



# **Crestone Peak Resources**

**Sec 2 T2N-R67W**

**Echeverria Pad**

**ECHEVERRIA 2L-2H-D267**

**Wellbore #1**

**Plan: Design #1 23Apr18 kjs**

## **Standard Planning Report - Geographic**

**14 May, 2018**

Well Name:

**ECHEVERRIA 2L-2H-D267**

Project Name:

**Sec 2 T2N-R67W**

Pad Name:

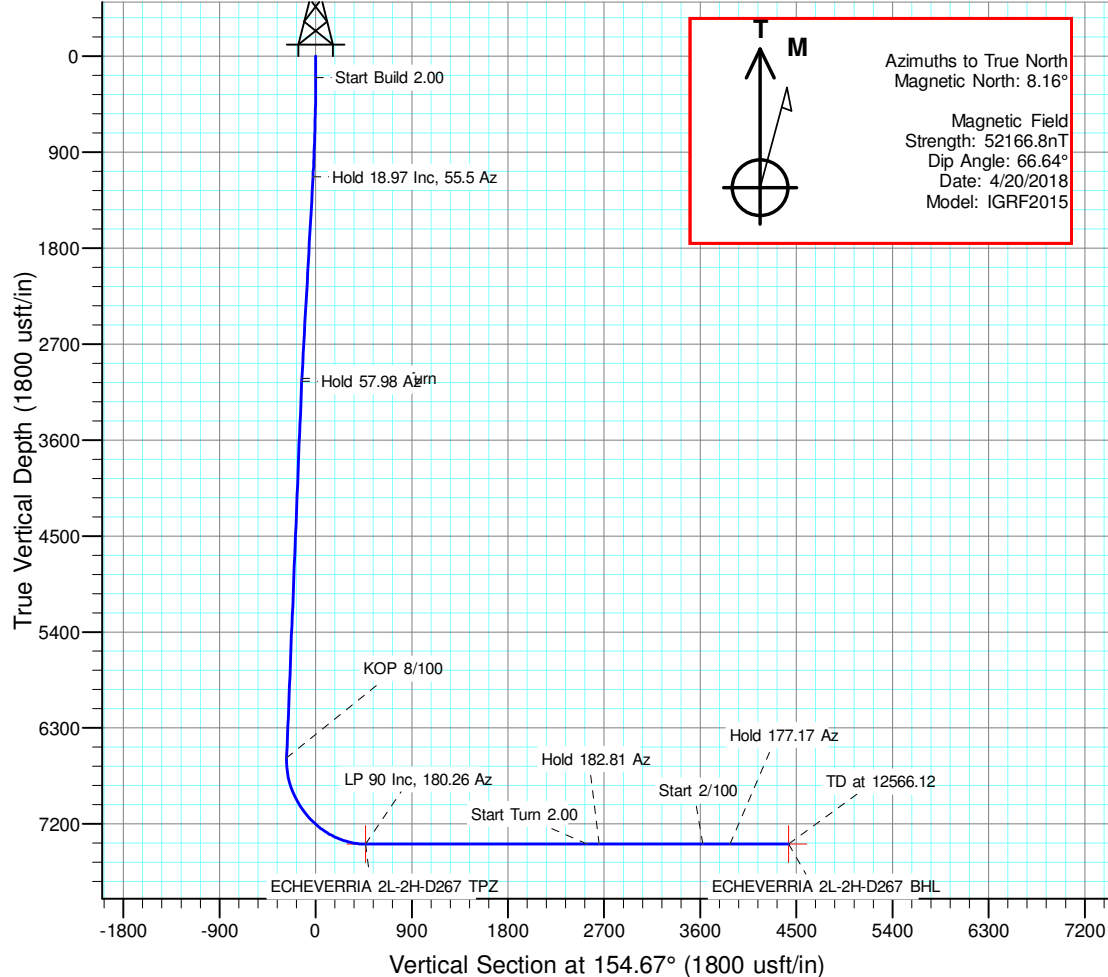
**Echeverria Pad**

**ANNOTATIONS**

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	Start Build 2.00
1148.50	18.97	55.50	1131.27	88.13	128.23	-24.80	155.59	Hold 18.97 Inc, 55.5 Az
3148.50	18.97	55.50	3022.64	456.37	664.03	-128.43	805.74	Start 2/100 Turn
3177.87	18.96	57.31	3050.42	461.66	671.98	-129.80	815.28	Hold 57.98 Az
6912.10	18.97	57.98	6581.90	1105.21	1701.03	-271.25	2029.00	KOP 8/100
8163.00	89.99	180.26	7390.00	399.07	1932.62	466.08	2844.33	LP 90 Inc, 180.26 Az
10463.00	90.00	180.26	7390.00	-1900.90	1922.16	2540.49	5144.33	Start Turn 2.00
10590.50	90.00	182.81	7390.00	-2028.35	1918.75	2654.22	5271.83	Hold 182.81 Az
11690.50	90.00	182.81	7390.00	-3127.02	1864.81	3624.20	6371.83	Start 2/100
11972.30	90.00	177.18	7390.00	-3408.71	1864.84	3878.82	6653.63	Hold 177.17 Az
12565.12	90.00	177.17	7390.00	-4000.81	1894.06	4426.51	7246.45	TD at 12566.12

**DESIGN TARGET DETAILS**

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
ECHEVERRIA 2L-2H-D267 BHL	7390.00	-4001.88	1894.12	1302161.44	3179488.21	40.16104399	-104.85780000	Point
ECHEVERRIA 2L-2H-D267 TPZ	7390.00	399.00	1932.62	1306562.48	3179495.18	40.17312499	-104.85766100	Point

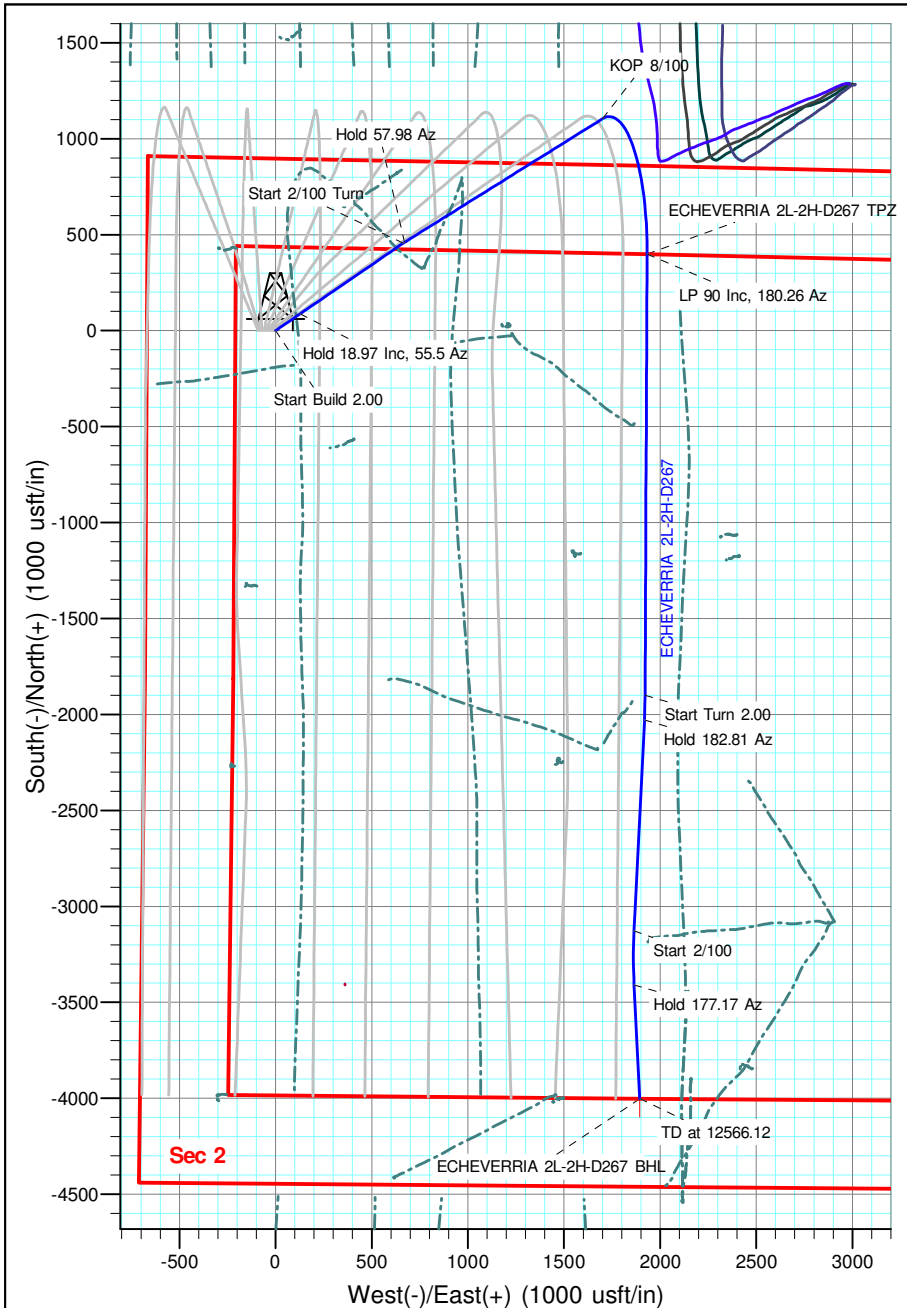


**Geodetic Datum:**

North American Datum 1983  
US State Plane 1983, Colorado Northern Zone

**Elevation:**

Ground Elevation: 4881.00  
KB Elevation: WELL @ 4904.00usft (Original Well Elev)



