

POCO Operating

Location **DJ Basin** Slot **BUCKLEY 21-16-3NBH**
 Field **Wattenberg - Brighton** Well **Copy of BUCKLEY 21-16-3NBH**
 Installation **Barr Lake and Buckley (Brighton Extension)** Wellbore **BUCKLEY 21-16-3NBH (PWB - Plats)**

Created by **vinnie.wolfram**
 Date plotted **23-Nov-2024**

Scale 1 cm = 800 ft

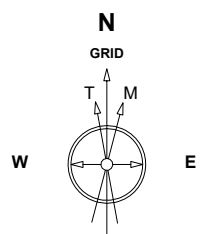
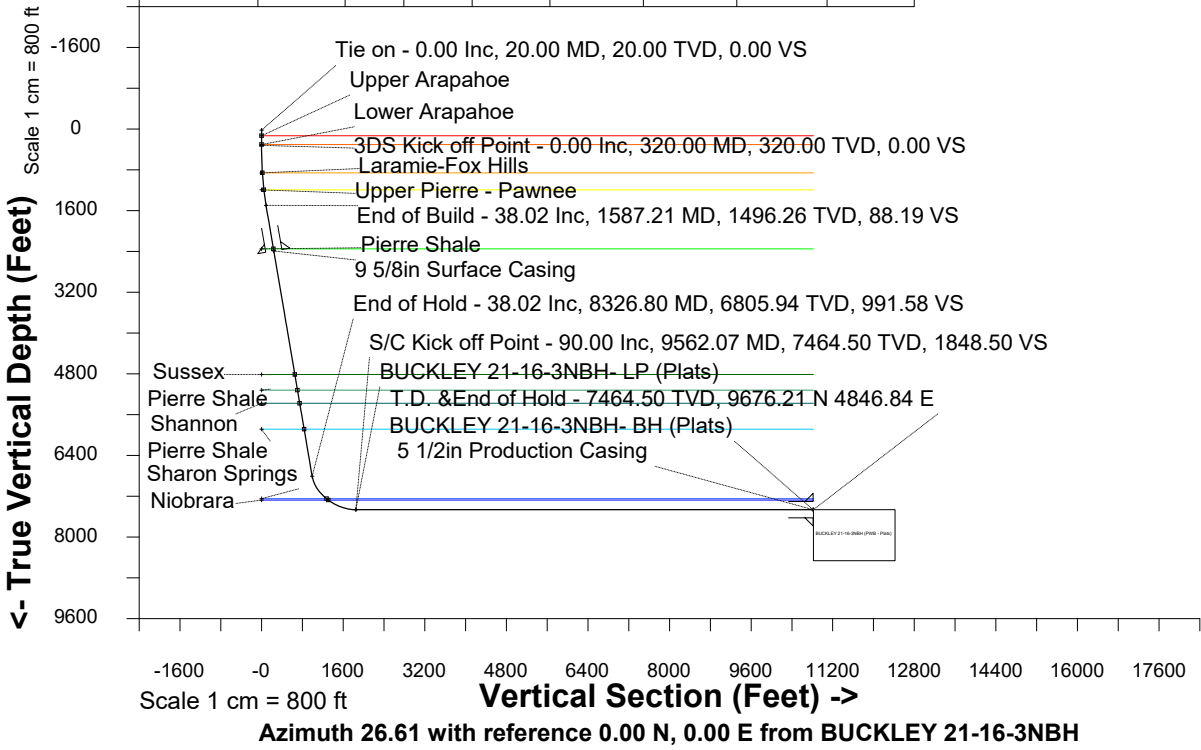
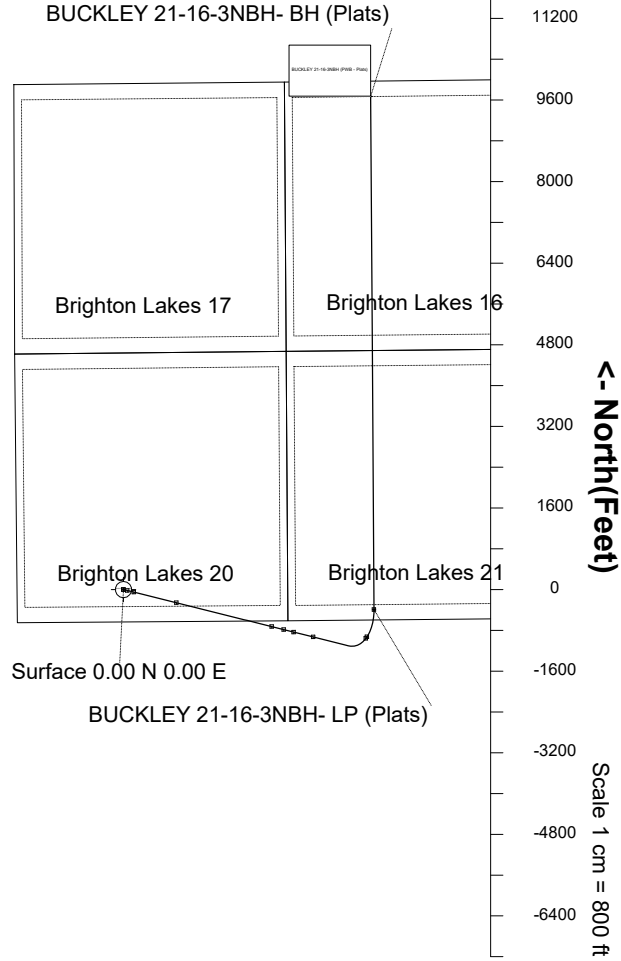
East (Feet) ->

