



# Crestone Peak Resources

Well Name:

HERBERS 1F-20H-B167

Project Name:

Sec 20 T1N-R67W

Pad Name:

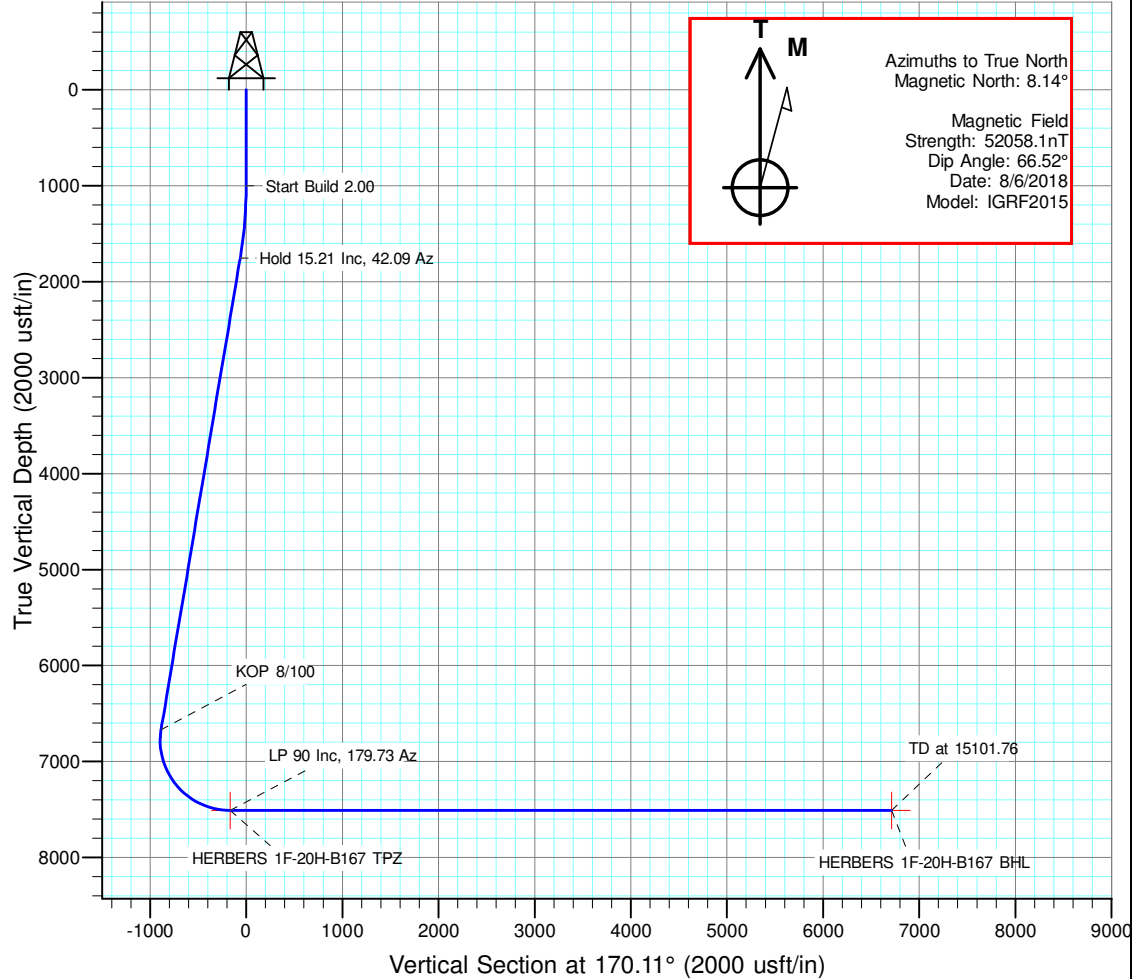
Herbers Pad

## ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	Start Build 2.00
1760.43	15.21	42.09	1751.53	74.45	67.26	-61.80	100.33	Hold 15.21 Inc, 42.09 Az
6856.34	15.21	42.09	6668.96	1066.47	963.37	-885.18	1437.17	KOP 8/100
8121.05	90.00	179.73	7510.00	364.59	1120.71	-166.71	2213.67	LP 90 Inc, 179.73 Az
15101.76	90.00	179.73	7510.00	-6616.04	1153.35	6715.82	9194.38	TD at 15101.76

## DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
HERBERS 1F-20H-B167 BHL	7510.00	-6616.04	1153.35	1251907.711	3165442.828	40.023361	-104.909250	Point
HERBERS 1F-20H-B167 TPZ	7510.00	364.59	1120.71	1258887.976	3165364.009	40.042524	-104.909365	Point

