

NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#06 APACHE STATE E35-656 (2159'FNL & 1631'FEL,SEC.36)

Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: Apache State E35-656

Facility: SEC.36-T06N-R65W Wellbore: Apache State E35-656 PWB

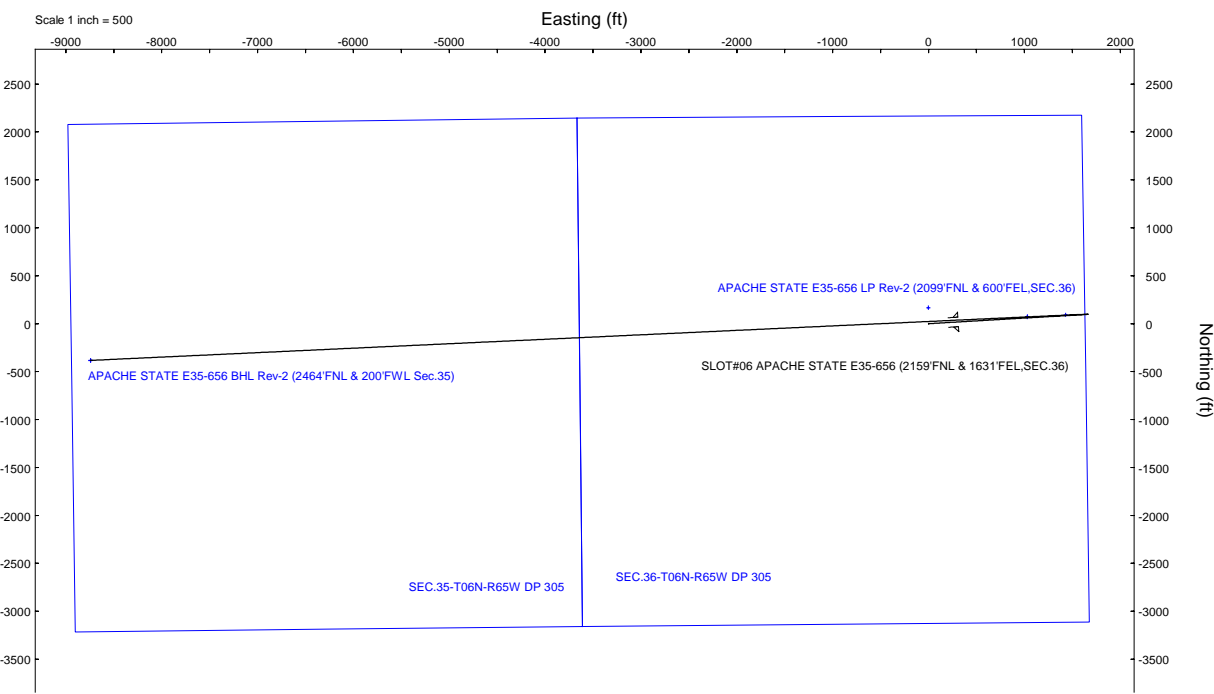
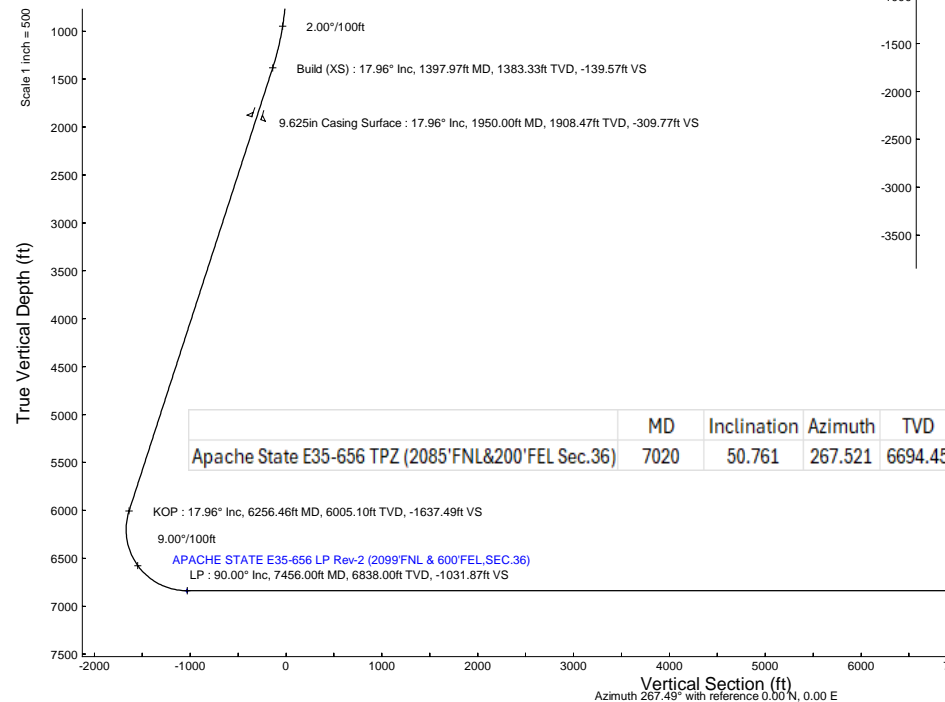
Plot reference wellpath is Apache State E35-656 (REV-C.0) PWP
 Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
 True vertical depths are referenced to Rig (4650'GL+30'KB = 4680.0'RKB) (RKB)
 North Reference: Grid north
 Reference wellpath measured depths are referenced to Rig (4650'GL+30'KB = 4680.0'RKB) (RKB)
 Scale: True distance
 Rig (4650'GL+30'KB = 4680.0'RKB) to Mean Sea Level: 4680 feet
 Coordinates are in feet referenced to Slot
 Mean Sea Level to Ground level (At Slot: SLOT#06 APACHE STATE E35-656 (2159'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		3248365.688	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	Longitude
SLOT#06 APACHE STATE E35-656 (2159'FNL & 1631'FEL,SEC.36)	-166.48	1.95	3248367.641	1405731.774	40°26'37.3380"N	104°36'27.4968"W
Rig (4650'GL+30'KB = 4680.0'RKB) to Ground level (At Slot: SLOT#06 APACHE STATE E35-656 (2159'FNL & 1631'FEL,SEC.36))					4680ft	
Mean Sea Level to Ground level (At Slot: SLOT#06 APACHE STATE E35-656 (2159'FNL & 1631'FEL,SEC.36))					0ft	
Rig (4650'GL+30'KB = 4680.0'RKB) to Mean Sea Level					4680ft	

