

CRESTONE PEAK RESOURCES

ARAPAHOE COUNTY

SEC 19-T4S-R64W

LUSSING TRUST 4-64 19-20 2AH

OWB

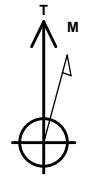
Design: FINAL SURVEY

Standard Survey Report

26 August, 2024

Project: ARAPAHOE COUNTY
 Site: SEC 19-T4S-R64W
 Well: LUSSING TRUST 4-64 19-20 2AH
 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



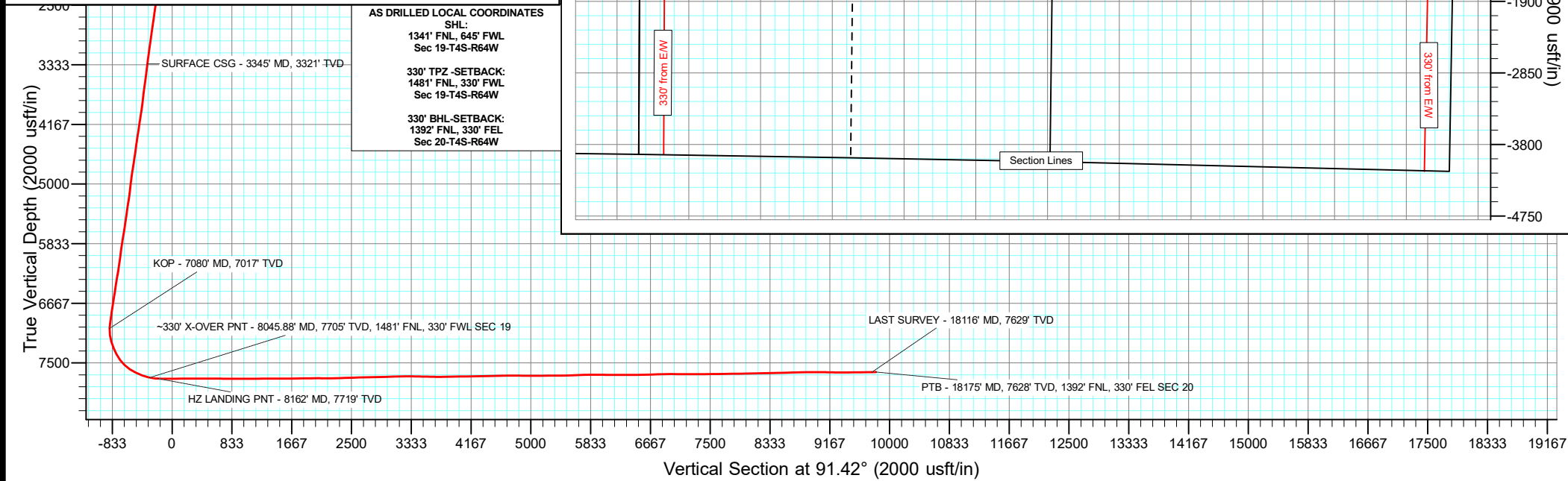
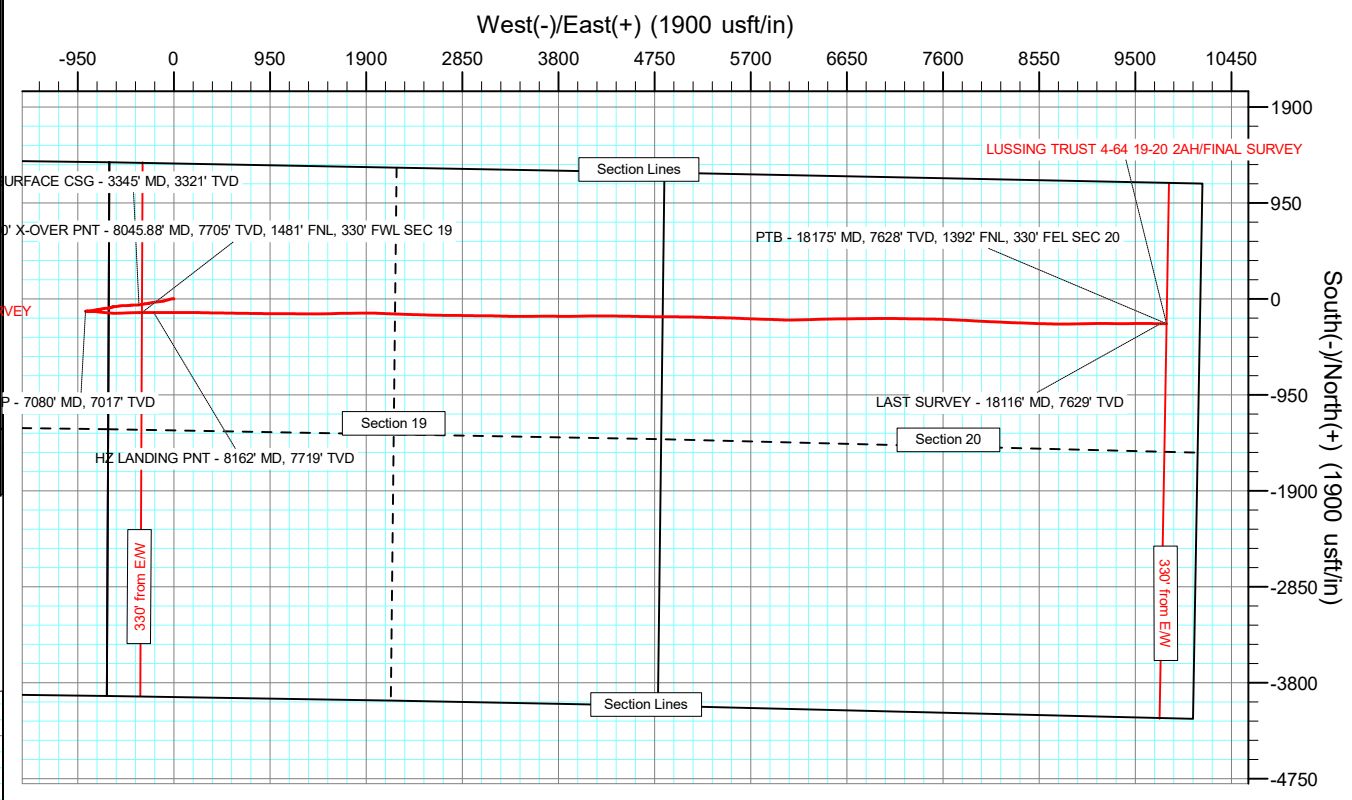
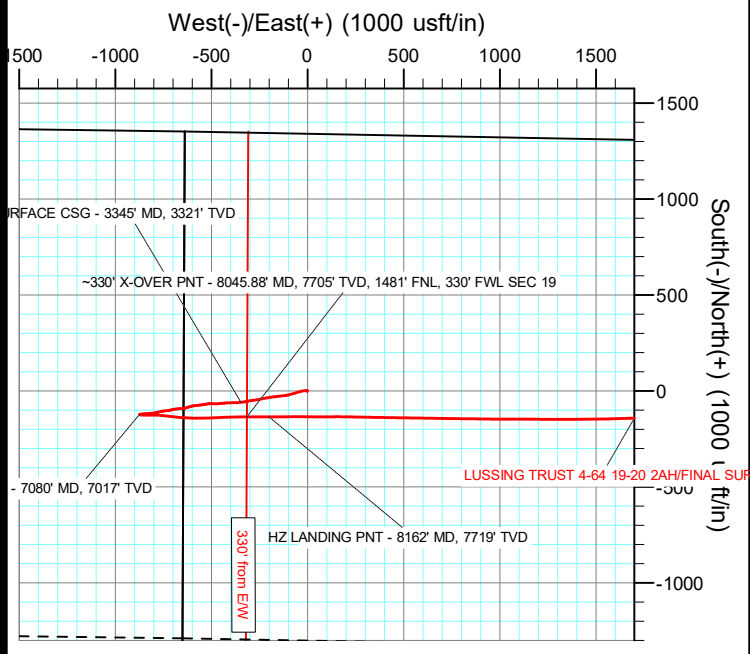
Azimuths to True North
 Magnetic North: 7.36°
 Magnetic Field
 Strength: 51259.1nT
 Dip Angle: 65.98°
 Date: 8/11/2024
 Model: IGRF2020

