

TABULA RASA ENERGY

Location: COLORADO Slot: SLOT#02 CADDELL #3 (1334'FSL & 1212'FEL, SEC.04)
Field: HUERFANO COUNTY Well: CADDELL #3
Facility: SEC.04-T29S-R69W Wellbore: CADDELL #3 PWB

Plot reference wellpath is CADDELL #3 (REV-A.0) PWP

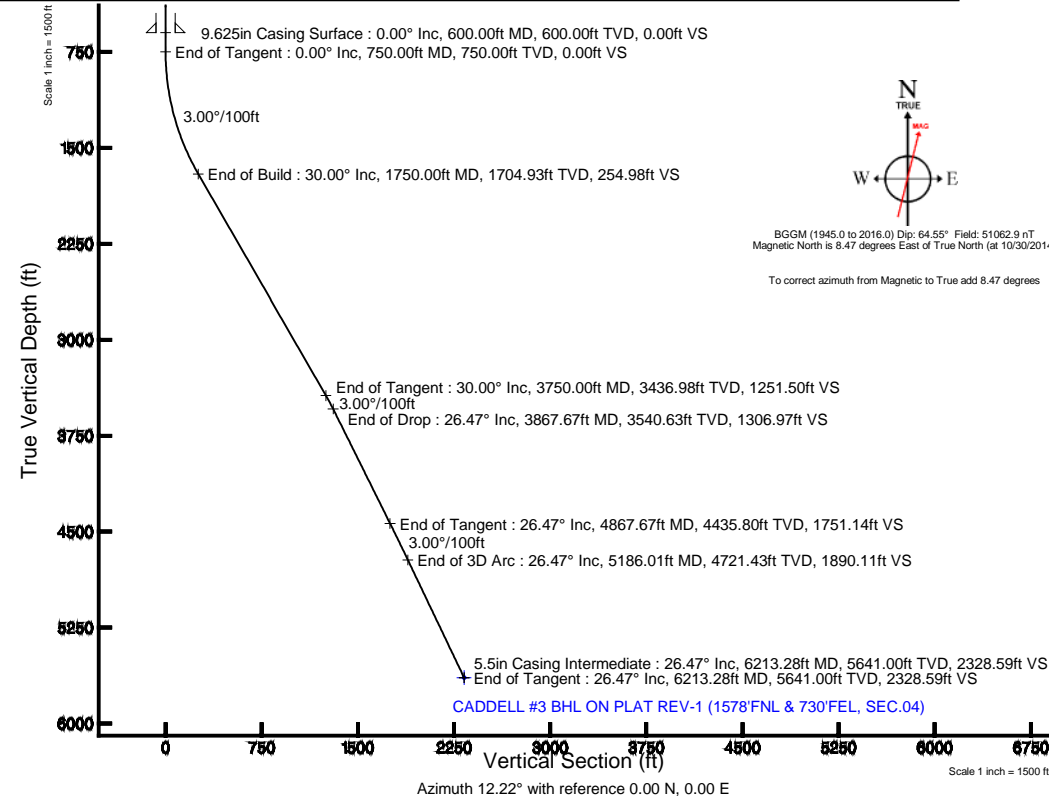
True vertical depths are referenced to RIG (RKB)	Grid System: NAD83 / Lambert Colorado SP, Southern Zone (503), US feet
Measured depths are referenced to RIG (RKB)	North Reference: True north
RIG (RKB) to Mean Sea Level: 7847 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#02 CADDELL #3 (1334'FSL & 1212'FEL, SEC.04)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: adamkat on 10/30/2014

Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.04-T29S-R69W	3112455.884	1322536.440	37°33'06.574"N	105°06'43.492"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
SLOT#02 CADDELL #3 (1334'FSL & 1212'FEL, SEC.04)	-16.79	93.09	3112549.042	1322520.037
RIG (RKB) to Mud line (At Slot: SLOT#02 CADDELL #3 (1334'FSL & 1212'FEL, SEC.04))			7847ft	
Mean Sea Level to Mud line (At Slot: SLOT#02 CADDELL #3 (1334'FSL & 1212'FEL, SEC.04))			0ft	
RIG (RKB) to Mean Sea Level			7847ft	