<b>Database:</b>	EDM 5000.15 Single User Db	<b>Local Co-ordinate Reference:</b>	Well ECHEVERRIA 2L-2H-D267
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	WELL @ 4904.00usft (Original Well Elev)
<b>Project:</b>	Sec 2 T2N-R67W	<b>MD Reference:</b>	WELL @ 4904.00usft (Original Well Elev)
<b>Site:</b>	Echeverria Pad	<b>North Reference:</b>	True
<b>Well:</b>	ECHEVERRIA 2L-2H-D267	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 23Apr18 kjs		

<b>Project</b>	Sec 2 T2N-R67W, Weld County, CO		
<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		

Site		Echeverria Pad			
Site Position:		Northing:	1,306,149.76 usft	Latitude:	40.17203200
From:	Lat/Long	Easting:	3,177,475.48 usft	Longitude:	-104.86489900
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.41

Well	ECHEVERRIA 2L-2H-D267					
Well Position	+N/-S	0.00 usft	Northing:	1,306,149.64 usft	Latitude:	40.17202989
	+E/-W	0.00 usft	Easting:	3,177,565.46 usft	Longitude:	-104.86457700
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	4,881.00 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	4/20/2018	8.16	66.64	52,166.84100757

<b>Design</b>	Design #1 23Apr18 kjs			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<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	154.67

<b>Plan Survey Tool Program</b>	<b>Date</b>	5/11/2018		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	12,565.32 Design #1 23Apr18 kjs (Wellbore)	MWD OWSG MWD - Standard	

<b>Database:</b>	EDM 5000.15 Single User Db	<b>Local Co-ordinate Reference:</b>	Well ECHEVERRIA 2L-2H-D267
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	WELL @ 4904.00usft (Original Well Elev)
<b>Project:</b>	Sec 2 T2N-R67W	<b>MD Reference:</b>	WELL @ 4904.00usft (Original Well Elev)
<b>Site:</b>	Echeverria Pad	<b>North Reference:</b>	True
<b>Well:</b>	ECHEVERRIA 2L-2H-D267	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 23Apr18 kjs		

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	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,148.50	18.97	55.50	1,131.27	88.13	128.23	2.00	2.00	0.00	55.50	
3,148.50	18.97	55.50	3,022.64	456.37	664.03	0.00	0.00	0.00	0.00	
3,188.80	18.97	57.98	3,060.75	463.56	674.98	2.00	-0.01	6.15	91.38	
6,913.12	18.97	57.98	6,582.86	1,105.38	1,701.31	0.00	0.00	0.00	0.00	
8,163.07	90.00	180.26	7,390.00	399.00	1,932.62	8.00	5.68	9.78	120.85	ECHEVERRIA 2L-2H-
10,463.07	90.00	180.26	7,390.00	-1,900.98	1,922.16	0.00	0.00	0.00	0.00	
10,590.57	90.00	182.81	7,390.00	-2,028.42	1,918.75	2.00	0.00	2.00	90.00	
11,690.57	90.00	182.81	7,390.00	-3,127.10	1,864.81	0.00	0.00	0.00	0.00	
11,972.37	90.00	177.17	7,390.00	-3,408.78	1,864.85	2.00	0.00	-2.00	-90.00	
12,566.20	90.00	177.17	7,390.00	-4,001.88	1,894.12	0.00	0.00	0.00	0.00	ECHEVERRIA 2L-2H-

<b>Database:</b>	EDM 5000.15 Single User Db	<b>Local Co-ordinate Reference:</b>	Well ECHEVERRIA 2L-2H-D267
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	WELL @ 4904.00usft (Original Well Elev)
<b>Project:</b>	Sec 2 T2N-R67W	<b>MD Reference:</b>	WELL @ 4904.00usft (Original Well Elev)
<b>Site:</b>	Echeverria Pad	<b>North Reference:</b>	True
<b>Well:</b>	ECHEVERRIA 2L-2H-D267	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 23Apr18 kjs		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	1,306,149.64	3,177,565.46	40.17202989	-104.86457700
100.00	0.00	0.00	100.00	0.00	0.00	1,306,149.64	3,177,565.46	40.17202989	-104.86457700
200.00	0.00	0.00	200.00	0.00	0.00	1,306,149.64	3,177,565.46	40.17202989	-104.86457700
<b>Start Build 2.00</b>									
300.00	2.00	55.50	299.98	0.99	1.44	1,306,150.64	3,177,566.89	40.17203260	-104.86457185
400.00	4.00	55.50	399.84	3.95	5.75	1,306,153.64	3,177,571.19	40.17204074	-104.86455642
500.00	6.00	55.50	499.45	8.89	12.93	1,306,158.62	3,177,578.33	40.17205429	-104.86453071
600.00	8.00	55.50	598.70	15.79	22.98	1,306,165.60	3,177,588.33	40.17207324	-104.86449478
700.00	10.00	55.50	697.47	24.65	35.87	1,306,174.55	3,177,601.15	40.17209756	-104.86444864
800.00	12.00	55.50	795.62	35.46	51.59	1,306,185.47	3,177,616.80	40.17212723	-104.86439237
900.00	14.00	55.50	893.06	48.20	70.13	1,306,198.34	3,177,635.25	40.17216220	-104.86432604
1,000.00	16.00	55.50	989.64	62.86	91.46	1,306,213.16	3,177,656.47	40.17220244	-104.86424971
1,100.00	18.00	55.50	1,085.27	79.42	115.55	1,306,229.89	3,177,680.44	40.17224790	-104.86416349
1,148.50	18.97	55.50	1,131.27	88.13	128.23	1,306,238.69	3,177,693.05	40.17227181	-104.86411814
<b>Hold 18.97 Inc, 55.5 Az</b>									
1,200.00	18.97	55.50	1,179.97	97.61	142.02	1,306,248.27	3,177,706.78	40.17229784	-104.86406877
1,300.00	18.97	55.50	1,274.54	116.02	168.81	1,306,266.87	3,177,733.44	40.17234838	-104.86397290
1,400.00	18.97	55.50	1,369.11	134.43	195.60	1,306,285.48	3,177,760.10	40.17239893	-104.86387703
1,500.00	18.97	55.50	1,463.68	152.85	222.39	1,306,304.08	3,177,786.75	40.17244947	-104.86378116
1,600.00	18.97	55.50	1,558.24	171.26	249.18	1,306,322.68	3,177,813.41	40.17250001	-104.86368529
1,700.00	18.97	55.50	1,652.81	189.67	275.97	1,306,341.29	3,177,840.07	40.17255056	-104.86358942
1,800.00	18.97	55.50	1,747.38	208.08	302.76	1,306,359.89	3,177,866.73	40.17260110	-104.86349355
1,900.00	18.97	55.50	1,841.95	226.50	329.55	1,306,378.49	3,177,893.38	40.17265164	-104.86339768
2,000.00	18.97	55.50	1,936.52	244.91	356.34	1,306,397.10	3,177,920.04	40.17270219	-104.86330181
2,100.00	18.97	55.50	2,031.09	263.32	383.13	1,306,415.70	3,177,946.70	40.17275273	-104.86320594
2,200.00	18.97	55.50	2,125.66	281.73	409.92	1,306,434.31	3,177,973.36	40.17280327	-104.86311007
2,300.00	18.97	55.50	2,220.23	300.15	436.71	1,306,452.91	3,178,000.01	40.17285382	-104.86301420
2,400.00	18.97	55.50	2,314.80	318.56	463.50	1,306,471.51	3,178,026.67	40.17290436	-104.86291833
2,500.00	18.97	55.50	2,409.36	336.97	490.29	1,306,490.12	3,178,053.33	40.17295490	-104.86282246
2,600.00	18.97	55.50	2,503.93	355.38	517.08	1,306,508.72	3,178,079.99	40.17300544	-104.86272659
2,700.00	18.97	55.50	2,598.50	373.79	543.87	1,306,527.33	3,178,106.64	40.17305599	-104.86263071
2,800.00	18.97	55.50	2,693.07	392.21	570.66	1,306,545.93	3,178,133.30	40.17310653	-104.86253484
2,900.00	18.97	55.50	2,787.64	410.62	597.45	1,306,564.53	3,178,159.96	40.17315707	-104.86243897
3,000.00	18.97	55.50	2,882.21	429.03	624.24	1,306,583.14	3,178,186.62	40.17320762	-104.86234310
3,100.00	18.97	55.50	2,976.78	447.44	651.03	1,306,601.74	3,178,213.27	40.17325816	-104.86224723
3,148.50	18.97	55.50	3,022.64	456.37	664.03	1,306,610.76	3,178,226.20	40.17328267	-104.86220073
<b>Start 2/100 Turn</b>									
3,177.87	18.96	57.31	3,050.42	461.66	671.98	1,306,616.10	3,178,234.12	40.17329717	-104.86217228
<b>Hold 57.98 Az</b>									
3,188.80	18.97	57.98	3,060.75	463.56	674.98	1,306,618.02	3,178,237.10	40.17330239	-104.86216154
3,200.00	18.97	57.98	3,071.35	465.49	678.07	1,306,619.98	3,178,240.18	40.17330769	-104.86215050
3,300.00	18.97	57.98	3,165.92	482.72	705.62	1,306,637.41	3,178,267.61	40.17335499	-104.86205188
3,400.00	18.97	57.98	3,260.49	499.95	733.18	1,306,654.84	3,178,295.04	40.17340230	-104.86195326
3,500.00	18.97	57.98	3,355.06	517.19	760.74	1,306,672.27	3,178,322.48	40.17344960	-104.86185464
3,600.00	18.97	57.98	3,449.63	534.42	788.30	1,306,689.70	3,178,349.91	40.17349691	-104.86175602
3,700.00	18.97	57.98	3,544.20	551.65	815.85	1,306,707.13	3,178,377.34	40.17354421	-104.86165740
3,800.00	18.97	57.98	3,638.77	568.89	843.41	1,306,724.56	3,178,404.78	40.17359152	-104.86155878
3,900.00	18.97	57.98	3,733.34	586.12	870.97	1,306,741.99	3,178,432.21	40.17363883	-104.86146017
4,000.00	18.97	57.98	3,827.91	603.35	898.53	1,306,759.42	3,178,459.64	40.17368613	-104.86136155
4,100.00	18.97	57.98	3,922.48	620.59	926.08	1,306,776.85	3,178,487.08	40.17373344	-104.86126293
4,200.00	18.97	57.98	4,017.05	637.82	953.64	1,306,794.28	3,178,514.51	40.17378074	-104.86116431
4,300.00	18.97	57.98	4,111.62	655.05	981.20	1,306,811.71	3,178,541.94	40.17382805	-104.86106569
4,400.00	18.97	57.98	4,206.19	672.29	1,008.76	1,306,829.14	3,178,569.38	40.17387535	-104.86096707
4,500.00	18.97	57.98	4,300.77	689.52	1,036.31	1,306,846.57	3,178,596.81	40.17392266	-104.86086845

