

NOBLE ENERGY, INC



Location: COLORADO Slot: SLOT#16 BISHOP A18-715 (860'FNL & 462'FEL,SEC.07)
 Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: BISHOP A18-715
 Facility: SEC.07-T06N-R64W Wellbore: BISHOP A18-715 PWB

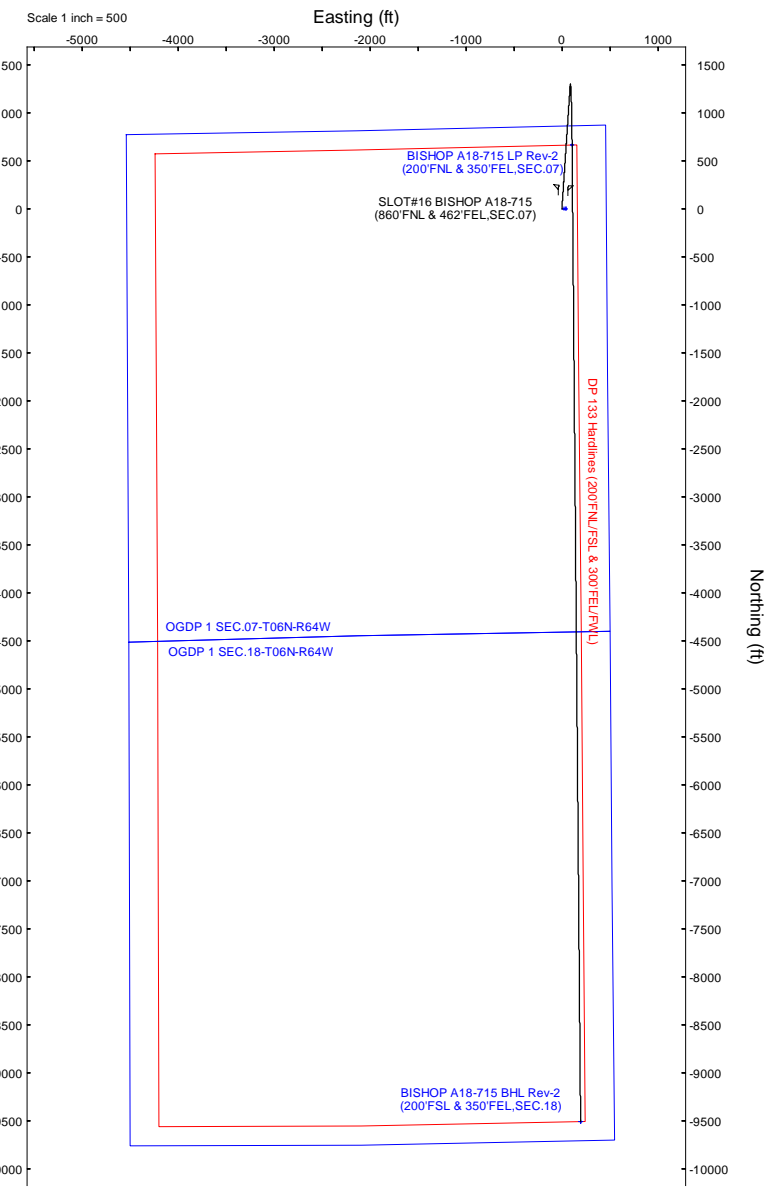
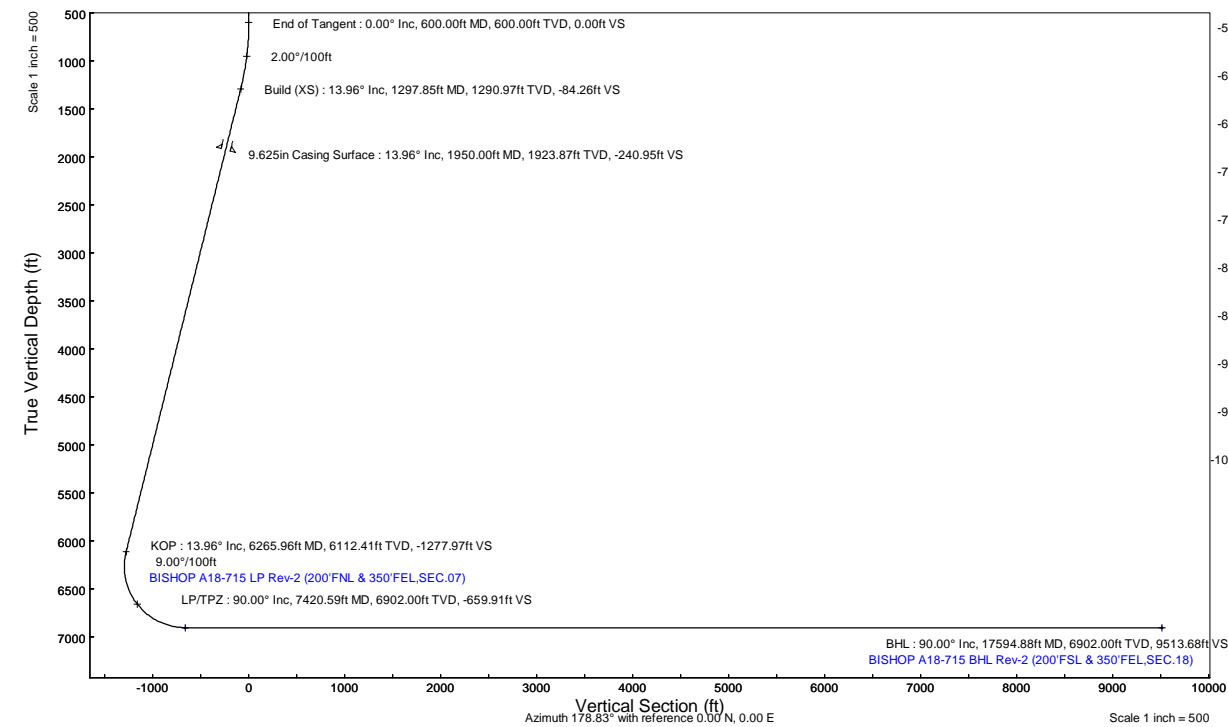
Plot reference wellpath is BISHOP A18-715 (REV-C.0) PWP
 Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
 True vertical depths are referenced to RIG (4741'GL+30'KB@4771'RKB) (RKB)
 North Reference: Grid north
 Reference wellpath measured depths are referenced to RIG (4741'GL+30'KB@4771'RKB) (RKB)
 Scale: True distance
 RIG (4741'GL+30'KB@4771'RKB) (RKB) to Mean Sea Level: 4771 feet
 Coordinates are in feet referenced to Slot
 Mean Sea Level to Ground level (At Slot: SLOT#16 BISHOP A18-715 (860'FNL & 462'FEL,SEC.07)): 0 feet
 Depths are in feet
 Offset wellpath MDs are referenced to each path's default MD datum
 Created by: guenaler on 2023-10-06; Database: WA_Denver

Location Information							
Facility Name				Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.07-T06N-R64W				3254380.716	1428262.611	40°30'19.3680"N	104°35'6.7200"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
SLOT#16 BISHOP A18-715 (860'FNL & 462'FEL,SEC.07)	0.33	-38.66	3254342.058	1428262.941	40°30'19.3752"N	104°35'7.2204"W	
RIG (4741'GL+30'KB@4771'RKB) (RKB) to Ground level (At Slot: SLOT#16 BISHOP A18-715 (860'FNL & 462'FEL,SEC.07))							4771ft
Mean Sea Level to Ground level (At Slot: SLOT#16 BISHOP A18-715 (860'FNL & 462'FEL,SEC.07))							0ft
RIG (4741'GL+30'KB@4771'RKB) (RKB) to Mean Sea Level							4771ft

Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local E (ft)	Local N (ft)	DLS (°/100ft)	VS (ft)
SHL	30.00	0.000	3.831	30.00	0.00	0.00	0.00	0.00
End of Tangent	600.00	0.000	3.831	600.00	0.00	0.00	0.00	0.00
Build (XS)	1297.85	13.957	3.831	1290.97	84.39	5.65	2.00	-84.26
KOP	6265.96	13.957	3.831	6112.41	1279.99	85.72	0.00	-1277.97
LP/TPZ	7420.59	90.000	179.502	6902.00	662.21	105.90	9.00	-659.91
BHL	17594.88	90.000	179.502	6902.00	-9511.70	194.27	0.00	9513.68

