

Crestone Peak Resources

Well Name: **Hingley 3D-18H-N167**

Surface Location: Sec.18-T1N-R67W (HINGLEY)

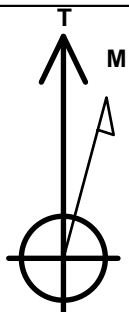
North American Datum 1983 , US State Plane 1983, Colorado Northern Zone

Ground Elevation: 5110.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1259879.92	3157469.82	40.045388	-104.937538	
RKB - 23' WELL @ 5133.0ft (RKB - 23')						

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 523'FSL & 1389'FWL	1.0	0.0	0.0	Point
BHL 460'FNL & 940'FWL	7692.0	4334.2	-436.1	Point
TPZ 460'FSL & 940'FWL	7692.0	-57.2	-449.1	Point



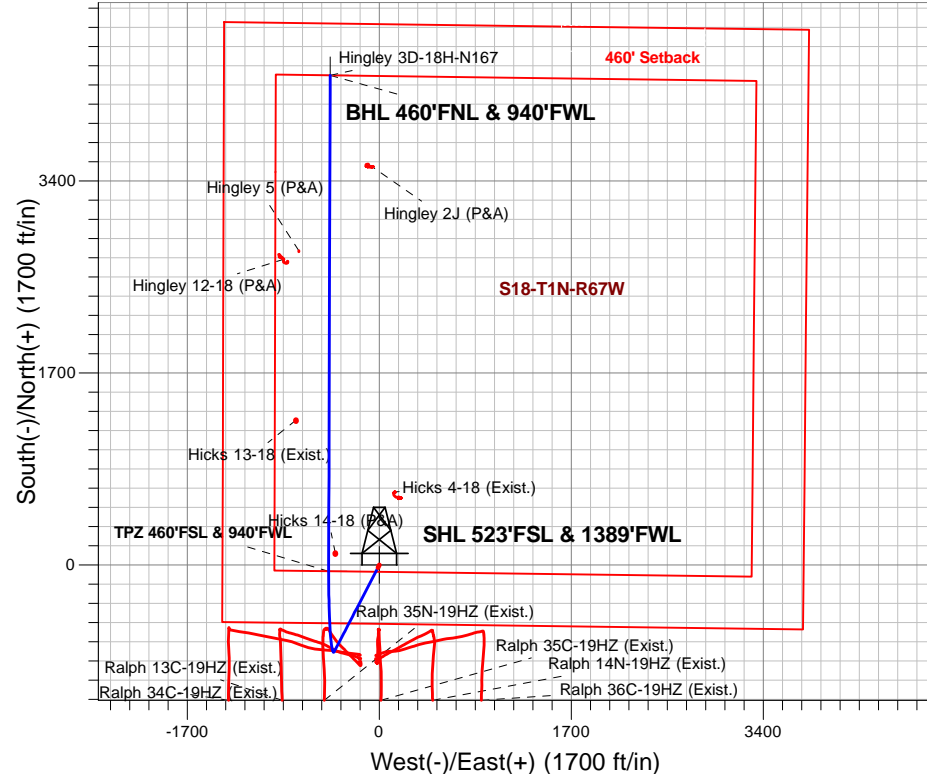
Azimuths to True North
Magnetic North: 8.22°

Magnetic Field
Strength: 51972.6snT
Dip Angle: 66.37°
Date: 9/25/2019
Model: HDGM

Sec.18-T1N-R67W (HINGLEY)
Hingley 3D-18H-N167
Plan #3 (9-25-19)
17:05, October 02 2019

