

# PETROSHARE

Location: COLORADO Slot: SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)  
Field: ADAMS COUNTY (NAD83/ GRID NORTH) Well: WAKEMAN 20-17-2CDH  
Facility: SEC.20-T01S-R65W Wellbore: WAKEMAN 20-17-2CDH PWB

Plot reference wellpath is WAKEMAN 20-17-2CDH 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#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°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

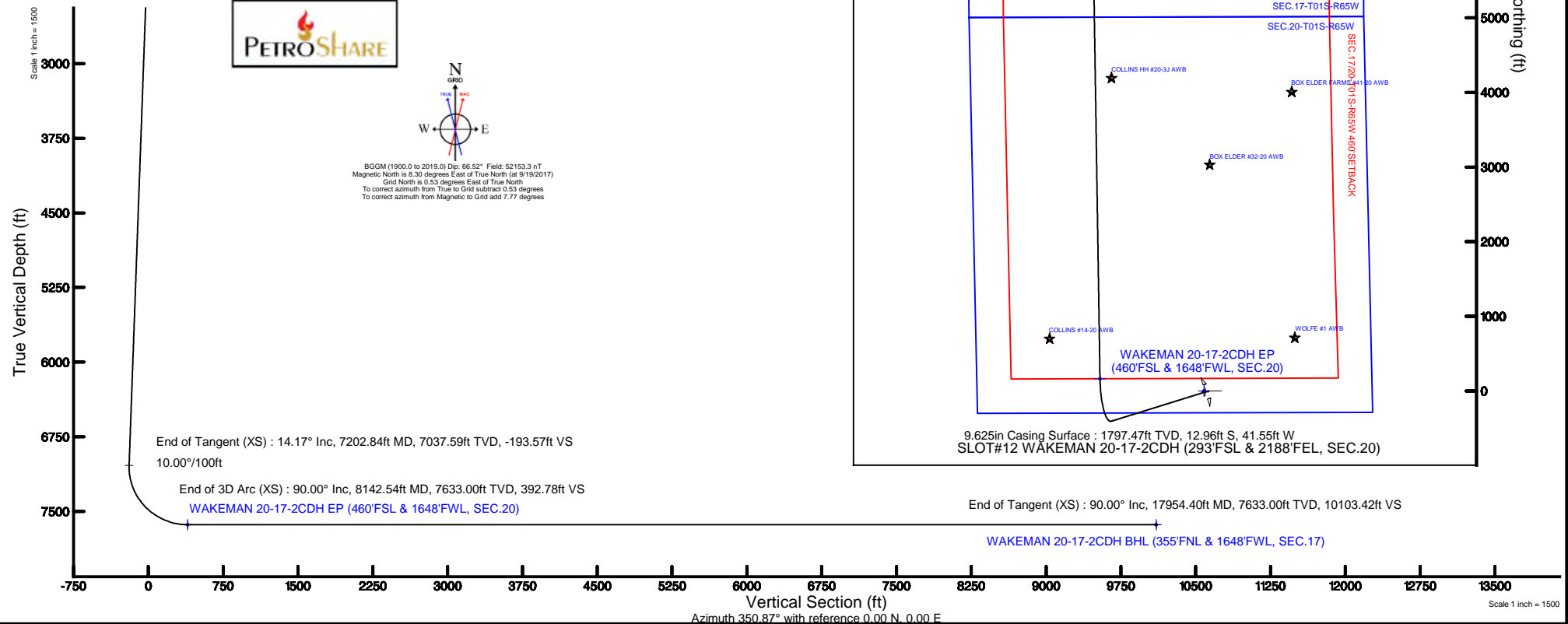
Facility Name				Grid East (US R)	Grid North (US R)	Latitude	Longitude
SEC.20-T01S-R65W				3228360.558	1223518.730	39°56'38.622"N	104°41'07.909"W
Slot				Local N (ft)	Local E (ft)	Grid East (US R)	Grid North (US R)
SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)				-0.32	-164.96	3228195.606	1223518.414
RIG (13KB) (RKB) to Ground level (At Slot: SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20))						5203R	
Mean Sea Level to Ground level (At Slot: SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°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	1797.47	0.00	0.00	-12.96	-41.55	WAKEMAN 20-17-2CDH PWB
8.5in Open Hole	1800.00	17954.40	16154.40	1797.47	N/A	-12.96	-41.55	N/A	N/A	WAKEMAN 20-17-2CDH PWB

## Survey Program

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
13.00	17954.40	BHI NavTrak	Custom BHI NavTrak (Standard Rotating+Axial Cor) (Rockies 0.03Gt model)		WAKEMAN 20-17-2CDH PWB



Well Profile Data							
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)
Tie On	13.00	0.000	252.679	13.00	0.00	0.00	0.00
End of Tangent	1300.00	0.000	252.679	1300.00	0.00	0.00	0.00
End of Build (XS)	2008.51	14.170	252.679	2001.31	-25.95	-83.21	2.00
End of Tangent (XS)	7202.84	14.170	252.679	7037.59	-404.54	-1297.14	0.00
End of 3D Arc (XS)	8142.54	90.000	359.106	7633.00	164.73	-1450.24	10.00
End of Tangent (XS)	17954.40	90.000	359.106	7633.00	9975.39	-1603.31	0.00



# Planned Wellpath Report

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

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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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 1:34:53 PM
Convergence at slot	0.53° East	Database/Source file	WellArchitectDB1/WAKEMAN_20-17-2CDH_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	-0.32	-164.96	3228195.61	1223518.41	39°56'38.634"N	104°41'10.027"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#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'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	350.87°



# Planned Wellpath Report

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HUGHES**  
a GE company



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

## WELLPATH DATA (196 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	252.679	0.00	0.00	0.00	0.00	39°56'38.634"N	104°41'10.027"W	0.00	
13.00	0.000	252.679	13.00	0.00	0.00	0.00	39°56'38.634"N	104°41'10.027"W	0.00	Tie On
113.00†	0.000	252.679	113.00	0.00	0.00	0.00	39°56'38.634"N	104°41'10.027"W	0.00	
213.00†	0.000	252.679	213.00	0.00	0.00	0.00	39°56'38.634"N	104°41'10.027"W	0.00	
313.00†	0.000	252.679	313.00	0.00	0.00	0.00	39°56'38.634"N	104°41'10.027"W	0.00	
413.00†	0.000	252.679	413.00	0.00	0.00	0.00	39°56'38.634"N	104°41'10.027"W	0.00	
513.00†	0.000	252.679	513.00	0.00	0.00	0.00	39°56'38.634"N	104°41'10.027"W	0.00	
613.00†	0.000	252.679	613.00	0.00	0.00	0.00	39°56'38.634"N	104°41'10.027"W	0.00	
713.00†	0.000	252.679	713.00	0.00	0.00	0.00	39°56'38.634"N	104°41'10.027"W	0.00	
813.00†	0.000	252.679	813.00	0.00	0.00	0.00	39°56'38.634"N	104°41'10.027"W	0.00	
913.00†	0.000	252.679	913.00	0.00	0.00	0.00	39°56'38.634"N	104°41'10.027"W	0.00	
1013.00†	0.000	252.679	1013.00	0.00	0.00	0.00	39°56'38.634"N	104°41'10.027"W	0.00	
1113.00†	0.000	252.679	1113.00	0.00	0.00	0.00	39°56'38.634"N	104°41'10.027"W	0.00	
1213.00†	0.000	252.679	1213.00	0.00	0.00	0.00	39°56'38.634"N	104°41'10.027"W	0.00	
1300.00	0.000	252.679	1300.00	0.00	0.00	0.00	39°56'38.634"N	104°41'10.027"W	0.00	End of Tangent
1313.00†	0.260	252.679	1313.00	0.00	-0.01	-0.03	39°56'38.634"N	104°41'10.027"W	2.00	
1413.00†	2.260	252.679	1412.97	-0.32	-0.66	-2.13	39°56'38.627"N	104°41'10.054"W	2.00	
1500.16†	4.003	252.679	1500.00	-1.00	-2.08	-6.67	39°56'38.614"N	104°41'10.113"W	2.00	FOX HILLS
1513.00†	4.260	252.679	1512.80	-1.13	-2.36	-7.56	39°56'38.611"N	104°41'10.124"W	2.00	
1613.00†	6.260	252.679	1612.38	-2.43	-5.09	-16.31	39°56'38.585"N	104°41'10.237"W	2.00	
1713.00†	8.260	252.679	1711.57	-4.23	-8.85	-28.37	39°56'38.549"N	104°41'10.392"W	2.00	
1813.00†	10.260	252.679	1810.26	-6.53	-13.64	-43.73	39°56'38.503"N	104°41'10.590"W	2.00	
1913.00†	12.260	252.679	1908.33	-9.31	-19.45	-62.37	39°56'38.447"N	104°41'10.830"W	2.00	
2008.51	14.170	252.679	2001.31	-12.42	-25.95	-83.21	39°56'38.385"N	104°41'11.098"W	2.00	End of Build (XS)
2013.00†	14.170	252.679	2005.66	-12.57	-26.28	-84.26	39°56'38.382"N	104°41'11.112"W	0.00	
2113.00†	14.170	252.679	2102.62	-16.06	-33.57	-107.63	39°56'38.312"N	104°41'11.413"W	0.00	
2213.00†	14.170	252.679	2199.58	-19.55	-40.86	-131.00	39°56'38.242"N	104°41'11.714"W	0.00	
2313.00†	14.170	252.679	2296.53	-23.04	-48.14	-154.37	39°56'38.172"N	104°41'12.015"W	0.00	
2413.00†	14.170	252.679	2393.49	-26.52	-55.43	-177.74	39°56'38.102"N	104°41'12.315"W	0.00	
2513.00†	14.170	252.679	2490.45	-30.01	-62.72	-201.11	39°56'38.032"N	104°41'12.616"W	0.00	



# Planned Wellpath Report

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

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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

## WELLPATH DATA (196 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2613.00†	14.170	252.679	2587.41	-33.50	-70.01	-224.49	39°56'37.962"N	104°41'12.917"W	0.00	
2713.00†	14.170	252.679	2684.36	-36.99	-77.30	-247.86	39°56'37.892"N	104°41'13.218"W	0.00	
2813.00†	14.170	252.679	2781.32	-40.47	-84.59	-271.23	39°56'37.822"N	104°41'13.519"W	0.00	
2913.00†	14.170	252.679	2878.28	-43.96	-91.87	-294.60	39°56'37.752"N	104°41'13.820"W	0.00	
3013.00†	14.170	252.679	2975.24	-47.45	-99.16	-317.97	39°56'37.683"N	104°41'14.121"W	0.00	
3113.00†	14.170	252.679	3072.19	-50.94	-106.45	-341.34	39°56'37.613"N	104°41'14.422"W	0.00	
3213.00†	14.170	252.679	3169.15	-54.42	-113.74	-364.71	39°56'37.543"N	104°41'14.723"W	0.00	
3313.00†	14.170	252.679	3266.11	-57.91	-121.03	-388.08	39°56'37.473"N	104°41'15.024"W	0.00	
3413.00†	14.170	252.679	3363.06	-61.40	-128.32	-411.45	39°56'37.403"N	104°41'15.324"W	0.00	
3513.00†	14.170	252.679	3460.02	-64.89	-135.61	-434.82	39°56'37.333"N	104°41'15.625"W	0.00	
3613.00†	14.170	252.679	3556.98	-68.37	-142.89	-458.19	39°56'37.263"N	104°41'15.926"W	0.00	
3713.00†	14.170	252.679	3653.94	-71.86	-150.18	-481.56	39°56'37.193"N	104°41'16.227"W	0.00	
3813.00†	14.170	252.679	3750.89	-75.35	-157.47	-504.93	39°56'37.123"N	104°41'16.528"W	0.00	
3913.00†	14.170	252.679	3847.85	-78.84	-164.76	-528.30	39°56'37.053"N	104°41'16.829"W	0.00	
4013.00†	14.170	252.679	3944.81	-82.32	-172.05	-551.67	39°56'36.983"N	104°41'17.130"W	0.00	
4113.00†	14.170	252.679	4041.77	-85.81	-179.34	-575.04	39°56'36.914"N	104°41'17.431"W	0.00	
4213.00†	14.170	252.679	4138.72	-89.30	-186.62	-598.41	39°56'36.844"N	104°41'17.732"W	0.00	
4313.00†	14.170	252.679	4235.68	-92.79	-193.91	-621.78	39°56'36.774"N	104°41'18.033"W	0.00	
4413.00†	14.170	252.679	4332.64	-96.27	-201.20	-645.15	39°56'36.704"N	104°41'18.333"W	0.00	
4513.00†	14.170	252.679	4429.59	-99.76	-208.49	-668.52	39°56'36.634"N	104°41'18.634"W	0.00	
4613.00†	14.170	252.679	4526.55	-103.25	-215.78	-691.89	39°56'36.564"N	104°41'18.935"W	0.00	
4713.00†	14.170	252.679	4623.51	-106.74	-223.07	-715.26	39°56'36.494"N	104°41'19.236"W	0.00	
4813.00†	14.170	252.679	4720.47	-110.22	-230.35	-738.63	39°56'36.424"N	104°41'19.537"W	0.00	
4913.00†	14.170	252.679	4817.42	-113.71	-237.64	-762.00	39°56'36.354"N	104°41'19.838"W	0.00	
4946.60†	14.170	252.679	4850.00	-114.88	-240.09	-769.85	39°56'36.331"N	104°41'19.939"W	0.00	SUSSEX/SHANNON
5013.00†	14.170	252.679	4914.38	-117.20	-244.93	-785.37	39°56'36.284"N	104°41'20.139"W	0.00	
5113.00†	14.170	252.679	5011.34	-120.69	-252.22	-808.74	39°56'36.214"N	104°41'20.440"W	0.00	
5213.00†	14.170	252.679	5108.30	-124.17	-259.51	-832.11	39°56'36.145"N	104°41'20.741"W	0.00	
5313.00†	14.170	252.679	5205.25	-127.66	-266.80	-855.48	39°56'36.075"N	104°41'21.041"W	0.00	
5413.00†	14.170	252.679	5302.21	-131.15	-274.09	-878.85	39°56'36.005"N	104°41'21.342"W	0.00	



# Planned Wellpath Report

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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

## WELLPATH DATA (196 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5513.00†	14.170	252.679	5399.17	-134.64	-281.37	-902.22	39°56'35.935"N	104°41'21.643"W	0.00	
5613.00†	14.170	252.679	5496.12	-138.12	-288.66	-925.59	39°56'35.865"N	104°41'21.944"W	0.00	
5713.00†	14.170	252.679	5593.08	-141.61	-295.95	-948.96	39°56'35.795"N	104°41'22.245"W	0.00	
5813.00†	14.170	252.679	5690.04	-145.10	-303.24	-972.33	39°56'35.725"N	104°41'22.546"W	0.00	
5913.00†	14.170	252.679	5787.00	-148.58	-310.53	-995.70	39°56'35.655"N	104°41'22.847"W	0.00	
6013.00†	14.170	252.679	5883.95	-152.07	-317.82	-1019.07	39°56'35.585"N	104°41'23.148"W	0.00	
6113.00†	14.170	252.679	5980.91	-155.56	-325.10	-1042.44	39°56'35.515"N	104°41'23.449"W	0.00	
6213.00†	14.170	252.679	6077.87	-159.05	-332.39	-1065.81	39°56'35.445"N	104°41'23.750"W	0.00	
6313.00†	14.170	252.679	6174.83	-162.53	-339.68	-1089.18	39°56'35.375"N	104°41'24.050"W	0.00	
6413.00†	14.170	252.679	6271.78	-166.02	-346.97	-1112.55	39°56'35.306"N	104°41'24.351"W	0.00	
6513.00†	14.170	252.679	6368.74	-169.51	-354.26	-1135.92	39°56'35.236"N	104°41'24.652"W	0.00	
6613.00†	14.170	252.679	6465.70	-173.00	-361.55	-1159.29	39°56'35.166"N	104°41'24.953"W	0.00	
6713.00†	14.170	252.679	6562.65	-176.48	-368.83	-1182.66	39°56'35.096"N	104°41'25.254"W	0.00	
6813.00†	14.170	252.679	6659.61	-179.97	-376.12	-1206.03	39°56'35.026"N	104°41'25.555"W	0.00	
6913.00†	14.170	252.679	6756.57	-183.46	-383.41	-1229.40	39°56'34.956"N	104°41'25.856"W	0.00	
7013.00†	14.170	252.679	6853.53	-186.95	-390.70	-1252.77	39°56'34.886"N	104°41'26.157"W	0.00	
7113.00†	14.170	252.679	6950.48	-190.43	-397.99	-1276.14	39°56'34.816"N	104°41'26.458"W	0.00	
7202.84	14.170	252.679	7037.59	-193.57	-404.54	-1297.14	39°56'34.753"N	104°41'26.728"W	0.00	End of Tangent (XS)
7213.00†	13.925	256.742	7047.45	-193.83	-405.19	-1299.52	39°56'34.747"N	104°41'26.758"W	10.00	
7313.00†	15.299	296.812	7144.45	-186.94	-401.99	-1323.06	39°56'34.781"N	104°41'27.060"W	10.00	
7398.65†	20.602	318.997	7226.00	-167.47	-385.49	-1343.07	39°56'34.946"N	104°41'27.315"W	10.00	NIOBRARA A CHALK
7413.00†	21.689	321.594	7239.38	-163.01	-381.51	-1346.38	39°56'34.985"N	104°41'27.357"W	10.00	
7417.98†	22.074	322.438	7244.00	-161.39	-380.04	-1347.52	39°56'35.000"N	104°41'27.372"W	10.00	NIOBRARA A MARL
7513.00†	30.047	334.355	7329.35	-122.79	-344.36	-1368.75	39°56'35.354"N	104°41'27.640"W	10.00	
7601.96†	38.107	341.120	7403.00	-74.29	-298.22	-1387.30	39°56'35.812"N	104°41'27.873"W	10.00	NIOBRARA B CHALK
7613.00†	39.129	341.787	7411.63	-67.49	-291.69	-1389.50	39°56'35.877"N	104°41'27.900"W	10.00	
7641.08†	41.746	343.360	7433.00	-49.47	-274.31	-1394.94	39°56'36.049"N	104°41'27.968"W	10.00	NIOBRARA B MARL
7691.23†	46.464	345.803	7469.00	-14.79	-240.67	-1404.19	39°56'36.382"N	104°41'28.083"W	10.00	NIOBRARA C CHALK
7713.00†	48.527	346.746	7483.71	1.21	-225.08	-1407.99	39°56'36.537"N	104°41'28.130"W	10.00	
7741.39†	51.228	347.889	7502.00	22.87	-203.90	-1412.76	39°56'36.746"N	104°41'28.189"W	10.00	NIOBRARA C MARL



# Planned Wellpath Report

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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

## WELLPATH DATA (196 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7813.00†	58.084	350.431	7543.41	81.22	-146.56	-1423.68	39°56'37.314"N	104°41'28.322"W	10.00	
7913.00†	67.726	353.413	7588.91	170.11	-58.52	-1436.07	39°56'38.185"N	104°41'28.471"W	10.00	
7970.20†	73.265	354.930	7608.00	223.91	-4.91	-1441.53	39°56'38.716"N	104°41'28.535"W	10.00	FORT HAYS
8013.00†	77.416	356.007	7618.83	265.18	36.36	-1444.80	39°56'39.124"N	104°41'28.572"W	10.00	
8113.00†	87.129	358.410	7632.26	363.53	135.21	-1449.60	39°56'40.101"N	104°41'28.622"W	10.00	
8142.54	90.000	359.106	7633.00†	392.78	164.73	-1450.24	39°56'40.393"N	104°41'28.627"W	10.00	End of 3D Arc (XS)
8213.00†	90.000	359.106	7633.00	462.52	235.18	-1451.34	39°56'41.089"N	104°41'28.633"W	0.00	
8313.00†	90.000	359.106	7633.00	561.48	335.17	-1452.90	39°56'42.077"N	104°41'28.641"W	0.00	
8413.00†	90.000	359.106	7633.00	660.45	435.16	-1454.46	39°56'43.065"N	104°41'28.649"W	0.00	
8513.00†	90.000	359.106	7633.00	759.42	535.15	-1456.02	39°56'44.054"N	104°41'28.658"W	0.00	
8613.00†	90.000	359.106	7633.00	858.39	635.13	-1457.58	39°56'45.042"N	104°41'28.666"W	0.00	
8713.00†	90.000	359.106	7633.00	957.36	735.12	-1459.14	39°56'46.030"N	104°41'28.674"W	0.00	
8813.00†	90.000	359.106	7633.00	1056.33	835.11	-1460.70	39°56'47.018"N	104°41'28.683"W	0.00	
8913.00†	90.000	359.106	7633.00	1155.29	935.10	-1462.26	39°56'48.006"N	104°41'28.691"W	0.00	
9013.00†	90.000	359.106	7633.00	1254.26	1035.09	-1463.82	39°56'48.995"N	104°41'28.699"W	0.00	
9113.00†	90.000	359.106	7633.00	1353.23	1135.07	-1465.38	39°56'49.983"N	104°41'28.707"W	0.00	
9213.00†	90.000	359.106	7633.00	1452.20	1235.06	-1466.94	39°56'50.971"N	104°41'28.716"W	0.00	
9313.00†	90.000	359.106	7633.00	1551.17	1335.05	-1468.50	39°56'51.959"N	104°41'28.724"W	0.00	
9413.00†	90.000	359.106	7633.00	1650.14	1435.04	-1470.06	39°56'52.948"N	104°41'28.732"W	0.00	
9513.00†	90.000	359.106	7633.00	1749.10	1535.02	-1471.62	39°56'53.936"N	104°41'28.741"W	0.00	
9613.00†	90.000	359.106	7633.00	1848.07	1635.01	-1473.18	39°56'54.924"N	104°41'28.749"W	0.00	
9713.00†	90.000	359.106	7633.00	1947.04	1735.00	-1474.74	39°56'55.912"N	104°41'28.757"W	0.00	
9813.00†	90.000	359.106	7633.00	2046.01	1834.99	-1476.30	39°56'56.900"N	104°41'28.766"W	0.00	
9913.00†	90.000	359.106	7633.00	2144.98	1934.98	-1477.86	39°56'57.889"N	104°41'28.774"W	0.00	
10013.00†	90.000	359.106	7633.00	2243.95	2034.96	-1479.42	39°56'58.877"N	104°41'28.782"W	0.00	
10113.00†	90.000	359.106	7633.00	2342.91	2134.95	-1480.98	39°56'59.865"N	104°41'28.791"W	0.00	
10213.00†	90.000	359.106	7633.00	2441.88	2234.94	-1482.54	39°57'00.853"N	104°41'28.799"W	0.00	
10313.00†	90.000	359.106	7633.00	2540.85	2334.93	-1484.10	39°57'01.842"N	104°41'28.807"W	0.00	
10413.00†	90.000	359.106	7633.00	2639.82	2434.92	-1485.66	39°57'02.830"N	104°41'28.816"W	0.00	
10513.00†	90.000	359.106	7633.00	2738.79	2534.90	-1487.22	39°57'03.818"N	104°41'28.824"W	0.00	





# Planned Wellpath Report

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

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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

## WELLPATH DATA (196 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10613.00†	90.000	359.106	7633.00	2837.76	2634.89	-1488.78	39°57'04.806"N	104°41'28.832"W	0.00	
10713.00†	90.000	359.106	7633.00	2936.73	2734.88	-1490.34	39°57'05.794"N	104°41'28.841"W	0.00	
10813.00†	90.000	359.106	7633.00	3035.69	2834.87	-1491.90	39°57'06.783"N	104°41'28.849"W	0.00	
10913.00†	90.000	359.106	7633.00	3134.66	2934.85	-1493.46	39°57'07.771"N	104°41'28.857"W	0.00	
11013.00†	90.000	359.106	7633.00	3233.63	3034.84	-1495.02	39°57'08.759"N	104°41'28.866"W	0.00	
11113.00†	90.000	359.106	7633.00	3332.60	3134.83	-1496.58	39°57'09.747"N	104°41'28.874"W	0.00	
11213.00†	90.000	359.106	7633.00	3431.57	3234.82	-1498.14	39°57'10.736"N	104°41'28.882"W	0.00	
11313.00†	90.000	359.106	7633.00	3530.54	3334.81	-1499.70	39°57'11.724"N	104°41'28.891"W	0.00	
11413.00†	90.000	359.106	7633.00	3629.50	3434.79	-1501.26	39°57'12.712"N	104°41'28.899"W	0.00	
11513.00†	90.000	359.106	7633.00	3728.47	3534.78	-1502.82	39°57'13.700"N	104°41'28.907"W	0.00	
11613.00†	90.000	359.106	7633.00	3827.44	3634.77	-1504.38	39°57'14.688"N	104°41'28.916"W	0.00	
11713.00†	90.000	359.106	7633.00	3926.41	3734.76	-1505.94	39°57'15.677"N	104°41'28.924"W	0.00	
11813.00†	90.000	359.106	7633.00	4025.38	3834.74	-1507.50	39°57'16.665"N	104°41'28.932"W	0.00	
11913.00†	90.000	359.106	7633.00	4124.35	3934.73	-1509.06	39°57'17.653"N	104°41'28.941"W	0.00	
12013.00†	90.000	359.106	7633.00	4223.31	4034.72	-1510.62	39°57'18.641"N	104°41'28.949"W	0.00	
12113.00†	90.000	359.106	7633.00	4322.28	4134.71	-1512.18	39°57'19.630"N	104°41'28.957"W	0.00	
12213.00†	90.000	359.106	7633.00	4421.25	4234.70	-1513.74	39°57'20.618"N	104°41'28.966"W	0.00	
12313.00†	90.000	359.106	7633.00	4520.22	4334.68	-1515.30	39°57'21.606"N	104°41'28.974"W	0.00	
12413.00†	90.000	359.106	7633.00	4619.19	4434.67	-1516.86	39°57'22.594"N	104°41'28.982"W	0.00	
12513.00†	90.000	359.106	7633.00	4718.16	4534.66	-1518.42	39°57'23.582"N	104°41'28.990"W	0.00	
12613.00†	90.000	359.106	7633.00	4817.12	4634.65	-1519.98	39°57'24.571"N	104°41'28.999"W	0.00	
12713.00†	90.000	359.106	7633.00	4916.09	4734.64	-1521.54	39°57'25.559"N	104°41'29.007"W	0.00	
12813.00†	90.000	359.106	7633.00	5015.06	4834.62	-1523.10	39°57'26.547"N	104°41'29.015"W	0.00	
12913.00†	90.000	359.106	7633.00	5114.03	4934.61	-1524.66	39°57'27.535"N	104°41'29.024"W	0.00	
13013.00†	90.000	359.106	7633.00	5213.00	5034.60	-1526.22	39°57'28.524"N	104°41'29.032"W	0.00	
13113.00†	90.000	359.106	7633.00	5311.97	5134.59	-1527.78	39°57'29.512"N	104°41'29.040"W	0.00	
13213.00†	90.000	359.106	7633.00	5410.94	5234.57	-1529.34	39°57'30.500"N	104°41'29.049"W	0.00	
13313.00†	90.000	359.106	7633.00	5509.90	5334.56	-1530.90	39°57'31.488"N	104°41'29.057"W	0.00	
13413.00†	90.000	359.106	7633.00	5608.87	5434.55	-1532.46	39°57'32.476"N	104°41'29.065"W	0.00	
13513.00†	90.000	359.106	7633.00	5707.84	5534.54	-1534.02	39°57'33.465"N	104°41'29.074"W	0.00	



# Planned Wellpath Report

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

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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

## WELLPATH DATA (196 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
13613.00†	90.000	359.106	7633.00	5806.81	5634.53	-1535.58	39°57'34.453"N	104°41'29.082"W	0.00	
13713.00†	90.000	359.106	7633.00	5905.78	5734.51	-1537.14	39°57'35.441"N	104°41'29.090"W	0.00	
13813.00†	90.000	359.106	7633.00	6004.75	5834.50	-1538.70	39°57'36.429"N	104°41'29.099"W	0.00	
13913.00†	90.000	359.106	7633.00	6103.71	5934.49	-1540.26	39°57'37.417"N	104°41'29.107"W	0.00	
14013.00†	90.000	359.106	7633.00	6202.68	6034.48	-1541.82	39°57'38.406"N	104°41'29.115"W	0.00	
14113.00†	90.000	359.106	7633.00	6301.65	6134.46	-1543.38	39°57'39.394"N	104°41'29.124"W	0.00	
14213.00†	90.000	359.106	7633.00	6400.62	6234.45	-1544.94	39°57'40.382"N	104°41'29.132"W	0.00	
14313.00†	90.000	359.106	7633.00	6499.59	6334.44	-1546.50	39°57'41.370"N	104°41'29.140"W	0.00	
14413.00†	90.000	359.106	7633.00	6598.56	6434.43	-1548.06	39°57'42.359"N	104°41'29.149"W	0.00	
14513.00†	90.000	359.106	7633.00	6697.52	6534.42	-1549.62	39°57'43.347"N	104°41'29.157"W	0.00	
14613.00†	90.000	359.106	7633.00	6796.49	6634.40	-1551.18	39°57'44.335"N	104°41'29.165"W	0.00	
14713.00†	90.000	359.106	7633.00	6895.46	6734.39	-1552.74	39°57'45.323"N	104°41'29.174"W	0.00	
14813.00†	90.000	359.106	7633.00	6994.43	6834.38	-1554.30	39°57'46.311"N	104°41'29.182"W	0.00	
14913.00†	90.000	359.106	7633.00	7093.40	6934.37	-1555.86	39°57'47.300"N	104°41'29.190"W	0.00	
15013.00†	90.000	359.106	7633.00	7192.37	7034.36	-1557.42	39°57'48.288"N	104°41'29.199"W	0.00	
15113.00†	90.000	359.106	7633.00	7291.33	7134.34	-1558.98	39°57'49.276"N	104°41'29.207"W	0.00	
15213.00†	90.000	359.106	7633.00	7390.30	7234.33	-1560.54	39°57'50.264"N	104°41'29.215"W	0.00	
15313.00†	90.000	359.106	7633.00	7489.27	7334.32	-1562.10	39°57'51.253"N	104°41'29.224"W	0.00	
15413.00†	90.000	359.106	7633.00	7588.24	7434.31	-1563.66	39°57'52.241"N	104°41'29.232"W	0.00	
15513.00†	90.000	359.106	7633.00	7687.21	7534.29	-1565.22	39°57'53.229"N	104°41'29.240"W	0.00	
15613.00†	90.000	359.106	7633.00	7786.18	7634.28	-1566.78	39°57'54.217"N	104°41'29.249"W	0.00	
15713.00†	90.000	359.106	7633.00	7885.15	7734.27	-1568.34	39°57'55.205"N	104°41'29.257"W	0.00	
15813.00†	90.000	359.106	7633.00	7984.11	7834.26	-1569.90	39°57'56.194"N	104°41'29.265"W	0.00	
15913.00†	90.000	359.106	7633.00	8083.08	7934.25	-1571.46	39°57'57.182"N	104°41'29.274"W	0.00	
16013.00†	90.000	359.106	7633.00	8182.05	8034.23	-1573.02	39°57'58.170"N	104°41'29.282"W	0.00	
16113.00†	90.000	359.106	7633.00	8281.02	8134.22	-1574.58	39°57'59.158"N	104°41'29.290"W	0.00	
16213.00†	90.000	359.106	7633.00	8379.99	8234.21	-1576.14	39°58'00.147"N	104°41'29.299"W	0.00	
16313.00†	90.000	359.106	7633.00	8478.96	8334.20	-1577.70	39°58'01.135"N	104°41'29.307"W	0.00	
16413.00†	90.000	359.106	7633.00	8577.92	8434.19	-1579.26	39°58'02.123"N	104°41'29.315"W	0.00	
16513.00†	90.000	359.106	7633.00	8676.89	8534.17	-1580.82	39°58'03.111"N	104°41'29.324"W	0.00	





# Planned Wellpath Report

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

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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

## WELLPATH DATA (196 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16613.00†	90.000	359.106	7633.00	8775.86	8634.16	-1582.38	39°58'04.099"N	104°41'29.332"W	0.00	
16713.00†	90.000	359.106	7633.00	8874.83	8734.15	-1583.94	39°58'05.088"N	104°41'29.340"W	0.00	
16813.00†	90.000	359.106	7633.00	8973.80	8834.14	-1585.50	39°58'06.076"N	104°41'29.349"W	0.00	
16913.00†	90.000	359.106	7633.00	9072.77	8934.12	-1587.06	39°58'07.064"N	104°41'29.357"W	0.00	
17013.00†	90.000	359.106	7633.00	9171.73	9034.11	-1588.62	39°58'08.052"N	104°41'29.365"W	0.00	
17113.00†	90.000	359.106	7633.00	9270.70	9134.10	-1590.18	39°58'09.041"N	104°41'29.373"W	0.00	
17213.00†	90.000	359.106	7633.00	9369.67	9234.09	-1591.74	39°58'10.029"N	104°41'29.382"W	0.00	
17313.00†	90.000	359.106	7633.00	9468.64	9334.08	-1593.30	39°58'11.017"N	104°41'29.390"W	0.00	
17413.00†	90.000	359.106	7633.00	9567.61	9434.06	-1594.86	39°58'12.005"N	104°41'29.398"W	0.00	
17513.00†	90.000	359.106	7633.00	9666.58	9534.05	-1596.42	39°58'12.993"N	104°41'29.407"W	0.00	
17613.00†	90.000	359.106	7633.00	9765.54	9634.04	-1597.98	39°58'13.982"N	104°41'29.415"W	0.00	
17713.00†	90.000	359.106	7633.00	9864.51	9734.03	-1599.54	39°58'14.970"N	104°41'29.423"W	0.00	
17813.00†	90.000	359.106	7633.00	9963.48	9834.01	-1601.10	39°58'15.958"N	104°41'29.432"W	0.00	
17913.00†	90.000	359.106	7633.00	10062.45	9934.00	-1602.66	39°58'16.946"N	104°41'29.440"W	0.00	
17954.39†	90.000	359.106	7633.00	10103.41	9975.39	-1603.31	39°58'17.355"N	104°41'29.444"W	0.00	CODELL
17954.40	90.000	359.106	7633.00 <sup>2</sup>	10103.42	9975.39	-1603.31	39°58'17.355"N	104°41'29.444"W	0.00	End of Tangent (XS)

## HOLE & CASING SECTIONS

- Ref Wellbore: WAKEMAN 20-17-2CDH PWB Ref 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	0.00	0.00	-12.96	-41.55
8.5in Open Hole	1800.00	17954.40	16154.40	1797.47	N/A	-12.96	-41.55	N/A	N/A



# Planned Wellpath Report

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

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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	1.31	-59.29	3228136.32	1223519.73	39°56'38.652"N	104°41'10.788"W	polygon
SEC.20-T01S-R65W		0.00	1.31	-59.29	3228136.32	1223519.73	39°56'38.652"N	104°41'10.788"W	polygon
2) WAKEMAN 20-17-2CDH BHL (355'FNL & 1648'FWL, SEC.17)	17954.40	7633.00	9975.39	-1603.31	3226592.35	1233493.50	39°58'17.355"N	104°41'29.444"W	point
1) WAKEMAN 20-17-2CDH EP (460'FSL & 1648'FWL, SEC.20)	8142.54	7633.00	164.73	-1450.24	3226745.41	1223683.14	39°56'40.393"N	104°41'28.627"W	point
SEC.17/20-T01S-R65W 460'SETBACK		7638.00	1.31	-59.29	3228136.32	1223519.73	39°56'38.652"N	104°41'10.788"W	polygon

## SURVEY PROGRAM -

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



# Planned Wellpath Report

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

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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

## WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1500.16	4.003	252.679	1500.00	FOX HILLS
4946.60	14.170	252.679	4850.00	SUSSEX/SHANNON
7398.65	20.602	318.997	7226.00	NIOBRARA A CHALK
7417.98	22.074	322.438	7244.00	NIOBRARA A MARL
7601.96	38.107	341.120	7403.00	NIOBRARA B CHALK
7641.08	41.746	343.360	7433.00	NIOBRARA B MARL
7691.23	46.464	345.803	7469.00	NIOBRARA C CHALK
7741.39	51.228	347.889	7502.00	NIOBRARA C MARL
7970.20	73.265	354.930	7608.00	FORT HAYS
17954.39	90.000	359.106	7633.00	CODELL

## DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
13.00	0.000	252.679	13.00	Tie On
1300.00	0.000	252.679	1300.00	End of Tangent
2008.51	14.170	252.679	2001.31	End of Build (XS)
7202.84	14.170	252.679	7037.59	End of Tangent (XS)
8142.54	90.000	359.106	7633.00	End of 3D Arc (XS)
17954.40	90.000	359.106	7633.00	End of Tangent (XS)



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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 1:34:39 PM
Convergence at slot	0.53° East	Database/Source file	WellArchitectDB1\WAKEMAN_20-17-2CDH_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	-0.32	-164.96	3228195.61	1223518.41	39°56'38.634"N	104°41'10.027"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#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'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 20-17-2CDH PWP (REV-A.0)**  
**Closest Approach**  
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**REFERENCE WELLPATH IDENTIFICATION**

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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 20-17-2CDH PWB Ref 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	0.00	0.00	-12.96	-41.55
8.5in Open Hole	1800.00	17954.40	16154.40	1797.47	N/A	-12.96	-41.55	N/A	N/A

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

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



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

## CALCULATION RANGE & CUTOFF

From: 13.00ft MD	To: 17954.40ft 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-T1S-R65W	SLOT#02 EX. COLLINS HH #20-3J (814°FNL & 1886°FWL, SEC.20, 8163, PR)	COLLINS HH #20-3J	COLLINS HH #20-3J AWB	COLLINS HH #20-3J AWP	12167.99	218.20	12167.99	12151.79	0.64	12151.79	FAIL
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	30.03	17947.17	17947.17	0.73	17947.17	FAIL
SEC.17-T1S-R65W	SLOT#02 EX. AMOCO #24-17 (990°FSL & 1360°FWL, SEC.17, OG, PR, 8130)	AMOCO #24-17	AMOCO #24-17	AMOCO #24-17 AWP	13949.95	291.69	13949.95	13976.51	0.74	13976.51	FAIL
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	15.00	17954.40	17954.40	0.81	17954.40	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	14.97	17954.40	6803.50	1.01	17954.40	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	29.95	17954.40	17954.40	1.30	17954.40	PASS
SEC.20-T01S-R65W	SLOT#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20)	WAKEMAN 20-17-2NBH	WAKEMAN 20-17-2NBH PWB	WAKEMAN 20-17-2NBH PWP (REV-A.0)	13.00	45.00	17939.94	17939.94	1.36	17939.94	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	59.95	17954.40	17954.40	1.88	17954.40	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	45.00	813.00	17954.40	1.92	17954.40	PASS
SEC.20-T01S-R65W	SLOT#08 WAKEMAN 20-17-3NCH (293°FSL & 2128°FEL, SEC.20)	WAKEMAN 20-17-3NCH	WAKEMAN 20-17-3NCH PWB	WAKEMAN 20-17-3NCH PWP (REV-A.0)	13.00	59.98	1300.00	17934.86	1.97	17934.86	PASS
SEC.20-T1S-R65W	SLOT#01 EX. COLLINS #14-20 (990°FSL & 990°FWL, SEC.20, OG, PR, 8202)	COLLINS #14-20	COLLINS #14-20 AWB	COLLINS #14-20 AWP	8692.64	670.72	8692.64	8864.24	2.57	8864.24	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	75.04	1300.00	17937.10	2.62	17937.10	PASS
SEC.17-T1S-R65W	SLOT#01 EX. AMOCO #17-32 (2013°FSL & 464°FWL, SEC.17, OG, PR, 8140)	AMOCO #17-32	AMOCO #17-32 AWB	AMOCO #17-32 AWP	14831.74	1233.46	14831.74	14988.17	2.90	14988.17	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	89.98	1300.00	17954.40	3.17	17954.40	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	105.01	1113.00	17954.40	3.20	17954.40	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	16313.00	1697.83	16313.00	16332.13	3.64	16332.13	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	120.01	1013.00	17954.40	3.85	17954.40	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	135.01	913.00	17954.40	4.49	17954.40	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	10978.30	1512.78	10978.30	10986.42	4.95	10986.42	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	149.96	813.00	17954.40	5.01	17954.40	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	164.96	11513.00	17954.40	5.08	17954.40	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	17220.78	2686.02	17220.78	17649.20	5.33	17649.20	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	13963.00	2374.35	13963.00	14083.95	6.01	14083.95	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	11950.50	2615.22	11950.50	12155.13	7.81	12155.13	PASS
SEC.16-T01S-R65W	SLOT#01 EX. STATE #11-16 (990°FNL & 990°FWL, SEC.16, OG, PR, 8173)	STATE #11-16	STATE #11-16 AWB	STATE #11-16 AWP	17250.50	4634.32	17250.50	17813.00	9.22	17813.00	PASS