Targets								
Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
OGDP 1 SEC.07-T06N-R64W	N/A	-1.00	-0.33	38.66	3254380.72	1428262.61	40°30'19.3680"N	104°35'6.7200"W
OGDP 1 SEC.18-T06N-R64W	N/A	-1.00	-0.33	38.66	3254380.72	1428262.61	40°30'19.3680"N	104°35'6.7200"W
BISHOP A18-715 BHL Rev-2 (200'FSL & 350'FEL,SEC.18)	17594.88	6902.00	-9511.70	194.27	3254536.32	1418751.58	40°28'45.3707"N	104°35'5.9761"W
BISHOP A18-715 LP Rev-2 (200'FNL & 350'FEL,SEC.07)	7420.59	6902.00	662.21	105.90	3254447.96	1428925.13	40°30'25.9076"N	104°35'5.7611"W
BISHOP A18-715 BHL Rev-1 (200'FSL & 350'FEL,SEC.18)	N/A	6951.00	-9511.70	194.27	3254536.32	1418751.58	40°28'45.3707"N	104°35'5.9761"W
BISHOP A18-715 LP Rev-1 (200'FNL & 350'FEL,SEC.07)	N/A	6951.00	662.21	105.90	3254447.96	1428925.13	40°30'25.9076"N	104°35'5.7611"W
DP 133 Hardlines (200'FNL/FSL & 300'FEL/FWL)	N/A	7000.00	-0.13	22.53	3254364.58	1428262.81	40°30'19.3716"N	104°35'6.9288"W

Survey Program					
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
30.00	17698.92	OWSG MWD rev2	OWSG MWD rev2 (MS+IFR1)		BISHOP A18-715 PWB



BGM (1900.0 to 2024.0) Dip: 66.68° Field: 51683.3 nT
 Magnetic North is 7.38 degrees East of True North (at 10/4/2023)
 Grid North is 0.59 degrees East of True North
 To correct azimuth from True to Grid subtract 0.59 degrees
 To correct azimuth from Magnetic to Grid add 0.79 degrees



Planned Wellpath Report

BISHOP A18-715 (REV-C.0) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Well	BISHOP A18-715
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.07-T06N-R64W	Wellbore	BISHOP A18-715 PWB
Slot	SLOT#16 BISHOP A18-715 (860'FNL & 462'FEL,SEC.07)		

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	0.999967	Report Generated	10/6/2023 at 1:26:53 PM
Convergence at slot	0.59° 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	0.33	-38.66	3254342.06	1428262.94	40.5053820°	-104.5853390°
Facility Reference Pt			3254380.72	1428262.61	40.5053800°	-104.5852000°
Field Reference Pt			3000000.00	4454105.15	48.7761986°	-105.5000000°

WELLPATH DATUM

Calculation method	Minimum curvature	RIG (4741'GL+30'KB@4771'RKB) (RKB) to Facility Vertical Datum	4771.00ft
Horizontal Reference Pt	Slot	RIG (4741'GL+30'KB@4771'RKB) (RKB) to Mean Sea Level	4771.00ft
Vertical Reference Pt	RIG (4741'GL+30'KB@4771'RKB) (RKB)	RIG (4741'GL+30'KB@4771'RKB) (RKB) to Ground Level at Slot (SLOT#16 BISHOP A18-715 (860'FNL & 462'FEL,SEC.07))	4771.00ft
MD Reference Pt	RIG (4741'GL+30'KB@4771'RKB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	178.83°



Planned Wellpath Report

BISHOP A18-715 (REV-C.0) PWP

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Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.07-T06N-R64W	Wellbore	BISHOP A18-715 PWB
Slot	SLOT#16 BISHOP A18-715 (860'FNL & 462'FEL,SEC.07)		

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	3.831	0.00	0.00	0.00	0.00	40.5053820	-104.5853390	0.00	
30.00	0.000	3.831	30.00	0.00	0.00	0.00	40.5053820	-104.5853390	0.00	SHL
130.00†	0.000	3.831	130.00	0.00	0.00	0.00	40.5053820	-104.5853390	0.00	
230.00†	0.000	3.831	230.00	0.00	0.00	0.00	40.5053820	-104.5853390	0.00	
330.00†	0.000	3.831	330.00	0.00	0.00	0.00	40.5053820	-104.5853390	0.00	
430.00†	0.000	3.831	430.00	0.00	0.00	0.00	40.5053820	-104.5853390	0.00	
530.00†	0.000	3.831	530.00	0.00	0.00	0.00	40.5053820	-104.5853390	0.00	
600.00	0.000	3.831	600.00	0.00	0.00	0.00	40.5053820	-104.5853390	0.00	End of Tangent
630.00†	0.600	3.831	630.00	-0.16	0.16	0.01	40.5053824	-104.5853390	2.00	
730.00†	2.600	3.831	729.96	-2.94	2.94	0.20	40.5053901	-104.5853382	2.00	
830.00†	4.600	3.831	829.75	-9.19	9.21	0.62	40.5054073	-104.5853364	2.00	
930.00†	6.600	3.831	929.27	-18.91	18.94	1.27	40.5054340	-104.5853337	2.00	
1030.00†	8.600	3.831	1028.39	-32.09	32.14	2.15	40.5054701	-104.5853301	2.00	
1130.00†	10.600	3.831	1126.98	-48.70	48.78	3.27	40.5055158	-104.5853254	2.00	
1230.00†	12.600	3.831	1224.93	-68.73	68.84	4.61	40.5055708	-104.5853199	2.00	
1297.85	13.957	3.831	1290.97	-84.26	84.39	5.65	40.5056135	-104.5853155	2.00	Build (XS)
1330.00†	13.957	3.831	1322.17	-91.98	92.13	6.17	40.5056347	-104.5853134	0.00	
1430.00†	13.957	3.831	1419.22	-116.01	116.19	7.78	40.5057007	-104.5853067	0.00	
1530.00†	13.957	3.831	1516.27	-140.04	140.26	9.39	40.5057667	-104.5853000	0.00	
1630.00†	13.957	3.831	1613.31	-164.06	164.32	11.00	40.5058327	-104.5852933	0.00	
1730.00†	13.957	3.831	1710.36	-188.09	188.39	12.62	40.5058987	-104.5852866	0.00	
1830.00†	13.957	3.831	1807.41	-212.12	212.45	14.23	40.5059647	-104.5852800	0.00	
1930.00†	13.957	3.831	1904.46	-236.15	236.52	15.84	40.5060307	-104.5852733	0.00	
2030.00†	13.957	3.831	2001.50	-260.17	260.58	17.45	40.5060967	-104.5852666	0.00	
2130.00†	13.957	3.831	2098.55	-284.20	284.65	19.06	40.5061627	-104.5852599	0.00	
2230.00†	13.957	3.831	2195.60	-308.23	308.71	20.67	40.5062287	-104.5852532	0.00	
2330.00†	13.957	3.831	2292.65	-332.26	332.78	22.29	40.5062948	-104.5852465	0.00	
2430.00†	13.957	3.831	2389.69	-356.28	356.85	23.90	40.5063608	-104.5852398	0.00	
2530.00†	13.957	3.831	2486.74	-380.31	380.91	25.51	40.5064268	-104.5852331	0.00	
2630.00†	13.957	3.831	2583.79	-404.34	404.98	27.12	40.5064928	-104.5852265	0.00	
2730.00†	13.957	3.831	2680.84	-428.37	429.04	28.73	40.5065588	-104.5852198	0.00	
2830.00†	13.957	3.831	2777.89	-452.39	453.11	30.35	40.5066248	-104.5852131	0.00	
2930.00†	13.957	3.831	2874.93	-476.42	477.17	31.96	40.5066908	-104.5852064	0.00	
3030.00†	13.957	3.831	2971.98	-500.45	501.24	33.57	40.5067568	-104.5851997	0.00	
3130.00†	13.957	3.831	3069.03	-524.48	525.30	35.18	40.5068228	-104.5851930	0.00	
3230.00†	13.957	3.831	3166.08	-548.50	549.37	36.79	40.5068888	-104.5851863	0.00	
3330.00†	13.957	3.831	3263.12	-572.53	573.43	38.40	40.5069548	-104.5851796	0.00	
3430.00†	13.957	3.831	3360.17	-596.56	597.50	40.02	40.5070208	-104.5851729	0.00	
3530.00†	13.957	3.831	3457.22	-620.59	621.57	41.63	40.5070868	-104.5851663	0.00	
3630.00†	13.957	3.831	3554.27	-644.61	645.63	43.24	40.5071528	-104.5851596	0.00	
3730.00†	13.957	3.831	3651.31	-668.64	669.70	44.85	40.5072188	-104.5851529	0.00	
3830.00†	13.957	3.831	3748.36	-692.67	693.76	46.46	40.5072849	-104.5851462	0.00	
3930.00†	13.957	3.831	3845.41	-716.70	717.83	48.07	40.5073509	-104.5851395	0.00	
4030.00†	13.957	3.831	3942.46	-740.72	741.89	49.69	40.5074169	-104.5851328	0.00	
4130.00†	13.957	3.831	4039.51	-764.75	765.96	51.30	40.5074829	-104.5851261	0.00	

