



Crestone Peak Resources

Well Name:

HERBERS 1B-20H-B167

Project Name:

Sec 20 T1N-R67W

Pad Name:

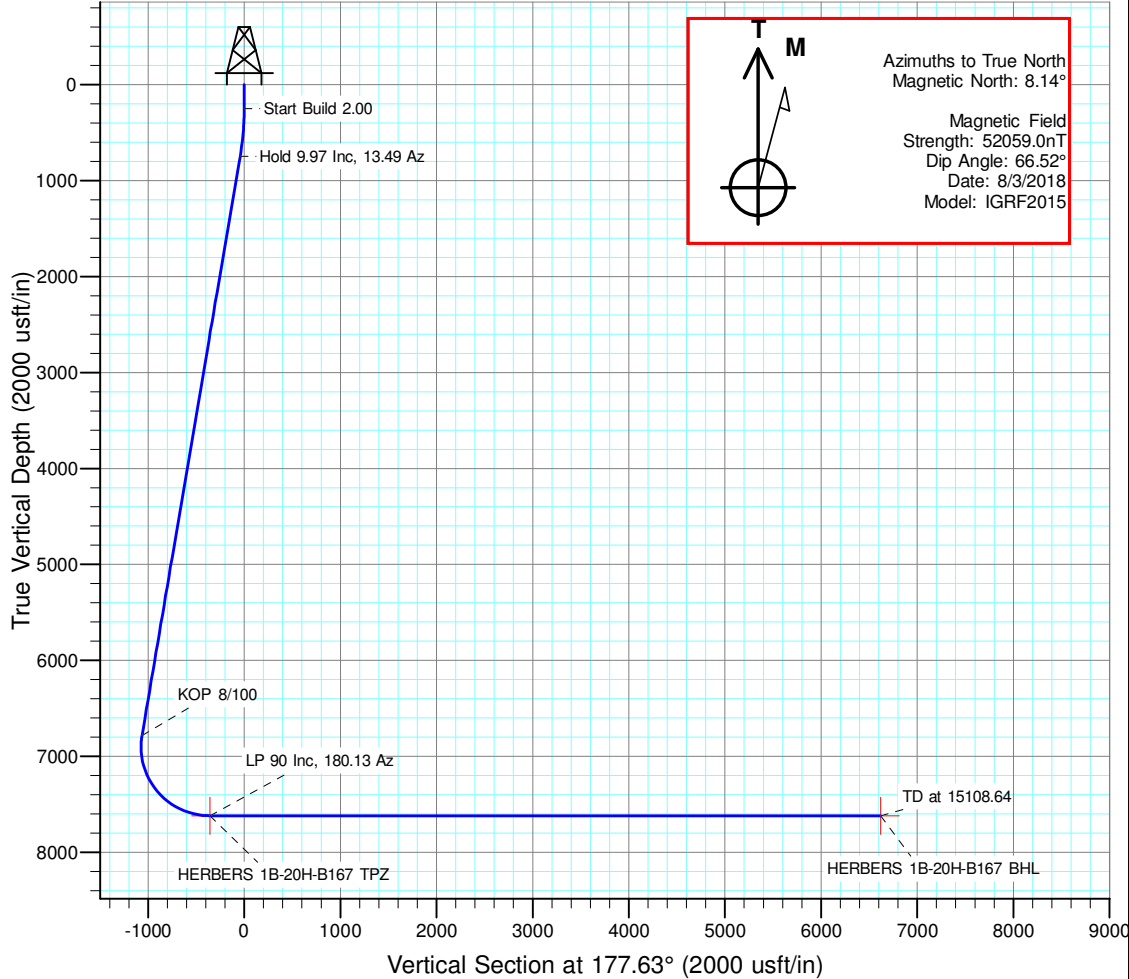
Herbers Pad

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	Start Build 2.00
748.57	9.97	13.49	746.06	42.08	10.09	-41.63	43.28	Hold 9.97 Inc, 13.49 Az
6878.95	9.97	13.49	6783.83	1074.31	257.70	-1062.75	1104.79	KOP 8/100
8125.19	90.00	180.13	7620.00	368.28	290.00	-355.98	1835.73	LP 90 Inc, 180.13 Az
15108.64	90.00	180.13	7620.00	-6615.15	273.58	6620.81	8819.18	TD at 15108.64

