

BONANZA CREEK OIL COMPANY

Location: COLORADO Slot: SLOT#01 MUSTANG X44-22-21XRLNB (1120'FSL & 505'FEL, SEC.22)
Field: WELD COUNTY Well: MUSTANG X44-22-21XRLNB
Facility: SEC.22-T04N-R63W Wellbore: MUSTANG X44-22-21XRLNB PWB

Plot reference wellpath is MUSTANG X44-22-21XRLNB PWP (REV-D.0)

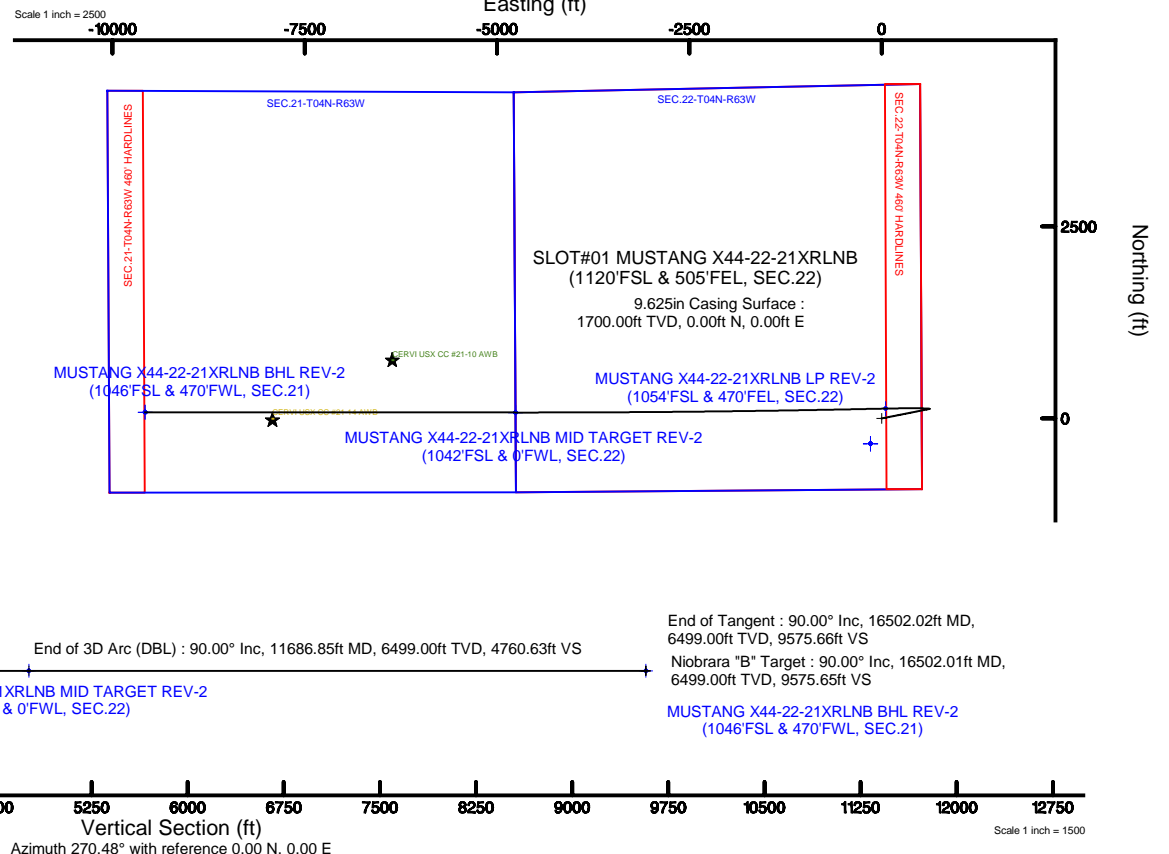
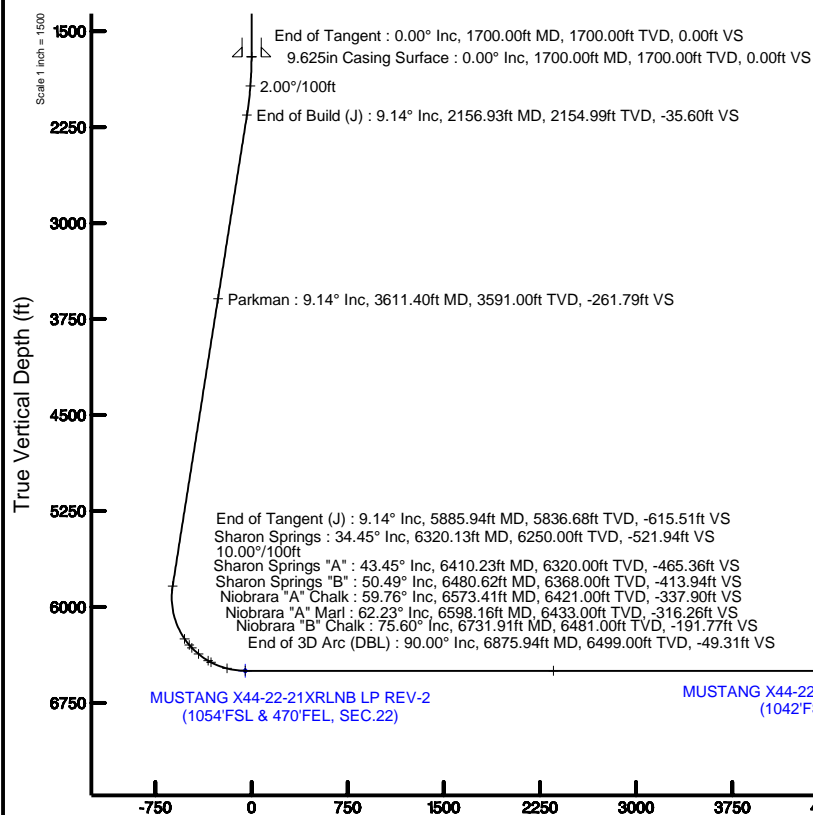
True vertical depths are referenced to XTREME 19 (17'KB +4774'GL) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to XTREME 19 (17'KB +4774'GL) (RKB)	North Reference: True north
XTREME 19 (17'KB +4774'GL) (RKB) to Mean Sea Level: 4791 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#01 MUSTANG X44-22-21XRLNB (1120'FSL & 505'FEL, SEC.22)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: ingnjmr on 2017-09-14
	Database: WA_DEN_Denver_Defn

Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.22-T04N-R63W			3302248.740	1351530.959	40°17'35.820"N	104°24'59.190"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#01 MUSTANG X44-22-21XRLNB (1120'FSL & 505'FEL, SEC.22)	0.00	0.00	3302248.740	1351530.959	40°17'35.820"N	104°24'59.190"W
XTREME 19 (17'KB +4774'GL) (RKB) to Mud line (At Slot: SLOT#01 MUSTANG X44-22-21XRLNB (1120'FSL & 505'FEL, SEC.22))						4791ft
Mean Sea Level to Mud line (At Slot: SLOT#01 MUSTANG X44-22-21XRLNB (1120'FSL & 505'FEL, SEC.22))						0ft
XTREME 19 (17'KB +4774'GL) (RKB) to Mean Sea Level						4791ft

Survey Program

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	1700.00	BHI AutoTrak Curve	Custom BHI AutoTrak Curve (Short) (Rockies 0.03Gt model)		MUSTANG X44-22-21XRLNB PWB
1700.00	16502.02	BHI AutoTrak Curve	Custom BHI AutoTrak Curve (Short) (Rockies 0.03Gt model)		MUSTANG X44-22-21XRLNB PWB



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	78.763	17.00	0.00	0.00	0.00	0.00
End of Tangent	1700.00	0.000	78.763	1700.00	0.00	0.00	0.00	0.00
End of Build (J)	2156.93	9.139	78.763	2154.99	7.09	35.67	2.00	-35.60
End of Tangent (J)	5885.94	9.139	78.763	5836.68	122.50	616.57	0.00	-615.51
End of 3D Arc (DBL)	6875.94	90.000	268.741	6499.00	128.52	50.39	10.00	-49.31
End of 3D Arc (DBL)	11686.85	90.000	270.041	6499.00	77.37	-4760.15	0.03	4760.63
End of Tangent	16502.02	90.000	270.041	6499.00	80.79	-9575.32	0.00	9575.66

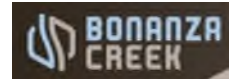
Bottom Hole Location

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
16502.02	90.000	270.041	6499.00	80.79	-9575.32	3292674.58	1351494.74	40°17'36.600"N	104°27'02.760"W



BGGM (1900.0 to 2019.0) Dip: 66.83° Field: 52392.9 nT
Magnetic North is 8.18 degrees East of True North (at 6/27/2017)

To correct azimuth from Magnetic to True add 8.18 degrees





Planned Wellpath Report

MUSTANG X44-22-21XRLNB PWP (REV-D.0)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 MUSTANG X44-22-21XRLNB (1120'FSL & 505'FEL, SEC.22)
Area	COLORADO	Well	MUSTANG X44-22-21XRLNB
Field	WELD COUNTY	Wellbore	MUSTANG X44-22-21XRLNB PWB
Facility	SEC.22-T04N-R63W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.1
North Reference	True	User	Ingmjmr
Scale	0.999957	Report Generated	9/14/2017 at 12:16:28 PM
Convergence at slot	0.70° East	Database/Source file	WA_DEN_Denver_Defn/MUSTANG_X44-22-21XRLNB_PWP__REV-D.0_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	3302249.74	1351530.96	40°17'35.820"N	104°24'59.190"W
Facility Reference Pt			3302249.74	1351530.96	40°17'35.820"N	104°24'59.190"W
Field Reference Pt			3224525.77	1254425.87	40°01'44.400"N	104°41'53.556"W

WELLPATH DATUM			
Calculation method	Minimum curvature	XTREME 19 (17'KB +4774'GL) (RKB) to Facility Vertical Datum	4791.00ft
Horizontal Reference Pt	Slot	XTREME 19 (17'KB +4774'GL) (RKB) to Mean Sea Level	4791.00ft
Vertical Reference Pt	XTREME 19 (17'KB +4774'GL) (RKB)	XTREME 19 (17'KB +4774'GL) (RKB) to Mud Line at Slot (SLOT#01 MUSTANG X44-22-21XRLNB (1120'FSL & 505'FEL, SEC.22))	4791.00ft
MD Reference Pt	XTREME 19 (17'KB +4774'GL) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	270.48°



Planned Wellpath Report

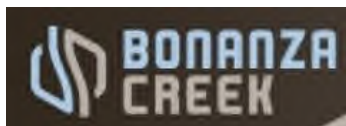
MUSTANG X44-22-21XRLNB PWP (REV-D.0)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 MUSTANG X44-22-21XRLNB (1120'FSL & 505'FEL, SEC.22)
Area	COLORADO	Well	MUSTANG X44-22-21XRLNB
Field	WELD COUNTY	Wellbore	MUSTANG X44-22-21XRLNB PWB
Facility	SEC.22-T04N-R63W		