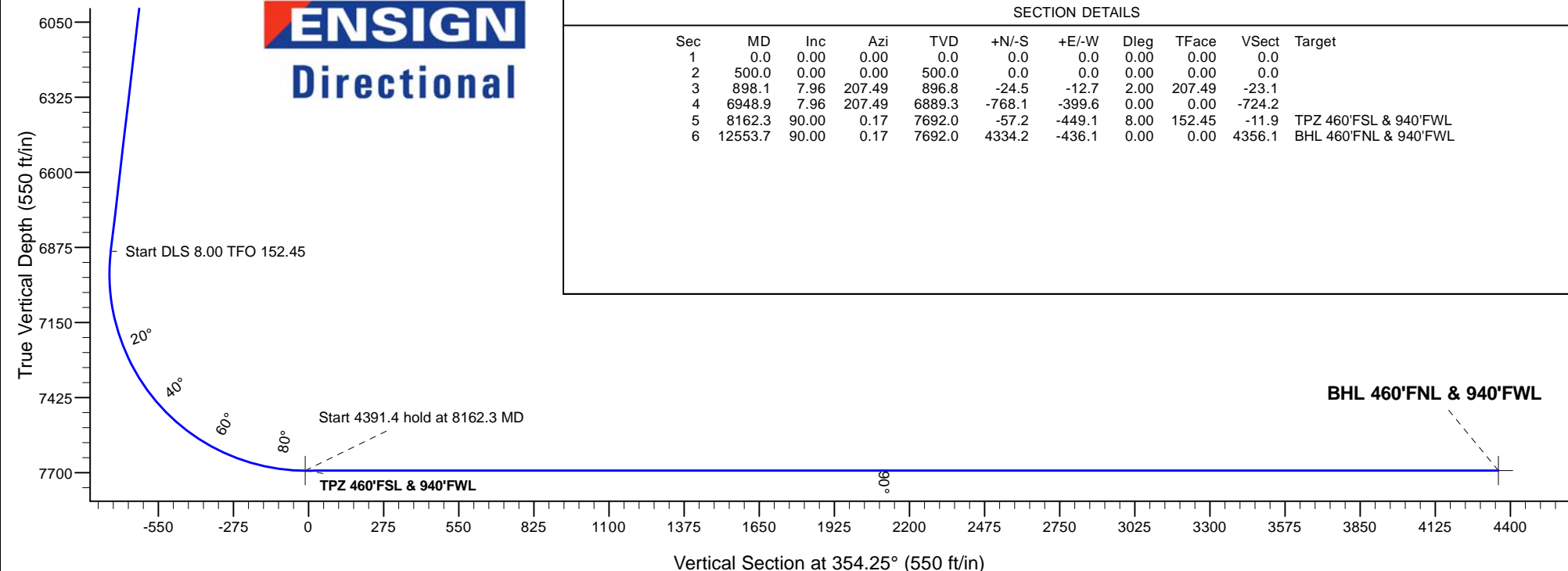
ANNOTATIONS

TVD	MD	Annotation
500.0	500.0	Start Build 2.00
896.8	898.1	Start 6050.8 hold at 898.1 MD
6889.3	6948.9	Start DLS 8.00 TFO 152.45
7692.0	8162.3	Start 4391.4 hold at 8162.3 MD
7692.0	12553.7	TD at 12553.7



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.0	
3	898.1	7.96	207.49	896.8	-24.5	-12.7	2.00	207.49	-23.1	
4	6948.9	7.96	207.49	6889.3	-768.1	-399.6	0.00	0.00	-724.2	
5	8162.3	90.00	0.17	7692.0	-57.2	-449.1	8.00	152.45	-11.9	TPZ 460'FSL & 940'FWL
6	12553.7	90.00	0.17	7692.0	4334.2	-436.1	0.00	0.00	4356.1	BHL 460'FNL & 940'FWL





Crestone Peak Resources

DJ BASIN

Sec.18-T1N-R67W (HINGLEY)

Hingley 3D-18H-N167

Hingley 3D-18H-N167 Wellbore #1

Plan: Plan #3 (9-25-19)

Standard Planning Report

02 October, 2019



CRESTONE PEAK
RESOURCES

Database:	US_EDM	Local Co-ordinate Reference:	Well Hingley 3D-18H-N167
Company:	Crestone Peak Resources	TVD Reference:	WELL @ 5133.0ft (RKB - 23')
Project:	DJ BASIN	MD Reference:	WELL @ 5133.0ft (RKB - 23')
Site:	Sec.18-T1N-R67W (HINGLEY)	North Reference:	True
Well:	Hingley 3D-18H-N167	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hingley 3D-18H-N167 Wellbore #1		
Design:	Plan #3 (9-25-19)		

Project	DJ BASIN		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		Sec.18-T1N-R67W (HINGLEY)			
Site Position:		Northing:	1,264,132.76 usft	Latitude:	40.057007
From:	Lat/Long	Easting:	3,160,624.47 usft	Longitude:	-104.926172
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.37

Well	Hingley 3D-18H-N167					
Well Position	+N/-S	-4,232.4 ft	Northing:	1,259,879.92 usft	Latitude:	40.045388
	+E/-W	-3,182.1 ft	Easting:	3,157,469.82 usft	Longitude:	-104.937538
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	5,110.0 ft

Wellbore	Hingley 3D-18H-N167 Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	9/25/2019	8.22	66.37	51,973

Design	Plan #3 (9-25-19)			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	354.25

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.00	0.00	
898.1	7.96	207.49	896.8	-24.5	-12.7	2.00	2.00	0.00	207.49	
6,948.9	7.96	207.49	6,889.3	-768.1	-399.6	0.00	0.00	0.00	0.00	
8,162.3	90.00	0.17	7,692.0	-57.2	-449.1	8.00	6.76	12.58	152.45	TPZ 460'FSL & 940'F'
12,553.7	90.00	0.17	7,692.0	4,334.2	-436.1	0.00	0.00	0.00	0.00	BHL 460'FNL & 940'F'

