

Crestone Peak Resources

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

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

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

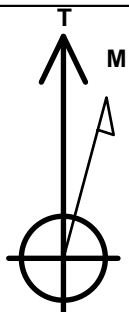
Ground Elevation: 5110.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1259880.15	3157509.86	40.045388	-104.937395	

RKB - 23' WELL @ 5133.0ft (RKB - 23')

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 523'FSL & 1429'FWL	1.0	0.0	0.0	Point
BHL 460'FNL & 1820'FWL	7692.0	4322.9	403.9	Point
TPZ 460'FSL & 1820'FWL	7692.0	-68.4	390.8	Point



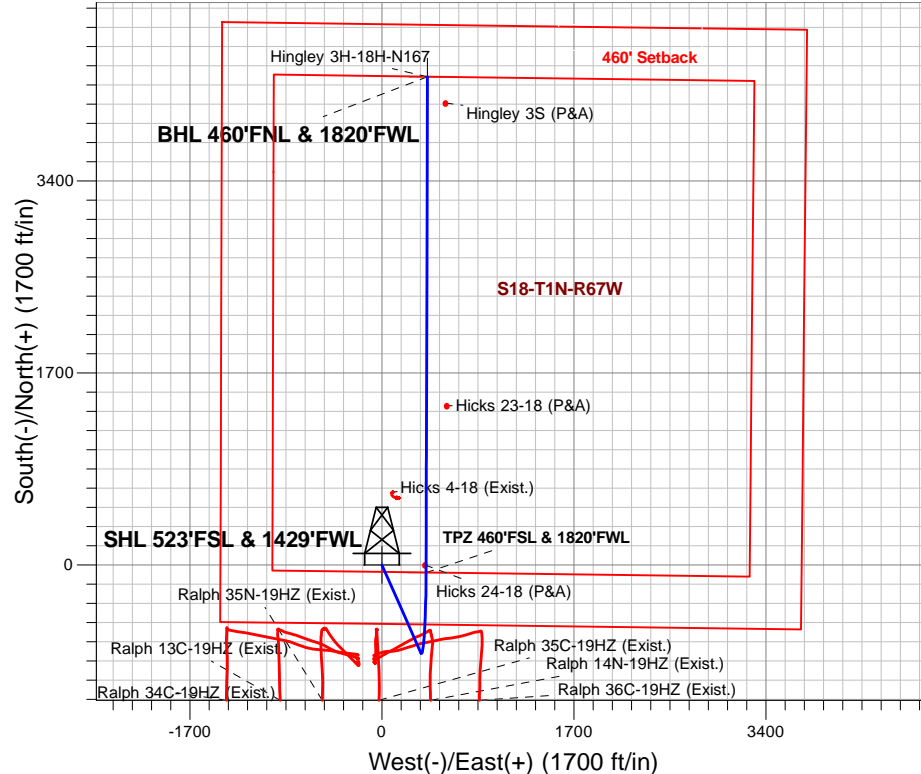
Azimuths to True North
Magnetic North: 8.22°

Magnetic Field
Strength: 51972.4snT
Dip Angle: 66.37°
Date: 9/26/2019
Model: HDGM

Sec.18-T1N-R67W (HINGLEY)
Hingley 3H-18H-N167
Plan #3 (9-26-19)
20:39, October 02 2019