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Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.07-T06N-R64W	Wellbore	BISHOP A18-715 PWB
Slot	SLOT#16 BISHOP A18-715 (860'FNL & 462'FEL,SEC.07)		

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†	13.957	3.831	4136.55	-788.78	790.02	52.91	40.5075489	-104.5851194	0.00	
4330.00†	13.957	3.831	4233.60	-812.81	814.09	54.52	40.5076149	-104.5851128	0.00	
4430.00†	13.957	3.831	4330.65	-836.83	838.16	56.13	40.5076809	-104.5851061	0.00	
4530.00†	13.957	3.831	4427.70	-860.86	862.22	57.74	40.5077469	-104.5850994	0.00	
4630.00†	13.957	3.831	4524.74	-884.89	886.29	59.36	40.5078129	-104.5850927	0.00	
4730.00†	13.957	3.831	4621.79	-908.92	910.35	60.97	40.5078789	-104.5850860	0.00	
4830.00†	13.957	3.831	4718.84	-932.94	934.42	62.58	40.5079449	-104.5850793	0.00	
4930.00†	13.957	3.831	4815.89	-956.97	958.48	64.19	40.5080109	-104.5850726	0.00	
5030.00†	13.957	3.831	4912.93	-981.00	982.55	65.80	40.5080769	-104.5850659	0.00	
5130.00†	13.957	3.831	5009.98	-1005.03	1006.61	67.41	40.5081429	-104.5850592	0.00	
5230.00†	13.957	3.831	5107.03	-1029.05	1030.68	69.03	40.5082090	-104.5850526	0.00	
5330.00†	13.957	3.831	5204.08	-1053.08	1054.74	70.64	40.5082750	-104.5850459	0.00	
5430.00†	13.957	3.831	5301.13	-1077.11	1078.81	72.25	40.5083410	-104.5850392	0.00	
5530.00†	13.957	3.831	5398.17	-1101.14	1102.88	73.86	40.5084070	-104.5850325	0.00	
5630.00†	13.957	3.831	5495.22	-1125.16	1126.94	75.47	40.5084730	-104.5850258	0.00	
5730.00†	13.957	3.831	5592.27	-1149.19	1151.01	77.08	40.5085390	-104.5850191	0.00	
5830.00†	13.957	3.831	5689.32	-1173.22	1175.07	78.70	40.5086050	-104.5850124	0.00	
5930.00†	13.957	3.831	5786.36	-1197.25	1199.14	80.31	40.5086710	-104.5850057	0.00	
6030.00†	13.957	3.831	5883.41	-1221.28	1223.20	81.92	40.5087370	-104.5849990	0.00	
6130.00†	13.957	3.831	5980.46	-1245.30	1247.27	83.53	40.5088030	-104.5849924	0.00	
6230.00†	13.957	3.831	6077.51	-1269.33	1271.33	85.14	40.5088690	-104.5849857	0.00	
6265.96	13.957	3.831	6112.41	-1277.97	1279.99	85.72	40.5088928	-104.5849833	0.00	KOP
6330.00†	8.223	6.961	6175.22	-1290.21	1292.25	86.79	40.5089264	-104.5849790	9.00	
6430.00†	1.368	127.743	6274.90	-1296.55	1298.63	88.61	40.5089438	-104.5849722	9.00	
6530.00†	9.905	173.335	6374.35	-1287.22	1289.34	90.56	40.5089183	-104.5849655	9.00	
6630.00†	18.876	176.357	6471.11	-1262.45	1264.60	92.59	40.5088503	-104.5849592	9.00	
6730.00†	27.866	177.469	6562.81	-1222.84	1225.03	94.65	40.5087417	-104.5849532	9.00	
6830.00†	36.860	178.069	6647.19	-1169.38	1171.60	96.70	40.5085949	-104.5849478	9.00	
6930.00†	45.857	178.459	6722.17	-1103.37	1105.62	98.68	40.5084138	-104.5849432	9.00	
7030.00†	54.854	178.746	6785.91	-1026.45	1028.72	100.54	40.5082027	-104.5849393	9.00	
7130.00†	63.852	178.975	6836.83	-940.51	942.79	102.24	40.5079668	-104.5849364	9.00	
7230.00†	72.850	179.171	6873.69	-847.66	849.95	103.74	40.5077119	-104.5849344	9.00	
7330.00†	81.848	179.348	6895.57	-750.19	752.49	105.00	40.5074444	-104.5849335	9.00	
7420.59	90.000	179.502	6902.00†	-659.91	662.21	105.90	40.5071966	-104.5849336	9.00	LP/TPZ
7430.00†	90.000	179.502	6902.00	-650.50	652.80	105.98	40.5071707	-104.5849337	0.00	
7530.00†	90.000	179.502	6902.00	-550.50	552.80	106.85	40.5068962	-104.5849343	0.00	
7630.00†	90.000	179.502	6902.00	-450.51	452.81	107.72	40.5066218	-104.5849349	0.00	
7730.00†	90.000	179.502	6902.00	-350.52	352.81	108.59	40.5063473	-104.5849354	0.00	
7830.00†	90.000	179.502	6902.00	-250.52	252.81	109.46	40.5060728	-104.5849360	0.00	
7930.00†	90.000	179.502	6902.00	-150.53	152.82	110.33	40.5057983	-104.5849366	0.00	
8030.00†	90.000	179.502	6902.00	-50.54	52.82	111.19	40.5055238	-104.5849372	0.00	
8130.00†	90.000	179.502	6902.00	49.45	-47.18	112.06	40.5052493	-104.5849378	0.00	
8230.00†	90.000	179.502	6902.00	149.45	-147.17	112.93	40.5049749	-104.5849384	0.00	
8330.00†	90.000	179.502	6902.00	249.44	-247.17	113.80	40.5047004	-104.5849390	0.00	
8430.00†	90.000	179.502	6902.00	349.43	-347.16	114.67	40.5044259	-104.5849396	0.00	



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BISHOP A18-715 (REV-C.0) PWP

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Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.07-T06N-R64W	Wellbore	BISHOP A18-715 PWB
Slot	SLOT#16 BISHOP A18-715 (860'FNL & 462'FEL,SEC.07)		