Plot reference is BUCKLEY 21-16-3NBH (PWB - Plats).
 Ref wellpath is BUCKLEY 21-16-3NBH (PWP#1).
 Coordinates are in Feet reference BUCKLEY 21-16-3NBH.
 True Vertical Depths are reference Rig Datum.
 Measured Depths are reference Rig Datum.
 Rig Datum: Planned Datum #1
 Rig Datum to Mean Sea Level: 5066.50 ft.
 Plot North is aligned to GRID North.

-9600 -8000 -6400 -4800 -3200 -1600 0 1600 3200 4800 6400

WELL PROFILE DATA

Point	MD	Inc	Azi	TVD	North	East	deg/100ft	V. Sect
Tie on	20.00	0.00	0.00	20.00	S 0.00	W 0.00		0.00
KOP	320.00	0.00	104.04	320.00	S 0.00	W 0.00	0.00	0.00
End of Build	1587.21	38.02	104.04	1496.26	S 98.27	E 393.11	3.00	88.19
End of Hold	8326.80	38.02	104.04	6805.94	S 1104.98	E 4420.01	0.00	991.58
Target	9562.07	90.00	359.62	7464.50	S 393.95	E 4913.90	8.00	1848.50
T.D. & Target	19632.44	90.00	359.62	7464.50	N 9676.21	E 4846.84	0.00	10822.24



Nov-19-2024
 IGRF-13 Dip: 66.15 deg Field: 51308.7 nT
 Lat: N39 56 41.3520 Long: W104 48 4.9824 Elev: 10093.61 ft
 Magnetic North is 7.46 deg East of True North
 GRID North is 0.45 deg East of True North
 To correct azimuth from True to GRID subtract 0.45 deg
 To correct azimuth from Magnetic to GRID add 7.01 deg

Azimuth 26.61 with reference 0.00 N, 0.00 E from BUCKLEY 21-16-3NBH



SYSDRILL
Well Design Combined Report
Wellbore: BUCKLEY 21-16-3NBH (PWB - Plats)



Wellhead Details							
Name	Latitude	Longitude	Northing	Easting	North	East	Slot Elevation Above Ground
BUCKLEY 21-16-3NBH	39.94508100	-104.80138500	1223612.9173	3195875.0858	95.07N	1.03W	0.00

Declination			
Date	Source	Time	
Feb-26-2024	IGRF-13	11:15	
Nov-8-2024	IGRF-13	09:15	
Nov-2-2024	IGRF-13	09:12	
Nov-19-2024	IGRF-13	09:04	
Oct-27-2024	IGRF-13	09:10	
Nov-15-2024	IGRF-13	08:56	
Sep-10-2024	IGRF-13	12:57	
Apr-16-2018	EMM-2017	10:44	

