

BONANZA CREEK OIL COMPANY

Location: COLORADO Slot: SLOT#01 STATE LONGHORN D14-11-12XRLNB (689'FSL & 204'FWL, SEC.11)
Field: WELD COUNTY Well: STATE LONGHORN D14-11-12XRLNB
Facility: SEC.11-T03N-R63W Wellbore: STATE LONGHORN D14-11-12XRLNB PWB

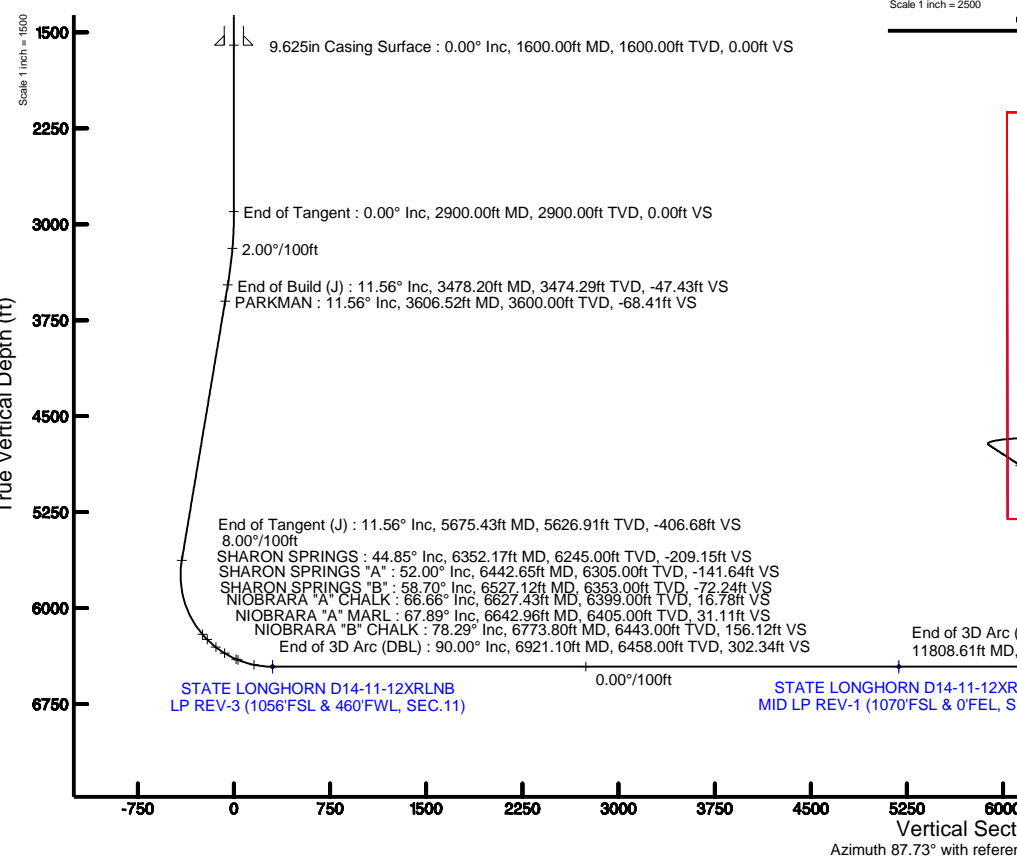
Plot reference wellpath is STATE LONGHORN D14-11-12XRLNB PWP (REV-C.0)		Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to XTREME 19 (17KB + 4782'GL) (RKB)		North Reference: True north
Measured depths are referenced to XTREME 19 (17KB + 4782'GL) (RKB)		Scale: True distance
XTREME 19 (17KB + 4782'GL) (RKB) to Mean Sea Level: 4799 feet		Depths are in feet
Mean Sea Level to Mud line (At Slot: SLOT#01 STATE LONGHORN D14-11-12XRLNB (689'FSL & 204'FWL, SEC.11)): 0 feet		Created by: ingnjamm on 2017-08-22
Coordinates are in feet referenced to Slot		Database: WA_DEN_Denver_Deht

Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.11-T03N-R63W			3303690.966	1330126.920	40°14'04.140"N	104°24'43.980"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#01 STATE LONGHORN D14-11-12XRLNB (689'FSL & 204'FWL, SEC.11)	64.98	-603.59	3303186.642	1330165.717	40°14'04.782"N	104°24'50.473"W
XTREME 19 (17KB + 4782'GL) (RKB) to Mud line (At Slot: SLOT#01 STATE LONGHORN D14-11-12XRLNB (689'FSL & 204'FWL, SEC.11))						4799ft
Mean Sea Level to Mud line (At Slot: SLOT#01 STATE LONGHORN D14-11-12XRLNB (689'FSL & 204'FWL, SEC.11))						0ft
XTREME 19 (17KB + 4782'GL) (RKB) to Mean Sea Level						4799ft

