

# **CRESTONE PEAK RESOURCES**

**ARAPAHOE COUNTY**

**SEC 30-T4S-R64W**

**WATKINS 4-64 30-29 4BH**

**OWB**

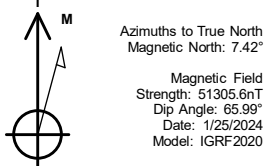
**Design: FINAL SURVEY**

## **Standard Survey Report**

**31 January, 2024**

Project: ARAPAHOE COUNTY  
Site: SEC 30-T4S-R64W  
Well: WATKINS 4-64 30-29 4BH  
Wellbore: OWB  
Design: FINAL SURVEY

PROJECT DETAILS: ARAPAHOE COUNTY  
Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: Colorado Central Zone  
System Datum: Mean Sea Level

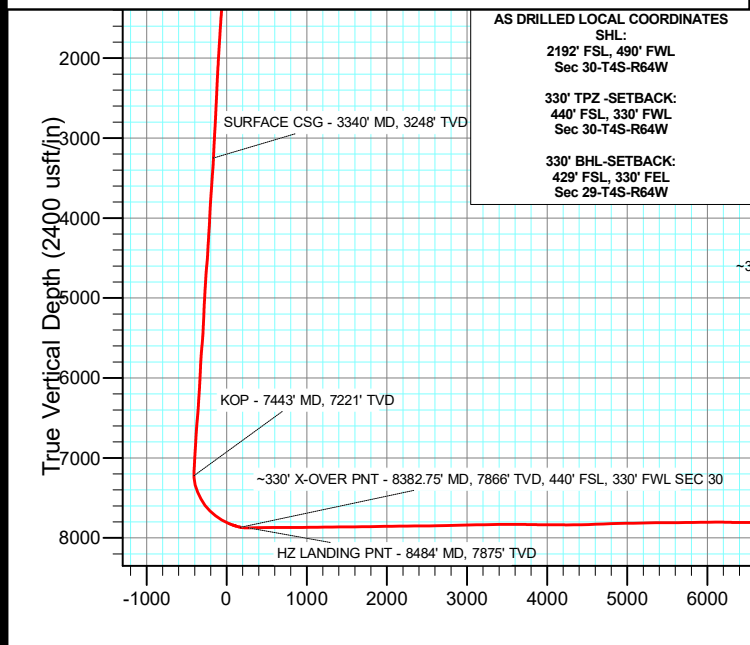
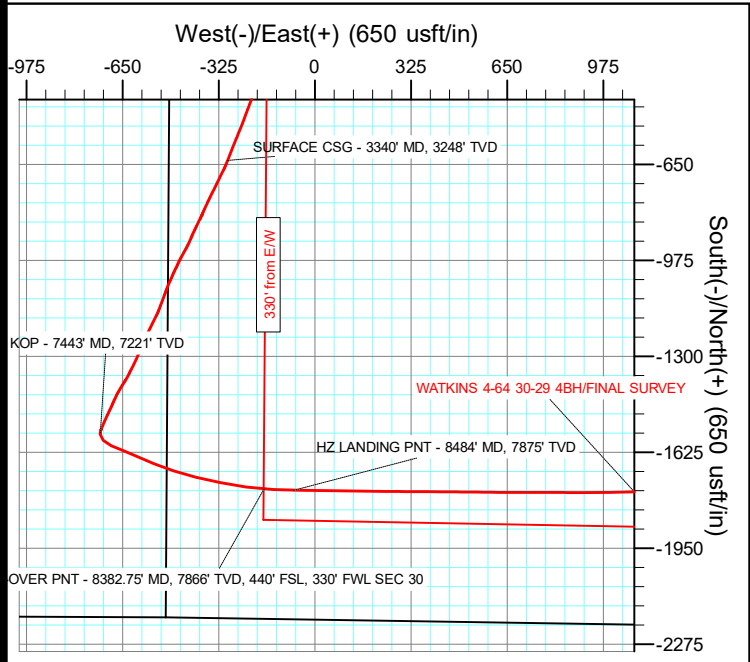