Installation Details						
Name	Installation Position (Latitude)	Installation Position (Longitude)	Northing	Easting	Coord System Name	North Alignment
Barr Lake and Buckley (Brighton Extension)	39.94482000	-104.80138400	1223517.8474	3195876.1152	NAD83 Based Colorado State Planes, Northern Zone, US Feet	Grid

Summary Wellpath								
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	Vertical Depth SS	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]
20.00	0.00	0.00	20.00	-5046.50	0.00N	0.00E		0.00
320.00	0.00	104.04	320.00	-4746.50	0.00N	0.00E	==>	0.00
1587.21	38.02	104.04	1496.26	-3570.24	98.27S	393.11E	3.00	88.19
8326.80	38.02	104.04	6805.94	1739.44	1104.98S	4420.01E	==>	991.58
9562.07	90.00	359.62	7464.50	2398.00	393.95S	4913.90E	8.00	1848.50
19632.44	90.00	359.62	7464.50	2398.00	9676.21N	4846.84E	==>	10822.24

Interpolated Wellpath								
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	All Station Comments
0.00	0.00	0.00	0.00	0.00N	0.00E		0.00	
20.00	0.00	0.00	20.00	0.00N	0.00E	==>	0.00	Tie on, Slot Datum
100.00	0.00	0.00	100.00	0.00N	0.00E	==>	0.00	
130.00	0.00	0.00	130.00	0.00N	0.00E	==>	0.00	Upper Arapahoe
200.00	0.00	0.00	200.00	0.00N	0.00E	==>	0.00	
300.00	0.00	0.00	300.00	0.00N	0.00E	==>	0.00	
302.00	0.00	0.00	302.00	0.00N	0.00E	==>	0.00	Lower Arapahoe
320.00	0.00	104.04	320.00	0.00N	0.00E	==>	0.00	3DS Kick off Point
400.00	2.40	104.04	399.98	0.41S	1.63E	3.00	0.36	
500.00	5.40	104.04	499.73	2.06S	8.22E	3.00	1.84	
600.00	8.40	104.04	599.00	4.97S	19.88E	3.00	4.46	
700.00	11.40	104.04	697.50	9.14S	36.55E	3.00	8.20	
800.00	14.40	104.04	794.96	14.55S	58.21E	3.00	13.06	
867.47	16.42	104.04	860.00	18.90S	75.60E	3.00	16.96	Laramie-Fox Hills
900.00	17.40	104.04	891.13	21.20S	84.79E	3.00	19.02	
1000.00	20.40	104.04	985.72	29.05S	116.21E	3.00	26.07	
1100.00	23.40	104.04	1078.50	38.10S	152.39E	3.00	34.19	
1200.00	26.40	104.04	1169.19	48.31S	193.23E	3.00	43.35	
1225.55	27.17	104.04	1192.00	51.10S	204.40E	3.00	45.85	Upper Pierre - Pawnee
1300.00	29.40	104.04	1257.56	59.65S	238.62E	3.00	53.53	
1400.00	32.40	104.04	1343.35	72.11S	288.44E	3.00	64.71	
1500.00	35.40	104.04	1426.35	85.63S	342.54E	3.00	76.84	
1587.21	38.02	104.04	1496.26	98.27S	393.11E	3.00	88.19	End of Build
1600.00	38.02	104.04	1506.33	100.18S	400.75E	==>	89.90	

All data is in Feet unless otherwise stated
Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Planned Datum #1 5066.5ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 26.61 degrees
Bottom hole distance is 10822.24 Feet on azimuth 26.61 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by
Date Printed: 23-Nov-2024



SYSDRILL
Well Design Combined Report
Wellbore: BUCKLEY 21-16-3NBH (PWB - Plats)



