

NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#04 APACHE STATE E35-669 (2129FNL & 1631FEL, SEC.36)

Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: Apache State E35-669

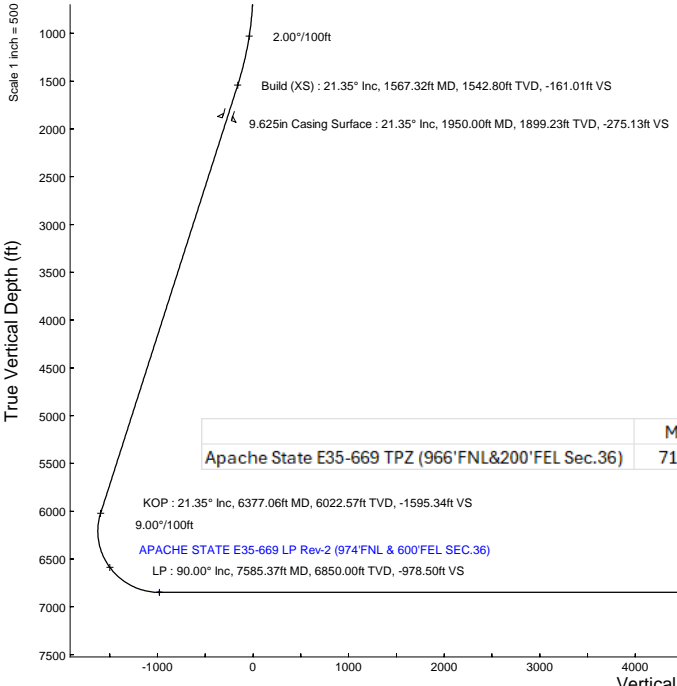
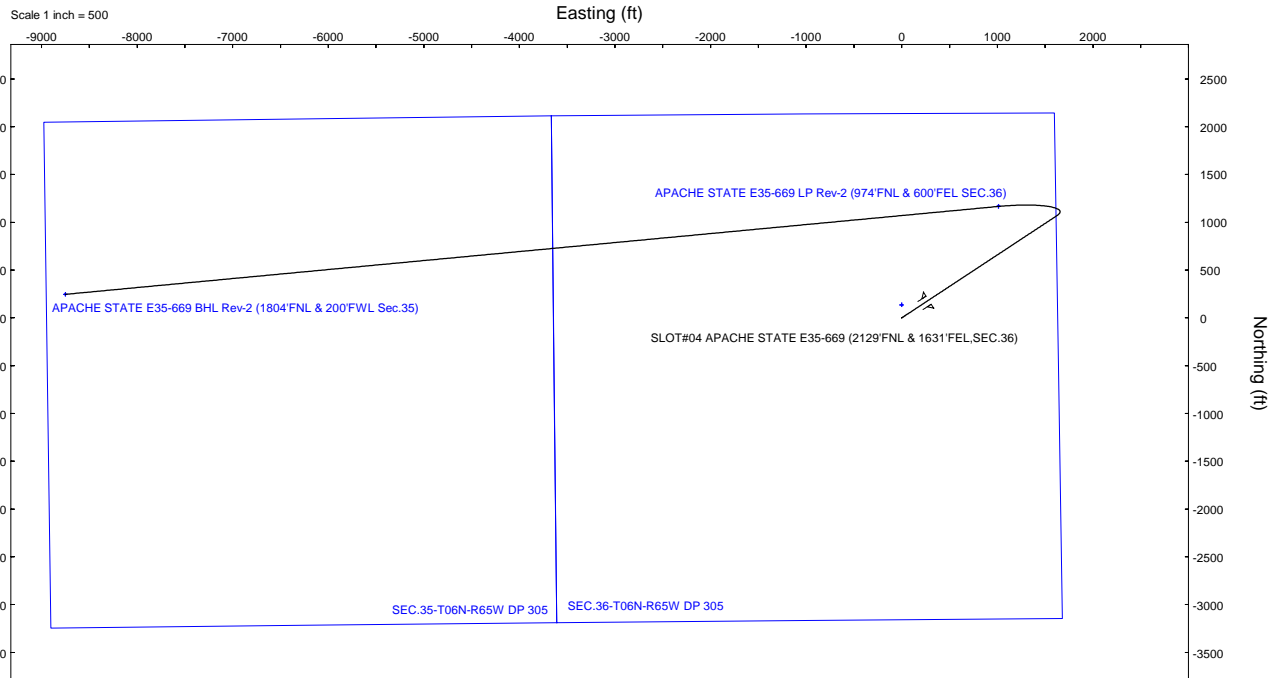
Facility: SEC.36-T06N-R65W Wellbore: Apache State E35-669 PWB

Plot reference wellpath is Apache State E35-669 (REV-C.0) PWP
 Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
 True vertical depths are referenced to Rig (4650'GL+30'KB = 4680.0'RK) (RK) North Reference: Grid north
 Reference wellpath measured depths are referenced to Rig (4650'GL+30'KB = 4680.0'RK) (RK) Scale: True distance
 Rig (4650'GL+30'KB = 4680.0'RK) to Mean Sea Level: 4680 feet Coordinates are in feet referenced to Slot
 Mean Sea Level to Ground level (At Slot: SLOT#04 APACHE STATE E35-669 (2129FNL & 1631FEL, 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_Danner

Location Information					
Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.36-T06N-R65W		3248365.688	1405898.248	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)	Latitude
SLOT#04 APACHE STATE E35-669 (2129FNL & 1631FEL, SEC.36)	-136.61	1.65	3248367.341	1405761.645	40°26'37.6332"N
Rig (4650'GL+30'KB = 4680.0'RK) (RK) to Ground level (At Slot: SLOT#04 APACHE STATE E35-669 (2129FNL & 1631FEL, SEC.36))	4680ft				
Mean Sea Level to Ground level (At Slot: SLOT#04 APACHE STATE E35-669 (2129FNL & 1631FEL, SEC.36))	0ft				
Rig (4650'GL+30'KB = 4680.0'RK) (RK) to Mean Sea Level	4680ft				