Survey Program

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	1600.00	BHI NaviTrak	Custom BHI NaviTrak (Standard Rotating) (Rockies 0.03Gt model)		STATE LONGHORN D14-11-12XRLNB PWB
1600.00	16668.23	BHI AutoTrak Curve	Custom BHI AutoTrak Curve (Short) (Rockies 0.03Gt model)		STATE LONGHORN D14-11-12XRLNB 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	303.076	17.00	0.00	0.00	0.00	0.00
End of Tangent	2900.00	0.000	303.076	2900.00	0.00	0.00	0.00	0.00
End of Build (J)	3478.20	11.564	303.076	3474.29	31.74	-48.73	2.00	-47.43
End of Tangent (J)	5675.43	11.564	303.076	5626.91	272.12	-417.81	0.00	-406.68
End of 3D Arc (DBL)	6921.10	90.000	89.852	6458.00	367.13	288.00	8.00	302.34
End of 3D Arc (DBL)	11808.61	90.000	89.803	6458.00	381.83	5175.49	0.00	5186.57
End of Tangent	16668.23	90.000	89.803	6458.00	398.51	10035.08	0.00	10042.99

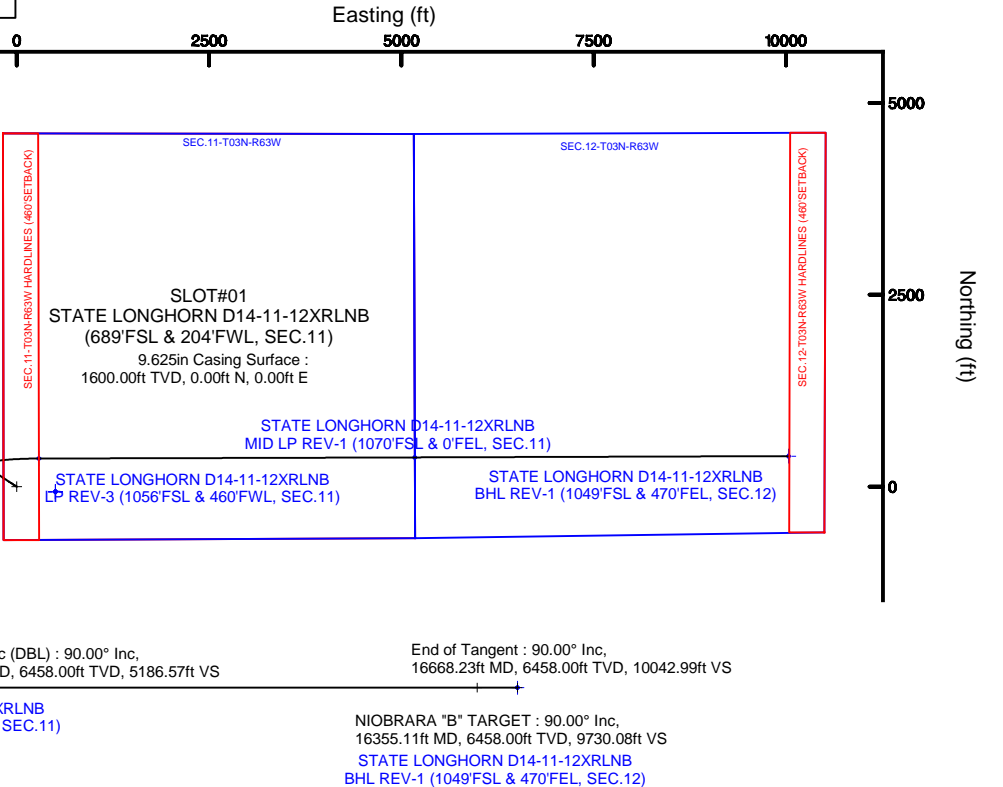
Bottom Hole Location

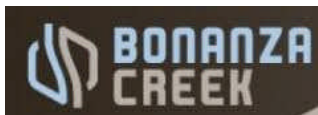
MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
16668.23	90.000	89.803	6458.00	398.51	10035.08	3313215.64	1330707.06	40°14'08.700"N	104°22'41.080"W



BGGM (1900.0 to 2019.0) Dip: 66.78° Field: 52317.6 nT
Magnetic North is 8.16 degrees East of True North (at 8/21/2017)

To correct azimuth from Magnetic to True add 8.16 degrees





Planned Wellpath Report

STATE LONGHORN D14-11-12XRLNB PWP (REV-C.0)
Page 1 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 STATE LONGHORN D14-11-12XRLNB (689'FSL & 204'FWL, SEC.11)
Area	COLORADO	Well	STATE LONGHORN D14-11-12XRLNB
Field	WELD COUNTY	Wellbore	STATE LONGHORN D14-11-12XRLNB PWB
Facility	SEC.11-T03N-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	8/22/2017 at 2:56:37 PM
Convergence at slot	0.70° East	Database/Source file	WA_DEN_Denver_Defn/STATE_LONGHORN_D14-11-12XRLNB_PWP_REV-C.0_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	64.98	-503.59	3303186.64	1330185.72	40°14'04.782"N	104°24'50.473"W
Facility Reference Pt			3303690.97	1330126.92	40°14'04.140"N	104°24'43.980"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 + 4782'GL) (RKB) to Facility Vertical Datum	4799.00ft
Horizontal Reference Pt	Slot	XTREME 19 (17'KB + 4782'GL) (RKB) to Mean Sea Level	4799.00ft
Vertical Reference Pt	XTREME 19 (17'KB + 4782'GL) (RKB)	XTREME 19 (17'KB + 4782'GL) (RKB) to Mud Line at Slot (SLOT#01 STATE LONGHORN D14-11-12XRLNB (689'FSL & 204'FWL, SEC.11))	4799.00ft
MD Reference Pt	XTREME 19 (17'KB + 4782'GL) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	87.73°



Planned Wellpath Report

STATE LONGHORN D14-11-12XRLNB PWP (REV-C.0)

