

CP-150 (101121/2/3)
CONTROL PANEL
 ALLEN BRADLEY MICROLOGIX 1400
 PROFACE 6.7" TFT COLOUR HMI
 WALL MOUNTED
 NEMA 4, CLASS 1, ZONE 2
 24 VDC / CSA
 S/N (101121): 11113367
 POWER SUPPLY WIRING BY OTHERS

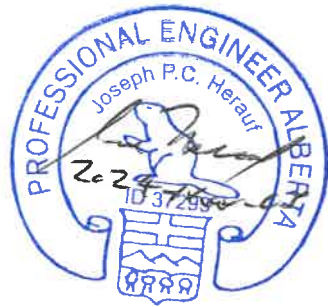
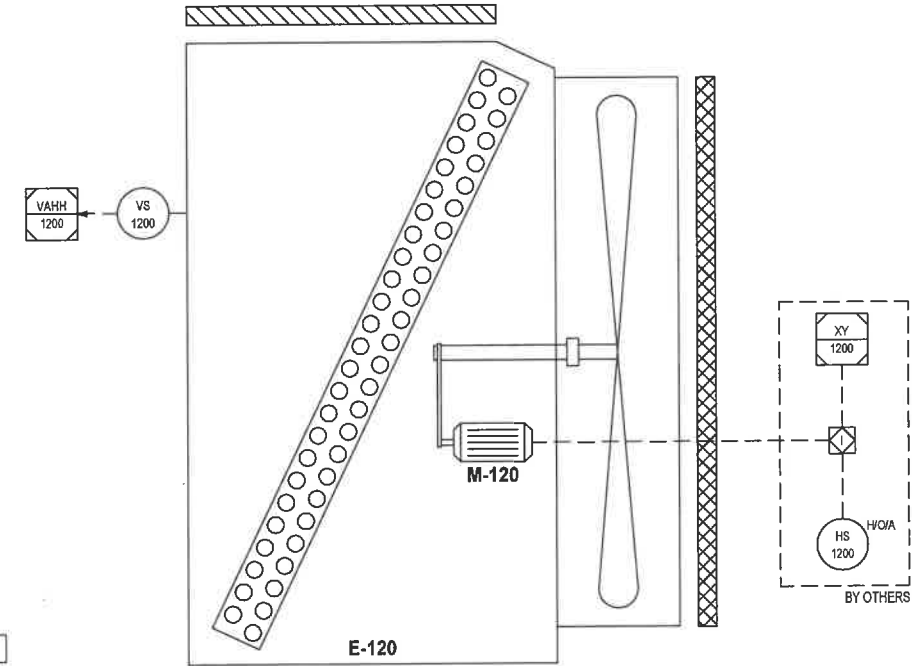
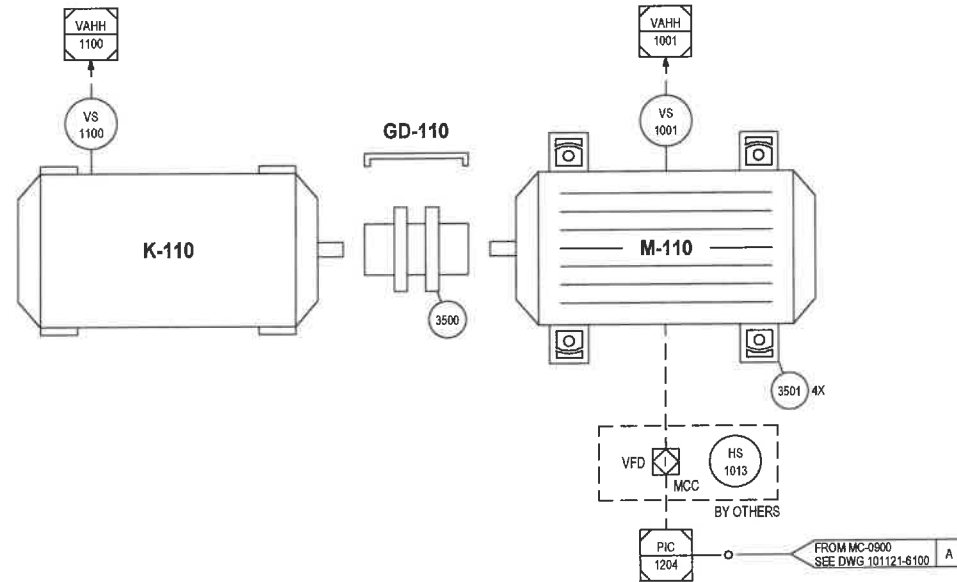
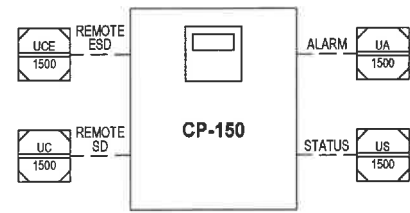
K-110
COMPRESSOR FRAME
 ROFLO SDBDE ROTARY VANE
 MAWP 80 PSIG @ 350/-20°F
 RATED 600-1466 RPM
 S/N: 18304-1