WELLPATH DATA (180 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	78.763	0.00	0.00	0.00	0.00	40°17'35.820"N	104°24'59.190"W	0.00	
17.00	0.000	78.763	17.00	0.00	0.00	0.00	40°17'35.820"N	104°24'59.190"W	0.00	Tie On
117.00†	0.000	78.763	117.00	0.00	0.00	0.00	40°17'35.820"N	104°24'59.190"W	0.00	
217.00†	0.000	78.763	217.00	0.00	0.00	0.00	40°17'35.820"N	104°24'59.190"W	0.00	
317.00†	0.000	78.763	317.00	0.00	0.00	0.00	40°17'35.820"N	104°24'59.190"W	0.00	
417.00†	0.000	78.763	417.00	0.00	0.00	0.00	40°17'35.820"N	104°24'59.190"W	0.00	
517.00†	0.000	78.763	517.00	0.00	0.00	0.00	40°17'35.820"N	104°24'59.190"W	0.00	
617.00†	0.000	78.763	617.00	0.00	0.00	0.00	40°17'35.820"N	104°24'59.190"W	0.00	
717.00†	0.000	78.763	717.00	0.00	0.00	0.00	40°17'35.820"N	104°24'59.190"W	0.00	
817.00†	0.000	78.763	817.00	0.00	0.00	0.00	40°17'35.820"N	104°24'59.190"W	0.00	
917.00†	0.000	78.763	917.00	0.00	0.00	0.00	40°17'35.820"N	104°24'59.190"W	0.00	
1017.00†	0.000	78.763	1017.00	0.00	0.00	0.00	40°17'35.820"N	104°24'59.190"W	0.00	
1117.00†	0.000	78.763	1117.00	0.00	0.00	0.00	40°17'35.820"N	104°24'59.190"W	0.00	
1217.00†	0.000	78.763	1217.00	0.00	0.00	0.00	40°17'35.820"N	104°24'59.190"W	0.00	
1317.00†	0.000	78.763	1317.00	0.00	0.00	0.00	40°17'35.820"N	104°24'59.190"W	0.00	
1417.00†	0.000	78.763	1417.00	0.00	0.00	0.00	40°17'35.820"N	104°24'59.190"W	0.00	
1517.00†	0.000	78.763	1517.00	0.00	0.00	0.00	40°17'35.820"N	104°24'59.190"W	0.00	
1617.00†	0.000	78.763	1617.00	0.00	0.00	0.00	40°17'35.820"N	104°24'59.190"W	0.00	
1700.00	0.000	78.763	1700.00	0.00	0.00	0.00	40°17'35.820"N	104°24'59.190"W	0.00	End of Tangent
1717.00†	0.340	78.763	1717.00	-0.05	0.01	0.05	40°17'35.820"N	104°24'59.189"W	2.00	
1817.00†	2.340	78.763	1816.97	-2.34	0.47	2.34	40°17'35.825"N	104°24'59.160"W	2.00	
1917.00†	4.340	78.763	1916.79	-8.04	1.60	8.06	40°17'35.836"N	104°24'59.086"W	2.00	
2017.00†	6.340	78.763	2016.35	-17.16	3.41	17.18	40°17'35.854"N	104°24'58.968"W	2.00	
2117.00†	8.340	78.763	2115.53	-29.66	5.90	29.72	40°17'35.878"N	104°24'58.807"W	2.00	
2156.93	9.139	78.763	2154.99	-35.60	7.09	35.67	40°17'35.890"N	104°24'58.730"W	2.00	End of Build (J)
2217.00†	9.139	78.763	2214.30	-44.95	8.95	45.02	40°17'35.908"N	104°24'58.609"W	0.00	
2317.00†	9.139	78.763	2313.03	-60.50	12.04	60.60	40°17'35.939"N	104°24'58.408"W	0.00	
2417.00†	9.139	78.763	2411.76	-76.05	15.13	76.18	40°17'35.970"N	104°24'58.207"W	0.00	
2517.00†	9.139	78.763	2510.49	-91.60	18.23	91.76	40°17'36.000"N	104°24'58.006"W	0.00	
2617.00†	9.139	78.763	2609.23	-107.15	21.32	107.33	40°17'36.031"N	104°24'57.805"W	0.00	



Planned Wellpath Report

MUSTANG X44-22-21XRLNB PWP (REV-D.0)

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REFERENCE WELLPATH IDENTIFICATION			
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Area	COLORADO	Well	MUSTANG X44-22-21XRLNB
Field	WELD COUNTY	Wellbore	MUSTANG X44-22-21XRLNB PWB
Facility	SEC.22-T04N-R63W		

