



**CRESTONE PEAK**  
RESOURCES

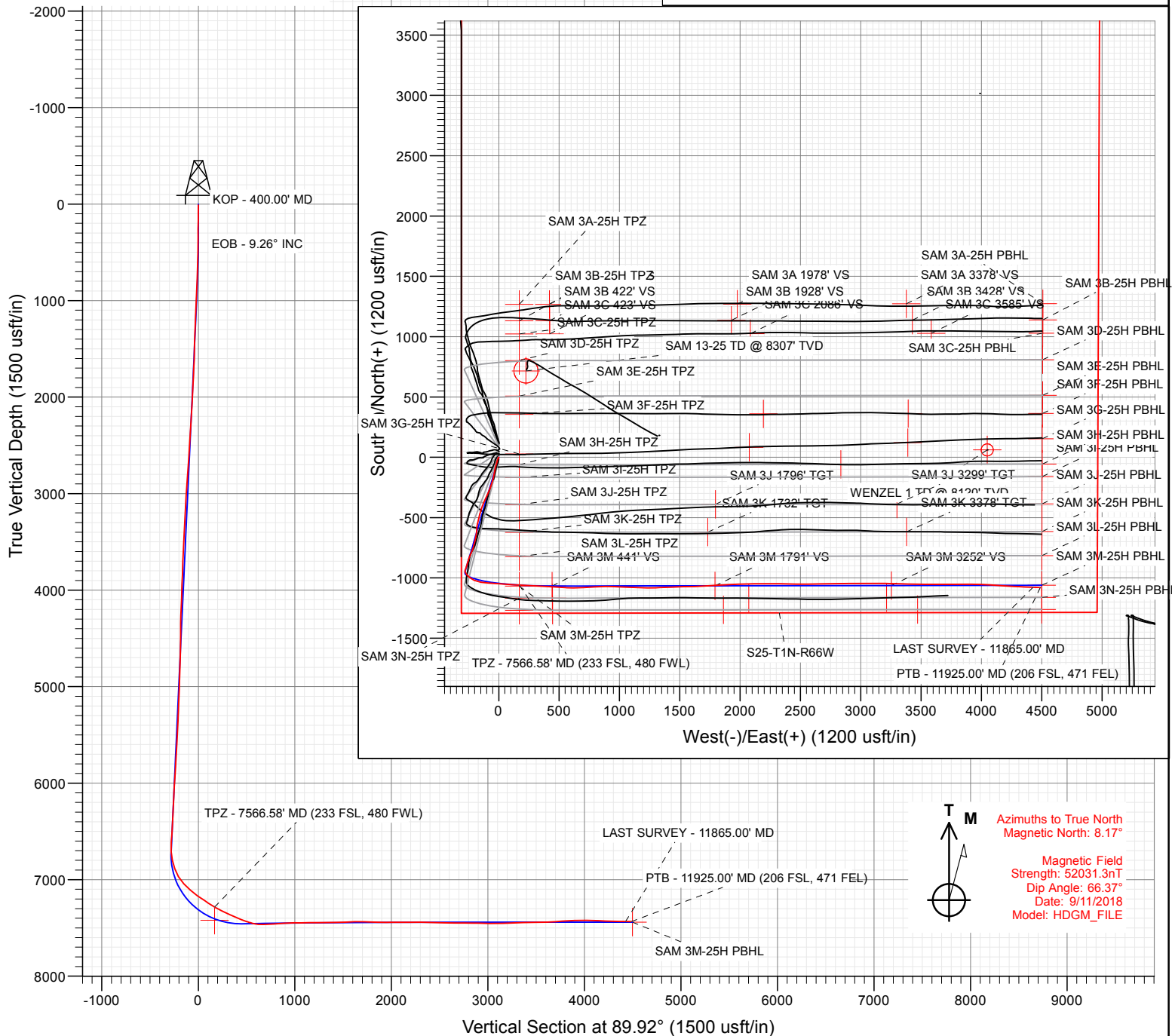
# SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	
3	862.99	9.26	196.42	860.98	-35.81	-10.55	2.00	196.42	-10.61	
4	6795.59	9.26	196.42	6716.27	-951.50	-280.38	0.00	0.00	-281.79	
5	7960.68	90.59	89.91	7456.00	-1067.26	442.58	8.00	-106.21	441.00	SAM 3M 441' VS
6	9310.76	90.59	89.91	7442.00	-1065.20	1792.58	0.00	0.00	1791.00	SAM 3M 1791' VS
7	9334.77	90.11	89.91	7441.85	-1065.17	1816.59	2.00	180.00	1815.01	
8	10766.06	90.11	89.91	7439.01	-1062.98	3247.88	0.00	0.00	3246.30	
9	10771.76	90.00	89.91	7439.00	-1062.98	3253.58	2.00	-180.00	3252.00	SAM 3M 3252' VS
10	12017.82	90.00	89.91	7439.00	-1061.08	4499.63	0.00	0.00	4498.06	SAM 3M-25H PBHL

