

# Ursa Operating Company LLC

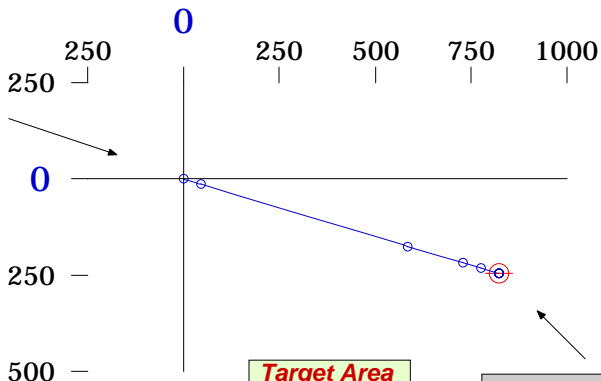
Valley Farms F-21  
Garfield County, CO



Horizontal Plan  
1" = 500'



**Surface Location**  
Y=1623464.77'  
X=2395726.77'  
NAD 83

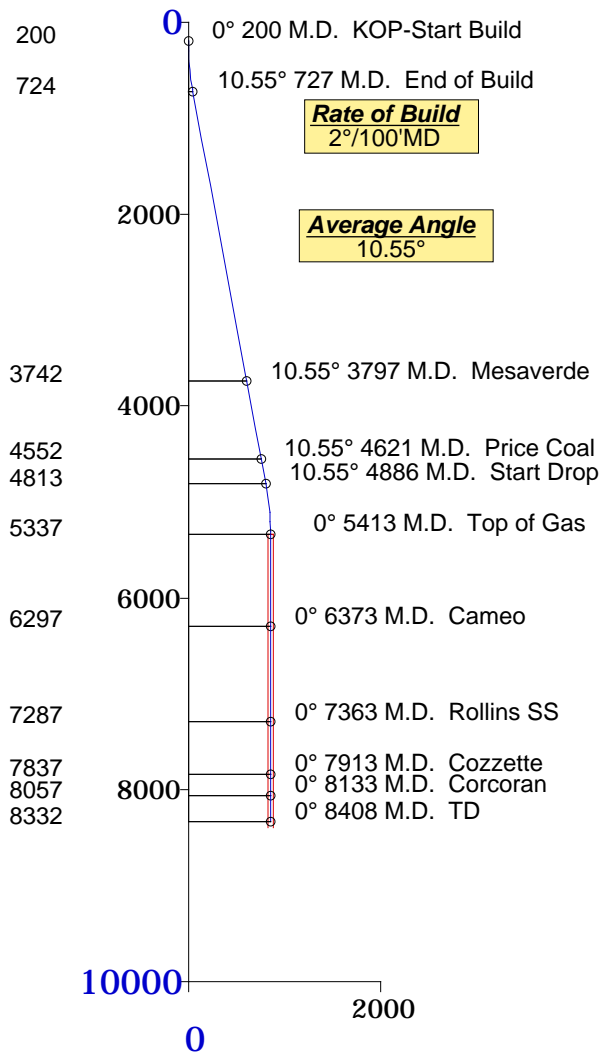


**Target Area**  
25' Radius

**Proposed Target**  
858.13' Displacement from S/L  
@ 106.71° Azimuth from S/L  
South-246.76' East-821.88' of S/L  
TVD-5337' MD-5413'  
Y=1623218', X=2396548.6'

**Vertical Section**  
1" = 106.71'

**Plane of Proposal**  
2000° Azimuth



**Rate of Build**  
2°/100' MD

**Average Angle**  
10.55°

**Rate of Drop**  
2°/100' MD

Formation	TVD
Mesaverde	3742
Price Coal	4552
Vertical	5337
Top Gas	5337
Cameo	6297
Rollins SS	7287
Cozzette	7837
Corcoran	8057
TD	8332



