

PETROSHARE

Location: COLORADO Slot: SLOT#02 WAKEMAN 20-17-4NAH (293°FSL & 2038°FEL, SEC.20)
Field: ADAMS COUNTY (NAD83/ GRID NORTH) Well: WAKEMAN 20-17-4NAH
Facility: SEC.20-T01S-R65W Wellbore: WAKEMAN 20-17-4NAH PWB

Plot reference wellpath is WAKEMAN 20-17-4NAH PWB (REV-A.0)

True vertical depths are referenced to RIG (13KB) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to RIG (13KB) (RKB)	North Reference: Grid north
RIG (13KB) (RKB) to Mean Sea Level: 5203 feet	Scale: True distance
Mean Sea Level to Ground level (At Slot: SLOT#02 WAKEMAN 20-17-4NAH (293°FSL & 2038°FEL, SEC.20)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: ingjammr on 2017-09-22
	Database: WellArchitectDB1

Location Information

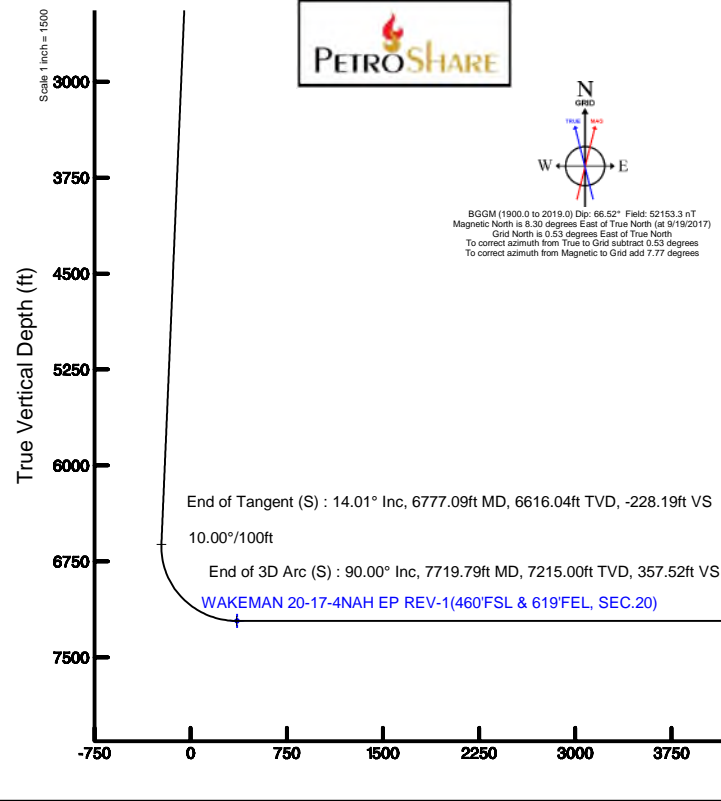
Facility Name				Grid East (US Rt)	Grid North (US Rt)	Latitude	Longitude
SEC.20-T01S-R65W				3228360.558	1223518.730	39°56'38.622"N	104°41'07.909"W
Slot	Local N (ft)	Local E (ft)		Grid East (US Rt)	Grid North (US Rt)	Latitude	Longitude
SLOT#02 WAKEMAN 20-17-4NAH (293°FSL & 2038°FEL, SEC.20)	-0.07	-15.00		3228345.559	1223518.661	39°56'38.622"N	104°41'08.102"W
RIG (13KB) (RKB) to Ground level (At Slot: SLOT#02 WAKEMAN 20-17-4NAH (293°FSL & 2038°FEL, SEC.20))						5203ft	
Mean Sea Level to Ground level (At Slot: SLOT#02 WAKEMAN 20-17-4NAH (293°FSL & 2038°FEL, SEC.20))						0ft	
RIG (13KB) (RKB) to Mean Sea Level						5203ft	

Hole and Casing Sections

Name	Start MD (ft)	End MD (ft)	Interval (ft)	Start TVD (ft)	End TVD (ft)	Start Local N (ft)	Start Local E (ft)	End Local N (ft)	End Local E (ft)	Wellbore
9.625in Casing Surface	13.00	1800.00	1787.00	13.00	1787.10	0.00	0.00	-40.11	127.36	WAKEMAN 20-17-4NAH PWB
8.5in Open Hole	1800.00	17516.82	15716.82	1787.10	7215.00	-40.11	127.36	9966.98	1341.93	WAKEMAN 20-17-4NAH PWB

Survey Program

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
13.00	17516.82	BHI NavTrak	Custom BHI NavTrak (Standard Rotating+Axial Corr) (Rockies 0.03Gt model)		WAKEMAN 20-17-4NAH PWB





Planned Wellpath Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)

Page 1 of 10

**BAKER
HUGHES**
a GE company



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Ingmjmr
Scale	0.999971	Report Generated	9/22/2017 at 11:35:38 AM
Convergence at slot	0.53° East	Database/Source file	WellArchitectDB1/WAKEMAN_20-17-4NAH_PWP_REV-A.0_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-0.07	-15.00	3228345.56	1223518.66	39°56'38.622"N	104°41'08.102"W
Facility Reference Pt			3228360.56	1223518.73	39°56'38.622"N	104°41'07.909"W
Field Reference Pt			3175478.75	1240632.48	39°59'31.992"N	104°52'25.320"W

WELLPATH DATUM

Calculation method	Minimum curvature	RIG (13'KB) (RKB) to Facility Vertical Datum	5203.00ft
Horizontal Reference Pt	Slot	RIG (13'KB) (RKB) to Mean Sea Level	5203.00ft
Vertical Reference Pt	RIG (13'KB) (RKB)	RIG (13'KB) (RKB) to Ground Level at Slot (SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20))	5203.00ft
MD Reference Pt	RIG (13'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	7.67°



Planned Wellpath Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)

Page 2 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

WELLPATH DATA (184 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	107.481	0.00	0.00	0.00	0.00	39°56'38.622"N	104°41'08.102"W	0.00	
13.00	0.000	107.481	13.00	0.00	0.00	0.00	39°56'38.622"N	104°41'08.102"W	0.00	Tie On
113.00†	0.000	107.481	113.00	0.00	0.00	0.00	39°56'38.622"N	104°41'08.102"W	0.00	
213.00†	0.000	107.481	213.00	0.00	0.00	0.00	39°56'38.622"N	104°41'08.102"W	0.00	
313.00†	0.000	107.481	313.00	0.00	0.00	0.00	39°56'38.622"N	104°41'08.102"W	0.00	
413.00†	0.000	107.481	413.00	0.00	0.00	0.00	39°56'38.622"N	104°41'08.102"W	0.00	
513.00†	0.000	107.481	513.00	0.00	0.00	0.00	39°56'38.622"N	104°41'08.102"W	0.00	
613.00†	0.000	107.481	613.00	0.00	0.00	0.00	39°56'38.622"N	104°41'08.102"W	0.00	
713.00†	0.000	107.481	713.00	0.00	0.00	0.00	39°56'38.622"N	104°41'08.102"W	0.00	
813.00†	0.000	107.481	813.00	0.00	0.00	0.00	39°56'38.622"N	104°41'08.102"W	0.00	
900.00	0.000	107.481	900.00	0.00	0.00	0.00	39°56'38.622"N	104°41'08.102"W	0.00	End of Tangent
913.00†	0.260	107.481	913.00	-0.01	-0.01	0.03	39°56'38.622"N	104°41'08.101"W	2.00	
1013.00†	2.260	107.481	1012.97	-0.38	-0.67	2.13	39°56'38.616"N	104°41'08.074"W	2.00	
1113.00†	4.260	107.481	1112.80	-1.35	-2.38	7.55	39°56'38.598"N	104°41'08.005"W	2.00	
1213.00†	6.260	107.481	1212.38	-2.91	-5.13	16.29	39°56'38.570"N	104°41'07.893"W	2.00	
1313.00†	8.260	107.481	1311.57	-5.07	-8.93	28.35	39°56'38.532"N	104°41'07.739"W	2.00	
1413.00†	10.260	107.481	1410.26	-7.81	-13.76	43.69	39°56'38.483"N	104°41'07.542"W	2.00	
1504.48†	12.090	107.481	1500.00	-10.83	-19.09	60.60	39°56'38.428"N	104°41'07.326"W	2.00	FOX HILLS
1513.00†	12.260	107.481	1508.33	-11.14	-19.63	62.32	39°56'38.423"N	104°41'07.304"W	2.00	
1600.74	14.015	107.481	1593.77	-14.53	-25.62	81.34	39°56'38.362"N	104°41'07.060"W	2.00	End of Build (S)
1613.00†	14.015	107.481	1605.67	-15.04	-26.51	84.17	39°56'38.353"N	104°41'07.024"W	0.00	
1713.00†	14.015	107.481	1702.69	-19.17	-33.78	107.27	39°56'38.279"N	104°41'06.728"W	0.00	
1813.00†	14.015	107.481	1799.71	-23.30	-41.06	130.37	39°56'38.205"N	104°41'06.433"W	0.00	
1913.00†	14.015	107.481	1896.74	-27.42	-48.33	153.47	39°56'38.131"N	104°41'06.137"W	0.00	
2013.00†	14.015	107.481	1993.76	-31.55	-55.61	176.56	39°56'38.057"N	104°41'05.841"W	0.00	
2113.00†	14.015	107.481	2090.78	-35.68	-62.88	199.66	39°56'37.983"N	104°41'05.546"W	0.00	
2213.00†	14.015	107.481	2187.81	-39.81	-70.16	222.76	39°56'37.909"N	104°41'05.250"W	0.00	
2313.00†	14.015	107.481	2284.83	-43.93	-77.43	245.86	39°56'37.835"N	104°41'04.954"W	0.00	
2413.00†	14.015	107.481	2381.85	-48.06	-84.71	268.96	39°56'37.761"N	104°41'04.659"W	0.00	
2513.00†	14.015	107.481	2478.88	-52.19	-91.98	292.06	39°56'37.687"N	104°41'04.363"W	0.00	



Planned Wellpath Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)

Page 3 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

WELLPATH DATA (184 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2613.00†	14.015	107.481	2575.90	-56.32	-99.26	315.16	39°56'37.613"N	104°41'04.067"W	0.00	
2713.00†	14.015	107.481	2672.92	-60.44	-106.53	338.26	39°56'37.539"N	104°41'03.772"W	0.00	
2813.00†	14.015	107.481	2769.95	-64.57	-113.81	361.35	39°56'37.465"N	104°41'03.476"W	0.00	
2913.00†	14.015	107.481	2866.97	-68.70	-121.08	384.45	39°56'37.391"N	104°41'03.180"W	0.00	
3013.00†	14.015	107.481	2963.99	-72.83	-128.35	407.55	39°56'37.317"N	104°41'02.884"W	0.00	
3113.00†	14.015	107.481	3061.02	-76.95	-135.63	430.65	39°56'37.243"N	104°41'02.589"W	0.00	
3213.00†	14.015	107.481	3158.04	-81.08	-142.90	453.75	39°56'37.169"N	104°41'02.293"W	0.00	
3313.00†	14.015	107.481	3255.06	-85.21	-150.18	476.85	39°56'37.095"N	104°41'01.997"W	0.00	
3413.00†	14.015	107.481	3352.09	-89.34	-157.45	499.95	39°56'37.021"N	104°41'01.702"W	0.00	
3513.00†	14.015	107.481	3449.11	-93.46	-164.73	523.04	39°56'36.947"N	104°41'01.406"W	0.00	
3613.00†	14.015	107.481	3546.13	-97.59	-172.00	546.14	39°56'36.873"N	104°41'01.110"W	0.00	
3713.00†	14.015	107.481	3643.16	-101.72	-179.28	569.24	39°56'36.799"N	104°41'00.815"W	0.00	
3813.00†	14.015	107.481	3740.18	-105.85	-186.55	592.34	39°56'36.725"N	104°41'00.519"W	0.00	
3913.00†	14.015	107.481	3837.20	-109.97	-193.83	615.44	39°56'36.651"N	104°41'00.223"W	0.00	
4013.00†	14.015	107.481	3934.23	-114.10	-201.10	638.54	39°56'36.577"N	104°40'59.928"W	0.00	
4113.00†	14.015	107.481	4031.25	-118.23	-208.38	661.64	39°56'36.503"N	104°40'59.632"W	0.00	
4213.00†	14.015	107.481	4128.27	-122.36	-215.65	684.74	39°56'36.429"N	104°40'59.336"W	0.00	
4313.00†	14.015	107.481	4225.30	-126.48	-222.93	707.83	39°56'36.355"N	104°40'59.040"W	0.00	
4413.00†	14.015	107.481	4322.32	-130.61	-230.20	730.93	39°56'36.281"N	104°40'58.745"W	0.00	
4513.00†	14.015	107.481	4419.34	-134.74	-237.48	754.03	39°56'36.207"N	104°40'58.449"W	0.00	
4613.00†	14.015	107.481	4516.37	-138.87	-244.75	777.13	39°56'36.133"N	104°40'58.153"W	0.00	
4713.00†	14.015	107.481	4613.39	-142.99	-252.02	800.23	39°56'36.059"N	104°40'57.858"W	0.00	
4813.00†	14.015	107.481	4710.41	-147.12	-259.30	823.33	39°56'35.985"N	104°40'57.562"W	0.00	
4913.00†	14.015	107.481	4807.44	-151.25	-266.57	846.43	39°56'35.911"N	104°40'57.266"W	0.00	
4956.87†	14.015	107.481	4850.00	-153.06	-269.77	856.56	39°56'35.879"N	104°40'57.137"W	0.00	SUSSEX/SHANNON
5013.00†	14.015	107.481	4904.46	-155.38	-273.85	869.53	39°56'35.837"N	104°40'56.971"W	0.00	
5113.00†	14.015	107.481	5001.48	-159.50	-281.12	892.62	39°56'35.763"N	104°40'56.675"W	0.00	
5213.00†	14.015	107.481	5098.51	-163.63	-288.40	915.72	39°56'35.689"N	104°40'56.379"W	0.00	
5313.00†	14.015	107.481	5195.53	-167.76	-295.67	938.82	39°56'35.615"N	104°40'56.084"W	0.00	
5413.00†	14.015	107.481	5292.55	-171.89	-302.95	961.92	39°56'35.541"N	104°40'55.788"W	0.00	



Planned Wellpath Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)

Page 4 of 10

**BAKER
HUGHES**
a GE company



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

WELLPATH DATA (184 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5513.00†	14.015	107.481	5389.58	-176.01	-310.22	985.02	39°56'35.467"N	104°40'55.492"W	0.00	
5613.00†	14.015	107.481	5486.60	-180.14	-317.50	1008.12	39°56'35.393"N	104°40'55.196"W	0.00	
5713.00†	14.015	107.481	5583.62	-184.27	-324.77	1031.22	39°56'35.319"N	104°40'54.901"W	0.00	
5813.00†	14.015	107.481	5680.65	-188.40	-332.05	1054.32	39°56'35.245"N	104°40'54.605"W	0.00	
5913.00†	14.015	107.481	5777.67	-192.52	-339.32	1077.41	39°56'35.171"N	104°40'54.309"W	0.00	
6013.00†	14.015	107.481	5874.69	-196.65	-346.60	1100.51	39°56'35.097"N	104°40'54.014"W	0.00	
6113.00†	14.015	107.481	5971.72	-200.78	-353.87	1123.61	39°56'35.023"N	104°40'53.718"W	0.00	
6213.00†	14.015	107.481	6068.74	-204.91	-361.15	1146.71	39°56'34.949"N	104°40'53.422"W	0.00	
6313.00†	14.015	107.481	6165.76	-209.03	-368.42	1169.81	39°56'34.875"N	104°40'53.127"W	0.00	
6413.00†	14.015	107.481	6262.79	-213.16	-375.70	1192.91	39°56'34.801"N	104°40'52.831"W	0.00	
6513.00†	14.015	107.481	6359.81	-217.29	-382.97	1216.01	39°56'34.727"N	104°40'52.535"W	0.00	
6613.00†	14.015	107.481	6456.83	-221.42	-390.24	1239.11	39°56'34.653"N	104°40'52.240"W	0.00	
6713.00†	14.015	107.481	6553.86	-225.55	-397.52	1262.20	39°56'34.579"N	104°40'51.944"W	0.00	
6777.09	14.015	107.481	6616.04	-228.19	-402.18	1277.01	39°56'34.532"N	104°40'51.754"W	0.00	End of Tangent (S)
6813.00†	13.378	92.510	6650.94	-228.56	-403.67	1285.31	39°56'34.516"N	104°40'51.648"W	10.00	
6913.00†	16.242	54.188	6747.83	-217.87	-395.97	1308.26	39°56'34.590"N	104°40'51.352"W	10.00	
7013.00†	23.344	32.961	6841.98	-190.26	-371.11	1330.44	39°56'34.834"N	104°40'51.065"W	10.00	
7113.00†	31.973	21.936	6930.53	-146.58	-329.82	1351.16	39°56'35.240"N	104°40'50.794"W	10.00	
7213.00†	41.177	15.327	7010.78	-88.14	-273.37	1369.80	39°56'35.796"N	104°40'50.548"W	10.00	
7313.00†	50.641	10.806	7080.30	-16.74	-203.47	1385.79	39°56'36.486"N	104°40'50.334"W	10.00	
7413.00†	60.236	7.379	7136.98	65.48	-122.24	1398.65	39°56'37.287"N	104°40'50.159"W	10.00	
7513.00†	69.905	4.557	7179.08	156.00	-32.16	1407.98	39°56'38.176"N	104°40'50.029"W	10.00	
7613.00†	79.613	2.068	7205.34	252.08	64.04	1413.50	39°56'39.127"N	104°40'49.947"W	10.00	
7713.00†	89.339	359.730	7214.96	350.79	163.44	1415.04	39°56'40.109"N	104°40'49.915"W	10.00	
7719.79	90.000	359.573	7215.00†	357.52	170.23	1415.00	39°56'40.176"N	104°40'49.915"W	10.00	End of 3D Arc (S)
7813.00†	90.000	359.573	7215.00	449.79	263.43	1414.30	39°56'41.097"N	104°40'49.913"W	0.00	
7913.00†	90.000	359.573	7215.00	548.80	363.43	1413.56	39°56'42.085"N	104°40'49.910"W	0.00	
8013.00†	90.000	359.573	7215.00	647.80	463.43	1412.81	39°56'43.073"N	104°40'49.908"W	0.00	
8113.00†	90.000	359.573	7215.00	746.80	563.43	1412.07	39°56'44.062"N	104°40'49.906"W	0.00	
8213.00†	90.000	359.573	7215.00	845.81	663.42	1411.32	39°56'45.050"N	104°40'49.904"W	0.00	



Planned Wellpath Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)

Page 5 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

WELLPATH DATA (184 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8313.00†	90.000	359.573	7215.00	944.81	763.42	1410.58	39°56'46.038"N	104°40'49.901"W	0.00	
8413.00†	90.000	359.573	7215.00	1043.82	863.42	1409.83	39°56'47.026"N	104°40'49.899"W	0.00	
8513.00†	90.000	359.573	7215.00	1142.82	963.42	1409.08	39°56'48.015"N	104°40'49.897"W	0.00	
8613.00†	90.000	359.573	7215.00	1241.82	1063.41	1408.34	39°56'49.003"N	104°40'49.894"W	0.00	
8713.00†	90.000	359.573	7215.00	1340.83	1163.41	1407.59	39°56'49.991"N	104°40'49.892"W	0.00	
8813.00†	90.000	359.573	7215.00	1439.83	1263.41	1406.85	39°56'50.979"N	104°40'49.890"W	0.00	
8913.00†	90.000	359.573	7215.00	1538.83	1363.40	1406.10	39°56'51.968"N	104°40'49.888"W	0.00	
9013.00†	90.000	359.573	7215.00	1637.84	1463.40	1405.35	39°56'52.956"N	104°40'49.885"W	0.00	
9113.00†	90.000	359.573	7215.00	1736.84	1563.40	1404.61	39°56'53.944"N	104°40'49.883"W	0.00	
9213.00†	90.000	359.573	7215.00	1835.84	1663.40	1403.86	39°56'54.932"N	104°40'49.881"W	0.00	
9313.00†	90.000	359.573	7215.00	1934.85	1763.39	1403.12	39°56'55.921"N	104°40'49.878"W	0.00	
9413.00†	90.000	359.573	7215.00	2033.85	1863.39	1402.37	39°56'56.909"N	104°40'49.876"W	0.00	
9513.00†	90.000	359.573	7215.00	2132.85	1963.39	1401.62	39°56'57.897"N	104°40'49.874"W	0.00	
9613.00†	90.000	359.573	7215.00	2231.86	2063.38	1400.88	39°56'58.885"N	104°40'49.872"W	0.00	
9713.00†	90.000	359.573	7215.00	2330.86	2163.38	1400.13	39°56'59.874"N	104°40'49.869"W	0.00	
9813.00†	90.000	359.573	7215.00	2429.86	2263.38	1399.39	39°57'00.862"N	104°40'49.867"W	0.00	
9913.00†	90.000	359.573	7215.00	2528.87	2363.38	1398.64	39°57'01.850"N	104°40'49.865"W	0.00	
10013.00†	90.000	359.573	7215.00	2627.87	2463.37	1397.90	39°57'02.838"N	104°40'49.862"W	0.00	
10113.00†	90.000	359.573	7215.00	2726.87	2563.37	1397.15	39°57'03.826"N	104°40'49.860"W	0.00	
10213.00†	90.000	359.573	7215.00	2825.88	2663.37	1396.40	39°57'04.815"N	104°40'49.858"W	0.00	
10313.00†	90.000	359.573	7215.00	2924.88	2763.37	1395.66	39°57'05.803"N	104°40'49.855"W	0.00	
10413.00†	90.000	359.573	7215.00	3023.89	2863.36	1394.91	39°57'06.791"N	104°40'49.853"W	0.00	
10513.00†	90.000	359.573	7215.00	3122.89	2963.36	1394.17	39°57'07.779"N	104°40'49.851"W	0.00	
10613.00†	90.000	359.573	7215.00	3221.89	3063.36	1393.42	39°57'08.768"N	104°40'49.849"W	0.00	
10713.00†	90.000	359.573	7215.00	3320.90	3163.35	1392.67	39°57'09.756"N	104°40'49.846"W	0.00	
10813.00†	90.000	359.573	7215.00	3419.90	3263.35	1391.93	39°57'10.744"N	104°40'49.844"W	0.00	
10913.00†	90.000	359.573	7215.00	3518.90	3363.35	1391.18	39°57'11.732"N	104°40'49.842"W	0.00	
11013.00†	90.000	359.573	7215.00	3617.91	3463.35	1390.44	39°57'12.721"N	104°40'49.839"W	0.00	
11113.00†	90.000	359.573	7215.00	3716.91	3563.34	1389.69	39°57'13.709"N	104°40'49.837"W	0.00	
11213.00†	90.000	359.573	7215.00	3815.91	3663.34	1388.94	39°57'14.697"N	104°40'49.835"W	0.00	



Planned Wellpath Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)

Page 6 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

WELLPATH DATA (184 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11313.00†	90.000	359.573	7215.00	3914.92	3763.34	1388.20	39°57'15.685"N	104°40'49.833"W	0.00	
11413.00†	90.000	359.573	7215.00	4013.92	3863.33	1387.45	39°57'16.674"N	104°40'49.830"W	0.00	
11513.00†	90.000	359.573	7215.00	4112.92	3963.33	1386.71	39°57'17.662"N	104°40'49.828"W	0.00	
11613.00†	90.000	359.573	7215.00	4211.93	4063.33	1385.96	39°57'18.650"N	104°40'49.826"W	0.00	
11713.00†	90.000	359.573	7215.00	4310.93	4163.33	1385.22	39°57'19.638"N	104°40'49.823"W	0.00	
11813.00†	90.000	359.573	7215.00	4409.93	4263.32	1384.47	39°57'20.627"N	104°40'49.821"W	0.00	
11913.00†	90.000	359.573	7215.00	4508.94	4363.32	1383.72	39°57'21.615"N	104°40'49.819"W	0.00	
12013.00†	90.000	359.573	7215.00	4607.94	4463.32	1382.98	39°57'22.603"N	104°40'49.817"W	0.00	
12113.00†	90.000	359.573	7215.00	4706.94	4563.32	1382.23	39°57'23.591"N	104°40'49.814"W	0.00	
12213.00†	90.000	359.573	7215.00	4805.95	4663.31	1381.49	39°57'24.580"N	104°40'49.812"W	0.00	
12313.00†	90.000	359.573	7215.00	4904.95	4763.31	1380.74	39°57'25.568"N	104°40'49.810"W	0.00	
12413.00†	90.000	359.573	7215.00	5003.96	4863.31	1379.99	39°57'26.556"N	104°40'49.807"W	0.00	
12513.00†	90.000	359.573	7215.00	5102.96	4963.30	1379.25	39°57'27.544"N	104°40'49.805"W	0.00	
12613.00†	90.000	359.573	7215.00	5201.96	5063.30	1378.50	39°57'28.532"N	104°40'49.803"W	0.00	
12713.00†	90.000	359.573	7215.00	5300.97	5163.30	1377.76	39°57'29.521"N	104°40'49.801"W	0.00	
12813.00†	90.000	359.573	7215.00	5399.97	5263.30	1377.01	39°57'30.509"N	104°40'49.798"W	0.00	
12913.00†	90.000	359.573	7215.00	5498.97	5363.29	1376.26	39°57'31.497"N	104°40'49.796"W	0.00	
13013.00†	90.000	359.573	7215.00	5597.98	5463.29	1375.52	39°57'32.485"N	104°40'49.794"W	0.00	
13113.00†	90.000	359.573	7215.00	5696.98	5563.29	1374.77	39°57'33.474"N	104°40'49.791"W	0.00	
13213.00†	90.000	359.573	7215.00	5795.98	5663.28	1374.03	39°57'34.462"N	104°40'49.789"W	0.00	
13313.00†	90.000	359.573	7215.00	5894.99	5763.28	1373.28	39°57'35.450"N	104°40'49.787"W	0.00	
13413.00†	90.000	359.573	7215.00	5993.99	5863.28	1372.53	39°57'36.438"N	104°40'49.785"W	0.00	
13513.00†	90.000	359.573	7215.00	6092.99	5963.28	1371.79	39°57'37.427"N	104°40'49.782"W	0.00	
13613.00†	90.000	359.573	7215.00	6192.00	6063.27	1371.04	39°57'38.415"N	104°40'49.780"W	0.00	
13713.00†	90.000	359.573	7215.00	6291.00	6163.27	1370.30	39°57'39.403"N	104°40'49.778"W	0.00	
13813.00†	90.000	359.573	7215.00	6390.00	6263.27	1369.55	39°57'40.391"N	104°40'49.775"W	0.00	
13913.00†	90.000	359.573	7215.00	6489.01	6363.27	1368.81	39°57'41.380"N	104°40'49.773"W	0.00	
14013.00†	90.000	359.573	7215.00	6588.01	6463.26	1368.06	39°57'42.368"N	104°40'49.771"W	0.00	
14113.00†	90.000	359.573	7215.00	6687.01	6563.26	1367.31	39°57'43.356"N	104°40'49.769"W	0.00	
14213.00†	90.000	359.573	7215.00	6786.02	6663.26	1366.57	39°57'44.344"N	104°40'49.766"W	0.00	



Planned Wellpath Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)

Page 7 of 10

**BAKER
HUGHES**
a GE company



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

WELLPATH DATA (184 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14313.00†	90.000	359.573	7215.00	6885.02	6763.25	1365.82	39°57'45.333"N	104°40'49.764"W	0.00	
14413.00†	90.000	359.573	7215.00	6984.03	6863.25	1365.08	39°57'46.321"N	104°40'49.762"W	0.00	
14513.00†	90.000	359.573	7215.00	7083.03	6963.25	1364.33	39°57'47.309"N	104°40'49.759"W	0.00	
14613.00†	90.000	359.573	7215.00	7182.03	7063.25	1363.58	39°57'48.297"N	104°40'49.757"W	0.00	
14713.00†	90.000	359.573	7215.00	7281.04	7163.24	1362.84	39°57'49.285"N	104°40'49.755"W	0.00	
14813.00†	90.000	359.573	7215.00	7380.04	7263.24	1362.09	39°57'50.274"N	104°40'49.752"W	0.00	
14913.00†	90.000	359.573	7215.00	7479.04	7363.24	1361.35	39°57'51.262"N	104°40'49.750"W	0.00	
15013.00†	90.000	359.573	7215.00	7578.05	7463.23	1360.60	39°57'52.250"N	104°40'49.748"W	0.00	
15113.00†	90.000	359.573	7215.00	7677.05	7563.23	1359.85	39°57'53.238"N	104°40'49.746"W	0.00	
15213.00†	90.000	359.573	7215.00	7776.05	7663.23	1359.11	39°57'54.227"N	104°40'49.743"W	0.00	
15313.00†	90.000	359.573	7215.00	7875.06	7763.23	1358.36	39°57'55.215"N	104°40'49.741"W	0.00	
15413.00†	90.000	359.573	7215.00	7974.06	7863.22	1357.62	39°57'56.203"N	104°40'49.739"W	0.00	
15513.00†	90.000	359.573	7215.00	8073.06	7963.22	1356.87	39°57'57.191"N	104°40'49.736"W	0.00	
15613.00†	90.000	359.573	7215.00	8172.07	8063.22	1356.13	39°57'58.180"N	104°40'49.734"W	0.00	
15713.00†	90.000	359.573	7215.00	8271.07	8163.21	1355.38	39°57'59.168"N	104°40'49.732"W	0.00	
15813.00†	90.000	359.573	7215.00	8370.07	8263.21	1354.63	39°58'00.156"N	104°40'49.730"W	0.00	
15913.00†	90.000	359.573	7215.00	8469.08	8363.21	1353.89	39°58'01.144"N	104°40'49.727"W	0.00	
16013.00†	90.000	359.573	7215.00	8568.08	8463.21	1353.14	39°58'02.133"N	104°40'49.725"W	0.00	
16113.00†	90.000	359.573	7215.00	8667.08	8563.20	1352.40	39°58'03.121"N	104°40'49.723"W	0.00	
16213.00†	90.000	359.573	7215.00	8766.09	8663.20	1351.65	39°58'04.109"N	104°40'49.720"W	0.00	
16313.00†	90.000	359.573	7215.00	8865.09	8763.20	1350.90	39°58'05.097"N	104°40'49.718"W	0.00	
16413.00†	90.000	359.573	7215.00	8964.10	8863.20	1350.16	39°58'06.086"N	104°40'49.716"W	0.00	
16513.00†	90.000	359.573	7215.00	9063.10	8963.19	1349.41	39°58'07.074"N	104°40'49.714"W	0.00	
16613.00†	90.000	359.573	7215.00	9162.10	9063.19	1348.67	39°58'08.062"N	104°40'49.711"W	0.00	
16713.00†	90.000	359.573	7215.00	9261.11	9163.19	1347.92	39°58'09.050"N	104°40'49.709"W	0.00	
16813.00†	90.000	359.573	7215.00	9360.11	9263.18	1347.17	39°58'10.039"N	104°40'49.707"W	0.00	
16913.00†	90.000	359.573	7215.00	9459.11	9363.18	1346.43	39°58'11.027"N	104°40'49.704"W	0.00	
17013.00†	90.000	359.573	7215.00	9558.12	9463.18	1345.68	39°58'12.015"N	104°40'49.702"W	0.00	
17113.00†	90.000	359.573	7215.00	9657.12	9563.18	1344.94	39°58'13.003"N	104°40'49.700"W	0.00	
17213.00†	90.000	359.573	7215.00	9756.12	9663.17	1344.19	39°58'13.991"N	104°40'49.698"W	0.00	



Planned Wellpath Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)

Page 8 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

WELLPATH DATA (184 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS °/100ft	Comments
17313.00†	90.000	359.573	7215.00	9855.13	9763.17	1343.45	39°58'14.980"N	104°40'49.695"W	0.00	
17413.00†	90.000	359.573	7215.00	9954.13	9863.17	1342.70	39°58'15.968"N	104°40'49.693"W	0.00	
17513.00†	90.000	359.573	7215.00	10053.13	9963.16	1341.95	39°58'16.956"N	104°40'49.691"W	0.00	
17516.82	90.000	359.573	7215.00 ²	10056.92	9966.99	1341.93	39°58'16.994"N	104°40'49.691"W	0.00	End of Tangent; NIOBRARA A CHALK

HOLE & CASING SECTIONS

- Ref Wellbore: WAKEMAN 20-17-4NAH PWB

Ref Wellpath: WAKEMAN 20-17-4NAH PWP (REV-A.0)

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	13.00	1800.00	1787.00	13.00	1787.10	0.00	0.00	-40.11	127.36
8.5in Open Hole	1800.00	17516.82	15716.82	1787.10	7215.00	-40.11	127.36	9966.98	1341.93



Planned Wellpath Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)

Page 9 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.17-T01S-R65W		0.00	1.07	-209.25	3228136.32	1223519.73	39°56'38.652"N	104°41'10.788"W	polygon
SEC.20-T01S-R65W		0.00	1.07	-209.25	3228136.32	1223519.73	39°56'38.652"N	104°41'10.788"W	polygon
2) WAKEMAN 20-17-4NAH BHL (355'FNL & 560'FEL, SEC.17)	17516.82	7215.00	9966.99	1341.93	3229687.44	1233485.34	39°58'16.994"N	104°40'49.691"W	point
WAKEMAN 20-17-4NAH EP (460'FSL & 560'FEL, SEC.20)		7215.00	170.23	1474.02	3229819.54	1223688.89	39°56'40.170"N	104°40'49.157"W	point
1) WAKEMAN 20-17-4NAH EP REV-1(460'FSL & 619'FEL, SEC.20)	7719.79	7215.00	170.23	1415.00	3229760.51	1223688.89	39°56'40.176"N	104°40'49.915"W	point
SEC.17/20-T01S-R65W 460'SETBACK		7638.00	1.07	-209.25	3228136.32	1223519.73	39°56'38.652"N	104°41'10.788"W	polygon

SURVEY PROGRAM -

Ref Wellbore: WAKEMAN 20-17-4NAH PWB Ref Wellpath: WAKEMAN 20-17-4NAH PWP (REV-A.0)

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
13.00	17516.82	Custom BHI NaviTrak (Standard Rotating+Axial Corr) (Rockies 0.03Gt model)		WAKEMAN 20-17-4NAH PWB



Planned Wellpath Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)

Page 10 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1504.48	12.090	107.481	1500.00	FOX HILLS
4956.87	14.015	107.481	4850.00	SUSSEX/SHANNON
17516.82	90.000	359.573	7215.00	NIOBRARA A CHALK

DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
13.00	0.000	107.481	13.00	Tie On
900.00	0.000	107.481	900.00	End of Tangent
1600.74	14.015	107.481	1593.77	End of Build (S)
6777.09	14.015	107.481	6616.04	End of Tangent (S)
7719.79	90.000	359.573	7215.00	End of 3D Arc (S)
17516.82	90.000	359.573	7215.00	End of Tangent



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 1 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293°FSL & 2038°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Ingmjmr
Scale	0.999971	Report Generated	9/22/2017 at 11:35:26 AM
Convergence at slot	0.53° East	Database/Source file	WellArchitectDB1/WAKEMAN_20-17-4NAH_PWP_REV-A.0_CR.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-0.07	-15.00	3228345.56	1223518.66	39°56'38.622"N	104°41'08.102"W
Facility Reference Pt			3228360.56	1223518.73	39°56'38.622"N	104°41'07.909"W
Field Reference Pt			3175478.75	1240632.48	39°59'31.992"N	104°52'25.320"W

WELLPATH DATUM

Calculation method	Minimum Curvature	RIG (13'KB) (RKB) to Facility Vertical Datum	5203.00ft
Horizontal Reference Pt	Slot	RIG (13'KB) (RKB) to Mean Sea Level	5203.00ft
Vertical Reference Pt	RIG (13'KB) (RKB)	RIG (13'KB) (RKB) to Ground Level at Slot (SLOT#02 WAKEMAN 20-17-4NAH (293°FSL & 2038°FEL, SEC.20))	5203.00ft
MD Reference Pt	RIG (13'KB) (RKB)		
Field Vertical Reference	Mean Sea Level		

POSITIONAL UNCERTAINTY CALCULATION SETTINGS

Ellipse Confidence Limit	3.00 Std Dev	Ellipse Start MD	13.00ft	Surface Position Uncertainty	Included
Declination	8.30° East of TN	Dip Angle	66.52°	Mag Field Strength	52153 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



Clearance Report
WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 2 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

ANTI-COLLISION RULE

Rule Name	Baker Hughes Stop Drilling (offset is HSE risk)	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: WAKEMAN 20-17-4NAH PWB Ref Wellpath: WAKEMAN 20-17-4NAH PWP (REV-A.0)

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	13.00	1800.00	1787.00	13.00	1787.10	0.00	0.00	-40.11	127.36
8.5in Open Hole	1800.00	17516.82	15716.82	1787.10	7215.00	-40.11	127.36	9966.98	1341.93

SURVEY PROGRAM - Ref Wellbore: WAKEMAN 20-17-4NAH PWB Ref Wellpath: WAKEMAN 20-17-4NAH PWP (REV-A.0)

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
13.00	17516.82	Custom BHI NaviTrak (Standard Rotating+Axial Corr) (Rockies 0.03Gt model)		WAKEMAN 20-17-4NAH PWB



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 3 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CALCULATION RANGE & CUTOFF

From: 13.00ft MD	To: 17516.82ft MD	C-C Cutoff: 1000.00 ft
------------------	-------------------	------------------------

OFFSET WELL CLEARANCE SUMMARY (26 Offset Wellpaths selected) Ratios are calculated in Closest Approach plane

