

PLAN VIEW



*N. Ganapathy*

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AS BUILT

**AS BUILT**

2016/04/13

F21	2"-NPT	LIQUID HOLDING TANK PUMPOUT
F20	2"-NPT	WASTE OIL TANK PUMPOUT
P3A	2"-150#RF	PACKING PURGE
U31	1"-PIPE	SEAL POT PSV
U30	1" PIPE	LOW PRESSURE FLARE
U27	2"-150#RF	INSTRUMENT AIR SUPPLY
U20	4"-150#RF	FLARE HEADER
U7	2"-600#RF	SCRUBBER DRAIN HEADER
P9	3"-900#RF	FINAL DISCHARGE
P1	3"-600#RF	INLET
TAG	SIZE & RATING	SERVICE / DESCRIPTION

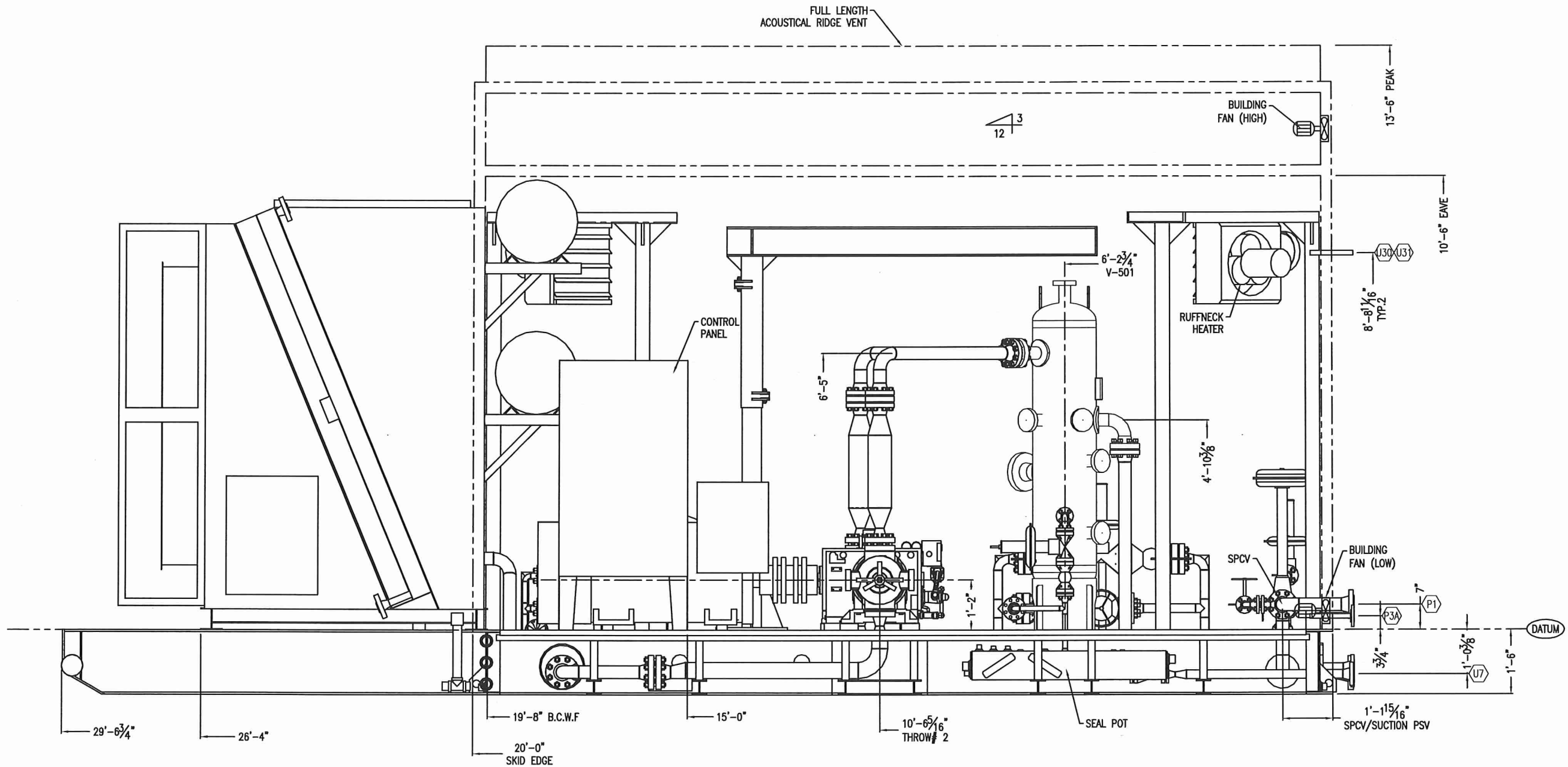
TOTAL PACKAGED UNIT  
 TOTAL PACKAGE WEIGHT = 46,000 lbs  
 TOTAL PACKAGE LENGTH = 30'-1"  
 TOTAL PACKAGE WIDTH = 17'-4"  
 TOTAL PACKAGE HEIGHT = 15'-0"

SCHEDULE OF OPENINGS

REV	DATE	CREATED	REVISED	APPROVED	DESCRIPTION
D	16-04-13	KM	CP	AH	AS BUILT
C	15-08-24	JQ	CP	AH	MOVED SKID EDGE CONNECTIONS
B	15-08-12	JQ	CP	AH	ISSUED FOR CONSTRUCTION
A	15-07-22	JQ	CP	AH	RE-ISSUED FOR APPROVAL
O	15-07-13	JQ	CP	AH	ISSUED FOR APPROVAL

REVISIONS		REVISIONS
MAN SHOP / OFFICE	6900 - 112th AVENUE S.E.	<b>BIDEILL</b> ™ APEGA PERMIT NUMBER
CALGARY, AB T2C 4Z1	PHONE: (403) 235-5877	GAS COMPRESSION
FAX: (403) 272-7749		POB318
GENERAL ARRANGEMENT (PLAN VIEW)		
BALDOR G5010Z / ARIEL JG1/2 / AIR-X B1AEF		
CUSTOMER: TOURMALINE OIL CORPORATION c/o OEL PROJECTS LTD.		
LOCATION: 9969 GAS LIFT COMPRESSOR		
LSO:	12-06-B1-07 W6M	SHEET#: 1 OF 4
		JOB#: 15-943
PAPER SIZE	SCALE	DWG#
11"x17"	NTS	15-943-100
		REV D