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
HERBERS 1B-20H-B167 BHL	7620.00	-6615.15	273.58	1251902.781	3164523.066	40.023364	-104.912534	Point
HERBERS 1B-20H-B167 TPZ	7620.00	368.28	290.00	1258886.167	3164493.294	40.042535	-104.912475	Point

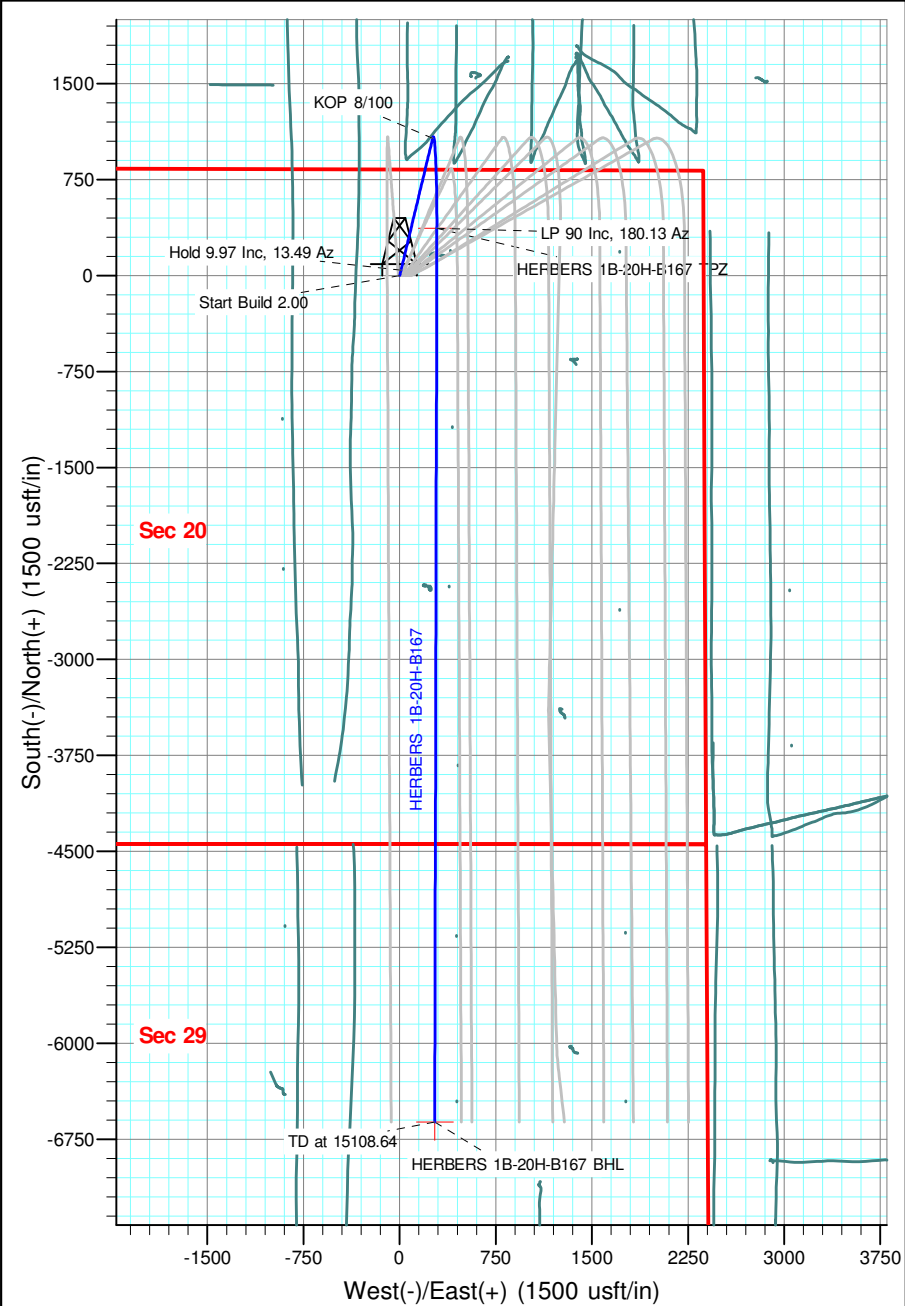


Geodetic Datum:

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

Elevation:

Ground Elevation: 5107.28
KB Elevation: WELL @ 5130.28usft (Original Well Elev)





