

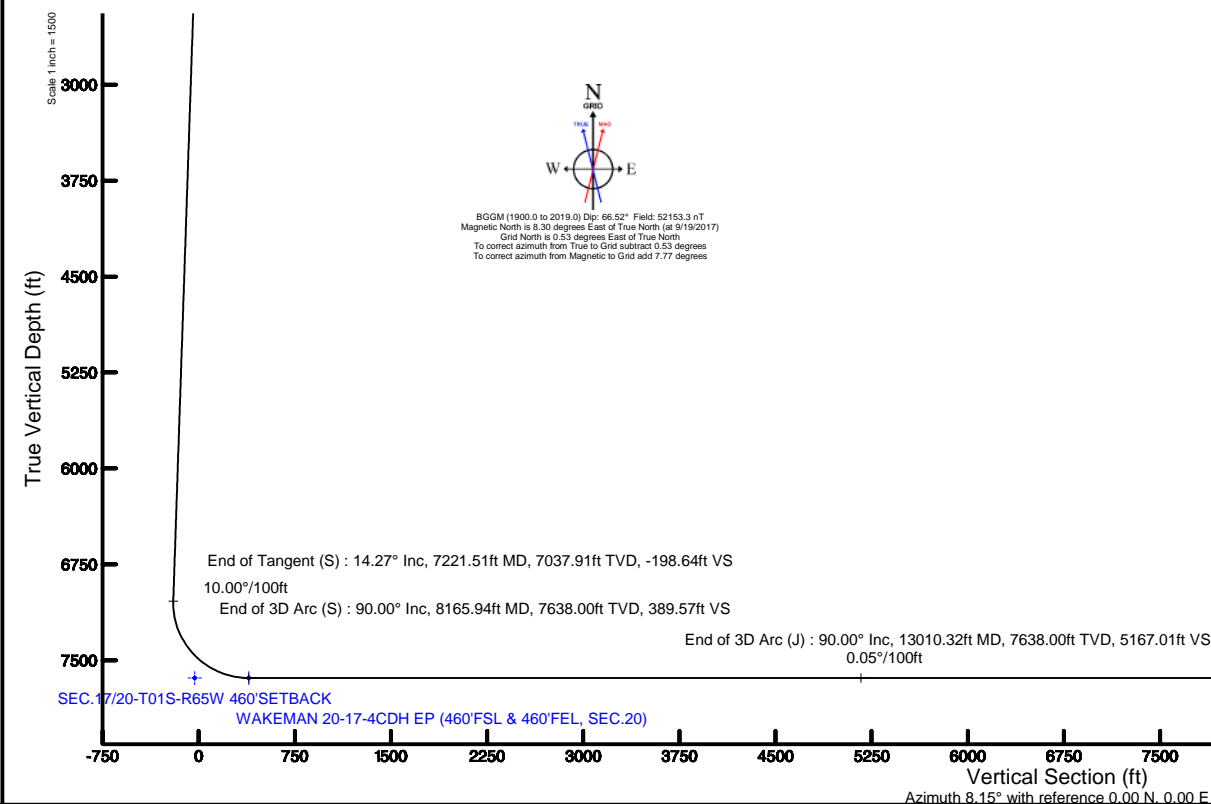
Location:	COLORADO	Slot:	SLOT#01 WAKEMAN 20-17-4CDH (293°FSL & 2023°FEL, SEC.20)
Field:	ADAMS COUNTY (NAD83/ GRID NORTH)	Well:	WAKEMAN 20-17-4CDH
Facility:	SEC.20-T01S-R65W	Wellbore:	WAKEMAN 20-17-4CDH PWB

<b>Plot reference wellpath is WAKEMAN 20-17-4CDH PWB (REV-A.0)</b>	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to RIG (13KB) (RKB)	North Reference: Grid north
Measured depths are referenced to RIG (13KB) (RKB)	Scale: True distance
RIG (13KB) (RKB) to Mean Sea Level: 5203 feet	Depths are in feet
Mean Sea Level to Ground level (At Slot: SLOTH01 WAKEMAN 20-17-4CDH (293FSL & 2023FEL, SEC.20): 0 feet	Created by: ingmjnmr on 2017-09-22
Coordinates are in feet referenced to Slot	Database: WellArchitectDB1

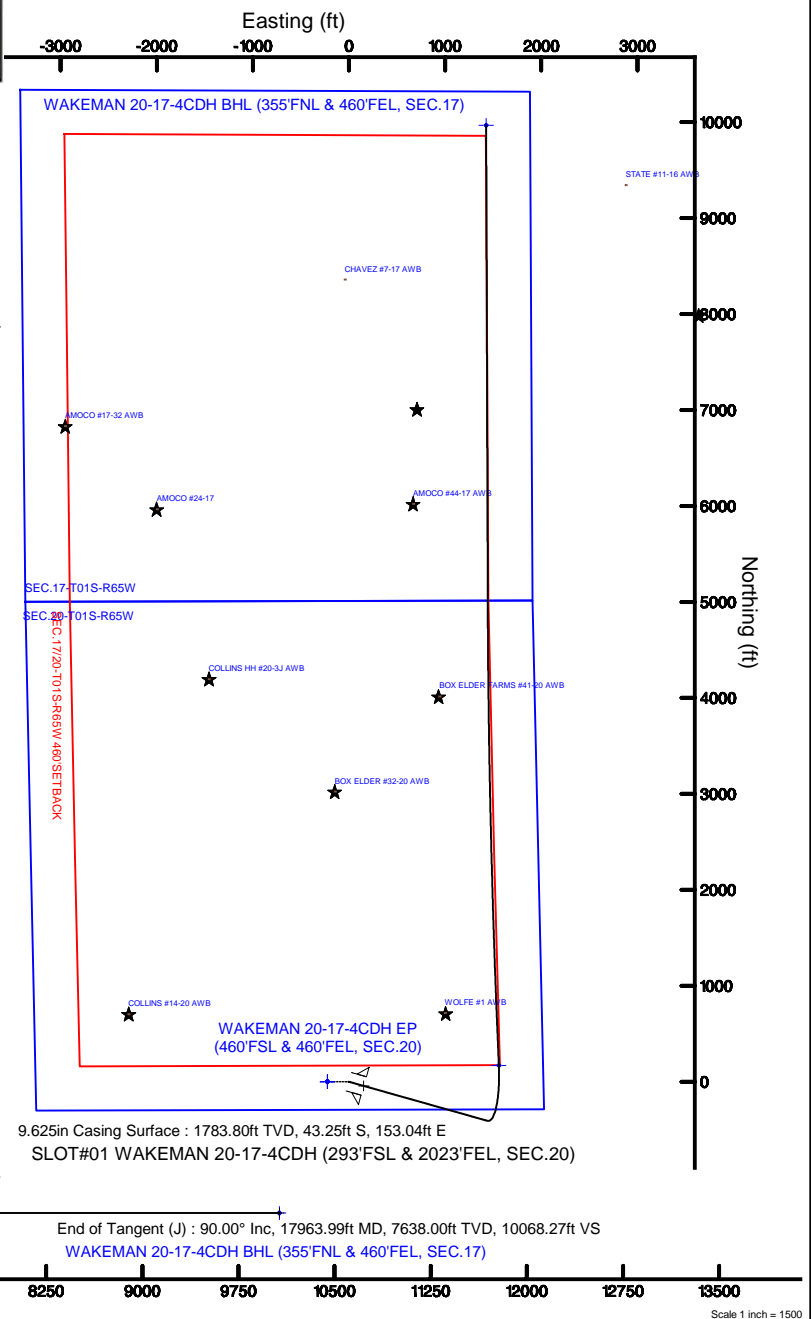
Facility Name				Grid East (US R)	Grid North (US R)	Latitude	Longitude
SEC.20-T01S-R65W				3228360.558	1223518.730	39°56'38.622"N	104°41'07.909"W
Slot	Local N (R)	Local E (R)	Grid East (US R)	Grid North (US R)	Latitude	Longitude	
SLOT#01 WAKEMAN 20-17-4CDH (293FSL & 2023FEL, SEC.20)	-0.00	0.00	3228360.559	1223518.726	39°56'38.622"N	104°41'07.909"W	
RIG (13KRB) (RKB) to Ground level (At Slot: SLOT#01 WAKEMAN 20-17-4CDH (293FSL & 2023FEL, SEC.20))						5203R	
Mean Sea Level to Ground level (At Slot: SLOT#01 WAKEMAN 20-17-4CDH (293FSL & 2023FEL, SEC.20))						0R	
RIG (13KRB) (RKB) to Mean Sea Level						5203R	

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	1783.80	0.00	0.00	-43.25	153.04	WAKEMAN 20-17-4CDH PWB
8.5in Open Hole	13.00	17963.99	17950.99	13.00	7638.00	0.00	0.00	-996.64	1426.91	WAKEMAN 20-17-4CDH PWB

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
13.00	17963.99	BHL NavTrak	Custom BHL NavTrak (Standard Rotating+Axial Corr) (Rockies 0.03Gt model)		WAKEMAN 20-17-4CDH PWB



Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	13.00	0.000	105.779	13.00	0.00	0.00	0.00	0.00
End of Tangent	800.00	0.000	105.779	800.00	0.00	0.00	0.00	0.00
End of Build (S)	1513.75	14.275	105.779	1506.39	-24.05	85.12	2.00	-11.75
End of Tangent (S)	7221.51	14.275	105.779	7037.91	-406.75	1439.48	0.00	-198.64
End of 3D Arc (S)	8165.94	90.000	357.466	7638.00	170.33	1559.04	10.00	389.57
End of 3D Arc (J)	13010.32	90.000	359.806	7638.00	5013.00	1443.72	0.05	5167.01
End of Tangent (J)	17963.99	90.000	359.806	7638.00	9966.64	1426.91	0.00	10068.27





# Planned Wellpath Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)

Page 1 of 10

**BAKER  
HUGHES**  
a GE company



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

## REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Ingmjmr
Scale	0.999971	Report Generated	9/22/2017 at 11:29:09 AM
Convergence at slot	0.53° East	Database/Source file	WellArchitectDB1/WAKEMAN_20-17-4CDH_PWB_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	-0.00	0.00	3228360.56	1223518.73	39°56'38.622"N	104°41'07.909"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#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'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	8.15°



# Planned Wellpath Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)

Page 2 of 10



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

## WELLPATH DATA (197 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	105.779	0.00	0.00	0.00	0.00	39°56'38.622"N	104°41'07.909"W	0.00	
13.00	0.000	105.779	13.00	0.00	0.00	0.00	39°56'38.622"N	104°41'07.909"W	0.00	Tie On
113.00†	0.000	105.779	113.00	0.00	0.00	0.00	39°56'38.622"N	104°41'07.909"W	0.00	
213.00†	0.000	105.779	213.00	0.00	0.00	0.00	39°56'38.622"N	104°41'07.909"W	0.00	
313.00†	0.000	105.779	313.00	0.00	0.00	0.00	39°56'38.622"N	104°41'07.909"W	0.00	
413.00†	0.000	105.779	413.00	0.00	0.00	0.00	39°56'38.622"N	104°41'07.909"W	0.00	
513.00†	0.000	105.779	513.00	0.00	0.00	0.00	39°56'38.622"N	104°41'07.909"W	0.00	
613.00†	0.000	105.779	613.00	0.00	0.00	0.00	39°56'38.622"N	104°41'07.909"W	0.00	
713.00†	0.000	105.779	713.00	0.00	0.00	0.00	39°56'38.622"N	104°41'07.909"W	0.00	
800.00	0.000	105.779	800.00	0.00	0.00	0.00	39°56'38.622"N	104°41'07.909"W	0.00	End of Tangent
813.00†	0.260	105.779	813.00	0.00	-0.01	0.03	39°56'38.622"N	104°41'07.909"W	2.00	
913.00†	2.260	105.779	912.97	-0.30	-0.61	2.14	39°56'38.616"N	104°41'07.882"W	2.00	
1013.00†	4.260	105.779	1012.80	-1.05	-2.15	7.62	39°56'38.600"N	104°41'07.812"W	2.00	
1113.00†	6.260	105.779	1112.38	-2.27	-4.64	16.44	39°56'38.574"N	104°41'07.699"W	2.00	
1213.00†	8.260	105.779	1211.57	-3.95	-8.08	28.60	39°56'38.539"N	104°41'07.543"W	2.00	
1313.00†	10.260	105.779	1310.26	-6.08	-12.46	44.08	39°56'38.495"N	104°41'07.345"W	2.00	
1413.00†	12.260	105.779	1408.33	-8.68	-17.77	62.87	39°56'38.440"N	104°41'07.104"W	2.00	
1507.16†	14.143	105.779	1500.00	-11.53	-23.61	83.57	39°56'38.381"N	104°41'06.839"W	2.00	Fox Hills
1513.00†	14.260	105.779	1505.66	-11.72	-24.00	84.94	39°56'38.377"N	104°41'06.821"W	2.00	
1513.75	14.275	105.779	1506.39	-11.75	-24.05	85.12	39°56'38.376"N	104°41'06.819"W	2.00	End of Build (S)
1613.00†	14.275	105.779	1602.57	-15.00	-30.71	108.67	39°56'38.308"N	104°41'06.517"W	0.00	
1713.00†	14.275	105.779	1699.49	-18.27	-37.41	132.40	39°56'38.240"N	104°41'06.214"W	0.00	
1813.00†	14.275	105.779	1796.40	-21.54	-44.12	156.13	39°56'38.172"N	104°41'05.910"W	0.00	
1913.00†	14.275	105.779	1893.31	-24.82	-50.82	179.86	39°56'38.103"N	104°41'05.606"W	0.00	
2013.00†	14.275	105.779	1990.22	-28.09	-57.53	203.59	39°56'38.035"N	104°41'05.302"W	0.00	
2113.00†	14.275	105.779	2087.14	-31.37	-64.23	227.31	39°56'37.966"N	104°41'04.998"W	0.00	
2213.00†	14.275	105.779	2184.05	-34.64	-70.94	251.04	39°56'37.898"N	104°41'04.694"W	0.00	
2313.00†	14.275	105.779	2280.96	-37.92	-77.64	274.77	39°56'37.830"N	104°41'04.391"W	0.00	
2413.00†	14.275	105.779	2377.87	-41.19	-84.35	298.50	39°56'37.761"N	104°41'04.087"W	0.00	
2513.00†	14.275	105.779	2474.79	-44.47	-91.05	322.23	39°56'37.693"N	104°41'03.783"W	0.00	



# Planned Wellpath Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)

Page 3 of 10



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

## WELLPATH DATA (197 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2613.00†	14.275	105.779	2571.70	-47.74	-97.76	345.96	39°56'37.624"N	104°41'03.479"W	0.00	
2713.00†	14.275	105.779	2668.61	-51.01	-104.46	369.68	39°56'37.556"N	104°41'03.175"W	0.00	
2813.00†	14.275	105.779	2765.52	-54.29	-111.17	393.41	39°56'37.487"N	104°41'02.871"W	0.00	
2913.00†	14.275	105.779	2862.44	-57.56	-117.87	417.14	39°56'37.419"N	104°41'02.567"W	0.00	
3013.00†	14.275	105.779	2959.35	-60.84	-124.58	440.87	39°56'37.351"N	104°41'02.264"W	0.00	
3113.00†	14.275	105.779	3056.26	-64.11	-131.28	464.60	39°56'37.282"N	104°41'01.960"W	0.00	
3213.00†	14.275	105.779	3153.17	-67.39	-137.99	488.33	39°56'37.214"N	104°41'01.656"W	0.00	
3313.00†	14.275	105.779	3250.08	-70.66	-144.69	512.05	39°56'37.145"N	104°41'01.352"W	0.00	
3413.00†	14.275	105.779	3347.00	-73.93	-151.40	535.78	39°56'37.077"N	104°41'01.048"W	0.00	
3513.00†	14.275	105.779	3443.91	-77.21	-158.10	559.51	39°56'37.009"N	104°41'00.744"W	0.00	
3613.00†	14.275	105.779	3540.82	-80.48	-164.81	583.24	39°56'36.940"N	104°41'00.441"W	0.00	
3713.00†	14.275	105.779	3637.73	-83.76	-171.51	606.97	39°56'36.872"N	104°41'00.137"W	0.00	
3813.00†	14.275	105.779	3734.65	-87.03	-178.22	630.70	39°56'36.803"N	104°40'59.833"W	0.00	
3913.00†	14.275	105.779	3831.56	-90.31	-184.92	654.43	39°56'36.735"N	104°40'59.529"W	0.00	
4013.00†	14.275	105.779	3928.47	-93.58	-191.62	678.15	39°56'36.666"N	104°40'59.225"W	0.00	
4113.00†	14.275	105.779	4025.38	-96.85	-198.33	701.88	39°56'36.598"N	104°40'58.921"W	0.00	
4213.00†	14.275	105.779	4122.30	-100.13	-205.03	725.61	39°56'36.530"N	104°40'58.617"W	0.00	
4309.69†	14.275	105.779	4216.00	-103.30	-211.52	748.55	39°56'36.463"N	104°40'58.324"W	0.00	Niobrara A Chalk
4313.00†	14.275	105.779	4219.21	-103.40	-211.74	749.34	39°56'36.461"N	104°40'58.314"W	0.00	
4413.00†	14.275	105.779	4316.12	-106.68	-218.44	773.07	39°56'36.393"N	104°40'58.010"W	0.00	
4513.00†	14.275	105.779	4413.03	-109.95	-225.15	796.80	39°56'36.324"N	104°40'57.706"W	0.00	
4613.00†	14.275	105.779	4509.95	-113.23	-231.85	820.52	39°56'36.256"N	104°40'57.402"W	0.00	
4713.00†	14.275	105.779	4606.86	-116.50	-238.56	844.25	39°56'36.188"N	104°40'57.098"W	0.00	
4813.00†	14.275	105.779	4703.77	-119.78	-245.26	867.98	39°56'36.119"N	104°40'56.794"W	0.00	
4913.00†	14.275	105.779	4800.68	-123.05	-251.97	891.71	39°56'36.051"N	104°40'56.491"W	0.00	
4963.89†	14.275	105.779	4850.00	-124.72	-255.38	903.78	39°56'36.016"N	104°40'56.336"W	0.00	Sussex / Shannon
5013.00†	14.275	105.779	4897.59	-126.32	-258.67	915.44	39°56'35.982"N	104°40'56.187"W	0.00	
5113.00†	14.275	105.779	4994.51	-129.60	-265.38	939.17	39°56'35.914"N	104°40'55.883"W	0.00	
5213.00†	14.275	105.779	5091.42	-132.87	-272.08	962.89	39°56'35.845"N	104°40'55.579"W	0.00	
5313.00†	14.275	105.779	5188.33	-136.15	-278.79	986.62	39°56'35.777"N	104°40'55.275"W	0.00	



# Planned Wellpath Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)

Page 4 of 10



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

## WELLPATH DATA (197 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5413.00†	14.275	105.779	5285.24	-139.42	-285.49	1010.35	39°56'35.709"N	104°40'54.971"W	0.00	
5513.00†	14.275	105.779	5382.16	-142.70	-292.20	1034.08	39°56'35.640"N	104°40'54.668"W	0.00	
5613.00†	14.275	105.779	5479.07	-145.97	-298.90	1057.81	39°56'35.572"N	104°40'54.364"W	0.00	
5713.00†	14.275	105.779	5575.98	-149.24	-305.61	1081.54	39°56'35.503"N	104°40'54.060"W	0.00	
5813.00†	14.275	105.779	5672.89	-152.52	-312.31	1105.26	39°56'35.435"N	104°40'53.756"W	0.00	
5913.00†	14.275	105.779	5769.81	-155.79	-319.02	1128.99	39°56'35.366"N	104°40'53.452"W	0.00	
6013.00†	14.275	105.779	5866.72	-159.07	-325.72	1152.72	39°56'35.298"N	104°40'53.148"W	0.00	
6113.00†	14.275	105.779	5963.63	-162.34	-332.43	1176.45	39°56'35.230"N	104°40'52.844"W	0.00	
6213.00†	14.275	105.779	6060.54	-165.62	-339.13	1200.18	39°56'35.161"N	104°40'52.541"W	0.00	
6313.00†	14.275	105.779	6157.46	-168.89	-345.84	1223.91	39°56'35.093"N	104°40'52.237"W	0.00	
6413.00†	14.275	105.779	6254.37	-172.17	-352.54	1247.64	39°56'35.024"N	104°40'51.933"W	0.00	
6513.00†	14.275	105.779	6351.28	-175.44	-359.25	1271.36	39°56'34.956"N	104°40'51.629"W	0.00	
6613.00†	14.275	105.779	6448.19	-178.71	-365.95	1295.09	39°56'34.888"N	104°40'51.325"W	0.00	
6713.00†	14.275	105.779	6545.11	-181.99	-372.66	1318.82	39°56'34.819"N	104°40'51.021"W	0.00	
6813.00†	14.275	105.779	6642.02	-185.26	-379.36	1342.55	39°56'34.751"N	104°40'50.718"W	0.00	
6913.00†	14.275	105.779	6738.93	-188.54	-386.07	1366.28	39°56'34.682"N	104°40'50.414"W	0.00	
7013.00†	14.275	105.779	6835.84	-191.81	-392.77	1390.01	39°56'34.614"N	104°40'50.110"W	0.00	
7113.00†	14.275	105.779	6932.75	-195.09	-399.48	1413.73	39°56'34.545"N	104°40'49.806"W	0.00	
7213.00†	14.275	105.779	7029.67	-198.36	-406.18	1437.46	39°56'34.477"N	104°40'49.502"W	0.00	
7221.51	14.275	105.779	7037.91	-198.64	-406.75	1439.48	39°56'34.471"N	104°40'49.476"W	0.00	End of Tangent (S)
7313.00†	14.357	68.145	7126.75	-194.46	-405.59	1460.91	39°56'34.481"N	104°40'49.201"W	10.00	
7413.00†	19.914	39.282	7222.44	-173.62	-387.75	1483.26	39°56'34.655"N	104°40'48.912"W	10.00	
7425.33†	20.824	36.891	7234.00	-169.91	-384.37	1485.90	39°56'34.688"N	104°40'48.878"W	10.00	Niobrara A Marl
7513.00†	27.985	24.503	7313.84	-136.44	-353.13	1503.82	39°56'34.995"N	104°40'48.644"W	10.00	
7606.57†	36.364	16.617	7393.00	-87.83	-306.47	1520.90	39°56'35.455"N	104°40'48.419"W	10.00	Niobrara B Chalk
7613.00†	36.955	16.193	7398.16	-84.03	-302.79	1521.98	39°56'35.491"N	104°40'48.405"W	10.00	
7644.71†	39.891	14.263	7423.00	-64.48	-283.78	1527.15	39°56'35.678"N	104°40'48.336"W	10.00	Niobrara B Marl
7693.28†	44.441	11.725	7459.00	-32.00	-252.01	1534.45	39°56'35.992"N	104°40'48.239"W	10.00	Niobrara C Chalk
7713.00†	46.302	10.811	7472.85	-17.99	-238.25	1537.18	39°56'36.127"N	104°40'48.202"W	10.00	
7741.43†	48.997	9.588	7492.00	3.01	-217.57	1540.90	39°56'36.331"N	104°40'48.152"W	10.00	Niobrara C Marl



# Planned Wellpath Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)

Page 5 of 10

**BAKER  
HUGHES**  
a GE company



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

## WELLPATH DATA (197 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7813.00†	55.832	6.903	7535.63	59.68	-161.48	1548.97	39°56'36.885"N	104°40'48.042"W	10.00	
7913.00†	65.461	3.798	7584.60	146.61	-74.80	1556.97	39°56'37.741"N	104°40'47.929"W	10.00	
7947.47†	68.793	2.844	7598.00	178.25	-43.10	1558.81	39°56'38.054"N	104°40'47.901"W	10.00	Fort Hays
8013.00†	75.144	1.140	7618.28	240.17	19.14	1560.96	39°56'38.669"N	104°40'47.866"W	10.00	
8113.00†	84.854	358.713	7635.62	337.51	117.49	1560.80	39°56'39.641"N	104°40'47.857"W	10.00	
8165.94	90.000	357.466	7638.00†	389.57	170.33	1559.04	39°56'40.163"N	104°40'47.873"W	10.00	End of 3D Arc (S)
8213.00†	90.000	357.489	7638.00	435.81	217.35	1556.96	39°56'40.628"N	104°40'47.894"W	0.05	
8313.00†	90.000	357.537	7638.00	534.09	317.25	1552.63	39°56'41.615"N	104°40'47.938"W	0.05	
8413.00†	90.000	357.586	7638.00	632.39	417.16	1548.37	39°56'42.603"N	104°40'47.981"W	0.05	
8513.00†	90.000	357.634	7638.00	730.71	517.08	1544.20	39°56'43.591"N	104°40'48.022"W	0.05	
8613.00†	90.000	357.682	7638.00	829.03	616.99	1540.11	39°56'44.579"N	104°40'48.063"W	0.05	
8713.00†	90.000	357.730	7638.00	927.38	716.91	1536.11	39°56'45.566"N	104°40'48.102"W	0.05	
8813.00†	90.000	357.779	7638.00	1025.74	816.84	1532.19	39°56'46.554"N	104°40'48.141"W	0.05	
8913.00†	90.000	357.827	7638.00	1124.11	916.76	1528.36	39°56'47.542"N	104°40'48.178"W	0.05	
9013.00†	90.000	357.875	7638.00	1222.50	1016.69	1524.61	39°56'48.530"N	104°40'48.214"W	0.05	
9113.00†	90.000	357.924	7638.00	1320.91	1116.62	1520.94	39°56'49.518"N	104°40'48.250"W	0.05	
9213.00†	90.000	357.972	7638.00	1419.33	1216.56	1517.36	39°56'50.506"N	104°40'48.284"W	0.05	
9313.00†	90.000	358.020	7638.00	1517.76	1316.50	1513.87	39°56'51.494"N	104°40'48.317"W	0.05	
9413.00†	90.000	358.068	7638.00	1616.21	1416.44	1510.45	39°56'52.481"N	104°40'48.349"W	0.05	
9513.00†	90.000	358.117	7638.00	1714.67	1516.39	1507.13	39°56'53.469"N	104°40'48.380"W	0.05	
9613.00†	90.000	358.165	7638.00	1813.15	1616.33	1503.88	39°56'54.457"N	104°40'48.409"W	0.05	
9713.00†	90.000	358.213	7638.00	1911.65	1716.28	1500.72	39°56'55.445"N	104°40'48.438"W	0.05	
9813.00†	90.000	358.262	7638.00	2010.15	1816.24	1497.65	39°56'56.433"N	104°40'48.466"W	0.05	
9913.00†	90.000	358.310	7638.00	2108.68	1916.19	1494.65	39°56'57.421"N	104°40'48.492"W	0.05	
10013.00†	90.000	358.358	7638.00	2207.21	2016.15	1491.75	39°56'58.409"N	104°40'48.518"W	0.05	
10113.00†	90.000	358.406	7638.00	2305.76	2116.11	1488.92	39°56'59.398"N	104°40'48.542"W	0.05	
10213.00†	90.000	358.455	7638.00	2404.33	2216.07	1486.19	39°57'00.386"N	104°40'48.565"W	0.05	
10313.00†	90.000	358.503	7638.00	2502.91	2316.04	1483.53	39°57'01.374"N	104°40'48.588"W	0.05	
10413.00†	90.000	358.551	7638.00	2601.50	2416.00	1480.96	39°57'02.362"N	104°40'48.609"W	0.05	
10513.00†	90.000	358.600	7638.00	2700.11	2515.97	1478.47	39°57'03.350"N	104°40'48.629"W	0.05	





# Planned Wellpath Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)

Page 6 of 10



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

## WELLPATH DATA (197 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	358.648	7638.00	2798.73	2615.94	1476.07	39°57'04.338"N	104°40'48.648"W	0.05	
10713.00†	90.000	358.696	7638.00	2897.37	2715.92	1473.76	39°57'05.326"N	104°40'48.666"W	0.05	
10813.00†	90.000	358.744	7638.00	2996.02	2815.89	1471.52	39°57'06.314"N	104°40'48.683"W	0.05	
10913.00†	90.000	358.793	7638.00	3094.68	2915.87	1469.37	39°57'07.303"N	104°40'48.698"W	0.05	
11013.00†	90.000	358.841	7638.00	3193.36	3015.85	1467.31	39°57'08.291"N	104°40'48.713"W	0.05	
11113.00†	90.000	358.889	7638.00	3292.05	3115.83	1465.33	39°57'09.279"N	104°40'48.726"W	0.05	
11213.00†	90.000	358.938	7638.00	3390.75	3215.81	1463.43	39°57'10.267"N	104°40'48.739"W	0.05	
11313.00†	90.000	358.986	7638.00	3489.47	3315.79	1461.62	39°57'11.255"N	104°40'48.750"W	0.05	
11413.00†	90.000	359.034	7638.00	3588.20	3415.78	1459.89	39°57'12.244"N	104°40'48.761"W	0.05	
11513.00†	90.000	359.083	7638.00	3686.95	3515.76	1458.25	39°57'13.232"N	104°40'48.770"W	0.05	
11613.00†	90.000	359.131	7638.00	3785.70	3615.75	1456.69	39°57'14.220"N	104°40'48.778"W	0.05	
11713.00†	90.000	359.179	7638.00	3884.47	3715.74	1455.22	39°57'15.208"N	104°40'48.785"W	0.05	
11813.00†	90.000	359.227	7638.00	3983.26	3815.73	1453.82	39°57'16.196"N	104°40'48.791"W	0.05	
11913.00†	90.000	359.276	7638.00	4082.05	3915.72	1452.52	39°57'17.185"N	104°40'48.796"W	0.05	
12013.00†	90.000	359.324	7638.00	4180.86	4015.72	1451.30	39°57'18.173"N	104°40'48.800"W	0.05	
12113.00†	90.000	359.372	7638.00	4279.69	4115.71	1450.16	39°57'19.161"N	104°40'48.803"W	0.05	
12213.00†	90.000	359.421	7638.00	4378.52	4215.70	1449.10	39°57'20.149"N	104°40'48.804"W	0.05	
12313.00†	90.000	359.469	7638.00	4477.37	4315.70	1448.14	39°57'21.138"N	104°40'48.805"W	0.05	
12413.00†	90.000	359.517	7638.00	4576.23	4415.70	1447.25	39°57'22.126"N	104°40'48.804"W	0.05	
12513.00†	90.000	359.565	7638.00	4675.11	4515.69	1446.45	39°57'23.114"N	104°40'48.803"W	0.05	
12613.00†	90.000	359.614	7638.00	4773.99	4615.69	1445.73	39°57'24.102"N	104°40'48.800"W	0.05	
12713.00†	90.000	359.662	7638.00	4872.89	4715.69	1445.10	39°57'25.091"N	104°40'48.796"W	0.05	
12813.00†	90.000	359.710	7638.00	4971.80	4815.69	1444.55	39°57'26.079"N	104°40'48.791"W	0.05	
12913.00†	90.000	359.759	7638.00	5070.73	4915.68	1444.09	39°57'27.067"N	104°40'48.785"W	0.05	
13010.32	90.000	359.806	7638.00	5167.01	5013.00	1443.72	39°57'28.029"N	104°40'48.779"W	0.05	End of 3D Arc (J)
13013.00†	90.000	359.806	7638.00	5169.66	5015.68	1443.71	39°57'28.055"N	104°40'48.778"W	0.00	
13113.00†	90.000	359.806	7638.00	5268.61	5115.68	1443.37	39°57'29.043"N	104°40'48.771"W	0.00	
13213.00†	90.000	359.806	7638.00	5367.55	5215.68	1443.03	39°57'30.032"N	104°40'48.763"W	0.00	
13313.00†	90.000	359.806	7638.00	5466.49	5315.68	1442.69	39°57'31.020"N	104°40'48.756"W	0.00	
13413.00†	90.000	359.806	7638.00	5565.43	5415.68	1442.35	39°57'32.008"N	104°40'48.748"W	0.00	



# Planned Wellpath Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)

Page 7 of 10



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

## WELLPATH DATA (197 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
13513.00†	90.000	359.806	7638.00	5664.37	5515.68	1442.01	39°57'32.996"N	104°40'48.741"W	0.00	
13613.00†	90.000	359.806	7638.00	5763.32	5615.68	1441.67	39°57'33.985"N	104°40'48.733"W	0.00	
13713.00†	90.000	359.806	7638.00	5862.26	5715.68	1441.34	39°57'34.973"N	104°40'48.726"W	0.00	
13813.00†	90.000	359.806	7638.00	5961.20	5815.68	1441.00	39°57'35.961"N	104°40'48.718"W	0.00	
13913.00†	90.000	359.806	7638.00	6060.14	5915.68	1440.66	39°57'36.949"N	104°40'48.711"W	0.00	
14013.00†	90.000	359.806	7638.00	6159.08	6015.68	1440.32	39°57'37.937"N	104°40'48.703"W	0.00	
14113.00†	90.000	359.806	7638.00	6258.03	6115.68	1439.98	39°57'38.926"N	104°40'48.696"W	0.00	
14213.00†	90.000	359.806	7638.00	6356.97	6215.68	1439.64	39°57'39.914"N	104°40'48.688"W	0.00	
14313.00†	90.000	359.806	7638.00	6455.91	6315.68	1439.30	39°57'40.902"N	104°40'48.681"W	0.00	
14413.00†	90.000	359.806	7638.00	6554.85	6415.68	1438.96	39°57'41.890"N	104°40'48.673"W	0.00	
14513.00†	90.000	359.806	7638.00	6653.79	6515.68	1438.62	39°57'42.879"N	104°40'48.666"W	0.00	
14613.00†	90.000	359.806	7638.00	6752.74	6615.67	1438.28	39°57'43.867"N	104°40'48.658"W	0.00	
14713.00†	90.000	359.806	7638.00	6851.68	6715.67	1437.94	39°57'44.855"N	104°40'48.651"W	0.00	
14813.00†	90.000	359.806	7638.00	6950.62	6815.67	1437.60	39°57'45.843"N	104°40'48.643"W	0.00	
14913.00†	90.000	359.806	7638.00	7049.56	6915.67	1437.26	39°57'46.831"N	104°40'48.636"W	0.00	
15013.00†	90.000	359.806	7638.00	7148.50	7015.67	1436.92	39°57'47.820"N	104°40'48.628"W	0.00	
15113.00†	90.000	359.806	7638.00	7247.45	7115.67	1436.58	39°57'48.808"N	104°40'48.621"W	0.00	
15213.00†	90.000	359.806	7638.00	7346.39	7215.67	1436.24	39°57'49.796"N	104°40'48.613"W	0.00	
15313.00†	90.000	359.806	7638.00	7445.33	7315.67	1435.90	39°57'50.784"N	104°40'48.606"W	0.00	
15413.00†	90.000	359.806	7638.00	7544.27	7415.67	1435.57	39°57'51.773"N	104°40'48.598"W	0.00	
15513.00†	90.000	359.806	7638.00	7643.21	7515.67	1435.23	39°57'52.761"N	104°40'48.591"W	0.00	
15613.00†	90.000	359.806	7638.00	7742.16	7615.67	1434.89	39°57'53.749"N	104°40'48.583"W	0.00	
15713.00†	90.000	359.806	7638.00	7841.10	7715.67	1434.55	39°57'54.737"N	104°40'48.576"W	0.00	
15813.00†	90.000	359.806	7638.00	7940.04	7815.67	1434.21	39°57'55.725"N	104°40'48.568"W	0.00	
15913.00†	90.000	359.806	7638.00	8038.98	7915.67	1433.87	39°57'56.714"N	104°40'48.561"W	0.00	
16013.00†	90.000	359.806	7638.00	8137.92	8015.67	1433.53	39°57'57.702"N	104°40'48.553"W	0.00	
16113.00†	90.000	359.806	7638.00	8236.87	8115.67	1433.19	39°57'58.690"N	104°40'48.546"W	0.00	
16213.00†	90.000	359.806	7638.00	8335.81	8215.67	1432.85	39°57'59.678"N	104°40'48.538"W	0.00	
16313.00†	90.000	359.806	7638.00	8434.75	8315.67	1432.51	39°58'00.667"N	104°40'48.531"W	0.00	
16413.00†	90.000	359.806	7638.00	8533.69	8415.66	1432.17	39°58'01.655"N	104°40'48.523"W	0.00	