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MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8530.00†	90.000	179.502	6902.00	449.43	-447.16	115.54	40.5041514	-104.5849401	0.00	
8630.00†	90.000	179.502	6902.00	549.42	-547.16	116.41	40.5038769	-104.5849407	0.00	
8730.00†	90.000	179.502	6902.00	649.41	-647.15	117.27	40.5036024	-104.5849413	0.00	
8830.00†	90.000	179.502	6902.00	749.41	-747.15	118.14	40.5033280	-104.5849419	0.00	
8930.00†	90.000	179.502	6902.00	849.40	-847.15	119.01	40.5030535	-104.5849425	0.00	
9030.00†	90.000	179.502	6902.00	949.39	-947.14	119.88	40.5027790	-104.5849431	0.00	
9130.00†	90.000	179.502	6902.00	1049.39	-1047.14	120.75	40.5025045	-104.5849437	0.00	
9230.00†	90.000	179.502	6902.00	1149.38	-1147.13	121.62	40.5022300	-104.5849443	0.00	
9330.00†	90.000	179.502	6902.00	1249.37	-1247.13	122.49	40.5019555	-104.5849448	0.00	
9430.00†	90.000	179.502	6902.00	1349.36	-1347.13	123.35	40.5016810	-104.5849454	0.00	
9530.00†	90.000	179.502	6902.00	1449.36	-1447.12	124.22	40.5014066	-104.5849460	0.00	
9630.00†	90.000	179.502	6902.00	1549.35	-1547.12	125.09	40.5011321	-104.5849466	0.00	
9730.00†	90.000	179.502	6902.00	1649.34	-1647.12	125.96	40.5008576	-104.5849472	0.00	
9830.00†	90.000	179.502	6902.00	1749.34	-1747.11	126.83	40.5005831	-104.5849478	0.00	
9930.00†	90.000	179.502	6902.00	1849.33	-1847.11	127.70	40.5003086	-104.5849484	0.00	
10030.00†	90.000	179.502	6902.00	1949.32	-1947.10	128.57	40.5000341	-104.5849490	0.00	
10130.00†	90.000	179.502	6902.00	2049.32	-2047.10	129.43	40.4997596	-104.5849495	0.00	
10230.00†	90.000	179.502	6902.00	2149.31	-2147.10	130.30	40.4994852	-104.5849501	0.00	
10330.00†	90.000	179.502	6902.00	2249.30	-2247.09	131.17	40.4992107	-104.5849507	0.00	
10430.00†	90.000	179.502	6902.00	2349.30	-2347.09	132.04	40.4989362	-104.5849513	0.00	
10530.00†	90.000	179.502	6902.00	2449.29	-2447.09	132.91	40.4986617	-104.5849519	0.00	
10630.00†	90.000	179.502	6902.00	2549.28	-2547.08	133.78	40.4983872	-104.5849525	0.00	
10730.00†	90.000	179.502	6902.00	2649.28	-2647.08	134.65	40.4981127	-104.5849531	0.00	
10830.00†	90.000	179.502	6902.00	2749.27	-2747.07	135.51	40.4978383	-104.5849537	0.00	
10930.00†	90.000	179.502	6902.00	2849.26	-2847.07	136.38	40.4975638	-104.5849542	0.00	
11030.00†	90.000	179.502	6902.00	2949.25	-2947.07	137.25	40.4972893	-104.5849548	0.00	
11130.00†	90.000	179.502	6902.00	3049.25	-3047.06	138.12	40.4970148	-104.5849554	0.00	
11230.00†	90.000	179.502	6902.00	3149.24	-3147.06	138.99	40.4967403	-104.5849560	0.00	
11330.00†	90.000	179.502	6902.00	3249.23	-3247.06	139.86	40.4964658	-104.5849566	0.00	
11430.00†	90.000	179.502	6902.00	3349.23	-3347.05	140.73	40.4961913	-104.5849572	0.00	
11530.00†	90.000	179.502	6902.00	3449.22	-3447.05	141.59	40.4959169	-104.5849578	0.00	
11630.00†	90.000	179.502	6902.00	3549.21	-3547.04	142.46	40.4956424	-104.5849583	0.00	
11730.00†	90.000	179.502	6902.00	3649.21	-3647.04	143.33	40.4953679	-104.5849589	0.00	
11830.00†	90.000	179.502	6902.00	3749.20	-3747.04	144.20	40.4950934	-104.5849595	0.00	
11930.00†	90.000	179.502	6902.00	3849.19	-3847.03	145.07	40.4948189	-104.5849601	0.00	
12030.00†	90.000	179.502	6902.00	3949.19	-3947.03	145.94	40.4945444	-104.5849607	0.00	
12130.00†	90.000	179.502	6902.00	4049.18	-4047.03	146.81	40.4942699	-104.5849613	0.00	
12230.00†	90.000	179.502	6902.00	4149.17	-4147.02	147.67	40.4939955	-104.5849619	0.00	
12330.00†	90.000	179.502	6902.00	4249.17	-4247.02	148.54	40.4937210	-104.5849625	0.00	
12430.00†	90.000	179.502	6902.00	4349.16	-4347.01	149.41	40.4934465	-104.5849630	0.00	
12530.00†	90.000	179.502	6902.00	4449.15	-4447.01	150.28	40.4931720	-104.5849636	0.00	
12630.00†	90.000	179.502	6902.00	4549.14	-4547.01	151.15	40.4928975	-104.5849642	0.00	
12730.00†	90.000	179.502	6902.00	4649.14	-4647.00	152.02	40.4926230	-104.5849648	0.00	
12830.00†	90.000	179.502	6902.00	4749.13	-4747.00	152.89	40.4923485	-104.5849654	0.00	
12930.00†	90.000	179.502	6902.00	4849.12	-4846.99	153.75	40.4920741	-104.5849660	0.00	



Planned Wellpath Report

BISHOP A18-715 (REV-C.0) PWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	BISHOP A18-715
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.07-T06N-R64W	Wellbore	BISHOP A18-715 PWB
Slot	SLOT#16 BISHOP A18-715 (860'FNL & 462'FEL,SEC.07)		

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†	90.000	179.502	6902.00	4949.12	-4946.99	154.62	40.4917996	-104.5849666	0.00	
13130.00†	90.000	179.502	6902.00	5049.11	-5046.99	155.49	40.4915251	-104.5849672	0.00	
13230.00†	90.000	179.502	6902.00	5149.10	-5146.98	156.36	40.4912506	-104.5849677	0.00	
13330.00†	90.000	179.502	6902.00	5249.10	-5246.98	157.23	40.4909761	-104.5849683	0.00	
13430.00†	90.000	179.502	6902.00	5349.09	-5346.98	158.10	40.4907016	-104.5849689	0.00	
13530.00†	90.000	179.502	6902.00	5449.08	-5446.97	158.97	40.4904271	-104.5849695	0.00	
13630.00†	90.000	179.502	6902.00	5549.08	-5546.97	159.83	40.4901527	-104.5849701	0.00	
13730.00†	90.000	179.502	6902.00	5649.07	-5646.96	160.70	40.4898782	-104.5849707	0.00	
13830.00†	90.000	179.502	6902.00	5749.06	-5746.96	161.57	40.4896037	-104.5849713	0.00	
13930.00†	90.000	179.502	6902.00	5849.06	-5846.96	162.44	40.4893292	-104.5849719	0.00	
14030.00†	90.000	179.502	6902.00	5949.05	-5946.95	163.31	40.4890547	-104.5849724	0.00	
14130.00†	90.000	179.502	6902.00	6049.04	-6046.95	164.18	40.4887802	-104.5849730	0.00	
14230.00†	90.000	179.502	6902.00	6149.03	-6146.95	165.05	40.4885058	-104.5849736	0.00	
14330.00†	90.000	179.502	6902.00	6249.03	-6246.94	165.91	40.4882313	-104.5849742	0.00	
14430.00†	90.000	179.502	6902.00	6349.02	-6346.94	166.78	40.4879568	-104.5849748	0.00	
14530.00†	90.000	179.502	6902.00	6449.01	-6446.93	167.65	40.4876823	-104.5849754	0.00	
14630.00†	90.000	179.502	6902.00	6549.01	-6546.93	168.52	40.4874078	-104.5849760	0.00	
14730.00†	90.000	179.502	6902.00	6649.00	-6646.93	169.39	40.4871333	-104.5849766	0.00	
14830.00†	90.000	179.502	6902.00	6748.99	-6746.92	170.26	40.4868588	-104.5849771	0.00	
14930.00†	90.000	179.502	6902.00	6848.99	-6846.92	171.13	40.4865844	-104.5849777	0.00	
15030.00†	90.000	179.502	6902.00	6948.98	-6946.92	171.99	40.4863099	-104.5849783	0.00	
15130.00†	90.000	179.502	6902.00	7048.97	-7046.91	172.86	40.4860354	-104.5849789	0.00	
15230.00†	90.000	179.502	6902.00	7148.97	-7146.91	173.73	40.4857609	-104.5849795	0.00	
15330.00†	90.000	179.502	6902.00	7248.96	-7246.90	174.60	40.4854864	-104.5849801	0.00	
15430.00†	90.000	179.502	6902.00	7348.95	-7346.90	175.47	40.4852119	-104.5849807	0.00	
15530.00†	90.000	179.502	6902.00	7448.94	-7446.90	176.34	40.4849374	-104.5849812	0.00	
15630.00†	90.000	179.502	6902.00	7548.94	-7546.89	177.21	40.4846629	-104.5849818	0.00	
15730.00†	90.000	179.502	6902.00	7648.93	-7646.89	178.07	40.4843885	-104.5849824	0.00	
15830.00†	90.000	179.502	6902.00	7748.92	-7746.89	178.94	40.4841140	-104.5849830	0.00	
15930.00†	90.000	179.502	6902.00	7848.92	-7846.88	179.81	40.4838395	-104.5849836	0.00	
16030.00†	90.000	179.502	6902.00	7948.91	-7946.88	180.68	40.4835650	-104.5849842	0.00	
16130.00†	90.000	179.502	6902.00	8048.90	-8046.87	181.55	40.4832905	-104.5849848	0.00	
16230.00†	90.000	179.502	6902.00	8148.90	-8146.87	182.42	40.4830160	-104.5849854	0.00	
16330.00†	90.000	179.502	6902.00	8248.89	-8246.87	183.29	40.4827415	-104.5849859	0.00	
16430.00†	90.000	179.502	6902.00	8348.88	-8346.86	184.15	40.4824671	-104.5849865	0.00	
16530.00†	90.000	179.502	6902.00	8448.88	-8446.86	185.02	40.4821926	-104.5849871	0.00	
16630.00†	90.000	179.502	6902.00	8548.87	-8546.86	185.89	40.4819181	-104.5849877	0.00	
16730.00†	90.000	179.502	6902.00	8648.86	-8646.85	186.76	40.4816436	-104.5849883	0.00	
16830.00†	90.000	179.502	6902.00	8748.86	-8746.85	187.63	40.4813691	-104.5849889	0.00	
16930.00†	90.000	179.502	6902.00	8848.85	-8846.84	188.50	40.4810946	-104.5849895	0.00	
17030.00†	90.000	179.502	6902.00	8948.84	-8946.84	189.37	40.4808201	-104.5849901	0.00	
17130.00†	90.000	179.502	6902.00	9048.83	-9046.84	190.23	40.4805457	-104.5849906	0.00	
17230.00†	90.000	179.502	6902.00	9148.83	-9146.83	191.10	40.4802712	-104.5849912	0.00	
17330.00†	90.000	179.502	6902.00	9248.82	-9246.83	191.97	40.4799967	-104.5849918	0.00	
17430.00†	90.000	179.502	6902.00	9348.81	-9346.83	192.84	40.4797222	-104.5849924	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	BISHOP A18-715
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.07-T06N-R64W	Wellbore	BISHOP A18-715 PWB
Slot	SLOT#16 BISHOP A18-715 (860'FNL & 462'FEL,SEC.07)		