<b>Database:</b>	EDM 5000.15 Single User Db	<b>Local Co-ordinate Reference:</b>	Well ECHEVERRIA 2L-2H-D267
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	WELL @ 4904.00usft (Original Well Elev)
<b>Project:</b>	Sec 2 T2N-R67W	<b>MD Reference:</b>	WELL @ 4904.00usft (Original Well Elev)
<b>Site:</b>	Echeverria Pad	<b>North Reference:</b>	True
<b>Well:</b>	ECHEVERRIA 2L-2H-D267	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 23Apr18 kjs		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,600.00	18.97	57.98	4,395.34	706.76	1,063.87	1,306,864.00	3,178,624.24	40.17396996	-104.86076983
4,700.00	18.97	57.98	4,489.91	723.99	1,091.43	1,306,881.43	3,178,651.68	40.17401727	-104.86067121
4,800.00	18.97	57.98	4,584.48	741.22	1,118.99	1,306,898.86	3,178,679.11	40.17406457	-104.86057259
4,900.00	18.97	57.98	4,679.05	758.46	1,146.54	1,306,916.30	3,178,706.54	40.17411187	-104.86047397
5,000.00	18.97	57.98	4,773.62	775.69	1,174.10	1,306,933.73	3,178,733.98	40.17415918	-104.86037535
5,100.00	18.97	57.98	4,868.19	792.92	1,201.66	1,306,951.16	3,178,761.41	40.17420648	-104.86027673
5,200.00	18.97	57.98	4,962.76	810.16	1,229.22	1,306,968.59	3,178,788.84	40.17425379	-104.86017811
5,300.00	18.97	57.98	5,057.33	827.39	1,256.77	1,306,986.02	3,178,816.28	40.17430109	-104.86007949
5,400.00	18.97	57.98	5,151.90	844.62	1,284.33	1,307,003.45	3,178,843.71	40.17434840	-104.85998087
5,500.00	18.97	57.98	5,246.47	861.86	1,311.89	1,307,020.88	3,178,871.14	40.17439570	-104.85988224
5,600.00	18.97	57.98	5,341.04	879.09	1,339.45	1,307,038.31	3,178,898.58	40.17444300	-104.85978362
5,700.00	18.97	57.98	5,435.61	896.32	1,367.00	1,307,055.74	3,178,926.01	40.17449031	-104.85968500
5,800.00	18.97	57.98	5,530.18	913.56	1,394.56	1,307,073.17	3,178,953.44	40.17453761	-104.85958638
5,900.00	18.97	57.98	5,624.75	930.79	1,422.12	1,307,090.60	3,178,980.88	40.17458492	-104.85948776
6,000.00	18.97	57.98	5,719.32	948.02	1,449.68	1,307,108.03	3,179,008.31	40.17463222	-104.85938914
6,100.00	18.97	57.98	5,813.89	965.26	1,477.23	1,307,125.46	3,179,035.74	40.17467952	-104.85929051
6,200.00	18.97	57.98	5,908.46	982.49	1,504.79	1,307,142.89	3,179,063.17	40.17472683	-104.85919189
6,300.00	18.97	57.98	6,003.04	999.72	1,532.35	1,307,160.32	3,179,090.61	40.17477413	-104.85909327
6,400.00	18.97	57.98	6,097.61	1,016.96	1,559.91	1,307,177.75	3,179,118.04	40.17482143	-104.85899465
6,500.00	18.97	57.98	6,192.18	1,034.19	1,587.46	1,307,195.18	3,179,145.47	40.17486874	-104.85889603
6,600.00	18.97	57.98	6,286.75	1,051.42	1,615.02	1,307,212.61	3,179,172.91	40.17491604	-104.85879740
6,700.00	18.97	57.98	6,381.32	1,068.66	1,642.58	1,307,230.04	3,179,200.34	40.17496334	-104.85869878
6,800.00	18.97	57.98	6,475.89	1,085.89	1,670.14	1,307,247.47	3,179,227.77	40.17501065	-104.85860016
6,900.00	18.97	57.98	6,570.46	1,103.12	1,697.69	1,307,264.90	3,179,255.21	40.17505795	-104.85850153
6,912.10	18.97	57.98	6,581.90	1,105.21	1,701.03	1,307,267.01	3,179,258.53	40.17506367	-104.85848960
<b>KOP 8/100</b>									
6,913.12	18.97	57.98	6,582.86	1,105.38	1,701.31	1,307,267.19	3,179,258.81	40.17506415	-104.85848860
7,000.00	16.48	79.46	6,665.71	1,115.14	1,725.42	1,307,277.12	3,179,282.85	40.17509092	-104.85840229
7,100.00	16.92	107.52	6,761.64	1,113.35	1,753.29	1,307,275.52	3,179,310.73	40.17508600	-104.85830256
7,200.00	20.64	129.76	6,856.42	1,097.67	1,780.76	1,307,260.04	3,179,338.31	40.17504296	-104.85820427
7,300.00	26.26	144.18	6,948.20	1,068.41	1,807.30	1,307,230.98	3,179,365.06	40.17496263	-104.85810931
7,400.00	32.83	153.50	7,035.20	1,026.14	1,832.38	1,307,188.89	3,179,390.44	40.17484659	-104.85801955
7,500.00	39.88	159.91	7,115.71	971.68	1,855.53	1,307,134.60	3,179,413.98	40.17469709	-104.85793673
7,600.00	47.19	164.65	7,188.17	906.09	1,876.29	1,307,069.16	3,179,435.21	40.17451704	-104.85786247
7,700.00	54.65	168.37	7,251.18	830.65	1,894.25	1,306,993.85	3,179,453.71	40.17430994	-104.85779820
7,800.00	62.21	171.45	7,303.50	746.83	1,909.07	1,306,910.13	3,179,469.13	40.17407983	-104.85774518
7,900.00	69.83	174.13	7,344.12	656.25	1,920.46	1,306,819.64	3,179,481.17	40.17383119	-104.85770444
8,000.00	77.48	176.56	7,372.25	560.69	1,928.20	1,306,724.13	3,179,489.60	40.17356885	-104.85767678
8,100.00	85.16	178.85	7,387.34	461.99	1,932.14	1,306,625.47	3,179,494.24	40.17329792	-104.85766273
8,163.00	89.99	180.26	7,390.00	399.07	1,932.62	1,306,562.55	3,179,495.18	40.17312519	-104.85766100
<b>LP 90 Inc, 180.26 Az</b>									
8,163.07	90.00	180.26	7,390.00	399.00	1,932.62	1,306,562.48	3,179,495.18	40.17312499	-104.85766100
<b>ECHEVERRIA 2L-2H-D267 TPZ</b>									
8,200.00	90.00	180.26	7,390.00	362.07	1,932.46	1,306,525.55	3,179,495.27	40.17302362	-104.85766161
8,300.00	90.00	180.26	7,390.00	262.07	1,932.00	1,306,425.55	3,179,495.54	40.17274911	-104.85766326
8,400.00	90.00	180.26	7,390.00	162.08	1,931.55	1,306,325.56	3,179,495.80	40.17247460	-104.85766492
8,500.00	90.00	180.26	7,390.00	62.08	1,931.09	1,306,225.56	3,179,496.06	40.17220009	-104.85766657
8,600.00	90.00	180.26	7,390.00	-37.92	1,930.64	1,306,125.56	3,179,496.32	40.17192558	-104.85766823
8,700.00	90.00	180.26	7,390.00	-137.92	1,930.18	1,306,025.56	3,179,496.58	40.17165107	-104.85766989
8,800.00	90.00	180.26	7,390.00	-237.92	1,929.73	1,305,925.56	3,179,496.85	40.17137656	-104.85767154
8,900.00	90.00	180.26	7,390.00	-337.92	1,929.27	1,305,825.56	3,179,497.11	40.17110205	-104.85767320
9,000.00	90.00	180.26	7,390.00	-437.92	1,928.82	1,305,725.56	3,179,497.37	40.17082754	-104.85767485
9,100.00	90.00	180.26	7,390.00	-537.92	1,928.36	1,305,625.56	3,179,497.63	40.17055303	-104.85767651
9,200.00	90.00	180.26	7,390.00	-637.92	1,927.91	1,305,525.56	3,179,497.89	40.17027852	-104.85767816

