

# AUGUSTUS

Location: COLORADO Slot: SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)  
Field: RIO BLANCO COUNTY Well: BHR FED J22-15-397-4RH  
Facility: SEC.22-T03N-R97W Wellbore: BHR FED J22-15-397-4RH PWB

Plot reference wellpath is BHR FED J22-15-397-4RH (REV-A.0) PWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to XTREME X18 (17KB) (RKB)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to XTREME X18 (17KB) (RKB)	North Reference: True north
XTREME X18 (17KB) (RKB) to Mean Sea Level: 5955 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: adamkat on 2017-11-13
	Database: Denver

## Location Information

Facility Name			Grid East (US)	Grid North (US)	Latitude	Longitude
SEC.22-T03N-R97W			2226533.777	1332099.886	40°12'43.578"N	108°15'33.055"W
Slot	Local N (ft)	Local E (ft)	Grid East (US)	Grid North (US)	Latitude	Longitude
SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)	-26.11	-160.98	2226572.067	1332078.801	40°12'43.320"N	108°15'36.130"W
XTREME X18 (17KB) (RKB) to Mud line (At Slot: SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22))						5955
Mean Sea Level to Mud line (At Slot: SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22))						0
XTREME X18 (17KB) (RKB) to Mean Sea Level						5955

## Well Profile Data

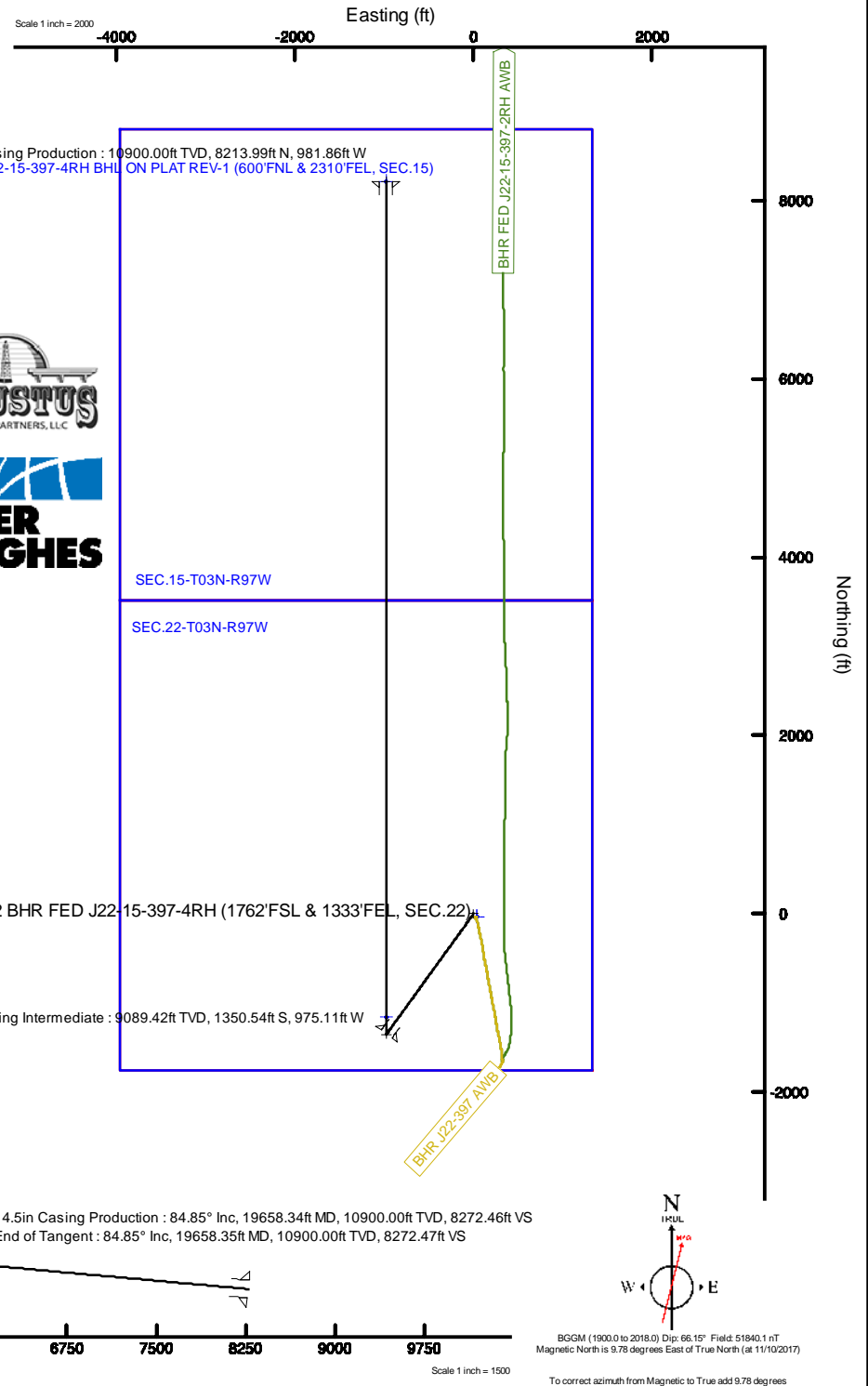
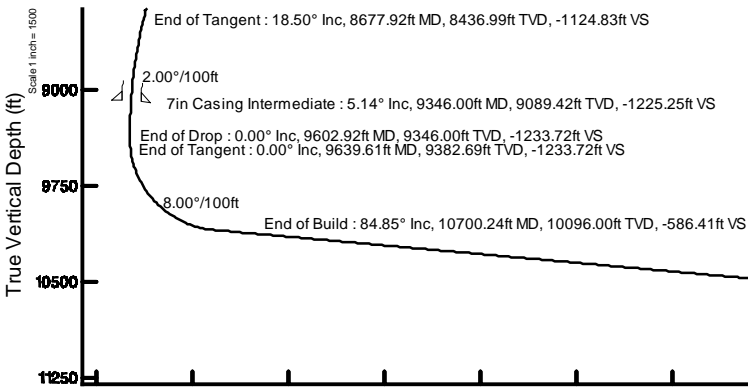
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	17.00	0.000	215.830	17.00	0.00	0.00	0.00	0.00
End of Tangent	3400.00	0.000	215.830	3400.00	0.00	0.00	0.00	0.00
End of Build	4325.00	18.500	215.830	4309.01	-120.03	-86.66	2.00	-108.89
End of Tangent	8677.92	18.500	215.830	8436.99	-1239.85	-895.19	0.00	-1124.83
End of Drop	9602.92	0.000	360.000	9346.00	-1359.87	-981.85	2.00	-1233.72
End of Tangent	9639.61	0.000	360.000	9382.69	-1359.87	-981.85	0.00	-1233.72
End of Build	10700.24	84.851	360.000	10096.00	-707.95	-981.85	8.00	-586.41
End of Tangent	19658.35	84.851	360.000	10900.00	8213.99	-981.86	0.00	8272.47

## Bottom Hole Location

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
19658.35	84.851	360.000	10900.00	8213.99	-981.86	2226646.31	1340319.00	40°14'04.490"N	108°15'47.790"W

## Survey Program

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	19658.35	BHI NaviTrak	BHI NaviTrak (Rotating)		BHR FED J22-15-397-4RH PWB



# Planned Wellpath Report

BHR FED J22-15-397-4RH (REV-A.0) PWP

Page 1 of 8



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.0
North Reference	True	User	Adamkat
Scale	0.999957	Report Generated	11/13/2017 at 9:33:48 AM
Convergence at slot	1.79° West	Database/Source file	Denver/BHR_FED_J22-15-397-4RH_REV-A.0_PWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-26.11	-160.98	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W
Facility Reference Pt			2229533.78	1332099.89	40°12'43.578"N	108°15'33.055"W
Field Reference Pt			2234560.64	1331098.80	40°12'35.230"N	108°14'27.890"W

WELLPATH DATUM			
Calculation method	Minimum curvature	XTREME X18 (17'KB) (RKB) to Facility Vertical Datum	5955.00ft
Horizontal Reference Pt	Slot	XTREME X18 (17'KB) (RKB) to Mean Sea Level	5955.00ft
Vertical Reference Pt	XTREME X18 (17'KB) (RKB)	XTREME X18 (17'KB) (RKB) to Mud Line at Slot (SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22))	5955.00ft
MD Reference Pt	XTREME X18 (17'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	353.18°

# Planned Wellpath Report

BHR FED J22-15-397-4RH (REV-A.0) PWP

Page 2 of 8



## REFERENCE WELLPATH IDENTIFICATION

Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

## WELLPATH DATA (205 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	215.830	0.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
17.00	0.000	215.830	17.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	Tie On
117.00†	0.000	215.830	117.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
217.00†	0.000	215.830	217.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
317.00†	0.000	215.830	317.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
417.00†	0.000	215.830	417.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
517.00†	0.000	215.830	517.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
617.00†	0.000	215.830	617.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
717.00†	0.000	215.830	717.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
817.00†	0.000	215.830	817.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
917.00†	0.000	215.830	917.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
1017.00†	0.000	215.830	1017.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
1117.00†	0.000	215.830	1117.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
1217.00†	0.000	215.830	1217.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
1317.00†	0.000	215.830	1317.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
1417.00†	0.000	215.830	1417.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
1517.00†	0.000	215.830	1517.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
1617.00†	0.000	215.830	1617.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
1717.00†	0.000	215.830	1717.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
1817.00†	0.000	215.830	1817.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
1917.00†	0.000	215.830	1917.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
2017.00†	0.000	215.830	2017.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
2117.00†	0.000	215.830	2117.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
2217.00†	0.000	215.830	2217.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
2317.00†	0.000	215.830	2317.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
2417.00†	0.000	215.830	2417.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
2517.00†	0.000	215.830	2517.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
2617.00†	0.000	215.830	2617.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
2717.00†	0.000	215.830	2717.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
2817.00†	0.000	215.830	2817.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
2917.00†	0.000	215.830	2917.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
3017.00†	0.000	215.830	3017.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
3117.00†	0.000	215.830	3117.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
3217.00†	0.000	215.830	3217.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
3317.00†	0.000	215.830	3317.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	
3400.00	0.000	215.830	3400.00	0.00	0.00	0.00	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W	0.00	End of Tangent
3417.00†	0.340	215.830	3417.00	-0.04	-0.04	-0.03	2229372.04	1332078.76	40°12'43.320"N	108°15'35.130"W	2.00	
3517.00†	2.340	215.830	3516.97	-1.76	-1.94	-1.40	2229370.61	1332076.91	40°12'43.301"N	108°15'35.148"W	2.00	
3617.00†	4.340	215.830	3616.79	-6.04	-6.66	-4.81	2229367.05	1332072.29	40°12'43.254"N	108°15'35.192"W	2.00	
3717.00†	6.340	215.830	3716.35	-12.89	-14.21	-10.26	2229361.37	1332064.92	40°12'43.180"N	108°15'35.262"W	2.00	
3817.00†	8.340	215.830	3815.53	-22.28	-24.56	-17.73	2229353.58	1332054.80	40°12'43.077"N	108°15'35.359"W	2.00	
3917.00†	10.340	215.830	3914.20	-34.22	-37.72	-27.23	2229343.67	1332041.95	40°12'42.947"N	108°15'35.481"W	2.00	
4017.00†	12.340	215.830	4012.24	-48.68	-53.66	-38.74	2229331.67	1332026.37	40°12'42.790"N	108°15'35.629"W	2.00	
4117.00†	14.340	215.830	4109.54	-65.65	-72.37	-52.25	2229317.59	1332008.10	40°12'42.605"N	108°15'35.803"W	2.00	
4217.00†	16.340	215.830	4205.97	-85.11	-93.81	-67.74	2229301.45	1331987.14	40°12'42.393"N	108°15'36.003"W	2.00	

# Planned Wellpath Report

BHR FED J22-15-397-4RH (REV-A.0) PWP  
Page 3 of 8



REFERENCE WELLPATH IDENTIFICATION				
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)	
Area	COLORADO	Well	BHR FED J22-15-397-4RH	
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB	
Facility	SEC.22-T03N-R97W			

WELLPATH DATA (205 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4317.00†	18.340	215.830	4301.42	-107.03	-117.98	-85.18	2229283.26	1331963.54	40°12'42.154"N	108°15'36.228"W	2.00	
4325.00	18.500	215.830	4309.01	-108.89	-120.03	-86.66	2229281.72	1331961.53	40°12'42.134"N	108°15'36.247"W	2.00	End of Build
4417.00†	18.500	215.830	4396.26	-130.36	-143.69	-103.75	2229263.90	1331938.41	40°12'41.900"N	108°15'36.467"W	0.00	
4517.00†	18.500	215.830	4491.09	-153.70	-169.42	-122.32	2229244.54	1331913.28	40°12'41.646"N	108°15'36.707"W	0.00	
4617.00†	18.500	215.830	4585.92	-177.04	-195.15	-140.90	2229225.17	1331888.14	40°12'41.392"N	108°15'36.946"W	0.00	
4717.00†	18.500	215.830	4680.75	-200.38	-220.87	-159.47	2229205.81	1331863.01	40°12'41.137"N	108°15'37.186"W	0.00	
4817.00†	18.500	215.830	4775.59	-223.72	-246.60	-178.05	2229186.44	1331837.87	40°12'40.883"N	108°15'37.425"W	0.00	
4917.00†	18.500	215.830	4870.42	-247.06	-272.32	-196.62	2229167.08	1331812.74	40°12'40.629"N	108°15'37.664"W	0.00	
5017.00†	18.500	215.830	4965.25	-270.40	-298.05	-215.20	2229147.71	1331787.61	40°12'40.375"N	108°15'37.904"W	0.00	
5117.00†	18.500	215.830	5060.08	-293.74	-323.77	-233.77	2229128.35	1331762.47	40°12'40.120"N	108°15'38.143"W	0.00	
5217.00†	18.500	215.830	5154.92	-317.08	-349.50	-252.35	2229108.98	1331737.34	40°12'39.866"N	108°15'38.383"W	0.00	
5317.00†	18.500	215.830	5249.75	-340.42	-375.23	-270.92	2229089.62	1331712.20	40°12'39.612"N	108°15'38.622"W	0.00	
5417.00†	18.500	215.830	5344.58	-363.76	-400.95	-289.49	2229070.25	1331687.07	40°12'39.358"N	108°15'38.861"W	0.00	
5517.00†	18.500	215.830	5439.41	-387.10	-426.68	-308.07	2229050.89	1331661.94	40°12'39.104"N	108°15'39.101"W	0.00	
5617.00†	18.500	215.830	5534.25	-410.43	-452.40	-326.64	2229031.52	1331636.80	40°12'38.849"N	108°15'39.340"W	0.00	
5717.00†	18.500	215.830	5629.08	-433.77	-478.13	-345.22	2229012.16	1331611.67	40°12'38.595"N	108°15'39.580"W	0.00	
5817.00†	18.500	215.830	5723.91	-457.11	-503.85	-363.79	2228992.79	1331586.53	40°12'38.341"N	108°15'39.819"W	0.00	
5917.00†	18.500	215.830	5818.74	-480.45	-529.58	-382.37	2228973.43	1331561.40	40°12'38.087"N	108°15'40.058"W	0.00	
6017.00†	18.500	215.830	5913.57	-503.79	-555.31	-400.94	2228954.06	1331536.27	40°12'37.832"N	108°15'40.298"W	0.00	
6117.00†	18.500	215.830	6008.41	-527.13	-581.03	-419.52	2228934.69	1331511.13	40°12'37.578"N	108°15'40.537"W	0.00	
6217.00†	18.500	215.830	6103.24	-550.47	-606.76	-438.09	2228915.33	1331486.00	40°12'37.324"N	108°15'40.777"W	0.00	
6317.00†	18.500	215.830	6198.07	-573.81	-632.48	-456.66	2228895.96	1331460.86	40°12'37.070"N	108°15'41.016"W	0.00	
6417.00†	18.500	215.830	6292.90	-597.15	-658.21	-475.24	2228876.60	1331435.73	40°12'36.816"N	108°15'41.255"W	0.00	
6517.00†	18.500	215.830	6387.74	-620.49	-683.93	-493.81	2228857.23	1331410.59	40°12'36.561"N	108°15'41.495"W	0.00	
6617.00†	18.500	215.830	6482.57	-643.83	-709.66	-512.39	2228837.87	1331385.46	40°12'36.307"N	108°15'41.734"W	0.00	
6717.00†	18.500	215.830	6577.40	-667.17	-735.39	-530.96	2228818.50	1331360.33	40°12'36.053"N	108°15'41.974"W	0.00	
6817.00†	18.500	215.830	6672.23	-690.51	-761.11	-549.54	2228799.14	1331335.19	40°12'35.799"N	108°15'42.213"W	0.00	
6917.00†	18.500	215.830	6767.07	-713.85	-786.84	-568.11	2228779.77	1331310.06	40°12'35.544"N	108°15'42.452"W	0.00	
7017.00†	18.500	215.830	6861.90	-737.18	-812.56	-586.69	2228760.41	1331284.92	40°12'35.290"N	108°15'42.692"W	0.00	
7117.00†	18.500	215.830	6956.73	-760.52	-838.29	-605.26	2228741.04	1331259.79	40°12'35.036"N	108°15'42.931"W	0.00	
7217.00†	18.500	215.830	7051.56	-783.86	-864.01	-623.83	2228721.68	1331234.66	40°12'34.782"N	108°15'43.171"W	0.00	
7317.00†	18.500	215.830	7146.40	-807.20	-889.74	-642.41	2228702.31	1331209.52	40°12'34.528"N	108°15'43.410"W	0.00	
7417.00†	18.500	215.830	7241.23	-830.54	-915.46	-660.98	2228682.95	1331184.39	40°12'34.273"N	108°15'43.649"W	0.00	
7517.00†	18.500	215.830	7336.06	-853.88	-941.19	-679.56	2228663.58	1331159.25	40°12'34.019"N	108°15'43.889"W	0.00	
7617.00†	18.500	215.830	7430.89	-877.22	-966.92	-698.13	2228644.22	1331134.12	40°12'33.765"N	108°15'44.128"W	0.00	
7717.00†	18.500	215.830	7525.72	-900.56	-992.64	-716.71	2228624.85	1331108.98	40°12'33.511"N	108°15'44.368"W	0.00	
7817.00†	18.500	215.830	7620.56	-923.90	-1018.37	-735.28	2228605.49	1331083.85	40°12'33.256"N	108°15'44.607"W	0.00	
7917.00†	18.500	215.830	7715.39	-947.24	-1044.09	-753.86	2228586.12	1331058.72	40°12'33.002"N	108°15'44.846"W	0.00	
8017.00†	18.500	215.830	7810.22	-970.58	-1069.82	-772.43	2228566.76	1331033.58	40°12'32.748"N	108°15'45.086"W	0.00	
8117.00†	18.500	215.830	7905.05	-993.92	-1095.54	-791.00	2228547.39	1331008.45	40°12'32.494"N	108°15'45.325"W	0.00	
8217.00†	18.500	215.830	7999.89	-1017.26	-1121.27	-809.58	2228528.03	1330983.31	40°12'32.240"N	108°15'45.565"W	0.00	
8317.00†	18.500	215.830	8094.72	-1040.59	-1147.00	-828.15	2228508.66	1330958.18	40°12'31.985"N	108°15'45.804"W	0.00	
8417.00†	18.500	215.830	8189.55	-1063.93	-1172.72	-846.73	2228489.30	1330933.05	40°12'31.731"N	108°15'46.043"W	0.00	
8517.00†	18.500	215.830	8284.38	-1087.27	-1198.45	-865.30	2228469.93	1330907.91	40°12'31.477"N	108°15'46.283"W	0.00	
8617.00†	18.500	215.830	8379.22	-1110.61	-1224.17	-883.88	2228450.57	1330882.78	40°12'31.223"N	108°15'46.522"W	0.00	