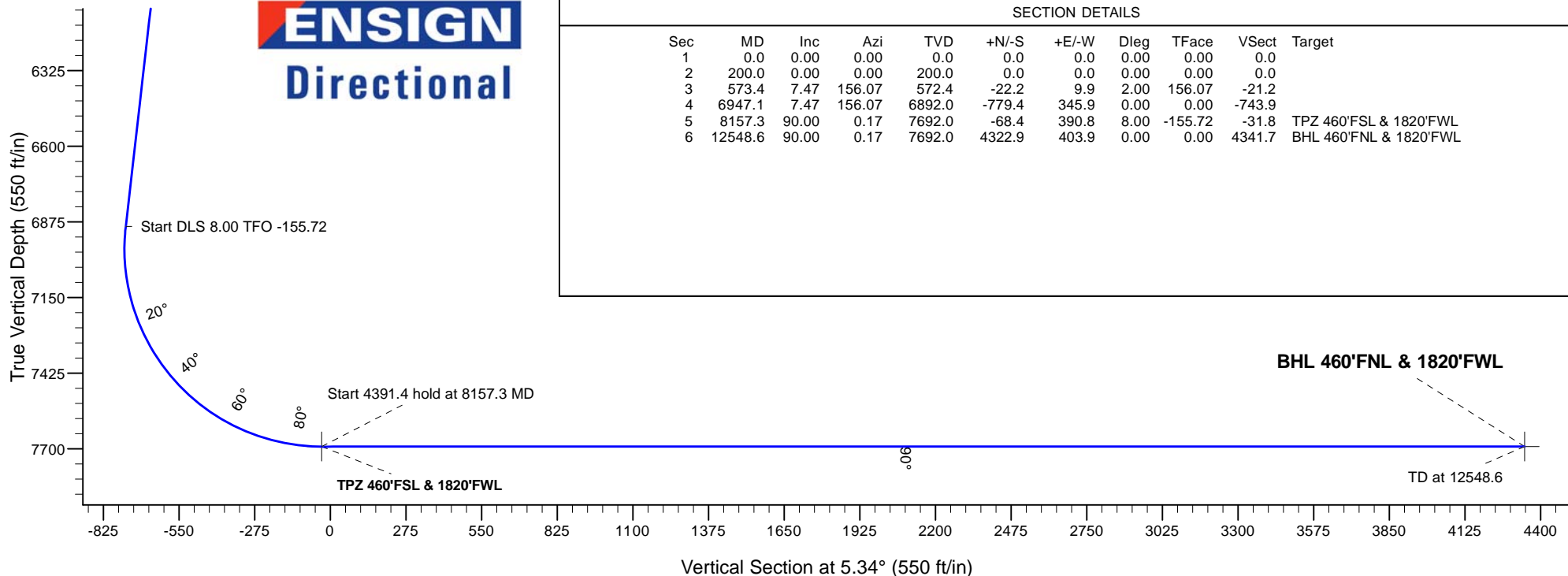
ANNOTATIONS

TVD	MD	Annotation
200.0	200.0	Start Build 2.00
572.4	573.4	Start 6373.7 hold at 573.4 MD
6892.0	6947.1	Start DLS 8.00 TFO -155.72
7692.0	8157.3	Start 4391.4 hold at 8157.3 MD
7692.0	12548.6	TD at 12548.6



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	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	573.4	7.47	156.07	572.4	-22.2	9.9	2.00	156.07	-21.2	
4	6947.1	7.47	156.07	6892.0	-779.4	345.9	0.00	0.00	-743.9	
5	8157.3	90.00	0.17	7692.0	-68.4	390.8	8.00	-155.72	-31.8	TPZ 460'FSL & 1820'FWL
6	12548.6	90.00	0.17	7692.0	4322.9	403.9	0.00	0.00	4341.7	BHL 460'FNL & 1820'FWL





Crestone Peak Resources

DJ BASIN

Sec.18-T1N-R67W (HINGLEY)

Hingley 3H-18H-N167

Hingley 3H-18H-N167 Wellbore #1

Plan: Plan #3 (9-26-19)

Standard Planning Report

02 October, 2019



CRESTONE PEAK
RESOURCES

Database:	US_EDM	Local Co-ordinate Reference:	Well Hingley 3H-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 3H-18H-N167	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hingley 3H-18H-N167 Wellbore #1		
Design:	Plan #3 (9-26-19)		

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 3H-18H-N167					
Well Position	+N/-S	-4,232.4 ft	Northing:	1,259,880.15 usft	Latitude:	40.045388
	+E/-W	-3,142.1 ft	Easting:	3,157,509.86 usft	Longitude:	-104.937395
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	5,110.0 ft

Wellbore	Hingley 3H-18H-N167 Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	9/26/2019	8.22	66.37	51,972

Design	Plan #3 (9-26-19)			
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	5.34

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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
573.4	7.47	156.07	572.4	-22.2	9.9	2.00	2.00	0.00	156.07	
6,947.1	7.47	156.07	6,892.0	-779.4	345.9	0.00	0.00	0.00	0.00	
8,157.3	90.00	0.17	7,692.0	-68.4	390.8	8.00	6.82	-12.88	-155.72	TPZ 460'FSL & 1820'
12,548.6	90.00	0.17	7,692.0	4,322.9	403.9	0.00	0.00	0.00	0.00	BHL 460'FNL & 1820'