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
CADDELL #2 SECTION 04		0.00	16.79	-93.09	3112455.88	1322536.44	37°33'06.574"N	105°06'43.492"W
EX. HARRY WILLIS #1		0.00	1752.21	321.78	3112863.52	1324273.50	37°33'23.731"N	105°06'38.340"W
EX. HARRY WILLIS #2		0.00	1754.40	221.48	3112763.22	1324275.26	37°33'23.753"N	105°06'39.586"W
EX. CADDELL #1		0.00	-38.23	-32.45	3112516.75	1322481.67	37°33'06.030"N	105°06'42.739"W
EX. STAUDER #1		0.00	1274.88	-412.78	3112130.99	1323793.13	37°33'19.012"N	105°06'47.462"W
EX. STAUDER #2		0.00	1210.34	-344.65	3112199.38	1323728.88	37°33'18.374"N	105°06'46.616"W
CADDELL #3 BHL ON PLAT REV-1 (1578'FNL & 730'FEL, SEC.04)	6213.28	5641.00	2275.84	492.80	3113032.36	1324797.81	37°33'28.908"N	105°06'36.216"W



Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	14.00	0.000	17.000	14.00	0.00	0.00	0.00	0.00
End of Tangent	750.00	0.000	17.000	750.00	0.00	0.00	0.00	0.00
End of Build	1750.00	30.000	17.000	1704.93	244.69	74.81	3.00	254.98
End of Tangent	3750.00	30.000	17.000	3436.98	1201.00	367.18	0.00	1251.50
End of Drop	3867.67	26.470	17.000	3540.63	1254.22	383.45	3.00	1306.97
End of Tangent	4867.67	26.470	17.000	4435.80	1680.48	513.77	0.00	1751.14
End of 3D Arc	5186.01	26.471	355.472	4721.43	1819.37	528.95	3.00	1890.11
End of Tangent	6213.28	26.471	355.472	5641.00	2275.84	492.80	0.00	2328.59

Hole and Casing Sections

Name	Start MD (ft)	End MD (ft)	Interval (ft)	Start TVD (ft)	End TVD (ft)	Start Local N (ft)	Start Local E (ft)	End Local N (ft)	End Local E (ft)	Wellbore
9.625in Casing Surface	14.00	600.00	586.00	14.00	600.00	0.00	0.00	0.00	0.00	CADDELL #3 PWB
5.5in Casing Intermediate	14.00	6213.28	6199.28	14.00	5641.00	0.00	0.00	2275.84	492.80	CADDELL #3 PWB

Wellpath Comments

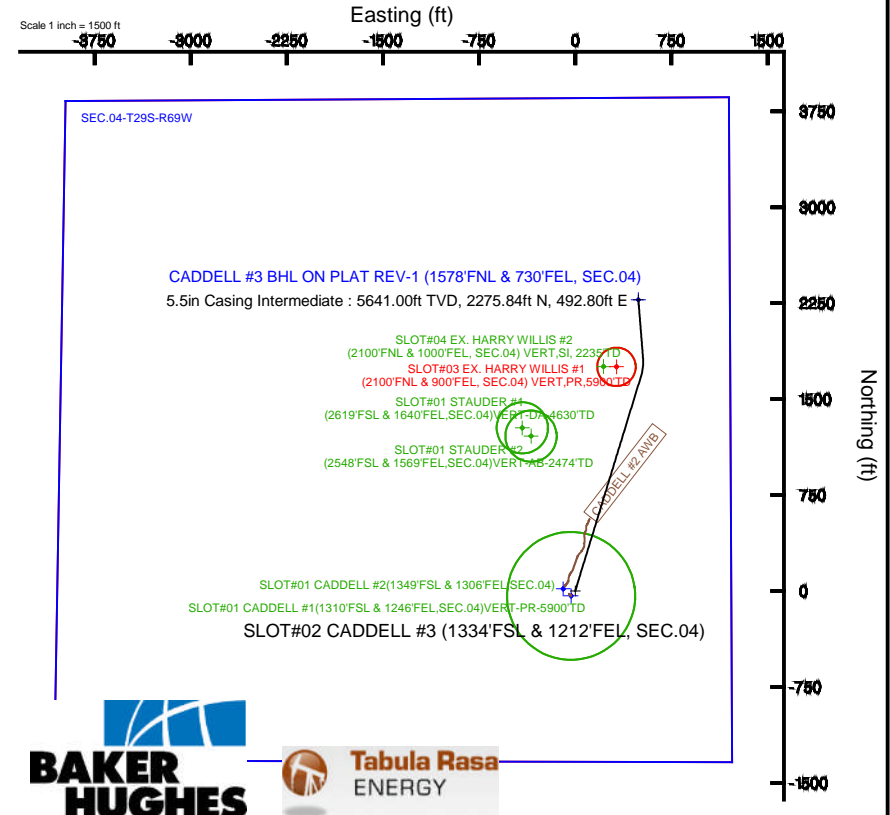
MD (ft)	X (ft)	Y (ft)	TVD (ft)	Inclination (°)	Azimuth (°)	VS (ft)	Comment
4834.38	509.44	1666.29	4406.00	26.470	17.000	1736.36	FORT HAYS
4895.80	517.24	1692.50	4461.00	26.341	15.124	1763.63	CODELL
5598.86	514.42	2002.83	5091.00	26.471	355.472	2066.33	DAKOTA
5823.40	506.52	2102.60	5292.00	26.471	355.472	2162.17	MORRISON
6213.28	492.80	2275.84	5641.00	26.471	355.472	2328.59	ENTRADA