# Planned Wellpath Report

BHR FED J22-15-397-4RH (REV-A.0) PWP  
Page 4 of 8



## REFERENCE WELLPATH IDENTIFICATION

Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

## WELLPATH DATA (205 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8677.92	18.500	215.830	8436.99	-1124.83	-1239.85	-895.19	2228438.77	1330867.47	40°12'31.068"N	108°15'46.668"W	0.00	End of Tangent
8717.00†	17.718	215.830	8474.13	-1133.77	-1249.69	-902.30	2228431.36	1330857.84	40°12'30.970"N	108°15'46.760"W	2.00	
8817.00†	15.718	215.830	8569.90	-1154.92	-1273.02	-919.14	2228413.80	1330835.06	40°12'30.740"N	108°15'46.977"W	2.00	
8917.00†	13.718	215.830	8666.61	-1173.61	-1293.61	-934.01	2228398.30	1330814.93	40°12'30.536"N	108°15'47.168"W	2.00	
9017.00†	11.718	215.830	8764.16	-1189.80	-1311.46	-946.90	2228384.86	1330797.50	40°12'30.360"N	108°15'47.335"W	2.00	
9117.00†	9.718	215.830	8862.41	-1203.48	-1326.54	-957.79	2228373.51	1330782.76	40°12'30.211"N	108°15'47.475"W	2.00	
9217.00†	7.718	215.830	8961.24	-1214.63	-1338.83	-966.66	2228364.26	1330770.76	40°12'30.090"N	108°15'47.589"W	2.00	
9317.00†	5.718	215.830	9060.55	-1223.24	-1348.31	-973.51	2228357.12	1330761.49	40°12'29.996"N	108°15'47.677"W	2.00	
9417.00†	3.718	215.830	9160.21	-1229.29	-1354.98	-978.32	2228352.10	1330754.98	40°12'29.930"N	108°15'47.739"W	2.00	
9517.00†	1.718	215.830	9260.09	-1232.78	-1358.83	-981.10	2228349.21	1330751.22	40°12'29.892"N	108°15'47.775"W	2.00	
9602.92	0.000	360.000	9346.00	-1233.72	-1359.87	-981.85	2228348.42	1330750.20	40°12'29.882"N	108°15'47.785"W	2.00	End of Drop
9617.00†	0.000	360.000	9360.08	-1233.72	-1359.87	-981.85	2228348.42	1330750.20	40°12'29.882"N	108°15'47.785"W	0.00	
9639.61	0.000	360.000	9382.69	-1233.72	-1359.87	-981.85	2228348.42	1330750.20	40°12'29.882"N	108°15'47.785"W	0.00	End of Tangent
9717.00†	6.191	360.000	9459.93	-1229.58	-1355.69	-981.85	2228348.55	1330754.37	40°12'29.923"N	108°15'47.785"W	8.00	
9817.00†	14.191	360.000	9558.27	-1212.02	-1338.02	-981.85	2228349.10	1330772.04	40°12'30.098"N	108°15'47.785"W	8.00	
9917.00†	22.191	360.000	9653.20	-1181.05	-1306.82	-981.85	2228350.07	1330803.22	40°12'30.406"N	108°15'47.785"W	8.00	
10017.00†	30.191	360.000	9742.86	-1137.26	-1262.72	-981.85	2228351.44	1330847.30	40°12'30.842"N	108°15'47.785"W	8.00	
10117.00†	38.191	360.000	9825.50	-1081.51	-1206.57	-981.85	2228353.19	1330903.42	40°12'31.397"N	108°15'47.785"W	8.00	
10217.00†	46.191	360.000	9899.54	-1014.88	-1139.47	-981.85	2228355.28	1330970.49	40°12'32.060"N	108°15'47.785"W	8.00	
10317.00†	54.191	360.000	9963.51	-938.66	-1062.71	-981.85	2228357.67	1331047.20	40°12'32.818"N	108°15'47.785"W	8.00	
10417.00†	62.191	360.000	10016.17	-854.35	-977.80	-981.85	2228360.31	1331132.07	40°12'33.657"N	108°15'47.785"W	8.00	
10517.00†	70.191	360.000	10056.51	-763.58	-886.38	-981.85	2228363.15	1331223.44	40°12'34.561"N	108°15'47.785"W	8.00	
10617.00†	78.191	360.000	10083.73	-668.12	-790.24	-981.85	2228366.14	1331319.53	40°12'35.511"N	108°15'47.785"W	8.00	
10700.24	84.851	360.000	10096.00	-586.41	-707.95	-981.85	2228368.70	1331401.77	40°12'36.324"N	108°15'47.785"W	8.00	End of Build
10717.00†	84.851	360.000	10097.50	-569.84	-691.27	-981.85	2228369.22	1331418.45	40°12'36.489"N	108°15'47.785"W	0.00	
10817.00†	84.851	360.000	10106.48	-470.95	-591.67	-981.85	2228372.32	1331517.99	40°12'37.473"N	108°15'47.785"W	0.00	
10917.00†	84.851	360.000	10115.45	-372.06	-492.07	-981.85	2228375.42	1331617.54	40°12'38.457"N	108°15'47.785"W	0.00	
11017.00†	84.851	360.000	10124.43	-273.17	-392.48	-981.85	2228378.52	1331717.08	40°12'39.441"N	108°15'47.786"W	0.00	
11117.00†	84.851	360.000	10133.40	-174.27	-292.88	-981.85	2228381.62	1331816.63	40°12'40.426"N	108°15'47.786"W	0.00	
11217.00†	84.851	360.000	10142.38	-75.38	-193.28	-981.85	2228384.72	1331916.17	40°12'41.410"N	108°15'47.786"W	0.00	
11317.00†	84.851	360.000	10151.35	23.51	-93.69	-981.85	2228387.82	1332015.71	40°12'42.394"N	108°15'47.786"W	0.00	
11417.00†	84.851	360.000	10160.33	122.40	5.91	-981.85	2228390.92	1332115.26	40°12'43.378"N	108°15'47.786"W	0.00	
11517.00†	84.851	360.000	10169.30	221.30	105.50	-981.85	2228394.02	1332214.80	40°12'44.362"N	108°15'47.786"W	0.00	
11617.00†	84.851	360.000	10178.28	320.19	205.10	-981.85	2228397.11	1332314.34	40°12'45.347"N	108°15'47.786"W	0.00	
11717.00†	84.851	360.000	10187.25	419.08	304.70	-981.85	2228400.21	1332413.89	40°12'46.331"N	108°15'47.786"W	0.00	
11817.00†	84.851	360.000	10196.23	517.97	404.29	-981.85	2228403.31	1332513.43	40°12'47.315"N	108°15'47.786"W	0.00	
11917.00†	84.851	360.000	10205.20	616.86	503.89	-981.86	2228406.41	1332612.98	40°12'48.299"N	108°15'47.786"W	0.00	
12017.00†	84.851	360.000	10214.18	715.76	603.49	-981.86	2228409.51	1332712.52	40°12'49.283"N	108°15'47.786"W	0.00	
12117.00†	84.851	360.000	10223.15	814.65	703.08	-981.86	2228412.61	1332812.06	40°12'50.268"N	108°15'47.786"W	0.00	
12217.00†	84.851	360.000	10232.13	913.54	802.68	-981.86	2228415.71	1332911.61	40°12'51.252"N	108°15'47.786"W	0.00	
12317.00†	84.851	360.000	10241.10	1012.43	902.28	-981.86	2228418.81	1333011.15	40°12'52.236"N	108°15'47.786"W	0.00	
12417.00†	84.851	360.000	10250.08	1111.33	1001.87	-981.86	2228421.91	1333110.69	40°12'53.220"N	108°15'47.786"W	0.00	
12517.00†	84.851	360.000	10259.05	1210.22	1101.47	-981.86	2228425.00	1333210.24	40°12'54.204"N	108°15'47.786"W	0.00	
12617.00†	84.851	360.000	10268.03	1309.11	1201.06	-981.86	2228428.10	1333309.78	40°12'55.189"N	108°15'47.786"W	0.00	
12717.00†	84.851	360.000	10277.00	1408.00	1300.66	-981.86	2228431.20	1333409.32	40°12'56.173"N	108°15'47.786"W	0.00	

# Planned Wellpath Report

BHR FED J22-15-397-4RH (REV-A.0) PWP  
Page 5 of 8



## REFERENCE WELLPATH IDENTIFICATION

Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

## WELLPATH DATA (205 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12817.00†	84.851	360.000	10285.98	1506.90	1400.26	-981.86	2228434.30	1333508.87	40°12'57.157"N	108°15'47.786"W	0.00	
12917.00†	84.851	360.000	10294.95	1605.79	1499.85	-981.86	2228437.40	1333608.41	40°12'58.141"N	108°15'47.786"W	0.00	
13017.00†	84.851	360.000	10303.93	1704.68	1599.45	-981.86	2228440.50	1333707.96	40°12'59.126"N	108°15'47.787"W	0.00	
13117.00†	84.851	360.000	10312.90	1803.57	1699.05	-981.86	2228443.60	1333807.50	40°13'00.110"N	108°15'47.787"W	0.00	
13217.00†	84.851	360.000	10321.88	1902.47	1798.64	-981.86	2228446.70	1333907.04	40°13'01.094"N	108°15'47.787"W	0.00	
13317.00†	84.851	360.000	10330.85	2001.36	1898.24	-981.86	2228449.80	1334006.59	40°13'02.078"N	108°15'47.787"W	0.00	
13417.00†	84.851	360.000	10339.83	2100.25	1997.84	-981.86	2228452.89	1334106.13	40°13'03.062"N	108°15'47.787"W	0.00	
13517.00†	84.851	360.000	10348.80	2199.14	2097.43	-981.86	2228455.99	1334205.67	40°13'04.047"N	108°15'47.787"W	0.00	
13617.00†	84.851	360.000	10357.78	2298.04	2197.03	-981.86	2228459.09	1334305.22	40°13'05.031"N	108°15'47.787"W	0.00	
13717.00†	84.851	360.000	10366.76	2396.93	2296.63	-981.86	2228462.19	1334404.76	40°13'06.015"N	108°15'47.787"W	0.00	
13817.00†	84.851	360.000	10375.73	2495.82	2396.22	-981.86	2228465.29	1334504.31	40°13'06.999"N	108°15'47.787"W	0.00	
13917.00†	84.851	360.000	10384.71	2594.71	2495.82	-981.86	2228468.39	1334603.85	40°13'07.983"N	108°15'47.787"W	0.00	
14017.00†	84.851	360.000	10393.68	2693.61	2595.41	-981.86	2228471.49	1334703.39	40°13'08.968"N	108°15'47.787"W	0.00	
14117.00†	84.851	360.000	10402.66	2792.50	2695.01	-981.86	2228474.59	1334802.94	40°13'09.952"N	108°15'47.787"W	0.00	
14217.00†	84.851	360.000	10411.63	2891.39	2794.61	-981.86	2228477.69	1334902.48	40°13'10.936"N	108°15'47.787"W	0.00	
14317.00†	84.851	360.000	10420.61	2990.28	2894.20	-981.86	2228480.79	1335002.02	40°13'11.920"N	108°15'47.787"W	0.00	
14417.00†	84.851	360.000	10429.58	3089.18	2993.80	-981.86	2228483.88	1335101.57	40°13'12.904"N	108°15'47.787"W	0.00	
14517.00†	84.851	360.000	10438.56	3188.07	3093.40	-981.86	2228486.98	1335201.11	40°13'13.889"N	108°15'47.787"W	0.00	
14617.00†	84.851	360.000	10447.53	3286.96	3192.99	-981.86	2228490.08	1335300.66	40°13'14.873"N	108°15'47.787"W	0.00	
14717.00†	84.851	360.000	10456.51	3385.85	3292.59	-981.86	2228493.18	1335400.20	40°13'15.857"N	108°15'47.787"W	0.00	
14817.00†	84.851	360.000	10465.48	3484.74	3392.19	-981.86	2228496.28	1335499.74	40°13'16.841"N	108°15'47.787"W	0.00	
14917.00†	84.851	360.000	10474.46	3583.64	3491.78	-981.86	2228499.38	1335599.29	40°13'17.825"N	108°15'47.788"W	0.00	
15017.00†	84.851	360.000	10483.43	3682.53	3591.38	-981.86	2228502.48	1335698.83	40°13'18.810"N	108°15'47.788"W	0.00	
15117.00†	84.851	360.000	10492.41	3781.42	3690.98	-981.86	2228505.58	1335798.37	40°13'19.794"N	108°15'47.788"W	0.00	
15217.00†	84.851	360.000	10501.38	3880.31	3790.57	-981.86	2228508.68	1335897.92	40°13'20.778"N	108°15'47.788"W	0.00	
15317.00†	84.851	360.000	10510.36	3979.21	3890.17	-981.86	2228511.77	1335997.46	40°13'21.762"N	108°15'47.788"W	0.00	
15417.00†	84.851	360.000	10519.33	4078.10	3989.76	-981.86	2228514.87	1336097.01	40°13'22.746"N	108°15'47.788"W	0.00	
15517.00†	84.851	360.000	10528.31	4176.99	4089.36	-981.86	2228517.97	1336196.55	40°13'23.731"N	108°15'47.788"W	0.00	
15617.00†	84.851	360.000	10537.28	4275.88	4188.96	-981.86	2228521.07	1336296.09	40°13'24.715"N	108°15'47.788"W	0.00	
15717.00†	84.851	360.000	10546.26	4374.78	4288.55	-981.86	2228524.17	1336395.64	40°13'25.699"N	108°15'47.788"W	0.00	
15817.00†	84.851	360.000	10555.23	4473.67	4388.15	-981.86	2228527.27	1336495.18	40°13'26.683"N	108°15'47.788"W	0.00	
15917.00†	84.851	360.000	10564.21	4572.56	4487.75	-981.86	2228530.37	1336594.72	40°13'27.667"N	108°15'47.788"W	0.00	
16017.00†	84.851	360.000	10573.18	4671.45	4587.34	-981.86	2228533.47	1336694.27	40°13'28.652"N	108°15'47.788"W	0.00	
16117.00†	84.851	360.000	10582.16	4770.35	4686.94	-981.86	2228536.57	1336793.81	40°13'29.636"N	108°15'47.788"W	0.00	
16217.00†	84.851	360.000	10591.13	4869.24	4786.54	-981.86	2228539.66	1336893.36	40°13'30.620"N	108°15'47.788"W	0.00	
16317.00†	84.851	360.000	10600.11	4968.13	4886.13	-981.86	2228542.76	1336992.90	40°13'31.604"N	108°15'47.788"W	0.00	
16417.00†	84.851	360.000	10609.08	5067.02	4985.73	-981.86	2228545.86	1337092.44	40°13'32.589"N	108°15'47.788"W	0.00	
16517.00†	84.851	360.000	10618.06	5165.92	5085.33	-981.86	2228548.96	1337191.99	40°13'33.573"N	108°15'47.788"W	0.00	
16617.00†	84.851	360.000	10627.03	5264.81	5184.92	-981.86	2228552.06	1337291.53	40°13'34.557"N	108°15'47.788"W	0.00	
16717.00†	84.851	360.000	10636.01	5363.70	5284.52	-981.86	2228555.16	1337391.07	40°13'35.541"N	108°15'47.788"W	0.00	
16817.00†	84.851	360.000	10644.98	5462.59	5384.11	-981.86	2228558.26	1337490.62	40°13'36.525"N	108°15'47.789"W	0.00	
16917.00†	84.851	360.000	10653.96	5561.49	5483.71	-981.86	2228561.36	1337590.16	40°13'37.510"N	108°15'47.789"W	0.00	
17017.00†	84.851	360.000	10662.94	5660.38	5583.31	-981.86	2228564.46	1337689.70	40°13'38.494"N	108°15'47.789"W	0.00	
17117.00†	84.851	360.000	10671.91	5759.27	5682.90	-981.86	2228567.56	1337789.25	40°13'39.478"N	108°15'47.789"W	0.00	
17217.00†	84.851	360.000	10680.89	5858.16	5782.50	-981.86	2228570.65	1337888.79	40°13'40.462"N	108°15'47.789"W	0.00	

# Planned Wellpath Report

BHR FED J22-15-397-4RH (REV-A.0) PWP

Page 6 of 8



## REFERENCE WELLPATH IDENTIFICATION

Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

## WELLPATH DATA (205 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
17317.00†	84.851	360.000	10689.86	5957.06	5882.10	-981.86	2228573.75	1337988.34	40°13'41.446"N	108°15'47.789"W	0.00	
17417.00†	84.851	360.000	10698.84	6055.95	5981.69	-981.86	2228576.85	1338087.88	40°13'42.431"N	108°15'47.789"W	0.00	
17517.00†	84.851	360.000	10707.81	6154.84	6081.29	-981.86	2228579.95	1338187.42	40°13'43.415"N	108°15'47.789"W	0.00	
17617.00†	84.851	360.000	10716.79	6253.73	6180.89	-981.86	2228583.05	1338286.97	40°13'44.399"N	108°15'47.789"W	0.00	
17717.00†	84.851	360.000	10725.76	6352.62	6280.48	-981.86	2228586.15	1338386.51	40°13'45.383"N	108°15'47.789"W	0.00	
17817.00†	84.851	360.000	10734.74	6451.52	6380.08	-981.86	2228589.25	1338486.05	40°13'46.367"N	108°15'47.789"W	0.00	
17917.00†	84.851	360.000	10743.71	6550.41	6479.68	-981.86	2228592.35	1338585.60	40°13'47.352"N	108°15'47.789"W	0.00	
18017.00†	84.851	360.000	10752.69	6649.30	6579.27	-981.86	2228595.45	1338685.14	40°13'48.336"N	108°15'47.789"W	0.00	
18117.00†	84.851	360.000	10761.66	6748.19	6678.87	-981.86	2228598.54	1338784.69	40°13'49.320"N	108°15'47.789"W	0.00	
18217.00†	84.851	360.000	10770.64	6847.09	6778.46	-981.86	2228601.64	1338884.23	40°13'50.304"N	108°15'47.789"W	0.00	
18317.00†	84.851	360.000	10779.61	6945.98	6878.06	-981.86	2228604.74	1338983.77	40°13'51.288"N	108°15'47.789"W	0.00	
18417.00†	84.851	360.000	10788.59	7044.87	6977.66	-981.86	2228607.84	1339083.32	40°13'52.273"N	108°15'47.789"W	0.00	
18517.00†	84.851	360.000	10797.56	7143.76	7077.25	-981.86	2228610.94	1339182.86	40°13'53.257"N	108°15'47.789"W	0.00	
18617.00†	84.851	360.000	10806.54	7242.66	7176.85	-981.86	2228614.04	1339282.40	40°13'54.241"N	108°15'47.789"W	0.00	
18717.00†	84.851	360.000	10815.51	7341.55	7276.45	-981.86	2228617.14	1339381.95	40°13'55.225"N	108°15'47.790"W	0.00	
18817.00†	84.851	360.000	10824.49	7440.44	7376.04	-981.86	2228620.24	1339481.49	40°13'56.209"N	108°15'47.790"W	0.00	
18917.00†	84.851	360.000	10833.46	7539.33	7475.64	-981.86	2228623.34	1339581.04	40°13'57.194"N	108°15'47.790"W	0.00	
19017.00†	84.851	360.000	10842.44	7638.23	7575.24	-981.86	2228626.43	1339680.58	40°13'58.178"N	108°15'47.790"W	0.00	
19117.00†	84.851	360.000	10851.41	7737.12	7674.83	-981.86	2228629.53	1339780.12	40°13'59.162"N	108°15'47.790"W	0.00	
19217.00†	84.851	360.000	10860.39	7836.01	7774.43	-981.86	2228632.63	1339879.67	40°14'00.146"N	108°15'47.790"W	0.00	
19317.00†	84.851	360.000	10869.36	7934.90	7874.03	-981.86	2228635.73	1339979.21	40°14'01.130"N	108°15'47.790"W	0.00	
19417.00†	84.851	360.000	10878.34	8033.80	7973.62	-981.86	2228638.83	1340078.75	40°14'02.115"N	108°15'47.790"W	0.00	
19517.00†	84.851	360.000	10887.31	8132.69	8073.22	-981.86	2228641.93	1340178.30	40°14'03.099"N	108°15'47.790"W	0.00	
19617.00†	84.851	360.000	10896.29	8231.58	8172.81	-981.86	2228645.03	1340277.84	40°14'04.083"N	108°15'47.790"W	0.00	
19658.35	84.851	360.000	10900.00†	8272.47	8213.99	-981.86	2228646.31	1340319.00	40°14'04.490"N	108°15'47.790"W	0.00	End of Tangent

## HOLE & CASING SECTIONS - Ref Wellbore: BHR FED J22-15-397-4RH PWB Ref Wellpath: BHR FED J22-15-397-4RH (REV-A.0) PWP

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
13.25in Open Hole	17.00	3300.00	3283.00	17.00	3300.00	0.00	0.00	0.00	0.00
9.625in Casing Surface	17.00	3300.00	3283.00	17.00	3300.00	0.00	0.00	0.00	0.00
8.75in Open Hole	3300.00	9346.00	6046.00	3300.00	9089.42	0.00	0.00	-1350.54	-975.11
7in Casing Intermediate	17.00	9346.00	9329.00	17.00	9089.42	0.00	0.00	-1350.54	-975.11
6in Open Hole	9346.00	19658.35	10312.35	9089.42	10900.00	-1350.54	-975.11	8213.99	-981.86
4.5in Casing Production	17.00	19658.34	19641.34	17.00	10900.00	0.00	0.00	8213.99	-981.86



# Planned Wellpath Report

BHR FED J22-15-397-4RH (REV-A.0) PWP

Page 7 of 8



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.15-T03N-R97W		-85.00	-29.27	41.43	2229412.56	1332048.26	40°12'43.031"N	108°15'34.596"W	polygon
SEC.22-T03N-R97W		-85.00	-29.27	41.43	2229412.56	1332048.26	40°12'43.031"N	108°15'34.596"W	polygon
BHR FED J22-15-397-4RH TOP OF PROD REV-1 (600'FSL & 2310'FEL, SEC.22)		9363.62	-1161.69	-975.25	2228361.19	1330948.07	40°12'31.840"N	108°15'47.700"W	point
1) BHR FED J22-15-397-4RH BHL ON PLAT REV-1 (600'FNL & 2310'FEL, SEC.15)		10191.00	8213.99	-981.86	2228646.31	1340319.00	40°14'04.490"N	108°15'47.790"W	point

SURVEY PROGRAM - Ref Wellbore: BHR FED J22-15-397-4RH PWB Ref Wellpath: BHR FED J22-15-397-4RH (REV-A.0) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	19658.35	BHI NaviTrak (Rotating)		BHR FED J22-15-397-4RH PWB



Planned Wellpath Report  
BHR FED J22-15-397-4RH (REV-A.0) PWP  
Page 8 of 8



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	215.830	17.00	Tie On
3400.00	0.000	215.830	3400.00	End of Tangent
4325.00	18.500	215.830	4309.01	End of Build
8677.92	18.500	215.830	8436.99	End of Tangent
9602.92	0.000	360.000	9346.00	End of Drop
9639.61	0.000	360.000	9382.69	End of Tangent
10700.24	84.851	360.000	10096.00	End of Build
19658.35	84.851	360.000	10900.00	End of Tangent

# Clearance Report

BHR FED J22-15-397-4RH (REV-A.0) PWP  
Closest Approach  
Page 1 of 26



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.0
North Reference	True	User	Adamkat
Scale	0.999957	Report Generated	11/13/2017 at 9:36:29 AM
Convergence at slot	1.79° West	Database/Source file	Denver\BHR_FED_J22-15-397-4RH_REV-A.0_PWP_CR.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-26.11	-160.98	2229372.07	1332078.80	40°12'43.320"N	108°15'35.130"W
Facility Reference Pt			2229533.78	1332099.89	40°12'43.578"N	108°15'33.055"W
Field Reference Pt			2234560.64	1331098.80	40°12'35.230"N	108°14'27.890"W

WELLPATH DATUM			
Calculation method	Minimum Curvature	XTREME X18 (17'KB) (RKB) to Facility Vertical Datum	5955.00ft
Horizontal Reference Pt	Slot	XTREME X18 (17'KB) (RKB) to Mean Sea Level	5955.00ft
Vertical Reference Pt	XTREME X18 (17'KB) (RKB)	XTREME X18 (17'KB) (RKB) to Mud Line at Slot (SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22))	5955.00ft
MD Reference Pt	XTREME X18 (17'KB) (RKB)		
Field Vertical Reference	Mean Sea Level		

POSITIONAL UNCERTAINTY CALCULATION SETTINGS					
Ellipse Confidence Limit	3.00 Std Dev	Ellipse Start MD	17.00ft	Surface Position Uncertainty	included
Declination	9.78° East of TN	Dip Angle	66.15°	Mag Field Strength	51840 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					

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

# Clearance Report

BHR FED J22-15-397-4RH (REV-A.0) PWP  
Closest Approach  
Page 2 of 26



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

HOLE & CASING SECTIONS - Ref Wellbore: BHR FED J22-15-397-4RH PWB Ref Wellpath: BHR FED J22-15-397-4RH (REV-A.0) PWP									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
13.25in Open Hole	17.00	3300.00	3283.00	17.00	3300.00	0.00	0.00	0.00	0.00
9.625in Casing Surface	17.00	3300.00	3283.00	17.00	3300.00	0.00	0.00	0.00	0.00
8.75in Open Hole	3300.00	9346.00	6046.00	3300.00	9089.42	0.00	0.00	-1350.54	-975.11
7in Casing Intermediate	17.00	9346.00	9329.00	17.00	9089.42	0.00	0.00	-1350.54	-975.11
6in Open Hole	9346.00	19658.35	10312.35	9089.42	10900.00	-1350.54	-975.11	8213.99	-981.86
4.5in Casing Production	17.00	19658.34	19641.34	17.00	10900.00	0.00	0.00	8213.99	-981.86

SURVEY PROGRAM - Ref Wellbore: BHR FED J22-15-397-4RH PWB Ref Wellpath: BHR FED J22-15-397-4RH (REV-A.0) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	19658.35	BHI NaviTrak (Rotating)		BHR FED J22-15-397-4RH PWB

CALCULATION RANGE & CUTOFF		
From: 17.00ft MD	To: 19658.35ft MD	C-C Cutoff: (none)

OFFSET WELL CLEARANCE SUMMARY (4 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.22-T03N-R97W	SLOT#01 BHR J22-397 (1733'FSL & 1292'FEL, SEC.22)	BHR FED J22-15-397-2RH	BHR FED J22-15-397-2RH AWB	BHR FED J22-15-397-2RH AWP	3566.48	36.04	18517.00	3582.85	1.20	19017.00	PASS
SEC.22-T03N-R97W	SLOT#01 BHR J22-397 (1733'FSL & 1292'FEL, SEC.22)	BHR J22-397	BHR J22-397 AWB	BHR J22-397 AWP	3566.48	36.04	9717.00	3582.85	1.20	9717.00	PASS
SEC.23-T03N-R97W	SLOT#01 EX) WILEY 23-3-97 H1 (950'FSL & 1402'FEL SEC 23)	WILEY 23-3-97 H1	WILEY 23-3-97-H1 AWB (BHI)	WILEY 23-3-97-H1 AWB (BHI) AWP	10467.00	4301.04	10467.00	10765.64	38.25	13217.00	PASS
SEC.23-T03N-R97W	SLOT#01 EX) WILEY 23-3-97 H1 (950'FSL & 1402'FEL SEC 23)	WILEY 23-3-97 H1	WILEY 23-3-97 H1 AWB	WILEY 23-3-97 H1 AWP	3542.00	5215.78	10517.00	10765.71	48.33	15317.00	PASS

