

REV	DESCRIPTION	BY	APP DATE
AS SHOWN		ML	11-98
AS SHOWN	F.L. CONN. CALVITA BURNER W/MT. P.L.C. ADDED	ML	12-03
AS SHOWN		ML	07-13
AS SHOWN		ML	07-13
AS SHOWN		ML	07-16
AS SHOWN		ML	07-25

DWN BY: ROCK L DATE: 06-10-21 SCALE: NTS  
 APP BY: DATE: 06-10-21  
 MECHANICAL FLOWSHEET FOR SOUR GLYCOL DEHYDRATION UNIT  
 CUSTOMER: CANNON NATURAL RESOURCES  
 SHOP ORDER: 94-0668 TAG No. 87-4/7/8 CUST. No. 177028/29/31

WEITS-HALT FABRICATION & CONSTRUCTION LTD.

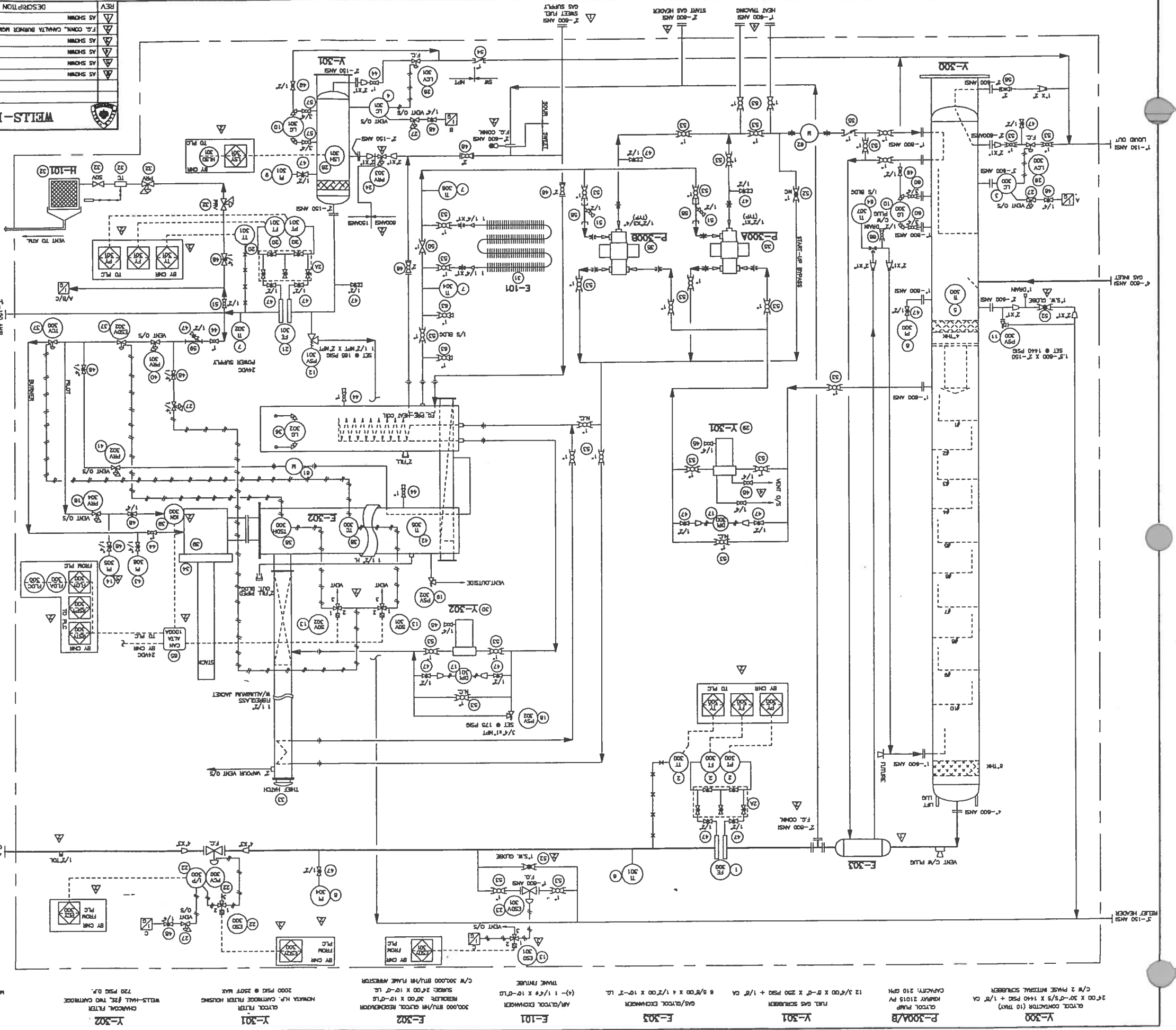
- THREE (3) UNITS REQ'D
- UNIT #8 87-9 R37P01
  - UNIT #9 87-9 R37P02
  - UNIT #7 87-9 R37P03
- UNIT IS FOR SOUR SERVICE.
  - ALL PIPING IN ACCORDANCE WITH ANSI B31.3 RETRYER PIPING CODE, LATEST EDITION.
  - PROCESS PIPING: (FULL 100% RADIOGRAPHY, STRESS RELIEF WELDED PIPE, 1/8" CA).
  - 1440 PSIG D.P., UNLESS NOTED.
    - OVER 2" WELDED: ROOMER FLAMERS SA-105H W/ SCL40 (2" TO BE SCL40)
    - SA-105-B PIPE W/ SA-234-WPB FITTINGS.
    - SA-105-B PIPE W/ SA-105H 3000# S.W. FITTINGS.
    - 1/2" & UNDER WELDED: ROOMER FLAMERS SA-105H W/ SCL40 (2" TO BE SCL40)
    - SA-105-B PIPE W/ SA-234-WPB FITTINGS.
    - SA-105-B PIPE W/ SA-105H 3000# S.W. FITTINGS.
    - 1/2" & UNDER WELDED: ROOMER FLAMERS SA-105H W/ SCL40 (2" TO BE SCL40)
    - SA-105-B PIPE W/ SA-234-WPB FITTINGS.
    - SA-105-B PIPE W/ SA-105H 3000# S.W. FITTINGS.
  - FUEL GAS PIPING: (100% RADIOGRAPHY, 1/8" CA).
    - SA-105 3000# WPT FITTINGS.
    - SA-234-WPB FITTINGS.
    - SA-105 3000# WPT FITTINGS.
  - OUTLET FROM SCRUBBER (ROOMERS)
    - SA-105 3000# WPT FITTINGS.
    - SA-234-WPB FITTINGS.
    - SA-105 3000# WPT FITTINGS.
  - OVER 2" WELDED: ROOMER FLAMERS SA-105H W/ SCL40 (2" TO BE SCL40)
  - SA-105-B PIPE W/ SA-234-WPB FITTINGS.
  - SA-105-B PIPE W/ SA-105H 3000# S.W. FITTINGS.
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  - SA-105-B PIPE W/ SA-105H 3000# S.W. FITTINGS.
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  - SA-105-B PIPE W/ SA-234-WPB FITTINGS.
  - SA-105-B PIPE W/ SA-105H 3000# S.W. FITTINGS.