WELL DETAILS: WATKINS 4-64 30-29 4BH

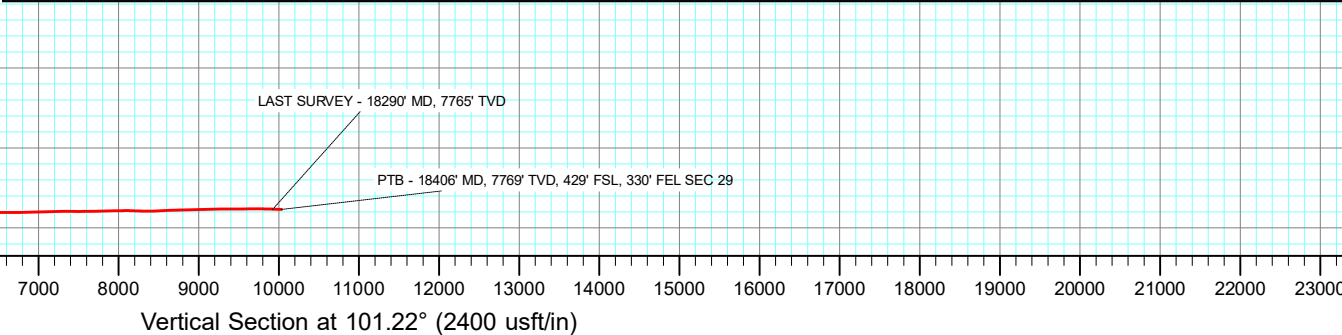
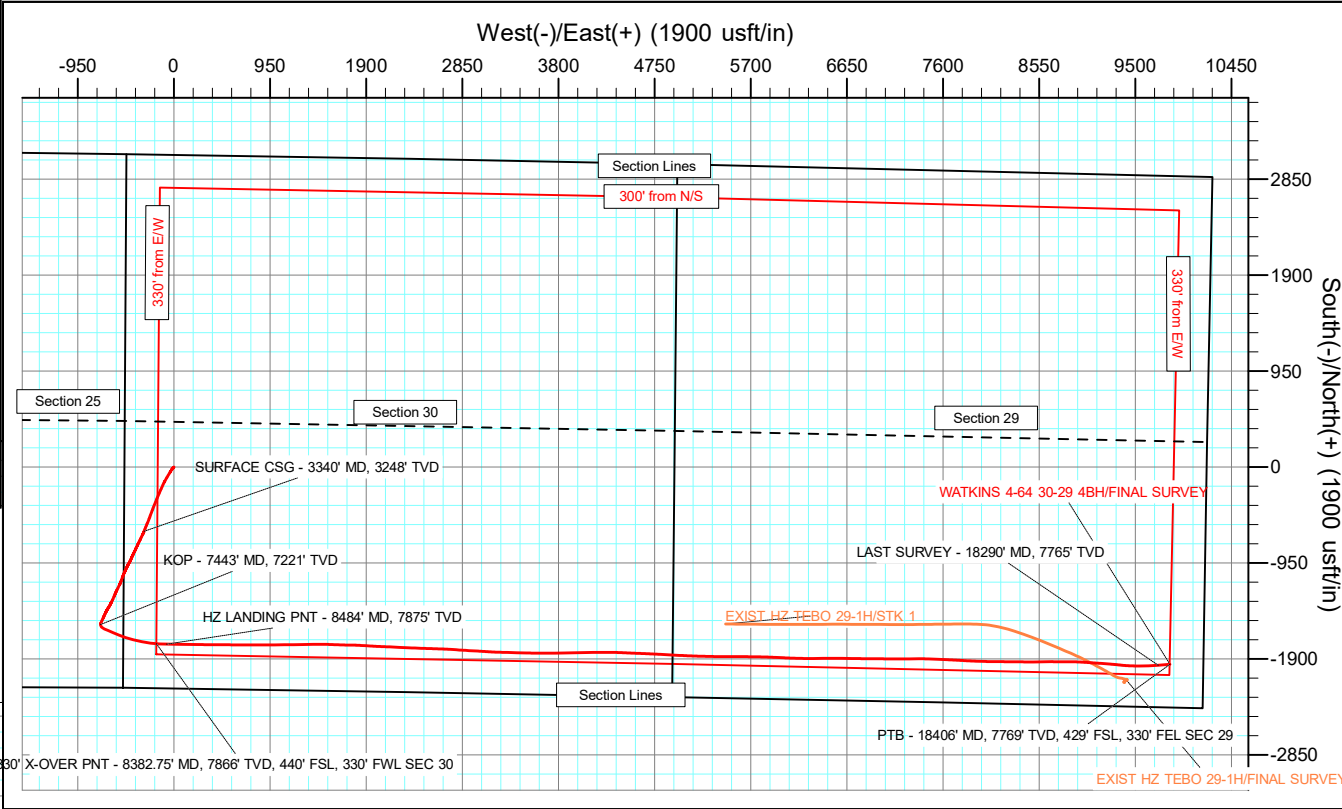
5768.00					Slot
+N/-S	+E/-W	Northing	Easting	Latitude	
0.00	0.00	1671357.50	3252837.07	39.673243°N	104.601775°W

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
3340.00	14.10	201.52	3248.13	-636.20	-294.96	-165.57	704.47	SURFACE CSG - 3340' MD, 3248' TVD
7443.00	12.16	185.95	7221.10	-1558.82	-725.56	-408.46	1724.29	KOP - 7443' MD, 7221' TVD
8382.75	79.30	94.36	7866.07	-1749.21	-172.00	171.57	2327.84	~330' X-OVER PNT - 8382.75' MD, 7866' TVD, 440' FSL, 330' FWL SEC 30
8484.00	90.36	91.33	7875.11	-1753.51	-71.41	271.07	2428.16	HZ LANDING PNT - 8484' MD, 7875' TVD
18290.00	88.20	85.13	7765.09	-1961.75	9726.68	9922.49	12232.17	LAST SURVEY - 18290' MD, 7765' TVD
18406.00	88.20	85.13	7768.74	-1951.90	9842.21	10033.89	12348.11	PTB - 18406' MD, 7769' TVD, 429' FSL, 330' FEL SEC 29



AS DRILLED LOCAL COORDINATES  
SHL:  
2192' FSL, 490' FWL  
Sec 30-T4S-R64W  
330' TPZ -SETBACK:  
440' FSL, 330' FWL  
Sec 30-T4S-R64W  
330' BHL-SETBACK:  
429' FSL, 330' FEL  
Sec 29-T4S-R64W