Targets									
Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
SEC.35-T06N-R65W DP 305	N/A	1.00	136.61	-1.65	3248365.69	1405898.25	40°26'38.9832"N	104°36'27.5004"W	
SEC.36-T06N-R65W DP 305	N/A	1.00	136.61	-1.65	3248365.69	1405898.25	40°26'38.9832"N	104°36'27.5004"W	
APACHE STATE E35-669 BHL Rev-2 (1804FNL & 200FWL, Sec.36)	17390.82	6850.00	246.49	-8750.52	3239617.17	1406008.12	40°26'40.9236"N	104°38'20.6376"W	
APACHE STATE E35-669 LP Rev-2 (974FNL & 600FEL, SEC.36)	7585.37	6850.00	1165.87	1011.73	3249379.03	1406027.47	40°26'49.0524"N	104°36'14.2596"W	
Liback E35-669 BPZ Rev-1 (1804FNL & 200FWL, SEC.36)	N/A	6850.00	245.92	-8752.79	3239614.90	1406007.55	40°26'40.9182"N	104°38'20.6670"W	
Liback E35-669 LP Rev-1 (938FNL & 200FEL, SEC.36)	N/A	6850.00	1206.22	1413.12	3249790.40	1406067.82	40°26'49.4110"N	104°36'9.0629"W	
Liback E35-669 LP Rev-2 (974FNL & 600FEL, SEC.36)	N/A	6850.00	1168.53	1013.67	3249380.97	1406030.13	40°26'48.0786"N	104°36'14.2342"W	

Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	30.00	0.000	56.624	30.00	0.00	0.00	0.00	0.00
End of Tangent	500.00	0.000	56.624	500.00	0.00	0.00	0.00	0.00
Build (XS)	1567.32	21.346	56.624	1542.80	108.12	164.12	2.00	-161.01
KOP	6377.06	21.346	56.624	6022.57	1071.27	1626.15	0.00	-1595.34
LP	7585.37	90.000	264.620	6850.00	1165.87	1011.73	9.00	-978.50
BHL	17390.82	90.000	264.620	6850.00	246.49	-8750.52	0.00	8753.99



Apache State E35-669 TPZ (966'FNL&200'FEL Sec.36)	MD	Inclination	Azimuth	TVD
	7152	51.754	272.934	6710.43

HDGM2024v1.0 (1900.0 to 2025.0) Dp: 66.61° Field: 51533.6 nT
 Magnetic North is 7.46 degrees East of True North (at 12/02/2024)
 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

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Apache State E35-669
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-669 PWB
Slot	SLOT#04 APACHE STATE E35-669 (2129'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	0.999963	Report Generated	2/10/2025 at 2:53:31 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	-136.61	1.65	3248367.34	1405761.65	40.4437870°	-104.6076380°
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 (4650'GL+30'KB = 4680.0'RKB) (RKB) to Facility Vertical Datum	4680.00ft
Horizontal Reference Pt	Slot	Rig (4650'GL+30'KB = 4680.0'RKB) (RKB) to Mean Sea Level	4680.00ft
Vertical Reference Pt	Rig (4650'GL+30'KB = 4680.0'RKB) (RKB)	Rig (4650'GL+30'KB = 4680.0'RKB) (RKB) to Ground Level at Slot (SLOT#04 APACHE STATE E35-669 (2129'FNL & 1631'FEL,SEC.36))	4680.00ft
MD Reference Pt	Rig (4650'GL+30'KB = 4680.0'RKB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	271.61°



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Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-669 PWB
Slot	SLOT#04 APACHE STATE E35-669 (2129'FNL & 1631'FEL,SEC.36)		

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	56.624	0.00	0.00	0.00	0.00	40.4437870	-104.6076380	0.00	
30.00	0.000	56.624	30.00	0.00	0.00	0.00	40.4437870	-104.6076380	0.00	Tie On
130.00†	0.000	56.624	130.00	0.00	0.00	0.00	40.4437870	-104.6076380	0.00	
230.00†	0.000	56.624	230.00	0.00	0.00	0.00	40.4437870	-104.6076380	0.00	
330.00†	0.000	56.624	330.00	0.00	0.00	0.00	40.4437870	-104.6076380	0.00	
430.00†	0.000	56.624	430.00	0.00	0.00	0.00	40.4437870	-104.6076380	0.00	
500.00	0.000	56.624	500.00	0.00	0.00	0.00	40.4437870	-104.6076380	0.00	End of Tangent
530.00†	0.600	56.624	530.00	-0.13	0.09	0.13	40.4437872	-104.6076375	2.00	
630.00†	2.600	56.624	629.96	-2.42	1.62	2.46	40.4437914	-104.6076291	2.00	
730.00†	4.600	56.624	729.75	-7.56	5.08	7.71	40.4438007	-104.6076101	2.00	
830.00†	6.600	56.624	829.27	-15.55	10.44	15.85	40.4438152	-104.6075807	2.00	
930.00†	8.600	56.624	928.39	-26.39	17.72	26.90	40.4438349	-104.6075407	2.00	
1030.00†	10.600	56.624	1026.98	-40.05	26.89	40.82	40.4438597	-104.6074904	2.00	
1130.00†	12.600	56.624	1124.93	-56.52	37.96	57.61	40.4438896	-104.6074296	2.00	
1230.00†	14.600	56.624	1222.13	-75.79	50.89	77.25	40.4439245	-104.6073586	2.00	
1330.00†	16.600	56.624	1318.44	-97.82	65.68	99.71	40.4439645	-104.6072774	2.00	
1430.00†	18.600	56.624	1413.75	-122.59	82.32	124.95	40.4440095	-104.6071861	2.00	
1530.00†	20.600	56.624	1507.95	-150.07	100.77	152.97	40.4440594	-104.6070848	2.00	
1567.32	21.346	56.624	1542.80	-161.01	108.12	164.12	40.4440792	-104.6070445	2.00	Build (XS)
1630.00†	21.346	56.624	1601.18	-179.70	120.67	183.17	40.4441131	-104.6069756	0.00	
1730.00†	21.346	56.624	1694.32	-209.53	140.70	213.57	40.4441673	-104.6068656	0.00	
1830.00†	21.346	56.624	1787.46	-239.35	160.72	243.97	40.4442214	-104.6067557	0.00	
1930.00†	21.346	56.624	1880.60	-269.17	180.75	274.37	40.4442755	-104.6066458	0.00	
2030.00†	21.346	56.624	1973.74	-298.99	200.77	304.76	40.4443296	-104.6065359	0.00	
2130.00†	21.346	56.624	2066.88	-328.81	220.80	335.16	40.4443838	-104.6064259	0.00	
2230.00†	21.346	56.624	2160.02	-358.63	240.82	365.56	40.4444379	-104.6063160	0.00	
2330.00†	21.346	56.624	2253.16	-388.45	260.85	395.96	40.4444920	-104.6062061	0.00	
2430.00†	21.346	56.624	2346.30	-418.27	280.87	426.35	40.4445461	-104.6060961	0.00	
2530.00†	21.346	56.624	2439.44	-448.10	300.90	456.75	40.4446003	-104.6059862	0.00	
2630.00†	21.346	56.624	2532.58	-477.92	320.92	487.15	40.4446544	-104.6058763	0.00	
2730.00†	21.346	56.624	2625.72	-507.74	340.95	517.54	40.4447085	-104.6057664	0.00	