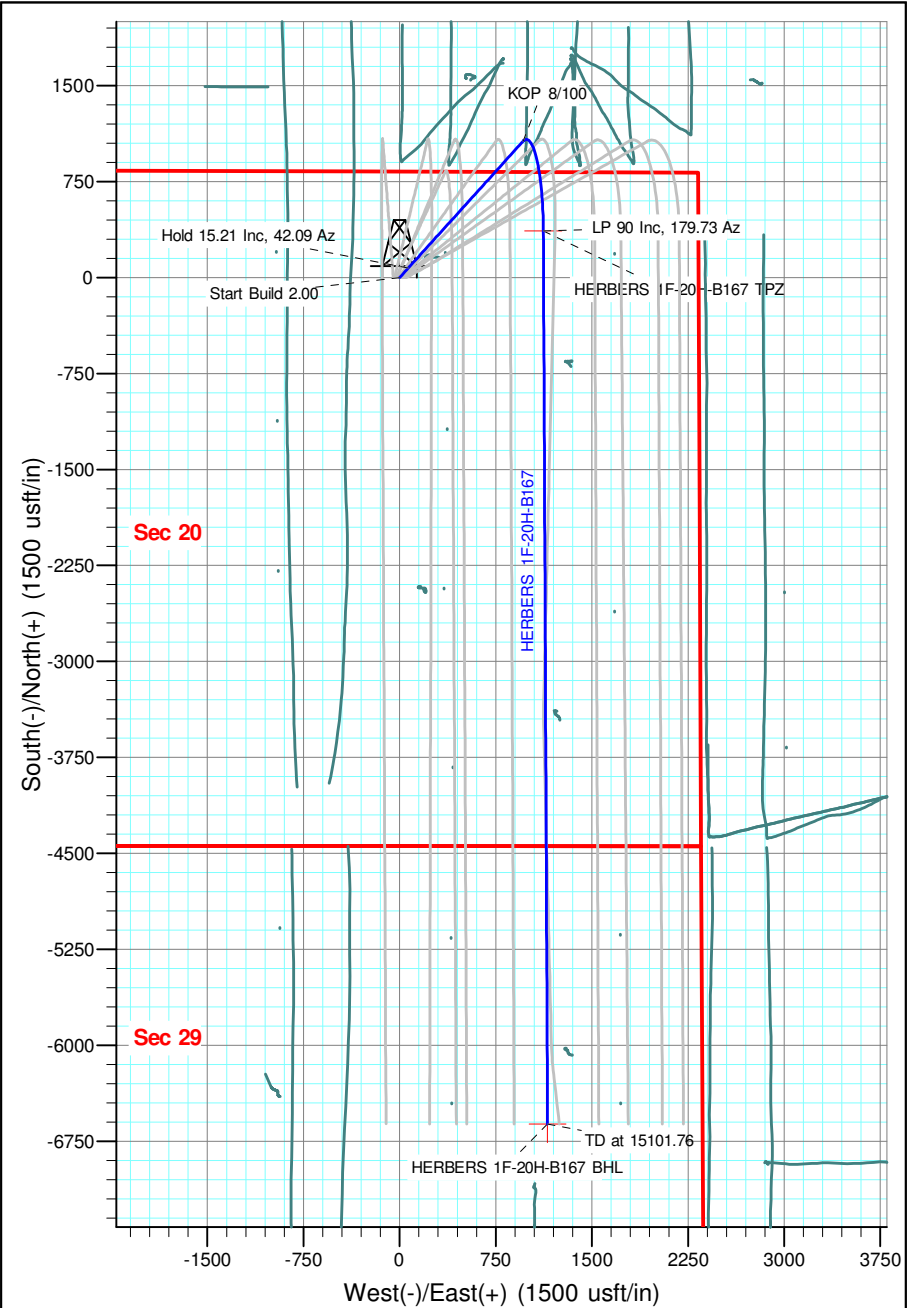


## Geodetic Datum:

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

## Elevation:

Ground Elevation: 5106.52  
KB Elevation: WELL @ 5129.52usft (Original Well Elev)





# **Crestone Peak Resources**

**Sec 20 T1N-R67W**

**Herbers Pad**

**HERBERS 1F-20H-B167**

**Wellbore #1**

**Plan: Design #1 06Aug18 kjs**

## **Standard Planning Report - Geographic**

**09 August, 2018**

<b>Database:</b>	EDM 5000.15 Single User Db	<b>Local Co-ordinate Reference:</b>	Well HERBERS 1F-20H-B167
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	WELL @ 5129.52usft (Original Well Elev)
<b>Project:</b>	Sec 20 T1N-R67W	<b>MD Reference:</b>	WELL @ 5129.52usft (Original Well Elev)
<b>Site:</b>	Herbers Pad	<b>North Reference:</b>	True
<b>Well:</b>	HERBERS 1F-20H-B167	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 06Aug18 kjs		