GD-110
COUPLING GUARD
 ALUMINUM
 D/N: 101121-3530

M-110
ELECTRIC MOTOR
 TECO WESTINGHOUSE 364T
 RATED 60 HP @ 1800 RPM
 3:1 TD / VFD COMP
 TEFC / 480VAC / 3PH / 60HZ /
 CSA CLASS 1, DIV2, GROUP B, C & D
 S/N: XHP722A339001
 WIRING & VFD BY OTHERS

E-120
AERIAL COOLER FRAME
 AXH 48EF
 ONE (3) BLADE FAN,
 HAILGUARD, BUGSCREEN
 S/N: 227607A

M-120
AERIAL COOLER MOTOR
 TBA
 RATED 7.5 HP @ 900 RPM
 INVERTER DUTY RATED
 TEFC / 480VAC / 3PH / 60HZ /
 CSA CLASS 1, DIV2, GROUP B, C & D
 WIRING BY OTHERS



PERMIT TO PRACTICE
NEXT COMPRESSION CORP.
 RM SIGNATURE: *[Signature]*
 RM APEGA ID #: 37293
 DATE: 2024-Mar-05
PERMIT NUMBER: P14344
 The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

NOTES:
 1. ELECTRICAL CLASSIFICATION: CSA CLASS 1, ZONE 2, GROUP IIA.

REVISIONS				
REV	DESCRIPTION	DATE	BY	APPR
A	ISSUED FOR HAZOP	3/8/23	RR	KH
B	ISSUED FOR APPROVAL	3/30/23	RR	KH
0	ISSUED FOR CONSTRUCTION	5/26/23	RR	KH
1	UPDATED EQUIPMENT TAGS	8/11/23	RR	KH
2	AS BUILT	12/20/23	ATE	KH

NEXT COMPRESSION
 281122 WAGON WHEEL CRESCENT, ROCKY VIEW COUNTY
 ALBERTA, CANADA T4A-0E2 (800) 256-1598
 WWW.NEXTCOMP.CA

TITLE: MAJOR EQUIPMENT	
PROJECT: CANADIAN NATURAL RESOURCES LTD	
VRU ROFLO 60 HP ELECTRIC SMITH, ALBERTA - LSD: TBA	
ENG. BY: K.HUARTSON	PROJECT NO: 101121
DRAWN BY: R.ROVETO	CLIENT REF. NO: -
DRAWN DATE (MM/DD/YYYY): 02/07/23	SHEET: 1 OF 1
DRAWING NO: 101121-3500	REV: 2

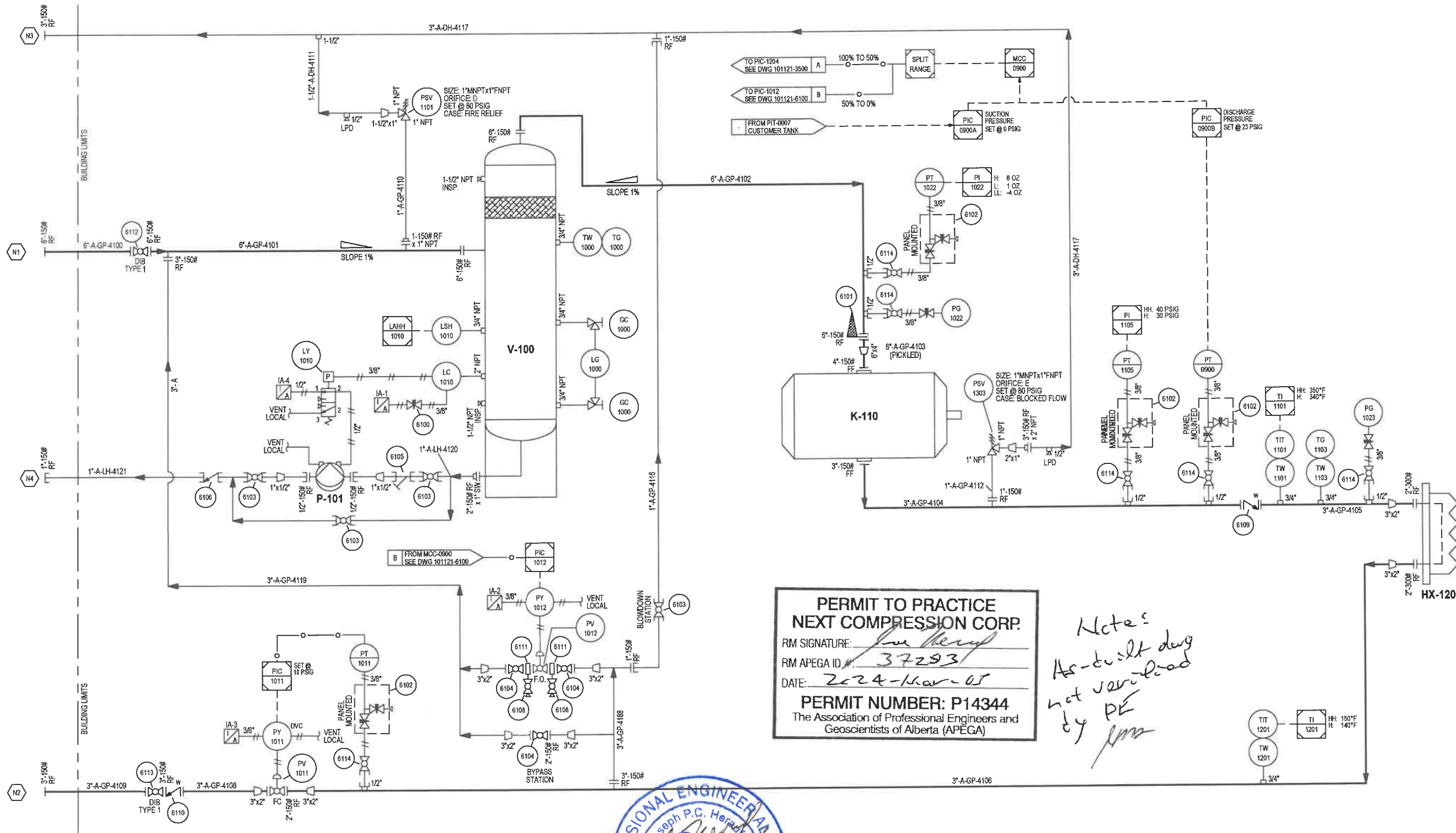
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P-101
SCRUBBER PUMP
 SANDPIPER G05B1SBTAWX00
 DOUBLE DIAPHRAGM
 NPSHA 140 FT / 6 GPM / 13 PSIG DISCH
 MAWP 100 PSIG @ 190°F
 S/N: 38101161

