

# NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#13 APACHE STATE E35-615 (2264'FNL & 1631'FEL,SEC.36)

Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: Apache State E35-615

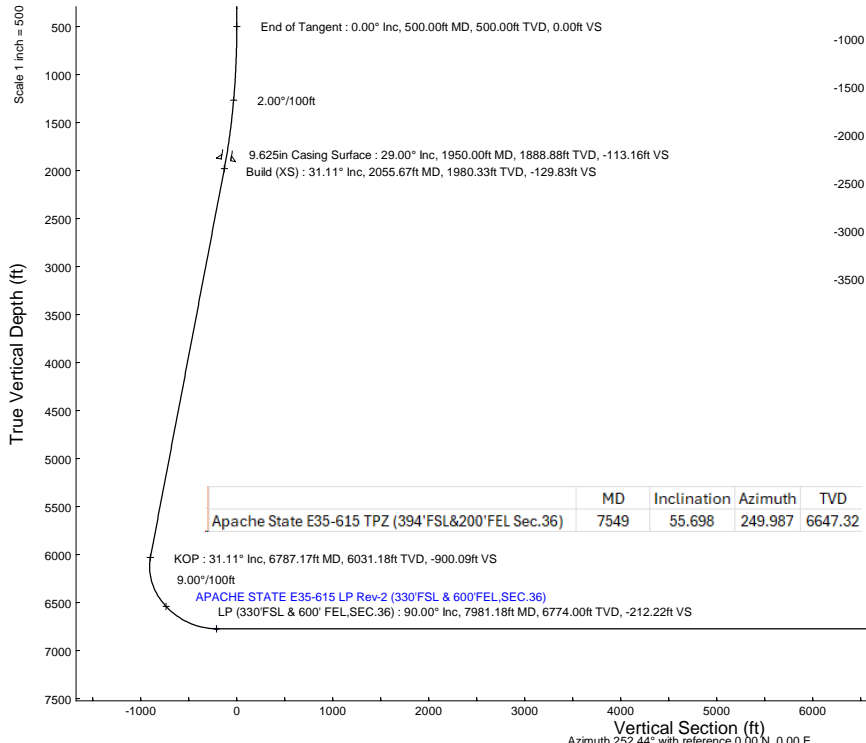
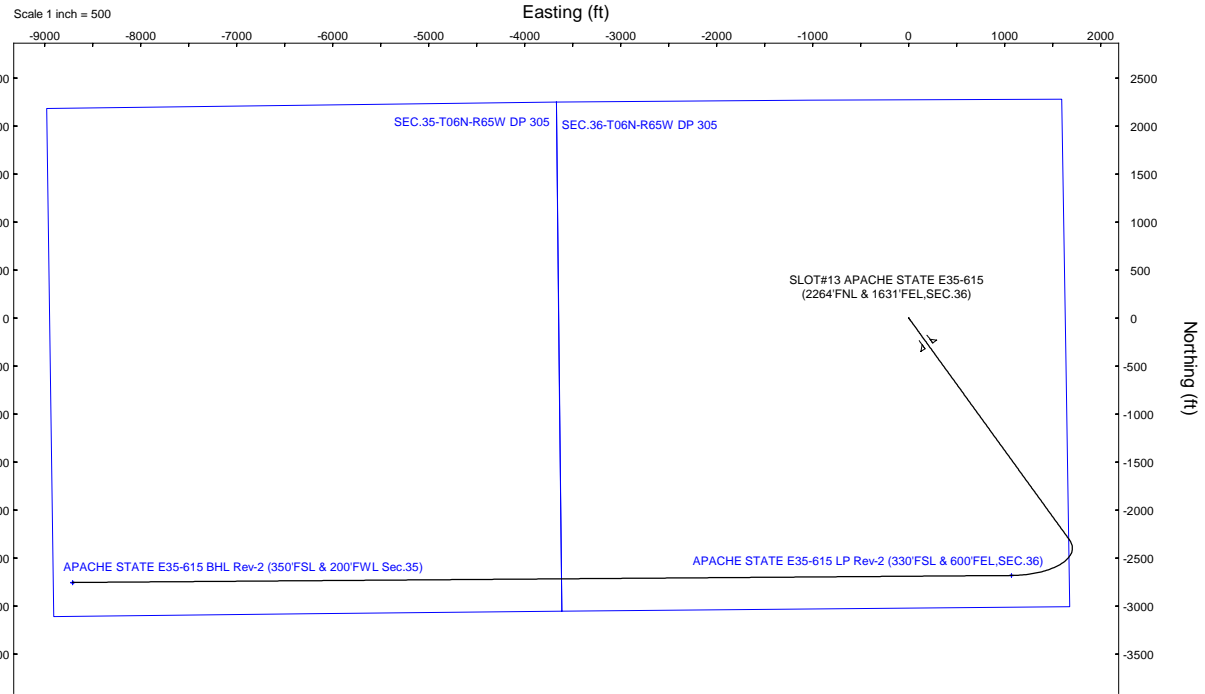
Facility: SEC.36-T06N-R65W Wellbore: Apache State E35-615 PWB

Plot reference wellpath is Apache State E35-615 (REV-C.0) PWP  
 Grid System: NAD83 / Lambert Colorado SP, Northern Zone (S01), US feet  
 True vertical depths are referenced to RIG (4649'GL+30'KB@4679'RKB) (RKB)  
 North Reference: Grid north  
 Reference wellpath measured depths are referenced to RIG (4649'GL+30'KB@4679'RKB) (RKB)  
 Scale: True distance  
 RIG (4649'GL+30'KB@4679'RKB) (RKB) to Mean Sea Level: 4679 feet  
 Coordinates are in feet referenced to Slot  
 Mean Sea Level to Ground level (At Slot: SLOT#13 APACHE STATE E35-615 (2264'FNL & 1631'FEL,SEC.36)): 0 feet  
 Depths are in feet  
 Offset wellpath MDs are referenced to each path's default MD datum  
 Created by: guenaler on 2025-02-11; Database: WA\_Denver

Location Information				
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.36-T06N-R65W	3248365.888	1402898.248	40°26'38.9832"N	104°36'27.5004"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
SLOT#13 APACHE STATE E35-615 (2264'FNL & 1631'FEL,SEC.36)	-271.39	3.84	3248369.532	1402898.248
RIG (4649'GL+30'KB@4679'RKB) (RKB) to Ground level (At Slot: SLOT#13 APACHE STATE E35-615 (2264'FNL & 1631'FEL,SEC.36))				
4679ft				
Mean Sea Level to Ground level (At Slot: SLOT#13 APACHE STATE E35-615 (2264'FNL & 1631'FEL,SEC.36))				
0ft				
RIG (4649'GL+30'KB@4679'RKB) (RKB) to Mean Sea Level				
4679ft				

Targets								
Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.36-T06N-R65W DP 305	N/A	0.00	271.39	-3.84	3248365.89	1405898.25	40°26'38.9832"N	104°36'27.5004"W
SEC.36-T06N-R65W DP 305	N/A	0.00	271.39	-3.84	3248365.89	1405898.25	40°26'38.9832"N	104°36'27.5004"W
APACHE STATE E35-615 BHL Rev-2 (350'FSL & 200'FWL,SEC.36)	17760.74	6774.00	-2755.92	-8707.50	3239662.38	1402871.06	40°26'9.9204"N	104°38'20.4488"W
APACHE STATE E35-615 LP Rev-2 (330'FSL & 600'FWL,SEC.36)	7981.18	6774.00	-2683.07	1071.79	3249441.28	1402943.90	40°26'9.6828"N	104°36'13.9752"W
Apache State E35-615 BP2 (350'FSL & 200'FWL,SEC.36)	N/A	6774.00	-2758.65	-8708.90	3239660.98	1402868.32	40°26'9.8935"N	104°38'20.4652"W
Apache State E35-615 LP (330'FSL & 600'FWL,SEC.36)	N/A	6774.00	-2684.82	1072.22	3249441.71	1402942.16	40°26'9.6655"N	104°36'13.9698"W
Liback E35-615 BP2 Rev-1 (350'FSL & 200'FWL,SEC.36)	N/A	6774.00	-2758.65	-8708.90	3239660.98	1402868.32	40°26'9.8935"N	104°38'20.4652"W
Liback E35-615 LP Rev-1 (330'FSL & 200'FWL,SEC.36)	N/A	6774.00	-2681.34	1472.06	3249841.53	1402945.63	40°26'9.6599"N	104°36'9.7988"W
Liback E35-615 LP Rev-2 (330'FSL & 400'FWL,SEC.36)	N/A	6774.00	-2682.86	1272.22	3249641.70	1402944.12	40°26'9.6649"N	104°36'11.3833"W