Offset Facility	Offset Slot	Offset Well	Offset Wellbore	Offset Wellpath	C-C Clearance Distance			ACR 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]	ACR Status
SEC.20-T01S-R65W	SLOT#03 WAKEMAN 20-17-4NBH (293'FSL & 2053'FEL, SEC.20)	WAKEMAN 20-17-4NBH	WAKEMAN 20-17-4NBH PWB	WAKEMAN 20-17-4NBH PWP (REV-A.0)	13.00	14.95	900.00	17516.82	0.62	17516.82	FAIL
SEC.20-T01S-R65W	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)	WAKEMAN 20-17-4CDH	WAKEMAN 20-17-4CDH PWB	WAKEMAN 20-17-4CDH PWP (REV-A.0)	13.00	15.00	12113.00	6791.16	1.07	17513.00	PASS
SEC.20-T01S-R65W	SLOT#04 WAKEMAN 20-17-4NCH (293'FSL & 2068'FEL, SEC.20)	WAKEMAN 20-17-4NCH	WAKEMAN 20-17-4NCH PWB	WAKEMAN 20-17-4NCH PWP (REV-A.0)	13.00	29.95	900.00	17516.82	1.22	17516.82	PASS
SEC.20-T01S-R65W	SLOT#01 EX. BOX ELDER FARMS #41-20 (990'FNL & 990'FEL, SEC.20,OG,PA, 8145)	BOX ELDER FARMS #41-20	BOX ELDER FARMS #41-20 AWB	BOX ELDER FARMS #41-20 AWP	11566.76	431.06	11566.76	11539.64	1.33	11539.64	PASS
SEC.20-T01S-R65W	SLOT#01 EX. WOLFE #1 (990'FSL & 990'FEL,SEC.20,OG,PR, 8200)	WOLFE #1	WOLFE #1 AWB	WOLFE #1 AWP	8270.47	398.04	8270.47	8240.06	1.67	8240.06	PASS
SEC.17-T1S-R65W	SLOT#03 EX. AMOCO #44-17 (990'FSL & 1320'FEL,SEC.17,OG,PR,8130)	AMOCO #44-17	AMOCO #44-17 AWB	AMOCO #44-17 AWP	13578.70	688.30	13578.70	13551.91	1.79	13551.91	PASS
SEC.20-T01S-R65W	SLOT#06 WAKEMAN 20-17-3NAH (293'FSL & 2098'FEL, SEC.20)	WAKEMAN 20-17-3NAH	WAKEMAN 20-17-3NAH PWB	WAKEMAN 20-17-3NAH PWP (REV-A.0)	13.00	59.98	900.00	17516.82	1.90	17516.82	PASS
SEC.20-T01S-R65W	SLOT#05 WAKEMAN 20-17-3CDH (293'FSL & 2083'FEL, SEC.20)	WAKEMAN 20-17-3CDH	WAKEMAN 20-17-3CDH PWB	WAKEMAN 20-17-3CDH PWP (REV-A.0)	13.00	44.95	900.00	17516.82	1.96	17516.82	PASS
SEC.20-T01S-R65W	SLOT#07 WAKEMAN 20-17-3NBH (293'FSL & 2113'FEL, SEC.20)	WAKEMAN 20-17-3NBH	WAKEMAN 20-17-3NBH PWB	WAKEMAN 20-17-3NBH PWP (REV-A.0)	13.00	74.92	900.00	17516.82	2.40	17516.82	PASS
SEC.17-T01S-R65W	SLOT#01 EX. CHAVEZ #7-17 (1971'FNL & 1926'FEL,SEC.17,OG,SI, 8190)	CHAVEZ #7-17	CHAVEZ #7-17 AWB	CHAVEZ #7-17 AWP	15920.54	1383.90	15920.54	15913.00	3.03	15913.00	PASS
SEC.20-T01S-R65W	SLOT#08 WAKEMAN 20-17-3NCH (293'FSL & 2128'FEL, SEC.20)	WAKEMAN 20-17-3NCH	WAKEMAN 20-17-3NCH PWB	WAKEMAN 20-17-3NCH PWP (REV-A.0)	13.00	89.98	900.00	17516.82	3.05	17516.82	PASS
SEC.16-T01S-R65W	SLOT#01 EX. STATE #11-16 (990'FNL & 990'FWL,SEC.16,OG,PR,8173)	STATE #11-16	STATE #11-16 AWB	STATE #11-16 AWP	16888.00	1544.85	16888.00	17063.29	3.14	17063.29	PASS
SEC.20-T01S-R65W	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)	WAKEMAN 20-17-2NBH	WAKEMAN 20-17-2NBH PWB	WAKEMAN 20-17-2NBH PWP (REV-A.0)	13.00	104.95	900.00	17516.82	3.70	17516.82	PASS
SEC.20-T01S-R65W	SLOT#10 WAKEMAN 20-17-2NCH (293'FSL & 2158'FEL, SEC.20)	WAKEMAN 20-17-2NCH	WAKEMAN 20-17-2NCH PWB	WAKEMAN 20-17-2NCH PWP (REV-A.0)	13.00	119.93	900.00	17516.82	4.34	17516.82	PASS
SEC.20-T01S-R65W	SLOT#11 WAKEMAN 20-17-2NAH (293'FSL & 2173'FEL, SEC.20)	WAKEMAN 20-17-2NAH	WAKEMAN 20-17-2NAH PWB	WAKEMAN 20-17-2NAH PWP (REV-A.0)	13.00	134.98	900.00	17516.82	4.78	17516.82	PASS
SEC.20-T01S-R65W	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)	WAKEMAN 20-17-2CDH	WAKEMAN 20-17-2CDH PWB	WAKEMAN 20-17-2CDH PWP (REV-A.0)	13.00	149.96	900.00	17516.82	5.02	17516.82	PASS
SEC.20-T01S-R65W	SLOT#02 EX. BOX ELDER #32-20 (1980'FNL & 2080'FEL,SEC.20,OG,PR)	BOX ELDER #32-20	BOX ELDER #32-20 AWB	BOX ELDER #32-20 AWP	10587.03	1525.52	10587.03	10597.43	5.17	10597.43	PASS
SEC.20-T01S-R65W	SLOT#13 WAKEMAN 20-17-1NBH (293'FSL & 2203'FEL, SEC.20)	WAKEMAN 20-17-1NBH	WAKEMAN 20-17-1NBH PWB	WAKEMAN 20-17-1NBH PWP (REV-A.0)	13.00	164.96	900.00	17516.82	5.59	17516.82	PASS
SEC.20-T01S-R65W	SLOT#14 WAKEMAN 20-17-1NCH (293'FSL & 2218'FEL, SEC.20)	WAKEMAN 20-17-1NCH	WAKEMAN 20-17-1NCH PWB	WAKEMAN 20-17-1NCH PWP (REV-A.0)	13.00	179.90	900.00	17516.82	6.23	17516.82	PASS
SEC.20-T01S-R65W	SLOT#15 WAKEMAN 20-17-1NAH (293'FSL & 2233'FEL, SEC.20)	WAKEMAN 20-17-1NAH	WAKEMAN 20-17-1NAH PWB	WAKEMAN 20-17-1NAH PWP (REV-A.0)	13.00	194.96	813.00	17516.82	6.68	17516.82	PASS
SEC.20-T01S-R65W	SLOT#16 WAKEMAN 20-17-1CDH (293'FSL & 2248'FEL, SEC.20)	WAKEMAN 20-17-1CDH	WAKEMAN 20-17-1CDH PWB	WAKEMAN 20-17-1CDH PWP (REV-A.0)	13.00	209.91	713.00	17516.82	6.89	17516.82	PASS
SEC.20-T1S-R65W	SLOT#02 EX. COLLINS HH #20-3J (814'FNL & 1886'FWL,SEC.20,8163, PR)	COLLINS HH #20-3J	COLLINS HH #20-3J AWB	COLLINS HH #20-3J AWP	11763.00	2829.76	11763.00	12013.00	8.56	12013.00	PASS
SEC.17-T1S-R65W	SLOT#02 EX. AMOCO #24-17 (990'FSL & 1360'FWL,SEC.17,OG,PR,8130)	AMOCO #24-17	AMOCO #24-17	AMOCO #24-17 AWP	13538.00	3354.12	13538.00	13892.30	8.70	13892.30	PASS
SEC.17-T1S-R65W	SLOT#01 EX. AMOCO #17-32 (2013'FSL & 464'FWL,SEC.17,OG,PR, 8140)	AMOCO #17-32	AMOCO #17-32 AWB	AMOCO #17-32 AWP	14413.00	4303.02	14413.00	15013.00	10.36	15013.00	PASS
SEC.18-T01S-R65W	SLOT#01 EX PUTNAM 41-18 (990'FNL & 990'FEL, SEC.18, SI,8092')	PUTNAM 41-18	PUTNAM 41-18 AWB	PUTNAM 41-18 AWP	16798.00	5775.01	16798.00	17516.82	11.72	17516.82	PASS



Clearance Report
WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 4 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CALCULATION RANGE & CUTOFF

From: 13.00ft MD	To: 17516.82ft MD	C-C Cutoff: 1000.00 ft
------------------	-------------------	------------------------

OFFSET WELL CLEARANCE SUMMARY (26 Offset Wellpaths selected) Ratios are calculated in Closest Approach plane

Offset Facility	Offset Slot	Offset Well	Offset Wellbore	Offset Wellpath	C-C Clearance Distance			ACR 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]	ACR Status
SEC.20-T1S-R65W	SLOT#01 EX. COLLINS #14-20 (990'FSL & 990'FWL, SEC.20, OG, PR, 8202)	COLLINS #14-20	COLLINS #14-20 AWB	COLLINS #14-20 AWP	113.00	2385.49	8313.00	8463.68	14.29	8913.00	PASS



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 5 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-4NBH PWB Offset Wellpath: WAKEMAN 20-17-4NBH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W		Slot: SLOT#03 WAKEMAN 20-17-4NBH (293'FSL & 2053'FEL, SEC.20)				Well: WAKEMAN 20-17-4NBH		Threshold Value=1.00		† = interpolated/extrapolated station			
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
13.00	13.00	0.00	0.00	13.00	13.00	0.08	-14.95	-89.69	14.95	1.40	23.57	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	0.08	-14.95	-89.69	14.95	1.73	15.21	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	0.08	-14.95	-89.69	14.95	2.31	9.39	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	0.08	-14.95	-89.69	14.95	2.91	6.69	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	0.08	-14.95	-89.69	14.95	3.53	5.18	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	0.08	-14.95	-89.69	14.95	4.15	4.22	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	0.08	-14.95	-89.69	14.95	4.77	3.56	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	0.08	-14.95	-89.69	14.95	5.40	3.08	PASS	
813.00†	813.00	0.00	0.00	813.00	813.00	0.08	-14.95	-89.69	14.95	6.02	2.71	PASS	
900.00	900.00	0.00	0.00	900.00	900.00	0.08	-14.95	-89.69	14.95	6.57	2.45	PASS	
913.00†	913.00	-0.01	0.03	913.00	913.00	0.08	-14.95	162.86	14.97	6.65	2.42	PASS	
1013.00†	1012.97	-0.67	2.13	1013.04	1013.04	0.07	-14.92	165.00	17.06	7.38	2.47	PASS	
1113.00†	1112.80	-2.38	7.55	1113.61	1113.58	-0.71	-12.84	167.21	20.47	8.49	2.56	PASS	
1213.00†	1212.38	-5.13	16.29	1214.31	1214.11	-2.72	-7.44	168.35	23.92	9.76	2.58	PASS	
1313.00†	1311.57	-8.93	28.35	1315.12	1314.49	-5.97	1.28	168.82	27.39	10.92	2.63	PASS	
1413.00†	1410.26	-13.76	43.69	1416.06	1414.60	-10.45	13.31	168.84	30.86	12.00	2.69	PASS	
1513.00†	1508.33	-19.63	62.32	1517.11	1514.31	-16.17	28.67	168.55	34.35	13.02	2.75	PASS	
1600.74	1593.77	-25.62	81.34	1605.72	1601.23	-22.19	44.81	168.11	37.43	13.82	2.81	PASS	
1613.00†	1605.67	-26.51	84.17	1617.98	1613.22	-23.07	47.18	168.07	37.91	13.90	2.83	PASS	
1713.00†	1702.69	-33.78	107.27	1717.90	1711.00	-30.26	66.46	167.70	41.79	14.48	3.00	PASS	
1813.00†	1799.71	-41.06	130.37	1817.82	1808.78	-37.44	85.74	167.40	45.68	15.00	3.15	PASS	
1913.00†	1896.74	-48.33	153.47	1917.75	1906.56	-44.63	105.03	167.14	49.56	15.65	3.27	PASS	
2013.00†	1993.76	-55.61	176.56	2017.67	2004.34	-51.82	124.31	166.93	53.45	16.30	3.38	PASS	
2113.00†	2090.78	-62.88	199.66	2117.60	2102.13	-59.00	143.59	166.74	57.34	16.99	3.48	PASS	
2213.00†	2187.81	-70.16	222.76	2217.52	2199.91	-66.19	162.87	166.57	61.23	17.70	3.56	PASS	
2313.00†	2284.83	-77.43	245.86	2317.45	2297.69	-73.38	182.16	166.43	65.11	18.42	3.64	PASS	
2413.00†	2381.85	-84.71	268.96	2417.37	2395.47	-80.56	201.44	166.30	69.00	19.16	3.70	PASS	
2513.00†	2478.88	-91.98	292.06	2517.29	2493.26	-87.75	220.72	166.19	72.89	19.91	3.76	PASS	
2613.00†	2575.90	-99.26	315.16	2617.22	2591.04	-94.94	240.00	166.08	76.78	20.67	3.81	PASS	
2713.00†	2672.92	-106.53	338.26	2717.14	2688.82	-102.12	259.29	165.99	80.67	21.45	3.86	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 6 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-4NBH PWB Offset Wellpath: WAKEMAN 20-17-4NBH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W		Slot: SLOT#03 WAKEMAN 20-17-4NBH (293'FSL & 2053'FEL, SEC.20)				Well: WAKEMAN 20-17-4NBH		Threshold Value=1.00		† = interpolated/extrapolated station			
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
2813.00†	2769.95	-113.81	361.35	2817.07	2786.60	-109.31	278.57	165.90	84.56	22.23	3.90	PASS	
2913.00†	2866.97	-121.08	384.45	2916.99	2884.39	-116.49	297.85	165.83	88.45	23.02	3.93	PASS	
3013.00†	2963.99	-128.35	407.55	3016.92	2982.17	-123.68	317.14	165.76	92.34	23.82	3.97	PASS	
3113.00†	3061.02	-135.63	430.65	3116.84	3079.95	-130.87	336.42	165.69	96.23	24.62	3.99	PASS	
3213.00†	3158.04	-142.90	453.75	3216.76	3177.73	-138.05	355.70	165.63	100.12	25.44	4.02	PASS	
3313.00†	3255.06	-150.18	476.85	3316.69	3275.52	-145.24	374.98	165.58	104.01	26.25	4.04	PASS	
3413.00†	3352.09	-157.45	499.95	3416.61	3373.30	-152.43	394.27	165.53	107.91	27.07	4.07	PASS	
3513.00†	3449.11	-164.73	523.04	3516.54	3471.08	-159.61	413.55	165.48	111.80	27.90	4.09	PASS	
3613.00†	3546.13	-172.00	546.14	3616.46	3568.86	-166.80	432.83	165.43	115.69	28.73	4.10	PASS	
3713.00†	3643.16	-179.28	569.24	3716.39	3666.64	-173.99	452.11	165.39	119.58	29.57	4.12	PASS	
3813.00†	3740.18	-186.55	592.34	3816.31	3764.43	-181.17	471.40	165.35	123.47	30.41	4.13	PASS	
3913.00†	3837.20	-193.83	615.44	3916.23	3862.21	-188.36	490.68	165.32	127.36	31.25	4.15	PASS	
4013.00†	3934.23	-201.10	638.54	4016.16	3959.99	-195.54	509.96	165.28	131.25	32.09	4.16	PASS	
4113.00†	4031.25	-208.38	661.64	4116.08	4057.77	-202.73	529.24	165.25	135.14	32.94	4.17	PASS	
4213.00†	4128.27	-215.65	684.74	4216.01	4155.56	-209.92	548.53	165.22	139.03	33.79	4.18	PASS	
4313.00†	4225.30	-222.93	707.83	4315.93	4253.34	-217.10	567.81	165.19	142.92	34.64	4.19	PASS	
4413.00†	4322.32	-230.20	730.93	4415.86	4351.12	-224.29	587.09	165.16	146.82	35.49	4.20	PASS	
4513.00†	4419.34	-237.48	754.03	4515.78	4448.90	-231.48	606.37	165.14	150.71	36.35	4.21	PASS	
4613.00†	4516.37	-244.75	777.13	4615.70	4546.69	-238.66	625.66	165.11	154.60	37.21	4.22	PASS	
4713.00†	4613.39	-252.02	800.23	4715.63	4644.47	-245.85	644.94	165.09	158.49	38.07	4.22	PASS	
4813.00†	4710.41	-259.30	823.33	4815.55	4742.25	-253.04	664.22	165.06	162.38	38.93	4.23	PASS	
4913.00†	4807.44	-266.57	846.43	4915.48	4840.03	-260.22	683.50	165.04	166.27	39.79	4.24	PASS	
5013.00†	4904.46	-273.85	869.53	5015.40	4937.82	-267.41	702.79	165.02	170.16	40.65	4.24	PASS	
5113.00†	5001.48	-281.12	892.62	5115.32	5035.60	-274.59	722.07	165.00	174.05	41.52	4.25	PASS	
5213.00†	5098.51	-288.40	915.72	5215.25	5133.38	-281.78	741.35	164.98	177.95	42.39	4.25	PASS	
5313.00†	5195.53	-295.67	938.82	5315.17	5231.16	-288.97	760.64	164.97	181.84	43.25	4.26	PASS	
5413.00†	5292.55	-302.95	961.92	5415.10	5328.95	-296.15	779.92	164.95	185.73	44.12	4.26	PASS	
5513.00†	5389.58	-310.22	985.02	5515.02	5426.73	-303.34	799.20	164.93	189.62	44.99	4.27	PASS	
5613.00†	5486.60	-317.50	1008.12	5614.95	5524.51	-310.53	818.48	164.92	193.51	45.86	4.27	PASS	
5713.00†	5583.62	-324.77	1031.22	5714.87	5622.29	-317.71	837.77	164.90	197.40	46.74	4.27	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 7 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-4NBH PWB Offset Wellpath: WAKEMAN 20-17-4NBH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#03 WAKEMAN 20-17-4NBH (293'FSL & 2053'FEL, SEC.20) Well: WAKEMAN 20-17-4NBH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
5813.00†	5680.65	-332.05	1054.32	5814.79	5720.07	-324.90	857.05	164.89	201.30	47.61	4.28	PASS	
5913.00†	5777.67	-339.32	1077.41	5914.72	5817.86	-332.09	876.33	164.87	205.19	48.48	4.28	PASS	
6013.00†	5874.69	-346.60	1100.51	6014.64	5915.64	-339.27	895.61	164.86	209.08	49.36	4.28	PASS	
6113.00†	5971.72	-353.87	1123.61	6114.57	6013.42	-346.46	914.90	164.85	212.97	50.23	4.29	PASS	
6213.00†	6068.74	-361.15	1146.71	6214.49	6111.20	-353.65	934.18	164.84	216.86	51.11	4.29	PASS	
6313.00†	6165.76	-368.42	1169.81	6314.42	6208.99	-360.83	953.46	164.82	220.75	51.98	4.29	PASS	
6413.00†	6262.79	-375.70	1192.91	6414.34	6306.77	-368.02	972.74	164.81	224.64	52.86	4.29	PASS	
6513.00†	6359.81	-382.97	1216.01	6514.26	6404.55	-375.20	992.03	164.80	228.54	53.74	4.30	PASS	
6613.00†	6456.83	-390.24	1239.11	6614.19	6502.33	-382.39	1011.31	164.79	232.43	54.62	4.30	PASS	
6713.00†	6553.86	-397.52	1262.20	6714.11	6600.12	-389.58	1030.59	164.78	236.32	55.49	4.30	PASS	
6777.09	6616.04	-402.18	1277.01	6778.15	6662.78	-394.18	1042.95	164.77	238.81	56.06	4.30	PASS	
6813.00†	6650.94	-403.67	1285.31	6814.01	6697.88	-396.76	1049.87	179.19	240.17	56.48	4.29	PASS	
6913.00†	6747.83	-395.97	1308.26	6912.78	6794.53	-403.80	1068.93	-146.73	243.97	58.97	4.18	PASS	
7013.00†	6841.98	-371.11	1330.44	7013.00	6892.71	-400.70	1088.15	-131.21	249.31	62.13	4.05	PASS	
7113.00†	6930.53	-329.82	1351.16	7117.40	6992.83	-379.02	1107.50	-125.65	256.27	64.30	4.02	PASS	
7213.00†	7010.78	-273.37	1369.80	7226.34	7091.44	-337.10	1126.29	-124.14	264.33	64.89	4.11	PASS	
7313.00†	7080.30	-203.47	1385.79	7340.03	7184.15	-273.97	1143.63	-124.26	272.76	63.86	4.31	PASS	
7413.00†	7136.98	-122.24	1398.65	7458.39	7265.76	-189.85	1158.51	-124.95	280.76	61.54	4.60	PASS	
7513.00†	7179.08	-32.16	1407.98	7580.95	7330.61	-86.75	1169.84	-125.71	287.49	58.89	4.93	PASS	
7613.00†	7205.34	64.04	1413.50	7706.79	7373.33	31.16	1176.63	-126.25	292.24	57.43	5.14	PASS	
7713.00†	7214.96	163.44	1415.04	7834.56	7389.87	157.58	1178.18	-126.45	294.51	58.62	5.07	PASS	
7719.79	7215.00	170.23	1415.00	7843.27	7389.99	166.29	1178.08	-126.45	294.56	58.80	5.06	PASS	
7813.00†	7215.00	263.43	1414.30	7937.22	7390.00	260.23	1176.82	-126.38	295.02	60.34	4.94	PASS	
7913.00†	7215.00	363.43	1413.56	8037.22	7390.00	360.22	1175.47	-126.32	295.50	62.35	4.78	PASS	
8013.00†	7215.00	463.43	1412.81	8137.22	7390.00	460.21	1174.12	-126.25	295.99	64.73	4.61	PASS	
8113.00†	7215.00	563.43	1412.07	8237.22	7390.00	560.20	1172.77	-126.18	296.47	67.43	4.43	PASS	
8213.00†	7215.00	663.42	1411.32	8337.22	7390.00	660.19	1171.43	-126.11	296.96	70.43	4.25	PASS	
8313.00†	7215.00	763.42	1410.58	8437.22	7390.00	760.18	1170.08	-126.04	297.45	73.69	4.07	PASS	
8413.00†	7215.00	863.42	1409.83	8537.21	7390.00	860.17	1168.73	-125.97	297.93	77.17	3.89	PASS	
8513.00†	7215.00	963.42	1409.08	8637.21	7390.00	960.16	1167.38	-125.90	298.42	80.08	3.75	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 8 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-4NBH PWB Offset Wellpath: WAKEMAN 20-17-4NBH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#03 WAKEMAN 20-17-4NBH (293'FSL & 2053'FEL, SEC.20) Well: WAKEMAN 20-17-4NBH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
8613.00†	7215.00	1063.41	1408.34	8737.21	7390.00	1060.15	1166.04	-125.84	298.91	84.70	3.55	PASS	
8713.00†	7215.00	1163.41	1407.59	8837.21	7390.00	1160.14	1164.69	-125.77	299.40	88.70	3.39	PASS	
8813.00†	7215.00	1263.41	1406.85	8937.21	7390.00	1260.13	1163.34	-125.70	299.88	92.84	3.25	PASS	
8913.00†	7215.00	1363.40	1406.10	9037.20	7390.00	1360.11	1161.99	-125.64	300.37	97.10	3.11	PASS	
9013.00†	7215.00	1463.40	1405.35	9137.20	7390.00	1460.10	1160.65	-125.57	300.86	101.45	2.98	PASS	
9113.00†	7215.00	1563.40	1404.61	9237.20	7390.00	1560.09	1159.30	-125.50	301.35	105.90	2.86	PASS	
9213.00†	7215.00	1663.40	1403.86	9337.20	7390.00	1660.08	1157.95	-125.44	301.84	110.43	2.74	PASS	
9313.00†	7215.00	1763.39	1403.12	9437.20	7390.00	1760.07	1156.60	-125.37	302.33	115.03	2.64	PASS	
9413.00†	7215.00	1863.39	1402.37	9537.20	7390.00	1860.06	1155.26	-125.30	302.82	119.70	2.54	PASS	
9513.00†	7215.00	1963.39	1401.62	9637.19	7390.00	1960.05	1153.91	-125.24	303.31	124.43	2.45	PASS	
9613.00†	7215.00	2063.38	1400.88	9737.19	7390.00	2060.04	1152.56	-125.17	303.81	129.21	2.36	PASS	
9713.00†	7215.00	2163.38	1400.13	9837.19	7390.00	2160.03	1151.21	-125.11	304.30	134.03	2.28	PASS	
9813.00†	7215.00	2263.38	1399.39	9937.19	7390.00	2260.02	1149.87	-125.04	304.79	138.90	2.20	PASS	
9913.00†	7215.00	2363.38	1398.64	10037.19	7390.00	2360.01	1148.52	-124.98	305.28	143.81	2.13	PASS	
10013.00†	7215.00	2463.37	1397.90	10137.18	7390.00	2459.99	1147.17	-124.91	305.78	148.76	2.06	PASS	
10113.00†	7215.00	2563.37	1397.15	10237.18	7390.00	2559.98	1145.82	-124.85	306.27	153.74	2.00	PASS	
10213.00†	7215.00	2663.37	1396.40	10337.18	7390.00	2659.97	1144.47	-124.78	306.76	158.75	1.94	PASS	
10313.00†	7215.00	2763.37	1395.66	10437.18	7390.00	2759.96	1143.13	-124.72	307.26	163.79	1.88	PASS	
10413.00†	7215.00	2863.36	1394.91	10537.18	7390.00	2859.95	1141.78	-124.66	307.75	168.86	1.83	PASS	
10513.00†	7215.00	2963.36	1394.17	10637.18	7390.00	2959.94	1140.43	-124.59	308.25	173.95	1.78	PASS	
10613.00†	7215.00	3063.36	1393.42	10737.17	7390.00	3059.93	1139.08	-124.53	308.74	179.06	1.73	PASS	
10713.00†	7215.00	3163.35	1392.67	10837.17	7390.00	3159.92	1137.74	-124.47	309.24	184.20	1.68	PASS	
10813.00†	7215.00	3263.35	1391.93	10937.17	7390.00	3259.91	1136.39	-124.40	309.74	189.36	1.64	PASS	
10913.00†	7215.00	3363.35	1391.18	11037.17	7390.00	3359.90	1135.04	-124.34	310.23	194.54	1.60	PASS	
11013.00†	7215.00	3463.35	1390.44	11137.17	7390.00	3459.89	1133.69	-124.28	310.73	199.73	1.56	PASS	
11113.00†	7215.00	3563.34	1389.69	11237.16	7390.00	3559.87	1132.35	-124.22	311.23	204.94	1.52	PASS	
11213.00†	7215.00	3663.34	1388.94	11337.16	7390.00	3659.86	1131.00	-124.15	311.73	210.17	1.48	PASS	
11313.00†	7215.00	3763.34	1388.20	11437.16	7390.00	3759.85	1129.65	-124.09	312.22	215.42	1.45	PASS	
11413.00†	7215.00	3863.33	1387.45	11537.16	7390.00	3859.84	1128.30	-124.03	312.72	220.68	1.42	PASS	
11513.00†	7215.00	3963.33	1386.71	11637.16	7390.00	3959.83	1126.96	-123.97	313.22	225.95	1.39	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 9 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-4NBH PWB Offset Wellpath: WAKEMAN 20-17-4NBH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#03 WAKEMAN 20-17-4NBH (293'FSL & 2053'FEL, SEC.20) Well: WAKEMAN 20-17-4NBH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
11613.00†	7215.00	4063.33	1385.96	11737.16	7390.00	4059.82	1125.61	-123.91	313.72	231.24	1.36	PASS	
11713.00†	7215.00	4163.33	1385.22	11837.15	7390.00	4159.81	1124.26	-123.85	314.22	236.55	1.33	PASS	
11813.00†	7215.00	4263.32	1384.47	11937.15	7390.00	4259.80	1122.91	-123.78	314.72	241.86	1.30	PASS	
11913.00†	7215.00	4363.32	1383.72	12037.15	7390.00	4359.79	1121.57	-123.72	315.22	247.19	1.28	PASS	
12013.00†	7215.00	4463.32	1382.98	12137.15	7390.00	4459.78	1120.22	-123.66	315.72	252.53	1.25	PASS	
12113.00†	7215.00	4563.32	1382.23	12237.15	7390.00	4559.77	1118.87	-123.60	316.22	257.88	1.23	PASS	
12213.00†	7215.00	4663.31	1381.49	12337.15	7390.00	4659.75	1117.52	-123.54	316.72	263.24	1.20	PASS	
12313.00†	7215.00	4763.31	1380.74	12437.14	7390.00	4759.74	1116.18	-123.48	317.23	268.61	1.18	PASS	
12413.00†	7215.00	4863.31	1379.99	12537.14	7390.00	4859.73	1114.83	-123.42	317.73	273.99	1.16	PASS	
12513.00†	7215.00	4963.30	1379.25	12637.14	7390.00	4959.72	1113.48	-123.36	318.23	279.38	1.14	PASS	
12613.00†	7215.00	5063.30	1378.50	12737.14	7390.00	5059.71	1112.13	-123.30	318.73	284.78	1.12	PASS	
12713.00†	7215.00	5163.30	1377.76	12837.14	7390.00	5159.70	1110.79	-123.24	319.24	290.20	1.10	PASS	
12813.00†	7215.00	5263.30	1377.01	12937.13	7390.00	5259.69	1109.44	-123.18	319.74	295.62	1.08	PASS	
12913.00†	7215.00	5363.29	1376.26	13037.13	7390.00	5359.68	1108.09	-123.13	320.24	301.05	1.06	PASS	
13013.00†	7215.00	5463.29	1375.52	13137.13	7390.00	5459.67	1106.74	-123.07	320.75	306.48	1.05	PASS	
13113.00†	7215.00	5563.29	1374.77	13237.13	7390.00	5559.66	1105.39	-123.01	321.25	311.93	1.03	PASS	
13213.00†	7215.00	5663.28	1374.03	13337.13	7390.00	5659.65	1104.05	-122.95	321.76	317.38	1.01	PASS	
13313.00†	7215.00	5763.28	1373.28	13437.13	7390.00	5759.64	1102.70	-122.89	322.26	322.85	1.00	FAIL	
13413.00†	7215.00	5863.28	1372.53	13537.12	7390.00	5859.62	1101.35	-122.83	322.77	328.32	0.98	FAIL	
13513.00†	7215.00	5963.28	1371.79	13637.12	7390.00	5959.61	1100.00	-122.78	323.27	333.80	0.97	FAIL	
13613.00†	7215.00	6063.27	1371.04	13737.12	7390.00	6059.60	1098.66	-122.72	323.78	339.28	0.95	FAIL	
13713.00†	7215.00	6163.27	1370.30	13837.12	7390.00	6159.59	1097.31	-122.66	324.29	344.78	0.94	FAIL	
13813.00†	7215.00	6263.27	1369.55	13937.12	7390.00	6259.58	1095.96	-122.60	324.79	350.28	0.93	FAIL	
13913.00†	7215.00	6363.27	1368.81	14037.11	7390.00	6359.57	1094.61	-122.55	325.30	355.79	0.91	FAIL	
14013.00†	7215.00	6463.26	1368.06	14137.11	7390.00	6459.56	1093.27	-122.49	325.81	361.30	0.90	FAIL	
14113.00†	7215.00	6563.26	1367.31	14237.11	7390.00	6559.55	1091.92	-122.43	326.31	366.82	0.89	FAIL	
14213.00†	7215.00	6663.26	1366.57	14337.11	7390.00	6659.54	1090.57	-122.38	326.82	372.35	0.88	FAIL	
14313.00†	7215.00	6763.25	1365.82	14437.11	7390.00	6759.53	1089.22	-122.32	327.33	377.89	0.87	FAIL	
14413.00†	7215.00	6863.25	1365.08	14537.11	7390.00	6859.52	1087.88	-122.26	327.84	383.43	0.85	FAIL	
14513.00†	7215.00	6963.25	1364.33	14637.10	7390.00	6959.50	1086.53	-122.21	328.35	388.98	0.84	FAIL	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 10 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-4NBH PWB Offset Wellpath: WAKEMAN 20-17-4NBH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#03 WAKEMAN 20-17-4NBH (293'FSL & 2053'FEL, SEC.20) Well: WAKEMAN 20-17-4NBH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
14613.00†	7215.00	7063.25	1363.58	14737.10	7390.00	7059.49	1085.18	-122.15	328.86	394.53	0.83	FAIL	
14713.00†	7215.00	7163.24	1362.84	14837.10	7390.00	7159.48	1083.83	-122.10	329.37	400.10	0.82	FAIL	
14813.00†	7215.00	7263.24	1362.09	14937.10	7390.00	7259.47	1082.49	-122.04	329.88	405.66	0.81	FAIL	
14913.00†	7215.00	7363.24	1361.35	15037.10	7390.00	7359.46	1081.14	-121.98	330.39	411.24	0.80	FAIL	
15013.00†	7215.00	7463.23	1360.60	15137.09	7390.00	7459.45	1079.79	-121.93	330.90	416.82	0.79	FAIL	
15113.00†	7215.00	7563.23	1359.85	15237.09	7390.00	7559.44	1078.44	-121.87	331.41	422.40	0.78	FAIL	
15213.00†	7215.00	7663.23	1359.11	15337.09	7390.00	7659.43	1077.10	-121.82	331.92	427.99	0.78	FAIL	
15313.00†	7215.00	7763.23	1358.36	15437.09	7390.00	7759.42	1075.75	-121.77	332.43	433.59	0.77	FAIL	
15413.00†	7215.00	7863.22	1357.62	15537.09	7390.00	7859.41	1074.40	-121.71	332.94	439.19	0.76	FAIL	
15513.00†	7215.00	7963.22	1356.87	15637.09	7390.00	7959.40	1073.05	-121.66	333.46	444.80	0.75	FAIL	
15613.00†	7215.00	8063.22	1356.13	15737.08	7390.00	8059.38	1071.71	-121.60	333.97	450.41	0.74	FAIL	
15713.00†	7215.00	8163.21	1355.38	15837.08	7390.00	8159.37	1070.36	-121.55	334.48	456.03	0.73	FAIL	
15813.00†	7215.00	8263.21	1354.63	15937.08	7390.00	8259.36	1069.01	-121.49	334.99	461.66	0.73	FAIL	
15913.00†	7215.00	8363.21	1353.89	16037.08	7390.00	8359.35	1067.66	-121.44	335.51	467.29	0.72	FAIL	
16013.00†	7215.00	8463.21	1353.14	16137.08	7390.00	8459.34	1066.32	-121.39	336.02	472.92	0.71	FAIL	
16113.00†	7215.00	8563.20	1352.40	16237.07	7390.00	8559.33	1064.97	-121.33	336.53	478.56	0.70	FAIL	
16213.00†	7215.00	8663.20	1351.65	16337.07	7390.00	8659.32	1063.62	-121.28	337.05	484.21	0.70	FAIL	
16313.00†	7215.00	8763.20	1350.90	16437.07	7390.00	8759.31	1062.27	-121.23	337.56	489.86	0.69	FAIL	
16413.00†	7215.00	8863.20	1350.16	16537.07	7390.00	8859.30	1060.92	-121.17	338.08	495.51	0.68	FAIL	
16513.00†	7215.00	8963.19	1349.41	16637.07	7390.00	8959.29	1059.58	-121.12	338.59	501.17	0.68	FAIL	
16613.00†	7215.00	9063.19	1348.67	16737.07	7390.00	9059.28	1058.23	-121.07	339.11	506.84	0.67	FAIL	
16713.00†	7215.00	9163.19	1347.92	16837.06	7390.00	9159.26	1056.88	-121.02	339.62	512.51	0.66	FAIL	
16813.00†	7215.00	9263.18	1347.17	16937.06	7390.00	9259.25	1055.53	-120.96	340.14	518.18	0.66	FAIL	
16913.00†	7215.00	9363.18	1346.43	17037.06	7390.00	9359.24	1054.19	-120.91	340.66	523.86	0.65	FAIL	
17013.00†	7215.00	9463.18	1345.68	17137.06	7390.00	9459.23	1052.84	-120.86	341.17	529.55	0.64	FAIL	
17113.00†	7215.00	9563.18	1344.94	17237.06	7390.00	9559.22	1051.49	-120.81	341.69	535.24	0.64	FAIL	
17213.00†	7215.00	9663.17	1344.19	17337.05	7390.00	9659.21	1050.14	-120.76	342.21	540.93	0.63	FAIL	
17313.00†	7215.00	9763.17	1343.45	17437.05	7390.00	9759.20	1048.80	-120.71	342.72	546.63	0.63	FAIL	
17413.00†	7215.00	9863.17	1342.70	17537.05	7390.00	9859.19	1047.45	-120.65	343.24	552.33	0.62	FAIL	
17513.00†	7215.00	9963.16	1341.95	17637.05	7390.00	9959.18	1046.10	-120.60	343.76	558.04	0.62	FAIL	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 11 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-4NBH PWB Offset Wellpath: WAKEMAN 20-17-4NBH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#03 WAKEMAN 20-17-4NBH (293'FSL & 2053'FEL, SEC.20) Well: WAKEMAN 20-17-4NBH Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
17516.82†	7215.00	9966.98	1341.93	17640.87	7390.00	9963.00	1046.05	-120.60	343.78	558.25	0.62	FAIL

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: WAKEMAN 20-17-4NBH PWB Offset Wellpath: WAKEMAN 20-17-4NBH PWP (REV-A.0)

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: WAKEMAN 20-17-4NBH PWB Offset Wellpath: WAKEMAN 20-17-4NBH PWP (REV-A.0)

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	13.00	1800.00	1787.00	13.00	1791.34	0.05	-9.11	-11.00	20.53
8.5in Open Hole	1800.00	17645.62	15845.62	1791.34	7390.00	-11.00	20.53	3038.19	314.26

SURVEY PROGRAM - Offset Wellbore: WAKEMAN 20-17-4NBH PWB Offset Wellpath: WAKEMAN 20-17-4NBH PWP (REV-A.0)

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
13.00	17645.62	Custom BHI NaviTrak (Standard Rotating+Axial Corr) (Rockies 0.03Gt model)		WAKEMAN 20-17-4NBH PWB

OFFSET WELLPATH REFERENCE - Offset Wellbore: WAKEMAN 20-17-4NBH PWB Offset Wellpath: WAKEMAN 20-17-4NBH PWP (REV-A.0)

MD Reference: RIG (13'KB) (RKB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	13.00ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 12 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-4CDH PWB Offset Wellpath: WAKEMAN 20-17-4CDH PWB (REV-A.0)

