



Crestone Peak Resources

Well Name:

HERBERS 1A-20H-B167

Project Name:

Sec 20 T1N-R67W

Pad Name:

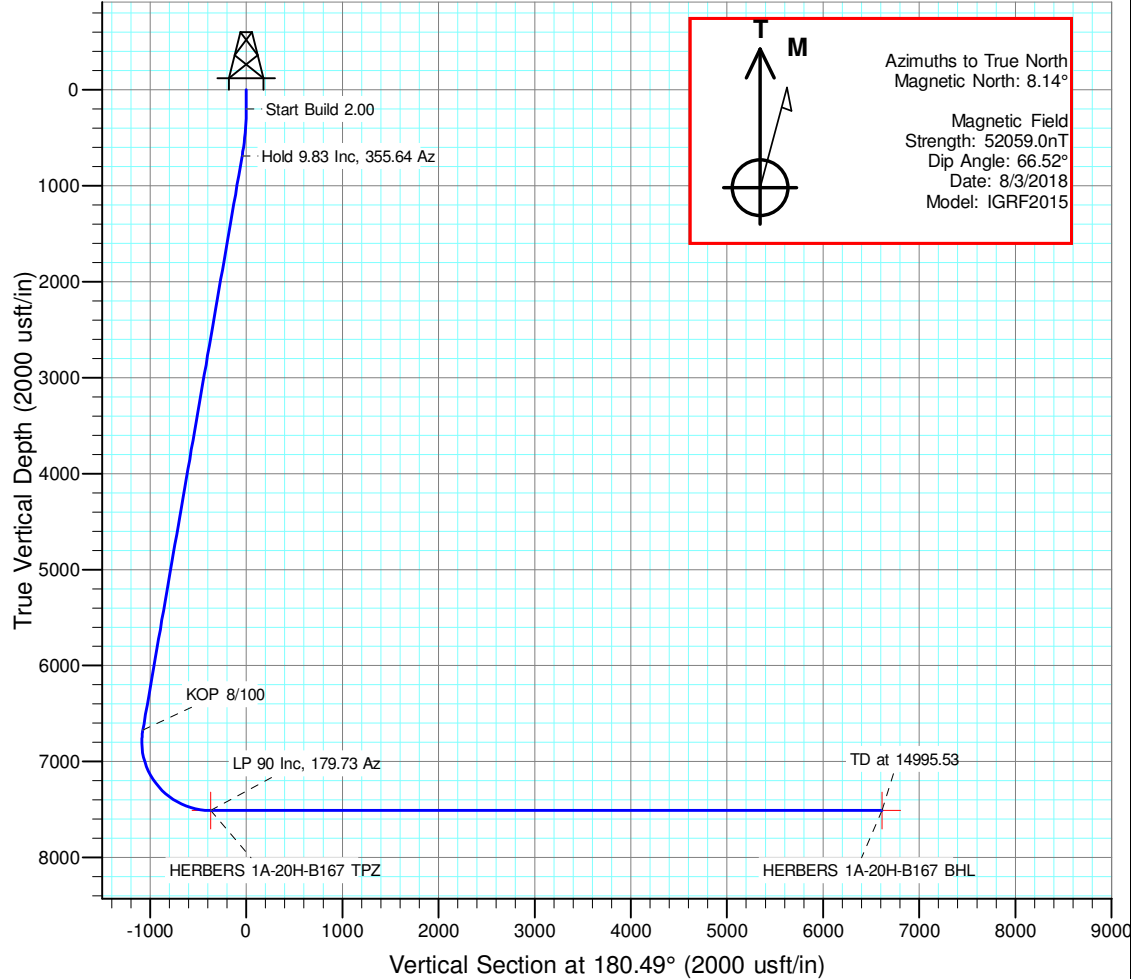
Herbers Pad

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
691.44	9.83	355.64	689.03	41.93	-3.19	-41.90	42.05	Hold 9.83 Inc, 355.64 Az
6763.45	9.83	355.64	6671.92	1075.45	-81.93	-1074.71	1078.57	KOP 8/100
8010.99	90.00	179.73	7510.00	369.67	-88.98	-368.90	1806.35	LP 90 Inc, 179.73 Az
14995.53	90.00	179.73	7510.00	-6614.79	-56.33	6615.03	8790.89	TD at 14995.53