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	144.074	30.00	0.00	0.00	0.00	0.00
End of Tangent	500.00	0.000	144.074	500.00	0.00	0.00	0.00	0.00
Build (XS)	2055.67	31.113	144.074	1980.33	-333.72	241.80	2.00	-129.83
KOP	6787.17	31.113	144.074	6031.18	-2313.56	1676.34	0.00	-900.09
LP (330'FSL & 600' FEL,SEC.36)	7981.18	90.000	269.573	6774.00	-2683.07	1071.79	9.00	-212.22
BHL	17760.74	90.000	269.573	6774.00	-2755.92	-8707.50	0.00	9133.21



HDGM2024v1.0 (1900.0 to 2025.0) Dip: 66.61° Field: 51533.5 nT  
 Magnetic North is 7.46 degrees East of True North (at 12/30/2024)  
 Grid North is 0.58 degrees East of True North  
 To correct azimuth from True to Grid subtract 0.58 degrees  
 To correct azimuth from Magnetic to Grid add 6.88 degrees



# Planned Wellpath Report

Apache State E35-615 (REV-C.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Apache State E35-615
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-615 PWB
Slot	SLOT#13 APACHE STATE E35-615 (2264'FNL & 1631'FEL,SEC.36)		

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	0.999962	Report Generated	2/10/2025 at 2:54:03 PM
Convergence at slot	0.58° 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	-271.39	3.84	3248369.53	1405626.87	40.4434170°	-104.6076350°
Facility Reference Pt			3248365.69	1405898.25	40.4441620°	-104.6076390°
Field Reference Pt			3000000.00	4454105.15	48.7761986°	-105.5000000°

WELLPATH DATUM			
Calculation method	Minimum curvature	RIG (4649'GL+30'KB@4679'RKB) (RKB) to Facility Vertical Datum	4679.00ft
Horizontal Reference Pt	Slot	RIG (4649'GL+30'KB@4679'RKB) (RKB) to Mean Sea Level	4679.00ft
Vertical Reference Pt	RIG (4649'GL+30'KB@4679'RKB) (RKB)	RIG (4649'GL+30'KB@4679'RKB) (RKB) to Ground Level at Slot (SLOT#13 APACHE STATE E35-615 (2264'FNL & 1631'FEL,SEC.36))	4679.00ft
MD Reference Pt	RIG (4649'GL+30'KB@4679'RKB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	252.44°



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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Apache State E35-615
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-615 PWB
Slot	SLOT#13 APACHE STATE E35-615 (2264'FNL & 1631'FEL,SEC.36)		

WELLPATH DATA (186 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	144.074	0.00	0.00	0.00	0.00	40.4434170	-104.6076350	0.00	
30.00	0.000	144.074	30.00	0.00	0.00	0.00	40.4434170	-104.6076350	0.00	SHL
130.00†	0.000	144.074	130.00	0.00	0.00	0.00	40.4434170	-104.6076350	0.00	
230.00†	0.000	144.074	230.00	0.00	0.00	0.00	40.4434170	-104.6076350	0.00	
330.00†	0.000	144.074	330.00	0.00	0.00	0.00	40.4434170	-104.6076350	0.00	
430.00†	0.000	144.074	430.00	0.00	0.00	0.00	40.4434170	-104.6076350	0.00	
500.00	0.000	144.074	500.00	0.00	0.00	0.00	40.4434170	-104.6076350	0.00	End of Tangent
530.00†	0.600	144.074	530.00	-0.05	-0.13	0.09	40.4434166	-104.6076347	2.00	
630.00†	2.600	144.074	629.96	-0.93	-2.39	1.73	40.4434104	-104.6076289	2.00	
730.00†	4.600	144.074	729.75	-2.91	-7.47	5.41	40.4433963	-104.6076158	2.00	
830.00†	6.600	144.074	829.27	-5.98	-15.37	11.14	40.4433745	-104.6075955	2.00	
930.00†	8.600	144.074	928.39	-10.15	-26.08	18.90	40.4433449	-104.6075680	2.00	
1030.00†	10.600	144.074	1026.98	-15.40	-39.59	28.68	40.4433076	-104.6075334	2.00	
1130.00†	12.600	144.074	1124.93	-21.74	-55.87	40.48	40.4432625	-104.6074916	2.00	
1230.00†	14.600	144.074	1222.13	-29.14	-74.91	54.28	40.4432099	-104.6074427	2.00	
1330.00†	16.600	144.074	1318.44	-37.62	-96.68	70.06	40.4431497	-104.6073868	2.00	
1430.00†	18.600	144.074	1413.75	-47.14	-121.17	87.80	40.4430820	-104.6073240	2.00	
1530.00†	20.600	144.074	1507.95	-57.71	-148.33	107.48	40.4430069	-104.6072543	2.00	
1630.00†	22.600	144.074	1600.93	-69.31	-178.14	129.07	40.4429245	-104.6071777	2.00	
1730.00†	24.600	144.074	1692.56	-81.92	-210.56	152.56	40.4428349	-104.6070945	2.00	
1830.00†	26.600	144.074	1782.74	-95.53	-245.54	177.91	40.4427381	-104.6070047	2.00	
1930.00†	28.600	144.074	1871.35	-110.12	-283.06	205.10	40.4426344	-104.6069084	2.00	
2030.00†	30.600	144.074	1958.30	-125.69	-323.06	234.08	40.4425238	-104.6068058	2.00	
2055.67	31.113	144.074	1980.33	-129.83	-333.72	241.80	40.4424943	-104.6067784	2.00	Build (XS)
2130.00†	31.113	144.074	2043.97	-141.93	-364.82	264.34	40.4424084	-104.6066986	0.00	
2230.00†	31.113	144.074	2129.58	-158.21	-406.66	294.66	40.4422927	-104.6065912	0.00	
2330.00†	31.113	144.074	2215.20	-174.49	-448.51	324.98	40.4421770	-104.6064838	0.00	
2430.00†	31.113	144.074	2300.81	-190.77	-490.35	355.29	40.4420613	-104.6063764	0.00	
2530.00†	31.113	144.074	2386.43	-207.05	-532.20	385.61	40.4419456	-104.6062690	0.00	
2630.00†	31.113	144.074	2472.04	-223.33	-574.04	415.93	40.4418299	-104.6061615	0.00	
2730.00†	31.113	144.074	2557.66	-239.61	-615.88	446.25	40.4417142	-104.6060541	0.00	

WELLPATH DATA (186 stations) † = interpolated, ‡ = extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2830.00†	31.113	144.074	2643.27	-255.89	-657.73	476.57	40.4415985	-104.6059467	0.00	
2930.00†	31.113	144.074	2728.89	-272.17	-699.57	506.89	40.4414828	-104.6058393	0.00	
3030.00†	31.113	144.074	2814.50	-288.45	-741.41	537.21	40.4413672	-104.6057319	0.00	
3130.00†	31.113	144.074	2900.12	-304.73	-783.26	567.53	40.4412515	-104.6056245	0.00	
3230.00†	31.113	144.074	2985.73	-321.01	-825.10	597.85	40.4411358	-104.6055171	0.00	
3330.00†	31.113	144.074	3071.35	-337.29	-866.95	628.16	40.4410201	-104.6054097	0.00	
3430.00†	31.113	144.074	3156.96	-353.57	-908.79	658.48	40.4409044	-104.6053023	0.00	
3530.00†	31.113	144.074	3242.57	-369.85	-950.63	688.80	40.4407887	-104.6051949	0.00	
3630.00†	31.113	144.074	3328.19	-386.12	-992.48	719.12	40.4406730	-104.6050875	0.00	
3730.00†	31.113	144.074	3413.80	-402.40	-1034.32	749.44	40.4405573	-104.6049801	0.00	
3830.00†	31.113	144.074	3499.42	-418.68	-1076.17	779.76	40.4404416	-104.6048727	0.00	
3930.00†	31.113	144.074	3585.03	-434.96	-1118.01	810.08	40.4403259	-104.6047653	0.00	
4030.00†	31.113	144.074	3670.65	-451.24	-1159.85	840.40	40.4402103	-104.6046579	0.00	
4130.00†	31.113	144.074	3756.26	-467.52	-1201.70	870.71	40.4400946	-104.6045505	0.00	



# Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Apache State E35-615
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-615 PWB
Slot	SLOT#13 APACHE STATE E35-615 (2264'FNL & 1631'FEL,SEC.36)		

WELLPATH DATA (186 stations) † = interpolated, ‡ = extrapolated station										
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MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4230.00†	31.113	144.074	3841.88	-483.80	-1243.54	901.03	40.4399789	-104.6044431	0.00	
4330.00†	31.113	144.074	3927.49	-500.08	-1285.38	931.35	40.4398632	-104.6043358	0.00	
4430.00†	31.113	144.074	4013.11	-516.36	-1327.23	961.67	40.4397475	-104.6042284	0.00	
4530.00†	31.113	144.074	4098.72	-532.64	-1369.07	991.99	40.4396318	-104.6041210	0.00	
4630.00†	31.113	144.074	4184.33	-548.92	-1410.92	1022.31	40.4395161	-104.6040136	0.00	
4730.00†	31.113	144.074	4269.95	-565.20	-1452.76	1052.63	40.4394004	-104.6039062	0.00	
4830.00†	31.113	144.074	4355.56	-581.48	-1494.60	1082.95	40.4392847	-104.6037988	0.00	
4930.00†	31.113	144.074	4441.18	-597.76	-1536.45	1113.27	40.4391690	-104.6036914	0.00	
5030.00†	31.113	144.074	4526.79	-614.04	-1578.29	1143.58	40.4390533	-104.6035840	0.00	
5130.00†	31.113	144.074	4612.41	-630.32	-1620.14	1173.90	40.4389376	-104.6034766	0.00	
5230.00†	31.113	144.074	4698.02	-646.59	-1661.98	1204.22	40.4388220	-104.6033692	0.00	
5330.00†	31.113	144.074	4783.64	-662.87	-1703.82	1234.54	40.4387063	-104.6032618	0.00	
5430.00†	31.113	144.074	4869.25	-679.15	-1745.67	1264.86	40.4385906	-104.6031544	0.00	
5530.00†	31.113	144.074	4954.87	-695.43	-1787.51	1295.18	40.4384749	-104.6030470	0.00	
5630.00†	31.113	144.074	5040.48	-711.71	-1829.35	1325.50	40.4383592	-104.6029396	0.00	
5730.00†	31.113	144.074	5126.10	-727.99	-1871.20	1355.82	40.4382435	-104.6028322	0.00	
5830.00†	31.113	144.074	5211.71	-744.27	-1913.04	1386.14	40.4381278	-104.6027248	0.00	
5930.00†	31.113	144.074	5297.32	-760.55	-1954.89	1416.45	40.4380121	-104.6026175	0.00	
6030.00†	31.113	144.074	5382.94	-776.83	-1996.73	1446.77	40.4378964	-104.6025101	0.00	
6130.00†	31.113	144.074	5468.55	-793.11	-2038.57	1477.09	40.4377807	-104.6024027	0.00	
6230.00†	31.113	144.074	5554.17	-809.39	-2080.42	1507.41	40.4376650	-104.6022953	0.00	
6330.00†	31.113	144.074	5639.78	-825.67	-2122.26	1537.73	40.4375493	-104.6021879	0.00	
6430.00†	31.113	144.074	5725.40	-841.95	-2164.11	1568.05	40.4374336	-104.6020805	0.00	
6530.00†	31.113	144.074	5811.01	-858.23	-2205.95	1598.37	40.4373180	-104.6019731	0.00	
6630.00†	31.113	144.074	5896.63	-874.51	-2247.79	1628.69	40.4372023	-104.6018657	0.00	
6730.00†	31.113	144.074	5982.24	-890.79	-2289.64	1659.01	40.4370866	-104.6017583	0.00	
6787.17	31.113	144.074	6031.18	-900.09	-2313.56	1676.34	40.4370204	-104.6016969	0.00	KOP
6830.00†	29.271	150.813	6068.22	-905.69	-2331.67	1687.94	40.4369704	-104.6016559	9.00	
6930.00†	26.542	169.219	6156.74	-907.98	-2375.05	1704.08	40.4368509	-104.6015995	9.00	
7030.00†	26.509	189.456	6246.40	-895.18	-2419.10	1704.59	40.4367299	-104.6015993	9.00	
7130.00†	29.180	207.939	6334.98	-867.60	-2462.74	1689.47	40.4366106	-104.6016552	9.00	

WELLPATH DATA (186 stations) † = interpolated, ‡ = extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7230.00†	33.920	222.628	6420.30	-825.91	-2504.89	1659.09	40.4364957	-104.6017659	9.00	
7330.00†	39.993	233.719	6500.26	-771.16	-2544.52	1614.20	40.4363882	-104.6019286	9.00	
7430.00†	46.878	242.175	6572.90	-704.67	-2580.64	1555.90	40.4362907	-104.6021393	9.00	
7530.00†	54.257	248.863	6636.41	-628.10	-2612.38	1485.63	40.4362055	-104.6023929	9.00	
7630.00†	61.942	254.390	6689.25	-543.33	-2638.94	1405.11	40.4361349	-104.6026831	9.00	
7730.00†	69.818	259.168	6730.10	-452.43	-2659.68	1316.34	40.4360804	-104.6030027	9.00	
7830.00†	77.811	263.480	6757.96	-357.66	-2674.07	1221.49	40.4360435	-104.6033439	9.00	
7882.09†	82.002	265.614	6767.09	-307.54	-2678.94	1170.46	40.4360316	-104.6035274	9.00	
7930.00†	85.867	267.538	6772.15	-261.35	-2681.78	1122.91	40.4360251	-104.6036983	9.00	
7981.18	90.000	269.573	6774.00 <sup>†</sup>	-212.22	-2683.07	1071.79	40.4360230	-104.6038820	9.00	LP (330'FSL & 600' FEL, SEC.36)
7982.54†	90.000	269.573	6774.00	-210.93	-2683.08	1070.43	40.4360230	-104.6038869	0.00	
8030.00†	90.000	269.573	6774.00	-165.57	-2683.43	1022.97	40.4360234	-104.6040574	0.00	
8130.00†	90.000	269.573	6774.00	-70.01	-2684.18	922.98	40.4360241	-104.6044166	0.00	
8230.00†	90.000	269.573	6774.00	25.55	-2684.92	822.98	40.4360248	-104.6047758	0.00	



# Planned Wellpath Report

Apache State E35-615 (REV-C.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Apache State E35-615
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-615 PWB
Slot	SLOT#13 APACHE STATE E35-615 (2264'FNL & 1631'FEL,SEC.36)		

