

**TABLE 1 - INSTRUMENTATION DETAILS**

GAUGE/INDICATOR UNITS: DUAL SCALE (PSIG/kPa & °F/°C)  
 INSTRUMENT MEDIUM: CLEAN DRY AIR  
 IMPULSE (SENSING) TUBING: 3/8" OD x 0.035" WALL, 316SS  
 INSTR. SUPPLY TUBING: 3/8" OD x 0.035" WALL, 316SS  
 INSTR. VENT TUBING: 3/8" OD x 0.035" WALL, 316SS  
 TUBE FITTINGS: SWAGelok 316SS c/w 316SS FERRULES  
 TUBING PNEUMATIC TEST: 1584 PSIG

ADDITIONAL NOTES:  
 1.1 TUBING RUNS IN TRAFFIC AREAS TO BE PROTECTED WITH REMOVABLE COVER.  
 1.2 NON-INCENDIVE WIRING TO BE PROTECTED INSIDE RIGID ALUMINUM CONDUIT.

**TABLE 2 - PROCESS PIPING DETAILS**

FABRICATION CODE: ASME B31.3 (2014)  
 HYDROTEST PRESSURE: 1.5 x DESIGN PRESSURE AT AMBIENT TEMPERATURE  
 CORROSION ALLOWANCE: 0.125"  
 RADIOGRAPHIC EXAMINATION: 100% OF BUTTWELDS  
 MPI EXAMINATION: 100% OF FILLET WELDS  
 HARDNESS TESTING: NONE  
 PWHT: 1150±25°F FOR 1 HR  
 EXTERNAL PREP: SSP-SP3 (POWER TOOL CLEANED)  
 INTERNAL PREP: INTERNALLY CLEANED & RUST PROTECTED  
 FLANGED PSV GUSSETS: REFER TO DFT-STD-0007  
 FLANGED INSTRUMENT GUSSETS: REFER TO DFT-STD-0007  
 NPT CONNECTIONS: HUB FLANGES & BLEED RINGS ONLY  
 REGISTRATION: ALBERTA, BC, SK

ADDITIONAL NOTES:  
 2.1 PIPING CLASSES TO BE BIDELL STANDARD (REFER TO ENG-STD-0001)  
 2.2 LOW TEMP PIPING (-49°F) OUTSIDE THE BUILDING  
 2.3 BIDELL TO PROVIDE P.ENG STAMPED P&ID & LINE LIST

**TABLE 3 - UTILITY PIPING DETAILS**

FABRICATION CODE: ASME B31.3 (2014)  
 HYDROTEST PRESSURE: 1.5 x DESIGN PRESSURE AT AMBIENT TEMPERATURE  
 CORROSION ALLOWANCE: 0.125"  
 RADIOGRAPHIC EXAMINATION: 100% OF BUTTWELDS [SEE NOTE 3.3]  
 MPI EXAMINATION: 100% OF FILLET WELDS [SEE NOTE 3.3]  
 HARDNESS TESTING: NONE [SEE NOTE 3.3]  
 PWHT: NONE (EXCEPT WHERE REQUIRED BY CODE)  
 EXTERNAL PREP: SSP-SP3 (POWER TOOL CLEANED)  
 INTERNAL PREP: CLEANED & RUST PROTECTED  
 FLANGED PSV GUSSETS: REFER TO DFT-STD-0007  
 FLANGED INSTRUMENT GUSSETS: REFER TO DFT-STD-0007  
 NPT CONNECTIONS: THREADOLETS TO BE MINIMUM CL3000  
 REGISTRATION: AB, BC, SK (SEE NOTE 3.2)

ADDITIONAL NOTES:  
 3.1 PIPING CLASSES TO BE BIDELL STANDARD (REFER TO ENG-STD-0001)  
 3.2 NON-CODE PIPING IS NOT REGISTERED.  
 3.3 NDE REQUIREMENTS DO NOT APPLY TO NON-CODE PIPING.

**TABLE 4 - PROCESS PRESSURE VESSEL DETAILS**

FABRICATION CODE: ASME SECTION VIII, DIV 1 (2013)  
 HYDROTEST PRESSURE: 1.3 x DESIGN PRESSURE AT AMBIENT TEMPERATURE  
 CORROSION ALLOWANCE: 0.125"  
 RADIOGRAPHIC EXAMINATION: RT-1 (INCLUDING 100% NOZZLE BUTT WELDS)  
 MPI EXAMINATION: YES (LIFTING LUGS ONLY)  
 HARDNESS TESTING: NONE  
 PWHT: 1150±25°F FOR 1HR  
 EXTERNAL PREP: SSPC-SP3 (POWER TOOL CLEANED)  
 INTERNAL PREP: FLUSHED & RUST PROTECTED  
 NPT CONNECTIONS: NONE  
 REGISTRATION: AB, BC, SASK

ADDITIONAL NOTES:  
 4.1 - SHEAR WAVE UT ON VESSEL CAT D WELDS

**TABLE 12 - FLUIDS**

OPERATIONAL FILL OF CHEVRON HDAX 7200 LOW ASH40 COMPRESSOR OIL SHIPPED W/UNIT

**TABLE 5 - SKID, CRANE & STEEL DETAILS**

SKID STYLE: ONE PIECE  
 MAIN BEAMS: 18@50 WIDE FLANGE  
 STRINGER BEAMS: 4@13 WIDE FLANGE  
 SEAL PAN: FLAT, FULL SKID COVERAGE, 12ga  
 UNDER-SKID INSULATION: NONE  
 OVERALL DIMENSIONS: 17'-4" WIDE x 29'-7" LONG  
 GRATING: 3/16" x 1", NON-SERRATED, CARBON STEEL  
 SKID SURFACE PREP: SSPC SP-2 (HAND TOOL CLEAN)  
 SKID LIFTING DEVICES: JACKING LUGS (100% MPI OF WELDS)

SKID STEEL MTRS: NOT REQUIRED  
 STRUCTURAL STEEL MTRS: NOT REQUIRED  
 SKID P.ENG STAMP: NOT REQUIRED  
 INTEGRAL SKID TANKS: 2 x 132 GALLON WASTE LIQUID WING TANKS  
 CRANE: 1/2 TON JIB CRANE  
 INTEGRAL CRANE TANKS: NONE

ADDITIONAL NOTES:  
 5.1 SKID TO BE CONSTRUCTED IN ACCORDANCE WITH CWB STANDARDS.  
 5.2 SKID TANKS HAVE PRIMARY CONTAINMENT ONLY  
 5.3 NEOPRENE TO BE INSTALLED BETWEEN SUPPORTS & GRATING  
 5.4 COMPLETE SKID PRIMING PRIOR TO INSTALLATION OF EQUIPMENT  
 5.5 INBOARD CYLINDER SUPPORTS MOUNTED ON FULL DEPTH GUSSETED WIDE FLANGE  
 5.6 LIVE ROLL LIFTING POINTS AT THE COOLER END FOR LOADING & UNLOADING

**TABLE 6 - PAINT DETAILS**

PRIMER: WARM GREY  
 PAINT: WARM GREY  
 PAINT COLOUR: WARM GREY  
 PAINT ENGINE: OEM FINISH  
 PAINT COMPRESSOR: OEM FINISH  
 PAINT COOLER: OEM FINISH

ADDITIONAL NOTES:  
 6.1 REFER TO BIDELL PAINT SPEC FOR MORE DETAILS  
 6.2 SEE TABLE 5 FOR SKID PAINTING DETAILS

**TABLE 7 - PIPE SUPPORT DETAILS**

PROCESS PIPING ≤6NPS: 2 BOLT CLAMP (NO U-BOLT STYLE)  
 PROCESS PIPING >6NPS: 4 BOLT CLAMP (NO U-BOLT STYLE)  
 UTILITY PIPING: 2 BOLT CLAMP (NO U-BOLT STYLE)

ADDITIONAL NOTES:  
 7.1 REFER TO BES-CLAMP-01/02 FOR PIPE CLAMP DETAILS.

**TABLE 8 - PHYSICAL TAGGING**

INSTRUMENT TAGGING: YES  
 EQUIPMENT TAGGING: NONE

ADDITIONAL NOTES:  
 8.1 TAGGING TO BE COMPLETED ONCE UNIT BUILD IS COMPLETE.

**TABLE 9 - CUSTOMER & INSPECTION**

UNIT DESTINATION: MULLIGAN OIL BATTERY - GAS LIFT COMPRESSOR  
 CUSTOMER AB-10 CONTACT: TBA  
 3RD PARTY INSPECTION: KEN KELLS PH: 403-391-8030  
 SHOP TEST RUN: NONE

**TABLE 10 - ELECTRICAL DETAILS**

COMPONENT ELECTRICAL CERTIFICATION: CSA CLASS 1, DIV 1 AND/OR 2  
 PACKAGE ELECTRICAL CERTIFICATION: NOT CERTIFIED AS FULL PACKAGE


ADDITIONAL NOTES:  
 10.1 ALL ON-SKID EQUIPMENT TO MEET COMPONENT ELECTRICAL CERTIFICATION REQUIREMENTS.  
 10.2 CONTROL PANEL WILL RECEIVE A POINT TO POINT CHECK OF ALL HOOK UPS & SHUTDOWNS

**TABLE 11 - ENGINEERING STUDIES**

TORSIONAL: YES  
 ACOUSTICAL/MECHANICAL: NONE  
 CRANE: YES, KOVA ENGINEERING  
 FUGITIVE EMISSIONS: NO  
 ADDITIONAL NOTES:

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**AS BUILT**



*Murthy Ganapathy*

REV	DATE	CREATED	REVIEWED	APPROVED	DESCRIPTION
D	16-04-13	GT	GW	AH	AS BUILT
C	15-08-17	GT	GW	AH	REVISED PNEUMATIC TEST PRESSURE
B	15-08-06	GT	GW	AH	REVISED AS NOTED
A	15-07-23	GT	GW	AH	ISSUED FOR CONSTRUCTION
O	15-07-07	GT	GW	AH	ISSUED FOR APPROVAL

REVISIONS

MAIN SHOP / OFFICE: 6900 - 112th AVENUE S.E. CALGARY, AB T2C 4Z1  
 PHONE: (403) 235-5877  
 FAX: (403) 272-7749

**BIDELL™** APEGA PERMIT NUMBER P08318  
 GAS COMPRESSION

SCOPE SUMMARY  
 BALDOR C5010Z/ARIEL JGJ/2 / AIR-X 81AEF  
 CUSTOMER: TOURMALINE OIL CORP c/o OEL PROJECTS LTD  
 LOCATION: 9969 GAS LIFT COMPRESSOR  
 LSD: 12-06-81-7 W6M

