

5D Plan Report**BONANZA CREEK**

Field Name: *DJ _WATTENBERG_NAD 83*
Site Name: *PRONGHORN F-17 PAD*
Well Name: *PRONGHORN 21-24-17HNB*
Plan: *PLAN 1*





Weatherford®

Plan Point Information:

DogLeg Severity Unit: °/100.00ft											
Position offsets from Slot centre											
MD	Inc	Az	TVD	+N/-S	+E/-W	VSec	DLS	Toolface	Build	Turn	
(USft)	(°)	(°)	(USft)	(USft)	(USft)	(USft)	(DLSU)	(°)	(DLSU)	(DLSU)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.00	
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.0	0.00	0.00	
1799.87	16.00	67.80	1789.52	41.91	102.72	-53.10	2.00	67.8	2.00	0.00	
4212.25	16.00	67.80	4108.48	293.09	718.29	-371.33	0.00	0.0	0.00	0.00	
5012.13	0.00	0.00	4898.00	335.00	821.01	-424.43	2.00	180.0	-2.00	0.00	
5639.88	0.00	0.00	5525.75	335.00	821.01	-424.43	0.00	0.0	0.00	0.00	
6321.70	75.00	179.96	6028.87	-51.06	821.28	-40.81	11.00	180.0	11.00	0.00	
6421.70	75.00	179.96	6054.76	-147.65	821.35	55.18	0.00	0.0	0.00	0.00	
6558.06	90.00	179.96	6072.50	-282.46	821.44	189.14	11.00	360.0	11.00	-0.00	
10803.79	90.00	179.96	6072.50	-4528.19	824.45	4408.07	0.00	0.0	0.00	0.00	

Target Set Information:

Name: PRONGHORN 21-24-17HNB

Name	TVD	Lat	Long
	(USft)	(°)	(°)
PBHL	6072.50	40.395130	-104.235660

Casing Point Information:

Name	MD	TVD
	(USft)	(USft)
7 in	6558.06	6072.50

Plan Data for PRONGHORN 21-24-17HNB

Field: DJ_WATTENBERG_NAD 83

Map Unit: USFt Vertical Reference Datum (VRD): Mean Sea Level
Projected Coordinate System: NAD83 / Colorado North (ftUS)

Site: PRONGHORN F-17 PAD

Unit: USFeet TVD Reference:

Company Name: BONANZA CREEK

Position: Northing: 1393852.86USft Latitude: 40.407670°

Easting: 3351255.81USft Longitude: -104.238620°

North Reference: True Grid Convergence: 0.82°

Elevation Above VRD: 4592.00USft

Slot: PRONGHORN 21-24-17HNB

Position:

Offset is from Site centre

+N/-S: -40.08USft Northing: 1393812.79USft Latitude: 40.407560°

+E/-W: 0.00USft Easting: 3351256.38USft Longitude: -104.238620°

Elevation Above VRD: 4592.00USft

Well: PRONGHORN 21-24-17HNB

Type: Main-Well

File Number:

Vertical Section: Position offset of origin from Slot centre:

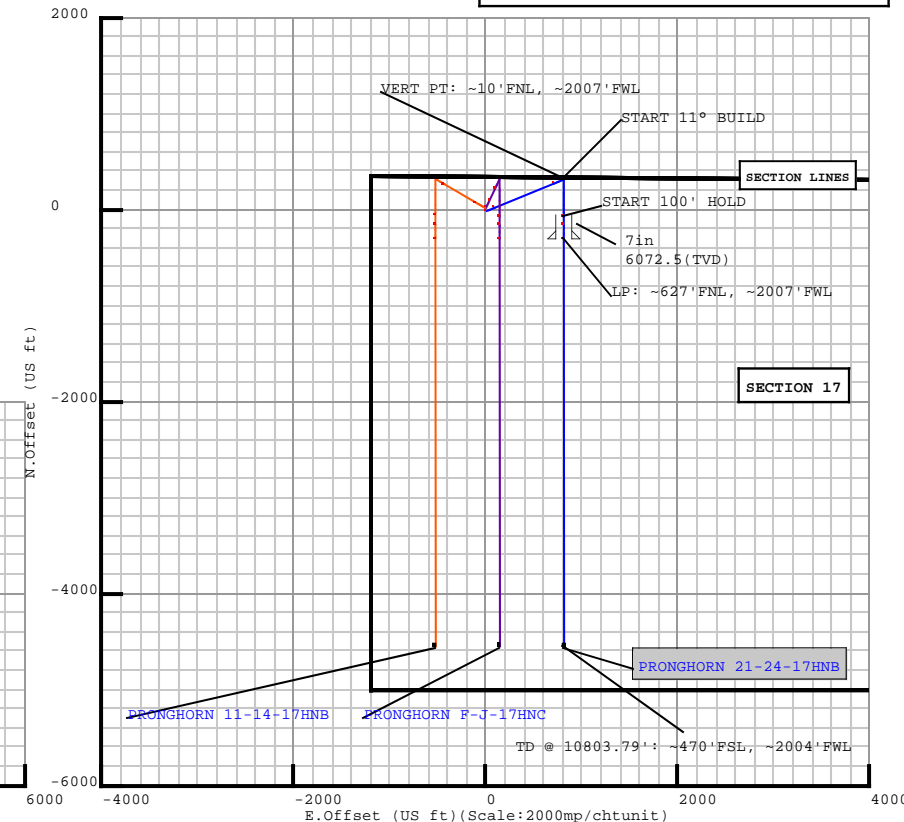
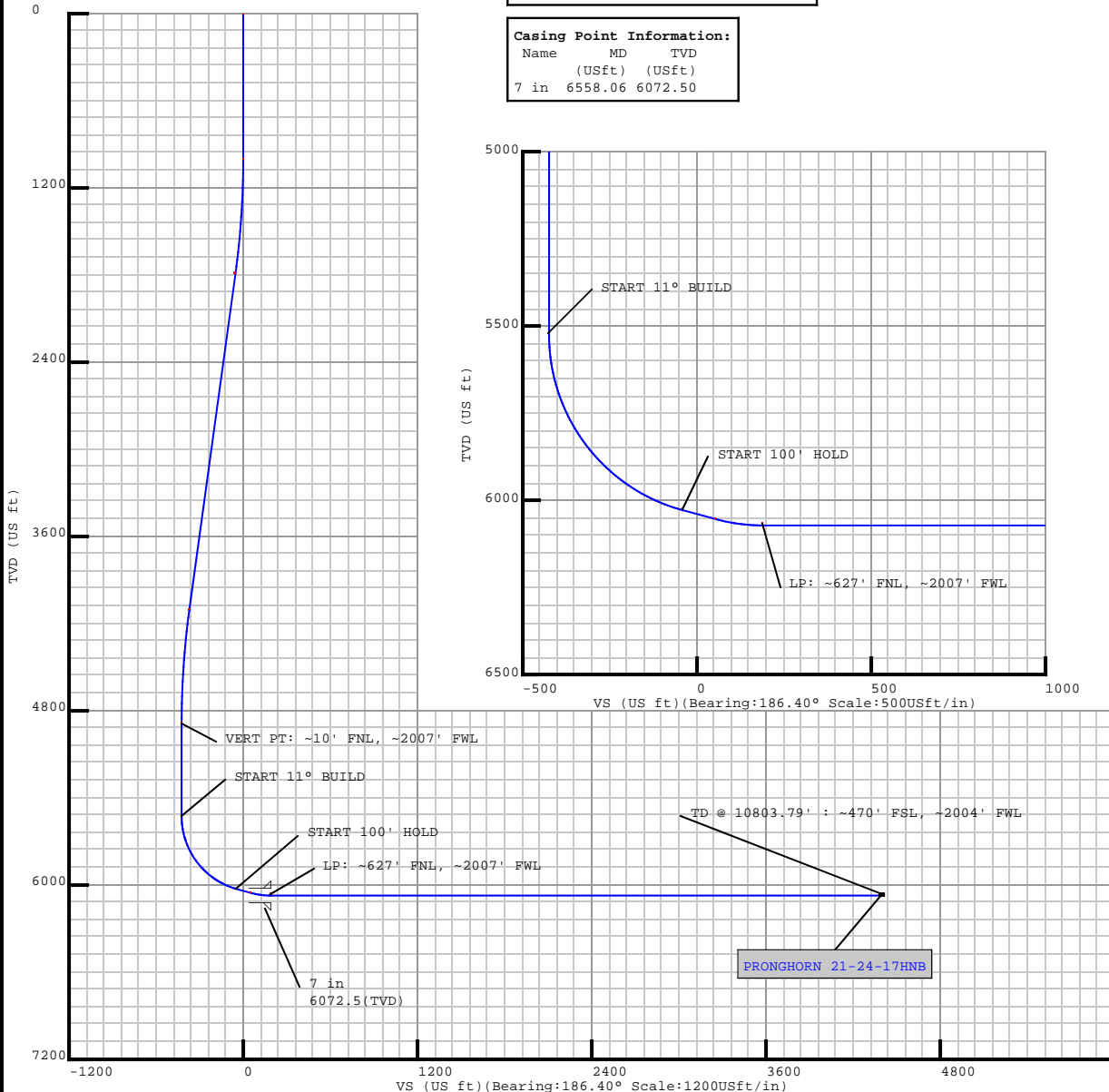
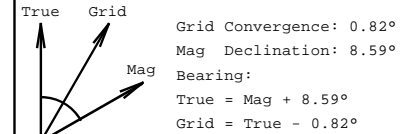
+N/-S: 40.08USft Azimuth: 186.40°