<b>Project</b>	Sec 20 T1N-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	Herbers Pad					
Site Position:		Northing:	1,258,515.981 usft	Latitude:	40.041524	
From:	Map	Easting:	3,164,195.736 usft	Longitude:	-104.913547	
Position Uncertainty:		0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.38 °

Well	HERBERS 1F-20H-B167					
Well Position	+N/-S	0.00 usft	Northing:	1,258,515.981 usft	Latitude:	40.041523
	+E/-W	0.00 usft	Easting:	3,164,245.736 usft	Longitude:	-104.913368
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	5,106.52 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	8/6/2018	8.14	66.52	52,058.08062839

<b>Design</b>	Design #1 06Aug18 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	170.11

<b>Plan Survey Tool Program</b>	<b>Date</b>	8/9/2018		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	15,101.76 Design #1 06Aug18 kjs (Wellbore)	MWD	
			OWSG MWD - Standard	

<b>Plan Sections</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,760.43	15.21	42.09	1,751.53	74.45	67.26	2.00	2.00	0.00	42.09	
6,856.34	15.21	42.09	6,668.96	1,066.47	963.37	0.00	0.00	0.00	0.00	
8,121.05	90.00	179.73	7,510.00	364.59	1,120.71	8.00	5.91	10.88	136.62	HERBERS 1F-20H-B
15,101.76	90.00	179.73	7,510.00	-6,616.04	1,153.35	0.00	0.00	0.00	0.00	HERBERS 1F-20H-B