# Clearance Report

BHR FED J22-15-397-4RH (REV-A.0) PWP  
Closest Approach  
Page 3 of 26



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

CLEARANCE DATA - Offset Wellbore: BHR FED J22-15-397-2RH AWP Offset Wellpath: BHR FED J22-15-397-2RH AWP												
Facility: SEC.22-T03N-R97W Slot: SLOT#01 BHR J22-397 (1733'FSL & 1292'FEL, SEC.22)				Well: BHR FED J22-15-397-2RH				Threshold Value=1.00 † = interpolated/extrapolated station				
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
17.00	17.00	0.00	0.00	0.00	48.00	-29.25	41.43	125.22	59.44	2.54	36.89	PASS
117.00†	117.00	0.00	0.00	68.84	116.84	-29.44	41.39	125.42	50.79	2.04	45.97	PASS
217.00†	217.00	0.00	0.00	168.65	216.64	-30.85	41.12	126.88	51.41	2.74	28.24	PASS
317.00†	317.00	0.00	0.00	268.82	316.80	-32.35	40.54	128.59	51.87	3.61	19.17	PASS
417.00†	417.00	0.00	0.00	368.76	416.72	-34.22	39.65	130.79	52.37	4.43	14.80	PASS
517.00†	517.00	0.00	0.00	469.01	516.94	-36.00	38.62	132.99	52.80	5.25	12.05	PASS
617.00†	617.00	0.00	0.00	569.09	617.01	-37.11	37.38	134.79	52.67	6.09	10.06	PASS
717.00†	717.00	0.00	0.00	668.85	716.76	-37.96	36.84	135.85	52.90	6.92	8.70	PASS
817.00†	817.00	0.00	0.00	768.80	816.71	-38.90	36.65	136.71	53.45	7.75	7.72	PASS
917.00†	917.00	0.00	0.00	869.06	916.97	-39.78	36.22	137.68	53.80	8.59	6.92	PASS
1017.00†	1017.00	0.00	0.00	968.96	1016.86	-40.63	35.42	138.92	53.90	9.43	6.25	PASS
1117.00†	1117.00	0.00	0.00	1068.89	1116.78	-41.22	35.27	139.45	54.24	10.26	5.72	PASS
1217.00†	1217.00	0.00	0.00	1169.04	1216.94	-41.29	35.59	139.24	54.51	11.10	5.28	PASS
1317.00†	1317.00	0.00	0.00	1269.07	1316.97	-41.16	35.88	138.91	54.60	11.93	4.89	PASS
1417.00†	1417.00	0.00	0.00	1369.20	1417.09	-40.76	36.18	138.41	54.51	12.75	4.54	PASS
1517.00†	1517.00	0.00	0.00	1469.11	1517.00	-40.47	36.48	137.97	54.48	13.58	4.24	PASS
1617.00†	1617.00	0.00	0.00	1569.27	1617.16	-40.41	36.29	138.07	54.31	14.42	3.96	PASS
1717.00†	1717.00	0.00	0.00	1669.38	1717.27	-40.49	35.64	138.65	53.94	14.45	3.92	PASS
1817.00†	1817.00	0.00	0.00	1769.47	1817.35	-40.54	34.60	139.52	53.30	16.09	3.46	PASS
1917.00†	1917.00	0.00	0.00	1869.55	1917.42	-41.01	33.02	141.16	52.65	16.93	3.24	PASS
2017.00†	2017.00	0.00	0.00	1969.53	2017.39	-41.09	31.41	142.61	51.72	17.77	3.02	PASS
2117.00†	2117.00	0.00	0.00	2069.49	2117.34	-41.35	30.09	143.95	51.14	18.61	2.84	PASS
2217.00†	2217.00	0.00	0.00	2169.82	2217.65	-41.60	28.13	145.93	50.22	19.46	2.66	PASS
2317.00†	2317.00	0.00	0.00	2270.03	2317.80	-41.85	24.87	149.28	48.69	20.31	2.47	PASS
2417.00†	2417.00	0.00	0.00	2369.95	2417.67	-41.89	21.52	152.81	47.10	21.16	2.28	PASS
2517.00†	2517.00	0.00	0.00	2470.16	2517.84	-41.39	19.00	155.35	45.55	22.00	2.12	PASS
2617.00†	2617.00	0.00	0.00	2569.92	2617.58	-40.33	17.28	156.81	43.88	22.84	1.96	PASS
2717.00†	2717.00	0.00	0.00	2669.53	2717.18	-39.94	15.95	158.22	43.00	23.68	1.85	PASS
2817.00†	2817.00	0.00	0.00	2769.26	2816.90	-40.20	15.06	159.46	42.93	24.52	1.78	PASS
2917.00†	2917.00	0.00	0.00	2869.51	2917.16	-40.34	14.52	160.20	42.87	25.35	1.72	PASS
3017.00†	3017.00	0.00	0.00	2969.86	3017.50	-39.27	14.92	159.20	42.01	26.20	1.63	PASS
3117.00†	3117.00	0.00	0.00	3069.80	3117.42	-37.67	15.94	157.07	40.91	27.05	1.53	PASS
3217.00†	3217.00	0.00	0.00	3169.79	3217.40	-36.28	16.67	155.33	39.93	27.89	1.45	PASS
3317.00†	3317.00	0.00	0.00	3269.77	3317.37	-35.03	16.88	154.28	38.88	28.42	1.38	PASS
3400.00	3400.00	0.00	0.00	3352.71	3400.30	-34.09	17.30	153.09	38.23	29.08	1.32	PASS
3417.00†	3417.00	-0.04	-0.03	3369.75	3417.34	-33.88	17.40	-63.09	38.07	29.20	1.31	PASS
3517.00†	3516.97	-1.94	-1.40	3469.30	3516.88	-32.65	18.09	-68.24	36.38	29.83	1.22	PASS
3566.48†	3566.39	-3.92	-2.83	3518.29	3565.86	-32.59	19.00	-73.11	36.04	30.10	1.20	PASS
3582.85†	3582.72	-4.73	-3.41	3534.29	3581.86	-32.74	19.34	-74.86	36.10	30.22	1.20	PASS
3617.00†	3616.79	-6.66	-4.81	3567.93	3615.49	-33.51	19.99	-78.43	36.58	30.42	1.21	PASS
3717.00†	3716.35	-14.21	-10.26	3665.88	3713.23	-39.29	21.97	-87.45	40.96	31.04	1.33	PASS
3817.00†	3815.53	-24.56	-17.73	3762.85	3809.48	-50.28	25.96	-94.31	51.07	31.76	1.62	PASS
3917.00†	3914.20	-37.72	-27.23	3859.56	3904.75	-65.47	32.48	-99.27	66.53	32.58	2.06	PASS
4017.00†	4012.24	-53.66	-38.74	3957.30	4000.35	-84.63	39.41	-102.20	84.90	33.41	2.57	PASS
4117.00†	4109.54	-72.37	-52.25	4055.79	4096.10	-106.99	44.94	-103.94	104.05	34.27	3.08	PASS

# Clearance Report

BHR FED J22-15-397-4RH (REV-A.0) PWP  
Closest Approach  
Page 4 of 26



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

CLEARANCE DATA - Offset Wellbore: BHR FED J22-15-397-2RH AWB Offset Wellpath: BHR FED J22-15-397-2RH AWP												
Facility: SEC.22-T03N-R97W Slot: SLOT#01 BHR J22-397 (1733'FSL & 1292'FEL, SEC.22)				Well: BHR FED J22-15-397-2RH				Threshold Value=1.00 † = interpolated/extrapolated station				
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
4217.00†	4205.97	-93.81	-67.74	4152.63	4189.92	-130.45	49.89	-105.80	124.23	35.18	3.58	PASS
4317.00†	4301.42	-117.98	-85.18	4247.51	4281.13	-156.01	55.21	-107.29	146.86	36.17	4.12	PASS
4325.00	4309.01	-120.03	-86.66	4255.03	4288.34	-158.11	55.69	-107.41	148.80	36.25	4.16	PASS
4417.00†	4396.26	-143.69	-103.75	4341.72	4371.13	-183.09	61.69	-108.82	171.91	37.25	4.68	PASS
4517.00†	4491.09	-169.42	-122.32	4440.83	4465.45	-212.74	68.51	-109.70	197.36	38.55	5.19	PASS
4617.00†	4585.92	-195.15	-140.90	4538.68	4558.81	-241.50	74.23	-110.46	221.73	39.87	5.64	PASS
4717.00†	4680.75	-220.87	-159.47	4632.23	4647.84	-269.62	80.02	-110.90	246.61	41.15	6.07	PASS
4817.00†	4775.59	-246.60	-178.05	4727.74	4738.16	-299.99	86.50	-110.92	272.46	42.55	6.49	PASS
4917.00†	4870.42	-272.32	-196.62	4829.72	4834.76	-332.07	92.76	-110.98	297.63	44.15	6.83	PASS
5017.00†	4965.25	-298.05	-215.20	4926.04	4926.14	-362.08	97.95	-111.06	322.01	45.68	7.14	PASS
5117.00†	5060.08	-323.77	-233.77	5024.02	5019.07	-392.69	103.12	-111.11	346.30	47.27	7.42	PASS
5217.00†	5154.92	-349.50	-252.35	5120.06	5110.31	-422.22	108.32	-111.23	370.61	48.86	7.68	PASS
5317.00†	5249.75	-375.23	-270.92	5216.59	5201.79	-452.55	113.62	-111.24	395.16	50.49	7.92	PASS
5417.00†	5344.58	-400.95	-289.49	5315.93	5295.91	-483.95	118.75	-111.22	419.43	52.22	8.12	PASS
5517.00†	5439.41	-426.68	-308.07	5414.79	5389.74	-514.70	123.43	-111.25	443.17	53.97	8.30	PASS
5617.00†	5534.25	-452.40	-326.64	5508.58	5478.76	-543.92	127.81	-111.27	466.88	55.64	8.48	PASS
5717.00†	5629.08	-478.13	-345.22	5595.20	5560.59	-571.77	133.31	-111.22	492.39	57.19	8.70	PASS
5817.00†	5723.91	-503.85	-363.79	5692.31	5651.95	-604.00	140.05	-111.06	518.71	59.02	8.88	PASS
5917.00†	5818.74	-529.58	-382.37	5790.97	5744.86	-636.51	146.61	-110.93	544.71	60.88	9.03	PASS
6017.00†	5913.57	-555.31	-400.94	5890.03	5838.31	-668.76	153.05	-110.86	570.48	62.76	9.18	PASS
6117.00†	6008.41	-581.03	-419.52	5993.50	5935.98	-702.44	158.75	-110.76	595.30	64.75	9.28	PASS
6217.00†	6103.24	-606.76	-438.09	6091.69	6028.89	-733.83	163.54	-110.72	619.38	66.63	9.38	PASS
6317.00†	6198.07	-632.48	-456.66	6182.27	6114.59	-762.78	168.35	-110.70	643.89	68.37	9.50	PASS
6417.00†	6292.90	-658.21	-475.24	6279.05	6205.87	-794.36	174.46	-110.64	669.49	70.26	9.61	PASS
6517.00†	6387.74	-683.93	-493.81	6384.29	6305.55	-827.67	179.83	-110.64	693.69	72.33	9.67	PASS
6617.00†	6482.57	-709.66	-512.39	6474.89	6391.47	-856.01	184.50	-110.67	717.89	74.09	9.77	PASS
6717.00†	6577.40	-735.39	-530.96	6565.14	6477.01	-884.19	190.36	-110.72	743.32	75.85	9.88	PASS
6817.00†	6672.23	-761.11	-549.54	6660.41	6567.33	-913.77	196.89	-110.79	769.06	77.71	9.97	PASS
6917.00†	6767.07	-786.84	-568.11	6761.26	6663.05	-944.75	203.94	-110.89	794.87	79.69	10.05	PASS
7017.00†	6861.90	-812.56	-586.69	6875.10	6771.38	-979.10	210.41	-111.02	819.32	81.93	10.07	PASS
7117.00†	6956.73	-838.29	-605.26	6977.38	6868.93	-1009.55	214.62	-111.13	842.17	83.94	10.10	PASS
7217.00†	7051.56	-864.01	-623.83	7066.67	6954.15	-1035.92	218.58	-111.24	865.28	85.69	10.17	PASS
7317.00†	7146.40	-889.74	-642.41	7152.38	7036.14	-1060.39	223.62	-111.42	889.54	87.36	10.25	PASS
7417.00†	7241.23	-915.46	-660.98	7255.40	7134.66	-1089.77	230.34	-111.63	914.43	89.37	10.30	PASS
7517.00†	7336.06	-941.19	-679.56	7352.14	7227.03	-1117.97	235.74	-111.77	938.57	91.27	10.35	PASS
7617.00†	7430.89	-966.92	-698.13	7462.24	7332.09	-1150.40	241.37	-111.89	962.33	93.43	10.37	PASS
7717.00†	7525.72	-992.64	-716.71	7556.37	7422.00	-1177.98	245.55	-111.99	985.42	95.30	10.40	PASS
7817.00†	7620.56	-1018.37	-735.28	7638.00	7499.73	-1202.50	249.85	-112.04	1009.45	96.93	10.48	PASS
7917.00†	7715.39	-1044.09	-753.86	7747.94	7604.18	-1236.31	255.68	-112.06	1033.68	99.15	10.49	PASS
8017.00†	7810.22	-1069.82	-772.43	7845.24	7696.66	-1266.24	260.08	-112.08	1057.14	101.12	10.52	PASS
8117.00†	7905.05	-1095.54	-791.00	7928.87	7775.92	-1292.60	264.31	-112.05	1081.30	102.84	10.58	PASS
8217.00†	7999.89	-1121.27	-809.58	8009.04	7851.69	-1318.27	269.41	-112.02	1106.79	104.47	10.65	PASS
8317.00†	8094.72	-1147.00	-828.15	8103.80	7941.20	-1348.59	276.34	-112.00	1133.19	106.42	10.71	PASS
8417.00†	8189.55	-1172.72	-846.73	8210.49	8042.04	-1382.65	283.70	-111.97	1159.18	108.63	10.73	PASS
8517.00†	8284.38	-1198.45	-865.30	8309.19	8135.48	-1413.82	290.03	-111.96	1184.63	110.66	10.76	PASS

# Clearance Report

BHR FED J22-15-397-4RH (REV-A.0) PWP  
Closest Approach  
Page 5 of 26



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

CLEARANCE DATA - Offset Wellbore: BHR FED J22-15-397-2RH AWB Offset Wellpath: BHR FED J22-15-397-2RH AWP												
Facility: SEC.22-T03N-R97W		Slot: SLOT#01 BHR J22-397 (1733'FSL & 1292'FEL, SEC.22)		Well: BHR FED J22-15-397-2RH		Threshold Value=1.00 † = interpolated/extrapolated station						
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
8617.00†	8379.22	-1224.17	-883.88	8410.20	8231.13	-1445.68	296.22	-111.95	1209.80	112.73	10.79	PASS
8677.92	8436.99	-1239.85	-895.19	8470.72	8288.44	-1464.80	299.79	-111.94	1225.01	113.98	10.80	PASS
8717.00†	8474.13	-1249.69	-902.30	8519.51	8334.74	-1479.93	302.56	-112.11	1234.56	114.96	10.80	PASS
8817.00†	8569.90	-1273.02	-919.14	8653.80	8463.93	-1516.08	308.17	-112.59	1255.63	117.47	10.74	PASS
8917.00†	8666.61	-1293.61	-934.01	8762.24	8569.18	-1542.00	311.59	-112.97	1273.86	119.35	10.73	PASS
9017.00†	8764.16	-1311.46	-946.90	8865.57	8669.60	-1566.14	314.42	-113.18	1290.25	121.07	10.71	PASS
9117.00†	8862.41	-1326.54	-957.79	8960.58	8761.96	-1588.27	317.00	-113.23	1305.25	122.59	10.70	PASS
9217.00†	8961.24	-1338.83	-966.66	9078.66	8877.36	-1613.05	320.35	-113.16	1318.57	124.29	10.66	PASS
9317.00†	9060.55	-1348.31	-973.51	9205.84	9002.88	-1633.29	322.28	-113.09	1328.01	125.86	10.60	PASS
9417.00†	9160.21	-1354.98	-978.32	9312.44	9108.89	-1644.16	324.45	-113.14	1335.47	126.77	10.57	PASS
9517.00†	9260.09	-1358.83	-981.10	9445.25	9241.32	-1654.01	326.00	-113.07	1340.15	127.92	10.51	PASS
9602.92	9346.00	-1359.87	-981.85	9557.54	9353.44	-1660.02	325.02	102.94	1340.92	128.71	10.45	PASS
9617.00†	9360.08	-1359.87	-981.85	9574.29	9370.17	-1660.86	324.71	102.97	1340.83	128.81	10.44	PASS
9639.61	9382.69	-1359.87	-981.85	9601.18	9397.02	-1662.24	324.14	103.04	1340.62	128.96	10.43	PASS
9717.00†	9459.93	-1355.69	-981.85	9686.18	9481.90	-1666.23	321.96	103.42	1340.47	129.29	10.40	PASS
9817.00†	9558.27	-1338.02	-981.85	9791.05	9586.70	-1664.81	320.32	103.96	1342.86	129.33	10.42	PASS
9917.00†	9653.20	-1306.82	-981.85	9895.76	9690.85	-1654.34	320.32	104.47	1348.27	128.94	10.49	PASS
10017.00†	9742.86	-1262.72	-981.85	9979.42	9772.66	-1637.25	322.71	104.56	1357.59	127.97	10.64	PASS
10117.00†	9825.50	-1206.57	-981.85	10021.05	9812.58	-1625.88	325.91	103.81	1373.40	126.81	10.86	PASS
10217.00†	9899.54	-1139.47	-981.85	10061.15	9850.43	-1613.66	330.98	102.57	1396.71	125.30	11.18	PASS
10317.00†	9963.51	-1062.71	-981.85	10100.82	9887.13	-1600.30	337.88	100.84	1427.07	123.48	11.59	PASS
10417.00†	10016.17	-977.80	-981.85	11055.18	10342.15	-845.46	395.68	99.34	1421.75	107.25	13.31	PASS
10517.00†	10056.51	-886.38	-981.85	11156.26	10348.52	-745.21	384.30	99.43	1404.13	105.09	13.41	PASS
10617.00†	10083.73	-790.24	-981.85	11258.92	10354.90	-643.48	372.14	99.86	1388.66	103.03	13.53	PASS
10700.24	10096.00	-707.95	-981.85	11339.19	10359.89	-563.95	362.53	100.53	1377.59	101.55	13.62	PASS
10717.00†	10097.50	-691.27	-981.85	11354.94	10360.87	-548.33	360.67	100.53	1375.56	101.28	13.64	PASS
10817.00†	10106.48	-591.67	-981.85	11431.80	10365.79	-472.12	352.04	100.51	1364.12	100.00	13.70	PASS
10917.00†	10115.45	-492.07	-981.85	11495.78	10370.50	-408.59	346.15	100.52	1354.85	99.06	13.73	PASS
11017.00†	10124.43	-392.48	-981.85	11549.16	10374.91	-355.49	342.90	100.53	1348.74	98.37	13.77	PASS
11117.00†	10133.40	-292.88	-981.85	11625.17	10381.31	-279.79	340.63	100.53	1345.58	97.79	13.82	PASS
11217.00†	10142.38	-193.28	-981.85	11714.89	10387.14	-190.27	338.95	100.45	1343.29	97.44	13.84	PASS
11317.00†	10151.35	-93.69	-981.85	11795.12	10392.24	-110.21	338.28	100.36	1342.03	97.38	13.84	PASS
11417.00†	10160.33	5.91	-981.85	11869.98	10397.76	-35.56	338.99	100.31	1342.65	97.58	13.82	PASS
11517.00†	10169.30	105.50	-981.85	11956.11	10404.45	50.28	340.99	100.25	1344.72	98.11	13.76	PASS
11617.00†	10178.28	205.10	-981.85	12061.22	10413.06	155.02	343.41	100.20	1346.83	99.17	13.64	PASS
11717.00†	10187.25	304.70	-981.85	12144.63	10420.09	238.09	345.97	100.16	1349.73	100.32	13.51	PASS
11817.00†	10196.23	404.29	-981.85	12298.60	10430.41	391.68	348.39	99.99	1350.76	102.97	13.17	PASS
11917.00†	10205.20	503.89	-981.86	12400.25	10437.68	493.06	347.76	99.92	1349.83	105.23	12.88	PASS
12017.00†	10214.18	603.49	-981.86	12555.06	10453.04	647.02	343.20	100.01	1347.12	109.05	12.40	PASS
12117.00†	10223.15	703.08	-981.86	12629.95	10460.45	721.44	339.32	100.07	1342.44	111.43	12.09	PASS
12217.00†	10232.13	802.68	-981.86	12668.84	10464.30	760.14	338.99	100.09	1341.77	112.98	11.92	PASS
12317.00†	10241.10	902.28	-981.86	12723.28	10469.71	814.26	341.21	100.10	1345.55	115.02	11.74	PASS
12417.00†	10250.08	1001.87	-981.86	12856.92	10482.99	947.14	346.14	100.11	1349.38	119.57	11.32	PASS
12517.00†	10259.05	1101.47	-981.86	12951.86	10492.00	1041.63	348.26	100.12	1351.69	123.09	11.02	PASS
12617.00†	10268.03	1201.06	-981.86	13032.86	10499.83	1122.20	351.08	100.12	1355.23	126.32	10.76	PASS