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
17530.00†	90.000	179.502	6902.00	9448.81	-9446.82	193.71	40.4794477	-104.5849930	0.00	
17594.88	90.000	179.502	6902.00‡	9513.68	-9511.70	194.27	40.4792696	-104.5849934	0.00	BHL

HOLE & CASING SECTIONS - Ref Wellbore: BISHOP A18-715 PWB Ref Wellpath: BISHOP A18-715 (REV-C.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	1923.87	0.00	0.00	241.33	16.16

TARGETS										
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape	
OGDP 1 SEC.07-T06N-R64W	N/A	-1.00	-0.33	38.66	3254380.72	1428262.61	40.5053800	-104.5852000	polygon	
2D Polygon: dimensions not calculated										
OGDP 1 SEC.18-T06N-R64W	N/A	-1.00	-0.33	38.66	3254380.72	1428262.61	40.5053800	-104.5852000	polygon	
2D Polygon: dimensions not calculated										
2) BISHOP A18-715 BHL Rev-2 (200'FSL & 350'FEL,SEC.18)	17594.88	6902.00	-9511.70	194.27	3254536.32	1418751.58	40.4792696	-104.5849934	point	
1) BISHOP A18-715 LP Rev-2 (200'FNL & 350'FEL,SEC.07)	7420.59	6902.00	662.21	105.90	3254447.96	1428925.13	40.5071966	-104.5849336	point	
BISHOP A18-715 BHL Rev-1 (200'FSL & 350'FEL,SEC.18)	N/A	6951.00	-9511.70	194.27	3254536.32	1418751.58	40.4792696	-104.5849934	point	
BISHOP A18-715 LP Rev-1 (200'FNL & 350'FEL,SEC.07)	N/A	6951.00	662.21	105.90	3254447.96	1428925.13	40.5071966	-104.5849336	point	
DP 133 Hardlines (200'FNL/FSL & 300'FEL/FWL)	N/A	7000.00	-0.13	22.53	3254364.58	1428262.81	40.5053810	-104.5852580	polygon	
2D Polygon: dimensions not calculated										

SURVEY PROGRAM - Ref Wellbore: BISHOP A18-715 PWB Ref Wellpath: BISHOP A18-715 (REV-C.0) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
30.00	17698.92	OWSG MWD rev2 (MS+IFR1)		BISHOP A18-715 PWB



Planned Wellpath Report

BISHOP A18-715 (REV-C.0) PWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	BISHOP A18-715
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.07-T06N-R64W	Wellbore	BISHOP A18-715 PWB
Slot	SLOT#16 BISHOP A18-715 (860'FNL & 462'FEL,SEC.07)		

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
30.00	0.000	3.831	30.00	SHL
600.00	0.000	3.831	600.00	End of Tangent
1297.85	13.957	3.831	1290.97	Build (XS)
6265.96	13.957	3.831	6112.41	KOP
7420.59	90.000	179.502	6902.00	LP/TPZ
17594.88	90.000	179.502	6902.00	BHL



Closest Approach Clearance Summary Report

BISHOP A18-715 (REV-C.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	BISHOP A18-715
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.07-T06N-R64W	Wellbore	BISHOP A18-715 PWB
Slot	SLOT#16 BISHOP A18-715 (860'FNL & 462'FEL,SEC.07)		

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	0.999967	Report Generated	10/6/2023 at 1:34:11 PM
Convergence at slot	0.59° 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	0.33	-38.66	3254342.06	1428262.94	40°30'19.3752"N	104°35'7.2204"W
Facility Reference Pt			3254380.72	1428262.61	40°30'19.3680"N	104°35'6.7200"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 (4741'GL+30'KB@4771'RKB) (RKB) to Facility Vertical Datum	4771.00ft
Horizontal Reference Pt	Slot	RIG (4741'GL+30'KB@4771'RKB) (RKB) to Mean Sea Level	4771.00ft
Vertical Reference Pt	RIG (4741'GL+30'KB@4771'RKB) (RKB)	RIG (4741'GL+30'KB@4771'RKB) (RKB) to Ground Level at Slot (SLOT#16 BISHOP A18-715 (860'FNL & 462'FEL,SEC.07))	4771.00ft
MD Reference Pt	RIG (4741'GL+30'KB@4771'RKB) (RKB)		
Field Vertical Reference	Mean Sea Level		

POSITIONAL UNCERTAINTY CALCULATION SETTINGS					
Ellipse Confidence Limit	3.50 Std Dev	Ellipse Start MD	30.00ft	Surface Position Uncertainty	included
Declination	7.38° East of TN	Dip Angle	66.68°	Mag Field Strength	51663 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

BISHOP A18-715 (REV-C.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	BISHOP A18-715
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.07-T06N-R64W	Wellbore	BISHOP A18-715 PWB
Slot	SLOT#16 BISHOP A18-715 (860'FNL & 462'FEL,SEC.07)		

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: BISHOP A18-715 PWB Ref Wellpath: BISHOP A18-715 (REV-C.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	1923.87	0.00	0.00	241.33	16.16

SURVEY PROGRAM - Ref Wellbore: BISHOP A18-715 PWB Ref Wellpath: BISHOP A18-715 (REV-C.0) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
30.00	17698.92	OWSG MWD rev2 (MS+IFR1)		BISHOP A18-715 PWB



Closest Approach Clearance Summary Report

BISHOP A18-715 (REV-C.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	BISHOP A18-715
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.07-T06N-R64W	Wellbore	BISHOP A18-715 PWB
Slot	SLOT#16 BISHOP A18-715 (860'FNL & 462'FEL,SEC.07)		

CALCULATION RANGE & CUTOFF		
From: 30.00ft MD	To: 17594.88ft MD	C-C Cutoff: (none)