<b>Database:</b>	EDM 5000.15 Single User Db	<b>Local Co-ordinate Reference:</b>	Well HERBERS 1F-20H-B167
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	WELL @ 5129.52usft (Original Well Elev)
<b>Project:</b>	Sec 20 T1N-R67W	<b>MD Reference:</b>	WELL @ 5129.52usft (Original Well Elev)
<b>Site:</b>	Herbers Pad	<b>North Reference:</b>	True
<b>Well:</b>	HERBERS 1F-20H-B167	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 06Aug18 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	1,258,515.981	3,164,245.736	40.041523	-104.913368
100.00	0.00	0.00	100.00	0.00	0.00	1,258,515.981	3,164,245.736	40.041523	-104.913368
200.00	0.00	0.00	200.00	0.00	0.00	1,258,515.981	3,164,245.736	40.041523	-104.913368
300.00	0.00	0.00	300.00	0.00	0.00	1,258,515.981	3,164,245.736	40.041523	-104.913368
400.00	0.00	0.00	400.00	0.00	0.00	1,258,515.981	3,164,245.736	40.041523	-104.913368
500.00	0.00	0.00	500.00	0.00	0.00	1,258,515.981	3,164,245.736	40.041523	-104.913368
600.00	0.00	0.00	600.00	0.00	0.00	1,258,515.981	3,164,245.736	40.041523	-104.913368
700.00	0.00	0.00	700.00	0.00	0.00	1,258,515.981	3,164,245.736	40.041523	-104.913368
800.00	0.00	0.00	800.00	0.00	0.00	1,258,515.981	3,164,245.736	40.041523	-104.913368
900.00	0.00	0.00	900.00	0.00	0.00	1,258,515.981	3,164,245.736	40.041523	-104.913368
1,000.00	0.00	0.00	1,000.00	0.00	0.00	1,258,515.981	3,164,245.736	40.041523	-104.913368
<b>Start Build 2.00</b>									
1,100.00	2.00	42.09	1,099.98	1.30	1.17	1,258,517.284	3,164,246.897	40.041527	-104.913364
1,200.00	4.00	42.09	1,199.84	5.18	4.68	1,258,521.191	3,164,250.379	40.041538	-104.913352
1,300.00	6.00	42.09	1,299.45	11.65	10.52	1,258,527.696	3,164,256.178	40.041555	-104.913331
1,400.00	8.00	42.09	1,398.70	20.69	18.69	1,258,536.793	3,164,264.287	40.041580	-104.913302
1,500.00	10.00	42.09	1,497.47	32.30	29.17	1,258,548.470	3,164,274.696	40.041612	-104.913264
1,600.00	12.00	42.09	1,595.62	46.46	41.96	1,258,562.713	3,164,287.392	40.041651	-104.913219
1,700.00	14.00	42.09	1,693.06	63.15	57.04	1,258,579.504	3,164,302.359	40.041697	-104.913165
1,760.43	15.21	42.09	1,751.53	74.45	67.26	1,258,590.879	3,164,312.498	40.041728	-104.913128
<b>Hold 15.21 Inc, 42.09 Az</b>									
1,800.00	15.21	42.09	1,789.72	82.16	74.21	1,258,598.627	3,164,319.405	40.041749	-104.913103
1,900.00	15.21	42.09	1,886.21	101.62	91.80	1,258,618.210	3,164,336.861	40.041802	-104.913041
2,000.00	15.21	42.09	1,982.71	121.09	109.38	1,258,637.793	3,164,354.317	40.041856	-104.912978
2,100.00	15.21	42.09	2,079.21	140.56	126.97	1,258,657.376	3,164,371.772	40.041909	-104.912915
2,200.00	15.21	42.09	2,175.71	160.02	144.55	1,258,676.959	3,164,389.228	40.041963	-104.912852
2,300.00	15.21	42.09	2,272.20	179.49	162.14	1,258,696.542	3,164,406.684	40.042016	-104.912789
2,400.00	15.21	42.09	2,368.70	198.96	179.72	1,258,716.125	3,164,424.140	40.042069	-104.912727
2,500.00	15.21	42.09	2,465.20	218.43	197.31	1,258,735.708	3,164,441.596	40.042123	-104.912664
2,600.00	15.21	42.09	2,561.70	237.89	214.89	1,258,755.290	3,164,459.051	40.042176	-104.912601
2,700.00	15.21	42.09	2,658.20	257.36	232.48	1,258,774.873	3,164,476.507	40.042230	-104.912538
2,800.00	15.21	42.09	2,754.69	276.83	250.06	1,258,794.456	3,164,493.963	40.042283	-104.912475
2,900.00	15.21	42.09	2,851.19	296.29	267.65	1,258,814.039	3,164,511.419	40.042337	-104.912413
3,000.00	15.21	42.09	2,947.69	315.76	285.23	1,258,833.622	3,164,528.875	40.042390	-104.912350
3,100.00	15.21	42.09	3,044.19	335.23	302.82	1,258,853.205	3,164,546.331	40.042444	-104.912287
3,200.00	15.21	42.09	3,140.68	354.69	320.40	1,258,872.788	3,164,563.786	40.042497	-104.912224
3,300.00	15.21	42.09	3,237.18	374.16	337.99	1,258,892.371	3,164,581.242	40.042550	-104.912161
3,400.00	15.21	42.09	3,333.68	393.63	355.57	1,258,911.954	3,164,598.698	40.042604	-104.912098
3,500.00	15.21	42.09	3,430.18	413.10	373.16	1,258,931.536	3,164,616.154	40.042657	-104.912036
3,600.00	15.21	42.09	3,526.67	432.56	390.74	1,258,951.119	3,164,633.610	40.042711	-104.911973
3,700.00	15.21	42.09	3,623.17	452.03	408.33	1,258,970.702	3,164,651.065	40.042764	-104.911910
3,800.00	15.21	42.09	3,719.67	471.50	425.91	1,258,990.285	3,164,668.521	40.042818	-104.911847
3,900.00	15.21	42.09	3,816.17	490.96	443.50	1,259,009.868	3,164,685.977	40.042871	-104.911784
4,000.00	15.21	42.09	3,912.67	510.43	461.08	1,259,029.451	3,164,703.433	40.042925	-104.911722
4,100.00	15.21	42.09	4,009.16	529.90	478.67	1,259,049.034	3,164,720.889	40.042978	-104.911659
4,200.00	15.21	42.09	4,105.66	549.36	496.25	1,259,068.617	3,164,738.345	40.043031	-104.911596
4,300.00	15.21	42.09	4,202.16	568.83	513.84	1,259,088.200	3,164,755.800	40.043085	-104.911533
4,400.00	15.21	42.09	4,298.66	588.30	531.42	1,259,107.782	3,164,773.256	40.043138	-104.911470
4,500.00	15.21	42.09	4,395.15	607.77	549.01	1,259,127.365	3,164,790.712	40.043192	-104.911408
4,600.00	15.21	42.09	4,491.65	627.23	566.59	1,259,146.948	3,164,808.168	40.043245	-104.911345
4,700.00	15.21	42.09	4,588.15	646.70	584.18	1,259,166.531	3,164,825.624	40.043299	-104.911282
4,800.00	15.21	42.09	4,684.65	666.17	601.76	1,259,186.114	3,164,843.079	40.043352	-104.911219
4,900.00	15.21	42.09	4,781.14	685.63	619.35	1,259,205.697	3,164,860.535	40.043405	-104.911156
5,000.00	15.21	42.09	4,877.64	705.10	636.93	1,259,225.280	3,164,877.991	40.043459	-104.911094

