

BAYSWATER E&P, LLC

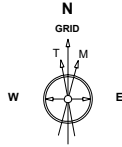
Location	Weld County, CO	Slot	TOPAZ EAST 12
Field	WATTENBERG	Well	TOPAZ EAST 12
Installation	Topaz 6-I Pad	Wellbore	TOPAZ EAST 12 (PWB)

Created by sean.dolffinger
Date plotted 8-Oct-2021
Plot reference is TOPAZ EAST 12 (PWB).
Ref wellpath is TOPAZ EAST 12 (PWP#1).
Coordinates are in Feet reference TOPAZ EAST 12.
True Vertical Depths are reference Rig Datum.
Measured Depths are reference Rig Datum.
Rig Datum: Planned Datum #1
Rig Datum to Mean Sea Level: 4969.00 ft.
Plot North is aligned to GRID North.

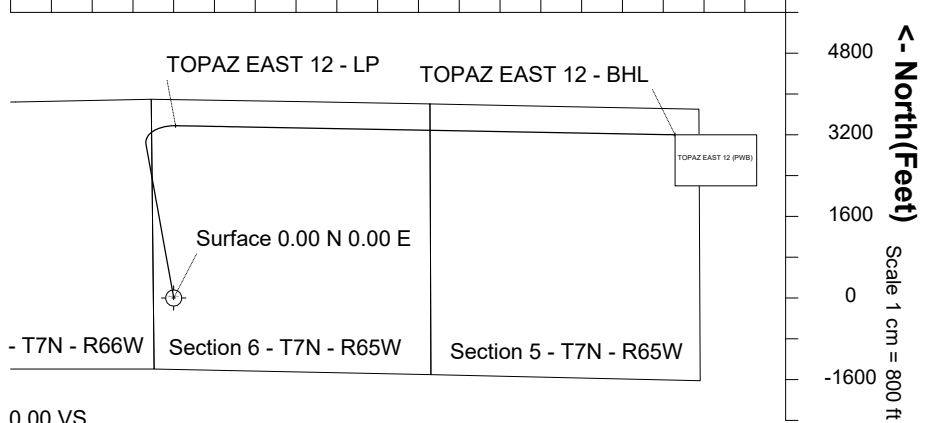
Scale 1 cm = 800 ft

East (Feet) ->

-3200 -1600 0 1600 3200 4800 6400 8000 9600 11200



Oct-8-2021
EMMA-2017 Dip: 66.83 deg Field: 51962.6 nT
Lat: N40 36 3.7296 Long: W104 42 52.5816 Elev: 4945.00 ft
Magnetic North is 7.85 deg East of True North
GRID North is 0.51 deg East of True North
To correct azimuth from True to GRID subtract 0.51 deg
To correct azimuth from Magnetic to GRID add 7.34 deg



Tie on - 0.00 Inc, 23.00 MD, 23.00 TVD, 0.00 VS

3DS Kick off Point - 0.00 Inc, 1573.00 MD, 1573.00 TVD, 0.00 VS

WELL PROFILE DATA

Point	MD	Inc	Azi	TVD	North	East	deg/100ft	V. Sect
Tie on	23.00	0.00	0.00	23.00	S 0.00	W 0.00		0.00
KOP	1573.00	0.00	349.77	1573.00	S 0.00	W 0.00	0.00	0.00
End of Build	3356.03	35.66	349.77	3243.12	N 528.66	W 95.36	2.00	72.95
End of Hold	7695.98	35.66	349.77	6769.26	N 3018.59	W 544.49	0.00	416.54
Target TOPAZ ...2 - LP	8666.17	90.58	91.04	7289.00	N 3378.48	E 36.15	10.00	1080.06
T.D. & Target TOP...BHL	18463.76	90.58	91.04	7189.00	N 3200.17	E 9831.62	0.00	10339.33