Page 2 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 STATE LONGHORN D14-11-12XRLNB (689'FSL & 204'FWL, SEC.11)
Area	COLORADO	Well	STATE LONGHORN D14-11-12XRLNB
Field	WELD COUNTY	Wellbore	STATE LONGHORN D14-11-12XRLNB PWB
Facility	SEC.11-T03N-R63W		

WELLPATH DATA (182 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	303.076	0.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
17.00	0.000	303.076	17.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	Tie On
117.00†	0.000	303.076	117.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
217.00†	0.000	303.076	217.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
317.00†	0.000	303.076	317.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
417.00†	0.000	303.076	417.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
517.00†	0.000	303.076	517.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
617.00†	0.000	303.076	617.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
717.00†	0.000	303.076	717.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
817.00†	0.000	303.076	817.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
917.00†	0.000	303.076	917.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
1017.00†	0.000	303.076	1017.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
1117.00†	0.000	303.076	1117.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
1217.00†	0.000	303.076	1217.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
1317.00†	0.000	303.076	1317.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
1417.00†	0.000	303.076	1417.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
1517.00†	0.000	303.076	1517.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
1617.00†	0.000	303.076	1617.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
1717.00†	0.000	303.076	1717.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
1817.00†	0.000	303.076	1817.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
1917.00†	0.000	303.076	1917.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
2017.00†	0.000	303.076	2017.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
2117.00†	0.000	303.076	2117.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
2217.00†	0.000	303.076	2217.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
2317.00†	0.000	303.076	2317.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
2417.00†	0.000	303.076	2417.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
2517.00†	0.000	303.076	2517.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
2617.00†	0.000	303.076	2617.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
2717.00†	0.000	303.076	2717.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	
2817.00†	0.000	303.076	2817.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	



Planned Wellpath Report

STATE LONGHORN D14-11-12XRLNB PWP (REV-C.0)
Page 3 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 STATE LONGHORN D14-11-12XRLNB (689'FSL & 204'FWL, SEC.11)
Area	COLORADO	Well	STATE LONGHORN D14-11-12XRLNB
Field	WELD COUNTY	Wellbore	STATE LONGHORN D14-11-12XRLNB PWB
Facility	SEC.11-T03N-R63W		

WELLPATH DATA (182 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2900.00	0.000	303.076	2900.00	0.00	0.00	0.00	40°14'04.782"N	104°24'50.473"W	0.00	End of Tangent
2917.00†	0.340	303.076	2917.00	-0.04	0.03	-0.04	40°14'04.782"N	104°24'50.474"W	2.00	
3017.00†	2.340	303.076	3016.97	-1.95	1.30	-2.00	40°14'04.795"N	104°24'50.499"W	2.00	
3117.00†	4.340	303.076	3116.79	-6.70	4.48	-6.88	40°14'04.826"N	104°24'50.562"W	2.00	
3217.00†	6.340	303.076	3216.35	-14.29	9.56	-14.68	40°14'04.877"N	104°24'50.663"W	2.00	
3317.00†	8.340	303.076	3315.53	-24.71	16.53	-25.39	40°14'04.945"N	104°24'50.801"W	2.00	
3417.00†	10.340	303.076	3414.20	-37.95	25.39	-38.98	40°14'05.033"N	104°24'50.976"W	2.00	
3478.20	11.564	303.076	3474.29	-47.43	31.74	-48.73	40°14'05.096"N	104°24'51.101"W	2.00	End of Build (J)
3517.00†	11.564	303.076	3512.29	-53.77	35.98	-55.24	40°14'05.138"N	104°24'51.186"W	0.00	
3606.52†	11.564	303.076	3600.00	-68.41	45.78	-70.28	40°14'05.234"N	104°24'51.379"W	0.00	PARKMAN
3617.00†	11.564	303.076	3610.26	-70.12	46.92	-72.04	40°14'05.246"N	104°24'51.402"W	0.00	
3717.00†	11.564	303.076	3708.24	-86.47	57.86	-88.84	40°14'05.354"N	104°24'51.619"W	0.00	
3817.00†	11.564	303.076	3806.21	-102.82	68.80	-105.64	40°14'05.462"N	104°24'51.835"W	0.00	
3917.00†	11.564	303.076	3904.18	-119.18	79.74	-122.44	40°14'05.570"N	104°24'52.052"W	0.00	
4017.00†	11.564	303.076	4002.15	-135.53	90.68	-139.23	40°14'05.678"N	104°24'52.268"W	0.00	
4117.00†	11.564	303.076	4100.12	-151.88	101.62	-156.03	40°14'05.786"N	104°24'52.485"W	0.00	
4217.00†	11.564	303.076	4198.09	-168.23	112.56	-172.83	40°14'05.894"N	104°24'52.702"W	0.00	
4317.00†	11.564	303.076	4296.06	-184.58	123.51	-189.63	40°14'06.003"N	104°24'52.918"W	0.00	
4417.00†	11.564	303.076	4394.03	-200.93	134.45	-206.42	40°14'06.111"N	104°24'53.135"W	0.00	
4517.00†	11.564	303.076	4492.00	-217.28	145.39	-223.22	40°14'06.219"N	104°24'53.351"W	0.00	
4617.00†	11.564	303.076	4589.97	-233.63	156.33	-240.02	40°14'06.327"N	104°24'53.568"W	0.00	
4717.00†	11.564	303.076	4687.94	-249.98	167.27	-256.82	40°14'06.435"N	104°24'53.785"W	0.00	
4817.00†	11.564	303.076	4785.91	-266.33	178.21	-273.62	40°14'06.543"N	104°24'54.001"W	0.00	
4917.00†	11.564	303.076	4883.88	-282.68	189.15	-290.41	40°14'06.651"N	104°24'54.218"W	0.00	
5017.00†	11.564	303.076	4981.85	-299.03	200.09	-307.21	40°14'06.759"N	104°24'54.434"W	0.00	
5117.00†	11.564	303.076	5079.82	-315.38	211.03	-324.01	40°14'06.867"N	104°24'54.651"W	0.00	
5217.00†	11.564	303.076	5177.79	-331.73	221.97	-340.81	40°14'06.976"N	104°24'54.868"W	0.00	
5317.00†	11.564	303.076	5275.76	-348.08	232.91	-357.60	40°14'07.084"N	104°24'55.084"W	0.00	
5417.00†	11.564	303.076	5373.73	-364.43	243.85	-374.40	40°14'07.192"N	104°24'55.301"W	0.00	
5517.00†	11.564	303.076	5471.70	-380.78	254.79	-391.20	40°14'07.300"N	104°24'55.517"W	0.00	