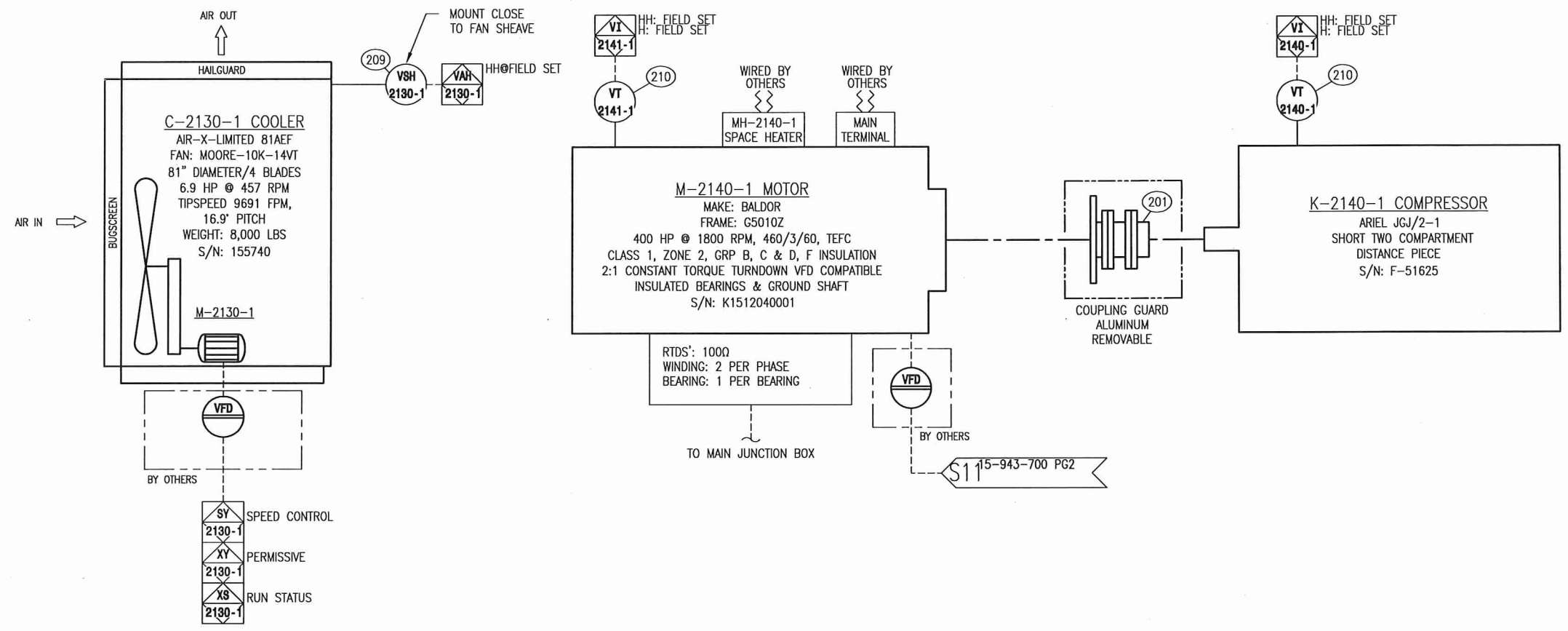
SHEET#: 1 OF 1  
 JOB#: 15-943

PAPER SIZE: 11"x17" SCALE: NTS DWG#: 15-943-000 REV: D

M-2130-1  
 MAKE: BALDOR  
 MODEL: ECP3774T-4  
 FRAME: 215T  
 10HP, 1760 RPM, 480/3/60, TEFC  
 CLASS 1, DIVISION 2 GRP B, C & D, F INSULATION  
 VFD COMPATIBLE

MH-2140-1  
 MOTOR SPACE HEATER  
 350W, 120V/1PH/60HZ

BILL OF MATERIALS			
MK	QTY	PART NUMBER	DESCRIPTION
201	1	DC-1072	COUPLING, FLEX, DRIVE:4.120"-4.121" HUB, CS, DRIVEN:3.7452"-3.7462" HUB, CS, DBSE:6.81", MAX:128000LBS-IN, 2000RPM, 203.2HP/100RPM (SF=1), DISCS:CS MFG: TB WOODS MODEL: HSH50-GRS-SB
209	1	VS-100	SWITCH, VIB, SPDT, MANUAL RESET, ENTELA APPROVED MFG: MURPHY MODEL: VS2-E
210	2	VT-123	TRANSMITTER, VIBRATION, 1/4"-MNPT, 0-1 in/s PEAK, -40-112F, 24VDC, 4-10mA, XP, CSA, CL IDIV I, GRP B, GRP C, GRP D, CASE: 303SS MFG: METRIX MODEL: ST5484E-123-020-00



LINETYPE LEGEND	
PROCESS PIPING	—————
UTILITY PIPING	—————
SEAMLESS TUBING	—————
ELECTRICAL WIRING	-----
INTERNAL LOGIC	.....
OEM SUPPLIED	-----
ASSEMBLY BOUNDARY	-----
BUILDING WALL	-----
DRIVETRAIN	-----
CUSTOMER SUPPLIED	.....
EXISTING EQUIPMENT	.....

INSTRUMENTATION TAGGING LEGEND	
○	LOCAL MOUNTED DEVICE
◐	PANEL MOUNTED DEVICE
◑	OFF-SKID MOUNTED DEVICE
◒	SIGNAL TO PANEL
◓	SIGNAL TO OFF-SKID
◔	PANEL LOGIC

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**AS BUILT**

PROFESSIONAL ENGINEER ALBERTA  
 MURPHY GARANTY  
 REG 999

*N. Ganapathy*

REV	DATE	CREATED	REVIEWED	APPROVED	DESCRIPTION
D	16-04-13	GT	GW	AH	AS-BUILT
C	15-08-13	GT	GW	AH	REVISED COUPLING
B	15-08-06	GT	GW	AH	REVISED SPACE HEATER TAG
A	15-07-23	GT	GW	AH	ISSUED FOR CONSTRUCTION
O	15-07-07	GT	GW	AH	ISSUED FOR APPROVAL

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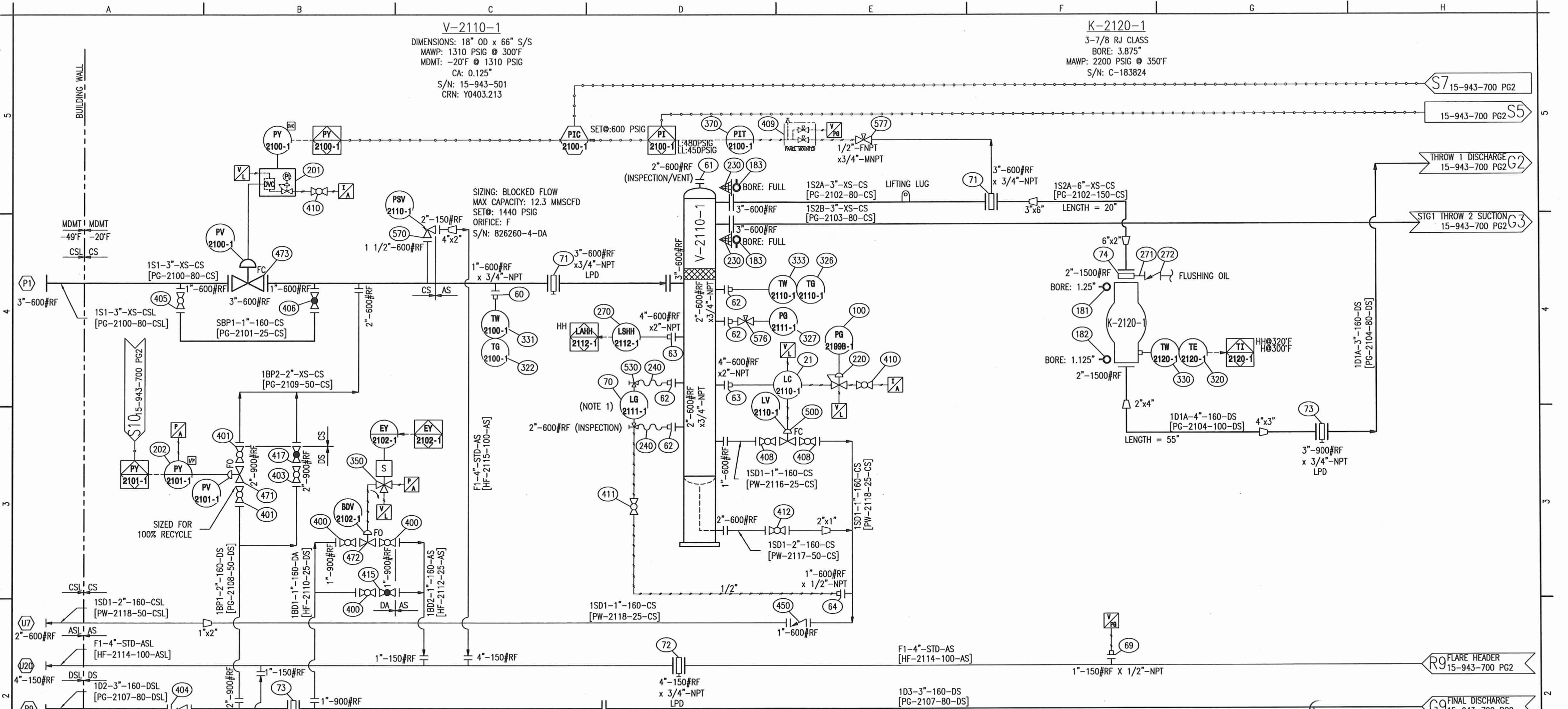
**BIDELL™** APEGA PERMIT NUMBER P08318  
 GAS COMPRESSION

DRIVE TRAIN DIAGRAM  
 BALDOR G5010Z/ARIEL JGJ/2 / AIR-X 81AEF  
 CUSTOMER: TOURMALINE OIL CORP c/o OEL PROJECTS LTD  
 LOCATION: 9969 GAS LIFT COMPRESSOR  
 LSD: 12-06-81-7 W6M

PAPER SIZE 11"x17" SCALE NTS DWG# 15-943-200 REV D

V-2110-1  
 DIMENSIONS: 18" OD x 66" S/S  
 MAWP: 1310 PSIG @ 300°F  
 MDMT: -20°F @ 1310 PSIG  
 CA: 0.125"  
 S/N: 15-943-501  
 CRN: Y0403.213

