FORM U-1 MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS 9 474556
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1 Aby 22/61

		rtified by			Smith	CO AI	merc	ooi Can		7920-56 TH S			aiya	ry, Alb	eria,	120-4	59 /	
. Ma	nufactured for			Omnit	ech Ene	ergy S	Syste		., 380	and address of Mar 4-93 Street, idress of Purchaser	Edmo		Alb	erta, T	6E-51	(6		
Loc	ation of installation	n						(IVa)		Stock	,							
Тур	e		ertical	(Name and address) Heat Exchanger o1C539B (Tank,separator, jkt. vessel, heat exh.,etc.) (Mig's serial No.)														
	N7279.		vert., or sph	iere)	9	7040	rank,se	parator, jkt. v	essei, nei	at exh.,etc.)	N/A				(Migss	2001		
_	(CRN)				the same transfer and the	wing No	o.)				(Nat'l. Bd	No.)				(Year B	Built)	
5. ASME Code, Section VIII, Div 1				1998 Edition 00 Addenda				N/A					N/A					
ems	6-11 to be comple	eted for s	single wall v		on and Adden			of heat exch	anger, or	Code Case No. chamber of multi-	chambere	ed vessel	1	Speci	al Servic	e per UG-	120(d)	
	ell (a) No. of Cour			Head				Overall lengt				.687"						
No. Diameter, in. L			gth (ft & in.)	Material Spec./Grade or Type		ne	Nom.	Corr.	Type	Full, Spot, None	Eff.	Type		t (Cat. A,B, Spot,None	& C) Eff.	Temp.	Treatme	ent me
1	4.5"X5"		5.687"		A516-70N	+	***	.063"	*	NA	1	NA	1 411,0	Spot, (4011e		1150°F	65Mir	
2	4.5"X5"	1'	5.687"	S	A516-70N		***	.063"	•	NA	1	NA				1150°F	65Mir	nute
Hea	ds: (a)		\$	SA516-70	N(2) 1150°	°F X 65	Minu	tes		(b)	SA	516-70	N (2) 1	150°F X	65 Mi	nutes		
			(M	at'l Spec. No	. Grade or Ty	rpe) H.T	Time & 1	Temp.			(Mat'l	Spec. No	. Grade	or Type) I	H.T Time	& Temp.		
T	Location (Top	Thic	kness	Ra	dius	Ellipti		Conical		Hemishperical	Flat		Side to	Pressure		Catagory A		
	Bottom, Ends)	Min.	Corr.	Crown	Knuckle	Rat	tio	Apex Angle		Radius	Diame	ter Co	onvex	Concave	Туре	Full,Sp	ot,None	Eff.
a)	End	.50"	.063"			Fla	at	Cover			3.75"x2	.75"	Flat					
)	End	.50"	.063"			Fla	at	Cover			3.75"x2	.75"	Flat					
	r, give dimensions A.W.P.: 4	00		psi at	max. temp.	35	50		Jacket	(Mat'i Spec. No. (Closure	Srade, size	(D	escribe	as Ogee 8		ar, etc) ed, describ		
M.	A.W.P.: 4	ernai)	(externa	al)	max. temp.	35 (inter		(exter		Closure		(D			if bolt	ed, describ		
M.	A.W.P.: 4	ernai) - Exem	pt per U	al)	-		mai)		nal)	Closure	sign metal	(D			if bolt	ed, describ		
M. Imp	A.W.P.: 4 (interpretation of the composition of the	ernal) - Exem est press	pt per U	al) G20(f)	-	(inter	mai)		nal)	°F Min. des	sign metal	(D		0 '	if bolt	ed, describ		psi
.Imp	A.W.P.: 4 (interpretation of the properties) (inter	ernai) - Exem est press	pt per U	ai) G20(f)	-	(inter	rnal) (Indi	icate yes or n	nal)	°F Min. de:	sign metal	temp.		N/A	if boit	ed, describ		
M. Hyd	A.W.P.: 4 (interpretation of the property of t	ernal) - Exem est press leted tub tionary (M	pt per U(he sections. Mat'l Spec. N	ai) G20(f)	600 Dia., in. (s	PSI **	rnal) (Indi	icate yes or n	nal) o and the	°F Min. de:	sign metal act tested)	(D		N/A	if bolt	400 (welded or	Dolted)	
M. Hyd	A.W.P.: 4 (intended and test No dro, pneu.or comb. 112-13 to be complete bester) Floating (Mart 1 sees: Mar	ernal) - Exem est press leted tub tionary (N Spec. No. S	per UC De sections. Mat'l Spec. N SA179 No., Grade o	al) G20(f) No.)	Dia., in. (s	(inter	(Indi	Nom. this	nal) o and the	oF Min. descomponent(s) impropriest Corr. A BWG in. or gauge	sign metal act tested)	temp.	-2	N/A	if bolt F at achment Atta	ed, describ 400	bolted)	