Interpolated Wellpath								
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	All Station Comments
1700.00	38.02	104.04	1585.11	115.12S	460.50E	==>	103.31	
1800.00	38.02	104.04	1663.90	130.06S	520.25E	==>	116.71	
1900.00	38.02	104.04	1742.68	145.00S	580.00E	==>	130.12	
2000.00	38.02	104.04	1821.47	159.93S	639.75E	==>	143.52	
2100.00	38.02	104.04	1900.25	174.87S	699.50E	==>	156.92	
2200.00	38.02	104.04	1979.03	189.81S	759.25E	==>	170.33	
2300.00	38.02	104.04	2057.82	204.74S	819.00E	==>	183.73	
2400.00	38.02	104.04	2136.60	219.68S	878.75E	==>	197.14	
2500.00	38.02	104.04	2215.38	234.62S	938.50E	==>	210.54	
2600.00	38.02	104.04	2294.17	249.56S	998.25E	==>	223.94	
2668.33	38.02	104.04	2348.00	259.76S	1039.08E	==>	233.10	Pierre Shale
2700.00	38.02	104.04	2372.95	264.49S	1058.00E	==>	237.35	
2720.87	38.02	104.04	2389.39	267.61S	1070.47E	==>	240.15	
2800.00	38.02	104.04	2451.73	279.43S	1117.75E	==>	250.75	
2900.00	38.02	104.04	2530.52	294.37S	1177.50E	==>	264.16	
3000.00	38.02	104.04	2609.30	309.30S	1237.25E	==>	277.56	
3100.00	38.02	104.04	2688.08	324.24S	1297.00E	==>	290.97	
3200.00	38.02	104.04	2766.87	339.18S	1356.75E	==>	304.37	
3300.00	38.02	104.04	2845.65	354.12S	1416.50E	==>	317.77	
3400.00	38.02	104.04	2924.43	369.05S	1476.25E	==>	331.18	
3500.00	38.02	104.04	3003.22	383.99S	1536.00E	==>	344.58	
3600.00	38.02	104.04	3082.00	398.93S	1595.75E	==>	357.99	
3700.00	38.02	104.04	3160.78	413.86S	1655.50E	==>	371.39	
3800.00	38.02	104.04	3239.57	428.80S	1715.25E	==>	384.80	
3900.00	38.02	104.04	3318.35	443.74S	1775.00E	==>	398.20	
4000.00	38.02	104.04	3397.13	458.68S	1834.75E	==>	411.60	
4100.00	38.02	104.04	3475.92	473.61S	1894.50E	==>	425.01	
4200.00	38.02	104.04	3554.70	488.55S	1954.25E	==>	438.41	
4300.00	38.02	104.04	3633.48	503.49S	2013.99E	==>	451.82	
4400.00	38.02	104.04	3712.27	518.42S	2073.74E	==>	465.22	
4500.00	38.02	104.04	3791.05	533.36S	2133.49E	==>	478.62	
4600.00	38.02	104.04	3869.84	548.30S	2193.24E	==>	492.03	
4700.00	38.02	104.04	3948.62	563.24S	2252.99E	==>	505.43	
4800.00	38.02	104.04	4027.40	578.17S	2312.74E	==>	518.84	
4900.00	38.02	104.04	4106.19	593.11S	2372.49E	==>	532.24	
5000.00	38.02	104.04	4184.97	608.05S	2432.24E	==>	545.65	
5100.00	38.02	104.04	4263.75	622.98S	2491.99E	==>	559.05	
5200.00	38.02	104.04	4342.54	637.92S	2551.74E	==>	572.45	
5300.00	38.02	104.04	4421.32	652.86S	2611.49E	==>	585.86	
5400.00	38.02	104.04	4500.10	667.80S	2671.24E	==>	599.26	
5500.00	38.02	104.04	4578.89	682.73S	2730.99E	==>	612.67	
5600.00	38.02	104.04	4657.67	697.67S	2790.74E	==>	626.07	
5700.00	38.02	104.04	4736.45	712.61S	2850.49E	==>	639.47	
5795.89	38.02	104.04	4812.00	726.93S	2907.79E	==>	652.33	Sussex
5800.00	38.02	104.04	4815.24	727.54S	2910.24E	==>	652.88	
5900.00	38.02	104.04	4894.02	742.48S	2969.99E	==>	666.28	
6000.00	38.02	104.04	4972.80	757.42S	3029.74E	==>	679.69	
6100.00	38.02	104.04	5051.59	772.36S	3089.49E	==>	693.09	
6186.84	38.02	104.04	5120.00	785.33S	3141.38E	==>	704.73	Pierre Shale
6200.00	38.02	104.04	5130.37	787.29S	3149.24E	==>	706.50	
6300.00	38.02	104.04	5209.15	802.23S	3208.99E	==>	719.90	
6400.00	38.02	104.04	5287.94	817.17S	3268.74E	==>	733.30	
6500.00	38.02	104.04	5366.72	832.10S	3328.49E	==>	746.71	
6514.32	38.02	104.04	5378.00	834.24S	3337.05E	==>	748.63	Shannon
6600.00	38.02	104.04	5445.50	847.04S	3388.24E	==>	760.11	
6700.00	38.02	104.04	5524.29	861.98S	3447.99E	==>	773.52	
6800.00	38.02	104.04	5603.07	876.92S	3507.74E	==>	786.92	
6900.00	38.02	104.04	5681.85	891.85S	3567.49E	==>	800.32	