SOUTH ELEVATION



*N. Ganapathy*

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AS BUILT

**AS BUILT**

2016/04/13

REV	DATE	CREATED	REVIEWED	APPROVED	DESCRIPTION
D	16-04-13	KM	CP	AH	AS BUILT

REVISIONS	
1	AS BUILT

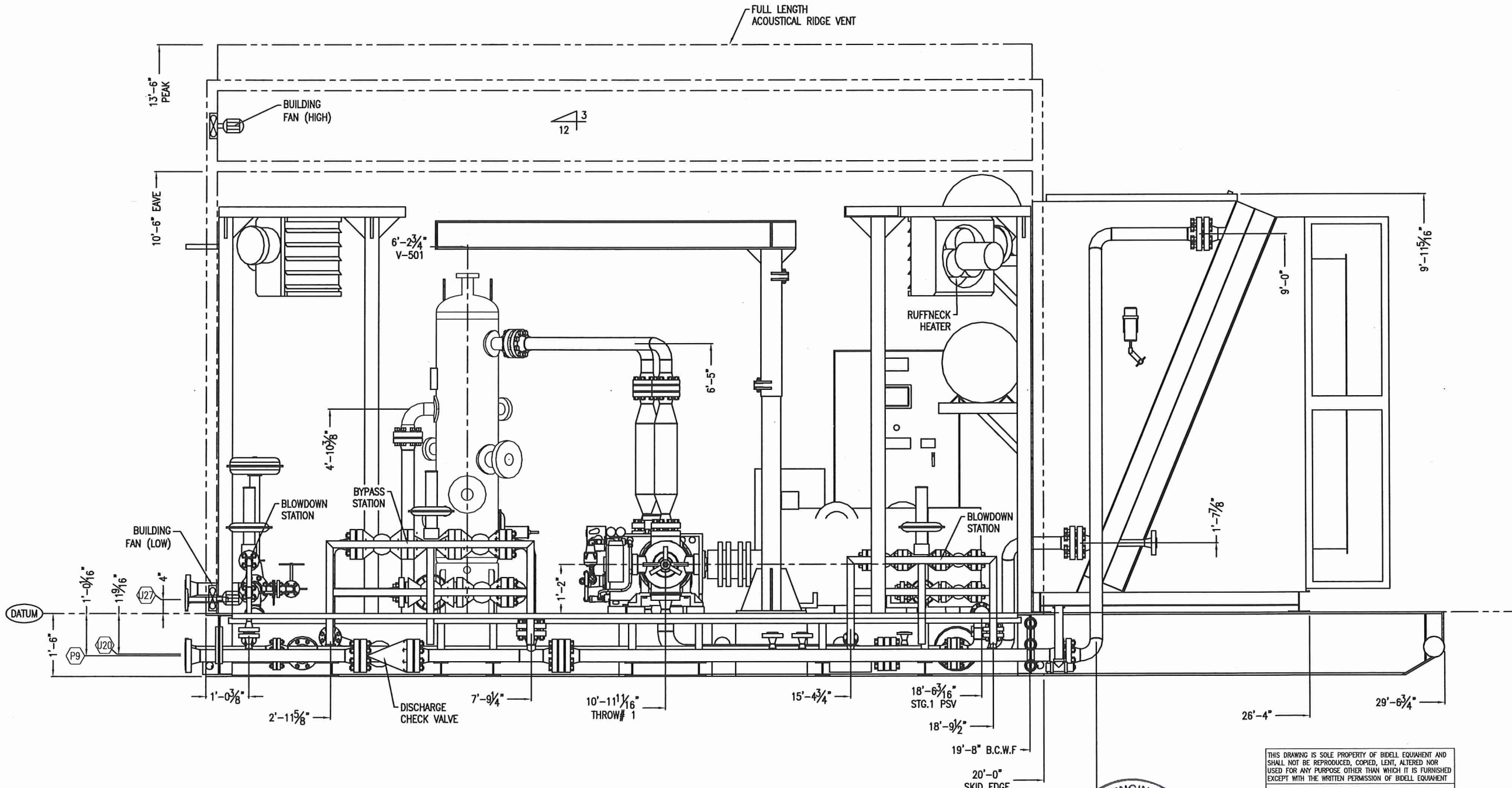
  

MAN SHOP / OFFICE 6900 - 112th AVENUE S.E. CALGARY, AB T2C 4Z1 PHONE: (403) 235-5877 FAX: (403) 272-7748	<b>BIDEILL</b> GAS COMPRESSION	APEGA PERMIT NUMBER P08318
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GENERAL ARRANGEMENT (SOUTH ELEVATION VIEW)		
BALDOR G5010Z / ARIEL JG1/2 / AIR-X B1AEF		
CUSTOMER: TOURMALINE OIL CORPORATION c/o DEL PROJECTS LTD.		
LOCATION: 9969 GAS LIFT COMPRESSOR	SHEET#: 2 OF 4	
LSD: 12-06-81-07 W6M	JOB#: 15-943	
PAPER SIZE 11"x17"	SCALE NTS	DWG# 15-943-100

FULL LENGTH  
ACOUSTICAL RIDGE VENT



NORTH ELEVATION

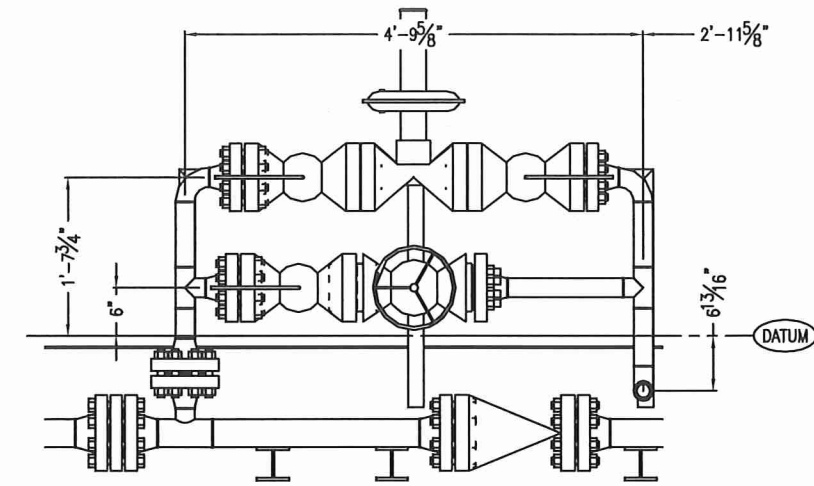
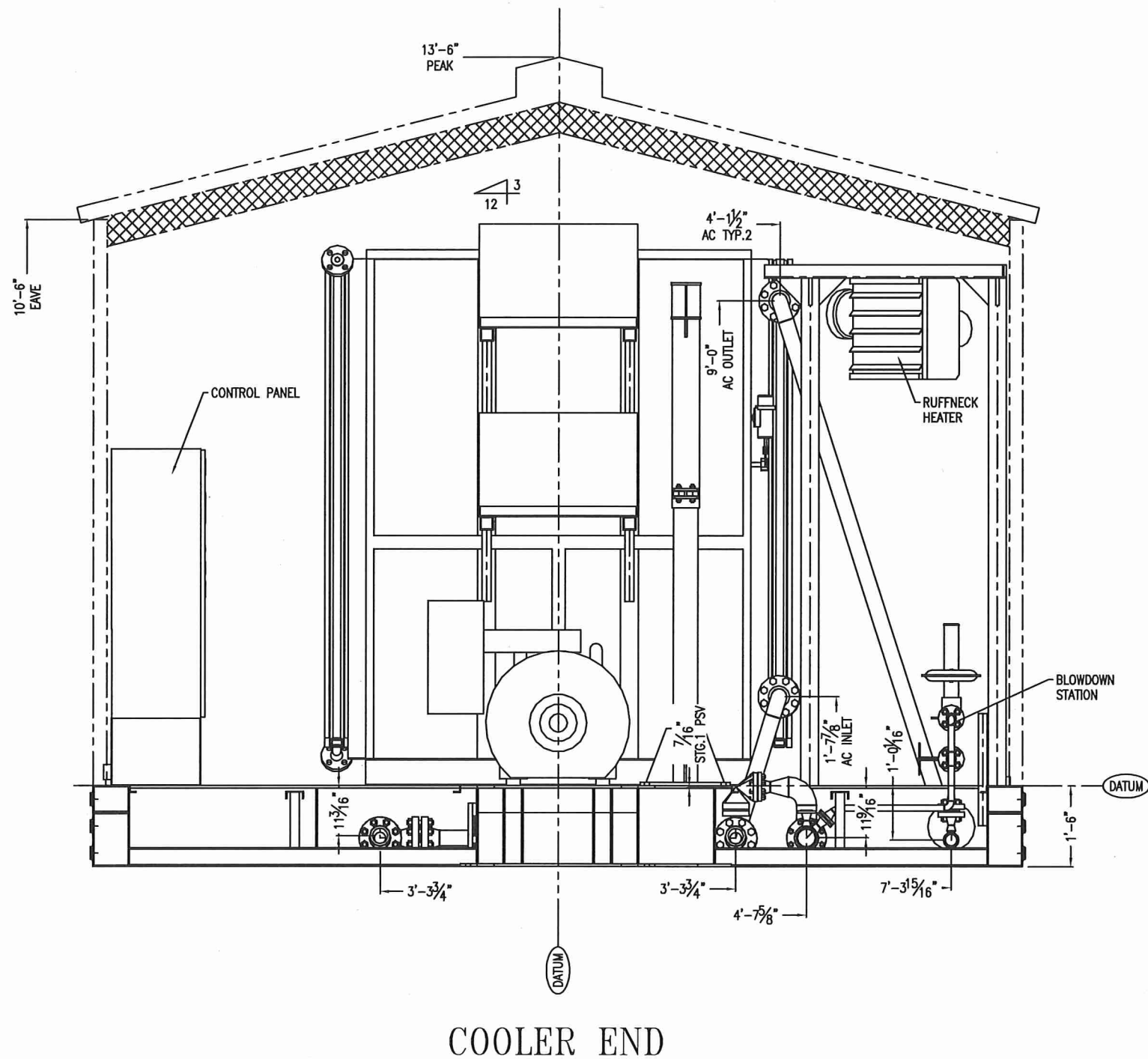