# Planned Wellpath Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)

Page 8 of 10



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

## WELLPATH DATA (197 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16513.00†	90.000	359.806	7638.00	8632.63	8515.66	1431.83	39°58'02.643"N	104°40'48.515"W	0.00	
16613.00†	90.000	359.806	7638.00	8731.58	8615.66	1431.49	39°58'03.631"N	104°40'48.508"W	0.00	
16713.00†	90.000	359.806	7638.00	8830.52	8715.66	1431.15	39°58'04.620"N	104°40'48.500"W	0.00	
16813.00†	90.000	359.806	7638.00	8929.46	8815.66	1430.81	39°58'05.608"N	104°40'48.493"W	0.00	
16913.00†	90.000	359.806	7638.00	9028.40	8915.66	1430.47	39°58'06.596"N	104°40'48.485"W	0.00	
17013.00†	90.000	359.806	7638.00	9127.34	9015.66	1430.13	39°58'07.584"N	104°40'48.478"W	0.00	
17113.00†	90.000	359.806	7638.00	9226.29	9115.66	1429.80	39°58'08.572"N	104°40'48.470"W	0.00	
17213.00†	90.000	359.806	7638.00	9325.23	9215.66	1429.46	39°58'09.561"N	104°40'48.463"W	0.00	
17313.00†	90.000	359.806	7638.00	9424.17	9315.66	1429.12	39°58'10.549"N	104°40'48.455"W	0.00	
17413.00†	90.000	359.806	7638.00	9523.11	9415.66	1428.78	39°58'11.537"N	104°40'48.448"W	0.00	
17513.00†	90.000	359.806	7638.00	9622.05	9515.66	1428.44	39°58'12.525"N	104°40'48.440"W	0.00	
17613.00†	90.000	359.806	7638.00	9720.99	9615.66	1428.10	39°58'13.514"N	104°40'48.433"W	0.00	
17713.00†	90.000	359.806	7638.00	9819.94	9715.66	1427.76	39°58'14.502"N	104°40'48.425"W	0.00	
17813.00†	90.000	359.806	7638.00	9918.88	9815.66	1427.42	39°58'15.490"N	104°40'48.418"W	0.00	
17913.00†	90.000	359.806	7638.00	10017.82	9915.66	1427.08	39°58'16.478"N	104°40'48.410"W	0.00	
17963.95†	90.000	359.806	7638.00	10068.23	9966.61	1426.91	39°58'16.982"N	104°40'48.406"W	0.00	Codell
17963.99	90.000	359.806	7638.00 <sup>2</sup>	10068.27	9966.64	1426.91	39°58'16.982"N	104°40'48.406"W	0.00	End of Tangent (J)

## HOLE & CASING SECTIONS

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

Ref 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	0.00	0.00	-43.25	153.04
8.5in Open Hole	13.00	17963.99	17950.99	13.00	7638.00	0.00	0.00	9966.64	1426.91



# Planned Wellpath Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)

Page 9 of 10



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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	1.00	-224.25	3228136.32	1223519.73	39°56'38.652"N	104°41'10.788"W	polygon
SEC.20-T01S-R65W		0.00	1.00	-224.25	3228136.32	1223519.73	39°56'38.652"N	104°41'10.788"W	polygon
SEC.17/20-T01S-R65W 460'SETBACK		7638.00	1.00	-224.25	3228136.32	1223519.73	39°56'38.652"N	104°41'10.788"W	polygon
2) WAKEMAN 20-17-4CDH BHL (355'FNL & 460'FEL, SEC.17)	17963.99	7638.00	9966.64	1426.91	3229787.42	1233485.06	39°58'16.982"N	104°40'48.406"W	point
1) WAKEMAN 20-17-4CDH EP (460'FSL & 460'FEL, SEC.20)	8165.94	7638.00	170.33	1559.04	3229919.55	1223689.05	39°56'40.163"N	104°40'47.873"W	point

## SURVEY PROGRAM -

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



# Planned Wellpath Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)

Page 10 of 10



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

## WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1507.16	14.143	105.779	1500.00	Fox Hills
4309.69	14.275	105.779	4216.00	Niobrara A Chalk
4963.89	14.275	105.779	4850.00	Sussex / Shannon
7425.33	20.824	36.891	7234.00	Niobrara A Marl
7606.57	36.364	16.617	7393.00	Niobrara B Chalk
7644.71	39.891	14.263	7423.00	Niobrara B Marl
7693.28	44.441	11.725	7459.00	Niobrara C Chalk
7741.43	48.997	9.588	7492.00	Niobrara C Marl
7947.47	68.793	2.844	7598.00	Fort Hays
17963.95	90.000	359.806	7638.00	Codell

## DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
13.00	0.000	105.779	13.00	Tie On
800.00	0.000	105.779	800.00	End of Tangent
1513.75	14.275	105.779	1506.39	End of Build (S)
7221.51	14.275	105.779	7037.91	End of Tangent (S)
8165.94	90.000	357.466	7638.00	End of 3D Arc (S)
13010.32	90.000	359.806	7638.00	End of 3D Arc (J)
17963.99	90.000	359.806	7638.00	End of Tangent (J)



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 1 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

## REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Ingmjmr
Scale	0.999971	Report Generated	9/22/2017 at 11:28:54 AM
Convergence at slot	0.53° East	Database/Source file	WellArchitectDB1/WAKEMAN_20-17-4CDH_PWB_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	-0.00	0.00	3228360.56	1223518.73	39°56'38.622"N	104°41'07.909"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#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'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 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 2 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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 20-17-4CDH PWB Ref 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	0.00	0.00	-43.25	153.04
8.5in Open Hole	13.00	17963.99	17950.99	13.00	7638.00	0.00	0.00	9966.64	1426.91

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

### Closest Approach

Page 3 of 88



#### REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

#### CALCULATION RANGE & CUTOFF

From: 13.00ft MD	To: 17963.99ft MD	C-C Cutoff: 1000.00 ft
------------------	-------------------	------------------------

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

Offset Facility	Offset Slot	Offset Well	Offset Wellbore	Offset Wellpath	C-C Clearance Distance			ACR Separation Ratio			
					Ref MD [ft]	Min C-C Clear Dist [ft]	Diverging from MD [ft]	Ref MD of Min Ratio [ft]	Min Ratio	Min Ratio Dvrg from [ft]	ACR Status
SEC.20-T01S-R65W	SLOT#03 WAKEMAN 20-17-4NBH (293'FSL & 2053'FEL, SEC.20)	WAKEMAN 20-17-4NBH	WAKEMAN 20-17-4NBH PWB	WAKEMAN 20-17-4NBH PWP (REV-A.0)	13.00	29.95	11813.00	17963.99	0.86	17963.99	FAIL
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	15.00	12513.00	6782.61	1.07	17963.99	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	44.95	11813.00	17963.99	1.33	17963.99	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	12018.72	511.01	12018.72	11985.73	1.53	11985.73	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	59.95	11813.00	17963.99	1.90	17963.99	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	14023.39	772.26	14023.39	13996.01	1.95	13996.01	PASS
SEC.20-T01S-R65W	SLOT#01 EX. WOLFE #1 (990'FSL & 990'FEL,SEC.20,OG,PR, 8200)	WOLFE #1	WOLFE #1 AWB	WOLFE #1 AWP	8736.12	537.77	8736.12	8863.31	2.03	8863.31	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	74.98	11813.00	17963.99	2.26	17963.99	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	89.92	11813.00	17963.99	2.59	17963.99	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	17338.00	1447.43	17338.00	17500.49	2.88	17500.49	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	16364.35	1477.38	16364.35	16364.35	3.16	16364.35	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	104.98	11813.00	17963.99	3.18	17963.99	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	119.95	11513.00	17963.99	3.87	17963.99	PASS
SEC.20-T01S-R65W	SLOT#10 WAKEMAN 20-17-2NCH (293'FSL & 2158'FEL, SEC.20)	WAKEMAN 20-17-2NCH	WAKEMAN 20-17-2NCH PWB	WAKEMAN 20-17-2NCH PWP (REV-A.0)	13.00	134.93	11513.00	17963.99	4.48	17963.99	PASS
SEC.20-T01S-R65W	SLOT#11 WAKEMAN 20-17-2NAH (293'FSL & 2173'FEL, SEC.20)	WAKEMAN 20-17-2NAH	WAKEMAN 20-17-2NAH PWB	WAKEMAN 20-17-2NAH PWP (REV-A.0)	13.00	149.99	10813.00	17963.99	5.03	17963.99	PASS
SEC.20-T01S-R65W	SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20)	WAKEMAN 20-17-2CDH	WAKEMAN 20-17-2CDH PWB	WAKEMAN 20-17-2CDH PWP (REV-A.0)	13.00	164.96	11513.00	17963.99	5.10	17963.99	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	11055.22	1613.66	11055.22	11055.22	5.28	11055.22	PASS
SEC.20-T01S-R65W	SLOT#13 WAKEMAN 20-17-1NBH (293'FSL & 2203'FEL, SEC.20)	WAKEMAN 20-17-1NBH	WAKEMAN 20-17-1NBH PWB	WAKEMAN 20-17-1NBH PWP (REV-A.0)	13.00	179.96	11513.00	17963.99	5.75	17963.99	PASS
SEC.20-T01S-R65W	SLOT#14 WAKEMAN 20-17-1NCH (293'FSL & 2218'FEL, SEC.20)	WAKEMAN 20-17-1NCH	WAKEMAN 20-17-1NCH PWB	WAKEMAN 20-17-1NCH PWP (REV-A.0)	13.00	194.91	11613.00	17963.99	6.36	17963.99	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	209.96	9513.00	17963.99	6.89	17963.99	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	224.91	11613.00	17963.99	6.98	17963.99	PASS
SEC.20-T1S-R65W	SLOT#02 EX. COLLINS HH #20-3J (814'FNL & 1886'FWL,SEC.20,8163, PR)	COLLINS HH #20-3J	COLLINS HH #20-3J AWB	COLLINS HH #20-3J AWP	12225.50	2909.03	12225.50	12480.70	8.52	12480.70	PASS
SEC.17-T1S-R65W	SLOT#02 EX. AMOCO #24-17 (990'FSL & 1360'FWL,SEC.17,OG,PR,8130)	AMOCO #24-17	AMOCO #24-17	AMOCO #24-17 AWP	13975.50	3437.92	13975.50	14335.54	8.69	14335.54	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	14850.50	4390.37	14850.50	15463.61	10.32	15463.61	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	17213.00	5872.00	17218.00	17963.99	11.68	17963.99	PASS



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



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 4 of 88



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

CALCULATION RANGE & CUTOFF		
From: 13.00ft MD	To: 17963.99ft MD	C-C Cutoff: 1000.00 ft

OFFSET WELL CLEARANCE SUMMARY (26 Offset Wellpaths selected) Ratios are calculated in Closest Approach plane											
Offset Facility	Offset Slot	Offset Well	Offset Wellbore	Offset Wellpath	C-C Clearance Distance			ACR Separation Ratio			
					Ref MD [ft]	Min C-C Clear Dist [ft]	Diverging from MD [ft]	Ref MD of Min Ratio [ft]	Min Ratio	Min Ratio Dvrg from [ft]	ACR Status
SEC.20-T1S-R65W	SLOT#01 EX. COLLINS #14-20 (990'FSL & 990'FWL, SEC.20, OG, PR, 8202)	COLLINS #14-20	COLLINS #14-20 AWB	COLLINS #14-20 AWP	113.00	2399.81	8863.63	8863.63	14.12	9513.00	PASS



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 5 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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	0.02	-29.95	-89.97	29.95	1.36	48.65	PASS
113.00†	113.00	0.00	0.00	113.00	113.00	0.02	-29.95	-89.97	29.95	1.69	31.39	PASS
213.00†	213.00	0.00	0.00	213.00	213.00	0.02	-29.95	-89.97	29.95	2.26	19.38	PASS
313.00†	313.00	0.00	0.00	313.00	313.00	0.02	-29.95	-89.97	29.95	2.87	13.82	PASS
413.00†	413.00	0.00	0.00	413.00	413.00	0.02	-29.95	-89.97	29.95	3.48	10.70	PASS
513.00†	513.00	0.00	0.00	513.00	513.00	0.02	-29.95	-89.97	29.95	4.11	8.71	PASS
613.00†	613.00	0.00	0.00	613.00	613.00	0.02	-29.95	-89.97	29.95	4.73	7.35	PASS
713.00†	713.00	0.00	0.00	713.00	713.00	0.02	-29.95	-89.97	29.95	5.35	6.35	PASS
800.00	800.00	0.00	0.00	800.00	800.00	0.02	-29.95	-89.97	29.95	5.90	5.68	PASS
813.00†	813.00	-0.01	0.03	813.00	813.00	0.02	-29.95	164.27	29.98	5.98	5.60	PASS
913.00†	912.97	-0.61	2.14	912.97	912.97	0.02	-29.95	165.32	32.10	6.72	5.25	PASS
1013.00†	1012.80	-2.15	7.62	1012.97	1012.97	0.01	-29.92	167.48	37.60	7.76	5.26	PASS
1113.00†	1112.38	-4.64	16.44	1114.11	1114.08	-0.78	-27.82	169.20	44.46	8.81	5.43	PASS
1213.00†	1211.57	-8.08	28.60	1215.51	1215.31	-2.81	-22.36	170.13	51.36	10.05	5.44	PASS
1313.00†	1310.26	-12.46	44.08	1317.16	1316.51	-6.11	-13.51	170.54	58.28	11.18	5.52	PASS
1413.00†	1408.33	-17.77	62.87	1419.05	1417.55	-10.67	-1.28	170.61	65.20	12.26	5.60	PASS
1513.00†	1505.66	-24.00	84.94	1521.18	1518.31	-16.49	14.35	170.42	72.11	13.28	5.70	PASS
1513.75	1506.39	-24.05	85.12	1521.95	1519.06	-16.54	14.48	170.42	72.16	13.29	5.70	PASS
1613.00†	1602.57	-30.71	108.67	1622.87	1618.00	-23.49	33.12	169.88	77.45	13.98	5.80	PASS
1713.00†	1699.49	-37.41	132.40	1722.77	1715.76	-30.67	52.40	169.25	81.92	14.56	5.88	PASS
1813.00†	1796.40	-44.12	156.13	1822.66	1813.51	-37.86	71.68	168.68	86.40	15.13	5.94	PASS
1913.00†	1893.31	-50.82	179.86	1922.56	1911.27	-45.04	90.95	168.17	90.88	15.80	5.97	PASS
2013.00†	1990.22	-57.53	203.59	2022.45	2009.02	-52.23	110.23	167.71	95.38	16.46	6.01	PASS
2113.00†	2087.14	-64.23	227.31	2122.35	2106.78	-59.41	129.51	167.29	99.88	17.16	6.03	PASS
2213.00†	2184.05	-70.94	251.04	2222.25	2204.53	-66.59	148.78	166.90	104.38	17.89	6.03	PASS
2313.00†	2280.96	-77.64	274.77	2322.14	2302.29	-73.78	168.06	166.55	108.89	18.63	6.04	PASS
2413.00†	2377.87	-84.35	298.50	2422.04	2400.04	-80.96	187.34	166.23	113.40	19.39	6.03	PASS
2513.00†	2474.79	-91.05	322.23	2521.93	2497.80	-88.15	206.62	165.93	117.92	20.17	6.02	PASS
2613.00†	2571.70	-97.76	345.96	2621.83	2595.55	-95.33	225.89	165.65	122.43	20.96	6.01	PASS
2713.00†	2668.61	-104.46	369.68	2721.73	2693.31	-102.52	245.17	165.39	126.95	21.77	5.99	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 6 of 88



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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†	2765.52	-111.17	393.41	2821.62	2791.06	-109.70	264.45	165.15	131.48	22.59	5.98	PASS
2913.00†	2862.44	-117.87	417.14	2921.52	2888.82	-116.89	283.73	164.93	136.00	23.42	5.96	PASS
3013.00†	2959.35	-124.58	440.87	3021.42	2986.57	-124.07	303.00	164.72	140.53	24.25	5.94	PASS
3113.00†	3056.26	-131.28	464.60	3121.31	3084.33	-131.25	322.28	164.52	145.06	25.10	5.92	PASS
3213.00†	3153.17	-137.99	488.33	3221.21	3182.08	-138.44	341.56	164.34	149.59	25.95	5.90	PASS
3313.00†	3250.08	-144.69	512.05	3321.10	3279.84	-145.62	360.83	164.16	154.12	26.82	5.88	PASS
3413.00†	3347.00	-151.40	535.78	3421.00	3377.59	-152.81	380.11	164.00	158.66	27.68	5.86	PASS
3513.00†	3443.91	-158.10	559.51	3520.90	3475.35	-159.99	399.39	163.84	163.19	28.56	5.83	PASS
3613.00†	3540.82	-164.81	583.24	3620.79	3573.10	-167.18	418.67	163.70	167.73	29.44	5.81	PASS
3713.00†	3637.73	-171.51	606.97	3720.69	3670.86	-174.36	437.94	163.56	172.26	30.32	5.79	PASS
3813.00†	3734.65	-178.22	630.70	3820.59	3768.61	-181.54	457.22	163.43	176.80	31.21	5.77	PASS
3913.00†	3831.56	-184.92	654.43	3920.48	3866.37	-188.73	476.50	163.30	181.34	32.11	5.75	PASS
4013.00†	3928.47	-191.62	678.15	4020.38	3964.12	-195.91	495.77	163.18	185.88	33.00	5.73	PASS
4113.00†	4025.38	-198.33	701.88	4120.27	4061.88	-203.10	515.05	163.07	190.42	33.91	5.71	PASS
4213.00†	4122.30	-205.03	725.61	4220.17	4159.63	-210.28	534.33	162.96	194.96	34.81	5.70	PASS
4313.00†	4219.21	-211.74	749.34	4320.07	4257.39	-217.47	553.61	162.86	199.50	35.72	5.68	PASS
4413.00†	4316.12	-218.44	773.07	4419.96	4355.14	-224.65	572.88	162.76	204.05	36.63	5.66	PASS
4513.00†	4413.03	-225.15	796.80	4519.86	4452.90	-231.83	592.16	162.67	208.59	37.55	5.64	PASS
4613.00†	4509.95	-231.85	820.52	4619.75	4550.65	-239.02	611.44	162.58	213.13	38.46	5.63	PASS
4713.00†	4606.86	-238.56	844.25	4719.65	4648.41	-246.20	630.71	162.49	217.68	39.38	5.61	PASS
4813.00†	4703.77	-245.26	867.98	4819.55	4746.16	-253.39	649.99	162.41	222.22	40.30	5.59	PASS
4913.00†	4800.68	-251.97	891.71	4919.44	4843.92	-260.57	669.27	162.33	226.77	41.23	5.58	PASS
5013.00†	4897.59	-258.67	915.44	5019.34	4941.67	-267.76	688.55	162.25	231.31	42.15	5.56	PASS
5113.00†	4994.51	-265.38	939.17	5119.24	5039.43	-274.94	707.82	162.18	235.86	43.08	5.55	PASS
5213.00†	5091.42	-272.08	962.89	5219.13	5137.18	-282.13	727.10	162.11	240.40	44.01	5.54	PASS
5313.00†	5188.33	-278.79	986.62	5319.03	5234.93	-289.31	746.38	162.04	244.95	44.94	5.52	PASS
5413.00†	5285.24	-285.49	1010.35	5418.92	5332.69	-296.49	765.66	161.97	249.50	45.87	5.51	PASS
5513.00†	5382.16	-292.20	1034.08	5518.82	5430.44	-303.68	784.93	161.91	254.04	46.80	5.50	PASS
5613.00†	5479.07	-298.90	1057.81	5618.72	5528.20	-310.86	804.21	161.85	258.59	47.74	5.48	PASS
5713.00†	5575.98	-305.61	1081.54	5718.61	5625.95	-318.05	823.49	161.79	263.14	48.67	5.47	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 7 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.20-T01S-R65W Slot: SLOT#03 WAKEMAN 20-17-4NBH (293'FSL & 2053'FEL, SEC.20) Well: WAKEMAN 20-17-4NBH Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
5813.00†	5672.89	-312.31	1105.26	5818.51	5723.71	-325.23	842.76	161.74	267.69	49.61	5.46	PASS
5913.00†	5769.81	-319.02	1128.99	5918.41	5821.46	-332.42	862.04	161.68	272.23	50.55	5.45	PASS
6013.00†	5866.72	-325.72	1152.72	6018.30	5919.22	-339.60	881.32	161.63	276.78	51.49	5.44	PASS
6113.00†	5963.63	-332.43	1176.45	6118.20	6016.97	-346.78	900.60	161.58	281.33	52.43	5.43	PASS
6213.00†	6060.54	-339.13	1200.18	6218.09	6114.73	-353.97	919.87	161.53	285.88	53.37	5.41	PASS
6313.00†	6157.46	-345.84	1223.91	6317.99	6212.48	-361.15	939.15	161.48	290.43	54.31	5.40	PASS
6413.00†	6254.37	-352.54	1247.64	6417.89	6310.24	-368.34	958.43	161.43	294.98	55.26	5.39	PASS
6513.00†	6351.28	-359.25	1271.36	6517.78	6407.99	-375.52	977.70	161.39	299.53	56.20	5.38	PASS
6613.00†	6448.19	-365.95	1295.09	6617.68	6505.75	-382.71	996.98	161.34	304.08	57.15	5.38	PASS
6713.00†	6545.11	-372.66	1318.82	6717.57	6603.50	-389.89	1016.26	161.30	308.63	58.09	5.37	PASS
6813.00†	6642.02	-379.36	1342.55	6817.47	6701.26	-397.08	1035.54	161.26	313.18	59.04	5.36	PASS
6913.00†	6738.93	-386.07	1366.28	6917.70	6799.35	-404.12	1054.88	161.25	317.72	59.97	5.35	PASS
7013.00†	6835.84	-392.77	1390.01	7018.64	6898.20	-400.07	1074.22	163.21	321.97	59.69	5.45	PASS
7113.00†	6932.75	-399.48	1413.73	7113.04	6988.73	-380.37	1091.72	167.77	327.41	58.31	5.67	PASS
7213.00†	7029.67	-406.18	1437.46	7197.07	7065.73	-350.30	1106.42	173.78	337.66	57.04	5.98	PASS
7221.51	7037.91	-406.75	1439.48	7203.68	7071.60	-347.45	1107.53	174.32	338.88	57.00	6.01	PASS
7313.00†	7126.75	-405.59	1460.91	7272.72	7130.73	-313.68	1118.68	-142.34	354.38	57.01	6.28	PASS
7413.00†	7222.44	-387.75	1483.26	7345.15	7188.02	-270.76	1129.34	-108.11	374.34	58.07	6.51	PASS
7513.00†	7313.84	-353.13	1503.82	7415.15	7237.94	-222.61	1138.49	-89.01	395.30	59.25	6.74	PASS
7613.00†	7398.16	-302.79	1521.98	7483.33	7280.69	-170.11	1146.17	-77.44	415.50	59.80	7.02	PASS
7713.00†	7472.85	-238.25	1537.18	7550.14	7316.37	-114.02	1152.41	-69.81	433.55	59.75	7.33	PASS
7813.00†	7535.63	-161.48	1548.97	7615.91	7345.02	-55.05	1157.24	-64.61	448.46	59.26	7.65	PASS
7913.00†	7584.60	-74.80	1556.97	7680.94	7366.65	6.15	1160.66	-61.14	459.48	58.47	7.94	PASS
8013.00†	7618.28	19.14	1560.96	7745.48	7381.26	68.94	1162.68	-59.00	466.14	57.61	8.18	PASS
8113.00†	7635.62	117.49	1560.80	7809.73	7388.83	132.71	1163.30	-58.02	468.12	56.90	8.32	PASS
8165.94	7638.00	170.33	1559.04	7843.70	7389.99	166.65	1163.07	-57.93	467.23	56.38	8.38	PASS
8213.00†	7638.00	217.35	1556.96	7889.08	7390.00	212.03	1162.46	-57.84	466.01	56.59	8.33	PASS
8313.00†	7638.00	317.25	1552.63	7989.04	7390.00	311.98	1161.12	-57.64	463.48	57.51	8.15	PASS
8413.00†	7638.00	417.16	1548.37	8089.00	7390.00	411.93	1159.77	-57.45	461.02	58.92	7.91	PASS
8513.00†	7638.00	517.08	1544.20	8188.96	7390.00	511.88	1158.42	-57.26	458.64	60.78	7.62	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 8 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.20-T01S-R65W Slot: SLOT#03 WAKEMAN 20-17-4NBH (293'FSL & 2053'FEL, SEC.20) Well: WAKEMAN 20-17-4NBH Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
8613.00†	7638.00	616.99	1540.11	8288.92	7390.00	611.83	1157.08	-57.07	456.34	63.03	7.31	PASS
8713.00†	7638.00	716.91	1536.11	8388.88	7390.00	711.79	1155.73	-56.89	454.12	65.64	6.98	PASS
8813.00†	7638.00	816.84	1532.19	8488.85	7390.00	811.74	1154.38	-56.71	451.96	68.56	6.65	PASS
8913.00†	7638.00	916.76	1528.36	8588.82	7390.00	911.70	1153.03	-56.54	449.89	71.75	6.32	PASS
9013.00†	7638.00	1016.69	1524.61	8688.79	7390.00	1011.67	1151.69	-56.37	447.88	76.05	5.94	PASS
9113.00†	7638.00	1116.62	1520.94	8788.76	7390.00	1111.63	1150.34	-56.21	445.96	78.78	5.70	PASS
9213.00†	7638.00	1216.56	1517.36	8888.74	7390.00	1211.60	1148.99	-56.05	444.10	82.57	5.42	PASS
9313.00†	7638.00	1316.50	1513.87	8988.71	7390.00	1311.56	1147.65	-55.89	442.32	86.49	5.15	PASS
9413.00†	7638.00	1416.44	1510.45	9088.69	7390.00	1411.53	1146.30	-55.74	440.61	90.55	4.90	PASS
9513.00†	7638.00	1516.39	1507.13	9188.67	7390.00	1511.50	1144.95	-55.60	438.97	94.70	4.66	PASS
9613.00†	7638.00	1616.33	1503.88	9288.66	7390.00	1611.48	1143.60	-55.46	437.41	98.95	4.44	PASS
9713.00†	7638.00	1716.28	1500.72	9388.64	7390.00	1711.45	1142.26	-55.32	435.92	103.28	4.24	PASS
9813.00†	7638.00	1816.24	1497.65	9488.62	7390.00	1811.43	1140.91	-55.19	434.50	107.68	4.06	PASS
9913.00†	7638.00	1916.19	1494.65	9588.61	7390.00	1911.41	1139.56	-55.07	433.15	112.14	3.88	PASS
10013.00†	7638.00	2016.15	1491.75	9688.60	7390.00	2011.38	1138.21	-54.95	431.87	116.65	3.72	PASS
10113.00†	7638.00	2116.11	1488.92	9788.59	7390.00	2111.36	1136.87	-54.84	430.66	121.21	3.57	PASS
10213.00†	7638.00	2216.07	1486.19	9888.58	7390.00	2211.35	1135.52	-54.73	429.53	125.82	3.43	PASS
10313.00†	7638.00	2316.04	1483.53	9988.57	7390.00	2311.33	1134.17	-54.63	428.46	130.45	3.30	PASS
10413.00†	7638.00	2416.00	1480.96	10088.56	7390.00	2411.31	1132.82	-54.54	427.46	135.13	3.17	PASS
10513.00†	7638.00	2515.97	1478.47	10188.56	7390.00	2511.30	1131.48	-54.45	426.54	139.83	3.06	PASS
10613.00†	7638.00	2615.94	1476.07	10288.55	7390.00	2611.28	1130.13	-54.37	425.68	144.57	2.95	PASS
10713.00†	7638.00	2715.92	1473.76	10388.55	7390.00	2711.27	1128.78	-54.29	424.89	149.33	2.85	PASS
10813.00†	7638.00	2815.89	1471.52	10488.54	7390.00	2811.25	1127.43	-54.22	424.17	154.12	2.76	PASS
10913.00†	7638.00	2915.87	1469.37	10588.54	7390.00	2911.24	1126.09	-54.16	423.52	158.93	2.67	PASS
11013.00†	7638.00	3015.85	1467.31	10688.54	7390.00	3011.23	1124.74	-54.10	422.94	163.77	2.59	PASS
11113.00†	7638.00	3115.83	1465.33	10788.53	7390.00	3111.22	1123.39	-54.05	422.43	168.63	2.51	PASS
11213.00†	7638.00	3215.81	1463.43	10888.53	7390.00	3211.21	1122.04	-54.01	421.98	173.52	2.44	PASS
11313.00†	7638.00	3315.79	1461.62	10988.53	7390.00	3311.20	1120.70	-53.97	421.61	178.42	2.37	PASS
11413.00†	7638.00	3415.78	1459.89	11088.53	7390.00	3411.19	1119.35	-53.94	421.30	183.35	2.30	PASS
11513.00†	7638.00	3515.76	1458.25	11188.53	7390.00	3511.18	1118.00	-53.92	421.06	188.30	2.24	PASS

C-C Clearance Distance Cutoff: 1000.00 ft





# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 9 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.20-T01S-R65W Slot: SLOT#03 WAKEMAN 20-17-4NBH (293'FSL & 2053'FEL, SEC.20) Well: WAKEMAN 20-17-4NBH Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
11613.00†	7638.00	3615.75	1456.69	11288.53	7390.00	3611.17	1116.65	-53.90	420.89	193.28	2.18	PASS
11713.00†	7638.00	3715.74	1455.22	11388.53	7390.00	3711.16	1115.31	-53.89	420.79	198.27	2.13	PASS
11813.00†	7638.00	3815.73	1453.82	11488.53	7390.00	3811.15	1113.96	-53.88	420.75	203.29	2.07	PASS
11913.00†	7638.00	3915.72	1452.52	11588.53	7390.00	3911.14	1112.61	-53.89	420.79	208.34	2.02	PASS
12013.00†	7638.00	4015.72	1451.30	11688.53	7390.00	4011.13	1111.26	-53.90	420.89	213.41	1.98	PASS
12113.00†	7638.00	4115.71	1450.16	11788.53	7390.00	4111.12	1109.92	-53.91	421.06	218.50	1.93	PASS
12213.00†	7638.00	4215.70	1449.10	11888.53	7390.00	4211.11	1108.57	-53.94	421.30	223.62	1.89	PASS
12313.00†	7638.00	4315.70	1448.14	11988.53	7390.00	4311.10	1107.22	-53.97	421.60	228.76	1.85	PASS
12413.00†	7638.00	4415.70	1447.25	12088.53	7390.00	4411.09	1105.87	-54.01	421.98	233.93	1.81	PASS
12513.00†	7638.00	4515.69	1446.45	12188.53	7390.00	4511.08	1104.52	-54.05	422.42	239.12	1.77	PASS
12613.00†	7638.00	4615.69	1445.73	12288.52	7390.00	4611.07	1103.18	-54.10	422.93	244.34	1.73	PASS
12713.00†	7638.00	4715.69	1445.10	12388.52	7390.00	4711.06	1101.83	-54.16	423.51	249.59	1.70	PASS
12813.00†	7638.00	4815.69	1444.55	12488.52	7390.00	4811.05	1100.48	-54.22	424.16	254.87	1.67	PASS
12913.00†	7638.00	4915.68	1444.09	12588.51	7390.00	4911.04	1099.13	-54.29	424.88	260.18	1.63	PASS
13010.32	7638.00	5013.00	1443.72	12685.83	7390.00	5008.34	1097.82	-54.36	425.64	265.37	1.61	PASS
13013.00†	7638.00	5015.68	1443.71	12688.51	7390.00	5011.02	1097.79	-54.36	425.66	265.51	1.60	PASS
13113.00†	7638.00	5115.68	1443.37	12788.50	7390.00	5111.01	1096.44	-54.44	426.48	270.86	1.58	PASS
13213.00†	7638.00	5215.68	1443.03	12888.50	7390.00	5210.99	1095.09	-54.52	427.30	276.23	1.55	PASS
13313.00†	7638.00	5315.68	1442.69	12988.49	7390.00	5310.98	1093.74	-54.60	428.12	281.61	1.52	PASS
13413.00†	7638.00	5415.68	1442.35	13088.49	7390.00	5410.97	1092.40	-54.68	428.95	287.00	1.50	PASS
13513.00†	7638.00	5515.68	1442.01	13188.48	7390.00	5510.95	1091.05	-54.76	429.77	292.40	1.47	PASS
13613.00†	7638.00	5615.68	1441.67	13288.48	7390.00	5610.94	1089.70	-54.83	430.59	297.81	1.45	PASS
13713.00†	7638.00	5715.68	1441.34	13388.47	7390.00	5710.92	1088.35	-54.91	431.42	303.23	1.42	PASS
13813.00†	7638.00	5815.68	1441.00	13488.47	7390.00	5810.91	1087.01	-54.99	432.24	308.66	1.40	PASS
13913.00†	7638.00	5915.68	1440.66	13588.46	7390.00	5910.89	1085.66	-55.06	433.07	314.10	1.38	PASS
14013.00†	7638.00	6015.68	1440.32	13688.46	7390.00	6010.88	1084.31	-55.14	433.90	319.55	1.36	PASS
14113.00†	7638.00	6115.68	1439.98	13788.45	7390.00	6110.87	1082.96	-55.22	434.72	325.01	1.34	PASS
14213.00†	7638.00	6215.68	1439.64	13888.45	7390.00	6210.85	1081.62	-55.29	435.55	330.48	1.32	PASS
14313.00†	7638.00	6315.68	1439.30	13988.44	7390.00	6310.84	1080.27	-55.37	436.38	335.96	1.30	PASS
14413.00†	7638.00	6415.68	1438.96	14088.44	7390.00	6410.82	1078.92	-55.44	437.21	341.45	1.28	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 10 of 88