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Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Planned Datum #1 5066.5ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 26.61 degrees
Bottom hole distance is 10822.24 Feet on azimuth 26.61 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by
Date Printed: 23-Nov-2024



SYSDRILL
Well Design Combined Report
Wellbore: BUCKLEY 21-16-3NBH (PWB - Plats)



Interpolated Wellpath								
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	All Station Comments
7000.00	38.02	104.04	5760.64	906.79S	3627.24E	==>	813.73	
7100.00	38.02	104.04	5839.42	921.73S	3686.99E	==>	827.13	
7156.58	38.02	104.04	5884.00	930.18S	3720.80E	==>	834.72	Pierre Shale
7200.00	38.02	104.04	5918.21	936.66S	3746.74E	==>	840.54	
7300.00	38.02	104.04	5996.99	951.60S	3806.49E	==>	853.94	
7400.00	38.02	104.04	6075.77	966.54S	3866.24E	==>	867.35	
7500.00	38.02	104.04	6154.56	981.48S	3925.99E	==>	880.75	
7600.00	38.02	104.04	6233.34	996.41S	3985.74E	==>	894.15	
7700.00	38.02	104.04	6312.12	1011.35S	4045.49E	==>	907.56	
7800.00	38.02	104.04	6390.91	1026.29S	4105.24E	==>	920.96	
7900.00	38.02	104.04	6469.69	1041.22S	4164.99E	==>	934.37	
8000.00	38.02	104.04	6548.47	1056.16S	4224.74E	==>	947.77	
8100.00	38.02	104.04	6627.26	1071.10S	4284.49E	==>	961.17	
8200.00	38.02	104.04	6706.04	1086.04S	4344.24E	==>	974.58	
8300.00	38.02	104.04	6784.82	1100.97S	4403.99E	==>	987.98	
8326.80	38.02	104.04	6805.94	1104.98S	4420.01E	==>	991.58	End of Hold
8400.00	37.23	94.52	6863.96	1112.20S	4463.99E	8.00	1004.82	
8500.00	37.42	81.31	6943.61	1109.99S	4524.28E	8.00	1033.79	
8600.00	39.04	68.64	7022.29	1093.90S	4583.74E	8.00	1074.81	
8700.00	41.91	57.12	7098.45	1064.25S	4641.21E	8.00	1127.06	
8800.00	45.81	47.02	7170.63	1021.60S	4695.57E	8.00	1189.54	
8900.00	50.47	38.28	7237.41	966.80S	4745.77E	8.00	1261.02	
8916.79	51.32	36.93	7248.00	956.48S	4753.72E	8.00	1273.81	Sharon Springs
8962.79	53.70	33.40	7276.00	926.64S	4774.72E	8.00	1309.89	Niobrara
9000.00	55.71	30.70	7297.50	900.90S	4790.83E	8.00	1340.12	
9100.00	61.35	24.05	7349.73	825.19S	4829.87E	8.00	1425.30	
9200.00	67.29	18.09	7393.08	741.14S	4862.13E	8.00	1514.89	
9300.00	73.43	12.64	7426.70	650.39S	4886.98E	8.00	1607.17	
9400.00	79.70	7.53	7449.94	554.70S	4903.94E	8.00	1700.32	
9500.00	86.04	2.62	7462.36	455.94S	4912.69E	8.00	1792.53	
9562.07	90.00	359.62	7464.50	393.95S	4913.90E	8.00	1848.50	S/C Kick off Point/Target, BUCKLEY 21-16-3NBH-LP (Plats)
9600.00	90.00	359.62	7464.50	356.01S	4913.64E	==>	1882.31	
9700.00	90.00	359.62	7464.50	256.02S	4912.98E	==>	1971.42	
9800.00	90.00	359.62	7464.50	156.02S	4912.31E	==>	2060.53	
9900.00	90.00	359.62	7464.50	56.02S	4911.64E	==>	2149.64	
10000.00	90.00	359.62	7464.50	43.98N	4910.98E	==>	2238.75	
10100.00	90.00	359.62	7464.50	143.98N	4910.31E	==>	2327.86	
10200.00	90.00	359.62	7464.50	243.97N	4909.65E	==>	2416.97	
10300.00	90.00	359.62	7464.50	343.97N	4908.98E	==>	2506.08	
10400.00	90.00	359.62	7464.50	443.97N	4908.32E	==>	2595.19	
10500.00	90.00	359.62	7464.50	543.97N	4907.65E	==>	2684.30	
10600.00	90.00	359.62	7464.50	643.96N	4906.98E	==>	2773.41	
10700.00	90.00	359.62	7464.50	743.96N	4906.32E	==>	2862.52	
10800.00	90.00	359.62	7464.50	843.96N	4905.65E	==>	2951.63	
10900.00	90.00	359.62	7464.50	943.96N	4904.99E	==>	3040.74	
11000.00	90.00	359.62	7464.50	1043.96N	4904.32E	==>	3129.85	
11100.00	90.00	359.62	7464.50	1143.95N	4903.65E	==>	3218.96	
11200.00	90.00	359.62	7464.50	1243.95N	4902.99E	==>	3308.07	
11300.00	90.00	359.62	7464.50	1343.95N	4902.32E	==>	3397.18	
11400.00	90.00	359.62	7464.50	1443.95N	4901.66E	==>	3486.29	
11500.00	90.00	359.62	7464.50	1543.94N	4900.99E	==>	3575.40	
11600.00	90.00	359.62	7464.50	1643.94N	4900.33E	==>	3664.51	
11700.00	90.00	359.62	7464.50	1743.94N	4899.66E	==>	3753.62	
11800.00	90.00	359.62	7464.50	1843.94N	4898.99E	==>	3842.73	
11900.00	90.00	359.62	7464.50	1943.94N	4898.33E	==>	3931.84	