NOTE:

- UNIT IS FOR SOUR SERVICE.
- ALL PIPING IN ACCORDANCE WITH ANSI B31.3 RETRYER PIPING CODE, LATEST EDITION.
- PROCESS PIPING: (FULL 100% RADIOGRAPHY, STRESS RELIEF WELDED PIPE, 1/8" CA).
- 1440 PSIG D.P., UNLESS NOTED.
  - OVER 2" WELDED: ROOMER FLAMERS SA-105H W/ SCL40 (2" TO BE SCL40)
  - SA-105-B PIPE W/ SA-234-WPB FITTINGS.
  - SA-105-B PIPE W/ SA-105H 3000# S.W. FITTINGS.
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  - SA-105-B PIPE W/ SA-234-WPB FITTINGS.
  - SA-105-B PIPE W/ SA-105H 3000# S.W. FITTINGS.
- FUEL GAS PIPING: (100% RADIOGRAPHY, 1/8" CA).
  - SA-105 3000# WPT FITTINGS.
  - SA-234-WPB FITTINGS.
  - SA-105 3000# WPT FITTINGS.
- OUTLET FROM SCRUBBER (ROOMERS)
  - SA-105 3000# WPT FITTINGS.
  - SA-234-WPB FITTINGS.
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- 1/2" & UNDER WELDED: ROOMER FLAMERS SA-105H W/ SCL40 (2" TO BE SCL40)
- SA-105-B PIPE W/ SA-234-WPB FITTINGS.
- SA-105-B PIPE W/ SA-105H 3000# S.W. FITTINGS.

LEGEND:

- BALL VALVE
- GLOBE VALVE
- GATE VALVE
- HECKLE VALVE
- CHECK VALVE
- SOCKET WELDED VALVE
- FLANGED VALVE
- TUBING
- THROATED VALVE
- BACK WELDED VALVE



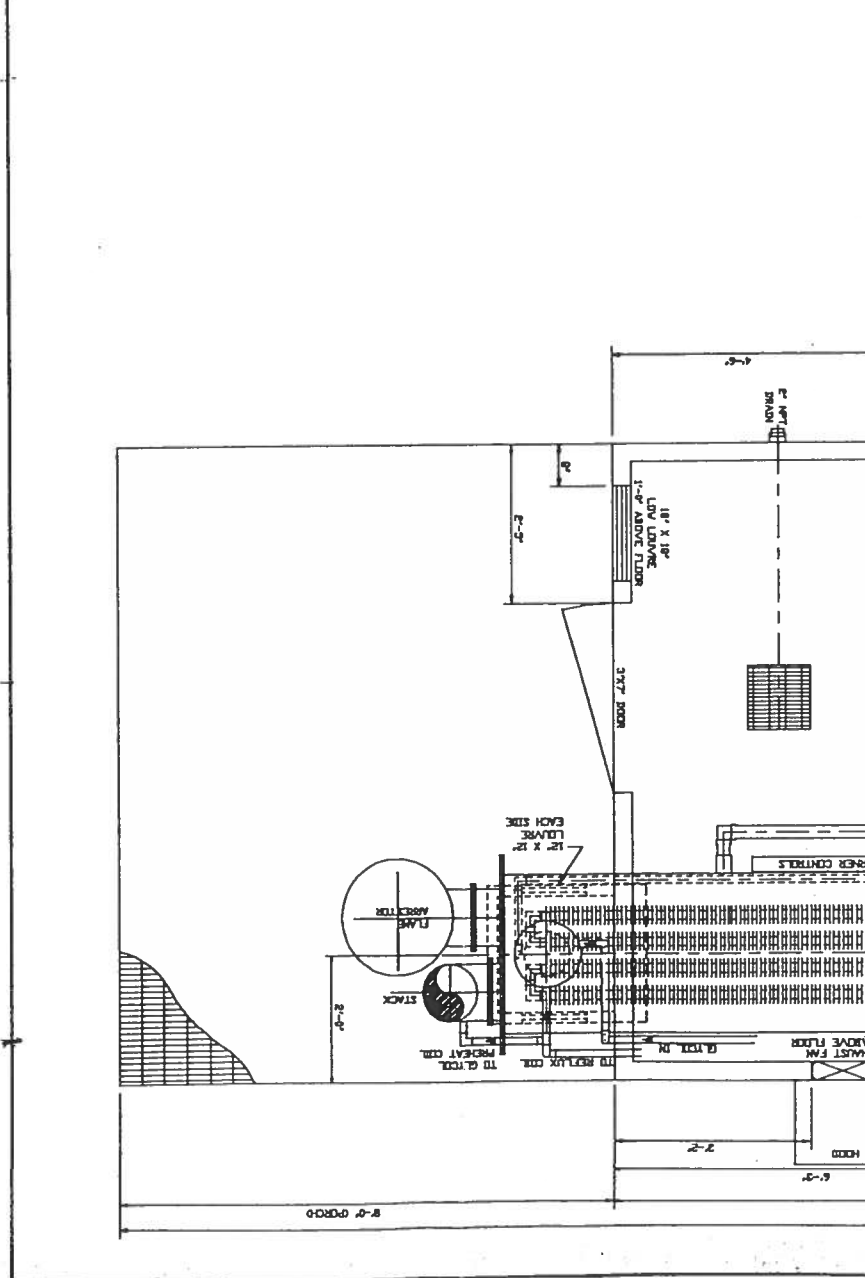
H-101 BUILDING HEATER MODEL PER 12 X 24, 120 WAC CAPACITY: 12,000 BTU/H  
 Y-301 GLYCOL FILTER 2000 PSIG @ 250T WAK  
 E-101 AIR/GLYCOL EXCHANGER 300,000 BTU/H AIR GLYCOL RECOVERY RESERVE: 30'00 X 10'-0" SIZES: 24'00 X 10'-0" TRAPE FRIMBE  
 Y-302 GLYCOL FILTER 2000 PSIG @ 250T WAK  
 E-301 FUEL GAS SCRUBBER 12.5'00 X 8'-0" X 2'00 X 1/8" CA GAS/GLYCOL EXCHANGER  
 P-300A/B GLYCOL PUMP 12.5'00 X 8'-0" X 2'00 X 1/8" CA CAPACITY: 210 GPM  
 Y-300 GLYCOL CONDENSER (10 TRM) 24'00 X 30'-0" X 5' X 1440 PSIG + 1/8" CA C/W 2 PHASE INTERNAL SCRUBBER