K-2120-1  
 3-7/8 RJ CLASS  
 BORE: 3.875"  
 MAWP: 2200 PSIG @ 350°F  
 S/N: C-183824



FABRICATION NOTES:  
 1. LEVEL GAUGE TO BE REMOTE MOUNTED ON A POST

LINETYPE LEGEND	STANDARD TUBING SIZES	PNEUMATIC TERMINATIONS	INSTRUMENTATION TAGGING LEGEND
PROCESS PIPING	1/4" - NOT ALLOWED	INSTRUMENT AIR	LOCAL MOUNTED DEVICE
UTILITY PIPING	3/8" - 0.035"	PANEL AIR	PANEL MOUNTED DEVICE
SEAMLESS TUBING	1/2" - 0.049"	VENT LOCALLY	OFF-SKID MOUNTED DEVICE
ELECTRICAL WIRING	3/4" - 0.065"	VENT TO PROCESS GAS HEADER	SIGNAL TO PANEL
INTERNAL LOGIC	1" - 0.083"		SIGNAL TO OFF-SKID
OEM SUPPLIED			PANEL LOGIC
ASSEMBLY BOUNDARY			
BUILDING WALL			
DRIVETRAIN			
CUSTOMER SUPPLIED			

ALL TUBING TO BE 316SS

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AS BUILT



*M. Ganapathy*

REV	DATE	CREATED	REVIEWED	APPROVED	DESCRIPTION
F	16-04-13	GT	GW	AH	AS-BUILT
E	15-09-09	GT	GW	AH	BLEED RINGS ADDED
D	15-08-25	GT	GW	AH	REVISED AS NOTED
C	15-08-13	GT	GW	AH	SWEET GAS PURGE REMOVED
B	15-08-06	GT	GW	AH	REVISED AS NOTED
A	15-07-23	GT	GW	AH	ISSUED FOR CONSTRUCTION
O	15-07-07	GT	GW	AH	ISSUED FOR APPROVAL

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**BIDELL** APEGA PERMIT NUMBER P08318  
 GAS COMPRESSION

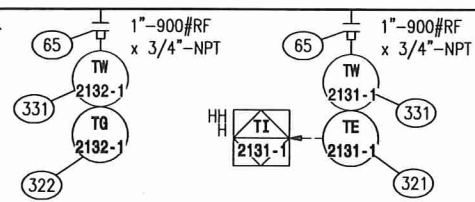
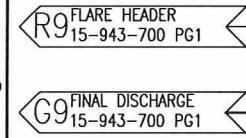
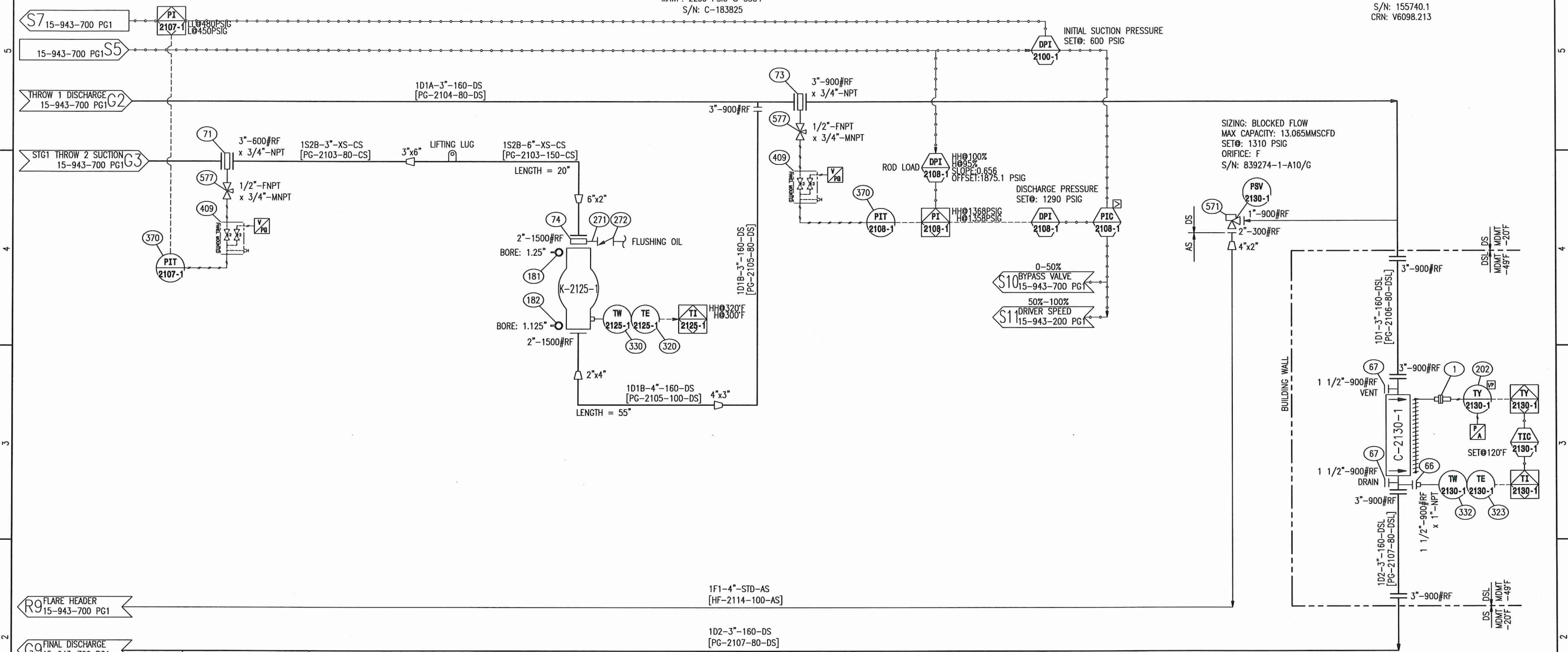
SOUR PROCESS FLOW DIAGRAM  
 BALDOR G5010Z/ARIEL JGJ/2 / AIR-X 81AEF  
 CUSTOMER: TOURMALINE OIL CORP c/o OEL PROJECTS LTD  
 LOCATION: 9969 GAS LIFT COMPRESSOR  
 LSD: 12-06-81-7 W6M

SHEET#: 1 OF 3  
 JOB#: 15-943

PAPER SIZE 11"x17" SCALE NTS DWG# 15-943-700 REV F

**K-2125-1**  
 3-7/8 RJ CLASS  
 BORE: 3.875"  
 MAWP: 2200 PSIG @ 350°F  
 S/N: C-183825

**C-2130-1**  
 MAWP: 1932 PSIG @ 350°F  
 MDMT: -49°F @ 1932 PSIG  
 CA: 0.125"  
 S/N: 155740.1  
 CRN: V6098.213



LINETYPE LEGEND	STANDARD TUBING SIZES	PNEUMATIC TERMINATIONS	INSTRUMENTATION TAGGING LEGEND
PROCESS PIPING ———	1/4" - NOT ALLOWED	INSTRUMENT AIR	LOCAL MOUNTED DEVICE
UTILITY PIPING ———	3/8" - 0.035"	PANEL AIR	PANEL MOUNTED DEVICE
SEAMLESS TUBING ———	1/2" - 0.049"	VENT LOCALLY	OFF-SKID MOUNTED DEVICE
ELECTRICAL WIRING - - - -	3/4" - 0.065"	VENT TO PROCESS GAS HEADER	SIGNAL TO PANEL
INTERNAL LOGIC - - - - -	1" - 0.083"		SIGNAL TO OFF-SKID
OEM SUPPLIED - - - - -			PANEL LOGIC
ASSEMBLY BOUNDARY ———			
BUILDING WALL ———			
DRIVETRAIN - - - - -			
CUSTOMER SUPPLIED - - - - -			