Database:	US_EDM	Local Co-ordinate Reference:	Well Hingley 3H-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 3H-18H-N167	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hingley 3H-18H-N167 Wellbore #1		
Design:	Plan #3 (9-26-19)		

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 & 1429'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
Start Build 2.00									
300.0	2.00	156.07	300.0	-1.6	0.7	-1.5	2.00	2.00	0.00
400.0	4.00	156.07	399.8	-6.4	2.8	-6.1	2.00	2.00	0.00
500.0	6.00	156.07	499.5	-14.3	6.4	-13.7	2.00	2.00	0.00
573.4	7.47	156.07	572.4	-22.2	9.9	-21.2	2.00	2.00	0.00
Start 6373.7 hold at 573.4 MD									
600.0	7.47	156.07	598.7	-25.4	11.3	-24.2	0.00	0.00	0.00
700.0	7.47	156.07	697.9	-37.3	16.5	-35.6	0.00	0.00	0.00
800.0	7.47	156.07	797.0	-49.1	21.8	-46.9	0.00	0.00	0.00
900.0	7.47	156.07	896.2	-61.0	27.1	-58.2	0.00	0.00	0.00
1,000.0	7.47	156.07	995.3	-72.9	32.3	-69.6	0.00	0.00	0.00
1,100.0	7.47	156.07	1,094.5	-84.8	37.6	-80.9	0.00	0.00	0.00
1,200.0	7.47	156.07	1,193.6	-96.7	42.9	-92.2	0.00	0.00	0.00
1,300.0	7.47	156.07	1,292.8	-108.5	48.2	-103.6	0.00	0.00	0.00
1,400.0	7.47	156.07	1,391.9	-120.4	53.4	-114.9	0.00	0.00	0.00
1,500.0	7.47	156.07	1,491.1	-132.3	58.7	-126.3	0.00	0.00	0.00
1,600.0	7.47	156.07	1,590.2	-144.2	64.0	-137.6	0.00	0.00	0.00
1,700.0	7.47	156.07	1,689.4	-156.1	69.3	-148.9	0.00	0.00	0.00
1,800.0	7.47	156.07	1,788.5	-167.9	74.5	-160.3	0.00	0.00	0.00
1,900.0	7.47	156.07	1,887.7	-179.8	79.8	-171.6	0.00	0.00	0.00
2,000.0	7.47	156.07	1,986.8	-191.7	85.1	-183.0	0.00	0.00	0.00
2,100.0	7.47	156.07	2,086.0	-203.6	90.3	-194.3	0.00	0.00	0.00
2,200.0	7.47	156.07	2,185.1	-215.5	95.6	-205.6	0.00	0.00	0.00
2,300.0	7.47	156.07	2,284.3	-227.3	100.9	-217.0	0.00	0.00	0.00
2,400.0	7.47	156.07	2,383.4	-239.2	106.2	-228.3	0.00	0.00	0.00
2,500.0	7.47	156.07	2,482.6	-251.1	111.4	-239.6	0.00	0.00	0.00
2,600.0	7.47	156.07	2,581.8	-263.0	116.7	-251.0	0.00	0.00	0.00
2,700.0	7.47	156.07	2,680.9	-274.9	122.0	-262.3	0.00	0.00	0.00
2,800.0	7.47	156.07	2,780.1	-286.7	127.2	-273.7	0.00	0.00	0.00
2,900.0	7.47	156.07	2,879.2	-298.6	132.5	-285.0	0.00	0.00	0.00
3,000.0	7.47	156.07	2,978.4	-310.5	137.8	-296.3	0.00	0.00	0.00
3,100.0	7.47	156.07	3,077.5	-322.4	143.1	-307.7	0.00	0.00	0.00
3,200.0	7.47	156.07	3,176.7	-334.3	148.3	-319.0	0.00	0.00	0.00
3,300.0	7.47	156.07	3,275.8	-346.1	153.6	-330.4	0.00	0.00	0.00
3,400.0	7.47	156.07	3,375.0	-358.0	158.9	-341.7	0.00	0.00	0.00
3,500.0	7.47	156.07	3,474.1	-369.9	164.2	-353.0	0.00	0.00	0.00
3,600.0	7.47	156.07	3,573.3	-381.8	169.4	-364.4	0.00	0.00	0.00
3,700.0	7.47	156.07	3,672.4	-393.7	174.7	-375.7	0.00	0.00	0.00
3,800.0	7.47	156.07	3,771.6	-405.6	180.0	-387.0	0.00	0.00	0.00
3,900.0	7.47	156.07	3,870.7	-417.4	185.2	-398.4	0.00	0.00	0.00
4,000.0	7.47	156.07	3,969.9	-429.3	190.5	-409.7	0.00	0.00	0.00
4,100.0	7.47	156.07	4,069.0	-441.2	195.8	-421.1	0.00	0.00	0.00
4,200.0	7.47	156.07	4,168.2	-453.1	201.1	-432.4	0.00	0.00	0.00
4,300.0	7.47	156.07	4,267.3	-465.0	206.3	-443.7	0.00	0.00	0.00
4,400.0	7.47	156.07	4,366.5	-476.8	211.6	-455.1	0.00	0.00	0.00
4,500.0	7.47	156.07	4,465.6	-488.7	216.9	-466.4	0.00	0.00	0.00
4,600.0	7.47	156.07	4,564.8	-500.6	222.1	-477.8	0.00	0.00	0.00
4,700.0	7.47	156.07	4,663.9	-512.5	227.4	-489.1	0.00	0.00	0.00

