

BONANZA CREEK OIL COMPANY

Location: COLORADO Slot: SLOT#19 LATHAM F21-J24-14HNB (332°FNL & 333°FEL, SEC.14)  
Field: WELD COUNTY Well: LATHAM F21-J24-14HNB  
Facility: SEC.14-T4N-R63W Wellbore: LATHAM F21-J24-14HNB PWB

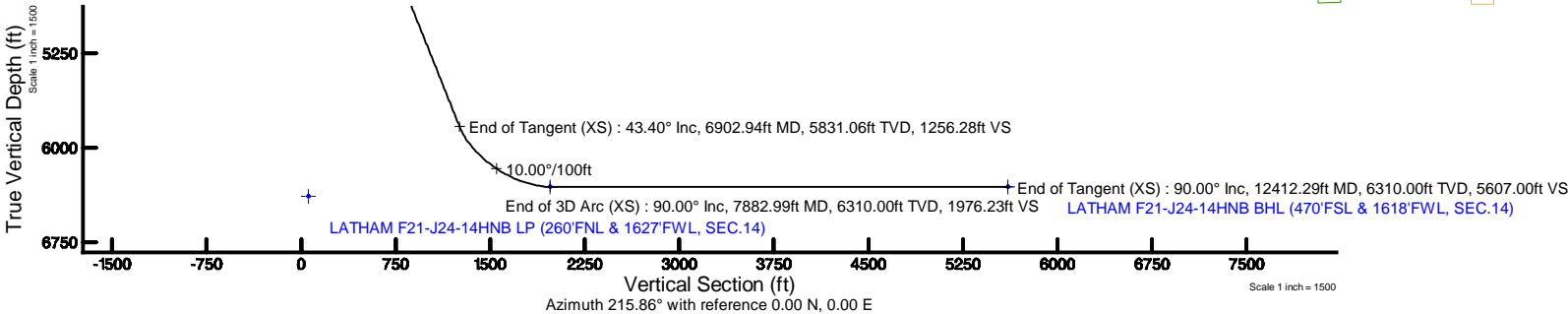
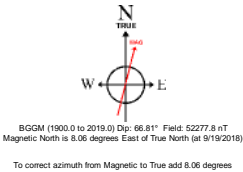
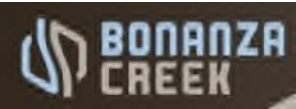
Plot reference wellpath is LATHAM F21-J24-14HNB (REV-A.0) PWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to RIG (17) (RKB)	North Reference: True north
Measured depths are referenced to RIG (17) (RKB)	Scale: True distance
RIG (17) (RKB) to Mean Sea Level: 4620 feet	Depths are in feet
Mean Sea Level to Ground level (At Slot: SLOT#19 LATHAM F21-J24-14HNB (332°FNL & 333°FEL, SEC.14)): 0 feet	Created by: doddiana on 2018-09-21
Coordinates are in feet referenced to Slot	Database: WellArchitect:DB2

Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.14-T4N-R63W			3307689.092	1361141.238	40°19'10.121"N	104°23'47.454"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#19 LATHAM F21-J24-14HNB (332°FNL & 333°FEL, SEC.14)	-141.27	-152.52	3307538.350	1360998.088	40°19'08.725"N	104°23'49.423"W
RIG (17) (RKB) to Ground level (At Slot: SLOT#19 LATHAM F21-J24-14HNB (332°FNL & 333°FEL, SEC.14))					4620ft	
Mean Sea Level to Ground level (At Slot: SLOT#19 LATHAM F21-J24-14HNB (332°FNL & 333°FEL, SEC.14))					0ft	
RIG (17) (RKB) to Mean Sea Level					4620ft	

Survey Program

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	1550.00	BHI NaviTrak	BHI NaviTrak (Rotating+Axial Corr)		LATHAM F21-J24-14HNB PWB
1550.00	12412.29	BHI AutoTrak Curve	BHI AutoTrak Curve (Axial Corr, Short spacing)		LATHAM F21-J24-14HNB PWB

