

# PETROSHARE

Location: COLORADO Slot: SLOT#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20)  
Field: ADAMS COUNTY (NAD83/ GRID NORTH) Well: WAKEMAN 20-17-2NBH  
Facility: SEC.20-T01S-R65W Wellbore: WAKEMAN 20-17-2NBH PWB

Plot reference wellpath is WAKEMAN 20-17-2NBH PWP (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#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: ingmjmr on 2017-09-22
	Database: WellArchitectDB1

## Location Information

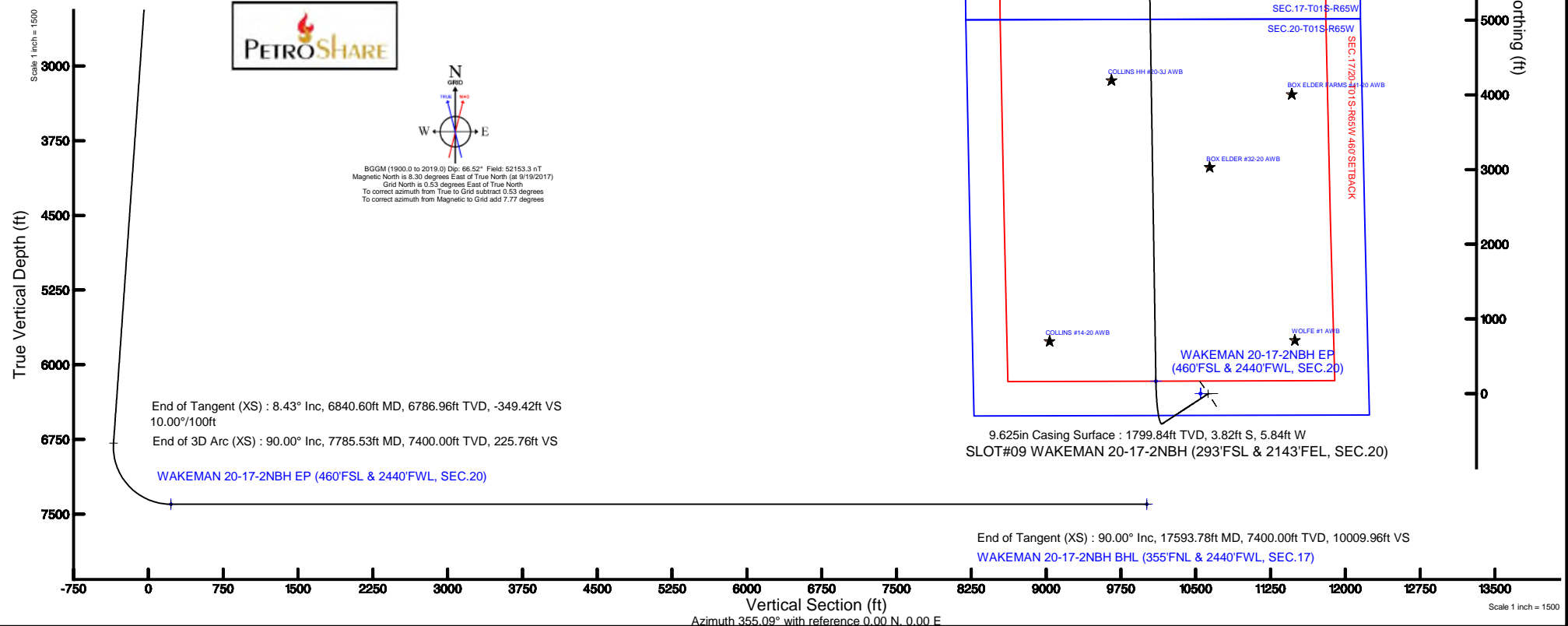
Facility Name				Grid East (US R)	Grid North (US R)	Latitude	Longitude
SEC.20-T01S-R65W				3228360.558	1223518.730	39°56'38.622"N	104°41'07.909"W
Slot				Local N (ft)	Local E (ft)	Grid East (US R)	Grid North (US R)
SLOT#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20)				-0.27	-119.95	3228240.609	1223518.463
RIG (13KB) (RKB) to Ground level (At Slot: SLOT#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20))							5203R
Mean Sea Level to Ground level (At Slot: SLOT#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20))							0ft
RIG (13KB) (RKB) to Mean Sea Level							5203R

## 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	1799.84	0.00	0.00	-3.82	-5.84	WAKEMAN 20-17-2NBH PWB
8.5in Open Hole	1800.00	17593.78	15793.78	1799.84	N/A	-3.82	-5.84	N/A	N/A	WAKEMAN 20-17-2NBH PWB

## Survey Program

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





# Planned Wellpath Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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 1:19:22 PM
Convergence at slot	0.53° East	Database/Source file	WellArchitectDB1/WAKEMAN_20-17-2NBH_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	-0.27	-119.95	3228240.61	1223518.46	39°56'38.630"N	104°41'09.449"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#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'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	355.09°



# Planned Wellpath Report

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Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH PWB
Facility	SEC.20-T01S-R65W		

## WELLPATH DATA (187 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	236.824	0.00	0.00	0.00	0.00	39°56'38.630"N	104°41'09.449"W	0.00	
13.00	0.000	236.824	13.00	0.00	0.00	0.00	39°56'38.630"N	104°41'09.449"W	0.00	Tie On
113.00†	0.000	236.824	113.00	0.00	0.00	0.00	39°56'38.630"N	104°41'09.449"W	0.00	
213.00†	0.000	236.824	213.00	0.00	0.00	0.00	39°56'38.630"N	104°41'09.449"W	0.00	
313.00†	0.000	236.824	313.00	0.00	0.00	0.00	39°56'38.630"N	104°41'09.449"W	0.00	
413.00†	0.000	236.824	413.00	0.00	0.00	0.00	39°56'38.630"N	104°41'09.449"W	0.00	
513.00†	0.000	236.824	513.00	0.00	0.00	0.00	39°56'38.630"N	104°41'09.449"W	0.00	
613.00†	0.000	236.824	613.00	0.00	0.00	0.00	39°56'38.630"N	104°41'09.449"W	0.00	
713.00†	0.000	236.824	713.00	0.00	0.00	0.00	39°56'38.630"N	104°41'09.449"W	0.00	
813.00†	0.000	236.824	813.00	0.00	0.00	0.00	39°56'38.630"N	104°41'09.449"W	0.00	
913.00†	0.000	236.824	913.00	0.00	0.00	0.00	39°56'38.630"N	104°41'09.449"W	0.00	
1013.00†	0.000	236.824	1013.00	0.00	0.00	0.00	39°56'38.630"N	104°41'09.449"W	0.00	
1113.00†	0.000	236.824	1113.00	0.00	0.00	0.00	39°56'38.630"N	104°41'09.449"W	0.00	
1213.00†	0.000	236.824	1213.00	0.00	0.00	0.00	39°56'38.630"N	104°41'09.449"W	0.00	
1313.00†	0.000	236.824	1313.00	0.00	0.00	0.00	39°56'38.630"N	104°41'09.449"W	0.00	
1413.00†	0.000	236.824	1413.00	0.00	0.00	0.00	39°56'38.630"N	104°41'09.449"W	0.00	
1500.00†	0.000	236.824	1500.00	0.00	0.00	0.00	39°56'38.630"N	104°41'09.449"W	0.00	FOX HILLS
1513.00†	0.000	236.824	1513.00	0.00	0.00	0.00	39°56'38.630"N	104°41'09.449"W	0.00	
1600.00	0.000	236.824	1600.00	0.00	0.00	0.00	39°56'38.630"N	104°41'09.449"W	0.00	End of Tangent
1613.00†	0.260	236.824	1613.00	-0.01	-0.02	-0.02	39°56'38.630"N	104°41'09.449"W	2.00	
1713.00†	2.260	236.824	1712.97	-1.06	-1.22	-1.87	39°56'38.618"N	104°41'09.473"W	2.00	
1813.00†	4.260	236.824	1812.80	-3.75	-4.33	-6.62	39°56'38.588"N	104°41'09.535"W	2.00	
1913.00†	6.260	236.824	1912.38	-8.09	-9.35	-14.30	39°56'38.539"N	104°41'09.634"W	2.00	
2013.00†	8.260	236.824	2011.57	-14.07	-16.26	-24.87	39°56'38.472"N	104°41'09.770"W	2.00	
2021.71	8.434	236.824	2020.19	-14.67	-16.95	-25.93	39°56'38.465"N	104°41'09.784"W	2.00	End of Build (XS)
2113.00†	8.434	236.824	2110.49	-21.01	-24.28	-37.14	39°56'38.393"N	104°41'09.929"W	0.00	
2213.00†	8.434	236.824	2209.41	-27.96	-32.31	-49.42	39°56'38.315"N	104°41'10.087"W	0.00	
2313.00†	8.434	236.824	2308.33	-34.91	-40.33	-61.69	39°56'38.237"N	104°41'10.246"W	0.00	
2413.00†	8.434	236.824	2407.25	-41.85	-48.36	-73.97	39°56'38.159"N	104°41'10.405"W	0.00	
2513.00†	8.434	236.824	2506.17	-48.80	-56.39	-86.25	39°56'38.081"N	104°41'10.563"W	0.00	



# Planned Wellpath Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH PWB
Facility	SEC.20-T01S-R65W		

## WELLPATH DATA (187 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2613.00†	8.434	236.824	2605.08	-55.75	-64.41	-98.52	39°56'38.002"N	104°41'10.722"W	0.00	
2713.00†	8.434	236.824	2704.00	-62.69	-72.44	-110.80	39°56'37.924"N	104°41'10.880"W	0.00	
2813.00†	8.434	236.824	2802.92	-69.64	-80.47	-123.08	39°56'37.846"N	104°41'11.039"W	0.00	
2913.00†	8.434	236.824	2901.84	-76.59	-88.49	-135.35	39°56'37.768"N	104°41'11.197"W	0.00	
3013.00†	8.434	236.824	3000.76	-83.53	-96.52	-147.63	39°56'37.690"N	104°41'11.356"W	0.00	
3113.00†	8.434	236.824	3099.68	-90.48	-104.54	-159.91	39°56'37.611"N	104°41'11.514"W	0.00	
3213.00†	8.434	236.824	3198.59	-97.43	-112.57	-172.18	39°56'37.533"N	104°41'11.673"W	0.00	
3313.00†	8.434	236.824	3297.51	-104.37	-120.60	-184.46	39°56'37.455"N	104°41'11.832"W	0.00	
3413.00†	8.434	236.824	3396.43	-111.32	-128.62	-196.74	39°56'37.377"N	104°41'11.990"W	0.00	
3513.00†	8.434	236.824	3495.35	-118.27	-136.65	-209.01	39°56'37.299"N	104°41'12.149"W	0.00	
3613.00†	8.434	236.824	3594.27	-125.21	-144.68	-221.29	39°56'37.220"N	104°41'12.307"W	0.00	
3713.00†	8.434	236.824	3693.19	-132.16	-152.70	-233.56	39°56'37.142"N	104°41'12.466"W	0.00	
3813.00†	8.434	236.824	3792.11	-139.11	-160.73	-245.84	39°56'37.064"N	104°41'12.624"W	0.00	
3913.00†	8.434	236.824	3891.02	-146.05	-168.76	-258.12	39°56'36.986"N	104°41'12.783"W	0.00	
4013.00†	8.434	236.824	3989.94	-153.00	-176.78	-270.39	39°56'36.908"N	104°41'12.941"W	0.00	
4113.00†	8.434	236.824	4088.86	-159.94	-184.81	-282.67	39°56'36.829"N	104°41'13.100"W	0.00	
4213.00†	8.434	236.824	4187.78	-166.89	-192.83	-294.95	39°56'36.751"N	104°41'13.259"W	0.00	
4313.00†	8.434	236.824	4286.70	-173.84	-200.86	-307.22	39°56'36.673"N	104°41'13.417"W	0.00	
4413.00†	8.434	236.824	4385.62	-180.78	-208.89	-319.50	39°56'36.595"N	104°41'13.576"W	0.00	
4513.00†	8.434	236.824	4484.53	-187.73	-216.91	-331.78	39°56'36.517"N	104°41'13.734"W	0.00	
4613.00†	8.434	236.824	4583.45	-194.68	-224.94	-344.05	39°56'36.438"N	104°41'13.893"W	0.00	
4713.00†	8.434	236.824	4682.37	-201.62	-232.97	-356.33	39°56'36.360"N	104°41'14.051"W	0.00	
4813.00†	8.434	236.824	4781.29	-208.57	-240.99	-368.61	39°56'36.282"N	104°41'14.210"W	0.00	
4882.46†	8.434	236.824	4850.00	-213.40	-246.57	-377.13	39°56'36.228"N	104°41'14.320"W	0.00	SUSSEX/SHANNON
4913.00†	8.434	236.824	4880.21	-215.52	-249.02	-380.88	39°56'36.204"N	104°41'14.368"W	0.00	
5013.00†	8.434	236.824	4979.13	-222.46	-257.04	-393.16	39°56'36.126"N	104°41'14.527"W	0.00	
5113.00†	8.434	236.824	5078.05	-229.41	-265.07	-405.44	39°56'36.047"N	104°41'14.686"W	0.00	
5213.00†	8.434	236.824	5176.96	-236.36	-273.10	-417.71	39°56'35.969"N	104°41'14.844"W	0.00	
5313.00†	8.434	236.824	5275.88	-243.30	-281.12	-429.99	39°56'35.891"N	104°41'15.003"W	0.00	
5413.00†	8.434	236.824	5374.80	-250.25	-289.15	-442.27	39°56'35.813"N	104°41'15.161"W	0.00	



# Planned Wellpath Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH PWB
Facility	SEC.20-T01S-R65W		

## WELLPATH DATA (187 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5513.00†	8.434	236.824	5473.72	-257.20	-297.18	-454.54	39°56'35.735"N	104°41'15.320"W	0.00	
5613.00†	8.434	236.824	5572.64	-264.14	-305.20	-466.82	39°56'35.656"N	104°41'15.478"W	0.00	
5713.00†	8.434	236.824	5671.56	-271.09	-313.23	-479.10	39°56'35.578"N	104°41'15.637"W	0.00	
5813.00†	8.434	236.824	5770.47	-278.04	-321.25	-491.37	39°56'35.500"N	104°41'15.795"W	0.00	
5913.00†	8.434	236.824	5869.39	-284.98	-329.28	-503.65	39°56'35.422"N	104°41'15.954"W	0.00	
6013.00†	8.434	236.824	5968.31	-291.93	-337.31	-515.93	39°56'35.344"N	104°41'16.113"W	0.00	
6113.00†	8.434	236.824	6067.23	-298.87	-345.33	-528.20	39°56'35.265"N	104°41'16.271"W	0.00	
6213.00†	8.434	236.824	6166.15	-305.82	-353.36	-540.48	39°56'35.187"N	104°41'16.430"W	0.00	
6313.00†	8.434	236.824	6265.07	-312.77	-361.39	-552.76	39°56'35.109"N	104°41'16.588"W	0.00	
6413.00†	8.434	236.824	6363.99	-319.71	-369.41	-565.03	39°56'35.031"N	104°41'16.747"W	0.00	
6513.00†	8.434	236.824	6462.90	-326.66	-377.44	-577.31	39°56'34.952"N	104°41'16.905"W	0.00	
6613.00†	8.434	236.824	6561.82	-333.61	-385.47	-589.59	39°56'34.874"N	104°41'17.064"W	0.00	
6713.00†	8.434	236.824	6660.74	-340.55	-393.49	-601.86	39°56'34.796"N	104°41'17.222"W	0.00	
6813.00†	8.434	236.824	6759.66	-347.50	-401.52	-614.14	39°56'34.718"N	104°41'17.381"W	0.00	
6840.60	8.434	236.824	6786.96	-349.42	-403.73	-617.53	39°56'34.696"N	104°41'17.425"W	0.00	End of Tangent (XS)
6913.00†	7.653	290.202	6858.74	-349.89	-404.98	-626.51	39°56'34.685"N	104°41'17.540"W	10.00	
7013.00†	14.584	330.302	6956.94	-335.59	-391.71	-639.03	39°56'34.817"N	104°41'17.699"W	10.00	
7113.00†	23.786	342.582	7051.32	-304.40	-361.45	-651.33	39°56'35.117"N	104°41'17.854"W	10.00	
7213.00†	33.433	348.159	7139.02	-257.24	-315.13	-663.05	39°56'35.576"N	104°41'17.999"W	10.00	
7313.00†	43.227	351.441	7217.38	-195.57	-254.15	-673.83	39°56'36.180"N	104°41'18.130"W	10.00	
7322.16†	44.127	351.680	7224.00	-189.25	-247.89	-674.75	39°56'36.241"N	104°41'18.141"W	10.00	NIOBRARA A CHALK
7346.34†	46.508	352.275	7241.00	-172.09	-230.87	-677.15	39°56'36.410"N	104°41'18.170"W	10.00	NIOBRARA A MARL
7413.00†	53.085	353.702	7284.01	-121.24	-180.36	-683.33	39°56'36.910"N	104°41'18.243"W	10.00	
7513.00†	62.976	355.439	7336.89	-36.52	-96.01	-691.28	39°56'37.744"N	104°41'18.336"W	10.00	
7613.00†	72.886	356.893	7374.42	56.02	-3.66	-697.43	39°56'38.657"N	104°41'18.404"W	10.00	
7713.00†	82.804	358.198	7395.45	153.56	93.88	-701.59	39°56'39.621"N	104°41'18.446"W	10.00	
7785.53	90.000	359.105	7400.00†	225.76	166.19	-703.29	39°56'40.336"N	104°41'18.459"W	10.00	End of 3D Arc (XS)
7813.00†	90.000	359.105	7400.00	253.17	193.67	-703.72	39°56'40.608"N	104°41'18.461"W	0.00	
7913.00†	90.000	359.105	7400.00	352.92	293.65	-705.28	39°56'41.596"N	104°41'18.469"W	0.00	
8013.00†	90.000	359.105	7400.00	452.67	393.64	-706.84	39°56'42.584"N	104°41'18.478"W	0.00	



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## REFERENCE WELLPATH IDENTIFICATION

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Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH PWB
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8113.00†	90.000	359.105	7400.00	552.43	493.63	-708.40	39°56'43.572"N	104°41'18.486"W	0.00	
8213.00†	90.000	359.105	7400.00	652.18	593.62	-709.96	39°56'44.560"N	104°41'18.494"W	0.00	
8313.00†	90.000	359.105	7400.00	751.94	693.60	-711.52	39°56'45.549"N	104°41'18.503"W	0.00	
8413.00†	90.000	359.105	7400.00	851.69	793.59	-713.09	39°56'46.537"N	104°41'18.511"W	0.00	
8513.00†	90.000	359.105	7400.00	951.45	893.58	-714.65	39°56'47.525"N	104°41'18.519"W	0.00	
8613.00†	90.000	359.105	7400.00	1051.20	993.57	-716.21	39°56'48.513"N	104°41'18.528"W	0.00	
8713.00†	90.000	359.105	7400.00	1150.96	1093.56	-717.77	39°56'49.502"N	104°41'18.536"W	0.00	
8813.00†	90.000	359.105	7400.00	1250.71	1193.54	-719.33	39°56'50.490"N	104°41'18.544"W	0.00	
8913.00†	90.000	359.105	7400.00	1350.47	1293.53	-720.89	39°56'51.478"N	104°41'18.552"W	0.00	
9013.00†	90.000	359.105	7400.00	1450.22	1393.52	-722.45	39°56'52.466"N	104°41'18.561"W	0.00	
9113.00†	90.000	359.105	7400.00	1549.98	1493.51	-724.02	39°56'53.454"N	104°41'18.569"W	0.00	
9213.00†	90.000	359.105	7400.00	1649.73	1593.50	-725.58	39°56'54.443"N	104°41'18.577"W	0.00	
9313.00†	90.000	359.105	7400.00	1749.49	1693.48	-727.14	39°56'55.431"N	104°41'18.586"W	0.00	
9413.00†	90.000	359.105	7400.00	1849.24	1793.47	-728.70	39°56'56.419"N	104°41'18.594"W	0.00	
9513.00†	90.000	359.105	7400.00	1949.00	1893.46	-730.26	39°56'57.407"N	104°41'18.602"W	0.00	
9613.00†	90.000	359.105	7400.00	2048.75	1993.45	-731.82	39°56'58.396"N	104°41'18.611"W	0.00	
9713.00†	90.000	359.105	7400.00	2148.51	2093.43	-733.39	39°56'59.384"N	104°41'18.619"W	0.00	
9813.00†	90.000	359.105	7400.00	2248.26	2193.42	-734.95	39°57'00.372"N	104°41'18.627"W	0.00	
9913.00†	90.000	359.105	7400.00	2348.02	2293.41	-736.51	39°57'01.360"N	104°41'18.635"W	0.00	
10013.00†	90.000	359.105	7400.00	2447.77	2393.40	-738.07	39°57'02.348"N	104°41'18.644"W	0.00	
10113.00†	90.000	359.105	7400.00	2547.52	2493.39	-739.63	39°57'03.337"N	104°41'18.652"W	0.00	
10213.00†	90.000	359.105	7400.00	2647.28	2593.37	-741.19	39°57'04.325"N	104°41'18.660"W	0.00	
10313.00†	90.000	359.105	7400.00	2747.03	2693.36	-742.75	39°57'05.313"N	104°41'18.669"W	0.00	
10413.00†	90.000	359.105	7400.00	2846.79	2793.35	-744.32	39°57'06.301"N	104°41'18.677"W	0.00	
10513.00†	90.000	359.105	7400.00	2946.54	2893.34	-745.88	39°57'07.290"N	104°41'18.685"W	0.00	
10613.00†	90.000	359.105	7400.00	3046.30	2993.32	-747.44	39°57'08.278"N	104°41'18.694"W	0.00	
10713.00†	90.000	359.105	7400.00	3146.05	3093.31	-749.00	39°57'09.266"N	104°41'18.702"W	0.00	
10813.00†	90.000	359.105	7400.00	3245.81	3193.30	-750.56	39°57'10.254"N	104°41'18.710"W	0.00	
10913.00†	90.000	359.105	7400.00	3345.56	3293.29	-752.12	39°57'11.242"N	104°41'18.718"W	0.00	
11013.00†	90.000	359.105	7400.00	3445.32	3393.28	-753.69	39°57'12.231"N	104°41'18.727"W	0.00	





# Planned Wellpath Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH PWB
Facility	SEC.20-T01S-R65W		

## WELLPATH DATA (187 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11113.00†	90.000	359.105	7400.00	3545.07	3493.26	-755.25	39°57'13.219"N	104°41'18.735"W	0.00	
11213.00†	90.000	359.105	7400.00	3644.83	3593.25	-756.81	39°57'14.207"N	104°41'18.743"W	0.00	
11313.00†	90.000	359.105	7400.00	3744.58	3693.24	-758.37	39°57'15.195"N	104°41'18.752"W	0.00	
11413.00†	90.000	359.105	7400.00	3844.34	3793.23	-759.93	39°57'16.184"N	104°41'18.760"W	0.00	
11513.00†	90.000	359.105	7400.00	3944.09	3893.21	-761.49	39°57'17.172"N	104°41'18.768"W	0.00	
11613.00†	90.000	359.105	7400.00	4043.85	3993.20	-763.05	39°57'18.160"N	104°41'18.777"W	0.00	
11713.00†	90.000	359.105	7400.00	4143.60	4093.19	-764.62	39°57'19.148"N	104°41'18.785"W	0.00	
11813.00†	90.000	359.105	7400.00	4243.36	4193.18	-766.18	39°57'20.136"N	104°41'18.793"W	0.00	
11913.00†	90.000	359.105	7400.00	4343.11	4293.17	-767.74	39°57'21.125"N	104°41'18.801"W	0.00	
12013.00†	90.000	359.105	7400.00	4442.87	4393.15	-769.30	39°57'22.113"N	104°41'18.810"W	0.00	
12113.00†	90.000	359.105	7400.00	4542.62	4493.14	-770.86	39°57'23.101"N	104°41'18.818"W	0.00	
12213.00†	90.000	359.105	7400.00	4642.37	4593.13	-772.42	39°57'24.089"N	104°41'18.826"W	0.00	
12313.00†	90.000	359.105	7400.00	4742.13	4693.12	-773.98	39°57'25.078"N	104°41'18.835"W	0.00	
12413.00†	90.000	359.105	7400.00	4841.88	4793.10	-775.55	39°57'26.066"N	104°41'18.843"W	0.00	
12513.00†	90.000	359.105	7400.00	4941.64	4893.09	-777.11	39°57'27.054"N	104°41'18.851"W	0.00	
12613.00†	90.000	359.105	7400.00	5041.39	4993.08	-778.67	39°57'28.042"N	104°41'18.860"W	0.00	
12713.00†	90.000	359.105	7400.00	5141.15	5093.07	-780.23	39°57'29.030"N	104°41'18.868"W	0.00	
12813.00†	90.000	359.105	7400.00	5240.90	5193.06	-781.79	39°57'30.019"N	104°41'18.876"W	0.00	
12913.00†	90.000	359.105	7400.00	5340.66	5293.04	-783.35	39°57'31.007"N	104°41'18.885"W	0.00	
13013.00†	90.000	359.105	7400.00	5440.41	5393.03	-784.92	39°57'31.995"N	104°41'18.893"W	0.00	
13113.00†	90.000	359.105	7400.00	5540.17	5493.02	-786.48	39°57'32.983"N	104°41'18.901"W	0.00	
13213.00†	90.000	359.105	7400.00	5639.92	5593.01	-788.04	39°57'33.971"N	104°41'18.909"W	0.00	
13313.00†	90.000	359.105	7400.00	5739.68	5693.00	-789.60	39°57'34.960"N	104°41'18.918"W	0.00	
13413.00†	90.000	359.105	7400.00	5839.43	5792.98	-791.16	39°57'35.948"N	104°41'18.926"W	0.00	
13513.00†	90.000	359.105	7400.00	5939.19	5892.97	-792.72	39°57'36.936"N	104°41'18.934"W	0.00	
13613.00†	90.000	359.105	7400.00	6038.94	5992.96	-794.28	39°57'37.924"N	104°41'18.943"W	0.00	
13713.00†	90.000	359.105	7400.00	6138.70	6092.95	-795.85	39°57'38.913"N	104°41'18.951"W	0.00	
13813.00†	90.000	359.105	7400.00	6238.45	6192.93	-797.41	39°57'39.901"N	104°41'18.959"W	0.00	
13913.00†	90.000	359.105	7400.00	6338.21	6292.92	-798.97	39°57'40.889"N	104°41'18.968"W	0.00	
14013.00†	90.000	359.105	7400.00	6437.96	6392.91	-800.53	39°57'41.877"N	104°41'18.976"W	0.00	



# Planned Wellpath Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH PWB
Facility	SEC.20-T01S-R65W		

## WELLPATH DATA (187 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14113.00†	90.000	359.105	7400.00	6537.72	6492.90	-802.09	39°57'42.865"N	104°41'18.984"W	0.00	
14213.00†	90.000	359.105	7400.00	6637.47	6592.89	-803.65	39°57'43.854"N	104°41'18.992"W	0.00	
14313.00†	90.000	359.105	7400.00	6737.22	6692.87	-805.21	39°57'44.842"N	104°41'19.001"W	0.00	
14413.00†	90.000	359.105	7400.00	6836.98	6792.86	-806.78	39°57'45.830"N	104°41'19.009"W	0.00	
14513.00†	90.000	359.105	7400.00	6936.73	6892.85	-808.34	39°57'46.818"N	104°41'19.017"W	0.00	
14613.00†	90.000	359.105	7400.00	7036.49	6992.84	-809.90	39°57'47.807"N	104°41'19.026"W	0.00	
14713.00†	90.000	359.105	7400.00	7136.24	7092.82	-811.46	39°57'48.795"N	104°41'19.034"W	0.00	
14813.00†	90.000	359.105	7400.00	7236.00	7192.81	-813.02	39°57'49.783"N	104°41'19.042"W	0.00	
14913.00†	90.000	359.105	7400.00	7335.75	7292.80	-814.58	39°57'50.771"N	104°41'19.051"W	0.00	
15013.00†	90.000	359.105	7400.00	7435.51	7392.79	-816.15	39°57'51.759"N	104°41'19.059"W	0.00	
15113.00†	90.000	359.105	7400.00	7535.26	7492.78	-817.71	39°57'52.748"N	104°41'19.067"W	0.00	
15213.00†	90.000	359.105	7400.00	7635.02	7592.76	-819.27	39°57'53.736"N	104°41'19.075"W	0.00	
15313.00†	90.000	359.105	7400.00	7734.77	7692.75	-820.83	39°57'54.724"N	104°41'19.084"W	0.00	
15413.00†	90.000	359.105	7400.00	7834.53	7792.74	-822.39	39°57'55.712"N	104°41'19.092"W	0.00	
15513.00†	90.000	359.105	7400.00	7934.28	7892.73	-823.95	39°57'56.701"N	104°41'19.100"W	0.00	
15613.00†	90.000	359.105	7400.00	8034.04	7992.71	-825.51	39°57'57.689"N	104°41'19.109"W	0.00	
15713.00†	90.000	359.105	7400.00	8133.79	8092.70	-827.08	39°57'58.677"N	104°41'19.117"W	0.00	
15813.00†	90.000	359.105	7400.00	8233.55	8192.69	-828.64	39°57'59.665"N	104°41'19.125"W	0.00	
15913.00†	90.000	359.105	7400.00	8333.30	8292.68	-830.20	39°58'00.653"N	104°41'19.134"W	0.00	
16013.00†	90.000	359.105	7400.00	8433.06	8392.67	-831.76	39°58'01.642"N	104°41'19.142"W	0.00	
16113.00†	90.000	359.105	7400.00	8532.81	8492.65	-833.32	39°58'02.630"N	104°41'19.150"W	0.00	
16213.00†	90.000	359.105	7400.00	8632.57	8592.64	-834.88	39°58'03.618"N	104°41'19.159"W	0.00	
16313.00†	90.000	359.105	7400.00	8732.32	8692.63	-836.45	39°58'04.606"N	104°41'19.167"W	0.00	
16413.00†	90.000	359.105	7400.00	8832.07	8792.62	-838.01	39°58'05.595"N	104°41'19.175"W	0.00	
16513.00†	90.000	359.105	7400.00	8931.83	8892.61	-839.57	39°58'06.583"N	104°41'19.183"W	0.00	
16613.00†	90.000	359.105	7400.00	9031.58	8992.59	-841.13	39°58'07.571"N	104°41'19.192"W	0.00	
16713.00†	90.000	359.105	7400.00	9131.34	9092.58	-842.69	39°58'08.559"N	104°41'19.200"W	0.00	
16813.00†	90.000	359.105	7400.00	9231.09	9192.57	-844.25	39°58'09.547"N	104°41'19.208"W	0.00	
16913.00†	90.000	359.105	7400.00	9330.85	9292.56	-845.81	39°58'10.536"N	104°41'19.217"W	0.00	
17013.00†	90.000	359.105	7400.00	9430.60	9392.54	-847.38	39°58'11.524"N	104°41'19.225"W	0.00	





# Planned Wellpath Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH PWB
Facility	SEC.20-T01S-R65W		

## WELLPATH DATA (187 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
17113.00†	90.000	359.105	7400.00	9530.36	9492.53	-848.94	39°58'12.512"N	104°41'19.233"W	0.00	
17213.00†	90.000	359.105	7400.00	9630.11	9592.52	-850.50	39°58'13.500"N	104°41'19.242"W	0.00	
17313.00†	90.000	359.105	7400.00	9729.87	9692.51	-852.06	39°58'14.488"N	104°41'19.250"W	0.00	
17413.00†	90.000	359.105	7400.00	9829.62	9792.50	-853.62	39°58'15.477"N	104°41'19.258"W	0.00	
17513.00†	90.000	359.105	7400.00	9929.38	9892.48	-855.18	39°58'16.465"N	104°41'19.266"W	0.00	
17593.77†	90.000	359.105	7400.00	10009.95	9973.24	-856.44	39°58'17.263"N	104°41'19.273"W	0.00	NIOBRARA B CHALK
17593.78	90.000	359.105	7400.00 <sup>2</sup>	10009.96	9973.25	-856.44	39°58'17.263"N	104°41'19.273"W	0.00	End of Tangent (XS)

## HOLE & CASING SECTIONS

- Ref Wellbore: WAKEMAN 20-17-2NBH PWB      Ref 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	0.00	0.00	-3.82	-5.84
8.5in Open Hole	1800.00	17593.78	15793.78	1799.84	N/A	-3.82	-5.84	N/A	N/A



# Planned Wellpath Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	1.26	-104.29	3228136.32	1223519.73	39°56'38.652"N	104°41'10.788"W	polygon
SEC.20-T01S-R65W		0.00	1.26	-104.29	3228136.32	1223519.73	39°56'38.652"N	104°41'10.788"W	polygon
2) WAKEMAN 20-17-2NBH BHL (355'FNL & 2440'FWL, SEC.17)	17593.78	7400.00	9973.25	-856.44	3227384.19	1233491.41	39°58'17.263"N	104°41'19.273"W	point
1) WAKEMAN 20-17-2NBH EP (460'FSL & 2440'FWL, SEC.20)	7785.53	7400.00	166.19	-703.29	3227537.34	1223684.65	39°56'40.336"N	104°41'18.459"W	point
SEC.17/20-T01S-R65W 460'SETBACK		7638.00	1.26	-104.29	3228136.32	1223519.73	39°56'38.652"N	104°41'10.788"W	polygon

## SURVEY PROGRAM -

Ref Wellbore: WAKEMAN 20-17-2NBH PWB Ref 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



# Planned Wellpath Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH PWB
Facility	SEC.20-T01S-R65W		

## WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1500.00	0.000	236.824	1500.00	FOX HILLS
4882.46	8.434	236.824	4850.00	SUSSEX/SHANNON
7322.16	44.127	351.680	7224.00	NIOBRARA A CHALK
7346.34	46.508	352.275	7241.00	NIOBRARA A MARL
17593.77	90.000	359.105	7400.00	NIOBRARA B CHALK

## DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
13.00	0.000	236.824	13.00	Tie On
1600.00	0.000	236.824	1600.00	End of Tangent
2021.71	8.434	236.824	2020.19	End of Build (XS)
6840.60	8.434	236.824	6786.96	End of Tangent (XS)
7785.53	90.000	359.105	7400.00	End of 3D Arc (XS)
17593.78	90.000	359.105	7400.00	End of Tangent (XS)



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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 1:19:45 PM
Convergence at slot	0.53° East	Database/Source file	WellArchitectDB1\WAKEMAN_20-17-2NBH_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	-0.27	-119.95	3228240.61	1223518.46	39°56'38.630"N	104°41'09.449"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#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'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 20-17-2NBH PWP (REV-A.0)**  
**Closest Approach**  
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**REFERENCE WELLPATH IDENTIFICATION**

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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 20-17-2NBH PWB Ref 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	0.00	0.00	-3.82	-5.84
8.5in Open Hole	1800.00	17593.78	15793.78	1799.84	N/A	-3.82	-5.84	N/A	N/A

**SURVEY PROGRAM - Ref Wellbore: WAKEMAN 20-17-2NBH PWB Ref 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



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH PWB
Facility	SEC.20-T01S-R65W		

## CALCULATION RANGE & CUTOFF

From: 13.00ft MD	To: 17593.78ft MD	C-C Cutoff: 1000.00 ft
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## 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#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	14.97	17593.78	17593.78	0.65	17593.78	FAIL
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)	1681.98	13.33	1681.98	17586.98	0.69	17586.98	FAIL
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	30.03	1313.00	17593.78	1.16	17593.78	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	30.03	1313.00	17583.38	1.30	17583.38	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	45.00	17593.78	17593.78	1.36	17593.78	PASS
SEC.20-T1S-R65W	SLOT#02 EX. COLLINS HH #20-3J (814°FNL & 1886°FEL, SEC.20, 8163, PR)	COLLINS HH #20-3J	COLLINS HH #20-3J AWB	COLLINS HH #20-3J AWP	11822.52	573.63	11822.52	11870.97	1.71	11870.97	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	44.98	1213.00	17593.78	1.82	17593.78	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	60.01	17593.78	17593.78	1.89	17593.78	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	15967.96	906.07	15967.96	15967.96	1.96	15967.96	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	60.01	1113.00	17593.78	2.00	17593.78	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	10632.99	720.94	10633.27	10632.99	2.41	10632.99	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	74.95	17593.78	17593.78	2.52	17593.78	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	75.01	1013.00	17593.78	2.57	17593.78	PASS
SEC.17-T1S-R65W	SLOT#02 EX. AMOCO #24-17 (990°FSL & 1360°FEL, SEC.17, OG, PR, 8130)	AMOCO #24-17	AMOCO #24-17	AMOCO #24-17 AWP	13603.34	1083.49	13603.34	13713.00	2.78	13713.00	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	90.01	813.00	17593.78	3.00	17593.78	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	104.95	17593.78	17593.78	3.19	17593.78	PASS
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	90.01	913.00	17593.78	3.20	17593.78	PASS
SEC.20-T01S-R65W	SLOT#02 WAKEMAN 20-17-4NAH (293°FSL & 2038°FEL, SEC.20)	WAKEMAN 20-17-4NAH	WAKEMAN 20-17-4NAH PWB	WAKEMAN 20-17-4NAH PWP (REV-A.0)	13.00	104.95	813.00	17593.78	3.69	17593.78	PASS
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	119.95	11113.00	17593.78	3.86	17593.78	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	13619.52	1582.55	13619.52	13694.08	4.07	13694.08	PASS
SEC.17-T1S-R65W	SLOT#01 EX. AMOCO #17-32 (2013°FSL & 464°FEL, SEC.17, OG, PR, 8140)	AMOCO #17-32	AMOCO #17-32 AWB	AMOCO #17-32 AWP	14483.28	2025.24	14483.28	14752.16	4.83	14752.16	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	11607.06	1823.39	11607.06	11743.19	5.55	11743.19	PASS
SEC.20-T1S-R65W	SLOT#01 EX. COLLINS #14-20 (990°FSL & 990°FEL, SEC.20, OG, PR, 8202)	COLLINS #14-20	COLLINS #14-20 AWB	COLLINS #14-20 AWP	8344.24	1462.59	8344.24	8766.18	6.00	8766.18	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	16875.50	3477.77	16875.50	17441.77	6.98	17441.77	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	13.00	1328.83	8313.00	8763.98	7.41	8763.98	PASS





**Clearance Report**  
**WAKEMAN 20-17-2NBH PWP (REV-A.0)**  
**Closest Approach**  
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**REFERENCE WELLPATH IDENTIFICATION**

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH PWB
Facility	SEC.20-T01S-R65W		

**CALCULATION RANGE & CUTOFF**

From: 13.00ft MD	To: 17593.78ft MD	C-C Cutoff: 1000.00 ft
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**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.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	16913.00	3842.58	16913.00	17381.14	7.74	17381.14	PASS