DATE: 96-11-21	SCALE: 3/4" = 1'-0"	DATE: 96-11-27	DWG#: 29-A-066A-3
APP. BY: [Signature]	DATE: 96-11-21	DATE: 96-11-27	DWG#: 29-A-066A-3
DESCR: PIPING & EQUIPMENT LAYOUT	SCALE: 3/4" = 1'-0"	DATE: 96-11-27	DWG#: 29-A-066A-3
REV: AS SHOWN	BY: RL	DATE: 11-27-96	
REV: AS SHOWN	BY: MJA	DATE: 11-27-96	
REV: AS SHOWN	BY: RL	DATE: 11-27-96	
REV: AS SHOWN	BY: RL	DATE: 11-27-96	
REV: AS SHOWN	BY: RL	DATE: 11-27-96	

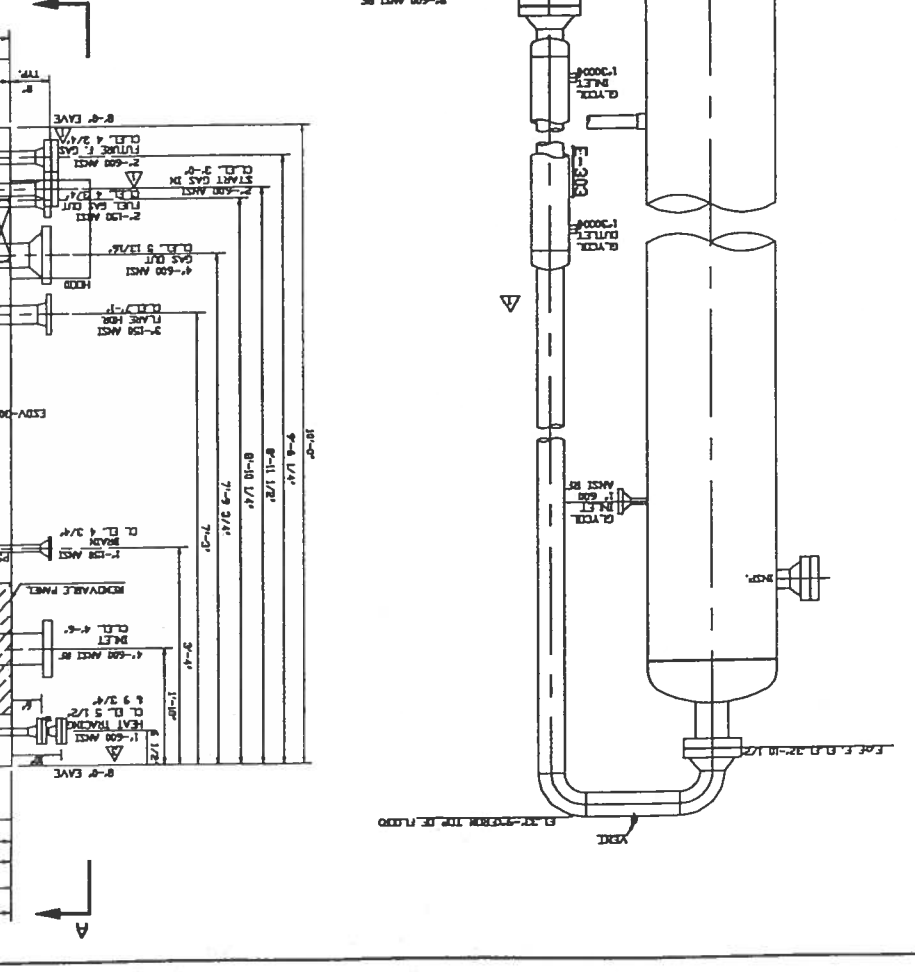
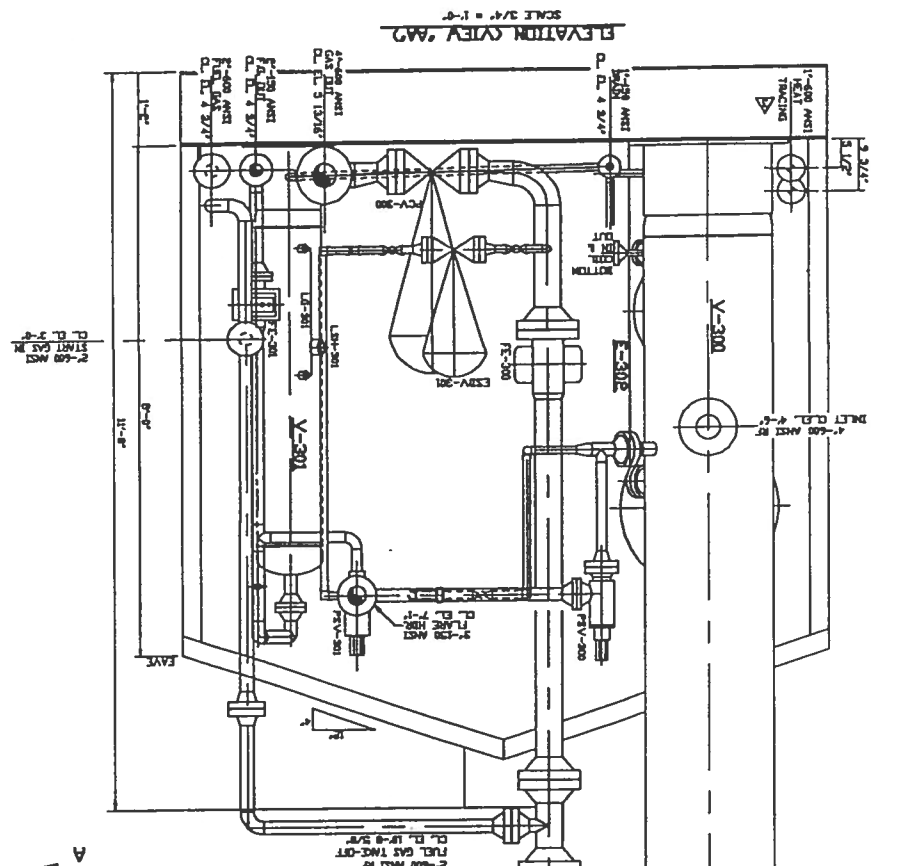
WELLS-HALT FABRICATION & CONSTRUCTION LTD. CUSTOMER: CAMBIA NATURAL RESOURCES TAG No. SHOP ORDER: 96-066A

UNIT #	DATE	DESCRIPTION
UNIT # 87-4	11-27-96	REVISION
UNIT # 87-4	11-27-96	REVISION
UNIT # 87-4	11-27-96	REVISION
UNIT # 87-4	11-27-96	REVISION
UNIT # 87-4	11-27-96	REVISION