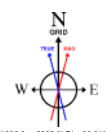


Targets								
Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.35-T06N-R65W DP 305	N/A	1.00	166.48	-1.95	3248365.69	1405898.25	40°26'38.9832"N	104°36'27.5004"W
SEC.36-T06N-R65W DP 305	N/A	1.00	166.48	-1.95	3248365.69	1405898.25	40°26'38.9832"N	104°36'27.5004"W
APACHE STATE E35-656 BHL Rev-2 (2464'FNL & 200'FWL, Sec.36)	17237.66	6838.00	-383.35	-8741.35	3239626.63	1405348.44	40°26'34.4040"N	104°38'20.5980"W
APACHE STATE E35-656 LP Rev-2 (2099'FNL & 600'FEL, SEC.36)	7456.00	6838.00	70.86	1029.76	3249397.36	1405802.63	40°26'37.9356"N	104°36'14.1696"W
Libsack E35-656 BPZ Rev-1 (2464'FNL & 200'FWL, SEC.36)	N/A	6838.00	-384.17	-8743.91	3239624.07	1405347.62	40°26'34.3961"N	104°38'20.6312"W
Libsack E35-656 LP Rev-1 (2081'FNL & 200'FEL, SEC.36)	N/A	6838.00	92.06	1431.59	3249799.17	1405823.83	40°26'38.1049"N	104°36'8.8659"W
Libsack E35-656 LP Rev-2 (2099'FNL & 600'FEL, SEC.36)	N/A	6838.00	73.35	1031.83	3249299.43	1405805.12	40°26'37.9600"N	104°36'14.1426"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	86.649	30.00	0.00	0.00	0.00	0.00
End of Tangent	500.00	0.000	86.649	500.00	0.00	0.00	0.00	0.00
Build (XS)	1397.97	17.959	86.649	1383.33	8.16	139.35	2.00	-139.57
KOP	6256.46	17.959	86.649	6005.10	95.74	1634.86	0.00	-1637.49
LP	7456.00	90.000	267.338	6838.00	70.86	1029.76	9.00	-1031.87
BHL	17237.66	90.000	267.338	6838.00	-383.35	-8741.35	0.00	8749.76



BHL - 90.00° Inc, 17237.66ft MD, 6838.00ft TVD, 8749.76ft VS
 APACHE STATE E35-656 BHL Rev-2 (2464'FNL & 200'FWL, SEC.35)



HDM2024v1.0 (1900.0 to 2025.0) Dip: 66.61° Field: 51533.6 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 E35-656 (REV-C.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Apache State E35-656
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-656 PWB
Slot	SLOT#06 APACHE STATE E35-656 (2159'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 2:53:43 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	-166.48	1.95	3248367.64	1405731.77	40.4437050°	-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#06 APACHE STATE E35-656 (2159'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	267.49°



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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 E35-656 PWB
Slot	SLOT#06 APACHE STATE E35-656 (2159'FNL & 1631'FEL,SEC.36)		

WELLPATH DATA (181 stations) † = interpolated, ‡ = extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	86.649	0.00	0.00	0.00	0.00	40.4437050	-104.6076380	0.00	
30.00	0.000	86.649	30.00	0.00	0.00	0.00	40.4437050	-104.6076380	0.00	Tie On
130.00†	0.000	86.649	130.00	0.00	0.00	0.00	40.4437050	-104.6076380	0.00	
230.00†	0.000	86.649	230.00	0.00	0.00	0.00	40.4437050	-104.6076380	0.00	
330.00†	0.000	86.649	330.00	0.00	0.00	0.00	40.4437050	-104.6076380	0.00	
430.00†	0.000	86.649	430.00	0.00	0.00	0.00	40.4437050	-104.6076380	0.00	
500.00	0.000	86.649	500.00	0.00	0.00	0.00	40.4437050	-104.6076380	0.00	End of Tangent
530.00†	0.600	86.649	530.00	-0.16	0.01	0.16	40.4437050	-104.6076374	2.00	
630.00†	2.600	86.649	629.96	-2.95	0.17	2.94	40.4437054	-104.6076274	2.00	
730.00†	4.600	86.649	729.75	-9.23	0.54	9.21	40.4437062	-104.6076049	2.00	
830.00†	6.600	86.649	829.27	-18.98	1.11	18.95	40.4437075	-104.6075699	2.00	
930.00†	8.600	86.649	928.39	-32.21	1.88	32.16	40.4437093	-104.6075224	2.00	
1030.00†	10.600	86.649	1026.98	-48.88	2.86	48.80	40.4437115	-104.6074626	2.00	
1130.00†	12.600	86.649	1124.93	-68.99	4.03	68.88	40.4437142	-104.6073904	2.00	
1230.00†	14.600	86.649	1222.13	-92.50	5.41	92.35	40.4437173	-104.6073060	2.00	
1330.00†	16.600	86.649	1318.44	-119.38	6.98	119.19	40.4437209	-104.6072095	2.00	
1397.97	17.959	86.649	1383.33	-139.57	8.16	139.35	40.4437235	-104.6071371	2.00	Build (XS)
1430.00†	17.959	86.649	1413.81	-149.45	8.74	149.21	40.4437249	-104.6071017	0.00	
1530.00†	17.959	86.649	1508.93	-180.28	10.54	179.99	40.4437290	-104.6069910	0.00	
1630.00†	17.959	86.649	1604.06	-211.11	12.34	210.77	40.4437331	-104.6068804	0.00	
1730.00†	17.959	86.649	1699.19	-241.94	14.15	241.55	40.4437371	-104.6067697	0.00	
1830.00†	17.959	86.649	1794.32	-272.77	15.95	272.33	40.4437412	-104.6066591	0.00	
1930.00†	17.959	86.649	1889.44	-303.60	17.75	303.11	40.4437453	-104.6065484	0.00	
2030.00†	17.959	86.649	1984.57	-334.43	19.55	333.90	40.4437494	-104.6064378	0.00	
2130.00†	17.959	86.649	2079.70	-365.26	21.36	364.68	40.4437535	-104.6063271	0.00	
2230.00†	17.959	86.649	2174.83	-396.09	23.16	395.46	40.4437576	-104.6062165	0.00	
2330.00†	17.959	86.649	2269.96	-426.92	24.96	426.24	40.4437617	-104.6061058	0.00	
2430.00†	17.959	86.649	2365.08	-457.75	26.76	457.02	40.4437658	-104.6059952	0.00	
2530.00†	17.959	86.649	2460.21	-488.59	28.57	487.80	40.4437699	-104.6058845	0.00	
2630.00†	17.959	86.649	2555.34	-519.42	30.37	518.58	40.4437740	-104.6057739	0.00	
2730.00†	17.959	86.649	2650.47	-550.25	32.17	549.37	40.4437781	-104.6056632	0.00	