## WELLPATH DATA (186 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8330.00†	90.000	269.573	6774.00	121.11	-2685.67	722.98	40.4360255	-104.6051350	0.00	
8430.00†	90.000	269.573	6774.00	216.67	-2686.41	622.99	40.4360263	-104.6054943	0.00	
8530.00†	90.000	269.573	6774.00	312.23	-2687.16	522.99	40.4360270	-104.6058535	0.00	
8630.00†	90.000	269.573	6774.00	407.79	-2687.90	422.99	40.4360277	-104.6062127	0.00	
8730.00†	90.000	269.573	6774.00	503.35	-2688.65	322.99	40.4360284	-104.6065720	0.00	
8830.00†	90.000	269.573	6774.00	598.91	-2689.39	223.00	40.4360291	-104.6069312	0.00	
8930.00†	90.000	269.573	6774.00	694.47	-2690.14	123.00	40.4360299	-104.6072904	0.00	
9030.00†	90.000	269.573	6774.00	790.03	-2690.88	23.00	40.4360306	-104.6076496	0.00	
9130.00†	90.000	269.573	6774.00	885.60	-2691.63	-77.00	40.4360313	-104.6080089	0.00	
9230.00†	90.000	269.573	6774.00	981.16	-2692.37	-176.99	40.4360320	-104.6083681	0.00	
9330.00†	90.000	269.573	6774.00	1076.72	-2693.12	-276.99	40.4360327	-104.6087273	0.00	
9430.00†	90.000	269.573	6774.00	1172.28	-2693.86	-376.99	40.4360334	-104.6090866	0.00	
9530.00†	90.000	269.573	6774.00	1267.84	-2694.61	-476.98	40.4360342	-104.6094458	0.00	
9630.00†	90.000	269.573	6774.00	1363.40	-2695.35	-576.98	40.4360349	-104.6098050	0.00	
9730.00†	90.000	269.573	6774.00	1458.96	-2696.10	-676.98	40.4360356	-104.6101642	0.00	
9830.00†	90.000	269.573	6774.00	1554.52	-2696.84	-776.98	40.4360363	-104.6105235	0.00	
9930.00†	90.000	269.573	6774.00	1650.08	-2697.59	-876.97	40.4360370	-104.6108827	0.00	
10030.00†	90.000	269.573	6774.00	1745.64	-2698.33	-976.97	40.4360377	-104.6112419	0.00	
10130.00†	90.000	269.573	6774.00	1841.21	-2699.08	-1076.97	40.4360384	-104.6116012	0.00	
10230.00†	90.000	269.573	6774.00	1936.77	-2699.82	-1176.96	40.4360391	-104.6119604	0.00	
10330.00†	90.000	269.573	6774.00	2032.33	-2700.57	-1276.96	40.4360398	-104.6123196	0.00	
10430.00†	90.000	269.573	6774.00	2127.89	-2701.31	-1376.96	40.4360405	-104.6126789	0.00	
10530.00†	90.000	269.573	6774.00	2223.45	-2702.06	-1476.96	40.4360412	-104.6130381	0.00	
10630.00†	90.000	269.573	6774.00	2319.01	-2702.80	-1576.95	40.4360419	-104.6133973	0.00	
10730.00†	90.000	269.573	6774.00	2414.57	-2703.55	-1676.95	40.4360426	-104.6137565	0.00	
10830.00†	90.000	269.573	6774.00	2510.13	-2704.29	-1776.95	40.4360433	-104.6141158	0.00	
10930.00†	90.000	269.573	6774.00	2605.69	-2705.04	-1876.95	40.4360440	-104.6144750	0.00	
11030.00†	90.000	269.573	6774.00	2701.25	-2705.78	-1976.94	40.4360447	-104.6148342	0.00	
11130.00†	90.000	269.573	6774.00	2796.81	-2706.52	-2076.94	40.4360454	-104.6151935	0.00	
11230.00†	90.000	269.573	6774.00	2892.38	-2707.27	-2176.94	40.4360461	-104.6155527	0.00	
11330.00†	90.000	269.573	6774.00	2987.94	-2708.01	-2276.93	40.4360468	-104.6159119	0.00	

WELLPATH DATA (186 stations) † = interpolated, ‡ = extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11430.00†	90.000	269.573	6774.00	3083.50	-2708.76	-2376.93	40.4360475	-104.6162711	0.00	
11530.00†	90.000	269.573	6774.00	3179.06	-2709.50	-2476.93	40.4360482	-104.6166304	0.00	
11630.00†	90.000	269.573	6774.00	3274.62	-2710.25	-2576.93	40.4360489	-104.6169896	0.00	
11730.00†	90.000	269.573	6774.00	3370.18	-2710.99	-2676.92	40.4360496	-104.6173488	0.00	
11830.00†	90.000	269.573	6774.00	3465.74	-2711.74	-2776.92	40.4360502	-104.6177081	0.00	
11930.00†	90.000	269.573	6774.00	3561.30	-2712.48	-2876.92	40.4360509	-104.6180673	0.00	
12030.00†	90.000	269.573	6774.00	3656.86	-2713.23	-2976.91	40.4360516	-104.6184265	0.00	
12130.00†	90.000	269.573	6774.00	3752.42	-2713.97	-3076.91	40.4360523	-104.6187857	0.00	
12230.00†	90.000	269.573	6774.00	3847.98	-2714.72	-3176.91	40.4360530	-104.6191450	0.00	
12330.00†	90.000	269.573	6774.00	3943.55	-2715.46	-3276.91	40.4360537	-104.6195042	0.00	
12430.00†	90.000	269.573	6774.00	4039.11	-2716.21	-3376.90	40.4360543	-104.6198634	0.00	
12530.00†	90.000	269.573	6774.00	4134.67	-2716.95	-3476.90	40.4360550	-104.6202227	0.00	
12630.00†	90.000	269.573	6774.00	4230.23	-2717.70	-3576.90	40.4360557	-104.6205819	0.00	
12730.00†	90.000	269.573	6774.00	4325.79	-2718.44	-3676.90	40.4360564	-104.6209411	0.00	



# Planned Wellpath Report

Apache State E35-615 (REV-C.0) PWP  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Apache State E35-615
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-615 PWB
Slot	SLOT#13 APACHE STATE E35-615 (2264'FNL & 1631'FEL,SEC.36)		

WELLPATH DATA (186 stations) † = interpolated, ‡ = extrapolated station										
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MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12830.00†	90.000	269.573	6774.00	4421.35	-2719.19	-3776.89	40.4360571	-104.6213003	0.00	
12930.00†	90.000	269.573	6774.00	4516.91	-2719.93	-3876.89	40.4360577	-104.6216596	0.00	
13030.00†	90.000	269.573	6774.00	4612.47	-2720.68	-3976.89	40.4360584	-104.6220188	0.00	
13130.00†	90.000	269.573	6774.00	4708.03	-2721.42	-4076.88	40.4360591	-104.6223780	0.00	
13230.00†	90.000	269.573	6774.00	4803.59	-2722.17	-4176.88	40.4360597	-104.6227373	0.00	
13330.00†	90.000	269.573	6774.00	4899.16	-2722.91	-4276.88	40.4360604	-104.6230965	0.00	
13430.00†	90.000	269.573	6774.00	4994.72	-2723.66	-4376.88	40.4360611	-104.6234557	0.00	
13530.00†	90.000	269.573	6774.00	5090.28	-2724.40	-4476.87	40.4360618	-104.6238149	0.00	
13630.00†	90.000	269.573	6774.00	5185.84	-2725.15	-4576.87	40.4360624	-104.6241742	0.00	
13730.00†	90.000	269.573	6774.00	5281.40	-2725.89	-4676.87	40.4360631	-104.6245334	0.00	
13830.00†	90.000	269.573	6774.00	5376.96	-2726.64	-4776.86	40.4360638	-104.6248926	0.00	
13930.00†	90.000	269.573	6774.00	5472.52	-2727.38	-4876.86	40.4360644	-104.6252519	0.00	
14030.00†	90.000	269.573	6774.00	5568.08	-2728.13	-4976.86	40.4360651	-104.6256111	0.00	
14130.00†	90.000	269.573	6774.00	5663.64	-2728.87	-5076.86	40.4360657	-104.6259703	0.00	
14230.00†	90.000	269.573	6774.00	5759.20	-2729.62	-5176.85	40.4360664	-104.6263295	0.00	
14330.00†	90.000	269.573	6774.00	5854.76	-2730.36	-5276.85	40.4360671	-104.6266888	0.00	
14430.00†	90.000	269.573	6774.00	5950.33	-2731.11	-5376.85	40.4360677	-104.6270480	0.00	
14530.00†	90.000	269.573	6774.00	6045.89	-2731.85	-5476.85	40.4360684	-104.6274072	0.00	
14630.00†	90.000	269.573	6774.00	6141.45	-2732.60	-5576.84	40.4360690	-104.6277665	0.00	
14730.00†	90.000	269.573	6774.00	6237.01	-2733.34	-5676.84	40.4360697	-104.6281257	0.00	
14830.00†	90.000	269.573	6774.00	6332.57	-2734.09	-5776.84	40.4360703	-104.6284849	0.00	
14930.00†	90.000	269.573	6774.00	6428.13	-2734.83	-5876.83	40.4360710	-104.6288441	0.00	
15030.00†	90.000	269.573	6774.00	6523.69	-2735.58	-5976.83	40.4360716	-104.6292034	0.00	
15130.00†	90.000	269.573	6774.00	6619.25	-2736.32	-6076.83	40.4360723	-104.6295626	0.00	
15230.00†	90.000	269.573	6774.00	6714.81	-2737.07	-6176.83	40.4360729	-104.6299218	0.00	
15330.00†	90.000	269.573	6774.00	6810.37	-2737.81	-6276.82	40.4360736	-104.6302811	0.00	
15430.00†	90.000	269.573	6774.00	6905.93	-2738.55	-6376.82	40.4360742	-104.6306403	0.00	
15530.00†	90.000	269.573	6774.00	7001.50	-2739.30	-6476.82	40.4360749	-104.6309995	0.00	
15630.00†	90.000	269.573	6774.00	7097.06	-2740.04	-6576.81	40.4360755	-104.6313588	0.00	
15730.00†	90.000	269.573	6774.00	7192.62	-2740.79	-6676.81	40.4360762	-104.6317180	0.00	
15830.00†	90.000	269.573	6774.00	7288.18	-2741.53	-6776.81	40.4360768	-104.6320772	0.00	