Facility: SEC.20-T01S-R65W		Slot: SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)		Well: WAKEMAN 20-17-4CDH		Threshold Value=1.00		† = interpolated/extrapolated station					
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
13.00	13.00	0.00	0.00	13.00	13.00	0.06	15.00	89.75	15.00	1.40	23.67	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	0.06	15.00	89.75	15.00	1.73	15.26	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	0.06	15.00	89.75	15.00	2.31	9.42	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	0.06	15.00	89.75	15.00	2.92	6.72	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	0.06	15.00	89.75	15.00	3.53	5.20	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	0.06	15.00	89.75	15.00	4.15	4.24	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	0.06	15.00	89.75	15.00	4.78	3.57	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	0.06	15.00	89.75	15.00	5.40	3.09	PASS	
813.00†	813.00	0.00	0.00	812.93	812.93	0.06	15.03	89.78	15.03	6.02	2.72	PASS	
900.00	900.00	0.00	0.00	899.46	899.44	-0.40	16.66	91.39	16.68	6.68	2.70	PASS	
913.00†	913.00	-0.01	0.03	912.38	912.35	-0.53	17.12	-15.72	17.11	6.77	2.73	PASS	
1013.00†	1012.97	-0.67	2.13	1011.68	1011.49	-2.06	22.52	-13.55	20.50	7.91	2.77	PASS	
1113.00†	1112.80	-2.38	7.55	1110.87	1110.26	-4.52	31.22	-12.25	23.90	9.22	2.74	PASS	
1213.00†	1212.38	-5.13	16.29	1209.94	1208.54	-7.90	43.18	-11.50	27.30	10.41	2.76	PASS	
1313.00†	1311.57	-8.93	28.35	1308.89	1306.22	-12.19	58.38	-11.11	30.68	11.49	2.80	PASS	
1413.00†	1410.26	-13.76	43.69	1407.74	1403.19	-17.40	76.80	-10.97	34.05	12.52	2.84	PASS	
1513.00†	1508.33	-19.63	62.32	1506.46	1499.33	-23.50	98.40	-11.02	37.39	13.50	2.88	PASS	
1600.74	1593.77	-25.62	81.34	1594.09	1584.24	-29.37	119.19	-11.45	39.21	14.17	2.87	PASS	
1613.00†	1605.67	-26.51	84.17	1606.35	1596.13	-30.20	122.09	-11.57	39.28	14.25	2.86	PASS	
1713.00†	1702.69	-33.78	107.27	1706.34	1693.04	-36.90	145.82	-12.47	39.87	14.83	2.79	PASS	
1813.00†	1799.71	-41.06	130.37	1806.34	1789.94	-43.61	169.55	-13.35	40.46	15.36	2.71	PASS	
1913.00†	1896.74	-48.33	153.47	1906.34	1886.85	-50.31	193.28	-14.20	41.07	16.02	2.64	PASS	
2013.00†	1993.76	-55.61	176.56	2006.33	1983.76	-57.01	217.00	-15.03	41.68	16.72	2.56	PASS	
2113.00†	2090.78	-62.88	199.66	2106.33	2080.67	-63.72	240.73	-15.83	42.30	17.45	2.48	PASS	
2213.00†	2187.81	-70.16	222.76	2206.33	2177.58	-70.42	264.46	-16.61	42.94	18.21	2.41	PASS	
2313.00†	2284.83	-77.43	245.86	2306.32	2274.49	-77.13	288.19	-17.36	43.57	19.01	2.34	PASS	
2413.00†	2381.85	-84.71	268.96	2406.32	2371.40	-83.83	311.91	-18.10	44.22	19.84	2.27	PASS	
2513.00†	2478.88	-91.98	292.06	2506.31	2468.31	-90.54	335.64	-18.81	44.87	20.70	2.21	PASS	
2613.00†	2575.90	-99.26	315.16	2606.31	2565.22	-97.24	359.37	-19.50	45.53	21.58	2.15	PASS	
2713.00†	2672.92	-106.53	338.26	2706.31	2662.12	-103.95	383.10	-20.18	46.20	22.49	2.09	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 13 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-4CDH PWB Offset Wellpath: WAKEMAN 20-17-4CDH PWB (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2033'FEL, SEC.20) Well: WAKEMAN 20-17-4CDH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
2813.00†	2769.95	-113.81	361.35	2806.30	2759.03	-110.65	406.83	-20.83	46.87	23.42	2.03	PASS	
2913.00†	2866.97	-121.08	384.45	2906.30	2855.94	-117.36	430.55	-21.47	47.55	24.38	1.98	PASS	
3013.00†	2963.99	-128.35	407.55	3006.30	2952.85	-124.06	454.28	-22.08	48.23	25.36	1.93	PASS	
3113.00†	3061.02	-135.63	430.65	3106.29	3049.76	-130.77	478.01	-22.68	48.92	26.37	1.88	PASS	
3213.00†	3158.04	-142.90	453.75	3206.29	3146.67	-137.47	501.74	-23.27	49.61	27.39	1.83	PASS	
3313.00†	3255.06	-150.18	476.85	3306.29	3243.58	-144.18	525.46	-23.83	50.31	28.43	1.79	PASS	
3413.00†	3352.09	-157.45	499.95	3406.28	3340.49	-150.88	549.19	-24.38	51.02	29.49	1.75	PASS	
3513.00†	3449.11	-164.73	523.04	3506.28	3437.39	-157.58	572.92	-24.92	51.73	30.57	1.71	PASS	
3613.00†	3546.13	-172.00	546.14	3606.27	3534.30	-164.29	596.65	-25.44	52.44	31.67	1.67	PASS	
3713.00†	3643.16	-179.28	569.24	3706.27	3631.21	-170.99	620.37	-25.95	53.16	32.78	1.64	PASS	
3813.00†	3740.18	-186.55	592.34	3806.27	3728.12	-177.70	644.10	-26.45	53.88	33.90	1.60	PASS	
3913.00†	3837.20	-193.83	615.44	3906.26	3825.03	-184.40	667.83	-26.93	54.60	35.04	1.57	PASS	
4013.00†	3934.23	-201.10	638.54	4006.26	3921.94	-191.11	691.56	-27.39	55.33	36.20	1.54	PASS	
4113.00†	4031.25	-208.38	661.64	4106.26	4018.85	-197.81	715.28	-27.85	56.07	37.37	1.51	PASS	
4213.00†	4128.27	-215.65	684.74	4206.25	4115.76	-204.52	739.01	-28.30	56.80	38.55	1.48	PASS	
4313.00†	4225.30	-222.93	707.83	4306.25	4212.67	-211.22	762.74	-28.73	57.54	39.74	1.46	PASS	
4413.00†	4322.32	-230.20	730.93	4406.24	4309.57	-217.93	786.47	-29.15	58.28	40.94	1.43	PASS	
4513.00†	4419.34	-237.48	754.03	4506.24	4406.48	-224.63	810.19	-29.56	59.03	42.16	1.41	PASS	
4613.00†	4516.37	-244.75	777.13	4606.24	4503.39	-231.34	833.92	-29.96	59.78	43.38	1.38	PASS	
4713.00†	4613.39	-252.02	800.23	4706.23	4600.30	-238.04	857.65	-30.35	60.53	44.61	1.36	PASS	
4813.00†	4710.41	-259.30	823.33	4806.23	4697.21	-244.75	881.38	-30.74	61.28	45.86	1.34	PASS	
4913.00†	4807.44	-266.57	846.43	4906.23	4794.12	-251.45	905.10	-31.11	62.04	47.11	1.32	PASS	
5013.00†	4904.46	-273.85	869.53	5006.22	4891.03	-258.15	928.83	-31.47	62.80	48.37	1.30	PASS	
5113.00†	5001.48	-281.12	892.62	5106.22	4987.94	-264.86	952.56	-31.83	63.56	49.64	1.28	PASS	
5213.00†	5098.51	-288.40	915.72	5206.22	5084.84	-271.56	976.29	-32.17	64.33	50.91	1.27	PASS	
5313.00†	5195.53	-295.67	938.82	5306.21	5181.75	-278.27	1000.01	-32.51	65.09	52.20	1.25	PASS	
5413.00†	5292.55	-302.95	961.92	5406.21	5278.66	-284.97	1023.74	-32.84	65.86	53.49	1.23	PASS	
5513.00†	5389.58	-310.22	985.02	5506.20	5375.57	-291.68	1047.47	-33.16	66.63	54.78	1.22	PASS	
5613.00†	5486.60	-317.50	1008.12	5606.20	5472.48	-298.38	1071.20	-33.48	67.41	56.09	1.20	PASS	
5713.00†	5583.62	-324.77	1031.22	5706.20	5569.39	-305.09	1094.92	-33.79	68.18	57.40	1.19	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 14 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-4CDH PWB Offset Wellpath: WAKEMAN 20-17-4CDH PWB (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2033'FEL, SEC.20) Well: WAKEMAN 20-17-4CDH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
5813.00†	5680.65	-332.05	1054.32	5806.19	5666.30	-311.79	1118.65	-34.09	68.96	58.71	1.18	PASS	
5913.00†	5777.67	-339.32	1077.41	5906.19	5763.21	-318.50	1142.38	-34.38	69.74	60.03	1.16	PASS	
6013.00†	5874.69	-346.60	1100.51	6006.19	5860.12	-325.20	1166.11	-34.67	70.52	61.36	1.15	PASS	
6113.00†	5971.72	-353.87	1123.61	6106.18	5957.02	-331.91	1189.83	-34.95	71.30	62.69	1.14	PASS	
6213.00†	6068.74	-361.15	1146.71	6206.18	6053.93	-338.61	1213.56	-35.23	72.08	64.03	1.13	PASS	
6313.00†	6165.76	-368.42	1169.81	6306.18	6150.84	-345.31	1237.29	-35.50	72.87	65.37	1.12	PASS	
6413.00†	6262.79	-375.70	1192.91	6406.17	6247.75	-352.02	1261.02	-35.76	73.66	66.71	1.11	PASS	
6513.00†	6359.81	-382.97	1216.01	6506.17	6344.66	-358.72	1284.74	-36.02	74.45	68.06	1.09	PASS	
6613.00†	6456.83	-390.24	1239.11	6606.16	6441.57	-365.43	1308.47	-36.27	75.24	69.42	1.08	PASS	
6713.00†	6553.86	-397.52	1262.20	6706.16	6538.48	-372.13	1332.20	-36.52	76.03	70.78	1.07	PASS	
6777.09	6616.04	-402.18	1277.01	6770.24	6600.58	-376.43	1347.40	-36.67	76.54	71.65	1.07	PASS	
6791.16†	6629.71	-403.03	1280.26	6784.32	6614.22	-377.37	1350.74	-31.06	76.59	71.74	1.07	PASS	
6813.00†	6650.94	-403.67	1285.31	6806.14	6635.37	-378.84	1355.92	-21.41	76.46	71.51	1.07	PASS	
6913.00†	6747.83	-395.97	1308.26	6904.97	6731.15	-385.46	1379.37	26.65	73.79	64.35	1.15	PASS	
7013.00†	6841.98	-371.11	1330.44	6999.81	6823.06	-391.82	1401.88	69.08	76.75	55.86	1.38	PASS	
7113.00†	6930.53	-329.82	1351.16	7087.77	6908.31	-397.72	1422.75	101.68	101.14	70.11	1.45	PASS	
7213.00†	7010.78	-273.37	1369.80	7166.19	6984.30	-402.98	1441.35	121.15	150.40	85.95	1.76	PASS	
7313.00†	7080.30	-203.47	1385.79	7239.00	7054.88	-407.59	1458.62	131.99	218.22	94.74	2.31	PASS	
7413.00†	7136.98	-122.24	1398.65	7349.42	7161.92	-401.02	1484.21	141.82	292.68	99.02	2.97	PASS	
7513.00†	7179.08	-32.16	1407.98	7503.46	7305.38	-357.07	1516.96	149.35	365.23	97.50	3.77	PASS	
7613.00†	7205.34	64.04	1413.50	7754.87	7500.70	-207.40	1557.56	155.57	426.23	81.96	5.24	PASS	
7713.00†	7214.96	163.44	1415.04	8166.01	7638.00	170.47	1574.03	159.39	451.98	52.63	8.69	PASS	
7719.79	7215.00	170.23	1415.00	8172.79	7638.00	177.25	1573.73	159.43	451.86	52.71	8.68	PASS	
7813.00†	7215.00	263.43	1414.30	8265.82	7638.00	270.18	1569.66	159.83	450.68	53.18	8.58	PASS	
7913.00†	7215.00	363.43	1413.56	8365.62	7638.00	369.89	1565.38	160.25	449.47	53.80	8.45	PASS	
8013.00†	7215.00	463.43	1412.81	8465.44	7638.00	469.62	1561.17	160.67	448.31	54.59	8.31	PASS	
8113.00†	7215.00	563.43	1412.07	8565.26	7638.00	569.35	1557.05	161.08	447.20	55.52	8.15	PASS	
8213.00†	7215.00	663.42	1411.32	8665.08	7638.00	669.10	1553.02	161.48	446.14	56.58	7.97	PASS	
8313.00†	7215.00	763.42	1410.58	8764.91	7638.00	768.85	1549.07	161.87	445.13	57.77	7.79	PASS	
8413.00†	7215.00	863.42	1409.83	8864.75	7638.00	868.61	1545.20	162.25	444.16	59.05	7.60	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 15 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293°FSL & 2038°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-4CDH PWB Offset Wellpath: WAKEMAN 20-17-4CDH PWB (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#01 WAKEMAN 20-17-4CDH (293°FSL & 2033°FEL, SEC.20) Well: WAKEMAN 20-17-4CDH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
8513.00†	7215.00	963.42	1409.08	8964.59	7638.00	968.38	1541.42	162.62	443.24	60.43	7.41	PASS	
8613.00†	7215.00	1063.41	1408.34	9064.43	7638.00	1068.16	1537.72	162.99	442.37	61.89	7.22	PASS	
8713.00†	7215.00	1163.41	1407.59	9164.29	7638.00	1167.94	1534.10	163.35	441.54	63.42	7.03	PASS	
8813.00†	7215.00	1263.41	1406.85	9264.14	7638.00	1267.73	1530.57	163.69	440.74	65.01	6.84	PASS	
8913.00†	7215.00	1363.40	1406.10	9364.00	7638.00	1367.54	1527.12	164.03	439.99	66.66	6.66	PASS	
9013.00†	7215.00	1463.40	1405.35	9463.87	7638.00	1467.34	1523.75	164.36	439.27	68.36	6.48	PASS	
9113.00†	7215.00	1563.40	1404.61	9563.74	7638.00	1567.16	1520.47	164.68	438.60	70.10	6.31	PASS	
9213.00†	7215.00	1663.40	1403.86	9663.61	7638.00	1666.98	1517.27	164.99	437.95	71.87	6.14	PASS	
9313.00†	7215.00	1763.39	1403.12	9763.49	7638.00	1766.81	1514.16	165.29	437.35	73.68	5.98	PASS	
9413.00†	7215.00	1863.39	1402.37	9863.37	7638.00	1866.64	1511.13	165.58	436.77	75.52	5.83	PASS	
9513.00†	7215.00	1963.39	1401.62	9963.25	7638.00	1966.49	1508.18	165.86	436.23	77.38	5.68	PASS	
9613.00†	7215.00	2063.38	1400.88	10063.14	7638.00	2066.33	1505.32	166.13	435.71	79.26	5.54	PASS	
9713.00†	7215.00	2163.38	1400.13	10163.03	7638.00	2166.19	1502.54	166.39	435.23	81.17	5.40	PASS	
9813.00†	7215.00	2263.38	1399.39	10262.93	7638.00	2266.05	1499.85	166.64	434.77	83.09	5.27	PASS	
9913.00†	7215.00	2363.38	1398.64	10362.83	7638.00	2365.91	1497.24	166.88	434.35	85.04	5.14	PASS	
10013.00†	7215.00	2463.37	1397.90	10462.73	7638.00	2465.78	1494.72	167.11	433.95	86.99	5.02	PASS	
10113.00†	7215.00	2563.37	1397.15	10562.63	7638.00	2565.66	1492.27	167.32	433.57	88.97	4.90	PASS	
10213.00†	7215.00	2663.37	1396.40	10662.54	7638.00	2665.54	1489.92	167.53	433.22	90.95	4.79	PASS	
10313.00†	7215.00	2763.37	1395.66	10762.45	7638.00	2765.42	1487.64	167.73	432.89	92.95	4.69	PASS	
10413.00†	7215.00	2863.36	1394.91	10862.36	7638.00	2865.31	1485.43	167.92	432.59	94.97	4.58	PASS	
10513.00†	7215.00	2963.36	1394.17	10962.28	7638.00	2965.20	1483.35	168.09	432.30	97.00	4.48	PASS	
10613.00†	7215.00	3063.36	1393.42	11062.20	7638.00	3065.10	1481.32	168.26	432.04	99.04	4.39	PASS	
10713.00†	7215.00	3163.35	1392.67	11162.12	7638.00	3165.00	1479.39	168.41	431.80	101.09	4.29	PASS	
10813.00†	7215.00	3263.35	1391.93	11262.04	7638.00	3264.90	1477.53	168.56	431.58	103.15	4.21	PASS	
10913.00†	7215.00	3363.35	1391.18	11361.96	7638.00	3364.81	1475.76	168.69	431.38	105.23	4.12	PASS	
11013.00†	7215.00	3463.35	1390.44	11461.89	7638.00	3464.72	1474.08	168.81	431.19	107.32	4.04	PASS	
11113.00†	7215.00	3563.34	1389.69	11561.81	7638.00	3564.63	1472.48	168.93	431.03	109.43	3.96	PASS	
11213.00†	7215.00	3663.34	1388.94	11661.74	7638.00	3664.55	1470.96	169.03	430.88	111.54	3.88	PASS	
11313.00†	7215.00	3763.34	1388.20	11761.67	7638.00	3764.47	1469.53	169.12	430.75	113.68	3.81	PASS	
11413.00†	7215.00	3863.33	1387.45	11861.60	7638.00	3864.39	1468.18	169.20	430.64	115.82	3.73	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 16 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-4CDH PWB Offset Wellpath: WAKEMAN 20-17-4CDH PWB (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2033'FEL, SEC.20) Well: WAKEMAN 20-17-4CDH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
11513.00†	7215.00	3963.33	1386.71	11961.53	7638.00	3964.31	1466.92	169.26	430.54	117.98	3.67	PASS	
11613.00†	7215.00	4063.33	1385.96	12061.46	7638.00	4064.24	1465.74	169.32	430.46	120.16	3.60	PASS	
11713.00†	7215.00	4163.33	1385.22	12161.39	7638.00	4164.16	1464.64	169.37	430.39	122.36	3.53	PASS	
11813.00†	7215.00	4263.32	1384.47	12261.33	7638.00	4264.09	1463.63	169.40	430.34	124.57	3.47	PASS	
11913.00†	7215.00	4363.32	1383.72	12361.26	7638.00	4364.02	1462.70	169.42	430.31	126.80	3.41	PASS	
12013.00†	7215.00	4463.32	1382.98	12461.19	7638.00	4463.95	1461.86	169.44	430.29	129.05	3.35	PASS	
12113.00†	7215.00	4563.32	1382.23	12561.13	7638.00	4563.88	1461.10	169.44	430.29	131.32	3.29	PASS	
12213.00†	7215.00	4663.31	1381.49	12661.06	7638.00	4663.81	1460.42	169.43	430.30	133.61	3.23	PASS	
12313.00†	7215.00	4763.31	1380.74	12760.99	7638.00	4763.74	1459.83	169.41	430.33	135.92	3.18	PASS	
12413.00†	7215.00	4863.31	1379.99	12860.93	7638.00	4863.68	1459.32	169.38	430.37	138.26	3.12	PASS	
12513.00†	7215.00	4963.30	1379.25	12960.86	7638.00	4963.61	1458.90	169.34	430.43	140.62	3.07	PASS	
12613.00†	7215.00	5063.30	1378.50	13060.82	7638.00	5063.57	1458.55	169.28	430.51	143.00	3.02	PASS	
12713.00†	7215.00	5163.30	1377.76	13160.82	7638.00	5163.57	1458.21	169.23	430.58	145.39	2.97	PASS	
12813.00†	7215.00	5263.30	1377.01	13260.82	7638.00	5263.57	1457.87	169.18	430.66	147.80	2.92	PASS	
12913.00†	7215.00	5363.29	1376.26	13360.82	7638.00	5363.57	1457.53	169.13	430.74	150.21	2.88	PASS	
13013.00†	7215.00	5463.29	1375.52	13460.82	7638.00	5463.57	1457.19	169.07	430.81	152.63	2.83	PASS	
13113.00†	7215.00	5563.29	1374.77	13560.82	7638.00	5563.57	1456.85	169.02	430.89	155.07	2.79	PASS	
13213.00†	7215.00	5663.28	1374.03	13660.82	7638.00	5663.56	1456.51	168.97	430.97	157.51	2.74	PASS	
13313.00†	7215.00	5763.28	1373.28	13760.82	7638.00	5763.56	1456.17	168.91	431.05	159.97	2.70	PASS	
13413.00†	7215.00	5863.28	1372.53	13860.82	7638.00	5863.56	1455.83	168.86	431.12	162.43	2.66	PASS	
13513.00†	7215.00	5963.28	1371.79	13960.82	7638.00	5963.56	1455.49	168.81	431.20	164.90	2.62	PASS	
13613.00†	7215.00	6063.27	1371.04	14060.82	7638.00	6063.56	1455.16	168.75	431.28	167.38	2.58	PASS	
13713.00†	7215.00	6163.27	1370.30	14160.82	7638.00	6163.56	1454.82	168.70	431.36	169.87	2.55	PASS	
13813.00†	7215.00	6263.27	1369.55	14260.81	7638.00	6263.56	1454.48	168.65	431.44	172.37	2.51	PASS	
13913.00†	7215.00	6363.27	1368.81	14360.81	7638.00	6363.55	1454.14	168.60	431.52	174.88	2.47	PASS	
14013.00†	7215.00	6463.26	1368.06	14460.81	7638.00	6463.55	1453.80	168.54	431.60	177.39	2.44	PASS	
14113.00†	7215.00	6563.26	1367.31	14560.81	7638.00	6563.55	1453.46	168.49	431.68	179.92	2.40	PASS	
14213.00†	7215.00	6663.26	1366.57	14660.81	7638.00	6663.55	1453.12	168.44	431.76	182.45	2.37	PASS	
14313.00†	7215.00	6763.25	1365.82	14760.81	7638.00	6763.55	1452.78	168.38	431.85	184.99	2.34	PASS	
14413.00†	7215.00	6863.25	1365.08	14860.81	7638.00	6863.55	1452.44	168.33	431.93	187.54	2.31	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 17 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-4CDH PWB Offset Wellpath: WAKEMAN 20-17-4CDH PWB (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2033'FEL, SEC.20) Well: WAKEMAN 20-17-4CDH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
14513.00†	7215.00	6963.25	1364.33	14960.81	7638.00	6963.55	1452.10	168.28	432.01	190.10	2.28	PASS	
14613.00†	7215.00	7063.25	1363.58	15060.81	7638.00	7063.54	1451.76	168.23	432.09	192.67	2.25	PASS	
14713.00†	7215.00	7163.24	1362.84	15160.81	7638.00	7163.54	1451.42	168.17	432.18	195.24	2.22	PASS	
14813.00†	7215.00	7263.24	1362.09	15260.81	7638.00	7263.54	1451.08	168.12	432.26	197.82	2.19	PASS	
14913.00†	7215.00	7363.24	1361.35	15360.81	7638.00	7363.54	1450.74	168.07	432.34	200.41	2.16	PASS	
15013.00†	7215.00	7463.23	1360.60	15460.80	7638.00	7463.54	1450.40	168.01	432.43	203.01	2.13	PASS	
15113.00†	7215.00	7563.23	1359.85	15560.80	7638.00	7563.54	1450.06	167.96	432.51	205.61	2.11	PASS	
15213.00†	7215.00	7663.23	1359.11	15660.80	7638.00	7663.54	1449.72	167.91	432.60	208.23	2.08	PASS	
15313.00†	7215.00	7763.23	1358.36	15760.80	7638.00	7763.54	1449.39	167.86	432.68	210.85	2.06	PASS	
15413.00†	7215.00	7863.22	1357.62	15860.80	7638.00	7863.53	1449.05	167.80	432.77	213.47	2.03	PASS	
15513.00†	7215.00	7963.22	1356.87	15960.80	7638.00	7963.53	1448.71	167.75	432.85	216.11	2.01	PASS	
15613.00†	7215.00	8063.22	1356.13	16060.80	7638.00	8063.53	1448.37	167.70	432.94	218.75	1.98	PASS	
15713.00†	7215.00	8163.21	1355.38	16160.80	7638.00	8163.53	1448.03	167.65	433.03	221.40	1.96	PASS	
15813.00†	7215.00	8263.21	1354.63	16260.80	7638.00	8263.53	1447.69	167.59	433.11	224.01	1.94	PASS	
15913.00†	7215.00	8363.21	1353.89	16360.80	7638.00	8363.53	1447.35	167.54	433.20	226.73	1.91	PASS	
16013.00†	7215.00	8463.21	1353.14	16460.80	7638.00	8463.53	1447.01	167.49	433.29	229.40	1.89	PASS	
16113.00†	7215.00	8563.20	1352.40	16560.80	7638.00	8563.52	1446.67	167.44	433.38	232.08	1.87	PASS	
16213.00†	7215.00	8663.20	1351.65	16660.79	7638.00	8663.52	1446.33	167.38	433.47	234.76	1.85	PASS	
16313.00†	7215.00	8763.20	1350.90	16760.79	7638.00	8763.52	1445.99	167.33	433.56	237.46	1.83	PASS	
16413.00†	7215.00	8863.20	1350.16	16860.79	7638.00	8863.52	1445.65	167.28	433.65	240.16	1.81	PASS	
16513.00†	7215.00	8963.19	1349.41	16960.79	7638.00	8963.52	1445.31	167.23	433.73	242.87	1.79	PASS	
16613.00†	7215.00	9063.19	1348.67	17060.79	7638.00	9063.52	1444.97	167.17	433.82	245.58	1.77	PASS	
16713.00†	7215.00	9163.19	1347.92	17160.79	7638.00	9163.52	1444.63	167.12	433.92	248.31	1.75	PASS	
16813.00†	7215.00	9263.18	1347.17	17260.79	7638.00	9263.51	1444.29	167.07	434.01	251.04	1.73	PASS	
16913.00†	7215.00	9363.18	1346.43	17360.79	7638.00	9363.51	1443.96	167.02	434.10	253.78	1.71	PASS	
17013.00†	7215.00	9463.18	1345.68	17460.79	7638.00	9463.51	1443.62	166.97	434.19	256.52	1.69	PASS	
17113.00†	7215.00	9563.18	1344.94	17560.79	7638.00	9563.51	1443.28	166.91	434.28	259.27	1.68	PASS	
17213.00†	7215.00	9663.17	1344.19	17660.79	7638.00	9663.51	1442.94	166.86	434.37	262.03	1.66	PASS	
17313.00†	7215.00	9763.17	1343.45	17760.79	7638.00	9763.51	1442.60	166.81	434.47	264.79	1.64	PASS	
17413.00†	7215.00	9863.17	1342.70	17860.78	7638.00	9863.51	1442.26	166.76	434.56	267.57	1.63	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 18 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-4CDH PWB Offset Wellpath: WAKEMAN 20-17-4CDH PWB (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20) Well: WAKEMAN 20-17-4CDH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
17513.00†	7215.00	9963.16	1341.95	17960.78	7638.00	9963.50	1441.92	166.70	434.65	270.35	1.61	PASS	
17516.82	7215.00	9966.99	1341.93	17963.99	7638.00	9966.71	1441.91	166.70	434.66	270.15	1.61	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: WAKEMAN 20-17-4CDH PWB Offset Wellpath: WAKEMAN 20-17-4CDH PWB (REV-A.0)

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: WAKEMAN 20-17-4CDH PWB Offset Wellpath: WAKEMAN 20-17-4CDH PWB (REV-A.0)

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	13.00	1800.00	1787.00	13.00	1783.80	0.04	9.14	-13.14	55.79
8.5in Open Hole	13.00	17963.99	17950.99	13.00	7638.00	0.04	9.14	3037.87	444.07

SURVEY PROGRAM - Offset Wellbore: WAKEMAN 20-17-4CDH PWB Offset Wellpath: WAKEMAN 20-17-4CDH PWB (REV-A.0)

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
13.00	17963.99	Custom BHI NaviTrak (Standard Rotating+Axial Corr) (Rockies 0.03Gt model)		WAKEMAN 20-17-4CDH PWB

OFFSET WELLPATH REFERENCE - Offset Wellbore: WAKEMAN 20-17-4CDH PWB Offset Wellpath: WAKEMAN 20-17-4CDH PWB (REV-A.0)

MD Reference: RIG (13'KB) (RKB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	13.00ft



Clearance Report

WAKEMAN 20-17-4NAH (REV-A.0)
Closest Approach
Page 19 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-4NCH PWB Offset Wellpath: WAKEMAN 20-17-4NCH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W		Slot: SLOT#04 WAKEMAN 20-17-4NCH (293'FSL & 2068'FEL, SEC.20)				Well: WAKEMAN 20-17-4NCH		Threshold Value=1.00		† = interpolated/extrapolated station			
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
13.00	13.00	0.00	0.00	13.00	13.00	0.02	-29.95	-89.97	29.95	1.40	48.58	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	0.02	-29.95	-89.97	29.95	1.73	31.37	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	0.02	-29.95	-89.97	29.95	2.31	19.37	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	0.02	-29.95	-89.97	29.95	2.91	13.81	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	0.02	-29.95	-89.97	29.95	3.53	10.69	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	0.02	-29.95	-89.97	29.95	4.15	8.71	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	0.02	-29.95	-89.97	29.95	4.77	7.34	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	0.02	-29.95	-89.97	29.95	5.40	6.34	PASS	
813.00†	813.00	0.00	0.00	813.00	813.00	0.02	-29.95	-89.97	29.95	6.02	5.58	PASS	
900.00	900.00	0.00	0.00	900.00	900.00	0.02	-29.95	-89.97	29.95	6.57	5.06	PASS	
913.00†	913.00	-0.01	0.03	913.00	913.00	0.02	-29.95	162.57	29.98	6.65	4.99	PASS	
1013.00†	1012.97	-0.67	2.13	1012.97	1012.97	0.02	-29.95	163.73	32.08	7.38	4.75	PASS	
1113.00†	1112.80	-2.38	7.55	1112.96	1112.96	0.00	-29.92	166.12	37.55	8.38	4.85	PASS	
1213.00†	1212.38	-5.13	16.29	1214.03	1214.00	-1.07	-27.96	167.74	44.46	9.40	5.08	PASS	
1313.00†	1311.57	-8.93	28.35	1315.34	1315.14	-3.86	-22.85	168.17	51.57	10.58	5.19	PASS	
1413.00†	1410.26	-13.76	43.69	1416.88	1416.23	-8.37	-14.58	167.83	58.83	11.66	5.34	PASS	
1513.00†	1508.33	-19.63	62.32	1518.63	1517.14	-14.62	-3.15	166.97	66.25	12.68	5.51	PASS	
1600.74	1593.77	-25.62	81.34	1606.34	1603.86	-20.93	8.40	166.26	73.78	13.36	5.81	PASS	
1613.00†	1605.67	-26.51	84.17	1618.54	1615.92	-21.81	10.01	166.21	75.01	13.45	5.87	PASS	
1713.00†	1702.69	-33.78	107.27	1718.03	1714.28	-28.98	23.15	165.85	85.05	14.04	6.36	PASS	
1813.00†	1799.71	-41.06	130.37	1817.52	1812.64	-36.16	36.29	165.56	95.09	14.57	6.81	PASS	
1913.00†	1896.74	-48.33	153.47	1917.02	1911.00	-43.33	49.43	165.33	105.13	15.23	7.19	PASS	
2013.00†	1993.76	-55.61	176.56	2016.51	2009.36	-50.51	62.57	165.14	115.17	15.91	7.53	PASS	
2113.00†	2090.78	-62.88	199.66	2116.01	2107.72	-57.68	75.71	164.98	125.22	16.60	7.84	PASS	
2213.00†	2187.81	-70.16	222.76	2215.50	2206.08	-64.86	88.84	164.85	135.26	17.31	8.11	PASS	
2313.00†	2284.83	-77.43	245.86	2314.99	2304.44	-72.03	101.98	164.73	145.31	18.03	8.35	PASS	
2413.00†	2381.85	-84.71	268.96	2414.49	2402.80	-79.21	115.12	164.63	155.35	18.77	8.56	PASS	
2513.00†	2478.88	-91.98	292.06	2513.98	2501.17	-86.38	128.26	164.54	165.40	19.52	8.75	PASS	
2613.00†	2575.90	-99.26	315.16	2613.47	2599.53	-93.56	141.40	164.46	175.45	20.28	8.93	PASS	
2713.00†	2672.92	-106.53	338.26	2712.97	2697.89	-100.74	154.54	164.39	185.50	21.05	9.08	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 20 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-4NCH PWB Offset Wellpath: WAKEMAN 20-17-4NCH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W		Slot: SLOT#04 WAKEMAN 20-17-4NCH (293'FSL & 2068'FEL, SEC.20)				Well: WAKEMAN 20-17-4NCH		Threshold Value=1.00		† = interpolated/extrapolated station				
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status		
2813.00†	2769.95	-113.81	361.35	2812.46	2796.25	-107.91	167.68	164.33	195.54	21.83	9.22	PASS		
2913.00†	2866.97	-121.08	384.45	2911.98	2894.61	-115.09	180.81	164.27	205.59	22.62	9.35	PASS		
3013.00†	2963.99	-128.35	407.55	3011.45	2992.97	-122.26	193.95	164.22	215.64	23.41	9.47	PASS		
3113.00†	3061.02	-135.63	430.65	3110.94	3091.33	-129.44	207.09	164.17	225.69	24.21	9.57	PASS		
3213.00†	3158.04	-142.90	453.75	3210.44	3189.69	-136.61	220.23	164.13	235.74	25.01	9.67	PASS		
3313.00†	3255.06	-150.18	476.85	3309.93	3288.05	-143.79	233.37	164.09	245.79	25.82	9.76	PASS		
3413.00†	3352.09	-157.45	499.95	3409.42	3386.41	-150.96	246.51	164.05	255.84	26.63	9.84	PASS		
3513.00†	3449.11	-164.73	523.04	3508.92	3484.78	-158.14	259.65	164.02	265.88	27.44	9.92	PASS		
3613.00†	3546.13	-172.00	546.14	3608.41	3583.14	-165.31	272.78	163.99	275.93	28.26	9.99	PASS		
3713.00†	3643.16	-179.28	569.24	3707.90	3681.50	-172.49	285.92	163.98	285.98	29.08	10.05	PASS		
3813.00†	3740.18	-186.55	592.34	3807.40	3779.86	-179.66	299.06	163.93	296.03	29.91	10.11	PASS		
3913.00†	3837.20	-193.83	615.44	3906.89	3878.22	-186.84	312.20	163.91	306.08	30.73	10.17	PASS		
4013.00†	3934.23	-201.10	638.54	4006.39	3976.58	-194.01	325.34	163.88	316.13	31.56	10.22	PASS		
4113.00†	4031.25	-208.38	661.64	4105.88	4074.94	-201.19	338.48	163.86	326.18	32.40	10.27	PASS		
4213.00†	4128.27	-215.65	684.74	4205.37	4173.30	-208.37	351.62	163.84	336.23	33.23	10.32	PASS		
4313.00†	4225.30	-222.93	707.83	4304.87	4271.66	-215.54	364.75	163.82	346.28	34.07	10.36	PASS		
4413.00†	4322.32	-230.20	730.93	4404.36	4370.02	-222.72	377.89	163.80	356.33	34.90	10.40	PASS		
4513.00†	4419.34	-237.48	754.03	4503.85	4468.39	-229.89	391.03	163.78	366.38	35.74	10.44	PASS		
4613.00†	4516.37	-244.75	777.13	4603.35	4566.75	-237.07	404.17	163.77	376.43	36.59	10.47	PASS		
4713.00†	4613.39	-252.02	800.23	4702.84	4665.11	-244.24	417.31	163.75	386.48	37.43	10.51	PASS		
4813.00†	4710.41	-259.30	823.33	4802.34	4763.47	-251.42	430.45	163.73	396.53	38.27	10.54	PASS		
4913.00†	4807.44	-266.57	846.43	4901.83	4861.83	-258.59	443.59	163.72	406.57	39.12	10.57	PASS		
5013.00†	4904.46	-273.85	869.53	5001.32	4960.19	-265.77	456.72	163.71	416.62	39.96	10.59	PASS		
5113.00†	5001.48	-281.12	892.62	5100.82	5058.55	-272.94	469.86	163.69	426.67	40.81	10.62	PASS		
5213.00†	5098.51	-288.40	915.72	5200.31	5156.91	-280.12	483.00	163.68	436.72	41.66	10.65	PASS		
5313.00†	5195.53	-295.67	938.82	5299.80	5255.27	-287.29	496.14	163.67	446.77	42.51	10.67	PASS		
5413.00†	5292.55	-302.95	961.92	5399.30	5353.64	-294.47	509.28	163.66	456.82	43.36	10.69	PASS		
5513.00†	5389.58	-310.22	985.02	5498.79	5452.00	-301.64	522.42	163.65	466.87	44.21	10.72	PASS		
5613.00†	5486.60	-317.50	1008.12	5598.29	5550.36	-308.82	535.56	163.64	476.92	45.07	10.74	PASS		
5713.00†	5583.62	-324.77	1031.22	5697.78	5648.72	-316.00	548.69	163.63	486.97	45.92	10.76	PASS		