Crestone Peak Resources

Sec 20 T1N-R67W

Herbers Pad

HERBERS 1B-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 1B-20H-B167
Company:	Crestone Peak Resources	TVD Reference:	WELL @ 5130.28usft (Original Well Elev)
Project:	Sec 20 T1N-R67W	MD Reference:	WELL @ 5130.28usft (Original Well Elev)
Site:	Herbers Pad	North Reference:	True
Well:	HERBERS 1B-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 1B-20H-B167					
Well Position	+N/-S	0.00 usft	Northing:	1,258,515.981 usft	Latitude:	40.041524
	+E/-W	0.00 usft	Easting:	3,164,205.736 usft	Longitude:	-104.913511
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	5,107.28 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	8/3/2018	8.14	66.52	52,058.99214669

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	177.63

Plan Survey Tool Program	Date	8/9/2018		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	15,108.64 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	
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	
748.57	9.97	13.49	746.06	42.08	10.09	2.00	2.00	0.00	13.49	
6,878.95	9.97	13.49	6,783.83	1,074.31	257.70	0.00	0.00	0.00	0.00	
8,125.19	90.00	180.13	7,620.00	368.28	290.00	8.00	6.42	13.37	166.45	HERBERS 1B-20H-B
15,108.64	90.00	180.13	7,620.00	-6,615.15	273.58	0.00	0.00	0.00	0.00	HERBERS 1B-20H-B