Planned Wellpath Report

STATE LONGHORN D14-11-12XRLNB PWP (REV-C.0)

Page 4 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 STATE LONGHORN D14-11-12XRLNB (689'FSL & 204'FWL, SEC.11)
Area	COLORADO	Well	STATE LONGHORN D14-11-12XRLNB
Field	WELD COUNTY	Wellbore	STATE LONGHORN D14-11-12XRLNB PWB
Facility	SEC.11-T03N-R63W		

WELLPATH DATA (182 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5617.00†	11.564	303.076	5569.67	-397.13	265.73	-408.00	40°14'07.408"N	104°24'55.734"W	0.00	
5675.43	11.564	303.076	5626.91	-406.68	272.12	-417.81	40°14'07.471"N	104°24'55.860"W	0.00	End of Tangent (J)
5717.00†	8.989	314.987	5667.82	-412.29	276.70	-423.60	40°14'07.516"N	104°24'55.935"W	8.00	
5817.00†	6.611	14.534	5767.03	-415.93	287.81	-427.69	40°14'07.626"N	104°24'55.988"W	8.00	
5917.00†	11.579	56.678	5865.84	-405.65	298.91	-417.84	40°14'07.736"N	104°24'55.861"W	8.00	
6017.00†	18.759	70.577	5962.32	-381.65	309.79	-394.25	40°14'07.843"N	104°24'55.557"W	8.00	
6117.00†	26.405	76.801	6054.60	-344.39	320.23	-357.38	40°14'07.947"N	104°24'55.081"W	8.00	
6217.00†	34.204	80.358	6140.88	-294.60	330.03	-307.94	40°14'08.043"N	104°24'54.444"W	8.00	
6317.00†	42.071	82.717	6219.47	-233.26	339.00	-246.90	40°14'08.132"N	104°24'53.657"W	8.00	
6352.17†	44.848	83.380	6245.00	-209.15	341.93	-222.89	40°14'08.161"N	104°24'53.347"W	8.00	SHARON SPRINGS
6417.00†	49.974	84.449	6288.86	-161.54	346.97	-175.44	40°14'08.211"N	104°24'52.735"W	8.00	
6442.65†	52.005	84.827	6305.00	-141.64	348.83	-155.61	40°14'08.229"N	104°24'52.480"W	8.00	SHARON SPRINGS "A"
6517.00†	57.898	85.818	6347.68	-80.85	353.77	-94.96	40°14'08.278"N	104°24'51.698"W	8.00	
6527.12†	58.700	85.943	6353.00	-72.24	354.39	-86.37	40°14'08.284"N	104°24'51.587"W	8.00	SHARON SPRINGS "B"
6617.00†	65.833	86.968	6394.80	7.24	359.28	-7.02	40°14'08.332"N	104°24'50.564"W	8.00	
6627.43†	66.661	87.079	6399.00	16.78	359.77	2.51	40°14'08.337"N	104°24'50.441"W	8.00	NIOBRARA "A" CHALK
6642.96†	67.895	87.242	6405.00	31.11	360.48	16.82	40°14'08.344"N	104°24'50.256"W	8.00	NIOBRARA "A" MARL
6717.00†	73.777	87.982	6429.29	101.01	363.39	86.66	40°14'08.373"N	104°24'49.356"W	8.00	
6773.80†	78.291	88.520	6443.00	156.12	365.07	141.74	40°14'08.390"N	104°24'48.646"W	8.00	NIOBRARA "B" CHALK
6817.00†	81.724	88.917	6450.49	198.65	366.02	184.27	40°14'08.399"N	104°24'48.097"W	8.00	
6917.00†	89.674	89.815	6457.99	298.24	367.12	283.90	40°14'08.410"N	104°24'46.813"W	8.00	
6921.10	90.000	89.852	6458.00†	302.34	367.13	288.00	40°14'08.410"N	104°24'46.760"W	8.00	End of 3D Arc (DBL)
7017.00†	90.000	89.851	6458.00	398.18	367.38	383.90	40°14'08.412"N	104°24'45.523"W	0.00	
7117.00†	90.000	89.850	6458.00	498.11	367.64	483.90	40°14'08.415"N	104°24'44.234"W	0.00	
7217.00†	90.000	89.849	6458.00	598.04	367.90	583.90	40°14'08.418"N	104°24'42.944"W	0.00	
7317.00†	90.000	89.848	6458.00	697.97	368.17	683.90	40°14'08.420"N	104°24'41.655"W	0.00	
7417.00†	90.000	89.847	6458.00	797.90	368.43	783.90	40°14'08.423"N	104°24'40.366"W	0.00	
7517.00†	90.000	89.846	6458.00	897.83	368.70	883.90	40°14'08.425"N	104°24'39.076"W	0.00	
7617.00†	90.000	89.845	6458.00	997.76	368.97	983.90	40°14'08.428"N	104°24'37.787"W	0.00	
7717.00†	90.000	89.844	6458.00	1097.70	369.24	1083.90	40°14'08.431"N	104°24'36.497"W	0.00	