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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
14513.00†	7638.00	6515.68	1438.62	14188.43	7390.00	6510.81	1077.57	-55.52	438.04	346.94	1.26	PASS
14613.00†	7638.00	6615.67	1438.28	14288.43	7390.00	6610.80	1076.23	-55.59	438.87	352.45	1.25	PASS
14713.00†	7638.00	6715.67	1437.94	14388.42	7390.00	6710.78	1074.88	-55.67	439.71	357.96	1.23	PASS
14813.00†	7638.00	6815.67	1437.60	14488.42	7390.00	6810.77	1073.53	-55.74	440.54	363.48	1.21	PASS
14913.00†	7638.00	6915.67	1437.26	14588.41	7390.00	6910.75	1072.18	-55.81	441.37	369.01	1.20	PASS
15013.00†	7638.00	7015.67	1436.92	14688.41	7390.00	7010.74	1070.84	-55.89	442.21	374.55	1.18	PASS
15113.00†	7638.00	7115.67	1436.58	14788.40	7390.00	7110.72	1069.49	-55.96	443.04	380.10	1.17	PASS
15213.00†	7638.00	7215.67	1436.24	14888.40	7390.00	7210.71	1068.14	-56.03	443.88	385.65	1.15	PASS
15313.00†	7638.00	7315.67	1435.90	14988.39	7390.00	7310.70	1066.79	-56.10	444.71	391.21	1.14	PASS
15413.00†	7638.00	7415.67	1435.57	15088.39	7390.00	7410.68	1065.45	-56.18	445.55	396.78	1.12	PASS
15513.00†	7638.00	7515.67	1435.23	15188.38	7390.00	7510.67	1064.10	-56.25	446.39	402.35	1.11	PASS
15613.00†	7638.00	7615.67	1434.89	15288.38	7390.00	7610.65	1062.75	-56.32	447.23	407.94	1.10	PASS
15713.00†	7638.00	7715.67	1434.55	15388.37	7390.00	7710.64	1061.40	-56.39	448.07	413.53	1.08	PASS
15813.00†	7638.00	7815.67	1434.21	15488.37	7390.00	7810.63	1060.06	-56.46	448.91	419.12	1.07	PASS
15913.00†	7638.00	7915.67	1433.87	15588.36	7390.00	7910.61	1058.71	-56.53	449.75	424.73	1.06	PASS
16013.00†	7638.00	8015.67	1433.53	15688.36	7390.00	8010.60	1057.36	-56.61	450.59	430.34	1.05	PASS
16113.00†	7638.00	8115.67	1433.19	15788.35	7390.00	8110.58	1056.01	-56.68	451.43	435.96	1.04	PASS
16213.00†	7638.00	8215.67	1432.85	15888.35	7390.00	8210.57	1054.67	-56.75	452.28	441.58	1.02	PASS
16313.00†	7638.00	8315.67	1432.51	15988.34	7390.00	8310.55	1053.32	-56.82	453.12	447.22	1.01	PASS
16413.00†	7638.00	8415.66	1432.17	16088.34	7390.00	8410.54	1051.97	-56.89	453.96	452.85	1.00	PASS
16513.00†	7638.00	8515.66	1431.83	16188.33	7390.00	8510.53	1050.62	-56.95	454.81	458.50	0.99	FAIL
16613.00†	7638.00	8615.66	1431.49	16288.33	7390.00	8610.51	1049.28	-57.02	455.65	464.15	0.98	FAIL
16713.00†	7638.00	8715.66	1431.15	16388.32	7390.00	8710.50	1047.93	-57.09	456.50	469.81	0.97	FAIL
16813.00†	7638.00	8815.66	1430.81	16488.32	7390.00	8810.48	1046.58	-57.16	457.35	475.47	0.96	FAIL
16913.00†	7638.00	8915.66	1430.47	16588.31	7390.00	8910.47	1045.23	-57.23	458.19	481.14	0.95	FAIL
17013.00†	7638.00	9015.66	1430.13	16688.31	7390.00	9010.46	1043.89	-57.30	459.04	486.81	0.94	FAIL
17113.00†	7638.00	9115.66	1429.80	16788.30	7390.00	9110.44	1042.54	-57.37	459.89	492.50	0.93	FAIL
17213.00†	7638.00	9215.66	1429.46	16888.30	7390.00	9210.43	1041.19	-57.43	460.74	498.18	0.92	FAIL
17313.00†	7638.00	9315.66	1429.12	16988.29	7390.00	9310.41	1039.84	-57.50	461.59	503.88	0.92	FAIL
17413.00†	7638.00	9415.66	1428.78	17088.29	7390.00	9410.40	1038.50	-57.57	462.44	509.58	0.91	FAIL

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 11 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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
17513.00†	7638.00	9515.66	1428.44	17188.28	7390.00	9510.38	1037.15	-57.63	463.29	515.28	0.90	FAIL
17613.00†	7638.00	9615.66	1428.10	17288.28	7390.00	9610.37	1035.80	-57.70	464.14	520.99	0.89	FAIL
17713.00†	7638.00	9715.66	1427.76	17388.27	7390.00	9710.36	1034.45	-57.77	465.00	526.71	0.88	FAIL
17813.00†	7638.00	9815.66	1427.42	17488.27	7390.00	9810.34	1033.11	-57.83	465.85	532.43	0.87	FAIL
17913.00†	7638.00	9915.66	1427.08	17588.26	7390.00	9910.33	1031.76	-57.90	466.70	538.16	0.87	FAIL
17963.99	7638.00	9966.64	1426.91	17639.24	7390.00	9961.31	1031.07	-57.93	467.14	541.08	0.86	FAIL

C-C Clearance Distance Cutoff: 1000.00 ft

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

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

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

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing Surface	13.00	1800.00	1787.00	13.00	1791.34	0.01	-18.26	-11.04	11.39
8.5in Open Hole	1800.00	17645.62	15845.62	1791.34	7390.00	-11.04	11.39	3038.15	305.12

## 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 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 12 of 88



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 13 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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	-0.06	-15.00	-90.25	15.00	1.36	23.74	PASS
113.00†	113.00	0.00	0.00	113.00	113.00	-0.06	-15.00	-90.25	15.00	1.69	15.31	PASS
213.00†	213.00	0.00	0.00	213.00	213.00	-0.06	-15.00	-90.25	15.00	2.26	9.45	PASS
313.00†	313.00	0.00	0.00	313.00	313.00	-0.06	-15.00	-90.25	15.00	2.87	6.74	PASS
413.00†	413.00	0.00	0.00	413.00	413.00	-0.06	-15.00	-90.25	15.00	3.48	5.22	PASS
513.00†	513.00	0.00	0.00	513.00	513.00	-0.06	-15.00	-90.25	15.00	4.11	4.25	PASS
613.00†	613.00	0.00	0.00	613.00	613.00	-0.06	-15.00	-90.25	15.00	4.73	3.59	PASS
713.00†	713.00	0.00	0.00	713.00	713.00	-0.06	-15.00	-90.25	15.00	5.35	3.10	PASS
800.00	800.00	0.00	0.00	800.00	800.00	-0.06	-15.00	-90.25	15.00	5.90	2.77	PASS
813.00†	813.00	-0.01	0.03	813.00	813.00	-0.06	-15.00	164.00	15.03	5.98	2.73	PASS
913.00†	912.97	-0.61	2.14	913.05	913.05	-0.07	-14.97	165.99	17.13	6.72	2.74	PASS
1013.00†	1012.80	-2.15	7.62	1013.63	1013.60	-0.74	-12.85	168.17	20.53	7.87	2.78	PASS
1113.00†	1112.38	-4.64	16.44	1114.33	1114.13	-2.47	-7.36	169.46	23.96	9.20	2.75	PASS
1213.00†	1211.57	-8.08	28.60	1215.15	1214.52	-5.27	1.52	170.21	27.39	10.39	2.77	PASS
1313.00†	1310.26	-12.46	44.08	1316.10	1314.64	-9.13	13.77	170.58	30.81	11.49	2.80	PASS
1413.00†	1408.33	-17.77	62.87	1417.17	1414.36	-14.05	29.40	170.70	34.21	12.53	2.84	PASS
1513.00†	1505.66	-24.00	84.94	1518.35	1513.56	-20.03	48.40	170.63	37.59	13.54	2.88	PASS
1513.75	1506.39	-24.05	85.12	1519.11	1514.30	-20.08	48.56	170.63	37.62	13.54	2.88	PASS
1613.00†	1602.57	-30.71	108.67	1619.42	1611.90	-27.04	70.65	170.03	39.32	14.24	2.86	PASS
1713.00†	1699.49	-37.41	132.40	1719.42	1708.92	-34.31	93.75	169.12	39.91	14.83	2.78	PASS
1813.00†	1796.40	-44.12	156.13	1819.42	1805.94	-41.59	116.85	168.25	40.50	15.42	2.70	PASS
1913.00†	1893.31	-50.82	179.86	1919.41	1902.96	-48.86	139.95	167.40	41.11	16.07	2.63	PASS
2013.00†	1990.22	-57.53	203.59	2019.41	1999.98	-56.14	163.04	166.57	41.72	16.77	2.55	PASS
2113.00†	2087.14	-64.23	227.31	2119.41	2097.00	-63.41	186.14	165.77	42.35	17.51	2.48	PASS
2213.00†	2184.05	-70.94	251.04	2219.40	2194.02	-70.69	209.24	164.99	42.98	18.27	2.41	PASS
2313.00†	2280.96	-77.64	274.77	2319.40	2291.04	-77.96	232.34	164.24	43.62	19.07	2.34	PASS
2413.00†	2377.87	-84.35	298.50	2419.39	2388.06	-85.24	255.43	163.51	44.26	19.90	2.27	PASS
2513.00†	2474.79	-91.05	322.23	2519.39	2485.08	-92.51	278.53	162.79	44.91	20.76	2.20	PASS
2613.00†	2571.70	-97.76	345.96	2619.39	2582.10	-99.79	301.63	162.10	45.57	21.64	2.14	PASS
2713.00†	2668.61	-104.46	369.68	2719.38	2679.12	-107.06	324.73	161.43	46.24	22.56	2.08	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 14 of 88



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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†	2765.52	-111.17	393.41	2819.38	2776.14	-114.33	347.83	160.78	46.91	23.49	2.03	PASS
2913.00†	2862.44	-117.87	417.14	2919.38	2873.16	-121.61	370.92	160.14	47.59	24.45	1.97	PASS
3013.00†	2959.35	-124.58	440.87	3019.37	2970.18	-128.88	394.02	159.53	48.28	25.43	1.92	PASS
3113.00†	3056.26	-131.28	464.60	3119.37	3067.20	-136.16	417.12	158.93	48.97	26.44	1.88	PASS
3213.00†	3153.17	-137.99	488.33	3219.37	3164.22	-143.43	440.22	158.35	49.66	27.46	1.83	PASS
3313.00†	3250.08	-144.69	512.05	3319.36	3261.24	-150.71	463.32	157.78	50.36	28.51	1.79	PASS
3413.00†	3347.00	-151.40	535.78	3419.36	3358.26	-157.98	486.41	157.23	51.06	29.57	1.74	PASS
3513.00†	3443.91	-158.10	559.51	3519.35	3455.28	-165.26	509.51	156.70	51.77	30.65	1.71	PASS
3613.00†	3540.82	-164.81	583.24	3619.35	3552.30	-172.53	532.61	156.18	52.49	31.74	1.67	PASS
3713.00†	3637.73	-171.51	606.97	3719.35	3649.32	-179.80	555.71	155.67	53.20	32.86	1.63	PASS
3813.00†	3734.65	-178.22	630.70	3819.34	3746.34	-187.08	578.81	155.18	53.93	33.98	1.60	PASS
3913.00†	3831.56	-184.92	654.43	3919.34	3843.36	-194.35	601.90	154.69	54.65	35.13	1.57	PASS
4013.00†	3928.47	-191.62	678.15	4019.34	3940.38	-201.63	625.00	154.23	55.38	36.28	1.54	PASS
4113.00†	4025.38	-198.33	701.88	4119.33	4037.40	-208.90	648.10	153.77	56.11	37.45	1.51	PASS
4213.00†	4122.30	-205.03	725.61	4219.33	4134.42	-216.18	671.20	153.33	56.85	38.63	1.48	PASS
4313.00†	4219.21	-211.74	749.34	4319.32	4231.43	-223.45	694.29	152.90	57.59	39.82	1.45	PASS
4413.00†	4316.12	-218.44	773.07	4419.32	4328.45	-230.73	717.39	152.47	58.33	41.03	1.43	PASS
4513.00†	4413.03	-225.15	796.80	4519.32	4425.47	-238.00	740.49	152.06	59.08	42.24	1.41	PASS
4613.00†	4509.95	-231.85	820.52	4619.31	4522.49	-245.27	763.59	151.66	59.83	43.47	1.38	PASS
4713.00†	4606.86	-238.56	844.25	4719.31	4619.51	-252.55	786.69	151.27	60.58	44.70	1.36	PASS
4813.00†	4703.77	-245.26	867.98	4819.31	4716.53	-259.82	809.78	150.89	61.33	45.94	1.34	PASS
4913.00†	4800.68	-251.97	891.71	4919.30	4813.55	-267.10	832.88	150.52	62.09	47.20	1.32	PASS
5013.00†	4897.59	-258.67	915.44	5019.30	4910.57	-274.37	855.98	150.16	62.85	48.46	1.30	PASS
5113.00†	4994.51	-265.38	939.17	5119.30	5007.59	-281.65	879.08	149.80	63.61	49.73	1.28	PASS
5213.00†	5091.42	-272.08	962.89	5219.29	5104.61	-288.92	902.18	149.46	64.38	51.00	1.27	PASS
5313.00†	5188.33	-278.79	986.62	5319.29	5201.63	-296.20	925.27	149.12	65.14	52.29	1.25	PASS
5413.00†	5285.24	-285.49	1010.35	5419.28	5298.65	-303.47	948.37	148.79	65.91	53.58	1.23	PASS
5513.00†	5382.16	-292.20	1034.08	5519.28	5395.67	-310.74	971.47	148.47	66.68	54.87	1.22	PASS
5613.00†	5479.07	-298.90	1057.81	5619.28	5492.69	-318.02	994.57	148.15	67.46	56.18	1.20	PASS
5713.00†	5575.98	-305.61	1081.54	5719.27	5589.71	-325.29	1017.66	147.85	68.23	57.49	1.19	PASS

C-C Clearance Distance Cutoff: 1000.00 ft





# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 15 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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
5813.00†	5672.89	-312.31	1105.26	5819.27	5686.73	-332.57	1040.76	147.55	69.01	58.80	1.18	PASS
5913.00†	5769.81	-319.02	1128.99	5919.27	5783.75	-339.84	1063.86	147.25	69.79	60.12	1.16	PASS
6013.00†	5866.72	-325.72	1152.72	6019.26	5880.77	-347.12	1086.96	146.96	70.57	61.45	1.15	PASS
6113.00†	5963.63	-332.43	1176.45	6119.26	5977.79	-354.39	1110.06	146.68	71.35	62.78	1.14	PASS
6213.00†	6060.54	-339.13	1200.18	6219.26	6074.81	-361.67	1133.15	146.41	72.14	64.12	1.13	PASS
6313.00†	6157.46	-345.84	1223.91	6319.25	6171.83	-368.94	1156.25	146.14	72.92	65.46	1.12	PASS
6413.00†	6254.37	-352.54	1247.64	6419.25	6268.85	-376.21	1179.35	145.88	73.71	66.81	1.10	PASS
6513.00†	6351.28	-359.25	1271.36	6519.24	6365.87	-383.49	1202.45	145.62	74.50	68.16	1.09	PASS
6613.00†	6448.19	-365.95	1295.09	6619.24	6462.89	-390.76	1225.55	145.37	75.29	69.51	1.08	PASS
6713.00†	6545.11	-372.66	1318.82	6719.24	6559.91	-398.04	1248.64	145.12	76.08	70.87	1.07	PASS
6782.61†	6612.57	-377.32	1335.34	6789.39	6627.98	-403.01	1264.85	145.04	76.59	71.74	1.07	PASS
6813.00†	6642.02	-379.36	1342.55	6821.11	6658.83	-403.76	1272.18	146.07	76.35	71.26	1.07	PASS
6913.00†	6738.93	-386.07	1366.28	6922.78	6757.21	-394.36	1295.48	158.28	73.59	63.13	1.17	PASS
7013.00†	6835.84	-392.77	1390.01	7016.12	6844.85	-370.12	1316.11	-178.74	77.81	55.88	1.40	PASS
7113.00†	6932.75	-399.48	1413.73	7097.92	6917.64	-337.12	1333.16	-156.56	103.00	64.74	1.60	PASS
7213.00†	7029.67	-406.18	1437.46	7167.49	6975.45	-300.90	1346.62	-142.29	149.25	71.57	2.10	PASS
7221.51	7037.91	-406.75	1439.48	7172.87	6979.74	-297.81	1347.61	-141.40	153.93	71.85	2.15	PASS
7313.00†	7126.75	-405.59	1460.91	7229.40	7022.98	-262.84	1357.62	-95.23	204.49	72.65	2.83	PASS
7413.00†	7222.44	-387.75	1483.26	7289.57	7065.10	-221.01	1367.31	-61.53	256.91	71.24	3.63	PASS
7513.00†	7313.84	-353.13	1503.82	7348.51	7102.00	-175.86	1375.74	-44.28	304.48	68.73	4.47	PASS
7613.00†	7398.16	-302.79	1521.98	7406.53	7133.73	-127.86	1382.92	-34.81	346.21	65.52	5.33	PASS
7713.00†	7472.85	-238.25	1537.18	7463.87	7160.31	-77.42	1388.86	-29.11	381.51	62.07	6.21	PASS
7813.00†	7535.63	-161.48	1548.97	7520.71	7181.69	-24.99	1393.54	-25.46	409.96	58.80	7.04	PASS
7913.00†	7584.60	-74.80	1556.97	7577.19	7197.82	29.00	1396.97	-23.10	431.25	56.01	7.78	PASS
8013.00†	7618.28	19.14	1560.96	7633.43	7208.68	84.12	1399.14	-21.61	445.17	54.06	8.33	PASS
8113.00†	7635.62	117.49	1560.80	7689.54	7214.22	139.93	1400.04	-20.79	451.58	53.19	8.59	PASS
8165.94	7638.00	170.33	1559.04	7719.22	7215.00	169.59	1400.00	-20.59	451.91	52.97	8.63	PASS
8213.00†	7638.00	217.35	1556.96	7765.80	7215.00	216.17	1399.66	-20.39	451.31	53.21	8.58	PASS
8313.00†	7638.00	317.25	1552.63	7865.74	7215.00	316.11	1398.91	-19.96	450.07	53.77	8.47	PASS
8413.00†	7638.00	417.16	1548.37	7965.68	7215.00	416.04	1398.16	-19.54	448.88	54.50	8.33	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 16 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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
8513.00†	7638.00	517.08	1544.20	8065.62	7215.00	515.98	1397.42	-19.13	447.74	55.37	8.18	PASS
8613.00†	7638.00	616.99	1540.11	8165.56	7215.00	615.92	1396.67	-18.72	446.66	56.38	8.01	PASS
8713.00†	7638.00	716.91	1536.11	8265.51	7215.00	715.87	1395.93	-18.33	445.62	57.51	7.83	PASS
8813.00†	7638.00	816.84	1532.19	8365.46	7215.00	815.81	1395.18	-17.94	444.64	58.74	7.65	PASS
8913.00†	7638.00	916.76	1528.36	8465.41	7215.00	915.76	1394.44	-17.56	443.69	60.21	7.44	PASS
9013.00†	7638.00	1016.69	1524.61	8565.37	7215.00	1015.72	1393.69	-17.19	442.80	61.49	7.27	PASS
9113.00†	7638.00	1116.62	1520.94	8665.32	7215.00	1115.67	1392.95	-16.83	441.94	62.98	7.09	PASS
9213.00†	7638.00	1216.56	1517.36	8765.28	7215.00	1215.63	1392.20	-16.48	441.13	64.53	6.90	PASS
9313.00†	7638.00	1316.50	1513.87	8865.25	7215.00	1315.59	1391.46	-16.14	440.36	66.14	6.72	PASS
9413.00†	7638.00	1416.44	1510.45	8965.21	7215.00	1415.55	1390.71	-15.80	439.62	67.80	6.54	PASS
9513.00†	7638.00	1516.39	1507.13	9065.18	7215.00	1515.51	1389.96	-15.48	438.93	69.51	6.37	PASS
9613.00†	7638.00	1616.33	1503.88	9165.15	7215.00	1615.48	1389.22	-15.16	438.27	71.25	6.20	PASS
9713.00†	7638.00	1716.28	1500.72	9265.12	7215.00	1715.45	1388.47	-14.86	437.64	73.03	6.04	PASS
9813.00†	7638.00	1816.24	1497.65	9365.09	7215.00	1815.42	1387.73	-14.56	437.05	74.84	5.89	PASS
9913.00†	7638.00	1916.19	1494.65	9465.06	7215.00	1915.39	1386.98	-14.28	436.49	76.68	5.74	PASS
10013.00†	7638.00	2016.15	1491.75	9565.04	7215.00	2015.36	1386.24	-14.00	435.96	78.54	5.59	PASS
10113.00†	7638.00	2116.11	1488.92	9665.02	7215.00	2115.34	1385.49	-13.74	435.46	80.43	5.45	PASS
10213.00†	7638.00	2216.07	1486.19	9765.00	7215.00	2215.31	1384.74	-13.48	434.99	82.33	5.32	PASS
10313.00†	7638.00	2316.04	1483.53	9864.98	7215.00	2315.29	1384.00	-13.24	434.55	84.25	5.19	PASS
10413.00†	7638.00	2416.00	1480.96	9964.96	7215.00	2415.27	1383.25	-13.01	434.14	86.19	5.07	PASS
10513.00†	7638.00	2515.97	1478.47	10064.95	7215.00	2515.26	1382.51	-12.78	433.75	88.15	4.95	PASS
10613.00†	7638.00	2615.94	1476.07	10164.94	7215.00	2615.24	1381.76	-12.57	433.39	90.12	4.84	PASS
10713.00†	7638.00	2715.92	1473.76	10264.92	7215.00	2715.22	1381.02	-12.37	433.05	92.10	4.73	PASS
10813.00†	7638.00	2815.89	1471.52	10364.91	7215.00	2815.21	1380.27	-12.17	432.73	94.10	4.63	PASS
10913.00†	7638.00	2915.87	1469.37	10464.90	7215.00	2915.20	1379.52	-11.99	432.44	96.11	4.53	PASS
11013.00†	7638.00	3015.85	1467.31	10564.89	7215.00	3015.19	1378.78	-11.82	432.17	98.14	4.43	PASS
11113.00†	7638.00	3115.83	1465.33	10664.89	7215.00	3115.18	1378.03	-11.66	431.91	100.18	4.34	PASS
11213.00†	7638.00	3215.81	1463.43	10764.88	7215.00	3215.17	1377.29	-11.51	431.68	102.23	4.25	PASS
11313.00†	7638.00	3315.79	1461.62	10864.87	7215.00	3315.16	1376.54	-11.37	431.47	104.29	4.16	PASS
11413.00†	7638.00	3415.78	1459.89	10964.87	7215.00	3415.15	1375.79	-11.24	431.28	106.37	4.07	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 17 of 88



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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	
11513.00†	7638.00	3515.76	1458.25	11064.86	7215.00	3515.14	1375.05	-11.13	431.11	108.46	3.99	PASS	
11613.00†	7638.00	3615.75	1456.69	11164.86	7215.00	3615.14	1374.30	-11.02	430.95	110.57	3.92	PASS	
11713.00†	7638.00	3715.74	1455.22	11264.86	7215.00	3715.13	1373.56	-10.93	430.81	112.69	3.84	PASS	
11813.00†	7638.00	3815.73	1453.82	11364.86	7215.00	3815.13	1372.81	-10.84	430.69	114.82	3.77	PASS	
11913.00†	7638.00	3915.72	1452.52	11464.85	7215.00	3915.12	1372.06	-10.77	430.58	116.97	3.70	PASS	
12013.00†	7638.00	4015.72	1451.30	11564.85	7215.00	4015.12	1371.32	-10.71	430.49	119.14	3.63	PASS	
12113.00†	7638.00	4115.71	1450.16	11664.85	7215.00	4115.12	1370.57	-10.66	430.42	121.32	3.56	PASS	
12213.00†	7638.00	4215.70	1449.10	11764.85	7215.00	4215.11	1369.83	-10.62	430.37	123.52	3.50	PASS	
12313.00†	7638.00	4315.70	1448.14	11864.85	7215.00	4315.11	1369.08	-10.59	430.32	125.73	3.44	PASS	
12413.00†	7638.00	4415.70	1447.25	11964.85	7215.00	4415.11	1368.34	-10.57	430.30	127.97	3.38	PASS	
12513.00†	7638.00	4515.69	1446.45	12064.85	7215.00	4515.10	1367.59	-10.56	430.29	130.22	3.32	PASS	
12613.00†	7638.00	4615.69	1445.73	12164.85	7215.00	4615.10	1366.84	-10.57	430.29	132.50	3.26	PASS	
12713.00†	7638.00	4715.69	1445.10	12264.85	7215.00	4715.10	1366.10	-10.58	430.31	134.80	3.20	PASS	
12813.00†	7638.00	4815.69	1444.55	12364.85	7215.00	4815.10	1365.35	-10.61	430.35	137.12	3.15	PASS	
12913.00†	7638.00	4915.68	1444.09	12464.85	7215.00	4915.09	1364.61	-10.64	430.40	139.46	3.10	PASS	
13010.32	7638.00	5013.00	1443.72	12562.17	7215.00	5012.40	1363.88	-10.69	430.47	141.77	3.05	PASS	
13013.00†	7638.00	5015.68	1443.71	12564.85	7215.00	5015.09	1363.86	-10.69	430.47	141.83	3.05	PASS	
13113.00†	7638.00	5115.68	1443.37	12664.85	7215.00	5115.08	1363.11	-10.74	430.55	144.22	3.00	PASS	
13213.00†	7638.00	5215.68	1443.03	12764.85	7215.00	5215.08	1362.37	-10.80	430.62	146.62	2.95	PASS	
13313.00†	7638.00	5315.68	1442.69	12864.85	7215.00	5315.08	1361.62	-10.85	430.70	149.02	2.90	PASS	
13413.00†	7638.00	5415.68	1442.35	12964.85	7215.00	5415.07	1360.88	-10.90	430.78	151.44	2.85	PASS	
13513.00†	7638.00	5515.68	1442.01	13064.85	7215.00	5515.07	1360.13	-10.96	430.85	153.87	2.81	PASS	
13613.00†	7638.00	5615.68	1441.67	13164.85	7215.00	5615.07	1359.38	-11.01	430.93	156.31	2.76	PASS	
13713.00†	7638.00	5715.68	1441.34	13264.85	7215.00	5715.06	1358.64	-11.06	431.01	158.76	2.72	PASS	
13813.00†	7638.00	5815.68	1441.00	13364.84	7215.00	5815.06	1357.89	-11.12	431.09	161.22	2.68	PASS	
13913.00†	7638.00	5915.68	1440.66	13464.84	7215.00	5915.06	1357.15	-11.17	431.16	163.68	2.64	PASS	
14013.00†	7638.00	6015.68	1440.32	13564.84	7215.00	6015.05	1356.40	-11.22	431.24	166.16	2.60	PASS	
14113.00†	7638.00	6115.68	1439.98	13664.84	7215.00	6115.05	1355.66	-11.27	431.32	168.65	2.56	PASS	
14213.00†	7638.00	6215.68	1439.64	13764.84	7215.00	6215.05	1354.91	-11.33	431.40	171.14	2.53	PASS	
14313.00†	7638.00	6315.68	1439.30	13864.84	7215.00	6315.04	1354.16	-11.38	431.48	173.64	2.49	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 18 of 88



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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	
14413.00†	7638.00	6415.68	1438.96	13964.84	7215.00	6415.04	1353.42	-11.43	431.56	176.16	2.46	PASS	
14513.00†	7638.00	6515.68	1438.62	14064.84	7215.00	6515.03	1352.67	-11.49	431.64	178.68	2.42	PASS	
14613.00†	7638.00	6615.67	1438.28	14164.84	7215.00	6615.03	1351.93	-11.54	431.72	181.20	2.39	PASS	
14713.00†	7638.00	6715.67	1437.94	14264.84	7215.00	6715.03	1351.18	-11.59	431.81	183.74	2.36	PASS	
14813.00†	7638.00	6815.67	1437.60	14364.84	7215.00	6815.02	1350.43	-11.64	431.89	186.29	2.32	PASS	
14913.00†	7638.00	6915.67	1437.26	14464.84	7215.00	6915.02	1349.69	-11.70	431.97	188.84	2.29	PASS	
15013.00†	7638.00	7015.67	1436.92	14564.83	7215.00	7015.02	1348.94	-11.75	432.05	191.40	2.26	PASS	
15113.00†	7638.00	7115.67	1436.58	14664.83	7215.00	7115.01	1348.20	-11.80	432.14	193.97	2.23	PASS	
15213.00†	7638.00	7215.67	1436.24	14764.83	7215.00	7215.01	1347.45	-11.86	432.22	196.55	2.20	PASS	
15313.00†	7638.00	7315.67	1435.90	14864.83	7215.00	7315.01	1346.70	-11.91	432.30	199.13	2.18	PASS	
15413.00†	7638.00	7415.67	1435.57	14964.83	7215.00	7415.00	1345.96	-11.96	432.39	201.73	2.15	PASS	
15513.00†	7638.00	7515.67	1435.23	15064.83	7215.00	7515.00	1345.21	-12.01	432.47	204.33	2.12	PASS	
15613.00†	7638.00	7615.67	1434.89	15164.83	7215.00	7614.99	1344.47	-12.07	432.56	206.94	2.09	PASS	
15713.00†	7638.00	7715.67	1434.55	15264.83	7215.00	7714.99	1343.72	-12.12	432.64	209.55	2.07	PASS	
15813.00†	7638.00	7815.67	1434.21	15364.83	7215.00	7814.99	1342.98	-12.17	432.73	212.18	2.04	PASS	
15913.00†	7638.00	7915.67	1433.87	15464.83	7215.00	7914.98	1342.23	-12.22	432.81	214.81	2.02	PASS	
16013.00†	7638.00	8015.67	1433.53	15564.83	7215.00	8014.98	1341.48	-12.28	432.90	217.45	1.99	PASS	
16113.00†	7638.00	8115.67	1433.19	15664.83	7215.00	8114.98	1340.74	-12.33	432.99	220.10	1.97	PASS	
16213.00†	7638.00	8215.67	1432.85	15764.82	7215.00	8214.97	1339.99	-12.38	433.07	222.75	1.95	PASS	
16313.00†	7638.00	8315.67	1432.51	15864.82	7215.00	8314.97	1339.25	-12.43	433.16	225.40	1.92	PASS	
16413.00†	7638.00	8415.66	1432.17	15964.82	7215.00	8414.97	1338.50	-12.49	433.25	228.08	1.90	PASS	
16513.00†	7638.00	8515.66	1431.83	16064.82	7215.00	8514.96	1337.75	-12.54	433.34	230.76	1.88	PASS	
16613.00†	7638.00	8615.66	1431.49	16164.82	7215.00	8614.96	1337.01	-12.59	433.42	233.44	1.86	PASS	
16713.00†	7638.00	8715.66	1431.15	16264.82	7215.00	8714.95	1336.26	-12.64	433.51	236.13	1.84	PASS	
16813.00†	7638.00	8815.66	1430.81	16364.82	7215.00	8814.95	1335.52	-12.70	433.60	238.83	1.82	PASS	
16913.00†	7638.00	8915.66	1430.47	16464.82	7215.00	8914.95	1334.77	-12.75	433.69	241.53	1.80	PASS	
17013.00†	7638.00	9015.66	1430.13	16564.82	7215.00	9014.94	1334.02	-12.80	433.78	244.24	1.78	PASS	
17113.00†	7638.00	9115.66	1429.80	16664.82	7215.00	9114.94	1333.28	-12.85	433.87	246.96	1.76	PASS	
17213.00†	7638.00	9215.66	1429.46	16764.82	7215.00	9214.94	1332.53	-12.91	433.96	249.69	1.74	PASS	
17313.00†	7638.00	9315.66	1429.12	16864.82	7215.00	9314.93	1331.79	-12.96	434.05	252.42	1.72	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 19 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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	
17413.00†	7638.00	9415.66	1428.78	16964.81	7215.00	9414.93	1331.04	-13.01	434.14	255.16	1.70	PASS	
17513.00†	7638.00	9515.66	1428.44	17064.81	7215.00	9514.93	1330.30	-13.06	434.24	257.91	1.69	PASS	
17613.00†	7638.00	9615.66	1428.10	17164.81	7215.00	9614.92	1329.55	-13.12	434.33	260.67	1.67	PASS	
17713.00†	7638.00	9715.66	1427.76	17264.81	7215.00	9714.92	1328.80	-13.17	434.42	263.43	1.65	PASS	
17813.00†	7638.00	9815.66	1427.42	17364.81	7215.00	9814.92	1328.06	-13.22	434.51	266.20	1.63	PASS	
17913.00†	7638.00	9915.66	1427.08	17464.81	7215.00	9914.91	1327.31	-13.27	434.61	268.97	1.62	PASS	
17963.99	7638.00	9966.64	1426.91	17515.80	7215.00	9965.90	1326.93	-13.30	434.65	270.39	1.61	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	-0.04	-9.14	-12.27	29.68
8.5in Open Hole	1800.00	17516.82	15716.82	1787.10	7215.00	-12.27	29.68	3037.90	399.87