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
HERBERS 1A-20H-B167 BHL	7510.00	-6614.79	-56.33	1251900.959	3164183.154	40.023365	-104.913748	Point
HERBERS 1A-20H-B167 TPZ	7510.00	369.67	-88.98	1258885.055	3164104.314	40.042539	-104.913865	Point

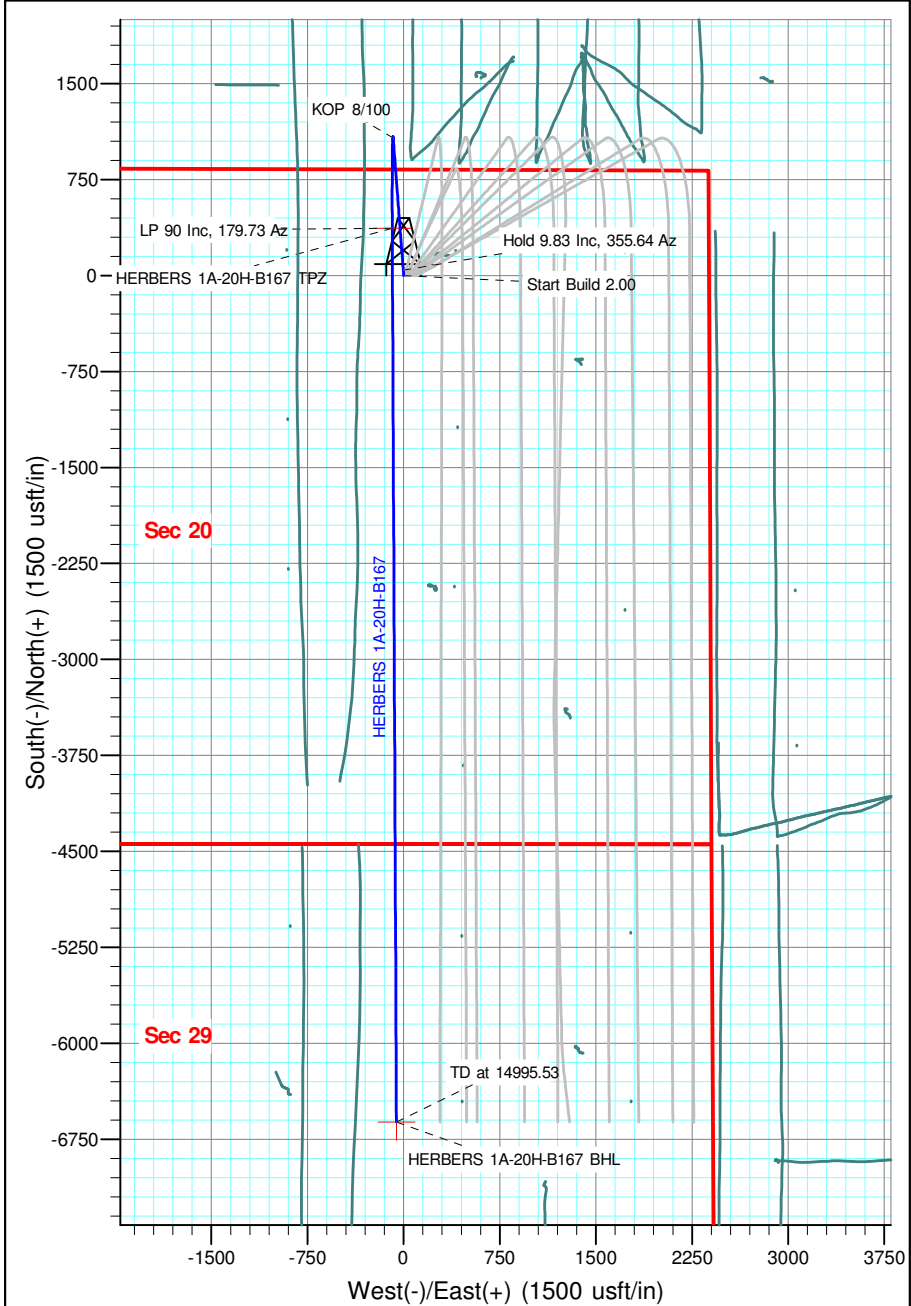


Geodetic Datum:

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

Elevation:

Ground Elevation: 5107.35
KB Elevation: WELL @ 5130.35usft (Original Well Elev)