+E/-W: -0.00USft

Magnetic Parameters:

Model: Field Strength: Declination: Dip: Date:

BGGM 52606(nT) 8.59° 66.62° 2014-01-10



Plan Surveys for the PRONGHORN 21-24-17HNB

Site Name PRONGHORN F-17 PAD	Units : US ft	North Reference : True	Convergence Angle : 0.82
	Position	Northing : 1393852.86 US ft	Latitude : 40.407670
		Easting : 3351255.81 US ft	Longitude : -104.238620
	Elevation above: 4592.00 US ft Comment :		
Slot Name PRONGHORN 21-24-17HNB	Position (Offsets relative to Site Centre)		
	+N / -S : -40.08 US ft	Northing : 1393812.79 US ft	Latitude : 40.407560
	+E / -W : 0.00 US ft	Easting : 3351256.38 US ft	Longitude : -104.238620
	Slot TVD Reference : Ground Elevation Elevation above : 4592.00 US ft Comment :		
Well Name PRONGHORN 21-24-17HNB	Type : Main well	UWI :	Plan : PLAN 1
	Rig Height <i>Drill Floor</i> : 16.50 US ft	Comment :	
	Relative to : 4608.50 US ft		
	Closure Distance : 4602.64 US ft	Closure Azimuth : 169.681°	
	Vertical Section (Position of Origin Relative to Slot)		
	+N / -S : 40.08 US ft	+E / -W : -0.00 US ft	Az : 169.77°
	Magnetic Parameters		
	Model : BGGM	Field Strength : 52606.3nT	Dec : 8.59°
			Dip : 66.62°
			Date : 10/Jan/2014

Target Set**Name :** PRONGHORN 21-24-17HNB**Number of Targets :** 1**Comment :**

TargetName:	Position (Relative to centre)				
PBHL	+N / -S : -4528.19US ft		Northing : 1389296.78 US ft		
	+E / -W : 824.45 US ft		Easting : 3352145.15US ft		
Shape:	Latitude : 40°23'42.468000"				
Cuboid	Longitude : -104°14'8.376000"				
	TVD (Drill Floor) : 6072.50 US ft				
	Orientation	Azimuth : 0.00°		Inclination : 0.00°	
	Dimensions	Length : 20.00 US ft		Breadth : 20.00 US ft	
			Height : 20.00 US ft		

Casing Points (Relative to centre, TVD relative to Drill Floor)

Name	MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Latitude (°)	Longitude (°)
7 in	6558.06	90.00	179.96	6072.50	-282.46	821.44	40.406785	-104.235670

Well path created using minimum curvature**Salient Points (Relative to centre, TVD relative to Drill Floor)**

MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Latitude (°)	Longitude (°)	DLS (°/100 US ft)	T.Face (°)	VS (US ft)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	40.407560	-104.238620	0.00	0.00	39.44	
1000.00	0.00	0.00	1000.00	0.00	0.00	40.407560	-104.238620	0.00	0.00	39.44	
1799.87	16.00	67.80	1789.52	41.91	102.72	40.407675	-104.238251	2.00	67.80	16.44	
4212.25	16.00	67.80	4108.48	293.09	718.29	40.408364	-104.236041	0.00	0.00	-121.42	
5012.13	0.00	0.00	4898.00	335.00	821.01	40.408480	-104.235672	2.00	180.00	-144.42	VERT PT: ~10' FNL, ~2007' FWL
5639.88	0.00	0.00	5525.75	335.00	821.01	40.408480	-104.235672	0.00	0.00	-144.42	START 11° BUILD
6321.70	75.00	179.96	6028.87	-51.06	821.28	40.407420	-104.235671	11.00	179.96	235.55	START 100' HOLD
6421.70	75.00	179.96	6054.76	-147.65	821.35	40.407155	-104.235671	0.00	0.00	330.62	
6558.06	90.00	179.96	6072.50	-282.46	821.44	40.406785	-104.235670	11.00	360.00	463.30	LP: ~627' FNL, ~2007' FWL; 7 in
10803.79	90.00	179.96	6072.50	-4528.19	824.45	40.395130	-104.235660	0.00	0.00	4642.07	TD @ 10803.79' : ~470' FSL, ~2004' FWL

Interpolated Points (Relative to centre, TVD relative to Drill Floor)

MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	DLS (°/100 US ft)	T.Face (°)	VS (US ft)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.44	

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Interpolated Points (Relative to centre, TVD relative to Drill Floor)									
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	DLS (°/100 US ft)	T.Face (°)	VS (US ft)	Comment
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	39.44	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	39.44	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	39.44	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	39.44	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	39.44	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	39.44	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	39.44	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	39.44	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	39.44	
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	39.44	
1100.00	2.00	67.80	1099.98	0.66	1.62	2.00	67.80	39.08	
1200.00	4.00	67.80	1199.84	2.64	6.46	2.00	0.00	37.99	
1300.00	6.00	67.80	1299.45	5.93	14.53	2.00	0.00	36.19	
1400.00	8.00	67.80	1398.70	10.53	25.81	2.00	0.00	33.66	
1500.00	10.00	67.80	1497.47	16.44	40.30	2.00	0.00	30.42	
1600.00	12.00	67.80	1595.62	23.65	57.96	2.00	0.00	26.46	
1700.00	14.00	67.80	1693.06	32.15	78.79	2.00	0.00	21.80	
1799.87	16.00	67.80	1789.52	41.91	102.72	2.00	0.00	16.44	
1800.00	16.00	67.80	1789.64	41.93	102.75	0.00	0.00	16.43	
1900.00	16.00	67.80	1885.77	52.34	128.27	0.00	0.00	10.71	
2000.00	16.00	67.80	1981.90	62.75	153.79	0.00	0.00	5.00	
2100.00	16.00	67.80	2078.03	73.16	179.30	0.00	0.00	-0.71	
2200.00	16.00	67.80	2174.15	83.57	204.82	0.00	0.00	-6.43	
2300.00	16.00	67.80	2270.28	93.99	230.34	0.00	0.00	-12.14	
2400.00	16.00	67.80	2366.41	104.40	255.85	0.00	0.00	-17.86	
2500.00	16.00	67.80	2462.53	114.81	281.37	0.00	0.00	-23.57	
2600.00	16.00	67.80	2558.66	125.22	306.89	0.00	0.00	-29.29	
2700.00	16.00	67.80	2654.79	135.63	332.41	0.00	0.00	-35.00	
2800.00	16.00	67.80	2750.92	146.05	357.92	0.00	0.00	-40.72	
2900.00	16.00	67.80	2847.04	156.46	383.44	0.00	0.00	-46.43	
3000.00	16.00	67.80	2943.17	166.87	408.96	0.00	0.00	-52.15	
3100.00	16.00	67.80	3039.30	177.28	434.47	0.00	0.00	-57.86	
3200.00	16.00	67.80	3135.43	187.69	459.99	0.00	0.00	-63.57	
3300.00	16.00	67.80	3231.55	198.10	485.51	0.00	0.00	-69.29	
3400.00	16.00	67.80	3327.68	208.52	511.03	0.00	0.00	-75.00	
3500.00	16.00	67.80	3423.81	218.93	536.54	0.00	0.00	-80.72	
3600.00	16.00	67.80	3519.94	229.34	562.06	0.00	0.00	-86.43	
3700.00	16.00	67.80	3616.06	239.75	587.58	0.00	0.00	-92.15	
3800.00	16.00	67.80	3712.19	250.16	613.09	0.00	0.00	-97.86	
3900.00	16.00	67.80	3808.32	260.58	638.61	0.00	0.00	-103.58	
4000.00	16.00	67.80	3904.45	270.99	664.13	0.00	0.00	-109.29	