ALL TUBING TO BE 316SS

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**AS BUILT**



*N. Ganapathy*

REV	DATE	CREATED	REVIEWED	APPROVED	DESCRIPTION
F	16-04-13	GT	GW	AH	AS-BUILT

REVISIONS

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**BIDELL**™ APEGA PERMIT NUMBER P08318  
 GAS COMPRESSION

SOUR PROCESS FLOW DIAGRAM  
 BALDOR G5010Z/ARIEL JGJ/2 / AIR-X 81AEF

CUSTOMER: TOURMALINE OIL CORP c/o OEL PROJECTS LTD  
 LOCATION: 9969 GAS LIFT COMPRESSOR  
 LSD: 12-06-81-7 W6M

SHEET#: 2 OF 3  
 JOB#: 15-943

PAPER SIZE 11"x17" SCALE NTS DWG# 15-943-700 REV F

FABRICATION NOTES:  
 1. LEVEL GAUGE TO BE REMOTE MOUNTED ON A POST

BILL OF MATERIALS			
MK	QTY	PART NUMBER	DESCRIPTION
408	2	BV-1246	VALVE, BALL, 1"-600#RF, BODY:WCC, SEAT:PTFE, TRIM:316 SS, FP, FLOATING, 2 PIECE BOLTED, PLAIN LEVER, LT, NACE0175 MFG: WKM MODEL: B182-CS2-42-S2
409	0	MVS-1004	VALVE, MANIFOLD, 2-WAY, 1/2"FNPT, 316SS, NACE MFG: ROSEMOUNT MODEL: 0306BT22BA11SG (QTY:3, C/W PANEL)
410	2	BVSF-022CS	VALVE, BALL, 1/4"-FNPT, 2000#, FP, 2PC, SWEET MFG: FUSION MODEL: 428TF002F20N1AN
411	1	BV-1029	VALVE, BALL, 1/2"-FNPT, CL3000, 2PC, FL, FP, NACE MFG: WKM MODEL: 1/2F-B138-CS2-43-S2-WR
412	1	BV-1244	VALVE, BALL, 2"-600#RF, BODY:WCC, SEAT:PTFE, TRIM:316 SS, RP, FLOATING, 2 PIECE BOLTED, PLAIN LEVER, NACE0175 MFG: WKM MODEL: B114-CS2-42-S2
415	2	GBF-1071	VALVE, GLOBE, 1"-1500#RF, BODY:A350-LF2, SEAT:A182-F304, TRIM:316/HF SS, BOLTED BONNET, NACE0175 MFG: CHERO MODEL: W754/150RF-LF2-TR16-N
417	1	GBF-1050	VALVE, GLOBE, 2"-1500#RF, BODY:LCC, SEAT:316 SS, TRIM:316 SS, BOLTED BONNET, NACE0175 MFG: NEWCO MODEL: 215F-LCC4/2-NC
450	1	SCF-1035	VALVE, CHECK, PISTON, 1"-600#RF, BODY:A350-LF2, SEAT:A479-410 SS, TRIM:316 SS, SPRING:A479-316 SS, NACE0175, 8.5"/F MFG: NEWCO MODEL: 46F-LF24/3-1"
471	1	PCV-1290	VALVE, CONTROL, GLOBE, 2"-900/1500#RF, FO, 2575PSID MAX, 3/4" PORT, CL M, Cv(1)=13.4, GUIDED, BODY:LCC, MICRO FORM, NACE0175, SIZE 40 ACTR, 0-33PSIG MFG: FISHER MODEL: D4
472	2	PCV-1276	VALVE, CONTROL, GLOBE, 1"-900/1500#RF, FO, 3705PSID MAX, 3/8" PORT, CL M, Cv(1)=3.53, BODY:LCC, MICRO FORM, NACE0175, SIZE 40 ACTR, 0-33PSIG MFG: FISHER MODEL: D4
473	1	PCV-1321	VALVE, CONTROL, GLOBE, 3"-600#RF, FC, 1450PSID MAX, 3-7/16"PORT, CL V, Cv(1)=86.7, GUIDED, BODY:A216-WCC, EQ%, NACE0175, SIZE 45 ACTR, 0-33PSIG W/ POSITIONER& REG MFG: FISHER MODEL: 667-45 ET / DVC6200AC / 67CFR
500	1	PCV-1138	VALVE, CONTROL, GLOBE, 1"-600#RF, FC, 1/4" PORT, 1480PSID MAX, CLASS IV, Cv(1)=1.76, BODY:A352 LCC, TRIM:17-4PH SS, NACE0175 MFG: FISHER MODEL: D4
530	1	LLG-190N	VALVE SET, GAUGE, 3/4"-NPT,NACE MFG: PENBERTHY MODEL: 330J-NACE
570	1	PSV-1095	VALVE, PSV, 1-1/2", RF, CL600 X 2", RF, CL150, F, CONV, NACE MFG: FARRIS MODEL: 26FA13-120/S7
571	1	PSV-1248	VALVE, RELIEF, 1"-900#RF X 2"-300#RF, F, SNAP PILOT, BOLTEDBONNET, BODY:A216-WCB, TRIM:316 SS, SEAT:316 SS, SPRING:INCONEL, NACE0175 MFG: FARRIS MODEL: 38FC14-120/S7
576	1	NVS-1008	VALVE, NEEDLE, 3/4"-MNPT X 1/2"-FNPT, MAWP:6000PSIG@100F, BODY:316 SS, SEAT:316 SS, TRIM:316 SS, PACKING:TEFLON, NACE0175 MFG: CENTURY MODEL: CM11L1M64TCNTSP1
577	3	NVS-1009	VALVE, NEEDLE, MULTIPOINT GAUGE, 3/4"-MNPT (EXTENDED) X 3x1/2"-FNPT, MAWP:10000PSIG@100F, BODY:316 SS, SEAT:316 SS, TRIM:316 SS, PACKING:TEFLON,NACE0175 MFG: CENTURY MODEL: CM11L-1-M64T-CN-T-SP100

BILL OF MATERIALS			
MK	QTY	PART NUMBER	DESCRIPTION
271	2	INJ-1017	INJECTION QUILL, 1/2"-MNPT X 1/2"-FNPT, 5.75" OAL/STEM, 4" U, MAWP:3000PSIG@300F, NO BALL CHECK, BODY:316 SS, SOUR, THERMOWELL CONVERT, HEX HEAD PAINTED RED MFG: UNIFIED VALVE MODEL: TWO2A08L5.5X
320	2	TCP-K753	THERMOCOUPLE, "K", 1/2" NPT, 1/4" OD X 7-1/2" STEM, 316 SS MFG: WESTERN GAUGE MODEL: 1K1BKU7.5Z23120FTA
321	1	TCP-K403	THERMOCOUPLE,"K",1/2"NPT,1/4"ODX4" 316SS MFG: WESTERN GAUGE MODEL: 1K1BKU4Z23120FTA
322	2	TI-32-250	IND, TEMP, 0-250°F, 3"DIAL, 1/2"-NPT, 1/4" X 2-1/2", CBM, SS MFG: WESTERN GAUGE MODEL: WL31105
323	1	TCP-K1053	THERMOCOUPLE, TYPE "K", 1/2"NPT, 1/4"OD X 10-1/2", 316SS MFG: WESTERN GAUGE MODEL: 1K1BKU10.5Z23120FTA
326	1	TI-39-160	IND, TEMP, -40-160°F, 3"DIAL, 1/2"-NPT, 1/4" X 9", CBM, SS MFG: WESTERN GAUGE MODEL: WL31402
327	1	PI-1004	IND, PRESS, 0-1000PSI, 4-1/2"DIAL, 1/2"NPT, BTM, SS MFG: WIKA MODEL: 233.34
330	2	TOW-1087	THERMOWELL, STRAIGHT, 1/2"-MNPT X 1/2"-FNPT, 4" U, 5.75" OAL, 0.260" BORE, BODY:316 SS, SOUR MFG: MAC-WELD MODEL: TWO2A08L5.5
331	3	TOW-275N	THERMOWELL, STRT, 3/4"MNPTX1/2"FNPT, 1.375"U, 0.26" ID, 2.75"OAL MFG: WESTERN GAUGE MODEL: 3/4-025-316
332	1	TOW-0021	THERMOWELL, STRT, 1"MNPT X 1/2"FNPT, 7-1/2"U, 0.26 ID, SS MFG: WESTERN GAUGE MODEL: 1-090-316ST
333	1	TOW-1088	THERMOWELL, STRAIGHT, 3/4"-MNPT X 1/2"-FNPT, 7.5" U, 9.25" OAL, 0.260" BORE, MAWP:7038PSIG@300F, BODY:316 SS, SOUR MFG: WESTERN GAUGE MODEL: 3/4-090-316-ST
350	0	SOL-002	VALVE, SOL, 3/2, 1/4"FNPT, 115PSID MAX, 3/32"ORF, NC, 24VDC, SST MFG: ASCO MODEL: EFB320G202-24(QTY: 2, C/W PANEL)
370	0	PT-6401	TRANSMITTER, PRESSURE, 1/2"-FNPT, -14.7-4000PSIG, 4-20mA HART, LCD, CSA, XP, INTRINSIC SAFE, NON-INCEN, BODY:316L SS, TRIM:316L SS, SOUR MFG: FISHER MODEL: 2088G4S22A1M5B4C6 (QTY: 3, c/w PANEL)
400	6	BV-1247	VALVE, BALL, 1"-1500#RF, BODY:A350-LF2, SEAT:PTFE, TRIM:CF8M, FP, FLOATING, 3 PIECE THREADED, LOCKABLE LEVER, LT, NACE0175 MFG: JAG MODEL: T3-F10R15L
401	2	BV-1245	VALVE, BALL, 2"-1500#RF, BODY:LCC, SEAT:NYLON, TRIM:316 SS,FP, TRUNNION, 2 PIECE BOLTED,PLAIN LEVER, NACE0175 MFG: WKM MODEL: 37-YRF-37
403	1	BV-1243	VALVE, BALL, 2"-1500#RF, BODY:LCC, SEAT:PTFE, TRIM:316 SS, RP, FLOATING, 2 PIECE BOLTED, PLAIN LEVER, NACE0175 MFG: WKM MODEL: B308-CS3-27-S2
404	1	PCN-1014	VALVE, CHECK, PISTON, 3"-900#RF, NON-SLAM, A352 LCC BODY / BONNET, 316SS TRIM, INCONEL X-750 SPRING, NACE0175, F/F: 15" MFG: DFT MODEL: PDC 31-8K1D-4A5
405	1	BV-1246	VALVE, BALL, 1"-600#RF, BODY:WCC, SEAT:PTFE, TRIM:316 SS, FP, FLOATING, 2 PIECE BOLTED, PLAIN LEVER, LT, NACE0175 MFG: WKM MODEL: B182-CS2-42-S2
406	1	GBF-1072	VALVE, GLOBE, 1"-600#RF, BODY:A350-LF2, SEAT:A182-F304, TRIM:316/HF SS, BOLTED BONNET, NAC MFG: CHERO MODEL: R354/60RF-LF2-TR12-N

BILL OF MATERIALS			
MK	QTY	PART NUMBER	DESCRIPTION
1	0	NPN	ACTUATOR, MFG: DURASTROKE, MODEL: 1000 6-30 PSI (QTY: 1, C/W COOLER)
21	1	LLC-000	CONTROLLER, LEVEL, PNEUMATIC, 2"-NPT, SOUR MFG: FISHER MODEL: L2-XB
60	1	BWF-1006	FLANGE, HUB, 1"-600#RF X 3/4"-NPT, SA105N
61	1	BWF-C3D	FLANGE, BLIND, RF, 2"-600#, SA105N
62	4	BWF-2008	FLANGE, HUB, 2"-600#RF X 3/4"-NPT, SA-105N
63	2	BWF-H3G	FLANGE, HUB, 4"-600#RF X 2"-NPT, SA-105N
64	1	BWF-1203	FLANGE, HUB, 1"-600#RF X 1/2"-NPT, SA-105N
65	2	BWF-1007	FLANGE, HUB, 1"-900/1500#RF X 3/4"-NPT, SA105N
66	1	BWF-1494	FLANGE, HUB, 1-1/2"-900#RF X 1"-NPT, SA-350-LF2 GR1
67	2	BWF-C4CL	FLANGE, BLIND, RF, 1-1/2"-900/1500#, SA350/LF2
69	1	BWF-1159	FLANGE, HUB, 1"-150#RF X 1/2"-NPT, SA-105N
70	1	LLG-159N	GAUGE, LEVEL, TRANSPARENT, 1/2" NPT, NACE MFG: PENBERTHY MODEL: TH9-NACE
71	3	BLF-0043	BLEED RING, 3"-600#RF, 1-1/2" THK, SA-516-70N, TAPPED 3/4"-NPT
72	1	BLF-1000	BLEED RING, 4"-150#RF, 1-1/2" THICK, 1 X 3/4" DRILL & 3/4"-NPT TAP, SA-516-70N
73	3	BLR-1033	BLEED RING, 3"-900#RF, 1-1/2" THK, SA-516-70N, 1 X TAPPED 3/4"-NPT
74	2	BLR-1034	BLEED RING, 2"-1500#FF, 1-1/2" THK, SA-516-70N, 1 X 1/2"-NPT TAP
100	1	PI-1015	IND, PRESS, 0-60PSI, 2-1/2"DIAL, 1/4"NPT, CBM, SS MFG: WIKA MODEL: 233.53.2.5"1/4CBM.60PSI/KPA
181	2	OP-1089	ORIFICE PLATE, 2"-1500#RF, BORE:1.25", 1/4" THK, 316/316L SS, SQUARE EDGE, W/ ID TAB
182	2	OP-1088	ORIFICE PLATE, 2"-1500#RF, BORE:1.125", 1/4" THK, 316/316L SS, SQUARE EDGE, W/ ID TAB
183	2	OP-13F	ORIFICE PLATE, 3"-600#RF, 1/8" THK, FULL BORE, SS, SQUARE EDGE, W/ ID TAB
201	0	POS-1000	POSITIONER, 4-20 mA, LOW BLEED, AUTO CALIBRATE DIAGNOSTIC TIER, 0-60 PSIG GAUGES, 2052 SIZE 2-3 MTG KIT, CSA XP, INTRINSIC SAFE, C/W REGULATOR,1/4"-NPT, 0-35 PSIG MFG: FISHER MODEL: DVC6200 / 67CFR(QTY: 1, C/W ITEM 473)
202	0	PNL-112	TRANSDUCER, I/P, 4-20 mA, 2-33 PSIG, LOW BLEED, TAPPED EXHAUST PORT, FIELD SELECTABLE OUTPUT, CSA, CL I DIV I MFG: FISHER MODEL: I2P-100-X3B(QTY: 2, C/W PANEL)
220	1	PRV-020	REGULATOR, 1/4"-FNPT, 0-35 PSIG RANGE, THREADED BONNET MFG: FISHER MODEL: 67CFR-362/SC/20
230	2	CST-1052	STRAINER, CONE, CS, 6" 600#RF, XH, 150% OA, 316SS, 40 MESH
240	2	FLX.H.0003	FLEX HOSE, 3/8" TUBE STUB, 36" OAL, MIN BEND RADIUS (STATIC/DYNAMIC):1.75"/4.4", MAWP:2000PSIG@100F, BRAID:304 SS, CORE:PTFE W/ CARBON BLACK, SOUR, TAG/TEST@BIDELL MFG: SWAGelok MODEL: SS-XC6TA6A6-36
270	1	LLS-1029	SWITCH, LEVEL, FLOAT, 2"-MNPT, MAWP:1500PSIG@400F, 0.45 SGMIN, SPDT, ELECTRIC, MAN OVRIDE, 3.07" INS LG, CSA, CL I DIV II, BODY:316 SS, TRIM:316 SS, NACE0175 MFG: SOR MODEL: 1510C-G2A-CL1-ES-CSCVMC
272	0	ARL-A-18496	CHK, VLV, DOU.BALL, SS, 1/4" TUBE INLET X 1/8" MNPT OUTLET MFG: ARIEL MODEL: A-18496 (QTY: 2, FROM: INVENTORY)