<b>Database:</b>	EDM 5000.15 Single User Db	<b>Local Co-ordinate Reference:</b>	Well ECHEVERRIA 2L-2H-D267
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	WELL @ 4904.00usft (Original Well Elev)
<b>Project:</b>	Sec 2 T2N-R67W	<b>MD Reference:</b>	WELL @ 4904.00usft (Original Well Elev)
<b>Site:</b>	Echeverria Pad	<b>North Reference:</b>	True
<b>Well:</b>	ECHEVERRIA 2L-2H-D267	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 23Apr18 kjs		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,300.00	90.00	180.26	7,390.00	-737.92	1,927.45	1,305,425.56	3,179,498.15	40.17000401	-104.85767982
9,400.00	90.00	180.26	7,390.00	-837.91	1,927.00	1,305,325.56	3,179,498.42	40.16972950	-104.85768147
9,500.00	90.00	180.26	7,390.00	-937.91	1,926.54	1,305,225.56	3,179,498.68	40.16945499	-104.85768313
9,600.00	90.00	180.26	7,390.00	-1,037.91	1,926.09	1,305,125.56	3,179,498.94	40.16918048	-104.85768478
9,700.00	90.00	180.26	7,390.00	-1,137.91	1,925.63	1,305,025.56	3,179,499.20	40.16890597	-104.85768644
9,800.00	90.00	180.26	7,390.00	-1,237.91	1,925.18	1,304,925.56	3,179,499.46	40.16863146	-104.85768809
9,900.00	90.00	180.26	7,390.00	-1,337.91	1,924.72	1,304,825.56	3,179,499.72	40.16835695	-104.85768975
10,000.00	90.00	180.26	7,390.00	-1,437.91	1,924.27	1,304,725.56	3,179,499.99	40.16808244	-104.85769140
10,100.00	90.00	180.26	7,390.00	-1,537.91	1,923.81	1,304,625.56	3,179,500.25	40.16780793	-104.85769306
10,200.00	90.00	180.26	7,390.00	-1,637.91	1,923.36	1,304,525.56	3,179,500.51	40.16753342	-104.85769471
10,300.00	90.00	180.26	7,390.00	-1,737.91	1,922.91	1,304,425.56	3,179,500.77	40.16725891	-104.85769637
10,400.00	90.00	180.26	7,390.00	-1,837.90	1,922.45	1,304,325.56	3,179,501.03	40.16698440	-104.85769802
10,463.00	90.00	180.26	7,390.00	-1,900.90	1,922.16	1,304,262.56	3,179,501.20	40.16681146	-104.85769907
<b>Start Turn 2.00</b>									
10,463.07	90.00	180.26	7,390.00	-1,900.98	1,922.16	1,304,262.49	3,179,501.20	40.16681126	-104.85769907
10,500.00	90.00	181.00	7,390.00	-1,937.90	1,921.76	1,304,225.56	3,179,501.06	40.16670989	-104.85770053
10,590.50	90.00	182.81	7,390.00	-2,028.35	1,918.75	1,304,135.10	3,179,498.70	40.16646161	-104.85771131
<b>Hold 182.81 Az</b>									
10,590.57	90.00	182.81	7,390.00	-2,028.42	1,918.75	1,304,135.03	3,179,498.70	40.16646141	-104.85771133
10,600.00	90.00	182.81	7,390.00	-2,037.84	1,918.29	1,304,125.61	3,179,498.30	40.16643556	-104.85771298
10,700.00	90.00	182.81	7,390.00	-2,137.72	1,913.38	1,304,025.69	3,179,494.11	40.16616138	-104.85773056
10,800.00	90.00	182.81	7,390.00	-2,237.60	1,908.48	1,303,925.78	3,179,489.93	40.16588720	-104.85774813
10,900.00	90.00	182.81	7,390.00	-2,337.48	1,903.57	1,303,825.87	3,179,485.74	40.16561302	-104.85776570
11,000.00	90.00	182.81	7,390.00	-2,437.35	1,898.67	1,303,725.96	3,179,481.55	40.16533883	-104.85778327
11,100.00	90.00	182.81	7,390.00	-2,537.23	1,893.77	1,303,626.04	3,179,477.36	40.16506465	-104.85780085
11,200.00	90.00	182.81	7,390.00	-2,637.11	1,888.86	1,303,526.13	3,179,473.18	40.16479047	-104.85781842
11,300.00	90.00	182.81	7,390.00	-2,736.99	1,883.96	1,303,426.22	3,179,468.99	40.16451629	-104.85783599
11,400.00	90.00	182.81	7,390.00	-2,836.87	1,879.06	1,303,326.31	3,179,464.80	40.16424211	-104.85785356
11,500.00	90.00	182.81	7,390.00	-2,936.75	1,874.15	1,303,226.39	3,179,460.61	40.16396792	-104.85787114
11,600.00	90.00	182.81	7,390.00	-3,036.63	1,869.25	1,303,126.48	3,179,456.43	40.16369374	-104.85788871
11,690.50	90.00	182.81	7,390.00	-3,127.02	1,864.81	1,303,036.06	3,179,452.64	40.16344561	-104.85790461
<b>Start 2/100</b>									
11,690.57	90.00	182.81	7,390.00	-3,127.10	1,864.81	1,303,035.99	3,179,452.63	40.16344541	-104.85790462
11,700.00	90.00	182.62	7,390.00	-3,136.51	1,864.36	1,303,026.57	3,179,452.25	40.16341956	-104.85790622
11,800.00	90.00	180.62	7,390.00	-3,236.47	1,861.53	1,302,926.60	3,179,450.14	40.16314517	-104.85791638
11,900.00	90.00	178.62	7,390.00	-3,336.46	1,862.19	1,302,826.61	3,179,451.52	40.16287068	-104.85791404
11,972.30	90.00	177.18	7,390.00	-3,408.71	1,864.84	1,302,754.39	3,179,454.68	40.16267235	-104.85790458
<b>Hold 177.17 Az</b>									
11,972.37	90.00	177.17	7,390.00	-3,408.78	1,864.85	1,302,754.31	3,179,454.69	40.16267215	-104.85790457
12,000.00	90.00	177.17	7,390.00	-3,436.38	1,866.21	1,302,726.73	3,179,456.25	40.16259639	-104.85789970
12,100.00	90.00	177.17	7,390.00	-3,536.26	1,871.14	1,302,626.89	3,179,461.89	40.16232221	-104.85788209
12,200.00	90.00	177.17	7,390.00	-3,636.13	1,876.07	1,302,527.05	3,179,467.54	40.16204803	-104.85786448
12,300.00	90.00	177.17	7,390.00	-3,736.01	1,881.00	1,302,427.21	3,179,473.18	40.16177385	-104.85784687
12,400.00	90.00	177.17	7,390.00	-3,835.89	1,885.93	1,302,327.36	3,179,478.83	40.16149967	-104.85782926
12,500.00	90.00	177.17	7,390.00	-3,935.77	1,890.85	1,302,227.52	3,179,484.47	40.16122549	-104.85781165
12,565.12	90.00	177.17	7,390.00	-4,000.81	1,894.06	1,302,162.51	3,179,488.15	40.16104694	-104.85780019
<b>TD at 12566.12</b>									
12,566.20	90.00	177.17	7,390.00	-4,001.88	1,894.12	1,302,161.43	3,179,488.21	40.16104399	-104.85780000
<b>ECHEVERRIA 2L-2H-D267 BHL</b>									

