

Eastern Hills 4-65 17-18 3FH Plan #0 Anti-Collision Summary Report

Analysis Date-24hr Time: April 16, 2020 - 15:25
Client: Crestone Peak Resources
Field: CO, Arapahoe County (NAD 83 CZ)

Analysis Method: 3D Least Distance
Reference Trajectory: Eastern Hills 4-65 17-18 3FH Plan #0 (Def Plan)
Depth Interval: Every 10.00 Measured Depth (ft)

Structure: Crestone Peak 02-05S-65W (Eastern Hills South Pad)
Slot: Eastern Hills 4-65 17-18 3FH
Well: Eastern Hills 4-65 17-18 3FH
Borehole: Original Hole
Scan MD Range: 0.00ft - 18129.65ft

Rule Set: D&M AntiCollision Standard S002 v5.1/5.2
Min Pts: All local minima indicated.
Version / Patch: 2.10.810.1
Database \ Project: localhost\drilling-Colorado

Trajectory Error Model: ISCSWA0 3-D 95.000% Confidence 2.7955 sigma, for subject well. For offset wells, error model version is specified with each well respectively.

Offset Trajectories Summary

Offset Selection Criteria

Wellhead distance scan: Not performed!
 Selection filters: Definitive Surveys - Definitive Plans - Definitive surveys exclude definitive plans
 - All Non-Def Surveys when no Def-Survey is set in a borehole - All Non-Def Plans when no Def-Plan is set in a borehole

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		

Results highlighted: Sep-Factor separation <= 1.50 ft

Eastern Hills 4-65 17-18 3EH Plan #0 (Def Plan)

Warning Alert

24.77	20.01	23.79	4.76	N/A	MAS = 6.10 (m)	0.00	0.00	CiCt<=15m<15.00				Enter Alert	
24.77	20.01	23.79	4.76	N/A	MAS = 6.10 (m)	30.00	30.00						
24.77	20.01	22.62	4.76	20.46	MAS = 6.10 (m)	250.00	250.00						
24.87	20.01	22.54	4.86	17.67	MAS = 6.10 (m)	290.00	290.00	CiCt<=15m>15.00				MINPT-O-EOU	
40.29	20.01	35.57	20.29	10.52	MAS = 6.10 (m)	730.00	727.85						
48.61	20.01	43.18	28.60	10.70	MAS = 6.10 (m)	840.00	836.67						
557.88	57.13	519.47	500.76	14.88	OSF1.50	7200.00	7128.16	OSF<5.00				MinPt-O-SF	Enter Alert
624.50	188.27	498.66	436.23	4.99	OSF1.50	11420.00	7950.00						
624.51	531.48	269.86	93.02	1.76	OSF1.50	18129.65	7950.00						

Eastern Hills 4-65 17-18 4CH Plan #0 (Def Plan)

Warning Alert

25.13	20.30	24.15	4.83	N/A	MAS = 6.19 (m)	0.00	0.00	CiCt<=15m<15.00				Enter Alert	
25.13	20.30	24.15	4.83	N/A	MAS = 6.19 (m)	30.00	30.00						
25.13	20.30	22.99	4.83	20.77	MAS = 6.19 (m)	250.00	250.00						
25.17	20.30	22.96	4.87	19.67	MAS = 6.19 (m)	270.00	270.00	CiCt<=15m>15.00				MINPT-O-EOU	
48.71	20.30	44.27	28.41	13.81	MAS = 6.19 (m)	760.00	757.53						
162.28	20.52	148.27	141.76	12.39	OSF1.50	2200.00	2182.02						
552.67	54.84	515.78	497.83	15.37	OSF1.50	7150.00	7078.70	OSF<5.00				MinPt-O-SF	Enter Alert
624.14	188.06	498.44	436.08	5.00	OSF1.50	11490.00	7950.00						
624.15	527.57	272.11	96.58	1.78	OSF1.50	18129.65	7950.00						

Eastern Hills 4-65 17-18 2FH Plan #0 (Def Plan)

Warning Alert

49.90	32.81	48.92	17.10	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
49.90	32.81	48.92	17.10	N/A	MAS = 10.00 (m)	30.00	30.00						
49.90	32.81	47.76	17.10	42.08	MAS = 10.00 (m)	250.00	250.00						
49.99	32.81	47.69	17.18	37.33	MAS = 10.00 (m)	280.00	280.00					MINPT-O-EOU	
80.87	32.81	75.68	48.06	18.99	MAS = 10.00 (m)	790.00	787.20						
1218.59	59.65	1178.50	1158.94	31.13	OSF1.50	7205.74	7133.84						
1399.60	421.00	1118.61	978.60	4.99	OSF1.50	15960.00	7950.00	OSF<5.00				MinPt-O-SF	Enter Alert
1399.52	533.18	1043.74	866.35	3.94	OSF1.50	18129.65	7950.00						

Eastern Hills 4-65 17-18 4DH Plan #0 (Def Plan)