Crestone Peak Resources

Sec 20 T1N-R67W

Herbers Pad

HERBERS 1A-20H-B167

Wellbore #1

Plan: Design #1 06Aug18 kjs

Standard Planning Report - Geographic

09 August, 2018

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well HERBERS 1A-20H-B167
Company:	Crestone Peak Resources	TVD Reference:	WELL @ 5130.35usft (Original Well Elev)
Project:	Sec 20 T1N-R67W	MD Reference:	WELL @ 5130.35usft (Original Well Elev)
Site:	Herbers Pad	North Reference:	True
Well:	HERBERS 1A-20H-B167	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 06Aug18 kjs		

Project	Sec 20 T1N-R67W, Weld County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	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 1A-20H-B167					
Well Position	+N/-S	0.00 usft	Northing:	1,258,515.981 usft	Latitude:	40.041524
	+E/-W	0.00 usft	Easting:	3,164,195.736 usft	Longitude:	-104.913547
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	5,107.35 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	8/3/2018	8.14	66.52	52,058.98787981

Design	Design #1 06Aug18 kjs			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	180.49

Plan Survey Tool Program	Date	8/9/2018		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	14,995.53 Design #1 06Aug18 kjs (Wellbore)	MWD	
			OWSG MWD - Standard	

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	
691.44	9.83	355.64	689.03	41.93	-3.19	2.00	2.00	0.00	355.64	
6,763.45	9.83	355.64	6,671.92	1,075.45	-81.93	0.00	0.00	0.00	0.00	
8,010.99	90.00	179.73	7,510.00	369.67	-88.98	8.00	6.43	-14.10	-175.85	HERBERS 1A-20H-B
14,995.53	90.00	179.73	7,510.00	-6,614.79	-56.33	0.00	0.00	0.00	0.00	HERBERS 1A-20H-B