Planned Wellpath Report

STATE LONGHORN D14-11-12XRLNB PWP (REV-C.0)

Page 5 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 STATE LONGHORN D14-11-12XRLNB (689'FSL & 204'FWL, SEC.11)
Area	COLORADO	Well	STATE LONGHORN D14-11-12XRLNB
Field	WELD COUNTY	Wellbore	STATE LONGHORN D14-11-12XRLNB PWB
Facility	SEC.11-T03N-R63W		

WELLPATH DATA (182 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	89.843	6458.00	1197.63	369.51	1183.90	40°14'08.433"N	104°24'35.208"W	0.00	
7917.00†	90.000	89.842	6458.00	1297.56	369.79	1283.90	40°14'08.436"N	104°24'33.919"W	0.00	
8017.00†	90.000	89.841	6458.00	1397.49	370.07	1383.90	40°14'08.439"N	104°24'32.629"W	0.00	
8117.00†	90.000	89.840	6458.00	1497.42	370.34	1483.90	40°14'08.441"N	104°24'31.340"W	0.00	
8217.00†	90.000	89.839	6458.00	1597.36	370.62	1583.90	40°14'08.444"N	104°24'30.050"W	0.00	
8317.00†	90.000	89.838	6458.00	1697.29	370.91	1683.90	40°14'08.447"N	104°24'28.761"W	0.00	
8417.00†	90.000	89.837	6458.00	1797.22	371.19	1783.90	40°14'08.450"N	104°24'27.472"W	0.00	
8517.00†	90.000	89.836	6458.00	1897.15	371.48	1883.90	40°14'08.452"N	104°24'26.182"W	0.00	
8617.00†	90.000	89.835	6458.00	1997.08	371.76	1983.89	40°14'08.455"N	104°24'24.893"W	0.00	
8717.00†	90.000	89.834	6458.00	2097.02	372.05	2083.89	40°14'08.458"N	104°24'23.603"W	0.00	
8817.00†	90.000	89.833	6458.00	2196.95	372.34	2183.89	40°14'08.461"N	104°24'22.314"W	0.00	
8917.00†	90.000	89.832	6458.00	2296.88	372.63	2283.89	40°14'08.463"N	104°24'21.025"W	0.00	
9017.00†	90.000	89.831	6458.00	2396.81	372.93	2383.89	40°14'08.466"N	104°24'19.735"W	0.00	
9117.00†	90.000	89.830	6458.00	2496.75	373.22	2483.89	40°14'08.469"N	104°24'18.446"W	0.00	
9217.00†	90.000	89.829	6458.00	2596.68	373.52	2583.89	40°14'08.472"N	104°24'17.156"W	0.00	
9317.00†	90.000	89.828	6458.00	2696.61	373.82	2683.89	40°14'08.475"N	104°24'15.867"W	0.00	
9417.00†	90.000	89.827	6458.00	2796.54	374.12	2783.89	40°14'08.478"N	104°24'14.577"W	0.00	
9517.00†	90.000	89.826	6458.00	2896.48	374.42	2883.89	40°14'08.480"N	104°24'13.288"W	0.00	
9617.00†	90.000	89.825	6458.00	2996.41	374.73	2983.89	40°14'08.483"N	104°24'11.999"W	0.00	
9717.00†	90.000	89.824	6458.00	3096.34	375.04	3083.89	40°14'08.486"N	104°24'10.709"W	0.00	
9817.00†	90.000	89.823	6458.00	3196.28	375.34	3183.89	40°14'08.489"N	104°24'09.420"W	0.00	
9917.00†	90.000	89.822	6458.00	3296.21	375.65	3283.89	40°14'08.492"N	104°24'08.130"W	0.00	
10017.00†	90.000	89.821	6458.00	3396.14	375.96	3383.89	40°14'08.495"N	104°24'06.841"W	0.00	
10117.00†	90.000	89.820	6458.00	3496.08	376.28	3483.89	40°14'08.498"N	104°24'05.552"W	0.00	
10217.00†	90.000	89.819	6458.00	3596.01	376.59	3583.89	40°14'08.501"N	104°24'04.262"W	0.00	
10317.00†	90.000	89.818	6458.00	3695.94	376.91	3683.89	40°14'08.504"N	104°24'02.973"W	0.00	
10417.00†	90.000	89.817	6458.00	3795.87	377.23	3783.89	40°14'08.507"N	104°24'01.683"W	0.00	
10517.00†	90.000	89.816	6458.00	3895.81	377.55	3883.89	40°14'08.510"N	104°24'00.394"W	0.00	
10617.00†	90.000	89.815	6458.00	3995.74	377.87	3983.89	40°14'08.513"N	104°23'59.105"W	0.00	
10717.00†	90.000	89.814	6458.00	4095.68	378.19	4083.89	40°14'08.516"N	104°23'57.815"W	0.00	