<b>Database:</b>	EDM 5000.15 Single User Db	<b>Local Co-ordinate Reference:</b>	Well ECHEVERRIA 2L-2H-D267
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	WELL @ 4904.00usft (Original Well Elev)
<b>Project:</b>	Sec 2 T2N-R67W	<b>MD Reference:</b>	WELL @ 4904.00usft (Original Well Elev)
<b>Site:</b>	Echeverria Pad	<b>North Reference:</b>	True
<b>Well:</b>	ECHEVERRIA 2L-2H-D267	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 23Apr18 kjs		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
ECHEVERRIA 2L-2H-D267	0.00	0.41	7,390.00	-4,001.88	1,894.12	1,302,161.43	3,179,488.21	40.16104399	-104.85780000
- plan hits target center									
- Point									
ECHEVERRIA 2L-2H-D267	0.00	0.42	7,390.00	399.00	1,932.62	1,306,562.48	3,179,495.18	40.17312499	-104.85766100
- plan hits target center									
- Point									

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
200.00	200.00	0.00	0.00	Start Build 2.00
1,148.50	1,131.27	88.13	128.23	Hold 18.97 Inc, 55.5 Az
3,148.50	3,022.64	456.37	664.03	Start 2/100 Turn
3,177.87	3,050.42	461.66	671.98	Hold 57.98 Az
6,912.10	6,581.90	1,105.21	1,701.03	KOP 8/100
8,163.00	7,390.00	399.07	1,932.62	LP 90 Inc, 180.26 Az
10,463.00	7,390.00	-1,900.90	1,922.16	Start Turn 2.00
10,590.50	7,390.00	-2,028.35	1,918.75	Hold 182.81 Az
11,690.50	7,390.00	-3,127.02	1,864.81	Start 2/100
11,972.30	7,390.00	-3,408.71	1,864.84	Hold 177.17 Az
12,565.12	7,390.00	-4,000.81	1,894.06	TD at 12566.12





# **Crestone Peak Resources**

**Sec 2 T2N-R67W**

**Echeverria Pad**

**ECHEVERRIA 2L-2H-D267**

**Wellbore #1**

**Design #1 23Apr18 kjs**

## **Anticollision Summary Report**

**14 May, 2018**

## Anticollision Summary Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well ECHEVERRIA 2L-2H-D267
<b>Project:</b>	Sec 2 T2N-R67W	<b>TVD Reference:</b>	WELL @ 4904.00usft (Original Well Elev)
<b>Reference Site:</b>	Echeverria Pad	<b>MD Reference:</b>	WELL @ 4904.00usft (Original Well Elev)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	ECHEVERRIA 2L-2H-D267	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 5000.15 Single User Db
<b>Reference Design:</b>	Design #1 23Apr18 kjs	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Design #1 23Apr18 kjs		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD Interval 100.00usft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 9,999.98 usft	<b>Error Surface:</b>	Pedal Curve
<b>Warning Levels Evaluated at:</b>	2.00 Sigma	<b>Casing Method:</b>	Not applied

<b>Survey Tool Program</b>	<b>Date</b> 5/11/2018			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.00	12,565.32	Design #1 23Apr18 kjs (Wellbore #1)	MWD	OWSG MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Echeverria Pad						
ECHEVERRIA 2C-2H-D267 - Wellbore #1 - Design #1 23	115.99	117.99	89.98	89.59	226.203	CC
ECHEVERRIA 2C-2H-D267 - Wellbore #1 - Design #1 23	200.00	201.98	89.99	88.99	89.981	ES
ECHEVERRIA 2C-2H-D267 - Wellbore #1 - Design #1 23	12,566.20	12,357.86	2,589.31	2,423.36	15.604	SF
ECHEVERRIA 2D-2H-D267 - Wellbore #1 - Design #1 23	116.33	117.33	80.20	79.81	202.181	CC
ECHEVERRIA 2D-2H-D267 - Wellbore #1 - Design #1 23	200.00	200.99	80.20	79.21	80.483	ES
ECHEVERRIA 2D-2H-D267 - Wellbore #1 - Design #1 23	12,566.20	12,131.62	2,459.23	2,294.61	14.939	SF
ECHEVERRIA 2E-2H-D267 - Wellbore #1 - Design #1 23	200.00	201.00	70.14	69.15	70.385	CC, ES
ECHEVERRIA 2E-2H-D267 - Wellbore #1 - Design #1 23	12,566.20	12,134.23	2,108.18	1,944.97	12.917	SF
ECHEVERRIA 2F-2H-D267 - Wellbore #1 - Design #1 23	200.00	201.00	60.08	59.09	60.290	CC, ES
ECHEVERRIA 2F-2H-D267 - Wellbore #1 - Design #1 23	12,566.20	12,331.15	1,699.65	1,533.95	10.257	SF
ECHEVERRIA 2G-2H-D267 - Wellbore #1 - Design #1 23	200.00	201.00	50.02	49.03	50.195	CC, ES
ECHEVERRIA 2G-2H-D267 - Wellbore #1 - Design #1 23	12,566.20	12,207.15	1,436.59	1,272.85	8.774	SF
ECHEVERRIA 2H-2H-D267 - Wellbore #1 - Design #1 23	200.00	201.00	39.96	38.97	40.101	CC, ES
ECHEVERRIA 2H-2H-D267 - Wellbore #1 - Design #1 23	12,566.20	12,156.41	1,121.83	961.47	6.996	SF
ECHEVERRIA 2I-2H-D267 - Wellbore #1 - Design #1 23A	200.00	200.00	30.18	29.19	30.394	CC
ECHEVERRIA 2I-2H-D267 - Wellbore #1 - Design #1 23A	300.00	300.68	30.49	28.78	17.848	ES
ECHEVERRIA 2I-2H-D267 - Wellbore #1 - Design #1 23A	12,566.20	12,291.83	684.42	524.41	4.277	SF
ECHEVERRIA 2J-2H-D267 - Wellbore #1 - Design #1 23	200.00	200.00	20.12	19.13	20.263	CC, ES
ECHEVERRIA 2J-2H-D267 - Wellbore #1 - Design #1 23	12,566.20	12,243.51	491.68	346.90	3.396	SF
ECHEVERRIA 2K-2H-D267 - Wellbore #1 - Design #1 23	200.00	200.00	10.06	9.07	10.131	CC
ECHEVERRIA 2K-2H-D267 - Wellbore #1 - Design #1 23	4,400.00	4,403.80	40.50	-2.99	0.931	Level 3, SF
ECHEVERRIA 2K-2H-D267 - Wellbore #1 - Design #1 23	4,900.00	4,903.74	47.39	-3.22	0.936	Level 3, ES