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
6213.28	26.471	355.472	5641.00	2275.84	492.80	3113032.36	1324797.81	37°33'28.908"N	105°06'36.216"W

Survey Program

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
14.00	25000.00	NaviTrak	NaviTrak (Standard)		CADDELL #3 PWB





Planned Wellpath Report

CADDELL #3 (REV-A.0) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	TABULA RASA ENERGY	Slot	SLOT#02 CADDELL #3 (1334'FSL & 1212'FEL, SEC.04)
Area	COLORADO	Well	CADDELL #3
Field	HUERFANO COUNTY	Wellbore	CADDELL #3 PWB
Facility	SEC.04-T29S-R69W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Southern Zone (503), US feet	Software System	WellArchitect® 4.0.0
North Reference	True	User	Adamkat
Scale	0.999957	Report Generated	10/30/2014 at 1:23:57 PM
Convergence at slot	n/a	Database/Source file	WA_DENVER/CADDELL_#3_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-16.79	93.09	3112549.04	1322520.04	37°33'06.408"N	105°06'42.336"W
Facility Reference Pt			3112455.88	1322536.44	37°33'06.574"N	105°06'43.492"W
Field Reference Pt			3112455.88	1322536.44	37°33'06.574"N	105°06'43.492"W

WELLPATH DATUM

Calculation method	Minimum curvature	RIG (RKB) to Facility Vertical Datum	7847.00ft
Horizontal Reference Pt	Slot	RIG (RKB) to Mean Sea Level	7847.00ft
Vertical Reference Pt	RIG (RKB)	RIG (RKB) to Mud Line at Slot (SLOT#02 CADDELL #3 (1334'FSL & 1212'FEL, SEC.04))	7847.00ft
MD Reference Pt	RIG (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	12.22°



Planned Wellpath Report

CADDELL #3 (REV-A.0) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	TABULA RASA ENERGY	Slot	SLOT#02 CADDELL #3 (1334'FSL & 1212'FEL, SEC.04)
Area	COLORADO	Well	CADDELL #3
Field	HUERFANO COUNTY	Wellbore	CADDELL #3 PWB
Facility	SEC.04-T29S-R69W		

