

**V-110
VRU SUCTION SCRUBBER**

Manufacturer: FOUR STAR RESOURCES
 Size: 12.75" x 5' S/S
 MAWP: 230 psig @ 300°F
 MDMT: -20°F @ 230 psig
 Corrosion Allowance: 0.125"
 CRN: AB + MB
 100% RADIOGRAPHY
 Serial No:
 (A)

**P-610
VRU LIQUID DISPOSAL PUMP**

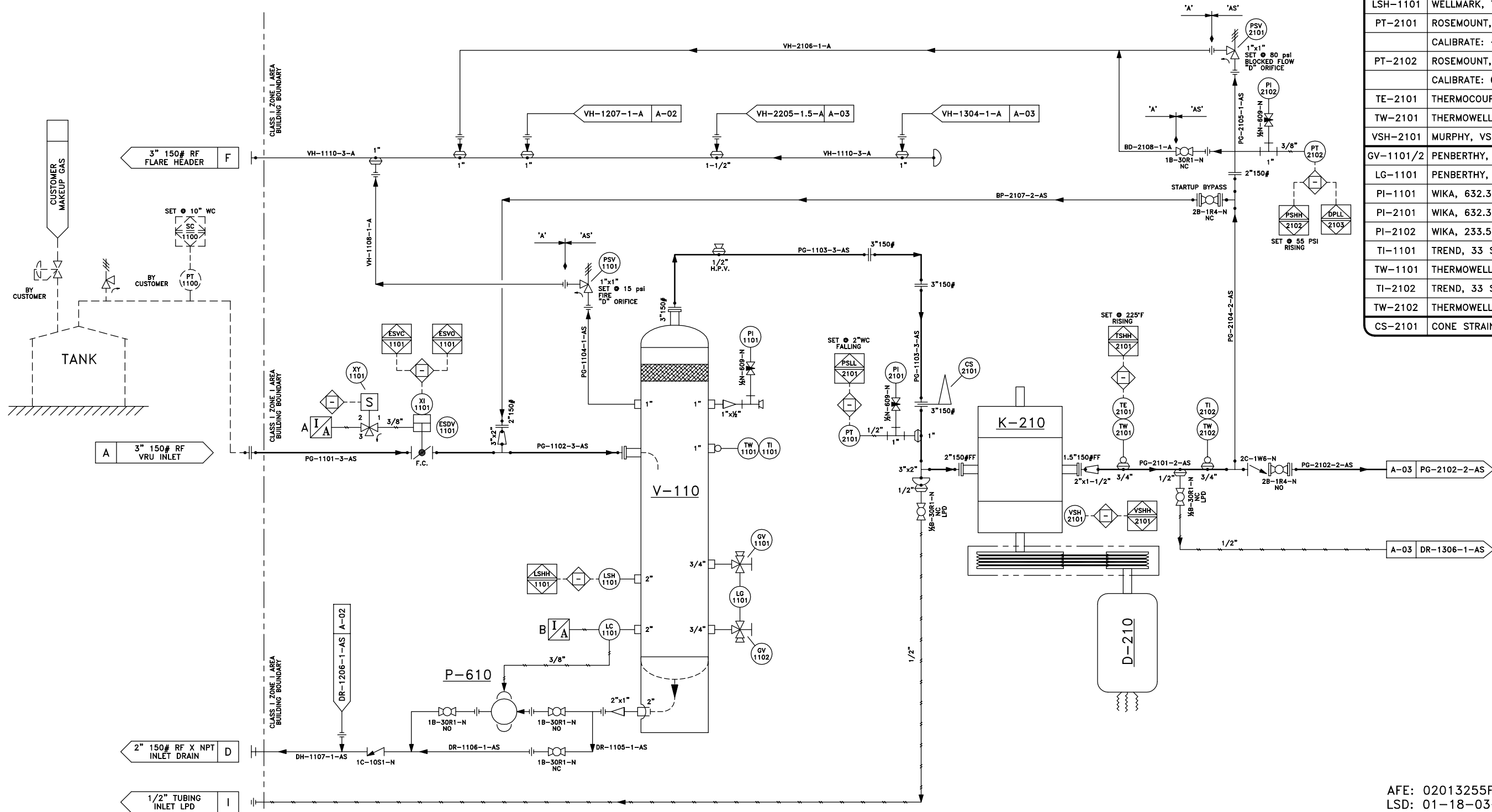
Manufacturer: SANDPIPER
 Model: S1FB1SGTANS700
 Flow Rate: 5usgpm @ 50psi
 7 SCFM @ 60psi AIR
 316SS c/w PTFE Diaphragms
 AIR ONLY
 Serial No:

**K-210
VRU COMPRESSOR**

Manufacturer: RO-FLO
 Model: 5CC
 CYL MAWP: 80 psig @ 350°F
 OP MAWP: 50 psig @ 350°F
 Speed: 865 - 1765 RPM
 Serial No:

**D-210
VRU DRIVE MOTOR**

Manufacturer: TECO-WESTINGHOUSE
 Model: XH0204
 Rating: 575VAC/3Ph/60Hz
 20HP @ 1765RPM
 TEXP, NEMA 'B' DESIGN
 CSA CLASS I ZONE I INVERTER DUTY
 VFD RATED 10:1 CT
 Serial No:



BILL of MATERIAL

ITEM TAG	DESCRIPTION
PSV-1101	TAYLOR, 82D134, 1"X1"NPT, 'D' ORIFICE, SET @ 15PSI
PSV-2101	TAYLOR, 82D234, 1"X1"NPT, 'D' ORIFICE, SET @ 80PSI
ESDV-1101	EL-0-MATIC ES0200, SPRING RETURN, F.C., 80PSI c/w FISHER 8580 CONTROL DISC, 3"150#, NACE
XI-1101	TOPWORX, DXP-L21GNEB C/W (2) SPDT GO SWITCHES
XY-1101	ASCO, EF8320G202, 24VDC, 1/4" NPT, 115 PSI
LC-1101	WELLMARK, W1200DVO-SS, 2"NPT, 30 to 70 PSI, NACE
LSH-1101	WELLMARK, 790SF-2A, 2" NPT, SPDT, NACE
PT-2101	ROSEMOUNT, 2051CG2A72A1A-K6M5, 250"WC, 4-20mA CALIBRATE: -30 to 60" WC
PT-2102	ROSEMOUNT, 2088G2S22A1-C6M5, 150PSI, 4-20mA CALIBRATE: 0 to 100 PSI
TE-2101	THERMOCOUPLE, TYPE K, 6" PROBE, 72" LEAD
TW-2101	THERMOWELL, 3/4"NPT X 2.5" LONG, 316SS
VSH-2101	MURPHY, VS2EX
GV-1101/2	PENBERTHY, 330J-N, 3/4"X1/2" NPT, NACE
LG-1101	PENBERTHY, 1RM-9, 1/2" NPT, NACE
PI-1101	WIKA, 632.34, 60"WC, 1/2" NPT, 316SS
PI-2101	WIKA, 632.34, 60"WC, 1/2" NPT, 316SS
PI-2102	WIKA, 233.54, 100 PSI, 1/2" NPT, 316SS
TI-1101	TREND, 33 SERIES, 1/2" NPT, 6" STEM, -40°F to 160°F
TW-1101	THERMOWELL, 1"NPT X 6" LONG, 316SS
TI-2102	TREND, 33 SERIES, 1/2" NPT, 2.5" STEM, 50°F to 500°F
TW-2102	THERMOWELL, 3/4"NPT X 2.5" LONG, 316SS
CS-2101	CONE STRAINER, 3"150#, CS, 300%, #20 SCREEN