THREE UNITS REQUIRED



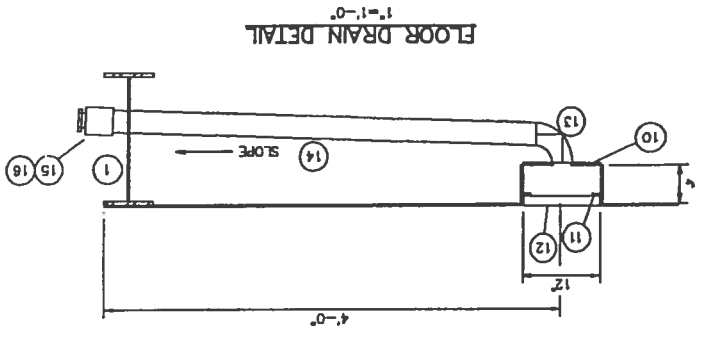
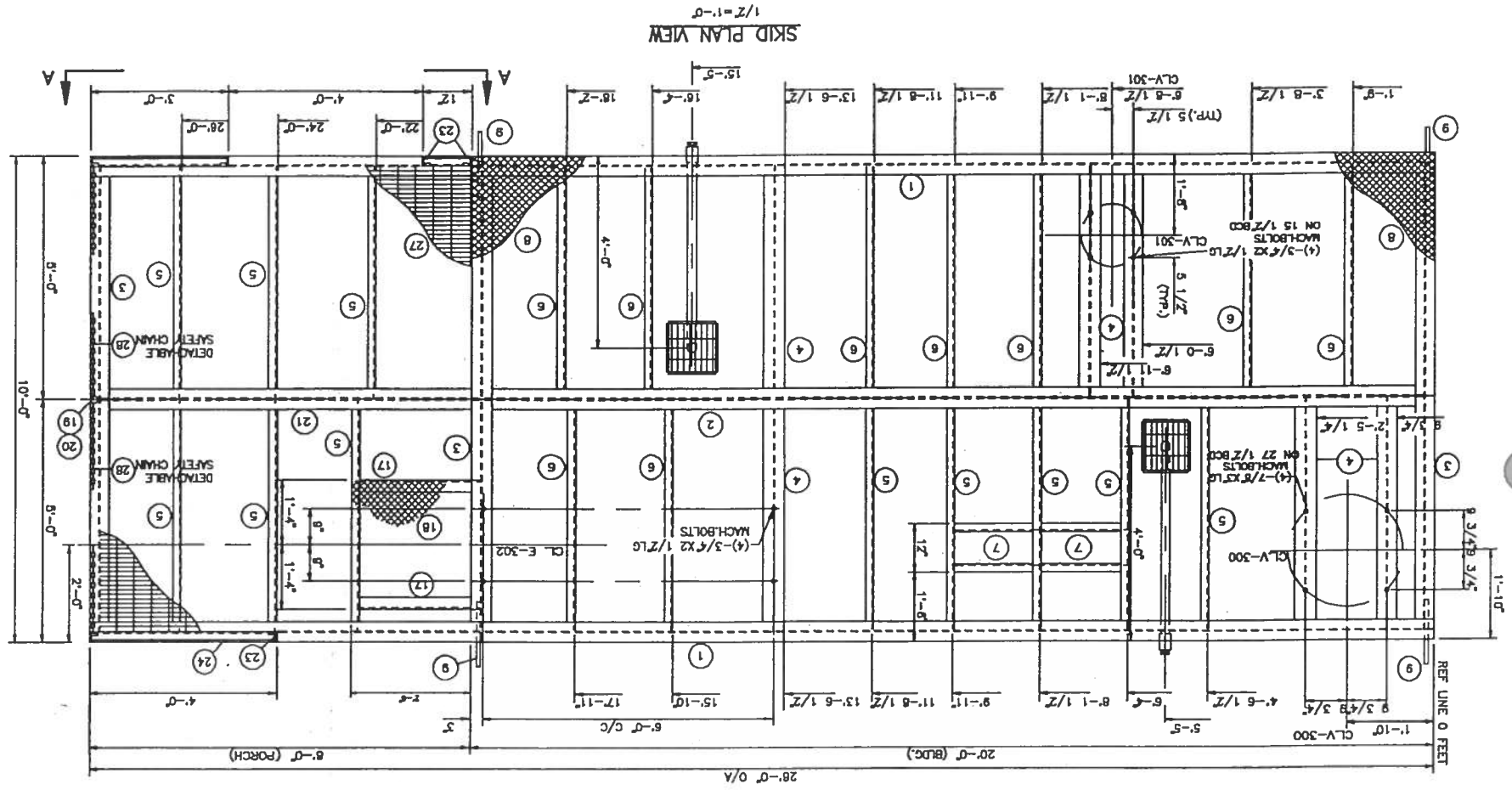
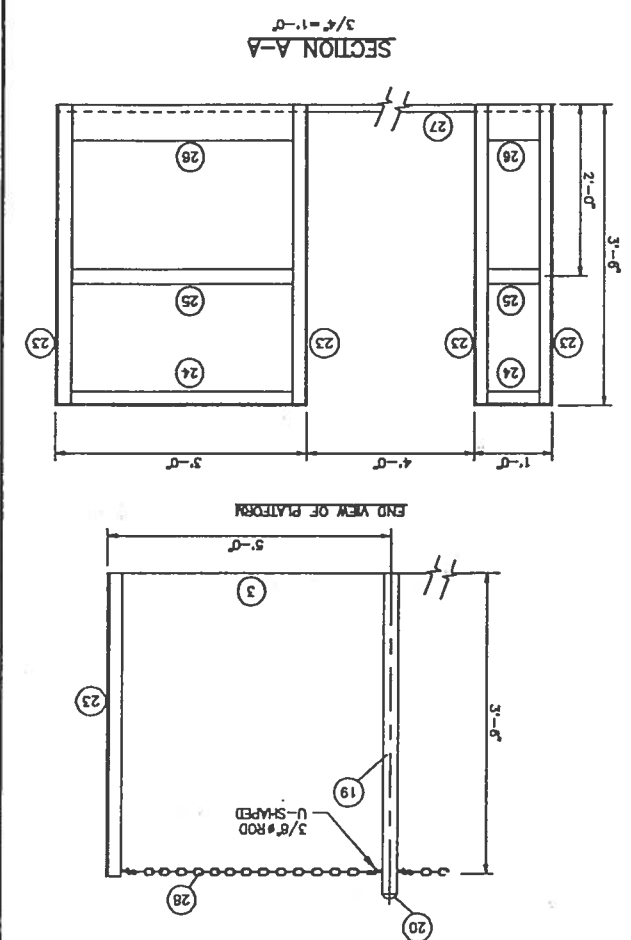
- NOTES:
- ONE (1) 10'-0" WIDE X 20'-0" LONG X 8'-0" LOW BAY W/ 4:12 SLOPE WITH 22 GAUGE PREPARED STEEL (SURE WHITE W/ NATURAL #721 BLUE TRIM & DOORS) EXTERIOR: 22 GAUGE PREPARED STEEL (SURE WHITE W/ NATURAL #721 BLUE TRIM & DOORS) INTERIOR: #12 REINFORCING INSULATION (R8 FOR ENCLOSURE), 4 MIL WHOLE BARBER C/W 24 GAUGE FLUENT ALUMINUM DOORS: TWO (2) 3'X7' R8 INSULATED STEEL DOORS C/W PAVIC HARDWARE, LOCKSET, WINDOWS: TWO (2) 36" X 36" DOUBLE GLAZED SLIDING WINDOWS C/W SCREEN, VENTILATION: ONE (1) 12" X 12" MANUALLY ADJUSTED HIGH LINTELS C/W BROSCHEK, ONE (1) 12" X 12" MANUALLY ADJUSTED LOW LINTELS C/W BROSCHEK, ONE (1) 17'-0" LID ROOF VENT C/W CHAIN OPERATOR, BROSCHEK, 8" THROAT & WEATHER CAP, TWO (2) EXPANSION ROOF WALL EXHAUST FAN, 12 AC/Hr, 80/1/120 W/C C/W SHUTTERS, SCREEN & OUTSIDE HOOD, OTHER: REMOVABLE PANEL CIRCUITS AND FLASHING, TWO (2) 12" X 12" MANUALLY ADJUSTED LOWERS C/W BROSCHEK IN EXCHANGER ENCLOSURE.
  - TOTAL ESTIMATED PACKAGE WEIGHT = 16,000 lbs. (8182 kg)
  - OVERALL SHIPPING DIMENSIONS: HEIGHT = 11'-0" (FROM BOTTOM OF SKID) WIDTH = 12'-0" LENGTH = 28'-0"
  - ALL DIMENSIONS ARE FROM TOP OF STEEL.
  - DESIGN & CONSTRUCTION OF BUILDING TO BE APPROVED BY REGISTERED PROFESSIONAL ENGINEER.