# Civitas Resources

## Survey Report

<b>Company:</b>	CRESTONE PEAK RESOURCES	<b>Local Co-ordinate Reference:</b>	Well WATKINS 4-64 30-29 4BH
<b>Project:</b>	ARAPAHOE COUNTY	<b>TVD Reference:</b>	KB 25' @ 5793.00usft
<b>Site:</b>	SEC 30-T4S-R64W	<b>MD Reference:</b>	KB 25' @ 5793.00usft
<b>Well:</b>	WATKINS 4-64 30-29 4BH	<b>North Reference:</b>	True
<b>Wellbore:</b>	OWB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEY	<b>Database:</b>	EDM

<b>Project</b>	ARAPAHOE COUNTY		
<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 Central Zone		Using geodetic scale factor

<b>Site</b>	SEC 30-T4S-R64W		
<b>Site Position:</b>		<b>Northing:</b>	1,669,168.52 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,252,354.22 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.200 in
		<b>Latitude:</b>	39.667247°N
		<b>Longitude:</b>	104.603567°W
		<b>Grid Convergence:</b>	0.57 °

<b>Well</b>	WATKINS 4-64 30-29 4BH		
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>
<b>Position Uncertainty</b>	0.00 usft	<b>Wellhead Elevation:</b>	usft
		<b>Latitude:</b>	39.673243°N
		<b>Longitude:</b>	104.601775°W
		<b>Ground Level:</b>	5,768.00 usft

<b>Wellbore</b>	OWB		
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>
			(°)
	IGRF2020	1/25/2024	7.42
			(°)
			Dip Angle
			(°)
			Field Strength
			(nT)
			51,305.56012308

<b>Design</b>	FINAL SURVEY		
<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)</b>	<b>+N/-S</b>	<b>+E/-W</b>
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			101.22

<b>Survey Program</b>	<b>Date</b>	1/31/2024		
<b>From</b>	<b>To</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
(usft)	(usft)			
243.00	3,166.00	SURFACE SURVEY (OWB)	MWD OWSG	OWSG MWD - Standard
3,260.00	18,406.00	FINAL SURVEY (OWB)	MWD OWSG	OWSG MWD - Standard

<b>Survey</b>									
<b>Measured</b>	<b>Inclination</b>	<b>Azimuth</b>	<b>Vertical</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Vertical</b>	<b>Dogleg</b>	<b>Build</b>	<b>Turn</b>
<b>Depth</b>	<b>(°)</b>	<b>(°)</b>	<b>Depth</b>	<b>(usft)</b>	<b>(usft)</b>	<b>Section</b>	<b>Rate</b>	<b>Rate</b>	<b>Rate</b>
<b>(usft)</b>			<b>(usft)</b>			<b>(usft)</b>	<b>(°/100ft)</b>	<b>(°/100ft)</b>	<b>(°/100ft)</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
243.00	1.10	199.62	242.99	-2.20	-0.78	-0.34	0.45	0.45	0.00
334.00	0.75	255.14	333.97	-3.17	-1.65	-1.00	1.01	-0.38	61.01
424.00	1.50	250.43	423.96	-3.72	-3.33	-2.54	0.84	0.83	-5.23
515.00	2.87	228.53	514.89	-5.63	-6.16	-4.95	1.74	1.51	-24.07
610.00	5.21	217.03	609.65	-10.65	-10.54	-8.27	2.59	2.46	-12.11
704.00	6.81	217.47	703.13	-18.48	-16.50	-12.59	1.70	1.70	0.47
799.00	8.84	213.54	797.24	-29.03	-23.96	-17.86	2.21	2.14	-4.14
893.00	10.16	213.46	889.95	-41.97	-32.53	-23.74	1.40	1.40	-0.09
988.00	12.59	210.86	983.08	-57.85	-42.46	-30.39	2.61	2.56	-2.74

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## Survey Report

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<b>Site:</b>	SEC 30-T4S-R64W	<b>MD Reference:</b>	KB 25' @ 5793.00usft
<b>Well:</b>	WATKINS 4-64 30-29 4BH	<b>North Reference:</b>	True
<b>Wellbore:</b>	OWB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEY	<b>Database:</b>	EDM