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well HERBERS 1A-20H-B167
Company:	Crestone Peak Resources	TVD Reference:	WELL @ 5130.35usft (Original Well Elev)
Project:	Sec 20 T1N-R67W	MD Reference:	WELL @ 5130.35usft (Original Well Elev)
Site:	Herbers Pad	North Reference:	True
Well:	HERBERS 1A-20H-B167	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	3,164,195.736	40.041524	-104.913547
100.00	0.00	0.00	100.00	0.00	0.00	1,258,515.981	3,164,195.736	40.041524	-104.913547
200.00	0.00	0.00	200.00	0.00	0.00	1,258,515.981	3,164,195.736	40.041524	-104.913547
Start Build 2.00									
300.00	2.00	355.64	299.98	1.74	-0.13	1,258,517.720	3,164,195.592	40.041529	-104.913548
400.00	4.00	355.64	399.84	6.96	-0.53	1,258,522.936	3,164,195.160	40.041543	-104.913549
500.00	6.00	355.64	499.45	15.65	-1.19	1,258,531.621	3,164,194.440	40.041567	-104.913551
600.00	8.00	355.64	598.70	27.80	-2.12	1,258,543.766	3,164,193.434	40.041601	-104.913555
691.44	9.83	355.64	689.03	41.93	-3.19	1,258,557.886	3,164,192.265	40.041639	-104.913558
Hold 9.83 Inc, 355.64 Az									
700.00	9.83	355.64	697.47	43.38	-3.30	1,258,559.343	3,164,192.144	40.041643	-104.913559
800.00	9.83	355.64	796.00	60.41	-4.60	1,258,576.355	3,164,190.735	40.041690	-104.913563
900.00	9.83	355.64	894.53	77.43	-5.90	1,258,593.367	3,164,189.326	40.041737	-104.913568
1,000.00	9.83	355.64	993.06	94.45	-7.19	1,258,610.379	3,164,187.916	40.041784	-104.913573
1,100.00	9.83	355.64	1,091.60	111.47	-8.49	1,258,627.391	3,164,186.507	40.041830	-104.913577
1,200.00	9.83	355.64	1,190.13	128.49	-9.79	1,258,644.403	3,164,185.098	40.041877	-104.913582
1,300.00	9.83	355.64	1,288.66	145.51	-11.08	1,258,661.416	3,164,183.689	40.041924	-104.913587
1,400.00	9.83	355.64	1,387.19	162.53	-12.38	1,258,678.428	3,164,182.280	40.041970	-104.913591
1,500.00	9.83	355.64	1,485.73	179.55	-13.68	1,258,695.440	3,164,180.870	40.042017	-104.913596
1,600.00	9.83	355.64	1,584.26	196.57	-14.97	1,258,712.452	3,164,179.461	40.042064	-104.913601
1,700.00	9.83	355.64	1,682.79	213.60	-16.27	1,258,729.464	3,164,178.052	40.042111	-104.913605
1,800.00	9.83	355.64	1,781.32	230.62	-17.57	1,258,746.476	3,164,176.643	40.042157	-104.913610
1,900.00	9.83	355.64	1,879.85	247.64	-18.86	1,258,763.489	3,164,175.234	40.042204	-104.913614
2,000.00	9.83	355.64	1,978.39	264.66	-20.16	1,258,780.501	3,164,173.825	40.042251	-104.913619
2,100.00	9.83	355.64	2,076.92	281.68	-21.46	1,258,797.513	3,164,172.415	40.042297	-104.913624
2,200.00	9.83	355.64	2,175.45	298.70	-22.75	1,258,814.525	3,164,171.006	40.042344	-104.913628
2,300.00	9.83	355.64	2,273.98	315.72	-24.05	1,258,831.537	3,164,169.597	40.042391	-104.913633
2,400.00	9.83	355.64	2,372.52	332.74	-25.35	1,258,848.549	3,164,168.188	40.042438	-104.913638
2,500.00	9.83	355.64	2,471.05	349.76	-26.64	1,258,865.561	3,164,166.779	40.042484	-104.913642
2,600.00	9.83	355.64	2,569.58	366.79	-27.94	1,258,882.574	3,164,165.369	40.042531	-104.913647
2,700.00	9.83	355.64	2,668.11	383.81	-29.24	1,258,899.586	3,164,163.960	40.042578	-104.913651
2,800.00	9.83	355.64	2,766.64	400.83	-30.53	1,258,916.598	3,164,162.551	40.042625	-104.913656
2,900.00	9.83	355.64	2,865.18	417.85	-31.83	1,258,933.610	3,164,161.142	40.042671	-104.913661
3,000.00	9.83	355.64	2,963.71	434.87	-33.13	1,258,950.622	3,164,159.733	40.042718	-104.913665
3,100.00	9.83	355.64	3,062.24	451.89	-34.42	1,258,967.634	3,164,158.323	40.042765	-104.913670
3,200.00	9.83	355.64	3,160.77	468.91	-35.72	1,258,984.647	3,164,156.914	40.042811	-104.913675
3,300.00	9.83	355.64	3,259.31	485.93	-37.02	1,259,001.659	3,164,155.505	40.042858	-104.913679
3,400.00	9.83	355.64	3,357.84	502.95	-38.31	1,259,018.671	3,164,154.096	40.042905	-104.913684
3,500.00	9.83	355.64	3,456.37	519.98	-39.61	1,259,035.683	3,164,152.687	40.042952	-104.913689
3,600.00	9.83	355.64	3,554.90	537.00	-40.91	1,259,052.695	3,164,151.278	40.042998	-104.913693
3,700.00	9.83	355.64	3,653.43	554.02	-42.20	1,259,069.707	3,164,149.868	40.043045	-104.913698
3,800.00	9.83	355.64	3,751.97	571.04	-43.50	1,259,086.719	3,164,148.459	40.043092	-104.913702
3,900.00	9.83	355.64	3,850.50	588.06	-44.80	1,259,103.732	3,164,147.050	40.043139	-104.913707
4,000.00	9.83	355.64	3,949.03	605.08	-46.09	1,259,120.744	3,164,145.641	40.043185	-104.913712
4,100.00	9.83	355.64	4,047.56	622.10	-47.39	1,259,137.756	3,164,144.232	40.043232	-104.913716
4,200.00	9.83	355.64	4,146.10	639.12	-48.69	1,259,154.768	3,164,142.822	40.043279	-104.913721
4,300.00	9.83	355.64	4,244.63	656.14	-49.98	1,259,171.780	3,164,141.413	40.043325	-104.913726
4,400.00	9.83	355.64	4,343.16	673.17	-51.28	1,259,188.792	3,164,140.004	40.043372	-104.913730
4,500.00	9.83	355.64	4,441.69	690.19	-52.58	1,259,205.805	3,164,138.595	40.043419	-104.913735
4,600.00	9.83	355.64	4,540.22	707.21	-53.87	1,259,222.817	3,164,137.186	40.043466	-104.913739
4,700.00	9.83	355.64	4,638.76	724.23	-55.17	1,259,239.829	3,164,135.777	40.043512	-104.913744
4,800.00	9.83	355.64	4,737.29	741.25	-56.47	1,259,256.841	3,164,134.367	40.043559	-104.913749
4,900.00	9.83	355.64	4,835.82	758.27	-57.76	1,259,273.853	3,164,132.958	40.043606	-104.913753
5,000.00	9.83	355.64	4,934.35	775.29	-59.06	1,259,290.865	3,164,131.549	40.043653	-104.913758

