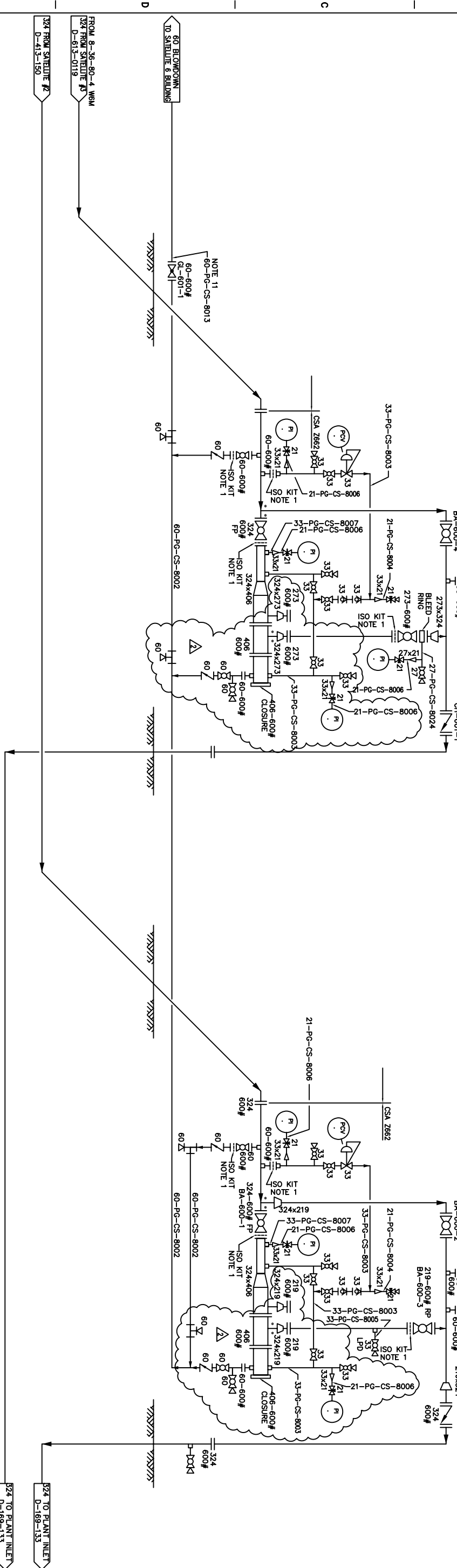




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<p>REFERENCE SYSTEMS</p> <p>SP SPECIAL ITEM</p> <p>K DRAWING NUMBER</p> <p>ORIGIN OR DESTINATION OF LINE</p> <p>TIE-IN</p> <p>COMMODITY</p> <p>INSULATION CODE</p> <p>H - INSULATE HOT (HEAT CONSERVATION)</p> <p>C - INSULATE COLD (COLD CONSERVATION)</p> <p>PP - PERSONNEL PROTECTION</p> <p>THICKNESS (mm)</p> <p>PIPE INSULATION</p> <p>3BH PIPE INSULATION AND HEAT TRACING</p> <p>ST - INSULATE & STEAM TRACE</p> <p>ET - INSULATE & ELECTRIC TRACE</p> <p>INSULATION BREAK</p>	<p>CONTROL VALVES</p> <p>FAIL OPEN DIAPHRAGM CONTROL VALVE</p> <p>FAIL CLOSED DIAPHRAGM CONTROL VALVE</p> <p>HAND OPERATED CONTROL VALVE</p> <p>MOTOR</p> <p>A - AIR</p> <p>E - ELECTRIC</p> <p>H - HYDRAULIC</p> <p>E/H - ELECTROHYDRAULIC</p> <p>HYDR/PNEUMATIC PISTON OPERATED</p> <p>DIAPHRAGM OPERATOR</p> <p>? HAND WHEEL</p> <p>THREE WAY DIAPHRAGM CONTROL VALVE</p> <p>SOLENOID VALVE</p> <p>BACK PRESSURE REGULATOR (INTERNAL SELF-CONTAINED) (BPV)</p> <p>BACK PRESSURE REGULATOR (INTERNAL SELF-CONTAINED) (PCV)</p>	<p>MISCELLANEOUS SYMBOLS</p> <p>INSULATING KIT SIZE IN mm O.D. - ANSI RATING (IE: 88.9-600#)</p> <p>INSULATING KIT</p> <p>FLANGED CONNECTION</p> <p>BLIND FLANGE</p> <p>SOCKET WELDED VALVE</p> <p>SPRING RETURN HANDLE</p> <p>WELD CAP</p> <p>HOSE CONNECTION</p> <p>SCREWED/SOCKET WELD CAP</p> <p>SCREWED/SOCKET WELD PLUG</p> <p>FLEXIBLE COUPLING</p> <p>EXPANSION JOINT</p> <p>Y PATTERN LINE STRAINER</p> <p>LINE REDUCER</p> <p>UNION</p> <p>THREADED</p> <p>SPECTACLE BLIND - LINE CLOSED</p> <p>SPECTACLE BLIND - LINE OPEN</p> <p>SLIP/BLIND</p> <p>SPACER</p> <p>STRAINER (CONICAL, TEMP. OR START-UP)</p> <p>IN LINE FILTER (STRAINER)</p> <p>STEAM TRAP</p> <p>FLAME ARRESTER</p> <p>IN LINE MIXER</p> <p>AGITATOR (MOTOR DRIVEN) (SEE DRIVER CODE)</p> <p>FLEXIBLE HOSE</p> <p>VIBRATION DAMPNER</p> <p>EJECTOR</p> <p>RELIEF TO ATMOSPHERE</p> <p>OPEN DRAIN</p> <p>CLOSED DRAIN</p> <p>STRAIGHTENING VANES</p> <p>RUPTURE DISC - PRESSURE</p> <p>RUPTURE DISC - VACUUM</p> <p>FLOOR DRAIN</p> <p>SNUBBER</p> <p>SLUG NIPPLE</p> <p>CAMLOCK FITTING</p> <p>FEMALE CAMLOCK FITTING</p> <p>PIG LAUNCHER/RECEIVER</p>	<p>VALVES</p> <p>GATE</p> <p>CLIP GATE</p> <p>GLDRE</p> <p>BALL</p> <p>NEEDLE</p> <p>BUTTERFLY</p> <p>SWING CHECK</p> <p>VAFTER CHECK</p> <p>PISTON CHECK</p> <p>STOP CHECK</p> <p>VELOCITY CHECK</p> <p>BALL CHECK</p> <p>BUTTERFLY CHECK</p> <p>PLUGGARD</p> <p>PIG VALVE</p> <p>DIAPHRAGM</p> <p>THREE-WAY</p> <p>FOUR-WAY</p> <p>PLUG</p> <p>PLUG VALVE HYPERSEA</p> <p>4-WAY PLUG</p> <p>3-WAY PLUG</p> <p>ANGLE</p> <p>ANGLE GLOBE</p> <p>CHOKE VALVE</p> <p>ANGLE CHOKE</p> <p>PRESSURE RELIEF/SAFETY VALVE (PSV)</p> <p>PRESSURE VACUUM RELIEF VALVE (PVSV)</p> <p>GLAUGE GLASS COCK</p> <p>PILOT OPERATED</p>	<p>INSTRUMENT IDENTIFICATION</p> <table border="1"> <thead> <tr> <th>VARIABLE</th> <th>PRIMARY ELEMENT</th> <th>RECORDER</th> <th>CONTROLLER</th> <th>TRANS-MITTER</th> <th>ALARM-SHUTDOWN</th> <th>CONTROL VALVE OR ACTUATOR</th> <th>SELF-TESTING/RELAY DR</th> </tr> </thead> <tbody> <tr><td>ANALYSIS</td><td>AE</td><td>AR</td><td>AC</td><td>AT</td><td>AA</td><td>AV</td><td>AY</td></tr> <tr><td>BURNER FLAME</td><td>BE</td><td>BR</td><td>BC</td><td>BT</td><td>BA</td><td>BV</td><td>BY</td></tr> <tr><td>CONDUCTIVITY</td><td>CE</td><td>CR</td><td>CC</td><td>CT</td><td>CA</td><td>CV</td><td>CY</td></tr> <tr><td>DENSITY</td><td>DE</td><td>DR</td><td>DC</td><td>DT</td><td>DA</td><td>DV</td><td>DY</td></tr> <tr><td>VOLTAGE (EMF)</td><td>EE</td><td>ER</td><td>EC</td><td>ET</td><td>EA</td><td>EV</td><td>EY</td></tr> <tr><td>FLOW 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(DIMENSIONAL)	GE	GR	GC	GT	GA	GV	GY	HAND	HE	HR	HC	HT	HA	HV	HY	CURRENT	IE	IR	IC	IT	IA	IV	IY	POWER	JE	JR	JC	JT	JA	JV	JY	TIME	KE	KR	KC	KT	KA	KV	KY	LEVEL	LE	LR	LC	LT	LA	LV	LY	MOISTURE	ME	MR	MC	MT	MA	MV	MY	USER'S CHOICE	NE	NR	NC	NT	NA	NV	NY	TORQUE	OE	OR	OC	OT	OA	OV	OY	PRESSURE	PE	PR	PC	PT	PA	PV	PY	PRESSURE DIFFERENTIAL	PDE	PDR	PDC	PDT	PAK	PVK	PYK	QUANTITY OR EVENT	QE	QR	QC	QT	QA	QV	QY	RADIATION	RE	RR	RC	RT	RA	RV	RY	SPEED OR FREQUENCY	SE	SR	SC	ST	SA	SV	SY	TEMPERATURE	TE	TR	TC	TT	TA	TV	TY	TEMPERATURE DIFFERENTIAL	TDE	TRD	TDC	TDT	TAK	TVK	TYK	MULTI-VARIABLE	UE	UR	UC	UT	UA	UV	UY	VISCOSITY OR VIBRATION	VE	VR	VC	VT	VA	VV	VY	WEIGHT	WE	WR	WC	WT	WA	WV	WY	UNCLASSIFIED	XE	XR	XC	XT	XA	XV	XY	USER'S CHOICE	ZE	ZR	ZC	ZT	ZA	ZV	ZY	<p>LINE COMMODITY CODES</p> <p>AIR</p> <p>CA - COMBUSTION AIR</p> <p>IA - INSTRUMENT AIR</p> <p>UA - UTILITY AIR OR PLANT AIR</p> <p>SA - START AIR</p> <p>EUEL</p> <p>FG - FUEL GAS</p> <p>FO - FUEL OIL</p> <p>SITAM</p> <p>LS - LOW PRESSURE</p> <p>MS - MEDIUM PRESSURE</p> <p>HS - HIGH PRESSURE</p> <p>STEAM CONDENSATE</p> <p>CM - LOW PRESSURE</p> <p>FM - MEDIUM PRESSURE</p> <p>CH - HIGH PRESSURE</p> <p>DRAINS</p> <p>D - DRAIN</p> <p>HOD - HYDROCARBON DRAIN</p> <p>FLARES</p> <p>LF - HIGH PRESSURE FLARE</p> <p>LF - LOW PRESSURE FLARE</p> <p>RF - RELIEF FLARE</p> <p>MISCELLANEOUS</p> <p>BG - BLANKET GAS</p> <p>EX - EXHAUST GAS</p> <p>HM - HEAT MEDIUM</p> <p>LO - LUBE OIL</p> <p>N - NITROGEN</p> <p>PU - PURGE GAS</p> <p>SG - STARTING GAS</p> <p>CI - CORROSION INHIBITOR</p> <p>Y - USER CHOICE</p>	<p>ABBREVIATIONS</p> <p>AG - AIR GLOBE</p> <p>AS - AIR SUPPLY</p> <p>BS - BLOW DOWN</p> <p>CC - CORROSION COUPON</p> <p>CP - CATHODIC PROTECTION</p> <p>CSC - CAR SEAL CLOSED</p> <p>CHO - CHAIN OPERATED</p> <p>CO - CLEAN OUT</p> <p>DC - DRAIN CONNECTION</p> <p>ESD - EMERGENCY SHUTDOWN</p> <p>ESDV - EMERGENCY SHUTDOWN VALVE</p> <p>FA - FLAME ARRESTOR</p> <p>FC - FAIL CLOSED</p> <p>FO - FULL OPEN</p> <p>FP - FULL PORT</p> <p>GO - GEAR OPERATED</p> <p>I/A - INSTRUMENT AIR</p> <p>I/V - INSTRUMENT VALVE</p> <p>LEL - LOWER EXPOSURE LIMIT</p> <p>NO - NORMALLY OPEN</p> <p>NC - NORMALLY CLOSED</p> <p>PO - PURGE CONNECTION</p> <p>PP - PUMP OUT</p> <p>PSIG - POUNDS PER SQUARE INCH GAUGE</p> <p>SD - SAMPLE CONNECTION</p> <p>SP - SET POINT</p> <p>S/S - SEAM TO SEAM</p> <p>T - TANGENT</p> <p>T/T - TANGENT TO TANGENT</p> <p>FOB - FLAT ON BOTTOM</p> <p>OSB - OUTSIDE BUILDING</p> <p>S - STRAIGHT THROUGH (DIAPHRAGM VALVE)</p> <p>W - WIRE (DIAPHRAGM VALVE)</p>
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- GENERAL NOTES:
- ANSI CLASS 600 GASKET RF LINERACKER G10 TYPE F INSULATING KIT ?
 - TEFLON SEAL, NYLAR (OR EQUAL) SLEEVES & STEEL BACKING WASHERS.
 - ALL ASME PIPE, PIPE FITTINGS, VALVES, AND OTHER PRESSURE COMPONENTS (AS INDICATED ON LINE SCHEDULE) SHALL BE SUPPLIED IN ACCORDANCE WITH ANSI/ASME B31.3 AND DEVON PIPING SPECIFICATIONS. ALL PRESSURE COMPONENTS SHALL BE REGISTERED WITH ABSA. CONTRACTOR SHALL HAVE AN APPROVED ABSA QUALITY CONTROL MANAGER AND DEVON PIPING SHALL HAVE AN APPROVED ABSA QUALITY CONTROL MANAGER. ALL PRESSURE COMPONENTS SHALL BE SUPPLIED IN ACCORDANCE WITH THE APPLICABLE CODES, STANDARDS AND DEVON'S PIPING SPECIFICATIONS.
 - ALL CSA PIPE, PIPE FITTINGS, VALVES AND OTHER PRESSURE COMPONENTS (AS INDICATED ON LINE SCHEDULE AND PREFABRICATED PIPING SUPPLIED) SHALL BE SUPPLIED IN ACCORDANCE WITH CSA Z662 AND DEVON PIPING SPECIFICATIONS. ALL PRESSURE COMPONENTS SHALL BE REGISTERED WITH ABSA. CONTRACTOR SHALL HAVE AN APPROVED ABSA QUALITY CONTROL MANAGER AND DEVON PIPING SHALL HAVE AN APPROVED ABSA QUALITY CONTROL MANAGER. ALL PRESSURE COMPONENTS SHALL BE SUPPLIED IN ACCORDANCE WITH THE APPLICABLE CODES, STANDARDS AND DEVON'S PIPING SPECIFICATIONS. WELDING PROCEDURES, WELDING SHALL BE PERFORMED IN ACCORDANCE WITH RADIOGRAPHY INSPECTION & HYDROTESTING TO BE PERFORMED AS PER LINE SCHEDULE AND DEVON PIPING SPECIFICATIONS. STRESS RELIEVING IS NOT REQUIRED.
 - FOR ASME PIPING (AS INDICATED ON LINE SCHEDULE), STRESS RELIEVING IS NOT REQUIRED. PROVIDED THAT THE WELDS AND HEAT AFFECTED ZONE HARDNESS IS LESS THAN 248 HV500T. A MINIMUM OF 10% OF ALL WELDS OR ONE WELD PER SPOOL PER WELDER, WHICHEVER IS GREATER, SHALL BE TESTED.
 - CONTRACTOR SHALL INSTALL DRAINS AND VENTS AS REQUIRED FOR TESTING, DRAINING AND PURGING.
 - ALL PIPING SHOWN IN RED SHOP FABRICATED AND TO BE FIELD INSTALLED.
 - ALL PIPING SHOWN IN BLUE TO BE FIELD FABRICATED.
 - ALL VALVES SHOWN IN GREEN ARE NEW VALVES TO BE FIELD INSTALLED.
 - ALL PIPING AND VALVES SHOWN IN BLACK REPRESENTS EXISTING PIPING AND VALVES.
 - NEW ASME PIPING TO BE HYDROTESTED TO ACCORDANCE WITH DEVON SPECIFICATION.
 - NEW CSA PIPING TO BE HYDROTESTED TO ACCORDANCE WITH DEVON SPECIFICATION.
 - FOR LINE SCHEDULE REFER TO DWG. No. B-169-2621.X1.S TO BE 100% X-RAYED AFTER INSTALLATION.
 - VALVES TO BE REUSED ARE INDICATED BY VALVE TAGS WHERE THE LAST DIGIT OF THE TAG REPRESENTS A SPECIFIC VALVE IN THE EXISTING PIPING TO BE RELOCATED TO NEW LOCATION AS SHOWN.



NOTE:
THIS DRAWING WAS AS BUILT BASED ON INCOMPLETE INFORMATION. FIELD CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO USING THIS INFORMATION FOR ANY NEW CONSTRUCTION.

REFERENCE DRAWINGS

ENGINEER AND PERMIT STAMPS

REV

PROJ. NO.

DATE

DRWN BY

CHK'D BY

APP'D

D-169-430.DWG	SAT #2 & #3 SWEET PIG RECEIVERS AREA PIPING PLAN
B-169-2621.X1.S	SAT #2 & #3 SWEET PIG RECEIVERS LINE SCHEDULE

056718	IFC - PIGGING UPGRADE (REL. 20060709)	07.05.29	R.M.
056718	AS BUILT (2005 PIGGING MODIFICATIONS)	06.03.06	R.V.
056718	ISSUED FOR CONSTRUCTION (2005 PIGGING MODIFICATIONS)	05.05.16	R.V.
056718	ISSUED FOR BID (2005 PIGGING MODIFICATIONS)	05.04.04	R.V.

056718	IFC - PIGGING UPGRADE (REL. 20060709)	07.05.29	R.M.
056718	AS BUILT (2005 PIGGING MODIFICATIONS)	06.03.06	R.V.
056718	ISSUED FOR CONSTRUCTION (2005 PIGGING MODIFICATIONS)	05.05.16	R.V.
056718	ISSUED FOR BID (2005 PIGGING MODIFICATIONS)	05.04.04	R.V.

056718	IFC - PIGGING UPGRADE (REL. 20060709)	07.05.29	R.M.
056718	AS BUILT (2005 PIGGING MODIFICATIONS)	06.03.06	R.V.
056718	ISSUED FOR CONSTRUCTION (2005 PIGGING MODIFICATIONS)	05.05.16	R.V.
056718	ISSUED FOR BID (2005 PIGGING MODIFICATIONS)	05.04.04	R.V.

056718	IFC - PIGGING UPGRADE (REL. 20060709)	07.05.29	R.M.
056718	AS BUILT (2005 PIGGING MODIFICATIONS)	06.03.06	R.V.
056718	ISSUED FOR CONSTRUCTION (2005 PIGGING MODIFICATIONS)	05.05.16	R.V.
056718	ISSUED FOR BID (2005 PIGGING MODIFICATIONS)	05.04.04	R.V.

056718	IFC - PIGGING UPGRADE (REL. 20060709)	07.05.29	R.M.
056718	AS BUILT (2005 PIGGING MODIFICATIONS)	06.03.06	R.V.
056718	ISSUED FOR CONSTRUCTION (2005 PIGGING MODIFICATIONS)	05.05.16	R.V.
056718	ISSUED FOR BID (2005 PIGGING MODIFICATIONS)	05.04.04	R.V.

056718	IFC - PIGGING UPGRADE (REL. 20060709)	07.05.29	R.M.
056718	AS BUILT (2005 PIGGING MODIFICATIONS)	06.03.06	R.V.
056718	ISSUED FOR CONSTRUCTION (2005 PIGGING MODIFICATIONS)	05.05.16	R.V.
056718	ISSUED FOR BID (2005 PIGGING MODIFICATIONS)	05.04.04	R.V.

PREPARED BY: PRECISION ENGINEERING INC.

DUNVEGAN GAS PLANT

SAT #2 & #3 SWEET PIG RECEIVERS P&ID

SCALE: 1:1

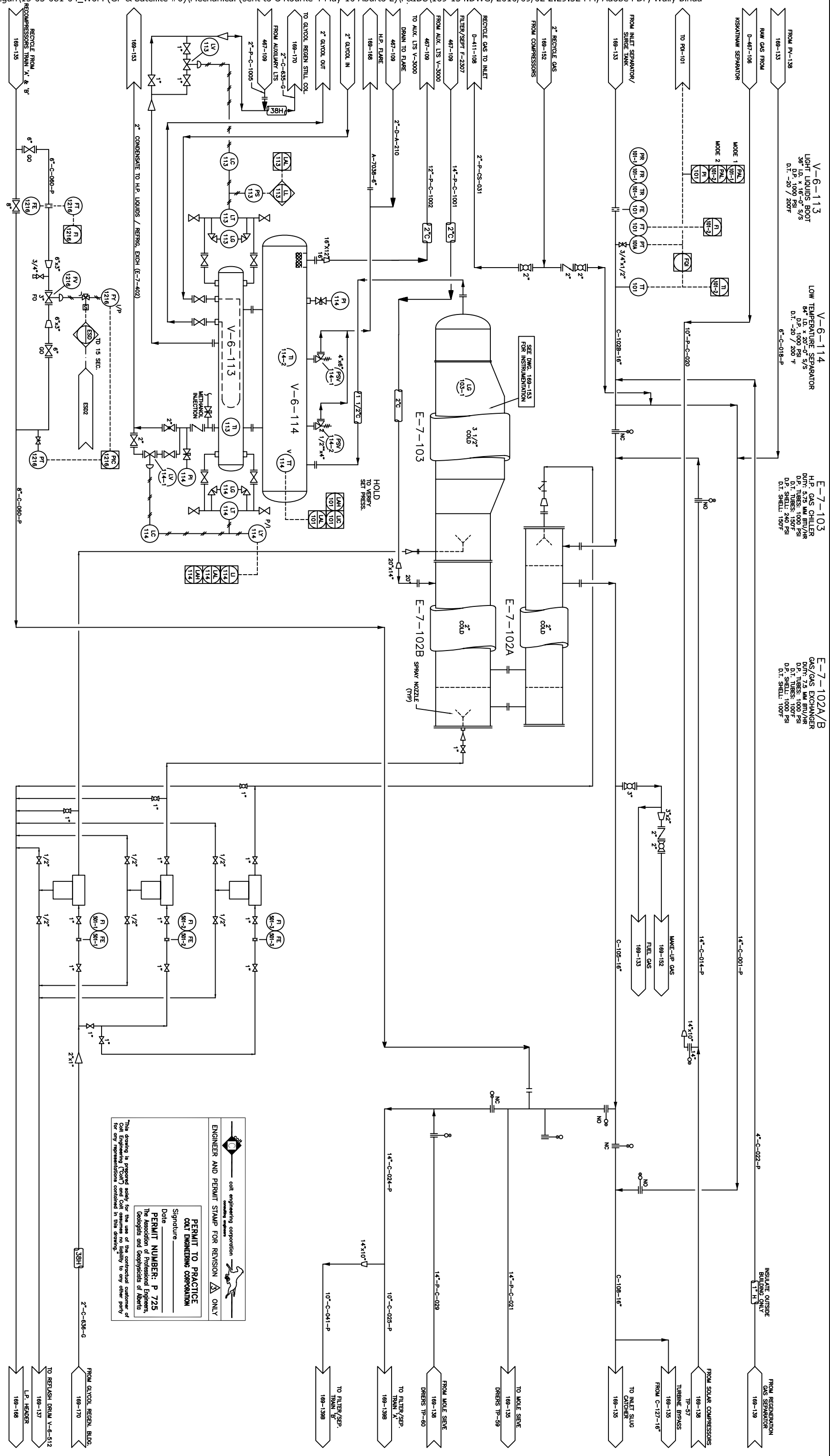
DWG. NO.: D-169-130.DWG

JOB NO.: 8356

DATE: 05/04/04

APP'D: [Signature]

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V-6-113
LIGHT LIQUIDS BOOT
36" I.D. x 16'-0" S/S
D.P. 1000 PSI
D.I. 20 / 200F

V-6-114
LOW TEMPERATURE SEPARATOR
84" I.D. x 20'-0" S/S
D.P. 1000 PSI
D.I. 20 / 200 F

E-7-103
H.P. GAS CHILLER
DUTY: 5.2 MM BDU/HR
D.I. 1.5" / 150F
D.P. SHELL: 240 PSI
D.I. SHELL: 150F

E-7-102A/B
GAS/GAS EXCHANGER
DUTY: 7.3 MM BDU/HR
D.I. 1.5" / 100F
D.P. SHELL: 1000 PSI
D.I. SHELL: 100F

DWG. NO.

REFERENCE DRAWINGS

REVISIONS

ENGINEER AND PERMIT STAMPS

DESIGNED

CHECKED

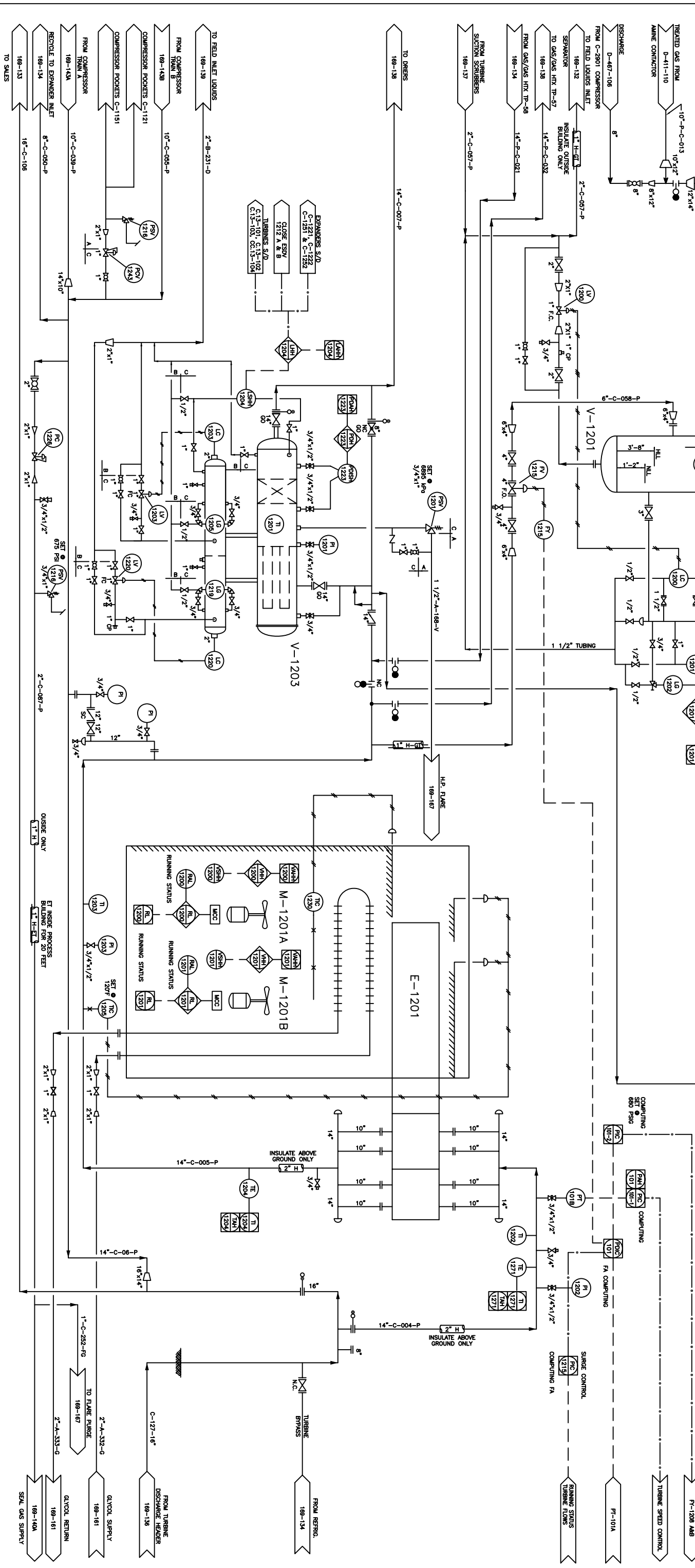
DUNVEGAN GAS PLANT
PIPING & INSTRUMENTATION DIAGRAM
REFRIGERATION SECTION
LSD. 15-03-81-04 W6M.

REV	DESCRIPTION	DATE	BY	CHK'D	APP'D	OWNER
1	AS BUILT (GLE)	04/03/05	SAE			
2	AUXILIARY LTS [V3000] ADDITION	96/08/07	GW			
3	REVISED 'AS BUILT'	96/07/22	IK			
4	'AS BUILT' GLYCOL REGEN (COLI 970639)	96/06/15	ERS			
5	AS BUILT (~2000 BY TUMULA GAS ENGINEERING LTD)	00/04/01	BB			

DESIGNED	AUDIT	DATE
		94/12/19

	colt engineering corporation ENGINEER AND PERMIT STAMP FOR REVISION ONLY PERMIT TO PRACTICE COLT ENGINEERING CORPORATION Signature: _____ Date: _____ PERMIT NUMBER: P 725 The Association of Professional Engineers, Geologists and Geophysicists of Alberta
--	---

FROM GLYCOL REGEN. BLDG. 189-170 TO REFLASH DRUM V-6-512 189-137 L.P. HEADER 189-168	FROM MOLE SIEVE 189-138 DIERSERS TP-60 TO FILTER/SEP. TRUNK V 189-139	TO MOLE SIEVE 189-135 DIERSERS TP-59	FROM SOLAR COMPRESSORS TP-57 TURBINE BYPASS 189-135 FROM C-127-16"	TO INLET SLUG TO CATCHER 189-135	FROM REGENERATION GAS SEPARATOR 189-139
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DWG. NO.		REFERENCE DRAWINGS		REV		REVISIONS		DATE		BY (CHK'D)		APP'D		AXL		ENGINEER AND PERMIT STAMPS	
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V-6-805
FUEL GAS SCRUBBER
SIZE: 24" O.D. x 6'-0" S/S
D.P.: 300 PSIG
D.I.: 100F

V-6-106/107
"PORTA-TEST" INLET SEPARATORS
SIZE: 20" O.D. x 7'-3" S/S
D.P.: 1100 PSIG
D.I.: 100F

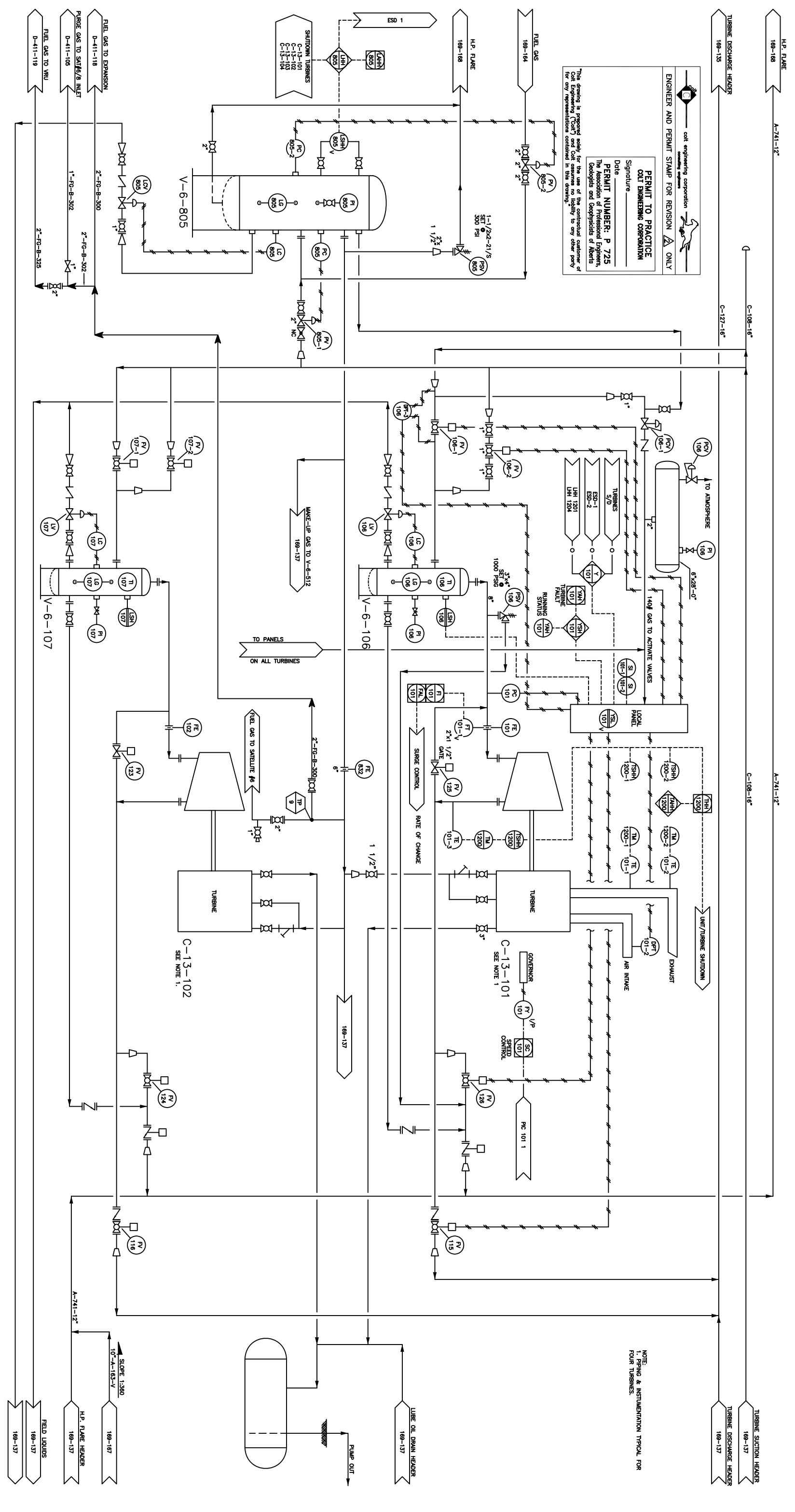
C-13-101/102
"SOLAR-SATURM" GAS COMPRESSORS
1160 BHP @ 80F

colt engineering corporation
ENGINEER AND PERMIT STAMP FOR REVISION ONLY

PERMIT TO PRACTICE
COLT ENGINEERING CORPORATION
Signature _____
Date _____

PERMIT NUMBER: P 725
The Association of Professional Engineers, Geologists and Geophysicists of Alberta

This drawing is prepared solely for the use of the contractual customer of Colt Engineering ("Colt") and Colt assumes no liability to any other party for any representations contained in this drawing.



NOTE:
1. PIPING & INSTRUMENTATION TYPICAL FOR
FOUR TURBINES.

DWG. NO.

REFERENCE DRAWINGS

REVISIONS

REV	DATE	BY	CHK'D	APP'D	OWNER
2	96/11/25	MK			
1	96/07/08	MK		RLK	
0	96/05/06	MK		RLK	
B	96/01/10	WF			
A	94/12/19	GS			

ENGINEER AND PERMIT STAMPS

DESIGNED	DRAWN	CHECKED	PROCESS CK.	MECH. CK.	STRUCT. CK.	ELECT. CK.	OWNER APP.

DESIGNED: ALDRIFT 94/12/19

DUNVEGAN GAS PLANT
PIPING & INSTRUMENTATION DIAGRAM
INLET GAS COMPRESSION
LSD. 15-03-81-04 W6M.

DWG. NO. 169-136

DEVON

PLOTTED: MAR 04 2004 8:31 AM

CADD FILE: Q:\AEP-271\PLANT POS\169-136.DWG

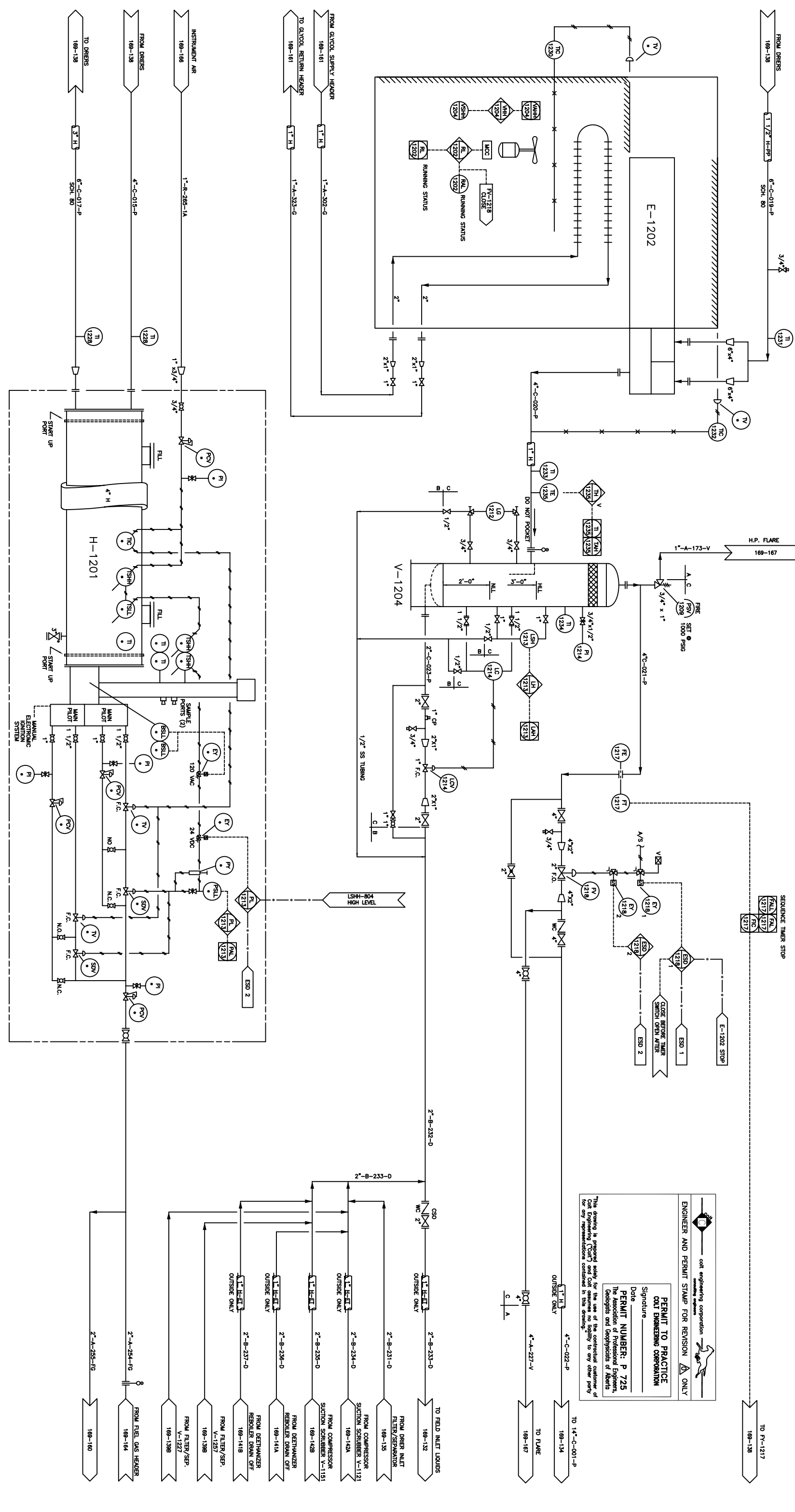
OWNER APP. NONE

DEVON PROJ. 2

E-1202
 REGENERATION GAS COOLER
 DUTY: 4.0 MM BTU/HR
 DP: 1000 PSIG
 DI: 800°F

H-1201
 REGENERATION GAS HEATER
 DUTY: 5.1 MM BTU/HR
 COP: DP: 1000 PSIG
 COL: DI: 800°F

V-1204
 REGENERATION GAS SEPARATOR
 SIZE: 20' O.D. x 6'-6" S/S
 DP: 1000 PSIG
 DI: 1500°F



colt engineering corporation
 ENGINEER AND PERMIT STAMP FOR REVISION **A** ONLY

PERMIT TO PRACTICE
 COLT ENGINEERING CORPORATION
 Signature: _____
 Date: _____
 PERMIT NUMBER: P 725
 The Association of Professional Engineers, Geologists and Geophysicists of Alberta

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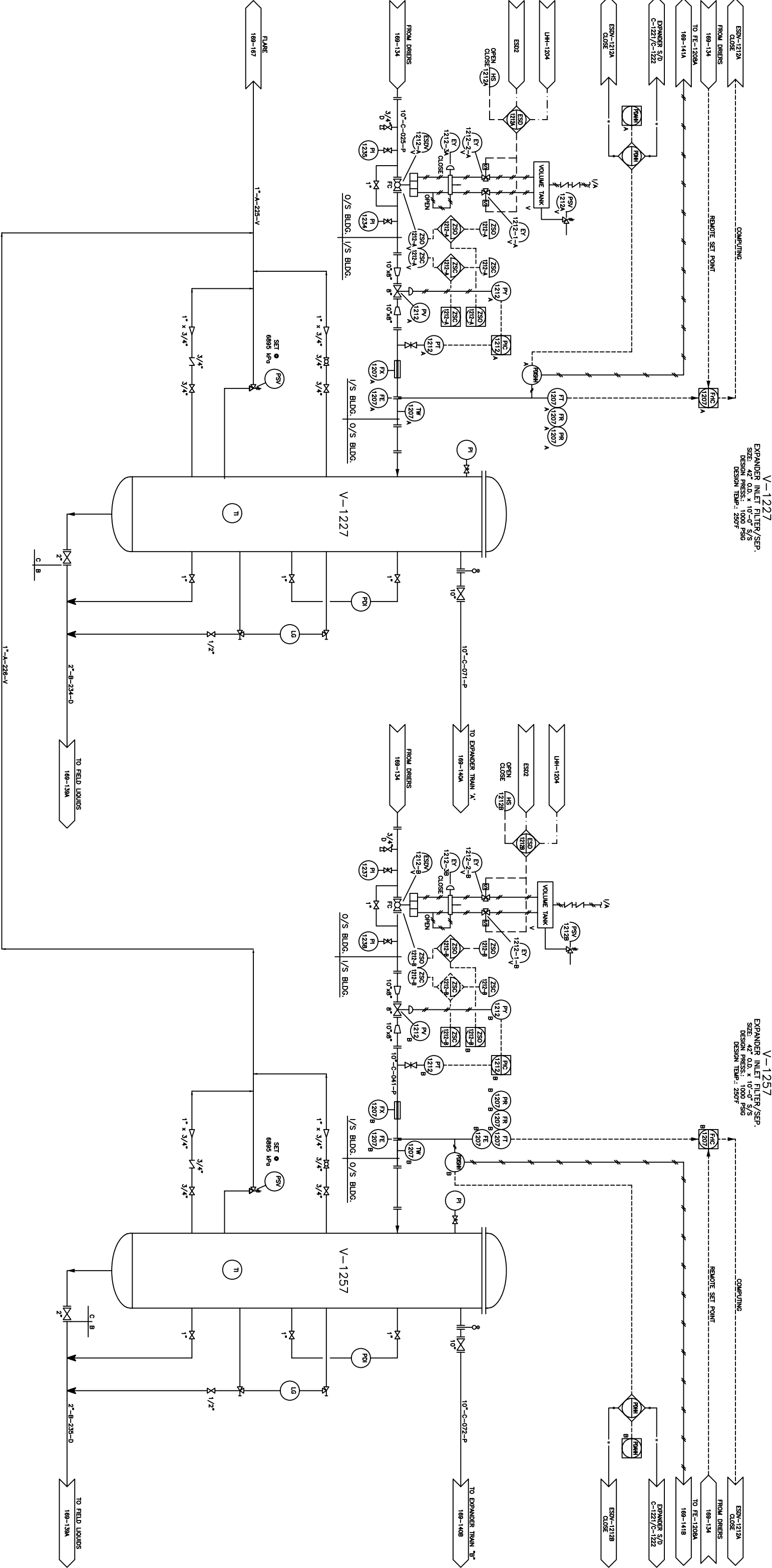
DWG. NO.	REFERENCE DRAWINGS	DEVON PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER APP'D	ENGINEER AND PERMIT STAMPS
			0	REVISED 'AS BUILT'	96/11/25	MK				DESIGNED: _____ DRAWN: _____ CHECKED: _____ PROCESS CK: _____ MECH. CK: _____ STRUCT. CK: _____ ELECT. CK: _____ OWNER APP: _____ OWNER APP: _____ OWNER APP: _____
			B	AS BUILT	96/01/09	WF				
			A	REDRAWN ON CAD	94/12/19	CAE				

DESIGNED	ALDRIFT	94/12/19
CHECKED		
PROCESS CK		
MECH. CK		
STRUCT. CK		
ELECT. CK		
OWNER APP.		
OWNER APP.		
OWNER APP.		

Devon

DUNVEGAN GAS PLANT
 PIPING & INSTRUMENTATION DIAGRAM
 DRYER REGENERATION
 LSD: 15-03-81-04 W6M.