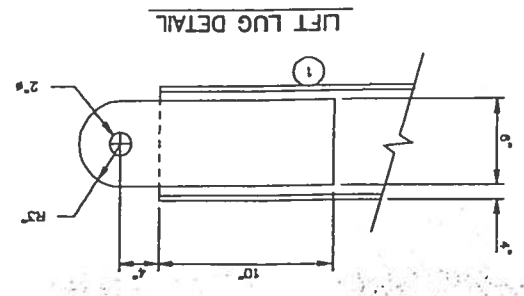
CHK'D BY:	DATE:	APP. BY:	DATE:	WELLS-HALL FABRICATION & CONSTRUCTION LTD.
DESCRIPTION	BY	APP	DATE	CUSTOMER: CANADIAN NATURAL RESOURCES
REV				SHOP ORDER: 96-8667 TAG No.
				CUST. No. F97P023-033
				SCALE: AS SHOWN
				DWG#: 40-B-8667-0



ITEM	QTY	DESCRIPTION	MATERIAL	WEIGHT
18	1	1/2" SCH 40 SMLS PIPE X 3'-9" LG.	SA-106-B	10 LBS
19	1	1/2" SCH 40 B/W PIPE CAP	SA-234-WPB	1 LB
20	1	1/2" SCH 40 B/W PIPE CAP	SA-234-WPB	1 LB
21	1	W14 X 22# X 7'-11 3/4" LG.	44W	176 LBS
22	2	W14 X 22# X 28'-0" LG.	44W	1232 LBS
23	6	HANDRAIL POST ANGLE: 2" X 2" X 1/4" THK X 3'-6" LG.	A-36	78 LBS
24	1	HANDRAIL ANGLE: 2" X 2" X 1/4" THK X 8'-0" LG. (CUT TO SUIT)	A-36	26 LBS
25	1	HANDRAIL: 1/4" THK X 2" FB X 8'-0" LG. (CUT TO SUIT)	A-36	14 LBS
26	1	PLATE: 1/4" THK X 8" FB X 8'-0" LG. (CUT TO SUIT)	A-36	41 LBS
27	1	RG. 19-4 DB GRATING, 1" X 1/8" FB X 8'-0" W X 10'-0" LG.	44W	400 LBS
28	1	CHAIN (CUT TO SUIT)		
1	1	W14 X 22# X 28'-0" LG.	44W	1232 LBS
2	1	W14 X 22# X 19'-6" 3/4" LG.	44W	440 LBS
3	3	W14 X 22# X 8'-6" 3/4" LG.	44W	630 LBS
4	6	W14 X 22# X 4'-9" 1/4" LG.	44W	628 LBS
5	11	C4 X 5.4# X 4'-9" 1/4" LG.	44W	430 LBS
6	8	C4 X 5.4# X 4'-9" 1/4" LG.	44W	231 LBS
7	4	ANGLE: 2" X 2" X 1/4" THK X 1'-9" 1/4" LG.	A-36	24 LBS
8	8	1/4" THK CHECKERPLATE X 10'-0" X 20'-0" LG.	44W	2000 LBS
9	8	LIFT LUG: 3/4" THK X 6" X 17" LG. (SEE DETAIL)	A-36	66 LBS
10	2	1/4" THK X 20" X 20" PLATE (BEND AS SHOWN)	A-36	56 LBS
11	1	1/8" THK X 1" FB X 8'-0" LG. (CUT TO SUIT)	A-36	2 LBS
12	2	RG. 19-4 DB GRATING, 1" X 1/8" FB X 11 1/2" SQUARE	44W	10 LBS
13	2	SCH 40 LR 90° BW ELB.	SA-234-WPB	2 LBS
14	2	SCH 40 ERW PIPE X 3'-9" LG. (BOLECTO)	SA-53-B	24 LBS
15	2	Z-3000# FULL CPLG.	SA-105	2 LBS
16	2	Z-3000# HEX HEAD PLUG	SA-105	2 LBS
17	2	ANGLE: 3" X 3" X 1/4" THK X 2'-6" 1/4" LG.	A-36	24 LBS
18	1	1/4" THK CHECKERPLATE X 2'-6" X 2'-6" LG.	44W	50 LBS

\*QTY. SHOWN FOR ONE(1) UNIT. ELEVEN(11) UNITS REQ'D.