# Clearance Report

WAKEMAN 20-17-2CDH PWP (REV-A.0)  
Closest Approach  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

CALCULATION RANGE & CUTOFF		
From: 13.00ft MD	To: 17954.40ft MD	C-C Cutoff: 1000.00 ft

OFFSET WELL CLEARANCE SUMMARY (26 Offset Wellpaths selected) Ratios are calculated in Closest Approach plane											
Offset Facility	Offset Slot	Offset Well	Offset Wellbore	Offset Wellpath	C-C Clearance Distance			ACR Separation Ratio			
					Ref MD [ft]	Min C-C Clear Dist [ft]	Diverging from MD [ft]	Ref MD of Min Ratio [ft]	Min Ratio	Min Ratio Dvrg from [ft]	ACR Status
SEC.20-T01S-R65W	SLOT#01 EX. WOLFE #1 (990'FSL & 990'FEL,SEC.20.OG,PR, 8200)	WOLFE #1	WOLFE #1 AWB	WOLFE #1 AWP	13.00	1366.93	8613.00	8863.62	9.73	8863.62	PASS



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	4194.01	-1294.88	-17.16	4389.51	25.40	178.39	PASS	
113.00†	113.00	0.00	0.00	51.00	113.00	4194.01	-1294.88	-17.16	4389.36	51.16	87.08	PASS	
213.00†	213.00	0.00	0.00	151.00	213.00	4194.01	-1294.88	-17.16	4389.36	53.50	83.22	PASS	
313.00†	313.00	0.00	0.00	251.00	313.00	4194.01	-1294.88	-17.16	4389.36	55.84	79.67	PASS	
413.00†	413.00	0.00	0.00	351.00	413.00	4194.01	-1294.88	-17.16	4389.36	58.19	76.42	PASS	
513.00†	513.00	0.00	0.00	451.00	513.00	4194.01	-1294.88	-17.16	4389.36	60.54	73.41	PASS	
613.00†	613.00	0.00	0.00	551.00	613.00	4194.01	-1294.88	-17.16	4389.36	62.90	70.62	PASS	
713.00†	713.00	0.00	0.00	651.00	713.00	4194.01	-1294.88	-17.16	4389.36	65.26	68.04	PASS	
813.00†	813.00	0.00	0.00	751.00	813.00	4194.01	-1294.88	-17.16	4389.36	67.63	65.63	PASS	
913.00†	913.00	0.00	0.00	851.00	913.00	4194.01	-1294.88	-17.16	4389.36	69.99	63.39	PASS	
1013.00†	1013.00	0.00	0.00	951.00	1013.00	4194.01	-1294.88	-17.16	4389.36	72.37	61.29	PASS	
1113.00†	1113.00	0.00	0.00	1051.00	1113.00	4194.01	-1294.88	-17.16	4389.36	74.74	59.32	PASS	
1213.00†	1213.00	0.00	0.00	1151.00	1213.00	4194.01	-1294.88	-17.16	4389.36	77.12	57.47	PASS	
1300.00	1300.00	0.00	0.00	1238.00	1300.00	4194.01	-1294.88	-17.16	4389.36	79.20	55.95	PASS	
1313.00†	1313.00	-0.01	-0.03	1251.00	1313.00	4194.01	-1294.88	90.16	4389.36	79.51	55.73	PASS	
1413.00†	1412.97	-0.66	-2.13	1350.97	1412.97	4194.01	-1294.88	90.19	4389.37	81.90	54.09	PASS	
1513.00†	1512.80	-2.36	-7.56	1450.80	1512.80	4194.01	-1294.88	90.27	4389.39	84.28	52.54	PASS	
1613.00†	1612.38	-5.09	-16.31	1550.38	1612.38	4194.01	-1294.88	90.38	4389.44	86.50	51.08	PASS	
1713.00†	1711.57	-8.85	-28.37	1649.57	1711.57	4194.01	-1294.88	90.55	4389.54	88.90	49.70	PASS	
1813.00†	1810.26	-13.64	-43.73	1748.26	1810.26	4194.01	-1294.88	90.75	4389.73	91.24	48.39	PASS	
1913.00†	1908.33	-19.45	-62.37	1846.33	1908.33	4194.01	-1294.88	90.99	4390.03	93.65	47.14	PASS	
2008.51	2001.31	-25.95	-83.21	1939.31	2001.31	4194.01	-1294.88	91.26	4390.47	95.96	46.01	PASS	
2013.00†	2005.66	-26.28	-84.26	1943.66	2005.66	4194.01	-1294.88	91.28	4390.50	96.06	45.96	PASS	
2113.00†	2102.62	-33.57	-107.63	2040.62	2102.62	4194.01	-1294.88	91.59	4391.13	98.50	44.82	PASS	
2213.00†	2199.58	-40.86	-131.00	2137.58	2199.58	4194.01	-1294.88	91.89	4391.89	100.96	43.73	PASS	
2313.00†	2296.53	-48.14	-154.37	2234.53	2296.53	4194.01	-1294.88	92.20	4392.80	103.45	42.68	PASS	
2413.00†	2393.49	-55.43	-177.74	2331.49	2393.49	4194.01	-1294.88	92.51	4393.84	105.96	41.67	PASS	
2513.00†	2490.45	-62.72	-201.11	2428.45	2490.45	4194.01	-1294.88	92.82	4395.01	108.50	40.71	PASS	
2613.00†	2587.41	-70.01	-224.49	2525.41	2587.41	4194.01	-1294.88	93.13	4396.32	111.05	39.78	PASS	
2713.00†	2684.36	-77.30	-247.86	2622.36	2684.36	4194.01	-1294.88	93.44	4397.77	113.63	38.88	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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†	2781.32	-84.59	-271.23	2719.32	2781.32	4194.01	-1294.88	93.75	4399.35	116.23	38.02	PASS	
2913.00†	2878.28	-91.87	-294.60	2816.28	2878.28	4194.01	-1294.88	94.06	4401.07	118.86	37.19	PASS	
3013.00†	2975.24	-99.16	-317.97	2913.24	2975.24	4194.01	-1294.88	94.37	4402.92	121.50	36.40	PASS	
3113.00†	3072.19	-106.45	-341.34	3010.19	3072.19	4194.01	-1294.88	94.67	4404.91	124.15	35.63	PASS	
3213.00†	3169.15	-113.74	-364.71	3107.15	3169.15	4194.01	-1294.88	94.98	4407.04	126.83	34.89	PASS	
3313.00†	3266.11	-121.03	-388.08	3204.11	3266.11	4194.01	-1294.88	95.29	4409.30	129.52	34.18	PASS	
3413.00†	3363.06	-128.32	-411.45	3301.06	3363.06	4194.01	-1294.88	95.60	4411.69	132.23	33.50	PASS	
3513.00†	3460.02	-135.61	-434.82	3398.02	3460.02	4194.01	-1294.88	95.90	4414.22	134.95	32.84	PASS	
3613.00†	3556.98	-142.89	-458.19	3494.98	3556.98	4194.01	-1294.88	96.21	4416.88	137.69	32.20	PASS	
3713.00†	3653.94	-150.18	-481.56	3591.94	3653.94	4194.01	-1294.88	96.51	4419.68	140.44	31.59	PASS	
3813.00†	3750.89	-157.47	-504.93	3688.89	3750.89	4194.01	-1294.88	96.82	4422.61	143.21	31.00	PASS	
3913.00†	3847.85	-164.76	-528.30	3785.85	3847.85	4194.01	-1294.88	97.13	4425.67	145.98	30.43	PASS	
4013.00†	3944.81	-172.05	-551.67	3882.81	3944.81	4194.01	-1294.88	97.43	4428.87	148.77	29.87	PASS	
4113.00†	4041.77	-179.34	-575.04	3979.77	4041.77	4194.01	-1294.88	97.73	4432.20	151.57	29.34	PASS	
4213.00†	4138.72	-186.62	-598.41	4076.72	4138.72	4194.01	-1294.88	98.04	4435.66	154.38	28.83	PASS	
4313.00†	4235.68	-193.91	-621.78	4173.68	4235.68	4194.01	-1294.88	98.34	4439.25	157.20	28.33	PASS	
4413.00†	4332.64	-201.20	-645.15	4270.64	4332.64	4194.01	-1294.88	98.65	4442.98	160.02	27.86	PASS	
4513.00†	4429.59	-208.49	-668.52	4367.59	4429.59	4194.01	-1294.88	98.95	4446.84	162.86	27.39	PASS	
4613.00†	4526.55	-215.78	-691.89	4464.55	4526.55	4194.01	-1294.88	99.25	4450.83	165.70	26.95	PASS	
4713.00†	4623.51	-223.07	-715.26	4561.51	4623.51	4194.01	-1294.88	99.55	4454.95	168.55	26.51	PASS	
4813.00†	4720.47	-230.35	-738.63	4658.47	4720.47	4194.01	-1294.88	99.85	4459.20	171.41	26.09	PASS	
4913.00†	4817.42	-237.64	-762.00	4755.42	4817.42	4194.01	-1294.88	100.15	4463.58	174.27	25.69	PASS	
5013.00†	4914.38	-244.93	-785.37	4852.38	4914.38	4194.01	-1294.88	100.45	4468.09	177.14	25.30	PASS	
5113.00†	5011.34	-252.22	-808.74	4949.34	5011.34	4194.01	-1294.88	100.75	4472.73	180.02	24.92	PASS	
5213.00†	5108.30	-259.51	-832.11	5046.30	5108.30	4194.01	-1294.88	101.05	4477.50	182.90	24.55	PASS	
5313.00†	5205.25	-266.80	-855.48	5143.25	5205.25	4194.01	-1294.88	101.35	4482.40	185.78	24.19	PASS	
5413.00†	5302.21	-274.09	-878.85	5240.21	5302.21	4194.01	-1294.88	101.65	4487.43	188.67	23.85	PASS	
5513.00†	5399.17	-281.37	-902.22	5337.17	5399.17	4194.01	-1294.88	101.94	4492.58	191.57	23.52	PASS	
5613.00†	5496.12	-288.66	-925.59	5434.12	5496.12	4194.01	-1294.88	102.24	4497.86	194.46	23.19	PASS	
5713.00†	5593.08	-295.95	-948.96	5531.08	5593.08	4194.01	-1294.88	102.54	4503.27	197.36	22.88	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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†	5690.04	-303.24	-972.33	5628.04	5690.04	4194.01	-1294.88	102.83	4508.80	200.27	22.57	PASS
5913.00†	5787.00	-310.53	-995.70	5725.00	5787.00	4194.01	-1294.88	103.12	4514.47	203.17	22.28	PASS
6013.00†	5883.95	-317.82	-1019.07	5821.95	5883.95	4194.01	-1294.88	103.42	4520.25	206.08	21.99	PASS
6113.00†	5980.91	-325.10	-1042.44	5918.91	5980.91	4194.01	-1294.88	103.71	4526.16	208.99	21.71	PASS
6213.00†	6077.87	-332.39	-1065.81	6015.87	6077.87	4194.01	-1294.88	104.00	4532.20	211.91	21.44	PASS
6313.00†	6174.83	-339.68	-1089.18	6112.83	6174.83	4194.01	-1294.88	104.29	4538.36	214.82	21.18	PASS
6413.00†	6271.78	-346.97	-1112.55	6209.78	6271.78	4194.01	-1294.88	104.58	4544.64	217.74	20.92	PASS
6513.00†	6368.74	-354.26	-1135.92	6306.74	6368.74	4194.01	-1294.88	104.87	4551.05	220.66	20.67	PASS
6613.00†	6465.70	-361.55	-1159.29	6403.70	6465.70	4194.01	-1294.88	105.16	4557.58	223.58	20.43	PASS
6713.00†	6562.65	-368.83	-1182.66	6500.65	6562.65	4194.01	-1294.88	105.45	4564.23	226.50	20.20	PASS
6813.00†	6659.61	-376.12	-1206.03	6597.61	6659.61	4194.01	-1294.88	105.74	4571.00	229.42	19.97	PASS
6913.00†	6756.57	-383.41	-1229.40	6694.57	6756.57	4194.01	-1294.88	106.03	4577.89	232.34	19.75	PASS
7013.00†	6853.53	-390.70	-1252.77	6791.53	6853.53	4194.01	-1294.88	106.31	4584.91	235.27	19.53	PASS
7113.00†	6950.48	-397.99	-1276.14	6888.48	6950.48	4194.01	-1294.88	106.60	4592.04	238.19	19.32	PASS
7202.84	7037.59	-404.54	-1297.14	6975.59	7037.59	4194.01	-1294.88	106.85	4598.55	240.82	19.14	PASS
7213.00†	7047.45	-405.19	-1299.52	6985.45	7047.45	4194.01	-1294.88	102.94	4599.20	241.11	19.12	PASS
7313.00†	7144.45	-401.99	-1323.06	7082.45	7144.45	4194.01	-1294.88	64.36	4596.09	244.22	18.86	PASS
7413.00†	7239.38	-381.51	-1346.38	7177.38	7239.38	4194.01	-1294.88	41.12	4575.81	247.80	18.50	PASS
7513.00†	7329.35	-344.36	-1368.75	7267.35	7329.35	4194.01	-1294.88	30.03	4538.98	251.21	18.11	PASS
7613.00†	7411.63	-291.69	-1389.50	7349.63	7411.63	4194.01	-1294.88	24.44	4486.70	254.25	17.68	PASS
7713.00†	7483.71	-225.08	-1407.99	7421.71	7483.71	4194.01	-1294.88	21.64	4420.54	256.86	17.24	PASS
7813.00†	7543.41	-146.56	-1423.68	7481.41	7543.41	4194.01	-1294.88	20.65	4342.49	258.99	16.80	PASS
7913.00†	7588.91	-58.52	-1436.07	7526.91	7588.91	4194.01	-1294.88	21.49	4254.88	260.60	16.36	PASS
8013.00†	7618.83	36.36	-1444.80	7556.83	7618.83	4194.01	-1294.88	25.97	4160.35	261.68	15.93	PASS
8113.00†	7632.26	135.21	-1449.60	7570.26	7632.26	4194.01	-1294.88	52.78	4061.75	262.24	15.52	PASS
8142.54	7633.00	164.73	-1450.24	7571.00	7633.00	4194.01	-1294.88	90.00	4032.28	262.30	15.40	PASS
8213.00†	7633.00	235.18	-1451.34	7571.00	7633.00	4194.01	-1294.88	90.00	3961.92	262.40	15.13	PASS
8313.00†	7633.00	335.17	-1452.90	7571.00	7633.00	4194.01	-1294.88	90.00	3862.08	262.54	14.74	PASS
8413.00†	7633.00	435.16	-1454.46	7571.00	7633.00	4194.01	-1294.88	90.00	3762.24	262.69	14.35	PASS
8513.00†	7633.00	535.15	-1456.02	7571.00	7633.00	4194.01	-1294.88	90.00	3662.41	262.86	13.96	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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†	7633.00	635.13	-1457.58	7571.00	7633.00	4194.01	-1294.88	90.00	3562.60	263.03	13.57	PASS	
8713.00†	7633.00	735.12	-1459.14	7571.00	7633.00	4194.01	-1294.88	90.00	3462.79	263.21	13.18	PASS	
8813.00†	7633.00	835.11	-1460.70	7571.00	7633.00	4194.01	-1294.88	90.00	3362.99	263.40	12.79	PASS	
8913.00†	7633.00	935.10	-1462.26	7571.00	7633.00	4194.01	-1294.88	90.00	3263.21	263.61	12.40	PASS	
9013.00†	7633.00	1035.09	-1463.82	7571.00	7633.00	4194.01	-1294.88	90.00	3163.44	263.83	12.01	PASS	
9113.00†	7633.00	1135.07	-1465.38	7571.00	7633.00	4194.01	-1294.88	90.00	3063.69	264.06	11.62	PASS	
9213.00†	7633.00	1235.06	-1466.94	7571.00	7633.00	4194.01	-1294.88	90.00	2963.95	264.31	11.23	PASS	
9313.00†	7633.00	1335.05	-1468.50	7571.00	7633.00	4194.01	-1294.88	90.00	2864.23	264.58	10.85	PASS	
9413.00†	7633.00	1435.04	-1470.06	7571.00	7633.00	4194.01	-1294.88	90.00	2764.53	264.87	10.46	PASS	
9513.00†	7633.00	1535.02	-1471.62	7571.00	7633.00	4194.01	-1294.88	90.00	2664.86	265.18	10.07	PASS	
9613.00†	7633.00	1635.01	-1473.18	7571.00	7633.00	4194.01	-1294.88	90.00	2565.20	265.51	9.68	PASS	
9713.00†	7633.00	1735.00	-1474.74	7571.00	7633.00	4194.01	-1294.88	90.00	2465.58	265.88	9.29	PASS	
9813.00†	7633.00	1834.99	-1476.30	7571.00	7633.00	4194.01	-1294.88	90.00	2365.99	266.27	8.90	PASS	
9913.00†	7633.00	1934.98	-1477.86	7571.00	7633.00	4194.01	-1294.88	90.00	2266.43	266.69	8.51	PASS	
10013.00†	7633.00	2034.96	-1479.42	7571.00	7633.00	4194.01	-1294.88	90.00	2166.92	267.16	8.13	PASS	
10113.00†	7633.00	2134.95	-1480.98	7571.00	7633.00	4194.01	-1294.88	90.00	2067.45	267.67	7.74	PASS	
10213.00†	7633.00	2234.94	-1482.54	7571.00	7633.00	4194.01	-1294.88	90.00	1968.04	268.23	7.35	PASS	
10313.00†	7633.00	2334.93	-1484.10	7571.00	7633.00	4194.01	-1294.88	90.00	1868.69	268.86	6.96	PASS	
10413.00†	7633.00	2434.92	-1485.66	7571.00	7633.00	4194.01	-1294.88	90.00	1769.41	269.55	6.58	PASS	
10513.00†	7633.00	2534.90	-1487.22	7571.00	7633.00	4194.01	-1294.88	90.00	1670.22	270.32	6.19	PASS	
10613.00†	7633.00	2634.89	-1488.78	7571.00	7633.00	4194.01	-1294.88	90.00	1571.13	271.19	5.80	PASS	
10713.00†	7633.00	2734.88	-1490.34	7571.00	7633.00	4194.01	-1294.88	90.00	1472.17	272.18	5.42	PASS	
10813.00†	7633.00	2834.87	-1491.90	7571.00	7633.00	4194.01	-1294.88	90.00	1373.35	273.31	5.03	PASS	
10913.00†	7633.00	2934.85	-1493.46	7571.00	7633.00	4194.01	-1294.88	90.00	1274.72	274.61	4.65	PASS	
11013.00†	7633.00	3034.84	-1495.02	7571.00	7633.00	4194.01	-1294.88	90.00	1176.32	276.13	4.27	PASS	
11113.00†	7633.00	3134.83	-1496.58	7571.00	7633.00	4194.01	-1294.88	90.00	1078.22	277.92	3.89	PASS	
11213.00†	7633.00	3234.82	-1498.14	7571.00	7633.00	4194.01	-1294.88	90.00	980.49	280.07	3.51	PASS	
11313.00†	7633.00	3334.81	-1499.70	7571.00	7633.00	4194.01	-1294.88	90.00	883.28	282.68	3.13	PASS	
11413.00†	7633.00	3434.79	-1501.26	7571.00	7633.00	4194.01	-1294.88	90.00	786.77	285.90	2.76	PASS	
11513.00†	7633.00	3534.78	-1502.82	7571.00	7633.00	4194.01	-1294.88	90.00	691.25	289.98	2.39	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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†	7633.00	3634.77	-1504.38	7571.00	7633.00	4194.01	-1294.88	90.00	597.19	295.24	2.02	PASS	
11713.00†	7633.00	3734.76	-1505.94	7571.00	7633.00	4194.01	-1294.88	90.00	505.43	302.19	1.67	PASS	
11813.00†	7633.00	3834.74	-1507.50	7571.00	7633.00	4194.01	-1294.88	90.00	417.47	311.50	1.34	PASS	
11913.00†	7633.00	3934.73	-1509.06	7571.00	7633.00	4194.01	-1294.88	90.00	336.30	323.78	1.04	PASS	
12013.00†	7633.00	4034.72	-1510.62	7571.00	7633.00	4194.01	-1294.88	90.00	268.17	337.83	0.79	FAIL	
12113.00†	7633.00	4134.71	-1512.18	7571.00	7633.00	4194.01	-1294.88	90.00	225.24	345.11	0.65	FAIL	
12151.79†	7633.00	4173.49	-1512.78	7571.00	7633.00	4194.01	-1294.88	90.00	218.86	342.40	0.64	FAIL	
12167.99†	7633.00	4189.70	-1513.04	7570.78	7632.78	4194.01	-1294.88	89.94	218.20	340.04	0.64	FAIL	
12213.00†	7633.00	4234.70	-1513.74	7571.00	7633.00	4194.01	-1294.88	90.00	222.60	330.16	0.67	FAIL	
12313.00†	7633.00	4334.68	-1515.30	7571.00	7633.00	4194.01	-1294.88	90.00	261.48	299.64	0.87	FAIL	
12413.00†	7633.00	4434.67	-1516.86	7571.00	7633.00	4194.01	-1294.88	90.00	327.40	273.85	1.20	PASS	
12513.00†	7633.00	4534.66	-1518.42	7571.00	7633.00	4194.01	-1294.88	90.00	407.44	257.90	1.58	PASS	
12613.00†	7633.00	4634.65	-1519.98	7571.00	7633.00	4194.01	-1294.88	90.00	494.80	249.34	1.99	PASS	
12713.00†	7633.00	4734.64	-1521.54	7571.00	7633.00	4194.01	-1294.88	90.00	586.21	245.26	2.39	PASS	
12813.00†	7633.00	4834.62	-1523.10	7571.00	7633.00	4194.01	-1294.88	90.00	680.05	243.65	2.80	PASS	
12913.00†	7633.00	4934.61	-1524.66	7571.00	7633.00	4194.01	-1294.88	90.00	775.42	243.32	3.19	PASS	
13013.00†	7633.00	5034.60	-1526.22	7571.00	7633.00	4194.01	-1294.88	90.00	871.84	243.62	3.58	PASS	
13113.00†	7633.00	5134.59	-1527.78	7571.00	7633.00	4194.01	-1294.88	90.00	968.98	244.21	3.97	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





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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

**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	2553.01	-801.01	2553.01	-801.01
8.625in Casing Surface	0.00	1529.00	1529.00	49.00	1578.00	2553.01	-801.01	2553.01	-801.01
7.875in Open Hole	1529.00	8141.00	6612.00	1578.00	8190.00	2553.01	-801.01	2553.01	-801.01
4.5in Casing Production	0.00	8141.00	8141.00	49.00	8190.00	2553.01	-801.01	2553.01	-801.01

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.20-T01S-R65W		Slot: SLOT#10 WAKEMAN 20-17-2NCH (293°FSL & 2158°FEL, SEC.20)		Well: WAKEMAN 20-17-2NCH		Threshold Value=1.00		† = interpolated/extrapolated station					
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
13.00	13.00	0.00	0.00	13.00	13.00	0.06	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	1.73	31.44	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	0.06	30.03	89.89	30.03	2.31	19.41	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	0.06	30.03	89.89	30.03	2.91	13.84	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	0.06	30.03	89.89	30.03	3.53	10.71	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	0.06	30.03	89.89	30.03	4.15	8.73	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	0.06	30.03	89.89	30.03	4.77	7.36	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	0.06	30.03	89.89	30.03	5.40	6.36	PASS	
813.00†	813.00	0.00	0.00	813.00	813.00	0.06	30.03	89.89	30.03	6.02	5.60	PASS	
913.00†	913.00	0.00	0.00	913.00	913.00	0.06	30.03	89.89	30.03	6.65	5.00	PASS	
1013.00†	1013.00	0.00	0.00	1013.00	1013.00	0.06	30.03	89.89	30.03	7.28	4.51	PASS	
1113.00†	1113.00	0.00	0.00	1113.00	1113.00	0.06	30.03	89.89	30.03	7.90	4.12	PASS	
1213.00†	1213.00	0.00	0.00	1213.00	1213.00	0.06	30.03	89.89	30.03	8.53	3.78	PASS	
1300.00	1300.00	0.00	0.00	1300.00	1300.00	0.06	30.03	89.89	30.03	9.08	3.53	PASS	
1313.00†	1313.00	-0.01	-0.03	1313.00	1313.00	0.06	30.03	-162.80	30.06	9.16	3.50	PASS	
1413.00†	1412.97	-0.66	-2.13	1412.97	1412.97	0.06	30.03	-163.95	32.17	9.86	3.46	PASS	
1513.00†	1512.80	-2.36	-7.56	1512.96	1512.96	0.05	30.00	-166.31	37.64	10.78	3.69	PASS	
1613.00†	1612.38	-5.09	-16.31	1614.10	1614.07	-0.82	27.94	-168.16	44.48	11.72	4.00	PASS	
1713.00†	1711.57	-8.85	-28.37	1715.48	1715.28	-3.08	22.56	-169.14	51.39	12.83	4.21	PASS	
1813.00†	1810.26	-13.64	-43.73	1817.11	1816.46	-6.74	13.87	-169.54	58.34	13.77	4.41	PASS	
1913.00†	1908.33	-19.45	-62.37	1918.98	1917.49	-11.81	1.84	-169.55	65.31	14.76	4.60	PASS	
2008.51	2001.31	-25.95	-83.21	2016.50	2013.71	-17.95	-12.77	-169.29	71.97	15.66	4.76	PASS	
2013.00†	2005.66	-26.28	-84.26	2021.09	2018.23	-18.27	-13.53	-169.28	72.28	15.70	4.77	PASS	
2113.00†	2102.62	-33.57	-107.63	2122.41	2117.59	-25.95	-31.77	-168.62	77.71	16.37	4.92	PASS	
2213.00†	2199.58	-40.86	-131.00	2222.29	2215.42	-33.74	-50.29	-167.93	82.57	16.98	5.03	PASS	
2313.00†	2296.53	-48.14	-154.37	2322.16	2313.26	-41.54	-68.81	-167.32	87.44	17.63	5.12	PASS	
2413.00†	2393.49	-55.43	-177.74	2422.04	2411.09	-49.33	-87.33	-166.78	92.32	18.32	5.20	PASS	
2513.00†	2490.45	-62.72	-201.11	2521.92	2508.93	-57.12	-105.85	-166.29	97.20	19.00	5.28	PASS	
2613.00†	2587.41	-70.01	-224.49	2621.80	2606.76	-64.92	-124.37	-165.84	102.10	19.72	5.33	PASS	
2713.00†	2684.36	-77.30	-247.86	2721.67	2704.60	-72.71	-142.89	-165.44	107.00	20.45	5.38	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.20-T01S-R65W		Slot: SLOT#10 WAKEMAN 20-17-2NCH (293'FSL & 2158'FEL, SEC.20)				Well: WAKEMAN 20-17-2NCH		Threshold Value=1.00		† = interpolated/extrapolated station		
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
2813.00†	2781.32	-84.59	-271.23	2821.55	2802.43	-80.50	-161.41	-165.07	111.90	21.21	5.42	PASS
2913.00†	2878.28	-91.87	-294.60	2921.43	2900.27	-88.30	-179.93	-164.73	116.81	21.98	5.46	PASS
3013.00†	2975.24	-99.16	-317.97	3021.31	2998.10	-96.09	-198.45	-164.42	121.72	22.76	5.49	PASS
3113.00†	3072.19	-106.45	-341.34	3121.18	3095.94	-103.89	-216.97	-164.14	126.64	23.56	5.51	PASS
3213.00†	3169.15	-113.74	-364.71	3221.06	3193.78	-111.68	-235.49	-163.87	131.56	24.37	5.53	PASS
3313.00†	3266.11	-121.03	-388.08	3320.94	3291.61	-119.47	-254.01	-163.63	136.48	25.20	5.54	PASS
3413.00†	3363.06	-128.32	-411.45	3420.81	3389.45	-127.27	-272.53	-163.40	141.40	26.03	5.56	PASS
3513.00†	3460.02	-135.61	-434.82	3520.69	3487.28	-135.06	-291.05	-163.18	146.33	26.87	5.57	PASS
3613.00†	3556.98	-142.89	-458.19	3620.57	3585.12	-142.85	-309.57	-162.98	151.25	27.72	5.57	PASS
3713.00†	3653.94	-150.18	-481.56	3720.45	3682.95	-150.65	-328.09	-162.80	156.18	28.58	5.58	PASS
3813.00†	3750.89	-157.47	-504.93	3820.32	3780.79	-158.44	-346.61	-162.62	161.11	29.44	5.58	PASS
3913.00†	3847.85	-164.76	-528.30	3920.20	3878.62	-166.24	-365.14	-162.46	166.04	30.32	5.58	PASS
4013.00†	3944.81	-172.05	-551.67	4020.08	3976.46	-174.03	-383.66	-162.30	170.98	31.20	5.59	PASS
4113.00†	4041.77	-179.34	-575.04	4119.95	4074.29	-181.82	-402.18	-162.16	175.91	32.08	5.58	PASS
4213.00†	4138.72	-186.62	-598.41	4219.83	4172.13	-189.62	-420.70	-162.02	180.85	32.97	5.58	PASS
4313.00†	4235.68	-193.91	-621.78	4319.71	4269.96	-197.41	-439.22	-161.89	185.78	33.86	5.58	PASS
4413.00†	4332.64	-201.20	-645.15	4419.59	4367.80	-205.20	-457.74	-161.76	190.72	34.76	5.58	PASS
4513.00†	4429.59	-208.49	-668.52	4519.46	4465.63	-213.00	-476.26	-161.64	195.66	35.66	5.58	PASS
4613.00†	4526.55	-215.78	-691.89	4619.34	4563.47	-220.79	-494.78	-161.53	200.60	36.57	5.57	PASS
4713.00†	4623.51	-223.07	-715.26	4719.22	4661.30	-228.59	-513.30	-161.42	205.54	37.48	5.57	PASS
4813.00†	4720.47	-230.35	-738.63	4819.09	4759.14	-236.38	-531.82	-161.32	210.48	38.39	5.57	PASS
4913.00†	4817.42	-237.64	-762.00	4918.97	4856.97	-244.17	-550.34	-161.23	215.42	39.31	5.56	PASS
5013.00†	4914.38	-244.93	-785.37	5018.85	4954.81	-251.97	-568.86	-161.13	220.36	40.23	5.56	PASS
5113.00†	5011.34	-252.22	-808.74	5118.73	5052.64	-259.76	-587.38	-161.04	225.30	41.15	5.55	PASS
5213.00†	5108.30	-259.51	-832.11	5218.60	5150.48	-267.55	-605.90	-160.96	230.25	42.07	5.55	PASS
5313.00†	5205.25	-266.80	-855.48	5318.48	5248.31	-275.35	-624.42	-160.88	235.19	43.00	5.54	PASS
5413.00†	5302.21	-274.09	-878.85	5418.36	5346.15	-283.14	-642.94	-160.80	240.13	43.93	5.54	PASS
5513.00†	5399.17	-281.37	-902.22	5518.24	5443.98	-290.94	-661.46	-160.72	245.08	44.86	5.54	PASS
5613.00†	5496.12	-288.66	-925.58	5618.11	5541.82	-298.73	-679.98	-160.65	250.02	45.79	5.53	PASS
5713.00†	5593.08	-295.95	-948.96	5717.99	5639.65	-306.52	-698.51	-160.58	254.97	46.72	5.53	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	
5813.00†	5690.04	-303.24	-972.33	5817.87	5737.49	-314.32	-717.03	-160.52	259.91	47.66	5.52	PASS	
5913.00†	5787.00	-310.53	-995.70	5917.74	5835.32	-322.11	-735.55	-160.45	264.86	48.60	5.52	PASS	
6013.00†	5883.95	-317.82	-1019.07	6017.62	5933.16	-329.91	-754.07	-160.39	269.81	49.54	5.51	PASS	
6113.00†	5980.91	-325.10	-1042.44	6117.50	6030.99	-337.70	-772.59	-160.33	274.75	50.48	5.51	PASS	
6213.00†	6077.87	-332.39	-1065.81	6217.38	6128.83	-345.49	-791.11	-160.27	279.70	51.42	5.50	PASS	
6313.00†	6174.83	-339.68	-1089.18	6317.25	6226.66	-353.29	-809.63	-160.22	284.64	52.37	5.50	PASS	
6413.00†	6271.78	-346.97	-1112.55	6417.13	6324.50	-361.08	-828.15	-160.16	289.59	53.31	5.49	PASS	
6513.00†	6368.74	-354.26	-1135.92	6517.01	6422.33	-368.87	-846.67	-160.11	294.54	54.26	5.49	PASS	
6613.00†	6465.70	-361.55	-1159.29	6616.88	6520.17	-376.67	-865.19	-160.06	299.49	55.21	5.48	PASS	
6713.00†	6562.65	-368.83	-1182.66	6716.76	6618.00	-384.46	-883.71	-160.01	304.43	56.15	5.48	PASS	
6813.00†	6659.61	-376.12	-1206.03	6816.64	6715.84	-392.26	-902.23	-159.97	309.38	57.10	5.47	PASS	
6913.00†	6756.57	-383.41	-1229.40	6916.52	6813.67	-400.05	-920.75	-159.92	314.33	58.05	5.47	PASS	
7013.00†	6853.53	-390.70	-1252.77	7016.25	6913.42	-405.68	-939.67	-160.29	319.13	58.76	5.48	PASS	
7113.00†	6950.48	-397.99	-1276.14	7116.76	7011.52	-395.71	-958.52	-163.38	323.44	58.00	5.63	PASS	
7202.84	7037.59	-404.54	-1297.14	7201.93	7090.35	-374.37	-973.87	-168.13	328.93	56.77	5.85	PASS	
7213.00†	7047.45	-405.19	-1299.52	7210.82	7098.58	-371.40	-975.49	-172.76	329.77	56.66	5.88	PASS	
7313.00†	7144.45	-401.99	-1323.06	7295.84	7174.60	-336.61	-990.52	141.91	340.25	56.02	6.14	PASS	
7413.00†	7239.38	-381.51	-1346.38	7377.08	7241.72	-293.01	-1003.99	112.52	353.65	56.56	6.32	PASS	
7513.00†	7329.35	-344.36	-1368.75	7455.38	7300.04	-242.23	-1015.89	95.96	368.50	57.44	6.48	PASS	
7613.00†	7411.63	-291.69	-1389.50	7531.39	7349.62	-185.63	-1026.22	85.59	383.48	58.11	6.67	PASS	
7713.00†	7483.71	-225.08	-1407.99	7605.64	7390.52	-124.34	-1034.97	78.56	397.46	58.45	6.87	PASS	
7813.00†	7543.41	-146.56	-1423.68	7678.57	7422.77	-59.38	-1042.13	73.69	409.55	58.44	7.08	PASS	
7913.00†	7588.91	-58.52	-1436.07	7750.52	7446.38	8.31	-1047.69	70.39	419.08	58.17	7.28	PASS	
8013.00†	7618.83	36.36	-1444.80	7821.82	7461.37	77.86	-1051.63	68.36	425.56	57.81	7.44	PASS	
8113.00†	7632.26	135.21	-1449.60	7892.75	7467.75	148.42	-1053.95	67.44	428.69	57.37	7.55	PASS	
8142.54	7633.00	164.73	-1450.24	7915.25	7468.00	170.91	-1054.34	67.38	428.94	57.34	7.56	PASS	
8213.00†	7633.00	235.18	-1451.34	7985.71	7468.00	241.36	-1055.44	67.38	428.94	58.13	7.46	PASS	
8313.00†	7633.00	335.17	-1452.90	8085.71	7468.00	341.35	-1057.00	67.38	428.94	59.72	7.26	PASS	
8413.00†	7633.00	435.16	-1454.46	8185.71	7468.00	441.34	-1058.57	67.38	428.94	61.85	7.00	PASS	
8513.00†	7633.00	535.15	-1456.02	8285.71	7468.00	541.33	-1060.13	67.38	428.94	64.44	6.72	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	
8613.00†	7633.00	635.13	-1457.58	8385.71	7468.00	641.31	-1061.69	67.38	428.94	67.44	6.42	PASS	
8713.00†	7633.00	735.12	-1459.14	8485.71	7468.00	741.30	-1063.25	67.38	428.94	70.81	6.11	PASS	
8813.00†	7633.00	835.11	-1460.70	8585.71	7468.00	841.29	-1064.81	67.38	428.94	74.48	5.80	PASS	
8913.00†	7633.00	935.10	-1462.26	8685.71	7468.00	941.28	-1066.37	67.38	428.94	78.42	5.51	PASS	
9013.00†	7633.00	1035.09	-1463.82	8785.71	7468.00	1041.26	-1067.93	67.38	428.94	83.77	5.16	PASS	
9113.00†	7633.00	1135.07	-1465.38	8885.71	7468.00	1141.25	-1069.49	67.38	428.94	86.95	4.97	PASS	
9213.00†	7633.00	1235.06	-1466.94	8985.71	7468.00	1241.24	-1071.05	67.38	428.94	91.49	4.72	PASS	
9313.00†	7633.00	1335.05	-1468.50	9085.71	7468.00	1341.23	-1072.61	67.38	428.94	96.16	4.49	PASS	
9413.00†	7633.00	1435.04	-1470.06	9185.71	7468.00	1441.22	-1074.17	67.38	428.94	100.96	4.27	PASS	
9513.00†	7633.00	1535.02	-1471.62	9285.71	7468.00	1541.20	-1075.73	67.38	428.94	105.86	4.07	PASS	
9613.00†	7633.00	1635.01	-1473.18	9385.71	7468.00	1641.19	-1077.29	67.38	428.94	110.85	3.89	PASS	
9713.00†	7633.00	1735.00	-1474.74	9485.71	7468.00	1741.18	-1078.85	67.38	428.94	115.93	3.72	PASS	
9813.00†	7633.00	1834.99	-1476.30	9585.71	7468.00	1841.17	-1080.41	67.38	428.94	121.07	3.56	PASS	
9913.00†	7633.00	1934.98	-1477.86	9685.71	7468.00	1941.16	-1081.98	67.38	428.94	126.28	3.41	PASS	
10013.00†	7633.00	2034.96	-1479.42	9785.71	7468.00	2041.14	-1083.54	67.38	428.93	131.54	3.27	PASS	
10113.00†	7633.00	2134.95	-1480.98	9885.71	7468.00	2141.13	-1085.10	67.38	428.93	136.85	3.15	PASS	
10213.00†	7633.00	2234.94	-1482.54	9985.71	7468.00	2241.12	-1086.66	67.38	428.93	142.20	3.03	PASS	
10313.00†	7633.00	2334.93	-1484.10	10085.71	7468.00	2341.11	-1088.22	67.38	428.93	147.59	2.92	PASS	
10413.00†	7633.00	2434.92	-1485.66	10185.71	7468.00	2441.09	-1089.78	67.38	428.93	153.01	2.81	PASS	
10513.00†	7633.00	2534.90	-1487.22	10285.71	7468.00	2541.08	-1091.34	67.38	428.93	158.47	2.71	PASS	
10613.00†	7633.00	2634.89	-1488.78	10385.71	7468.00	2641.07	-1092.90	67.38	428.93	163.95	2.62	PASS	
10713.00†	7633.00	2734.88	-1490.34	10485.71	7468.00	2741.06	-1094.46	67.38	428.93	169.45	2.54	PASS	
10813.00†	7633.00	2834.87	-1491.90	10585.71	7468.00	2841.05	-1096.02	67.38	428.93	174.98	2.46	PASS	
10913.00†	7633.00	2934.85	-1493.46	10685.71	7468.00	2941.03	-1097.58	67.38	428.93	180.52	2.38	PASS	
11013.00†	7633.00	3034.84	-1495.02	10785.71	7468.00	3041.02	-1099.14	67.38	428.93	186.09	2.31	PASS	
11113.00†	7633.00	3134.83	-1496.58	10885.71	7468.00	3141.01	-1100.70	67.38	428.93	191.67	2.24	PASS	
11213.00†	7633.00	3234.82	-1498.14	10985.71	7468.00	3241.00	-1102.26	67.38	428.93	197.27	2.18	PASS	
11313.00†	7633.00	3334.81	-1499.70	11085.71	7468.00	3340.98	-1103.82	67.38	428.93	202.88	2.12	PASS	
11413.00†	7633.00	3434.79	-1501.26	11185.71	7468.00	3440.97	-1105.39	67.38	428.93	208.51	2.06	PASS	
11513.00†	7633.00	3534.78	-1502.82	11285.71	7468.00	3540.96	-1106.95	67.38	428.93	214.14	2.01	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	
11613.00†	7633.00	3634.77	-1504.38	11385.71	7468.00	3640.95	-1108.51	67.38	428.93	219.79	1.95	PASS	
11713.00†	7633.00	3734.76	-1505.94	11485.71	7468.00	3740.94	-1110.07	67.38	428.93	225.45	1.91	PASS	
11813.00†	7633.00	3834.74	-1507.50	11585.71	7468.00	3840.92	-1111.63	67.38	428.93	231.11	1.86	PASS	
11913.00†	7633.00	3934.73	-1509.06	11685.71	7468.00	3940.91	-1113.19	67.38	428.92	236.79	1.81	PASS	
12013.00†	7633.00	4034.72	-1510.62	11785.71	7468.00	4040.90	-1114.75	67.38	428.92	242.47	1.77	PASS	
12113.00†	7633.00	4134.71	-1512.18	11885.71	7468.00	4140.89	-1116.31	67.38	428.92	248.17	1.73	PASS	
12213.00†	7633.00	4234.70	-1513.74	11985.71	7468.00	4240.88	-1117.87	67.38	428.92	253.86	1.69	PASS	
12313.00†	7633.00	4334.68	-1515.30	12085.71	7468.00	4340.86	-1119.43	67.38	428.92	259.57	1.65	PASS	
12413.00†	7633.00	4434.67	-1516.86	12185.71	7468.00	4440.85	-1120.99	67.38	428.92	265.28	1.62	PASS	
12513.00†	7633.00	4534.66	-1518.42	12285.71	7468.00	4540.84	-1122.55	67.38	428.92	271.00	1.58	PASS	
12613.00†	7633.00	4634.65	-1519.98	12385.71	7468.00	4640.83	-1124.11	67.38	428.92	276.72	1.55	PASS	
12713.00†	7633.00	4734.64	-1521.54	12485.71	7468.00	4740.81	-1125.67	67.38	428.92	282.45	1.52	PASS	
12813.00†	7633.00	4834.62	-1523.10	12585.71	7468.00	4840.80	-1127.23	67.38	428.92	288.18	1.49	PASS	
12913.00†	7633.00	4934.61	-1524.66	12685.71	7468.00	4940.79	-1128.79	67.38	428.92	293.92	1.46	PASS	
13013.00†	7633.00	5034.60	-1526.22	12785.71	7468.00	5040.78	-1130.36	67.38	428.92	299.66	1.43	PASS	
13113.00†	7633.00	5134.59	-1527.78	12885.71	7468.00	5140.77	-1131.92	67.38	428.92	305.40	1.41	PASS	
13213.00†	7633.00	5234.57	-1529.34	12985.71	7468.00	5240.75	-1133.48	67.38	428.92	311.15	1.38	PASS	
13313.00†	7633.00	5334.56	-1530.90	13085.71	7468.00	5340.74	-1135.04	67.38	428.92	316.90	1.35	PASS	
13413.00†	7633.00	5434.55	-1532.46	13185.71	7468.00	5440.73	-1136.60	67.38	428.92	322.66	1.33	PASS	
13513.00†	7633.00	5534.54	-1534.02	13285.71	7468.00	5540.72	-1138.16	67.38	428.92	328.42	1.31	PASS	
13613.00†	7633.00	5634.53	-1535.58	13385.71	7468.00	5640.70	-1139.72	67.38	428.92	334.18	1.28	PASS	
13713.00†	7633.00	5734.51	-1537.14	13485.71	7468.00	5740.69	-1141.28	67.38	428.92	339.95	1.26	PASS	
13813.00†	7633.00	5834.50	-1538.70	13585.71	7468.00	5840.68	-1142.84	67.38	428.91	345.71	1.24	PASS	
13913.00†	7633.00	5934.49	-1540.26	13685.71	7468.00	5940.67	-1144.40	67.38	428.91	351.48	1.22	PASS	
14013.00†	7633.00	6034.48	-1541.82	13785.71	7468.00	6040.66	-1145.96	67.38	428.91	357.26	1.20	PASS	
14113.00†	7633.00	6134.46	-1543.38	13885.71	7468.00	6140.64	-1147.52	67.38	428.91	363.03	1.18	PASS	
14213.00†	7633.00	6234.45	-1544.94	13985.71	7468.00	6240.63	-1149.08	67.38	428.91	368.81	1.16	PASS	
14313.00†	7633.00	6334.44	-1546.50	14085.71	7468.00	6340.62	-1150.64	67.38	428.91	374.59	1.15	PASS	
14413.00†	7633.00	6434.43	-1548.06	14185.71	7468.00	6440.61	-1152.20	67.38	428.91	380.37	1.13	PASS	
14513.00†	7633.00	6534.42	-1549.62	14285.71	7468.00	6540.59	-1153.77	67.38	428.91	386.15	1.11	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft





# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	
14613.00†	7633.00	6634.40	-1551.18	14385.71	7468.00	6640.58	-1155.33	67.38	428.91	391.94	1.09	PASS	
14713.00†	7633.00	6734.39	-1552.74	14485.71	7468.00	6740.57	-1156.89	67.38	428.91	397.73	1.08	PASS	
14813.00†	7633.00	6834.38	-1554.30	14585.71	7468.00	6840.56	-1158.45	67.38	428.91	403.51	1.06	PASS	
14913.00†	7633.00	6934.37	-1555.86	14685.71	7468.00	6940.55	-1160.01	67.38	428.91	409.31	1.05	PASS	
15013.00†	7633.00	7034.36	-1557.42	14785.71	7468.00	7040.53	-1161.57	67.38	428.91	415.10	1.03	PASS	
15113.00†	7633.00	7134.34	-1558.98	14885.71	7468.00	7140.52	-1163.13	67.38	428.91	420.89	1.02	PASS	
15213.00†	7633.00	7234.33	-1560.54	14985.71	7468.00	7240.51	-1164.69	67.38	428.91	426.69	1.01	PASS	
15313.00†	7633.00	7334.32	-1562.10	15085.71	7468.00	7340.50	-1166.25	67.38	428.91	432.48	0.99	FAIL	
15413.00†	7633.00	7434.31	-1563.66	15185.71	7468.00	7440.49	-1167.81	67.38	428.91	438.28	0.98	FAIL	
15513.00†	7633.00	7534.29	-1565.22	15285.71	7468.00	7540.47	-1169.37	67.38	428.91	444.08	0.97	FAIL	
15613.00†	7633.00	7634.28	-1566.78	15385.71	7468.00	7640.46	-1170.93	67.38	428.91	449.88	0.95	FAIL	
15713.00†	7633.00	7734.27	-1568.34	15485.71	7468.00	7740.45	-1172.49	67.38	428.90	455.68	0.94	FAIL	
15813.00†	7633.00	7834.26	-1569.90	15585.71	7468.00	7840.44	-1174.05	67.38	428.90	461.48	0.93	FAIL	
15913.00†	7633.00	7934.25	-1571.46	15685.71	7468.00	7940.42	-1175.61	67.38	428.90	467.29	0.92	FAIL	
16013.00†	7633.00	8034.23	-1573.02	15785.71	7468.00	8040.41	-1177.18	67.38	428.90	473.09	0.91	FAIL	
16113.00†	7633.00	8134.22	-1574.58	15885.71	7468.00	8140.40	-1178.74	67.38	428.90	478.90	0.90	FAIL	
16213.00†	7633.00	8234.21	-1576.14	15985.71	7468.00	8240.39	-1180.30	67.38	428.90	484.70	0.88	FAIL	
16313.00†	7633.00	8334.20	-1577.70	16085.71	7468.00	8340.38	-1181.86	67.38	428.90	490.51	0.87	FAIL	
16413.00†	7633.00	8434.19	-1579.26	16185.71	7468.00	8440.36	-1183.42	67.38	428.90	496.32	0.86	FAIL	
16513.00†	7633.00	8534.17	-1580.82	16285.71	7468.00	8540.35	-1184.98	67.38	428.90	502.13	0.85	FAIL	
16613.00†	7633.00	8634.16	-1582.38	16385.71	7468.00	8640.34	-1186.54	67.38	428.90	507.94	0.84	FAIL	
16713.00†	7633.00	8734.15	-1583.94	16485.71	7468.00	8740.33	-1188.10	67.38	428.90	513.75	0.83	FAIL	
16813.00†	7633.00	8834.14	-1585.50	16585.71	7468.00	8840.31	-1189.66	67.38	428.90	519.56	0.83	FAIL	
16913.00†	7633.00	8934.12	-1587.06	16685.71	7468.00	8940.30	-1191.22	67.37	428.90	525.37	0.82	FAIL	
17013.00†	7633.00	9034.11	-1588.62	16785.71	7468.00	9040.29	-1192.78	67.37	428.90	531.19	0.81	FAIL	
17113.00†	7633.00	9134.10	-1590.18	16885.71	7468.00	9140.28	-1194.34	67.37	428.90	537.00	0.80	FAIL	
17213.00†	7633.00	9234.09	-1591.74	16985.71	7468.00	9240.27	-1195.90	67.37	428.90	542.82	0.79	FAIL	
17313.00†	7633.00	9334.08	-1593.30	17085.71	7468.00	9340.25	-1197.46	67.37	428.90	548.63	0.78	FAIL	
17413.00†	7633.00	9434.06	-1594.86	17185.71	7468.00	9440.24	-1199.02	67.37	428.90	554.45	0.77	FAIL	
17513.00†	7633.00	9534.05	-1596.42	17285.71	7468.00	9540.23	-1200.59	67.37	428.90	560.26	0.77	FAIL	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	
17613.00†	7633.00	9634.04	-1597.98	17385.71	7468.00	9640.22	-1202.15	67.37	428.89	566.08	0.76	FAIL	
17713.00†	7633.00	9734.03	-1599.54	17485.71	7468.00	9740.21	-1203.71	67.37	428.89	571.90	0.75	FAIL	
17813.00†	7633.00	9834.01	-1601.10	17585.71	7468.00	9840.19	-1205.27	67.37	428.89	577.72	0.74	FAIL	
17913.00†	7633.00	9934.00	-1602.66	17685.71	7468.00	9940.18	-1206.83	67.37	428.89	583.54	0.73	FAIL	
17947.17†	7633.00	9968.17	-1603.20	17719.88	7468.00	9974.34	-1207.36	67.37	428.89	585.53	0.73	FAIL	
17954.40	7633.00	9975.39	-1603.31	17719.88	7468.00	9974.34	-1207.36	67.37	428.95	584.36	0.73	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	0.03	18.31	-1.82	13.90
8.5in Open Hole	1800.00	17719.88	15919.88	1799.45	N/A	-1.82	13.90	N/A	N/A

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

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



**Clearance Report**  
**WAKEMAN 20-17-2CDH PWP (REV-A.0)**  
**Closest Approach**  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

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



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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°FSL, 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	5966.89	-1832.49	-17.07	6242.23	25.40	253.71	PASS	
113.00†	113.00	0.00	0.00	27.00	113.00	5966.89	-1832.49	-17.07	6241.94	50.60	125.23	PASS	
213.00†	213.00	0.00	0.00	127.00	213.00	5966.89	-1832.49	-17.07	6241.94	52.94	119.62	PASS	
313.00†	313.00	0.00	0.00	227.00	313.00	5966.89	-1832.49	-17.07	6241.94	55.11	114.48	PASS	
413.00†	413.00	0.00	0.00	327.00	413.00	5966.89	-1832.49	-17.07	6241.94	57.46	109.75	PASS	
513.00†	513.00	0.00	0.00	427.00	513.00	5966.89	-1832.49	-17.07	6241.94	59.81	105.39	PASS	
613.00†	613.00	0.00	0.00	527.00	613.00	5966.89	-1832.49	-17.07	6241.94	62.16	101.36	PASS	
713.00†	713.00	0.00	0.00	627.00	713.00	5966.89	-1832.49	-17.07	6241.94	64.52	97.62	PASS	
813.00†	813.00	0.00	0.00	727.00	813.00	5966.89	-1832.49	-17.07	6241.94	66.89	94.14	PASS	
913.00†	913.00	0.00	0.00	827.00	913.00	5966.89	-1832.49	-17.07	6241.94	69.25	90.90	PASS	
1013.00†	1013.00	0.00	0.00	927.00	1013.00	5966.89	-1832.49	-17.07	6241.94	71.63	87.86	PASS	
1113.00†	1113.00	0.00	0.00	1027.00	1113.00	5966.89	-1832.49	-17.07	6241.94	74.00	85.02	PASS	
1213.00†	1213.00	0.00	0.00	1127.00	1213.00	5966.89	-1832.49	-17.07	6241.94	76.38	82.35	PASS	
1300.00	1300.00	0.00	0.00	1214.00	1300.00	5966.89	-1832.49	-17.07	6241.94	78.45	80.16	PASS	
1313.00†	1313.00	-0.01	-0.03	1227.00	1313.00	5966.89	-1832.49	90.25	6241.94	78.76	79.84	PASS	
1413.00†	1412.97	-0.66	-2.13	1326.97	1412.97	5966.89	-1832.49	90.27	6241.95	81.15	77.47	PASS	
1513.00†	1512.80	-2.36	-7.56	1426.80	1512.80	5966.89	-1832.49	90.32	6241.98	83.54	75.24	PASS	
1613.00†	1612.38	-5.09	-16.31	1526.38	1612.38	5966.89	-1832.49	90.40	6242.04	85.93	73.14	PASS	
1713.00†	1711.57	-8.85	-28.37	1625.57	1711.57	5966.89	-1832.49	90.52	6242.14	88.32	71.15	PASS	
1813.00†	1810.26	-13.64	-43.73	1724.26	1810.26	5966.89	-1832.49	90.66	6242.31	90.67	69.26	PASS	
1913.00†	1908.33	-19.45	-62.37	1822.33	1908.33	5966.89	-1832.49	90.83	6242.56	93.07	67.46	PASS	
2008.51	2001.31	-25.95	-83.21	1915.31	2001.31	5966.89	-1832.49	91.02	6242.93	95.37	65.83	PASS	
2013.00†	2005.66	-26.28	-84.26	1919.66	2005.66	5966.89	-1832.49	91.03	6242.95	95.48	65.75	PASS	
2113.00†	2102.62	-33.57	-107.63	2016.62	2102.62	5966.89	-1832.49	91.24	6243.45	97.92	64.11	PASS	
2213.00†	2199.58	-40.86	-131.00	2113.58	2199.58	5966.89	-1832.49	91.46	6244.04	100.38	62.54	PASS	
2313.00†	2296.53	-48.14	-154.37	2210.53	2296.53	5966.89	-1832.49	91.68	6244.74	102.87	61.02	PASS	
2413.00†	2393.49	-55.43	-177.74	2307.49	2393.49	5966.89	-1832.49	91.90	6245.52	105.38	59.57	PASS	
2513.00†	2490.45	-62.72	-201.11	2404.45	2490.45	5966.89	-1832.49	92.12	6246.41	107.91	58.17	PASS	
2613.00†	2587.41	-70.01	-224.49	2501.41	2587.41	5966.89	-1832.49	92.33	6247.39	110.47	56.83	PASS	
2713.00†	2684.36	-77.30	-247.86	2598.36	2684.36	5966.89	-1832.49	92.55	6248.46	113.05	55.53	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	
2813.00†	2781.32	-84.59	-271.23	2695.32	2781.32	5966.89	-1832.49	92.77	6249.63	115.65	54.29	PASS	
2913.00†	2878.28	-91.87	-294.60	2792.28	2878.28	5966.89	-1832.49	92.99	6250.90	118.27	53.09	PASS	
3013.00†	2975.24	-99.16	-317.97	2889.24	2975.24	5966.89	-1832.49	93.20	6252.26	120.91	51.94	PASS	
3113.00†	3072.19	-106.45	-341.34	2986.19	3072.19	5966.89	-1832.49	93.42	6253.72	123.57	50.83	PASS	
3213.00†	3169.15	-113.74	-364.71	3083.15	3169.15	5966.89	-1832.49	93.64	6255.27	126.24	49.76	PASS	
3313.00†	3266.11	-121.03	-388.08	3180.11	3266.11	5966.89	-1832.49	93.85	6256.92	128.94	48.73	PASS	
3413.00†	3363.06	-128.32	-411.45	3277.06	3363.06	5966.89	-1832.49	94.07	6258.67	131.65	47.73	PASS	
3513.00†	3460.02	-135.61	-434.82	3374.02	3460.02	5966.89	-1832.49	94.29	6260.51	134.37	46.77	PASS	
3613.00†	3556.98	-142.89	-458.19	3470.98	3556.98	5966.89	-1832.49	94.50	6262.44	137.11	45.85	PASS	
3713.00†	3653.94	-150.18	-481.56	3567.94	3653.94	5966.89	-1832.49	94.72	6264.47	139.87	44.96	PASS	
3813.00†	3750.89	-157.47	-504.93	3664.89	3750.89	5966.89	-1832.49	94.94	6266.60	142.64	44.10	PASS	
3913.00†	3847.85	-164.76	-528.30	3761.85	3847.85	5966.89	-1832.49	95.15	6268.82	145.42	43.27	PASS	
4013.00†	3944.81	-172.05	-551.67	3858.81	3944.81	5966.89	-1832.49	95.37	6271.13	148.21	42.46	PASS	
4113.00†	4041.77	-179.34	-575.04	3955.77	4041.77	5966.89	-1832.49	95.58	6273.54	151.01	41.69	PASS	
4213.00†	4138.72	-186.62	-598.41	4052.72	4138.72	5966.89	-1832.49	95.80	6276.04	153.83	40.94	PASS	
4313.00†	4235.68	-193.91	-621.78	4149.68	4235.68	5966.89	-1832.49	96.02	6278.64	156.65	40.22	PASS	
4413.00†	4332.64	-201.20	-645.15	4246.64	4332.64	5966.89	-1832.49	96.23	6281.33	159.48	39.52	PASS	
4513.00†	4429.59	-208.49	-668.52	4343.59	4429.59	5966.89	-1832.49	96.45	6284.12	162.33	38.84	PASS	
4613.00†	4526.55	-215.78	-691.89	4440.55	4526.55	5966.89	-1832.49	96.66	6287.00	165.18	38.18	PASS	
4713.00†	4623.51	-223.07	-715.26	4537.51	4623.51	5966.89	-1832.49	96.88	6289.97	168.04	37.55	PASS	
4813.00†	4720.47	-230.35	-738.63	4634.47	4720.47	5966.89	-1832.49	97.09	6293.04	170.91	36.94	PASS	
4913.00†	4817.42	-237.64	-762.00	4731.42	4817.42	5966.89	-1832.49	97.31	6296.20	173.78	36.34	PASS	
5013.00†	4914.38	-244.93	-785.37	4828.38	4914.38	5966.89	-1832.49	97.52	6299.46	176.66	35.76	PASS	
5113.00†	5011.34	-252.22	-808.74	4925.34	5011.34	5966.89	-1832.49	97.73	6302.81	179.55	35.21	PASS	
5213.00†	5108.30	-259.51	-832.11	5022.30	5108.30	5966.89	-1832.49	97.95	6306.25	182.44	34.67	PASS	
5313.00†	5205.25	-266.80	-855.48	5119.25	5205.25	5966.89	-1832.49	98.16	6309.79	185.34	34.14	PASS	
5413.00†	5302.21	-274.09	-878.85	5216.21	5302.21	5966.89	-1832.49	98.37	6313.41	188.25	33.63	PASS	
5513.00†	5399.17	-281.37	-902.22	5313.17	5399.17	5966.89	-1832.49	98.59	6317.14	191.16	33.14	PASS	
5613.00†	5496.12	-288.66	-925.59	5410.12	5496.12	5966.89	-1832.49	98.80	6320.95	194.07	32.66	PASS	
5713.00†	5593.08	-295.95	-948.96	5507.08	5593.08	5966.89	-1832.49	99.01	6324.86	196.99	32.19	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	
5813.00†	5690.04	-303.24	-972.33	5604.04	5690.04	5966.89	-1832.49	99.23	6328.85	199.91	31.74	PASS	
5913.00†	5787.00	-310.53	-995.70	5701.00	5787.00	5966.89	-1832.49	99.44	6332.94	202.84	31.30	PASS	
6013.00†	5883.95	-317.82	-1019.07	5797.95	5883.95	5966.89	-1832.49	99.65	6337.13	205.77	30.88	PASS	
6113.00†	5980.91	-325.10	-1042.44	5894.91	5980.91	5966.89	-1832.49	99.86	6341.40	208.70	30.46	PASS	
6213.00†	6077.87	-332.39	-1065.81	5991.87	6077.87	5966.89	-1832.49	100.07	6345.77	211.64	30.06	PASS	
6313.00†	6174.83	-339.68	-1089.18	6088.83	6174.83	5966.89	-1832.49	100.28	6350.22	214.58	29.67	PASS	
6413.00†	6271.78	-346.97	-1112.55	6185.78	6271.78	5966.89	-1832.49	100.49	6354.77	217.52	29.29	PASS	
6513.00†	6368.74	-354.26	-1135.92	6282.74	6368.74	5966.89	-1832.49	100.71	6359.41	220.46	28.91	PASS	
6613.00†	6465.70	-361.55	-1159.29	6379.70	6465.70	5966.89	-1832.49	100.92	6364.14	223.41	28.55	PASS	
6713.00†	6562.65	-368.83	-1182.66	6476.65	6562.65	5966.89	-1832.49	101.13	6368.96	226.36	28.20	PASS	
6813.00†	6659.61	-376.12	-1206.03	6573.61	6659.61	5966.89	-1832.49	101.34	6373.87	229.31	27.86	PASS	
6913.00†	6756.57	-383.41	-1229.40	6670.57	6756.57	5966.89	-1832.49	101.54	6378.88	232.26	27.53	PASS	
7013.00†	6853.53	-390.70	-1252.77	6767.53	6853.53	5966.89	-1832.49	101.75	6383.97	235.22	27.20	PASS	
7113.00†	6950.48	-397.99	-1276.14	6864.48	6950.48	5966.89	-1832.49	101.96	6389.15	238.18	26.88	PASS	
7202.84	7037.59	-404.54	-1297.14	6951.59	7037.59	5966.89	-1832.49	102.15	6393.88	240.83	26.61	PASS	
7213.00†	7047.45	-405.19	-1299.52	6961.45	7047.45	5966.89	-1832.49	98.23	6394.33	241.13	26.58	PASS	
7313.00†	7144.45	-401.99	-1323.06	7058.45	7144.45	5966.89	-1832.49	59.53	6389.22	244.24	26.22	PASS	
7413.00†	7239.38	-381.51	-1346.38	7153.38	7239.38	5966.89	-1832.49	36.00	6366.98	247.75	25.75	PASS	
7513.00†	7329.35	-344.36	-1368.75	7243.35	7329.35	5966.89	-1832.49	24.41	6328.27	251.07	25.26	PASS	
7613.00†	7411.63	-291.69	-1389.50	7325.63	7411.63	5966.89	-1832.49	18.02	6274.23	253.99	24.75	PASS	
7713.00†	7483.71	-225.08	-1407.99	7397.71	7483.71	5966.89	-1832.49	13.94	6206.50	256.46	24.25	PASS	
7813.00†	7543.41	-146.56	-1423.68	7457.41	7543.41	5966.89	-1832.49	10.77	6127.11	258.42	23.76	PASS	
7913.00†	7588.91	-58.52	-1436.07	7502.91	7588.91	5966.89	-1832.49	7.41	6038.44	259.84	23.29	PASS	
8013.00†	7618.83	36.36	-1444.80	7532.83	7618.83	5966.89	-1832.49	1.16	5943.19	260.70	22.84	PASS	
8113.00†	7632.26	135.21	-1449.60	7546.26	7632.26	5966.89	-1832.49	-37.07	5844.24	261.01	22.44	PASS	
8142.54	7633.00	164.73	-1450.24	7547.00	7633.00	5966.89	-1832.49	-90.00	5814.74	260.99	22.32	PASS	
8213.00†	7633.00	235.18	-1451.34	7547.00	7633.00	5966.89	-1832.49	-90.00	5744.37	260.91	22.06	PASS	
8313.00†	7633.00	335.17	-1452.90	7547.00	7633.00	5966.89	-1832.49	-90.00	5644.50	260.79	21.69	PASS	
8413.00†	7633.00	435.16	-1454.46	7547.00	7633.00	5966.89	-1832.49	-90.00	5544.63	260.66	21.31	PASS	
8513.00†	7633.00	535.15	-1456.02	7547.00	7633.00	5966.89	-1832.49	-90.00	5444.77	260.53	20.94	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft





# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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°FSL, 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	
8613.00†	7633.00	635.13	-1457.58	7547.00	7633.00	5966.89	-1832.49	-90.00	5344.92	260.39	20.57	PASS	
8713.00†	7633.00	735.12	-1459.14	7547.00	7633.00	5966.89	-1832.49	-90.00	5245.07	260.26	20.19	PASS	
8813.00†	7633.00	835.11	-1460.70	7547.00	7633.00	5966.89	-1832.49	-90.00	5145.23	260.11	19.82	PASS	
8913.00†	7633.00	935.10	-1462.26	7547.00	7633.00	5966.89	-1832.49	-90.00	5045.39	259.96	19.45	PASS	
9013.00†	7633.00	1035.09	-1463.82	7547.00	7633.00	5966.89	-1832.49	-90.00	4945.57	259.81	19.07	PASS	
9113.00†	7633.00	1135.07	-1465.38	7547.00	7633.00	5966.89	-1832.49	-90.00	4845.74	259.65	18.70	PASS	
9213.00†	7633.00	1235.06	-1466.94	7547.00	7633.00	5966.89	-1832.49	-90.00	4745.93	259.49	18.33	PASS	
9313.00†	7633.00	1335.05	-1468.50	7547.00	7633.00	5966.89	-1832.49	-90.00	4646.12	259.32	17.95	PASS	
9413.00†	7633.00	1435.04	-1470.06	7547.00	7633.00	5966.89	-1832.49	-90.00	4546.32	259.14	17.58	PASS	
9513.00†	7633.00	1535.02	-1471.62	7547.00	7633.00	5966.89	-1832.49	-90.00	4446.53	258.96	17.20	PASS	
9613.00†	7633.00	1635.01	-1473.18	7547.00	7633.00	5966.89	-1832.49	-90.00	4346.75	258.77	16.83	PASS	
9713.00†	7633.00	1735.00	-1474.74	7547.00	7633.00	5966.89	-1832.49	-90.00	4246.98	258.57	16.46	PASS	
9813.00†	7633.00	1834.99	-1476.30	7547.00	7633.00	5966.89	-1832.49	-90.00	4147.23	258.36	16.08	PASS	
9913.00†	7633.00	1934.98	-1477.86	7547.00	7633.00	5966.89	-1832.49	-90.00	4047.48	258.15	15.71	PASS	
10013.00†	7633.00	2034.96	-1479.42	7547.00	7633.00	5966.89	-1832.49	-90.00	3947.75	257.92	15.34	PASS	
10113.00†	7633.00	2134.95	-1480.98	7547.00	7633.00	5966.89	-1832.49	-90.00	3848.03	257.69	14.96	PASS	
10213.00†	7633.00	2234.94	-1482.54	7547.00	7633.00	5966.89	-1832.49	-90.00	3748.32	257.44	14.59	PASS	
10313.00†	7633.00	2334.93	-1484.10	7547.00	7633.00	5966.89	-1832.49	-90.00	3648.63	257.18	14.22	PASS	
10413.00†	7633.00	2434.92	-1485.66	7547.00	7633.00	5966.89	-1832.49	-90.00	3548.96	256.90	13.84	PASS	
10513.00†	7633.00	2534.90	-1487.22	7547.00	7633.00	5966.89	-1832.49	-90.00	3449.31	256.62	13.47	PASS	
10613.00†	7633.00	2634.89	-1488.78	7547.00	7633.00	5966.89	-1832.49	-90.00	3349.68	256.31	13.09	PASS	
10713.00†	7633.00	2734.88	-1490.34	7547.00	7633.00	5966.89	-1832.49	-90.00	3250.07	255.99	12.72	PASS	
10813.00†	7633.00	2834.87	-1491.90	7547.00	7633.00	5966.89	-1832.49	-90.00	3150.49	255.66	12.35	PASS	
10913.00†	7633.00	2934.85	-1493.46	7547.00	7633.00	5966.89	-1832.49	-90.00	3050.93	255.30	11.97	PASS	
11013.00†	7633.00	3034.84	-1495.02	7547.00	7633.00	5966.89	-1832.49	-90.00	2951.41	254.92	11.60	PASS	
11113.00†	7633.00	3134.83	-1496.58	7547.00	7633.00	5966.89	-1832.49	-90.00	2851.91	254.52	11.23	PASS	
11213.00†	7633.00	3234.82	-1498.14	7547.00	7633.00	5966.89	-1832.49	-90.00	2752.46	254.09	10.85	PASS	
11313.00†	7633.00	3334.81	-1499.70	7547.00	7633.00	5966.89	-1832.49	-90.00	2653.04	253.64	10.48	PASS	
11413.00†	7633.00	3434.79	-1501.26	7547.00	7633.00	5966.89	-1832.49	-90.00	2553.67	253.16	10.11	PASS	
11513.00†	7633.00	3534.78	-1502.82	7547.00	7633.00	5966.89	-1832.49	-90.00	2454.35	252.64	9.73	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	
11613.00†	7633.00	3634.77	-1504.38	7547.00	7633.00	5966.89	-1832.49	-90.00	2355.09	252.09	9.36	PASS	
11713.00†	7633.00	3734.76	-1505.94	7547.00	7633.00	5966.89	-1832.49	-90.00	2255.89	251.51	8.99	PASS	
11813.00†	7633.00	3834.74	-1507.50	7547.00	7633.00	5966.89	-1832.49	-90.00	2156.77	250.88	8.61	PASS	
11913.00†	7633.00	3934.73	-1509.06	7547.00	7633.00	5966.89	-1832.49	-90.00	2057.73	250.22	8.24	PASS	
12013.00†	7633.00	4034.72	-1510.62	7547.00	7633.00	5966.89	-1832.49	-90.00	1958.80	249.51	7.87	PASS	
12113.00†	7633.00	4134.71	-1512.18	7547.00	7633.00	5966.89	-1832.49	-90.00	1859.97	248.75	7.49	PASS	
12213.00†	7633.00	4234.70	-1513.74	7547.00	7633.00	5966.89	-1832.49	-90.00	1761.28	247.95	7.12	PASS	
12313.00†	7633.00	4334.68	-1515.30	7547.00	7633.00	5966.89	-1832.49	-90.00	1662.74	247.11	6.74	PASS	
12413.00†	7633.00	4434.67	-1516.86	7547.00	7633.00	5966.89	-1832.49	-90.00	1564.39	246.24	6.36	PASS	
12513.00†	7633.00	4534.66	-1518.42	7547.00	7633.00	5966.89	-1832.49	-90.00	1466.26	245.35	5.99	PASS	
12613.00†	7633.00	4634.65	-1519.98	7547.00	7633.00	5966.89	-1832.49	-90.00	1368.41	244.48	5.61	PASS	
12713.00†	7633.00	4734.64	-1521.54	7547.00	7633.00	5966.89	-1832.49	-90.00	1270.88	243.68	5.22	PASS	
12813.00†	7633.00	4834.62	-1523.10	7547.00	7633.00	5966.89	-1832.49	-90.00	1173.78	243.04	4.84	PASS	
12913.00†	7633.00	4934.61	-1524.66	7547.00	7633.00	5966.89	-1832.49	-90.00	1077.20	242.71	4.45	PASS	
13013.00†	7633.00	5034.60	-1526.22	7547.00	7633.00	5966.89	-1832.49	-90.00	981.31	242.94	4.05	PASS	
13113.00†	7633.00	5134.59	-1527.78	7547.00	7633.00	5966.89	-1832.49	-90.00	886.33	244.13	3.64	PASS	
13213.00†	7633.00	5234.57	-1529.34	7547.00	7633.00	5966.89	-1832.49	-90.00	792.58	246.86	3.22	PASS	
13313.00†	7633.00	5334.56	-1530.90	7547.00	7633.00	5966.89	-1832.49	-90.00	700.57	251.92	2.78	PASS	
13413.00†	7633.00	5434.55	-1532.46	7547.00	7633.00	5966.89	-1832.49	-90.00	611.07	260.39	2.35	PASS	
13513.00†	7633.00	5534.54	-1534.02	7547.00	7633.00	5966.89	-1832.49	-90.00	525.37	273.59	1.92	PASS	
13613.00†	7633.00	5634.53	-1535.58	7547.00	7633.00	5966.89	-1832.49	-90.00	445.67	293.10	1.52	PASS	
13713.00†	7633.00	5734.51	-1537.14	7547.00	7633.00	5966.89	-1832.49	-90.00	375.81	320.25	1.17	PASS	
13813.00†	7633.00	5834.50	-1538.70	7547.00	7633.00	5966.89	-1832.49	-90.00	322.24	353.85	0.91	FAIL	
13913.00†	7633.00	5934.49	-1540.26	7547.00	7633.00	5966.89	-1832.49	-90.00	294.02	385.35	0.76	FAIL	
13949.95†	7633.00	5971.43	-1540.84	7546.40	7632.40	5966.89	-1832.49	-89.88	291.69	393.45	0.74	FAIL	
13976.51†	7633.00	5997.99	-1541.25	7547.00	7633.00	5966.89	-1832.49	-90.00	292.90	397.51	0.74	FAIL	
14013.00†	7633.00	6034.48	-1541.82	7547.00	7633.00	5966.89	-1832.49	-90.00	298.43	400.52	0.74	FAIL	
14113.00†	7633.00	6134.46	-1543.38	7547.00	7633.00	5966.89	-1832.49	-90.00	334.17	396.05	0.84	FAIL	
14213.00†	7633.00	6234.45	-1544.94	7547.00	7633.00	5966.89	-1832.49	-90.00	392.78	381.88	1.03	PASS	
14313.00†	7633.00	6334.44	-1546.50	7547.00	7633.00	5966.89	-1832.49	-90.00	465.71	366.54	1.27	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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°FSL, 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	
14413.00†	7633.00	6434.43	-1548.06	7547.00	7633.00	5966.89	-1832.49	-90.00	547.26	353.19	1.55	PASS	
14513.00†	7633.00	6534.42	-1549.62	7547.00	7633.00	5966.89	-1832.49	-90.00	634.12	342.29	1.85	PASS	
14613.00†	7633.00	6634.40	-1551.18	7547.00	7633.00	5966.89	-1832.49	-90.00	724.37	333.52	2.17	PASS	
14713.00†	7633.00	6734.39	-1552.74	7547.00	7633.00	5966.89	-1832.49	-90.00	816.90	326.45	2.50	PASS	
14813.00†	7633.00	6834.38	-1554.30	7547.00	7633.00	5966.89	-1832.49	-90.00	911.00	320.68	2.84	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	3632.25	-1133.63	3632.25	-1133.63
8.625in Casing Surface	0.00	218.00	218.00	73.00	291.00	3632.25	-1133.63	3632.25	-1133.63
7.875in Open Hole	218.00	8129.00	7911.00	291.00	8202.00	3632.25	-1133.63	3632.25	-1133.63
4.5in Casing Production	0.00	8129.00	8129.00	73.00	8202.00	3632.25	-1133.63	3632.25	-1133.63