WELLPATH DATA (181 stations) † = interpolated, ‡ = extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2830.00†	17.959	86.649	2745.59	-581.08	33.97	580.15	40.4437822	-104.6055526	0.00	
2930.00†	17.959	86.649	2840.72	-611.91	35.78	610.93	40.4437863	-104.6054419	0.00	
3030.00†	17.959	86.649	2935.85	-642.74	37.58	641.71	40.4437904	-104.6053313	0.00	
3130.00†	17.959	86.649	3030.98	-673.57	39.38	672.49	40.4437945	-104.6052206	0.00	
3230.00†	17.959	86.649	3126.10	-704.40	41.18	703.27	40.4437986	-104.6051100	0.00	
3330.00†	17.959	86.649	3221.23	-735.23	42.99	734.05	40.4438027	-104.6049993	0.00	
3430.00†	17.959	86.649	3316.36	-766.06	44.79	764.84	40.4438068	-104.6048887	0.00	
3530.00†	17.959	86.649	3411.49	-796.89	46.59	795.62	40.4438109	-104.6047780	0.00	
3630.00†	17.959	86.649	3506.61	-827.72	48.39	826.40	40.4438150	-104.6046674	0.00	
3730.00†	17.959	86.649	3601.74	-858.56	50.20	857.18	40.4438191	-104.6045567	0.00	
3830.00†	17.959	86.649	3696.87	-889.39	52.00	887.96	40.4438232	-104.6044461	0.00	
3930.00†	17.959	86.649	3792.00	-920.22	53.80	918.74	40.4438272	-104.6043354	0.00	
4030.00†	17.959	86.649	3887.12	-951.05	55.60	949.52	40.4438313	-104.6042248	0.00	
4130.00†	17.959	86.649	3982.25	-981.88	57.41	980.31	40.4438354	-104.6041141	0.00	



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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Apache State E35-656
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-656 PWB
Slot	SLOT#06 APACHE STATE E35-656 (2159'FNL & 1631'FEL,SEC.36)		

WELLPATH DATA (181 stations) † = interpolated, ‡ = extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4230.00†	17.959	86.649	4077.38	-1012.71	59.21	1011.09	40.4438395	-104.6040035	0.00	
4330.00†	17.959	86.649	4172.51	-1043.54	61.01	1041.87	40.4438436	-104.6038929	0.00	
4430.00†	17.959	86.649	4267.63	-1074.37	62.81	1072.65	40.4438477	-104.6037822	0.00	
4530.00†	17.959	86.649	4362.76	-1105.20	64.62	1103.43	40.4438518	-104.6036716	0.00	
4630.00†	17.959	86.649	4457.89	-1136.03	66.42	1134.21	40.4438559	-104.6035609	0.00	
4730.00†	17.959	86.649	4553.02	-1166.86	68.22	1164.99	40.4438600	-104.6034503	0.00	
4830.00†	17.959	86.649	4648.14	-1197.69	70.03	1195.78	40.4438641	-104.6033396	0.00	
4930.00†	17.959	86.649	4743.27	-1228.53	71.83	1226.56	40.4438682	-104.6032290	0.00	
5030.00†	17.959	86.649	4838.40	-1259.36	73.63	1257.34	40.4438723	-104.6031183	0.00	
5130.00†	17.959	86.649	4933.53	-1290.19	75.43	1288.12	40.4438764	-104.6030077	0.00	
5230.00†	17.959	86.649	5028.65	-1321.02	77.24	1318.90	40.4438805	-104.6028970	0.00	
5330.00†	17.959	86.649	5123.78	-1351.85	79.04	1349.68	40.4438846	-104.6027864	0.00	
5430.00†	17.959	86.649	5218.91	-1382.68	80.84	1380.46	40.4438886	-104.6026757	0.00	
5530.00†	17.959	86.649	5314.04	-1413.51	82.64	1411.25	40.4438927	-104.6025651	0.00	
5630.00†	17.959	86.649	5409.16	-1444.34	84.45	1442.03	40.4438968	-104.6024544	0.00	
5730.00†	17.959	86.649	5504.29	-1475.17	86.25	1472.81	40.4439009	-104.6023438	0.00	
5830.00†	17.959	86.649	5599.42	-1506.00	88.05	1503.59	40.4439050	-104.6022331	0.00	
5930.00†	17.959	86.649	5694.55	-1536.83	89.85	1534.37	40.4439091	-104.6021225	0.00	
6030.00†	17.959	86.649	5789.68	-1567.67	91.66	1565.15	40.4439132	-104.6020118	0.00	
6130.00†	17.959	86.649	5884.80	-1598.50	93.46	1595.93	40.4439173	-104.6019012	0.00	
6230.00†	17.959	86.649	5979.93	-1629.33	95.26	1626.72	40.4439214	-104.6017905	0.00	
6256.46	17.959	86.649	6005.10	-1637.49	95.74	1634.86	40.4439225	-104.6017612	0.00	KOP
6330.00†	11.342	86.224	6076.21	-1656.07	96.88	1653.41	40.4439251	-104.6016945	9.00	
6430.00†	2.350	81.882	6175.40	-1667.97	97.82	1665.28	40.4439273	-104.6016519	9.00	
6530.00†	6.664	269.253	6275.22	-1664.20	98.03	1661.50	40.4439280	-104.6016655	9.00	
6630.00†	15.662	268.136	6373.23	-1644.86	97.52	1642.17	40.4439271	-104.6017349	9.00	
6730.00†	24.661	267.826	6467.00	-1610.43	96.28	1607.76	40.4439247	-104.6018586	9.00	
6830.00†	33.661	267.674	6554.24	-1561.76	94.36	1559.12	40.4439208	-104.6020334	9.00	
6930.00†	42.661	267.581	6632.79	-1500.03	91.80	1497.45	40.4439155	-104.6022550	9.00	
7030.00†	51.661	267.515	6700.71	-1426.78	88.67	1424.27	40.4439089	-104.6025181	9.00	
7130.00†	60.661	267.464	6756.34	-1343.81	85.03	1341.37	40.4439012	-104.6028160	9.00	