End of Build - 35.66 Inc, 3356.03 MD, 3243.12 TVD, 72.95 VS

End of Hold - 35.66 Inc, 7695.98 MD, 6769.26 TVD, 416.54 VS

TOPAZ EAST 12 - LP

S/C Kick off Point - 90.58 Inc, 8666.17 MD, 7289.00 TVD, 1080.06 VS

T.D. & End of Hold - 7189.00 TVD, 3200.17 N 9831.62 E

TOPAZ EAST 12 - BHL

TOPAZ EAST 12 (PWB)

-800 -0 800 1600 2400 3200 4000 4800 5600 6400 7200 8000 8800 9600 10400 11200

Scale 1 cm = 400 ft

Vertical Section (Feet) ->

Azimuth 71.97 with reference 0.00 N, 0.00 E from TOPAZ EAST 12

Scale 1 cm = 400 ft

True Vertical Depth (Feet)

-800

-0

800

1600

2400

3200

4000

4800

5600

6400

7200

8000

SYSDRILL
Well Design Combined Report
Wellbore: TOPAZ EAST 12 (PWB)



Wellhead Details							
Name	Latitude	Longitude	Northing	Easting	North	East	Slot Elevation Above Ground
TOPAZ EAST 12	40.60109500	-104.71441300	1462786.7231	3218142.2373	21.97N	53.40E	0.00

Declination		
Date	Source	Time
Oct-8-2021	EMM-2017	10:10

Installation Details						
Name	Installation Position (Latitude)	Installation Position (Longitude)	Northing	Easting	Coord System Name	North Alignment
Topaz 6-I Pad	40.60103600	-104.71460600	1462764.7546	3218088.8367	NAD83 Colorado State Planes, North Zone, US Foot	Grid

Summary Wellpath								
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	Vertical Depth SS	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]
23.00	0.00	0.00	23.00	-4946.00	0.00N	0.00E		0.00
1573.00	0.00	349.77	1573.00	-3396.00	0.00N	0.00E	==>	0.00
3356.03	35.66	349.77	3243.12	-1725.88	528.66N	95.36W	2.00	72.95
7695.98	35.66	349.77	6769.26	1800.26	3018.59N	544.49W	==>	416.54
8666.17	90.58	91.04	7289.00	2320.00	3378.48N	36.15E	10.00	1080.06
18463.76	90.58	91.04	7189.00	2220.00	3200.17N	9831.62E	==>	10339.33

Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Station Position (Latitude)	Station Position (Longitude)
0.00	0.00	0.00	0.00	0.00N	0.00E		0.00	40.60109500	-104.71441300
23.00	0.00	0.00	23.00	0.00N	0.00E	==>	0.00	40.60109500	-104.71441300
100.00	0.00	0.00	100.00	0.00N	0.00E	==>	0.00	40.60109500	-104.71441300
200.00	0.00	0.00	200.00	0.00N	0.00E	==>	0.00	40.60109500	-104.71441300
300.00	0.00	0.00	300.00	0.00N	0.00E	==>	0.00	40.60109500	-104.71441300
400.00	0.00	0.00	400.00	0.00N	0.00E	==>	0.00	40.60109500	-104.71441300
500.00	0.00	0.00	500.00	0.00N	0.00E	==>	0.00	40.60109500	-104.71441300
600.00	0.00	0.00	600.00	0.00N	0.00E	==>	0.00	40.60109500	-104.71441300
700.00	0.00	0.00	700.00	0.00N	0.00E	==>	0.00	40.60109500	-104.71441300
800.00	0.00	0.00	800.00	0.00N	0.00E	==>	0.00	40.60109500	-104.71441300
900.00	0.00	0.00	900.00	0.00N	0.00E	==>	0.00	40.60109500	-104.71441300
1000.00	0.00	0.00	1000.00	0.00N	0.00E	==>	0.00	40.60109500	-104.71441300
1100.00	0.00	0.00	1100.00	0.00N	0.00E	==>	0.00	40.60109500	-104.71441300
1200.00	0.00	0.00	1200.00	0.00N	0.00E	==>	0.00	40.60109500	-104.71441300
1300.00	0.00	0.00	1300.00	0.00N	0.00E	==>	0.00	40.60109500	-104.71441300
1400.00	0.00	0.00	1400.00	0.00N	0.00E	==>	0.00	40.60109500	-104.71441300
1500.00	0.00	0.00	1500.00	0.00N	0.00E	==>	0.00	40.60109500	-104.71441300
1573.00	0.00	349.77	1573.00	0.00N	0.00E	==>	0.00	40.60109500	-104.71441300
1673.00	2.00	349.77	1672.98	1.72N	0.31W	2.00	0.24	40.60109972	-104.71441406
1773.00	4.00	349.77	1772.84	6.87N	1.24W	2.00	0.95	40.60111388	-104.71441724
1873.00	6.00	349.77	1872.45	15.44N	2.79W	2.00	2.13	40.60113746	-104.71442254
1973.00	8.00	349.77	1971.70	27.44N	4.95W	2.00	3.79	40.60117043	-104.71442995
2073.00	10.00	349.77	2070.47	42.83N	7.73W	2.00	5.91	40.60121275	-104.71443945
2173.00	12.00	349.77	2168.62	61.61N	11.11W	2.00	8.50	40.60126437	-104.71445105
2273.00	14.00	349.77	2266.06	83.74N	15.11W	2.00	11.56	40.60132522	-104.71446472
2373.00	16.00	349.77	2362.64	109.21N	19.70W	2.00	15.07	40.60139524	-104.71448046
2473.00	18.00	349.77	2458.27	137.99N	24.89W	2.00	19.04	40.60147433	-104.71449823
2573.00	20.00	349.77	2552.82	170.02N	30.67W	2.00	23.46	40.60156241	-104.71451801
2673.00	22.00	349.77	2646.17	205.29N	37.03W	2.00	28.33	40.60165936	-104.71453980
2773.00	24.00	349.77	2738.21	243.74N	43.97W	2.00	33.63	40.60176506	-104.71456355
2873.00	26.00	349.77	2828.84	285.33N	51.47W	2.00	39.37	40.60187939	-104.71458923
2973.00	28.00	349.77	2917.94	330.00N	59.53W	2.00	45.54	40.60200221	-104.71461683

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 4969.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 71.97 degrees
Bottom hole distance is 10339.33 Feet on azimuth 71.97 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by
Date Printed: 8-Oct-2021

SYSDRILL
Well Design Combined Report
Wellbore: TOPAZ EAST 12 (PWB)



Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Station Position (Latitude)	Station Position (Longitude)
3073.00	30.00	349.77	3005.39	377.71N	68.13W	2.00	52.12	40.60213336	-104.71464629
3173.00	32.00	349.77	3091.11	428.40N	77.27W	2.00	59.12	40.60227270	-104.71467760
3273.00	34.00	349.77	3174.97	481.99N	86.94W	2.00	66.51	40.60242004	-104.71471070
3356.03	35.66	349.77	3243.12	528.66N	95.36W	2.00	72.95	40.60254833	-104.71473953
3373.00	35.66	349.77	3256.91	538.40N	97.12W	==>	74.29	40.60257510	-104.71474554
3473.00	35.66	349.77	3338.16	595.77N	107.46W	==>	82.21	40.60273282	-104.71478098
3573.00	35.66	349.77	3419.41	653.14N	117.81W	==>	90.13	40.60289054	-104.71481642
3673.00	35.66	349.77	3500.66	710.51N	128.16W	==>	98.05	40.60304826	-104.71485185
3773.00	35.66	349.77	3581.90	767.89N	138.51W	==>	105.96	40.60320598	-104.71488729
3873.00	35.66	349.77	3663.15	825.26N	148.86W	==>	113.88	40.60336370	-104.71492273
3973.00	35.66	349.77	3744.40	882.63N	159.21W	==>	121.80	40.60352142	-104.71495817
4073.00	35.66	349.77	3825.65	940.00N	169.56W	==>	129.71	40.60367914	-104.71499361
4173.00	35.66	349.77	3906.90	997.38N	179.91W	==>	137.63	40.60383686	-104.71502904
4273.00	35.66	349.77	3988.15	1054.75N	190.25W	==>	145.55	40.60399459	-104.71506448
4373.00	35.66	349.77	4069.39	1112.12N	200.60W	==>	153.46	40.60415231	-104.71509992
4473.00	35.66	349.77	4150.64	1169.49N	210.95W	==>	161.38	40.60431003	-104.71513536
4573.00	35.66	349.77	4231.89	1226.87N	221.30W	==>	169.30	40.60446775	-104.71517080
4673.00	35.66	349.77	4313.14	1284.24N	231.65W	==>	177.22	40.60462547	-104.71520624
4773.00	35.66	349.77	4394.39	1341.61N	242.00W	==>	185.13	40.60478319	-104.71524168
4873.00	35.66	349.77	4475.64	1398.98N	252.35W	==>	193.05	40.60494091	-104.71527712
4973.00	35.66	349.77	4556.89	1456.35N	262.70W	==>	200.97	40.60509863	-104.71531256
5073.00	35.66	349.77	4638.13	1513.73N	273.05W	==>	208.88	40.60525635	-104.71534799
5173.00	35.66	349.77	4719.38	1571.10N	283.39W	==>	216.80	40.60541408	-104.71538343
5273.00	35.66	349.77	4800.63	1628.47N	293.74W	==>	224.72	40.60557180	-104.71541887
5373.00	35.66	349.77	4881.88	1685.84N	304.09W	==>	232.63	40.60572952	-104.71545432
5473.00	35.66	349.77	4963.13	1743.22N	314.44W	==>	240.55	40.60588724	-104.71548976
5573.00	35.66	349.77	5044.38	1800.59N	324.79W	==>	248.47	40.60604496	-104.71552520
5673.00	35.66	349.77	5125.62	1857.96N	335.14W	==>	256.39	40.60620268	-104.71556064
5773.00	35.66	349.77	5206.87	1915.33N	345.49W	==>	264.30	40.60636040	-104.71559608
