



Directional Survey

Well Name: INTERCHANGE A S16-20-20N

API 0501420849	Surface Legal Location SWNW S10 T1S R68W M6	Field Name WATTENBERG	License # 401504441	State/Province COLORADO	Well Configuration Type HORIZONTAL
Ground Elevation (ft) 5,236.00	Casing Flange Elevation (ft)	KB-Ground Distance (ft)	KB-Casing Flange Distance (ft)	Spud Date Production	Rig Release Date

Wellbore Name Original Hole	Parent Wellbore	Vertical Section Direction (°)
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Kick Offs & Key Depths

Date	Point or Interval	Type	Top Depth (ftKB)	Depth Top (TVD) (ftKB)	Bottom Depth (ftKB)	Depth Bottom (TVD) (ftKB)	Length (ft)

Deviation Surveys

Date 8/28/2021		Definitive? Yes		Description Actual		Proposed? No	
MD Tie In (ftKB) 0.00	TVD Tie In (ftKB) 0.00	Inclination Tie In (°) 0.00	Azimuth Tie In (°) 0.00		NSTie In (ft) 0.00		EWTie In (ft) 0.00

Survey Data

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Build (°/100ft)	Turn (°/100ft)	Unwrap Displace (ft)	Method	Survey Company
	105.00	1.49	76.21	104.99	-0.21	0.33	1.33	1.42	1.42	72.58	1.37		
	192.00	1.98	82.63	191.95	-0.79	0.79	3.91	0.61	0.56	7.38	4.00		
	279.00	2.24	31.21	278.90	-0.19	2.43	6.29	2.12	0.30	-59.10	6.88		
	367.00	4.00	7.31	366.77	3.47	6.95	7.57	2.45	2.00	-27.16	11.58		
	454.00	5.54	324.59	453.49	10.20	13.39	5.52	4.32	1.77	-49.10	18.33		
	541.00	7.38	350.17	539.95	19.74	22.32	2.13	3.88	2.11	29.40	27.88		
	628.00	8.96	347.36	626.06	31.86	34.43	-0.30	1.87	1.82	-3.23	40.24		
	715.00	9.58	334.67	711.94	45.76	47.59	-4.88	2.45	0.71	-14.59	54.17		
	802.00	11.38	334.61	797.48	61.57	61.89	-11.66	2.07	2.07	-0.07	70.00		
	890.00	13.36	322.22	883.45	80.07	77.77	-21.62	3.75	2.25	-14.08	88.74		
	977.00	16.35	332.33	967.55	101.99	96.57	-33.47	4.54	3.44	11.62	110.96		
	1,064.00	18.15	337.69	1,050.64	127.74	119.95	-44.30	2.76	2.07	6.16	136.73		
	1,151.00	19.82	335.31	1,132.90	156.04	145.89	-55.60	2.12	1.92	-2.74	165.03		
	1,239.00	21.27	334.88	1,215.30	186.90	173.90	-68.61	1.66	1.65	-0.49	195.91		
	1,326.00	23.81	334.88	1,295.65	220.22	204.09	-82.77	2.92	2.92	0.00	229.26		
	1,413.00	24.61	335.05	1,375.00	255.87	236.42	-97.87	0.92	0.92	0.20	264.93		
	1,500.00	23.42	336.19	1,454.47	291.26	268.66	-112.49	1.47	-1.37	1.31	300.34		
	1,584.00	24.04	336.81	1,531.36	325.06	299.66	-125.96	0.80	0.74	0.74	334.14		
	1,634.00	24.04	336.82	1,577.03	345.43	318.39	-133.98	0.01	0.00	0.02	354.51		