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AS BUILT



*N. Ganapathy*

REV	DATE	CREATED	REVIEWED	APPROVED	DESCRIPTION
F	16-04-13	GT	GW	AH	AS-BUILT

REVISIONS

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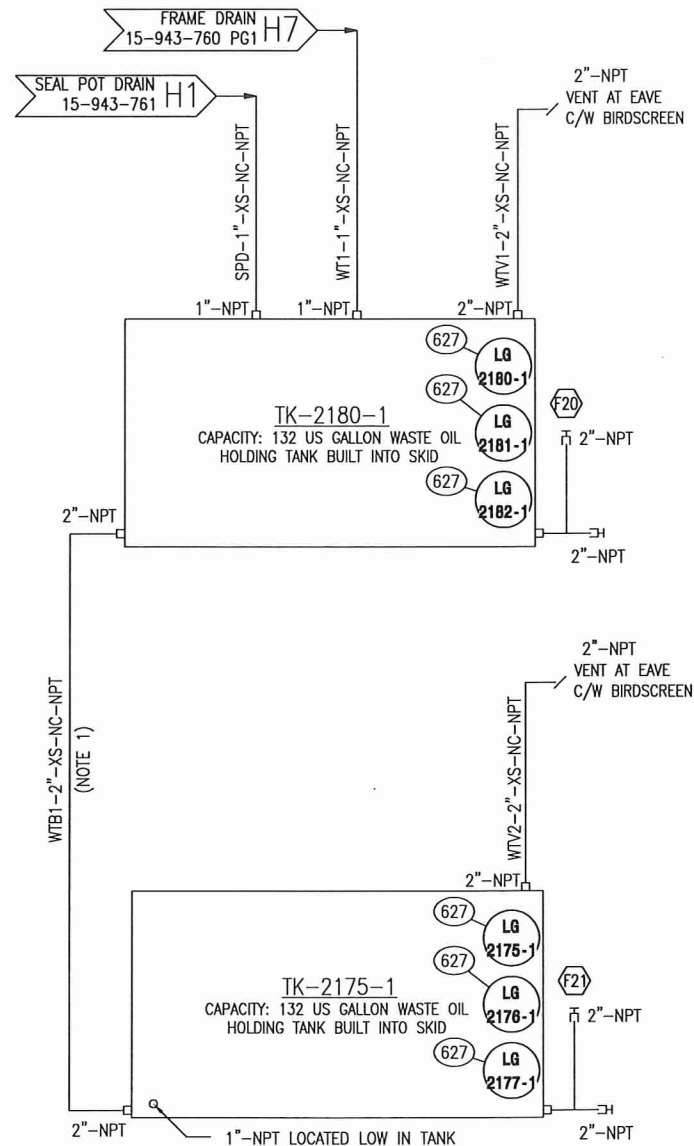
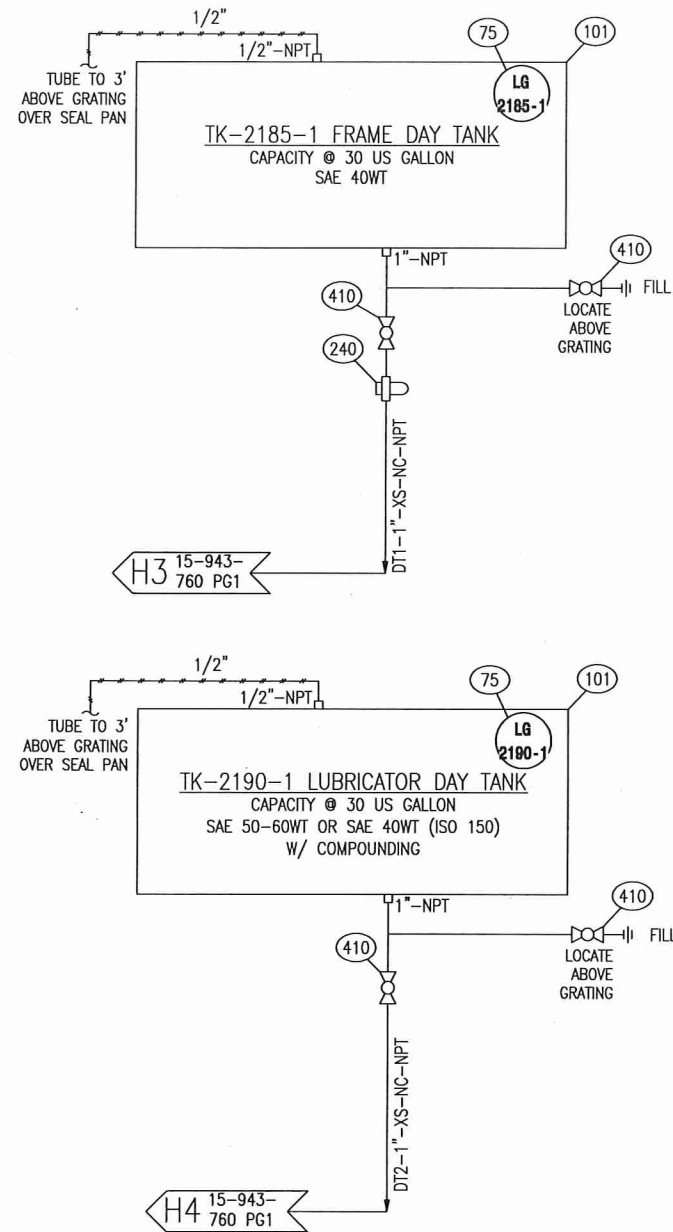
**BIDELL™** APEGA PERMIT NUMBER P08318  
GAS COMPRESSION

SOUR PROCESS FLOW DIAGRAM  
BALDOR G5010Z/ARIEL JGJ/2 / AIR-X 81AEF

CUSTOMER: TOURMALINE OIL CORP c/o OEL PROJECTS LTD  
LOCATION: 9969 GAS LIFT COMPRESSOR  
LSD: 12-06-81-7 W6M

SHEET#: 3 OF 3  
JOB#: 15-943

PAPER SIZE 11"x17" SCALE NTS DWG# 15-943-700 REV F



BILL OF MATERIALS			
MK	QTY	PART NUMBER	DESCRIPTION
75	2	TNK-217	GAUGE, LEVEL, TANK, ALUMMUM MFG: NORCAN FLUID POWER MODEL: YB4353-0900
101	2	TNK-130	TANK, OIL, 30 US GALLON MFG: KENCO MODEL: 30G
240	1	TNK-310	FILTER, 1"-NPT, 9 MICRON MFG: BALDWIN MODEL: BF914
410	4	BVSF-102CS	VALVE, BALL, 1"-FNPT, 2000#, FP, 2PC, SWT MFG: FUSION MODEL: 428TF010F20N1AN
627	6	LLG-302	GAUGE, LEVEL, SIGHT, 2" NPT, SWT, NON-CODE USE ONLY MFG: LDI INDUSTRIES MODEL: LSP51-09

NOTES:  
1. LINE FROM SKID OIL TANK TO SKID OIL TANK BE COMPLETED BY THE SKID SHOP.