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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#10 WAKEMAN 20-17-2NBH (293'FSL & 2158'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	0.01	-14.97	-89.97	14.97	1.40	23.62	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	0.01	-14.97	-89.97	14.97	1.73	15.27	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	0.01	-14.97	-89.97	14.97	2.30	9.43	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	0.01	-14.97	-89.97	14.97	2.91	6.72	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	0.01	-14.97	-89.97	14.97	3.53	5.20	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	0.01	-14.97	-89.97	14.97	4.15	4.24	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	0.01	-14.97	-89.97	14.97	4.77	3.57	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	0.01	-14.97	-89.97	14.97	5.39	3.09	PASS	
813.00†	813.00	0.00	0.00	813.00	813.00	0.01	-14.97	-89.97	14.97	6.02	2.72	PASS	
913.00†	913.00	0.00	0.00	913.00	913.00	0.01	-14.97	-89.97	14.97	6.65	2.43	PASS	
1013.00†	1013.00	0.00	0.00	1013.00	1013.00	0.01	-14.97	-89.97	14.97	7.27	2.19	PASS	
1113.00†	1113.00	0.00	0.00	1113.00	1113.00	0.01	-14.97	-89.97	14.97	7.90	2.00	PASS	
1213.00†	1213.00	0.00	0.00	1213.00	1213.00	0.01	-14.97	-89.97	14.97	8.53	1.83	PASS	
1313.00†	1313.00	0.00	0.00	1313.00	1313.00	0.01	-14.97	-89.97	14.97	9.15	1.70	PASS	
1413.00†	1413.00	0.00	0.00	1413.00	1413.00	0.01	-14.97	-89.97	14.97	9.78	1.58	PASS	
1513.00†	1513.00	0.00	0.00	1512.94	1512.94	0.00	-15.00	-90.01	15.00	10.41	1.48	PASS	
1600.00	1600.00	0.00	0.00	1599.48	1599.46	-0.66	-16.57	-92.29	16.59	11.01	1.55	PASS	
1613.00†	1613.00	-0.02	-0.02	1612.40	1612.37	-0.85	-17.01	30.37	17.01	11.10	1.57	PASS	
1713.00†	1712.97	-1.22	-1.87	1711.73	1711.53	-3.03	-22.18	28.04	20.45	12.02	1.75	PASS	
1813.00†	1812.80	-4.33	-6.62	1810.92	1810.31	-6.53	-30.51	27.78	24.12	12.95	1.91	PASS	
1913.00†	1912.38	-9.35	-14.30	1909.99	1908.59	-11.35	-41.97	28.77	28.00	13.91	2.07	PASS	
2013.00†	2011.57	-16.26	-24.87	2008.92	2006.25	-17.48	-56.53	30.53	32.12	14.81	2.23	PASS	
2021.71	2020.19	-16.95	-25.93	2017.54	2014.72	-18.07	-57.94	30.71	32.49	14.88	2.24	PASS	
2113.00†	2110.49	-24.28	-37.14	2107.98	2103.45	-24.87	-74.09	31.70	37.62	15.49	2.50	PASS	
2213.00†	2209.41	-32.31	-49.42	2207.77	2201.21	-32.66	-92.60	32.14	43.96	16.13	2.81	PASS	
2313.00†	2308.33	-40.33	-61.69	2307.57	2298.97	-40.45	-111.10	32.47	50.29	16.79	3.08	PASS	
2413.00†	2407.25	-48.36	-73.97	2407.37	2396.72	-48.23	-129.61	32.73	56.63	17.47	3.34	PASS	
2513.00†	2506.17	-56.39	-86.25	2507.17	2494.48	-56.02	-148.12	32.93	62.97	18.18	3.56	PASS	
2613.00†	2605.08	-64.41	-98.52	2606.97	2592.24	-63.81	-166.62	33.10	69.30	18.89	3.77	PASS	
2713.00†	2704.00	-72.44	-110.80	2706.77	2690.00	-71.60	-185.13	33.24	75.64	19.62	3.96	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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#10 WAKEMAN 20-17-2NBH (293°FSL & 2158°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†	2802.92	-80.47	-123.08	2806.57	2787.76	-79.38	-203.64	33.36	81.98	20.37	4.13	PASS	
2913.00†	2901.84	-88.49	-135.35	2906.37	2885.51	-87.17	-222.14	33.46	88.32	21.12	4.29	PASS	
3013.00†	3000.76	-96.52	-147.63	3006.16	2983.27	-94.96	-240.65	33.55	94.66	21.89	4.44	PASS	
3113.00†	3099.68	-104.54	-159.91	3105.96	3081.03	-102.75	-259.15	33.62	101.00	22.67	4.57	PASS	
3213.00†	3198.59	-112.57	-172.18	3205.76	3178.79	-110.53	-277.66	33.69	107.34	23.45	4.69	PASS	
3313.00†	3297.51	-120.60	-184.46	3305.56	3276.55	-118.32	-296.17	33.75	113.68	24.24	4.80	PASS	
3413.00†	3396.43	-128.62	-196.74	3405.36	3374.31	-126.11	-314.67	33.81	120.02	25.04	4.90	PASS	
3513.00†	3495.35	-136.65	-209.01	3505.16	3472.06	-133.90	-333.18	33.85	126.36	25.85	5.00	PASS	
3613.00†	3594.27	-144.68	-221.29	3604.96	3569.82	-141.68	-351.68	33.90	132.70	26.66	5.09	PASS	
3713.00†	3693.19	-152.70	-233.56	3704.76	3667.58	-149.47	-370.19	33.94	139.04	27.47	5.17	PASS	
3813.00†	3792.11	-160.73	-245.84	3804.55	3765.34	-157.26	-388.70	33.97	145.38	28.29	5.25	PASS	
3913.00†	3891.02	-168.76	-258.12	3904.35	3863.10	-165.05	-407.20	34.01	151.72	29.11	5.32	PASS	
4013.00†	3989.94	-176.78	-270.39	4004.15	3960.86	-172.84	-425.71	34.04	158.06	29.94	5.38	PASS	
4113.00†	4088.86	-184.81	-282.67	4103.95	4058.61	-180.62	-444.21	34.06	164.40	30.77	5.44	PASS	
4213.00†	4187.78	-192.83	-294.95	4203.75	4156.37	-188.41	-462.72	34.09	170.74	31.61	5.50	PASS	
4313.00†	4286.70	-200.86	-307.22	4303.55	4254.13	-196.20	-481.23	34.12	177.08	32.44	5.56	PASS	
4413.00†	4385.62	-208.89	-319.50	4403.35	4351.89	-203.99	-499.73	34.14	183.42	33.28	5.61	PASS	
4513.00†	4484.53	-216.91	-331.78	4503.15	4449.65	-211.77	-518.24	34.16	189.77	34.12	5.66	PASS	
4613.00†	4583.45	-224.94	-344.05	4602.94	4547.40	-219.56	-536.74	34.18	196.11	34.97	5.70	PASS	
4713.00†	4682.37	-232.97	-356.33	4702.74	4645.16	-227.35	-555.25	34.20	202.45	35.81	5.75	PASS	
4813.00†	4781.29	-240.99	-368.61	4802.54	4742.92	-235.14	-573.76	34.21	208.79	36.66	5.79	PASS	
4913.00†	4880.21	-249.02	-380.88	4902.34	4840.68	-242.92	-592.26	34.23	215.13	37.51	5.83	PASS	
5013.00†	4979.13	-257.04	-393.16	5002.14	4938.44	-250.71	-610.77	34.24	221.47	38.36	5.86	PASS	
5113.00†	5078.05	-265.07	-405.44	5101.94	5036.20	-258.50	-629.27	34.26	227.81	39.21	5.90	PASS	
5213.00†	5176.96	-273.10	-417.71	5201.74	5133.95	-266.29	-647.78	34.27	234.15	40.07	5.93	PASS	
5313.00†	5275.88	-281.12	-429.99	5301.54	5231.71	-274.08	-666.29	34.29	240.49	40.93	5.96	PASS	
5413.00†	5374.80	-289.15	-442.27	5401.33	5329.47	-281.86	-684.79	34.30	246.83	41.78	5.99	PASS	
5513.00†	5473.72	-297.18	-454.54	5501.13	5427.23	-289.65	-703.30	34.31	253.17	42.64	6.02	PASS	
5613.00†	5572.64	-305.20	-466.82	5600.93	5524.99	-297.44	-721.80	34.32	259.51	43.50	6.05	PASS	
5713.00†	5671.56	-313.23	-479.10	5700.73	5622.75	-305.23	-740.31	34.33	265.85	44.36	6.07	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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#10 WAKEMAN 20-17-2NBH (293°FSL & 2158°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
5813.00†	5770.47	-321.25	-491.37	5800.53	5720.50	-313.01	-758.82	34.34	272.20	45.22	6.10	PASS
5913.00†	5869.39	-329.28	-503.65	5900.33	5818.28	-320.80	-777.32	34.35	278.54	46.09	6.12	PASS
6013.00†	5968.31	-337.31	-515.93	6000.13	5916.02	-328.59	-795.83	34.36	284.88	46.95	6.15	PASS
6113.00†	6067.23	-345.33	-528.20	6099.93	6013.78	-336.38	-814.33	34.37	291.22	47.81	6.17	PASS
6213.00†	6166.15	-353.36	-540.48	6199.72	6111.54	-344.16	-832.84	34.38	297.56	48.68	6.19	PASS
6313.00†	6265.07	-361.39	-552.76	6299.52	6209.29	-351.95	-851.35	34.39	303.90	49.55	6.21	PASS
6413.00†	6363.99	-369.41	-565.03	6399.32	6307.05	-359.74	-869.85	34.39	310.24	50.41	6.23	PASS
6513.00†	6462.90	-377.44	-577.31	6499.12	6404.81	-367.53	-888.36	34.40	316.58	51.28	6.25	PASS
6613.00†	6561.82	-385.47	-589.59	6598.92	6502.57	-375.31	-906.86	34.41	322.92	52.15	6.26	PASS
6713.00†	6660.74	-393.49	-601.86	6698.72	6600.33	-383.10	-925.37	34.42	329.26	53.02	6.28	PASS
6813.00†	6759.66	-401.52	-614.14	6798.52	6698.09	-390.89	-943.88	34.42	335.60	53.89	6.30	PASS
6840.60	6786.96	-403.73	-617.53	6826.06	6725.06	-393.04	-948.98	34.42	337.35	54.13	6.30	PASS
6913.00†	6858.74	-404.98	-626.51	6898.14	6795.67	-398.66	-962.35	-18.82	341.77	54.43	6.35	PASS
7013.00†	6956.94	-391.71	-639.03	6996.06	6891.63	-405.56	-980.53	-60.96	347.96	54.03	6.51	PASS
7113.00†	7051.32	-361.45	-651.33	7096.49	6989.96	-399.48	-999.36	-75.80	355.43	53.68	6.70	PASS
7213.00†	7139.02	-315.13	-663.05	7201.69	7090.12	-374.50	-1018.83	-83.77	364.00	53.66	6.86	PASS
7313.00†	7217.38	-254.15	-673.83	7312.17	7188.56	-328.69	-1038.31	-89.14	373.14	53.91	7.00	PASS
7413.00†	7284.01	-180.36	-683.33	7428.23	7280.60	-260.80	-1056.90	-93.11	382.15	54.28	7.12	PASS
7513.00†	7336.89	-96.01	-691.28	7549.83	7360.50	-170.97	-1073.53	-96.07	390.24	54.66	7.22	PASS
7613.00†	7374.42	-3.66	-697.43	7676.39	7421.93	-61.42	-1086.94	-98.15	396.63	54.89	7.31	PASS
7713.00†	7395.45	93.88	-701.59	7806.73	7458.91	62.94	-1095.93	-99.38	400.61	54.94	7.37	PASS
7785.53	7400.00	166.19	-703.29	7902.63	7467.96	158.24	-1099.14	-99.74	401.72	54.89	7.40	PASS
7813.00†	7400.00	193.67	-703.72	7931.88	7468.00	187.49	-1099.61	-99.75	401.74	55.20	7.36	PASS
7913.00†	7400.00	293.65	-705.28	8031.88	7468.00	287.47	-1101.17	-99.75	401.74	56.92	7.13	PASS
8013.00†	7400.00	393.64	-706.84	8131.88	7468.00	387.46	-1102.73	-99.75	401.73	59.27	6.85	PASS
8113.00†	7400.00	493.63	-708.40	8231.88	7468.00	487.45	-1104.29	-99.75	401.73	62.15	6.53	PASS
8213.00†	7400.00	593.62	-709.96	8331.88	7468.00	587.44	-1105.85	-99.75	401.73	65.50	6.19	PASS
8313.00†	7400.00	693.60	-711.52	8431.88	7468.00	687.43	-1107.41	-99.75	401.73	69.25	5.85	PASS
8413.00†	7400.00	793.59	-713.09	8531.88	7468.00	787.41	-1108.97	-99.75	401.73	73.33	5.52	PASS
8513.00†	7400.00	893.58	-714.65	8631.88	7468.00	887.40	-1110.53	-99.75	401.73	77.69	5.21	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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#10 WAKEMAN 20-17-2NBH (293'FSL & 2158'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	
8613.00†	7400.00	993.57	-716.21	8731.88	7468.00	987.39	-1112.09	-99.75	401.73	81.56	4.96	PASS	
8713.00†	7400.00	1093.56	-717.77	8831.88	7468.00	1087.38	-1113.65	-99.75	401.73	87.08	4.64	PASS	
8813.00†	7400.00	1193.54	-719.33	8931.88	7468.00	1187.36	-1115.21	-99.75	401.73	92.04	4.39	PASS	
8913.00†	7400.00	1293.53	-720.89	9031.88	7468.00	1287.35	-1116.78	-99.75	401.73	97.15	4.16	PASS	
9013.00†	7400.00	1393.52	-722.45	9131.88	7468.00	1387.34	-1118.34	-99.75	401.73	102.37	3.94	PASS	
9113.00†	7400.00	1493.51	-724.02	9231.88	7468.00	1487.33	-1119.90	-99.75	401.73	107.70	3.75	PASS	
9213.00†	7400.00	1593.50	-725.58	9331.88	7468.00	1587.32	-1121.46	-99.75	401.72	113.12	3.57	PASS	
9313.00†	7400.00	1693.48	-727.14	9431.88	7468.00	1687.30	-1123.02	-99.75	401.72	118.61	3.40	PASS	
9413.00†	7400.00	1793.47	-728.70	9531.88	7468.00	1787.29	-1124.58	-99.75	401.72	124.17	3.25	PASS	
9513.00†	7400.00	1893.46	-730.26	9631.88	7468.00	1887.28	-1126.14	-99.75	401.72	129.78	3.11	PASS	
9613.00†	7400.00	1993.45	-731.82	9731.88	7468.00	1987.27	-1127.70	-99.75	401.72	135.45	2.98	PASS	
9713.00†	7400.00	2093.43	-733.39	9831.88	7468.00	2087.26	-1129.26	-99.75	401.72	141.15	2.86	PASS	
9813.00†	7400.00	2193.42	-734.95	9931.88	7468.00	2187.24	-1130.82	-99.75	401.72	146.90	2.74	PASS	
9913.00†	7400.00	2293.41	-736.51	10031.88	7468.00	2287.23	-1132.38	-99.75	401.72	152.68	2.64	PASS	
10013.00†	7400.00	2393.40	-738.07	10131.88	7468.00	2387.22	-1133.94	-99.75	401.72	158.50	2.54	PASS	
10113.00†	7400.00	2493.39	-739.63	10231.88	7468.00	2487.21	-1135.50	-99.75	401.72	164.34	2.45	PASS	
10213.00†	7400.00	2593.37	-741.19	10331.88	7468.00	2587.19	-1137.06	-99.75	401.72	170.20	2.37	PASS	
10313.00†	7400.00	2693.36	-742.75	10431.88	7468.00	2687.18	-1138.62	-99.75	401.72	176.09	2.29	PASS	
10413.00†	7400.00	2793.35	-744.32	10531.88	7468.00	2787.17	-1140.19	-99.75	401.71	182.00	2.21	PASS	
10513.00†	7400.00	2893.34	-745.88	10631.88	7468.00	2887.16	-1141.75	-99.75	401.71	187.92	2.14	PASS	
10613.00†	7400.00	2993.32	-747.44	10731.88	7468.00	2987.15	-1143.31	-99.75	401.71	193.86	2.08	PASS	
10713.00†	7400.00	3093.31	-749.00	10831.88	7468.00	3087.13	-1144.87	-99.75	401.71	199.82	2.01	PASS	
10813.00†	7400.00	3193.30	-750.56	10931.88	7468.00	3187.12	-1146.43	-99.75	401.71	205.79	1.96	PASS	
10913.00†	7400.00	3293.29	-752.12	11031.88	7468.00	3287.11	-1147.99	-99.75	401.71	211.77	1.90	PASS	
11013.00†	7400.00	3393.28	-753.69	11131.88	7468.00	3387.10	-1149.55	-99.75	401.71	217.76	1.85	PASS	
11113.00†	7400.00	3493.26	-755.25	11231.88	7468.00	3487.08	-1151.11	-99.75	401.71	223.77	1.80	PASS	
11213.00†	7400.00	3593.25	-756.81	11331.88	7468.00	3587.07	-1152.67	-99.75	401.71	229.78	1.75	PASS	
11313.00†	7400.00	3693.24	-758.37	11431.88	7468.00	3687.06	-1154.23	-99.75	401.71	235.81	1.71	PASS	
11413.00†	7400.00	3793.23	-759.93	11531.88	7468.00	3787.05	-1155.79	-99.75	401.71	241.84	1.66	PASS	
11513.00†	7400.00	3893.21	-761.49	11631.88	7468.00	3887.04	-1157.35	-99.75	401.71	247.88	1.62	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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#10 WAKEMAN 20-17-2NBH (293'FSL & 2158'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
11613.00†	7400.00	3993.20	-763.05	11731.88	7468.00	3987.02	-1158.91	-99.75	401.70	253.92	1.58	PASS
11713.00†	7400.00	4093.19	-764.62	11831.88	7468.00	4087.01	-1160.47	-99.75	401.70	259.97	1.55	PASS
11813.00†	7400.00	4193.18	-766.18	11931.88	7468.00	4187.00	-1162.03	-99.75	401.70	266.03	1.51	PASS
11913.00†	7400.00	4293.17	-767.74	12031.88	7468.00	4286.99	-1163.60	-99.75	401.70	272.10	1.48	PASS
12013.00†	7400.00	4393.15	-769.30	12131.88	7468.00	4386.98	-1165.16	-99.75	401.70	278.17	1.45	PASS
12113.00†	7400.00	4493.14	-770.86	12231.88	7468.00	4486.96	-1166.72	-99.75	401.70	284.24	1.41	PASS
12213.00†	7400.00	4593.13	-772.42	12331.88	7468.00	4586.95	-1168.28	-99.75	401.70	290.32	1.38	PASS
12313.00†	7400.00	4693.12	-773.98	12431.88	7468.00	4686.94	-1169.84	-99.75	401.70	296.41	1.36	PASS
12413.00†	7400.00	4793.10	-775.55	12531.88	7468.00	4786.93	-1171.40	-99.75	401.70	302.50	1.33	PASS
12513.00†	7400.00	4893.09	-777.11	12631.88	7468.00	4886.91	-1172.96	-99.75	401.70	308.59	1.30	PASS
12613.00†	7400.00	4993.08	-778.67	12731.88	7468.00	4986.90	-1174.52	-99.75	401.70	314.68	1.28	PASS
12713.00†	7400.00	5093.07	-780.23	12831.88	7468.00	5086.89	-1176.08	-99.75	401.70	320.78	1.25	PASS
12813.00†	7400.00	5193.06	-781.79	12931.88	7468.00	5186.88	-1177.64	-99.75	401.69	326.89	1.23	PASS
12913.00†	7400.00	5293.04	-783.35	13031.88	7468.00	5286.87	-1179.20	-99.75	401.69	332.99	1.21	PASS
13013.00†	7400.00	5393.03	-784.92	13131.88	7468.00	5386.85	-1180.76	-99.75	401.69	339.10	1.18	PASS
13113.00†	7400.00	5493.02	-786.48	13231.88	7468.00	5486.84	-1182.32	-99.75	401.69	345.21	1.16	PASS
13213.00†	7400.00	5593.01	-788.04	13331.88	7468.00	5586.83	-1183.88	-99.75	401.69	351.33	1.14	PASS
13313.00†	7400.00	5693.00	-789.60	13431.88	7468.00	5686.82	-1185.44	-99.75	401.69	357.44	1.12	PASS
13413.00†	7400.00	5792.98	-791.16	13531.88	7468.00	5786.80	-1187.01	-99.75	401.69	363.56	1.11	PASS
13513.00†	7400.00	5892.97	-792.72	13631.88	7468.00	5886.79	-1188.57	-99.75	401.69	369.68	1.09	PASS
13613.00†	7400.00	5992.96	-794.28	13731.88	7468.00	5986.78	-1190.13	-99.75	401.69	375.81	1.07	PASS
13713.00†	7400.00	6092.95	-795.85	13831.88	7468.00	6086.77	-1191.69	-99.75	401.69	381.93	1.05	PASS
13813.00†	7400.00	6192.93	-797.41	13931.88	7468.00	6186.76	-1193.25	-99.75	401.69	388.06	1.04	PASS
13913.00†	7400.00	6292.92	-798.97	14031.88	7468.00	6286.74	-1194.81	-99.75	401.69	394.19	1.02	PASS
14013.00†	7400.00	6392.91	-800.53	14131.88	7468.00	6386.73	-1196.37	-99.75	401.68	400.32	1.00	PASS
14113.00†	7400.00	6492.90	-802.09	14231.88	7468.00	6486.72	-1197.93	-99.75	401.68	406.45	0.99	FAIL
14213.00†	7400.00	6592.89	-803.65	14331.88	7468.00	6586.71	-1199.49	-99.75	401.68	412.59	0.97	FAIL
14313.00†	7400.00	6692.87	-805.21	14431.88	7468.00	6686.69	-1201.05	-99.75	401.68	418.72	0.96	FAIL
14413.00†	7400.00	6792.86	-806.78	14531.88	7468.00	6786.68	-1202.61	-99.75	401.68	424.86	0.95	FAIL
14513.00†	7400.00	6892.85	-808.34	14631.88	7468.00	6886.67	-1204.17	-99.75	401.68	431.00	0.93	FAIL

C-C Clearance Distance Cutoff: 1000.00 ft





# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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#10 WAKEMAN 20-17-2NBH (293°FSL & 2158°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
14613.00†	7400.00	6992.84	-809.90	14731.88	7468.00	6986.66	-1205.73	-99.75	401.68	437.14	0.92	FAIL
14713.00†	7400.00	7092.82	-811.46	14831.88	7468.00	7086.65	-1207.29	-99.75	401.68	443.28	0.91	FAIL
14813.00†	7400.00	7192.81	-813.02	14931.88	7468.00	7186.63	-1208.85	-99.75	401.68	449.42	0.89	FAIL
14913.00†	7400.00	7292.80	-814.58	15031.88	7468.00	7286.62	-1210.41	-99.75	401.68	455.57	0.88	FAIL
15013.00†	7400.00	7392.79	-816.15	15131.88	7468.00	7386.61	-1211.98	-99.75	401.68	461.71	0.87	FAIL
15113.00†	7400.00	7492.78	-817.71	15231.88	7468.00	7486.60	-1213.54	-99.75	401.68	467.86	0.86	FAIL
15213.00†	7400.00	7592.76	-819.27	15331.88	7468.00	7586.59	-1215.10	-99.75	401.67	474.01	0.85	FAIL
15313.00†	7400.00	7692.75	-820.83	15431.88	7468.00	7686.57	-1216.66	-99.75	401.67	480.15	0.84	FAIL
15413.00†	7400.00	7792.74	-822.39	15531.88	7468.00	7786.56	-1218.22	-99.75	401.67	486.30	0.83	FAIL
15513.00†	7400.00	7892.73	-823.95	15631.88	7468.00	7886.55	-1219.78	-99.75	401.67	492.45	0.82	FAIL
15613.00†	7400.00	7992.71	-825.51	15731.88	7468.00	7986.54	-1221.34	-99.75	401.67	498.60	0.81	FAIL
15713.00†	7400.00	8092.70	-827.08	15831.88	7468.00	8086.52	-1222.90	-99.75	401.67	504.76	0.80	FAIL
15813.00†	7400.00	8192.69	-828.64	15931.88	7468.00	8186.51	-1224.46	-99.75	401.67	510.91	0.79	FAIL
15913.00†	7400.00	8292.68	-830.20	16031.88	7468.00	8286.50	-1226.02	-99.75	401.67	517.06	0.78	FAIL
16013.00†	7400.00	8392.67	-831.76	16131.88	7468.00	8386.49	-1227.58	-99.75	401.67	523.22	0.77	FAIL
16113.00†	7400.00	8492.65	-833.32	16231.88	7468.00	8486.48	-1229.14	-99.75	401.67	529.37	0.76	FAIL
16213.00†	7400.00	8592.64	-834.88	16331.88	7468.00	8586.46	-1230.70	-99.75	401.67	535.53	0.75	FAIL
16313.00†	7400.00	8692.63	-836.45	16431.88	7468.00	8686.45	-1232.26	-99.75	401.67	541.68	0.74	FAIL
16413.00†	7400.00	8792.62	-838.01	16531.88	7468.00	8786.44	-1233.82	-99.75	401.66	547.84	0.73	FAIL
16513.00†	7400.00	8892.61	-839.57	16631.88	7468.00	8886.43	-1235.39	-99.75	401.66	554.00	0.72	FAIL
16613.00†	7400.00	8992.59	-841.13	16731.88	7468.00	8986.41	-1236.95	-99.75	401.66	560.16	0.72	FAIL
16713.00†	7400.00	9092.58	-842.69	16831.88	7468.00	9086.40	-1238.51	-99.75	401.66	566.32	0.71	FAIL
16813.00†	7400.00	9192.57	-844.25	16931.88	7468.00	9186.39	-1240.07	-99.75	401.66	572.48	0.70	FAIL
16913.00†	7400.00	9292.56	-845.81	17031.88	7468.00	9286.38	-1241.63	-99.75	401.66	578.64	0.69	FAIL
17013.00†	7400.00	9392.54	-847.38	17131.88	7468.00	9386.37	-1243.19	-99.75	401.66	584.80	0.69	FAIL
17113.00†	7400.00	9492.53	-848.94	17231.88	7468.00	9486.35	-1244.75	-99.75	401.66	590.96	0.68	FAIL
17213.00†	7400.00	9592.52	-850.50	17331.88	7468.00	9586.34	-1246.31	-99.75	401.66	597.12	0.67	FAIL
17313.00†	7400.00	9692.51	-852.06	17431.88	7468.00	9686.33	-1247.87	-99.75	401.66	603.28	0.67	FAIL
17413.00†	7400.00	9792.50	-853.62	17531.88	7468.00	9786.32	-1249.43	-99.75	401.66	609.44	0.66	FAIL
17513.00†	7400.00	9892.48	-855.18	17631.88	7468.00	9886.31	-1250.99	-99.75	401.66	615.61	0.65	FAIL

C-C Clearance Distance Cutoff: 1000.00 ft



**Clearance Report**  
**WAKEMAN 20-17-2NBH PWP (REV-A.0)**  
**Closest Approach**  
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**REFERENCE WELLPATH IDENTIFICATION**

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	
17593.78	7400.00	9973.25	-856.44	17712.65	7468.00	9967.07	-1252.25	-99.75	401.65	620.59	0.65	FAIL	

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	0.01	-9.13	-1.85	-13.54
8.5in Open Hole	1800.00	17719.88	15919.88	1799.45	N/A	-1.85	-13.54	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

**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 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	0.06	14.97	89.75	14.97	1.40	23.62	PASS
113.00†	113.00	0.00	0.00	113.00	113.00	0.06	14.97	89.75	14.97	1.73	15.34	PASS
213.00†	213.00	0.00	0.00	213.00	213.00	0.06	14.97	89.75	14.97	2.30	9.48	PASS
313.00†	313.00	0.00	0.00	313.00	313.00	0.06	14.97	89.75	14.97	2.90	6.75	PASS
413.00†	413.00	0.00	0.00	413.00	413.00	0.06	14.97	89.75	14.97	3.52	5.22	PASS
513.00†	513.00	0.00	0.00	513.00	513.00	0.06	14.97	89.75	14.97	4.14	4.25	PASS
613.00†	613.00	0.00	0.00	613.00	613.00	0.06	14.97	89.75	14.97	4.76	3.58	PASS
713.00†	713.00	0.00	0.00	713.00	713.00	0.06	14.97	89.75	14.97	5.38	3.09	PASS
813.00†	813.00	0.00	0.00	813.00	813.00	0.06	14.97	89.75	14.97	6.01	2.72	PASS
913.00†	913.00	0.00	0.00	913.00	913.00	0.06	14.97	89.75	14.97	6.63	2.43	PASS
1013.00†	1013.00	0.00	0.00	1013.00	1013.00	0.06	14.97	89.75	14.97	7.26	2.19	PASS
1113.00†	1113.00	0.00	0.00	1113.00	1113.00	0.06	14.97	89.75	14.97	7.89	2.00	PASS
1213.00†	1213.00	0.00	0.00	1213.00	1213.00	0.06	14.97	89.75	14.97	8.51	1.84	PASS
1313.00†	1313.00	0.00	0.00	1313.00	1313.00	0.06	14.97	89.75	14.97	9.14	1.70	PASS
1413.00†	1413.00	0.00	0.00	1413.00	1413.00	0.06	14.97	89.75	14.97	9.77	1.58	PASS
1513.00†	1513.00	0.00	0.00	1513.04	1513.04	0.04	14.96	89.85	14.96	10.40	1.48	PASS
1600.00	1600.00	0.00	0.00	1600.26	1600.24	-1.39	13.99	95.66	14.06	10.95	1.31	PASS
1613.00†	1613.00	-0.02	-0.02	1613.28	1613.25	-1.79	13.71	-139.48	13.85	11.03	1.28	PASS
1681.98†	1681.97	-0.64	-0.98	1682.34	1682.22	-4.73	11.71	-128.98	13.33	11.50	1.17	PASS
1713.00†	1712.97	-1.22	-1.87	1713.36	1713.16	-6.50	10.50	-123.71	13.45	11.67	1.16	PASS
1813.00†	1812.80	-4.33	-6.62	1813.30	1812.71	-13.78	5.54	-108.91	15.41	12.23	1.28	PASS
1913.00†	1912.38	-9.35	-14.30	1913.23	1912.21	-21.49	0.29	-106.90	18.98	12.92	1.50	PASS
2013.00†	2011.57	-16.26	-24.87	2013.08	2011.62	-29.19	-4.96	-113.62	23.75	13.70	1.77	PASS
2021.71	2020.19	-16.95	-25.93	2021.77	2020.28	-29.87	-5.41	-114.44	24.24	13.77	1.80	PASS
2113.00†	2110.49	-24.28	-37.14	2112.83	2110.94	-36.89	-10.20	-121.57	29.75	14.51	2.10	PASS
2213.00†	2209.41	-32.31	-49.42	2212.58	2210.25	-44.58	-15.44	-126.82	36.14	15.31	2.43	PASS
2313.00†	2308.33	-40.33	-61.69	2312.33	2309.57	-52.28	-20.68	-130.46	42.73	16.08	2.73	PASS
2413.00†	2407.25	-48.36	-73.97	2412.09	2408.88	-59.97	-25.92	-133.13	49.46	16.85	3.02	PASS
2513.00†	2506.17	-56.39	-86.25	2511.84	2508.20	-67.67	-31.16	-135.15	56.26	17.62	3.29	PASS
2613.00†	2605.08	-64.41	-98.52	2611.59	2607.51	-75.36	-36.41	-136.74	63.12	18.38	3.53	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	
2713.00†	2704.00	-72.44	-110.80	2711.34	2706.83	-83.06	-41.65	-138.01	70.02	19.14	3.76	PASS	
2813.00†	2802.92	-80.47	-123.08	2811.09	2806.14	-90.76	-46.89	-139.06	76.95	19.90	3.97	PASS	
2913.00†	2901.84	-88.49	-135.35	2910.84	2905.46	-98.45	-52.13	-139.93	83.89	20.66	4.17	PASS	
3013.00†	3000.76	-96.52	-147.63	3010.59	3004.78	-106.15	-57.37	-140.67	90.86	21.43	4.35	PASS	
3113.00†	3099.68	-104.54	-159.91	3110.34	3104.09	-113.84	-62.61	-141.30	97.83	22.19	4.52	PASS	
3213.00†	3198.59	-112.57	-172.18	3210.09	3203.41	-121.54	-67.86	-141.85	104.82	22.96	4.68	PASS	
3313.00†	3297.51	-120.60	-184.46	3309.84	3302.72	-129.23	-73.10	-142.33	111.82	23.73	4.83	PASS	
3413.00†	3396.43	-128.62	-196.74	3409.59	3402.04	-136.93	-78.34	-142.75	118.82	24.51	4.96	PASS	
3513.00†	3495.35	-136.65	-209.01	3509.34	3501.35	-144.62	-83.58	-143.13	125.83	25.28	5.09	PASS	
3613.00†	3594.27	-144.68	-221.29	3609.10	3600.67	-152.32	-88.82	-143.47	132.84	26.06	5.21	PASS	
3713.00†	3693.19	-152.70	-233.56	3708.85	3699.98	-160.01	-94.06	-143.77	139.86	26.83	5.33	PASS	
3813.00†	3792.11	-160.73	-245.84	3808.60	3799.30	-167.71	-99.30	-144.04	146.88	27.61	5.43	PASS	
3913.00†	3891.02	-168.76	-258.12	3908.35	3898.61	-175.40	-104.55	-144.29	153.90	28.39	5.53	PASS	
4013.00†	3989.94	-176.78	-270.39	4008.10	3997.93	-183.10	-109.79	-144.52	160.93	29.18	5.63	PASS	
4113.00†	4088.86	-184.81	-282.67	4107.85	4097.24	-190.79	-115.03	-144.73	167.96	29.96	5.72	PASS	
4213.00†	4187.78	-192.83	-294.95	4207.60	4196.56	-198.49	-120.27	-144.92	174.99	30.74	5.80	PASS	
4313.00†	4286.70	-200.86	-307.22	4307.35	4295.88	-206.18	-125.51	-145.10	182.02	31.53	5.88	PASS	
4413.00†	4385.62	-208.89	-319.50	4407.10	4395.19	-213.88	-130.75	-145.26	189.06	32.31	5.96	PASS	
4513.00†	4484.53	-216.91	-331.78	4506.85	4494.51	-221.57	-135.99	-145.41	196.09	33.10	6.03	PASS	
4613.00†	4583.45	-224.94	-344.05	4606.60	4593.82	-229.27	-141.24	-145.56	203.13	33.89	6.10	PASS	
4713.00†	4682.37	-232.97	-356.33	4706.36	4693.14	-236.96	-146.48	-145.69	210.17	34.68	6.17	PASS	
4813.00†	4781.29	-240.99	-368.61	4806.11	4792.45	-244.66	-151.72	-145.81	217.21	35.47	6.23	PASS	
4913.00†	4880.21	-249.02	-380.88	4905.86	4891.77	-252.35	-156.96	-145.93	224.25	36.26	6.29	PASS	
5013.00†	4979.13	-257.04	-393.16	5005.61	4991.08	-260.05	-162.20	-146.04	231.29	37.05	6.34	PASS	
5113.00†	5078.05	-265.07	-405.44	5105.36	5090.40	-267.74	-167.44	-146.14	238.33	37.85	6.40	PASS	
5213.00†	5176.96	-273.10	-417.71	5205.11	5189.71	-275.44	-172.69	-146.23	245.37	38.64	6.45	PASS	
5313.00†	5275.88	-281.12	-429.99	5304.86	5289.03	-283.13	-177.93	-146.32	252.41	39.43	6.50	PASS	
5413.00†	5374.80	-289.15	-442.27	5404.61	5388.35	-290.83	-183.17	-146.41	259.46	40.23	6.55	PASS	
5513.00†	5473.72	-297.18	-454.54	5504.36	5487.66	-298.52	-188.41	-146.49	266.50	41.02	6.59	PASS	
5613.00†	5572.64	-305.20	-466.82	5604.11	5586.98	-306.22	-193.65	-146.57	273.55	41.82	6.64	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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
5713.00†	5671.56	-313.23	-479.10	5703.86	5686.29	-313.91	-198.89	-146.64	280.59	42.61	6.68	PASS
5813.00†	5770.47	-321.25	-491.37	5803.62	5785.61	-321.61	-204.13	-146.71	287.64	43.41	6.72	PASS
5913.00†	5869.39	-329.28	-503.65	5903.37	5884.92	-329.30	-209.38	-146.78	294.68	44.21	6.76	PASS
6013.00†	5968.31	-337.31	-515.93	6003.12	5984.24	-337.00	-214.62	-146.84	301.73	45.00	6.80	PASS
6113.00†	6067.23	-345.33	-528.20	6102.87	6083.55	-344.69	-219.86	-146.90	308.78	45.80	6.83	PASS
6213.00†	6166.15	-353.36	-540.48	6202.62	6182.87	-352.39	-225.10	-146.96	315.82	46.60	6.87	PASS
6313.00†	6265.07	-361.39	-552.76	6302.37	6282.18	-360.08	-230.34	-147.01	322.87	47.40	6.90	PASS
6413.00†	6363.99	-369.41	-565.03	6402.12	6381.50	-367.78	-235.58	-147.07	329.92	48.20	6.93	PASS
6513.00†	6462.90	-377.44	-577.31	6501.87	6480.81	-375.47	-240.83	-147.12	336.97	48.99	6.96	PASS
6613.00†	6561.82	-385.47	-589.59	6601.62	6580.13	-383.17	-246.07	-147.17	344.01	49.79	6.99	PASS
6713.00†	6660.74	-393.49	-601.86	6701.37	6679.45	-390.86	-251.31	-147.21	351.06	50.59	7.02	PASS
6813.00†	6759.66	-401.52	-614.14	6801.12	6778.76	-398.56	-256.55	-147.26	358.11	51.39	7.05	PASS
6840.60	6786.96	-403.73	-617.53	6828.65	6806.17	-400.68	-258.00	-147.27	360.06	51.61	7.06	PASS
6913.00†	6858.74	-404.98	-626.51	6901.00	6878.25	-405.41	-261.81	159.84	365.22	52.24	7.07	PASS
7013.00†	6956.94	-391.71	-639.03	7002.06	6978.82	-398.82	-267.31	120.71	372.42	53.27	7.07	PASS
7113.00†	7051.32	-361.45	-651.33	7104.40	7077.86	-374.24	-272.97	109.36	379.50	54.55	7.04	PASS
7213.00†	7139.02	-315.13	-663.05	7207.99	7172.04	-331.81	-278.61	104.68	386.21	54.03	7.23	PASS
7313.00†	7217.38	-254.15	-673.83	7312.78	7257.97	-272.35	-284.04	102.26	392.32	53.14	7.47	PASS
7413.00†	7284.01	-180.36	-683.33	7418.63	7332.34	-197.39	-289.05	100.85	397.60	52.23	7.70	PASS
7513.00†	7336.89	-96.01	-691.28	7525.37	7392.10	-109.25	-293.45	99.97	401.86	51.62	7.88	PASS
7613.00†	7374.42	-3.66	-697.43	7632.76	7434.72	-10.93	-297.06	99.41	404.95	51.61	7.94	PASS
7713.00†	7395.45	93.88	-701.59	7740.49	7458.34	93.99	-299.74	99.05	406.74	52.39	7.86	PASS
7785.53	7400.00	166.19	-703.29	7818.31	7463.00	171.60	-301.04	98.90	407.19	53.40	7.71	PASS
7813.00†	7400.00	193.67	-703.72	7845.79	7463.00	199.07	-301.41	98.90	407.25	53.84	7.65	PASS
7913.00†	7400.00	293.65	-705.28	7945.79	7463.00	299.06	-302.75	98.89	407.46	55.78	7.39	PASS
8013.00†	7400.00	393.64	-706.84	8045.78	7463.00	399.05	-304.09	98.89	407.68	58.35	7.06	PASS
8113.00†	7400.00	493.63	-708.40	8145.78	7463.00	499.04	-305.44	98.89	407.90	61.44	6.70	PASS
8213.00†	7400.00	593.62	-709.96	8245.78	7463.00	599.04	-306.78	98.88	408.11	64.98	6.34	PASS
8313.00†	7400.00	693.60	-711.52	8345.78	7463.00	699.03	-308.12	98.88	408.33	68.91	5.98	PASS
8413.00†	7400.00	793.59	-713.09	8445.78	7463.00	799.02	-309.47	98.87	408.54	73.15	5.63	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	
8513.00†	7400.00	893.58	-714.65	8545.78	7463.00	899.01	-310.81	98.87	408.76	77.66	5.30	PASS	
8613.00†	7400.00	993.57	-716.21	8645.78	7463.00	999.00	-312.16	98.86	408.97	82.40	5.00	PASS	
8713.00†	7400.00	1093.56	-717.77	8745.78	7463.00	1098.99	-313.50	98.86	409.19	87.32	4.72	PASS	
8813.00†	7400.00	1193.54	-719.33	8845.78	7463.00	1198.98	-314.84	98.85	409.40	92.40	4.46	PASS	
8913.00†	7400.00	1293.53	-720.89	8945.78	7463.00	1298.97	-316.19	98.85	409.62	97.60	4.22	PASS	
9013.00†	7400.00	1393.52	-722.45	9045.78	7463.00	1398.96	-317.53	98.84	409.83	102.47	4.02	PASS	
9113.00†	7400.00	1493.51	-724.02	9145.78	7463.00	1498.95	-318.87	98.84	410.05	108.33	3.80	PASS	
9213.00†	7400.00	1593.50	-725.58	9245.78	7463.00	1598.94	-320.22	98.83	410.26	113.83	3.62	PASS	
9313.00†	7400.00	1693.48	-727.14	9345.78	7463.00	1698.93	-321.56	98.83	410.48	119.39	3.45	PASS	
9413.00†	7400.00	1793.47	-728.70	9445.78	7463.00	1798.92	-322.91	98.82	410.69	125.01	3.30	PASS	
9513.00†	7400.00	1893.46	-730.26	9545.78	7463.00	1898.91	-324.25	98.82	410.91	130.69	3.16	PASS	
9613.00†	7400.00	1993.45	-731.82	9645.78	7463.00	1998.91	-325.59	98.82	411.12	136.41	3.02	PASS	
9713.00†	7400.00	2093.43	-733.39	9745.78	7463.00	2098.90	-326.94	98.81	411.34	142.17	2.90	PASS	
9813.00†	7400.00	2193.42	-734.95	9845.78	7463.00	2198.89	-328.28	98.81	411.55	147.97	2.79	PASS	
9913.00†	7400.00	2293.41	-736.51	9945.78	7463.00	2298.88	-329.63	98.80	411.77	153.80	2.69	PASS	
10013.00†	7400.00	2393.40	-738.07	10045.78	7463.00	2398.87	-330.97	98.80	411.98	159.66	2.59	PASS	
10113.00†	7400.00	2493.39	-739.63	10145.78	7463.00	2498.86	-332.31	98.79	412.20	165.55	2.50	PASS	
10213.00†	7400.00	2593.37	-741.19	10245.78	7463.00	2598.85	-333.66	98.79	412.41	171.45	2.41	PASS	
10313.00†	7400.00	2693.36	-742.75	10345.78	7463.00	2698.84	-335.00	98.78	412.63	177.38	2.33	PASS	
10413.00†	7400.00	2793.35	-744.32	10445.78	7463.00	2798.83	-336.34	98.78	412.84	183.32	2.26	PASS	
10513.00†	7400.00	2893.34	-745.88	10545.78	7463.00	2898.82	-337.69	98.77	413.06	189.29	2.19	PASS	
10613.00†	7400.00	2993.32	-747.44	10645.78	7463.00	2998.81	-339.03	98.77	413.27	195.26	2.12	PASS	
10713.00†	7400.00	3093.31	-749.00	10745.78	7463.00	3098.80	-340.38	98.76	413.49	201.25	2.06	PASS	
10813.00†	7400.00	3193.30	-750.56	10845.78	7463.00	3198.79	-341.72	98.76	413.70	207.26	2.00	PASS	
10913.00†	7400.00	3293.29	-752.12	10945.78	7463.00	3298.79	-343.06	98.76	413.92	213.27	1.94	PASS	
11013.00†	7400.00	3393.28	-753.69	11045.78	7463.00	3398.78	-344.41	98.75	414.14	219.30	1.89	PASS	
11113.00†	7400.00	3493.26	-755.25	11145.78	7463.00	3498.77	-345.75	98.75	414.35	225.33	1.84	PASS	
11213.00†	7400.00	3593.25	-756.81	11245.78	7463.00	3598.76	-347.09	98.74	414.57	231.38	1.79	PASS	
11313.00†	7400.00	3693.24	-758.37	11345.78	7463.00	3698.75	-348.44	98.74	414.78	237.43	1.75	PASS	
11413.00†	7400.00	3793.23	-759.93	11445.78	7463.00	3798.74	-349.78	98.73	415.00	243.49	1.71	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft





# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	
11513.00†	7400.00	3893.21	-761.49	11545.78	7463.00	3898.73	-351.13	98.73	415.21	249.56	1.67	PASS	
11613.00†	7400.00	3993.20	-763.05	11645.78	7463.00	3998.72	-352.47	98.72	415.43	255.63	1.63	PASS	
11713.00†	7400.00	4093.19	-764.62	11745.78	7463.00	4098.71	-353.81	98.72	415.64	261.72	1.59	PASS	
11813.00†	7400.00	4193.18	-766.18	11845.78	7463.00	4198.70	-355.16	98.71	415.86	267.80	1.55	PASS	
11913.00†	7400.00	4293.17	-767.74	11945.78	7463.00	4298.69	-356.50	98.71	416.07	273.89	1.52	PASS	
12013.00†	7400.00	4393.15	-769.30	12045.78	7463.00	4398.68	-357.84	98.70	416.29	279.99	1.49	PASS	
12113.00†	7400.00	4493.14	-770.86	12145.78	7463.00	4498.67	-359.19	98.70	416.50	286.09	1.46	PASS	
12213.00†	7400.00	4593.13	-772.42	12245.77	7463.00	4598.66	-360.53	98.70	416.72	292.20	1.43	PASS	
12313.00†	7400.00	4693.12	-773.98	12345.77	7463.00	4698.66	-361.88	98.69	416.93	298.31	1.40	PASS	
12413.00†	7400.00	4793.10	-775.55	12445.77	7463.00	4798.65	-363.22	98.69	417.15	304.42	1.37	PASS	
12513.00†	7400.00	4893.09	-777.11	12545.77	7463.00	4898.64	-364.56	98.68	417.36	310.54	1.34	PASS	
12613.00†	7400.00	4993.08	-778.67	12645.77	7463.00	4998.63	-365.91	98.68	417.58	316.66	1.32	PASS	
12713.00†	7400.00	5093.07	-780.23	12745.77	7463.00	5098.62	-367.25	98.67	417.79	322.79	1.29	PASS	
12813.00†	7400.00	5193.06	-781.79	12845.77	7463.00	5198.61	-368.59	98.67	418.01	328.92	1.27	PASS	
12913.00†	7400.00	5293.04	-783.35	12945.77	7463.00	5298.60	-369.94	98.66	418.22	335.05	1.25	PASS	
13013.00†	7400.00	5393.03	-784.92	13045.77	7463.00	5398.59	-371.28	98.66	418.44	341.18	1.23	PASS	
13113.00†	7400.00	5493.02	-786.48	13145.77	7463.00	5498.58	-372.63	98.66	418.66	347.32	1.21	PASS	
13213.00†	7400.00	5593.01	-788.04	13245.77	7463.00	5598.57	-373.97	98.65	418.87	353.46	1.19	PASS	
13313.00†	7400.00	5693.00	-789.60	13345.77	7463.00	5698.56	-375.31	98.65	419.09	359.60	1.17	PASS	
13413.00†	7400.00	5792.98	-791.16	13445.77	7463.00	5798.55	-376.66	98.64	419.30	365.74	1.15	PASS	
13513.00†	7400.00	5892.97	-792.72	13545.77	7463.00	5898.54	-378.00	98.64	419.52	371.89	1.13	PASS	
13613.00†	7400.00	5992.96	-794.28	13645.77	7463.00	5998.54	-379.34	98.63	419.73	378.04	1.11	PASS	
13713.00†	7400.00	6092.95	-795.85	13745.77	7463.00	6098.53	-380.69	98.63	419.95	384.19	1.09	PASS	
13813.00†	7400.00	6192.93	-797.41	13845.77	7463.00	6198.52	-382.03	98.62	420.16	390.34	1.08	PASS	
13913.00†	7400.00	6292.92	-798.97	13945.77	7463.00	6298.51	-383.38	98.62	420.38	396.49	1.06	PASS	
14013.00†	7400.00	6392.91	-800.53	14045.77	7463.00	6398.50	-384.72	98.62	420.59	402.65	1.04	PASS	
14113.00†	7400.00	6492.90	-802.09	14145.77	7463.00	6498.49	-386.06	98.61	420.81	408.80	1.03	PASS	
14213.00†	7400.00	6592.89	-803.65	14245.77	7463.00	6598.48	-387.41	98.61	421.02	414.96	1.01	PASS	
14313.00†	7400.00	6692.87	-805.21	14345.77	7463.00	6698.47	-388.75	98.60	421.24	421.12	1.00	PASS	
14413.00†	7400.00	6792.86	-806.78	14445.77	7463.00	6798.46	-390.10	98.60	421.45	427.29	0.99	FAIL	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	
14513.00†	7400.00	6892.85	-808.34	14545.77	7463.00	6898.45	-391.44	98.59	421.67	433.45	0.97	FAIL	
14613.00†	7400.00	6992.84	-809.90	14645.77	7463.00	6998.44	-392.78	98.59	421.88	439.61	0.96	FAIL	
14713.00†	7400.00	7092.82	-811.46	14745.77	7463.00	7098.43	-394.13	98.58	422.10	445.78	0.95	FAIL	
14813.00†	7400.00	7192.81	-813.02	14845.77	7463.00	7198.42	-395.47	98.58	422.32	451.95	0.93	FAIL	
14913.00†	7400.00	7292.80	-814.58	14945.77	7463.00	7298.41	-396.81	98.58	422.53	458.12	0.92	FAIL	
15013.00†	7400.00	7392.79	-816.15	15045.77	7463.00	7398.41	-398.16	98.57	422.75	464.29	0.91	FAIL	
15113.00†	7400.00	7492.78	-817.71	15145.77	7463.00	7498.40	-399.50	98.57	422.96	470.46	0.90	FAIL	
15213.00†	7400.00	7592.76	-819.27	15245.77	7463.00	7598.39	-400.85	98.56	423.18	476.63	0.89	FAIL	
15313.00†	7400.00	7692.75	-820.83	15345.77	7463.00	7698.38	-402.19	98.56	423.39	482.80	0.88	FAIL	
15413.00†	7400.00	7792.74	-822.39	15445.77	7463.00	7798.37	-403.53	98.55	423.61	488.97	0.87	FAIL	
15513.00†	7400.00	7892.73	-823.95	15545.77	7463.00	7898.36	-404.88	98.55	423.82	495.15	0.86	FAIL	
15613.00†	7400.00	7992.71	-825.51	15645.77	7463.00	7998.35	-406.22	98.54	424.04	501.33	0.85	FAIL	
15713.00†	7400.00	8092.70	-827.08	15745.77	7463.00	8098.34	-407.56	98.54	424.25	507.50	0.84	FAIL	
15813.00†	7400.00	8192.69	-828.64	15845.77	7463.00	8198.33	-408.91	98.54	424.47	513.68	0.83	FAIL	
15913.00†	7400.00	8292.68	-830.20	15945.77	7463.00	8298.32	-410.25	98.53	424.68	519.86	0.82	FAIL	
16013.00†	7400.00	8392.67	-831.76	16045.77	7463.00	8398.31	-411.60	98.53	424.90	526.04	0.81	FAIL	
16113.00†	7400.00	8492.65	-833.32	16145.77	7463.00	8498.30	-412.94	98.52	425.11	532.22	0.80	FAIL	
16213.00†	7400.00	8592.64	-834.88	16245.77	7463.00	8598.29	-414.28	98.52	425.33	538.40	0.79	FAIL	
16313.00†	7400.00	8692.63	-836.45	16345.77	7463.00	8698.28	-415.63	98.51	425.55	544.58	0.78	FAIL	
16413.00†	7400.00	8792.62	-838.01	16445.77	7463.00	8798.28	-416.97	98.51	425.76	550.76	0.77	FAIL	
16513.00†	7400.00	8892.61	-839.57	16545.76	7463.00	8898.27	-418.31	98.51	425.98	556.95	0.76	FAIL	
16613.00†	7400.00	8992.59	-841.13	16645.76	7463.00	8998.26	-419.66	98.50	426.19	563.13	0.76	FAIL	
16713.00†	7400.00	9092.58	-842.69	16745.76	7463.00	9098.25	-421.00	98.50	426.41	569.32	0.75	FAIL	
16813.00†	7400.00	9192.57	-844.25	16845.76	7463.00	9198.24	-422.35	98.49	426.62	575.50	0.74	FAIL	
16913.00†	7400.00	9292.56	-845.81	16945.76	7463.00	9298.23	-423.69	98.49	426.84	581.69	0.73	FAIL	
17013.00†	7400.00	9392.54	-847.38	17045.76	7463.00	9398.22	-425.03	98.48	427.05	587.87	0.73	FAIL	
17113.00†	7400.00	9492.53	-848.94	17145.76	7463.00	9498.21	-426.38	98.48	427.27	594.06	0.72	FAIL	
17213.00†	7400.00	9592.52	-850.50	17245.76	7463.00	9598.20	-427.72	98.48	427.48	600.25	0.71	FAIL	
17313.00†	7400.00	9692.51	-852.06	17345.76	7463.00	9698.19	-429.06	98.47	427.70	606.44	0.70	FAIL	
17413.00†	7400.00	9792.50	-853.62	17445.76	7463.00	9798.18	-430.41	98.47	427.91	612.63	0.70	FAIL	

C-C Clearance Distance Cutoff: 1000.00 ft



**Clearance Report**  
**WAKEMAN 20-17-2NBH PWP (REV-A.0)**  
**Closest Approach**  
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**REFERENCE WELLPATH IDENTIFICATION**

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	
17513.00†	7400.00	9892.48	-855.18	17545.76	7463.00	9898.17	-431.75	98.46	428.13	618.81	0.69	FAIL	
17586.98†	7400.00	9966.45	-856.34	17619.74	7463.00	9972.14	-432.75	98.46	428.29	623.39	0.69	FAIL	
17593.78	7400.00	9973.25	-856.44	17619.74	7463.00	9972.14	-432.75	98.46	428.36	623.01	0.69	FAIL	

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

**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	0.04	9.13	-3.87	6.47
8.5in Open Hole	1800.00	17619.74	15819.74	1799.47	N/A	-3.87	6.47	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 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	-0.02	-30.03	-90.04	30.03	1.40	48.71	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	-0.02	-30.03	-90.04	30.03	1.73	31.48	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	-0.02	-30.03	-90.04	30.03	2.31	19.44	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	-0.02	-30.03	-90.04	30.03	2.91	13.86	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	-0.02	-30.03	-90.04	30.03	3.53	10.73	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	-0.02	-30.03	-90.04	30.03	4.15	8.74	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	-0.02	-30.03	-90.04	30.03	4.77	7.36	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	-0.02	-30.03	-90.04	30.03	5.40	6.36	PASS	
813.00†	813.00	0.00	0.00	813.00	813.00	-0.02	-30.03	-90.04	30.03	6.02	5.60	PASS	
913.00†	913.00	0.00	0.00	913.00	913.00	-0.02	-30.03	-90.04	30.03	6.65	5.00	PASS	
1013.00†	1013.00	0.00	0.00	1013.00	1013.00	-0.02	-30.03	-90.04	30.03	7.27	4.52	PASS	
1113.00†	1113.00	0.00	0.00	1113.00	1113.00	-0.02	-30.03	-90.04	30.03	7.90	4.12	PASS	
1213.00†	1213.00	0.00	0.00	1213.00	1213.00	-0.02	-30.03	-90.04	30.03	8.53	3.78	PASS	
1313.00†	1313.00	0.00	0.00	1313.00	1313.00	-0.02	-30.03	-90.04	30.03	9.15	3.50	PASS	
1413.00†	1413.00	0.00	0.00	1412.87	1412.87	-0.03	-30.06	-90.06	30.06	9.78	3.26	PASS	
1513.00†	1513.00	0.00	0.00	1511.84	1511.81	-0.75	-32.09	-91.33	32.12	10.48	3.24	PASS	
1600.00	1600.00	0.00	0.00	1597.73	1597.57	-2.29	-36.46	-93.59	36.62	11.27	3.42	PASS	
1613.00†	1613.00	-0.02	-0.02	1610.54	1610.35	-2.59	-37.33	29.22	37.48	11.36	3.47	PASS	
1713.00†	1712.97	-1.22	-1.87	1708.93	1708.34	-5.55	-45.73	27.45	44.32	12.25	3.80	PASS	
1813.00†	1812.80	-4.33	-6.62	1807.09	1805.72	-9.61	-57.27	27.02	51.41	13.17	4.07	PASS	
1913.00†	1912.38	-9.35	-14.30	1904.99	1902.38	-14.76	-71.91	27.45	58.72	14.12	4.32	PASS	
2013.00†	2011.57	-16.26	-24.87	2002.63	1998.20	-20.99	-89.60	28.44	66.26	15.04	4.58	PASS	
2021.71	2020.19	-16.95	-25.93	2011.13	2006.51	-21.58	-91.29	28.55	66.93	15.10	4.60	PASS	
2113.00†	2110.49	-24.28	-37.14	2099.92	2092.97	-28.27	-110.28	29.34	75.32	15.74	4.96	PASS	
2213.00†	2209.41	-32.31	-49.42	2199.34	2189.45	-36.25	-132.95	29.75	85.98	16.37	5.44	PASS	
2313.00†	2308.33	-40.33	-61.69	2298.77	2285.93	-44.23	-155.63	30.07	96.64	17.02	5.88	PASS	
2413.00†	2407.25	-48.36	-73.97	2398.20	2382.41	-52.21	-178.30	30.32	107.31	17.70	6.27	PASS	
2513.00†	2506.17	-56.39	-86.25	2497.63	2478.89	-60.19	-200.97	30.53	117.98	18.39	6.63	PASS	
2613.00†	2605.08	-64.41	-98.52	2597.06	2575.37	-68.17	-223.64	30.71	128.65	19.10	6.96	PASS	
2713.00†	2704.00	-72.44	-110.80	2696.49	2671.85	-76.15	-246.31	30.86	139.33	19.83	7.25	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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		
2813.00†	2802.92	-80.47	-123.08	2795.91	2768.33	-84.13	-268.99	30.98	150.00	20.57	7.52	PASS		
2913.00†	2901.84	-88.49	-135.35	2895.34	2864.81	-92.11	-291.66	31.10	160.67	21.32	7.76	PASS		
3013.00†	3000.76	-96.52	-147.63	2994.77	2961.29	-100.09	-314.33	31.19	171.35	22.09	7.98	PASS		
3113.00†	3099.68	-104.54	-159.91	3094.20	3057.77	-108.07	-337.00	31.28	182.02	22.86	8.18	PASS		
3213.00†	3198.59	-112.57	-172.18	3193.63	3154.25	-116.05	-359.68	31.35	192.70	23.65	8.37	PASS		
3313.00†	3297.51	-120.60	-184.46	3293.06	3250.73	-124.03	-382.35	31.42	203.37	24.44	8.54	PASS		
3413.00†	3396.43	-128.62	-196.74	3392.48	3347.21	-132.01	-405.02	31.48	214.05	25.23	8.70	PASS		
3513.00†	3495.35	-136.65	-209.01	3491.91	3443.68	-139.99	-427.69	31.54	224.73	26.04	8.84	PASS		
3613.00†	3594.27	-144.68	-221.29	3591.34	3540.16	-147.97	-450.37	31.59	235.40	26.85	8.98	PASS		
3713.00†	3693.19	-152.70	-233.56	3690.77	3636.64	-155.95	-473.04	31.63	246.08	27.67	9.10	PASS		
3813.00†	3792.11	-160.73	-245.84	3790.20	3733.12	-163.93	-495.71	31.68	256.76	28.49	9.22	PASS		
3913.00†	3891.02	-168.76	-258.12	3889.62	3829.60	-171.91	-518.38	31.71	267.43	29.31	9.32	PASS		
4013.00†	3989.94	-176.78	-270.39	3989.05	3926.08	-179.89	-541.05	31.75	278.11	30.14	9.42	PASS		
4113.00†	4088.86	-184.81	-282.67	4088.48	4022.56	-187.87	-563.73	31.78	288.79	30.98	9.52	PASS		
4213.00†	4187.78	-192.83	-294.95	4187.91	4119.04	-195.85	-586.40	31.81	299.46	31.81	9.60	PASS		
4313.00†	4286.70	-200.86	-307.22	4287.34	4215.52	-203.83	-609.07	31.84	310.14	32.65	9.69	PASS		
4413.00†	4385.62	-208.89	-319.50	4386.77	4312.00	-211.81	-631.74	31.87	320.82	33.50	9.76	PASS		
4513.00†	4484.53	-216.91	-331.78	4486.19	4408.48	-219.79	-654.42	31.89	331.49	34.34	9.84	PASS		
4613.00†	4583.45	-224.94	-344.05	4585.62	4504.96	-227.77	-677.09	31.92	342.17	35.19	9.90	PASS		
4713.00†	4682.37	-232.97	-356.33	4685.05	4601.44	-235.75	-699.76	31.94	352.85	36.04	9.97	PASS		
4813.00†	4781.29	-240.99	-368.61	4784.48	4697.92	-243.73	-722.43	31.96	363.53	36.89	10.03	PASS		
4913.00†	4880.21	-249.02	-380.88	4883.91	4794.40	-251.71	-745.10	31.98	374.20	37.75	10.08	PASS		
5013.00†	4979.13	-257.04	-393.16	4983.34	4890.87	-259.69	-767.78	32.00	384.88	38.60	10.14	PASS		
5113.00†	5078.05	-265.07	-405.44	5082.76	4987.35	-267.67	-790.45	32.02	395.56	39.46	10.19	PASS		
5213.00†	5176.96	-273.10	-417.71	5182.19	5083.83	-275.65	-813.12	32.03	406.24	40.32	10.24	PASS		
5313.00†	5275.88	-281.12	-429.99	5281.62	5180.31	-283.63	-835.79	32.05	416.91	41.18	10.28	PASS		
5413.00†	5374.80	-289.15	-442.27	5381.05	5276.79	-291.61	-858.47	32.06	427.59	42.05	10.33	PASS		
5513.00†	5473.72	-297.18	-454.54	5480.48	5373.27	-299.59	-881.14	32.08	438.27	42.91	10.37	PASS		
5613.00†	5572.64	-305.20	-466.82	5579.90	5469.75	-307.57	-903.81	32.09	448.95	43.78	10.41	PASS		
5713.00†	5671.56	-313.23	-479.10	5679.33	5566.23	-315.55	-926.48	32.10	459.62	44.64	10.45	PASS		

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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
5813.00†	5770.47	-321.25	-491.37	5778.76	5662.71	-323.53	-949.16	32.12	470.30	45.51	10.48	PASS
5913.00†	5869.39	-329.28	-503.65	5878.19	5759.19	-331.52	-971.83	32.13	480.98	46.38	10.52	PASS
6013.00†	5968.31	-337.31	-515.93	5977.62	5855.67	-339.50	-994.50	32.14	491.66	47.25	10.55	PASS
6113.00†	6067.23	-345.33	-528.20	6077.05	5952.15	-347.48	-1017.17	32.15	502.33	48.12	10.58	PASS
6213.00†	6166.15	-353.36	-540.48	6176.47	6048.63	-355.46	-1039.84	32.16	513.01	48.99	10.61	PASS
6313.00†	6265.07	-361.39	-552.76	6275.90	6145.11	-363.44	-1062.52	32.17	523.69	49.86	10.64	PASS
6413.00†	6363.99	-369.41	-565.03	6375.33	6241.59	-371.42	-1085.19	32.18	534.37	50.74	10.67	PASS
6513.00†	6462.90	-377.44	-577.31	6474.76	6338.06	-379.40	-1107.86	32.19	545.05	51.61	10.69	PASS
6613.00†	6561.82	-385.47	-589.59	6574.19	6434.54	-387.38	-1130.53	32.20	555.72	52.49	10.72	PASS
6713.00†	6660.74	-393.49	-601.86	6673.62	6531.02	-395.36	-1153.21	32.21	566.40	53.36	10.74	PASS
6813.00†	6759.66	-401.52	-614.14	6773.01	6627.47	-403.33	-1175.87	32.21	577.08	54.24	10.77	PASS
6840.60	6786.96	-403.73	-617.53	6799.91	6653.62	-404.77	-1182.03	32.29	580.04	54.49	10.77	PASS
6913.00†	6858.74	-404.98	-626.51	6870.16	6721.89	-402.57	-1198.25	-19.51	587.90	55.07	10.80	PASS
7013.00†	6956.94	-391.71	-639.03	6966.54	6814.02	-385.64	-1220.44	-57.50	598.76	55.64	10.89	PASS
7113.00†	7051.32	-361.45	-651.33	7062.31	6901.47	-353.35	-1241.88	-67.77	609.31	55.81	11.04	PASS
7213.00†	7139.02	-315.13	-663.05	7157.65	6982.06	-306.77	-1262.00	-71.47	619.23	55.35	11.32	PASS
7313.00†	7217.38	-254.15	-673.83	7252.70	7053.75	-247.28	-1280.30	-73.02	628.20	54.70	11.62	PASS
7413.00†	7284.01	-180.36	-683.33	7347.62	7114.76	-176.50	-1296.33	-73.70	635.94	54.13	11.89	PASS
7513.00†	7336.89	-96.01	-691.28	7442.53	7163.52	-96.30	-1309.66	-74.01	642.22	53.88	12.06	PASS
7613.00†	7374.42	-3.66	-697.43	7537.57	7198.73	-8.75	-1319.95	-74.17	646.86	54.16	12.09	PASS
7713.00†	7395.45	93.88	-701.59	7632.81	7219.39	83.86	-1326.90	-74.29	649.70	55.06	11.94	PASS
7785.53	7400.00	166.19	-703.29	7702.08	7224.88	152.80	-1329.73	-74.39	650.60	56.09	11.74	PASS
7813.00†	7400.00	193.67	-703.72	7729.00	7225.00	179.72	-1330.36	-74.40	650.77	56.55	11.64	PASS
7913.00†	7400.00	293.65	-705.28	7829.00	7225.00	279.69	-1332.59	-74.42	651.41	58.54	11.25	PASS
8013.00†	7400.00	393.64	-706.84	7929.00	7225.00	379.67	-1334.81	-74.43	652.05	61.10	10.78	PASS
8113.00†	7400.00	493.63	-708.40	8029.00	7225.00	479.64	-1337.04	-74.45	652.69	64.15	10.28	PASS
8213.00†	7400.00	593.62	-709.96	8128.99	7225.00	579.61	-1339.26	-74.46	653.33	67.60	9.76	PASS
8313.00†	7400.00	693.60	-711.52	8228.99	7225.00	679.59	-1341.48	-74.48	653.97	71.41	9.24	PASS
8413.00†	7400.00	793.59	-713.09	8328.99	7225.00	779.56	-1343.71	-74.49	654.61	75.52	8.74	PASS
8513.00†	7400.00	893.58	-714.65	8428.99	7225.00	879.53	-1345.93	-74.51	655.24	79.89	8.27	PASS

C-C Clearance Distance Cutoff: 1000.00 ft





# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	
8613.00†	7400.00	993.57	-716.21	8528.98	7225.00	979.51	-1348.16	-74.53	655.88	83.88	7.88	PASS	
8713.00†	7400.00	1093.56	-717.77	8628.98	7225.00	1079.48	-1350.38	-74.54	656.52	89.22	7.41	PASS	
8813.00†	7400.00	1193.54	-719.33	8728.98	7225.00	1179.45	-1352.61	-74.56	657.16	94.13	7.03	PASS	
8913.00†	7400.00	1293.53	-720.89	8828.98	7225.00	1279.43	-1354.83	-74.57	657.80	99.17	6.67	PASS	
9013.00†	7400.00	1393.52	-722.45	8928.98	7225.00	1379.40	-1357.06	-74.59	658.44	104.32	6.35	PASS	
9113.00†	7400.00	1493.51	-724.02	9028.97	7225.00	1479.37	-1359.28	-74.60	659.08	109.57	6.05	PASS	
9213.00†	7400.00	1593.50	-725.58	9128.97	7225.00	1579.34	-1361.51	-74.62	659.72	114.90	5.77	PASS	
9313.00†	7400.00	1693.48	-727.14	9228.97	7225.00	1679.32	-1363.73	-74.63	660.36	120.30	5.52	PASS	
9413.00†	7400.00	1793.47	-728.70	9328.97	7225.00	1779.29	-1365.96	-74.65	661.00	125.76	5.28	PASS	
9513.00†	7400.00	1893.46	-730.26	9428.96	7225.00	1879.26	-1368.18	-74.66	661.64	131.28	5.06	PASS	
9613.00†	7400.00	1993.45	-731.82	9528.96	7225.00	1979.24	-1370.41	-74.68	662.28	136.85	4.86	PASS	
9713.00†	7400.00	2093.43	-733.39	9628.96	7225.00	2079.21	-1372.63	-74.69	662.92	142.46	4.67	PASS	
9813.00†	7400.00	2193.42	-734.95	9728.96	7225.00	2179.18	-1374.85	-74.71	663.56	148.11	4.50	PASS	
9913.00†	7400.00	2293.41	-736.51	9828.96	7225.00	2279.16	-1377.08	-74.72	664.20	153.79	4.33	PASS	
10013.00†	7400.00	2393.40	-738.07	9928.95	7225.00	2379.13	-1379.30	-74.74	664.84	159.50	4.18	PASS	
10113.00†	7400.00	2493.39	-739.63	10028.95	7225.00	2479.10	-1381.53	-74.75	665.48	165.24	4.04	PASS	
10213.00†	7400.00	2593.37	-741.19	10128.95	7225.00	2579.07	-1383.75	-74.77	666.12	171.00	3.91	PASS	
10313.00†	7400.00	2693.36	-742.75	10228.95	7225.00	2679.05	-1385.98	-74.78	666.76	176.79	3.78	PASS	
10413.00†	7400.00	2793.35	-744.32	10328.94	7225.00	2779.02	-1388.20	-74.80	667.40	182.59	3.67	PASS	
10513.00†	7400.00	2893.34	-745.88	10428.94	7225.00	2878.99	-1390.43	-74.81	668.04	188.42	3.56	PASS	
10613.00†	7400.00	2993.32	-747.44	10528.94	7225.00	2978.97	-1392.65	-74.83	668.68	194.26	3.45	PASS	
10713.00†	7400.00	3093.31	-749.00	10628.94	7225.00	3078.94	-1394.88	-74.84	669.32	200.11	3.35	PASS	
10813.00†	7400.00	3193.30	-750.56	10728.94	7225.00	3178.91	-1397.10	-74.86	669.96	205.98	3.26	PASS	
10913.00†	7400.00	3293.29	-752.12	10828.93	7225.00	3278.89	-1399.33	-74.87	670.60	211.86	3.17	PASS	
11013.00†	7400.00	3393.28	-753.69	10928.93	7225.00	3378.86	-1401.55	-74.89	671.24	217.76	3.09	PASS	
11113.00†	7400.00	3493.26	-755.25	11028.93	7225.00	3478.83	-1403.77	-74.90	671.88	223.67	3.01	PASS	
11213.00†	7400.00	3593.25	-756.81	11128.93	7225.00	3578.81	-1406.00	-74.92	672.52	229.58	2.94	PASS	
11313.00†	7400.00	3693.24	-758.37	11228.93	7225.00	3678.78	-1408.22	-74.93	673.16	235.51	2.86	PASS	
11413.00†	7400.00	3793.23	-759.93	11328.92	7225.00	3778.75	-1410.45	-74.95	673.80	241.44	2.80	PASS	
11513.00†	7400.00	3893.21	-761.49	11428.92	7225.00	3878.72	-1412.67	-74.96	674.44	247.38	2.73	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	
11613.00†	7400.00	3993.20	-763.05	11528.92	7225.00	3978.70	-1414.90	-74.97	675.08	253.34	2.67	PASS	
11713.00†	7400.00	4093.19	-764.62	11628.92	7225.00	4078.67	-1417.12	-74.99	675.72	259.29	2.61	PASS	
11813.00†	7400.00	4193.18	-766.18	11728.91	7225.00	4178.64	-1419.35	-75.01	676.36	265.26	2.55	PASS	
11913.00†	7400.00	4293.17	-767.74	11828.91	7225.00	4278.62	-1421.57	-75.02	677.00	271.23	2.50	PASS	
12013.00†	7400.00	4393.15	-769.30	11928.91	7225.00	4378.59	-1423.80	-75.03	677.64	277.21	2.45	PASS	
12113.00†	7400.00	4493.14	-770.86	12028.91	7225.00	4478.56	-1426.02	-75.05	678.29	283.19	2.40	PASS	
12213.00†	7400.00	4593.13	-772.42	12128.91	7225.00	4578.54	-1428.25	-75.06	678.93	289.18	2.35	PASS	
12313.00†	7400.00	4693.12	-773.98	12228.90	7225.00	4678.51	-1430.47	-75.08	679.57	295.17	2.31	PASS	
12413.00†	7400.00	4793.10	-775.55	12328.90	7225.00	4778.48	-1432.70	-75.09	680.21	301.17	2.26	PASS	
12513.00†	7400.00	4893.09	-777.11	12428.90	7225.00	4878.45	-1434.92	-75.11	680.85	307.17	2.22	PASS	
12613.00†	7400.00	4993.08	-778.67	12528.90	7225.00	4978.43	-1437.14	-75.12	681.49	313.18	2.18	PASS	
12713.00†	7400.00	5093.07	-780.23	12628.89	7225.00	5078.40	-1439.37	-75.13	682.13	319.19	2.14	PASS	
12813.00†	7400.00	5193.06	-781.79	12728.89	7225.00	5178.37	-1441.59	-75.15	682.77	325.20	2.10	PASS	
12913.00†	7400.00	5293.04	-783.35	12828.89	7225.00	5278.35	-1443.82	-75.16	683.41	331.22	2.07	PASS	
13013.00†	7400.00	5393.03	-784.92	12928.89	7225.00	5378.32	-1446.04	-75.18	684.06	337.25	2.03	PASS	
13113.00†	7400.00	5493.02	-786.48	13028.89	7225.00	5478.29	-1448.27	-75.19	684.70	343.27	2.00	PASS	
13213.00†	7400.00	5593.01	-788.04	13128.88	7225.00	5578.27	-1450.49	-75.21	685.34	349.30	1.96	PASS	
13313.00†	7400.00	5693.00	-789.60	13228.88	7225.00	5678.24	-1452.72	-75.22	685.98	355.33	1.93	PASS	
13413.00†	7400.00	5792.98	-791.16	13328.88	7225.00	5778.21	-1454.94	-75.23	686.62	361.37	1.90	PASS	
13513.00†	7400.00	5892.97	-792.72	13428.88	7225.00	5878.19	-1457.17	-75.25	687.26	367.41	1.87	PASS	
13613.00†	7400.00	5992.96	-794.28	13528.87	7225.00	5978.16	-1459.39	-75.26	687.90	373.45	1.84	PASS	
13713.00†	7400.00	6092.95	-795.85	13628.87	7225.00	6078.13	-1461.62	-75.28	688.54	379.49	1.82	PASS	
13813.00†	7400.00	6192.93	-797.41	13728.87	7225.00	6178.10	-1463.84	-75.29	689.19	385.54	1.79	PASS	
13913.00†	7400.00	6292.92	-798.97	13828.87	7225.00	6278.08	-1466.06	-75.30	689.83	391.59	1.76	PASS	
14013.00†	7400.00	6392.91	-800.53	13928.87	7225.00	6378.05	-1468.29	-75.32	690.47	397.64	1.74	PASS	
14113.00†	7400.00	6492.90	-802.09	14028.86	7225.00	6478.02	-1470.51	-75.33	691.11	403.69	1.71	PASS	
14213.00†	7400.00	6592.89	-803.65	14128.86	7225.00	6578.00	-1472.74	-75.35	691.75	409.75	1.69	PASS	
14313.00†	7400.00	6692.87	-805.21	14228.86	7225.00	6677.97	-1474.96	-75.36	692.39	415.81	1.67	PASS	
14413.00†	7400.00	6792.86	-806.78	14328.86	7225.00	6777.94	-1477.19	-75.37	693.04	421.87	1.64	PASS	
14513.00†	7400.00	6892.85	-808.34	14428.85	7225.00	6877.92	-1479.41	-75.39	693.68	427.93	1.62	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	
14613.00†	7400.00	6992.84	-809.90	14528.85	7225.00	6977.89	-1481.64	-75.40	694.32	433.99	1.60	PASS	
14713.00†	7400.00	7092.82	-811.46	14628.85	7225.00	7077.86	-1483.86	-75.42	694.96	440.06	1.58	PASS	
14813.00†	7400.00	7192.81	-813.02	14728.85	7225.00	7177.84	-1486.09	-75.43	695.60	446.13	1.56	PASS	
14913.00†	7400.00	7292.80	-814.58	14828.85	7225.00	7277.81	-1488.31	-75.44	696.25	452.20	1.54	PASS	
15013.00†	7400.00	7392.79	-816.15	14928.84	7225.00	7377.78	-1490.54	-75.46	696.89	458.27	1.52	PASS	
15113.00†	7400.00	7492.78	-817.71	15028.84	7225.00	7477.75	-1492.76	-75.47	697.53	464.34	1.50	PASS	
15213.00†	7400.00	7592.76	-819.27	15128.84	7225.00	7577.73	-1494.99	-75.48	698.17	470.42	1.48	PASS	
15313.00†	7400.00	7692.75	-820.83	15228.84	7225.00	7677.70	-1497.21	-75.50	698.81	476.49	1.47	PASS	
15413.00†	7400.00	7792.74	-822.39	15328.83	7225.00	7777.67	-1499.43	-75.51	699.46	482.57	1.45	PASS	
15513.00†	7400.00	7892.73	-823.95	15428.83	7225.00	7877.65	-1501.66	-75.52	700.10	488.65	1.43	PASS	
15613.00†	7400.00	7992.71	-825.51	15528.83	7225.00	7977.62	-1503.88	-75.54	700.74	494.73	1.42	PASS	
15713.00†	7400.00	8092.70	-827.08	15628.83	7225.00	8077.59	-1506.11	-75.55	701.38	500.81	1.40	PASS	
15813.00†	7400.00	8192.69	-828.64	15728.83	7225.00	8177.57	-1508.33	-75.57	702.03	506.90	1.39	PASS	
15913.00†	7400.00	8292.68	-830.20	15828.82	7225.00	8277.54	-1510.56	-75.58	702.67	512.98	1.37	PASS	
16013.00†	7400.00	8392.67	-831.76	15928.82	7225.00	8377.51	-1512.78	-75.59	703.31	519.07	1.36	PASS	
16113.00†	7400.00	8492.65	-833.32	16028.82	7225.00	8477.48	-1515.01	-75.61	703.95	525.16	1.34	PASS	
16213.00†	7400.00	8592.64	-834.88	16128.82	7225.00	8577.46	-1517.23	-75.62	704.59	531.25	1.33	PASS	
16313.00†	7400.00	8692.63	-836.45	16228.82	7225.00	8677.43	-1519.46	-75.63	705.24	537.34	1.31	PASS	
16413.00†	7400.00	8792.62	-838.01	16328.81	7225.00	8777.40	-1521.68	-75.65	705.88	543.43	1.30	PASS	
16513.00†	7400.00	8892.61	-839.57	16428.81	7225.00	8877.38	-1523.91	-75.66	706.52	549.52	1.29	PASS	
16613.00†	7400.00	8992.59	-841.13	16528.81	7225.00	8977.35	-1526.13	-75.67	707.17	555.62	1.27	PASS	
16713.00†	7400.00	9092.58	-842.69	16628.81	7225.00	9077.32	-1528.35	-75.69	707.81	561.71	1.26	PASS	
16813.00†	7400.00	9192.57	-844.25	16728.80	7225.00	9177.30	-1530.58	-75.70	708.45	567.81	1.25	PASS	
16913.00†	7400.00	9292.56	-845.81	16828.80	7225.00	9277.27	-1532.80	-75.71	709.09	573.91	1.24	PASS	
17013.00†	7400.00	9392.54	-847.38	16928.80	7225.00	9377.24	-1535.03	-75.72	709.74	580.00	1.22	PASS	
17113.00†	7400.00	9492.53	-848.94	17028.80	7225.00	9477.22	-1537.25	-75.74	710.38	586.10	1.21	PASS	
17213.00†	7400.00	9592.52	-850.50	17128.80	7225.00	9577.19	-1539.48	-75.75	711.02	592.21	1.20	PASS	
17313.00†	7400.00	9692.51	-852.06	17228.79	7225.00	9677.16	-1541.70	-75.77	711.66	598.31	1.19	PASS	
17413.00†	7400.00	9792.50	-853.62	17328.79	7225.00	9777.13	-1543.93	-75.78	712.31	604.41	1.18	PASS	
17513.00†	7400.00	9892.48	-855.18	17428.79	7225.00	9877.11	-1546.15	-75.79	712.95	610.52	1.17	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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
17593.78	7400.00	9973.25	-856.44	17509.57	7225.00	9957.86	-1547.95	-75.80	713.47	615.45	1.16	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	-0.01	-18.31	-2.83	-26.32
8.5in Open Hole	1800.00	17526.80	15726.80	1798.70	N/A	-2.83	-26.32	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