AFE: 02013255FC
 LSD: 01-18-03-28 W1M

REV.	DESCRIPTION	BY	DATE	CHKD	APPD
A	ISSUED FOR APPROVAL	GDB	07-10-13		



2308-8th Street
 Nisku, Alberta
 T9E 7Z2
 Office: 780.955.4292
 Fax: 780.955.4294
 Toll Free: 866.955.4292

Drawn by: GDB	20HP VRU & 30HP BOOSTER PACKAGE				
Date: JUL 06-13	RO-FLO 5CC w 20HP / RO-FLO 5CC w 30HP				
Checked by:	SOUR NAUTRAL GAS SERVICE				
Approved by:	Company: TUNDRA OIL & GAS PARTNERSHIP				
Scale: N.T.S.	Quote/Ref. NO.:	JOB NO.:	Unit NO.:	Drawing NO.:	Rev.:
	Q-13019 R1	PC-512	RF-13018	PID-RF13018-A-01	A

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**V-120
BOOSTER SUCTION SCRUBBER**

Manufacturer: FOUR STAR RESOURCES
 Size: 12.75" x 5" S/S
 MAWP: 230 psig @ 300°F
 MDMT: -20°F @ 230 psig
 Corrosion Allowance: 0.125"
 CRN: AB + MB
 100% RADIOGRAPHY
 Serial No:
 (A)

**K-210
BOOSTER COMPRESSOR**

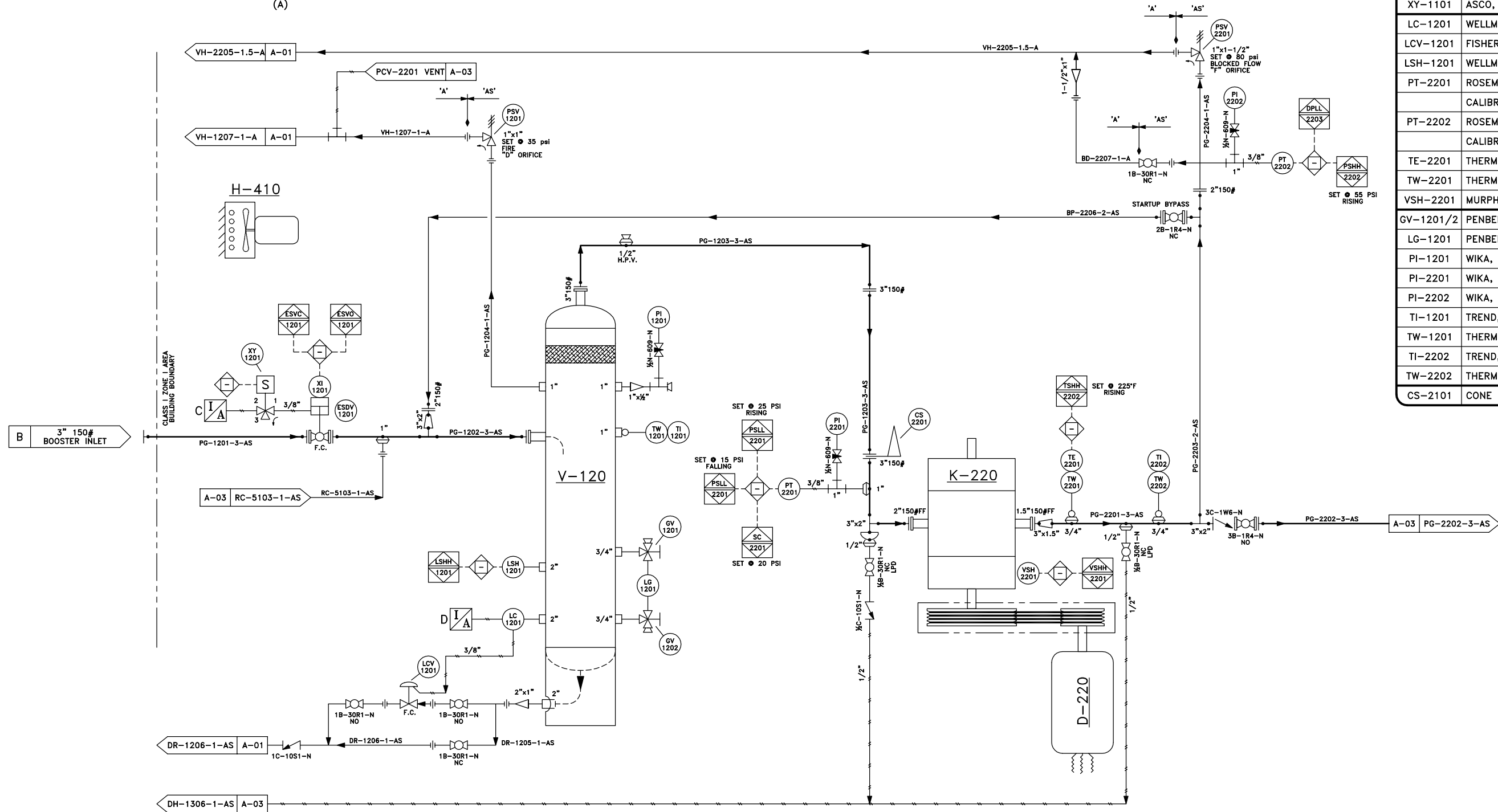
Manufacturer: RO-FLO
 Model: 5CC
 CYL MAWP: 80 psig @ 350°F
 OP MAWP: 50 psig @ 350°F
 Speed: 865 - 2200 RPM
 Serial No:

**D-210
BOOSTER DRIVE MOTOR**

Manufacturer: TECO-WESTINGHOUSE
 Model: XH0304
 Rating: 575VAC/3Ph/60Hz
 30HP @ 1765RPM
 TEXP, NEMA 'B' DESIGN
 CSA CLASS I ZONE I INVERTER DUTY
 VFD RATED 10:1 CT
 Serial No:

**H-410
BUILDING HEATER**

Manufacturer: HAZLOC
 Model: XEU1-100-600360-BTA
 Rated: 10 kW/hr
 575VAC/3Ph/60Hz
 c/w Thermostat
 Serial No:

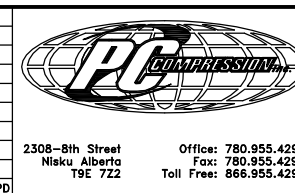


BILL of MATERIAL

ITEM TAG	DESCRIPTION
PSV-1201	TAYLOR, 82D234, 1"X1"NPT, 'D' ORIFICE, SET @ 35PSI
PSV-2201	TAYLOR, 82F366, 1"X1.5"NPT, 'F' ORIFICE, SET @ 80PSI
ESDV-1201	EL-O-MATIC ES0350, SPRING RETURN, F.C., 80PSI c/w 'KF' BALL VALVE, 3"150#, FP, NACE
XI-1201	TOPWORX, DXP-L21GNEB C/W (2) SPDT GO SWITCHES
XY-1101	ASCO, EF8320G202, 24VDC, 1/4" NPT, 115 PSI
LC-1201	WELLMARK, W1200DVO-SS, 2"NPT, 30 to 70 PSI, NACE
LCV-1201	FISHER, D2-X1, 1" NPT, 35 PSI, F.C.
LSH-1201	WELLMARK, 790SF-2A, 2" NPT, SPDT, NACE
PT-2201	ROSEMOUNT, 2088G2S22A1-C6M5, 150PSI, 4-20mA CALIBRATE: 0 to 50 PSI
PT-2202	ROSEMOUNT, 2088G2S22A1-C6M5, 150PSI, 4-20mA CALIBRATE: 0 to 100 PSI
TE-2201	THERMOCOUPLE, TYPE K, 6" PROBE, 72" LEAD
TW-2201	THERMOWELL, 3/4"NPT X 2.5" LONG, 316SS
VSH-2201	MURPHY, VS2EX
GV-1201/2	PENBERTHY, 330J-N, 3/4"X1/2" NPT, NACE
LG-1201	PENBERTHY, 1RM-9, 1/2" NPT, NACE
PI-1201	WIKA, 233.54, 60 PSI, 1/2" NPT, 316SS
PI-2201	WIKA, 233.54, 60 PSI, 1/2" NPT, 316SS
PI-2202	WIKA, 233.54, 100 PSI, 1/2" NPT, 316SS
TI-1201	TREND, 33 SERIES, 1/2" NPT, 6" STEM, -40°F to 160°F
TW-1201	THERMOWELL, 1"NPT X 6" LONG, 316SS
TI-2202	TREND, 33 SERIES, 1/2" NPT, 2.5" STEM, 50°F to 500°F
TW-2202	THERMOWELL, 3/4"NPT X 2.5" LONG, 316SS
CS-2101	CONE STRAINER, 3"150#, CS, 150%, #20 SCREEN

AFE: 02013255FC
 LSD: 01-18-03-28 W1M

REV.	DESCRIPTION	BY	DATE	CHKD	APPD
A	ISSUED FOR APPROVAL	GDB	07-10-13		



2308-8th Street
 Nisku Alberta T9E 7Z2
 Office: 780.955.4292
 Fax: 780.955.4294
 Toll Free: 866.955.4292

Drawn by: GDB	20HP VRU & 30HP BOOSTER PACKAGE				
Date: JUL 06-13	RO-FLO 5CC w/ 20HP & RO-FLO 5CC w/ 30HP				
Checked by:	SOUR NAUTRAL GAS SERVICE				
Approved by:	Company: TUNDRA OIL & GAS PARTNERSHIP				
Scale: N.T.S.	Quote/Ref. NO.:	JOB NO.:	Unit NO.:	Drawing NO.:	Rev.:
	Q-13019 R1	PC-512	RF-13018	PID-RF13018-A-02	A

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**V-130
DISCHARGE SCRUBBER**

Manufacturer: FOUR STAR RESOURCES
 Size: 12.75" x 5' S/S
 MAWP: 230 psig @ 300°F
 MDMT: -20°F @ 230 psig
 Corrosion Allowance: 0.125"
 CRN: AB + MB
 100% RADIOGRAPHY
 Serial No: (A)

**EF-420
EXHAUST FAN**

Manufacturer: ENERTECH
 Model: ET12-1
 Rating: 120 VAC/1Ph/60Hz

**E-510
AIR COOLED EXCHANGER**

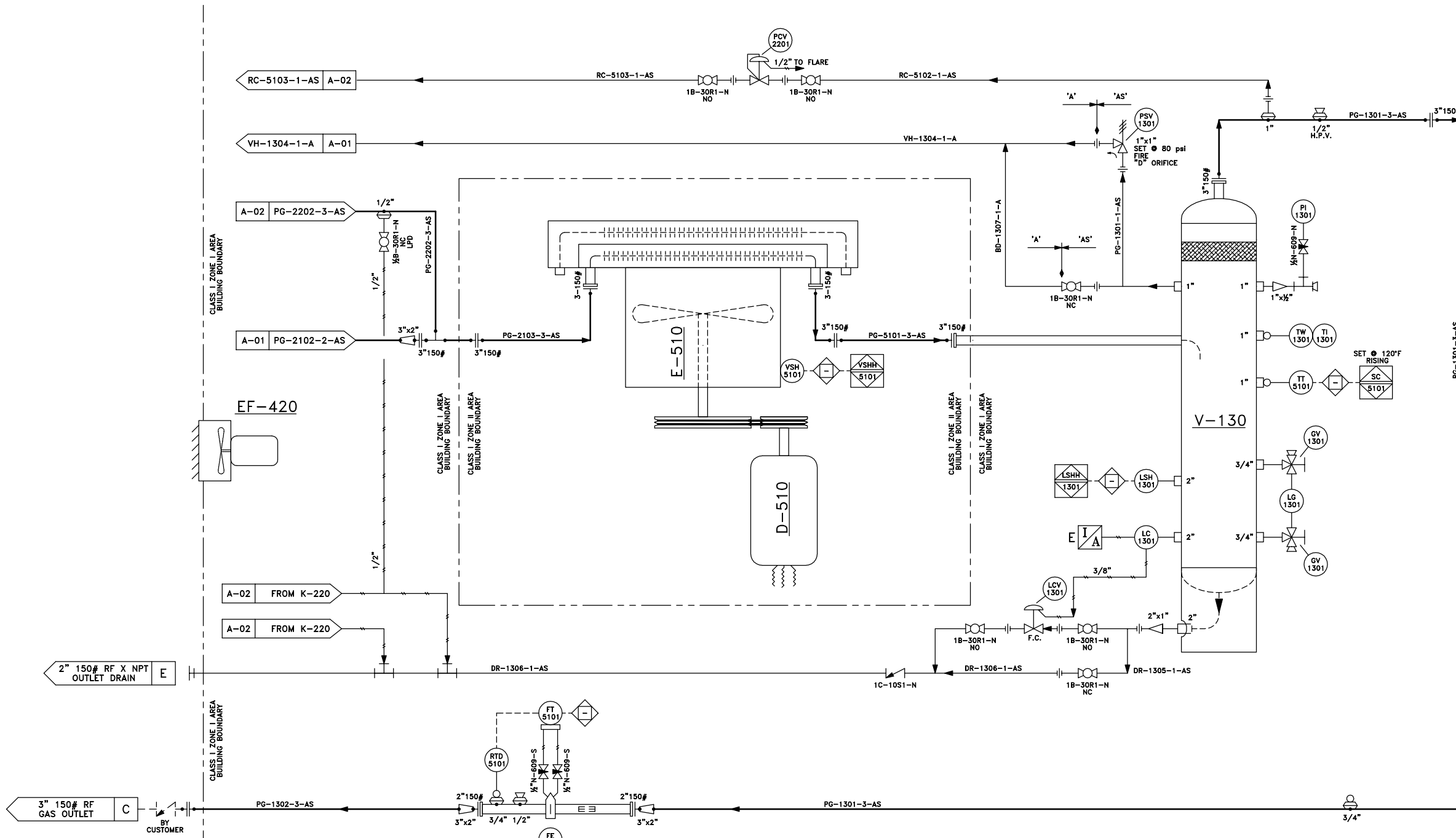
Manufacturer: AIR-X
 Model: 36ZF
 A/C MAWP: 215psi @ 350°F
 A/C MDMT: -20°F @ 215psi
 A/C CORROSION: 0.125"
 100% UT & 100% X-RAY (BW)
 A/C Serial No:
 A/C CRN: AB+MB
 JW MAWP: 14psig @ 250°F
 JW Serial No:
 c/w 36" 5 BLADE MOORE 1k-S16
 FAN SPEED: 870 RPM