Database:	US_EDM	Local Co-ordinate Reference:	Well Hingley 3D-18H-N167
Company:	Crestone Peak Resources	TVD Reference:	WELL @ 5133.0ft (RKB - 23')
Project:	DJ BASIN	MD Reference:	WELL @ 5133.0ft (RKB - 23')
Site:	Sec.18-T1N-R67W (HINGLEY)	North Reference:	True
Well:	Hingley 3D-18H-N167	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hingley 3D-18H-N167 Wellbore #1		
Design:	Plan #3 (9-25-19)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
1.0	0.00	0.00	1.0	0.0	0.0	0.0	0.00	0.00	0.00
SHL 523'FSL & 1389'FWL									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
600.0	2.00	207.49	600.0	-1.5	-0.8	-1.5	2.00	2.00	0.00
700.0	4.00	207.49	699.8	-6.2	-3.2	-5.8	2.00	2.00	0.00
800.0	6.00	207.49	799.5	-13.9	-7.2	-13.1	2.00	2.00	0.00
898.1	7.96	207.49	896.8	-24.5	-12.7	-23.1	2.00	2.00	0.00
Start 6050.8 hold at 898.1 MD									
900.0	7.96	207.49	898.7	-24.7	-12.9	-23.3	0.00	0.00	0.00
1,000.0	7.96	207.49	997.7	-37.0	-19.3	-34.9	0.00	0.00	0.00
1,100.0	7.96	207.49	1,096.8	-49.3	-25.7	-46.5	0.00	0.00	0.00
1,200.0	7.96	207.49	1,195.8	-61.6	-32.1	-58.1	0.00	0.00	0.00
1,300.0	7.96	207.49	1,294.8	-73.9	-38.4	-69.7	0.00	0.00	0.00
1,400.0	7.96	207.49	1,393.9	-86.2	-44.8	-81.3	0.00	0.00	0.00
1,500.0	7.96	207.49	1,492.9	-98.5	-51.2	-92.8	0.00	0.00	0.00
1,600.0	7.96	207.49	1,592.0	-110.8	-57.6	-104.4	0.00	0.00	0.00
1,700.0	7.96	207.49	1,691.0	-123.0	-64.0	-116.0	0.00	0.00	0.00
1,800.0	7.96	207.49	1,790.0	-135.3	-70.4	-127.6	0.00	0.00	0.00
1,900.0	7.96	207.49	1,889.1	-147.6	-76.8	-139.2	0.00	0.00	0.00
2,000.0	7.96	207.49	1,988.1	-159.9	-83.2	-150.8	0.00	0.00	0.00
2,100.0	7.96	207.49	2,087.1	-172.2	-89.6	-162.4	0.00	0.00	0.00
2,200.0	7.96	207.49	2,186.2	-184.5	-96.0	-173.9	0.00	0.00	0.00
2,300.0	7.96	207.49	2,285.2	-196.8	-102.4	-185.5	0.00	0.00	0.00
2,400.0	7.96	207.49	2,384.2	-209.1	-108.8	-197.1	0.00	0.00	0.00
2,500.0	7.96	207.49	2,483.3	-221.4	-115.2	-208.7	0.00	0.00	0.00
2,600.0	7.96	207.49	2,582.3	-233.6	-121.6	-220.3	0.00	0.00	0.00
2,700.0	7.96	207.49	2,681.3	-245.9	-128.0	-231.9	0.00	0.00	0.00
2,800.0	7.96	207.49	2,780.4	-258.2	-134.4	-243.5	0.00	0.00	0.00
2,900.0	7.96	207.49	2,879.4	-270.5	-140.7	-255.1	0.00	0.00	0.00
3,000.0	7.96	207.49	2,978.5	-282.8	-147.1	-266.6	0.00	0.00	0.00
3,100.0	7.96	207.49	3,077.5	-295.1	-153.5	-278.2	0.00	0.00	0.00
3,200.0	7.96	207.49	3,176.5	-307.4	-159.9	-289.8	0.00	0.00	0.00
3,300.0	7.96	207.49	3,275.6	-319.7	-166.3	-301.4	0.00	0.00	0.00
3,400.0	7.96	207.49	3,374.6	-331.9	-172.7	-313.0	0.00	0.00	0.00
3,500.0	7.96	207.49	3,473.6	-344.2	-179.1	-324.6	0.00	0.00	0.00
3,600.0	7.96	207.49	3,572.7	-356.5	-185.5	-336.2	0.00	0.00	0.00
3,700.0	7.96	207.49	3,671.7	-368.8	-191.9	-347.7	0.00	0.00	0.00
3,800.0	7.96	207.49	3,770.7	-381.1	-198.3	-359.3	0.00	0.00	0.00
3,900.0	7.96	207.49	3,869.8	-393.4	-204.7	-370.9	0.00	0.00	0.00
4,000.0	7.96	207.49	3,968.8	-405.7	-211.1	-382.5	0.00	0.00	0.00
4,100.0	7.96	207.49	4,067.8	-418.0	-217.5	-394.1	0.00	0.00	0.00
4,200.0	7.96	207.49	4,166.9	-430.3	-223.9	-405.7	0.00	0.00	0.00
4,300.0	7.96	207.49	4,265.9	-442.5	-230.3	-417.3	0.00	0.00	0.00
4,400.0	7.96	207.49	4,365.0	-454.8	-236.7	-428.9	0.00	0.00	0.00
4,500.0	7.96	207.49	4,464.0	-467.1	-243.1	-440.4	0.00	0.00	0.00
4,600.0	7.96	207.49	4,563.0	-479.4	-249.4	-452.0	0.00	0.00	0.00
4,700.0	7.96	207.49	4,662.1	-491.7	-255.8	-463.6	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well Hingley 3D-18H-N167
Company:	Crestone Peak Resources	TVD Reference:	WELL @ 5133.0ft (RKB - 23')
Project:	DJ BASIN	MD Reference:	WELL @ 5133.0ft (RKB - 23')
Site:	Sec.18-T1N-R67W (HINGLEY)	North Reference:	True