WELL DETAILS: LUSSING TRUST 4-64 19-20 2AH

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1678386.76	3252960.34	39.692536°N	104.601090°W	

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
3345.00	7.23	264.33	3320.50	-58.48	-346.37	-344.81	353.34	SURFACE CSG - 3345' MD, 3321' TVD
7080.00	5.00	254.39	7016.57	-122.41	-874.45	-871.14	887.86	KOP - 7080' MD, 7017' TVD
8045.88	78.11	89.85	7704.72	-134.44	-315.47	-312.03	1456.29	~330' X-OVER PNT - 8045.88' MD, 7705' TVD, 1481' FNL, 330' FWL SEC 19
8162.00	86.64	90.01	7719.28	-134.79	-200.39	-196.97	1571.24	HZ LANDING PNT - 8162' MD, 7719' TVD
18116.00	91.03	89.59	7628.78	-244.35	9749.51	9752.57	11523.67	LAST SURVEY - 18116' MD, 7629' TVD
18175.00	91.03	89.59	7627.72	-243.92	9808.50	9811.53	11582.66	PTB - 18175' MD, 7628' TVD, 1392' FNL, 330' FEL SEC 20



AS DRILLED LOCAL COORDINATES
 SHL:
 1341' FNL, 645' FWL
 Sec 19-T4S-R64W
 330' TPZ -SETBACK:
 1481' FNL, 330' FWL
 Sec 19-T4S-R64W
 330' BHL-SETBACK:
 1392' FNL, 330' FEL
 Sec 20-T4S-R64W