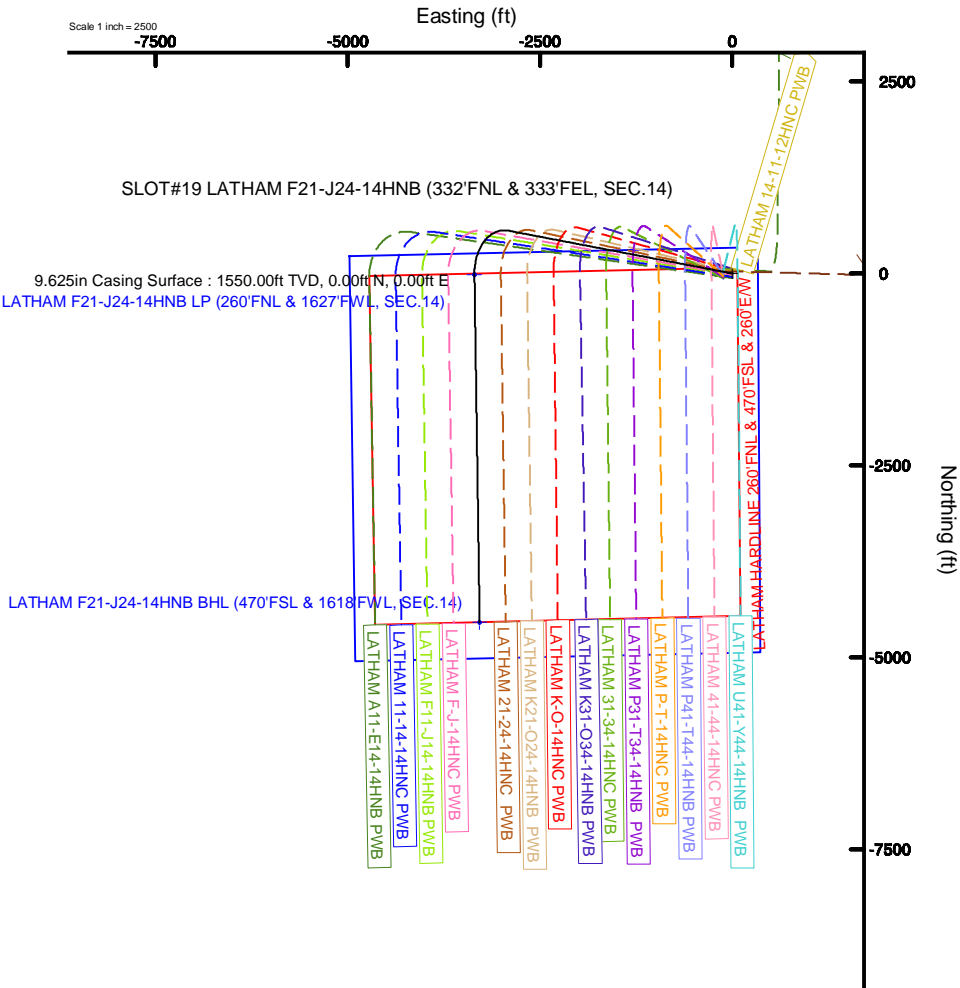


Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	17.00	0.000	280.843	17.00	0.00	0.00	0.00	0.00
End of Tangent	1550.00	0.000	280.843	1550.00	0.00	0.00	0.00	0.00
End of Build (XS)	3719.94	43.399	280.843	3518.31	147.35	-769.28	2.00	331.29
End of Tangent (XS)	6902.94	43.399	280.843	5831.06	558.77	-2917.18	0.00	1256.28
End of 3D Arc (XS)	7882.99	90.000	179.150	6310.00	-15.12	-3352.21	10.00	1976.23
End of Tangent (XS)	12412.29	90.000	179.150	6310.00	-4543.92	-3285.01	0.00	5607.00

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
12412.29	90.000	179.150	6310.00	-4543.92	-3285.01	3304310.25	1356413.87	40°18'23.821"N	104°24'31.824"W





# Planned Wellpath Report

LATHAM F21-J24-14HNB (REV-A.0) PWP

Page 1 of 8



## REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#19 LATHAM F21-J24-14HNB (332'FNL & 333'FEL, SEC.14)
Area	COLORADO	Well	LATHAM F21-J24-14HNB
Field	WELD COUNTY	Wellbore	LATHAM F21-J24-14HNB PWB
Facility	SEC.14-T4N-R63W		

## REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.1
North Reference	True	User	Bushjamh
Scale	0.999958	Report Generated	9/20/2018 at 2:58:43 PM
Convergence at slot	0.71° East	Database/Source file	WellArchitectDB2/LATHAM F21-J24-14HNB (REV-A.0) PWP PR.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-141.27	-152.52	3307538.35	1360998.09	40°19'08.725"N	104°23'49.423"W
Facility Reference Pt			3307689.09	1361141.24	40°19'10.121"N	104°23'47.454"W
Field Reference Pt			3224525.77	1254425.87	40°01'44.400"N	104°41'53.556"W

## WELLPATH DATUM

Calculation method	Minimum curvature	RIG (17') (RKB) to Facility Vertical Datum	4620.00ft
Horizontal Reference Pt	Slot	RIG (17') (RKB) to Mean Sea Level	4620.00ft
Vertical Reference Pt	RIG (17') (RKB)	RIG (17') (RKB) to Ground Level at Slot (SLOT#19 LATHAM F21-J24-14HNB (332'FNL & 333'FEL, SEC.14))	4620.00ft
MD Reference Pt	RIG (17') (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	215.86°



# Planned Wellpath Report

LATHAM F21-J24-14HNB (REV-A.0) PWP

Page 2 of 8



## REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#19 LATHAM F21-J24-14HNB (332'FNL & 333'FEL, SEC.14)
Area	COLORADO	Well	LATHAM F21-J24-14HNB
Field	WELD COUNTY	Wellbore	LATHAM F21-J24-14HNB PWB
Facility	SEC.14-T4N-R63W		

## WELLPATH DATA (130 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	280.843	0.00	0.00	0.00	0.00	40°19'08.725"N	104°23'49.423"W	0.00	
17.00	0.000	280.843	17.00	0.00	0.00	0.00	40°19'08.725"N	104°23'49.423"W	0.00	Tie On
117.00†	0.000	280.843	117.00	0.00	0.00	0.00	40°19'08.725"N	104°23'49.423"W	0.00	
217.00†	0.000	280.843	217.00	0.00	0.00	0.00	40°19'08.725"N	104°23'49.423"W	0.00	
317.00†	0.000	280.843	317.00	0.00	0.00	0.00	40°19'08.725"N	104°23'49.423"W	0.00	
417.00†	0.000	280.843	417.00	0.00	0.00	0.00	40°19'08.725"N	104°23'49.423"W	0.00	
517.00†	0.000	280.843	517.00	0.00	0.00	0.00	40°19'08.725"N	104°23'49.423"W	0.00	