V-100
VERTICAL SCRUBBER
 14" OD x 64" S/S
 MAWP 230 PSIG @ 300/-20°F
 CARBON STEEL, 1/16" CA, NO INSULATION
 8"-316LSS MESH
 CRN: Z9099.2 (AB)
 S/N: 101121-6100

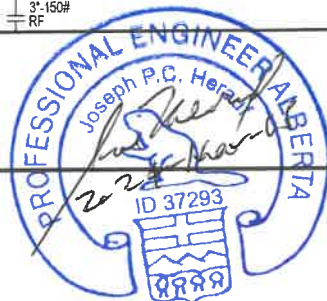
K-110
COMPRESSOR FRAME
 ROFLO SDBDE ROTARY VANE
 REFER TO D/N: 101121-3600

HX-120
GAS/COOLANT PLATE EXCHANGER
 DELTA-T LC11-60MB-UM
 MAWP: 362 PSIG @ 445-160°F
 316L PLATES, NICKEL/COPPER BRAZED
 SURFACE AREA: 61.6 FT²
 CRN: OH23683.601246789YTNC3171.3 (AB)
 S/N: 23N300062538002



PERMIT TO PRACTICE
NEXT COMPRESSION CORP.
 RM SIGNATURE: *Joseph P.C. Herald*
 RM APEGA ID #: 37293
 DATE: 2024-Nov-05
PERMIT NUMBER: P14344
 The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Notes:
 As-built design
 not verified
 by PE
 JPH



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TAG	DESCRIPTION	RATING
N1	VENT GAS INLET	6"-150# RF
N2	PROCESS OUTLET	3"-150# RF
N3	OPEN TO ATMOSPHERE	3"-150# RF
N4	RECOVERED LIQUIDS	1"-150# RF