COMP. 88 IN. SCALE: NONE
 DWG. NO.: 169-139A
 DEVON PROJ.: 0



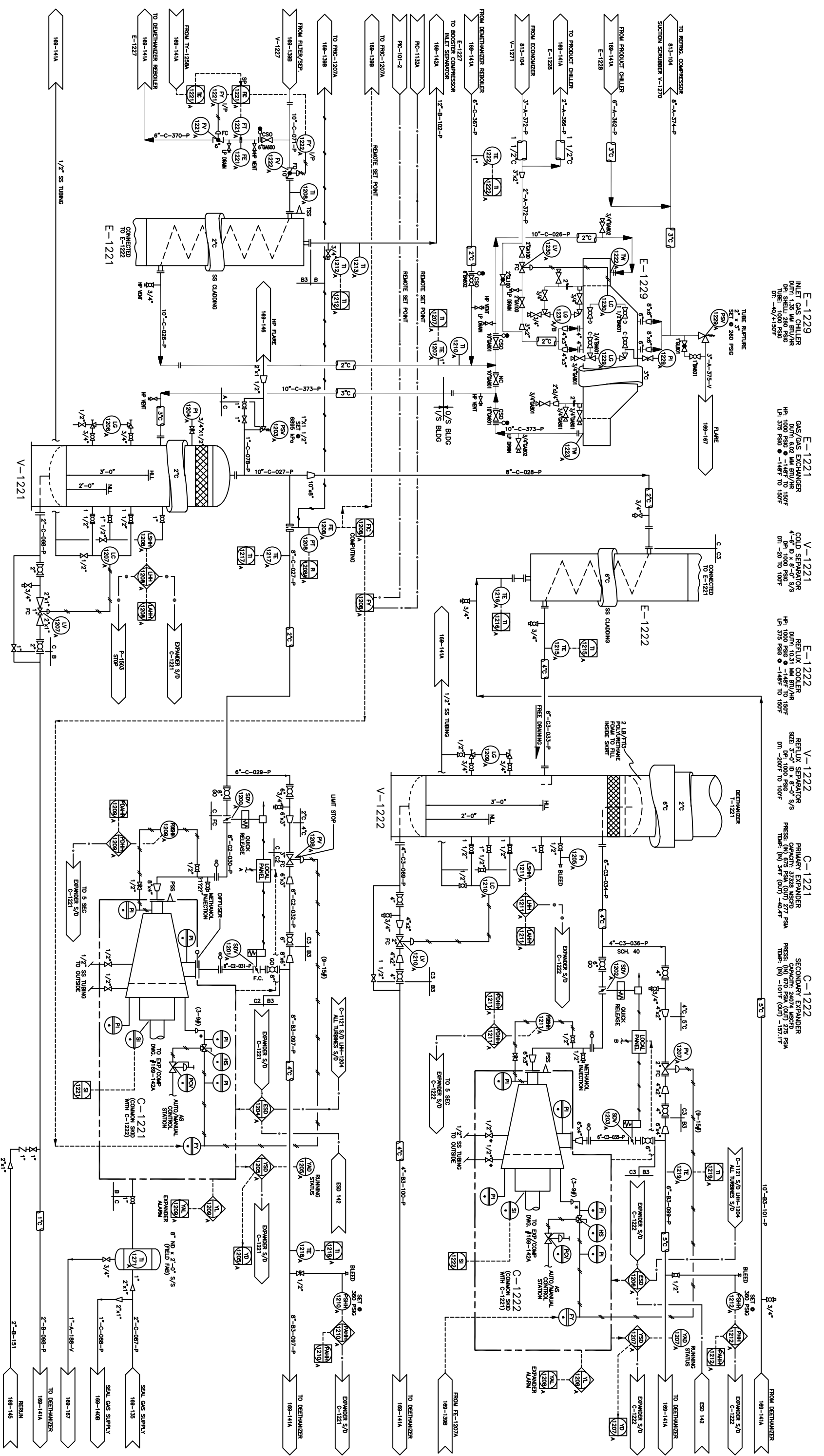
V-1227
EXPANDER INLET FILTER/SEP.
SIZE: 42" O.D. x 10'-0" S/S
DESIGN PRESS: 150 PSIG
DESIGN TEMP.: 250°F

V-1257
EXPANDER INLET FILTER/SEP.
SIZE: 42" O.D. x 10'-0" S/S
DESIGN PRESS: 150 PSIG
DESIGN TEMP.: 250°F

DWG. NO.	REFERENCE DRAWINGS	DEVON PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER APP'D	ENGINEER AND PERMIT STAMPS	DESIGNED	AUDRFT	DATE	SCALE	DWG. NO.	DEVON PROJ.	
			1-0	I.F.C. -C2 RECOVERY PROJECT (COLT 97C813)	99/04/30	ERS				PERMIT TO PRACTICE COLT ENGINEERING CORPORATION COLT ENGINEERING CORPORATION SIGNED BY: KEN RICHARDS DATED: APR. 30, 98			94/12/19	NONE	169-139B	3	
			1B	ISSUED FOR AEUB APPROVAL	99/04/24	ERS					PROFESSIONAL ENGINEER STAMP COLT ENGINEERING CORPORATION COLT ENGINEERING CORPORATION SIGNED BY: KEN RICHARDS DATED: APR. 30, 98						
			1A	I.F.A., C2 RECOVERY (COLT JOB 97C813)	99/04/08	GR											
			0	REVISED 'AS BUILT'	96/11/25	MK											
			3	AS BUILT (1-2000 BY TORITA GAS ENGINEERING LTD.)	00/04/01	BB											
			2	AS BUILT (COLT JOB 97C813)	98-12-21	SGS											



DUNVEGAN C2 RECOVERY
PIPING & INSTRUMENTATION DIAGRAM
EXPANDER INLET FILTER SEPARATOR
LSD. 15-03-81-04 W6M.



E-1229
 INLET GAS CHILLER
 DUTY: 1.35 MM BTU/HR
 DP: 200 PSIG
 DT: 40/4.50°F

E-1221
 GAS/GAS EXCHANGER
 DUTY: 6.02 MM BTU/HR
 DP: 1000 PSIG
 DT: 148°F TO 150°F

V-1221
 COLD SEPARATOR
 DUTY: 6.02 MM BTU/HR
 DP: 1000 PSIG
 DT: 20 TO 100°F

E-1222
 REFLUX COOLER
 DUTY: 10.31 MM BTU/HR
 DP: 1000 PSIG
 DT: 148°F TO 150°F

V-1222
 REFLUX SEPARATOR
 DUTY: 10.31 MM BTU/HR
 DP: 1000 PSIG
 DT: 20 TO 100°F

C-1221
 PRIMARY EXPANDER
 CAPACITY: 3724 MSCFD
 PRESS: (N) 675 PSIA (O) 277 PSIA
 TEMP: (N) 54°F (O) 26.4°F

C-1222
 SECONDARY EXPANDER
 CAPACITY: 2407.4 MSCFD
 PRESS: (N) 670 PSIA (O) 275 PSIA
 TEMP: (N) 101°F (O) 15.1°F

DWG. NO.	REFERENCE DRAWINGS	DECON PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER	ENGINEER AND PERMIT STAMPS
			1-0	I.F.C - C2 RECOVERY (COLT 970813)	98/04/30	ERS	KR	FSG		DESIGNED: ALBERT 94/12/19
			1B	ISSUED FOR AEBU APPROVAL	98/04/24	ERS				CHECKED: KR 98/04/30
			1A	I.F.A C2 RECOVERY (COLT JOB 970813)	98/04/08	CLR				PROCESS CK: FSG 98/04/30
			3	AS BUILT PER FIELD MARK-UP (GLE)	04/04/22	SAE				MECH. CK: FSG STRUCT. CK:
			2	AS BUILT (COLT JOB 97-C-813)	98/12/21	SDS				ELECT. CK:
			1-1	GENERAL REVISION	98/08/28	WRL				OWNER APP: NONE OWNER APP: NONE

Devon

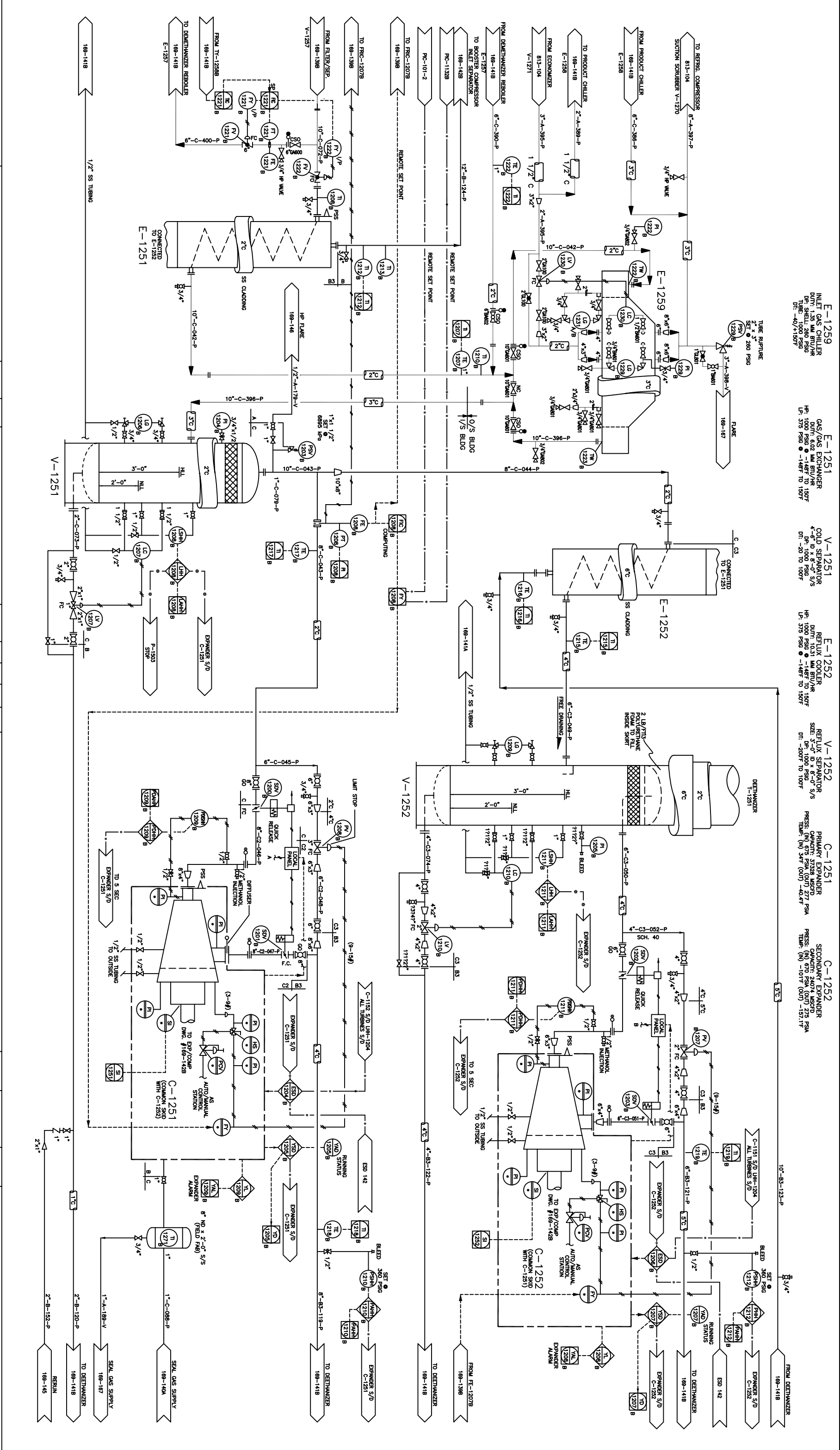
DUNVEGAN SOUR GAS PLANT
 PIPING & INSTRUMENTATION DIAGRAM
 TURBO EXPANDER TRAIN B
 L.S.D. 15-03-81-04 W6M.

DWG. NO. 169-140A

SCALE NONE

DECON PROJ. 3

DWG. NO.	REFERENCE DRAWINGS	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER	ENGINEER AND PERMIT STAMPS
		1-0	99/04/30	ERS	KR	FSG		DESIGNED DRAWN CHECKED PROCESS CK MECH. CK STRUCT. CK ELECT. CK OWNER APP. OWNER APP.
		1B	99/04/24	ERS	KR	FSG		DATE 94/12/19
		1A	99/04/08	GR				98/04/30
		3	04/04/22	SAE				98/04/30
		2	98/12/21	SDS				
		1-1	98/08/28	WRL				



Devon

DUNVEGAN C2 RECOVERY
PIPING & INSTRUMENTATION DIAGRAM
TURBO EXPANDER TRAIN "B"

LSD: 15-03-81-04 W6M.

DWG. NO. 169-140B

SCALE NONE

OWNER APP. 97-C-813

OWNER APP.

REVISIONS

DATE

BY

CHK'D

APP'D

OWNER

DESIGNED

DRAWN

CHECKED

PROCESS CK

MECH. CK

STRUCT. CK

ELECT. CK

OWNER APP.

OWNER APP.

DATE

94/12/19

98/04/30

98/04/30

E-1259
INLET GAS CHILLER
CAP: 1.35 MM BTU/HR
DR: 1000 PSIG
DI: 40/1407

E-1251
GAS/GAS EXCHANGER
CAP: 6.02 MM BTU/HR
DR: 1487 TO 1507
DI: 575 PSIG

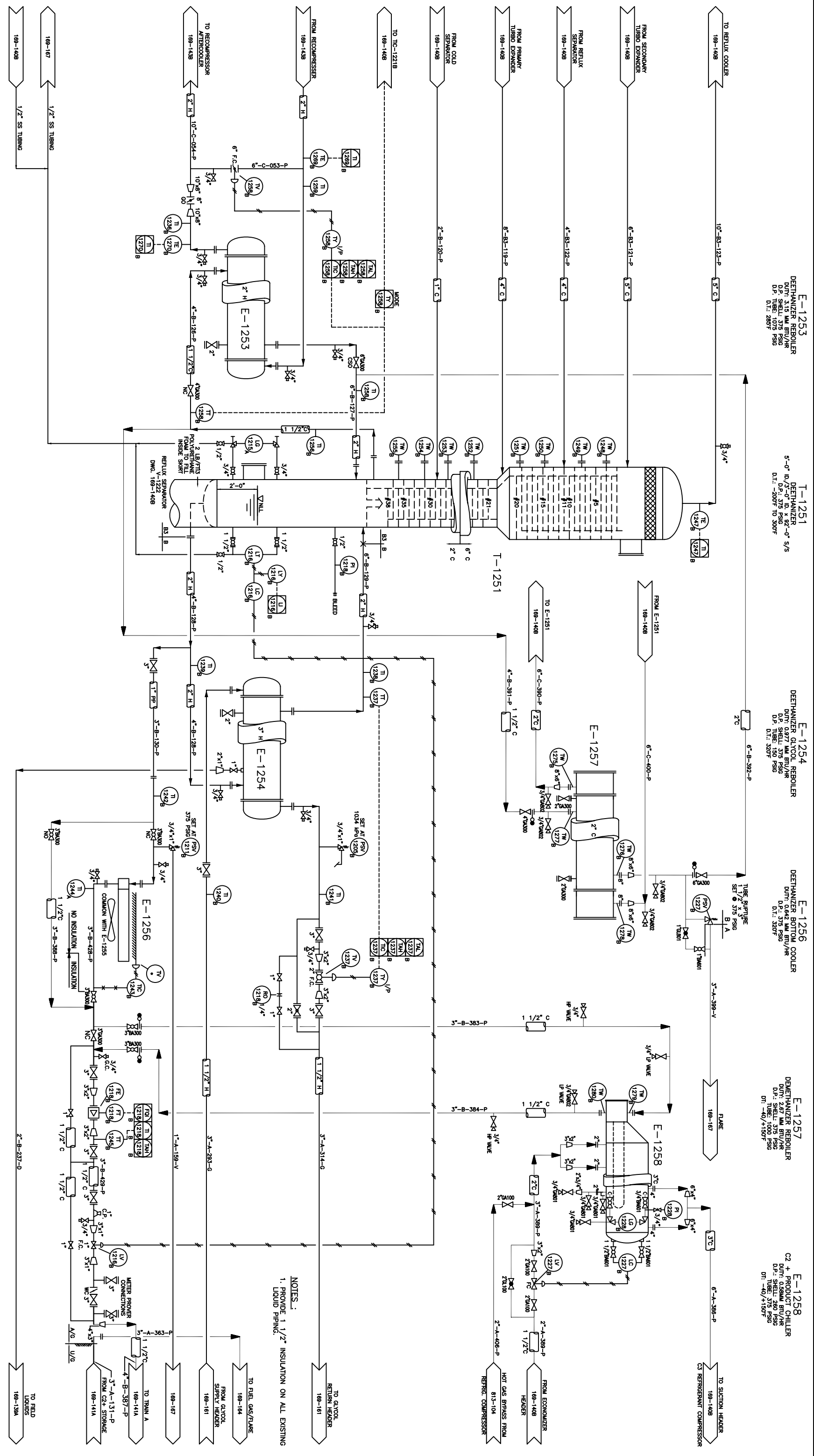
V-1251
COLD SEPARATOR
CAP: 4'-6" ID x 8'-0" S/S
DR: 1000 PSIG
DI: 20 TO 1007

E-1252
REFLUX COOLER
CAP: 10.31 MM BTU/HR
DR: 1031 TO 1097
DI: 20 TO 1007

V-1252
REFLUX SEPARATOR
CAP: 3'-0" ID x 8'-0" S/S
DR: 1000 PSIG
DI: 2007 TO 1007

C-1251
PRIMARY EXPANDER
CAP: 3728 MGD
DR: 277 PSIA
TEMP: (N) 547 (O) 40.44

C-1252
SECONDARY EXPANDER
CAP: 24074 MGD
DR: 275 PSIA
TEMP: (N) 1017 (O) 17.17



E-1253
 DEETHANIZER REBOILER
 DUTY: 3.15 MM BTU/HR
 D.P. SHELL: 375 PSIG
 D.I.: 280°F TO 300°F

T-1251
 DEETHANIZER
 DUTY: 0.642 MM BTU/HR
 D.P. SHELL: 375 PSIG
 D.I.: 280°F TO 300°F

E-1254
 DEETHANIZER GLYCOL REBOILER
 DUTY: 0.977 MM BTU/HR
 D.P. SHELL: 375 PSIG
 D.I.: 320°F

E-1256
 DEETHANIZER BOTTOM COOLER
 DUTY: 0.642 MM BTU/HR
 D.P. SHELL: 375 PSIG
 D.I.: 320°F

E-1257
 DEETHANIZER REBOILER
 DUTY: 2.88 MM BTU/HR
 D.P. SHELL: 375 PSIG
 D.I.: 280°F TO 300°F

E-1258
 C2 + PRODUCT CHILLER
 DUTY: 3.15 MM BTU/HR
 D.P. SHELL: 375 PSIG
 D.I.: TUBE: 1000 PSIG
 DT: -40/+150°F

NOTES:
 1. PROVIDE 1 1/2" INSULATION ON ALL EXISTING LIQUID PIPING.

DWG. NO.	REFERENCE DRAWINGS	DEVON PROJECT	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER	ENGINEER AND PERMIT STAMPS
189-1408			1-0	99/04/30	ERS	KR	FSS		DESIGNED: ALBERT 94/12/19
189-1408			1B	99/04/24	ERS				CHECKED: KR 98/04/30
189-1408			1A	99/04/08	GLR				PROCESS CK: FSS 98/04/30
189-1408			3	04/04/22	SAE				MECH. CK: FSS 98/04/30
189-1408			2	99/12/21	SDS				ELECT. CK: [Blank]
189-1408			1-1	99/05/28	WRL				OWNER APP: [Blank]

189-141B	189-141B	189-141B	189-141B	189-141B	189-141B	189-141B	189-141B	189-141B	189-141B
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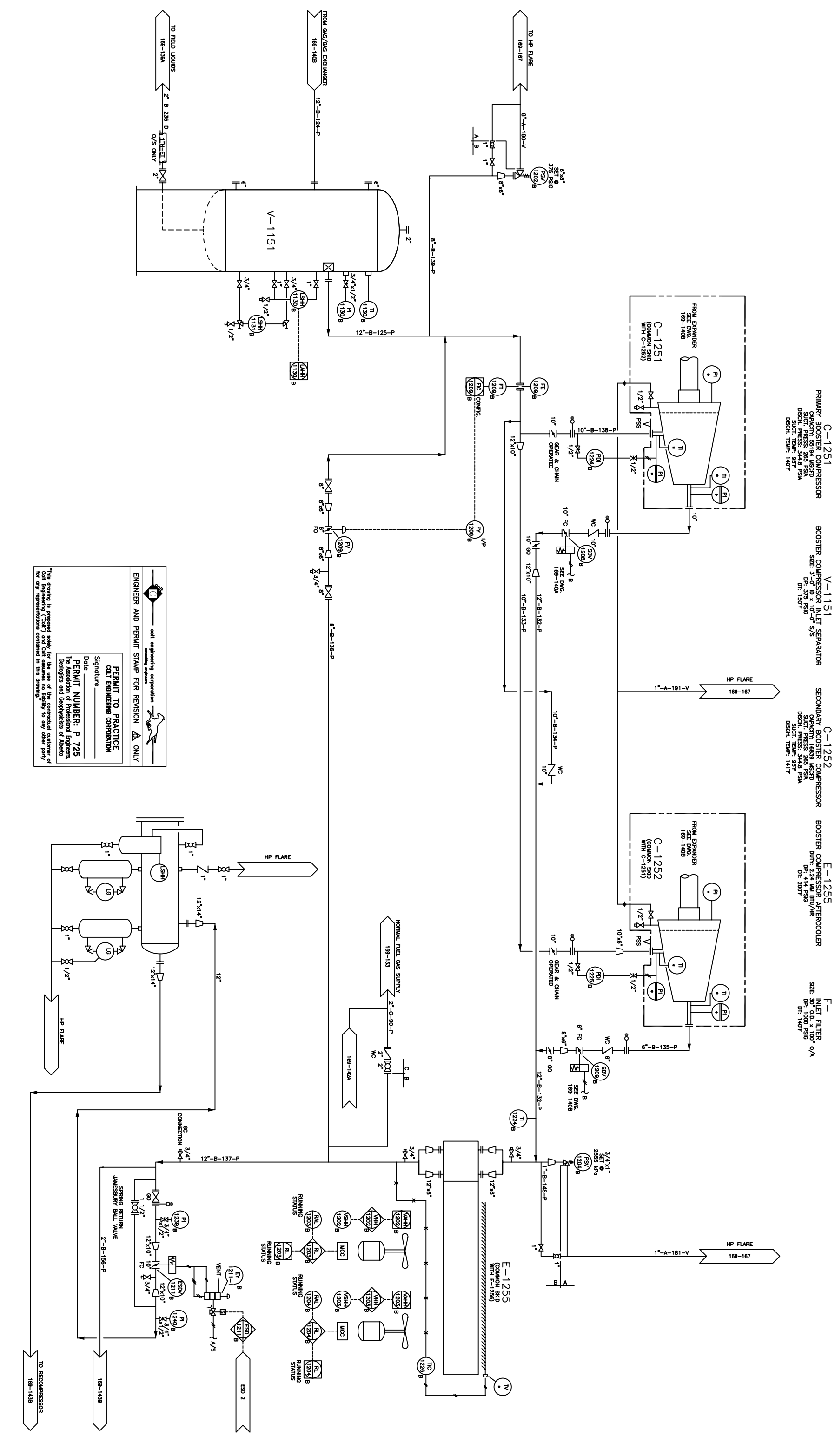
Devon

DUNVEGAN C2 RECOVERY
 PIPING & INSTRUMENTATION DIAGRAM
 DEETHANIZER TRAIN "B"

LSD: 15-03-81-04 W6M.

COMP. 08 IN SCALE NONE
 DWG. NO. 189-141B
 DEVON PROJ. 3

DWG. NO.	REFERENCE DRAWINGS	DEVON PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER APP'D	ENGINEER AND PERMIT STAMPS	DESIGNED	DRAWN	AUDIT	DATE	DESCRIPTION	
			0	REVISED 'AS BUILT'	96/11/25	MK				<p>PERMIT TO PRACTICE OIL ENGINEERING CORPORATION Signature _____ Date _____ PERMIT NUMBER: P 725 The Association of Professional Engineers, Geologists and Geophysicists of Alberta</p>						
			B	AS BUILT	96/01/09	WF										
			A	REDRAWN ON CAD	94/12/19	KCC										



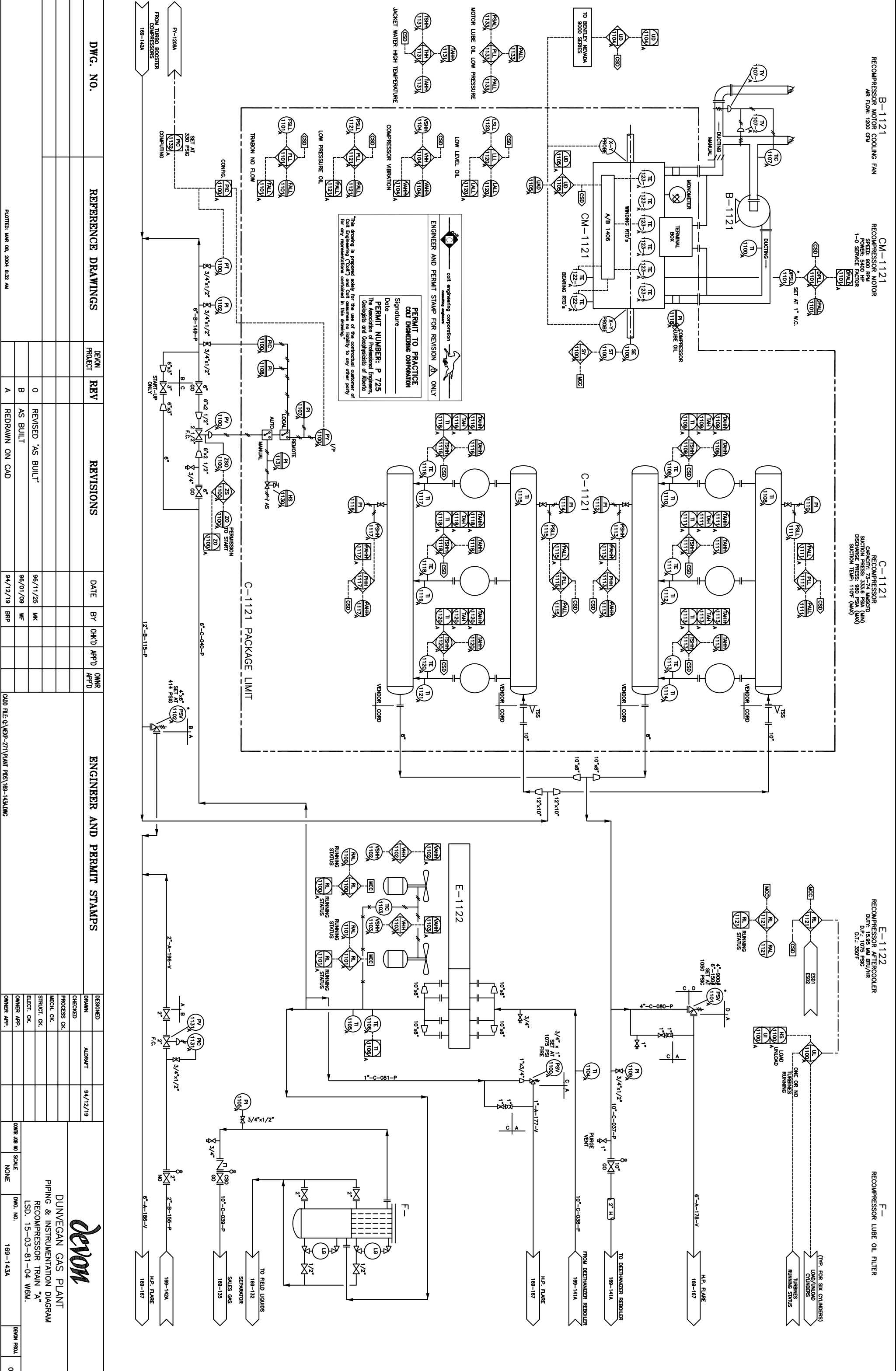
C-1251 PRIMARY BOOSTER COMPRESSOR
 CAPACITY: 55194 MSCFD
 SUCT. PRESS: 265 PSIA
 DISCH. PRESS: 967 PSIA
 SUCT. TEMP: 96°F
 DISCH. TEMP: 140°F

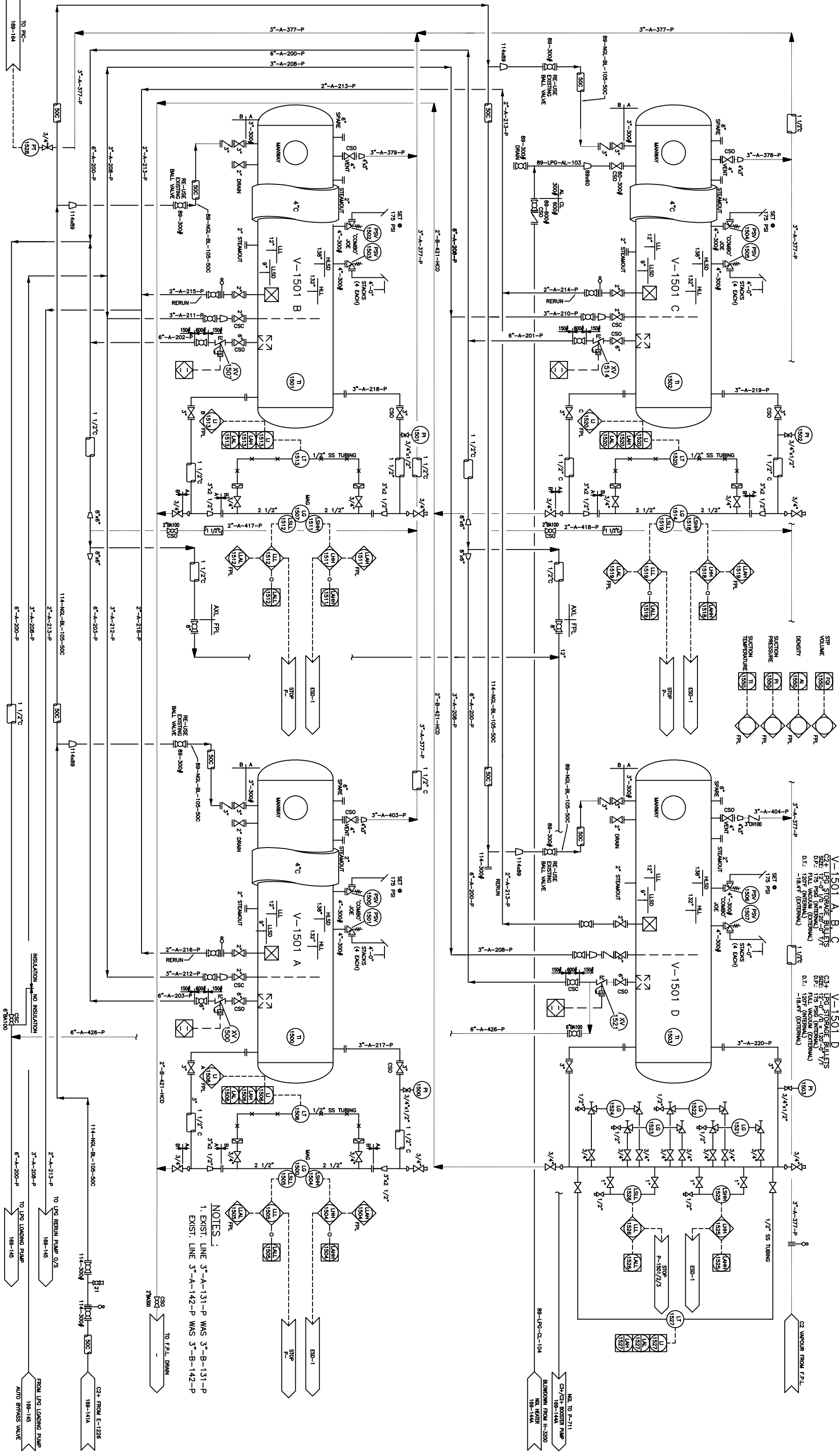
V-1151 BOOSTER COMPRESSOR INLET SEPARATOR
 SIZE: 3'-0" ID x 10'-0" S/S
 DR: 375 P596
 DT: 150°F

C-1252 SECONDARY BOOSTER COMPRESSOR
 CAPACITY: 16839 MSCFD
 SUCT. PRESS: 265 PSIA
 DISCH. PRESS: 967 PSIA
 SUCT. TEMP: 96°F
 DISCH. TEMP: 141°F

E-1255 BOOSTER COMPRESSOR AFTERCOOLER
 DUTY: 224 MM BTU/HR
 DR: 414 P596
 DT: 200°F

E-1251 INLET FILTER 0/A
 SIZE: 30" O.D. x 100"
 DR: 1000 P596
 DT: 140°F



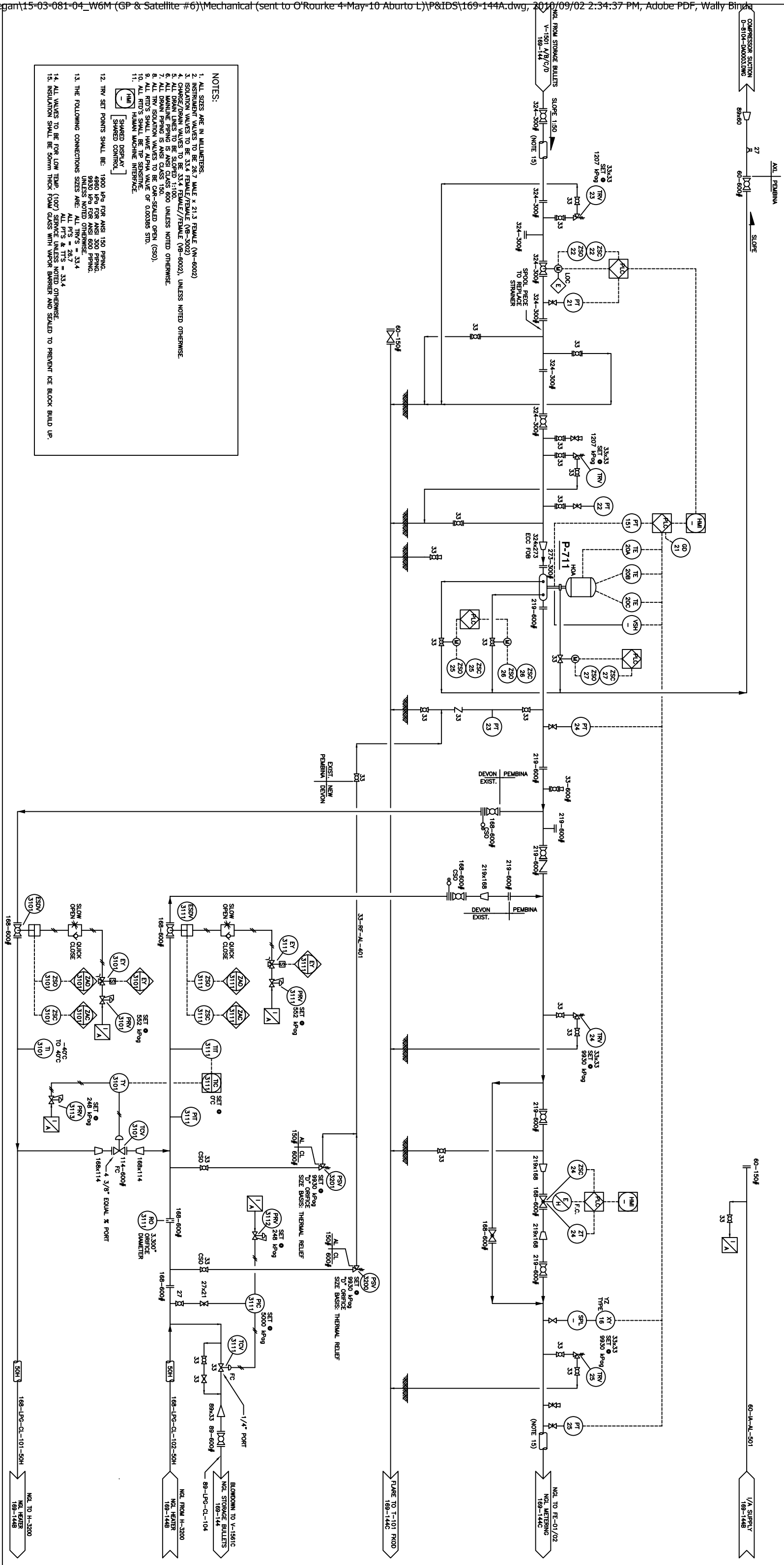


DWG. NO.	REFERENCE DRAWINGS	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER	ENGINEER AND PERMIT STAMPS
0811510		ISSUED FOR CONSTRUCTION (GLE 08217)	08.09.24	JRF				DESIGNED: ALURAFI 94.12.19
0711084		ISSUED FOR CONSTRUCTION (GLE 07243)	08.07.15	MRD				CHECKED: ALURAFI
0711084		ISSUED FOR BID (GLE 07243)	08.07.09	MRD				PROCESS OK
0711084		ISSUED FOR HAZOP (GLE 07243)	08.06.23	JRF				MECH. OK
0711084		ISSUED FOR DESIGN (GLE 07234)	08.05.27	SLL				ELECT. OK
0811510		AS BUILT (GLE 08217)	09.03.25	JUG				OWNER APP.:

devon
 DUNVEGAN
 SOUR GAS PLANT
 P&ID - LPG STORAGE SYSTEM
 LSD. 15-03-081-04 W6M.
 DWG. NO. 169-144.DWG
 DESIGN NO. 0811510

NOTES:
 1. EXIST. LINE 3"-A-131-P WAS 3"-B-131-P
 EXIST. LINE 3"-A-142-P WAS 3"-B-142-P

P-711
 C3+/C2+ BOOSTER PUMP
 MANUFACTURE: BW/IP
 MODEL: 2500
 VOLTAGE: 600 V, 3φ, 60Hz
 SPEED: 3575 RPM



- NOTES:**
1. ALL SIZES ARE IN MILLIMETERS.
 2. INSULATION SHALL BE 25.4 MM (1 IN) FOR ALL PIPING UNLESS NOTED OTHERWISE.
 3. CHARGE/DRAIN VALVES TO BE 31.4 FEMALE/FEMALE (N6-8002), UNLESS NOTED OTHERWISE.
 4. ALL DRAIN LINES TO BE SLOPED 1:100.
 5. ALL MAINLINE PIPING IS ANSI CLASS 600 UNLESS NOTED OTHERWISE.
 6. ALL TRV ISOLATION VALVES TO BE 150#-SEALED OPEN (CSO).
 7. ALL TRV ISOLATION VALVES TO BE 150#-SEALED OPEN (CSO).
 8. ALL RTD'S SHALL HAVE ALPHA VALUE OF 0.00285 STD.
 9. ALL RTD'S SHALL BE TIP SENSITIVE.
 10. ALL RTD'S SHALL BE TIP SENSITIVE.
 11. HUMAN MACHINE INTERFACE.
 12. TRV SET POINTS SHALL BE: 1900 kPa FOR ANSI 150 PIPING, 9930 kPa FOR ANSI 600 PIPING, UNLESS NOTED OTHERWISE.
 13. THE FOLLOWING CONNECTIONS SIZES ARE: ALL TRVS = 33.4 ALL PVS = 25.7 ALL PVS = 33.4 ALL PVS = 33.4
 14. ALL VALVES TO BE FOR LOW TEMP. (100°) SERVICE UNLESS NOTED OTHERWISE.
 15. INSULATION SHALL BE 50mm THICK FOAM GLASS WITH VAPOR BARRIER AND SEALED TO PREVENT ICE BLOCK BUILD UP.

DWG. NO.	REFERENCE DRAWINGS	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER	ENGINEER AND PERMIT STAMPS
0811510		7 AS-BUILT (GLE 08217)	09-03-23	JRF				DESIGNED: JDV 08.03.25
0711084		6 ADDED RO-3111 (GLE 07243)	08.08.05	JLM	JUG	DBM		CHECKED: _____
0711084		5 ISSUED FOR CONSTRUCTION (GLE 07243)	08.07.15	MRO	JUG	DBM		PROCESS CK: _____
0711084		4 ISSUED FOR BID (GLE 07243)	08.07.09	MRO	JUG	DBM		MECH. CK: _____
0711084		3 ISSUED FOR HAZOP (GLE 07243)	08.06.23	JRF				ELECT. CK: _____
0711084		2 ISSUED FOR DESIGN (GLE 07243)	08.06.27	SLL	JUG			OWNER APP: _____

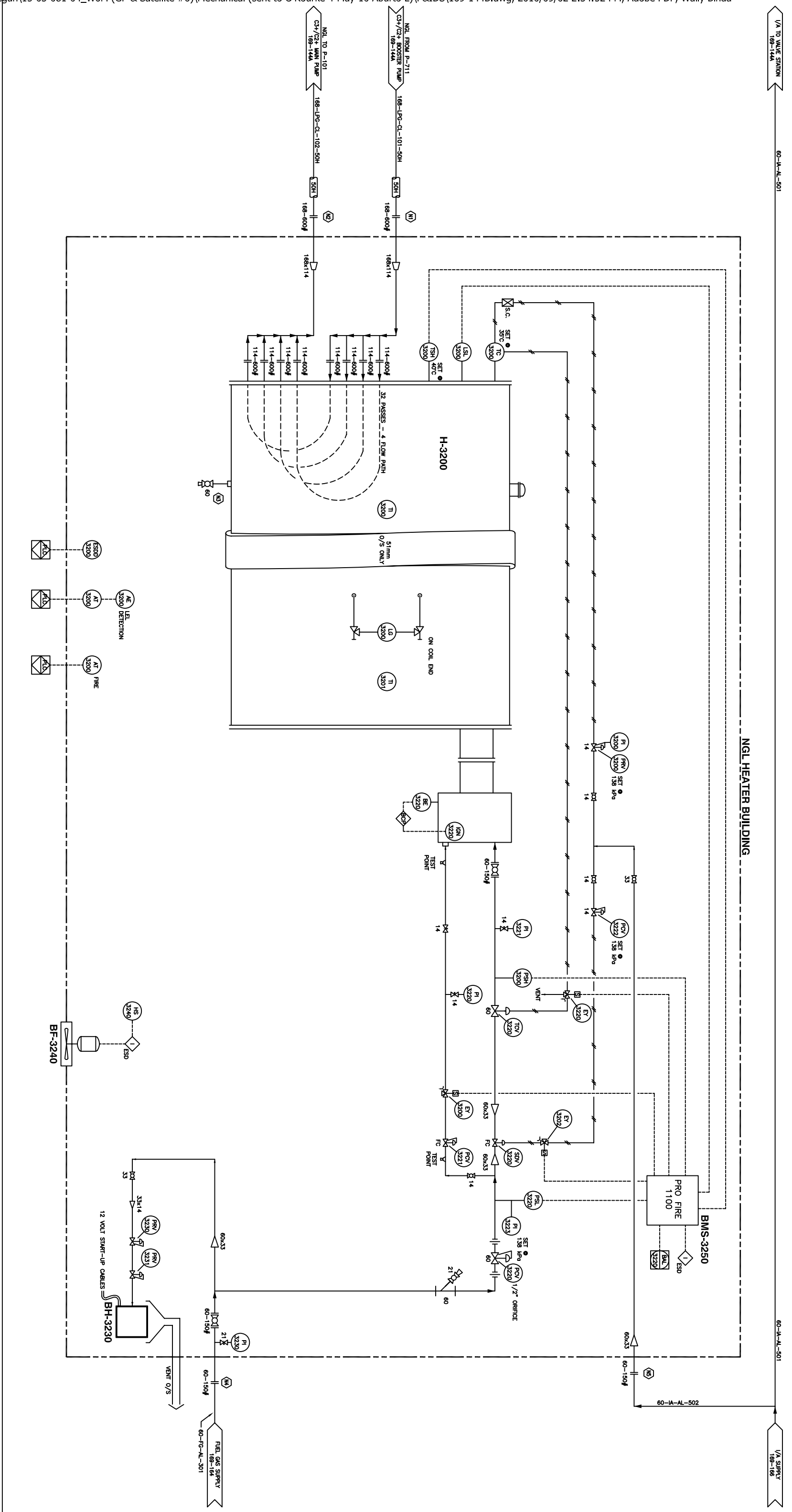
devon
 DUNVEGAN
 SOUR GAS PLANT
 P&ID - C3+/C2+ BOOSTER PUMP
 LSD 15-03-081-04 W6M
 DWG. NO. 169-144A.DWG
 DESIGN PROJ. 0711084

H-3200
 NGL HEATER
 SIZE: 2450mm O/D x 9144mm S/S
 DUTY: 4.0MM BTU/HR
 COIL DESIGN: 9930 KPa @ -45C/54C

BH-3230
 BUILDING HEATER
 8000 BTU/HR
 120 VAC START
 305mm x 610mm

BF-3240
 BUILDING FAN
 120 VAC

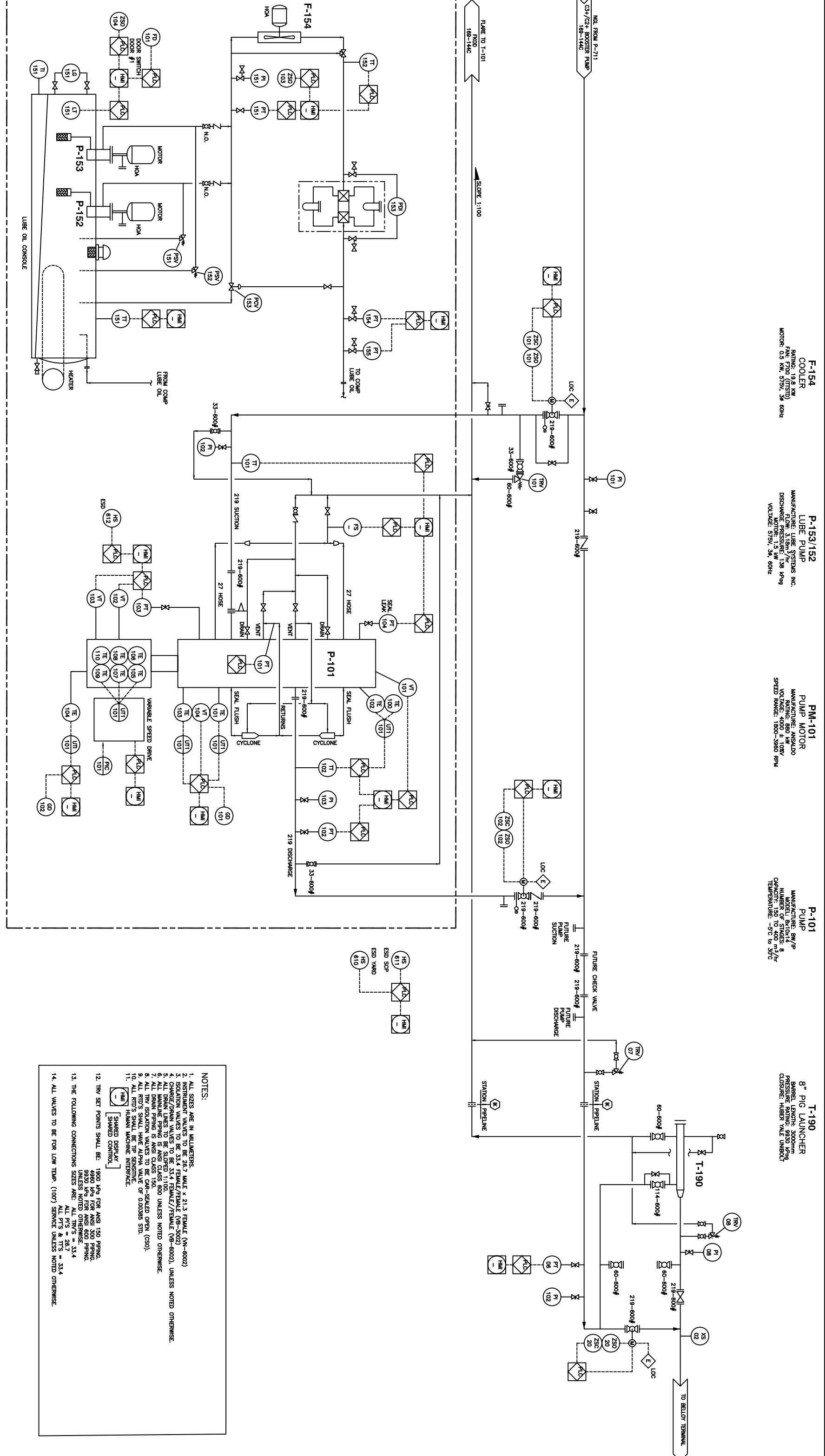
BMS-3250
 BURNER MANAGEMENT SYSTEM
 PRO FIRE 1100