## 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 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 20 of 88



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 21 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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	-0.05	-44.95	-90.06	44.95	1.36	73.66	PASS
113.00†	113.00	0.00	0.00	113.00	113.00	-0.05	-44.95	-90.06	44.95	1.68	47.56	PASS
213.00†	213.00	0.00	0.00	213.00	213.00	-0.05	-44.95	-90.06	44.95	2.26	29.36	PASS
313.00†	313.00	0.00	0.00	313.00	313.00	-0.05	-44.95	-90.06	44.95	2.87	20.93	PASS
413.00†	413.00	0.00	0.00	413.00	413.00	-0.05	-44.95	-90.06	44.95	3.48	16.21	PASS
513.00†	513.00	0.00	0.00	513.00	513.00	-0.05	-44.95	-90.06	44.95	4.10	13.20	PASS
613.00†	613.00	0.00	0.00	613.00	613.00	-0.05	-44.95	-90.06	44.95	4.73	11.13	PASS
713.00†	713.00	0.00	0.00	713.00	713.00	-0.05	-44.95	-90.06	44.95	5.35	9.62	PASS
800.00	800.00	0.00	0.00	800.00	800.00	-0.05	-44.95	-90.06	44.95	5.89	8.60	PASS
813.00†	813.00	-0.01	0.03	813.00	813.00	-0.05	-44.95	164.17	44.98	5.97	8.47	PASS
913.00†	912.97	-0.61	2.14	912.97	912.97	-0.05	-44.95	164.89	47.10	6.72	7.77	PASS
1013.00†	1012.80	-2.15	7.62	1012.80	1012.80	-0.05	-44.95	166.48	52.61	7.75	7.41	PASS
1113.00†	1112.38	-4.64	16.44	1112.62	1112.62	-0.06	-44.92	168.43	61.53	8.70	7.65	PASS
1213.00†	1211.57	-8.08	28.60	1214.24	1214.21	-1.14	-42.95	169.71	71.93	9.68	7.97	PASS
1313.00†	1310.26	-12.46	44.08	1316.21	1316.00	-3.96	-37.79	170.12	82.51	10.84	8.11	PASS
1413.00†	1408.33	-17.77	62.87	1418.53	1417.87	-8.53	-29.42	169.93	93.25	11.92	8.29	PASS
1513.00†	1505.66	-24.00	84.94	1521.18	1519.67	-14.86	-17.82	169.34	104.12	12.94	8.48	PASS
1513.75	1506.39	-24.05	85.12	1521.95	1520.43	-14.92	-17.73	169.33	104.20	12.95	8.48	PASS
1613.00†	1602.57	-30.71	108.67	1620.99	1618.34	-22.05	-4.66	168.64	114.76	13.52	8.93	PASS
1713.00†	1699.49	-37.41	132.40	1720.42	1716.64	-29.22	8.47	168.05	125.38	14.12	9.33	PASS
1813.00†	1796.40	-44.12	156.13	1819.85	1814.93	-36.39	21.60	167.56	136.02	14.70	9.67	PASS
1913.00†	1893.31	-50.82	179.86	1919.27	1913.23	-43.56	34.73	167.13	146.67	15.36	9.96	PASS
2013.00†	1990.22	-57.53	203.59	2018.70	2011.52	-50.73	47.85	166.77	157.33	16.05	10.21	PASS
2113.00†	2087.14	-64.23	227.31	2118.12	2109.82	-57.90	60.98	166.45	167.99	16.74	10.43	PASS
2213.00†	2184.05	-70.94	251.04	2217.55	2208.11	-65.07	74.11	166.17	178.65	17.46	10.62	PASS
2313.00†	2280.96	-77.64	274.77	2316.98	2306.40	-72.24	87.24	165.92	189.32	18.19	10.79	PASS
2413.00†	2377.87	-84.35	298.50	2416.40	2404.70	-79.41	100.37	165.70	199.99	18.94	10.93	PASS
2513.00†	2474.79	-91.05	322.23	2515.83	2502.99	-86.58	113.50	165.50	210.67	19.70	11.05	PASS
2613.00†	2571.70	-97.76	345.96	2615.25	2601.29	-93.75	126.63	165.32	221.35	20.48	11.16	PASS
2713.00†	2668.61	-104.46	369.68	2714.68	2699.58	-100.92	139.76	165.15	232.03	21.26	11.26	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 22 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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†	2765.52	-111.17	393.41	2814.11	2797.87	-108.09	152.89	165.00	242.71	22.05	11.34	PASS
2913.00†	2862.44	-117.87	417.14	2913.53	2896.17	-115.26	166.02	164.87	253.39	22.85	11.41	PASS
3013.00†	2959.35	-124.58	440.87	3012.96	2994.46	-122.44	179.15	164.74	264.07	23.65	11.48	PASS
3113.00†	3056.26	-131.28	464.60	3112.38	3092.76	-129.61	192.28	164.62	274.76	24.47	11.54	PASS
3213.00†	3153.17	-137.99	488.33	3211.81	3191.05	-136.78	205.41	164.52	285.44	25.28	11.59	PASS
3313.00†	3250.08	-144.69	512.05	3311.24	3289.35	-143.95	218.54	164.42	296.13	26.11	11.63	PASS
3413.00†	3347.00	-151.40	535.78	3410.66	3387.64	-151.12	231.67	164.32	306.82	26.93	11.67	PASS
3513.00†	3443.91	-158.10	559.51	3510.09	3485.93	-158.29	244.80	164.24	317.51	27.77	11.71	PASS
3613.00†	3540.82	-164.81	583.24	3609.51	3584.23	-165.46	257.93	164.16	328.19	28.60	11.74	PASS
3713.00†	3637.73	-171.51	606.97	3708.94	3682.52	-172.63	271.06	164.08	338.88	29.44	11.77	PASS
3813.00†	3734.65	-178.22	630.70	3808.37	3780.82	-179.80	284.19	164.01	349.57	30.28	11.80	PASS
3913.00†	3831.56	-184.92	654.43	3907.79	3879.11	-186.97	297.32	163.94	360.27	31.13	11.82	PASS
4013.00†	3928.47	-191.62	678.15	4007.22	3977.40	-194.14	310.45	163.88	370.96	31.98	11.84	PASS
4113.00†	4025.38	-198.33	701.88	4106.64	4075.70	-201.31	323.58	163.82	381.65	32.83	11.86	PASS
4213.00†	4122.30	-205.03	725.61	4206.07	4173.99	-208.48	336.71	163.76	392.34	33.68	11.88	PASS
4313.00†	4219.21	-211.74	749.34	4305.50	4272.29	-215.65	349.84	163.71	403.03	34.54	11.89	PASS
4413.00†	4316.12	-218.44	773.07	4404.92	4370.58	-222.82	362.97	163.66	413.72	35.39	11.91	PASS
4513.00†	4413.03	-225.15	796.80	4504.35	4468.87	-229.99	376.10	163.61	424.42	36.25	11.92	PASS
4613.00†	4509.95	-231.85	820.52	4603.77	4567.17	-237.16	389.23	163.57	435.11	37.11	11.93	PASS
4713.00†	4606.86	-238.56	844.25	4703.20	4665.46	-244.33	402.36	163.52	445.80	37.97	11.94	PASS
4813.00†	4703.77	-245.26	867.98	4802.63	4763.76	-251.50	415.48	163.48	456.50	38.84	11.95	PASS
4913.00†	4800.68	-251.97	891.71	4902.05	4862.05	-258.67	428.61	163.44	467.19	39.70	11.96	PASS
5013.00†	4897.59	-258.67	915.44	5001.48	4960.35	-265.84	441.74	163.40	477.89	40.57	11.97	PASS
5113.00†	4994.51	-265.38	939.17	5100.91	5058.64	-273.01	454.87	163.37	488.58	41.44	11.98	PASS
5213.00†	5091.42	-272.08	962.89	5200.33	5156.93	-280.19	468.00	163.33	499.27	42.31	11.98	PASS
5313.00†	5188.33	-278.79	986.62	5299.76	5255.23	-287.36	481.13	163.30	509.97	43.18	11.99	PASS
5413.00†	5285.24	-285.49	1010.35	5399.18	5353.52	-294.53	494.26	163.27	520.66	44.05	12.00	PASS
5513.00†	5382.16	-292.20	1034.08	5498.61	5451.82	-301.70	507.39	163.24	531.36	44.92	12.00	PASS
5613.00†	5479.07	-298.90	1057.81	5598.04	5550.11	-308.87	520.52	163.21	542.05	45.79	12.01	PASS
5713.00†	5575.98	-305.61	1081.54	5697.46	5648.40	-316.04	533.65	163.18	552.75	46.67	12.01	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 23 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.20-T01S-R65W Slot: SLOT#04 WAKEMAN 20-17-4NCH (293'FSL & 2068'FEL, SEC.20) Well: WAKEMAN 20-17-4NCH Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
5813.00†	5672.89	-312.31	1105.26	5796.89	5746.70	-323.21	546.78	163.15	563.44	47.54	12.02	PASS
5913.00†	5769.81	-319.02	1128.99	5896.31	5844.99	-330.38	559.91	163.13	574.14	48.42	12.02	PASS
6013.00†	5866.72	-325.72	1152.72	5995.74	5943.29	-337.55	573.04	163.10	584.84	49.29	12.02	PASS
6113.00†	5963.63	-332.43	1176.45	6095.17	6041.58	-344.72	586.17	163.08	595.53	50.17	12.03	PASS
6213.00†	6060.54	-339.13	1200.18	6194.59	6139.88	-351.89	599.30	163.06	606.23	51.05	12.03	PASS
6313.00†	6157.46	-345.84	1223.91	6294.02	6238.17	-359.06	612.43	163.03	616.92	51.93	12.03	PASS
6413.00†	6254.37	-352.54	1247.64	6393.44	6336.46	-366.23	625.56	163.01	627.62	52.81	12.03	PASS
6513.00†	6351.28	-359.25	1271.36	6492.87	6434.76	-373.40	638.69	162.99	638.32	53.68	12.04	PASS
6613.00†	6448.19	-365.95	1295.09	6592.30	6533.05	-380.57	651.82	162.97	649.01	54.56	12.04	PASS
6713.00†	6545.11	-372.66	1318.82	6691.72	6631.35	-387.74	664.95	162.95	659.71	55.45	12.04	PASS
6813.00†	6642.02	-379.36	1342.55	6791.15	6729.64	-394.91	678.08	162.93	670.40	56.33	12.04	PASS
6913.00†	6738.93	-386.07	1366.28	6890.57	6827.93	-402.08	691.21	162.91	681.10	57.21	12.04	PASS
7013.00†	6835.84	-392.77	1390.01	6990.50	6926.87	-403.77	704.35	163.35	691.76	57.72	12.12	PASS
7113.00†	6932.75	-399.48	1413.73	7086.15	7020.54	-389.47	716.58	165.06	702.73	58.00	12.25	PASS
7213.00†	7029.67	-406.18	1437.46	7172.84	7102.37	-363.12	727.07	167.63	715.40	56.98	12.70	PASS
7221.51	7037.91	-406.75	1439.48	7179.71	7108.67	-360.50	727.87	167.87	716.61	57.09	12.70	PASS
7313.00†	7126.75	-405.59	1460.91	7251.60	7172.56	-328.62	735.91	-151.76	730.51	57.25	12.91	PASS
7413.00†	7222.44	-387.75	1483.26	7327.08	7234.83	-286.77	743.61	-120.24	746.62	57.21	13.20	PASS
7513.00†	7313.84	-353.13	1503.82	7400.08	7289.38	-238.79	750.19	-103.25	762.65	57.40	13.44	PASS
7613.00†	7398.16	-302.79	1521.98	7471.18	7336.30	-185.71	755.70	-93.26	777.64	57.54	13.67	PASS
7713.00†	7472.85	-238.25	1537.18	7540.87	7375.63	-128.41	760.14	-86.78	790.77	57.66	13.87	PASS
7813.00†	7535.63	-161.48	1548.97	7609.48	7407.35	-67.70	763.53	-82.41	801.35	57.74	14.04	PASS
7913.00†	7584.60	-74.80	1556.97	7677.33	7431.42	-4.36	765.87	-79.53	808.87	57.77	14.16	PASS
8013.00†	7618.28	19.14	1560.96	7744.66	7447.82	60.89	767.16	-77.83	812.96	57.82	14.22	PASS
8113.00†	7635.62	117.49	1560.80	7811.68	7456.50	127.31	767.42	-77.15	813.41	57.93	14.20	PASS
8165.94	7638.00	170.33	1559.04	7847.12	7457.97	162.71	767.14	-77.19	812.14	57.93	14.18	PASS
8213.00†	7638.00	217.35	1556.96	7891.12	7458.00	206.70	766.55	-77.17	810.72	58.32	14.06	PASS
8313.00†	7638.00	317.25	1552.63	7991.07	7458.00	306.65	765.20	-77.12	807.80	59.76	13.67	PASS
8413.00†	7638.00	417.16	1548.37	8091.03	7458.00	406.60	763.86	-77.07	804.97	61.80	13.17	PASS
8513.00†	7638.00	517.08	1544.20	8190.99	7458.00	506.55	762.51	-77.03	802.21	64.36	12.59	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 24 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.20-T01S-R65W Slot: SLOT#04 WAKEMAN 20-17-4NCH (293'FSL & 2068'FEL, SEC.20) Well: WAKEMAN 20-17-4NCH Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
8613.00†	7638.00	616.99	1540.11	8290.95	7458.00	606.50	761.16	-76.99	799.54	67.39	11.98	PASS
8713.00†	7638.00	716.91	1536.11	8390.92	7458.00	706.46	759.82	-76.94	796.96	70.82	11.36	PASS
8813.00†	7638.00	816.84	1532.19	8490.88	7458.00	806.41	758.47	-76.90	794.45	74.60	10.74	PASS
8913.00†	7638.00	916.76	1528.36	8590.85	7458.00	906.37	757.13	-76.86	792.03	78.67	10.15	PASS
9013.00†	7638.00	1016.69	1524.61	8690.82	7458.00	1006.34	755.78	-76.82	789.69	83.00	9.59	PASS
9113.00†	7638.00	1116.62	1520.94	8790.80	7458.00	1106.30	754.43	-76.78	787.43	88.31	8.98	PASS
9213.00†	7638.00	1216.56	1517.36	8890.77	7458.00	1206.27	753.09	-76.75	785.26	92.26	8.57	PASS
9313.00†	7638.00	1316.50	1513.87	8990.75	7458.00	1306.23	751.74	-76.71	783.16	97.13	8.11	PASS
9413.00†	7638.00	1416.44	1510.45	9090.73	7458.00	1406.20	750.39	-76.68	781.15	102.14	7.69	PASS
9513.00†	7638.00	1516.39	1507.13	9190.71	7458.00	1506.17	749.05	-76.64	779.22	107.26	7.31	PASS
9613.00†	7638.00	1616.33	1503.88	9290.69	7458.00	1606.15	747.70	-76.61	777.38	112.48	6.95	PASS
9713.00†	7638.00	1716.28	1500.72	9390.67	7458.00	1706.12	746.35	-76.58	775.61	117.78	6.62	PASS
9813.00†	7638.00	1816.24	1497.65	9490.66	7458.00	1806.10	745.01	-76.55	773.93	123.16	6.31	PASS
9913.00†	7638.00	1916.19	1494.65	9590.64	7458.00	1906.08	743.66	-76.52	772.33	128.61	6.03	PASS
10013.00†	7638.00	2016.15	1491.75	9690.63	7458.00	2006.05	742.31	-76.49	770.81	134.10	5.77	PASS
10113.00†	7638.00	2116.11	1488.92	9790.62	7458.00	2106.03	740.97	-76.47	769.38	139.65	5.53	PASS
10213.00†	7638.00	2216.07	1486.19	9890.61	7458.00	2206.02	739.62	-76.44	768.02	145.25	5.31	PASS
10313.00†	7638.00	2316.04	1483.53	9990.60	7458.00	2306.00	738.27	-76.42	766.75	150.88	5.10	PASS
10413.00†	7638.00	2416.00	1480.96	10090.60	7458.00	2405.98	736.93	-76.40	765.56	156.55	4.91	PASS
10513.00†	7638.00	2515.97	1478.47	10190.59	7458.00	2505.97	735.58	-76.38	764.46	162.24	4.73	PASS
10613.00†	7638.00	2615.94	1476.07	10290.58	7458.00	2605.95	734.23	-76.36	763.43	167.97	4.56	PASS
10713.00†	7638.00	2715.92	1473.76	10390.58	7458.00	2705.94	732.89	-76.35	762.49	173.72	4.40	PASS
10813.00†	7638.00	2815.89	1471.52	10490.57	7458.00	2805.92	731.54	-76.33	761.63	179.50	4.26	PASS
10913.00†	7638.00	2915.87	1469.37	10590.57	7458.00	2905.91	730.19	-76.32	760.85	185.30	4.12	PASS
11013.00†	7638.00	3015.85	1467.31	10690.57	7458.00	3005.90	728.85	-76.30	760.15	191.11	3.99	PASS
11113.00†	7638.00	3115.83	1465.33	10790.57	7458.00	3105.89	727.50	-76.29	759.53	196.95	3.87	PASS
11213.00†	7638.00	3215.81	1463.43	10890.57	7458.00	3205.88	726.15	-76.28	759.00	202.80	3.75	PASS
11313.00†	7638.00	3315.79	1461.62	10990.56	7458.00	3305.87	724.81	-76.27	758.55	208.66	3.64	PASS
11413.00†	7638.00	3415.78	1459.89	11090.56	7458.00	3405.86	723.46	-76.27	758.18	214.54	3.54	PASS
11513.00†	7638.00	3515.76	1458.25	11190.56	7458.00	3505.85	722.11	-76.26	757.89	220.43	3.45	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 25 of 88



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: WAKEMAN 20-17-4NCH PWB Offset Wellpath: WAKEMAN 20-17-4NCH PWP (REV-A.0)												
Facility: SEC.20-T01S-R65W Slot: SLOT#04 WAKEMAN 20-17-4NCH (293'FSL & 2068'FEL, SEC.20) Well: WAKEMAN 20-17-4NCH Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
11613.00†	7638.00	3615.75	1456.69	11290.56	7458.00	3605.84	720.77	-76.26	757.68	226.34	3.35	PASS
11713.00†	7638.00	3715.74	1455.22	11390.56	7458.00	3705.83	719.42	-76.26	757.56	232.25	3.27	PASS
11813.00†	7638.00	3815.73	1453.82	11490.56	7458.00	3805.82	718.07	-76.25	757.52	238.18	3.19	PASS
11913.00†	7638.00	3915.72	1452.52	11590.56	7458.00	3905.81	716.73	-76.26	757.55	244.12	3.11	PASS
12013.00†	7638.00	4015.72	1451.30	11690.56	7458.00	4005.80	715.38	-76.26	757.68	250.06	3.04	PASS
12113.00†	7638.00	4115.71	1450.16	11790.56	7458.00	4105.79	714.03	-76.26	757.88	256.02	2.97	PASS
12213.00†	7638.00	4215.70	1449.10	11890.56	7458.00	4205.78	712.69	-76.27	758.16	261.98	2.90	PASS
12313.00†	7638.00	4315.70	1448.14	11990.56	7458.00	4305.78	711.34	-76.27	758.53	267.96	2.84	PASS
12413.00†	7638.00	4415.70	1447.25	12090.56	7458.00	4405.76	709.99	-76.28	758.98	273.94	2.78	PASS
12513.00†	7638.00	4515.69	1446.45	12190.56	7458.00	4505.75	708.64	-76.29	759.51	279.93	2.72	PASS
12613.00†	7638.00	4615.69	1445.73	12290.56	7458.00	4605.74	707.30	-76.30	760.12	285.92	2.66	PASS
12713.00†	7638.00	4715.69	1445.10	12390.55	7458.00	4705.73	705.95	-76.31	760.82	291.92	2.61	PASS
12813.00†	7638.00	4815.69	1444.55	12490.55	7458.00	4805.72	704.60	-76.33	761.59	297.93	2.56	PASS
12913.00†	7638.00	4915.68	1444.09	12590.55	7458.00	4905.71	703.26	-76.34	762.45	303.95	2.51	PASS
13010.32	7638.00	5013.00	1443.72	12687.86	7458.00	5003.01	701.95	-76.36	763.37	309.81	2.47	PASS
13013.00†	7638.00	5015.68	1443.71	12690.54	7458.00	5005.69	701.91	-76.36	763.39	309.97	2.47	PASS
13113.00†	7638.00	5115.68	1443.37	12790.54	7458.00	5105.68	700.56	-76.38	764.37	316.00	2.42	PASS
13213.00†	7638.00	5215.68	1443.03	12890.53	7458.00	5205.66	699.22	-76.40	765.35	322.03	2.38	PASS
13313.00†	7638.00	5315.68	1442.69	12990.53	7458.00	5305.65	697.87	-76.41	766.33	328.07	2.34	PASS
13413.00†	7638.00	5415.68	1442.35	13090.52	7458.00	5405.64	696.52	-76.43	767.31	334.11	2.30	PASS
13513.00†	7638.00	5515.68	1442.01	13190.52	7458.00	5505.62	695.18	-76.45	768.29	340.16	2.26	PASS
13613.00†	7638.00	5615.68	1441.67	13290.51	7458.00	5605.61	693.83	-76.47	769.27	346.21	2.22	PASS
13713.00†	7638.00	5715.68	1441.34	13390.51	7458.00	5705.59	692.48	-76.49	770.25	352.26	2.19	PASS
13813.00†	7638.00	5815.68	1441.00	13490.50	7458.00	5805.58	691.14	-76.50	771.23	358.31	2.15	PASS
13913.00†	7638.00	5915.68	1440.66	13590.50	7458.00	5905.57	689.79	-76.52	772.21	364.37	2.12	PASS
14013.00†	7638.00	6015.68	1440.32	13690.49	7458.00	6005.55	688.44	-76.54	773.19	370.44	2.09	PASS
14113.00†	7638.00	6115.68	1439.98	13790.49	7458.00	6105.54	687.10	-76.56	774.16	376.50	2.06	PASS
14213.00†	7638.00	6215.68	1439.64	13890.48	7458.00	6205.52	685.75	-76.57	775.14	382.57	2.03	PASS
14313.00†	7638.00	6315.68	1439.30	13990.48	7458.00	6305.51	684.40	-76.59	776.12	388.64	2.00	PASS
14413.00†	7638.00	6415.68	1438.96	14090.47	7458.00	6405.49	683.06	-76.61	777.10	394.72	1.97	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 26 of 88



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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
14513.00†	7638.00	6515.68	1438.62	14190.47	7458.00	6505.48	681.71	-76.62	778.08	400.79	1.94	PASS
14613.00†	7638.00	6615.67	1438.28	14290.46	7458.00	6605.47	680.36	-76.64	779.06	406.87	1.92	PASS
14713.00†	7638.00	6715.67	1437.94	14390.46	7458.00	6705.45	679.02	-76.66	780.04	412.96	1.89	PASS
14813.00†	7638.00	6815.67	1437.60	14490.45	7458.00	6805.44	677.67	-76.68	781.03	419.04	1.87	PASS
14913.00†	7638.00	6915.67	1437.26	14590.45	7458.00	6905.42	676.32	-76.69	782.01	425.13	1.84	PASS
15013.00†	7638.00	7015.67	1436.92	14690.44	7458.00	7005.41	674.98	-76.71	782.99	431.22	1.82	PASS
15113.00†	7638.00	7115.67	1436.58	14790.44	7458.00	7105.40	673.63	-76.73	783.97	437.31	1.79	PASS
15213.00†	7638.00	7215.67	1436.24	14890.43	7458.00	7205.38	672.28	-76.74	784.95	443.40	1.77	PASS
15313.00†	7638.00	7315.67	1435.90	14990.43	7458.00	7305.37	670.94	-76.76	785.93	449.49	1.75	PASS
15413.00†	7638.00	7415.67	1435.57	15090.42	7458.00	7405.35	669.59	-76.78	786.91	455.59	1.73	PASS
15513.00†	7638.00	7515.67	1435.23	15190.42	7458.00	7505.34	668.24	-76.79	787.89	461.69	1.71	PASS
15613.00†	7638.00	7615.67	1434.89	15290.41	7458.00	7605.32	666.90	-76.81	788.87	467.79	1.69	PASS
15713.00†	7638.00	7715.67	1434.55	15390.41	7458.00	7705.31	665.55	-76.83	789.85	473.89	1.67	PASS
15813.00†	7638.00	7815.67	1434.21	15490.40	7458.00	7805.30	664.20	-76.84	790.83	480.00	1.65	PASS
15913.00†	7638.00	7915.67	1433.87	15590.40	7458.00	7905.28	662.86	-76.86	791.81	486.10	1.63	PASS
16013.00†	7638.00	8015.67	1433.53	15690.39	7458.00	8005.27	661.51	-76.88	792.79	492.21	1.61	PASS
16113.00†	7638.00	8115.67	1433.19	15790.39	7458.00	8105.25	660.16	-76.89	793.77	498.32	1.59	PASS
16213.00†	7638.00	8215.67	1432.85	15890.38	7458.00	8205.24	658.82	-76.91	794.76	504.43	1.58	PASS
16313.00†	7638.00	8315.67	1432.51	15990.37	7458.00	8305.23	657.47	-76.93	795.74	510.54	1.56	PASS
16413.00†	7638.00	8415.66	1432.17	16090.37	7458.00	8405.21	656.12	-76.94	796.72	516.66	1.54	PASS
16513.00†	7638.00	8515.66	1431.83	16190.36	7458.00	8505.20	654.78	-76.96	797.70	522.77	1.53	PASS
16613.00†	7638.00	8615.66	1431.49	16290.36	7458.00	8605.18	653.43	-76.98	798.68	528.89	1.51	PASS
16713.00†	7638.00	8715.66	1431.15	16390.35	7458.00	8705.17	652.08	-76.99	799.66	535.01	1.50	PASS
16813.00†	7638.00	8815.66	1430.81	16490.35	7458.00	8805.16	650.74	-77.01	800.64	541.13	1.48	PASS
16913.00†	7638.00	8915.66	1430.47	16590.34	7458.00	8905.14	649.39	-77.02	801.63	547.25	1.47	PASS
17013.00†	7638.00	9015.66	1430.13	16690.34	7458.00	9005.13	648.04	-77.04	802.61	553.37	1.45	PASS
17113.00†	7638.00	9115.66	1429.80	16790.33	7458.00	9105.11	646.70	-77.06	803.59	559.49	1.44	PASS
17213.00†	7638.00	9215.66	1429.46	16890.33	7458.00	9205.10	645.35	-77.07	804.57	565.62	1.42	PASS
17313.00†	7638.00	9315.66	1429.12	16990.32	7458.00	9305.08	644.00	-77.09	805.55	571.75	1.41	PASS
17413.00†	7638.00	9415.66	1428.78	17090.32	7458.00	9405.07	642.66	-77.10	806.54	577.87	1.40	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 27 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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
17513.00†	7638.00	9515.66	1428.44	17190.31	7458.00	9505.06	641.31	-77.12	807.52	584.00	1.38	PASS
17613.00†	7638.00	9615.66	1428.10	17290.31	7458.00	9605.04	639.96	-77.14	808.50	590.13	1.37	PASS
17713.00†	7638.00	9715.66	1427.76	17390.30	7458.00	9705.03	638.62	-77.15	809.48	596.26	1.36	PASS
17813.00†	7638.00	9815.66	1427.42	17490.30	7458.00	9805.01	637.27	-77.17	810.46	602.39	1.35	PASS
17913.00†	7638.00	9915.66	1427.08	17590.29	7458.00	9905.00	635.92	-77.18	811.45	608.53	1.33	PASS
17963.99	7638.00	9966.64	1426.91	17641.28	7458.00	9955.98	635.24	-77.19	811.95	611.65	1.33	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	-0.03	-27.40	-10.67	-7.92
8.5in Open Hole	1800.00	17654.03	15854.03	1795.31	7458.00	-10.67	-7.92	3038.45	179.87

## 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





# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 28 of 88



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

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 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 29 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

## CLEARANCE DATA - Offset Wellbore: BOX ELDER FARMS #41-20 AWP 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 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	29.00	4015.36	940.25	13.18	4124.01	25.36	167.60	PASS	
113.00†	113.00	0.00	0.00	71.00	113.00	4015.36	940.25	13.18	4123.98	51.58	81.07	PASS	
213.00†	213.00	0.00	0.00	171.00	213.00	4015.36	940.25	13.18	4123.98	53.74	77.50	PASS	
313.00†	313.00	0.00	0.00	271.00	313.00	4015.36	940.25	13.18	4123.98	56.09	74.23	PASS	
413.00†	413.00	0.00	0.00	371.00	413.00	4015.36	940.25	13.18	4123.98	58.44	71.22	PASS	
513.00†	513.00	0.00	0.00	471.00	513.00	4015.36	940.25	13.18	4123.98	60.79	68.44	PASS	
613.00†	613.00	0.00	0.00	571.00	613.00	4015.36	940.25	13.18	4123.98	63.15	65.87	PASS	
713.00†	713.00	0.00	0.00	671.00	713.00	4015.36	940.25	13.18	4123.98	65.51	63.47	PASS	
800.00	800.00	0.00	0.00	758.00	800.00	4015.36	940.25	13.18	4123.98	67.56	61.53	PASS	
813.00†	813.00	-0.01	0.03	771.00	813.00	4015.36	940.25	-92.60	4123.98	67.87	61.24	PASS	
913.00†	912.97	-0.61	2.14	870.97	912.97	4015.36	940.25	-92.63	4124.08	70.24	59.17	PASS	
1013.00†	1012.80	-2.15	7.62	970.80	1012.80	4015.36	940.25	-92.70	4124.34	72.61	57.22	PASS	
1113.00†	1112.38	-4.64	16.44	1070.38	1112.38	4015.36	940.25	-92.82	4124.79	74.98	55.41	PASS	
1213.00†	1211.57	-8.08	28.60	1169.57	1211.57	4015.36	940.25	-92.98	4125.43	77.35	53.70	PASS	
1313.00†	1310.26	-12.46	44.08	1268.26	1310.26	4015.36	940.25	-93.18	4126.31	79.73	52.10	PASS	
1413.00†	1408.33	-17.77	62.87	1366.33	1408.33	4015.36	940.25	-93.43	4127.46	82.11	50.59	PASS	
1513.00†	1505.66	-24.00	84.94	1463.66	1505.66	4015.36	940.25	-93.71	4128.92	84.51	49.17	PASS	
1513.75	1506.39	-24.05	85.12	1464.39	1506.39	4015.36	940.25	-93.71	4128.93	84.53	49.16	PASS	
1613.00†	1602.57	-30.71	108.67	1560.57	1602.57	4015.36	940.25	-94.04	4130.64	86.93	47.81	PASS	
1713.00†	1699.49	-37.41	132.40	1657.49	1699.49	4015.36	940.25	-94.37	4132.50	89.37	46.51	PASS	
1813.00†	1796.40	-44.12	156.13	1754.40	1796.40	4015.36	940.25	-94.70	4134.51	91.85	45.28	PASS	
1913.00†	1893.31	-50.82	179.86	1851.31	1893.31	4015.36	940.25	-95.03	4136.67	94.34	44.09	PASS	
2013.00†	1990.22	-57.53	203.59	1948.22	1990.22	4015.36	940.25	-95.36	4138.97	96.86	42.96	PASS	
2113.00†	2087.14	-64.23	227.31	2045.14	2087.14	4015.36	940.25	-95.69	4141.42	99.41	41.88	PASS	
2213.00†	2184.05	-70.94	251.04	2142.05	2184.05	4015.36	940.25	-96.02	4144.01	101.98	40.85	PASS	
2313.00†	2280.96	-77.64	274.77	2238.96	2280.96	4015.36	940.25	-96.34	4146.75	104.56	39.86	PASS	
2413.00†	2377.87	-84.35	298.50	2335.87	2377.87	4015.36	940.25	-96.67	4149.63	107.17	38.91	PASS	
2513.00†	2474.79	-91.05	322.23	2432.79	2474.79	4015.36	940.25	-97.00	4152.66	109.80	38.00	PASS	
2613.00†	2571.70	-97.76	345.96	2529.70	2571.70	4015.36	940.25	-97.33	4155.83	112.45	37.13	PASS	
2713.00†	2668.61	-104.46	369.68	2626.61	2668.61	4015.36	940.25	-97.65	4159.14	115.12	36.30	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 30 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