Project: DJ BASIN  
Site: S25-T1N-R66W (SAM)  
Well: SAM 3M-25H-M166  
Wellbore: OH  
Design: FINAL

FINAL  
SAM 3M-25H-M166  
385137 185154 418037 185268  
23 KB @ 5109.00usf  
Ground Level @ 5086.00  
North American Datum 1983  
Well SAM 3M-25H-M166, True North

Name	Type	User	Target	No Target (Freehand)	Origin Type	From TVD	From 0.00	From 0.00	Latitude	Longitude
SAM 3M-25H TPZ					89.92				40.015634	-104.733248
SAM 3M 3252' VS					89.92				40.015646	-104.733248
SAM 3M-25H PBHL					89.92				40.015651	-104.733248
SAM 3M 1791' VS					89.92				40.015641	-104.733248
SAM 3M 441' VS					89.92				40.015635	-104.733248





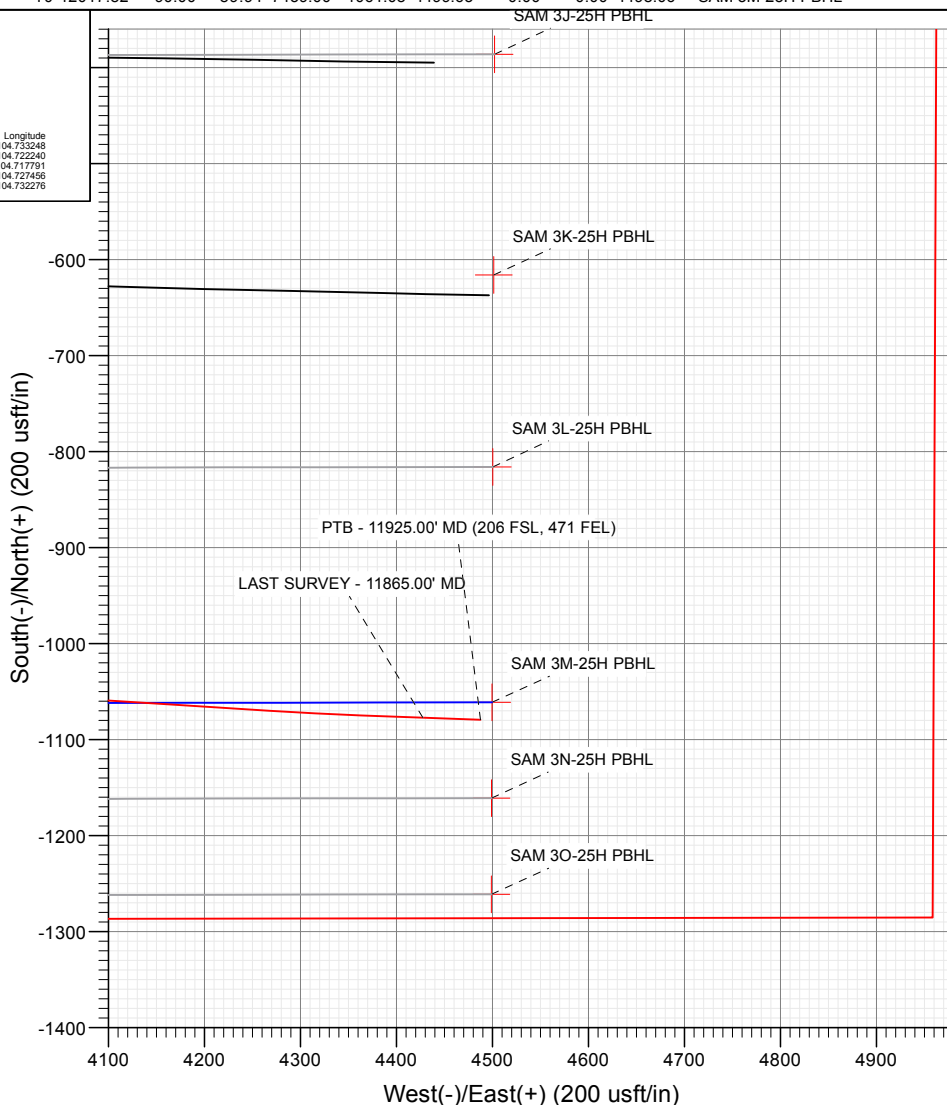
**CRESTONE PEAK**  
RESOURCES

# SECTION DETAILS

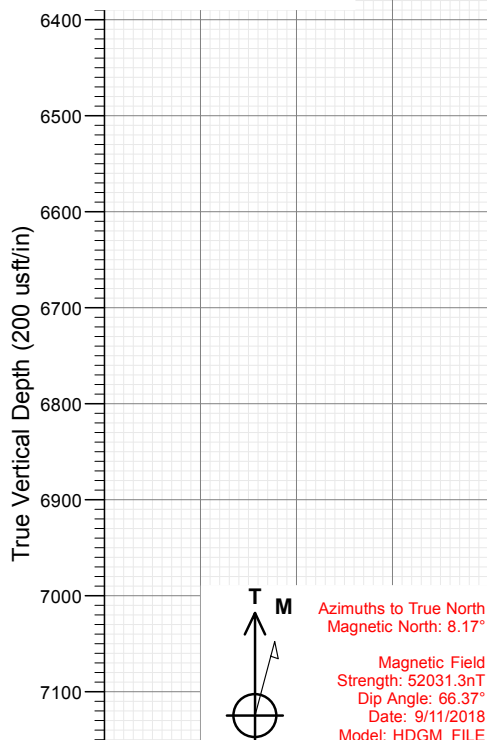
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	
3	862.99	9.26	196.42	860.98	-35.81	-10.55	2.00	196.42	-10.61	
4	6795.59	9.26	196.42	6716.27	-951.50	-280.38	0.00	0.00	-281.79	
5	7960.68	90.59	89.91	7456.00	-1067.26	442.58	8.00	-106.21	441.00	SAM 3M 441' VS
6	9310.76	90.59	89.91	7442.00	-1065.20	1792.58	0.00	0.00	1791.00	SAM 3M 1791' VS
7	9334.77	90.11	89.91	7441.85	-1065.17	1816.59	2.00	180.00	1815.01	
8	10766.06	90.11	89.91	7439.01	-1062.98	3247.88	0.00	0.00	3246.30	
9	10771.76	90.00	89.91	7439.00	-1062.98	3253.58	2.00	-180.00	3252.00	SAM 3M 3252' VS
10	12017.82	90.00	89.91	7439.00	-1061.08	4499.63	0.00	0.00	4498.06	SAM 3M-25H PBHL

FINAL  
SAM 3M-25H-M166  
385137 185154 418037 185268  
23' KB @ 5109.00ust  
Ground Level @ 5086.00  
North American Datum 1983  
Well SAM 3M-25H-M166, True North