# Clearance Report

BHR FED J22-15-397-4RH (REV-A.0) PWP  
Closest Approach  
Page 6 of 26



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

CLEARANCE DATA - Offset Wellbore: BHR FED J22-15-397-2RH AWP Offset Wellpath: BHR FED J22-15-397-2RH AWP												
Facility: SEC.22-T03N-R97W		Slot: SLOT#01 BHR J22-397 (1733'FSL & 1292'FEL, SEC.22)		Well: BHR FED J22-15-397-2RH		Threshold Value=1.00 † = interpolated/extrapolated station						
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
12717.00†	10277.00	1300.66	-981.86	13120.03	10508.92	1208.80	355.18	100.14	1360.10	129.88	10.50	PASS
12817.00†	10285.98	1400.26	-981.86	13276.24	10525.82	1363.97	360.85	100.22	1364.44	136.04	10.06	PASS
12917.00†	10294.95	1499.85	-981.86	13455.55	10545.27	1542.13	355.96	100.40	1361.68	143.27	9.53	PASS
13017.00†	10303.93	1599.45	-981.86	13520.41	10552.28	1606.56	353.46	100.47	1358.23	146.66	9.29	PASS
13117.00†	10312.90	1699.05	-981.86	13577.90	10558.49	1663.71	352.80	100.52	1357.52	149.77	9.09	PASS
13217.00†	10321.88	1798.64	-981.86	13629.86	10564.08	1715.35	354.07	100.55	1360.26	152.62	8.94	PASS
13317.00†	10330.85	1898.24	-981.86	13688.42	10570.38	1773.46	357.51	100.56	1366.33	155.67	8.80	PASS
13417.00†	10339.83	1997.84	-981.86	13759.49	10578.06	1843.84	363.77	100.57	1375.20	159.23	8.66	PASS
13517.00†	10348.80	2097.43	-981.86	13907.21	10594.01	1990.19	375.85	100.59	1383.83	166.26	8.34	PASS
13617.00†	10357.78	2197.03	-981.86	14118.17	10616.82	2199.79	380.78	100.71	1387.04	175.89	7.90	PASS
13717.00†	10366.76	2296.63	-981.86	14227.36	10628.49	2308.32	378.07	100.81	1384.93	181.46	7.65	PASS
13817.00†	10375.73	2396.22	-981.86	14340.78	10640.51	2421.03	373.99	100.92	1381.68	187.24	7.39	PASS
13917.00†	10384.71	2495.82	-981.86	14439.23	10650.77	2518.87	370.25	101.00	1378.23	192.50	7.17	PASS
14017.00†	10393.68	2595.41	-981.86	14525.03	10658.76	2604.24	367.43	101.04	1375.11	197.32	6.98	PASS
14117.00†	10402.66	2695.01	-981.86	14649.19	10670.04	2727.86	364.82	101.07	1373.36	203.70	6.75	PASS
14217.00†	10411.63	2794.61	-981.86	14789.01	10683.40	2866.72	355.43	101.18	1366.53	210.68	6.50	PASS
14317.00†	10420.61	2894.20	-981.86	14845.51	10689.12	2922.83	352.16	101.23	1361.07	214.59	6.35	PASS
14417.00†	10429.58	2993.80	-981.86	14920.19	10696.71	2997.09	349.99	101.28	1358.38	219.12	6.21	PASS
14517.00†	10438.56	3093.40	-981.86	15008.78	10705.55	3085.22	348.44	101.33	1356.86	224.21	6.06	PASS
14617.00†	10447.53	3192.99	-981.86	15093.14	10713.27	3169.22	347.77	101.35	1356.13	229.12	5.93	PASS
14717.00†	10456.51	3292.59	-981.86	15213.17	10724.59	3288.72	347.92	101.37	1356.54	235.61	5.77	PASS
14817.00†	10465.48	3392.19	-981.86	15339.88	10736.62	3414.79	344.03	101.43	1353.52	242.38	5.59	PASS
14917.00†	10474.46	3491.78	-981.86	15420.72	10744.29	3495.23	341.68	101.47	1350.76	247.27	5.47	PASS
15017.00†	10483.43	3591.38	-981.86	15516.87	10753.42	3590.93	339.78	101.50	1348.93	252.81	5.34	PASS
15117.00†	10492.41	3690.98	-981.86	15593.60	10760.69	3667.31	338.96	101.53	1348.00	257.50	5.24	PASS
15217.00†	10501.38	3790.57	-981.86	15682.53	10769.17	3755.83	339.32	101.54	1348.49	262.72	5.14	PASS
15317.00†	10510.36	3890.17	-981.86	15779.72	10778.50	3852.57	340.10	101.56	1349.41	268.33	5.04	PASS
15417.00†	10519.33	3989.76	-981.86	15890.83	10789.22	3963.16	340.74	101.59	1350.12	274.61	4.92	PASS
15517.00†	10528.31	4089.36	-981.86	16023.60	10802.06	4095.29	338.79	101.64	1348.74	281.85	4.79	PASS
15617.00†	10537.28	4188.96	-981.86	16153.41	10815.41	4224.32	334.20	101.75	1345.59	288.82	4.66	PASS
15717.00†	10546.26	4288.55	-981.86	16223.72	10822.64	4294.21	331.54	101.82	1342.17	293.44	4.58	PASS
15817.00†	10555.23	4388.15	-981.86	16310.30	10831.38	4380.34	330.00	101.87	1340.63	298.68	4.49	PASS
15917.00†	10564.21	4487.75	-981.86	16408.90	10840.71	4478.49	328.70	101.90	1339.44	304.47	4.40	PASS
16017.00†	10573.18	4587.34	-981.86	16499.08	10849.11	4568.27	327.84	101.92	1338.58	309.88	4.32	PASS
16117.00†	10582.16	4686.94	-981.86	16575.49	10856.17	4644.35	328.04	101.93	1338.93	314.62	4.26	PASS
16217.00†	10591.13	4786.54	-981.86	16658.80	10863.99	4727.28	329.81	101.93	1341.06	319.65	4.20	PASS
16317.00†	10600.11	4886.13	-981.86	16763.44	10873.98	4831.40	332.47	101.93	1343.68	325.78	4.13	PASS
16417.00†	10609.08	4985.73	-981.86	16889.47	10886.77	4956.77	333.76	101.98	1344.91	332.93	4.04	PASS
16517.00†	10618.06	5085.33	-981.86	16976.06	10895.94	5042.87	334.17	102.04	1345.72	338.15	3.98	PASS
16617.00†	10627.03	5184.92	-981.86	17071.05	10906.08	5137.31	335.28	102.09	1347.22	343.77	3.92	PASS
16717.00†	10636.01	5284.52	-981.86	17173.19	10916.94	5238.87	336.51	102.15	1348.74	349.75	3.86	PASS
16817.00†	10644.98	5384.11	-981.86	17271.85	10927.39	5336.96	337.84	102.21	1350.40	355.57	3.80	PASS
16917.00†	10653.96	5483.71	-981.86	17386.79	10939.55	5451.25	338.77	102.28	1351.54	362.19	3.73	PASS
17017.00†	10662.94	5583.31	-981.86	17496.24	10951.13	5560.09	338.43	102.35	1351.57	368.53	3.67	PASS
17117.00†	10671.91	5682.90	-981.86	17600.50	10962.19	5663.75	337.66	102.43	1351.21	374.62	3.61	PASS



# Clearance Report

BHR FED J22-15-397-4RH (REV-A.0) PWP  
Closest Approach  
Page 7 of 26



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

CLEARANCE DATA - Offset Wellbore: BHR FED J22-15-397-2RH AWB Offset Wellpath: BHR FED J22-15-397-2RH AWP												
Facility: SEC.22-T03N-R97W Slot: SLOT#01 BHR J22-397 (1733'FSL & 1292'FEL, SEC.22) Well: BHR FED J22-15-397-2RH Threshold Value=1.00 † = interpolated/extrapolated station												
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
17217.00†	10680.89	5782.50	-981.86	17695.06	10972.20	5757.78	337.03	102.50	1350.90	380.27	3.56	PASS
17317.00†	10689.86	5882.10	-981.86	17796.58	10982.98	5858.72	336.43	102.57	1350.69	386.24	3.50	PASS
17417.00†	10698.84	5981.69	-981.86	17892.74	10993.13	5954.34	336.06	102.64	1350.65	391.97	3.45	PASS
17517.00†	10707.81	6081.29	-981.86	17991.80	11003.54	6052.85	335.76	102.71	1350.69	397.84	3.40	PASS
17617.00†	10716.79	6180.89	-981.86	18085.68	11013.49	6146.21	335.74	102.77	1351.04	403.46	3.35	PASS
17717.00†	10725.76	6280.48	-981.86	18179.16	11023.36	6239.16	336.21	102.83	1351.88	409.06	3.31	PASS
17817.00†	10734.74	6380.08	-981.86	18275.54	11033.47	6335.00	337.10	102.88	1353.12	414.81	3.26	PASS
17917.00†	10743.71	6479.68	-981.86	18373.00	11043.65	6431.93	338.18	102.93	1354.53	420.61	3.22	PASS
18017.00†	10752.69	6579.27	-981.86	18486.87	11055.64	6545.16	339.22	102.99	1355.80	427.23	3.18	PASS
18117.00†	10761.66	6678.87	-981.86	18607.60	11068.40	6665.21	338.45	103.08	1355.54	434.11	3.12	PASS
18217.00†	10770.64	6778.46	-981.86	18729.28	11081.19	6786.19	335.68	103.18	1353.67	440.92	3.07	PASS
18317.00†	10779.61	6878.06	-981.86	18837.09	11092.64	6893.32	331.88	103.29	1350.61	447.11	3.02	PASS
18417.00†	10788.59	6977.66	-981.86	18920.46	11101.47	6976.17	329.18	103.38	1347.86	452.37	2.98	PASS
18517.00†	10797.56	7077.25	-981.86	18996.71	11109.55	7051.98	328.00	103.44	1346.74	457.26	2.95	PASS
18617.00†	10806.54	7176.85	-981.86	19069.90	11117.32	7124.76	328.26	103.49	1347.48	461.85	2.92	PASS
18717.00†	10815.51	7276.45	-981.86	19149.46	11125.96	7203.82	330.26	103.53	1350.31	466.65	2.90	PASS
18817.00†	10824.49	7376.04	-981.86	19262.46	11138.24	7316.12	332.72	103.59	1352.83	473.31	2.86	PASS
18917.00†	10833.46	7475.64	-981.86	19376.16	11150.47	7429.14	334.66	103.66	1354.95	479.97	2.82	PASS
19017.00†	10842.44	7575.24	-981.86	19419.00	11155.08	7471.74	334.95	103.69	1357.37	482.58	2.81	PASS
19117.00†	10851.41	7674.83	-981.86	19419.00	11155.08	7471.74	334.95	103.69	1366.55	480.81	2.84	PASS
19217.00†	10860.39	7774.43	-981.86	19419.00	11155.08	7471.74	334.95	103.69	1382.91	476.73	2.90	PASS
19317.00†	10869.36	7874.03	-981.86	19419.00	11155.08	7471.74	334.95	103.69	1406.22	470.58	2.99	PASS
19417.00†	10878.34	7973.62	-981.86	19419.00	11155.08	7471.74	334.95	103.69	1436.13	462.64	3.11	PASS
19517.00†	10887.31	8073.22	-981.86	19419.00	11155.08	7471.74	334.95	103.69	1472.23	453.27	3.25	PASS
19617.00†	10896.29	8172.81	-981.86	19419.00	11155.08	7471.74	334.95	103.69	1514.09	442.80	3.42	PASS
19658.35	10900.00	8213.99	-981.86	19419.00	11155.08	7471.74	334.95	103.69	1532.97	438.30	3.50	PASS

POSITIONAL UNCERTAINTY - Offset Wellbore: BHR FED J22-15-397-2RH AWB Offset Wellpath: BHR FED J22-15-397-2RH AWP			
Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical

WELLPATH COMPOSITION - Offset Wellbore: BHR FED J22-15-397-2RH AWB Offset Wellpath: BHR FED J22-15-397-2RH AWP			
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Wellbore
17.00	3330.00	Custom BHI NaviTrak (Standard Rotating) (Rockies 0.03Gt model)	BHR J22-397 AWB
3330.00	9526.00	BHI NaviTrak (Rotating)	BHR J22-397 AWB
9526.00	9631.00	BHI NaviTrak (Rotating)	BHR J22-397 AWB
9631.00	19395.00	BHI AutoTrak Curve (Axial Corr, Short spacing)	BHR FED J22-15-397-2RH AWB
19395.00	19419.00	Blind Drilling (std)	BHR FED J22-15-397-2RH AWB

**Clearance Report**  
**BHR FED J22-15-397-4RH (REV-A.0) PWP**  
**Closest Approach**  
Page 8 of 26



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

OFFSET WELLPATH REFERENCE - Offset Wellbore: BHR FED J22-15-397-2RH AWB    Offset Wellpath: BHR FED J22-15-397-2RH AWP	
MD Reference: XTREME 18 (17'KB) (RKB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	17.00ft

# Clearance Report

BHR FED J22-15-397-4RH (REV-A.0) PWP  
Closest Approach  
Page 9 of 26



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

CLEARANCE DATA - Offset Wellbore: BHR J22-397 AWB Offset Wellpath: BHR J22-397 AWP												
Facility: SEC.22-T03N-R97W				Slot: SLOT#01 BHR J22-397 (1733'FSL & 1292'FEL, SEC.22)		Well: BHR J22-397		Threshold Value=1.00 † = interpolated/extrapolated station				
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
17.00	17.00	0.00	0.00	0.00	48.00	-29.25	41.43	125.22	59.44	2.54	36.89	PASS
117.00†	117.00	0.00	0.00	68.84	116.84	-29.44	41.39	125.42	50.79	2.04	45.97	PASS
217.00†	217.00	0.00	0.00	168.65	216.64	-30.85	41.12	126.88	51.41	2.74	28.24	PASS
317.00†	317.00	0.00	0.00	268.82	316.80	-32.35	40.54	128.59	51.87	3.61	19.17	PASS
417.00†	417.00	0.00	0.00	368.76	416.72	-34.22	39.65	130.79	52.37	4.43	14.80	PASS
517.00†	517.00	0.00	0.00	469.01	516.94	-36.00	38.62	132.99	52.80	5.25	12.05	PASS
617.00†	617.00	0.00	0.00	569.09	617.01	-37.11	37.38	134.79	52.67	6.09	10.06	PASS
717.00†	717.00	0.00	0.00	668.85	716.76	-37.96	36.84	135.85	52.90	6.92	8.70	PASS
817.00†	817.00	0.00	0.00	768.80	816.71	-38.90	36.65	136.71	53.45	7.75	7.72	PASS
917.00†	917.00	0.00	0.00	869.06	916.97	-39.78	36.22	137.68	53.80	8.59	6.92	PASS
1017.00†	1017.00	0.00	0.00	968.96	1016.86	-40.63	35.42	138.92	53.90	9.43	6.25	PASS
1117.00†	1117.00	0.00	0.00	1068.89	1116.78	-41.22	35.27	139.45	54.24	10.26	5.72	PASS
1217.00†	1217.00	0.00	0.00	1169.04	1216.94	-41.29	35.59	139.24	54.51	11.10	5.28	PASS
1317.00†	1317.00	0.00	0.00	1269.07	1316.97	-41.16	35.88	138.91	54.60	11.93	4.89	PASS
1417.00†	1417.00	0.00	0.00	1369.20	1417.09	-40.76	36.18	138.41	54.51	12.75	4.54	PASS
1517.00†	1517.00	0.00	0.00	1469.11	1517.00	-40.47	36.48	137.97	54.48	13.58	4.24	PASS
1617.00†	1617.00	0.00	0.00	1569.27	1617.16	-40.41	36.29	138.07	54.31	14.42	3.96	PASS
1717.00†	1717.00	0.00	0.00	1669.38	1717.27	-40.49	35.64	138.65	53.94	14.45	3.92	PASS
1817.00†	1817.00	0.00	0.00	1769.47	1817.35	-40.54	34.60	139.52	53.30	16.09	3.46	PASS
1917.00†	1917.00	0.00	0.00	1869.55	1917.42	-41.01	33.02	141.16	52.65	16.93	3.24	PASS
2017.00†	2017.00	0.00	0.00	1969.53	2017.39	-41.09	31.41	142.61	51.72	17.77	3.02	PASS
2117.00†	2117.00	0.00	0.00	2069.49	2117.34	-41.35	30.09	143.95	51.14	18.61	2.84	PASS
2217.00†	2217.00	0.00	0.00	2169.82	2217.65	-41.60	28.13	145.93	50.22	19.46	2.66	PASS
2317.00†	2317.00	0.00	0.00	2270.03	2317.80	-41.85	24.87	149.28	48.69	20.31	2.47	PASS
2417.00†	2417.00	0.00	0.00	2369.95	2417.67	-41.89	21.52	152.81	47.10	21.16	2.28	PASS
2517.00†	2517.00	0.00	0.00	2470.16	2517.84	-41.39	19.00	155.35	45.55	22.00	2.12	PASS
2617.00†	2617.00	0.00	0.00	2569.92	2617.58	-40.33	17.28	156.81	43.88	22.84	1.96	PASS
2717.00†	2717.00	0.00	0.00	2669.53	2717.18	-39.94	15.95	158.22	43.00	23.68	1.85	PASS
2817.00†	2817.00	0.00	0.00	2769.26	2816.90	-40.20	15.06	159.46	42.93	24.52	1.78	PASS
2917.00†	2917.00	0.00	0.00	2869.51	2917.16	-40.34	14.52	160.20	42.87	25.35	1.72	PASS
3017.00†	3017.00	0.00	0.00	2969.86	3017.50	-39.27	14.92	159.20	42.01	26.20	1.63	PASS
3117.00†	3117.00	0.00	0.00	3069.80	3117.42	-37.67	15.94	157.07	40.91	27.05	1.53	PASS
3217.00†	3217.00	0.00	0.00	3169.79	3217.40	-36.28	16.67	155.33	39.93	27.89	1.45	PASS
3317.00†	3317.00	0.00	0.00	3269.77	3317.37	-35.03	16.88	154.28	38.88	28.42	1.38	PASS
3400.00	3400.00	0.00	0.00	3352.71	3400.30	-34.09	17.30	153.09	38.23	29.08	1.32	PASS
3417.00†	3417.00	-0.04	-0.03	3369.75	3417.34	-33.88	17.40	-63.09	38.07	29.20	1.31	PASS
3517.00†	3516.97	-1.94	-1.40	3469.30	3516.88	-32.65	18.09	-68.24	36.38	29.83	1.22	PASS
3566.48†	3566.39	-3.92	-2.83	3518.29	3565.86	-32.59	19.00	-73.11	36.04	30.10	1.20	PASS
3582.85†	3582.72	-4.73	-3.41	3534.29	3581.86	-32.74	19.34	-74.86	36.10	30.22	1.20	PASS
3617.00†	3616.79	-6.66	-4.81	3567.93	3615.49	-33.51	19.99	-78.43	36.58	30.42	1.21	PASS
3717.00†	3716.35	-14.21	-10.26	3665.88	3713.23	-39.29	21.97	-87.45	40.96	31.04	1.33	PASS
3817.00†	3815.53	-24.56	-17.73	3762.85	3809.48	-50.28	25.96	-94.31	51.07	31.76	1.62	PASS
3917.00†	3914.20	-37.72	-27.23	3859.56	3904.75	-65.47	32.48	-99.27	66.53	32.58	2.06	PASS
4017.00†	4012.24	-53.66	-38.74	3957.30	4000.35	-84.63	39.41	-102.20	84.90	33.41	2.57	PASS
4117.00†	4109.54	-72.37	-52.25	4055.79	4096.10	-106.99	44.94	-103.94	104.05	34.27	3.08	PASS

# Clearance Report

BHR FED J22-15-397-4RH (REV-A.0) PWP  
Closest Approach  
Page 10 of 26



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

CLEARANCE DATA - Offset Wellbore: BHR J22-397 AWB Offset Wellpath: BHR J22-397 AWP												
Facility: SEC.22-T03N-R97W		Slot: SLOT#01 BHR J22-397 (1733'FSL & 1292'FEL, SEC.22)			Well: BHR J22-397		Threshold Value=1.00 † = interpolated/extrapolated station					
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
4217.00†	4205.97	-93.81	-67.74	4152.63	4189.92	-130.45	49.89	-105.80	124.23	35.18	3.58	PASS
4317.00†	4301.42	-117.98	-85.18	4247.51	4281.13	-156.01	55.21	-107.29	146.86	36.17	4.12	PASS
4325.00	4309.01	-120.03	-86.66	4255.03	4288.34	-158.11	55.69	-107.41	148.80	36.25	4.16	PASS
4417.00†	4396.26	-143.69	-103.75	4341.72	4371.13	-183.09	61.69	-108.82	171.91	37.25	4.68	PASS
4517.00†	4491.09	-169.42	-122.32	4440.83	4465.45	-212.74	68.51	-109.70	197.36	38.55	5.19	PASS
4617.00†	4585.92	-195.15	-140.90	4538.68	4558.81	-241.50	74.23	-110.46	221.73	39.87	5.64	PASS
4717.00†	4680.75	-220.87	-159.47	4632.23	4647.84	-269.62	80.02	-110.90	246.61	41.15	6.07	PASS
4817.00†	4775.59	-246.60	-178.05	4727.74	4738.16	-299.99	86.50	-110.92	272.46	42.55	6.49	PASS
4917.00†	4870.42	-272.32	-196.62	4829.72	4834.76	-332.07	92.76	-110.98	297.63	44.15	6.83	PASS
5017.00†	4965.25	-298.05	-215.20	4926.04	4926.14	-362.08	97.95	-111.06	322.01	45.68	7.14	PASS
5117.00†	5060.08	-323.77	-233.77	5024.02	5019.07	-392.69	103.12	-111.11	346.30	47.27	7.42	PASS
5217.00†	5154.92	-349.50	-252.35	5120.06	5110.31	-422.22	108.32	-111.23	370.61	48.86	7.68	PASS
5317.00†	5249.75	-375.23	-270.92	5216.59	5201.79	-452.55	113.62	-111.24	395.16	50.49	7.92	PASS
5417.00†	5344.58	-400.95	-289.49	5315.93	5295.91	-483.95	118.75	-111.22	419.43	52.22	8.12	PASS
5517.00†	5439.41	-426.68	-308.07	5414.79	5389.74	-514.70	123.43	-111.25	443.17	53.97	8.30	PASS
5617.00†	5534.25	-452.40	-326.64	5508.58	5478.76	-543.92	127.81	-111.27	466.88	55.64	8.48	PASS
5717.00†	5629.08	-478.13	-345.22	5595.20	5560.59	-571.77	133.31	-111.22	492.39	57.19	8.70	PASS
5817.00†	5723.91	-503.85	-363.79	5692.31	5651.95	-604.00	140.05	-111.06	518.71	59.02	8.88	PASS
5917.00†	5818.74	-529.58	-382.37	5790.97	5744.86	-636.51	146.61	-110.93	544.71	60.88	9.03	PASS
6017.00†	5913.57	-555.31	-400.94	5890.03	5838.31	-668.76	153.05	-110.86	570.48	62.76	9.18	PASS
6117.00†	6008.41	-581.03	-419.52	5993.50	5935.98	-702.44	158.75	-110.76	595.30	64.75	9.28	PASS
6217.00†	6103.24	-606.76	-438.09	6091.69	6028.89	-733.83	163.54	-110.72	619.38	66.63	9.38	PASS
6317.00†	6198.07	-632.48	-456.66	6182.27	6114.59	-762.78	168.35	-110.70	643.89	68.37	9.50	PASS
6417.00†	6292.90	-658.21	-475.24	6279.05	6205.87	-794.36	174.46	-110.64	669.49	70.26	9.61	PASS
6517.00†	6387.74	-683.93	-493.81	6384.29	6305.55	-827.67	179.83	-110.64	693.69	72.33	9.67	PASS
6617.00†	6482.57	-709.66	-512.39	6474.89	6391.47	-856.01	184.50	-110.67	717.89	74.09	9.77	PASS
6717.00†	6577.40	-735.39	-530.96	6565.14	6477.01	-884.19	190.36	-110.72	743.32	75.85	9.88	PASS
6817.00†	6672.23	-761.11	-549.54	6660.41	6567.33	-913.77	196.89	-110.79	769.06	77.71	9.97	PASS
6917.00†	6767.07	-786.84	-568.11	6761.26	6663.05	-944.75	203.94	-110.89	794.87	79.69	10.05	PASS
7017.00†	6861.90	-812.56	-586.69	6875.10	6771.38	-979.10	210.41	-111.02	819.32	81.93	10.07	PASS
7117.00†	6956.73	-838.29	-605.26	6977.38	6868.93	-1009.55	214.62	-111.13	842.17	83.94	10.10	PASS
7217.00†	7051.56	-864.01	-623.83	7066.67	6954.15	-1035.92	218.58	-111.24	865.28	85.69	10.17	PASS
7317.00†	7146.40	-889.74	-642.41	7152.38	7036.14	-1060.39	223.62	-111.42	889.54	87.36	10.25	PASS
7417.00†	7241.23	-915.46	-660.98	7255.40	7134.66	-1089.77	230.34	-111.63	914.43	89.37	10.30	PASS
7517.00†	7336.06	-941.19	-679.56	7352.14	7227.03	-1117.97	235.74	-111.77	938.57	91.27	10.35	PASS
7617.00†	7430.89	-966.92	-698.13	7462.24	7332.09	-1150.40	241.37	-111.89	962.33	93.43	10.37	PASS
7717.00†	7525.72	-992.64	-716.71	7556.37	7422.00	-1177.98	245.55	-111.99	985.42	95.30	10.40	PASS
7817.00†	7620.56	-1018.37	-735.28	7638.00	7499.73	-1202.50	249.85	-112.04	1009.45	96.93	10.48	PASS
7917.00†	7715.39	-1044.09	-753.86	7747.94	7604.18	-1236.31	255.68	-112.06	1033.68	99.15	10.49	PASS
8017.00†	7810.22	-1069.82	-772.43	7845.24	7696.66	-1266.24	260.08	-112.08	1057.14	101.12	10.52	PASS
8117.00†	7905.05	-1095.54	-791.00	7928.87	7775.92	-1292.60	264.31	-112.05	1081.30	102.84	10.58	PASS
8217.00†	7999.89	-1121.27	-809.58	8009.04	7851.69	-1318.27	269.41	-112.02	1106.79	104.47	10.65	PASS
8317.00†	8094.72	-1147.00	-828.15	8103.80	7941.20	-1348.59	276.34	-112.00	1133.19	106.42	10.71	PASS
8417.00†	8189.55	-1172.72	-846.73	8210.49	8042.04	-1382.65	283.70	-111.97	1159.18	108.63	10.73	PASS
8517.00†	8284.38	-1198.45	-865.30	8309.19	8135.48	-1413.82	290.03	-111.96	1184.63	110.66	10.76	PASS