*N. Ganapathy*

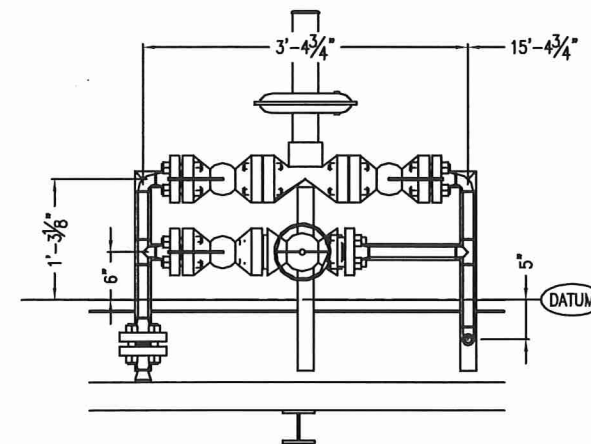
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AS BUILT  
**AS BUILT**  
2016/04/13

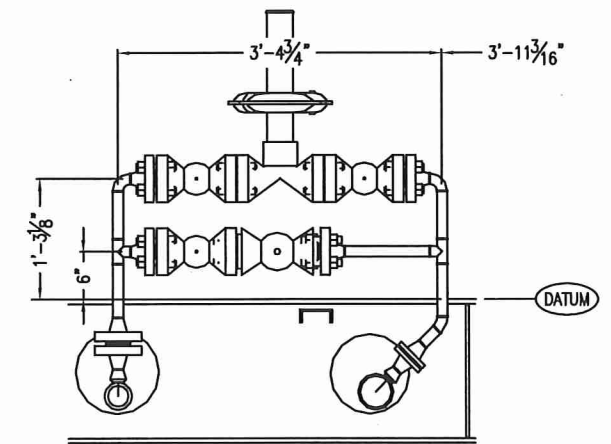
REV	DATE	CREATED	REVIEWED	APPROVED	DESCRIPTION
D	16-04-13	KM	CP	AH	AS BUILT
REVISIONS					
MAIN SHOP / OFFICE 6900 - 112th AVENUE S.E. CALGARY, AB T2C 4Z1 PHONE: (403) 235-5877 FAX: (403) 272-7749					
			<b>BIDEILL</b>		APEGA PERMIT NUMBER P08318
GENERAL ARRANGEMENT (NORTH ELEVATION VIEW)					
CUSTOMER: TOURMALINE OIL CORPORATION c/o OEL PROJECTS LTD.					
LOCATION: 9969 GAS LIFT COMPRESSOR					
LSD: 12-06-81-07 W6M				JOB#: 15-943	
PAPER SIZE 11"x17"		SCALE NTS		DWG# 15-943-100	
					REV D



BYPASS STATION



BLOWDOWN STATION



BLOWDOWN STATION



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AS BUILT

**AS BUILT**

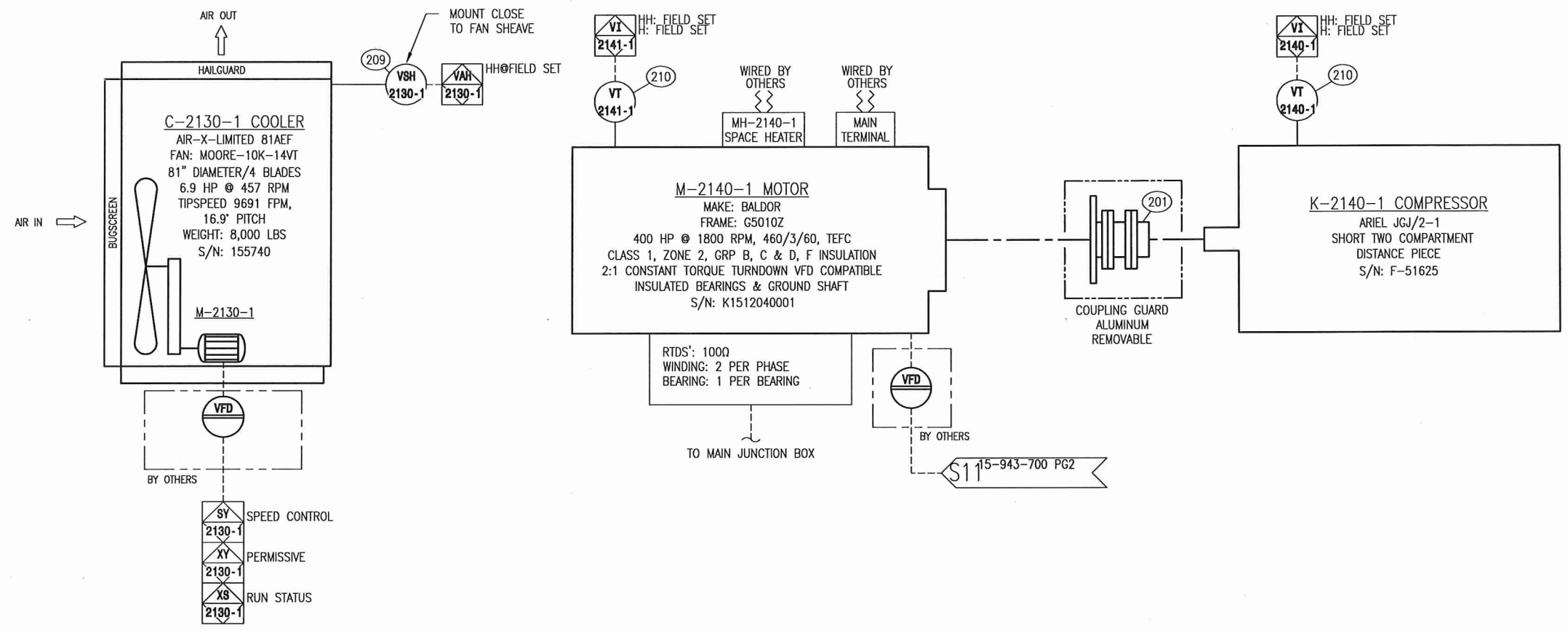
2016/04/13

D	16-04-13	KM	CP	AH	AS BUILT
REV	DATE	CREATED	REVISED	APPROVED	DESCRIPTION
REVISIONS					
MAIN SHOP / OFFICE 6900 - 112th AVENUE S.E. CALGARY, AB T2C 4Z1 PHONE: (403) 235-5877 FAX: (403) 272-7749					
<b>BIDELL</b>			APEGA PERMIT NUMBER POB318		
GAS COMPRESSION					
GENERAL ARRANGEMENT (COOLER ELEVATION VIEW)					
BALDOR G5010Z / ARIEL JGJ/2 / AIR-X 81AEF					
CUSTOMER: TOURMALINE OIL CORPORATION c/o OEL PROJECTS LTD.					
LOCATION: 9969 GAS LIFT COMPRESSOR				SHEET#: 4 OF 4	
LSD: 12-06-81-07 W6M				JOB#: 15-943	
PAPER SIZE 11"x17"	SCALE NTS	DWG#	15-943-100		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  
 REGD

*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

REVISIONS

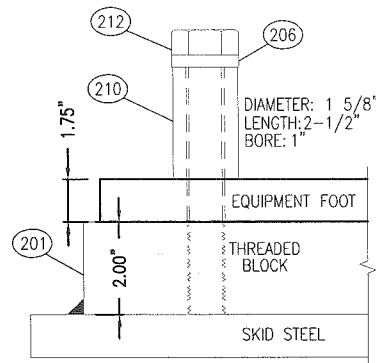
MAIN SHOP / OFFICE  
 6900 - 112th AVENUE S.E.  
 CALGARY, AB T2C 4Z1  
 PHONE: (403) 235-5877  
 FAX: (403) 272-7749

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

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 SHEET#: 1 OF 1  
 LSD: 12-06-81-7 W6M JOB#: 15-943

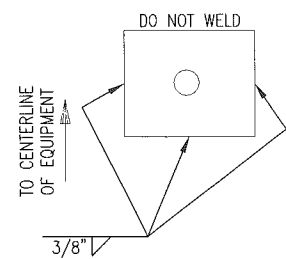
PAPER SIZE 11"x17" SCALE NTS DWG# 15-943-200 REV D