NOTES:  
 1. CHECKERPLATE SEAMS TO BE SEAL WELDED & STITCH WELDED AROUND PERIMETER.  
 2. 2" THK. SAFETYWAVE SPRAYED UNDER BOTTOM SIDE OF WHOLE SKID.  
 3. SANDBLAST TO SSPC-SP6; 1 S/C ZINC PHOSPHATE PRIMER; FINISH COAT AS PER P. & L.D.  
 4. SKID WEIGHT: 6500 LBS.



ITEM	TAG	QTY	DESCRIPTION
1	FE-300	1	4"-600ANSI RF DANIEL SENIOR FLANGNEK ORIFICE FITTING, SCH.80, NACE TRIM (RECONDITIONED) AGA FIG.3C METER RUN, 100% RADIOGRAPHY, P.W.H.T. C/W SEAL PLATE & ONE(1) ORIFICE PLATE, 2"Ø BORE, 316 SS
* 2	FT/PT/TT-300	1	BRISTOL #3508-30B-142-217-222-020-100 (* CUSTOMER SUPPLIED) TELETRANS SMART DP/P/T MULTIVARIABLE TRANSMITTER 0-15 to 0-300 IN H2O INPUT RANGE, 2000 PSIG STATIC PRESSURE 24V, RS-485 COMMUNICATION 1" MOUNTING BRACKET RTD ASSEMBLY W/ 100 OHM PLATINUM RTD SENSOR, XPROOF CONNECTION HEAD 1/2" X 3/4" X 4" 'U' LENGTH 316 SS THERMOWELL
2A		2	PGI 5 VALVE MANIFOLD #M-673-SDT, 316 SS, NACE (WELLS-HALL SUPPLIED)
3	LC-300	1	3"-600ANSI RF FISHER 2680 LEVEL CONTROLLER #2680A-268T, SNAP ACTING PVC VERTICAL DISPLACER, 1 7/8" X 12" LONG 6-30# SUPPLY
4	LC-301	1	2"NPT FISHER 2680 LEVEL CONTROLLER #2680A-268T, SNAP ACTING PVC VERTICAL DISPLACER, 1 7/8" X 12" LONG 6-30# SUPPLY
5	TI-300	1	3"Ø DIAL TREND MODEL 33120 TEMPERATURE INDICATOR X 1/2"NPT X 12"LG. STEM 0-250°F, DUAL SCALE 1/2"NPT X 3/4"NPT X 12"LG. 316 SS THERMOWELL
6	TI-301	1	3"Ø DIAL TREND MODEL 33040 TEMPERATURE INDICATOR X 1/2"NPT X 4"LG. STEM 0-250°F, DUAL SCALE 1/2"NPT X 3/4"NPT X 4"LG. 316 SS THERMOWELL
7	TI-302/306 TI-304	3	3"Ø DIAL TREND MODEL 33025 TEMPERATURE INDICATOR X 1/2"NPT X 2 1/2"LG. STEM 0-250°F, DUAL SCALE (TI-302/306) 50-300°F, DUAL SCALE (TI-304) 1/2"NPT X 3/4"NPT X 2 1/2"LG. 316 SS THERMOWELL
8	PI-300 <sup>1</sup> PI-304	2	4 1/2"Ø DIAL WIKA #233.34 PRESSURE INDICATOR X 1/2"NPT 0-1500 PSIG, DUAL SCALE
9	PI-301	1	4 1/2"Ø DIAL WIKA #233.34 PRESSURE INDICATOR X 1/2"NPT 0-300 PSIG, DUAL SCALE
10	LG-300 LG-301	2	REFLEX LEVEL GAUGE PENBERTHY MODEL #1RM9, 12 5/8" VISIBLE (1800 PSIG @ 100°F) 330J 3/4 NACE GAUGE VALVE

**SOUR DEHYDRATION PACKAGE No.97-6,7,9**

CUSTOMER: CANADIAN NATURAL RESOURCES  
SHOP ORDER: 96-8668 TAG No. CUST. No. F97P028/29/31

**BILL OF MATERIALS**

DWN.BY: RICK L. DATE: 96-10-21 SHEET: 1 OF 6  
APP.BY: DATE: 96-11-07 DWG#: 31-C-8668-0

REV	DESCRIPTION	BY	APP	DATE

ITEM	TAG	QTY	DESCRIPTION
11	PSV-300	1	1 1/2"-600ANSI RF INLET X 2"-150ANSI RF OUTLET RELIEF VALVE FARRIS MODEL 26FA13-120/S6 SET @ 1440 PSIG (NACE PRIMARY ZONE)
12	PSV-301	1	1 1/2"NPT INLET X 2"NPT OUTLET RELIEF VALVE FARRIS MODEL 2741U, INCONNEL SPRING, 0.398" ORIFICE SET @ 165 PSIG (NACE)
13	SOV-301/302 ESD-301	3	ASCO EF8320G200-24 3-WAY SOLENOID VALVE 24VDC, X.P., NORMALLY CLOSED
14	PI-305	1	2 1/2" DIAL WIKA #233.53 PRESSURE INDICATOR X 1/4"NPT, 0-20" W.C.
16		1	1/4"NPT FISHER 912 PRESSURE REGULATOR, 5" TO 10" W.C.
17	DPI-300 DPI-301	2	1/4"NPT MIDWEST DIFFERENTIAL PRESSURE INDICATOR 0-50 PSIG RANGE MODEL #120-SA-10-00, 316 SS
18	PSV-303	1	3/4"MNPT INLET X 1"NPT OUTLET RELIEF VALVE FARRIS MODEL 2740UL SET @ 175 PSIG
19	PSV-302	1	2"NPT OUTLET RELIEF VALVE WELLMARK MODEL W1392 12 oz.
20	FT/PT/TT-301	1	BRISTOL #3508-30B-142-217-222-020-100 (* CUSTOMER SUPPLIED) TELETRANS SMART DP/P/T MULTIVARIABLE TRANSMITTER 0-15 to 0-300 IN H2O INPUT RANGE, 2000 PSIG STATIC PRESSURE 24V, RS-485 COMMUNICATION 1" MOUNTING BRACKET RTD ASSEMBLY W/ 100 OHM PLATINUM RTD SENSOR, XPROOF CONNECTION HEAD 1/2" X 3/4" X 2 1/2" 'U' LENGTH 316 SS THERMOWELL
21	FE-301	1	2"-150ANSI RF DANIEL SENIOR FLANGNEK ORIFICE FITTING, SCH.40, STD. TRIM (RECONDITIONED) AGA FIG.3C METER RUN, 10% RADIOGRAPHY C/W SEAL PLATE & ONE(1) ORIFICE PLATE, 1" Ø BORE, 316 SS