Well:	Hingley 3D-18H-N167	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hingley 3D-18H-N167 Wellbore #1		
Design:	Plan #3 (9-25-19)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,800.0	7.96	207.49	4,761.1	-504.0	-262.2	-475.2	0.00	0.00	0.00
4,900.0	7.96	207.49	4,860.1	-516.3	-268.6	-486.8	0.00	0.00	0.00
5,000.0	7.96	207.49	4,959.2	-528.6	-275.0	-498.4	0.00	0.00	0.00
5,100.0	7.96	207.49	5,058.2	-540.9	-281.4	-510.0	0.00	0.00	0.00
5,200.0	7.96	207.49	5,157.2	-553.1	-287.8	-521.6	0.00	0.00	0.00
5,300.0	7.96	207.49	5,256.3	-565.4	-294.2	-533.1	0.00	0.00	0.00
5,400.0	7.96	207.49	5,355.3	-577.7	-300.6	-544.7	0.00	0.00	0.00
5,500.0	7.96	207.49	5,454.4	-590.0	-307.0	-556.3	0.00	0.00	0.00
5,600.0	7.96	207.49	5,553.4	-602.3	-313.4	-567.9	0.00	0.00	0.00
5,700.0	7.96	207.49	5,652.4	-614.6	-319.8	-579.5	0.00	0.00	0.00
5,800.0	7.96	207.49	5,751.5	-626.9	-326.2	-591.1	0.00	0.00	0.00
5,900.0	7.96	207.49	5,850.5	-639.2	-332.6	-602.7	0.00	0.00	0.00
6,000.0	7.96	207.49	5,949.5	-651.5	-339.0	-614.2	0.00	0.00	0.00
6,100.0	7.96	207.49	6,048.6	-663.7	-345.4	-625.8	0.00	0.00	0.00
6,200.0	7.96	207.49	6,147.6	-676.0	-351.8	-637.4	0.00	0.00	0.00
6,300.0	7.96	207.49	6,246.6	-688.3	-358.1	-649.0	0.00	0.00	0.00
6,400.0	7.96	207.49	6,345.7	-700.6	-364.5	-660.6	0.00	0.00	0.00
6,500.0	7.96	207.49	6,444.7	-712.9	-370.9	-672.2	0.00	0.00	0.00
6,600.0	7.96	207.49	6,543.7	-725.2	-377.3	-683.8	0.00	0.00	0.00
6,700.0	7.96	207.49	6,642.8	-737.5	-383.7	-695.4	0.00	0.00	0.00
6,800.0	7.96	207.49	6,741.8	-749.8	-390.1	-706.9	0.00	0.00	0.00
6,900.0	7.96	207.49	6,840.9	-762.1	-396.5	-718.5	0.00	0.00	0.00
6,948.9	7.96	207.49	6,889.3	-768.1	-399.6	-724.2	0.00	0.00	0.00
Start DLS 8.00 TFO 152.45									
7,000.0	4.73	231.04	6,940.1	-772.5	-402.9	-728.3	8.00	-6.33	46.11
7,100.0	6.21	324.05	7,039.8	-770.7	-409.3	-725.9	8.00	1.48	93.01
7,200.0	13.52	344.68	7,138.3	-755.1	-415.6	-709.7	8.00	7.30	20.63
7,300.0	21.32	350.70	7,233.6	-725.8	-421.6	-679.9	8.00	7.80	6.02
7,400.0	29.23	353.58	7,324.0	-683.5	-427.3	-637.3	8.00	7.91	2.88
7,500.0	37.17	355.31	7,407.6	-629.1	-432.5	-582.6	8.00	7.94	1.73
7,600.0	45.13	356.51	7,482.8	-563.5	-437.1	-516.9	8.00	7.96	1.19
7,700.0	53.10	357.41	7,548.2	-488.0	-441.1	-441.4	8.00	7.97	0.90
7,800.0	61.08	358.14	7,602.5	-404.2	-444.3	-357.7	8.00	7.98	0.73
7,900.0	69.06	358.76	7,644.6	-313.6	-446.8	-267.3	8.00	7.98	0.62
8,000.0	77.04	359.32	7,673.7	-218.1	-448.4	-172.1	8.00	7.98	0.56
8,100.0	85.03	359.85	7,689.3	-119.4	-449.1	-73.8	8.00	7.98	0.53
8,162.3	90.00	0.17	7,692.0	-57.2	-449.1	-11.9	8.00	7.98	0.51
Start 4391.4 hold at 8162.3 MD - TPZ 460'FSL & 940'FWL									
8,200.0	90.00	0.17	7,692.0	-19.5	-449.0	25.6	0.00	0.00	0.00
8,300.0	90.00	0.17	7,692.0	80.5	-448.7	125.1	0.00	0.00	0.00
8,400.0	90.00	0.17	7,692.0	180.5	-448.4	224.5	0.00	0.00	0.00
8,500.0	90.00	0.17	7,692.0	280.5	-448.1	324.0	0.00	0.00	0.00
8,600.0	90.00	0.17	7,692.0	380.5	-447.8	423.5	0.00	0.00	0.00
8,700.0	90.00	0.17	7,692.0	480.5	-447.5	522.9	0.00	0.00	0.00
8,800.0	90.00	0.17	7,692.0	580.5	-447.2	622.4	0.00	0.00	0.00
8,900.0	90.00	0.17	7,692.0	680.5	-446.9	721.9	0.00	0.00	0.00
9,000.0	90.00	0.17	7,692.0	780.5	-446.6	821.3	0.00	0.00	0.00
9,100.0	90.00	0.17	7,692.0	880.5	-446.3	920.8	0.00	0.00	0.00
9,200.0	90.00	0.17	7,692.0	980.5	-446.0	1,020.3	0.00	0.00	0.00
9,300.0	90.00	0.17	7,692.0	1,080.5	-445.7	1,119.7	0.00	0.00	0.00
9,400.0	90.00	0.17	7,692.0	1,180.5	-445.4	1,219.2	0.00	0.00	0.00
9,500.0	90.00	0.17	7,692.0	1,280.5	-445.1	1,318.7	0.00	0.00	0.00
9,600.0	90.00	0.17	7,692.0	1,380.5	-444.8	1,418.1	0.00	0.00	0.00
9,700.0	90.00	0.17	7,692.0	1,480.5	-444.5	1,517.6	0.00	0.00	0.00