Civitas Resources

Survey Report

Company: CRESTONE PEAK RESOURCES	Local Co-ordinate Reference: Well LUSSING TRUST 4-64 19-20 2AH
Project: ARAPAHOE COUNTY	TVD Reference: KB 25' @ 5721.00usft
Site: SEC 19-T4S-R64W	MD Reference: KB 25' @ 5721.00usft
Well: LUSSING TRUST 4-64 19-20 2AH	North Reference: True
Wellbore: OWB	Survey Calculation Method: Minimum Curvature
Design: FINAL SURVEY	Database: EDM

Project ARAPAHOE COUNTY		
Map System: US State Plane 1983	System Datum: Mean Sea Level	
Geo Datum: North American Datum 1983		
Map Zone: Colorado Central Zone	Using geodetic scale factor	

Site SEC 19-T4S-R64W		
Site Position:	Northing: 1,679,733.25 usft	Latitude: 39.696250°N
From: Lat/Long	Easting: 3,252,308.22 usft	Longitude: 104.603360°W
Position Uncertainty: 0.00 usft	Slot Radius: 13.200 in	Grid Convergence: 0.57 °

Well LUSSING TRUST 4-64 19-20 2AH		
Well Position +N/-S 0.00 usft	Northing: 1,678,386.75 usft	Latitude: 39.692536°N
+E/-W 0.00 usft	Easting: 3,252,960.34 usft	Longitude: 104.601090°W
Position Uncertainty 0.00 usft	Wellhead Elevation: usft	Ground Level: 5,696.00 usft

Wellbore OWB					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	8/11/2024	7.36	65.98	51,259.07569136

Design FINAL SURVEY					
Audit Notes:					
Version: 1.0	Phase: ACTUAL	Tie On Depth: 0.00			
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	91.42	

Survey Program		Date 8/26/2024		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
215.00	3,286.00	SURFACE SURVEY (OWB)	MWD OWSG	OWSG MWD - Standard
3,486.00	18,175.00	FINAL SURVEY (OWB)	MWD OWSG	OWSG MWD - Standard

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
215.00	0.26	269.94	215.00	0.00	-0.49	-0.49	0.12	0.12	0.00
305.00	0.69	281.30	305.00	0.11	-1.22	-1.23	0.49	0.48	12.62
394.00	0.67	293.49	393.99	0.42	-2.23	-2.24	0.16	-0.02	13.70
484.00	0.89	270.73	483.98	0.64	-3.41	-3.42	0.42	0.24	-25.29
579.00	0.85	274.18	578.97	0.70	-4.85	-4.86	0.07	-0.04	3.63
674.00	1.23	287.27	673.95	1.05	-6.52	-6.55	0.47	0.40	13.78
769.00	1.24	319.35	768.93	2.13	-8.17	-8.22	0.72	0.01	33.77
864.00	2.36	266.75	863.89	2.80	-10.79	-10.86	1.98	1.18	-55.37
959.00	4.75	259.86	958.70	2.00	-16.62	-16.66	2.55	2.52	-7.25