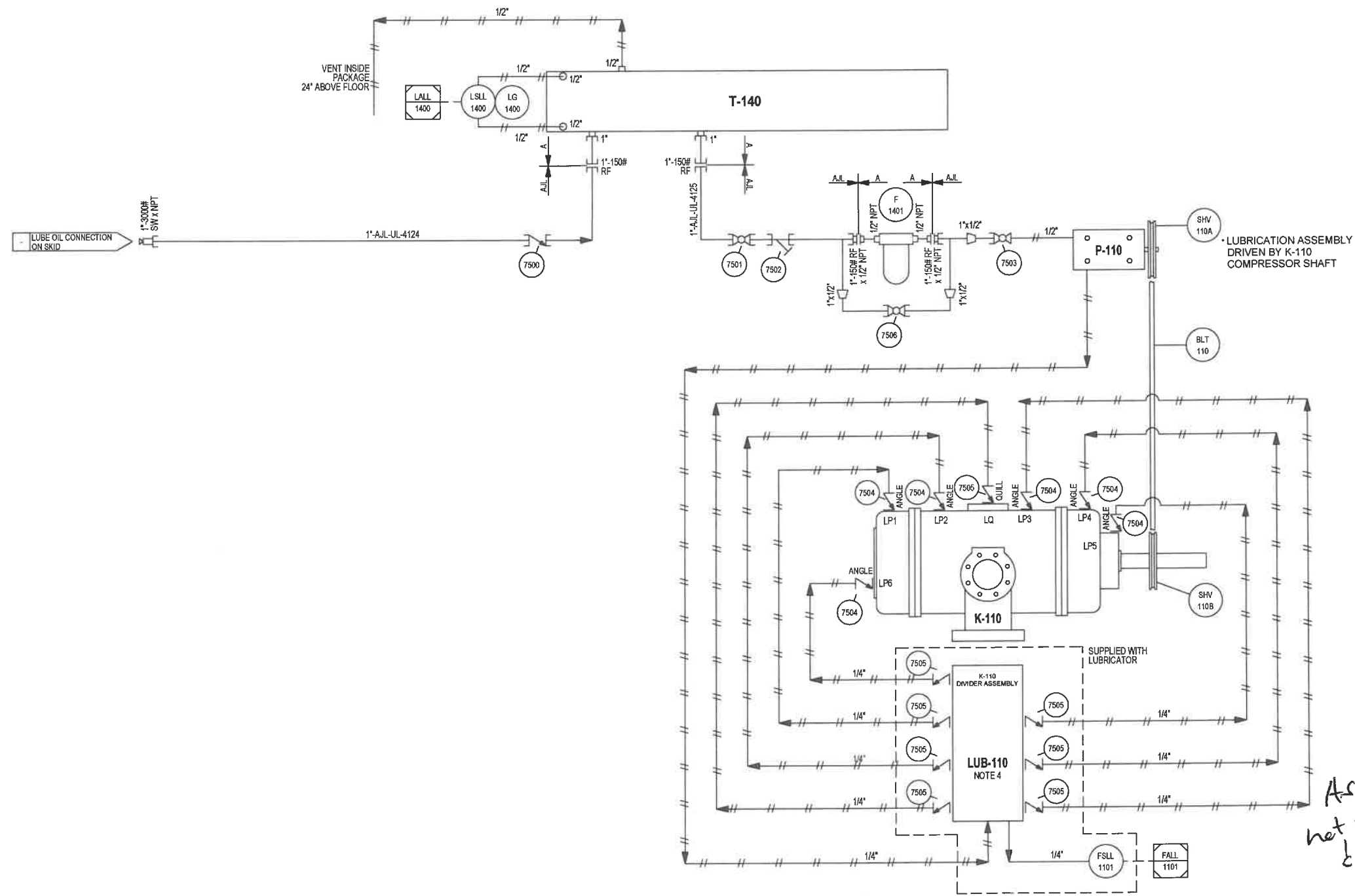
- NOTES:**
- ALL PRESSURE PIPING SYSTEMS WELDED OR THREADED AND TUBING TO COMPLY WITH B31.3 EDITION (2022).
 - REFER TO CNRL PIPING SPEC. FOR RADIOGRAPHY REQ'S & MATERIALS.
 - ELECTRICAL CLASSIFICATION: CSA CLASS 1, ZONE 2, GROUP IIA.
 - REFER TO PROJECT SPOOL DRAWINGS FOR WPS AND WELD DETAILS.

REV	DESCRIPTION	DATE	BY	APPR
A	ISSUED FOR HAZOP	3/6/23	RR	KH
B	ISSUED FOR APPROVAL	3/30/23	RR	KH
0	ISSUED FOR CONSTRUCTION	5/29/23	RR	KH
1	REM V-130, DISCH. SIZE WAS 4, PSV HEADER SIZE WAS 2-1/2"	6/21/23	RR	KH
2	REMOVED VESSEL TAG	8/11/23	RR	KH
3	ADDED TUBE SIZINGS, UPDATED PSV TAKE-OFF'S, LINES & EQUIP.	11/20/23	RR	KH
4	AS BUILT	12/20/23	ATE	KH
5	UPDATED LINE NUMBER	02/26/24	RR	KH
6	REVISED PG-1023 LOCATION, UPDATED PIT SYMBOLS	03/04/24	RR	KH

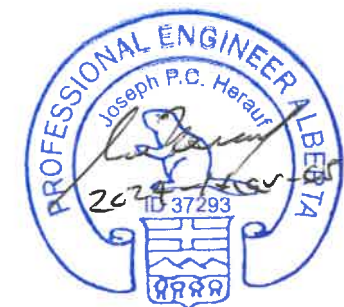
NEXT COMPRESSION
 261122 WINGOH WHEEL CRESCENT, ROCKY MOUNTAIN COUNTY
 ALBERTA, CANADA, T4A-6E2, 1(800) 258-1596
 WWW.NEXTCOMP.CA

TITLE: PROCESS DIAGRAM	
PROJECT: CANADIAN NATURAL RESOURCES LTD	
VRU ROFLO 60 HP ELECTRIC SMITH, ALBERTA - LSD: TBA	
ENG. BY: K.HUARTSON	PROJECT NO: 101121
DRAWN BY: R.ROVETO	CLIENT REF. NO:
DRAWN DATE (MM/DD/YYYY): 01/22/24	SHEET: 1 OF 1
DRAWING NO: 101121-6100	REV: 6

T-140
 COMP. LUBE OIL TANK
 12"W x 12"H x 36"L
 CAPACITY: 20 USG
 D/N: 101121-4030



**PERMIT TO PRACTICE
 NEXT COMPRESSION CORP.**
 RM SIGNATURE: *[Signature]*
 RM APEGA ID #: 37293
 DATE: 2024-11-05
PERMIT NUMBER: P14344
 The Association of Professional Engineers and
 Geoscientists of Alberta (APEGA)



*Note:
 As built dug
 not verified
 by PE*

- NOTES:**
1. ALL PRESSURE PIPING SYSTEMS WELDED OR THREADED AND TUBING TO COMPLY WITH B31.3 EDITION (2022).
 2. REFER TO CNRL PIPING SPEC. FOR RADIOGRAPHY REQ'S & MATERIALS.
 3. ELECTRICAL CLASSIFICATION: CSA CLASS 1, ZONE 2, GROUP IIA.
 4. SET LUBRICATOR FLOW RATE AS FOLLOWS:
 A - INITIAL 300 HR BREAK-IN PERIOD: 10.66 PINTS/DAY.
 B - NORMAL OPERATION: 5.33 PINTS/DAY.