<b>Database:</b>	EDM 5000.15 Single User Db	<b>Local Co-ordinate Reference:</b>	Well HERBERS 1F-20H-B167
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	WELL @ 5129.52usft (Original Well Elev)
<b>Project:</b>	Sec 20 T1N-R67W	<b>MD Reference:</b>	WELL @ 5129.52usft (Original Well Elev)
<b>Site:</b>	Herbers Pad	<b>North Reference:</b>	True
<b>Well:</b>	HERBERS 1F-20H-B167	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 06Aug18 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	
5,100.00	15.21	42.09	4,974.14	724.57	654.52	1,259,244.863	3,164,895.447	40.043512	-104.911031	
5,200.00	15.21	42.09	5,070.64	744.03	672.10	1,259,264.446	3,164,912.903	40.043566	-104.910968	
5,300.00	15.21	42.09	5,167.14	763.50	689.69	1,259,284.028	3,164,930.359	40.043619	-104.910905	
5,400.00	15.21	42.09	5,263.63	782.97	707.27	1,259,303.611	3,164,947.814	40.043673	-104.910842	
5,500.00	15.21	42.09	5,360.13	802.44	724.86	1,259,323.194	3,164,965.270	40.043726	-104.910779	
5,600.00	15.21	42.09	5,456.63	821.90	742.44	1,259,342.777	3,164,982.726	40.043780	-104.910717	
5,700.00	15.21	42.09	5,553.13	841.37	760.03	1,259,362.360	3,165,000.182	40.043833	-104.910654	
5,800.00	15.21	42.09	5,649.62	860.84	777.61	1,259,381.943	3,165,017.638	40.043886	-104.910591	
5,900.00	15.21	42.09	5,746.12	880.30	795.20	1,259,401.526	3,165,035.093	40.043940	-104.910528	
6,000.00	15.21	42.09	5,842.62	899.77	812.78	1,259,421.109	3,165,052.549	40.043993	-104.910465	
6,100.00	15.21	42.09	5,939.12	919.24	830.37	1,259,440.692	3,165,070.005	40.044047	-104.910403	
6,200.00	15.21	42.09	6,035.61	938.70	847.95	1,259,460.274	3,165,087.461	40.044100	-104.910340	
6,300.00	15.21	42.09	6,132.11	958.17	865.54	1,259,479.857	3,165,104.917	40.044154	-104.910277	
6,400.00	15.21	42.09	6,228.61	977.64	883.12	1,259,499.440	3,165,122.373	40.044207	-104.910214	
6,500.00	15.21	42.09	6,325.11	997.11	900.71	1,259,519.023	3,165,139.828	40.044261	-104.910151	
6,600.00	15.21	42.09	6,421.61	1,016.57	918.29	1,259,538.606	3,165,157.284	40.044314	-104.910089	
6,700.00	15.21	42.09	6,518.10	1,036.04	935.88	1,259,558.189	3,165,174.740	40.044367	-104.910026	
6,800.00	15.21	42.09	6,614.60	1,055.51	953.46	1,259,577.772	3,165,192.196	40.044421	-104.909963	
6,856.34	15.21	42.09	6,668.96	1,066.47	963.37	1,259,588.804	3,165,202.030	40.044451	-104.909928	
KOP 8/100										
6,900.00	12.89	52.90	6,711.33	1,073.66	971.10	1,259,596.045	3,165,209.708	40.044471	-104.909900	
7,000.00	10.38	91.48	6,809.41	1,080.17	989.03	1,259,602.668	3,165,227.600	40.044489	-104.909836	
7,100.00	13.27	128.78	6,907.41	1,072.73	1,007.02	1,259,595.352	3,165,245.636	40.044468	-104.909772	
7,200.00	19.26	148.12	7,003.43	1,051.50	1,024.71	1,259,574.239	3,165,263.464	40.044410	-104.909708	
7,300.00	26.31	157.99	7,095.60	1,016.89	1,041.75	1,259,539.741	3,165,280.738	40.044315	-104.909648	
7,400.00	33.77	163.83	7,182.13	969.57	1,057.82	1,259,492.528	3,165,297.121	40.044185	-104.909590	
7,500.00	41.41	167.74	7,261.32	910.46	1,072.60	1,259,433.520	3,165,312.294	40.044023	-104.909537	
7,600.00	49.15	170.62	7,331.64	840.72	1,085.81	1,259,363.866	3,165,325.962	40.043831	-104.909490	
7,700.00	56.94	172.88	7,391.72	761.70	1,097.19	1,259,284.920	3,165,337.860	40.043614	-104.909450	
7,800.00	64.77	174.78	7,440.40	674.93	1,106.51	1,259,198.220	3,165,347.755	40.043376	-104.909416	
7,900.00	72.61	176.44	7,476.71	582.12	1,113.59	1,259,105.453	3,165,355.455	40.043121	-104.909391	
8,000.00	80.48	177.97	7,499.96	485.06	1,118.31	1,259,008.425	3,165,360.810	40.042855	-104.909374	
8,100.00	88.34	179.43	7,509.70	385.64	1,120.56	1,258,909.024	3,165,363.715	40.042582	-104.909366	
8,121.05	90.00	179.73	7,510.00	364.59	1,120.71	1,258,887.976	3,165,364.009	40.042524	-104.909366	
LP 90 Inc, 179.73 Az - HERBERS 1F-20H-B167 TPZ										
8,200.00	90.00	179.73	7,510.00	285.64	1,121.08	1,258,809.034	3,165,364.900	40.042307	-104.909364	
8,300.00	90.00	179.73	7,510.00	185.64	1,121.55	1,258,709.041	3,165,366.029	40.042033	-104.909363	
8,400.00	90.00	179.73	7,510.00	85.64	1,122.01	1,258,609.047	3,165,367.158	40.041758	-104.909361	
8,500.00	90.00	179.73	7,510.00	-14.35	1,122.48	1,258,509.053	3,165,368.287	40.041484	-104.909359	
8,600.00	90.00	179.73	7,510.00	-114.35	1,122.95	1,258,409.060	3,165,369.416	40.041209	-104.909358	
8,700.00	90.00	179.73	7,510.00	-214.35	1,123.42	1,258,309.066	3,165,370.546	40.040935	-104.909356	
8,800.00	90.00	179.73	7,510.00	-314.35	1,123.88	1,258,209.072	3,165,371.675	40.040660	-104.909354	
8,900.00	90.00	179.73	7,510.00	-414.35	1,124.35	1,258,109.079	3,165,372.804	40.040386	-104.909353	
9,000.00	90.00	179.73	7,510.00	-514.35	1,124.82	1,258,009.085	3,165,373.933	40.040111	-104.909351	
9,100.00	90.00	179.73	7,510.00	-614.35	1,125.29	1,257,909.092	3,165,375.062	40.039837	-104.909349	
9,200.00	90.00	179.73	7,510.00	-714.35	1,125.75	1,257,809.098	3,165,376.191	40.039562	-104.909348	
9,300.00	90.00	179.73	7,510.00	-814.35	1,126.22	1,257,709.104	3,165,377.320	40.039288	-104.909346	
9,400.00	90.00	179.73	7,510.00	-914.34	1,126.69	1,257,609.111	3,165,378.449	40.039013	-104.909344	
9,500.00	90.00	179.73	7,510.00	-1,014.34	1,127.16	1,257,509.117	3,165,379.578	40.038739	-104.909343	
9,600.00	90.00	179.73	7,510.00	-1,114.34	1,127.62	1,257,409.123	3,165,380.707	40.038464	-104.909341	
9,700.00	90.00	179.73	7,510.00	-1,214.34	1,128.09	1,257,309.130	3,165,381.836	40.038190	-104.909340	
9,800.00	90.00	179.73	7,510.00	-1,314.34	1,128.56	1,257,209.136	3,165,382.966	40.037915	-104.909338	
9,900.00	90.00	179.73	7,510.00	-1,414.34	1,129.03	1,257,109.143	3,165,384.095	40.037641	-104.909336	
10,000.00	90.00	179.73	7,510.00	-1,514.34	1,129.49	1,257,009.149	3,165,385.224	40.037366	-104.909335	