Civitas Resources

Survey Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LUSSING TRUST 4-64 19-20 2AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5721.00usft
Site:	SEC 19-T4S-R64W	MD Reference:	KB 25' @ 5721.00usft
Well:	LUSSING TRUST 4-64 19-20 2AH	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEY	Database:	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)
1,054.00	4.66	261.16	1,053.38	0.71	-24.30	-24.31	0.15	-0.09	1.37
1,149.00	6.96	254.13	1,147.89	-1.45	-33.65	-33.61	2.53	2.42	-7.40
1,244.00	7.72	252.68	1,242.11	-4.93	-45.28	-45.14	0.82	0.80	-1.53
1,339.00	7.83	253.34	1,336.24	-8.68	-57.57	-57.34	0.15	0.12	0.69
1,434.00	7.92	254.87	1,430.34	-12.25	-70.09	-69.76	0.24	0.09	1.61
1,528.00	8.12	254.39	1,523.42	-15.72	-82.73	-82.32	0.22	0.21	-0.51
1,623.00	8.02	253.99	1,617.48	-19.36	-95.57	-95.06	0.12	-0.11	-0.42
1,716.00	8.89	261.13	1,709.47	-22.25	-108.90	-108.32	1.46	0.94	7.68
1,811.00	9.75	263.12	1,803.22	-24.35	-124.14	-123.50	0.97	0.91	2.09
1,906.00	10.04	263.59	1,896.80	-26.24	-140.36	-139.66	0.32	0.31	0.49
2,000.00	9.82	264.17	1,989.39	-27.97	-156.47	-155.73	0.26	-0.23	0.62
2,095.00	8.99	263.18	2,083.12	-29.67	-171.90	-171.11	0.89	-0.87	-1.04
2,190.00	8.40	262.19	2,177.02	-31.49	-186.15	-185.31	0.64	-0.62	-1.04
2,285.00	7.45	259.72	2,271.12	-33.54	-199.08	-198.19	1.06	-1.00	-2.60
2,379.00	8.71	260.70	2,364.18	-35.77	-212.10	-211.15	1.35	1.34	1.04
2,474.00	8.55	259.38	2,458.11	-38.24	-226.14	-225.12	0.27	-0.17	-1.39
2,569.00	8.27	258.10	2,552.08	-40.95	-239.77	-238.68	0.35	-0.29	-1.35
2,663.00	7.60	255.47	2,645.18	-43.90	-252.40	-251.23	0.81	-0.71	-2.80
2,757.00	8.70	264.25	2,738.24	-46.17	-265.49	-264.26	1.76	1.17	9.34
2,852.00	8.43	263.47	2,832.18	-47.69	-279.56	-278.29	0.31	-0.28	-0.82
2,946.00	7.54	260.77	2,925.27	-49.46	-292.50	-291.18	1.03	-0.95	-2.87
3,041.00	8.58	258.98	3,019.33	-51.81	-305.60	-304.22	1.13	1.09	-1.88
3,136.00	7.69	256.85	3,113.37	-54.61	-318.75	-317.29	0.99	-0.94	-2.24
3,231.00	8.02	262.83	3,207.48	-56.89	-331.51	-330.00	0.93	0.35	6.29
3,286.00	7.45	264.22	3,261.98	-57.72	-338.87	-337.33	1.09	-1.04	2.53
3,345.00	7.23	264.33	3,320.50	-58.48	-346.37	-344.81	0.37	-0.37	0.19
SURFACE CSG - 3345' MD, 3321' TVD									
3,486.00	6.72	264.63	3,460.45	-60.13	-363.42	-361.81	0.37	-0.36	0.21
3,579.00	8.18	269.32	3,552.66	-60.71	-375.45	-373.83	1.70	1.57	5.04
3,674.00	7.50	269.32	3,646.78	-60.87	-388.41	-386.78	0.72	-0.72	0.00
3,769.00	6.91	269.26	3,741.02	-61.01	-400.33	-398.68	0.62	-0.62	-0.06
3,863.00	6.20	270.18	3,834.41	-61.07	-411.06	-409.41	0.76	-0.76	0.98
3,958.00	7.84	263.11	3,928.70	-61.83	-422.62	-420.95	1.95	1.73	-7.44
4,053.00	9.34	263.91	4,022.63	-63.43	-436.72	-435.01	1.58	1.58	0.84
4,147.00	8.74	265.05	4,115.46	-64.85	-451.42	-449.67	0.67	-0.64	1.21
4,242.00	7.89	266.25	4,209.46	-65.90	-465.11	-463.33	0.91	-0.89	1.26
4,337.00	9.25	272.19	4,303.40	-66.04	-479.25	-477.46	1.71	1.43	6.25
4,432.00	8.24	270.80	4,397.29	-65.65	-493.69	-491.90	1.09	-1.06	-1.46
4,526.00	6.92	267.71	4,490.47	-65.78	-506.08	-504.29	1.47	-1.40	-3.29
4,620.00	9.28	262.12	4,583.53	-67.05	-519.25	-517.42	2.64	2.51	-5.95
4,715.00	8.03	263.38	4,677.44	-68.86	-533.43	-531.55	1.33	-1.32	1.33
4,809.00	9.53	258.15	4,770.34	-71.22	-547.57	-545.63	1.81	1.60	-5.56
4,904.00	8.36	262.96	4,864.19	-73.68	-562.12	-560.11	1.46	-1.23	5.06