Planned Wellpath Report

STATE LONGHORN D14-11-12XRLNB PWP (REV-C.0)
Page 6 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 STATE LONGHORN D14-11-12XRLNB (689'FSL & 204'FWL, SEC.11)
Area	COLORADO	Well	STATE LONGHORN D14-11-12XRLNB
Field	WELD COUNTY	Wellbore	STATE LONGHORN D14-11-12XRLNB PWB
Facility	SEC.11-T03N-R63W		

WELLPATH DATA (182 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	89.813	6458.00	4195.61	378.52	4183.88	40°14'08.519"N	104°23'56.526"W	0.00	
10917.00†	90.000	89.812	6458.00	4295.54	378.84	4283.88	40°14'08.522"N	104°23'55.236"W	0.00	
11017.00†	90.000	89.811	6458.00	4395.48	379.17	4383.88	40°14'08.525"N	104°23'53.947"W	0.00	
11117.00†	90.000	89.810	6458.00	4495.41	379.50	4483.88	40°14'08.528"N	104°23'52.658"W	0.00	
11217.00†	90.000	89.809	6458.00	4595.34	379.83	4583.88	40°14'08.531"N	104°23'51.368"W	0.00	
11317.00†	90.000	89.808	6458.00	4695.28	380.17	4683.88	40°14'08.535"N	104°23'50.079"W	0.00	
11417.00†	90.000	89.807	6458.00	4795.21	380.50	4783.88	40°14'08.538"N	104°23'48.789"W	0.00	
11517.00†	90.000	89.806	6458.00	4895.15	380.84	4883.88	40°14'08.541"N	104°23'47.500"W	0.00	
11617.00†	90.000	89.805	6458.00	4995.08	381.18	4983.88	40°14'08.544"N	104°23'46.211"W	0.00	
11717.00†	90.000	89.804	6458.00	5095.01	381.52	5083.88	40°14'08.547"N	104°23'44.921"W	0.00	
11808.61	90.000	89.803	6458.00	5186.57	381.83	5175.49	40°14'08.550"N	104°23'43.740"W	0.00	End of 3D Arc (DBL)
11817.00†	90.000	89.803	6458.00	5194.95	381.86	5183.88	40°14'08.550"N	104°23'43.632"W	0.00	
11917.00†	90.000	89.803	6458.00	5294.88	382.21	5283.88	40°14'08.553"N	104°23'42.342"W	0.00	
12017.00†	90.000	89.803	6458.00	5394.82	382.55	5383.88	40°14'08.557"N	104°23'41.053"W	0.00	
12117.00†	90.000	89.803	6458.00	5494.75	382.89	5483.88	40°14'08.560"N	104°23'39.764"W	0.00	
12217.00†	90.000	89.803	6458.00	5594.69	383.23	5583.88	40°14'08.563"N	104°23'38.474"W	0.00	
12317.00†	90.000	89.803	6458.00	5694.62	383.58	5683.88	40°14'08.566"N	104°23'37.185"W	0.00	
12417.00†	90.000	89.803	6458.00	5794.55	383.92	5783.88	40°14'08.569"N	104°23'35.895"W	0.00	
12517.00†	90.000	89.803	6458.00	5894.49	384.26	5883.87	40°14'08.572"N	104°23'34.606"W	0.00	
12617.00†	90.000	89.803	6458.00	5994.42	384.61	5983.87	40°14'08.576"N	104°23'33.317"W	0.00	
12717.00†	90.000	89.803	6458.00	6094.36	384.95	6083.87	40°14'08.579"N	104°23'32.027"W	0.00	
12817.00†	90.000	89.803	6458.00	6194.29	385.29	6183.87	40°14'08.582"N	104°23'30.738"W	0.00	
12917.00†	90.000	89.803	6458.00	6294.23	385.64	6283.87	40°14'08.585"N	104°23'29.448"W	0.00	
13017.00†	90.000	89.803	6458.00	6394.16	385.98	6383.87	40°14'08.588"N	104°23'28.159"W	0.00	
13117.00†	90.000	89.803	6458.00	6494.09	386.32	6483.87	40°14'08.591"N	104°23'26.870"W	0.00	
13217.00†	90.000	89.803	6458.00	6594.03	386.67	6583.87	40°14'08.594"N	104°23'25.580"W	0.00	
13317.00†	90.000	89.803	6458.00	6693.96	387.01	6683.87	40°14'08.598"N	104°23'24.291"W	0.00	
13417.00†	90.000	89.803	6458.00	6793.90	387.35	6783.87	40°14'08.601"N	104°23'23.001"W	0.00	
13517.00†	90.000	89.803	6458.00	6893.83	387.69	6883.87	40°14'08.604"N	104°23'21.712"W	0.00	
13617.00†	90.000	89.803	6458.00	6993.77	388.04	6983.87	40°14'08.607"N	104°23'20.423"W	0.00	