<b>Database:</b>	EDM 5000.15 Single User Db	<b>Local Co-ordinate Reference:</b>	Well HERBERS 1F-20H-B167
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	WELL @ 5129.52usft (Original Well Elev)
<b>Project:</b>	Sec 20 T1N-R67W	<b>MD Reference:</b>	WELL @ 5129.52usft (Original Well Elev)
<b>Site:</b>	Herbers Pad	<b>North Reference:</b>	True
<b>Well:</b>	HERBERS 1F-20H-B167	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 06Aug18 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
10,100.00	90.00	179.73	7,510.00	-1,614.34	1,129.96	1,256,909.155	3,165,386.353	40.037092	-104.909333
10,200.00	90.00	179.73	7,510.00	-1,714.34	1,130.43	1,256,809.162	3,165,387.482	40.036817	-104.909331
10,300.00	90.00	179.73	7,510.00	-1,814.33	1,130.90	1,256,709.168	3,165,388.611	40.036543	-104.909330
10,400.00	90.00	179.73	7,510.00	-1,914.33	1,131.37	1,256,609.175	3,165,389.740	40.036268	-104.909328
10,500.00	90.00	179.73	7,510.00	-2,014.33	1,131.83	1,256,509.181	3,165,390.869	40.035994	-104.909326
10,600.00	90.00	179.73	7,510.00	-2,114.33	1,132.30	1,256,409.187	3,165,391.998	40.035719	-104.909325
10,700.00	90.00	179.73	7,510.00	-2,214.33	1,132.77	1,256,309.194	3,165,393.127	40.035445	-104.909323
10,800.00	90.00	179.73	7,510.00	-2,314.33	1,133.24	1,256,209.200	3,165,394.257	40.035170	-104.909321
10,900.00	90.00	179.73	7,510.00	-2,414.33	1,133.70	1,256,109.206	3,165,395.386	40.034895	-104.909320
11,000.00	90.00	179.73	7,510.00	-2,514.33	1,134.17	1,256,009.213	3,165,396.515	40.034621	-104.909318
11,100.00	90.00	179.73	7,510.00	-2,614.33	1,134.64	1,255,909.219	3,165,397.644	40.034346	-104.909316
11,200.00	90.00	179.73	7,510.00	-2,714.32	1,135.11	1,255,809.226	3,165,398.773	40.034072	-104.909315
11,300.00	90.00	179.73	7,510.00	-2,814.32	1,135.57	1,255,709.232	3,165,399.902	40.033797	-104.909313
11,400.00	90.00	179.73	7,510.00	-2,914.32	1,136.04	1,255,609.238	3,165,401.031	40.033523	-104.909311
11,500.00	90.00	179.73	7,510.00	-3,014.32	1,136.51	1,255,509.245	3,165,402.160	40.033248	-104.909310
11,600.00	90.00	179.73	7,510.00	-3,114.32	1,136.98	1,255,409.251	3,165,403.289	40.032974	-104.909308
11,700.00	90.00	179.73	7,510.00	-3,214.32	1,137.44	1,255,309.257	3,165,404.418	40.032699	-104.909306
11,800.00	90.00	179.73	7,510.00	-3,314.32	1,137.91	1,255,209.264	3,165,405.548	40.032425	-104.909305
11,900.00	90.00	179.73	7,510.00	-3,414.32	1,138.38	1,255,109.270	3,165,406.677	40.032150	-104.909303
12,000.00	90.00	179.73	7,510.00	-3,514.32	1,138.85	1,255,009.277	3,165,407.806	40.031876	-104.909302
12,100.00	90.00	179.73	7,510.00	-3,614.31	1,139.31	1,254,909.283	3,165,408.935	40.031601	-104.909300
12,200.00	90.00	179.73	7,510.00	-3,714.31	1,139.78	1,254,809.289	3,165,410.064	40.031327	-104.909298
12,300.00	90.00	179.73	7,510.00	-3,814.31	1,140.25	1,254,709.296	3,165,411.193	40.031052	-104.909297
12,400.00	90.00	179.73	7,510.00	-3,914.31	1,140.72	1,254,609.302	3,165,412.322	40.030778	-104.909295