Civitas Resources

Survey Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LUSSING TRUST 4-64 19-20 2AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5721.00usft
Site:	SEC 19-T4S-R64W	MD Reference:	KB 25' @ 5721.00usft
Well:	LUSSING TRUST 4-64 19-20 2AH	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEY	Database:	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)	
4,999.00	7.28	265.34	4,958.30	-75.02	-574.97	-572.93	1.19	-1.14	2.51	
5,094.00	5.91	262.93	5,052.67	-76.11	-585.83	-583.75	1.47	-1.44	-2.54	
5,188.00	7.39	261.46	5,146.04	-77.60	-596.61	-594.50	1.58	1.57	-1.56	
5,282.00	9.67	253.60	5,238.99	-80.73	-610.16	-607.97	2.72	2.43	-8.36	
5,377.00	9.08	252.83	5,332.72	-85.19	-624.98	-622.67	0.63	-0.62	-0.81	
5,471.00	8.22	250.47	5,425.65	-89.63	-638.40	-635.97	0.99	-0.91	-2.51	
5,566.00	8.63	270.25	5,519.65	-91.87	-651.93	-649.44	3.07	0.43	20.82	
5,661.00	7.76	268.57	5,613.68	-92.00	-665.47	-662.98	0.95	-0.92	-1.77	
5,755.00	10.18	263.51	5,706.52	-93.10	-680.07	-677.55	2.71	2.57	-5.38	
5,850.00	9.14	259.35	5,800.18	-95.44	-695.83	-693.24	1.32	-1.09	-4.38	
5,945.00	8.33	255.25	5,894.07	-98.59	-709.90	-707.23	1.07	-0.85	-4.32	
6,039.00	6.79	261.82	5,987.26	-101.11	-721.98	-719.25	1.88	-1.64	6.99	
6,134.00	8.74	264.80	6,081.38	-102.56	-734.73	-731.95	2.10	2.05	3.14	
6,228.00	7.78	262.87	6,174.40	-104.00	-748.16	-745.34	1.06	-1.02	-2.05	
6,322.00	11.13	257.22	6,267.12	-106.80	-763.32	-760.43	3.69	3.56	-6.01	
6,417.00	9.34	257.32	6,360.60	-110.52	-779.79	-776.80	1.88	-1.88	0.11	
6,512.00	7.77	255.42	6,454.54	-113.83	-793.52	-790.45	1.68	-1.65	-2.00	
6,607.00	9.92	267.50	6,548.41	-115.80	-807.92	-804.79	2.98	2.26	12.72	
6,702.00	8.21	265.51	6,642.22	-116.69	-822.86	-819.70	1.83	-1.80	-2.09	
6,796.00	9.19	266.45	6,735.14	-117.68	-837.04	-833.85	1.05	1.04	1.00	
6,891.00	7.80	265.81	6,829.10	-118.62	-851.04	-847.83	1.47	-1.46	-0.67	
6,986.00	8.04	260.36	6,923.19	-120.20	-864.02	-860.76	0.83	0.25	-5.74	
7,080.00	5.00	254.39	7,016.57	-122.41	-874.45	-871.14	3.31	-3.23	-6.35	
KOP - 7080' MD, 7017' TVD										
7,175.00	8.98	93.80	7,111.27	-124.02	-871.02	-867.67	14.52	4.19	-169.04	
7,270.00	16.00	94.46	7,203.96	-125.53	-850.54	-847.16	7.39	7.39	0.69	
7,365.00	22.86	86.87	7,293.51	-125.54	-819.02	-815.65	7.68	7.22	-7.99	
7,459.00	28.40	93.61	7,378.25	-125.95	-778.44	-775.07	6.65	5.89	7.17	
7,554.00	34.71	96.11	7,459.16	-130.26	-728.95	-725.48	6.78	6.64	2.63	
7,648.00	47.69	96.75	7,529.74	-137.22	-667.56	-663.94	13.82	13.81	0.68	
7,743.00	56.52	90.77	7,588.07	-141.90	-592.87	-589.16	10.53	9.29	-6.29	
7,838.00	62.91	86.74	7,635.96	-140.02	-510.92	-507.29	7.66	6.73	-4.24	
7,932.00	70.17	88.14	7,673.36	-136.20	-424.84	-421.32	7.84	7.72	1.49	
8,027.00	76.52	89.70	7,700.58	-134.51	-333.89	-330.44	6.87	6.68	1.64	
8,045.88	78.11	89.85	7,704.72	-134.44	-315.47	-312.03	8.47	8.43	0.79	
-330' X-OVER PNT - 8045.88' MD, 7705' TVD, 1481' FNL, 330' FWL SEC 19										
8,048.97	78.37	89.87	7,705.35	-134.43	-312.45	-309.01	8.47	8.43	0.79	
LP-LT 4-64 19-20 2AH (P2)										
8,122.00	84.53	90.44	7,716.20	-134.63	-240.26	-236.84	8.47	8.43	0.77	
8,162.00	86.64	90.01	7,719.28	-134.79	-200.39	-196.97	5.38	5.28	-1.08	
HZ LANDING PNT - 8162' MD, 7719' TVD										
8,216.00	89.49	89.43	7,721.11	-134.52	-146.42	-143.03	5.38	5.28	-1.07	
8,311.00	90.25	89.88	7,721.32	-133.95	-51.43	-48.08	0.93	0.80	0.47	
8,405.00	90.59	90.26	7,720.63	-134.06	42.57	45.89	0.54	0.36	0.40	