WELLPATH DATA (181 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7230.00†	69.660	267.421	6798.31	-1253.15	80.98	1250.81	40.4438926	-104.6031415	9.00	
7330.00†	78.660	267.383	6825.57	-1157.05	76.63	1154.80	40.4438834	-104.6034866	9.00	
7354.52†	80.867	267.374	6829.93	-1132.92	75.52	1130.70	40.4438810	-104.6035732	9.00	
7430.00†	87.660	267.348	6837.47	-1057.86	72.07	1055.72	40.4438736	-104.6038427	9.00	
7455.05†	89.915	267.339	6838.00	-1032.82	70.91	1030.70	40.4438711	-104.6039326	9.00	LP
7456.00	90.000	267.338	6838.00 [†]	-1031.87	70.86	1029.76	40.4438710	-104.6039360	9.00	LP
7530.00†	90.000	267.338	6838.00	-957.87	67.43	955.83	40.4438636	-104.6042017	0.00	
7630.00†	90.000	267.338	6838.00	-857.87	62.78	855.94	40.4438536	-104.6045607	0.00	
7730.00†	90.000	267.338	6838.00	-757.87	58.14	756.05	40.4438437	-104.6049198	0.00	
7830.00†	90.000	267.338	6838.00	-657.87	53.50	656.16	40.4438337	-104.6052788	0.00	
7930.00†	90.000	267.338	6838.00	-557.87	48.85	556.27	40.4438237	-104.6056378	0.00	
8030.00†	90.000	267.338	6838.00	-457.87	44.21	456.37	40.4438137	-104.6059969	0.00	
8130.00†	90.000	267.338	6838.00	-357.87	39.57	356.48	40.4438037	-104.6063559	0.00	
8230.00†	90.000	267.338	6838.00	-257.87	34.92	256.59	40.4437938	-104.6067149	0.00	



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Apache State E35-656 (REV-C.0) PWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Apache State E35-656
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-656 PWB
Slot	SLOT#06 APACHE STATE E35-656 (2159'FNL & 1631'FEL,SEC.36)		

WELLPATH DATA (181 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
8330.00†	90.000	267.338	6838.00	-157.87	30.28	156.70	40.4437838	-104.6070740	0.00	
8430.00†	90.000	267.338	6838.00	-57.87	25.64	56.81	40.4437738	-104.6074330	0.00	
8530.00†	90.000	267.338	6838.00	42.13	20.99	-43.09	40.4437638	-104.6077920	0.00	
8630.00†	90.000	267.338	6838.00	142.13	16.35	-142.98	40.4437538	-104.6081511	0.00	
8730.00†	90.000	267.338	6838.00	242.13	11.70	-242.87	40.4437438	-104.6085101	0.00	
8830.00†	90.000	267.338	6838.00	342.12	7.06	-342.76	40.4437338	-104.6088691	0.00	
8930.00†	90.000	267.338	6838.00	442.12	2.42	-442.66	40.4437239	-104.6092282	0.00	
9030.00†	90.000	267.338	6838.00	542.12	-2.23	-542.55	40.4437139	-104.6095872	0.00	
9130.00†	90.000	267.338	6838.00	642.12	-6.87	-642.44	40.4437039	-104.6099462	0.00	
9230.00†	90.000	267.338	6838.00	742.12	-11.51	-742.33	40.4436939	-104.6103053	0.00	
9330.00†	90.000	267.338	6838.00	842.12	-16.16	-842.22	40.4436839	-104.6106643	0.00	
9430.00†	90.000	267.338	6838.00	942.12	-20.80	-942.12	40.4436739	-104.6110233	0.00	
9530.00†	90.000	267.338	6838.00	1042.12	-25.44	-1042.01	40.4436639	-104.6113824	0.00	
9630.00†	90.000	267.338	6838.00	1142.12	-30.09	-1141.90	40.4436539	-104.6117414	0.00	
9730.00†	90.000	267.338	6838.00	1242.12	-34.73	-1241.79	40.4436439	-104.6121004	0.00	
9830.00†	90.000	267.338	6838.00	1342.12	-39.37	-1341.68	40.4436339	-104.6124595	0.00	
9930.00†	90.000	267.338	6838.00	1442.12	-44.02	-1441.58	40.4436239	-104.6128185	0.00	
10030.00†	90.000	267.338	6838.00	1542.12	-48.66	-1541.47	40.4436139	-104.6131775	0.00	
10130.00†	90.000	267.338	6838.00	1642.12	-53.30	-1641.36	40.4436039	-104.6135365	0.00	
10230.00†	90.000	267.338	6838.00	1742.12	-57.95	-1741.25	40.4435939	-104.6138956	0.00	
10330.00†	90.000	267.338	6838.00	1842.12	-62.59	-1841.15	40.4435839	-104.6142546	0.00	
10430.00†	90.000	267.338	6838.00	1942.12	-67.24	-1941.04	40.4435739	-104.6146136	0.00	
10530.00†	90.000	267.338	6838.00	2042.12	-71.88	-2040.93	40.4435639	-104.6149727	0.00	
10630.00†	90.000	267.338	6838.00	2142.12	-76.52	-2140.82	40.4435538	-104.6153317	0.00	
10730.00†	90.000	267.338	6838.00	2242.12	-81.17	-2240.71	40.4435438	-104.6156907	0.00	
10830.00†	90.000	267.338	6838.00	2342.12	-85.81	-2340.61	40.4435338	-104.6160498	0.00	
10930.00†	90.000	267.338	6838.00	2442.12	-90.45	-2440.50	40.4435238	-104.6164088	0.00	
11030.00†	90.000	267.338	6838.00	2542.12	-95.10	-2540.39	40.4435138	-104.6167678	0.00	
11130.00†	90.000	267.338	6838.00	2642.12	-99.74	-2640.28	40.4435038	-104.6171269	0.00	
11230.00†	90.000	267.338	6838.00	2742.12	-104.38	-2740.17	40.4434938	-104.6174859	0.00	
11330.00†	90.000	267.338	6838.00	2842.12	-109.03	-2840.07	40.4434837	-104.6178449	0.00	

