

2004-04-26
 PLOT DATE
 ACAD DRAWING NO MANUAL CHANGES
 STANDARD DRAWING
 D SIZE

S-1110/1120
METHANOL/CORROSION INHIBITOR TANKS
 CAPACITY 1135L (300 GAL)
 MANUFACTURER MARMIT
 DOUBLE WALLED PLASTIC TANK

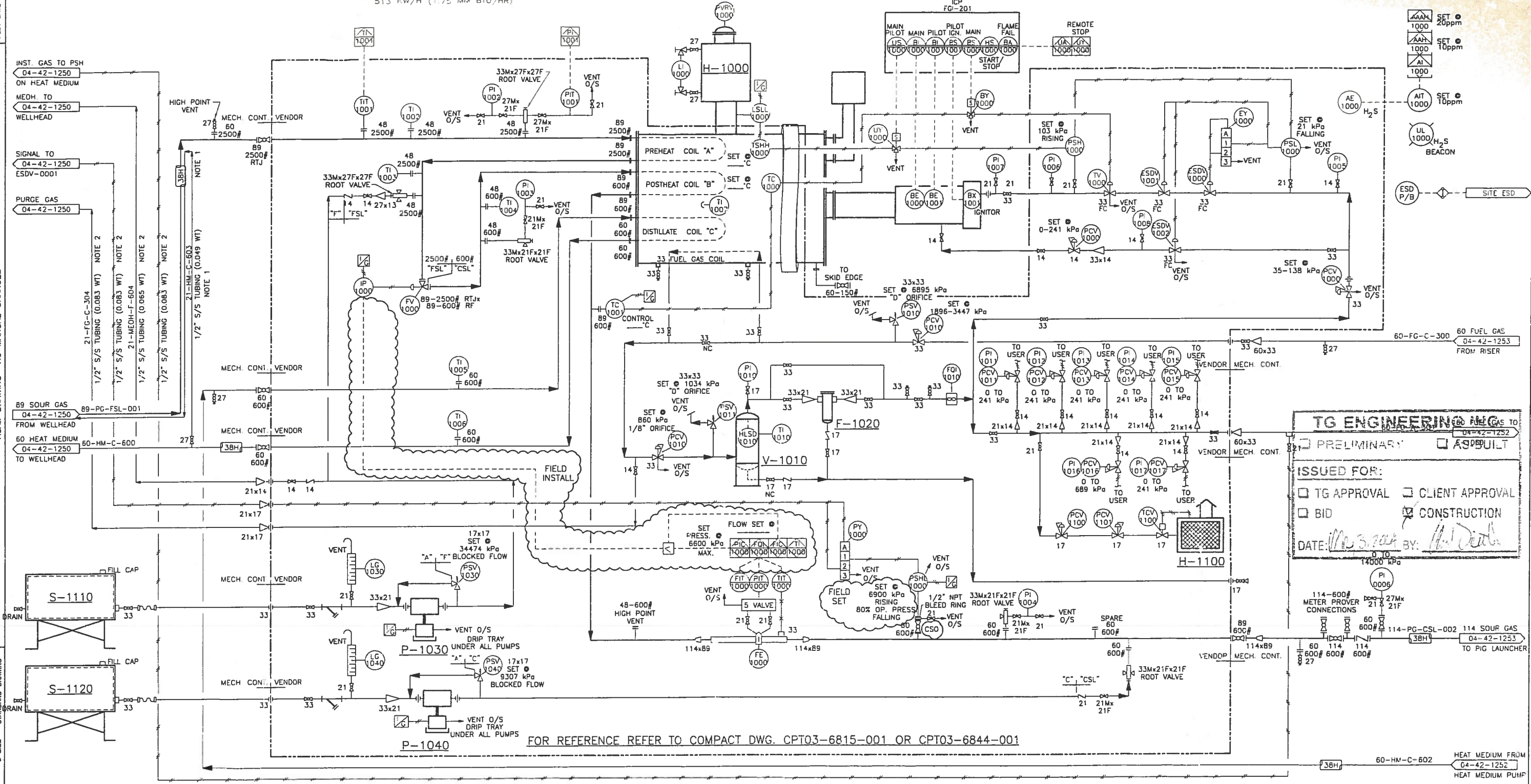
H-1000
LINEHEATER (SOUP)
 SIZE SHELL 1372mm O.D. x 6096mm S/S
 BATH SAVER 610mm O.D. x 2438mm S/S
 PREHEAT COIL EIGHT (8) PASSES OF 89mm SCH XXH, 2500# RTJ CONNECTIONS
 REHEAT COIL SIX (6) PASSES OF 89mm SCH 80, 600# RF CONNECTIONS
 DISTILLATE HEAT COIL TEN (10) PASSES 80mm SCH 20, 600# RF CONNECTIONS
 513 kW/H (1.75 MM BTU/HR)