M. Hydens	A.W.P.: 4 (interpretation of the properties) (inter	ernal) - Exem est press leted tub tionary (A Spec. No. S	per UC De sections. Mat'l Spec. N SA179 No., Grade o	al) G20(f) No.)	Dia., in. (s	(inter	(Indi	Nom. this	nal) o and the lom, thk, i i. in. 14E iom, thk, i thangers	°F Min. del component(s) impr Proof test Corr. F	sign metal act tested)	(D temp. w., in.	-2	N/A	if bolt F at achment Atta	400 (welded or Straig	bolted)	
M. Hyo	A.W.P.: direct lest No dro.pneu.or comb. to 112-13 to be completed between the state of the st	ernal) - Exem est press leted tub tionary (N Spec. No. S ''I Spec. N complete sse(s):	per UC De sections. Mat'l Spec. N SA179 No., Grade o	al) G20(f) No.)	Dia., in. (s	(inter	(Indi	Nom. this	nal) o and the lom. thk. i i. in. 14E iom. thk., changers h (ft & in.	°F Min. del component(s) impr Proof test Corr. F	ccrr. Allow, in.	(Ditemp.	-2	N/A	if bolt F at achment Atta	(welded or Straig	bolted)	psi
M. Hydens Tut	A.W.P.: direct lest No dro.pneu.or comb. to 12-13 to be composheet: Sta Floating (Mat'l to be composheet) Mat 14-17 incl. to be composheet lest lest lest lest lest lest lest l	ernal) - Exem est press leted tub tionary (A Spec. No. S '' Spec. No. omplete se(s):	per UC De sections. Mat'l Spec. N SA179 No., Grade o	or Type chamber of	Dia., in. (s	(inter	(Indi	Nom. this s of heat exc	nal) o and the lom. thk. i i. in. 14E iom. thk., changers h (ft & in.	°F Min. del component(s) impr Proof test Corr. A BWG in. or gauge	ccrr. Allow, in.	(Ditemp.	-2	N/A	if bolt F at achment Atta	(welded or Straig	bolted)	psi
M. Hyens. Tub	A.W.P.: deact test No dro.pneu.or comb. to be comp pesheet: Sta Floating (Mat'l soes: Mat 14-17 incl. to be comp Cours	ernal) - Exem est press leted tub tionary (A Spec. No. S '' Spec. No. omplete se(s):	per per U(Mari Spec. N SA179 No., Grade o	or Type chamber of	Dia., in. (s Dia., in. (jacketed ves	(inter	(Indi	Nom. this sof heat exc	nal) o and the lom. thk. i i. in. 14E lom. thk., thangers h (ft & in.	°F Min. de: component(s) impa Proof test Corr. A BWG in. or gauge):	Sign metal act tested) Corr. Allow., in.	temp. v., in. 32 Nurnber	-2	N/A Att	if bolt Fat achment Atta	(welded or Straig	bolted) pht pht or U)	psi
M. Hydens . Tut	A.W.P.: direct test No dro.pneu.or comb. to be comp pesheet: Sta Floating (Mat1: pes: Mat 14-17 incl. to be comp Cours Diameter, in.	ernal) - Exem est press leted tub tionary (A Spec. No. S '' Spec. No. omplete se(s):	per per U(Mari Spec. N SA179 No., Grade o	or Type chamber of	Dia., in. (s Dia., in. (jacketed ves	(inter	(Indi	Nom. this sof heat exc	nal) o and the lom. thk. i i. in. 14E lom. thk., thangers h (ft & in.	°F Min. de: component(s) impa Proof test Corr. A BWG in. or gauge):	Sign metal act tested) Corr. Allow., in.	temp. v., in. 32 Nurnber	-2	N/A Att	if bolt Fat achment Atta	(welded or Straig	bolted) pht pht or U)	psi
M. Hydens . Tut	A.W.P.: direct test No dro pneu.or comb. to be comp pesheet: Sta Floating (Mat1: pes. Mat 14-17 incl. to be comp cours Cours Diameter, in.	ernal) - Exem est press leted tub tionary (A Spec. No. S '' Spec. No. omplete se(s):	pt per U(or Type chamber of	Dia., in. (s Dia., in. (jacketed ves	(inter PSI ** Subject to .625" D.D., in. ssels or o	(Indi	Nom. this s of heat exc	nal) o and the lom. thk. i i. in. 14E lom. thk., thangers h (ft & in.	°F Min. de: component(s) impri Proof test Corr. A BWG in. or gauge Long. Joint (Cat.A) Full.Spot.None	Corr. Allow, in.	temp. 32 Number Circur	-2	N/A Att	achment Atta	ed, describ 400 (welded or Straig ype (Straig Heat	bolted) pht pht or U)	psi