**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



**Clearance Report**  
**WAKEMAN 20-17-2CDH PWP (REV-A.0)**  
**Closest Approach**  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	-0.03	-15.00	-90.12	15.00	1.40	23.67	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	-0.03	-15.00	-90.12	15.00	1.73	15.26	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	-0.03	-15.00	-90.12	15.00	2.31	9.42	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	-0.03	-15.00	-90.12	15.00	2.92	6.72	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	-0.03	-15.00	-90.12	15.00	3.53	5.20	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	-0.03	-15.00	-90.12	15.00	4.15	4.24	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	-0.03	-15.00	-90.12	15.00	4.78	3.57	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	-0.03	-15.00	-90.12	15.00	5.40	3.09	PASS	
813.00†	813.00	0.00	0.00	813.00	813.00	-0.03	-15.00	-90.12	15.00	6.03	2.72	PASS	
913.00†	913.00	0.00	0.00	913.00	913.00	-0.03	-15.00	-90.12	15.00	6.65	2.43	PASS	
1013.00†	1013.00	0.00	0.00	1013.00	1013.00	-0.03	-15.00	-90.12	15.00	7.28	2.19	PASS	
1113.00†	1113.00	0.00	0.00	1113.00	1113.00	-0.03	-15.00	-90.12	15.00	7.91	2.00	PASS	
1213.00†	1213.00	0.00	0.00	1212.93	1212.93	-0.04	-15.03	-90.14	15.03	8.53	1.84	PASS	
1300.00	1300.00	0.00	0.00	1299.45	1299.43	-0.44	-16.68	-91.53	16.70	9.15	1.90	PASS	
1313.00†	1313.00	-0.01	-0.03	1312.37	1312.34	-0.56	-17.14	15.48	17.14	9.24	1.94	PASS	
1413.00†	1412.97	-0.66	-2.13	1411.67	1411.48	-1.91	-22.59	13.82	20.56	10.25	2.09	PASS	
1513.00†	1512.80	-2.36	-7.56	1510.85	1510.24	-4.07	-31.36	13.13	24.00	11.41	2.19	PASS	
1613.00†	1612.38	-5.09	-16.31	1609.91	1608.52	-7.06	-43.43	13.04	27.46	12.48	2.28	PASS	
1713.00†	1711.57	-8.85	-28.37	1708.86	1706.19	-10.85	-58.76	13.35	30.93	13.49	2.37	PASS	
1813.00†	1810.26	-13.64	-43.73	1807.69	1803.14	-15.44	-77.34	13.95	34.40	14.36	2.47	PASS	
1913.00†	1908.33	-19.45	-62.37	1906.41	1899.27	-20.83	-99.13	14.74	37.88	15.29	2.55	PASS	
2008.51	2001.31	-25.95	-83.21	2000.58	1990.20	-26.70	-122.89	15.63	41.21	16.15	2.62	PASS	
2013.00†	2005.66	-26.28	-84.26	2005.01	1994.46	-27.00	-124.08	15.68	41.37	16.18	2.63	PASS	
2113.00†	2102.62	-33.57	-107.63	2103.39	2088.50	-33.93	-152.14	16.08	46.69	16.90	2.84	PASS	
2213.00†	2199.58	-40.86	-131.00	2203.14	2183.32	-41.36	-182.18	15.99	53.70	17.55	3.15	PASS	
2313.00†	2296.53	-48.14	-154.37	2302.90	2278.15	-48.79	-212.23	15.92	60.71	18.26	3.42	PASS	
2413.00†	2393.49	-55.43	-177.74	2402.65	2372.98	-56.21	-242.28	15.87	67.72	18.97	3.67	PASS	
2513.00†	2490.45	-62.72	-201.11	2502.41	2467.81	-63.64	-272.32	15.82	74.73	19.70	3.90	PASS	
2613.00†	2587.41	-70.01	-224.49	2602.16	2562.65	-71.07	-302.37	15.78	81.73	20.45	4.10	PASS	
2713.00†	2684.36	-77.30	-247.86	2701.91	2657.48	-78.50	-332.42	15.75	88.74	21.23	4.29	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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†	2781.32	-84.59	-271.23	2801.67	2752.31	-85.92	-362.46	15.73	95.75	22.01	4.46	PASS
2913.00†	2878.28	-91.87	-294.60	2901.42	2847.14	-93.35	-392.51	15.70	102.76	22.81	4.62	PASS
3013.00†	2975.24	-99.16	-317.97	3001.18	2941.97	-100.78	-422.56	15.68	109.76	23.63	4.76	PASS
3113.00†	3072.19	-106.45	-341.34	3100.93	3036.80	-108.21	-452.60	15.66	116.77	24.45	4.89	PASS
3213.00†	3169.15	-113.74	-364.71	3200.68	3131.63	-115.64	-482.65	15.65	123.78	25.29	5.01	PASS
3313.00†	3266.11	-121.03	-388.08	3300.44	3226.46	-123.06	-512.70	15.63	130.79	26.13	5.12	PASS
3413.00†	3363.06	-128.32	-411.45	3400.19	3321.29	-130.49	-542.74	15.62	137.80	26.98	5.22	PASS
3513.00†	3460.02	-135.61	-434.82	3499.95	3416.13	-137.92	-572.79	15.61	144.80	27.84	5.31	PASS
3613.00†	3556.98	-142.89	-458.19	3599.70	3510.96	-145.35	-602.84	15.60	151.81	28.71	5.40	PASS
3713.00†	3653.94	-150.18	-481.56	3699.45	3605.79	-152.77	-632.88	15.59	158.82	29.58	5.48	PASS
3813.00†	3750.89	-157.47	-504.93	3799.21	3700.62	-160.20	-662.93	15.58	165.83	30.46	5.55	PASS
3913.00†	3847.85	-164.76	-528.30	3898.96	3795.45	-167.63	-692.97	15.57	172.84	31.34	5.62	PASS
4013.00†	3944.81	-172.05	-551.67	3998.72	3890.28	-175.06	-723.02	15.57	179.84	32.23	5.68	PASS
4113.00†	4041.77	-179.34	-575.04	4098.47	3985.11	-182.48	-753.07	15.56	186.85	33.12	5.74	PASS
4213.00†	4138.72	-186.62	-598.41	4198.23	4079.94	-189.91	-783.11	15.55	193.86	34.02	5.80	PASS
4313.00†	4235.68	-193.91	-621.78	4297.98	4174.77	-197.34	-813.16	15.55	200.87	34.92	5.85	PASS
4413.00†	4332.64	-201.20	-645.15	4397.73	4269.60	-204.77	-843.21	15.54	207.88	35.82	5.90	PASS
4513.00†	4429.59	-208.49	-668.52	4497.49	4364.44	-212.20	-873.25	15.54	214.88	36.73	5.95	PASS
4613.00†	4526.55	-215.78	-691.89	4597.24	4459.27	-219.62	-903.30	15.53	221.89	37.64	5.99	PASS
4713.00†	4623.51	-223.07	-715.26	4697.00	4554.10	-227.05	-933.35	15.53	228.90	38.55	6.03	PASS
4813.00†	4720.47	-230.35	-738.63	4796.75	4648.93	-234.48	-963.39	15.52	235.91	39.47	6.07	PASS
4913.00†	4817.42	-237.64	-762.00	4896.50	4743.76	-241.91	-993.44	15.52	242.92	40.38	6.10	PASS
5013.00†	4914.38	-244.93	-785.37	4996.26	4838.59	-249.33	-1023.49	15.52	249.93	41.30	6.14	PASS
5113.00†	5011.34	-252.22	-808.74	5096.01	4933.42	-256.76	-1053.53	15.51	256.93	42.23	6.17	PASS
5213.00†	5108.30	-259.51	-832.11	5195.77	5028.25	-264.19	-1083.58	15.51	263.94	43.15	6.20	PASS
5313.00†	5205.25	-266.80	-855.48	5295.52	5123.08	-271.62	-1113.63	15.51	270.95	44.07	6.23	PASS
5413.00†	5302.21	-274.09	-878.85	5395.28	5217.92	-279.04	-1143.67	15.50	277.96	45.00	6.26	PASS
5513.00†	5399.17	-281.37	-902.22	5495.03	5312.75	-286.47	-1173.72	15.50	284.97	45.93	6.29	PASS
5613.00†	5496.12	-288.66	-925.59	5594.78	5407.58	-293.90	-1203.76	15.50	291.97	46.86	6.31	PASS
5713.00†	5593.08	-295.95	-948.96	5694.54	5502.41	-301.33	-1233.81	15.49	298.98	47.79	6.34	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	
5813.00†	5690.04	-303.24	-972.33	5794.29	5597.24	-308.76	-1263.86	15.49	305.99	48.72	6.36	PASS	
5913.00†	5787.00	-310.53	-995.70	5894.05	5692.07	-316.18	-1293.90	15.49	313.00	49.66	6.38	PASS	
6013.00†	5883.95	-317.82	-1019.07	5993.80	5786.90	-323.61	-1323.95	15.49	320.01	50.59	6.40	PASS	
6113.00†	5980.91	-325.10	-1042.44	6093.55	5881.73	-331.04	-1354.00	15.49	327.01	51.53	6.42	PASS	
6213.00†	6077.87	-332.39	-1065.81	6193.31	5976.56	-338.47	-1384.04	15.48	334.02	52.46	6.44	PASS	
6313.00†	6174.83	-339.68	-1089.18	6293.06	6071.39	-345.89	-1414.09	15.48	341.03	53.40	6.46	PASS	
6413.00†	6271.78	-346.97	-1112.55	6392.82	6166.23	-353.32	-1444.14	15.48	348.04	54.34	6.48	PASS	
6513.00†	6368.74	-354.26	-1135.92	6492.57	6261.06	-360.75	-1474.18	15.48	355.05	55.28	6.49	PASS	
6613.00†	6465.70	-361.55	-1159.29	6592.32	6355.89	-368.18	-1504.23	15.48	362.05	56.22	6.51	PASS	
6713.00†	6562.65	-368.83	-1182.66	6692.08	6450.72	-375.60	-1534.28	15.47	369.06	57.16	6.52	PASS	
6813.00†	6659.61	-376.12	-1206.03	6791.83	6545.55	-383.03	-1564.32	15.47	376.07	58.11	6.54	PASS	
6913.00†	6756.57	-383.41	-1229.40	6891.59	6640.38	-390.46	-1594.37	15.47	383.08	59.05	6.55	PASS	
7013.00†	6853.53	-390.70	-1252.77	6991.34	6735.21	-397.89	-1624.42	15.47	390.09	59.99	6.57	PASS	
7113.00†	6950.48	-397.99	-1276.14	7091.12	6830.07	-405.24	-1654.47	15.48	397.09	60.94	6.58	PASS	
7202.84	7037.59	-404.54	-1297.14	7179.99	6914.65	-403.48	-1681.40	16.67	403.45	62.35	6.53	PASS	
7213.00†	7047.45	-405.19	-1299.52	7189.84	6923.98	-402.43	-1684.38	13.04	404.20	62.57	6.52	PASS	
7313.00†	7144.45	-401.99	-1323.06	7285.34	7013.02	-383.68	-1713.00	-22.87	411.90	64.35	6.46	PASS	
7413.00†	7239.38	-381.51	-1346.38	7378.47	7095.76	-350.69	-1739.83	-43.70	419.98	65.38	6.48	PASS	
7513.00†	7329.35	-344.36	-1368.75	7469.58	7170.68	-305.21	-1764.37	-52.76	428.05	65.52	6.59	PASS	
7613.00†	7411.63	-291.69	-1389.50	7559.01	7236.58	-248.98	-1786.21	-56.77	435.71	64.96	6.77	PASS	
7713.00†	7483.71	-225.08	-1407.99	7647.08	7292.51	-183.72	-1805.01	-58.59	442.59	64.02	6.98	PASS	
7813.00†	7543.41	-146.56	-1423.68	7734.09	7337.74	-111.12	-1820.53	-59.40	448.38	63.10	7.17	PASS	
7913.00†	7588.91	-58.52	-1436.07	7820.34	7371.70	-32.85	-1832.55	-59.76	452.81	62.63	7.30	PASS	
8013.00†	7618.83	36.36	-1444.80	7906.08	7393.96	49.45	-1840.92	-59.92	455.68	62.97	7.31	PASS	
8113.00†	7632.26	135.21	-1449.60	7991.58	7404.26	134.12	-1845.51	-60.03	456.87	64.32	7.17	PASS	
8142.54	7633.00	164.73	-1450.24	8016.83	7404.98	159.34	-1846.13	-60.06	456.90	64.89	7.11	PASS	
8213.00†	7633.00	235.18	-1451.34	8086.50	7405.00	229.01	-1847.23	-60.07	456.89	66.15	6.97	PASS	
8313.00†	7633.00	335.17	-1452.90	8186.50	7405.00	329.00	-1848.79	-60.07	456.89	68.27	6.75	PASS	
8413.00†	7633.00	435.16	-1454.46	8286.50	7405.00	428.99	-1850.34	-60.07	456.89	70.77	6.51	PASS	
8513.00†	7633.00	535.15	-1456.02	8386.50	7405.00	528.97	-1851.90	-60.07	456.89	73.61	6.26	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	
8613.00†	7633.00	635.13	-1457.58	8486.50	7405.00	628.96	-1853.46	-60.06	456.89	76.74	6.00	PASS	
8713.00†	7633.00	735.12	-1459.14	8586.50	7405.00	728.95	-1855.02	-60.06	456.89	80.14	5.74	PASS	
8813.00†	7633.00	835.11	-1460.70	8686.50	7405.00	828.94	-1856.58	-60.06	456.89	84.88	5.42	PASS	
8913.00†	7633.00	935.10	-1462.26	8786.50	7405.00	928.92	-1858.14	-60.06	456.89	87.60	5.25	PASS	
9013.00†	7633.00	1035.09	-1463.82	8886.50	7405.00	1028.91	-1859.70	-60.06	456.89	91.61	5.02	PASS	
9113.00†	7633.00	1135.07	-1465.38	8986.50	7405.00	1128.90	-1861.26	-60.06	456.89	95.77	4.80	PASS	
9213.00†	7633.00	1235.06	-1466.94	9086.50	7405.00	1228.89	-1862.82	-60.06	456.89	100.07	4.59	PASS	
9313.00†	7633.00	1335.05	-1468.50	9186.50	7405.00	1328.88	-1864.38	-60.06	456.89	104.48	4.40	PASS	
9413.00†	7633.00	1435.04	-1470.06	9286.50	7405.00	1428.86	-1865.94	-60.06	456.89	109.00	4.21	PASS	
9513.00†	7633.00	1535.02	-1471.62	9386.50	7405.00	1528.85	-1867.50	-60.06	456.89	113.61	4.04	PASS	
9613.00†	7633.00	1635.01	-1473.18	9486.50	7405.00	1628.84	-1869.06	-60.06	456.89	118.30	3.88	PASS	
9713.00†	7633.00	1735.00	-1474.74	9586.50	7405.00	1728.83	-1870.62	-60.06	456.89	123.07	3.73	PASS	
9813.00†	7633.00	1834.99	-1476.30	9686.50	7405.00	1828.81	-1872.17	-60.06	456.89	127.89	3.59	PASS	
9913.00†	7633.00	1934.98	-1477.86	9786.50	7405.00	1928.80	-1873.73	-60.06	456.89	132.77	3.45	PASS	
10013.00†	7633.00	2034.96	-1479.42	9886.50	7405.00	2028.79	-1875.29	-60.06	456.89	137.70	3.33	PASS	
10113.00†	7633.00	2134.95	-1480.98	9986.50	7405.00	2128.78	-1876.85	-60.06	456.89	142.68	3.21	PASS	
10213.00†	7633.00	2234.94	-1482.54	10086.50	7405.00	2228.77	-1878.41	-60.06	456.89	147.70	3.10	PASS	
10313.00†	7633.00	2334.93	-1484.10	10186.50	7405.00	2328.75	-1879.97	-60.06	456.89	152.75	3.00	PASS	
10413.00†	7633.00	2434.92	-1485.66	10286.50	7405.00	2428.74	-1881.53	-60.06	456.89	157.84	2.90	PASS	
10513.00†	7633.00	2534.90	-1487.22	10386.50	7405.00	2528.73	-1883.09	-60.06	456.89	162.95	2.81	PASS	
10613.00†	7633.00	2634.89	-1488.78	10486.50	7405.00	2628.72	-1884.65	-60.06	456.89	168.10	2.73	PASS	
10713.00†	7633.00	2734.88	-1490.34	10586.50	7405.00	2728.71	-1886.21	-60.06	456.89	173.27	2.64	PASS	
10813.00†	7633.00	2834.87	-1491.90	10686.50	7405.00	2828.69	-1887.77	-60.06	456.87	178.46	2.57	PASS	
10913.00†	7633.00	2934.85	-1493.46	10786.50	7405.00	2928.68	-1889.33	-60.06	456.87	183.67	2.49	PASS	
11013.00†	7633.00	3034.84	-1495.02	10886.50	7405.00	3028.67	-1890.89	-60.06	456.87	188.90	2.42	PASS	
11113.00†	7633.00	3134.83	-1496.58	10986.50	7405.00	3128.66	-1892.44	-60.06	456.87	194.15	2.36	PASS	
11213.00†	7633.00	3234.82	-1498.14	11086.50	7405.00	3228.64	-1894.00	-60.06	456.87	199.41	2.30	PASS	
11313.00†	7633.00	3334.81	-1499.70	11186.50	7405.00	3328.63	-1895.56	-60.06	456.87	204.69	2.24	PASS	
11413.00†	7633.00	3434.79	-1501.26	11286.50	7405.00	3428.62	-1897.12	-60.06	456.87	209.98	2.18	PASS	
11513.00†	7633.00	3534.78	-1502.82	11386.50	7405.00	3528.61	-1898.68	-60.06	456.87	215.28	2.13	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft





# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	
11613.00†	7633.00	3634.77	-1504.38	11486.50	7405.00	3628.60	-1900.24	-60.06	456.87	220.60	2.07	PASS	
11713.00†	7633.00	3734.76	-1505.94	11586.50	7405.00	3728.58	-1901.80	-60.06	456.87	225.93	2.03	PASS	
11813.00†	7633.00	3834.74	-1507.50	11686.50	7405.00	3828.57	-1903.36	-60.06	456.87	231.26	1.98	PASS	
11913.00†	7633.00	3934.73	-1509.06	11786.50	7405.00	3928.56	-1904.92	-60.06	456.87	236.61	1.93	PASS	
12013.00†	7633.00	4034.72	-1510.62	11886.50	7405.00	4028.55	-1906.48	-60.06	456.87	241.96	1.89	PASS	
12113.00†	7633.00	4134.71	-1512.18	11986.50	7405.00	4128.54	-1908.04	-60.06	456.86	247.33	1.85	PASS	
12213.00†	7633.00	4234.70	-1513.74	12086.50	7405.00	4228.52	-1909.60	-60.06	456.86	252.70	1.81	PASS	
12313.00†	7633.00	4334.68	-1515.30	12186.50	7405.00	4328.51	-1911.16	-60.06	456.86	258.08	1.77	PASS	
12413.00†	7633.00	4434.67	-1516.86	12286.50	7405.00	4428.50	-1912.71	-60.06	456.86	263.46	1.74	PASS	
12513.00†	7633.00	4534.66	-1518.42	12386.50	7405.00	4528.49	-1914.27	-60.06	456.86	268.85	1.70	PASS	
12613.00†	7633.00	4634.65	-1519.98	12486.50	7405.00	4628.47	-1915.83	-60.06	456.86	274.25	1.67	PASS	
12713.00†	7633.00	4734.64	-1521.54	12586.50	7405.00	4728.46	-1917.39	-60.06	456.86	279.66	1.64	PASS	
12813.00†	7633.00	4834.62	-1523.10	12686.50	7405.00	4828.45	-1918.95	-60.06	456.86	285.06	1.60	PASS	
12913.00†	7633.00	4934.61	-1524.66	12786.50	7405.00	4928.44	-1920.51	-60.06	456.86	290.48	1.57	PASS	
13013.00†	7633.00	5034.60	-1526.22	12886.50	7405.00	5028.43	-1922.07	-60.06	456.86	295.90	1.55	PASS	
13113.00†	7633.00	5134.59	-1527.78	12986.50	7405.00	5128.41	-1923.63	-60.06	456.86	301.32	1.52	PASS	
13213.00†	7633.00	5234.57	-1529.34	13086.50	7405.00	5228.40	-1925.19	-60.06	456.86	306.75	1.49	PASS	
13313.00†	7633.00	5334.56	-1530.90	13186.50	7405.00	5328.39	-1926.75	-60.06	456.86	312.18	1.46	PASS	
13413.00†	7633.00	5434.55	-1532.46	13286.50	7405.00	5428.38	-1928.31	-60.06	456.86	317.61	1.44	PASS	
13513.00†	7633.00	5534.54	-1534.02	13386.50	7405.00	5528.37	-1929.87	-60.06	456.85	323.05	1.42	PASS	
13613.00†	7633.00	5634.53	-1535.58	13486.50	7405.00	5628.35	-1931.43	-60.06	456.85	328.49	1.39	PASS	
13713.00†	7633.00	5734.51	-1537.14	13586.50	7405.00	5728.34	-1932.98	-60.06	456.85	333.94	1.37	PASS	
13813.00†	7633.00	5834.50	-1538.70	13686.50	7405.00	5828.33	-1934.54	-60.06	456.85	339.39	1.35	PASS	
13913.00†	7633.00	5934.49	-1540.26	13786.50	7405.00	5928.32	-1936.10	-60.06	456.85	344.84	1.33	PASS	
14013.00†	7633.00	6034.48	-1541.82	13886.50	7405.00	6028.30	-1937.66	-60.06	456.85	350.29	1.30	PASS	
14113.00†	7633.00	6134.46	-1543.38	13986.50	7405.00	6128.29	-1939.22	-60.06	456.85	355.75	1.28	PASS	
14213.00†	7633.00	6234.45	-1544.94	14086.50	7405.00	6228.28	-1940.78	-60.06	456.85	361.21	1.27	PASS	
14313.00†	7633.00	6334.44	-1546.50	14186.50	7405.00	6328.27	-1942.34	-60.06	456.85	366.67	1.25	PASS	
14413.00†	7633.00	6434.43	-1548.06	14286.50	7405.00	6428.26	-1943.90	-60.06	456.85	372.13	1.23	PASS	
14513.00†	7633.00	6534.42	-1549.62	14386.50	7405.00	6528.24	-1945.46	-60.06	456.85	377.60	1.21	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	
14613.00†	7633.00	6634.40	-1551.18	14486.50	7405.00	6628.23	-1947.02	-60.06	456.85	383.07	1.19	PASS	
14713.00†	7633.00	6734.39	-1552.74	14586.50	7405.00	6728.22	-1948.58	-60.06	456.85	388.54	1.18	PASS	
14813.00†	7633.00	6834.38	-1554.30	14686.50	7405.00	6828.21	-1950.14	-60.06	456.84	394.01	1.16	PASS	
14913.00†	7633.00	6934.37	-1555.86	14786.50	7405.00	6928.19	-1951.70	-60.06	456.84	399.49	1.14	PASS	
15013.00†	7633.00	7034.36	-1557.42	14886.50	7405.00	7028.18	-1953.25	-60.06	456.84	404.96	1.13	PASS	
15113.00†	7633.00	7134.34	-1558.98	14986.50	7405.00	7128.17	-1954.81	-60.06	456.84	410.44	1.11	PASS	
15213.00†	7633.00	7234.33	-1560.54	15086.50	7405.00	7228.16	-1956.37	-60.06	456.84	415.92	1.10	PASS	
15313.00†	7633.00	7334.32	-1562.10	15186.50	7405.00	7328.15	-1957.93	-60.06	456.84	421.40	1.08	PASS	
15413.00†	7633.00	7434.31	-1563.66	15286.50	7405.00	7428.13	-1959.49	-60.06	456.84	426.89	1.07	PASS	
15513.00†	7633.00	7534.29	-1565.22	15386.50	7405.00	7528.12	-1961.05	-60.06	456.84	432.37	1.06	PASS	
15613.00†	7633.00	7634.28	-1566.78	15486.50	7405.00	7628.11	-1962.61	-60.06	456.84	437.86	1.04	PASS	
15713.00†	7633.00	7734.27	-1568.34	15586.50	7405.00	7728.10	-1964.17	-60.06	456.84	443.35	1.03	PASS	
15813.00†	7633.00	7834.26	-1569.90	15686.50	7405.00	7828.09	-1965.73	-60.06	456.84	448.83	1.02	PASS	
15913.00†	7633.00	7934.25	-1571.46	15786.50	7405.00	7928.07	-1967.29	-60.06	456.84	454.32	1.01	PASS	
16013.00†	7633.00	8034.23	-1573.02	15886.50	7405.00	8028.06	-1968.85	-60.06	456.84	459.82	0.99	FAIL	
16113.00†	7633.00	8134.22	-1574.58	15986.50	7405.00	8128.05	-1970.41	-60.06	456.84	465.31	0.98	FAIL	
16213.00†	7633.00	8234.21	-1576.14	16086.50	7405.00	8228.04	-1971.97	-60.06	456.83	470.80	0.97	FAIL	
16313.00†	7633.00	8334.20	-1577.70	16186.50	7405.00	8328.02	-1973.52	-60.06	456.83	476.30	0.96	FAIL	
16413.00†	7633.00	8434.19	-1579.26	16286.50	7405.00	8428.01	-1975.08	-60.06	456.83	481.79	0.95	FAIL	
16513.00†	7633.00	8534.17	-1580.82	16386.50	7405.00	8528.00	-1976.64	-60.06	456.83	487.29	0.94	FAIL	
16613.00†	7633.00	8634.16	-1582.38	16486.50	7405.00	8627.99	-1978.20	-60.06	456.83	492.79	0.93	FAIL	
16713.00†	7633.00	8734.15	-1583.94	16586.50	7405.00	8727.98	-1979.76	-60.06	456.83	498.29	0.92	FAIL	
16813.00†	7633.00	8834.14	-1585.50	16686.50	7405.00	8827.96	-1981.32	-60.06	456.83	503.79	0.91	FAIL	
16913.00†	7633.00	8934.12	-1587.06	16786.50	7405.00	8927.95	-1982.88	-60.06	456.83	509.29	0.90	FAIL	
17013.00†	7633.00	9034.11	-1588.62	16886.50	7405.00	9027.94	-1984.44	-60.06	456.83	514.79	0.89	FAIL	
17113.00†	7633.00	9134.10	-1590.18	16986.50	7405.00	9127.93	-1986.00	-60.06	456.83	520.29	0.88	FAIL	
17213.00†	7633.00	9234.09	-1591.74	17086.50	7405.00	9227.92	-1987.56	-60.06	456.83	525.79	0.87	FAIL	
17313.00†	7633.00	9334.08	-1593.30	17186.50	7405.00	9327.90	-1989.12	-60.06	456.83	531.30	0.86	FAIL	
17413.00†	7633.00	9434.06	-1594.86	17286.50	7405.00	9427.89	-1990.68	-60.06	456.83	536.80	0.85	FAIL	
17513.00†	7633.00	9534.05	-1596.42	17386.50	7405.00	9527.88	-1992.24	-60.06	456.82	542.31	0.84	FAIL	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	
17613.00†	7633.00	9634.04	-1597.98	17486.50	7405.00	9627.87	-1993.79	-60.06	456.82	547.81	0.83	FAIL	
17713.00†	7633.00	9734.03	-1599.54	17586.50	7405.00	9727.85	-1995.35	-60.06	456.82	553.32	0.83	FAIL	
17813.00†	7633.00	9834.01	-1601.10	17686.50	7405.00	9827.84	-1996.91	-60.06	456.82	558.83	0.82	FAIL	
17913.00†	7633.00	9934.00	-1602.66	17786.50	7405.00	9927.83	-1998.47	-60.06	456.82	564.34	0.81	FAIL	
17954.40	7633.00	9975.39	-1603.31	17827.90	7405.00	9969.22	-1999.12	-60.06	456.82	566.62	0.81	FAIL	

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	-0.02	-9.15	-4.60	-27.67
8.5in Open Hole	1800.00	17835.13	16035.13	1795.62	N/A	-4.60	-27.67	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 20-17-2CDH PWP (REV-A.0)**  
**Closest Approach**  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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 20-17-2CDH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	0.03	14.97	89.89	14.97	1.40	23.62	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	0.03	14.97	89.89	14.97	1.73	15.24	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	0.03	14.97	89.89	14.97	2.31	9.41	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	0.03	14.97	89.89	14.97	2.91	6.71	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	0.03	14.97	89.89	14.97	3.53	5.19	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	0.03	14.97	89.89	14.97	4.15	4.23	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	0.03	14.97	89.89	14.97	4.78	3.57	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	0.03	14.97	89.89	14.97	5.40	3.08	PASS	
813.00†	813.00	0.00	0.00	813.00	813.00	0.03	14.97	89.89	14.97	6.03	2.71	PASS	
913.00†	913.00	0.00	0.00	913.00	913.00	0.03	14.97	89.89	14.97	6.65	2.42	PASS	
1013.00†	1013.00	0.00	0.00	1013.00	1013.00	0.03	14.97	89.89	14.97	7.28	2.19	PASS	
1113.00†	1113.00	0.00	0.00	1113.00	1113.00	0.03	14.97	89.89	14.97	7.90	2.00	PASS	
1213.00†	1213.00	0.00	0.00	1213.00	1213.00	0.03	14.97	89.89	14.97	8.53	1.83	PASS	
1300.00	1300.00	0.00	0.00	1300.00	1300.00	0.03	14.97	89.89	14.97	9.08	1.71	PASS	
1313.00†	1313.00	-0.01	-0.03	1313.00	1313.00	0.03	14.97	-162.82	15.00	9.16	1.70	PASS	
1413.00†	1412.97	-0.66	-2.13	1413.05	1413.05	0.02	14.95	-164.96	17.09	9.86	1.80	PASS	
1513.00†	1512.80	-2.36	-7.56	1513.62	1513.59	-0.72	12.85	-167.27	20.48	10.86	1.96	PASS	
1613.00†	1612.38	-5.09	-16.31	1614.32	1614.12	-2.63	7.42	-168.61	23.91	12.00	2.06	PASS	
1713.00†	1711.57	-8.85	-28.37	1715.13	1714.50	-5.72	-1.36	-169.34	27.35	13.07	2.16	PASS	
1813.00†	1810.26	-13.64	-43.73	1816.08	1814.61	-9.99	-13.48	-169.66	30.78	13.99	2.26	PASS	
1913.00†	1908.33	-19.45	-62.37	1917.14	1914.33	-15.43	-28.93	-169.70	34.21	14.96	2.35	PASS	
2008.51	2001.31	-25.95	-83.21	2013.77	2009.09	-21.72	-46.81	-169.54	37.47	15.86	2.43	PASS	
2013.00†	2005.66	-26.28	-84.26	2018.32	2013.53	-22.04	-47.72	-169.53	37.62	15.90	2.43	PASS	
2113.00†	2102.62	-33.57	-107.63	2119.36	2111.84	-29.78	-69.71	-168.71	39.21	16.59	2.42	PASS	
2213.00†	2199.58	-40.86	-131.00	2219.36	2208.87	-37.81	-92.51	-167.57	39.72	17.21	2.36	PASS	
2313.00†	2296.53	-48.14	-154.37	2319.36	2305.90	-45.83	-115.31	-166.46	40.23	17.88	2.30	PASS	
2413.00†	2393.49	-55.43	-177.74	2419.35	2402.93	-53.86	-138.12	-165.38	40.77	18.56	2.24	PASS	
2513.00†	2490.45	-62.72	-201.11	2519.35	2499.96	-61.88	-160.92	-164.32	41.32	19.29	2.19	PASS	
2613.00†	2587.41	-70.01	-224.49	2619.34	2596.99	-69.91	-183.72	-163.29	41.88	20.05	2.13	PASS	
2713.00†	2684.36	-77.30	-247.86	2719.34	2694.02	-77.93	-206.52	-162.29	42.45	20.85	2.07	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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†	2781.32	-84.59	-271.23	2819.33	2791.05	-85.96	-229.32	-161.32	43.04	21.68	2.02	PASS
2913.00†	2878.28	-91.87	-294.60	2919.33	2888.08	-93.99	-252.12	-160.37	43.64	22.55	1.97	PASS
3013.00†	2975.24	-99.16	-317.97	3019.32	2985.11	-102.01	-274.93	-159.45	44.25	23.45	1.91	PASS
3113.00†	3072.19	-106.45	-341.34	3119.32	3082.14	-110.04	-297.73	-158.56	44.87	24.38	1.87	PASS
3213.00†	3169.15	-113.74	-364.71	3219.32	3179.17	-118.06	-320.53	-157.68	45.51	25.35	1.82	PASS
3313.00†	3266.11	-121.03	-388.08	3319.31	3276.20	-126.09	-343.33	-156.84	46.15	26.35	1.77	PASS
3413.00†	3363.06	-128.32	-411.45	3419.31	3373.23	-134.11	-366.13	-156.01	46.80	27.37	1.73	PASS
3513.00†	3460.02	-136.61	-434.82	3519.30	3470.26	-142.14	-388.93	-155.21	47.46	28.42	1.69	PASS
3613.00†	3556.98	-142.89	-458.19	3619.30	3567.29	-150.17	-411.74	-154.44	48.13	29.50	1.65	PASS
3713.00†	3653.94	-150.18	-481.56	3719.29	3664.32	-158.19	-434.54	-153.68	48.81	30.61	1.61	PASS
3813.00†	3750.89	-157.47	-504.93	3819.29	3761.35	-166.22	-457.34	-152.94	49.50	31.74	1.57	PASS
3913.00†	3847.85	-164.76	-528.30	3919.29	3858.38	-174.24	-480.14	-152.23	50.20	32.89	1.54	PASS
4013.00†	3944.81	-172.05	-551.67	4019.28	3955.41	-182.27	-502.94	-151.53	50.90	34.07	1.50	PASS
4113.00†	4041.77	-179.34	-575.04	4119.28	4052.44	-190.29	-525.74	-150.85	51.61	35.26	1.47	PASS
4213.00†	4138.72	-186.62	-598.41	4219.27	4149.47	-198.32	-548.55	-150.20	52.33	36.48	1.44	PASS
4313.00†	4235.68	-193.91	-621.78	4319.27	4246.50	-206.35	-571.35	-149.56	53.06	37.71	1.41	PASS
4413.00†	4332.64	-201.20	-645.15	4419.26	4343.53	-214.37	-594.15	-148.93	53.79	38.97	1.39	PASS
4513.00†	4429.59	-208.49	-668.52	4519.26	4440.56	-222.40	-616.95	-148.32	54.52	40.24	1.36	PASS
4613.00†	4526.55	-215.78	-691.89	4619.26	4537.59	-230.42	-639.75	-147.74	55.27	41.52	1.34	PASS
4713.00†	4623.51	-223.07	-715.26	4719.25	4634.62	-238.45	-662.55	-147.16	56.02	42.83	1.31	PASS
4813.00†	4720.47	-230.35	-738.63	4819.25	4731.65	-246.47	-685.36	-146.60	56.77	44.14	1.29	PASS
4913.00†	4817.42	-237.64	-762.00	4919.24	4828.68	-254.50	-708.16	-146.06	57.53	45.47	1.27	PASS
5013.00†	4914.38	-244.93	-785.37	5019.24	4925.71	-262.53	-730.96	-145.53	58.30	46.81	1.25	PASS
5113.00†	5011.34	-252.22	-808.74	5119.23	5022.74	-270.55	-753.76	-145.01	59.07	48.17	1.23	PASS
5213.00†	5108.30	-259.51	-832.11	5219.23	5119.77	-278.58	-776.56	-144.51	59.84	49.53	1.21	PASS
5313.00†	5205.25	-266.80	-855.48	5319.22	5216.80	-286.60	-799.36	-144.02	60.62	50.91	1.19	PASS
5413.00†	5302.21	-274.09	-878.85	5419.22	5313.83	-294.63	-822.17	-143.54	61.40	52.30	1.18	PASS
5513.00†	5399.17	-281.37	-902.22	5519.22	5410.86	-302.65	-844.97	-143.07	62.19	53.69	1.16	PASS
5613.00†	5496.12	-288.66	-925.59	5619.21	5507.89	-310.68	-867.77	-142.62	62.98	55.10	1.14	PASS
5713.00†	5593.08	-295.95	-948.96	5719.21	5604.92	-318.71	-890.57	-142.18	63.78	56.52	1.13	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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†	5690.04	-303.24	-972.33	5819.20	5701.95	-326.73	-913.37	-141.75	64.58	57.94	1.12	PASS	
5913.00†	5787.00	-310.53	-995.70	5919.20	5798.98	-334.76	-936.17	-141.32	65.38	59.37	1.10	PASS	
6013.00†	5883.95	-317.82	-1019.07	6019.19	5896.01	-342.78	-958.98	-140.91	66.18	60.81	1.09	PASS	
6113.00†	5980.91	-325.10	-1042.44	6119.19	5993.04	-350.81	-981.78	-140.51	66.99	62.25	1.08	PASS	
6213.00†	6077.87	-332.39	-1065.81	6219.19	6090.07	-358.83	-1004.58	-140.12	67.81	63.71	1.07	PASS	
6313.00†	6174.83	-339.68	-1089.18	6319.18	6187.10	-366.86	-1027.38	-139.74	68.62	65.16	1.05	PASS	
6413.00†	6271.78	-346.97	-1112.55	6419.18	6284.13	-374.89	-1050.18	-139.37	69.44	66.63	1.04	PASS	
6513.00†	6368.74	-354.26	-1135.92	6519.17	6381.16	-382.91	-1072.98	-139.00	70.26	68.10	1.03	PASS	
6613.00†	6465.70	-361.55	-1159.29	6619.17	6478.19	-390.94	-1095.79	-138.65	71.09	69.57	1.02	PASS	
6713.00†	6562.65	-368.83	-1182.66	6719.16	6575.22	-398.96	-1118.59	-138.30	71.91	71.05	1.01	PASS	
6803.50†	6650.40	-375.43	-1203.81	6811.90	6665.28	-404.95	-1139.78	-139.02	72.06	71.67	1.01	PASS	
6813.00†	6659.61	-376.12	-1206.03	6821.91	6675.02	-404.96	-1142.09	-139.56	71.82	71.39	1.01	PASS	
6913.00†	6756.57	-383.41	-1229.40	6924.47	6774.16	-394.94	-1165.79	-153.42	67.00	63.06	1.06	PASS	
7013.00†	6853.53	-390.70	-1252.77	7018.18	6861.84	-370.05	-1187.11	179.86	69.33	54.26	1.28	PASS	
7113.00†	6950.48	-397.99	-1276.14	7099.93	6934.17	-336.58	-1204.99	154.81	95.40	62.98	1.52	PASS	
7202.84	7037.59	-404.54	-1297.14	7162.69	6986.09	-303.88	-1218.01	141.04	138.00	68.67	2.02	PASS	
7213.00†	7047.45	-405.19	-1299.52	7169.22	6991.29	-300.15	-1219.33	135.60	143.59	68.97	2.09	PASS	
7313.00†	7144.45	-401.99	-1323.06	7232.28	7039.18	-261.03	-1231.54	86.47	198.31	69.52	2.87	PASS	
7413.00†	7239.38	-381.51	-1346.38	7293.52	7081.39	-218.08	-1242.49	57.30	249.92	68.23	3.69	PASS	
7513.00†	7329.35	-344.36	-1368.75	7353.43	7118.11	-171.79	-1252.22	42.41	296.61	65.93	4.54	PASS	
7613.00†	7411.63	-291.69	-1389.50	7412.35	7149.43	-122.65	-1260.73	34.09	337.49	63.11	5.40	PASS	
7713.00†	7483.71	-225.08	-1407.99	7470.53	7175.36	-71.10	-1268.02	29.04	372.00	60.15	6.25	PASS	
7813.00†	7543.41	-146.56	-1423.68	7528.18	7195.89	-17.60	-1274.07	25.83	399.73	57.43	7.04	PASS	
7913.00†	7588.91	-58.52	-1436.07	7585.44	7210.99	37.40	-1278.87	23.80	420.40	55.20	7.70	PASS	
8013.00†	7618.83	36.36	-1444.80	7642.46	7220.64	93.46	-1282.40	22.61	433.80	53.71	8.17	PASS	
8113.00†	7632.26	135.21	-1449.60	7699.33	7224.81	150.11	-1284.65	22.08	439.82	53.19	8.37	PASS	
8142.54	7633.00	164.73	-1450.24	7717.63	7225.00	168.40	-1285.10	22.04	440.17	53.12	8.39	PASS	
8213.00†	7633.00	235.18	-1451.34	7788.09	7225.00	238.85	-1286.67	21.98	439.99	53.48	8.32	PASS	
8313.00†	7633.00	335.17	-1452.90	7888.09	7225.00	338.82	-1288.90	21.90	439.74	54.13	8.22	PASS	
8413.00†	7633.00	435.16	-1454.46	7988.09	7225.00	438.79	-1291.12	21.82	439.49	54.95	8.09	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	
8513.00†	7633.00	535.15	-1456.02	8088.09	7225.00	538.77	-1293.35	21.74	439.25	55.93	7.94	PASS	
8613.00†	7633.00	635.13	-1457.58	8188.08	7225.00	638.74	-1295.57	21.66	439.00	57.07	7.78	PASS	
8713.00†	7633.00	735.12	-1459.14	8288.08	7225.00	738.71	-1297.80	21.58	438.76	58.34	7.60	PASS	
8813.00†	7633.00	835.11	-1460.70	8388.08	7225.00	838.69	-1300.02	21.50	438.51	59.74	7.42	PASS	
8913.00†	7633.00	935.10	-1462.26	8488.08	7225.00	938.66	-1302.24	21.42	438.27	61.26	7.23	PASS	
9013.00†	7633.00	1035.09	-1463.82	8588.08	7225.00	1038.63	-1304.47	21.34	438.03	63.09	7.01	PASS	
9113.00†	7633.00	1135.07	-1465.38	8688.07	7225.00	1138.60	-1306.69	21.26	437.79	64.62	6.84	PASS	
9213.00†	7633.00	1235.06	-1466.94	8788.07	7225.00	1238.58	-1308.92	21.18	437.55	66.44	6.65	PASS	
9313.00†	7633.00	1335.05	-1468.50	8888.07	7225.00	1338.55	-1311.14	21.09	437.31	68.33	6.46	PASS	
9413.00†	7633.00	1435.04	-1470.06	8988.07	7225.00	1438.52	-1313.37	21.01	437.07	70.31	6.27	PASS	
9513.00†	7633.00	1535.02	-1471.62	9088.06	7225.00	1538.50	-1315.59	20.93	436.83	72.34	6.09	PASS	
9613.00†	7633.00	1635.01	-1473.18	9188.06	7225.00	1638.47	-1317.82	20.85	436.59	74.44	5.91	PASS	
9713.00†	7633.00	1735.00	-1474.74	9288.06	7225.00	1738.44	-1320.04	20.77	436.36	76.59	5.74	PASS	
9813.00†	7633.00	1834.99	-1476.30	9388.06	7225.00	1838.42	-1322.27	20.69	436.12	78.79	5.58	PASS	
9913.00†	7633.00	1934.98	-1477.86	9488.06	7225.00	1938.39	-1324.49	20.61	435.89	81.02	5.42	PASS	
10013.00†	7633.00	2034.96	-1479.42	9588.05	7225.00	2038.36	-1326.72	20.52	435.65	83.30	5.27	PASS	
10113.00†	7633.00	2134.95	-1480.98	9688.05	7225.00	2138.33	-1328.94	20.44	435.42	85.61	5.12	PASS	
10213.00†	7633.00	2234.94	-1482.54	9788.05	7225.00	2238.31	-1331.16	20.36	435.19	87.95	4.98	PASS	
10313.00†	7633.00	2334.93	-1484.10	9888.05	7225.00	2338.28	-1333.39	20.28	434.96	90.32	4.85	PASS	
10413.00†	7633.00	2434.92	-1485.66	9988.05	7225.00	2438.25	-1335.61	20.20	434.73	92.71	4.72	PASS	
10513.00†	7633.00	2534.90	-1487.22	10088.04	7225.00	2538.23	-1337.84	20.11	434.50	95.12	4.59	PASS	
10613.00†	7633.00	2634.89	-1488.78	10188.04	7225.00	2638.20	-1340.06	20.03	434.27	97.55	4.48	PASS	
10713.00†	7633.00	2734.88	-1490.34	10288.04	7225.00	2738.17	-1342.29	19.95	434.04	99.99	4.36	PASS	
10813.00†	7633.00	2834.87	-1491.90	10388.04	7225.00	2838.15	-1344.51	19.87	433.82	102.45	4.26	PASS	
10913.00†	7633.00	2934.85	-1493.46	10488.03	7225.00	2938.12	-1346.74	19.78	433.59	104.93	4.15	PASS	
11013.00†	7633.00	3034.84	-1495.02	10588.03	7225.00	3038.09	-1348.96	19.70	433.37	107.41	4.05	PASS	
11113.00†	7633.00	3134.83	-1496.58	10688.03	7225.00	3138.07	-1351.19	19.62	433.14	109.90	3.96	PASS	
11213.00†	7633.00	3234.82	-1498.14	10788.03	7225.00	3238.04	-1353.41	19.54	432.92	112.40	3.87	PASS	
11313.00†	7633.00	3334.81	-1499.70	10888.03	7225.00	3338.01	-1355.64	19.45	432.70	114.90	3.78	PASS	
11413.00†	7633.00	3434.79	-1501.26	10988.02	7225.00	3437.98	-1357.86	19.37	432.48	117.41	3.70	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft





# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	
11513.00†	7633.00	3534.78	-1502.82	11088.02	7225.00	3537.96	-1360.09	19.29	432.26	119.93	3.62	PASS	
11613.00†	7633.00	3634.77	-1504.38	11188.02	7225.00	3637.93	-1362.31	19.20	432.04	122.45	3.54	PASS	
11713.00†	7633.00	3734.76	-1505.94	11288.02	7225.00	3737.90	-1364.53	19.12	431.82	124.97	3.47	PASS	
11813.00†	7633.00	3834.74	-1507.50	11388.01	7225.00	3837.88	-1366.76	19.04	431.60	127.49	3.40	PASS	
11913.00†	7633.00	3934.73	-1509.06	11488.01	7225.00	3937.85	-1368.98	18.95	431.39	130.01	3.33	PASS	
12013.00†	7633.00	4034.72	-1510.62	11588.01	7225.00	4037.82	-1371.21	18.87	431.17	132.54	3.27	PASS	
12113.00†	7633.00	4134.71	-1512.18	11688.01	7225.00	4137.80	-1373.43	18.79	430.96	135.06	3.20	PASS	
12213.00†	7633.00	4234.70	-1513.74	11788.01	7225.00	4237.77	-1375.66	18.70	430.74	137.58	3.14	PASS	
12313.00†	7633.00	4334.68	-1515.30	11888.00	7225.00	4337.74	-1377.88	18.62	430.53	140.10	3.08	PASS	
12413.00†	7633.00	4434.67	-1516.86	11988.00	7225.00	4437.71	-1380.11	18.53	430.32	142.62	3.03	PASS	
12513.00†	7633.00	4534.66	-1518.42	12088.00	7225.00	4537.69	-1382.33	18.45	430.11	145.14	2.97	PASS	
12613.00†	7633.00	4634.65	-1519.98	12188.00	7225.00	4637.66	-1384.56	18.37	429.90	147.65	2.92	PASS	
12713.00†	7633.00	4734.64	-1521.54	12287.99	7225.00	4737.63	-1386.78	18.28	429.69	150.16	2.87	PASS	
12813.00†	7633.00	4834.62	-1523.10	12387.99	7225.00	4837.61	-1389.01	18.20	429.48	152.67	2.82	PASS	
12913.00†	7633.00	4934.61	-1524.66	12487.99	7225.00	4937.58	-1391.23	18.11	429.27	155.17	2.77	PASS	
13013.00†	7633.00	5034.60	-1526.22	12587.99	7225.00	5037.55	-1393.45	18.03	429.07	157.67	2.73	PASS	
13113.00†	7633.00	5134.59	-1527.78	12687.99	7225.00	5137.53	-1395.68	17.94	428.86	160.16	2.69	PASS	
13213.00†	7633.00	5234.57	-1529.34	12787.98	7225.00	5237.50	-1397.90	17.86	428.66	162.65	2.64	PASS	
13313.00†	7633.00	5334.56	-1530.90	12887.98	7225.00	5337.47	-1400.13	17.77	428.45	165.14	2.60	PASS	
13413.00†	7633.00	5434.55	-1532.46	12987.98	7225.00	5437.45	-1402.35	17.69	428.25	167.62	2.56	PASS	
13513.00†	7633.00	5534.54	-1534.02	13087.98	7225.00	5537.42	-1404.58	17.61	428.05	170.09	2.52	PASS	
13613.00†	7633.00	5634.53	-1535.58	13187.97	7225.00	5637.39	-1406.80	17.52	427.85	172.56	2.49	PASS	
13713.00†	7633.00	5734.51	-1537.14	13287.97	7225.00	5737.36	-1409.03	17.44	427.65	175.02	2.45	PASS	
13813.00†	7633.00	5834.50	-1538.70	13387.97	7225.00	5837.34	-1411.25	17.35	427.45	177.48	2.41	PASS	
13913.00†	7633.00	5934.49	-1540.26	13487.97	7225.00	5937.31	-1413.48	17.27	427.25	179.93	2.38	PASS	
14013.00†	7633.00	6034.48	-1541.82	13587.97	7225.00	6037.28	-1415.70	17.18	427.06	182.38	2.35	PASS	
14113.00†	7633.00	6134.46	-1543.38	13687.96	7225.00	6137.26	-1417.93	17.10	426.86	184.82	2.31	PASS	
14213.00†	7633.00	6234.45	-1544.94	13787.96	7225.00	6237.23	-1420.15	17.01	426.67	187.25	2.28	PASS	
14313.00†	7633.00	6334.44	-1546.50	13887.96	7225.00	6337.20	-1422.37	16.93	426.47	189.67	2.25	PASS	
14413.00†	7633.00	6434.43	-1548.06	13987.96	7225.00	6437.18	-1424.60	16.84	426.28	192.09	2.22	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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		
14513.00†	7633.00	6534.42	-1549.62	14087.95	7225.00	6537.15	-1426.82	16.75	426.09	194.51	2.19	PASS		
14613.00†	7633.00	6634.40	-1551.18	14187.95	7225.00	6637.12	-1429.05	16.67	425.90	196.91	2.17	PASS		
14713.00†	7633.00	6734.39	-1552.74	14287.95	7225.00	6737.09	-1431.27	16.58	425.71	199.31	2.14	PASS		
14813.00†	7633.00	6834.38	-1554.30	14387.95	7225.00	6837.07	-1433.50	16.50	425.52	201.71	2.11	PASS		
14913.00†	7633.00	6934.37	-1555.86	14487.95	7225.00	6937.04	-1435.72	16.41	425.33	204.09	2.09	PASS		
15013.00†	7633.00	7034.36	-1557.42	14587.94	7225.00	7037.01	-1437.95	16.33	425.14	206.47	2.06	PASS		
15113.00†	7633.00	7134.34	-1558.98	14687.94	7225.00	7136.99	-1440.17	16.24	424.95	208.85	2.04	PASS		
15213.00†	7633.00	7234.33	-1560.54	14787.94	7225.00	7236.96	-1442.40	16.15	424.77	211.21	2.01	PASS		
15313.00†	7633.00	7334.32	-1562.10	14887.94	7225.00	7336.93	-1444.62	16.07	424.59	213.57	1.99	PASS		
15413.00†	7633.00	7434.31	-1563.66	14987.93	7225.00	7436.91	-1446.85	15.98	424.40	215.92	1.97	PASS		
15513.00†	7633.00	7534.29	-1565.22	15087.93	7225.00	7536.88	-1449.07	15.89	424.22	218.26	1.95	PASS		
15613.00†	7633.00	7634.28	-1566.78	15187.93	7225.00	7636.85	-1451.30	15.81	424.04	220.60	1.93	PASS		
15713.00†	7633.00	7734.27	-1568.34	15287.93	7225.00	7736.83	-1453.52	15.72	423.86	222.93	1.90	PASS		
15813.00†	7633.00	7834.26	-1569.90	15387.93	7225.00	7836.80	-1455.74	15.64	423.68	225.25	1.88	PASS		
15913.00†	7633.00	7934.25	-1571.46	15487.92	7225.00	7936.77	-1457.97	15.55	423.50	227.57	1.86	PASS		
16013.00†	7633.00	8034.23	-1573.02	15587.92	7225.00	8036.74	-1460.19	15.46	423.32	229.88	1.84	PASS		
16113.00†	7633.00	8134.22	-1574.58	15687.92	7225.00	8136.72	-1462.42	15.38	423.14	232.18	1.83	PASS		
16213.00†	7633.00	8234.21	-1576.14	15787.92	7225.00	8236.69	-1464.64	15.29	422.97	234.47	1.81	PASS		
16313.00†	7633.00	8334.20	-1577.70	15887.91	7225.00	8336.66	-1466.87	15.20	422.79	236.76	1.79	PASS		
16413.00†	7633.00	8434.19	-1579.26	15987.91	7225.00	8436.64	-1469.09	15.11	422.62	239.04	1.77	PASS		
16513.00†	7633.00	8534.17	-1580.82	16087.91	7225.00	8536.61	-1471.32	15.03	422.45	241.31	1.75	PASS		
16613.00†	7633.00	8634.16	-1582.38	16187.91	7225.00	8636.58	-1473.54	14.94	422.28	243.57	1.74	PASS		
16713.00†	7633.00	8734.15	-1583.94	16287.91	7225.00	8736.56	-1475.77	14.85	422.10	245.83	1.72	PASS		
16813.00†	7633.00	8834.14	-1585.50	16387.90	7225.00	8836.53	-1477.99	14.77	421.93	248.08	1.70	PASS		
16913.00†	7633.00	8934.12	-1587.06	16487.90	7225.00	8936.50	-1480.22	14.68	421.77	250.33	1.69	PASS		
17013.00†	7633.00	9034.11	-1588.62	16587.90	7225.00	9036.47	-1482.44	14.59	421.60	252.56	1.67	PASS		
17113.00†	7633.00	9134.10	-1590.18	16687.90	7225.00	9136.45	-1484.66	14.50	421.43	254.79	1.66	PASS		
17213.00†	7633.00	9234.09	-1591.74	16787.89	7225.00	9236.42	-1486.89	14.42	421.26	257.01	1.64	PASS		
17313.00†	7633.00	9334.08	-1593.30	16887.89	7225.00	9336.39	-1489.11	14.33	421.10	259.23	1.63	PASS		
17413.00†	7633.00	9434.06	-1594.86	16987.89	7225.00	9436.37	-1491.34	14.24	420.94	261.44	1.61	PASS		

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	
17513.00†	7633.00	9534.05	-1596.42	17087.89	7225.00	9536.34	-1493.56	14.15	420.77	263.64	1.60	PASS	
17613.00†	7633.00	9634.04	-1597.98	17187.89	7225.00	9636.31	-1495.79	14.07	420.61	265.83	1.58	PASS	
17713.00†	7633.00	9734.03	-1599.54	17287.88	7225.00	9736.29	-1498.01	13.98	420.45	268.02	1.57	PASS	
17813.00†	7633.00	9834.01	-1601.10	17387.88	7225.00	9836.26	-1500.24	13.89	420.29	270.20	1.56	PASS	
17913.00†	7633.00	9934.00	-1602.66	17487.88	7225.00	9936.23	-1502.46	13.80	420.13	272.38	1.54	PASS	
17954.40	7633.00	9975.39	-1603.31	17526.80	7225.00	9975.14	-1503.33	13.77	420.07	273.00	1.54	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	0.02	9.13	-2.80	1.11
8.5in Open Hole	1800.00	17526.80	15726.80	1798.70	N/A	-2.80	1.11	N/A	N/A

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

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



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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

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

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



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	-0.06	-29.95	-90.11	29.95	1.40	48.57	PASS	
113.00†	113.00	0.00	0.00	116.00	113.00	-0.06	-29.95	-90.11	29.95	1.73	31.32	PASS	
213.00†	213.00	0.00	0.00	216.00	213.00	-0.06	-29.95	-90.11	29.95	2.31	19.33	PASS	
313.00†	313.00	0.00	0.00	316.00	313.00	-0.06	-29.95	-90.11	29.95	2.92	13.79	PASS	
413.00†	413.00	0.00	0.00	416.00	413.00	-0.06	-29.95	-90.11	29.95	3.53	10.67	PASS	
513.00†	513.00	0.00	0.00	516.00	513.00	-0.06	-29.95	-90.11	29.95	4.15	8.70	PASS	
613.00†	613.00	0.00	0.00	616.00	613.00	-0.06	-29.95	-90.11	29.95	4.78	7.33	PASS	
713.00†	713.00	0.00	0.00	716.00	713.00	-0.06	-29.95	-90.11	29.95	5.40	6.34	PASS	
813.00†	813.00	0.00	0.00	816.00	813.00	-0.06	-29.95	-90.11	29.95	6.03	5.58	PASS	
913.00†	913.00	0.00	0.00	916.00	913.00	-0.06	-29.95	-90.11	29.95	6.65	4.98	PASS	
1013.00†	1013.00	0.00	0.00	1015.84	1012.84	-0.06	-29.99	-90.12	29.99	7.28	4.51	PASS	
1113.00†	1113.00	0.00	0.00	1114.76	1111.73	-0.51	-32.20	-90.92	32.23	8.01	4.36	PASS	
1213.00†	1213.00	0.00	0.00	1213.41	1210.22	-1.64	-37.73	-92.49	37.87	8.98	4.53	PASS	
1300.00	1300.00	0.00	0.00	1298.84	1295.30	-3.16	-45.21	-94.00	45.56	9.78	4.99	PASS	
1313.00†	1313.00	-0.01	-0.03	1311.56	1307.95	-3.43	-46.53	13.11	46.90	9.89	5.07	PASS	
1413.00†	1412.97	-0.66	-2.13	1409.26	1404.87	-5.87	-58.54	11.99	57.23	10.83	5.63	PASS	
1513.00†	1512.80	-2.36	-7.56	1506.62	1500.98	-8.96	-73.73	11.50	67.54	11.92	6.00	PASS	
1613.00†	1612.38	-5.09	-16.31	1603.64	1596.18	-12.69	-92.04	11.39	77.81	12.95	6.34	PASS	
1713.00†	1711.57	-8.85	-28.37	1700.33	1690.38	-17.04	-113.41	11.53	88.03	13.91	6.65	PASS	
1813.00†	1810.26	-13.64	-43.73	1796.70	1783.47	-22.00	-137.81	11.83	98.17	14.80	6.94	PASS	
1913.00†	1908.33	-19.45	-62.37	1892.75	1875.37	-27.57	-165.16	12.25	108.25	15.65	7.20	PASS	
2008.51	2001.31	-25.95	-83.21	1984.19	1961.95	-33.43	-193.99	12.74	117.80	16.48	7.43	PASS	
2013.00†	2005.66	-26.28	-84.26	1988.48	1965.98	-33.72	-195.41	12.76	118.25	16.51	7.44	PASS	
2113.00†	2102.62	-33.57	-107.63	2085.89	2057.24	-40.51	-228.80	13.23	129.57	17.19	7.82	PASS	
2213.00†	2199.58	-40.86	-131.00	2185.20	2150.14	-47.51	-263.19	13.60	141.29	17.84	8.20	PASS	
2313.00†	2296.53	-48.14	-154.37	2284.51	2243.04	-54.51	-297.58	13.92	153.01	18.54	8.54	PASS	
2413.00†	2393.49	-55.43	-177.74	2383.82	2335.94	-61.51	-331.97	14.20	164.73	19.26	8.84	PASS	
2513.00†	2490.45	-62.72	-201.11	2483.12	2428.84	-68.50	-366.37	14.43	176.46	20.02	9.10	PASS	
2613.00†	2587.41	-70.01	-224.49	2582.43	2521.73	-75.50	-400.76	14.64	188.19	20.79	9.34	PASS	
2713.00†	2684.36	-77.30	-247.86	2681.74	2614.63	-82.50	-435.15	14.82	199.92	21.59	9.54	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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†	2781.32	-84.59	-271.23	2781.05	2707.53	-89.50	-469.54	14.99	211.66	22.40	9.73	PASS
2913.00†	2878.28	-91.87	-294.60	2880.35	2800.43	-96.49	-503.94	15.13	223.39	23.23	9.89	PASS
3013.00†	2975.24	-99.16	-317.97	2979.66	2893.33	-103.49	-538.33	15.27	235.13	24.07	10.03	PASS
3113.00†	3072.19	-106.45	-341.34	3078.97	2986.23	-110.49	-572.72	15.38	246.87	24.93	10.16	PASS
3213.00†	3169.15	-113.74	-364.71	3178.28	3079.13	-117.49	-607.11	15.49	258.61	25.80	10.28	PASS
3313.00†	3266.11	-121.03	-388.08	3277.58	3172.03	-124.48	-641.50	15.59	270.35	26.68	10.38	PASS
3413.00†	3363.06	-128.32	-411.45	3376.89	3264.92	-131.48	-675.90	15.68	282.09	27.58	10.47	PASS
3513.00†	3460.02	-135.61	-434.82	3476.20	3357.82	-138.48	-710.29	15.76	293.83	28.48	10.56	PASS
3613.00†	3556.98	-142.89	-458.19	3575.51	3450.72	-145.47	-744.68	15.84	305.57	29.38	10.63	PASS
3713.00†	3653.94	-150.18	-481.56	3674.81	3543.62	-152.47	-779.07	15.91	317.32	30.30	10.70	PASS
3813.00†	3750.89	-157.47	-504.93	3774.12	3636.52	-159.47	-813.46	15.98	329.06	31.22	10.76	PASS
3913.00†	3847.85	-164.76	-528.30	3873.43	3729.42	-166.47	-847.86	16.04	340.80	32.15	10.82	PASS
4013.00†	3944.81	-172.05	-551.67	3972.73	3822.32	-173.46	-882.25	16.10	352.55	33.08	10.87	PASS
4113.00†	4041.77	-179.34	-575.04	4072.04	3915.22	-180.46	-916.64	16.15	364.29	34.02	10.92	PASS
4213.00†	4138.72	-186.62	-598.41	4171.35	4008.11	-187.46	-951.03	16.20	376.04	34.96	10.96	PASS
4313.00†	4235.68	-193.91	-621.78	4270.66	4101.01	-194.46	-985.42	16.25	387.78	35.91	11.00	PASS
4413.00†	4332.64	-201.20	-645.15	4369.96	4193.91	-201.45	-1019.82	16.29	399.52	36.86	11.03	PASS
4513.00†	4429.59	-208.49	-668.52	4469.27	4286.81	-208.45	-1054.21	16.33	411.27	37.81	11.06	PASS
4613.00†	4526.55	-215.78	-691.89	4568.58	4379.71	-215.45	-1088.60	16.37	423.02	38.77	11.09	PASS
4713.00†	4623.51	-223.07	-715.26	4667.89	4472.61	-222.45	-1122.99	16.41	434.76	39.73	11.12	PASS
4813.00†	4720.47	-230.35	-738.63	4767.19	4565.51	-229.44	-1157.38	16.45	446.51	40.70	11.15	PASS
4913.00†	4817.42	-237.64	-762.00	4866.50	4658.41	-236.44	-1191.78	16.48	458.25	41.66	11.17	PASS
5013.00†	4914.38	-244.93	-785.37	4965.81	4751.31	-243.44	-1226.17	16.51	470.00	42.63	11.19	PASS
5113.00†	5011.34	-252.22	-808.74	5065.12	4844.20	-250.43	-1260.56	16.54	481.75	43.60	11.21	PASS
5213.00†	5108.30	-259.51	-832.11	5164.42	4937.10	-257.43	-1294.95	16.57	493.49	44.58	11.23	PASS
5313.00†	5205.25	-266.80	-855.48	5263.73	5030.00	-264.43	-1329.34	16.60	505.24	45.55	11.25	PASS
5413.00†	5302.21	-274.09	-878.85	5363.04	5122.90	-271.43	-1363.74	16.63	516.98	46.53	11.27	PASS
5513.00†	5399.17	-281.37	-902.22	5462.35	5215.80	-278.42	-1398.13	16.65	528.73	47.51	11.28	PASS
5613.00†	5496.12	-288.66	-925.59	5561.65	5308.70	-285.42	-1432.52	16.68	540.48	48.49	11.30	PASS
5713.00†	5593.08	-295.95	-948.96	5660.96	5401.60	-292.42	-1466.91	16.70	552.23	49.48	11.31	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	
5813.00†	5690.04	-303.24	-972.33	5760.27	5494.50	-299.42	-1501.31	16.72	563.97	50.46	11.32	PASS	
5913.00†	5787.00	-310.53	-995.70	5859.58	5587.39	-306.41	-1535.70	16.74	575.72	51.45	11.33	PASS	
6013.00†	5883.95	-317.82	-1019.07	5958.88	5680.29	-313.41	-1570.09	16.76	587.47	52.43	11.34	PASS	
6113.00†	5980.91	-325.10	-1042.44	6058.19	5773.19	-320.41	-1604.48	16.78	599.21	53.42	11.35	PASS	
6213.00†	6077.87	-332.39	-1065.81	6157.50	5866.09	-327.41	-1638.87	16.80	610.96	54.41	11.36	PASS	
6313.00†	6174.83	-339.68	-1089.18	6256.81	5958.99	-334.40	-1673.27	16.82	622.71	55.40	11.37	PASS	
6413.00†	6271.78	-346.97	-1112.55	6356.11	6051.89	-341.40	-1707.66	16.84	634.46	56.39	11.38	PASS	
6513.00†	6368.74	-354.26	-1135.92	6455.42	6144.79	-348.40	-1742.05	16.85	646.20	57.39	11.39	PASS	
6613.00†	6465.70	-361.55	-1159.29	6554.73	6237.69	-355.40	-1776.44	16.87	657.95	58.38	11.40	PASS	
6713.00†	6562.65	-368.83	-1182.66	6654.03	6330.58	-362.39	-1810.83	16.89	669.70	59.38	11.40	PASS	
6813.00†	6659.61	-376.12	-1206.03	6753.34	6423.48	-369.39	-1845.23	16.90	681.45	60.37	11.41	PASS	
6913.00†	6756.57	-383.41	-1229.40	6852.65	6516.38	-376.39	-1879.62	16.92	693.19	61.37	11.42	PASS	
7013.00†	6853.53	-390.70	-1252.77	6951.96	6609.28	-383.38	-1914.01	16.93	704.94	62.36	11.42	PASS	
7113.00†	6950.48	-397.99	-1276.14	7051.26	6702.18	-390.38	-1948.40	16.94	716.69	63.36	11.43	PASS	
7202.84	7037.59	-404.54	-1297.14	7140.48	6785.64	-396.67	-1979.30	16.95	727.24	64.26	11.43	PASS	
7213.00†	7047.45	-405.19	-1299.52	7150.57	6795.08	-397.38	-1982.79	13.13	728.44	64.36	11.43	PASS	
7313.00†	7144.45	-401.99	-1323.06	7249.25	6887.38	-404.33	-2016.97	-25.38	739.99	64.74	11.55	PASS	
7413.00†	7239.38	-381.51	-1346.38	7346.85	6978.78	-404.71	-2050.90	-49.37	751.54	64.55	11.76	PASS	
7513.00†	7329.35	-344.36	-1368.75	7448.03	7072.08	-387.78	-2085.82	-61.34	763.06	64.37	11.98	PASS	
7613.00†	7411.63	-291.69	-1389.50	7553.43	7164.63	-351.82	-2120.75	-67.96	774.18	64.39	12.15	PASS	
7713.00†	7483.71	-225.08	-1407.99	7663.41	7252.81	-295.68	-2154.37	-72.03	784.46	64.69	12.25	PASS	
7813.00†	7543.41	-146.56	-1423.68	7778.11	7332.22	-219.09	-2185.06	-74.72	793.45	65.26	12.28	PASS	
7913.00†	7588.91	-58.52	-1436.07	7897.36	7397.82	-123.20	-2210.92	-76.53	800.67	66.02	12.25	PASS	
8013.00†	7618.83	36.36	-1444.80	8020.51	7444.48	-11.09	-2229.99	-77.68	805.72	66.86	12.17	PASS	
8113.00†	7632.26	135.21	-1449.60	8146.48	7467.84	111.98	-2240.59	-78.28	808.23	67.71	12.05	PASS	
8142.54	7633.00	164.73	-1450.24	8184.01	7469.84	149.43	-2241.92	-78.36	808.46	67.96	12.01	PASS	
8213.00†	7633.00	235.18	-1451.34	8257.44	7470.00	222.84	-2243.12	-78.37	808.48	69.02	11.82	PASS	
8313.00†	7633.00	335.17	-1452.90	8357.44	7470.00	322.83	-2244.68	-78.37	808.48	71.05	11.48	PASS	
8413.00†	7633.00	435.16	-1454.46	8457.44	7470.00	422.82	-2246.24	-78.37	808.48	73.56	11.09	PASS	
8513.00†	7633.00	535.15	-1456.02	8557.44	7470.00	522.80	-2247.79	-78.37	808.48	76.49	10.66	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	
8613.00†	7633.00	635.13	-1457.58	8657.44	7470.00	622.79	-2249.35	-78.37	808.48	79.79	10.21	PASS	
8713.00†	7633.00	735.12	-1459.14	8757.44	7470.00	722.78	-2250.91	-78.37	808.47	79.56	10.24	PASS	
8813.00†	7633.00	835.11	-1460.70	8857.44	7470.00	822.77	-2252.47	-78.37	808.47	87.33	9.33	PASS	
8913.00†	7633.00	935.10	-1462.26	8957.44	7470.00	922.76	-2254.03	-78.37	808.47	91.49	8.90	PASS	
9013.00†	7633.00	1035.09	-1463.82	9057.44	7470.00	1022.74	-2255.59	-78.37	808.47	95.87	8.49	PASS	
9113.00†	7633.00	1135.07	-1465.38	9157.44	7470.00	1122.73	-2257.15	-78.37	808.47	100.43	8.10	PASS	
9213.00†	7633.00	1235.06	-1466.94	9257.44	7470.00	1222.72	-2258.70	-78.37	808.47	105.16	7.73	PASS	
9313.00†	7633.00	1335.05	-1468.50	9357.44	7470.00	1322.71	-2260.26	-78.37	808.47	110.03	7.39	PASS	
9413.00†	7633.00	1435.04	-1470.06	9457.44	7470.00	1422.69	-2261.82	-78.37	808.46	115.02	7.07	PASS	
9513.00†	7633.00	1535.02	-1471.62	9557.44	7470.00	1522.68	-2263.38	-78.37	808.46	120.12	6.76	PASS	
9613.00†	7633.00	1635.01	-1473.18	9657.44	7470.00	1622.67	-2264.94	-78.37	808.46	125.32	6.48	PASS	
9713.00†	7633.00	1735.00	-1474.74	9757.44	7470.00	1722.66	-2266.50	-78.37	808.46	130.60	6.22	PASS	
9813.00†	7633.00	1834.99	-1476.30	9857.44	7470.00	1822.65	-2268.06	-78.37	808.46	135.95	5.97	PASS	
9913.00†	7633.00	1934.98	-1477.86	9957.44	7470.00	1922.63	-2269.62	-78.37	808.46	141.37	5.74	PASS	
10013.00†	7633.00	2034.96	-1479.42	10057.44	7470.00	2022.62	-2271.17	-78.37	808.46	146.84	5.53	PASS	
10113.00†	7633.00	2134.95	-1480.98	10157.44	7470.00	2122.61	-2272.73	-78.37	808.45	152.37	5.33	PASS	
10213.00†	7633.00	2234.94	-1482.54	10257.44	7470.00	2222.60	-2274.29	-78.37	808.45	157.94	5.14	PASS	
10313.00†	7633.00	2334.93	-1484.10	10357.44	7470.00	2322.59	-2275.85	-78.37	808.45	163.56	4.96	PASS	
10413.00†	7633.00	2434.92	-1485.66	10457.44	7470.00	2422.57	-2277.41	-78.37	808.45	169.21	4.79	PASS	
10513.00†	7633.00	2534.90	-1487.22	10557.44	7470.00	2522.56	-2278.97	-78.37	808.45	174.90	4.64	PASS	
10613.00†	7633.00	2634.89	-1488.78	10657.44	7470.00	2622.55	-2280.53	-78.37	808.45	180.62	4.49	PASS	
10713.00†	7633.00	2734.88	-1490.34	10757.44	7470.00	2722.54	-2282.08	-78.37	808.45	186.36	4.35	PASS	
10813.00†	7633.00	2834.87	-1491.90	10857.44	7470.00	2822.52	-2283.64	-78.37	808.44	192.13	4.22	PASS	
10913.00†	7633.00	2934.85	-1493.46	10957.44	7470.00	2922.51	-2285.20	-78.37	808.44	197.93	4.10	PASS	
11013.00†	7633.00	3034.84	-1495.02	11057.44	7470.00	3022.50	-2286.76	-78.37	808.44	203.74	3.98	PASS	
11113.00†	7633.00	3134.83	-1496.58	11157.44	7470.00	3122.49	-2288.32	-78.37	808.44	209.58	3.87	PASS	
11213.00†	7633.00	3234.82	-1498.14	11257.44	7470.00	3222.48	-2289.88	-78.37	808.44	215.43	3.76	PASS	
11313.00†	7633.00	3334.81	-1499.70	11357.44	7470.00	3322.46	-2291.44	-78.37	808.44	221.30	3.66	PASS	
11413.00†	7633.00	3434.79	-1501.26	11457.44	7470.00	3422.45	-2293.00	-78.37	808.44	227.18	3.57	PASS	
11513.00†	7633.00	3534.78	-1502.82	11557.44	7470.00	3522.44	-2294.55	-78.37	808.43	233.08	3.48	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft





# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	
11613.00†	7633.00	3634.77	-1504.38	11657.44	7470.00	3622.43	-2296.11	-78.37	808.43	238.99	3.39	PASS	
11713.00†	7633.00	3734.76	-1505.94	11757.44	7470.00	3722.42	-2297.67	-78.37	808.43	244.91	3.31	PASS	
11813.00†	7633.00	3834.74	-1507.50	11857.44	7470.00	3822.40	-2299.23	-78.37	808.43	250.85	3.23	PASS	
11913.00†	7633.00	3934.73	-1509.06	11957.44	7470.00	3922.39	-2300.79	-78.37	808.43	256.79	3.15	PASS	
12013.00†	7633.00	4034.72	-1510.62	12057.44	7470.00	4022.38	-2302.35	-78.37	808.43	262.74	3.08	PASS	
12113.00†	7633.00	4134.71	-1512.18	12157.44	7470.00	4122.37	-2303.91	-78.37	808.43	268.71	3.01	PASS	
12213.00†	7633.00	4234.70	-1513.74	12257.44	7470.00	4222.35	-2305.46	-78.37	808.42	274.68	2.95	PASS	
12313.00†	7633.00	4334.68	-1515.30	12357.44	7470.00	4322.34	-2307.02	-78.37	808.42	280.66	2.89	PASS	
12413.00†	7633.00	4434.67	-1516.86	12457.44	7470.00	4422.33	-2308.58	-78.37	808.42	286.64	2.82	PASS	
12513.00†	7633.00	4534.66	-1518.42	12557.44	7470.00	4522.32	-2310.14	-78.37	808.42	292.64	2.77	PASS	
12613.00†	7633.00	4634.65	-1519.98	12657.44	7470.00	4622.31	-2311.70	-78.37	808.42	298.64	2.71	PASS	
12713.00†	7633.00	4734.64	-1521.54	12757.44	7470.00	4722.29	-2313.26	-78.37	808.42	304.64	2.66	PASS	
12813.00†	7633.00	4834.62	-1523.10	12857.44	7470.00	4822.28	-2314.82	-78.37	808.42	310.65	2.61	PASS	
12913.00†	7633.00	4934.61	-1524.66	12957.44	7470.00	4922.27	-2316.38	-78.37	808.42	316.67	2.56	PASS	
13013.00†	7633.00	5034.60	-1526.22	13057.44	7470.00	5022.26	-2317.93	-78.37	808.41	322.69	2.51	PASS	
13113.00†	7633.00	5134.59	-1527.78	13157.44	7470.00	5122.24	-2319.49	-78.37	808.41	328.72	2.46	PASS	
13213.00†	7633.00	5234.57	-1529.34	13257.44	7470.00	5222.23	-2321.05	-78.37	808.41	334.75	2.42	PASS	
13313.00†	7633.00	5334.56	-1530.90	13357.44	7470.00	5322.22	-2322.61	-78.37	808.41	340.79	2.38	PASS	
13413.00†	7633.00	5434.55	-1532.46	13457.44	7470.00	5422.21	-2324.17	-78.37	808.41	346.83	2.33	PASS	
13513.00†	7633.00	5534.54	-1534.02	13557.44	7470.00	5522.20	-2325.73	-78.37	808.41	352.87	2.29	PASS	
13613.00†	7633.00	5634.53	-1535.58	13657.44	7470.00	5622.18	-2327.29	-78.37	808.41	358.92	2.25	PASS	
13713.00†	7633.00	5734.51	-1537.14	13757.44	7470.00	5722.17	-2328.84	-78.37	808.40	364.97	2.22	PASS	
13813.00†	7633.00	5834.50	-1538.70	13857.44	7470.00	5822.16	-2330.40	-78.37	808.40	371.02	2.18	PASS	
13913.00†	7633.00	5934.49	-1540.26	13957.44	7470.00	5922.15	-2331.96	-78.37	808.40	377.08	2.15	PASS	
14013.00†	7633.00	6034.48	-1541.82	14057.44	7470.00	6022.14	-2333.52	-78.37	808.40	383.14	2.11	PASS	
14113.00†	7633.00	6134.46	-1543.38	14157.44	7470.00	6122.12	-2335.08	-78.37	808.40	389.21	2.08	PASS	
14213.00†	7633.00	6234.45	-1544.94	14257.44	7470.00	6222.11	-2336.64	-78.37	808.40	395.27	2.05	PASS	
14313.00†	7633.00	6334.44	-1546.50	14357.44	7470.00	6322.10	-2338.20	-78.37	808.40	401.34	2.02	PASS	
14413.00†	7633.00	6434.43	-1548.06	14457.44	7470.00	6422.09	-2339.76	-78.37	808.39	407.41	1.99	PASS	
14513.00†	7633.00	6534.42	-1549.62	14557.44	7470.00	6522.07	-2341.31	-78.37	808.39	413.49	1.96	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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		
14613.00†	7633.00	6634.40	-1551.18	14657.44	7470.00	6622.06	-2342.87	-78.37	808.39	419.57	1.93	PASS		
14713.00†	7633.00	6734.39	-1552.74	14757.44	7470.00	6722.05	-2344.43	-78.37	808.39	425.64	1.90	PASS		
14813.00†	7633.00	6834.38	-1554.30	14857.44	7470.00	6822.04	-2345.99	-78.37	808.39	431.72	1.87	PASS		
14913.00†	7633.00	6934.37	-1555.86	14957.44	7470.00	6922.03	-2347.55	-78.37	808.39	437.81	1.85	PASS		
15013.00†	7633.00	7034.36	-1557.42	15057.44	7470.00	7022.01	-2349.11	-78.37	808.39	443.89	1.82	PASS		
15113.00†	7633.00	7134.34	-1558.98	15157.44	7470.00	7122.00	-2350.67	-78.37	808.38	449.98	1.80	PASS		
15213.00†	7633.00	7234.33	-1560.54	15257.44	7470.00	7221.99	-2352.22	-78.37	808.38	456.07	1.77	PASS		
15313.00†	7633.00	7334.32	-1562.10	15357.44	7470.00	7321.98	-2353.78	-78.37	808.38	462.16	1.75	PASS		
15413.00†	7633.00	7434.31	-1563.66	15457.44	7470.00	7421.97	-2355.34	-78.37	808.38	468.25	1.73	PASS		
15513.00†	7633.00	7534.29	-1565.22	15557.44	7470.00	7521.95	-2356.90	-78.37	808.38	474.34	1.71	PASS		
15613.00†	7633.00	7634.28	-1566.78	15657.44	7470.00	7621.94	-2358.46	-78.37	808.38	480.44	1.68	PASS		
15713.00†	7633.00	7734.27	-1568.34	15757.44	7470.00	7721.93	-2360.02	-78.37	808.38	486.53	1.66	PASS		
15813.00†	7633.00	7834.26	-1569.90	15857.44	7470.00	7821.92	-2361.58	-78.37	808.37	492.63	1.64	PASS		
15913.00†	7633.00	7934.25	-1571.46	15957.44	7470.00	7921.90	-2363.14	-78.37	808.37	498.73	1.62	PASS		
16013.00†	7633.00	8034.23	-1573.02	16057.44	7470.00	8021.89	-2364.69	-78.37	808.37	504.83	1.60	PASS		
16113.00†	7633.00	8134.22	-1574.58	16157.44	7470.00	8121.88	-2366.25	-78.37	808.37	510.93	1.58	PASS		
16213.00†	7633.00	8234.21	-1576.14	16257.44	7470.00	8221.87	-2367.81	-78.37	808.37	517.04	1.56	PASS		
16313.00†	7633.00	8334.20	-1577.70	16357.44	7470.00	8321.86	-2369.37	-78.37	808.37	523.14	1.55	PASS		
16413.00†	7633.00	8434.19	-1579.26	16457.44	7470.00	8421.84	-2370.93	-78.37	808.37	529.24	1.53	PASS		
16513.00†	7633.00	8534.17	-1580.82	16557.44	7470.00	8521.83	-2372.49	-78.37	808.37	535.35	1.51	PASS		
16613.00†	7633.00	8634.16	-1582.38	16657.44	7470.00	8621.82	-2374.05	-78.37	808.36	541.46	1.49	PASS		
16713.00†	7633.00	8734.15	-1583.94	16757.44	7470.00	8721.81	-2375.60	-78.37	808.36	547.57	1.48	PASS		
16813.00†	7633.00	8834.14	-1585.50	16857.44	7470.00	8821.80	-2377.16	-78.37	808.36	553.68	1.46	PASS		
16913.00†	7633.00	8934.12	-1587.06	16957.44	7470.00	8921.78	-2378.72	-78.37	808.36	559.79	1.44	PASS		
17013.00†	7633.00	9034.11	-1588.62	17057.44	7470.00	9021.77	-2380.28	-78.37	808.36	565.90	1.43	PASS		
17113.00†	7633.00	9134.10	-1590.18	17157.44	7470.00	9121.76	-2381.84	-78.37	808.36	572.01	1.41	PASS		
17213.00†	7633.00	9234.09	-1591.74	17257.44	7470.00	9221.75	-2383.40	-78.37	808.36	578.12	1.40	PASS		
17313.00†	7633.00	9334.08	-1593.30	17357.44	7470.00	9321.73	-2384.96	-78.37	808.35	584.24	1.38	PASS		
17413.00†	7633.00	9434.06	-1594.86	17457.44	7470.00	9421.72	-2386.52	-78.37	808.35	590.35	1.37	PASS		
17513.00†	7633.00	9534.05	-1596.42	17557.44	7470.00	9521.71	-2388.07	-78.37	808.35	596.47	1.36	PASS		

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	
17613.00†	7633.00	9634.04	-1597.98	17657.44	7470.00	9621.70	-2389.63	-78.37	808.35	602.58	1.34	PASS	
17713.00†	7633.00	9734.03	-1599.54	17757.44	7470.00	9721.69	-2391.19	-78.37	808.35	608.70	1.33	PASS	
17813.00†	7633.00	9834.01	-1601.10	17857.44	7470.00	9821.67	-2392.75	-78.37	808.35	614.82	1.32	PASS	
17913.00†	7633.00	9934.00	-1602.66	17957.44	7470.00	9921.66	-2394.31	-78.37	808.35	620.94	1.30	PASS	
17954.40	7633.00	9975.39	-1603.31	17998.83	7470.00	9963.05	-2394.95	-78.37	808.34	623.47	1.30	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft

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

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

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

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing Surface	16.00	1800.00	1784.00	16.00	1789.64	-0.03	-18.26	-6.78	-51.40
8.5in Open Hole	1800.00	18013.26	16213.26	1789.64	N/A	-6.78	-51.40	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



**Clearance Report**  
**WAKEMAN 20-17-2CDH PWP (REV-A.0)**  
**Closest Approach**  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.20-T01S-R65W				Slot: SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)				Well: WAKEMAN 20-17-2NBH		Threshold Value=1.00	† = interpolated/extrapolated station			
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status		
13.00	13.00	0.00	0.00	13.00	13.00	0.05	45.00	89.94	45.00	1.40	73.67	PASS		
113.00†	113.00	0.00	0.00	113.00	113.00	0.05	45.00	89.94	45.00	1.73	47.60	PASS		
213.00†	213.00	0.00	0.00	213.00	213.00	0.05	45.00	89.94	45.00	2.31	29.39	PASS		
313.00†	313.00	0.00	0.00	313.00	313.00	0.05	45.00	89.94	45.00	2.91	20.95	PASS		
413.00†	413.00	0.00	0.00	413.00	413.00	0.05	45.00	89.94	45.00	3.53	16.22	PASS		
513.00†	513.00	0.00	0.00	513.00	513.00	0.05	45.00	89.94	45.00	4.15	13.21	PASS		
613.00†	613.00	0.00	0.00	613.00	613.00	0.05	45.00	89.94	45.00	4.77	11.14	PASS		
713.00†	713.00	0.00	0.00	713.00	713.00	0.05	45.00	89.94	45.00	5.40	9.62	PASS		
813.00†	813.00	0.00	0.00	813.00	813.00	0.05	45.00	89.94	45.00	6.02	8.47	PASS		
913.00†	913.00	0.00	0.00	913.00	913.00	0.05	45.00	89.94	45.00	6.65	7.56	PASS		
1013.00†	1013.00	0.00	0.00	1013.00	1013.00	0.05	45.00	89.94	45.00	7.27	6.83	PASS		
1113.00†	1113.00	0.00	0.00	1113.00	1113.00	0.05	45.00	89.94	45.00	7.90	6.23	PASS		
1213.00†	1213.00	0.00	0.00	1213.00	1213.00	0.05	45.00	89.94	45.00	8.53	5.72	PASS		
1300.00	1300.00	0.00	0.00	1300.00	1300.00	0.05	45.00	89.94	45.00	9.07	5.34	PASS		
1313.00†	1313.00	-0.01	-0.03	1313.00	1313.00	0.05	45.00	-162.75	45.03	9.15	5.30	PASS		
1413.00†	1412.97	-0.66	-2.13	1412.97	1412.97	0.05	45.00	-163.53	47.14	9.86	5.12	PASS		
1513.00†	1512.80	-2.36	-7.56	1512.80	1512.80	0.05	45.00	-165.26	52.62	10.77	5.20	PASS		
1613.00†	1612.38	-5.09	-16.31	1612.62	1612.62	0.03	44.98	-167.39	61.50	11.65	5.60	PASS		
1713.00†	1711.57	-8.85	-28.37	1714.15	1714.12	-1.20	43.10	-168.73	71.93	12.56	6.05	PASS		
1813.00†	1810.26	-13.64	-43.73	1816.03	1815.82	-4.41	38.19	-169.07	82.63	13.50	6.41	PASS		
1913.00†	1908.33	-19.45	-62.37	1918.23	1917.58	-9.61	30.23	-168.73	93.58	14.48	6.74	PASS		
2008.51	2001.31	-25.95	-83.21	2016.14	2014.68	-16.46	19.75	-167.97	104.26	15.38	7.06	PASS		
2013.00†	2005.66	-26.28	-84.26	2020.75	2019.24	-16.83	19.19	-167.93	104.77	15.42	7.07	PASS		
2113.00†	2102.62	-33.57	-107.63	2120.14	2117.56	-24.81	6.99	-167.08	115.92	16.01	7.53	PASS		
2213.00†	2199.58	-40.86	-131.00	2219.51	2215.84	-32.78	-5.21	-166.38	127.10	16.65	7.93	PASS		
2313.00†	2296.53	-48.14	-154.37	2318.87	2314.13	-40.76	-17.41	-165.79	138.29	17.30	8.29	PASS		
2413.00†	2393.49	-55.43	-177.74	2418.23	2412.42	-48.73	-29.61	-165.30	149.49	17.98	8.61	PASS		
2513.00†	2490.45	-62.72	-201.11	2517.59	2510.71	-56.71	-41.81	-164.87	160.71	18.69	8.90	PASS		
2613.00†	2587.41	-70.01	-224.49	2616.96	2609.00	-64.68	-54.00	-164.50	171.93	19.40	9.16	PASS		
2713.00†	2684.36	-77.30	-247.86	2716.32	2707.28	-72.66	-66.20	-164.17	183.15	20.14	9.39	PASS		