WELLPATH DATA (181 stations) † = interpolated, ‡ = extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11430.00†	90.000	267.338	6838.00	2942.12	-113.67	-2939.96	40.4434737	-104.6182039	0.00	
11530.00†	90.000	267.338	6838.00	3042.12	-118.31	-3039.85	40.4434637	-104.6185630	0.00	
11630.00†	90.000	267.338	6838.00	3142.12	-122.96	-3139.74	40.4434537	-104.6189220	0.00	
11730.00†	90.000	267.338	6838.00	3242.11	-127.60	-3239.64	40.4434437	-104.6192810	0.00	
11830.00†	90.000	267.338	6838.00	3342.11	-132.25	-3339.53	40.4434336	-104.6196401	0.00	
11930.00†	90.000	267.338	6838.00	3442.11	-136.89	-3439.42	40.4434236	-104.6199991	0.00	
12030.00†	90.000	267.338	6838.00	3542.11	-141.53	-3539.31	40.4434136	-104.6203581	0.00	
12130.00†	90.000	267.338	6838.00	3642.11	-146.18	-3639.20	40.4434036	-104.6207172	0.00	
12230.00†	90.000	267.338	6838.00	3742.11	-150.82	-3739.10	40.4433935	-104.6210762	0.00	
12330.00†	90.000	267.338	6838.00	3842.11	-155.46	-3838.99	40.4433835	-104.6214352	0.00	
12430.00†	90.000	267.338	6838.00	3942.11	-160.11	-3938.88	40.4433735	-104.6217942	0.00	
12530.00†	90.000	267.338	6838.00	4042.11	-164.75	-4038.77	40.4433635	-104.6221533	0.00	
12630.00†	90.000	267.338	6838.00	4142.11	-169.39	-4138.66	40.4433534	-104.6225123	0.00	
12730.00†	90.000	267.338	6838.00	4242.11	-174.04	-4238.56	40.4433434	-104.6228713	0.00	



Planned Wellpath Report

Apache State E35-656 (REV-C.0) PWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Apache State E35-656
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-656 PWB
Slot	SLOT#06 APACHE STATE E35-656 (2159'FNL & 1631'FEL,SEC.36)		

WELLPATH DATA (181 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	267.338	6838.00	4342.11	-178.68	-4338.45	40.4433334	-104.6232304	0.00	
12930.00†	90.000	267.338	6838.00	4442.11	-183.32	-4438.34	40.4433233	-104.6235894	0.00	
13030.00†	90.000	267.338	6838.00	4542.11	-187.97	-4538.23	40.4433133	-104.6239484	0.00	
13130.00†	90.000	267.338	6838.00	4642.11	-192.61	-4638.13	40.4433033	-104.6243074	0.00	
13230.00†	90.000	267.338	6838.00	4742.11	-197.25	-4738.02	40.4432932	-104.6246665	0.00	
13330.00†	90.000	267.338	6838.00	4842.11	-201.90	-4837.91	40.4432832	-104.6250255	0.00	
13430.00†	90.000	267.338	6838.00	4942.11	-206.54	-4937.80	40.4432731	-104.6253845	0.00	
13530.00†	90.000	267.338	6838.00	5042.11	-211.19	-5037.69	40.4432631	-104.6257435	0.00	
13630.00†	90.000	267.338	6838.00	5142.11	-215.83	-5137.59	40.4432530	-104.6261026	0.00	
13730.00†	90.000	267.338	6838.00	5242.11	-220.47	-5237.48	40.4432430	-104.6264616	0.00	
13830.00†	90.000	267.338	6838.00	5342.11	-225.12	-5337.37	40.4432330	-104.6268206	0.00	
13930.00†	90.000	267.338	6838.00	5442.11	-229.76	-5437.26	40.4432229	-104.6271797	0.00	
14030.00†	90.000	267.338	6838.00	5542.11	-234.40	-5537.15	40.4432129	-104.6275387	0.00	
14130.00†	90.000	267.338	6838.00	5642.11	-239.05	-5637.05	40.4432028	-104.6278977	0.00	
14230.00†	90.000	267.338	6838.00	5742.11	-243.69	-5736.94	40.4431928	-104.6282567	0.00	
14330.00†	90.000	267.338	6838.00	5842.11	-248.33	-5836.83	40.4431827	-104.6286158	0.00	
14430.00†	90.000	267.338	6838.00	5942.11	-252.98	-5936.72	40.4431727	-104.6289748	0.00	
14530.00†	90.000	267.338	6838.00	6042.11	-257.62	-6036.61	40.4431626	-104.6293338	0.00	
14630.00†	90.000	267.338	6838.00	6142.10	-262.26	-6136.51	40.4431526	-104.6296928	0.00	
14730.00†	90.000	267.338	6838.00	6242.10	-266.91	-6236.40	40.4431425	-104.6300519	0.00	
14830.00†	90.000	267.338	6838.00	6342.10	-271.55	-6336.29	40.4431324	-104.6304109	0.00	
14930.00†	90.000	267.338	6838.00	6442.10	-276.20	-6436.18	40.4431224	-104.6307699	0.00	
15030.00†	90.000	267.338	6838.00	6542.10	-280.84	-6536.08	40.4431123	-104.6311290	0.00	
15130.00†	90.000	267.338	6838.00	6642.10	-285.48	-6635.97	40.4431023	-104.6314880	0.00	
15230.00†	90.000	267.338	6838.00	6742.10	-290.13	-6735.86	40.4430922	-104.6318470	0.00	
15330.00†	90.000	267.338	6838.00	6842.10	-294.77	-6835.75	40.4430822	-104.6322060	0.00	
15430.00†	90.000	267.338	6838.00	6942.10	-299.41	-6935.64	40.4430721	-104.6325651	0.00	
15530.00†	90.000	267.338	6838.00	7042.10	-304.06	-7035.54	40.4430620	-104.6329241	0.00	
15630.00†	90.000	267.338	6838.00	7142.10	-308.70	-7135.43	40.4430520	-104.6332831	0.00	
15730.00†	90.000	267.338	6838.00	7242.10	-313.34	-7235.32	40.4430419	-104.6336421	0.00	
15830.00†	90.000	267.338	6838.00	7342.10	-317.99	-7335.21	40.4430318	-104.6340012	0.00	