617.00†	0.000	280.843	617.00	0.00	0.00	0.00	40°19'08.725"N	104°23'49.423"W	0.00	
717.00†	0.000	280.843	717.00	0.00	0.00	0.00	40°19'08.725"N	104°23'49.423"W	0.00	
817.00†	0.000	280.843	817.00	0.00	0.00	0.00	40°19'08.725"N	104°23'49.423"W	0.00	
917.00†	0.000	280.843	917.00	0.00	0.00	0.00	40°19'08.725"N	104°23'49.423"W	0.00	
1017.00†	0.000	280.843	1017.00	0.00	0.00	0.00	40°19'08.725"N	104°23'49.423"W	0.00	
1117.00†	0.000	280.843	1117.00	0.00	0.00	0.00	40°19'08.725"N	104°23'49.423"W	0.00	
1217.00†	0.000	280.843	1217.00	0.00	0.00	0.00	40°19'08.725"N	104°23'49.423"W	0.00	
1317.00†	0.000	280.843	1317.00	0.00	0.00	0.00	40°19'08.725"N	104°23'49.423"W	0.00	
1417.00†	0.000	280.843	1417.00	0.00	0.00	0.00	40°19'08.725"N	104°23'49.423"W	0.00	
1517.00†	0.000	280.843	1517.00	0.00	0.00	0.00	40°19'08.725"N	104°23'49.423"W	0.00	
1550.00	0.000	280.843	1550.00	0.00	0.00	0.00	40°19'08.725"N	104°23'49.423"W	0.00	End of Tangent
1617.00†	1.340	280.843	1616.99	0.33	0.15	-0.77	40°19'08.726"N	104°23'49.433"W	2.00	
1717.00†	3.340	280.843	1716.91	2.06	0.92	-4.78	40°19'08.734"N	104°23'49.485"W	2.00	
1817.00†	5.340	280.843	1816.61	5.26	2.34	-12.21	40°19'08.748"N	104°23'49.581"W	2.00	
1917.00†	7.340	280.843	1916.00	9.93	4.42	-23.06	40°19'08.769"N	104°23'49.721"W	2.00	
2017.00†	9.340	280.843	2014.93	16.06	7.14	-37.30	40°19'08.796"N	104°23'49.905"W	2.00	
2117.00†	11.340	280.843	2113.31	23.65	10.52	-54.93	40°19'08.829"N	104°23'50.132"W	2.00	
2217.00†	13.340	280.843	2210.99	32.69	14.54	-75.92	40°19'08.869"N	104°23'50.403"W	2.00	
2317.00†	15.340	280.843	2307.87	43.17	19.20	-100.24	40°19'08.915"N	104°23'50.717"W	2.00	
2417.00†	17.340	280.843	2403.83	55.07	24.49	-127.87	40°19'08.967"N	104°23'51.074"W	2.00	
2517.00†	19.340	280.843	2498.74	68.38	30.41	-158.77	40°19'09.026"N	104°23'51.473"W	2.00	
2617.00†	21.340	280.843	2592.50	83.08	36.95	-192.91	40°19'09.090"N	104°23'51.913"W	2.00	
2717.00†	23.340	280.843	2684.99	99.15	44.10	-230.24	40°19'09.161"N	104°23'52.395"W	2.00	