**D-510
EXCHANGER FAN DRIVE MOTOR**

Manufacturer: TECO-WESTINGHOUSE
 Model: TBA
 Rating: 575VAC/3Ph/60Hz
 5HP @ 1800RPM
 TEXP, NEMA 'B' DESIGN
 CSA CLASS I ZONE I INVERTER DUTY
 VFD RATED 10:1 CT
 Serial No:

BILL of MATERIAL

ITEM TAG	DESCRIPTION
PSV-1301	TAYLOR, 82D234, 1"x1"NPT, 'D' ORIFICE, SET @ 80PSI
FE-5101	CAMERON, JUNIOR METER RUN, 2"150# X 49"LG, AGA2000
	FLOW CONDITIONER, 1/2" & 3/4" NPT TAPS
FT-5101	NUFLO SCANNER 2000, c/w MVT ADAPTER, 1/4"NPT
	300PSIA MAWP, 200"WC D.P., NACE
RTD-5101	RTD, 5' CABLE, 2.5" PROBE c/w FT-5101
TT-5101	ROSEMOUNT, 644KAH6-J6M5F6 c/w 2.5" RTD
	CALIBRATE: -50 to 350°F
LC-1201	WELLMARK, W1200DVO-SS, 2"NPT, 30 to 70 PSI, NACE
LCV-1201	FISHER, D2-X1, 1" NPT, 35 PSI, F.C.
LSH-1201	WELLMARK, 790SF-2A, 2" NPT, SPDT, NACE
PCV-2201	FISHER, 627, 1"NPT, 1/2" ORIFICE, 5-20 PSI, SOUR
VSH-5101	MURPHY, VS2EX
GV-1301/2	PENBERTHY, 330J-N, 3/4"x1/2" NPT, NACE
LG-1301	PENBERTHY, 1RM-9, 1/2" NPT, NACE
PI-1201	WIKA, 233.54, 100 PSI, 1/2" NPT, 316SS
TI-1201	TREND, 33 SERIES, 1/2" NPT, 6" STEM, -40°F to 160°F
TW-1201	THERMOWELL, 1"NPT X 6" LONG, 316SS



AFE: 02013255FC
 LSD: 01-18-03-28 W1M

REV.	DESCRIPTION	BY	DATE	CHKD	APPD
A	ISSUED FOR APPROVAL	GDB	07-10-13		



2308-8th Street
 Nisku Alberta T9E 7Z2
 Office: 780.955.4292
 Fax: 780.955.4294
 Toll Free: 866.955.4292

Drawn by: GDB	20HP VRU & 30HP BOOSTER PACKAGE				
Date: JUL 06-13	RO-FLO 5CC w 20HP / RO-FLO 5CC w 30HP				
Checked by:	SOUR NAUTRAL GAS SERVICE				
Approved by:	Company: TUNDRA OIL & GAS PARTNERSHIP				
Scale: N.T.S.	Quote/Ref. NO.: Q-13019 R1	JOB NO.: PC-512	Unit NO.: RF-13018	Drawing NO.: PID-RF13018-A-03	Rev.: A