12,500.00	90.00	179.73	7,510.00	-4,014.31	1,141.18	1,254,509.308	3,165,413.451	40.030503	-104.909293
12,600.00	90.00	179.73	7,510.00	-4,114.31	1,141.65	1,254,409.315	3,165,414.580	40.030229	-104.909292
12,700.00	90.00	179.73	7,510.00	-4,214.31	1,142.12	1,254,309.321	3,165,415.709	40.029954	-104.909290
12,800.00	90.00	179.73	7,510.00	-4,314.31	1,142.59	1,254,209.328	3,165,416.839	40.029680	-104.909288
12,900.00	90.00	179.73	7,510.00	-4,414.31	1,143.05	1,254,109.334	3,165,417.968	40.029405	-104.909287
13,000.00	90.00	179.73	7,510.00	-4,514.30	1,143.52	1,254,009.340	3,165,419.097	40.029131	-104.909285
13,100.00	90.00	179.73	7,510.00	-4,614.30	1,143.99	1,253,909.347	3,165,420.226	40.028856	-104.909283
13,200.00	90.00	179.73	7,510.00	-4,714.30	1,144.46	1,253,809.353	3,165,421.355	40.028582	-104.909282
13,300.00	90.00	179.73	7,510.00	-4,814.30	1,144.92	1,253,709.360	3,165,422.484	40.028307	-104.909280
13,400.00	90.00	179.73	7,510.00	-4,914.30	1,145.39	1,253,609.366	3,165,423.613	40.028033	-104.909278
13,500.00	90.00	179.73	7,510.00	-5,014.30	1,145.86	1,253,509.372	3,165,424.742	40.027758	-104.909277
13,600.00	90.00	179.73	7,510.00	-5,114.30	1,146.33	1,253,409.379	3,165,425.871	40.027484	-104.909275
13,700.00	90.00	179.73	7,510.00	-5,214.30	1,146.79	1,253,309.385	3,165,427.000	40.027209	-104.909273
13,800.00	90.00	179.73	7,510.00	-5,314.30	1,147.26	1,253,209.391	3,165,428.129	40.026935	-104.909272
13,900.00	90.00	179.73	7,510.00	-5,414.30	1,147.73	1,253,109.398	3,165,429.259	40.026660	-104.909270
14,000.00	90.00	179.73	7,510.00	-5,514.29	1,148.20	1,253,009.404	3,165,430.388	40.026386	-104.909268
14,100.00	90.00	179.73	7,510.00	-5,614.29	1,148.66	1,252,909.411	3,165,431.517	40.026111	-104.909267
14,200.00	90.00	179.73	7,510.00	-5,714.29	1,149.13	1,252,809.417	3,165,432.646	40.025837	-104.909265
14,300.00	90.00	179.73	7,510.00	-5,814.29	1,149.60	1,252,709.423	3,165,433.775	40.025562	-104.909263
14,400.00	90.00	179.73	7,510.00	-5,914.29	1,150.07	1,252,609.429	3,165,434.904	40.025287	-104.909262
14,500.00	90.00	179.73	7,510.00	-6,014.29	1,150.54	1,252,509.435	3,165,436.033	40.025013	-104.909260
14,600.00	90.00	179.73	7,510.00	-6,114.29	1,151.00	1,252,409.441	3,165,437.162	40.024738	-104.909259
14,700.00	90.00	179.73	7,510.00	-6,214.29	1,151.47	1,252,309.448	3,165,438.291	40.024464	-104.909257
14,800.00	90.00	179.73	7,510.00	-6,314.29	1,151.94	1,252,209.454	3,165,439.420	40.024189	-104.909255
14,900.00	90.00	179.73	7,510.00	-6,414.28	1,152.41	1,252,109.461	3,165,440.550	40.023915	-104.909254
15,000.00	90.00	179.73	7,510.00	-6,514.28	1,152.87	1,252,009.467	3,165,441.679	40.023640	-104.909252
15,100.00	90.00	179.73	7,510.00	-6,614.28	1,153.34	1,251,909.473	3,165,442.808	40.023366	-104.909250
15,101.76	90.00	179.73	7,510.00	-6,616.04	1,153.35	1,251,907.711	3,165,442.828	40.023361	-104.909250
TD at 15101.76 - HERBERS 1F-20H-B167 BHL									