## 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 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	0.06	30.03	89.89	30.03	1.40	48.71	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	0.06	30.03	89.89	30.03	1.72	31.72	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	0.06	30.03	89.89	30.03	2.29	19.61	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	0.06	30.03	89.89	30.03	2.90	13.96	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	0.06	30.03	89.89	30.03	3.51	10.79	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	0.06	30.03	89.89	30.03	4.13	8.78	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	0.06	30.03	89.89	30.03	4.75	7.40	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	0.06	30.03	89.89	30.03	5.38	6.39	PASS	
813.00†	813.00	0.00	0.00	813.00	813.00	0.06	30.03	89.89	30.03	6.00	5.62	PASS	
913.00†	913.00	0.00	0.00	913.00	913.00	0.06	30.03	89.89	30.03	6.63	5.02	PASS	
1013.00†	1013.00	0.00	0.00	1013.00	1013.00	0.06	30.03	89.89	30.03	7.25	4.53	PASS	
1113.00†	1113.00	0.00	0.00	1113.00	1113.00	0.06	30.03	89.89	30.03	7.88	4.13	PASS	
1213.00†	1213.00	0.00	0.00	1213.00	1213.00	0.06	30.03	89.89	30.03	8.51	3.79	PASS	
1313.00†	1313.00	0.00	0.00	1313.00	1313.00	0.06	30.03	89.89	30.03	9.13	3.51	PASS	
1413.00†	1413.00	0.00	0.00	1412.98	1412.98	0.03	30.04	89.95	30.04	9.76	3.26	PASS	
1513.00†	1513.00	0.00	0.00	1512.75	1512.73	-2.13	30.39	94.02	30.46	10.39	3.09	PASS	
1600.00	1600.00	0.00	0.00	1599.35	1599.18	-6.79	31.14	102.29	31.88	10.98	3.05	PASS	
1613.00†	1613.00	-0.02	-0.02	1612.26	1612.06	-7.70	31.29	-133.03	32.26	11.07	3.06	PASS	
1713.00†	1712.97	-1.22	-1.87	1711.95	1711.46	-15.30	32.53	-124.46	37.20	11.77	3.32	PASS	
1813.00†	1812.80	-4.33	-6.62	1811.67	1810.88	-22.92	33.77	-121.88	44.51	12.41	3.74	PASS	
1913.00†	1912.38	-9.35	-14.30	1911.23	1910.14	-30.53	35.01	-123.20	53.71	13.14	4.26	PASS	
2013.00†	2011.57	-16.26	-24.87	2010.52	2009.13	-38.12	36.24	-126.61	64.95	13.91	4.87	PASS	
2021.71	2020.19	-16.95	-25.93	2019.16	2017.74	-38.78	36.35	-126.96	66.04	13.98	4.92	PASS	
2113.00†	2110.49	-24.28	-37.14	2109.61	2107.92	-45.69	37.47	-130.29	77.66	14.63	5.53	PASS	
2213.00†	2209.41	-32.31	-49.42	2208.69	2206.70	-53.26	38.70	-132.95	90.62	15.35	6.14	PASS	
2313.00†	2308.33	-40.33	-61.69	2307.77	2305.49	-60.84	39.93	-134.94	103.71	16.08	6.70	PASS	
2413.00†	2407.25	-48.36	-73.97	2406.85	2404.27	-68.41	41.17	-136.49	116.90	16.82	7.21	PASS	
2513.00†	2506.17	-56.39	-86.25	2505.94	2503.06	-75.98	42.40	-137.72	130.16	17.55	7.69	PASS	
2613.00†	2605.08	-64.41	-98.52	2605.02	2601.84	-83.55	43.63	-138.72	143.47	18.29	8.12	PASS	
2713.00†	2704.00	-72.44	-110.80	2704.10	2700.63	-91.13	44.86	-139.55	156.81	19.04	8.52	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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†	2802.92	-80.47	-123.08	2803.18	2799.41	-98.70	46.09	-140.26	170.18	19.79	8.88	PASS
2913.00†	2901.84	-88.49	-135.35	2902.26	2898.20	-106.27	47.32	-140.85	183.57	20.54	9.22	PASS
3013.00†	3000.76	-96.52	-147.63	3001.35	2996.98	-113.84	48.55	-141.37	196.98	21.30	9.53	PASS
3113.00†	3099.68	-104.54	-159.91	3100.43	3095.77	-121.41	49.79	-141.82	210.40	22.06	9.82	PASS
3213.00†	3198.59	-112.57	-172.18	3199.51	3194.55	-128.99	51.02	-142.22	223.84	22.82	10.09	PASS
3313.00†	3297.51	-120.60	-184.46	3298.59	3293.34	-136.56	52.25	-142.58	237.28	23.59	10.34	PASS
3413.00†	3396.43	-128.62	-196.74	3397.68	3392.12	-144.13	53.48	-142.89	250.73	24.36	10.57	PASS
3513.00†	3495.35	-136.65	-209.01	3496.76	3490.91	-151.70	54.71	-143.17	264.19	25.13	10.79	PASS
3613.00†	3594.27	-144.68	-221.29	3595.84	3589.69	-159.27	55.94	-143.43	277.65	25.90	10.99	PASS
3713.00†	3693.19	-152.70	-233.56	3694.92	3688.48	-166.85	57.17	-143.66	291.12	26.68	11.18	PASS
3813.00†	3792.11	-160.73	-245.84	3794.01	3787.26	-174.42	58.41	-143.87	304.59	27.45	11.36	PASS
3913.00†	3891.02	-168.76	-258.12	3893.09	3886.05	-181.99	59.64	-144.07	318.07	28.23	11.53	PASS
4013.00†	3989.94	-176.78	-270.39	3992.17	3984.83	-189.56	60.87	-144.24	331.55	29.01	11.69	PASS
4113.00†	4088.86	-184.81	-282.67	4091.25	4083.62	-197.13	62.10	-144.41	345.03	29.79	11.84	PASS
4213.00†	4187.78	-192.83	-294.95	4190.33	4182.40	-204.71	63.33	-144.56	358.52	30.58	11.98	PASS
4313.00†	4286.70	-200.86	-307.22	4289.42	4281.19	-212.28	64.56	-144.70	372.00	31.36	12.11	PASS
4413.00†	4385.62	-208.89	-319.50	4388.50	4379.97	-219.85	65.79	-144.83	385.49	32.14	12.24	PASS
4513.00†	4484.53	-216.91	-331.78	4487.58	4478.76	-227.42	67.03	-144.95	398.98	32.93	12.36	PASS
4613.00†	4583.45	-224.94	-344.05	4586.66	4577.54	-235.00	68.26	-145.07	412.48	33.72	12.47	PASS
4713.00†	4682.37	-232.97	-356.33	4685.75	4676.33	-242.57	69.49	-145.17	425.97	34.51	12.58	PASS
4813.00†	4781.29	-240.99	-368.61	4784.83	4775.11	-250.14	70.72	-145.27	439.47	35.30	12.69	PASS
4913.00†	4880.21	-249.02	-380.88	4883.91	4873.90	-257.71	71.95	-145.37	452.96	36.09	12.78	PASS
5013.00†	4979.13	-257.04	-393.16	4982.99	4972.68	-265.28	73.18	-145.46	466.46	36.88	12.88	PASS
5113.00†	5078.05	-265.07	-405.44	5082.08	5071.47	-272.86	74.41	-145.54	479.96	37.67	12.97	PASS
5213.00†	5176.96	-273.10	-417.71	5181.16	5170.25	-280.43	75.65	-145.62	493.46	38.46	13.05	PASS
5313.00†	5275.88	-281.12	-429.99	5280.24	5269.04	-288.00	76.88	-145.69	506.96	39.25	13.13	PASS
5413.00†	5374.80	-289.15	-442.27	5379.32	5367.82	-295.57	78.11	-145.76	520.46	40.05	13.21	PASS
5513.00†	5473.72	-297.18	-454.54	5478.41	5466.61	-303.14	79.34	-145.83	533.96	40.84	13.29	PASS
5613.00†	5572.64	-305.20	-466.82	5577.49	5565.39	-310.72	80.57	-145.90	547.47	41.63	13.36	PASS
5713.00†	5671.56	-313.23	-479.10	5676.57	5664.18	-318.29	81.80	-145.96	560.97	42.43	13.43	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	
5813.00†	5770.47	-321.25	-491.37	5775.65	5762.96	-325.86	83.03	-146.01	574.47	43.22	13.50	PASS	
5913.00†	5869.39	-329.28	-503.65	5874.73	5861.75	-333.43	84.27	-146.07	587.98	44.02	13.56	PASS	
6013.00†	5968.31	-337.31	-515.93	5973.82	5960.53	-341.01	85.50	-146.12	601.48	44.82	13.62	PASS	
6113.00†	6067.23	-345.33	-528.20	6072.90	6059.32	-348.58	86.73	-146.17	614.99	45.61	13.68	PASS	
6213.00†	6166.15	-353.36	-540.48	6171.98	6158.10	-356.15	87.96	-146.22	628.50	46.41	13.74	PASS	
6313.00†	6265.07	-361.39	-552.76	6271.06	6256.89	-363.72	89.19	-146.27	642.00	47.21	13.79	PASS	
6413.00†	6363.99	-369.41	-565.03	6370.15	6355.67	-371.29	90.42	-146.31	655.51	48.01	13.84	PASS	
6513.00†	6462.90	-377.44	-577.31	6469.23	6454.46	-378.87	91.65	-146.36	669.02	48.80	13.90	PASS	
6613.00†	6561.82	-385.47	-589.59	6568.31	6553.24	-386.44	92.88	-146.40	682.53	49.60	13.94	PASS	
6713.00†	6660.74	-393.49	-601.86	6667.39	6652.03	-394.01	94.12	-146.44	696.03	50.40	13.99	PASS	
6813.00†	6759.66	-401.52	-614.14	6766.48	6750.81	-401.58	95.35	-146.47	709.54	51.20	14.04	PASS	
6840.60	6786.96	-403.73	-617.53	6793.82	6778.07	-403.67	95.69	-146.48	713.27	51.42	14.05	PASS	
6913.00†	6858.74	-404.98	-626.51	6866.76	6850.95	-404.63	96.53	159.57	723.08	52.71	13.89	PASS	
7013.00†	6956.94	-391.71	-639.03	6967.48	6950.58	-390.74	97.49	118.71	736.54	56.16	13.27	PASS	
7113.00†	7051.32	-361.45	-651.33	7068.23	7046.26	-359.64	98.16	105.74	749.51	58.07	13.05	PASS	
7213.00†	7139.02	-315.13	-663.05	7169.06	7135.11	-312.24	98.54	99.58	761.61	57.52	13.39	PASS	
7313.00†	7217.38	-254.15	-673.83	7269.99	7214.35	-249.94	98.61	95.88	772.45	56.79	13.76	PASS	
7413.00†	7284.01	-180.36	-683.33	7371.01	7281.52	-174.65	98.36	93.39	781.72	56.10	14.10	PASS	
7513.00†	7336.89	-96.01	-691.28	7472.10	7334.46	-88.69	97.81	91.68	789.13	55.68	14.34	PASS	
7613.00†	7374.42	-3.66	-697.43	7573.17	7371.49	5.20	96.97	90.52	794.46	55.70	14.43	PASS	
7713.00†	7395.45	93.88	-701.59	7674.14	7391.46	104.04	95.87	89.85	797.53	56.30	14.33	PASS	
7785.53	7400.00	166.19	-703.29	7747.17	7395.00	176.93	94.93	89.64	798.31	57.08	14.15	PASS	
7813.00†	7400.00	193.67	-703.72	7774.64	7395.00	204.40	94.56	89.64	798.37	57.47	14.05	PASS	
7913.00†	7400.00	293.65	-705.28	7874.64	7395.00	304.40	93.22	89.64	798.58	59.27	13.62	PASS	
8013.00†	7400.00	393.64	-706.84	7974.64	7395.00	404.39	91.87	89.64	798.80	61.68	13.09	PASS	
8113.00†	7400.00	493.63	-708.40	8074.64	7395.00	504.38	90.53	89.64	799.02	64.61	12.49	PASS	
8213.00†	7400.00	593.62	-709.96	8174.64	7395.00	604.37	89.18	89.64	799.23	68.00	11.87	PASS	
8313.00†	7400.00	693.60	-711.52	8274.64	7395.00	704.36	87.84	89.64	799.45	71.78	11.24	PASS	
8413.00†	7400.00	793.59	-713.09	8374.64	7395.00	804.35	86.49	89.64	799.66	75.90	10.63	PASS	
8513.00†	7400.00	893.58	-714.65	8474.64	7395.00	904.34	85.15	89.64	799.88	80.30	10.04	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	
8613.00†	7400.00	993.57	-716.21	8574.64	7395.00	1004.33	83.80	89.64	800.10	84.93	9.49	PASS	
8713.00†	7400.00	1093.56	-717.77	8674.64	7395.00	1104.32	82.46	89.64	800.31	89.76	8.98	PASS	
8813.00†	7400.00	1193.54	-719.33	8774.64	7395.00	1204.31	81.11	89.64	800.53	94.76	8.50	PASS	
8913.00†	7400.00	1293.53	-720.89	8874.64	7395.00	1304.30	79.77	89.64	800.75	99.90	8.07	PASS	
9013.00†	7400.00	1393.52	-722.45	8974.64	7395.00	1404.29	78.42	89.64	800.96	105.17	7.66	PASS	
9113.00†	7400.00	1493.51	-724.02	9074.64	7395.00	1504.28	77.08	89.64	801.18	110.54	7.29	PASS	
9213.00†	7400.00	1593.50	-725.58	9174.64	7395.00	1604.27	75.73	89.64	801.40	116.00	6.94	PASS	
9313.00†	7400.00	1693.48	-727.14	9274.64	7395.00	1704.27	74.38	89.64	801.61	121.54	6.63	PASS	
9413.00†	7400.00	1793.47	-728.70	9374.64	7395.00	1804.26	73.04	89.64	801.83	127.14	6.34	PASS	
9513.00†	7400.00	1893.46	-730.26	9474.64	7395.00	1904.25	71.69	89.64	802.05	132.81	6.07	PASS	
9613.00†	7400.00	1993.45	-731.82	9574.64	7395.00	2004.24	70.35	89.64	802.26	138.56	5.81	PASS	
9713.00†	7400.00	2093.43	-733.39	9674.64	7395.00	2104.23	69.00	89.64	802.48	144.29	5.58	PASS	
9813.00†	7400.00	2193.42	-734.95	9774.64	7395.00	2204.22	67.66	89.64	802.69	150.09	5.37	PASS	
9913.00†	7400.00	2293.41	-736.51	9874.64	7395.00	2304.21	66.31	89.64	802.91	155.93	5.17	PASS	
10013.00†	7400.00	2393.40	-738.07	9974.64	7395.00	2404.20	64.97	89.64	803.13	161.80	4.98	PASS	
10113.00†	7400.00	2493.39	-739.63	10074.64	7395.00	2504.19	63.62	89.64	803.34	167.70	4.81	PASS	
10213.00†	7400.00	2593.37	-741.19	10174.64	7395.00	2604.18	62.28	89.64	803.56	173.63	4.64	PASS	
10313.00†	7400.00	2693.36	-742.75	10274.64	7395.00	2704.17	60.93	89.64	803.78	179.58	4.49	PASS	
10413.00†	7400.00	2793.35	-744.32	10374.64	7395.00	2804.16	59.59	89.64	803.99	185.55	4.35	PASS	
10513.00†	7400.00	2893.34	-745.88	10474.64	7395.00	2904.15	58.24	89.64	804.21	191.53	4.21	PASS	
10613.00†	7400.00	2993.32	-747.44	10574.64	7395.00	3004.14	56.90	89.64	804.43	197.54	4.08	PASS	
10713.00†	7400.00	3093.31	-749.00	10674.64	7395.00	3104.14	55.55	89.64	804.64	203.56	3.96	PASS	
10813.00†	7400.00	3193.30	-750.56	10774.64	7395.00	3204.13	54.21	89.64	804.86	209.60	3.85	PASS	
10913.00†	7400.00	3293.29	-752.12	10874.64	7395.00	3304.12	52.86	89.64	805.07	215.65	3.74	PASS	
11013.00†	7400.00	3393.28	-753.69	10974.64	7395.00	3404.11	51.52	89.64	805.29	221.71	3.64	PASS	
11113.00†	7400.00	3493.26	-755.25	11074.64	7395.00	3504.10	50.17	89.64	805.51	227.78	3.54	PASS	
11213.00†	7400.00	3593.25	-756.81	11174.64	7395.00	3604.09	48.83	89.64	805.72	233.86	3.45	PASS	
11313.00†	7400.00	3693.24	-758.37	11274.64	7395.00	3704.08	47.48	89.65	805.94	239.95	3.37	PASS	
11413.00†	7400.00	3793.23	-759.93	11374.64	7395.00	3804.07	46.14	89.65	806.16	246.05	3.28	PASS	
11513.00†	7400.00	3893.21	-761.49	11474.64	7395.00	3904.06	44.79	89.65	806.37	252.16	3.20	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft





# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	
11613.00†	7400.00	3993.20	-763.05	11574.64	7395.00	4004.05	43.45	89.65	806.59	258.28	3.13	PASS	
11713.00†	7400.00	4093.19	-764.62	11674.64	7395.00	4104.04	42.10	89.65	806.81	264.40	3.06	PASS	
11813.00†	7400.00	4193.18	-766.18	11774.64	7395.00	4204.03	40.76	89.65	807.02	270.53	2.99	PASS	
11913.00†	7400.00	4293.17	-767.74	11874.64	7395.00	4304.02	39.41	89.65	807.24	276.66	2.92	PASS	
12013.00†	7400.00	4393.15	-769.30	11974.64	7395.00	4404.01	38.07	89.65	807.46	282.80	2.86	PASS	
12113.00†	7400.00	4493.14	-770.86	12074.63	7395.00	4504.01	36.72	89.65	807.67	288.95	2.80	PASS	
12213.00†	7400.00	4593.13	-772.42	12174.63	7395.00	4604.00	35.38	89.65	807.89	295.10	2.74	PASS	
12313.00†	7400.00	4693.12	-773.98	12274.63	7395.00	4703.99	34.03	89.65	808.10	301.26	2.69	PASS	
12413.00†	7400.00	4793.10	-775.55	12374.63	7395.00	4803.98	32.69	89.65	808.32	307.42	2.63	PASS	
12513.00†	7400.00	4893.09	-777.11	12474.63	7395.00	4903.97	31.34	89.65	808.54	313.58	2.58	PASS	
12613.00†	7400.00	4993.08	-778.67	12574.63	7395.00	5003.96	30.00	89.65	808.75	319.75	2.53	PASS	
12713.00†	7400.00	5093.07	-780.23	12674.63	7395.00	5103.95	28.65	89.65	808.97	325.92	2.49	PASS	
12813.00†	7400.00	5193.06	-781.79	12774.63	7395.00	5203.94	27.31	89.65	809.19	332.10	2.44	PASS	
12913.00†	7400.00	5293.04	-783.35	12874.63	7395.00	5303.93	25.96	89.65	809.40	338.28	2.40	PASS	
13013.00†	7400.00	5393.03	-784.92	12974.63	7395.00	5403.92	24.62	89.65	809.62	344.46	2.35	PASS	
13113.00†	7400.00	5493.02	-786.48	13074.63	7395.00	5503.91	23.27	89.65	809.84	350.65	2.31	PASS	
13213.00†	7400.00	5593.01	-788.04	13174.63	7395.00	5603.90	21.92	89.65	810.05	356.83	2.27	PASS	
13313.00†	7400.00	5693.00	-789.60	13274.63	7395.00	5703.89	20.58	89.65	810.27	363.02	2.23	PASS	
13413.00†	7400.00	5792.98	-791.16	13374.63	7395.00	5803.88	19.23	89.65	810.48	369.22	2.20	PASS	
13513.00†	7400.00	5892.97	-792.72	13474.63	7395.00	5903.88	17.89	89.65	810.70	375.41	2.16	PASS	
13613.00†	7400.00	5992.96	-794.28	13574.63	7395.00	6003.87	16.54	89.65	810.92	381.61	2.13	PASS	
13713.00†	7400.00	6092.95	-795.85	13674.63	7395.00	6103.86	15.20	89.65	811.13	387.81	2.09	PASS	
13813.00†	7400.00	6192.93	-797.41	13774.63	7395.00	6203.85	13.85	89.65	811.35	394.01	2.06	PASS	
13913.00†	7400.00	6292.92	-798.97	13874.63	7395.00	6303.84	12.51	89.65	811.57	400.21	2.03	PASS	
14013.00†	7400.00	6392.91	-800.53	13974.63	7395.00	6403.83	11.16	89.65	811.78	406.42	2.00	PASS	
14113.00†	7400.00	6492.90	-802.09	14074.63	7395.00	6503.82	9.82	89.65	812.00	412.63	1.97	PASS	
14213.00†	7400.00	6592.89	-803.65	14174.63	7395.00	6603.81	8.47	89.65	812.22	418.84	1.94	PASS	
14313.00†	7400.00	6692.87	-805.21	14274.63	7395.00	6703.80	7.13	89.65	812.43	425.05	1.91	PASS	
14413.00†	7400.00	6792.86	-806.78	14374.63	7395.00	6803.79	5.78	89.65	812.65	431.26	1.89	PASS	
14513.00†	7400.00	6892.85	-808.34	14474.63	7395.00	6903.78	4.44	89.65	812.86	437.47	1.86	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	
14613.00†	7400.00	6992.84	-809.90	14574.63	7395.00	7003.77	3.09	89.65	813.08	443.69	1.83	PASS	
14713.00†	7400.00	7092.82	-811.46	14674.63	7395.00	7103.76	1.75	89.65	813.30	449.91	1.81	PASS	
14813.00†	7400.00	7192.81	-813.02	14774.63	7395.00	7203.76	0.40	89.65	813.51	456.12	1.78	PASS	
14913.00†	7400.00	7292.80	-814.58	14874.63	7395.00	7303.75	-0.94	89.65	813.73	462.34	1.76	PASS	
15013.00†	7400.00	7392.79	-816.15	14974.63	7395.00	7403.74	-2.29	89.65	813.95	468.56	1.74	PASS	
15113.00†	7400.00	7492.78	-817.71	15074.63	7395.00	7503.73	-3.63	89.65	814.16	474.79	1.72	PASS	
15213.00†	7400.00	7592.76	-819.27	15174.63	7395.00	7603.72	-4.98	89.65	814.38	481.01	1.69	PASS	
15313.00†	7400.00	7692.75	-820.83	15274.63	7395.00	7703.71	-6.32	89.65	814.60	487.23	1.67	PASS	
15413.00†	7400.00	7792.74	-822.39	15374.63	7395.00	7803.70	-7.67	89.65	814.81	493.46	1.65	PASS	
15513.00†	7400.00	7892.73	-823.95	15474.63	7395.00	7903.69	-9.01	89.65	815.03	499.68	1.63	PASS	
15613.00†	7400.00	7992.71	-825.51	15574.63	7395.00	8003.68	-10.36	89.65	815.25	505.91	1.61	PASS	
15713.00†	7400.00	8092.70	-827.08	15674.63	7395.00	8103.67	-11.70	89.65	815.46	512.14	1.59	PASS	
15813.00†	7400.00	8192.69	-828.64	15774.63	7395.00	8203.66	-13.05	89.65	815.68	518.37	1.57	PASS	
15913.00†	7400.00	8292.68	-830.20	15874.63	7395.00	8303.65	-14.39	89.65	815.89	524.60	1.56	PASS	
16013.00†	7400.00	8392.67	-831.76	15974.63	7395.00	8403.64	-15.74	89.65	816.11	530.83	1.54	PASS	
16113.00†	7400.00	8492.65	-833.32	16074.63	7395.00	8503.63	-17.08	89.65	816.33	537.06	1.52	PASS	
16213.00†	7400.00	8592.64	-834.88	16174.63	7395.00	8603.63	-18.43	89.65	816.54	543.29	1.50	PASS	
16313.00†	7400.00	8692.63	-836.45	16274.62	7395.00	8703.62	-19.77	89.65	816.76	549.52	1.49	PASS	
16413.00†	7400.00	8792.62	-838.01	16374.62	7395.00	8803.61	-21.12	89.65	816.98	555.76	1.47	PASS	
16513.00†	7400.00	8892.61	-839.57	16474.62	7395.00	8903.60	-22.46	89.65	817.19	561.99	1.45	PASS	
16613.00†	7400.00	8992.59	-841.13	16574.62	7395.00	9003.59	-23.81	89.65	817.41	568.23	1.44	PASS	
16713.00†	7400.00	9092.58	-842.69	16674.62	7395.00	9103.58	-25.15	89.65	817.63	574.46	1.42	PASS	
16813.00†	7400.00	9192.57	-844.25	16774.62	7395.00	9203.57	-26.50	89.65	817.84	580.70	1.41	PASS	
16913.00†	7400.00	9292.56	-845.81	16874.62	7395.00	9303.56	-27.85	89.65	818.06	586.93	1.39	PASS	
17013.00†	7400.00	9392.54	-847.38	16974.62	7395.00	9403.55	-29.19	89.65	818.27	593.17	1.38	PASS	
17113.00†	7400.00	9492.53	-848.94	17074.62	7395.00	9503.54	-30.54	89.65	818.49	599.41	1.37	PASS	
17213.00†	7400.00	9592.52	-850.50	17174.62	7395.00	9603.53	-31.88	89.65	818.71	605.65	1.35	PASS	
17313.00†	7400.00	9692.51	-852.06	17274.62	7395.00	9703.52	-33.23	89.65	818.92	611.89	1.34	PASS	
17413.00†	7400.00	9792.50	-853.62	17374.62	7395.00	9803.51	-34.57	89.65	819.14	618.13	1.33	PASS	
17513.00†	7400.00	9892.48	-855.18	17474.62	7395.00	9903.50	-35.92	89.65	819.36	624.37	1.31	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



**Clearance Report**  
**WAKEMAN 20-17-2NBH PWP (REV-A.0)**  
**Closest Approach**  
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**REFERENCE WELLPATH IDENTIFICATION**

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	
17583.38†	7400.00	9962.85	-856.28	17542.23	7395.00	9971.11	-36.83	89.65	819.51	628.60	1.30	PASS	
17593.78	7400.00	9973.25	-856.44	17542.23	7395.00	9971.11	-36.83	89.65	819.64	628.59	1.30	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft

**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	0.03	18.31	-6.70	19.40
8.5in Open Hole	1800.00	17542.23	15742.23	1799.24	7395.00	-6.70	19.40	3039.21	-2.07

**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 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	-0.05	-45.00	-90.06	45.00	1.40	73.67	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	-0.05	-45.00	-90.06	45.00	1.73	47.60	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	-0.05	-45.00	-90.06	45.00	2.31	29.39	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	-0.05	-45.00	-90.06	45.00	2.91	20.95	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	-0.05	-45.00	-90.06	45.00	3.53	16.22	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	-0.05	-45.00	-90.06	45.00	4.15	13.21	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	-0.05	-45.00	-90.06	45.00	4.77	11.14	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	-0.05	-45.00	-90.06	45.00	5.40	9.62	PASS	
813.00†	813.00	0.00	0.00	813.00	813.00	-0.05	-45.00	-90.06	45.00	6.02	8.47	PASS	
913.00†	913.00	0.00	0.00	913.00	913.00	-0.05	-45.00	-90.06	45.00	6.65	7.56	PASS	
1013.00†	1013.00	0.00	0.00	1013.00	1013.00	-0.05	-45.00	-90.06	45.00	7.27	6.83	PASS	
1113.00†	1113.00	0.00	0.00	1113.00	1113.00	-0.05	-45.00	-90.06	45.00	7.90	6.23	PASS	
1213.00†	1213.00	0.00	0.00	1213.00	1213.00	-0.05	-45.00	-90.06	45.00	8.53	5.72	PASS	
1313.00†	1313.00	0.00	0.00	1312.81	1312.81	-0.06	-45.03	-90.07	45.03	9.15	5.30	PASS	
1413.00†	1413.00	0.00	0.00	1411.27	1411.25	-0.69	-47.07	-90.84	47.10	9.85	5.12	PASS	
1513.00†	1513.00	0.00	0.00	1509.48	1509.29	-2.33	-52.31	-92.55	52.50	10.75	5.20	PASS	
1600.00	1600.00	0.00	0.00	1594.52	1594.01	-4.55	-59.44	-94.38	59.92	11.48	5.54	PASS	
1613.00†	1613.00	-0.02	-0.02	1607.19	1606.61	-4.95	-60.71	-94.38	61.22	11.61	5.59	PASS	
1713.00†	1712.97	-1.22	-1.87	1704.46	1703.12	-8.54	-72.22	-94.38	71.41	12.48	6.05	PASS	
1813.00†	1812.80	-4.33	-6.62	1801.37	1798.81	-13.08	-86.78	-94.38	81.84	13.38	6.40	PASS	
1913.00†	1912.38	-9.35	-14.30	1897.92	1893.59	-18.56	-104.36	-94.38	92.46	14.32	6.74	PASS	
2013.00†	2011.57	-16.26	-24.87	1994.11	1987.33	-24.96	-124.89	-94.38	103.27	15.20	7.08	PASS	
2021.71	2020.19	-16.95	-25.93	2002.47	1995.45	-25.56	-126.81	-94.38	104.23	15.26	7.11	PASS	
2113.00†	2110.49	-24.28	-37.14	2092.96	2083.19	-32.16	-147.95	-94.38	114.40	15.82	7.53	PASS	
2213.00†	2209.41	-32.31	-49.42	2192.32	2179.53	-39.40	-171.18	-94.38	125.57	16.44	7.94	PASS	
2313.00†	2308.33	-40.33	-61.69	2291.68	2275.87	-46.64	-194.40	-94.38	136.78	17.10	8.30	PASS	
2413.00†	2407.25	-48.36	-73.97	2391.05	2372.21	-53.88	-217.62	-94.38	147.96	17.77	8.63	PASS	
2513.00†	2506.17	-56.39	-86.25	2490.41	2468.55	-61.12	-240.84	-94.38	159.18	18.47	8.92	PASS	
2613.00†	2605.08	-64.41	-98.52	2589.77	2564.89	-68.37	-264.06	-94.38	170.40	19.18	9.19	PASS	
2713.00†	2704.00	-72.44	-110.80	2689.14	2661.23	-75.61	-287.28	-94.38	181.62	19.92	9.42	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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†	2802.92	-80.47	-123.08	2788.50	2757.56	-82.85	-310.50	31.66	192.85	20.67	9.63	PASS	
2913.00†	2901.84	-88.49	-135.35	2887.86	2853.90	-90.09	-333.73	31.92	204.09	21.43	9.82	PASS	
3013.00†	3000.76	-96.52	-147.63	2987.22	2950.24	-97.33	-356.95	32.15	215.33	22.20	9.98	PASS	
3113.00†	3099.68	-104.54	-159.91	3086.59	3046.58	-104.58	-380.17	32.36	226.57	22.99	10.14	PASS	
3213.00†	3198.59	-112.57	-172.18	3185.95	3142.92	-111.82	-403.39	32.55	237.82	23.79	10.27	PASS	
3313.00†	3297.51	-120.60	-184.46	3285.31	3239.26	-119.06	-426.61	32.73	249.06	24.59	10.40	PASS	
3413.00†	3396.43	-128.62	-196.74	3384.67	3335.60	-126.30	-449.83	32.89	260.31	25.40	10.51	PASS	
3513.00†	3495.35	-136.65	-209.01	3484.04	3431.94	-133.54	-473.05	33.03	271.57	26.23	10.61	PASS	
3613.00†	3594.27	-144.68	-221.29	3583.40	3528.28	-140.79	-496.27	33.17	282.82	27.05	10.71	PASS	
3713.00†	3693.19	-152.70	-233.56	3682.76	3624.62	-148.03	-519.50	33.29	294.07	27.89	10.79	PASS	
3813.00†	3792.11	-160.73	-245.84	3782.13	3720.96	-155.27	-542.72	33.40	305.33	28.72	10.87	PASS	
3913.00†	3891.02	-168.76	-258.12	3881.49	3817.30	-162.51	-565.94	33.51	316.59	29.57	10.95	PASS	
4013.00†	3989.94	-176.78	-270.39	3980.85	3913.64	-169.75	-589.16	33.61	327.85	30.42	11.01	PASS	
4113.00†	4088.86	-184.81	-282.67	4080.21	4009.98	-177.00	-612.38	33.70	339.10	31.27	11.07	PASS	
4213.00†	4187.78	-192.83	-294.95	4179.58	4106.32	-184.24	-635.60	33.79	350.36	32.12	11.13	PASS	
4313.00†	4286.70	-200.86	-307.22	4278.94	4202.65	-191.48	-658.82	33.87	361.63	32.98	11.18	PASS	
4413.00†	4385.62	-208.89	-319.50	4378.30	4298.99	-198.72	-682.04	33.95	372.89	33.85	11.23	PASS	
4513.00†	4484.53	-216.91	-331.78	4477.66	4395.33	-205.96	-705.27	34.02	384.15	34.71	11.28	PASS	
4613.00†	4583.45	-224.94	-344.05	4577.03	4491.67	-213.21	-728.49	34.09	395.41	35.58	11.32	PASS	
4713.00†	4682.37	-232.97	-356.33	4676.39	4588.01	-220.45	-751.71	34.15	406.67	36.45	11.36	PASS	
4813.00†	4781.29	-240.99	-368.61	4775.75	4684.35	-227.69	-774.93	34.21	417.94	37.33	11.39	PASS	
4913.00†	4880.21	-249.02	-380.88	4875.11	4780.69	-234.93	-798.15	34.27	429.20	38.21	11.43	PASS	
5013.00†	4979.13	-257.04	-393.16	4974.48	4877.03	-242.17	-821.37	34.32	440.47	39.08	11.46	PASS	
5113.00†	5078.05	-265.07	-405.44	5073.84	4973.37	-249.41	-844.59	34.37	451.73	39.96	11.49	PASS	
5213.00†	5176.96	-273.10	-417.71	5173.20	5069.71	-256.66	-867.81	34.42	463.00	40.85	11.52	PASS	
5313.00†	5275.88	-281.12	-429.99	5272.57	5166.05	-263.90	-891.04	34.47	474.26	41.73	11.54	PASS	
5413.00†	5374.80	-289.15	-442.27	5371.93	5262.39	-271.14	-914.26	34.51	485.53	42.62	11.57	PASS	
5513.00†	5473.72	-297.18	-454.54	5471.29	5358.73	-278.38	-937.48	34.56	496.79	43.50	11.59	PASS	
5613.00†	5572.64	-305.20	-466.82	5570.65	5455.07	-285.62	-960.70	34.60	508.06	44.39	11.61	PASS	
5713.00†	5671.56	-313.23	-479.10	5670.02	5551.41	-292.87	-983.92	34.64	519.32	45.28	11.64	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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
5813.00†	5770.47	-321.25	-491.37	5769.38	5647.75	-300.11	-1007.14	34.67	530.59	46.17	11.65	PASS
5913.00†	5869.39	-329.28	-503.65	5868.74	5744.08	-307.35	-1030.36	34.71	541.86	47.07	11.67	PASS
6013.00†	5968.31	-337.31	-515.93	5968.10	5840.42	-314.59	-1053.58	34.74	553.13	47.96	11.69	PASS
6113.00†	6067.23	-345.33	-528.20	6067.47	5936.76	-321.83	-1076.81	34.78	564.39	48.85	11.71	PASS
6213.00†	6166.15	-353.36	-540.48	6166.83	6033.10	-329.08	-1100.03	34.81	575.66	49.75	11.72	PASS
6313.00†	6265.07	-361.39	-552.76	6266.19	6129.44	-336.32	-1123.25	34.84	586.93	50.65	11.74	PASS
6413.00†	6363.99	-369.41	-565.03	6365.56	6225.78	-343.56	-1146.47	34.87	598.20	51.54	11.75	PASS
6513.00†	6462.90	-377.44	-577.31	6464.92	6322.12	-350.80	-1169.69	34.90	609.46	52.44	11.77	PASS
6613.00†	6561.82	-385.47	-589.59	6564.28	6418.46	-358.04	-1192.91	34.92	620.73	53.34	11.78	PASS
6713.00†	6660.74	-393.49	-601.86	6663.64	6514.80	-365.29	-1216.13	34.95	632.00	54.24	11.79	PASS
6813.00†	6759.66	-401.52	-614.14	6763.01	6611.14	-372.53	-1239.35	34.98	643.27	55.14	11.80	PASS
6840.60	6786.96	-403.73	-617.53	6790.43	6637.72	-374.53	-1245.76	34.98	646.38	55.39	11.81	PASS
6913.00†	6858.74	-404.98	-626.51	6862.22	6707.33	-379.76	-1262.54	-17.53	654.29	55.82	11.86	PASS
7013.00†	6956.94	-391.71	-639.03	6959.38	6801.54	-386.84	-1285.25	-57.72	664.66	55.83	12.05	PASS
7113.00†	7051.32	-361.45	-651.33	7051.56	6890.91	-393.56	-1306.79	-71.20	675.56	55.35	12.35	PASS
7213.00†	7139.02	-315.13	-663.05	7135.96	6972.74	-399.71	-1326.51	-78.46	689.19	54.47	12.81	PASS
7313.00†	7217.38	-254.15	-673.83	7212.34	7046.81	-405.20	-1344.37	-83.29	708.19	54.01	13.27	PASS
7413.00†	7284.01	-180.36	-683.33	7312.61	7144.07	-402.08	-1367.97	-88.00	733.13	54.98	13.50	PASS
7513.00†	7336.89	-96.01	-691.28	7437.86	7262.32	-373.84	-1397.06	-92.68	762.15	57.58	13.39	PASS
7613.00†	7374.42	-3.66	-697.43	7609.04	7408.55	-294.10	-1433.72	-98.05	792.24	60.11	13.33	PASS
7713.00†	7395.45	93.88	-701.59	7861.22	7567.22	-105.19	-1475.10	-103.86	816.97	59.80	13.81	PASS
7785.53	7400.00	166.19	-703.29	8103.81	7631.73	125.99	-1494.33	-106.32	825.26	57.08	14.63	PASS
7813.00†	7400.00	193.67	-703.72	8159.17	7633.00	181.31	-1495.50	-106.40	825.45	56.78	14.71	PASS
7913.00†	7400.00	293.65	-705.28	8259.17	7633.00	281.30	-1497.06	-106.40	825.45	58.30	14.32	PASS
8013.00†	7400.00	393.64	-706.84	8359.17	7633.00	381.29	-1498.62	-106.40	825.44	60.40	13.82	PASS
8113.00†	7400.00	493.63	-708.40	8459.17	7633.00	481.28	-1500.18	-106.40	825.44	63.03	13.23	PASS
8213.00†	7400.00	593.62	-709.96	8559.17	7633.00	581.26	-1501.74	-106.40	825.44	66.10	12.61	PASS
8313.00†	7400.00	693.60	-711.52	8659.17	7633.00	681.25	-1503.30	-106.40	825.44	69.58	11.98	PASS
8413.00†	7400.00	793.59	-713.09	8759.17	7633.00	781.24	-1504.86	-106.40	825.44	73.38	11.35	PASS
8513.00†	7400.00	893.58	-714.65	8859.17	7633.00	881.23	-1506.42	-106.40	825.44	67.93	12.27	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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
8613.00†	7400.00	993.57	-716.21	8959.17	7633.00	981.21	-1507.98	-106.40	825.44	81.82	10.17	PASS
8713.00†	7400.00	1093.56	-717.77	9059.17	7633.00	1081.20	-1509.54	-106.40	825.43	86.36	9.63	PASS
8813.00†	7400.00	1193.54	-719.33	9159.17	7633.00	1181.19	-1511.10	-106.40	825.43	91.08	9.13	PASS
8913.00†	7400.00	1293.53	-720.89	9259.17	7633.00	1281.18	-1512.66	-106.40	825.43	95.95	8.66	PASS
9013.00†	7400.00	1393.52	-722.45	9359.17	7633.00	1381.17	-1514.22	-106.40	825.43	100.95	8.23	PASS
9113.00†	7400.00	1493.51	-724.02	9459.17	7633.00	1481.15	-1515.78	-106.40	825.43	106.06	7.83	PASS
9213.00†	7400.00	1593.50	-725.58	9559.17	7633.00	1581.14	-1517.34	-106.40	825.43	111.26	7.46	PASS
9313.00†	7400.00	1693.48	-727.14	9659.17	7633.00	1681.13	-1518.90	-106.40	825.43	116.54	7.12	PASS
9413.00†	7400.00	1793.47	-728.70	9759.17	7633.00	1781.12	-1520.46	-106.40	825.43	121.89	6.81	PASS
9513.00†	7400.00	1893.46	-730.26	9859.17	7633.00	1881.10	-1522.02	-106.40	825.42	127.31	6.51	PASS
9613.00†	7400.00	1993.45	-731.82	9959.17	7633.00	1981.09	-1523.58	-106.40	825.42	132.78	6.24	PASS
9713.00†	7400.00	2093.43	-733.39	10059.17	7633.00	2081.08	-1525.14	-106.40	825.42	138.30	5.99	PASS
9813.00†	7400.00	2193.42	-734.95	10159.17	7633.00	2181.07	-1526.70	-106.40	825.42	143.86	5.76	PASS
9913.00†	7400.00	2293.41	-736.51	10259.17	7633.00	2281.06	-1528.26	-106.40	825.42	149.46	5.54	PASS
10013.00†	7400.00	2393.40	-738.07	10359.17	7633.00	2381.04	-1529.82	-106.40	825.42	155.09	5.34	PASS
10113.00†	7400.00	2493.39	-739.63	10459.17	7633.00	2481.03	-1531.38	-106.40	825.42	160.75	5.15	PASS
10213.00†	7400.00	2593.37	-741.19	10559.17	7633.00	2581.02	-1532.94	-106.40	825.41	166.44	4.98	PASS
10313.00†	7400.00	2693.36	-742.75	10659.17	7633.00	2681.01	-1534.50	-106.40	825.41	172.15	4.81	PASS
10413.00†	7400.00	2793.35	-744.32	10759.17	7633.00	2781.00	-1536.06	-106.40	825.41	177.89	4.65	PASS
10513.00†	7400.00	2893.34	-745.88	10859.17	7633.00	2880.98	-1537.62	-106.40	825.41	183.64	4.51	PASS
10613.00†	7400.00	2993.32	-747.44	10959.17	7633.00	2980.97	-1539.18	-106.40	825.41	189.41	4.37	PASS
10713.00†	7400.00	3093.31	-749.00	11059.17	7633.00	3080.96	-1540.74	-106.40	825.41	195.20	4.24	PASS
10813.00†	7400.00	3193.30	-750.56	11159.17	7633.00	3180.95	-1542.30	-106.40	825.41	201.01	4.12	PASS
10913.00†	7400.00	3293.29	-752.12	11259.17	7633.00	3280.93	-1543.86	-106.40	825.40	206.83	4.00	PASS
11013.00†	7400.00	3393.28	-753.69	11359.17	7633.00	3380.92	-1545.42	-106.40	825.40	212.66	3.89	PASS
11113.00†	7400.00	3493.26	-755.25	11459.17	7633.00	3480.91	-1546.98	-106.40	825.40	218.50	3.79	PASS
11213.00†	7400.00	3593.25	-756.81	11559.17	7633.00	3580.90	-1548.54	-106.40	825.40	224.35	3.69	PASS
11313.00†	7400.00	3693.24	-758.37	11659.17	7633.00	3680.89	-1550.10	-106.40	825.40	230.21	3.59	PASS
11413.00†	7400.00	3793.23	-759.93	11759.17	7633.00	3780.87	-1551.66	-106.40	825.40	236.09	3.50	PASS
11513.00†	7400.00	3893.21	-761.49	11859.17	7633.00	3880.86	-1553.22	-106.40	825.40	241.97	3.42	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	
11613.00†	7400.00	3993.20	-763.05	11959.17	7633.00	3980.85	-1554.78	-106.40	825.39	247.86	3.34	PASS	
11713.00†	7400.00	4093.19	-764.62	12059.17	7633.00	4080.84	-1556.34	-106.40	825.39	253.75	3.26	PASS	
11813.00†	7400.00	4193.18	-766.18	12159.17	7633.00	4180.82	-1557.90	-106.40	825.39	259.65	3.18	PASS	
11913.00†	7400.00	4293.17	-767.74	12259.17	7633.00	4280.81	-1559.46	-106.40	825.39	265.56	3.11	PASS	
12013.00†	7400.00	4393.15	-769.30	12359.17	7633.00	4380.80	-1561.02	-106.40	825.39	271.48	3.05	PASS	
12113.00†	7400.00	4493.14	-770.86	12459.17	7633.00	4480.79	-1562.58	-106.40	825.39	277.40	2.98	PASS	
12213.00†	7400.00	4593.13	-772.42	12559.17	7633.00	4580.78	-1564.14	-106.40	825.39	283.32	2.92	PASS	
12313.00†	7400.00	4693.12	-773.98	12659.17	7633.00	4680.76	-1565.70	-106.40	825.39	289.25	2.86	PASS	
12413.00†	7400.00	4793.10	-775.55	12759.17	7633.00	4780.75	-1567.26	-106.40	825.39	295.19	2.80	PASS	
12513.00†	7400.00	4893.09	-777.11	12859.17	7633.00	4880.74	-1568.82	-106.40	825.39	301.13	2.75	PASS	
12613.00†	7400.00	4993.08	-778.67	12959.17	7633.00	4980.73	-1570.38	-106.40	825.39	307.07	2.69	PASS	
12713.00†	7400.00	5093.07	-780.23	13059.17	7633.00	5080.72	-1571.94	-106.40	825.39	313.02	2.64	PASS	
12813.00†	7400.00	5193.06	-781.79	13159.17	7633.00	5180.70	-1573.50	-106.40	825.39	318.97	2.59	PASS	
12913.00†	7400.00	5293.04	-783.35	13259.17	7633.00	5280.69	-1575.06	-106.40	825.39	324.92	2.54	PASS	
13013.00†	7400.00	5393.03	-784.92	13359.17	7633.00	5380.68	-1576.62	-106.40	825.39	330.88	2.50	PASS	
13113.00†	7400.00	5493.02	-786.48	13459.17	7633.00	5480.67	-1578.18	-106.40	825.37	336.84	2.45	PASS	
13213.00†	7400.00	5593.01	-788.04	13559.17	7633.00	5580.65	-1579.74	-106.40	825.37	342.80	2.41	PASS	
13313.00†	7400.00	5693.00	-789.60	13659.17	7633.00	5680.64	-1581.30	-106.40	825.37	348.77	2.37	PASS	
13413.00†	7400.00	5792.98	-791.16	13759.17	7633.00	5780.63	-1582.87	-106.40	825.37	354.74	2.33	PASS	
13513.00†	7400.00	5892.97	-792.72	13859.17	7633.00	5880.62	-1584.43	-106.40	825.37	360.71	2.29	PASS	
13613.00†	7400.00	5992.96	-794.28	13959.17	7633.00	5980.61	-1585.99	-106.40	825.37	366.68	2.25	PASS	
13713.00†	7400.00	6092.95	-795.85	14059.17	7633.00	6080.59	-1587.55	-106.40	825.37	372.66	2.22	PASS	
13813.00†	7400.00	6192.93	-797.41	14159.17	7633.00	6180.58	-1589.11	-106.40	825.36	378.64	2.18	PASS	
13913.00†	7400.00	6292.92	-798.97	14259.17	7633.00	6280.57	-1590.67	-106.40	825.36	384.62	2.15	PASS	
14013.00†	7400.00	6392.91	-800.53	14359.17	7633.00	6380.56	-1592.23	-106.40	825.36	390.60	2.12	PASS	
14113.00†	7400.00	6492.90	-802.09	14459.17	7633.00	6480.55	-1593.79	-106.40	825.36	396.58	2.08	PASS	
14213.00†	7400.00	6592.89	-803.65	14559.17	7633.00	6580.53	-1595.35	-106.40	825.36	402.57	2.05	PASS	
14313.00†	7400.00	6692.87	-805.21	14659.17	7633.00	6680.52	-1596.91	-106.40	825.36	408.56	2.02	PASS	
14413.00†	7400.00	6792.86	-806.78	14759.17	7633.00	6780.51	-1598.47	-106.40	825.36	414.54	1.99	PASS	
14513.00†	7400.00	6892.85	-808.34	14859.17	7633.00	6880.50	-1600.03	-106.40	825.36	420.54	1.96	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft





# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	
14613.00†	7400.00	6992.84	-809.90	14959.17	7633.00	6980.48	-1601.59	-106.40	825.35	426.53	1.94	PASS	
14713.00†	7400.00	7092.82	-811.46	15059.17	7633.00	7080.47	-1603.15	-106.40	825.35	432.52	1.91	PASS	
14813.00†	7400.00	7192.81	-813.02	15159.17	7633.00	7180.46	-1604.71	-106.40	825.35	438.52	1.88	PASS	
14913.00†	7400.00	7292.80	-814.58	15259.17	7633.00	7280.45	-1606.27	-106.40	825.35	444.51	1.86	PASS	
15013.00†	7400.00	7392.79	-816.15	15359.17	7633.00	7380.44	-1607.83	-106.40	825.35	450.51	1.83	PASS	
15113.00†	7400.00	7492.78	-817.71	15459.17	7633.00	7480.42	-1609.39	-106.40	825.35	456.51	1.81	PASS	
15213.00†	7400.00	7592.76	-819.27	15559.17	7633.00	7580.41	-1610.95	-106.40	825.35	462.51	1.79	PASS	
15313.00†	7400.00	7692.75	-820.83	15659.17	7633.00	7680.40	-1612.51	-106.40	825.34	468.51	1.76	PASS	
15413.00†	7400.00	7792.74	-822.39	15759.17	7633.00	7780.39	-1614.07	-106.40	825.34	474.51	1.74	PASS	
15513.00†	7400.00	7892.73	-823.95	15859.17	7633.00	7880.37	-1615.63	-106.40	825.34	480.51	1.72	PASS	
15613.00†	7400.00	7992.71	-825.51	15959.17	7633.00	7980.36	-1617.19	-106.40	825.34	486.52	1.70	PASS	
15713.00†	7400.00	8092.70	-827.08	16059.17	7633.00	8080.35	-1618.75	-106.40	825.34	492.52	1.68	PASS	
15813.00†	7400.00	8192.69	-828.64	16159.17	7633.00	8180.34	-1620.31	-106.40	825.34	498.53	1.66	PASS	
15913.00†	7400.00	8292.68	-830.20	16259.17	7633.00	8280.33	-1621.87	-106.40	825.34	504.54	1.64	PASS	
16013.00†	7400.00	8392.67	-831.76	16359.17	7633.00	8380.31	-1623.43	-106.40	825.33	510.54	1.62	PASS	
16113.00†	7400.00	8492.65	-833.32	16459.17	7633.00	8480.30	-1624.99	-106.40	825.33	516.55	1.60	PASS	
16213.00†	7400.00	8592.64	-834.88	16559.17	7633.00	8580.29	-1626.55	-106.40	825.33	522.56	1.58	PASS	
16313.00†	7400.00	8692.63	-836.45	16659.17	7633.00	8680.28	-1628.11	-106.40	825.33	528.57	1.56	PASS	
16413.00†	7400.00	8792.62	-838.01	16759.17	7633.00	8780.27	-1629.67	-106.40	825.33	534.58	1.54	PASS	
16513.00†	7400.00	8892.61	-839.57	16859.17	7633.00	8880.25	-1631.23	-106.40	825.33	540.59	1.53	PASS	
16613.00†	7400.00	8992.59	-841.13	16959.17	7633.00	8980.24	-1632.79	-106.40	825.33	546.61	1.51	PASS	
16713.00†	7400.00	9092.58	-842.69	17059.17	7633.00	9080.23	-1634.35	-106.40	825.33	552.62	1.49	PASS	
16813.00†	7400.00	9192.57	-844.25	17159.17	7633.00	9180.22	-1635.91	-106.40	825.32	558.63	1.48	PASS	
16913.00†	7400.00	9292.56	-845.81	17259.17	7633.00	9280.20	-1637.47	-106.40	825.32	564.65	1.46	PASS	
17013.00†	7400.00	9392.54	-847.38	17359.17	7633.00	9380.19	-1639.03	-106.40	825.32	570.66	1.45	PASS	
17113.00†	7400.00	9492.53	-848.94	17459.17	7633.00	9480.18	-1640.59	-106.40	825.32	576.68	1.43	PASS	
17213.00†	7400.00	9592.52	-850.50	17559.17	7633.00	9580.17	-1642.15	-106.40	825.32	582.69	1.42	PASS	
17313.00†	7400.00	9692.51	-852.06	17659.17	7633.00	9680.16	-1643.71	-106.40	825.32	588.71	1.40	PASS	
17413.00†	7400.00	9792.50	-853.62	17759.17	7633.00	9780.14	-1645.27	-106.40	825.32	594.73	1.39	PASS	
17513.00†	7400.00	9892.48	-855.18	17859.17	7633.00	9880.13	-1646.83	-106.40	825.31	600.74	1.37	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



**Clearance Report**  
**WAKEMAN 20-17-2NBH PWP (REV-A.0)**  
**Closest Approach**  
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**REFERENCE WELLPATH IDENTIFICATION**

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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
17593.78	7400.00	9973.25	-856.44	17939.95	7633.00	9960.90	-1648.09	-106.40	825.31	605.61	1.36	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	-0.03	-27.43	-3.98	-40.10
8.5in Open Hole	1800.00	17954.40	16154.40	1797.47	N/A	-3.98	-40.10	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

**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 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	4193.96	-1339.89	-17.72	4402.95	25.40	178.94	PASS	
113.00†	113.00	0.00	0.00	51.00	113.00	4193.96	-1339.89	-17.72	4402.80	51.16	87.35	PASS	
213.00†	213.00	0.00	0.00	151.00	213.00	4193.96	-1339.89	-17.72	4402.80	53.50	83.47	PASS	
313.00†	313.00	0.00	0.00	251.00	313.00	4193.96	-1339.89	-17.72	4402.80	55.84	79.92	PASS	
413.00†	413.00	0.00	0.00	351.00	413.00	4193.96	-1339.89	-17.72	4402.80	58.19	76.65	PASS	
513.00†	513.00	0.00	0.00	451.00	513.00	4193.96	-1339.89	-17.72	4402.80	60.54	73.63	PASS	
613.00†	613.00	0.00	0.00	551.00	613.00	4193.96	-1339.89	-17.72	4402.80	62.90	70.84	PASS	
713.00†	713.00	0.00	0.00	651.00	713.00	4193.96	-1339.89	-17.72	4402.80	65.26	68.25	PASS	
813.00†	813.00	0.00	0.00	751.00	813.00	4193.96	-1339.89	-17.72	4402.80	67.63	65.83	PASS	
913.00†	913.00	0.00	0.00	851.00	913.00	4193.96	-1339.89	-17.72	4402.80	69.99	63.58	PASS	
1013.00†	1013.00	0.00	0.00	951.00	1013.00	4193.96	-1339.89	-17.72	4402.80	72.37	61.47	PASS	
1113.00†	1113.00	0.00	0.00	1051.00	1113.00	4193.96	-1339.89	-17.72	4402.80	74.74	59.50	PASS	
1213.00†	1213.00	0.00	0.00	1151.00	1213.00	4193.96	-1339.89	-17.72	4402.80	77.12	57.65	PASS	
1313.00†	1313.00	0.00	0.00	1251.00	1313.00	4193.96	-1339.89	-17.72	4402.80	79.51	55.90	PASS	
1413.00†	1413.00	0.00	0.00	1351.00	1413.00	4193.96	-1339.89	-17.72	4402.80	81.90	54.25	PASS	
1513.00†	1513.00	0.00	0.00	1451.00	1513.00	4193.96	-1339.89	-17.72	4402.80	84.29	52.70	PASS	
1600.00	1600.00	0.00	0.00	1538.00	1600.00	4193.96	-1339.89	-17.72	4402.80	86.20	51.42	PASS	
1613.00†	1613.00	-0.02	-0.02	1551.00	1613.00	4193.96	-1339.89	105.46	4402.81	86.51	51.23	PASS	
1713.00†	1712.97	-1.22	-1.87	1650.97	1712.97	4193.96	-1339.89	105.48	4403.39	88.91	49.85	PASS	
1813.00†	1812.80	-4.33	-6.62	1750.80	1812.80	4193.96	-1339.89	105.52	4404.92	91.27	48.54	PASS	
1913.00†	1912.38	-9.35	-14.30	1850.38	1912.38	4193.96	-1339.89	105.58	4407.38	93.68	47.32	PASS	
2013.00†	2011.57	-16.26	-24.87	1949.57	2011.57	4193.96	-1339.89	105.68	4410.81	96.08	46.16	PASS	
2021.71	2020.19	-16.95	-25.93	1958.19	2020.19	4193.96	-1339.89	105.68	4411.16	96.29	46.06	PASS	
2113.00†	2110.49	-24.28	-37.14	2048.49	2110.49	4193.96	-1339.89	105.85	4414.83	98.49	45.07	PASS	
2213.00†	2209.41	-32.31	-49.42	2147.41	2209.41	4193.96	-1339.89	106.03	4418.90	100.91	44.02	PASS	
2313.00†	2308.33	-40.33	-61.69	2246.33	2308.33	4193.96	-1339.89	106.21	4423.02	103.34	43.02	PASS	
2413.00†	2407.25	-48.36	-73.97	2345.25	2407.25	4193.96	-1339.89	106.39	4427.17	105.78	42.06	PASS	
2513.00†	2506.17	-56.39	-86.25	2444.17	2506.17	4193.96	-1339.89	106.57	4431.38	108.23	41.14	PASS	
2613.00†	2605.08	-64.41	-98.52	2543.08	2605.08	4193.96	-1339.89	106.75	4435.62	110.69	40.26	PASS	
2713.00†	2704.00	-72.44	-110.80	2642.00	2704.00	4193.96	-1339.89	106.93	4439.92	113.16	39.42	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	
2813.00†	2802.92	-80.47	-123.08	2740.92	2802.92	4193.96	-1339.89	107.11	4444.25	115.64	38.61	PASS	
2913.00†	2901.84	-88.49	-135.35	2839.84	2901.84	4193.96	-1339.89	107.29	4448.63	118.14	37.83	PASS	
3013.00†	3000.76	-96.52	-147.63	2938.76	3000.76	4193.96	-1339.89	107.47	4453.06	120.63	37.08	PASS	
3113.00†	3099.68	-104.54	-159.91	3037.68	3099.68	4193.96	-1339.89	107.65	4457.53	123.14	36.35	PASS	
3213.00†	3198.59	-112.57	-172.18	3136.59	3198.59	4193.96	-1339.89	107.82	4462.04	125.66	35.66	PASS	
3313.00†	3297.51	-120.60	-184.46	3235.51	3297.51	4193.96	-1339.89	108.00	4466.59	128.19	34.99	PASS	
3413.00†	3396.43	-128.62	-196.74	3334.43	3396.43	4193.96	-1339.89	108.18	4471.19	130.72	34.34	PASS	
3513.00†	3495.35	-136.65	-209.01	3433.35	3495.35	4193.96	-1339.89	108.35	4475.84	133.26	33.72	PASS	
3613.00†	3594.27	-144.68	-221.29	3532.27	3594.27	4193.96	-1339.89	108.53	4480.52	135.81	33.12	PASS	
3713.00†	3693.19	-152.70	-233.56	3631.19	3693.19	4193.96	-1339.89	108.71	4485.25	138.37	32.54	PASS	
3813.00†	3792.11	-160.73	-245.84	3730.11	3792.11	4193.96	-1339.89	108.88	4490.02	140.94	31.98	PASS	
3913.00†	3891.02	-168.76	-258.12	3829.02	3891.02	4193.96	-1339.89	109.06	4494.84	143.51	31.44	PASS	
4013.00†	3989.94	-176.78	-270.39	3927.94	3989.94	4193.96	-1339.89	109.23	4499.69	146.09	30.91	PASS	
4113.00†	4088.86	-184.81	-282.67	4026.86	4088.86	4193.96	-1339.89	109.41	4504.59	148.67	30.41	PASS	
4213.00†	4187.78	-192.83	-294.95	4125.78	4187.78	4193.96	-1339.89	109.58	4509.53	151.27	29.92	PASS	
4313.00†	4286.70	-200.86	-307.22	4224.70	4286.70	4193.96	-1339.89	109.75	4514.52	153.86	29.44	PASS	
4413.00†	4385.62	-208.89	-319.50	4323.62	4385.62	4193.96	-1339.89	109.93	4519.54	156.47	28.98	PASS	
4513.00†	4484.53	-216.91	-331.78	4422.53	4484.53	4193.96	-1339.89	110.10	4524.61	159.08	28.54	PASS	
4613.00†	4583.45	-224.94	-344.05	4521.45	4583.45	4193.96	-1339.89	110.27	4529.72	161.69	28.10	PASS	
4713.00†	4682.37	-232.97	-356.33	4620.37	4682.37	4193.96	-1339.89	110.45	4534.88	164.31	27.69	PASS	
4813.00†	4781.29	-240.99	-368.61	4719.29	4781.29	4193.96	-1339.89	110.62	4540.07	166.94	27.28	PASS	
4913.00†	4880.21	-249.02	-380.88	4818.21	4880.21	4193.96	-1339.89	110.79	4545.30	169.57	26.89	PASS	
5013.00†	4979.13	-257.04	-393.16	4917.13	4979.13	4193.96	-1339.89	110.96	4550.58	172.21	26.51	PASS	
5113.00†	5078.05	-265.07	-405.44	5016.05	5078.05	4193.96	-1339.89	111.13	4555.90	174.85	26.13	PASS	
5213.00†	5176.96	-273.10	-417.71	5114.96	5176.96	4193.96	-1339.89	111.30	4561.25	177.49	25.77	PASS	
5313.00†	5275.88	-281.12	-429.99	5213.88	5275.88	4193.96	-1339.89	111.47	4566.65	180.14	25.42	PASS	
5413.00†	5374.80	-289.15	-442.27	5312.80	5374.80	4193.96	-1339.89	111.64	4572.09	182.80	25.08	PASS	
5513.00†	5473.72	-297.18	-454.54	5411.72	5473.72	4193.96	-1339.89	111.81	4577.57	185.45	24.75	PASS	
5613.00†	5572.64	-305.20	-466.82	5510.64	5572.64	4193.96	-1339.89	111.98	4583.09	188.12	24.43	PASS	
5713.00†	5671.56	-313.23	-479.10	5609.56	5671.56	4193.96	-1339.89	112.15	4588.65	190.78	24.12	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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
5813.00†	5770.47	-321.25	-491.37	5708.47	5770.47	4193.96	-1339.89	112.31	4594.26	193.45	23.81	PASS
5913.00†	5869.39	-329.28	-503.65	5807.39	5869.39	4193.96	-1339.89	112.48	4599.90	196.12	23.52	PASS
6013.00†	5968.31	-337.31	-515.93	5906.31	5968.31	4193.96	-1339.89	112.65	4605.58	198.79	23.23	PASS
6113.00†	6067.23	-345.33	-528.20	6005.23	6067.23	4193.96	-1339.89	112.82	4611.30	201.47	22.95	PASS
6213.00†	6166.15	-353.36	-540.48	6104.15	6166.15	4193.96	-1339.89	112.98	4617.06	204.15	22.67	PASS
6313.00†	6265.07	-361.39	-552.76	6203.07	6265.07	4193.96	-1339.89	113.15	4622.86	206.84	22.41	PASS
6413.00†	6363.99	-369.41	-565.03	6301.99	6363.99	4193.96	-1339.89	113.31	4628.69	209.52	22.15	PASS
6513.00†	6462.90	-377.44	-577.31	6400.90	6462.90	4193.96	-1339.89	113.48	4634.57	212.21	21.89	PASS
6613.00†	6561.82	-385.47	-589.59	6499.82	6561.82	4193.96	-1339.89	113.64	4640.49	214.90	21.65	PASS
6713.00†	6660.74	-393.49	-601.86	6598.74	6660.74	4193.96	-1339.89	113.81	4646.44	217.60	21.40	PASS
6813.00†	6759.66	-401.52	-614.14	6697.66	6759.66	4193.96	-1339.89	113.97	4652.44	220.29	21.17	PASS
6840.60	6786.96	-403.73	-617.53	6724.96	6786.96	4193.96	-1339.89	114.02	4654.10	221.04	21.11	PASS
6913.00†	6858.74	-404.98	-626.51	6796.74	6858.74	4193.96	-1339.89	61.20	4653.94	223.02	20.92	PASS
7013.00†	6956.94	-391.71	-639.03	6894.94	6956.94	4193.96	-1339.89	21.64	4638.92	226.08	20.57	PASS
7113.00†	7051.32	-361.45	-651.33	6989.32	7051.32	4193.96	-1339.89	9.63	4607.16	229.43	20.13	PASS
7213.00†	7139.02	-315.13	-663.05	7077.02	7139.02	4193.96	-1339.89	3.96	4559.61	232.39	19.66	PASS
7313.00†	7217.38	-254.15	-673.83	7155.38	7217.38	4193.96	-1339.89	0.06	4497.71	234.91	19.19	PASS
7413.00†	7284.01	-180.36	-683.33	7222.01	7284.01	4193.96	-1339.89	-3.72	4423.33	236.94	18.71	PASS
7513.00†	7336.89	-96.01	-691.28	7274.89	7336.89	4193.96	-1339.89	-8.83	4338.73	238.42	18.24	PASS
7613.00†	7374.42	-3.66	-697.43	7312.42	7374.42	4193.96	-1339.89	-18.41	4246.51	239.36	17.78	PASS
7713.00†	7395.45	93.88	-701.59	7333.45	7395.45	4193.96	-1339.89	-44.62	4149.47	239.75	17.34	PASS
7785.53	7400.00	166.19	-703.29	7338.00	7400.00	4193.96	-1339.89	-90.00	4077.77	239.71	17.05	PASS
7813.00†	7400.00	193.67	-703.72	7338.00	7400.00	4193.96	-1339.89	-90.00	4050.57	239.65	16.94	PASS
7913.00†	7400.00	293.65	-705.28	7338.00	7400.00	4193.96	-1339.89	-90.00	3951.60	239.41	16.54	PASS
8013.00†	7400.00	393.64	-706.84	7338.00	7400.00	4193.96	-1339.89	-90.00	3852.69	239.17	16.14	PASS
8113.00†	7400.00	493.63	-708.40	7338.00	7400.00	4193.96	-1339.89	-90.00	3753.83	238.92	15.75	PASS
8213.00†	7400.00	593.62	-709.96	7338.00	7400.00	4193.96	-1339.89	-90.00	3655.04	238.67	15.35	PASS
8313.00†	7400.00	693.60	-711.52	7338.00	7400.00	4193.96	-1339.89	-90.00	3556.31	238.41	14.95	PASS
8413.00†	7400.00	793.59	-713.09	7338.00	7400.00	4193.96	-1339.89	-90.00	3457.66	238.14	14.55	PASS
8513.00†	7400.00	893.58	-714.65	7338.00	7400.00	4193.96	-1339.89	-90.00	3359.09	237.86	14.15	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH PWB
Facility	SEC.20-T01S-R65W		

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

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	
8613.00†	7400.00	993.57	-716.21	7338.00	7400.00	4193.96	-1339.89	-90.00	3260.60	237.58	13.75	PASS	
8713.00†	7400.00	1093.56	-717.77	7338.00	7400.00	4193.96	-1339.89	-90.00	3162.21	237.30	13.35	PASS	
8813.00†	7400.00	1193.54	-719.33	7338.00	7400.00	4193.96	-1339.89	-90.00	3063.92	237.00	12.96	PASS	
8913.00†	7400.00	1293.53	-720.89	7338.00	7400.00	4193.96	-1339.89	-90.00	2965.75	236.71	12.56	PASS	
9013.00†	7400.00	1393.52	-722.45	7338.00	7400.00	4193.96	-1339.89	-90.00	2867.70	236.41	12.16	PASS	
9113.00†	7400.00	1493.51	-724.02	7338.00	7400.00	4193.96	-1339.89	-90.00	2769.80	236.11	11.76	PASS	
9213.00†	7400.00	1593.50	-725.58	7338.00	7400.00	4193.96	-1339.89	-90.00	2672.04	235.82	11.35	PASS	
9313.00†	7400.00	1693.48	-727.14	7338.00	7400.00	4193.96	-1339.89	-90.00	2574.46	235.53	10.95	PASS	
9413.00†	7400.00	1793.47	-728.70	7338.00	7400.00	4193.96	-1339.89	-90.00	2477.08	235.26	10.55	PASS	
9513.00†	7400.00	1893.46	-730.26	7338.00	7400.00	4193.96	-1339.89	-90.00	2379.91	235.00	10.15	PASS	
9613.00†	7400.00	1993.45	-731.82	7338.00	7400.00	4193.96	-1339.89	-90.00	2282.99	234.77	9.74	PASS	
9713.00†	7400.00	2093.43	-733.39	7338.00	7400.00	4193.96	-1339.89	-90.00	2186.34	234.59	9.34	PASS	
9813.00†	7400.00	2193.42	-734.95	7338.00	7400.00	4193.96	-1339.89	-90.00	2090.01	234.45	8.93	PASS	
9913.00†	7400.00	2293.41	-736.51	7338.00	7400.00	4193.96	-1339.89	-90.00	1994.03	234.39	8.52	PASS	
10013.00†	7400.00	2393.40	-738.07	7338.00	7400.00	4193.96	-1339.89	-90.00	1898.48	234.44	8.11	PASS	
10113.00†	7400.00	2493.39	-739.63	7338.00	7400.00	4193.96	-1339.89	-90.00	1803.41	234.61	7.70	PASS	
10213.00†	7400.00	2593.37	-741.19	7338.00	7400.00	4193.96	-1339.89	-90.00	1708.90	234.97	7.29	PASS	
10313.00†	7400.00	2693.36	-742.75	7338.00	7400.00	4193.96	-1339.89	-90.00	1615.05	235.56	6.87	PASS	
10413.00†	7400.00	2793.35	-744.32	7338.00	7400.00	4193.96	-1339.89	-90.00	1521.98	236.44	6.45	PASS	
10513.00†	7400.00	2893.34	-745.88	7338.00	7400.00	4193.96	-1339.89	-90.00	1429.85	237.72	6.03	PASS	
10613.00†	7400.00	2993.32	-747.44	7338.00	7400.00	4193.96	-1339.89	-90.00	1338.85	239.48	5.60	PASS	
10713.00†	7400.00	3093.31	-749.00	7338.00	7400.00	4193.96	-1339.89	-90.00	1249.23	241.84	5.17	PASS	
10813.00†	7400.00	3193.30	-750.56	7338.00	7400.00	4193.96	-1339.89	-90.00	1161.31	244.96	4.75	PASS	
10913.00†	7400.00	3293.29	-752.12	7338.00	7400.00	4193.96	-1339.89	-90.00	1075.49	248.98	4.33	PASS	
11013.00†	7400.00	3393.28	-753.69	7338.00	7400.00	4193.96	-1339.89	-90.00	992.34	254.09	3.91	PASS	
11113.00†	7400.00	3493.26	-755.25	7338.00	7400.00	4193.96	-1339.89	-90.00	912.57	260.46	3.51	PASS	
11213.00†	7400.00	3593.25	-756.81	7338.00	7400.00	4193.96	-1339.89	-90.00	837.16	268.26	3.13	PASS	
11313.00†	7400.00	3693.24	-758.37	7338.00	7400.00	4193.96	-1339.89	-90.00	767.39	277.59	2.77	PASS	
11413.00†	7400.00	3793.23	-759.93	7338.00	7400.00	4193.96	-1339.89	-90.00	704.94	288.41	2.45	PASS	
11513.00†	7400.00	3893.21	-761.49	7338.00	7400.00	4193.96	-1339.89	-90.00	651.91	300.37	2.17	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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
11613.00†	7400.00	3993.20	-763.05	7338.00	7400.00	4193.96	-1339.89	-90.00	610.77	312.67	1.96	PASS
11713.00†	7400.00	4093.19	-764.62	7338.00	7400.00	4193.96	-1339.89	-90.00	584.03	324.02	1.80	PASS
11813.00†	7400.00	4193.18	-766.18	7338.00	7400.00	4193.96	-1339.89	-90.00	573.71	332.87	1.72	PASS
11822.52†	7400.00	4202.70	-766.33	7339.00	7401.00	4193.96	-1339.89	-90.10	573.63	333.55	1.72	PASS
11870.97†	7400.00	4251.14	-767.08	7338.00	7400.00	4193.96	-1339.89	-90.00	575.65	336.37	1.71	PASS
11913.00†	7400.00	4293.17	-767.74	7338.00	7400.00	4193.96	-1339.89	-90.00	580.69	338.07	1.72	PASS
12013.00†	7400.00	4393.15	-769.30	7338.00	7400.00	4193.96	-1339.89	-90.00	604.36	339.40	1.78	PASS
12113.00†	7400.00	4493.14	-770.86	7338.00	7400.00	4193.96	-1339.89	-90.00	642.88	337.54	1.91	PASS
12213.00†	7400.00	4593.13	-772.42	7338.00	7400.00	4193.96	-1339.89	-90.00	693.79	333.61	2.08	PASS
12313.00†	7400.00	4693.12	-773.98	7338.00	7400.00	4193.96	-1339.89	-90.00	754.59	328.63	2.30	PASS
12413.00†	7400.00	4793.10	-775.55	7338.00	7400.00	4193.96	-1339.89	-90.00	823.07	323.32	2.55	PASS
12513.00†	7400.00	4893.09	-777.11	7338.00	7400.00	4193.96	-1339.89	-90.00	897.50	318.13	2.82	PASS
12613.00†	7400.00	4993.08	-778.67	7338.00	7400.00	4193.96	-1339.89	-90.00	976.50	313.28	3.12	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	2552.86	-828.45	2552.86	-828.45
8.625in Casing Surface	0.00	1529.00	1529.00	49.00	1578.00	2552.86	-828.45	2552.86	-828.45
7.875in Open Hole	1529.00	8141.00	6612.00	1578.00	8190.00	2552.86	-828.45	2552.86	-828.45
4.5in Casing Production	0.00	8141.00	8141.00	49.00	8190.00	2552.86	-828.45	2552.86	-828.45



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH PWB
Facility	SEC.20-T01S-R65W		

## 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 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	0.16	44.98	89.80	44.98	1.40	73.62	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	0.16	44.98	89.80	44.98	1.73	47.79	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	0.16	44.98	89.80	44.98	2.30	29.53	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	0.16	44.98	89.80	44.98	2.90	21.03	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	0.16	44.98	89.80	44.98	3.52	16.27	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	0.16	44.98	89.80	44.98	4.14	13.24	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	0.16	44.98	89.80	44.98	4.76	11.16	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	0.16	44.98	89.80	44.98	5.38	9.64	PASS	
813.00†	813.00	0.00	0.00	813.00	813.00	0.16	44.98	89.80	44.98	6.01	8.48	PASS	
913.00†	913.00	0.00	0.00	913.00	913.00	0.16	44.98	89.80	44.98	6.64	7.57	PASS	
1013.00†	1013.00	0.00	0.00	1013.00	1013.00	0.16	44.98	89.80	44.98	7.26	6.84	PASS	
1113.00†	1113.00	0.00	0.00	1113.00	1113.00	0.16	44.98	89.80	44.98	7.89	6.23	PASS	
1213.00†	1213.00	0.00	0.00	1213.00	1213.00	0.16	44.98	89.80	44.98	8.52	5.73	PASS	
1313.00†	1313.00	0.00	0.00	1312.88	1312.88	0.14	44.99	89.83	44.99	9.14	5.30	PASS	
1413.00†	1413.00	0.00	0.00	1411.86	1411.84	-1.56	46.32	91.93	46.36	9.80	5.06	PASS	
1513.00†	1513.00	0.00	0.00	1510.58	1510.40	-5.93	49.75	96.80	50.17	10.58	5.05	PASS	
1600.00	1600.00	0.00	0.00	1596.26	1595.74	-11.86	54.40	102.30	55.85	11.26	5.27	PASS	
1613.00†	1613.00	-0.02	-0.02	1609.20	1608.61	-12.87	55.19	-133.71	56.87	11.35	5.32	PASS	
1713.00†	1712.97	-1.22	-1.87	1708.66	1707.58	-20.61	61.27	-129.59	66.26	12.03	5.83	PASS	
1813.00†	1812.80	-4.33	-6.62	1807.95	1806.39	-28.33	67.33	-128.49	78.01	12.67	6.46	PASS	
1913.00†	1912.38	-9.35	-14.30	1906.96	1904.91	-36.04	73.37	-129.33	91.94	13.41	7.18	PASS	
2013.00†	2011.57	-16.26	-24.87	2005.56	2003.03	-43.71	79.39	-131.29	108.15	14.17	7.98	PASS	
2021.71	2020.19	-16.95	-25.93	2014.13	2011.56	-44.38	79.91	-131.49	109.68	14.24	8.05	PASS	
2113.00†	2110.49	-24.28	-37.14	2103.87	2100.86	-51.36	85.39	-133.58	125.85	14.86	8.84	PASS	
2213.00†	2209.41	-32.31	-49.42	2202.18	2198.69	-59.01	91.39	-135.33	143.71	15.56	9.63	PASS	
2313.00†	2308.33	-40.33	-61.69	2300.49	2296.51	-66.66	97.39	-136.69	161.68	16.27	10.35	PASS	
2413.00†	2407.25	-48.36	-73.97	2398.80	2394.34	-74.31	103.39	-137.78	179.71	16.98	11.00	PASS	
2513.00†	2506.17	-56.39	-86.25	2497.11	2492.17	-81.96	109.39	-138.67	197.79	17.70	11.60	PASS	
2613.00†	2605.08	-64.41	-98.52	2595.42	2589.99	-89.61	115.39	-139.41	215.92	18.43	12.14	PASS	
2713.00†	2704.00	-72.44	-110.80	2693.72	2687.82	-97.26	121.39	-140.04	234.07	19.17	12.64	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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†	2802.92	-80.47	-123.08	2792.03	2785.65	-104.90	127.39	-140.58	252.25	19.92	13.10	PASS		
2913.00†	2901.84	-88.49	-135.35	2890.34	2883.47	-112.55	133.39	-141.04	270.44	20.67	13.52	PASS		
3013.00†	3000.76	-96.52	-147.63	2988.65	2981.30	-120.20	139.39	-141.45	288.65	21.42	13.90	PASS		
3113.00†	3099.68	-104.54	-159.91	3086.96	3079.13	-127.85	145.39	-141.81	306.87	22.18	14.26	PASS		
3213.00†	3198.59	-112.57	-172.18	3185.27	3176.95	-135.50	151.39	-142.12	325.10	22.94	14.59	PASS		
3313.00†	3297.51	-120.60	-184.46	3283.58	3274.78	-143.15	157.39	-142.41	343.35	23.71	14.90	PASS		
3413.00†	3396.43	-128.62	-196.74	3381.89	3372.61	-150.80	163.39	-142.66	361.59	24.47	15.18	PASS		
3513.00†	3495.35	-136.65	-209.01	3480.20	3470.44	-158.45	169.39	-142.89	379.85	25.25	15.45	PASS		
3613.00†	3594.27	-144.68	-221.29	3578.50	3568.26	-166.10	175.39	-143.10	398.11	26.02	15.70	PASS		
3713.00†	3693.19	-152.70	-233.56	3676.81	3666.09	-173.75	181.39	-143.29	416.37	26.80	15.93	PASS		
3813.00†	3792.11	-160.73	-245.84	3775.12	3763.92	-181.40	187.39	-143.47	434.64	27.58	16.15	PASS		
3913.00†	3891.02	-168.76	-258.12	3873.43	3861.74	-189.05	193.39	-143.63	452.91	28.36	16.35	PASS		
4013.00†	3989.94	-176.78	-270.39	3971.74	3959.57	-196.70	199.39	-143.78	471.19	29.14	16.55	PASS		
4113.00†	4088.86	-184.81	-282.67	4070.05	4057.40	-204.35	205.39	-143.92	489.47	29.93	16.73	PASS		
4213.00†	4187.78	-192.83	-294.95	4168.36	4155.22	-212.00	211.39	-144.04	507.75	30.71	16.90	PASS		
4313.00†	4286.70	-200.86	-307.22	4266.67	4253.05	-219.64	217.39	-144.16	526.03	31.50	17.06	PASS		
4413.00†	4385.62	-208.89	-319.50	4364.97	4350.88	-227.29	223.39	-144.27	544.32	32.29	17.21	PASS		
4513.00†	4484.53	-216.91	-331.78	4463.28	4448.70	-234.94	229.39	-144.38	562.60	33.08	17.36	PASS		
4613.00†	4583.45	-224.94	-344.05	4561.59	4546.53	-242.59	235.39	-144.47	580.89	33.87	17.49	PASS		
4713.00†	4682.37	-232.97	-356.33	4659.90	4644.36	-250.24	241.39	-144.56	599.18	34.67	17.62	PASS		
4813.00†	4781.29	-240.99	-368.61	4758.21	4742.19	-257.89	247.39	-144.65	617.47	35.46	17.75	PASS		
4913.00†	4880.21	-249.02	-380.88	4856.52	4840.01	-265.54	253.39	-144.73	635.77	36.25	17.87	PASS		
5013.00†	4979.13	-257.04	-393.16	4954.83	4937.84	-273.19	259.40	-144.81	654.06	37.05	17.98	PASS		
5113.00†	5078.05	-265.07	-405.44	5053.14	5035.67	-280.84	265.40	-144.88	672.35	37.85	18.08	PASS		
5213.00†	5176.96	-273.10	-417.71	5151.45	5133.49	-288.49	271.40	-144.95	690.65	38.65	18.19	PASS		
5313.00†	5275.88	-281.12	-429.99	5249.75	5231.32	-296.14	277.40	-145.01	708.95	39.44	18.28	PASS		
5413.00†	5374.80	-289.15	-442.27	5348.06	5329.15	-303.79	283.40	-145.07	727.24	40.24	18.38	PASS		
5513.00†	5473.72	-297.18	-454.54	5446.37	5426.97	-311.44	289.40	-145.13	745.54	41.04	18.47	PASS		
5613.00†	5572.64	-305.20	-466.82	5544.68	5524.80	-319.09	295.40	-145.19	763.84	41.84	18.55	PASS		
5713.00†	5671.56	-313.23	-479.10	5642.99	5622.63	-326.73	301.40	-145.24	782.14	42.64	18.63	PASS		