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well HERBERS 1B-20H-B167
Company:	Crestone Peak Resources	TVD Reference:	WELL @ 5130.28usft (Original Well Elev)
Project:	Sec 20 T1N-R67W	MD Reference:	WELL @ 5130.28usft (Original Well Elev)
Site:	Herbers Pad	North Reference:	True
Well:	HERBERS 1B-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	3,164,205.736	40.041524	-104.913511
100.00	0.00	0.00	100.00	0.00	0.00	1,258,515.981	3,164,205.736	40.041524	-104.913511
200.00	0.00	0.00	200.00	0.00	0.00	1,258,515.981	3,164,205.736	40.041524	-104.913511
250.00	0.00	0.00	250.00	0.00	0.00	1,258,515.981	3,164,205.736	40.041524	-104.913511
Start Build 2.00									
300.00	1.00	13.49	300.00	0.42	0.10	1,258,516.406	3,164,205.835	40.041525	-104.913511
400.00	3.00	13.49	399.93	3.82	0.92	1,258,519.805	3,164,206.626	40.041535	-104.913508
500.00	5.00	13.49	499.68	10.60	2.54	1,258,526.598	3,164,208.208	40.041553	-104.913502
600.00	7.00	13.49	599.13	20.76	4.98	1,258,536.778	3,164,210.579	40.041581	-104.913494
700.00	9.00	13.49	698.15	34.30	8.23	1,258,550.332	3,164,213.736	40.041618	-104.913482
748.57	9.97	13.49	746.06	42.08	10.09	1,258,558.128	3,164,215.552	40.041640	-104.913475
Hold 9.97 Inc, 13.49 Az									
800.00	9.97	13.49	796.71	50.74	12.17	1,258,566.801	3,164,217.571	40.041663	-104.913468
900.00	9.97	13.49	895.20	67.58	16.21	1,258,583.666	3,164,221.499	40.041710	-104.913453
1,000.00	9.97	13.49	993.69	84.42	20.25	1,258,600.530	3,164,225.427	40.041756	-104.913439
1,100.00	9.97	13.49	1,092.18	101.25	24.29	1,258,617.394	3,164,229.354	40.041802	-104.913425
1,200.00	9.97	13.49	1,190.67	118.09	28.33	1,258,634.259	3,164,233.282	40.041848	-104.913410
1,300.00	9.97	13.49	1,289.16	134.93	32.37	1,258,651.123	3,164,237.209	40.041894	-104.913396
1,400.00	9.97	13.49	1,387.65	151.77	36.41	1,258,667.987	3,164,241.137	40.041941	-104.913381
1,500.00	9.97	13.49	1,486.14	168.61	40.45	1,258,684.852	3,164,245.065	40.041987	-104.913367
1,600.00	9.97	13.49	1,584.63	185.44	44.48	1,258,701.716	3,164,248.992	40.042033	-104.913352
1,700.00	9.97	13.49	1,683.12	202.28	48.52	1,258,718.580	3,164,252.920	40.042079	-104.913338
1,800.00	9.97	13.49	1,781.60	219.12	52.56	1,258,735.445	3,164,256.848	40.042126	-104.913324
1,900.00	9.97	13.49	1,880.09	235.96	56.60	1,258,752.309	3,164,260.775	40.042172	-104.913309
2,000.00	9.97	13.49	1,978.58	252.80	60.64	1,258,769.173	3,164,264.703	40.042218	-104.913295
2,100.00	9.97	13.49	2,077.07	269.63	64.68	1,258,786.038	3,164,268.630	40.042264	-104.913280
2,200.00	9.97	13.49	2,175.56	286.47	68.72	1,258,802.902	3,164,272.558	40.042310	-104.913266
2,300.00	9.97	13.49	2,274.05	303.31	72.76	1,258,819.766	3,164,276.486	40.042357	-104.913251
2,400.00	9.97	13.49	2,372.54	320.15	76.80	1,258,836.631	3,164,280.413	40.042403	-104.913237
2,500.00	9.97	13.49	2,471.03	336.99	80.84	1,258,853.495	3,164,284.341	40.042449	-104.913223
2,600.00	9.97	13.49	2,569.52	353.82	84.87	1,258,870.360	3,164,288.268	40.042495	-104.913208
2,700.00	9.97	13.49	2,668.01	370.66	88.91	1,258,887.224	3,164,292.196	40.042542	-104.913194
2,800.00	9.97	13.49	2,766.50	387.50	92.95	1,258,904.088	3,164,296.124	40.042588	-104.913179
2,900.00	9.97	13.49	2,864.99	404.34	96.99	1,258,920.953	3,164,300.051	40.042634	-104.913165
3,000.00	9.97	13.49	2,963.48	421.18	101.03	1,258,937.817	3,164,303.979	40.042680	-104.913150
3,100.00	9.97	13.49	3,061.97	438.01	105.07	1,258,954.681	3,164,307.907	40.042726	-104.913136
3,200.00	9.97	13.49	3,160.46	454.85	109.11	1,258,971.546	3,164,311.834	40.042773	-104.913122
3,300.00	9.97	13.49	3,258.95	471.69	113.15	1,258,988.410	3,164,315.762	40.042819	-104.913107
3,400.00	9.97	13.49	3,357.44	488.53	117.19	1,259,005.274	3,164,319.689	40.042865	-104.913093
3,500.00	9.97	13.49	3,455.92	505.37	121.23	1,259,022.139	3,164,323.617	40.042911	-104.913078
3,600.00	9.97	13.49	3,554.41	522.20	125.27	1,259,039.003	3,164,327.545	40.042958	-104.913064
3,700.00	9.97	13.49	3,652.90	539.04	129.30	1,259,055.867	3,164,331.472	40.043004	-104.913050
3,800.00	9.97	13.49	3,751.39	555.88	133.34	1,259,072.732	3,164,335.400	40.043050	-104.913035
3,900.00	9.97	13.49	3,849.88	572.72	137.38	1,259,089.596	3,164,339.327	40.043096	-104.913021
4,000.00	9.97	13.49	3,948.37	589.56	141.42	1,259,106.460	3,164,343.255	40.043142	-104.913006
4,100.00	9.97	13.49	4,046.86	606.39	145.46	1,259,123.325	3,164,347.183	40.043189	-104.912992
4,200.00	9.97	13.49	4,145.35	623.23	149.50	1,259,140.189	3,164,351.110	40.043235	-104.912977
4,300.00	9.97	13.49	4,243.84	640.07	153.54	1,259,157.053	3,164,355.038	40.043281	-104.912963
4,400.00	9.97	13.49	4,342.33	656.91	157.58	1,259,173.918	3,164,358.965	40.043327	-104.912949
4,500.00	9.97	13.49	4,440.82	673.75	161.62	1,259,190.782	3,164,362.893	40.043374	-104.912934
4,600.00	9.97	13.49	4,539.31	690.58	165.66	1,259,207.647	3,164,366.821	40.043420	-104.912920
4,700.00	9.97	13.49	4,637.80	707.42	169.70	1,259,224.511	3,164,370.748	40.043466	-104.912905
4,800.00	9.97	13.49	4,736.29	724.26	173.73	1,259,241.375	3,164,374.676	40.043512	-104.912891
4,900.00	9.97	13.49	4,834.78	741.10	177.77	1,259,258.240	3,164,378.604	40.043558	-104.912876