DWG. NO.	REFERENCE DRAWINGS	DESIGNER	DATE	BY	CHK'D	APP'D	OWNER	ENGINEER AND PERMIT STAMPS
0811510	PROJECT	0811510	09-03-23	JRF				DESIGNED: JDV 08.03.25
0711084	AS-BUILT (GLE 08217)	0711084	08.10.09	MRD				CHECKED:
0711084	PRELIMINARY AS-BUILT	0711084	08.07.15	MRD				PROCESS CK:
0711084	ISSUED FOR CONSTRUCTION (GLE 07243)	0711084	08.07.09	MRD	JUG			MECH. CK:
0711084	ISSUED FOR BID (GLE 07243)	0711084	08.06.23	JRF				ELECT. CK:
0711084	ISSUED FOR DESIGN (GLE 07243)	0711084	08.05.27	JUG				OWNER APP.:

devon
 DUNVEGAN
 SOUR GAS PLANT
 PAID - NGL LINE HEATER
 LSD 15-03-081-04 W6M

OWNER APP. SCALE NONE
 DWG. NO. 169-144B.DWG
 DESIGN PROJ. 0711084



F-154
COOLER
RATING: 19.8 kW
FAN: F700 (TSTTD)
MOTOR: 0.5 kW, 575V, 3ø, 60Hz

P-153/152
LUBE PUMP
MANUFACTURE: LUBE SYSTEMS INC.
FLOW: 3.18m³/hr
DISCHARGE: 28 MPa
MOTOR: 1.5 kW
VOLTAGE: 575V, 3ø, 60Hz

PM-101
PUMP MOTOR
MANUFACTURE: ANSALDO
RATING: 880 kW
VOLTAGE: 400V-3Ø-50 Hz
SPEED RANGE: 1800-3600 RPM

P-101
PUMP
MANUFACTURE: BW/IP
MODEL: B10X14
RATING: 25.8 kW
VOLTAGE: 400V-3Ø-60 Hz
TEMPERATURE: -5°C to 30°C

T-190
8" PIG LAUNCHER
BARREL LENGTH: 3000mm
PRESSURE RATING: 99.50 kPa g
CLOSURE: RUBBER WALE UNBOLT

DWG. NO.	REFERENCE DRAWINGS	REVISIONS	ENGINEER AND PERMIT STAMPS
0711084	1	ISSUED FOR BID (GLE 07243)	DESIGNED: JDV, 08.03.25
0711084	0	ISSUED FOR CONSTRUCTION (GLE 07243)	CHECKED: [Blank]
0711084	C	ISSUED FOR APPROVAL (GLE 07243)	PROCESS CK: [Blank]
0711084	B	ISSUED FOR DESIGN REVIEW (GLE 07243)	MECH CK: [Blank]
0711084	A	REDRAWN PEMBINA A204.01-2 SHT.8	STRUCT. CK: [Blank]
			ELECT. CK: [Blank]
			OWNER APP: [Blank]
			OWNER APP: [Blank]

DATE	BY	CHK'D	APP'D	OWNER
08.07.09	MRO	JUG		
08.05.09	OS			
08.04.28	JRF			
08.04.02	JDV	JUG		
08.03.25	JDV	BAK		

devon
DUNVEGAN
SOUR GAS PLANT
P&ID - C3+/C2+ MAIN PUMP & PIG LAUNCHER
LSD 15-03-081-04 W6M
DWG. NO. 169-144D.DWG

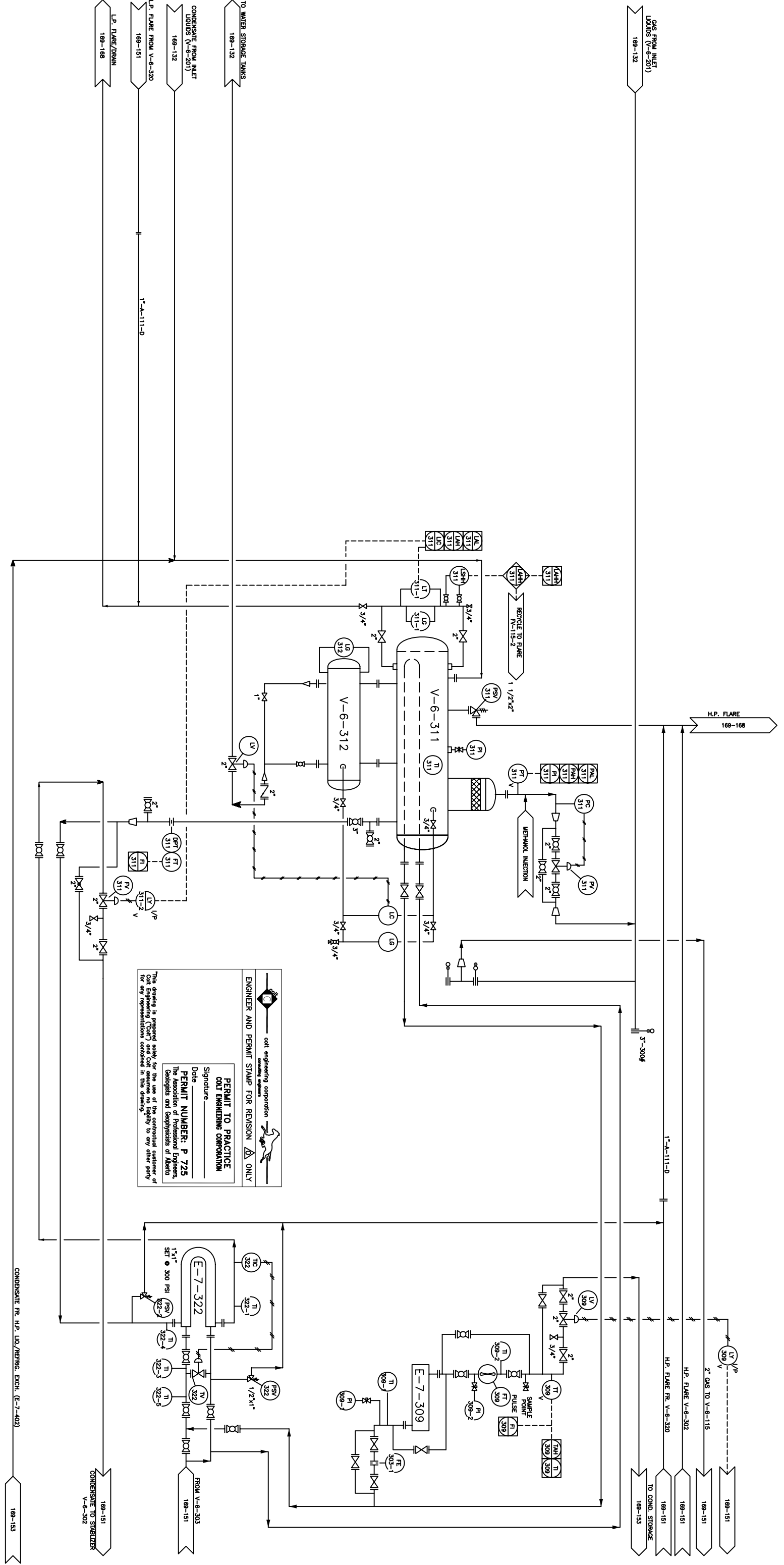
- NOTES:**
1. ALL SIZES ARE IN MILLIMETERS.
 2. INSTRUMENT VALVES TO BE 28.7 MALE x 21.3 FEMALE (VM-6002)
 3. ISOLATION VALVES TO BE 33.4 FEMALE/FEMALE (VB-3002)
 4. CHANGE/DRAIN VALVES TO BE 33.4 FEMALE/FEMALE (VB-6002), UNLESS NOTED OTHERWISE.
 5. ALL DRAIN LINES TO BE SLOPED 1:100, UNLESS NOTED OTHERWISE.
 6. ALL DRAIN LINES TO BE SLOPED 1:100, UNLESS NOTED OTHERWISE.
 7. ALL DRAIN PIPING IS ANSI CLASS 150.
 8. ALL TRV ISOLATION VALVES TO BE CAR-SEALED OPEN (CSO).
 9. ALL RTD'S SHALL BE TIP SENSITIVE.
 10. ALL RTD'S SHALL HAVE ALPHA VALUE OF 0.00385 STD.
 11. HUMAN MACHINE INTERFACE.
 12. TTY SET POINTS SHALL BE:
 - 1900 kPa FOR ANSI 150 PIPING.
 - 4950 kPa FOR ANSI 300 PIPING.
 - 9950 kPa FOR ANSI 600 PIPING.
 - SIZES NOTED OTHERWISE: 33.4
 - ALL PITS & TTS = 28.7
 - ALL PITS & TTS = 33.4
 13. THE FOLLOWING CONNECTIONS SIZES ARE:
 - ALL PITS & TTS = 28.7
 - ALL PITS & TTS = 33.4
 14. ALL VALVES TO BE FOR LOW TEMP. (100) SERVICE UNLESS NOTED OTHERWISE.

V-6-311
FRACTIONATION SURGE TANK
6'-0" O.D. x 24'-0" H.
D.P. 534 PSIA M.W.P. 480 PS (DERATED)
D.I. 1507

V-6-312
FRACTIONATION SURGE TANK BOOT
18' O.D. x 10'-8" H.
D.P. 534 PSIA
D.I. 1507

E-7-322
CONDENSATE HEAT EXCHANGER
DUTY: 172mm BTU/HR
D.P. SHELL: 300 PSIA
D.P. TUBES: 300 PSIA
D.I. SHELL: 3507F
D.I. TUBES: 3507F

E-7-309
CONDENSATE COOLER
DUTY: 250mm BTU/HR
(COMBINED WITH COOLER E-7-401)



call engineering corporation
ENGINEER AND PERMIT STAMP FOR REVISION ONLY

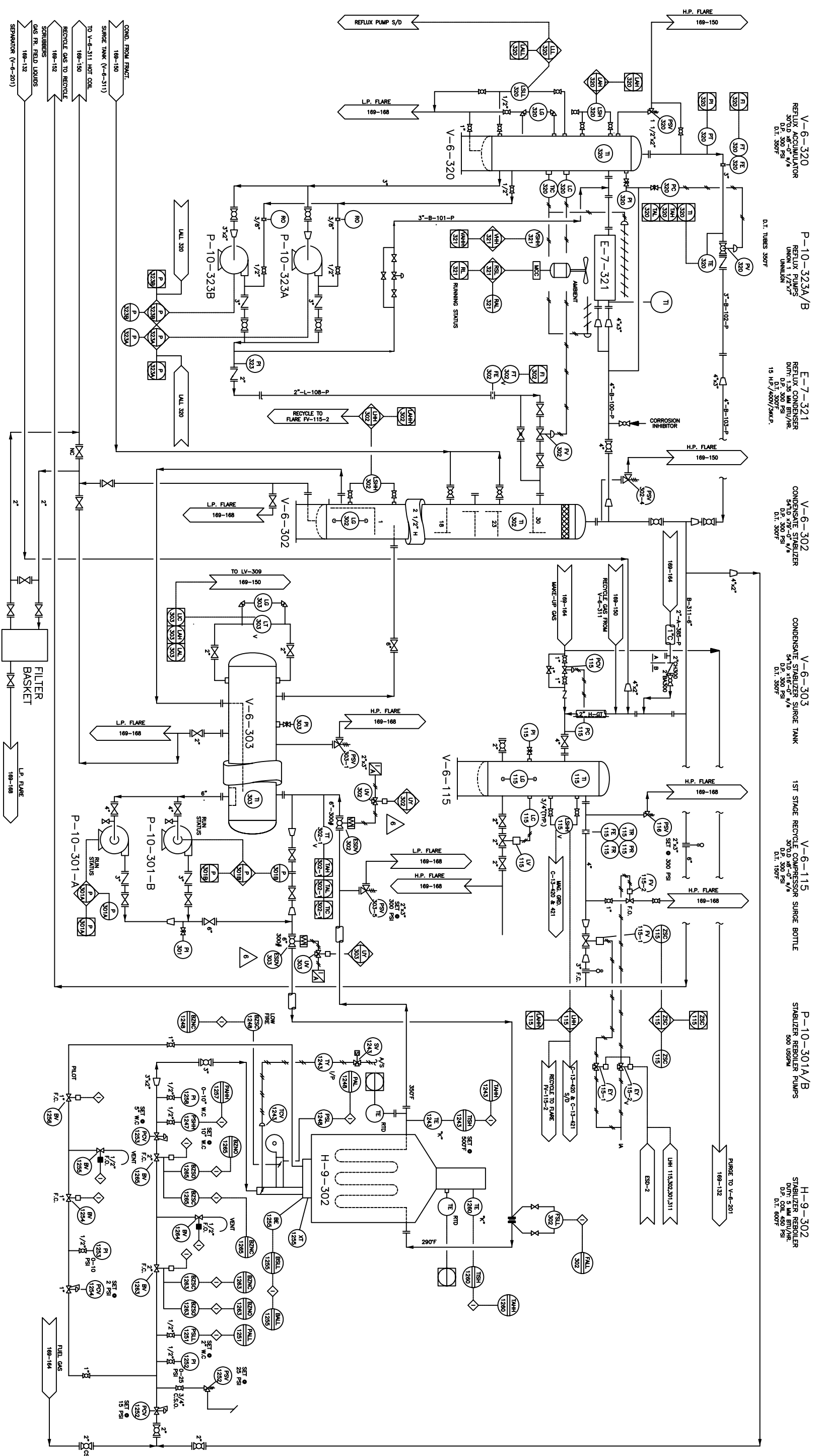
PERMIT TO PRACTICE
CALL ENGINEERING CORPORATION

Signature _____
Date _____

PERMIT NUMBER: P 725
The Association of Professional Engineers,
Geologists and Geophysicists of Alberta

This drawing is prepared solely for the use of the contractual customer of call engineering corporation and is not to be used for any other party for any reproduction contained in this drawing.

DWG. NO.	REFERENCE DRAWINGS	DECON PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER APP'D	ENGINEER AND PERMIT STAMPS	DESIGNED	AUDIT/FT	DATE	SCALE	DWG. NO.	DECON PROJ.	
			1	AS BUILT (V-2000 BY TUKULA GAS ENGINEERING LTD.)	00/04/01	BB				<p>DUNVEGAN GAS PLANT PIPING & INSTRUMENTATION DIAGRAM CONDENSATE PROCESSING LSD. 15-03-81-04 W6M.</p>			94/12/19	NONE	169-150		
			0	REVISED 'AS BUILT'	96/11/25	MK											
			B	AS BUILT	96/01/10	WF											
			A	REDRAWN ON CAD	94/12/19	RHD											



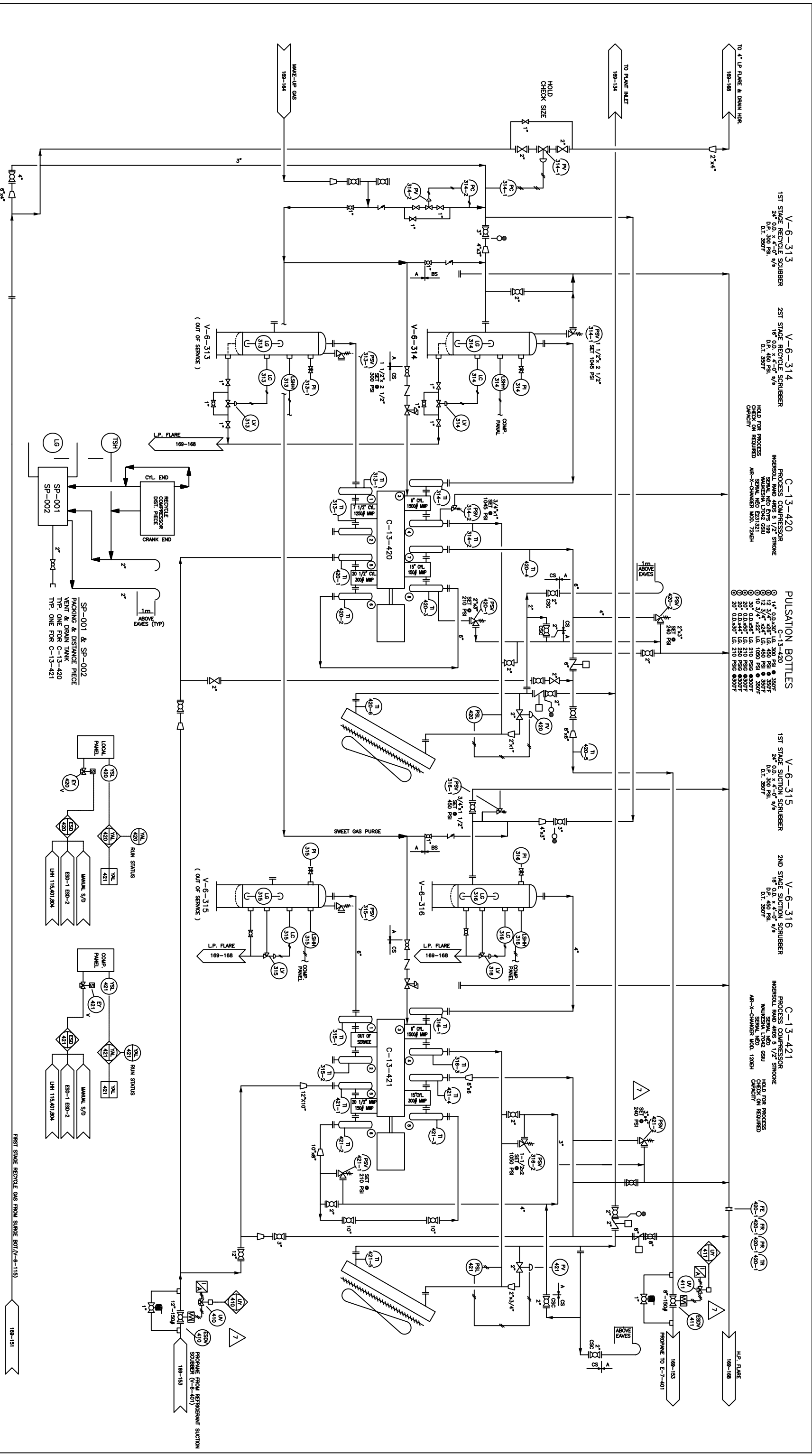
DWG. NO.	REFERENCE DRAWINGS	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER
		3-0	I.F.C., C2 RECOVERY (COLT JOB 97C813)	98/08/25	VRL			
		2	REVISED 'AS BUILT'	98/11/25	MK			
		1A	REVISED AS NOTED, IFC	98/09/30	SL			
		6	AS BUILT (ADD ESQVS) (PEI)	04/07/22	AT			
		5	AS BUILT (GLE)	04/03/05	SAE			
		4	AS BUILT (COLT JOB 97C813)	98/12/18	SOS			

DESIGNED	CHECKED	DATE	APP'D	OWNER
		94/12/19		

THE ENGINEERING STAMP WAS SIGNED BY T. W. WOLOSHYN ON 22JUL04

THE ASBUILT TO PRACTICE STAMP FOR PRECISION ENGINEERING WAS SIGNED BY T.W. WOLOSHYN ON 22JUL04

DUNVEGAN GAS PLANT
PIPING & INSTRUMENTATION DIAGRAM
CONDENSATE STABILIZATION
LSD. 15-03-81-04 W6M.
DWG. NO. 169-151
SCALE NONE
OWNER APP. [Signature]
DESIGN PROJ. 6



DWG. NO.

REFERENCE DRAWINGS

REVISIONS

ENGINEER AND PERMIT STAMPS

DESIGNED
DRAWN
CHECKED
PROCESS CK.
MECH. CK.
STRUCT. CK.
ELECT. CK.
OWNER APP.

DATE
BY
CHKD
APPD
OMNR
APPD

REV

PROJECT

DATE

BY

CHKD

APPD

OMNR

APPD

REV

PROJECT

DATE

BY

CHKD

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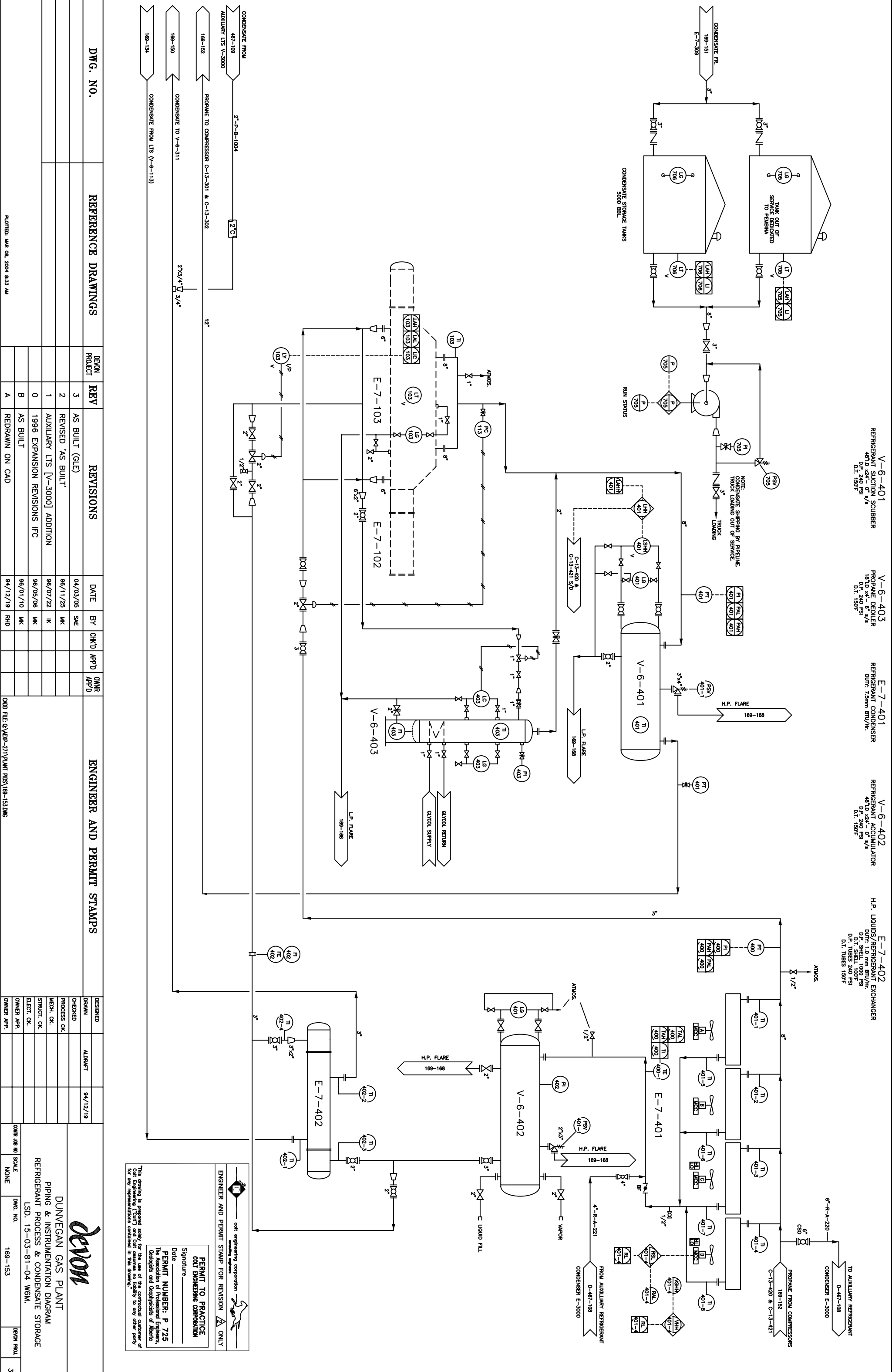
CHKD

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APPD

REV



V-6-401
REFRIGERANT SUCTION SUBCOOLER
481D x24" - 6" s/s
D.P. 240 PSI
D.I. 150F

V-6-403
REFRIGERANT DEOILER
181D x4" - 6" s/s
D.P. 240 PSI
D.I. 150F

E-7-401
REFRIGERANT CONDENSER
DUTY: 7.5mm BTU/Hr

V-6-402
REFRIGERANT ACCUMULATOR
481D x24" - 6" s/s
D.P. 240 PSI
D.I. 150F

E-7-402
H.P. LIQUIDS/REFRIGERANT EXCHANGER
DUTY: 1.0 mm BTU/Hr
D.P. SHELL 1000 PSI
D.P. TUBES 240 PSI
D.I. TUBES 150F

DWG. NO.	REFERENCE DRAWINGS	DEVON PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER APP'D	ENGINEER AND PERMIT STAMPS
			3	AS BUILT (GLE)	04/03/05	SAE				DESIGNED: AUBRYT 94/12/19 CHECKED: _____ PROCESS CK: _____ MECH. CK: _____ STRUCT. CK: _____ ELECT. CK: _____ OWNER APP: _____ OWNER APP: _____ OWNER APP: _____ OWNER APP: _____
			2	REVISED 'AS BUILT'	96/11/25	MK				
			1	AUXILIARY LTS [V-3000] ADDITION	96/07/22	IK				
			0	1996 EXPANSION REVISIONS IFC	96/05/06	MK				
			B	AS BUILT	96/01/10	MK				
			A	REDRAWN ON CAD	94/12/19	RHD				DUNVEGAN GAS PLANT PIPING & INSTRUMENTATION DIAGRAM REFRIGERANT PROCESS & CONDENSATE STORAGE LSD. 15-03-81-04 W6M. DWG. NO. 169-153 DEVON PROJ. 3

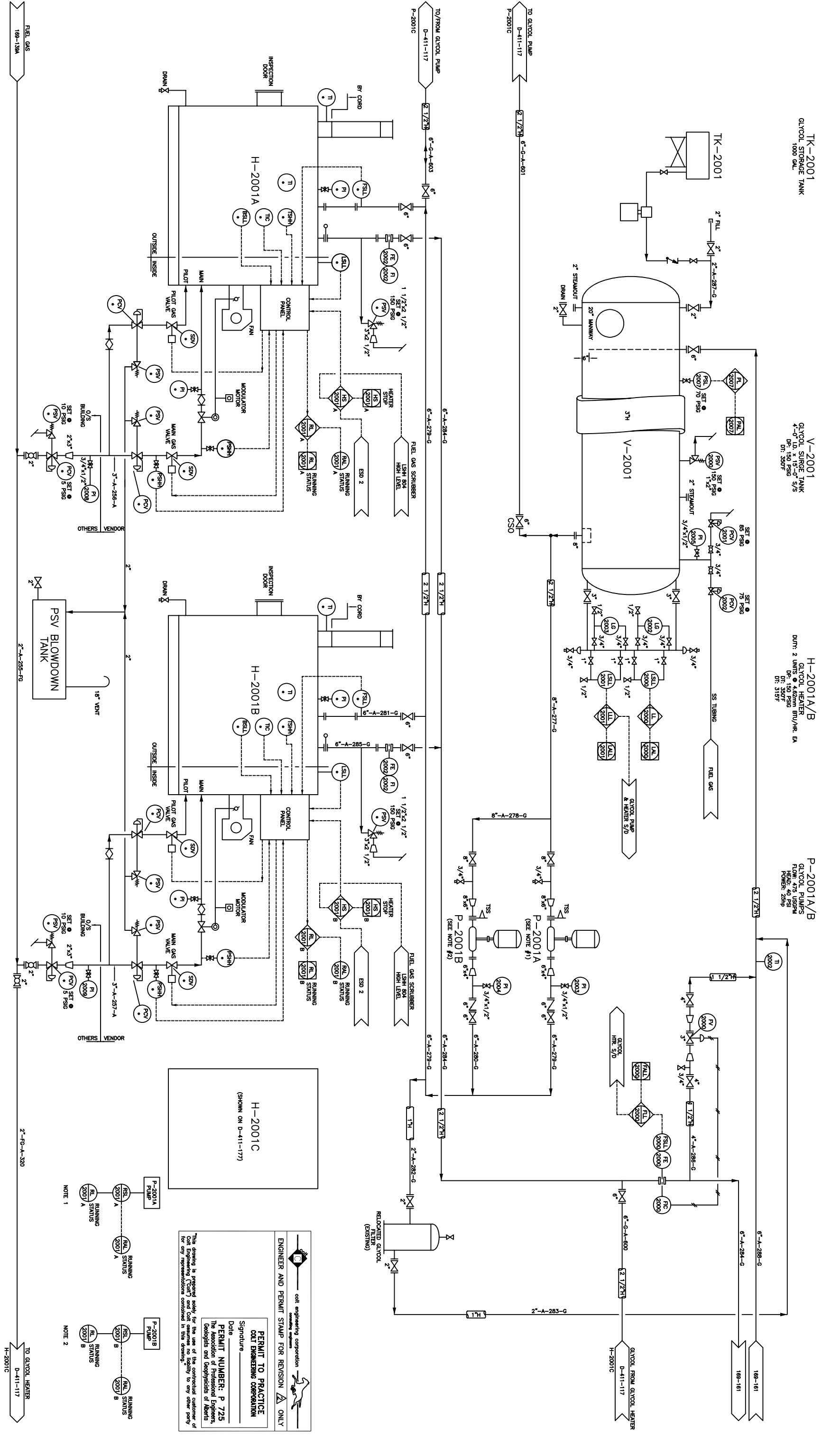
CONDENSATE FROM	PIPE SIZE	VALVE
467-108 AUXILIARY LTS V-3000	2"-B-B-1004	ZC
169-152 PROPAPE TO COMPRESSOR C-13-301 & C-13-302	12"	
169-150 CONDENSATE TO V-6-311	2"x3/4"	3/4"
169-134 CONDENSATE FROM LTS (V-6-113)	12"	

colt engineering corporation
 ENGINEER AND PERMIT STAMP FOR REVISION ONLY

PERMIT TO PRACTICE
 COLT ENGINEERING CORPORATION

Signature: _____
 Date: _____
 PERMIT NUMBER: P 725
 The Association of Professional Engineers,
 Geologists and Geophysicists of Alberta

This drawing is prepared solely for the use of the contracted customer of Colt Engineering ("Colt") and Colt assumes no liability to any other party for any representations contained in this drawing.



TK-2001
GLYCOL STORAGE TANK
1500 GAL

V-2001
GLYCOL SURGE TANK
4-0
DP: 150 PSIG
DT: 350°F

H-2001A/B
GLYCOL HEATER
DUM: 2 UNITS
DP: 150 PSIG
DT: 350°F
DT: 315°F

P-2001A/B
GLYCOL PUMPS
FLOW: 10 GPM
HEAD: 40 PSI
POWER: 25HP

DWG. NO.	REFERENCE DRAWINGS	DEVON PROJECT	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER	ENGINEER AND PERMIT STAMPS
			3 AS BUILT (GLE)	04/03/05	SAE				DESIGNED: ALDRIFT 9/4/12/19
			2 REVISED 'AS BUILT'	96/11/25	MK				CHECKED:
			1 1996 EXPANSION REVISIONS-PHASE2 IFC	96/07/08	MK				PROCESS CK:
			0 1996 EXPANSION REVISIONS IFC	96/05/06	MK				MECH. CK:
			B AS BUILT	96/01/10	WF				STRUCT. CK:
			A REDRAWN ON CAD	94/12/12	KCC				ELECT. CK:

PERMIT TO PRACTICE
COIL ENGINEERING CORPORATION

Signature: _____
Date: _____
PERMIT NUMBER: P 725

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REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER	ENGINEER AND PERMIT STAMPS
3	AS BUILT (GLE)	04/03/05	SAE				DESIGNED: ALDRIFT 9/4/12/19
2	REVISED 'AS BUILT'	96/11/25	MK				CHECKED:
1	1996 EXPANSION REVISIONS-PHASE2 IFC	96/07/08	MK				PROCESS CK:
0	1996 EXPANSION REVISIONS IFC	96/05/06	MK				MECH. CK:
B	AS BUILT	96/01/10	WF				STRUCT. CK:
A	REDRAWN ON CAD	94/12/12	KCC				ELECT. CK:

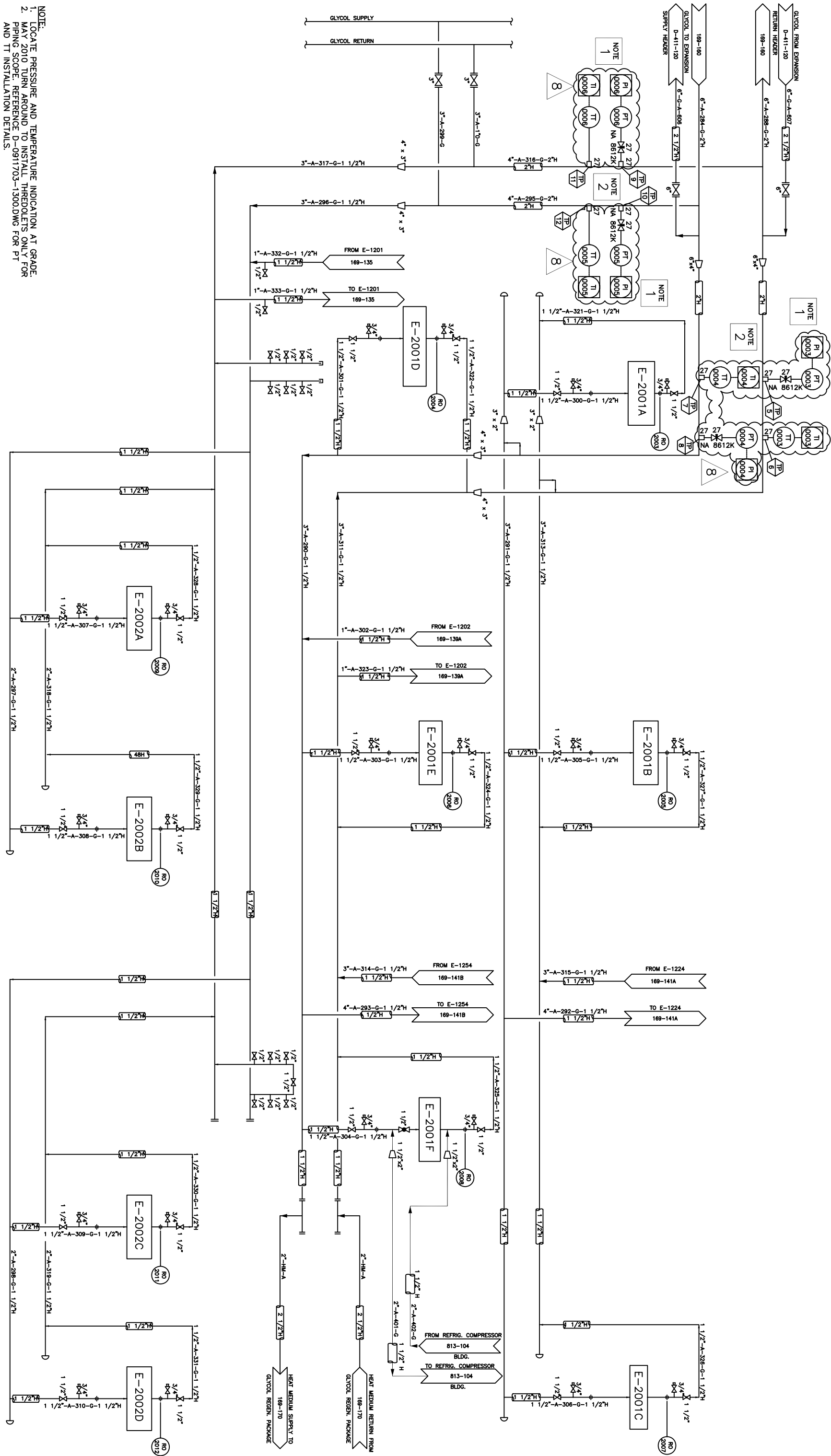
Devon

DUNVEGAN GAS PLANT
PIPING & INSTRUMENTATION DIAGRAM
GLYCOL SYSTEM

LSD: 15-03-81-04 W6M.

DWG. NO. 169-160

DEVON PROJ. 3



NOTE:
 1. LOCATE PRESSURE AND TEMPERATURE INDICATION AT GRADE.
 2. MAY 2010 TURN AROUND TO INSTALL THRODLETS ONLY FOR PIPING SCOPE. REFERENCE D-0911703-1300.DWG FOR PT AND TT INSTALLATION DETAILS.

DWG. NO.

REFERENCE DRAWINGS

REVISIONS

ENGINEER AND PERMIT STAMPS

DESIGNED
 DRAWN
 CHECKED
 PROCESS OK
 MECH. CK.
 STRUCT. CK.
 ELECT. CK.
 OWNER APP.

DUNVEGAN C2 RECOVERY
 PIPING & INSTRUMENTATION DIAGRAM
 GLYCOL SYSTEM

DEVON

REV	DATE (y/m/d)	BY	CHK'D	APP'D	OWNER APP'D
6	04/04/22	SAE			
7	10/05/21	KS	CK	CK	
8	10/05/26	MMP	CK	CK	

DESIGNED	DRAWN	CHECKED	PROCESS OK	MECH. CK.	STRUCT. CK.	ELECT. CK.	OWNER APP.

OWNER APP.	SCALE	DWG. NO.	REV. NO.
	NONE	169-161	8



0911703
 0911703
 6

ISSUED FOR CONSTRUCTION (OEL #7550)
 ISSUED FOR APPROVAL (OEL #7550)
 AS-BUILD PER FIELD MARK-UP (GLE)

0911703
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ISSUED FOR CONSTRUCTION (OEL #7550)
 ISSUED FOR APPROVAL (OEL #7550)
 AS-BUILD PER FIELD MARK-UP (GLE)

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ISSUED FOR CONSTRUCTION (OEL #7550)
 ISSUED FOR APPROVAL (OEL #7550)
 AS-BUILD PER FIELD MARK-UP (GLE)

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ISSUED FOR CONSTRUCTION (OEL #7550)
 ISSUED FOR APPROVAL (OEL #7550)
 AS-BUILD PER FIELD MARK-UP (GLE)

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ISSUED FOR CONSTRUCTION (OEL #7550)
 ISSUED FOR APPROVAL (OEL #7550)
 AS-BUILD PER FIELD MARK-UP (GLE)

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ISSUED FOR CONSTRUCTION (OEL #7550)
 ISSUED FOR APPROVAL (OEL #7550)
 AS-BUILD PER FIELD MARK-UP (GLE)

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 ISSUED FOR APPROVAL (OEL #7550)
 AS-BUILD PER FIELD MARK-UP (GLE)

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 ISSUED FOR APPROVAL (OEL #7550)
 AS-BUILD PER FIELD MARK-UP (GLE)

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 AS-BUILD PER FIELD MARK-UP (GLE)

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ISSUED FOR CONSTRUCTION (OEL #7550)
 ISSUED FOR APPROVAL (OEL #7550)
 AS-BUILD PER FIELD MARK-UP (GLE)

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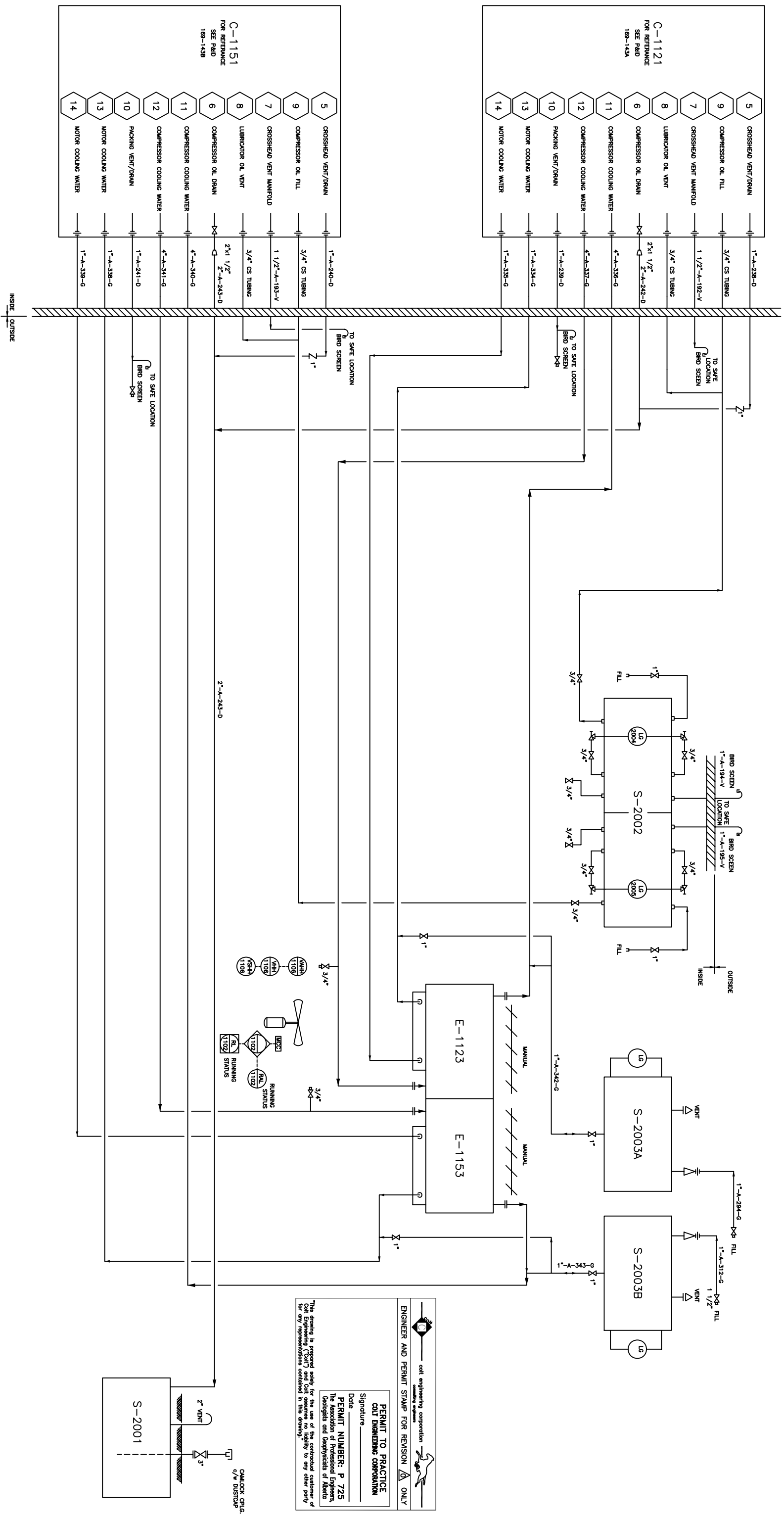
ISSUED FOR CONSTRUCTION (OEL #7550)
 ISSUED FOR APPROVAL (OEL #7550)
 AS-BUILD PER FIELD MARK-UP (GLE)

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ISSUED FOR CONSTRUCTION (OEL #7550)
 ISSUED FOR APPROVAL (OEL #7550)
 AS-BUILD PER FIELD MARK-UP (GLE)

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ISSUED FOR CONSTRUCTION (OEL #7550)
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 AS-BUILD PER FIELD MARK-UP (GLE)

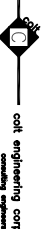


S-2002
LUBE OIL MAKE-UP TANK
DIMENSIONS: 16'x24'-0" O/A
TOTAL CAPACITY: 210 IMP. GAL.

E-1123/E-1153
RECOMPRESSOR UTILITY COOLERS
DUTY: COMP. 210 MM BTU/Hr
MOTOR: 3/4 HP 0.016 MM BTU/Hr
D.T.: 300°C

S-2003A/B
LUBE OIL MAKE-UP TANK
CAPACITY: 40 IMP. GAL EACH

S-2001
LUBE OIL DRAIN TANK
CAPACITY: 500 IMP. GAL.


colt engineering corporation
 ENGINEERING CORPORATION
 ENGINEER AND PERMIT STAMP FOR REVISION ONLY

PERMIT TO PRACTICE
COLT ENGINEERING CORPORATION
 Signature _____
 Date _____
PERMIT NUMBER: P 725
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 Colt Engineering ("Colt") and Colt assumes no liability to any other party
 for any representations contained in this drawing.

DWG. NO. REFERENCE DRAWINGS

DEVON PROJECT REV REVISIONS DATE BY CHK'D APP'D OWNER APP'D

ENGINEER AND PERMIT STAMPS

DESIGNED DRAWN ALBERT 9/4/12/19
CHECKED
PROCESS CK
MECH. CK
STRUCT. CK
ELECT. CK
OWNER APP.

DUNVEGAN GAS PLANT
PIPING & INSTRUMENTATION DIAGRAM
RECOMPRESSOR AUXILIARIES
LSD. 15-03-81-04 W6M.
DUNVEGAN GAS PLANT
189-162

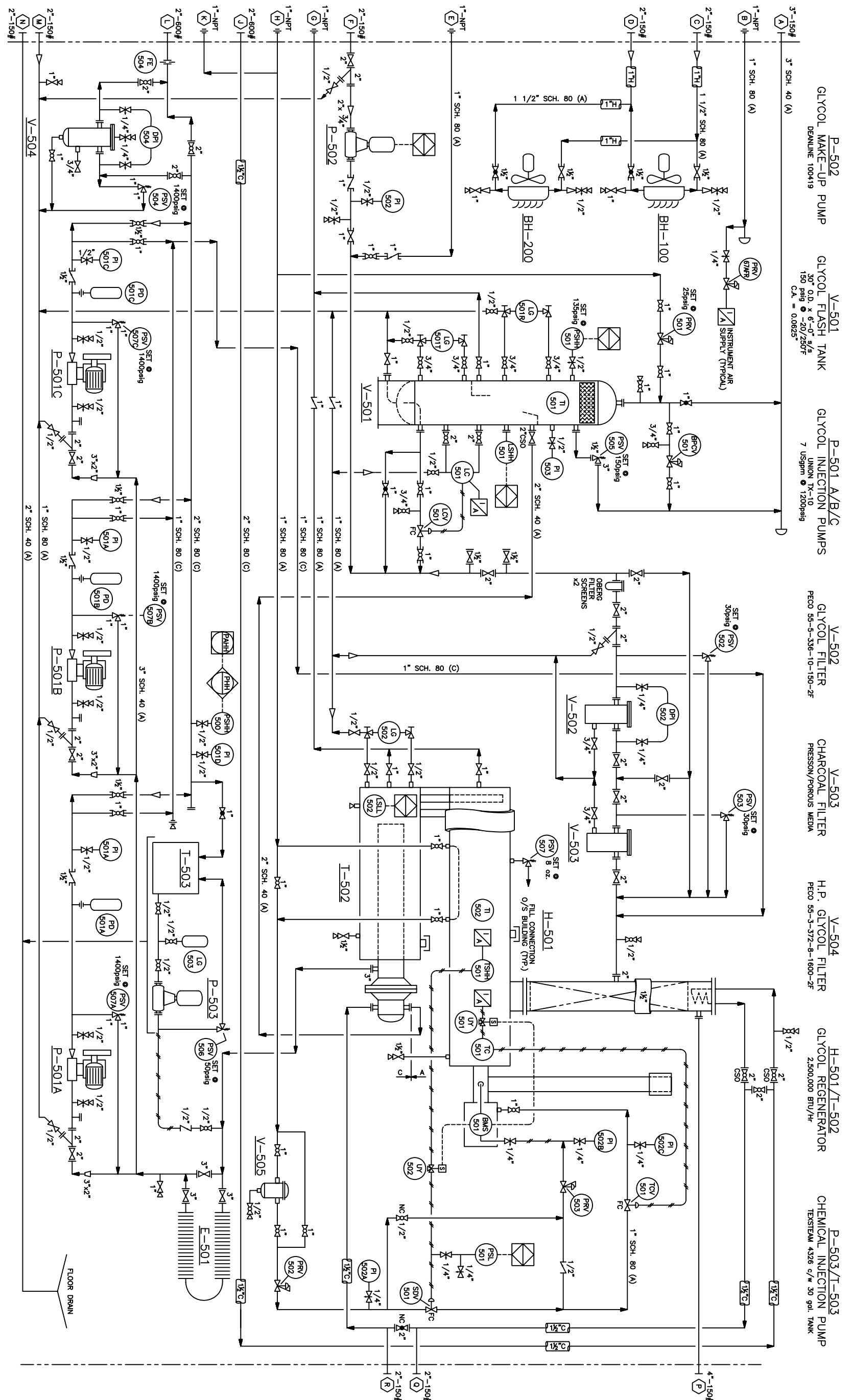
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96/11/25	MK				0 REVISED 'AS BUILT'					
96/01/10	WF				B AS BUILT					
94/12/19	RHD				A REDRAWN ON CAD					

PLOTTED: MAR 08, 2004 8:33 AM

CADD FILE: Q:\AEP-271\PLANT POS\169-162.DWG

OWNER APP.