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Wellbore:	Hingley 3D-18H-N167 Wellbore #1		
Design:	Plan #3 (9-25-19)		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
9,800.0	90.00	0.17	7,692.0	1,580.5	-444.2	1,617.1	0.00	0.00	0.00	
9,900.0	90.00	0.17	7,692.0	1,680.5	-443.9	1,716.5	0.00	0.00	0.00	
10,000.0	90.00	0.17	7,692.0	1,780.5	-443.6	1,816.0	0.00	0.00	0.00	
10,100.0	90.00	0.17	7,692.0	1,880.5	-443.4	1,915.5	0.00	0.00	0.00	
10,200.0	90.00	0.17	7,692.0	1,980.5	-443.1	2,014.9	0.00	0.00	0.00	
10,300.0	90.00	0.17	7,692.0	2,080.5	-442.8	2,114.4	0.00	0.00	0.00	
10,400.0	90.00	0.17	7,692.0	2,180.5	-442.5	2,213.9	0.00	0.00	0.00	
10,500.0	90.00	0.17	7,692.0	2,280.5	-442.2	2,313.3	0.00	0.00	0.00	
10,600.0	90.00	0.17	7,692.0	2,380.5	-441.9	2,412.8	0.00	0.00	0.00	
10,700.0	90.00	0.17	7,692.0	2,480.5	-441.6	2,512.3	0.00	0.00	0.00	
10,800.0	90.00	0.17	7,692.0	2,580.5	-441.3	2,611.7	0.00	0.00	0.00	
10,900.0	90.00	0.17	7,692.0	2,680.5	-441.0	2,711.2	0.00	0.00	0.00	
11,000.0	90.00	0.17	7,692.0	2,780.5	-440.7	2,810.7	0.00	0.00	0.00	
11,100.0	90.00	0.17	7,692.0	2,880.5	-440.4	2,910.1	0.00	0.00	0.00	
11,200.0	90.00	0.17	7,692.0	2,980.5	-440.1	3,009.6	0.00	0.00	0.00	
11,300.0	90.00	0.17	7,692.0	3,080.5	-439.8	3,109.1	0.00	0.00	0.00	
11,400.0	90.00	0.17	7,692.0	3,180.5	-439.5	3,208.5	0.00	0.00	0.00	
11,500.0	90.00	0.17	7,692.0	3,280.5	-439.2	3,308.0	0.00	0.00	0.00	
11,600.0	90.00	0.17	7,692.0	3,380.5	-438.9	3,407.5	0.00	0.00	0.00	
11,700.0	90.00	0.17	7,692.0	3,480.5	-438.6	3,507.0	0.00	0.00	0.00	
11,800.0	90.00	0.17	7,692.0	3,580.5	-438.3	3,606.4	0.00	0.00	0.00	
11,900.0	90.00	0.17	7,692.0	3,680.5	-438.0	3,705.9	0.00	0.00	0.00	
12,000.0	90.00	0.17	7,692.0	3,780.5	-437.7	3,805.4	0.00	0.00	0.00	
12,100.0	90.00	0.17	7,692.0	3,880.5	-437.5	3,904.8	0.00	0.00	0.00	
12,200.0	90.00	0.17	7,692.0	3,980.5	-437.2	4,004.3	0.00	0.00	0.00	
12,300.0	90.00	0.17	7,692.0	4,080.5	-436.9	4,103.8	0.00	0.00	0.00	
12,400.0	90.00	0.17	7,692.0	4,180.5	-436.6	4,203.2	0.00	0.00	0.00	
12,500.0	90.00	0.17	7,692.0	4,280.5	-436.3	4,302.7	0.00	0.00	0.00	
12,553.7	90.00	0.17	7,692.0	4,334.2	-436.1	4,356.1	0.00	0.00	0.00	
TD at 12553.7 - BHL 460°FNL & 940°FWL										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
SHL 523°FSL & 1389°FV - hit/miss target - Shape - Point	0.00	0.00	1.0	0.0	0.0	1,259,879.94	3,157,469.82	40.045388	-104.937538	
TPZ 460°FSL & 940°FV - plan hits target center - Point	0.00	0.00	7,692.0	-57.2	-449.1	1,259,819.91	3,157,021.12	40.045231	-104.939142	
BHL 460°FNL & 940°FV - plan hits target center - Point	0.00	0.00	7,692.0	4,334.2	-436.1	1,264,211.25	3,157,006.23	40.057286	-104.939096	