REV	DESCRIPTION	DATE	BY	APPR
A	ISSUED FOR HAZOP	3/6/23	RR	KH
B	ISSUED FOR APPROVAL	3/30/23	RR	KH
0	ISSUED FOR CONSTRUCTION	5/26/23	RR	KH
1	UPDATED COUPLING TAG, UPDATED CODE	6/21/23	RR	KH
2	UPDATED BALLOON TAGS	8/11/23	RR	KH
3	ADDED TUBING SIZES, LUBE OIL CONTENT, PIPING LAYOUT	9/29/23	RR	KH
4	QUILL REFERENCE REMOVED	11/20/23	RR	KH
5	AS BUILT	12/20/23	ATE	KH



TITLE: COMPRESSOR UTILITIES	
PROJECT: CANADIAN NATURAL RESOURCES LTD	
VRU ROFLO 60 HP ELECTRIC SMITH, ALBERTA - LSD: TBA	
ENG BY: K.HUARTSON	PROJECT NO: 101121
DRAWN BY: R.ROVETO	CUSTOMER REF. NO:
DRAWN DATE (MM/DD/YYYY): 02/07/23	SHEET: 1 OF 1
DRAWING NO: 101121-7500	REV: 5

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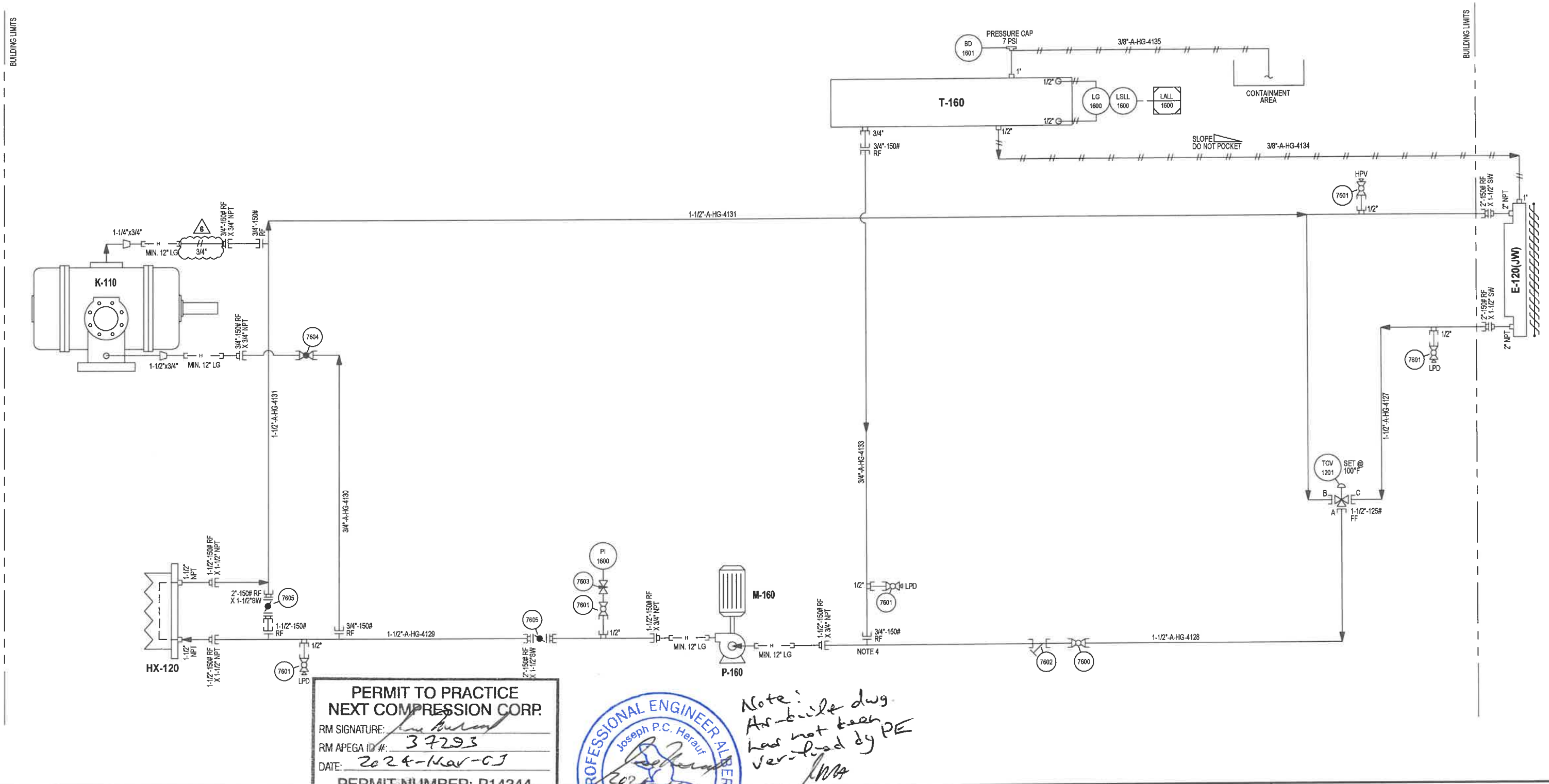
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HX-120
GAS/COOLANT PLATE EXCHANGER
 DELTA-T LC11-50MB-UM
 MAWP: 362 PSIG @ 445-150°F
 316L PLATES, NICKEL/COPPER BRAZED
 SURFACE AREA: 61.5 FT²
 CRN: OH23683.601246789YTNCS171.3 (AB)
 S/N: 23N300062638002