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well HERBERS 1A-20H-B167
Company:	Crestone Peak Resources	TVD Reference:	WELL @ 5130.35usft (Original Well Elev)
Project:	Sec 20 T1N-R67W	MD Reference:	WELL @ 5130.35usft (Original Well Elev)
Site:	Herbers Pad	North Reference:	True
Well:	HERBERS 1A-20H-B167	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	9.83	355.64	5,032.89	792.31	-60.36	1,259,307.877	3,164,130.140	40.043699	-104.913763	
5,200.00	9.83	355.64	5,131.42	809.33	-61.65	1,259,324.890	3,164,128.731	40.043746	-104.913767	
5,300.00	9.83	355.64	5,229.95	826.35	-62.95	1,259,341.902	3,164,127.321	40.043793	-104.913772	
5,400.00	9.83	355.64	5,328.48	843.38	-64.25	1,259,358.914	3,164,125.912	40.043839	-104.913777	
5,500.00	9.83	355.64	5,427.01	860.40	-65.54	1,259,375.926	3,164,124.503	40.043886	-104.913781	
5,600.00	9.83	355.64	5,525.55	877.42	-66.84	1,259,392.938	3,164,123.094	40.043933	-104.913786	
5,700.00	9.83	355.64	5,624.08	894.44	-68.14	1,259,409.950	3,164,121.685	40.043980	-104.913790	
5,800.00	9.83	355.64	5,722.61	911.46	-69.43	1,259,426.963	3,164,120.276	40.044026	-104.913795	
5,900.00	9.83	355.64	5,821.14	928.48	-70.73	1,259,443.975	3,164,118.866	40.044073	-104.913800	
6,000.00	9.83	355.64	5,919.68	945.50	-72.03	1,259,460.987	3,164,117.457	40.044120	-104.913804	
6,100.00	9.83	355.64	6,018.21	962.52	-73.32	1,259,477.999	3,164,116.048	40.044167	-104.913809	
6,200.00	9.83	355.64	6,116.74	979.54	-74.62	1,259,495.011	3,164,114.639	40.044213	-104.913814	
6,300.00	9.83	355.64	6,215.27	996.57	-75.92	1,259,512.023	3,164,113.230	40.044260	-104.913818	
6,400.00	9.83	355.64	6,313.80	1,013.59	-77.21	1,259,529.035	3,164,111.820	40.044307	-104.913823	
6,500.00	9.83	355.64	6,412.34	1,030.61	-78.51	1,259,546.048	3,164,110.411	40.044353	-104.913827	
6,600.00	9.83	355.64	6,510.87	1,047.63	-79.81	1,259,563.060	3,164,109.002	40.044400	-104.913832	
6,700.00	9.83	355.64	6,609.40	1,064.65	-81.10	1,259,580.072	3,164,107.593	40.044447	-104.913837	
6,763.45	9.83	355.64	6,671.92	1,075.45	-81.93	1,259,590.866	3,164,106.699	40.044477	-104.913840	
KOP 8/100										
6,800.00	6.92	353.89	6,708.08	1,080.75	-82.40	1,259,596.163	3,164,106.192	40.044491	-104.913841	
6,900.00	1.33	212.00	6,807.86	1,085.76	-83.65	1,259,601.168	3,164,104.903	40.044505	-104.913846	
7,000.00	9.15	184.13	6,907.37	1,076.84	-84.84	1,259,592.237	3,164,103.775	40.044480	-104.913850	
7,100.00	17.13	182.03	7,004.68	1,054.15	-85.94	1,259,569.543	3,164,102.829	40.044418	-104.913854	
7,200.00	25.13	181.24	7,097.88	1,018.14	-86.92	1,259,533.528	3,164,102.084	40.044319	-104.913858	
7,300.00	33.13	180.82	7,185.16	969.51	-87.77	1,259,484.894	3,164,101.555	40.044186	-104.913861	
7,400.00	41.13	180.54	7,264.83	909.21	-88.47	1,259,424.586	3,164,101.252	40.044020	-104.913863	