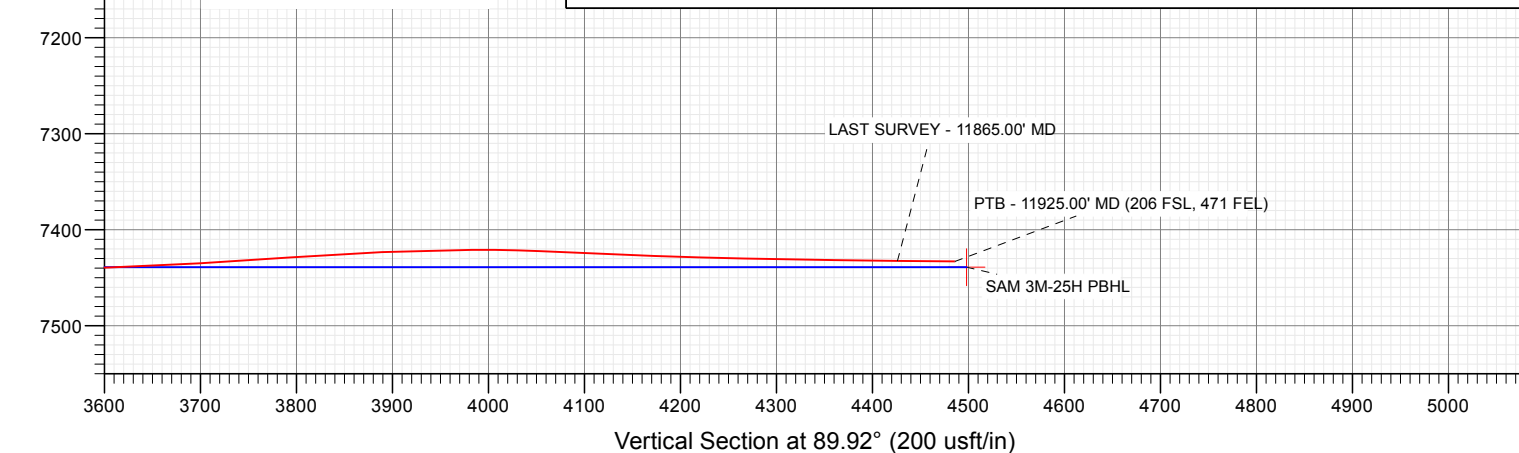
Name	Type	Target	No Target (Freehand)	Azimuth	Origin	Type	N/S	E/W	From	TVD
SAM 3M-25H TPZ				89.92	Slot		0.00	0.00	0.00	
SAM 3M 3252' VS										
SAM 3M-25H PBHL										
SAM 3M 1791' VS										
SAM 3M 441' VS										



Project: DJ BASIN  
Site: S25-T1N-R66W (SAM)  
Well: SAM 3M-25H-M166  
Wellbore: OH  
Design: FINAL



Azimuths to True North  
Magnetic North: 8.17°  
Magnetic Field  
Strength: 52031.3nT  
Dip Angle: 66.37°  
Date: 9/11/2018  
Model: HDGM\_FILE



## WELL DETAILS: SAM 3M-25H-M166

+N/-S	+E/-W	Northing	Ground Level:	5086.00	Latitude	Longitude
0.00	0.00	1250536.54	Easting	3214576.89	40.018565	-104.733856

**CATHEDRAL**



## Survey Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SAM 3M-25H-M166
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 5109.00usft
<b>Site:</b>	S25-T1N-R66W (SAM)	<b>MD Reference:</b>	23' KB @ 5109.00usft
<b>Well:</b>	SAM 3M-25H-M166	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

<b>Project</b>	DJ BASIN		
<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		S25-T1N-R66W (SAM)			
Site Position:		Northing:	1,251,849.37 usft	Latitude:	40.022061
From:	Lat/Long	Easting:	3,219,074.73 usft	Longitude:	-104.717756
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.51 °

Well	SAM 3M-25H-M166					
Well Position	+N/-S	0.00 usft	Northing:	1,250,536.54 usft	Latitude:	40.018565
	+E/-W	0.00 usft	Easting:	3,214,576.89 usft	Longitude:	-104.733856
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	5,086.00 usft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM_FILE	9/11/2018	8.17	66.37	52,031.30000000

<b>Design</b>	FINAL				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<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	89.92	

<b>Survey Program</b>	<b>Date</b>	9/20/2018			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
169.00	2,379.00	Survey #1 (OH)	VESSI_GYROFLEX	VESSI Gyroflex Gyro	
2,547.00	11,925.00	Survey #2 (OH)	MWD+HDGM	OWSG MWD + HDGM	

<b>Survey</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>Vertical Section (usft)</b>	<b>Dogleg Rate (°/100usf)</b>	<b>Build Rate (°/100u)</b>	<b>Formations / Comments</b>
10.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	
169.00	1.02	209.19	168.99	-1.24	-0.69	-0.69	0.64	0.64	
260.00	0.83	221.07	259.98	-2.44	-1.52	-1.52	0.30	-0.21	
352.00	0.73	210.07	351.97	-3.45	-2.25	-2.25	0.20	-0.11	
413.00	0.86	207.61	412.97	-4.19	-2.66	-2.66	0.22	0.21	
498.00	1.26	216.40	497.95	-5.51	-3.51	-3.51	0.51	0.47	
580.00	3.47	208.58	579.88	-8.41	-5.23	-5.24	2.72	2.70	
639.00	4.55	202.89	638.73	-12.14	-6.99	-7.01	1.95	1.83	
722.00	6.79	196.66	721.32	-19.87	-9.68	-9.71	2.79	2.70	
805.00	8.89	195.62	803.54	-30.75	-12.82	-12.86	2.54	2.53	
887.00	8.98	196.98	884.54	-42.97	-16.39	-16.45	0.28	0.11	
969.00	9.53	197.17	965.48	-55.58	-20.26	-20.35	0.67	0.67	