M. Hydens . Tut	A.W.P.: direct test No dro pneu.or comb. to be comp pesheet: Sta Floating (Mat1: pes. Mat 14-17 incl. to be comp cours Cours Diameter, in.	ernai) - Exem est press leted tub tionary (N Spec. No. S I'l Spec. N complete se(s) Leng	pt per U(or Type chamber of Speciat'l Spec. No.	Dia., in. (s Dia., in. (jacketed ves Material c./Grade or T	(inter PSI ** Subject to .625" D.D., in. ssels or o	(Indi (Indi press.) channels (b) Th Nom.	Nom. this s of heat exc	o and the	°F Min. de: component(s) impri Proof test Corr. A BWG in. or gauge Long. Joint (Cat.A) Full.Spot.None	Corr. Allow, in.	v., in. 32 Number Circur Type	-2 -2 -2	N/A Att. (Cat. A.B. oot, None	achment Atta	ed, describ 400 (welded or Straig ype (Straig Heat	bolted) pht Treatme	psi
M. J. Hyo	A.W.P.: decent test No dro, pneu. or comb. to 12-13 to be complete the test Floating (Mart street) Floating (Mart street) Mart 14-17 incl. to be complete the test Cours Diameter, in.	ernai) - Exem est press leted tub tionary (N Spec. No. S I'l Spec. N complete se(s) Leng	pt per U(le sections. Mat'l Spec. N SA179 No., Grade o d for inner (gth (ft & in.)	or Type chamber of Speciat'l Spec. No.	Dia., in. (s Dia., in. (jacketed ves Material c./Grade or Ty	(inter PSI ** Subject to .625" O.D., in. ssels or o	(Indi	Nom. this s of heat excoverall length ickness Corr.	nal) o and the lom. thk. i i. in. 14E iom. thk., thangers h (ft & in.	°F Min. des component(s) impr Proof test Corr. A BWG in. or gauge Full, Spot, None	Corr. Allow., in. Ett.	v., in. 32 Number Circur Type Spec. No.	-2 -2 -2	N/A Att. (Cat. A,B, pot,None	achment Atta T	ed, describ 400 (welded or Straig ype (Straig Heat Temp.	bolted) pht tht or U) Treatme	psi
M. Hydens Hydens Tut	A.W.P.: direct test No dro, pneu.or comb. t 12-13 to be comp pesheet: Sta Floating (Mat') ses: Mat 14-17 incl. to be c all (a)No. of Cour. Cours Diameter, in. Location (Top	ernal) - Exem est press leted tub tionary (A Spec. No. S I'l Spec. No. complete se(s):	pt per U(dari Spec. N) SA179 No., Grade o d for inner (gth (ft & in.) (M.	ati) G2O(f) No.) Type chamber of Spe atil Spec. No.	Dia., in. (s Dia., in. (s Dia., in. (s Dia., in. (c) jacketed ves Material c./Grade or Ty dius	(inter PSI ** PSI ** .625" O.D., in. ssels or of ype H.T Ellipt	(Indi	Nom. this s of heat excoverall length ickness Corr.	nal) o and the lom. thk. i i. in. 14E iom. thk., thangers h (ft & in.	component(s) impriprior test Corr. A BWG in. or gauge Long. Joint (Cat.A) Full.Spot.None	Ccrr. Allow., in. Ett. (Mat'l	v., in. 32 Number Circur Type Spec. No.	-2	N/A Att. (Cat. A.B., sot, None e or Type) H Pressure	achment Atta T & C) Eff.	(welded or Straig ype (Straig Heat Temp. & Temp.	bolted) pht tht or U) Treatme	psi psi nt me
M. Hydens Hydens Tut	A.W.P.: direct test No dro, pneu.or comb. t 12-13 to be comp pesheet: Sta Floating (Mat') ses: Mat 14-17 incl. to be c all (a)No. of Cour. Cours Diameter, in. Location (Top	ernal) - Exem est press leted tub tionary (A Spec. No. S I'l Spec. No. complete se(s):	pt per U(dari Spec. N) SA179 No., Grade o d for inner (gth (ft & in.) (M.	ati) G2O(f) No.) Type chamber of Spe atil Spec. No.	Dia., in. (s Dia., in. (s Dia., in. (s Dia., in. (c) jacketed ves Material c./Grade or Ty dius	(inter PSI ** PSI ** .625" O.D., in. ssels or of ype H.T Ellipt	(Indi	Nom. this s of heat excoverall length ickness Corr.	nal) o and the lom. thk. i i. in. 14E iom. thk., thangers h (ft & in.	component(s) impriprior test Corr. A BWG in. or gauge Long. Joint (Cat.A) Full.Spot.None	Ccrr. Allow., in. Ett. (Mat'l	v., in. 32 Number Circur Type Spec. No.	-2	N/A Att. (Cat. A.B., sot, None e or Type) H Pressure	achment Atta T & C) Eff.	(welded or Straig ype (Straig Heat Temp. & Temp.	bolted) pht tht or U) Treatme	ps -