## Anticollision Summary Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well ECHEVERRIA 2L-2H-D267
<b>Project:</b>	Sec 2 T2N-R67W	<b>TVD Reference:</b>	WELL @ 4904.00usft (Original Well Elev)
<b>Reference Site:</b>	Echeverria Pad	<b>MD Reference:</b>	WELL @ 4904.00usft (Original Well Elev)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	ECHEVERRIA 2L-2H-D267	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 5000.15 Single User Db
<b>Reference Design:</b>	Design #1 23Apr18 kjs	<b>Offset TVD Reference:</b>	Offset Datum

### Summary

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
<b>Offset Well - Wellbore - Design</b>						
Existing Wells (Echeverria)						
BARCLAY 28C-11HZ - KMG - MWD	12,566.20	17,339.00	961.37	876.34	11.307	CC, ES, SF
BBKB 15N-35HZ - KMG - MWD	7,005.08	12,400.00	1,980.31	1,858.35	16.238	CC, ES
BBKB 15N-35HZ - KMG - MWD	7,200.00	12,400.00	1,993.42	1,868.82	15.998	SF
BBKB 16N-35HZ - KMG - MWD	7,160.88	12,431.00	1,266.33	1,144.10	10.360	CC
BBKB 16N-35HZ - KMG - MWD	7,200.00	12,431.00	1,267.15	1,144.03	10.292	ES
BBKB 16N-35HZ - KMG - MWD	7,300.00	12,431.00	1,276.64	1,151.86	10.232	SF
BBKB 16N-A35HZ - KMG - MWD	7,236.26	12,450.00	1,076.99	956.80	8.961	CC, ES
BBKB 16N-A35HZ - KMG - MWD	7,300.00	12,450.00	1,079.66	957.96	8.871	SF
BBKB 25E-3HZ - KMG - MWD	7,118.47	12,763.06	2,203.40	2,080.44	17.920	CC, ES
BBKB 25E-3HZ - KMG - MWD	7,400.00	12,763.06	2,227.33	2,101.00	17.631	SF
BBKB 36E-35HZ - KMG - MWD	6,866.16	12,687.00	2,547.70	2,424.96	20.757	CC
BBKB 36E-35HZ - KMG - MWD	6,900.00	12,687.00	2,547.93	2,424.70	20.678	ES
BBKB 36E-35HZ - KMG - MWD	7,200.00	12,687.00	2,575.34	2,448.76	20.345	SF
BBKB 36N-35HZ - KMG - MWD	6,979.95	12,677.00	2,338.43	2,214.92	18.932	CC
BBKB 36N-35HZ - KMG - MWD	7,000.00	12,677.00	2,338.45	2,214.62	18.885	ES
BBKB 36N-35HZ - KMG - MWD	7,300.00	12,677.00	2,368.34	2,241.14	18.619	SF
BBKB 37C-35HZ - KMG - MWD	7,264.92	12,762.00	1,510.79	1,388.68	12.373	CC
BBKB 37C-35HZ - KMG - MWD	7,300.00	12,762.00	1,511.37	1,388.58	12.309	ES
BBKB 37C-35HZ - KMG - MWD	7,400.00	12,762.00	1,519.41	1,395.13	12.226	SF
BBKB 37N-35HZ - KMG - MWD	7,124.39	12,575.00	1,726.70	1,603.17	13.979	CC, ES
BBKB 37N-35HZ - KMG - MWD	7,300.00	12,575.00	1,738.72	1,612.59	13.785	SF
BBKB 38C-35HZ - KMG - MWD	7,392.38	12,652.00	948.92	832.80	8.171	CC
BBKB 38C-35HZ - KMG - MWD	7,400.00	12,652.00	948.97	832.63	8.157	ES
BBKB 38C-35HZ - KMG - MWD	7,500.00	12,652.00	958.02	839.66	8.094	SF
BBKB 38N-35HZ - KMG - MWD	7,346.44	12,437.00	519.35	417.47	5.098	CC, ES
BBKB 38N-35HZ - KMG - MWD	7,400.00	12,437.00	523.36	419.34	5.031	SF
BUTTERBALL 40C-34HZ - KMG - MWD	7,027.03	13,282.50	2,699.46	2,557.80	19.056	CC, ES
BUTTERBALL 40C-34HZ - KMG - MWD	7,200.00	13,264.96	2,704.77	2,561.58	18.889	SF
BUTTERBALL 40N-34HZ - KMG - MWD	6,778.22	13,065.00	2,775.16	2,634.47	19.726	CC
BUTTERBALL 40N-34HZ - KMG - MWD	6,800.00	13,065.00	2,775.24	2,634.27	19.687	ES
BUTTERBALL 40N-34HZ - KMG - MWD	7,100.00	13,107.72	2,793.61	2,648.50	19.251	SF
BUTTERBALL 9N-34HZ - KMG - MWD	6,715.04	13,061.36	3,232.91	3,094.34	23.331	CC
BUTTERBALL 9N-34HZ - KMG - MWD	6,800.00	13,064.00	3,234.01	3,094.34	23.154	ES
BUTTERBALL 9N-34HZ - KMG - MWD	7,100.00	13,089.04	3,255.31	3,112.14	22.737	SF
ECHEVERRIA 0-2-2 - CPR - MWD	2,371.82	2,390.97	444.91	418.54	16.875	CC, ES
ECHEVERRIA 0-2-2 - CPR - MWD	2,500.00	2,486.63	453.38	425.54	16.281	SF
ECHEVERRIA 1 - CPR - No Survey	11,922.31	7,375.00	1,502.13	1,415.95	17.429	CC, ES
ECHEVERRIA 1 - CPR - No Survey	12,000.00	7,375.00	1,505.25	1,418.78	17.407	SF
ECHEVERRIA 11-2 - CPR - Gyro	762.01	733.67	472.62	467.56	93.451	CC
ECHEVERRIA 11-2 - CPR - Gyro	800.00	770.68	472.68	467.33	88.255	ES
ECHEVERRIA 11-2 - CPR - Gyro	2,700.00	2,570.65	776.84	755.95	37.180	SF
ECHEVERRIA 1-2 - CPR - Gyro	299.06	256.55	696.67	695.10	443.025	CC
ECHEVERRIA 1-2 - CPR - Gyro	700.00	656.58	697.28	692.77	154.750	ES
ECHEVERRIA 1-2 - CPR - Gyro	9,400.00	7,297.17	1,634.36	1,572.58	26.455	SF
ECHEVERRIA 12-2 - CPR - Gyro	207.24	184.37	1,334.71	1,333.71	1,326.937	CC, ES
ECHEVERRIA 12-2 - CPR - Gyro	10,200.00	7,354.61	2,100.35	2,029.94	29.832	SF
ECHEVERRIA 13-2 - CPR - Gyro	10,926.53	7,357.95	2,116.25	2,034.44	25.868	CC, ES
ECHEVERRIA 13-2 - CPR - Gyro	11,100.00	7,357.85	2,123.35	2,040.65	25.674	SF
ECHEVERRIA 14-2 - CPR - Gyro	12,472.20	7,412.19	2,181.17	2,073.02	20.170	CC
ECHEVERRIA 14-2 - CPR - Gyro	12,500.00	7,412.20	2,181.34	2,072.96	20.127	ES
ECHEVERRIA 14-2 - CPR - Gyro	12,566.20	7,412.20	2,183.19	2,074.47	20.081	SF
ECHEVERRIA 2-0-2 - CPR - Gyro	3,200.00	3,040.27	321.91	292.40	10.910	CC, ES
ECHEVERRIA 2-0-2 - CPR - Gyro	3,600.00	3,426.63	338.68	305.76	10.287	SF

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

## Anticollision Summary Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well ECHEVERRIA 2L-2H-D267
<b>Project:</b>	Sec 2 T2N-R67W	<b>TVD Reference:</b>	WELL @ 4904.00usft (Original Well Elev)
<b>Reference Site:</b>	Echeverria Pad	<b>MD Reference:</b>	WELL @ 4904.00usft (Original Well Elev)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	ECHEVERRIA 2L-2H-D267	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 5000.15 Single User Db
<b>Reference Design:</b>	Design #1 23Apr18 kjs	<b>Offset TVD Reference:</b>	Offset Datum