WELLPATH DATA (74 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00†	0.000	17.000	0.00	0.00	0.00	0.00	0.00	
14.00	0.000	17.000	14.00	0.00	0.00	0.00	0.00	Tie On
114.00†	0.000	17.000	114.00	0.00	0.00	0.00	0.00	
214.00†	0.000	17.000	214.00	0.00	0.00	0.00	0.00	
314.00†	0.000	17.000	314.00	0.00	0.00	0.00	0.00	
414.00†	0.000	17.000	414.00	0.00	0.00	0.00	0.00	
514.00†	0.000	17.000	514.00	0.00	0.00	0.00	0.00	
614.00†	0.000	17.000	614.00	0.00	0.00	0.00	0.00	
714.00†	0.000	17.000	714.00	0.00	0.00	0.00	0.00	
750.00	0.000	17.000	750.00	0.00	0.00	0.00	0.00	End of Tangent
814.00†	1.920	17.000	813.99	1.07	1.03	0.31	3.00	
914.00†	4.920	17.000	913.80	7.01	6.73	2.06	3.00	
1014.00†	7.920	17.000	1013.16	18.15	17.42	5.33	3.00	
1114.00†	10.920	17.000	1111.80	34.46	33.07	10.11	3.00	
1214.00†	13.920	17.000	1209.45	55.89	53.64	16.40	3.00	
1314.00†	16.920	17.000	1305.84	82.39	79.06	24.17	3.00	
1414.00†	19.920	17.000	1400.70	113.87	109.28	33.41	3.00	
1514.00†	22.920	17.000	1493.79	150.26	144.20	44.09	3.00	
1614.00†	25.920	17.000	1584.83	191.45	183.73	56.17	3.00	
1714.00†	28.920	17.000	1673.58	237.34	227.76	69.63	3.00	
1750.00	30.000	17.000	1704.93	254.98	244.69	74.81	3.00	End of Build
1814.00†	30.000	17.000	1760.36	286.87	275.29	84.17	0.00	
1914.00†	30.000	17.000	1846.96	336.70	323.11	98.78	0.00	
2014.00†	30.000	17.000	1933.56	386.52	370.92	113.40	0.00	
2114.00†	30.000	17.000	2020.16	436.35	418.74	128.02	0.00	
2214.00†	30.000	17.000	2106.77	486.17	466.55	142.64	0.00	
2314.00†	30.000	17.000	2193.37	536.00	514.37	157.26	0.00	
2414.00†	30.000	17.000	2279.97	585.83	562.19	171.88	0.00	
2514.00†	30.000	17.000	2366.57	635.65	610.00	186.50	0.00	
2614.00†	30.000	17.000	2453.18	685.48	657.82	201.11	0.00	
2714.00†	30.000	17.000	2539.78	735.30	705.63	215.73	0.00	
2814.00†	30.000	17.000	2626.38	785.13	753.45	230.35	0.00	
2914.00†	30.000	17.000	2712.98	834.96	801.26	244.97	0.00	
3014.00†	30.000	17.000	2799.59	884.78	849.08	259.59	0.00	
3114.00†	30.000	17.000	2886.19	934.61	896.89	274.21	0.00	
3214.00†	30.000	17.000	2972.79	984.43	944.71	288.83	0.00	
3314.00†	30.000	17.000	3059.39	1034.26	992.52	303.44	0.00	
3414.00†	30.000	17.000	3146.00	1084.09	1040.34	318.06	0.00	
3514.00†	30.000	17.000	3232.60	1133.91	1088.15	332.68	0.00	
3614.00†	30.000	17.000	3319.20	1183.74	1135.97	347.30	0.00	
3714.00†	30.000	17.000	3405.80	1233.56	1183.78	361.92	0.00	
3750.00	30.000	17.000	3436.98	1251.50	1201.00	367.18	0.00	End of Tangent
3814.00†	28.080	17.000	3492.93	1282.46	1230.70	376.26	3.00	
3867.67	26.470	17.000	3540.63	1306.97	1254.22	383.45	3.00	End of Drop
3914.00†	26.470	17.000	3582.11	1327.55	1273.97	389.49	0.00	



Planned Wellpath Report

CADDELL #3 (REV-A.0) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	TABULA RASA ENERGY	Slot	SLOT#02 CADDELL #3 (1334'FSL & 1212'FEL, SEC.04)
Area	COLORADO	Well	CADDELL #3
Field	HUERFANO COUNTY	Wellbore	CADDELL #3 PWB
Facility	SEC.04-T29S-R69W		

WELLPATH DATA (74 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
4014.00†	26.470	17.000	3671.62	1371.96	1316.60	402.52	0.00	
4114.00†	26.470	17.000	3761.14	1416.38	1359.22	415.56	0.00	
4214.00†	26.470	17.000	3850.66	1460.80	1401.85	428.59	0.00	
4314.00†	26.470	17.000	3940.17	1505.22	1444.47	441.62	0.00	
4414.00†	26.470	17.000	4029.69	1549.63	1487.10	454.65	0.00	
4514.00†	26.470	17.000	4119.21	1594.05	1529.72	467.68	0.00	
4614.00†	26.470	17.000	4208.72	1638.47	1572.35	480.72	0.00	
4714.00†	26.470	17.000	4298.24	1682.89	1614.98	493.75	0.00	
4814.00†	26.470	17.000	4387.76	1727.31	1657.60	506.78	0.00	
4834.38†	26.470	17.000	4406.00	1736.36	1666.29	509.44	0.00	FORT HAYS
4867.67	26.470	17.000	4435.80	1751.14	1680.48	513.77	0.00	End of Tangent
4895.80†	26.341	15.124	4461.00	1763.63	1692.50	517.24	3.00	CODELL
4914.00†	26.270	13.903	4477.31	1771.68	1700.31	519.26	3.00	
5014.00†	26.069	7.113	4567.08	1815.70	1743.60	527.30	3.00	
5114.00†	26.189	0.303	4656.88	1859.19	1787.48	530.13	3.00	
5186.01	26.471	355.472	4721.43	1890.11	1819.37	528.95	3.00	End of 3D Arc
5214.00†	26.471	355.472	4746.48	1902.05	1831.81	527.97	0.00	
5314.00†	26.471	355.472	4836.00	1944.74	1876.25	524.45	0.00	
5414.00†	26.471	355.472	4925.52	1987.42	1920.68	520.93	0.00	
5514.00†	26.471	355.472	5015.03	2030.11	1965.12	517.41	0.00	
5598.86†	26.471	355.472	5091.00	2066.33	2002.83	514.42	0.00	DAKOTA
5614.00†	26.471	355.472	5104.55	2072.79	2009.55	513.89	0.00	
5714.00†	26.471	355.472	5194.07	2115.47	2053.99	510.37	0.00	
5814.00†	26.471	355.472	5283.58	2158.16	2098.42	506.85	0.00	
5823.40†	26.471	355.472	5292.00	2162.17	2102.60	506.52	0.00	MORRISON
5914.00†	26.471	355.472	5373.10	2200.84	2142.86	503.33	0.00	
6014.00†	26.471	355.472	5462.61	2243.53	2187.29	499.82	0.00	
6114.00†	26.471	355.472	5552.13	2286.21	2231.73	496.30	0.00	
6213.28	26.471	355.472	5641.00 ¹	2328.59	2275.84	492.80	0.00	End of Tangent; ENTRADA