# Planned Wellpath Report

LATHAM F21-J24-14HNB (REV-A.0) PWP

Page 3 of 8



## REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#19 LATHAM F21-J24-14HNB (332'FNL & 333'FEL, SEC.14)
Area	COLORADO	Well	LATHAM F21-J24-14HNB
Field	WELD COUNTY	Wellbore	LATHAM F21-J24-14HNB PWB
Facility	SEC.14-T4N-R63W		

## WELLPATH DATA (130 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2817.00†	25.340	280.843	2776.10	116.58	51.85	-270.72	40°19'09.237"N	104°23'52.918"W	2.00	
2917.00†	27.340	280.843	2865.71	135.35	60.20	-314.29	40°19'09.320"N	104°23'53.481"W	2.00	
3017.00†	29.340	280.843	2953.72	155.43	69.13	-360.91	40°19'09.408"N	104°23'54.082"W	2.00	
3117.00†	31.340	280.843	3040.02	176.79	78.63	-410.52	40°19'09.502"N	104°23'54.723"W	2.00	
3217.00†	33.340	280.843	3124.51	199.41	88.70	-463.06	40°19'09.601"N	104°23'55.401"W	2.00	
3317.00†	35.340	280.843	3207.07	223.27	99.31	-518.46	40°19'09.706"N	104°23'56.116"W	2.00	
3417.00†	37.340	280.843	3287.62	248.33	110.46	-576.65	40°19'09.816"N	104°23'56.868"W	2.00	
3517.00†	39.340	280.843	3366.05	274.57	122.12	-637.58	40°19'09.932"N	104°23'57.654"W	2.00	
3617.00†	41.340	280.843	3442.27	301.95	134.30	-701.15	40°19'10.052"N	104°23'58.475"W	2.00	
3717.00†	43.340	280.843	3516.18	330.43	146.97	-767.30	40°19'10.177"N	104°23'59.329"W	2.00	
3719.94	43.399	280.843	3518.31	331.29	147.35	-769.28	40°19'10.181"N	104°23'59.354"W	2.00	End of Build (XS)
3817.00†	43.399	280.843	3588.84	359.49	159.90	-834.78	40°19'10.305"N	104°24'00.200"W	0.00	
3917.00†	43.399	280.843	3661.50	388.55	172.82	-902.26	40°19'10.433"N	104°24'01.071"W	0.00	
4017.00†	43.399	280.843	3734.16	417.61	185.75	-969.74	40°19'10.560"N	104°24'01.942"W	0.00	
4117.00†	43.399	280.843	3806.82	446.67	198.67	-1037.22	40°19'10.688"N	104°24'02.814"W	0.00	
4217.00†	43.399	280.843	3879.48	475.74	211.60	-1104.70	40°19'10.816"N	104°24'03.685"W	0.00	
4317.00†	43.399	280.843	3952.13	504.80	224.53	-1172.18	40°19'10.943"N	104°24'04.556"W	0.00	
4417.00†	43.399	280.843	4024.79	533.86	237.45	-1239.66	40°19'11.071"N	104°24'05.427"W	0.00	
4517.00†	43.399	280.843	4097.45	562.92	250.38	-1307.14	40°19'11.199"N	104°24'06.298"W	0.00	
4617.00†	43.399	280.843	4170.11	591.98	263.30	-1374.62	40°19'11.327"N	104°24'07.169"W	0.00	
4717.00†	43.399	280.843	4242.77	621.04	276.23	-1442.10	40°19'11.454"N	104°24'08.041"W	0.00	
4817.00†	43.399	280.843	4315.43	650.10	289.15	-1509.58	40°19'11.582"N	104°24'08.912"W	0.00	
4917.00†	43.399	280.843	4388.09	679.16	302.08	-1577.06	40°19'11.710"N	104°24'09.783"W	0.00	
5017.00†	43.399	280.843	4460.75	708.22	315.00	-1644.54	40°19'11.837"N	104°24'10.654"W	0.00	
5117.00†	43.399	280.843	4533.41	737.28	327.93	-1712.02	40°19'11.965"N	104°24'11.525"W	0.00	
5217.00†	43.399	280.843	4606.07	766.34	340.86	-1779.50	40°19'12.093"N	104°24'12.397"W	0.00	
5317.00†	43.399	280.843	4678.73	795.40	353.78	-1846.98	40°19'12.220"N	104°24'13.268"W	0.00	
5417.00†	43.399	280.843	4751.38	824.46	366.71	-1914.46	40°19'12.348"N	104°24'14.139"W	0.00	
5517.00†	43.399	280.843	4824.04	853.52	379.63	-1981.94	40°19'12.476"N	104°24'15.010"W	0.00	
5617.00†	43.399	280.843	4896.70	882.58	392.56	-2049.42	40°19'12.603"N	104°24'15.881"W	0.00	