OFFSET WELL CLEARANCE SUMMARY (88 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.06-T06N-R64W	SLOT#08 KREPS TRUST #44-6 (05-123-21722)	KREPS TRUST #44-6	KREPS TRUST #44-6 AWB	KREPS TRUST #44-6 AWP	Drilling	6417.49	374.76	6417.49	6456.45	0.05	6456.45	FAIL
SEC.07-T06N-R64W	SLOT#37 DYER #42-7 (05-123-13959)	DYER #42-7 (05-123-13959)	DYER #42-7 AWB	DYER #42-7 AWP (05-123-13959)	Drilling	9218.56	582.01	9218.56	9218.56	0.07	9218.56	FAIL
SEC.06-T06N-R64W	SLOT#13 KREPS TRUST #34-6 (05-123-21723)	KREPS TRUST #34-6	KREPS TRUST #34-6 AWB	KREPS TRUST #34-6 AWP	Drilling	6001.17	1332.88	6001.17	6952.59	0.17	6952.59	FAIL
SEC.07-T06N-R64W	SLOT#35 CARLSON #33-7 (05-123-19548)	CARLSON #33-7 (05-123-19548)	CARLSON #33-7 AWB	CARLSON #33-7 AWP	Drilling	10470.97	1420.74	10470.97	10470.99	0.17	10470.99	FAIL
SEC.07-T06N-R64W	SLOT#41 Ehrlich #32-7 (05-123-20196)	Ehrlich #32-7 (05-123-20196)	Ehrlich #32-7 AWB	Ehrlich #32-7 AWP	Drilling	9396.24	1427.99	9396.24	9396.25	0.17	9396.25	FAIL
SEC.06-T06N-R64W	SLOT#02 KREPS #43-6 (05-123-22600)	KREPS #43-6	KREPS #43-6 AWB	KREPS #43-6 AWP	Drilling	6430.00	1368.42	6430.00	6555.81	0.18	6555.81	FAIL
SEC.18-T06N-R64W	SLOT#24 WPF III A #18-7 (05-123-26642)	WPF III A #18-7	WPF III A #18-7 AWB	WPF III A #18-7 AWP	Drilling	14488.99	1628.59	14488.99	14488.99	0.19	14488.99	FAIL
SEC.18-T06N-R64W	SLOT#17 FOOSE #A18-10 (05-123-13855)	FOOSE #A18-10	FOOSE #A18-10 AWB	FOOSE #A18-10 AWP	Drilling	15906.94	1643.06	15906.94	15906.94	0.20	15906.94	FAIL
SEC.18-T06N-R64W	SLOT#28 RICH FOOSE #1 (05-123-13946)	RICH FOOSE #1	RICH FOOSE #1 AWB	RICH FOOSE #1 AWP	Drilling	17158.89	1745.97	17158.89	17158.98	0.21	17158.98	FAIL
SEC.06-T06N-R64W	SLOT#05 KREPS #33-6 (05-123-22597)	KREPS #33-6	KREPS #33-6 AWB	KREPS #33-6 AWP	Drilling	6403.12	2109.39	6403.12	6674.34	0.27	6674.34	FAIL
SEC.18-T06N-R64W	SLOT#09 FOOSE PC A18-65HN (05-123-35047)	FOOSE PC A18-65HN	FOOSE PC A18-65HN AWB	FOOSE PC A18-65HN AWP	Drilling	15313.83	39.41	15313.83	15309.58	0.30	15309.58	FAIL
SEC.06-T06N-R64W	SLOT#09 KREPS #24-6 (05-123-23621)	KREPS #24-6	KREPS #24-6 AWB	KREPS #24-6 AWP	Drilling	5910.63	2655.97	5910.63	7147.81	0.32	7147.81	FAIL
SEC.18-T06N-R64W	SLOT#22 KERKSIEK A #18-14 (05-123-24865)	KERKSIEK A #18-14	KERKSIEK A #18-14 AWB	KERKSIEK A #18-14 AWP	Drilling	17159.37	2764.98	17159.37	17159.59	0.33	17159.59	FAIL
SEC.07-T06N-R64W	SLOT#32 EHRLICH #3 (05-123-12737)	EHRLICH #3 (05-123-12737)	EHRLICH #3 AWB	EHRLICH #3 AWP	Drilling	10576.98	2833.95	10576.98	10577.06	0.34	10577.06	FAIL
SEC.07-T06N-R64W	SLOT#30 KREPS #21-7 (05-123-20207)	KREPS #21-7 (05-123-20207)	KREPS #21-7 AWB	KREPS #21-7 AWP	Drilling	1156.97	2885.64	7810.22	7810.22	0.35	7810.22	FAIL
SEC.18-T06N-R64W	SLOT#20 WPF III #BC A18-6 (05-123-14329)	WPF III #BC A18-6	WPF III #BC A18-6 AWB	WPF III #BC A18-6 AWP	Drilling	14541.42	3024.04	14541.42	14541.61	0.36	14541.61	FAIL
SEC.07-T06N-R64W	SLOT#38 EHRLICH #22-7 (05-123-14184)	EHRLICH #22-7 (05-123-14184)	EHRLICH #22-7 AWB	EHRLICH #22-7 AWP	Drilling	9796.06	3190.56	9796.06	9796.13	0.38	9796.13	FAIL
SEC.06-T06N-R64W	SLOT#03 STEPHENSON #6-31 (05-123-22625)	STEPHENSON #6-31	STEPHENSON #6-31 AWB	STEPHENSON #6-31 AWP	Drilling	6399.15	3082.08	6399.15	6878.59	0.39	6878.59	FAIL
SEC.07-T06N-R64W	SLOT#42 EHRLICH #4 (05-123-12738)	EHRLICH #4 (05-123-12738)	EHRLICH #4 AWB	EHRLICH #4 AWP	Drilling	9250.84	4039.59	9250.84	9250.93	0.48	9250.93	FAIL
SEC.07-T06N-R64W	SLOT#34 KREPS #11-7 (05-123-14166)	KREPS #11-7 (05-123-14166)	KREPS #11-7 AWB	KREPS #11-7 AWP	Drilling	30.00	4021.55	7873.87	7873.87	0.49	7873.87	FAIL
SEC.18-T06N-R64W	SLOT#18 GOZA #1 (05-123-13598)	GOZA #1	GOZA #1 AWB	GOZA #1 AWP	Drilling	15856.89	4199.01	15856.89	15857.32	0.50	15857.32	FAIL
SEC.06-T06N-R64W	SLOT#04 KREPS #31-6 (05-123-22628)	KREPS #31-6	KREPS #31-6 AWB	KREPS #31-6 AWP	Drilling	6430.00	4502.46	6430.00	6822.51	0.57	6822.51	FAIL
SEC.18-T06N-R64W	SLOT#08 Foose State A17-618 (2347'FSL & 687'FEL,SEC.18)	Foose State A17-618	Foose State A17-618 PWB	Foose State A17-618 (REV-C.0) PWP	Planned	17220.93	209.25	17220.93	17233.49	1.33	17233.49	PASS
SEC.18-T06N-R64W	SLOT#30 LOG CABIN #1 (05-123-13426)	LOG CABIN #1	LOG CABIN #1 AWB	LOG CABIN #1 AWP	Drilling	17094.58	5028.97	17094.58	17104.03	1.35	17104.03	PASS
SEC.18-T06N-R64W	SLOT#27 FOOSE #2 (05-123-14425)	FOOSE #2	FOOSE #2 AWB	FOOSE #2 AWP	Drilling	17060.83	3661.06	17060.83	14640.05	1.36	17594.88	PASS



Closest Approach Clearance Summary Report

BISHOP A18-715 (REV-C.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	BISHOP A18-715
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.07-T06N-R64W	Wellbore	BISHOP A18-715 PWB
Slot	SLOT#16 BISHOP A18-715 (860'FNL & 462'FEL,SEC.07)		

CALCULATION RANGE & CUTOFF		
From: 30.00ft MD	To: 17594.88ft MD	C-C Cutoff: (none)