V-1010
FUEL GAS SCRUBBER (SWEET)
 SIZE 273mm O.D. x 762mm S/S
 DESIGN PRESSURE 1965 kPa @ 38°C
 1.6mm, RT-3 (SPOT) X-RAY

F-1020
HEADLINE COALESCING FILTER
 MODEL 370 AP
 21 FNPT CONNECTIONS c/w
 70C COALESCING ELEMENT

P-1030/1040
METHANOL/CORROSION INHIBITOR PUMPS
 MAKE TEXSTEAM 5113 LP
 CAPACITY 76.4 LITERS/DAY
 DISCHARGE PRESSURE 41359 kPa
 PLUNGER SIZE: 3/8"

H-1100
BUILDING HEATER
 MAKE THERMAT MODEL HA12 24
 RATE 12,000 BTU/HR SWEET NATURAL GAS
 c/w 12 VDC STARTING ELEMENT,
 TVC & THERMOSTAT, REGULATORS
 PROTECTIVE GRILL AND VENT HOOD



TG ENGINEERING INC.
 PRELIMINARY AS BUILT
 ISSUED FOR:
 TG APPROVAL CLIENT APPROVAL
 BID CONSTRUCTION
 DATE: *12/3/04* BY: *H. D. D.*

FOR REFERENCE REFER TO COMPACT DWG. CPT03-6815-001 OR CPT03-6844-001

- NOTES:**
- CONTRACTOR TO SUPPLY AND INSTALL HEAT TRACE TUBING BENEATH INSULATION.
 - TO BE INSTALLED ON CABLE TRAY
- PIPING SPECIFICATION LEGEND:**
 "A" 150 ANSI, SWEET SERVICE
 "C" 600 ANSI, SWEET SERVICE
 "CSL" 600 ANSI, LOW TEMP, SOUR SERVICE
 "F" 2500 ANSI, SWEET SERVICE
 "FSL" 2500 ANSI, LOW TEMP, SOUR SERVICE