DETAIL A-1



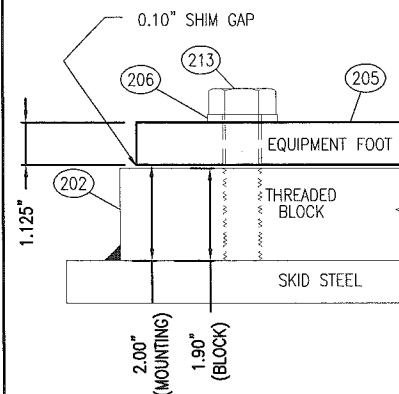
COMPRESSOR FRAME FOOT

DETAIL A-2



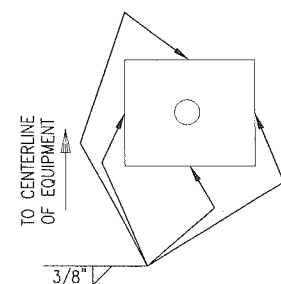
COMPRESSOR FRAME FOOT

DETAIL B-1



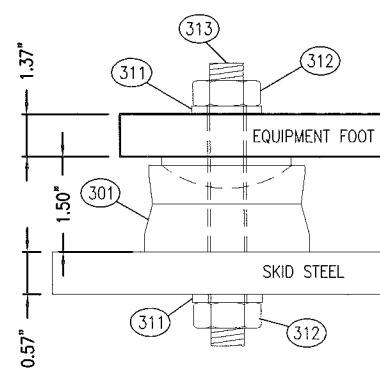
COMPRESSOR DISTANCE PIECE FOOT

DETAIL B-2



COMPRESSOR DISTANCE PIECE FOOT

DETAIL C



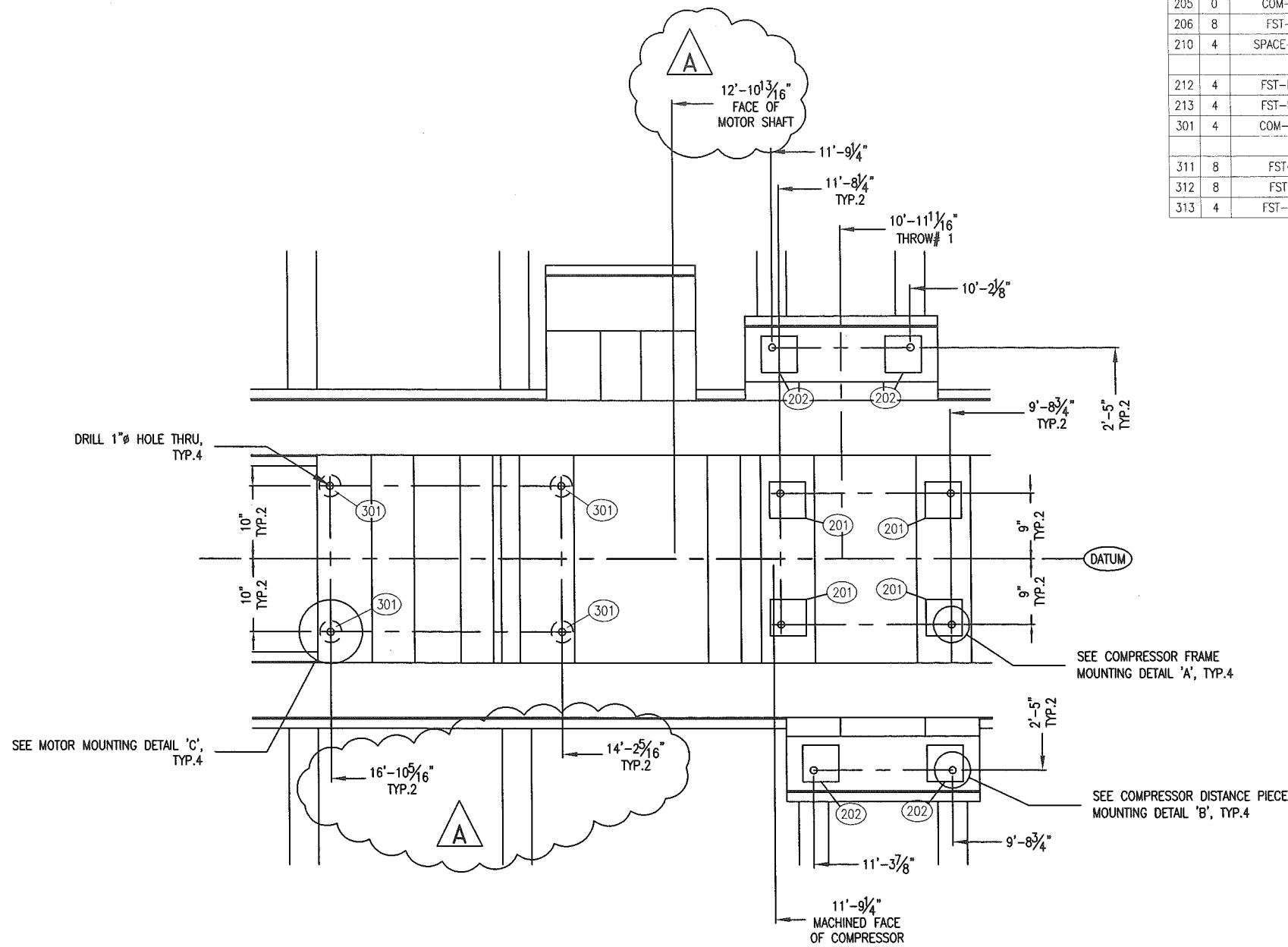
MOTOR MOUNTING

COMPRESSOR FRAME  
MOUNTING DETAIL (4 PLACES)  
BOLT SIZE: 7/8"  
BOLT STRETCH REQUIRED: 6"  
BOLT TORQUE: 280 FT-LB  
  
COMPRESSOR WEIGHT: 3,182 LBS  
COMPRESSOR S/N: TBD

COMPRESSOR DISTANCE PIECE  
MOUNTING DETAIL (4 PLACES)  
BOLT SIZE: 7/8"  
BOLT STRETCH REQUIRED: NONE  
BOLT TORQUE: 280 FT-LB

MOTOR MOUNTING DETAIL (4 PLACES)  
BOLT SIZE: 3/4"  
HOLE SIZE: 1"φ  
STUD TORQUE: 376 FT-LB  
  
MOTOR WEIGHT: 5,550 LBS  
MOTOR S/N: TBD

BILL OF MATERIALS			
MK	QTY	PART NUMBER	DESCRIPTION
201	4	COM-A02-M1	MOUNTING BLOCK, ARIEL, REFER TO DWG# BES-301-A02-M1
202	4	COM-A02-M1S	MOUNTING BLOCK, ARIEL JGH/JGE/JGK/JGT DISTANCE PIECE, REFER TO DWG# BES-301-A02-M1S
205	0	COM-A60	X-HD GUIDE, SUPPORT, JGJ:R:RJ:HJ ARIEL G-2996
206	8	FST-HK	WASHER, FLAT, GR8 ZP, 7/8"
210	4	SPACE-1019	SPACER, BOLT STRETCH SLEEVE, 1-1/4"-XXS PIPE x 2-1/2" LG, BORE TO 1" ID, BOTH ENDS MACHINED FLAT, SA-106B
212	4	FST-EK60	BOLT, GR8 UNC ZP, 7/8"x6"
213	4	FST-EK30	BOLT, GR8 UNC ZP, 7/8"x3"
301	4	COM-1072	MOUNTING BLOCK, ROTACHOCK, 3"OD, 1.57" HEIGHT, 3/4" BOLT, CS MFG: ROTACHOCK MODEL: RC3
311	8	FST-HJ	WASHER, FLAT, GR8 ZP, 3/4"
312	8	FST-LJ	NUT, 2H, 3/4"
313	4	FST-KJ60	STUD, B7, 3/4"x6"



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ISSUED FOR CONSTRUCTION

**IFC**

2015/08/17

REV	DATE	CREATED	REVIEWED	APPROVED	DESCRIPTION
A	15-08-17	JQ	CP	AH	REVISED BOLT MOTOR BOLT HOLE LOCATIONS
0	15-07-20	JQ	CP	GT	ISSUED FOR CONSTRUCTION