WELLPATH DATA (186 stations) † = interpolated, ‡ = extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
15930.00†	90.000	269.573	6774.00	7383.74	-2742.28	-6876.81	40.4360775	-104.6324364	0.00	
16030.00†	90.000	269.573	6774.00	7479.30	-2743.02	-6976.80	40.4360781	-104.6327957	0.00	
16130.00†	90.000	269.573	6774.00	7574.86	-2743.77	-7076.80	40.4360787	-104.6331549	0.00	
16230.00†	90.000	269.573	6774.00	7670.42	-2744.51	-7176.80	40.4360794	-104.6335141	0.00	
16330.00†	90.000	269.573	6774.00	7765.98	-2745.26	-7276.80	40.4360800	-104.6338734	0.00	
16430.00†	90.000	269.573	6774.00	7861.54	-2746.00	-7376.79	40.4360806	-104.6342326	0.00	
16530.00†	90.000	269.573	6774.00	7957.11	-2746.75	-7476.79	40.4360813	-104.6345918	0.00	
16630.00†	90.000	269.573	6774.00	8052.67	-2747.49	-7576.79	40.4360819	-104.6349510	0.00	
16730.00†	90.000	269.573	6774.00	8148.23	-2748.24	-7676.78	40.4360825	-104.6353103	0.00	
16830.00†	90.000	269.573	6774.00	8243.79	-2748.98	-7776.78	40.4360832	-104.6356695	0.00	
16930.00†	90.000	269.573	6774.00	8339.35	-2749.73	-7876.78	40.4360838	-104.6360287	0.00	
17030.00†	90.000	269.573	6774.00	8434.91	-2750.47	-7976.78	40.4360844	-104.6363880	0.00	
17130.00†	90.000	269.573	6774.00	8530.47	-2751.22	-8076.77	40.4360851	-104.6367472	0.00	
17230.00†	90.000	269.573	6774.00	8626.03	-2751.96	-8176.77	40.4360857	-104.6371064	0.00	



# Planned Wellpath Report

Apache State E35-615 (REV-C.0) PWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Well	Apache State E35-615
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-615 PWB
Slot	SLOT#13 APACHE STATE E35-615 (2264'FNL & 1631'FEL,SEC.36)		

## WELLPATH DATA (186 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
17330.00†	90.000	269.573	6774.00	8721.59	-2752.71	-8276.77	40.4360863	-104.6374656	0.00	
17430.00†	90.000	269.573	6774.00	8817.15	-2753.45	-8376.76	40.4360869	-104.6378249	0.00	
17530.00†	90.000	269.573	6774.00	8912.71	-2754.20	-8476.76	40.4360876	-104.6381841	0.00	
17630.00†	90.000	269.573	6774.00	9008.28	-2754.94	-8576.76	40.4360882	-104.6385433	0.00	
17730.00†	90.000	269.573	6774.00	9103.84	-2755.69	-8676.76	40.4360888	-104.6389026	0.00	
17760.74	90.000	269.573	6774.00 <sup>‡</sup>	9133.21	-2755.92	-8707.50	40.4360890	-104.6390130	0.00	BHL

## HOLE & CASING SECTIONS - Ref Wellbore: Apache State E35-615 PWB Ref Wellpath: Apache State E35-615 (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	1888.88	0.00	0.00	-290.86	210.75



# Planned Wellpath Report

Apache State E35-615 (REV-C.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Apache State E35-615
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-615 PWB
Slot	SLOT#13 APACHE STATE E35-615 (2264'FNL & 1631'FEL,SEC.36)		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.35-T06N-R65W DP 305	N/A	0.00	271.39	-3.84	3248365.69	1405898.25	40.4441620	-104.6076390	polygon
2D Polygon: dimensions not calculated									
SEC.36-T06N-R65W DP 305	N/A	0.00	271.39	-3.84	3248365.69	1405898.25	40.4441620	-104.6076390	polygon
2D Polygon: dimensions not calculated									
2) APACHE STATE E35-615 BHL Rev-2 (350'FSL & 200'FWL Sec.35)	17760.74	6774.00	-2755.92	-8707.50	3239662.38	1402871.06	40.4360890	-104.6390130	point
1) APACHE STATE E35-615 LP Rev-2 (330'FSL & 600'FEL,SEC.36)	7981.18	6774.00	-2683.07	1071.79	3249441.28	1402943.90	40.4360230	-104.6038820	point
Apache State E35-615 BPZ (350'FSL & 200'FWL,SEC.35)	N/A	6774.00	-2758.65	-8708.90	3239660.98	1402868.32	40.4360815	-104.6390181	point
Apache State E35-615 LP (330'FSL & 600'FEL,SEC.36)	N/A	6774.00	-2684.82	1072.22	3249441.71	1402942.16	40.4360182	-104.6038805	point
Libsack E35-615 BPZ Rev-1 (350'FSL & 200'FWL,SEC.35)	N/A	6774.00	-2758.65	-8708.90	3239660.98	1402868.32	40.4360815	-104.6390181	point
Libsack E35-615 LP Rev-1 (330'FSL & 200'FEL,SEC.36)	N/A	6774.00	-2681.34	1472.06	3249841.53	1402945.63	40.4360166	-104.6024441	point
Libsack E35-615 LP Rev-2 (330'FSL & 400'FEL,SEC.36)	N/A	6774.00	-2682.86	1272.22	3249641.70	1402944.12	40.4360180	-104.6031620	point

SURVEY PROGRAM - Ref Wellbore: Apache State E35-615 PWB Ref Wellpath: Apache State E35-615 (REV-C.0) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
30.00	18687.83	OWSG MWD rev2 (MS+IFR1)		Apache State E35-615 PWB



# Planned Wellpath Report

Apache State E35-615 (REV-C.0) PWP  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Apache State E35-615
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-615 PWB
Slot	SLOT#13 APACHE STATE E35-615 (2264'FNL & 1631'FEL,SEC.36)		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
7882.09	82.002	265.614	6767.09	
7982.54	90.000	269.573	6774.00	LP

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
30.00	0.000	144.074	30.00	SHL
500.00	0.000	144.074	500.00	End of Tangent
2055.67	31.113	144.074	1980.33	Build (XS)
6787.17	31.113	144.074	6031.18	KOP
7981.18	90.000	269.573	6774.00	LP (330'FSL & 600' FEL, SEC.36)
17760.74	90.000	269.573	6774.00	BHL