5873.00	35.66	349.77	5288.12	1972.71N	355.84W	==>	272.22	40.60651812	-104.71563152
5973.00	35.66	349.77	5369.37	2030.08N	366.18W	==>	280.14	40.60667584	-104.71566696
6073.00	35.66	349.77	5450.62	2087.45N	376.53W	==>	288.05	40.60683356	-104.71570240
6173.00	35.66	349.77	5531.87	2144.82N	386.88W	==>	295.97	40.60699128	-104.71573784
6273.00	35.66	349.77	5613.12	2202.20N	397.23W	==>	303.89	40.60714900	-104.71577328
6373.00	35.66	349.77	5694.36	2259.57N	407.58W	==>	311.80	40.60730673	-104.71580873
6473.00	35.66	349.77	5775.61	2316.94N	417.93W	==>	319.72	40.60746445	-104.71584417
6573.00	35.66	349.77	5856.86	2374.31N	428.28W	==>	327.64	40.60762217	-104.71587961
6673.00	35.66	349.77	5938.11	2431.69N	438.63W	==>	335.55	40.60777989	-104.71591505
6773.00	35.66	349.77	6019.36	2489.06N	448.97W	==>	343.47	40.60793761	-104.71595050
6873.00	35.66	349.77	6100.61	2546.43N	459.32W	==>	351.39	40.60809533	-104.71598594
6973.00	35.66	349.77	6181.85	2603.80N	469.67W	==>	359.31	40.60825305	-104.71602138
7073.00	35.66	349.77	6263.10	2661.18N	480.02W	==>	367.22	40.60841077	-104.71605682
7173.00	35.66	349.77	6344.35	2718.55N	490.37W	==>	375.14	40.60856849	-104.71609227
7273.00	35.66	349.77	6425.60	2775.92N	500.72W	==>	383.06	40.60872621	-104.71612771
7373.00	35.66	349.77	6506.85	2833.29N	511.07W	==>	390.97	40.60888393	-104.71616315
7473.00	35.66	349.77	6588.10	2890.66N	521.42W	==>	398.89	40.60904165	-104.71619860
7573.00	35.66	349.77	6669.34	2948.04N	531.77W	==>	406.81	40.60919937	-104.71623404
7673.00	35.66	349.77	6750.59	3005.41N	542.11W	==>	414.72	40.60935709	-104.71626949
7695.98	35.66	349.77	6769.26	3018.59N	544.49W	==>	416.54	40.60939333	-104.71627763
7773.00	35.20	3.06	6832.12	3062.92N	547.30W	10.00	427.60	40.60951507	-104.71628632
7873.00	36.75	19.92	6913.25	3119.97N	535.54W	10.00	456.43	40.60967135	-104.71624216
7973.00	40.44	34.86	6991.57	3174.84N	506.74W	10.00	500.81	40.60982127	-104.71613668
8073.00	45.76	47.29	7064.69	3225.88N	461.77W	10.00	559.36	40.60996027	-104.71597310
8173.00	52.18	57.47	7130.40	3271.53N	402.00W	10.00	630.33	40.61008412	-104.71575639
8273.00	59.34	65.93	7186.70	3310.41N	329.24W	10.00	711.55	40.61018905	-104.71549312
8373.00	66.96	73.19	7231.88	3341.33N	245.71W	10.00	800.55	40.61027189	-104.71519130
8473.00	74.89	79.66	7264.57	3363.35N	153.94W	10.00	894.62	40.61033011	-104.71486010
8573.00	82.98	85.65	7283.77	3375.81N	56.73W	10.00	990.92	40.61036195	-104.71450959

