

# Air-Cooled Heat Exchanger Specification Sheet

1	Client: Limerock Resources										
2	Location:										
3	Service of Unit: Water Cooling Water and Natural Gas										
4	Item No.: 230461 and 230462										
5	Date: 6/29/2023										
6	Size & Type	38	/	14	ft	Type	Forced	Number of Bays	1		
7	Surf/Unit-Finned Tube	51,762			ft <sup>2</sup>	Bare area/bundle	2,406	ft <sup>2</sup>	Ratio (Total	21.51	
8	Heat exchanged	7337216			BTU/h	MTD, Eff	46.05 °F				
9	Transfer rate	3.27	Bare, Service		66.21	Clean	82.93 BTU/(h-ft <sup>2</sup> -F)				
10	<b>PERFORMANCE DATA - TUBE SIDE</b>										
11	Fluid Circulated	Water and Natural Gas					In/Out				
12	Total Fluid Entering	lb/h	98,766			Density, Liq	lb/ft <sup>3</sup>	45.85	/	47.325	
13		BPD	6,000			Density, Vap	lb/ft <sup>3</sup>	0	/	0	
14	Temperature	°F	200	/	120	Specific Heat, Liq	BTU/(lb-F)	0.9356	/	0.922	
15	Liquid	lb/h	98766	/	98766	Specific Heat, Vap	BTU/(lb-F)	0	/	0	
16	Vapor	lb/h	0	/	0	Therm. Cond, Liq	BTU/(ft-h-F)	0.292	/	0.276	
17	Noncondensable	lb/h	0	/	0	Therm. Cond, Vap	BTU/(ft-h-F)	0	/	0	
18	Steam	lb/h	/			Freeze Point	°F	0			
19	Water	lb/h	/			Bubble / Dew point	°F	0 / 0			
20	Molecular wt, Vap	/			Latent heat	BTU/lb	0				
21	Molecular wt, NC				Inlet pressure (abs)	psi	514.7				
22	Viscosity, Liq	cp	0.2536	/	0.4482	Pres Drop, Allow/Calc	psi	10	/	0.04	
23	Viscosity, Vap	cp	0.0000	/	0.0000	Fouling resistance	ft <sup>2</sup> -h-F/BTU	0.001			
24	<b>PERFORMANCE DATA - AIR SIDE</b>										
25	Air Quantity, Total	1,515,000	lb/h	Altitude			2,500	ft			
26	Air Quantity/Fan	195,685	ft <sup>3</sup> /min	Temperature In			95	°F			
27	Static Pressure	0.8	inH2O	Temperature Out			115	°F			
28	Face Velocity	14.21	ft/s	Bundle velocity	3,300	lb/h/ft <sup>2</sup>	Design Ambient	95	°F		
29	<b>DESIGN-MATERIALS-CONSTRUCTION</b>										
30	Design/Vac./Test Pres	950	/	0	/	0	psi	Design temperature	250	°F	
31	<b>TUBE BUNDLE</b>		<b>Header</b>			<b>Tube</b>					
32	Size	38	ft	Type	Box	Material	Carbon Steel				
33	Number/bay	1		Material	Carbon Steel	Specifications					
34	Tube Rows	4		Passes	1	OD	1	Min Thk.	0.065	in	
35	Arrangement				Plug Mat.	No./Bun	266	Lng	36	ft	
36	Bundles	1	par	Gasket Mat.	Pitch			2.375	/	2.057	
37	Bays	1	par	Corr. Allow.	0	in	<b>Fin</b>				
38	Bundle frame				Inlet Nozzle	2	8	in	Type	L-finned	
39	<b>MISCELLANEOUS</b>					Outlet nozzle	2	8	in	Material	Aluminum 1060
40	Struct. Mount.				Special Nozzles	OD	2.25	Tks	0.016	in	
41	Surf. Prep				Rating	600	ANSI	No.	10	#/in	
42	Louvers				TI	PI	Code	ASME Code Sec VIII Div 1			
43	Vibration Switches				Chem Cleaning	Stamp	Yes	Specs			
44	<b>MECHANICAL EQUIPMENT</b>										
45	Fan, Mfr., Model				Driver, Type	V-belt	Speed Reducer, Type				
46	No./Bay	2	RPM	0	Mfr.	Mfr. & Model					
47	Dia.	11	ft	Blade(s)	No./Bay			No./Bay			
48	Pitch	Angle			RPM	Rating					
49	Blade(s)	0	Hub	0	Enclosure	Ratio					
50	hp/Fan	40	hp	MinAmb	V/Phase/Hz			Support			
51	Control Action on Air Failure-	Louvers									
52	Degree Control of Outlet Process Temperature										
53	Recirculation	Steam Coil							No		
54	Plot Area	0	ft <sup>2</sup>	Drawing No.	Wt. Bundle	29,639	Wt. Unit	29,639	lb		
55	Notes:										
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