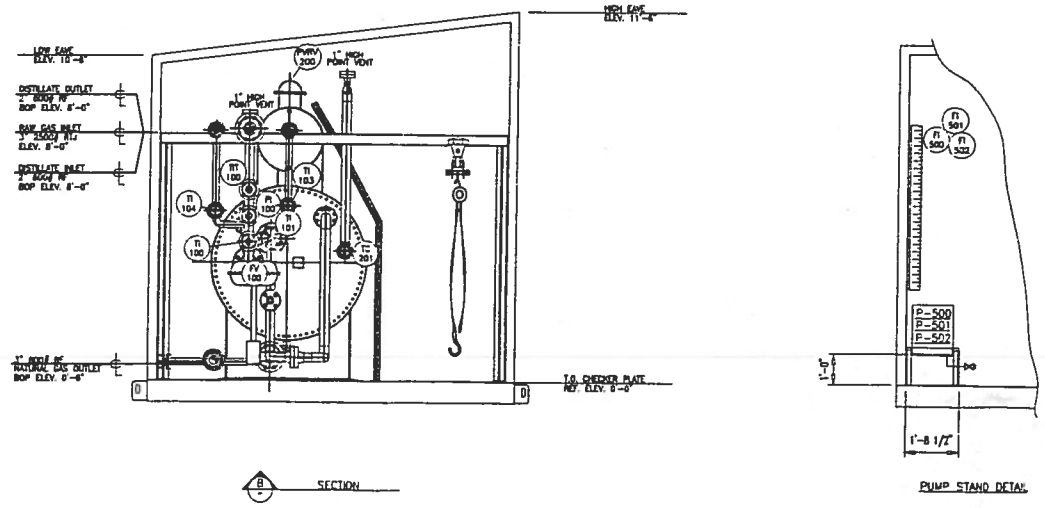
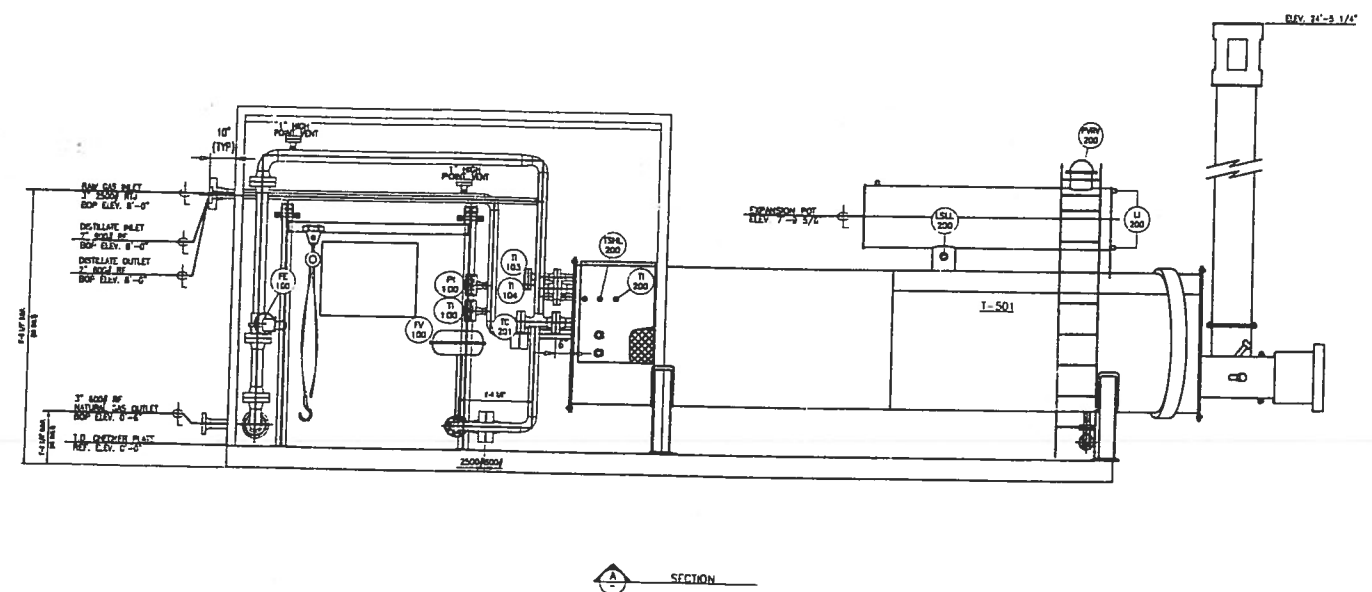
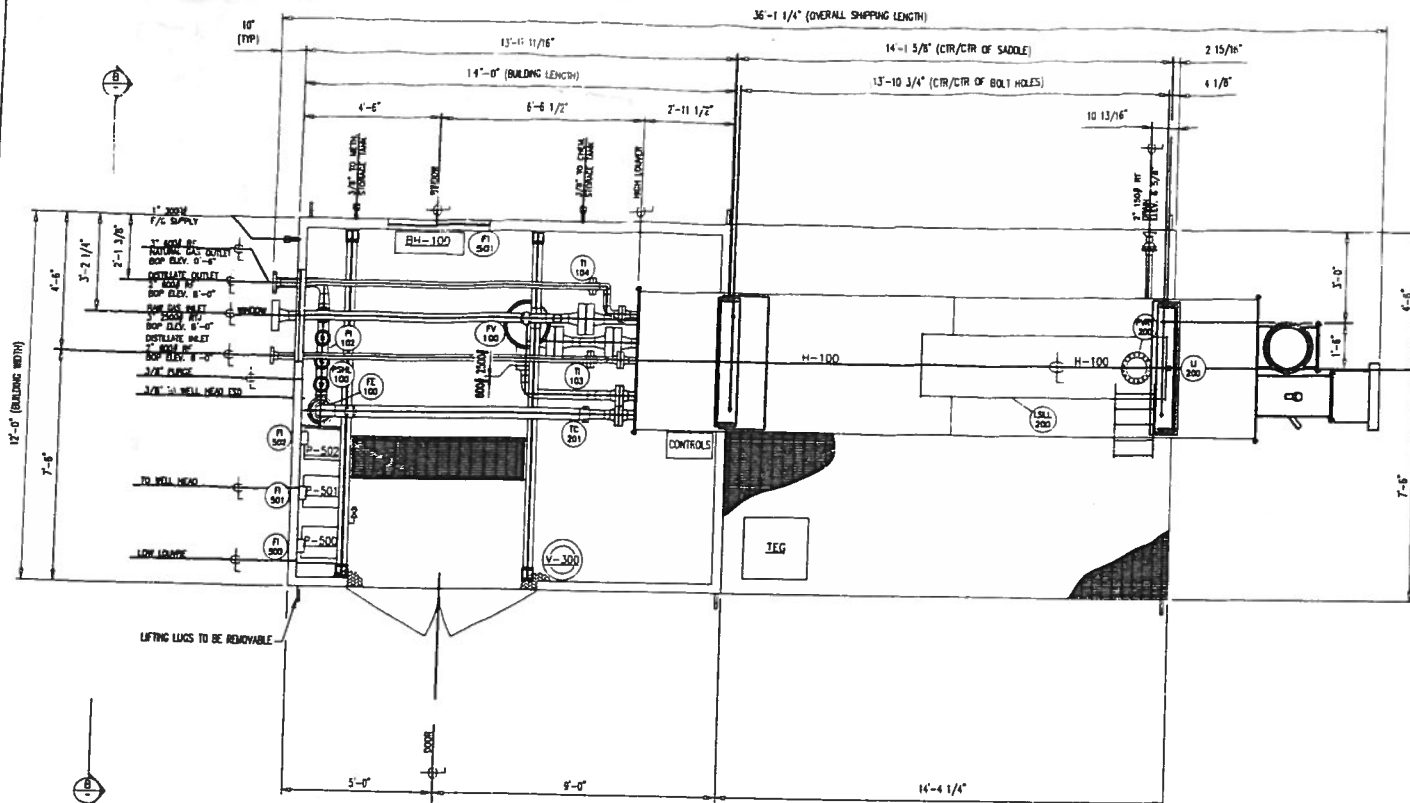
PROFESSIONAL ENGINEER
PERMIT TO PRACTICE
TG ENGINEERING INC.
 Signature _____
 Date _____
PERMIT NUMBER: P 5346
 The Association of Professional Engineers
 Geologists and Geophysicists of Alberta