# Clearance Report

BHR FED J22-15-397-4RH (REV-A.0) PWP  
Closest Approach  
Page 11 of 26



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

CLEARANCE DATA - Offset Wellbore: BHR J22-397 AWB Offset Wellpath: BHR J22-397 AWP												
Facility: SEC.22-T03N-R97W				Slot: SLOT#01 BHR J22-397 (1733'FSL & 1292'FEL, SEC.22)				Well: BHR J22-397		Threshold Value=1.00 † = interpolated/extrapolated station		
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
8617.00†	8379.22	-1224.17	-883.88	8410.20	8231.13	-1445.68	296.22	-111.95	1209.80	112.73	10.79	PASS
8677.92	8436.99	-1239.85	-895.19	8470.72	8288.44	-1464.80	299.79	-111.94	1225.01	113.98	10.80	PASS
8717.00†	8474.13	-1249.69	-902.30	8519.51	8334.74	-1479.93	302.56	-112.11	1234.56	114.96	10.80	PASS
8817.00†	8569.90	-1273.02	-919.14	8653.80	8463.93	-1516.08	308.17	-112.59	1255.63	117.47	10.74	PASS
8917.00†	8666.61	-1293.61	-934.01	8762.24	8569.18	-1542.00	311.59	-112.97	1273.86	119.35	10.73	PASS
9017.00†	8764.16	-1311.46	-946.90	8865.57	8669.60	-1566.14	314.42	-113.18	1290.25	121.07	10.71	PASS
9117.00†	8862.41	-1326.54	-957.79	8960.58	8761.96	-1588.27	317.00	-113.23	1305.25	122.59	10.70	PASS
9217.00†	8961.24	-1338.83	-966.66	9078.66	8877.36	-1613.05	320.35	-113.16	1318.57	124.29	10.66	PASS
9317.00†	9060.55	-1348.31	-973.51	9205.84	9002.88	-1633.29	322.28	-113.09	1328.01	125.86	10.60	PASS
9417.00†	9160.21	-1354.98	-978.32	9312.44	9108.89	-1644.16	324.45	-113.14	1335.47	126.77	10.57	PASS
9517.00†	9260.09	-1358.83	-981.10	9445.25	9241.32	-1654.01	326.00	-113.07	1340.15	127.92	10.51	PASS
9602.92	9346.00	-1359.87	-981.85	9557.54	9353.44	-1660.02	325.02	102.94	1340.92	128.71	10.45	PASS
9617.00†	9360.08	-1359.87	-981.85	9574.29	9370.17	-1660.86	324.71	102.97	1340.83	128.81	10.44	PASS
9639.61	9382.69	-1359.87	-981.85	9601.18	9397.02	-1662.24	324.14	103.04	1340.62	128.96	10.43	PASS
9717.00†	9459.93	-1355.69	-981.85	9693.91	9489.59	-1666.90	321.50	103.49	1340.32	129.30	10.40	PASS
9817.00†	9558.27	-1338.02	-981.85	9784.76	9580.31	-1670.70	318.49	104.15	1342.41	129.40	10.41	PASS
9917.00†	9653.20	-1306.82	-981.85	9863.58	9659.06	-1673.71	316.85	104.75	1349.54	129.15	10.48	PASS
10017.00†	9742.86	-1262.72	-981.85	9957.54	9752.97	-1676.73	315.80	105.63	1362.14	128.54	10.63	PASS
10117.00†	9825.50	-1206.57	-981.85	10058.11	9853.50	-1678.06	313.58	106.67	1378.86	127.55	10.84	PASS
10217.00†	9899.54	-1139.47	-981.85	10123.14	9918.51	-1678.04	312.23	106.63	1401.81	126.23	11.14	PASS
10317.00†	9963.51	-1062.71	-981.85	10166.73	9962.10	-1678.22	311.85	105.51	1432.67	124.60	11.53	PASS
10417.00†	10016.17	-977.80	-981.85	10203.37	9998.74	-1678.61	311.94	103.54	1471.51	122.70	12.03	PASS
10517.00†	10056.51	-886.38	-981.85	10234.87	10030.24	-1679.01	312.24	100.67	1517.77	120.62	12.63	PASS
10617.00†	10083.73	-790.24	-981.85	10255.71	10051.07	-1679.29	312.54	96.61	1570.64	118.44	13.31	PASS
10700.24	10096.00	-707.95	-981.85	10264.65	10060.01	-1679.41	312.69	92.27	1618.91	116.60	13.93	PASS
10717.00†	10097.50	-691.27	-981.85	10265.67	10061.03	-1679.42	312.70	92.32	1629.01	116.24	14.06	PASS
10817.00†	10106.48	-591.67	-981.85	10271.76	10067.12	-1679.51	312.82	92.58	1691.48	114.15	14.87	PASS
10917.00†	10115.45	-492.07	-981.85	10277.83	10073.18	-1679.59	312.93	92.85	1757.40	112.21	15.72	PASS
11017.00†	10124.43	-392.48	-981.85	10283.88	10079.23	-1679.68	313.06	93.12	1826.39	110.43	16.60	PASS
11117.00†	10133.40	-292.88	-981.85	10289.91	10085.26	-1679.76	313.19	93.38	1898.13	108.80	17.51	PASS
11217.00†	10142.38	-193.28	-981.85	10307.95	10103.30	-1680.03	313.49	94.17	1972.27	107.31	18.45	PASS
11317.00†	10151.35	-93.69	-981.85	10320.97	10116.32	-1680.24	313.62	94.74	2048.56	105.97	19.41	PASS
11417.00†	10160.33	5.91	-981.85	10334.20	10129.55	-1680.44	313.70	95.32	2126.78	104.75	20.38	PASS
11517.00†	10169.30	105.50	-981.85	10347.65	10142.99	-1680.63	313.74	95.91	2206.70	103.66	21.37	PASS
11617.00†	10178.28	205.10	-981.85	10361.31	10156.65	-1680.82	313.72	96.51	2288.16	102.67	22.38	PASS
11717.00†	10187.25	304.70	-981.85	10375.20	10170.54	-1681.01	313.65	97.11	2371.00	101.78	23.39	PASS
11817.00†	10196.23	404.29	-981.85	10386.07	10181.41	-1681.14	313.56	97.58	2455.07	100.98	24.41	PASS
11917.00†	10205.20	503.89	-981.86	10392.88	10188.22	-1681.23	313.50	97.88	2540.27	100.28	25.44	PASS
12017.00†	10214.18	603.49	-981.86	10399.58	10194.92	-1681.33	313.43	98.17	2626.50	99.65	26.47	PASS
12117.00†	10223.15	703.08	-981.86	10406.17	10201.51	-1681.42	313.36	98.45	2713.66	99.09	27.50	PASS
12217.00†	10232.13	802.68	-981.86	10412.66	10207.99	-1681.52	313.29	98.73	2801.65	98.58	28.54	PASS
12317.00†	10241.10	902.28	-981.86	10419.03	10214.37	-1681.62	313.22	99.01	2890.41	98.14	29.58	PASS
12417.00†	10250.08	1001.87	-981.86	10425.31	10220.64	-1681.72	313.15	99.28	2979.86	97.74	30.62	PASS
12517.00†	10259.05	1101.47	-981.86	10431.49	10226.82	-1681.83	313.08	99.54	3069.96	97.38	31.66	PASS
12617.00†	10268.03	1201.06	-981.86	10437.57	10232.90	-1681.93	313.01	99.81	3160.63	97.06	32.70	PASS

# Clearance Report

BHR FED J22-15-397-4RH (REV-A.0) PWP  
Closest Approach  
Page 12 of 26



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

CLEARANCE DATA - Offset Wellbore: BHR J22-397 AWB Offset Wellpath: BHR J22-397 AWP												
Facility: SEC.22-T03N-R97W				Slot: SLOT#01 BHR J22-397 (1733'FSL & 1292'FEL, SEC.22)		Well: BHR J22-397		Threshold Value=1.00 † = interpolated/extrapolated station				
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
12717.00†	10277.00	1300.66	-981.86	10443.56	10238.89	-1682.04	312.93	100.06	3251.84	96.78	33.75	PASS
12817.00†	10285.98	1400.26	-981.86	10449.46	10244.78	-1682.15	312.86	100.31	3343.53	96.53	34.79	PASS
12917.00†	10294.95	1499.85	-981.86	10455.26	10250.59	-1682.26	312.78	100.56	3435.68	96.31	35.83	PASS
13017.00†	10303.93	1599.45	-981.86	10460.98	10256.30	-1682.37	312.70	100.81	3528.24	96.12	36.87	PASS
13117.00†	10312.90	1699.05	-981.86	10466.61	10261.93	-1682.49	312.63	101.05	3621.19	95.95	37.91	PASS
13217.00†	10321.88	1798.64	-981.86	10472.15	10267.47	-1682.60	312.55	101.28	3714.50	95.80	38.95	PASS
13317.00†	10330.85	1898.24	-981.86	10477.62	10272.94	-1682.72	312.47	101.52	3808.13	95.67	39.98	PASS
13417.00†	10339.83	1997.84	-981.86	10483.68	10279.00	-1682.85	312.38	101.77	3902.07	95.56	41.02	PASS
13517.00†	10348.80	2097.43	-981.86	10489.75	10285.06	-1682.98	312.29	102.03	3996.30	95.46	42.05	PASS
13617.00†	10357.78	2197.03	-981.86	10495.77	10291.08	-1683.11	312.20	102.29	4090.79	95.38	43.08	PASS
13717.00†	10366.76	2296.63	-981.86	10501.75	10297.06	-1683.25	312.11	102.54	4185.52	95.31	44.11	PASS
13817.00†	10375.73	2396.22	-981.86	10507.68	10302.99	-1683.38	312.01	102.79	4280.49	95.25	45.14	PASS
13917.00†	10384.71	2495.82	-981.86	10513.57	10308.87	-1683.52	311.92	103.04	4375.67	95.21	46.17	PASS
14017.00†	10393.68	2595.41	-981.86	10519.41	10314.71	-1683.65	311.83	103.28	4471.05	95.17	47.19	PASS
14117.00†	10402.66	2695.01	-981.86	10525.21	10320.51	-1683.79	311.74	103.53	4566.62	95.15	48.21	PASS
14217.00†	10411.63	2794.61	-981.86	10530.96	10326.26	-1683.92	311.64	103.77	4662.37	95.13	49.23	PASS
14317.00†	10420.61	2894.20	-981.86	10536.68	10331.97	-1684.06	311.55	104.01	4758.28	95.13	50.25	PASS
14417.00†	10429.58	2993.80	-981.86	10542.35	10337.64	-1684.20	311.46	104.24	4854.35	95.13	51.26	PASS
14517.00†	10438.56	3093.40	-981.86	10547.98	10343.27	-1684.33	311.36	104.48	4950.58	95.13	52.27	PASS
14617.00†	10447.53	3192.99	-981.86	10553.57	10348.86	-1684.47	311.27	104.71	5046.94	95.15	53.28	PASS
14717.00†	10456.51	3292.59	-981.86	10559.12	10354.40	-1684.61	311.17	104.94	5143.43	95.17	54.29	PASS
14817.00†	10465.48	3392.19	-981.86	10564.62	10359.91	-1684.75	311.08	105.17	5240.04	95.20	55.29	PASS
14917.00†	10474.46	3491.78	-981.86	10570.09	10365.37	-1684.88	310.98	105.39	5336.78	95.23	56.30	PASS
15017.00†	10483.43	3591.38	-981.86	10575.99	10369.26	-1684.98	310.92	105.56	5433.63	95.27	57.29	PASS
15117.00†	10492.41	3690.98	-981.86	10577.50	10372.78	-1685.08	310.85	105.70	5530.58	95.32	58.29	PASS
15217.00†	10501.38	3790.57	-981.86	10580.94	10376.21	-1685.17	310.79	105.84	5627.64	95.37	59.28	PASS
15317.00†	10510.36	3890.17	-981.86	10584.30	10379.58	-1685.26	310.72	105.98	5724.80	95.42	60.26	PASS
15417.00†	10519.33	3989.76	-981.86	10587.60	10382.87	-1685.36	310.65	106.12	5822.05	95.49	61.25	PASS
15517.00†	10528.31	4089.36	-981.86	10590.82	10386.09	-1685.45	310.58	106.25	5919.38	95.55	62.23	PASS
15617.00†	10537.28	4188.96	-981.86	10593.98	10389.25	-1685.54	310.52	106.38	6016.80	95.62	63.21	PASS
15717.00†	10546.26	4288.55	-981.86	10597.08	10392.34	-1685.64	310.45	106.50	6114.30	95.69	64.18	PASS
15817.00†	10555.23	4388.15	-981.86	10600.11	10395.37	-1685.73	310.38	106.63	6211.88	95.77	65.16	PASS
15917.00†	10564.21	4487.75	-981.86	10603.08	10398.34	-1685.83	310.31	106.75	6309.53	95.85	66.13	PASS
16017.00†	10573.18	4587.34	-981.86	10606.00	10401.25	-1685.92	310.24	106.87	6407.25	95.93	67.09	PASS
16117.00†	10582.16	4686.94	-981.86	10608.85	10404.11	-1686.01	310.17	106.99	6505.04	96.02	68.05	PASS
16217.00†	10591.13	4786.54	-981.86	10611.65	10406.91	-1686.10	310.10	107.10	6602.89	96.11	69.01	PASS
16317.00†	10600.11	4886.13	-981.86	10614.40	10409.65	-1686.20	310.03	107.21	6700.80	96.20	69.97	PASS
16417.00†	10609.08	4985.73	-981.86	10617.10	10412.34	-1686.29	309.96	107.32	6798.78	96.29	70.92	PASS
16517.00†	10618.06	5085.33	-981.86	10619.74	10414.98	-1686.38	309.89	107.43	6896.80	96.39	71.87	PASS
16617.00†	10627.03	5184.92	-981.86	10622.33	10417.58	-1686.47	309.82	107.53	6994.88	96.49	72.82	PASS
16717.00†	10636.01	5284.52	-981.86	10624.88	10420.12	-1686.56	309.75	107.64	7093.02	96.59	73.76	PASS
16817.00†	10644.98	5384.11	-981.86	10627.38	10422.62	-1686.66	309.68	107.74	7191.20	96.70	74.70	PASS
16917.00†	10653.96	5483.71	-981.86	10629.83	10425.07	-1686.75	309.61	107.84	7289.43	96.81	75.63	PASS
17017.00†	10662.94	5583.31	-981.86	10632.24	10427.48	-1686.84	309.54	107.94	7387.70	96.92	76.57	PASS
17117.00†	10671.91	5682.90	-981.86	10634.61	10429.84	-1686.93	309.47	108.03	7486.02	97.03	77.49	PASS

# Clearance Report

BHR FED J22-15-397-4RH (REV-A.0) PWP  
Closest Approach  
Page 13 of 26



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

CLEARANCE DATA - Offset Wellbore: BHR J22-397 AWP Offset Wellpath: BHR J22-397 AWP												
Facility: SEC.22-T03N-R97W Slot: SLOT#01 BHR J22-397 (1733'FSL & 1292'FEL, SEC.22)				Well: BHR J22-397		Threshold Value=1.00 † = interpolated/extrapolated station						
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
17217.00†	10680.89	5782.50	-981.86	10636.94	10432.16	-1687.01	309.40	108.13	7584.38	97.15	78.42	PASS
17317.00†	10689.86	5882.10	-981.86	10639.22	10434.45	-1687.10	309.34	108.22	7682.79	97.27	79.34	PASS
17417.00†	10698.84	5981.69	-981.86	10641.47	10436.69	-1687.19	309.27	108.31	7781.23	97.39	80.26	PASS
17517.00†	10707.81	6081.29	-981.86	10643.67	10438.89	-1687.28	309.20	108.40	7879.71	97.51	81.17	PASS
17617.00†	10716.79	6180.89	-981.86	10645.84	10441.06	-1687.36	309.13	108.49	7978.22	97.63	82.08	PASS
17717.00†	10725.76	6280.48	-981.86	10647.97	10443.19	-1687.45	309.06	108.57	8076.77	97.76	82.99	PASS
17817.00†	10734.74	6380.08	-981.86	10650.07	10445.28	-1687.54	309.00	108.66	8175.36	97.89	83.89	PASS
17917.00†	10743.71	6479.68	-981.86	10652.13	10447.34	-1687.62	308.93	108.74	8273.98	98.02	84.79	PASS
18017.00†	10752.69	6579.27	-981.86	10654.16	10449.36	-1687.70	308.86	108.82	8372.63	98.15	85.68	PASS
18117.00†	10761.66	6678.87	-981.86	10656.15	10451.35	-1687.79	308.79	108.90	8471.31	98.28	86.57	PASS
18217.00†	10770.64	6778.46	-981.86	10658.11	10453.31	-1687.87	308.73	108.98	8570.02	98.42	87.46	PASS
18317.00†	10779.61	6878.06	-981.86	10660.04	10455.24	-1687.95	308.66	109.06	8668.75	98.56	88.34	PASS
18417.00†	10788.59	6977.66	-981.86	10661.94	10457.14	-1688.04	308.60	109.13	8767.52	98.70	89.22	PASS
18517.00†	10797.56	7077.25	-981.86	10663.81	10459.00	-1688.12	308.53	109.21	8866.31	98.84	90.10	PASS
18617.00†	10806.54	7176.85	-981.86	10665.50	10460.69	-1688.19	308.47	109.27	8965.13	98.99	90.97	PASS
18717.00†	10815.51	7276.45	-981.86	10666.88	10462.07	-1688.25	308.42	109.33	9063.97	99.13	91.83	PASS
18817.00†	10824.49	7376.04	-981.86	10668.24	10463.42	-1688.31	308.37	109.38	9162.84	99.28	92.70	PASS
18917.00†	10833.46	7475.64	-981.86	10669.57	10464.75	-1688.37	308.32	109.44	9261.73	99.43	93.55	PASS
19017.00†	10842.44	7575.24	-981.86	10670.87	10466.05	-1688.43	308.27	109.49	9360.65	99.58	94.41	PASS
19117.00†	10851.41	7674.83	-981.86	10672.15	10467.33	-1688.49	308.22	109.54	9459.58	99.74	95.26	PASS
19217.00†	10860.39	7774.43	-981.86	10673.40	10468.58	-1688.55	308.17	109.59	9558.54	99.89	96.10	PASS
19317.00†	10869.36	7874.03	-981.86	10674.63	10469.80	-1688.61	308.12	109.64	9657.52	100.05	96.95	PASS
19417.00†	10878.34	7973.62	-981.86	10675.84	10471.01	-1688.67	308.08	109.69	9756.52	100.21	97.78	PASS
19517.00†	10887.31	8073.22	-981.86	10677.02	10472.19	-1688.72	308.03	109.73	9855.54	100.37	98.62	PASS
19617.00†	10896.29	8172.81	-981.86	10678.18	10473.34	-1688.78	307.98	109.78	9954.58	100.53	99.45	PASS
19658.35	10900.00	8213.99	-981.86	10678.65	10473.82	-1688.80	307.96	109.80	9995.53	100.66	99.79	PASS

POSITIONAL UNCERTAINTY - Offset Wellbore: BHR J22-397 AWP Offset Wellpath: BHR J22-397 AWP			
Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical

WELLPATH COMPOSITION - Offset Wellbore: BHR J22-397 AWP Offset Wellpath: BHR J22-397 AWP			
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment
17.00	3330.00	Custom BHI NaviTrak (Standard Rotating) (Rockies 0.03Gt model)	17 1/2" BHGE MWD NAVITRAK (STANDARD ROTATING) <17 - 3330>
3330.00	9526.00	BHI NaviTrak (Rotating)	12 1/4" BHGE MWD NAVITRAK (STANDARD ROTATING) <3330 - 9526>
9526.00	11417.00	BHI NaviTrak (Rotating)	8 1/2" BHGE MWD NAVITRAK PILOT HOLE (STANDARD) <9526 - 11417>
11417.00	11473.00	Blind Drilling (std)	Projection to bit



**Clearance Report**  
BHR FED J22-15-397-4RH (REV-A.0) PWP  
Closest Approach  
Page 14 of 26



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

OFFSET WELLPATH REFERENCE - Offset Wellbore: BHR J22-397 AWB    Offset Wellpath: BHR J22-397 AWP	
MD Reference: XTREME 18 (17'KB) (RKB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	17.00ft