## Survey Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SAM 3M-25H-M166
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 5109.00usft
<b>Site:</b>	S25-T1N-R66W (SAM)	<b>MD Reference:</b>	23' KB @ 5109.00usft
<b>Well:</b>	SAM 3M-25H-M166	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

### Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100u)	Formations / Comments
1,054.00	10.05	193.04	1,049.24	-69.53	-24.01	-24.12	1.03	0.61	
1,138.00	10.33	192.54	1,131.92	-84.02	-27.30	-27.43	0.35	0.33	
1,221.00	9.21	194.44	1,213.71	-97.72	-30.57	-30.72	1.40	-1.35	
1,304.00	9.36	191.48	1,295.62	-110.76	-33.57	-33.74	0.60	0.18	
1,388.00	8.62	190.13	1,378.59	-123.66	-36.04	-36.22	0.92	-0.88	
1,472.00	8.69	188.36	1,461.63	-136.13	-38.07	-38.27	0.33	0.08	
1,554.00	8.53	188.53	1,542.71	-148.27	-39.87	-40.09	0.20	-0.20	
1,637.00	9.49	195.58	1,624.69	-160.95	-42.62	-42.86	1.76	1.16	
1,719.00	10.30	194.73	1,705.47	-174.55	-46.30	-46.56	1.00	0.99	
1,802.00	9.93	196.58	1,787.18	-188.59	-50.23	-50.51	0.59	-0.45	
1,889.00	10.55	195.86	1,872.79	-203.44	-54.55	-54.85	0.73	0.71	
1,971.00	9.39	198.33	1,953.55	-217.01	-58.71	-59.03	1.51	-1.41	
2,058.00	9.18	199.77	2,039.41	-230.28	-63.29	-63.63	0.36	-0.24	
2,147.00	9.71	198.36	2,127.21	-244.08	-68.05	-68.41	0.65	0.60	
2,237.00	9.71	198.42	2,215.92	-258.49	-72.84	-73.22	0.01	0.00	
2,326.00	9.09	205.30	2,303.72	-271.97	-78.22	-78.62	1.44	-0.70	
2,379.00	9.33	205.69	2,356.04	-279.62	-81.87	-82.28	0.47	0.45	
2,547.00	8.70	200.05	2,521.97	-303.83	-92.13	-92.58	0.65	-0.37	
2,642.00	9.71	201.01	2,615.74	-318.06	-97.46	-97.93	1.08	1.06	
2,736.00	9.14	210.54	2,708.48	-331.89	-104.10	-104.59	1.77	-0.61	
2,841.00	8.83	199.96	2,812.20	-346.65	-111.09	-111.60	1.60	-0.30	
2,936.00	8.57	209.10	2,906.11	-359.69	-117.02	-117.55	1.48	-0.27	
3,030.00	9.76	205.06	2,998.91	-373.03	-123.80	-124.35	1.44	1.27	
3,125.00	9.32	205.23	3,092.59	-387.28	-130.49	-131.07	0.46	-0.46	
3,219.00	9.05	196.35	3,185.39	-401.26	-135.82	-136.41	1.53	-0.29	
3,314.00	8.61	193.37	3,279.27	-415.35	-139.56	-140.18	0.67	-0.46	
3,409.00	9.14	196.94	3,373.13	-429.48	-143.41	-144.04	0.80	0.56	
3,504.00	8.53	198.20	3,467.00	-443.40	-147.81	-148.46	0.67	-0.64	
3,599.00	10.02	197.58	3,560.76	-457.97	-152.50	-153.18	1.57	1.57	
3,693.00	9.27	198.02	3,653.43	-472.96	-157.32	-158.02	0.80	-0.80	
3,787.00	7.38	193.98	3,746.44	-486.02	-161.12	-161.84	2.10	-2.01	
3,882.00	9.01	192.84	3,840.46	-499.20	-164.24	-164.98	1.72	1.72	
4,071.00	7.87	192.66	4,027.41	-526.25	-170.37	-171.15	0.60	-0.60	
4,166.00	11.12	194.33	4,121.10	-541.48	-174.06	-174.87	3.43	3.42	
4,233.00	10.46	193.01	4,186.91	-553.66	-177.03	-177.85	1.05	-0.99	
4,327.00	8.30	191.60	4,279.65	-568.63	-180.32	-181.16	2.31	-2.30	
4,422.00	9.89	180.18	4,373.46	-583.50	-181.72	-182.59	2.52	1.67	
4,516.00	9.49	178.95	4,466.12	-599.32	-181.60	-182.49	0.48	-0.43	
4,611.00	9.80	188.71	4,559.78	-615.15	-182.69	-183.60	1.75	0.33	
4,705.00	8.97	189.76	4,652.53	-630.28	-185.14	-186.07	0.90	-0.88	
4,800.00	9.41	187.74	4,746.31	-645.27	-187.44	-188.40	0.57	0.46	
4,894.00	9.10	190.11	4,839.08	-660.20	-189.78	-190.76	0.52	-0.33	
4,989.00	7.91	194.33	4,933.04	-673.93	-192.72	-193.72	1.41	-1.25	
5,084.00	9.67	194.16	5,026.92	-688.00	-196.29	-197.31	1.85	1.85	
5,179.00	9.76	194.33	5,120.55	-703.54	-200.23	-201.28	0.10	0.09	
5,274.00	8.22	195.12	5,214.39	-717.90	-204.00	-205.06	1.63	-1.62	
5,368.00	9.32	193.89	5,307.28	-731.78	-207.58	-208.66	1.19	1.17	
5,462.00	8.26	193.80	5,400.18	-745.72	-211.01	-212.12	1.13	-1.13	
5,557.00	9.32	200.48	5,494.06	-759.56	-215.33	-216.46	1.55	1.12	
5,651.00	8.13	200.40	5,586.98	-772.92	-220.31	-221.46	1.27	-1.27	
5,745.00	8.48	204.79	5,679.99	-785.44	-225.54	-226.70	0.77	0.37	
5,840.00	8.62	204.00	5,773.93	-798.30	-231.37	-232.55	0.19	0.15	
5,935.00	8.79	201.89	5,867.84	-811.54	-236.97	-238.18	0.38	0.18	