Warning Alert

50.27	32.81	49.28	17.46	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
50.27	32.81	49.28	17.46	N/A	MAS = 10.00 (m)	30.00	30.00						
50.27	32.81	48.12	17.46	42.40	MAS = 10.00 (m)	250.00	250.00						
50.28	32.81	48.11	17.48	41.43	MAS = 10.00 (m)	260.00	260.00					MINPT-O-EOU	
316.69	32.81	302.79	283.88	24.44	MAS = 10.00 (m)	2200.00	2182.02						
1101.73	56.04	1064.04	1045.68	29.99	OSF1.50	7205.74	7133.84						
1239.61	372.62	990.86	866.98	5.00	OSF1.50	15060.00	7950.00	OSF<5.00				MinPt-O-SF	Enter Alert
1239.61	531.43	884.99	708.18	3.50	OSF1.50	18129.65	7950.00						

Lone Tree 4-65 15-16 3BH MWD 0' to 17542' - PR (Def Survey)

Warning Alert

8018.07	223.65	7868.36	7794.41	54.20	OSF1.50	0.00	0.00					Surface	
7988.51	223.73	7838.76	7764.78	53.98	OSF1.50	30.00	30.00						
1290.30	392.33	1027.91	897.97	4.96	OSF1.50	6870.00	6801.72						
703.44	601.73	299.71	101.70	1.76	OSF1.50	7810.00	7696.88	OSF<5.00				MinPt	Enter Alert
703.18	600.66	300.10	102.53	1.76	OSF1.50	7830.00	7711.95						
1151.13	354.84	910.65	796.29	4.98	OSF1.50	8620.00	7950.00						
10495.37	61.88	10453.42	10433.48	263.14	OSF1.50	18129.65	7950.00					TD	

Eastern Hills 4-65 17-18 2DH MWD 0' to 14879' - PR (Def Survey)

Warning Alert

1925.65	32.81	1923.83	1892.84	N/A	MAS = 10.00 (m)	0.00	0.00					Surface	
1925.63	32.81	1923.82	1892.82	N/A	MAS = 10.00 (m)	30.00	30.00						
1869.82	32.81	1858.13	1837.01	189.29	MAS = 10.00 (m)	2300.00	2280.94						
1355.31	45.32	1324.24	1310.00	47.50	OSF1.50	7340.00	7267.64					MinPt-O-SF	
1204.60	61.58	1162.61	1143.01	30.66	OSF1.50	8610.00	7950.00						
1211.93	153.63	1108.58	1058.30	12.02	OSF1.50	9930.00	7950.00						
1212.86	156.77	1107.42	1056.09	11.79	OSF1.50	10000.00	7950.00					MINPT-O-EOU	
1213.90	158.07	1107.59	1055.82	11.70	OSF1.50	10030.00	7950.00						
1139.22	228.58	985.88	910.64	7.55	OSF1.50	10920.00	7950.00						
1140.61	233.11	984.25	907.50	7.41	OSF1.50	11010.00	7950.00					MINPT-O-EOU	
1142.63	235.55	984.65	907.08	7.35	OSF1.50	11060.00	7950.00						
1203.53	270.72	1022.14	932.81	6.72	OSF1.50	11590.00	7950.00						
1199.49	341.95	970.58	857.54	5.29	OSF1.50	12370.00	7950.00					MinPt-O-SF	
1201.70	349.17	967.99	852.53	5.19	OSF1.50	12500.00	7950.00						
1210.18	365.97	965.27	844.21	4.99	OSF1.50	12700.00	7950.00						
1196.34	410.91	921.45	785.43	4.39	OSF1.50	13250.00	7950.00					Enter Alert	
1201.89	426.47	916.64	775.41	4.25	OSF1.50	13490.00	7950.00						
1206.40	431.80	917.61	774.61	4.21	OSF1.50	13580.00	7950.00						
1201.89	537.70	842.48	664.18	3.36	OSF1.50	14860.00	7950.00					MinPt-O-ADP	
1203.74	543.53	840.45	660.21	3.33	OSF1.50	14970.00	7950.00						

...Eastern Hills 4-65 17-18 3FH\Original Hole\Eastern Hills 4-65 17-18 3FH Plan #0