**P-620
VRU LUBRICATOR PUMP**

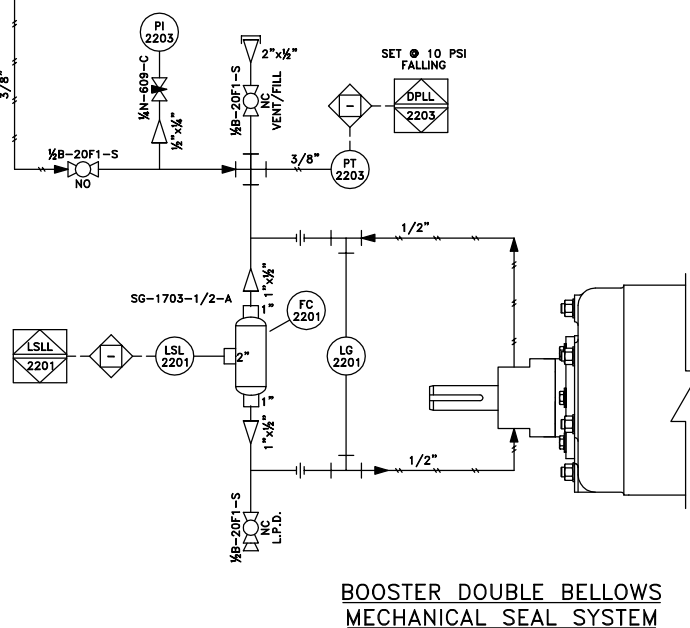
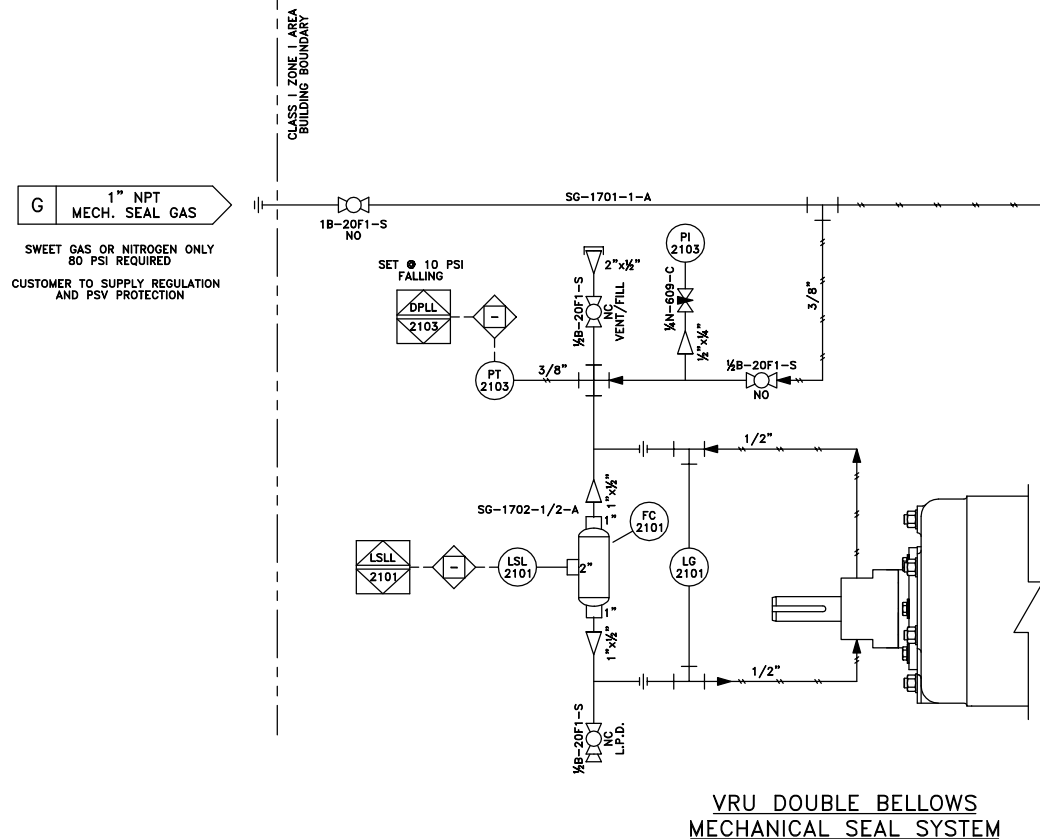
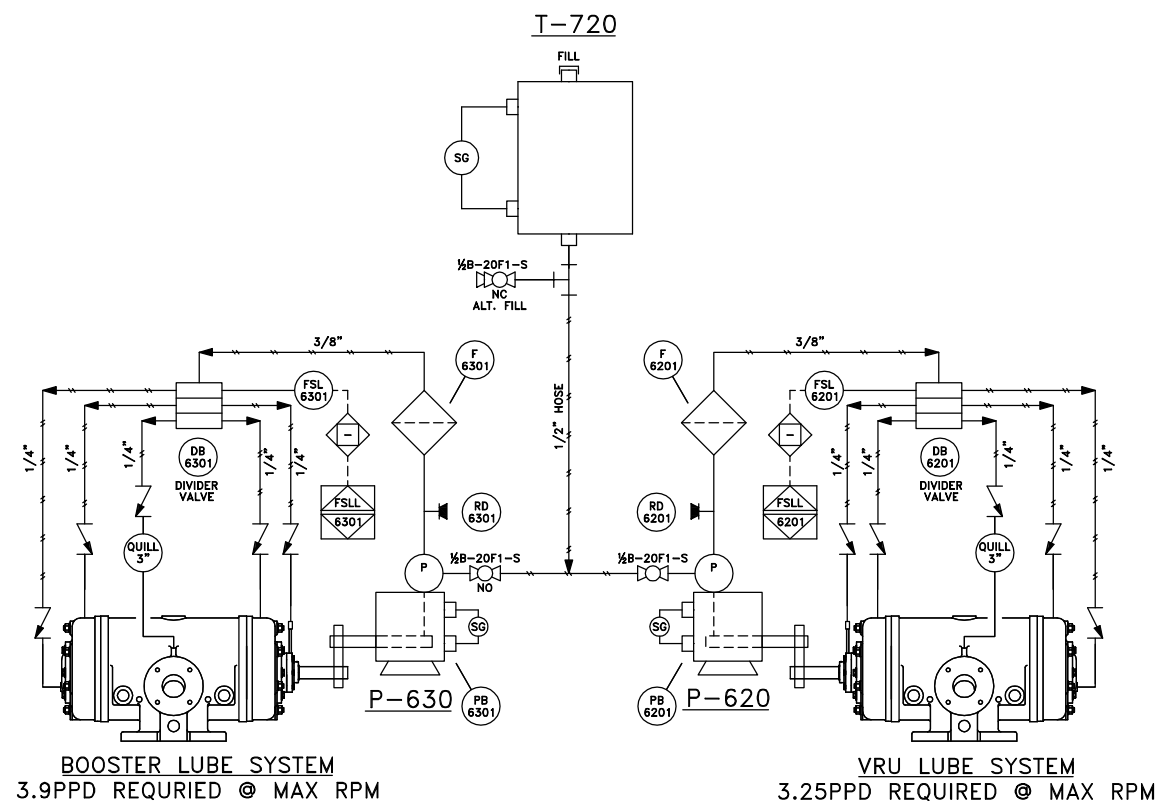
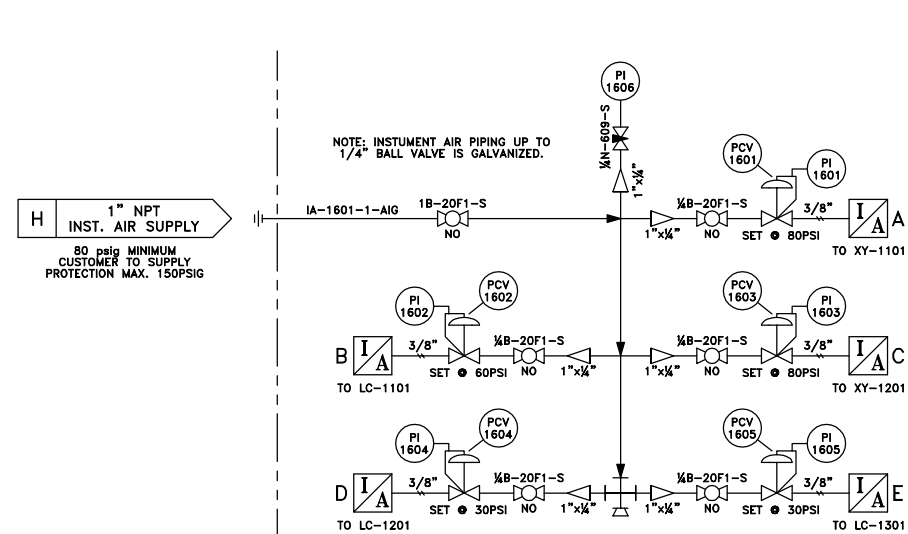
Manufacturer: PREMIER
MODEL: 91211
3/8" PLUNGER

**P-630
BOOSTER LUBRICATOR PUMP**

Manufacturer: PREMIER
MODEL: 91211
3/8" PLUNGER

**T-720
OIL DAY TANK**

Manufacturer: KENCO ENGINEERING
Part No: 30G
Volume: 30 usgal

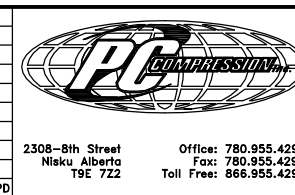


BILL of MATERIAL

ITEM TAG	DESCRIPTION
PT-2103	AST, 4600 SERIES, 0-100 PSI, 1/4" NPT
PT-2203	AST, 4600 SERIES, 0-100 PSI, 1/4" NPT
LSL-2101	WELLMARK, 790SF-2A, 2" NPT, SPDT, NACE
LSL-2201	WELLMARK, 790SF-2A, 2" NPT, SPDT, NACE
FC-2101	MURPHY, FLOAT CHAMBER, 2" NPT
FC-2201	MURPHY, FLOAT CHAMBER, 2" NPT
LG-2101	PENBERTHY, 1RM-4, 1/2" NPT, NACE
LG-2201	PENBERTHY, 1RM-4, 1/2" NPT, NACE
PCV-1601	FISHER, 67CFR-601SPEC, 0 to 125PSI, 1/4" NPT
PCV-1602	FISHER, 67CFR-601SPEC, 0 to 125PSI, 1/4" NPT
PCV-1603	FISHER, 67CFR-601SPEC, 0 to 125PSI, 1/4" NPT
PCV-1604	FISHER, 67CFR-362SPEC, 0 to 35PSI, 1/4" NPT
PCV-1605	FISHER, 67CFR-362SPEC, 0 to 35PSI, 1/4" NPT
FSL-6201	WHITLOK, DNFT-PS-LED, 3-MIN NO-FLOW
FSL-6301	WHITLOK, DNFT-PS-LED, 3-MIN NO-FLOW
PB-6201	PREMIER, 802300, 60:1GR, 1/2" SHAFT
PB-6301	PREMIER, 802300, 60:1GR, 1/2" SHAFT
RO-6201	BURST PLATE, BLACK
RO-6301	BURST PLATE, BLACK
F-6201	LUBE FILTER, 1/4" NPT
F-6301	LUBE FILTER, 1/4" NPT
DB-6201	MSP-3 DIVIDER BLOCK c/w (2) 10T & (1) 5S VALVES
DB-6301	MSP-3 DIVIDER BLOCK c/w (2) 10T & (1) 5S VALVES
PI-1601	WIKA, 233.53, 160 PSI, 1/4" NPT, 316SS
PI-1602	WIKA, 233.53, 160 PSI, 1/4" NPT, 316SS
PI-1603	WIKA, 233.53, 160 PSI, 1/4" NPT, 316SS
PI-1604	WIKA, 233.53, 60 PSI, 1/4" NPT, 316SS
PI-1605	WIKA, 233.53, 60 PSI, 1/4" NPT, 316SS
PI-1606	WIKA, 233.53, 160 PSI, 1/4" NPT, 316SS
PI-2103	WIKA, 233.53, 100 PSI, 1/4" NPT, 316SS
PI-2203	WIKA, 233.53, 100 PSI, 1/4" NPT, 316SS