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,083.00	13.12	210.72	1,075.70	-76.01	-53.28	-37.47	0.56	0.56	-0.15
1,176.00	13.30	211.38	1,166.23	-94.21	-64.24	-44.68	0.25	0.19	0.71
1,271.00	14.94	209.84	1,258.36	-114.17	-76.02	-52.36	1.77	1.73	-1.62
1,366.00	14.67	209.58	1,350.21	-135.25	-88.05	-60.06	0.29	-0.28	-0.27
1,460.00	15.69	206.23	1,440.93	-157.00	-99.55	-67.10	1.43	1.09	-3.56
1,555.00	16.35	204.95	1,532.24	-180.65	-110.87	-73.61	0.79	0.69	-1.35
1,649.00	16.70	203.41	1,622.36	-205.04	-121.81	-79.60	0.60	0.37	-1.64
1,744.00	15.95	204.47	1,713.53	-229.45	-132.64	-85.47	0.85	-0.79	1.12
1,838.00	15.64	203.19	1,803.98	-252.85	-142.98	-91.06	0.50	-0.33	-1.36
1,933.00	16.70	202.75	1,895.22	-277.21	-153.30	-96.45	1.12	1.12	-0.46
2,029.00	17.32	202.44	1,987.02	-303.14	-164.09	-101.99	0.65	0.65	-0.32
2,123.00	16.08	202.04	2,077.05	-328.14	-174.32	-107.16	1.32	-1.32	-0.43
2,218.00	15.78	202.66	2,168.40	-352.25	-184.23	-112.19	0.36	-0.32	0.65
2,312.00	15.11	202.39	2,259.01	-375.38	-193.82	-117.10	0.72	-0.71	-0.29
2,407.00	14.72	200.19	2,350.81	-398.15	-202.71	-121.38	0.72	-0.41	-2.32
2,503.00	15.64	200.46	2,443.46	-421.73	-211.44	-125.36	0.96	0.96	0.28
2,597.00	16.44	201.25	2,533.80	-446.00	-220.69	-129.71	0.88	0.85	0.84
2,692.00	16.70	200.41	2,624.85	-471.32	-230.32	-134.24	0.37	0.27	-0.88
2,787.00	15.95	199.75	2,716.02	-496.40	-239.49	-138.35	0.81	-0.79	-0.69
2,881.00	16.75	202.13	2,806.22	-521.10	-248.96	-142.83	1.11	0.85	2.53
2,976.00	16.44	202.09	2,897.26	-546.24	-259.17	-147.96	0.33	-0.33	-0.04
3,071.00	15.11	202.53	2,988.68	-570.13	-268.97	-152.93	1.41	-1.40	0.46
3,166.00	16.13	201.34	3,080.17	-593.86	-278.52	-157.67	1.13	1.07	-1.25
3,260.00	15.07	201.03	3,170.71	-617.43	-287.66	-162.05	1.13	-1.13	-0.33
3,340.00	14.10	201.52	3,248.13	-636.20	-294.96	-165.57	1.22	-1.21	0.61
SURFACE CSG - 3340' MD, 3248' TVD									
3,391.00	13.48	201.87	3,297.66	-647.50	-299.46	-167.78	1.22	-1.21	0.68
3,486.00	16.35	206.89	3,389.45	-669.70	-309.63	-173.44	3.31	3.02	5.28
3,581.00	15.69	206.27	3,480.76	-693.15	-321.36	-180.39	0.72	-0.69	-0.65
3,676.00	14.05	204.69	3,572.58	-715.14	-331.87	-186.41	1.78	-1.73	-1.66
3,771.00	15.82	207.37	3,664.37	-737.12	-342.64	-192.70	2.00	1.86	2.82
3,865.00	14.72	205.66	3,755.05	-759.27	-353.70	-199.24	1.26	-1.17	-1.82
3,960.00	12.68	205.08	3,847.34	-779.59	-363.35	-204.75	2.15	-2.15	-0.61
4,055.00	12.99	204.51	3,939.97	-798.75	-372.20	-209.70	0.35	0.33	-0.60
4,149.00	10.91	202.48	4,031.93	-816.59	-379.98	-213.87	2.26	-2.21	-2.16
4,243.00	14.27	207.37	4,123.65	-835.10	-388.71	-218.83	3.75	3.57	5.20
4,338.00	12.99	205.08	4,215.98	-855.17	-398.62	-224.65	1.46	-1.35	-2.41
4,433.00	15.38	205.61	4,308.07	-876.20	-408.59	-230.34	2.52	2.52	0.56
4,528.00	13.04	201.95	4,400.16	-897.51	-418.05	-235.47	2.64	-2.46	-3.85
4,623.00	14.85	205.70	4,492.36	-918.42	-427.33	-240.51	2.13	1.91	3.95
4,718.00	17.94	209.80	4,583.49	-942.09	-439.89	-248.22	3.47	3.25	4.32
4,813.00	15.42	207.64	4,674.49	-965.98	-453.02	-256.45	2.73	-2.65	-2.27
4,908.00	12.73	203.85	4,766.63	-986.75	-463.11	-262.31	2.99	-2.83	-3.99

# Civitas Resources

## Survey Report

<b>Company:</b>	CRESTONE PEAK RESOURCES	<b>Local Co-ordinate Reference:</b>	Well WATKINS 4-64 30-29 4BH
<b>Project:</b>	ARAPAHOE COUNTY	<b>TVD Reference:</b>	KB 25' @ 5793.00usft
<b>Site:</b>	SEC 30-T4S-R64W	<b>MD Reference:</b>	KB 25' @ 5793.00usft
<b>Well:</b>	WATKINS 4-64 30-29 4BH	<b>North Reference:</b>	True
<b>Wellbore:</b>	OWB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEY	<b>Database:</b>	EDM