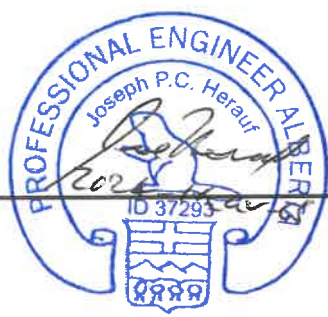
P-160/M-160
COOLANT PUMP
 FINISH THOMPSON
 MODEL: AC6STS2V470B015C22
 RATED 1.6 HP @ 3600 RPM
 CLASSIFICATION: CLASS 1, DIV 2, TEFC
 230/460V / 3PH
 WIRING BY OTHERS

T-160
SURGE TANK - GLYCOL
 12"W x 12"H x 22"L
 CAPACITY: 12.4 USG
 D/N: 101121-4030

E-120
UTILITY COOLER SECTION - JW
 RATED 441,541 BTU/HR
 MAWP: 14 PSIG @ 300°F-20°F
 SA214 CS TUBES, MANUAL LOUVERS
 CRN: N/A



PERMIT TO PRACTICE
NEXT COMPRESSION CORP.
 RM SIGNATURE: *[Signature]*
 RM APEGA ID #: 37293
 DATE: 2024-Mar-03
PERMIT NUMBER: P14344
 The Association of Professional Engineers and
 Geoscientists of Alberta (APEGA)



Note:
 As-built dwg.
 has not been
 verified by PE
 N/A

- NOTES:**
- ALL PRESSURE PIPING SYSTEMS WELDED OR THREADED AND TUBING TO COMPLY WITH B31.3 EDITION (2022).
 - REFER TO CNRL PIPING SPEC. FOR RADIOGRAPHY REQ'S & MATERIALS.
 - ELECTRICAL CLASSIFICATION: CSA CLASS 1, ZONE 2, GROUP IIA.
 - LOCATE BALANCE LINE CONNECTION AS CLOSE TO PUMP INLET AS POSSIBLE.

REV	DESCRIPTION	DATE	BY	APPR
A	ISSUED FOR HAZOP	3/8/23	RR	KH
B	ISSUED FOR APPROVAL	3/30/23	RR	KH
0	ISSUED FOR CONSTRUCTION	5/29/23	RR	KH
1	RELOCATED LPD, REM. LPD, UPDATED CODE	6/21/23	RR	KH
2	UPDATED EQUIPMENT TAG	8/11/23	RR	KH
3	ADDED ISO VALVE ON PI-1600	9/29/23	RR	KH
4	UPDATED MAWP AND TEMP FOR HX-120	11/20/23	RR	KH
5	AS BUILT	12/20/23	ATE	KH
6	FIELD REVISION OF COMP. GLYCOL OUTLET TO TUBING	03/04/24	RR	KH



TITLE: COOLING SYSTEM	
PROJECT: CANADIAN NATURAL RESOURCES LTD	
VRU ROFLO 60 HP ELECTRIC SMITH, ALBERTA - LSD: TBA	
ENG. BY: K.HUARTSON	PROJECT NO: 101121
DRAWN BY: R.ROVETO	CLIENT REF. NO: -
DRAWN DATE (MM/DD/YY): 01/22/24	SHEET: 1 OF 1
DRAWING NO: 101121-7600	REV: 6

BU-830
BUILDING SPECIFICATIONS

DESIGN NOTES
THE BUILDING IS DESIGNED BASED ON LSD LOCATION, SNOW AND SEISMIC CONDITIONS.
1. ALL BOLTS, SCREWS, ETC. USED FOR FASTENING ALUMINUM TO ALUMINUM AND ALUMINUM TO STEEL SHALL BE AUSTENITIC STAINLESS STEEL OR CADMIUM PLATED.