7,500.00	49.12	180.34	7,335.32	838.41	-89.01	1,259,353.779	3,164,101.180	40.043826	-104.913865	
7,600.00	57.12	180.19	7,395.28	758.48	-89.38	1,259,273.851	3,164,101.342	40.043606	-104.913866	
7,700.00	65.12	180.06	7,443.54	670.98	-89.57	1,259,186.357	3,164,101.733	40.043366	-104.913867	
7,800.00	73.12	179.95	7,479.15	577.62	-89.57	1,259,093.001	3,164,102.347	40.043110	-104.913867	
7,900.00	81.12	179.84	7,501.42	480.22	-89.39	1,258,995.599	3,164,103.172	40.042843	-104.913866	
8,000.00	89.12	179.74	7,509.92	380.66	-89.03	1,258,896.048	3,164,104.191	40.042569	-104.913865	
8,010.99	90.00	179.73	7,510.00	369.67	-88.98	1,258,885.055	3,164,104.314	40.042539	-104.913865	
LP 90 Inc, 179.73 Az - HERBERS 1A-20H-B167 TPZ										
8,100.00	90.00	179.73	7,510.00	280.67	-88.56	1,258,796.054	3,164,105.318	40.042295	-104.913863	
8,200.00	90.00	179.73	7,510.00	180.67	-88.10	1,258,696.061	3,164,106.447	40.042020	-104.913862	
8,300.00	90.00	179.73	7,510.00	80.67	-87.63	1,258,596.067	3,164,107.576	40.041746	-104.913860	
8,400.00	90.00	179.73	7,510.00	-19.33	-87.16	1,258,496.074	3,164,108.705	40.041471	-104.913858	
8,500.00	90.00	179.73	7,510.00	-119.33	-86.69	1,258,396.080	3,164,109.834	40.041197	-104.913857	
8,600.00	90.00	179.73	7,510.00	-219.33	-86.23	1,258,296.086	3,164,110.962	40.040922	-104.913855	
8,700.00	90.00	179.73	7,510.00	-319.33	-85.76	1,258,196.093	3,164,112.091	40.040648	-104.913853	
8,800.00	90.00	179.73	7,510.00	-419.33	-85.29	1,258,096.099	3,164,113.220	40.040373	-104.913852	
8,900.00	90.00	179.73	7,510.00	-519.33	-84.82	1,257,996.105	3,164,114.349	40.040099	-104.913850	
9,000.00	90.00	179.73	7,510.00	-619.33	-84.36	1,257,896.112	3,164,115.477	40.039824	-104.913848	
9,100.00	90.00	179.73	7,510.00	-719.32	-83.89	1,257,796.118	3,164,116.606	40.039550	-104.913847	
9,200.00	90.00	179.73	7,510.00	-819.32	-83.42	1,257,696.125	3,164,117.735	40.039275	-104.913845	
9,300.00	90.00	179.73	7,510.00	-919.32	-82.95	1,257,596.131	3,164,118.864	40.039001	-104.913843	
9,400.00	90.00	179.73	7,510.00	-1,019.32	-82.49	1,257,496.137	3,164,119.993	40.038726	-104.913842	
9,500.00	90.00	179.73	7,510.00	-1,119.32	-82.02	1,257,396.144	3,164,121.121	40.038452	-104.913840	
9,600.00	90.00	179.73	7,510.00	-1,219.32	-81.55	1,257,296.150	3,164,122.250	40.038177	-104.913838	
9,700.00	90.00	179.73	7,510.00	-1,319.32	-81.08	1,257,196.156	3,164,123.379	40.037902	-104.913837	
9,800.00	90.00	179.73	7,510.00	-1,419.32	-80.62	1,257,096.163	3,164,124.508	40.037628	-104.913835	
9,900.00	90.00	179.73	7,510.00	-1,519.32	-80.15	1,256,996.169	3,164,125.636	40.037353	-104.913833	
10,000.00	90.00	179.73	7,510.00	-1,619.31	-79.68	1,256,896.176	3,164,126.765	40.037079	-104.913832	