OFFSET WELL CLEARANCE SUMMARY (88 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.18-T06N-R64W	SLOT#12 FOOSE #A18-9 (05-123-13528)	FOOSE #A18-9	FOOSE #A18-9 AWB	FOOSE #A18-9 AWP	Drilling	15897.91	199.65	15897.91	15899.32	1.38	15899.32	PASS
SEC.18-T06N-R64W	SLOT#21 LOG CABIN #2 (05-123-14563)	LOG CABIN #2	LOG CABIN #2 AWB	LOG CABIN #2 AWP	Drilling	16833.41	4551.31	16833.41	16870.88	1.38	16870.88	PASS
SEC.18-T06N-R64W	SLOT#19 DOUBLE BAR S #12-18 (05-123-14542)	DOUBLE BAR S #12-18	DOUBLE BAR S #12-18 AWB	DOUBLE BAR S #12-18 AWP	Drilling	16233.25	5033.86	16233.25	16243.73	1.40	16243.73	PASS
SEC.18-T06N-R64W	SLOT#06 Foose State A17-637 (2349'FSL & 762'FEL,SEC.18)	Foose State A17-637	Foose State A17-637 PWB	Foose State A17-637 (REV-C.0) PWP	Planned	16041.46	208.21	16041.46	16055.34	1.47	16055.34	PASS
SEC.18-T06N-R64W	SLOT#04 Foose State A17-656 (2350'FSL & 837'FEL,SEC.18)	Foose State A17-656	Foose State A17-656 PWB	Foose State A17-656 (REV-B.0) PWP	Planned	14765.00	215.38	14765.00	14782.03	1.73	14782.03	PASS
SEC.18-T06N-R64W	SLOT#07 Foose State A17-627 (2348'FSL & 724'FEL,SEC.18)	Foose State A17-627	Foose State A17-627 PWB	Foose State A17-627 (REV-B.0) PWP	Planned	16610.95	268.70	16610.95	16629.35	1.81	16629.35	PASS
SEC.18-T06N-R64W	SLOT#05 Foose State A17-647 (2349'FSL & 799'FEL,SEC.18)	Foose State A17-647	Foose State A17-647 PWB	Foose State A17-647 (REV-B.0) PWP	Planned	15378.62	249.82	15378.62	15397.72	1.90	15397.72	PASS
SEC.18-T06N-R64W	SLOT#02 Foose State A17-675 (2351'FSL & 912'FEL,SEC.18)	Foose State A17-675	Foose State A17-675 PWB	Foose State A17-675 (REV-B.0) PWP	Planned	13541.14	220.72	13541.14	13562.62	1.99	13562.62	PASS
SEC.07-T06N-R64W	SLOT#01 BISHOP A08-685 (860'FNL & 439'FEL,SEC.07)	BISHOP A08-685	BISHOP A08-685 PWB	BISHOP A08-685 (REV-C.0) PWP	Planned	688.72	22.49	7530.00	981.95	2.17	7630.00	PASS
SEC.18-T06N-R64W	SLOT#03 Foose State A17-665 (2351'FSL & 874'FEL,SEC.18)	Foose State A17-665	Foose State A17-665 PWB	Foose State A17-665 (REV-B.0) PWP	Planned	14147.91	257.13	14147.91	14172.15	2.21	14172.15	PASS
SEC.18-T06N-R64W	SLOT#01 Foose State A17-685 (2352'FSL & 949'FEL,SEC.18)	Foose State A17-685	Foose State A17-685 PWB	Foose State A17-685 (REV-B.0) PWP	Planned	12914.91	229.81	12914.91	12944.99	2.21	12944.99	PASS
SEC.18-T06N-R64W	SLOT#25 CARLSON #A18-17 (05-123-32627)	CARLSON #A18-17	CARLSON #A18-17 AWB	CARLSON #A18-17 AWP	Drilling	13865.85	1064.91	13865.85	13872.92	2.45	13872.92	PASS
SEC.07-T06N-R64W	SLOT#08 CARLSON A08-615 (1422'FSL & 807'FEL,SEC.07)	CARLSON A08-615	CARLSON A08-615 PWB	CARLSON A08-615 (REV-C.0) PWP	Planned	12103.26	226.12	12103.26	12128.83	2.53	12128.83	PASS
SEC.18-T06N-R64W	SLOT#11 CARLSON #42-18 (05-123-21671)	CARLSON #42-18	CARLSON #42-18 AWB	CARLSON #42-18 AWP	Drilling	14422.69	321.26	14422.69	14426.98	2.55	14426.98	PASS
SEC.07-T06N-R64W	SLOT#07 CARLSON A08-625 (1423'FSL & 844'FEL,SEC.07)	CARLSON A08-625	CARLSON A08-625 PWB	CARLSON A08-625 (REV-C.0) PWP	Planned	11471.21	217.24	11471.21	11499.39	2.65	11499.39	PASS
SEC.07-T06N-R64W	SLOT#15 BISHOP A18-724 (859'FNL & 484'FEL,SEC.07)	BISHOP A18-724	BISHOP A18-724 PWB	BISHOP A18-724 (REV-C.0) PWP	Planned	30.00	22.25	430.00	622.56	2.74	17594.88	PASS
SEC.07-T06N-R64W	SLOT#06 CARLSON A08-635 (1423'FSL & 882'FEL,SEC.07)	CARLSON A08-635	CARLSON A08-635 PWB	CARLSON A08-635 (REV-C.0) PWP	Planned	10839.22	208.44	10839.22	10870.58	2.78	10870.58	PASS
SEC.07-T06N-R64W	SLOT#31 ROY CARLSON #43-7 (05-123-21867)	ROY CARLSON #43-7 (05-123-21867)	ROY CARLSON #43-7 AWB	ROY CARLSON #43-7 AWP	Drilling	10706.87	269.07	10706.87	10711.01	3.43	10711.01	PASS
SEC.07-T06N-R64W	SLOT#04 BISHOP A08-655 (862'FNL & 372'FEL,SEC.07)	BISHOP A08-655	BISHOP A08-655 PWB	BISHOP A08-655 (REV-C.0) PWP	Planned	761.48	89.94	9526.18	9526.18	3.52	9526.18	PASS
SEC.07-T06N-R64W	SLOT#24 BISHOP A06-712 (1010'FNL & 463'FEL,SEC.07)	BISHOP A06-712	BISHOP A06-712 PWB	BISHOP A06-712 (REV-C.0) PWP	Planned	30.00	150.11	7317.12	7317.12	3.53	7317.12	PASS
SEC.07-T06N-R64W	SLOT#05 CARLSON A08-645 (1424'FSL & 919'FEL,SEC.07)	CARLSON A08-645	CARLSON A08-645 PWB	CARLSON A08-645 (REV-C.0) PWP	Planned	10204.88	256.83	10204.88	10255.36	3.75	10255.36	PASS
SEC.18-T06N-R64W	SLOT#10 CARLSON #41-18 (05-123-21670)	CARLSON #41-18	CARLSON #41-18 AWB	CARLSON #41-18 AWP	Drilling	12942.68	429.81	12942.68	12952.50	3.95	12952.50	PASS
SEC.07-T06N-R64W	SLOT#02 BISHOP A08-675 (861'FNL & 417'FEL,SEC.07)	BISHOP A08-675	BISHOP A08-675 PWB	BISHOP A08-675 (REV-C.0) PWP	Planned	733.51	44.94	8230.00	8268.90	4.47	8268.90	PASS
SEC.07-T06N-R64W	SLOT#03 BISHOP A08-665 (861'FNL & 394'FEL,SEC.07)	BISHOP A08-665	BISHOP A08-665 PWB	BISHOP A08-665 (REV-C.0) PWP	Planned	758.91	67.43	8830.00	8911.15	4.63	8911.15	PASS
SEC.07-T06N-R64W	SLOT#39 CARLSON #44-7 (05-123-14171)	CARLSON #44-7 (05-123-14171)	CARLSON #44-7 AWB	CARLSON #44-7 AWP (05-123-14171)	Drilling	11955.53	418.41	11955.53	11968.01	4.64	11968.01	PASS



Closest Approach Clearance Summary Report

BISHOP A18-715 (REV-C.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	BISHOP A18-715
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.07-T06N-R64W	Wellbore	BISHOP A18-715 PWB
Slot	SLOT#16 BISHOP A18-715 (860'FNL & 462'FEL,SEC.07)		

CALCULATION RANGE & CUTOFF		
From: 30.00ft MD	To: 17594.88ft MD	C-C Cutoff: (none)