LINETYPE LEGEND	STANDARD TUBING SIZES	INSTRUMENTATION TAGGING LEGEND
PROCESS PIPING ———	1/4" - NOT ALLOWED	○ LOCAL MOUNTED DEVICE
UTILITY PIPING ———	3/8" - 0.035"	○ PANEL MOUNTED DEVICE
SEAMLESS TUBING ———	1/2" - 0.049"	○ OFF-SKID MOUNTED DEVICE
ELECTRICAL WIRING - - - - -	3/4" - 0.065"	◇ SIGNAL TO PANEL
INTERNAL LOGIC ———	1" - 0.083"	◇ SIGNAL TO OFF-SKID
OEM SUPPLIED - - - - -		◇ PANEL LOGIC
ASSEMBLY BOUNDARY - - - - -		
BUILDING WALL - - - - -		
DRIVETRAIN - - - - -		
CUSTOMER SUPPLIED ·····		
EXISTING EQUIPMENT ·····		

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**AS BUILT**

*N. Ganapathy*

REV	DATE	CREATED	REVIEWED	APPROVED	DESCRIPTION
C	16-01-04	GT	GW	AH	AS-BUILT
B	15-08-06	GT	GW	AH	REVISED TAGGING
A	15-07-23	GT	GW	AH	ISSUED FOR CONSTRUCTION
O	15-07-07	GT	GW	AH	ISSUED FOR APPROVAL

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FAX: (403) 272-7749

**BIDEILL™** APEGA PERMIT NUMBER P08318  
GAS COMPRESSION

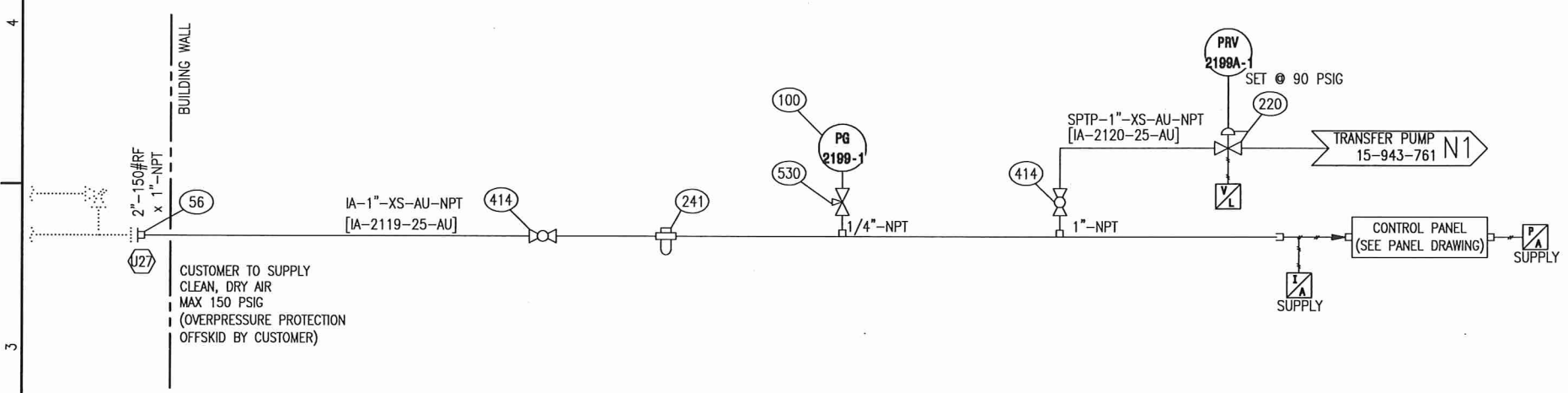
SKID TANK & TRANSFER PUMP UTILITY FLOW DIAGRAM  
BALDOR G5010Z/ARIEL JGJ/2 / AIR-X 81AEF

CUSTOMER: TOURMALINE OIL CORP c/o OEL PROJECTS LTD  
LOCATION: 9969 GAS LIFT COMPRESSOR  
LSD: 12-06-81-7 W6M

SHEET#: 1 OF 1  
JOB#: 15-943

PAPER SIZE 11"x17" SCALE NTS DWG# 15-943-711 REV C

BILL OF MATERIALS			
MK	QTY	PART NUMBER	DESCRIPTION
56	1	BWF-HOD	FLANGE, HUB, 2"-150#RF x 1"-NPT, SA-105N
100	1	PI-1017	IND, PRESS, 0-200PSI, 4"DIAL, 1/4"NPT, BTM, SS MFG: WIKA
			MODEL: 9560063
220	1	PRV-499	REGULATOR, 1"-NPT, 70-150 RANGE MFG: MODEL: 627-1217-29863
241	1	FLT-704	FILTER, COALESCING, 1" NPT, AL BODY, 70C ELEMENT MODEL:
			BEP-38-152-70C
414	2	BVSF-102CS	VALVE, BALL, 1"-FNPT, 2000#, FP, 2PC, SWT MFG: FUSION MODEL:
			428TF010F20N1AN
530	1	NVSA-026F	VALVE, NEEDLE, 1/4" F X 1/4" F, NPT, 6000#, SWT MFG: WESTERN
			GAUGE MODEL: WN1612PN



STANDARD TUBING SIZES	LINETYPE LEGEND	PNEUMATIC TERMINATIONS	INSTRUMENTATION TAGGING LEGEND
1/4" - NOT ALLOWED 3/8" - 0.035" 1/2" - 0.049" 3/4" - 0.065" 1" - 0.083"	PROCESS PIPING ————— UTILITY PIPING ————— SEAMLESS TUBING ————— ELECTRICAL WIRING - - - - - INTERNAL LOGIC - - - - - OEM SUPPLIED - - - - - ASSEMBLY BOUNDARY - - - - - BUILDING WALL - - - - - DRIVETRAIN - - - - - CUSTOMER SUPPLIED ······	INSTRUMENT AIR PANEL AIR	LOCAL MOUNTED DEVICE PANEL MOUNTED DEVICE OFF-SKID MOUNTED DEVICE SIGNAL TO PANEL SIGNAL TO OFF-SKID PANEL LOGIC
ALL TUBING TO BE 316SS			

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**AS BUILT**

*N. Ganapathy*

REV	DATE	CREATED	REVIEWED	APPROVED	DESCRIPTION
D	16-04-13	GT	GW	AH	AS-BUILT
C	15-08-24	GT	GW	AH	REVISED BOM ITEM # 221 TO 220
B	15-08-06	GT	GW	AH	REVISED & ADDED TAGGING
A	15-07-23	GT	GW	AH	ISSUED FOR CONSTRUCTION
O	15-07-07	GT	GW	AH	ISSUED FOR APPROVAL

REVISIONS

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**BIDELL™** APEGA PERMIT NUMBER P08318  
GAS COMPRESSION

INSTRUMENT SUPPLY FLOWSHEET  
BALDOR G5010Z/ARIEL JGJ/2 / AIR-X 81AEF  
CUSTOMER: TOURMALINE OIL CORP c/o OEL PROJECTS LTD  
LOCATION: 9969 GAS LIFT COMPRESSOR  
LSD: 12-06-81-7 W6M

SHEET#: 1 OF 1  
JOB#: 15-943

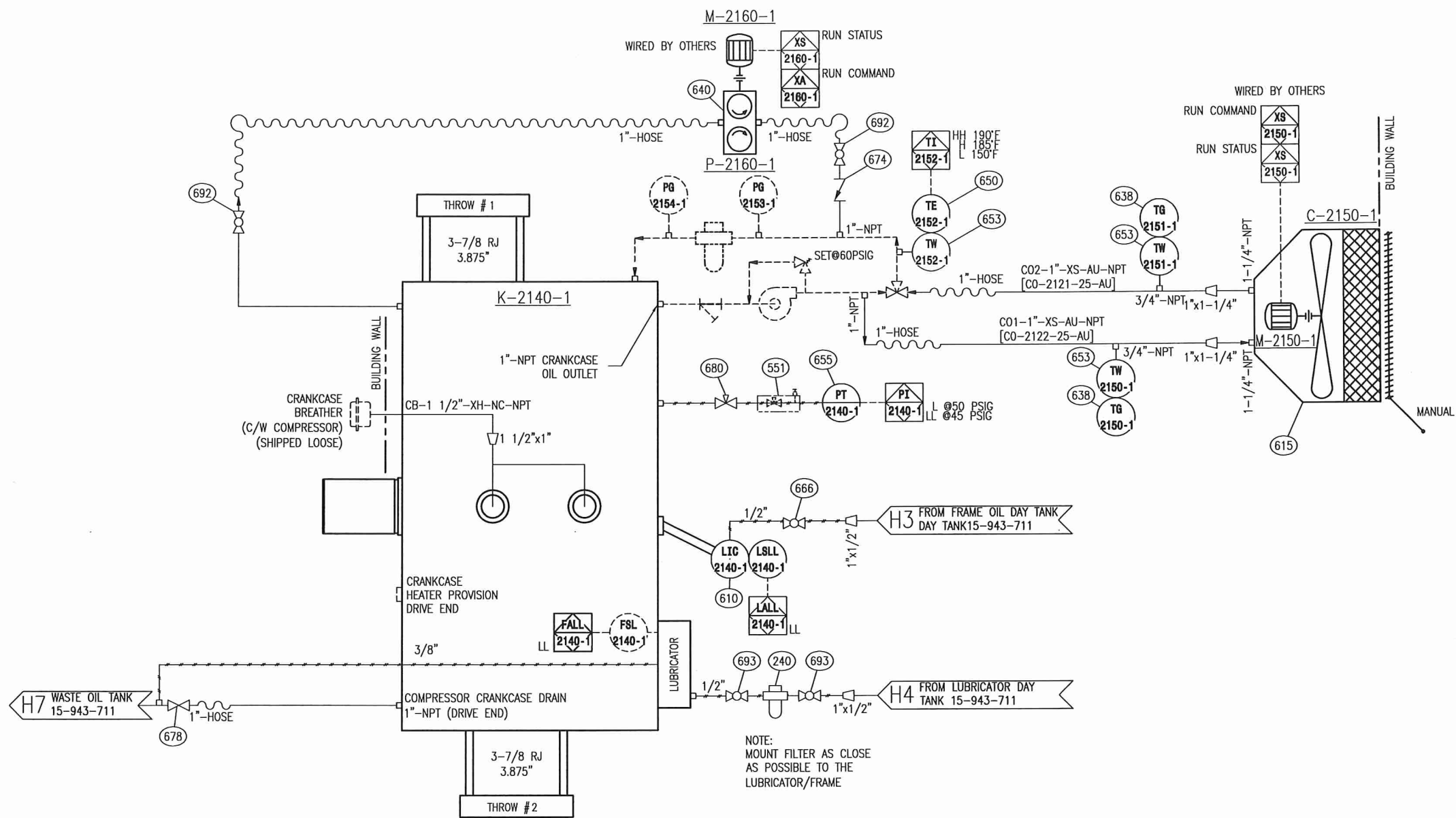
PAPER SIZE 11"x17" SCALE NTS DWG# 15-943-720 REV D

M-2160-1 (PRELUBE PUMP MOTOR)

MAKE: WEG  
 MODEL: TF.50406  
 FRAME: 56  
 0.5HP,460VAC/3PH/60HZ

M-2150-1 (COMPRESSOR OIL COOLER MOTOR)