<b>Database:</b>	EDM 5000.15 Single User Db	<b>Local Co-ordinate Reference:</b>	Well HERBERS 1F-20H-B167
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	WELL @ 5129.52usft (Original Well Elev)
<b>Project:</b>	Sec 20 T1N-R67W	<b>MD Reference:</b>	WELL @ 5129.52usft (Original Well Elev)
<b>Site:</b>	Herbers Pad	<b>North Reference:</b>	True
<b>Well:</b>	HERBERS 1F-20H-B167	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 06Aug18 kjs		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
HERBERS 1F-20H-B16; - plan hits target center - Point	0.00	0.00	7,510.00	-6,616.04	1,153.35	1,251,907.711	3,165,442.828	40.023361	-104.909250
HERBERS 1F-20H-B16; - plan hits target center - Point	0.00	0.00	7,510.00	364.59	1,120.71	1,258,887.976	3,165,364.009	40.042524	-104.909366

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
1,000.00	1,000.00	0.00	0.00	Start Build 2.00
1,760.43	1,751.53	74.45	67.26	Hold 15.21 Inc, 42.09 Az
6,856.34	6,668.96	1,066.47	963.37	KOP 8/100
8,121.05	7,510.00	364.59	1,120.71	LP 90 Inc, 179.73 Az
15,101.76	7,510.00	-6,616.04	1,153.35	TD at 15101.76