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 21 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-4NCH PWB Offset Wellpath: WAKEMAN 20-17-4NCH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#04 WAKEMAN 20-17-4NCH (293'FSL & 2068'FEL, SEC.20) Well: WAKEMAN 20-17-4NCH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
5813.00†	5680.65	-332.05	1054.32	5797.27	5747.08	-323.17	561.83	163.62	497.02	46.77	10.77	PASS	
5913.00†	5777.67	-339.32	1077.41	5896.77	5845.44	-330.35	574.97	163.61	507.07	47.63	10.79	PASS	
6013.00†	5874.69	-346.60	1100.51	5996.26	5943.80	-337.52	588.11	163.60	517.12	48.48	10.81	PASS	
6113.00†	5971.72	-353.87	1123.61	6095.75	6042.16	-344.70	601.25	163.59	527.17	49.34	10.83	PASS	
6213.00†	6068.74	-361.15	1146.71	6195.25	6140.52	-351.87	614.39	163.58	537.22	50.19	10.84	PASS	
6313.00†	6165.76	-368.42	1169.81	6294.74	6238.88	-359.05	627.53	163.58	547.27	51.05	10.86	PASS	
6413.00†	6262.79	-375.70	1192.91	6394.23	6337.25	-366.22	640.66	163.57	557.32	51.91	10.87	PASS	
6513.00†	6359.81	-382.97	1216.01	6493.73	6435.61	-373.40	653.80	163.56	567.37	52.77	10.89	PASS	
6613.00†	6456.83	-390.24	1239.11	6593.22	6533.97	-380.57	666.94	163.55	577.42	53.63	10.90	PASS	
6713.00†	6553.86	-397.52	1262.20	6692.72	6632.33	-387.75	680.08	163.55	587.47	54.48	10.91	PASS	
6777.09	6616.04	-402.18	1277.01	6756.48	6695.36	-392.35	688.50	163.54	593.91	55.04	10.92	PASS	
6813.00†	6650.94	-403.67	1285.31	6792.19	6730.67	-394.92	693.22	178.34	597.50	55.37	10.92	PASS	
6913.00†	6747.83	-395.97	1308.26	6890.45	6827.82	-402.01	706.19	-144.91	607.39	56.69	10.84	PASS	
7013.00†	6841.98	-371.11	1330.44	6988.20	6924.60	-403.85	719.05	-126.27	617.82	58.14	10.75	PASS	
7113.00†	6930.53	-329.82	1351.16	7090.86	7025.08	-388.30	732.16	-117.88	628.91	59.46	10.69	PASS	
7213.00†	7010.78	-273.37	1369.80	7199.25	7126.42	-352.57	745.12	-113.92	640.22	59.38	10.90	PASS	
7313.00†	7080.30	-203.47	1385.79	7314.04	7224.47	-294.52	757.34	-112.03	651.18	58.92	11.17	PASS	
7413.00†	7136.98	-122.24	1398.65	7435.55	7313.60	-212.98	768.06	-111.21	661.12	57.62	11.60	PASS	
7513.00†	7179.08	-32.16	1407.98	7563.54	7386.90	-108.72	776.37	-110.94	669.31	56.37	12.01	PASS	
7613.00†	7205.34	64.04	1413.50	7696.98	7436.99	14.54	781.35	-110.93	675.07	56.00	12.20	PASS	
7713.00†	7214.96	163.44	1415.04	7833.94	7457.68	149.59	782.28	-110.99	677.86	57.30	11.96	PASS	
7719.79	7215.00	170.23	1415.00	7843.31	7457.91	158.96	782.18	-111.00	677.93	57.46	11.93	PASS	
7813.00†	7215.00	263.43	1414.30	7939.26	7458.00	254.90	780.90	-110.99	678.47	59.02	11.62	PASS	
7913.00†	7215.00	363.43	1413.56	8039.26	7458.00	354.89	779.56	-110.97	679.03	61.14	11.22	PASS	
8013.00†	7215.00	463.43	1412.81	8139.25	7458.00	454.88	778.21	-110.95	679.59	63.75	10.77	PASS	
8113.00†	7215.00	563.43	1412.07	8239.25	7458.00	554.87	776.86	-110.93	680.15	66.79	10.28	PASS	
8213.00†	7215.00	663.42	1411.32	8339.25	7458.00	654.86	775.52	-110.92	680.71	70.20	9.79	PASS	
8313.00†	7215.00	763.42	1410.58	8439.25	7458.00	754.85	774.17	-110.90	681.28	73.93	9.29	PASS	
8413.00†	7215.00	863.42	1409.83	8539.25	7458.00	854.84	772.82	-110.88	681.84	77.93	8.82	PASS	
8513.00†	7215.00	963.42	1409.08	8639.24	7458.00	954.83	771.47	-110.86	682.40	82.16	8.37	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 22 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-4NCH PWB Offset Wellpath: WAKEMAN 20-17-4NCH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#04 WAKEMAN 20-17-4NCH (293'FSL & 2068'FEL, SEC.20) Well: WAKEMAN 20-17-4NCH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
8613.00†	7215.00	1063.41	1408.34	8739.24	7458.00	1054.82	770.13	-110.84	682.96	85.66	8.03	PASS	
8713.00†	7215.00	1163.41	1407.59	8839.24	7458.00	1154.81	768.78	-110.83	683.52	91.20	7.55	PASS	
8813.00†	7215.00	1263.41	1406.85	8939.24	7458.00	1254.79	767.43	-110.81	684.08	95.95	7.18	PASS	
8913.00†	7215.00	1363.40	1406.10	9039.24	7458.00	1354.78	766.09	-110.79	684.65	100.82	6.83	PASS	
9013.00†	7215.00	1463.40	1405.35	9139.24	7458.00	1454.77	764.74	-110.77	685.21	105.80	6.51	PASS	
9113.00†	7215.00	1563.40	1404.61	9239.23	7458.00	1554.76	763.39	-110.75	685.77	110.88	6.22	PASS	
9213.00†	7215.00	1663.40	1403.86	9339.23	7458.00	1654.75	762.05	-110.74	686.33	116.03	5.95	PASS	
9313.00†	7215.00	1763.39	1403.12	9439.23	7458.00	1754.74	760.70	-110.72	686.89	121.26	5.69	PASS	
9413.00†	7215.00	1863.39	1402.37	9539.23	7458.00	1854.73	759.35	-110.70	687.46	126.55	5.46	PASS	
9513.00†	7215.00	1963.39	1401.62	9639.23	7458.00	1954.72	758.01	-110.68	688.02	131.89	5.24	PASS	
9613.00†	7215.00	2063.38	1400.88	9739.22	7458.00	2054.71	756.66	-110.67	688.58	137.28	5.04	PASS	
9713.00†	7215.00	2163.38	1400.13	9839.22	7458.00	2154.70	755.31	-110.65	689.14	142.72	4.85	PASS	
9813.00†	7215.00	2263.38	1399.39	9939.22	7458.00	2254.69	753.97	-110.63	689.70	148.19	4.67	PASS	
9913.00†	7215.00	2363.38	1398.64	10039.22	7458.00	2354.67	752.62	-110.61	690.27	153.70	4.51	PASS	
10013.00†	7215.00	2463.37	1397.90	10139.22	7458.00	2454.66	751.27	-110.60	690.83	159.24	4.35	PASS	
10113.00†	7215.00	2563.37	1397.15	10239.22	7458.00	2554.65	749.93	-110.58	691.39	164.80	4.21	PASS	
10213.00†	7215.00	2663.37	1396.40	10339.21	7458.00	2654.64	748.58	-110.56	691.95	170.40	4.07	PASS	
10313.00†	7215.00	2763.37	1395.66	10439.21	7458.00	2754.63	747.23	-110.54	692.52	176.01	3.95	PASS	
10413.00†	7215.00	2863.36	1394.91	10539.21	7458.00	2854.62	745.89	-110.53	693.08	181.65	3.83	PASS	
10513.00†	7215.00	2963.36	1394.17	10639.21	7458.00	2954.61	744.54	-110.51	693.64	187.30	3.71	PASS	
10613.00†	7215.00	3063.36	1393.42	10739.21	7458.00	3054.60	743.19	-110.49	694.21	192.98	3.61	PASS	
10713.00†	7215.00	3163.35	1392.67	10839.20	7458.00	3154.59	741.85	-110.47	694.77	198.67	3.51	PASS	
10813.00†	7215.00	3263.35	1391.93	10939.20	7458.00	3254.58	740.50	-110.46	695.33	204.37	3.41	PASS	
10913.00†	7215.00	3363.35	1391.18	11039.20	7458.00	3354.57	739.15	-110.44	695.89	210.09	3.32	PASS	
11013.00†	7215.00	3463.35	1390.44	11139.20	7458.00	3454.56	737.81	-110.42	696.46	215.82	3.23	PASS	
11113.00†	7215.00	3563.34	1389.69	11239.20	7458.00	3554.54	736.46	-110.40	697.02	221.56	3.15	PASS	
11213.00†	7215.00	3663.34	1388.94	11339.20	7458.00	3654.53	735.11	-110.39	697.58	227.31	3.08	PASS	
11313.00†	7215.00	3763.34	1388.20	11439.19	7458.00	3754.52	733.77	-110.37	698.15	233.08	3.00	PASS	
11413.00†	7215.00	3863.33	1387.45	11539.19	7458.00	3854.51	732.42	-110.35	698.71	238.85	2.93	PASS	
11513.00†	7215.00	3963.33	1386.71	11639.19	7458.00	3954.50	731.07	-110.34	699.27	244.64	2.86	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 23 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-4NCH PWB Offset Wellpath: WAKEMAN 20-17-4NCH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#04 WAKEMAN 20-17-4NCH (293'FSL & 2068'FEL, SEC.20) Well: WAKEMAN 20-17-4NCH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
11613.00†	7215.00	4063.33	1385.96	11739.19	7458.00	4054.49	729.72	-110.32	699.84	250.43	2.80	PASS	
11713.00†	7215.00	4163.33	1385.22	11839.19	7458.00	4154.48	728.38	-110.30	700.40	256.23	2.74	PASS	
11813.00†	7215.00	4263.32	1384.47	11939.19	7458.00	4254.47	727.03	-110.28	700.96	262.03	2.68	PASS	
11913.00†	7215.00	4363.32	1383.72	12039.18	7458.00	4354.46	725.68	-110.27	701.53	267.85	2.62	PASS	
12013.00†	7215.00	4463.32	1382.98	12139.18	7458.00	4454.45	724.34	-110.25	702.09	273.67	2.57	PASS	
12113.00†	7215.00	4563.32	1382.23	12239.18	7458.00	4554.44	722.99	-110.23	702.66	279.50	2.52	PASS	
12213.00†	7215.00	4663.31	1381.49	12339.18	7458.00	4654.42	721.64	-110.22	703.22	285.33	2.47	PASS	
12313.00†	7215.00	4763.31	1380.74	12439.18	7458.00	4754.41	720.30	-110.20	703.78	291.17	2.42	PASS	
12413.00†	7215.00	4863.31	1379.99	12539.17	7458.00	4854.40	718.95	-110.18	704.35	297.01	2.37	PASS	
12513.00†	7215.00	4963.30	1379.25	12639.17	7458.00	4954.39	717.60	-110.17	704.91	302.86	2.33	PASS	
12613.00†	7215.00	5063.30	1378.50	12739.17	7458.00	5054.38	716.26	-110.15	705.48	308.72	2.29	PASS	
12713.00†	7215.00	5163.30	1377.76	12839.17	7458.00	5154.37	714.91	-110.13	706.04	314.57	2.25	PASS	
12813.00†	7215.00	5263.30	1377.01	12939.17	7458.00	5254.36	713.56	-110.12	706.60	320.44	2.21	PASS	
12913.00†	7215.00	5363.29	1376.26	13039.17	7458.00	5354.35	712.22	-110.10	707.17	326.31	2.17	PASS	
13013.00†	7215.00	5463.29	1375.52	13139.16	7458.00	5454.34	710.87	-110.08	707.73	332.18	2.13	PASS	
13113.00†	7215.00	5563.29	1374.77	13239.16	7458.00	5554.33	709.52	-110.07	708.30	338.06	2.10	PASS	
13213.00†	7215.00	5663.28	1374.03	13339.16	7458.00	5654.32	708.18	-110.05	708.86	343.94	2.06	PASS	
13313.00†	7215.00	5763.28	1373.28	13439.16	7458.00	5754.31	706.83	-110.03	709.43	349.82	2.03	PASS	
13413.00†	7215.00	5863.28	1372.53	13539.16	7458.00	5854.29	705.48	-110.02	709.99	355.71	2.00	PASS	
13513.00†	7215.00	5963.28	1371.79	13639.15	7458.00	5954.28	704.14	-110.00	710.56	361.60	1.97	PASS	
13613.00†	7215.00	6063.27	1371.04	13739.15	7458.00	6054.27	702.79	-109.98	711.12	367.49	1.94	PASS	
13713.00†	7215.00	6163.27	1370.30	13839.15	7458.00	6154.26	701.44	-109.97	711.69	373.39	1.91	PASS	
13813.00†	7215.00	6263.27	1369.55	13939.15	7458.00	6254.25	700.10	-109.95	712.25	379.29	1.88	PASS	
13913.00†	7215.00	6363.27	1368.81	14039.15	7458.00	6354.24	698.75	-109.93	712.82	385.19	1.85	PASS	
14013.00†	7215.00	6463.26	1368.06	14139.15	7458.00	6454.23	697.40	-109.92	713.38	391.10	1.83	PASS	
14113.00†	7215.00	6563.26	1367.31	14239.14	7458.00	6554.22	696.06	-109.90	713.95	397.01	1.80	PASS	
14213.00†	7215.00	6663.26	1366.57	14339.14	7458.00	6654.21	694.71	-109.88	714.51	402.92	1.77	PASS	
14313.00†	7215.00	6763.25	1365.82	14439.14	7458.00	6754.20	693.36	-109.87	715.08	408.83	1.75	PASS	
14413.00†	7215.00	6863.25	1365.08	14539.14	7458.00	6854.19	692.02	-109.85	715.64	414.75	1.73	PASS	
14513.00†	7215.00	6963.25	1364.33	14639.14	7458.00	6954.17	690.67	-109.83	716.21	420.67	1.70	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 24 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-4NCH PWB Offset Wellpath: WAKEMAN 20-17-4NCH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#04 WAKEMAN 20-17-4NCH (293'FSL & 2068'FEL, SEC.20) Well: WAKEMAN 20-17-4NCH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
14613.00†	7215.00	7063.25	1363.58	14739.13	7458.00	7054.16	689.32	-109.82	716.77	426.59	1.68	PASS	
14713.00†	7215.00	7163.24	1362.84	14839.13	7458.00	7154.15	687.98	-109.80	717.34	432.52	1.66	PASS	
14813.00†	7215.00	7263.24	1362.09	14939.13	7458.00	7254.14	686.63	-109.79	717.90	438.44	1.64	PASS	
14913.00†	7215.00	7363.24	1361.35	15039.13	7458.00	7354.13	685.28	-109.77	718.47	444.37	1.62	PASS	
15013.00†	7215.00	7463.23	1360.60	15139.13	7458.00	7454.12	683.93	-109.75	719.03	450.30	1.60	PASS	
15113.00†	7215.00	7563.23	1359.85	15239.13	7458.00	7554.11	682.59	-109.74	719.60	456.23	1.58	PASS	
15213.00†	7215.00	7663.23	1359.11	15339.12	7458.00	7654.10	681.24	-109.72	720.16	462.17	1.56	PASS	
15313.00†	7215.00	7763.23	1358.36	15439.12	7458.00	7754.09	679.89	-109.70	720.73	468.11	1.54	PASS	
15413.00†	7215.00	7863.22	1357.62	15539.12	7458.00	7854.08	678.55	-109.69	721.30	474.05	1.52	PASS	
15513.00†	7215.00	7963.22	1356.87	15639.12	7458.00	7954.07	677.20	-109.67	721.86	479.99	1.50	PASS	
15613.00†	7215.00	8063.22	1356.13	15739.12	7458.00	8054.06	675.85	-109.66	722.43	485.93	1.49	PASS	
15713.00†	7215.00	8163.21	1355.38	15839.11	7458.00	8154.04	674.51	-109.64	722.99	491.88	1.47	PASS	
15813.00†	7215.00	8263.21	1354.63	15939.11	7458.00	8254.03	673.16	-109.62	723.56	497.82	1.45	PASS	
15913.00†	7215.00	8363.21	1353.89	16039.11	7458.00	8354.02	671.81	-109.61	724.13	503.77	1.44	PASS	
16013.00†	7215.00	8463.21	1353.14	16139.11	7458.00	8454.01	670.47	-109.59	724.69	509.72	1.42	PASS	
16113.00†	7215.00	8563.20	1352.40	16239.11	7458.00	8554.00	669.12	-109.58	725.26	515.67	1.41	PASS	
16213.00†	7215.00	8663.20	1351.65	16339.11	7458.00	8653.99	667.77	-109.56	725.82	521.63	1.39	PASS	
16313.00†	7215.00	8763.20	1350.90	16439.10	7458.00	8753.98	666.43	-109.54	726.39	527.58	1.38	PASS	
16413.00†	7215.00	8863.20	1350.16	16539.10	7458.00	8853.97	665.08	-109.53	726.96	533.54	1.36	PASS	
16513.00†	7215.00	8963.19	1349.41	16639.10	7458.00	8953.96	663.73	-109.51	727.52	539.50	1.35	PASS	
16613.00†	7215.00	9063.19	1348.67	16739.10	7458.00	9053.95	662.39	-109.50	728.09	545.46	1.34	PASS	
16713.00†	7215.00	9163.19	1347.92	16839.10	7458.00	9153.94	661.04	-109.48	728.66	551.42	1.32	PASS	
16813.00†	7215.00	9263.18	1347.17	16939.09	7458.00	9253.92	659.69	-109.47	729.22	557.39	1.31	PASS	
16913.00†	7215.00	9363.18	1346.43	17039.09	7458.00	9353.91	658.35	-109.45	729.79	563.35	1.30	PASS	
17013.00†	7215.00	9463.18	1345.68	17139.09	7458.00	9453.90	657.00	-109.43	730.36	569.32	1.28	PASS	
17113.00†	7215.00	9563.18	1344.94	17239.09	7458.00	9553.89	655.65	-109.42	730.92	575.29	1.27	PASS	
17213.00†	7215.00	9663.17	1344.19	17339.09	7458.00	9653.88	654.31	-109.40	731.49	581.26	1.26	PASS	
17313.00†	7215.00	9763.17	1343.45	17439.09	7458.00	9753.87	652.96	-109.39	732.06	587.23	1.25	PASS	
17413.00†	7215.00	9863.17	1342.70	17539.08	7458.00	9853.86	651.61	-109.37	732.62	593.20	1.24	PASS	
17513.00†	7215.00	9963.16	1341.95	17639.08	7458.00	9953.85	650.27	-109.36	733.19	599.17	1.22	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 25 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-4NCH PWB Offset Wellpath: WAKEMAN 20-17-4NCH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#04 WAKEMAN 20-17-4NCH (293'FSL & 2068'FEL, SEC.20) Well: WAKEMAN 20-17-4NCH Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
17516.82†	7215.00	9966.98	1341.93	17642.90	7458.00	9957.67	650.21	-109.36	733.21	599.40	1.22	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: WAKEMAN 20-17-4NCH PWB Offset Wellpath: WAKEMAN 20-17-4NCH PWP (REV-A.0)

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: WAKEMAN 20-17-4NCH PWB Offset Wellpath: WAKEMAN 20-17-4NCH PWP (REV-A.0)

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	13.00	1800.00	1787.00	13.00	1795.31	0.01	-18.26	-10.63	1.23
8.5in Open Hole	1800.00	17654.03	15854.03	1795.31	7458.00	-10.63	1.23	3038.49	189.01

SURVEY PROGRAM - Offset Wellbore: WAKEMAN 20-17-4NCH PWB Offset Wellpath: WAKEMAN 20-17-4NCH PWP (REV-A.0)

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
13.00	17654.03	Custom BHI NaviTrak (Standard Rotating+Axial Corr) (Rockies 0.03Gt model)		WAKEMAN 20-17-4NCH PWB

OFFSET WELLPATH REFERENCE - Offset Wellbore: WAKEMAN 20-17-4NCH PWB Offset Wellpath: WAKEMAN 20-17-4NCH PWP (REV-A.0)

MD Reference: RIG (13'KB) (RKB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	13.00ft



Clearance Report

WAKEMAN 20-17-4NAH (REV-A.0)
Closest Approach
Page 26 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: BOX ELDER FARMS #41-20 AWB Offset Wellpath: BOX ELDER FARMS #41-20 AWP

Facility: SEC.20-T01S-R65W Slot: SLOT#01 EX. BOX ELDER FARMS #41-20 (990'FNL & 990'FEL, SEC.20,OG,PA, 8145) Well: BOX ELDER FARMS #41-20 Threshold Value=1.00 † = interpolated/extrapolated sz													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	AC Stat	
13.00	13.00	0.00	0.00	-13.00	29.00	4015.43	955.25	13.38	4127.52	25.40	167.74	PA5	
113.00†	113.00	0.00	0.00	71.00	113.00	4015.43	955.25	13.38	4127.49	51.62	81.13	PA5	
213.00†	213.00	0.00	0.00	171.00	213.00	4015.43	955.25	13.38	4127.49	53.79	77.57	PA5	
313.00†	313.00	0.00	0.00	271.00	313.00	4015.43	955.25	13.38	4127.49	56.14	74.30	PA5	
413.00†	413.00	0.00	0.00	371.00	413.00	4015.43	955.25	13.38	4127.49	58.48	71.28	PA5	
513.00†	513.00	0.00	0.00	471.00	513.00	4015.43	955.25	13.38	4127.49	60.84	68.50	PA5	
613.00†	613.00	0.00	0.00	571.00	613.00	4015.43	955.25	13.38	4127.49	63.19	65.92	PA5	
713.00†	713.00	0.00	0.00	671.00	713.00	4015.43	955.25	13.38	4127.49	65.55	63.53	PA5	
813.00†	813.00	0.00	0.00	771.00	813.00	4015.43	955.25	13.38	4127.49	67.92	61.30	PA5	
900.00	900.00	0.00	0.00	858.00	900.00	4015.43	955.25	13.38	4127.49	69.98	59.48	PA5	
913.00†	913.00	-0.01	0.03	871.00	913.00	4015.43	955.25	-94.10	4127.49	70.28	59.21	PA5	
1013.00†	1012.97	-0.67	2.13	970.97	1012.97	4015.43	955.25	-94.13	4127.65	72.66	57.27	PA5	
1113.00†	1112.80	-2.38	7.55	1070.80	1112.80	4015.43	955.25	-94.20	4128.06	75.03	55.45	PA5	
1213.00†	1212.38	-5.13	16.29	1170.38	1212.38	4015.43	955.25	-94.31	4128.74	77.40	53.74	PA5	
1313.00†	1311.57	-8.93	28.35	1269.57	1311.57	4015.43	955.25	-94.46	4129.72	79.78	52.14	PA5	
1413.00†	1410.26	-13.76	43.69	1368.26	1410.26	4015.43	955.25	-94.66	4131.01	82.16	50.63	PA5	
1513.00†	1508.33	-19.63	62.32	1466.33	1508.33	4015.43	955.25	-94.89	4132.67	84.55	49.21	PA5	
1600.74	1593.77	-25.62	81.34	1551.77	1593.77	4015.43	955.25	-95.12	4134.46	86.66	48.03	PA5	
1613.00†	1605.67	-26.51	84.17	1563.67	1605.67	4015.43	955.25	-95.16	4134.73	86.95	47.87	PA5	
1713.00†	1702.69	-33.78	107.27	1660.69	1702.69	4015.43	955.25	-95.49	4137.05	89.37	46.59	PA5	
1813.00†	1799.71	-41.06	130.37	1757.71	1799.71	4015.43	955.25	-95.81	4139.50	91.78	45.37	PA5	
1913.00†	1896.74	-48.33	153.47	1854.74	1896.74	4015.43	955.25	-96.13	4142.10	94.25	44.20	PA5	
2013.00†	1993.76	-55.61	176.56	1951.76	1993.76	4015.43	955.25	-96.46	4144.84	96.75	43.08	PA5	
2113.00†	2090.78	-62.88	199.66	2048.78	2090.78	4015.43	955.25	-96.78	4147.71	99.27	42.01	PA5	
2213.00†	2187.81	-70.16	222.76	2145.81	2187.81	4015.43	955.25	-97.10	4150.73	101.81	40.98	PA5	
2313.00†	2284.83	-77.43	245.86	2242.83	2284.83	4015.43	955.25	-97.42	4153.88	104.37	40.00	PA5	
2413.00†	2381.85	-84.71	268.96	2339.85	2381.85	4015.43	955.25	-97.74	4157.17	106.96	39.06	PA5	
2513.00†	2478.88	-91.98	292.06	2436.88	2478.88	4015.43	955.25	-98.07	4160.60	109.56	38.16	PA5	
2613.00†	2575.90	-99.26	315.16	2533.90	2575.90	4015.43	955.25	-98.39	4164.17	112.19	37.29	PA5	
2713.00†	2672.92	-106.53	338.26	2630.92	2672.92	4015.43	955.25	-98.71	4167.88	114.83	36.46	PA5	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 27 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: BOX ELDER FARMS #41-20 AWB Offset Wellpath: BOX ELDER FARMS #41-20 AWP

Facility: SEC.20-T01S-R65W				Slot: SLOT#01 EX. BOX ELDER FARMS #41-20 (990'FNL & 990'FEL, SEC.20, OG, PA, 8145)				Well: BOX ELDER FARMS #41-20		Threshold Value=1.00		† = interpolated/extrapolated st	
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	AC Stat	
2813.00†	2769.95	-113.81	361.35	2727.95	2769.95	4015.43	955.25	-99.03	4171.72	117.49	35.67	PA5	
2913.00†	2866.97	-121.08	384.45	2824.97	2866.97	4015.43	955.25	-99.34	4175.70	120.16	34.90	PA5	
3013.00†	2963.99	-128.35	407.55	2921.99	2963.99	4015.43	955.25	-99.66	4179.82	122.85	34.17	PA5	
3113.00†	3061.02	-135.63	430.65	3019.02	3061.02	4015.43	955.25	-99.98	4184.07	125.56	33.46	PA5	
3213.00†	3158.04	-142.90	453.75	3116.04	3158.04	4015.43	955.25	-100.30	4188.46	128.28	32.79	PA5	
3313.00†	3255.06	-150.18	476.85	3213.06	3255.06	4015.43	955.25	-100.61	4192.99	131.01	32.13	PA5	
3413.00†	3352.09	-157.45	499.95	3310.09	3352.09	4015.43	955.25	-100.93	4197.64	133.75	31.51	PA5	
3513.00†	3449.11	-164.73	523.04	3407.11	3449.11	4015.43	955.25	-101.24	4202.44	136.51	30.90	PA5	
3613.00†	3546.13	-172.00	546.14	3504.13	3546.13	4015.43	955.25	-101.56	4207.37	139.28	30.32	PA5	
3713.00†	3643.16	-179.28	569.24	3601.16	3643.16	4015.43	955.25	-101.87	4212.43	142.06	29.76	PA5	
3813.00†	3740.18	-186.55	592.34	3698.18	3740.18	4015.43	955.25	-102.18	4217.62	144.84	29.22	PA5	
3913.00†	3837.20	-193.83	615.44	3795.20	3837.20	4015.43	955.25	-102.50	4222.95	147.64	28.70	PA5	
4013.00†	3934.23	-201.10	638.54	3892.23	3934.23	4015.43	955.25	-102.81	4228.40	150.45	28.20	PA5	
4113.00†	4031.25	-208.38	661.64	3989.25	4031.25	4015.43	955.25	-103.12	4233.99	153.26	27.72	PA5	
4213.00†	4128.27	-215.65	684.74	4086.27	4128.27	4015.43	955.25	-103.43	4239.72	156.08	27.25	PA5	
4313.00†	4225.30	-222.93	707.83	4183.30	4225.30	4015.43	955.25	-103.74	4245.57	158.91	26.81	PA5	
4413.00†	4322.32	-230.20	730.93	4280.32	4322.32	4015.43	955.25	-104.04	4251.55	161.74	26.37	PA5	
4513.00†	4419.34	-237.48	754.03	4377.34	4419.34	4015.43	955.25	-104.35	4257.66	164.58	25.95	PA5	
4613.00†	4516.37	-244.75	777.13	4474.37	4516.37	4015.43	955.25	-104.66	4263.90	167.43	25.55	PA5	
4713.00†	4613.39	-252.02	800.23	4571.39	4613.39	4015.43	955.25	-104.96	4270.26	170.28	25.16	PA5	
4813.00†	4710.41	-259.30	823.33	4668.41	4710.41	4015.43	955.25	-105.27	4276.76	173.13	24.78	PA5	
4913.00†	4807.44	-266.57	846.43	4765.44	4807.44	4015.43	955.25	-105.57	4283.38	175.99	24.41	PA5	
5013.00†	4904.46	-273.85	869.53	4862.46	4904.46	4015.43	955.25	-105.88	4290.13	178.86	24.06	PA5	
5113.00†	5001.48	-281.12	892.62	4959.48	5001.48	4015.43	955.25	-106.18	4297.01	181.72	23.71	PA5	
5213.00†	5098.51	-288.40	915.72	5056.51	5098.51	4015.43	955.25	-106.48	4304.01	184.59	23.38	PA5	
5313.00†	5195.53	-295.67	938.82	5153.53	5195.53	4015.43	955.25	-106.78	4311.13	187.47	23.06	PA5	
5413.00†	5292.55	-302.95	961.92	5250.55	5292.55	4015.43	955.25	-107.08	4318.38	190.34	22.75	PA5	
5513.00†	5389.58	-310.22	985.02	5347.58	5389.58	4015.43	955.25	-107.38	4325.75	193.22	22.45	PA5	
5613.00†	5486.60	-317.50	1008.12	5444.60	5486.60	4015.43	955.25	-107.67	4333.24	196.10	22.16	PA5	
5713.00†	5583.62	-324.77	1031.22	5541.62	5583.62	4015.43	955.25	-107.97	4340.86	198.98	21.87	PA5	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 28 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: BOX ELDER FARMS #41-20 AWB Offset Wellpath: BOX ELDER FARMS #41-20 AWP

Facility: SEC.20-T01S-R65W Slot: SLOT#01 EX. BOX ELDER FARMS #41-20 (990'FNL & 990'FEL, SEC.20, OG, PA, 8145) Well: BOX ELDER FARMS #41-20 Threshold Value=1.00 † = interpolated/extrapolated														AC Stat	
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio				AC Stat
5813.00†	5680.65	-332.05	1054.32	5638.65	5680.65	4015.43	955.25	-108.27	4348.60	201.87	21.60	PA5			PA5
5913.00†	5777.67	-339.32	1077.41	5735.67	5777.67	4015.43	955.25	-108.56	4356.46	204.75	21.33	PA5			PA5
6013.00†	5874.69	-346.60	1100.51	5832.69	5874.69	4015.43	955.25	-108.85	4364.44	207.64	21.07	PA5			PA5
6113.00†	5971.72	-353.87	1123.61	5929.72	5971.72	4015.43	955.25	-109.15	4372.54	210.53	20.82	PA5			PA5
6213.00†	6068.74	-361.15	1146.71	6026.74	6068.74	4015.43	955.25	-109.44	4380.76	213.42	20.58	PA5			PA5
6313.00†	6165.76	-368.42	1169.81	6123.76	6165.76	4015.43	955.25	-109.73	4389.09	216.31	20.34	PA5			PA5
6413.00†	6262.79	-375.70	1192.91	6220.79	6262.79	4015.43	955.25	-110.02	4397.55	219.20	20.11	PA5			PA5
6513.00†	6359.81	-382.97	1216.01	6317.81	6359.81	4015.43	955.25	-110.30	4406.12	222.09	19.89	PA5			PA5
6613.00†	6456.83	-390.24	1239.11	6414.83	6456.83	4015.43	955.25	-110.59	4414.80	224.98	19.67	PA5			PA5
6713.00†	6553.86	-397.52	1262.20	6511.86	6553.86	4015.43	955.25	-110.88	4423.61	227.87	19.46	PA5			PA5
6777.09	6616.04	-402.18	1277.01	6574.04	6616.04	4015.43	955.25	-111.06	4429.31	229.73	19.32	PA5			PA5
6813.00†	6650.94	-403.67	1285.31	6608.94	6650.94	4015.43	955.25	-96.60	4431.40	230.77	19.25	PA5			PA5
6913.00†	6747.83	-395.97	1308.26	6705.83	6747.83	4015.43	955.25	-59.79	4425.50	233.90	18.96	PA5			PA5
7013.00†	6841.98	-371.11	1330.44	6799.98	6841.98	4015.43	955.25	-40.24	4402.55	237.52	18.58	PA5			PA5
7113.00†	6930.53	-329.82	1351.16	6888.53	6930.53	4015.43	955.25	-31.15	4363.24	240.90	18.15	PA5			PA5
7213.00†	7010.78	-273.37	1369.80	6968.78	7010.78	4015.43	955.25	-26.84	4308.78	243.89	17.70	PA5			PA5
7313.00†	7080.30	-203.47	1385.79	7038.30	7080.30	4015.43	955.25	-25.22	4240.80	246.45	17.24	PA5			PA5
7413.00†	7136.98	-122.24	1398.65	7094.98	7136.98	4015.43	955.25	-25.80	4161.36	248.54	16.78	PA5			PA5
7513.00†	7179.08	-32.16	1407.98	7137.08	7179.08	4015.43	955.25	-29.36	4072.83	250.12	16.32	PA5			PA5
7613.00†	7205.34	64.04	1413.50	7163.34	7205.34	4015.43	955.25	-40.27	3977.87	251.19	15.87	PA5			PA5
7713.00†	7214.96	163.44	1415.04	7172.96	7214.96	4015.43	955.25	-84.25	3879.33	251.75	15.44	PA5			PA5
7719.79	7215.00	170.23	1415.00	7173.00	7215.00	4015.43	955.25	-90.00	3872.58	251.77	15.41	PA5			PA5
7813.00†	7215.00	263.43	1414.30	7173.00	7215.00	4015.43	955.25	-90.00	3779.97	252.02	15.03	PA5			PA5
7913.00†	7215.00	363.43	1413.56	7173.00	7215.00	4015.43	955.25	-90.00	3680.64	252.31	14.62	PA5			PA5
8013.00†	7215.00	463.43	1412.81	7173.00	7215.00	4015.43	955.25	-90.00	3581.35	252.62	14.21	PA5			PA5
8113.00†	7215.00	563.43	1412.07	7173.00	7215.00	4015.43	955.25	-90.00	3482.09	252.94	13.79	PA5			PA5
8213.00†	7215.00	663.42	1411.32	7173.00	7215.00	4015.43	955.25	-90.00	3382.89	253.29	13.38	PA5			PA5
8313.00†	7215.00	763.42	1410.58	7173.00	7215.00	4015.43	955.25	-90.00	3283.72	253.65	12.97	PA5			PA5
8413.00†	7215.00	863.42	1409.83	7173.00	7215.00	4015.43	955.25	-90.00	3184.62	254.04	12.56	PA5			PA5
8513.00†	7215.00	963.42	1409.08	7173.00	7215.00	4015.43	955.25	-90.00	3085.57	254.46	12.15	PA5			PA5

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 29 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: BOX ELDER FARMS #41-20 AWB Offset Wellpath: BOX ELDER FARMS #41-20 AWP

Facility: SEC.20-T01S-R65W Slot: SLOT#01 EX. BOX ELDER FARMS #41-20 (990'FNL & 990'FEL, SEC.20,OG,PA, 8145) Well: BOX ELDER FARMS #41-20 Threshold Value=1.00 † = interpolated/extrapolated sts												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	AC Stat
8613.00†	7215.00	1063.41	1408.34	7173.00	7215.00	4015.43	955.25	-90.00	2986.58	254.91	11.74	PA5
8713.00†	7215.00	1163.41	1407.59	7173.00	7215.00	4015.43	955.25	-90.00	2887.66	255.39	11.33	PA5
8813.00†	7215.00	1263.41	1406.85	7173.00	7215.00	4015.43	955.25	-90.00	2788.82	255.90	10.92	PA5
8913.00†	7215.00	1363.40	1406.10	7173.00	7215.00	4015.43	955.25	-90.00	2690.07	256.45	10.51	PA5
9013.00†	7215.00	1463.40	1405.35	7173.00	7215.00	4015.43	955.25	-90.00	2591.41	257.05	10.10	PA5
9113.00†	7215.00	1563.40	1404.61	7173.00	7215.00	4015.43	955.25	-90.00	2492.86	257.69	9.69	PA5
9213.00†	7215.00	1663.40	1403.86	7173.00	7215.00	4015.43	955.25	-90.00	2394.43	258.39	9.28	PA5
9313.00†	7215.00	1763.39	1403.12	7173.00	7215.00	4015.43	955.25	-90.00	2296.13	259.15	8.88	PA5
9413.00†	7215.00	1863.39	1402.37	7173.00	7215.00	4015.43	955.25	-90.00	2197.99	259.97	8.47	PA5
9513.00†	7215.00	1963.39	1401.62	7173.00	7215.00	4015.43	955.25	-90.00	2100.03	260.88	8.06	PA5
9613.00†	7215.00	2063.38	1400.88	7173.00	7215.00	4015.43	955.25	-90.00	2002.26	261.87	7.66	PA5
9713.00†	7215.00	2163.38	1400.13	7173.00	7215.00	4015.43	955.25	-90.00	1904.73	262.97	7.26	PA5
9813.00†	7215.00	2263.38	1399.39	7173.00	7215.00	4015.43	955.25	-90.00	1807.46	264.19	6.85	PA5
9913.00†	7215.00	2363.38	1398.64	7173.00	7215.00	4015.43	955.25	-90.00	1710.51	265.54	6.45	PA5
10013.00†	7215.00	2463.37	1397.90	7173.00	7215.00	4015.43	955.25	-90.00	1613.94	267.05	6.05	PA5
10113.00†	7215.00	2563.37	1397.15	7173.00	7215.00	4015.43	955.25	-90.00	1517.81	268.74	5.66	PA5
10213.00†	7215.00	2663.37	1396.40	7173.00	7215.00	4015.43	955.25	-90.00	1422.21	270.66	5.26	PA5
10313.00†	7215.00	2763.37	1395.66	7173.00	7215.00	4015.43	955.25	-90.00	1327.26	272.84	4.87	PA5
10413.00†	7215.00	2863.36	1394.91	7173.00	7215.00	4015.43	955.25	-90.00	1233.10	275.34	4.49	PA5
10513.00†	7215.00	2963.36	1394.17	7173.00	7215.00	4015.43	955.25	-90.00	1139.95	278.21	4.10	PA5
10613.00†	7215.00	3063.36	1393.42	7173.00	7215.00	4015.43	955.25	-90.00	1048.06	281.53	3.73	PA5
10713.00†	7215.00	3163.35	1392.67	7173.00	7215.00	4015.43	955.25	-90.00	957.79	285.40	3.36	PA5
10813.00†	7215.00	3263.35	1391.93	7173.00	7215.00	4015.43	955.25	-90.00	869.65	289.92	3.00	PA5
10913.00†	7215.00	3363.35	1391.18	7173.00	7215.00	4015.43	955.25	-90.00	784.37	295.18	2.66	PA5
11013.00†	7215.00	3463.35	1390.44	7173.00	7215.00	4015.43	955.25	-90.00	702.98	301.27	2.34	PA5
11113.00†	7215.00	3563.34	1389.69	7173.00	7215.00	4015.43	955.25	-90.00	626.99	308.12	2.04	PA5
11213.00†	7215.00	3663.34	1388.94	7173.00	7215.00	4015.43	955.25	-90.00	558.62	315.42	1.77	PA5
11313.00†	7215.00	3763.34	1388.20	7173.00	7215.00	4015.43	955.25	-90.00	500.99	322.23	1.56	PA5
11413.00†	7215.00	3863.33	1387.45	7173.00	7215.00	4015.43	955.25	-90.00	458.18	326.77	1.40	PA5
11513.00†	7215.00	3963.33	1386.71	7173.00	7215.00	4015.43	955.25	-90.00	434.59	326.59	1.33	PA5

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 30 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: BOX ELDER FARMS #41-20 AWB Offset Wellpath: BOX ELDER FARMS #41-20 AWP

Facility: SEC.20-T01S-R65W Slot: SLOT#01 EX. BOX ELDER FARMS #41-20 (990'FNL & 990'FEL, SEC.20,OG,PA, 8145) Well: BOX ELDER FARMS #41-20 Threshold Value=1.00 † = interpolated/extrapolated sts												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	AC Stat
11539.64†	7215.00	3989.97	1386.51	7173.00	7215.00	4015.43	955.25	-90.00	432.01	325.50	1.33	PA5
11566.76†	7215.00	4017.09	1386.31	7173.01	7215.01	4015.43	955.25	-90.00	431.06	323.90	1.33	PA5
11613.00†	7215.00	4063.33	1385.96	7173.00	7215.00	4015.43	955.25	-90.00	433.36	320.11	1.35	PA5
11713.00†	7215.00	4163.33	1385.22	7173.00	7215.00	4015.43	955.25	-90.00	454.69	308.30	1.48	PA5
11813.00†	7215.00	4263.32	1384.47	7173.00	7215.00	4015.43	955.25	-90.00	495.66	294.14	1.69	PA5
11913.00†	7215.00	4363.32	1383.72	7173.00	7215.00	4015.43	955.25	-90.00	551.92	280.43	1.97	PA5
12013.00†	7215.00	4463.32	1382.98	7173.00	7215.00	4015.43	955.25	-90.00	619.32	268.67	2.31	PA5
12113.00†	7215.00	4563.32	1382.23	7173.00	7215.00	4015.43	955.25	-90.00	694.62	259.22	2.68	PA5
12213.00†	7215.00	4663.31	1381.49	7173.00	7215.00	4015.43	955.25	-90.00	775.52	251.91	3.08	PA5
12313.00†	7215.00	4763.31	1380.74	7173.00	7215.00	4015.43	955.25	-90.00	860.45	246.41	3.50	PA5
12413.00†	7215.00	4863.31	1379.99	7173.00	7215.00	4015.43	955.25	-90.00	948.32	242.34	3.92	PA5

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: BOX ELDER FARMS #41-20 AWB Offset Wellpath: BOX ELDER FARMS #41-20 AWP

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: BOX ELDER FARMS #41-20 AWB Offset Wellpath: BOX ELDER FARMS #41-20 AWP

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]
12.25in Open Hole	0.00	91.00	91.00	29.00	120.00	2450.44	571.02	2450.44	571.02
8.625in Casing Surface	0.00	91.00	91.00	29.00	120.00	2450.44	571.02	2450.44	571.02
7.875in Open Hole	91.00	8123.00	8032.00	120.00	8152.00	2450.44	571.02	2450.44	571.02
4.5in Casing Production	0.00	8123.00	8123.00	29.00	8152.00	2450.44	571.02	2450.44	571.02



Clearance Report
WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 31 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

WELLPATH COMPOSITION - Offset Wellbore: **BOX ELDER FARMS #41-20 AWB** Offset Wellpath: **BOX ELDER FARMS #41-20 AWP**

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	8145.00	Drift Indicator - Inclination Only (Actual Survey)	ASSUMED VERTICAL COGCC <8145'>	BOX ELDER FARMS #41-20 AWB

OFFSET WELLPATH REFERENCE - Offset Wellbore: **BOX ELDER FARMS #41-20 AWB** Offset Wellpath: **BOX ELDER FARMS #41-20 AWP**

MD Reference: Rig on SLOT#01 EX. BOX ELDER FARMS #41-20 (990'FNL & 990'FEL, SEC.20,OG,PA) (RT)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	0.00ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 32 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WOLFE #1 AWP Offset Wellpath: WOLFE #1 AWP

Facility: SEC.20-T01S-R65W Slot: SLOT#01 EX. WOLFE #1 (990'FSL & 990'FEL, SEC.20, OG, PR, 8200) Well: WOLFE #1 Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
13.00	13.00	0.00	0.00	8.00	13.00	718.32	1012.87	54.66	1241.73	50.15	25.13	PASS
113.00†	113.00	0.00	0.00	108.00	113.00	718.32	1012.87	54.66	1241.73	52.49	23.99	PASS
213.00†	213.00	0.00	0.00	208.00	213.00	718.32	1012.87	54.66	1241.73	54.83	22.95	PASS
313.00†	313.00	0.00	0.00	308.00	313.00	718.32	1012.87	54.66	1241.73	57.00	22.00	PASS
413.00†	413.00	0.00	0.00	408.00	413.00	718.32	1012.87	54.66	1241.73	59.35	21.12	PASS
513.00†	513.00	0.00	0.00	508.00	513.00	718.32	1012.87	54.66	1241.73	61.71	20.31	PASS
613.00†	613.00	0.00	0.00	608.00	613.00	718.32	1012.87	54.66	1241.73	64.07	19.55	PASS
713.00†	713.00	0.00	0.00	708.00	713.00	718.32	1012.87	54.66	1241.73	66.43	18.85	PASS
813.00†	813.00	0.00	0.00	808.00	813.00	718.32	1012.87	54.66	1241.73	68.80	18.20	PASS
900.00	900.00	0.00	0.00	895.00	900.00	718.32	1012.87	54.66	1241.73	70.86	17.66	PASS
913.00†	913.00	-0.01	0.03	908.00	913.00	718.32	1012.87	-52.83	1241.71	71.16	17.59	PASS
1013.00†	1012.97	-0.67	2.13	1007.97	1012.97	718.32	1012.87	-52.93	1240.38	73.54	16.99	PASS
1113.00†	1112.80	-2.38	7.55	1107.80	1112.80	718.32	1012.87	-53.19	1236.96	75.94	16.41	PASS
1213.00†	1212.38	-5.13	16.29	1207.38	1212.38	718.32	1012.87	-53.62	1231.48	78.34	15.83	PASS
1313.00†	1311.57	-8.93	28.35	1306.57	1311.57	718.32	1012.87	-54.22	1224.00	80.73	15.27	PASS
1413.00†	1410.26	-13.76	43.69	1405.26	1410.26	718.32	1012.87	-54.98	1214.59	83.13	14.71	PASS
1513.00†	1508.33	-19.63	62.32	1503.33	1508.33	718.32	1012.87	-55.92	1203.37	85.52	14.16	PASS
1600.74	1593.77	-25.62	81.34	1588.77	1593.77	718.32	1012.87	-56.89	1192.14	87.63	13.69	PASS
1613.00†	1605.67	-26.51	84.17	1600.67	1605.67	718.32	1012.87	-57.01	1190.48	87.92	13.63	PASS
1713.00†	1702.69	-33.78	107.27	1697.69	1702.69	718.32	1012.87	-57.98	1177.19	90.32	13.11	PASS
1813.00†	1799.71	-41.06	130.37	1794.71	1799.71	718.32	1012.87	-58.96	1164.24	92.69	12.63	PASS
1913.00†	1896.74	-48.33	153.47	1891.74	1896.74	718.32	1012.87	-59.97	1151.66	95.13	12.17	PASS
2013.00†	1993.76	-55.61	176.56	1988.76	1993.76	718.32	1012.87	-61.00	1139.46	97.60	11.73	PASS
2113.00†	2090.78	-62.88	199.66	2085.78	2090.78	718.32	1012.87	-62.05	1127.64	100.09	11.32	PASS
2213.00†	2187.81	-70.16	222.76	2182.81	2187.81	718.32	1012.87	-63.13	1116.23	102.61	10.93	PASS
2313.00†	2284.83	-77.43	245.86	2279.83	2284.83	718.32	1012.87	-64.22	1105.22	105.15	10.56	PASS
2413.00†	2381.85	-84.71	268.96	2376.85	2381.85	718.32	1012.87	-65.33	1094.65	107.72	10.21	PASS
2513.00†	2478.88	-91.98	292.06	2473.88	2478.88	718.32	1012.87	-66.47	1084.51	110.31	9.87	PASS
2613.00†	2575.90	-99.26	315.16	2570.90	2575.90	718.32	1012.87	-67.62	1074.82	112.93	9.56	PASS
2713.00†	2672.92	-106.53	338.26	2667.92	2672.92	718.32	1012.87	-68.79	1065.59	115.57	9.26	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 33 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WOLFE #1 AWB Offset Wellpath: WOLFE #1 AWP

Facility: SEC.20-T01S-R65W Slot: SLOT#01 EX. WOLFE #1 (990'FSL & 990'FEL, SEC.20, OG, PR, 8200) Well: WOLFE #1 Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
2813.00†	2769.95	-113.81	361.35	2764.95	2769.95	718.32	1012.87	-69.99	1056.84	118.24	8.97	PASS
2913.00†	2866.97	-121.08	384.45	2861.97	2866.97	718.32	1012.87	-71.20	1048.57	120.92	8.71	PASS
3013.00†	2963.99	-128.35	407.55	2958.99	2963.99	718.32	1012.87	-72.42	1040.80	123.63	8.45	PASS
3113.00†	3061.02	-135.63	430.65	3056.02	3061.02	718.32	1012.87	-73.67	1033.54	126.36	8.21	PASS
3213.00†	3158.04	-142.90	453.75	3153.04	3158.04	718.32	1012.87	-74.93	1026.80	129.11	7.98	PASS
3313.00†	3255.06	-150.18	476.85	3250.06	3255.06	718.32	1012.87	-76.21	1020.59	131.88	7.77	PASS
3413.00†	3352.09	-157.45	499.95	3347.09	3352.09	718.32	1012.87	-77.50	1014.92	134.67	7.56	PASS
3513.00†	3449.11	-164.73	523.04	3444.11	3449.11	718.32	1012.87	-78.80	1009.80	137.47	7.37	PASS
3613.00†	3546.13	-172.00	546.14	3541.13	3546.13	718.32	1012.87	-80.11	1005.24	140.29	7.19	PASS
3713.00†	3643.16	-179.28	569.24	3638.16	3643.16	718.32	1012.87	-81.44	1001.24	143.12	7.02	PASS
3813.00†	3740.18	-186.55	592.34	3735.18	3740.18	718.32	1012.87	-82.78	997.82	145.96	6.86	PASS
3913.00†	3837.20	-193.83	615.44	3832.20	3837.20	718.32	1012.87	-84.12	994.97	148.81	6.71	PASS
4013.00†	3934.23	-201.10	638.54	3929.23	3934.23	718.32	1012.87	-85.47	992.70	151.66	6.57	PASS
4113.00†	4031.25	-208.38	661.64	4026.25	4031.25	718.32	1012.87	-86.82	991.03	154.53	6.43	PASS
4213.00†	4128.27	-215.65	684.74	4123.27	4128.27	718.32	1012.87	-88.18	989.94	157.39	6.31	PASS
4313.00†	4225.30	-222.93	707.83	4220.30	4225.30	718.32	1012.87	-89.54	989.44	160.26	6.19	PASS
4413.00†	4322.32	-230.20	730.93	4317.32	4322.32	718.32	1012.87	-90.90	989.54	163.13	6.08	PASS
4513.00†	4419.34	-237.48	754.03	4414.34	4419.34	718.32	1012.87	-92.26	990.22	166.01	5.98	PASS
4613.00†	4516.37	-244.75	777.13	4511.37	4516.37	718.32	1012.87	-93.62	991.50	168.87	5.89	PASS
4713.00†	4613.39	-252.02	800.23	4608.39	4613.39	718.32	1012.87	-94.97	993.37	171.74	5.80	PASS
4813.00†	4710.41	-259.30	823.33	4705.41	4710.41	718.32	1012.87	-96.32	995.83	174.60	5.72	PASS
4913.00†	4807.44	-266.57	846.43	4802.44	4807.44	718.32	1012.87	-97.66	998.86	177.45	5.64	PASS
5013.00†	4904.46	-273.85	869.53	4899.46	4904.46	718.32	1012.87	-98.99	1002.47	180.30	5.57	PASS
5113.00†	5001.48	-281.12	892.62	4996.48	5001.48	718.32	1012.87	-100.31	1006.65	183.14	5.51	PASS
5213.00†	5098.51	-288.40	915.72	5093.51	5098.51	718.32	1012.87	-101.62	1011.40	185.96	5.45	PASS
5313.00†	5195.53	-295.67	938.82	5190.53	5195.53	718.32	1012.87	-102.92	1016.69	188.78	5.40	PASS
5413.00†	5292.55	-302.95	961.92	5287.55	5292.55	718.32	1012.87	-104.21	1022.54	191.59	5.35	PASS
5513.00†	5389.58	-310.22	985.02	5384.58	5389.58	718.32	1012.87	-105.48	1028.92	194.39	5.31	PASS
5613.00†	5486.60	-317.50	1008.12	5481.60	5486.60	718.32	1012.87	-106.74	1035.83	197.17	5.27	PASS
5713.00†	5583.62	-324.77	1031.22	5578.62	5583.62	718.32	1012.87	-107.98	1043.26	199.95	5.23	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 34 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WOLFE #1 AWP Offset Wellpath: WOLFE #1 AWP

Facility: SEC.20-T01S-R65W Slot: SLOT#01 EX. WOLFE #1 (990'FSL & 990'FEL, SEC.20, OG, PR, 8200) Well: WOLFE #1 Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
5813.00†	5680.65	-332.05	1054.32	5675.65	5680.65	718.32	1012.87	-109.20	1051.19	202.71	5.20	PASS	
5913.00†	5777.67	-339.32	1077.41	5772.67	5777.67	718.32	1012.87	-110.40	1059.61	205.46	5.17	PASS	
6013.00†	5874.69	-346.60	1100.51	5869.69	5874.69	718.32	1012.87	-111.59	1068.52	208.19	5.14	PASS	
6113.00†	5971.72	-353.87	1123.61	5966.72	5971.72	718.32	1012.87	-112.75	1077.90	210.92	5.12	PASS	
6213.00†	6068.74	-361.15	1146.71	6063.74	6068.74	718.32	1012.87	-113.90	1087.73	213.63	5.10	PASS	
6313.00†	6165.76	-368.42	1169.81	6160.76	6165.76	718.32	1012.87	-115.03	1098.02	216.33	5.09	PASS	
6413.00†	6262.79	-375.70	1192.91	6257.79	6262.79	718.32	1012.87	-116.14	1108.73	219.02	5.07	PASS	
6513.00†	6359.81	-382.97	1216.01	6354.81	6359.81	718.32	1012.87	-117.22	1119.87	221.70	5.06	PASS	
6613.00†	6456.83	-390.24	1239.11	6451.83	6456.83	718.32	1012.87	-118.29	1131.42	224.37	5.05	PASS	
6713.00†	6553.86	-397.52	1262.20	6548.86	6553.86	718.32	1012.87	-119.33	1143.36	227.02	5.05	PASS	
6777.09	6616.04	-402.18	1277.01	6611.04	6616.04	718.32	1012.87	-119.99	1151.22	228.72	5.04	PASS	
6813.00†	6650.94	-403.67	1285.31	6645.94	6650.94	718.32	1012.87	-105.74	1154.60	229.68	5.04	PASS	
6913.00†	6747.83	-395.97	1308.26	6742.83	6747.83	718.32	1012.87	-69.80	1152.79	232.59	4.97	PASS	
7013.00†	6841.98	-371.11	1330.44	6836.98	6841.98	718.32	1012.87	-51.62	1134.77	236.07	4.82	PASS	
7113.00†	6930.53	-329.82	1351.16	6925.53	6930.53	718.32	1012.87	-44.51	1101.38	239.29	4.61	PASS	
7213.00†	7010.78	-273.37	1369.80	7005.78	7010.78	718.32	1012.87	-43.06	1053.97	242.11	4.36	PASS	
7313.00†	7080.30	-203.47	1385.79	7075.30	7080.30	718.32	1012.87	-45.50	994.37	244.50	4.07	PASS	
7413.00†	7136.98	-122.24	1398.65	7131.98	7136.98	718.32	1012.87	-51.57	924.87	246.43	3.76	PASS	
7513.00†	7179.08	-32.16	1407.98	7174.08	7179.08	718.32	1012.87	-61.50	848.14	247.86	3.43	PASS	
7613.00†	7205.34	64.04	1413.50	7200.34	7205.34	718.32	1012.87	-74.79	767.20	248.77	3.09	PASS	
7713.00†	7214.96	163.44	1415.04	7209.96	7214.96	718.32	1012.87	-89.08	685.30	249.10	2.75	PASS	
7719.79	7215.00	170.23	1415.00	7210.00	7215.00	718.32	1012.87	-90.00	679.79	249.10	2.73	PASS	
7813.00†	7215.00	263.43	1414.30	7210.00	7215.00	718.32	1012.87	-90.00	606.69	248.92	2.44	PASS	
7913.00†	7215.00	363.43	1413.56	7210.00	7215.00	718.32	1012.87	-90.00	535.26	248.29	2.16	PASS	
8013.00†	7215.00	463.43	1412.81	7210.00	7215.00	718.32	1012.87	-90.00	474.27	246.85	1.92	PASS	
8113.00†	7215.00	563.43	1412.07	7210.00	7215.00	718.32	1012.87	-90.00	428.20	244.18	1.76	PASS	
8213.00†	7215.00	663.42	1411.32	7210.00	7215.00	718.32	1012.87	-90.00	402.22	240.17	1.68	PASS	
8240.06†	7215.00	690.48	1411.12	7210.00	7215.00	718.32	1012.87	-90.00	399.23	238.94	1.67	PASS	
8270.47†	7215.00	720.89	1410.89	7209.36	7214.36	718.32	1012.87	-89.91	398.04	237.51	1.68	PASS	
8313.00†	7215.00	763.42	1410.58	7210.00	7215.00	718.32	1012.87	-90.00	400.26	235.64	1.70	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 35 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WOLFE #1 AWB Offset Wellpath: WOLFE #1 AWP

Facility: SEC.20-T01S-R65W Slot: SLOT#01 EX. WOLFE #1 (990'FSL & 990'FEL, SEC.20, OG, PR, 8200) Well: WOLFE #1 Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
8413.00†	7215.00	863.42	1409.83	7210.00	7215.00	718.32	1012.87	-90.00	422.65	232.19	1.82	PASS
8513.00†	7215.00	963.42	1409.08	7210.00	7215.00	718.32	1012.87	-90.00	465.90	230.75	2.02	PASS
8613.00†	7215.00	1063.41	1408.34	7210.00	7215.00	718.32	1012.87	-90.00	524.87	230.92	2.28	PASS
8713.00†	7215.00	1163.41	1407.59	7210.00	7215.00	718.32	1012.87	-90.00	594.90	231.88	2.57	PASS
8813.00†	7215.00	1263.41	1406.85	7210.00	7215.00	718.32	1012.87	-90.00	672.56	233.06	2.89	PASS
8913.00†	7215.00	1363.40	1406.10	7210.00	7215.00	718.32	1012.87	-90.00	755.49	234.21	3.23	PASS
9013.00†	7215.00	1463.40	1405.35	7210.00	7215.00	718.32	1012.87	-90.00	842.13	235.23	3.59	PASS
9113.00†	7215.00	1563.40	1404.61	7210.00	7215.00	718.32	1012.87	-90.00	931.46	236.12	3.95	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: WOLFE #1 AWB Offset Wellpath: WOLFE #1 AWP

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: WOLFE #1 AWB Offset Wellpath: WOLFE #1 AWP

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]
12.25in Open Hole	0.00	250.00	250.00	-8.00	242.00	440.73	615.41	440.73	615.41
8.625in Casing Surface	0.00	250.00	250.00	-8.00	242.00	440.73	615.41	440.73	615.41
7.875in Open Hole	250.00	8200.00	7950.00	242.00	8192.00	440.73	615.41	440.73	615.41
4.5in Casing Production	0.00	8200.00	8200.00	-8.00	8192.00	440.73	615.41	440.73	615.41



Clearance Report
WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 36 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

WELLPATH COMPOSITION - Offset Wellbore: **WOLFE #1 AWB** Offset Wellpath: **WOLFE #1 AWP**

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	8200.00	Drift Indicator - Inclination Only (Actual Survey)	ASSUMED VERTICAL COGCC <8200'>	WOLFE #1 AWB

OFFSET WELLPATH REFERENCE - Offset Wellbore: **WOLFE #1 AWB** Offset Wellpath: **WOLFE #1 AWP**

MD Reference: Rig on SLOT#01 EX. WOLFE #1 (990'FSL & 990'FEL, SEC.20, OG, PR) (RT)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	0.00ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 37 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: AMOCO #44-17 AWB Offset Wellpath: AMOCO #44-17 AWP

Facility: SEC.17-T1S-R65W Slot: SLOT#03 EX. AMOCO #44-17 (990'FSL & 1320'FEL, SEC.17, OG, PR, 8130) Well: AMOCO #44-17 Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
13.00	13.00	0.00	0.00	-13.00	46.00	6023.85	683.02	6.47	6062.54	25.40	246.40	PASS
113.00†	113.00	0.00	0.00	54.00	113.00	6023.85	683.02	6.47	6062.45	51.27	120.11	PASS
213.00†	213.00	0.00	0.00	154.00	213.00	6023.85	683.02	6.47	6062.45	53.61	114.79	PASS
313.00†	313.00	0.00	0.00	254.00	313.00	6023.85	683.02	6.47	6062.45	55.74	109.92	PASS
413.00†	413.00	0.00	0.00	354.00	413.00	6023.85	683.02	6.47	6062.45	58.09	105.43	PASS
513.00†	513.00	0.00	0.00	454.00	513.00	6023.85	683.02	6.47	6062.45	60.44	101.29	PASS
613.00†	613.00	0.00	0.00	554.00	613.00	6023.85	683.02	6.47	6062.45	62.79	97.45	PASS
713.00†	713.00	0.00	0.00	654.00	713.00	6023.85	683.02	6.47	6062.45	65.15	93.89	PASS
813.00†	813.00	0.00	0.00	754.00	813.00	6023.85	683.02	6.47	6062.45	67.52	90.57	PASS
900.00	900.00	0.00	0.00	841.00	900.00	6023.85	683.02	6.47	6062.45	69.58	87.87	PASS
913.00†	913.00	-0.01	0.03	854.00	913.00	6023.85	683.02	-101.01	6062.45	69.88	87.48	PASS
1013.00†	1012.97	-0.67	2.13	953.97	1012.97	6023.85	683.02	-101.03	6062.87	72.25	84.59	PASS
1113.00†	1112.80	-2.38	7.55	1053.80	1112.80	6023.85	683.02	-101.06	6063.96	74.63	81.89	PASS
1213.00†	1212.38	-5.13	16.29	1153.38	1212.38	6023.85	683.02	-101.11	6065.73	77.01	79.37	PASS
1313.00†	1311.57	-8.93	28.35	1252.57	1311.57	6023.85	683.02	-101.17	6068.19	79.38	77.00	PASS
1413.00†	1410.26	-13.76	43.69	1351.26	1410.26	6023.85	683.02	-101.26	6071.36	81.77	74.78	PASS
1513.00†	1508.33	-19.63	62.32	1449.33	1508.33	6023.85	683.02	-101.36	6075.26	84.15	72.69	PASS
1600.74	1593.77	-25.62	81.34	1534.77	1593.77	6023.85	683.02	-101.46	6079.31	86.26	70.95	PASS
1613.00†	1605.67	-26.51	84.17	1546.67	1605.67	6023.85	683.02	-101.49	6079.92	86.56	70.72	PASS
1713.00†	1702.69	-33.78	107.27	1643.69	1702.69	6023.85	683.02	-101.70	6084.93	88.97	68.84	PASS
1813.00†	1799.71	-41.06	130.37	1740.71	1799.71	6023.85	683.02	-101.92	6090.03	91.37	67.04	PASS
1913.00†	1896.74	-48.33	153.47	1837.74	1896.74	6023.85	683.02	-102.14	6095.23	93.84	65.32	PASS
2013.00†	1993.76	-55.61	176.56	1934.76	1993.76	6023.85	683.02	-102.35	6100.51	96.33	63.68	PASS
2113.00†	2090.78	-62.88	199.66	2031.78	2090.78	6023.85	683.02	-102.57	6105.89	98.84	62.11	PASS
2213.00†	2187.81	-70.16	222.76	2128.81	2187.81	6023.85	683.02	-102.78	6111.36	101.38	60.60	PASS
2313.00†	2284.83	-77.43	245.86	2225.83	2284.83	6023.85	683.02	-103.00	6116.92	103.94	59.16	PASS
2413.00†	2381.85	-84.71	268.96	2322.85	2381.85	6023.85	683.02	-103.21	6122.57	106.51	57.77	PASS
2513.00†	2478.88	-91.98	292.06	2419.88	2478.88	6023.85	683.02	-103.43	6128.31	109.11	56.44	PASS
2613.00†	2575.90	-99.26	315.16	2516.90	2575.90	6023.85	683.02	-103.64	6134.14	111.72	55.17	PASS
2713.00†	2672.92	-106.53	338.26	2613.92	2672.92	6023.85	683.02	-103.86	6140.06	114.35	53.94	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 38 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293°FSL & 2038°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: AMOCO #44-17 AWB Offset Wellpath: AMOCO #44-17 AWP

Facility: SEC.17-T1S-R65W Slot: SLOT#03 EX. AMOCO #44-17 (990°FSL & 1320°FEL, SEC.17, OG, PR, 8130) Well: AMOCO #44-17 Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
2813.00†	2769.95	-113.81	361.35	2710.95	2769.95	6023.85	683.02	-104.07	6146.08	117.00	52.77	PASS	
2913.00†	2866.97	-121.08	384.45	2807.97	2866.97	6023.85	683.02	-104.28	6152.18	119.67	51.64	PASS	
3013.00†	2963.99	-128.35	407.55	2904.99	2963.99	6023.85	683.02	-104.49	6158.37	122.35	50.55	PASS	
3113.00†	3061.02	-135.63	430.65	3002.02	3061.02	6023.85	683.02	-104.70	6164.64	125.04	49.51	PASS	
3213.00†	3158.04	-142.90	453.75	3099.04	3158.04	6023.85	683.02	-104.92	6171.01	127.75	48.51	PASS	
3313.00†	3255.06	-150.18	476.85	3196.06	3255.06	6023.85	683.02	-105.13	6177.47	130.47	47.54	PASS	
3413.00†	3352.09	-157.45	499.95	3293.09	3352.09	6023.85	683.02	-105.34	6184.01	133.21	46.61	PASS	
3513.00†	3449.11	-164.73	523.04	3390.11	3449.11	6023.85	683.02	-105.55	6190.64	135.95	45.71	PASS	
3613.00†	3546.13	-172.00	546.14	3487.13	3546.13	6023.85	683.02	-105.76	6197.36	138.71	44.85	PASS	
3713.00†	3643.16	-179.28	569.24	3584.16	3643.16	6023.85	683.02	-105.97	6204.17	141.48	44.02	PASS	
3813.00†	3740.18	-186.55	592.34	3681.18	3740.18	6023.85	683.02	-106.18	6211.06	144.25	43.21	PASS	
3913.00†	3837.20	-193.83	615.44	3778.20	3837.20	6023.85	683.02	-106.38	6218.04	147.04	42.44	PASS	
4013.00†	3934.23	-201.10	638.54	3875.23	3934.23	6023.85	683.02	-106.59	6225.11	149.84	41.69	PASS	
4113.00†	4031.25	-208.38	661.64	3972.25	4031.25	6023.85	683.02	-106.80	6232.26	152.64	40.97	PASS	
4213.00†	4128.27	-215.65	684.74	4069.27	4128.27	6023.85	683.02	-107.01	6239.50	155.45	40.27	PASS	
4313.00†	4225.30	-222.93	707.83	4166.30	4225.30	6023.85	683.02	-107.21	6246.82	158.27	39.60	PASS	
4413.00†	4322.32	-230.20	730.93	4263.32	4322.32	6023.85	683.02	-107.42	6254.23	161.09	38.95	PASS	
4513.00†	4419.34	-237.48	754.03	4360.34	4419.34	6023.85	683.02	-107.63	6261.72	163.93	38.32	PASS	
4613.00†	4516.37	-244.75	777.13	4457.37	4516.37	6023.85	683.02	-107.83	6269.30	166.76	37.71	PASS	
4713.00†	4613.39	-252.02	800.23	4554.39	4613.39	6023.85	683.02	-108.04	6276.97	169.61	37.12	PASS	
4813.00†	4710.41	-259.30	823.33	4651.41	4710.41	6023.85	683.02	-108.24	6284.71	172.46	36.55	PASS	
4913.00†	4807.44	-266.57	846.43	4748.44	4807.44	6023.85	683.02	-108.44	6292.54	175.31	36.00	PASS	
5013.00†	4904.46	-273.85	869.53	4845.46	4904.46	6023.85	683.02	-108.65	6300.46	178.17	35.47	PASS	
5113.00†	5001.48	-281.12	892.62	4942.48	5001.48	6023.85	683.02	-108.85	6308.45	181.03	34.95	PASS	
5213.00†	5098.51	-288.40	915.72	5039.51	5098.51	6023.85	683.02	-109.05	6316.53	183.90	34.45	PASS	
5313.00†	5195.53	-295.67	938.82	5136.53	5195.53	6023.85	683.02	-109.25	6324.70	186.77	33.96	PASS	
5413.00†	5292.55	-302.95	961.92	5233.55	5292.55	6023.85	683.02	-109.46	6332.94	189.64	33.49	PASS	
5513.00†	5389.58	-310.22	985.02	5330.58	5389.58	6023.85	683.02	-109.66	6341.26	192.52	33.03	PASS	
5613.00†	5486.60	-317.50	1008.12	5427.60	5486.60	6023.85	683.02	-109.86	6349.67	195.40	32.58	PASS	
5713.00†	5583.62	-324.77	1031.22	5524.62	5583.62	6023.85	683.02	-110.06	6358.16	198.28	32.15	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 39 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: AMOCO #44-17 AWB Offset Wellpath: AMOCO #44-17 AWP

Facility: SEC.17-T1S-R65W Slot: SLOT#03 EX. AMOCO #44-17 (990'FSL & 1320'FEL, SEC.17, OG, PR, 8130) Well: AMOCO #44-17 Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
5813.00†	5680.65	-332.05	1054.32	5621.65	5680.65	6023.85	683.02	-110.26	6366.73	201.17	31.73	PASS
5913.00†	5777.67	-339.32	1077.41	5718.67	5777.67	6023.85	683.02	-110.46	6375.38	204.06	31.32	PASS
6013.00†	5874.69	-346.60	1100.51	5815.69	5874.69	6023.85	683.02	-110.65	6384.11	206.95	30.93	PASS
6113.00†	5971.72	-353.87	1123.61	5912.72	5971.72	6023.85	683.02	-110.85	6392.92	209.84	30.54	PASS
6213.00†	6068.74	-361.15	1146.71	6009.74	6068.74	6023.85	683.02	-111.05	6401.81	212.73	30.17	PASS
6313.00†	6165.76	-368.42	1169.81	6106.76	6165.76	6023.85	683.02	-111.25	6410.78	215.63	29.80	PASS
6413.00†	6262.79	-375.70	1192.91	6203.79	6262.79	6023.85	683.02	-111.44	6419.82	218.53	29.45	PASS
6513.00†	6359.81	-382.97	1216.01	6300.81	6359.81	6023.85	683.02	-111.64	6428.95	221.42	29.10	PASS
6613.00†	6456.83	-390.24	1239.11	6397.83	6456.83	6023.85	683.02	-111.83	6438.15	224.32	28.77	PASS
6713.00†	6553.86	-397.52	1262.20	6494.86	6553.86	6023.85	683.02	-112.03	6447.43	227.22	28.44	PASS
6777.09	6616.04	-402.18	1277.01	6557.04	6616.04	6023.85	683.02	-112.15	6453.42	229.08	28.24	PASS
6813.00†	6650.94	-403.67	1285.31	6591.94	6650.94	6023.85	683.02	-97.65	6455.67	230.13	28.12	PASS
6913.00†	6747.83	-395.97	1308.26	6688.83	6747.83	6023.85	683.02	-60.76	6450.20	233.29	27.71	PASS
7013.00†	6841.98	-371.11	1330.44	6782.98	6841.98	6023.85	683.02	-41.15	6427.64	236.94	27.19	PASS
7113.00†	6930.53	-329.82	1351.16	6871.53	6930.53	6023.85	683.02	-32.01	6388.70	240.35	26.64	PASS
7213.00†	7010.78	-273.37	1369.80	6951.78	7010.78	6023.85	683.02	-27.69	6334.55	243.36	26.08	PASS
7313.00†	7080.30	-203.47	1385.79	7021.30	7080.30	6023.85	683.02	-26.08	6266.84	245.95	25.53	PASS
7413.00†	7136.98	-122.24	1398.65	7077.98	7136.98	6023.85	683.02	-26.70	6187.61	248.06	25.00	PASS
7513.00†	7179.08	-32.16	1407.98	7120.08	7179.08	6023.85	683.02	-30.37	6099.24	249.67	24.48	PASS
7613.00†	7205.34	64.04	1413.50	7146.34	7205.34	6023.85	683.02	-41.48	6004.41	250.75	24.00	PASS
7713.00†	7214.96	163.44	1415.04	7155.96	7214.96	6023.85	683.02	-84.52	5905.95	251.32	23.55	PASS
7719.79	7215.00	170.23	1415.00	7156.00	7215.00	6023.85	683.02	-90.00	5899.20	251.35	23.52	PASS
7813.00†	7215.00	263.43	1414.30	7156.00	7215.00	6023.85	683.02	-90.00	5806.64	251.61	23.13	PASS
7913.00†	7215.00	363.43	1413.56	7156.00	7215.00	6023.85	683.02	-90.00	5707.36	251.90	22.70	PASS
8013.00†	7215.00	463.43	1412.81	7156.00	7215.00	6023.85	683.02	-90.00	5608.10	252.21	22.28	PASS
8113.00†	7215.00	563.43	1412.07	7156.00	7215.00	6023.85	683.02	-90.00	5508.87	252.52	21.86	PASS
8213.00†	7215.00	663.42	1411.32	7156.00	7215.00	6023.85	683.02	-90.00	5409.67	252.85	21.44	PASS
8313.00†	7215.00	763.42	1410.58	7156.00	7215.00	6023.85	683.02	-90.00	5310.50	253.20	21.02	PASS
8413.00†	7215.00	863.42	1409.83	7156.00	7215.00	6023.85	683.02	-90.00	5211.36	253.56	20.59	PASS
8513.00†	7215.00	963.42	1409.08	7156.00	7215.00	6023.85	683.02	-90.00	5112.25	253.93	20.17	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 40 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: AMOCO #44-17 AWB Offset Wellpath: AMOCO #44-17 AWP

Facility: SEC.17-T1S-R65W Slot: SLOT#03 EX. AMOCO #44-17 (990'FSL & 1320'FEL, SEC.17, OG, PR, 8130) Well: AMOCO #44-17 Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
8613.00†	7215.00	1063.41	1408.34	7156.00	7215.00	6023.85	683.02	-90.00	5013.18	254.32	19.75	PASS	
8713.00†	7215.00	1163.41	1407.59	7156.00	7215.00	6023.85	683.02	-90.00	4914.15	254.73	19.33	PASS	
8813.00†	7215.00	1263.41	1406.85	7156.00	7215.00	6023.85	683.02	-90.00	4815.15	255.16	18.91	PASS	
8913.00†	7215.00	1363.40	1406.10	7156.00	7215.00	6023.85	683.02	-90.00	4716.20	255.60	18.49	PASS	
9013.00†	7215.00	1463.40	1405.35	7156.00	7215.00	6023.85	683.02	-90.00	4617.30	256.07	18.07	PASS	
9113.00†	7215.00	1563.40	1404.61	7156.00	7215.00	6023.85	683.02	-90.00	4518.44	256.56	17.65	PASS	
9213.00†	7215.00	1663.40	1403.86	7156.00	7215.00	6023.85	683.02	-90.00	4419.63	257.07	17.23	PASS	
9313.00†	7215.00	1763.39	1403.12	7156.00	7215.00	6023.85	683.02	-90.00	4320.88	257.61	16.81	PASS	
9413.00†	7215.00	1863.39	1402.37	7156.00	7215.00	6023.85	683.02	-90.00	4222.19	258.18	16.39	PASS	
9513.00†	7215.00	1963.39	1401.62	7156.00	7215.00	6023.85	683.02	-90.00	4123.56	258.77	15.97	PASS	
9613.00†	7215.00	2063.38	1400.88	7156.00	7215.00	6023.85	683.02	-90.00	4024.99	259.40	15.55	PASS	
9713.00†	7215.00	2163.38	1400.13	7156.00	7215.00	6023.85	683.02	-90.00	3926.50	260.06	15.13	PASS	
9813.00†	7215.00	2263.38	1399.39	7156.00	7215.00	6023.85	683.02	-90.00	3828.08	260.75	14.71	PASS	
9913.00†	7215.00	2363.38	1398.64	7156.00	7215.00	6023.85	683.02	-90.00	3729.77	261.49	14.29	PASS	
10013.00†	7215.00	2463.37	1397.90	7156.00	7215.00	6023.85	683.02	-90.00	3631.53	262.26	13.87	PASS	
10113.00†	7215.00	2563.37	1397.15	7156.00	7215.00	6023.85	683.02	-90.00	3533.39	263.08	13.46	PASS	
10213.00†	7215.00	2663.37	1396.40	7156.00	7215.00	6023.85	683.02	-90.00	3435.36	263.95	13.04	PASS	
10313.00†	7215.00	2763.37	1395.66	7156.00	7215.00	6023.85	683.02	-90.00	3337.45	264.87	12.62	PASS	
10413.00†	7215.00	2863.36	1394.91	7156.00	7215.00	6023.85	683.02	-90.00	3239.67	265.85	12.21	PASS	
10513.00†	7215.00	2963.36	1394.17	7156.00	7215.00	6023.85	683.02	-90.00	3142.02	266.89	11.79	PASS	
10613.00†	7215.00	3063.36	1393.42	7156.00	7215.00	6023.85	683.02	-90.00	3044.53	268.01	11.38	PASS	
10713.00†	7215.00	3163.35	1392.67	7156.00	7215.00	6023.85	683.02	-90.00	2947.21	269.19	10.97	PASS	
10813.00†	7215.00	3263.35	1391.93	7156.00	7215.00	6023.85	683.02	-90.00	2850.07	270.46	10.56	PASS	
10913.00†	7215.00	3363.35	1391.18	7156.00	7215.00	6023.85	683.02	-90.00	2753.13	271.82	10.15	PASS	
11013.00†	7215.00	3463.35	1390.44	7156.00	7215.00	6023.85	683.02	-90.00	2656.43	273.28	9.74	PASS	
11113.00†	7215.00	3563.34	1389.69	7156.00	7215.00	6023.85	683.02	-90.00	2559.97	274.85	9.33	PASS	
11213.00†	7215.00	3663.34	1388.94	7156.00	7215.00	6023.85	683.02	-90.00	2463.80	276.55	8.92	PASS	
11313.00†	7215.00	3763.34	1388.20	7156.00	7215.00	6023.85	683.02	-90.00	2367.95	278.38	8.52	PASS	
11413.00†	7215.00	3863.33	1387.45	7156.00	7215.00	6023.85	683.02	-90.00	2272.45	280.37	8.12	PASS	
11513.00†	7215.00	3963.33	1386.71	7156.00	7215.00	6023.85	683.02	-90.00	2177.36	282.52	7.72	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 41 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: AMOCO #44-17 AWB Offset Wellpath: AMOCO #44-17 AWP

Facility: SEC.17-T1S-R65W Slot: SLOT#03 EX. AMOCO #44-17 (990'FSL & 1320'FEL, SEC.17, OG, PR, 8130) Well: AMOCO #44-17 Threshold Value=1.00 † = interpolated/extrapolated station														
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status		
11613.00†	7215.00	4063.33	1385.96	7156.00	7215.00	6023.85	683.02	-90.00	2082.73	284.87	7.32	PASS		
11713.00†	7215.00	4163.33	1385.22	7156.00	7215.00	6023.85	683.02	-90.00	1988.62	287.44	6.93	PASS		
11813.00†	7215.00	4263.32	1384.47	7156.00	7215.00	6023.85	683.02	-90.00	1895.12	290.24	6.54	PASS		
11913.00†	7215.00	4363.32	1383.72	7156.00	7215.00	6023.85	683.02	-90.00	1802.31	293.32	6.15	PASS		
12013.00†	7215.00	4463.32	1382.98	7156.00	7215.00	6023.85	683.02	-90.00	1710.32	296.71	5.77	PASS		
12113.00†	7215.00	4563.32	1382.23	7156.00	7215.00	6023.85	683.02	-90.00	1619.27	300.44	5.40	PASS		
12213.00†	7215.00	4663.31	1381.49	7156.00	7215.00	6023.85	683.02	-90.00	1529.35	304.58	5.03	PASS		
12313.00†	7215.00	4763.31	1380.74	7156.00	7215.00	6023.85	683.02	-90.00	1440.75	309.15	4.67	PASS		
12413.00†	7215.00	4863.31	1379.99	7156.00	7215.00	6023.85	683.02	-90.00	1353.74	314.22	4.31	PASS		
12513.00†	7215.00	4963.30	1379.25	7156.00	7215.00	6023.85	683.02	-90.00	1268.65	319.85	3.97	PASS		
12613.00†	7215.00	5063.30	1378.50	7156.00	7215.00	6023.85	683.02	-90.00	1185.89	326.07	3.64	PASS		
12713.00†	7215.00	5163.30	1377.76	7156.00	7215.00	6023.85	683.02	-90.00	1105.98	332.92	3.33	PASS		
12813.00†	7215.00	5263.30	1377.01	7156.00	7215.00	6023.85	683.02	-90.00	1029.59	340.40	3.03	PASS		
12913.00†	7215.00	5363.29	1376.26	7156.00	7215.00	6023.85	683.02	-90.00	957.56	348.46	2.75	PASS		
13013.00†	7215.00	5463.29	1375.52	7156.00	7215.00	6023.85	683.02	-90.00	890.94	356.90	2.50	PASS		
13113.00†	7215.00	5563.29	1374.77	7156.00	7215.00	6023.85	683.02	-90.00	831.04	365.42	2.28	PASS		
13213.00†	7215.00	5663.28	1374.03	7156.00	7215.00	6023.85	683.02	-90.00	779.42	373.44	2.09	PASS		
13313.00†	7215.00	5763.28	1373.28	7156.00	7215.00	6023.85	683.02	-90.00	737.80	380.15	1.94	PASS		
13413.00†	7215.00	5863.28	1372.53	7156.00	7215.00	6023.85	683.02	-90.00	707.96	384.57	1.84	PASS		
13513.00†	7215.00	5963.28	1371.79	7156.00	7215.00	6023.85	683.02	-90.00	691.42	385.76	1.79	PASS		
13551.91†	7215.00	6002.19	1371.50	7156.00	7215.00	6023.85	683.02	-90.00	688.82	385.21	1.79	PASS		
13578.70†	7215.00	6028.97	1371.30	7155.97	7214.97	6023.85	683.02	-90.00	688.30	384.49	1.79	PASS		
13613.00†	7215.00	6063.27	1371.04	7156.00	7215.00	6023.85	683.02	-90.00	689.15	383.16	1.80	PASS		
13713.00†	7215.00	6163.27	1370.30	7156.00	7215.00	6023.85	683.02	-90.00	701.27	376.86	1.86	PASS		
13813.00†	7215.00	6263.27	1369.55	7156.00	7215.00	6023.85	683.02	-90.00	727.08	367.62	1.98	PASS		
13913.00†	7215.00	6363.27	1368.81	7156.00	7215.00	6023.85	683.02	-90.00	765.18	356.53	2.15	PASS		
14013.00†	7215.00	6463.26	1368.06	7156.00	7215.00	6023.85	683.02	-90.00	813.86	344.68	2.36	PASS		
14113.00†	7215.00	6563.26	1367.31	7156.00	7215.00	6023.85	683.02	-90.00	871.33	332.93	2.62	PASS		
14213.00†	7215.00	6663.26	1366.57	7156.00	7215.00	6023.85	683.02	-90.00	935.99	321.82	2.91	PASS		

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 42 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293°FSL & 2038°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

POSITIONAL UNCERTAINTY - Offset Wellbore: AMOCO #44-17 AWB Offset Wellpath: AMOCO #44-17 AWP

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: AMOCO #44-17 AWB Offset Wellpath: AMOCO #44-17 AWP

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]
13.75in Open Hole	0.00	224.00	224.00	46.00	270.00	3673.97	399.44	3673.97	399.44
9.625in Casing Surface	0.00	224.00	224.00	46.00	270.00	3673.97	399.44	3673.97	399.44
7.875in Open Hole	224.00	8129.00	7905.00	270.00	8175.00	3673.97	399.44	3673.97	399.44
4.5in Casing Production	0.00	8129.00	8129.00	46.00	8175.00	3673.97	399.44	3673.97	399.44

WELLPATH COMPOSITION - Offset Wellbore: AMOCO #44-17 AWB Offset Wellpath: AMOCO #44-17 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	8130.00	Drift Indicator - Inclination Only (Actual Survey)	ASSUMED VERTICAL COGCC <8130>	AMOCO #44-17 AWB

OFFSET WELLPATH REFERENCE - Offset Wellbore: AMOCO #44-17 AWB Offset Wellpath: AMOCO #44-17 AWP

MD Reference: Rig on SLOT#03 EX. AMOCO #44-17 (990°FSL & 1320°FSL, SEC.17, OG, PR) (RT)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	0.00ft



Clearance Report

WAKEMAN 20-17-4NAH (REV-A.0)
Closest Approach
Page 43 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-3NAH PWB Offset Wellpath: WAKEMAN 20-17-3NAH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W		Slot: SLOT#06 WAKEMAN 20-17-3NAH (293'FSL & 2098'FEL, SEC.20)				Well: WAKEMAN 20-17-3NAH		Threshold Value=1.00		† = interpolated/extrapolated station			
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
13.00	13.00	0.00	0.00	13.00	13.00	-0.04	-59.98	-90.04	59.98	1.40	98.63	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	-0.04	-59.98	-90.04	59.98	1.73	63.91	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	-0.04	-59.98	-90.04	59.98	2.30	39.48	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	-0.04	-59.98	-90.04	59.98	2.91	28.13	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	-0.04	-59.98	-90.04	59.98	3.52	21.76	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	-0.04	-59.98	-90.04	59.98	4.14	17.72	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	-0.04	-59.98	-90.04	59.98	4.76	14.93	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	-0.04	-59.98	-90.04	59.98	5.39	12.90	PASS	
813.00†	813.00	0.00	0.00	813.00	813.00	-0.04	-59.98	-90.04	59.98	6.01	11.35	PASS	
900.00	900.00	0.00	0.00	900.00	900.00	-0.04	-59.98	-90.04	59.98	6.56	10.28	PASS	
913.00†	913.00	-0.01	0.03	913.00	913.00	-0.04	-59.98	162.49	60.01	6.64	10.14	PASS	
1013.00†	1012.97	-0.67	2.13	1012.97	1012.97	-0.04	-59.98	163.09	62.11	7.37	9.33	PASS	
1113.00†	1112.80	-2.38	7.55	1112.80	1112.80	-0.04	-59.98	164.46	67.57	8.37	8.83	PASS	
1213.00†	1212.38	-5.13	16.29	1212.38	1212.38	-0.04	-59.98	166.26	76.44	9.30	8.90	PASS	
1313.00†	1311.57	-8.93	28.35	1311.82	1311.82	-0.06	-59.96	168.14	88.75	10.18	9.37	PASS	
1413.00†	1410.26	-13.76	43.69	1413.16	1413.13	-1.80	-58.60	169.07	103.03	11.08	9.94	PASS	
1513.00†	1508.33	-19.63	62.32	1514.76	1514.55	-6.37	-55.01	168.84	118.24	12.07	10.43	PASS	
1600.74	1593.77	-25.62	81.34	1603.41	1602.85	-12.62	-50.11	168.02	132.40	12.83	10.94	PASS	
1613.00†	1605.67	-26.51	84.17	1615.49	1614.87	-13.56	-49.37	167.91	134.49	12.93	11.03	PASS	
1713.00†	1702.69	-33.78	107.27	1714.01	1712.91	-21.22	-43.36	167.12	151.50	13.51	11.86	PASS	
1813.00†	1799.71	-41.06	130.37	1812.54	1810.95	-28.89	-37.35	166.50	168.53	14.05	12.58	PASS	
1913.00†	1896.74	-48.33	153.47	1911.06	1908.99	-36.56	-31.33	165.99	185.58	14.70	13.21	PASS	
2013.00†	1993.76	-55.61	176.56	2009.59	2007.03	-44.22	-25.32	165.56	202.64	15.37	13.77	PASS	
2113.00†	2090.78	-62.88	199.66	2108.11	2105.08	-51.89	-19.31	165.20	219.71	16.07	14.26	PASS	
2213.00†	2187.81	-70.16	222.76	2206.63	2203.12	-59.55	-13.29	164.90	236.79	16.78	14.69	PASS	
2313.00†	2284.83	-77.43	245.86	2305.16	2301.16	-67.22	-7.28	164.63	253.87	17.51	15.07	PASS	
2413.00†	2381.85	-84.71	268.96	2403.68	2399.20	-74.89	-1.27	164.40	270.96	18.25	15.41	PASS	
2513.00†	2478.88	-91.98	292.06	2502.20	2497.24	-82.55	4.75	164.19	288.05	19.00	15.71	PASS	
2613.00†	2575.90	-99.26	315.16	2600.73	2595.28	-90.22	10.76	164.01	305.15	19.76	15.98	PASS	
2713.00†	2672.92	-106.53	338.26	2699.25	2693.32	-97.88	16.77	163.85	322.24	20.53	16.22	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 44 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-3NAH PWB Offset Wellpath: WAKEMAN 20-17-3NAH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W		Slot: SLOT#06 WAKEMAN 20-17-3NAH (293'FSL & 2098'FEL, SEC.20)				Well: WAKEMAN 20-17-3NAH		Threshold Value=1.00		† = interpolated/extrapolated station		
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
2813.00†	2769.95	-113.81	361.35	2797.77	2791.36	-105.55	22.79	163.70	339.34	21.31	16.44	PASS
2913.00†	2866.97	-121.08	384.45	2896.30	2889.40	-113.22	28.80	163.57	356.45	22.10	16.63	PASS
3013.00†	2963.99	-128.35	407.55	2994.82	2987.44	-120.88	34.81	163.45	373.55	22.89	16.81	PASS
3113.00†	3061.02	-135.63	430.65	3093.35	3085.48	-128.55	40.83	163.34	390.65	23.69	16.97	PASS
3213.00†	3158.04	-142.90	453.75	3191.87	3183.52	-136.21	46.84	163.24	407.76	24.49	17.12	PASS
3313.00†	3255.06	-150.18	476.85	3290.39	3281.56	-143.88	52.85	163.15	424.87	25.30	17.25	PASS
3413.00†	3352.09	-157.45	499.95	3388.92	3379.60	-151.55	58.87	163.06	441.98	26.11	17.37	PASS
3513.00†	3449.11	-164.73	523.04	3487.44	3477.64	-159.21	64.88	162.98	459.09	26.93	17.48	PASS
3613.00†	3546.13	-172.00	546.14	3585.96	3575.69	-166.88	70.89	162.91	476.20	27.74	17.59	PASS
3713.00†	3643.16	-179.28	569.24	3684.49	3673.73	-174.54	76.91	162.84	493.31	28.57	17.68	PASS
3813.00†	3740.18	-186.55	592.34	3783.01	3771.77	-182.21	82.92	162.78	510.42	29.39	17.77	PASS
3913.00†	3837.20	-193.83	615.44	3881.53	3869.81	-189.88	88.93	162.72	527.53	30.22	17.85	PASS
4013.00†	3934.23	-201.10	638.54	3980.06	3967.85	-197.54	94.95	162.66	544.64	31.05	17.93	PASS
4113.00†	4031.25	-208.38	661.64	4078.58	4065.89	-205.21	100.96	162.61	561.75	31.88	18.00	PASS
4213.00†	4128.27	-215.65	684.74	4177.11	4163.93	-212.87	106.97	162.56	578.87	32.71	18.06	PASS
4313.00†	4225.30	-222.93	707.83	4275.63	4261.97	-220.54	112.99	162.52	595.98	33.55	18.12	PASS
4413.00†	4322.32	-230.20	730.93	4374.15	4360.01	-228.21	119.00	162.47	613.10	34.39	18.18	PASS
4513.00†	4419.34	-237.48	754.03	4472.68	4458.05	-235.87	125.01	162.43	630.21	35.23	18.24	PASS
4613.00†	4516.37	-244.75	777.13	4571.20	4556.09	-243.54	131.03	162.39	647.32	36.07	18.29	PASS
4713.00†	4613.39	-252.02	800.23	4669.72	4654.13	-251.20	137.04	162.36	664.44	36.91	18.33	PASS
4813.00†	4710.41	-259.30	823.33	4768.25	4752.17	-258.87	143.05	162.32	681.56	37.76	18.38	PASS
4913.00†	4807.44	-266.57	846.43	4866.77	4850.21	-266.54	149.07	162.29	698.67	38.60	18.42	PASS
5013.00†	4904.46	-273.85	869.53	4965.29	4948.25	-274.20	155.08	162.25	715.79	39.45	18.46	PASS
5113.00†	5001.48	-281.12	892.62	5063.82	5046.30	-281.87	161.09	162.22	732.90	40.30	18.50	PASS
5213.00†	5098.51	-288.40	915.72	5162.34	5144.34	-289.53	167.11	162.19	750.02	41.14	18.53	PASS
5313.00†	5195.53	-295.67	938.82	5260.87	5242.38	-297.20	173.12	162.17	767.13	41.99	18.56	PASS
5413.00†	5292.55	-302.95	961.92	5359.39	5340.42	-304.87	179.13	162.14	784.25	42.84	18.60	PASS
5513.00†	5389.58	-310.22	985.02	5457.91	5438.46	-312.53	185.15	162.11	801.37	43.69	18.63	PASS
5613.00†	5486.60	-317.50	1008.12	5556.44	5536.50	-320.20	191.16	162.09	818.48	44.55	18.65	PASS
5713.00†	5583.62	-324.77	1031.22	5654.96	5634.54	-327.86	197.17	162.07	835.60	45.40	18.68	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 45 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-3NAH PWB Offset Wellpath: WAKEMAN 20-17-3NAH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#06 WAKEMAN 20-17-3NAH (293'FSL & 2098'FEL, SEC.20) Well: WAKEMAN 20-17-3NAH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
5813.00†	5680.65	-332.05	1054.32	5753.48	5732.58	-335.53	203.19	162.04	852.72	46.25	18.71	PASS	
5913.00†	5777.67	-339.32	1077.41	5852.01	5830.62	-343.20	209.20	162.02	869.83	47.11	18.73	PASS	
6013.00†	5874.69	-346.60	1100.51	5950.53	5928.66	-350.86	215.21	162.00	886.95	47.96	18.76	PASS	
6113.00†	5971.72	-353.87	1123.61	6049.05	6026.70	-358.53	221.23	161.98	904.07	48.82	18.78	PASS	
6213.00†	6068.74	-361.15	1146.71	6147.58	6124.74	-366.19	227.24	161.96	921.19	49.67	18.80	PASS	
6313.00†	6165.76	-368.42	1169.81	6246.10	6222.78	-373.86	233.25	161.94	938.30	50.53	18.82	PASS	
6413.00†	6262.79	-375.70	1192.91	6344.62	6320.82	-381.53	239.27	161.93	955.42	51.39	18.84	PASS	
6513.00†	6359.81	-382.97	1216.01	6443.15	6418.87	-389.19	245.28	161.91	972.54	52.25	18.86	PASS	
6613.00†	6456.83	-390.24	1239.11	6541.67	6516.91	-396.86	251.29	161.89	989.66	53.10	18.87	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: WAKEMAN 20-17-3NAH PWB Offset Wellpath: WAKEMAN 20-17-3NAH PWP (REV-A.0)

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: WAKEMAN 20-17-3NAH PWB Offset Wellpath: WAKEMAN 20-17-3NAH PWP (REV-A.0)

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	13.00	1800.00	1787.00	13.00	1798.48	-0.02	-36.56	-8.52	-29.90
8.5in Open Hole	1800.00	17376.39	15576.39	1798.48	N/A	-8.52	-29.90	N/A	N/A

SURVEY PROGRAM - Offset Wellbore: WAKEMAN 20-17-3NAH PWB Offset Wellpath: WAKEMAN 20-17-3NAH PWP (REV-A.0)

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
13.00	17376.39	Custom BHI NaviTrak (Standard Rotating+Axial Corr) (Rockies 0.03Gt model)		WAKEMAN 20-17-3NAH PWB



Clearance Report
WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 46 of 85



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

OFFSET WELLPATH REFERENCE - Offset Wellbore: WAKEMAN 20-17-3NAH PWB Offset Wellpath: WAKEMAN 20-17-3NAH PWP (REV-A.0)	
MD Reference: RIG (13'KB) (RKB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	13.00ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 47 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-3CDH PWB Offset Wellpath: WAKEMAN 20-17-3CDH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W		Slot: SLOT#05 WAKEMAN 20-17-3CDH (293'FSL & 2083'FEL, SEC.20)		Well: WAKEMAN 20-17-3CDH		Threshold Value=1.00		† = interpolated/extrapolated station					
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
13.00	13.00	0.00	0.00	13.00	13.00	-0.08	-44.95	-90.11	44.95	1.40	73.58	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	-0.08	-44.95	-90.11	44.95	1.73	47.63	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	-0.08	-44.95	-90.11	44.95	2.30	29.42	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	-0.08	-44.95	-90.11	44.95	2.91	20.96	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	-0.08	-44.95	-90.11	44.95	3.52	16.22	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	-0.08	-44.95	-90.11	44.95	4.14	13.21	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	-0.08	-44.95	-90.11	44.95	4.77	11.13	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	-0.08	-44.95	-90.11	44.95	5.39	9.62	PASS	
813.00†	813.00	0.00	0.00	813.00	813.00	-0.08	-44.95	-90.11	44.95	6.02	8.47	PASS	
900.00	900.00	0.00	0.00	900.00	900.00	-0.08	-44.95	-90.11	44.95	6.56	7.67	PASS	
913.00†	913.00	-0.01	0.03	913.00	913.00	-0.08	-44.95	162.42	44.98	6.64	7.57	PASS	
1013.00†	1012.97	-0.67	2.13	1012.97	1012.97	-0.08	-44.95	163.22	47.08	7.37	7.04	PASS	
1113.00†	1112.80	-2.38	7.55	1112.80	1112.80	-0.08	-44.95	164.98	52.55	8.37	6.84	PASS	
1213.00†	1212.38	-5.13	16.29	1212.58	1212.58	-0.10	-44.93	167.14	61.43	9.30	7.13	PASS	
1313.00†	1311.57	-8.93	28.35	1313.80	1313.77	-1.70	-43.36	168.21	72.11	10.25	7.55	PASS	
1413.00†	1410.26	-13.76	43.69	1415.27	1415.06	-5.85	-39.28	167.90	83.49	11.29	7.89	PASS	
1513.00†	1508.33	-19.63	62.32	1516.12	1515.50	-12.39	-32.86	166.78	95.72	12.20	8.33	PASS	
1600.74	1593.77	-25.62	81.34	1602.89	1601.84	-18.54	-26.82	166.11	108.69	12.88	8.93	PASS	
1613.00†	1605.67	-26.51	84.17	1614.99	1613.87	-19.39	-25.98	166.06	110.68	12.97	9.03	PASS	
1713.00†	1702.69	-33.78	107.27	1713.65	1712.05	-26.38	-19.12	165.72	126.95	13.58	9.88	PASS	
1813.00†	1799.71	-41.06	130.37	1812.32	1810.23	-33.37	-12.26	165.45	143.22	14.12	10.63	PASS	
1913.00†	1896.74	-48.33	153.47	1910.98	1908.41	-40.35	-5.40	165.23	159.49	14.78	11.29	PASS	
2013.00†	1993.76	-55.61	176.56	2009.65	2006.59	-47.34	1.47	165.06	175.76	15.45	11.87	PASS	
2113.00†	2090.78	-62.88	199.66	2108.31	2104.77	-54.32	8.33	164.91	192.03	16.15	12.39	PASS	
2213.00†	2187.81	-70.16	222.76	2206.98	2202.95	-61.31	15.19	164.79	208.31	16.85	12.86	PASS	
2313.00†	2284.83	-77.43	245.86	2305.65	2301.12	-68.30	22.05	164.69	224.58	17.57	13.27	PASS	
2413.00†	2381.85	-84.71	268.96	2404.31	2399.30	-75.28	28.92	164.60	240.86	18.30	13.65	PASS	
2513.00†	2478.88	-91.98	292.06	2502.98	2497.48	-82.27	35.78	164.52	257.14	19.04	13.98	PASS	
2613.00†	2575.90	-99.26	315.16	2601.64	2595.66	-89.26	42.64	164.45	273.41	19.79	14.29	PASS	
2713.00†	2672.92	-106.53	338.26	2700.31	2693.84	-96.24	49.50	164.39	289.69	20.55	14.56	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 48 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-3CDH PWB Offset Wellpath: WAKEMAN 20-17-3CDH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W		Slot: SLOT#05 WAKEMAN 20-17-3CDH (293'FSL & 2083'FEL, SEC.20)		Well: WAKEMAN 20-17-3CDH		Threshold Value=1.00		† = interpolated/extrapolated station				
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
2813.00†	2769.95	-113.81	361.35	2798.98	2792.02	-103.23	56.36	164.33	305.97	21.31	14.81	PASS
2913.00†	2866.97	-121.08	384.45	2897.64	2890.20	-110.21	63.23	164.28	322.25	22.08	15.04	PASS
3013.00†	2963.99	-128.35	407.55	2996.31	2988.38	-117.20	70.09	164.24	338.53	22.86	15.25	PASS
3113.00†	3061.02	-135.63	430.65	3094.97	3086.55	-124.19	76.95	164.20	354.80	23.64	15.44	PASS
3213.00†	3158.04	-142.90	453.75	3193.64	3184.73	-131.17	83.81	164.16	371.08	24.42	15.62	PASS
3313.00†	3255.06	-150.18	476.85	3292.30	3282.91	-138.16	90.67	164.13	387.36	25.21	15.78	PASS
3413.00†	3352.09	-157.45	499.95	3390.97	3381.09	-145.15	97.54	164.10	403.64	26.00	15.93	PASS
3513.00†	3449.11	-164.73	523.04	3489.64	3479.27	-152.13	104.40	164.07	419.92	26.80	16.07	PASS
3613.00†	3546.13	-172.00	546.14	3588.30	3577.45	-159.12	111.26	164.04	436.20	27.60	16.20	PASS
3713.00†	3643.16	-179.28	569.24	3686.97	3675.63	-166.10	118.12	164.01	452.48	28.40	16.32	PASS
3813.00†	3740.18	-186.55	592.34	3785.63	3773.81	-173.09	124.99	163.99	468.76	29.20	16.43	PASS
3913.00†	3837.20	-193.83	615.44	3884.30	3871.98	-180.08	131.85	163.97	485.04	30.00	16.53	PASS
4013.00†	3934.23	-201.10	638.54	3982.97	3970.16	-187.06	138.71	163.95	501.32	30.81	16.63	PASS
4113.00†	4031.25	-208.38	661.64	4081.63	4068.34	-194.05	145.57	163.93	517.59	31.62	16.72	PASS
4213.00†	4128.27	-215.65	684.74	4180.30	4166.52	-201.03	152.43	163.91	533.87	32.43	16.81	PASS
4313.00†	4225.30	-222.93	707.83	4278.96	4264.70	-208.02	159.30	163.90	550.15	33.25	16.89	PASS
4413.00†	4322.32	-230.20	730.93	4377.63	4362.88	-215.01	166.16	163.88	566.43	34.06	16.96	PASS
4513.00†	4419.34	-237.48	754.03	4476.30	4461.06	-221.99	173.02	163.87	582.71	34.88	17.03	PASS
4613.00†	4516.37	-244.75	777.13	4574.96	4559.23	-228.98	179.88	163.85	598.99	35.69	17.10	PASS
4713.00†	4613.39	-252.02	800.23	4673.63	4657.41	-235.97	186.74	163.84	615.27	36.51	17.17	PASS
4813.00†	4710.41	-259.30	823.33	4772.29	4755.59	-242.95	193.61	163.83	631.55	37.33	17.23	PASS
4913.00†	4807.44	-266.57	846.43	4870.96	4853.77	-249.94	200.47	163.81	647.83	38.15	17.28	PASS
5013.00†	4904.46	-273.85	869.53	4969.62	4951.95	-256.92	207.33	163.80	664.11	38.97	17.34	PASS
5113.00†	5001.48	-281.12	892.62	5068.29	5050.13	-263.91	214.19	163.79	680.39	39.80	17.39	PASS
5213.00†	5098.51	-288.40	915.72	5166.96	5148.31	-270.90	221.06	163.78	696.67	40.62	17.44	PASS
5313.00†	5195.53	-295.67	938.82	5265.62	5246.49	-277.88	227.92	163.77	712.95	41.44	17.48	PASS
5413.00†	5292.55	-302.95	961.92	5364.29	5344.66	-284.87	234.78	163.76	729.23	42.27	17.53	PASS
5513.00†	5389.58	-310.22	985.02	5462.95	5442.84	-291.85	241.64	163.75	745.51	43.10	17.57	PASS
5613.00†	5486.60	-317.50	1008.12	5561.62	5541.02	-298.84	248.50	163.75	761.79	43.92	17.61	PASS
5713.00†	5583.62	-324.77	1031.22	5660.29	5639.20	-305.83	255.37	163.74	778.07	44.75	17.65	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 49 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-3CDH PWB Offset Wellpath: WAKEMAN 20-17-3CDH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W		Slot: SLOT#05 WAKEMAN 20-17-3CDH (293'FSL & 2083'FEL, SEC.20)				Well: WAKEMAN 20-17-3CDH		Threshold Value=1.00		† = interpolated/extrapolated station		
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
5813.00†	5680.65	-332.05	1054.32	5758.95	5737.38	-312.81	262.23	163.73	794.35	45.58	17.69	PASS
5913.00†	5777.67	-339.32	1077.41	5857.62	5835.56	-319.80	269.09	163.72	810.63	46.41	17.72	PASS
6013.00†	5874.69	-346.60	1100.51	5956.28	5933.74	-326.79	275.95	163.71	826.91	47.24	17.76	PASS
6113.00†	5971.72	-353.87	1123.61	6054.95	6031.92	-333.77	282.81	163.71	843.19	48.07	17.79	PASS
6213.00†	6068.74	-361.15	1146.71	6153.62	6130.09	-340.76	289.68	163.70	859.47	48.90	17.82	PASS
6313.00†	6165.76	-368.42	1169.81	6252.28	6228.27	-347.74	296.54	163.69	875.75	49.73	17.85	PASS
6413.00†	6262.79	-375.70	1192.91	6350.95	6326.45	-354.73	303.40	163.69	892.03	50.56	17.88	PASS
6513.00†	6359.81	-382.97	1216.01	6449.61	6424.63	-361.72	310.26	163.68	908.31	51.39	17.91	PASS
6613.00†	6456.83	-390.24	1239.11	6548.28	6522.81	-368.70	317.13	163.68	924.59	52.22	17.93	PASS
6713.00†	6553.86	-397.52	1262.20	6646.94	6620.99	-375.69	323.99	163.67	940.87	53.06	17.96	PASS
6777.09	6616.04	-402.18	1277.01	6710.18	6683.91	-380.17	328.39	163.67	951.30	53.59	17.98	PASS
6813.00†	6650.94	-403.67	1285.31	6745.59	6719.15	-382.67	330.85	178.74	957.12	53.90	17.98	PASS
6913.00†	6747.83	-395.97	1308.26	6843.06	6816.13	-389.57	337.63	-143.38	973.06	54.89	17.95	PASS
7013.00†	6841.98	-371.11	1330.44	6936.52	6909.14	-396.19	344.13	-123.50	988.92	56.08	17.85	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: WAKEMAN 20-17-3CDH PWB Offset Wellpath: WAKEMAN 20-17-3CDH PWP (REV-A.0)

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: WAKEMAN 20-17-3CDH PWB Offset Wellpath: WAKEMAN 20-17-3CDH PWP (REV-A.0)

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	13.00	1800.00	1787.00	13.00	1797.97	-0.05	-27.40	-9.93	-17.70
8.5in Open Hole	1800.00	17786.94	15986.94	1797.97	7628.00	-9.93	-17.70	3038.78	63.76



Clearance Report
WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 50 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

SURVEY PROGRAM - Offset Wellbore: WAKEMAN 20-17-3CDH PWB Offset Wellpath: WAKEMAN 20-17-3CDH PWP (REV-A.0)

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
13.00	17786.94	Custom BHI NaviTrak (Standard Rotating+Axial Corr) (Rockies 0.03Gt model)		WAKEMAN 20-17-3CDH PWB

OFFSET WELLPATH REFERENCE - Offset Wellbore: WAKEMAN 20-17-3CDH PWB Offset Wellpath: WAKEMAN 20-17-3CDH PWP (REV-A.0)

MD Reference: RIG (13'KB) (RKB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	13.00ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 51 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293°FSL & 2038°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-3NBH PWB Offset Wellpath: WAKEMAN 20-17-3NBH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W		Slot: SLOT#07 WAKEMAN 20-17-3NBH (293°FSL & 2113°FEL, SEC.20)				Well: WAKEMAN 20-17-3NBH		Threshold Value=1.00		† = interpolated/extrapolated station		
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
13.00	13.00	0.00	0.00	13.00	13.00	-0.14	-74.92	-90.11	74.92	1.40	123.53	PASS
113.00†	113.00	0.00	0.00	113.00	113.00	-0.14	-74.92	-90.11	74.92	1.73	80.30	PASS
213.00†	213.00	0.00	0.00	213.00	213.00	-0.14	-74.92	-90.11	74.92	2.30	49.63	PASS
313.00†	313.00	0.00	0.00	313.00	313.00	-0.14	-74.92	-90.11	74.92	2.90	35.34	PASS
413.00†	413.00	0.00	0.00	413.00	413.00	-0.14	-74.92	-90.11	74.92	3.51	27.33	PASS
513.00†	513.00	0.00	0.00	513.00	513.00	-0.14	-74.92	-90.11	74.92	4.13	22.24	PASS
613.00†	613.00	0.00	0.00	613.00	613.00	-0.14	-74.92	-90.11	74.92	4.76	18.74	PASS
713.00†	713.00	0.00	0.00	713.00	713.00	-0.14	-74.92	-90.11	74.92	5.38	16.19	PASS
813.00†	813.00	0.00	0.00	813.00	813.00	-0.14	-74.92	-90.11	74.92	6.01	14.24	PASS
900.00	900.00	0.00	0.00	900.00	900.00	-0.14	-74.92	-90.11	74.92	6.55	12.89	PASS
913.00†	913.00	-0.01	0.03	913.00	913.00	-0.14	-74.92	162.42	74.95	6.63	12.72	PASS
1013.00†	1012.97	-0.67	2.13	1012.97	1012.97	-0.14	-74.92	162.90	77.05	7.36	11.62	PASS
1113.00†	1112.80	-2.38	7.55	1112.80	1112.80	-0.14	-74.92	164.03	82.50	8.36	10.81	PASS
1213.00†	1212.38	-5.13	16.29	1212.38	1212.38	-0.14	-74.92	165.57	91.35	9.28	10.68	PASS
1313.00†	1311.57	-8.93	28.35	1311.57	1311.57	-0.14	-74.92	167.25	103.64	10.17	10.98	PASS
1413.00†	1410.26	-13.76	43.69	1410.38	1410.38	-0.16	-74.92	168.89	119.39	11.02	11.60	PASS
1513.00†	1508.33	-19.63	62.32	1509.86	1509.84	-2.22	-74.58	169.56	138.01	11.86	12.41	PASS
1600.74	1593.77	-25.62	81.34	1596.92	1596.76	-6.82	-73.84	169.16	156.34	12.57	13.21	PASS
1613.00†	1605.67	-26.51	84.17	1609.07	1608.88	-7.67	-73.70	169.06	159.02	12.66	13.34	PASS
1713.00†	1702.69	-33.78	107.27	1706.84	1706.36	-15.11	-72.49	168.16	180.76	13.27	14.44	PASS
1813.00†	1799.71	-41.06	130.37	1804.42	1803.65	-22.57	-71.28	167.45	202.53	13.79	15.43	PASS
1913.00†	1896.74	-48.33	153.47	1901.99	1900.93	-30.03	-70.06	166.88	224.32	14.44	16.29	PASS
2013.00†	1993.76	-55.61	176.56	1999.57	1998.21	-37.48	-68.85	166.41	246.12	15.11	17.04	PASS
2113.00†	2090.78	-62.88	199.66	2097.14	2095.49	-44.94	-67.64	166.02	267.94	15.79	17.71	PASS
2213.00†	2187.81	-70.16	222.76	2194.72	2192.77	-52.40	-66.42	165.68	289.77	16.50	18.31	PASS
2313.00†	2284.83	-77.43	245.86	2292.29	2290.06	-59.85	-65.21	165.40	311.61	17.22	18.83	PASS
2413.00†	2381.85	-84.71	268.96	2389.87	2387.34	-67.31	-64.00	165.15	333.46	17.95	19.30	PASS
2513.00†	2478.88	-91.98	292.06	2487.44	2484.62	-74.77	-62.79	164.93	355.31	18.69	19.73	PASS
2613.00†	2575.90	-99.26	315.16	2585.02	2581.90	-82.22	-61.57	164.73	377.16	19.43	20.11	PASS
2713.00†	2672.92	-106.53	338.26	2682.59	2679.19	-89.68	-60.36	164.56	399.02	20.19	20.45	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 52 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-3NBH PWB Offset Wellpath: WAKEMAN 20-17-3NBH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W		Slot: SLOT#07 WAKEMAN 20-17-3NBH (293'FSL & 2113'FEL, SEC.20)				Well: WAKEMAN 20-17-3NBH		Threshold Value=1.00		† = interpolated/extrapolated station			
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
2813.00†	2769.95	-113.81	361.35	2780.17	2776.47	-97.14	-59.15	164.40	420.88	20.95	20.75	PASS	
2913.00†	2866.97	-121.08	384.45	2877.74	2873.75	-104.59	-57.94	164.26	442.75	21.72	21.03	PASS	
3013.00†	2963.99	-128.35	407.55	2975.32	2971.03	-112.05	-56.72	164.14	464.61	22.50	21.29	PASS	
3113.00†	3061.02	-135.63	430.65	3072.89	3068.31	-119.51	-55.51	164.02	486.48	23.28	21.52	PASS	
3213.00†	3158.04	-142.90	453.75	3170.47	3165.60	-126.97	-54.30	163.92	508.35	24.07	21.73	PASS	
3313.00†	3255.06	-150.18	476.85	3268.04	3262.88	-134.42	-53.09	163.82	530.22	24.86	21.92	PASS	
3413.00†	3352.09	-157.45	499.95	3365.62	3360.16	-141.88	-51.87	163.73	552.10	25.65	22.10	PASS	
3513.00†	3449.11	-164.73	523.04	3463.19	3457.44	-149.34	-50.66	163.65	573.97	26.45	22.27	PASS	
3613.00†	3546.13	-172.00	546.14	3560.77	3554.73	-156.79	-49.45	163.58	595.85	27.25	22.42	PASS	
3713.00†	3643.16	-179.28	569.24	3658.34	3652.01	-164.25	-48.23	163.50	617.72	28.06	22.56	PASS	
3813.00†	3740.18	-186.55	592.34	3755.92	3749.29	-171.71	-47.02	163.44	639.60	28.87	22.69	PASS	
3913.00†	3837.20	-193.83	615.44	3853.49	3846.57	-179.16	-45.81	163.38	661.48	29.68	22.81	PASS	
4013.00†	3934.23	-201.10	638.54	3951.07	3943.85	-186.62	-44.60	163.32	683.36	30.49	22.92	PASS	
4113.00†	4031.25	-208.38	661.64	4048.64	4041.14	-194.08	-43.38	163.27	705.23	31.30	23.03	PASS	
4213.00†	4128.27	-215.65	684.74	4146.22	4138.42	-201.53	-42.17	163.22	727.11	32.12	23.13	PASS	
4313.00†	4225.30	-222.93	707.83	4243.79	4235.70	-208.99	-40.96	163.17	748.99	32.93	23.22	PASS	
4413.00†	4322.32	-230.20	730.93	4341.37	4332.98	-216.45	-39.75	163.12	770.88	33.75	23.31	PASS	
4513.00†	4419.34	-237.48	754.03	4438.94	4430.26	-223.91	-38.53	163.08	792.76	34.57	23.39	PASS	
4613.00†	4516.37	-244.75	777.13	4536.52	4527.55	-231.36	-37.32	163.04	814.64	35.40	23.46	PASS	
4713.00†	4613.39	-252.02	800.23	4634.09	4624.83	-238.82	-36.11	163.00	836.52	36.22	23.54	PASS	
4813.00†	4710.41	-259.30	823.33	4731.67	4722.11	-246.28	-34.89	162.97	858.40	37.05	23.60	PASS	
4913.00†	4807.44	-266.57	846.43	4829.24	4819.39	-253.73	-33.68	162.93	880.28	37.87	23.67	PASS	
5013.00†	4904.46	-273.85	869.53	4926.82	4916.68	-261.19	-32.47	162.90	902.17	38.70	23.73	PASS	
5113.00†	5001.48	-281.12	892.62	5024.39	5013.96	-268.65	-31.26	162.87	924.05	39.53	23.79	PASS	
5213.00†	5098.51	-288.40	915.72	5121.97	5111.24	-276.10	-30.04	162.84	945.93	40.36	23.84	PASS	
5313.00†	5195.53	-295.67	938.82	5219.54	5208.52	-283.56	-28.83	162.81	967.82	41.19	23.89	PASS	
5413.00†	5292.55	-302.95	961.92	5317.12	5305.80	-291.02	-27.62	162.78	989.70	42.02	23.94	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 53 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