Database:	US_EDM	Local Co-ordinate Reference:	Well Hingley 3D-18H-N167
Company:	Crestone Peak Resources	TVD Reference:	WELL @ 5133.0ft (RKB - 23')
Project:	DJ BASIN	MD Reference:	WELL @ 5133.0ft (RKB - 23')
Site:	Sec.18-T1N-R67W (HINGLEY)	North Reference:	True
Well:	Hingley 3D-18H-N167	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hingley 3D-18H-N167 Wellbore #1		
Design:	Plan #3 (9-25-19)		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
500.0	500.0	0.0	0.0	Start Build 2.00
898.1	896.8	-24.5	-12.7	Start 6050.8 hold at 898.1 MD
6,948.9	6,889.3	-768.1	-399.6	Start DLS 8.00 TFO 152.45
8,162.3	7,692.0	-57.2	-449.1	Start 4391.4 hold at 8162.3 MD
12,553.7	7,692.0	4,334.2	-436.1	TD at 12553.7

Crestone Peak Resources

DJ BASIN

Sec.18-T1N-R67W (HINGLEY)

Hingley 3D-18H-N167

Hingley 3D-18H-N167 Wellbore #1

Plan #3 (9-25-19)

Anticollision Report

02 October, 2019



CRESTONE PEAK
RESOURCES

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well Hingley 3D-18H-N167
Project:	DJ BASIN	TVD Reference:	WELL @ 5133.0ft (RKB - 23')
Reference Site:	Sec.18-T1N-R67W (HINGLEY)	MD Reference:	WELL @ 5133.0ft (RKB - 23')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Hingley 3D-18H-N167	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Hingley 3D-18H-N167 Wellbore #1	Database:	US_EDM
Reference Design:	Plan #3 (9-25-19)	Offset TVD Reference:	Offset Datum