Civitas Resources

Survey Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LUSSING TRUST 4-64 19-20 2AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5721.00usft
Site:	SEC 19-T4S-R64W	MD Reference:	KB 25' @ 5721.00usft
Well:	LUSSING TRUST 4-64 19-20 2AH	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEY	Database:	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)	
8,500.00	91.64	89.69	7,718.78	-134.02	137.55	140.84	1.26	1.11	-0.60	
8,594.00	89.21	91.27	7,718.09	-134.81	231.54	234.82	3.08	-2.59	1.68	
8,689.00	89.92	91.16	7,718.81	-136.82	326.51	329.81	0.76	0.75	-0.12	
8,784.00	90.26	90.71	7,718.66	-138.37	421.50	424.81	0.59	0.36	-0.47	
8,879.00	89.74	90.99	7,718.66	-139.78	516.49	519.80	0.62	-0.55	0.29	
8,974.00	89.43	90.78	7,719.35	-141.25	611.47	614.80	0.39	-0.33	-0.22	
9,068.00	89.62	90.96	7,720.13	-142.68	705.46	708.79	0.28	0.20	0.19	
9,162.00	89.76	90.68	7,720.64	-144.02	799.45	802.78	0.33	0.15	-0.30	
9,257.00	89.98	90.90	7,720.85	-145.33	894.44	897.78	0.33	0.23	0.23	
9,352.00	89.87	90.15	7,720.98	-146.20	989.43	992.76	0.80	-0.12	-0.79	
9,445.00	90.52	89.95	7,720.66	-146.28	1,082.43	1,085.74	0.73	0.70	-0.22	
9,541.00	90.09	90.59	7,720.15	-146.74	1,178.43	1,181.71	0.80	-0.45	0.67	
9,635.00	90.37	90.14	7,719.77	-147.34	1,272.43	1,275.70	0.56	0.30	-0.48	
9,730.00	90.72	89.98	7,718.87	-147.44	1,367.42	1,370.66	0.41	0.37	-0.17	
9,825.00	89.82	89.47	7,718.42	-146.98	1,462.42	1,465.62	1.09	-0.95	-0.54	
9,919.00	90.02	88.59	7,718.55	-145.39	1,556.40	1,559.54	0.96	0.21	-0.94	
10,014.00	90.10	88.14	7,718.45	-142.68	1,651.37	1,654.40	0.48	0.08	-0.47	
10,109.00	90.96	90.09	7,717.57	-141.21	1,746.34	1,749.32	2.24	0.91	2.05	
10,203.00	91.04	89.78	7,715.93	-141.10	1,840.33	1,843.27	0.34	0.09	-0.33	
10,298.00	91.12	89.48	7,714.14	-140.49	1,935.31	1,938.21	0.33	0.08	-0.32	
10,392.00	89.52	92.68	7,713.62	-142.26	2,029.28	2,032.19	3.81	-1.70	3.40	
10,487.00	89.33	92.36	7,714.57	-146.44	2,124.18	2,127.16	0.39	-0.20	-0.34	
10,581.00	91.05	92.00	7,714.26	-150.01	2,218.11	2,221.15	1.87	1.83	-0.38	
10,676.00	91.34	92.05	7,712.28	-153.37	2,313.03	2,316.13	0.31	0.31	0.05	
10,770.00	91.81	91.59	7,709.69	-156.35	2,406.94	2,410.09	0.70	0.50	-0.49	
10,865.00	91.96	91.33	7,706.57	-158.77	2,501.86	2,505.04	0.32	0.16	-0.27	
10,960.00	91.96	91.42	7,703.32	-161.05	2,596.78	2,599.98	0.09	0.00	0.09	
11,054.00	90.77	90.49	7,701.08	-162.62	2,690.74	2,693.95	1.61	-1.27	-0.99	
11,149.00	91.41	90.35	7,699.27	-163.31	2,785.72	2,788.92	0.69	0.67	-0.15	
11,243.00	91.50	91.03	7,696.89	-164.45	2,879.68	2,882.88	0.73	0.10	0.72	
11,338.00	91.63	90.73	7,694.29	-165.90	2,974.63	2,977.84	0.34	0.14	-0.32	
11,433.00	92.26	90.20	7,691.07	-166.68	3,069.57	3,072.77	0.87	0.66	-0.56	
11,527.00	90.72	91.34	7,688.62	-167.94	3,163.53	3,166.73	2.04	-1.64	1.21	
11,622.00	90.84	91.76	7,687.33	-170.51	3,258.49	3,261.72	0.46	0.13	0.44	
11,717.00	88.90	90.16	7,687.54	-172.10	3,353.46	3,356.71	2.65	-2.04	-1.68	
11,811.00	88.67	90.42	7,689.54	-172.58	3,447.44	3,450.67	0.37	-0.24	0.28	
11,906.00	88.90	89.57	7,691.55	-172.57	3,542.42	3,545.61	0.93	0.24	-0.89	
12,001.00	88.67	89.20	7,693.57	-171.55	3,637.39	3,640.53	0.46	-0.24	-0.39	
12,095.00	90.65	90.41	7,694.12	-171.23	3,731.38	3,734.49	2.47	2.11	1.29	
12,190.00	90.89	90.53	7,692.85	-172.01	3,826.37	3,829.47	0.28	0.25	0.13	
12,285.00	91.03	89.53	7,691.26	-172.06	3,921.36	3,924.42	1.06	0.15	-1.05	
12,379.00	90.83	89.03	7,689.73	-170.88	4,015.34	4,018.34	0.57	-0.21	-0.53	
12,474.00	90.28	88.74	7,688.81	-169.03	4,110.31	4,113.25	0.65	-0.58	-0.31	