### Summary

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Existing Wells (Echeverria)						
ECHEVERRIA 21-2 - CPR - Gyro	3,918.28	3,711.18	652.34	616.60	18.253	CC
ECHEVERRIA 21-2 - CPR - Gyro	4,000.00	3,787.33	652.95	616.43	17.883	ES
ECHEVERRIA 21-2 - CPR - Gyro	8,600.00	7,340.40	763.02	704.97	13.143	SF
ECHEVERRIA 22-2 - CPR - Gyro	9,700.00	7,335.67	371.56	304.21	5.517	SF
ECHEVERRIA 22-2 - CPR - Gyro	9,737.36	7,335.86	369.68	302.98	5.543	CC, ES
ECHEVERRIA 23-2 - CPR - Gyro	10,800.00	7,333.40	451.00	369.57	5.538	SF
ECHEVERRIA 23-2 - CPR - Gyro	10,844.53	7,333.59	448.80	368.35	5.579	CC, ES
ECHEVERRIA 24-2 - CPR - Gyro	12,566.20	7,355.43	462.08	352.77	4.227	CC, ES, SF
ECHEVERRIA 2-8-2 - CPR - MWD	12,566.20	7,480.89	1,343.79	1,232.19	12.041	CC, ES, SF
ECHEVERRIA 2A-2H - CPR - MWD	2,919.95	2,782.46	58.00	32.63	2.286	CC, ES, SF
ECHEVERRIA 2B-2H - CPR - MWD	3,843.67	3,660.38	34.10	-1.22	0.966	Level 3, CC, ES, SF
ECHEVERRIA 4-2-2 - CPR - MWD	9,039.49	7,439.15	59.43	-2.80	0.955	Level 3, CC, ES, SF
ECHEVERRIA 4-4-2 - CPR - MWD	10,481.98	7,360.88	56.19	-19.54	0.742	Level 2, CC, ES, SF
ECHEVERRIA C-2-320-W - CPR - MWD	10,388.88	7,494.00	1,337.22	1,261.50	17.659	CC, ES, SF
ENDERSON 3-11 - KMG - Gyro	12,566.20	7,369.22	1,018.97	923.64	10.688	CC, ES, SF
GORDON RED V 10-1 - KMG - Gyro	12,566.20	7,485.21	3,272.36	3,160.22	29.181	CC, ES, SF
HSR-ENDERSON 4-11A - KMG - Gyro	12,566.20	7,412.45	2,288.59	2,177.02	20.512	CC, ES, SF
HSR-WITTEMEYER 7-2A - KMG - Gyro	9,755.06	7,335.63	417.17	350.12	6.222	CC, ES
HSR-WITTEMEYER 7-2A - KMG - Gyro	9,900.00	7,333.64	441.62	369.21	6.098	SF
KIYOTA 4A-35H-O367 - CPR - MWD	7,370.98	7,090.08	163.90	108.22	2.943	CC, ES, SF
KIYOTA 4B-35H-O367 - CPR - MWD	7,400.00	7,108.44	315.08	255.38	5.278	SF
KIYOTA 4B-35H-O367 - CPR - MWD	7,495.50	7,137.10	300.15	243.65	5.313	CC, ES
KIYOTA 4C-35H-O367 - CPR - MWD	7,400.00	7,085.00	402.41	347.03	7.266	ES, SF
KIYOTA 4C-35H-O367 - CPR - MWD	7,405.55	7,085.00	402.37	347.05	7.274	CC
KIYOTA 4D-35H-O367 - CPR - MWD	7,495.56	7,127.00	486.37	430.41	8.690	CC, ES, SF
MATSUSHIMA 35-13L - KMG - Gyro	3,424.09	3,240.63	1,216.23	1,185.41	39.463	CC
MATSUSHIMA 35-13L - KMG - Gyro	3,500.00	3,309.50	1,216.60	1,185.02	38.536	ES
MATSUSHIMA 35-13L - KMG - Gyro	5,900.00	5,560.56	1,473.55	1,421.68	28.405	SF
PANCOST 10-2 - KMG - MWD	10,879.41	7,460.39	545.73	461.69	6.494	CC
PANCOST 10-2 - KMG - MWD	10,900.00	7,460.46	546.11	461.00	6.416	ES
PANCOST 10-2 - KMG - MWD	11,000.00	7,460.77	558.89	469.25	6.235	SF
PANCOST 23-2 - KMG - MWD	11,745.59	7,478.03	69.85	-25.83	0.730	Level 2, CC, ES, SF
PANCOST 36-2 - KMG - MWD	12,566.20	7,624.22	473.18	398.49	6.336	CC, ES, SF
PENNINGTON 28N-2HZ - KMG - MWD	12,524.97	7,575.25	286.70	188.71	2.926	CC, ES, SF
PENNINGTON 28N-2HZX - KMG - MWD	8,329.64	11,763.00	240.42	146.81	2.568	CC, ES, SF
RICHARDSON V 3-16 - KMG - Gyro	12,243.77	7,331.42	3,256.66	3,152.87	31.379	CC
RICHARDSON V 3-16 - KMG - Gyro	12,300.00	7,330.74	3,257.14	3,152.74	31.197	ES
RICHARDSON V 3-16 - KMG - Gyro	12,566.20	7,327.40	3,272.58	3,165.68	30.614	SF
RICHARDSON V 3-1JI - KMG - Gyro	243.08	264.49	1,420.81	1,419.40	1,004.051	CC
RICHARDSON V 3-1JI - KMG - Gyro	300.00	320.28	1,421.19	1,419.38	784.770	ES
RICHARDSON V 3-1JI - KMG - Gyro	9,000.00	7,389.76	3,447.34	3,387.60	57.702	SF
RICHARDSON V 3-2 - KMG - No Survey	200.00	208.00	2,764.66	2,763.79	3,182.230	CC, ES
RICHARDSON V 3-2 - KMG - No Survey	11,500.00	7,398.00	5,548.95	5,485.78	87.842	SF
RICHARDSON V 3-8 - KMG - Gyro	0.00	0.00	1,553.34			
RICHARDSON V 3-8 - KMG - Gyro	206.83	211.47	1,553.66	1,552.58	1,431.979	ES
RICHARDSON V 3-8 - KMG - Gyro	10,600.00	7,425.46	3,203.27	3,130.43	43.977	SF
RICHARDSON V 3-9 - KMG - Gyro	158.31	163.31	2,872.77	2,872.04	3,957.040	CC
RICHARDSON V 3-9 - KMG - Gyro	200.00	200.00	2,872.81	2,871.81	2,860.095	ES
RICHARDSON V 3-9 - KMG - Gyro	11,800.00	7,487.17	3,222.50	3,131.02	35.224	SF
ROLLIE J VINCENT 1 - Kauffman - Gyro	9,634.86	7,344.31	389.27	323.90	5.955	CC, ES
ROLLIE J VINCENT 1 - Kauffman - Gyro	9,700.00	7,344.01	394.68	326.82	5.815	SF
VOLLMAR 28N-11HZ - KMG - MWD	12,566.20	12,881.00	613.74	493.68	5.112	CC, ES, SF
VOLLMAR 29C-11HZ - KMG - MWD	12,566.20	13,082.00	1,469.09	1,271.38	7.431	CC, ES, SF

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

## Anticollision Summary Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well ECHEVERRIA 2L-2H-D267
<b>Project:</b>	Sec 2 T2N-R67W	<b>TVD Reference:</b>	WELL @ 4904.00usft (Original Well Elev)
<b>Reference Site:</b>	Echeverria Pad	<b>MD Reference:</b>	WELL @ 4904.00usft (Original Well Elev)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	ECHEVERRIA 2L-2H-D267	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 5000.15 Single User Db
<b>Reference Design:</b>	Design #1 23Apr18 kjs	<b>Offset TVD Reference:</b>	Offset Datum