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well HERBERS 1A-20H-B167
Company:	Crestone Peak Resources	TVD Reference:	WELL @ 5130.35usft (Original Well Elev)
Project:	Sec 20 T1N-R67W	MD Reference:	WELL @ 5130.35usft (Original Well Elev)
Site:	Herbers Pad	North Reference:	True
Well:	HERBERS 1A-20H-B167	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	-1,719.31	-79.21	1,256,796.182	3,164,127.894	40.036804	-104.913830	
10,200.00	90.00	179.73	7,510.00	-1,819.31	-78.75	1,256,696.188	3,164,129.023	40.036530	-104.913828	
10,300.00	90.00	179.73	7,510.00	-1,919.31	-78.28	1,256,596.195	3,164,130.152	40.036255	-104.913827	
10,400.00	90.00	179.73	7,510.00	-2,019.31	-77.81	1,256,496.201	3,164,131.280	40.035981	-104.913825	
10,500.00	90.00	179.73	7,510.00	-2,119.31	-77.34	1,256,396.207	3,164,132.409	40.035706	-104.913823	
10,600.00	90.00	179.73	7,510.00	-2,219.31	-76.88	1,256,296.214	3,164,133.538	40.035432	-104.913822	
10,700.00	90.00	179.73	7,510.00	-2,319.31	-76.41	1,256,196.220	3,164,134.667	40.035157	-104.913820	
10,800.00	90.00	179.73	7,510.00	-2,419.31	-75.94	1,256,096.227	3,164,135.795	40.034883	-104.913818	
10,900.00	90.00	179.73	7,510.00	-2,519.30	-75.47	1,255,996.233	3,164,136.924	40.034608	-104.913817	
11,000.00	90.00	179.73	7,510.00	-2,619.30	-75.01	1,255,896.239	3,164,138.053	40.034334	-104.913815	
11,100.00	90.00	179.73	7,510.00	-2,719.30	-74.54	1,255,796.246	3,164,139.182	40.034059	-104.913813	
11,200.00	90.00	179.73	7,510.00	-2,819.30	-74.07	1,255,696.252	3,164,140.311	40.033785	-104.913812	
11,300.00	90.00	179.73	7,510.00	-2,919.30	-73.60	1,255,596.258	3,164,141.439	40.033510	-104.913810	
11,400.00	90.00	179.73	7,510.00	-3,019.30	-73.14	1,255,496.265	3,164,142.568	40.033236	-104.913808	
11,500.00	90.00	179.73	7,510.00	-3,119.30	-72.67	1,255,396.271	3,164,143.697	40.032961	-104.913807	
11,600.00	90.00	179.73	7,510.00	-3,219.30	-72.20	1,255,296.278	3,164,144.826	40.032687	-104.913805	
11,700.00	90.00	179.73	7,510.00	-3,319.30	-71.73	1,255,196.284	3,164,145.954	40.032412	-104.913803	
11,800.00	90.00	179.73	7,510.00	-3,419.29	-71.27	1,255,096.290	3,164,147.083	40.032138	-104.913802	
11,900.00	90.00	179.73	7,510.00	-3,519.29	-70.80	1,254,996.297	3,164,148.212	40.031863	-104.913800	
12,000.00	90.00	179.73	7,510.00	-3,619.29	-70.33	1,254,896.303	3,164,149.341	40.031589	-104.913798	
12,100.00	90.00	179.73	7,510.00	-3,719.29	-69.87	1,254,796.309	3,164,150.470	40.031314	-104.913797	
12,200.00	90.00	179.73	7,510.00	-3,819.29	-69.40	1,254,696.316	3,164,151.598	40.031040	-104.913795	
12,300.00	90.00	179.73	7,510.00	-3,919.29	-68.93	1,254,596.322	3,164,152.727	40.030765	-104.913793	
12,400.00	90.00	179.73	7,510.00	-4,019.29	-68.46	1,254,496.329	3,164,153.856	40.030491	-104.913792	
12,500.00	90.00	179.73	7,510.00	-4,119.29	-68.00	1,254,396.335	3,164,154.985	40.030216	-104.913790	
12,600.00	90.00	179.73	7,510.00	-4,219.29	-67.53	1,254,296.341	3,164,156.113	40.029942	-104.913788	
12,700.00	90.00	179.73	7,510.00	-4,319.28	-67.06	1,254,196.348	3,164,157.242	40.029667	-104.913787	
12,800.00	90.00	179.73	7,510.00	-4,419.28	-66.59	1,254,096.354	3,164,158.371	40.029393	-104.913785	