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
2830.00†	21.346	56.624	2718.86	-537.56	360.97	547.94	40.4447626	-104.6056564	0.00	
2930.00†	21.346	56.624	2812.00	-567.38	381.00	578.34	40.4448167	-104.6055465	0.00	
3030.00†	21.346	56.624	2905.14	-597.20	401.02	608.74	40.4448709	-104.6054366	0.00	
3130.00†	21.346	56.624	2998.27	-627.02	421.05	639.13	40.4449250	-104.6053266	0.00	
3230.00†	21.346	56.624	3091.41	-656.85	441.07	669.53	40.4449791	-104.6052167	0.00	
3330.00†	21.346	56.624	3184.55	-686.67	461.10	699.93	40.4450332	-104.6051068	0.00	
3430.00†	21.346	56.624	3277.69	-716.49	481.12	730.33	40.4450873	-104.6049968	0.00	
3530.00†	21.346	56.624	3370.83	-746.31	501.15	760.72	40.4451415	-104.6048869	0.00	
3630.00†	21.346	56.624	3463.97	-776.13	521.17	791.12	40.4451956	-104.6047770	0.00	
3730.00†	21.346	56.624	3557.11	-805.95	541.20	821.52	40.4452497	-104.6046670	0.00	
3830.00†	21.346	56.624	3650.25	-835.77	561.22	851.91	40.4453038	-104.6045571	0.00	
3930.00†	21.346	56.624	3743.39	-865.60	581.25	882.31	40.4453580	-104.6044472	0.00	
4030.00†	21.346	56.624	3836.53	-895.42	601.27	912.71	40.4454121	-104.6043372	0.00	
4130.00†	21.346	56.624	3929.67	-925.24	621.30	943.11	40.4454662	-104.6042273	0.00	



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REFERENCE WELLPATH IDENTIFICATION			
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Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-669 PWB
Slot	SLOT#04 APACHE STATE E35-669 (2129'FNL & 1631'FEL,SEC.36)		

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†	21.346	56.624	4022.81	-955.06	641.32	973.50	40.4455203	-104.6041174	0.00	
4330.00†	21.346	56.624	4115.95	-984.88	661.35	1003.90	40.4455744	-104.6040075	0.00	
4430.00†	21.346	56.624	4209.09	-1014.70	681.37	1034.30	40.4456286	-104.6038975	0.00	
4530.00†	21.346	56.624	4302.23	-1044.52	701.40	1064.70	40.4456827	-104.6037876	0.00	
4630.00†	21.346	56.624	4395.37	-1074.35	721.42	1095.09	40.4457368	-104.6036777	0.00	
4730.00†	21.346	56.624	4488.51	-1104.17	741.45	1125.49	40.4457909	-104.6035677	0.00	
4830.00†	21.346	56.624	4581.65	-1133.99	761.47	1155.89	40.4458450	-104.6034578	0.00	
4930.00†	21.346	56.624	4674.79	-1163.81	781.50	1186.28	40.4458992	-104.6033479	0.00	
5030.00†	21.346	56.624	4767.93	-1193.63	801.52	1216.68	40.4459533	-104.6032379	0.00	
5130.00†	21.346	56.624	4861.07	-1223.45	821.55	1247.08	40.4460074	-104.6031280	0.00	
5230.00†	21.346	56.624	4954.21	-1253.27	841.57	1277.48	40.4460615	-104.6030180	0.00	
5330.00†	21.346	56.624	5047.35	-1283.10	861.60	1307.87	40.4461156	-104.6029081	0.00	
5430.00†	21.346	56.624	5140.49	-1312.92	881.62	1338.27	40.4461698	-104.6027982	0.00	
5530.00†	21.346	56.624	5233.63	-1342.74	901.65	1368.67	40.4462239	-104.6026882	0.00	
5630.00†	21.346	56.624	5326.77	-1372.56	921.67	1399.07	40.4462780	-104.6025783	0.00	
5730.00†	21.346	56.624	5419.91	-1402.38	941.70	1429.46	40.4463321	-104.6024684	0.00	
5830.00†	21.346	56.624	5513.05	-1432.20	961.72	1459.86	40.4463862	-104.6023584	0.00	
5930.00†	21.346	56.624	5606.19	-1462.02	981.75	1490.26	40.4464403	-104.6022485	0.00	
6030.00†	21.346	56.624	5699.33	-1491.84	1001.77	1520.65	40.4464945	-104.6021386	0.00	
6130.00†	21.346	56.624	5792.47	-1521.67	1021.80	1551.05	40.4465486	-104.6020286	0.00	
6230.00†	21.346	56.624	5885.61	-1551.49	1041.82	1581.45	40.4466027	-104.6019187	0.00	
6330.00†	21.346	56.624	5978.75	-1581.31	1061.85	1611.85	40.4466568	-104.6018088	0.00	
6377.06	21.346	56.624	6022.57	-1595.34	1071.27	1626.15	40.4466823	-104.6017570	0.00	KOP
6430.00†	17.362	48.692	6072.52	-1609.03	1081.79	1640.14	40.4467108	-104.6017064	9.00	
6530.00†	11.516	20.411	6169.44	-1623.20	1101.03	1654.86	40.4467632	-104.6016528	9.00	
6630.00†	11.137	333.355	6267.69	-1621.84	1119.06	1654.01	40.4468127	-104.6016552	9.00	
6730.00†	16.602	302.593	6364.87	-1604.99	1135.42	1637.61	40.4468580	-104.6017135	9.00	
6830.00†	24.237	288.668	6458.57	-1573.05	1149.71	1606.06	40.4468982	-104.6018264	9.00	
6930.00†	32.547	281.325	6546.49	-1526.82	1161.59	1560.14	40.4469320	-104.6019909	9.00	
7030.00†	41.124	276.749	6626.47	-1467.43	1170.76	1500.99	40.4469588	-104.6022031	9.00	
7130.00†	49.829	273.529	6696.53	-1396.34	1176.99	1430.05	40.4469779	-104.6024577	9.00	

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MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7230.00†	58.602	271.049	6754.95	-1315.32	1180.12	1349.08	40.4469888	-104.6027485	9.00	
7330.00†	67.415	268.996	6800.29	-1226.34	1180.10	1260.07	40.4469912	-104.6030683	9.00	
7430.00†	76.251	267.193	6831.44	-1131.60	1176.90	1165.20	40.4469850	-104.6034092	9.00	
7471.56†	79.927	266.487	6840.02	-1091.09	1174.66	1124.61	40.4469800	-104.6035552	9.00	
7530.00†	85.099	265.521	6847.63	-1033.44	1170.62	1066.83	40.4469705	-104.6037629	9.00	
7572.30†	88.843	264.832	6849.87	-991.48	1167.07	1024.74	40.4469619	-104.6039142	9.00	LP
7585.37	90.000	264.620	6850.00†	-978.50	1165.87	1011.73	40.4469590	-104.6039610	9.00	LP
7630.00†	90.000	264.620	6850.00	-934.20	1161.68	967.30	40.4469487	-104.6041208	0.00	
7730.00†	90.000	264.620	6850.00	-834.95	1152.31	867.74	40.4469258	-104.6044788	0.00	
7830.00†	90.000	264.620	6850.00	-735.69	1142.93	768.18	40.4469028	-104.6048368	0.00	
7930.00†	90.000	264.620	6850.00	-636.44	1133.56	668.62	40.4468798	-104.6051949	0.00	
8030.00†	90.000	264.620	6850.00	-537.18	1124.18	569.06	40.4468568	-104.6055529	0.00	
8130.00†	90.000	264.620	6850.00	-437.92	1114.80	469.50	40.4468339	-104.6059109	0.00	
8230.00†	90.000	264.620	6850.00	-338.67	1105.43	369.94	40.4468109	-104.6062690	0.00	



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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Apache State E35-669
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-669 PWB
Slot	SLOT#04 APACHE STATE E35-669 (2129'FNL & 1631'FEL,SEC.36)		

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
8330.00†	90.000	264.620	6850.00	-239.41	1096.05	270.38	40.4467879	-104.6066270	0.00	
8430.00†	90.000	264.620	6850.00	-140.16	1086.67	170.82	40.4467649	-104.6069850	0.00	
8530.00†	90.000	264.620	6850.00	-40.90	1077.30	71.26	40.4467419	-104.6073430	0.00	
8630.00†	90.000	264.620	6850.00	58.36	1067.92	-28.30	40.4467189	-104.6077011	0.00	
8730.00†	90.000	264.620	6850.00	157.61	1058.55	-127.86	40.4466960	-104.6080591	0.00	
8830.00†	90.000	264.620	6850.00	256.87	1049.17	-227.42	40.4466730	-104.6084171	0.00	
8930.00†	90.000	264.620	6850.00	356.12	1039.79	-326.98	40.4466500	-104.6087751	0.00	
9030.00†	90.000	264.620	6850.00	455.38	1030.42	-426.53	40.4466270	-104.6091331	0.00	
9130.00†	90.000	264.620	6850.00	554.64	1021.04	-526.09	40.4466040	-104.6094912	0.00	
9230.00†	90.000	264.620	6850.00	653.89	1011.66	-625.65	40.4465810	-104.6098492	0.00	
9330.00†	90.000	264.620	6850.00	753.15	1002.29	-725.21	40.4465580	-104.6102072	0.00	
9430.00†	90.000	264.620	6850.00	852.40	992.91	-824.77	40.4465350	-104.6105652	0.00	
9530.00†	90.000	264.620	6850.00	951.66	983.54	-924.33	40.4465120	-104.6109233	0.00	
9630.00†	90.000	264.620	6850.00	1050.92	974.16	-1023.89	40.4464890	-104.6112813	0.00	
9730.00†	90.000	264.620	6850.00	1150.17	964.78	-1123.45	40.4464660	-104.6116393	0.00	
9830.00†	90.000	264.620	6850.00	1249.43	955.41	-1223.01	40.4464430	-104.6119973	0.00	
9930.00†	90.000	264.620	6850.00	1348.68	946.03	-1322.57	40.4464200	-104.6123553	0.00	
10030.00†	90.000	264.620	6850.00	1447.94	936.65	-1422.13	40.4463970	-104.6127134	0.00	
10130.00†	90.000	264.620	6850.00	1547.20	927.28	-1521.69	40.4463740	-104.6130714	0.00	
10230.00†	90.000	264.620	6850.00	1646.45	917.90	-1621.25	40.4463510	-104.6134294	0.00	
10330.00†	90.000	264.620	6850.00	1745.71	908.53	-1720.81	40.4463280	-104.6137874	0.00	
10430.00†	90.000	264.620	6850.00	1844.96	899.15	-1820.37	40.4463050	-104.6141455	0.00	
10530.00†	90.000	264.620	6850.00	1944.22	889.77	-1919.93	40.4462820	-104.6145035	0.00	
10630.00†	90.000	264.620	6850.00	2043.48	880.40	-2019.49	40.4462590	-104.6148615	0.00	
10730.00†	90.000	264.620	6850.00	2142.73	871.02	-2119.05	40.4462360	-104.6152195	0.00	
10830.00†	90.000	264.620	6850.00	2241.99	861.65	-2218.61	40.4462130	-104.6155775	0.00	
10930.00†	90.000	264.620	6850.00	2341.24	852.27	-2318.16	40.4461900	-104.6159356	0.00	
11030.00†	90.000	264.620	6850.00	2440.50	842.89	-2417.72	40.4461670	-104.6162936	0.00	
11130.00†	90.000	264.620	6850.00	2539.75	833.52	-2517.28	40.4461440	-104.6166516	0.00	
11230.00†	90.000	264.620	6850.00	2639.01	824.14	-2616.84	40.4461210	-104.6170096	0.00	
11330.00†	90.000	264.620	6850.00	2738.27	814.76	-2716.40	40.4460979	-104.6173676	0.00	

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
11430.00†	90.000	264.620	6850.00	2837.52	805.39	-2815.96	40.4460749	-104.6177256	0.00	
11530.00†	90.000	264.620	6850.00	2936.78	796.01	-2915.52	40.4460519	-104.6180837	0.00	
11630.00†	90.000	264.620	6850.00	3036.03	786.64	-3015.08	40.4460289	-104.6184417	0.00	
11730.00†	90.000	264.620	6850.00	3135.29	777.26	-3114.64	40.4460059	-104.6187997	0.00	
11830.00†	90.000	264.620	6850.00	3234.55	767.88	-3214.20	40.4459828	-104.6191577	0.00	
11930.00†	90.000	264.620	6850.00	3333.80	758.51	-3313.76	40.4459598	-104.6195157	0.00	
12030.00†	90.000	264.620	6850.00	3433.06	749.13	-3413.32	40.4459368	-104.6198737	0.00	
12130.00†	90.000	264.620	6850.00	3532.31	739.75	-3512.88	40.4459138	-104.6202318	0.00	
12230.00†	90.000	264.620	6850.00	3631.57	730.38	-3612.44	40.4458908	-104.6205898	0.00	
12330.00†	90.000	264.620	6850.00	3730.83	721.00	-3712.00	40.4458677	-104.6209478	0.00	
12430.00†	90.000	264.620	6850.00	3830.08	711.63	-3811.56	40.4458447	-104.6213058	0.00	
12530.00†	90.000	264.620	6850.00	3929.34	702.25	-3911.12	40.4458217	-104.6216638	0.00	
12630.00†	90.000	264.620	6850.00	4028.59	692.87	-4010.68	40.4457986	-104.6220218	0.00	
12730.00†	90.000	264.620	6850.00	4127.85	683.50	-4110.23	40.4457756	-104.6223799	0.00	



Planned Wellpath Report

Apache State E35-669 (REV-C.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Apache State E35-669
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-669 PWB
Slot	SLOT#04 APACHE STATE E35-669 (2129'FNL & 1631'FEL,SEC.36)		

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
12830.00†	90.000	264.620	6850.00	4227.11	674.12	-4209.79	40.4457526	-104.6227379	0.00	
12930.00†	90.000	264.620	6850.00	4326.36	664.74	-4309.35	40.4457296	-104.6230959	0.00	
13030.00†	90.000	264.620	6850.00	4425.62	655.37	-4408.91	40.4457065	-104.6234539	0.00	
13130.00†	90.000	264.620	6850.00	4524.87	645.99	-4508.47	40.4456835	-104.6238119	0.00	
13230.00†	90.000	264.620	6850.00	4624.13	636.62	-4608.03	40.4456605	-104.6241699	0.00	
13330.00†	90.000	264.620	6850.00	4723.39	627.24	-4707.59	40.4456374	-104.6245279	0.00	
13430.00†	90.000	264.620	6850.00	4822.64	617.86	-4807.15	40.4456144	-104.6248860	0.00	
13530.00†	90.000	264.620	6850.00	4921.90	608.49	-4906.71	40.4455913	-104.6252440	0.00	
13630.00†	90.000	264.620	6850.00	5021.15	599.11	-5006.27	40.4455683	-104.6256020	0.00	
13730.00†	90.000	264.620	6850.00	5120.41	589.73	-5105.83	40.4455453	-104.6259600	0.00	
13830.00†	90.000	264.620	6850.00	5219.67	580.36	-5205.39	40.4455222	-104.6263180	0.00	
13930.00†	90.000	264.620	6850.00	5318.92	570.98	-5304.95	40.4454992	-104.6266760	0.00	
14030.00†	90.000	264.620	6850.00	5418.18	561.61	-5404.51	40.4454761	-104.6270340	0.00	
14130.00†	90.000	264.620	6850.00	5517.43	552.23	-5504.07	40.4454531	-104.6273920	0.00	
14230.00†	90.000	264.620	6850.00	5616.69	542.85	-5603.63	40.4454300	-104.6277500	0.00	
14330.00†	90.000	264.620	6850.00	5715.95	533.48	-5703.19	40.4454070	-104.6281081	0.00	
14430.00†	90.000	264.620	6850.00	5815.20	524.10	-5802.75	40.4453839	-104.6284661	0.00	
14530.00†	90.000	264.620	6850.00	5914.46	514.73	-5902.31	40.4453609	-104.6288241	0.00	
14630.00†	90.000	264.620	6850.00	6013.71	505.35	-6001.86	40.4453378	-104.6291821	0.00	
14730.00†	90.000	264.620	6850.00	6112.97	495.97	-6101.42	40.4453148	-104.6295401	0.00	
14830.00†	90.000	264.620	6850.00	6212.23	486.60	-6200.98	40.4452917	-104.6298981	0.00	
14930.00†	90.000	264.620	6850.00	6311.48	477.22	-6300.54	40.4452687	-104.6302561	0.00	
15030.00†	90.000	264.620	6850.00	6410.74	467.84	-6400.10	40.4452456	-104.6306141	0.00	
15130.00†	90.000	264.620	6850.00	6509.99	458.47	-6499.66	40.4452226	-104.6309721	0.00	
15230.00†	90.000	264.620	6850.00	6609.25	449.09	-6599.22	40.4451995	-104.6313301	0.00	
15330.00†	90.000	264.620	6850.00	6708.51	439.72	-6698.78	40.4451764	-104.6316882	0.00	
15430.00†	90.000	264.620	6850.00	6807.76	430.34	-6798.34	40.4451534	-104.6320462	0.00	
15530.00†	90.000	264.620	6850.00	6907.02	420.96	-6897.90	40.4451303	-104.6324042	0.00	
15630.00†	90.000	264.620	6850.00	7006.27	411.59	-6997.46	40.4451073	-104.6327622	0.00	
15730.00†	90.000	264.620	6850.00	7105.53	402.21	-7097.02	40.4450842	-104.6331202	0.00	
15830.00†	90.000	264.620	6850.00	7204.79	392.83	-7196.58	40.4450611	-104.6334782	0.00	

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
15930.00†	90.000	264.620	6850.00	7304.04	383.46	-7296.14	40.4450381	-104.6338362	0.00	
16030.00†	90.000	264.620	6850.00	7403.30	374.08	-7395.70	40.4450150	-104.6341942	0.00	
16130.00†	90.000	264.620	6850.00	7502.55	364.71	-7495.26	40.4449919	-104.6345522	0.00	
16230.00†	90.000	264.620	6850.00	7601.81	355.33	-7594.82	40.4449689	-104.6349102	0.00	
16330.00†	90.000	264.620	6850.00	7701.07	345.95	-7694.38	40.4449458	-104.6352682	0.00	
16430.00†	90.000	264.620	6850.00	7800.32	336.58	-7793.94	40.4449227	-104.6356262	0.00	
16530.00†	90.000	264.620	6850.00	7899.58	327.20	-7893.49	40.4448997	-104.6359842	0.00	
16630.00†	90.000	264.620	6850.00	7998.83	317.82	-7993.05	40.4448766	-104.6363422	0.00	
16730.00†	90.000	264.620	6850.00	8098.09	308.45	-8092.61	40.4448535	-104.6367002	0.00	
16830.00†	90.000	264.620	6850.00	8197.35	299.07	-8192.17	40.4448304	-104.6370582	0.00	
16930.00†	90.000	264.620	6850.00	8296.60	289.70	-8291.73	40.4448074	-104.6374163	0.00	
17030.00†	90.000	264.620	6850.00	8395.86	280.32	-8391.29	40.4447843	-104.6377743	0.00	
17130.00†	90.000	264.620	6850.00	8495.11	270.94	-8490.85	40.4447612	-104.6381323	0.00	
17230.00†	90.000	264.620	6850.00	8594.37	261.57	-8590.41	40.4447381	-104.6384903	0.00	



Planned Wellpath Report

Apache State E35-669 (REV-C.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Apache State E35-669
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-669 PWB
Slot	SLOT#04 APACHE STATE E35-669 (2129'FNL & 1631'FEL,SEC.36)		

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
17330.00†	90.000	264.620	6850.00	8693.63	252.19	-8689.97	40.4447150	-104.6388483	0.00	
17390.82	90.000	264.620	6850.00‡	8753.99	246.49	-8750.52	40.4447010	-104.6390660	0.00	BHL

HOLE & CASING SECTIONS - Ref Wellbore: Apache State E35-669 PWB Ref Wellpath: Apache State E35-669 (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	1899.23	0.00	0.00	184.75	280.45

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	1.00	136.61	-1.65	3248365.69	1405898.25	40.4441620	-104.6076390	polygon	
2D Polygon: dimensions not calculated										
SEC.36-T06N-R65W DP 305	N/A	1.00	136.61	-1.65	3248365.69	1405898.25	40.4441620	-104.6076390	polygon	
2D Polygon: dimensions not calculated										
2) APACHE STATE E35-669 BHL Rev-2 (1804'FNL & 200'FWL Sec.35)	17390.82	6850.00	246.49	-8750.52	3239617.17	1406008.12	40.4447010	-104.6390660	point	
1) APACHE STATE E35-669 LP Rev-2 (974'FNL & 600'FEL SEC.36)	7585.37	6850.00	1165.87	1011.73	3249379.03	1406927.47	40.4469590	-104.6039610	point	
Libsack E35-669 BPZ Rev-1 (1804'FNL & 200'FWL,SEC.35)	N/A	6850.00	245.92	-8752.79	3239614.90	1406007.55	40.4446995	-104.6390742	point	
Libsack E35-669 LP Rev-1 (938'FNL & 200'FEL,SEC.36)	N/A	6850.00	1206.22	1413.12	3249780.40	1406967.82	40.4470586	-104.6025175	point	
Libsack E35-669 LP Rev-2 (974'FNL & 600'FEL,SEC.36)	N/A	6850.00	1168.53	1013.67	3249380.97	1406930.13	40.4469662	-104.6039540	point	

SURVEY PROGRAM - Ref Wellbore: Apache State E35-669 PWB Ref Wellpath: Apache State E35-669 (REV-C.0) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
30.00	17976.82	OWSG MWD rev2 (MS+IFR1)		Apache State E35-669 PWB



Planned Wellpath Report

Apache State E35-669 (REV-C.0) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Well	Apache State E35-669
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-669 PWB
Slot	SLOT#04 APACHE STATE E35-669 (2129'FNL & 1631'FEL,SEC.36)		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
7471.56	79.927	266.487	6840.02	
7572.30	88.843	264.832	6849.87	LP

DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
30.00	0.000	56.624	30.00	Tie On
500.00	0.000	56.624	500.00	End of Tangent
1567.32	21.346	56.624	1542.80	Build (XS)
6377.06	21.346	56.624	6022.57	KOP
7585.37	90.000	264.620	6850.00	LP
17390.82	90.000	264.620	6850.00	BHL



Closest Approach Clearance Summary Report

Apache State E35-669 (REV-C.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)
Page 1 of 5



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Apache State E35-669
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-669 PWB
Slot	SLOT#04 APACHE STATE E35-669 (2129'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	0.999963	Report Generated	2/10/2025 at 5:27:13 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	-136.61	1.65	3248367.34	1405761.65	40°26'37.6332"N	104°36'27.4968"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 (4650'GL+30'KB = 4680.0'RKB) (RKB) to Facility Vertical Datum	4680.00ft
Horizontal Reference Pt	Slot	Rig (4650'GL+30'KB = 4680.0'RKB) (RKB) to Mean Sea Level	4680.00ft
Vertical Reference Pt	Rig (4650'GL+30'KB = 4680.0'RKB) (RKB)	Rig (4650'GL+30'KB = 4680.0'RKB) (RKB) to Ground Level at Slot (SLOT#04 APACHE STATE E35-669 (2129'FNL & 1631'FEL,SEC.36))	4680.00ft
MD Reference Pt	Rig (4650'GL+30'KB = 4680.0'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	7.46° East of TN	Dip Angle	66.61°	Mag Field Strength	51534 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

Apache State E35-669 (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 E35-669
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-669 PWB
Slot	SLOT#04 APACHE STATE E35-669 (2129'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 E35-669 PWB Ref Wellpath: Apache State E35-669 (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	1899.23	0.00	0.00	184.75	280.45

SURVEY PROGRAM - Ref Wellbore: Apache State E35-669 PWB Ref Wellpath: Apache State E35-669 (REV-C.0) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
30.00	17976.82	OWSG MWD rev2 (MS+IFR1)		Apache State E35-669 PWB



Closest Approach Clearance Summary Report

Apache State E35-669 (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 E35-669
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-669 PWB
Slot	SLOT#04 APACHE STATE E35-669 (2129'FNL & 1631'FEL,SEC.36)		

CALCULATION RANGE & CUTOFF		
From: 30.00ft MD	To: 17390.82ft 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 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	15612.71	371.92	15612.71	15612.71	0.04	15612.71	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	14220.58	834.23	14220.58	14220.62	0.10	14220.62	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	14439.77	538.13	14439.77	14439.82	0.13	14439.82	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	17075.51	1745.34	17075.51	17075.69	0.21	17075.69	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	15590.30	1828.93	15590.30	15590.47	0.22	15590.47	FAIL	
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	16842.07	84.21	16842.07	16841.80	0.36	16841.80	FAIL	
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	15695.82	3146.82	15695.82	15696.36	0.38	15696.36	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	13211.16	3235.53	13211.16	13211.56	0.39	13211.56	FAIL	
E Section 36	(Sinjin State E36-19)	Sinjin State E36-19 (05-123-30092)	Sinjin State E36-19 AWB	Wellbore #1\Gyro Surveys	Drilling	11011.32	112.48	11011.32	11011.20	1.04	11011.20	WARN	
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	14.94	17390.82	17390.82	1.07	17390.82	WARN	
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	12882.68	3247.09	12882.68	3904.89	1.17	15930.00	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	14.94	500.00	1568.99	1.26	17390.82	PASS	
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	7048.07	165.72	7048.07	7059.18	1.31	7059.18	PASS	
E Section 36	(Bill E36-67HN)		Bill E36-67HN	Bill E36-67HN - As Drilled	Drilling	11254.14	314.83	11730.00	7565.96	1.43	11330.00	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	
		Bill E36-67HN (05-123-34609)											
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	29.87	17390.82	17390.82	2.05	17390.82	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	17390.82	298.42	17390.82	17390.82	2.39	17390.82	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	16342.35	551.68	16342.35	16362.07	2.59	16362.07	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	30.24	500.00	17357.43	2.79	17357.43	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	44.81	17390.82	17390.82	3.08	17390.82	PASS	
E Section 36	(Sinjin E36-6 (SI))	Sinjin E36-6 (05-123-16354)	Sinjin E36-6 AWB	Wellbore #1\No Surveys	Drilling	10378.34	772.13	10378.34	10391.34	3.36	10391.34	PASS	
E Section 35	Hoshiko 3 (05-123-11550) PA	Hoshiko 3 (05-123-11550)	Hoshiko 3 AWB	Hoshiko 3 - As Drilled	Drilling	12927.82	552.19	12927.82	12944.15	3.79	12944.15	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	16999.59	925.84	16999.59	17048.96	4.09	17048.96	PASS	
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	45.18	500.00	17365.12	4.16	17365.12	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	60.11	17390.82	17390.82	4.50	17390.82	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	15648.17	1052.08	15648.17	15695.42	4.77	15695.42	PASS	



Closest Approach Clearance Summary Report

Apache State E35-669 (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 E35-669
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-669 PWB
Slot	SLOT#04 APACHE STATE E35-669 (2129'FNL & 1631'FEL,SEC.36)		

CALCULATION RANGE & CUTOFF		
From: 30.00ft MD	To: 17390.82ft 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	(Sinjin E36-7 (PA))	Sinjin E36-7 (05-123-16302)	Sinjin E36-7 AWB	Wellbore #1\No Surveys	Drilling	30.00	358.44	9076.30	9076.30	5.04	9076.30	PASS
E Section 35	CEI-Hoshiko 2 (05-123-11415) PA	CEI-Hoshiko 2 (05-123-11415)	CEI-Hoshiko 2 AWB	CEI-Hoshiko 2 AWP	Abandoned	12854.31	767.48	12854.31	12905.24	5.32	12905.24	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	75.05	17390.82	17390.82	5.55	17390.82	PASS
E Section 36	(Sinjin E36-2 (PR))	Sinjin E36-2 (05-123-16301)	Sinjin E36-2 AWB	Wellbore #1\Gyro Surveys	Drilling	9138.23	445.71	9138.23	9165.11	5.70	9165.11	PASS
E Section 26	(Healy E34-69HN)	Healy E34-69HN (05-123-38160)	Healy E34-69HN AWB	Healy E34-69HN\Original Drilling	Drilling	12594.23	1360.20	12594.23	17390.82	5.72	17390.82	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	11575.22	671.39	11575.22	11624.56	5.80	11624.56	PASS
E Section 36	(Sinjin E36-1 (SI))	Sinjin E36-1 (05-123-16466)	Sinjin E36-1 AWB	Wellbore #1\Gyro Surveys	Drilling	7708.17	425.35	7708.17	7712.43	6.41	7712.43	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	6872.14	791.07	6872.14	6872.14	6.49	6872.14	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	89.99	17390.82	17390.82	6.61	17390.82	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	10231.47	638.14	10231.47	10282.39	6.81	10282.39	PASS
E Section 36	(Sinjin E36-5 (PR))	Sinjin E36-5 (05-123-16353)	Sinjin E36-5 AWB	Wellbore #1\Gyro Surveys	Drilling	11675.23	869.55	11675.23	11730.58	7.40	11730.58	PASS
E Section 36	(Mansfield E36-65HN)	Mansfield E36-65HN (05-123-34611)	Mansfield E36-65HN ST01	Mansfield E36-65HN ST01 - As Drilled	Drilling	11885.37	1484.02	11885.37	7596.45	7.44	12330.00	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	104.92	17390.82	17390.82	7.64	17390.82	PASS
		Apache State E35-620			Planned	30.00	119.86	17390.82	17390.82	8.72	17390.82	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	
SEC.36-T06N-R65W	SLOT#12 APACHE STATE E35-620 (2249'FNL & 1631'FEL,SEC.36)		Apache State E35-620 PWB	Apache State E35-620 (REV-C.0) PWP									
E Section 36	(Sinjin E36-11 (SI))	Sinjin E36-11 (05-123-16305)	Sinjin E36-11 AWB	Wellbore #1\No Surveys	Drilling	30.00	1942.43	10330.00	10453.91	9.21	10453.91	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	6629.28	579.18	6629.28	6653.96	9.51	6653.96	PASS	
SEC.36-T06N-R65W	SLOT#13 APACHE STATE E35-615 (2264'FNL & 1631'FEL,SEC.36)	Apache State E35-615	Apache State E35-615 PWB	Apache State E35-615 (REV-C.0) PWP	Planned	30.00	134.80	17390.82	17390.82	9.74	17390.82	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	549.45	3802.65	14770.91	14770.91	10.13	14770.91	PASS	
E Section 36	(Sinjin E36-10(SI))	Sinjin E36-10(05-123-16304)	Sinjin E36-10 AWB	Wellbore #1\No Surveys	Drilling	30.00	1314.80	9130.00	9221.81	10.40	9221.81	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	699.70	3826.84	14802.53	14802.53	10.60	14802.53	PASS	
E Section 36	(Sinjin E36-9 (SI))	Sinjin E36-9 (05-123-16303)	Sinjin E36-9 AWB	Wellbore #1\No Surveys	Drilling	955.85	1702.78	7830.00	7914.43	11.68	7914.43	PASS	
E Section 36	(Mansfield E36-65HN)	Mansfield E36-65HN (05-123-34611)	Mansfield E36-65HN	Mansfield E36-65HN - As Drilled	Drilling	11327.26	1482.82	11930.00	12303.57	11.75	12303.57	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	11026.26	1341.46	11026.26	11184.62	12.60	11184.62	PASS	
E Section 36	(Sinjin E36-12 (SI))	Sinjin E36-12 (05-123-12890)	Sinjin E36-12 AWB	Wellbore #1\Gyro Surveys	Drilling	11849.21	2164.72	11849.21	12303.25	12.70	12303.25	PASS	
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	17208.51	3031.55	17208.51	17390.82	13.04	17390.82	PASS	