# Planned Wellpath Report

LATHAM F21-J24-14HNB (REV-A.0) PWP

Page 4 of 8



## REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#19 LATHAM F21-J24-14HNB (332'FNL & 333'FEL, SEC.14)
Area	COLORADO	Well	LATHAM F21-J24-14HNB
Field	WELD COUNTY	Wellbore	LATHAM F21-J24-14HNB PWB
Facility	SEC.14-T4N-R63W		

## WELLPATH DATA (130 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5717.00†	43.399	280.843	4969.36	911.64	405.48	-2116.90	40°19'12.731"N	104°24'16.753"W	0.00	
5817.00†	43.399	280.843	5042.02	940.70	418.41	-2184.38	40°19'12.859"N	104°24'17.624"W	0.00	
5917.00†	43.399	280.843	5114.68	969.76	431.33	-2251.86	40°19'12.986"N	104°24'18.495"W	0.00	
6017.00†	43.399	280.843	5187.34	998.82	444.26	-2319.34	40°19'13.114"N	104°24'19.366"W	0.00	
6117.00†	43.399	280.843	5260.00	1027.88	457.19	-2386.82	40°19'13.242"N	104°24'20.237"W	0.00	
6217.00†	43.399	280.843	5332.66	1056.94	470.11	-2454.30	40°19'13.369"N	104°24'21.108"W	0.00	
6317.00†	43.399	280.843	5405.32	1086.00	483.04	-2521.78	40°19'13.497"N	104°24'21.980"W	0.00	
6417.00†	43.399	280.843	5477.97	1115.06	495.96	-2589.27	40°19'13.625"N	104°24'22.851"W	0.00	
6517.00†	43.399	280.843	5550.63	1144.12	508.89	-2656.75	40°19'13.752"N	104°24'23.722"W	0.00	
6617.00†	43.399	280.843	5623.29	1173.18	521.81	-2724.23	40°19'13.880"N	104°24'24.593"W	0.00	
6717.00†	43.399	280.843	5695.95	1202.24	534.74	-2791.71	40°19'14.008"N	104°24'25.465"W	0.00	
6817.00†	43.399	280.843	5768.61	1231.30	547.66	-2859.19	40°19'14.135"N	104°24'26.336"W	0.00	
6902.94	43.399	280.843	5831.06	1256.28	558.77	-2917.18	40°19'14.245"N	104°24'27.084"W	0.00	End of Tangent (XS)
6917.00†	43.208	278.813	5841.29	1260.51	560.42	-2926.68	40°19'14.261"N	104°24'27.207"W	10.00	
7017.00†	42.908	264.151	5914.54	1298.83	562.20	-2994.54	40°19'14.279"N	104°24'28.083"W	10.00	
7117.00†	44.458	249.826	5987.03	1350.65	546.61	-3061.45	40°19'14.125"N	104°24'28.947"W	10.00	
7217.00†	47.671	236.655	6056.57	1414.42	514.13	-3125.36	40°19'13.804"N	104°24'29.772"W	10.00	
7317.00†	52.226	225.007	6121.03	1488.18	465.75	-3184.34	40°19'13.325"N	104°24'30.533"W	10.00	
7417.00†	57.784	214.845	6178.46	1569.71	402.93	-3236.59	40°19'12.705"N	104°24'31.208"W	10.00	
7517.00†	64.058	205.924	6227.11	1656.51	327.59	-3280.53	40°19'11.960"N	104°24'31.775"W	10.00	
7617.00†	70.821	197.939	6265.51	1745.96	242.00	-3314.82	40°19'11.114"N	104°24'32.218"W	10.00	
7717.00†	77.901	190.599	6292.48	1835.33	148.78	-3338.42	40°19'10.193"N	104°24'32.522"W	10.00	
7817.00†	85.163	183.644	6307.21	1921.91	50.76	-3350.61	40°19'09.224"N	104°24'32.679"W	10.00	
7882.99	90.000	179.150	6310.00†	1976.23	-15.12	-3352.21	40°19'08.573"N	104°24'32.700"W	10.00	End of 3D Arc (XS)
7917.00†	90.000	179.150	6310.00	2003.50	-49.13	-3351.71	40°19'08.237"N	104°24'32.693"W	0.00	
8017.00†	90.000	179.150	6310.00	2083.66	-149.11	-3350.22	40°19'07.249"N	104°24'32.674"W	0.00	
8117.00†	90.000	179.150	6310.00	2163.82	-249.10	-3348.74	40°19'06.261"N	104°24'32.655"W	0.00	
8217.00†	90.000	179.150	6310.00	2243.98	-349.09	-3347.25	40°19'05.273"N	104°24'32.635"W	0.00	
8317.00†	90.000	179.150	6310.00	2324.14	-449.08	-3345.77	40°19'04.285"N	104°24'32.616"W	0.00	
8417.00†	90.000	179.150	6310.00	2404.31	-549.07	-3344.29	40°19'03.297"N	104°24'32.597"W	0.00	



# Planned Wellpath Report

LATHAM F21-J24-14HNB (REV-A.0) PWP

Page 5 of 8



## REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#19 LATHAM F21-J24-14HNB (332'FNL & 333'FEL, SEC.14)
Area	COLORADO	Well	LATHAM F21-J24-14HNB
Field	WELD COUNTY	Wellbore	LATHAM F21-J24-14HNB PWB
Facility	SEC.14-T4N-R63W		