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Project:	DJ BASIN	MD Reference:	WELL @ 5133.0ft (RKB - 23')
Site:	Sec.18-T1N-R67W (HINGLEY)	North Reference:	True
Well:	Hingley 3H-18H-N167	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hingley 3H-18H-N167 Wellbore #1		
Design:	Plan #3 (9-26-19)		

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	7.47	156.07	4,763.1	-524.4	232.7	-500.4	0.00	0.00	0.00
4,900.0	7.47	156.07	4,862.2	-536.2	238.0	-511.8	0.00	0.00	0.00
5,000.0	7.47	156.07	4,961.4	-548.1	243.2	-523.1	0.00	0.00	0.00
5,100.0	7.47	156.07	5,060.5	-560.0	248.5	-534.4	0.00	0.00	0.00
5,200.0	7.47	156.07	5,159.7	-571.9	253.8	-545.8	0.00	0.00	0.00
5,300.0	7.47	156.07	5,258.8	-583.8	259.1	-557.1	0.00	0.00	0.00
5,400.0	7.47	156.07	5,358.0	-595.6	264.3	-568.5	0.00	0.00	0.00
5,500.0	7.47	156.07	5,457.2	-607.5	269.6	-579.8	0.00	0.00	0.00
5,600.0	7.47	156.07	5,556.3	-619.4	274.9	-591.1	0.00	0.00	0.00
5,700.0	7.47	156.07	5,655.5	-631.3	280.1	-602.5	0.00	0.00	0.00
5,800.0	7.47	156.07	5,754.6	-643.2	285.4	-613.8	0.00	0.00	0.00
5,900.0	7.47	156.07	5,853.8	-655.0	290.7	-625.2	0.00	0.00	0.00
6,000.0	7.47	156.07	5,952.9	-666.9	296.0	-636.5	0.00	0.00	0.00
6,100.0	7.47	156.07	6,052.1	-678.8	301.2	-647.8	0.00	0.00	0.00
6,200.0	7.47	156.07	6,151.2	-690.7	306.5	-659.2	0.00	0.00	0.00
6,300.0	7.47	156.07	6,250.4	-702.6	311.8	-670.5	0.00	0.00	0.00
6,400.0	7.47	156.07	6,349.5	-714.4	317.0	-681.9	0.00	0.00	0.00
6,500.0	7.47	156.07	6,448.7	-726.3	322.3	-693.2	0.00	0.00	0.00
6,600.0	7.47	156.07	6,547.8	-738.2	327.6	-704.5	0.00	0.00	0.00
6,700.0	7.47	156.07	6,647.0	-750.1	332.9	-715.9	0.00	0.00	0.00
6,800.0	7.47	156.07	6,746.1	-762.0	338.1	-727.2	0.00	0.00	0.00
6,900.0	7.47	156.07	6,845.3	-773.8	343.4	-738.5	0.00	0.00	0.00
6,947.1	7.47	156.07	6,892.0	-779.4	345.9	-743.9	0.00	0.00	0.00
Start DLS 8.00 TFO -155.72									
7,000.0	4.01	130.32	6,944.6	-783.8	348.7	-747.9	8.00	-6.54	-48.67
7,100.0	6.22	29.58	7,044.4	-781.3	354.0	-745.0	8.00	2.22	-100.75