WELLPATH DATA (180 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2717.00†	9.139	78.763	2707.96	-122.70	24.42	122.91	40°17'36.061"N	104°24'57.604"W	0.00	
2817.00†	9.139	78.763	2806.69	-138.25	27.51	138.49	40°17'36.092"N	104°24'57.403"W	0.00	
2917.00†	9.139	78.763	2905.42	-153.80	30.61	154.07	40°17'36.122"N	104°24'57.202"W	0.00	
3017.00†	9.139	78.763	3004.15	-169.36	33.70	169.65	40°17'36.153"N	104°24'57.001"W	0.00	
3117.00†	9.139	78.763	3102.88	-184.91	36.80	185.22	40°17'36.184"N	104°24'56.800"W	0.00	
3217.00†	9.139	78.763	3201.61	-200.46	39.89	200.80	40°17'36.214"N	104°24'56.599"W	0.00	
3317.00†	9.139	78.763	3300.34	-216.01	42.99	216.38	40°17'36.245"N	104°24'56.398"W	0.00	
3417.00†	9.139	78.763	3399.07	-231.56	46.08	231.96	40°17'36.275"N	104°24'56.197"W	0.00	
3517.00†	9.139	78.763	3497.80	-247.11	49.18	247.53	40°17'36.306"N	104°24'55.996"W	0.00	
3611.40†	9.139	78.763	3591.00	-261.79	52.10	262.24	40°17'36.335"N	104°24'55.806"W	0.00	Parkman
3617.00†	9.139	78.763	3596.53	-262.66	52.27	263.11	40°17'36.337"N	104°24'55.795"W	0.00	
3717.00†	9.139	78.763	3695.26	-278.21	55.37	278.69	40°17'36.367"N	104°24'55.593"W	0.00	
3817.00†	9.139	78.763	3793.99	-293.76	58.46	294.27	40°17'36.398"N	104°24'55.392"W	0.00	
3917.00†	9.139	78.763	3892.72	-309.32	61.56	309.85	40°17'36.428"N	104°24'55.191"W	0.00	
4017.00†	9.139	78.763	3991.46	-324.87	64.65	325.42	40°17'36.459"N	104°24'54.990"W	0.00	
4117.00†	9.139	78.763	4090.19	-340.42	67.75	341.00	40°17'36.489"N	104°24'54.789"W	0.00	
4217.00†	9.139	78.763	4188.92	-355.97	70.84	356.58	40°17'36.520"N	104°24'54.588"W	0.00	
4317.00†	9.139	78.763	4287.65	-371.52	73.94	372.16	40°17'36.551"N	104°24'54.387"W	0.00	
4417.00†	9.139	78.763	4386.38	-387.07	77.03	387.74	40°17'36.581"N	104°24'54.186"W	0.00	
4517.00†	9.139	78.763	4485.11	-402.62	80.13	403.31	40°17'36.612"N	104°24'53.985"W	0.00	
4617.00†	9.139	78.763	4583.84	-418.17	83.22	418.89	40°17'36.642"N	104°24'53.784"W	0.00	
4717.00†	9.139	78.763	4682.57	-433.73	86.32	434.47	40°17'36.673"N	104°24'53.583"W	0.00	
4817.00†	9.139	78.763	4781.30	-449.28	89.41	450.05	40°17'36.704"N	104°24'53.382"W	0.00	
4917.00†	9.139	78.763	4880.03	-464.83	92.51	465.62	40°17'36.734"N	104°24'53.181"W	0.00	
5017.00†	9.139	78.763	4978.76	-480.38	95.60	481.20	40°17'36.765"N	104°24'52.980"W	0.00	
5117.00†	9.139	78.763	5077.49	-495.93	98.70	496.78	40°17'36.795"N	104°24'52.779"W	0.00	
5217.00†	9.139	78.763	5176.22	-511.48	101.79	512.36	40°17'36.826"N	104°24'52.578"W	0.00	
5317.00†	9.139	78.763	5274.95	-527.03	104.89	527.94	40°17'36.856"N	104°24'52.377"W	0.00	
5417.00†	9.139	78.763	5373.69	-542.58	107.98	543.51	40°17'36.887"N	104°24'52.176"W	0.00	
5517.00†	9.139	78.763	5472.42	-558.13	111.08	559.09	40°17'36.918"N	104°24'51.975"W	0.00	



Planned Wellpath Report

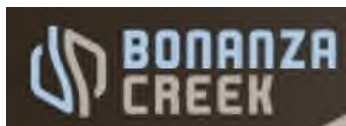
MUSTANG X44-22-21XRLNB PWP (REV-D.0)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 MUSTANG X44-22-21XRLNB (1120'FSL & 505'FEL, SEC.22)
Area	COLORADO	Well	MUSTANG X44-22-21XRLNB
Field	WELD COUNTY	Wellbore	MUSTANG X44-22-21XRLNB PWB
Facility	SEC.22-T04N-R63W		