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.20-T01S-R65W Slot: SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20) Well: WAKEMAN 20-17-2NBH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
2813.00†	2781.32	-84.59	-271.23	2815.68	2805.57	-80.63	-78.40	-163.88	194.38	20.89	9.60	PASS	
2913.00†	2878.28	-91.87	-294.60	2915.04	2903.86	-88.61	-90.60	-163.62	205.62	21.65	9.78	PASS	
3013.00†	2975.24	-99.16	-317.97	3014.41	3002.15	-96.58	-102.80	-163.39	216.86	22.43	9.95	PASS	
3113.00†	3072.19	-106.45	-341.34	3113.77	3100.44	-104.56	-115.00	-163.18	228.10	23.22	10.10	PASS	
3213.00†	3169.15	-113.74	-364.71	3213.13	3198.73	-112.53	-127.19	-162.99	239.35	24.01	10.24	PASS	
3313.00†	3266.11	-121.03	-388.08	3312.49	3297.01	-120.51	-139.39	-162.82	250.60	24.82	10.36	PASS	
3413.00†	3363.06	-128.32	-411.45	3411.86	3395.30	-128.48	-151.59	-162.67	261.85	25.63	10.48	PASS	
3513.00†	3460.02	-135.61	-434.82	3511.22	3493.59	-136.46	-163.79	-162.52	273.10	26.45	10.58	PASS	
3613.00†	3556.98	-142.89	-458.19	3610.58	3591.88	-144.43	-175.99	-162.39	284.35	27.28	10.67	PASS	
3713.00†	3653.94	-150.18	-481.56	3709.95	3690.17	-152.41	-188.19	-162.27	295.61	28.11	10.76	PASS	
3813.00†	3750.89	-157.47	-504.93	3809.31	3788.45	-160.38	-200.38	-162.15	306.87	28.95	10.84	PASS	
3913.00†	3847.85	-164.76	-528.30	3908.67	3886.74	-168.36	-212.58	-162.05	318.12	29.80	10.91	PASS	
4013.00†	3944.81	-172.05	-551.67	4008.03	3985.03	-176.33	-224.78	-161.95	329.38	30.65	10.98	PASS	
4113.00†	4041.77	-179.34	-575.04	4107.40	4083.32	-184.31	-236.98	-161.86	340.64	31.50	11.04	PASS	
4213.00†	4138.72	-186.62	-598.41	4206.76	4181.61	-192.28	-249.18	-161.77	351.90	32.35	11.10	PASS	
4313.00†	4235.68	-193.91	-621.78	4306.12	4279.89	-200.26	-261.38	-161.69	363.16	33.21	11.15	PASS	
4413.00†	4332.64	-201.20	-645.15	4405.48	4378.18	-208.23	-273.57	-161.62	374.42	34.08	11.20	PASS	
4513.00†	4429.59	-208.49	-668.52	4504.85	4476.47	-216.21	-285.77	-161.54	385.68	34.94	11.25	PASS	
4613.00†	4526.55	-215.78	-691.89	4604.21	4574.76	-224.18	-297.97	-161.48	396.95	35.81	11.29	PASS	
4713.00†	4623.51	-223.07	-715.26	4703.57	4673.05	-232.16	-310.17	-161.41	408.21	36.68	11.33	PASS	
4813.00†	4720.47	-230.35	-738.63	4802.94	4771.33	-240.14	-322.37	-161.35	419.47	37.56	11.36	PASS	
4913.00†	4817.42	-237.64	-762.00	4902.30	4869.62	-248.11	-334.57	-161.30	430.74	38.43	11.40	PASS	
5013.00†	4914.38	-244.93	-785.37	5001.66	4967.91	-256.09	-346.76	-161.24	442.00	39.31	11.43	PASS	
5113.00†	5011.34	-252.22	-808.74	5101.02	5066.20	-264.06	-358.96	-161.19	453.27	40.19	11.46	PASS	
5213.00†	5108.30	-259.51	-832.11	5200.39	5164.49	-272.04	-371.16	-161.14	464.53	41.07	11.49	PASS	
5313.00†	5205.25	-266.80	-855.48	5299.75	5262.77	-280.01	-383.36	-161.10	475.80	41.96	11.52	PASS	
5413.00†	5302.21	-274.09	-878.85	5399.11	5361.06	-287.99	-395.56	-161.05	487.06	42.84	11.54	PASS	
5513.00†	5399.17	-281.37	-902.22	5498.47	5459.35	-295.96	-407.76	-161.01	498.33	43.73	11.57	PASS	
5613.00†	5496.12	-288.66	-925.59	5597.84	5557.64	-303.94	-419.95	-160.97	509.59	44.62	11.59	PASS	
5713.00†	5593.08	-295.95	-948.96	5697.20	5655.93	-311.91	-432.15	-160.93	520.86	45.51	11.61	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.20-T01S-R65W Slot: SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20) Well: WAKEMAN 20-17-2NBH Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
5813.00†	5690.04	-303.24	-972.33	5796.56	5754.21	-319.89	-444.35	-160.89	532.13	46.40	11.63	PASS
5913.00†	5787.00	-310.53	-995.70	5895.93	5852.50	-327.86	-456.55	-160.86	543.39	47.29	11.65	PASS
6013.00†	5883.95	-317.82	-1019.07	5995.29	5950.79	-335.84	-468.75	-160.82	554.66	48.18	11.67	PASS
6113.00†	5980.91	-325.10	-1042.44	6094.65	6049.08	-343.81	-480.95	-160.79	565.93	49.08	11.69	PASS
6213.00†	6077.87	-332.39	-1065.81	6194.01	6147.37	-351.79	-493.14	-160.76	577.20	49.97	11.70	PASS
6313.00†	6174.83	-339.68	-1089.18	6293.38	6245.66	-359.76	-505.34	-160.73	588.46	50.87	11.72	PASS
6413.00†	6271.78	-346.97	-1112.55	6392.74	6343.94	-367.74	-517.54	-160.70	599.73	51.77	11.73	PASS
6513.00†	6368.74	-354.26	-1135.92	6492.10	6442.23	-375.71	-529.74	-160.67	611.00	52.66	11.75	PASS
6613.00†	6465.70	-361.55	-1159.29	6591.46	6540.52	-383.69	-541.94	-160.64	622.27	53.56	11.76	PASS
6713.00†	6562.65	-368.83	-1182.66	6690.83	6638.81	-391.66	-554.14	-160.62	633.54	54.46	11.77	PASS
6813.00†	6659.61	-376.12	-1206.03	6790.19	6737.10	-399.64	-566.33	-160.59	644.80	55.36	11.78	PASS
6913.00†	6756.57	-383.41	-1229.40	6892.54	6838.46	-405.50	-578.95	-160.77	655.96	56.08	11.83	PASS
7013.00†	6853.53	-390.70	-1252.77	6994.83	6939.29	-395.35	-591.75	-162.32	666.58	56.29	11.98	PASS
7113.00†	6950.48	-397.99	-1276.14	7088.30	7028.52	-370.41	-603.33	-165.01	677.89	55.45	12.37	PASS
7202.84	7037.59	-404.54	-1297.14	7162.15	7095.43	-340.57	-612.18	-167.90	690.37	55.47	12.59	PASS
7213.00†	7047.45	-405.19	-1299.52	7169.91	7102.22	-336.93	-613.09	-172.34	691.98	55.41	12.64	PASS
7313.00†	7144.45	-401.99	-1323.06	7244.13	7164.53	-297.59	-621.52	144.00	709.55	55.05	13.04	PASS
7413.00†	7239.38	-381.51	-1346.38	7315.25	7219.02	-252.57	-629.05	115.96	729.10	55.19	13.37	PASS
7513.00†	7329.35	-344.36	-1368.75	7384.09	7266.08	-202.84	-635.73	100.40	749.23	55.44	13.68	PASS
7613.00†	7411.63	-291.69	-1389.50	7451.23	7305.95	-149.18	-641.57	90.73	768.68	55.66	13.98	PASS
7713.00†	7483.71	-225.08	-1407.99	7517.10	7338.74	-92.32	-646.57	84.19	786.39	55.84	14.25	PASS
7813.00†	7543.41	-146.56	-1423.68	7582.03	7364.52	-32.91	-650.72	79.61	801.48	55.98	14.49	PASS
7913.00†	7588.91	-58.52	-1436.07	7646.29	7383.30	28.43	-654.04	76.49	813.28	56.10	14.67	PASS
8013.00†	7618.83	36.36	-1444.80	7710.11	7395.08	91.06	-656.49	74.56	821.27	56.27	14.77	PASS
8113.00†	7632.26	135.21	-1449.60	7773.66	7399.88	154.39	-658.08	73.67	825.14	56.43	14.80	PASS
8142.54	7633.00	164.73	-1450.24	7796.38	7400.00	177.09	-658.45	73.60	825.45	56.58	14.76	PASS
8213.00†	7633.00	235.18	-1451.34	7866.84	7400.00	247.55	-659.55	73.60	825.45	57.54	14.51	PASS
8313.00†	7633.00	335.17	-1452.90	7966.84	7400.00	347.54	-661.11	73.60	825.44	59.38	14.06	PASS
8413.00†	7633.00	435.16	-1454.46	8066.84	7400.00	447.52	-662.68	73.60	825.44	61.77	13.51	PASS
8513.00†	7633.00	535.15	-1456.02	8166.84	7400.00	547.51	-664.24	73.60	825.44	64.64	12.90	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.20-T01S-R65W Slot: SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20) Well: WAKEMAN 20-17-2NBH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
8613.00†	7633.00	635.13	-1457.58	8266.84	7400.00	647.50	-665.80	73.60	825.44	67.94	12.27	PASS	
8713.00†	7633.00	735.12	-1459.14	8366.84	7400.00	747.49	-667.36	73.60	825.44	71.59	11.63	PASS	
8813.00†	7633.00	835.11	-1460.70	8466.84	7400.00	847.48	-668.92	73.60	825.44	75.56	11.02	PASS	
8913.00†	7633.00	935.10	-1462.26	8566.84	7400.00	947.46	-670.48	73.60	825.44	79.79	10.43	PASS	
9013.00†	7633.00	1035.09	-1463.82	8666.84	7400.00	1047.45	-672.05	73.60	825.44	84.24	9.87	PASS	
9113.00†	7633.00	1135.07	-1465.38	8766.84	7400.00	1147.44	-673.61	73.60	825.43	94.09	8.83	PASS	
9213.00†	7633.00	1235.06	-1466.94	8866.84	7400.00	1247.43	-675.17	73.60	825.43	93.69	8.87	PASS	
9313.00†	7633.00	1335.05	-1468.50	8966.84	7400.00	1347.41	-676.73	73.60	825.43	98.63	8.42	PASS	
9413.00†	7633.00	1435.04	-1470.06	9066.84	7400.00	1447.40	-678.29	73.60	825.43	103.69	8.01	PASS	
9513.00†	7633.00	1535.02	-1471.62	9166.84	7400.00	1547.39	-679.85	73.60	825.43	108.85	7.63	PASS	
9613.00†	7633.00	1635.01	-1473.18	9266.84	7400.00	1647.38	-681.41	73.60	825.43	114.09	7.27	PASS	
9713.00†	7633.00	1735.00	-1474.74	9366.84	7400.00	1747.37	-682.98	73.60	825.43	119.42	6.95	PASS	
9813.00†	7633.00	1834.99	-1476.30	9466.84	7400.00	1847.35	-684.54	73.60	825.42	124.81	6.65	PASS	
9913.00†	7633.00	1934.98	-1477.86	9566.84	7400.00	1947.34	-686.10	73.60	825.42	130.25	6.37	PASS	
10013.00†	7633.00	2034.96	-1479.42	9666.84	7400.00	2047.33	-687.66	73.60	825.42	135.75	6.11	PASS	
10113.00†	7633.00	2134.95	-1480.98	9766.84	7400.00	2147.32	-689.22	73.60	825.42	141.29	5.87	PASS	
10213.00†	7633.00	2234.94	-1482.54	9866.84	7400.00	2247.30	-690.78	73.60	825.42	146.87	5.64	PASS	
10313.00†	7633.00	2334.93	-1484.10	9966.84	7400.00	2347.29	-692.34	73.60	825.42	152.49	5.43	PASS	
10413.00†	7633.00	2434.92	-1485.66	10066.84	7400.00	2447.28	-693.91	73.60	825.42	158.14	5.24	PASS	
10513.00†	7633.00	2534.90	-1487.22	10166.84	7400.00	2547.27	-695.47	73.60	825.41	163.81	5.06	PASS	
10613.00†	7633.00	2634.89	-1488.78	10266.84	7400.00	2647.26	-697.03	73.60	825.41	169.51	4.89	PASS	
10713.00†	7633.00	2734.88	-1490.34	10366.84	7400.00	2747.24	-698.59	73.60	825.41	175.24	4.73	PASS	
10813.00†	7633.00	2834.87	-1491.90	10466.84	7400.00	2847.23	-700.15	73.60	825.41	180.99	4.57	PASS	
10913.00†	7633.00	2934.85	-1493.46	10566.84	7400.00	2947.22	-701.71	73.60	825.41	186.75	4.43	PASS	
11013.00†	7633.00	3034.84	-1495.02	10666.84	7400.00	3047.21	-703.28	73.60	825.41	192.53	4.30	PASS	
11113.00†	7633.00	3134.83	-1496.58	10766.84	7400.00	3147.19	-704.84	73.60	825.41	198.33	4.17	PASS	
11213.00†	7633.00	3234.82	-1498.14	10866.84	7400.00	3247.18	-706.40	73.60	825.41	204.14	4.05	PASS	
11313.00†	7633.00	3334.81	-1499.70	10966.84	7400.00	3347.17	-707.96	73.60	825.40	209.97	3.94	PASS	
11413.00†	7633.00	3434.79	-1501.26	11066.84	7400.00	3447.16	-709.52	73.60	825.40	215.80	3.83	PASS	
11513.00†	7633.00	3534.78	-1502.82	11166.84	7400.00	3547.15	-711.08	73.60	825.40	221.65	3.73	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft





# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.20-T01S-R65W Slot: SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20) Well: WAKEMAN 20-17-2NBH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
11613.00†	7633.00	3634.77	-1504.38	11266.84	7400.00	3647.13	-712.64	73.60	825.40	227.51	3.64	PASS	
11713.00†	7633.00	3734.76	-1505.94	11366.84	7400.00	3747.12	-714.21	73.60	825.40	233.38	3.54	PASS	
11813.00†	7633.00	3834.74	-1507.50	11466.84	7400.00	3847.11	-715.77	73.60	825.40	239.25	3.46	PASS	
11913.00†	7633.00	3934.73	-1509.06	11566.84	7400.00	3947.10	-717.33	73.60	825.40	245.14	3.37	PASS	
12013.00†	7633.00	4034.72	-1510.62	11666.84	7400.00	4047.08	-718.89	73.60	825.39	251.03	3.29	PASS	
12113.00†	7633.00	4134.71	-1512.18	11766.84	7400.00	4147.07	-720.45	73.60	825.39	256.93	3.22	PASS	
12213.00†	7633.00	4234.70	-1513.74	11866.84	7400.00	4247.06	-722.01	73.60	825.39	262.83	3.15	PASS	
12313.00†	7633.00	4334.68	-1515.30	11966.84	7400.00	4347.05	-723.57	73.60	825.39	268.75	3.08	PASS	
12413.00†	7633.00	4434.67	-1516.86	12066.84	7400.00	4447.04	-725.14	73.60	825.39	274.66	3.01	PASS	
12513.00†	7633.00	4534.66	-1518.42	12166.84	7400.00	4547.02	-726.70	73.60	825.39	280.59	2.95	PASS	
12613.00†	7633.00	4634.65	-1519.98	12266.84	7400.00	4647.01	-728.26	73.60	825.39	286.51	2.89	PASS	
12713.00†	7633.00	4734.64	-1521.54	12366.84	7400.00	4747.00	-729.82	73.60	825.38	292.45	2.83	PASS	
12813.00†	7633.00	4834.62	-1523.10	12466.84	7400.00	4846.99	-731.38	73.60	825.38	298.39	2.77	PASS	
12913.00†	7633.00	4934.61	-1524.66	12566.84	7400.00	4946.98	-732.94	73.60	825.38	304.33	2.72	PASS	
13013.00†	7633.00	5034.60	-1526.22	12666.84	7400.00	5046.96	-734.51	73.60	825.38	310.27	2.66	PASS	
13113.00†	7633.00	5134.59	-1527.78	12766.84	7400.00	5146.95	-736.07	73.60	825.38	316.22	2.61	PASS	
13213.00†	7633.00	5234.57	-1529.34	12866.84	7400.00	5246.94	-737.63	73.60	825.38	322.17	2.57	PASS	
13313.00†	7633.00	5334.56	-1530.90	12966.84	7400.00	5346.93	-739.19	73.60	825.38	328.13	2.52	PASS	
13413.00†	7633.00	5434.55	-1532.46	13066.84	7400.00	5446.91	-740.75	73.60	825.38	334.09	2.47	PASS	
13513.00†	7633.00	5534.54	-1534.02	13166.84	7400.00	5546.90	-742.31	73.60	825.37	340.05	2.43	PASS	
13613.00†	7633.00	5634.53	-1535.58	13266.84	7400.00	5646.89	-743.87	73.60	825.37	346.02	2.39	PASS	
13713.00†	7633.00	5734.51	-1537.14	13366.84	7400.00	5746.88	-745.44	73.60	825.37	351.98	2.35	PASS	
13813.00†	7633.00	5834.50	-1538.70	13466.84	7400.00	5846.87	-747.00	73.60	825.37	357.95	2.31	PASS	
13913.00†	7633.00	5934.49	-1540.26	13566.84	7400.00	5946.85	-748.56	73.60	825.37	363.93	2.27	PASS	
14013.00†	7633.00	6034.48	-1541.82	13666.84	7400.00	6046.84	-750.12	73.60	825.37	369.90	2.23	PASS	
14113.00†	7633.00	6134.46	-1543.38	13766.84	7400.00	6146.83	-751.68	73.60	825.37	375.88	2.20	PASS	
14213.00†	7633.00	6234.45	-1544.94	13866.84	7400.00	6246.82	-753.24	73.60	825.36	381.86	2.16	PASS	
14313.00†	7633.00	6334.44	-1546.50	13966.84	7400.00	6346.80	-754.81	73.60	825.36	387.84	2.13	PASS	
14413.00†	7633.00	6434.43	-1548.06	14066.84	7400.00	6446.79	-756.37	73.60	825.36	393.82	2.10	PASS	
14513.00†	7633.00	6534.42	-1549.62	14166.84	7400.00	6546.78	-757.93	73.60	825.36	399.81	2.07	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.20-T01S-R65W		Slot: SLOT#09 WAKEMAN 20-17-2NBH (293'FSL & 2143'FEL, SEC.20)				Well: WAKEMAN 20-17-2NBH		Threshold Value=1.00		† = interpolated/extrapolated station			
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
14613.00†	7633.00	6634.40	-1551.18	14266.84	7400.00	6646.77	-759.49	73.60	825.36	405.79	2.04	PASS	
14713.00†	7633.00	6734.39	-1552.74	14366.84	7400.00	6746.78	-761.05	73.60	825.36	411.78	2.01	PASS	
14813.00†	7633.00	6834.38	-1554.30	14466.84	7400.00	6846.74	-762.61	73.60	825.36	417.77	1.98	PASS	
14913.00†	7633.00	6934.37	-1555.86	14566.84	7400.00	6946.73	-764.17	73.60	825.35	423.76	1.95	PASS	
15013.00†	7633.00	7034.36	-1557.42	14666.84	7400.00	7046.72	-765.74	73.60	825.35	429.75	1.92	PASS	
15113.00†	7633.00	7134.34	-1558.98	14766.84	7400.00	7146.71	-767.30	73.60	825.35	435.75	1.90	PASS	
15213.00†	7633.00	7234.33	-1560.54	14866.84	7400.00	7246.69	-768.86	73.60	825.35	441.74	1.87	PASS	
15313.00†	7633.00	7334.32	-1562.10	14966.84	7400.00	7346.68	-770.42	73.60	825.35	447.74	1.84	PASS	
15413.00†	7633.00	7434.31	-1563.66	15066.84	7400.00	7446.67	-771.98	73.60	825.35	453.74	1.82	PASS	
15513.00†	7633.00	7534.29	-1565.22	15166.84	7400.00	7546.66	-773.54	73.60	825.35	459.74	1.80	PASS	
15613.00†	7633.00	7634.28	-1566.78	15266.84	7400.00	7646.65	-775.10	73.60	825.35	465.74	1.77	PASS	
15713.00†	7633.00	7734.27	-1568.34	15366.84	7400.00	7746.63	-776.67	73.60	825.34	471.74	1.75	PASS	
15813.00†	7633.00	7834.26	-1569.90	15466.84	7400.00	7846.62	-778.23	73.60	825.34	477.74	1.73	PASS	
15913.00†	7633.00	7934.25	-1571.46	15566.84	7400.00	7946.61	-779.79	73.60	825.34	483.75	1.71	PASS	
16013.00†	7633.00	8034.23	-1573.02	15666.84	7400.00	8046.60	-781.35	73.60	825.34	489.75	1.69	PASS	
16113.00†	7633.00	8134.22	-1574.58	15766.84	7400.00	8146.59	-782.91	73.60	825.34	495.76	1.67	PASS	
16213.00†	7633.00	8234.21	-1576.14	15866.84	7400.00	8246.57	-784.47	73.60	825.34	501.76	1.65	PASS	
16313.00†	7633.00	8334.20	-1577.70	15966.84	7400.00	8346.56	-786.04	73.60	825.34	507.77	1.63	PASS	
16413.00†	7633.00	8434.19	-1579.26	16066.84	7400.00	8446.55	-787.60	73.60	825.33	513.78	1.61	PASS	
16513.00†	7633.00	8534.17	-1580.82	16166.84	7400.00	8546.54	-789.16	73.60	825.33	519.79	1.59	PASS	
16613.00†	7633.00	8634.16	-1582.38	16266.84	7400.00	8646.52	-790.72	73.60	825.33	525.80	1.57	PASS	
16713.00†	7633.00	8734.15	-1583.94	16366.84	7400.00	8746.51	-792.28	73.60	825.33	531.81	1.55	PASS	
16813.00†	7633.00	8834.14	-1585.50	16466.84	7400.00	8846.50	-793.84	73.60	825.33	537.82	1.54	PASS	
16913.00†	7633.00	8934.12	-1587.06	16566.84	7400.00	8946.49	-795.40	73.60	825.33	543.83	1.52	PASS	
17013.00†	7633.00	9034.11	-1588.62	16666.84	7400.00	9046.48	-796.97	73.60	825.33	549.84	1.50	PASS	
17113.00†	7633.00	9134.10	-1590.18	16766.84	7400.00	9146.46	-798.53	73.60	825.32	555.86	1.49	PASS	
17213.00†	7633.00	9234.09	-1591.74	16866.84	7400.00	9246.45	-800.09	73.60	825.32	561.87	1.47	PASS	
17313.00†	7633.00	9334.08	-1593.30	16966.84	7400.00	9346.44	-801.65	73.60	825.32	567.89	1.45	PASS	
17413.00†	7633.00	9434.06	-1594.86	17066.84	7400.00	9446.43	-803.21	73.60	825.32	573.90	1.44	PASS	
17513.00†	7633.00	9534.05	-1596.42	17166.84	7400.00	9546.41	-804.77	73.60	825.32	579.92	1.42	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.20-T01S-R65W Slot: SLOT#09 WAKEMAN 20-17-2NBH (293°FSL & 2143°FEL, SEC.20) Well: WAKEMAN 20-17-2NBH Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
17613.00†	7633.00	9634.04	-1597.98	17266.84	7400.00	9646.40	-806.34	73.60	825.32	585.93	1.41	PASS
17713.00†	7633.00	9734.03	-1599.54	17366.84	7400.00	9746.39	-807.90	73.60	825.32	591.96	1.39	PASS
17813.00†	7633.00	9834.01	-1601.10	17466.84	7400.00	9846.38	-809.46	73.60	825.32	597.97	1.38	PASS
17913.00†	7633.00	9934.00	-1602.66	17566.84	7400.00	9946.37	-811.02	73.60	825.31	603.99	1.37	PASS
17939.94†	7633.00	9960.94	-1603.08	17593.78	7400.00	9973.30	-811.44	73.60	825.31	605.61	1.36	PASS
17954.40	7633.00	9975.39	-1603.31	17593.78	7400.00	9973.30	-811.44	73.60	825.44	604.80	1.37	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

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

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

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

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing Surface	13.00	1800.00	1787.00	13.00	1799.84	0.03	27.43	-1.13	25.65
8.5in Open Hole	1800.00	17593.78	15793.78	1799.84	N/A	-1.13	25.65	N/A	N/A

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

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



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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

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

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



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	-0.15	-59.95	-90.14	59.95	1.40	98.58	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	-0.15	-59.95	-90.14	59.95	1.73	63.55	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	-0.15	-59.95	-90.14	59.95	2.31	39.23	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	-0.15	-59.95	-90.14	59.95	2.92	27.97	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	-0.15	-59.95	-90.14	59.95	3.53	21.66	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	-0.15	-59.95	-90.14	59.95	4.15	17.65	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	-0.15	-59.95	-90.14	59.95	4.78	14.88	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	-0.15	-59.95	-90.14	59.95	5.40	12.86	PASS	
813.00†	813.00	0.00	0.00	812.74	812.74	-0.15	-59.98	-90.15	59.98	6.02	11.33	PASS	
913.00†	913.00	0.00	0.00	910.66	910.63	-0.51	-62.05	-90.48	62.10	6.77	10.27	PASS	
1013.00†	1013.00	0.00	0.00	1008.33	1008.14	-1.44	-67.41	-91.23	67.60	7.79	9.56	PASS	
1113.00†	1113.00	0.00	0.00	1105.51	1104.93	-2.93	-75.98	-92.21	76.47	8.73	9.54	PASS	
1213.00†	1213.00	0.00	0.00	1201.99	1200.68	-4.96	-87.69	-93.24	88.69	9.63	9.96	PASS	
1300.00	1300.00	0.00	0.00	1285.20	1282.89	-7.15	-100.34	-94.08	102.04	10.32	10.64	PASS	
1313.00†	1313.00	-0.01	-0.03	1297.57	1295.07	-7.52	-102.42	13.12	104.22	10.44	10.73	PASS	
1413.00†	1412.97	-0.66	-2.13	1392.44	1388.23	-10.58	-120.09	12.42	120.94	11.33	11.41	PASS	
1513.00†	1512.80	-2.36	-7.56	1486.81	1480.25	-14.15	-140.68	12.07	137.55	12.35	11.84	PASS	
1613.00†	1612.38	-5.09	-16.31	1580.68	1571.05	-18.22	-164.11	11.95	154.03	13.34	12.23	PASS	
1713.00†	1711.57	-8.85	-28.37	1674.07	1660.57	-22.76	-190.31	11.99	170.35	14.27	12.59	PASS	
1813.00†	1810.26	-13.64	-43.73	1766.98	1748.73	-27.78	-219.23	12.15	186.51	15.11	12.94	PASS	
1913.00†	1908.33	-19.45	-62.37	1859.44	1835.46	-33.25	-250.78	12.40	202.48	16.03	13.17	PASS	
2008.51	2001.31	-25.95	-83.21	1948.67	1918.16	-38.97	-283.77	12.70	217.49	16.76	13.51	PASS	
2013.00†	2005.66	-26.28	-84.26	1953.11	1922.26	-39.26	-285.45	12.72	218.17	16.78	13.53	PASS	
2113.00†	2102.62	-33.57	-107.63	2051.95	2013.52	-45.75	-322.66	13.15	233.26	17.43	13.91	PASS	
2213.00†	2199.58	-40.86	-131.00	2150.79	2104.78	-52.24	-360.27	13.52	248.36	18.12	14.22	PASS	
2313.00†	2296.53	-48.14	-154.37	2249.63	2196.03	-58.73	-397.68	13.85	263.46	18.84	14.49	PASS	
2413.00†	2393.49	-55.43	-177.74	2348.48	2287.29	-65.22	-435.10	14.14	278.58	19.59	14.72	PASS	
2513.00†	2490.45	-62.72	-201.11	2447.32	2378.55	-71.71	-472.51	14.40	293.70	20.36	14.91	PASS	
2613.00†	2587.41	-70.01	-224.49	2546.16	2469.80	-78.20	-509.92	14.64	308.82	21.16	15.07	PASS	
2713.00†	2684.36	-77.30	-247.86	2645.00	2561.06	-84.69	-547.33	14.86	323.95	21.98	15.20	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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†	2781.32	-84.59	-271.23	2743.84	2652.32	-91.18	-584.75	15.05	339.09	22.82	15.31	PASS
2913.00†	2878.28	-91.87	-294.60	2842.68	2743.58	-97.67	-622.16	15.23	354.23	23.67	15.39	PASS
3013.00†	2975.24	-99.16	-317.97	2941.53	2834.83	-104.16	-659.57	15.40	369.37	24.54	15.47	PASS
3113.00†	3072.19	-106.45	-341.34	3040.37	2926.09	-110.65	-696.98	15.55	384.51	25.43	15.53	PASS
3213.00†	3169.15	-113.74	-364.71	3139.21	3017.35	-117.14	-734.40	15.69	399.66	26.33	15.57	PASS
3313.00†	3266.11	-121.03	-388.08	3238.05	3108.60	-123.63	-771.81	15.82	414.81	27.23	15.61	PASS
3413.00†	3363.06	-128.32	-411.45	3336.89	3199.86	-130.12	-809.22	15.94	429.96	28.15	15.64	PASS
3513.00†	3460.02	-135.61	-434.82	3435.73	3291.12	-136.61	-846.63	16.05	445.11	29.08	15.66	PASS
3613.00†	3556.98	-142.89	-458.19	3534.58	3382.38	-143.10	-884.05	16.16	460.26	30.02	15.68	PASS
3713.00†	3653.94	-150.18	-481.56	3633.42	3473.63	-149.59	-921.46	16.26	475.42	30.96	15.69	PASS
3813.00†	3750.89	-157.47	-504.93	3732.26	3564.89	-156.07	-958.87	16.35	490.58	31.91	15.70	PASS
3913.00†	3847.85	-164.76	-528.30	3831.10	3656.15	-162.56	-996.28	16.43	505.73	32.87	15.70	PASS
4013.00†	3944.81	-172.05	-551.67	3929.94	3747.40	-169.05	-1033.70	16.52	520.89	33.83	15.70	PASS
4113.00†	4041.77	-179.34	-575.04	4028.79	3838.66	-175.54	-1071.11	16.59	536.05	34.80	15.70	PASS
4213.00†	4138.72	-186.62	-598.41	4127.63	3929.92	-182.03	-1108.52	16.67	551.21	35.77	15.70	PASS
4313.00†	4235.68	-193.91	-621.78	4226.47	4021.18	-188.52	-1145.93	16.74	566.37	36.75	15.69	PASS
4413.00†	4332.64	-201.20	-645.15	4325.31	4112.43	-195.01	-1183.35	16.80	581.54	37.73	15.69	PASS
4513.00†	4429.59	-208.49	-668.52	4424.15	4203.69	-201.50	-1220.76	16.86	596.70	38.72	15.68	PASS
4613.00†	4526.55	-215.78	-691.89	4522.99	4294.95	-207.99	-1258.17	16.92	611.86	39.71	15.67	PASS
4713.00†	4623.51	-223.07	-715.26	4621.84	4386.20	-214.48	-1295.58	16.98	627.03	40.70	15.66	PASS
4813.00†	4720.47	-230.35	-738.63	4720.68	4477.46	-220.97	-1333.00	17.03	642.19	41.70	15.65	PASS
4913.00†	4817.42	-237.64	-762.00	4819.52	4568.72	-227.46	-1370.41	17.08	657.36	42.70	15.64	PASS
5013.00†	4914.38	-244.93	-785.37	4918.36	4659.98	-233.95	-1407.82	17.13	672.52	43.70	15.63	PASS
5113.00†	5011.34	-252.22	-808.74	5017.20	4751.23	-240.44	-1445.23	17.18	687.69	44.70	15.61	PASS
5213.00†	5108.30	-259.51	-832.11	5116.04	4842.49	-246.93	-1482.65	17.22	702.86	45.71	15.60	PASS
5313.00†	5205.25	-266.80	-855.48	5214.89	4933.75	-253.42	-1520.06	17.27	718.02	46.72	15.59	PASS
5413.00†	5302.21	-274.09	-878.85	5313.73	5025.00	-259.91	-1557.47	17.31	733.19	47.73	15.58	PASS
5513.00†	5399.17	-281.37	-902.22	5412.57	5116.26	-266.40	-1594.88	17.35	748.36	48.74	15.56	PASS
5613.00†	5496.12	-288.66	-925.59	5511.41	5207.52	-272.89	-1632.30	17.38	763.53	49.76	15.55	PASS
5713.00†	5593.08	-295.95	-948.96	5610.25	5298.78	-279.38	-1669.71	17.42	778.70	50.78	15.54	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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
5813.00†	5690.04	-303.24	-972.33	5709.09	5390.03	-285.87	-1707.12	17.45	793.87	51.79	15.53	PASS
5913.00†	5787.00	-310.53	-995.70	5807.94	5481.29	-292.35	-1744.54	17.49	809.03	52.81	15.51	PASS
6013.00†	5883.95	-317.82	-1019.07	5906.78	5572.55	-298.84	-1781.95	17.52	824.20	53.84	15.50	PASS
6113.00†	5980.91	-325.10	-1042.44	6005.62	5663.81	-305.33	-1819.36	17.55	839.37	54.86	15.49	PASS
6213.00†	6077.87	-332.39	-1065.81	6104.46	5755.06	-311.82	-1856.77	17.58	854.54	55.88	15.48	PASS
6313.00†	6174.83	-339.68	-1089.18	6203.30	5846.32	-318.31	-1894.19	17.61	869.71	56.91	15.46	PASS
6413.00†	6271.78	-346.97	-1112.55	6302.14	5937.58	-324.80	-1931.60	17.64	884.88	57.93	15.45	PASS
6513.00†	6368.74	-354.26	-1135.92	6400.99	6028.83	-331.29	-1969.01	17.67	900.05	58.96	15.44	PASS
6613.00†	6465.70	-361.55	-1159.29	6499.83	6120.09	-337.78	-2006.42	17.69	915.22	59.99	15.43	PASS
6713.00†	6562.65	-368.83	-1182.66	6598.67	6211.35	-344.27	-2043.84	17.72	930.40	61.02	15.41	PASS
6813.00†	6659.61	-376.12	-1206.03	6697.51	6302.61	-350.76	-2081.25	17.74	945.57	62.05	15.40	PASS
6913.00†	6756.57	-383.41	-1229.40	6796.35	6393.86	-357.25	-2118.66	17.76	960.74	63.08	15.39	PASS
7013.00†	6853.53	-390.70	-1252.77	6895.19	6485.12	-363.74	-2156.07	17.79	975.91	64.12	15.38	PASS
7113.00†	6950.48	-397.99	-1276.14	6994.04	6576.38	-370.23	-2193.49	17.81	991.08	65.15	15.37	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

## 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	-0.09	-36.54	-9.09	-88.43
8.5in Open Hole	1800.00	18287.12	16487.12	1779.82	7638.00	-9.09	-88.43	3041.42	-869.01