# Survey Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SAM 3M-25H-M166
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 5109.00usft
<b>Site:</b>	S25-T1N-R66W (SAM)	<b>MD Reference:</b>	23' KB @ 5109.00usft
<b>Well:</b>	SAM 3M-25H-M166	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

## Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100u)	Formations / Comments
6,030.00	10.33	200.84	5,961.52	-826.24	-242.71	-243.93	1.63	1.62	
6,124.00	9.14	200.84	6,054.16	-841.09	-248.36	-249.61	1.27	-1.27	
6,219.00	9.76	194.77	6,147.88	-855.93	-253.10	-254.37	1.23	0.65	
6,314.00	10.46	197.76	6,241.40	-871.93	-257.78	-259.08	0.92	0.74	
6,408.00	8.44	196.09	6,334.12	-886.69	-262.30	-263.61	2.17	-2.15	
6,502.00	9.80	195.70	6,426.93	-901.02	-266.38	-267.71	1.45	1.45	
6,597.00	11.91	200.57	6,520.23	-917.98	-272.01	-273.37	2.42	2.22	
6,691.00	9.63	200.13	6,612.57	-934.45	-278.12	-279.51	2.43	-2.43	
6,786.00	9.27	168.58	6,706.34	-949.42	-279.34	-280.75	5.40	-0.38	
6,880.00	19.30	140.46	6,797.41	-968.89	-267.91	-269.35	12.68	10.67	
6,975.00	25.76	133.60	6,885.13	-995.26	-242.94	-244.42	7.33	6.80	
7,069.00	32.97	114.62	6,967.18	-1,020.09	-204.76	-206.28	12.44	7.67	
7,164.00	42.20	98.88	7,042.55	-1,035.86	-149.49	-151.03	13.96	9.72	
7,259.00	49.54	92.82	7,108.68	-1,042.57	-81.75	-83.29	8.97	7.73	
7,353.00	55.21	94.58	7,166.05	-1,047.42	-7.49	-9.04	6.21	6.03	
7,448.00	55.82	94.22	7,219.84	-1,053.43	70.59	69.02	0.71	0.64	
7,543.00	58.20	92.73	7,271.56	-1,058.24	150.11	148.54	2.83	2.51	
7,566.58	59.68	92.71	7,283.73	-1,059.20	170.29	168.72	6.27	6.27	TPZ - 7566.58' MD (233 FSL, 480 FWL)
7,637.00	64.09	92.64	7,316.91	-1,062.09	232.32	230.74	6.27	6.27	
7,732.00	65.19	93.52	7,357.60	-1,066.71	318.04	316.45	1.43	1.16	
7,826.00	66.95	92.91	7,395.72	-1,071.52	403.82	402.23	1.96	1.87	
7,921.00	70.11	93.96	7,430.49	-1,076.83	492.05	490.45	3.48	3.33	
8,015.00	77.85	91.85	7,456.41	-1,081.37	582.21	580.61	8.51	8.23	
8,110.00	92.57	87.19	7,464.33	-1,080.54	676.59	674.99	16.24	15.49	