HOLE & CASING SECTIONS - Ref Wellbore: CADDELL #3 PWB Ref Wellpath: CADDELL #3 (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	14.00	600.00	586.00	14.00	600.00	0.00	0.00	0.00	0.00
5.5in Casing Intermediate	14.00	6213.28	6199.28	14.00	5641.00	0.00	0.00	2275.84	492.80



Planned Wellpath Report

CADDELL #3 (REV-A.0) PWP

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REFERENCE WELLPATH IDENTIFICATION									
Operator	TABULA RASA ENERGY				Slot	SLOT#02 CADDELL #3 (1334'FSL & 1212'FEL, SEC.04)			
Area	COLORADO				Well	CADDELL #3			
Field	HUERFANO COUNTY				Wellbore	CADDELL #3 PWB			
Facility	SEC.04-T29S-R69W								

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
CADDELL #2 SECTION 04		0.00	16.79	-93.09	3112455.88	1322536.44	37°33'06.574"N	105°06'43.492"W	polygon
EX. HARRY WILLIS #1		0.00	1752.21	321.78	3112863.52	1324273.50	37°33'23.731"N	105°06'38.340"W	circle
EX. HARRY WILLIS #2		0.00	1754.40	221.48	3112763.22	1324275.26	37°33'23.753"N	105°06'39.586"W	point
EX.CADDELL #1		0.00	-38.23	-32.45	3112516.75	1322481.67	37°33'06.030"N	105°06'42.739"W	circle
EX.STAUDER #1		0.00	1274.88	-412.78	3112130.99	1323793.13	37°33'19.012"N	105°06'47.462"W	circle
EX.STAUDER #2		0.00	1210.34	-344.65	3112199.38	1323728.88	37°33'18.374"N	105°06'46.616"W	circle
1) CADDELL #3 BHL ON PLAT REV-1 (1578'FNL & 730'FEL, SEC.04)	6213.28	5641.00	2275.84	492.80	3113032.36	1324797.81	37°33'28.908"N	105°06'36.216"W	point

SURVEY PROGRAM - Ref Wellbore: CADDELL #3 PWB Ref Wellpath: CADDELL #3 (REV-A.0) PWP									
Start MD [ft]	End MD [ft]	Positional Uncertainty Model			Log Name/Comment		Wellbore		
14.00	25000.00	NaviTrak (Standard)					CADDELL #3 PWB		



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Operator	TABULA RASA ENERGY	Slot	SLOT#02 CADDELL #3 (1334'FSL & 1212'FEL, SEC.04)
Area	COLORADO	Well	CADDELL #3
Field	HUERFANO COUNTY	Wellbore	CADDELL #3 PWB
Facility	SEC.04-T29S-R69W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
4834.38	26.470	17.000	4406.00	FORT HAYS
4895.80	26.341	15.124	4461.00	CODELL
5598.86	26.471	355.472	5091.00	DAKOTA
5823.40	26.471	355.472	5292.00	MORRISON
6213.28	26.471	355.472	5641.00	ENTRADA

DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
14.00	0.000	17.000	14.00	Tie On
750.00	0.000	17.000	750.00	End of Tangent
1750.00	30.000	17.000	1704.93	End of Build
3750.00	30.000	17.000	3436.98	End of Tangent
3867.67	26.470	17.000	3540.63	End of Drop
4867.67	26.470	17.000	4435.80	End of Tangent
5186.01	26.471	355.472	4721.43	End of 3D Arc
6213.28	26.471	355.472	5641.00	End of Tangent