Planned Wellpath Report

STATE LONGHORN D14-11-12XRLNB PWP (REV-C.0)
Page 7 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 STATE LONGHORN D14-11-12XRLNB (689'FSL & 204'FWL, SEC.11)
Area	COLORADO	Well	STATE LONGHORN D14-11-12XRLNB
Field	WELD COUNTY	Wellbore	STATE LONGHORN D14-11-12XRLNB PWB
Facility	SEC.11-T03N-R63W		

WELLPATH DATA (182 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	89.803	6458.00	7093.70	388.38	7083.87	40°14'08.610"N	104°23'19.133"W	0.00	
13817.00†	90.000	89.803	6458.00	7193.63	388.72	7183.87	40°14'08.613"N	104°23'17.844"W	0.00	
13917.00†	90.000	89.803	6458.00	7293.57	389.07	7283.87	40°14'08.616"N	104°23'16.554"W	0.00	
14017.00†	90.000	89.803	6458.00	7393.50	389.41	7383.87	40°14'08.619"N	104°23'15.265"W	0.00	
14117.00†	90.000	89.803	6458.00	7493.44	389.75	7483.87	40°14'08.622"N	104°23'13.976"W	0.00	
14217.00†	90.000	89.803	6458.00	7593.37	390.10	7583.86	40°14'08.626"N	104°23'12.686"W	0.00	
14317.00†	90.000	89.803	6458.00	7693.31	390.44	7683.86	40°14'08.629"N	104°23'11.397"W	0.00	
14417.00†	90.000	89.803	6458.00	7793.24	390.78	7783.86	40°14'08.632"N	104°23'10.107"W	0.00	
14517.00†	90.000	89.803	6458.00	7893.17	391.13	7883.86	40°14'08.635"N	104°23'08.818"W	0.00	
14617.00†	90.000	89.803	6458.00	7993.11	391.47	7983.86	40°14'08.638"N	104°23'07.529"W	0.00	
14717.00†	90.000	89.803	6458.00	8093.04	391.81	8083.86	40°14'08.641"N	104°23'06.239"W	0.00	
14817.00†	90.000	89.803	6458.00	8192.98	392.15	8183.86	40°14'08.644"N	104°23'04.950"W	0.00	
14917.00†	90.000	89.803	6458.00	8292.91	392.50	8283.86	40°14'08.647"N	104°23'03.660"W	0.00	
15017.00†	90.000	89.803	6458.00	8392.85	392.84	8383.86	40°14'08.650"N	104°23'02.371"W	0.00	
15117.00†	90.000	89.803	6458.00	8492.78	393.18	8483.86	40°14'08.653"N	104°23'01.082"W	0.00	
15217.00†	90.000	89.803	6458.00	8592.71	393.53	8583.86	40°14'08.656"N	104°22'59.792"W	0.00	
15317.00†	90.000	89.803	6458.00	8692.65	393.87	8683.86	40°14'08.659"N	104°22'58.503"W	0.00	
15417.00†	90.000	89.803	6458.00	8792.58	394.21	8783.86	40°14'08.662"N	104°22'57.213"W	0.00	
15517.00†	90.000	89.803	6458.00	8892.52	394.56	8883.86	40°14'08.665"N	104°22'55.924"W	0.00	
15617.00†	90.000	89.803	6458.00	8992.45	394.90	8983.86	40°14'08.668"N	104°22'54.635"W	0.00	
15717.00†	90.000	89.803	6458.00	9092.39	395.24	9083.86	40°14'08.671"N	104°22'53.345"W	0.00	
15817.00†	90.000	89.803	6458.00	9192.32	395.58	9183.86	40°14'08.674"N	104°22'52.056"W	0.00	
15917.00†	90.000	89.803	6458.00	9292.25	395.93	9283.85	40°14'08.677"N	104°22'50.766"W	0.00	
16017.00†	90.000	89.803	6458.00	9392.19	396.27	9383.85	40°14'08.680"N	104°22'49.477"W	0.00	
16117.00†	90.000	89.803	6458.00	9492.12	396.61	9483.85	40°14'08.683"N	104°22'48.188"W	0.00	
16217.00†	90.000	89.803	6458.00	9592.06	396.96	9583.85	40°14'08.686"N	104°22'46.898"W	0.00	
16317.00†	90.000	89.803	6458.00	9691.99	397.30	9683.85	40°14'08.689"N	104°22'45.609"W	0.00	
16355.11†	90.000	89.803	6458.00	9730.08	397.43	9721.96	40°14'08.691"N	104°22'45.117"W	0.00	NIOBRARA "B" TARGET
16417.00†	90.000	89.803	6458.00	9791.93	397.64	9783.85	40°14'08.692"N	104°22'44.319"W	0.00	
16517.00†	90.000	89.803	6458.00	9891.86	397.99	9883.85	40°14'08.695"N	104°22'43.030"W	0.00	



Planned Wellpath Report

STATE LONGHORN D14-11-12XRLNB PWP (REV-C.0)
Page 8 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 STATE LONGHORN D14-11-12XRLNB (689'FSL & 204'FWL, SEC.11)
Area	COLORADO	Well	STATE LONGHORN D14-11-12XRLNB
Field	WELD COUNTY	Wellbore	STATE LONGHORN D14-11-12XRLNB PWB
Facility	SEC.11-T03N-R63W		