# Closest Approach Clearance Summary Report

Apache State E35-615 (REV-C.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Apache State E35-615
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-615 PWB
Slot	SLOT#13 APACHE STATE E35-615 (2264'FNL & 1631'FEL,SEC.36)		

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	0.999962	Report Generated	2/10/2025 at 5:18:04 PM
Convergence at slot	0.58° 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	-271.39	3.84	3248369.53	1405626.87	40°26'36.3012"N	104°36'27.4860"W
Facility Reference Pt			3248365.69	1405898.25	40°26'38.9832"N	104°36'27.5004"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 (4649'GL+30'KB@4679'RKB) (RKB) to Facility Vertical Datum	4679.00ft
Horizontal Reference Pt	Slot	RIG (4649'GL+30'KB@4679'RKB) (RKB) to Mean Sea Level	4679.00ft
Vertical Reference Pt	RIG (4649'GL+30'KB@4679'RKB) (RKB)	RIG (4649'GL+30'KB@4679'RKB) (RKB) to Ground Level at Slot (SLOT#13 APACHE STATE E35-615 (2264'FNL & 1631'FEL,SEC.36))	4679.00ft
MD Reference Pt	RIG (4649'GL+30'KB@4679'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

**POSITIONAL UNCERTAINTY CALCULATION SETTINGS**

Declination	<b>7.46° East of TN</b>	Dip Angle	<b>66.61°</b>	Mag Field Strength	<b>51534 nT</b>
Slot Surface Uncertainty @1SD		Horizontal	<b>0.100ft</b>	Vertical	<b>1.000ft</b>
Facility Surface Uncertainty @1SD		Horizontal	<b>8.200ft</b>	Vertical	<b>3.000ft</b>

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

Apache State E35-615 (REV-C.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Apache State E35-615
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-615 PWB
Slot	SLOT#13 APACHE STATE E35-615 (2264'FNL & 1631'FEL,SEC.36)		

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: Apache State E35-615 PWB    Ref Wellpath: Apache State E35-615 (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	1888.88	0.00	0.00	-290.86	210.75

SURVEY PROGRAM - Ref Wellbore: Apache State E35-615 PWB    Ref Wellpath: Apache State E35-615 (REV-C.0) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
30.00	18687.83	OWSG MWD rev2 (MS+IFR1)		Apache State E35-615 PWB



# Closest Approach Clearance Summary Report

Apache State E35-615 (REV-C.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)  
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**REFERENCE WELLPATH IDENTIFICATION**

Operator	NOBLE ENERGY, INC	Well	Apache State E35-615
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-615 PWB
Slot	SLOT#13 APACHE STATE E35-615 (2264'FNL & 1631'FEL,SEC.36)		

**CALCULATION RANGE & CUTOFF**

From: <b>30.00ft MD</b>	To: <b>17760.74ft MD</b>	C-C Cutoff: <b>(none)</b>
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**OFFSET WELL CLEARANCE SUMMARY (70 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
E Section 35	Warren E35-14 (05-123-16223) PA	Warren E 35-14 (05-123-16223)	Warren E 35-14 AWB	Warren E 35-14 AWP	Drilling	15822.22	148.72	15822.22	15822.22	0.02	15822.22	FAIL
E Section 35	Little Will 5 (05-123-11742) PA	Little Will 5 (05-123-11742)	Little Will 5 AWB	Little Will 5 No Surveys	Drilling	13339.16	274.88	13339.16	13339.17	0.03	13339.17	FAIL
E Section 35	Warren E 35-12 (05-123-16221) SI	Warren E 35-12 (05-123-16221)	Warren E 35-12 AWB	Warren E 35-12 AWP	Drilling	17317.76	1425.83	17317.76	17317.76	0.17	17317.76	FAIL
E Section 35	Warren E 35-11 (05-123-16220) PA	Warren E 35-11 (05-123-16220)	Warren E 35-11 AWB	Warren E 35-11 AWP	Drilling	15830.88	1470.80	15830.88	15830.99	0.18	15830.99	FAIL
E Section 36	(Sinjin E36-9 (SI))	Sinjin E36-9 (05-123-16303)	Sinjin E36-9 AWB	Wellbore #1\No Surveys	Drilling	4339.57	37.70	8030.00	4340.35	0.25	8130.00	FAIL
E Section 35	WARREN #E 35-6 (05-123-12087) PA	WARREN #E 35-6 (05-123-12087)	WARREN #E 35-6 AWB	WARREN #E 35-6 AWP	Drilling	15979.00	2920.43	15979.00	15979.47	0.35	15979.47	FAIL
E Section 36	(LDS F 01-29 (SI))	LDS F 01-29 (05-123-29793)	LDS F 01-29 AWB	Wellbore #1\Inc Only Surveys	Drilling	11351.99	121.30	11351.99	11352.30	0.43	11352.30	FAIL
E Section 35	Lyster 4-35EG (05-123-12998) PA	Lyster 4-35EG (05-123-12998)	Lyster 4-35EG AWB	Lyster 4-35EG AWP	Drilling	14696.22	4242.28	14696.22	14697.08	0.51	14697.08	FAIL
E Section 35	Warren E35-13 (05-123-16222) SI	Warren E35-13 (05-123-16222)	Warren E35-13 AWB	Warren E35-13 AWP	Drilling	17334.36	126.86	17334.36	17334.40	0.55	17334.40	FAIL
E Section 35	Little Will 8 (05-123-11986) PR	Little Will 8 (05-123-11986)	Little Will 8 AWB	Little Will 8 AWP	Drilling	14796.10	2856.12	14796.10	14797.84	0.73	14797.84	FAIL
SEC.36-T06N-R65W	SLOT#12 APACHE STATE E35-620 (2249'FNL & 1631'FEL,SEC.36)	Apache State E35-620	Apache State E35-620 PWB	Apache State E35-620 (REV-C.0) PWP	Planned	30.00	14.94	500.00	1950.00	1.00	17760.74	WARN
SEC.19-T06N-R64W	SLOT#18 ROTH STATE A31-790 (508'FSL & 1980'FWL,SEC.19)	ROTH STATE A31-790 (05-123-51060)	ROTH STATE A31-790 AWB	ROTH STATE A31-790 AWP	Drilling	7448.27	201.44	7448.27	7452.01	1.16	7452.01	PASS
E Section 35	Hoshiko 1-35 (05-123-14541) PA	Hoshiko 1-35 (05-123-14541)	Hoshiko 1-35 AWB	Hoshiko 1-35 - No Surveys	Drilling	30.00	4653.26	13330.00	4086.48	1.31	13330.00	PASS
SEC.01-T05N-R65W	SLOT #1 LDS #1U-304 (05-123-41129)	LDS #1U-304	LDS #1U-304 AWB	LDS #1U-304 AWP	Drilling	8674.76	500.72	14030.00	14740.52	1.39	14740.52	PASS
E Section 36	(LDS F 01-27 (SI))		LDS F 01-27 AWB	Wellbore #1\Gyro Surveys	Drilling	8687.95	112.31	8687.95	8681.96	1.48	8681.96	PASS