OWNER APP. NONE
DUNVEGAN GAS PLANT
189-162



- P-502 GLYCOL MAKE-UP PUMP
- V-501 GLYCOL FLASH TANK
- P-501 A/B/C GLYCOL INJECTION PUMPS
- V-502 GLYCOL FILTER
- V-503 CHARCOAL FILTER
- V-504 H.P. GLYCOL FILTER
- H-501/T-502 GLYCOL REGENERATOR
- P-503/T-503 CHEMICAL INJECTION TANK

DWG. NO.	REFERENCE DRAWINGS	REVISIONS	DATE	BY	CHK'D	APP'D	ENGR AND PERMIT STAMPS

REVISIONS	DATE	BY	CHK'D	APP'D	ENGR AND PERMIT STAMPS
1	04/03/05	SAE			
0	00/04/03	BB			

DESIGNED	DRAWN	CHECKED	PROCESS OK	MECH. OK	STRUC. OK	ELECT. OK	OWNER APP.	OWNER APP.

OWNER APP.	SCALE	DWG. NO.	REVISION
	NONE	169-171	1

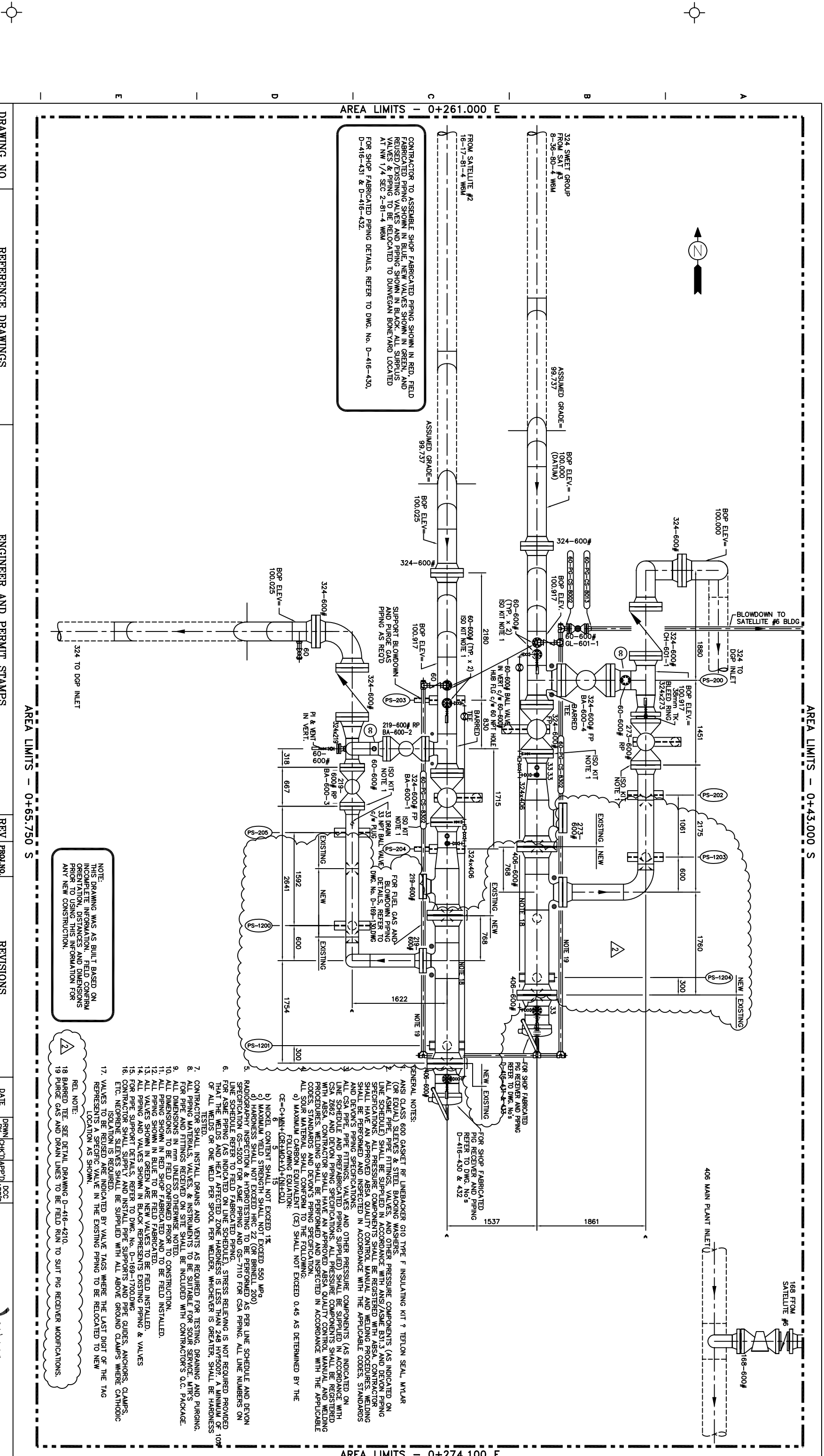
Devon

DUNVEGAN SOUR GAS PLANT
PIPING & INSTRUMENTATION DIAGRAM
GLYCOL REGENERATION PACKAGE P&ID
LSD. 15-03-81-04 W6M.

DEWON CANADA CORP.
PLOTTED: MAR 08, 2004 8:34 AM

PROJECT: 953044
AS BUILT (GLE)
AS BUILT (1-2000 BY TUNILIA GAS ENGINEERING LTD.)

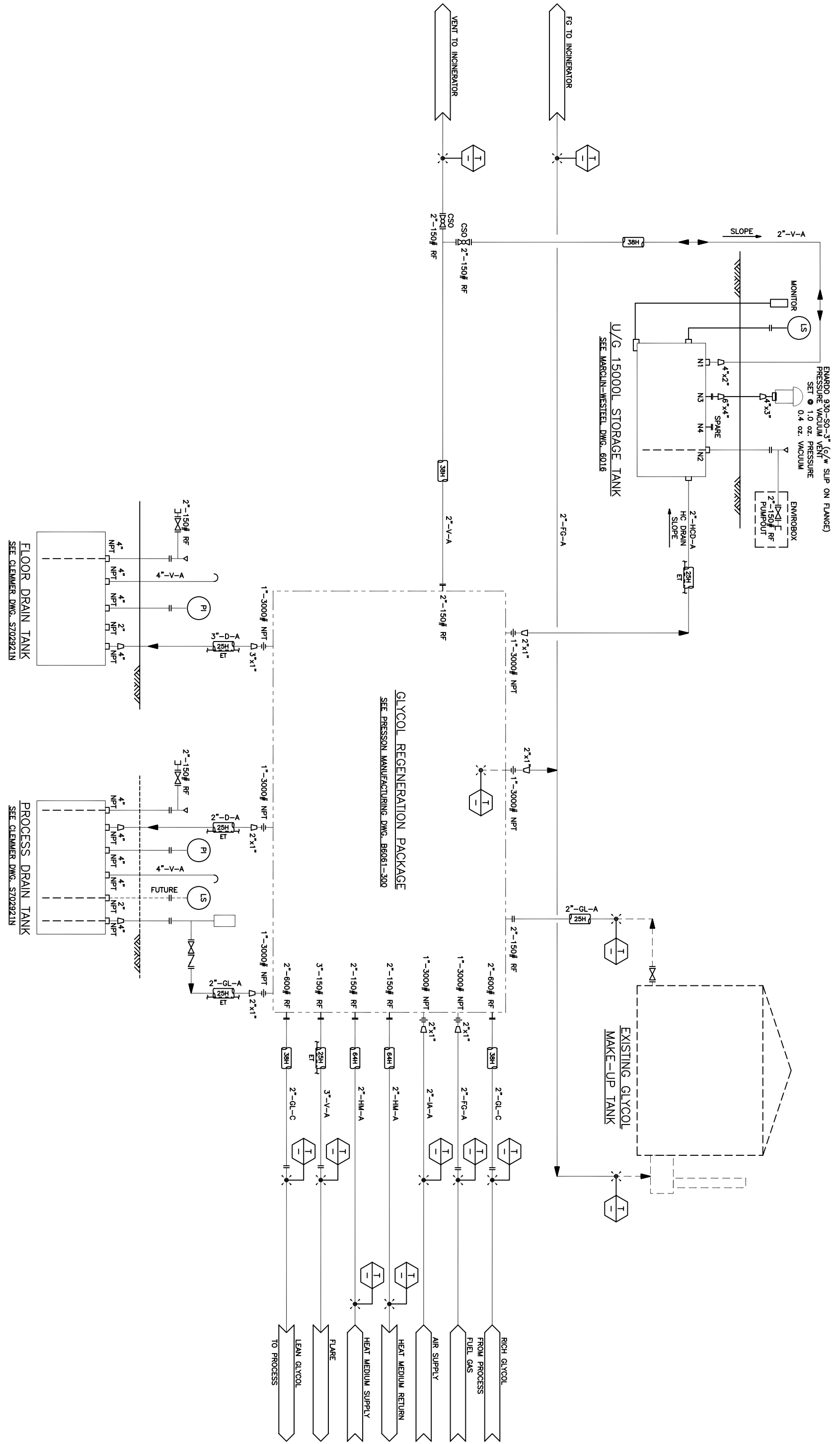
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OWNER APP. 1077



DRAWING NO.	REFERENCE DRAWINGS	ENGINEER AND PERMIT STAMPS	REV	PROJ.NO.	REVISIONS	DATE	DRWN	CHK'D	APP'D	DCC
D-416-430.DWG	GAS PLANT PIG RECEIVER LAYOUT (FROM SAT#2)									
D-416-431.DWG	GAS PLANT PIG RECEIVER LAYOUT (FROM SAT#2)									
D-416-432.DWG	GAS PLANT PIG RECEIVER DETAILS "D" & "T"									
D-416-433.DWG	GAS PLANT PIG RECEIVER DETAIL "K"									
D-169-1300.DWG	SAT #2 & #3 SHEET PIG RECEIVERS PAID									
D-169-1700.DWG	PIPE SUPPORT DETAILS									

REV	PROJ.NO.	REVISIONS	DATE	DRWN	CHK'D	APP'D	DCC
A	056718	ISSUED FOR BID (2005 PIGGING MODIFICATIONS)	05/04/04	R.V.	S.W.	S.W.	
B	056718	ISSUED FOR CONSTRUCTION (2005 PIGGING MODIFICATIONS)	05/05/06	R.V.	S.W.	S.W.	
C	056718	AS BUILT (2005 PIGGING MODIFICATIONS)	06/03/06	R.V.	S.W.	S.W.	
D	056718	IFC - PIGGING UPGRADE (REL 2006078)	07/05/09	R.M.			

PREPARED BY	PRECISION ENGINEERING INC.
DUNVEGAN	
GAS PLANT	
SAT #2 & #3 SWEET PIG RECEIVERS AREA PIPING PLAN	
SCALE	1:30
DWG. No.	D-169-430.DWG
JOB NO.	8356
DCC PROJ. NO.	056718



FLOOR DRAIN TANK
SEE CLEANER DWG. SZ029221N

PROCESS DRAIN TANK
SEE CLEANER DWG. SZ029221N

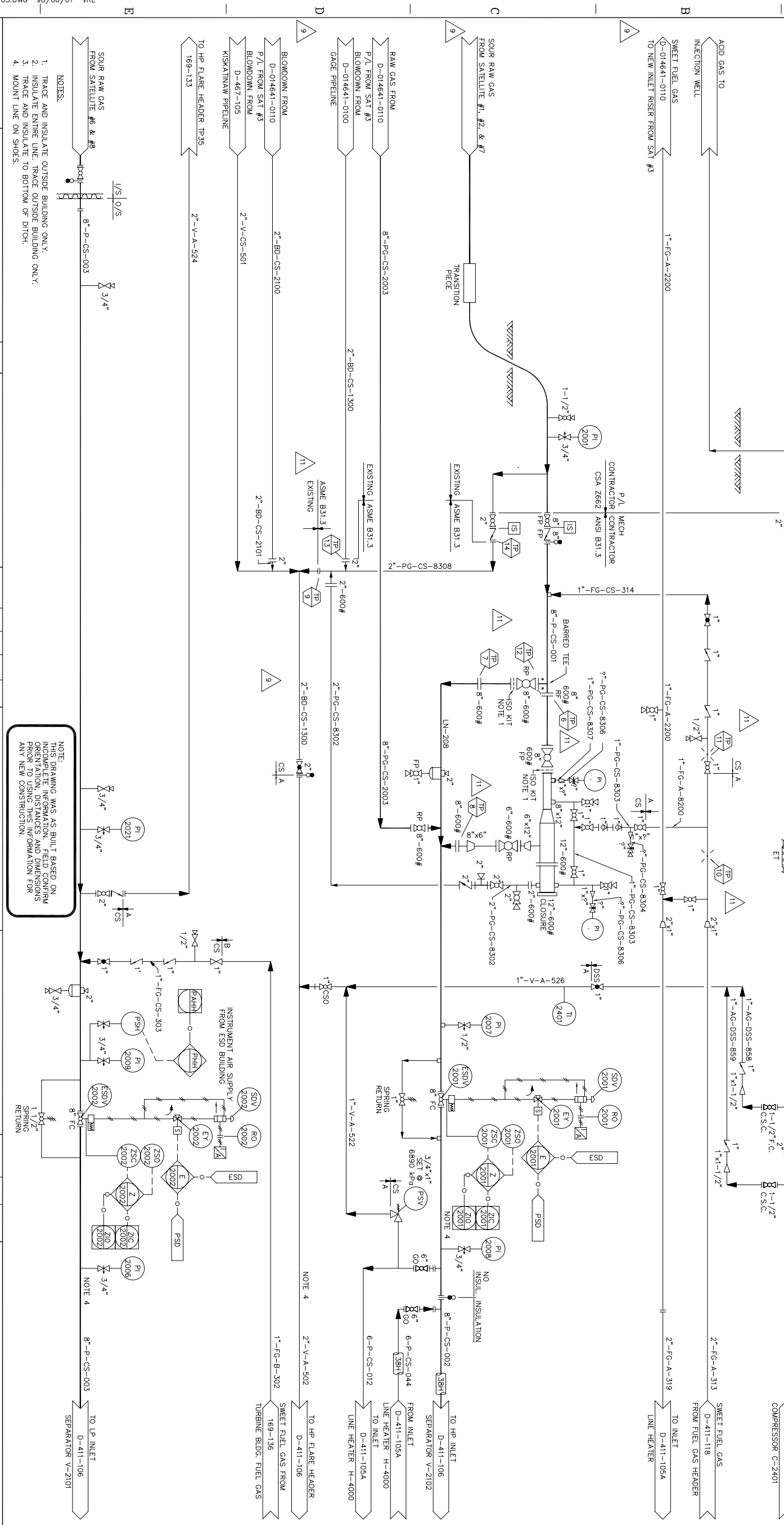
DWG. NO.	REFERENCE DRAWINGS	DEVON PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER APP'D	ENGINEER AND PERMIT STAMPS	DESIGNED	CHECKED	PROCESS CK	MECH. CK	STRUCT. CK	ELECT. CK	OWNER APP.	OWNER APP.	SCALE	DWG. NO.	DEVON PROJ.
			1	AS BUILT PER FIELD MARK-UP (GLE)	04/04/05	SAE															
			0	ISSUED FOR CONSTRUCTION	97/09/05	GDW															
			B	ISSUE FOR TENDER	97/08/25	GDW															
			A	ISSUED FOR CLIENT APPROVAL	97/07/28	HMF															

DESIGNED																					
CHECKED																					
PROCESS CK																					
MECH. CK																					
STRUCT. CK																					
ELECT. CK																					
OWNER APP.																					
OWNER APP.																					

COMB. 88 INI	SCALE	DUNVEGAN SOUR GAS PLANT	DEVON PROJ.
97-C-658	NONE	PIPING & INSTRUMENTATION DIAGRAM	953044
		GLYCOL SKID REPLACEMENT	1
		LSD. 15-03-81-04 W6M.	
		D-953044-100	



- GENERAL NOTES**
1. INST. CLASS 600 GASKET PER LINEBACKER C10 TYPE F INSULATING KIT ? TEFLOON SEAL MIXAR (OR EQUAL) SLEEVES & STEEL BACKING WASHERS
 2. ALL ASME PIPE, PIPE FITTINGS, VALVES, AND OTHER PRESSURE COMPONENTS (AS INDICATED ON LINE SCHEDULE) SHALL BE SUPPLIED IN ACCORDANCE WITH ANSI/ASME B31.3 AND DEVON PIPING SPECIFICATIONS. ALL PRESSURE COMPONENTS SHALL BE REGISTERED WITH ABSA. CONTRACTOR SHALL HAVE AN APPROVED ABSA QUALITY CONTROL MANUAL AND WELDING PROCEDURES. WELDING SHALL BE PERFORMED & INSPECTED IN ACCORDANCE WITH THE APPLICABLE CODES, STANDARDS AND DEVON'S PIPING SPECIFICATIONS AND PERFORMED PIPING SHALL BE REGISTERED WITH ABSA. CONTRACTOR SHALL HAVE AN APPROVED ABSA QUALITY CONTROL MANUAL AND WELDING PROCEDURES. WELDING SHALL BE PERFORMED & INSPECTED IN ACCORDANCE WITH THE APPLICABLE CODES, STANDARDS AND DEVON'S PIPING SPECIFICATIONS.
 3. ALL PIPING SHALL BE REGISTERED WITH ABSA. CONTRACTOR SHALL HAVE AN APPROVED ABSA QUALITY CONTROL MANUAL AND WELDING PROCEDURES. WELDING SHALL BE PERFORMED & INSPECTED IN ACCORDANCE WITH THE APPLICABLE CODES, STANDARDS AND DEVON'S PIPING SPECIFICATIONS.
 4. RADIOGRAPHY INSPECTION & HYDROTESTING TO BE PERFORMED AS PER LINE SCHEDULE AND DEVON SPECIFICATION GS-5200 FOR ASME PIPING AND GS-7100 FOR CSA PIPING. ALL LINE NUMBERS ON LINE SCHEDULE REFER TO FIELD FABRICATED PIPING.
 5. FOR ASME PIPING, STRESS RELIEVING IS NOT REQUIRED PROVIDED THAT THE WELDS AND HEAT AFFECTED ZONES ARE HEATED TO A MINIMUM OF 100% OF ALL WELDS OR ONE WELD PER 300' PER WELDER, WHICHEVER IS GREATER. SHALL BE HARDNESS TESTED.
 6. CONTRACTOR SHALL INSTALL DRAINS AND VENTS AS REQUIRED FOR TESTING, DRAINING AND PURGING.
 7. ALL PIPING SHOWN IN RED SHOP FABRICATED AND TO BE FIELD FABRICATED.
 8. ALL PIPING SHOWN IN BLUE TO BE FIELD FABRICATED.
 9. ALL PIPING SHOWN IN GREEN ARE NEW VALVES, SLEEVES, FIELD FABRICATED PIPING AND TO BE FIELD FABRICATED.
 10. ALL PIPING SHOWN IN BLACK ARE NEW VALVES, SLEEVES, FIELD FABRICATED PIPING AND TO BE FIELD FABRICATED.
 11. FOR LINE SCHEDULE, REFER TO DWG. NO. D-B-169-2620.XLS



- NOTES:**
1. TRACE AND INSULATE OUTSIDE BUILDING ONLY.
 2. INSULATE ENTIRE LINE, TRACE OUTSIDE BUILDING ONLY.
 3. TRACE AND INSULATE TO BOTTOM OF DITCH.
 4. MOUNT LINE ON SHOES.

REFERENCE DRAWINGS

REVISIONS

ENGINEER AND PERMIT STAMPS

DRAWING ISSUE RECORD

BY DATE

colt engineering corporation
 ANDERSON EXPLORATION
 CALGARY, ALBERTA, CANADA

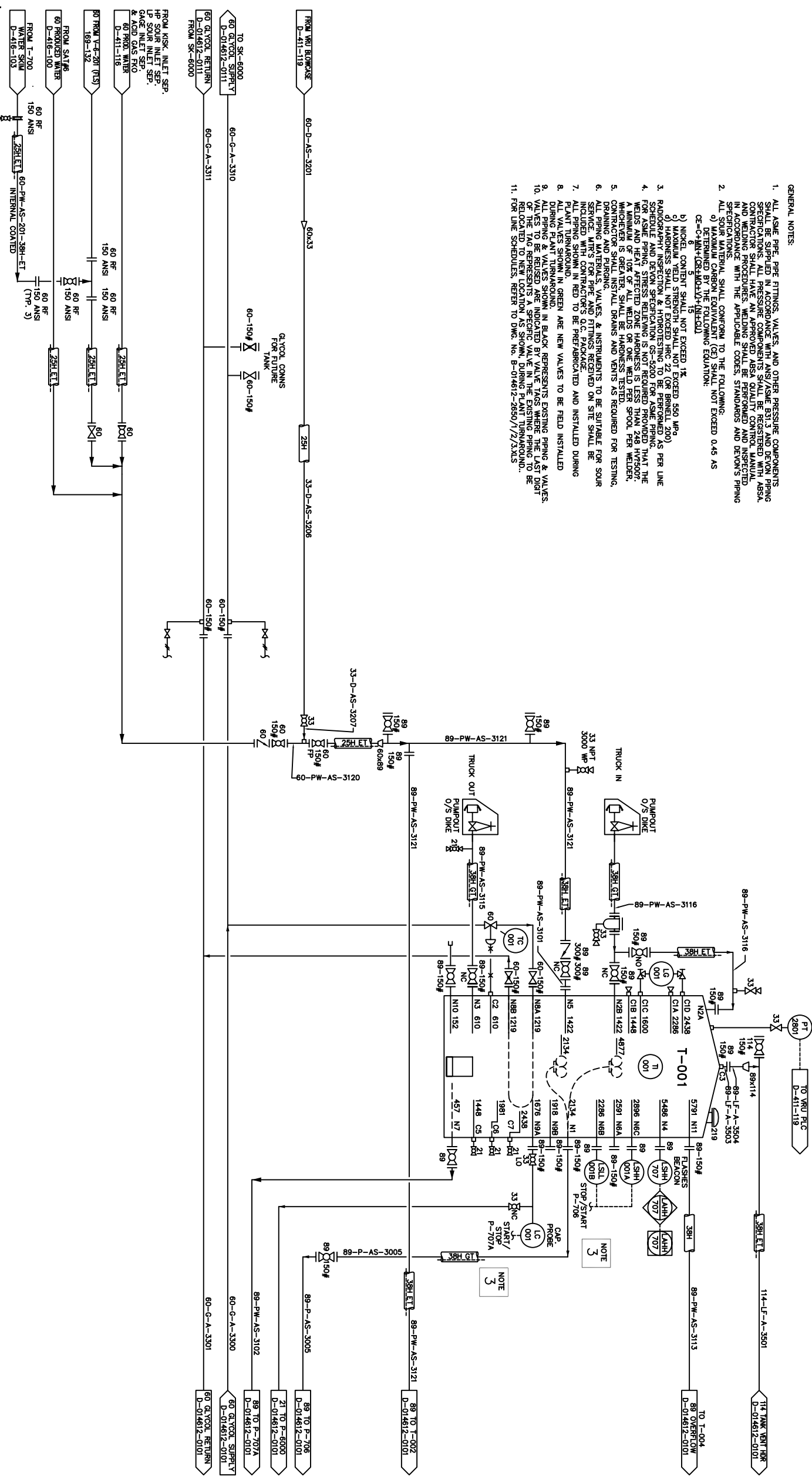
PROJECT
 DUNVEGAN SOUR GAS PLANT
 PIPING & INSTRUMENTATION DIAGRAM
 INLET FACILITIES

DWG. NO.	REV.	DATE	BY	CHK'D	APP'D	CLIENT
169-133	5	01.11.20	M.B.	T.W.W.	T.W.W.	
D-411-106	6	02.04.29	M.B.	T.W.W.	T.W.W.	
169-136	7	04.07.13	R.V.	A.T.	T.W.W.	
D-411-105A	8	04.09.27	R.V.	A.T.	T.W.W.	
D-411-113	9	05.02.16	A.B.	W.H.	T.W.W.	
D-411-118	10	05.04.04	A.B.	W.H.	T.W.W.	
D-014641-010	11	05.05.16	R.V.	S.W.	S.W.	
B-169-2620.XLS	12	06.03.06	R.V.	W.H.	S.W.	

ISSUE	1	2	3	4	5	6
DESIGNED						
DRAWN						
CHECKED						
APPROVAL						
PROCESS OK						
MECH. OK						
STRUCT. OK						
ELECT. OK						
CLIENT APP.						

JOB NO. 056717 SCALE NTS DWG. NO. D-411-105

- GENERAL NOTES:
1. ALL ASME PIPE, PIPE FITTINGS, VALVES, AND OTHER PRESSURE COMPONENTS SHALL BE SUPPLIED IN ACCORDANCE WITH ANSI/ASME B31.3 AND DEVON PIPING SPECIFICATIONS. ALL PRESSURE COMPONENTS SHALL BE REGISTERED WITH ASBA. CONTRACTOR SHALL HAVE AN APPROVED ASBA QUALIFIED PERSONNEL INSPECTED IN ACCORDANCE WITH THE APPLICABLE COOKS STANDARDS AND DEVON'S PIPING SPECIFICATIONS.
 2. ALL SOUR MATERIAL SHALL CONFORM TO THE FOLLOWING:
 a) 304/304L (UNS)
 b) 316/316L (UNS)
 c) CE-C-MNH-CR6MO-VI-NI-020
 d) NICKEL CONTENT SHALL NOT EXCEED 1%
 e) HARDNESS SHALL NOT EXCEED 180 HRC (OR BRINELL 200)
 3. RADIOGRAPHY INSPECTION & HYDROTESTING TO BE PERFORMED AS PER LINE SCHEDULE AND DEVON SPECIFICATION GS-0200 FOR ASME PIPING. ALL THE WELDS AND HEAVY AFFECTED ZONES SHALL BE HYDROTESTED TO A MINIMUM OF 10% OF ALL WELDS OR ONE WELD PER SPOOL PER WELDER, WHICHEVER IS GREATER. SHALL BE HARDNESS TESTED.
 4. CONTRACTOR SHALL INSTALL DRAINS AND VENTS AS REQUIRED FOR TESTING, SERVICE, WIRTS FOR PIPE AND FITTINGS RECEIVED ON SITE SHALL BE INCLUDED WITH CONTRACTOR'S Q.C. PACKAGE.
 5. ALL PIPING MATERIALS, VALVES, & INSTRUMENTS TO BE SUITABLE FOR SOUR PLANT TURNAROUND.
 6. ALL VALVES SHOWN IN GREEN ARE NEW VALVES TO BE FIELD INSTALLED DURING PLANT TURNAROUND.
 7. ALL VALVES SHOWN IN BLACK REPRESENTS EXISTING PIPING & VALVES. ALL PIPING & VALVES SHOWN IN GREEN REPRESENTS EXISTING PIPING & VALVES. CONTRACTOR SHALL VERIFY THE LOCATION OF THE EXISTING PIPING & VALVES OF THE TAG REPRESENTS A SPECIFIC VALVE IN THE EXISTING PIPING TO BE RELOCATED TO NEW LOCATION AS SHOWN, DURING PLANT TURNAROUND.
 8. FOR LINE SCHEDULES, REFER TO DWG. NO. B-014612-2650/1/2/3.XLS

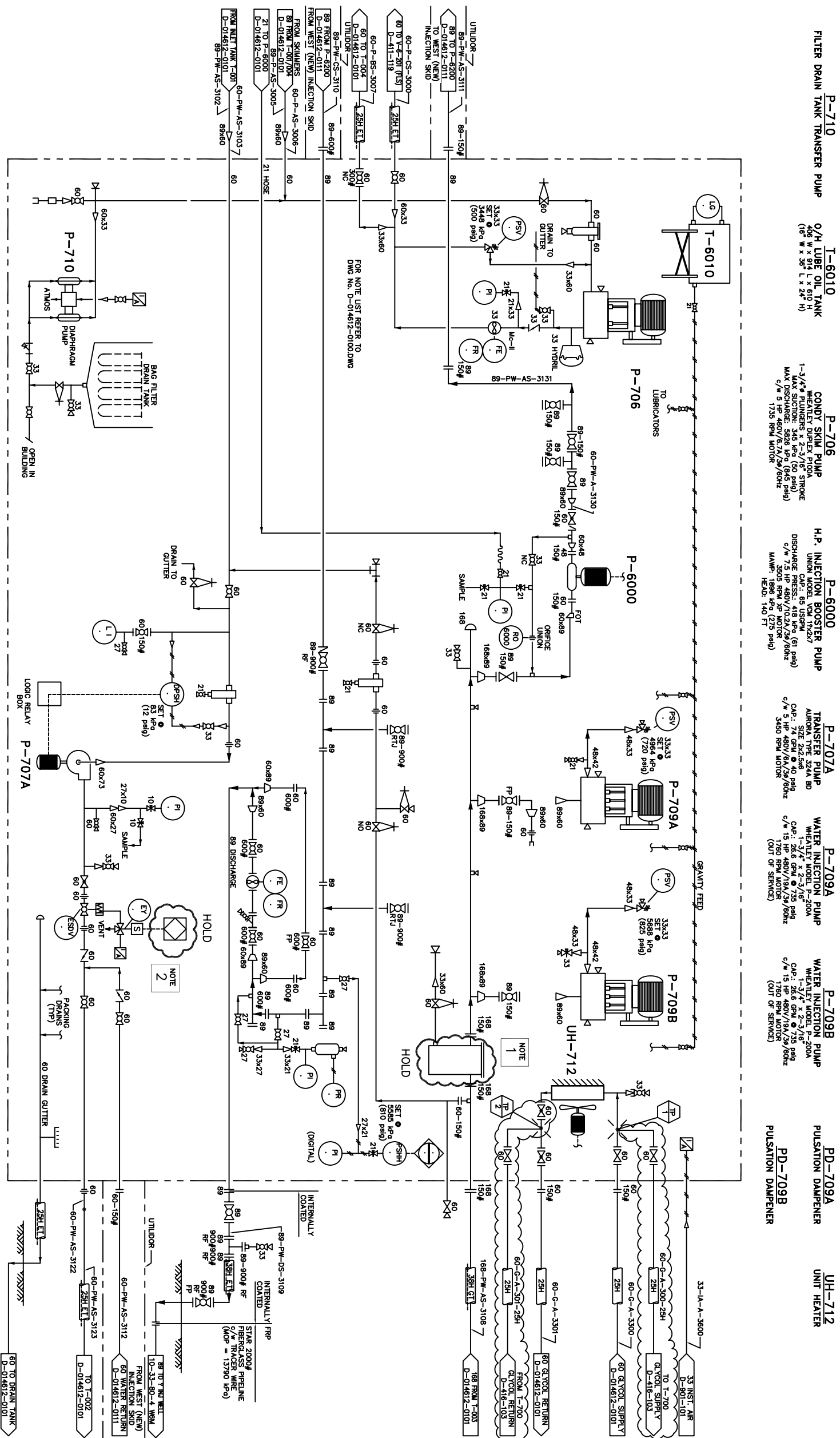


- NOTE:
1. REV "3" CREATED BY GAS LIQUID ENGINEERING LTD AND "4" TO "6" CREATED BY PRECISION ENGINEERING INC.
 2. CLOUDING INDICATES NEW PIPING AND EQUIPMENT.
 3. PUMPS P-706 AND P-707A SHOWN ON D-014612-0110.
 4. INLET FLOWS TO BE CONFIRMED WITH OPERATIONS.

DWG. NO.	REFERENCE DRAWINGS	DEVON PROJECT	REV	REVISIONS	DATE (yy/mm/dd)	BY	CHK'D	APP'D	OWNER APP'D	ENGINEER AND PERMIT STAMPS
D-014612-0110	EAST INJECTION SKID P&ID	0911662	10	ISSUED FOR CONSTRUCTION (OEL #7144)	09.11.13	SDZ	MMP			DESIGNED: [] DRAWN: [] CHECKED: [] PROCESS OK: [] MECH. OK: [] STRUCT. OK: [] ELECT. OK: [] OWNER APP: []
D-014612-0111	WEST WATER INJECTION SKID P&ID	0911662	9	ISSUED FOR BID (OEL #7144)	09.11.05	SDZ	MMP			
D-014612-0101	WATER STORAGE TANKS P&ID 2 of 2	0911662	8	ISSUED FOR REVIEW (OEL #7144)	09.10.14	SDZ	MMP			
		0911662	12	AS BUILT (OEL #7144) (NOTE A)	10.03.18	SB	MMP			
		0911662	11	I.F.C.: ADDED BALL VALVE (OEL #7144)	09.11.24	DW	MMP			CADD FILE: \\net\46120100.dwg OWNER APP: [] OWNER APP: []



DUNVEGAN SOUR GAS PLANT
 PIPING & INSTRUMENTATION DIAGRAM
 WATER STORAGE TANKS P&ID 1 of 2
 L.S.D. 15-03-81-04 W6M
 DWG. NO. D-014612-0100
 DEVON PROJECT 0911662



NOTE:
1. OPERATIONS TO PROVIDE DETAILS ABOUT EQUIPMENT.
2. OPERATIONS TO CONFIRM HOW ESDY IS OPERATED.

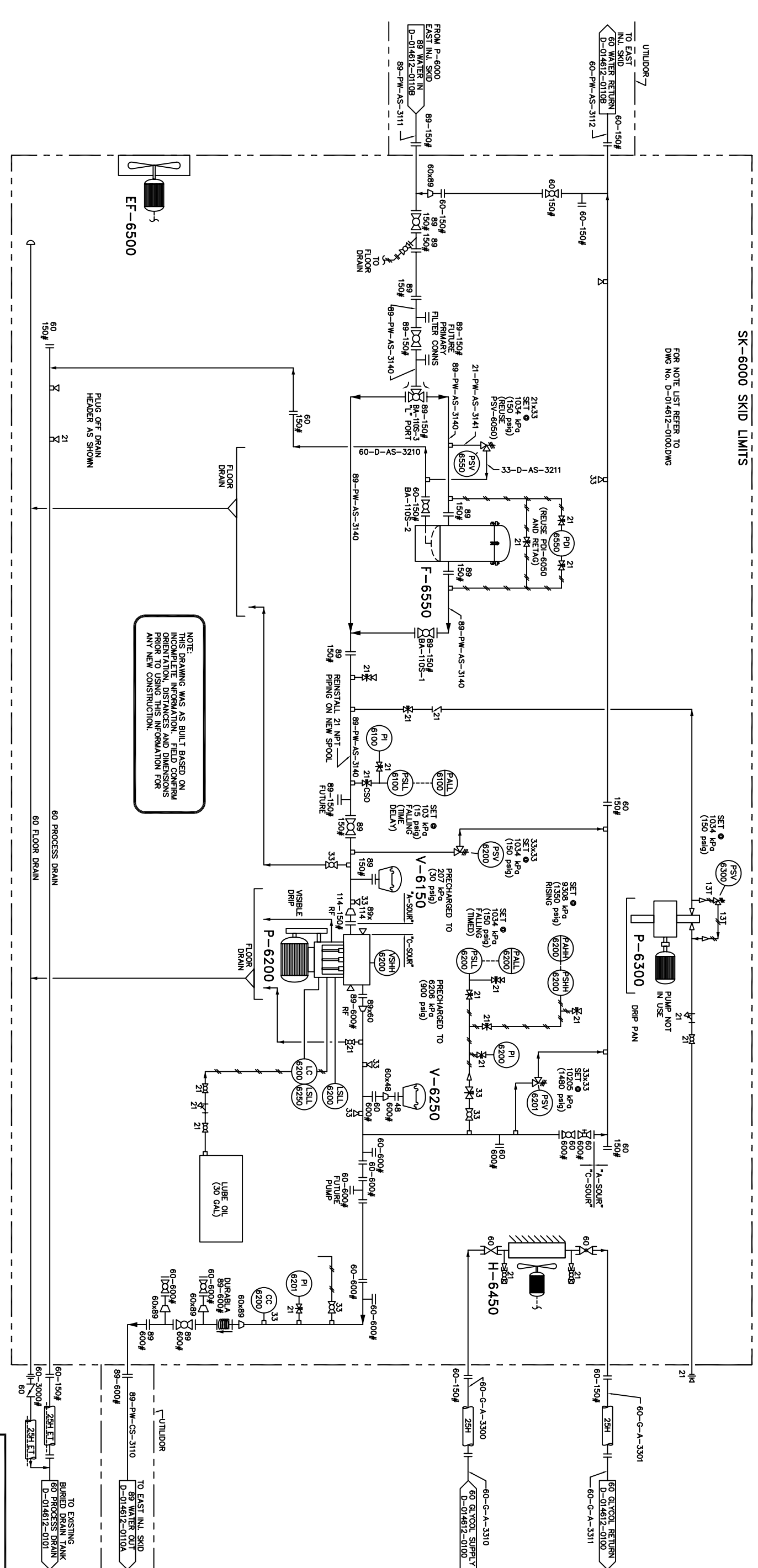
DWG. NO.	REFERENCE DRAWINGS	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER	DESIGNED	CHECKED	PROCESS	MECH.	STRUC.	ELECT.	OWNER APP.	OWNER APP.	SCALE	DATE	REVISION
D-014612-0100	WATER STORAGE TANKS PAID 1 of 2	ISSUED FOR CONSTRUCTION (OEL #7144)	09/11/03	SOZ	MMP													
D-014612-0101	WATER STORAGE TANKS PAID 2 of 2	ISSUED FOR BID (OEL #7144)	09/11/05	SOZ	MMP													
D-014612-0111	WEST WATER INJECTION SKID PAID	ISSUED FOR REVIEW (OEL #7144)	09/10/14	SOZ	MMP													
		AS BUILT (SEE NOTE A) (OEL #7144)	09/09/03	SOZ	MMP													
		AS BUILT (WATER DISPOSAL MODS) (PEI)	06/03/13	A.T.	W.H.	T.M.W.												
		GEN REV (WATER DISPOSAL MODS) (PEI)	05/05/31	WH	WH	TW												

ENGINEER AND PERMIT STAMPS		DESIGNED	
REGISTERED PROFESSIONAL TECHNOLOGIST (ENGINEERING) CHAD FITZSIMONS P.E.T.	PERMIT TO PRACTICE OROURKE ENGINEERING LTD.	OWNER	OWNER APP.
Signature: _____	Signature: _____	OWNER	OWNER APP.
Date: _____	Date: _____	OWNER	OWNER APP.
PERMIT NUMBER: P 0751 The Association of Professional Engineers, Geologists and Geophysicists of Alberta		OWNER	OWNER APP.

DUNVEGAN SOUR GAS PLANT		OWNER
PIPING & INSTRUMENTATION DIAGRAM EAST INJECTION SKID PAID LSD. 15-03-81-04 W6M.		OWNER
OWC. NO. D-014612-0110	OWC. NO. D-014612-0101	OWNER
7144	NTS	OWNER
09/11/03	10	OWNER



- EF-6500**
ELECTRIC FAN
1/4 HP/120V/1ϕ/60Hz
- F-6550**
LOW PRESSURE FILTER
ALL STABILIZER MODEL LINE
610mm OD x 762mm S/S
(24" OD x 30" S/S)
D.P.: 1722kPa @ 93°C
(250 psig @ 200°F)
CAP: 120 GPM @ 57kPa (75 psig)
ELEMENTS: (5) BAGS - 25 MICRON
C.A.: 3.175mm (1/8")
- V-6150**
SUCTION DAMPENER
COMPOSITE
MODEL # ST-1503-F
89-150# ANSI
MAX. PRESS.: 1034 kPa (150 psig)
- P-6200**
H.P. INJECTION PUMP
UNION MODEL TD-120
2-7/8" x 4-1/4" TRIPLEX
c/w 79HP 1175 RPM 460V/3ϕ/60 Hz 1ϕ MOTOR
CAP: 69 USGPM @ 1200 psig @ 217 RPM
MAX. PRESS.: 14460 kPa (2100 psig)
- V-6250**
DISCHARGE DAMPENER
COMPOSITE
MODEL # S-21001-5-F
48-600# ANSI
MAX. PRESS.: 14460 kPa (2100 psig)
- P-6300**
CHEMICAL INJECTION PUMP
TEXTIFLEX MODEL #4303-P / 3/8" PLUNGER
c/w 1/4 H.P. 120/240 VAC / 1ϕ / 1/2 HP MOTOR
MAX. PRESS.: 8274 kPa (1200 psig)
CAP.: 23 GPD @ 1200 psig
- H-6450**
BUILDING HEATER
RUFHECK
MODEL XL 416-480360-15
15 kW ELECTRIC HEATER



NOTE: THIS DRAWING WAS AS BUILT BASED ON THE FIELD PHOTOGRAPHS AND DIMENSIONS ORIENTED TO THE SKID. REVISIONS PRIOR TO USING THIS INFORMATION FOR ANY NEW CONSTRUCTION.

REFERENCE ONLY

DWG. NO.	REFERENCE DRAWINGS	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER	DESIGNED	CHECKED	PROCESS OK	MECH. OK	STRUCT. OK	ELECT. OK	OWNER APP.	OWNER APP.	SCALE	DWG. NO.	ISSUED FOR	DATE
D-014612-0100	WATER STORAGE TANKS P&ID 1 of 2	ISSUED FOR CLIENT REVIEW (PEI)	05/06/18	WH	WH	TWW											D-014612-0111	PRECISION ENGINEERING INC.	05/06/18
D-014612-0101	WATER STORAGE TANKS P&ID 2 of 2	AS BUILT (GLE)	04/03/05	SME													D-014612-0100	PRECISION ENGINEERING INC.	04/03/05
D-014612-0110	EAST INJECTION SKID P&ID	AS BUILT	02/06/11	WH	WH	TWW											D-014612-0100	PRECISION ENGINEERING INC.	02/06/11
		ISSUED FOR CONSTRUCTION	01/11/14	RV	TWW	TWW											D-014612-0100	PRECISION ENGINEERING INC.	01/11/14
		AS BUILT (WATER DISPOSAL MODS) (PEI)	06/03/13	A.T.	W.H.	T.W.W.											D-014612-0100	PRECISION ENGINEERING INC.	06/03/13
		IFC (WATER DISPOSAL MODS) (PEI)	05/09/27	R.V.	W.H.	T.W.W.											D-014612-0100	PRECISION ENGINEERING INC.	05/09/27



DUNVEGAN SOUR GAS PLANT
PIPING & INSTRUMENTATION DIAGRAM
WEST WATER INJECTION SKID P&ID
LSD. 15-03-81-04 W6M.