WELLPATH DATA (181 stations) † = interpolated, ‡ = extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
15930.00†	90.000	267.338	6838.00	7442.10	-322.63	-7435.10	40.4430218	-104.6343602	0.00	
16030.00†	90.000	267.338	6838.00	7542.10	-327.27	-7535.00	40.4430117	-104.6347192	0.00	
16130.00†	90.000	267.338	6838.00	7642.10	-331.92	-7634.89	40.4430016	-104.6350782	0.00	
16230.00†	90.000	267.338	6838.00	7742.10	-336.56	-7734.78	40.4429915	-104.6354373	0.00	
16330.00†	90.000	267.338	6838.00	7842.10	-341.20	-7834.67	40.4429815	-104.6357963	0.00	
16430.00†	90.000	267.338	6838.00	7942.10	-345.85	-7934.57	40.4429714	-104.6361553	0.00	
16530.00†	90.000	267.338	6838.00	8042.10	-350.49	-8034.46	40.4429613	-104.6365143	0.00	
16630.00†	90.000	267.338	6838.00	8142.10	-355.14	-8134.35	40.4429513	-104.6368734	0.00	
16730.00†	90.000	267.338	6838.00	8242.10	-359.78	-8234.24	40.4429412	-104.6372324	0.00	
16830.00†	90.000	267.338	6838.00	8342.10	-364.42	-8334.13	40.4429311	-104.6375914	0.00	
16930.00†	90.000	267.338	6838.00	8442.10	-369.07	-8434.03	40.4429210	-104.6379504	0.00	
17030.00†	90.000	267.338	6838.00	8542.10	-373.71	-8533.92	40.4429109	-104.6383095	0.00	
17130.00†	90.000	267.338	6838.00	8642.10	-378.35	-8633.81	40.4429009	-104.6386685	0.00	
17230.00†	90.000	267.338	6838.00	8742.10	-383.00	-8733.70	40.4428908	-104.6390275	0.00	



Planned Wellpath Report

Apache State E35-656 (REV-C.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Apache State E35-656
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-656 PWB
Slot	SLOT#06 APACHE STATE E35-656 (2159'FNL & 1631'FEL,SEC.36)		

WELLPATH DATA (181 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
17237.66	90.000	267.338	6838.00 ²	8749.76	-383.35	-8741.35	40.4428900	-104.6390550	0.00	BHL

HOLE & CASING SECTIONS - Ref Wellbore: Apache State E35-656 PWB Ref Wellpath: Apache State E35-656 (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	1908.47	0.00	0.00	18.11	309.27	

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	166.48	-1.95	3248365.69	1405898.25	40.4441620	-104.6076390	polygon	2D Polygon: dimensions not calculated
SEC.36-T06N-R65W DP 305	N/A	1.00	166.48	-1.95	3248365.69	1405898.25	40.4441620	-104.6076390	polygon	2D Polygon: dimensions not calculated
2) APACHE STATE E35-656 BHL Rev-2 (2464'FNL & 200'FWL Sec.35)	17237.66	6838.00	-383.35	-8741.35	3239626.63	1405348.44	40.4428900	-104.6390550	point	
1) APACHE STATE E35-656 LP Rev-2 (2099'FNL & 600'FEL,SEC.36)	7456.00	6838.00	70.86	1029.76	3249397.36	1405802.63	40.4438710	-104.6039360	point	
Libsack E35-656 BPZ Rev-1 (2464'FNL & 200'FWL,SEC.35)	N/A	6838.00	-384.17	-8743.91	3239624.07	1405347.62	40.4428878	-104.6390642	point	
Libsack E35-656 LP Rev-1 (2081'FNL & 200'FEL,SEC.36)	N/A	6838.00	92.06	1431.59	3249799.17	1405823.83	40.4439180	-104.6024916	point	
Libsack E35-656 LP Rev-2 (2099'FNL & 600'FEL,SEC.36)	N/A	6838.00	73.35	1031.83	3249399.43	1405805.12	40.4438778	-104.6039285	point	

SURVEY PROGRAM - Ref Wellbore: Apache State E35-656 PWB Ref Wellpath: Apache State E35-656 (REV-C.0) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
30.00	17829.90	OWSG MWD rev2 (MS+IFR1)		Apache State E35-656 PWB



Planned Wellpath Report

Apache State E35-656 (REV-C.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	Apache State E35-656
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-656 PWB
Slot	SLOT#06 APACHE STATE E35-656 (2159'FNL & 1631'FEL,SEC.36)		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
7354.52	80.867	267.374	6829.93	
7455.05	89.915	267.339	6838.00	LP

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
30.00	0.000	86.649	30.00	Tie On
500.00	0.000	86.649	500.00	End of Tangent
1397.97	17.959	86.649	1383.33	Build (XS)
6256.46	17.959	86.649	6005.10	KOP
7456.00	90.000	267.338	6838.00	LP
17237.66	90.000	267.338	6838.00	BHL