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Interpolated Points (Relative to centre, TVD relative to Drill Floor)									
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	DLS (°/100 US ft)	T.Face (°)	VS (US ft)	Comment
4100.00	16.00	67.80	4000.57	281.40	689.64	0.00	0.00	-115.00	
4200.00	16.00	67.80	4096.70	291.81	715.16	0.00	0.00	-120.72	
4212.25	16.00	67.80	4108.48	293.09	718.29	0.00	0.00	-121.42	
4300.00	14.24	67.80	4193.18	301.73	739.48	2.00	180.00	-126.16	
4400.00	12.24	67.80	4290.52	310.39	760.69	2.00	180.00	-130.91	
4500.00	10.24	67.80	4388.60	317.75	778.74	2.00	180.00	-134.96	
4600.00	8.24	67.80	4487.29	323.82	793.61	2.00	180.00	-138.29	
4700.00	6.24	67.80	4586.49	328.58	805.28	2.00	180.00	-140.90	
4800.00	4.24	67.80	4686.07	332.03	813.74	2.00	180.00	-142.80	
4900.00	2.24	67.80	4785.90	334.17	818.98	2.00	180.00	-143.97	
5000.00	0.24	67.80	4885.87	334.99	820.98	2.00	180.00	-144.42	
5012.13	0.00	0.00	4898.00	335.00	821.01	2.00	180.00	-144.42	VERT PT: ~10' FNL, ~2007' FWL
5100.00	0.00	0.00	4985.87	335.00	821.01	0.00	0.00	-144.42	
5200.00	0.00	0.00	5085.87	335.00	821.01	0.00	0.00	-144.42	
5300.00	0.00	0.00	5185.87	335.00	821.01	0.00	0.00	-144.42	
5400.00	0.00	0.00	5285.87	335.00	821.01	0.00	0.00	-144.42	
5500.00	0.00	0.00	5385.87	335.00	821.01	0.00	0.00	-144.42	
5600.00	0.00	0.00	5485.87	335.00	821.01	0.00	0.00	-144.42	
5639.88	0.00	0.00	5525.75	335.00	821.01	0.00	0.00	-144.42	START 11° BUILD
5700.00	6.61	179.96	5585.74	331.53	821.01	11.00	179.96	-141.01	
5800.00	17.61	179.96	5683.36	310.58	821.03	11.00	0.00	-120.39	
5900.00	28.61	179.96	5775.19	271.39	821.05	11.00	0.00	-81.81	
6000.00	39.61	179.96	5857.86	215.39	821.09	11.00	0.00	-26.70	
6100.00	50.61	179.96	5928.32	144.65	821.14	11.00	0.00	42.93	
6200.00	61.61	179.96	5983.99	61.76	821.20	11.00	0.00	124.51	
6300.00	72.61	179.96	6022.82	-30.23	821.26	11.00	0.00	215.04	
6321.70	75.00	179.96	6028.87	-51.06	821.28	11.00	0.00	235.55	START 100' HOLD
6400.00	75.00	179.96	6049.14	-126.70	821.33	0.00	0.00	309.99	
6421.70	75.00	179.96	6054.76	-147.65	821.35	0.00	0.00	330.62	
6500.00	83.61	179.96	6069.27	-224.52	821.40	11.00	360.00	406.28	
6558.06	90.00	179.96	6072.50	-282.46	821.44	11.00	360.00	463.30	LP: ~627' FNL, ~2007' FWL; 7 in
6600.00	90.00	179.96	6072.50	-324.40	821.47	0.00	0.00	504.58	
6700.00	90.00	179.96	6072.50	-424.40	821.54	0.00	0.00	603.00	
6800.00	90.00	179.96	6072.50	-524.40	821.61	0.00	0.00	701.43	
6900.00	90.00	179.96	6072.50	-624.40	821.68	0.00	0.00	799.85	
7000.00	90.00	179.96	6072.50	-724.40	821.75	0.00	0.00	898.27	
7100.00	90.00	179.96	6072.50	-824.40	821.82	0.00	0.00	996.69	
7200.00	90.00	179.96	6072.50	-924.40	821.89	0.00	0.00	1095.12	
7300.00	90.00	179.96	6072.50	-1024.40	821.97	0.00	0.00	1193.54	
7400.00	90.00	179.96	6072.50	-1124.40	822.04	0.00	0.00	1291.96	