PRECISION ENGINEERING INC.
ISSUED ON: 3/24/2008
AS BUILT

ENGINEER AND PERMIT STAMPS

PRECISION ENGINEERING INC.
ISSUED ON: 3/24/2008
AS BUILT

PRECISION ENGINEERING INC.
ISSUED ON: 3/24/2008
AS BUILT

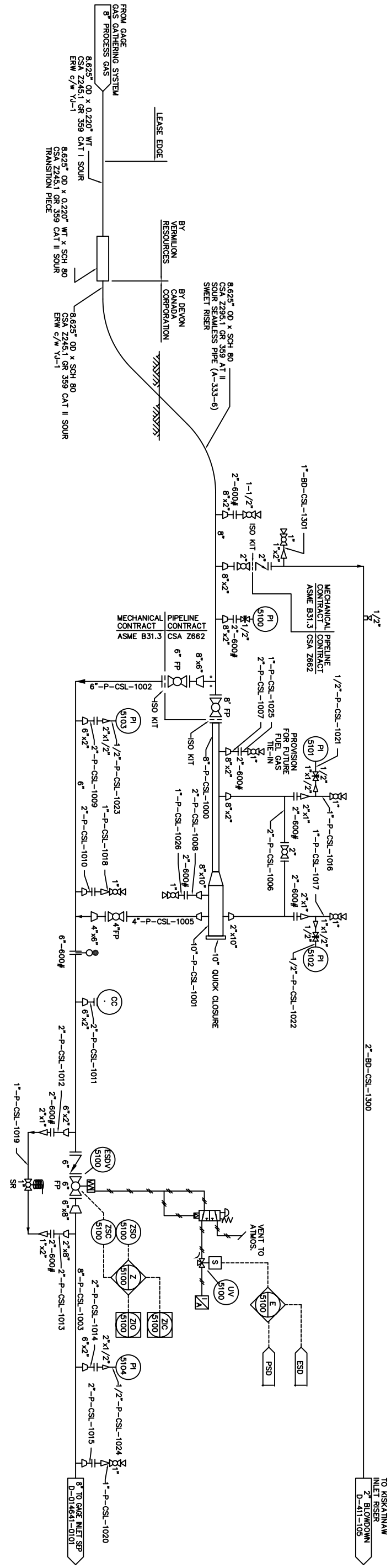
PRECISION ENGINEERING INC.
ISSUED ON: 3/24/2008
AS BUILT

PRECISION ENGINEERING INC.
ISSUED ON: 3/24/2008
AS BUILT

PRECISION ENGINEERING INC.
ISSUED ON: 3/24/2008
AS BUILT

PRECISION ENGINEERING INC.
ISSUED ON: 3/24/2008
AS BUILT

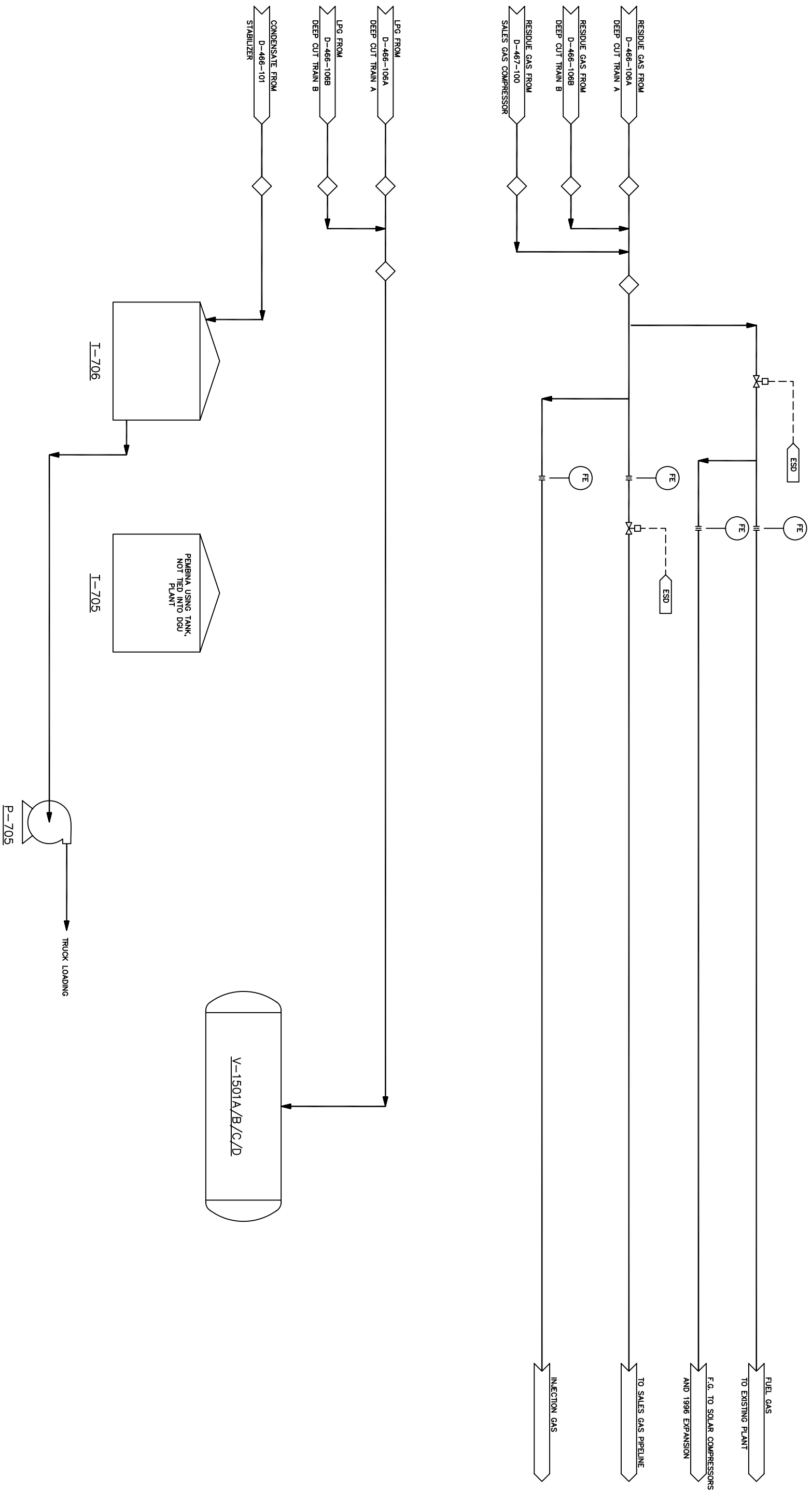
PRECISION ENGINEERING INC.
ISSUED ON: 3/24/2008
AS BUILT



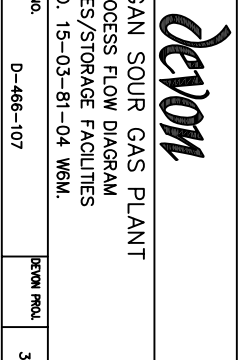
DWG. NO.	REFERENCE DRAWINGS	DEMON PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER APP'D	ENGINEER AND PERMIT STAMPS
D-014641-0101	GAGE INLET SEPARATOR P&ID									DESIGNED DRAWN CHECKED PROCESS CK. MECH. CK. STRUCT. CK. ELECT. CK. OWNER APP. OWNER APP.
			1	AS BUILT	02.04.29	MB	TWW	TWW		<p>DUNVEGAN SOUR GAS PLANT PROCESS & INSTRUMENTATION DIAGRAM GAGE INLET RISER P&ID LSD. 15-03-81-04 W6M. DWG. NO. D-014641-0100</p>
			0	ISSUED FOR CONSTRUCTION	01.11.20	MB	TWW	TWW		
			A	ISSUED FOR CLIENT DISCUSSION	01.10.17	WH	TWW	TWW		

I-706
CONDENSATE STORAGE TANK
5000 BBL

V-1501A/B/C/D
LPG STORAGE BULLETS
3658mm ID x 36576mm 1/T



DWG. NO.	REFERENCE DRAWINGS	DEVON PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER APP'D	ENGINEER AND PERMIT STAMPS	DESIGNED DRAWN	WF	95/01/09	DUNVEGAN SOUR GAS PLANT PROCESS FLOW DIAGRAM SALES/STORAGE FACILITIES LSD, 15-03-81-04 W6M.	DEVON PROJ.
169-144	P&ID LPG STORAGE														
169-153	P&ID REFRIGERANT PROCESS & CONDENSATE STORAGE														
			3	AS BUILT (GLE)	04/03/05	SAE									
			2	GENERAL REVISIONS	96/10/10	WDA									
			1	1996 EXPANSION REVISIONS-IFA	96/01/22	MK									
			0	1996 AS-BUILT	96/01/12	WF									



V-6-401
REFRIGERANT SUCTION
SCRUBBER
1219mm ID x 7315mm S/S

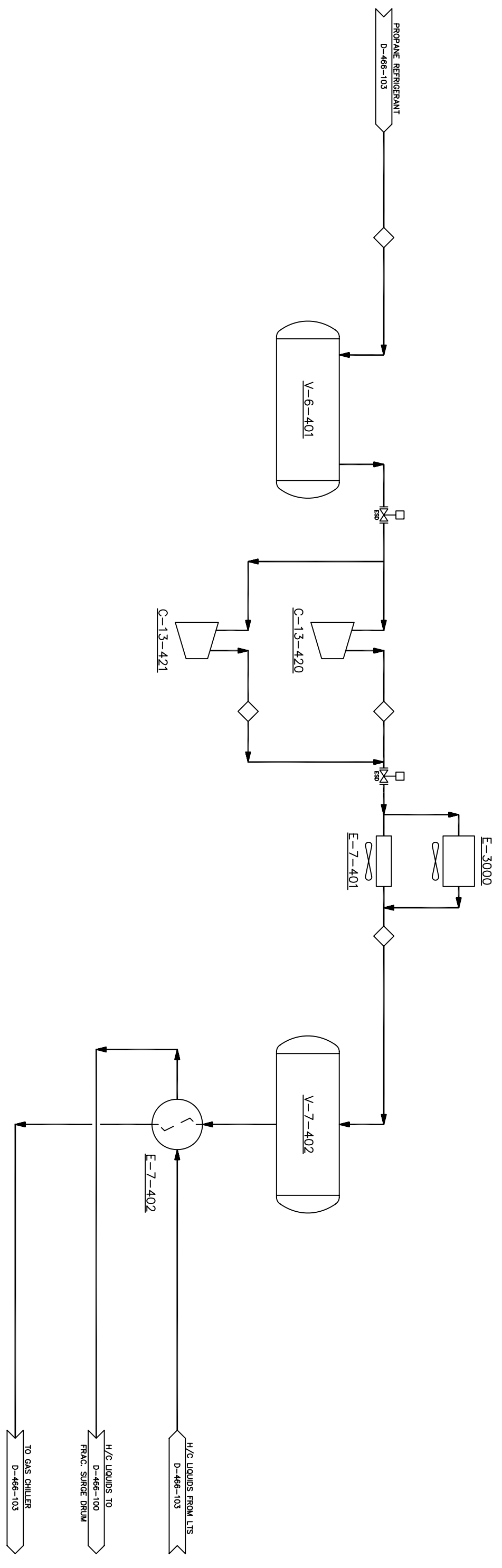
C-13-420/421
REFRIGERANT
COMPRESSORS
I.R. 4R05
140mm STROKE
NOTE 1

E-7-401
REFRIGERANT CONDENSER
7.5mm BTU/HR

E-7-402
HP LIQUIDS/REFRIGERANT
EXCHANGER
1.0mm BTU/HR

V-6-402
REFRIGERANT
ACCUMULATOR
1219mm x 7315mm S/S

E-3000
AUXILIARY REFRIGERANT
CONDENSOR
4.8MM BTU/HR
62,223 FT2 FIN. SURFACE



NOTE:
1. EACH I.R. 4R05 SERVES REFRIGERANT COMPRESSION WITH TWO CYLINDERS. EQUIPMENT TAG NOS. C-13-301 & C-13-302 AND PROCESS (RECYCLE) COMPRESSION WITH ONE CYLINDER TAG NOS. C-13-420 & C-13-421 AND ONE CYLINDER ON EACH IS LEFT IDLE.

DWG. NO.	REFERENCE DRAWINGS	DEVON PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER APP'D	ENGINEER AND PERMIT STAMPS
169-153	PAID REFRIGERANT & PROCESS CONDENSATE STORAGE									DESIGNED: [] DRAWN: [] CHECKED: [] PROCESS OK: [] MECH. OK: [] STRUCT. OK: [] ELECT. OK: [] OWNER APP. [] OWNER APP. []
D-467-106	E-3000									
			0	1996 AS-BUILT	96/01/12	WF		RLK		DUNVEGAN SOUR GAS PLANT PROCESS FLOW DIAGRAM REFRIGERATION UNIT LSD. 15-03-81-04 W6M. DUNVEGAN SCALE NTS DWG. NO. D-466-108 DEVON PROJ. 3

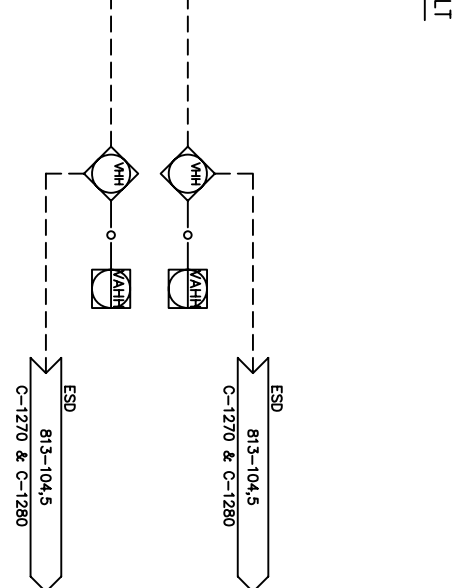
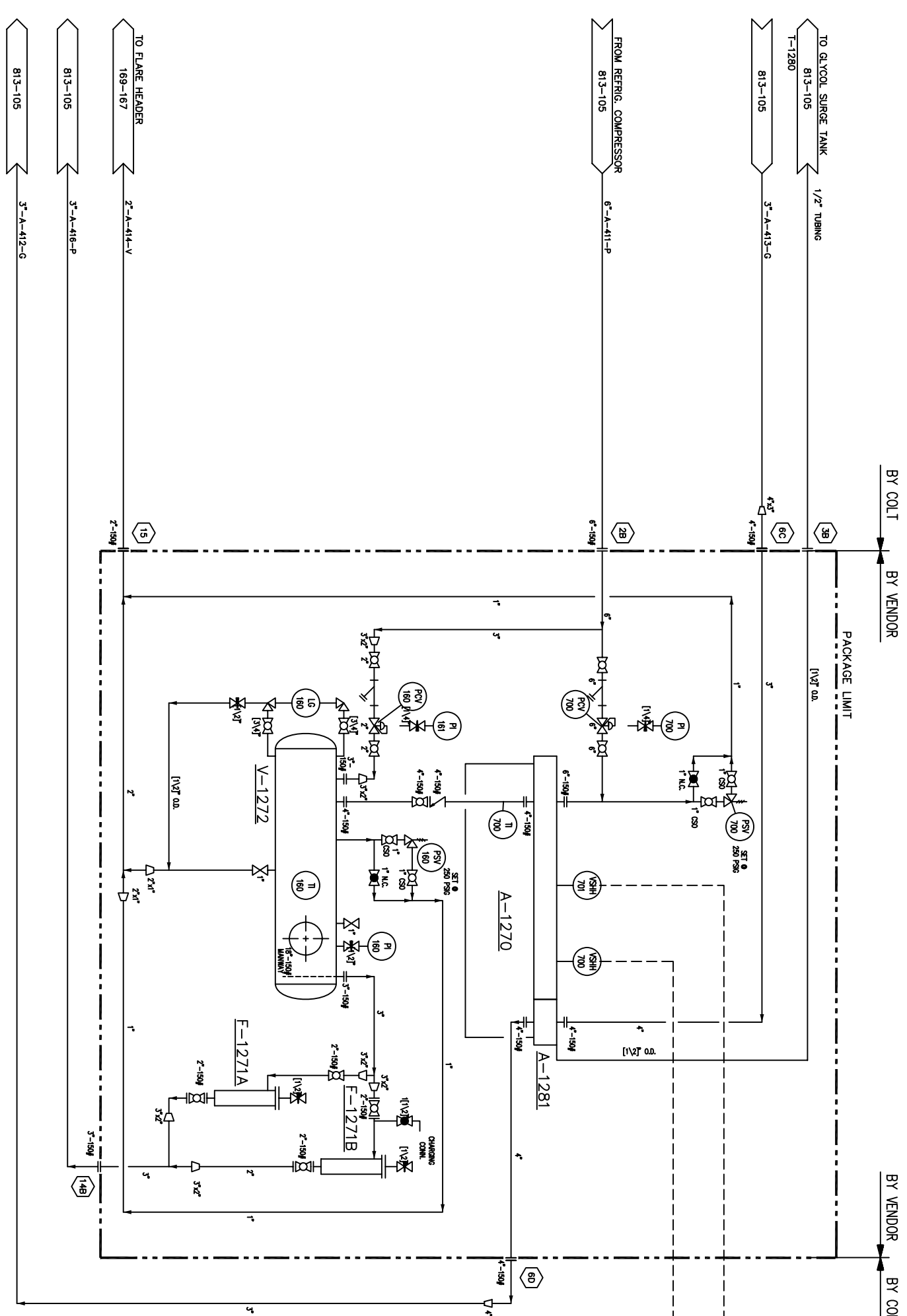
A-1270
PROPANE CONDENSOR
 DUTY: 6.5mm btu/hr
 D.P.: 300psig
 DWT: -20/300° F

V-1272
PROPANE ACCUMULATOR
 SIZE: 48" O.D. x 12'-0" O/A
 DWP: 250 PSIG
 DWT: -20/200° F

F-1271A
FILTER/DRYER
 SPF: 9801A
 DWP: 400psig
 DWT: -20/300° F

F-1271B
FILTER/DRYER
 SPF: 9801B
 DWP: 400 psig
 DWT: -20/300° F

A-1281
GLYCOL COOLING CIRCUIT
 DUTY: 6mm btu/hr
 D.P.: 14 psig
 DWT: 300° F



NOTES

- 1) ALL PIPING TO BE IN ACCORDANCE WITH LATEST EDITION OF ANSI B31.3, B31.5 & CSA B52 PRESSURE PIPING CODE AS REQD.
- 2) REFRIGERATION PIPING SPECIFICATIONS:
 2" & LARGER, WELDED, SCH 40, SA-106 B SMLS, PRE- & SA-234 WPB BW FITTINGS & SA-105 FLANGES.
 2" & SMALLER, THREADED OR S.W., SCH 80 SA-106 B SMLS, PRE- & SA-105 3000A FITTINGS.
- 3) TUBING TO BE [1/2] MIN. 1-3/4 SS C/W COLUMBIUM PLATED STAINLESS FITTINGS & SS FERRULES.
- 4) REFRIGERATION PIPING ONLY TO BE MANUFACTURER TESTED PER STANDARD TESTING PROCEDURES.
- 5) PAINT ONE (1) S.C. ZINC CHROMATE PRIMER OVERALL. VAPOR EPoxy MIMB GET FINISH COAT.
- 6) REMOVE ALL FLOATS & DISPLACERS. ALL DISMANTLED INSTRUMENTS TO BE TAGGED AND GRATED FOR SHIPPING.
- 7) ALL INSTRUMENTS TO BE TAGGED WITH TAG NUMBER. PROTECT ALL OPENINGS FOR SHIPPING.
- 8) ALBERTA QUALITY CONTROL PROGRAM REGISTERED - AQP-2311.
- 9) 1" NPT INSTRUMENT AIR LINE TO BE GALVANIZED.
- 10) ALL INLET PIPING TO COMPRESSOR AND ALL OIL HEADERS TO BE PICKLED.
- 11) PROCESS Suction DWP 250 PS @ 200° F. HYDROTEST @ 375 PS.
 PROCESS Discharge DWP 250 PS @ 200° F. HYDROTEST @ 375 PS.
 150G OIL HEATER DWP 300 PS @ 200° F. HYDROTEST @ 450 PS.
 300G OIL HEATER DWP 300 PS @ 200° F. HYDROTEST @ 450 PS.
- 12) GLYCOL TANK MUST BE MOUNTED ABOVE HIGHEST GLYCOL LINE.

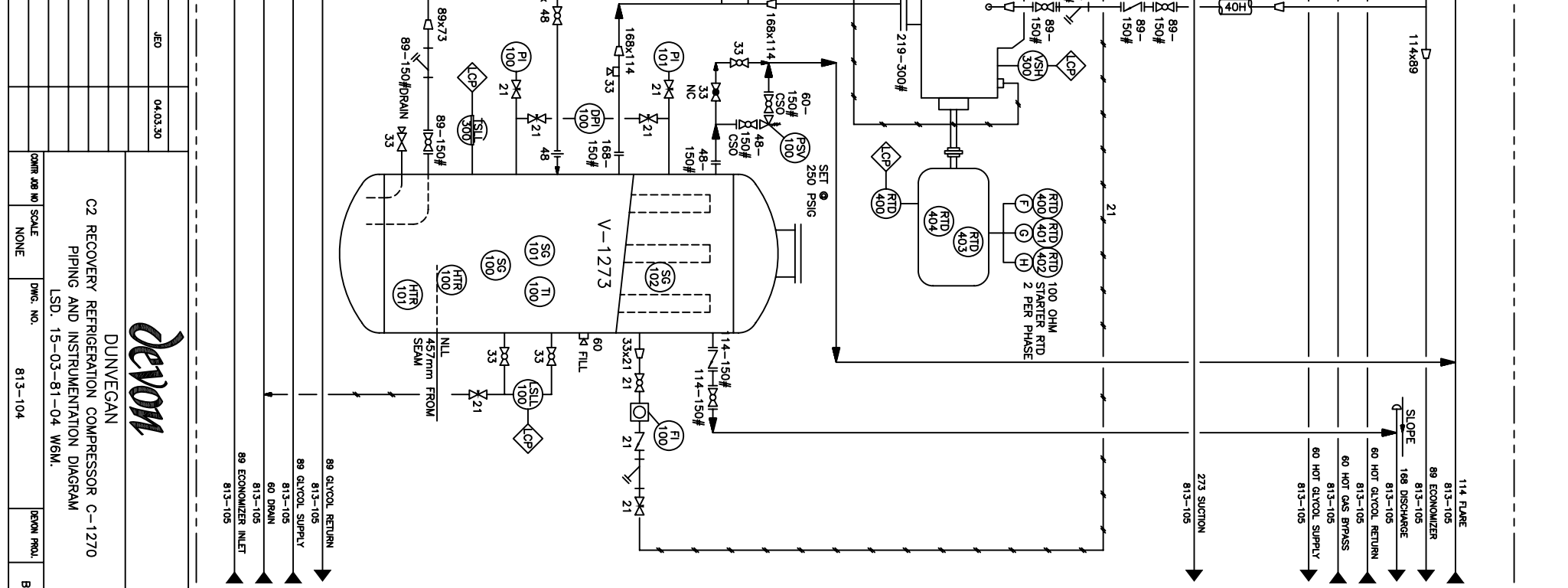
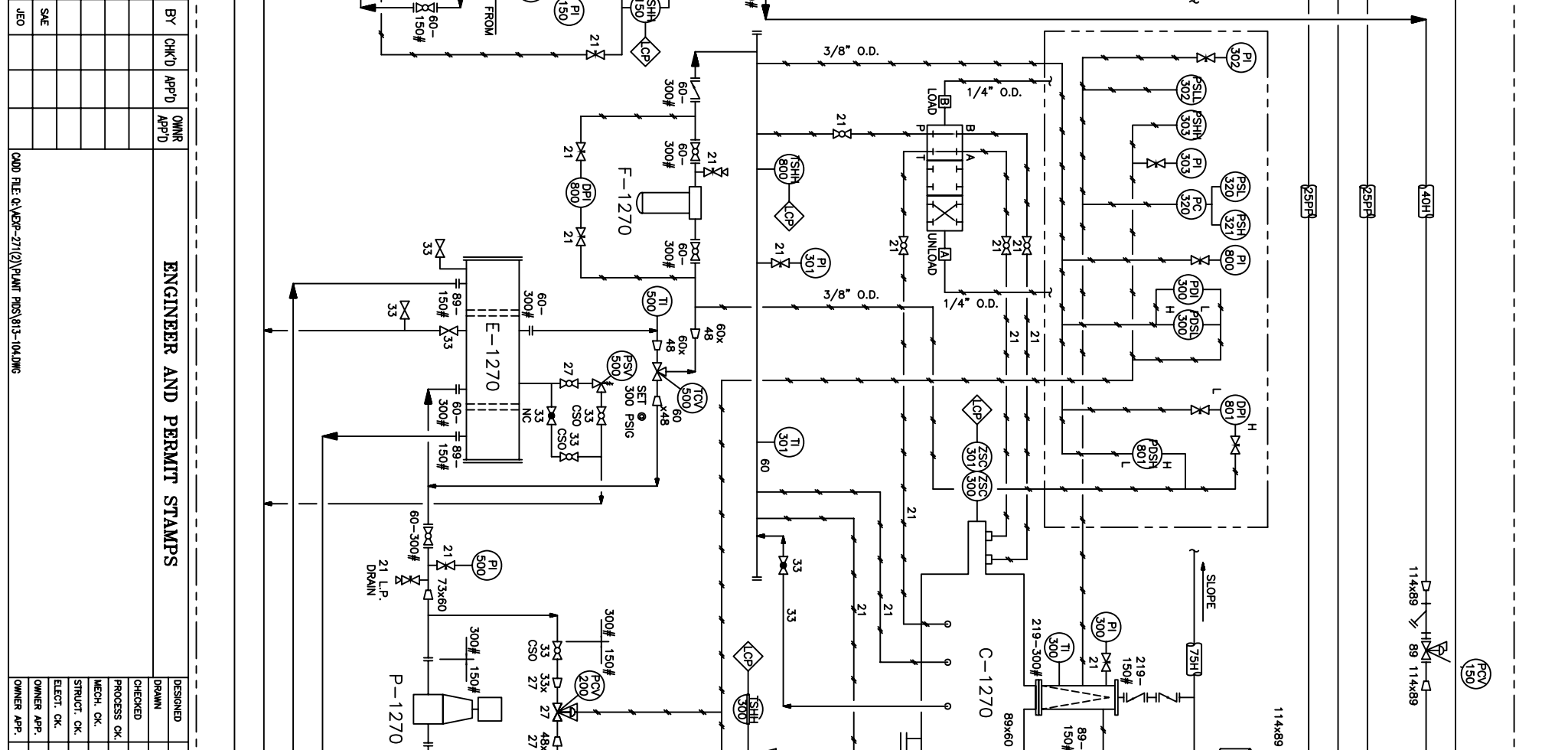
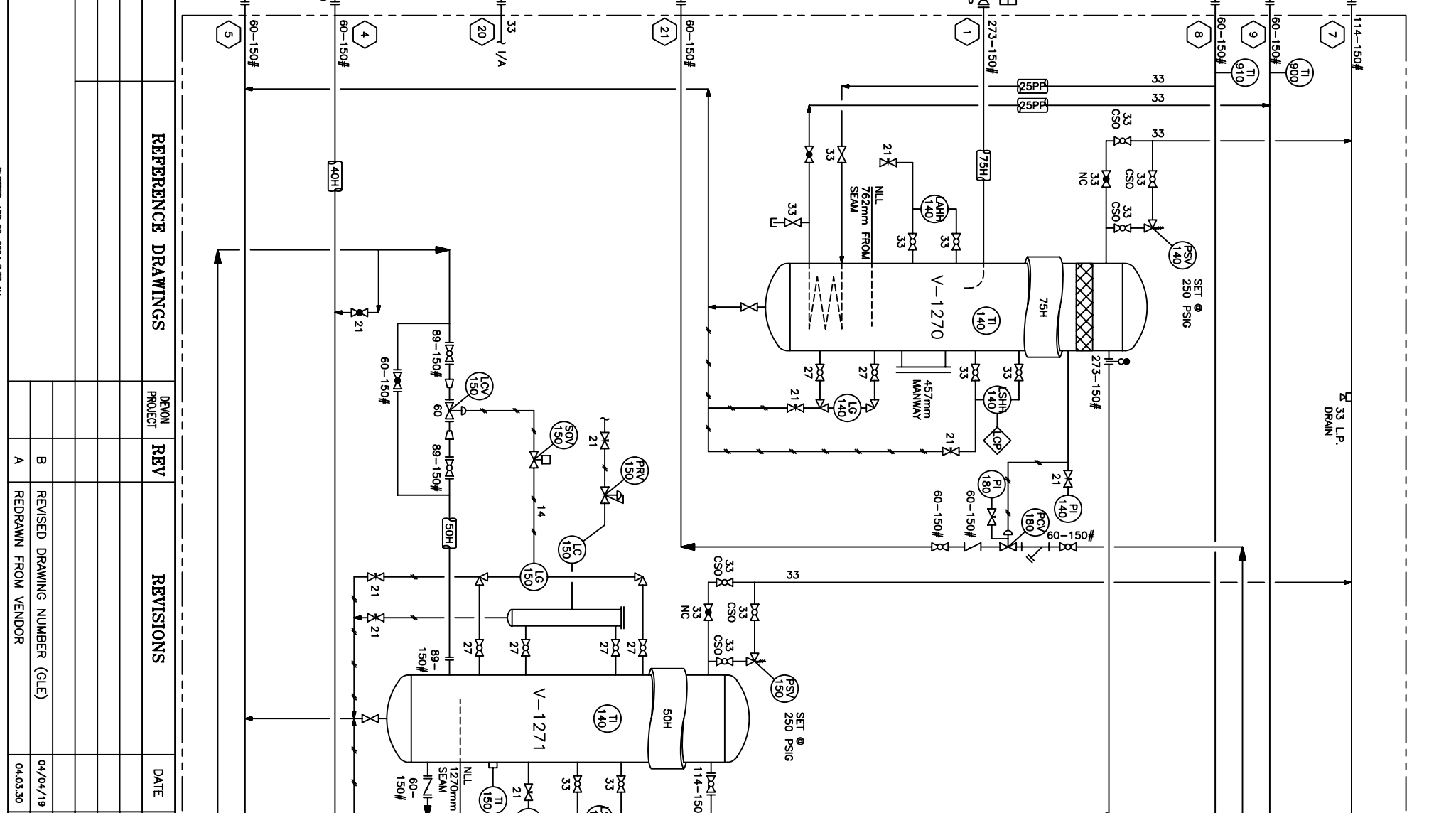
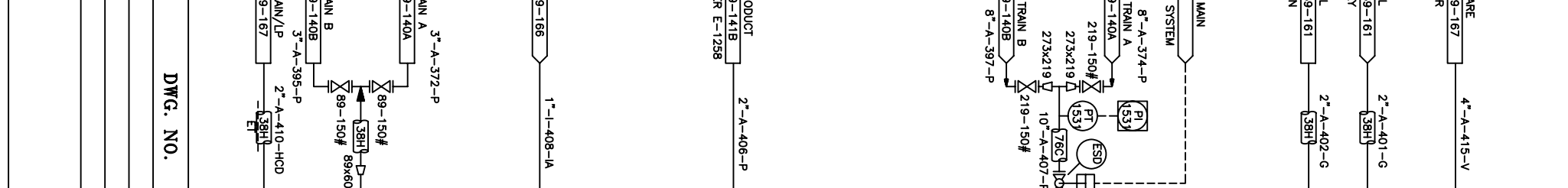
NOZZLE SCHEDULE

NOZZLE	FINAL DISCHARGE	SCALE
2B	GLYCOL BALANCE LINE	6" 150# RF
2C	GLYCOL IN / OUT	1 1/2" SWAGELOK
2D	COMPARATOR INLET	3" 150# RF
14B	FLARE	2" 150# RF
15		

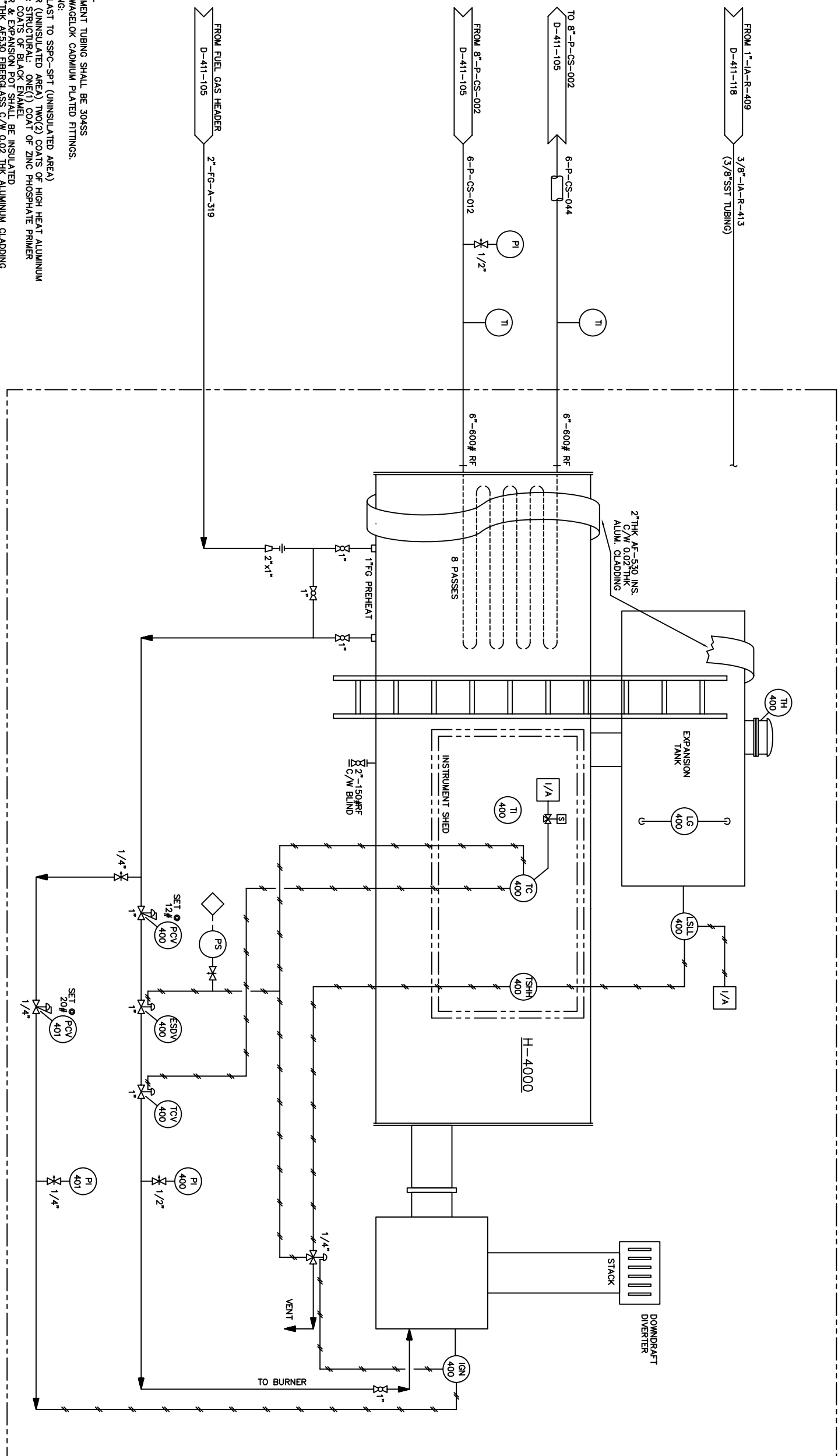
DWG. NO.	REFERENCE DRAWINGS	DEVON PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER APP'D	ENGINEER AND PERMIT STAMPS
33656-1C	STARTED, PAD - HONDEN SCREW COMPRESSOR		2	AS BUILT PER FIELD MARK-UP (GLE)	04/04/19	SAE				DESIGNED: GAR DRAWN: GAR CHECKED: GAR PROCESS OK: GAR MECH. OK: GAR STRUCT. OK: GAR ELECT. OK: GAR OWNER APP.: OWNER APP.
			1	AS BUILT (COLT JOB 97C813)	98/12/18	SOS				
			0	I.F.C - C2 RECOVERY (COLT 97C813)	98/04/30	ERS				
			B	ISSUED FOR AUB APPROVAL (COLT 97C813)	98/04/24	ERS				
			A	I.F.A., C2 RECOVERY (COLT JOB 97C813)	98/04/08	WRL				



DUNVEGAN SOUR GAS PLANT
 PIPING & INSTRUMENTATION DIAGRAM
 REFRIGERATION CONDENSER
 LSD: 15-03-81-04 W6M.



H-4000
 INDIRECT LINE HEATER
 SIZE: 54"OD x 22'-0"LG
 DUTY: 2,000,000 Btu/hr.
 MANUFACTURER: WELLS-HALL FABRICATION LTD.



- NOTES:
1. INSTRUMENT TUBING SHALL BE 304SS C/W SWAGELOK CADMIUM PLATED FITTINGS.
 2. PAINTING: SANDBLAST TO SSPC-SPT (UNINSULATED AREA) HEATER (UNINSULATED AREA) TWO(2) COATS OF HIGH HEAT ALUMINUM THERM & STRUCTURAL PAINT (VENT) COAT OF ZINC PHOSPHATE PRIMER AND STRUCTURAL PAINT.
 3. HEATER & EXPANSION POT SHALL BE INSULATED WITH 2" THK AF530 FIBERGLASS C/W 0.02 THK ALUMINUM CLADDING

DWG. NO.	REFERENCE DRAWINGS	DEVON PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER APP'D	ENGINEER AND PERMIT STAMPS	DESIGNED DRAWN	WRL	98/05/27	OWNER APP. NO	SCALE	DWG. NO.	DEVON PROJ.
31-C-9341-2	WELLS-HALL FABRICATION LTD. - P&ID													95-C-411	N/S	D-411-105A	0

Devon

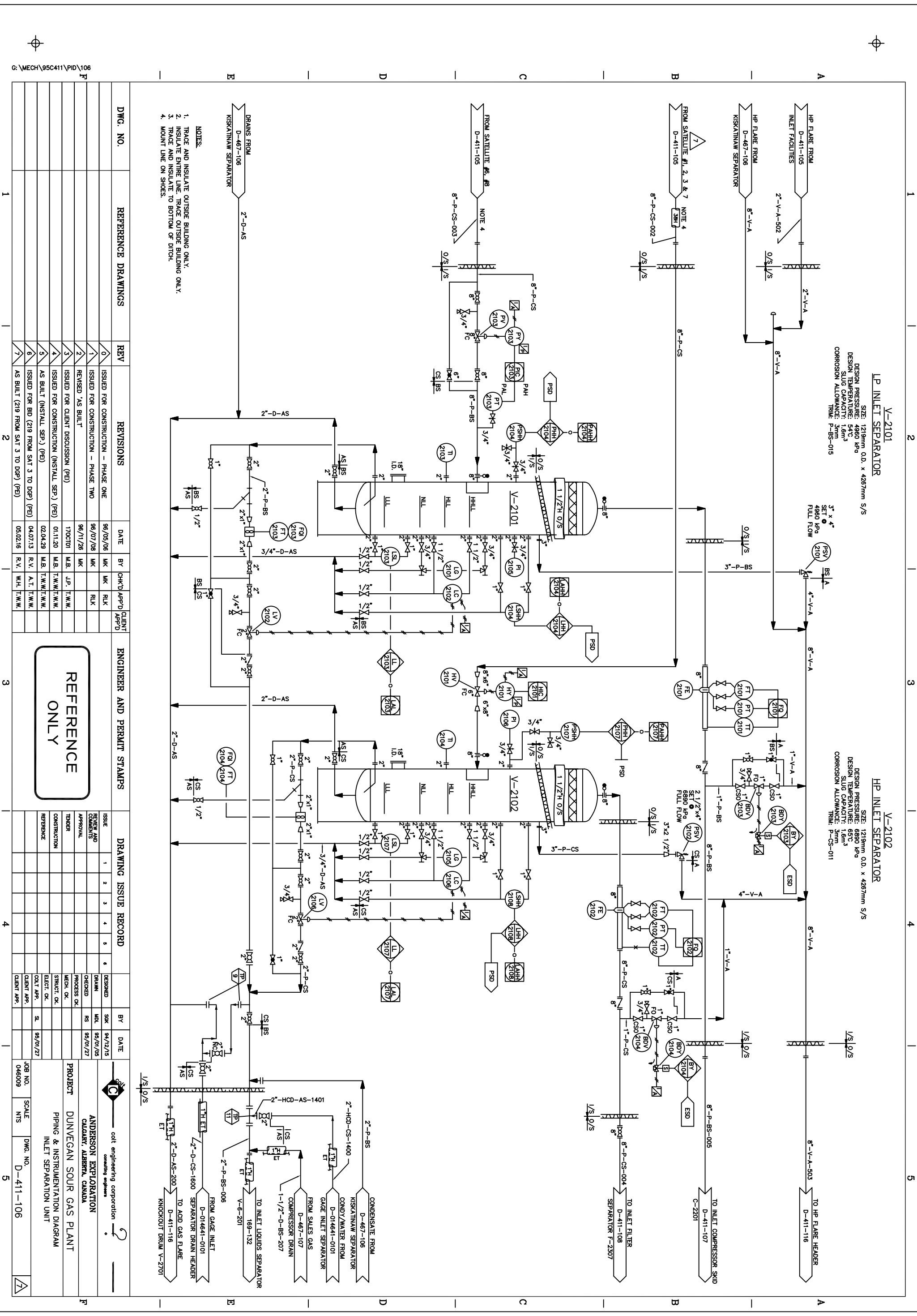
DUNVEGAN SOUR GAS PLANT
 PIPING & INSTRUMENTATION DIAGRAM
 INLET LINE HEATER
 LSD. 15-03-81-04 W6M.

ISSUED FOR AS-BUILT

98/05/16 WRL

98/05/27

0



V-2101
LP INLET SEPARATOR
 SIZE: 1219mm O.D. x 4267mm S/S
 DESIGN PRESSURE: 4860 kPa
 DESIGN TEMPERATURE: 54°C
 SLUG CAPACITY: 1.6m³
 CORROSION ALLOWANCE: 3mm
 TRIM: P-BS-015

V-2102
HP INLET SEPARATOR
 SIZE: 1219mm O.D. x 4267mm S/S
 DESIGN PRESSURE: 6880 kPa
 DESIGN TEMPERATURE: 65°C
 SLUG CAPACITY: 1.6m³
 CORROSION ALLOWANCE: 3mm
 TRIM: P-CS-011

- NOTES:**
1. TRACE AND INSULATE OUTSIDE BUILDING ONLY.
 2. INSULATE ENTIRE LINE. TRACE OUTSIDE BUILDING ONLY.
 3. TRACE AND INSULATE TO BOTTOM OF DITCH.
 4. MOUNT LINE ON SPODES.

DWG. NO.	REFERENCE DRAWINGS	REV	REVISIONS	DATE	BY	CHK'D	APP'D
		0	ISSUED FOR CONSTRUCTION - PHASE ONE	96/05/06	MM	RLK	
		1	ISSUED FOR CONSTRUCTION - PHASE TWO	96/07/08	MM	RLK	
		2	REVISED 'AS BUILT'	96/11/26	MM	RLK	
		3	ISSUED FOR CLIENT DISCUSSION (PE)	1706/01	J.P.	T.W.W.	
		4	ISSUED FOR CONSTRUCTION (INSTALL SEP.) (PE)	01.11.20	M.B.	T.W.W./T.W.W.	
		5	AS BUILT (INSTALL SEP.) (PE)	02.04.29	M.B.	T.W.W./T.W.W.	
		6	ISSUED FOR BID (219 FROM SAT 3 TO DGP) (PE)	04.07.13	R.V.	A.T./T.W.W.	
		7	AS BUILT (219 FROM SAT 3 TO DGP) (PE)	05.02.16	R.V.	W.H./T.W.W.	

ENGINEER AND PERMIT STAMPS

REFERENCE ONLY

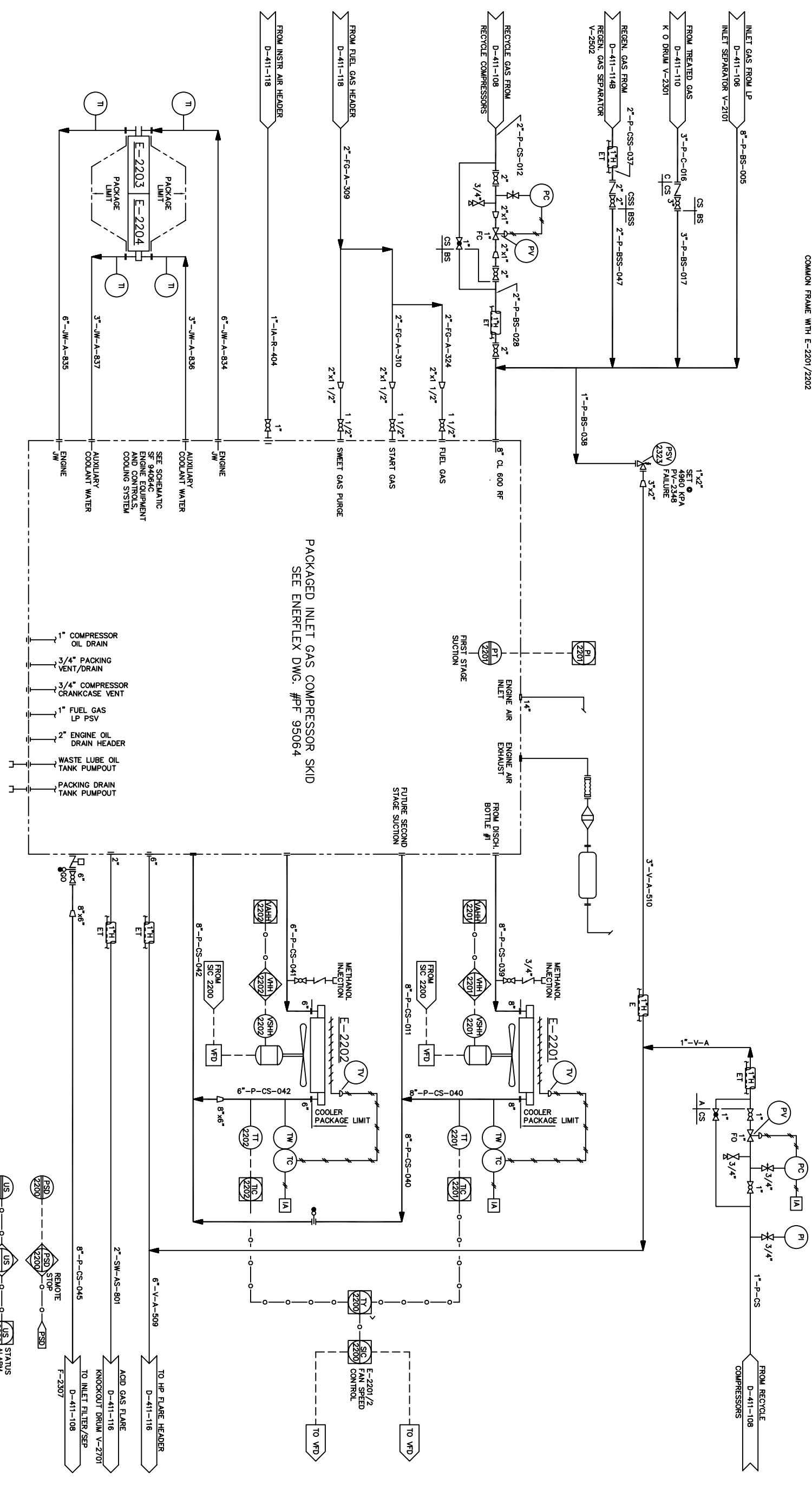
DRAWING ISSUE RECORD		BY	DATE
1	DESIGNED	SK	94/12/15
2	DRAWN	ML	95/01/06
3	CHECKED	RS	95/01/27
4	APPROVAL		
5	PROCESS OK		
6	MECH. OK		
7	STRUCT. OK		
8	ELECT. OK	SL	96/01/27
9	CLIENT APP.		
10	CLIENT APP.		