12,900.00	90.00	179.73	7,510.00	-4,519.28	-66.13	1,253,996.360	3,164,159.500	40.029118	-104.913783	
13,000.00	90.00	179.73	7,510.00	-4,619.28	-65.66	1,253,896.367	3,164,160.629	40.028843	-104.913782	
13,100.00	90.00	179.73	7,510.00	-4,719.28	-65.19	1,253,796.373	3,164,161.757	40.028569	-104.913780	
13,200.00	90.00	179.73	7,510.00	-4,819.28	-64.72	1,253,696.380	3,164,162.886	40.028294	-104.913778	
13,300.00	90.00	179.73	7,510.00	-4,919.28	-64.26	1,253,596.386	3,164,164.015	40.028020	-104.913777	
13,400.00	90.00	179.73	7,510.00	-5,019.28	-63.79	1,253,496.392	3,164,165.144	40.027745	-104.913775	
13,500.00	90.00	179.73	7,510.00	-5,119.28	-63.32	1,253,396.399	3,164,166.272	40.027471	-104.913773	
13,600.00	90.00	179.73	7,510.00	-5,219.27	-62.85	1,253,296.405	3,164,167.401	40.027196	-104.913772	
13,700.00	90.00	179.73	7,510.00	-5,319.27	-62.39	1,253,196.411	3,164,168.530	40.026922	-104.913770	
13,800.00	90.00	179.73	7,510.00	-5,419.27	-61.92	1,253,096.418	3,164,169.659	40.026647	-104.913768	
13,900.00	90.00	179.73	7,510.00	-5,519.27	-61.45	1,252,996.424	3,164,170.788	40.026373	-104.913766	
14,000.00	90.00	179.73	7,510.00	-5,619.27	-60.98	1,252,896.431	3,164,171.916	40.026098	-104.913765	
14,100.00	90.00	179.73	7,510.00	-5,719.27	-60.52	1,252,796.437	3,164,173.045	40.025824	-104.913763	
14,200.00	90.00	179.73	7,510.00	-5,819.27	-60.05	1,252,696.442	3,164,174.174	40.025549	-104.913761	
14,300.00	90.00	179.73	7,510.00	-5,919.27	-59.58	1,252,596.449	3,164,175.303	40.025275	-104.913760	
14,400.00	90.00	179.73	7,510.00	-6,019.27	-59.11	1,252,496.455	3,164,176.431	40.025000	-104.913758	
14,500.00	90.00	179.73	7,510.00	-6,119.27	-58.65	1,252,396.461	3,164,177.560	40.024726	-104.913756	
14,600.00	90.00	179.73	7,510.00	-6,219.26	-58.18	1,252,296.468	3,164,178.689	40.024451	-104.913755	
14,700.00	90.00	179.73	7,510.00	-6,319.26	-57.71	1,252,196.474	3,164,179.818	40.024177	-104.913753	
14,800.00	90.00	179.73	7,510.00	-6,419.26	-57.24	1,252,096.481	3,164,180.947	40.023902	-104.913751	
14,900.00	90.00	179.73	7,510.00	-6,519.26	-56.78	1,251,996.487	3,164,182.075	40.023628	-104.913750	
14,995.53	90.00	179.73	7,510.00	-6,614.79	-56.33	1,251,900.959	3,164,183.154	40.023365	-104.913748	
TD at 14995.53 - HERBERS 1A-20H-B167 BHL										

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well HERBERS 1A-20H-B167
Company:	Crestone Peak Resources	TVD Reference:	WELL @ 5130.35usft (Original Well Elev)
Project:	Sec 20 T1N-R67W	MD Reference:	WELL @ 5130.35usft (Original Well Elev)
Site:	Herbers Pad	North Reference:	True
Well:	HERBERS 1A-20H-B167	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 06Aug18 kjs		

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
HERBERS 1A-20H-B16' - plan hits target center - Point	0.00	0.00	7,510.00	-6,614.79	-56.33	1,251,900.959	3,164,183.154	40.023365	-104.913748
HERBERS 1A-20H-B16' - plan hits target center - Point	0.00	0.00	7,510.00	369.67	-88.98	1,258,885.055	3,164,104.314	40.042539	-104.913865

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
691.44	689.03	41.93	-3.19	Hold 9.83 Inc, 355.64 Az
6,763.45	6,671.92	1,075.45	-81.93	KOP 8/100
8,010.99	7,510.00	369.67	-88.98	LP 90 Inc, 179.73 Az
14,995.53	7,510.00	-6,614.79	-56.33	TD at 14995.53