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Vertical Section is from 0.00N 0.00E on azimuth 26.61 degrees
Bottom hole distance is 10822.24 Feet on azimuth 26.61 degrees from Wellhead
Calculation method uses Minimum Curvature method
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Wellbore: BUCKLEY 21-16-3NBH (PWB - Plats)



Interpolated Wellpath								
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	All Station Comments
12000.00	90.00	359.62	7464.50	2043.93N	4897.66E	==>	4020.95	
12100.00	90.00	359.62	7464.50	2143.93N	4897.00E	==>	4110.06	
12200.00	90.00	359.62	7464.50	2243.93N	4896.33E	==>	4199.17	
12300.00	90.00	359.62	7464.50	2343.93N	4895.66E	==>	4288.28	
12400.00	90.00	359.62	7464.50	2443.92N	4895.00E	==>	4377.39	
12500.00	90.00	359.62	7464.50	2543.92N	4894.33E	==>	4466.50	
12600.00	90.00	359.62	7464.50	2643.92N	4893.67E	==>	4555.61	
12700.00	90.00	359.62	7464.50	2743.92N	4893.00E	==>	4644.72	
12800.00	90.00	359.62	7464.50	2843.92N	4892.34E	==>	4733.83	
12900.00	90.00	359.62	7464.50	2943.91N	4891.67E	==>	4822.94	
13000.00	90.00	359.62	7464.50	3043.91N	4891.00E	==>	4912.06	
13100.00	90.00	359.62	7464.50	3143.91N	4890.34E	==>	5001.17	
13200.00	90.00	359.62	7464.50	3243.91N	4889.67E	==>	5090.28	
13300.00	90.00	359.62	7464.50	3343.90N	4889.01E	==>	5179.39	
13400.00	90.00	359.62	7464.50	3443.90N	4888.34E	==>	5268.50	
13500.00	90.00	359.62	7464.50	3543.90N	4887.67E	==>	5357.61	
13600.00	90.00	359.62	7464.50	3643.90N	4887.01E	==>	5446.72	
13700.00	90.00	359.62	7464.50	3743.90N	4886.34E	==>	5535.83	
13800.00	90.00	359.62	7464.50	3843.89N	4885.68E	==>	5624.94	
13900.00	90.00	359.62	7464.50	3943.89N	4885.01E	==>	5714.05	
14000.00	90.00	359.62	7464.50	4043.89N	4884.34E	==>	5803.16	
14100.00	90.00	359.62	7464.50	4143.89N	4883.68E	==>	5892.27	
14200.00	90.00	359.62	7464.50	4243.88N	4883.01E	==>	5981.38	
14300.00	90.00	359.62	7464.50	4343.88N	4882.35E	==>	6070.49	
14400.00	90.00	359.62	7464.50	4443.88N	4881.68E	==>	6159.60	
14500.00	90.00	359.62	7464.50	4543.88N	4881.02E	==>	6248.71	
14600.00	90.00	359.62	7464.50	4643.88N	4880.35E	==>	6337.82	
14700.00	90.00	359.62	7464.50	4743.87N	4879.68E	==>	6426.93	
14800.00	90.00	359.62	7464.50	4843.87N	4879.02E	==>	6516.04	