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well HERBERS 1B-20H-B167
Company:	Crestone Peak Resources	TVD Reference:	WELL @ 5130.28usft (Original Well Elev)
Project:	Sec 20 T1N-R67W	MD Reference:	WELL @ 5130.28usft (Original Well Elev)
Site:	Herbers Pad	North Reference:	True
Well:	HERBERS 1B-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
5,000.00	9.97	13.49	4,933.27	757.94	181.81	1,259,275.104	3,164,382.531	40.043605	-104.912862
5,100.00	9.97	13.49	5,031.76	774.77	185.85	1,259,291.968	3,164,386.459	40.043651	-104.912848
5,200.00	9.97	13.49	5,130.25	791.61	189.89	1,259,308.833	3,164,390.386	40.043697	-104.912833
5,300.00	9.97	13.49	5,228.73	808.45	193.93	1,259,325.697	3,164,394.314	40.043743	-104.912819
5,400.00	9.97	13.49	5,327.22	825.29	197.97	1,259,342.561	3,164,398.242	40.043790	-104.912804
5,500.00	9.97	13.49	5,425.71	842.13	202.01	1,259,359.426	3,164,402.169	40.043836	-104.912790
5,600.00	9.97	13.49	5,524.20	858.96	206.05	1,259,376.290	3,164,406.097	40.043882	-104.912775
5,700.00	9.97	13.49	5,622.69	875.80	210.09	1,259,393.154	3,164,410.024	40.043928	-104.912761
5,800.00	9.97	13.49	5,721.18	892.64	214.12	1,259,410.019	3,164,413.952	40.043975	-104.912747
5,900.00	9.97	13.49	5,819.67	909.48	218.16	1,259,426.883	3,164,417.880	40.044021	-104.912732
6,000.00	9.97	13.49	5,918.16	926.32	222.20	1,259,443.747	3,164,421.807	40.044067	-104.912718
6,100.00	9.97	13.49	6,016.65	943.15	226.24	1,259,460.612	3,164,425.735	40.044113	-104.912703
6,200.00	9.97	13.49	6,115.14	959.99	230.28	1,259,477.476	3,164,429.663	40.044159	-104.912689
6,300.00	9.97	13.49	6,213.63	976.83	234.32	1,259,494.340	3,164,433.590	40.044206	-104.912674
6,400.00	9.97	13.49	6,312.12	993.67	238.36	1,259,511.205	3,164,437.518	40.044252	-104.912660
6,500.00	9.97	13.49	6,410.61	1,010.51	242.40	1,259,528.069	3,164,441.445	40.044298	-104.912646
6,600.00	9.97	13.49	6,509.10	1,027.34	246.44	1,259,544.933	3,164,445.373	40.044344	-104.912631
6,700.00	9.97	13.49	6,607.59	1,044.18	250.48	1,259,561.798	3,164,449.301	40.044391	-104.912617
6,800.00	9.97	13.49	6,706.08	1,061.02	254.52	1,259,578.662	3,164,453.228	40.044437	-104.912602
6,878.95	9.97	13.49	6,783.83	1,074.31	257.70	1,259,591.976	3,164,456.329	40.044473	-104.912591
KOP 8/100									
6,900.00	8.34	16.21	6,804.61	1,077.55	258.56	1,259,595.221	3,164,457.159	40.044482	-104.912588
7,000.00	2.33	89.77	6,904.21	1,084.54	262.62	1,259,602.234	3,164,461.173	40.044501	-104.912573
7,100.00	8.31	164.00	7,003.80	1,077.59	266.64	1,259,595.308	3,164,465.247	40.044482	-104.912559
7,200.00	16.15	172.07	7,101.46	1,056.83	270.56	1,259,574.576	3,164,469.302	40.044425	-104.912545
7,300.00	24.09	174.92	7,195.29	1,022.67	274.29	1,259,540.443	3,164,473.257	40.044331	-104.912532
