	359.434	6965.00	10423.23	10420.34	245.93	40°10'21.7384"N	104°32'56.7986"W	0.00	
17130.00†	90.000	359.434	6965.00	10523.18	10520.33	244.94	40°10'22.7266"N	104°32'56.7975"W	0.00	
17230.00†	90.000	359.434	6965.00	10623.13	10620.33	243.95	40°10'23.7148"N	104°32'56.7965"W	0.00	
17272.22	90.000	359.434	6965.00‡	10665.32	10662.54	243.53	40°10'24.1320"N	104°32'56.7960"W	0.00	BPZ
17330.00†	90.000	359.399	6965.00	10723.08	10720.32	242.94	40°10'24.7030"N	104°32'56.7956"W	0.06	
17430.00†	90.000	359.339	6965.00	10823.02	10820.32	241.84	40°10'25.6912"N	104°32'56.7960"W	0.06	



Planned Wellpath Report

GIG-EM STATE Y9-719 (REV-B.0) PWP

Page 6 of 7



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-719
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-719 PWB
Slot	SLOT#20 GIG-EM STATE Y9-719 (595'FNL&952'FEL,SEC.16)		

WELLPATH DATA (181 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
17432.51	90.000	359.337	6965.00 <sup>3</sup>	10825.53	10822.83	241.81	40°10'25.7160"N	104°32'56.7960"W	0.06	BHL

HOLE & CASING SECTIONS - Ref Wellbore: GIG-EM STATE Y9-719 PWB    Ref Wellpath: GIG-EM STATE Y9-719 (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	1947.47	0.00	0.00	27.13	93.41	

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	-3.00	-1.89	-0.38	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	-3.00	-1.89	-0.38	3265469.02	1296762.33	40°08'38.7774"N	104°33'1.4092"W	polygon	
	2D Polygon: dimensions not calculated									
GIG-EM STATE Y9-719 BHL (300'FNL & 600'FEL,SEC.04)	N/A	6965.00	10821.73	241.54	3265710.94	1307585.48	40°10'25.7052"N	104°32'56.7996"W	point	
3) GIG-EM STATE Y9-719 BHL 2(300'FNL & 600'FEL,SEC.04)	17432.51	6965.00	10822.83	241.81	3265711.21	1307586.57	40°10'25.7160"N	104°32'56.7960"W	point	
2) GIG-EM STATE Y9-719 BPZ (460'FNL & 598'FEL,SEC.04)	17272.22	6965.00	10662.54	243.53	3265712.93	1307426.30	40°10'24.1320"N	104°32'56.7960"W	point	
GIG-EM STATE Y9-719 LP /TPZ (133'FSL & 600'FEL,SEC.09)	N/A	6965.00	728.07	342.83	3265812.22	1297492.26	40°08'45.9541"N	104°32'56.8891"W	point	
1) GIG-EM STATE Y9-719 LP /TPZ 2(133'FSL & 600'FEL,SEC.09)	7337.84	6965.00	728.65	341.67	3265811.06	1297492.84	40°08'45.9600"N	104°32'56.9040"W	point	

SURVEY PROGRAM - Ref Wellbore: GIG-EM STATE Y9-719 PWB    Ref Wellpath: GIG-EM STATE Y9-719 (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 Y9-719 PWB
1950.00	17485.94	OWSG MWD rev2 (MS+IFR1)		GIG-EM STATE Y9-719 PWB



Planned Wellpath Report

GIG-EM STATE Y9-719 (REV-B.0) PWP

Page 7 of 7



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-719
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-719 PWB
Slot	SLOT#20 GIG-EM STATE Y9-719 (595'FNL&952'FEL,SEC.16)		

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
30.00	0.000	73.803	30.00	SHL
181.15	3.023	73.803	181.08	Build (XS)
6346.89	3.023	73.803	6338.24	KOP
7337.84	90.000	359.434	6965.00	TPZ
17272.22	90.000	359.434	6965.00	BPZ
17432.51	90.000	359.337	6965.00	BHL





Closest Approach Clearance Summary Report

GIG-EM STATE Y9-719 (REV-B.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)

Page 1 of 4



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-719
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-719 PWB
Slot	SLOT#20 GIG-EM STATE Y9-719 (595'FNL&952'FEL,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 2:29:54 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	-130.06	3527.00	3265469.40	1296764.22	40°08'38.7960"N	104°33'1.4040"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	4973.00ft
Horizontal Reference Pt	Slot	Rig(30'KB) (RKB) to Mean Sea Level	4973.00ft
Vertical Reference Pt	Rig(30'KB) (RKB)	Rig(30'KB) (RKB) to Ground Level at Slot (SLOT#20 GIG-EM STATE Y9-719 (595'FNL&952'FEL,SEC.16))	4973.00ft
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					



Closest Approach Clearance Summary Report

GIG-EM STATE Y9-719 (REV-B.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)

Page 2 of 4



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-719
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-719 PWB
Slot	SLOT#20 GIG-EM STATE Y9-719 (595'FNL&952'FEL,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 Y9-719 PWB      Ref Wellpath: GIG-EM STATE Y9-719 (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	1947.45	0.00	0.00	26.96	93.73