14900.00	90.00	359.62	7464.50	4943.87N	4878.35E	==>	6605.15	
15000.00	90.00	359.62	7464.50	5043.87N	4877.69E	==>	6694.26	
15100.00	90.00	359.62	7464.50	5143.86N	4877.02E	==>	6783.37	
15200.00	90.00	359.62	7464.50	5243.86N	4876.35E	==>	6872.48	
15300.00	90.00	359.62	7464.50	5343.86N	4875.69E	==>	6961.59	
15400.00	90.00	359.62	7464.50	5443.86N	4875.02E	==>	7050.70	
15500.00	90.00	359.62	7464.50	5543.86N	4874.36E	==>	7139.81	
15600.00	90.00	359.62	7464.50	5643.85N	4873.69E	==>	7228.92	
15700.00	90.00	359.62	7464.50	5743.85N	4873.03E	==>	7318.03	
15800.00	90.00	359.62	7464.50	5843.85N	4872.36E	==>	7407.14	
15900.00	90.00	359.62	7464.50	5943.85N	4871.69E	==>	7496.25	
16000.00	90.00	359.62	7464.50	6043.84N	4871.03E	==>	7585.36	
16100.00	90.00	359.62	7464.50	6143.84N	4870.36E	==>	7674.47	
16200.00	90.00	359.62	7464.50	6243.84N	4869.70E	==>	7763.58	
16300.00	90.00	359.62	7464.50	6343.84N	4869.03E	==>	7852.69	
16400.00	90.00	359.62	7464.50	6443.84N	4868.36E	==>	7941.80	
16500.00	90.00	359.62	7464.50	6543.83N	4867.70E	==>	8030.91	
16600.00	90.00	359.62	7464.50	6643.83N	4867.03E	==>	8120.02	
16700.00	90.00	359.62	7464.50	6743.83N	4866.37E	==>	8209.13	
16800.00	90.00	359.62	7464.50	6843.83N	4865.70E	==>	8298.24	
16900.00	90.00	359.62	7464.50	6943.83N	4865.04E	==>	8387.35	
17000.00	90.00	359.62	7464.50	7043.82N	4864.37E	==>	8476.46	
17100.00	90.00	359.62	7464.50	7143.82N	4863.70E	==>	8565.57	
17200.00	90.00	359.62	7464.50	7243.82N	4863.04E	==>	8654.68	
17300.00	90.00	359.62	7464.50	7343.82N	4862.37E	==>	8743.79	
17400.00	90.00	359.62	7464.50	7443.81N	4861.71E	==>	8832.90	
17500.00	90.00	359.62	7464.50	7543.81N	4861.04E	==>	8922.01	
17600.00	90.00	359.62	7464.50	7643.81N	4860.37E	==>	9011.12	
17700.00	90.00	359.62	7464.50	7743.81N	4859.71E	==>	9100.23	

All data is in Feet unless otherwise stated
Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Planned Datum #1 5066.5ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 26.61 degrees
Bottom hole distance is 10822.24 Feet on azimuth 26.61 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by
Date Printed: 23-Nov-2024



SYSDRILL
Well Design Combined Report
Wellbore: BUCKLEY 21-16-3NBH (PWB - Plats)