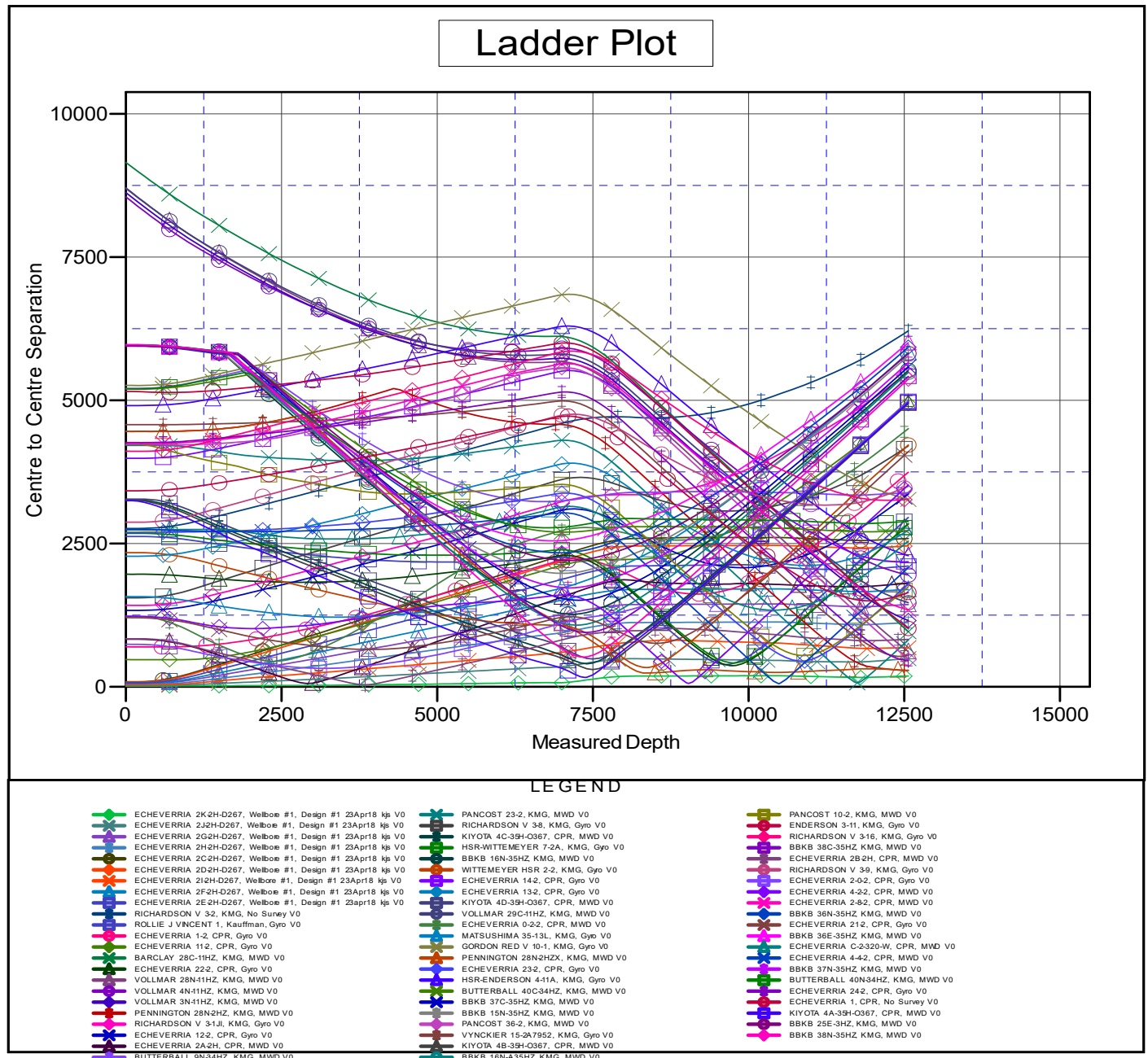
Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Existing Wells (Echeverria)						
VOLLMAR 3N-11HZ - KMG - MWD	12,566.20	12,934.00	1,157.37	967.67	6.101	CC, ES, SF
VOLLMAR 4N-11HZ - KMG - MWD	12,566.20	13,131.00	1,952.31	1,750.02	9.651	CC, ES, SF
VYNCKIER 15-2A7952 - KMG - Gyro	12,430.71	7,347.05	530.83	423.70	4.955	CC, ES
VYNCKIER 15-2A7952 - KMG - Gyro	12,500.00	7,348.07	535.33	425.46	4.872	SF
WITTEMEYER HSR 2-2 - KMG - Gyro	8,300.00	7,325.40	340.85	282.28	5.820	SF
WITTEMEYER HSR 2-2 - KMG - Gyro	8,357.51	7,324.53	335.96	278.63	5.859	CC, ES

## Anticollision Summary Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well ECHEVERRIA 2L-2H-D267
<b>Project:</b>	Sec 2 T2N-R67W	<b>TVD Reference:</b>	WELL @ 4904.00usft (Original Well Elev)
<b>Reference Site:</b>	Echeverria Pad	<b>MD Reference:</b>	WELL @ 4904.00usft (Original Well Elev)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	ECHEVERRIA 2L-2H-D267	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 5000.15 Single User Db
<b>Reference Design:</b>	Design #1 23Apr18 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4904.00usft (Original Well E  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.50000000

Coordinates are relative to: ECHEVERRIA 2L-2H-D267  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.41°



CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

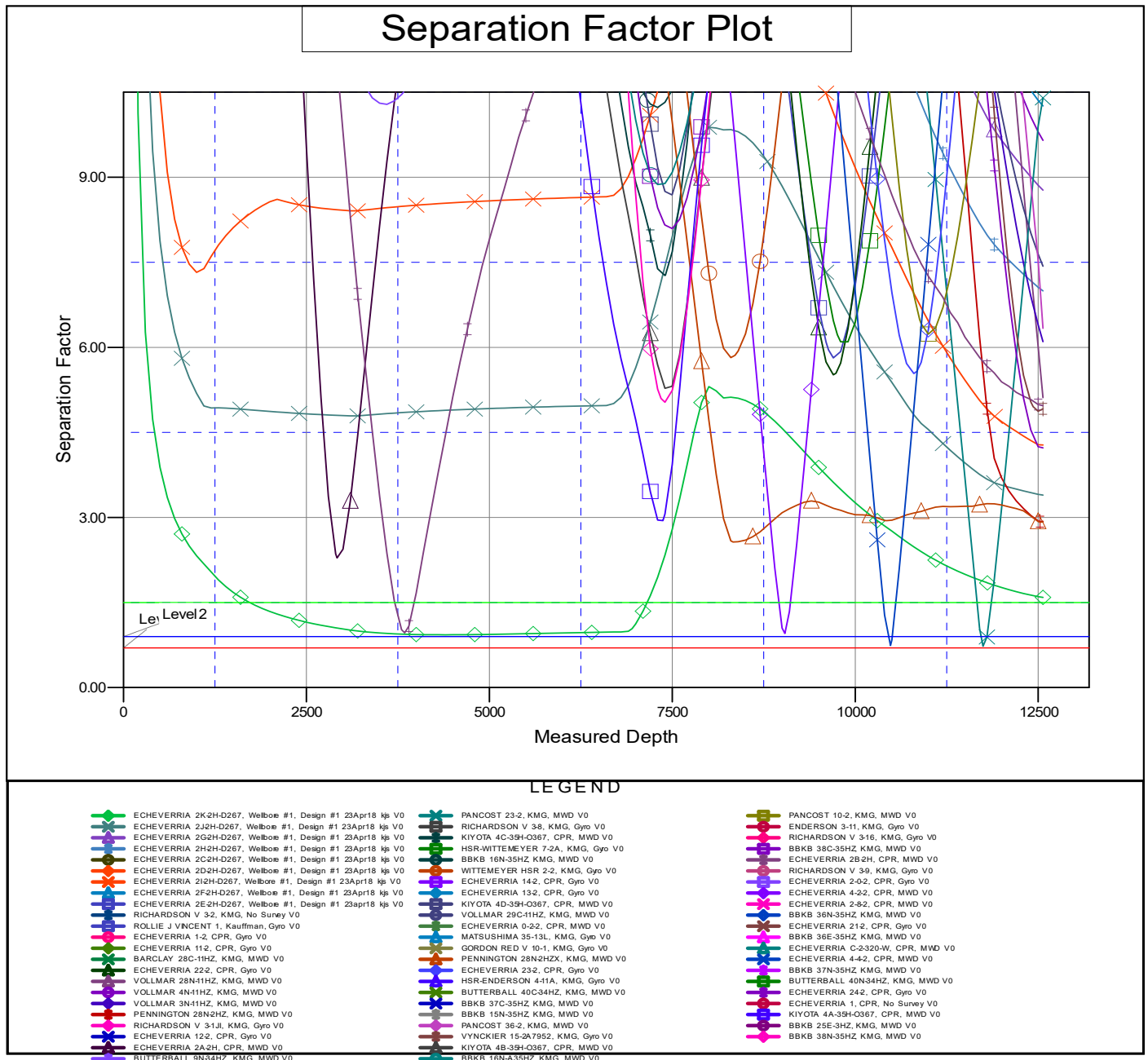


## Anticollision Summary Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well ECHEVERRIA 2L-2H-D267
<b>Project:</b>	Sec 2 T2N-R67W	<b>TVD Reference:</b>	WELL @ 4904.00usft (Original Well Elev)
<b>Reference Site:</b>	Echeverria Pad	<b>MD Reference:</b>	WELL @ 4904.00usft (Original Well Elev)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	ECHEVERRIA 2L-2H-D267	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 5000.15 Single User Db
<b>Reference Design:</b>	Design #1 23Apr18 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4904.00usft (Original Well E  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.50000000

Coordinates are relative to: ECHEVERRIA 2L-2H-D267  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.41°



CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation