

# **CRESTONE PEAK RESOURCES**

**WELD COUNTY**

**SEC 22-T1N-R68W**

**COSSLETT EAST 1M-22H-H168**

**OWB**

**Plan: PROPOSAL 1**

## **Standard Planning Report**

**01 March, 2022**

**Project: WELD COUNTY**  
**Site: SEC 22-T1N-R68W**  
**Well: COSSLETT EAST 1M-22H-H168**  
**Wellbore: OWB**  
**Design: PROPOSAL 1**

**PROJECT DETAILS: WELD COUNTY**

Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: Colorado Northern Zone  
 System Datum: Mean Sea Level



Azimuths to True North  
 Magnetic North: 7.86°  
 Magnetic Field  
 Strength: 51667.5nT  
 Dip Angle: 66.31°  
 Date: 2/17/2022  
 Model: IGRF2020

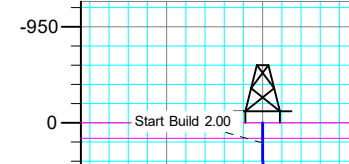
**WELL DETAILS: COSSLETT EAST 1M-22H-H168**

+N/-S	+E/-W	Northing	Easting	5181.00	Latitude	Longitude	Slot
0.00	0.00	1257557.77	3144492.92		40.039230°N	104.983937°W	

**SECTION DETAILS**

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	2357.48	43.15	69.32	2159.25	273.64	724.79	2.00	69.32	166.47	
4	9104.89	43.15	69.32	7081.95	1903.56	5041.96	0.00	0.00	1158.04	
5	10145.95	90.00	180.19	7618.00	1346.30	5509.59	10.00	105.55	1880.23	LP-COSSLETT E 1M-H168
6	19896.19	90.00	180.19	7618.00	-8403.88	5476.74	0.00	0.00	10030.95	PBHL-COSSLETT E 1M-H168

**ANNOTATIONS**

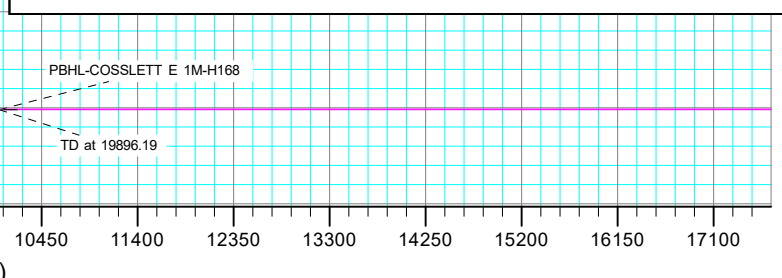
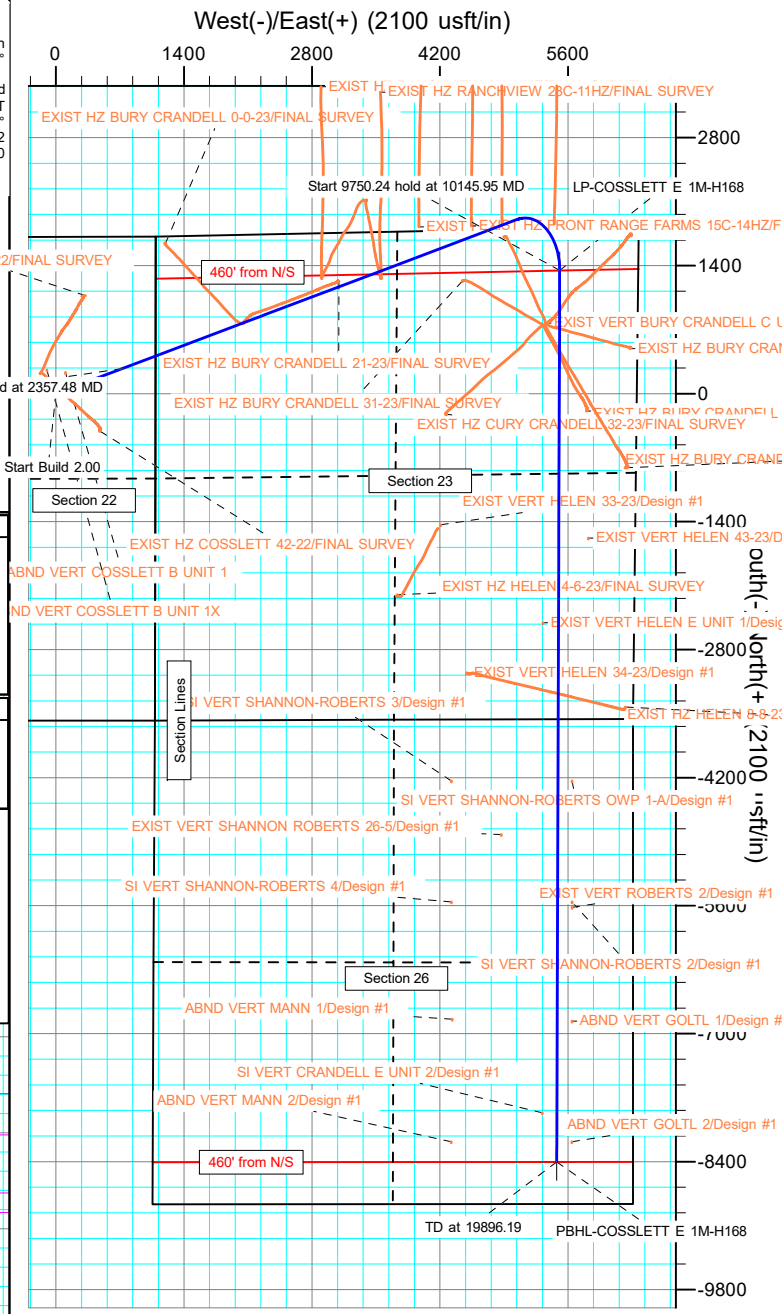
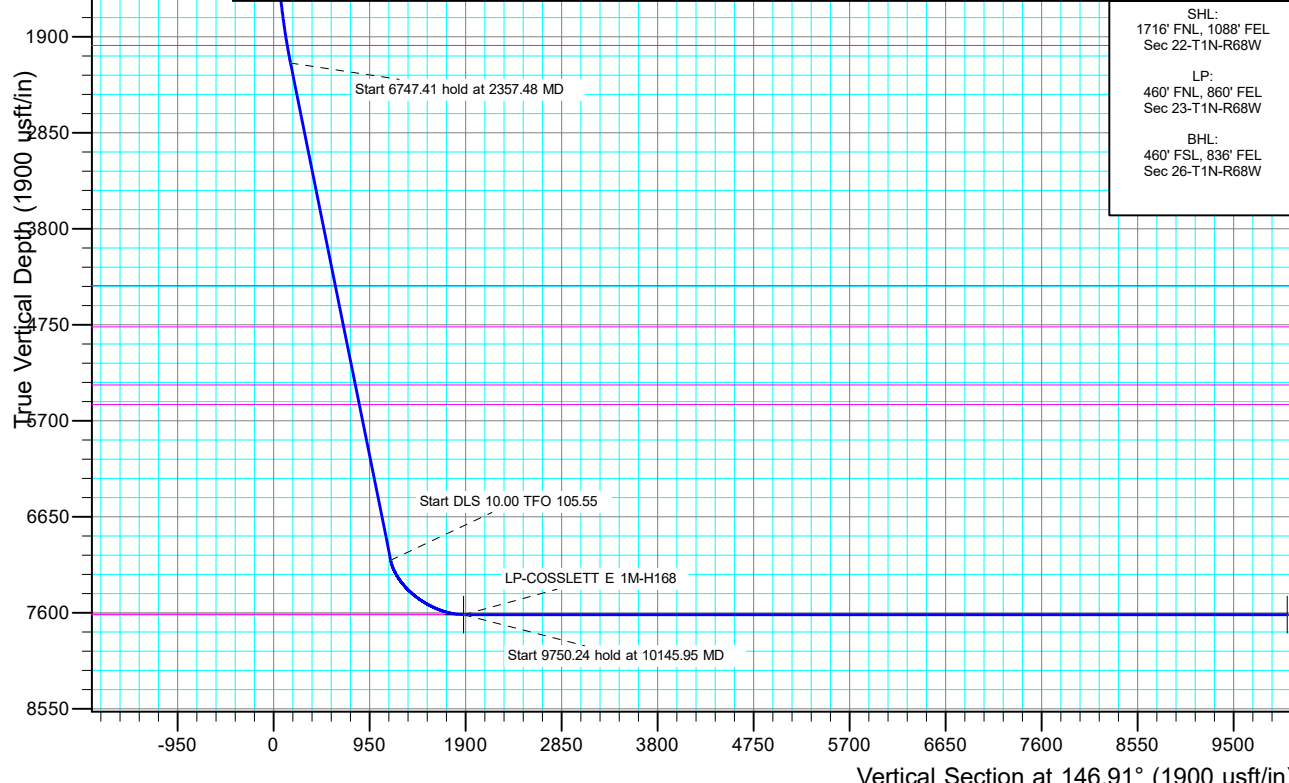


MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	Start Build 2.00
2357.48	43.15	69.32	2159.25	273.64	724.79	166.47	774.73	Start 6747.41 hold at 2357.48 MD
9104.89	43.15	69.32	7081.95	1903.56	5041.96	1158.04	5389.33	Start DLS 10.00 TFO 105.55
10145.95	90.00	180.19	7618.00	1346.30	5509.59	1880.23	6238.11	Start 9750.24 hold at 10145.95 MD
19896.19	90.00	180.19	7618.00	-8403.88	5476.74	10030.95	15988.35	TD at 19896.19

**DESIGN TARGET DETAILS**

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
LP-COSSLETT E 1M-H168	7618.00	1346.30	5509.59	1258936.06	3149994.39	40.042924°N	104.964259°W
PBHL-COSSLETT E 1M-H168	7618.00	-8403.88	5476.74	1249186.21	3150018.28	40.016159°N	104.964384°W

SHL:  
 1716' FNL, 1088' FEL  
 Sec 22-T1N-R68W  
 LP:  
 460' FNL, 860' FEL  
 Sec 23-T1N-R68W  
 BHL:  
 460' FSL, 836' FEL  
 Sec 26-T1N-R68W



## Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well COSSLETT EAST 1M-22H-H168
<b>Company:</b>	CRESTONE PEAK RESOURCES	<b>TVD Reference:</b>	KB 25' @ 5206.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 25' @ 5206.00usft
<b>Site:</b>	SEC 22-T1N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	COSSLETT EAST 1M-22H-H168	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	PROPOSAL 1		

<b>Project</b>	WELD COUNTY		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

<b>Site</b>	SEC 22-T1N-R68W				
<b>Site Position:</b>		<b>Northing:</b>	1,259,282.05 usft	<b>Latitude:</b>	40.043946°N
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,145,574.24 usft	<b>Longitude:</b>	104.980039°W
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	0.34 °

<b>Well</b>	COSSLETT EAST 1M-22H-H168					
<b>Well Position</b>	<b>+N/-S</b>	-1,717.97 usft	<b>Northing:</b>	1,257,557.77 usft	<b>Latitude:</b>	40.039230°N
	<b>+E/-W</b>	-1,091.45 usft	<b>Easting:</b>	3,144,492.92 usft	<b>Longitude:</b>	104.983937°W
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	5,181.00 usft

<b>Wellbore</b>	OWB				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2020	2/17/2022	7.86	66.31	51,667.45593615

<b>Design</b>	PROPOSAL 1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	146.91

<b>Plan Survey Tool Program</b>	<b>Date</b>	3/1/2022			
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.00	19,896.19	PROPOSAL 1 (OWB)	MWD OWSG	
				OWSG MWD - Standard	

<b>Plan Sections</b>										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,357.48	43.15	69.32	2,159.25	273.64	724.79	2.00	2.00	0.00	69.32	
9,104.89	43.15	69.32	7,081.95	1,903.56	5,041.96	0.00	0.00	0.00	0.00	
10,145.95	90.00	180.19	7,618.00	1,346.30	5,509.59	10.00	4.50	10.65	105.55	LP-COSSLETT E 1M-
19,896.19	90.00	180.19	7,618.00	-8,403.88	5,476.74	0.00	0.00	0.00	0.00	PBHL-COSSLETT E

Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well COSLETT EAST 1M-22H-H168
<b>Company:</b>	CRESTONE PEAK RESOURCES	<b>TVD Reference:</b>	KB 25' @ 5206.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 25' @ 5206.00usft
<b>Site:</b>	SEC 22-T1N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	COSLETT EAST 1M-22H-H168	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	PROPOSAL 1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Denver Formation</b>										
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
154.00	0.00	0.00	154.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Laramie Formation</b>										
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>										
300.00	2.00	69.32	299.98	0.62	1.63	0.37	2.00	2.00	2.00	0.00
400.00	4.00	69.32	399.84	2.46	6.53	1.50	2.00	2.00	2.00	0.00
500.00	6.00	69.32	499.45	5.54	14.68	3.37	2.00	2.00	2.00	0.00
600.00	8.00	69.32	598.70	9.85	26.08	5.99	2.00	2.00	2.00	0.00
632.64	8.65	69.32	631.00	11.52	30.51	7.01	2.00	2.00	2.00	0.00
<b>Fox Hills sandstone</b>										
700.00	10.00	69.32	697.47	15.37	40.72	9.35	2.00	2.00	2.00	0.00
800.00	12.00	69.32	795.62	22.11	58.57	13.45	2.00	2.00	2.00	0.00
807.54	12.15	69.32	803.00	22.67	60.04	13.79	2.00	2.00	2.00	0.00
<b>Pierre Formation</b>										
900.00	14.00	69.32	893.06	30.06	79.61	18.29	2.00	2.00	2.00	0.00
1,000.00	16.00	69.32	989.64	39.20	103.82	23.85	2.00	2.00	2.00	0.00
1,061.95	17.24	69.32	1,049.00	45.46	120.40	27.65	2.00	2.00	2.00	0.00
<b>Upper Pierre aquifer</b>										
1,100.00	18.00	69.32	1,085.27	49.52	131.18	30.13	2.00	2.00	2.00	0.00
1,200.00	20.00	69.32	1,179.82	61.02	161.63	37.12	2.00	2.00	2.00	0.00
1,300.00	22.00	69.32	1,273.17	73.68	195.16	44.82	2.00	2.00	2.00	0.00
1,400.00	24.00	69.32	1,365.21	87.48	231.71	53.22	2.00	2.00	2.00	0.00
1,500.00	26.00	69.32	1,455.84	102.41	271.25	62.30	2.00	2.00	2.00	0.00
1,600.00	28.00	69.32	1,544.94	118.44	313.72	72.05	2.00	2.00	2.00	0.00
1,700.00	30.00	69.32	1,632.39	135.57	359.07	82.47	2.00	2.00	2.00	0.00
1,800.00	32.00	69.32	1,718.11	153.76	407.25	93.54	2.00	2.00	2.00	0.00
1,900.00	34.00	69.32	1,801.97	172.99	458.20	105.24	2.00	2.00	2.00	0.00
2,000.00	36.00	69.32	1,883.88	193.25	511.86	117.56	2.00	2.00	2.00	0.00
2,100.00	38.00	69.32	1,963.74	214.51	568.16	130.50	2.00	2.00	2.00	0.00
2,127.08	38.54	69.32	1,985.00	220.43	583.85	134.10	2.00	2.00	2.00	0.00
<b>Base of Upper Pierre aquifer</b>										
2,200.00	40.00	69.32	2,041.45	236.73	627.03	144.02	2.00	2.00	2.00	0.00
2,300.00	42.00	69.32	2,116.92	259.90	688.41	158.11	2.00	2.00	2.00	0.00
2,357.48	43.15	69.32	2,159.25	273.64	724.79	166.47	2.00	2.00	2.00	0.00
<b>Start 6747.41 hold at 2357.48 MD</b>										
2,400.00	43.15	69.32	2,190.27	283.91	751.99	172.72	0.00	0.00	0.00	0.00
2,500.00	43.15	69.32	2,263.22	308.07	815.98	187.41	0.00	0.00	0.00	0.00
2,600.00	43.15	69.32	2,336.18	332.22	879.96	202.11	0.00	0.00	0.00	0.00
2,700.00	43.15	69.32	2,409.14	356.38	943.94	216.80	0.00	0.00	0.00	0.00
2,800.00	43.15	69.32	2,482.09	380.54	1,007.93	231.50	0.00	0.00	0.00	0.00
2,900.00	43.15	69.32	2,555.05	404.69	1,071.91	246.20	0.00	0.00	0.00	0.00
3,000.00	43.15	69.32	2,628.01	428.85	1,135.89	260.89	0.00	0.00	0.00	0.00
3,100.00	43.15	69.32	2,700.96	453.00	1,199.87	275.59	0.00	0.00	0.00	0.00
3,200.00	43.15	69.32	2,773.92	477.16	1,263.86	290.28	0.00	0.00	0.00	0.00
3,300.00	43.15	69.32	2,846.88	501.32	1,327.84	304.98	0.00	0.00	0.00	0.00
3,400.00	43.15	69.32	2,919.83	525.47	1,391.82	319.67	0.00	0.00	0.00	0.00
3,500.00	43.15	69.32	2,992.79	549.63	1,455.80	334.37	0.00	0.00	0.00	0.00
3,600.00	43.15	69.32	3,065.75	573.79	1,519.79	349.06	0.00	0.00	0.00	0.00
3,700.00	43.15	69.32	3,138.71	597.94	1,583.77	363.76	0.00	0.00	0.00	0.00
3,800.00	43.15	69.32	3,211.66	622.10	1,647.75	378.46	0.00	0.00	0.00	0.00

Planning Report

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<b>Company:</b>	CRESTONE PEAK RESOURCES	<b>TVD Reference:</b>	KB 25' @ 5206.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 25' @ 5206.00usft
<b>Site:</b>	SEC 22-T1N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	COSSLETT EAST 1M-22H-H168	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	PROPOSAL 1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
3,900.00	43.15	69.32	3,284.62	646.25	1,711.73	393.15	0.00	0.00	0.00	
4,000.00	43.15	69.32	3,357.58	670.41	1,775.72	407.85	0.00	0.00	0.00	
4,100.00	43.15	69.32	3,430.53	694.57	1,839.70	422.54	0.00	0.00	0.00	
4,200.00	43.15	69.32	3,503.49	718.72	1,903.68	437.24	0.00	0.00	0.00	
4,300.00	43.15	69.32	3,576.45	742.88	1,967.66	451.93	0.00	0.00	0.00	
4,400.00	43.15	69.32	3,649.40	767.04	2,031.65	466.63	0.00	0.00	0.00	
4,500.00	43.15	69.32	3,722.36	791.19	2,095.63	481.32	0.00	0.00	0.00	
4,600.00	43.15	69.32	3,795.32	815.35	2,159.61	496.02	0.00	0.00	0.00	
4,700.00	43.15	69.32	3,868.27	839.50	2,223.59	510.72	0.00	0.00	0.00	
4,800.00	43.15	69.32	3,941.23	863.66	2,287.58	525.41	0.00	0.00	0.00	
4,900.00	43.15	69.32	4,014.19	887.82	2,351.56	540.11	0.00	0.00	0.00	
5,000.00	43.15	69.32	4,087.15	911.97	2,415.54	554.80	0.00	0.00	0.00	
5,100.00	43.15	69.32	4,160.10	936.13	2,479.52	569.50	0.00	0.00	0.00	
5,200.00	43.15	69.32	4,233.06	960.29	2,543.51	584.19	0.00	0.00	0.00	
5,300.00	43.15	69.32	4,306.02	984.44	2,607.49	598.89	0.00	0.00	0.00	
5,378.11	43.15	69.32	4,363.00	1,003.31	2,657.46	610.37	0.00	0.00	0.00	
<b>Larimer sandstone</b>										
5,400.00	43.15	69.32	4,378.97	1,008.60	2,671.47	613.58	0.00	0.00	0.00	
5,500.00	43.15	69.32	4,451.93	1,032.75	2,735.45	628.28	0.00	0.00	0.00	
5,600.00	43.15	69.32	4,524.89	1,056.91	2,799.44	642.97	0.00	0.00	0.00	
5,700.00	43.15	69.32	4,597.84	1,081.07	2,863.42	657.67	0.00	0.00	0.00	
5,800.00	43.15	69.32	4,670.80	1,105.22	2,927.40	672.37	0.00	0.00	0.00	
5,900.00	43.15	69.32	4,743.76	1,129.38	2,991.38	687.06	0.00	0.00	0.00	
5,937.34	43.15	69.32	4,771.00	1,138.40	3,015.28	692.55	0.00	0.00	0.00	
<b>Terry ("Sussex") sandstone</b>										
6,000.00	43.15	69.32	4,816.71	1,153.54	3,055.37	701.76	0.00	0.00	0.00	
6,100.00	43.15	69.32	4,889.67	1,177.69	3,119.35	716.45	0.00	0.00	0.00	
6,200.00	43.15	69.32	4,962.63	1,201.85	3,183.33	731.15	0.00	0.00	0.00	
6,300.00	43.15	69.32	5,035.59	1,226.00	3,247.31	745.84	0.00	0.00	0.00	
6,400.00	43.15	69.32	5,108.54	1,250.16	3,311.30	760.54	0.00	0.00	0.00	
6,500.00	43.15	69.32	5,181.50	1,274.32	3,375.28	775.23	0.00	0.00	0.00	
6,600.00	43.15	69.32	5,254.46	1,298.47	3,439.26	789.93	0.00	0.00	0.00	
6,700.00	43.15	69.32	5,327.41	1,322.63	3,503.24	804.63	0.00	0.00	0.00	
6,725.48	43.15	69.32	5,346.00	1,328.78	3,519.55	808.37	0.00	0.00	0.00	
<b>Hygiene ("Shannon") sandstone</b>										
6,800.00	43.15	69.32	5,400.37	1,346.79	3,567.23	819.32	0.00	0.00	0.00	
6,900.00	43.15	69.32	5,473.33	1,370.94	3,631.21	834.02	0.00	0.00	0.00	
6,990.02	43.15	69.32	5,539.00	1,392.69	3,688.80	847.24	0.00	0.00	0.00	
<b>Pierre shale</b>										
7,000.00	43.15	69.32	5,546.28	1,395.10	3,695.19	848.71	0.00	0.00	0.00	
7,100.00	43.15	69.32	5,619.24	1,419.25	3,759.17	863.41	0.00	0.00	0.00	
7,200.00	43.15	69.32	5,692.20	1,443.41	3,823.16	878.10	0.00	0.00	0.00	
7,300.00	43.15	69.32	5,765.15	1,467.57	3,887.14	892.80	0.00	0.00	0.00	
7,400.00	43.15	69.32	5,838.11	1,491.72	3,951.12	907.49	0.00	0.00	0.00	
7,500.00	43.15	69.32	5,911.07	1,515.88	4,015.10	922.19	0.00	0.00	0.00	
7,600.00	43.15	69.32	5,984.03	1,540.04	4,079.09	936.89	0.00	0.00	0.00	
7,700.00	43.15	69.32	6,056.98	1,564.19	4,143.07	951.58	0.00	0.00	0.00	
7,800.00	43.15	69.32	6,129.94	1,588.35	4,207.05	966.28	0.00	0.00	0.00	
7,900.00	43.15	69.32	6,202.90	1,612.50	4,271.03	980.97	0.00	0.00	0.00	
8,000.00	43.15	69.32	6,275.85	1,636.66	4,335.02	995.67	0.00	0.00	0.00	
8,100.00	43.15	69.32	6,348.81	1,660.82	4,399.00	1,010.36	0.00	0.00	0.00	
8,200.00	43.15	69.32	6,421.77	1,684.97	4,462.98	1,025.06	0.00	0.00	0.00	
8,300.00	43.15	69.32	6,494.72	1,709.13	4,526.97	1,039.75	0.00	0.00	0.00	
8,400.00	43.15	69.32	6,567.68	1,733.29	4,590.95	1,054.45	0.00	0.00	0.00	

Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well COSPLETT EAST 1M-22H-H168
<b>Company:</b>	CRESTONE PEAK RESOURCES	<b>TVD Reference:</b>	KB 25' @ 5206.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 25' @ 5206.00usft
<b>Site:</b>	SEC 22-T1N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	COSPLETT EAST 1M-22H-H168	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	PROPOSAL 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,500.00	43.15	69.32	6,640.64	1,757.44	4,654.93	1,069.14	0.00	0.00	0.00
8,600.00	43.15	69.32	6,713.59	1,781.60	4,718.91	1,083.84	0.00	0.00	0.00
8,700.00	43.15	69.32	6,786.55	1,805.75	4,782.90	1,098.54	0.00	0.00	0.00
8,800.00	43.15	69.32	6,859.51	1,829.91	4,846.88	1,113.23	0.00	0.00	0.00
8,900.00	43.15	69.32	6,932.46	1,854.07	4,910.86	1,127.93	0.00	0.00	0.00
9,000.00	43.15	69.32	7,005.42	1,878.22	4,974.84	1,142.62	0.00	0.00	0.00
9,104.89	43.15	69.32	7,081.95	1,903.56	5,041.96	1,158.04	0.00	0.00	0.00
<b>Start DLS 10.00 TFO 105.55</b>									
9,150.00	42.12	75.80	7,115.15	1,912.72	5,071.07	1,166.25	10.00	-2.28	14.38
9,200.00	41.42	83.24	7,152.46	1,918.79	5,103.77	1,179.03	10.00	-1.39	14.87
9,250.00	41.22	90.81	7,190.04	1,920.50	5,136.68	1,195.56	10.00	-0.42	15.14
9,300.00	41.50	98.36	7,227.59	1,917.86	5,169.57	1,215.73	10.00	0.58	15.11
9,350.00	42.28	105.77	7,264.83	1,910.88	5,202.16	1,239.38	10.00	1.55	14.80
9,400.00	43.51	112.89	7,301.48	1,899.61	5,234.23	1,266.33	10.00	2.47	14.24
9,450.00	45.17	119.64	7,337.26	1,884.13	5,265.51	1,296.37	10.00	3.31	13.51
9,500.00	47.19	125.98	7,371.90	1,864.58	5,295.79	1,329.28	10.00	4.06	12.67
9,550.00	49.55	131.88	7,405.13	1,841.09	5,324.81	1,364.81	10.00	4.71	11.81
9,600.00	52.18	137.36	7,436.70	1,813.84	5,352.37	1,402.69	10.00	5.27	10.96
9,650.00	55.05	142.45	7,466.36	1,783.04	5,378.25	1,442.62	10.00	5.74	10.18
9,700.00	58.12	147.18	7,493.91	1,748.93	5,402.26	1,484.30	10.00	6.13	9.46
9,750.00	61.35	151.60	7,519.11	1,711.77	5,424.21	1,527.42	10.00	6.46	8.84
9,800.00	64.72	155.75	7,541.79	1,671.84	5,443.94	1,571.65	10.00	6.73	8.30
9,850.00	68.19	159.68	7,561.77	1,629.43	5,461.30	1,616.65	10.00	6.95	7.84
9,900.00	71.75	163.41	7,578.90	1,584.88	5,476.15	1,662.08	10.00	7.13	7.47
9,950.00	75.39	166.99	7,593.04	1,538.53	5,488.38	1,707.60	10.00	7.27	7.17
10,000.00	79.07	170.46	7,604.09	1,490.72	5,497.90	1,752.85	10.00	7.37	6.93
10,050.00	82.80	173.84	7,611.97	1,441.82	5,504.63	1,797.49	10.00	7.45	6.76
10,058.59	83.44	174.41	7,613.00	1,433.34	5,505.51	1,805.08	10.00	7.48	6.68
<b>Sharon Springs</b>									
10,100.00	86.54	177.16	7,616.61	1,392.21	5,508.53	1,841.19	10.00	7.50	6.64
10,145.95	90.00	180.19	7,618.00	1,346.30	5,509.59	1,880.23	10.00	7.52	6.60
<b>Start 9750.24 hold at 10145.95 MD - Niobrara</b>									
10,200.00	90.00	180.19	7,618.00	1,292.25	5,509.41	1,925.41	0.00	0.00	0.00
10,300.00	90.00	180.19	7,618.00	1,192.25	5,509.07	2,009.01	0.00	0.00	0.00
10,400.00	90.00	180.19	7,618.00	1,092.25	5,508.74	2,092.60	0.00	0.00	0.00
10,500.00	90.00	180.19	7,618.00	992.26	5,508.40	2,176.20	0.00	0.00	0.00
10,600.00	90.00	180.19	7,618.00	892.26	5,508.06	2,259.79	0.00	0.00	0.00
10,700.00	90.00	180.19	7,618.00	792.26	5,507.73	2,343.39	0.00	0.00	0.00
10,800.00	90.00	180.19	7,618.00	692.26	5,507.39	2,426.98	0.00	0.00	0.00
10,900.00	90.00	180.19	7,618.00	592.26	5,507.05	2,510.58	0.00	0.00	0.00
11,000.00	90.00	180.19	7,618.00	492.26	5,506.72	2,594.17	0.00	0.00	0.00
11,100.00	90.00	180.19	7,618.00	392.26	5,506.38	2,677.77	0.00	0.00	0.00
11,200.00	90.00	180.19	7,618.00	292.26	5,506.04	2,761.36	0.00	0.00	0.00
11,300.00	90.00	180.19	7,618.00	192.26	5,505.71	2,844.96	0.00	0.00	0.00
11,400.00	90.00	180.19	7,618.00	92.26	5,505.37	2,928.55	0.00	0.00	0.00
11,500.00	90.00	180.19	7,618.00	-7.74	5,505.03	3,012.15	0.00	0.00	0.00
11,600.00	90.00	180.19	7,618.00	-107.74	5,504.69	3,095.74	0.00	0.00	0.00
11,700.00	90.00	180.19	7,618.00	-207.74	5,504.36	3,179.34	0.00	0.00	0.00
11,800.00	90.00	180.19	7,618.00	-307.74	5,504.02	3,262.93	0.00	0.00	0.00
11,900.00	90.00	180.19	7,618.00	-407.74	5,503.68	3,346.53	0.00	0.00	0.00
12,000.00	90.00	180.19	7,618.00	-507.74	5,503.35	3,430.12	0.00	0.00	0.00
12,100.00	90.00	180.19	7,618.00	-607.74	5,503.01	3,513.72	0.00	0.00	0.00
12,200.00	90.00	180.19	7,618.00	-707.74	5,502.67	3,597.31	0.00	0.00	0.00

Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well COSSLETT EAST 1M-22H-H168
<b>Company:</b>	CRESTONE PEAK RESOURCES	<b>TVD Reference:</b>	KB 25' @ 5206.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 25' @ 5206.00usft
<b>Site:</b>	SEC 22-T1N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	COSSLETT EAST 1M-22H-H168	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	PROPOSAL 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
12,300.00	90.00	180.19	7,618.00	-807.73	5,502.34	3,680.91	0.00	0.00	0.00
12,400.00	90.00	180.19	7,618.00	-907.73	5,502.00	3,764.50	0.00	0.00	0.00
12,500.00	90.00	180.19	7,618.00	-1,007.73	5,501.66	3,848.10	0.00	0.00	0.00
12,600.00	90.00	180.19	7,618.00	-1,107.73	5,501.33	3,931.69	0.00	0.00	0.00
12,700.00	90.00	180.19	7,618.00	-1,207.73	5,500.99	4,015.29	0.00	0.00	0.00
12,800.00	90.00	180.19	7,618.00	-1,307.73	5,500.65	4,098.88	0.00	0.00	0.00
12,900.00	90.00	180.19	7,618.00	-1,407.73	5,500.31	4,182.48	0.00	0.00	0.00
13,000.00	90.00	180.19	7,618.00	-1,507.73	5,499.98	4,266.07	0.00	0.00	0.00
13,100.00	90.00	180.19	7,618.00	-1,607.73	5,499.64	4,349.67	0.00	0.00	0.00
13,200.00	90.00	180.19	7,618.00	-1,707.73	5,499.30	4,433.26	0.00	0.00	0.00
13,300.00	90.00	180.19	7,618.00	-1,807.73	5,498.97	4,516.86	0.00	0.00	0.00
13,400.00	90.00	180.19	7,618.00	-1,907.73	5,498.63	4,600.45	0.00	0.00	0.00
13,500.00	90.00	180.19	7,618.00	-2,007.73	5,498.29	4,684.05	0.00	0.00	0.00
13,600.00	90.00	180.19	7,618.00	-2,107.73	5,497.96	4,767.64	0.00	0.00	0.00
13,700.00	90.00	180.19	7,618.00	-2,207.73	5,497.62	4,851.24	0.00	0.00	0.00
13,800.00	90.00	180.19	7,618.00	-2,307.73	5,497.28	4,934.83	0.00	0.00	0.00
13,900.00	90.00	180.19	7,618.00	-2,407.73	5,496.95	5,018.43	0.00	0.00	0.00
14,000.00	90.00	180.19	7,618.00	-2,507.73	5,496.61	5,102.02	0.00	0.00	0.00
14,100.00	90.00	180.19	7,618.00	-2,607.72	5,496.27	5,185.62	0.00	0.00	0.00
14,200.00	90.00	180.19	7,618.00	-2,707.72	5,495.93	5,269.21	0.00	0.00	0.00
14,300.00	90.00	180.19	7,618.00	-2,807.72	5,495.60	5,352.81	0.00	0.00	0.00
14,400.00	90.00	180.19	7,618.00	-2,907.72	5,495.26	5,436.40	0.00	0.00	0.00
14,500.00	90.00	180.19	7,618.00	-3,007.72	5,494.92	5,520.00	0.00	0.00	0.00
14,600.00	90.00	180.19	7,618.00	-3,107.72	5,494.59	5,603.59	0.00	0.00	0.00
14,700.00	90.00	180.19	7,618.00	-3,207.72	5,494.25	5,687.19	0.00	0.00	0.00
14,800.00	90.00	180.19	7,618.00	-3,307.72	5,493.91	5,770.79	0.00	0.00	0.00
14,900.00	90.00	180.19	7,618.00	-3,407.72	5,493.58	5,854.38	0.00	0.00	0.00
15,000.00	90.00	180.19	7,618.00	-3,507.72	5,493.24	5,937.98	0.00	0.00	0.00
15,100.00	90.00	180.19	7,618.00	-3,607.72	5,492.90	6,021.57	0.00	0.00	0.00
15,200.00	90.00	180.19	7,618.00	-3,707.72	5,492.57	6,105.17	0.00	0.00	0.00
15,300.00	90.00	180.19	7,618.00	-3,807.72	5,492.23	6,188.76	0.00	0.00	0.00
15,400.00	90.00	180.19	7,618.00	-3,907.72	5,491.89	6,272.36	0.00	0.00	0.00
15,500.00	90.00	180.19	7,618.00	-4,007.72	5,491.56	6,355.95	0.00	0.00	0.00
15,600.00	90.00	180.19	7,618.00	-4,107.72	5,491.22	6,439.55	0.00	0.00	0.00
15,700.00	90.00	180.19	7,618.00	-4,207.72	5,490.88	6,523.14	0.00	0.00	0.00
15,800.00	90.00	180.19	7,618.00	-4,307.72	5,490.54	6,606.74	0.00	0.00	0.00
15,900.00	90.00	180.19	7,618.00	-4,407.71	5,490.21	6,690.33	0.00	0.00	0.00
16,000.00	90.00	180.19	7,618.00	-4,507.71	5,489.87	6,773.93	0.00	0.00	0.00
16,100.00	90.00	180.19	7,618.00	-4,607.71	5,489.53	6,857.52	0.00	0.00	0.00
16,200.00	90.00	180.19	7,618.00	-4,707.71	5,489.20	6,941.12	0.00	0.00	0.00
16,300.00	90.00	180.19	7,618.00	-4,807.71	5,488.86	7,024.71	0.00	0.00	0.00
16,400.00	90.00	180.19	7,618.00	-4,907.71	5,488.52	7,108.31	0.00	0.00	0.00
16,500.00	90.00	180.19	7,618.00	-5,007.71	5,488.19	7,191.90	0.00	0.00	0.00
16,600.00	90.00	180.19	7,618.00	-5,107.71	5,487.85	7,275.50	0.00	0.00	0.00
16,700.00	90.00	180.19	7,618.00	-5,207.71	5,487.51	7,359.09	0.00	0.00	0.00
16,800.00	90.00	180.19	7,618.00	-5,307.71	5,487.18	7,442.69	0.00	0.00	0.00
16,900.00	90.00	180.19	7,618.00	-5,407.71	5,486.84	7,526.28	0.00	0.00	0.00
17,000.00	90.00	180.19	7,618.00	-5,507.71	5,486.50	7,609.88	0.00	0.00	0.00
17,100.00	90.00	180.19	7,618.00	-5,607.71	5,486.16	7,693.47	0.00	0.00	0.00
17,200.00	90.00	180.19	7,618.00	-5,707.71	5,485.83	7,777.07	0.00	0.00	0.00
17,300.00	90.00	180.19	7,618.00	-5,807.71	5,485.49	7,860.66	0.00	0.00	0.00
17,400.00	90.00	180.19	7,618.00	-5,907.71	5,485.15	7,944.26	0.00	0.00	0.00
17,500.00	90.00	180.19	7,618.00	-6,007.71	5,484.82	8,027.85	0.00	0.00	0.00
17,600.00	90.00	180.19	7,618.00	-6,107.70	5,484.48	8,111.45	0.00	0.00	0.00

Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well COSSLETT EAST 1M-22H-H168
<b>Company:</b>	CRESTONE PEAK RESOURCES	<b>TVD Reference:</b>	KB 25' @ 5206.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 25' @ 5206.00usft
<b>Site:</b>	SEC 22-T1N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	COSSLETT EAST 1M-22H-H168	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	PROPOSAL 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
17,700.00	90.00	180.19	7,618.00	-6,207.70	5,484.14	8,195.04	0.00	0.00	0.00
17,800.00	90.00	180.19	7,618.00	-6,307.70	5,483.81	8,278.64	0.00	0.00	0.00
17,900.00	90.00	180.19	7,618.00	-6,407.70	5,483.47	8,362.23	0.00	0.00	0.00
18,000.00	90.00	180.19	7,618.00	-6,507.70	5,483.13	8,445.83	0.00	0.00	0.00
18,100.00	90.00	180.19	7,618.00	-6,607.70	5,482.80	8,529.42	0.00	0.00	0.00
18,200.00	90.00	180.19	7,618.00	-6,707.70	5,482.46	8,613.02	0.00	0.00	0.00
18,300.00	90.00	180.19	7,618.00	-6,807.70	5,482.12	8,696.61	0.00	0.00	0.00
18,400.00	90.00	180.19	7,618.00	-6,907.70	5,481.79	8,780.21	0.00	0.00	0.00
18,500.00	90.00	180.19	7,618.00	-7,007.70	5,481.45	8,863.80	0.00	0.00	0.00
18,600.00	90.00	180.19	7,618.00	-7,107.70	5,481.11	8,947.40	0.00	0.00	0.00
18,700.00	90.00	180.19	7,618.00	-7,207.70	5,480.77	9,030.99	0.00	0.00	0.00
18,800.00	90.00	180.19	7,618.00	-7,307.70	5,480.44	9,114.59	0.00	0.00	0.00
18,900.00	90.00	180.19	7,618.00	-7,407.70	5,480.10	9,198.18	0.00	0.00	0.00
19,000.00	90.00	180.19	7,618.00	-7,507.70	5,479.76	9,281.78	0.00	0.00	0.00
19,100.00	90.00	180.19	7,618.00	-7,607.70	5,479.43	9,365.37	0.00	0.00	0.00
19,200.00	90.00	180.19	7,618.00	-7,707.70	5,479.09	9,448.97	0.00	0.00	0.00
19,300.00	90.00	180.19	7,618.00	-7,807.70	5,478.75	9,532.56	0.00	0.00	0.00
19,400.00	90.00	180.19	7,618.00	-7,907.69	5,478.42	9,616.16	0.00	0.00	0.00
19,500.00	90.00	180.19	7,618.00	-8,007.69	5,478.08	9,699.75	0.00	0.00	0.00
19,600.00	90.00	180.19	7,618.00	-8,107.69	5,477.74	9,783.35	0.00	0.00	0.00
19,700.00	90.00	180.19	7,618.00	-8,207.69	5,477.41	9,866.94	0.00	0.00	0.00
19,800.00	90.00	180.19	7,618.00	-8,307.69	5,477.07	9,950.54	0.00	0.00	0.00
19,896.19	90.00	180.19	7,618.00	-8,403.88	5,476.74	10,030.95	0.00	0.00	0.00
<b>TD at 19896.19</b>									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
LP-COSSLETT E 1M-H' - plan hits target center - Point	0.00	0.00	7,618.00	1,346.30	5,509.59	1,258,936.06	3,149,994.39	40.042924°N	104.964259°W
PBHL-COSSLETT E 1M - plan hits target center - Point	0.00	0.00	7,618.00	-8,403.88	5,476.74	1,249,186.21	3,150,018.28	40.016159°N	104.964384°W

## Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well COSSLETT EAST 1M-22H-H168
<b>Company:</b>	CRESTONE PEAK RESOURCES	<b>TVD Reference:</b>	KB 25' @ 5206.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 25' @ 5206.00usft
<b>Site:</b>	SEC 22-T1N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	COSSLETT EAST 1M-22H-H168	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	PROPOSAL 1		

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
0.00	0.00	Denver Formation			
154.00	154.00	Laramie Formation			
632.64	631.00	Fox Hills sandstone			
807.54	803.00	Pierre Formation			
1,061.95	1,049.00	Upper Pierre aquifer			
2,127.08	1,985.00	Base of Upper Pierre aquifer			
5,378.11	4,363.00	Larimer sandstone			
5,937.34	4,771.00	Terry ("Sussex") sandstone			
6,725.48	5,346.00	Hygiene ("Shannon") sandstone			
6,990.02	5,539.00	Pierre shale			
10,058.59	7,613.00	Sharon Springs			
10,145.95	7,618.00	Niobrara			

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
200.00	200.00	0.00	0.00	Start Build 2.00
2,357.48	2,159.25	273.64	724.79	Start 6747.41 hold at 2357.48 MD
9,104.89	7,081.95	1,903.56	5,041.96	Start DLS 10.00 TFO 105.55
10,145.95	7,618.00	1,346.30	5,509.59	Start 9750.24 hold at 10145.95 MD
19,896.19	7,618.00	-8,403.88	5,476.74	TD at 19896.19