AFE: 02013255FC
LSD: 01-18-03-28 W1M

REV.	DESCRIPTION	BY	DATE	CHKD	APPD
A	ISSUED FOR APPROVAL	GDB	07-10-13		



2308-8th Street
Nisku, Alberta T9E 7Z2
Office: 780.955.4292
Fax: 780.955.4294
Toll Free: 866.955.4292

Drawn by: GDB	20HP VRU & 30HP BOOSTER PACKAGE			
Date: JUL 06-13	RO-FLO 5CC w 20HP / RO-FLO 5CC w 30HP			
Checked by:	SOUR NAUTRAL GAS SERVICE			
Approved by:	Company:	TUNDRA OIL & GAS PARTNERSHIP		
Scale: N.T.S.	Quote/Ref. NO.: Q-13019 R1	JOB NO.: PC-512	Unit NO.: RF-13018	Drawing NO.: PID-RF13018-A-04

P-640
VRU JW PUMP

Manufacturer: TUTHILL
Model: OLEV-C-7
Flow Rate: 1.6GPM @ 1750RPM
CAST IRON
C/W INTERNAL RELIEF @ 50PSI
Serial No:

D-640
VRU JW PUMP MOTOR

Manufacturer: BALDOR
Model: CL5004A
Rating: 115/208-230VAC/1PH/60HZ
1/2HP @ 1725RPM
TEXP, CSA CLASS 1 ZONE 1
Serial No:

T-710
EXPANSION TANK

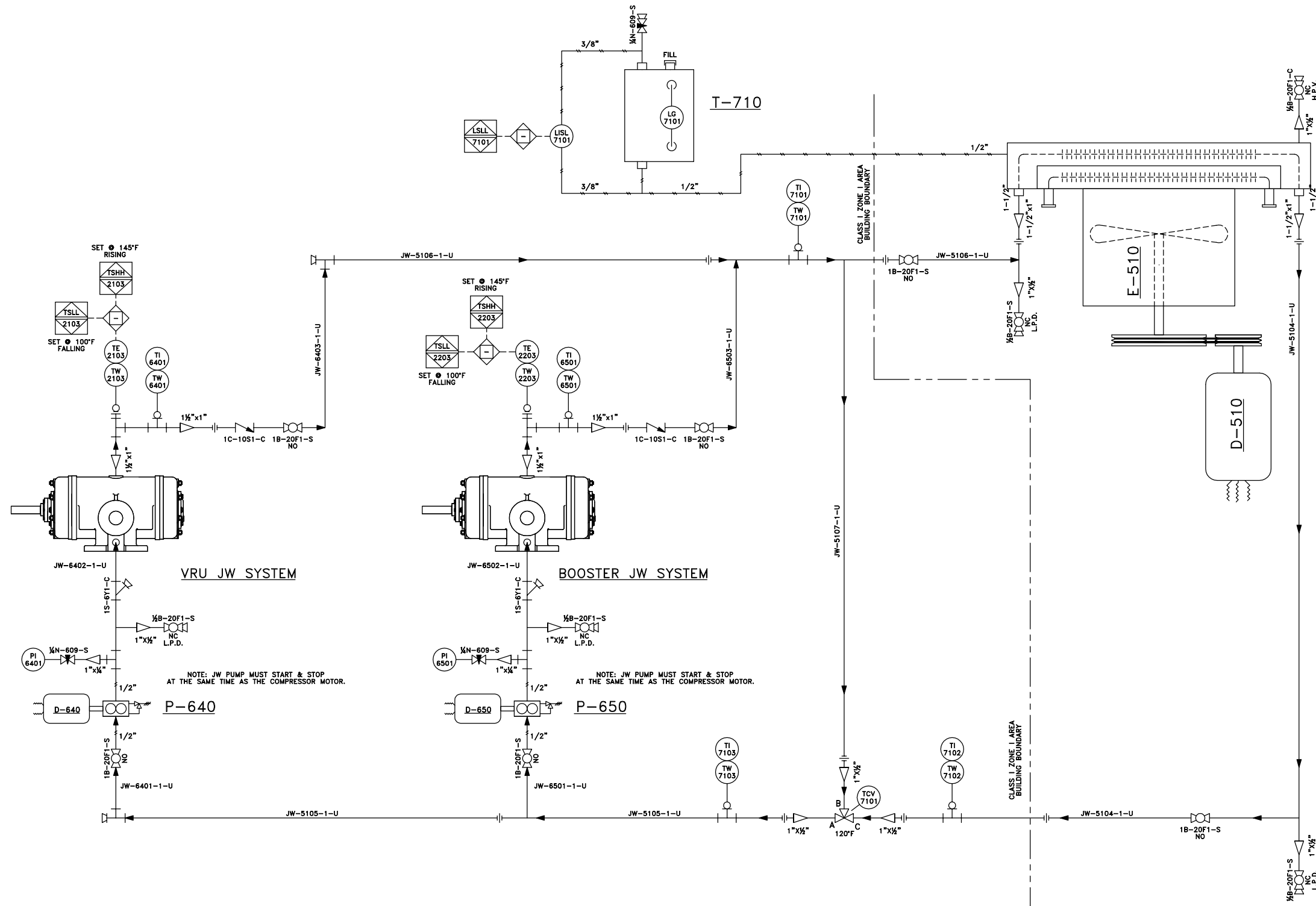
Manufacturer: PC COMPRESSION
VOLUME: 5 usgal
8"x8"x24" LG

P-650
BOOSTER JW PUMP

Manufacturer: TUTHILL
Model: 1LEV-C-7
Flow Rate: 2.7GPM @ 1750RPM
CAST IRON
C/W INTERNAL RELIEF @ 50PSI
Serial No:

D-650
VRU BOOSTER PUMP MOTOR

Manufacturer: BALDOR
Model: CL5004A
Rating: 115/208-230VAC/1PH/60HZ
1/2HP @ 1725RPM
TEXP, CSA CLASS 1 ZONE 1
Serial No:



BILL of MATERIAL

ITEM TAG	DESCRIPTION
TCV-7101	FPE, A1210-120, 1/2" NPT, 120°F, CAST IRON
TE-2103	THERMOCOUPLE, TYPE K, 6" PROBE, 72" LEAD
TW-2103	THERMOWELL, 3/4"NPT X 2.5" LONG, 316SS
TE-2203	THERMOCOUPLE, TYPE K, 6" PROBE, 72" LEAD
TW-2203	THERMOWELL, 3/4"NPT X 2.5" LONG, 316SS
LISL-7103	MURPHY, EL150-EX
LG-7101	KENCO, 4400 SERIES, 6" REDLINE GAUGE
PI-6401	WIKA, 233.53, 60 PSI, 1/4" NPT, 316SS
PI-6501	WIKA, 233.53, 60 PSI, 1/4" NPT, 316SS
TI-6401	TREND, 33 SERIES, 1/2" NPT, 2.5" STEM, -40°F to 160°F
TW-6401	THERMOWELL, 1"NPT X 2.5" LONG, 316SS
TI-6501	TREND, 33 SERIES, 1/2" NPT, 2.5" STEM, -40°F to 160°F
TW-6501	THERMOWELL, 1"NPT X 2.5" LONG, 316SS
TI-7101	TREND, 33 SERIES, 1/2" NPT, 2.5" STEM, -40°F to 160°F
TW-7101	THERMOWELL, 1"NPT X 2.5" LONG, 316SS
TI-7102	TREND, 33 SERIES, 1/2" NPT, 2.5" STEM, -40°F to 160°F
TW-7102	THERMOWELL, 1"NPT X 2.5" LONG, 316SS
TI-7103	TREND, 33 SERIES, 1/2" NPT, 2.5" STEM, -40°F to 160°F
TW-7103	THERMOWELL, 1"NPT X 2.5" LONG, 316SS