## CLEARANCE DATA - Offset Wellbore: BOX ELDER FARMS #41-20 AWP 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 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†	2765.52	-111.17	393.41	2723.52	2765.52	4015.36	940.25	-97.98	4162.60	117.80	35.50	PASS
2913.00†	2862.44	-117.87	417.14	2820.44	2862.44	4015.36	940.25	-98.31	4166.20	120.50	34.73	PASS
3013.00†	2959.35	-124.58	440.87	2917.35	2959.35	4015.36	940.25	-98.63	4169.95	123.21	33.99	PASS
3113.00†	3056.26	-131.28	464.60	3014.26	3056.26	4015.36	940.25	-98.95	4173.83	125.94	33.28	PASS
3213.00†	3153.17	-137.99	488.33	3111.17	3153.17	4015.36	940.25	-99.28	4177.86	128.68	32.60	PASS
3313.00†	3250.08	-144.69	512.05	3208.08	3250.08	4015.36	940.25	-99.60	4182.03	131.44	31.94	PASS
3413.00†	3347.00	-151.40	535.78	3305.00	3347.00	4015.36	940.25	-99.93	4186.34	134.21	31.32	PASS
3513.00†	3443.91	-158.10	559.51	3401.91	3443.91	4015.36	940.25	-100.25	4190.79	136.99	30.71	PASS
3613.00†	3540.82	-164.81	583.24	3498.82	3540.82	4015.36	940.25	-100.57	4195.38	139.78	30.13	PASS
3713.00†	3637.73	-171.51	606.97	3595.73	3637.73	4015.36	940.25	-100.89	4200.11	142.58	29.57	PASS
3813.00†	3734.65	-178.22	630.70	3692.65	3734.65	4015.36	940.25	-101.21	4204.98	145.38	29.03	PASS
3913.00†	3831.56	-184.92	654.43	3789.56	3831.56	4015.36	940.25	-101.53	4209.99	148.20	28.51	PASS
4013.00†	3928.47	-191.62	678.15	3886.47	3928.47	4015.36	940.25	-101.85	4215.14	151.03	28.01	PASS
4113.00†	4025.38	-198.33	701.88	3983.38	4025.38	4015.36	940.25	-102.17	4220.43	153.86	27.52	PASS
4213.00†	4122.30	-205.03	725.61	4080.30	4122.30	4015.36	940.25	-102.48	4225.85	156.70	27.06	PASS
4313.00†	4219.21	-211.74	749.34	4177.21	4219.21	4015.36	940.25	-102.80	4231.41	159.55	26.61	PASS
4413.00†	4316.12	-218.44	773.07	4274.12	4316.12	4015.36	940.25	-103.12	4237.10	162.40	26.17	PASS
4513.00†	4413.03	-225.15	796.80	4371.03	4413.03	4015.36	940.25	-103.43	4242.94	165.26	25.75	PASS
4613.00†	4509.95	-231.85	820.52	4467.95	4509.95	4015.36	940.25	-103.74	4248.90	168.13	25.35	PASS
4713.00†	4606.86	-238.56	844.25	4564.86	4606.86	4015.36	940.25	-104.06	4255.00	171.00	24.96	PASS
4813.00†	4703.77	-245.26	867.98	4661.77	4703.77	4015.36	940.25	-104.37	4261.24	173.87	24.58	PASS
4913.00†	4800.68	-251.97	891.71	4758.68	4800.68	4015.36	940.25	-104.68	4267.61	176.75	24.22	PASS
5013.00†	4897.59	-258.67	915.44	4855.59	4897.59	4015.36	940.25	-104.99	4274.11	179.63	23.86	PASS
5113.00†	4994.51	-265.38	939.17	4952.51	4994.51	4015.36	940.25	-105.30	4280.74	182.51	23.52	PASS
5213.00†	5091.42	-272.08	962.89	5049.42	5091.42	4015.36	940.25	-105.61	4287.50	185.40	23.19	PASS
5313.00†	5188.33	-278.79	986.62	5146.33	5188.33	4015.36	940.25	-105.92	4294.40	188.29	22.87	PASS
5413.00†	5285.24	-285.49	1010.35	5243.24	5285.24	4015.36	940.25	-106.22	4301.42	191.19	22.56	PASS
5513.00†	5382.16	-292.20	1034.08	5340.16	5382.16	4015.36	940.25	-106.53	4308.58	194.08	22.26	PASS
5613.00†	5479.07	-298.90	1057.81	5437.07	5479.07	4015.36	940.25	-106.84	4315.86	196.98	21.97	PASS
5713.00†	5575.98	-305.61	1081.54	5533.98	5575.98	4015.36	940.25	-107.14	4323.28	199.88	21.69	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 31 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

## CLEARANCE DATA - Offset Wellbore: BOX ELDER FARMS #41-20 AWP 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 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†	5672.89	-312.31	1105.26	5630.89	5672.89	4015.36	940.25	-107.44	4330.82	202.78	21.41	PASS
5913.00†	5769.81	-319.02	1128.99	5727.81	5769.81	4015.36	940.25	-107.74	4338.49	205.68	21.15	PASS
6013.00†	5866.72	-325.72	1152.72	5824.72	5866.72	4015.36	940.25	-108.05	4346.28	208.58	20.89	PASS
6113.00†	5963.63	-332.43	1176.45	5921.63	5963.63	4015.36	940.25	-108.35	4354.20	211.49	20.64	PASS
6213.00†	6060.54	-339.13	1200.18	6018.54	6060.54	4015.36	940.25	-108.64	4362.24	214.39	20.40	PASS
6313.00†	6157.46	-345.84	1223.91	6115.46	6157.46	4015.36	940.25	-108.94	4370.41	217.30	20.16	PASS
6413.00†	6254.37	-352.54	1247.64	6212.37	6254.37	4015.36	940.25	-109.24	4378.70	220.20	19.93	PASS
6513.00†	6351.28	-359.25	1271.36	6309.28	6351.28	4015.36	940.25	-109.53	4387.12	223.11	19.71	PASS
6613.00†	6448.19	-365.95	1295.09	6406.19	6448.19	4015.36	940.25	-109.83	4395.66	226.01	19.49	PASS
6713.00†	6545.11	-372.66	1318.82	6503.11	6545.11	4015.36	940.25	-110.12	4404.32	228.92	19.28	PASS
6813.00†	6642.02	-379.36	1342.55	6600.02	6642.02	4015.36	940.25	-110.42	4413.10	231.82	19.08	PASS
6913.00†	6738.93	-386.07	1366.28	6696.93	6738.93	4015.36	940.25	-110.71	4422.00	234.73	18.88	PASS
7013.00†	6835.84	-392.77	1390.01	6793.84	6835.84	4015.36	940.25	-111.00	4431.02	237.63	18.69	PASS
7113.00†	6932.75	-399.48	1413.73	6890.75	6932.75	4015.36	940.25	-111.29	4440.15	240.53	18.50	PASS
7213.00†	7029.67	-406.18	1437.46	6987.67	7029.67	4015.36	940.25	-111.57	4449.41	243.44	18.32	PASS
7221.51	7037.91	-406.75	1439.48	6995.91	7037.91	4015.36	940.25	-111.60	4450.20	243.68	18.30	PASS
7313.00†	7126.75	-405.59	1460.91	7084.75	7126.75	4015.36	940.25	-75.31	4451.51	246.46	18.10	PASS
7413.00†	7222.44	-387.75	1483.26	7180.44	7222.44	4015.36	940.25	-48.07	4436.47	249.92	17.79	PASS
7513.00†	7313.84	-353.13	1503.82	7271.84	7313.84	4015.36	940.25	-35.13	4404.69	253.40	17.42	PASS
7613.00†	7398.16	-302.79	1521.98	7356.16	7398.16	4015.36	940.25	-28.97	4357.16	256.54	17.02	PASS
7713.00†	7472.85	-238.25	1537.18	7430.85	7472.85	4015.36	940.25	-26.23	4295.29	259.28	16.60	PASS
7813.00†	7535.63	-161.48	1548.97	7493.63	7535.63	4015.36	940.25	-25.81	4220.96	261.57	16.17	PASS
7913.00†	7584.60	-74.80	1556.97	7542.60	7584.60	4015.36	940.25	-27.84	4136.40	263.39	15.73	PASS
8013.00†	7618.28	19.14	1560.96	7576.28	7618.28	4015.36	940.25	-34.43	4044.14	264.70	15.31	PASS
8113.00†	7635.62	117.49	1560.80	7593.62	7635.62	4015.36	940.25	-56.64	3946.95	265.49	14.89	PASS
8165.94	7638.00	170.33	1559.04	7596.00	7638.00	4015.36	940.25	-90.00	3894.50	265.71	14.68	PASS
8213.00†	7638.00	217.35	1556.96	7596.00	7638.00	4015.36	940.25	-90.00	3847.76	265.84	14.50	PASS
8313.00†	7638.00	317.25	1552.63	7596.00	7638.00	4015.36	940.25	-90.00	3748.47	266.14	14.11	PASS
8413.00†	7638.00	417.16	1548.37	7596.00	7638.00	4015.36	940.25	-90.00	3649.22	266.45	13.72	PASS
8513.00†	7638.00	517.08	1544.20	7596.00	7638.00	4015.36	940.25	-90.00	3550.03	266.78	13.33	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 32 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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 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†	7638.00	616.99	1540.11	7596.00	7638.00	4015.36	940.25	-90.00	3450.90	267.14	12.94	PASS
8713.00†	7638.00	716.91	1536.11	7596.00	7638.00	4015.36	940.25	-90.00	3351.84	267.52	12.55	PASS
8813.00†	7638.00	816.84	1532.19	7596.00	7638.00	4015.36	940.25	-90.00	3252.84	267.93	12.16	PASS
8913.00†	7638.00	916.76	1528.36	7596.00	7638.00	4015.36	940.25	-90.00	3153.92	268.36	11.77	PASS
9013.00†	7638.00	1016.69	1524.61	7596.00	7638.00	4015.36	940.25	-90.00	3055.08	268.83	11.39	PASS
9113.00†	7638.00	1116.62	1520.94	7596.00	7638.00	4015.36	940.25	-90.00	2956.33	269.34	11.00	PASS
9213.00†	7638.00	1216.56	1517.36	7596.00	7638.00	4015.36	940.25	-90.00	2857.68	269.88	10.61	PASS
9313.00†	7638.00	1316.50	1513.87	7596.00	7638.00	4015.36	940.25	-90.00	2759.15	270.46	10.22	PASS
9413.00†	7638.00	1416.44	1510.45	7596.00	7638.00	4015.36	940.25	-90.00	2660.74	271.09	9.83	PASS
9513.00†	7638.00	1516.39	1507.13	7596.00	7638.00	4015.36	940.25	-90.00	2562.46	271.78	9.45	PASS
9613.00†	7638.00	1616.33	1503.88	7596.00	7638.00	4015.36	940.25	-90.00	2464.35	272.52	9.06	PASS
9713.00†	7638.00	1716.28	1500.72	7596.00	7638.00	4015.36	940.25	-90.00	2366.41	273.33	8.67	PASS
9813.00†	7638.00	1816.24	1497.65	7596.00	7638.00	4015.36	940.25	-90.00	2268.66	274.21	8.29	PASS
9913.00†	7638.00	1916.19	1494.65	7596.00	7638.00	4015.36	940.25	-90.00	2171.15	275.17	7.90	PASS
10013.00†	7638.00	2016.15	1491.75	7596.00	7638.00	4015.36	940.25	-90.00	2073.88	276.23	7.52	PASS
10113.00†	7638.00	2116.11	1488.92	7596.00	7638.00	4015.36	940.25	-90.00	1976.92	277.39	7.14	PASS
10213.00†	7638.00	2216.07	1486.19	7596.00	7638.00	4015.36	940.25	-90.00	1880.29	278.67	6.76	PASS
10313.00†	7638.00	2316.04	1483.53	7596.00	7638.00	4015.36	940.25	-90.00	1784.06	280.10	6.38	PASS
10413.00†	7638.00	2416.00	1480.96	7596.00	7638.00	4015.36	940.25	-90.00	1688.29	281.68	6.00	PASS
10513.00†	7638.00	2515.97	1478.47	7596.00	7638.00	4015.36	940.25	-90.00	1593.06	283.45	5.63	PASS
10613.00†	7638.00	2615.94	1476.07	7596.00	7638.00	4015.36	940.25	-90.00	1498.49	285.44	5.26	PASS
10713.00†	7638.00	2715.92	1473.76	7596.00	7638.00	4015.36	940.25	-90.00	1404.70	287.68	4.89	PASS
10813.00†	7638.00	2815.89	1471.52	7596.00	7638.00	4015.36	940.25	-90.00	1311.86	290.22	4.53	PASS
10913.00†	7638.00	2915.87	1469.37	7596.00	7638.00	4015.36	940.25	-90.00	1220.18	293.10	4.17	PASS
11013.00†	7638.00	3015.85	1467.31	7596.00	7638.00	4015.36	940.25	-90.00	1129.96	296.38	3.82	PASS
11113.00†	7638.00	3115.83	1465.33	7596.00	7638.00	4015.36	940.25	-90.00	1041.57	300.13	3.47	PASS
11213.00†	7638.00	3215.81	1463.43	7596.00	7638.00	4015.36	940.25	-90.00	955.51	304.40	3.14	PASS
11313.00†	7638.00	3315.79	1461.62	7596.00	7638.00	4015.36	940.25	-90.00	872.48	309.26	2.82	PASS
11413.00†	7638.00	3415.78	1459.89	7596.00	7638.00	4015.36	940.25	-90.00	793.43	314.70	2.52	PASS
11513.00†	7638.00	3515.76	1458.25	7596.00	7638.00	4015.36	940.25	-90.00	719.66	320.64	2.25	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 33 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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 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†	7638.00	3615.75	1456.69	7596.00	7638.00	4015.36	940.25	-90.00	652.99	326.79	2.00	PASS
11713.00†	7638.00	3715.74	1455.22	7596.00	7638.00	4015.36	940.25	-90.00	595.78	332.49	1.79	PASS
11813.00†	7638.00	3815.73	1453.82	7596.00	7638.00	4015.36	940.25	-90.00	551.01	336.65	1.64	PASS
11913.00†	7638.00	3915.72	1452.52	7596.00	7638.00	4015.36	940.25	-90.00	521.87	337.77	1.55	PASS
11985.73†	7638.00	3988.45	1451.62	7596.00	7638.00	4015.36	940.25	-90.00	512.08	335.92	1.53	PASS
12013.00†	7638.00	4015.72	1451.30	7596.00	7638.00	4015.36	940.25	-90.00	511.04	334.59	1.53	PASS
12018.72†	7638.00	4021.43	1451.23	7596.30	7638.30	4015.36	940.25	-90.03	511.01	334.28	1.53	PASS
12113.00†	7638.00	4115.71	1450.16	7596.00	7638.00	4015.36	940.25	-90.00	519.69	326.98	1.59	PASS
12213.00†	7638.00	4215.70	1449.10	7596.00	7638.00	4015.36	940.25	-90.00	546.87	316.22	1.73	PASS
12313.00†	7638.00	4315.70	1448.14	7596.00	7638.00	4015.36	940.25	-90.00	590.04	304.26	1.94	PASS
12413.00†	7638.00	4415.70	1447.25	7596.00	7638.00	4015.36	940.25	-90.00	646.00	292.72	2.21	PASS
12513.00†	7638.00	4515.69	1446.45	7596.00	7638.00	4015.36	940.25	-90.00	711.74	282.52	2.52	PASS
12613.00†	7638.00	4615.69	1445.73	7596.00	7638.00	4015.36	940.25	-90.00	784.80	273.97	2.87	PASS
12713.00†	7638.00	4715.69	1445.10	7596.00	7638.00	4015.36	940.25	-90.00	863.33	267.03	3.24	PASS
12813.00†	7638.00	4815.69	1444.55	7596.00	7638.00	4015.36	940.25	-90.00	945.96	261.51	3.62	PASS

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



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 34 of 88



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

HOLE & CASING SECTIONS - Offset Wellbore: BOX ELDER FARMS #41-20 AWB Offset Wellpath: BOX ELDER FARMS #41-20 AWP									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
12.25in Open Hole	0.00	91.00	91.00	29.00	120.00	2450.35	561.88	2450.35	561.88
8.625in Casing Surface	0.00	91.00	91.00	29.00	120.00	2450.35	561.88	2450.35	561.88
7.875in Open Hole	91.00	8123.00	8032.00	120.00	8152.00	2450.35	561.88	2450.35	561.88
4.5in Casing Production	0.00	8123.00	8123.00	29.00	8152.00	2450.35	561.88	2450.35	561.88

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 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 35 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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	-0.15	-59.95	-90.14	59.95	1.36	98.66	PASS
113.00†	113.00	0.00	0.00	113.00	113.00	-0.15	-59.95	-90.14	59.95	1.68	63.86	PASS
213.00†	213.00	0.00	0.00	213.00	213.00	-0.15	-59.95	-90.14	59.95	2.26	39.44	PASS
313.00†	313.00	0.00	0.00	313.00	313.00	-0.15	-59.95	-90.14	59.95	2.86	28.11	PASS
413.00†	413.00	0.00	0.00	413.00	413.00	-0.15	-59.95	-90.14	59.95	3.48	21.75	PASS
513.00†	513.00	0.00	0.00	513.00	513.00	-0.15	-59.95	-90.14	59.95	4.10	17.71	PASS
613.00†	613.00	0.00	0.00	613.00	613.00	-0.15	-59.95	-90.14	59.95	4.72	14.93	PASS
713.00†	713.00	0.00	0.00	713.00	713.00	-0.15	-59.95	-90.14	59.95	5.34	12.90	PASS
800.00	800.00	0.00	0.00	800.00	800.00	-0.15	-59.95	-90.14	59.95	5.89	11.53	PASS
813.00†	813.00	-0.01	0.03	813.00	813.00	-0.15	-59.95	164.09	59.98	5.97	11.36	PASS
913.00†	912.97	-0.61	2.14	912.97	912.97	-0.15	-59.95	164.63	62.10	6.71	10.29	PASS
1013.00†	1012.80	-2.15	7.62	1012.80	1012.80	-0.15	-59.95	165.88	67.60	7.74	9.57	PASS
1113.00†	1112.38	-4.64	16.44	1112.38	1112.38	-0.15	-59.95	167.52	76.52	8.69	9.55	PASS
1213.00†	1211.57	-8.08	28.60	1211.85	1211.85	-0.17	-59.93	169.23	88.88	9.59	9.98	PASS
1313.00†	1310.26	-12.46	44.08	1313.44	1313.41	-1.75	-58.38	170.08	103.06	10.50	10.50	PASS
1413.00†	1408.33	-17.77	62.87	1415.35	1415.15	-5.92	-54.28	169.89	117.95	11.54	10.87	PASS
1513.00†	1505.66	-24.00	84.94	1516.39	1515.76	-12.48	-47.84	169.06	133.67	12.45	11.37	PASS
1513.75	1506.39	-24.05	85.12	1517.12	1516.49	-12.53	-47.79	169.05	133.79	12.46	11.37	PASS
1613.00†	1602.57	-30.71	108.67	1614.95	1613.84	-19.46	-40.99	168.39	150.50	13.03	12.20	PASS
1713.00†	1699.49	-37.41	132.40	1713.51	1711.91	-26.43	-34.13	167.85	167.35	13.64	12.93	PASS
1813.00†	1796.40	-44.12	156.13	1812.06	1809.98	-33.41	-27.28	167.41	184.22	14.24	13.57	PASS
1913.00†	1893.31	-50.82	179.86	1910.62	1908.05	-40.39	-20.42	167.05	201.09	14.90	14.12	PASS
2013.00†	1990.22	-57.53	203.59	2009.18	2006.12	-47.37	-13.57	166.74	217.97	15.58	14.61	PASS
2113.00†	2087.14	-64.23	227.31	2107.74	2104.20	-54.35	-6.71	166.48	234.86	16.27	15.04	PASS
2213.00†	2184.05	-70.94	251.04	2206.30	2202.27	-61.33	0.14	166.25	251.74	16.99	15.42	PASS
2313.00†	2280.96	-77.64	274.77	2304.86	2300.34	-68.31	7.00	166.05	268.64	17.71	15.76	PASS
2413.00†	2377.87	-84.35	298.50	2403.42	2398.41	-75.28	13.85	165.87	285.53	18.45	16.06	PASS
2513.00†	2474.79	-91.05	322.23	2501.98	2496.49	-82.26	20.71	165.72	302.43	19.19	16.32	PASS
2613.00†	2571.70	-97.76	345.96	2600.54	2594.56	-89.24	27.56	165.58	319.33	19.95	16.56	PASS
2713.00†	2668.61	-104.46	369.68	2699.09	2692.63	-96.22	34.42	165.45	336.23	20.71	16.77	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 36 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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†	2765.52	-111.17	393.41	2797.65	2790.70	-103.20	41.27	165.34	353.13	21.48	16.97	PASS
2913.00†	2862.44	-117.87	417.14	2896.21	2888.77	-110.18	48.13	165.24	370.03	22.26	17.14	PASS
3013.00†	2959.35	-124.58	440.87	2994.77	2986.85	-117.16	54.98	165.14	386.94	23.04	17.30	PASS
3113.00†	3056.26	-131.28	464.60	3093.33	3084.92	-124.14	61.84	165.06	403.84	23.82	17.44	PASS
3213.00†	3153.17	-137.99	488.33	3191.89	3182.99	-131.11	68.69	164.98	420.75	24.62	17.57	PASS
3313.00†	3250.08	-144.69	512.05	3290.45	3281.06	-138.09	75.54	164.90	437.66	25.41	17.69	PASS
3413.00†	3347.00	-151.40	535.78	3389.01	3379.14	-145.07	82.40	164.84	454.57	26.21	17.80	PASS
3513.00†	3443.91	-158.10	559.51	3487.57	3477.21	-152.05	89.25	164.77	471.47	27.01	17.90	PASS
3613.00†	3540.82	-164.81	583.24	3586.12	3575.28	-159.03	96.11	164.71	488.38	27.82	17.99	PASS
3713.00†	3637.73	-171.51	606.97	3684.68	3673.35	-166.01	102.96	164.66	505.29	28.62	18.07	PASS
3813.00†	3734.65	-178.22	630.70	3783.24	3771.43	-172.99	109.82	164.61	522.20	29.44	18.15	PASS
3913.00†	3831.56	-184.92	654.43	3881.80	3869.50	-179.96	116.67	164.56	539.11	30.25	18.23	PASS
4013.00†	3928.47	-191.62	678.15	3980.36	3967.57	-186.94	123.53	164.52	556.02	31.06	18.29	PASS
4113.00†	4025.38	-198.33	701.88	4078.92	4065.64	-193.92	130.38	164.47	572.93	31.88	18.36	PASS
4213.00†	4122.30	-205.03	725.61	4177.48	4163.71	-200.90	137.24	164.43	589.84	32.70	18.42	PASS
4313.00†	4219.21	-211.74	749.34	4276.04	4261.79	-207.88	144.09	164.40	606.76	33.52	18.47	PASS
4413.00†	4316.12	-218.44	773.07	4374.60	4359.86	-214.86	150.95	164.36	623.67	34.34	18.52	PASS
4513.00†	4413.03	-225.15	796.80	4473.15	4457.93	-221.84	157.80	164.33	640.58	35.17	18.57	PASS
4613.00†	4509.95	-231.85	820.52	4571.71	4556.00	-228.81	164.66	164.29	657.49	35.99	18.61	PASS
4713.00†	4606.86	-238.56	844.25	4670.27	4654.08	-235.79	171.51	164.26	674.40	36.82	18.66	PASS
4813.00†	4703.77	-245.26	867.98	4768.83	4752.15	-242.77	178.37	164.24	691.31	37.65	18.70	PASS
4913.00†	4800.68	-251.97	891.71	4867.39	4850.22	-249.75	185.22	164.21	708.23	38.47	18.73	PASS
5013.00†	4897.59	-258.67	915.44	4965.95	4948.29	-256.73	192.07	164.18	725.14	39.30	18.77	PASS
5113.00†	4994.51	-265.38	939.17	5064.51	5046.36	-263.71	198.93	164.16	742.05	40.13	18.80	PASS
5213.00†	5091.42	-272.08	962.89	5163.07	5144.44	-270.69	205.78	164.13	758.97	40.97	18.83	PASS
5313.00†	5188.33	-278.79	986.62	5261.63	5242.51	-277.66	212.64	164.11	775.88	41.80	18.86	PASS
5413.00†	5285.24	-285.49	1010.35	5360.19	5340.58	-284.64	219.49	164.09	792.79	42.63	18.89	PASS
5513.00†	5382.16	-292.20	1034.08	5458.74	5438.65	-291.62	226.35	164.07	809.71	43.47	18.92	PASS
5613.00†	5479.07	-298.90	1057.81	5557.30	5536.73	-298.60	233.20	164.05	826.62	44.30	18.95	PASS
5713.00†	5575.98	-305.61	1081.54	5655.86	5634.80	-305.58	240.06	164.03	843.53	45.14	18.97	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 37 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.20-T01S-R65W Slot: SLOT#05 WAKEMAN 20-17-3CDH (293'FSL & 2083'FEL, SEC.20) Well: WAKEMAN 20-17-3CDH Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
5813.00†	5672.89	-312.31	1105.26	5754.42	5732.87	-312.56	246.91	164.01	860.45	45.98	18.99	PASS
5913.00†	5769.81	-319.02	1128.99	5852.98	5830.94	-319.54	253.77	163.99	877.36	46.81	19.01	PASS
6013.00†	5866.72	-325.72	1152.72	5951.54	5929.02	-326.51	260.62	163.97	894.27	47.65	19.04	PASS
6113.00†	5963.63	-332.43	1176.45	6050.10	6027.09	-333.49	267.48	163.96	911.19	48.49	19.06	PASS
6213.00†	6060.54	-339.13	1200.18	6148.66	6125.16	-340.47	274.33	163.94	928.10	49.33	19.07	PASS
6313.00†	6157.46	-345.84	1223.91	6247.22	6223.23	-347.45	281.19	163.93	945.01	50.17	19.09	PASS
6413.00†	6254.37	-352.54	1247.64	6345.77	6321.30	-354.43	288.04	163.91	961.93	51.01	19.11	PASS
6513.00†	6351.28	-359.25	1271.36	6444.33	6419.38	-361.41	294.90	163.90	978.84	51.85	19.13	PASS
6613.00†	6448.19	-365.95	1295.09	6542.89	6517.45	-368.39	301.75	163.88	995.76	52.69	19.14	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

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

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

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

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing Surface	13.00	1800.00	1787.00	13.00	1797.97	-0.09	-36.54	-9.97	-26.84
8.5in Open Hole	1800.00	17786.94	15986.94	1797.97	7628.00	-9.97	-26.84	3038.75	54.62

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

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



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 38 of 88



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

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



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 39 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.17-T1S-R65W Slot: SLOT#03 EX. AMOCO #44-17 (990'FSL & 1320'FEL, SEC.17, OG, PR, 8130) Well: AMOCO #44-17 Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
13.00	13.00	0.00	0.00	-13.00	46.00	6023.78	668.02	6.33	6060.80	25.36	246.33	PASS
113.00†	113.00	0.00	0.00	54.00	113.00	6023.78	668.02	6.33	6060.71	51.22	120.08	PASS
213.00†	213.00	0.00	0.00	154.00	213.00	6023.78	668.02	6.33	6060.71	53.56	114.76	PASS
313.00†	313.00	0.00	0.00	254.00	313.00	6023.78	668.02	6.33	6060.71	55.69	109.89	PASS
413.00†	413.00	0.00	0.00	354.00	413.00	6023.78	668.02	6.33	6060.71	58.04	105.40	PASS
513.00†	513.00	0.00	0.00	454.00	513.00	6023.78	668.02	6.33	6060.71	60.39	101.26	PASS
613.00†	613.00	0.00	0.00	554.00	613.00	6023.78	668.02	6.33	6060.71	62.75	97.42	PASS
713.00†	713.00	0.00	0.00	654.00	713.00	6023.78	668.02	6.33	6060.71	65.11	93.86	PASS
800.00	800.00	0.00	0.00	741.00	800.00	6023.78	668.02	6.33	6060.71	67.16	90.97	PASS
813.00†	813.00	-0.01	0.03	754.00	813.00	6023.78	668.02	-99.45	6060.71	67.47	90.55	PASS
913.00†	912.97	-0.61	2.14	853.97	912.97	6023.78	668.02	-99.46	6061.08	69.84	87.46	PASS
1013.00†	1012.80	-2.15	7.62	953.80	1012.80	6023.78	668.02	-99.50	6062.01	72.21	84.58	PASS
1113.00†	1112.38	-4.64	16.44	1053.38	1112.38	6023.78	668.02	-99.55	6063.54	74.58	81.89	PASS
1213.00†	1211.57	-8.08	28.60	1152.57	1211.57	6023.78	668.02	-99.63	6065.66	76.95	79.38	PASS
1313.00†	1310.26	-12.46	44.08	1251.26	1310.26	6023.78	668.02	-99.72	6068.40	79.33	77.02	PASS
1413.00†	1408.33	-17.77	62.87	1349.33	1408.33	6023.78	668.02	-99.83	6071.78	81.71	74.79	PASS
1513.00†	1505.66	-24.00	84.94	1446.66	1505.66	6023.78	668.02	-99.96	6075.83	84.11	72.70	PASS
1513.75	1506.39	-24.05	85.12	1447.39	1506.39	6023.78	668.02	-99.96	6075.86	84.13	72.68	PASS
1613.00†	1602.57	-30.71	108.67	1543.57	1602.57	6023.78	668.02	-100.18	6080.27	86.53	70.71	PASS
1713.00†	1699.49	-37.41	132.40	1640.49	1699.49	6023.78	668.02	-100.41	6084.81	88.97	68.80	PASS
1813.00†	1796.40	-44.12	156.13	1737.40	1796.40	6023.78	668.02	-100.63	6089.45	91.44	66.99	PASS
1913.00†	1893.31	-50.82	179.86	1834.31	1893.31	6023.78	668.02	-100.85	6094.19	93.93	65.25	PASS
2013.00†	1990.22	-57.53	203.59	1931.22	1990.22	6023.78	668.02	-101.07	6099.02	96.44	63.59	PASS
2113.00†	2087.14	-64.23	227.31	2028.14	2087.14	6023.78	668.02	-101.29	6103.94	98.98	62.00	PASS
2213.00†	2184.05	-70.94	251.04	2125.05	2184.05	6023.78	668.02	-101.51	6108.97	101.54	60.48	PASS
2313.00†	2280.96	-77.64	274.77	2221.96	2280.96	6023.78	668.02	-101.73	6114.08	104.12	59.02	PASS
2413.00†	2377.87	-84.35	298.50	2318.87	2377.87	6023.78	668.02	-101.95	6119.30	106.72	57.63	PASS
2513.00†	2474.79	-91.05	322.23	2415.79	2474.79	6023.78	668.02	-102.17	6124.60	109.34	56.29	PASS
2613.00†	2571.70	-97.76	345.96	2512.70	2571.70	6023.78	668.02	-102.39	6130.00	111.98	55.00	PASS
2713.00†	2668.61	-104.46	369.68	2609.61	2668.61	6023.78	668.02	-102.60	6135.50	114.64	53.77	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 40 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.17-T1S-R65W Slot: SLOT#03 EX. AMOCO #44-17 (990'FSL & 1320'FEL, SEC.17, OG, PR, 8130) Well: AMOCO #44-17 Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
2813.00†	2765.52	-111.17	393.41	2706.52	2765.52	6023.78	668.02	-102.82	6141.09	117.31	52.59	PASS
2913.00†	2862.44	-117.87	417.14	2803.44	2862.44	6023.78	668.02	-103.04	6146.77	120.00	51.45	PASS
3013.00†	2959.35	-124.58	440.87	2900.35	2959.35	6023.78	668.02	-103.26	6152.55	122.71	50.36	PASS
3113.00†	3056.26	-131.28	464.60	2997.26	3056.26	6023.78	668.02	-103.47	6158.42	125.42	49.31	PASS
3213.00†	3153.17	-137.99	488.33	3094.17	3153.17	6023.78	668.02	-103.69	6164.39	128.16	48.30	PASS
3313.00†	3250.08	-144.69	512.05	3191.08	3250.08	6023.78	668.02	-103.91	6170.44	130.90	47.33	PASS
3413.00†	3347.00	-151.40	535.78	3288.00	3347.00	6023.78	668.02	-104.12	6176.59	133.66	46.40	PASS
3513.00†	3443.91	-158.10	559.51	3384.91	3443.91	6023.78	668.02	-104.34	6182.83	136.43	45.50	PASS
3613.00†	3540.82	-164.81	583.24	3481.82	3540.82	6023.78	668.02	-104.55	6189.17	139.21	44.63	PASS
3713.00†	3637.73	-171.51	606.97	3578.73	3637.73	6023.78	668.02	-104.77	6195.59	142.00	43.79	PASS
3813.00†	3734.65	-178.22	630.70	3675.65	3734.65	6023.78	668.02	-104.98	6202.11	144.80	42.99	PASS
3913.00†	3831.56	-184.92	654.43	3772.56	3831.56	6023.78	668.02	-105.19	6208.72	147.61	42.21	PASS
4013.00†	3928.47	-191.62	678.15	3869.47	3928.47	6023.78	668.02	-105.41	6215.42	150.42	41.46	PASS
4113.00†	4025.38	-198.33	701.88	3966.38	4025.38	6023.78	668.02	-105.62	6222.20	153.25	40.74	PASS
4213.00†	4122.30	-205.03	725.61	4063.30	4122.30	6023.78	668.02	-105.83	6229.08	156.08	40.04	PASS
4313.00†	4219.21	-211.74	749.34	4160.21	4219.21	6023.78	668.02	-106.04	6236.05	158.92	39.37	PASS
4413.00†	4316.12	-218.44	773.07	4257.12	4316.12	6023.78	668.02	-106.25	6243.11	161.77	38.72	PASS
4513.00†	4413.03	-225.15	796.80	4354.03	4413.03	6023.78	668.02	-106.46	6250.26	164.62	38.09	PASS
4613.00†	4509.95	-231.85	820.52	4450.95	4509.95	6023.78	668.02	-106.68	6257.49	167.48	37.48	PASS
4713.00†	4606.86	-238.56	844.25	4547.86	4606.86	6023.78	668.02	-106.89	6264.82	170.34	36.89	PASS
4813.00†	4703.77	-245.26	867.98	4644.77	4703.77	6023.78	668.02	-107.09	6272.23	173.21	36.32	PASS
4913.00†	4800.68	-251.97	891.71	4741.68	4800.68	6023.78	668.02	-107.30	6279.74	176.09	35.77	PASS
5013.00†	4897.59	-258.67	915.44	4838.59	4897.59	6023.78	668.02	-107.51	6287.33	178.96	35.24	PASS
5113.00†	4994.51	-265.38	939.17	4935.51	4994.51	6023.78	668.02	-107.72	6295.00	181.85	34.72	PASS
5213.00†	5091.42	-272.08	962.89	5032.42	5091.42	6023.78	668.02	-107.93	6302.77	184.73	34.22	PASS
5313.00†	5188.33	-278.79	986.62	5129.33	5188.33	6023.78	668.02	-108.13	6310.62	187.62	33.73	PASS
5413.00†	5285.24	-285.49	1010.35	5226.24	5285.24	6023.78	668.02	-108.34	6318.56	190.51	33.26	PASS
5513.00†	5382.16	-292.20	1034.08	5323.16	5382.16	6023.78	668.02	-108.55	6326.58	193.41	32.80	PASS
5613.00†	5479.07	-298.90	1057.81	5420.07	5479.07	6023.78	668.02	-108.75	6334.69	196.31	32.36	PASS
5713.00†	5575.98	-305.61	1081.54	5516.98	5575.98	6023.78	668.02	-108.96	6342.88	199.21	31.92	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 41 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.17-T1S-R65W Slot: SLOT#03 EX. AMOCO #44-17 (990'FSL & 1320'FEL, SEC.17, OG, PR, 8130) Well: AMOCO #44-17 Threshold Value=1.00 † = interpolated/extrapolated station													
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
5813.00†	5672.89	-312.31	1105.26	5613.89	5672.89	6023.78	668.02	-109.16	6351.16	202.11	31.51	PASS	
5913.00†	5769.81	-319.02	1128.99	5710.81	5769.81	6023.78	668.02	-109.37	6359.53	205.02	31.10	PASS	
6013.00†	5866.72	-325.72	1152.72	5807.72	5866.72	6023.78	668.02	-109.57	6367.98	207.93	30.70	PASS	
6113.00†	5963.63	-332.43	1176.45	5904.63	5963.63	6023.78	668.02	-109.77	6376.51	210.84	30.32	PASS	
6213.00†	6060.54	-339.13	1200.18	6001.54	6060.54	6023.78	668.02	-109.98	6385.13	213.75	29.95	PASS	
6313.00†	6157.46	-345.84	1223.91	6098.46	6157.46	6023.78	668.02	-110.18	6393.83	216.66	29.58	PASS	
6413.00†	6254.37	-352.54	1247.64	6195.37	6254.37	6023.78	668.02	-110.38	6402.61	219.57	29.23	PASS	
6513.00†	6351.28	-359.25	1271.36	6292.28	6351.28	6023.78	668.02	-110.58	6411.48	222.49	28.89	PASS	
6613.00†	6448.19	-365.95	1295.09	6389.19	6448.19	6023.78	668.02	-110.78	6420.43	225.40	28.55	PASS	
6713.00†	6545.11	-372.66	1318.82	6486.11	6545.11	6023.78	668.02	-110.98	6429.46	228.32	28.22	PASS	
6813.00†	6642.02	-379.36	1342.55	6583.02	6642.02	6023.78	668.02	-111.18	6438.57	231.24	27.91	PASS	
6913.00†	6738.93	-386.07	1366.28	6679.93	6738.93	6023.78	668.02	-111.38	6447.77	234.16	27.60	PASS	
7013.00†	6835.84	-392.77	1390.01	6776.84	6835.84	6023.78	668.02	-111.58	6457.04	237.08	27.30	PASS	
7113.00†	6932.75	-399.48	1413.73	6873.75	6932.75	6023.78	668.02	-111.78	6466.40	240.00	27.00	PASS	
7213.00†	7029.67	-406.18	1437.46	6970.67	7029.67	6023.78	668.02	-111.97	6475.84	242.92	26.72	PASS	
7221.51	7037.91	-406.75	1439.48	6978.91	7037.91	6023.78	668.02	-111.99	6476.64	243.16	26.69	PASS	
7313.00†	7126.75	-405.59	1460.91	7067.75	7126.75	6023.78	668.02	-75.62	6478.08	245.96	26.39	PASS	
7413.00†	7222.44	-387.75	1483.26	7163.44	7222.44	6023.78	668.02	-48.29	6463.15	249.44	25.97	PASS	
7513.00†	7313.84	-353.13	1503.82	7254.84	7313.84	6023.78	668.02	-35.25	6431.45	252.94	25.48	PASS	
7613.00†	7398.16	-302.79	1521.98	7339.16	7398.16	6023.78	668.02	-28.99	6383.94	256.10	24.98	PASS	
7713.00†	7472.85	-238.25	1537.18	7413.85	7472.85	6023.78	668.02	-26.12	6322.06	258.86	24.47	PASS	
7813.00†	7535.63	-161.48	1548.97	7476.63	7535.63	6023.78	668.02	-25.52	6247.68	261.16	23.97	PASS	
7913.00†	7584.60	-74.80	1556.97	7525.60	7584.60	6023.78	668.02	-27.28	6163.03	262.98	23.48	PASS	
8013.00†	7618.28	19.14	1560.96	7559.28	7618.28	6023.78	668.02	-33.41	6070.67	264.28	23.02	PASS	
8113.00†	7635.62	117.49	1560.80	7576.62	7635.62	6023.78	668.02	-55.03	5973.38	265.07	22.58	PASS	
8165.94	7638.00	170.33	1559.04	7579.00	7638.00	6023.78	668.02	-90.00	5920.88	265.28	22.36	PASS	
8213.00†	7638.00	217.35	1556.96	7579.00	7638.00	6023.78	668.02	-90.00	5874.09	265.40	22.18	PASS	
8313.00†	7638.00	317.25	1552.63	7579.00	7638.00	6023.78	668.02	-90.00	5774.69	265.67	21.78	PASS	
8413.00†	7638.00	417.16	1548.37	7579.00	7638.00	6023.78	668.02	-90.00	5675.31	265.95	21.38	PASS	
8513.00†	7638.00	517.08	1544.20	7579.00	7638.00	6023.78	668.02	-90.00	5575.98	266.25	20.98	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft





# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 42 of 88



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

CLEARANCE DATA - Offset Wellbore: AMOCO #44-17 AWB Offset Wellpath: AMOCO #44-17 AWP												
Facility: SEC.17-T1S-R65W Slot: SLOT#03 EX. AMOCO #44-17 (990'FSL & 1320'FEL, SEC.17, OG, PR, 8130) Well: AMOCO #44-17 Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
8613.00†	7638.00	616.99	1540.11	7579.00	7638.00	6023.78	668.02	-90.00	5476.67	266.55	20.59	PASS
8713.00†	7638.00	716.91	1536.11	7579.00	7638.00	6023.78	668.02	-90.00	5377.40	266.88	20.19	PASS
8813.00†	7638.00	816.84	1532.19	7579.00	7638.00	6023.78	668.02	-90.00	5278.17	267.22	19.79	PASS
8913.00†	7638.00	916.76	1528.36	7579.00	7638.00	6023.78	668.02	-90.00	5178.98	267.58	19.39	PASS
9013.00†	7638.00	1016.69	1524.61	7579.00	7638.00	6023.78	668.02	-90.00	5079.83	267.95	18.99	PASS
9113.00†	7638.00	1116.62	1520.94	7579.00	7638.00	6023.78	668.02	-90.00	4980.73	268.35	18.60	PASS
9213.00†	7638.00	1216.56	1517.36	7579.00	7638.00	6023.78	668.02	-90.00	4881.68	268.76	18.20	PASS
9313.00†	7638.00	1316.50	1513.87	7579.00	7638.00	6023.78	668.02	-90.00	4782.67	269.19	17.80	PASS
9413.00†	7638.00	1416.44	1510.45	7579.00	7638.00	6023.78	668.02	-90.00	4683.73	269.65	17.40	PASS
9513.00†	7638.00	1516.39	1507.13	7579.00	7638.00	6023.78	668.02	-90.00	4584.84	270.13	17.00	PASS
9613.00†	7638.00	1616.33	1503.88	7579.00	7638.00	6023.78	668.02	-90.00	4486.01	270.64	16.61	PASS
9713.00†	7638.00	1716.28	1500.72	7579.00	7638.00	6023.78	668.02	-90.00	4387.25	271.17	16.21	PASS
9813.00†	7638.00	1816.24	1497.65	7579.00	7638.00	6023.78	668.02	-90.00	4288.56	271.73	15.81	PASS
9913.00†	7638.00	1916.19	1494.65	7579.00	7638.00	6023.78	668.02	-90.00	4189.94	272.33	15.41	PASS
10013.00†	7638.00	2016.15	1491.75	7579.00	7638.00	6023.78	668.02	-90.00	4091.41	272.95	15.02	PASS
10113.00†	7638.00	2116.11	1488.92	7579.00	7638.00	6023.78	668.02	-90.00	3992.97	273.62	14.62	PASS
10213.00†	7638.00	2216.07	1486.19	7579.00	7638.00	6023.78	668.02	-90.00	3894.62	274.32	14.22	PASS
10313.00†	7638.00	2316.04	1483.53	7579.00	7638.00	6023.78	668.02	-90.00	3796.37	275.06	13.83	PASS
10413.00†	7638.00	2416.00	1480.96	7579.00	7638.00	6023.78	668.02	-90.00	3698.23	275.84	13.43	PASS
10513.00†	7638.00	2515.97	1478.47	7579.00	7638.00	6023.78	668.02	-90.00	3600.22	276.68	13.04	PASS
10613.00†	7638.00	2615.94	1476.07	7579.00	7638.00	6023.78	668.02	-90.00	3502.33	277.56	12.64	PASS
10713.00†	7638.00	2715.92	1473.76	7579.00	7638.00	6023.78	668.02	-90.00	3404.58	278.50	12.25	PASS
10813.00†	7638.00	2815.89	1471.52	7579.00	7638.00	6023.78	668.02	-90.00	3306.99	279.51	11.85	PASS
10913.00†	7638.00	2915.87	1469.37	7579.00	7638.00	6023.78	668.02	-90.00	3209.56	280.57	11.46	PASS
11013.00†	7638.00	3015.85	1467.31	7579.00	7638.00	6023.78	668.02	-90.00	3112.32	281.71	11.07	PASS
11113.00†	7638.00	3115.83	1465.33	7579.00	7638.00	6023.78	668.02	-90.00	3015.28	282.93	10.68	PASS
11213.00†	7638.00	3215.81	1463.43	7579.00	7638.00	6023.78	668.02	-90.00	2918.46	284.24	10.29	PASS
11313.00†	7638.00	3315.79	1461.62	7579.00	7638.00	6023.78	668.02	-90.00	2821.88	285.64	9.90	PASS
11413.00†	7638.00	3415.78	1459.89	7579.00	7638.00	6023.78	668.02	-90.00	2725.57	287.14	9.51	PASS
11513.00†	7638.00	3515.76	1458.25	7579.00	7638.00	6023.78	668.02	-90.00	2629.56	288.76	9.12	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 43 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.17-T1S-R65W Slot: SLOT#03 EX. AMOCO #44-17 (990'FSL & 1320'FEL, SEC.17, OG, PR, 8130) Well: AMOCO #44-17 Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
11613.00†	7638.00	3615.75	1456.69	7579.00	7638.00	6023.78	668.02	-90.00	2533.89	290.51	8.74	PASS
11713.00†	7638.00	3715.74	1455.22	7579.00	7638.00	6023.78	668.02	-90.00	2438.59	292.39	8.35	PASS
11813.00†	7638.00	3815.73	1453.82	7579.00	7638.00	6023.78	668.02	-90.00	2343.71	294.44	7.97	PASS
11913.00†	7638.00	3915.72	1452.52	7579.00	7638.00	6023.78	668.02	-90.00	2249.30	296.65	7.59	PASS
12013.00†	7638.00	4015.72	1451.30	7579.00	7638.00	6023.78	668.02	-90.00	2155.42	299.05	7.22	PASS
12113.00†	7638.00	4115.71	1450.16	7579.00	7638.00	6023.78	668.02	-90.00	2062.15	301.67	6.85	PASS
12213.00†	7638.00	4215.70	1449.10	7579.00	7638.00	6023.78	668.02	-90.00	1969.58	304.53	6.48	PASS
12313.00†	7638.00	4315.70	1448.14	7579.00	7638.00	6023.78	668.02	-90.00	1877.80	307.65	6.11	PASS
12413.00†	7638.00	4415.70	1447.25	7579.00	7638.00	6023.78	668.02	-90.00	1786.94	311.07	5.75	PASS
12513.00†	7638.00	4515.69	1446.45	7579.00	7638.00	6023.78	668.02	-90.00	1697.14	314.82	5.40	PASS
12613.00†	7638.00	4615.69	1445.73	7579.00	7638.00	6023.78	668.02	-90.00	1608.59	318.94	5.05	PASS
12713.00†	7638.00	4715.69	1445.10	7579.00	7638.00	6023.78	668.02	-90.00	1521.50	323.47	4.71	PASS
12813.00†	7638.00	4815.69	1444.55	7579.00	7638.00	6023.78	668.02	-90.00	1436.14	328.44	4.38	PASS
12913.00†	7638.00	4915.68	1444.09	7579.00	7638.00	6023.78	668.02	-90.00	1352.83	333.89	4.06	PASS
13010.32	7638.00	5013.00	1443.72	7579.00	7638.00	6023.78	668.02	-90.00	1274.12	339.70	3.76	PASS
13013.00†	7638.00	5015.68	1443.71	7579.00	7638.00	6023.78	668.02	-90.00	1271.99	339.86	3.75	PASS
13113.00†	7638.00	5115.68	1443.37	7579.00	7638.00	6023.78	668.02	-90.00	1194.07	346.35	3.45	PASS
13213.00†	7638.00	5215.68	1443.03	7579.00	7638.00	6023.78	668.02	-90.00	1119.67	353.33	3.17	PASS
13313.00†	7638.00	5315.68	1442.69	7579.00	7638.00	6023.78	668.02	-90.00	1049.53	360.73	2.91	PASS
13413.00†	7638.00	5415.68	1442.35	7579.00	7638.00	6023.78	668.02	-90.00	984.57	368.39	2.68	PASS
13513.00†	7638.00	5515.68	1442.01	7579.00	7638.00	6023.78	668.02	-90.00	925.87	376.05	2.46	PASS
13613.00†	7638.00	5615.68	1441.67	7579.00	7638.00	6023.78	668.02	-90.00	874.69	383.28	2.28	PASS
13713.00†	7638.00	5715.68	1441.34	7579.00	7638.00	6023.78	668.02	-90.00	832.43	389.50	2.14	PASS
13813.00†	7638.00	5815.68	1441.00	7579.00	7638.00	6023.78	668.02	-90.00	800.50	394.01	2.03	PASS
13913.00†	7638.00	5915.68	1440.66	7579.00	7638.00	6023.78	668.02	-90.00	780.16	396.10	1.97	PASS
13996.01†	7638.00	5998.69	1440.37	7579.00	7638.00	6023.78	668.02	-90.00	772.76	395.64	1.95	PASS
14013.00†	7638.00	6015.68	1440.32	7579.00	7638.00	6023.78	668.02	-90.00	772.34	395.28	1.96	PASS
14023.39†	7638.00	6026.07	1440.28	7578.63	7637.63	6023.78	668.02	-89.97	772.26	395.01	1.96	PASS
14113.00†	7638.00	6115.68	1439.98	7579.00	7638.00	6023.78	668.02	-90.00	777.41	391.41	1.99	PASS
14213.00†	7638.00	6215.68	1439.64	7579.00	7638.00	6023.78	668.02	-90.00	795.12	384.81	2.07	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 44 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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
14313.00†	7638.00	6315.68	1439.30	7579.00	7638.00	6023.78	668.02	-90.00	824.66	376.12	2.19	PASS
14413.00†	7638.00	6415.68	1438.96	7579.00	7638.00	6023.78	668.02	-90.00	864.83	366.17	2.36	PASS
14513.00†	7638.00	6515.68	1438.62	7579.00	7638.00	6023.78	668.02	-90.00	914.21	355.70	2.57	PASS
14613.00†	7638.00	6615.67	1438.28	7579.00	7638.00	6023.78	668.02	-90.00	971.41	345.30	2.82	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	3673.89	390.30	3673.89	390.30
9.625in Casing Surface	0.00	224.00	224.00	46.00	270.00	3673.89	390.30	3673.89	390.30
7.875in Open Hole	224.00	8129.00	7905.00	270.00	8175.00	3673.89	390.30	3673.89	390.30
4.5in Casing Production	0.00	8129.00	8129.00	46.00	8175.00	3673.89	390.30	3673.89	390.30

## 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



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 45 of 88



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

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 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 46 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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	718.26	997.86	54.25	1229.48	50.10	24.88	PASS
113.00†	113.00	0.00	0.00	108.00	113.00	718.26	997.86	54.25	1229.48	52.44	23.75	PASS
213.00†	213.00	0.00	0.00	208.00	213.00	718.26	997.86	54.25	1229.48	54.78	22.73	PASS
313.00†	313.00	0.00	0.00	308.00	313.00	718.26	997.86	54.25	1229.48	56.96	21.78	PASS
413.00†	413.00	0.00	0.00	408.00	413.00	718.26	997.86	54.25	1229.48	59.31	20.91	PASS
513.00†	513.00	0.00	0.00	508.00	513.00	718.26	997.86	54.25	1229.48	61.66	20.11	PASS
613.00†	613.00	0.00	0.00	608.00	613.00	718.26	997.86	54.25	1229.48	64.02	19.36	PASS
713.00†	713.00	0.00	0.00	708.00	713.00	718.26	997.86	54.25	1229.48	66.38	18.67	PASS
800.00	800.00	0.00	0.00	795.00	800.00	718.26	997.86	54.25	1229.48	68.44	18.10	PASS
813.00†	813.00	-0.01	0.03	808.00	813.00	718.26	997.86	-51.53	1229.46	68.75	18.02	PASS
913.00†	912.97	-0.61	2.14	907.97	912.97	718.26	997.86	-51.63	1228.10	71.12	17.39	PASS
1013.00†	1012.80	-2.15	7.62	1007.80	1012.80	718.26	997.86	-51.89	1224.57	73.52	16.77	PASS
1113.00†	1112.38	-4.64	16.44	1107.38	1112.38	718.26	997.86	-52.32	1218.93	75.91	16.17	PASS
1213.00†	1211.57	-8.08	28.60	1206.57	1211.57	718.26	997.86	-52.91	1211.22	78.30	15.57	PASS
1313.00†	1310.26	-12.46	44.08	1305.26	1310.26	718.26	997.86	-53.68	1201.52	80.70	14.98	PASS
1413.00†	1408.33	-17.77	62.87	1403.33	1408.33	718.26	997.86	-54.62	1189.93	83.09	14.41	PASS
1513.00†	1505.66	-24.00	84.94	1500.66	1505.66	718.26	997.86	-55.73	1176.59	85.48	13.85	PASS
1513.75	1506.39	-24.05	85.12	1501.39	1506.39	718.26	997.86	-55.74	1176.49	85.50	13.84	PASS
1613.00†	1602.57	-30.71	108.67	1597.57	1602.57	718.26	997.86	-56.72	1162.59	87.87	13.31	PASS
1713.00†	1699.49	-37.41	132.40	1694.49	1699.49	718.26	997.86	-57.72	1148.94	90.29	12.80	PASS
1813.00†	1796.40	-44.12	156.13	1791.40	1796.40	718.26	997.86	-58.75	1135.66	92.73	12.31	PASS
1913.00†	1893.31	-50.82	179.86	1888.31	1893.31	718.26	997.86	-59.80	1122.77	95.19	11.86	PASS
2013.00†	1990.22	-57.53	203.59	1985.22	1990.22	718.26	997.86	-60.87	1110.28	97.68	11.42	PASS
2113.00†	2087.14	-64.23	227.31	2082.14	2087.14	718.26	997.86	-61.97	1098.20	100.19	11.01	PASS
2213.00†	2184.05	-70.94	251.04	2179.05	2184.05	718.26	997.86	-63.09	1086.54	102.73	10.63	PASS
2313.00†	2280.96	-77.64	274.77	2275.96	2280.96	718.26	997.86	-64.23	1075.32	105.30	10.26	PASS
2413.00†	2377.87	-84.35	298.50	2372.87	2377.87	718.26	997.86	-65.40	1064.56	107.89	9.91	PASS
2513.00†	2474.79	-91.05	322.23	2469.79	2474.79	718.26	997.86	-66.59	1054.26	110.51	9.58	PASS
2613.00†	2571.70	-97.76	345.96	2566.70	2571.70	718.26	997.86	-67.79	1044.44	113.15	9.27	PASS
2713.00†	2668.61	-104.46	369.68	2663.61	2668.61	718.26	997.86	-69.02	1035.12	115.82	8.97	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 47 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.20-T01S-R65W Slot: SLOT#01 EX. WOLFE #1 (990'FSL & 990'FEL, SEC.20, OG, PR, 8200) Well: WOLFE #1 Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
2813.00†	2765.52	-111.17	393.41	2760.52	2765.52	718.26	997.86	-70.27	1026.31	118.51	8.70	PASS
2913.00†	2862.44	-117.87	417.14	2857.44	2862.44	718.26	997.86	-71.54	1018.01	121.23	8.43	PASS
3013.00†	2959.35	-124.58	440.87	2954.35	2959.35	718.26	997.86	-72.83	1010.25	123.96	8.18	PASS
3113.00†	3056.26	-131.28	464.60	3051.26	3056.26	718.26	997.86	-74.14	1003.04	126.72	7.94	PASS
3213.00†	3153.17	-137.99	488.33	3148.17	3153.17	718.26	997.86	-75.47	996.38	129.50	7.72	PASS
3313.00†	3250.08	-144.69	512.05	3245.08	3250.08	718.26	997.86	-76.81	990.30	132.30	7.51	PASS
3413.00†	3347.00	-151.40	535.78	3342.00	3347.00	718.26	997.86	-78.16	984.79	135.11	7.31	PASS
3513.00†	3443.91	-158.10	559.51	3438.91	3443.91	718.26	997.86	-79.53	979.88	137.94	7.13	PASS
3613.00†	3540.82	-164.81	583.24	3535.82	3540.82	718.26	997.86	-80.91	975.56	140.78	6.95	PASS
3713.00†	3637.73	-171.51	606.97	3632.73	3637.73	718.26	997.86	-82.30	971.85	143.63	6.79	PASS
3813.00†	3734.65	-178.22	630.70	3729.65	3734.65	718.26	997.86	-83.71	968.75	146.49	6.63	PASS
3913.00†	3831.56	-184.92	654.43	3826.56	3831.56	718.26	997.86	-85.11	966.27	149.36	6.49	PASS
4013.00†	3928.47	-191.62	678.15	3923.47	3928.47	718.26	997.86	-86.53	964.42	152.24	6.35	PASS
4113.00†	4025.38	-198.33	701.88	4020.38	4025.38	718.26	997.86	-87.95	963.19	155.12	6.23	PASS
4213.00†	4122.30	-205.03	725.61	4117.30	4122.30	718.26	997.86	-89.37	962.60	158.00	6.11	PASS
4313.00†	4219.21	-211.74	749.34	4214.21	4219.21	718.26	997.86	-90.79	962.63	160.88	6.00	PASS
4413.00†	4316.12	-218.44	773.07	4311.12	4316.12	718.26	997.86	-92.21	963.30	163.76	5.90	PASS
4513.00†	4413.03	-225.15	796.80	4408.03	4413.03	718.26	997.86	-93.63	964.60	166.64	5.80	PASS
4613.00†	4509.95	-231.85	820.52	4504.95	4509.95	718.26	997.86	-95.05	966.52	169.51	5.72	PASS
4713.00†	4606.86	-238.56	844.25	4601.86	4606.86	718.26	997.86	-96.45	969.07	172.38	5.64	PASS
4813.00†	4703.77	-245.26	867.98	4698.77	4703.77	718.26	997.86	-97.85	972.24	175.24	5.56	PASS
4913.00†	4800.68	-251.97	891.71	4795.68	4800.68	718.26	997.86	-99.25	976.02	178.08	5.49	PASS
5013.00†	4897.59	-258.67	915.44	4892.59	4897.59	718.26	997.86	-100.63	980.40	180.92	5.43	PASS
5113.00†	4994.51	-265.38	939.17	4989.51	4994.51	718.26	997.86	-101.99	985.39	183.75	5.38	PASS
5213.00†	5091.42	-272.08	962.89	5086.42	5091.42	718.26	997.86	-103.35	990.96	186.57	5.32	PASS
5313.00†	5188.33	-278.79	986.62	5183.33	5188.33	718.26	997.86	-104.69	997.11	189.38	5.28	PASS
5413.00†	5285.24	-285.49	1010.35	5280.24	5285.24	718.26	997.86	-106.01	1003.83	192.17	5.24	PASS
5513.00†	5382.16	-292.20	1034.08	5377.16	5382.16	718.26	997.86	-107.31	1011.10	194.95	5.20	PASS
5613.00†	5479.07	-298.90	1057.81	5474.07	5479.07	718.26	997.86	-108.60	1018.92	197.71	5.16	PASS
5713.00†	5575.98	-305.61	1081.54	5570.98	5575.98	718.26	997.86	-109.87	1027.28	200.47	5.14	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 48 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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
5813.00†	5672.89	-312.31	1105.26	5667.89	5672.89	718.26	997.86	-111.12	1036.15	203.21	5.11	PASS
5913.00†	5769.81	-319.02	1128.99	5764.81	5769.81	718.26	997.86	-112.35	1045.53	205.93	5.09	PASS
6013.00†	5866.72	-325.72	1152.72	5861.72	5866.72	718.26	997.86	-113.55	1055.40	208.64	5.07	PASS
6113.00†	5963.63	-332.43	1176.45	5958.63	5963.63	718.26	997.86	-114.74	1065.75	211.34	5.05	PASS
6213.00†	6060.54	-339.13	1200.18	6055.54	6060.54	718.26	997.86	-115.90	1076.57	214.03	5.04	PASS
6313.00†	6157.46	-345.84	1223.91	6152.46	6157.46	718.26	997.86	-117.04	1087.84	216.70	5.03	PASS
6413.00†	6254.37	-352.54	1247.64	6249.37	6254.37	718.26	997.86	-118.15	1099.54	219.37	5.02	PASS
6513.00†	6351.28	-359.25	1271.36	6346.28	6351.28	718.26	997.86	-119.25	1111.67	222.02	5.02	PASS
6613.00†	6448.19	-365.95	1295.09	6443.19	6448.19	718.26	997.86	-120.32	1124.21	224.66	5.01	PASS
6713.00†	6545.11	-372.66	1318.82	6540.11	6545.11	718.26	997.86	-121.37	1137.15	227.29	5.01	PASS
6813.00†	6642.02	-379.36	1342.55	6637.02	6642.02	718.26	997.86	-122.39	1150.47	229.91	5.01	PASS
6913.00†	6738.93	-386.07	1366.28	6733.93	6738.93	718.26	997.86	-123.40	1164.16	232.52	5.02	PASS
7013.00†	6835.84	-392.77	1390.01	6830.84	6835.84	718.26	997.86	-124.38	1178.20	235.12	5.02	PASS
7113.00†	6932.75	-399.48	1413.73	6927.75	6932.75	718.26	997.86	-125.34	1192.59	237.71	5.03	PASS
7213.00†	7029.67	-406.18	1437.46	7024.67	7029.67	718.26	997.86	-126.27	1207.31	240.29	5.03	PASS
7221.51	7037.91	-406.75	1439.48	7032.91	7037.91	718.26	997.86	-126.35	1208.58	240.51	5.03	PASS
7313.00†	7126.75	-405.59	1460.91	7121.75	7126.75	718.26	997.86	-90.52	1215.50	243.01	5.01	PASS
7413.00†	7222.44	-387.75	1483.26	7217.44	7222.44	718.26	997.86	-64.38	1207.83	246.23	4.91	PASS
7513.00†	7313.84	-353.13	1503.82	7308.84	7313.84	718.26	997.86	-53.25	1184.85	249.50	4.76	PASS
7613.00†	7398.16	-302.79	1521.98	7393.16	7398.16	718.26	997.86	-49.77	1147.71	252.36	4.56	PASS
7713.00†	7472.85	-238.25	1537.18	7467.85	7472.85	718.26	997.86	-50.76	1098.07	254.79	4.32	PASS
7813.00†	7535.63	-161.48	1548.97	7530.63	7535.63	718.26	997.86	-55.23	1038.10	256.75	4.05	PASS
7913.00†	7584.60	-74.80	1556.97	7579.60	7584.60	718.26	997.86	-62.83	970.33	258.19	3.76	PASS
8013.00†	7618.28	19.14	1560.96	7613.28	7618.28	718.26	997.86	-73.00	897.68	259.08	3.47	PASS
8113.00†	7635.62	117.49	1560.80	7630.62	7635.62	718.26	997.86	-84.28	823.29	259.36	3.18	PASS
8165.94	7638.00	170.33	1559.04	7633.00	7638.00	718.26	997.86	-90.00	784.30	259.25	3.03	PASS
8213.00†	7638.00	217.35	1556.96	7633.00	7638.00	718.26	997.86	-90.00	750.67	259.02	2.90	PASS
8313.00†	7638.00	317.25	1552.63	7633.00	7638.00	718.26	997.86	-90.00	684.52	258.24	2.65	PASS
8413.00†	7638.00	417.16	1548.37	7633.00	7638.00	718.26	997.86	-90.00	627.47	256.93	2.45	PASS
8513.00†	7638.00	517.08	1544.20	7633.00	7638.00	718.26	997.86	-90.00	582.20	254.94	2.29	PASS

C-C Clearance Distance Cutoff: 1000.00 ft





# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 49 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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
8613.00†	7638.00	616.99	1540.11	7633.00	7638.00	718.26	997.86	-90.00	551.62	252.24	2.19	PASS
8713.00†	7638.00	716.91	1536.11	7633.00	7638.00	718.26	997.86	-90.00	538.25	249.06	2.16	PASS
8736.12†	7638.00	740.02	1535.20	7633.01	7638.01	718.26	997.86	-90.00	537.77	248.31	2.17	PASS
8813.00†	7638.00	816.84	1532.19	7633.00	7638.00	718.26	997.86	-90.00	543.35	245.98	2.21	PASS
8863.31†	7638.00	867.11	1530.25	7633.00	7638.00	718.26	997.86	-90.00	552.81	272.24	2.03	PASS
8913.00†	7638.00	916.76	1528.36	7633.00	7638.00	718.26	997.86	-90.00	566.42	243.64	2.33	PASS
9013.00†	7638.00	1016.69	1524.61	7633.00	7638.00	718.26	997.86	-90.00	605.41	242.38	2.50	PASS
9113.00†	7638.00	1116.62	1520.94	7633.00	7638.00	718.26	997.86	-90.00	657.50	242.10	2.72	PASS
9213.00†	7638.00	1216.56	1517.36	7633.00	7638.00	718.26	997.86	-90.00	719.85	242.47	2.97	PASS
9313.00†	7638.00	1316.50	1513.87	7633.00	7638.00	718.26	997.86	-90.00	790.03	243.19	3.25	PASS
9413.00†	7638.00	1416.44	1510.45	7633.00	7638.00	718.26	997.86	-90.00	866.15	244.03	3.56	PASS
9513.00†	7638.00	1516.39	1507.13	7633.00	7638.00	718.26	997.86	-90.00	946.76	244.88	3.87	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

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

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

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

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
12.25in Open Hole	0.00	250.00	250.00	-8.00	242.00	440.65	606.27	440.65	606.27
8.625in Casing Surface	0.00	250.00	250.00	-8.00	242.00	440.65	606.27	440.65	606.27
7.875in Open Hole	250.00	8200.00	7950.00	242.00	8192.00	440.65	606.27	440.65	606.27
4.5in Casing Production	0.00	8200.00	8200.00	-8.00	8192.00	440.65	606.27	440.65	606.27