GENERAL NOTES
 DENOTES WHICH ARE APPLICABLE TO THIS JOB WHEN CHECKED

BUILDING TYPE
 SELF FRAMING (SHED) SELF FRAMING (GABLE) RIGID FRAMING (GABLE)
 P.ENG. STAMPED BUILDING DRAWING

ERECTION
 ON-SITE BY BUILDING MANUFACTURER
 AT FABRICATION SHOP BY BUILDING MANUFACTURER

ROOF SLOPE
 1:12 2:12 3:12 4:12

BUILDING SIZE
LENGTH: 13 FT 0 IN WIDTH: 10 FT 0 IN
EAVE HEIGHT: 10 FT 0 IN PEAK HEIGHT:

MATERIAL - WALL & ROOF PANELS (MIN. 22 GA.)
 GALVANIZED ALUMINUM PRE-PAINTED STEEL

COLOUR:
WALLS: TBD SPEC. NO.: TBD ROOF: TBD SPEC. NO.: TBD
DOORS: TBD SPEC. NO.: TBD TRIM: TBD SPEC. NO.: TBD

TRANSLUCENT ROOF PANELS:
WALLS: N/A COLOUR: N/A QTY: 0

REMOVABLE ROOF PANELS:
SIZE: N/A COLOUR: N/A QTY: 0

LINING
 24 GA. FLUTED ALUMINUM
 24 GA. FLUTED ALUMINUM - WHITE
 22 GA. PERFORATED ALUMINUM - WHITE

INSULATION (FIBERGLASS)
WALLS: R-12 R-20 3 LBCU.FT. DENSITY SOUND OTHER: __
ROOF: R-12 R-20 3 LBCU.FT. DENSITY SOUND OTHER: __

POLYETHYLENE VAPOUR BARRIER
 2 MIL 4 MIL 6 MIL

DOORS - 20 GA. METAL INSULATED (NORMAL SIZES)
 (1x) 3x7 SINGLE WS WGW PH LS DC SF CC CP
 (1x) 6x7 DOUBLE WS WGW PH LS DC SF CC CP
 WGW8D

WS - WEATHER STRIPPING LS - LOCKSET CC - CHECKCHAIN
WGW - WIRE GLAZED WINDOW DC - DOOR CLOSURE CP - CANOPY
PH - PANIC HARDWARE SF - STEEL FRAME
WGW8D - WIRE GLAZED IN WINDOW BOTH DOORS

ROLL-UP DOORS/SECTIONAL OR DOORS/SLIDING DOORS
 STEEL ROLL-UP DOOR, QTY: DIRECT DRIVE CHAIN HOIST
 STEEL HINGED ACCESS DOOR, QTY: GEARED DRIVE CHAIN HOIST
 STEEL BOLTED ACCESS DOOR, QTY: MANUAL OPERATED CHAIN HOIST
 TRANSOM, QTY: INSULATED

WINDOWS - HORIZONTAL SLIDING (w/ SCREEN SINGLE GLAZED)
 40x40 QTY: 40x50 QTY: WIRE GLAZED QTY:

WALL LOUVERS (NOMINAL SIZES)
 STAMPED LOUVER (w/ SLIDE CLOSURE AND SCREEN, QTY/SIZE:
 ADJUSTABLE LOUVER (w/ MANUAL CONTROL AND SCREEN, QTY/SIZE: (2) 16"x20"
 FLASHED OPENINGS FOR HEATER VENTS

RIDGE VENTILATOR
 RIDGE VENTILATOR (w/ SLIDE CLOSURE AND BIRDSCREEN
 RIDGE VENTILATOR (ACOUSTICAL) (w/ MANUAL CLOSURE AND BIRDSCREEN
 LENGTH: FULL