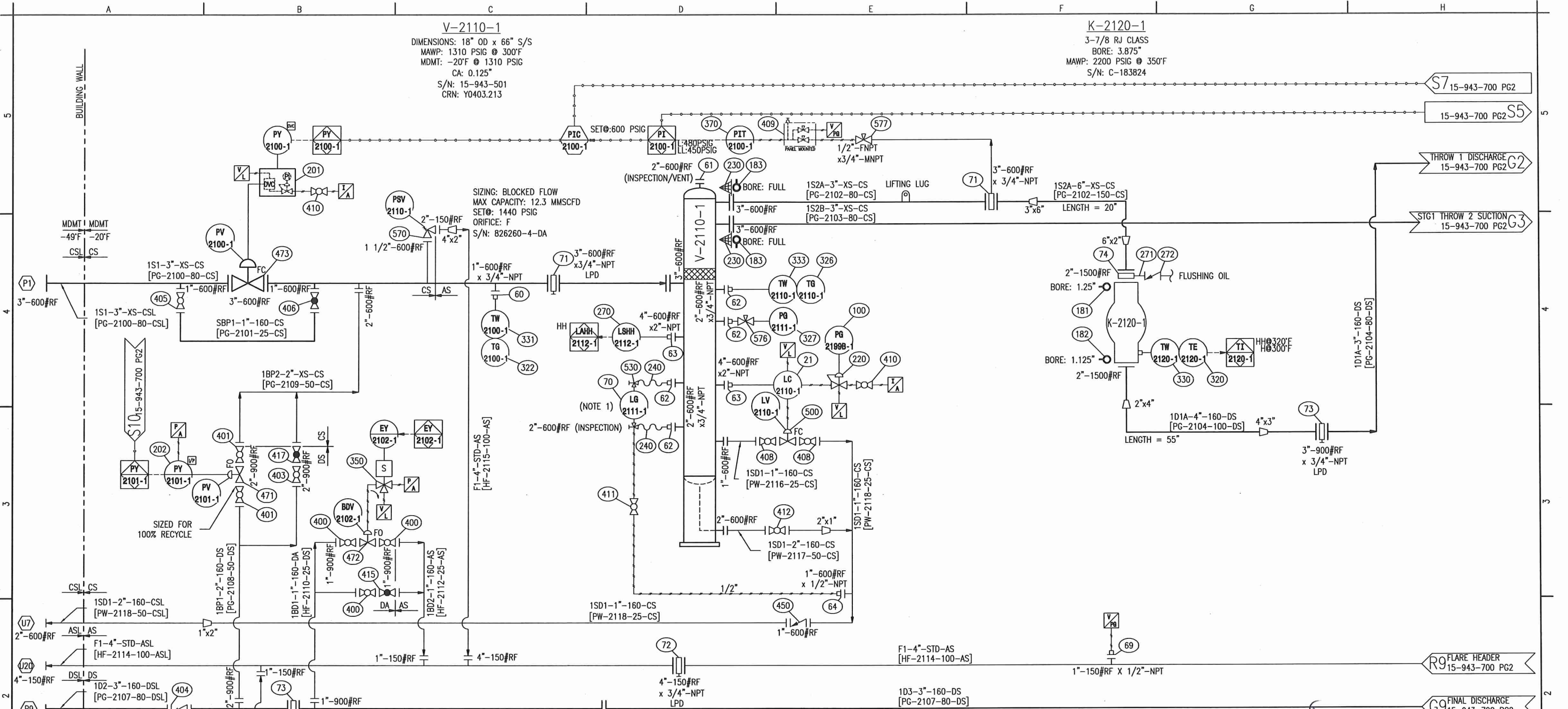
  

REVISIONS					
MAIN SHOP / OFFICE					
6900 - 112th AVENUE S.E.					
CALGARY, AB T2C 4Z1					
PHONE: (403) 235-5877					
FAX: (403) 272-7749					
<b>BIDELL™</b>		APEGA PERMIT NUMBER		P08318	
GAS COMPRESSION					
MAJORS MOUNTING DIAGRAM					
BALDOR C5010Z - ARIEL JGJ/2					
CUSTOMER: TOURMALINE OIL CORP. c/o OEL PROJECTS LTD.					
LOCATION: 9969 GAS LIFT COMPRESSOR					
LSD: 12-06-81-07 W6M					
PAPER SIZE	SCALE	DWG#	JOB#		SHEET#
11"x17"	NTS		15-943-225		1 OF 1
					REV A

FABRICATION NOTES:  
1. ALL TAIL DIMENSIONS FROM MAIN SKID DATUM  
2. WELDING TO BE PERFORMED BY CWB QUALIFIED WELDERS ONLY.

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			

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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

REVISIONS	
MAIN SHOP / OFFICE 6900 - 112th AVENUE, S.E. CALGARY, AB T2C 4Z1 PHONE: (403) 235-5877 FAX: (403) 272-7749	<b>BIDELL</b> ™ GAS COMPRESSION

APEGA PERMIT NUMBER P08318

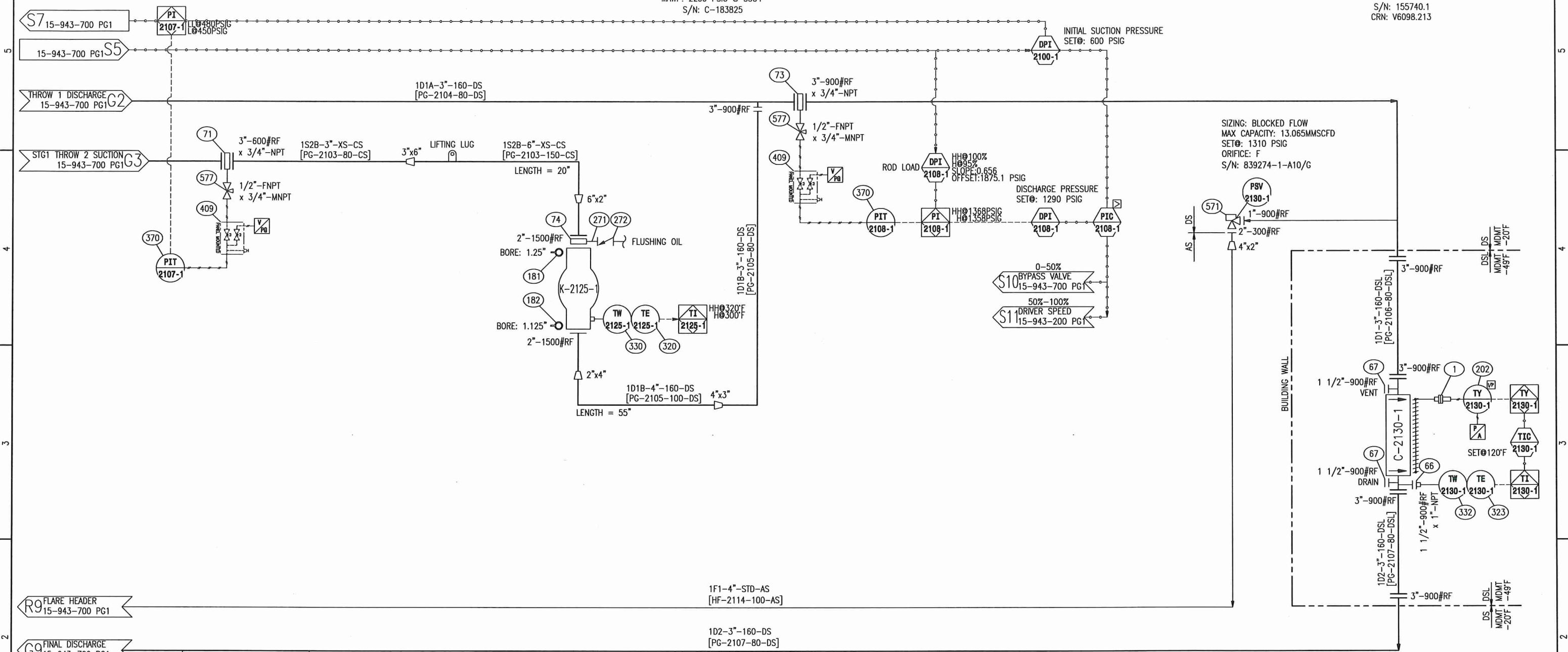
SOUR PROCESS FLOW DIAGRAM  
 BALDOR G5010Z/ARIEL JGJ/2 / AIR-X 81AEF  
 CUSTOMER: TOURMALINE OIL CORP c/o OEL PROJECTS LTD  
 LOCATION: 9969 GAS LIFT COMPRESSOR  
 LSD: 12-06-81-7 W6M