WELLPATH DATA (180 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5617.00†	9.139	78.763	5571.15	-573.69	114.17	574.67	40°17'36.948"N	104°24'51.774"W	0.00	
5717.00†	9.139	78.763	5669.88	-589.24	117.27	590.25	40°17'36.979"N	104°24'51.573"W	0.00	
5817.00†	9.139	78.763	5768.61	-604.79	120.36	605.83	40°17'37.009"N	104°24'51.372"W	0.00	
5885.94	9.139	78.763	5836.68	-615.51	122.50	616.57	40°17'37.030"N	104°24'51.233"W	0.00	End of Tangent (J)
5917.00†	6.105	73.636	5867.46	-619.51	123.44	620.57	40°17'37.040"N	104°24'51.181"W	10.00	
6017.00†	4.405	289.951	5967.28	-620.98	126.26	622.07	40°17'37.068"N	104°24'51.162"W	10.00	
6117.00†	14.195	275.067	6065.85	-605.10	128.66	606.20	40°17'37.091"N	104°24'51.367"W	10.00	
6217.00†	24.156	272.304	6160.19	-572.34	130.57	573.46	40°17'37.110"N	104°24'51.789"W	10.00	
6317.00†	34.139	271.097	6247.42	-523.71	131.93	524.84	40°17'37.124"N	104°24'52.417"W	10.00	
6320.13†	34.452	271.069	6250.00	-521.94	131.97	523.08	40°17'37.124"N	104°24'52.440"W	10.00	Sharon Springs
6410.23†	43.453	270.427	6320.00	-465.36	132.67	466.49	40°17'37.131"N	104°24'53.170"W	10.00	Sharon Springs "A"
6417.00†	44.129	270.387	6324.88	-460.67	132.71	461.81	40°17'37.131"N	104°24'53.230"W	10.00	
6480.62†	50.487	270.058	6368.00	-413.94	132.88	415.07	40°17'37.133"N	104°24'53.833"W	10.00	Sharon Springs "B"
6517.00†	54.122	269.896	6390.24	-385.16	132.87	386.29	40°17'37.133"N	104°24'54.205"W	10.00	
6573.41†	59.760	269.672	6421.00	-337.90	132.69	339.03	40°17'37.131"N	104°24'54.815"W	10.00	Niobrara "A" Chalk
6598.16†	62.234	269.582	6433.00	-316.26	132.55	317.39	40°17'37.130"N	104°24'55.094"W	10.00	Niobrara "A" Marl
6617.00†	64.117	269.516	6441.50	-299.45	132.41	300.58	40°17'37.128"N	104°24'55.311"W	10.00	
6717.00†	74.113	269.195	6477.11	-206.16	131.36	207.27	40°17'37.118"N	104°24'56.515"W	10.00	
6731.91†	75.603	269.151	6481.00	-191.77	131.15	192.88	40°17'37.116"N	104°24'56.701"W	10.00	Niobrara "B" Chalk
6817.00†	84.109	268.906	6495.97	-108.11	129.73	109.21	40°17'37.102"N	104°24'57.781"W	10.00	
6875.94	90.000	268.741	6499.00†	-49.31	128.52	50.39	40°17'37.090"N	104°24'58.540"W	10.00	End of 3D Arc (DBL)
6917.00†	90.000	268.752	6499.00	-8.26	127.62	9.34	40°17'37.081"N	104°24'59.070"W	0.03	
7017.00†	90.000	268.779	6499.00	91.70	125.47	-90.64	40°17'37.060"N	104°25'00.360"W	0.03	
7117.00†	90.000	268.806	6499.00	191.65	123.36	-190.62	40°17'37.039"N	104°25'01.650"W	0.03	
7217.00†	90.000	268.833	6499.00	291.61	121.30	-290.60	40°17'37.019"N	104°25'02.940"W	0.03	
7317.00†	90.000	268.860	6499.00	391.57	119.29	-390.58	40°17'36.999"N	104°25'04.230"W	0.03	
7417.00†	90.000	268.887	6499.00	491.53	117.32	-490.56	40°17'36.979"N	104°25'05.521"W	0.03	
7517.00†	90.000	268.914	6499.00	591.49	115.40	-590.54	40°17'36.960"N	104°25'06.811"W	0.03	
7617.00†	90.000	268.941	6499.00	691.45	113.53	-690.52	40°17'36.942"N	104°25'08.101"W	0.03	
7717.00†	90.000	268.968	6499.00	791.42	111.70	-790.50	40°17'36.924"N	104°25'09.392"W	0.03	



Planned Wellpath Report

MUSTANG X44-22-21XRLNB PWP (REV-D.0)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 MUSTANG X44-22-21XRLNB (1120'FSL & 505'FEL, SEC.22)
Area	COLORADO	Well	MUSTANG X44-22-21XRLNB
Field	WELD COUNTY	Wellbore	MUSTANG X44-22-21XRLNB PWB
Facility	SEC.22-T04N-R63W		

WELLPATH DATA (180 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7817.00†	90.000	268.995	6499.00	891.38	109.93	-890.49	40°17'36.906"N	104°25'10.682"W	0.03	
7917.00†	90.000	269.022	6499.00	991.35	108.20	-990.47	40°17'36.889"N	104°25'11.972"W	0.03	
8017.00†	90.000	269.049	6499.00	1091.32	106.51	-1090.46	40°17'36.872"N	104°25'13.262"W	0.03	
8117.00†	90.000	269.076	6499.00	1191.29	104.88	-1190.45	40°17'36.856"N	104°25'14.553"W	0.03	
8217.00†	90.000	269.103	6499.00	1291.26	103.29	-1290.43	40°17'36.840"N	104°25'15.843"W	0.03	
8317.00†	90.000	269.130	6499.00	1391.23	101.75	-1390.42	40°17'36.825"N	104°25'17.133"W	0.03	
8417.00†	90.000	269.157	6499.00	1491.20	100.25	-1490.41	40°17'36.810"N	104°25'18.424"W	0.03	
8517.00†	90.000	269.184	6499.00	1591.18	98.81	-1590.40	40°17'36.796"N	104°25'19.714"W	0.03	
8617.00†	90.000	269.211	6499.00	1691.15	97.41	-1690.39	40°17'36.782"N	104°25'21.005"W	0.03	
8717.00†	90.000	269.238	6499.00	1791.13	96.05	-1790.38	40°17'36.769"N	104°25'22.295"W	0.03	
8817.00†	90.000	269.265	6499.00	1891.10	94.75	-1890.37	40°17'36.756"N	104°25'23.585"W	0.03	
8917.00†	90.000	269.292	6499.00	1991.08	93.49	-1990.36	40°17'36.743"N	104°25'24.876"W	0.03	
9017.00†	90.000	269.319	6499.00	2091.06	92.28	-2090.36	40°17'36.731"N	104°25'26.166"W	0.03	
9117.00†	90.000	269.346	6499.00	2191.04	91.11	-2190.35	40°17'36.719"N	104°25'27.457"W	0.03	
9217.00†	90.000	269.373	6499.00	2291.02	90.00	-2290.34	40°17'36.708"N	104°25'28.747"W	0.03	
9317.00†	90.000	269.400	6499.00	2391.00	88.93	-2390.34	40°17'36.698"N	104°25'30.037"W	0.03	
9417.00†	90.000	269.427	6499.00	2490.99	87.90	-2490.33	40°17'36.687"N	104°25'31.328"W	0.03	
9517.00†	90.000	269.454	6499.00	2590.97	86.93	-2590.33	40°17'36.678"N	104°25'32.618"W	0.03	
9617.00†	90.000	269.481	6499.00	2690.95	86.00	-2690.32	40°17'36.668"N	104°25'33.909"W	0.03	
9717.00†	90.000	269.508	6499.00	2790.94	85.12	-2790.32	40°17'36.660"N	104°25'35.199"W	0.03	
9817.00†	90.000	269.535	6499.00	2890.92	84.28	-2890.32	40°17'36.651"N	104°25'36.490"W	0.03	
9917.00†	90.000	269.563	6499.00	2990.91	83.50	-2990.31	40°17'36.643"N	104°25'37.780"W	0.03	
10017.00†	90.000	269.590	6499.00	3090.90	82.76	-3090.31	40°17'36.636"N	104°25'39.071"W	0.03	
10117.00†	90.000	269.617	6499.00	3190.89	82.06	-3190.31	40°17'36.629"N	104°25'40.361"W	0.03	
10217.00†	90.000	269.644	6499.00	3290.88	81.42	-3290.31	40°17'36.622"N	104°25'41.652"W	0.03	
10317.00†	90.000	269.671	6499.00	3390.87	80.82	-3390.30	40°17'36.616"N	104°25'42.942"W	0.03	
10417.00†	90.000	269.698	6499.00	3490.86	80.27	-3490.30	40°17'36.611"N	104°25'44.233"W	0.03	
10517.00†	90.000	269.725	6499.00	3590.85	79.76	-3590.30	40°17'36.606"N	104°25'45.523"W	0.03	
10617.00†	90.000	269.752	6499.00	3690.84	79.31	-3690.30	40°17'36.601"N	104°25'46.814"W	0.03	
10717.00†	90.000	269.779	6499.00	3790.83	78.90	-3790.30	40°17'36.597"N	104°25'48.104"W	0.03	