Closest Approach Clearance Summary Report

Apache State E35-669 (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 E35-669
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-669 PWB
Slot	SLOT#04 APACHE STATE E35-669 (2129'FNL & 1631'FEL,SEC.36)		

CALCULATION RANGE & CUTOFF

From: 30.00ft MD	To: 17390.82ft MD	C-C Cutoff: (none)
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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 36	(Sinjin E36-8 (SI))	Sinjin E36-8 (05-123-16468)	Sinjin E36-8 AWB	Wellbore #1\Gyro Surveys	Drilling	3570.68	593.99	7585.37	3903.33	13.38	7630.00	PASS
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	30.00	3749.35	11230.00	11586.66	13.57	11586.66	PASS
E Section 36	(Sinjin E36-14 (PA))	Sinjin E36-14 (05-123-16307)	Sinjin E36-14 AWB	Wellbore #1\No Surveys	Drilling	30.00	2831.19	10530.00	10810.70	14.02	10810.70	PASS
E Section 35	EWS #2 (05-123-37808) IJ	EWS #2 (05-123-37808)	EWS #2	EWS #2 - As-Drilled	Drilling	14562.06	2523.29	14562.06	14919.95	14.05	14919.95	PASS
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	14531.77	3093.51	14531.77	15156.17	17.07	15156.17	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	12328.43	2599.31	12328.43	12841.53	19.57	12841.53	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	13303.04	3069.74	13303.04	13903.78	19.61	13903.78	PASS
SEC.02-T05N-R65W	SLOT#01 Noffsinger #2RD (05-123-31903)	Noffsinger #2RD	Noffsinger #2RD AWB	Noffsinger #2RD AWP	Drilling	13876.70	3837.24	13876.70	14751.34	22.17	14751.34	PASS
E Section 36	(Sinjin E36-25 (SI))	Sinjin E36-25 (05-123-22619)	Sinjin E36-25 AWB	Wellbore #1\Gyro Surveys	Drilling	11046.82	2608.60	11046.82	11657.10	23.63	11657.10	PASS
E Section 36	(Sinjin E36-13 (TA))	Sinjin E36-13 (05-123-16306)	Sinjin E36-13 AWB	Wellbore #1\Gyro Surveys	Drilling	11937.24	3086.18	11937.24	12695.25	24.17	12695.25	PASS
E Section 36	(Cattleman 23-31D (PR))	Cattleman 23-31D (05-123-22090)	Cattleman 23-31D AWB	Wellbore #1\MWD Surveys	Drilling	6430.00	2843.64	6430.00	6608.39	25.50	16830.00	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	12519.20	3863.85	12519.20	13624.30	26.18	13624.30	PASS
E Section 36	(Cattleman 13-31D (PR))	Cattleman 13-31D (05-123-22091)	Cattleman 13-31D AWB	Wellbore #1\MWD Surveys	Drilling	6238.32	2320.51	6238.32	6730.00	28.58	6730.00	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	167.14	2712.76	9330.00	10721.83	40.50	10721.83	PASS
E Section 36	(LDS F 01-28D (SI))		LDS F 01-28D AWB	Wellbore #1\Gyro Surveys	Drilling	378.52	2964.25	9930.00	11548.70	40.60	11548.70	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 01-28D (05-123-29794)										
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	3208.27	2386.15	3208.27	6530.00	40.67	6530.00	PASS
E Section 36	(Cattleman 24-31D (TA))	Cattleman 24-31D (05-123-22092)	Cattleman 24-31D AWB	Wellbore #1\MWD Surveys	Drilling	469.10	2972.54	469.10	6803.90	41.38	15630.00	PASS
E Section 36	(Cattleman 14-31D (SI))	Cattleman 14-31D (05-123-22089)	Cattleman 14-31D AWB	Wellbore #1\MWD Surveys	Drilling	30.00	2972.57	30.00	7120.43	47.21	7120.43	PASS
E Section 36	(LDS F 01-27 (SI))	LDS F 01-27 (05-123-29795)	LDS F 01-27 AWB	Wellbore #1\Gyro Surveys	Drilling	397.33	2967.58	8630.00	10494.69	49.19	10494.69	PASS
E Section 36	(Sinjin E36-16 (PA))	Sinjin E36-16 (05-123-16469)	Sinjin E36-16 AWB	Wellbore #1\Gyro Surveys	Drilling	503.50	2853.84	8030.00	9753.36	51.86	9753.36	PASS