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
5,003.00	15.07	207.02	4,858.84	-1,007.32	-472.96	-267.97	2.59	2.46	3.34	
5,097.00	12.81	202.04	4,950.07	-1,027.87	-482.42	-273.25	2.72	-2.40	-5.30	
5,192.00	14.54	205.39	5,042.38	-1,048.41	-491.49	-278.15	2.00	1.82	3.53	
5,287.00	13.52	199.88	5,134.54	-1,069.63	-500.38	-282.74	1.77	-1.07	-5.80	
5,382.00	16.44	200.50	5,226.31	-1,092.67	-508.86	-286.58	3.08	3.07	0.65	
5,477.00	16.26	200.54	5,317.46	-1,117.71	-518.24	-290.91	0.19	-0.19	0.04	
5,572.00	14.67	200.15	5,409.02	-1,141.46	-527.05	-294.93	1.68	-1.67	-0.41	
5,667.00	18.16	206.80	5,500.14	-1,165.98	-537.87	-300.78	4.17	3.67	7.00	
5,762.00	18.07	206.58	5,590.43	-1,192.37	-551.14	-308.66	0.12	-0.09	-0.23	
5,857.00	16.70	206.32	5,681.09	-1,217.78	-563.78	-316.12	1.44	-1.44	-0.27	
5,952.00	15.11	204.33	5,772.45	-1,241.30	-574.94	-322.48	1.77	-1.67	-2.09	
6,047.00	12.64	201.07	5,864.68	-1,262.29	-583.78	-327.07	2.73	-2.60	-3.43	
6,142.00	14.45	203.45	5,957.03	-1,282.86	-592.23	-331.36	1.99	1.91	2.51	
6,237.00	12.46	203.36	6,049.42	-1,303.15	-601.01	-336.03	2.09	-2.09	-0.09	
6,331.00	13.26	206.23	6,141.06	-1,322.13	-609.80	-340.96	1.09	0.85	3.05	
6,426.00	14.27	206.98	6,233.33	-1,342.33	-619.93	-346.96	1.08	1.06	0.79	
6,520.00	11.80	206.49	6,324.90	-1,361.26	-629.47	-352.64	2.63	-2.63	-0.52	
6,615.00	12.37	211.78	6,417.80	-1,378.61	-639.16	-358.77	1.31	0.60	5.57	
6,709.00	15.20	212.05	6,509.08	-1,397.62	-651.01	-366.69	3.01	3.01	0.29	
6,804.00	12.95	210.19	6,601.22	-1,417.37	-662.97	-374.58	2.42	-2.37	-1.96	
6,898.00	15.51	205.35	6,692.34	-1,437.84	-673.65	-381.08	3.00	2.72	-5.15	
6,993.00	13.08	202.97	6,784.39	-1,459.22	-683.29	-386.37	2.63	-2.56	-2.51	
7,088.00	15.29	205.44	6,876.49	-1,480.43	-692.86	-391.64	2.41	2.33	2.60	
7,184.00	12.99	205.04	6,969.57	-1,501.64	-702.87	-397.32	2.40	-2.40	-0.42	
7,279.00	13.92	203.58	7,061.96	-1,521.79	-711.96	-402.32	1.04	0.98	-1.54	
7,374.00	14.85	203.19	7,153.98	-1,543.45	-721.32	-407.29	0.98	0.98	-0.41	
7,443.00	12.16	185.95	7,221.10	-1,558.82	-725.56	-408.46	6.97	-3.89	-24.98	
KOP - 7443' MD, 7221' TVD										
7,468.00	11.53	178.03	7,245.57	-1,563.93	-725.75	-407.65	6.97	-2.53	-31.69	
7,563.00	17.99	137.84	7,337.61	-1,584.37	-715.54	-393.66	12.36	6.80	-42.31	
7,658.00	23.02	113.91	7,426.72	-1,602.82	-688.65	-363.69	10.19	5.29	-25.19	
7,753.00	29.08	111.35	7,512.03	-1,618.77	-650.13	-322.81	6.49	6.38	-2.69	
7,849.00	37.74	113.64	7,592.09	-1,639.08	-601.39	-271.05	9.11	9.02	2.39	
7,943.00	46.09	112.63	7,661.98	-1,663.69	-543.68	-209.66	8.91	8.88	-1.07	
8,037.00	51.75	107.87	7,723.74	-1,688.07	-477.22	-139.72	7.13	6.02	-5.06	
8,131.00	59.79	103.95	7,776.59	-1,709.23	-402.53	-62.34	9.22	8.55	-4.17	
8,226.00	67.70	101.52	7,818.59	-1,727.93	-319.49	22.75	8.64	8.33	-2.56	
8,320.00	72.34	97.87	7,850.71	-1,742.76	-232.44	111.02	6.14	4.94	-3.88	
8,382.75	79.30	94.36	7,866.07	-1,749.21	-172.00	171.57	12.35	11.10	-5.60	
-330' X-OVER PNT - 8382.75' MD, 7866' TVD, 440' FSL, 330' FWL SEC 30										
8,415.00	82.90	92.62	7,871.06	-1,751.14	-140.20	203.13	12.35	11.15	-5.39	
8,484.00	90.36	91.33	7,875.11	-1,753.51	-71.41	271.07	10.97	10.81	-1.87	
HZ LANDING PNT - 8484' MD, 7875' TVD										
8,509.00	93.06	90.86	7,874.37	-1,753.99	-46.43	295.66	10.97	10.81	-1.87	

# Civitas Resources

## Survey Report

<b>Company:</b>	CRESTONE PEAK RESOURCES	<b>Local Co-ordinate Reference:</b>	Well WATKINS 4-64 30-29 4BH
<b>Project:</b>	ARAPAHOE COUNTY	<b>TVD Reference:</b>	KB 25' @ 5793.00usft
<b>Site:</b>	SEC 30-T4S-R64W	<b>MD Reference:</b>	KB 25' @ 5793.00usft
<b>Well:</b>	WATKINS 4-64 30-29 4BH	<b>North Reference:</b>	True
<b>Wellbore:</b>	OWB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEY	<b>Database:</b>	EDM