PROJECT
 DUNVEGAN SOUR GAS PLANT
 PIPING & INSTRUMENTATION DIAGRAM
 INLET SEPARATION UNIT

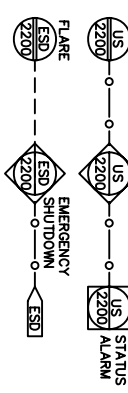
JOB NO. 046009
SCALE NTS
DWG. NO. D-411-106

E-2203/2204
 JACKET WATER/
 AUXILIARY WATER COOLERS
 DESIGN TEMP :
 DESIGN PRESS :
 AUXILIARY DUTY :
 COMMON FRAME WITH E-2201/2202

E-2201/2202
 INLET COMP INTERCOOLER/ AFTERCOOLER
 MODEL: AIR-X 13Z-ZZ
 DESIGN PRESS: 6890 KPA
 DESIGN TEMP: 176°C
 DUTY:
 MOTOR: 2 @ 20 HP



PACKAGED INLET GAS COMPRESSOR SKID
 SEE ENERFLEX DWG. #PF 95064



DWG. NO.	REFERENCE DRAWINGS	DEVON PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER APP'D	ENGINEER AND PERMIT STAMPS
			4	REVISED 'AS BUILT'	97/01/11	MK				DESIGNED: WDA, 96/05/10
			3	RECYCLE GAS TO INLET COMPRESSOR	96/11/24	MK				CHECKED: WDA
			2	REVISED 'AS BUILT'	96/11/19	MK				PROCESS OK: WDA
			1A	REVISED AS NOTED, IFC	96/09/30	SL				MCH. OK: WDA
			0	ISSUED FOR CONSTRUCTION	95-07-08	MK				STRUCT. OK: WDA
										ELECT. OK: WDA
										OWNER APP.:

PLOTTED: MAR 08, 2004 9:16 AM

QADD FILE: Q:\KMP-271\PLANT POS\D-411-107.DWG

OWNER APP.:

SCALE: NTS

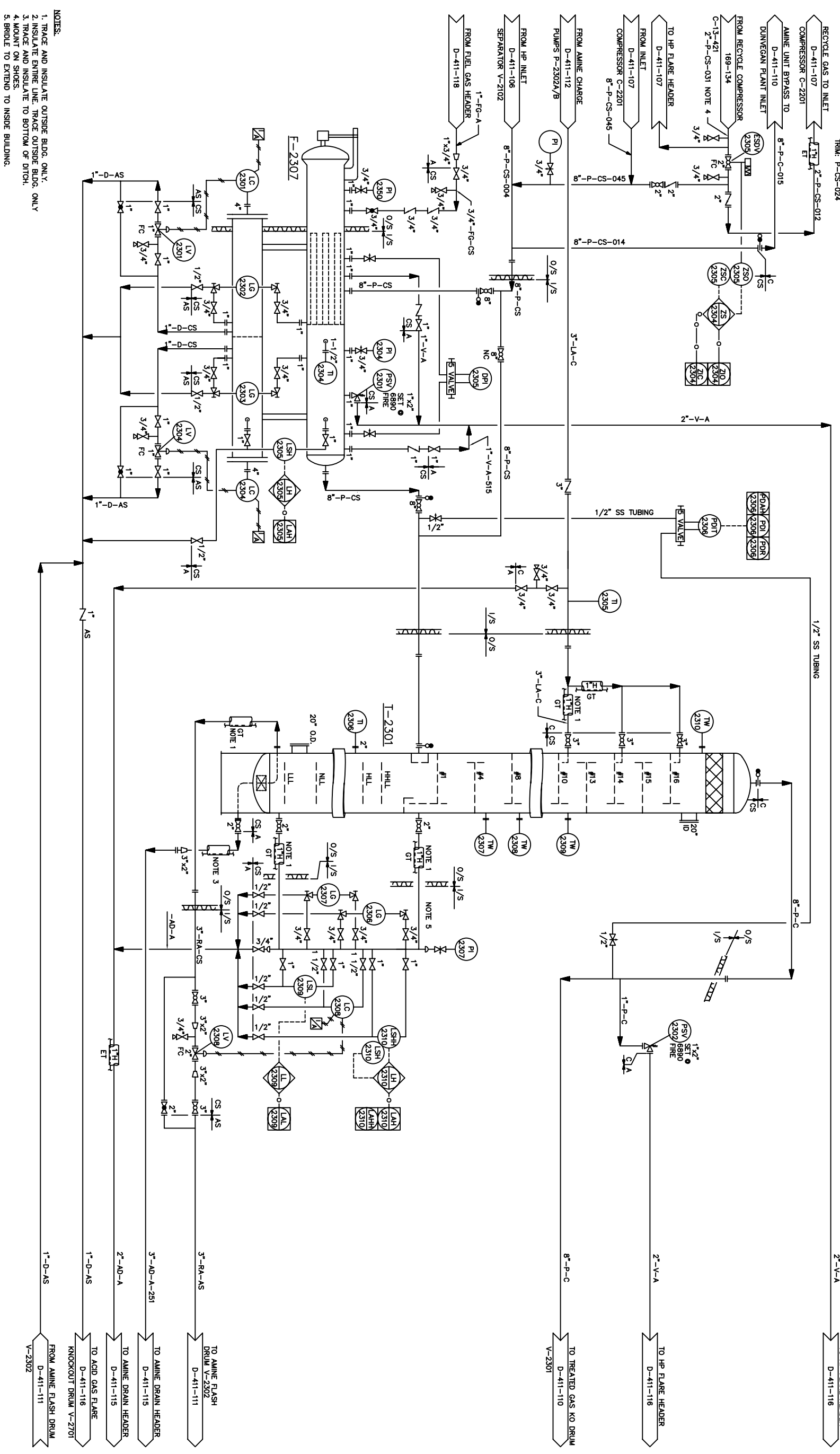
DUNVEGAN SOUR GAS PLANT
 PIPING & INSTRUMENTATION DIAGRAM
 INLET COMPRESSOR PACKAGE
 LSD, 15-03-81-04 W6M.

DEVON

DEVON PROJ. 4

F-2307
INLET FILTER/SEPARATOR
 MODEL: POROUS MEDIA GCLJ3456E03V-SOE
 SIZE: 609mm O.D. x 2439mm S/S
 BOOT: 219mm O.D. x 2439mm S/S
 DESIGN PRESS.: 6890 kPa(g)
 DESIGN TEMP.: 65°C
 TRIM: P-CS-024

I-2301
AMINE CONTACTOR
 SIZE: 1372mm I.D. x 13411mm S/S
 DESIGN PRESS.: 6890 kPa(g)
 DESIGN TEMP.: 100°C
 TRIM: P-CS-025



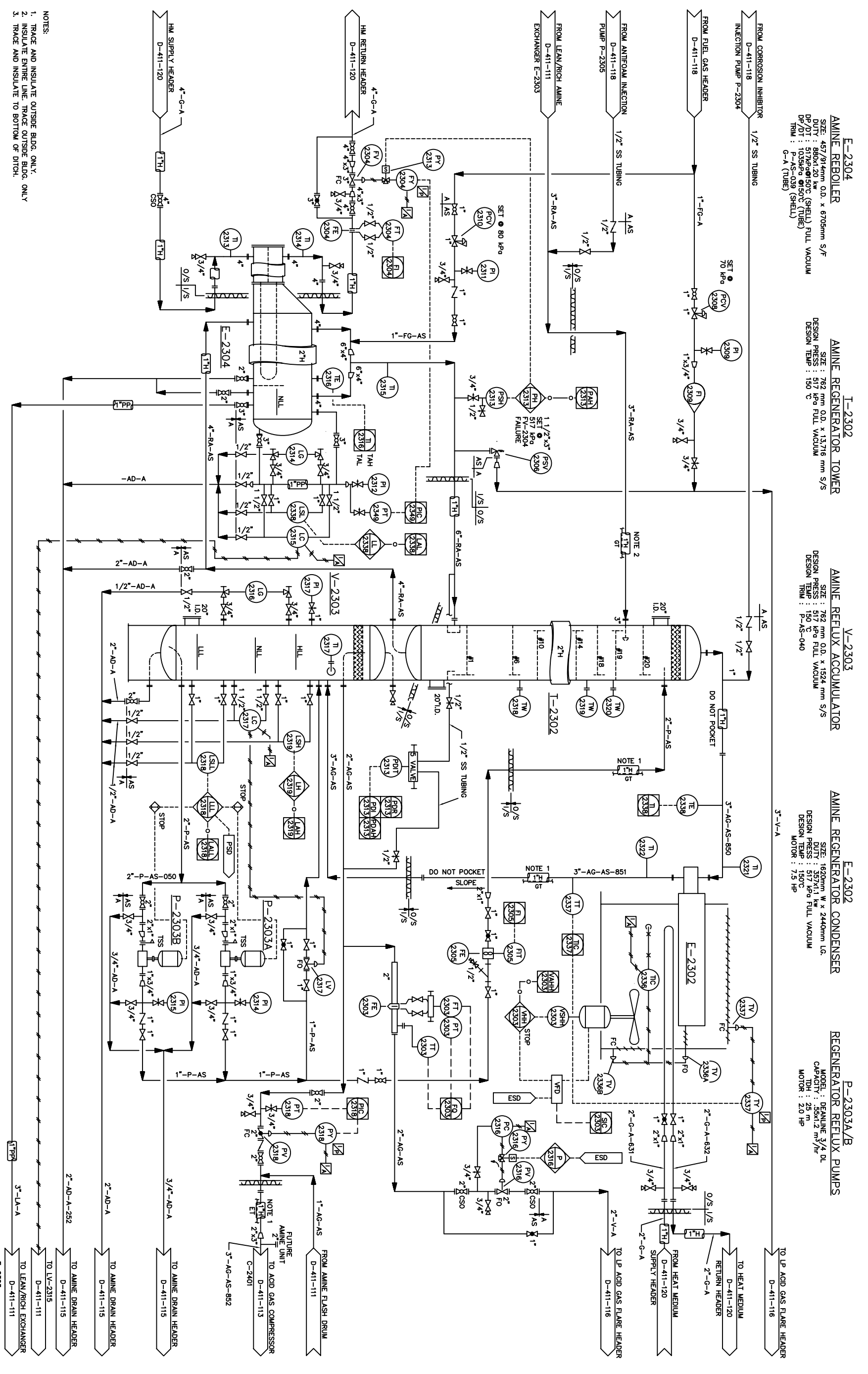
- NOTES:**
1. TRACE AND INSULATE OUTSIDE BLDG. ONLY.
 2. INSULATE ENTIRE LINE. TRACE OUTSIDE BLDG. ONLY.
 3. TRACE AND INSULATE TO BOTTOM OF DITCH.
 4. MOUNT ON SHOES.
 5. BRIDLE TO EXTEND TO INSIDE BUILDING.

DWG. NO.	REFERENCE DRAWINGS	DEVN PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APPD	OWNER APPD	ENGINEER AND PERMIT STAMPS
			4	REVISED 'AS BUILT'	97-01-11	MK				DESIGNED: SGR 94/12/15 DRAWN: LMR 95/01/10 CHECKED: RS 95/01/27
			3	RECYCLE GAS TO INLET COMPRESSOR	96-11-24	MK				PROCESS OK
			2	REVISED 'AS BUILT'	96-11-19	MK				MECH. OK
			1-A	REVISED AS NOTED, IFC	96/09/30	SL				ELECT. OK
			0	ISSUED FOR CONSTRUCTION	96/07/08	MK				OWNER APP.

DUNVEGAN SOUR GAS PLANT
 PIPING & INSTRUMENTATION DIAGRAM
 SOUR GAS TREATING
 LSD, 15-03-81-04 W6M.

Devon

OWNER APP. SCALE: D-411-108
 DPK. NO. 4



AMINE REBOILER E-2304
 SIZE: 457/914mm O.D. x 6705mm S/F
 DUTY: 860x120 kW
 DP/DT: 517xP@50°C (SHELL) FULL VACUUM
 TRM: P-AS-039 (SHELL)
 G-A (TUBE)

AMINE REGENERATOR TOWER I-2302
 SIZE: 762 mm O.D. x 13716 mm S/S
 DESIGN PRESS: 517 MPa FULL VACUUM
 DESIGN TEMP: 150 °C

AMINE REFLUX ACCUMULATOR V-2303
 SIZE: 762 mm O.D. x 1524 mm S/S
 DESIGN PRESS: 517 MPa FULL VACUUM
 DESIGN TEMP: 150 °C
 TRM: P-AS-040

AMINE REGENERATOR CONDENSER E-2302
 SIZE: 1620mm W x 2440mm LG.
 DUTY: 357x1.1 kW
 DESIGN PRESS: 517 MPa FULL VACUUM
 DESIGN TEMP: 150°C
 MOTOR: 7.5 HP

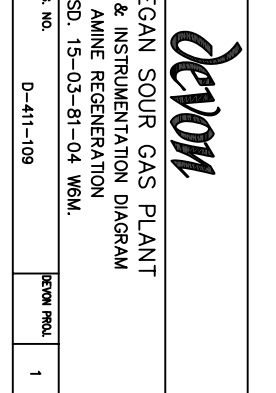
REGENERATOR REFLUX PUMPS P-2303A/B
 MODEL: DEANLINE 3/4 DL
 CAPACITY: 55x1.2 m³/hr
 TDH: 25 m
 MOTOR: 20 HP

NOTES:
 1. TRACE AND INSULATE OUTSIDE BLDG. ONLY.
 2. INSULATE ENTIRE LINE. TRACE OUTSIDE BLDG. ONLY.
 3. TRACE AND INSULATE TO BOTTOM OF DITCH.

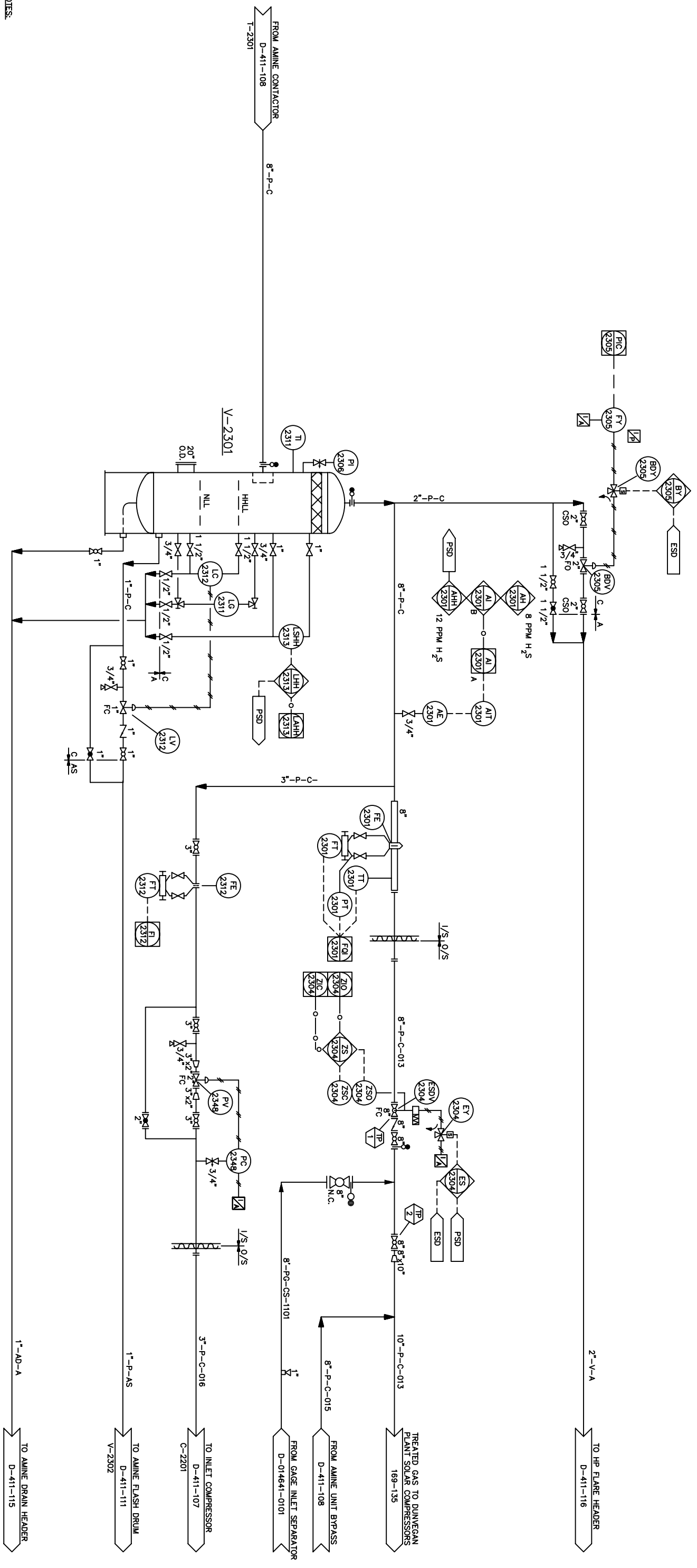
NOTE 1: FUTURE AMINE UNIT TO ACID GAS COMPRESSOR C-2401

NOTE 2: DO NOT POCKET SLOPE

DWG. NO.	REFERENCE DRAWINGS	DEVON PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER	ENGINEER AND PERMIT STAMPS
										DESIGNED: SKK 9/4/12/15 DRAWN: TA 9/4/12/15 CHECKED: RS 9/30/12/15 PROCESS OK: MECH. OK: STRUCT. OK: ELEC. OK: OWNER APP.:
			1	REVISED 'AS BUILT'	96/11/26	MK				OWNR APP. SCALE: NTS DWG. NO. D-411-109 DEVON PROJ. 1
			0	ISSUED FOR CONSTRUCTION	96/07/08	MK				



V-2301
 TREATED GAS
 KNOCKOUT DRUM
 SIZE: 1372mm I.D. x 3046mm S/S
 DESIGN PRESS: 6890 kPa(g)
 DESIGN TEMP: 100°C
 TRIM: P-C-026

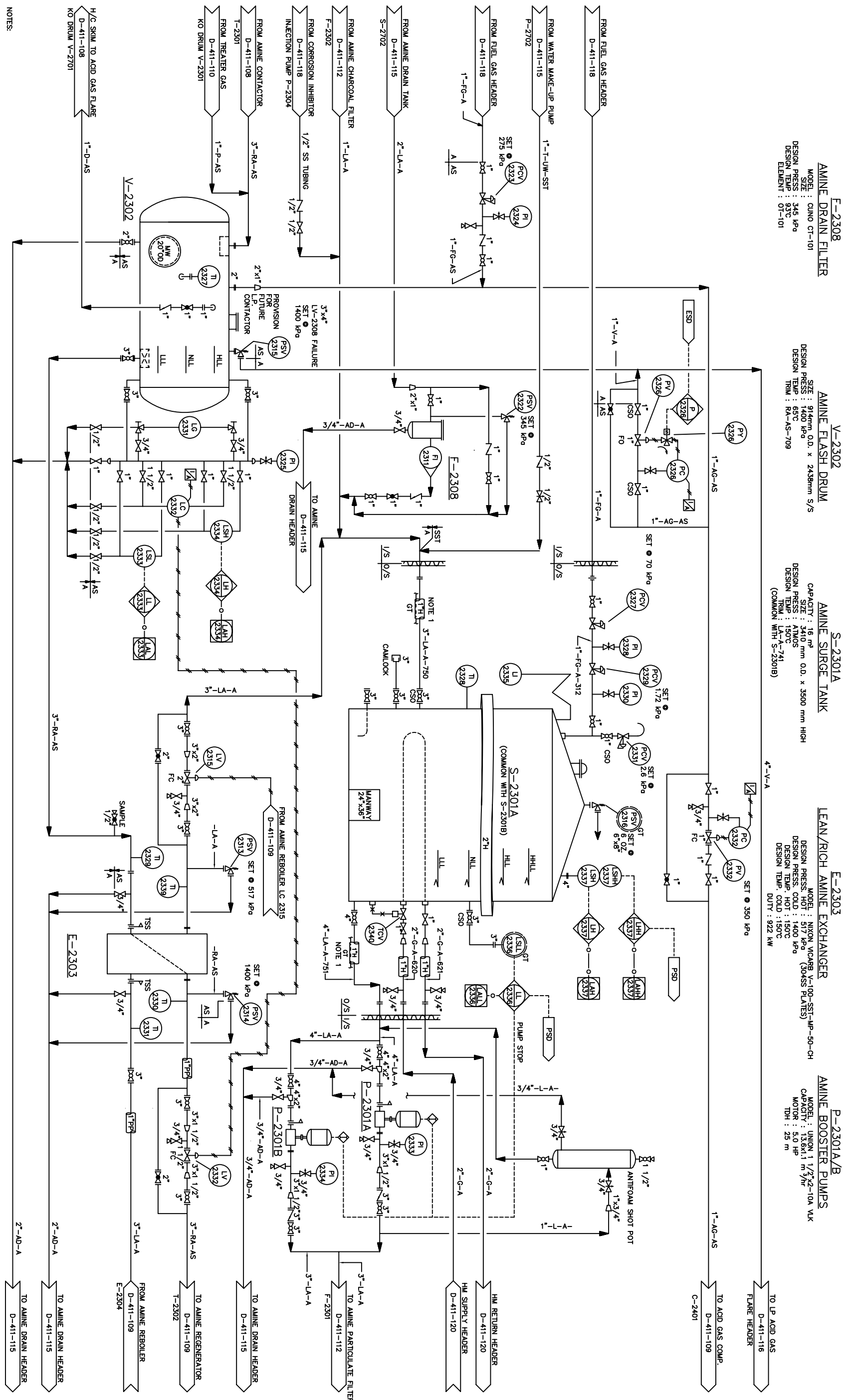


- NOTES:
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 2. INSULATE ENTIRE LINE. TRACE OUTSIDE BLDG. ONLY.
 3. TRACE AND INSULATE TO BOTTOM OF DITCH.
 4. BRIDLE TO EXTEND ABOVE BLDG.

DWG. NO.	REFERENCE DRAWINGS	DEVN PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER APP'D	ENGINEER AND PERMIT STAMPS	DESIGNED	SGK	94/12/15	DRWN	LMR	95/12/15	CHECKED	RS	95/01/27	PROCESS OK	MECH. OK	STRUCT. OK	ELECT. OK	OWNER APP.	OWNER APP.	OWNER APP.	SCALE	DWG. NO.	DEVN PROJ.	5
			5	AS BUILT PER FIELD MARK-UP (GLE)	04/04/05	SAE																								
			4	AS BUILT (INSTALL SEP.)	02.04.29	MB	TWW	TWW																						
			3	ISSUED FOR CONSTRUCTION (INSTALL SEP.)	01.11.20	MB	TWW	TWW																						
			2	ISSUED FOR CLIENT DISCUSSION	17OCT01	MB	JP	TWW																						
			1	REVISED 'AS BUILT'	96/11/26	MB	JP	TWW																						
			0	ISSUED FOR CONSTRUCTION	96/07/08	MB	KK	RLK																						



DUNVEGAN SOUR GAS PLANT
 PIPING & INSTRUMENTATION DIAGRAM
 TREATED GAS KNOCKOUT
 LSD. 15-03-81-04 W6M.



F-2308
AMINE DRAIN FILTER
 MODEL: CUNO CT-101
 SIZE: 914mm O.D. x 2438mm S/S
 DESIGN PRESS: 1400 kPa
 DESIGN TEMP: 93°C
 ELEMENT: 0T-101

V-2302
AMINE FLASH DRUM
 SIZE: 914mm O.D. x 2438mm S/S
 DESIGN PRESS: 1400 kPa
 DESIGN TEMP: 65°C
 TRIM: RA-AS-709

S-2301A
AMINE SURGE TANK
 CAPACITY: 16 m³
 SIZE: 3410 mm O.D. x 3500 mm HIGH
 DESIGN PRESS: ATMOS
 DESIGN TEMP: 150°C
 TRIM: LA-A-741
 (COMMON WITH S-2301B)

E-2303
LEAN/RICH AMINE EXCHANGER
 MODEL: NIXON VICARB V-100-SST-MP-50-CH
 DESIGN PRESS: HOT: 517 kPa (304SS PLATES)
 DESIGN PRESS: COLD: 1400 kPa
 DESIGN TEMP: HOT: 150°C
 DESIGN TEMP: COLD: 150°C
 DUTY: 922 kW

P-2301A/B
AMINE BOOSTER PUMPS
 MODEL: UNION 1 1/2"X2-10A V/LK
 CAPACITY: 1.36x1.1 m³/hr
 MOTOR: 5.0 HP
 TH: 25 m

- NOTES:
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 2. INSULATE ENTIRE LINE. TRACE OUTSIDE BLDG. ONLY.
 3. TRACE AND INSULATE TO BOTTOM OF DITCH.

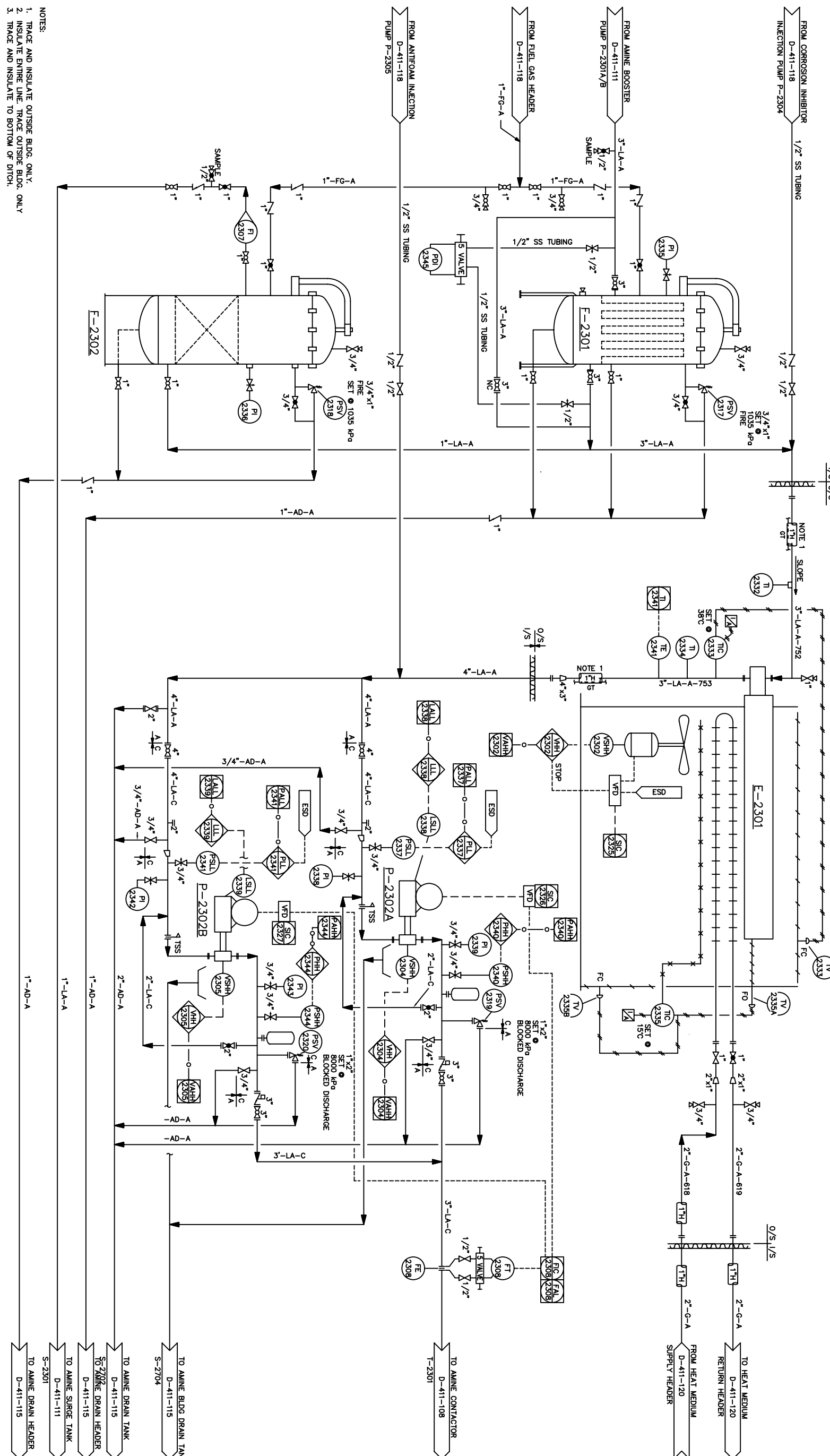
DWG. NO.	REFERENCE DRAWINGS	DEVON PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER APP'D	ENGINEER AND PERMIT STAMPS
										DESIGNED: SSK 94/12/15 DRAWN: TA 95/01/09 CHECKED: RS 95/01/27 PROCESS OK: MECH. OK: STRUCT. OK: ELECT. OK: OWNER APP.:
			1	REVISED 'AS BUILT'	96/11/26	MK				DESIGNED: SSK 94/12/15 DRAWN: TA 95/01/09 CHECKED: RS 95/01/27 PROCESS OK: MECH. OK: STRUCT. OK: ELECT. OK: OWNER APP.:
			0	ISSUED FOR CONSTRUCTION	96/07/08	MK				DESIGNED: SSK 94/12/15 DRAWN: TA 95/01/09 CHECKED: RS 95/01/27 PROCESS OK: MECH. OK: STRUCT. OK: ELECT. OK: OWNER APP.:

F-2301 AMINE PARTICULATE FILTER
 MODEL : POROUS MEDIA FE36390C10E
 SIZE : 324 mm O.D. x 1270 mm mm S/S
 ELEMENT : 10 MICRON
 CAPACITY : 13.6411 m³/hr
 DESIGN PRESS : 1035 kPa
 DESIGN TEMP : 85C

F-2302 AMINE CHARCOAL FILTER
 MODEL : POROUS MEDIA FA6036A00E
 SIZE : 365 mm O.D. x 1067mm mm S/S
 ELEMENT : 2 CANISTERS
 CAPACITY : 1.4411 m³/hr
 DESIGN PRESS : 1035 kPa
 DESIGN TEMP : 65 kPa

E-2301 LEAN AMINE COOLER
 MODEL : WHEATLEY GASO P-323-MX
 SIZE : 2350 mm W x 3048 mm LG.
 DUTY : 2204.11 kW
 MOTORS : 1 @ 15 HP
 DESIGN PRESS : 1035 kPa
 DESIGN TEMP : 75 C

P-2302A/B AMINE CHARGE PUMPS
 MODEL : WHEATLEY GASO P-323-MX
 CAPACITY : 13.0411 m³/hr @700 m TDH
 MOTOR : 2 @ 40 hp
 RPM : 328



NOTES:
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 2. INSULATE ENTIRE LINE. TRACE OUTSIDE BLDG. ONLY.
 3. TRACE AND INSULATE TO BOTTOM OF DITCH.

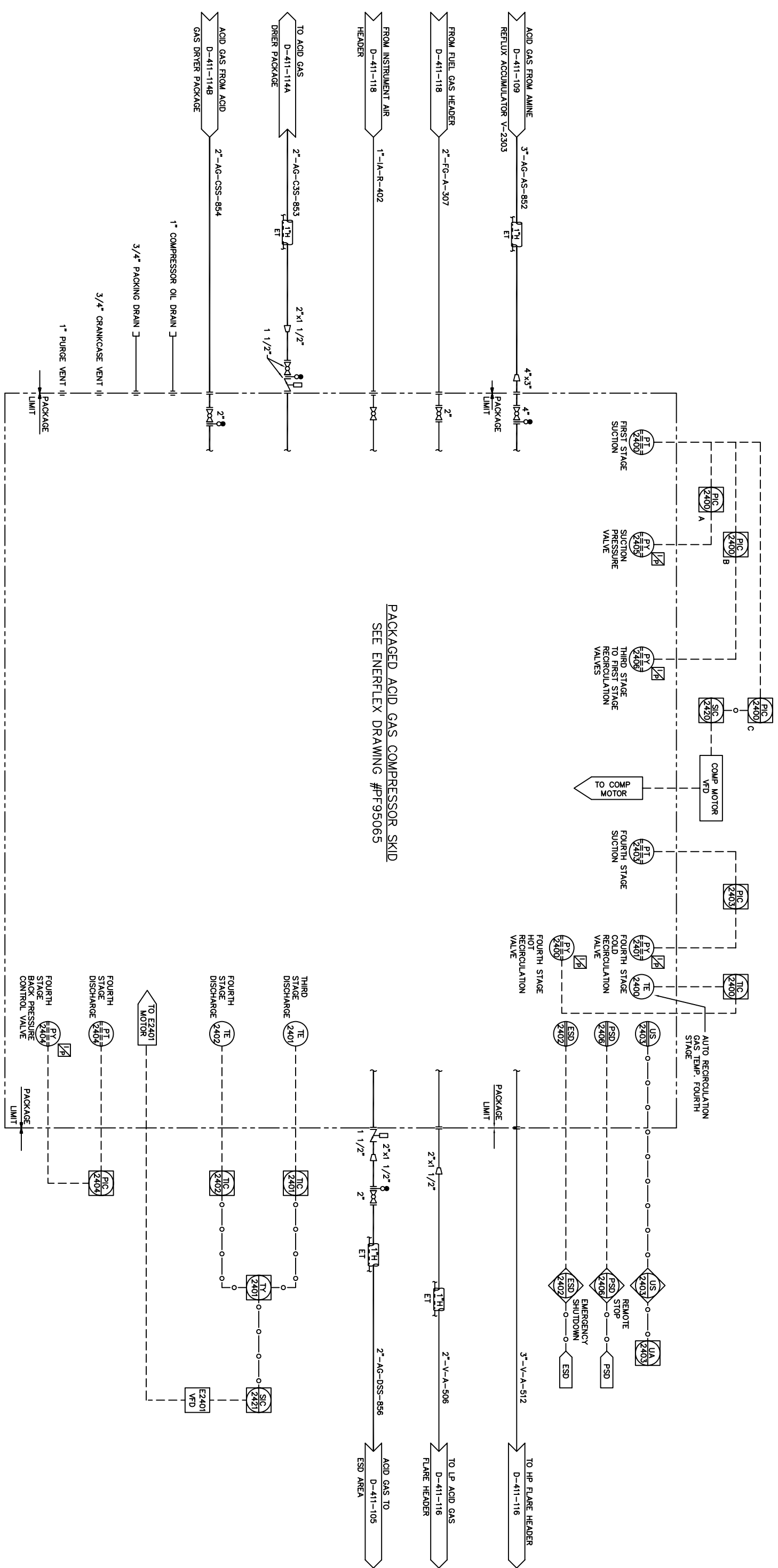
DWG. NO.	REFERENCE DRAWINGS	DEVON PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER APP'D	ENGINEER AND PERMIT STAMPS
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			0	ISSUED FOR CONSTRUCTION	96/07/08	MK				PROCESS OK MECH. OK INSTR. OK ELECT. OK OWNER APP. _____

Devon

DUNVEGAN SOUR GAS PLANT
 PIPING & INSTRUMENTATION DIAGRAM
 AMINE PUMPING & FILTRATION SYSTEMS
 LSD: 15-03-81-04 W6M.

SCALE: NTS
 DWG. NO.: D-411-112
 DEVON PROJ.: 1

C-2401 A/B/C/D
 ACID GAS COMPRESSOR
 MODEL: ARIEL J6/4 x 3 1/2" STROKE
 RPM: 885
 MOTOR: 1 @ 150 hp
 1 @ 2 hp



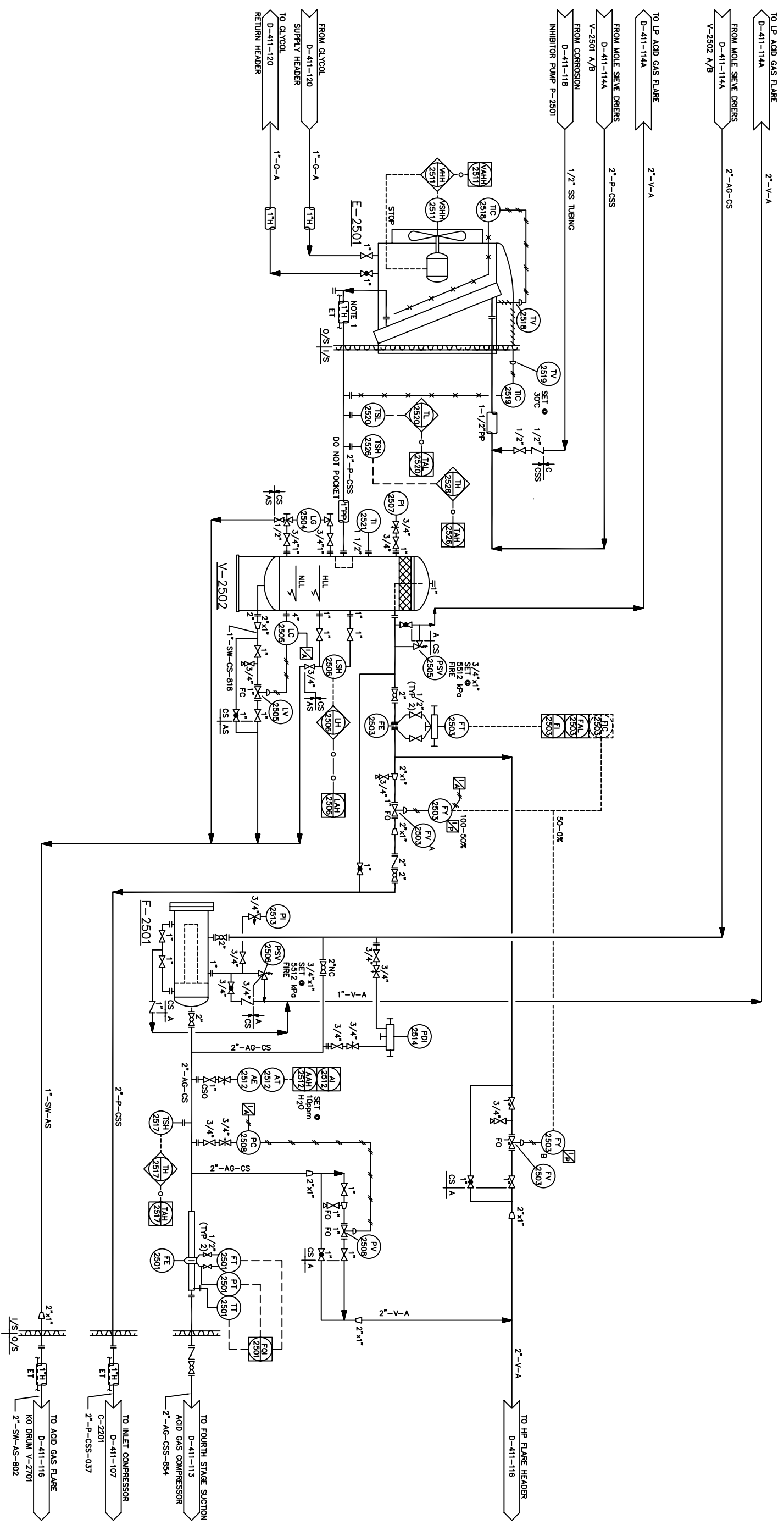
PACKAGED ACID GAS COMPRESSOR SKID
 SEE ENERFLEX DRAWING #PF95065

DWG. NO.	REFERENCE DRAWINGS	DEVN PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER	ENGINEER AND PERMIT STAMPS
										DESIGNED DRAWN CHECKED PROCESS OK MECH. OK STRUCT. OK ELECT. OK OWNER APP. OWNER APP.
			1	REVISED 'AS BUILT'	96/11/26	MK				 DUNVEGAN SOUR GAS PLANT PIPING & INSTRUMENTATION DIAGRAM ACID GAS COMPRESSION PACKAGE LSD. 15-03-81-04 W6M.
			0	ISSUED FOR CONSTRUCTION	96/07/08	MK				DUNVEGAN SOUR GAS PLANT PIPING & INSTRUMENTATION DIAGRAM ACID GAS COMPRESSION PACKAGE LSD. 15-03-81-04 W6M.

E-2501
REGEN GAS COOLER
 SIZE : 43x1.3 KW
 DESIGN PRESS : 5312 kPa
 DESIGN TEMP : 340 °C
 MOTOR : 1 hp

V-2502
REGEN GAS SEPARATOR
 SIZE : 609 mm OD x 2438 mm S/F
 DESIGN PRESS : 5312 kPa
 DESIGN TEMP : 340 °C
 TMM : P-CS-068

E-2501
DRY ACID GAS FILTER
 SIZE : 219mm OD x 1524mm S/F
 DESIGN PRESS : 5312 kPa
 DESIGN TEMP : 340 °C
 ELEMENT : ONE GES1360P09V
 (CHANGE OUT @ 84 TO 105 kPa)



DWG. NO. REFERENCE DRAWINGS

DEVON PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER APP'D
	1	REVISED 'AS BUILT'	96/11/26	MK			
	0	ISSUED FOR CONSTRUCTION	96/07/08	MK			

ENGINEER AND PERMIT STAMPS

DESIGNED	SSK	94/12/15
DRAWN	SS	95/01/10
CHECKED	RS	95/01/27
PROCESS OK		
MECH. OK		
STRUCT. OK		
ELECT. OK		
OWNER APP.		

Devon

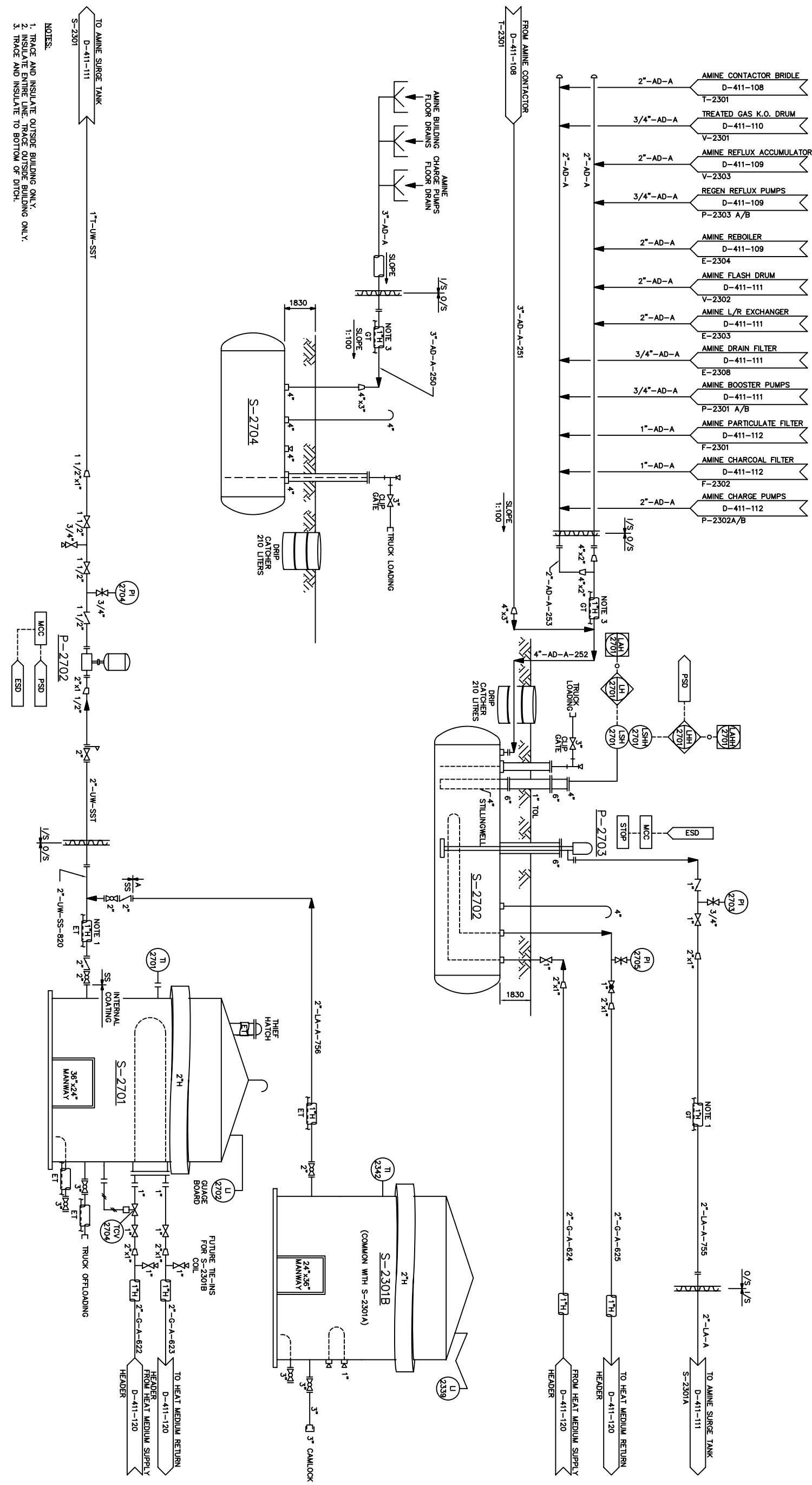
DUNVEGAN SOUR GAS PLANT
 PIPING & INSTRUMENTATION DIAGRAM
 ACID GAS DRIER SYSTEM (SH. 2 OF 2)
 LSD. 15-03-81-04 W6M.