7,400.00	32.06	176.42	7,283.45	975.78	277.76	1,259,493.572	3,164,477.037	40.044203	-104.912519
7,500.00	40.04	177.36	7,364.23	917.06	280.90	1,259,434.877	3,164,480.568	40.044042	-104.912508
7,600.00	48.03	178.04	7,436.07	847.66	283.66	1,259,365.500	3,164,483.781	40.043851	-104.912498
7,700.00	56.02	178.57	7,497.55	768.93	285.97	1,259,286.790	3,164,486.613	40.043635	-104.912490
7,800.00	64.01	179.00	7,547.49	682.41	287.79	1,259,200.280	3,164,489.010	40.043397	-104.912483
7,900.00	72.00	179.38	7,584.92	589.77	289.10	1,259,107.654	3,164,490.925	40.043143	-104.912479
8,000.00	79.99	179.72	7,609.10	492.83	289.85	1,259,010.715	3,164,492.320	40.042877	-104.912476
8,100.00	87.99	180.05	7,619.56	393.46	290.04	1,258,911.349	3,164,493.168	40.042604	-104.912475
8,125.19	90.00	180.13	7,620.00	368.28	290.00	1,258,886.168	3,164,493.294	40.042535	-104.912476
LP 90 Inc, 180.13 Az - HERBERS 1B-20H-B167 TPZ									
8,200.00	90.00	180.13	7,620.00	293.46	289.82	1,258,811.355	3,164,493.613	40.042330	-104.912476
8,300.00	90.00	180.13	7,620.00	193.46	289.59	1,258,711.356	3,164,494.039	40.042055	-104.912477
8,400.00	90.00	180.13	7,620.00	93.46	289.35	1,258,611.357	3,164,494.465	40.041781	-104.912478
8,500.00	90.00	180.13	7,620.00	-6.54	289.12	1,258,511.358	3,164,494.892	40.041506	-104.912479
8,600.00	90.00	180.13	7,620.00	-106.54	288.88	1,258,411.359	3,164,495.318	40.041232	-104.912480
8,700.00	90.00	180.13	7,620.00	-206.54	288.65	1,258,311.360	3,164,495.744	40.040957	-104.912480
8,800.00	90.00	180.13	7,620.00	-306.53	288.41	1,258,211.361	3,164,496.171	40.040683	-104.912481
8,900.00	90.00	180.13	7,620.00	-406.53	288.18	1,258,111.361	3,164,496.597	40.040408	-104.912482
9,000.00	90.00	180.13	7,620.00	-506.53	287.94	1,258,011.362	3,164,497.023	40.040134	-104.912483
9,100.00	90.00	180.13	7,620.00	-606.53	287.71	1,257,911.363	3,164,497.449	40.039859	-104.912484
9,200.00	90.00	180.13	7,620.00	-706.53	287.47	1,257,811.364	3,164,497.876	40.039584	-104.912485
9,300.00	90.00	180.13	7,620.00	-806.53	287.24	1,257,711.365	3,164,498.302	40.039310	-104.912485
9,400.00	90.00	180.13	7,620.00	-906.53	287.00	1,257,611.366	3,164,498.728	40.039035	-104.912486
9,500.00	90.00	180.13	7,620.00	-1,006.53	286.77	1,257,511.367	3,164,499.155	40.038761	-104.912487
9,600.00	90.00	180.13	7,620.00	-1,106.53	286.53	1,257,411.368	3,164,499.581	40.038486	-104.912488
9,700.00	90.00	180.13	7,620.00	-1,206.53	286.30	1,257,311.369	3,164,500.007	40.038212	-104.912489
9,800.00	90.00	180.13	7,620.00	-1,306.53	286.06	1,257,211.370	3,164,500.434	40.037937	-104.912490
9,900.00	90.00	180.13	7,620.00	-1,406.53	285.83	1,257,111.371	3,164,500.860	40.037663	-104.912491