**SOUR DEHYDRATION PACKAGE No.97-6,7,9**

CUSTOMER: CANADIAN NATURAL RESOURCES		TAG No.		CUST. No. F97P028/29/31	
SHOP ORDER: 96-8668		DATE: 96-10-21		DATE: 96-11-07	
DWN.BY: RICK L.		DATE: 96-10-21		DATE: 96-11-07	
APP.BY:		DATE: 96-11-07		DATE: 96-11-07	

**BILL OF MATERIALS**

AS SHOWN	EG	JAN.14 1997
AS SHOWN	M.L.O.	DEC.13 1996
AS SHOWN	M.L.O.	NOV.26 1996

REV	DESCRIPTION	BY	APP	DATE
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ITEM	TAG	QTY	DESCRIPTION
22	PCV-300	1	3"-600ANSI RF VALTEC MARK ONE CONTROL VALVE, NACE SIZE 100 ACTUATOR, AIR TO OPEN, FAIL CLOSED 316 SS TRIM, T/N 2.0, CV 78
			BETA IP2000 POSITIONER, X.P., 4-20ma INPUT, 6-30 PSI OUTPUT 24VDC IP2000 X.P. SOLENOID VALVE, MOUNTING & TUBING
23	ESDV-301	1	1"-600ANSI RF FISHER 'D' BODY CONTROL VALVE, NACE (RECONDITIONED) 657 DIRECT ACTING SIZE 30 ACTUATOR, FAIL OPEN 1/2" $\phi$ PORT 6-30# INPUT SIGNAL
24	PRV-303	1	1"NPT FISHER 627 REGULATOR STEEL BODY, SST TRIM, NYLON DISC * 3/8" $\phi$ PORT 70-150 PSIG SPRING, SET @ 140 PSIG
25		1	FISHER 546 I/P TRANSDUCER
26	LCV-300 LCV-301	2	1"NPT FISHER 128PROC CONTROL VALVE NITRONIC 50 TRIM (SOUR) AIR TO OPEN, SPRING TO CLOSE VALVE, FLOW UP 1/2" $\phi$ PORT 0-20 PSIG SUPPLY
27		4	1/4"NPT FISHER 67AFR REGULATOR INTERNAL FILTER & RELIEF, C/W VENTED BONNET 0-35 PSIG SPRING RANGE
28	LSH-301	1	2"NPT ELECTRIC LEVEL SWITCH MURPHY MODEL #L-1200 EXPLOSION PROOF, 24VDC, 1500 PSIG SWP
29	Y-301	1	H.P. GLYCOL PARTICULATE FILTER HOUSING NOWATA #1S2N200N1CNT, TWO CARTRIDGE FILTER, 2-1/4"NPT VENTS IN HEAD TWO(2)--25 MICRON FILTER ELEMENTS 2000 PSIG D.P. @ 250°F MAX.
30	Y-302	1	GLYCOL CARBON FILTER HOUSING WELLS-HALL #2E, TWO CARTRIDGE FILTER TWO(2)--ACTIVATED CARBON FILTER ELEMENTS 720 PSIG D.P. @ 250°F MAX.
<b>*QTY. SHOWN FOR ONE(1) UNIT; <del>THREE(3)</del> UNITS REQ'D.</b>			

**SOUR DEHYDRATION PACKAGE No. 97-6 to 97-9**

CUSTOMER: CANADIAN NATURAL RESOURCES

SHOP ORDER: 96-8668 TAG No. CUST. No. F97P028/29/31

**BILL OF MATERIALS**

DWN.BY: RICK L. DATE: 96-10-21 SHEET: 3 OF 6  
APP.BY: DATE: 96-11-07 DWG#: 31-C-8668-4

REV	DESCRIPTION	BY	APP	DATE
4	AS SHOWN	RL		97 03-24
3	AS SHOWN	RL		97 01-13
2	AS PER CUSTOMER	M.Lo		96 12-02
1	AS SHOWN	RL		96 11-04



ITEM	TAG	QTY	DESCRIPTION
31	E-101	1	AIR/GLYCOL EXCHANGER (4) PASSES - 1 1/4"Ø X 10'-0"LG. TRANE FIN TUBE
32	H-101	1	12,000 BTU/HR HEATER CATADYNE MODEL #BX 12 X 24 SSOV, NATURAL GAS REGULATOR, FISHER 912 REGULATOR, TEMPERATURE CONTROL GRILL, VENT HOOD, 120 VAC
33		1	JAYCO THIEF HATCH, NOMINAL 8" ROUND 4 oz. PRESSURE, 0.4 oz. VACUUM, ALL ALUMINIUM CONSTRUCTION
34	1	1	WELLS-HALL STANDARD FLAME ARRESTOR (36-C-8666-0) 10 3/4" FBX. CONN. X 300,000 BTU/HR, 2" VIEW PORT SURLITE BURNER/ CANALTA PILOT ASSEMBLY
35	P-300A/B	2	GLYCOL PUMP KIMRAY #21015 PV MAX CAPACITY 210 GPH, 1500 PSIG MAX. W.P.
36	LG-302	1	PENBERTHY TUBULAR GAUGE GLASS W/ MESH GUARD N7B GAUGE VALVE (3/4"NPT)
37	ESDV-302	2	1"NPT KIMRAY #112-SMT-ADA FUEL VALVE CAST IRON CONSTRUCTION, 40 PSIG MAX. W.P.
38	TC-300	2	KIMRAY #T-12-DA THERMOSTAT -30F TO 400F TEMP. RANGE, CAST IRON, 4000 PSIG MAX W.P.
38A	TSDH-300	1	1"NPT SS-t2 SEPARABLE SOCKET T.W., CARBON STEEL (400F MAX.) CCS DUAL SNAP SERIES #6900-TE-14
39	IGN-300	1	CANLITE MODEL 500-3.0 IGNITER, CSA APPROVED CLASS 1 DIV.2, SINGLE 36" INSERTION ELECTRONIC IGNITER, SS PILOT BURNER, SS CONDUIT AND THERMOCOUPLE, 3"NPT FLANGE KIT
39A	IGN-300	1	CANLITE MODEL CL-501-3.0 PILOT/FF/IGN. ASS'Y, CSA APPROVED CLASS 1 DIV.2, SINGLE 36" INSERT. * (UNIT #4,10,11) ELECTRONIC IGNITER, SS PILOT BURNER, SS CONDUIT AND THERMOCOUPLE, 3"NPT FLANGE KIT
40	PRV-301	1	1"NPT FISHER 627 REGULATOR STEEL BODY, SST TRIM 3/32"Ø PORT 5-20 PSIG SPRING, SET @ 8 PSIG
*QTY. SHOWN FOR ONE(1) UNIT.			

**SOUR DEHYDRATION PACKAGE No.97-6, 7, 9**

CUSTOMER: CANADIAN NATURAL RESOURCES

SHOP ORDER: 96-8668 TAG No.