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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	-0.05	-45.00	-90.06	45.00	1.40	73.67	PASS	
113.00†	113.00	0.00	0.00	116.00	113.00	-0.05	-45.00	-90.06	45.00	1.73	47.50	PASS	
213.00†	213.00	0.00	0.00	216.00	213.00	-0.05	-45.00	-90.06	45.00	2.31	29.32	PASS	
313.00†	313.00	0.00	0.00	316.00	313.00	-0.05	-45.00	-90.06	45.00	2.92	20.91	PASS	
413.00†	413.00	0.00	0.00	416.00	413.00	-0.05	-45.00	-90.06	45.00	3.53	16.19	PASS	
513.00†	513.00	0.00	0.00	516.00	513.00	-0.05	-45.00	-90.06	45.00	4.15	13.19	PASS	
613.00†	613.00	0.00	0.00	616.00	613.00	-0.05	-45.00	-90.06	45.00	4.78	11.12	PASS	
713.00†	713.00	0.00	0.00	716.00	713.00	-0.05	-45.00	-90.06	45.00	5.40	9.61	PASS	
813.00†	813.00	0.00	0.00	816.00	813.00	-0.05	-45.00	-90.06	45.00	6.03	8.46	PASS	
913.00†	913.00	0.00	0.00	915.76	912.76	-0.06	-45.05	-90.07	45.05	6.65	7.56	PASS	
1013.00†	1013.00	0.00	0.00	1014.18	1011.15	-0.48	-47.24	-90.58	47.28	7.39	7.06	PASS	
1113.00†	1113.00	0.00	0.00	1112.33	1109.13	-1.54	-52.73	-91.67	52.89	8.38	6.87	PASS	
1213.00†	1213.00	0.00	0.00	1209.98	1206.38	-3.22	-61.46	-93.00	61.90	9.31	7.18	PASS	
1300.00	1300.00	0.00	0.00	1294.37	1290.12	-5.18	-71.62	-94.14	72.48	10.09	7.72	PASS	
1313.00†	1313.00	-0.01	-0.03	1306.92	1302.56	-5.51	-73.33	13.02	74.25	10.19	7.82	PASS	
1413.00†	1412.97	-0.66	-2.13	1403.28	1397.69	-8.40	-88.30	12.12	87.86	11.08	8.47	PASS	
1513.00†	1512.80	-2.36	-7.56	1499.20	1491.84	-11.87	-106.31	11.67	101.40	12.15	8.86	PASS	
1613.00†	1612.38	-5.09	-16.31	1594.70	1584.91	-15.92	-127.31	11.51	114.86	13.14	9.24	PASS	
1713.00†	1711.57	-8.85	-28.37	1689.79	1676.82	-20.54	-151.23	11.54	128.21	14.09	9.59	PASS	
1813.00†	1810.26	-13.64	-43.73	1784.47	1767.48	-25.70	-178.01	11.71	141.44	14.96	9.90	PASS	
1913.00†	1908.33	-19.45	-62.37	1878.76	1856.83	-31.41	-207.58	11.99	154.54	15.79	10.20	PASS	
2008.51	2001.31	-25.95	-83.21	1968.45	1940.85	-37.35	-238.39	12.32	166.92	16.68	10.41	PASS	
2013.00†	2005.66	-26.28	-84.26	1972.66	1944.77	-37.64	-239.89	12.34	167.50	16.71	10.43	PASS	
2113.00†	2102.62	-33.57	-107.63	2069.57	2034.60	-44.52	-275.59	12.71	181.54	17.33	10.88	PASS	
2213.00†	2199.58	-40.86	-131.00	2168.54	2126.26	-51.59	-312.25	13.04	195.81	18.00	11.28	PASS	
2313.00†	2296.53	-48.14	-154.37	2267.51	2217.92	-58.66	-348.91	13.31	210.08	18.70	11.63	PASS	
2413.00†	2393.49	-55.43	-177.74	2366.48	2309.58	-65.74	-385.57	13.55	224.36	19.44	11.94	PASS	
2513.00†	2490.45	-62.72	-201.11	2465.45	2401.24	-72.81	-422.22	13.77	238.64	20.20	12.21	PASS	
2613.00†	2587.41	-70.01	-224.49	2564.43	2492.90	-79.88	-458.88	13.95	252.92	20.98	12.44	PASS	
2713.00†	2684.36	-77.30	-247.86	2663.40	2584.56	-86.95	-495.54	14.12	267.21	21.78	12.65	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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†	2781.32	-84.59	-271.23	2762.37	2676.22	-94.02	-532.20	14.27	281.50	22.60	12.82	PASS
2913.00†	2878.28	-91.87	-294.60	2861.34	2767.88	-101.09	-568.86	14.41	295.79	23.44	12.98	PASS
3013.00†	2975.24	-99.16	-317.97	2960.31	2859.54	-108.16	-605.52	14.54	310.08	24.30	13.12	PASS
3113.00†	3072.19	-106.45	-341.34	3059.28	2951.20	-115.23	-642.17	14.65	324.38	25.16	13.24	PASS
3213.00†	3169.15	-113.74	-364.71	3158.25	3042.86	-122.30	-678.83	14.75	338.67	26.04	13.34	PASS
3313.00†	3266.11	-121.03	-388.08	3257.22	3134.52	-129.37	-715.49	14.85	352.97	26.93	13.43	PASS
3413.00†	3363.06	-128.32	-411.45	3356.20	3226.18	-136.44	-752.15	14.94	367.26	27.83	13.52	PASS
3513.00†	3460.02	-135.61	-434.82	3455.17	3317.84	-143.51	-788.81	15.02	381.56	28.74	13.59	PASS
3613.00†	3556.98	-142.89	-458.19	3554.14	3409.50	-150.58	-825.47	15.09	395.86	29.65	13.65	PASS
3713.00†	3653.94	-150.18	-481.56	3653.11	3501.16	-157.65	-862.13	15.16	410.16	30.58	13.71	PASS
3813.00†	3750.89	-157.47	-504.93	3752.08	3592.81	-164.72	-898.78	15.23	424.46	31.50	13.76	PASS
3913.00†	3847.85	-164.76	-528.30	3851.05	3684.47	-171.79	-935.44	15.29	438.76	32.44	13.80	PASS
4013.00†	3944.81	-172.05	-551.67	3950.02	3776.13	-178.86	-972.10	15.35	453.06	33.38	13.84	PASS
4113.00†	4041.77	-179.34	-575.04	4048.99	3867.79	-185.93	-1008.76	15.40	467.36	34.33	13.88	PASS
4213.00†	4138.72	-186.62	-598.41	4147.97	3959.45	-193.01	-1045.42	15.45	481.66	35.28	13.91	PASS
4313.00†	4235.68	-193.91	-621.78	4246.94	4051.11	-200.08	-1082.08	15.50	495.96	36.23	13.94	PASS
4413.00†	4332.64	-201.20	-645.15	4345.91	4142.77	-207.15	-1118.73	15.54	510.26	37.19	13.97	PASS
4513.00†	4429.59	-208.49	-668.52	4444.88	4234.43	-214.22	-1155.39	15.59	524.56	38.16	13.99	PASS
4613.00†	4526.55	-215.78	-691.89	4543.85	4326.09	-221.29	-1192.05	15.63	538.87	39.12	14.01	PASS
4713.00†	4623.51	-223.07	-715.26	4642.82	4417.75	-228.36	-1228.71	15.66	553.17	40.09	14.03	PASS
4813.00†	4720.47	-230.35	-738.63	4741.79	4509.41	-235.43	-1265.37	15.70	567.47	41.07	14.04	PASS
4913.00†	4817.42	-237.64	-762.00	4840.76	4601.07	-242.50	-1302.03	15.74	581.77	42.04	14.06	PASS
5013.00†	4914.38	-244.93	-785.37	4939.74	4692.73	-249.57	-1338.69	15.77	596.08	43.02	14.07	PASS
5113.00†	5011.34	-252.22	-808.74	5038.71	4784.39	-256.64	-1375.34	15.80	610.38	44.00	14.08	PASS
5213.00†	5108.30	-259.51	-832.11	5137.68	4876.05	-263.71	-1412.00	15.83	624.68	44.98	14.09	PASS
5313.00†	5205.25	-266.80	-855.48	5236.65	4967.71	-270.78	-1448.66	15.86	638.99	45.97	14.10	PASS
5413.00†	5302.21	-274.09	-878.85	5335.62	5059.37	-277.85	-1485.32	15.88	653.29	46.95	14.11	PASS
5513.00†	5399.17	-281.37	-902.22	5434.59	5151.03	-284.92	-1521.98	15.91	667.60	47.94	14.12	PASS
5613.00†	5496.12	-288.66	-925.59	5533.56	5242.69	-291.99	-1558.64	15.94	681.90	48.93	14.13	PASS
5713.00†	5593.08	-295.95	-948.96	5632.53	5334.35	-299.06	-1595.29	15.96	696.20	49.93	14.13	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	
5813.00†	5690.04	-303.24	-972.33	5731.51	5426.01	-306.13	-1631.95	15.98	710.51	50.92	14.14	PASS	
5913.00†	5787.00	-310.53	-995.70	5830.48	5517.67	-313.21	-1668.61	16.01	724.81	51.91	14.14	PASS	
6013.00†	5883.95	-317.82	-1019.07	5929.45	5609.32	-320.28	-1705.27	16.03	739.12	52.91	14.15	PASS	
6113.00†	5980.91	-325.10	-1042.44	6028.42	5700.98	-327.35	-1741.93	16.05	753.42	53.91	14.15	PASS	
6213.00†	6077.87	-332.39	-1065.81	6127.39	5792.64	-334.42	-1778.59	16.07	767.73	54.91	14.15	PASS	
6313.00†	6174.83	-339.68	-1089.18	6226.36	5884.30	-341.49	-1815.25	16.09	782.03	55.91	14.15	PASS	
6413.00†	6271.78	-346.97	-1112.55	6325.33	5975.96	-348.56	-1851.90	16.10	796.34	56.91	14.16	PASS	
6513.00†	6368.74	-354.26	-1135.92	6424.30	6067.62	-355.63	-1888.56	16.12	810.64	57.91	14.16	PASS	
6613.00†	6465.70	-361.55	-1159.29	6523.28	6159.28	-362.70	-1925.22	16.14	824.95	58.91	14.16	PASS	
6713.00†	6562.65	-368.83	-1182.66	6622.25	6250.94	-369.77	-1961.88	16.15	839.25	59.92	14.16	PASS	
6813.00†	6659.61	-376.12	-1206.03	6721.22	6342.60	-376.84	-1998.54	16.17	853.56	60.92	14.16	PASS	
6913.00†	6756.57	-383.41	-1229.40	6820.19	6434.26	-383.91	-2035.20	16.19	867.86	61.93	14.16	PASS	
7013.00†	6853.53	-390.70	-1252.77	6919.16	6525.92	-390.98	-2071.85	16.20	882.17	62.93	14.17	PASS	
7113.00†	6950.48	-397.99	-1276.14	7018.13	6617.58	-398.05	-2108.51	16.22	896.47	63.94	14.17	PASS	
7202.84	7037.59	-404.54	-1297.14	7105.20	6698.26	-403.07	-2140.82	16.30	909.36	64.86	14.16	PASS	
7213.00†	7047.45	-405.19	-1299.52	7114.75	6707.12	-403.06	-2144.38	12.55	910.84	64.98	14.16	PASS	
7313.00†	7144.45	-401.99	-1323.06	7208.14	6793.21	-394.55	-2179.31	-24.50	925.52	65.85	14.20	PASS	
7413.00†	7239.38	-381.51	-1346.38	7300.76	6876.03	-371.34	-2213.39	-46.35	940.13	66.34	14.31	PASS	
7513.00†	7329.35	-344.36	-1368.75	7392.88	6953.73	-334.27	-2245.87	-56.29	954.22	66.37	14.52	PASS	
7613.00†	7411.63	-291.69	-1389.50	7484.76	7024.60	-284.35	-2276.01	-61.05	967.35	66.14	14.77	PASS	
7713.00†	7483.71	-225.08	-1407.99	7576.63	7087.02	-222.78	-2303.14	-63.48	979.11	65.89	15.01	PASS	
7813.00†	7543.41	-146.56	-1423.68	7668.72	7139.50	-150.96	-2326.59	-64.77	989.15	65.86	15.17	PASS	
7913.00†	7588.91	-58.52	-1436.07	7761.20	7180.68	-70.52	-2345.78	-65.48	997.18	66.24	15.21	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 20-17-2CDH PWP (REV-A.0)  
Closest Approach  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	-0.03	-27.43	-8.12	-69.40
8.5in Open Hole	1800.00	17822.97	16022.97	1785.27	7230.00	-8.12	-69.40	3041.37	-833.98

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	0.11	59.98	89.89	59.98	1.40	98.63	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	0.11	59.98	89.89	59.98	1.73	63.94	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	0.11	59.98	89.89	59.98	2.30	39.50	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	0.11	59.98	89.89	59.98	2.90	28.14	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	0.11	59.98	89.89	59.98	3.52	21.77	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	0.11	59.98	89.89	59.98	4.14	17.73	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	0.11	59.98	89.89	59.98	4.76	14.94	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	0.11	59.98	89.89	59.98	5.39	12.91	PASS	
813.00†	813.00	0.00	0.00	813.00	813.00	0.11	59.98	89.89	59.98	6.01	11.36	PASS	
913.00†	913.00	0.00	0.00	913.00	913.00	0.11	59.98	89.89	59.98	6.64	10.14	PASS	
1013.00†	1013.00	0.00	0.00	1013.00	1013.00	0.11	59.98	89.89	59.98	7.27	9.16	PASS	
1113.00†	1113.00	0.00	0.00	1113.00	1113.00	0.11	59.98	89.89	59.98	7.89	8.35	PASS	
1213.00†	1213.00	0.00	0.00	1213.00	1213.00	0.11	59.98	89.89	59.98	8.52	7.67	PASS	
1300.00	1300.00	0.00	0.00	1300.00	1300.00	0.11	59.98	89.89	59.98	9.06	7.16	PASS	
1313.00†	1313.00	-0.01	-0.03	1313.00	1313.00	0.11	59.98	-162.79	60.01	9.15	7.10	PASS	
1413.00†	1412.97	-0.66	-2.13	1412.97	1412.97	0.11	59.98	-163.38	62.11	9.85	6.78	PASS	
1513.00†	1512.80	-2.36	-7.56	1512.99	1512.99	0.09	59.96	-164.72	67.56	10.76	6.70	PASS	
1613.00†	1612.38	-5.09	-16.31	1614.20	1614.17	-1.77	58.70	-165.17	75.10	11.66	6.84	PASS	
1713.00†	1711.57	-8.85	-28.37	1715.47	1715.27	-6.58	55.42	-164.17	83.90	12.59	7.05	PASS	
1813.00†	1810.26	-13.64	-43.73	1815.81	1815.21	-13.93	50.41	-162.40	94.28	13.33	7.41	PASS	
1913.00†	1908.33	-19.45	-62.37	1914.88	1913.85	-21.57	45.21	-161.35	107.74	14.14	7.97	PASS	
2008.51	2001.31	-25.95	-83.21	2009.05	2007.60	-28.83	40.26	-161.04	123.67	14.91	8.66	PASS	
2013.00†	2005.66	-26.28	-84.26	2013.46	2012.00	-29.18	40.03	-161.04	124.49	14.95	8.69	PASS	
2113.00†	2102.62	-33.57	-107.63	2111.78	2109.89	-36.76	34.86	-161.09	142.72	15.61	9.53	PASS	
2213.00†	2199.58	-40.86	-131.00	2210.11	2207.79	-44.35	29.69	-161.13	160.95	16.28	10.29	PASS	
2313.00†	2296.53	-48.14	-154.37	2308.43	2305.68	-51.93	24.53	-161.17	179.18	16.98	10.97	PASS	
2413.00†	2393.49	-55.43	-177.74	2406.76	2403.58	-59.52	19.36	-161.19	197.41	17.69	11.58	PASS	
2513.00†	2490.45	-62.72	-201.11	2505.08	2501.47	-67.10	14.19	-161.21	215.64	18.41	12.14	PASS	
2613.00†	2587.41	-70.01	-224.49	2603.41	2599.37	-74.69	9.03	-161.23	233.87	19.15	12.64	PASS	
2713.00†	2684.36	-77.30	-247.86	2701.73	2697.26	-82.27	3.86	-161.25	252.10	19.89	13.10	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.20-T01S-R65W Slot: SLOT#08 WAKEMAN 20-17-3NCH (293'FSL & 2128'FEL, SEC.20) Well: WAKEMAN 20-17-3NCH Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
2813.00†	2781.32	-84.59	-271.23	2800.05	2795.16	-89.86	-1.31	-161.26	270.33	20.65	13.52	PASS	
2913.00†	2878.28	-91.87	-294.60	2898.38	2893.05	-97.44	-6.47	-161.27	288.56	21.41	13.90	PASS	
3013.00†	2975.24	-99.16	-317.97	2996.70	2990.95	-105.03	-11.64	-161.28	306.79	22.18	14.25	PASS	
3113.00†	3072.19	-106.45	-341.34	3095.03	3088.84	-112.61	-16.80	-161.29	325.02	22.96	14.57	PASS	
3213.00†	3169.15	-113.74	-364.71	3193.35	3186.74	-120.20	-21.97	-161.30	343.25	23.75	14.87	PASS	
3313.00†	3266.11	-121.03	-388.08	3291.68	3284.63	-127.78	-27.14	-161.31	361.48	24.54	15.14	PASS	
3413.00†	3363.06	-128.32	-411.45	3390.00	3382.53	-135.37	-32.30	-161.32	379.71	25.33	15.39	PASS	
3513.00†	3460.02	-135.61	-434.82	3488.32	3480.42	-142.95	-37.47	-161.32	397.94	26.13	15.62	PASS	
3613.00†	3556.98	-142.89	-458.19	3586.65	3578.32	-150.54	-42.64	-161.33	416.17	26.94	15.84	PASS	
3713.00†	3653.94	-150.18	-481.56	3684.97	3676.21	-158.12	-47.80	-161.33	434.40	27.74	16.04	PASS	
3813.00†	3750.89	-157.47	-504.93	3783.30	3774.11	-165.71	-52.97	-161.34	452.63	28.55	16.23	PASS	
3913.00†	3847.85	-164.76	-528.30	3881.62	3872.00	-173.29	-58.14	-161.34	470.86	29.37	16.40	PASS	
4013.00†	3944.81	-172.05	-551.67	3979.95	3969.90	-180.88	-63.30	-161.35	489.09	30.18	16.57	PASS	
4113.00†	4041.77	-179.34	-575.04	4078.27	4067.79	-188.46	-68.47	-161.35	507.32	31.00	16.72	PASS	
4213.00†	4138.72	-186.62	-598.41	4176.59	4165.69	-196.05	-73.64	-161.35	525.55	31.83	16.87	PASS	
4313.00†	4235.68	-193.91	-621.78	4274.92	4263.58	-203.63	-78.80	-161.35	543.78	32.65	17.00	PASS	
4413.00†	4332.64	-201.20	-645.15	4373.24	4361.48	-211.22	-83.97	-161.36	562.01	33.48	17.13	PASS	
4513.00†	4429.59	-208.49	-668.52	4471.57	4459.37	-218.80	-89.14	-161.36	580.24	34.31	17.25	PASS	
4613.00†	4526.55	-215.78	-691.89	4569.89	4557.27	-226.39	-94.30	-161.36	598.47	35.14	17.36	PASS	
4713.00†	4623.51	-223.07	-715.26	4668.22	4655.16	-233.97	-99.47	-161.37	616.70	35.97	17.47	PASS	
4813.00†	4720.47	-230.35	-738.63	4766.54	4753.06	-241.56	-104.64	-161.37	634.93	36.80	17.57	PASS	
4913.00†	4817.42	-237.64	-762.00	4864.86	4850.95	-249.14	-109.80	-161.37	653.16	37.64	17.67	PASS	
5013.00†	4914.38	-244.93	-785.37	4963.19	4948.85	-256.73	-114.97	-161.37	671.39	38.47	17.76	PASS	
5113.00†	5011.34	-252.22	-808.74	5061.51	5046.74	-264.31	-120.14	-161.38	689.62	39.31	17.85	PASS	
5213.00†	5108.30	-259.51	-832.11	5159.84	5144.64	-271.90	-125.30	-161.38	707.85	40.15	17.93	PASS	
5313.00†	5205.25	-266.80	-855.48	5258.16	5242.53	-279.48	-130.47	-161.38	726.08	40.99	18.01	PASS	
5413.00†	5302.21	-274.09	-878.85	5356.49	5340.43	-287.07	-135.64	-161.38	744.31	41.83	18.08	PASS	
5513.00†	5399.17	-281.37	-902.22	5454.81	5438.32	-294.65	-140.80	-161.38	762.54	42.67	18.15	PASS	
5613.00†	5496.12	-288.66	-925.59	5553.13	5536.22	-302.24	-145.97	-161.38	780.77	43.52	18.22	PASS	
5713.00†	5593.08	-295.95	-948.96	5651.46	5634.11	-309.82	-151.14	-161.39	799.00	44.36	18.29	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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
5813.00†	5690.04	-303.24	-972.33	5749.78	5732.01	-317.41	-156.30	-161.39	817.23	45.21	18.35	PASS
5913.00†	5787.00	-310.53	-995.70	5848.11	5829.90	-324.99	-161.47	-161.39	835.46	46.05	18.41	PASS
6013.00†	5883.95	-317.82	-1019.07	5946.43	5927.80	-332.58	-166.63	-161.39	853.69	46.90	18.47	PASS
6113.00†	5980.91	-325.10	-1042.44	6044.75	6025.69	-340.16	-171.80	-161.39	871.92	47.75	18.52	PASS
6213.00†	6077.87	-332.39	-1065.81	6143.08	6123.59	-347.75	-176.97	-161.39	890.15	48.59	18.57	PASS
6313.00†	6174.83	-339.68	-1089.18	6241.40	6221.48	-355.33	-182.13	-161.39	908.38	49.44	18.63	PASS
6413.00†	6271.78	-346.97	-1112.55	6339.73	6319.38	-362.92	-187.30	-161.39	926.61	50.29	18.67	PASS
6513.00†	6368.74	-354.26	-1135.92	6438.05	6417.27	-370.50	-192.47	-161.40	944.84	51.14	18.72	PASS
6613.00†	6465.70	-361.55	-1159.29	6536.38	6515.17	-378.09	-197.63	-161.40	963.07	51.99	18.77	PASS
6713.00†	6562.65	-368.83	-1182.66	6634.70	6613.06	-385.67	-202.80	-161.40	981.30	52.84	18.81	PASS
6813.00†	6659.61	-376.12	-1206.03	6733.02	6710.96	-393.26	-207.97	-161.40	999.53	53.69	18.85	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

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

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

## 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	0.07	36.56	-3.84	33.90
8.5in Open Hole	1800.00	17619.74	15819.74	1799.47	N/A	-3.84	33.90	N/A	N/A



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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.20-T1S-R65W Slot: SLOT#01 EX. COLLINS #14-20 (990°FSL & 990°FSL, SEC.20, OG, PR, 8202) Well: COLLINS #14-20 Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
13.00	13.00	0.00	0.00	-13.00	17.00	703.71	-2129.45	-71.71	2242.72	25.40	91.13	PASS
113.00†	113.00	0.00	0.00	83.00	113.00	703.71	-2129.45	-71.71	2242.71	51.90	43.84	PASS
213.00†	213.00	0.00	0.00	183.00	213.00	703.71	-2129.45	-71.71	2242.71	54.08	41.92	PASS
313.00†	313.00	0.00	0.00	283.00	313.00	703.71	-2129.45	-71.71	2242.71	56.42	40.16	PASS
413.00†	413.00	0.00	0.00	383.00	413.00	703.71	-2129.45	-71.71	2242.71	58.77	38.54	PASS
513.00†	513.00	0.00	0.00	483.00	513.00	703.71	-2129.45	-71.71	2242.71	61.13	37.04	PASS
613.00†	613.00	0.00	0.00	583.00	613.00	703.71	-2129.45	-71.71	2242.71	63.48	35.65	PASS
713.00†	713.00	0.00	0.00	683.00	713.00	703.71	-2129.45	-71.71	2242.71	65.85	34.36	PASS
813.00†	813.00	0.00	0.00	783.00	813.00	703.71	-2129.45	-71.71	2242.71	68.21	33.16	PASS
913.00†	913.00	0.00	0.00	883.00	913.00	703.71	-2129.45	-71.71	2242.71	70.58	32.03	PASS
1013.00†	1013.00	0.00	0.00	983.00	1013.00	703.71	-2129.45	-71.71	2242.71	72.96	30.98	PASS
1113.00†	1113.00	0.00	0.00	1083.00	1113.00	703.71	-2129.45	-71.71	2242.71	75.33	30.00	PASS
1213.00†	1213.00	0.00	0.00	1183.00	1213.00	703.71	-2129.45	-71.71	2242.71	77.72	29.07	PASS
1300.00	1300.00	0.00	0.00	1270.00	1300.00	703.71	-2129.45	-71.71	2242.71	79.79	28.31	PASS
1313.00†	1313.00	-0.01	-0.03	1283.00	1313.00	703.71	-2129.45	35.61	2242.69	80.10	28.20	PASS
1413.00†	1412.97	-0.66	-2.13	1382.97	1412.97	703.71	-2129.45	35.66	2240.90	82.50	27.35	PASS
1513.00†	1512.80	-2.36	-7.56	1482.80	1512.80	703.71	-2129.45	35.80	2236.28	84.93	26.51	PASS
1613.00†	1612.38	-5.09	-16.31	1582.38	1612.38	703.71	-2129.45	36.03	2228.85	87.36	25.68	PASS
1713.00†	1711.57	-8.85	-28.37	1681.57	1711.57	703.71	-2129.45	36.34	2218.62	89.79	24.87	PASS
1813.00†	1810.26	-13.64	-43.73	1780.26	1810.26	703.71	-2129.45	36.74	2205.63	92.16	24.07	PASS
1913.00†	1908.33	-19.45	-62.37	1878.33	1908.33	703.71	-2129.45	37.24	2189.92	94.58	23.28	PASS
2008.51	2001.31	-25.95	-83.21	1971.31	2001.31	703.71	-2129.45	37.80	2172.44	96.88	22.54	PASS
2013.00†	2005.66	-26.28	-84.26	1975.66	2005.66	703.71	-2129.45	37.82	2171.56	96.99	22.51	PASS
2113.00†	2102.62	-33.57	-107.63	2072.62	2102.62	703.71	-2129.45	38.21	2152.05	99.37	21.77	PASS
2213.00†	2199.58	-40.86	-131.00	2169.58	2199.58	703.71	-2129.45	38.62	2132.64	101.77	21.06	PASS
2313.00†	2296.53	-48.14	-154.37	2266.53	2296.53	703.71	-2129.45	39.03	2113.34	104.18	20.39	PASS
2413.00†	2393.49	-55.43	-177.74	2363.49	2393.49	703.71	-2129.45	39.44	2094.15	106.61	19.74	PASS
2513.00†	2490.45	-62.72	-201.11	2460.45	2490.45	703.71	-2129.45	39.87	2075.06	109.05	19.12	PASS
2613.00†	2587.41	-70.01	-224.49	2557.41	2587.41	703.71	-2129.45	40.30	2056.10	111.51	18.52	PASS
2713.00†	2684.36	-77.30	-247.86	2654.36	2684.36	703.71	-2129.45	40.74	2037.25	113.98	17.95	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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]	Sep Ratio	ACR Status		
2813.00†	2781.32	-84.59	-271.23	2751.32	2781.32	703.71	-2129.45	41.18	2018.52	116.47	17.41	PASS		
2913.00†	2878.28	-91.87	-294.60	2848.28	2878.28	703.71	-2129.45	41.64	1999.91	118.98	16.88	PASS		
3013.00†	2975.24	-99.16	-317.97	2945.24	2975.24	703.71	-2129.45	42.10	1981.43	121.50	16.38	PASS		
3113.00†	3072.19	-106.45	-341.34	3042.19	3072.19	703.71	-2129.45	42.58	1963.09	124.04	15.89	PASS		
3213.00†	3169.15	-113.74	-364.71	3139.15	3169.15	703.71	-2129.45	43.06	1944.88	126.59	15.43	PASS		
3313.00†	3266.11	-121.03	-388.08	3236.11	3266.11	703.71	-2129.45	43.55	1926.80	129.16	14.98	PASS		
3413.00†	3363.06	-128.32	-411.45	3333.06	3363.06	703.71	-2129.45	44.05	1908.87	131.75	14.54	PASS		
3513.00†	3460.02	-135.61	-434.82	3430.02	3460.02	703.71	-2129.45	44.55	1891.09	134.36	14.13	PASS		
3613.00†	3556.98	-142.89	-458.19	3526.98	3556.98	703.71	-2129.45	45.07	1873.46	136.98	13.73	PASS		
3713.00†	3653.94	-150.18	-481.56	3623.94	3653.94	703.71	-2129.45	45.60	1855.99	139.61	13.34	PASS		
3813.00†	3750.89	-157.47	-504.93	3720.89	3750.89	703.71	-2129.45	46.14	1838.67	142.27	12.97	PASS		
3913.00†	3847.85	-164.76	-528.30	3817.85	3847.85	703.71	-2129.45	46.68	1821.52	144.94	12.61	PASS		
4013.00†	3944.81	-172.05	-551.67	3914.81	3944.81	703.71	-2129.45	47.24	1804.53	147.63	12.26	PASS		
4113.00†	4041.77	-179.34	-575.04	4011.77	4041.77	703.71	-2129.45	47.80	1787.73	150.34	11.93	PASS		
4213.00†	4138.72	-186.62	-598.41	4108.72	4138.72	703.71	-2129.45	48.38	1771.10	153.06	11.61	PASS		
4313.00†	4235.68	-193.91	-621.78	4205.68	4235.68	703.71	-2129.45	48.97	1754.65	155.80	11.30	PASS		
4413.00†	4332.64	-201.20	-645.15	4302.64	4332.64	703.71	-2129.45	49.57	1738.39	158.56	11.00	PASS		
4513.00†	4429.59	-208.49	-668.52	4399.59	4429.59	703.71	-2129.45	50.18	1722.33	161.33	10.71	PASS		
4613.00†	4526.55	-215.78	-691.89	4496.55	4526.55	703.71	-2129.45	50.80	1706.47	164.12	10.43	PASS		
4713.00†	4623.51	-223.07	-715.26	4593.51	4623.51	703.71	-2129.45	51.43	1690.81	166.93	10.16	PASS		
4813.00†	4720.47	-230.35	-738.63	4690.47	4720.47	703.71	-2129.45	52.07	1675.37	169.75	9.90	PASS		
4913.00†	4817.42	-237.64	-762.00	4787.42	4817.42	703.71	-2129.45	52.72	1660.14	172.59	9.65	PASS		
5013.00†	4914.38	-244.93	-785.37	4884.38	4914.38	703.71	-2129.45	53.39	1645.14	175.44	9.40	PASS		
5113.00†	5011.34	-252.22	-808.74	4981.34	5011.34	703.71	-2129.45	54.06	1630.36	178.32	9.17	PASS		
5213.00†	5108.30	-259.51	-832.11	5078.30	5108.30	703.71	-2129.45	54.75	1615.82	181.20	8.94	PASS		
5313.00†	5205.25	-266.80	-855.48	5175.25	5205.25	703.71	-2129.45	55.45	1601.53	184.11	8.72	PASS		
5413.00†	5302.21	-274.09	-878.85	5272.21	5302.21	703.71	-2129.45	56.17	1587.48	187.03	8.51	PASS		
5513.00†	5399.17	-281.37	-902.22	5369.17	5399.17	703.71	-2129.45	56.89	1573.68	189.96	8.31	PASS		
5613.00†	5496.12	-288.66	-925.59	5466.12	5496.12	703.71	-2129.45	57.63	1560.15	192.91	8.11	PASS		
5713.00†	5593.08	-295.95	-948.96	5563.08	5593.08	703.71	-2129.45	58.38	1546.89	195.87	7.92	PASS		

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.20-T1S-R65W Slot: SLOT#01 EX. COLLINS #14-20 (990°FSL & 990°FSL, SEC.20, OG, PR, 8202) Well: COLLINS #14-20 Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
5813.00†	5690.04	-303.24	-972.33	5660.04	5690.04	703.71	-2129.45	59.14	1533.91	198.85	7.73	PASS	
5913.00†	5787.00	-310.53	-995.70	5757.00	5787.00	703.71	-2129.45	59.91	1521.21	201.84	7.55	PASS	
6013.00†	5883.95	-317.82	-1019.07	5853.95	5883.95	703.71	-2129.45	60.70	1508.79	204.85	7.38	PASS	
6113.00†	5980.91	-325.10	-1042.44	5950.91	5980.91	703.71	-2129.45	61.49	1496.68	207.86	7.22	PASS	
6213.00†	6077.87	-332.39	-1065.81	6047.87	6077.87	703.71	-2129.45	62.31	1484.87	210.90	7.06	PASS	
6313.00†	6174.83	-339.68	-1089.18	6144.83	6174.83	703.71	-2129.45	63.13	1473.37	213.94	6.90	PASS	
6413.00†	6271.78	-346.97	-1112.55	6241.78	6271.78	703.71	-2129.45	63.96	1462.19	216.99	6.75	PASS	
6513.00†	6368.74	-354.26	-1135.92	6338.74	6368.74	703.71	-2129.45	64.81	1451.34	220.06	6.61	PASS	
6613.00†	6465.70	-361.55	-1159.29	6435.70	6465.70	703.71	-2129.45	65.67	1440.83	223.13	6.47	PASS	
6713.00†	6562.65	-368.83	-1182.66	6532.65	6562.65	703.71	-2129.45	66.54	1430.65	226.22	6.34	PASS	
6813.00†	6659.61	-376.12	-1206.03	6629.61	6659.61	703.71	-2129.45	67.42	1420.82	229.31	6.21	PASS	
6913.00†	6756.57	-383.41	-1229.40	6726.57	6756.57	703.71	-2129.45	68.31	1411.35	232.41	6.08	PASS	
7013.00†	6853.53	-390.70	-1252.77	6823.53	6853.53	703.71	-2129.45	69.22	1402.25	235.52	5.97	PASS	
7113.00†	6950.48	-397.99	-1276.14	6920.48	6950.48	703.71	-2129.45	70.14	1393.51	238.63	5.85	PASS	
7202.84	7037.59	-404.54	-1297.14	7007.59	7037.59	703.71	-2129.45	70.97	1385.99	241.44	5.75	PASS	
7213.00†	7047.45	-405.19	-1299.52	7017.45	7047.45	703.71	-2129.45	67.07	1385.08	241.75	5.74	PASS	
7313.00†	7144.45	-401.99	-1323.06	7114.45	7144.45	703.71	-2129.45	27.93	1368.52	244.76	5.60	PASS	
7413.00†	7239.38	-381.51	-1346.38	7209.38	7239.38	703.71	-2129.45	2.79	1338.25	247.63	5.41	PASS	
7513.00†	7329.35	-344.36	-1368.75	7299.35	7329.35	703.71	-2129.45	-11.89	1295.04	250.06	5.19	PASS	
7613.00†	7411.63	-291.69	-1389.50	7381.63	7411.63	703.71	-2129.45	-23.23	1240.30	251.89	4.93	PASS	
7713.00†	7483.71	-225.08	-1407.99	7453.71	7483.71	703.71	-2129.45	-34.64	1176.07	252.99	4.66	PASS	
7813.00†	7543.41	-146.56	-1423.68	7513.41	7543.41	703.71	-2129.45	-47.66	1105.02	253.23	4.37	PASS	
7913.00†	7588.91	-58.52	-1436.07	7558.91	7588.91	703.71	-2129.45	-62.19	1030.42	252.53	4.09	PASS	
8013.00†	7618.83	36.36	-1444.80	7588.83	7618.83	703.71	-2129.45	-76.28	956.09	250.85	3.82	PASS	
8113.00†	7632.26	135.21	-1449.60	7602.26	7632.26	703.71	-2129.45	-87.46	886.22	248.27	3.58	PASS	
8142.54	7633.00	164.73	-1450.24	7603.00	7633.00	703.71	-2129.45	-90.00	867.08	247.37	3.51	PASS	
8213.00†	7633.00	235.18	-1451.34	7603.00	7633.00	703.71	-2129.45	-90.00	824.23	245.18	3.37	PASS	
8313.00†	7633.00	335.17	-1452.90	7603.00	7633.00	703.71	-2129.45	-90.00	770.42	242.47	3.18	PASS	
8413.00†	7633.00	435.16	-1454.46	7603.00	7633.00	703.71	-2129.45	-90.00	726.45	240.89	3.02	PASS	
8513.00†	7633.00	535.15	-1456.02	7603.00	7633.00	703.71	-2129.45	-90.00	694.21	241.33	2.88	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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]	Sep Ratio	ACR Status
8613.00†	7633.00	635.13	-1457.58	7603.00	7633.00	703.71	-2129.45	-90.00	675.36	244.24	2.77	PASS
8692.64†	7633.00	714.77	-1458.82	7602.70	7632.70	703.71	-2129.45	-89.98	670.72	248.07	2.71	PASS
8713.00†	7633.00	735.12	-1459.14	7603.00	7633.00	703.71	-2129.45	-90.00	671.05	249.20	2.70	PASS
8813.00†	7633.00	835.11	-1460.70	7603.00	7633.00	703.71	-2129.45	-90.00	681.54	255.17	2.67	PASS
8864.24†	7633.00	886.34	-1461.50	7603.00	7633.00	703.71	-2129.45	-90.00	692.47	270.08	2.57	PASS
8913.00†	7633.00	935.10	-1462.26	7603.00	7633.00	703.71	-2129.45	-90.00	706.17	261.13	2.71	PASS
9013.00†	7633.00	1035.09	-1463.82	7603.00	7633.00	703.71	-2129.45	-90.00	743.55	266.42	2.78	PASS
9113.00†	7633.00	1135.07	-1465.38	7603.00	7633.00	703.71	-2129.45	-90.00	791.87	270.78	2.93	PASS
9213.00†	7633.00	1235.06	-1466.94	7603.00	7633.00	703.71	-2129.45	-90.00	849.26	274.19	3.10	PASS
9313.00†	7633.00	1335.05	-1468.50	7603.00	7633.00	703.71	-2129.45	-90.00	914.02	276.79	3.31	PASS
9413.00†	7633.00	1435.04	-1470.06	7603.00	7633.00	703.71	-2129.45	-90.00	984.70	278.73	3.54	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	423.07	-1300.03	423.07	-1300.03
8.625in Casing Surface	0.00	150.00	150.00	17.00	167.00	423.07	-1300.03	423.07	-1300.03
7.875in Open Hole	150.00	8194.00	8044.00	167.00	8211.00	423.07	-1300.03	423.07	-1300.03
4.5in Casing Production	0.00	8194.00	8194.00	17.00	8211.00	423.07	-1300.03	423.07	-1300.03



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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

**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



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	0.11	75.04	89.92	75.04	1.40	123.72	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	0.11	75.04	89.92	75.04	1.73	80.42	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	0.11	75.04	89.92	75.04	2.30	49.70	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	0.11	75.04	89.92	75.04	2.90	35.39	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	0.11	75.04	89.92	75.04	3.51	27.37	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	0.11	75.04	89.92	75.04	4.13	22.28	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	0.11	75.04	89.92	75.04	4.76	18.77	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	0.11	75.04	89.92	75.04	5.38	16.21	PASS	
813.00†	813.00	0.00	0.00	813.00	813.00	0.11	75.04	89.92	75.04	6.01	14.26	PASS	
913.00†	913.00	0.00	0.00	913.00	913.00	0.11	75.04	89.92	75.04	6.63	12.73	PASS	
1013.00†	1013.00	0.00	0.00	1013.00	1013.00	0.11	75.04	89.92	75.04	7.26	11.50	PASS	
1113.00†	1113.00	0.00	0.00	1113.00	1113.00	0.11	75.04	89.92	75.04	7.89	10.48	PASS	
1213.00†	1213.00	0.00	0.00	1213.00	1213.00	0.11	75.04	89.92	75.04	8.51	9.63	PASS	
1300.00	1300.00	0.00	0.00	1300.00	1300.00	0.11	75.04	89.92	75.04	9.06	8.99	PASS	
1313.00†	1313.00	-0.01	-0.03	1313.00	1313.00	0.11	75.04	-162.77	75.06	9.14	8.91	PASS	
1413.00†	1412.97	-0.66	-2.13	1412.92	1412.92	0.08	75.04	-163.22	77.17	9.84	8.45	PASS	
1513.00†	1512.80	-2.36	-7.56	1512.32	1512.29	-2.07	75.39	-162.83	82.95	10.75	8.26	PASS	
1613.00†	1612.38	-5.09	-16.31	1611.29	1611.10	-7.58	76.29	-161.00	92.63	11.61	8.49	PASS	
1713.00†	1711.57	-8.85	-28.37	1710.26	1709.77	-15.12	77.51	-159.04	106.08	12.45	9.04	PASS	
1813.00†	1810.26	-13.64	-43.73	1808.83	1808.04	-22.66	78.74	-158.08	122.82	13.18	9.79	PASS	
1913.00†	1908.33	-19.45	-62.37	1906.82	1905.74	-30.15	79.95	-157.84	142.75	14.00	10.68	PASS	
2008.51	2001.31	-25.95	-83.21	1999.75	1998.40	-37.25	81.11	-158.05	164.74	14.79	11.65	PASS	
2013.00†	2005.66	-26.28	-84.26	2004.10	2002.73	-37.58	81.16	-158.07	165.84	14.83	11.70	PASS	
2113.00†	2102.62	-33.57	-107.63	2101.04	2099.38	-44.99	82.37	-158.56	190.37	15.49	12.83	PASS	
2213.00†	2199.58	-40.86	-131.00	2197.97	2196.02	-52.40	83.57	-158.93	214.92	16.18	13.85	PASS	
2313.00†	2296.53	-48.14	-154.37	2294.90	2292.66	-59.80	84.78	-159.23	239.47	16.88	14.77	PASS	
2413.00†	2393.49	-55.43	-177.74	2391.83	2389.30	-67.21	85.98	-159.47	264.02	17.59	15.60	PASS	
2513.00†	2490.45	-62.72	-201.11	2488.77	2485.94	-74.62	87.19	-159.67	288.58	18.31	16.35	PASS	
2613.00†	2587.41	-70.01	-224.49	2585.70	2582.58	-82.03	88.39	-159.84	313.15	19.04	17.04	PASS	
2713.00†	2684.36	-77.30	-247.86	2682.63	2679.23	-89.44	89.60	-159.98	337.71	19.78	17.67	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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†	2781.32	-84.59	-271.23	2779.57	2775.87	-96.84	90.80	-160.11	362.28	20.53	18.24	PASS	
2913.00†	2878.28	-91.87	-294.60	2876.50	2872.51	-104.25	92.01	-160.22	386.84	21.29	18.76	PASS	
3013.00†	2975.24	-99.16	-317.97	2973.43	2969.15	-111.66	93.21	-160.31	411.41	22.05	19.24	PASS	
3113.00†	3072.19	-106.45	-341.34	3070.36	3065.79	-119.07	94.42	-160.40	435.98	22.82	19.68	PASS	
3213.00†	3169.15	-113.74	-364.71	3167.30	3162.44	-126.48	95.62	-160.48	460.55	23.60	20.09	PASS	
3313.00†	3266.11	-121.03	-388.08	3264.23	3259.08	-133.88	96.83	-160.54	485.12	24.38	20.47	PASS	
3413.00†	3363.06	-128.32	-411.45	3361.16	3355.72	-141.29	98.03	-160.60	509.69	25.16	20.82	PASS	
3513.00†	3460.02	-135.61	-434.82	3458.09	3452.36	-148.70	99.23	-160.66	534.27	25.95	21.14	PASS	
3613.00†	3556.98	-142.89	-458.19	3555.03	3549.00	-156.11	100.44	-160.71	558.84	26.74	21.44	PASS	
3713.00†	3653.94	-150.18	-481.56	3651.96	3645.64	-163.51	101.64	-160.76	583.41	27.53	21.72	PASS	
3813.00†	3750.89	-157.47	-504.93	3748.89	3742.29	-170.92	102.85	-160.80	607.99	28.33	21.99	PASS	
3913.00†	3847.85	-164.76	-528.30	3845.83	3838.93	-178.33	104.05	-160.84	632.56	29.13	22.23	PASS	
4013.00†	3944.81	-172.05	-551.67	3942.76	3935.57	-185.74	105.26	-160.88	657.13	29.93	22.46	PASS	
4113.00†	4041.77	-179.34	-575.04	4039.69	4032.21	-193.15	106.46	-160.91	681.71	30.74	22.68	PASS	
4213.00†	4138.72	-186.62	-598.41	4136.62	4128.85	-200.55	107.67	-160.95	706.28	31.55	22.88	PASS	
4313.00†	4235.68	-193.91	-621.78	4233.56	4225.49	-207.96	108.87	-160.98	730.86	32.36	23.07	PASS	
4413.00†	4332.64	-201.20	-645.15	4330.49	4322.14	-215.37	110.08	-161.00	755.43	33.17	23.25	PASS	
4513.00†	4429.59	-208.49	-668.52	4427.42	4418.78	-222.78	111.28	-161.03	780.01	33.98	23.42	PASS	
4613.00†	4526.55	-215.78	-691.89	4524.36	4515.42	-230.18	112.49	-161.05	804.58	34.80	23.58	PASS	
4713.00†	4623.51	-223.07	-715.26	4621.29	4612.06	-237.59	113.69	-161.07	829.16	35.61	23.74	PASS	
4813.00†	4720.47	-230.35	-738.63	4718.22	4708.70	-245.00	114.90	-161.10	853.73	36.43	23.88	PASS	
4913.00†	4817.42	-237.64	-762.00	4815.15	4805.35	-252.41	116.10	-161.12	878.31	37.25	24.02	PASS	
5013.00†	4914.38	-244.93	-785.37	4912.09	4901.99	-259.82	117.31	-161.14	902.88	38.07	24.15	PASS	
5113.00†	5011.34	-252.22	-808.74	5009.02	4998.63	-267.22	118.51	-161.16	927.46	38.89	24.27	PASS	
5213.00†	5108.30	-259.51	-832.11	5105.95	5095.27	-274.63	119.71	-161.17	952.03	39.71	24.39	PASS	
5313.00†	5205.25	-266.80	-855.48	5202.88	5191.91	-282.04	120.92	-161.19	976.61	40.54	24.50	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