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well HERBERS 1B-20H-B167
Company:	Crestone Peak Resources	TVD Reference:	WELL @ 5130.28usft (Original Well Elev)
Project:	Sec 20 T1N-R67W	MD Reference:	WELL @ 5130.28usft (Original Well Elev)
Site:	Herbers Pad	North Reference:	True
Well:	HERBERS 1B-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
10,000.00	90.00	180.13	7,620.00	-1,506.53	285.59	1,257,011.372	3,164,501.286	40.037388	-104.912491
10,100.00	90.00	180.13	7,620.00	-1,606.53	285.36	1,256,911.372	3,164,501.713	40.037114	-104.912492
10,200.00	90.00	180.13	7,620.00	-1,706.53	285.12	1,256,811.373	3,164,502.139	40.036839	-104.912493
10,300.00	90.00	180.13	7,620.00	-1,806.53	284.89	1,256,711.374	3,164,502.565	40.036565	-104.912494
10,400.00	90.00	180.13	7,620.00	-1,906.53	284.65	1,256,611.375	3,164,502.992	40.036290	-104.912495
10,500.00	90.00	180.13	7,620.00	-2,006.53	284.42	1,256,511.376	3,164,503.418	40.036016	-104.912496
10,600.00	90.00	180.13	7,620.00	-2,106.53	284.18	1,256,411.377	3,164,503.844	40.035741	-104.912496
10,700.00	90.00	180.13	7,620.00	-2,206.53	283.95	1,256,311.378	3,164,504.271	40.035467	-104.912497
10,800.00	90.00	180.13	7,620.00	-2,306.53	283.71	1,256,211.379	3,164,504.697	40.035192	-104.912498
10,900.00	90.00	180.13	7,620.00	-2,406.53	283.48	1,256,111.380	3,164,505.123	40.034918	-104.912499
11,000.00	90.00	180.13	7,620.00	-2,506.53	283.24	1,256,011.381	3,164,505.550	40.034643	-104.912500
11,100.00	90.00	180.13	7,620.00	-2,606.53	283.01	1,255,911.382	3,164,505.976	40.034369	-104.912501
11,200.00	90.00	180.13	7,620.00	-2,706.53	282.77	1,255,811.383	3,164,506.402	40.034094	-104.912501
11,300.00	90.00	180.13	7,620.00	-2,806.53	282.54	1,255,711.383	3,164,506.829	40.033820	-104.912502
11,400.00	90.00	180.13	7,620.00	-2,906.53	282.30	1,255,611.384	3,164,507.255	40.033545	-104.912503
11,500.00	90.00	180.13	7,620.00	-3,006.53	282.07	1,255,511.385	3,164,507.681	40.033271	-104.912504
11,600.00	90.00	180.13	7,620.00	-3,106.53	281.83	1,255,411.386	3,164,508.108	40.032996	-104.912505
11,700.00	90.00	180.13	7,620.00	-3,206.53	281.60	1,255,311.387	3,164,508.534	40.032722	-104.912506
11,800.00	90.00	180.13	7,620.00	-3,306.53	281.36	1,255,211.388	3,164,508.960	40.032447	-104.912507
11,900.00	90.00	180.13	7,620.00	-3,406.53	281.13	1,255,111.389	3,164,509.387	40.032173	-104.912507
12,000.00	90.00	180.13	7,620.00	-3,506.53	280.89	1,255,011.390	3,164,509.813	40.031898	-104.912508
12,100.00	90.00	180.13	7,620.00	-3,606.53	280.66	1,254,911.391	3,164,510.239	40.031623	-104.912509
12,200.00	90.00	180.13	7,620.00	-3,706.53	280.42	1,254,811.392	3,164,510.665	40.031349	-104.912510
12,300.00	90.00	180.13	7,620.00	-3,806.53	280.19	1,254,711.393	3,164,511.092	40.031074	-104.912511
12,400.00	90.00	180.13	7,620.00	-3,906.53	279.95	1,254,611.393	3,164,511.518	40.030800	-104.912512
12,500.00	90.00	180.13	7,620.00	-4,006.52	279.72	1,254,511.394	3,164,511.944	40.030525	-104.912512
12,600.00	90.00	180.13	7,620.00	-4,106.52	279.48	1,254,411.395	3,164,512.371	40.030251	-104.912513
12,700.00	90.00	180.13	7,620.00	-4,206.52	279.25	1,254,311.396	3,164,512.797	40.029976	-104.912514
12,800.00	90.00	180.13	7,620.00	-4,306.52	279.01	1,254,211.397	3,164,513.223	40.029702	-104.912515
12,900.00	90.00	180.13	7,620.00	-4,406.52	278.78	1,254,111.398	3,164,513.650	40.029427	-104.912516