SURVEY PROGRAM - Ref Wellbore: GIG-EM STATE Y9-719 PWB      Ref Wellpath: GIG-EM STATE Y9-719 (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 Y9-719 PWB
1950.00	17485.94	OWSG MWD rev2 (MS+IFR1)		GIG-EM STATE Y9-719 PWB



Closest Approach Clearance Summary Report

GIG-EM STATE Y9-719 (REV-B.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)

Page 3 of 4



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-719
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-719 PWB
Slot	SLOT#20 GIG-EM STATE Y9-719 (595'FNL&952'FEL,SEC.16)		

CALCULATION RANGE & CUTOFF		
From: 30.00ft MD	To: 17433.15ft 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 01-04)	HSR-Guttersen 01-04	Original Drilling	Original Drilling\Original Drilling - As Drilled	Drilling	17091.12	310.05	17091.12	17094.51	1.94	17094.51	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	11367.21	577.19	16130.00	17433.15	2.31	17433.15	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	30.00	22.37	17330.00	17433.15	3.09	17433.15	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	1769.26	118.84	7065.64	7065.64	3.40	7065.64	PASS
Y Section 09	(Perkins USX Y09-23)	Perkins USX Y09-23	Original Drilling	Original Drilling\Original Drilling - As Drilled	Drilling	8392.98	697.85	8392.98	7985.02	5.87	8830.00	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	30.00	44.73	17330.00	17433.15	6.17	17433.15	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	10355.50	628.79	10355.50	10989.47	6.29	10989.47	PASS
Y Section 04	(HSR-Guttersen 02-04)	HSR-Guttersen 02-04	Original Drilling	Original Drilling\Original Drilling - As Drilled	Drilling	17099.11	1415.80	17099.11	17184.11	8.89	17184.11	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	30.00	67.10	17430.00	17433.15	9.25	17433.15	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	1351.75	133.62	6930.00	2023.17	9.38	7030.00	PASS
Y Section 04	(HSR-Guttersen 07-04)	HSR-Guttersen 07-04	Original Drilling	Original Drilling\Original Drilling - As Drilled	Drilling	15866.33	1568.65	15866.33	15987.92	10.99	15987.92	PASS
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	31.26	1755.74	17330.00	17433.15	12.39	17433.15	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	619.54	145.18	6830.00	2020.99	14.28	6930.00	PASS
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	31.25	1778.10	17430.00	17433.15	15.44	17433.15	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	180.18	157.95	180.18	2024.53	15.97	7030.00	PASS
Y Section 04	(HSR-Guttersen 03-04)	HSR-Guttersen 03-04	Original Drilling	Original Drilling\Original Drilling - As Drilled	Drilling	17020.76	2856.28	17020.76	17385.70	17.89	17385.70	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	31.25	1800.47	17330.00	17433.15	18.55	17433.15	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	12833.94	4919.46	17130.00	12755.94	22.38	17430.00	PASS
Y Section 04	(Melvin Y04-04)	Melvin Y04-04	Original Drilling	Original Drilling\Original Drilling - As Drilled	Drilling	16816.43	3672.13	16816.43	17427.81	23.15	17427.81	PASS
Y Section 09	(Perkins 34-09)	Perkins 34-09	Wellbore #1	Wellbore #1\Wellbore #1 - As Drilled	Drilling	7810.72	1299.05	7810.72	7936.05	23.40	7936.05	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	30.00	4617.28	30.00	6930.00	24.82	6930.00	PASS
Y Section 04	(HSR-Guttersen 05-04)	HSR-Guttersen 05-04	Original Drilling	Original Drilling\Original Drilling - As Drilled	Drilling	15656.67	3966.36	15656.67	16437.37	27.50	16437.37	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	30.00	842.83	30.00	6543.71	30.53	6543.71	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	12275.83	5043.30	12275.83	14299.88	43.66	14299.88	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	30.64	1757.12	30.64	6999.81	54.15	7430.00	PASS



Closest Approach Clearance Summary Report

GIG-EM STATE Y9-719 (REV-B.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)

Page 4 of 4



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GIG-EM STATE Y9-719
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.16-T02N-R64W	Wellbore	GIG-EM STATE Y9-719 PWB
Slot	SLOT#20 GIG-EM STATE Y9-719 (595'FNL&952'FEL,SEC.16)		

CALCULATION RANGE & CUTOFF		
From: 30.00ft MD	To: 17433.15ft 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#05 HULLABALOO Y21-763(445'FNL&2580'FWL,SEC.16)	HULLABALOO Y21-763	HULLABALOO Y21-763 AWB	HULLABALOO Y21-763 AWP	Drilling	30.63	1793.33	30.63	8081.35	61.07	8081.35	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	6877.14	3314.45	6877.14	7969.39	70.72	7969.39	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	38.86	3453.85	6830.00	8804.69	77.46	8804.69	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	38.81	3490.15	38.81	9544.99	84.13	9544.99	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	39.21	3529.42	39.21	9992.66	88.69	9992.66	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	30.00	3929.88	30.00	7130.00	111.03	7130.00	PASS