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

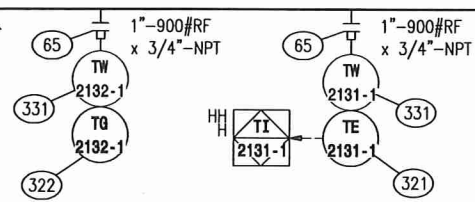
**C-2130-1**  
 MAWP: 1932 PSIG @ 350°F  
 MDMT: -49°F @ 1932 PSIG  
 CA: 0.125"  
 S/N: 155740.1  
 CRN: V6098.213



SIZING: BLOCKED FLOW  
 MAX CAPACITY: 13.065MMSCFD  
 SET@: 1310 PSIG  
 ORIFICE: F  
 S/N: 839274-1-A10/G

0-50% BYPASS VALVE  
 15-943-700 PG1  
 50%-100% DRIVER SPEED  
 15-943-200 PG1

R9 FLARE HEADER  
 15-943-700 PG1  
 G9 FINAL DISCHARGE  
 15-943-700 PG1



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**



F 16-04-13	GT	GW	AH	AS-BUILT
REV	DATE	CREATED	REVIEWED	APPROVED
REVISIONS				
MAIN SHOP / OFFICE 6900 - 112th AVENUE S.E. CALGARY, AB T2C 4Z1 PHONE: (403) 235-5877 FAX: (403) 272-7749		<b>BIDEILL</b> ™ GAS COMPRESSION		
CUSTOMER: TOURMALINE OIL CORP c/o OEL PROJECTS LTD				APEGA PERMIT NUMBER P08318
LOCATION: 9969 GAS LIFT COMPRESSOR				SHEET#: 2 OF 3
LSD: 12-06-81-7 W6M				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, 0-250F, 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, -40-160F, 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*

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

REVISIONS

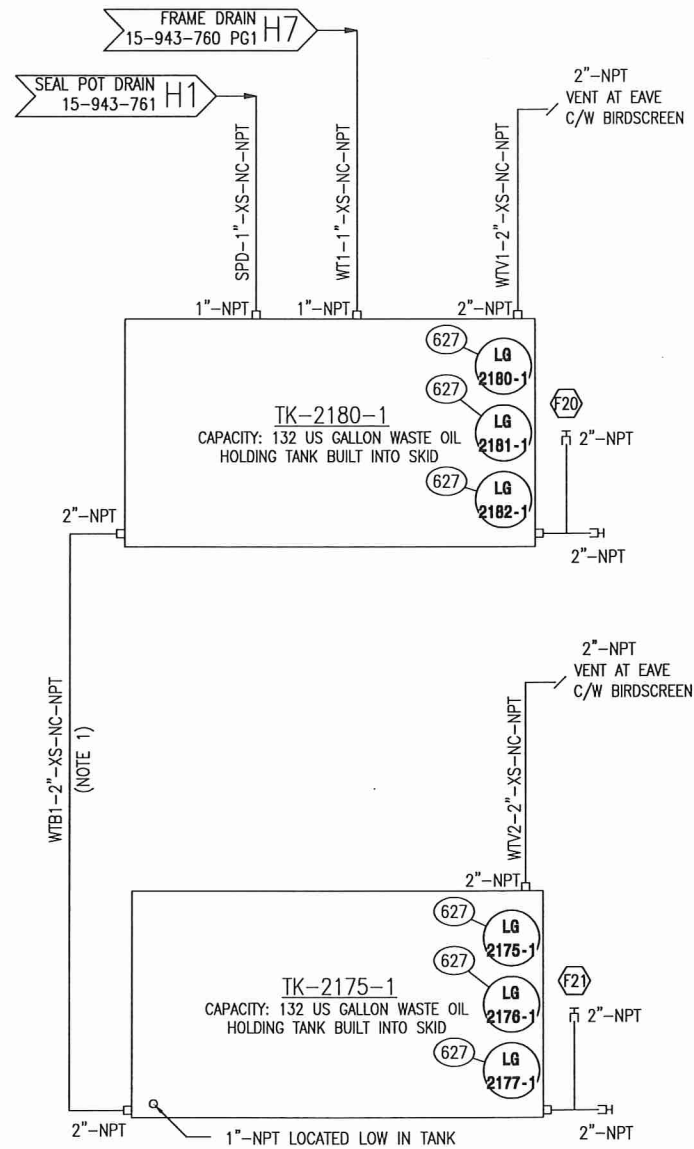
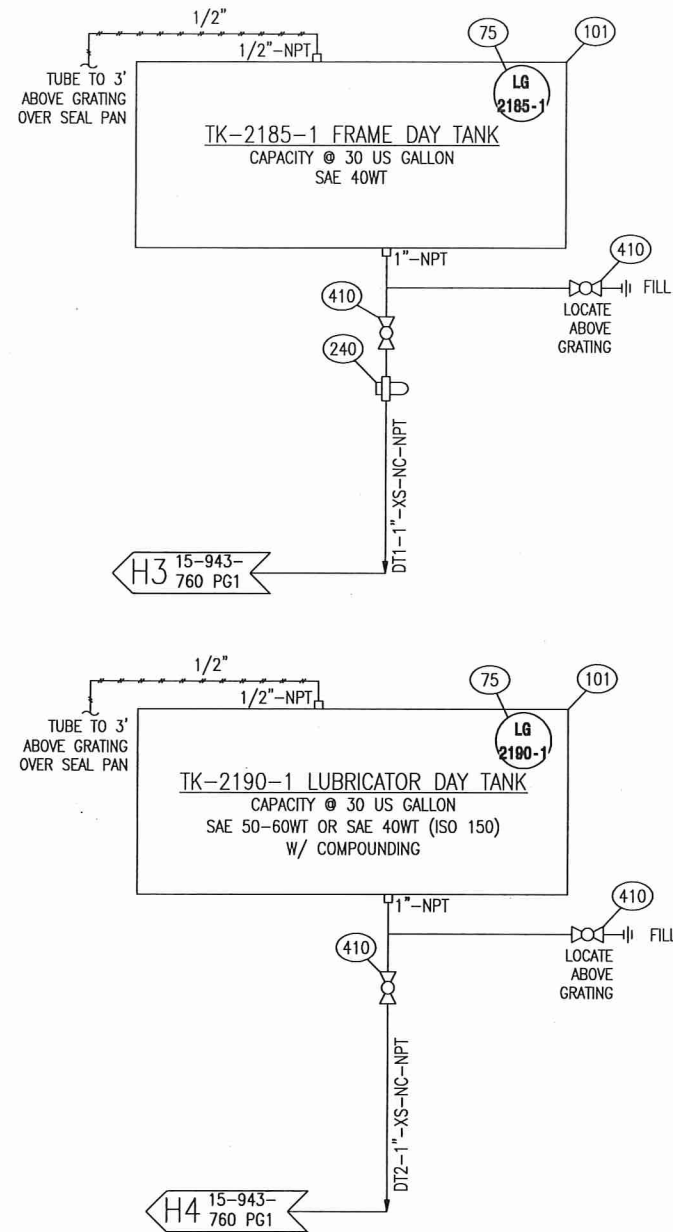
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CALGARY, AB T2C 4Z1  
PHONE: (403) 235-5877  
FAX: (403) 272-7749

**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	THIS DRAWING IS SOLE PROPERTY OF BIDEILL EQUIPMENT AND SHALL NOT BE REPRODUCED, COPIED, LENT, ALTERED NOR USED FOR ANY PURPOSE OTHER THAN WHICH IT IS FURNISHED EXCEPT WITH THE WRITTEN PERMISSION OF BIDEILL EQUIPMENT
PROCESS PIPING ————	1/4" - NOT ALLOWED	○ LOCAL MOUNTED DEVICE	<p><b>AS BUILT</b></p>
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 ······			