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
8,604.00	91.12	90.68	7,870.90	-1,755.26	48.50	389.02	2.05	-2.04	-0.19	
8,794.00	90.10	90.64	7,868.88	-1,757.45	238.47	575.79	0.54	-0.54	-0.02	
8,888.00	89.70	90.24	7,869.04	-1,758.17	332.47	668.13	0.60	-0.43	-0.43	
8,983.00	89.79	90.38	7,869.47	-1,758.69	427.46	761.42	0.18	0.09	0.15	
9,173.00	90.81	90.73	7,868.47	-1,760.53	617.45	948.13	0.57	0.54	0.18	
9,268.00	90.50	89.58	7,867.39	-1,760.78	712.44	1,041.36	1.25	-0.33	-1.21	
9,363.00	90.72	90.51	7,866.37	-1,760.86	807.44	1,134.55	1.01	0.23	0.98	
9,457.00	90.99	89.98	7,864.97	-1,761.26	901.42	1,226.82	0.63	0.29	-0.56	
9,551.00	90.63	89.23	7,863.64	-1,760.61	995.41	1,318.89	0.88	-0.38	-0.80	
9,647.00	90.15	88.66	7,862.99	-1,758.85	1,091.39	1,412.69	0.78	-0.50	-0.59	
9,741.00	90.77	90.29	7,862.23	-1,757.98	1,185.38	1,504.72	1.86	0.66	1.73	
9,836.00	90.54	87.86	7,861.15	-1,756.45	1,280.36	1,597.58	2.57	-0.24	-2.56	
9,931.00	90.54	89.67	7,860.25	-1,754.40	1,375.33	1,690.34	1.91	0.00	1.91	
10,026.00	91.12	90.73	7,858.88	-1,754.74	1,470.31	1,783.58	1.27	0.61	1.12	
10,121.00	91.07	92.36	7,857.06	-1,757.30	1,565.26	1,877.20	1.72	-0.05	1.72	
10,216.00	91.16	91.96	7,855.21	-1,760.88	1,660.17	1,971.00	0.43	0.09	-0.42	
10,310.00	90.46	90.33	7,853.88	-1,762.75	1,754.14	2,063.54	1.89	-0.74	-1.73	
10,405.00	90.85	93.50	7,852.80	-1,765.93	1,849.07	2,157.27	3.36	0.41	3.34	
10,499.00	90.85	93.68	7,851.40	-1,771.81	1,942.87	2,250.43	0.19	0.00	0.19	
10,593.00	89.84	92.23	7,850.84	-1,776.66	2,036.74	2,343.45	1.88	-1.07	-1.54	
10,688.00	90.54	92.53	7,850.52	-1,780.60	2,131.66	2,437.32	0.80	0.74	0.32	
10,781.00	91.07	92.62	7,849.22	-1,784.78	2,224.56	2,529.26	0.58	0.57	0.10	
10,875.00	90.85	92.53	7,847.64	-1,789.00	2,318.45	2,622.17	0.25	-0.23	-0.10	
11,000.00	91.03	92.18	7,845.59	-1,794.14	2,443.33	2,745.67	0.31	0.14	-0.28	
11,095.00	91.56	91.83	7,843.44	-1,797.46	2,538.24	2,839.42	0.67	0.56	-0.37	
11,190.00	92.44	91.70	7,840.13	-1,800.39	2,633.14	2,933.07	0.94	0.93	-0.14	
11,284.00	90.77	93.86	7,837.49	-1,804.94	2,726.98	3,026.01	2.90	-1.78	2.30	
11,378.00	90.90	93.68	7,836.12	-1,811.12	2,820.77	3,119.20	0.24	0.14	-0.19	
11,473.00	90.94	93.28	7,834.60	-1,816.89	2,915.58	3,213.33	0.42	0.04	-0.42	
11,566.00	91.60	93.20	7,832.54	-1,822.15	3,008.41	3,305.40	0.71	0.71	-0.09	
11,661.00	90.90	94.08	7,830.47	-1,828.18	3,103.19	3,399.55	1.18	-0.74	0.93	
11,757.00	89.79	91.79	7,829.89	-1,833.09	3,199.06	3,494.54	2.65	-1.16	-2.39	
11,851.00	89.70	91.48	7,830.31	-1,835.77	3,293.02	3,587.23	0.34	-0.10	-0.33	
11,946.00	89.40	91.48	7,831.05	-1,838.23	3,387.98	3,680.85	0.32	-0.32	0.00	
12,040.00	88.56	91.43	7,832.72	-1,840.61	3,481.94	3,773.48	0.90	-0.89	-0.05	
12,135.00	89.53	90.16	7,834.31	-1,841.93	3,576.91	3,866.89	1.68	1.02	-1.34	
12,230.00	88.78	89.93	7,835.71	-1,842.00	3,671.90	3,960.08	0.83	-0.79	-0.24	
12,324.00	90.06	89.63	7,836.66	-1,841.64	3,765.89	4,052.21	1.40	1.36	-0.32	
12,419.00	90.01	88.92	7,836.60	-1,840.44	3,860.89	4,145.15	0.75	-0.05	-0.75	
12,514.00	89.62	88.26	7,836.91	-1,838.10	3,955.86	4,237.85	0.81	-0.41	-0.69	
12,608.00	90.85	89.45	7,836.52	-1,836.23	4,049.83	4,329.67	1.82	1.31	1.27	
12,703.00	91.16	89.58	7,834.86	-1,835.42	4,144.82	4,422.68	0.35	0.33	0.14	
12,798.00	92.14	89.10	7,832.12	-1,834.33	4,239.77	4,515.61	1.15	1.03	-0.51	