OFFSET WELL CLEARANCE SUMMARY (88 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.07-T06N-R64W	SLOT#14 BISHOP A18-733 (859'FNL & 507'FEL,SEC.07)	BISHOP A18-733	BISHOP A18-733 PWB	BISHOP A18-733 (REV-C.0) PWP	Planned	30.00	44.77	430.00	17594.88	5.56	17594.88	PASS
SEC.07-T06N-R64W	SLOT#29 DYER #41-7 (05-123-20669)	DYER #41-7 (05-123-20669)	DYER #41-7 AWB	DYER #41-7 AWP	Drilling	1653.79	224.42	7943.14	7943.14	5.94	7943.14	PASS
SEC.18-T06N-R64W	SLOT#14 FOOSE #A18-23 (05-123-32666)	FOOSE #A18-23	FOOSE #A18-23 AWB	FOOSE #A18-23 AWP	Drilling	16291.19	920.03	16291.19	16328.84	6.24	16328.84	PASS
SEC.07-T06N-R64W	SLOT#23 BISHOP A06-722 (1009'FNL & 486'FEL,SEC.07)	BISHOP A06-722	BISHOP A06-722 PWB	BISHOP A06-722 (REV-C.0) PWP	Planned	30.00	151.63	7230.00	7229.71	7.10	7229.71	PASS
SEC.07-T06N-R64W	SLOT#13 BISHOP A18-742 (858'FNL & 529'FEL,SEC.07)	BISHOP A18-742	BISHOP A18-742 PWB	BISHOP A18-742 (REV-C.0) PWP	Planned	30.00	67.30	430.00	17594.88	8.30	17594.88	PASS
SEC.07-T06N-R64W	SLOT#12 BRASKALAND A18-755 (800'FNL & 319'FWL,SEC.07)	BRASKALAND A18-755	BRASKALAND A18-755 PWB	BRASKALAND A18-755 (REV-C.0) PWP	Planned	7439.16	2304.50	7439.16	17594.88	11.17	17594.88	PASS
SEC.07-T06N-R64W	SLOT#11 BRASKALAND A18-764 (777'FNL & 319'FWL,SEC.07)	BRASKALAND A18-764	BRASKALAND A18-764 PWB	BRASKALAND A18-764 (REV-C.0) PWP	Planned	7435.80	2885.54	7435.80	17594.88	13.96	17594.88	PASS
SEC.07-T06N-R64W	SLOT#25 BISHOP A05-783 (1010'FNL & 441'FEL,SEC.07)	BISHOP A05-783	BISHOP A05-783 PWB	BISHOP A05-783 (REV-C.0) PWP	Planned	683.83	150.02	7330.00	7230.00	14.19	7230.00	PASS
SEC.18-T06N-R64W	SLOT#15 WPF III #A18-2 (05-123-13195)	WPF III #A18-2	WPF III #A18-2 AWB	WPF III #A18-2 AWP	Drilling	13134.03	1674.52	13134.03	13304.56	15.11	13304.56	PASS
SEC.07-T06N-R64W	SLOT#22 BISHOP A06-731 (1009'FNL & 508'FEL,SEC.07)	BISHOP A06-731	BISHOP A06-731 PWB	BISHOP A06-731 (REV-B.0) PWP	Planned	30.00	156.77	7530.00	7249.87	15.99	7249.87	PASS
SEC.06-T06N-R64W	SLOT#12 Stille #12-6H (05-123-34410)	Stille #12-6H	Stille #12-6H AWB	Stille #12-6H AWP	Drilling	6530.00	3536.09	6530.00	6605.08	16.61	6605.08	PASS
SEC.07-T06N-R64W	SLOT#10 BRASKALAND A18-773 (755'FNL & 319'FWL,SEC.07)	BRASKALAND A18-773	BRASKALAND A18-773 PWB	BRASKALAND A18-773 (REV-C.0) PWP	Planned	7422.62	3466.40	7422.62	17594.88	16.79	17594.88	PASS
SEC.07-T06N-R64W	SLOT#26 BISHOP A05-773 (1011'FNL & 418'FEL,SEC.07)	BISHOP A05-773	BISHOP A05-773 PWB	BISHOP A05-773 (REV-C.0) PWP	Planned	614.07	156.42	7630.00	1002.61	17.23	7420.59	PASS
SEC.07-T06N-R64W	SLOT#21 BISHOP A06-740 (1008'FNL & 531'FEL,SEC.07)	BISHOP A06-740	BISHOP A06-740 PWB	BISHOP A06-740 (REV-C.0) PWP	Planned	30.00	164.52	7630.00	1018.31	18.24	7730.00	PASS
SEC.07-T06N-R64W	SLOT#43 CARLSON #34-7 (05-123-14251)	CARLSON #34-7 (05-123-14251)	CARLSON #34-7 AWB	CARLSON #34-7 AWP	Drilling	11847.04	1628.40	11847.04	12051.35	18.32	12051.35	PASS
SEC.07-T06N-R64W	SLOT#27 BISHOP A05-764 (1011'FNL & 396'FEL,SEC.07)	BISHOP A05-764	BISHOP A05-764 PWB	BISHOP A05-764 (REV-C.0) PWP	Planned	30.00	164.71	7630.00	931.59	18.76	7730.00	PASS
SEC.07-T06N-R64W	SLOT#09 BRASKALAND A18-782 (732'FNL & 319'FWL,SEC.07)	BRASKALAND A18-782	BRASKALAND A18-782 PWB	BRASKALAND A18-782 (REV-C.0) PWP	Planned	7274.47	4046.66	7274.47	17594.88	19.60	17594.88	PASS
SEC.07-T06N-R64W	SLOT#28 BISHOP A05-755 (1012'FNL & 373'FEL,SEC.07)	BISHOP A05-755	BISHOP A05-755 PWB	BISHOP A05-755 (REV-C.0) PWP	Planned	30.00	174.98	7630.00	936.59	20.24	8130.00	PASS
SEC.18-T06N-R64W	SLOT#23 Kersiek USX #A18-25 (05-123-32655)	Kersiek USX #A18-25	Kersiek USX #A18-25 AWB	Kersiek USX #A18-25 AWP	Drilling	16510.23	3247.44	16510.23	17001.46	21.30	17001.46	PASS
SEC.07-T06N-R64W	SLOT#33 KREPS #1 (05-123-12736)	KREPS #1 (05-123-12736)	KREPS #1 AWB	KREPS #1 AWP	Drilling	1345.56	1439.33	7922.41	7922.41	24.45	7922.41	PASS
SEC.18-T06N-R64W	SLOT#29 WPF III #A18-13A (05-123-13197)	WPF III #A18-13A	WPF III #A18-13A AWB	WPF III #A18-13A AWP	Drilling	17057.02	4141.36	17057.02	17594.88	25.78	17594.88	PASS
SEC.18-T06N-R64W	SLOT#13 WPF III #A18-3 (05-123-13196)	WPF III #A18-3	WPF III #A18-3 AWB	WPF III #A18-3 AWP	Drilling	13165.54	2930.76	13165.54	13684.63	25.95	13684.63	PASS
SEC.18-T06N-R64W	SLOT#26 HELDT #12-18 (05-123-19549)	HELDT #12-18	HELDT #12-18 AWB	HELDT #12-18 AWP	Drilling	14554.21	4030.38	14554.21	15428.61	30.81	15428.61	PASS
SEC.07-T06N-R64W	SLOT#40 EHRLICH #24-7 (05-123-20469)	EHRLICH #24-7 (05-123-20469)	EHRLICH #24-7 AWB	EHRLICH #24-7 AWP	Drilling	11886.01	2920.82	11886.01	12513.26	31.85	12513.26	PASS
SEC.18-T06N-R64W	SLOT#16 HELDT #11-18 (05-123-20466)	HELDT #11-18	HELDT #11-18 AWB	HELDT #11-18 AWP	Drilling	13186.89	4079.92	13186.89	14182.25	35.24	14182.25	PASS

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	BISHOP A18-715
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.07-T06N-R64W	Wellbore	BISHOP A18-715 PWB
Slot	SLOT#16 BISHOP A18-715 (860'FNL & 462'FEL,SEC.07)		

CALCULATION RANGE & CUTOFF		
From: 30.00ft MD	To: 17594.88ft MD	C-C Cutoff: (none)

OFFSET WELL CLEARANCE SUMMARY (88 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.07-T06N-R64W	SLOT#20 BRASKALAND A06-756 (642'FNL & 320'FWL,SEC.07)	BRASKALAND A06-756	BRASKALAND A06-756 PWB	BRASKALAND A06-756 (REV-C.0) PWP	Planned	7081.06	2389.52	7081.06	6830.00	35.47	6830.00	PASS
SEC.07-T06N-R64W	SLOT#44 EHRLICH #2 (05-123-12460)	EHRLICH #2 (05-123-12460)	EHRLICH #2 AWB	EHRLICH #2 AWP	Drilling	11929.76	4040.13	11929.76	13106.28	42.44	13106.28	PASS
SEC.07-T06N-R64W	SLOT#19 BRASKALAND A06-765 (665'FNL & 319'FWL,SEC.07)	BRASKALAND A06-765	BRASKALAND A06-765 PWB	BRASKALAND A06-765 (REV-C.0) PWP	Planned	7130.83	2973.93	7130.83	6898.35	45.21	6898.35	PASS
SEC.06-T06N-R64W	SLOT#10 KREPS #32-6 (05-123-22629)	KREPS #32-6	KREPS #32-6 AWB	KREPS #32-6 AWP	Drilling	6430.00	3360.66	6430.00	6601.40	47.49	6601.40	PASS
SEC.07-T06N-R64W	SLOT#36 EHRLICH #1 (05-123-12382)	EHRLICH #1 (05-123-12382)	EHRLICH #1 AWB	EHRLICH #1 AWP	Drilling	10596.12	4110.98	10596.12	11969.59	49.89	11969.59	PASS
SEC.06-T06N-R64W	SLOT#15 KREPS #6-35 (05-123-24937)	KREPS #6-35	KREPS #6-35 AWB	KREPS #6-35 AWP	Drilling	6414.11	3720.06	6414.11	6906.87	51.86	6906.87	PASS
SEC.06-T06N-R64W	SLOT#07 MOODY #22-6 (05-123-22579)	MOODY #22-6	MOODY #22-6 AWB	MOODY #22-6 AWP	Drilling	6430.00	3738.36	6430.00	6710.64	52.08	6710.64	PASS
SEC.07-T06N-R64W	SLOT#18 BRASKALAND A06-773 (687'FNL & 319'FWL,SEC.07)	BRASKALAND A06-773	BRASKALAND A06-773 PWB	BRASKALAND A06-773 (REV-C.0) PWP	Planned	7105.11	3551.72	7105.11	6907.29	55.40	6907.29	PASS
SEC.06-T06N-R64W	SLOT#06 STEPHENSON #6-32 (05-123-22622)	STEPHENSON #6-32	STEPHENSON #6-32 AWB	STEPHENSON #6-32 AWP	Drilling	6376.50	4166.49	6376.50	6830.00	58.00	6830.00	PASS
SEC.06-T06N-R64W	SLOT#14 STEPHENSON #6-33 (05-123-22623)	STEPHENSON #6-33	STEPHENSON #6-33 AWB	STEPHENSON #6-33 AWP	Drilling	6288.65	4243.81	6288.65	7071.12	58.59	7071.12	PASS
SEC.07-T06N-R64W	SLOT#17 BRASKALAND A06-782 (710'FNL & 319'FWL,SEC.07)	BRASKALAND A06-782	BRASKALAND A06-782 PWB	BRASKALAND A06-782 (REV-C.0) PWP	Planned	7202.17	4133.68	7202.17	6945.02	65.05	6945.02	PASS
SEC.06-T06N-R64W	SLOT#11 MOODY #12-6 (05-123-22569)	MOODY #12-6	MOODY #12-6 AWB	MOODY #12-6 AWP	Drilling	6393.17	4859.24	6393.17	6894.58	67.36	6894.58	PASS
SEC.06-T06N-R64W	SLOT#01 MOODY #21-6 (05-123-23586)	MOODY #21-6	MOODY #21-6 AWB	MOODY #21-6 AWP	Drilling	6430.00	4933.86	6430.00	6735.75	68.73	6735.75	PASS