POSITIONAL UNCERTAINTY - Offset Wellbore: WAKEMAN 20-17-3NBH PWB Offset Wellpath: WAKEMAN 20-17-3NBH PWP (REV-A.0)

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: WAKEMAN 20-17-3NBH PWB Offset Wellpath: WAKEMAN 20-17-3NBH PWP (REV-A.0)

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	13.00	1800.00	1787.00	13.00	1799.24	-0.09	-45.67	-6.82	-44.58
8.5in Open Hole	1800.00	17542.23	15742.23	1799.24	7395.00	-6.82	-44.58	3039.09	-66.05

SURVEY PROGRAM - Offset Wellbore: WAKEMAN 20-17-3NBH PWB Offset Wellpath: WAKEMAN 20-17-3NBH PWP (REV-A.0)

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
13.00	17542.23	Custom BHI NaviTrak (Standard Rotating+Axial Corr) (Rockies 0.03Gt model)		WAKEMAN 20-17-3NBH PWB

OFFSET WELLPATH REFERENCE - Offset Wellbore: WAKEMAN 20-17-3NBH PWB Offset Wellpath: WAKEMAN 20-17-3NBH PWP (REV-A.0)

MD Reference: RIG (13'KB) (RKB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	13.00ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 54 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: CHAVEZ #7-17 AWB Offset Wellpath: CHAVEZ #7-17 AWP

Facility: SEC.17-T01S-R65W Slot: SLOT#01 EX. CHAVEZ #7-17 (1971'FNL & 1926'FEL, SEC.17, OG, SI, 8190) Well: CHAVEZ #7-17 Threshold Value=1.00 † = interpolated/extrapolated station										C-C	ACR	Sep	ACR
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]		Clear Dist [ft]	MASD [ft]	Ratio	Status
13.00	13.00	0.00	0.00	-13.00	40.00	8360.10	-30.03	-0.21		8360.19	25.40	339.79	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: CHAVEZ #7-17 AWB Offset Wellpath: CHAVEZ #7-17 AWP

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: CHAVEZ #7-17 AWB Offset Wellpath: CHAVEZ #7-17 AWP

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]
12.25in Open Hole	0.00	1472.00	1472.00	40.00	1512.00	5096.12	-41.71	5096.12	-41.71
8.625in Casing Surface	0.00	1472.00	1472.00	40.00	1512.00	5096.12	-41.71	5096.12	-41.71
7.875in Open Hole	1472.00	8173.00	6701.00	1512.00	8213.00	5096.12	-41.71	5096.12	-41.71
4.5in Casing Production	0.00	8173.00	8173.00	40.00	8213.00	5096.12	-41.71	5096.12	-41.71

WELLPATH COMPOSITION - Offset Wellbore: CHAVEZ #7-17 AWB Offset Wellpath: CHAVEZ #7-17 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	8190.00	Drift Indicator - Inclination Only (Actual Survey)	ASSUMED VERTICAL COGCC <8190>	CHAVEZ #7-17 AWB

OFFSET WELLPATH REFERENCE - Offset Wellbore: CHAVEZ #7-17 AWB Offset Wellpath: CHAVEZ #7-17 AWP

MD Reference: Rig on SLOT#04 EX. CHAVEZ #7-17 (1971'FNL & 1926'FEL, SEC.17, OG, SI) (RT)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	0.00ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 55 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-3NCH PWB Offset Wellpath: WAKEMAN 20-17-3NCH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W		Slot: SLOT#08 WAKEMAN 20-17-3NCH (293'FSL & 2128'FEL, SEC.20)		Well: WAKEMAN 20-17-3NCH		Threshold Value=1.00		† = interpolated/extrapolated station				
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
13.00	13.00	0.00	0.00	13.00	13.00	-0.13	-89.98	-90.09	89.98	1.40	148.63	PASS
113.00†	113.00	0.00	0.00	113.00	113.00	-0.13	-89.98	-90.09	89.98	1.73	96.37	PASS
213.00†	213.00	0.00	0.00	213.00	213.00	-0.13	-89.98	-90.09	89.98	2.30	59.53	PASS
313.00†	313.00	0.00	0.00	313.00	313.00	-0.13	-89.98	-90.09	89.98	2.90	42.41	PASS
413.00†	413.00	0.00	0.00	413.00	413.00	-0.13	-89.98	-90.09	89.98	3.52	32.81	PASS
513.00†	513.00	0.00	0.00	513.00	513.00	-0.13	-89.98	-90.09	89.98	4.14	26.71	PASS
613.00†	613.00	0.00	0.00	613.00	613.00	-0.13	-89.98	-90.09	89.98	4.76	22.51	PASS
713.00†	713.00	0.00	0.00	713.00	713.00	-0.13	-89.98	-90.09	89.98	5.39	19.45	PASS
813.00†	813.00	0.00	0.00	813.00	813.00	-0.13	-89.98	-90.09	89.98	6.01	17.11	PASS
900.00	900.00	0.00	0.00	900.00	900.00	-0.13	-89.98	-90.09	89.98	6.56	15.50	PASS
913.00†	913.00	-0.01	0.03	913.00	913.00	-0.13	-89.98	162.44	90.01	6.64	15.29	PASS
1013.00†	1012.97	-0.67	2.13	1012.97	1012.97	-0.13	-89.98	162.84	92.11	7.37	13.90	PASS
1113.00†	1112.80	-2.38	7.55	1112.80	1112.80	-0.13	-89.98	163.79	97.56	8.36	12.80	PASS
1213.00†	1212.38	-5.13	16.29	1212.38	1212.38	-0.13	-89.98	165.13	106.39	9.29	12.44	PASS
1313.00†	1311.57	-8.93	28.35	1311.57	1311.57	-0.13	-89.98	166.64	118.65	10.17	12.58	PASS
1413.00†	1410.26	-13.76	43.69	1410.26	1410.26	-0.13	-89.98	168.16	134.37	11.02	13.07	PASS
1513.00†	1508.33	-19.63	62.32	1508.14	1508.14	-0.14	-89.99	169.57	153.54	11.85	13.83	PASS
1600.74	1593.77	-25.62	81.34	1591.34	1591.32	-1.34	-90.80	170.23	173.86	12.54	14.74	PASS
1613.00†	1605.67	-26.51	84.17	1602.88	1602.88	-1.66	-91.02	170.27	176.96	12.63	14.90	PASS
1713.00†	1702.69	-33.78	107.27	1696.66	1696.50	-5.71	-93.78	170.11	203.09	13.25	16.25	PASS
1813.00†	1799.71	-41.06	130.37	1790.37	1789.89	-12.21	-98.21	169.29	230.60	13.82	17.59	PASS
1913.00†	1896.74	-48.33	153.47	1886.32	1885.41	-19.61	-103.25	168.44	258.56	14.40	18.83	PASS
2013.00†	1993.76	-55.61	176.56	1982.27	1980.94	-27.02	-108.29	167.77	286.57	15.06	19.93	PASS
2113.00†	2090.78	-62.88	199.66	2078.22	2076.47	-34.42	-113.33	167.21	314.61	15.72	20.90	PASS
2213.00†	2187.81	-70.16	222.76	2174.16	2172.00	-41.82	-118.37	166.74	342.68	16.41	21.77	PASS
2313.00†	2284.83	-77.43	245.86	2270.11	2267.53	-49.22	-123.42	166.34	370.76	17.11	22.56	PASS
2413.00†	2381.85	-84.71	268.96	2366.06	2363.06	-56.62	-128.46	166.00	398.85	17.82	23.28	PASS
2513.00†	2478.88	-91.98	292.06	2462.01	2458.58	-64.02	-133.50	165.71	426.96	18.56	23.87	PASS
2613.00†	2575.90	-99.26	315.16	2557.95	2554.11	-71.43	-138.54	165.45	455.07	19.28	24.46	PASS
2713.00†	2672.92	-106.53	338.26	2653.90	2649.64	-78.83	-143.58	165.22	483.19	20.02	24.98	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 56 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-3NCH PWB Offset Wellpath: WAKEMAN 20-17-3NCH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#08 WAKEMAN 20-17-3NCH (293'FSL & 2128'FEL, SEC.20) Well: WAKEMAN 20-17-3NCH Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
2813.00†	2769.95	-113.81	361.35	2749.85	2745.17	-86.23	-148.62	165.01	511.32	20.77	25.45	PASS
2913.00†	2866.97	-121.08	384.45	2845.79	2840.70	-93.63	-153.67	164.83	539.46	21.53	25.87	PASS
3013.00†	2963.99	-128.35	407.55	2941.74	2936.23	-101.03	-158.71	164.67	567.60	22.30	26.26	PASS
3113.00†	3061.02	-135.63	430.65	3037.69	3031.76	-108.43	-163.75	164.52	595.74	23.06	26.62	PASS
3213.00†	3158.04	-142.90	453.75	3133.64	3127.28	-115.84	-168.79	164.38	623.89	23.84	26.94	PASS
3313.00†	3255.06	-150.18	476.85	3229.58	3222.81	-123.24	-173.83	164.26	652.04	24.62	27.24	PASS
3413.00†	3352.09	-157.45	499.95	3325.53	3318.34	-130.64	-178.87	164.14	680.19	25.40	27.52	PASS
3513.00†	3449.11	-164.73	523.04	3421.48	3413.87	-138.04	-183.92	164.04	708.34	26.19	27.77	PASS
3613.00†	3546.13	-172.00	546.14	3517.42	3509.40	-145.44	-188.96	163.94	736.50	26.98	28.01	PASS
3713.00†	3643.16	-179.28	569.24	3613.37	3604.93	-152.84	-194.00	163.85	764.66	27.77	28.23	PASS
3813.00†	3740.18	-186.55	592.34	3709.32	3700.45	-160.25	-199.04	163.77	792.82	28.57	28.43	PASS
3913.00†	3837.20	-193.83	615.44	3805.27	3795.98	-167.65	-204.08	163.69	820.98	29.37	28.62	PASS
4013.00†	3934.23	-201.10	638.54	3901.21	3891.51	-175.05	-209.12	163.62	849.14	30.17	28.80	PASS
4113.00†	4031.25	-208.38	661.64	3997.16	3987.04	-182.45	-214.17	163.55	877.30	30.97	28.96	PASS
4213.00†	4128.27	-215.65	684.74	4093.11	4082.57	-189.85	-219.21	163.49	905.47	31.78	29.12	PASS
4313.00†	4225.30	-222.93	707.83	4189.06	4178.10	-197.25	-224.25	163.43	933.63	32.59	29.26	PASS
4413.00†	4322.32	-230.20	730.93	4285.00	4273.62	-204.66	-229.29	163.37	961.80	33.40	29.40	PASS
4513.00†	4419.34	-237.48	754.03	4380.95	4369.15	-212.06	-234.33	163.32	989.96	34.21	29.53	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: WAKEMAN 20-17-3NCH PWB Offset Wellpath: WAKEMAN 20-17-3NCH PWP (REV-A.0)

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft



Clearance Report
WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 57 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

HOLE & CASING SECTIONS - Offset Wellbore: WAKEMAN 20-17-3NCH PWB Offset Wellpath: WAKEMAN 20-17-3NCH PWP (REV-A.0)

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	13.00	1800.00	1787.00	13.00	1799.47	-0.08	-54.85	-3.99	-57.51
8.5in Open Hole	1800.00	17619.74	15819.74	1799.47	N/A	-3.99	-57.51	N/A	N/A

SURVEY PROGRAM - Offset Wellbore: WAKEMAN 20-17-3NCH PWB Offset Wellpath: WAKEMAN 20-17-3NCH PWP (REV-A.0)

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
13.00	17619.74	Custom BHI NaviTrak (Standard Rotating+Axial Corr) (Rockies 0.03Gt model)		WAKEMAN 20-17-3NCH PWB

OFFSET WELLPATH REFERENCE - Offset Wellbore: WAKEMAN 20-17-3NCH PWB Offset Wellpath: WAKEMAN 20-17-3NCH PWP (REV-A.0)

MD Reference: RIG (13'KB) (RKB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	13.00ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 58 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: STATE #11-16 AWB Offset Wellpath: STATE #11-16 AWP

Facility: SEC.16-T01S-R65W Slot: SLOT#01 EX. STATE #11-16 (990'FNL & 990'FWL, SEC.16, OG, PR, 8173) Well: STATE #11-16 Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
13.00	13.00	0.00	0.00	-13.00	23.00	9345.21	2891.45	17.19	9782.31	25.40	397.59	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: STATE #11-16 AWB Offset Wellpath: STATE #11-16 AWP

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: STATE #11-16 AWB Offset Wellpath: STATE #11-16 AWP

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]
12.25in Open Hole	0.00	1549.00	1549.00	23.00	1572.00	5704.91	1736.08	5704.91	1736.08
8.625in Casing Surface	0.00	1549.00	1549.00	23.00	1572.00	5704.91	1736.08	5704.91	1736.08
7.875in Open Hole	1549.00	8173.00	6624.00	1572.00	8196.00	5704.91	1736.08	5704.91	1736.08
4.5in Casing Production	0.00	8173.00	8173.00	23.00	8196.00	5704.91	1736.08	5704.91	1736.08

WELLPATH COMPOSITION - Offset Wellbore: STATE #11-16 AWB Offset Wellpath: STATE #11-16 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	8173.00	Drift Indicator - Inclination Only (Actual Survey)	ASSUMED VERTICAL COGCC <8173>	STATE #11-16 AWB

OFFSET WELLPATH REFERENCE - Offset Wellbore: STATE #11-16 AWB Offset Wellpath: STATE #11-16 AWP

MD Reference: Rig on SLOT#01 EX. STATE #11-16 (990'FNL & 990'FWL, SEC.16, OG, PR) (RT)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	0.00ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 59 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-2NBH PWB Offset Wellpath: WAKEMAN 20-17-2NBH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20) Well: WAKEMAN 20-17-2NBH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
13.00	13.00	0.00	0.00	13.00	13.00	-0.20	-104.95	-90.11	104.95	1.40	173.59	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	-0.20	-104.95	-90.11	104.95	1.73	112.17	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	-0.20	-104.95	-90.11	104.95	2.31	69.26	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	-0.20	-104.95	-90.11	104.95	2.91	49.37	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	-0.20	-104.95	-90.11	104.95	3.53	38.21	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	-0.20	-104.95	-90.11	104.95	4.15	31.13	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	-0.20	-104.95	-90.11	104.95	4.77	26.24	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	-0.20	-104.95	-90.11	104.95	5.40	22.67	PASS	
813.00†	813.00	0.00	0.00	813.00	813.00	-0.20	-104.95	-90.11	104.95	6.02	19.96	PASS	
900.00	900.00	0.00	0.00	900.00	900.00	-0.20	-104.95	-90.11	104.95	6.57	18.07	PASS	
913.00†	913.00	-0.01	0.03	913.00	913.00	-0.20	-104.95	162.42	104.98	6.65	17.83	PASS	
1013.00†	1012.97	-0.67	2.13	1012.97	1012.97	-0.20	-104.95	162.76	107.08	7.38	16.16	PASS	
1113.00†	1112.80	-2.38	7.55	1112.80	1112.80	-0.20	-104.95	163.59	112.52	8.37	14.76	PASS	
1213.00†	1212.38	-5.13	16.29	1212.38	1212.38	-0.20	-104.95	164.76	121.35	9.29	14.20	PASS	
1313.00†	1311.57	-8.93	28.35	1311.57	1311.57	-0.20	-104.95	166.13	133.58	10.17	14.17	PASS	
1413.00†	1410.26	-13.76	43.69	1410.26	1410.26	-0.20	-104.95	167.54	149.26	11.03	14.52	PASS	
1513.00†	1508.33	-19.63	62.32	1508.33	1508.33	-0.20	-104.95	168.90	168.39	11.86	15.16	PASS	
1600.74	1593.77	-25.62	81.34	1593.77	1593.77	-0.20	-104.95	170.00	188.02	12.55	15.94	PASS	
1613.00†	1605.67	-26.51	84.17	1605.40	1605.40	-0.20	-104.96	170.15	190.95	12.63	16.07	PASS	
1713.00†	1702.69	-33.78	107.27	1697.25	1697.23	-1.10	-106.33	170.90	216.16	13.24	17.31	PASS	
1813.00†	1799.71	-41.06	130.37	1787.97	1787.84	-3.57	-110.11	171.01	243.67	13.88	18.51	PASS	
1913.00†	1896.74	-48.33	153.47	1877.42	1876.98	-7.54	-116.19	170.69	273.43	14.51	19.77	PASS	
2013.00†	1993.76	-55.61	176.56	1965.43	1964.44	-12.94	-124.44	170.07	305.42	15.20	21.03	PASS	
2113.00†	2090.78	-62.88	199.66	2054.63	2052.76	-19.80	-134.93	169.25	339.49	15.87	22.35	PASS	
2213.00†	2187.81	-70.16	222.76	2148.36	2145.46	-27.32	-146.43	168.49	374.08	16.50	23.64	PASS	
2313.00†	2284.83	-77.43	245.86	2242.08	2238.17	-34.84	-157.94	167.85	408.71	17.19	24.76	PASS	
2413.00†	2381.85	-84.71	268.96	2335.80	2330.88	-42.36	-169.45	167.32	443.38	17.87	25.79	PASS	
2513.00†	2478.88	-91.98	292.06	2429.52	2423.59	-49.89	-180.95	166.86	478.09	18.58	26.72	PASS	
2613.00†	2575.90	-99.26	315.16	2523.24	2516.30	-57.41	-192.46	166.46	512.81	19.30	27.55	PASS	
2713.00†	2672.92	-106.53	338.26	2616.97	2609.01	-64.93	-203.96	166.12	547.55	20.01	28.33	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 60 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293°FSL & 2038°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-2NBH PWB Offset Wellpath: WAKEMAN 20-17-2NBH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20) Well: WAKEMAN 20-17-2NBH Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
2813.00†	2769.95	-113.81	361.35	2710.69	2701.72	-72.45	-215.47	165.81	582.31	20.74	29.03	PASS
2913.00†	2866.97	-121.08	384.45	2804.41	2794.42	-79.97	-226.97	165.54	617.09	21.49	29.66	PASS
3013.00†	2963.99	-128.35	407.55	2898.13	2887.13	-87.50	-238.48	165.30	651.87	22.24	30.25	PASS
3113.00†	3061.02	-135.63	430.65	2991.85	2979.84	-95.02	-249.99	165.08	686.66	23.00	30.78	PASS
3213.00†	3158.04	-142.90	453.75	3085.58	3072.55	-102.54	-261.49	164.89	721.46	23.76	31.27	PASS
3313.00†	3255.06	-150.18	476.85	3179.30	3165.26	-110.06	-273.00	164.71	756.27	24.53	31.72	PASS
3413.00†	3352.09	-157.45	499.95	3273.02	3257.97	-117.59	-284.50	164.55	791.08	25.31	32.13	PASS
3513.00†	3449.11	-164.73	523.04	3366.74	3350.67	-125.11	-296.01	164.40	825.90	26.09	32.52	PASS
3613.00†	3546.13	-172.00	546.14	3460.47	3443.38	-132.63	-307.52	164.26	860.72	26.87	32.87	PASS
3713.00†	3643.16	-179.28	569.24	3554.19	3536.09	-140.15	-319.02	164.13	895.55	27.66	33.20	PASS
3813.00†	3740.18	-186.55	592.34	3647.91	3628.80	-147.68	-330.53	164.02	930.38	28.45	33.51	PASS
3913.00†	3837.20	-193.83	615.44	3741.63	3721.51	-155.20	-342.03	163.91	965.21	29.25	33.80	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: WAKEMAN 20-17-2NBH PWB Offset Wellpath: WAKEMAN 20-17-2NBH PWP (REV-A.0)

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: WAKEMAN 20-17-2NBH PWB Offset Wellpath: WAKEMAN 20-17-2NBH PWP (REV-A.0)

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	13.00	1800.00	1787.00	13.00	1799.84	-0.12	-63.98	-1.29	-65.76
8.5in Open Hole	1800.00	17593.78	15793.78	1799.84	N/A	-1.29	-65.76	N/A	N/A



Clearance Report
WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 61 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

SURVEY PROGRAM - Offset Wellbore: WAKEMAN 20-17-2NBH PWB Offset Wellpath: WAKEMAN 20-17-2NBH PWP (REV-A.0)

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
13.00	17593.78	Custom BHI NaviTrak (Standard Rotating+Axial Corr) (Rockies 0.03Gt model)		WAKEMAN 20-17-2NBH PWB

OFFSET WELLPATH REFERENCE - Offset Wellbore: WAKEMAN 20-17-2NBH PWB Offset Wellpath: WAKEMAN 20-17-2NBH PWP (REV-A.0)

MD Reference: RIG (13'KB) (RKB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	13.00ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 62 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-2NCH PWB Offset Wellpath: WAKEMAN 20-17-2NCH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#10 WAKEMAN 20-17-2NCH (293'FSL & 2158'FEL, SEC.20) Well: WAKEMAN 20-17-2NCH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
13.00	13.00	0.00	0.00	13.00	13.00	-0.19	-119.93	-90.09	119.93	1.40	198.54	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	-0.19	-119.93	-90.09	119.93	1.73	128.13	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	-0.19	-119.93	-90.09	119.93	2.31	79.10	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	-0.19	-119.93	-90.09	119.93	2.91	56.40	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	-0.19	-119.93	-90.09	119.93	3.53	43.66	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	-0.19	-119.93	-90.09	119.93	4.15	35.57	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	-0.19	-119.93	-90.09	119.93	4.77	29.99	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	-0.19	-119.93	-90.09	119.93	5.40	25.92	PASS	
813.00†	813.00	0.00	0.00	813.00	813.00	-0.19	-119.93	-90.09	119.93	6.02	22.81	PASS	
900.00	900.00	0.00	0.00	900.00	900.00	-0.19	-119.93	-90.09	119.93	6.57	20.66	PASS	
913.00†	913.00	-0.01	0.03	913.00	913.00	-0.19	-119.93	162.43	119.96	6.65	20.38	PASS	
1013.00†	1012.97	-0.67	2.13	1012.97	1012.97	-0.19	-119.93	162.73	122.05	7.38	18.43	PASS	
1113.00†	1112.80	-2.38	7.55	1112.80	1112.80	-0.19	-119.93	163.46	127.48	8.37	16.74	PASS	
1213.00†	1212.38	-5.13	16.29	1212.38	1212.38	-0.19	-119.93	164.51	136.31	9.29	15.96	PASS	
1313.00†	1311.57	-8.93	28.35	1311.57	1311.57	-0.19	-119.93	165.75	148.53	10.18	15.76	PASS	
1413.00†	1410.26	-13.76	43.69	1410.26	1410.26	-0.19	-119.93	167.06	164.18	11.03	15.98	PASS	
1513.00†	1508.33	-19.63	62.32	1507.89	1507.89	-0.19	-119.94	168.34	183.29	11.85	16.51	PASS	
1600.74	1593.77	-25.62	81.34	1588.33	1588.31	-0.72	-121.18	169.14	204.12	12.57	17.28	PASS	
1613.00†	1605.67	-26.51	84.17	1599.45	1599.43	-0.86	-121.52	169.24	207.37	12.66	17.43	PASS	
1713.00†	1702.69	-33.78	107.27	1689.41	1689.27	-2.62	-125.70	169.70	235.42	13.37	18.67	PASS	
1813.00†	1799.71	-41.06	130.37	1777.93	1777.49	-5.42	-132.34	169.74	266.05	14.05	19.95	PASS	
1913.00†	1896.74	-48.33	153.47	1864.87	1863.89	-9.19	-141.32	169.50	299.18	14.70	21.34	PASS	
2013.00†	1993.76	-55.61	176.56	1950.13	1948.28	-13.88	-152.45	169.07	334.76	15.35	22.82	PASS	
2113.00†	2090.78	-62.88	199.66	2033.60	2030.52	-19.41	-165.60	168.52	372.74	16.07	24.22	PASS	
2213.00†	2187.81	-70.16	222.76	2119.62	2114.86	-25.98	-181.21	167.89	412.87	16.72	25.74	PASS	
2313.00†	2284.83	-77.43	245.86	2210.94	2204.31	-33.10	-198.14	167.30	453.41	17.37	27.17	PASS	
2413.00†	2381.85	-84.71	268.96	2302.27	2293.77	-40.23	-215.07	166.82	493.99	18.04	28.47	PASS	
2513.00†	2478.88	-91.98	292.06	2393.59	2383.23	-47.36	-232.01	166.40	534.59	18.72	29.64	PASS	
2613.00†	2575.90	-99.26	315.16	2484.92	2472.68	-54.48	-248.94	166.05	575.21	19.45	30.65	PASS	
2713.00†	2672.92	-106.53	338.26	2576.24	2562.14	-61.61	-265.88	165.74	615.85	20.13	31.68	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 63 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-2NCH PWB Offset Wellpath: WAKEMAN 20-17-2NCH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#10 WAKEMAN 20-17-2NCH (293'FSL & 2158'FEL, SEC.20) Well: WAKEMAN 20-17-2NCH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
2813.00†	2769.95	-113.81	361.35	2667.56	2651.60	-68.74	-282.81	165.47	656.50	20.84	32.57	PASS	
2913.00†	2866.97	-121.08	384.45	2758.89	2741.05	-75.86	-299.75	165.23	697.16	21.57	33.38	PASS	
3013.00†	2963.99	-128.35	407.55	2850.21	2830.51	-82.99	-316.68	165.02	737.83	22.31	34.12	PASS	
3113.00†	3061.02	-135.63	430.65	2941.54	2919.97	-90.11	-333.62	164.82	778.50	23.06	34.80	PASS	
3213.00†	3158.04	-142.90	453.75	3032.86	3009.42	-97.24	-350.55	164.65	819.19	23.82	35.42	PASS	
3313.00†	3255.06	-150.18	476.85	3124.18	3098.88	-104.37	-367.49	164.50	859.88	24.58	36.00	PASS	
3413.00†	3352.09	-157.45	499.95	3215.51	3188.34	-111.49	-384.42	164.36	900.57	25.34	36.53	PASS	
3513.00†	3449.11	-164.73	523.04	3306.83	3277.79	-118.62	-401.35	164.23	941.27	26.12	37.02	PASS	
3613.00†	3546.13	-172.00	546.14	3398.15	3367.25	-125.75	-418.29	164.11	981.97	26.90	37.47	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: WAKEMAN 20-17-2NCH PWB Offset Wellpath: WAKEMAN 20-17-2NCH PWP (REV-A.0)

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: WAKEMAN 20-17-2NCH PWB Offset Wellpath: WAKEMAN 20-17-2NCH PWP (REV-A.0)

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	13.00	1800.00	1787.00	13.00	1799.45	-0.12	-73.11	-1.97	-77.52
8.5in Open Hole	1800.00	17719.88	15919.88	1799.45	N/A	-1.97	-77.52	N/A	N/A

SURVEY PROGRAM - Offset Wellbore: WAKEMAN 20-17-2NCH PWB Offset Wellpath: WAKEMAN 20-17-2NCH PWP (REV-A.0)

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
13.00	17719.88	Custom BHI NaviTrak (Standard Rotating+Axial Corr) (Rockies 0.03Gt model)		WAKEMAN 20-17-2NCH PWB



Clearance Report
WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 64 of 85



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

OFFSET WELLPATH REFERENCE - Offset Wellbore: WAKEMAN 20-17-2NCH PWB Offset Wellpath: WAKEMAN 20-17-2NCH PWP (REV-A.0)	
MD Reference: RIG (13'KB) (RKB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	13.00ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 65 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-2NAH PWB Offset Wellpath: WAKEMAN 20-17-2NAH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#11 WAKEMAN 20-17-2NAH (293'FSL & 2173'FEL, SEC.20) Well: WAKEMAN 20-17-2NAH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
13.00	13.00	0.00	0.00	13.00	13.00	-0.22	-134.98	-90.09	134.98	1.40	223.64	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	-0.22	-134.98	-90.09	134.98	1.73	144.27	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	-0.22	-134.98	-90.09	134.98	2.31	89.06	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	-0.22	-134.98	-90.09	134.98	2.91	63.51	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	-0.22	-134.98	-90.09	134.98	3.53	49.17	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	-0.22	-134.98	-90.09	134.98	4.15	40.06	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	-0.22	-134.98	-90.09	134.98	4.78	33.77	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	-0.22	-134.98	-90.09	134.98	5.40	29.19	PASS	
813.00†	813.00	0.00	0.00	813.00	813.00	-0.22	-134.98	-90.09	134.98	6.03	25.69	PASS	
900.00	900.00	0.00	0.00	900.00	900.00	-0.22	-134.98	-90.09	134.98	6.57	23.27	PASS	
913.00†	913.00	-0.01	0.03	913.00	913.00	-0.22	-134.98	162.43	135.01	6.65	22.95	PASS	
1013.00†	1012.97	-0.67	2.13	1012.97	1012.97	-0.22	-134.98	162.69	137.11	7.38	20.71	PASS	
1113.00†	1112.80	-2.38	7.55	1112.80	1112.80	-0.22	-134.98	163.34	142.55	8.37	18.72	PASS	
1213.00†	1212.38	-5.13	16.29	1212.38	1212.38	-0.22	-134.98	164.29	151.36	9.29	17.73	PASS	
1313.00†	1311.57	-8.93	28.35	1311.57	1311.57	-0.22	-134.98	165.43	163.56	10.17	17.37	PASS	
1413.00†	1410.26	-13.76	43.69	1409.71	1409.71	-0.22	-135.00	166.64	179.21	11.02	17.45	PASS	
1513.00†	1508.33	-19.63	62.32	1501.90	1501.88	-0.82	-136.69	167.56	200.00	11.89	17.97	PASS	
1600.74	1593.77	-25.62	81.34	1581.14	1581.02	-2.12	-140.38	168.06	223.33	12.75	18.63	PASS	
1613.00†	1605.67	-26.51	84.17	1592.08	1591.94	-2.36	-141.06	168.12	226.93	12.85	18.77	PASS	
1713.00†	1702.69	-33.78	107.27	1680.44	1680.00	-4.77	-147.92	168.42	257.83	13.57	20.13	PASS	
1813.00†	1799.71	-41.06	130.37	1767.18	1766.18	-8.02	-157.15	168.41	291.35	14.21	21.60	PASS	
1913.00†	1896.74	-48.33	153.47	1852.18	1850.31	-12.04	-168.58	168.20	327.39	14.86	23.09	PASS	
2013.00†	1993.76	-55.61	176.56	1935.35	1932.24	-16.78	-182.03	167.85	365.90	15.52	24.65	PASS	
2113.00†	2090.78	-62.88	199.66	2016.62	2011.87	-22.17	-197.34	167.41	406.81	16.21	26.19	PASS	
2213.00†	2187.81	-70.16	222.76	2095.92	2089.09	-28.15	-214.32	166.93	450.06	16.87	27.81	PASS	
2313.00†	2284.83	-77.43	245.86	2184.87	2175.41	-35.28	-234.61	166.40	494.57	17.52	29.38	PASS	
2413.00†	2381.85	-84.71	268.96	2274.33	2262.22	-42.46	-255.01	165.96	539.11	18.18	30.82	PASS	
2513.00†	2478.88	-91.98	292.06	2363.80	2349.03	-49.65	-275.41	165.58	583.67	18.91	32.02	PASS	
2613.00†	2575.90	-99.26	315.16	2453.26	2435.84	-56.83	-295.81	165.26	628.25	19.54	33.32	PASS	
2713.00†	2672.92	-106.53	338.26	2542.72	2522.65	-64.01	-316.21	164.98	672.84	20.25	34.40	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 66 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-2NAH PWB Offset Wellpath: WAKEMAN 20-17-2NAH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#11 WAKEMAN 20-17-2NAH (293'FSL & 2173'FEL, SEC.20) Well: WAKEMAN 20-17-2NAH Threshold Value=1.00 † = interpolated/extrapolated station											
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	ACR Status
2813.00†	2769.95	-113.81	361.35	2632.18	2609.46	-71.19	-336.61	164.74	717.44	20.96	PASS
2913.00†	2866.97	-121.08	384.45	2721.65	2696.26	-78.37	-357.01	164.52	762.05	21.69	PASS
3013.00†	2963.99	-128.35	407.55	2811.11	2783.07	-85.55	-377.41	164.33	806.67	22.43	PASS
3113.00†	3061.02	-135.63	430.65	2900.57	2869.88	-92.73	-397.81	164.16	851.30	23.18	PASS
3213.00†	3158.04	-142.90	453.75	2990.03	2956.69	-99.91	-418.21	164.01	895.93	23.93	PASS
3313.00†	3255.06	-150.18	476.85	3079.50	3043.50	-107.09	-438.60	163.87	940.57	24.70	PASS
3413.00†	3352.09	-157.45	499.95	3168.96	3130.31	-114.27	-459.00	163.74	985.21	25.47	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: WAKEMAN 20-17-2NAH PWB Offset Wellpath: WAKEMAN 20-17-2NAH PWP (REV-A.0)

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: WAKEMAN 20-17-2NAH PWB Offset Wellpath: WAKEMAN 20-17-2NAH PWP (REV-A.0)

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	13.00	1800.00	1787.00	13.00	1798.70	-0.13	-82.29	-2.96	-90.30
8.5in Open Hole	1800.00	17526.80	15726.80	1798.70	N/A	-2.96	-90.30	N/A	N/A

SURVEY PROGRAM - Offset Wellbore: WAKEMAN 20-17-2NAH PWB Offset Wellpath: WAKEMAN 20-17-2NAH PWP (REV-A.0)

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
13.00	17526.80	Custom BHI NaviTrak (Standard Rotating+Axial Corr) (Rockies 0.03Gt model)		WAKEMAN 20-17-2NAH PWB