OFFSET WELL CLEARANCE SUMMARY (70 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
		LDS F 01-27 (05-123-29795)										
E Section 35	SRC Airport 34-35D (05-123-34400) PR	SRC Airport 34-35D (05-123-34400)	SRC Airport 34-35D AWB	SRC Airport 34-35D AWP	Drilling	14712.44	287.81	14712.44	14713.82	1.60	14713.82	PASS
SEC.34-T06N-R65W	SLOT#1 LDS E #35-79HC (05-123-35466)	LDS E #35-79HC	LDS E #35-79HC AWB	LDS E #35-79HC AWP	Drilling	17760.74	367.77	17760.74	17760.74	1.77	17760.74	PASS
SEC.01-T05N-R65W	SLOT #2 LDS #1U-234 (05-123-41128)	LDS #1U-234	LDS #1U-234 AWB	LDS #1U-234 AWP	Drilling	14749.14	724.24	14749.14	14820.95	1.86	14820.95	PASS
SEC.36-T06N-R65W	SLOT#11 APACHE STATE E35-625 (2234'FNL & 1631'FEL,SEC.36)	Apache State E35-625	Apache State E35-625 PWB	Apache State E35-625 (REV-C.0) PWP	Planned	30.00	29.88	500.00	17760.74	2.07	17760.74	PASS
E Section 36	(LDS F 01-30D (TA))	LDS F 01-30D (05-123-30047)	LDS F 01-30D AWB	Wellbore #1\MWD Surveys	Drilling	12595.54	290.57	12595.54	12606.33	2.12	12606.33	PASS
E Section 36	(Sinjin E36-16 (PA))	Sinjin E36-16 (05-123-16469)	Sinjin E36-16 AWB	Wellbore #1\Gyro Surveys	Drilling	8090.15	153.59	8090.15	8105.68	2.13	8105.68	PASS
E Section 36	(Sinjin E36-14 (PA))	Sinjin E36-14 (05-123-16307)	Sinjin E36-14 AWB	Wellbore #1\No Surveys	Drilling	10668.53	513.97	10668.53	10676.37	2.25	10676.37	PASS
SEC.02-T05N-R65W	SLOT#01 Noffsinger #2RD (05-123-31903)	Noffsinger #2RD	Noffsinger #2RD AWB	Noffsinger #2RD AWP	Drilling	13959.24	385.49	13959.24	13972.99	2.37	13972.99	PASS
E Section 35	SRC Airport 44-35D (05-123-34406) SI	SRC Airport 44-35D (05-123-34406)	SRC Airport 44-35D	SRC Airport 44-35D AWP	Drilling	13429.49	427.59	13429.49	13436.62	2.78	13436.62	PASS
E Section 36	(SINJIN E36-15 (PA))	SINJIN E36-15 (05-123-16308)	SINJIN E36-15	SINJIN E36-15\Wellbore #1 - As Drilled	Drilling	9431.20	230.70	9431.20	9444.83	2.81	9444.83	PASS



# Closest Approach Clearance Summary Report

Apache State E35-615 (REV-C.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Apache State E35-615
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-615 PWB
Slot	SLOT#13 APACHE STATE E35-615 (2264'FNL & 1631'FEL,SEC.36)		

CALCULATION RANGE & CUTOFF		
From: 30.00ft MD	To: 17760.74ft MD	C-C Cutoff: (none)

OFFSET WELL CLEARANCE SUMMARY (70 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
E Section 36	(LDS F 01-28D (SI))	LDS F 01-28D (05-123-29794)	LDS F 01-28D AWB	Wellbore #1\Gyro Surveys	Drilling	9952.78	252.66	9952.78	9954.16	2.88	9954.16	PASS
SEC.36-T06N-R65W	SLOT#10 APACHE STATE E35-630 (2219'FNL & 1631'FEL,SEC.36)	Apache State E35-630	Apache State E35-630 PWB	Apache State E35-630 (REV-D.0) PWP	Planned	30.00	44.81	17760.74	17760.74	3.12	17760.74	PASS
SEC.36-T06N-R65W	SLOT#09 APACHE STATE E35-635 (2204'FNL & 1631'FEL,SEC.36)	Apache State E35-635	Apache State E35-635 PWB	Apache State E35-635 (REV-C.0) PWP	Planned	30.00	59.75	500.00	17760.74	4.17	17760.74	PASS
E Section 36	(Sinjin E36-13 (TA))	Sinjin E36-13 (05-123-16306)	Sinjin E36-13 AWB	Wellbore #1\Gyro Surveys	Drilling	12081.94	534.37	12081.94	12102.69	4.40	12102.69	PASS
SEC.19-T06N-R64W	SLOT#19 ROTH A31-780 (492'FSL & 1996'FWL,SEC.19)	ROTH A31-780 (05-123-51064)	ROTH A31-780 AWB	ROTH A31-780 AWP	Drilling	7259.71	807.52	7259.71	7289.11	4.65	7289.11	PASS
E Section 35	EWS #2 (05-123-37808) IJ	EWS #2 (05-123-37808)	EWS #2	EWS #2 - As-Drilled	Drilling	14742.34	865.74	14742.34	14783.68	4.94	14783.68	PASS
SEC.36-T06N-R65W	SLOT#08 APACHE STATE E35-640 (2189'FNL & 1631'FEL,SEC.36)	Apache State E35-640	Apache State E35-640 PWB	Apache State E35-640 (REV-C.0) PWP	Planned	30.00	74.69	500.00	17760.74	5.22	17760.74	PASS
E Section 36	(Cattleman 14-31D (SI))	Cattleman 14-31D (05-123-22089)	Cattleman 14-31D AWB	Wellbore #1\MWD Surveys	Drilling	6888.07	491.60	6888.07	6927.04	6.22	6927.04	PASS
SEC.36-T06N-R65W	SLOT#07 APACHE STATE E35-646 (2174'FNL & 1631'FEL,SEC.36)	Apache State E35-646	Apache State E35-646 PWB	Apache State E35-646 (REV-C.0) PWP	Planned	30.00	89.99	12630.00	17760.74	6.67	17760.74	PASS
E Section 36	(Sinjin E36-10(SI))	Sinjin E36-10(05-123-16304)	Sinjin E36-10 AWB	Wellbore #1\No Surveys	Drilling	2695.97	922.90	9330.00	9402.82	7.02	9402.82	PASS
A Section 31	Cervi 13-31H (05-123-34142) PR	Cervi 13-31H (05-123-34142)	Cervi 13-31H AWB	Cervi 13-31H AWP	Producing / injecting	5624.93	467.51	5624.93	5718.98	7.08	5718.98	PASS
E Section 36	(Sinjin E36-7 (PA))	Sinjin E36-7 (05-123-16302)	Sinjin E36-7 AWB	Wellbore #1\No Surveys	Drilling	30.00	353.46	9430.00	1138.34	7.10	9530.00	PASS
E Section 36	(Sinjin E36-11 (SI))	Sinjin E36-11 (05-123-16305)	Sinjin E36-11 AWB	Wellbore #1\No Surveys	Drilling	10580.12	1649.77	10580.12	10654.73	7.27	10654.73	PASS
E Section 36	(LDS E 36-33 (SI))	LDS E 36-33 (05-123-29796)	LDS E 36-33 AWB	LDS E 36-33\Gyro Surveys	Drilling	12513.85	985.60	12513.85	12585.85	7.62	12585.85	PASS