# Clearance Report

BHR FED J22-15-397-4RH (REV-A.0) PWP  
Closest Approach  
Page 15 of 26



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

CLEARANCE DATA - Offset Wellbore: WILEY 23-3-97-H1 AWB (BHI) Offset Wellpath: WILEY 23-3-97-H1 AWB (BHI) AWP												
Facility: SEC.23-T03N-R97W				Slot: SLOT#01 EX) WILEY 23-3-97 H1 (950'FSL & 1402'FEL SEC 23)				Well: WILEY 23-3-97 H1				Threshold Value=1.00 † = interpolated/extrapolated station
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
17.00	17.00	0.00	0.00	110.37	19.37	-818.00	5216.78	98.91	5280.53	50.16	107.29	PASS
117.00†	117.00	0.00	0.00	194.82	103.82	-817.75	5216.86	98.91	5280.58	50.18	107.25	PASS
217.00†	217.00	0.00	0.00	296.71	205.71	-817.59	5217.24	98.91	5280.92	50.22	107.16	PASS
317.00†	317.00	0.00	0.00	417.80	326.80	-817.61	5217.24	98.91	5280.92	50.30	107.00	PASS
417.00†	417.00	0.00	0.00	584.67	493.65	-818.21	5215.57	98.92	5279.92	50.42	106.72	PASS
517.00†	517.00	0.00	0.00	739.31	648.25	-820.03	5212.19	98.94	5277.94	50.57	106.35	PASS
617.00†	617.00	0.00	0.00	808.40	717.31	-820.70	5210.55	98.95	5275.74	50.69	106.05	PASS
717.00†	717.00	0.00	0.00	886.10	795.00	-820.94	5209.19	98.96	5274.06	50.84	105.70	PASS
817.00†	817.00	0.00	0.00	987.46	896.35	-821.11	5207.67	98.96	5272.61	51.03	105.28	PASS
917.00†	917.00	0.00	0.00	1098.09	1006.96	-821.81	5205.77	98.97	5271.00	51.24	104.79	PASS
1017.00†	1017.00	0.00	0.00	1217.00	1125.85	-822.28	5203.49	98.98	5269.19	51.50	104.23	PASS
1117.00†	1117.00	0.00	0.00	1333.40	1242.21	-823.03	5200.63	98.99	5266.84	51.77	103.62	PASS
1217.00†	1217.00	0.00	0.00	1402.31	1311.09	-823.96	5198.93	99.01	5264.66	52.00	103.11	PASS
1317.00†	1317.00	0.00	0.00	1454.23	1363.00	-824.72	5198.11	99.02	5263.33	52.22	102.64	PASS
1417.00†	1417.00	0.00	0.00	1594.89	1503.63	-826.82	5195.99	99.04	5262.08	52.59	101.88	PASS
1517.00†	1517.00	0.00	0.00	1683.95	1592.67	-828.19	5194.34	99.06	5260.49	52.91	101.24	PASS
1617.00†	1617.00	0.00	0.00	1773.86	1682.55	-829.35	5193.05	99.07	5259.26	53.24	100.57	PASS
1717.00†	1717.00	0.00	0.00	1918.07	1826.73	-830.60	5190.26	99.09	5257.44	53.69	99.68	PASS
1817.00†	1817.00	0.00	0.00	2011.96	1920.60	-831.53	5188.13	99.11	5255.37	54.07	98.93	PASS
1917.00†	1917.00	0.00	0.00	2161.74	2070.33	-830.70	5184.60	99.10	5252.97	54.57	97.95	PASS
2017.00†	2017.00	0.00	0.00	2261.23	2169.77	-829.37	5181.85	99.09	5250.02	55.00	97.12	PASS
2117.00†	2117.00	0.00	0.00	2361.76	2270.25	-828.50	5179.09	99.09	5247.18	55.45	96.27	PASS
2217.00†	2217.00	0.00	0.00	2520.78	2429.19	-828.06	5173.64	99.09	5243.79	56.04	95.17	PASS
2317.00†	2317.00	0.00	0.00	2595.54	2503.88	-828.06	5170.76	99.10	5239.98	56.47	94.37	PASS
2417.00†	2417.00	0.00	0.00	2671.68	2579.98	-827.70	5168.25	99.10	5236.64	56.91	93.56	PASS
2517.00†	2517.00	0.00	0.00	2746.13	2654.40	-827.10	5166.17	99.10	5233.77	57.36	92.77	PASS
2617.00†	2617.00	0.00	0.00	2849.69	2757.93	-826.91	5163.63	99.10	5231.32	57.90	91.85	PASS
2717.00†	2717.00	0.00	0.00	4496.09	4371.86	-820.36	4885.27	99.53	5222.78	56.86	93.23	PASS
2817.00†	2817.00	0.00	0.00	4595.46	4466.12	-817.71	4853.88	99.56	5191.19	57.19	92.12	PASS
2917.00†	2917.00	0.00	0.00	4672.07	4538.70	-815.96	4829.46	99.59	5159.40	57.58	90.93	PASS
3017.00†	3017.00	0.00	0.00	4718.83	4583.13	-815.26	4814.89	99.61	5128.41	58.03	89.66	PASS
3117.00†	3117.00	0.00	0.00	4854.62	4712.17	-814.35	4772.62	99.68	5097.61	58.35	88.63	PASS
3217.00†	3217.00	0.00	0.00	4936.23	4789.61	-814.08	4746.87	99.73	5066.42	58.77	87.45	PASS
3317.00†	3317.00	0.00	0.00	5008.05	4857.82	-814.42	4724.39	99.78	5035.60	59.03	86.25	PASS
3400.00	3400.00	0.00	0.00	5119.37	4963.47	-815.64	4689.36	99.87	5009.97	59.33	85.38	PASS
3417.00†	3417.00	-0.04	-0.03	5133.84	4977.20	-815.76	4684.77	-116.05	5004.69	59.41	85.18	PASS
3517.00†	3516.97	-1.94	-1.40	5232.23	5070.58	-815.61	4653.77	-116.59	4974.57	59.84	84.04	PASS
3617.00†	3616.79	-6.66	-4.81	5365.61	5196.95	-814.26	4611.15	-117.14	4945.32	60.24	82.99	PASS
3717.00†	3716.35	-14.21	-10.26	5467.02	5292.94	-812.88	4578.45	-117.72	4917.28	60.70	81.88	PASS
3817.00†	3815.53	-24.56	-17.73	5596.88	5415.66	-811.70	4536.01	-118.32	4890.46	61.14	80.85	PASS
3917.00†	3914.20	-37.72	-27.23	5683.05	5497.00	-811.20	4507.59	-118.89	4864.99	61.67	79.73	PASS
4017.00†	4012.24	-53.66	-38.74	5746.43	5556.94	-810.84	4486.96	-119.41	4841.63	62.24	78.60	PASS
4117.00†	4109.54	-72.37	-52.25	5814.51	5621.45	-810.52	4465.23	-119.92	4820.62	62.83	77.52	PASS
4217.00†	4205.97	-93.81	-67.74	5884.43	5687.81	-810.68	4443.19	-120.41	4801.89	63.44	76.47	PASS
4317.00†	4301.42	-117.98	-85.18	5951.32	5751.39	-811.42	4422.41	-120.87	4785.56	64.09	75.44	PASS

# Clearance Report

BHR FED J22-15-397-4RH (REV-A.0) PWP  
Closest Approach  
Page 16 of 26



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

CLEARANCE DATA - Offset Wellbore: WILEY 23-3-97-H1 AWB (BHI) Offset Wellpath: WILEY 23-3-97-H1 AWB (BHI) AWP												
Facility: SEC.23-T03N-R97W		Slot: SLOT#01 EX) WILEY 23-3-97 H1 (950'FSL & 1402'FEL SEC 23)		Well: WILEY 23-3-97 H1		Threshold Value=1.00 † = interpolated/extrapolated station						
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
4325.00	4309.01	-120.03	-86.66	5956.68	5756.48	-811.50	4420.76	-120.91	4784.36	64.14	75.35	PASS
4417.00†	4396.26	-143.69	-103.75	6020.02	5816.80	-812.24	4401.45	-121.08	4770.93	64.74	74.43	PASS
4517.00†	4491.09	-169.42	-122.32	6181.26	5970.33	-812.33	4352.18	-121.56	4756.33	65.32	73.54	PASS
4617.00†	4585.92	-195.15	-140.90	6280.65	6064.67	-811.45	4320.94	-121.86	4740.73	66.00	72.54	PASS
4717.00†	4680.75	-220.87	-159.47	6348.99	6129.62	-810.86	4299.66	-122.07	4725.59	66.73	71.51	PASS
4817.00†	4775.59	-246.60	-178.05	6397.86	6176.18	-810.77	4284.80	-122.22	4711.37	67.51	70.47	PASS
4917.00†	4870.42	-272.32	-196.62	6466.12	6241.38	-811.23	4264.64	-122.42	4698.17	68.28	69.46	PASS
5017.00†	4965.25	-298.05	-215.20	6697.50	6461.59	-813.73	4193.69	-123.09	4684.36	68.93	68.60	PASS
5117.00†	5060.08	-323.77	-233.77	6809.63	6567.66	-813.95	4157.35	-123.43	4668.51	69.72	67.59	PASS
5217.00†	5154.92	-349.50	-252.35	6885.22	6639.19	-814.73	4132.88	-123.65	4652.92	70.55	66.56	PASS
5317.00†	5249.75	-375.23	-270.92	6965.83	6715.54	-815.94	4107.07	-123.88	4637.84	71.40	65.55	PASS
5417.00†	5344.58	-400.95	-289.49	7031.27	6777.57	-817.45	4086.30	-124.06	4623.26	72.28	64.54	PASS
5517.00†	5439.41	-426.68	-308.07	7085.96	6829.56	-818.93	4069.40	-124.22	4609.62	73.18	63.55	PASS
5617.00†	5534.25	-452.40	-326.64	7196.74	6934.98	-822.40	4035.52	-124.52	4596.46	74.06	62.61	PASS
5717.00†	5629.08	-478.13	-345.22	7308.64	7041.27	-826.03	4000.73	-124.83	4582.86	74.94	61.68	PASS
5817.00†	5723.91	-503.85	-363.79	7379.37	7108.51	-828.22	3978.89	-125.03	4569.59	75.87	60.75	PASS
5917.00†	5818.74	-529.58	-382.37	7419.67	7146.94	-829.39	3966.81	-125.14	4557.34	76.82	59.82	PASS
6017.00†	5913.57	-555.31	-400.94	7460.04	7185.59	-830.47	3955.19	-125.25	4546.39	77.78	58.94	PASS
6117.00†	6008.41	-581.03	-419.52	7767.85	7478.97	-838.13	3862.50	-126.15	4534.79	78.60	58.17	PASS
6217.00†	6103.24	-606.76	-438.09	7820.03	7528.39	-838.53	3845.77	-126.31	4520.65	79.60	57.26	PASS
6317.00†	6198.07	-632.48	-456.66	7867.79	7573.78	-838.56	3830.91	-126.47	4507.59	80.60	56.38	PASS
6417.00†	6292.90	-658.21	-475.24	7910.22	7614.26	-838.61	3818.19	-126.60	4495.78	81.60	55.53	PASS
6517.00†	6387.74	-683.93	-493.81	7953.95	7656.13	-838.75	3805.57	-126.75	4485.26	82.60	54.73	PASS
6617.00†	6482.57	-709.66	-512.39	8001.41	7701.72	-838.48	3792.40	-126.90	4475.95	83.60	53.96	PASS
6717.00†	6577.40	-735.39	-530.96	8052.49	7750.94	-837.53	3778.79	-127.08	4467.84	84.60	53.22	PASS
6817.00†	6672.23	-761.11	-549.54	8115.51	7811.81	-836.45	3762.48	-127.31	4460.70	85.58	52.52	PASS
6917.00†	6767.07	-786.84	-568.11	8212.63	7905.73	-835.37	3737.77	-127.64	4454.16	86.55	51.85	PASS
7017.00†	6861.90	-812.56	-586.69	8352.65	8040.96	-832.90	3701.56	-128.14	4447.43	87.51	51.20	PASS
7117.00†	6956.73	-838.29	-605.26	8589.92	8268.51	-828.99	3634.52	-128.98	4438.08	88.43	50.56	PASS
7217.00†	7051.56	-864.01	-623.83	8644.18	8320.39	-828.91	3618.63	-129.16	4428.28	89.46	49.86	PASS
7317.00†	7146.40	-889.74	-642.41	8688.99	8363.40	-829.54	3606.05	-129.31	4419.74	90.51	49.18	PASS
7417.00†	7241.23	-915.46	-660.98	8749.06	8421.21	-831.13	3589.81	-129.49	4412.33	91.55	48.54	PASS
7517.00†	7336.06	-941.19	-679.56	8820.16	8489.76	-833.47	3571.10	-129.70	4405.76	92.58	47.92	PASS
7617.00†	7430.89	-966.92	-698.13	8905.01	8571.66	-835.69	3549.03	-129.96	4399.66	93.60	47.33	PASS
7717.00†	7525.72	-992.64	-716.71	8984.34	8648.30	-837.77	3528.67	-130.20	4394.02	94.62	46.75	PASS
7817.00†	7620.56	-1018.37	-735.28	9045.48	8707.47	-839.78	3513.36	-130.38	4389.10	95.65	46.20	PASS
7917.00†	7715.39	-1044.09	-753.86	9100.01	8760.33	-842.00	3500.17	-130.54	4385.14	96.68	45.66	PASS
8017.00†	7810.22	-1069.82	-772.43	9147.96	8806.92	-844.41	3489.12	-130.67	4382.35	97.70	45.15	PASS
8117.00†	7905.05	-1095.54	-791.00	9194.32	8852.08	-847.18	3478.98	-130.79	4380.78	98.71	44.67	PASS
8217.00†	7999.89	-1121.27	-809.58	9246.38	8902.89	-850.78	3468.23	-130.92	4380.44	99.71	44.21	PASS
8317.00†	8094.72	-1147.00	-828.15	9299.15	8954.46	-854.90	3457.87	-131.05	4381.15	100.71	43.78	PASS
8417.00†	8189.55	-1172.72	-846.73	9351.77	9005.96	-859.53	3448.14	-131.16	4382.98	101.69	43.38	PASS
8517.00†	8284.38	-1198.45	-865.30	9409.65	9062.69	-865.10	3438.05	-131.29	4385.86	102.67	42.99	PASS
8617.00†	8379.22	-1224.17	-883.88	9473.08	9124.95	-871.00	3427.50	-131.42	4389.62	103.64	42.62	PASS
8677.92	8436.99	-1239.85	-895.19	9511.84	9163.11	-873.61	3421.21	-131.52	4392.35	104.23	42.40	PASS

# Clearance Report

BHR FED J22-15-397-4RH (REV-A.0) PWP  
Closest Approach  
Page 17 of 26



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

CLEARANCE DATA - Offset Wellbore: WILEY 23-3-97-H1 AWB (BHI) Offset Wellpath: WILEY 23-3-97-H1 AWB (BHI) AWP												
Facility: SEC.23-T03N-R97W Slot: SLOT#01 EX) WILEY 23-3-97 H1 (950'FSL & 1402'FEL SEC 23)				Well: WILEY 23-3-97 H1				Threshold Value=1.00 † = interpolated/extrapolated station				
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
8717.00†	8474.13	-1249.69	-902.30	9538.50	9189.38	-875.24	3416.97	-131.61	4394.08	104.60	42.27	PASS
8817.00†	8569.90	-1273.02	-919.14	9587.32	9237.55	-877.87	3409.47	-131.78	4397.58	105.52	41.93	PASS
8917.00†	8666.61	-1293.61	-934.01	9657.26	9306.69	-881.00	3399.42	-131.95	4399.84	106.41	41.60	PASS
9017.00†	8764.16	-1311.46	-946.90	9736.09	9384.64	-885.17	3388.40	-132.09	4400.18	107.27	41.27	PASS
9117.00†	8862.41	-1326.54	-957.79	9828.86	9476.36	-891.08	3375.84	-132.17	4398.51	108.10	40.93	PASS
9217.00†	8961.24	-1338.83	-966.66	9909.67	9556.22	-896.93	3365.00	-132.18	4394.61	108.87	40.60	PASS
9317.00†	9060.55	-1348.31	-973.51	9956.32	9602.42	-899.98	3359.26	-132.12	4389.48	109.56	40.30	PASS
9417.00†	9160.21	-1354.98	-978.32	10018.49	9664.10	-903.42	3352.25	-132.04	4383.12	110.09	40.00	PASS
9517.00†	9260.09	-1358.83	-981.10	10091.30	9736.38	-907.60	3344.50	-131.91	4375.08	110.71	39.71	PASS
9602.92	9346.00	-1359.87	-981.85	10192.14	9836.45	-914.35	3334.14	84.11	4366.56	111.26	39.43	PASS
9617.00†	9360.08	-1359.87	-981.85	10209.68	9853.84	-915.71	3332.29	84.12	4364.97	111.35	39.39	PASS
9639.61	9382.69	-1359.87	-981.85	10224.79	9868.82	-916.95	3330.72	84.14	4362.43	111.48	39.32	PASS
9717.00†	9459.93	-1355.69	-981.85	10271.38	9914.98	-921.18	3326.07	84.92	4353.63	111.83	39.12	PASS
9817.00†	9558.27	-1338.02	-981.85	10298.25	9941.61	-923.92	3323.75	85.92	4342.43	112.04	38.94	PASS
9917.00†	9653.20	-1306.82	-981.85	10327.89	9970.99	-927.26	3321.67	86.92	4331.90	112.03	38.85	PASS
10017.00†	9742.86	-1262.72	-981.85	10347.69	9990.60	-929.71	3320.58	87.83	4322.40	111.81	38.84	PASS
10117.00†	9825.50	-1206.57	-981.85	10364.56	10007.32	-931.90	3319.90	88.62	4314.34	111.40	38.91	PASS
10217.00†	9899.54	-1139.47	-981.85	10379.57	10022.18	-933.93	3319.48	89.28	4307.99	110.85	39.05	PASS
10317.00†	9963.51	-1062.71	-981.85	10391.78	10034.27	-935.64	3319.28	89.77	4303.59	110.18	39.25	PASS
10417.00†	10016.17	-977.80	-981.85	10402.46	10044.84	-937.18	3319.19	90.09	4301.33	109.44	39.49	PASS
10467.00†	10037.94	-932.79	-981.85	10409.50	10051.80	-938.22	3319.16	90.20	4301.04	109.05	39.63	PASS
10517.00†	10056.51	-886.38	-981.85	10409.76	10052.06	-938.26	3319.16	90.18	4301.33	108.67	39.78	PASS
10617.00†	10083.73	-790.24	-981.85	10413.16	10055.43	-938.77	3319.17	90.04	4303.68	107.90	40.08	PASS
10700.24	10096.00	-707.95	-981.85	10413.08	10055.34	-938.76	3319.17	89.74	4307.40	107.28	40.35	PASS
10717.00†	10097.50	-691.27	-981.85	10412.80	10055.07	-938.72	3319.16	89.73	4308.34	107.15	40.41	PASS
10765.64†	10101.87	-642.82	-981.85	10412.00	10054.27	-938.60	3319.16	89.72	4311.44	113.23	38.25	PASS
10817.00†	10106.48	-591.67	-981.85	10411.16	10053.45	-938.47	3319.16	89.71	4315.30	106.50	40.72	PASS
10917.00†	10115.45	-492.07	-981.85	10409.56	10051.86	-938.23	3319.16	89.69	4324.57	105.97	41.01	PASS
11017.00†	10124.43	-392.48	-981.85	10407.99	10050.31	-938.00	3319.17	89.67	4336.11	105.57	41.28	PASS
11117.00†	10133.40	-292.88	-981.85	10406.46	10048.80	-937.77	3319.17	89.65	4349.93	105.29	41.52	PASS
11217.00†	10142.38	-193.28	-981.85	10404.96	10047.32	-937.55	3319.18	89.63	4365.98	105.13	41.74	PASS
11317.00†	10151.35	-93.69	-981.85	10403.50	10045.87	-937.33	3319.18	89.61	4384.26	105.10	41.92	PASS
11417.00†	10160.33	5.91	-981.85	10402.07	10044.45	-937.12	3319.19	89.59	4404.74	105.20	42.08	PASS
11517.00†	10169.30	105.50	-981.85	10400.66	10043.06	-936.92	3319.20	89.57	4427.37	105.41	42.21	PASS
11617.00†	10178.28	205.10	-981.85	10399.29	10041.70	-936.72	3319.21	89.55	4452.14	105.75	42.31	PASS
11717.00†	10187.25	304.70	-981.85	10397.94	10040.37	-936.52	3319.22	89.54	4479.00	106.19	42.39	PASS
11817.00†	10196.23	404.29	-981.85	10396.62	10039.07	-936.33	3319.23	89.52	4507.91	106.74	42.44	PASS
11917.00†	10205.20	503.89	-981.86	10395.33	10037.79	-936.15	3319.24	89.50	4538.85	107.39	42.47	PASS
12017.00†	10214.18	603.49	-981.86	10394.07	10036.54	-935.97	3319.25	89.48	4571.76	108.13	42.49	PASS
12117.00†	10223.15	703.08	-981.86	10392.98	10035.46	-935.81	3319.26	89.47	4606.61	108.96	42.48	PASS
12217.00†	10232.13	802.68	-981.86	10391.91	10034.40	-935.66	3319.28	89.46	4643.34	109.86	42.47	PASS
12317.00†	10241.10	902.28	-981.86	10390.85	10033.35	-935.51	3319.29	89.44	4681.93	110.84	42.44	PASS
12417.00†	10250.08	1001.87	-981.86	10389.81	10032.32	-935.36	3319.30	89.43	4722.31	111.87	42.41	PASS
12517.00†	10259.05	1101.47	-981.86	10388.78	10031.31	-935.22	3319.32	89.41	4764.46	112.97	42.37	PASS
12617.00†	10268.03	1201.06	-981.86	10387.77	10030.30	-935.07	3319.33	89.40	4808.31	114.10	42.34	PASS