7,200.0	13.76	12.80	7,142.8	-765.0	359.4	-728.2	8.00	7.53	-16.78
7,300.0	21.63	7.93	7,238.0	-735.1	364.5	-698.0	8.00	7.87	-4.87
7,400.0	29.56	5.59	7,328.1	-692.2	369.5	-654.8	8.00	7.94	-2.34
7,500.0	37.53	4.17	7,411.4	-637.2	374.1	-599.6	8.00	7.96	-1.42
7,600.0	45.50	3.19	7,486.2	-571.1	378.3	-533.4	8.00	7.97	-0.98
7,700.0	53.48	2.44	7,551.1	-495.2	382.0	-457.6	8.00	7.98	-0.74
7,800.0	61.46	1.84	7,604.8	-411.1	385.1	-373.4	8.00	7.98	-0.60
7,900.0	69.45	1.32	7,646.4	-320.2	387.6	-282.8	8.00	7.99	-0.52
8,000.0	77.44	0.85	7,674.8	-224.4	389.5	-187.2	8.00	7.99	-0.47
8,100.0	85.42	0.42	7,689.7	-125.6	390.5	-88.8	8.00	7.99	-0.44
8,157.3	90.00	0.17	7,692.0	-68.4	390.8	-31.8	8.00	7.99	-0.43
Start 4391.4 hold at 8157.3 MD - TPZ 460'FSL & 1820'FWL									
8,200.0	90.00	0.17	7,692.0	-25.7	391.0	10.8	0.00	0.00	0.00
8,300.0	90.00	0.17	7,692.0	74.3	391.3	110.4	0.00	0.00	0.00
8,400.0	90.00	0.17	7,692.0	174.3	391.6	210.0	0.00	0.00	0.00
8,500.0	90.00	0.17	7,692.0	274.3	391.9	309.6	0.00	0.00	0.00
8,600.0	90.00	0.17	7,692.0	374.3	392.2	409.1	0.00	0.00	0.00
8,700.0	90.00	0.17	7,692.0	474.3	392.5	508.7	0.00	0.00	0.00
8,800.0	90.00	0.17	7,692.0	574.3	392.8	608.3	0.00	0.00	0.00
8,900.0	90.00	0.17	7,692.0	674.3	393.0	707.9	0.00	0.00	0.00
9,000.0	90.00	0.17	7,692.0	774.3	393.3	807.5	0.00	0.00	0.00
9,100.0	90.00	0.17	7,692.0	874.3	393.6	907.1	0.00	0.00	0.00
9,200.0	90.00	0.17	7,692.0	974.3	393.9	1,006.7	0.00	0.00	0.00
9,300.0	90.00	0.17	7,692.0	1,074.3	394.2	1,106.3	0.00	0.00	0.00
9,400.0	90.00	0.17	7,692.0	1,174.3	394.5	1,205.9	0.00	0.00	0.00
9,500.0	90.00	0.17	7,692.0	1,274.3	394.8	1,305.5	0.00	0.00	0.00
9,600.0	90.00	0.17	7,692.0	1,374.3	395.1	1,405.1	0.00	0.00	0.00
9,700.0	90.00	0.17	7,692.0	1,474.3	395.4	1,504.7	0.00	0.00	0.00

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Site:	Sec.18-T1N-R67W (HINGLEY)	North Reference:	True
Well:	Hingley 3H-18H-N167	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hingley 3H-18H-N167 Wellbore #1		
Design:	Plan #3 (9-26-19)		