FORM U-1 (Back) (internal) (internal) 17. Impact test (Indicate yes or no and the component(s) impact tested) 18. Hydro.pneu.or comb.test press. Proof test 19. Nozzles, Inspection, and safety valve openings: Material Nozzle Thickness Reinforcement How attached Location (Inlet, Outlet, Dm) Nozzie Flange Nozzle Flange SA105N Corr Type Nom. Material Inlet-N3 SA106B 2"-3004 .344 .063 UW16.1(a) Type Rear Header Outlet-N4 2"-300# REWN SA105N **SA106B** 344 .063 Weld JW16.1(a) Type Front Header TI 1" CPLG SA105N 6000# .063" UW16.1(a) Type Weld Front Header SA105N Inspection .75 Plug Threaded ront and Rear **Plugsheet** 20. Supports: NO Nil Other Lugs Leas NA Attached Side Frame- Welded No (Describe) (Where and how) 21. Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: (List the name of part, item number, mfg's name and identifying number) 22. Remarks: SERVICE: After- Cooler CUBIC CAPACITY: 0.42 Cu. Ft. on piping as per ug125(8) SAFETY VALVES: *** (6) WRAPPER PLATE - THICKNESS: .50" CORR. ALLOWANCE: .063" HEATING SUFACE: 31 Sq. Ft. **TUBE & PLUGSHEET - THICKNESS: .75'** CORP ALLOWANCE: .063' *CORNER JOINT **HYDROTEST Fabrication Drawing# 2001C539 Rev 0 **CERTIFICATE OF SHOP COMPLIANCE** We certify that the statements made in this report are correct and that all details of design, material, construction and workmanship of this ASME Code for Pressure Vessels, Section VIII, Division 1. U Certificate of Authorization No. 30807 **Expires** January 5, 2002 Date SMITHCO AMERCOOL CANADA Signed **CERTIFICATE OF SHOP INSPECTION** I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of **ALBERTA** and employed by **ALBERTA BOILERS SAFETY ASSOCIATION** CALGARY, ALBERTA NOV the pressure vessel described in the Manufacturer's Data Report on , 2001 , and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME code, Section VIII, Division 1. By signing this certificate neither the inspector nor his employer makes any warranty, expressed, or implied, concerning the pressure vessel described in the Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal nury or property damage or a loss of any kind arising from or connected with this inspection. Commissions (Authorized Inspector) (Nat'l Board incl.endorsments, State, Prov. and No.) CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE We certify that the statements made in this report are correct and that all details of design, material, construction and workmanship of this vessel conform to the ASME Code for Pressure Vessels, Section VIII, Division 1. U Certificate of Authorization No. Expires Date Signed

(Manufacturer) (Representativu) CERTIFICATE OF FIELD ASSEMBLY INSPECTION I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of have compared the statements in the Manufacturer's Data Report with the description of the pressure vessel and state that the parts referred to as data items , not included in the certificate of shop inspection, have been inspected by me and to the best of my knowledge and belief, the Manufacturer has constructed and assembled this pressure vessel in accordance with ASME code, Section VIII, Division 1. The described vessel was inspected and subjected to a hydrostatic test of psi . By signing this certificate neither the inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in the Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection. Date Signed Commissionss (Authorized Inspector) (Nat'l Board incl.endorsments, State, Prov. and No.)