Interpolated Wellpath								
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	All Station Comments
17800.00	90.00	359.62	7464.50	7843.81N	4859.04E	==>	9189.35	
17900.00	90.00	359.62	7464.50	7943.80N	4858.38E	==>	9278.46	
18000.00	90.00	359.62	7464.50	8043.80N	4857.71E	==>	9367.57	
18100.00	90.00	359.62	7464.50	8143.80N	4857.04E	==>	9456.68	
18200.00	90.00	359.62	7464.50	8243.80N	4856.38E	==>	9545.79	
18300.00	90.00	359.62	7464.50	8343.79N	4855.71E	==>	9634.90	
18400.00	90.00	359.62	7464.50	8443.79N	4855.05E	==>	9724.01	
18500.00	90.00	359.62	7464.50	8543.79N	4854.38E	==>	9813.12	
18600.00	90.00	359.62	7464.50	8643.79N	4853.72E	==>	9902.23	
18700.00	90.00	359.62	7464.50	8743.79N	4853.05E	==>	9991.34	
18800.00	90.00	359.62	7464.50	8843.78N	4852.38E	==>	10080.45	
18900.00	90.00	359.62	7464.50	8943.78N	4851.72E	==>	10169.56	
19000.00	90.00	359.62	7464.50	9043.78N	4851.05E	==>	10258.67	
19100.00	90.00	359.62	7464.50	9143.78N	4850.39E	==>	10347.78	
19200.00	90.00	359.62	7464.50	9243.77N	4849.72E	==>	10436.89	
19300.00	90.00	359.62	7464.50	9343.77N	4849.05E	==>	10526.00	
19400.00	90.00	359.62	7464.50	9443.77N	4848.39E	==>	10615.11	
19500.00	90.00	359.62	7464.50	9543.77N	4847.72E	==>	10704.22	
19600.00	90.00	359.62	7464.50	9643.77N	4847.06E	==>	10793.33	
19625.29	90.00	359.62	7464.50	9669.05N	4846.89E	==>	10815.86	
19632.44	90.00	359.62	7464.50	9676.21N	4846.84E	==>	10822.24	End of Hold/Target

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Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Planned Datum #1 5066.5ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 26.61 degrees
Bottom hole distance is 10822.24 Feet on azimuth 26.61 degrees from Wellhead
Calculation method uses Minimum Curvature method
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Wellbore: BUCKLEY 21-16-3NBH (PWB - Plats)



Casings		
Casing Name	Shoe MD [ft]	Shoe TVD [ft]
9 5/8in Surface Casing	2720.87	2389.39
5 1/2in Production Casing	19625.29	7464.50

Targets							
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting
BUCKLEY 21-16-3NBH- BH (Plats)	9669.19N	4847.92E	7464.50	39.97151700	-104.78381700	1233281.81	3200722.86
BUCKLEY 21-16-3NBH- LP (Plats)	393.95S	4913.77E	7464.50	39.94389200	-104.78387200	1223218.98	3200788.71

Formations						
Formation Name	Formation MD	Formation TVD	Wellpath Inc	Incidence Angle	North	East
Upper Arapahoe	130.00	130.00	0.00	90.00	0.00N	0.00E
Lower Arapahoe	302.00	302.00	0.00	90.00	0.00N	0.00E
Laramie-Fox Hills	867.47	860.00	16.42	73.58	18.90S	75.60E
Upper Pierre - Pawnee	1225.55	1192.00	27.17	62.83	51.10S	204.40E
Pierre Shale	2668.33	2348.00	38.02	51.98	259.76S	1039.08E
Sussex	5795.89	4812.00	38.02	51.98	726.93S	2907.79E
Pierre Shale	6186.84	5120.00	38.02	51.98	785.33S	3141.38E
Shannon	6514.32	5378.00	38.02	51.98	834.24S	3337.05E
Pierre Shale	7156.58	5884.00	38.02	51.98	930.18S	3720.80E
Sharon Springs	8916.79	7248.00	51.32	38.68	956.48S	4753.72E
Niobrara	8962.79	7276.00	53.70	36.30	926.64S	4774.72E

Survey Tool Program					
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
1376613	Planned	19632.44	7464.50	ISCWSA MWD	Rev 4 + SAG + FLT

Notes