# Civitas Resources

## Survey Report

<b>Company:</b>	CRESTONE PEAK RESOURCES	<b>Local Co-ordinate Reference:</b>	Well WATKINS 4-64 30-29 4BH
<b>Project:</b>	ARAPAHOE COUNTY	<b>TVD Reference:</b>	KB 25' @ 5793.00usft
<b>Site:</b>	SEC 30-T4S-R64W	<b>MD Reference:</b>	KB 25' @ 5793.00usft
<b>Well:</b>	WATKINS 4-64 30-29 4BH	<b>North Reference:</b>	True
<b>Wellbore:</b>	OWB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEY	<b>Database:</b>	EDM

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
12,893.00	91.69	91.12	7,828.95	-1,834.51	4,334.71	4,608.77	2.18	-0.47	2.13	
12,987.00	92.62	92.71	7,825.41	-1,837.65	4,428.59	4,701.46	1.96	0.99	1.69	
13,081.00	91.07	92.36	7,822.39	-1,841.80	4,522.44	4,794.34	1.69	-1.65	-0.37	
13,175.00	92.40	92.09	7,819.54	-1,845.45	4,616.33	4,887.14	1.44	1.41	-0.29	
13,271.00	90.50	92.80	7,817.11	-1,849.55	4,712.20	4,981.98	2.11	-1.98	0.74	
13,365.00	90.85	93.02	7,816.00	-1,854.32	4,806.08	5,074.98	0.44	0.37	0.23	
13,460.00	90.99	93.06	7,814.48	-1,859.35	4,900.93	5,169.01	0.15	0.15	0.04	
13,555.00	92.27	93.02	7,811.78	-1,864.39	4,995.76	5,263.00	1.35	1.35	-0.04	
13,649.00	90.77	92.49	7,809.28	-1,868.91	5,089.61	5,355.94	1.69	-1.60	-0.56	
13,744.00	89.31	91.52	7,809.22	-1,872.23	5,184.55	5,449.71	1.85	-1.54	-1.02	
13,838.00	90.06	91.30	7,809.73	-1,874.54	5,278.52	5,542.34	0.83	0.80	-0.23	
13,933.00	90.68	90.86	7,809.12	-1,876.33	5,373.50	5,635.85	0.80	0.65	-0.46	
14,028.00	90.81	89.89	7,807.88	-1,876.96	5,468.49	5,729.15	1.03	0.14	-1.02	
14,123.00	91.56	89.54	7,805.92	-1,876.48	5,563.47	5,822.22	0.87	0.79	-0.37	
14,217.00	90.41	91.43	7,804.30	-1,877.28	5,657.44	5,914.55	2.35	-1.22	2.01	
14,312.00	90.23	90.51	7,803.77	-1,878.89	5,752.43	6,008.04	0.99	-0.19	-0.97	
14,406.00	91.07	91.65	7,802.71	-1,880.66	5,846.40	6,100.56	1.51	0.89	1.21	
14,501.00	88.73	92.76	7,802.87	-1,884.31	5,941.32	6,194.38	2.73	-2.46	1.17	
14,595.00	88.38	92.76	7,805.24	-1,888.84	6,035.18	6,287.33	0.37	-0.37	0.00	
14,690.00	89.66	91.70	7,806.87	-1,892.53	6,130.09	6,381.14	1.75	1.35	-1.12	
14,785.00	89.70	91.21	7,807.40	-1,894.95	6,225.06	6,474.77	0.52	0.04	-0.52	
14,880.00	90.50	88.57	7,807.23	-1,894.76	6,320.05	6,567.91	2.90	0.84	-2.78	
14,974.00	90.10	90.11	7,806.74	-1,893.68	6,414.04	6,659.89	1.69	-0.43	1.64	
15,068.00	90.41	90.11	7,806.32	-1,893.86	6,508.04	6,752.13	0.33	0.33	0.00	
15,164.00	91.21	90.68	7,804.96	-1,894.52	6,604.03	6,846.41	1.02	0.83	0.59	
15,258.00	92.53	90.77	7,801.90	-1,895.71	6,697.97	6,938.79	1.41	1.40	0.10	
15,354.00	90.68	90.33	7,799.21	-1,896.63	6,793.92	7,033.09	1.98	-1.93	-0.46	
15,448.00	91.07	90.42	7,797.77	-1,897.25	6,887.91	7,125.40	0.43	0.41	0.10	
15,543.00	92.14	90.68	7,795.11	-1,898.16	6,982.87	7,218.72	1.16	1.13	0.27	
15,638.00	90.06	90.46	7,793.29	-1,899.10	7,077.84	7,312.06	2.20	-2.19	-0.23	
15,732.00	89.75	89.80	7,793.44	-1,899.32	7,171.84	7,404.31	0.78	-0.33	-0.70	
15,827.00	89.79	89.45	7,793.83	-1,898.70	7,266.83	7,497.37	0.37	0.04	-0.37	
15,922.00	90.68	89.71	7,793.44	-1,898.00	7,361.83	7,590.41	0.98	0.94	0.27	
16,016.00	90.46	92.36	7,792.50	-1,899.70	7,455.80	7,682.92	2.83	-0.23	2.82	
16,110.00	91.47	92.40	7,790.92	-1,903.60	7,549.71	7,775.79	1.08	1.07	0.04	
16,205.00	92.36	92.36	7,787.74	-1,907.54	7,644.57	7,869.61	0.94	0.94	-0.04	
16,300.00	90.28	93.28	7,785.56	-1,912.22	7,739.42	7,963.56	2.39	-2.19	0.97	
16,395.00	91.47	93.11	7,784.10	-1,917.51	7,834.26	8,057.62	1.27	1.25	-0.18	
16,490.00	87.89	91.92	7,784.63	-1,921.68	7,929.15	8,151.50	3.97	-3.77	-1.25	
16,584.00	88.07	92.01	7,787.95	-1,924.90	8,023.04	8,244.22	0.21	0.19	0.10	
16,678.00	89.35	90.02	7,790.06	-1,926.56	8,116.99	8,336.71	2.52	1.36	-2.12	
16,773.00	91.74	90.60	7,789.16	-1,927.08	8,211.98	8,429.98	2.59	2.52	0.61	
16,868.00	92.84	90.55	7,785.37	-1,928.03	8,306.90	8,523.27	1.16	1.16	-0.05	
16,963.00	92.31	90.73	7,781.10	-1,929.09	8,401.80	8,616.56	0.59	-0.56	0.19	