CNRL
 WAPITI - ELMWORTH
 10-36-68-09 W6M
 LINEHEATER
 P&ID

SCALE(11"=17'): -
 SCALE(0"=SIZE): -
 CAD No: 04421251
 DRAWING NUMBER: 04-42-1251
 REV: 0
 TG ENG. DWG NUMBER

REV	DESCRIPTION OF CHANGE	DATE	BY	CHK	ENG.
0	ISSUED FOR CONSTRUCTION	04-04-26	CD		
A	ISSUED FOR APPROVAL	04-03-25	CD		

DRAWING NUMBER	DRAWING TITLE
	REFERENCE DRAWINGS



- 1. CUSTOMER NOTES:**
- a) THREE (3) UNITS REQUIRED FOR SOAR SERVICE
 - b) CUSTOMER P.O. T.B.A.
- 2. MATERIAL NOTES:**
- a) MTR'S ARE REQUIRED FOR ALL PRESSURE CONTAINING MATERIALS
 - b) MATERIAL SPECIFICATION 150# ANSI (INSTRUMENT GAS & RELIEF)
 - PIPES: 1/2" - 1" SCH 80 - THRD SA106 Gr. B
 - FITTINGS: 1/2" - 1" 3000# - NPT SA105
 - c) MATERIAL SPECIFICATION 600# ANSI
 - PIPE: 1/2" - 2" SCH 160 - BW/THRD SA106 Gr. B
 - PIPE: 2" - 6" SCH 80 - BW SA106 Gr. B
 - FLANGES: 2" - 6" 600# RFWN SA105 Gr. M (SCH 160 BORE)
 - FLANGES: 3" 600# RFWN SA105 Gr. M (SCH 80 BORE)
 - FITTINGS: 1/2" - 1" 600# NPT SA105
 - 2" SCH 160 BW SA234 Gr. WPB
 - 2" SCH 80 BW SA234 Gr. WPB
 - d) MATERIAL SPECIFICATION 2500# ANSI
 - PIPES: 1/2" - 1" SCH 160 - THRD SA106 Gr. B
 - PIPE: 3" SCH XXH - BW/THRD SA105 Gr. E
 - FLANGES: 3" 2500# RTJ SA105 Gr. M (SCH XXH BORE)
 - FITTINGS: 1/2" - 1" 8000# NPT SA105
 - 3" SCH XXH BW SA234 Gr. WPB
 - CL 2500 SA234 Gr. WPB
 - BOLTING: SA193 Gr. B7M STUDS c/w SA194 Gr. 2HM NUTS (CAD PLATED) 316 S.S. RTJ
 - e) INSTRUMENT TUBING (FUEL GAS):
 - TUBING: 1/4" - 3/8" SMLS 0.035" WT C.S. ELECTROGALVANIZED
 - FITTINGS: 1/4" - 3/8" C.S. CADMIUM PLATED
 - f) INSTRUMENT TUBING (PROCESS):
 - TUBING: 1/4" - 3/8" ANNEALED SMLS 0.035" WT 316 S.S.
 - TUBING: 1/2" - 3/8" ANNEALED SMLS 0.049" WT 316 S.S.
 - FITTINGS: 1/4" - 1/2" 316 S.S. RTJ
 - g) MATERIAL SUBSTITUTION: COMPACT RESERVES THE RIGHT TO SUBSTITUTE MATERIAL AS NOTED:
 - PIPE: SA106 Gr. E TO SA133 Gr. E
 - FORGINGS: SA105 TO SA105 Gr. M TO SA350 Gr. LF2
 - WELD FITTINGS: SA234 Gr. WPB TO SA420 Gr. WPB
 - STUDS: SA193 Gr. B7M TO SA320 Gr. L7M
 - NUTS: SA194 Gr. 2HM TO SA194 Gr. 7H
 - h) TAPERBORED BUTTWELD FITTINGS MAY REQUIRE PARTIAL ASME/ANSI B16.9 COMPLIANCE PER PARA. 1.3 AND 4.4.
- 3. NDE NOTES:**
- a) RT: RADIOGRAPHY ON 100% OF ALL BUTTWELDS INTERPRETED TO DEVON SPEC. 7.006 FOR SOUR SERVICE PIPING, CLAUSE 4.3.2.