# Clearance Report

BHR FED J22-15-397-4RH (REV-A.0) PWP  
Closest Approach  
Page 18 of 26



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

CLEARANCE DATA - Offset Wellbore: WILEY 23-3-97-H1 AWB (BHI) Offset Wellpath: WILEY 23-3-97-H1 AWB (BHI) AWP												
Facility: SEC.23-T03N-R97W		Slot: SLOT#01 EX) WILEY 23-3-97 H1 (950'FSL & 1402'FEL SEC 23)		Well: WILEY 23-3-97 H1		Threshold Value=1.00 † = interpolated/extrapolated station						
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
12717.00†	10277.00	1300.66	-981.86	10386.77	10029.32	-934.93	3319.35	89.39	4853.82	115.28	42.30	PASS
12817.00†	10285.98	1400.26	-981.86	10385.79	10028.34	-934.79	3319.36	89.37	4900.95	116.49	42.26	PASS
12917.00†	10294.95	1499.85	-981.86	10384.81	10027.38	-934.66	3319.38	89.36	4949.65	117.72	42.23	PASS
13017.00†	10303.93	1599.45	-981.86	10383.85	10026.43	-934.52	3319.40	89.35	4999.88	118.98	42.21	PASS
13117.00†	10312.90	1699.05	-981.86	10382.91	10025.49	-934.39	3319.42	89.34	5051.59	120.25	42.19	PASS
13217.00†	10321.88	1798.64	-981.86	10381.97	10024.56	-934.26	3319.43	89.32	5104.73	121.53	42.19	PASS
13317.00†	10330.85	1898.24	-981.86	10381.05	10023.65	-934.13	3319.45	89.31	5159.26	122.82	42.19	PASS
13417.00†	10339.83	1997.84	-981.86	10380.14	10022.75	-934.01	3319.47	89.30	5215.14	124.11	42.20	PASS
13517.00†	10348.80	2097.43	-981.86	10379.24	10021.86	-933.88	3319.49	89.29	5272.32	125.39	42.23	PASS
13617.00†	10357.78	2197.03	-981.86	10378.35	10020.98	-933.76	3319.51	89.28	5330.76	126.67	42.26	PASS
13717.00†	10366.76	2296.63	-981.86	10377.48	10020.11	-933.64	3319.53	89.26	5390.43	127.94	42.31	PASS
13817.00†	10375.73	2396.22	-981.86	10376.61	10019.25	-933.52	3319.55	89.25	5451.27	129.20	42.37	PASS
13917.00†	10384.71	2495.82	-981.86	10375.76	10018.41	-933.41	3319.57	89.24	5513.26	130.45	42.44	PASS
14017.00†	10393.68	2595.41	-981.86	10374.91	10017.57	-933.29	3319.59	89.23	5576.35	131.68	42.52	PASS
14117.00†	10402.66	2695.01	-981.86	10374.08	10016.75	-933.18	3319.61	89.22	5640.51	132.90	42.61	PASS
14217.00†	10411.63	2794.61	-981.86	10373.25	10015.93	-933.06	3319.64	89.21	5705.69	134.09	42.72	PASS
14317.00†	10420.61	2894.20	-981.86	10372.42	10015.12	-932.95	3319.66	89.20	5771.88	135.27	42.84	PASS
14417.00†	10429.58	2993.80	-981.86	10371.64	10014.33	-932.85	3319.68	89.19	5839.02	136.43	42.97	PASS
14517.00†	10438.56	3093.40	-981.86	10370.84	10013.54	-932.74	3319.70	89.18	5907.10	137.57	43.11	PASS
14617.00†	10447.53	3192.99	-981.86	10370.06	10012.76	-932.63	3319.72	89.17	5976.07	138.69	43.26	PASS
14717.00†	10456.51	3292.59	-981.86	10369.28	10012.00	-932.53	3319.75	89.15	6045.91	139.78	43.42	PASS
14817.00†	10465.48	3392.19	-981.86	10368.52	10011.24	-932.42	3319.77	89.14	6116.58	140.85	43.59	PASS
14917.00†	10474.46	3491.78	-981.86	10367.76	10010.49	-932.32	3319.79	89.13	6188.07	141.91	43.77	PASS
15017.00†	10483.43	3591.38	-981.86	10367.01	10009.75	-932.22	3319.82	89.12	6260.33	142.94	43.96	PASS
15117.00†	10492.41	3690.98	-981.86	10366.27	10009.01	-932.12	3319.84	89.11	6333.35	143.94	44.16	PASS
15217.00†	10501.38	3790.57	-981.86	10365.54	10008.29	-932.03	3319.86	89.10	6407.10	144.93	44.37	PASS
15317.00†	10510.36	3890.17	-981.86	10364.82	10007.57	-931.93	3319.89	89.10	6481.55	145.89	44.59	PASS
15417.00†	10519.33	3989.76	-981.86	10364.10	10006.86	-931.84	3319.91	89.09	6556.68	146.83	44.82	PASS
15517.00†	10528.31	4089.36	-981.86	10363.40	10006.16	-931.74	3319.94	89.08	6632.46	147.76	45.05	PASS
15617.00†	10537.28	4188.96	-981.86	10362.70	10005.47	-931.65	3319.96	89.07	6708.88	148.66	45.29	PASS
15717.00†	10546.26	4288.55	-981.86	10362.01	10004.79	-931.56	3319.98	89.06	6785.91	149.54	45.54	PASS
15817.00†	10555.23	4388.15	-981.86	10361.34	10004.13	-931.47	3320.01	89.05	6863.54	150.40	45.80	PASS
15917.00†	10564.21	4487.75	-981.86	10360.69	10003.49	-931.39	3320.03	89.04	6941.73	151.23	46.06	PASS
16017.00†	10573.18	4587.34	-981.86	10360.04	10002.85	-931.30	3320.05	89.03	7020.48	152.06	46.33	PASS
16117.00†	10582.16	4686.94	-981.86	10359.40	10002.21	-931.22	3320.08	89.02	7099.77	152.86	46.61	PASS
16217.00†	10591.13	4786.54	-981.86	10358.77	10001.59	-931.13	3320.10	89.02	7179.57	153.64	46.89	PASS
16317.00†	10600.11	4886.13	-981.86	10358.15	10000.96	-931.05	3320.13	89.01	7259.87	154.40	47.18	PASS
16417.00†	10609.08	4985.73	-981.86	10357.53	10000.35	-930.97	3320.15	89.00	7340.65	155.15	47.47	PASS
16517.00†	10618.06	5085.33	-981.86	10356.91	9999.74	-930.89	3320.17	88.99	7421.91	155.88	47.77	PASS
16617.00†	10627.03	5184.92	-981.86	10356.31	9999.14	-930.81	3320.20	88.98	7503.61	156.60	48.08	PASS
16717.00†	10636.01	5284.52	-981.86	10355.71	9998.55	-930.73	3320.22	88.97	7585.75	157.29	48.39	PASS
16817.00†	10644.98	5384.11	-981.86	10355.11	9997.96	-930.66	3320.25	88.97	7668.32	157.98	48.70	PASS
16917.00†	10653.96	5483.71	-981.86	10354.52	9997.38	-930.58	3320.27	88.96	7751.30	158.64	49.02	PASS
17017.00†	10662.94	5583.31	-981.86	10353.94	9996.80	-930.51	3320.30	88.95	7834.67	159.29	49.35	PASS
17117.00†	10671.91	5682.90	-981.86	10353.37	9996.23	-930.43	3320.32	88.94	7918.43	159.93	49.68	PASS

# Clearance Report

BHR FED J22-15-397-4RH (REV-A.0) PWP  
Closest Approach  
Page 19 of 26



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

CLEARANCE DATA - Offset Wellbore: WILEY 23-3-97-H1 AWB (BHI) Offset Wellpath: WILEY 23-3-97-H1 AWB (BHI) AWP												
Facility: SEC.23-T03N-R97W		Slot: SLOT#01 EX) WILEY 23-3-97 H1 (950'FSL & 1402'FEL SEC 23)		Well: WILEY 23-3-97 H1		Threshold Value=1.00 † = interpolated/extrapolated station						
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
17217.00†	10680.89	5782.50	-981.86	10352.80	9995.66	-930.36	3320.34	88.94	8002.56	160.56	50.01	PASS
17317.00†	10689.86	5882.10	-981.86	10352.23	9995.11	-930.29	3320.37	88.93	8087.05	161.17	50.34	PASS
17417.00†	10698.84	5981.69	-981.86	10351.67	9994.55	-930.21	3320.39	88.92	8171.89	161.76	50.68	PASS
17517.00†	10707.81	6081.29	-981.86	10351.12	9994.00	-930.14	3320.42	88.91	8257.08	162.35	51.03	PASS
17617.00†	10716.79	6180.89	-981.86	10350.57	9993.46	-930.07	3320.44	88.91	8342.59	162.92	51.37	PASS
17717.00†	10725.76	6280.48	-981.86	10350.03	9992.92	-930.00	3320.47	88.90	8428.42	163.48	51.72	PASS
17817.00†	10734.74	6380.08	-981.86	10349.49	9992.39	-929.94	3320.49	88.89	8514.55	164.03	52.08	PASS
17917.00†	10743.71	6479.68	-981.86	10348.96	9991.86	-929.87	3320.52	88.88	8600.99	164.57	52.43	PASS
18017.00†	10752.69	6579.27	-981.86	10348.43	9991.34	-929.80	3320.54	88.88	8687.72	165.09	52.79	PASS
18117.00†	10761.66	6678.87	-981.86	10347.91	9990.83	-929.73	3320.56	88.87	8774.73	165.61	53.16	PASS
18217.00†	10770.64	6778.46	-981.86	10347.40	9990.31	-929.67	3320.59	88.86	8862.01	166.11	53.52	PASS
18317.00†	10779.61	6878.06	-981.86	10346.88	9989.81	-929.60	3320.61	88.86	8949.56	166.61	53.89	PASS
18417.00†	10788.59	6977.66	-981.86	10346.38	9989.31	-929.54	3320.64	88.85	9037.37	167.10	54.26	PASS
18517.00†	10797.56	7077.25	-981.86	10345.88	9988.81	-929.48	3320.66	88.84	9125.43	167.57	54.63	PASS
18617.00†	10806.54	7176.85	-981.86	10345.38	9988.32	-929.41	3320.69	88.84	9213.74	168.04	55.00	PASS
18717.00†	10815.51	7276.45	-981.86	10344.89	9987.83	-929.35	3320.71	88.83	9302.27	168.50	55.38	PASS
18817.00†	10824.49	7376.04	-981.86	10344.40	9987.34	-929.29	3320.73	88.82	9391.04	168.95	55.76	PASS
18917.00†	10833.46	7475.64	-981.86	10343.92	9986.87	-929.23	3320.76	88.82	9480.04	169.40	56.14	PASS
19017.00†	10842.44	7575.24	-981.86	10343.44	9986.39	-929.17	3320.78	88.81	9569.25	169.83	56.52	PASS
19117.00†	10851.41	7674.83	-981.86	10342.96	9985.92	-929.11	3320.81	88.81	9658.67	170.26	56.91	PASS
19217.00†	10860.39	7774.43	-981.86	10342.49	9985.46	-929.05	3320.83	88.80	9748.29	170.68	57.29	PASS
19317.00†	10869.36	7874.03	-981.86	10342.03	9984.99	-928.99	3320.86	88.79	9838.12	171.10	57.68	PASS
19417.00†	10878.34	7973.62	-981.86	10341.57	9984.54	-928.94	3320.88	88.79	9928.14	171.50	58.07	PASS
19517.00†	10887.31	8073.22	-981.86	10341.11	9984.08	-928.88	3320.90	88.78	10018.35	171.90	58.46	PASS
19617.00†	10896.29	8172.81	-981.86	10340.65	9983.64	-928.82	3320.93	88.77	10108.74	172.30	58.85	PASS
19658.35	10900.00	8213.99	-981.86	10340.47	9983.45	-928.80	3320.94	88.77	10146.17	172.46	59.01	PASS

POSITIONAL UNCERTAINTY - Offset Wellbore: WILEY 23-3-97-H1 AWB (BHI) Offset Wellpath: WILEY 23-3-97-H1 AWB (BHI) AWP			
Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical
			1.000ft
			3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: WILEY 23-3-97-H1 AWB (BHI) Offset Wellpath: WILEY 23-3-97-H1 AWB (BHI) 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]
9.625in Casing Surface	24.00	3040.00	3016.00	-60.00	2955.06	-498.39	3180.20	-501.43	3161.55
7in Casing Intermediate	3053.00	10755.00	7702.00	2968.04	10384.95	-501.50	3161.34	-567.39	2599.40

# Clearance Report

BHR FED J22-15-397-4RH (REV-A.0) PWP  
Closest Approach  
Page 20 of 26



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

WELLPATH COMPOSITION - Offset Wellbore: WILEY 23-3-97-H1 AWB (BHI) Offset Wellpath: WILEY 23-3-97-H1 AWB (BHI) AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
24.00	3053.00	ISCWSA MWD, Rev. 4 (Standard)	MWD SURVEYS FROM ENDEAVOUR <141-11824>	WILEY 23-3-97 H1 AWB
3053.00	16167.00	Custom BHI NaviTrak (Standard Rotating) (Rockies 0.03Gt model)	BHI MWD NAVI (STANDARD) 8 3/4" HOLE <3053 - 16200>	WILEY 23-3-97-H1 AWB (BHI)
16167.00	16201.00	Blind Drilling (std)	Projection to bit	WILEY 23-3-97-H1 AWB (BHI)

OFFSET WELLPATH REFERENCE - Offset Wellbore: WILEY 23-3-97-H1 AWB (BHI) Offset Wellpath: WILEY 23-3-97-H1 AWB (BHI) AWP	
MD Reference: PATTERSON 303 (RKB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	24.00ft



# Clearance Report

BHR FED J22-15-397-4RH (REV-A.0) PWP  
Closest Approach  
Page 21 of 26



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

CLEARANCE DATA - Offset Wellbore: WILEY 23-3-97 H1 AWB Offset Wellpath: WILEY 23-3-97 H1 AWP												
Facility: SEC.23-T03N-R97W		Slot: SLOT#01 EX) WILEY 23-3-97 H1 (950'FSL & 1402'FEL SEC 23)		Well: WILEY 23-3-97 H1		Threshold Value=1.00 † = interpolated/extrapolated station						
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
17.00	17.00	0.00	0.00	110.37	19.37	-818.00	5216.78	98.91	5280.53	50.16	107.29	PASS
117.00†	117.00	0.00	0.00	194.82	103.82	-817.75	5216.86	98.91	5280.58	50.18	107.25	PASS
217.00†	217.00	0.00	0.00	296.71	205.71	-817.59	5217.24	98.91	5280.92	50.22	107.16	PASS
317.00†	317.00	0.00	0.00	417.80	326.80	-817.61	5217.24	98.91	5280.92	50.30	107.00	PASS
417.00†	417.00	0.00	0.00	584.67	493.65	-818.21	5215.57	98.92	5279.92	50.42	106.72	PASS
517.00†	517.00	0.00	0.00	739.31	648.25	-820.03	5212.19	98.94	5277.94	50.57	106.35	PASS
617.00†	617.00	0.00	0.00	808.40	717.31	-820.70	5210.55	98.95	5275.74	50.69	106.05	PASS
717.00†	717.00	0.00	0.00	886.10	795.00	-820.94	5209.19	98.96	5274.06	50.84	105.70	PASS
817.00†	817.00	0.00	0.00	987.46	896.35	-821.11	5207.67	98.96	5272.61	51.03	105.28	PASS
917.00†	917.00	0.00	0.00	1098.09	1006.96	-821.81	5205.77	98.97	5271.00	51.24	104.79	PASS
1017.00†	1017.00	0.00	0.00	1217.00	1125.85	-822.28	5203.49	98.98	5269.19	51.50	104.23	PASS
1117.00†	1117.00	0.00	0.00	1333.40	1242.21	-823.03	5200.63	98.99	5266.84	51.77	103.62	PASS
1217.00†	1217.00	0.00	0.00	1402.31	1311.09	-823.96	5198.93	99.01	5264.66	52.00	103.11	PASS
1317.00†	1317.00	0.00	0.00	1454.23	1363.00	-824.72	5198.11	99.02	5263.33	52.22	102.64	PASS
1417.00†	1417.00	0.00	0.00	1594.89	1503.63	-826.82	5195.99	99.04	5262.08	52.59	101.88	PASS
1517.00†	1517.00	0.00	0.00	1683.95	1592.67	-828.19	5194.34	99.06	5260.49	52.91	101.24	PASS
1617.00†	1617.00	0.00	0.00	1773.86	1682.55	-829.35	5193.05	99.07	5259.26	53.24	100.57	PASS
1717.00†	1717.00	0.00	0.00	1918.07	1826.73	-830.60	5190.26	99.09	5257.44	53.69	99.68	PASS
1817.00†	1817.00	0.00	0.00	2011.96	1920.60	-831.53	5188.13	99.11	5255.37	54.07	98.93	PASS
1917.00†	1917.00	0.00	0.00	2161.74	2070.33	-830.70	5184.60	99.10	5252.97	54.57	97.95	PASS
2017.00†	2017.00	0.00	0.00	2261.23	2169.77	-829.37	5181.85	99.09	5250.02	55.00	97.12	PASS
2117.00†	2117.00	0.00	0.00	2361.76	2270.25	-828.50	5179.09	99.09	5247.18	55.45	96.27	PASS
2217.00†	2217.00	0.00	0.00	2520.78	2429.19	-828.06	5173.64	99.09	5243.79	56.04	95.17	PASS
2317.00†	2317.00	0.00	0.00	2595.54	2503.88	-828.06	5170.76	99.10	5239.98	56.47	94.37	PASS
2417.00†	2417.00	0.00	0.00	2671.68	2579.98	-827.70	5168.25	99.10	5236.64	56.91	93.56	PASS
2517.00†	2517.00	0.00	0.00	2746.13	2654.40	-827.10	5166.17	99.10	5233.77	57.36	92.77	PASS
2617.00†	2617.00	0.00	0.00	2849.69	2757.93	-826.91	5163.63	99.10	5231.32	57.90	91.85	PASS
2717.00†	2717.00	0.00	0.00	3057.09	2965.12	-828.38	5154.68	99.13	5226.71	58.72	90.47	PASS
2817.00†	2817.00	0.00	0.00	3084.74	2992.73	-829.03	5153.44	99.14	5222.66	59.09	89.82	PASS
2917.00†	2917.00	0.00	0.00	3112.40	3020.37	-829.95	5152.55	99.15	5219.98	59.46	89.20	PASS
3017.00†	3017.00	0.00	0.00	3140.07	3048.00	-831.12	5152.00	99.16	5218.70	59.83	88.63	PASS
3117.00†	3117.00	0.00	0.00	3196.07	3103.96	-833.29	5151.63	99.19	5218.60	60.27	87.96	PASS
3217.00†	3217.00	0.00	0.00	3266.33	3174.22	-833.86	5151.94	99.19	5219.16	60.77	87.24	PASS
3317.00†	3317.00	0.00	0.00	3480.43	3388.29	-832.04	5152.66	99.17	5219.89	61.41	85.91	PASS
3400.00	3400.00	0.00	0.00	3637.52	3545.34	-832.05	5149.22	99.18	5218.04	62.16	84.83	PASS
3417.00†	3417.00	-0.04	-0.03	3657.28	3565.09	-832.21	5148.64	-116.66	5217.59	62.27	84.67	PASS
3517.00†	3516.97	-1.94	-1.40	3732.66	3640.43	-833.10	5146.30	-116.69	5215.83	62.84	83.86	PASS
3542.00†	3541.94	-2.85	-2.06	3741.75	3649.52	-833.28	5146.07	-116.69	5215.78	62.96	83.71	PASS
3617.00†	3616.79	-6.66	-4.81	3763.34	3671.09	-833.84	5145.65	-116.68	5216.74	63.28	83.29	PASS
3717.00†	3716.35	-14.21	-10.26	3793.97	3701.70	-834.93	5145.36	-116.63	5220.55	63.72	82.78	PASS
3817.00†	3815.53	-24.56	-17.73	3829.56	3737.25	-836.59	5145.45	-116.54	5227.23	64.17	82.30	PASS
3917.00†	3914.20	-37.72	-27.23	3873.21	3780.86	-838.56	5146.03	-116.42	5236.58	64.65	81.82	PASS
4017.00†	4012.24	-53.66	-38.74	4004.28	3911.82	-842.92	5148.96	-116.43	5248.36	65.45	80.99	PASS
4117.00†	4109.54	-72.37	-52.25	4420.60	4327.76	-841.26	5144.74	-117.21	5258.09	67.26	78.93	PASS
4217.00†	4205.97	-93.81	-67.74	4467.69	4374.78	-842.98	5142.74	-117.15	5266.77	67.86	78.36	PASS

# Clearance Report

BHR FED J22-15-397-4RH (REV-A.0) PWP  
Closest Approach  
Page 22 of 26



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

CLEARANCE DATA - Offset Wellbore: WILEY 23-3-97 H1 AWB Offset Wellpath: WILEY 23-3-97 H1 AWP												
Facility: SEC.23-T03N-R97W Slot: SLOT#01 EX) WILEY 23-3-97 H1 (950'FSL & 1402'FEL SEC 23)				Well: WILEY 23-3-97 H1				Threshold Value=1.00 † = interpolated/extrapolated station				
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
4317.00†	4301.42	-117.98	-85.18	4501.72	4408.76	-844.48	5141.61	-117.03	5278.13	68.44	77.86	PASS
4325.00	4309.01	-120.03	-86.66	4504.13	4411.17	-844.59	5141.54	-117.02	5279.16	68.48	77.82	PASS
4417.00†	4396.26	-143.69	-103.75	4531.86	4438.87	-845.81	5140.99	-117.09	5291.70	69.00	77.41	PASS
4517.00†	4491.09	-169.42	-122.32	4561.87	4468.85	-847.12	5140.76	-117.17	5306.59	69.59	76.98	PASS
4617.00†	4585.92	-195.15	-140.90	4601.48	4508.42	-848.62	5140.98	-117.28	5322.71	70.21	76.51	PASS
4717.00†	4680.75	-220.87	-159.47	4646.19	4553.12	-849.29	5141.76	-117.41	5339.88	70.87	76.04	PASS
4817.00†	4775.59	-246.60	-178.05	4785.40	4692.26	-846.64	5145.18	-117.86	5357.59	71.92	75.17	PASS
4917.00†	4870.42	-272.32	-196.62	4954.24	4861.03	-842.46	5147.22	-118.42	5374.18	73.11	74.16	PASS
5017.00†	4965.25	-298.05	-215.20	5219.92	5126.66	-841.40	5143.38	-119.22	5388.47	74.72	72.75	PASS
5117.00†	5060.08	-323.77	-233.77	5335.06	5241.73	-842.26	5139.62	-119.55	5401.40	75.76	71.91	PASS
5217.00†	5154.92	-349.50	-252.35	5445.45	5352.01	-844.33	5135.08	-119.85	5413.69	76.81	71.08	PASS
5317.00†	5249.75	-375.23	-270.92	5473.07	5379.61	-844.97	5134.19	-119.92	5427.04	77.55	70.57	PASS
5417.00†	5344.58	-400.95	-289.49	5500.56	5407.08	-845.61	5133.65	-120.00	5441.70	78.29	70.08	PASS
5517.00†	5439.41	-426.68	-308.07	5529.49	5436.00	-846.27	5133.45	-120.08	5457.67	79.04	69.62	PASS
5617.00†	5534.25	-452.40	-326.64	5571.42	5477.92	-847.60	5133.58	-120.18	5474.79	79.85	69.12	PASS
5717.00†	5629.08	-478.13	-345.22	5613.51	5519.95	-849.56	5134.08	-120.29	5492.95	80.66	68.65	PASS
5817.00†	5723.91	-503.85	-363.79	5675.47	5581.80	-853.11	5135.29	-120.43	5511.99	81.56	68.12	PASS
5917.00†	5818.74	-529.58	-382.37	5729.47	5635.69	-856.28	5136.62	-120.56	5531.68	82.44	67.63	PASS
6017.00†	5913.57	-555.31	-400.94	5765.78	5671.92	-858.24	5137.90	-120.64	5552.38	83.23	67.24	PASS
6117.00†	6008.41	-581.03	-419.52	5801.81	5707.87	-859.98	5139.57	-120.73	5574.18	84.01	66.86	PASS
6217.00†	6103.24	-606.76	-438.09	5832.85	5738.83	-861.28	5141.34	-120.81	5597.11	84.77	66.53	PASS
6317.00†	6198.07	-632.48	-456.66	5862.21	5768.10	-862.28	5143.38	-120.88	5621.22	85.52	66.23	PASS
6417.00†	6292.90	-658.21	-475.24	5891.26	5797.05	-863.04	5145.74	-120.96	5646.52	86.26	65.95	PASS
6517.00†	6387.74	-683.93	-493.81	6354.63	6259.43	-858.19	5170.39	-122.32	5668.34	89.22	64.00	PASS
6617.00†	6482.57	-709.66	-512.39	6389.08	6293.86	-858.21	5171.31	-122.41	5688.77	90.05	63.63	PASS
6717.00†	6577.40	-735.39	-530.96	6412.76	6317.53	-858.43	5172.24	-122.48	5710.45	90.81	63.33	PASS
6817.00†	6672.23	-761.11	-549.54	6436.41	6341.14	-858.83	5173.45	-122.54	5733.39	91.57	63.05	PASS
6917.00†	6767.07	-786.84	-568.11	6460.00	6364.67	-859.42	5174.95	-122.60	5757.60	92.32	62.80	PASS
7017.00†	6861.90	-812.56	-586.69	6485.25	6389.84	-860.26	5176.86	-122.66	5783.04	93.07	62.57	PASS
7117.00†	6956.73	-838.29	-605.26	6521.08	6425.51	-861.76	5179.99	-122.74	5809.63	93.87	62.32	PASS
7217.00†	7051.56	-864.01	-623.83	7244.48	7147.67	-854.50	5203.26	-124.74	5827.90	98.25	59.71	PASS
7317.00†	7146.40	-889.74	-642.41	7406.15	7309.31	-854.35	5199.91	-125.16	5844.69	99.73	58.98	PASS
7417.00†	7241.23	-915.46	-660.98	7593.18	7496.20	-854.56	5192.82	-125.64	5859.67	101.32	58.20	PASS
7517.00†	7336.06	-941.19	-679.56	7657.11	7560.07	-853.75	5190.09	-125.81	5874.57	102.37	57.75	PASS
7617.00†	7430.89	-966.92	-698.13	7686.66	7589.60	-853.48	5189.12	-125.89	5890.49	103.27	57.40	PASS
7717.00†	7525.72	-992.64	-716.71	7716.22	7619.15	-853.45	5188.49	-125.97	5907.58	104.16	57.07	PASS
7817.00†	7620.56	-1018.37	-735.28	7753.89	7656.82	-853.68	5188.13	-126.06	5925.81	105.07	56.74	PASS
7917.00†	7715.39	-1044.09	-753.86	7818.66	7721.58	-854.08	5187.91	-126.22	5944.81	106.12	56.36	PASS
8017.00†	7810.22	-1069.82	-772.43	7910.92	7813.84	-854.46	5187.90	-126.45	5964.22	107.30	55.92	PASS
8117.00†	7905.05	-1095.54	-791.00	8047.69	7950.61	-854.97	5187.28	-126.78	5983.30	108.70	55.37	PASS
8217.00†	7999.89	-1121.27	-809.58	8127.34	8030.26	-855.09	5186.79	-126.98	6002.35	109.83	54.97	PASS
8317.00†	8094.72	-1147.00	-828.15	8219.96	8122.88	-855.10	5186.32	-127.21	6021.62	111.02	54.55	PASS
8417.00†	8189.55	-1172.72	-846.73	8288.39	8191.31	-855.22	5186.16	-127.37	6041.23	112.09	54.21	PASS
8517.00†	8284.38	-1198.45	-865.30	8406.08	8309.00	-855.68	5186.03	-127.65	6061.09	113.41	53.75	PASS
8617.00†	8379.22	-1224.17	-883.88	8483.40	8386.32	-856.05	5185.85	-127.84	6080.89	114.52	53.40	PASS