MAKE: BALDOR  
 MODEL: TBD  
 FRAME: 48  
 0.25HP,460VAC/3PH/60HZ



BILL OF MATERIALS			
MK	QTY	PART NUMBER	DESCRIPTION
1	0	NPN	ACTUATOR, (QTY: 1, c/w COOLER)
240	1	FLT-1039	FILTER, ARIEL CYLINDER LUBE OIL, 5 MICRON MFG: ARIEL MODEL: G-24184
551	0	PNL.0001	PANEL MOUNTED BALL VALVE AND TEST TEE, 1/4", 316SS MFG: SWAGelok MODEL: SS-43GS4 (QTY: 1, c/w PANEL)
610	1	LLC-551	CONTROLLER, OIL LEVEL, XP, ARIEL JGU:Z MOUNT MFG: KENCO MODEL: KLCE-25
640	1	PMP-1091	PUMP, GEAR, 1/2"-FNPT X 1/2"-FNPT, 2.3GPM@1150RPM, W/ MOTOR.5HP@1200RPM, 208/230/460VAC/3PH/60HZ/da, SIZE:56, ENCL:TEFC, CLASS 1 DIV 2, BCD MFG: VIKING / WEG MODEL: FH-432 / TF.50406
650	1	TCP-K403	THERMOCOUPLE,"K",1/2"NPT,1/4"ODX4" 316SS MFG: WESTERN GAUGE MODEL: 1K1BKU4Z3120FTA
653	1	TOW-275N	THERMOWELL, SIRT, 3/4"MNPTx1/2"FNPT, 1.375"U, 0.26" ID, 2.75"OAL MFG: WESTERN GAUGE MODEL: 3/4-025-316
655	0	PT-6016	XMTR, PRESS, 0-150PSI, 1/2"NPT, 4-20MA, NACE, XP W/LCD DISPLAY MFG: ROSEMOUNT MODEL: 2088G2S22A1M5B4C6 (QTY: 1, c/w PANEL)
666	1	BVSF-052CS	VALVE, BALL, 1/2"-FNPT, 2000#, FP, 2PC, SWT MFG: FUSION MODEL: 428TF005F20N1AN
674	1	SCS-0014	VALVE, CHK, SWING, 1", FNPT, CL800, SWT MFG: NEWCO MODEL: 1.00-38T-FS2
678	1	GTS-0014	VALVE, GATE, 1"-FNPT, CL800, SWEET MFG: NEWCO MODEL: 18T-FS2-RP-1"
680	1	NVT-0011	VALVE, NEEDLE, 3/8" X 3/8" F, NPT, 6000#, SOUR MFG: WESTERN GAUGE MODEL: WN-1413P
692	2	BVSF-102CS	VALVE, BALL, 1"-FNPT, 2000#, FP, 2PC, SWT MFG: FUSION MODEL: 428TF010F20N1AN
693	2	BVSF-052CS	VALVE, BALL, 1/2"-FNPT, 2000#, FP, 2PC, SWT MFG: FUSION MODEL: 428TF005F20N1AN

NOTE:  
 MOUNT FILTER AS CLOSE  
 AS POSSIBLE TO THE  
 LUBRICATOR/FRAME

PNEUMATIC TERMINATIONS	LINETYPE LEGEND	TUBING SIZES	INSTRUMENTATION TAGGING LEGEND
INSTRUMENT AIR PANEL AIR	PROCESS PIPING _____ UTILITY PIPING _____ SEAMLESS TUBING _____ ELECTRICAL WIRING _____ INTERNAL LOGIC _____ OEM SUPPLIED _____ ASSEMBLY BOUNDARY _____ BUILDING WALL _____ DRIVETRAIN _____ CUSTOMER SUPPLIED _____	1/4" - NOT ALLOWED 3/8" - 0.035" 1/2" - 0.049" 3/4" - 0.065" 1" - 0.083"  ALL TUBING TO BE 316SS SEAMLESS W/ SWAGelok FITTINGS	LOCAL MOUNTED DEVICE PANEL MOUNTED DEVICE OFF-SKID MOUNTED DEVICE SIGNAL TO PANEL SIGNAL TO OFF-SKID PANEL LOGIC

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**AS BUILT**

*N. Ganapathy*

REV	DATE	CREATED	REVIEWED	APPROVED	DESCRIPTION
D	16-04-13	GT	GW	AH	AS-BUILT
C	15-08-24	GT	GW	AH	REVISED BOM ITEM 203
B	15-08-06	GT	GW	AH	REVISED AS NOTED
A	15-07-23	GT	GW	AH	ISSUED FOR CONSTRUCTION
O	15-07-07	GT	GW	AH	ISSUED FOR APPROVAL

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**BIDELL™** APEGA PERMIT NUMBER P08318  
 GAS COMPRESSION

COMPRESSOR FRAME OIL UTILITY FLOW  
 BALDOR G5010Z/ARIEL JGJ/2 / AIR-X 81AEF

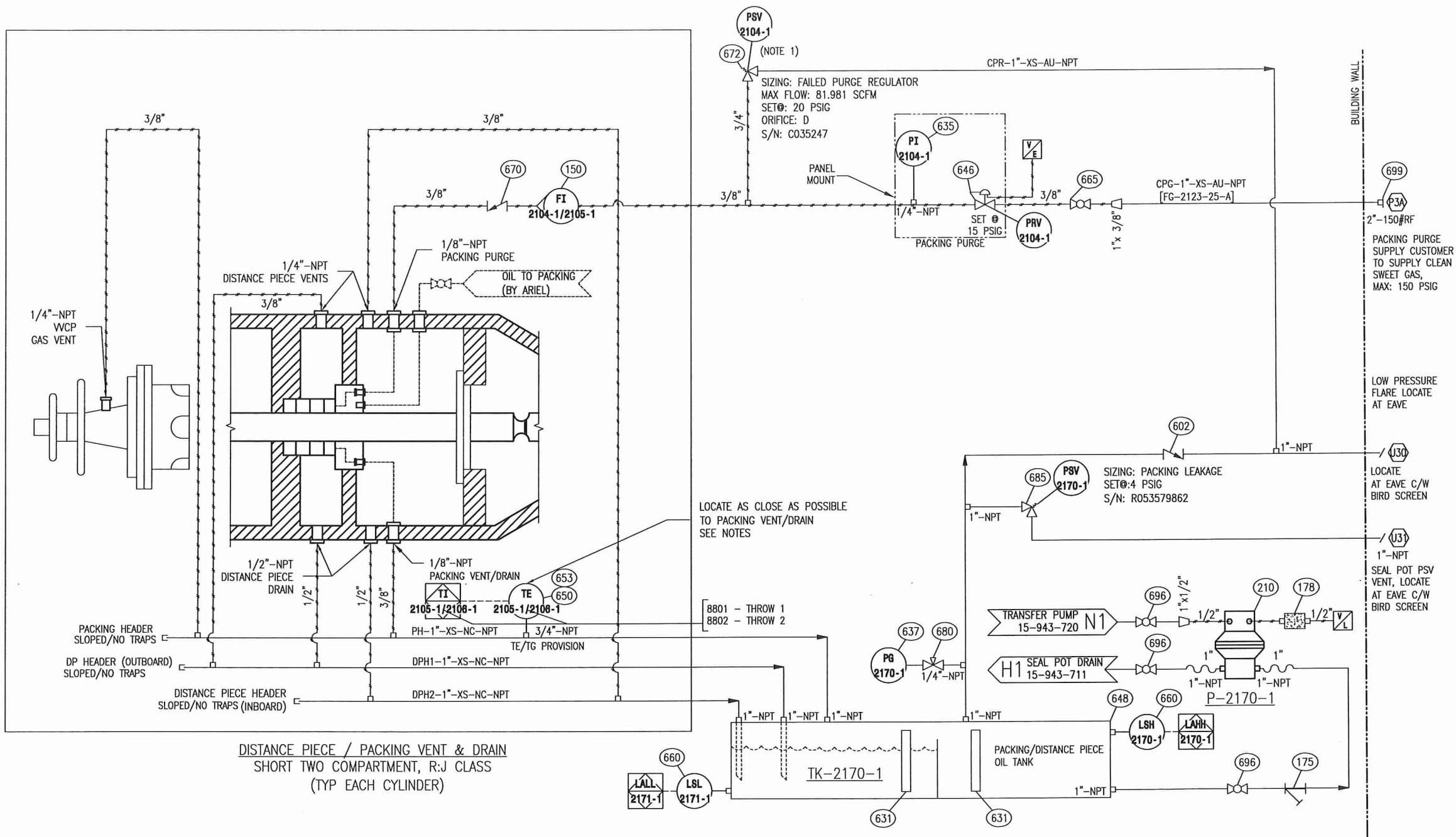
CUSTOMER: TOURMALINE OIL CORP c/o OEL PROJECTS LTD  
 LOCATION: 9969 GAS LIFT COMPRESSOR  
 LSD: 12-06-81-7 W6M