13,000.00	90.00	180.13	7,620.00	-4,506.52	278.54	1,254,011.399	3,164,514.076	40.029153	-104.912517
13,100.00	90.00	180.13	7,620.00	-4,606.52	278.31	1,253,911.400	3,164,514.502	40.028878	-104.912518
13,200.00	90.00	180.13	7,620.00	-4,706.52	278.07	1,253,811.401	3,164,514.929	40.028604	-104.912518
13,300.00	90.00	180.13	7,620.00	-4,806.52	277.84	1,253,711.402	3,164,515.355	40.028329	-104.912519
13,400.00	90.00	180.13	7,620.00	-4,906.52	277.60	1,253,611.403	3,164,515.781	40.028055	-104.912520
13,500.00	90.00	180.13	7,620.00	-5,006.52	277.37	1,253,511.404	3,164,516.208	40.027780	-104.912521
13,600.00	90.00	180.13	7,620.00	-5,106.52	277.13	1,253,411.404	3,164,516.634	40.027506	-104.912522
13,700.00	90.00	180.13	7,620.00	-5,206.52	276.90	1,253,311.405	3,164,517.060	40.027231	-104.912523
13,800.00	90.00	180.13	7,620.00	-5,306.52	276.66	1,253,211.406	3,164,517.487	40.026957	-104.912523
13,900.00	90.00	180.13	7,620.00	-5,406.52	276.43	1,253,111.407	3,164,517.913	40.026682	-104.912524
14,000.00	90.00	180.13	7,620.00	-5,506.52	276.19	1,253,011.408	3,164,518.339	40.026408	-104.912525
14,100.00	90.00	180.13	7,620.00	-5,606.52	275.96	1,252,911.409	3,164,518.766	40.026133	-104.912526
14,200.00	90.00	180.13	7,620.00	-5,706.52	275.72	1,252,811.410	3,164,519.192	40.025859	-104.912527
14,300.00	90.00	180.13	7,620.00	-5,806.52	275.49	1,252,711.411	3,164,519.618	40.025584	-104.912528
14,400.00	90.00	180.13	7,620.00	-5,906.52	275.25	1,252,611.411	3,164,520.045	40.025310	-104.912528
14,500.00	90.00	180.13	7,620.00	-6,006.52	275.01	1,252,511.412	3,164,520.471	40.025035	-104.912529
14,600.00	90.00	180.13	7,620.00	-6,106.52	274.78	1,252,411.413	3,164,520.897	40.024761	-104.912530
14,700.00	90.00	180.13	7,620.00	-6,206.52	274.54	1,252,311.413	3,164,521.324	40.024486	-104.912531
14,800.00	90.00	180.13	7,620.00	-6,306.52	274.31	1,252,211.414	3,164,521.750	40.024212	-104.912532
14,900.00	90.00	180.13	7,620.00	-6,406.52	274.07	1,252,111.415	3,164,522.176	40.023937	-104.912533
15,000.00	90.00	180.13	7,620.00	-6,506.52	273.84	1,252,011.416	3,164,522.603	40.023662	-104.912534
15,100.00	90.00	180.13	7,620.00	-6,606.52	273.60	1,251,911.417	3,164,523.029	40.023388	-104.912534
15,108.64	90.00	180.13	7,620.00	-6,615.15	273.58	1,251,902.781	3,164,523.066	40.023364	-104.912534
TD at 15108.64 - HERBERS 1B-20H-B167 BHL									

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well HERBERS 1B-20H-B167
Company:	Crestone Peak Resources	TVD Reference:	WELL @ 5130.28usft (Original Well Elev)
Project:	Sec 20 T1N-R67W	MD Reference:	WELL @ 5130.28usft (Original Well Elev)
Site:	Herbers Pad	North Reference:	True
Well:	HERBERS 1B-20H-B167	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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 1B-20H-B16'	0.00	0.00	7,620.00	368.28	290.00	1,258,886.168	3,164,493.294	40.042535	-104.912476
- plan hits target center									
- Point									
HERBERS 1B-20H-B16'	0.00	0.00	7,620.00	-6,615.15	273.58	1,251,902.781	3,164,523.066	40.023364	-104.912534
- plan hits target center									
- Point									

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
250.00	250.00	0.00	0.00	Start Build 2.00
748.57	746.06	42.08	10.09	Hold 9.97 Inc, 13.49 Az
6,878.95	6,783.83	1,074.31	257.70	KOP 8/100
8,125.19	7,620.00	368.28	290.00	LP 90 Inc, 180.13 Az
15,108.64	7,620.00	-6,615.15	273.58	TD at 15108.64