Planned Wellpath Report

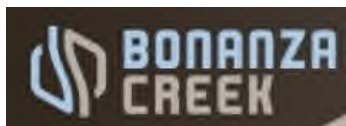
MUSTANG X44-22-21XRLNB PWP (REV-D.0)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 MUSTANG X44-22-21XRLNB (1120'FSL & 505'FEL, SEC.22)
Area	COLORADO	Well	MUSTANG X44-22-21XRLNB
Field	WELD COUNTY	Wellbore	MUSTANG X44-22-21XRLNB PWB
Facility	SEC.22-T04N-R63W		

WELLPATH DATA (180 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10817.00†	90.000	269.806	6499.00	3890.82	78.53	-3890.30	40°17'36.593"N	104°25'49.395"W	0.03	
10917.00†	90.000	269.833	6499.00	3990.82	78.22	-3990.30	40°17'36.590"N	104°25'50.685"W	0.03	
11017.00†	90.000	269.860	6499.00	4090.81	77.95	-4090.30	40°17'36.587"N	104°25'51.976"W	0.03	
11117.00†	90.000	269.887	6499.00	4190.80	77.73	-4190.30	40°17'36.585"N	104°25'53.266"W	0.03	
11217.00†	90.000	269.914	6499.00	4290.80	77.55	-4290.30	40°17'36.583"N	104°25'54.557"W	0.03	
11317.00†	90.000	269.941	6499.00	4390.79	77.43	-4390.30	40°17'36.581"N	104°25'55.847"W	0.03	
11417.00†	90.000	269.968	6499.00	4490.79	77.35	-4490.30	40°17'36.580"N	104°25'57.138"W	0.03	
11517.00†	90.000	269.995	6499.00	4590.79	77.31	-4590.30	40°17'36.580"N	104°25'58.428"W	0.03	
11617.00†	90.000	270.022	6499.00	4690.78	77.33	-4690.30	40°17'36.580"N	104°25'59.719"W	0.03	
11686.85	90.000	270.041	6499.00 ²	4760.63	77.37	-4760.15	40°17'36.580"N	104°26'00.620"W	0.03	End of 3D Arc (DBL)
11717.00†	90.000	270.041	6499.00	4790.78	77.39	-4790.30	40°17'36.580"N	104°26'01.009"W	0.00	
11817.00†	90.000	270.041	6499.00	4890.78	77.46	-4890.30	40°17'36.581"N	104°26'02.300"W	0.00	
11917.00†	90.000	270.041	6499.00	4990.77	77.53	-4990.30	40°17'36.581"N	104°26'03.590"W	0.00	
12017.00†	90.000	270.041	6499.00	5090.77	77.60	-5090.30	40°17'36.582"N	104°26'04.881"W	0.00	
12117.00†	90.000	270.041	6499.00	5190.77	77.67	-5190.30	40°17'36.582"N	104°26'06.171"W	0.00	
12217.00†	90.000	270.041	6499.00	5290.77	77.74	-5290.30	40°17'36.583"N	104°26'07.462"W	0.00	
12317.00†	90.000	270.041	6499.00	5390.76	77.81	-5390.30	40°17'36.583"N	104°26'08.752"W	0.00	
12417.00†	90.000	270.041	6499.00	5490.76	77.89	-5490.30	40°17'36.584"N	104°26'10.043"W	0.00	
12517.00†	90.000	270.041	6499.00	5590.76	77.96	-5590.30	40°17'36.584"N	104°26'11.333"W	0.00	
12617.00†	90.000	270.041	6499.00	5690.75	78.03	-5690.30	40°17'36.585"N	104°26'12.624"W	0.00	
12717.00†	90.000	270.041	6499.00	5790.75	78.10	-5790.30	40°17'36.585"N	104°26'13.914"W	0.00	
12817.00†	90.000	270.041	6499.00	5890.75	78.17	-5890.30	40°17'36.586"N	104°26'15.205"W	0.00	
12917.00†	90.000	270.041	6499.00	5990.74	78.24	-5990.30	40°17'36.586"N	104°26'16.495"W	0.00	
13017.00†	90.000	270.041	6499.00	6090.74	78.31	-6090.30	40°17'36.586"N	104°26'17.786"W	0.00	
13117.00†	90.000	270.041	6499.00	6190.74	78.38	-6190.30	40°17'36.587"N	104°26'19.076"W	0.00	
13217.00†	90.000	270.041	6499.00	6290.74	78.45	-6290.30	40°17'36.587"N	104°26'20.367"W	0.00	
13317.00†	90.000	270.041	6499.00	6390.73	78.52	-6390.30	40°17'36.588"N	104°26'21.657"W	0.00	
13417.00†	90.000	270.041	6499.00	6490.73	78.60	-6490.30	40°17'36.588"N	104°26'22.948"W	0.00	
13517.00†	90.000	270.041	6499.00	6590.73	78.67	-6590.30	40°17'36.589"N	104°26'24.238"W	0.00	
13617.00†	90.000	270.041	6499.00	6690.72	78.74	-6690.30	40°17'36.589"N	104°26'25.529"W	0.00	