Reference	Plan #3 (9-25-19)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 500.0 ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	10/2/2019			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	12,552.7	Plan #3 (9-25-19) (Hingley 3D-18H-N167 W	MWD+HDGM	OWSG MWD + HDGM	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Sec.18-T1N-R67W (HINGLEY)						
Hingley 3A-18H-N167 - Hingley 3A-18H-N167 Wellbore #	200.0	199.0	30.0	29.0	30.280	CC, ES
Hingley 3A-18H-N167 - Hingley 3A-18H-N167 Wellbore #	4,600.0	4,563.7	496.4	460.2	13.716	SF
Hingley 3B-18H-N167 - Hingley 3B-18H-N167 Wellbore #	300.0	299.0	19.9	18.2	11.652	CC, ES
Hingley 3B-18H-N167 - Hingley 3B-18H-N167 Wellbore #	500.0	497.6	25.5	22.4	8.183	SF
Hingley 3C-18H-N167 - Hingley 3C-18H-N167 Wellbore #	400.0	400.0	9.8	7.4	4.038	CC, ES
Hingley 3C-18H-N167 - Hingley 3C-18H-N167 Wellbore #	500.0	499.7	11.2	8.1	3.585	SF
Hingley 3F-18H-N167 - Hingley 3F-18H-N167 Wellbore #	500.0	500.0	20.2	17.0	6.412	CC
Hingley 3F-18H-N167 - Hingley 3F-18H-N167 Wellbore #	600.0	600.1	20.7	16.9	5.404	ES
Hingley 3F-18H-N167 - Hingley 3F-18H-N167 Wellbore #	12,553.7	12,681.9	368.6	216.1	2.417	SF
Hingley 3G-18H-N167 - Hingley 3G-18H-N167 Wellbore	400.0	400.0	30.2	27.8	12.459	CC
Hingley 3G-18H-N167 - Hingley 3G-18H-N167 Wellbore	500.0	499.9	30.4	27.3	9.718	ES
Hingley 3G-18H-N167 - Hingley 3G-18H-N167 Wellbore	12,553.7	12,449.0	440.1	282.6	2.794	SF
Hingley 3H-18H-N167 - Hingley 3H-18H-N167 Wellbore #	500.0	500.0	40.0	36.9	12.735	CC, ES
Hingley 3H-18H-N167 - Hingley 3H-18H-N167 Wellbore #	800.0	799.5	49.3	44.0	9.332	SF
Hingley 3I-18H-N167 - Hingley 3I-18H-N167 Wellbore #1	500.0	500.0	50.1	47.0	15.941	CC, ES
Hingley 3I-18H-N167 - Hingley 3I-18H-N167 Wellbore #1	800.0	799.5	58.9	53.7	11.171	SF
Hingley 3K-18H-N167 - Hingley 3K-18H-N167 Wellbore #	133.5	133.5	70.3	69.8	136.161	CC
Hingley 3K-18H-N167 - Hingley 3K-18H-N167 Wellbore #	200.0	199.2	70.6	69.6	71.747	ES
Hingley 3K-18H-N167 - Hingley 3K-18H-N167 Wellbore #	2,900.0	2,853.3	491.4	469.5	22.454	SF
Sec.18-T1N-R67W Existing Wells						
Hicks 13-18 (Exist.) - Wellbore #1 - Wellbore #1						Out of range
Hicks 14-18 (P&A) - Wellbore #1 - Wellbore #1	1,332.6	1,296.2	394.5	364.0	12.932	CC
Hicks 14-18 (P&A) - Wellbore #1 - Wellbore #1	1,800.0	1,759.0	399.8	358.2	9.607	ES
Hicks 14-18 (P&A) - Wellbore #1 - Wellbore #1	3,500.0	3,442.6	495.8	414.2	6.074	SF
Hicks 4-18 (Exist.) - Wellbore #1 - Wellbore #1						Out of range
Hingley 12-18 (P&A) - Wellbore #1 - Wellbore #1	10,963.9	7,643.7	446.9	374.2	6.146	CC, ES
Hingley 12-18 (P&A) - Wellbore #1 - Wellbore #1	11,000.0	7,642.3	448.3	375.1	6.124	SF
Hingley 2J (P&A) - Wellbore #1 - Wellbore #1	11,767.0	7,621.0	325.5	242.7	3.932	CC, ES
Hingley 2J (P&A) - Wellbore #1 - Wellbore #1	11,800.0	7,621.1	327.2	243.9	3.929	SF
Hingley 5 (P&A) - Wellbore #1 - Wellbore #1						Out of range

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well Hingley 3D-18H-N167
Project:	DJ BASIN	TVD Reference:	WELL @ 5133.0ft (RKB - 23')
Reference Site:	Sec.18-T1N-R67W (HINGLEY)	MD Reference:	WELL @ 5133.0ft (RKB - 23')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Hingley 3D-18H-N167	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Hingley 3D-18H-N167 Wellbore #1	Database:	US_EDM
Reference Design:	Plan #3 (9-25-19)	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Sec.19-T1N-R67W Existing Wells						
Ralph 13C-19HZ (Exist.) - Wellbore #1 - Wellbore #1	4,264.9	4,220.9	441.7	405.0	12.014	CC
Ralph 13C-19HZ (Exist.) - Wellbore #1 - Wellbore #1	7,555.6	7,536.0	447.3	387.4	7.473	ES, SF
Ralph 14N-19HZ (Exist.) - Wellbore #1 - Wellbore #1						Out of range
Ralph 34C-19HZ (Exist.) - Wellbore #1 - Wellbore #1						Out of range
Ralph 35C-19HZ (Exist.) - Wellbore #1 - Wellbore #1	4,514.3	4,504.4	255.0	218.9	7.056	CC, ES
Ralph 35C-19HZ (Exist.) - Wellbore #1 - Wellbore #1	4,700.0	4,680.8	258.8	221.3	6.898	SF
Ralph 35N-19HZ (Exist.) - Wellbore #1 - Wellbore #1	7,467.8	7,435.0	67.8	12.5	1.225	Level 2, CC, ES, SF
Ralph 36C-19HZ (Exist.) - Wellbore #1 - Wellbore #1						Out of range