WELLPATH DATA (182 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16617.00†	90.000	89.803	6458.00	9991.79	398.33	9983.85	40°14'08.698"N	104°22'41.741"W	0.00	
16668.23	90.000	89.803	6458.00 ³	10042.99	398.51	10035.08	40°14'08.700"N	104°22'41.080"W	0.00	End of Tangent

HOLE & CASING SECTIONS									
- Ref Wellbore: STATE LONGHORN D14-11-12XRLNB PWB					Ref Wellpath: STATE LONGHORN D14-11-12XRLNB PWP (REV-C.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	1600.00	1583.00	17.00	1600.00	0.00	0.00	0.00	0.00
9.625in Casing Surface	17.00	1600.00	1583.00	17.00	1600.00	0.00	0.00	0.00	0.00
8.5in Open Hole	1600.00	16668.23	15068.23	1600.00	6458.00	0.00	0.00	398.51	10035.08



Planned Wellpath Report

STATE LONGHORN D14-11-12XRLNB PWP (REV-C.0)
Page 9 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 STATE LONGHORN D14-11-12XRLNB (689'FSL & 204'FWL, SEC.11)
Area	COLORADO	Well	STATE LONGHORN D14-11-12XRLNB
Field	WELD COUNTY	Wellbore	STATE LONGHORN D14-11-12XRLNB PWB
Facility	SEC.11-T03N-R63W		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.11-T03N-R63W		0.00	-64.97	503.59	3303690.97	1330126.92	40°14'04.140"N	104°24'43.980"W	polygon
SEC.12-T03N-R63W		0.00	-64.97	503.59	3303690.97	1330126.92	40°14'04.140"N	104°24'43.980"W	polygon
SEC.12-T03N-R63W HARDLINES (460'SETBACK)		6458.00	-64.97	503.59	3303690.97	1330126.92	40°14'04.140"N	104°24'43.980"W	polygon
3) STATE LONGHORN D14-11- 12XRLNB BHL REV-1 (1049'FSL & 470'FEL, SEC.12)	16668.23	6458.00	398.51	10035.08	3313215.64	1330707.06	40°14'08.700"N	104°22'41.080"W	point
STATE LONGHORN D14-11- 12XRLNB LP REV-1 (1059'FSL & 531'FWL, SEC.11)		6458.00	367.13	359.33	3303541.43	1330557.20	40°14'08.410"N	104°24'45.840"W	point
STATE LONGHORN D14-11- 12XRLNB LP REV-2 (1056'FSL & 774'FWL, SEC.11)		6458.00	367.13	570.00	3303752.08	1330559.78	40°14'08.410"N	104°24'43.124"W	point
1) STATE LONGHORN D14-11- 12XRLNB LP REV-3 (1056'FSL & 460'FWL, SEC.11)	6921.10	6458.00	367.13	288.00	3303470.11	1330556.33	40°14'08.410"N	104°24'46.760"W	point
2) STATE LONGHORN D14-11- 12XRLNB MID LP REV-1 (1070'FSL & 0'FEL, SEC.11)	11808.61	6458.00	381.83	5175.49	3308356.84	1330630.88	40°14'08.550"N	104°23'43.740"W	point
SEC.11-T03N-R63W HARDLINES (460'SETBACK)		6460.00	-64.97	503.59	3303690.97	1330126.92	40°14'04.140"N	104°24'43.980"W	polygon

SURVEY PROGRAM -				
Ref Wellbore: STATE LONGHORN D14-11-12XRLNB PWB		Ref Wellpath: STATE LONGHORN D14-11-12XRLNB PWP (REV-C.0)		
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1600.00	Custom BHI NaviTrak (Standard Rotating) (Rockies 0.03Gt model)		STATE LONGHORN D14-11-12XRLNB PWB
1600.00	16668.23	Custom BHI AutoTrak Curve (Short) (Rockies 0.03Gt model)		STATE LONGHORN D14-11-12XRLNB PWB



Planned Wellpath Report

STATE LONGHORN D14-11-12XRLNB PWP (REV-C.0)
Page 10 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#01 STATE LONGHORN D14-11-12XRLNB (689'FSL & 204'FWL, SEC.11)
Area	COLORADO	Well	STATE LONGHORN D14-11-12XRLNB
Field	WELD COUNTY	Wellbore	STATE LONGHORN D14-11-12XRLNB PWB
Facility	SEC.11-T03N-R63W		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
3606.52	11.564	303.076	3600.00	PARKMAN	
6352.17	44.848	83.380	6245.00	SHARON SPRINGS	
6442.65	52.005	84.827	6305.00	SHARON SPRINGS "A"	
6527.12	58.700	85.943	6353.00	SHARON SPRINGS "B"	
6627.43	66.661	87.079	6399.00	NIOBRARA "A" CHALK	
6642.96	67.895	87.242	6405.00	NIOBRARA "A" MARL	
6773.80	78.291	88.520	6443.00	NIOBRARA "B" CHALK	
16355.11	90.000	89.803	6458.00	NIOBRARA "B" TARGET	

DESIGN COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
17.00	0.000	303.076	17.00	Tie On	
2900.00	0.000	303.076	2900.00	End of Tangent	
3478.20	11.564	303.076	3474.29	End of Build (J)	
5675.43	11.564	303.076	5626.91	End of Tangent (J)	
6921.10	90.000	89.852	6458.00	End of 3D Arc (DBL)	
11808.61	90.000	89.803	6458.00	End of 3D Arc (DBL)	
16668.23	90.000	89.803	6458.00	End of Tangent	