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

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

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

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing Surface	13.00	1800.00	1787.00	13.00	1799.24	0.06	45.74	-6.67	46.84
8.5in Open Hole	1800.00	17542.23	15742.23	1799.24	7395.00	-6.67	46.84	3039.24	25.36

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	6832.52	-2787.88	-22.20	7379.72	25.40	299.94	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	4157.31	-1718.34	4157.31	-1718.34
8.625in Casing Surface	0.00	1450.00	1450.00	81.00	1531.00	4157.31	-1718.34	4157.31	-1718.34
7.875in Open Hole	1450.00	8150.00	6700.00	1531.00	N/A	4157.31	-1718.34	N/A	N/A
4.5in Casing Production	0.00	8150.00	8150.00	81.00	N/A	4157.31	-1718.34	N/A	N/A

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

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

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

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



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	0.21	89.98	89.87	89.98	1.40	148.63	PASS
113.00†	113.00	0.00	0.00	113.00	113.00	0.21	89.98	89.87	89.98	1.73	96.31	PASS
213.00†	213.00	0.00	0.00	213.00	213.00	0.21	89.98	89.87	89.98	2.30	59.49	PASS
313.00†	313.00	0.00	0.00	313.00	313.00	0.21	89.98	89.87	89.98	2.91	42.39	PASS
413.00†	413.00	0.00	0.00	413.00	413.00	0.21	89.98	89.87	89.98	3.52	32.79	PASS
513.00†	513.00	0.00	0.00	513.00	513.00	0.21	89.98	89.87	89.98	4.14	26.70	PASS
613.00†	613.00	0.00	0.00	613.00	613.00	0.21	89.98	89.87	89.98	4.76	22.51	PASS
713.00†	713.00	0.00	0.00	713.00	713.00	0.21	89.98	89.87	89.98	5.39	19.44	PASS
813.00†	813.00	0.00	0.00	813.00	813.00	0.21	89.98	89.87	89.98	6.01	17.11	PASS
913.00†	913.00	0.00	0.00	913.00	913.00	0.21	89.98	89.87	89.98	6.64	15.28	PASS
1013.00†	1013.00	0.00	0.00	1013.00	1013.00	0.21	89.98	89.87	89.98	7.27	13.80	PASS
1113.00†	1113.00	0.00	0.00	1113.00	1113.00	0.21	89.98	89.87	89.98	7.89	12.58	PASS
1213.00†	1213.00	0.00	0.00	1213.00	1213.00	0.21	89.98	89.87	89.98	8.52	11.55	PASS
1300.00	1300.00	0.00	0.00	1300.00	1300.00	0.21	89.98	89.87	89.98	9.07	10.79	PASS
1313.00†	1313.00	-0.01	-0.03	1312.75	1312.75	0.18	90.00	-162.80	90.03	9.15	10.69	PASS
1413.00†	1412.97	-0.66	-2.13	1410.74	1410.72	-1.48	91.30	-162.15	93.46	9.88	10.21	PASS
1513.00†	1512.80	-2.36	-7.56	1508.20	1508.02	-5.74	94.65	-160.67	102.37	10.90	10.06	PASS
1613.00†	1612.38	-5.09	-16.31	1605.23	1604.67	-12.51	99.96	-158.76	116.76	11.83	10.52	PASS
1713.00†	1711.57	-8.85	-28.37	1703.50	1702.45	-20.16	105.95	-157.44	135.11	12.66	11.32	PASS
1813.00†	1810.26	-13.64	-43.73	1801.14	1799.61	-27.76	111.91	-156.89	156.65	13.38	12.31	PASS
1913.00†	1908.33	-19.45	-62.37	1898.05	1896.04	-35.30	117.83	-156.85	181.31	14.19	13.40	PASS
2008.51	2001.31	-25.95	-83.21	1989.80	1987.35	-42.44	123.43	-157.12	207.77	14.96	14.53	PASS
2013.00†	2005.66	-26.28	-84.26	1994.09	1991.62	-42.77	123.69	-157.15	209.08	15.00	14.58	PASS
2113.00†	2102.62	-33.57	-107.63	2089.72	2086.77	-50.21	129.53	-157.69	238.27	15.66	15.89	PASS
2213.00†	2199.58	-40.86	-131.00	2185.34	2181.93	-57.65	135.36	-158.12	267.48	16.33	17.08	PASS
2313.00†	2296.53	-48.14	-154.37	2280.96	2277.08	-65.09	141.20	-158.46	296.70	17.03	18.14	PASS
2413.00†	2393.49	-55.43	-177.74	2376.58	2372.23	-72.53	147.04	-158.74	325.92	17.72	19.12	PASS
2513.00†	2490.45	-62.72	-201.11	2472.21	2467.39	-79.97	152.87	-158.97	355.16	18.43	20.00	PASS
2613.00†	2587.41	-70.01	-224.49	2567.83	2562.54	-87.41	158.71	-159.17	384.39	19.16	20.80	PASS
2713.00†	2684.36	-77.30	-247.86	2663.45	2657.70	-94.85	164.55	-159.34	413.63	19.89	21.52	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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†	2781.32	-84.59	-271.23	2759.08	2752.85	-102.29	170.38	-159.49	442.88	20.64	22.19	PASS	
2913.00†	2878.28	-91.87	-294.60	2854.70	2848.00	-109.73	176.22	-159.62	472.12	21.39	22.80	PASS	
3013.00†	2975.24	-99.16	-317.97	2950.32	2943.16	-117.17	182.05	-159.74	501.37	22.15	23.35	PASS	
3113.00†	3072.19	-106.45	-341.34	3045.94	3038.31	-124.61	187.89	-159.84	530.62	22.91	23.87	PASS	
3213.00†	3169.15	-113.74	-364.71	3141.57	3133.47	-132.05	193.73	-159.93	559.87	23.68	24.34	PASS	
3313.00†	3266.11	-121.03	-388.08	3237.19	3228.62	-139.49	199.56	-160.01	589.12	24.45	24.78	PASS	
3413.00†	3363.06	-128.32	-411.45	3332.81	3323.77	-146.93	205.40	-160.09	618.38	25.23	25.18	PASS	
3513.00†	3460.02	-135.61	-434.82	3428.43	3418.93	-154.37	211.24	-160.15	647.63	26.02	25.56	PASS	
3613.00†	3556.98	-142.89	-458.19	3524.06	3514.08	-161.81	217.07	-160.21	676.89	26.81	25.91	PASS	
3713.00†	3653.94	-150.18	-481.56	3619.68	3609.24	-169.25	222.91	-160.27	706.14	27.60	26.24	PASS	
3813.00†	3750.89	-157.47	-504.93	3715.30	3704.39	-176.69	228.75	-160.32	735.40	28.39	26.54	PASS	
3913.00†	3847.85	-164.76	-528.30	3810.92	3799.54	-184.13	234.58	-160.37	764.65	29.19	26.82	PASS	
4013.00†	3944.81	-172.05	-551.67	3906.55	3894.70	-191.58	240.42	-160.42	793.91	29.99	27.09	PASS	
4113.00†	4041.77	-179.34	-575.04	4002.17	3989.85	-199.02	246.25	-160.46	823.17	30.79	27.34	PASS	
4213.00†	4138.72	-186.62	-598.41	4097.79	4085.01	-206.46	252.09	-160.50	852.42	31.59	27.58	PASS	
4313.00†	4235.68	-193.91	-621.78	4193.42	4180.16	-213.90	257.93	-160.53	881.68	32.40	27.80	PASS	
4413.00†	4332.64	-201.20	-645.15	4289.04	4275.31	-221.34	263.76	-160.57	910.94	33.21	28.00	PASS	
4513.00†	4429.59	-208.49	-668.52	4384.66	4370.47	-228.78	269.60	-160.60	940.20	34.02	28.20	PASS	
4613.00†	4526.55	-215.78	-691.89	4480.28	4465.62	-236.22	275.44	-160.63	969.46	34.83	28.39	PASS	
4713.00†	4623.51	-223.07	-715.26	4575.91	4560.78	-243.66	281.27	-160.66	998.72	35.65	28.56	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



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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

**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	0.13	54.85	-8.37	61.52
8.5in Open Hole	1800.00	17376.39	15576.39	1798.48	N/A	-8.37	61.52	N/A	N/A

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

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

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	0.16	105.01	89.91	105.01	1.40	173.68	PASS
113.00†	113.00	0.00	0.00	113.00	113.00	0.16	105.01	89.91	105.01	1.73	112.43	PASS
213.00†	213.00	0.00	0.00	213.00	213.00	0.16	105.01	89.91	105.01	2.30	69.44	PASS
313.00†	313.00	0.00	0.00	313.00	313.00	0.16	105.01	89.91	105.01	2.91	49.49	PASS
413.00†	413.00	0.00	0.00	413.00	413.00	0.16	105.01	89.91	105.01	3.52	38.29	PASS
513.00†	513.00	0.00	0.00	513.00	513.00	0.16	105.01	89.91	105.01	4.14	31.18	PASS
613.00†	613.00	0.00	0.00	613.00	613.00	0.16	105.01	89.91	105.01	4.77	26.28	PASS
713.00†	713.00	0.00	0.00	713.00	713.00	0.16	105.01	89.91	105.01	5.39	22.71	PASS
813.00†	813.00	0.00	0.00	813.00	813.00	0.16	105.01	89.91	105.01	6.02	19.98	PASS
913.00†	913.00	0.00	0.00	913.00	913.00	0.16	105.01	89.91	105.01	6.64	17.84	PASS
1013.00†	1013.00	0.00	0.00	1013.00	1013.00	0.16	105.01	89.91	105.01	7.27	16.11	PASS
1113.00†	1113.00	0.00	0.00	1113.00	1113.00	0.16	105.01	89.91	105.01	7.90	14.69	PASS
1213.00†	1213.00	0.00	0.00	1212.67	1212.67	0.14	105.03	89.92	105.03	8.52	13.50	PASS
1300.00	1300.00	0.00	0.00	1297.46	1297.44	-1.02	106.17	90.55	106.21	9.10	12.71	PASS
1313.00†	1313.00	-0.01	-0.03	1310.12	1310.09	-1.35	106.49	-161.96	106.57	9.18	12.62	PASS
1413.00†	1412.97	-0.66	-2.13	1407.21	1407.03	-5.18	110.26	-160.32	112.63	10.05	12.09	PASS
1513.00†	1512.80	-2.36	-7.56	1504.08	1503.51	-11.29	116.26	-158.38	124.49	11.05	12.07	PASS
1613.00†	1612.38	-5.09	-16.31	1602.74	1601.69	-18.28	123.12	-156.96	140.46	11.90	12.58	PASS
1713.00†	1711.57	-8.85	-28.37	1700.88	1699.34	-25.23	129.95	-156.30	159.63	12.73	13.32	PASS
1813.00†	1810.26	-13.64	-43.73	1798.35	1796.33	-32.13	136.73	-156.17	181.94	13.49	14.23	PASS
1913.00†	1908.33	-19.45	-62.37	1895.05	1892.56	-38.98	143.45	-156.41	207.35	14.25	15.26	PASS
2008.51	2001.31	-25.95	-83.21	1986.58	1983.63	-45.46	149.82	-156.84	234.52	15.02	16.33	PASS
2013.00†	2005.66	-26.28	-84.26	1990.86	1987.89	-45.76	150.12	-156.88	235.86	15.06	16.38	PASS
2113.00†	2102.62	-33.57	-107.63	2086.23	2082.79	-52.51	156.75	-157.56	265.80	15.71	17.68	PASS
2213.00†	2199.58	-40.86	-131.00	2181.60	2177.69	-59.27	163.38	-158.10	295.77	16.39	18.82	PASS
2313.00†	2296.53	-48.14	-154.37	2276.97	2272.59	-66.02	170.02	-158.55	325.76	17.06	19.88	PASS
2413.00†	2393.49	-55.43	-177.74	2372.34	2367.49	-72.77	176.65	-158.92	355.77	17.75	20.83	PASS
2513.00†	2490.45	-62.72	-201.11	2467.71	2462.39	-79.52	183.28	-159.23	385.79	18.46	21.70	PASS
2613.00†	2587.41	-70.01	-224.49	2563.08	2557.28	-86.28	189.92	-159.50	415.81	19.17	22.48	PASS
2713.00†	2684.36	-77.30	-247.86	2658.45	2652.18	-93.03	196.55	-159.73	445.84	19.90	23.20	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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†	2781.32	-84.59	-271.23	2753.82	2747.08	-99.78	203.18	-159.93	475.88	20.63	23.85	PASS
2913.00†	2878.28	-91.87	-294.60	2849.19	2841.98	-106.54	209.81	-160.11	505.93	21.37	24.45	PASS
3013.00†	2975.24	-99.16	-317.97	2944.55	2936.88	-113.29	216.45	-160.27	535.97	22.11	25.00	PASS
3113.00†	3072.19	-106.45	-341.34	3039.92	3031.78	-120.04	223.08	-160.41	566.02	22.87	25.51	PASS
3213.00†	3169.15	-113.74	-364.71	3135.29	3126.67	-126.79	229.71	-160.54	596.08	23.62	25.98	PASS
3313.00†	3266.11	-121.03	-388.08	3230.66	3221.57	-133.55	236.35	-160.65	626.13	24.38	26.42	PASS
3413.00†	3363.06	-128.32	-411.45	3326.03	3316.47	-140.30	242.98	-160.76	656.19	25.15	26.82	PASS
3513.00†	3460.02	-135.61	-434.82	3421.40	3411.37	-147.05	249.61	-160.85	686.25	25.92	27.19	PASS
3613.00†	3556.98	-142.89	-458.19	3516.77	3506.27	-153.80	256.24	-160.94	716.31	26.69	27.54	PASS
3713.00†	3653.94	-150.18	-481.56	3612.14	3601.17	-160.56	262.88	-161.02	746.37	27.47	27.86	PASS
3813.00†	3750.89	-157.47	-504.93	3707.51	3696.06	-167.31	269.51	-161.09	776.44	28.25	28.17	PASS
3913.00†	3847.85	-164.76	-528.30	3802.88	3790.96	-174.06	276.14	-161.16	806.50	29.03	28.45	PASS
4013.00†	3944.81	-172.05	-551.67	3898.25	3885.86	-180.82	282.78	-161.22	836.57	29.82	28.72	PASS
4113.00†	4041.77	-179.34	-575.04	3993.62	3980.76	-187.57	289.41	-161.28	866.64	30.60	28.97	PASS
4213.00†	4138.72	-186.62	-598.41	4088.99	4075.66	-194.32	296.04	-161.34	896.70	31.39	29.20	PASS
4313.00†	4235.68	-193.91	-621.78	4184.35	4170.56	-201.07	302.67	-161.39	926.77	32.18	29.42	PASS
4413.00†	4332.64	-201.20	-645.15	4279.72	4265.45	-207.83	309.31	-161.44	956.84	32.98	29.63	PASS
4513.00†	4429.59	-208.49	-668.52	4375.09	4360.35	-214.58	315.94	-161.48	986.91	33.77	29.83	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



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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

**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	0.10	64.01	-9.78	73.72
8.5in Open Hole	1800.00	17786.94	15986.94	1797.97	7628.00	-9.78	73.72	3038.94	155.18

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

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

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

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



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	8360.34	119.93			0.82	8361.25	25.40	339.83 PASS

C-C Clearance Distance Cutoff: 1000.00 ft

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

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

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

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
12.25in Open Hole	0.00	1472.00	1472.00	40.00	1512.00	5096.69	49.70	5096.69	49.70
8.625in Casing Surface	0.00	1472.00	1472.00	40.00	1512.00	5096.69	49.70	5096.69	49.70
7.875in Open Hole	1472.00	8173.00	6701.00	1512.00	8213.00	5096.69	49.70	5096.69	49.70
4.5in Casing Production	0.00	8173.00	8173.00	40.00	8213.00	5096.69	49.70	5096.69	49.70

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	0.26	120.01	89.87	120.01	1.40	198.68	PASS
113.00†	113.00	0.00	0.00	113.00	113.00	0.26	120.01	89.87	120.01	1.73	128.31	PASS
213.00†	213.00	0.00	0.00	213.00	213.00	0.26	120.01	89.87	120.01	2.31	79.22	PASS
313.00†	313.00	0.00	0.00	313.00	313.00	0.26	120.01	89.87	120.01	2.91	56.48	PASS
413.00†	413.00	0.00	0.00	413.00	413.00	0.26	120.01	89.87	120.01	3.53	43.72	PASS
513.00†	513.00	0.00	0.00	513.00	513.00	0.26	120.01	89.87	120.01	4.15	35.61	PASS
613.00†	613.00	0.00	0.00	613.00	613.00	0.26	120.01	89.87	120.01	4.77	30.02	PASS
713.00†	713.00	0.00	0.00	713.00	713.00	0.26	120.01	89.87	120.01	5.40	25.94	PASS
813.00†	813.00	0.00	0.00	813.00	813.00	0.26	120.01	89.87	120.01	6.02	22.84	PASS
913.00†	913.00	0.00	0.00	913.00	913.00	0.26	120.01	89.87	120.01	6.65	20.39	PASS
1013.00†	1013.00	0.00	0.00	1013.00	1013.00	0.26	120.01	89.87	120.01	7.28	18.42	PASS
1113.00†	1113.00	0.00	0.00	1112.54	1112.54	0.25	120.03	89.88	120.04	7.90	16.80	PASS
1213.00†	1213.00	0.00	0.00	1208.94	1208.92	-0.73	121.83	90.34	121.90	8.59	15.55	PASS
1300.00	1300.00	0.00	0.00	1292.63	1292.48	-2.84	125.69	91.29	125.95	9.35	14.65	PASS
1313.00†	1313.00	-0.01	-0.03	1305.10	1304.93	-3.25	126.45	-161.20	126.78	9.46	14.55	PASS
1413.00†	1412.97	-0.66	-2.13	1400.62	1400.07	-7.29	133.84	-159.80	136.74	10.41	14.15	PASS
1513.00†	1512.80	-2.36	-7.56	1494.92	1493.68	-12.76	143.86	-158.50	152.98	11.46	14.28	PASS
1613.00†	1612.38	-5.09	-16.31	1590.57	1588.27	-19.54	156.28	-157.44	174.86	12.35	15.07	PASS
1713.00†	1711.57	-8.85	-28.37	1687.31	1683.91	-26.52	169.05	-156.90	200.13	13.15	16.15	PASS
1813.00†	1810.26	-13.64	-43.73	1783.20	1778.70	-33.43	181.71	-156.76	228.50	13.90	17.33	PASS
1913.00†	1908.33	-19.45	-62.37	1878.11	1872.54	-40.28	194.25	-156.90	259.94	14.61	18.64	PASS
2008.51	2001.31	-25.95	-83.21	1967.75	1961.15	-46.74	206.09	-157.19	292.81	15.36	19.94	PASS
2013.00†	2005.66	-26.28	-84.26	1971.93	1965.29	-47.05	206.64	-157.22	294.42	15.40	19.99	PASS
2113.00†	2102.62	-33.57	-107.63	2065.23	2057.52	-53.77	218.96	-157.79	330.31	16.06	21.47	PASS
2213.00†	2199.58	-40.86	-131.00	2158.52	2149.75	-60.50	231.28	-158.26	366.22	16.67	22.89	PASS
2313.00†	2296.53	-48.14	-154.37	2251.81	2241.98	-67.23	243.60	-158.64	402.15	17.34	24.14	PASS
2413.00†	2393.49	-55.43	-177.74	2345.11	2334.21	-73.96	255.92	-158.96	438.09	18.02	25.27	PASS
2513.00†	2490.45	-62.72	-201.11	2438.40	2426.44	-80.69	268.24	-159.23	474.04	18.71	26.29	PASS
2613.00†	2587.41	-70.01	-224.49	2531.69	2518.68	-87.41	280.56	-159.46	509.99	19.42	27.22	PASS
2713.00†	2684.36	-77.30	-247.86	2624.99	2610.91	-94.14	292.88	-159.66	545.96	20.13	28.07	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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†	2781.32	-84.59	-271.23	2718.28	2703.14	-100.87	305.20	-159.84	581.93	20.85	28.85	PASS
2913.00†	2878.28	-91.87	-294.60	2811.57	2795.37	-107.60	317.52	-159.99	617.90	21.59	29.56	PASS
3013.00†	2975.24	-99.16	-317.97	2904.86	2887.60	-114.33	329.84	-160.13	653.88	22.33	30.21	PASS
3113.00†	3072.19	-106.45	-341.34	2998.16	2979.83	-121.06	342.16	-160.26	689.86	23.07	30.81	PASS
3213.00†	3169.15	-113.74	-364.71	3091.45	3072.06	-127.78	354.48	-160.37	725.84	23.83	31.37	PASS
3313.00†	3266.11	-121.03	-388.08	3184.74	3164.29	-134.51	366.79	-160.47	761.83	24.58	31.88	PASS
3413.00†	3363.06	-128.32	-411.45	3278.04	3256.52	-141.24	379.11	-160.56	797.81	25.35	32.35	PASS
3513.00†	3460.02	-135.61	-434.82	3371.33	3348.75	-147.97	391.43	-160.65	833.80	26.12	32.79	PASS
3613.00†	3556.98	-142.89	-458.19	3464.62	3440.98	-154.70	403.75	-160.72	869.79	26.89	33.20	PASS
3713.00†	3653.94	-150.18	-481.56	3557.91	3533.22	-161.42	416.07	-160.80	905.78	27.66	33.58	PASS
3813.00†	3750.89	-157.47	-504.93	3651.21	3625.45	-168.15	428.39	-160.86	941.77	28.44	33.93	PASS
3913.00†	3847.85	-164.76	-528.30	3744.50	3717.68	-174.88	440.71	-160.92	977.77	29.23	34.26	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

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

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

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

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing Surface	13.00	1800.00	1787.00	13.00	1795.31	0.16	73.16	-10.48	92.64
8.5in Open Hole	1800.00	17654.03	15854.03	1795.31	7458.00	-10.48	92.64	3038.64	280.43



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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	0.33	135.01	89.86	135.01	1.40	223.68	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	0.33	135.01	89.86	135.01	1.73	144.32	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	0.33	135.01	89.86	135.01	2.31	89.09	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	0.33	135.01	89.86	135.01	2.91	63.53	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	0.33	135.01	89.86	135.01	3.53	49.18	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	0.33	135.01	89.86	135.01	4.15	40.07	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	0.33	135.01	89.86	135.01	4.77	33.78	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	0.33	135.01	89.86	135.01	5.40	29.19	PASS	
813.00†	813.00	0.00	0.00	813.00	813.00	0.33	135.01	89.86	135.01	6.02	25.70	PASS	
913.00†	913.00	0.00	0.00	913.00	913.00	0.33	135.01	89.86	135.01	6.65	22.95	PASS	
1013.00†	1013.00	0.00	0.00	1012.45	1012.45	0.32	135.04	89.86	135.04	7.27	20.74	PASS	
1113.00†	1113.00	0.00	0.00	1108.17	1108.15	-0.38	136.92	90.16	137.01	7.98	18.98	PASS	
1213.00†	1213.00	0.00	0.00	1203.66	1203.48	-2.20	141.79	90.89	142.13	8.90	17.46	PASS	
1300.00	1300.00	0.00	0.00	1286.37	1285.89	-4.67	148.41	91.80	149.15	9.66	16.74	PASS	
1313.00†	1313.00	-0.01	-0.03	1298.68	1298.14	-5.10	149.59	-160.72	150.44	9.78	16.67	PASS	
1413.00†	1412.97	-0.66	-2.13	1392.81	1391.58	-9.06	160.21	-159.60	163.95	10.68	16.51	PASS	
1513.00†	1512.80	-2.36	-7.56	1485.41	1483.09	-14.00	173.45	-158.69	183.80	11.75	16.71	PASS	
1613.00†	1612.38	-5.09	-16.31	1575.98	1572.10	-19.82	189.08	-158.00	209.82	12.73	17.52	PASS	
1713.00†	1711.57	-8.85	-28.37	1669.70	1663.83	-26.54	207.12	-157.53	240.93	13.53	18.87	PASS	
1813.00†	1810.26	-13.64	-43.73	1763.66	1755.77	-33.30	225.25	-157.38	275.15	14.24	20.35	PASS	
1913.00†	1908.33	-19.45	-62.37	1856.45	1846.58	-39.97	243.15	-157.43	312.38	14.95	21.88	PASS	
2008.51	2001.31	-25.95	-83.21	1943.88	1932.13	-46.26	260.03	-157.60	350.73	15.72	23.31	PASS	
2013.00†	2005.66	-26.28	-84.26	1947.96	1936.12	-46.56	260.81	-157.62	352.60	15.77	23.37	PASS	
2113.00†	2102.62	-33.57	-107.63	2038.85	2025.07	-53.09	278.35	-158.13	394.18	16.32	25.20	PASS	
2213.00†	2199.58	-40.86	-131.00	2129.74	2114.01	-59.63	295.89	-158.53	435.79	16.95	26.78	PASS	
2313.00†	2296.53	-48.14	-154.37	2220.64	2202.96	-66.17	313.43	-158.87	477.42	17.61	28.21	PASS	
2413.00†	2393.49	-55.43	-177.74	2311.53	2291.90	-72.70	330.97	-159.15	519.05	18.27	29.51	PASS	
2513.00†	2490.45	-62.72	-201.11	2402.42	2380.85	-79.24	348.51	-159.39	560.69	18.96	30.69	PASS	
2613.00†	2587.41	-70.01	-224.49	2493.32	2469.79	-85.78	366.05	-159.60	602.34	19.65	31.76	PASS	
2713.00†	2684.36	-77.30	-247.86	2584.21	2558.74	-92.31	383.59	-159.78	644.00	20.36	32.73	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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†	2781.32	-84.59	-271.23	2675.10	2647.68	-98.85	401.13	-159.94	685.66	21.08	33.63	PASS
2913.00†	2878.28	-91.87	-294.60	2766.00	2736.63	-105.39	418.67	-160.08	727.32	21.81	34.44	PASS
3013.00†	2975.24	-99.16	-317.97	2856.89	2825.57	-111.92	436.21	-160.21	768.99	22.54	35.19	PASS
3113.00†	3072.19	-106.45	-341.34	2947.78	2914.52	-118.46	453.75	-160.32	810.66	23.29	35.88	PASS
3213.00†	3169.15	-113.74	-364.71	3038.68	3003.46	-125.00	471.29	-160.42	852.33	24.04	36.51	PASS
3313.00†	3266.11	-121.03	-388.08	3129.57	3092.41	-131.54	488.83	-160.51	894.01	24.79	37.09	PASS
3413.00†	3363.06	-128.32	-411.45	3220.46	3181.35	-138.07	506.37	-160.60	935.68	25.56	37.63	PASS
3513.00†	3460.02	-135.61	-434.82	3311.36	3270.30	-144.61	523.91	-160.67	977.36	26.32	38.13	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

## 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	0.20	82.30	-10.85	111.94
8.5in Open Hole	1800.00	17645.62	15845.62	1791.34	7390.00	-10.85	111.94	3038.35	405.68

## 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



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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	3024.98	18.10	0.34	3025.03	25.40	122.93	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

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

Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	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	1844.04	2.57	1844.04	2.57
8.625in Casing Surface	0.00	1561.00	1561.00	18.00	1579.00	1844.04	2.57	1844.04	2.57
7.875in Open Hole	1561.00	8292.00	6731.00	1579.00	8310.00	1844.04	2.57	1844.04	2.57
4.5in Casing Production	0.00	8292.00	8292.00	18.00	8310.00	1844.04	2.57	1844.04	2.57

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	0.25	149.96	89.91	149.96	1.40	248.59	PASS
113.00†	113.00	0.00	0.00	113.00	113.00	0.25	149.96	89.91	149.96	1.73	160.34	PASS
213.00†	213.00	0.00	0.00	213.00	213.00	0.25	149.96	89.91	149.96	2.31	98.98	PASS
313.00†	313.00	0.00	0.00	313.00	313.00	0.25	149.96	89.91	149.96	2.92	70.58	PASS
413.00†	413.00	0.00	0.00	413.00	413.00	0.25	149.96	89.91	149.96	3.53	54.65	PASS
513.00†	513.00	0.00	0.00	513.00	513.00	0.25	149.96	89.91	149.96	4.15	44.52	PASS
613.00†	613.00	0.00	0.00	613.00	613.00	0.25	149.96	89.91	149.96	4.78	37.54	PASS
713.00†	713.00	0.00	0.00	713.00	713.00	0.25	149.96	89.91	149.96	5.40	32.44	PASS
813.00†	813.00	0.00	0.00	813.00	813.00	0.25	149.96	89.91	149.96	6.03	28.56	PASS
913.00†	913.00	0.00	0.00	912.38	912.38	0.24	149.98	89.91	149.98	6.65	25.52	PASS
1013.00†	1013.00	0.00	0.00	1007.58	1007.55	-0.36	151.88	90.14	151.98	7.36	23.04	PASS
1113.00†	1113.00	0.00	0.00	1102.54	1102.37	-1.90	156.78	90.70	157.16	8.31	20.83	PASS
1213.00†	1213.00	0.00	0.00	1197.05	1196.52	-4.37	164.63	91.52	165.51	9.21	19.60	PASS
1300.00	1300.00	0.00	0.00	1278.77	1277.66	-7.26	173.81	92.39	175.39	9.97	19.04	PASS
1313.00†	1313.00	-0.01	-0.03	1290.92	1289.71	-7.75	175.36	-160.14	177.10	10.08	19.00	PASS
1413.00†	1412.97	-0.66	-2.13	1383.64	1381.35	-11.99	188.81	-159.14	193.86	10.95	19.03	PASS
1513.00†	1512.80	-2.36	-7.56	1474.59	1470.74	-17.00	204.73	-158.37	216.91	12.02	19.27	PASS
1613.00†	1612.38	-5.09	-16.31	1563.26	1557.35	-22.71	222.86	-157.80	246.05	12.95	20.20	PASS
1713.00†	1711.57	-8.85	-28.37	1653.85	1645.30	-29.23	243.56	-157.41	280.63	13.76	21.59	PASS
1813.00†	1810.26	-13.64	-43.73	1746.40	1735.10	-35.97	264.94	-157.25	318.48	14.47	23.17	PASS
1913.00†	1908.33	-19.45	-62.37	1837.67	1823.65	-42.61	286.02	-157.26	359.28	15.22	24.72	PASS
2008.51	2001.31	-25.95	-83.21	1923.54	1906.97	-48.85	305.86	-157.38	401.00	15.88	26.39	PASS
2013.00†	2005.66	-26.28	-84.26	1927.55	1910.85	-49.14	306.78	-157.40	403.03	15.92	26.45	PASS
2113.00†	2102.62	-33.57	-107.63	2016.75	1997.40	-55.63	327.39	-157.88	448.11	16.52	28.29	PASS
2213.00†	2199.58	-40.86	-131.00	2105.95	2083.95	-62.12	347.99	-158.28	493.21	17.15	29.95	PASS
2313.00†	2296.53	-48.14	-154.37	2195.15	2170.49	-68.61	368.60	-158.61	538.33	17.80	31.45	PASS
2413.00†	2393.49	-55.43	-177.74	2284.36	2257.04	-75.10	389.20	-158.88	583.47	18.47	32.81	PASS
2513.00†	2490.45	-62.72	-201.11	2373.56	2343.59	-81.59	409.81	-159.12	628.61	19.15	34.05	PASS
2613.00†	2587.41	-70.01	-224.49	2462.76	2430.14	-88.08	430.41	-159.33	673.76	19.85	35.17	PASS
2713.00†	2684.36	-77.30	-247.86	2551.97	2516.69	-94.57	451.02	-159.51	718.91	20.55	36.19	PASS

C-C Clearance Distance Cutoff: 1000.00 ft





# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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†	2781.32	-84.59	-271.23	2641.17	2603.23	-101.06	471.62	-159.67	764.07	21.27	37.12	PASS
2913.00†	2878.28	-91.87	-294.60	2730.37	2689.78	-107.55	492.23	-159.81	809.24	22.00	37.97	PASS
3013.00†	2975.24	-99.16	-317.97	2819.58	2776.33	-114.04	512.83	-159.93	854.40	22.74	38.75	PASS
3113.00†	3072.19	-106.45	-341.34	2908.78	2862.88	-120.53	533.44	-160.05	899.58	23.49	39.46	PASS
3213.00†	3169.15	-113.74	-364.71	2997.98	2949.43	-127.01	554.04	-160.15	944.75	24.24	40.12	PASS
3313.00†	3266.11	-121.03	-388.08	3087.19	3035.97	-133.50	574.64	-160.24	989.92	25.00	40.72	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	0.15	91.41	-12.08	130.23
8.5in Open Hole	1800.00	17516.82	15716.82	1787.10	7215.00	-12.08	130.23	3038.09	500.43

## 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



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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	0.31	164.96	89.89	164.96	1.40	273.59	PASS	
113.00†	113.00	0.00	0.00	113.00	113.00	0.31	164.96	89.89	164.96	1.73	176.44	PASS	
213.00†	213.00	0.00	0.00	213.00	213.00	0.31	164.96	89.89	164.96	2.31	108.92	PASS	
313.00†	313.00	0.00	0.00	313.00	313.00	0.31	164.96	89.89	164.96	2.92	77.67	PASS	
413.00†	413.00	0.00	0.00	413.00	413.00	0.31	164.96	89.89	164.96	3.53	60.13	PASS	
513.00†	513.00	0.00	0.00	513.00	513.00	0.31	164.96	89.89	164.96	4.15	48.99	PASS	
613.00†	613.00	0.00	0.00	613.00	613.00	0.31	164.96	89.89	164.96	4.78	41.31	PASS	
713.00†	713.00	0.00	0.00	713.00	713.00	0.31	164.96	89.89	164.96	5.40	35.70	PASS	
813.00†	813.00	0.00	0.00	812.32	812.32	0.31	164.98	89.89	164.99	6.02	31.45	PASS	
913.00†	913.00	0.00	0.00	907.02	907.00	-0.23	166.88	90.08	166.99	6.75	27.95	PASS	
1013.00†	1013.00	0.00	0.00	1001.49	1001.32	-1.61	171.77	90.54	172.18	7.72	24.78	PASS	
1113.00†	1113.00	0.00	0.00	1095.52	1095.00	-3.83	179.61	91.22	180.55	8.64	22.95	PASS	
1213.00†	1213.00	0.00	0.00	1188.92	1187.73	-6.86	190.32	92.06	192.12	9.52	21.94	PASS	
1300.00	1300.00	0.00	0.00	1269.51	1267.41	-10.13	201.90	92.87	204.76	10.18	21.74	PASS	
1313.00†	1313.00	-0.01	-0.03	1281.49	1279.23	-10.66	203.80	-159.67	206.89	10.30	21.70	PASS	
1413.00†	1412.97	-0.66	-2.13	1372.69	1368.89	-15.20	219.86	-158.76	226.79	11.22	21.69	PASS	
1513.00†	1512.80	-2.36	-7.56	1461.89	1456.01	-20.39	238.21	-158.06	252.89	12.22	22.08	PASS	
1613.00†	1612.38	-5.09	-16.31	1552.01	1543.46	-26.31	259.16	-157.56	284.75	13.09	23.11	PASS	
1713.00†	1711.57	-8.85	-28.37	1645.53	1634.10	-32.58	281.35	-157.29	320.14	13.85	24.48	PASS	
1813.00†	1810.26	-13.64	-43.73	1737.85	1723.57	-38.77	303.26	-157.22	358.54	14.60	25.85	PASS	
1913.00†	1908.33	-19.45	-62.37	1828.86	1811.77	-44.87	324.85	-157.28	399.89	15.25	27.44	PASS	
2008.51	2001.31	-25.95	-83.21	1914.45	1894.72	-50.61	345.16	-157.42	442.13	15.97	28.93	PASS	
2013.00†	2005.66	-26.28	-84.26	1918.44	1898.59	-50.87	346.11	-157.45	444.17	16.01	28.99	PASS	
2113.00†	2102.62	-33.57	-107.63	2007.35	1984.75	-56.84	367.20	-157.95	489.80	16.62	30.74	PASS	
2213.00†	2199.58	-40.86	-131.00	2096.26	2070.91	-62.80	388.30	-158.38	535.46	17.25	32.33	PASS	
2313.00†	2296.53	-48.14	-154.37	2185.16	2157.07	-68.76	409.40	-158.73	581.13	17.90	33.76	PASS	
2413.00†	2393.49	-55.43	-177.74	2274.07	2243.23	-74.72	430.49	-159.03	626.82	18.56	35.06	PASS	
2513.00†	2490.45	-62.72	-201.11	2362.98	2329.40	-80.68	451.59	-159.30	672.52	19.25	36.24	PASS	
2613.00†	2587.41	-70.01	-224.49	2451.89	2415.56	-86.64	472.69	-159.53	718.23	19.94	37.31	PASS	
2713.00†	2684.36	-77.30	-247.86	2540.79	2501.72	-92.60	493.78	-159.73	763.95	20.65	38.28	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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†	2781.32	-84.59	-271.23	2629.70	2587.88	-98.56	514.88	-159.91	809.67	21.36	39.17	PASS
2913.00†	2878.28	-91.87	-294.60	2718.61	2674.04	-104.52	535.97	-160.07	855.40	22.09	39.98	PASS
3013.00†	2975.24	-99.16	-317.97	2807.51	2760.21	-110.49	557.07	-160.21	901.14	22.82	40.72	PASS
3113.00†	3072.19	-106.45	-341.34	2896.42	2846.37	-116.45	578.17	-160.34	946.88	23.57	41.39	PASS
3213.00†	3169.15	-113.74	-364.71	2985.33	2932.53	-122.41	599.26	-160.46	992.62	24.32	42.02	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	0.19	100.56	-12.99	147.21
8.5in Open Hole	13.00	17963.99	17950.99	13.00	7638.00	0.19	100.56	3038.02	535.48

## 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



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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH PWB
Facility	SEC.20-T01S-R65W		

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

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



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293°FSL & 2188°FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	9200.48	-4277.56	-24.94	10146.66	25.40	412.42	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft

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

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

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

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

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

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



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	6024.09	832.98	7.87		6081.50	25.40	247.17	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	3674.55	490.86	3674.55	490.86
9.625in Casing Surface	0.00	224.00	224.00	46.00	270.00	3674.55	490.86	3674.55	490.86
7.875in Open Hole	224.00	8129.00	7905.00	270.00	8175.00	3674.55	490.86	3674.55	490.86
4.5in Casing Production	0.00	8129.00	8129.00	46.00	8175.00	3674.55	490.86	3674.55	490.86

## 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'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 20-17-2CDH PWP (REV-A.0)  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	4015.67	1105.21	15.39	4165.02	25.40	169.27	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	2451.01	662.43	2451.01	662.43
8.625in Casing Surface	0.00	91.00	91.00	29.00	120.00	2451.01	662.43	2451.01	662.43
7.875in Open Hole	91.00	8123.00	8032.00	120.00	8152.00	2451.01	662.43	2451.01	662.43
4.5in Casing Production	0.00	8123.00	8123.00	29.00	8152.00	2451.01	662.43	2451.01	662.43

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

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

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

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





# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	9345.46	3041.40	18.03	9827.91	25.40	399.45	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	5705.49	1827.50	5705.49	1827.50
8.625in Casing Surface	0.00	1549.00	1549.00	23.00	1572.00	5705.49	1827.50	5705.49	1827.50
7.875in Open Hole	1549.00	8173.00	6624.00	1572.00	8196.00	5705.49	1827.50	5705.49	1827.50
4.5in Casing Production	0.00	8173.00	8173.00	23.00	8196.00	5705.49	1827.50	5705.49	1827.50

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

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

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

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



# Clearance Report

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

Operator	PETROSHARE	Slot	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-2CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-2CDH 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	718.57	1162.82	58.29	1366.93	50.15	27.66	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	441.30	706.82	441.30	706.82
8.625in Casing Surface	0.00	250.00	250.00	-8.00	242.00	441.30	706.82	441.30	706.82
7.875in Open Hole	250.00	8200.00	7950.00	242.00	8192.00	441.30	706.82	441.30	706.82
4.5in Casing Production	0.00	8200.00	8200.00	-8.00	8192.00	441.30	706.82	441.30	706.82

## 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