OWNER APP. SCALE NTS
 D-411-114B

DEVON PROJ. 1

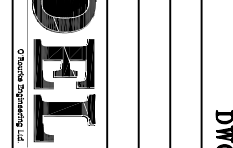
PLOTTED: MAR 06, 2004 9:17 AM

- S-2704**
AMINE BUILDING DRAIN TANK
SIZE: 1220 mm O.D. x 2185 mm S/S
CAPACITY: 2.5 m³
DESIGN PRESSURE: ATMOS
DESIGN TEMPERATURE: 65°C
DOUBLE WALL STEEL
TRIM: AD-A-282
- S-2702**
AMINE DRAIN TANK
SIZE: 1829mm I.D. x 3658mm S/S
CAPACITY: 9.5 m³
DESIGN PRESSURE: ATMOS
DESIGN TEMPERATURE: 65°C
DOUBLE WALL STEEL
- P-2703**
AMINE DRAIN TANK PUMP
MODEL: 2.3 m³/HR @ 20 m TDH
CAPACITY: 9.5 m³
MOTOR: 1.0 hp
SPEED: 1750 RPM
- P-2702**
WATER MAKE-UP PUMP
MODEL: DEANLINE 1 1/2 DL
CAPACITY: 7.0 m³/HR @ 20 m TDH
MOTOR: 2.0 hp
SPEED: 1750 RPM
- S-2701**
WATER MAKE-UP STORAGE TANK
SIZE: mm O.D. x mm HIGH
CAPACITY: 63.6 m³
DESIGN PRESSURE: ATMOS
DESIGN TEMPERATURE: 65°C
INTERNAL LINING: INTERLINE TL4350
- S-2301B**
LEAN AMINE STORAGE TANK
SIZE: 3410mm O.D. x 3500mm HIGH
CAPACITY: 16 m³
DESIGN PRESSURE: ATMOS
DESIGN TEMPERATURE: 150°C
TRIM: LA-A-741
(COMMON WITH S-2301A)



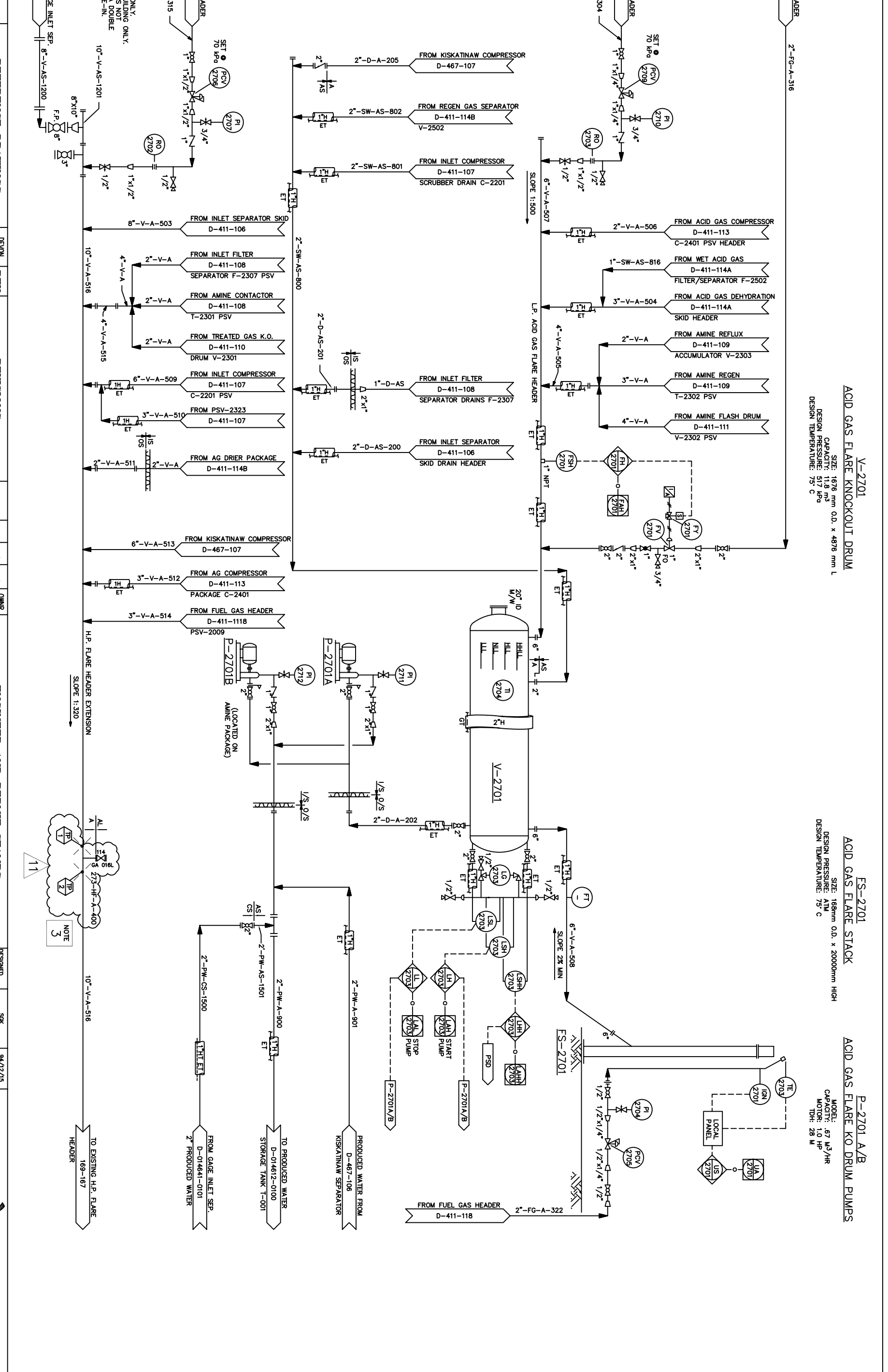
NOTES:
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DWG. NO.	REFERENCE DRAWINGS	DEVON PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER APP'D	OWNER	ENGINEER AND PERMIT STAMPS																											
											DESIGNED: SRK 94/12/15 DRAWN: MDL 95/01/09 CHECKED: RS 95/01/27 PROCESS OK: MECH. OK: STRUCT. OK: ELECT. OK: OWNER APP. OWNER APP.																											
			1	REVISED 'AS BUILT'	96/11/26	MK					<div style="text-align: center;"> </div> <p>DUNVEGAN SOUR GAS PLANT PIPING & INSTRUMENTATION DIAGRAM AMINE DRAIN & MAKE-UP WATER LSD. 15-03-81-04 W6M.</p>																											
			0	ISSUED FOR CONSTRUCTION	96/07/08	MK					<table border="0"> <tr> <td>DESIGNED:</td> <td>SRK</td> <td>94/12/15</td> </tr> <tr> <td>DRAWN:</td> <td>MDL</td> <td>95/01/09</td> </tr> <tr> <td>CHECKED:</td> <td>RS</td> <td>95/01/27</td> </tr> <tr> <td>PROCESS OK:</td> <td></td> <td></td> </tr> <tr> <td>MECH. OK:</td> <td></td> <td></td> </tr> <tr> <td>STRUCT. OK:</td> <td></td> <td></td> </tr> <tr> <td>ELECT. OK:</td> <td></td> <td></td> </tr> <tr> <td>OWNER APP.:</td> <td></td> <td></td> </tr> <tr> <td>OWNER APP.:</td> <td></td> <td></td> </tr> </table>	DESIGNED:	SRK	94/12/15	DRAWN:	MDL	95/01/09	CHECKED:	RS	95/01/27	PROCESS OK:			MECH. OK:			STRUCT. OK:			ELECT. OK:			OWNER APP.:			OWNER APP.:		
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DWG. NO.	REFERENCE DRAWINGS	REVISIONS	ENGINEER AND PERMIT STAMPS																																																																					
		<table border="1"> <thead> <tr> <th>REV</th> <th>DESCRIPTION</th> <th>DATE</th> <th>BY</th> <th>CHK'D</th> <th>APP'D</th> <th>OWNER</th> </tr> </thead> <tbody> <tr> <td>8</td> <td>AS BUILT (GLE)</td> <td>04/03/05</td> <td>SAE</td> <td></td> <td></td> <td></td> </tr> <tr> <td>7</td> <td>AS BUILT (INSTALL SEP.)</td> <td>02/04/29</td> <td>TWW</td> <td></td> <td></td> <td></td> </tr> <tr> <td>11</td> <td>ISSUED FOR CONSTRUCTION (OEL #7550)</td> <td>10/05/26</td> <td>MMP</td> <td>OK</td> <td>OK</td> <td></td> </tr> <tr> <td>10</td> <td>ISSUED FOR APPROVAL (OEL #7550)</td> <td>10/05/21</td> <td>MMP</td> <td>OK</td> <td>OK</td> <td></td> </tr> <tr> <td>9</td> <td>AS BUILT PER FIELD MARK-UP (GLE)</td> <td>04/04/07</td> <td>SAE</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	REV	DESCRIPTION	DATE	BY	CHK'D	APP'D	OWNER	8	AS BUILT (GLE)	04/03/05	SAE				7	AS BUILT (INSTALL SEP.)	02/04/29	TWW				11	ISSUED FOR CONSTRUCTION (OEL #7550)	10/05/26	MMP	OK	OK		10	ISSUED FOR APPROVAL (OEL #7550)	10/05/21	MMP	OK	OK		9	AS BUILT PER FIELD MARK-UP (GLE)	04/04/07	SAE				<table border="1"> <thead> <tr> <th>DESIGNED</th> <th>SGR</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>94/12/15</td> </tr> <tr> <th>CHECKED</th> <th>MDL</th> <th>DATE</th> </tr> <tr> <td></td> <td></td> <td>95/01/23</td> </tr> <tr> <th>PROCESS OK</th> <td></td> <td>95/01/27</td> </tr> <tr> <th>MECH. OK</th> <td></td> <td></td> </tr> <tr> <th>STRUCT. OK</th> <td></td> <td></td> </tr> <tr> <th>ELECT. OK</th> <td></td> <td></td> </tr> <tr> <th>OWNER APP.</th> <td></td> <td></td> </tr> </tbody> </table>	DESIGNED	SGR	DATE			94/12/15	CHECKED	MDL	DATE			95/01/23	PROCESS OK		95/01/27	MECH. OK			STRUCT. OK			ELECT. OK			OWNER APP.		
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NOTE:
 1. TRACE AND INSULATE OUTSIDE BUILDING ONLY.
 2. INSULATE ENTIRE LINE. TRACE OUTSIDE BUILDING ONLY.
 3. IN THE EVENT THAT THE FLARE HEADER IS NOT PURGED DURING TURNAROUND PERFORM A DOUBLE FLANGE AND SPOOL TO COMPLETE THE TIE-IN.



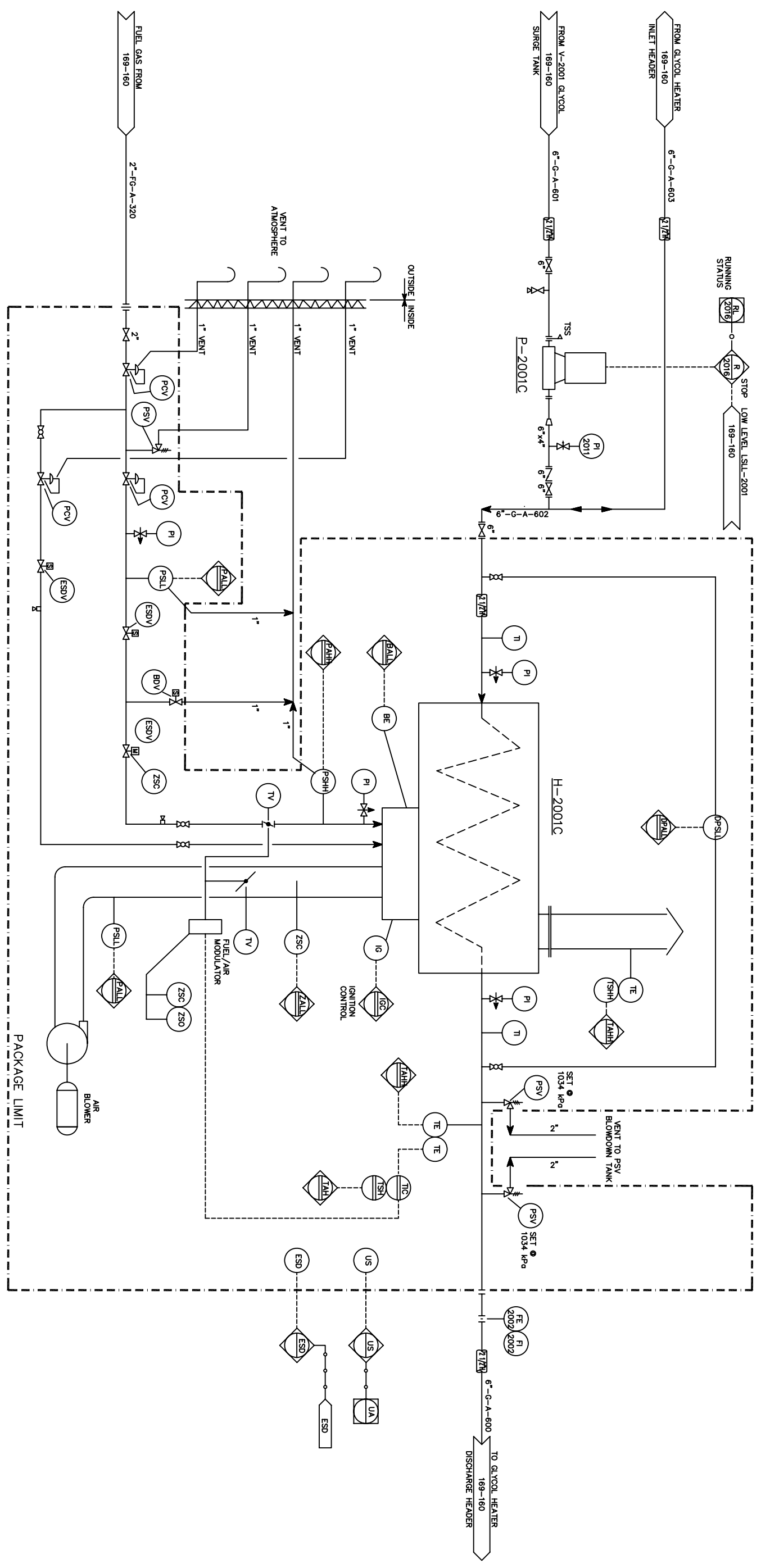
V-2701
 ACID GAS FLARE KNOCKOUT DRUM
 SIZE: 1676 mm O.D. x 4876 mm L
 CAPACITY: 11.8 m³
 DESIGN PRESSURE: 517 kPa
 DESIGN TEMPERATURE: 75° C

FS-2701
 ACID GAS FLARE STACK
 SIZE: 168mm O.D. x 20000mm HIGH
 DESIGN PRESSURE: 471 kPa
 DESIGN TEMPERATURE: 75° C

P-2701 A/B
 ACID GAS FLARE KO DRUM PUMPS
 MODEL: 67 M³/HR
 CAPACITY: 67 M³/HR
 MOTOR: 1.0 HP
 TDH: 28 M

P-2001C
GLYCOL PUMP
 MODEL: LINUM 44641 YOM
 CAPACITY: 107.9 M³/HR @ 28 M TOH
 MOTOR: 25 HP

H-2001C
GLYCOL HEATER
 DUTY: 134 KW
 DESIGN PRESS: 1035 kPa (COIL)
 DESIGN TEMP: 176°C
 MOTOR: 7.5 HP

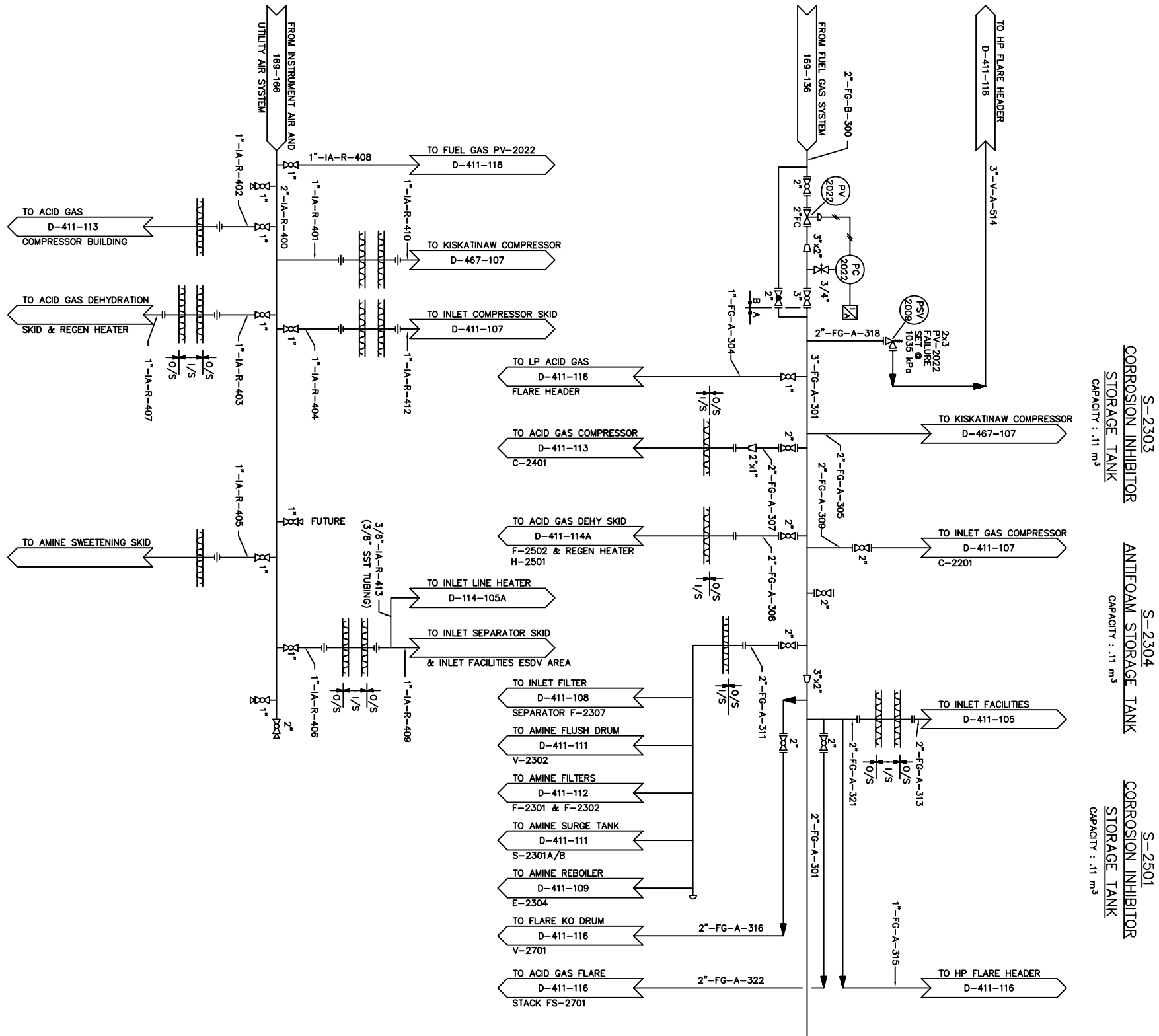


NOTES:
 1. TRACE AND INSULATE OUTSIDE BLDG. ONLY.
 2. INSULATE ENTIRE LINE. TRACE OUTSIDE BLDG. ONLY

DWG. NO.	REFERENCE DRAWINGS	DEVN. PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER	ENGINEER AND PERMIT STAMPS
										DESIGNED: SGR 94/12/15 DRAWN: MDL 95/01/24 CHECKED: RS 95/01/27 PROCESS OK. MECH. OK. STRUCT. OK. ELECT. OK. OWNER APP. OWNER APP.
			2	AS BUILT (GLE)	04/03/05	SAE				Devon DUNVEGAN SOUR GAS PLANT PIPING & INSTRUMENTATION DIAGRAM GLYCOL HEATING SYSTEM LSD. 15-03-81-04 W6M. SCALE: NTS DWG. NO. D-411-117 DEVN. PROJ. 2
			1	REVISED 'AS BUILT'	96/11/26	MK				
			0	ISSUED FOR CONSTRUCTION	96/07/08	MK				

PLOTTED: MAR 08, 2004 9:17 AM

QDD FILE Q:\KCR-271\PLANT POS\D-411-117.DWG



S-2303
CORROSION INHIBITOR STORAGE TANK
CAPACITY : .11 m³

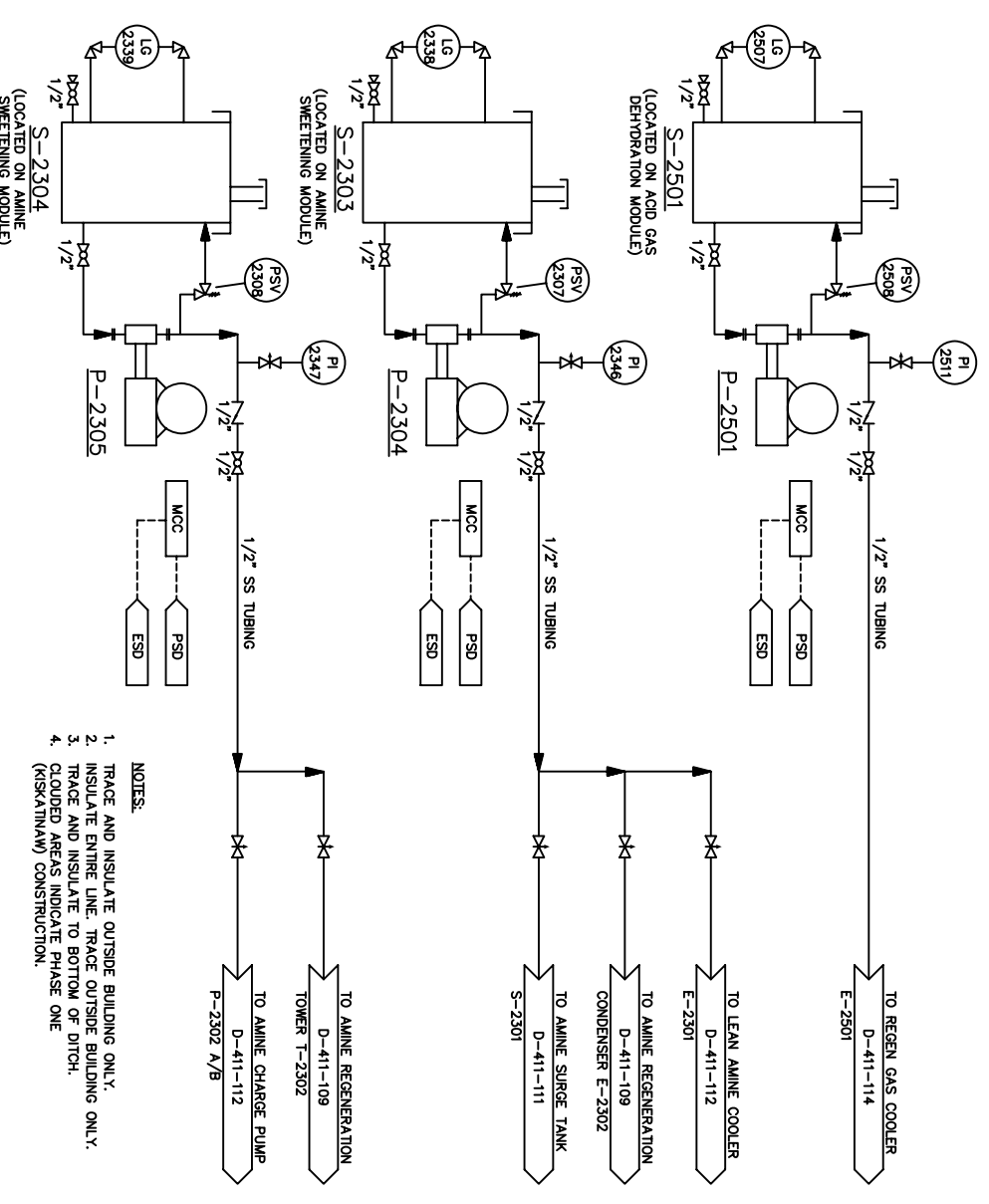
S-2304
ANTIFOAM STORAGE TANK
CAPACITY : .11 m³

S-2501
CORROSION INHIBITOR STORAGE TANK
CAPACITY : .11 m³

P-2501
CORROSION INHIBITOR INJECTION PUMP
MODEL : TEXTTEAM 4333-P
CAPACITY : .17 m³/DAY
MOTOR : 1/4 HP

P-2304
CORROSION INHIBITOR INJECTION PUMP
MODEL : TEXTTEAM 4333-P
CAPACITY : .17 m³/DAY
MOTOR : 1/4 HP

P-2305
ANTIFOAM INJECTION PUMP
MODEL : TEXTTEAM 4333-P
CAPACITY : .17 m³/DAY
MOTOR : 1/4 HP



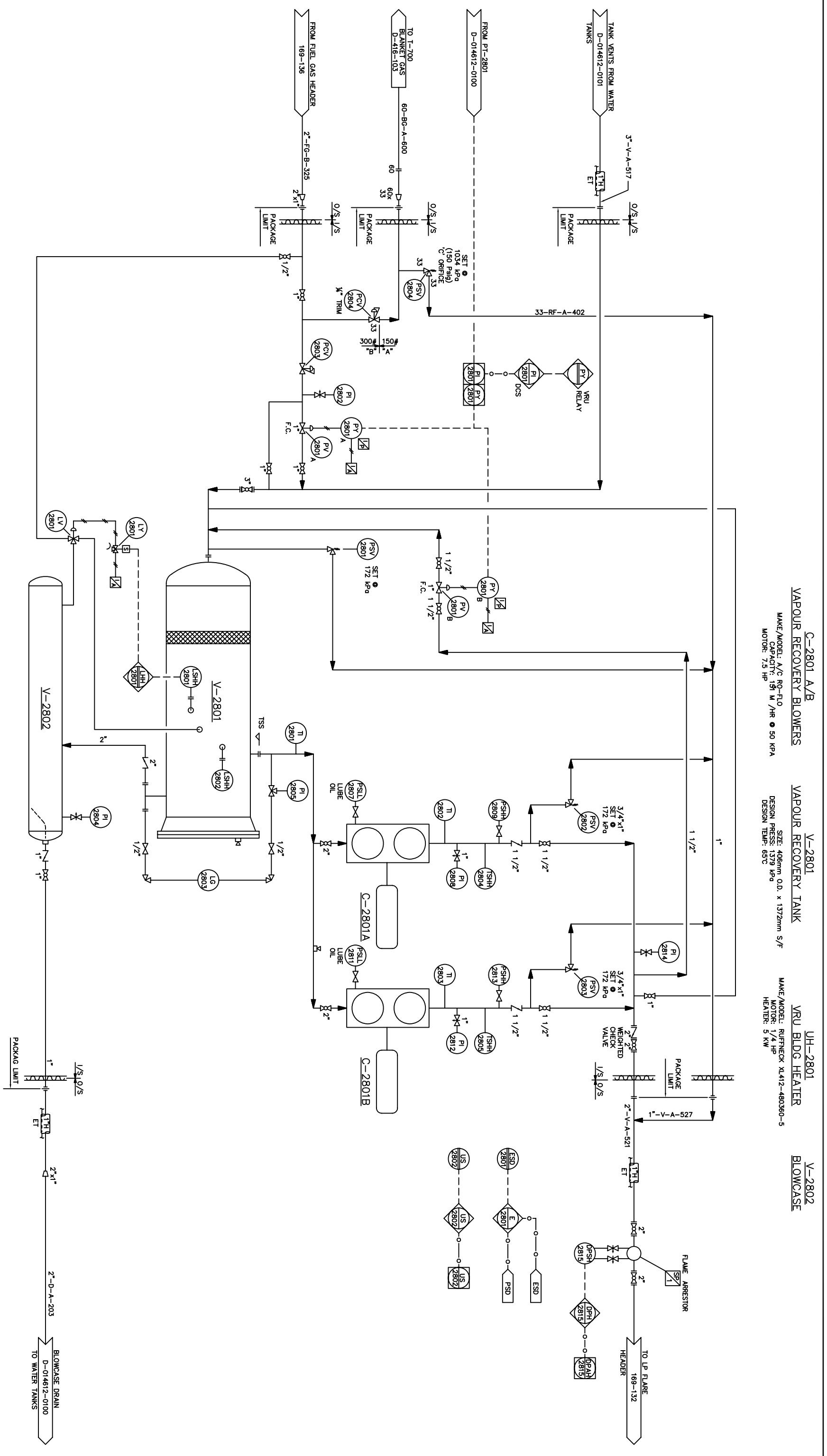
- NOTES:
1. TRACE AND INSULATE OUTSIDE BUILDING ONLY.
 2. INSULATE ENTIRE LINE. TRACE OUTSIDE BUILDING ONLY.
 3. TRACE AND INSULATE TO BOTTOM OF DITCH.
 4. CLOUDED AREAS INDICATE PHASE ONE (KISKATINAW) CONSTRUCTION.

DWG. NO.	REFERENCE DRAWINGS	DEVON PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER	ENGINEER AND PERMIT STAMPS
			5	AS BUILT (GLE)	04/03/05	SAE				DESIGNED: SRK 94/12/15 DRAWN: MDL 95/01/24 CHECKED: RS 95/01/27
			4	AS BUILT (~2000 TUXIA GAS ENGINEERING LTD)	00/03/30	BB				PROCESS OK MECH. OK STRUCT. OK
			3	ISSUED FOR INFORMATION #/1999 MODIFICATIONS(BY GLE)	99/03/25	MDG				OWNER APP. OWNER APP.
			2	REVISED 'AS BUILT'	96/11/26	MK				
			1	ISSUED FOR CONSTRUCTION - PHASE 2	96-07-08	MK				
			0	ISSUED FOR CONSTRUCTION - PHASE 1	96/05/06	MK				

Devon

DUNVEGAN SOUR GAS PLANT
PIPING & INSTRUMENTATION DIAGRAM
AND CHEMICAL INJECTION - LSD. 15-03-81-04 WGM.

SCALE: 1/4" = 1'-0"
DWG. NO.: D-411-118
DEVON PROJ. NO.: 5



C-2801 A/B VAPOUR RECOVERY BLOWERS MAKE/MODEL: A/C RG-FLO CAPACITY: 151 M³/HR @ 50 KPA MOTOR: 7.5 HP

V-2801 VAPOUR RECOVERY TANK MAKE/MODEL: RUFFNECK XL412-480360-5 CAPACITY: 1379 M³ O.D. x 1372mm S/F DESIGN PRESS: 1379 KPa DESIGN TEMP: 65°C

UH-2801 VRU BLDG HEATER MAKE/MODEL: RUFFNECK XL412-480360-5 MOTOR: 1/4 HP HEATER: 5 KW

V-2802 BLOWCASE

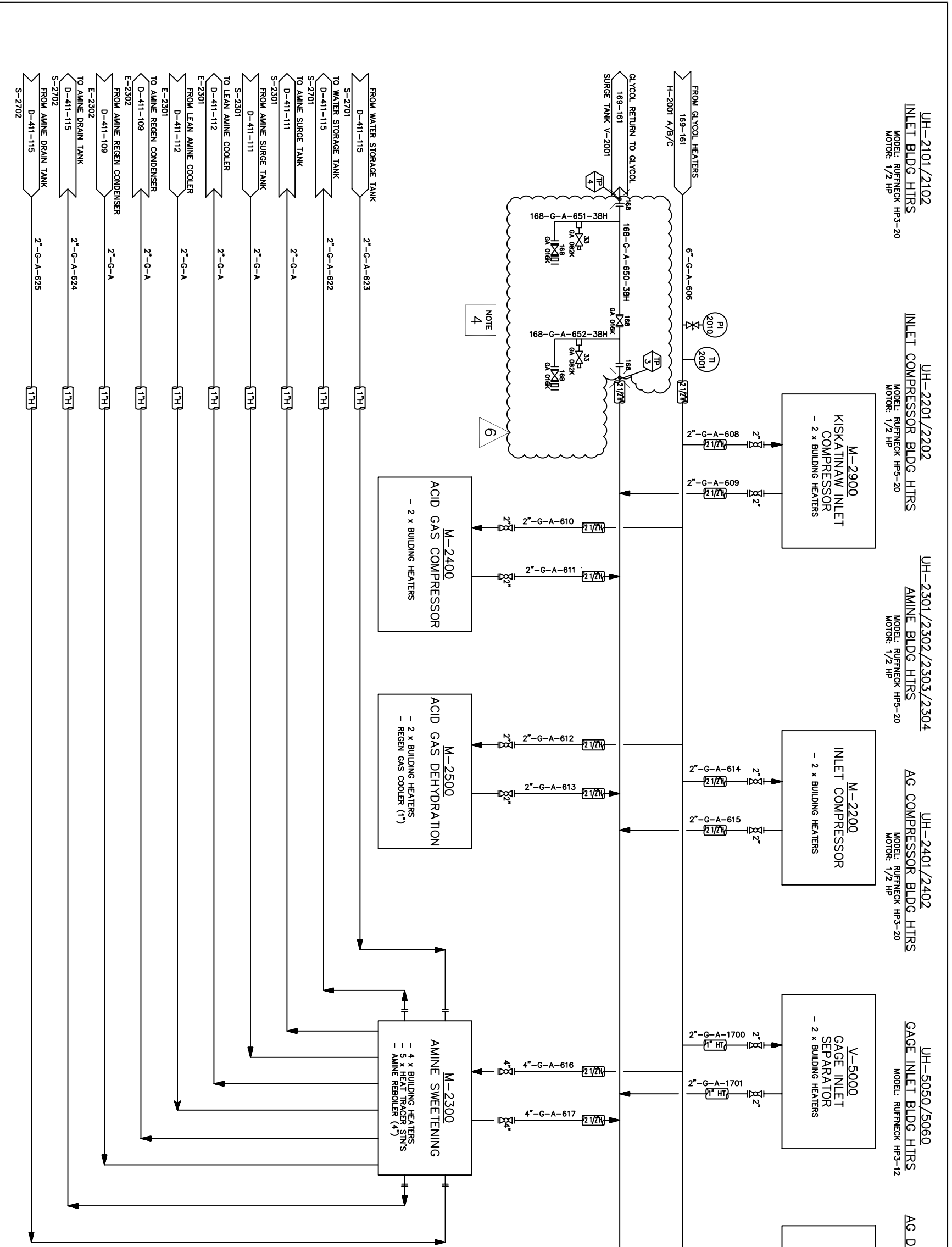
DWG. NO.	REFERENCE DRAWINGS	DECON PROJECT	REV	REVISIONS	DATE (yy/mm/dd)	BY	CHK'D	APP'D	OMNR APP'D	ENGINEER AND PERMIT STAMPS
		0911662	5	ISSUED FOR CONSTRUCTION (OEL #7144)	09.11.13	SOZ	MMP			DESIGNED: JNP DRAWN: JNP CHECKED: JNP PROCESS OK: JNP MECH. OK: JNP STRUCT. OK: JNP ELECT. OK: JNP OWNER APP.:
		0911662	4	ISSUED FOR BID (OEL #7144)	09.11.05	SOZ	MMP			DESIGNED: JNP DRAWN: JNP CHECKED: JNP PROCESS OK: JNP MECH. OK: JNP STRUCT. OK: JNP ELECT. OK: JNP OWNER APP.:
		0911662	3	ISSUED FOR REVIEW (OEL #7144)	09.10.14	SOZ	MMP			DESIGNED: JNP DRAWN: JNP CHECKED: JNP PROCESS OK: JNP MECH. OK: JNP STRUCT. OK: JNP ELECT. OK: JNP OWNER APP.:
		0911662	7	AS BUILT (OEL #7144) (NOTE A)	10.03.18	SB	MMP			DESIGNED: JNP DRAWN: JNP CHECKED: JNP PROCESS OK: JNP MECH. OK: JNP STRUCT. OK: JNP ELECT. OK: JNP OWNER APP.:
		0911662	6	I.F.C.: CHG. TIE-IN POINTS (OEL #7144)	09.11.24	DM	MMP			DESIGNED: JNP DRAWN: JNP CHECKED: JNP PROCESS OK: JNP MECH. OK: JNP STRUCT. OK: JNP ELECT. OK: JNP OWNER APP.:

NOTE A: AS-BUILT (REV 7) AS PER FIELD QUALITY CONTROL MARK-UPS & PHOTOS. DETAILS SHOULD BE VERIFIED IN FIELD.

DEVON logo

DUNVEGAN SOUR GAS PLANT
PIPING & INSTRUMENTATION DIAGRAM
WATER TANK VAPOUR RECOVERY SYSTEM
LSD, 15-03-81-04 W6M.

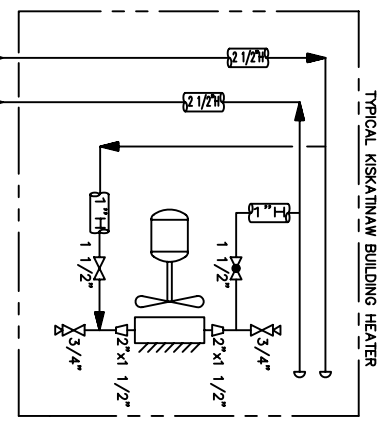
CONTR. NO. 7144
SCALE NTS
DWG. NO. D-411-119
DECON PROJ. 0911662
REV. 7



- UH-2101/2102 INLET BLDG HTRS
MODEL: RUFFNECK HP-3-20
MOTOR: 1/2 HP
- UH-2201/2202 INLET COMPRESSOR BLDG HTRS
MODEL: RUFFNECK HP-5-20
MOTOR: 1/2 HP
- UH-2301/2302/2303/2304 AMINE BLDG HTRS
MODEL: RUFFNECK HP-5-20
MOTOR: 1/2 HP
- UH-2401/2402 AG COMPRESSOR BLDG HTRS
MODEL: RUFFNECK HP-3-20
MOTOR: 1/2 HP
- UH-5050/5060 GAGE INLET BLDG HTRS
MODEL: RUFFNECK HP-3-12
- UH-2501/2502 AG DEHYDRATION BLDG HTRS
MODEL: RUFFNECK HP-3-20
MOTOR: 1/2 HP
- UH-2901/2902 KISKATINAW BLDG HTRS
MODEL: RUFFNECK HP-5-20
MOTOR: 1/2 HP

NOTE 4

STN #1



- NOTES:
1. TRACE AND INSULATE OUTSIDE BLDG. ONLY.
 2. INSULATE ENTIRE LINE. TRACE OUTSIDE BLDG. ONLY.
 3. TRACE AND INSULATE TO BOTTOM OF DITCH.
 4. CLOUDING INDICATES NEW PIPING AND EQUIPMENT TO BE INSTALLED.

DWG. NO. REFERENCE DRAWINGS

DESN PROJECT	REV	REVISIONS	DATE (yymmdd)	BY	CHK'D	APP'D	OMNR APP'D
0911703	5	ISSUED FOR APPROVAL (OEL #7550)	10.05.21	MMP	ICH	OK	
	4	AS BUILT (GLE)	04.03.05	SAE			
	3	AS BUILT (INSTALL SEP.)	02.04.29	MB	TWW	TWW	
	2	ISSUED FOR CONSTRUCTION (INSTALL SEP.)	01.11.20	MB	TWW	TWW	
	6	ISSUED FOR CONSTRUCTION (OEL #7550)	10.05.26	MMP	ICH	OK	

ENGINEER AND PERMIT STAMPS

DESIGNED	ANP	95.10.30
CHECKED		
PROCESS CK		
MECH. CK		
STRUCT. CK		
ELECT. CK		
OWNER APP.		

DUNVEGAN SOUR GAS PLANT
PIPING & INSTRUMENTATION DIAGRAM
GLYCOL DISTRIBUTION SYSTEM
LSD: 15-03-81-04 W6M

07-0000 Engineering Ltd.

PERMIT TO PRACTICE
OROURKE ENGINEERING LTD.
Signature: _____
Date: _____
PERMIT NUMBER: P 0751
The Association of Professional Engineers,
Geologists and Geophysicists of Alberta

OWNER APP. _____

OWNER APP. _____

OWNER APP. _____

CONTR. JOB NO. 7550

SCALE NTS

DWG. NO. D-411-120

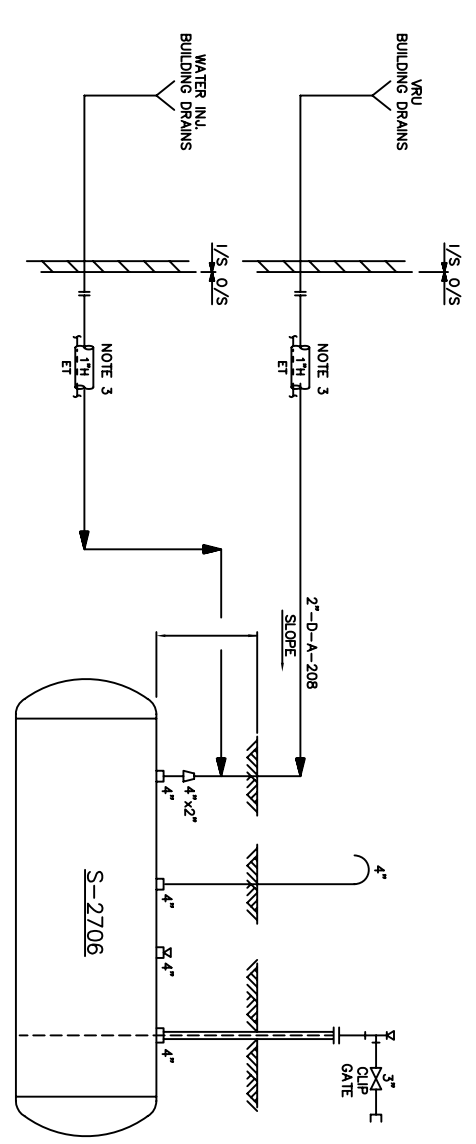
DESN PROJ. 0911703

6

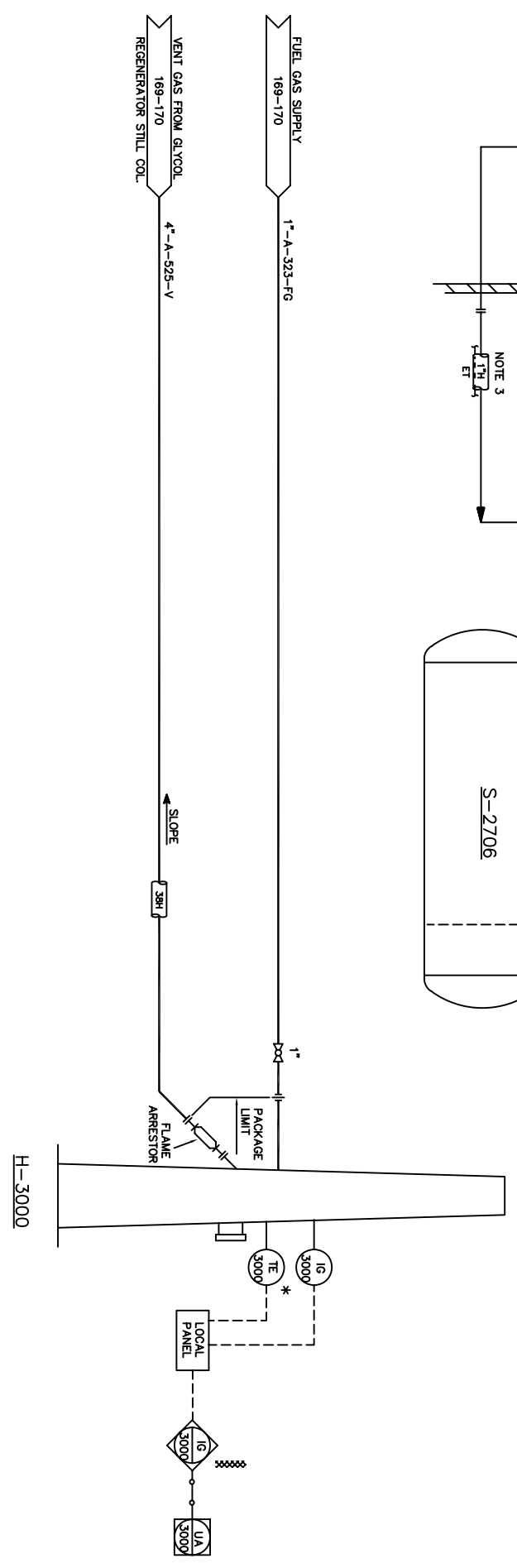
H-3000
GLYCOL VENT INCINERATOR
 DIMENSIONS : 610mm O.D. x 12040mm HIGH
 DESIGN PRESS. : ATM
 DESIGN TEMP. : 1370°C

S-2705
INLET SEPARATOR BLDG DRAIN TANK
 DIMENSIONS : 1219mm O.D. x 2362mm LONG
 CAPACITY : 2273 LITRES
 DESIGN PRESS. : ATM
 DESIGN TEMP. : 65°C
 DOUBLE WALL FIBREGLOSS

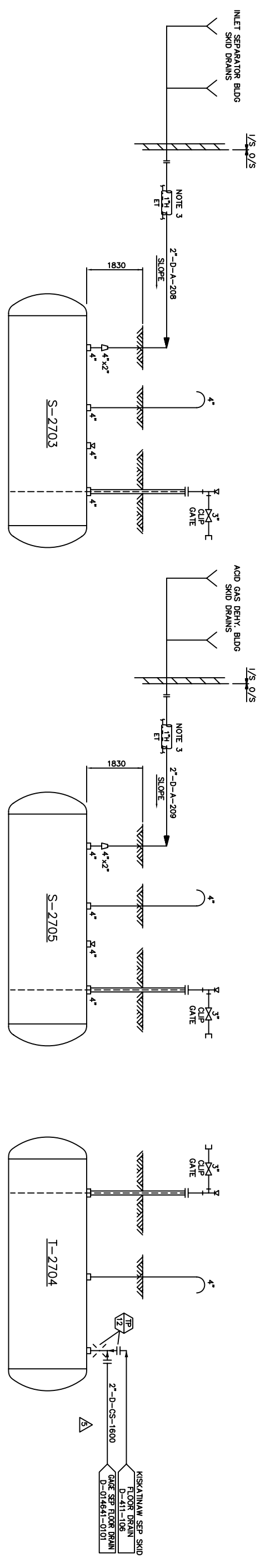
S-2705
ACID GAS DEHY. BLDG DRAIN TANK
 DIMENSIONS : 1219mm O.D. x 2362mm LONG
 CAPACITY : 2273 LITRES
 DESIGN PRESS. : ATM
 DESIGN TEMP. : 65°C
 DOUBLE WALL FIBREGLOSS



S-2706
VRU BLDG DRAIN TANK
 DIMENSIONS : 1219mm O.D. x 2362mm LONG
 CAPACITY : 2273 LITRES
 DESIGN PRESS. : ATM
 DESIGN TEMP. : 65°C
 DOUBLE WALL FIBREGLOSS



I-2704
SEPARATOR FLOOR DRAIN TANK



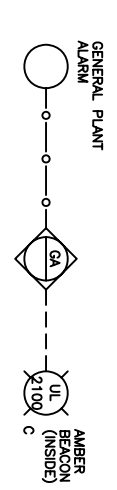
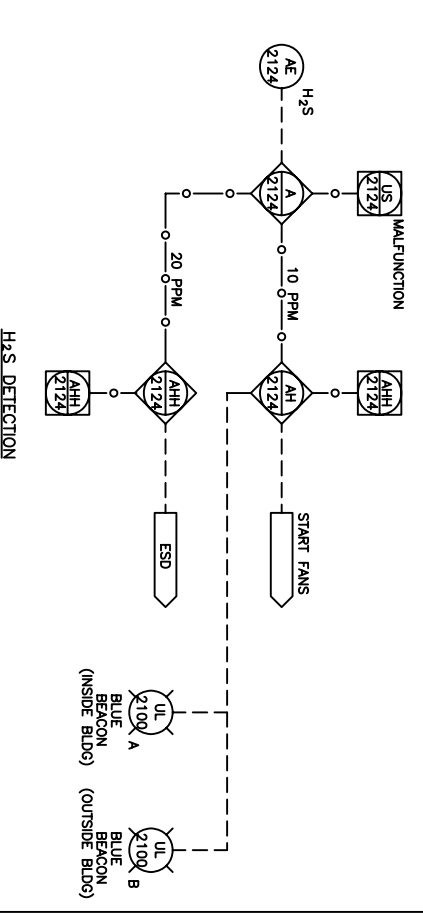
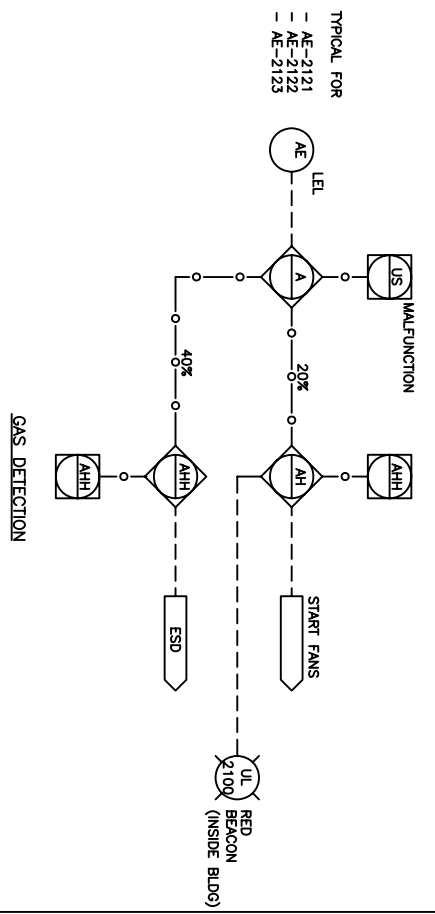
NOTES :
 1. TRACE AND INSULATE OUTSIDE BUILDING ONLY.
 2. INSULATE ENTIRE LINE. TRACE OUTSIDE BUILDING ONLY.
 3. TRACE AND INSULATE TO BOTTOM OF DITCH.