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

REVISIONS

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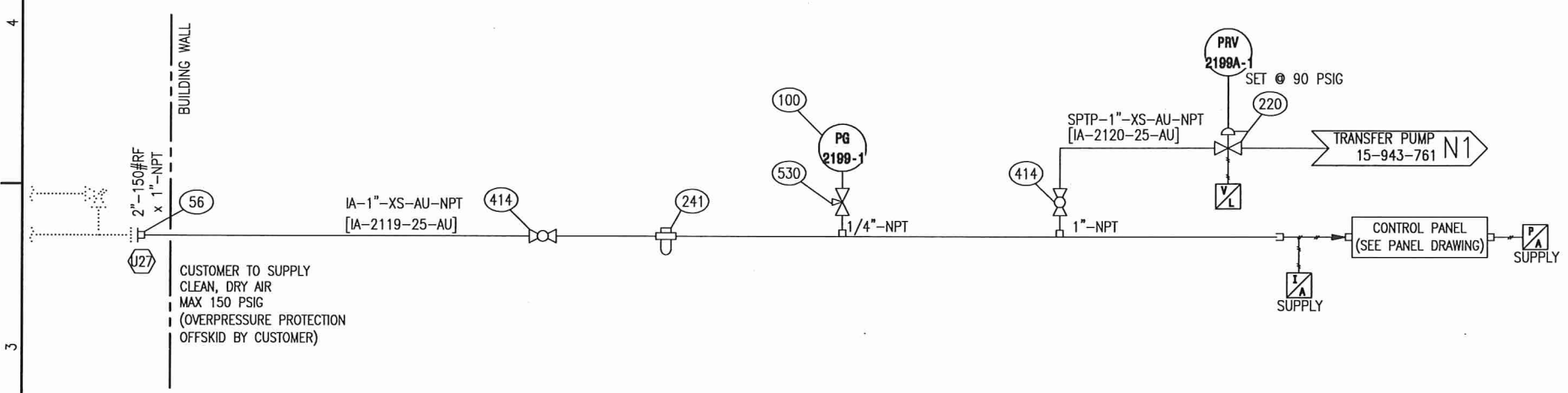
**BIDEILL™** APEGA PERMIT NUMBER P08318  
GAS COMPRESSION

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

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

BILL OF MATERIALS			
MK	QTY	PART NUMBER	DESCRIPTION
56	1	BWF-H0D	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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PHONE: (403) 235-5877  
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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

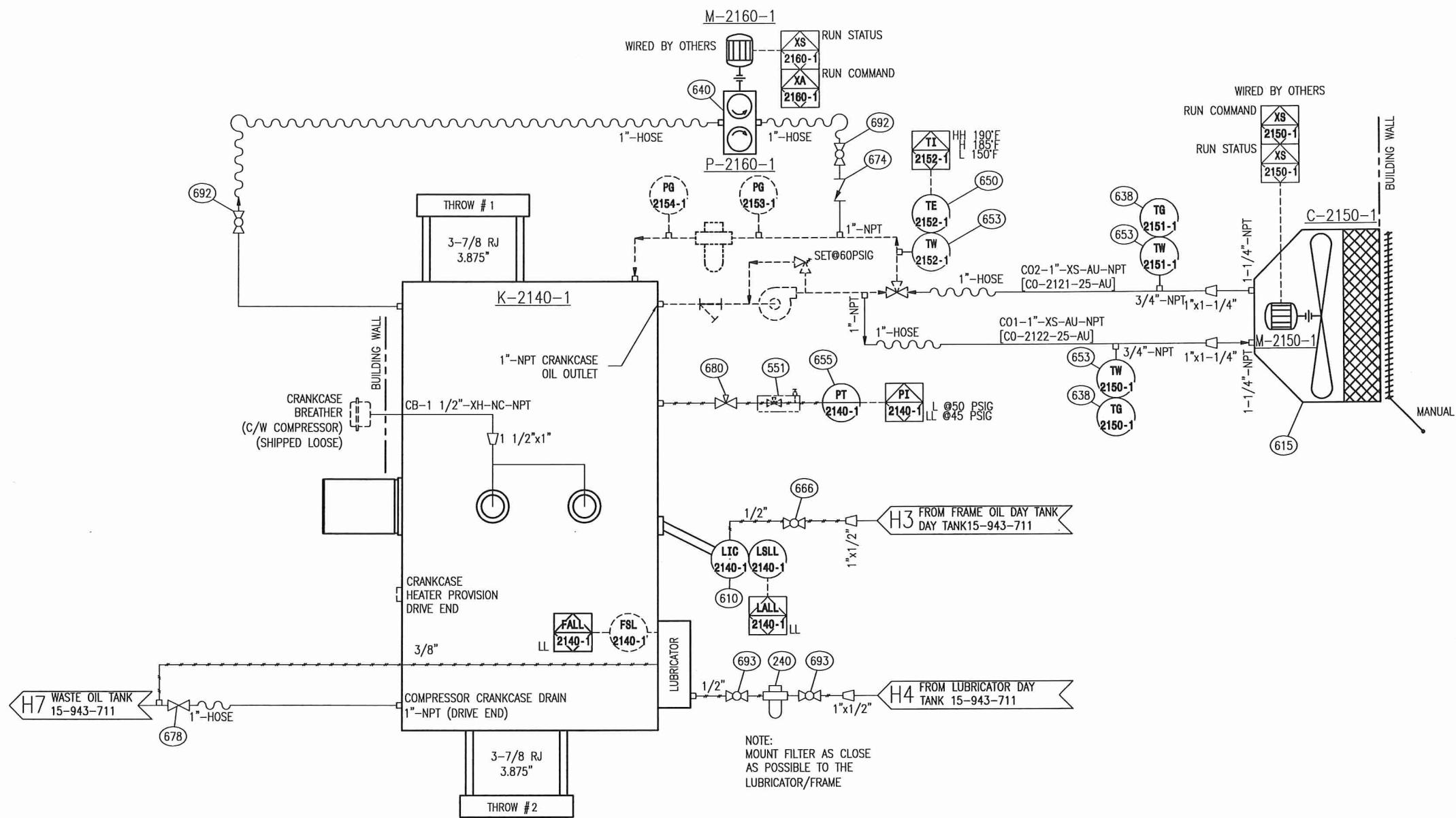
PAPER SIZE 11"x17" SCALE NTS DWG# 15-943-720 REV D

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

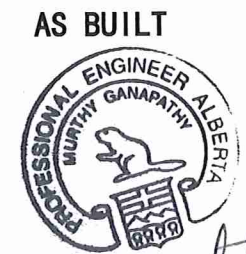


NOTE:  
 MOUNT FILTER AS CLOSE  
 AS POSSIBLE TO THE  
 LUBRICATOR/FRAME

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

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

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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