SHEET#: 1 OF 1  
 JOB#: 15-943

PAPER SIZE 11"x17" SCALE NTS DWG# 15-943-760 REV D



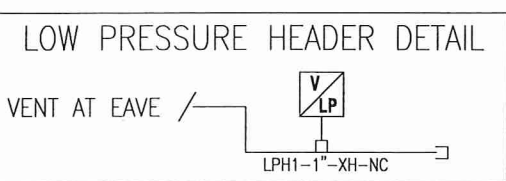
BILL OF MATERIALS			DESCRIPTION	
MK	QTY	PART NUMBER		
150	2	FMR-1012	FLOW METER, 1/4" NPT, 290 PSI MAWP, 2-30 SCFH, ACRYLIC BODY MFG: KYTOLA INSTRUMENTS MODEL: LH-VK30	
175	1	YSS-210	STRAINER, Y, 1"-NPT, 100 MESH, SOUR	
178	0	NPN	MUFFLER FOR YAMADA PUMP (QTY:1, C/W PUMP)	
210	1	PMP-1007	PUMP, DIAPHRAGM, 1" FNPT IN X OUT, 50GPM, AL MFG: GRACO MODEL: 647666	
602	1	SCS-102NS	VALVE, CHK, SWING, 1" NPT CL800, NACE MFG: SMITH MODEL: SW80YS0G01	
631	2	TNK-217	GAUGE, LEVEL, TANK, ALUMINUM MFG: NORCAN FLUID POWER MODEL: YB4353-0900	
635	1	PI-25-0030P	IND. PRESS, 0-30PSI, 2-1/2"DIAL, 1/4"NPT, CBU, SS MFG: WESTERN GAUGE MODEL: WJ7442B	
637	1	PI-1037	GAUGE, PRESSURE, -30-6"WC/PSIG, 2-1/2" DIAL, 1/4"-MNPT BTM,BURST:7.8PSIG@150°F, CASE:304SS, TRIM:316 SS, SOUR, DIAPHRAGM MFG: UNIFIED VALVE GROUP MODEL: J200-SPEC	
646	1	PRV-010	REGULATOR, 1/4"-FNPT, 0-35 PSIG RANGE MFG: FISHER MODEL: 67C-414/PM	
648	1	TNK-1004	TANK, SEAL-POT, 15.5USGAL, 54" LG X 12" WID X 8" HT X 1/4" THK, 2 COMP, CS, REFER TO DWG MODEL: BES-761-06	
650	2	TCP-K403	THERMOCOUPLE,"K",1/2"NPT,1/4"ODX4" 316SS MFG: WESTERN GAUGE MODEL: 1K1BKU4Z3120FTA	
653	2	TOW-275N	THERMOWELL, STRT, 3/4"MNPTX1/2"FNPT, 1.375"U, 0.26" ID, 2.75"OAL MFG: WESTERN GAUGE MODEL: 3/4-025-316	
660	2	LLS-550	SWITCH, LEVEL, FLOAT, 2"-MNPT, MAWP:1500PSIG@400°F, ELECTRIC, 3.07" INSERTION LEN, MANUAL OVERRIDE, XP, BODY:316 SS, TRIM:316 SS, SOUR MFG: SOR MODEL: 1510C-G2A-C-LI-ES-CSCVMC	
665	1	BVSF-032CS	VALVE, BALL, 3/8"-FNPT, 2000#, FP, 2PC, SWEET MFG: FUSION MODEL: 428TF003F20N1AN	
670	2	ICT-036S	VALVE CHECK BALL 3/8"-TUBE 1-PSI MFG: SWAGelok MODEL: SS-CH56-1	
672	1	PSV-1090	VALVE, RELIEF, 3/4"-MNPT X 1"-FNPT, D, CONV, BOLTED BONNET,BODY:WCB, TRIM:17-4PH SS, SEAT:WTON, SPRING:17-7PH SS, RANGE 14.1-22PSI, SWEET MFG: MERCER MODEL: 91-12D51V01E1	
680	1	NVSA-026FN	VALVE, NEEDLE, 1/4" X 1/4" NPT, 6000#, SOUR MFG: WESTERN GAUGE MODEL: WN1412P	
683	0	PNL-0003	PANEL MOUNTED BLOCK AND BLEED MANIFOLD (1/2"-FNPT) AND TESTTEE, 316SS, NACE MR0175 / ISO15156 MFG: ROSEMOUNT MODEL: 0306BT22BA11SG(QTY: 1, C/W CONTROL PANEL)	
685	1	PRV-289H	VALVE, RELIEF, 1"-MNPT X 1"-FNPT, 1 - 4 1/2 PSIG RANGE MFG: FISHER MODEL: 289H-41	
696	3	BVS-103RN	VALVE, BALL, 1"-FNPT, CL3000, RP, 3PCS, FL, NACE MFG: NUTRON MODEL: T3-R10S30S (NACE)	
699	1	BWF-H0D	FLANGE, HUB, 2"-150#RF X 1"-NPT, SA-105N	



DISTANCE PIECE / PACKING VENT & DRAIN  
SHORT TWO COMPARTMENT, R:J CLASS  
(TYP EACH CYLINDER)

- 8801 - THROW 1
- 8802 - THROW 2

NOTES:  
1. PLACE ITEM 672 AS CLOSE TO LOW PRESSURE FLARE  
LINE AS POSSIBLE



LINETYPE LEGEND	STANDARD TUBING SIZES	PNEUMATIC TERMINATIONS	INSTRUMENTATION TAGGING LEGEND
PROCESS PIPING ———	1/4" - NOT ALLOWED	VENT AT EAVE	LOCAL MOUNTED DEVICE
UTILITY PIPING ———	3/8" - 0.035"	LOW PRESSURE HEADER	PANEL MOUNTED DEVICE
SEAMLESS TUBING ———	1/2" - 0.049"	VENT LOCALLY	OFF-SKID MOUNTED DEVICE
ELECTRICAL WIRING - - - - -	3/4" - 0.065"		SIGNAL TO PANEL
INTERNAL LOGIC - - - - -	1" - 0.083"		SIGNAL TO OFF-SKID
OEM SUPPLIED - - - - -			PANEL LOGIC
ASSEMBLY BOUNDARY - - - - -			
BUILDING WALL - - - - -			
DRIVETRAIN - - - - -			
CUSTOMER SUPPLIED - - - - -			
EXISTING EQUIPMENT - - - - -			

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**AS BUILT**

*N. Ganapathy*

REV	DATE	CREATED	REVIEWED	APPROVED	DESCRIPTION
E	16-04-28	GT	GW	AH	AS-BUILT
D	15-08-24	GT	GW	AH	REVISED AS NOTED
C	15-08-13	GT	GW	AH	SWEET GAS PURGE REMOVED
B	15-08-06	GT	GW	AH	REVISED AS NOTED
A	15-07-23	GT	GW	AH	ISSUED FOR CONSTRUCTION
O	15-07-07	GT	GW	AH	ISSUED FOR APPROVAL

REVISIONS

MAIN SHOP / OFFICE  
6900 - 112th AVENUE S.E.  
CALGARY, AB T2C 4Z1  
PHONE: (403) 235-5877  
FAX: (403) 272-7749

**BIDELL™** APEGA PERMIT NUMBER P08318  
GAS COMPRESSION

COMPRESSOR CYLINDER UTILITY FLOW DIAGRAM  
BALDOR G5010Z/ARIEL JGJ/2 / AIR-X 81AEF

CUSTOMER: TOURMALINE OIL CORP c/o OEL PROJECTS LTD  
LOCATION: 9969 GAS LIFT COMPRESSOR  
LSD: 12-06-81-7 W6M

SHEET#: 1 OF 1  
JOB#: 15-943

PAPER SIZE: 11"x17" SCALE: NTS DWG#: 15-943-761 REV: E

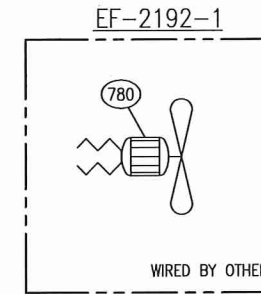
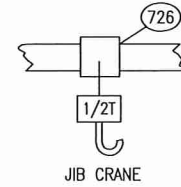
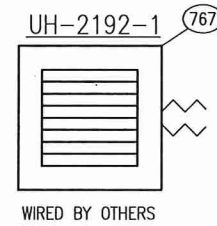
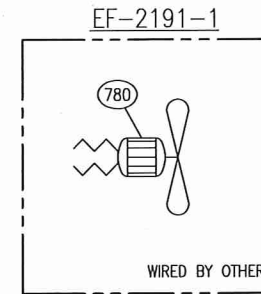
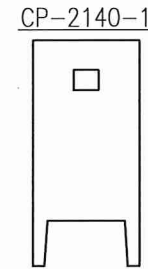
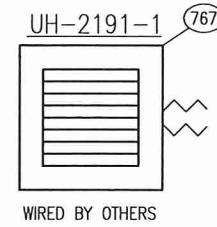
BUILDING DETAILS	
DESIGN LOAD BASIS:	LSD: 12-06-81-7 W6M
1/50 SNOW LOAD:	2.6kPa
1/50 WIND LOAD:	0.35 kPa
BUILDING CODE:	AB, BC
BUILDING TYPE:	SELF-FRAMING GABLE
LENGTH:	20'-0"
WIDTH:	17'-6"
EAVE HEIGHT:	10'-6"
ROOF SLOPE:	3:12
WALL INSULATION:	R12 ROXUL
ROOF INSULATION:	R20 ROXUL
WINDOWS:	2 x 40"x40" HORIZONTAL SLIDING c/w SCREEN (DOUBLE GLAZED)
BUILDING LINER:	24 ga FLUTED ALUMINIUM BELOW 3' 20 ga WHITE PAINTED PERFORATED (10%) ALUMINIUM ABOVE 3'
VAPOUR BARRIER:	HEAVY
ROOF OPTIONS:	EAVESTROUGHS, DOWNSPOUTS & ICE RAKES
FASTENERS:	CLIMASEAL
<b>DOOR DETAILS</b>	
TWO 6'x7' DOUBLE DOORS c/w WEATHER STRIPPING	
WIRE GLAZED WINDOW (ONE)	
PANIC HARDWARE	
LOCKSET	
DOOR CLOSURE	
STEEL FRAME	
CHECKCHAIN	
CANOPY	
<b>VENTILATION DETAILS</b>	
RIDGE VENT:	FULL LENGTH, 6" THROAT, c/w MANUAL CONTROLS & BIRDSCREEN & ACOUSTIC CAP
WALL LOUVRES:	2 x 18"x32" ADJUSTABLE c/w MANUAL CONTROL, SCREEN & ACOUSTIC HOOD
BUILDING FAN DETAILS:	REFER TO DRAWING EQUIPMENT TAGS (c/w ACOUSTIC HOODS)
<b>ADDITIONAL NOTES:</b>	
EXTERIOR WALLS & ROOF PANELS: (22GA MIN.) GALVALUME WITH SAFETY GREEN TRIM	

**UH-2191/2192-1**  
 BUILDING HEATER  
 TYPE: ELECTRIC  
 MAKE: RUFFNECK  
 MODEL: FX5-480360-150-W  
 POWER: 15KW, 480/3/60

**CP-2140-1**  
 MFG: ALLEN BRADLEY  
 MODEL: COMPACT LOGIX  
 POWER SUPPLY: 24VDC  
 POWER CONSUMPTION: 15 AMPS  
 AREA CLASSIFICATION:  
 CSA, CLASS I, DIV 2, GROUPS C & D  
 S/N: DE-38115-AA

**EF-2191/2192-1**  
 MFG: SOPER'S AIR  
 MODEL: KL12XP1PH  
 DIAMETER: 12"  
 0.25HP, 230/120-208VAC/1PH/60HZ  
 AREA CLASSIFICATION: CLASS I, DIVISION II, GROUP C & D,  
 EXPLOSION PROOF  
 c/w ACOUSTIC HOOD

BILL OF MATERIALS			
MK	QTY	PART NUMBER	DESCRIPTION
726	1	NPN	CRANE, 1/2 TON, SEE DWG# 15-943-425
767	2	HEE-39	HEATER, ELEC, 15KW, 480/3/60, CSA CL 1, DIV 1&2, GR C&D MFG:
			RUFFNECK MODEL: FX5-480360-150-W
780	0	NPN	12" DIA. EXHAUST FAN, 0.25 HP, 120-208VAC/1PH/60HZ EXPLOSION PROOF(QTY: 2, C/W BUILDING)



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**AS BUILT**



*M. Ganapathy*

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BUILDING DETAILS	
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LOCATION: 9969 GAS LIFT COMPRESSOR	SHEET#: 1 OF 1
LSD: 12-06-81-7 W6M	JOB#: 15-943
PAPER SIZE: 11"x17"	SCALE: NTS
DWG#	15-943-770
REV	B