DWG. NO.	REFERENCE DRAWINGS	DEVON PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER	ENGINEER AND PERMIT STAMPS	DESIGNED	DATE	SCALE	DWG. NO.	DEVON PROJ.
			5	AS BUILT (ADD GAGE SEPARATOR)	02/04/29	RV	TWW	TWW			DR	96/04/13			
			4	AS BUILT (~2000 TUXIA GAS ENGINEERING LTD)	00/04/02	BB									
			3	REVISED 'AS BUILT'	96/11/26	MK									
			2	S-2706 ADDITION	96/08/12	IK									
			1	DRAIN TANKS ADDED	96/07/26	AMB									
			6	AS BUILT PER FIELD MARK-UP (GLE)	04/04/05	SAE									

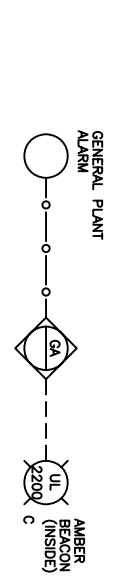
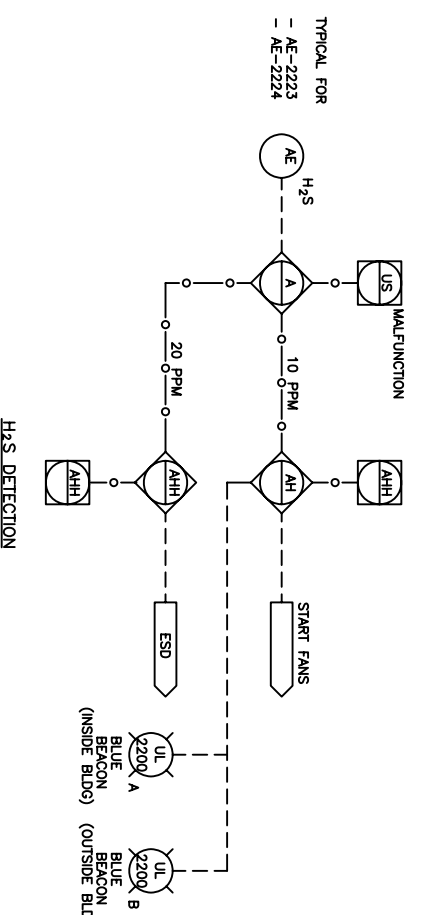
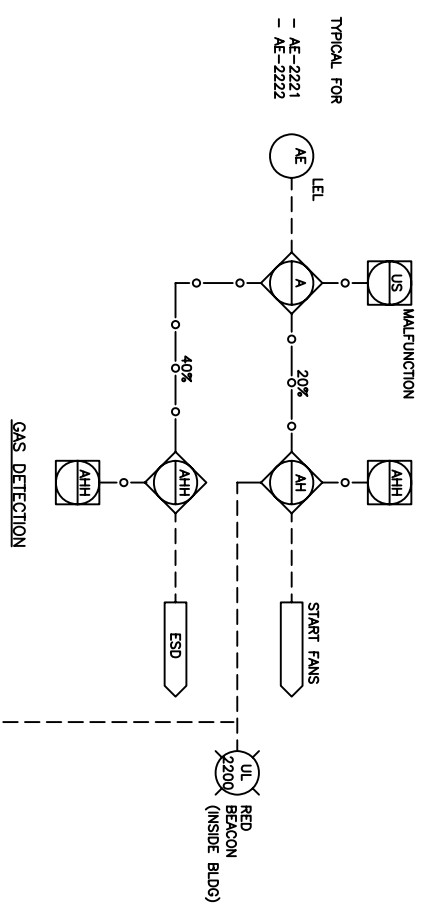
Devon

DUNVEGAN SOUR GAS PLANT
 PIPING & INSTRUMENTATION DIAGRAM
 GLYCOL VENT INCINERATOR
 LSD, 15-03-81-04 W6M.

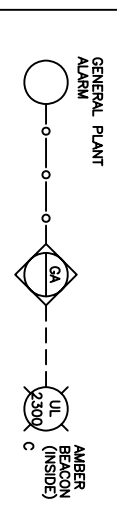
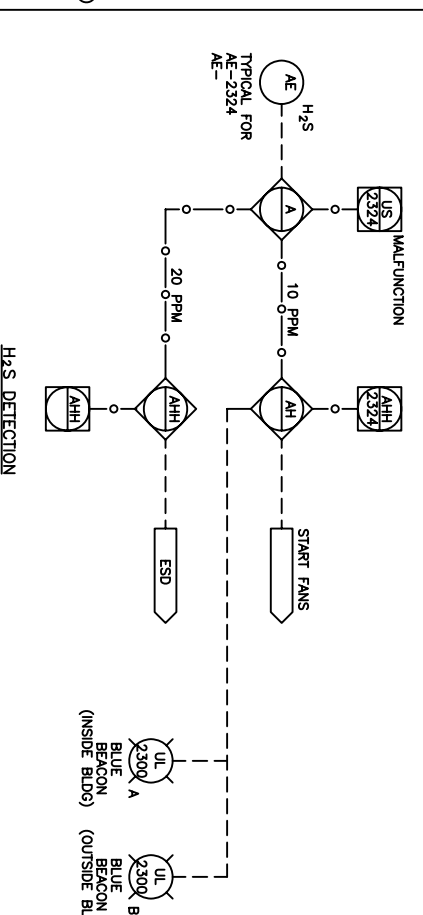
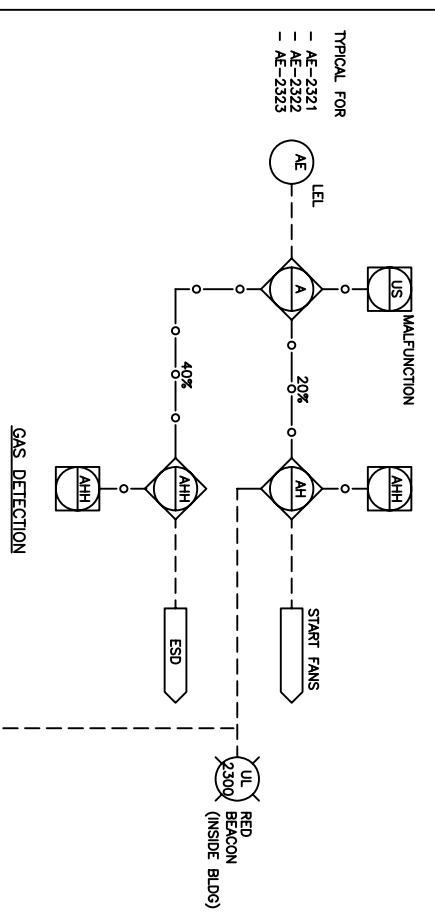
OWNER APP. _____
 95-C-411 NTS
 D-411-121



INLET SEPARATOR BUILDING



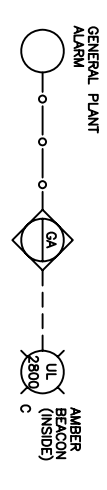
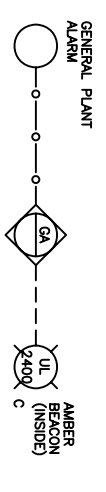
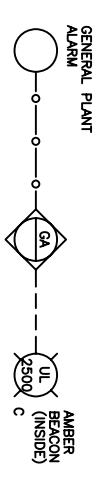
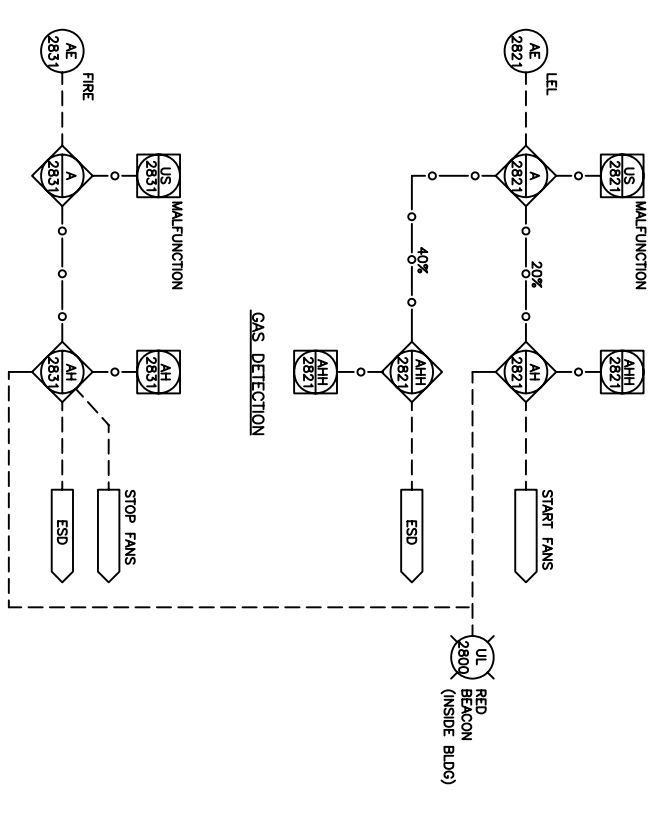
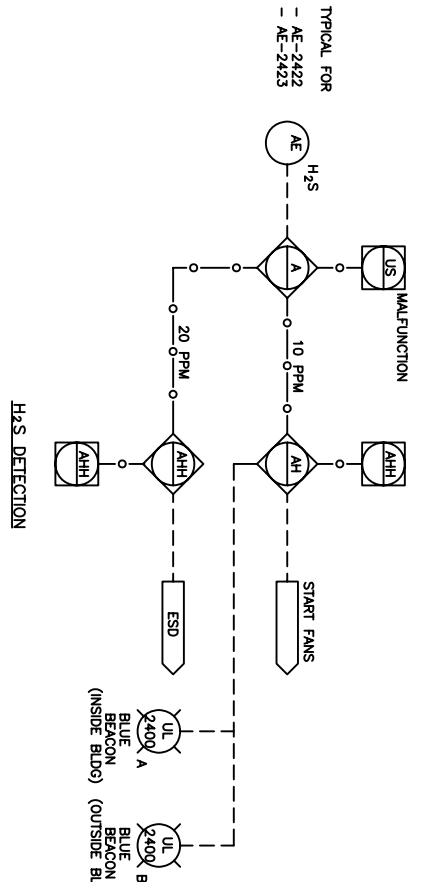
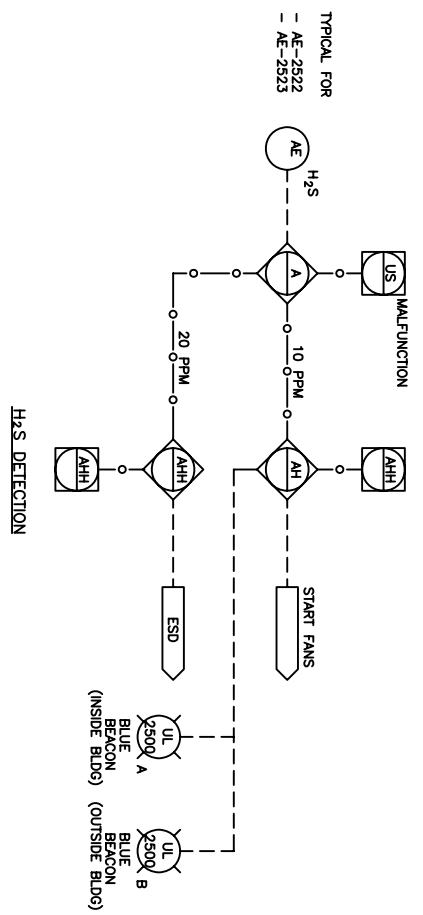
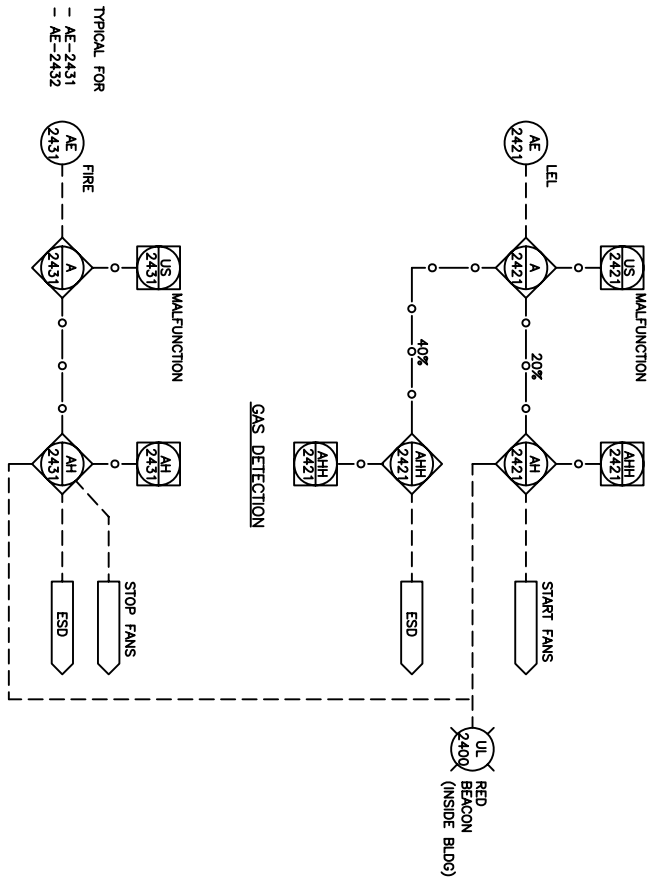
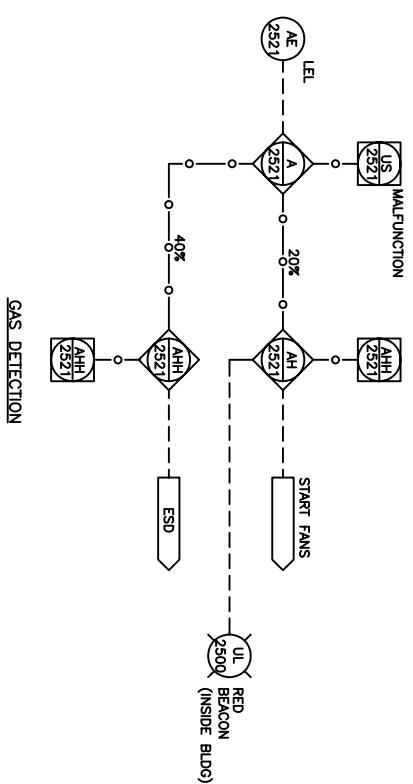
INLET COMPRESSOR BUILDING



AMINE SWEETENING BUILDING

- NOTES:
1. FANS WILL START ONLY IN EACH BUILDING AFFECTED BY GAS DETECTION. HOWEVER, RED BEACONS WILL COME ON IN ALL BUILDINGS.
 2. FANS AND BLUE BEACONS WILL COME ON ONLY IN EACH BUILDING AFFECTED BY H₂S DETECTION.

DWG. NO.	REFERENCE DRAWINGS	DEVON PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER APP'D	ENGINEER AND PERMIT STAMPS
			1	REVISED 'AS BUILT'	96/11/28	MK				<p>DUNVEGAN SOUR GAS PLANT PIPING & INSTRUMENTATION DIAGRAM GAS, FIRE & H₂S DETECTION LSD, 15-03-81-04 W6M.</p>
			0	ISSUED FOR CONSTRUCTION	96/07/08	MK		RLK		



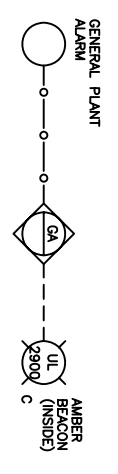
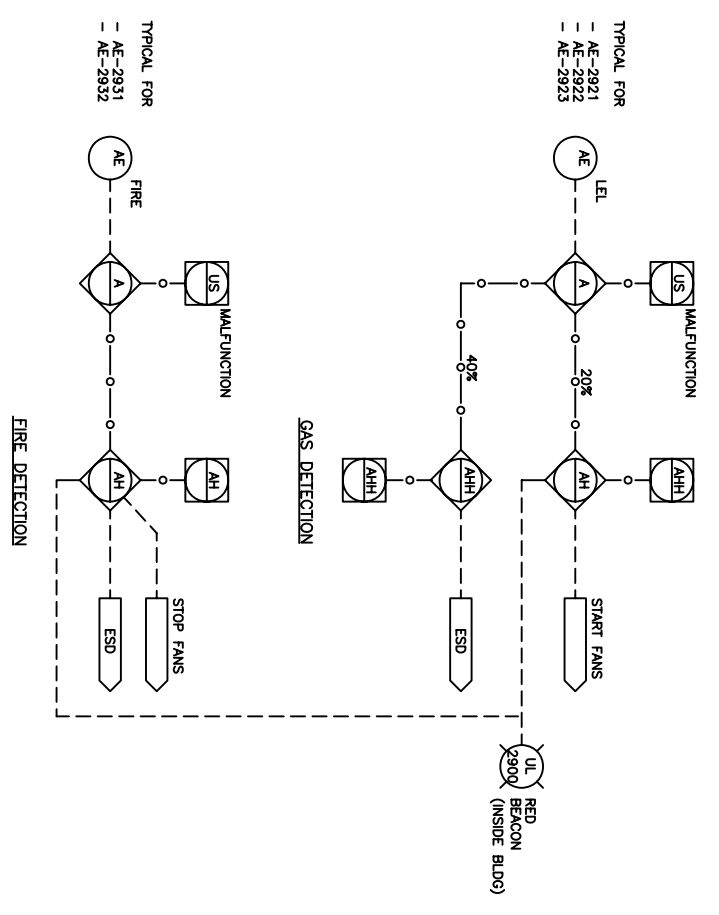
ACID GAS DEHYDRATOR BUILDING

ACID GAS COMPRESSOR BUILDING

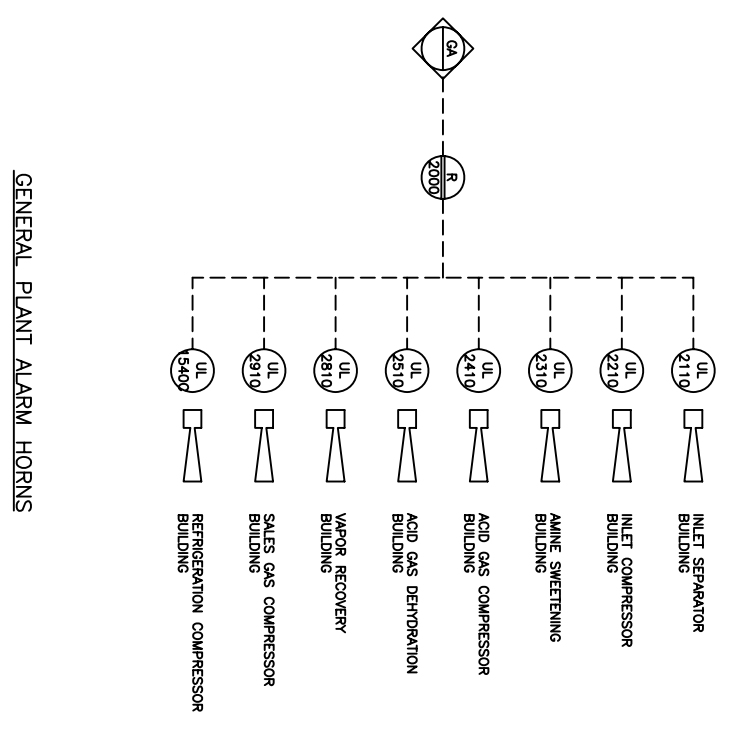
VAPOR RECOVERY UNIT BUILDING

- NOTES:
1. FANS WILL START ONLY IN EACH BUILDING AFFECTED BY GAS DETECTION. HOWEVER, RED BEACONS WILL COME ON IN ALL BUILDINGS.
 2. FANS AND BLUE BEACONS WILL COME ON ONLY IN EACH BUILDING AFFECTED BY H₂S DETECTION.

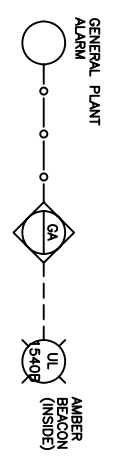
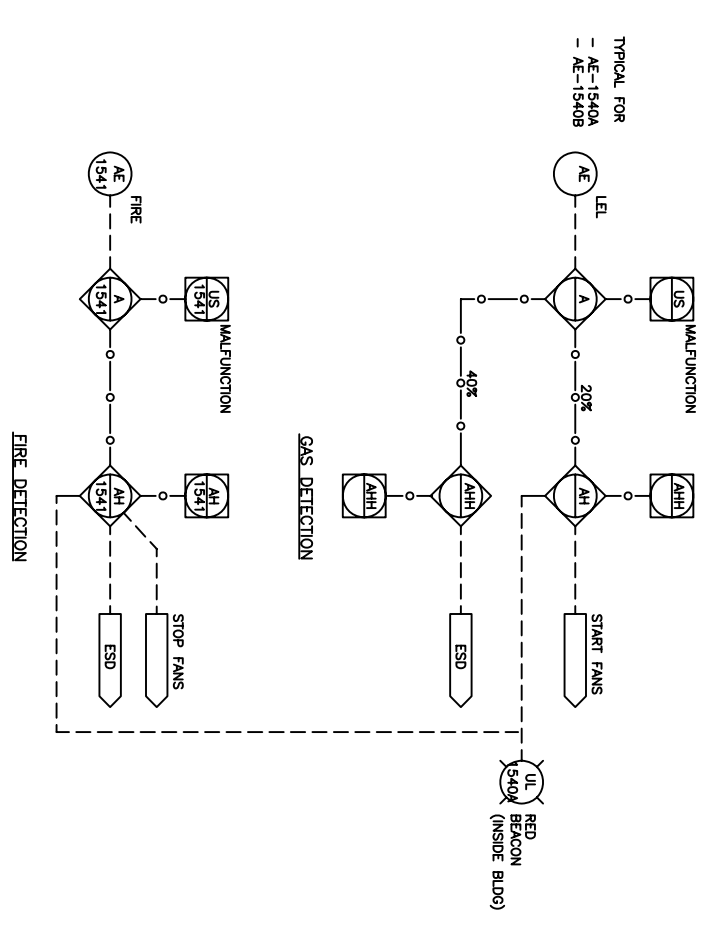
DWG. NO.	REFERENCE DRAWINGS	DEVON PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER APP'D	ENGINEER AND PERMIT STAMPS
			1	REVISED 'AS BUILT'	96/11/28	MK				<p>DUNVEGAN SOUR GAS PLANT PIPING & INSTRUMENTATION DIAGRAM GAS, FIRE & H₂S DETECTION LSD, 15-03-81-04 W6M.</p>
			0	ISSUED FOR CONSTRUCTION	96/07/08	MK		RLK		



KISKATINAW COMPRESSOR BUILDING



REFRIGERATION COMPRESSOR BUILDING



REFRIGERATION COMPRESSOR BUILDING

NOTES:
 1. FANS WILL START ONLY IN EACH BUILDING AFFECTED BY GAS DETECTION.
 HOWEVER, RED BEACONS WILL COME ON IN ALL BUILDINGS.
 2. FANS AND BLUE BEACONS WILL COME ON ONLY IN EACH BUILDING AFFECTED BY H₂S DETECTION.

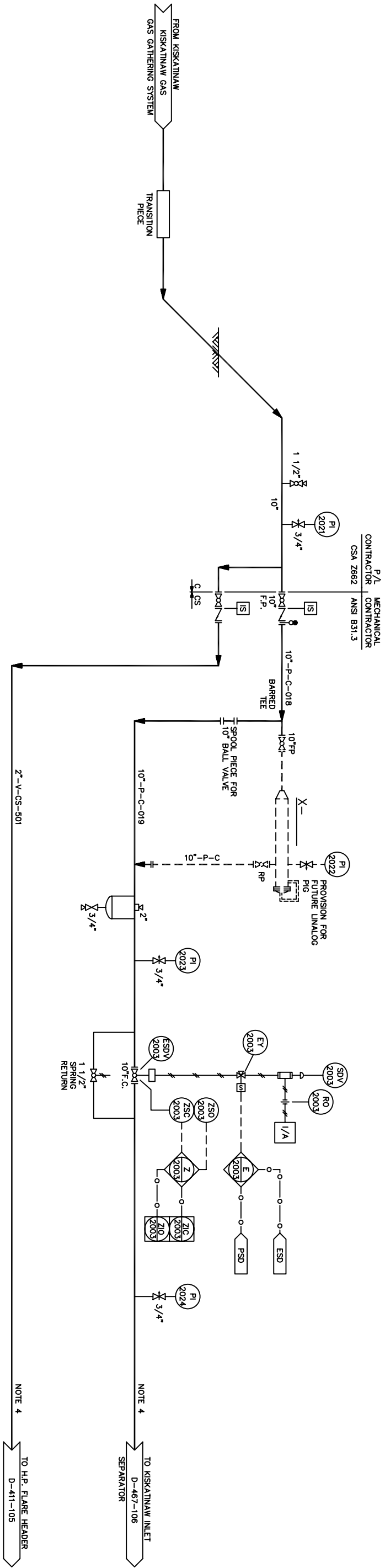
DWG. NO.	REFERENCE DRAWINGS	DEVON PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER APP'D	ENGINEER AND PERMIT STAMPS
			4	AS BUILT (GLE)	04/03/05	SAE				DESIGNED: AMB DRAWN: AMB CHECKED: AMB PROCESS CK: AMB MECH CK: AMB STRUCT. CK: AMB ELECT. CK: AMB OWNER APP: AMB
			3	AS BUILT (COLT JOB 97C813)	99/12/18	SOS				99/04/04
			2-0	I.F.C. - Q2 RECOVERY PROJECT (COLT 97C813)	99/04/30	ERS				
			2A	ISSUED FOR AEUB APPROVAL	99/04/24	GR				
			1	REVISED 'AS BUILT'	99/11/28	MK				
			0	ISSUED FOR CONSTRUCTION	99/07/08	MK				

Devon

DUNVEGAN SOUR GAS PLANT
 PIPING & INSTRUMENTATION DIAGRAM
 GAS, FIRE & H₂S DETECTION
 LSD. 15-03-81-04 W6M.

COMP. 88 IN SCALE
 95-C-411 NONE
 DWG. NO. D-411-127
 DEVON PROJ. 4

X-
FIG RECEIVER
 (FUTURE)
 SIZE : 9930 MPa
 DESIGN TEMP : 65°C

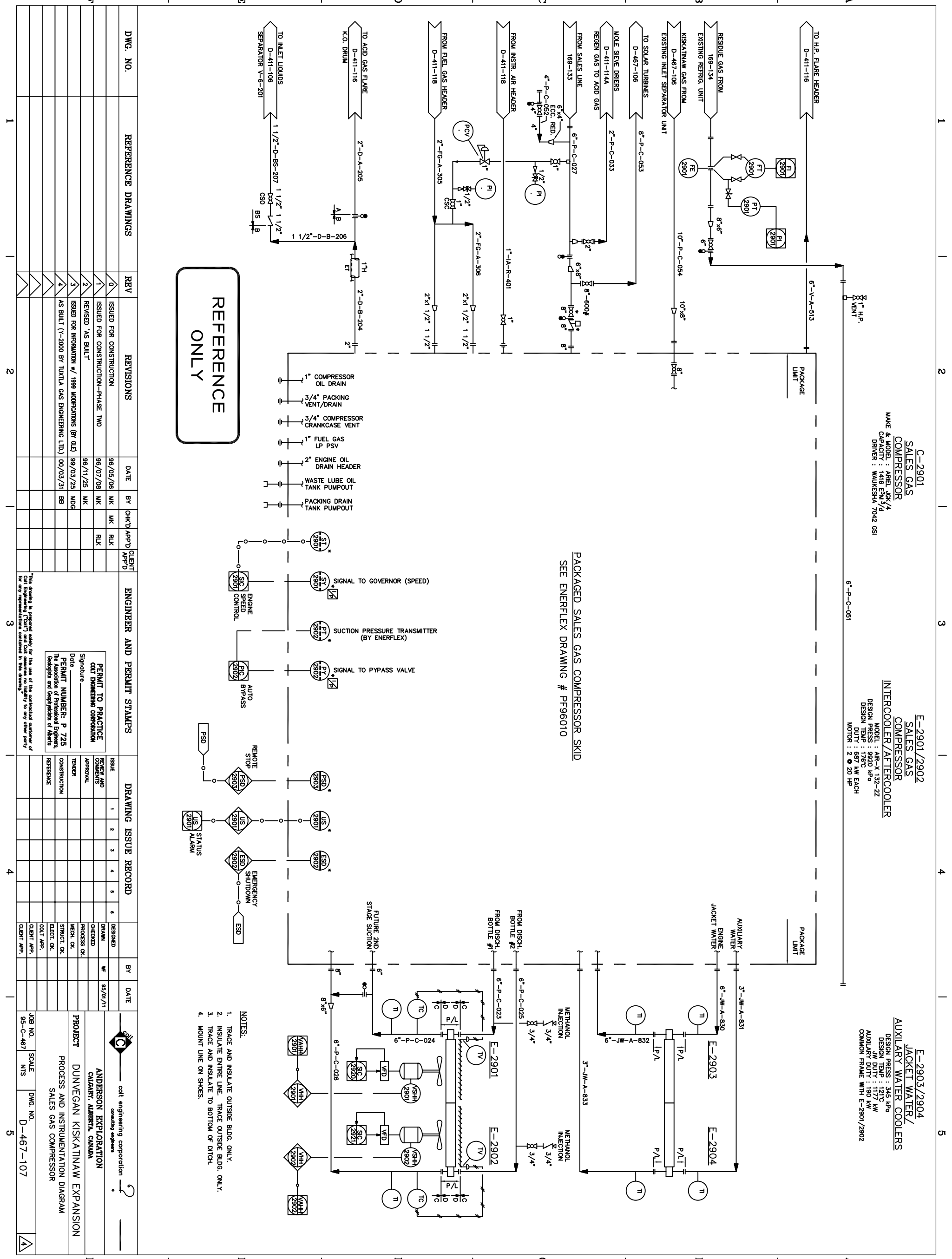


- NOTES:
1. TRACE AND INSULATE OUTSIDE BLDG. ONLY.
 2. INSULATE ENTIRE LINE. TRACE OUTSIDE BLDG. ONLY.
 3. TRACE AND INSULATE TO BOTTOM OF DITCH.
 4. MOUNT LINE ON SHOES.

DWG. NO.	REFERENCE DRAWINGS	DEVN. PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER APP'D	ENGINEER AND PERMIT STAMPS
			0	ISSUED FOR CONSTRUCTION	96-05-06	MK				DESIGNED DRAWN CHECKED PROCESS OK MECH. OK STRUCT. OK ELECT. OK OWNER APP.
			1	REVISED 'AS BUILT'	96-11-25	MK				<p>DUNVEGAN KISKATINAW EXPANSION PROCESS & INSTRUMENTATION DIAGRAM INLET FACILITIES LSD. 15-03-81-04 WGM.</p>
										DRAWN SCALE 95-0-467 NTS DWG. NO. D-467-105 DEVN PROJ. 1

PLotted: MAR 06, 2004 9:45 AM
 CADD FILE: Q:\KPR-271\PLANT POS\D-467-105.DWG

G:\MECH\95C467\PID\467-107



C-2901
SALES GAS
COMPRESSOR
MAKE & MODEL : AMEL 3M / 4
DRIVER : MAUKESHA / 7042 GSI

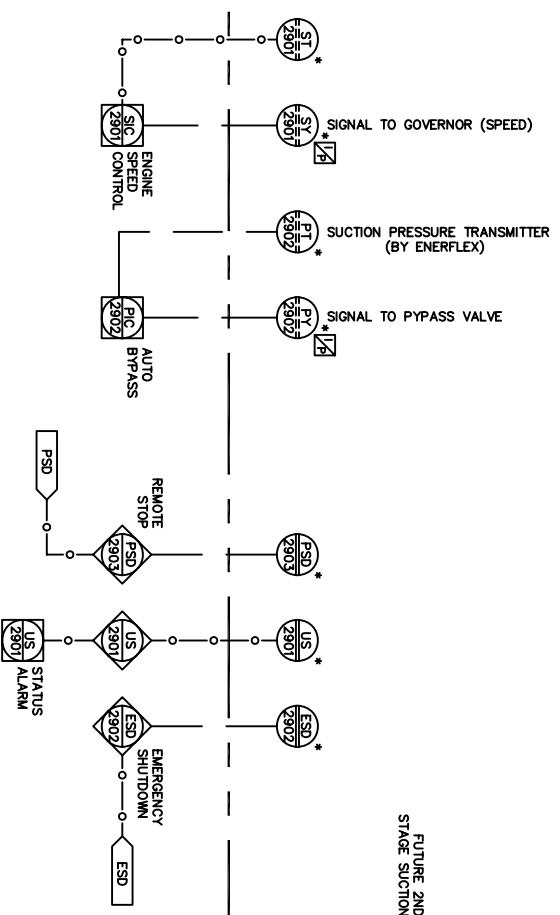
E-2901/2902
SALES GAS
COMPRESSOR
INTERCOOLER/AFTERCOOLER
MODEL : AIR-X 132-2Z
DESIGN PRESS : 9920 lbf/sq
DESIGN TEMP : 176°C
DUTY : 667 KW EACH
MOTOR : 2 ● 20 Hp

E-2903/2904
JACKET WATER/
AUXILIARY WATER COOLERS
DESIGN PRESS : 345 lbf/sq
DESIGN DUTY : 1177 kW
AUXILIARY DUTY : 190 kW
COMMON FRAME WITH E-2901/2902

PACKAGED SALES GAS COMPRESSOR SKID
SEE ENERFLEX DRAWING # PF96010

REFERENCE ONLY

- 1" COMPRESSOR OIL DRAIN
- 3/4" PACKING VENT/ DRAIN
- 3/4" COMPRESSOR CRANKCASE VENT
- 1" FUEL GAS LP PSV
- 2" ENGINE OIL DRAIN HEADER
- WASTE LUBE OIL TANK PUMP/OUT
- PACKING DRAIN TANK PUMP/OUT

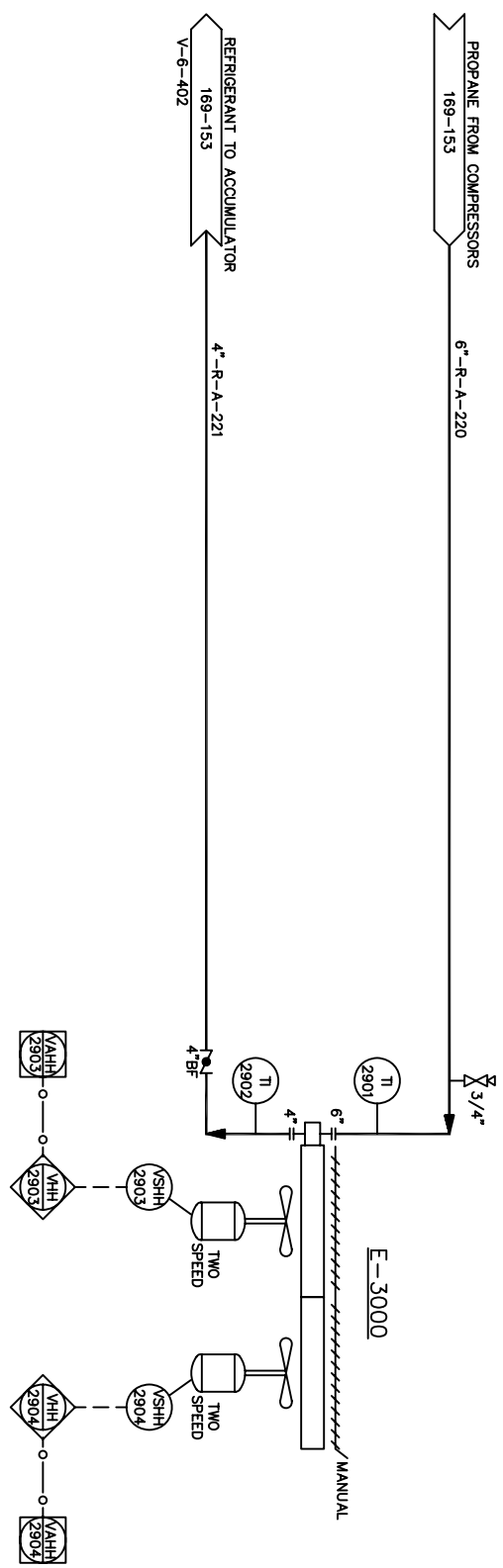


- NOTES:
1. TRACE AND INSULATE OUTSIDE BLDG. ONLY.
 2. INSULATE ENTIRE LINE. TRACE OUTSIDE BLDG. ONLY.
 3. TRACE AND INSULATE TO BOTTOM OF DITCH.
 4. MOUNT LINE ON SHOES.


DWG. NO.	REFERENCE DRAWINGS	REVISIONS		ENGINEER AND PERMIT STAMPS		DRAWING ISSUE RECORD					
		REV	DATE	BY	CHK'D	ISSUE	1	2	3	4	5
		1	96/05/06	MK	MK	DESIGNED					
		2	96/07/08	MK	RLK	DRAWN					
		3	96/11/25	MK		CHECKED					
		4	99/03/25	MDG		PROCESS OK					
			00/03/31	BB		MECH. OK					
						STRUCT. OK					
						ELECT. OK					
						CLIENT APP.					
						CLIENT APP.					

colt engineering corporation
 ANDERSON EXPLORATION
 CALGARY, ALBERTA, CANADA
 PROJECT: DUNVEGAN KISKATINAW EXPANSION
 PROCESS AND INSTRUMENTATION DIAGRAM
 SALES GAS COMPRESSOR
 JOB NO. 95-C-467 SCALE NTS DWG. NO. D-467-107

E-3000
AUXILIARY REFRIGERANT
CONDENSER
 MODEL : THERMOTECH 13.1x40x4RF
 DESIGN PRESS : 1722 kPa
 DESIGN TEMP : 93°C
 DUTY : 1418 kW
 MOTOR : 2 @ 40 HP

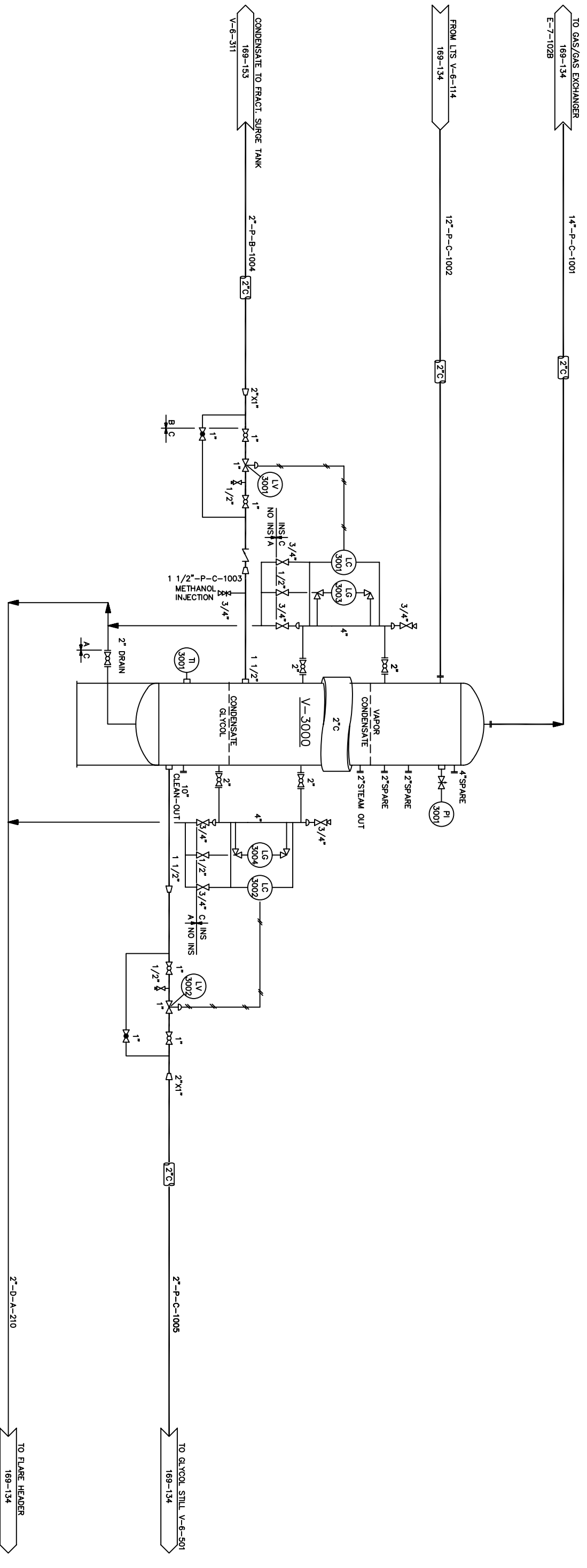


DWG. NO.	REFERENCE DRAWINGS	DEVN PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER APP'D	ENGINEER AND PERMIT STAMPS
			1	REVISED 'AS BUILT'	96/11/25	MK				DESIGNED DRAWN CHECKED PROCESS OK MECH. OK STRUCT. OK ELECT. OK OWNER APP. OWNER APP.
			0	ISSUED FOR CONSTRUCTION	96-05-06	MK		RLK		


 DUNVEGAN KISKATINAW EXPANSION
 PROCESS & INSTRUMENTATION DIAGRAM
 AUXILIARY PROPANE CONDENSER
 LSD. 15-03-81-04 W6M.

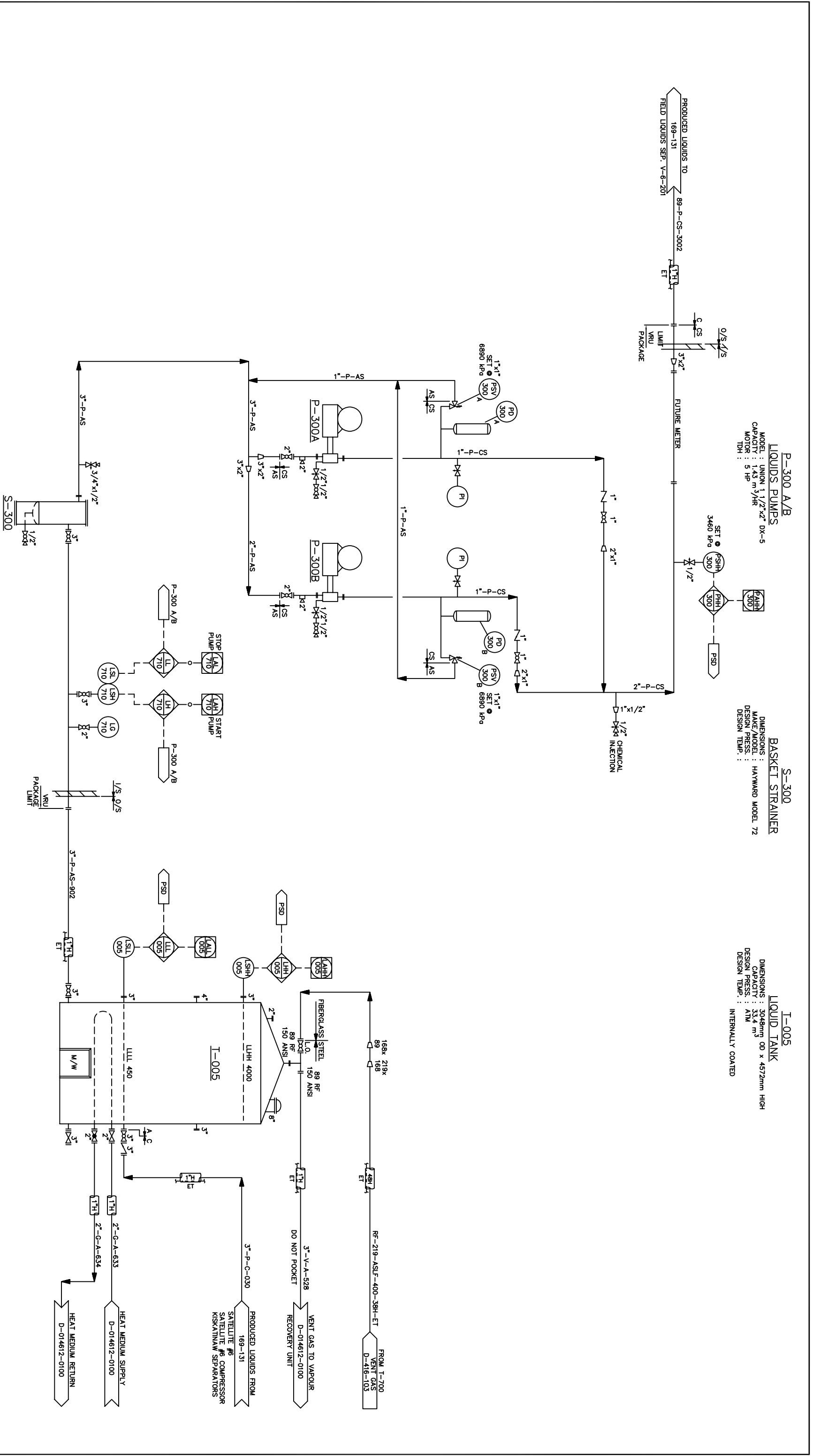
CORR. JOB NO. 95-C-467
 SCALE NTS
 DWG. NO. D-467-108
 DEVN PROJ. 1

V-3000
 AUXILIARY LITS
 711 OD X 2438 S/S
 DESIGN PRESS : 6895 kPa
 DESIGN TEMP : -29/93.3°C
 CAPACITY : 205 mm SFD



DWG. NO.	REFERENCE DRAWINGS	DEVON PROJECT	REV	REVISIONS	DATE	BY	CHK'D	APP'D	OWNER APP'D	ENGINEER AND PERMIT STAMPS
			1	REVISED 'AS BUILT'	96/11/25	MK				DESIGNED: GW CHECKED: GW PROCESS OK: GW MECH. OK: GW STRUCT. OK: GW ELECT. OK: GW OWNER APP. GW OWNER APP. GW
			0	ISSUED FOR CONSTRUCTION	96/07/22	MK				

DUNVEGAN SOUR GAS PLANT PROCESS & INSTRUMENTATION DIAGRAM AUXILIARY LITS LSD. 15-03-81-04 W6M.	15-03-81-04 W6M SCALE: NTS DWG. NO.: D-467-109	96-03-467 1
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P-300 A/B
LIQUIDS PUMPS
 MODEL : UNION 1 1/2"x2" DX-5
 CAPACITY : 1.43 m³/HR
 MOTOR : 5 HP
 TDH :

S-300
BASKET STRAINER
 DIMENSIONS :
 MAKE/MODEL : HAYWARD MODEL 72
 DESIGN PRESS. :
 DESIGN TEMP. :

T-005
LIQUID TANK
 DIMENSIONS : 3046mm OD x 4572mm HIGH
 CAPACITY : 33.4 m³
 DESIGN PRESS. : ATM
 DESIGN TEMP. :
 INTERNALLY COATED

DWG. NO.	REFERENCE DRAWINGS	DEVON PROJECT	REV	REVISIONS	DATE (yy/mm/dd)	BY	CHK'D	APP'D	OWNER APP'D	ENGINEER AND PERMIT STAMPS
		0911662	5	ISSUED FOR REVIEW (OEL #7144)	09.10.14					
		0911662	9	AS BUILT (OEL #7144) (NOTE A)	10.03.18					
		0911662	8	I.F.C.: L.O. VALVE @ TIE-IN 3 (OEL #7144)	09.11.24					
		0911662	7	ISSUED FOR CONSTRUCTION (OEL #7144)	09.11.13					
		0911662	6	ISSUED FOR BID (OEL #7144)	09.11.05					

NOTE: AS-BUILT (REV. 9) AS PER FIELD QUALITY CONTROL MARK-UPS & PHOTOS. DETAILS SHOULD BE VERIFIED IN FIELD.

DESIGNED	CHK'D	APP'D	OWNER APP'D
AMB			

96/07/23

DUNVEGAN SOUR GAS PLANT
 PIPING & INSTRUMENTATION DIAGRAM
 SATELLITE # 6 PRODUCED LIQUIDS HANDLING
 LSD. 15-03-81-04 W6M.

OWNER APP.	SCALE	DWG. NO.	DEVON PROJ.
7/144	NTS	D-901-101	0911662