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	1,574.3	395.7	1,604.3	0.00	0.00	0.00	
9,900.0	90.00	0.17	7,692.0	1,674.3	396.0	1,703.9	0.00	0.00	0.00	
10,000.0	90.00	0.17	7,692.0	1,774.3	396.3	1,803.5	0.00	0.00	0.00	
10,100.0	90.00	0.17	7,692.0	1,874.3	396.6	1,903.1	0.00	0.00	0.00	
10,200.0	90.00	0.17	7,692.0	1,974.3	396.9	2,002.6	0.00	0.00	0.00	
10,300.0	90.00	0.17	7,692.0	2,074.3	397.2	2,102.2	0.00	0.00	0.00	
10,400.0	90.00	0.17	7,692.0	2,174.3	397.5	2,201.8	0.00	0.00	0.00	
10,500.0	90.00	0.17	7,692.0	2,274.3	397.8	2,301.4	0.00	0.00	0.00	
10,600.0	90.00	0.17	7,692.0	2,374.3	398.1	2,401.0	0.00	0.00	0.00	
10,700.0	90.00	0.17	7,692.0	2,474.3	398.4	2,500.6	0.00	0.00	0.00	
10,800.0	90.00	0.17	7,692.0	2,574.3	398.7	2,600.2	0.00	0.00	0.00	
10,900.0	90.00	0.17	7,692.0	2,674.3	399.0	2,699.8	0.00	0.00	0.00	
11,000.0	90.00	0.17	7,692.0	2,774.3	399.3	2,799.4	0.00	0.00	0.00	
11,100.0	90.00	0.17	7,692.0	2,874.3	399.6	2,899.0	0.00	0.00	0.00	
11,200.0	90.00	0.17	7,692.0	2,974.3	399.9	2,998.6	0.00	0.00	0.00	
11,300.0	90.00	0.17	7,692.0	3,074.3	400.2	3,098.2	0.00	0.00	0.00	
11,400.0	90.00	0.17	7,692.0	3,174.3	400.5	3,197.8	0.00	0.00	0.00	
11,500.0	90.00	0.17	7,692.0	3,274.3	400.8	3,297.4	0.00	0.00	0.00	
11,600.0	90.00	0.17	7,692.0	3,374.3	401.1	3,397.0	0.00	0.00	0.00	
11,700.0	90.00	0.17	7,692.0	3,474.3	401.4	3,496.5	0.00	0.00	0.00	
11,800.0	90.00	0.17	7,692.0	3,574.3	401.7	3,596.1	0.00	0.00	0.00	
11,900.0	90.00	0.17	7,692.0	3,674.3	402.0	3,695.7	0.00	0.00	0.00	
12,000.0	90.00	0.17	7,692.0	3,774.3	402.3	3,795.3	0.00	0.00	0.00	
12,100.0	90.00	0.17	7,692.0	3,874.3	402.6	3,894.9	0.00	0.00	0.00	
12,200.0	90.00	0.17	7,692.0	3,974.3	402.9	3,994.5	0.00	0.00	0.00	
12,300.0	90.00	0.17	7,692.0	4,074.3	403.2	4,094.1	0.00	0.00	0.00	
12,400.0	90.00	0.17	7,692.0	4,174.3	403.5	4,193.7	0.00	0.00	0.00	
12,500.0	90.00	0.17	7,692.0	4,274.3	403.8	4,293.3	0.00	0.00	0.00	
12,548.6	90.00	0.17	7,692.0	4,322.9	403.9	4,341.7	0.00	0.00	0.00	
TD at 12548.6 - BHL 460'FNL & 1820'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 & 1429'FW - hit/miss target - Shape - Point	0.00	0.00	1.0	0.0	0.0	1,259,880.20	3,157,509.86	40.045388	-104.937395	
BHL 460'FNL & 1820'FW - plan hits target center - Point	0.00	0.00	7,692.0	4,322.9	403.9	1,264,205.54	3,157,886.34	40.057255	-104.935952	
TPZ 460'FSL & 1820'FW - plan hits target center - Point	0.00	0.00	7,692.0	-68.4	390.8	1,259,814.20	3,157,901.12	40.045200	-104.935999	

Database:	US_EDM	Local Co-ordinate Reference:	Well Hingley 3H-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 3H-18H-N167	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hingley 3H-18H-N167 Wellbore #1		
Design:	Plan #3 (9-26-19)		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
200.0	200.0	0.0	0.0	Start Build 2.00
573.4	572.4	-22.2	9.9	Start 6373.7 hold at 573.4 MD
6,947.1	6,892.0	-779.4	345.9	Start DLS 8.00 TFO -155.72
8,157.3	7,692.0	-68.4	390.8	Start 4391.4 hold at 8157.3 MD
12,548.6	7,692.0	4,322.9	403.9	TD at 12548.6

Crestone Peak Resources

DJ BASIN

Sec.18-T1N-R67W (HINGLEY)

Hingley 3H-18H-N167

Hingley 3H-18H-N167 Wellbore #1

Plan #3 (9-26-19)