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Vertical Section is from 0.00N 0.00E on azimuth 71.97 degrees
Bottom hole distance is 10339.33 Feet on azimuth 71.97 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by
Date Printed: 8-Oct-2021

SYSDRILL
Well Design Combined Report
Wellbore: TOPAZ EAST 12 (PWB)



Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Station Position (Latitude)	Station Position (Longitude)
8666.17	90.58	91.04	7289.00	3378.48N	36.15E	10.00	1080.06	40.61036700	-104.71417500
8673.00	90.58	91.04	7288.93	3378.35N	42.98E	==>	1086.52	40.61036649	-104.71415040
8773.00	90.58	91.04	7287.91	3376.53N	142.96E	==>	1181.03	40.61035907	-104.71379039
8873.00	90.58	91.04	7286.89	3374.71N	242.94E	==>	1275.53	40.61035164	-104.71343038
8973.00	90.58	91.04	7285.87	3372.89N	342.92E	==>	1370.04	40.61034421	-104.71307037
9073.00	90.58	91.04	7284.85	3371.07N	442.90E	==>	1464.54	40.61033678	-104.71271036
9173.00	90.58	91.04	7283.83	3369.25N	542.87E	==>	1559.05	40.61032934	-104.71235035
9273.00	90.58	91.04	7282.81	3367.43N	642.85E	==>	1653.55	40.61032191	-104.71199034
9373.00	90.58	91.04	7281.79	3365.61N	742.83E	==>	1748.06	40.61031448	-104.71163033
9473.00	90.58	91.04	7280.76	3363.79N	842.81E	==>	1842.57	40.61030704	-104.71127032
9573.00	90.58	91.04	7279.74	3361.97N	942.79E	==>	1937.07	40.61029961	-104.71091031
9673.00	90.58	91.04	7278.72	3360.15N	1042.77E	==>	2031.58	40.61029217	-104.71055030
9773.00	90.58	91.04	7277.70	3358.33N	1142.74E	==>	2126.08	40.61028473	-104.71019029
9873.00	90.58	91.04	7276.68	3356.51N	1242.72E	==>	2220.59	40.61027729	-104.70983028
9973.00	90.58	91.04	7275.66	3354.69N	1342.70E	==>	2315.09	40.61026985	-104.70947027
10073.00	90.58	91.04	7274.64	3352.87N	1442.68E	==>	2409.60	40.61026241	-104.70911026
10173.00	90.58	91.04	7273.62	3351.05N	1542.66E	==>	2504.10	40.61025496	-104.70875025
10273.00	90.58	91.04	7272.60	3349.23N	1642.64E	==>	2598.61	40.61024752	-104.70839024
10373.00	90.58	91.04	7271.58	3347.41N	1742.61E	==>	2693.12	40.61024007	-104.70803024
10473.00	90.58	91.04	7270.56	3345.59N	1842.59E	==>	2787.62	40.61023263	-104.70767023
10573.00	90.58	91.04	7269.54	3343.77N	1942.57E	==>	2882.13	40.61022518	-104.70731022
10673.00	90.58	91.04	7268.52	3341.96N	2042.55E	==>	2976.63	40.61021773	-104.70695021
10773.00	90.58	91.04	7267.50	3340.14N	2142.53E	==>	3071.14	40.61021028	-104.70659020
10873.00	90.58	91.04	7266.48	3338.32N	2242.50E	==>	3165.64	40.61020283	-104.70623019
10973.00	90.58	91.04	7265.46	3336.50N	2342.48E	==>	3260.15	40.61019538	-104.70587018
11073.00	90.58	91.04	7264.43	3334.68N	2442.46E	==>	3354.65	40.61018793	-104.70551017
11173.00	90.58	91.04	7263.41	3332.86N	2542.44E	==>	3449.16	40.61018047	-104.70515016