<b>OFFSET WELL CLEARANCE SUMMARY (70 Offset Wellpaths selected) Ratios are calculated in Closest Approach plane</b>													
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.36-T06N-R65W	SLOT#06 APACHE STATE E35-656 (2159'FNL & 1631'FEL,SEC.36)	Apache State E35-656	Apache State E35-656 PWB	Apache State E35-656 (REV-C.0) PWP	Planned	30.00	104.93	17760.74	17760.74	7.67	17760.74	PASS	
SEC.36-T06N-R65W	SLOT#05 APACHE STATE E35-661 (2144'FNL & 1631'FEL,SEC.36)	Apache State E35-661	Apache State E35-661 PWB	Apache State E35-661 (REV-C.0) PWP	Planned	30.00	119.86	17760.74	17760.74	8.65	17760.74	PASS	
E Section 36	(Sinjin E36-12 (SI))	Sinjin E36-12 (05-123-12890)	Sinjin E36-12 AWB	Wellbore #1\Gyro Surveys	Drilling	12074.99	1460.03	12074.99	11967.07	8.98	11967.07	PASS	
SEC.36-T06N-R65W	SLOT#04 APACHE STATE E35-669 (2129'FNL & 1631'FEL,SEC.36)	Apache State E35-669	Apache State E35-669 PWB	Apache State E35-669 (REV-C.0) PWP	Planned	30.00	134.80	17760.74	17760.74	9.74	17760.74	PASS	
E Section 36	(Sinjin E36-25 (SI))	Sinjin E36-25 (05-123-22619)	Sinjin E36-25 AWB	Wellbore #1\Gyro Surveys	Drilling	11235.74	1087.16	11235.74	11342.61	10.15	11342.61	PASS	
E Section 36	(Mansfield E36-65HN)	Mansfield E36-65HN (05-123-34611)	Mansfield E36-65HN ST01	Mansfield E36-65HN ST01 - As Drilled	Drilling	6386.52	2112.88	12330.00	7580.91	10.24	12830.00	PASS	
SEC.36-T06N-R65W	SLOT#03 APACHE STATE E35-674 (2114'FNL & 1631'FEL,SEC.36)	Apache State E35-674	Apache State E35-674 PWB	Apache State E35-674 (REV-C.0) PWP	Planned	30.00	149.74	17760.74	17760.74	11.06	17760.74	PASS	
E Section 36	(Cattleman 13-31D (PR))	Cattleman 13-31D (05-123-22091)	Cattleman 13-31D AWB	Wellbore #1\MWD Surveys	Drilling	5244.87	850.81	5244.87	5301.85	12.31	5301.85	PASS	
SEC.36-T06N-R65W	SLOT#02 APACHE STATE E35-679 (2099'FNL & 1631'FEL,SEC.36)	Apache State E35-679	Apache State E35-679 PWB	Apache State E35-679 (REV-C.0) PWP	Planned	30.00	165.04	17760.74	17760.74	12.50	17760.74	PASS	
E Section 36	(Sinjin E36-6 (SI))	Sinjin E36-6 (05-123-16354)	Sinjin E36-6 AWB	Wellbore #1\No Surveys	Drilling	30.00	1720.06	10730.00	10978.62	13.00	10978.62	PASS	
E Section 35	Warren E 35-05 (05-123-16119) PA	Warren E 35-05 (05-123-16119)	Warren E 35-05 AWB	Warren E 35-05 AWP	Drilling	17226.52	3100.40	17226.52	17664.08	13.56	17664.08	PASS	



# Closest Approach Clearance Summary Report

Apache State E35-615 (REV-C.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Apache State E35-615
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-615 PWB
Slot	SLOT#13 APACHE STATE E35-615 (2264'FNL & 1631'FEL,SEC.36)		

CALCULATION RANGE & CUTOFF		
From: 30.00ft MD	To: 17760.74ft MD	C-C Cutoff: (none)

OFFSET WELL CLEARANCE SUMMARY (70 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.36-T06N-R65W	SLOT#01 APACHE STATE E35-684 (2084'FNL & 1631'FEL,SEC.36)	Apache State E35-684	Apache State E35-684 PWB	Apache State E35-684 (REV-C.0) PWP	Planned	30.00	179.97	17760.74	17760.74	13.81	17760.74	PASS	
E Section 36	(Bill E36-67HN)	Bill E36-67HN (05-123-34609)	Bill E36-67HN	Bill E36-67HN - As Drilled	Drilling	12436.98	3295.42	12436.98	6693.71	14.40	13230.00	PASS	
E Section 26	(Healy E34-69HN)	Healy E34-69HN (05-123-38160)	Healy E34-69HN AWB	Healy E34-69HN\Original Drilling	Drilling	30.00	4680.36	16730.00	17760.74	15.73	17760.74	PASS	
E Section 36	(Mansfield E36-65HN)	Mansfield E36-65HN (05-123-34611)	Mansfield E36-65HN	Mansfield E36-65HN - As Drilled	Drilling	12311.97	2137.90	12311.97	12842.93	16.47	12842.93	PASS	
E Section 35	CSU E 35-19 (05-123-30493) SI	CSU E 35-19 (05-123-30493)	CSU E 35-19 AWB	CSU E 35-19 AWP	Drilling	16781.84	3776.50	16781.84	17460.31	17.02	17460.31	PASS	
E Section 35	CSU E 35-04 (05-123-30492) SI	CSU E 35-04 (05-123-30492)	CSU E 35-04 AWB	CSU E 35-04 AWP	Suspended	17474.41	4087.98	17474.41	17760.74	17.55	17760.74	PASS	
E Section 35	CSU E35-03D (05-123-30495)	CSU E35-03D (05-123-30495)	CSU E35-03D AWB	CSU E35-03D - As Drilled	Drilling	16136.37	4335.61	16136.37	16864.45	18.93	16864.45	PASS	
E Section 35	Hoshiko 3 (05-123-11550) PA	Hoshiko 3 (05-123-11550)	Hoshiko 3 AWB	Hoshiko 3 - As Drilled	Drilling	13289.18	2972.84	13289.18	13893.74	19.53	13893.74	PASS	
E Section 36	(Cattleman 24-31D (TA))	Cattleman 24-31D (05-123-22092)	Cattleman 24-31D AWB	Wellbore #1\MWD Surveys	Drilling	6787.17	1652.55	6787.17	6959.62	20.84	17730.00	PASS	
E Section 36	(Sinjin State E36-20 (SI))	Sinjin State E36-20 (05-123-30661)	Sinjin State E36-20 AWB	Wellbore #1\Gyro Surveys	Drilling	631.24	2341.61	11330.00	11834.85	21.04	11834.85	PASS	
E Section 36	(Sinjin E36-5 (PR))	Sinjin E36-5 (05-123-16353)	Sinjin E36-5 AWB	Wellbore #1\Gyro Surveys	Drilling	12015.82	2764.49	12015.82	12658.25	22.21	12658.25	PASS	
E Section 36	(Cattleman 23-31D (PR))	Cattleman 23-31D (05-123-22090)	Cattleman 23-31D AWB	Wellbore #1\MWD Surveys	Drilling	4766.24	1638.19	4766.24	5496.65	24.74	17330.00	PASS	
E Section 36	(Sinjin E36-8 (SI))	Sinjin E36-8 (05-123-16468)	Sinjin E36-8 AWB	Wellbore #1\Gyro Surveys	Drilling	2273.61	991.30	2273.61	2741.06	25.16	8730.00	PASS	
E Section 35	CEI-Hoshiko 2 (05-123-11415) PA		CEI-Hoshiko 2 AWB	CEI-Hoshiko 2 AWP	Abandoned	13329.37	4294.48	13329.37	14547.01	27.00	14547.01	PASS	

**OFFSET WELL CLEARANCE SUMMARY** (70 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
		CEI-Hoshiko 2 (05-123-11415)										
E Section 36	(Sinjin State E36-19)	Sinjin State E36-19 (05-123-30092)	Sinjin State E36-19 AWB	Wellbore #1\Gyro Surveys	Drilling	156.37	2518.48	11430.00	12524.20	30.19	12524.20	PASS
E Section 36	(Sinjin E36-04 (SI))	Sinjin E36-04 (05-123-11676)	Sinjin E36-04 Gyros	Sinjin E36-04 Gyros\As-Drilled	Drilling	30.00	3404.09	12030.00	13521.66	32.48	13521.66	PASS
E Section 36	(Sinjin E 36-3 (PA))	Sinjin E 36-3 (05-123-16467)	Sinjin E 36-3 AWB	Wellbore #1\Gyro Surveys	Drilling	30.00	2340.74	10730.00	12493.80	39.20	12493.80	PASS
E Section 36	(Sinjin E36-2 (PR))	Sinjin E36-2 (05-123-16301)	Sinjin E36-2 AWB	Wellbore #1\Gyro Surveys	Drilling	30.00	1700.51	9630.00	11585.33	44.89	11585.33	PASS
E Section 36	(Sinjin E36-1 (SI))	Sinjin E36-1 (05-123-16466)	Sinjin E36-1 AWB	Wellbore #1\Gyro Surveys	Drilling	30.00	1960.46	8130.00	10494.15	55.30	10494.15	PASS
A Section 31	Ehrlich 31-1 (05-123-13686) PA	Ehrlich 31-1 (05-123-13686)	Ehrlich 31-1 AWB	Ehrlich 31-1 AWP	Abandoned	1174.43	2709.22	1174.43	6830.00	56.53	6830.00	PASS