# Civitas Resources

## Survey Report

<b>Company:</b>	CRESTONE PEAK RESOURCES	<b>Local Co-ordinate Reference:</b>	Well WATKINS 4-64 30-29 4BH
<b>Project:</b>	ARAPAHOE COUNTY	<b>TVD Reference:</b>	KB 25' @ 5793.00usft
<b>Site:</b>	SEC 30-T4S-R64W	<b>MD Reference:</b>	KB 25' @ 5793.00usft
<b>Well:</b>	WATKINS 4-64 30-29 4BH	<b>North Reference:</b>	True
<b>Wellbore:</b>	OWB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEY	<b>Database:</b>	EDM

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
17,057.00	91.25	89.32	7,778.18	-1,929.13	8,495.75	8,708.72	1.88	-1.13	-1.50
17,152.00	91.43	88.52	7,775.96	-1,927.34	8,590.70	8,801.52	0.86	0.19	-0.84
17,247.00	90.90	90.99	7,774.02	-1,926.93	8,685.68	8,894.60	2.66	-0.56	2.60
17,342.00	92.05	89.67	7,771.58	-1,927.48	8,780.64	8,987.85	1.84	1.21	-1.39
17,437.00	92.22	90.73	7,768.04	-1,927.81	8,875.57	9,081.03	1.13	0.18	1.12
17,532.00	91.65	93.33	7,764.83	-1,931.18	8,970.45	9,174.75	2.80	-0.60	2.74
17,627.00	90.90	94.03	7,762.72	-1,937.27	9,065.23	9,268.91	1.08	-0.79	0.74
17,721.00	89.31	94.25	7,762.54	-1,944.06	9,158.98	9,362.19	1.71	-1.69	0.23
17,816.00	89.26	94.21	7,763.73	-1,951.07	9,253.71	9,456.48	0.07	-0.05	-0.04
17,910.00	91.30	96.59	7,763.27	-1,959.91	9,347.28	9,549.98	3.33	2.17	2.53
18,005.00	90.41	92.45	7,761.85	-1,967.39	9,441.96	9,644.30	4.46	-0.94	-4.36
18,100.00	89.88	89.85	7,761.61	-1,969.30	9,536.93	9,737.83	2.79	-0.56	-2.74
18,195.00	88.86	87.95	7,762.66	-1,967.48	9,631.90	9,830.63	2.27	-1.07	-2.00
18,290.00	88.20	85.13	7,765.09	-1,961.75	9,726.68	9,922.49	3.05	-0.69	-2.97
LAST SURVEY - 18290' MD, 7765' TVD									
18,406.00	88.20	85.13	7,768.74	-1,951.90	9,842.21	10,033.89	0.00	0.00	0.00
PTB - 18406' MD, 7769' TVD, 429' FSL, 330' FEL SEC 29									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL-WATKINS 4-64 4BH	0.00	0.00	7,755.00	-1,980.80	9,842.63	1,669,474.14	3,262,698.66	39.667800°N	104.566812°W
- actual wellpath misses target center by 31.90usft at 18403.54usft MD (7768.66 TVD, -1952.11 N, 9839.76 E)									
- Point									
LP-WATKINS 4-64 4BH	0.00	0.00	7,875.00	-1,748.90	-172.00	1,669,607.00	3,252,682.37	39.668442°N	104.602386°W
- actual wellpath misses target center by 8.79usft at 8384.10usft MD (7866.32 TVD, -1749.31 N, -170.67 E)									
- Point									

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
3,340.00	3,248.13	-636.20	-294.96	SURFACE CSG - 3340' MD, 3248' TVD	
7,443.00	7,221.10	-1,558.82	-725.56	KOP - 7443' MD, 7221' TVD	
8,382.75	7,866.07	-1,749.21	-172.00	~330' X-OVER PNT - 8382.75' MD, 7866' TVD, 440' FSL, 330' FWL SEC 30	
8,484.00	7,875.11	-1,753.51	-71.41	HZ LANDING PNT - 8484' MD, 7875' TVD	
18,290.00	7,765.09	-1,961.75	9,726.68	LAST SURVEY - 18290' MD, 7765' TVD	
18,406.00	7,768.74	-1,951.90	9,842.21	PTB - 18406' MD, 7769' TVD, 429' FSL, 330' FEL SEC 29	

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