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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 MUSTANG X44-22-21XRLNB (1120'FSL & 505'FEL, SEC.22)
Area	COLORADO	Well	MUSTANG X44-22-21XRLNB
Field	WELD COUNTY	Wellbore	MUSTANG X44-22-21XRLNB PWB
Facility	SEC.22-T04N-R63W		

WELLPATH DATA (180 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
13717.00†	90.000	270.041	6499.00	6790.72	78.81	-6790.30	40°17'36.590"N	104°26'26.819"W	0.00	
13817.00†	90.000	270.041	6499.00	6890.72	78.88	-6890.30	40°17'36.590"N	104°26'28.110"W	0.00	
13917.00†	90.000	270.041	6499.00	6990.71	78.95	-6990.30	40°17'36.590"N	104°26'29.400"W	0.00	
14017.00†	90.000	270.041	6499.00	7090.71	79.02	-7090.30	40°17'36.591"N	104°26'30.691"W	0.00	
14117.00†	90.000	270.041	6499.00	7190.71	79.09	-7190.30	40°17'36.591"N	104°26'31.981"W	0.00	
14217.00†	90.000	270.041	6499.00	7290.71	79.16	-7290.30	40°17'36.592"N	104°26'33.272"W	0.00	
14317.00†	90.000	270.041	6499.00	7390.70	79.23	-7390.30	40°17'36.592"N	104°26'34.562"W	0.00	
14417.00†	90.000	270.041	6499.00	7490.70	79.31	-7490.30	40°17'36.592"N	104°26'35.853"W	0.00	
14517.00†	90.000	270.041	6499.00	7590.70	79.38	-7590.30	40°17'36.593"N	104°26'37.143"W	0.00	
14617.00†	90.000	270.041	6499.00	7690.69	79.45	-7690.30	40°17'36.593"N	104°26'38.434"W	0.00	
14717.00†	90.000	270.041	6499.00	7790.69	79.52	-7790.30	40°17'36.594"N	104°26'39.724"W	0.00	
14817.00†	90.000	270.041	6499.00	7890.69	79.59	-7890.30	40°17'36.594"N	104°26'41.015"W	0.00	
14917.00†	90.000	270.041	6499.00	7990.68	79.66	-7990.30	40°17'36.594"N	104°26'42.305"W	0.00	
15017.00†	90.000	270.041	6499.00	8090.68	79.73	-8090.30	40°17'36.595"N	104°26'43.596"W	0.00	
15117.00†	90.000	270.041	6499.00	8190.68	79.80	-8190.30	40°17'36.595"N	104°26'44.886"W	0.00	
15217.00†	90.000	270.041	6499.00	8290.68	79.87	-8290.30	40°17'36.596"N	104°26'46.177"W	0.00	
15317.00†	90.000	270.041	6499.00	8390.67	79.94	-8390.30	40°17'36.596"N	104°26'47.467"W	0.00	
15417.00†	90.000	270.041	6499.00	8490.67	80.02	-8490.30	40°17'36.596"N	104°26'48.758"W	0.00	
15517.00†	90.000	270.041	6499.00	8590.67	80.09	-8590.30	40°17'36.597"N	104°26'50.048"W	0.00	
15617.00†	90.000	270.041	6499.00	8690.66	80.16	-8690.30	40°17'36.597"N	104°26'51.339"W	0.00	
15717.00†	90.000	270.041	6499.00	8790.66	80.23	-8790.30	40°17'36.597"N	104°26'52.629"W	0.00	
15817.00†	90.000	270.041	6499.00	8890.66	80.30	-8890.30	40°17'36.598"N	104°26'53.920"W	0.00	
15917.00†	90.000	270.041	6499.00	8990.65	80.37	-8990.30	40°17'36.598"N	104°26'55.210"W	0.00	
16017.00†	90.000	270.041	6499.00	9090.65	80.44	-9090.30	40°17'36.598"N	104°26'56.501"W	0.00	
16117.00†	90.000	270.041	6499.00	9190.65	80.51	-9190.30	40°17'36.599"N	104°26'57.791"W	0.00	
16217.00†	90.000	270.041	6499.00	9290.65	80.58	-9290.30	40°17'36.599"N	104°26'59.082"W	0.00	
16317.00†	90.000	270.041	6499.00	9390.64	80.65	-9390.30	40°17'36.599"N	104°27'00.372"W	0.00	
16417.00†	90.000	270.041	6499.00	9490.64	80.73	-9490.30	40°17'36.600"N	104°27'01.663"W	0.00	
16502.01†	90.000	270.041	6499.00	9575.65	80.79	-9575.31	40°17'36.600"N	104°27'02.760"W	0.00	Niobrara "B" Target
16502.02	90.000	270.041	6499.00 ³	9575.66	80.79	-9575.32	40°17'36.600"N	104°27'02.760"W	0.00	End of Tangent