# Clearance Report

BHR FED J22-15-397-4RH (REV-A.0) PWP  
Closest Approach  
Page 23 of 26



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

CLEARANCE DATA - Offset Wellbore: WILEY 23-3-97 H1 AWB Offset Wellpath: WILEY 23-3-97 H1 AWP												
Facility: SEC.23-T03N-R97W Slot: SLOT#01 EX) WILEY 23-3-97 H1 (950'FSL & 1402'FEL SEC 23)				Well: WILEY 23-3-97 H1				Threshold Value=1.00 † = interpolated/extrapolated station				
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
8677.92	8436.99	-1239.85	-895.19	8533.46	8436.37	-856.37	5185.85	-127.95	6093.12	115.22	53.18	PASS
8717.00†	8474.13	-1249.69	-902.30	8566.68	8469.60	-856.64	5185.88	-128.15	6100.86	115.66	53.04	PASS
8817.00†	8569.90	-1273.02	-919.14	8702.57	8605.42	-860.20	5185.83	-128.70	6119.02	117.05	52.56	PASS
8917.00†	8666.61	-1293.61	-934.01	8778.86	8681.62	-864.00	5185.78	-129.06	6134.87	118.11	52.23	PASS
9017.00†	8764.16	-1311.46	-946.90	8823.41	8726.11	-866.25	5186.00	-129.33	6149.16	118.94	51.98	PASS
9117.00†	8862.41	-1326.54	-957.79	8865.29	8767.94	-868.23	5186.60	-129.57	6162.18	119.71	51.75	PASS
9217.00†	8961.24	-1338.83	-966.66	8908.74	8811.34	-870.13	5187.61	-129.78	6173.91	120.44	51.54	PASS
9317.00†	9060.55	-1348.31	-973.51	8953.07	8855.60	-871.88	5189.02	-129.97	6184.31	121.11	51.34	PASS
9417.00†	9160.21	-1354.98	-978.32	9006.94	8909.40	-873.82	5191.19	-130.12	6193.33	121.57	51.12	PASS
9517.00†	9260.09	-1358.83	-981.10	9070.39	8972.74	-876.18	5194.14	-130.23	6200.74	122.26	50.90	PASS
9602.92	9346.00	-1359.87	-981.85	9181.82	9083.91	-881.72	5199.39	85.58	6205.24	123.17	50.56	PASS
9617.00†	9360.08	-1359.87	-981.85	9191.21	9093.26	-882.31	5199.83	85.58	6205.84	123.26	50.52	PASS
9639.61	9382.69	-1359.87	-981.85	9206.27	9108.28	-883.28	5200.56	85.59	6206.83	123.40	50.47	PASS
9717.00†	9459.93	-1355.69	-981.85	9257.27	9159.08	-886.93	5203.20	85.39	6210.09	123.84	50.32	PASS
9817.00†	9558.27	-1338.02	-981.85	9295.83	9197.46	-889.78	5205.47	85.17	6214.02	124.04	50.27	PASS
9917.00†	9653.20	-1306.82	-981.85	9332.73	9234.20	-892.30	5207.96	85.00	6217.81	124.01	50.31	PASS
10017.00†	9742.86	-1262.72	-981.85	9374.58	9275.83	-895.06	5211.14	84.90	6221.45	123.82	50.42	PASS
10117.00†	9825.50	-1206.57	-981.85	9420.04	9320.99	-898.68	5214.88	84.89	6224.85	123.49	50.58	PASS
10217.00†	9899.54	-1139.47	-981.85	10024.66	9922.71	-941.02	5237.70	88.89	6222.76	126.47	49.37	PASS
10317.00†	9963.51	-1062.71	-981.85	10117.16	10015.21	-941.48	5237.14	89.73	6220.39	126.15	49.48	PASS
10417.00†	10016.17	-977.80	-981.85	10171.15	10069.20	-941.63	5236.69	90.28	6218.88	125.54	49.71	PASS
10517.00†	10056.51	-886.38	-981.85	10212.47	10110.52	-941.59	5236.33	90.64	6218.67	124.81	50.00	PASS
10617.00†	10083.73	-790.24	-981.85	10236.83	10134.87	-941.51	5236.13	90.75	6220.03	123.96	50.35	PASS
10700.24	10096.00	-707.95	-981.85	10248.04	10146.08	-941.46	5236.04	90.65	6222.48	123.22	50.67	PASS
10717.00†	10097.50	-691.27	-981.85	10249.44	10147.48	-941.45	5236.03	90.67	6223.12	123.07	50.74	PASS
10765.71†	10101.87	-642.76	-981.85	10253.54	10151.58	-941.43	5236.00	90.70	6225.22	129.25	48.33	PASS
10817.00†	10106.48	-591.67	-981.85	10257.88	10155.92	-941.41	5235.96	90.74	6227.84	122.22	51.14	PASS
10917.00†	10115.45	-492.07	-981.85	10266.40	10164.44	-941.37	5235.90	90.82	6234.16	121.48	51.50	PASS
11017.00†	10124.43	-392.48	-981.85	10274.99	10173.04	-941.32	5235.84	90.90	6242.06	120.85	51.83	PASS
11117.00†	10133.40	-292.88	-981.85	10283.67	10181.72	-941.27	5235.77	90.98	6251.53	120.33	52.14	PASS
11217.00†	10142.38	-193.28	-981.85	10292.43	10190.48	-941.21	5235.71	91.06	6262.57	119.93	52.41	PASS
11317.00†	10151.35	-93.69	-981.85	10301.28	10199.32	-941.15	5235.65	91.14	6275.18	119.64	52.64	PASS
11417.00†	10160.33	5.91	-981.85	10308.26	10206.30	-941.09	5235.61	91.21	6289.34	119.46	52.84	PASS
11517.00†	10169.30	105.50	-981.85	10314.76	10212.80	-941.05	5235.57	91.27	6305.04	119.40	53.00	PASS
11617.00†	10178.28	205.10	-981.85	10321.26	10219.30	-941.00	5235.53	91.32	6322.27	119.45	53.12	PASS
11717.00†	10187.25	304.70	-981.85	10327.75	10225.79	-940.95	5235.50	91.38	6341.03	119.62	53.20	PASS
11817.00†	10196.23	404.29	-981.85	10334.22	10232.26	-940.91	5235.47	91.44	6361.29	119.89	53.25	PASS
11917.00†	10205.20	503.89	-981.86	10340.69	10238.73	-940.86	5235.44	91.50	6383.04	120.28	53.26	PASS
12017.00†	10214.18	603.49	-981.86	10347.14	10245.18	-940.82	5235.42	91.56	6406.27	120.76	53.24	PASS
12117.00†	10223.15	703.08	-981.86	10353.59	10251.63	-940.78	5235.40	91.62	6430.97	121.35	53.18	PASS
12217.00†	10232.13	802.68	-981.86	10360.03	10258.07	-940.73	5235.38	91.68	6457.11	122.02	53.10	PASS
12317.00†	10241.10	902.28	-981.86	10366.45	10264.49	-940.69	5235.37	91.74	6484.67	122.79	53.00	PASS
12417.00†	10250.08	1001.87	-981.86	10372.87	10270.91	-940.65	5235.36	91.80	6513.65	123.63	52.87	PASS
12517.00†	10259.05	1101.47	-981.86	10379.28	10277.31	-940.61	5235.35	91.86	6544.01	124.55	52.72	PASS
12617.00†	10268.03	1201.06	-981.86	10385.67	10283.71	-940.56	5235.35	91.92	6575.75	125.53	52.56	PASS

# Clearance Report

BHR FED J22-15-397-4RH (REV-A.0) PWP  
Closest Approach  
Page 24 of 26



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

CLEARANCE DATA - Offset Wellbore: WILEY 23-3-97 H1 AWB Offset Wellpath: WILEY 23-3-97 H1 AWP												
Facility: SEC.23-T03N-R97W Slot: SLOT#01 EX) WILEY 23-3-97 H1 (950'FSL & 1402'FEL SEC 23)				Well: WILEY 23-3-97 H1				Threshold Value=1.00 † = interpolated/extrapolated station				
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
12717.00†	10277.00	1300.66	-981.86	10392.06	10290.10	-940.52	5235.35	91.97	6608.84	126.58	52.39	PASS
12817.00†	10285.98	1400.26	-981.86	10398.71	10296.75	-940.48	5235.35	92.03	6643.26	127.68	52.21	PASS
12917.00†	10294.95	1499.85	-981.86	10409.10	10307.14	-940.42	5235.36	92.13	6678.98	128.85	52.01	PASS
13017.00†	10303.93	1599.45	-981.86	10419.35	10317.38	-940.37	5235.36	92.22	6716.00	130.06	51.81	PASS
13117.00†	10312.90	1699.05	-981.86	10429.45	10327.49	-940.32	5235.35	92.32	6754.27	131.31	51.61	PASS
13217.00†	10321.88	1798.64	-981.86	10439.41	10337.45	-940.28	5235.35	92.41	6793.79	132.59	51.41	PASS
13317.00†	10330.85	1898.24	-981.86	10449.24	10347.28	-940.25	5235.33	92.50	6834.53	133.89	51.21	PASS
13417.00†	10339.83	1997.84	-981.86	10458.93	10356.97	-940.23	5235.32	92.59	6876.47	135.22	51.02	PASS
13517.00†	10348.80	2097.43	-981.86	10468.50	10366.54	-940.21	5235.30	92.67	6919.58	136.57	50.83	PASS
13617.00†	10357.78	2197.03	-981.86	10477.93	10375.97	-940.19	5235.28	92.76	6963.86	137.93	50.65	PASS
13717.00†	10366.76	2296.63	-981.86	10487.24	10385.28	-940.19	5235.26	92.85	7009.27	139.30	50.47	PASS
13817.00†	10375.73	2396.22	-981.86	10496.54	10394.57	-940.19	5235.23	92.93	7055.79	140.68	50.31	PASS
13917.00†	10384.71	2495.82	-981.86	10505.95	10403.98	-940.19	5235.20	93.02	7103.40	142.06	50.15	PASS
14017.00†	10393.68	2595.41	-981.86	10515.33	10413.36	-940.19	5235.17	93.10	7152.08	143.45	50.01	PASS
14117.00†	10402.66	2695.01	-981.86	10524.68	10422.71	-940.19	5235.14	93.19	7201.82	144.83	49.87	PASS
14217.00†	10411.63	2794.61	-981.86	10533.99	10432.03	-940.20	5235.11	93.27	7252.57	146.22	49.75	PASS
14317.00†	10420.61	2894.20	-981.86	10543.28	10441.32	-940.20	5235.07	93.36	7304.34	147.60	49.63	PASS
14417.00†	10429.58	2993.80	-981.86	10552.54	10450.58	-940.21	5235.04	93.44	7357.08	148.97	49.53	PASS
14517.00†	10438.56	3093.40	-981.86	10561.77	10459.80	-940.22	5235.00	93.53	7410.79	150.33	49.44	PASS
14617.00†	10447.53	3192.99	-981.86	10570.96	10469.00	-940.23	5234.96	93.61	7465.44	151.69	49.36	PASS
14717.00†	10456.51	3292.59	-981.86	10580.13	10478.17	-940.24	5234.92	93.70	7521.01	153.03	49.29	PASS
14817.00†	10465.48	3392.19	-981.86	10590.25	10488.29	-940.25	5234.88	93.79	7577.49	154.37	49.22	PASS
14917.00†	10474.46	3491.78	-981.86	10600.70	10504.74	-940.26	5234.80	93.94	7634.84	155.72	49.16	PASS
15017.00†	10483.43	3591.38	-981.86	10623.65	10521.68	-940.25	5234.72	94.09	7693.04	157.07	49.11	PASS
15117.00†	10492.41	3690.98	-981.86	10641.12	10539.15	-940.21	5234.62	94.25	7752.08	158.40	49.07	PASS
15217.00†	10501.38	3790.57	-981.86	10659.14	10557.17	-940.15	5234.53	94.42	7811.93	159.72	49.04	PASS
15317.00†	10510.36	3890.17	-981.86	10677.73	10575.77	-940.05	5234.42	94.59	7872.57	161.03	49.02	PASS
15417.00†	10519.33	3989.76	-981.86	10688.54	10586.57	-939.99	5234.35	94.69	7933.99	162.28	49.02	PASS
15517.00†	10528.31	4089.36	-981.86	10696.12	10594.16	-939.94	5234.30	94.75	7996.18	163.50	49.04	PASS
15617.00†	10537.28	4188.96	-981.86	10703.63	10601.66	-939.91	5234.26	94.82	8059.12	164.70	49.06	PASS
15717.00†	10546.26	4288.55	-981.86	10711.04	10609.08	-939.87	5234.21	94.89	8122.80	165.89	49.09	PASS
15817.00†	10555.23	4388.15	-981.86	10718.38	10616.41	-939.84	5234.16	94.96	8187.19	167.05	49.14	PASS
15917.00†	10564.21	4487.75	-981.86	10725.63	10623.66	-939.82	5234.11	95.02	8252.29	168.20	49.19	PASS
16017.00†	10573.18	4587.34	-981.86	10732.80	10630.83	-939.80	5234.06	95.09	8318.07	169.33	49.25	PASS
16117.00†	10582.16	4686.94	-981.86	10739.89	10637.93	-939.78	5234.01	95.15	8384.52	170.45	49.32	PASS
16217.00†	10591.13	4786.54	-981.86	10746.91	10644.94	-939.77	5233.96	95.22	8451.62	171.54	49.39	PASS
16317.00†	10600.11	4886.13	-981.86	10753.84	10651.88	-939.76	5233.91	95.28	8519.36	172.62	49.48	PASS
16417.00†	10609.08	4985.73	-981.86	10760.71	10658.74	-939.75	5233.86	95.34	8587.72	173.68	49.57	PASS
16517.00†	10618.06	5085.33	-981.86	10767.49	10665.53	-939.75	5233.81	95.40	8656.69	174.72	49.67	PASS
16617.00†	10627.03	5184.92	-981.86	10774.21	10672.24	-939.75	5233.76	95.47	8726.26	175.75	49.77	PASS
16717.00†	10636.01	5284.52	-981.86	10781.24	10679.27	-939.75	5233.71	95.53	8796.40	176.76	49.89	PASS
16817.00†	10644.98	5384.11	-981.86	10788.80	10686.83	-939.75	5233.66	95.60	8867.11	177.76	50.00	PASS
16917.00†	10653.96	5483.71	-981.86	10796.41	10694.44	-939.75	5233.60	95.67	8938.37	178.73	50.13	PASS
17017.00†	10662.94	5583.31	-981.86	10804.08	10702.11	-939.75	5233.56	95.74	9010.18	179.70	50.26	PASS
17117.00†	10671.91	5682.90	-981.86	10811.80	10709.83	-939.75	5233.52	95.81	9082.50	180.65	50.40	PASS

# Clearance Report

BHR FED J22-15-397-4RH (REV-A.0) PWP  
Closest Approach  
Page 25 of 26



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

CLEARANCE DATA - Offset Wellbore: WILEY 23-3-97 H1 AWB Offset Wellpath: WILEY 23-3-97 H1 AWP												
Facility: SEC.23-T03N-R97W		Slot: SLOT#01 EX) WILEY 23-3-97 H1 (950'FSL & 1402'FEL SEC 23)		Well: WILEY 23-3-97 H1		Threshold Value=1.00		† = interpolated/extrapolated station				
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
17217.00†	10680.89	5782.50	-981.86	10819.58	10717.61	-939.74	5233.48	95.88	9155.34	181.58	50.54	PASS
17317.00†	10689.86	5882.10	-981.86	10827.41	10725.44	-939.73	5233.44	95.95	9228.68	182.49	50.69	PASS
17417.00†	10698.84	5981.69	-981.86	10835.30	10733.33	-939.72	5233.41	96.02	9302.51	183.40	50.84	PASS
17517.00†	10707.81	6081.29	-981.86	10843.25	10741.28	-939.70	5233.39	96.09	9376.82	184.28	51.00	PASS
17617.00†	10716.79	6180.89	-981.86	10851.26	10749.29	-939.68	5233.37	96.17	9451.59	185.16	51.17	PASS
17717.00†	10725.76	6280.48	-981.86	10859.32	10757.35	-939.66	5233.35	96.24	9526.82	186.01	51.33	PASS
17817.00†	10734.74	6380.08	-981.86	10867.44	10765.48	-939.64	5233.34	96.31	9602.49	186.86	51.51	PASS
17917.00†	10743.71	6479.68	-981.86	10876.15	10774.18	-939.61	5233.33	96.39	9678.60	187.69	51.69	PASS
18017.00†	10752.69	6579.27	-981.86	10885.98	10784.01	-939.57	5233.32	96.48	9755.13	188.51	51.87	PASS
18117.00†	10761.66	6678.87	-981.86	10895.84	10793.87	-939.54	5233.31	96.57	9832.07	189.32	52.05	PASS
18217.00†	10770.64	6778.46	-981.86	10905.72	10803.75	-939.50	5233.31	96.66	9909.41	190.12	52.24	PASS
18317.00†	10779.61	6878.06	-981.86	10915.63	10813.66	-939.46	5233.30	96.75	9987.14	190.91	52.43	PASS
18417.00†	10788.59	6977.66	-981.86	10925.56	10823.59	-939.42	5233.30	96.84	10065.26	191.68	52.63	PASS
18517.00†	10797.56	7077.25	-981.86	10935.52	10833.55	-939.38	5233.29	96.93	10143.76	192.44	52.83	PASS
18617.00†	10806.54	7176.85	-981.86	10945.50	10843.53	-939.34	5233.29	97.02	10222.62	193.18	53.03	PASS
18717.00†	10815.51	7276.45	-981.86	10955.51	10853.54	-939.30	5233.28	97.11	10301.84	193.92	53.24	PASS
18817.00†	10824.49	7376.04	-981.86	10965.54	10863.57	-939.25	5233.28	97.20	10381.41	194.64	53.45	PASS
18917.00†	10833.46	7475.64	-981.86	10975.44	10873.47	-939.21	5233.28	97.29	10461.32	195.35	53.67	PASS
19017.00†	10842.44	7575.24	-981.86	10985.27	10883.30	-939.17	5233.27	97.38	10541.56	196.05	53.89	PASS
19117.00†	10851.41	7674.83	-981.86	10995.07	10893.09	-939.12	5233.26	97.47	10622.13	196.74	54.11	PASS
19217.00†	10860.39	7774.43	-981.86	11004.84	10902.87	-939.08	5233.25	97.56	10703.03	197.42	54.33	PASS
19317.00†	10869.36	7874.03	-981.86	11014.58	10912.61	-939.04	5233.24	97.64	10784.23	198.09	54.56	PASS
19417.00†	10878.34	7973.62	-981.86	11024.30	10922.33	-939.01	5233.23	97.73	10865.74	198.75	54.79	PASS
19517.00†	10887.31	8073.22	-981.86	11033.99	10932.02	-938.97	5233.21	97.82	10947.54	199.39	55.02	PASS
19617.00†	10896.29	8172.81	-981.86	11043.65	10941.68	-938.94	5233.19	97.91	11029.64	200.03	55.26	PASS
19658.35	10900.00	8213.99	-981.86	11047.64	10945.66	-938.92	5233.18	97.94	11063.67	200.35	55.36	PASS

POSITIONAL UNCERTAINTY - Offset Wellbore: WILEY 23-3-97 H1 AWB Offset Wellpath: WILEY 23-3-97 H1 AWP			
Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical

HOLE & CASING SECTIONS - Offset Wellbore: WILEY 23-3-97 H1 AWB Offset Wellpath: WILEY 23-3-97 H1 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]
9.625in Casing Surface	24.00	3040.00	3016.00	-60.00	2955.06	-498.39	3180.20	-501.43	3161.55

WELLPATH COMPOSITION - Offset Wellbore: WILEY 23-3-97 H1 AWB Offset Wellpath: WILEY 23-3-97 H1 AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
24.00	11823.00	ISCWSA MWD, Rev. 4 (Standard)	MWD SURVEYS FROM ENDEAVOUR <141-11824>	WILEY 23-3-97 H1 AWB
11823.00	11994.00	Blind Drilling (std)	Projection to bit	WILEY 23-3-97 H1 AWB

**Clearance Report**  
BHR FED J22-15-397-4RH (REV-A.0) PWP  
Closest Approach  
Page 26 of 26



REFERENCE WELLPATH IDENTIFICATION			
Operator	AUGUSTUS	Slot	SLOT#02 BHR FED J22-15-397-4RH (1762'FSL & 1333'FEL, SEC.22)
Area	COLORADO	Well	BHR FED J22-15-397-4RH
Field	RIO BLANCO COUNTY	Wellbore	BHR FED J22-15-397-4RH PWB
Facility	SEC.22-T03N-R97W		

OFFSET WELLPATH REFERENCE - Offset Wellbore: WILEY 23-3-97 H1 AWB Offset Wellpath: WILEY 23-3-97 H1 AWP	
MD Reference: PATTERSON 303 (RKB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	24.00ft