

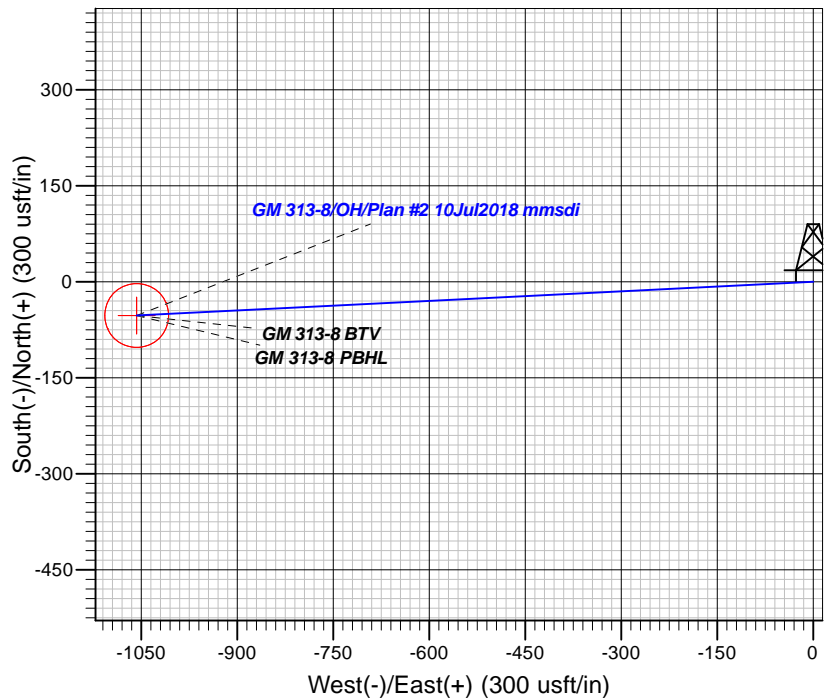
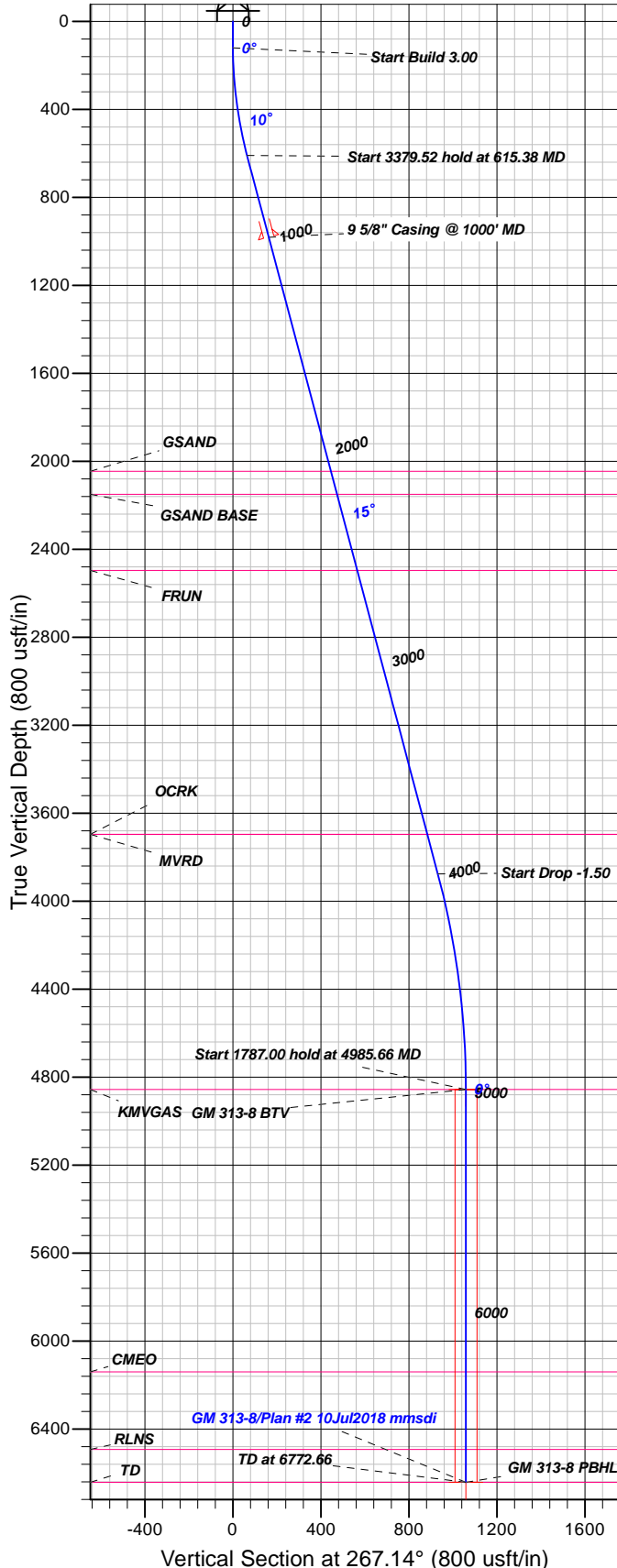


Azimuths to True North
Magnetic North: 9.52°

Magnetic Field
Strength: 51679.1nT
Dip Angle: 65.68°
Date: 6/21/2018
Model: HDGM

Well Details: GM 313-8

GL 6280' & RKB 24' @ 6304.00usft
+N/-S 0.00 +E/-W 0.00 Northing 1599869.22 Easting 2256695.95 Latitude 39.4508413 Longitude -108.1326371 Slot GM 313-8 (B10)



FORMATION TOP DETAILS

TVDP	MD	Formation
2046.00	2101.24	GSAND
2151.00	2209.87	GSAND BASE
2496.00	2566.81	FRUN
3696.00	3808.34	MVRD
3696.00	3808.34	OCRK
4856.00	4985.66	KMVGAS
6140.00	6269.66	CMEO
6493.00	6622.66	RLNS
6643.00	6772.66	TD

Plan: Plan #2 10Jul2018 mmsdi

12:05, July 10 2018
Created By: Mel Mireles

PROJECT DETAILS: Garfield County, CO NAD83

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Central Zone

System Datum: Mean Sea Level

CASING DETAILS

TVD	MD	Name	Size
981.60	1000.00	5/8" Casing @ 1000' MD	9.62

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	
3	615.38	14.86	267.14	609.84	-3.18	-63.81	3.00	267.14	63.89	
4	3994.90	14.86	267.14	3876.32	-46.38	-929.51	0.00	0.00	930.67	
5	4985.66	0.00	0.00	4856.00	-52.75	-1057.13	1.50	180.00	1058.44	GM 313-8 BTV
6	6772.66	0.00	0.00	6643.00	-52.75	-1057.13	0.00	0.00	1058.44	GM 313-8 PBHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
GM 313-8 BTV	4856.00	-52.75	-1057.13	1599847.12	2255637.74	39.4506964	-108.1363807	Circle (Radius: 50.00)
- plan hits target center								
GM 313-8 PBHL	6643.00	-52.75	-1057.13	1599847.12	2255637.74	39.4506964	-108.1363807	Point
- plan hits target center								



TEP Rocky Mountain LLC

Garfield County, CO NAD83

GV 1-8 Pad

GM 313-8 - Slot GM 313-8 (B10)

OH

Plan: Plan #2 10Jul2018 mmsdi

Standard Planning Report

10 July, 2018



Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 313-8 - Slot GM 313-8 (B10)
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 6280' & RKB 24' @ 6304.00usft
Project:	Garfield County, CO NAD83	MD Reference:	GL 6280' & RKB 24' @ 6304.00usft
Site:	GV 1-8 Pad	North Reference:	True
Well:	GM 313-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 10Jul2018 mmsdi		

Project	Garfield County, CO NAD83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site	GV 1-8 Pad				
Site Position:		Northing:	1,599,836.41 usft	Latitude:	39.4507498
From:	Map	Easting:	2,256,677.81 usft	Longitude:	-108.1326980
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	-1.66

Well	GM 313-8 - Slot GM 313-8 (B10)					
Well Position	+N/-S	33.32 usft	Northing:	1,599,869.22 usft	Latitude:	39.4508413
	+E/-W	17.18 usft	Easting:	2,256,695.95 usft	Longitude:	-108.1326372
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,280.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	6/21/2018	9.52	65.68	51,679

Design	Plan #2 10Jul2018 mmsdi			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	267.14

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00	
615.38	14.86	267.14	609.84	-3.18	-63.81	3.00	3.00	0.00	267.14	
3,994.90	14.86	267.14	3,876.32	-46.38	-929.51	0.00	0.00	0.00	0.00	
4,985.66	0.00	0.00	4,856.00	-52.75	-1,057.13	1.50	-1.50	0.00	180.00	GM 313-8 BTV
6,772.66	0.00	0.00	6,643.00	-52.75	-1,057.13	0.00	0.00	0.00	0.00	GM 313-8 PBHL

Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 313-8 - Slot GM 313-8 (B10)
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 6280' & RKB 24' @ 6304.00usft
Project:	Garfield County, CO NAD83	MD Reference:	GL 6280' & RKB 24' @ 6304.00usft
Site:	GV 1-8 Pad	North Reference:	True
Well:	GM 313-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 10Jul2018 mmsdi		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 3.00									
200.00	2.40	267.14	199.98	-0.08	-1.67	1.68	3.00	3.00	0.00
300.00	5.40	267.14	299.73	-0.42	-8.47	8.48	3.00	3.00	0.00
400.00	8.40	267.14	399.00	-1.02	-20.46	20.49	3.00	3.00	0.00
500.00	11.40	267.14	497.50	-1.88	-37.63	37.68	3.00	3.00	0.00
600.00	14.40	267.14	594.96	-2.99	-59.93	60.00	3.00	3.00	0.00
615.38	14.86	267.14	609.84	-3.18	-63.81	63.89	3.00	3.00	0.00
Start 3379.52 hold at 615.38 MD									
700.00	14.86	267.14	691.63	-4.27	-85.48	85.59	0.00	0.00	0.00
800.00	14.86	267.14	788.29	-5.54	-111.10	111.24	0.00	0.00	0.00
900.00	14.86	267.14	884.94	-6.82	-136.72	136.89	0.00	0.00	0.00
1,000.00	14.86	267.14	981.60	-8.10	-162.33	162.53	0.00	0.00	0.00
9 5/8" Casing @ 1000' MD									
1,100.00	14.86	267.14	1,078.25	-9.38	-187.95	188.18	0.00	0.00	0.00
1,200.00	14.86	267.14	1,174.91	-10.66	-213.56	213.83	0.00	0.00	0.00
1,300.00	14.86	267.14	1,271.56	-11.94	-239.18	239.48	0.00	0.00	0.00
1,400.00	14.86	267.14	1,368.22	-13.21	-264.80	265.13	0.00	0.00	0.00
1,500.00	14.86	267.14	1,464.87	-14.49	-290.41	290.77	0.00	0.00	0.00
1,600.00	14.86	267.14	1,561.53	-15.77	-316.03	316.42	0.00	0.00	0.00
1,700.00	14.86	267.14	1,658.18	-17.05	-341.65	342.07	0.00	0.00	0.00
1,800.00	14.86	267.14	1,754.84	-18.33	-367.26	367.72	0.00	0.00	0.00
1,900.00	14.86	267.14	1,851.49	-19.61	-392.88	393.37	0.00	0.00	0.00
2,000.00	14.86	267.14	1,948.15	-20.88	-418.49	419.02	0.00	0.00	0.00
2,100.00	14.86	267.14	2,044.80	-22.16	-444.11	444.66	0.00	0.00	0.00
2,101.24	14.86	267.14	2,046.00	-22.18	-444.43	444.98	0.00	0.00	0.00
GSAND									
2,200.00	14.86	267.14	2,141.46	-23.44	-469.73	470.31	0.00	0.00	0.00
2,209.87	14.86	267.14	2,151.00	-23.57	-472.26	472.84	0.00	0.00	0.00
GSAND BASE									
2,300.00	14.86	267.14	2,238.11	-24.72	-495.34	495.96	0.00	0.00	0.00
2,400.00	14.86	267.14	2,334.77	-26.00	-520.96	521.61	0.00	0.00	0.00
2,500.00	14.86	267.14	2,431.42	-27.28	-546.58	547.26	0.00	0.00	0.00
2,566.81	14.86	267.14	2,496.00	-28.13	-563.69	564.39	0.00	0.00	0.00
FRUN									
2,600.00	14.86	267.14	2,528.08	-28.55	-572.19	572.90	0.00	0.00	0.00
2,700.00	14.86	267.14	2,624.73	-29.83	-597.81	598.55	0.00	0.00	0.00
2,800.00	14.86	267.14	2,721.39	-31.11	-623.42	624.20	0.00	0.00	0.00
2,900.00	14.86	267.14	2,818.04	-32.39	-649.04	649.85	0.00	0.00	0.00
3,000.00	14.86	267.14	2,914.70	-33.67	-674.66	675.50	0.00	0.00	0.00
3,100.00	14.86	267.14	3,011.35	-34.94	-700.27	701.14	0.00	0.00	0.00
3,200.00	14.86	267.14	3,108.01	-36.22	-725.89	726.79	0.00	0.00	0.00
3,300.00	14.86	267.14	3,204.66	-37.50	-751.51	752.44	0.00	0.00	0.00
3,400.00	14.86	267.14	3,301.32	-38.78	-777.12	778.09	0.00	0.00	0.00
3,500.00	14.86	267.14	3,397.97	-40.06	-802.74	803.74	0.00	0.00	0.00
3,600.00	14.86	267.14	3,494.63	-41.34	-828.35	829.38	0.00	0.00	0.00
3,700.00	14.86	267.14	3,591.28	-42.61	-853.97	855.03	0.00	0.00	0.00
3,800.00	14.86	267.14	3,687.94	-43.89	-879.59	880.68	0.00	0.00	0.00
3,808.34	14.86	267.14	3,696.00	-44.00	-881.72	882.82	0.00	0.00	0.00
OCRK - MVRD									
3,900.00	14.86	267.14	3,784.59	-45.17	-905.20	906.33	0.00	0.00	0.00

Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 313-8 - Slot GM 313-8 (B10)
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 6280' & RKB 24' @ 6304.00usft
Project:	Garfield County, CO NAD83	MD Reference:	GL 6280' & RKB 24' @ 6304.00usft
Site:	GV 1-8 Pad	North Reference:	True
Well:	GM 313-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 10Jul2018 mmsdi		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
3,994.90	14.86	267.14	3,876.32	-46.38	-929.51	930.67	0.00	0.00	0.00	
Start Drop -1.50										
4,000.00	14.78	267.14	3,881.25	-46.45	-930.82	931.97	1.50	-1.50	0.00	
4,100.00	13.28	267.14	3,978.26	-47.66	-955.04	956.22	1.50	-1.50	0.00	
4,200.00	11.78	267.14	4,075.87	-48.74	-976.71	977.93	1.50	-1.50	0.00	
4,300.00	10.28	267.14	4,174.02	-49.69	-995.83	997.07	1.50	-1.50	0.00	
4,400.00	8.78	267.14	4,272.64	-50.52	-1,012.37	1,013.63	1.50	-1.50	0.00	
4,500.00	7.28	267.14	4,371.65	-51.22	-1,026.33	1,027.61	1.50	-1.50	0.00	
4,600.00	5.78	267.14	4,471.00	-51.78	-1,037.70	1,038.99	1.50	-1.50	0.00	
4,700.00	4.28	267.14	4,570.61	-52.22	-1,046.46	1,047.76	1.50	-1.50	0.00	
4,800.00	2.78	267.14	4,670.42	-52.53	-1,052.62	1,053.93	1.50	-1.50	0.00	
4,900.00	1.28	267.14	4,770.35	-52.70	-1,056.17	1,057.48	1.50	-1.50	0.00	
4,985.66	0.00	0.00	4,856.00	-52.75	-1,057.13	1,058.44	1.50	-1.50	108.41	
Start 1787.00 hold at 4985.66 MD - KMGAS - GM 313-8 BTV										
5,000.00	0.00	0.00	4,870.34	-52.75	-1,057.13	1,058.44	0.00	0.00	0.00	
5,100.00	0.00	0.00	4,970.34	-52.75	-1,057.13	1,058.44	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,070.34	-52.75	-1,057.13	1,058.44	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,170.34	-52.75	-1,057.13	1,058.44	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,270.34	-52.75	-1,057.13	1,058.44	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,370.34	-52.75	-1,057.13	1,058.44	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,470.34	-52.75	-1,057.13	1,058.44	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,570.34	-52.75	-1,057.13	1,058.44	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,670.34	-52.75	-1,057.13	1,058.44	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,770.34	-52.75	-1,057.13	1,058.44	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,870.34	-52.75	-1,057.13	1,058.44	0.00	0.00	0.00	
6,100.00	0.00	0.00	5,970.34	-52.75	-1,057.13	1,058.44	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,070.34	-52.75	-1,057.13	1,058.44	0.00	0.00	0.00	
6,269.66	0.00	0.00	6,140.00	-52.75	-1,057.13	1,058.44	0.00	0.00	0.00	
CME0										
6,300.00	0.00	0.00	6,170.34	-52.75	-1,057.13	1,058.44	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,270.34	-52.75	-1,057.13	1,058.44	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,370.34	-52.75	-1,057.13	1,058.44	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,470.34	-52.75	-1,057.13	1,058.44	0.00	0.00	0.00	
6,622.66	0.00	0.00	6,493.00	-52.75	-1,057.13	1,058.44	0.00	0.00	0.00	
RLNS										
6,700.00	0.00	0.00	6,570.34	-52.75	-1,057.13	1,058.44	0.00	0.00	0.00	
6,772.66	0.00	0.00	6,643.00	-52.75	-1,057.13	1,058.44	0.00	0.00	0.00	
TD at 6772.66 - TD - GM 313-8 PBHL										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude		
- hit/miss target										
- Shape										
GM 313-8 BTV	0.00	0.00	4,856.00	-52.75	-1,057.13	1,599,847.12	2,255,637.74	39.4506964		
- plan hits target center										
- Circle (radius 50.00)										
GM 313-8 PBHL	0.00	0.00	6,643.00	-52.75	-1,057.13	1,599,847.12	2,255,637.74	39.4506964		
- plan hits target center										
- Point										

Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 313-8 - Slot GM 313-8 (B10)
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 6280' & RKB 24' @ 6304.00usft
Project:	Garfield County, CO NAD83	MD Reference:	GL 6280' & RKB 24' @ 6304.00usft
Site:	GV 1-8 Pad	North Reference:	True
Well:	GM 313-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 10Jul2018 mmsdi		

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,000.00	981.60	9 5/8" Casing @ 1000' MD	9.62	13.50

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,101.24	2,046.00	GSAND		0.00	0.00
2,209.87	2,151.00	GSAND BASE		0.00	0.00
2,566.81	2,496.00	FRUN		0.00	0.00
3,808.34	3,696.00	OCRK		0.00	0.00
3,808.34	3,696.00	MVRD		0.00	0.00
4,985.66	4,856.00	KMVGAS		0.00	0.00
6,269.66	6,140.00	CMEO		0.00	0.00
6,622.66	6,493.00	RLNS		0.00	0.00
6,772.66	6,643.00	TD		0.00	0.00

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
120.00	120.00	0.00	0.00	Start Build 3.00
615.38	609.84	-3.18	-63.81	Start 3379.52 hold at 615.38 MD
3,994.90	3,876.32	-46.38	-929.51	Start Drop -1.50
4,985.66	4,856.00	-52.75	-1,057.13	Start 1787.00 hold at 4985.66 MD
6,772.66	6,643.00	-52.75	-1,057.13	TD at 6772.66