## WELLPATH DATA (130 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8517.00†	90.000	179.150	6310.00	2484.47	-649.06	-3342.80	40°19'02.309"N	104°24'32.577"W	0.00	
8617.00†	90.000	179.150	6310.00	2564.63	-749.05	-3341.32	40°19'01.321"N	104°24'32.558"W	0.00	
8717.00†	90.000	179.150	6310.00	2644.79	-849.04	-3339.84	40°19'00.333"N	104°24'32.539"W	0.00	
8817.00†	90.000	179.150	6310.00	2724.95	-949.03	-3338.35	40°18'59.345"N	104°24'32.519"W	0.00	
8917.00†	90.000	179.150	6310.00	2805.11	-1049.02	-3336.87	40°18'58.357"N	104°24'32.500"W	0.00	
9017.00†	90.000	179.150	6310.00	2885.28	-1149.00	-3335.39	40°18'57.369"N	104°24'32.481"W	0.00	
9117.00†	90.000	179.150	6310.00	2965.44	-1248.99	-3333.90	40°18'56.380"N	104°24'32.461"W	0.00	
9217.00†	90.000	179.150	6310.00	3045.60	-1348.98	-3332.42	40°18'55.392"N	104°24'32.442"W	0.00	
9317.00†	90.000	179.150	6310.00	3125.76	-1448.97	-3330.93	40°18'54.404"N	104°24'32.423"W	0.00	
9417.00†	90.000	179.150	6310.00	3205.92	-1548.96	-3329.45	40°18'53.416"N	104°24'32.403"W	0.00	
9517.00†	90.000	179.150	6310.00	3286.09	-1648.95	-3327.97	40°18'52.428"N	104°24'32.384"W	0.00	
9617.00†	90.000	179.150	6310.00	3366.25	-1748.94	-3326.48	40°18'51.440"N	104°24'32.365"W	0.00	
9717.00†	90.000	179.150	6310.00	3446.41	-1848.93	-3325.00	40°18'50.452"N	104°24'32.345"W	0.00	
9817.00†	90.000	179.150	6310.00	3526.57	-1948.92	-3323.52	40°18'49.464"N	104°24'32.326"W	0.00	
9917.00†	90.000	179.150	6310.00	3606.73	-2048.91	-3322.03	40°18'48.476"N	104°24'32.307"W	0.00	
10017.00†	90.000	179.150	6310.00	3686.90	-2148.89	-3320.55	40°18'47.488"N	104°24'32.287"W	0.00	
10117.00†	90.000	179.150	6310.00	3767.06	-2248.88	-3319.06	40°18'46.500"N	104°24'32.268"W	0.00	
10217.00†	90.000	179.150	6310.00	3847.22	-2348.87	-3317.58	40°18'45.512"N	104°24'32.249"W	0.00	
10317.00†	90.000	179.150	6310.00	3927.38	-2448.86	-3316.10	40°18'44.524"N	104°24'32.229"W	0.00	
10417.00†	90.000	179.150	6310.00	4007.54	-2548.85	-3314.61	40°18'43.536"N	104°24'32.210"W	0.00	
10517.00†	90.000	179.150	6310.00	4087.70	-2648.84	-3313.13	40°18'42.548"N	104°24'32.191"W	0.00	
10617.00†	90.000	179.150	6310.00	4167.87	-2748.83	-3311.65	40°18'41.559"N	104°24'32.171"W	0.00	
10717.00†	90.000	179.150	6310.00	4248.03	-2848.82	-3310.16	40°18'40.571"N	104°24'32.152"W	0.00	
10817.00†	90.000	179.150	6310.00	4328.19	-2948.81	-3308.68	40°18'39.583"N	104°24'32.133"W	0.00	
10917.00†	90.000	179.150	6310.00	4408.35	-3048.80	-3307.20	40°18'38.595"N	104°24'32.113"W	0.00	
11017.00†	90.000	179.150	6310.00	4488.51	-3148.78	-3305.71	40°18'37.607"N	104°24'32.094"W	0.00	
11117.00†	90.000	179.150	6310.00	4568.68	-3248.77	-3304.23	40°18'36.619"N	104°24'32.075"W	0.00	
11217.00†	90.000	179.150	6310.00	4648.84	-3348.76	-3302.74	40°18'35.631"N	104°24'32.055"W	0.00	
11317.00†	90.000	179.150	6310.00	4729.00	-3448.75	-3301.26	40°18'34.643"N	104°24'32.036"W	0.00	
11417.00†	90.000	179.150	6310.00	4809.16	-3548.74	-3299.78	40°18'33.655"N	104°24'32.017"W	0.00	





# Planned Wellpath Report

LATHAM F21-J24-14HNB (REV-A.0) PWP

Page 6 of 8



## REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#19 LATHAM F21-J24-14HNB (332'FNL & 333'FEL, SEC.14)
Area	COLORADO	Well	LATHAM F21-J24-14HNB
Field	WELD COUNTY	Wellbore	LATHAM F21-J24-14HNB PWB
Facility	SEC.14-T4N-R63W		