Closest Approach Clearance Summary Report

Apache State E35-656 (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 E35-656
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-656 PWB
Slot	SLOT#06 APACHE STATE E35-656 (2159'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 5:17:41 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	-166.48	1.95	3248367.64	1405731.77	40°26'37.3380"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#06 APACHE STATE E35-656 (2159'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 E35-656 (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 E35-656
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-656 PWB
Slot	SLOT#06 APACHE STATE E35-656 (2159'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 E35-656 PWB Ref Wellpath: Apache State E35-656 (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	1908.47	0.00	0.00	18.11	309.27

SURVEY PROGRAM - Ref Wellbore: Apache State E35-656 PWB Ref Wellpath: Apache State E35-656 (REV-C.0) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
30.00	17829.90	OWSG MWD rev2 (MS+IFR1)		Apache State E35-656 PWB



Closest Approach Clearance Summary Report

Apache State E35-656 (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 E35-656
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-656 PWB
Slot	SLOT#06 APACHE STATE E35-656 (2159'FNL & 1631'FEL,SEC.36)		

CALCULATION RANGE & CUTOFF		
From: 30.00ft MD	To: 17237.66ft 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	15422.73	372.27	15422.73	15422.73	0.04	15422.73	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	14243.24	261.88	14243.24	14243.24	0.06	14243.24	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	16818.75	1068.98	16818.75	16818.75	0.13	16818.75	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	15331.24	1082.03	15331.24	15331.24	0.13	15331.24	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	14089.38	1643.10	14089.38	14089.51	0.20	14089.51	FAIL
E Section 36	(Sinjin E36-7 (PA))	Sinjin E36-7 (05-123-16302)	Sinjin E36-7 AWB	Wellbore #1\No Surveys	Drilling	8838.39	63.08	8838.39	8838.37	0.27	8838.37	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	12888.06	2374.21	12888.06	12888.28	0.28	12888.28	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	15374.14	2403.44	15374.14	15374.46	0.29	15374.46	FAIL
E Section 36	(Sinjin E36-5 (PR))	Sinjin E36-5 (05-123-16353)	Sinjin E36-5 AWB	Wellbore #1\Gyro Surveys	Drilling	11466.61	61.91	11466.61	11467.22	0.50	11467.22	FAIL
E Section 36	(Sinjin E36-8 (SI))	Sinjin E36-8 (05-123-16468)	Sinjin E36-8 AWB	Wellbore #1\Gyro Surveys	Drilling	4531.14	37.25	7330.00	4536.75	0.69	7330.00	FAIL
E Section 36	(Sinjin E36-6 (SI))	Sinjin E36-6 (05-123-16354)	Sinjin E36-6 AWB	Wellbore #1\No Surveys	Drilling	10175.27	220.79	10175.27	10176.84	0.95	10176.84	FAIL
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	14.94	17237.66	17237.66	1.02	17237.66	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	17130.00	17232.88	1.04	17232.88	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	12754.41	3568.90	12754.41	3854.32	1.20	15330.00	PASS
					Drilling	6930.00	183.69	6930.00	6930.78	1.32	6930.78	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.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									
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	29.87	17221.89	17221.89	2.05	17221.89	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	17237.66	294.38	17237.66	17237.66	2.15	17237.66	PASS	
E Section 35	Hoshiko 3 (05-123-11550) PA	Hoshiko 3 (05-123-11550)	Hoshiko 3 AWB	Hoshiko 3 - As Drilled	Drilling	12732.39	319.59	12732.39	12740.80	2.20	12740.80	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	30.24	17237.66	17237.66	2.44	17237.66	PASS	
E Section 36	(Mansfield E36-65HN)	Mansfield E36-65HN (05-123-34611)	Mansfield E36-65HN ST01	Mansfield E36-65HN ST01 - As Drilled	Drilling	9019.16	537.28	11130.00	7391.88	2.49	11130.00	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	16663.99	601.25	16663.99	16682.62	2.70	16682.62	PASS	
E Section 36	(Bill E36-67HN)	Bill E36-67HN (05-123-34609)	Bill E36-67HN	Bill E36-67HN - As Drilled	Drilling	11461.93	615.35	11461.93	7304.35	3.24	11630.00	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	44.81	17230.00	17234.42	3.43	17234.42	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	45.18	17237.66	17237.66	3.49	17237.66	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	10794.79	378.67	10794.79	10808.26	3.63	10808.26	PASS	



Closest Approach Clearance Summary Report

Apache State E35-656 (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 E35-656
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-656 PWB
Slot	SLOT#06 APACHE STATE E35-656 (2159'FNL & 1631'FEL,SEC.36)		