Anticollision Report

02 October, 2019



CRESTONE PEAK
RESOURCES

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well Hingley 3H-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 3H-18H-N167	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Hingley 3H-18H-N167 Wellbore #1	Database:	US_EDM
Reference Design:	Plan #3 (9-26-19)	Offset TVD Reference:	Offset Datum

Reference	Plan #3 (9-26-19)		
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	12,548.6	Plan #3 (9-26-19) (Hingley 3H-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	70.0	69.0	70.744	CC, ES
Hingley 3A-18H-N167 - Hingley 3A-18H-N167 Wellbore #	700.0	683.5	122.4	117.8	26.522	SF
Hingley 3B-18H-N167 - Hingley 3B-18H-N167 Wellbore #	200.0	199.0	59.9	58.9	60.557	CC, ES
Hingley 3B-18H-N167 - Hingley 3B-18H-N167 Wellbore #	700.0	689.7	99.3	94.7	21.550	SF
Hingley 3C-18H-N167 - Hingley 3C-18H-N167 Wellbore #	200.0	200.0	49.8	48.8	50.187	CC, ES
Hingley 3C-18H-N167 - Hingley 3C-18H-N167 Wellbore #	600.0	596.2	69.8	65.9	17.828	SF
Hingley 3D-18H-N167 - Hingley 3D-18H-N167 Wellbore #	200.0	200.0	40.0	39.0	40.319	CC, ES
Hingley 3D-18H-N167 - Hingley 3D-18H-N167 Wellbore #	2,200.0	2,188.0	233.4	217.1	14.335	SF
Hingley 3F-18H-N167 - Hingley 3F-18H-N167 Wellbore #	200.0	200.0	19.9	18.9	20.019	CC, ES
Hingley 3F-18H-N167 - Hingley 3F-18H-N167 Wellbore #	7,000.0	6,983.9	484.9	429.9	8.827	SF
Hingley 3G-18H-N167 - Hingley 3G-18H-N167 Wellbore	200.0	200.0	9.8	8.8	9.868	CC, ES
Hingley 3G-18H-N167 - Hingley 3G-18H-N167 Wellbore	12,548.6	12,405.9	457.8	300.3	2.906	SF
Hingley 3I-18H-N167 - Hingley 3I-18H-N167 Wellbore #1	358.6	358.6	9.1	7.0	4.305	CC, ES
Hingley 3I-18H-N167 - Hingley 3I-18H-N167 Wellbore #1	12,548.6	12,789.4	461.8	308.5	3.012	SF
Hingley 3K-18H-N167 - Hingley 3K-18H-N167 Wellbore #	133.7	133.7	30.2	29.7	58.431	CC
Hingley 3K-18H-N167 - Hingley 3K-18H-N167 Wellbore #	200.0	199.6	30.5	29.6	30.981	ES
Hingley 3K-18H-N167 - Hingley 3K-18H-N167 Wellbore #	12,548.6	12,490.8	469.5	310.6	2.955	SF
Sec.18-T1N-R67W Existing Wells						
Hicks 23-18 (P&A) - Wellbore #1 - Wellbore #1						Out of range
Hicks 24-18 (P&A) - Wellbore #1 - Wellbore #1	1,586.6	1,553.0	348.0	311.1	9.424	CC
Hicks 24-18 (P&A) - Wellbore #1 - Wellbore #1	2,100.0	2,062.0	354.3	305.2	7.209	ES
Hicks 24-18 (P&A) - Wellbore #1 - Wellbore #1	4,300.0	4,243.3	495.5	394.8	4.923	SF
Hicks 4-18 (Exist.) - Wellbore #1 - Wellbore #1	8,869.2	7,670.2	298.4	250.8	6.267	CC, ES, SF
Hingley 3S (P&A) - Wellbore #1 - Wellbore #1						Out of range
Sec.19-T1N-R67W Existing Wells						
Ralph 13C-19HZ (Exist.) - Wellbore #1 - Wellbore #1						Out of range
Ralph 14N-19HZ (Exist.) - Wellbore #1 - Wellbore #1	7,402.3	7,400.2	78.8	23.1	1.414	Level 3, CC, ES, SF
Ralph 34C-19HZ (Exist.) - Wellbore #1 - Wellbore #1						Out of range
Ralph 35C-19HZ (Exist.) - Wellbore #1 - Wellbore #1	4,400.3	4,393.0	279.4	244.1	7.917	CC
Ralph 35C-19HZ (Exist.) - Wellbore #1 - Wellbore #1	4,500.0	4,490.9	280.0	243.9	7.746	ES
Ralph 35C-19HZ (Exist.) - Wellbore #1 - Wellbore #1	5,200.0	5,183.4	297.8	256.9	7.286	SF
Ralph 35N-19HZ (Exist.) - Wellbore #1 - Wellbore #1						Out of range
Ralph 36C-19HZ (Exist.) - Wellbore #1 - Wellbore #1	4,719.2	4,700.5	312.2	271.3	7.622	CC, ES
Ralph 36C-19HZ (Exist.) - Wellbore #1 - Wellbore #1	4,900.0	4,864.0	317.0	274.9	7.522	SF