8,204.00	94.24	86.23	7,458.75	-1,075.16	770.27	768.67	2.05	1.78	
8,299.00	92.48	89.22	7,453.18	-1,071.39	865.01	863.42	3.65	-1.85	
8,393.00	92.09	91.76	7,449.43	-1,072.20	958.93	957.34	2.73	-0.41	
8,488.00	90.46	92.38	7,447.32	-1,075.63	1,053.84	1,052.24	1.84	-1.72	
8,582.00	90.99	92.82	7,446.13	-1,079.89	1,147.73	1,146.13	0.73	0.56	
8,676.00	90.15	89.65	7,445.19	-1,081.92	1,241.69	1,240.09	3.49	-0.89	
8,771.00	90.68	87.98	7,444.50	-1,079.95	1,336.67	1,335.06	1.84	0.56	
8,866.00	91.38	87.02	7,442.80	-1,075.81	1,431.56	1,429.96	1.25	0.74	
8,960.00	93.10	89.13	7,439.12	-1,072.65	1,525.43	1,523.83	2.89	1.83	
9,056.00	91.30	88.69	7,435.44	-1,070.83	1,621.33	1,619.74	1.93	-1.87	
9,150.00	87.96	86.40	7,436.04	-1,066.80	1,715.23	1,713.64	4.31	-3.55	
9,245.00	88.40	86.75	7,439.06	-1,061.13	1,810.01	1,808.43	0.59	0.46	
9,340.00	89.10	87.11	7,441.13	-1,056.05	1,904.85	1,903.28	0.83	0.74	
9,435.00	89.98	87.72	7,441.90	-1,051.76	1,999.75	1,998.19	1.13	0.93	
9,529.00	90.51	88.07	7,441.49	-1,048.31	2,093.68	2,092.13	0.68	0.56	
9,623.00	89.85	90.53	7,441.20	-1,047.16	2,187.67	2,186.11	2.71	-0.70	
9,717.00	90.51	91.41	7,440.90	-1,048.75	2,281.65	2,280.09	1.17	0.70	
9,812.00	88.40	90.53	7,441.81	-1,050.36	2,376.63	2,375.07	2.41	-2.22	
9,906.00	87.82	90.27	7,444.91	-1,051.02	2,470.57	2,469.01	0.68	-0.62	
10,001.00	88.79	89.83	7,447.72	-1,051.10	2,565.53	2,563.97	1.12	1.02	
10,096.00	89.80	88.95	7,448.89	-1,050.09	2,660.52	2,658.96	1.41	1.06	
10,191.00	90.07	89.83	7,448.99	-1,049.08	2,755.51	2,753.95	0.97	0.28	
10,285.00	89.10	88.25	7,449.67	-1,047.50	2,849.49	2,847.93	1.97	-1.03	
10,380.00	87.91	89.30	7,452.15	-1,045.47	2,944.43	2,942.88	1.67	-1.25	
10,475.00	90.37	90.27	7,453.58	-1,045.11	3,039.41	3,037.86	2.78	2.59	
10,570.00	89.89	89.48	7,453.36	-1,044.91	3,134.41	3,132.86	0.97	-0.51	
10,665.00	92.57	91.50	7,451.32	-1,045.72	3,229.37	3,227.82	3.53	2.82	
10,759.00	93.36	91.59	7,446.46	-1,048.25	3,323.21	3,321.65	0.85	0.84	
10,854.00	90.68	91.50	7,443.11	-1,050.81	3,418.11	3,416.55	2.82	-2.82	