AFE: 02013255FC
LSD: 01-18-03-28 W1M

		Drawn by: GDB Date: JUL 06-13 Checked by: Approved by: Company: TUNDRA OIL & GAS PARTNERSHIP Scale: N.T.S. Quote/Ref. NO.: Q-13019 R1 JOB NO.: PC-512 Unit NO.: RF-13018 Drawing NO.: PID-RF13018-A-05 Rev.: A
2308-8th Street Nisku Alberta T9E 7Z2		Office: 780.955.4292 Fax: 780.955.4294 Toll Free: 866.955.4292
A REV.	ISSUED FOR APPROVAL DESCRIPTION	GDB 07-10-13 BY DATE CHKD APPD

A-GENERAL NOTES:

1. REFERENCE DRAWINGS: ISO-RF13018-C-03
 GA-RF13018-B-01 ISO-RF13018-C-05
 GA-RF13018-B-02 ISO-RF13018-C-06
 GA-RF13018-B-03 ISO-RF13018-C-04
 GA-RF13018-B-04 SKD-RF13018-D-01
 ISO-RF13018-C-01 BLD-RF13018-H-01
 ISO-RF13018-C-02

B-DESIGN & MATERIAL NOTES:

1. PROCESS PIPING CONSTRUCTED TO ASME B31.3-2012, NORMAL SERVICE
 2. SPEC 'U' UTILITY PIPING (NON-CODE):
 DESIGN: MAWP: 50psig @ 350°F (345kPag @ 177°C)
 MDMT: -20°F @ 50psig (-29°C @ 345kPag)
 LEAK TEST: 75psig @ AMBIENT TEMPERATURE (>40°F)
 w/ HYDRO
 CORROSION ALLOWANCE: 0.0625", UNLESS NOTED OTHERWISE
 PIPE/NIPPLES: NPT: ¼" TO ¾", A-106-B, SCH.80 @ ½"C.A.
 NPT: ½" TO 2", A-106-B, SCH.80
 FITTINGS: NPT: ¼" TO 2", cl.3000, A-105N
 BUSHINGS: ALLOWED ALL SIZES.
 TUBE: ¼" TO ¾", @ 0.035" WALL, 316SS
 ½" @ 0.049" WALL, 316SS
 TUBE FITTINGS: ¼" TO ½", 316SS, SWAGelok

3. SPEC 'AS' PIPING: - SOUR GAS
 DESIGN: MAWP: 150psig @ 350°F (1034kPag @ 177°C)
 MDMT: -20°F @ 150psig (-29°C @ 1034kPag)
 LEAK TEST: 225psig @ AMBIENT TEMPERATURE (>40°F)
 w/ HYDRO
 CORROSION ALLOWANCE: 0.125", UNLESS NOTED OTHERWISE
 PIPE/NIPPLES: NPT: ¼" TO ¾", 316SS ONLY
 NPT: ½", A-106-B, SCH.XXS
 NPT: ¾" TO 2", A-106-B, SCH.160
 BW: 1½" TO 2", A-106-B, SCH.80
 BW: 3", A-106-B, SCH.40
 FITTINGS: NPT: ¼" TO 2", cl.3000, A-105N
 BW: 1½" TO 2", A-234-WPB, SCH.80
 BW: 3", A-234-WPB, SCH.40
 FLANGES: BW: 1½" TO 3", A-105N, ASME cl.150 RF, BORED TO SUIT
 BW: 1½" TO 2", A-105N, ASME cl.150 FF,
 BORED TO SUIT (K-210 & K-220 ONLY)
 'O'-LETS: TOL: ½", cl.6000, A-105N
 TOL: ¾" TO 1½" cl.3000, A-105N
 BUSHINGS: BUSHINGS ALLOWED IF 2 PIPE SIZES SMALLER.
 STUDS: ALL SIZES, A-193-B7M
 NUTS: ALL SIZES, A-194-2HM, HEAVEY HEX HEAD
 GASKETS: 316SS SPIRAL WOUND, FLEXICARB (GRAPHITE) FILLER
 TUBE: ¼" TO ¾", @ 0.035" WALL, 316SS
 ½" @ 0.049" WALL, 316SS
 TUBE FITTINGS: ¼" TO ½", 316SS, SWAGelok

4. SPEC 'A' PIPING: - FLARE, SWEET GAS
 DESIGN: MAWP: 150psig @ 350°F (1034kPag @ 177°C)
 MDMT: -20°F @ 150psig (-29°C @ 1034kPag)
 LEAK TEST: 225psig @ AMBIENT TEMPERATURE (>40°F)
 w/ HYDRO
 CORROSION ALLOWANCE: 0.0625", UNLESS NOTED OTHERWISE
 PIPE/NIPPLES: NPT: ¼" TO ¾" A-106-B, SCH.80 @ ½"C.A.
 NPT: ½" TO 2", A-106-B, SCH.80
 BW: 1½" TO 2", A-106-B, SCH.80
 BW: 3", A-106-B, SCH.40
 FITTINGS: NPT: ¼" TO 2", cl.3000, A-105N
 BW: 1½" TO 2", A-234-WPB, SCH.80
 BW: 3", A-234-WPB, SCH.40
 FLANGES: BW: 1½" TO 3", A-105N, ASME cl.150 RF, BORED TO SUIT
 'O'-LETS: TOL: ½" TO 1½", cl.3000, A-105N
 BUSHINGS: BUSHINGS ALLOWED IF 2 PIPE SIZES SMALLER.
 STUDS: ALL SIZES, A-193-B7M
 NUTS: ALL SIZES, A-194-2HM, HEAVEY HEX HEAD
 GASKETS: 316SS SPIRAL WOUND, FLEXICARB (GRAPHITE) FILLER
 TUBE: ¼" TO ¾", @ 0.035" WALL, 316SS
 ½" @ 0.049" WALL, 316SS
 TUBE FITTINGS: ¼" TO ½", 316SS, SWAGelok

4. SPEC 'AIG' PIPING: - INSTRUMENT AIR
 DESIGN: MAWP: 150psig @ 350°F (1034kPag @ 177°C)
 MDMT: -20°F @ 150psig (-29°C @ 1034kPag)
 LEAK TEST: 225psig @ AMBIENT TEMPERATURE (>40°F)
 w/ HYDRO
 CORROSION ALLOWANCE: 0.0625", UNLESS NOTED OTHERWISE
 PIPE/NIPPLES: NPT: ¼" TO ¾" A-106-B, SCH.80 @ ½"C.A., GALVANIZED
 NPT: ½" TO 2", A-106-B, SCH.80, GALVANIZED
 FITTINGS: NPT: ¼" TO 2", cl.3000, A-105N, GALVANIZED
 BUSHINGS: NOT ALLOWED.
 TUBE: ¼" TO ¾", @ 0.035" WALL, 316SS
 ½" @ 0.049" WALL, 316SS
 TUBE FITTINGS: ¼" TO ½", 316SS, SWAGelok