Ursa Operating Company LLC Valley Farms F-21 Garfield County, CO		Page: 1  Minimum of Curvature Slot Location: 1623464.77', 2395726.77' Plane of Vertical Section: 106.71°
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Measured Depth Feet	BORE Inc Degrees	HOLE Direction Degrees	True Vertical Depth Feet	RECTANGULAR COORDINATES		LAMBERT COORDINATES		Vertical Section Feet	CLOSURES		Dogleg Severity Deg/100'
				North(-South) Feet	East(-West) Feet	Y Feet	X Feet		Distance Feet	Direction Deg	
200.00	0.00	0.00	200.00	0.00	0.00	1623464.8	2395726.8	0.00	0.00	0.00	0.00
KOP-Start Build											
300.00	2.00	106.71	299.98	-0.50	1.67	1623464.3	2395728.4	1.75	1.75	106.71	2.00
400.00	4.00	106.71	399.84	-2.01	6.68	1623462.8	2395733.4	6.98	6.98	106.71	2.00
500.00	6.00	106.71	499.45	-4.51	15.03	1623460.3	2395741.8	15.69	15.69	106.71	2.00
600.00	8.00	106.71	598.70	-8.02	26.70	1623456.8	2395753.5	27.88	27.88	106.71	2.00
700.00	10.00	106.71	697.47	-12.52	41.68	1623452.3	2395768.4	43.52	43.52	106.71	2.00
727.45	10.55	106.71	724.48	-13.92	46.37	1623450.8	2395773.1	48.42	48.42	106.71	2.00
End of Build											
1227.45	10.55	106.71	1216.03	-40.25	134.05	1623424.5	2395860.8	139.96	139.96	106.71	0.00
1727.45	10.55	106.71	1707.58	-66.57	221.72	1623398.2	2395948.5	231.50	231.50	106.71	0.00
2227.45	10.55	106.71	2199.13	-92.89	309.39	1623371.9	2396036.2	323.03	323.03	106.71	0.00
2727.45	10.55	106.71	2690.68	-119.21	397.06	1623345.6	2396123.8	414.57	414.57	106.71	0.00
3227.45	10.55	106.71	3182.23	-145.54	484.73	1623319.2	2396211.5	506.11	506.11	106.71	0.00
3727.45	10.55	106.71	3673.78	-171.86	572.41	1623292.9	2396299.2	597.65	597.65	106.71	0.00
3796.85	10.55	106.71	3742.00	-175.51	584.57	1623289.3	2396311.3	610.35	610.35	106.71	0.00
Mesaverde											
4296.85	10.55	106.71	4233.55	-201.84	672.25	1623262.9	2396399.0	701.89	701.89	106.71	0.00
4620.78	10.55	106.71	4552.00	-218.89	729.04	1623245.9	2396455.8	761.19	761.19	106.71	0.00
Price Coal											
4885.78	10.55	106.71	4812.52	-232.84	775.51	1623231.9	2396502.3	809.71	809.71	106.71	0.00
Start Drop											
4985.78	8.55	106.71	4911.13	-237.61	791.40	1623227.2	2396518.2	826.30	826.30	106.71	2.00
5085.78	6.55	106.71	5010.26	-241.39	803.98	1623223.4	2396530.7	839.43	839.43	106.71	2.00
5185.78	4.55	106.71	5109.78	-244.17	813.24	1623220.6	2396540.0	849.10	849.10	106.71	2.00
5285.78	2.55	106.71	5209.59	-245.95	819.17	1623218.8	2396545.9	855.29	855.29	106.71	2.00
5385.78	0.55	106.71	5309.55	-246.73	821.76	1623218.0	2396548.5	858.00	858.00	106.71	2.00

Measured Depth  Feet	<b>BORE</b>  Inc Degrees	<b>HOLE</b>  Direction Degrees	<b>True</b> Vertical Depth Feet	<b>RECTANGULAR</b>		<b>LAMBERT</b>		Vertical Section Feet	<b>CLOSURES</b>		Dogleg Severity Deg/100'
				<b>COORDINATES</b>		<b>COORDINATES</b>			Distance Feet	Direction Deg	
				North(-South) Feet	East(-West) Feet	Y Feet	X Feet				
5413.23	0.00	106.71	5337.00	-246.76	821.88	1623218.0	2396548.6	858.13	858.13	106.71	2.00
Top of Gas											
6373.23	0.00	106.71	6297.00	-246.76	821.88	1623218.0	2396548.6	858.13	858.13	106.71	0.00
Cameo											
7363.23	0.00	106.71	7287.00	-246.76	821.88	1623218.0	2396548.6	858.13	858.13	106.71	0.00
Rollins SS											
7913.23	0.00	106.71	7837.00	-246.76	821.88	1623218.0	2396548.6	858.13	858.13	106.71	0.00
Cozzette											
8133.23	0.00	106.71	8057.00	-246.76	821.88	1623218.0	2396548.6	858.13	858.13	106.71	0.00
Corcoran											
8408.23	0.00	106.71	8332.00	-246.76	821.88	1623218.0	2396548.6	858.13	858.13	106.71	0.00
TD											
Final Station Closure Distance: 858.13' Direction: 106.71°											