Offset Design														Offset Site Error:	0.0 ft
Survey Program: 0-MWD+HDGM														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)					
0.0	0.0	0.0	0.0	0.0	0.0	-89.29	0.4	-30.0	30.0						
100.0	100.0	99.0	99.0	0.1	0.1	-89.29	0.4	-30.0	30.0	29.7	0.27	109.083			
200.0	200.0	199.0	199.0	0.5	0.5	-89.29	0.4	-30.0	30.0	29.0	0.99	30.280	CC, ES		
300.0	300.0	298.1	298.1	0.9	0.8	-91.02	-0.6	-31.4	31.4	29.7	1.69	18.525			
400.0	400.0	397.0	396.8	1.2	1.2	-95.41	-3.4	-35.6	35.8	33.4	2.40	14.917			
500.0	500.0	495.4	494.9	1.6	1.5	-100.69	-8.0	-42.6	43.6	40.5	3.11	13.993			
600.0	600.0	593.3	592.0	1.9	1.9	48.20	-14.5	-52.4	53.7	49.8	3.82	14.046			
700.0	699.8	690.8	688.4	2.3	2.3	47.00	-22.8	-64.9	64.7	60.2	4.53	14.278			
800.0	799.5	787.8	783.7	2.6	2.7	47.21	-32.9	-80.0	76.6	71.4	5.27	14.553			
900.0	898.7	886.6	880.4	3.0	3.2	48.53	-44.3	-97.2	88.3	82.3	6.02	14.671			
1,000.0	997.7	986.0	977.5	3.3	3.6	50.42	-55.8	-114.5	99.0	92.2	6.77	14.631			
1,100.0	1,096.8	1,085.4	1,074.7	3.7	4.1	51.93	-67.3	-131.9	109.8	102.2	7.53	14.581			
1,200.0	1,195.8	1,184.8	1,171.9	4.1	4.5	53.18	-78.8	-149.2	120.6	112.3	8.30	14.525			
1,300.0	1,294.8	1,284.2	1,269.1	4.5	5.0	54.22	-90.3	-166.5	131.5	122.4	9.09	14.469			
1,400.0	1,393.9	1,383.5	1,366.3	4.9	5.5	55.10	-101.8	-183.8	142.4	132.5	9.88	14.414			
1,500.0	1,492.9	1,482.9	1,463.4	5.3	6.0	55.86	-113.3	-201.2	153.3	142.7	10.68	14.362			
1,600.0	1,592.0	1,582.3	1,560.6	5.7	6.4	56.51	-124.8	-218.5	164.3	152.8	11.48	14.313			
1,700.0	1,691.0	1,681.7	1,657.8	6.1	6.9	57.08	-136.3	-235.8	175.3	163.0	12.28	14.268			
1,800.0	1,790.0	1,781.1	1,755.0	6.5	7.4	57.59	-147.8	-253.1	186.3	173.2	13.09	14.226			
1,900.0	1,889.1	1,880.4	1,852.1	6.9	7.9	58.04	-159.4	-270.5	197.3	183.4	13.91	14.187			
2,000.0	1,988.1	1,979.8	1,949.3	7.3	8.3	58.44	-170.9	-287.8	208.3	193.6	14.72	14.151			
2,100.0	2,087.1	2,079.2	2,046.5	7.7	8.8	58.80	-182.4	-305.1	219.4	203.8	15.54	14.117			
2,200.0	2,186.2	2,178.6	2,143.7	8.2	9.3	59.13	-193.9	-322.4	230.4	214.0	16.36	14.086			
2,300.0	2,285.2	2,278.0	2,240.9	8.6	9.8	59.42	-205.4	-339.8	241.4	224.3	17.18	14.058			
2,400.0	2,384.2	2,377.4	2,338.0	9.0	10.2	59.69	-216.9	-357.1	252.5	234.5	18.00	14.031			
2,500.0	2,483.3	2,476.7	2,435.2	9.4	10.7	59.94	-228.4	-374.4	263.6	244.7	18.82	14.006			
2,600.0	2,582.3	2,576.1	2,532.4	9.8	11.2	60.17	-239.9	-391.7	274.6	255.0	19.64	13.983			
2,700.0	2,681.3	2,675.5	2,629.6	10.2	11.7	60.38	-251.4	-409.0	285.7	265.2	20.46	13.961			
2,800.0	2,780.4	2,774.9	2,726.8	10.6	12.2	60.57	-262.9	-426.4	296.8	275.5	21.29	13.940			
2,900.0	2,879.4	2,874.3	2,823.9	11.0	12.6	60.76	-274.4	-443.7	307.8	285.7	22.11	13.921			
3,000.0	2,978.5	2,973.6	2,921.1	11.4	13.1	60.92	-285.9	-461.0	318.9	296.0	22.94	13.903			
3,100.0	3,077.5	3,073.0	3,018.3	11.9	13.6	61.08	-297.4	-478.3	330.0	306.2	23.76	13.886			
3,200.0	3,176.5	3,172.4	3,115.5	12.3	14.1	61.23	-308.9	-495.7	341.1	316.5	24.59	13.870			
3,300.0	3,275.6	3,271.8	3,212.7	12.7	14.6	61.36	-320.4	-513.0	352.2	326.7	25.42	13.855			
3,400.0	3,374.6	3,371.2	3,309.8	13.1	15.0	61.49	-331.9	-530.3	363.2	337.0	26.24	13.841			

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