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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†	5770.47	-321.25	-491.37	5741.30	5720.46	-334.38	307.40	-145.29	800.44	43.45	18.71	PASS	
5913.00†	5869.39	-329.28	-503.65	5839.61	5818.28	-342.03	313.40	-145.34	818.74	44.25	18.79	PASS	
6013.00†	5968.31	-337.31	-515.93	5937.92	5916.11	-349.68	319.40	-145.39	837.05	45.05	18.86	PASS	
6113.00†	6067.23	-345.33	-528.20	6036.22	6013.94	-357.33	325.40	-145.43	855.35	45.86	18.93	PASS	
6213.00†	6166.15	-353.36	-540.48	6134.53	6111.76	-364.98	331.40	-145.47	873.65	46.66	19.00	PASS	
6313.00†	6265.07	-361.39	-552.76	6232.84	6209.59	-372.63	337.40	-145.51	891.95	47.46	19.06	PASS	
6413.00†	6363.99	-369.41	-565.03	6331.15	6307.42	-380.28	343.40	-145.55	910.26	48.27	19.12	PASS	
6513.00†	6462.90	-377.44	-577.31	6429.46	6405.24	-387.93	349.40	-145.59	928.56	49.07	19.18	PASS	
6613.00†	6561.82	-385.47	-589.59	6527.77	6503.07	-395.58	355.40	-145.63	946.86	49.88	19.24	PASS	
6713.00†	6660.74	-393.49	-601.88	6626.08	6600.90	-403.23	361.40	-145.66	965.17	50.69	19.30	PASS	
6813.00†	6759.66	-401.52	-614.14	6727.34	6701.84	-402.56	367.48	-146.20	983.32	51.57	19.32	PASS	
6840.60	6786.96	-403.73	-617.53	6754.50	6728.76	-399.34	369.06	-146.52	988.31	51.84	19.31	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	0.10	27.42	-8.40	34.08
8.5in Open Hole	1800.00	17376.39	15576.39	1798.48	N/A	-8.40	34.08	N/A	N/A



**Clearance Report**  
**WAKEMAN 20-17-2NBH PWP (REV-A.0)**  
**Closest Approach**  
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**REFERENCE WELLPATH IDENTIFICATION**

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH PWB
Facility	SEC.20-T01S-R65W		

**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

**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 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	-0.08	-60.01	-90.08	60.01	1.40	98.68	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	-0.08	-60.01	-90.08	60.01	1.73	63.75	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	-0.08	-60.01	-90.08	60.01	2.31	39.36	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	-0.08	-60.01	-90.08	60.01	2.91	28.06	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	-0.08	-60.01	-90.08	60.01	3.53	21.72	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	-0.08	-60.01	-90.08	60.01	4.15	17.69	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	-0.08	-60.01	-90.08	60.01	4.77	14.91	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	-0.08	-60.01	-90.08	60.01	5.40	12.89	PASS	
813.00†	813.00	0.00	0.00	813.00	813.00	-0.08	-60.01	-90.08	60.01	6.02	11.34	PASS	
913.00†	913.00	0.00	0.00	913.00	913.00	-0.08	-60.01	-90.08	60.01	6.65	10.13	PASS	
1013.00†	1013.00	0.00	0.00	1013.00	1013.00	-0.08	-60.01	-90.08	60.01	7.27	9.15	PASS	
1113.00†	1113.00	0.00	0.00	1113.00	1113.00	-0.08	-60.01	-90.08	60.01	7.90	8.34	PASS	
1213.00†	1213.00	0.00	0.00	1212.74	1212.74	-0.09	-60.04	-90.08	60.04	8.53	7.67	PASS	
1313.00†	1313.00	0.00	0.00	1310.69	1310.66	-0.59	-62.08	-90.55	62.13	9.23	7.28	PASS	
1413.00†	1413.00	0.00	0.00	1408.39	1408.20	-1.90	-67.36	-91.61	67.56	10.15	7.14	PASS	
1513.00†	1513.00	0.00	0.00	1505.60	1505.02	-3.99	-75.82	-93.01	76.34	11.03	7.39	PASS	
1600.00	1600.00	0.00	0.00	1589.61	1588.41	-6.43	-85.69	-94.29	86.71	11.74	7.85	PASS	
1613.00†	1613.00	-0.02	-0.02	1602.11	1600.79	-6.84	-87.36	-94.29	88.45	11.85	7.93	PASS	
1713.00†	1712.97	-1.22	-1.87	1698.03	1695.52	-10.44	-101.93	-94.29	101.99	12.70	8.51	PASS	
1813.00†	1812.80	-4.33	-6.62	1793.49	1789.25	-14.78	-119.47	-94.29	115.75	13.63	8.93	PASS	
1913.00†	1912.38	-9.35	-14.30	1888.48	1881.87	-19.84	-139.93	-94.29	129.71	14.47	9.37	PASS	
2013.00†	2011.57	-16.26	-24.87	1983.00	1973.29	-25.60	-163.24	-94.29	143.87	15.35	9.78	PASS	
2021.71	2020.19	-16.95	-25.93	1991.21	1981.19	-26.13	-165.40	-94.29	145.11	15.42	9.82	PASS	
2113.00†	2110.49	-24.28	-37.14	2076.86	2063.23	-32.03	-189.27	-94.29	159.49	16.05	10.35	PASS	
2213.00†	2209.41	-32.31	-49.42	2173.72	2155.35	-39.22	-218.33	-94.29	177.48	16.67	11.07	PASS	
2313.00†	2308.33	-40.33	-61.69	2272.05	2248.83	-46.54	-247.94	-94.29	195.62	17.36	11.70	PASS	
2413.00†	2407.25	-48.36	-73.97	2370.38	2342.31	-53.86	-277.56	-94.29	213.77	18.04	12.29	PASS	
2513.00†	2506.17	-56.39	-86.25	2468.72	2435.79	-61.18	-307.18	-94.29	231.92	18.75	12.82	PASS	
2613.00†	2605.08	-64.41	-98.52	2567.05	2529.27	-68.50	-336.80	-94.29	250.08	19.47	13.29	PASS	
2713.00†	2704.00	-72.44	-110.80	2665.38	2622.75	-75.83	-366.42	-94.29	31.30	268.24	20.22	13.71	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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†	2802.92	-80.47	-123.08	2763.71	2716.23	-83.15	-396.04	31.49	286.41	20.98	14.09	PASS
2913.00†	2901.84	-88.49	-135.35	2862.04	2809.70	-90.47	-425.65	31.66	304.58	21.76	14.43	PASS
3013.00†	3000.76	-96.52	-147.63	2960.38	2903.18	-97.79	-455.27	31.81	322.75	22.55	14.74	PASS
3113.00†	3099.68	-104.54	-159.91	3058.71	2996.66	-105.11	-484.89	31.94	340.92	23.36	15.02	PASS
3213.00†	3198.59	-112.57	-172.18	3157.04	3090.14	-112.43	-514.51	32.06	359.09	24.17	15.28	PASS
3313.00†	3297.51	-120.60	-184.46	3255.37	3183.62	-119.76	-544.13	32.17	377.27	24.99	15.51	PASS
3413.00†	3396.43	-128.62	-196.74	3353.70	3277.10	-127.08	-573.74	32.27	395.45	25.83	15.72	PASS
3513.00†	3495.35	-136.65	-209.01	3452.04	3370.58	-134.40	-603.36	32.36	413.62	26.66	15.91	PASS
3613.00†	3594.27	-144.68	-221.29	3550.37	3464.06	-141.72	-632.98	32.44	431.80	27.51	16.08	PASS
3713.00†	3693.19	-152.70	-233.56	3648.70	3557.54	-149.04	-662.60	32.51	449.98	28.36	16.24	PASS
3813.00†	3792.11	-160.73	-245.84	3747.03	3651.02	-156.37	-692.22	32.58	468.16	29.22	16.39	PASS
3913.00†	3891.02	-168.76	-258.12	3845.36	3744.50	-163.69	-721.83	32.65	486.34	30.09	16.53	PASS
4013.00†	3989.94	-176.78	-270.39	3943.70	3837.97	-171.01	-751.45	32.71	504.52	30.96	16.66	PASS
4113.00†	4088.86	-184.81	-282.67	4042.03	3931.45	-178.33	-781.07	32.76	522.71	31.83	16.77	PASS
4213.00†	4187.78	-192.83	-294.95	4140.36	4024.93	-185.65	-810.69	32.82	540.89	32.71	16.88	PASS
4313.00†	4286.70	-200.86	-307.22	4238.69	4118.41	-192.97	-840.31	32.86	559.07	33.59	16.98	PASS
4413.00†	4385.62	-208.89	-319.50	4337.02	4211.89	-200.30	-869.93	32.91	577.25	34.48	17.07	PASS
4513.00†	4484.53	-216.91	-331.78	4435.36	4305.37	-207.62	-899.54	32.95	595.44	35.37	17.16	PASS
4613.00†	4583.45	-224.94	-344.05	4533.69	4398.85	-214.94	-929.16	32.99	613.62	36.26	17.24	PASS
4713.00†	4682.37	-232.97	-356.33	4632.02	4492.33	-222.26	-958.78	33.03	631.80	37.15	17.32	PASS
4813.00†	4781.29	-240.99	-368.61	4730.35	4585.81	-229.58	-988.40	33.06	649.99	38.05	17.39	PASS
4913.00†	4880.21	-249.02	-380.88	4828.68	4679.29	-236.90	-1018.02	33.10	668.17	38.95	17.46	PASS
5013.00†	4979.13	-257.04	-393.16	4927.02	4772.77	-244.23	-1047.63	33.13	686.36	39.85	17.52	PASS
5113.00†	5078.05	-265.07	-405.44	5025.35	4866.25	-251.55	-1077.25	33.16	704.54	40.75	17.58	PASS
5213.00†	5176.96	-273.10	-417.71	5123.68	4959.72	-258.87	-1106.87	33.19	722.73	41.66	17.63	PASS
5313.00†	5275.88	-281.12	-429.99	5222.01	5053.20	-266.19	-1136.49	33.22	740.91	42.57	17.68	PASS
5413.00†	5374.80	-289.15	-442.27	5320.34	5146.68	-273.51	-1166.11	33.24	759.10	43.47	17.73	PASS
5513.00†	5473.72	-297.18	-454.54	5418.68	5240.16	-280.84	-1195.72	33.27	777.28	44.39	17.78	PASS
5613.00†	5572.64	-305.20	-466.82	5517.01	5333.64	-288.16	-1225.34	33.29	795.47	45.30	17.82	PASS
5713.00†	5671.56	-313.23	-479.10	5615.34	5427.12	-295.48	-1254.96	33.31	813.65	46.21	17.87	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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]	ACR Status
5813.00†	5770.47	-321.25	-491.37	5713.67	5520.60	-302.80	-1284.58	33.34	831.84	47.13	PASS
5913.00†	5869.39	-329.28	-503.65	5812.00	5614.08	-310.12	-1314.20	33.36	850.02	48.04	PASS
6013.00†	5968.31	-337.31	-515.93	5910.34	5707.56	-317.44	-1343.82	33.38	868.21	48.96	PASS
6113.00†	6067.23	-345.33	-528.20	6008.67	5801.04	-324.77	-1373.43	33.40	886.40	49.88	PASS
6213.00†	6166.15	-353.36	-540.48	6107.00	5894.52	-332.09	-1403.05	33.41	904.58	50.80	PASS
6313.00†	6265.07	-361.39	-552.76	6205.33	5987.99	-339.41	-1432.67	33.43	922.77	51.72	PASS
6413.00†	6363.99	-369.41	-565.03	6303.66	6081.47	-346.73	-1462.29	33.45	940.95	52.64	PASS
6513.00†	6462.90	-377.44	-577.31	6402.00	6174.95	-354.05	-1491.91	33.46	959.14	53.56	PASS
6613.00†	6561.82	-385.47	-589.59	6500.33	6268.43	-361.38	-1521.52	33.48	977.33	54.49	PASS
6713.00†	6660.74	-393.49	-601.86	6598.66	6361.91	-368.70	-1551.14	33.49	995.51	55.41	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	-0.05	-36.58	-4.63	-55.11
8.5in Open Hole	1800.00	17835.13	16035.13	1795.62	N/A	-4.63	-55.11	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 20-17-2NBH PWP (REV-A.0)**  
**Closest Approach**  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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													
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	40.00	8360.29	74.93	0.51	8360.67	25.40	339.81	PASS	
113.00†	113.00	0.00	0.00	60.00	113.00	8360.29	74.93	0.51	8360.63	51.37	165.19	PASS	
213.00†	213.00	0.00	0.00	160.00	213.00	8360.29	74.93	0.51	8360.63	53.71	157.89	PASS	
313.00†	313.00	0.00	0.00	260.00	313.00	8360.29	74.93	0.51	8360.63	56.05	151.19	PASS	
413.00†	413.00	0.00	0.00	360.00	413.00	8360.29	74.93	0.51	8360.63	58.40	145.03	PASS	
513.00†	513.00	0.00	0.00	460.00	513.00	8360.29	74.93	0.51	8360.63	60.76	139.34	PASS	
613.00†	613.00	0.00	0.00	560.00	613.00	8360.29	74.93	0.51	8360.63	63.12	134.07	PASS	
713.00†	713.00	0.00	0.00	660.00	713.00	8360.29	74.93	0.51	8360.63	65.48	129.17	PASS	
813.00†	813.00	0.00	0.00	760.00	813.00	8360.29	74.93	0.51	8360.63	67.84	124.62	PASS	
913.00†	913.00	0.00	0.00	860.00	913.00	8360.29	74.93	0.51	8360.63	70.21	120.37	PASS	
1013.00†	1013.00	0.00	0.00	960.00	1013.00	8360.29	74.93	0.51	8360.63	72.59	116.39	PASS	
1113.00†	1113.00	0.00	0.00	1060.00	1113.00	8360.29	74.93	0.51	8360.63	74.96	112.66	PASS	
1213.00†	1213.00	0.00	0.00	1160.00	1213.00	8360.29	74.93	0.51	8360.63	77.35	109.16	PASS	
1313.00†	1313.00	0.00	0.00	1260.00	1313.00	8360.29	74.93	0.51	8360.63	79.73	105.86	PASS	
1413.00†	1413.00	0.00	0.00	1360.00	1413.00	8360.29	74.93	0.51	8360.63	82.12	102.75	PASS	
1513.00†	1513.00	0.00	0.00	1460.00	1513.00	8360.29	74.93	0.51	8360.63	84.51	99.82	PASS	
1600.00	1600.00	0.00	0.00	1547.00	1600.00	8360.29	74.93	0.51	8360.63	86.43	97.39	PASS	
1613.00†	1613.00	-0.02	-0.02	1560.00	1613.00	8360.29	74.93	123.69	8360.65	86.74	97.04	PASS	
1713.00†	1712.97	-1.22	-1.87	1659.97	1712.97	8360.29	74.93	123.68	8361.87	89.14	94.42	PASS	
1813.00†	1812.80	-4.33	-6.62	1759.80	1812.80	8360.29	74.93	123.66	8365.02	91.51	91.94	PASS	
1913.00†	1912.38	-9.35	-14.30	1859.38	1912.38	8360.29	74.93	123.63	8370.12	93.93	89.62	PASS	
2013.00†	2011.57	-16.26	-24.87	1958.57	2011.57	8360.29	74.93	123.58	8377.15	96.35	87.43	PASS	
2021.71	2020.19	-16.95	-25.93	1967.19	2020.19	8360.29	74.93	123.58	8377.86	96.56	87.24	PASS	
2113.00†	2110.49	-24.28	-37.14	2057.49	2110.49	8360.29	74.93	123.65	8385.32	98.76	85.37	PASS	
2213.00†	2209.41	-32.31	-49.42	2156.41	2209.41	8360.29	74.93	123.74	8393.52	101.17	83.40	PASS	
2313.00†	2308.33	-40.33	-61.69	2255.33	2308.33	8360.29	74.93	123.82	8401.74	103.59	81.52	PASS	
2413.00†	2407.25	-48.36	-73.97	2354.25	2407.25	8360.29	74.93	123.90	8409.97	106.03	79.72	PASS	
2513.00†	2506.17	-56.39	-86.25	2453.17	2506.17	8360.29	74.93	123.98	8418.22	108.47	78.00	PASS	
2613.00†	2605.08	-64.41	-98.52	2552.08	2605.08	8360.29	74.93	124.07	8426.49	110.92	76.34	PASS	
2713.00†	2704.00	-72.44	-110.80	2651.00	2704.00	8360.29	74.93	124.15	8434.78	113.37	74.75	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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													
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†	2802.92	-80.47	-123.08	2749.92	2802.92	8360.29	74.93	124.23	8443.08	115.84	73.22	PASS	
2913.00†	2901.84	-88.49	-135.35	2848.84	2901.84	8360.29	74.93	124.31	8451.40	118.31	71.76	PASS	
3013.00†	3000.76	-96.52	-147.63	2947.76	3000.76	8360.29	74.93	124.39	8459.74	120.80	70.34	PASS	
3113.00†	3099.68	-104.54	-159.91	3046.68	3099.68	8360.29	74.93	124.47	8468.10	123.29	68.98	PASS	
3213.00†	3198.59	-112.57	-172.18	3145.59	3198.59	8360.29	74.93	124.56	8476.47	125.78	67.68	PASS	
3313.00†	3297.51	-120.60	-184.46	3244.51	3297.51	8360.29	74.93	124.64	8484.86	128.29	66.41	PASS	
3413.00†	3396.43	-128.62	-196.74	3343.43	3396.43	8360.29	74.93	124.72	8493.26	130.80	65.20	PASS	
3513.00†	3495.35	-136.65	-209.01	3442.35	3495.35	8360.29	74.93	124.80	8501.69	133.32	64.02	PASS	
3613.00†	3594.27	-144.68	-221.29	3541.27	3594.27	8360.29	74.93	124.88	8510.13	135.85	62.89	PASS	
3713.00†	3693.19	-152.70	-233.56	3640.19	3693.19	8360.29	74.93	124.96	8518.58	138.38	61.80	PASS	
3813.00†	3792.11	-160.73	-245.84	3739.11	3792.11	8360.29	74.93	125.04	8527.06	140.92	60.74	PASS	
3913.00†	3891.02	-168.76	-258.12	3838.02	3891.02	8360.29	74.93	125.12	8535.55	143.47	59.72	PASS	
4013.00†	3989.94	-176.78	-270.39	3936.94	3989.94	8360.29	74.93	125.20	8544.06	146.02	58.73	PASS	
4113.00†	4088.86	-184.81	-282.67	4035.86	4088.86	8360.29	74.93	125.28	8552.58	148.58	57.77	PASS	
4213.00†	4187.78	-192.83	-294.95	4134.78	4187.78	8360.29	74.93	125.36	8561.12	151.14	56.84	PASS	
4313.00†	4286.70	-200.86	-307.22	4233.70	4286.70	8360.29	74.93	125.44	8569.68	153.71	55.95	PASS	
4413.00†	4385.62	-208.89	-319.50	4332.62	4385.62	8360.29	74.93	125.52	8578.25	156.28	55.08	PASS	
4513.00†	4484.53	-216.91	-331.78	4431.53	4484.53	8360.29	74.93	125.60	8586.84	158.86	54.23	PASS	
4613.00†	4583.45	-224.94	-344.05	4530.45	4583.45	8360.29	74.93	125.68	8595.45	161.45	53.41	PASS	
4713.00†	4682.37	-232.97	-356.33	4629.37	4682.37	8360.29	74.93	125.75	8604.07	164.04	52.62	PASS	
4813.00†	4781.29	-240.99	-368.61	4728.29	4781.29	8360.29	74.93	125.83	8612.71	166.64	51.85	PASS	
4913.00†	4880.21	-249.02	-380.88	4827.21	4880.21	8360.29	74.93	125.91	8621.37	169.24	51.10	PASS	
5013.00†	4979.13	-257.04	-393.16	4926.13	4979.13	8360.29	74.93	125.99	8630.04	171.84	50.38	PASS	
5113.00†	5078.05	-265.07	-405.44	5025.05	5078.05	8360.29	74.93	126.07	8638.73	174.45	49.67	PASS	
5213.00†	5176.96	-273.10	-417.71	5123.96	5176.96	8360.29	74.93	126.15	8647.44	177.06	48.99	PASS	
5313.00†	5275.88	-281.12	-429.99	5222.88	5275.88	8360.29	74.93	126.22	8656.16	179.68	48.32	PASS	
5413.00†	5374.80	-289.15	-442.27	5321.80	5374.80	8360.29	74.93	126.30	8664.89	182.30	47.67	PASS	
5513.00†	5473.72	-297.18	-454.54	5420.72	5473.72	8360.29	74.93	126.38	8673.65	184.93	47.04	PASS	
5613.00†	5572.64	-305.20	-466.82	5519.64	5572.64	8360.29	74.93	126.46	8682.41	187.55	46.42	PASS	
5713.00†	5671.56	-313.23	-479.10	5618.56	5671.56	8360.29	74.93	126.53	8691.20	190.19	45.83	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



**Clearance Report**  
**WAKEMAN 20-17-2NBH PWP (REV-A.0)**  
**Closest Approach**  
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**REFERENCE WELLPATH IDENTIFICATION**

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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													
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†	5770.47	-321.25	-491.37	5717.47	5770.47	8360.29	74.93	126.61	8700.00	192.82	45.24	PASS	
5913.00†	5869.39	-329.28	-503.65	5816.39	5869.39	8360.29	74.93	126.69	8708.82	195.46	44.68	PASS	
6013.00†	5968.31	-337.31	-515.93	5915.31	5968.31	8360.29	74.93	126.76	8717.65	198.10	44.12	PASS	
6113.00†	6067.23	-345.33	-528.20	6014.23	6067.23	8360.29	74.93	126.84	8726.50	200.75	43.58	PASS	
6213.00†	6166.15	-353.36	-540.48	6113.15	6166.15	8360.29	74.93	126.92	8735.36	203.40	43.06	PASS	
6313.00†	6265.07	-361.39	-552.76	6212.07	6265.07	8360.29	74.93	126.99	8744.24	206.05	42.55	PASS	
6413.00†	6363.99	-369.41	-565.03	6310.99	6363.99	8360.29	74.93	127.07	8753.13	208.70	42.05	PASS	
6513.00†	6462.90	-377.44	-577.31	6409.90	6462.90	8360.29	74.93	127.15	8762.04	211.36	41.56	PASS	
6613.00†	6561.82	-385.47	-589.59	6508.82	6561.82	8360.29	74.93	127.22	8770.97	214.02	41.08	PASS	
6713.00†	6660.74	-393.49	-601.86	6607.74	6660.74	8360.29	74.93	127.30	8779.91	216.68	40.62	PASS	
6813.00†	6759.66	-401.52	-614.14	6706.66	6759.66	8360.29	74.93	127.37	8788.87	219.34	40.17	PASS	
6840.60	6786.96	-403.73	-617.53	6733.96	6786.96	8360.29	74.93	127.39	8791.34	220.08	40.04	PASS	
6913.00†	6858.74	-404.98	-626.51	6805.74	6858.74	8360.29	74.93	74.51	8793.29	222.07	39.69	PASS	
7013.00†	6956.94	-391.71	-639.03	6903.94	6956.94	8360.29	74.93	35.24	8781.07	225.30	39.07	PASS	
7113.00†	7051.32	-361.45	-651.33	6998.32	7051.32	8360.29	74.93	24.01	8751.93	228.99	38.31	PASS	
7213.00†	7139.02	-315.13	-663.05	7086.02	7139.02	8360.29	74.93	19.78	8706.76	232.19	37.58	PASS	
7313.00†	7217.38	-254.15	-673.83	7164.38	7217.38	8360.29	74.93	18.27	8646.92	234.95	36.89	PASS	
7413.00†	7284.01	-180.36	-683.33	7231.01	7284.01	8360.29	74.93	18.51	8574.25	237.26	36.22	PASS	
7513.00†	7336.89	-96.01	-691.28	7283.89	7336.89	8360.29	74.93	20.69	8490.95	239.06	35.60	PASS	
7613.00†	7374.42	-3.66	-697.43	7321.42	7374.42	8360.29	74.93	26.60	8399.54	240.34	35.02	PASS	
7713.00†	7395.45	93.88	-701.59	7342.45	7395.45	8360.29	74.93	45.11	8302.81	241.12	34.51	PASS	
7785.53	7400.00	166.19	-703.29	7347.00	7400.00	8360.29	74.93	90.00	8230.97	241.37	34.18	PASS	
7813.00†	7400.00	193.67	-703.72	7347.00	7400.00	8360.29	74.93	90.00	8203.66	241.42	34.05	PASS	
7913.00†	7400.00	293.65	-705.28	7347.00	7400.00	8360.29	74.93	90.00	8104.28	241.61	33.62	PASS	
8013.00†	7400.00	393.64	-706.84	7347.00	7400.00	8360.29	74.93	90.00	8004.92	241.80	33.18	PASS	
8113.00†	7400.00	493.63	-708.40	7347.00	7400.00	8360.29	74.93	90.00	7905.57	242.00	32.74	PASS	
8213.00†	7400.00	593.62	-709.96	7347.00	7400.00	8360.29	74.93	90.00	7806.24	242.21	32.30	PASS	
8313.00†	7400.00	693.60	-711.52	7347.00	7400.00	8360.29	74.93	90.00	7706.92	242.42	31.86	PASS	
8413.00†	7400.00	793.59	-713.09	7347.00	7400.00	8360.29	74.93	90.00	7607.62	242.65	31.42	PASS	
8513.00†	7400.00	893.58	-714.65	7347.00	7400.00	8360.29	74.93	90.00	7508.34	242.89	30.98	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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													
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†	7400.00	993.57	-716.21	7347.00	7400.00	8360.29	74.93	90.00	7409.09	243.13	30.54	PASS	
8713.00†	7400.00	1093.56	-717.77	7347.00	7400.00	8360.29	74.93	90.00	7309.85	243.39	30.10	PASS	
8813.00†	7400.00	1193.54	-719.33	7347.00	7400.00	8360.29	74.93	90.00	7210.63	243.65	29.66	PASS	
8913.00†	7400.00	1293.53	-720.89	7347.00	7400.00	8360.29	74.93	90.00	7111.43	243.93	29.22	PASS	
9013.00†	7400.00	1393.52	-722.45	7347.00	7400.00	8360.29	74.93	90.00	7012.26	244.22	28.77	PASS	
9113.00†	7400.00	1493.51	-724.02	7347.00	7400.00	8360.29	74.93	90.00	6913.11	244.52	28.33	PASS	
9213.00†	7400.00	1593.50	-725.58	7347.00	7400.00	8360.29	74.93	90.00	6813.98	244.83	27.89	PASS	
9313.00†	7400.00	1693.48	-727.14	7347.00	7400.00	8360.29	74.93	90.00	6714.89	245.16	27.45	PASS	
9413.00†	7400.00	1793.47	-728.70	7347.00	7400.00	8360.29	74.93	90.00	6615.81	245.50	27.01	PASS	
9513.00†	7400.00	1893.46	-730.26	7347.00	7400.00	8360.29	74.93	90.00	6516.77	245.85	26.56	PASS	
9613.00†	7400.00	1993.45	-731.82	7347.00	7400.00	8360.29	74.93	90.00	6417.76	246.22	26.12	PASS	
9713.00†	7400.00	2093.43	-733.39	7347.00	7400.00	8360.29	74.93	90.00	6318.77	246.60	25.68	PASS	
9813.00†	7400.00	2193.42	-734.95	7347.00	7400.00	8360.29	74.93	90.00	6219.82	247.01	25.23	PASS	
9913.00†	7400.00	2293.41	-736.51	7347.00	7400.00	8360.29	74.93	90.00	6120.91	247.42	24.79	PASS	
10013.00†	7400.00	2393.40	-738.07	7347.00	7400.00	8360.29	74.93	90.00	6022.03	247.86	24.35	PASS	
10113.00†	7400.00	2493.39	-739.63	7347.00	7400.00	8360.29	74.93	90.00	5923.19	248.31	23.90	PASS	
10213.00†	7400.00	2593.37	-741.19	7347.00	7400.00	8360.29	74.93	90.00	5824.38	248.79	23.46	PASS	
10313.00†	7400.00	2693.36	-742.75	7347.00	7400.00	8360.29	74.93	90.00	5725.62	249.29	23.02	PASS	
10413.00†	7400.00	2793.35	-744.32	7347.00	7400.00	8360.29	74.93	90.00	5626.90	249.80	22.57	PASS	
10513.00†	7400.00	2893.34	-745.88	7347.00	7400.00	8360.29	74.93	90.00	5528.23	250.35	22.13	PASS	
10613.00†	7400.00	2993.32	-747.44	7347.00	7400.00	8360.29	74.93	90.00	5429.61	250.91	21.68	PASS	
10713.00†	7400.00	3093.31	-749.00	7347.00	7400.00	8360.29	74.93	90.00	5331.04	251.50	21.24	PASS	
10813.00†	7400.00	3193.30	-750.56	7347.00	7400.00	8360.29	74.93	90.00	5232.52	252.12	20.80	PASS	
10913.00†	7400.00	3293.29	-752.12	7347.00	7400.00	8360.29	74.93	90.00	5134.06	252.77	20.35	PASS	
11013.00†	7400.00	3393.28	-753.69	7347.00	7400.00	8360.29	74.93	90.00	5035.66	253.45	19.91	PASS	
11113.00†	7400.00	3493.26	-755.25	7347.00	7400.00	8360.29	74.93	90.00	4937.32	254.17	19.46	PASS	
11213.00†	7400.00	3593.25	-756.81	7347.00	7400.00	8360.29	74.93	90.00	4839.06	254.92	19.02	PASS	
11313.00†	7400.00	3693.24	-758.37	7347.00	7400.00	8360.29	74.93	90.00	4740.86	255.70	18.58	PASS	
11413.00†	7400.00	3793.23	-759.93	7347.00	7400.00	8360.29	74.93	90.00	4642.75	256.53	18.13	PASS	
11513.00†	7400.00	3893.21	-761.49	7347.00	7400.00	8360.29	74.93	90.00	4544.71	257.39	17.69	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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													
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†	7400.00	3993.20	-763.05	7347.00	7400.00	8360.29	74.93	90.00	4446.76	258.31	17.25	PASS	
11713.00†	7400.00	4093.19	-764.62	7347.00	7400.00	8360.29	74.93	90.00	4348.91	259.27	16.81	PASS	
11813.00†	7400.00	4193.18	-766.18	7347.00	7400.00	8360.29	74.93	90.00	4251.15	260.28	16.37	PASS	
11913.00†	7400.00	4293.17	-767.74	7347.00	7400.00	8360.29	74.93	90.00	4153.51	261.34	15.92	PASS	
12013.00†	7400.00	4393.15	-769.30	7347.00	7400.00	8360.29	74.93	90.00	4055.97	262.47	15.48	PASS	
12113.00†	7400.00	4493.14	-770.86	7347.00	7400.00	8360.29	74.93	90.00	3958.56	263.66	15.04	PASS	
12213.00†	7400.00	4593.13	-772.42	7347.00	7400.00	8360.29	74.93	90.00	3861.29	264.91	14.60	PASS	
12313.00†	7400.00	4693.12	-773.98	7347.00	7400.00	8360.29	74.93	90.00	3764.15	266.24	14.16	PASS	
12413.00†	7400.00	4793.10	-775.55	7347.00	7400.00	8360.29	74.93	90.00	3667.17	267.65	13.73	PASS	
12513.00†	7400.00	4893.09	-777.11	7347.00	7400.00	8360.29	74.93	90.00	3570.36	269.14	13.29	PASS	
12613.00†	7400.00	4993.08	-778.67	7347.00	7400.00	8360.29	74.93	90.00	3473.72	270.73	12.85	PASS	
12713.00†	7400.00	5093.07	-780.23	7347.00	7400.00	8360.29	74.93	90.00	3377.29	272.41	12.42	PASS	
12813.00†	7400.00	5193.06	-781.79	7347.00	7400.00	8360.29	74.93	90.00	3281.06	274.21	11.99	PASS	
12913.00†	7400.00	5293.04	-783.35	7347.00	7400.00	8360.29	74.93	90.00	3185.07	276.12	11.56	PASS	
13013.00†	7400.00	5393.03	-784.92	7347.00	7400.00	8360.29	74.93	90.00	3089.33	278.15	11.13	PASS	
13113.00†	7400.00	5493.02	-786.48	7347.00	7400.00	8360.29	74.93	90.00	2993.87	280.33	10.70	PASS	
13213.00†	7400.00	5593.01	-788.04	7347.00	7400.00	8360.29	74.93	90.00	2898.72	282.66	10.27	PASS	
13313.00†	7400.00	5693.00	-789.60	7347.00	7400.00	8360.29	74.93	90.00	2803.91	285.15	9.85	PASS	
13413.00†	7400.00	5792.98	-791.16	7347.00	7400.00	8360.29	74.93	90.00	2709.46	287.82	9.43	PASS	
13513.00†	7400.00	5892.97	-792.72	7347.00	7400.00	8360.29	74.93	90.00	2615.43	290.69	9.01	PASS	
13613.00†	7400.00	5992.96	-794.28	7347.00	7400.00	8360.29	74.93	90.00	2521.87	293.78	8.60	PASS	
13713.00†	7400.00	6092.95	-795.85	7347.00	7400.00	8360.29	74.93	90.00	2428.81	297.11	8.19	PASS	
13813.00†	7400.00	6192.93	-797.41	7347.00	7400.00	8360.29	74.93	90.00	2336.32	300.71	7.78	PASS	
13913.00†	7400.00	6292.92	-798.97	7347.00	7400.00	8360.29	74.93	90.00	2244.49	304.59	7.38	PASS	
14013.00†	7400.00	6392.91	-800.53	7347.00	7400.00	8360.29	74.93	90.00	2153.38	308.80	6.98	PASS	
14113.00†	7400.00	6492.90	-802.09	7347.00	7400.00	8360.29	74.93	90.00	2063.09	313.36	6.59	PASS	
14213.00†	7400.00	6592.89	-803.65	7347.00	7400.00	8360.29	74.93	90.00	1973.74	318.31	6.21	PASS	
14313.00†	7400.00	6692.87	-805.21	7347.00	7400.00	8360.29	74.93	90.00	1885.45	323.70	5.83	PASS	
14413.00†	7400.00	6792.86	-806.78	7347.00	7400.00	8360.29	74.93	90.00	1798.40	329.55	5.46	PASS	
14513.00†	7400.00	6892.85	-808.34	7347.00	7400.00	8360.29	74.93	90.00	1712.76	335.93	5.11	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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												
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†	7400.00	6992.84	-809.90	7347.00	7400.00	8360.29	74.93	90.00	1628.76	342.87	4.76	PASS
14713.00†	7400.00	7092.82	-811.46	7347.00	7400.00	8360.29	74.93	90.00	1546.66	350.41	4.42	PASS
14813.00†	7400.00	7192.81	-813.02	7347.00	7400.00	8360.29	74.93	90.00	1466.79	358.61	4.09	PASS
14913.00†	7400.00	7292.80	-814.58	7347.00	7400.00	8360.29	74.93	90.00	1389.52	367.48	3.79	PASS
15013.00†	7400.00	7392.79	-816.15	7347.00	7400.00	8360.29	74.93	90.00	1315.32	377.02	3.49	PASS
15113.00†	7400.00	7492.78	-817.71	7347.00	7400.00	8360.29	74.93	90.00	1244.74	387.21	3.22	PASS
15213.00†	7400.00	7592.76	-819.27	7347.00	7400.00	8360.29	74.93	90.00	1178.43	397.96	2.96	PASS
15313.00†	7400.00	7692.75	-820.83	7347.00	7400.00	8360.29	74.93	90.00	1117.14	409.09	2.73	PASS
15413.00†	7400.00	7792.74	-822.39	7347.00	7400.00	8360.29	74.93	90.00	1061.74	420.33	2.53	PASS
15513.00†	7400.00	7892.73	-823.95	7347.00	7400.00	8360.29	74.93	90.00	1013.21	431.29	2.35	PASS
15613.00†	7400.00	7992.71	-825.51	7347.00	7400.00	8360.29	74.93	90.00	972.58	441.43	2.20	PASS
15713.00†	7400.00	8092.70	-827.08	7347.00	7400.00	8360.29	74.93	90.00	940.86	450.11	2.09	PASS
15813.00†	7400.00	8192.69	-828.64	7347.00	7400.00	8360.29	74.93	90.00	918.98	456.67	2.01	PASS
15913.00†	7400.00	8292.68	-830.20	7347.00	7400.00	8360.29	74.93	90.00	907.65	460.53	1.97	PASS
15967.96†	7400.00	8347.63	-831.06	7348.61	7401.61	8360.29	74.93	90.10	906.07	461.41	1.96	PASS
15974.56†	7400.00	8354.23	-831.16	7347.00	7400.00	8360.29	74.93	90.00	906.11	461.40	1.96	PASS
16013.00†	7400.00	8392.67	-831.76	7347.00	7400.00	8360.29	74.93	90.00	907.26	461.34	1.97	PASS
16113.00†	7400.00	8492.65	-833.32	7347.00	7400.00	8360.29	74.93	90.00	917.84	459.08	2.00	PASS
16213.00†	7400.00	8592.64	-834.88	7347.00	7400.00	8360.29	74.93	90.00	939.01	454.01	2.07	PASS
16313.00†	7400.00	8692.63	-836.45	7347.00	7400.00	8360.29	74.93	90.00	970.07	446.68	2.17	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



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH PWB
Facility	SEC.20-T01S-R65W		

## 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	5096.53	22.27	5096.53	22.27
8.625in Casing Surface	0.00	1472.00	1472.00	40.00	1512.00	5096.53	22.27	5096.53	22.27
7.875in Open Hole	1472.00	8173.00	6701.00	1512.00	8213.00	5096.53	22.27	5096.53	22.27
4.5in Casing Production	0.00	8173.00	8173.00	40.00	8213.00	5096.53	22.27	5096.53	22.27

## 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 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	0.11	60.01	89.89	60.01	1.40	98.67	PASS		
113.00†	113.00	0.00	0.00	113.00	113.00	0.11	60.01	89.89	60.01	1.73	63.99	PASS		
213.00†	213.00	0.00	0.00	213.00	213.00	0.11	60.01	89.89	60.01	2.30	39.54	PASS		
313.00†	313.00	0.00	0.00	313.00	313.00	0.11	60.01	89.89	60.01	2.90	28.16	PASS		
413.00†	413.00	0.00	0.00	413.00	413.00	0.11	60.01	89.89	60.01	3.52	21.79	PASS		
513.00†	513.00	0.00	0.00	513.00	513.00	0.11	60.01	89.89	60.01	4.14	17.74	PASS		
613.00†	613.00	0.00	0.00	613.00	613.00	0.11	60.01	89.89	60.01	4.76	14.95	PASS		
713.00†	713.00	0.00	0.00	713.00	713.00	0.11	60.01	89.89	60.01	5.39	12.91	PASS		
813.00†	813.00	0.00	0.00	813.00	813.00	0.11	60.01	89.89	60.01	6.01	11.36	PASS		
913.00†	913.00	0.00	0.00	913.00	913.00	0.11	60.01	89.89	60.01	6.64	10.14	PASS		
1013.00†	1013.00	0.00	0.00	1013.00	1013.00	0.11	60.01	89.89	60.01	7.26	9.16	PASS		
1113.00†	1113.00	0.00	0.00	1113.00	1113.00	0.11	60.01	89.89	60.01	7.89	8.35	PASS		
1213.00†	1213.00	0.00	0.00	1212.81	1212.81	0.09	60.03	89.91	60.03	8.52	7.68	PASS		
1313.00†	1313.00	0.00	0.00	1311.31	1311.28	-1.43	61.52	91.33	61.56	9.19	7.25	PASS		
1413.00†	1413.00	0.00	0.00	1409.55	1409.36	-5.35	65.37	94.68	65.69	10.00	7.06	PASS		
1513.00†	1513.00	0.00	0.00	1507.76	1507.18	-11.60	71.51	99.22	72.68	10.76	7.22	PASS		
1600.00	1600.00	0.00	0.00	1594.33	1593.32	-17.73	77.53	102.88	79.82	11.33	7.51	PASS		
1613.00†	1613.00	-0.02	-0.02	1607.26	1606.19	-18.65	78.43	-133.45	80.93	11.41	7.55	PASS		
1713.00†	1712.97	-1.22	-1.87	1706.70	1705.13	-25.69	85.35	-130.98	90.92	12.08	7.99	PASS		
1813.00†	1812.80	-4.33	-6.62	1805.93	1803.87	-32.72	92.25	-130.45	103.26	12.73	8.53	PASS		
1913.00†	1912.38	-9.35	-14.30	1904.83	1902.29	-39.72	99.13	-131.26	117.86	13.47	9.18	PASS		
2013.00†	2011.57	-16.26	-24.87	2003.29	2000.26	-46.69	105.98	-132.93	134.82	14.24	9.91	PASS		
2021.71	2020.19	-16.95	-25.93	2011.84	2008.77	-47.30	106.57	-133.10	136.41	14.30	9.98	PASS		
2113.00†	2110.49	-24.28	-37.14	2101.44	2097.92	-53.64	112.80	-134.94	153.31	14.92	10.74	PASS		
2213.00†	2209.41	-32.31	-49.42	2199.58	2195.58	-60.59	119.63	-136.55	171.95	15.61	11.49	PASS		
2313.00†	2308.33	-40.33	-61.69	2297.72	2293.24	-67.54	126.46	-137.84	190.70	16.31	12.18	PASS		
2413.00†	2407.25	-48.36	-73.97	2395.87	2390.90	-74.49	133.28	-138.90	209.53	17.02	12.80	PASS		
2513.00†	2506.17	-56.39	-86.25	2494.01	2488.56	-81.44	140.11	-139.78	228.41	17.74	13.37	PASS		
2613.00†	2605.08	-64.41	-98.52	2592.16	2586.22	-88.39	146.93	-140.53	247.34	18.46	13.89	PASS		
2713.00†	2704.00	-72.44	-110.80	2690.30	2683.88	-95.33	153.76	-141.17	266.31	19.19	14.37	PASS		