11273.00	90.58	91.04	7262.39	3331.04N	2642.42E	==>	3543.66	40.61017302	-104.70479016
11373.00	90.58	91.04	7261.37	3329.22N	2742.40E	==>	3638.17	40.61016556	-104.70443015
11473.00	90.58	91.04	7260.35	3327.40N	2842.37E	==>	3732.68	40.61015810	-104.70407014
11573.00	90.58	91.04	7259.33	3325.58N	2942.35E	==>	3827.18	40.61015064	-104.70371013
11673.00	90.58	91.04	7258.31	3323.76N	3042.33E	==>	3921.69	40.61014318	-104.70335012
11773.00	90.58	91.04	7257.29	3321.94N	3142.31E	==>	4016.19	40.61013572	-104.70299011
11873.00	90.58	91.04	7256.27	3320.12N	3242.29E	==>	4110.70	40.61012826	-104.70263011
11973.00	90.58	91.04	7255.25	3318.30N	3342.27E	==>	4205.20	40.61012080	-104.70227010
12073.00	90.58	91.04	7254.23	3316.48N	3442.24E	==>	4299.71	40.61011333	-104.70191009
12173.00	90.58	91.04	7253.21	3314.66N	3542.22E	==>	4394.21	40.61010587	-104.70155008
12273.00	90.58	91.04	7252.19	3312.84N	3642.20E	==>	4488.72	40.61009840	-104.70119007
12373.00	90.58	91.04	7251.17	3311.02N	3742.18E	==>	4583.22	40.61009093	-104.70083007
12473.00	90.58	91.04	7250.15	3309.20N	3842.16E	==>	4677.73	40.61008346	-104.70047006
12573.00	90.58	91.04	7249.12	3307.38N	3942.13E	==>	4772.24	40.61007600	-104.70011005
12673.00	90.58	91.04	7248.10	3305.56N	4042.11E	==>	4866.74	40.61006852	-104.69975004
12773.00	90.58	91.04	7247.08	3303.74N	4142.09E	==>	4961.25	40.61006105	-104.69939004
12873.00	90.58	91.04	7246.06	3301.92N	4242.07E	==>	5055.75	40.61005358	-104.69903003
12973.00	90.58	91.04	7245.04	3300.10N	4342.05E	==>	5150.26	40.61004610	-104.69867002
13073.00	90.58	91.04	7244.02	3298.28N	4442.03E	==>	5244.76	40.61003863	-104.69831002
13173.00	90.58	91.04	7243.00	3296.46N	4542.00E	==>	5339.27	40.61003115	-104.69795001
13273.00	90.58	91.04	7241.98	3294.64N	4641.98E	==>	5433.77	40.61002368	-104.69759000
13373.00	90.58	91.04	7240.96	3292.82N	4741.96E	==>	5528.28	40.61001620	-104.69723000
13473.00	90.58	91.04	7239.94	3291.00N	4841.94E	==>	5622.79	40.61000872	-104.69686999
13573.00	90.58	91.04	7238.92	3289.18N	4941.92E	==>	5717.29	40.61000124	-104.69650998
13673.00	90.58	91.04	7237.90	3287.36N	5041.89E	==>	5811.80	40.60999375	-104.69614997
13773.00	90.58	91.04	7236.88	3285.54N	5141.87E	==>	5906.30	40.60998627	-104.69578997
13873.00	90.58	91.04	7235.86	3283.72N	5241.85E	==>	6000.81	40.60997879	-104.69542996
13973.00	90.58	91.04	7234.84	3281.90N	5341.83E	==>	6095.31	40.60997130	-104.69506996
14073.00	90.58	91.04	7233.81	3280.08N	5441.81E	==>	6189.82	40.60996381	-104.69470995
14173.00	90.58	91.04	7232.79	3278.26N	5541.79E	==>	6284.32	40.60995633	-104.69434994
14273.00	90.58	91.04	7231.77	3276.44N	5641.76E	==>	6378.83	40.60994884	-104.69398994
14373.00	90.58	91.04	7230.75	3274.62N	5741.74E	==>	6473.33	40.60994135	-104.69362993