CALCULATION RANGE & CUTOFF		
From: 30.00ft MD	To: 17237.66ft 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#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	60.11	17237.66	17237.66	4.54	17237.66	PASS	
E Section 36	(Mansfield E36-65HN)	Mansfield E36-65HN (05-123-34611)	Mansfield E36-65HN	Mansfield E36-65HN - As Drilled	Drilling	11089.65	540.32	11089.65	11114.58	4.56	11114.58	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	60.11	17230.00	17237.66	4.85	17237.66	PASS	
E Section 36	(Sinjin E36-11 (SI))	Sinjin E36-11 (05-123-16305)	Sinjin E36-11 AWB	Wellbore #1/No Surveys	Drilling	10077.50	1107.94	10077.50	10107.17	4.88	10107.17	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	75.05	17237.66	17237.66	5.58	17237.66	PASS	
E Section 36	(Sinjin E36-10(SI))	Sinjin E36-10(05-123-16304)	Sinjin E36-10 AWB	Wellbore #1/No Surveys	Drilling	8855.07	1255.30	8855.07	8879.98	5.68	8879.98	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	16194.49	1259.95	16194.49	16278.09	5.91	16278.09	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	6730.00	798.13	6730.00	6756.42	5.94	6756.42	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	75.05	500.00	17237.66	6.20	17237.66	PASS	
E Section 36	(Sinjin E36-9 (SI))	Sinjin E36-9 (05-123-16303)	Sinjin E36-9 AWB	Wellbore #1/No Surveys	Drilling	3814.83	1426.34	7594.66	7594.66	6.61	7594.66	PASS	
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	89.99	17237.66	17237.66	6.65	17237.66	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	16870.04	1601.89	16870.04	16997.01	7.05	16997.01	PASS	
E Section 36	(Sinjin E36-12 (SI))	Sinjin E36-12 (05-123-12890)	Sinjin E36-12 AWB	Wellbore #1/Gyro Surveys	Drilling	11578.36	1239.93	11578.36	11810.15	7.49	11810.15	PASS	
		Apache State E35-615			Planned	30.00	104.93	17237.66	17237.66	7.67	17237.66	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#13 APACHE STATE E35-615 (2264'FNL & 1631'FEL,SEC.36)		Apache State E35-615 PWB	Apache State E35-615 (REV-C.0) PWP									
E Section 26	(Healy E34-69HN)	Healy E34-69HN (05-123-38160)	Healy E34-69HN AWB	Healy E34-69HN\Original Drilling	Drilling	12474.23	2239.33	12474.23	17237.66	7.82	17237.66	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	13966.79	3116.96	13966.79	14477.19	8.10	14477.19	PASS	
E Section 36	(Sinjin State E36-19)	Sinjin State E36-19 (05-123-30092)	Sinjin State E36-19 AWB	Wellbore #1\Gyro Surveys	Drilling	10837.92	849.53	10837.92	10911.86	8.11	10911.86	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	15525.51	1792.93	15525.51	15648.09	8.11	15648.09	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	14404.33	3315.83	14404.33	14464.12	8.58	14464.12	PASS	
E Section 36	(Sinjin E36-14 (PA))	Sinjin E36-14 (05-123-16307)	Sinjin E36-14 AWB	Wellbore #1\No Surveys	Drilling	10210.13	2239.44	10210.13	10342.71	9.82	10342.71	PASS	
E Section 35	EWS #2 (05-123-37808) IJ	EWS #2 (05-123-37808)	EWS #2	EWS #2 - As-Drilled	Drilling	14270.25	1727.27	14270.25	14449.44	9.86	14449.44	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	10917.85	2847.57	10917.85	11095.27	10.26	11095.27	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	16889.74	2361.04	16889.74	17148.27	10.31	17148.27	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	12721.47	1641.31	12721.47	12922.50	11.29	12922.50	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	14223.64	2298.97	14223.64	14591.52	13.01	14591.52	PASS	



Closest Approach Clearance Summary Report

Apache State E35-656 (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 E35-656
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.36-T06N-R65W	Wellbore	Apache State E35-656 PWB
Slot	SLOT#06 APACHE STATE E35-656 (2159'FNL & 1631'FEL,SEC.36)		

CALCULATION RANGE & CUTOFF		
From: 30.00ft MD	To: 17237.66ft 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 E 36-33 (SI))	LDS E 36-33 (05-123-29796)	LDS E 36-33 AWB	LDS E 36-33\Gyro Surveys	Drilling	12036.00	1696.90	12036.00	12273.80	13.28	12273.80	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	11439.33	1605.99	11439.33	11679.04	13.74	11679.04	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	12984.17	2214.37	12984.17	13321.78	14.58	13321.78	PASS
E Section 36	(Sinjin E36-25 (SI))	Sinjin E36-25 (05-123-22619)	Sinjin E36-25 AWB	Wellbore #1\Gyro Surveys	Drilling	10754.24	1645.29	10754.24	11018.57	15.70	11018.57	PASS
E Section 36	(Cattleman 13-31D (PR))	Cattleman 13-31D (05-123-22091)	Cattleman 13-31D AWB	Wellbore #1\MWD Surveys	Drilling	6555.18	1343.04	6555.18	6726.83	16.05	6726.83	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	10095.39	1636.50	10095.39	10387.61	17.30	10387.61	PASS
E Section 36	(Sinjin E36-13 (TA))	Sinjin E36-13 (05-123-16306)	Sinjin E36-13 AWB	Wellbore #1\Gyro Surveys	Drilling	11622.12	2164.63	11622.12	12028.08	17.82	12028.08	PASS
SEC.02-T05N-R65W	SLOT#01 Noffsinger #2RD (05-123-31903)	Noffsinger #2RD	Noffsinger #2RD AWB	Noffsinger #2RD AWP	Drilling	13525.48	3007.31	13525.48	14103.96	18.06	14103.96	PASS
E Section 36	(Sinjin E36-2 (PR))	Sinjin E36-2 (05-123-16301)	Sinjin E36-2 AWB	Wellbore #1\Gyro Surveys	Drilling	8994.34	1496.14	8994.34	9270.05	19.17	9270.05	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	2108.98	6430.00	6518.15	19.71	16230.00	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	12167.14	2968.94	12167.14	12882.66	21.19	12882.66	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	6519.55	1375.49	6519.55	6639.60	22.04	6639.60	PASS
E Section 36	(Sinjin E36-1 (SI))	Sinjin E36-1 (05-123-16466)	Sinjin E36-1 AWB	Wellbore #1\Gyro Surveys	Drilling	7564.51	1543.56	7564.51	7745.44	23.83	7745.44	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	6379.82	1745.65	6379.82	6634.89	25.79	6634.89	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	8984.93	2571.17	8984.93	9750.91	31.62	9750.91	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
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	1332.45	2930.94	9530.00	10558.58	33.41	10558.58	PASS
E Section 36	(Cattleman 24-31D (TA))	Cattleman 24-31D (05-123-22092)	Cattleman 24-31D AWB	Wellbore #1\MWD Surveys	Drilling	469.04	2946.53	3230.00	6691.08	33.67	16030.00	PASS
E Section 36	(Cattleman 14-31D (SI))	Cattleman 14-31D (05-123-22089)	Cattleman 14-31D AWB	Wellbore #1\MWD Surveys	Drilling	6370.78	2574.34	6370.78	6907.61	34.22	6907.61	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	397.12	2937.89	8230.00	9307.66	40.20	9307.66	PASS
E Section 36	(Sinjin E36-16 (PA))	Sinjin E36-16 (05-123-16469)	Sinjin E36-16 AWB	Wellbore #1\Gyro Surveys	Drilling	3481.16	2700.30	7630.00	8391.73	40.75	8391.73	PASS