CUST. No. F97R028/29/31

**BILL OF MATERIALS**

DWN.BY: RICK L.

DATE: 96-10-21

SHEET: 4 OF 6

APP.BY:

DATE: 96-11-07

DWG#: 31-C-8668-3

REV	DESCRIPTION	BY	APP	DATE
3	AS SHOWN	RL		97 03-07
2	AS SHOWN	RL		97 01-13
1	AS SHOWN	M.L.O.		NDV26 1996

ITEM	TAG	QTY	DESCRIPTION
41	PRV-302	1	1/4"NPT FISHER 67AFR REGULATOR INTERNAL FILTER & RELIEF, C/W VENTED BONNET 0-20 PSIG SPRING RANGE
42	TI-305	1	3"Ø DIAL TREND MODEL 33060 TEMPERATURE INDICATOR X 1/2"NPT X 6"LG. STEM 50-500°F, DUAL SCALE 1/2"NPT X 3/4"NPT X 6"LG. 316 SS THERMOWELL
43	PI-306	1	2 1/2"Ø DIAL WKA #233.53 PRESSURE INDICATOR X 1/4"NPT 0-30 PSIG, DUAL SCALE
44		5	1"NPT R.P. BALL VALVE WKM MODEL #B136-CS2-03-S2 3000# W.O.G., NACE
45		4	1/4"NPT F.P. BALL VALVE WKM MODEL #B138-CS02-03-02 3000# W.O.G., NACE
46		3	2"-600ANSI RF REGULAR PORT BALL VALVE WKM MODEL #B114-CS02-02-S2 FLOATING BALL, ONE PIECE BODY, NACE TRIM
47		16	1/2"FNPT X 1/2"FNPT NEEDLE VALVE PRECISION GENERAL MODEL #V408-LMW, 10000# RATING, NACE
48		8	1/4"FNPT X 1/4"FNPT NEEDLE VALVE PRECISION GENERAL MODEL #V402-LMW, 10000# RATING, NACE
49		2	1/2"NPT CLASS 800 GLOBE VALVE DSI MODEL #4221-A8-18 NACE TRIM, FORGED STEEL
50		1	1"S.W. CLASS 800 GATE VALVE DSI MODEL #4111-A8-18 NACE TRIM, FORGED STEEL
51		3	1/2"NPT F.P. BALL VALVE WKM MODEL #B138-CS02-03-S2 3000# W.O.G., NACE
52		3	1"S.W. CLASS 800 GLOBE VALVE DSI MODEL #4211-A8-18 NACE TRIM, FORGED STEEL
53		29	1"S.W. R.P. BALL VALVE NUTRON/NAVCO MODEL 3-PIECE BODY, 2000# W.O.G., NACE

REV	DESCRIPTION	BY	APP	DATE
4	AS SHOWN	EG		97 01-14
3	AS SHOWN	RL		97 01-13
2	AS SHOWN	M.L.o.		NOV/26 1996
1	AS SHOWN	RL		96 11-06

**SOUR DEHYDRATION PACKAGE No.97-6,7,9**

CUSTOMER: CANADIAN NATURAL RESOURCES  
SHOP ORDER: 96-8668 TAG No. CUST. No. F97P028/29/31

**BILL OF MATERIALS**

DWN.BY: RICK L. DATE: 96-10-21 SHEET: 5 OF 6  
APP.BY: DATE: 96-11-07 DWG#: 31-C-8668-4

ITEM	TAG	QTY	DESCRIPTION
54		1	1" S.W. CLASS 800 PISTON CHECK VALVE DSI MODEL #4311-A8-18 NACE TRIM, FORGED STEEL
55		1	1" S.W. CLASS 800 PISTON CHECK VALVE DSI MODEL #4311-A8-18 NACE TRIM, FORGED STEEL
56		1	2"-600ANSI RF RP GLOBE VALVE OMB MODEL #F6/838, NACE TRIM
57		2	3/4" NPT R.P. BALL VALVE WKM MODEL #B136-CS2-03-S2
58		2	1" S.W. "Y" STRAINER SARCO MODEL #CT600, NACE 1480 PSIG MAX. W.P. @ 150°F, CAST STEEL, 20 MESH SCREEN
59		1	1" NPT "Y" STRAINER SARCO MODEL #CT600 1480 PSIG MAX. W.P. @ 150°F, CAST STEEL, 20 MESH SCREEN
60		2	3/4" S.W. X NPT R.P. BALL VALVE NUTRON/NAVCO, 2000# W.P. (ALTERNATE OMB MODEL #S804LTN, 1500# W.P.) 3-PIECE BODY, NACE TRIM
61		1	1/2" NPT HEDLAND FLOW ROTAMETER MODEL #671-020, ANODIZED ALUMINUM BODY, 10-20 SCFM
62		1	1" FNPT HEDLAND FLOW METER MODEL #796-503, 3000 PSI RATED, 0.5-5 GPM
63		4	1" S.W. X NPT R.P. BALL VALVE NUTRON/NAVCO, 2000# W.P. (ALTERNATE OMB MODEL #S805LTN, 1500# W.P.) 3-PIECE BODY, NACE TRIM
64	T1-307	1	3" Ø DIAL TREND MODEL 33040 TEMPERATURE INDICATOR X 1/2" NPT X 4" LG. STEM 0-250°F, DUAL SCALE 1/2" NPT X 3/4" NPT X 4" LG. 316 SS THERMOWELL
65	BMS-302	1	BURNER MANAGEMENT SYSTEM, CANALTA MODEL 1000A CONTROLLERS, CSA APPROVED CLASS 1 DIV 1 C/W AUTO RE-LITE CONFIGURATION, FULL FUNCTION SEQUENCING 3 (UNITS #1-9)
66		1	1/2" S.W. X NPT F.P. BALL VALVE NUTRON/NAVCO, 2000# W.P. (ALTERNATE OMB MODEL #S803LTN, 1500# W.P.) 3-PIECE BODY, NACE TRIM 3 (UNITS #4,10,11)

\*QTY. SHOWN FOR ONE(1) UNIT.

**SOUR DEHYDRATION PACKAGE No.97-6,7,9**

CUSTOMER: CANADIAN NATURAL RESOURCES

SHOP ORDER: 96-8668

TAG No.

CUST. No. F97R028/29/31

**BILL OF MATERIALS**

DWN.BY: RICK L.

DATE: 96-10-21

SHEET: 6 OF 6

APP.BY:

DATE: 96-11-07

DWG#: 31-C-8668-3

REV	DESCRIPTION	BY	APP	DATE
3	AS SHOWN	RL		97 03-07
2	AS SHOWN	RL		97 01-13
1	AS SHOWN	M.L.O.		NOV.26 1996