 - b) MT: ON ALL PROCESS PIPING "O-LET WELDS, AFTER PWHIT
 - c) UT: NONE
 - d) PWHIT: YES, WELDED PIPING AND LINEHEATER PROCESS COILS
 - e) HT: ONE SET OF TESTS PER WELDER, PER WPS USED
 - f) DESIGN: CLASS 150# PIPING: 280 PSIG @ -20/200°F + 1/8" CA
 - DESIGN: CLASS 800# PIPING: 1350 PSIG @ -20/200°F + 1/8" CA
 - DESIGN: CLASS 2500# PIPING: 5000 PSIG @ -20/200°F + 1/8" CA
 - g) HYDRO (CLASS 150#): TO ASME B31.3 c/w AFFIDAVIT @ 450 PSIG
 - HYDRO (CLASS 800#): TO ASME B31.3 c/w AFFIDAVIT @ 3350 PSIG
 - HYDRO (CLASS 2500#): TO ASME B31.3 c/w AFFIDAVIT @ 7500 PSIG
- 4. PAINT AND COATING SPECIFICATIONS:**
- EXTERNAL SURFACE PREP: SSPC-SP7
 - INTERNAL SURFACE PREP: NONE
 - PRIME: ONE (1) SHOP COAT OF 1.5 - 2.0 MILS 752 DEVOE OR EQUAL
 - FINISH PAINT: ONE (1) SHOP COAT OF 1.5 - 2.0 MILS MARBEC ENAMEL 1111 OR EQUAL
 - FINISH COLOR: RUSTOLEUM 1287- FOREST GREEN (STRUCTURAL)
 - FINISH COLOR: RUSTOLEUM 806- SILVER GREY (PIPING AND VESSEL)
 - INTERNAL COATING: NONE
- 5. BUILDING DESCRIPTION:**
- SELF FRAMING GABLE STYLE ROOF
 - 12'-0" WIDE x 14'-0" LG x 11'-6" LOW EAVE HEIGHT
 - 22 GAUGE GALVANIZED EXTERIOR
 - 24 GAUGE ALUMINUM LINER
 - R12 INSULATION IN WALLS AND ROOF
 - 4.0 mil VAPOUR BARRIER
 - ONE (1) 6'-0" x 7'-0" INSULATED STEEL DOUBLE DOOR c/w HNG. PANIC HARDWARE, CHECKCHAM, LOCKSET, CANOPY AND WINDOW
 - TWO (2) 48" x 36" DOUBLE GLAZED SLIDING WINDOW c/w LOCK
 - TWO (1) 12" x 12" ADJUSTABLE LOUVERES.
- 6. SHIPPING DIMENSIONS:**
- 12'-0" WIDE x 12'-8" HIGH x 35'-0" LG
 - TOTAL APPROXIMATE SHIPPING WEIGHT: 28,700 LBS
- 7. INSULATION:**
- 2" THK FOAM URETHANE INSULATION REQUIRED UNDER BUILDING
 - 2" THK PIREGLASS INSULATION ON HEATER SHELL OUTSIDE BUILDING

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GENERAL NOTES	NO.	DATE	REVISION	DRW.	CHK.	APP.
	A	03/06/23	ISSUED FOR APPROVAL	TR	PE	
	O	03/08/01	ISSUED FOR CONSTRUCTION	TR		

DESIGN DATA

-10-36-68-09 WGM



CLIENT:	DEVON CANADA LTD. c/o TG ENGINEERING LTD.		
PROJECT:	ELM WORTH FIELD DEVELOPMENT 1.75 MM BTU/HR SOUR LINEHEATER PIPING LAYOUT AND SECTIONS		
SCALE:	JOB No:	DWG No:	R.V.:
3/8" = 1"	03-6844	CPT03-6844-100	0

MATERIAL SHOWN FOR ONE (1) UNIT ONLY - THREE (3) UNITS REQUIRED