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
	1208.87	549.83	841.39	659.04	3.31	OSF1.50	15080.00	7950.00				MinPt-O-ADP	
	1214.24	559.53	840.29	654.70	3.26	OSF1.50	15180.00	7950.00				MinPt-O-EQU	
	1216.56	562.23	840.81	654.32	3.25	OSF1.50	15230.00	7950.00				MinPt-O-ADP	
	1223.74	568.65	843.72	655.09	3.24	OSF1.50	15340.00	7950.00				MinPts	
	1540.20	465.04	1229.56	1075.15	4.98	OSF1.50	16190.00	7950.00	OSF>5.00			Exit Alert	
	3127.15	249.03	2960.52	2878.12	18.96	OSF1.50	18129.65	7950.00				TD	
Grande 4-65 20-19 1AH - Plan (Def Plan)													
	2550.90	32.81	2549.09	2518.09	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	Warning Alert
	2550.90	32.81	2549.03	2518.09	45895.63	MAS = 10.00 (m)	30.00	30.00				WRP	
	2062.90	84.90	2005.62	1978.00	37.31	OSF1.50	8400.00	7949.30				MinPt-CtCt	
	2085.83	627.26	1666.98	1458.57	5.00	OSF1.50	15590.00	7950.00	OSF<5.00			Enter Alert	
	2094.09	827.83	1541.52	1266.26	3.80	OSF1.50	18129.65	7950.00				MinPts	
Eastern Hills 4-65 17-18 2EH Plan #0 (Def Plan)													
	75.05	32.81	74.06	42.24	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	Pass
	75.04	32.81	74.05	42.23	N/A	MAS = 10.00 (m)	30.00	30.00				WRP	
	75.04	32.81	72.89	42.23	63.79	MAS = 10.00 (m)	250.00	250.00				MinPts	
	75.13	32.81	72.83	42.32	56.45	MAS = 10.00 (m)	280.00	280.00				MINPT-O-EQU	
	125.39	32.81	119.47	92.58	25.22	MAS = 10.00 (m)	900.00	896.02				MinPt-O-SF	
	1720.64	62.05	1678.94	1658.58	42.24	OSF1.50	7205.74	7133.84				MinPt-O-SF	
	2000.85	534.85	1643.95	1465.99	5.62	OSF1.50	18129.65	7950.00				MinPts	
Eastern Hills 4-65 17-18 1FH Plan #0 (Def Plan)													
	99.81	32.81	98.83	67.01	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	Pass
	99.81	32.81	98.83	67.00	N/A	MAS = 10.00 (m)	30.00	30.00				WRP	
	99.81	32.81	97.66	67.00	85.13	MAS = 10.00 (m)	250.00	250.00				MinPts	
	99.85	32.81	97.60	67.04	78.28	MAS = 10.00 (m)	270.00	270.00				MINPT-O-EQU	
	172.94	32.81	166.31	140.14	30.45	MAS = 10.00 (m)	1010.00	1004.83				MinPt-O-SF	
	2153.58	64.04	2110.56	2089.54	51.21	OSF1.50	7205.74	7133.84				MinPt-O-SF	
	2449.36	69.94	2402.41	2379.43	53.26	OSF1.50	8210.00	7915.98				MinPt-O-SF	
	2485.66	70.92	2438.05	2414.74	53.29	OSF1.50	8340.00	7944.14				MinPt-O-SF	
	2507.46	71.52	2459.45	2435.94	53.30	OSF1.50	8420.00	7949.90				MinPt-O-SF	
	2526.77	72.08	2478.39	2454.69	53.29	OSF1.50	8490.00	7950.00				MinPt-O-SF	
	2554.11	72.89	2505.19	2481.22	53.26	OSF1.50	8580.00	7950.00				MinPt-O-SF	
	2584.23	73.76	2534.73	2510.47	53.24	OSF1.50	8670.00	7950.00				MinPt-O-SF	
	2599.43	534.88	2242.52	2064.56	7.30	OSF1.50	18129.65	7950.00				MinPts	
Eastern Hills 4-65 17-18 1EH Plan #0 (Def Plan)													
	124.96	32.81	123.98	92.15	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	Pass
	124.94	32.81	123.96	92.14	N/A	MAS = 10.00 (m)	30.00	30.00				WRP	
	124.94	32.81	122.80	92.14	106.92	MAS = 10.00 (m)	250.00	250.00				MinPts	
	125.03	32.81	122.73	92.22	94.49	MAS = 10.00 (m)	280.00	280.00				MINPT-O-EQU	
	218.94	32.81	211.74	186.14	35.06	MAS = 10.00 (m)	1100.00	1093.87				MinPt-O-SF	
	2586.10	65.85	2541.87	2520.25	59.78	OSF1.50	7205.74	7133.84				MinPt-O-SF	
	2869.94	71.04	2822.25	2798.90	61.43	OSF1.50	8020.00	7834.97				MinPt-O-SF	
	3199.85	536.44	2841.90	2663.42	6.96	OSF1.50	18129.65	7950.00				MinPts	
State Smith 1-16 Blind 0' to 8644' - DRY (Def Survey)													
	3635.30	32.81	3633.49	3602.49	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	Pass
	3635.16	32.81	3633.35	3602.35	N/A	MAS = 10.00 (m)	30.00	30.00				WRP	
	3120.15	441.84	2824.84	2678.31	10.64	OSF1.50	7520.00	7444.36				MinPt-CtCt	
	3122.41	449.43	2822.04	2672.97	10.47	OSF1.50	7660.00	7573.24				MINPT-O-EQU	
	3124.49	451.98	2822.42	2672.51	10.41	OSF1.50	7710.00	7616.38				MinPt-O-ADP	
	3167.43	466.64	2855.60	2700.79	10.22	OSF1.50	8080.00	7865.42				MinPt-O-SF	
	11221.12	480.91	10899.91	10740.21	35.13	OSF1.50	18129.65	7950.00				TD	