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

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well Hingley 3H-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 3H-18H-N167	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Hingley 3H-18H-N167 Wellbore #1	Database:	US_EDM
Reference Design:	Plan #3 (9-26-19)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-89.68	0.4	-70.0	70.0					
100.0	100.0	99.0	99.0	0.1	0.1	-89.68	0.4	-70.0	70.0	69.7	0.27	254.851		
200.0	200.0	199.0	199.0	0.5	0.5	-89.68	0.4	-70.0	70.0	69.0	0.99	70.744 CC, ES		
300.0	300.0	297.0	297.0	0.8	0.8	114.73	-0.5	-71.4	72.1	70.4	1.68	42.809		
400.0	399.8	394.7	394.5	1.2	1.2	115.95	-3.3	-75.5	78.5	76.1	2.39	32.805		
500.0	499.5	491.8	491.3	1.6	1.5	117.58	-7.8	-82.4	89.3	86.1	3.13	28.530		
600.0	598.7	588.0	586.9	1.9	1.9	119.26	-14.1	-91.9	104.3	100.4	3.88	26.905		
700.0	697.9	683.5	681.2	2.3	2.3	120.04	-22.1	-103.9	122.4	117.8	4.61	26.522 SF		
800.0	797.0	778.0	774.1	2.7	2.7	119.77	-31.8	-118.4	143.0	137.6	5.36	26.652		
900.0	896.2	874.4	868.4	3.1	3.1	119.04	-42.9	-135.1	165.4	159.2	6.13	26.965		
1,000.0	995.3	971.8	963.7	3.5	3.6	118.44	-54.1	-152.1	187.9	181.0	6.91	27.199		
1,100.0	1,094.5	1,069.3	1,058.9	3.9	4.0	117.98	-65.4	-169.1	210.5	202.8	7.69	27.364		
1,200.0	1,193.6	1,166.7	1,154.2	4.3	4.5	117.60	-76.7	-186.1	233.0	224.5	8.48	27.483		
1,300.0	1,292.8	1,264.1	1,249.4	4.7	4.9	117.29	-88.0	-203.0	255.6	246.3	9.27	27.572		
1,400.0	1,391.9	1,361.5	1,344.7	5.1	5.4	117.03	-99.2	-220.0	278.1	268.1	10.06	27.639		
1,500.0	1,491.1	1,458.9	1,439.9	5.6	5.8	116.81	-110.5	-237.0	300.7	289.9	10.86	27.692		
1,600.0	1,590.2	1,556.3	1,535.2	6.0	6.3	116.62	-121.8	-254.0	323.3	311.6	11.66	27.733		
1,700.0	1,689.4	1,653.7	1,630.5	6.4	6.8	116.46	-133.1	-271.0	345.9	333.4	12.46	27.767		
1,800.0	1,788.5	1,751.1	1,725.7	6.8	7.2	116.31	-144.4	-287.9	368.5	355.2	13.26	27.794		
1,900.0	1,887.7	1,848.6	1,821.0	7.2	7.7	116.19	-155.6	-304.9	391.0	377.0	14.06	27.817		
2,000.0	1,986.8	1,946.0	1,916.2	7.6	8.2	116.07	-166.9	-321.9	413.6	398.8	14.86	27.836		
2,100.0	2,086.0	2,043.4	2,011.5	8.0	8.6	115.97	-178.2	-338.9	436.2	420.6	15.66	27.852		
2,200.0	2,185.1	2,140.8	2,106.7	8.4	9.1	115.88	-189.5	-355.9	458.8	442.3	16.47	27.865		
2,300.0	2,284.3	2,238.2	2,202.0	8.8	9.6	115.79	-200.8	-372.9	481.4	464.1	17.27	27.877		