## Survey Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well SAM 3M-25H-M166
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 5109.00usft
<b>Site:</b>	S25-T1N-R66W (SAM)	<b>MD Reference:</b>	23' KB @ 5109.00usft
<b>Well:</b>	SAM 3M-25H-M166	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100u)	Formations / Comments
10,948.00	91.03	90.53	7,441.71	-1,052.47	3,512.08	3,510.52	1.10	0.37	
11,043.00	91.91	90.27	7,439.27	-1,053.14	3,607.05	3,605.48	0.97	0.93	
11,137.00	93.23	89.74	7,435.06	-1,053.14	3,700.95	3,699.39	1.51	1.40	
11,232.00	94.24	89.57	7,428.87	-1,052.57	3,795.75	3,794.18	1.08	1.06	
11,327.00	92.57	90.18	7,423.23	-1,052.37	3,890.58	3,889.01	1.87	-1.76	
11,421.00	90.07	91.68	7,421.06	-1,053.89	3,984.53	3,982.96	3.10	-2.66	
11,516.00	87.25	93.43	7,423.28	-1,058.13	4,079.39	4,077.82	3.49	-2.97	
11,611.00	87.82	93.61	7,427.37	-1,063.95	4,174.13	4,172.54	0.63	0.60	
11,705.00	88.97	93.61	7,430.00	-1,069.87	4,267.90	4,266.31	1.22	1.22	
11,800.00	89.01	92.12	7,431.68	-1,074.62	4,362.77	4,361.17	1.57	0.04	
11,865.00	89.49	92.20	7,432.53	-1,077.07	4,427.71	4,426.11	0.75	0.74	LAST SURVEY - 11865.00' MD
11,925.00	89.49	92.20	7,433.06	-1,079.37	4,487.67	4,486.06	0.00	0.00	PTB - 11925.00' MD (206 FSL, 471 FEL)

Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SAM 3M 3252' VS - actual wellpath misses target center by 20.01usft at 10690.27usft MD (7450.14 TVD, -1046.38 N, 3254.60 E) - Point	0.00	0.00	7,439.00	-1,062.98	3,253.58	1,249,501.71	3,217,839.54	40.015646	-104.722240
SAM 3M-25H PBHL - actual wellpath misses target center by 22.65usft at 11925.00usft MD (7433.06 TVD, -1079.37 N, 4487.67 E) - Point	0.00	0.51	7,439.00	-1,061.08	4,499.63	1,249,514.38	3,219,085.53	40.015651	-104.717791
SAM 3M-25H TPZ - actual wellpath misses target center by 120.09usft at 7631.17usft MD (7314.34 TVD, -1061.85 N, 227.08 E) - Point	0.00	0.50	7,420.00	-1,067.68	170.29	1,249,470.37	3,214,756.41	40.015634	-104.733248
SAM 3M 441' VS - actual wellpath misses target center by 41.89usft at 7883.84usft MD (7417.47 TVD, -1074.55 N, 457.32 E) - Point	0.00	0.00	7,456.00	-1,067.26	442.58	1,249,473.14	3,215,028.68	40.015635	-104.732276
SAM 3M 1791' VS - actual wellpath misses target center by 4.61usft at 9227.46usft MD (7438.56 TVD, -1062.14 N, 1792.51 E) - Point	0.00	0.00	7,442.00	-1,065.20	1,792.58	1,249,486.86	3,216,378.61	40.015641	-104.727456

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
7,566.58	7,283.73	-1,059.20	170.29	TPZ - 7566.58' MD (233 FSL, 480 FWL)	
11,865.00	7,432.53	-1,077.07	4,427.71	LAST SURVEY - 11865.00' MD	
11,925.00	7,433.06	-1,079.37	4,487.67	PTB - 11925.00' MD (206 FSL, 471 FEL)	

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_