Civitas Resources

Survey Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LUSSING TRUST 4-64 19-20 2AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5721.00usft
Site:	SEC 19-T4S-R64W	MD Reference:	KB 25' @ 5721.00usft
Well:	LUSSING TRUST 4-64 19-20 2AH	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEY	Database:	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)	
12,569.00	91.29	90.38	7,687.51	-168.30	4,205.30	4,208.18	2.03	1.06	1.73	
12,663.00	91.12	90.33	7,685.53	-168.88	4,299.28	4,302.15	0.19	-0.18	-0.05	
12,758.00	91.33	90.78	7,683.50	-169.80	4,394.25	4,397.11	0.52	0.22	0.47	
12,852.00	91.95	90.92	7,680.81	-171.19	4,488.20	4,491.07	0.68	0.66	0.15	
12,947.00	90.87	91.49	7,678.47	-173.19	4,583.15	4,586.04	1.29	-1.14	0.60	
13,041.00	89.96	90.81	7,677.79	-175.08	4,677.13	4,680.03	1.21	-0.97	-0.72	
13,136.00	90.02	90.65	7,677.81	-176.29	4,772.12	4,775.03	0.18	0.06	-0.17	
13,231.00	89.68	90.30	7,678.06	-177.08	4,867.11	4,870.01	0.51	-0.36	-0.37	
13,325.00	89.40	89.95	7,678.81	-177.28	4,961.11	4,963.98	0.48	-0.30	-0.37	
13,420.00	89.23	90.80	7,679.95	-177.90	5,056.10	5,058.96	0.91	-0.18	0.89	
13,515.00	91.15	90.91	7,679.63	-179.32	5,151.08	5,153.95	2.02	2.02	0.12	
13,609.00	90.96	91.93	7,677.90	-181.65	5,245.04	5,247.93	1.10	-0.20	1.09	
13,704.00	90.55	91.63	7,676.65	-184.60	5,339.98	5,342.92	0.53	-0.43	-0.32	
13,798.00	90.14	90.90	7,676.08	-186.67	5,433.96	5,436.92	0.89	-0.44	-0.78	
13,893.00	92.07	92.56	7,674.25	-189.54	5,528.89	5,531.89	2.68	2.03	1.75	
13,988.00	92.57	92.67	7,670.41	-193.87	5,623.71	5,626.79	0.54	0.53	0.12	
14,082.00	91.59	91.80	7,666.99	-197.53	5,717.58	5,720.72	1.39	-1.04	-0.93	
14,177.00	90.89	91.70	7,664.94	-200.44	5,812.51	5,815.70	0.74	-0.74	-0.11	
14,272.00	89.79	91.77	7,664.37	-203.31	5,907.46	5,910.69	1.16	-1.16	0.07	
14,366.00	88.74	92.56	7,665.58	-206.86	6,001.39	6,004.67	1.40	-1.12	0.84	
14,461.00	89.95	89.08	7,666.67	-208.22	6,096.35	6,099.65	3.88	1.27	-3.66	
14,556.00	89.94	88.91	7,666.76	-206.55	6,191.34	6,194.56	0.18	-0.01	-0.18	
14,651.00	89.80	88.55	7,666.97	-204.45	6,286.32	6,289.46	0.41	-0.15	-0.38	
14,745.00	89.74	87.97	7,667.35	-201.59	6,380.27	6,383.31	0.62	-0.06	-0.62	
14,840.00	91.03	89.26	7,666.71	-199.30	6,475.24	6,478.19	1.92	1.36	1.36	
14,935.00	91.30	89.36	7,664.78	-198.15	6,570.21	6,573.11	0.30	0.28	0.11	
15,029.00	91.73	89.29	7,662.30	-197.05	6,664.17	6,667.01	0.46	0.46	-0.07	
15,124.00	91.78	89.71	7,659.39	-196.22	6,759.12	6,761.91	0.45	0.05	0.44	
15,219.00	92.03	89.02	7,656.23	-195.17	6,854.06	6,856.80	0.77	0.26	-0.73	
15,314.00	89.38	89.87	7,655.06	-194.25	6,949.04	6,951.72	2.93	-2.79	0.89	
15,408.00	89.29	89.40	7,656.15	-193.65	7,043.03	7,045.67	0.51	-0.10	-0.50	
15,503.00	90.04	91.33	7,656.71	-194.25	7,138.03	7,140.65	2.18	0.79	2.03	
15,598.00	90.19	90.96	7,656.52	-196.15	7,233.01	7,235.65	0.42	0.16	-0.39	
15,693.00	90.15	90.64	7,656.23	-197.48	7,328.00	7,330.64	0.34	-0.04	-0.34	
15,787.00	90.07	90.80	7,656.05	-198.66	7,421.99	7,424.63	0.19	-0.09	0.17	
15,882.00	90.11	90.80	7,655.90	-199.99	7,516.98	7,519.63	0.04	0.04	0.00	
15,977.00	90.93	92.72	7,655.04	-202.90	7,611.93	7,614.62	2.20	0.86	2.02	
16,071.00	91.02	92.17	7,653.44	-206.91	7,705.83	7,708.59	0.59	0.10	-0.59	
16,166.00	90.92	93.08	7,651.83	-211.26	7,800.71	7,803.55	0.96	-0.11	0.96	
16,261.00	90.74	93.10	7,650.46	-216.38	7,895.56	7,898.50	0.19	-0.19	0.02	
16,355.00	91.21	92.98	7,648.86	-221.37	7,989.42	7,992.45	0.52	0.50	-0.13	
16,450.00	91.02	92.55	7,647.01	-225.95	8,084.29	8,087.41	0.49	-0.20	-0.45	
16,545.00	91.12	92.68	7,645.24	-230.28	8,179.17	8,182.37	0.17	0.11	0.14	
16,640.00	91.17	92.27	7,643.34	-234.38	8,274.07	8,277.34	0.43	0.05	-0.43	