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Interpolated Points (Relative to centre, TVD relative to Drill Floor)									
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	DLS (°/100 US ft)	T.Face (°)	VS (US ft)	Comment
7500.00	90.00	179.96	6072.50	-1224.40	822.11	0.00	0.00	1390.39	
7600.00	90.00	179.96	6072.50	-1324.40	822.18	0.00	0.00	1488.81	
7700.00	90.00	179.96	6072.50	-1424.40	822.25	0.00	0.00	1587.23	
7800.00	90.00	179.96	6072.50	-1524.40	822.32	0.00	0.00	1685.65	
7900.00	90.00	179.96	6072.50	-1624.40	822.39	0.00	0.00	1784.08	
8000.00	90.00	179.96	6072.50	-1724.40	822.46	0.00	0.00	1882.50	
8100.00	90.00	179.96	6072.50	-1824.40	822.53	0.00	0.00	1980.92	
8200.00	90.00	179.96	6072.50	-1924.40	822.60	0.00	0.00	2079.35	
8300.00	90.00	179.96	6072.50	-2024.40	822.67	0.00	0.00	2177.77	
8400.00	90.00	179.96	6072.50	-2124.40	822.74	0.00	0.00	2276.19	
8500.00	90.00	179.96	6072.50	-2224.40	822.82	0.00	0.00	2374.61	
8600.00	90.00	179.96	6072.50	-2324.40	822.89	0.00	0.00	2473.04	
8700.00	90.00	179.96	6072.50	-2424.40	822.96	0.00	0.00	2571.46	
8800.00	90.00	179.96	6072.50	-2524.40	823.03	0.00	0.00	2669.88	
8900.00	90.00	179.96	6072.50	-2624.40	823.10	0.00	0.00	2768.31	
9000.00	90.00	179.96	6072.50	-2724.40	823.17	0.00	0.00	2866.73	
9100.00	90.00	179.96	6072.50	-2824.40	823.24	0.00	0.00	2965.15	
9200.00	90.00	179.96	6072.50	-2924.40	823.31	0.00	0.00	3063.57	
9300.00	90.00	179.96	6072.50	-3024.40	823.38	0.00	0.00	3162.00	
9400.00	90.00	179.96	6072.50	-3124.40	823.45	0.00	0.00	3260.42	
9500.00	90.00	179.96	6072.50	-3224.40	823.52	0.00	0.00	3358.84	
9600.00	90.00	179.96	6072.50	-3324.40	823.59	0.00	0.00	3457.26	
9700.00	90.00	179.96	6072.50	-3424.40	823.67	0.00	0.00	3555.69	
9800.00	90.00	179.96	6072.50	-3524.40	823.74	0.00	0.00	3654.11	
9900.00	90.00	179.96	6072.50	-3624.40	823.81	0.00	0.00	3752.53	
10000.00	90.00	179.96	6072.50	-3724.40	823.88	0.00	0.00	3850.96	
10100.00	90.00	179.96	6072.50	-3824.40	823.95	0.00	0.00	3949.38	
10200.00	90.00	179.96	6072.50	-3924.40	824.02	0.00	0.00	4047.80	
10300.00	90.00	179.96	6072.50	-4024.40	824.09	0.00	0.00	4146.22	
10400.00	90.00	179.96	6072.50	-4124.40	824.16	0.00	0.00	4244.65	
10500.00	90.00	179.96	6072.50	-4224.40	824.23	0.00	0.00	4343.07	
10600.00	90.00	179.96	6072.50	-4324.40	824.30	0.00	0.00	4441.49	
10700.00	90.00	179.96	6072.50	-4424.40	824.37	0.00	0.00	4539.92	
10800.00	90.00	179.96	6072.50	-4524.40	824.44	0.00	0.00	4638.34	
10803.79	90.00	179.96	6072.50	-4528.19	824.45	0.00	0.00	4642.07	TD @ 10803.79' : ~470' FSL, ~2004' FWL