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 50 of 88



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

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

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



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 51 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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	-0.11	-74.98	-90.08	74.98	1.36	123.71	PASS
113.00†	113.00	0.00	0.00	113.00	113.00	-0.11	-74.98	-90.08	74.98	1.68	80.15	PASS
213.00†	213.00	0.00	0.00	213.00	213.00	-0.11	-74.98	-90.08	74.98	2.25	49.51	PASS
313.00†	313.00	0.00	0.00	313.00	313.00	-0.11	-74.98	-90.08	74.98	2.86	35.28	PASS
413.00†	413.00	0.00	0.00	413.00	413.00	-0.11	-74.98	-90.08	74.98	3.47	27.29	PASS
513.00†	513.00	0.00	0.00	513.00	513.00	-0.11	-74.98	-90.08	74.98	4.10	22.22	PASS
613.00†	613.00	0.00	0.00	613.00	613.00	-0.11	-74.98	-90.08	74.98	4.72	18.73	PASS
713.00†	713.00	0.00	0.00	713.00	713.00	-0.11	-74.98	-90.08	74.98	5.34	16.18	PASS
800.00	800.00	0.00	0.00	800.00	800.00	-0.11	-74.98	-90.08	74.98	5.89	14.47	PASS
813.00†	813.00	-0.01	0.03	813.00	813.00	-0.11	-74.98	164.15	75.01	5.97	14.25	PASS
913.00†	912.97	-0.61	2.14	912.97	912.97	-0.11	-74.98	164.58	77.13	6.71	12.82	PASS
1013.00†	1012.80	-2.15	7.62	1012.80	1012.80	-0.11	-74.98	165.60	82.62	7.74	11.72	PASS
1113.00†	1112.38	-4.64	16.44	1112.38	1112.38	-0.11	-74.98	166.99	91.53	8.68	11.45	PASS
1213.00†	1211.57	-8.08	28.60	1211.57	1211.57	-0.11	-74.98	168.51	103.88	9.58	11.69	PASS
1313.00†	1310.26	-12.46	44.08	1310.57	1310.57	-0.12	-74.97	169.99	119.69	10.44	12.28	PASS
1413.00†	1408.33	-17.77	62.87	1412.15	1412.12	-1.83	-73.62	170.73	137.48	11.32	12.94	PASS
1513.00†	1505.66	-24.00	84.94	1514.06	1513.86	-6.40	-70.05	170.54	156.20	12.30	13.47	PASS
1513.75	1506.39	-24.05	85.12	1514.82	1514.62	-6.44	-70.01	170.53	156.34	12.31	13.47	PASS
1613.00†	1602.57	-30.71	108.67	1615.15	1614.53	-13.60	-64.40	169.73	174.32	12.98	14.20	PASS
1713.00†	1699.49	-37.41	132.40	1713.55	1712.45	-21.25	-58.39	168.91	191.91	13.57	14.92	PASS
1813.00†	1796.40	-44.12	156.13	1811.96	1810.38	-28.91	-52.38	168.23	209.53	14.16	15.53	PASS
1913.00†	1893.31	-50.82	179.86	1910.37	1908.30	-36.57	-46.38	167.66	227.18	14.82	16.05	PASS
2013.00†	1990.22	-57.53	203.59	2008.77	2006.23	-44.22	-40.37	167.17	244.84	15.50	16.51	PASS
2113.00†	2087.14	-64.23	227.31	2107.18	2104.15	-51.88	-34.37	166.74	262.52	16.20	16.90	PASS
2213.00†	2184.05	-70.94	251.04	2205.59	2202.08	-59.54	-28.36	166.37	280.21	16.91	17.25	PASS
2313.00†	2280.96	-77.64	274.77	2304.00	2300.00	-67.19	-22.35	166.04	297.92	17.65	17.55	PASS
2413.00†	2377.87	-84.35	298.50	2402.40	2397.93	-74.85	-16.35	165.75	315.63	18.39	17.81	PASS
2513.00†	2474.79	-91.05	322.23	2500.81	2495.85	-82.51	-10.34	165.49	333.34	19.14	18.04	PASS
2613.00†	2571.70	-97.76	345.96	2599.22	2593.78	-90.17	-4.33	165.25	351.07	19.91	18.25	PASS
2713.00†	2668.61	-104.46	369.68	2697.63	2691.70	-97.82	1.67	165.04	368.80	20.69	18.43	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 52 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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†	2765.52	-111.17	393.41	2796.03	2789.63	-105.48	7.68	164.85	386.53	21.47	18.58	PASS
2913.00†	2862.44	-117.87	417.14	2894.44	2887.55	-113.14	13.68	164.68	404.27	22.26	18.73	PASS
3013.00†	2959.35	-124.58	440.87	2992.85	2985.48	-120.79	19.69	164.51	422.01	23.06	18.85	PASS
3113.00†	3056.26	-131.28	464.60	3091.25	3083.40	-128.45	25.70	164.37	439.75	23.86	18.96	PASS
3213.00†	3153.17	-137.99	488.33	3189.66	3181.33	-136.11	31.70	164.23	457.49	24.67	19.07	PASS
3313.00†	3250.08	-144.69	512.05	3288.07	3279.25	-143.76	37.71	164.11	475.24	25.48	19.16	PASS
3413.00†	3347.00	-151.40	535.78	3386.48	3377.18	-151.42	43.72	163.99	492.99	26.30	19.24	PASS
3513.00†	3443.91	-158.10	559.51	3484.88	3475.10	-159.08	49.72	163.88	510.74	27.12	19.31	PASS
3613.00†	3540.82	-164.81	583.24	3583.29	3573.03	-166.74	55.73	163.78	528.50	27.94	19.38	PASS
3713.00†	3637.73	-171.51	606.97	3681.70	3670.95	-174.39	61.74	163.68	546.25	28.77	19.44	PASS
3813.00†	3734.65	-178.22	630.70	3780.11	3768.88	-182.05	67.74	163.59	564.01	29.60	19.50	PASS
3913.00†	3831.56	-184.92	654.43	3878.51	3866.80	-189.71	73.75	163.51	581.77	30.43	19.55	PASS
4013.00†	3928.47	-191.62	678.15	3976.92	3964.73	-197.36	79.75	163.43	599.52	31.27	19.59	PASS
4113.00†	4025.38	-198.33	701.88	4075.33	4062.65	-205.02	85.76	163.36	617.28	32.11	19.64	PASS
4213.00†	4122.30	-205.03	725.61	4173.73	4160.58	-212.68	91.77	163.29	635.04	32.95	19.68	PASS
4313.00†	4219.21	-211.74	749.34	4272.14	4258.50	-220.33	97.77	163.22	652.81	33.79	19.71	PASS
4413.00†	4316.12	-218.44	773.07	4370.55	4356.43	-227.99	103.78	163.16	670.57	34.63	19.74	PASS
4513.00†	4413.03	-225.15	796.80	4468.96	4454.35	-235.65	109.79	163.10	688.33	35.48	19.77	PASS
4613.00†	4509.95	-231.85	820.52	4567.36	4552.28	-243.31	115.79	163.04	706.10	36.33	19.80	PASS
4713.00†	4606.86	-238.56	844.25	4665.77	4650.20	-250.96	121.80	162.99	723.86	37.18	19.83	PASS
4813.00†	4703.77	-245.26	867.98	4764.18	4748.13	-258.62	127.80	162.94	741.62	38.03	19.85	PASS
4913.00†	4800.68	-251.97	891.71	4862.59	4846.05	-266.28	133.81	162.89	759.39	38.88	19.88	PASS
5013.00†	4897.59	-258.67	915.44	4960.99	4943.97	-273.93	139.82	162.84	777.16	39.73	19.90	PASS
5113.00†	4994.51	-265.38	939.17	5059.40	5041.90	-281.59	145.82	162.80	794.92	40.59	19.92	PASS
5213.00†	5091.42	-272.08	962.89	5157.81	5139.82	-289.25	151.83	162.76	812.69	41.44	19.93	PASS
5313.00†	5188.33	-278.79	986.62	5256.22	5237.75	-296.90	157.84	162.72	830.46	42.30	19.95	PASS
5413.00†	5285.24	-285.49	1010.35	5354.62	5335.67	-304.56	163.84	162.68	848.22	43.15	19.97	PASS
5513.00†	5382.16	-292.20	1034.08	5453.03	5433.60	-312.22	169.85	162.64	865.99	44.01	19.98	PASS
5613.00†	5479.07	-298.90	1057.81	5551.44	5531.52	-319.87	175.85	162.61	883.76	44.87	20.00	PASS
5713.00†	5575.98	-305.61	1081.54	5649.84	5629.45	-327.53	181.86	162.57	901.53	45.73	20.01	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 53 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.20-T01S-R65W Slot: SLOT#06 WAKEMAN 20-17-3NAH (293'FSL & 2098'FEL, SEC.20) Well: WAKEMAN 20-17-3NAH Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
5813.00†	5672.89	-312.31	1105.26	5748.25	5727.37	-335.19	187.87	162.54	919.30	46.59	20.02	PASS
5913.00†	5769.81	-319.02	1128.99	5846.66	5825.30	-342.85	193.87	162.51	937.07	47.45	20.03	PASS
6013.00†	5866.72	-325.72	1152.72	5945.07	5923.22	-350.50	199.88	162.48	954.84	48.31	20.04	PASS
6113.00†	5963.63	-332.43	1176.45	6043.47	6021.15	-358.16	205.89	162.45	972.61	49.18	20.05	PASS
6213.00†	6060.54	-339.13	1200.18	6141.88	6119.07	-365.82	211.89	162.42	990.38	50.04	20.06	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

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

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

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

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing Surface	13.00	1800.00	1787.00	13.00	1798.48	-0.06	-45.71	-8.56	-39.04
8.5in Open Hole	1800.00	17376.39	15576.39	1798.48	N/A	-8.56	-39.04	N/A	N/A

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

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



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 54 of 88



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

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



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 55 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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	-0.21	-89.92	-90.13	89.92	1.36	148.61	PASS
113.00†	113.00	0.00	0.00	113.00	113.00	-0.21	-89.92	-90.13	89.92	1.68	96.59	PASS
213.00†	213.00	0.00	0.00	213.00	213.00	-0.21	-89.92	-90.13	89.92	2.25	59.69	PASS
313.00†	313.00	0.00	0.00	313.00	313.00	-0.21	-89.92	-90.13	89.92	2.85	42.51	PASS
413.00†	413.00	0.00	0.00	413.00	413.00	-0.21	-89.92	-90.13	89.92	3.47	32.87	PASS
513.00†	513.00	0.00	0.00	513.00	513.00	-0.21	-89.92	-90.13	89.92	4.09	26.76	PASS
613.00†	613.00	0.00	0.00	613.00	613.00	-0.21	-89.92	-90.13	89.92	4.71	22.54	PASS
713.00†	713.00	0.00	0.00	713.00	713.00	-0.21	-89.92	-90.13	89.92	5.33	19.47	PASS
800.00	800.00	0.00	0.00	800.00	800.00	-0.21	-89.92	-90.13	89.92	5.88	17.41	PASS
813.00†	813.00	-0.01	0.03	813.00	813.00	-0.21	-89.92	164.10	89.95	5.96	17.14	PASS
913.00†	912.97	-0.61	2.14	912.97	912.97	-0.21	-89.92	164.46	92.07	6.70	15.35	PASS
1013.00†	1012.80	-2.15	7.62	1012.80	1012.80	-0.21	-89.92	165.33	97.56	7.73	13.88	PASS
1113.00†	1112.38	-4.64	16.44	1112.38	1112.38	-0.21	-89.92	166.53	106.45	8.67	13.35	PASS
1213.00†	1211.57	-8.08	28.60	1211.57	1211.57	-0.21	-89.92	167.90	118.78	9.57	13.40	PASS
1313.00†	1310.26	-12.46	44.08	1310.26	1310.26	-0.21	-89.92	169.28	134.57	10.42	13.84	PASS
1413.00†	1408.33	-17.77	62.87	1408.46	1408.46	-0.22	-89.92	170.56	153.80	11.26	14.57	PASS
1513.00†	1505.66	-24.00	84.94	1507.55	1507.52	-2.20	-89.60	171.10	175.91	12.08	15.47	PASS
1513.75	1506.39	-24.05	85.12	1508.29	1508.26	-2.23	-89.60	171.10	176.08	12.09	15.47	PASS
1613.00†	1602.57	-30.71	108.67	1606.69	1606.52	-7.56	-88.73	170.67	198.79	12.70	16.58	PASS
1713.00†	1699.49	-37.41	132.40	1704.42	1703.95	-14.99	-87.52	169.78	221.10	13.31	17.55	PASS
1813.00†	1796.40	-44.12	156.13	1801.85	1801.08	-22.44	-86.31	169.05	243.45	13.89	18.42	PASS
1913.00†	1893.31	-50.82	179.86	1899.27	1898.22	-29.88	-85.10	168.45	265.83	14.54	19.17	PASS
2013.00†	1990.22	-57.53	203.59	1996.70	1995.36	-37.33	-83.89	167.93	288.23	15.22	19.82	PASS
2113.00†	2087.14	-64.23	227.31	2094.13	2092.49	-44.77	-82.68	167.49	310.65	15.91	20.39	PASS
2213.00†	2184.05	-70.94	251.04	2191.56	2189.63	-52.22	-81.46	167.11	333.08	16.61	20.90	PASS
2313.00†	2280.96	-77.64	274.77	2288.99	2286.76	-59.67	-80.25	166.78	355.53	17.33	21.34	PASS
2413.00†	2377.87	-84.35	298.50	2386.42	2383.90	-67.11	-79.04	166.49	377.98	18.07	21.73	PASS
2513.00†	2474.79	-91.05	322.23	2483.85	2481.04	-74.56	-77.83	166.23	400.45	18.81	22.08	PASS
2613.00†	2571.70	-97.76	345.96	2581.28	2578.17	-82.00	-76.62	165.99	422.92	19.56	22.40	PASS
2713.00†	2668.61	-104.46	369.68	2678.70	2675.31	-89.45	-75.41	165.78	445.40	20.32	22.67	PASS

C-C Clearance Distance Cutoff: 1000.00 ft





# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 56 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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†	2765.52	-111.17	393.41	2776.13	2772.45	-96.89	-74.20	165.60	467.88	21.09	22.92	PASS
2913.00†	2862.44	-117.87	417.14	2873.56	2869.58	-104.34	-72.99	165.42	490.37	21.86	23.15	PASS
3013.00†	2959.35	-124.58	440.87	2970.99	2966.72	-111.79	-71.78	165.27	512.86	22.64	23.35	PASS
3113.00†	3056.26	-131.28	464.60	3068.42	3063.85	-119.23	-70.57	165.12	535.35	23.42	23.54	PASS
3213.00†	3153.17	-137.99	488.33	3165.85	3160.99	-126.68	-69.36	164.99	557.85	24.21	23.70	PASS
3313.00†	3250.08	-144.69	512.05	3263.28	3258.13	-134.12	-68.15	164.87	580.35	25.01	23.86	PASS
3413.00†	3347.00	-151.40	535.78	3360.71	3355.26	-141.57	-66.93	164.76	602.85	25.80	24.00	PASS
3513.00†	3443.91	-158.10	559.51	3458.13	3452.40	-149.01	-65.72	164.65	625.36	26.60	24.12	PASS
3613.00†	3540.82	-164.81	583.24	3555.56	3549.54	-156.46	-64.51	164.56	647.87	27.41	24.24	PASS
3713.00†	3637.73	-171.51	606.97	3652.99	3646.67	-163.91	-63.30	164.46	670.37	28.21	24.35	PASS
3813.00†	3734.65	-178.22	630.70	3750.42	3743.81	-171.35	-62.09	164.38	692.88	29.02	24.45	PASS
3913.00†	3831.56	-184.92	654.43	3847.85	3840.94	-178.80	-60.88	164.30	715.39	29.84	24.54	PASS
4013.00†	3928.47	-191.62	678.15	3945.28	3938.08	-186.24	-59.67	164.23	737.91	30.65	24.62	PASS
4113.00†	4025.38	-198.33	701.88	4042.71	4035.22	-193.69	-58.46	164.16	760.42	31.47	24.70	PASS
4213.00†	4122.30	-205.03	725.61	4140.14	4132.35	-201.13	-57.25	164.09	782.93	32.28	24.77	PASS
4313.00†	4219.21	-211.74	749.34	4237.56	4229.49	-208.58	-56.04	164.03	805.45	33.10	24.84	PASS
4413.00†	4316.12	-218.44	773.07	4334.99	4326.63	-216.03	-54.83	163.97	827.96	33.93	24.90	PASS
4513.00†	4413.03	-225.15	796.80	4432.42	4423.76	-223.47	-53.61	163.91	850.48	34.75	24.96	PASS
4613.00†	4509.95	-231.85	820.52	4529.85	4520.90	-230.92	-52.40	163.86	873.00	35.57	25.02	PASS
4713.00†	4606.86	-238.56	844.25	4627.28	4618.04	-238.36	-51.19	163.81	895.52	36.40	25.07	PASS
4813.00†	4703.77	-245.26	867.98	4724.71	4715.17	-245.81	-49.98	163.76	918.03	37.23	25.12	PASS
4913.00†	4800.68	-251.97	891.71	4822.14	4812.31	-253.25	-48.77	163.72	940.55	38.05	25.17	PASS
5013.00†	4897.59	-258.67	915.44	4919.57	4909.44	-260.70	-47.56	163.67	963.07	38.88	25.21	PASS
5113.00†	4994.51	-265.38	939.17	5016.99	5006.58	-268.15	-46.35	163.63	985.59	39.72	25.25	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 57 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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	-0.13	-54.82	-6.86	-53.72
8.5in Open Hole	1800.00	17542.23	15742.23	1799.24	7395.00	-6.86	-53.72	3039.05	-75.20

## 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 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 58 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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	9345.15	2876.45	17.11	9777.82	25.36	397.41	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

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

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

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

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
12.25in Open Hole	0.00	1549.00	1549.00	23.00	1572.00	5704.83	1726.94	5704.83	1726.94
8.625in Casing Surface	0.00	1549.00	1549.00	23.00	1572.00	5704.83	1726.94	5704.83	1726.94
7.875in Open Hole	1549.00	8173.00	6624.00	1572.00	8196.00	5704.83	1726.94	5704.83	1726.94
4.5in Casing Production	0.00	8173.00	8173.00	23.00	8196.00	5704.83	1726.94	5704.83	1726.94

## 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 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 59 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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	8360.03	-45.03	-0.31	8360.20	25.36	339.79	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft

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

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

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

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
12.25in Open Hole	0.00	1472.00	1472.00	40.00	1512.00	5096.04	-50.86	5096.04	-50.86
8.625in Casing Surface	0.00	1472.00	1472.00	40.00	1512.00	5096.04	-50.86	5096.04	-50.86
7.875in Open Hole	1472.00	8173.00	6701.00	1512.00	8213.00	5096.04	-50.86	5096.04	-50.86
4.5in Casing Production	0.00	8173.00	8173.00	40.00	8213.00	5096.04	-50.86	5096.04	-50.86

## 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 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 60 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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	-0.20	-104.98	-90.11	104.98	1.36	173.71	PASS
113.00†	113.00	0.00	0.00	113.00	113.00	-0.20	-104.98	-90.11	104.98	1.68	112.61	PASS
213.00†	213.00	0.00	0.00	213.00	213.00	-0.20	-104.98	-90.11	104.98	2.25	69.57	PASS
313.00†	313.00	0.00	0.00	313.00	313.00	-0.20	-104.98	-90.11	104.98	2.86	49.56	PASS
413.00†	413.00	0.00	0.00	413.00	413.00	-0.20	-104.98	-90.11	104.98	3.47	38.34	PASS
513.00†	513.00	0.00	0.00	513.00	513.00	-0.20	-104.98	-90.11	104.98	4.09	31.22	PASS
613.00†	613.00	0.00	0.00	613.00	613.00	-0.20	-104.98	-90.11	104.98	4.72	26.31	PASS
713.00†	713.00	0.00	0.00	713.00	713.00	-0.20	-104.98	-90.11	104.98	5.34	22.73	PASS
800.00	800.00	0.00	0.00	800.00	800.00	-0.20	-104.98	-90.11	104.98	5.88	20.32	PASS
813.00†	813.00	-0.01	0.03	813.00	813.00	-0.20	-104.98	164.12	105.01	5.96	20.01	PASS
913.00†	912.97	-0.61	2.14	912.97	912.97	-0.20	-104.98	164.43	107.13	6.71	17.86	PASS
1013.00†	1012.80	-2.15	7.62	1012.80	1012.80	-0.20	-104.98	165.18	112.61	7.73	16.03	PASS
1113.00†	1112.38	-4.64	16.44	1112.38	1112.38	-0.20	-104.98	166.24	121.50	8.68	15.24	PASS
1213.00†	1211.57	-8.08	28.60	1211.57	1211.57	-0.20	-104.98	167.47	133.81	9.57	15.10	PASS
1313.00†	1310.26	-12.46	44.08	1310.26	1310.26	-0.20	-104.98	168.75	149.57	10.43	15.39	PASS
1413.00†	1408.33	-17.77	62.87	1408.33	1408.33	-0.20	-104.98	169.97	168.77	11.26	16.00	PASS
1513.00†	1505.66	-24.00	84.94	1505.49	1505.49	-0.20	-104.98	171.09	191.41	12.07	16.85	PASS
1513.75	1506.39	-24.05	85.12	1506.20	1506.20	-0.20	-104.99	171.10	191.60	12.08	16.85	PASS
1613.00†	1602.57	-30.71	108.67	1599.24	1599.22	-1.62	-105.95	171.65	216.61	12.65	18.14	PASS
1713.00†	1699.49	-37.41	132.40	1692.28	1692.14	-5.53	-108.61	171.43	243.22	13.28	19.36	PASS
1813.00†	1796.40	-44.12	156.13	1785.16	1784.70	-11.88	-112.94	170.67	271.24	13.90	20.57	PASS
1913.00†	1893.31	-50.82	179.86	1880.92	1880.04	-19.26	-117.97	169.85	299.79	14.49	21.70	PASS
2013.00†	1990.22	-57.53	203.59	1976.68	1975.38	-26.65	-123.00	169.18	328.38	15.15	22.69	PASS
2113.00†	2087.14	-64.23	227.31	2072.44	2070.72	-34.04	-128.03	168.61	357.00	15.82	23.58	PASS
2213.00†	2184.05	-70.94	251.04	2168.20	2166.06	-41.42	-133.06	168.12	385.66	16.51	24.36	PASS
2313.00†	2280.96	-77.64	274.77	2263.96	2261.41	-48.81	-138.09	167.71	414.33	17.21	25.06	PASS
2413.00†	2377.87	-84.35	298.50	2359.72	2356.75	-56.20	-143.13	167.34	443.03	17.93	25.69	PASS
2513.00†	2474.79	-91.05	322.23	2455.48	2452.09	-63.59	-148.16	167.02	471.73	18.67	26.23	PASS
2613.00†	2571.70	-97.76	345.96	2551.24	2547.43	-70.97	-153.19	166.74	500.45	19.39	26.75	PASS
2713.00†	2668.61	-104.46	369.68	2647.00	2642.77	-78.36	-158.22	166.49	529.18	20.13	27.21	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 61 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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†	2765.52	-111.17	393.41	2742.76	2738.11	-85.75	-163.25	166.26	557.92	20.88	27.62	PASS
2913.00†	2862.44	-117.87	417.14	2838.52	2833.45	-93.13	-168.28	166.06	586.66	21.64	28.00	PASS
3013.00†	2959.35	-124.58	440.87	2934.28	2928.80	-100.52	-173.32	165.87	615.42	22.40	28.33	PASS
3113.00†	3056.26	-131.28	464.60	3030.04	3024.14	-107.91	-178.35	165.71	644.17	23.17	28.64	PASS
3213.00†	3153.17	-137.99	488.33	3125.80	3119.48	-115.30	-183.38	165.55	672.93	23.95	28.93	PASS
3313.00†	3250.08	-144.69	512.05	3221.56	3214.82	-122.68	-188.41	165.41	701.70	24.73	29.19	PASS
3413.00†	3347.00	-151.40	535.78	3317.32	3310.16	-130.07	-193.44	165.28	730.47	25.51	29.43	PASS
3513.00†	3443.91	-158.10	559.51	3413.08	3405.50	-137.46	-198.48	165.16	759.24	26.29	29.65	PASS
3613.00†	3540.82	-164.81	583.24	3508.84	3500.85	-144.84	-203.51	165.05	788.02	27.08	29.85	PASS
3713.00†	3637.73	-171.51	606.97	3604.60	3596.19	-152.23	-208.54	164.94	816.79	27.88	30.04	PASS
3813.00†	3734.65	-178.22	630.70	3700.36	3691.53	-159.62	-213.57	164.85	845.57	28.67	30.21	PASS
3913.00†	3831.56	-184.92	654.43	3796.12	3786.87	-167.01	-218.60	164.76	874.35	29.47	30.37	PASS
4013.00†	3928.47	-191.62	678.15	3891.88	3882.21	-174.39	-223.63	164.67	903.14	30.27	30.52	PASS
4113.00†	4025.38	-198.33	701.88	3987.64	3977.55	-181.78	-228.67	164.59	931.92	31.08	30.67	PASS
4213.00†	4122.30	-205.03	725.61	4083.40	4072.90	-189.17	-233.70	164.52	960.71	31.88	30.80	PASS
4313.00†	4219.21	-211.74	749.34	4179.15	4168.24	-196.56	-238.73	164.45	989.50	32.69	30.92	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	-0.12	-64.00	-4.03	-66.66
8.5in Open Hole	1800.00	17619.74	15819.74	1799.47	N/A	-4.03	-66.66	N/A	N/A



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 62 of 88



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 63 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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	-0.26	-119.95	-90.13	119.95	1.36	198.67	PASS
113.00†	113.00	0.00	0.00	113.00	113.00	-0.26	-119.95	-90.13	119.95	1.68	128.36	PASS
213.00†	213.00	0.00	0.00	213.00	213.00	-0.26	-119.95	-90.13	119.95	2.26	79.25	PASS
313.00†	313.00	0.00	0.00	313.00	313.00	-0.26	-119.95	-90.13	119.95	2.87	56.50	PASS
413.00†	413.00	0.00	0.00	413.00	413.00	-0.26	-119.95	-90.13	119.95	3.48	43.73	PASS
513.00†	513.00	0.00	0.00	513.00	513.00	-0.26	-119.95	-90.13	119.95	4.10	35.62	PASS
613.00†	613.00	0.00	0.00	613.00	613.00	-0.26	-119.95	-90.13	119.95	4.72	30.03	PASS
713.00†	713.00	0.00	0.00	713.00	713.00	-0.26	-119.95	-90.13	119.95	5.35	25.95	PASS
800.00	800.00	0.00	0.00	800.00	800.00	-0.26	-119.95	-90.13	119.95	5.89	23.20	PASS
813.00†	813.00	-0.01	0.03	813.00	813.00	-0.26	-119.95	164.10	119.98	5.97	22.85	PASS
913.00†	912.97	-0.61	2.14	912.97	912.97	-0.26	-119.95	164.37	122.10	6.72	20.35	PASS
1013.00†	1012.80	-2.15	7.62	1012.80	1012.80	-0.26	-119.95	165.03	127.58	7.74	18.15	PASS
1113.00†	1112.38	-4.64	16.44	1112.38	1112.38	-0.26	-119.95	165.98	136.46	8.68	17.12	PASS
1213.00†	1211.57	-8.08	28.60	1211.57	1211.57	-0.26	-119.95	167.10	148.76	9.57	16.78	PASS
1313.00†	1310.26	-12.46	44.08	1310.26	1310.26	-0.26	-119.95	168.29	164.49	10.43	16.92	PASS
1413.00†	1408.33	-17.77	62.87	1408.33	1408.33	-0.26	-119.95	169.45	183.66	11.26	17.41	PASS
1513.00†	1505.66	-24.00	84.94	1505.66	1505.66	-0.26	-119.95	170.54	206.27	12.08	18.15	PASS
1513.75	1506.39	-24.05	85.12	1506.39	1506.39	-0.26	-119.95	170.55	206.45	12.09	18.15	PASS
1613.00†	1602.57	-30.71	108.67	1602.43	1602.43	-0.26	-119.96	171.55	230.65	12.66	19.31	PASS
1713.00†	1699.49	-37.41	132.40	1693.24	1693.22	-1.09	-121.22	172.08	256.29	13.27	20.42	PASS
1813.00†	1796.40	-44.12	156.13	1782.91	1782.79	-3.46	-124.84	172.12	284.22	13.96	21.46	PASS
1913.00†	1893.31	-50.82	179.86	1871.29	1870.89	-7.29	-130.70	171.81	314.39	14.58	22.61	PASS
2013.00†	1990.22	-57.53	203.59	1958.24	1957.31	-12.50	-138.68	171.24	346.78	15.27	23.76	PASS
2113.00†	2087.14	-64.23	227.31	2045.89	2044.11	-19.16	-148.86	170.50	381.30	15.95	24.98	PASS
2213.00†	2184.05	-70.94	251.04	2139.38	2136.59	-26.66	-160.33	169.77	416.46	16.59	26.18	PASS
2313.00†	2280.96	-77.64	274.77	2232.87	2229.06	-34.17	-171.81	169.15	451.68	17.27	27.23	PASS
2413.00†	2377.87	-84.35	298.50	2326.36	2321.54	-41.67	-183.29	168.62	486.94	17.96	28.19	PASS
2513.00†	2474.79	-91.05	322.23	2419.85	2414.02	-49.17	-194.76	168.16	522.23	18.66	29.06	PASS
2613.00†	2571.70	-97.76	345.96	2513.34	2506.50	-56.68	-206.24	167.76	557.55	19.37	29.84	PASS
2713.00†	2668.61	-104.46	369.68	2606.83	2598.98	-64.18	-217.72	167.40	592.89	20.10	30.54	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 64 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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†	2765.52	-111.17	393.41	2700.32	2691.46	-71.68	-229.20	167.09	628.24	20.83	31.19	PASS
2913.00†	2862.44	-117.87	417.14	2793.81	2783.93	-79.19	-240.67	166.81	663.61	21.57	31.78	PASS
3013.00†	2959.35	-124.58	440.87	2887.29	2876.41	-86.69	-252.15	166.56	698.99	22.32	32.32	PASS
3113.00†	3056.26	-131.28	464.60	2980.78	2968.89	-94.20	-263.63	166.33	734.39	23.07	32.81	PASS
3213.00†	3153.17	-137.99	488.33	3074.27	3061.37	-101.70	-275.11	166.12	769.79	23.83	33.26	PASS
3313.00†	3250.08	-144.69	512.05	3167.76	3153.85	-109.20	-286.58	165.93	805.20	24.60	33.67	PASS
3413.00†	3347.00	-151.40	535.78	3261.25	3246.32	-116.71	-298.06	165.76	840.61	25.37	34.05	PASS
3513.00†	3443.91	-158.10	559.51	3354.74	3338.80	-124.21	-309.54	165.60	876.04	26.15	34.40	PASS
3613.00†	3540.82	-164.81	583.24	3448.23	3431.28	-131.71	-321.01	165.46	911.47	26.93	34.73	PASS
3713.00†	3637.73	-171.51	606.97	3541.72	3523.76	-139.22	-332.49	165.32	946.90	27.72	35.03	PASS
3813.00†	3734.65	-178.22	630.70	3635.21	3616.24	-146.72	-343.97	165.20	982.34	28.51	35.31	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	-0.16	-73.12	-1.32	-74.90
8.5in Open Hole	1800.00	17593.78	15793.78	1799.84	N/A	-1.32	-74.90	N/A	N/A



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 65 of 88



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

SURVEY PROGRAM - Offset Wellbore: WAKEMAN 20-17-2NBH PWB    Offset Wellpath: WAKEMAN 20-17-2NBH PWP (REV-A.0)				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
13.00	17593.78	Custom BHI NaviTrak (Standard Rotating+Axial Corr) (Rockies 0.03Gt model)		WAKEMAN 20-17-2NBH PWB

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



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 66 of 88



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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	-0.26	-134.93	-90.11	134.93	1.36	223.62	PASS
113.00†	113.00	0.00	0.00	113.00	113.00	-0.26	-134.93	-90.11	134.93	1.69	144.29	PASS
213.00†	213.00	0.00	0.00	213.00	213.00	-0.26	-134.93	-90.11	134.93	2.26	89.08	PASS
313.00†	313.00	0.00	0.00	313.00	313.00	-0.26	-134.93	-90.11	134.93	2.87	63.52	PASS
413.00†	413.00	0.00	0.00	413.00	413.00	-0.26	-134.93	-90.11	134.93	3.48	49.17	PASS
513.00†	513.00	0.00	0.00	513.00	513.00	-0.26	-134.93	-90.11	134.93	4.10	40.06	PASS
613.00†	613.00	0.00	0.00	613.00	613.00	-0.26	-134.93	-90.11	134.93	4.73	33.78	PASS
713.00†	713.00	0.00	0.00	713.00	713.00	-0.26	-134.93	-90.11	134.93	5.35	29.19	PASS
800.00	800.00	0.00	0.00	800.00	800.00	-0.26	-134.93	-90.11	134.93	5.90	26.10	PASS
813.00†	813.00	-0.01	0.03	813.00	813.00	-0.26	-134.93	164.12	134.96	5.98	25.70	PASS
913.00†	912.97	-0.61	2.14	912.97	912.97	-0.26	-134.93	164.36	137.07	6.72	22.85	PASS
1013.00†	1012.80	-2.15	7.62	1012.80	1012.80	-0.26	-134.93	164.94	142.56	7.74	20.29	PASS
1113.00†	1112.38	-4.64	16.44	1112.38	1112.38	-0.26	-134.93	165.80	151.43	8.69	19.00	PASS
1213.00†	1211.57	-8.08	28.60	1211.57	1211.57	-0.26	-134.93	166.83	163.71	9.58	18.48	PASS
1313.00†	1310.26	-12.46	44.08	1310.26	1310.26	-0.26	-134.93	167.93	179.43	10.43	18.46	PASS
1413.00†	1408.33	-17.77	62.87	1408.33	1408.33	-0.26	-134.93	169.04	198.57	11.26	18.82	PASS
1513.00†	1505.66	-24.00	84.94	1505.30	1505.30	-0.26	-134.93	170.08	221.16	12.08	19.47	PASS
1513.75	1506.39	-24.05	85.12	1505.98	1505.98	-0.26	-134.93	170.09	221.34	12.09	19.46	PASS
1613.00†	1602.57	-30.71	108.67	1595.45	1595.43	-0.87	-136.39	170.82	246.98	12.68	20.65	PASS
1713.00†	1699.49	-37.41	132.40	1684.29	1684.16	-2.55	-140.39	171.11	275.44	13.38	21.76	PASS
1813.00†	1796.40	-44.12	156.13	1771.68	1771.27	-5.25	-146.79	171.08	306.44	14.12	22.87	PASS
1913.00†	1893.31	-50.82	179.86	1857.51	1856.58	-8.90	-155.46	170.82	339.92	14.76	24.14	PASS
2013.00†	1990.22	-57.53	203.59	1941.66	1939.91	-13.43	-166.25	170.41	375.83	15.43	25.47	PASS
2113.00†	2087.14	-64.23	227.31	2024.04	2021.12	-18.79	-178.98	169.90	414.12	16.13	26.80	PASS
2213.00†	2184.05	-70.94	251.04	2107.97	2103.44	-25.13	-194.05	169.30	454.64	16.78	28.24	PASS
2313.00†	2280.96	-77.64	274.77	2199.02	2192.63	-32.24	-210.93	168.72	495.75	17.43	29.60	PASS
2413.00†	2377.87	-84.35	298.50	2290.07	2281.82	-39.34	-227.81	168.23	536.90	18.10	30.83	PASS
2513.00†	2474.79	-91.05	322.23	2381.13	2371.02	-46.45	-244.70	167.81	578.07	18.79	31.94	PASS
2613.00†	2571.70	-97.76	345.96	2472.18	2460.21	-53.55	-261.58	167.44	619.26	19.53	32.87	PASS
2713.00†	2668.61	-104.46	369.68	2563.24	2549.40	-60.66	-278.47	167.12	660.48	20.18	33.88	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 67 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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†	2765.52	-111.17	393.41	2654.29	2638.59	-67.76	-295.35	166.84	701.71	20.90	34.72	PASS
2913.00†	2862.44	-117.87	417.14	2745.34	2727.79	-74.87	-312.24	166.59	742.95	21.63	35.48	PASS
3013.00†	2959.35	-124.58	440.87	2836.40	2816.98	-81.98	-329.12	166.37	784.20	22.36	36.18	PASS
3113.00†	3056.26	-131.28	464.60	2927.45	2906.17	-89.08	-346.01	166.16	825.46	23.11	36.82	PASS
3213.00†	3153.17	-137.99	488.33	3018.51	2995.36	-96.19	-362.89	165.98	866.73	23.86	37.41	PASS
3313.00†	3250.08	-144.69	512.05	3109.56	3084.56	-103.29	-379.77	165.82	908.01	24.62	37.95	PASS
3413.00†	3347.00	-151.40	535.78	3200.61	3173.75	-110.40	-396.66	165.66	949.29	25.38	38.45	PASS
3513.00†	3443.91	-158.10	559.51	3291.67	3262.94	-117.50	-413.54	165.52	990.57	26.15	38.91	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