Clearance Report
WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 67 of 85



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

OFFSET WELLPATH REFERENCE - Offset Wellbore: WAKEMAN 20-17-2NAH PWB Offset Wellpath: WAKEMAN 20-17-2NAH PWP (REV-A.0)	
MD Reference: RIG (13'KB) (RKB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	13.00ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 68 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-2CDH PWB Offset Wellpath: WAKEMAN 20-17-2CDH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20) Well: WAKEMAN 20-17-2CDH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
13.00	13.00	0.00	0.00	13.00	13.00	-0.25	-149.96	-90.10	149.96	1.40	248.59	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	-0.25	-149.96	-90.10	149.96	1.73	160.34	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	-0.25	-149.96	-90.10	149.96	2.31	98.98	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	-0.25	-149.96	-90.10	149.96	2.92	70.58	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	-0.25	-149.96	-90.10	149.96	3.53	54.65	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	-0.25	-149.96	-90.10	149.96	4.15	44.52	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	-0.25	-149.96	-90.10	149.96	4.78	37.54	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	-0.25	-149.96	-90.10	149.96	5.40	32.44	PASS	
813.00†	813.00	0.00	0.00	813.00	813.00	-0.25	-149.96	-90.10	149.96	6.03	28.56	PASS	
900.00	900.00	0.00	0.00	900.00	900.00	-0.25	-149.96	-90.10	149.96	6.57	25.86	PASS	
913.00†	913.00	-0.01	0.03	913.00	913.00	-0.25	-149.96	162.43	149.99	6.65	25.51	PASS	
1013.00†	1012.97	-0.67	2.13	1012.97	1012.97	-0.25	-149.96	162.67	152.08	7.38	22.99	PASS	
1113.00†	1112.80	-2.38	7.55	1112.80	1112.80	-0.25	-149.96	163.25	157.52	8.37	20.70	PASS	
1213.00†	1212.38	-5.13	16.29	1212.38	1212.38	-0.25	-149.96	164.11	166.32	9.29	19.49	PASS	
1313.00†	1311.57	-8.93	28.35	1310.93	1310.93	-0.25	-149.96	165.15	178.54	10.17	18.97	PASS	
1413.00†	1410.26	-13.76	43.69	1403.67	1403.65	-0.81	-151.75	166.01	195.98	11.07	19.02	PASS	
1513.00†	1508.33	-19.63	62.32	1494.64	1494.49	-2.22	-156.27	166.60	219.71	12.09	19.40	PASS	
1600.74	1593.77	-25.62	81.34	1572.59	1572.18	-4.11	-162.33	166.91	245.56	12.87	20.28	PASS	
1613.00†	1605.67	-26.51	84.17	1583.34	1582.88	-4.42	-163.32	166.96	249.52	12.99	20.41	PASS	
1713.00†	1702.69	-33.78	107.27	1670.02	1668.99	-7.35	-172.74	167.17	283.26	13.75	21.82	PASS	
1813.00†	1799.71	-41.06	130.37	1754.94	1753.03	-10.98	-184.37	167.15	319.60	14.37	23.41	PASS	
1913.00†	1896.74	-48.33	153.47	1838.00	1834.84	-15.24	-198.04	166.97	358.45	14.99	25.06	PASS	
2013.00†	1993.76	-55.61	176.56	1919.12	1914.31	-20.09	-213.58	166.69	399.73	15.68	26.66	PASS	
2113.00†	2090.78	-62.88	199.66	1998.26	1991.36	-25.46	-230.79	166.34	443.37	16.33	28.33	PASS	
2213.00†	2187.81	-70.16	222.76	2085.99	2076.43	-31.85	-251.28	165.95	488.45	16.96	30.01	PASS	
2313.00†	2284.83	-77.43	245.86	2175.19	2162.92	-38.35	-272.13	165.61	533.57	17.61	31.54	PASS	
2413.00†	2381.85	-84.71	268.96	2264.39	2249.41	-44.85	-292.97	165.33	578.70	18.32	32.82	PASS	
2513.00†	2478.88	-91.98	292.06	2353.59	2335.89	-51.35	-313.82	165.09	623.84	18.94	34.19	PASS	
2613.00†	2575.90	-99.26	315.16	2442.80	2422.38	-57.85	-334.67	164.88	668.99	19.62	35.33	PASS	
2713.00†	2672.92	-106.53	338.26	2532.00	2508.87	-64.35	-355.51	164.70	714.15	20.32	36.37	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 69 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-2CDH PWB Offset Wellpath: WAKEMAN 20-17-2CDH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W		Slot: SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)				Well: WAKEMAN 20-17-2CDH		Threshold Value=1.00		† = interpolated/extrapolated station		
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
2813.00†	2769.95	-113.81	361.35	2621.20	2595.36	-70.86	-376.36	164.54	759.31	21.04	37.32	PASS
2913.00†	2866.97	-121.08	384.45	2710.41	2681.85	-77.36	-397.21	164.39	804.47	21.76	38.18	PASS
3013.00†	2963.99	-128.35	407.55	2799.61	2768.34	-83.86	-418.05	164.27	849.64	22.49	38.97	PASS
3113.00†	3061.02	-135.63	430.65	2888.81	2854.83	-90.36	-438.90	164.15	894.81	23.24	39.69	PASS
3213.00†	3158.04	-142.90	453.75	2978.02	2941.32	-96.86	-459.75	164.05	939.98	23.99	40.35	PASS
3313.00†	3255.06	-150.18	476.85	3067.22	3027.81	-103.36	-480.60	163.95	985.16	24.74	40.96	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: WAKEMAN 20-17-2CDH PWB Offset Wellpath: WAKEMAN 20-17-2CDH PWP (REV-A.0)

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: WAKEMAN 20-17-2CDH PWB Offset Wellpath: WAKEMAN 20-17-2CDH PWP (REV-A.0)

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	13.00	1800.00	1787.00	13.00	1797.47	-0.15	-91.41	-4.10	-104.08
8.5in Open Hole	1800.00	17954.40	16154.40	1797.47	N/A	-4.10	-104.08	N/A	N/A

SURVEY PROGRAM - Offset Wellbore: WAKEMAN 20-17-2CDH PWB Offset Wellpath: WAKEMAN 20-17-2CDH PWP (REV-A.0)

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
13.00	17954.40	Custom BHI NaviTrak (Standard Rotating+Axial Corr) (Rockies 0.03Gt model)		WAKEMAN 20-17-2CDH PWB



Clearance Report
WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 70 of 85



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

OFFSET WELLPATH REFERENCE - Offset Wellbore: WAKEMAN 20-17-2CDH PWB Offset Wellpath: WAKEMAN 20-17-2CDH PWP (REV-A.0)	
MD Reference: RIG (13'KB) (RKB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	13.00ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 71 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: BOX ELDER #32-20 AWB Offset Wellpath: BOX ELDER #32-20 AWP

Facility: SEC.20-T01S-R65W Slot: SLOT#02 EX. BOX ELDER #32-20 (1980'FNL & 2080'FEL, SEC.20, OG, PR) Well: BOX ELDER #32-20 Threshold Value=1.00 † = Interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
13.00	13.00	0.00	0.00	-13.00	18.00	3024.73	-131.85	-2.50	3027.60	25.40	123.03	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: BOX ELDER #32-20 AWB Offset Wellpath: BOX ELDER #32-20 AWP

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	3.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: BOX ELDER #32-20 AWB Offset Wellpath: BOX ELDER #32-20 AWP

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]
12.25in Open Hole	0.00	1561.00	1561.00	18.00	1579.00	1843.47	-88.84	1843.47	-88.84
8.625in Casing Surface	0.00	1561.00	1561.00	18.00	1579.00	1843.47	-88.84	1843.47	-88.84
7.875in Open Hole	1561.00	8292.00	6731.00	1579.00	8310.00	1843.47	-88.84	1843.47	-88.84
4.5in Casing Production	0.00	8292.00	8292.00	18.00	8310.00	1843.47	-88.84	1843.47	-88.84

WELLPATH COMPOSITION - Offset Wellbore: BOX ELDER #32-20 AWB Offset Wellpath: BOX ELDER #32-20 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	8314.00	Drift Indicator - Inclination Only (Actual Survey)	ASSUMED VERTICAL <8314>	BOX ELDER #32-20 AWB

OFFSET WELLPATH REFERENCE - Offset Wellbore: BOX ELDER #32-20 AWB Offset Wellpath: BOX ELDER #32-20 AWP

MD Reference: Rig on SLOT#02 EX. BOX ELDER #32-20 (1980'FNL & 2080'FEL, SEC.20, OG, PR) (RT)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	0.00ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 72 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-1NBH PWB Offset Wellpath: WAKEMAN 20-17-1NBH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#13 WAKEMAN 20-17-1NBH (293'FSL & 2203'FEL, SEC.20) Well: WAKEMAN 20-17-1NBH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
13.00	13.00	0.00	0.00	13.00	13.00	-0.28	-164.96	-90.10	164.96	1.40	273.60	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	-0.28	-164.96	-90.10	164.96	1.73	176.43	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	-0.28	-164.96	-90.10	164.96	2.31	108.91	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	-0.28	-164.96	-90.10	164.96	2.92	77.66	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	-0.28	-164.96	-90.10	164.96	3.53	60.13	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	-0.28	-164.96	-90.10	164.96	4.15	48.99	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	-0.28	-164.96	-90.10	164.96	4.78	41.31	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	-0.28	-164.96	-90.10	164.96	5.40	35.70	PASS	
813.00†	813.00	0.00	0.00	813.00	813.00	-0.28	-164.96	-90.10	164.96	6.03	31.42	PASS	
900.00	900.00	0.00	0.00	900.00	900.00	-0.28	-164.96	-90.10	164.96	6.57	28.46	PASS	
913.00†	913.00	-0.01	0.03	913.00	913.00	-0.28	-164.96	162.43	164.96	6.65	28.07	PASS	
1013.00†	1012.97	-0.67	2.13	1012.97	1012.97	-0.28	-164.96	162.64	167.09	7.38	25.27	PASS	
1113.00†	1112.80	-2.38	7.55	1112.80	1112.80	-0.28	-164.96	163.17	172.52	8.37	22.68	PASS	
1213.00†	1212.38	-5.13	16.29	1211.67	1211.67	-0.28	-164.99	163.95	181.34	9.29	21.27	PASS	
1313.00†	1311.57	-8.93	28.35	1304.74	1304.71	-0.74	-166.82	164.69	195.46	10.23	20.65	PASS	
1413.00†	1410.26	-13.76	43.69	1396.28	1396.12	-1.89	-171.49	165.28	215.97	11.30	20.50	PASS	
1513.00†	1508.33	-19.63	62.32	1485.76	1485.29	-3.70	-178.79	165.70	242.73	12.32	21.01	PASS	
1600.74	1593.77	-25.62	81.34	1562.21	1561.25	-5.77	-187.16	165.94	271.19	13.11	21.97	PASS	
1613.00†	1605.67	-26.51	84.17	1572.73	1571.68	-6.09	-188.47	165.98	275.51	13.21	22.13	PASS	
1713.00†	1702.69	-33.78	107.27	1657.49	1655.55	-9.03	-200.35	166.22	312.19	13.92	23.73	PASS	
1813.00†	1799.71	-41.06	130.37	1740.35	1737.16	-12.47	-214.29	166.27	351.45	14.51	25.49	PASS	
1913.00†	1896.74	-48.33	153.47	1821.25	1816.39	-16.38	-230.10	166.19	393.19	15.16	27.16	PASS	
2013.00†	1993.76	-55.61	176.56	1900.12	1893.17	-20.71	-247.60	166.03	437.32	15.81	28.91	PASS	
2113.00†	2090.78	-62.88	199.66	1976.92	1967.43	-25.41	-266.61	165.81	483.76	16.46	30.67	PASS	
2213.00†	2187.81	-70.16	222.76	2051.63	2039.14	-30.43	-286.94	165.55	532.43	17.09	32.46	PASS	
2313.00†	2284.83	-77.43	245.86	2128.21	2112.09	-36.03	-309.57	165.27	583.15	17.75	34.19	PASS	
2413.00†	2381.85	-84.71	268.96	2214.03	2193.67	-42.42	-335.42	164.97	634.41	18.35	35.92	PASS	
2513.00†	2478.88	-91.98	292.06	2299.85	2275.26	-48.81	-361.27	164.73	685.69	19.01	37.43	PASS	
2613.00†	2575.90	-99.26	315.16	2385.67	2356.84	-55.20	-387.12	164.51	736.97	19.68	38.80	PASS	
2713.00†	2672.92	-106.53	338.26	2471.49	2438.43	-61.59	-412.97	164.33	788.26	20.37	40.05	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report
WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 73 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293°FSL & 2038°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-1NBH PWB Offset Wellpath: WAKEMAN 20-17-1NBH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#13 WAKEMAN 20-17-1NBH (293°FSL & 2203°FEL, SEC.20) Well: WAKEMAN 20-17-1NBH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
2813.00†	2769.95	-113.81	361.35	2557.31	2520.01	-67.98	-438.82	164.16	839.55	21.07	41.19	PASS	
2913.00†	2866.97	-121.08	384.45	2643.13	2601.59	-74.37	-464.67	164.02	890.85	21.79	42.22	PASS	
3013.00†	2963.99	-128.35	407.55	2728.95	2683.18	-80.76	-490.52	163.89	942.15	22.52	43.17	PASS	
3113.00†	3061.02	-135.63	430.65	2814.77	2764.76	-87.15	-516.37	163.78	993.46	23.26	44.03	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: WAKEMAN 20-17-1NBH PWB Offset Wellpath: WAKEMAN 20-17-1NBH PWP (REV-A.0)

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: WAKEMAN 20-17-1NBH PWB Offset Wellpath: WAKEMAN 20-17-1NBH PWP (REV-A.0)

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	13.00	1800.00	1787.00	13.00	1795.62	-0.17	-100.56	-4.75	-119.08
8.5in Open Hole	1800.00	17835.13	16035.13	1795.62	N/A	-4.75	-119.08	N/A	N/A

SURVEY PROGRAM - Offset Wellbore: WAKEMAN 20-17-1NBH PWB Offset Wellpath: WAKEMAN 20-17-1NBH PWP (REV-A.0)

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
13.00	17835.13	Custom BHI NaviTrak (Standard Rotating+Axial Corr) (Rockies 0.03Gt model)		WAKEMAN 20-17-1NBH PWB



Clearance Report
WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 74 of 85



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

OFFSET WELLPATH REFERENCE - Offset Wellbore: WAKEMAN 20-17-1NBH PWB Offset Wellpath: WAKEMAN 20-17-1NBH PWP (REV-A.0)	
MD Reference: RIG (13'KB) (RKB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	13.00ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 75 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-1NCH PWB Offset Wellpath: WAKEMAN 20-17-1NCH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W				Slot: SLOT#14 WAKEMAN 20-17-1NCH (293'FSL & 2218'FEL, SEC.20)		Well: WAKEMAN 20-17-1NCH		Threshold Value=1.00		† = interpolated/extrapolated station			
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
13.00	13.00	0.00	0.00	16.00	13.00	-0.30	-179.90	-90.10	179.90	1.40	298.50	PASS	
113.00†	113.00	0.00	0.00	116.00	113.00	-0.30	-179.90	-90.10	179.90	1.73	192.46	PASS	
213.00†	213.00	0.00	0.00	216.00	213.00	-0.30	-179.90	-90.10	179.90	2.31	118.80	PASS	
313.00†	313.00	0.00	0.00	316.00	313.00	-0.30	-179.90	-90.10	179.90	2.92	84.72	PASS	
413.00†	413.00	0.00	0.00	416.00	413.00	-0.30	-179.90	-90.10	179.90	3.53	65.59	PASS	
513.00†	513.00	0.00	0.00	516.00	513.00	-0.30	-179.90	-90.10	179.90	4.15	53.44	PASS	
613.00†	613.00	0.00	0.00	616.00	613.00	-0.30	-179.90	-90.10	179.90	4.78	45.06	PASS	
713.00†	713.00	0.00	0.00	716.00	713.00	-0.30	-179.90	-90.10	179.90	5.40	38.94	PASS	
813.00†	813.00	0.00	0.00	816.00	813.00	-0.30	-179.90	-90.10	179.90	6.03	34.28	PASS	
900.00	900.00	0.00	0.00	903.00	900.00	-0.30	-179.90	-90.10	179.90	6.57	31.05	PASS	
913.00†	913.00	-0.01	0.03	916.00	913.00	-0.30	-179.90	162.43	179.93	6.65	30.62	PASS	
1013.00†	1012.97	-0.67	2.13	1015.03	1012.03	-0.31	-179.94	162.62	182.07	7.38	27.56	PASS	
1113.00†	1112.80	-2.38	7.55	1108.79	1105.76	-0.72	-181.93	162.93	189.62	8.45	24.69	PASS	
1213.00†	1212.38	-5.13	16.29	1201.56	1198.40	-1.72	-186.85	163.26	203.65	9.65	22.92	PASS	
1313.00†	1311.57	-8.93	28.35	1292.79	1289.28	-3.28	-194.55	163.58	224.08	10.76	22.42	PASS	
1413.00†	1410.26	-13.76	43.69	1381.96	1377.82	-5.37	-204.82	163.84	250.76	11.75	22.82	PASS	
1513.00†	1508.33	-19.63	62.32	1468.57	1463.49	-7.93	-217.37	164.03	283.50	12.72	23.72	PASS	
1600.74	1593.77	-25.62	81.34	1542.14	1535.91	-10.50	-230.02	164.14	317.05	13.50	24.91	PASS	
1613.00†	1605.67	-26.51	84.17	1552.23	1545.82	-10.88	-231.90	164.18	322.06	13.59	25.12	PASS	
1713.00†	1702.69	-33.78	107.27	1633.41	1625.26	-14.21	-248.24	164.42	364.37	14.25	27.04	PASS	
1813.00†	1799.71	-41.06	130.37	1712.50	1702.18	-17.88	-266.28	164.51	409.12	14.84	28.98	PASS	
1913.00†	1896.74	-48.33	153.47	1789.46	1776.51	-21.85	-285.83	164.51	456.22	15.48	30.93	PASS	
2013.00†	1993.76	-55.61	176.56	1864.28	1848.23	-26.10	-306.69	164.45	505.56	16.06	32.88	PASS	
2113.00†	2090.78	-62.88	199.66	1936.94	1917.33	-30.58	-328.71	164.34	557.05	16.69	34.80	PASS	
2213.00†	2187.81	-70.16	222.76	2007.45	1983.81	-35.26	-351.71	164.21	610.61	17.29	36.79	PASS	
2313.00†	2284.83	-77.43	245.86	2085.06	2056.46	-40.70	-378.47	164.04	665.80	17.90	38.68	PASS	
2413.00†	2381.85	-84.71	268.96	2168.34	2134.37	-46.57	-407.31	163.88	721.14	18.53	40.42	PASS	
2513.00†	2478.88	-91.98	292.06	2251.62	2212.27	-52.44	-436.15	163.74	776.49	19.19	41.99	PASS	
2613.00†	2575.90	-99.26	315.16	2334.89	2290.17	-58.31	-464.99	163.63	831.83	19.86	43.40	PASS	
2713.00†	2672.92	-106.53	338.26	2418.17	2368.07	-64.17	-493.83	163.52	887.18	20.55	44.68	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 76 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-1NCH PWB Offset Wellpath: WAKEMAN 20-17-1NCH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#14 WAKEMAN 20-17-1NCH (293'FSL & 2218'FEL, SEC.20) Well: WAKEMAN 20-17-1NCH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
2813.00†	2769.95	-113.81	361.35	2501.44	2445.97	-70.04	-522.67	163.43	942.53	21.25	45.85	PASS	
2913.00†	2866.97	-121.08	384.45	2584.72	2523.87	-75.91	-551.51	163.35	997.89	21.97	46.91	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: WAKEMAN 20-17-1NCH PWB Offset Wellpath: WAKEMAN 20-17-1NCH PWP (REV-A.0)

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: WAKEMAN 20-17-1NCH PWB Offset Wellpath: WAKEMAN 20-17-1NCH PWP (REV-A.0)

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	16.00	1800.00	1784.00	16.00	1789.64	-0.19	-109.67	-6.93	-142.82
8.5in Open Hole	1800.00	18013.26	16213.26	1789.64	N/A	-6.93	-142.82	N/A	N/A

SURVEY PROGRAM - Offset Wellbore: WAKEMAN 20-17-1NCH PWB Offset Wellpath: WAKEMAN 20-17-1NCH PWP (REV-A.0)

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	18013.26	Custom BHI NaviTrak (Standard Rotating+Axial Corr) (Rockies 0.03Gt model)		WAKEMAN 20-17-1NCH PWB

OFFSET WELLPATH REFERENCE - Offset Wellbore: WAKEMAN 20-17-1NCH PWB Offset Wellpath: WAKEMAN 20-17-1NCH PWP (REV-A.0)

MD Reference: RIG (13'KB) (RKB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	16.00ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 77 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-1NAH PWB Offset Wellpath: WAKEMAN 20-17-1NAH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W Slot: SLOT#15 WAKEMAN 20-17-1NAH (293'FSL & 2233'FEL, SEC.20) Well: WAKEMAN 20-17-1NAH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
13.00	13.00	0.00	0.00	16.00	13.00	-0.30	-194.96	-90.09	194.96	1.40	323.60	PASS	
113.00†	113.00	0.00	0.00	116.00	113.00	-0.30	-194.96	-90.09	194.96	1.73	208.63	PASS	
213.00†	213.00	0.00	0.00	216.00	213.00	-0.30	-194.96	-90.09	194.96	2.31	128.78	PASS	
313.00†	313.00	0.00	0.00	316.00	313.00	-0.30	-194.96	-90.09	194.96	2.92	91.84	PASS	
413.00†	413.00	0.00	0.00	416.00	413.00	-0.30	-194.96	-90.09	194.96	3.53	71.11	PASS	
513.00†	513.00	0.00	0.00	516.00	513.00	-0.30	-194.96	-90.09	194.96	4.15	57.94	PASS	
613.00†	613.00	0.00	0.00	616.00	613.00	-0.30	-194.96	-90.09	194.96	4.78	48.85	PASS	
713.00†	713.00	0.00	0.00	716.00	713.00	-0.30	-194.96	-90.09	194.96	5.40	42.22	PASS	
813.00†	813.00	0.00	0.00	816.00	813.00	-0.30	-194.96	-90.09	194.96	6.03	37.16	PASS	
900.00	900.00	0.00	0.00	902.81	899.81	-0.30	-194.96	-90.09	194.96	6.57	33.67	PASS	
913.00†	913.00	-0.01	0.03	915.00	912.00	-0.30	-195.00	162.43	195.03	6.65	33.23	PASS	
1013.00†	1012.97	-0.67	2.13	1008.58	1005.56	-0.69	-196.98	162.48	199.25	7.47	29.76	PASS	
1113.00†	1112.80	-2.38	7.55	1101.49	1098.32	-1.64	-201.92	162.59	209.97	8.77	26.25	PASS	
1213.00†	1212.38	-5.13	16.29	1193.14	1189.63	-3.13	-209.68	162.74	227.12	9.95	24.75	PASS	
1313.00†	1311.57	-8.93	28.35	1283.00	1278.86	-5.14	-220.06	162.91	250.58	11.04	24.40	PASS	
1413.00†	1410.26	-13.76	43.69	1370.57	1365.45	-7.60	-232.82	163.06	280.19	11.99	24.97	PASS	
1513.00†	1508.33	-19.63	62.32	1455.39	1448.92	-10.46	-247.66	163.17	315.75	12.88	26.08	PASS	
1600.74	1593.77	-25.62	81.34	1527.25	1519.25	-13.25	-262.12	163.24	351.67	13.66	27.28	PASS	
1613.00†	1605.67	-26.51	84.17	1537.10	1528.86	-13.66	-264.24	163.28	357.00	13.76	27.48	PASS	
1713.00†	1702.69	-33.78	107.27	1616.23	1605.79	-17.16	-282.42	163.52	401.90	14.40	29.50	PASS	
1813.00†	1799.71	-41.06	130.37	1693.22	1680.12	-20.96	-302.10	163.64	449.15	14.98	31.52	PASS	
1913.00†	1896.74	-48.33	153.47	1768.05	1751.82	-25.01	-323.11	163.67	498.66	15.61	33.53	PASS	
2013.00†	1993.76	-55.61	176.56	1840.71	1820.89	-29.28	-345.26	163.65	550.34	16.19	35.51	PASS	
2113.00†	2090.78	-62.88	199.66	1911.20	1887.33	-33.75	-368.39	163.59	604.09	16.78	37.54	PASS	
2213.00†	2187.81	-70.16	222.76	1979.55	1951.18	-38.36	-392.33	163.49	659.81	17.42	39.43	PASS	
2313.00†	2284.83	-77.43	245.86	2054.96	2021.07	-43.73	-420.14	163.37	717.12	17.99	41.45	PASS	
2413.00†	2381.85	-84.71	268.96	2136.78	2096.85	-49.57	-450.44	163.26	774.60	18.62	43.20	PASS	
2513.00†	2478.88	-91.98	292.06	2218.60	2172.62	-55.42	-480.75	163.16	832.08	19.28	44.77	PASS	
2613.00†	2575.90	-99.26	315.16	2300.42	2248.40	-61.26	-511.05	163.07	889.56	19.96	46.18	PASS	
2713.00†	2672.92	-106.53	338.26	2382.24	2324.17	-67.11	-541.36	163.00	947.05	20.65	47.46	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report
WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 78 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

POSITIONAL UNCERTAINTY - Offset Wellbore: WAKEMAN 20-17-1NAH PWB Offset Wellpath: WAKEMAN 20-17-1NAH PWP (REV-A.0)

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: WAKEMAN 20-17-1NAH PWB Offset Wellpath: WAKEMAN 20-17-1NAH PWP (REV-A.0)

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	16.00	1800.00	1784.00	16.00	1785.27	-0.18	-118.85	-8.27	-160.81
8.5in Open Hole	1800.00	17822.97	16022.97	1785.27	7230.00	-8.27	-160.81	3041.22	-925.39

SURVEY PROGRAM - Offset Wellbore: WAKEMAN 20-17-1NAH PWB Offset Wellpath: WAKEMAN 20-17-1NAH PWP (REV-A.0)

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	17886.70	Custom BHI NaviTrak (Standard Rotating+Axial Corr) (Rockies 0.03Gt model)		WAKEMAN 20-17-1NAH PWB

OFFSET WELLPATH REFERENCE - Offset Wellbore: WAKEMAN 20-17-1NAH PWB Offset Wellpath: WAKEMAN 20-17-1NAH PWP (REV-A.0)

MD Reference: RIG (13'KB) (RKB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	16.00ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 79 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-1CDH PWB Offset Wellpath: WAKEMAN 20-17-1CDH PWP (REV-A.0)

Facility: SEC.20-T01S-R65W				Slot: SLOT#16 WAKEMAN 20-17-1CDH (293'FSL & 2248'FEL, SEC.20)				Well: WAKEMAN 20-17-1CDH		Threshold Value=1.00		† = interpolated/extrapolated station	
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
13.00	13.00	0.00	0.00	13.00	13.00	-0.40	-209.91	-90.11	209.91	1.40	348.51	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	-0.40	-209.91	-90.11	209.91	1.73	224.67	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	-0.40	-209.91	-90.11	209.91	2.31	138.68	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	-0.40	-209.91	-90.11	209.91	2.92	98.90	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	-0.40	-209.91	-90.11	209.91	3.53	76.58	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	-0.40	-209.91	-90.11	209.91	4.15	62.39	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	-0.40	-209.91	-90.11	209.91	4.78	52.61	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	-0.40	-209.91	-90.11	209.91	5.40	45.47	PASS	
813.00†	813.00	0.00	0.00	812.12	812.12	-0.40	-209.93	-90.11	209.93	6.02	40.06	PASS	
900.00	900.00	0.00	0.00	893.23	893.22	-0.66	-211.40	-90.18	211.51	6.65	36.02	PASS	
913.00†	913.00	-0.01	0.03	905.34	905.32	-0.73	-211.81	162.32	211.98	6.75	35.53	PASS	
1013.00†	1012.97	-0.67	2.13	998.18	998.02	-1.57	-216.66	162.22	219.30	7.82	31.12	PASS	
1113.00†	1112.80	-2.38	7.55	1090.07	1089.58	-2.90	-224.36	162.21	233.07	9.09	28.01	PASS	
1213.00†	1212.38	-5.13	16.29	1180.46	1179.34	-4.71	-234.76	162.27	253.22	10.25	26.72	PASS	
1313.00†	1311.57	-8.93	28.35	1268.82	1266.73	-6.94	-247.62	162.35	279.59	11.22	26.76	PASS	
1413.00†	1410.26	-13.76	43.69	1354.68	1351.22	-9.55	-262.65	162.45	312.01	12.15	27.43	PASS	
1513.00†	1508.33	-19.63	62.32	1437.63	1432.38	-12.47	-279.53	162.53	350.26	13.11	28.39	PASS	
1600.74	1593.77	-25.62	81.34	1507.73	1500.55	-15.26	-295.60	162.57	388.43	13.83	29.76	PASS	
1613.00†	1605.67	-26.51	84.17	1517.33	1509.85	-15.67	-297.93	162.61	394.08	13.92	29.97	PASS	
1713.00†	1702.69	-33.78	107.27	1594.37	1584.22	-19.10	-317.73	162.88	441.44	14.55	32.06	PASS	
1813.00†	1799.71	-41.06	130.37	1669.23	1655.95	-22.76	-338.84	163.03	491.08	15.12	34.14	PASS	
1913.00†	1896.74	-48.33	153.47	1741.91	1725.03	-26.62	-361.10	163.11	542.90	15.74	36.19	PASS	
2013.00†	1993.76	-55.61	176.56	1812.41	1791.47	-30.65	-384.34	163.14	596.79	16.28	38.27	PASS	
2113.00†	2090.78	-62.88	199.66	1880.75	1855.30	-34.83	-408.39	163.12	652.67	16.94	40.16	PASS	
2213.00†	2187.81	-70.16	222.76	1951.17	1920.47	-39.38	-434.67	163.08	710.37	17.46	42.36	PASS	
2313.00†	2284.83	-77.43	245.86	2032.48	1995.54	-44.72	-465.45	163.02	768.58	18.08	44.20	PASS	
2413.00†	2381.85	-84.71	268.96	2113.80	2070.62	-50.06	-496.23	162.98	826.79	18.72	45.86	PASS	
2513.00†	2478.88	-91.98	292.06	2195.11	2145.69	-55.40	-527.00	162.94	884.99	19.38	47.35	PASS	
2613.00†	2575.90	-99.26	315.16	2276.42	2220.76	-60.74	-557.78	162.90	943.20	20.06	48.70	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 80 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

POSITIONAL UNCERTAINTY - Offset Wellbore: WAKEMAN 20-17-1CDH PWB Offset Wellpath: WAKEMAN 20-17-1CDH PWP (REV-A.0)

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: WAKEMAN 20-17-1CDH PWB Offset Wellpath: WAKEMAN 20-17-1CDH PWP (REV-A.0)

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	13.00	1800.00	1787.00	13.00	1779.82	-0.24	-127.96	-9.24	-179.84
8.5in Open Hole	1800.00	18287.12	16487.12	1779.82	7638.00	-9.24	-179.84	3041.26	-960.42

SURVEY PROGRAM - Offset Wellbore: WAKEMAN 20-17-1CDH PWB Offset Wellpath: WAKEMAN 20-17-1CDH PWP (REV-A.0)

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
13.00	18383.57	Custom BHI NaviTrak (Standard Rotating+Axial Corr) (Rockies 0.03Gt model)		WAKEMAN 20-17-1CDH PWB

OFFSET WELLPATH REFERENCE - Offset Wellbore: WAKEMAN 20-17-1CDH PWB Offset Wellpath: WAKEMAN 20-17-1CDH PWP (REV-A.0)

MD Reference: RIG (13'KB) (RKB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	13.00ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 81 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: COLLINS HH #20-3J AWB Offset Wellpath: COLLINS HH #20-3J AWP

Facility: SEC.20-T1S-R65W		Slot: SLOT#02 EX. COLLINS HH #20-3J (814'FNL & 1886'FWL, SEC.20, 8163, PR)		Well: COLLINS HH #20-3J		Threshold Value=1.00 † = Interpolated/extrapolated station							
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
13.00	13.00	0.00	0.00	-13.00	49.00	4193.77	-1444.84	-19.01	4435.82	25.40	180.28	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: COLLINS HH #20-3J AWB Offset Wellpath: COLLINS HH #20-3J AWP

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: COLLINS HH #20-3J AWB Offset Wellpath: COLLINS HH #20-3J AWP

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]
12.25in Open Hole	0.00	1529.00	1529.00	49.00	1578.00	2552.45	-892.42	2552.45	-892.42
8.625in Casing Surface	0.00	1529.00	1529.00	49.00	1578.00	2552.45	-892.42	2552.45	-892.42
7.875in Open Hole	1529.00	8141.00	6612.00	1578.00	8190.00	2552.45	-892.42	2552.45	-892.42
4.5in Casing Production	0.00	8141.00	8141.00	49.00	8190.00	2552.45	-892.42	2552.45	-892.42

WELLPATH COMPOSITION - Offset Wellbore: COLLINS HH #20-3J AWB Offset Wellpath: COLLINS HH #20-3J AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	8163.00	Drift Indicator - Inclination Only (Actual Survey)	ASSUMED VERTICAL COGCC <8163>	COLLINS HH #20-3J AWB

OFFSET WELLPATH REFERENCE - Offset Wellbore: COLLINS HH #20-3J AWB Offset Wellpath: COLLINS HH #20-3J AWP

MD Reference: Rig on SLOT#02 EX. COLLINS HH #20-3J (814'FNL & 1886'FWL, SEC.20, OG) (RT)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	0.00ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 82 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: AMOCO #24-17 Offset Wellpath: AMOCO #24-17 AWP

Facility: SEC.17-T1S-R65W Slot: SLOT#02 EX. AMOCO #24-17 (990'FSL & 1360'FWL, SEC.17, OG, PR, 8130) Well: AMOCO #24-17 Threshold Value=1.00 † = interpolated/extrapolated station											
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	ACR Status
13.00	13.00	0.00	0.00	-13.00	73.00	5966.64	-1982.45	-18.38	6287.65	25.40	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: AMOCO #24-17 Offset Wellpath: AMOCO #24-17 AWP

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: AMOCO #24-17 Offset Wellpath: AMOCO #24-17 AWP

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]
12.25in Open Hole	0.00	218.00	218.00	73.00	291.00	3631.68	-1225.04	3631.68	-1225.04
8.625in Casing Surface	0.00	218.00	218.00	73.00	291.00	3631.68	-1225.04	3631.68	-1225.04
7.875in Open Hole	218.00	8129.00	7911.00	291.00	8202.00	3631.68	-1225.04	3631.68	-1225.04
4.5in Casing Production	0.00	8129.00	8129.00	73.00	8202.00	3631.68	-1225.04	3631.68	-1225.04

WELLPATH COMPOSITION - Offset Wellbore: AMOCO #24-17 Offset Wellpath: AMOCO #24-17 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	8130.00	Drift Indicator - Inclination Only (Actual Survey)	ASSUMED VERTICAL COGCC <8130>	AMOCO #24-17

OFFSET WELLPATH REFERENCE - Offset Wellbore: AMOCO #24-17 Offset Wellpath: AMOCO #24-17 AWP

MD Reference: Rig on SLOT#02 EX. AMOCO #24-17 (990'FSL & 1360'FWL, SEC.17, OG, PR) (RT)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	0.00ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 83 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: AMOCO #17-32 AWB Offset Wellpath: AMOCO #17-32 AWP

Facility: SEC.17-T1S-R65W		Slot: SLOT#01 EX. AMOCO #17-32 (2013'FSL & 464'FWL, SEC.17, OG, PR, 8140)		Well: AMOCO #17-32		Threshold Value=1.00		† = interpolated/extrapolated station				
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
13.00	13.00	0.00	0.00	-13.00	81.00	6832.28	-2937.84	-23.27	7437.44	25.40	302.28	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: AMOCO #17-32 AWB Offset Wellpath: AMOCO #17-32 AWP

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: AMOCO #17-32 AWB Offset Wellpath: AMOCO #17-32 AWP

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]
11in Open Hole	0.00	1450.00	1450.00	81.00	1531.00	4156.75	-1809.75	4156.75	-1809.75
8.625in Casing Surface	0.00	1450.00	1450.00	81.00	1531.00	4156.75	-1809.75	4156.75	-1809.75
7.875in Open Hole	1450.00	8150.00	6700.00	1531.00	N/A	4156.75	-1809.75	N/A	N/A
4.5in Casing Production	0.00	8150.00	8150.00	81.00	N/A	4156.75	-1809.75	N/A	N/A

WELLPATH COMPOSITION - Offset Wellbore: AMOCO #17-32 AWB Offset Wellpath: AMOCO #17-32 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	8140.00	Drift Indicator - Inclination Only (Actual Survey)	ASSUMED VERTICAL COGCC <8140>	AMOCO #17-32 AWB

OFFSET WELLPATH REFERENCE - Offset Wellbore: AMOCO #17-32 AWB Offset Wellpath: AMOCO #17-32 AWP

MD Reference: Rig on SLOT#03 EX. AMOCO #17-32 (2013'FSL & 464'FWL, SEC.14, OG, PR) (RT)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	0.00ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 84 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293°FSL & 2038°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: PUTNAM 41-18 AWB Offset Wellpath: PUTNAM 41-18 AWP

Facility: SEC.18-T01S-R65W Slot: SLOT#01 EX PUTNAM 41-18 (990°FNL & 990°FEL, SEC.18, SI,8092') Well: PUTNAM 41-18 Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
13.00	13.00	0.00	0.00	-13.00	104.00	9200.23	-4427.52	-25.70	10210.56	25.40	415.01	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: PUTNAM 41-18 AWB Offset Wellpath: PUTNAM 41-18 AWP

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

WELLPATH COMPOSITION - Offset Wellbore: PUTNAM 41-18 AWB Offset Wellpath: PUTNAM 41-18 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	8092.00	Drift Indicator - Inclination Only (Actual Survey)	ASSUMED VERTICAL <8092>	PUTNAM 41-18 AWB

OFFSET WELLPATH REFERENCE - Offset Wellbore: PUTNAM 41-18 AWB Offset Wellpath: PUTNAM 41-18 AWP

MD Reference: Rig on SLOT#01 EX PUTNAM 41-18 (990°FNL & 990°FEL, SEC.18, SI,8092') (RT)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	0.00ft



Clearance Report

WAKEMAN 20-17-4NAH PWP (REV-A.0)
Closest Approach
Page 85 of 85



REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#02 WAKEMAN 20-17-4NAH (293°FSL & 2038°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4NAH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4NAH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: COLLINS #14-20 AWB Offset Wellpath: COLLINS #14-20 AWP

Facility: SEC.20-T1S-R65W Slot: SLOT#01 EX. COLLINS #14-20 (990°FSL & 990°FSL, SEC.20, OG, PR, 8202) Well: COLLINS #14-20 Threshold Value=1.00 † = interpolated/extrapolated station											
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	ACR Status
13.00	13.00	0.00	0.00	-13.00	17.00	703.47	-2279.40	-72.85	2385.49	25.40	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: COLLINS #14-20 AWB Offset Wellpath: COLLINS #14-20 AWP

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: COLLINS #14-20 AWB Offset Wellpath: COLLINS #14-20 AWP

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]
12.25in Open Hole	0.00	150.00	150.00	17.00	167.00	422.51	-1391.45	422.51	-1391.45
8.625in Casing Surface	0.00	150.00	150.00	17.00	167.00	422.51	-1391.45	422.51	-1391.45
7.875in Open Hole	150.00	8194.00	8044.00	167.00	8211.00	422.51	-1391.45	422.51	-1391.45
4.5in Casing Production	0.00	8194.00	8194.00	17.00	8211.00	422.51	-1391.45	422.51	-1391.45

WELLPATH COMPOSITION - Offset Wellbore: COLLINS #14-20 AWB Offset Wellpath: COLLINS #14-20 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	8202.00	Drift Indicator - Inclination Only (Actual Survey)	ASSUMED VERTICAL COGCC <8202>	COLLINS #14-20 AWB

OFFSET WELLPATH REFERENCE - Offset Wellbore: COLLINS #14-20 AWB Offset Wellpath: COLLINS #14-20 AWP

MD Reference: Rig on SLOT#01 EX. COLLINS #14-20 (990°FSL & 990°FSL, SEC.20, OG, PR) (RT)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	0.00ft