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 4969.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 71.97 degrees
Bottom hole distance is 10339.33 Feet on azimuth 71.97 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by
Date Printed: 8-Oct-2021

SYSDRILL
Well Design Combined Report
Wellbore: TOPAZ EAST 12 (PWB)



Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Station Position (Latitude)	Station Position (Longitude)
14473.00	90.58	91.04	7229.73	3272.80N	5841.72E	==>	6567.84	40.60993386	-104.69326992
14573.00	90.58	91.04	7228.71	3270.98N	5941.70E	==>	6662.35	40.60992636	-104.69290992
14673.00	90.58	91.04	7227.69	3269.16N	6041.68E	==>	6756.85	40.60991887	-104.69254991
14773.00	90.58	91.04	7226.67	3267.34N	6141.66E	==>	6851.36	40.60991138	-104.69218991
14873.00	90.58	91.04	7225.65	3265.52N	6241.63E	==>	6945.86	40.60990388	-104.69182990
14973.00	90.58	91.04	7224.63	3263.70N	6341.61E	==>	7040.37	40.60989639	-104.69146990
15073.00	90.58	91.04	7223.61	3261.88N	6441.59E	==>	7134.87	40.60988889	-104.69110989
15173.00	90.58	91.04	7222.59	3260.06N	6541.57E	==>	7229.38	40.60988139	-104.69074988
15273.00	90.58	91.04	7221.57	3258.24N	6641.55E	==>	7323.88	40.60987389	-104.69038988
15373.00	90.58	91.04	7220.55	3256.42N	6741.52E	==>	7418.39	40.60986639	-104.69002987
15473.00	90.58	91.04	7219.53	3254.60N	6841.50E	==>	7512.90	40.60985889	-104.68966987
15573.00	90.58	91.04	7218.50	3252.78N	6941.48E	==>	7607.40	40.60985138	-104.68930986
15673.00	90.58	91.04	7217.48	3250.96N	7041.46E	==>	7701.91	40.60984388	-104.68894986
15773.00	90.58	91.04	7216.46	3249.14N	7141.44E	==>	7796.41	40.60983637	-104.68858985
15873.00	90.58	91.04	7215.44	3247.32N	7241.42E	==>	7890.92	40.60982887	-104.68822985
15973.00	90.58	91.04	7214.42	3245.50N	7341.39E	==>	7985.42	40.60982136	-104.68786984
16073.00	90.58	91.04	7213.40	3243.68N	7441.37E	==>	8079.93	40.60981385	-104.68750984
16173.00	90.58	91.04	7212.38	3241.86N	7541.35E	==>	8174.43	40.60980634	-104.68714983
16273.00	90.58	91.04	7211.36	3240.04N	7641.33E	==>	8268.94	40.60979883	-104.68678983
16373.00	90.58	91.04	7210.34	3238.22N	7741.31E	==>	8363.44	40.60979132	-104.68642983
16473.00	90.58	91.04	7209.32	3236.40N	7841.29E	==>	8457.95	40.60978380	-104.68606982
16573.00	90.58	91.04	7208.30	3234.58N	7941.26E	==>	8552.46	40.60977629	-104.68570982
16673.00	90.58	91.04	7207.28	3232.76N	8041.24E	==>	8646.96	40.60976877	-104.68534981
16773.00	90.58	91.04	7206.26	3230.94N	8141.22E	==>	8741.47	40.60976126	-104.68498981
16873.00	90.58	91.04	7205.24	3229.12N	8241.20E	==>	8835.97	40.60975374	-104.68462980
16973.00	90.58	91.04	7204.22	3227.30N	8341.18E	==>	8930.48	40.60974622	-104.68426980
17073.00	90.58	91.04	7203.19	3225.48N	8441.15E	==>	9024.98	40.60973870	-104.68390980
17173.00	90.58	91.04	7202.17	3223.66N	8541.13E	==>	9119.49	40.60973118	-104.68354979
17273.00	90.58	91.04	7201.15	3221.84N	8641.11E	==>	9213.99	40.60972366	-104.68318979
17373.00	90.58	91.04	7200.13	3220.02N	8741.09E	==>	9308.50	40.60971613	-104.68282979
17473.00	90.58	91.04	7199.11	3218.20N	8841.07E	==>	9403.01	40.60970861	-104.68246978
17573.00	90.58	91.04	7198.09	3216.38N	8941.05E	==>	9497.51	40.60970108	-104.68210978
17673.00	90.58	91.04	7197.07	3214.56N	9041.02E	==>	9592.02	40.60969356	-104.68174978
17773.00	90.58	91.04	7196.05	3212.74N	9141.00E	==>	9686.52	40.60968603	-104.68138977
17873.00	90.58	91.04	7195.03	3210.92N	9240.98E	==>	9781.03	40.60967850	-104.68102977
17973.00	90.58	91.04	7194.01	3209.10N	9340.96E	==>	9875.53	40.60967097	-104.68066977
18073.00	90.58	91.04	7192.99	3207.28N	9440.94E	==>	9970.04	40.60966344	-104.68030976
18173.00	90.58	91.04	7191.97	3205.46N	9540.92E	==>	10064.54	40.60965591	-104.67994976
18273.00	90.58	91.04	7190.95	3203.64N	9640.89E	==>	10159.05	40.60964837	-104.67958976
18373.00	90.58	91.04	7189.93	3201.82N	9740.87E	==>	10253.55	40.60964084	-104.67922975
18463.76	90.58	91.04	7189.00	3200.17N	9831.62E	==>	10339.33	40.60963400	-104.67890300

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Calculation method uses Minimum Curvature method
Prepared by
Date Printed: 8-Oct-2021

SYS DRILL
Well Design Combined Report
Wellbore: TOPAZ EAST 12 (PWB)



Targets							
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting
TOPAZ EAST 12 - LP	3378.48N	36.15E	7289.00	40.61036700	-104.71417500	1466165.11	3218178.39
TOPAZ EAST 12 - BHL	3200.17N	9831.62E	7189.00	40.60963400	-104.67890300	1465986.81	3227973.59

Survey Tool Program					
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
1031615	Planned	1573.00	1573.00	WdW Rate Gyro	Standard
1031614	Planned	18463.76	7189.00	ISCWSA MWD	Rev 4 + SAG + FLT

Notes