Civitas Resources

Survey Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LUSSING TRUST 4-64 19-20 2AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5721.00usft
Site:	SEC 19-T4S-R64W	MD Reference:	KB 25' @ 5721.00usft
Well:	LUSSING TRUST 4-64 19-20 2AH	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEY	Database:	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)	
16,734.00	91.46	91.94	7,641.18	-237.84	8,367.98	8,371.30	0.47	0.31	-0.35	
16,829.00	91.47	91.80	7,638.75	-240.94	8,462.90	8,466.27	0.15	0.01	-0.15	
16,923.00	91.52	91.90	7,636.30	-243.97	8,556.81	8,560.24	0.12	0.05	0.11	
17,018.00	91.77	91.62	7,633.57	-246.89	8,651.73	8,655.19	0.40	0.26	-0.29	
17,113.00	91.64	90.28	7,630.74	-248.46	8,746.67	8,750.15	1.42	-0.14	-1.41	
17,207.00	90.07	89.81	7,629.34	-248.53	8,840.66	8,844.11	1.74	-1.67	-0.50	
17,302.00	90.00	88.82	7,629.28	-247.40	8,935.65	8,939.04	1.04	-0.07	-1.04	
17,397.00	89.79	87.52	7,629.46	-244.36	9,030.60	9,033.88	1.39	-0.22	-1.37	
17,491.00	89.41	90.43	7,630.11	-242.68	9,124.57	9,127.79	3.12	-0.40	3.10	
17,586.00	88.48	90.41	7,631.86	-243.38	9,219.55	9,222.75	0.98	-0.98	-0.02	
17,681.00	90.52	90.32	7,632.69	-243.98	9,314.54	9,317.73	2.15	2.15	-0.09	
17,775.00	90.32	89.86	7,632.00	-244.13	9,408.54	9,411.70	0.53	-0.21	-0.49	
17,870.00	90.47	89.35	7,631.35	-243.48	9,503.54	9,506.65	0.56	0.16	-0.54	
17,964.00	90.49	90.27	7,630.56	-243.17	9,597.53	9,600.61	0.98	0.02	0.98	
18,058.00	90.65	90.88	7,629.63	-244.11	9,691.52	9,694.59	0.67	0.17	0.65	
18,116.00	91.03	89.59	7,628.78	-244.35	9,749.51	9,752.57	2.32	0.66	-2.22	
LAST SURVEY - 18116' MD, 7629' TVD										
18,175.00	91.03	89.59	7,627.72	-243.92	9,808.50	9,811.53	0.00	0.00	0.00	
PTB - 18175' MD, 7628' TVD, 1392' FNL, 330' FEL SEC 20 - PBHL-LT 4-64 19-20 2AH (P2)										

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL-LT 4-64 19-20 2AI - hit/miss target - Shape	0.00	0.00	7,625.00	-231.61	9,808.55	1,678,252.21	3,262,770.60	39.691895°N	104.566236°W
- actual wellpath misses target center by 12.61usft at 18175.00usft MD (7627.72 TVD, -243.92 N, 9808.50 E)									
- Point									
LP-LT 4-64 19-20 2AH (I - hit/miss target - Shape	0.00	0.00	7,725.00	-143.15	-315.47	1,678,240.49	3,252,646.31	39.692143°N	104.602211°W
- actual wellpath misses target center by 21.71usft at 8048.97usft MD (7705.35 TVD, -134.43 N, -312.45 E)									
- Point									

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
3,345.00	3,320.50	-58.48	-346.37	SURFACE CSG - 3345' MD, 3321' TVD	
7,080.00	7,016.57	-122.41	-874.45	KOP - 7080' MD, 7017' TVD	
8,045.88	7,704.72	-134.44	-315.47	~330' X-OVER PNT - 8045.88' MD, 7705' TVD, 1481' FNL, 330' FWL SEC 19	
8,162.00	7,719.28	-134.79	-200.39	HZ LANDING PNT - 8162' MD, 7719' TVD	
18,116.00	7,628.78	-244.35	9,749.51	LAST SURVEY - 18116' MD, 7629' TVD	
18,175.00	7,627.72	-243.92	9,808.50	PTB - 18175' MD, 7628' TVD, 1392' FNL, 330' FEL SEC 20	

Civitas Resources

Survey Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LUSSING TRUST 4-64 19-20 2AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5721.00usft
Site:	SEC 19-T4S-R64W	MD Reference:	KB 25' @ 5721.00usft
Well:	LUSSING TRUST 4-64 19-20 2AH	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEY	Database:	EDM

Checked By: _____ Approved By: _____ Date: _____