HOLE & CASING SECTIONS									
- Ref Wellbore: MUSTANG X44-22-21XRLNB PWB					Ref Wellpath: MUSTANG X44-22-21XRLNB PWP (REV-D.0)				
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
13.5in Open Hole	17.00	1700.00	1683.00	17.00	1700.00	0.00	0.00	0.00	0.00
9.625in Casing Surface	17.00	1700.00	1683.00	17.00	1700.00	0.00	0.00	0.00	0.00
8.5in Open Hole	1700.00	16502.02	14802.02	1700.00	N/A	0.00	0.00	N/A	N/A

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.21-T04N-R63W		-13.00	-328.89	-144.13	3302109.64	1351200.35	40°17'32.570"N	104°25'01.050"W	polygon
SEC.22-T04N-R63W		-13.00	-328.89	-144.13	3302109.64	1351200.35	40°17'32.570"N	104°25'01.050"W	polygon
	16502.02	6499.00	80.79	-9575.32	3292674.58	1351494.74	40°17'36.600"N	104°27'02.760"W	point

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
3) MUSTANG X44-22-21XRLNB BHL REV-2 (1046'FSL & 470'FWL, SEC.21)									
1) MUSTANG X44-22-21XRLNB LP REV-2 (1054'FSL & 470'FEL, SEC.22)	6875.94	6499.00	128.52	50.39	3302298.55	1351660.08	40°17'37.090"N	104°24'58.540"W	point
2) MUSTANG X44-22-21XRLNB MID TARGET REV-2 (1042'FSL & 0'FWL, SEC.22)	11686.85	6499.00	77.37	-4760.15	3297489.21	1351550.15	40°17'36.580"N	104°26'00.620"W	point
MUSTANG X44-22-21XRLNB BHL REV-1 (1046'FSL & 470'FWL, SEC.21)		6541.00	80.79	-9575.32	3292674.58	1351494.74	40°17'36.600"N	104°27'02.760"W	point
MUSTANG X44-22-21XRLNB MID TARGET REV-1 (1042'FSL & 0'FWL, SEC.22)		6541.00	77.37	-4760.15	3297489.21	1351550.15	40°17'36.580"N	104°26'00.620"W	point
SEC.21-T04N-R63W 460' HARDLINES		6541.00	-328.89	-144.13	3302109.64	1351200.35	40°17'32.570"N	104°25'01.050"W	polygon
SEC.22-T04N-R63W 460' HARDLINES		6541.00	-328.89	-144.13	3302109.64	1351200.35	40°17'32.570"N	104°25'01.050"W	polygon



Planned Wellpath Report

MUSTANG X44-22-21XRLNB PWP (REV-D.0)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 MUSTANG X44-22-21XRLNB (1120'FSL & 505'FEL, SEC.22)
Area	COLORADO	Well	MUSTANG X44-22-21XRLNB
Field	WELD COUNTY	Wellbore	MUSTANG X44-22-21XRLNB PWB
Facility	SEC.22-T04N-R63W		

SURVEY PROGRAM -				
Ref Wellbore: MUSTANG X44-22-21XRLNB PWB Ref Wellpath: MUSTANG X44-22-21XRLNB PWP (REV-D.0)				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1700.00	Custom BHI AutoTrak Curve (Short) (Rockies 0.03Gt model)		MUSTANG X44-22-21XRLNB PWB
1700.00	16502.02	Custom BHI AutoTrak Curve (Short) (Rockies 0.03Gt model)		MUSTANG X44-22-21XRLNB PWB



Planned Wellpath Report

MUSTANG X44-22-21XRLNB PWP (REV-D.0)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 MUSTANG X44-22-21XRLNB (1120'FSL & 505'FEL, SEC.22)
Area	COLORADO	Well	MUSTANG X44-22-21XRLNB
Field	WELD COUNTY	Wellbore	MUSTANG X44-22-21XRLNB PWB
Facility	SEC.22-T04N-R63W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
3611.40	9.139	78.763	3591.00	Parkman
6320.13	34.452	271.069	6250.00	Sharon Springs
6410.23	43.453	270.427	6320.00	Sharon Springs "A"
6480.62	50.487	270.058	6368.00	Sharon Springs "B"
6573.41	59.760	269.672	6421.00	Niobrara "A" Chalk
6598.16	62.234	269.582	6433.00	Niobrara "A" Marl
6731.91	75.603	269.151	6481.00	Niobrara "B" Chalk
16502.01	90.000	270.041	6499.00	Niobrara "B" Target

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	78.763	17.00	Tie On
1700.00	0.000	78.763	1700.00	End of Tangent
2156.93	9.139	78.763	2154.99	End of Build (J)
5885.94	9.139	78.763	5836.68	End of Tangent (J)
6875.94	90.000	268.741	6499.00	End of 3D Arc (DBL)
11686.85	90.000	270.041	6499.00	End of 3D Arc (DBL)
16502.02	90.000	270.041	6499.00	End of Tangent