C-MISCELLANEOUS NOTES:

1. PACKAGE FOR USE WITH SOUR NATURAL GAS ONLY, MAX 3% H2S.
 2. EXTERIOR FINISH: COMMERCIAL SANDBLAST TO SSPC-SP6 (NACE#3)
 FINISH ONE (1) COAT OF CLOVERDALE 835 DTM ENAMEL
 SKID COLOUR: BLACK (ROLLED AFTER COMPLETION)
 PIPE COLOUR: WARM GRAY
 BANDING: GAS = YELLOW
 DRAINS = GREEN
 3. BUILDING: SELF FRAMING GABLE, R12 ROOF, R12 WALLS,
 6mil VAPOUR BARRIER
 EXTERIOR COLOUR: 22GA. PRE-PAINTED SURF WHITE (QC8316)
 TRIM & DOORS COLOUR: SLATE BLUE (QC8260)
 INTERIOR COLOUR: 24GA. WHITE ALUMINUM
 4. SKID INSULATION: 3" (R-20), FIRE RETARDANT, SPRAY URETHANE FOAM
 5. SHOP RUN TEST: NO

D-ELECTRICAL NOTES:

1. BUILDING AREA: CLASS I ZONE I
 2. CSA/QPS EQUIVALENCY INSPECTION: NO
 3. FES STUDY: PROVIDED BY END USER
 4. LOCAL PERMIT & INSPECTION: N/A
 5. CUSTOMER SUPPLIED POWER REQUIRED: 575VAC/3Ph/60Hz;
 120VAC/1Ph/60Hz
 24VDC
 6. WIRING OF END DEVICES, POWER, MOTOR & CONTROL WIRING BY OTHERS

E-INSPECTION AND TESTING NOTES:

1. RADIOGRAPHY: 100% OF BUTTWELDS
 2. MAGNETIC PARTICLE: 100% OF FILLETS
 3. PWHT: NONE
 4. HARDNESS TESTING: NONE
 5. LEAK TEST TO PRESSURES INDICATED ABOVE
 6. CUSTOMER HOLD POINTS:
 a) SKID WELDING: NO
 b) B-PRESSURE: NO
 c) VESSELS: NO
 d) LEAK TESTS: NO
 e) RUN TEST: NO
 f) FINAL INSPECTION: NO

F-VRU OPERATING CONDITIONS:

1. SUCTION PRESSURE: TANK <8oz
 2. DISCHARGE PRESSURE: 50psig (345kPag)
 3. COMPRESSOR OPERATING RANGE: 865 TO 1765 rpm
 4. FLUID SPECIFIC GRAVITY: 1.42 SOUR NATURAL GAS, 2.75% H2S
 5. COMPRESSOR MOTOR OPERATING RANGE: 865 TO 1765 rpm
 (CONSULT WITH PC COMPRESSION INC. FOR OPERATION OUTSIDE THESE CONDITIONS.)

G-BOOSTER OPERATING CONDITIONS:

1. SUCTION PRESSURE: 20psig (138kPag)
 2. DISCHARGE PRESSURE: 50psig (345kPag)
 3. COMPRESSOR OPERATING RANGE: 865 TO 2175 rpm
 4. FLUID SPECIFIC GRAVITY: 1.1 SOUR NATURAL GAS, 0.5% H2S
 5. COMPRESSOR MOTOR OPERATING RANGE: 700 TO 1765 rpm
 (CONSULT WITH PC COMPRESSION INC. FOR OPERATION OUTSIDE THESE CONDITIONS.)

H-VALVES:

1. ¼B-20F1-S, = MAS G-2 2000#, ¼"NPT, FULL PORT, STAINLESS STEEL, BALL VALVE
 2. ½B-20F1-S, = MAS G-2 2000#, ½"NPT, FULL PORT, STAINLESS STEEL, BALL VALVE
 3. 1B-20F1-S, = MAS G-2 2000#, 1"NPT, FULL PORT, STAINLESS STEEL, BALL VALVE
 4. ½B-30R1-N = 'KF' ½"3000# NPT, REG PORT, BALL VALVE, NACE
 5. 1B-30R1-N = 'KF' 1"3000# NPT, REG PORT, BALL VALVE, NACE
 6. 2B-1R4-N, = 'KF' 2"150# RF, REG PORT, BALL VALVE, NACE
 7. 3B-1R4-N, = 'KF' 3"150# RF, REG PORT, BALL VALVE, NACE
 8. 1C-10S1-N, = WHEATLEY, 822-013100-766, 1000psi, 1" NPT, SWING CHECK VALVE, NACE
 9. 2C-1W6-N, = WHEATLEY, 973-030027-169, 2" 150#, WAFER CHECK VALVE, NACE
 10. 3C-1W6-N, = WHEATLEY, 973-040027-169, 3" 150#, WAFER CHECK VALVE, NACE
 11. ¼N-609-C, = AGCO H7VIC-22, ¼" Mx F CARBON STEEL, 6000psi NEEDLE VALVE
 12. ¼N-601-C, = AGCO H7VIC-2, ¼" Fx F CARBON STEEL, 6000psi NEEDLE VALVE
 13. ½N-609-N, = AGCO H7VIS-44Q-SG, ½" Mx F STAINLESS, 6000psi NEEDLE VALVE, NACE
 14. ½N-601-N, = AGCO H1VIS-4Q-SG, ½" Fx F STAINLESS, 6000psi NEEDLE VALVE, NACE
 15. 10-81-C, = VELAN, 1" NPT CLASS 800, API#5 TRIM., GLOBE VALVE
 16. 1S-6Y1-C, = COLTON Y660TST, 'Y' STRAINER, ASME 600, 1" NPT, c/w #40 SCREEN.

I-VRU LUBRICATION & COOLANT:

1. BREAK-IN PERIOD: (300 HOURS) 6.5 PPD @ MAX SPEED
 2. NORMAL OPERATION: 3.25 PPD @ MAX SPEED
 3. OIL TYPE: MOBIL DELVAC 1300 SAE 30WT
 4. COOLANT: 50% ETHYLENE GLYCOL

J-BOOSTER LUBRICATION & COOLANT:

1. BREAK-IN PERIOD: (300 HOURS) 7.8 PPD @ MAX SPEED
 2. NORMAL OPERATION: 3.9 PPD @ MAX SPEED
 3. OIL TYPE: MOBIL DELVAC 1300 SAE 30WT
 4. COOLANT: 50% ETHYLENE GLYCOL

AFE: 02013255FC
 LSD: 01-18-03-28 W1M



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 Nisku Alberta Fax: 780.955.4294
 T9E 7Z2 Toll Free: 866.955.4292

Drawn by: GDB	20HP VRU & 30HP BOOSTER PACKAGE				
Date: JUL 06-13	RO-FLO 5CC w 20HP / RO-FLO 5CC w 30HP				
Checked by:	SOUR NAUTRAL GAS SERVICE				
Approved by:	Company: TUNDRA OIL & GAS PARTNERSHIP				
Scale: N.T.S.	Quote/Ref. NO.:	JOB NO.:	Unit NO.:	Drawing NO.:	Rev.:
	Q-13019 R1	PC-512	RF-13018	PID-RF13018-A-06	A

REV.	DESCRIPTION	BY	DATE	CHKD	APPD
A	ISSUED FOR APPROVAL	GDB	07-10-13		