C-C Clearance Distance Cutoff: 1000.00 ft





# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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†	2802.92	-80.47	-123.08	2788.45	2781.54	-102.28	160.59	-141.73	285.30	19.92	14.81	PASS		
2913.00†	2901.84	-88.49	-135.35	2886.59	2879.20	-109.23	167.41	-142.22	304.32	20.66	15.22	PASS		
3013.00†	3000.76	-96.52	-147.63	2984.74	2976.86	-116.18	174.24	-142.65	323.35	21.41	15.59	PASS		
3113.00†	3099.68	-104.54	-159.91	3082.88	3074.52	-123.13	181.06	-143.03	342.40	22.15	15.93	PASS		
3213.00†	3198.59	-112.57	-172.18	3181.03	3172.18	-130.08	187.89	-143.37	361.46	22.91	16.25	PASS		
3313.00†	3297.51	-120.60	-184.46	3279.17	3269.84	-137.03	194.71	-143.68	380.54	23.66	16.55	PASS		
3413.00†	3396.43	-128.62	-196.74	3377.31	3367.50	-143.98	201.54	-143.96	399.62	24.42	16.83	PASS		
3513.00†	3495.35	-136.65	-209.01	3475.46	3465.16	-150.93	208.37	-144.21	418.71	25.18	17.08	PASS		
3613.00†	3594.27	-144.68	-221.29	3573.60	3562.82	-157.88	215.19	-144.44	437.81	25.94	17.32	PASS		
3713.00†	3693.19	-152.70	-233.56	3671.75	3660.48	-164.83	222.02	-144.66	456.92	26.71	17.55	PASS		
3813.00†	3792.11	-160.73	-245.84	3769.89	3758.14	-171.78	228.84	-144.85	476.03	27.47	17.76	PASS		
3913.00†	3891.02	-168.76	-258.12	3868.04	3855.80	-178.73	235.67	-145.03	495.14	28.24	17.96	PASS		
4013.00†	3989.94	-176.78	-270.39	3966.18	3953.46	-185.67	242.50	-145.20	514.26	29.01	18.14	PASS		
4113.00†	4088.86	-184.81	-282.67	4064.33	4051.12	-192.62	249.32	-145.35	533.39	29.78	18.32	PASS		
4213.00†	4187.78	-192.83	-294.95	4162.47	4148.78	-199.57	256.15	-145.50	552.51	30.56	18.49	PASS		
4313.00†	4286.70	-200.86	-307.22	4260.62	4246.44	-206.52	262.97	-145.63	571.65	31.33	18.64	PASS		
4413.00†	4385.62	-208.89	-319.50	4358.76	4344.10	-213.47	269.80	-145.75	590.78	32.11	18.79	PASS		
4513.00†	4484.53	-216.91	-331.78	4456.90	4441.76	-220.42	276.63	-145.87	609.91	32.89	18.93	PASS		
4613.00†	4583.45	-224.94	-344.05	4555.05	4539.42	-227.37	283.45	-145.98	629.05	33.67	19.07	PASS		
4713.00†	4682.37	-232.97	-356.33	4653.19	4637.08	-234.32	290.28	-146.09	648.19	34.45	19.19	PASS		
4813.00†	4781.29	-240.99	-368.61	4751.34	4734.74	-241.27	297.10	-146.18	667.34	35.23	19.31	PASS		
4913.00†	4880.21	-249.02	-380.88	4849.48	4832.40	-248.22	303.93	-146.28	686.48	36.01	19.43	PASS		
5013.00†	4979.13	-257.04	-393.16	4947.63	4930.06	-255.17	310.75	-146.36	705.63	36.79	19.54	PASS		
5113.00†	5078.05	-265.07	-405.44	5045.77	5027.72	-262.12	317.58	-146.45	724.77	37.57	19.64	PASS		
5213.00†	5176.96	-273.10	-417.71	5143.92	5125.38	-269.07	324.41	-146.53	743.92	38.36	19.74	PASS		
5313.00†	5275.88	-281.12	-429.99	5242.06	5223.04	-276.02	331.23	-146.60	763.07	39.14	19.84	PASS		
5413.00†	5374.80	-289.15	-442.27	5340.21	5320.70	-282.96	338.06	-146.67	782.22	39.93	19.93	PASS		
5513.00†	5473.72	-297.18	-454.54	5438.35	5418.36	-289.91	344.88	-146.74	801.37	40.71	20.01	PASS		
5613.00†	5572.64	-305.20	-466.82	5536.49	5516.02	-296.86	351.71	-146.80	820.53	41.50	20.10	PASS		
5713.00†	5671.56	-313.23	-479.10	5634.64	5613.68	-303.81	358.54	-146.87	839.68	42.29	20.18	PASS		

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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†	5770.47	-321.25	-491.37	5732.78	5711.34	-310.76	365.36	-146.92	858.84	43.08	20.25	PASS
5913.00†	5869.39	-329.28	-503.65	5830.93	5809.00	-317.71	372.19	-146.98	877.99	43.87	20.33	PASS
6013.00†	5968.31	-337.31	-515.93	5929.07	5906.66	-324.66	379.01	-147.03	897.15	44.65	20.40	PASS
6113.00†	6067.23	-345.33	-528.20	6027.22	6004.32	-331.61	385.84	-147.09	916.31	45.44	20.47	PASS
6213.00†	6166.15	-353.36	-540.48	6125.36	6101.98	-338.56	392.67	-147.14	935.47	46.23	20.53	PASS
6313.00†	6265.07	-361.39	-552.76	6223.51	6199.64	-345.51	399.49	-147.18	954.62	47.03	20.60	PASS
6413.00†	6363.99	-369.41	-565.03	6321.65	6297.30	-352.46	406.32	-147.23	973.78	47.82	20.66	PASS
6513.00†	6462.90	-377.44	-577.31	6419.80	6394.96	-359.41	413.14	-147.27	992.94	48.61	20.71	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	0.07	36.58	-9.81	46.28
8.5in Open Hole	1800.00	17786.94	15986.94	1797.97	7628.00	-9.81	46.28	3038.91	127.74

## 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



**Clearance Report**  
**WAKEMAN 20-17-2NBH PWP (REV-A.0)**  
**Closest Approach**  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH PWB
Facility	SEC.20-T01S-R65W		

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 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	3024.93	-26.90	-0.51	3025.05	25.40	122.93	PASS
113.00†	113.00	0.00	0.00	82.00	113.00	3024.93	-26.90	-0.51	3025.05	51.88	59.16	PASS
213.00†	213.00	0.00	0.00	182.00	213.00	3024.93	-26.90	-0.51	3025.05	54.23	56.56	PASS
313.00†	313.00	0.00	0.00	282.00	313.00	3024.93	-26.90	-0.51	3025.05	56.58	54.18	PASS
413.00†	413.00	0.00	0.00	382.00	413.00	3024.93	-26.90	-0.51	3025.05	58.93	51.99	PASS
513.00†	513.00	0.00	0.00	482.00	513.00	3024.93	-26.90	-0.51	3025.05	61.29	49.96	PASS
613.00†	613.00	0.00	0.00	582.00	613.00	3024.93	-26.90	-0.51	3025.05	63.65	48.09	PASS
713.00†	713.00	0.00	0.00	682.00	713.00	3024.93	-26.90	-0.51	3025.05	66.02	46.34	PASS
813.00†	813.00	0.00	0.00	782.00	813.00	3024.93	-26.90	-0.51	3025.05	68.39	44.72	PASS
913.00†	913.00	0.00	0.00	882.00	913.00	3024.93	-26.90	-0.51	3025.05	70.76	43.20	PASS
1013.00†	1013.00	0.00	0.00	982.00	1013.00	3024.93	-26.90	-0.51	3025.05	73.14	41.78	PASS
1113.00†	1113.00	0.00	0.00	1082.00	1113.00	3024.93	-26.90	-0.51	3025.05	75.52	40.45	PASS
1213.00†	1213.00	0.00	0.00	1182.00	1213.00	3024.93	-26.90	-0.51	3025.05	77.91	39.20	PASS
1313.00†	1313.00	0.00	0.00	1282.00	1313.00	3024.93	-26.90	-0.51	3025.05	80.30	38.02	PASS
1413.00†	1413.00	0.00	0.00	1382.00	1413.00	3024.93	-26.90	-0.51	3025.05	82.69	36.91	PASS
1513.00†	1513.00	0.00	0.00	1482.00	1513.00	3024.93	-26.90	-0.51	3025.05	85.08	35.86	PASS
1600.00	1600.00	0.00	0.00	1569.00	1600.00	3024.93	-26.90	-0.51	3025.05	87.00	35.00	PASS
1613.00†	1613.00	-0.02	-0.02	1582.00	1613.00	3024.93	-26.90	122.67	3025.06	87.31	34.87	PASS
1713.00†	1712.97	-1.22	-1.87	1681.97	1712.97	3024.93	-26.90	122.68	3026.25	89.72	33.95	PASS
1813.00†	1812.80	-4.33	-6.62	1781.80	1812.80	3024.93	-26.90	122.72	3029.33	92.10	33.08	PASS
1913.00†	1912.38	-9.35	-14.30	1881.38	1912.38	3024.93	-26.90	122.78	3034.30	94.52	32.28	PASS
2013.00†	2011.57	-16.26	-24.87	1980.57	2011.57	3024.93	-26.90	122.87	3041.19	96.94	31.54	PASS
2021.71	2020.19	-16.95	-25.93	1989.19	2020.19	3024.93	-26.90	122.87	3041.88	97.15	31.48	PASS
2113.00†	2110.49	-24.28	-37.14	2079.49	2110.49	3024.93	-26.90	123.08	3049.23	99.35	30.85	PASS
2213.00†	2209.41	-32.31	-49.42	2178.41	2209.41	3024.93	-26.90	123.31	3057.32	101.77	30.20	PASS
2313.00†	2308.33	-40.33	-61.69	2277.33	2308.33	3024.93	-26.90	123.54	3065.46	104.20	29.57	PASS
2413.00†	2407.25	-48.36	-73.97	2376.25	2407.25	3024.93	-26.90	123.77	3073.65	106.63	28.97	PASS
2513.00†	2506.17	-56.39	-86.25	2475.17	2506.17	3024.93	-26.90	123.99	3081.88	109.08	28.39	PASS
2613.00†	2605.08	-64.41	-98.52	2574.08	2605.08	3024.93	-26.90	124.21	3090.17	111.53	27.84	PASS
2713.00†	2704.00	-72.44	-110.80	2673.00	2704.00	3024.93	-26.90	124.44	3098.50	113.99	27.31	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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
2813.00†	2802.92	-80.47	-123.08	2771.92	2802.92	3024.93	-26.90	124.66	3106.88	116.46	26.80	PASS
2913.00†	2901.84	-88.49	-135.35	2870.84	2901.84	3024.93	-26.90	124.88	3115.31	118.94	26.31	PASS
3013.00†	3000.76	-96.52	-147.63	2969.76	3000.76	3024.93	-26.90	125.10	3123.78	121.42	25.84	PASS
3113.00†	3099.68	-104.54	-159.91	3068.68	3099.68	3024.93	-26.90	125.32	3132.30	123.92	25.38	PASS
3213.00†	3198.59	-112.57	-172.18	3167.59	3198.59	3024.93	-26.90	125.53	3140.86	126.42	24.95	PASS
3313.00†	3297.51	-120.60	-184.46	3266.51	3297.51	3024.93	-26.90	125.75	3149.47	128.92	24.53	PASS
3413.00†	3396.43	-128.62	-196.74	3365.43	3396.43	3024.93	-26.90	125.96	3158.12	131.44	24.12	PASS
3513.00†	3495.35	-136.65	-209.01	3464.35	3495.35	3024.93	-26.90	126.18	3166.82	133.95	23.73	PASS
3613.00†	3594.27	-144.68	-221.29	3563.27	3594.27	3024.93	-26.90	126.39	3175.56	136.48	23.36	PASS
3713.00†	3693.19	-152.70	-233.56	3662.19	3693.19	3024.93	-26.90	126.60	3184.34	139.01	22.99	PASS
3813.00†	3792.11	-160.73	-245.84	3761.11	3792.11	3024.93	-26.90	126.81	3193.17	141.55	22.64	PASS
3913.00†	3891.02	-168.76	-258.12	3860.02	3891.02	3024.93	-26.90	127.02	3202.04	144.09	22.30	PASS
4013.00†	3989.94	-176.78	-270.39	3958.94	3989.94	3024.93	-26.90	127.23	3210.95	146.64	21.97	PASS
4113.00†	4088.86	-184.81	-282.67	4057.86	4088.86	3024.93	-26.90	127.43	3219.91	149.20	21.66	PASS
4213.00†	4187.78	-192.83	-294.95	4156.78	4187.78	3024.93	-26.90	127.64	3228.91	151.76	21.35	PASS
4313.00†	4286.70	-200.86	-307.22	4255.70	4286.70	3024.93	-26.90	127.84	3237.94	154.32	21.05	PASS
4413.00†	4385.62	-208.89	-319.50	4354.62	4385.62	3024.93	-26.90	128.04	3247.02	156.89	20.76	PASS
4513.00†	4484.53	-216.91	-331.78	4453.53	4484.53	3024.93	-26.90	128.25	3256.14	159.46	20.49	PASS
4613.00†	4583.45	-224.94	-344.05	4552.45	4583.45	3024.93	-26.90	128.45	3265.30	162.04	20.22	PASS
4713.00†	4682.37	-232.97	-356.33	4651.37	4682.37	3024.93	-26.90	128.65	3274.51	164.62	19.95	PASS
4813.00†	4781.29	-240.99	-368.61	4750.29	4781.29	3024.93	-26.90	128.85	3283.75	167.21	19.70	PASS
4913.00†	4880.21	-249.02	-380.88	4849.21	4880.21	3024.93	-26.90	129.04	3293.03	169.80	19.45	PASS
5013.00†	4979.13	-257.04	-393.16	4948.13	4979.13	3024.93	-26.90	129.24	3302.34	172.39	19.21	PASS
5113.00†	5078.05	-265.07	-405.44	5047.05	5078.05	3024.93	-26.90	129.43	3311.70	174.99	18.98	PASS
5213.00†	5176.96	-273.10	-417.71	5145.96	5176.96	3024.93	-26.90	129.63	3321.10	177.59	18.75	PASS
5313.00†	5275.88	-281.12	-429.99	5244.88	5275.88	3024.93	-26.90	129.82	3330.53	180.20	18.54	PASS
5413.00†	5374.80	-289.15	-442.27	5343.80	5374.80	3024.93	-26.90	130.01	3340.00	182.80	18.32	PASS
5513.00†	5473.72	-297.18	-454.54	5442.72	5473.72	3024.93	-26.90	130.20	3349.51	185.42	18.11	PASS
5613.00†	5572.64	-305.20	-466.82	5541.64	5572.64	3024.93	-26.90	130.39	3359.06	188.03	17.91	PASS
5713.00†	5671.56	-313.23	-479.10	5640.56	5671.56	3024.93	-26.90	130.58	3368.64	190.65	17.72	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	
5813.00†	5770.47	-321.25	-491.37	5739.47	5770.47	3024.93	-26.90	130.77	3378.26	193.26	17.53	PASS	
5913.00†	5869.39	-329.28	-503.65	5838.39	5869.39	3024.93	-26.90	130.96	3387.92	195.89	17.34	PASS	
6013.00†	5968.31	-337.31	-515.93	5937.31	5968.31	3024.93	-26.90	131.14	3397.61	198.51	17.16	PASS	
6113.00†	6067.23	-345.33	-528.20	6036.23	6067.23	3024.93	-26.90	131.33	3407.34	201.14	16.98	PASS	
6213.00†	6166.15	-353.36	-540.48	6135.15	6166.15	3024.93	-26.90	131.51	3417.10	203.77	16.81	PASS	
6313.00†	6265.07	-361.39	-552.76	6234.07	6265.07	3024.93	-26.90	131.69	3426.90	206.40	16.64	PASS	
6413.00†	6363.99	-369.41	-565.03	6332.99	6363.99	3024.93	-26.90	131.88	3436.73	209.03	16.48	PASS	
6513.00†	6462.90	-377.44	-577.31	6431.90	6462.90	3024.93	-26.90	132.06	3446.60	211.67	16.32	PASS	
6613.00†	6561.82	-385.47	-589.59	6530.82	6561.82	3024.93	-26.90	132.24	3456.50	214.30	16.17	PASS	
6713.00†	6660.74	-393.49	-601.86	6629.74	6660.74	3024.93	-26.90	132.41	3466.43	216.94	16.02	PASS	
6813.00†	6759.66	-401.52	-614.14	6728.66	6759.66	3024.93	-26.90	132.59	3476.40	219.58	15.87	PASS	
6840.60	6786.96	-403.73	-617.53	6755.96	6786.96	3024.93	-26.90	132.64	3479.16	220.31	15.83	PASS	
6913.00†	6858.74	-404.98	-626.51	6827.74	6858.74	3024.93	-26.90	79.80	3481.92	222.29	15.70	PASS	
7013.00†	6956.94	-391.71	-639.03	6925.94	6956.94	3024.93	-26.90	40.78	3471.03	225.56	15.42	PASS	
7113.00†	7051.32	-361.45	-651.33	7020.32	7051.32	3024.93	-26.90	30.02	3443.47	229.34	15.05	PASS	
7213.00†	7139.02	-315.13	-663.05	7108.02	7139.02	3024.93	-26.90	26.54	3400.10	232.59	14.65	PASS	
7313.00†	7217.38	-254.15	-673.83	7186.38	7217.38	3024.93	-26.90	26.19	3342.28	235.42	14.23	PASS	
7413.00†	7284.01	-180.36	-683.33	7253.01	7284.01	3024.93	-26.90	28.23	3271.82	237.80	13.79	PASS	
7513.00†	7336.89	-96.01	-691.28	7305.89	7336.89	3024.93	-26.90	33.23	3190.87	239.71	13.34	PASS	
7613.00†	7374.42	-3.66	-697.43	7343.42	7374.42	3024.93	-26.90	43.48	3101.93	241.14	12.89	PASS	
7713.00†	7395.45	93.88	-701.59	7364.45	7395.45	3024.93	-26.90	64.58	3007.70	242.10	12.45	PASS	
7785.53	7400.00	166.19	-703.29	7369.00	7400.00	3024.93	-26.90	90.00	2937.66	242.50	12.14	PASS	
7813.00†	7400.00	193.67	-703.72	7369.00	7400.00	3024.93	-26.90	90.00	2911.03	242.61	12.02	PASS	
7913.00†	7400.00	293.65	-705.28	7369.00	7400.00	3024.93	-26.90	90.00	2814.26	243.04	11.60	PASS	
8013.00†	7400.00	393.64	-706.84	7369.00	7400.00	3024.93	-26.90	90.00	2717.72	243.50	11.18	PASS	
8113.00†	7400.00	493.63	-708.40	7369.00	7400.00	3024.93	-26.90	90.00	2621.43	244.01	10.76	PASS	
8213.00†	7400.00	593.62	-709.96	7369.00	7400.00	3024.93	-26.90	90.00	2525.44	244.57	10.35	PASS	
8313.00†	7400.00	693.60	-711.52	7369.00	7400.00	3024.93	-26.90	90.00	2429.77	245.19	9.93	PASS	
8413.00†	7400.00	793.59	-713.09	7369.00	7400.00	3024.93	-26.90	90.00	2334.46	245.87	9.51	PASS	
8513.00†	7400.00	893.58	-714.65	7369.00	7400.00	3024.93	-26.90	90.00	2239.56	246.63	9.10	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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
8613.00†	7400.00	993.57	-716.21	7369.00	7400.00	3024.93	-26.90	90.00	2145.13	247.47	8.68	PASS
8713.00†	7400.00	1093.56	-717.77	7369.00	7400.00	3024.93	-26.90	90.00	2051.22	248.41	8.27	PASS
8813.00†	7400.00	1193.54	-719.33	7369.00	7400.00	3024.93	-26.90	90.00	1957.91	249.46	7.86	PASS
8913.00†	7400.00	1293.53	-720.89	7369.00	7400.00	3024.93	-26.90	90.00	1865.30	250.63	7.46	PASS
9013.00†	7400.00	1393.52	-722.45	7369.00	7400.00	3024.93	-26.90	90.00	1773.50	251.94	7.05	PASS
9113.00†	7400.00	1493.51	-724.02	7369.00	7400.00	3024.93	-26.90	90.00	1682.62	253.42	6.65	PASS
9213.00†	7400.00	1593.50	-725.58	7369.00	7400.00	3024.93	-26.90	90.00	1592.84	255.09	6.26	PASS
9313.00†	7400.00	1693.48	-727.14	7369.00	7400.00	3024.93	-26.90	90.00	1504.35	256.97	5.86	PASS
9413.00†	7400.00	1793.47	-728.70	7369.00	7400.00	3024.93	-26.90	90.00	1417.39	259.10	5.48	PASS
9513.00†	7400.00	1893.46	-730.26	7369.00	7400.00	3024.93	-26.90	90.00	1332.27	261.51	5.10	PASS
9613.00†	7400.00	1993.45	-731.82	7369.00	7400.00	3024.93	-26.90	90.00	1249.35	264.23	4.74	PASS
9713.00†	7400.00	2093.43	-733.39	7369.00	7400.00	3024.93	-26.90	90.00	1169.10	267.29	4.38	PASS
9813.00†	7400.00	2193.42	-734.95	7369.00	7400.00	3024.93	-26.90	90.00	1092.12	270.72	4.04	PASS
9913.00†	7400.00	2293.41	-736.51	7369.00	7400.00	3024.93	-26.90	90.00	1019.15	274.51	3.72	PASS
10013.00†	7400.00	2393.40	-738.07	7369.00	7400.00	3024.93	-26.90	90.00	951.10	278.64	3.42	PASS
10113.00†	7400.00	2493.39	-739.63	7369.00	7400.00	3024.93	-26.90	90.00	889.11	283.03	3.15	PASS
10213.00†	7400.00	2593.37	-741.19	7369.00	7400.00	3024.93	-26.90	90.00	834.54	287.48	2.91	PASS
10313.00†	7400.00	2693.36	-742.75	7369.00	7400.00	3024.93	-26.90	90.00	788.91	291.71	2.71	PASS
10413.00†	7400.00	2793.35	-744.32	7369.00	7400.00	3024.93	-26.90	90.00	753.87	295.35	2.56	PASS
10513.00†	7400.00	2893.34	-745.88	7369.00	7400.00	3024.93	-26.90	90.00	730.92	297.93	2.46	PASS
10613.00†	7400.00	2993.32	-747.44	7369.00	7400.00	3024.93	-26.90	90.00	721.23	299.06	2.41	PASS
10632.99†	7400.00	3013.32	-747.75	7369.82	7400.82	3024.93	-26.90	90.07	720.94	299.12	2.41	PASS
10633.27†	7400.00	3013.60	-747.76	7369.00	7400.00	3024.93	-26.90	90.00	720.94	299.10	2.41	PASS
10713.00†	7400.00	3093.31	-749.00	7369.00	7400.00	3024.93	-26.90	90.00	725.33	298.57	2.43	PASS
10813.00†	7400.00	3193.30	-750.56	7369.00	7400.00	3024.93	-26.90	90.00	742.99	296.53	2.51	PASS
10913.00†	7400.00	3293.29	-752.12	7369.00	7400.00	3024.93	-26.90	90.00	773.28	293.27	2.64	PASS
11013.00†	7400.00	3393.28	-753.69	7369.00	7400.00	3024.93	-26.90	90.00	814.80	289.24	2.82	PASS
11113.00†	7400.00	3493.26	-755.25	7369.00	7400.00	3024.93	-26.90	90.00	865.93	284.85	3.04	PASS
11213.00†	7400.00	3593.25	-756.81	7369.00	7400.00	3024.93	-26.90	90.00	925.07	280.45	3.30	PASS
11313.00†	7400.00	3693.24	-758.37	7369.00	7400.00	3024.93	-26.90	90.00	990.80	276.24	3.59	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



**Clearance Report**  
**WAKEMAN 20-17-2NBH PWP (REV-A.0)**  
**Closest Approach**  
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**REFERENCE WELLPATH IDENTIFICATION**

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH PWB
Facility	SEC.20-T01S-R65W		

**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	8.200ft	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	1843.88	-24.86	1843.88	-24.86
8.625in Casing Surface	0.00	1561.00	1561.00	18.00	1579.00	1843.88	-24.86	1843.88	-24.86
7.875in Open Hole	1561.00	8292.00	6731.00	1579.00	8310.00	1843.88	-24.86	1843.88	-24.86
4.5in Casing Production	0.00	8292.00	8292.00	18.00	8310.00	1843.88	-24.86	1843.88	-24.86

**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 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	-0.11	-74.95	-90.08	74.95	1.40	123.58	PASS	
113.00†	113.00	0.00	0.00	116.00	113.00	-0.11	-74.95	-90.08	74.95	1.73	79.82	PASS	
213.00†	213.00	0.00	0.00	216.00	213.00	-0.11	-74.95	-90.08	74.95	2.31	49.28	PASS	
313.00†	313.00	0.00	0.00	316.00	313.00	-0.11	-74.95	-90.08	74.95	2.91	35.13	PASS	
413.00†	413.00	0.00	0.00	416.00	413.00	-0.11	-74.95	-90.08	74.95	3.53	27.20	PASS	
513.00†	513.00	0.00	0.00	516.00	513.00	-0.11	-74.95	-90.08	74.95	4.15	22.15	PASS	
613.00†	613.00	0.00	0.00	616.00	613.00	-0.11	-74.95	-90.08	74.95	4.77	18.68	PASS	
713.00†	713.00	0.00	0.00	716.00	713.00	-0.11	-74.95	-90.08	74.95	5.40	16.14	PASS	
813.00†	813.00	0.00	0.00	816.00	813.00	-0.11	-74.95	-90.08	74.95	6.02	14.20	PASS	
913.00†	913.00	0.00	0.00	916.00	913.00	-0.11	-74.95	-90.08	74.95	6.65	12.68	PASS	
1013.00†	1013.00	0.00	0.00	1015.60	1012.60	-0.11	-74.99	-90.09	74.99	7.27	11.47	PASS	
1113.00†	1113.00	0.00	0.00	1113.04	1110.01	-0.55	-77.14	-90.41	77.20	7.99	10.62	PASS	
1213.00†	1213.00	0.00	0.00	1210.22	1207.03	-1.64	-82.51	-91.14	82.74	8.95	10.05	PASS	
1313.00†	1313.00	0.00	0.00	1306.92	1303.33	-3.38	-91.05	-92.13	91.62	9.85	10.03	PASS	
1413.00†	1413.00	0.00	0.00	1402.92	1398.59	-5.74	-102.67	-93.20	103.84	10.70	10.41	PASS	
1513.00†	1513.00	0.00	0.00	1498.02	1492.52	-8.71	-117.26	-94.25	119.36	11.52	11.06	PASS	
1600.00	1600.00	0.00	0.00	1579.87	1572.92	-11.77	-132.26	-95.08	135.52	12.24	11.78	PASS	
1613.00†	1613.00	-0.02	-0.02	1592.03	1584.82	-12.26	-134.68	-96.08	138.12	12.32	11.92	PASS	
1713.00†	1712.97	-1.22	-1.87	1685.19	1675.68	-16.36	-154.86	-97.08	158.21	13.11	12.79	PASS	
1813.00†	1812.80	-4.33	-6.62	1777.72	1765.20	-21.02	-177.76	-98.08	178.42	13.98	13.44	PASS	
1913.00†	1912.38	-9.35	-14.30	1869.61	1853.31	-26.22	-203.30	-99.08	198.73	14.81	14.04	PASS	
2013.00†	2011.57	-16.26	-24.87	1960.86	1939.95	-31.93	-231.38	-100.08	219.13	15.65	14.61	PASS	
2021.71	2020.19	-16.95	-25.93	1968.78	1947.42	-32.45	-233.94	-101.08	220.92	15.71	14.68	PASS	
2113.00†	2110.49	-24.28	-37.14	2052.60	2026.10	-38.22	-262.27	-102.08	240.84	16.33	15.37	PASS	
2213.00†	2209.41	-32.31	-49.42	2149.95	2117.16	-45.08	-295.99	-103.08	263.57	16.96	16.17	PASS	
2313.00†	2308.33	-40.33	-61.69	2247.30	2208.23	-51.94	-329.70	-104.08	286.33	17.63	16.87	PASS	
2413.00†	2407.25	-48.36	-73.97	2344.66	2299.30	-58.80	-363.42	-105.08	309.10	18.33	17.50	PASS	
2513.00†	2506.17	-56.39	-86.25	2442.01	2390.37	-65.66	-397.13	-106.08	331.88	19.05	18.05	PASS	
2613.00†	2605.08	-64.41	-98.52	2539.36	2481.44	-72.52	-430.85	-107.08	354.67	19.80	18.54	PASS	
2713.00†	2704.00	-72.44	-110.80	2636.71	2572.51	-79.37	-464.56	-108.08	377.47	20.56	18.98	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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†	2802.92	-80.47	-123.08	2734.06	2663.58	-86.23	-498.28	30.96	400.28	21.34	19.36	PASS	
2913.00†	2901.84	-88.49	-135.35	2831.42	2754.65	-93.09	-531.99	31.17	423.09	22.14	19.71	PASS	
3013.00†	3000.76	-96.52	-147.63	2928.77	2845.72	-99.95	-565.71	31.36	445.91	22.95	20.01	PASS	
3113.00†	3099.68	-104.54	-159.91	3026.12	2936.79	-106.81	-599.42	31.52	468.73	23.78	20.29	PASS	
3213.00†	3198.59	-112.57	-172.18	3123.47	3027.86	-113.67	-633.14	31.68	491.56	24.61	20.54	PASS	
3313.00†	3297.51	-120.60	-184.46	3220.83	3118.93	-120.53	-666.85	31.82	514.39	25.45	20.76	PASS	
3413.00†	3396.43	-128.62	-196.74	3318.18	3210.00	-127.39	-700.57	31.95	537.22	26.31	20.96	PASS	
3513.00†	3495.35	-136.65	-209.01	3415.53	3301.07	-134.25	-734.28	32.06	560.05	27.17	21.14	PASS	
3613.00†	3594.27	-144.68	-221.29	3512.88	3392.14	-141.11	-768.00	32.17	582.89	28.04	21.30	PASS	
3713.00†	3693.19	-152.70	-233.56	3610.23	3483.21	-147.97	-801.71	32.27	605.73	28.92	21.45	PASS	
3813.00†	3792.11	-160.73	-245.84	3707.59	3574.28	-154.83	-835.43	32.36	628.56	29.80	21.58	PASS	
3913.00†	3891.02	-168.76	-258.12	3804.94	3665.35	-161.69	-869.14	32.45	651.40	30.69	21.70	PASS	
4013.00†	3989.94	-176.78	-270.39	3902.29	3756.42	-168.55	-902.86	32.53	674.25	31.58	21.82	PASS	
4113.00†	4088.86	-184.81	-282.67	3999.64	3847.49	-175.41	-936.57	32.60	697.09	32.48	21.92	PASS	
4213.00†	4187.78	-192.83	-294.95	4096.99	3938.56	-182.27	-970.29	32.67	719.93	33.38	22.01	PASS	
4313.00†	4286.70	-200.86	-307.22	4194.35	4029.63	-189.13	-1004.00	32.74	742.78	34.29	22.10	PASS	
4413.00†	4385.62	-208.89	-319.50	4291.70	4120.70	-195.99	-1037.72	32.80	765.62	35.20	22.18	PASS	
4513.00†	4484.53	-216.91	-331.78	4389.05	4211.77	-202.85	-1071.43	32.86	788.47	36.11	22.25	PASS	
4613.00†	4583.45	-224.94	-344.05	4486.40	4302.84	-209.71	-1105.15	32.92	811.32	37.03	22.32	PASS	
4713.00†	4682.37	-232.97	-356.33	4583.75	4393.91	-216.57	-1138.86	32.97	834.17	37.95	22.38	PASS	
4813.00†	4781.29	-240.99	-368.61	4681.11	4484.98	-223.43	-1172.58	33.02	857.02	38.87	22.44	PASS	
4913.00†	4880.21	-249.02	-380.88	4778.46	4576.05	-230.29	-1206.29	33.07	879.86	39.80	22.49	PASS	
5013.00†	4979.13	-257.04	-393.16	4875.81	4667.12	-237.14	-1240.01	33.11	902.71	40.73	22.54	PASS	
5113.00†	5078.05	-265.07	-405.44	4973.16	4758.18	-244.00	-1273.72	33.15	925.56	41.66	22.59	PASS	
5213.00†	5176.96	-273.10	-417.71	5070.52	4849.25	-250.86	-1307.43	33.19	948.42	42.59	22.63	PASS	
5313.00†	5275.88	-281.12	-429.99	5167.87	4940.32	-257.72	-1341.15	33.23	971.27	43.52	22.67	PASS	
5413.00†	5374.80	-289.15	-442.27	5265.22	5031.39	-264.58	-1374.86	33.27	994.12	44.46	22.71	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



**Clearance Report**  
**WAKEMAN 20-17-2NBH PWP (REV-A.0)**  
**Closest Approach**  
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**REFERENCE WELLPATH IDENTIFICATION**

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH PWB
Facility	SEC.20-T01S-R65W		

**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	-0.06	-45.69	-6.81	-78.84
8.5in Open Hole	1800.00	18013.26	16213.26	1789.64	N/A	-6.81	-78.84	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 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	0.22	75.01	89.84	75.01	1.40	123.67	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	0.22	75.01	89.84	75.01	1.73	80.01	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	0.22	75.01	89.84	75.01	2.30	49.41	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	0.22	75.01	89.84	75.01	2.91	35.22	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	0.22	75.01	89.84	75.01	3.52	27.25	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	0.22	75.01	89.84	75.01	4.15	22.20	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	0.22	75.01	89.84	75.01	4.77	18.71	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	0.22	75.01	89.84	75.01	5.39	16.16	PASS	
813.00†	813.00	0.00	0.00	813.00	813.00	0.22	75.01	89.84	75.01	6.02	14.23	PASS	
913.00†	913.00	0.00	0.00	913.00	913.00	0.22	75.01	89.84	75.01	6.64	12.70	PASS	
1013.00†	1013.00	0.00	0.00	1013.00	1013.00	0.22	75.01	89.84	75.01	7.27	11.47	PASS	
1113.00†	1113.00	0.00	0.00	1112.71	1112.71	0.20	75.03	89.85	75.03	7.90	10.46	PASS	
1213.00†	1213.00	0.00	0.00	1210.41	1210.38	-0.80	76.87	90.60	76.92	8.59	9.77	PASS	
1313.00†	1313.00	0.00	0.00	1307.86	1307.67	-3.40	81.62	92.38	81.87	9.48	9.34	PASS	
1413.00†	1413.00	0.00	0.00	1404.82	1404.25	-7.55	89.23	94.84	89.97	10.36	9.33	PASS	
1513.00†	1513.00	0.00	0.00	1501.10	1499.79	-13.22	99.61	97.56	101.35	11.18	9.68	PASS	
1600.00	1600.00	0.00	0.00	1586.06	1583.81	-19.27	110.68	99.88	113.50	11.77	10.27	PASS	
1613.00†	1613.00	-0.02	-0.02	1598.91	1596.51	-20.19	112.37	-136.62	115.38	11.85	10.37	PASS	
1713.00†	1712.97	-1.22	-1.87	1697.59	1694.07	-27.31	125.41	-134.98	131.28	12.50	11.16	PASS	
1813.00†	1812.80	-4.33	-6.62	1795.88	1791.24	-34.40	138.39	-134.59	149.66	13.20	11.97	PASS	
1913.00†	1912.38	-9.35	-14.30	1893.67	1887.92	-41.45	151.30	-135.04	170.44	13.88	12.89	PASS	
2013.00†	2011.57	-16.26	-24.87	1990.84	1983.98	-48.46	164.13	-136.03	193.70	14.64	13.86	PASS	
2021.71	2020.19	-16.95	-25.93	1999.27	1992.31	-49.07	165.24	-136.14	195.85	14.70	13.95	PASS	
2113.00†	2110.49	-24.28	-37.14	2087.59	2079.63	-55.44	176.91	-137.42	218.49	15.31	14.91	PASS	
2213.00†	2209.41	-32.31	-49.42	2184.34	2175.28	-62.41	189.68	-138.55	243.39	15.97	15.91	PASS	
2313.00†	2308.33	-40.33	-61.69	2281.09	2270.92	-69.39	202.46	-139.47	268.36	16.65	16.79	PASS	
2413.00†	2407.25	-48.36	-73.97	2377.84	2366.57	-76.37	215.24	-140.23	293.39	17.34	17.60	PASS	
2513.00†	2506.17	-56.39	-86.25	2474.59	2462.22	-83.35	228.01	-140.87	318.46	18.05	18.33	PASS	
2613.00†	2605.08	-64.41	-98.52	2571.34	2557.87	-90.32	240.79	-141.42	343.56	18.76	18.99	PASS	
2713.00†	2704.00	-72.44	-110.80	2668.09	2653.52	-97.30	253.56	-141.90	368.68	19.49	19.60	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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†	2802.92	-80.47	-123.08	2764.84	2749.17	-104.28	266.34	-142.31	393.83	20.22	20.15	PASS	
2913.00†	2901.84	-88.49	-135.35	2861.59	2844.82	-111.26	279.12	-142.68	418.99	20.95	20.66	PASS	
3013.00†	3000.76	-96.52	-147.63	2958.34	2940.46	-118.23	291.89	-143.00	444.17	21.70	21.13	PASS	
3113.00†	3099.68	-104.54	-159.91	3055.09	3036.11	-125.21	304.67	-143.29	469.36	22.44	21.56	PASS	
3213.00†	3198.59	-112.57	-172.18	3151.84	3131.76	-132.19	317.45	-143.55	494.56	23.20	21.96	PASS	
3313.00†	3297.51	-120.60	-184.46	3248.59	3227.41	-139.16	330.22	-143.78	519.76	23.96	22.33	PASS	
3413.00†	3396.43	-128.62	-196.74	3345.34	3323.06	-146.14	343.00	-144.00	544.98	24.72	22.67	PASS	
3513.00†	3495.35	-136.65	-209.01	3442.09	3418.71	-153.12	355.77	-144.19	570.20	25.48	22.99	PASS	
3613.00†	3594.27	-144.68	-221.29	3538.84	3514.36	-160.10	368.55	-144.37	595.43	26.25	23.28	PASS	
3713.00†	3693.19	-152.70	-233.56	3635.59	3610.00	-167.07	381.33	-144.53	620.66	27.02	23.56	PASS	
3813.00†	3792.11	-160.73	-245.84	3732.34	3705.65	-174.05	394.10	-144.68	645.89	27.80	23.82	PASS	
3913.00†	3891.02	-168.76	-258.12	3829.09	3801.30	-181.03	406.88	-144.82	671.13	28.57	24.06	PASS	
4013.00†	3989.94	-176.78	-270.39	3925.84	3896.95	-188.01	419.66	-144.95	696.38	29.35	24.29	PASS	
4113.00†	4088.86	-184.81	-282.67	4022.59	3992.60	-194.98	432.43	-145.07	721.62	30.14	24.50	PASS	
4213.00†	4187.78	-192.83	-294.95	4119.34	4088.25	-201.96	445.21	-145.18	746.87	30.92	24.70	PASS	
4313.00†	4286.70	-200.86	-307.22	4216.09	4183.90	-208.94	457.98	-145.28	772.13	31.70	24.89	PASS	
4413.00†	4385.62	-208.89	-319.50	4312.84	4279.54	-215.92	470.76	-145.38	797.38	32.49	25.07	PASS	
4513.00†	4484.53	-216.91	-331.78	4409.59	4375.19	-222.89	483.54	-145.47	822.64	33.28	25.23	PASS	
4613.00†	4583.45	-224.94	-344.05	4506.34	4470.84	-229.87	496.31	-145.56	847.89	34.07	25.39	PASS	
4713.00†	4682.37	-232.97	-356.33	4603.09	4566.49	-236.85	509.09	-145.64	873.15	34.86	25.54	PASS	
4813.00†	4781.29	-240.99	-368.61	4699.84	4662.14	-243.83	521.87	-145.72	898.41	35.65	25.69	PASS	
4913.00†	4880.21	-249.02	-380.88	4796.59	4757.79	-250.80	534.64	-145.79	923.68	36.45	25.82	PASS	
5013.00†	4979.13	-257.04	-393.16	4893.34	4853.44	-257.78	547.42	-145.86	948.94	37.24	25.95	PASS	
5113.00†	5078.05	-265.07	-405.44	4990.09	4949.08	-264.76	560.19	-145.92	974.20	38.04	26.08	PASS	
5213.00†	5176.96	-273.10	-417.71	5086.84	5044.73	-271.74	572.97	-145.98	999.47	38.84	26.19	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH PWB
Facility	SEC.20-T01S-R65W		

## 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	0.13	45.72	-10.51	65.21
8.5in Open Hole	1800.00	17654.03	15854.03	1795.31	7458.00	-10.51	65.21	3038.61	252.99

## 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 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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]	Sep Ratio	ACR Status	
13.00	13.00	0.00	0.00	-13.00	73.00	5966.84	-1877.50	-17.47	6255.54	25.40	254.25	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	3632.10	-1161.06	3632.10	-1161.06
8.625in Casing Surface	0.00	218.00	218.00	73.00	291.00	3632.10	-1161.06	3632.10	-1161.06
7.875in Open Hole	218.00	8129.00	7911.00	291.00	8202.00	3632.10	-1161.06	3632.10	-1161.06
4.5in Casing Production	0.00	8129.00	8129.00	73.00	8202.00	3632.10	-1161.06	3632.10	-1161.06

## 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 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	-0.10	-90.01	-90.06	90.01	1.40	148.68	PASS	
113.00†	113.00	0.00	0.00	116.00	113.00	-0.10	-90.01	-90.06	90.01	1.73	96.03	PASS	
213.00†	213.00	0.00	0.00	216.00	213.00	-0.10	-90.01	-90.06	90.01	2.31	59.29	PASS	
313.00†	313.00	0.00	0.00	316.00	313.00	-0.10	-90.01	-90.06	90.01	2.91	42.27	PASS	
413.00†	413.00	0.00	0.00	416.00	413.00	-0.10	-90.01	-90.06	90.01	3.53	32.72	PASS	
513.00†	513.00	0.00	0.00	516.00	513.00	-0.10	-90.01	-90.06	90.01	4.15	26.65	PASS	
613.00†	613.00	0.00	0.00	616.00	613.00	-0.10	-90.01	-90.06	90.01	4.77	22.47	PASS	
713.00†	713.00	0.00	0.00	716.00	713.00	-0.10	-90.01	-90.06	90.01	5.40	19.42	PASS	
813.00†	813.00	0.00	0.00	816.00	813.00	-0.10	-90.01	-90.06	90.01	6.02	17.09	PASS	
913.00†	913.00	0.00	0.00	915.52	912.52	-0.11	-90.05	-90.07	90.05	6.65	15.27	PASS	
1013.00†	1013.00	0.00	0.00	1012.47	1009.44	-0.52	-92.18	-90.32	92.25	7.38	13.91	PASS	
1113.00†	1113.00	0.00	0.00	1109.16	1105.98	-1.54	-97.50	-90.91	97.77	8.35	12.84	PASS	
1213.00†	1213.00	0.00	0.00	1205.38	1201.80	-3.18	-105.98	-91.72	106.61	9.27	12.49	PASS	
1313.00†	1313.00	0.00	0.00	1300.91	1296.60	-5.40	-117.51	-92.63	118.77	10.16	12.61	PASS	
1413.00†	1413.00	0.00	0.00	1395.55	1390.08	-8.19	-131.99	-93.55	134.21	10.95	13.14	PASS	
1513.00†	1513.00	0.00	0.00	1489.11	1481.97	-11.53	-149.28	-94.42	152.90	11.76	13.88	PASS	
1600.00	1600.00	0.00	0.00	1569.50	1560.42	-14.85	-166.47	-95.10	171.76	12.42	14.72	PASS	
1613.00†	1613.00	-0.02	-0.02	1581.43	1572.02	-15.37	-169.21	-97.96	174.75	12.51	14.86	PASS	
1713.00†	1712.97	-1.22	-1.87	1672.79	1660.45	-19.72	-191.74	-97.34	197.87	13.29	15.78	PASS	
1813.00†	1812.80	-4.33	-6.62	1763.47	1747.45	-24.56	-216.82	-97.14	221.04	14.15	16.45	PASS	
1913.00†	1912.38	-9.35	-14.30	1853.45	1832.94	-29.87	-244.37	-97.23	244.26	14.96	17.09	PASS	
2013.00†	2011.57	-16.26	-24.87	1942.74	1916.87	-35.64	-274.30	-97.53	267.50	15.85	17.62	PASS	
2021.71	2020.19	-16.95	-25.93	1950.49	1924.11	-36.17	-277.02	-97.57	269.53	15.91	17.68	PASS	
2113.00†	2110.49	-24.28	-37.14	2033.41	2001.12	-41.99	-307.20	-98.08	291.91	16.47	18.48	PASS	
2213.00†	2209.41	-32.31	-49.42	2130.14	2090.70	-48.90	-343.03	-98.58	317.14	17.11	19.29	PASS	
2313.00†	2308.33	-40.33	-61.69	2226.87	2180.29	-55.81	-378.86	-99.00	342.39	17.79	20.00	PASS	
2413.00†	2407.25	-48.36	-73.97	2323.61	2269.87	-62.72	-414.69	-99.36	367.65	18.50	20.63	PASS	
2513.00†	2506.17	-56.39	-86.25	2420.34	2359.46	-69.63	-450.52	-99.68	392.93	19.23	21.18	PASS	
2613.00†	2605.08	-64.41	-98.52	2517.07	2449.04	-76.54	-486.35	-99.96	418.21	19.98	21.66	PASS	
2713.00†	2704.00	-72.44	-110.80	2613.80	2538.63	-83.45	-522.17	-99.96	443.51	20.75	22.09	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft





# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	
2813.00†	2802.92	-80.47	-123.08	2710.53	2628.21	-90.36	-558.00	30.43	468.81	21.54	22.47	PASS	
2913.00†	2901.84	-88.49	-135.35	2807.26	2717.80	-97.27	-593.83	30.63	494.12	22.35	22.80	PASS	
3013.00†	3000.76	-96.52	-147.63	2903.99	2807.38	-104.18	-629.66	30.81	519.43	23.17	23.09	PASS	
3113.00†	3099.68	-104.54	-159.91	3000.72	2896.97	-111.09	-665.49	30.97	544.75	24.00	23.36	PASS	
3213.00†	3198.59	-112.57	-172.18	3097.46	2986.55	-118.01	-701.32	31.12	570.07	24.84	23.59	PASS	
3313.00†	3297.51	-120.60	-184.46	3194.19	3076.14	-124.92	-737.15	31.25	595.39	25.70	23.80	PASS	
3413.00†	3396.43	-128.62	-196.74	3290.92	3165.72	-131.83	-772.98	31.38	620.72	26.56	23.98	PASS	
3513.00†	3495.35	-136.65	-209.01	3387.65	3255.31	-138.74	-808.80	31.49	646.05	27.43	24.15	PASS	
3613.00†	3594.27	-144.68	-221.29	3484.38	3344.89	-145.65	-844.63	31.60	671.38	28.31	24.30	PASS	
3713.00†	3693.19	-152.70	-233.56	3581.11	3434.48	-152.56	-880.46	31.70	696.71	29.20	24.43	PASS	
3813.00†	3792.11	-160.73	-245.84	3677.84	3524.06	-159.47	-916.29	31.79	722.05	30.09	24.55	PASS	
3913.00†	3891.02	-168.76	-258.12	3774.57	3613.65	-166.38	-952.12	31.87	747.38	30.99	24.66	PASS	
4013.00†	3989.94	-176.78	-270.39	3871.31	3703.23	-173.29	-987.95	31.95	772.72	31.89	24.76	PASS	
4113.00†	4088.86	-184.81	-282.67	3968.04	3792.82	-180.20	-1023.78	32.03	798.06	32.80	24.85	PASS	
4213.00†	4187.78	-192.83	-294.95	4064.77	3882.40	-187.11	-1059.61	32.10	823.40	33.71	24.93	PASS	
4313.00†	4286.70	-200.86	-307.22	4161.50	3971.99	-194.02	-1095.43	32.16	848.74	34.62	25.00	PASS	
4413.00†	4385.62	-208.89	-319.50	4258.23	4061.57	-200.93	-1131.26	32.22	874.09	35.54	25.07	PASS	
4513.00†	4484.53	-216.91	-331.78	4354.96	4151.16	-207.84	-1167.09	32.28	899.43	36.47	25.13	PASS	
4613.00†	4583.45	-224.94	-344.05	4451.69	4240.74	-214.75	-1202.92	32.34	924.77	37.39	25.19	PASS	
4713.00†	4682.37	-232.97	-356.33	4548.42	4330.33	-221.66	-1238.75	32.39	950.12	38.32	25.24	PASS	
4813.00†	4781.29	-240.99	-368.61	4645.16	4419.91	-228.57	-1274.58	32.44	975.47	39.26	25.29	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft

## 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



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH PWB
Facility	SEC.20-T01S-R65W		

## 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	-0.06	-54.87	-8.15	-96.83
8.5in Open Hole	1800.00	17822.97	16022.97	1785.27	7230.00	-8.15	-96.83	3041.34	-861.41

## 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 20-17-2NBH PWP (REV-A.0)**  
**Closest Approach**  
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**REFERENCE WELLPATH IDENTIFICATION**

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	-0.20	-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	112.11	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	-0.20	-104.95	-90.11	104.95	2.31	69.22	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	-0.20	-104.95	-90.11	104.95	2.91	49.35	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	-0.20	-104.95	-90.11	104.95	3.53	38.20	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	-0.20	-104.95	-90.11	104.95	4.15	31.11	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	-0.20	-104.95	-90.11	104.95	4.77	26.23	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	812.55	812.55	-0.20	-104.98	-90.11	104.98	6.02	19.97	PASS	
913.00†	913.00	0.00	0.00	909.01	908.98	-0.55	-107.00	-90.30	107.07	6.76	17.84	PASS	
1013.00†	1013.00	0.00	0.00	1005.23	1005.05	-1.45	-112.19	-90.74	112.48	7.76	16.04	PASS	
1113.00†	1113.00	0.00	0.00	1100.98	1100.43	-2.90	-120.52	-91.38	121.21	8.70	15.25	PASS	
1213.00†	1213.00	0.00	0.00	1196.06	1194.80	-4.87	-131.89	-92.12	133.22	9.59	15.07	PASS	
1313.00†	1313.00	0.00	0.00	1290.28	1287.89	-7.35	-146.19	-92.88	148.51	10.38	15.42	PASS	
1413.00†	1413.00	0.00	0.00	1383.43	1379.41	-10.32	-163.29	-93.62	167.03	11.21	15.97	PASS	
1513.00†	1513.00	0.00	0.00	1475.36	1469.12	-13.74	-183.03	-94.29	188.71	11.96	16.83	PASS	
1600.00	1600.00	0.00	0.00	1554.20	1545.52	-17.07	-202.21	-94.83	210.11	12.61	17.72	PASS	
1613.00†	1613.00	-0.02	-0.02	1565.89	1556.80	-17.59	-205.23	28.25	213.48	12.71	17.86	PASS	
1713.00†	1712.97	-1.22	-1.87	1655.40	1642.74	-21.86	-229.85	27.70	239.45	13.47	18.83	PASS	
1813.00†	1812.80	-4.33	-6.62	1744.17	1727.17	-26.55	-256.87	27.50	265.42	14.31	19.53	PASS	
1913.00†	1912.38	-9.35	-14.30	1832.20	1810.01	-31.64	-286.20	27.55	291.39	15.16	20.11	PASS	
2013.00†	2011.57	-16.26	-24.87	1919.50	1891.23	-37.11	-317.75	27.78	317.32	15.94	20.79	PASS	
2021.71	2020.19	-16.95	-25.93	1927.07	1898.22	-37.60	-320.60	27.80	319.58	15.99	20.87	PASS	
2113.00†	2110.49	-24.28	-37.14	2014.89	1979.30	-43.37	-353.83	28.33	343.32	16.56	21.62	PASS	
2213.00†	2209.41	-32.31	-49.42	2111.39	2068.40	-49.70	-390.36	28.84	369.37	17.22	22.33	PASS	
2313.00†	2308.33	-40.33	-61.69	2207.89	2157.49	-56.04	-426.89	29.28	395.43	17.91	22.95	PASS	
2413.00†	2407.25	-48.36	-73.97	2304.39	2246.59	-62.38	-463.41	29.66	421.51	18.63	23.48	PASS	
2513.00†	2506.17	-56.39	-86.25	2400.90	2335.69	-68.71	-499.94	30.00	447.61	19.37	23.95	PASS	
2613.00†	2605.08	-64.41	-98.52	2497.40	2424.78	-75.05	-536.47	30.31	473.73	20.13	24.35	PASS	
2713.00†	2704.00	-72.44	-110.80	2593.90	2513.88	-81.38	-573.00	30.58	499.85	20.91	24.70	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	
2813.00†	2802.92	-80.47	-123.08	2690.40	2602.98	-87.72	-609.52	30.82	525.99	21.71	25.01	PASS	
2913.00†	2901.84	-88.49	-135.35	2786.90	2692.07	-94.06	-646.05	31.04	552.13	22.53	25.27	PASS	
3013.00†	3000.76	-96.52	-147.63	2883.40	2781.17	-100.39	-682.58	31.24	578.27	23.36	25.50	PASS	
3113.00†	3099.68	-104.54	-159.91	2979.91	2870.27	-106.73	-719.10	31.43	604.43	24.20	25.70	PASS	
3213.00†	3198.59	-112.57	-172.18	3076.41	2959.36	-113.06	-755.63	31.59	630.59	25.05	25.88	PASS	
3313.00†	3297.51	-120.60	-184.46	3172.91	3048.46	-119.40	-792.16	31.75	656.75	25.91	26.03	PASS	
3413.00†	3396.43	-128.62	-196.74	3269.41	3137.56	-125.74	-828.68	31.89	682.92	26.79	26.16	PASS	
3513.00†	3495.35	-136.65	-209.01	3365.91	3226.65	-132.07	-865.21	32.03	709.09	27.67	26.28	PASS	
3613.00†	3594.27	-144.68	-221.29	3462.42	3315.75	-138.41	-901.74	32.15	735.27	28.55	26.38	PASS	
3713.00†	3693.19	-152.70	-233.56	3558.92	3404.85	-144.74	-938.26	32.26	761.45	29.45	26.47	PASS	
3813.00†	3792.11	-160.73	-245.84	3655.42	3493.95	-151.08	-974.79	32.37	787.63	30.35	26.55	PASS	
3913.00†	3891.02	-168.76	-258.12	3751.92	3583.04	-157.41	-1011.32	32.47	813.81	31.26	26.62	PASS	
4013.00†	3989.94	-176.78	-270.39	3848.42	3672.14	-163.75	-1047.84	32.56	840.00	32.17	26.68	PASS	
4113.00†	4088.86	-184.81	-282.67	3944.92	3761.24	-170.09	-1084.37	32.65	866.19	33.09	26.73	PASS	
4213.00†	4187.78	-192.83	-294.95	4041.43	3850.33	-176.42	-1120.90	32.74	892.38	34.01	26.78	PASS	
4313.00†	4286.70	-200.86	-307.22	4137.93	3939.43	-182.76	-1157.43	32.81	918.57	34.93	26.82	PASS	
4413.00†	4385.62	-208.89	-319.50	4234.43	4028.53	-189.09	-1193.95	32.89	944.76	35.86	26.86	PASS	
4513.00†	4484.53	-216.91	-331.78	4330.93	4117.62	-195.43	-1230.48	32.96	970.95	36.79	26.89	PASS	
4613.00†	4583.45	-224.94	-344.05	4427.43	4206.72	-201.77	-1267.01	33.02	997.15	37.73	26.91	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft

## 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



**Clearance Report**  
**WAKEMAN 20-17-2NBH PWP (REV-A.0)**  
**Closest Approach**  
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**REFERENCE WELLPATH IDENTIFICATION**

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH PWB
Facility	SEC.20-T01S-R65W		

**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	-0.12	-63.98	-9.12	-115.86
8.5in Open Hole	1800.00	18287.12	16487.12	1779.82	7638.00	-9.12	-115.86	3041.39	-896.44

**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 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	0.28	90.01	89.82	90.01	1.40	148.68	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	0.28	90.01	89.82	90.01	1.73	96.10	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	0.28	90.01	89.82	90.01	2.31	59.34	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	0.28	90.01	89.82	90.01	2.91	42.30	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	0.28	90.01	89.82	90.01	3.53	32.74	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	0.28	90.01	89.82	90.01	4.15	26.66	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	0.28	90.01	89.82	90.01	4.77	22.48	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	0.28	90.01	89.82	90.01	5.39	19.42	PASS	
813.00†	813.00	0.00	0.00	813.00	813.00	0.28	90.01	89.82	90.01	6.02	17.09	PASS	
913.00†	913.00	0.00	0.00	913.00	913.00	0.28	90.01	89.82	90.01	6.65	15.26	PASS	
1013.00†	1013.00	0.00	0.00	1012.63	1012.63	0.27	90.03	89.83	90.03	7.27	13.79	PASS	
1113.00†	1113.00	0.00	0.00	1109.72	1109.69	-0.45	91.98	90.28	92.04	7.98	12.71	PASS	
1213.00†	1213.00	0.00	0.00	1206.56	1206.38	-2.32	96.98	91.37	97.24	8.91	11.89	PASS	
1313.00†	1313.00	0.00	0.00	1302.92	1302.36	-5.31	105.00	92.89	105.67	9.80	11.65	PASS	
1413.00†	1413.00	0.00	0.00	1398.61	1397.32	-9.39	115.95	94.63	117.38	10.65	11.84	PASS	
1513.00†	1513.00	0.00	0.00	1493.41	1490.97	-14.52	129.72	96.39	132.38	11.47	12.33	PASS	
1600.00	1600.00	0.00	0.00	1575.01	1571.16	-19.81	143.90	97.84	148.09	12.15	12.98	PASS	
1613.00†	1613.00	-0.02	-0.02	1587.12	1583.02	-20.66	146.19	-138.75	150.67	12.24	13.10	PASS	
1713.00†	1712.97	-1.22	-1.87	1684.32	1678.14	-27.64	164.93	-137.48	172.43	12.88	14.21	PASS	
1813.00†	1812.80	-4.33	-6.62	1781.32	1773.06	-34.62	183.65	-137.10	196.73	13.57	15.29	PASS	
1913.00†	1912.38	-9.35	-14.30	1877.64	1867.31	-41.55	202.24	-137.32	223.51	14.26	16.44	PASS	
2013.00†	2011.57	-16.26	-24.87	1973.16	1960.79	-48.42	220.67	-137.93	252.80	15.04	17.59	PASS	
2021.71	2020.19	-16.95	-25.93	1981.44	1968.89	-49.01	222.27	-138.00	255.47	15.10	17.71	PASS	
2113.00†	2110.49	-24.28	-37.14	2068.17	2053.76	-55.25	239.01	-138.99	283.61	15.65	18.93	PASS	
2213.00†	2209.41	-32.31	-49.42	2163.18	2146.73	-62.08	257.34	-139.87	314.51	16.31	20.12	PASS	
2313.00†	2308.33	-40.33	-61.69	2258.18	2239.70	-68.92	275.67	-140.59	345.46	16.98	21.19	PASS	
2413.00†	2407.25	-48.36	-73.97	2353.19	2332.67	-75.75	294.01	-141.19	376.46	17.67	22.16	PASS	
2513.00†	2506.17	-56.39	-86.25	2448.20	2425.64	-82.58	312.34	-141.71	407.48	18.37	23.04	PASS	
2613.00†	2605.08	-64.41	-98.52	2543.20	2518.61	-89.41	330.67	-142.15	438.54	19.08	23.84	PASS	
2713.00†	2704.00	-72.44	-110.80	2638.21	2611.58	-96.25	349.01	-142.53	469.61	19.80	24.56	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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†	2802.92	-80.47	-123.08	2733.21	2704.55	-103.08	367.34	-142.86	500.70	20.53	25.23	PASS	
2913.00†	2901.84	-88.49	-135.35	2828.22	2797.52	-109.91	385.68	-143.16	531.80	21.27	25.83	PASS	
3013.00†	3000.76	-96.52	-147.63	2923.23	2890.49	-116.74	404.01	-143.42	562.91	22.01	26.39	PASS	
3113.00†	3099.68	-104.54	-159.91	3018.23	2983.46	-123.58	422.34	-143.66	594.04	22.77	26.90	PASS	
3213.00†	3198.59	-112.57	-172.18	3113.24	3076.43	-130.41	440.68	-143.87	625.17	23.52	27.37	PASS	
3313.00†	3297.51	-120.60	-184.46	3208.25	3169.40	-137.24	459.01	-144.06	656.31	24.29	27.80	PASS	
3413.00†	3396.43	-128.62	-196.74	3303.25	3262.37	-144.08	477.34	-144.24	687.45	25.06	28.21	PASS	
3513.00†	3495.35	-136.65	-209.01	3398.26	3355.34	-150.91	495.68	-144.40	718.60	25.83	28.58	PASS	
3613.00†	3594.27	-144.68	-221.29	3493.27	3448.31	-157.74	514.01	-144.54	749.76	26.61	28.92	PASS	
3713.00†	3693.19	-152.70	-233.56	3588.27	3541.28	-164.57	532.34	-144.68	780.92	27.39	29.25	PASS	
3813.00†	3792.11	-160.73	-245.84	3683.28	3634.25	-171.41	550.68	-144.80	812.08	28.17	29.55	PASS	
3913.00†	3891.02	-168.76	-258.12	3778.28	3727.22	-178.24	569.01	-144.91	843.25	28.96	29.83	PASS	
4013.00†	3989.94	-176.78	-270.39	3873.29	3820.19	-185.07	587.35	-145.02	874.42	29.75	30.09	PASS	
4113.00†	4088.86	-184.81	-282.67	3968.30	3913.16	-191.90	605.68	-145.12	905.59	30.54	30.33	PASS	
4213.00†	4187.78	-192.83	-294.95	4063.30	4006.13	-198.74	624.01	-145.21	936.76	31.34	30.56	PASS	
4313.00†	4286.70	-200.86	-307.22	4158.31	4099.10	-205.57	642.35	-145.30	967.94	32.13	30.78	PASS	
4413.00†	4385.62	-208.89	-319.50	4253.32	4192.07	-212.40	660.68	-145.38	999.11	32.93	30.98	PASS	

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



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH PWB
Facility	SEC.20-T01S-R65W		

## 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	0.17	54.87	-10.88	84.51
8.5in Open Hole	1800.00	17645.62	15845.62	1791.34	7390.00	-10.88	84.51	3038.32	378.24

## 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 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.20-T01S-R65W		Slot: SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20)				Well: WAKEMAN 20-17-4NAH		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	89.89	104.95	1.40	173.59	PASS
113.00†	113.00	0.00	0.00	113.00	113.00	0.20	104.95	89.89	104.95	1.73	112.17	PASS
213.00†	213.00	0.00	0.00	213.00	213.00	0.20	104.95	89.89	104.95	2.31	69.26	PASS
313.00†	313.00	0.00	0.00	313.00	313.00	0.20	104.95	89.89	104.95	2.91	49.37	PASS
413.00†	413.00	0.00	0.00	413.00	413.00	0.20	104.95	89.89	104.95	3.53	38.21	PASS
513.00†	513.00	0.00	0.00	513.00	513.00	0.20	104.95	89.89	104.95	4.15	31.13	PASS
613.00†	613.00	0.00	0.00	613.00	613.00	0.20	104.95	89.89	104.95	4.77	26.24	PASS
713.00†	713.00	0.00	0.00	713.00	713.00	0.20	104.95	89.89	104.95	5.40	22.67	PASS
813.00†	813.00	0.00	0.00	813.00	813.00	0.20	104.95	89.89	104.95	6.02	19.96	PASS
913.00†	913.00	0.00	0.00	912.56	912.56	0.19	104.98	89.90	104.98	6.64	17.83	PASS
1013.00†	1013.00	0.00	0.00	1009.13	1009.11	-0.43	106.94	90.23	107.01	7.37	16.18	PASS
1113.00†	1113.00	0.00	0.00	1105.46	1105.28	-2.01	111.98	91.03	112.26	8.32	14.82	PASS
1213.00†	1213.00	0.00	0.00	1201.32	1200.77	-4.56	120.05	92.17	120.76	9.23	14.23	PASS
1313.00†	1313.00	0.00	0.00	1296.51	1295.25	-8.03	131.08	93.51	132.52	10.11	14.15	PASS
1413.00†	1413.00	0.00	0.00	1390.83	1388.43	-12.40	144.96	94.89	147.55	10.91	14.52	PASS
1513.00†	1513.00	0.00	0.00	1484.08	1480.05	-17.63	161.55	96.23	165.82	11.72	15.11	PASS
1600.00	1600.00	0.00	0.00	1564.22	1558.28	-22.83	178.07	97.31	184.31	12.37	15.86	PASS
1613.00†	1613.00	-0.02	-0.02	1576.10	1569.84	-23.66	180.70	-139.33	187.30	12.46	15.99	PASS
1713.00†	1712.97	-1.22	-1.87	1671.17	1662.10	-30.54	202.56	-138.27	212.69	13.13	17.19	PASS
1813.00†	1812.80	-4.33	-6.62	1767.16	1755.24	-37.52	224.73	-137.88	240.71	13.82	18.37	PASS
1913.00†	1912.38	-9.35	-14.30	1862.36	1847.60	-44.45	246.72	-137.96	271.22	14.54	19.55	PASS
2013.00†	2011.57	-16.26	-24.87	1956.66	1939.10	-51.31	268.50	-138.37	304.22	15.24	20.89	PASS
2021.71	2020.19	-16.95	-25.93	1964.83	1947.03	-51.90	270.39	-138.41	307.22	15.31	20.99	PASS
2113.00†	2110.49	-24.28	-37.14	2050.38	2030.03	-58.13	290.15	-139.26	338.73	15.89	22.27	PASS
2213.00†	2209.41	-32.31	-49.42	2144.11	2120.97	-64.95	311.80	-140.03	373.32	16.54	23.54	PASS
2313.00†	2308.33	-40.33	-61.69	2237.83	2211.90	-71.76	333.45	-140.67	407.95	17.21	24.68	PASS
2413.00†	2407.25	-48.36	-73.97	2331.55	2302.83	-78.58	355.10	-141.21	442.62	17.90	25.70	PASS
2513.00†	2506.17	-56.39	-86.25	2425.27	2393.76	-85.40	376.75	-141.67	477.32	18.60	26.64	PASS
2613.00†	2605.08	-64.41	-98.52	2519.00	2484.70	-92.22	398.40	-142.06	512.05	19.32	27.48	PASS
2713.00†	2704.00	-72.44	-110.80	2612.72	2575.63	-99.04	420.04	-142.41	546.79	20.04	28.24	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.20-T01S-R65W Slot: SLOT#02 WAKEMAN 20-17-4NAH (293'FSL & 2038'FEL, SEC.20) Well: WAKEMAN 20-17-4NAH 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†	2802.92	-80.47	-123.08	2706.44	2666.56	-105.85	441.69	-142.72	581.55	20.78	28.94	PASS
2913.00†	2901.84	-88.49	-135.35	2800.16	2757.49	-112.67	463.34	-142.99	616.32	21.52	29.58	PASS
3013.00†	3000.76	-96.52	-147.63	2893.88	2848.42	-119.49	484.99	-143.23	651.11	22.27	30.16	PASS
3113.00†	3099.68	-104.54	-159.91	2987.61	2939.36	-126.31	506.64	-143.45	685.90	23.03	30.69	PASS
3213.00†	3198.59	-112.57	-172.18	3081.33	3030.29	-133.13	528.29	-143.65	720.70	23.80	31.18	PASS
3313.00†	3297.51	-120.60	-184.46	3175.05	3121.22	-139.94	549.94	-143.82	755.51	24.57	31.63	PASS
3413.00†	3396.43	-128.62	-196.74	3268.77	3212.15	-146.76	571.58	-143.99	790.32	25.35	32.05	PASS
3513.00†	3495.35	-136.65	-209.01	3362.50	3303.09	-153.58	593.23	-144.14	825.14	26.13	32.43	PASS
3613.00†	3594.27	-144.68	-221.29	3456.22	3394.02	-160.40	614.88	-144.27	859.96	26.92	32.79	PASS
3713.00†	3693.19	-152.70	-233.56	3549.94	3484.95	-167.22	636.53	-144.40	894.78	27.71	33.12	PASS
3813.00†	3792.11	-160.73	-245.84	3643.66	3575.88	-174.03	658.18	-144.52	929.61	28.50	33.42	PASS
3913.00†	3891.02	-168.76	-258.12	3737.38	3666.82	-180.85	679.83	-144.62	964.45	29.30	33.71	PASS
4013.00†	3989.94	-176.78	-270.35	3831.11	3757.75	-187.67	701.48	-144.73	999.28	30.10	33.98	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

## POSITIONAL UNCERTAINTY - Offset Wellbore: WAKEMAN 20-17-4NAH PWB Offset Wellpath: WAKEMAN 20-17-4NAH 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 20-17-4NAH PWB Offset 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	0.12	63.98	-12.11	102.80
8.5in Open Hole	1800.00	17516.82	15716.82	1787.10	7215.00	-12.11	102.80	3038.06	473.00



**Clearance Report**  
**WAKEMAN 20-17-2NBH PWP (REV-A.0)**  
**Closest Approach**  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH PWB
Facility	SEC.20-T01S-R65W		

SURVEY PROGRAM - Offset Wellbore: WAKEMAN 20-17-4NAH PWB Offset 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

OFFSET WELLPATH REFERENCE - Offset Wellbore: WAKEMAN 20-17-4NAH PWB Offset Wellpath: WAKEMAN 20-17-4NAH 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 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	0.26	119.95	89.87	119.95	1.40	198.59	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	0.26	119.95	89.87	119.95	1.73	128.31	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	0.26	119.95	89.87	119.95	2.31	79.22	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	0.26	119.95	89.87	119.95	2.91	56.48	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	0.26	119.95	89.87	119.95	3.53	43.71	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	0.26	119.95	89.87	119.95	4.15	35.61	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	0.26	119.95	89.87	119.95	4.77	30.02	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	0.26	119.95	89.87	119.95	5.40	25.94	PASS	
813.00†	813.00	0.00	0.00	812.50	812.50	0.26	119.98	89.88	119.98	6.02	22.85	PASS	
913.00†	913.00	0.00	0.00	908.57	908.55	-0.30	121.93	90.14	122.02	6.75	20.38	PASS	
1013.00†	1013.00	0.00	0.00	1004.41	1004.23	-1.72	126.97	90.78	127.28	7.74	18.24	PASS	
1113.00†	1113.00	0.00	0.00	1099.78	1099.24	-4.00	135.03	91.70	135.79	8.66	17.18	PASS	
1213.00†	1213.00	0.00	0.00	1194.50	1193.25	-7.11	146.05	92.79	147.55	9.55	16.77	PASS	
1313.00†	1313.00	0.00	0.00	1288.36	1285.99	-11.03	159.91	93.95	162.55	10.34	16.95	PASS	
1413.00†	1413.00	0.00	0.00	1381.16	1377.19	-15.71	176.49	95.09	180.77	11.18	17.34	PASS	
1513.00†	1513.00	0.00	0.00	1472.75	1466.59	-21.12	195.62	96.16	202.16	11.94	18.08	PASS	
1600.00	1600.00	0.00	0.00	1554.21	1545.60	-26.50	214.68	97.04	223.04	12.51	18.98	PASS	
1613.00†	1613.00	-0.02	-0.02	1566.81	1557.81	-27.35	217.67	-139.63	226.24	12.59	19.13	PASS	
1713.00†	1712.97	-1.22	-1.87	1663.34	1651.36	-33.82	240.57	-138.77	252.26	13.21	20.27	PASS	
1813.00†	1812.80	-4.33	-6.62	1759.17	1744.23	-40.24	263.31	-138.46	280.81	13.94	21.24	PASS	
1913.00†	1912.38	-9.35	-14.30	1854.18	1836.31	-46.61	285.86	-138.53	311.88	14.59	22.41	PASS	
2013.00†	2011.57	-16.26	-24.87	1948.27	1927.49	-52.92	308.18	-138.88	345.45	15.34	23.57	PASS	
2021.71	2020.19	-16.95	-25.93	1956.42	1935.39	-53.47	310.11	-138.92	348.50	15.40	23.67	PASS	
2113.00†	2110.49	-24.28	-37.14	2041.76	2018.09	-59.19	330.36	-139.72	380.55	15.99	24.86	PASS	
2213.00†	2209.41	-32.31	-49.42	2135.25	2108.70	-65.46	352.55	-140.46	415.71	16.64	26.04	PASS	
2313.00†	2308.33	-40.33	-61.69	2228.74	2199.30	-71.73	374.73	-141.08	450.93	17.32	27.11	PASS	
2413.00†	2407.25	-48.36	-73.97	2322.23	2289.90	-78.00	396.91	-141.62	486.19	18.01	28.07	PASS	
2513.00†	2506.17	-56.39	-86.25	2415.72	2380.51	-84.27	419.10	-142.08	521.48	18.71	28.93	PASS	
2613.00†	2605.08	-64.41	-98.52	2509.21	2471.11	-90.53	441.28	-142.48	556.79	19.42	29.71	PASS	
2713.00†	2704.00	-72.44	-110.80	2602.70	2561.71	-96.80	463.47	-142.83	592.13	20.15	30.42	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-2NBH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	
2813.00†	2802.92	-80.47	-123.08	2696.18	2652.31	-103.07	485.65	-143.15	627.49	20.88	31.07	PASS	
2913.00†	2901.84	-88.49	-135.35	2789.67	2742.92	-109.34	507.83	-143.43	662.86	21.63	31.65	PASS	
3013.00†	3000.76	-96.52	-147.63	2883.16	2833.52	-115.61	530.02	-143.68	698.24	22.38	32.19	PASS	
3113.00†	3099.68	-104.54	-159.91	2976.65	2924.12	-121.88	552.20	-143.91	733.63	23.14	32.68	PASS	
3213.00†	3198.59	-112.57	-172.18	3070.14	3014.73	-128.14	574.38	-144.12	769.03	23.90	33.13	PASS	
3313.00†	3297.51	-120.60	-184.46	3163.63	3105.33	-134.41	596.57	-144.31	804.44	24.67	33.54	PASS	
3413.00†	3396.43	-128.62	-196.74	3257.12	3195.93	-140.68	618.75	-144.48	839.86	25.44	33.92	PASS	
3513.00†	3495.35	-136.65	-209.01	3350.61	3286.53	-146.95	640.93	-144.64	875.28	26.22	34.28	PASS	
3613.00†	3594.27	-144.68	-221.29	3444.10	3377.14	-153.22	663.12	-144.78	910.71	27.01	34.60	PASS	
3713.00†	3693.19	-152.70	-233.56	3537.59	3467.74	-159.49	685.30	-144.92	946.14	27.80	34.90	PASS	
3813.00†	3792.11	-160.73	-245.84	3631.08	3558.34	-165.75	707.48	-145.04	981.58	28.59	35.18	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	0.16	73.12	-13.02	119.77
8.5in Open Hole	13.00	17963.99	17950.99	13.00	7638.00	0.16	73.12	3037.99	508.05



**Clearance Report**  
**WAKEMAN 20-17-2NBH PWP (REV-A.0)**  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH PWB
Facility	SEC.20-T01S-R65W		

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



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WAKEMAN 20-17-2NBH PWP (REV-A.0)  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	6024.05	787.98	7.45		6075.45	25.40	246.92	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

## 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	3674.39	463.42	3674.39	463.42
9.625in Casing Surface	0.00	224.00	224.00	46.00	270.00	3674.39	463.42	3674.39	463.42
7.875in Open Hole	224.00	8129.00	7905.00	270.00	8175.00	3674.39	463.42	3674.39	463.42
4.5in Casing Production	0.00	8129.00	8129.00	46.00	8175.00	3674.39	463.42	3674.39	463.42

## 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°FEL, 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 20-17-2NBH PWP (REV-A.0)  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	6832.48	-2832.88	-22.52	7396.80	25.40	300.64	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	4157.16	-1745.77	4157.16	-1745.77
8.625in Casing Surface	0.00	1450.00	1450.00	81.00	1531.00	4157.16	-1745.77	4157.16	-1745.77
7.875in Open Hole	1450.00	8150.00	6700.00	1531.00	N/A	4157.16	-1745.77	N/A	N/A
4.5in Casing Production	0.00	8150.00	8150.00	81.00	N/A	4157.16	-1745.77	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





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**WAKEMAN 20-17-2NBH PWP (REV-A.0)**  
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**REFERENCE WELLPATH IDENTIFICATION**

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	ACF Statu	
13.00	13.00	0.00	0.00	-13.00	29.00	4015.62	1060.21	14.79	4153.26	25.40	168.79	PAS	

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	2450.85	635.00	2450.85	635.00
8.625in Casing Surface	0.00	91.00	91.00	29.00	120.00	2450.85	635.00	2450.85	635.00
7.875in Open Hole	91.00	8123.00	8032.00	120.00	8152.00	2450.85	635.00	2450.85	635.00
4.5in Casing Production	0.00	8123.00	8123.00	29.00	8152.00	2450.85	635.00	2450.85	635.00

**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



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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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'FWL, 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	703.67	-2174.45	-72.07	2285.48	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	422.92	-1327.47	422.92	-1327.47
8.625in Casing Surface	0.00	150.00	150.00	17.00	167.00	422.92	-1327.47	422.92	-1327.47
7.875in Open Hole	150.00	8194.00	8044.00	167.00	8211.00	422.92	-1327.47	422.92	-1327.47
4.5in Casing Production	0.00	8194.00	8194.00	17.00	8211.00	422.92	-1327.47	422.92	-1327.47

## 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'FWL, 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



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**WAKEMAN 20-17-2NBH PWP (REV-A.0)**  
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**REFERENCE WELLPATH IDENTIFICATION**

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	9200.43	-4322.57	-25.17	10165.67	25.40	413.19	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



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WAKEMAN 20-17-2NBH PWP (REV-A.0)  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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
13.00	13.00	0.00	0.00	8.00	13.00	718.52	1117.82	57.27	1328.83	50.15	26.89	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	441.14	679.39	441.14	679.39
8.625in Casing Surface	0.00	250.00	250.00	-8.00	242.00	441.14	679.39	441.14	679.39
7.875in Open Hole	250.00	8200.00	7950.00	242.00	8192.00	441.14	679.39	441.14	679.39
4.5in Casing Production	0.00	8200.00	8200.00	-8.00	8192.00	441.14	679.39	441.14	679.39

## 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



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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2NBH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2NBH 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	9345.41	2996.40	17.78	9814.03	25.40	398.88	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	5705.33	1800.06	5705.33	1800.06
8.625in Casing Surface	0.00	1549.00	1549.00	23.00	1572.00	5705.33	1800.06	5705.33	1800.06
7.875in Open Hole	1549.00	8173.00	6624.00	1572.00	8196.00	5705.33	1800.06	5705.33	1800.06
4.5in Casing Production	0.00	8173.00	8173.00	23.00	8196.00	5705.33	1800.06	5705.33	1800.06

## 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