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

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

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

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing Surface	13.00	1800.00	1787.00	13.00	1799.45	-0.16	-82.25	-2.01	-86.66
8.5in Open Hole	1800.00	17719.88	15919.88	1799.45	N/A	-2.01	-86.66	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 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 68 of 88



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 69 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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	-0.28	-149.99	-90.11	149.99	1.36	248.72	PASS
113.00†	113.00	0.00	0.00	113.00	113.00	-0.28	-149.99	-90.11	149.99	1.69	160.43	PASS
213.00†	213.00	0.00	0.00	213.00	213.00	-0.28	-149.99	-90.11	149.99	2.26	99.04	PASS
313.00†	313.00	0.00	0.00	313.00	313.00	-0.28	-149.99	-90.11	149.99	2.87	70.62	PASS
413.00†	413.00	0.00	0.00	413.00	413.00	-0.28	-149.99	-90.11	149.99	3.48	54.67	PASS
513.00†	513.00	0.00	0.00	513.00	513.00	-0.28	-149.99	-90.11	149.99	4.11	44.54	PASS
613.00†	613.00	0.00	0.00	613.00	613.00	-0.28	-149.99	-90.11	149.99	4.73	37.56	PASS
713.00†	713.00	0.00	0.00	713.00	713.00	-0.28	-149.99	-90.11	149.99	5.35	32.46	PASS
800.00	800.00	0.00	0.00	800.00	800.00	-0.28	-149.99	-90.11	149.99	5.90	29.03	PASS
813.00†	813.00	-0.01	0.03	813.00	813.00	-0.28	-149.99	164.12	150.01	5.98	28.58	PASS
913.00†	912.97	-0.61	2.14	912.97	912.97	-0.28	-149.99	164.33	152.13	6.72	25.37	PASS
1013.00†	1012.80	-2.15	7.62	1012.80	1012.80	-0.28	-149.99	164.86	157.61	7.75	22.44	PASS
1113.00†	1112.38	-4.64	16.44	1112.38	1112.38	-0.28	-149.99	165.64	166.48	8.69	20.90	PASS
1213.00†	1211.57	-8.08	28.60	1211.57	1211.57	-0.28	-149.99	166.59	178.75	9.57	20.18	PASS
1313.00†	1310.26	-12.46	44.08	1310.26	1310.26	-0.28	-149.99	167.62	194.45	10.43	20.02	PASS
1413.00†	1408.33	-17.77	62.87	1407.80	1407.80	-0.29	-150.00	168.66	213.58	11.26	20.26	PASS
1513.00†	1505.66	-24.00	84.94	1498.29	1498.27	-0.84	-151.58	169.41	237.77	12.10	20.89	PASS
1513.75	1506.39	-24.05	85.12	1498.95	1498.94	-0.85	-151.60	169.42	237.97	12.11	20.88	PASS
1613.00†	1602.57	-30.71	108.67	1587.02	1586.89	-2.31	-155.74	169.90	266.40	12.87	21.93	PASS
1713.00†	1699.49	-37.41	132.40	1674.25	1673.83	-4.64	-162.36	170.05	297.68	13.60	23.12	PASS
1813.00†	1796.40	-44.12	156.13	1759.87	1758.92	-7.78	-171.28	169.97	331.54	14.27	24.48	PASS
1913.00†	1893.31	-50.82	179.86	1843.76	1841.99	-11.67	-182.34	169.72	367.91	14.92	25.85	PASS
2013.00†	1990.22	-57.53	203.59	1925.85	1922.90	-16.26	-195.38	169.37	406.71	15.59	27.28	PASS
2113.00†	2087.14	-64.23	227.31	2006.06	2001.54	-21.49	-210.23	168.94	447.88	16.27	28.73	PASS
2213.00†	2184.05	-70.94	251.04	2084.32	2077.83	-27.29	-226.72	168.47	491.37	16.92	30.27	PASS
2313.00†	2280.96	-77.64	274.77	2171.11	2162.06	-34.25	-246.47	167.95	536.39	17.57	31.78	PASS
2413.00†	2377.87	-84.35	298.50	2260.28	2248.58	-41.40	-266.80	167.49	581.49	18.23	33.15	PASS
2513.00†	2474.79	-91.05	322.23	2349.45	2335.10	-48.56	-287.13	167.10	626.61	18.96	34.29	PASS
2613.00†	2571.70	-97.76	345.96	2438.61	2421.62	-55.71	-307.47	166.77	671.75	19.59	35.55	PASS
2713.00†	2668.61	-104.46	369.68	2527.78	2508.14	-62.87	-327.80	166.47	716.91	20.29	36.58	PASS

C-C Clearance Distance Cutoff: 1000.00 ft





# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 70 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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†	2765.52	-111.17	393.41	2616.94	2594.67	-70.03	-348.13	166.21	762.08	21.00	37.52	PASS
2913.00†	2862.44	-117.87	417.14	2706.11	2681.19	-77.18	-368.46	165.98	807.27	21.72	38.38	PASS
3013.00†	2959.35	-124.58	440.87	2795.27	2767.71	-84.34	-388.80	165.77	852.46	22.46	39.16	PASS
3113.00†	3056.26	-131.28	464.60	2884.44	2854.23	-91.50	-409.13	165.59	897.66	23.20	39.87	PASS
3213.00†	3153.17	-137.99	488.33	2973.60	2940.75	-98.65	-429.46	165.42	942.87	23.95	40.53	PASS
3313.00†	3250.08	-144.69	512.05	3062.77	3027.27	-105.81	-449.79	165.27	988.08	24.71	41.13	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	-0.17	-91.43	-2.99	-99.45
8.5in Open Hole	1800.00	17526.80	15726.80	1798.70	N/A	-2.99	-99.45	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 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 71 of 88



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 72 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.20-T01S-R65W Slot: SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20) Well: WAKEMAN 20-17-2CDH Threshold Value=1.00 † = Interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
13.00	13.00	0.00	0.00	13.00	13.00	-0.31	-164.96	-90.11	164.96	1.36	273.67	PASS
113.00†	113.00	0.00	0.00	113.00	113.00	-0.31	-164.96	-90.11	164.96	1.69	176.50	PASS
213.00†	213.00	0.00	0.00	213.00	213.00	-0.31	-164.96	-90.11	164.96	2.26	108.95	PASS
313.00†	313.00	0.00	0.00	313.00	313.00	-0.31	-164.96	-90.11	164.96	2.87	77.69	PASS
413.00†	413.00	0.00	0.00	413.00	413.00	-0.31	-164.96	-90.11	164.96	3.49	60.15	PASS
513.00†	513.00	0.00	0.00	513.00	513.00	-0.31	-164.96	-90.11	164.96	4.11	49.01	PASS
613.00†	613.00	0.00	0.00	613.00	613.00	-0.31	-164.96	-90.11	164.96	4.73	41.32	PASS
713.00†	713.00	0.00	0.00	713.00	713.00	-0.31	-164.96	-90.11	164.96	5.35	35.71	PASS
800.00	800.00	0.00	0.00	800.00	800.00	-0.31	-164.96	-90.11	164.96	5.90	31.93	PASS
813.00†	813.00	-0.01	0.03	813.00	813.00	-0.31	-164.96	164.12	164.99	5.98	31.45	PASS
913.00†	912.97	-0.61	2.14	912.97	912.97	-0.31	-164.96	164.31	167.10	6.72	27.88	PASS
1013.00†	1012.80	-2.15	7.62	1012.80	1012.80	-0.31	-164.96	164.79	172.59	7.75	24.58	PASS
1113.00†	1112.38	-4.64	16.44	1112.38	1112.38	-0.31	-164.96	165.51	181.45	8.68	22.79	PASS
1213.00†	1211.57	-8.08	28.60	1211.57	1211.57	-0.31	-164.96	166.38	193.71	9.57	21.88	PASS
1313.00†	1310.26	-12.46	44.08	1309.61	1309.61	-0.32	-164.97	167.34	209.41	10.43	21.57	PASS
1413.00†	1408.33	-17.77	62.87	1400.82	1400.80	-0.84	-166.65	168.09	230.27	11.30	21.77	PASS
1513.00†	1505.66	-24.00	84.94	1490.00	1489.87	-2.19	-170.97	168.58	257.33	12.29	22.25	PASS
1513.75	1506.39	-24.05	85.12	1490.66	1490.52	-2.20	-171.01	168.58	257.55	12.30	22.24	PASS
1613.00†	1602.57	-30.71	108.67	1577.23	1576.79	-4.30	-177.75	168.91	288.79	12.99	23.54	PASS
1713.00†	1699.49	-37.41	132.40	1662.80	1661.83	-7.14	-186.86	168.99	322.90	13.76	24.77	PASS
1813.00†	1796.40	-44.12	156.13	1746.62	1744.81	-10.66	-198.13	168.89	359.55	14.43	26.24	PASS
1913.00†	1893.31	-50.82	179.86	1828.60	1825.60	-14.79	-211.38	168.66	398.69	15.05	27.75	PASS
2013.00†	1990.22	-57.53	203.59	1908.67	1904.10	-19.49	-226.46	168.36	440.23	15.73	29.26	PASS
2113.00†	2087.14	-64.23	227.31	1986.78	1980.22	-24.70	-243.17	168.00	484.10	16.38	30.84	PASS
2213.00†	2184.05	-70.94	251.04	2072.28	2063.14	-30.91	-263.08	167.59	529.66	17.01	32.44	PASS
2313.00†	2280.96	-77.64	274.77	2161.18	2149.34	-37.39	-283.85	167.23	575.33	17.65	33.91	PASS
2413.00†	2377.87	-84.35	298.50	2250.09	2235.54	-43.87	-304.63	166.92	621.02	18.37	35.12	PASS
2513.00†	2474.79	-91.05	322.23	2339.00	2321.74	-50.35	-325.41	166.65	666.72	18.98	36.45	PASS
2613.00†	2571.70	-97.76	345.96	2427.90	2407.94	-56.83	-346.19	166.42	712.43	19.66	37.55	PASS
2713.00†	2668.61	-104.46	369.68	2516.81	2494.14	-63.31	-366.96	166.21	758.14	20.36	38.54	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 73 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.20-T01S-R65W Slot: SLOT#12 WAKEMAN 20-17-2CDH (293'FSL & 2188'FEL, SEC.20) Well: WAKEMAN 20-17-2CDH Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
2813.00†	2765.52	-111.17	393.41	2605.72	2580.35	-69.79	-387.74	166.03	803.87	21.07	39.44	PASS
2913.00†	2862.44	-117.87	417.14	2694.63	2666.55	-76.27	-408.52	165.87	849.60	21.79	40.26	PASS
3013.00†	2959.35	-124.58	440.87	2783.53	2752.75	-82.75	-429.30	165.72	895.33	22.52	41.02	PASS
3113.00†	3056.26	-131.28	464.60	2872.44	2838.95	-89.23	-450.08	165.59	941.07	23.26	41.70	PASS
3213.00†	3153.17	-137.99	488.33	2961.35	2925.15	-95.71	-470.85	165.47	986.82	24.00	42.33	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

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

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

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

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing Surface	13.00	1800.00	1787.00	13.00	1797.47	-0.19	-100.56	-4.14	-113.22
8.5in Open Hole	1800.00	17954.40	16154.40	1797.47	N/A	-4.14	-113.22	N/A	N/A

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

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



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 74 of 88



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

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



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 75 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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	3024.66	-146.86	-2.78	3028.23	25.36	123.06	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	1843.38	-97.98	1843.38	-97.98
8.625in Casing Surface	0.00	1561.00	1561.00	18.00	1579.00	1843.38	-97.98	1843.38	-97.98
7.875in Open Hole	1561.00	8292.00	6731.00	1579.00	8310.00	1843.38	-97.98	1843.38	-97.98
4.5in Casing Production	0.00	8292.00	8292.00	18.00	8310.00	1843.38	-97.98	1843.38	-97.98

## 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 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 76 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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	-0.34	-179.96	-90.11	179.96	1.36	298.68	PASS
113.00†	113.00	0.00	0.00	113.00	113.00	-0.34	-179.96	-90.11	179.96	1.69	192.57	PASS
213.00†	213.00	0.00	0.00	213.00	213.00	-0.34	-179.96	-90.11	179.96	2.26	118.87	PASS
313.00†	313.00	0.00	0.00	313.00	313.00	-0.34	-179.96	-90.11	179.96	2.87	84.77	PASS
413.00†	413.00	0.00	0.00	413.00	413.00	-0.34	-179.96	-90.11	179.96	3.49	65.63	PASS
513.00†	513.00	0.00	0.00	513.00	513.00	-0.34	-179.96	-90.11	179.96	4.11	53.48	PASS
613.00†	613.00	0.00	0.00	613.00	613.00	-0.34	-179.96	-90.11	179.96	4.73	45.09	PASS
713.00†	713.00	0.00	0.00	713.00	713.00	-0.34	-179.96	-90.11	179.96	5.35	38.97	PASS
800.00	800.00	0.00	0.00	800.00	800.00	-0.34	-179.96	-90.11	179.96	5.90	34.85	PASS
813.00†	813.00	-0.01	0.03	813.00	813.00	-0.34	-179.96	164.12	179.99	5.98	34.32	PASS
913.00†	912.97	-0.61	2.14	912.97	912.97	-0.34	-179.96	164.29	182.11	6.72	30.39	PASS
1013.00†	1012.80	-2.15	7.62	1012.80	1012.80	-0.34	-179.96	164.73	187.59	7.75	26.73	PASS
1113.00†	1112.38	-4.64	16.44	1112.38	1112.38	-0.34	-179.96	165.39	196.45	8.68	24.68	PASS
1213.00†	1211.57	-8.08	28.60	1210.81	1210.81	-0.35	-179.98	166.20	208.73	9.57	23.59	PASS
1313.00†	1310.26	-12.46	44.08	1302.54	1302.51	-0.78	-181.74	166.90	226.26	10.48	23.20	PASS
1413.00†	1408.33	-17.77	62.87	1392.46	1392.32	-1.89	-186.24	167.42	250.13	11.51	23.18	PASS
1513.00†	1505.66	-24.00	84.94	1480.10	1479.65	-3.63	-193.25	167.77	280.14	12.50	23.78	PASS
1513.75	1506.39	-24.05	85.12	1480.74	1480.29	-3.64	-193.31	167.77	280.39	12.52	23.77	PASS
1613.00†	1602.57	-30.71	108.67	1565.56	1564.57	-5.93	-202.57	168.06	314.54	13.22	25.18	PASS
1713.00†	1699.49	-37.41	132.40	1649.23	1647.39	-8.78	-214.09	168.16	351.55	13.93	26.63	PASS
1813.00†	1796.40	-44.12	156.13	1731.02	1727.99	-12.12	-227.60	168.11	391.09	14.57	28.25	PASS
1913.00†	1893.31	-50.82	179.86	1810.87	1806.25	-15.91	-242.95	167.98	433.09	15.21	29.83	PASS
2013.00†	1990.22	-57.53	203.59	1888.72	1882.11	-20.12	-259.95	167.77	477.44	15.85	31.48	PASS
2113.00†	2087.14	-64.23	227.31	1964.55	1955.50	-24.68	-278.42	167.53	524.07	16.49	33.15	PASS
2213.00†	2184.05	-70.94	251.04	2038.32	2026.40	-29.57	-298.19	167.25	572.90	17.12	34.86	PASS
2313.00†	2280.96	-77.64	274.77	2111.32	2096.03	-34.83	-319.49	166.96	623.84	17.74	36.59	PASS
2413.00†	2377.87	-84.35	298.50	2196.80	2177.29	-41.20	-345.23	166.64	675.64	18.35	38.25	PASS
2513.00†	2474.79	-91.05	322.23	2282.28	2258.55	-47.56	-370.98	166.37	727.45	19.03	39.66	PASS
2613.00†	2571.70	-97.76	345.96	2367.76	2339.82	-53.93	-396.73	166.13	779.27	19.70	41.00	PASS
2713.00†	2668.61	-104.46	369.68	2453.24	2421.08	-60.29	-422.48	165.92	831.11	20.38	42.21	PASS

C-C Clearance Distance Cutoff: 1000.00 ft





# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 77 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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†	2765.52	-111.17	393.41	2538.73	2502.34	-66.66	-448.22	165.74	882.95	21.08	43.31	PASS	
2913.00†	2862.44	-117.87	417.14	2624.21	2583.61	-73.02	-473.97	165.57	934.79	21.79	44.31	PASS	
3013.00†	2959.35	-124.58	440.87	2709.69	2664.87	-79.39	-499.72	165.43	986.64	22.51	45.22	PASS	

C-C Clearance Distance Cutoff: 1000.00 ft

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

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

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

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing Surface	13.00	1800.00	1787.00	13.00	1795.62	-0.21	-109.71	-4.79	-128.23
8.5in Open Hole	1800.00	17835.13	16035.13	1795.62	N/A	-4.79	-128.23	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

## 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 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 78 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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	-0.37	-194.91	-90.11	194.91	1.36	323.58	PASS
113.00†	113.00	0.00	0.00	116.00	113.00	-0.37	-194.91	-90.11	194.91	1.69	208.60	PASS
213.00†	213.00	0.00	0.00	216.00	213.00	-0.37	-194.91	-90.11	194.91	2.26	128.76	PASS
313.00†	313.00	0.00	0.00	316.00	313.00	-0.37	-194.91	-90.11	194.91	2.87	91.82	PASS
413.00†	413.00	0.00	0.00	416.00	413.00	-0.37	-194.91	-90.11	194.91	3.49	71.10	PASS
513.00†	513.00	0.00	0.00	516.00	513.00	-0.37	-194.91	-90.11	194.91	4.11	57.93	PASS
613.00†	613.00	0.00	0.00	616.00	613.00	-0.37	-194.91	-90.11	194.91	4.73	48.85	PASS
713.00†	713.00	0.00	0.00	716.00	713.00	-0.37	-194.91	-90.11	194.91	5.35	42.21	PASS
800.00	800.00	0.00	0.00	803.00	800.00	-0.37	-194.91	-90.11	194.91	5.90	37.75	PASS
813.00†	813.00	-0.01	0.03	816.00	813.00	-0.37	-194.91	164.12	194.93	5.98	37.17	PASS
913.00†	912.97	-0.61	2.14	915.97	912.97	-0.37	-194.91	164.28	197.05	6.72	32.89	PASS
1013.00†	1012.80	-2.15	7.62	1014.78	1011.78	-0.38	-194.94	164.68	202.57	7.74	28.88	PASS
1113.00†	1112.38	-4.64	16.44	1107.58	1104.55	-0.77	-196.88	165.12	213.50	8.76	26.59	PASS
1213.00†	1211.57	-8.08	28.60	1199.11	1195.95	-1.75	-201.68	165.51	230.90	9.91	25.13	PASS
1313.00†	1310.26	-12.46	44.08	1288.83	1285.34	-3.27	-209.16	165.84	254.63	10.99	24.80	PASS
1413.00†	1408.33	-17.77	62.87	1376.25	1372.16	-5.29	-219.08	166.07	284.54	11.95	25.35	PASS
1513.00†	1505.66	-24.00	84.94	1460.90	1455.92	-7.74	-231.16	166.23	320.41	12.90	26.32	PASS
1513.75	1506.39	-24.05	85.12	1461.52	1456.53	-7.76	-231.26	166.23	320.70	12.92	26.31	PASS
1613.00†	1602.57	-30.71	108.67	1543.06	1536.81	-10.60	-245.19	166.46	360.49	13.59	28.03	PASS
1713.00†	1699.49	-37.41	132.40	1623.20	1615.30	-13.83	-261.07	166.55	403.07	14.24	29.84	PASS
1813.00†	1796.40	-44.12	156.13	1701.29	1691.31	-17.40	-278.60	166.54	448.05	14.88	31.66	PASS
1913.00†	1893.31	-50.82	179.86	1777.29	1764.79	-21.26	-297.61	166.47	495.34	15.51	33.51	PASS
2013.00†	1990.22	-57.53	203.59	1851.19	1835.72	-25.40	-317.91	166.35	544.85	16.09	35.37	PASS
2113.00†	2087.14	-64.23	227.31	1922.96	1904.08	-29.76	-339.34	166.20	596.49	16.71	37.23	PASS
2213.00†	2184.05	-70.94	251.04	1992.62	1969.88	-34.31	-361.74	166.04	650.16	17.31	39.13	PASS
2313.00†	2280.96	-77.64	274.77	2066.25	2038.86	-39.44	-386.95	165.84	705.66	17.92	40.97	PASS
2413.00†	2377.87	-84.35	298.50	2149.16	2116.42	-45.28	-415.67	165.64	761.52	18.54	42.67	PASS
2513.00†	2474.79	-91.05	322.23	2232.07	2193.99	-51.13	-444.38	165.47	817.39	19.19	44.20	PASS
2613.00†	2571.70	-97.76	345.96	2314.99	2271.55	-56.97	-473.10	165.33	873.27	19.85	45.58	PASS
2713.00†	2668.61	-104.46	369.68	2397.90	2349.11	-62.81	-501.81	165.20	929.15	20.54	46.82	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 79 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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†	2765.52	-111.17	393.41	2480.81	2426.67	-68.65	-530.53	165.08	985.03	21.24	47.95	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	-0.22	-118.81	-6.97	-151.96
8.5in Open Hole	1800.00	18013.26	16213.26	1789.64	N/A	-6.97	-151.96	N/A	N/A

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

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

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

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



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 80 of 88



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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	-0.36	-209.96	-90.10	209.96	1.36	348.68	PASS
113.00†	113.00	0.00	0.00	116.00	113.00	-0.36	-209.96	-90.10	209.96	1.69	224.77	PASS
213.00†	213.00	0.00	0.00	216.00	213.00	-0.36	-209.96	-90.10	209.96	2.26	138.74	PASS
313.00†	313.00	0.00	0.00	316.00	313.00	-0.36	-209.96	-90.10	209.96	2.87	98.94	PASS
413.00†	413.00	0.00	0.00	416.00	413.00	-0.36	-209.96	-90.10	209.96	3.49	76.61	PASS
513.00†	513.00	0.00	0.00	516.00	513.00	-0.36	-209.96	-90.10	209.96	4.11	62.42	PASS
613.00†	613.00	0.00	0.00	616.00	613.00	-0.36	-209.96	-90.10	209.96	4.73	52.63	PASS
713.00†	713.00	0.00	0.00	716.00	713.00	-0.36	-209.96	-90.10	209.96	5.35	45.49	PASS
800.00	800.00	0.00	0.00	803.00	800.00	-0.36	-209.96	-90.10	209.96	5.90	40.68	PASS
813.00†	813.00	-0.01	0.03	816.00	813.00	-0.36	-209.96	164.13	209.99	5.98	40.06	PASS
913.00†	912.97	-0.61	2.14	914.89	911.89	-0.37	-210.00	164.27	212.15	6.72	35.44	PASS
1013.00†	1012.80	-2.15	7.62	1007.73	1004.70	-0.74	-211.95	164.51	219.72	7.83	30.95	PASS
1113.00†	1112.38	-4.64	16.44	1099.60	1096.44	-1.68	-216.79	164.75	233.79	9.07	28.03	PASS
1213.00†	1211.57	-8.08	28.60	1189.94	1186.44	-3.14	-224.36	164.98	254.25	10.20	26.84	PASS
1313.00†	1310.26	-12.46	44.08	1278.23	1274.13	-5.08	-234.44	165.17	280.96	11.26	26.69	PASS
1413.00†	1408.33	-17.77	62.87	1364.00	1358.97	-7.46	-246.78	165.31	313.73	12.18	27.38	PASS
1513.00†	1505.66	-24.00	84.94	1446.83	1440.52	-10.22	-261.05	165.40	352.35	13.07	28.55	PASS
1513.75	1506.39	-24.05	85.12	1447.44	1441.11	-10.24	-261.17	165.40	352.66	13.09	28.54	PASS
1613.00†	1602.57	-30.71	108.67	1527.05	1519.05	-13.31	-277.08	165.62	395.07	13.75	30.34	PASS
1713.00†	1699.49	-37.41	132.40	1605.19	1595.09	-16.72	-294.76	165.72	440.22	14.39	32.24	PASS
1813.00†	1796.40	-44.12	156.13	1681.23	1668.58	-20.41	-313.91	165.74	487.68	15.02	34.15	PASS
1913.00†	1893.31	-50.82	179.86	1755.14	1739.50	-24.35	-334.36	165.70	537.38	15.64	36.06	PASS
2013.00†	1990.22	-57.53	203.59	1826.92	1807.83	-28.51	-355.93	165.62	589.20	16.21	37.97	PASS
2113.00†	2087.14	-64.23	227.31	1896.58	1873.60	-32.86	-378.46	165.51	643.07	16.80	39.93	PASS
2213.00†	2184.05	-70.94	251.04	1964.13	1936.82	-37.36	-401.80	165.38	698.89	17.45	41.69	PASS
2313.00†	2280.96	-77.64	274.77	2035.12	2002.70	-42.37	-427.79	165.23	756.48	17.99	43.73	PASS
2413.00†	2377.87	-84.35	298.50	2116.56	2078.12	-48.19	-457.95	165.07	814.48	18.62	45.43	PASS
2513.00†	2474.79	-91.05	322.23	2198.01	2153.55	-54.01	-488.12	164.94	872.48	19.27	46.96	PASS
2613.00†	2571.70	-97.76	345.96	2279.45	2228.98	-59.83	-518.29	164.82	930.49	19.94	48.34	PASS
2713.00†	2668.61	-104.46	369.68	2360.89	2304.40	-65.65	-548.45	164.71	988.50	20.63	49.59	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 81 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

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

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

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

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing Surface	16.00	1800.00	1784.00	16.00	1785.27	-0.22	-127.99	-8.31	-169.96
8.5in Open Hole	1800.00	17822.97	16022.97	1785.27	7230.00	-8.31	-169.96	3041.18	-934.54

## 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 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 82 of 88



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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	-0.46	-224.91	-90.12	224.91	1.36	373.59	PASS
113.00†	113.00	0.00	0.00	113.00	113.00	-0.46	-224.91	-90.12	224.91	1.69	240.81	PASS
213.00†	213.00	0.00	0.00	213.00	213.00	-0.46	-224.91	-90.12	224.91	2.26	148.64	PASS
313.00†	313.00	0.00	0.00	313.00	313.00	-0.46	-224.91	-90.12	224.91	2.87	106.00	PASS
413.00†	413.00	0.00	0.00	413.00	413.00	-0.46	-224.91	-90.12	224.91	3.49	82.08	PASS
513.00†	513.00	0.00	0.00	513.00	513.00	-0.46	-224.91	-90.12	224.91	4.11	66.88	PASS
613.00†	613.00	0.00	0.00	613.00	613.00	-0.46	-224.91	-90.12	224.91	4.73	56.39	PASS
713.00†	713.00	0.00	0.00	713.00	713.00	-0.46	-224.91	-90.12	224.91	5.35	48.73	PASS
800.00	800.00	0.00	0.00	800.00	800.00	-0.46	-224.91	-90.12	224.91	5.90	43.59	PASS
813.00†	813.00	-0.01	0.03	812.07	812.07	-0.47	-224.93	164.10	224.96	5.98	42.95	PASS
913.00†	912.97	-0.61	2.14	904.74	904.72	-0.79	-226.79	164.14	229.09	6.82	37.67	PASS
1013.00†	1012.80	-2.15	7.62	996.75	996.60	-1.62	-231.56	164.23	239.73	8.17	32.21	PASS
1113.00†	1112.38	-4.64	16.44	1087.53	1087.05	-2.93	-239.11	164.35	256.81	9.38	29.67	PASS
1213.00†	1211.57	-8.08	28.60	1176.54	1175.46	-4.68	-249.25	164.48	280.21	10.49	28.69	PASS
1313.00†	1310.26	-12.46	44.08	1263.28	1261.26	-6.85	-261.74	164.60	309.77	11.43	28.94	PASS
1413.00†	1408.33	-17.77	62.87	1347.31	1343.98	-9.37	-276.26	164.70	345.29	12.37	29.67	PASS
1513.00†	1505.66	-24.00	84.94	1428.25	1423.22	-12.19	-292.51	164.75	386.53	13.27	30.82	PASS
1513.75	1506.39	-24.05	85.12	1428.84	1423.80	-12.21	-292.64	164.75	386.86	13.29	30.80	PASS
1613.00†	1602.57	-30.71	108.67	1506.46	1499.32	-15.27	-310.30	164.98	431.78	13.91	32.77	PASS
1713.00†	1699.49	-37.41	132.40	1582.56	1572.86	-18.62	-329.57	165.12	479.37	14.53	34.74	PASS
1813.00†	1796.40	-44.12	156.13	1656.52	1643.81	-22.18	-350.13	165.17	529.21	15.15	36.72	PASS
1913.00†	1893.31	-50.82	179.86	1728.33	1712.17	-25.94	-371.81	165.18	581.18	15.76	38.68	PASS
2013.00†	1990.22	-57.53	203.59	1798.00	1777.94	-29.87	-394.46	165.14	635.21	16.35	40.69	PASS
2113.00†	2087.14	-64.23	227.31	1865.55	1841.15	-33.94	-417.92	165.08	691.19	16.98	42.44	PASS
2213.00†	2184.05	-70.94	251.04	1931.36	1902.18	-38.15	-442.17	165.00	749.05	17.46	44.66	PASS
2313.00†	2280.96	-77.64	274.77	2012.30	1976.91	-43.46	-472.81	164.89	807.77	18.08	46.46	PASS
2413.00†	2377.87	-84.35	298.50	2093.23	2051.63	-48.78	-503.44	164.80	866.49	18.72	48.08	PASS
2513.00†	2474.79	-91.05	322.23	2174.17	2126.36	-54.09	-534.08	164.73	925.22	19.37	49.54	PASS
2613.00†	2571.70	-97.76	345.96	2255.10	2201.08	-59.40	-564.71	164.66	983.94	20.04	50.86	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 83 of 88



REFERENCE WELLPATH IDENTIFICATION			
Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

POSITIONAL UNCERTAINTY - Offset Wellbore: WAKEMAN 20-17-1CDH PWB Offset Wellpath: WAKEMAN 20-17-1CDH PWP (REV-A.0)				
Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: WAKEMAN 20-17-1CDH PWB Offset Wellpath: WAKEMAN 20-17-1CDH PWP (REV-A.0)									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing Surface	13.00	1800.00	1787.00	13.00	1779.82	-0.28	-137.10	-9.28	-188.99
8.5in Open Hole	1800.00	18287.12	16487.12	1779.82	7638.00	-9.28	-188.99	3041.22	-969.57

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 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 84 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.20-T1S-R65W Slot: SLOT#02 EX. COLLINS HH #20-3J (814'FNL & 1886'FWL, SEC.20,8163, PR) Well: COLLINS HH #20-3J Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
13.00	13.00	0.00	0.00	-13.00	49.00	4193.70	-1459.84	-19.19	4440.67	25.36	180.48	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

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

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

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

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
12.25in Open Hole	0.00	1529.00	1529.00	49.00	1578.00	2552.36	-901.57	2552.36	-901.57
8.625in Casing Surface	0.00	1529.00	1529.00	49.00	1578.00	2552.36	-901.57	2552.36	-901.57
7.875in Open Hole	1529.00	8141.00	6612.00	1578.00	8190.00	2552.36	-901.57	2552.36	-901.57
4.5in Casing Production	0.00	8141.00	8141.00	49.00	8190.00	2552.36	-901.57	2552.36	-901.57

## 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 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 85 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH PWB
Facility	SEC.20-T01S-R65W		

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

Facility: SEC.17-T1S-R65W Slot: SLOT#02 EX. AMOCO #24-17 (990'FSL & 1360'FWL,SEC.17,OG,PR,8130) Well: AMOCO #24-17 Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
13.00	13.00	0.00	0.00	-13.00	73.00	5966.58	-1997.45	-18.51	6292.33	25.36	255.75	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

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

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

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

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
12.25in Open Hole	0.00	218.00	218.00	73.00	291.00	3631.60	-1234.18	3631.60	-1234.18
8.625in Casing Surface	0.00	218.00	218.00	73.00	291.00	3631.60	-1234.18	3631.60	-1234.18
7.875in Open Hole	218.00	8129.00	7911.00	291.00	8202.00	3631.60	-1234.18	3631.60	-1234.18
4.5in Casing Production	0.00	8129.00	8129.00	73.00	8202.00	3631.60	-1234.18	3631.60	-1234.18

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

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

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

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



# Clearance Report

WAKEMAN 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 86 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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	6832.21	-2952.84	-23.37	7443.32	25.36	302.53	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

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

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

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

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
11in Open Hole	0.00	1450.00	1450.00	81.00	1531.00	4156.67	-1818.90	4156.67	-1818.90
8.625in Casing Surface	0.00	1450.00	1450.00	81.00	1531.00	4156.67	-1818.90	4156.67	-1818.90
7.875in Open Hole	1450.00	8150.00	6700.00	1531.00	N/A	4156.67	-1818.90	N/A	N/A
4.5in Casing Production	0.00	8150.00	8150.00	81.00	N/A	4156.67	-1818.90	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 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 87 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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	9200.17	-4442.52	-25.78	10217.01	25.36	415.28	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 20-17-4CDH PWB (REV-A.0)  
Closest Approach  
Page 88 of 88



## REFERENCE WELLPATH IDENTIFICATION

Operator	PETROSHARE	Slot	SLOT#01 WAKEMAN 20-17-4CDH (293'FSL & 2023'FEL, SEC.20)
Area	COLORADO	Well	WAKEMAN 20-17-4CDH
Field	ADAMS COUNTY (NAD83/ GRID NORTH)	Wellbore	WAKEMAN 20-17-4CDH 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
13.00	13.00	0.00	0.00	-13.00	17.00	703.40	-2294.41	-72.96	2399.81	25.36	97.52	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

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

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

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

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
12.25in Open Hole	0.00	150.00	150.00	17.00	167.00	422.43	-1400.59	422.43	-1400.59
8.625in Casing Surface	0.00	150.00	150.00	17.00	167.00	422.43	-1400.59	422.43	-1400.59
7.875in Open Hole	150.00	8194.00	8044.00	167.00	8211.00	422.43	-1400.59	422.43	-1400.59
4.5in Casing Production	0.00	8194.00	8194.00	17.00	8211.00	422.43	-1400.59	422.43	-1400.59

## 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