EAVESTROUGH, DOWNSPOUT & ICE RAKES
 EAVESTROUGH DOWNSPOUT (14) ICE RAKES

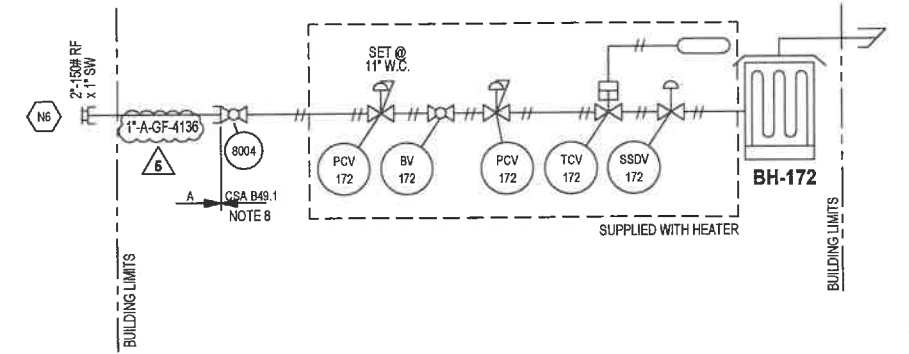
MATERIAL CODE:
F8301

EF-170/ EF-171
BUILDING FANS
12" FAN
1200 CFM
XP / 120VAC / 1PH / 60HZ / CSA
WIRING BY OTHERS



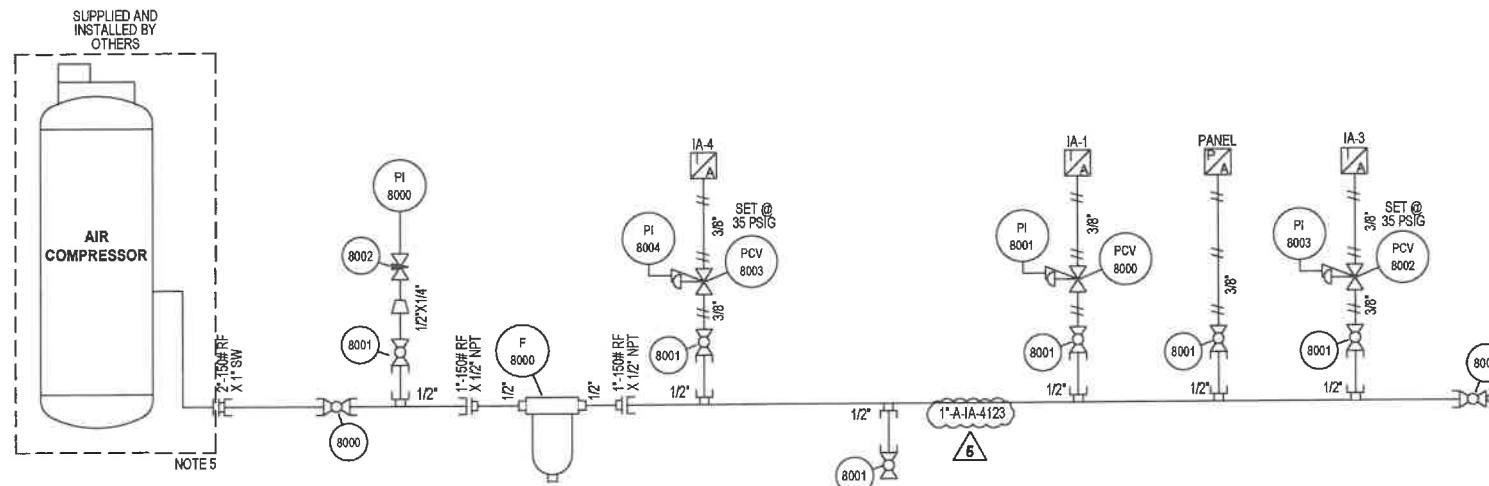
MATERIAL CODE:
F8301

BH-172
BUILDING HEATER
CATADYNE MK2448-XXXXX
RATED: XX,000 BTU/HR
INT HOOD, SAFETY SHUT OFF VALVE,
TEMP CONTROL VALVE
XP / 120VAC / 1PH / 60HZ / CSA STARTER



MATERIAL CODE:
F8401

MATERIAL CODE:
F4401



MATERIAL CODE:
F8301

PERMIT TO PRACTICE
NEXT COMPRESSION CORP.
RM SIGNATURE: *[Signature]*
RM APEGA ID #: 37293
DATE: 2024-Nov-05
PERMIT NUMBER: P14344
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)



Note: As-built has not been verified by PE

MATERIAL CODE:
F8001

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SKID EDGE CONNECTIONS		
TAG	DESCRIPTION	RATING
N5	INSTRUMENT AIR	2"-150# RF
N6	HEATER GAS SUPPLY	2"-150# RF

- NOTES:**
- ALL PRESSURE PIPING SYSTEMS WELDED OR THREADED AND TUBING TO COMPLY WITH B31.3 EDITION (2023).
 - REFER TO CNRL PIPING SPEC. FOR RADIOGRAPHY REQ'S & MATERIALS.
 - ELECTRICAL CLASSIFICATION: CSA CLASS 1, ZONE 2, GROUP IIA.
 - MAXIMUM OF (3) INSTRUMENTS PER 1/2" LATERAL FOR INSTRUMENT AIR/GAS.
 - UPSTREAM PROTECTION (PSV) FOR INSTRUMENT AIR BY OTHERS.
 - BUILDING HEATERS SIZED TO MAINTAIN A MIN. TEMP OF 50°F AT (3) AIR CHANGES/HOUR.
 - CSA/CSSA 3.16 CERTIFIED VALVE.
 - CSA B149.1 PIPING & TUBING REQUIRES PRESSURE TESTING AT 1.5X DESIGN PRESSURE FOR 3 HRS.

REVISIONS				
REV	DESCRIPTION	DATE	BY	APPR
A	ISSUED FOR HAZOP	3/8/23	RR	KH
B	ISSUED FOR APPROVAL	3/30/23	RR	KH
0	ISSUED FOR CONSTRUCTION	5/28/23	RR	KH
1	REPLACED ELEC. HEATERS, UPDATED CODE, ADDED PCV'S & IA-4	6/21/23	RR	KH
2	ADDED NOTES, SPEC BREAK & INSTRUMENT AIR COMPRESSOR	8/11/23	RR	KH
3	ADDED/UPDATED TUBING SIZES, UPDATED HEATER CONTENT	9/29/23	RR	KH
4	AS BUILT	12/20/23	ATE	KH
5	UPDATED LINE NUMBERS	02/28/24	RR	KH

NEXT COMPRESSION
281122 WAGON WHEEL CRESCENT, ROCKY MOUNT COUNTY
ALBERTA, CANADA, T4A-0E2, (403) 256-1586
WWW.NEXTCOMP.CA

TITLE: BUILDING UTILITIES			
PROJECT: CANADIAN NATURAL RESOURCES LTD			
VRU ROFLO 60 HP ELECTRIC SMITH, ALBERTA - LSD: TBA			
ENG. BY: K.HUARTSON	PROJECT NO: 101121		
DRAWN BY: R.ROVETO	CLIENT REF. NO: -		
DRAWN DATE (MM/DD/YYYY): 01/22/24	SHEET: 1 OF 1	DRAWING NO: 101121-8000	REV: 5