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Proposal / Job No. 65317
 Date 6/1/2006
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1	Purchaser	TOROMONT ENERGY 3516TALE-JGK4		Ultimate User	TRIDENT EXPLORATION	
2	Inquiry / PO#	75-11610		Destination	ALBERTA	
3	# Units	4	Model	156ZF	Reference	
4	Assembly	PACKAGED	Draft	FORCED	Overall Size (WxL), Ft	14'W x 26'L Est Wt LBS

THERMAL & MECHANICAL DESIGN

5	Service	EJW **	AUX-W **	IC-1	IC-2	AC
6	Flow	275GPM	85GPM	5.70MMSCFD	7.22MMSCFD	6.28MMSCFD
7	Fluid	50%GLY	50%GLY	.595SPGR	.595SPGR	.595SPGR
8	Temp. In / Out, °F	170.0 / 146.2	129.7 / 110.0	274.0 / 120.0	265.0 / 120.5	256.0 / 120.3
9	Pressure, PSI			131PSIG	403PSIG	900PSIG
10	Pressure Drop, PSI	6.2	7.1	1.7	6.3	4.6
11	Heat Load, BTU/HR	2978560	737397	934687	1141793	986682
12	True LMTD	34.9	12.0	54.9	46.7	52.8
13	Overall Rate, U	150.3	130.1	53.7	83.2	98.0
14	Fouling Factor	.0005	.0005	.0020	.0020	.0020
15	Surface, Tube / Total, Sq Ft	569 / 8477	476 / 7087	326 / 6463	294 / 4377	191 / 2849
16	Sections, #	(1) - COMBINED	(1) - COMBINED	(1)	(1)	(1)
17	Design Temp, °F Max / Min	300 / -20	300 / -20	350 / -20	350 / -20	350 / -20
18	MWP / Test Press, PSIG	* 14 / 75	* 14 / 75	645 / 839	1292 / 1680	1440 / 1872
19	Pass Arrangement	CROSSFLOW	CROSSFLOW	CROSSFLOW	CROSSFLOW	CROSSFLOW
20	# Tube Rows	4	4	4	5	3
21	# Tube Passes	2	4	2	2	2
22	Tubes, OD x BWG	3/4X16	3/4X16	1-1/4X16	3/4X16	3/4X16
23	Material	SA214 STEEL	SA214 STEEL	SA214 STEEL	SA214 STEEL	SA214 STEEL
24	# Per Section / Length, Ft	122 / 24	102 / 24	42 / 24	63 / 24	41 / 24
25	Turbulators					
26	Accelerators					
27	Fins, Type	HI-EFF	HI-EFF	HI-EFF	HI-EFF	HI-EFF
28	Material	AL	AL	AL	AL	AL
29	Nozzles, Rating / Type	150RF	150RF	300RF	600RF	900RF
30	Material	SA105	SA105	SA105	SA105	SA105
31	#-Inlets / Size In	(1) 4	(1) 3	(1) 6	(1) 4	(1) 3
32	#-Outlets / Size In	(1) 4	(1) 3	(1) 6	(1) 4	(1) 3
33	Headers, Type	REC TUBE	REC TUBE	BOX	BOX	BOX
34	Material	A500	A500	SA516-70	SA516-70	SA516-70
35	Corrosion Allow, In			.0625	.0625	.0625
36	Grooved Tubesheet	SGL	SGL	DBL	DBL	DBL
37	Plugs, Type	SHOULDER	SHOULDER	SHOULDER	SHOULDER	SHOULDER
38	Plugs Material	STEEL	STEEL	A105 STEEL	A105 STEEL	A105 STEEL
39	PWHT					
40	ASME Code & Nat'l Board			YES	YES	YES
41	CRN			AB, BC, SK	AB, BC, SK	AB, BC, SK
42	Add'l Specs & Options					
43	API					
44	Louvers / Hail Screen	MAN / INT	MAN / INT	AUTO / INT	AUTO / INT	AUTO / INT
45	Inspection / NDT					

FX= 100% X-Ray of all header seam, attachment & nozzle butt welds. SX= Spot X-Ray of 1 long seam & 1 end closure, per header
 BX= 100% X-Ray of all nozzle butt welds. UT = 100% UT of all header seam, attachment & nozzle butt welds. H = Hardness testing.

AIR-SIDE PERFORMANCE		FAN DATA		DRIVER DATA		STRUCTURAL	
46	Ambient Air Temp, In °F	100	Fan(s)	(1) MOORE-10K-60VT	Type	Guards	FAN / DRIVE
47	Elevation, Ft	3000	Blade Material	ALUMINUM	V-BELT DRIVE BY (1) 60HP,		SOFT BUGSCREENS
48	Air Flow, SCFM	194,868	HP / Fan	50.1	1800RPM, 460/3/60, TEFC, VFD		
49	Outlet Air Temp, °F	131.6	Dia, In / # Blades	156 / 10	COMP MOTOR (CSA)		
50	Min Air Temp, °F	-20	RPM	260			
51			Tipspeed, FPM	10618			
52	Est. Noise Data:	85 dBA @1m, 68 dBA @ 15m	Pitch, Deg	9			

Additional Info. *-BUILT TO STANDARD 150# DESIGN BUT DESIGNATED 14# TO AVOID THE NEED FOR PROVINCIAL REGISTRATION
 ** - DESIGNED FOR 120°F AMBIENT