## WELLPATH DATA (130 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11517.00†	90.000	179.150	6310.00	4889.32	-3648.73	-3298.29	40°18'32.667"N	104°24'31.997"W	0.00	
11617.00†	90.000	179.150	6310.00	4969.49	-3748.72	-3296.81	40°18'31.679"N	104°24'31.978"W	0.00	
11717.00†	90.000	179.150	6310.00	5049.65	-3848.71	-3295.33	40°18'30.691"N	104°24'31.959"W	0.00	
11817.00†	90.000	179.150	6310.00	5129.81	-3948.70	-3293.84	40°18'29.703"N	104°24'31.939"W	0.00	
11917.00†	90.000	179.150	6310.00	5209.97	-4048.69	-3292.36	40°18'28.715"N	104°24'31.920"W	0.00	
12017.00†	90.000	179.150	6310.00	5290.13	-4148.67	-3290.87	40°18'27.727"N	104°24'31.901"W	0.00	
12117.00†	90.000	179.150	6310.00	5370.30	-4248.66	-3289.39	40°18'26.738"N	104°24'31.882"W	0.00	
12217.00†	90.000	179.150	6310.00	5450.46	-4348.65	-3287.91	40°18'25.750"N	104°24'31.862"W	0.00	
12317.00†	90.000	179.150	6310.00	5530.62	-4448.64	-3286.42	40°18'24.762"N	104°24'31.843"W	0.00	
12412.29	90.000	179.150	6310.00 <sup>2</sup>	5607.00	-4543.92	-3285.01	40°18'23.821"N	104°24'31.824"W	0.00	End of Tangent (XS)

## HOLE & CASING SECTIONS - Ref Wellbore: LATHAM F21-J24-14HNB PWB Ref Wellpath: LATHAM F21-J24-14HNB (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]
9.625in Casing Surface	17.00	1550.00	1533.00	17.00	1550.00	0.00	0.00	0.00	0.00



# Planned Wellpath Report

LATHAM F21-J24-14HNB (REV-A.0) PWP

Page 7 of 8



## REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#19 LATHAM F21-J24-14HNB (332'FNL & 333'FEL, SEC.14)
Area	COLORADO	Well	LATHAM F21-J24-14HNB
Field	WELD COUNTY	Wellbore	LATHAM F21-J24-14HNB PWB
Facility	SEC.14-T4N-R63W		

## TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
LATHAM SECTION 14		-1.00	141.25	152.52	3307689.09	1361141.22	40°19'10.121"N	104°23'47.454"W	polygon
2) LATHAM F21-J24-14HNB BHL (470'FSL & 1618'FWL, SEC.14)	12412.29	6310.00	-4543.92	-3285.01	3304310.25	1356413.87	40°18'23.821"N	104°24'31.824"W	point
1) LATHAM F21-J24-14HNB LP (260'FNL & 1627'FWL, SEC.14)	7882.99	6310.00	-15.12	-3352.21	3304186.74	1360941.28	40°19'08.573"N	104°24'32.700"W	point
LATHAM HARDLINE 260'FNL & 470'FSL & 260'E/W		6385.00	15.08	-119.99	3307418.19	1361011.67	40°19'08.874"N	104°23'50.972"W	polygon

## SURVEY PROGRAM - Ref Wellbore: LATHAM F21-J24-14HNB PWB Ref Wellpath: LATHAM F21-J24-14HNB (REV-A.0) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1550.00	BHI NaviTrak (Rotating+Axial Corr)		LATHAM F21-J24-14HNB PWB
1550.00	12412.29	BHI AutoTrak Curve (Axial Corr, Short spacing)		LATHAM F21-J24-14HNB PWB





# Planned Wellpath Report

LATHAM F21-J24-14HNB (REV-A.0) PWP

Page 8 of 8



## REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#19 LATHAM F21-J24-14HNB (332'FNL & 333'FEL, SEC.14)
Area	COLORADO	Well	LATHAM F21-J24-14HNB
Field	WELD COUNTY	Wellbore	LATHAM F21-J24-14HNB PWB
Facility	SEC.14-T4N-R63W		

## DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	280.843	17.00	Tie On
1550.00	0.000	280.843	1550.00	End of Tangent
3719.94	43.399	280.843	3518.31	End of Build (XS)
6902.94	43.399	280.843	5831.06	End of Tangent (XS)
7882.99	90.000	179.150	6310.00	End of 3D Arc (XS)
12412.29	90.000	179.150	6310.00	End of Tangent (XS)