REVISIONS

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 6900 - 112th AVENUE S.E.  
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 PHONE: (403) 235-5877  
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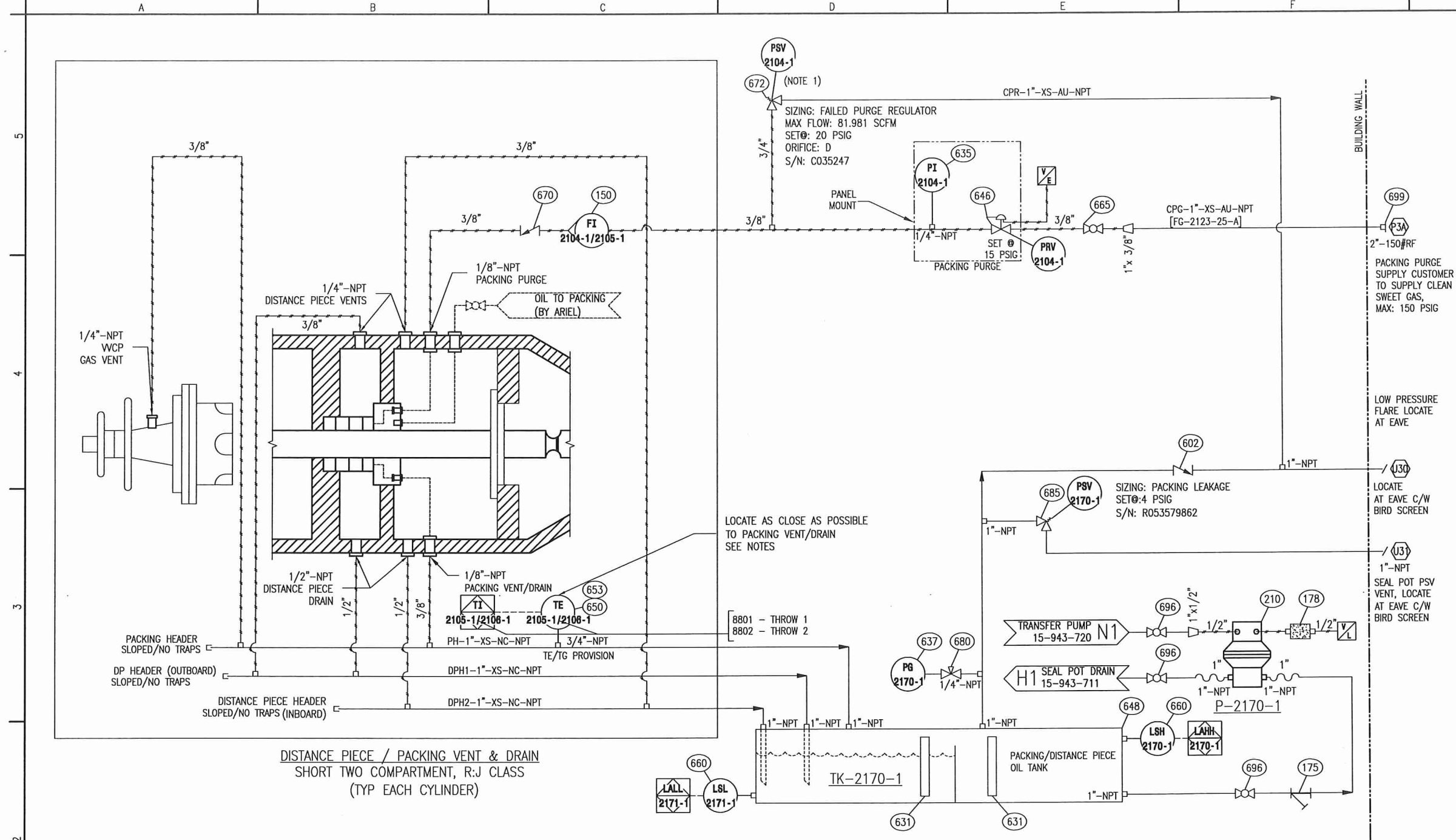
**BIDELL™** APEGA PERMIT NUMBER P08318  
 GAS COMPRESSION

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

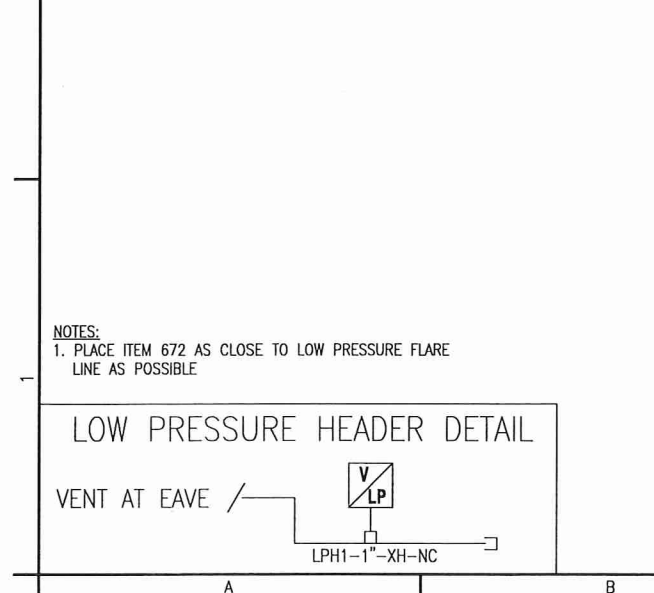
CUSTOMER: TOURMALINE OIL CORP c/o OEL PROJECTS LTD  
 LOCATION: 9969 GAS LIFT COMPRESSOR  
 LSD: 12-06-81-7 W6M

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

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



BILL OF MATERIALS			
MK	QTY	PART NUMBER	DESCRIPTION
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-L1-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:VTON, 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



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  
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**BIDEEL** 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

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

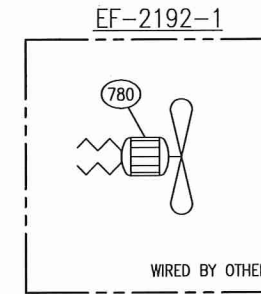
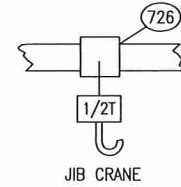
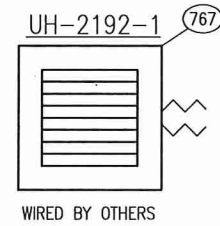
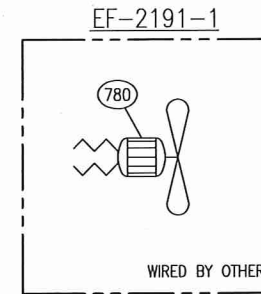
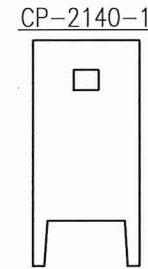
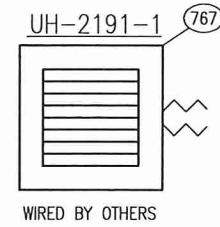
BUILDING DETAILS	
DESIGN LOAD BASIS:	LSD: 12-06-81-7 W6M
1/50 SNOW LOAD:	2.6kPa
1/50 WIND LOAD:	0.35 kPa
BUILDING CODE:	AB, BC
BUILDING TYPE:	SELF-FRAMING GABLE
LENGTH:	20'-0"
WIDTH:	17'-6"
EAVE HEIGHT:	10'-6"
ROOF SLOPE:	3:12
WALL INSULATION:	R12 ROXUL
ROOF INSULATION:	R20 ROXUL
WINDOWS:	2 x 40"x40" 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*

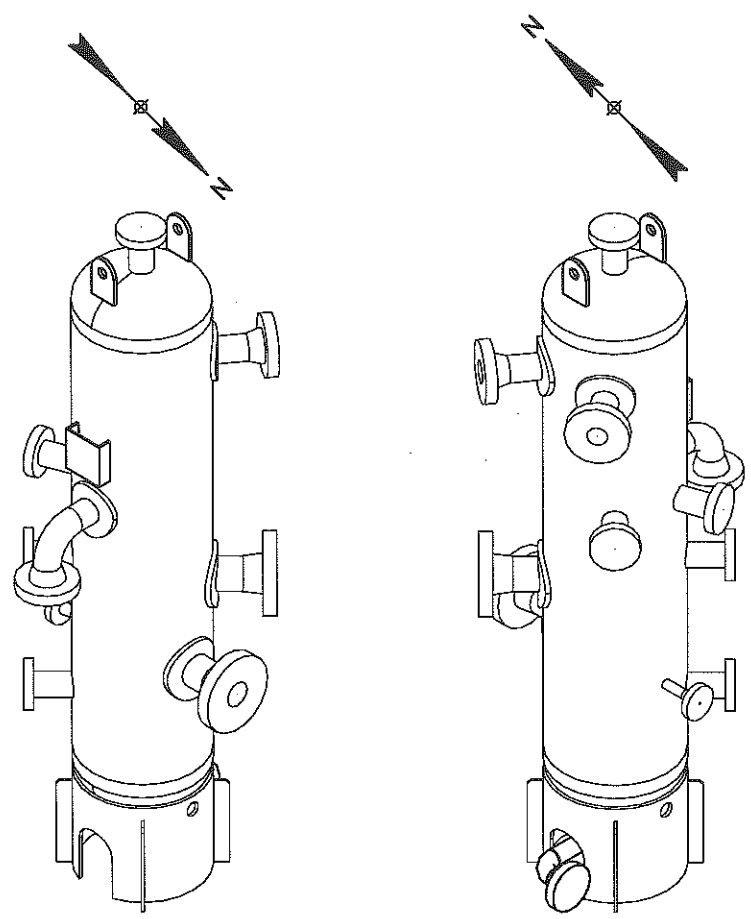
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A	15-07-23	GT	GW	AH	ISSUED FOR CONSTRUCTION
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REVISIONS	
MAIN SHOP / OFFICE 6900 - 112th AVENUE S.E. CALGARY, AB T2C 4Z1 PHONE: (403) 236-5877 FAX: (403) 272-7749	<b>BIDELL™</b> APEGA PERMIT NUMBER P08318 GAS COMPRESSION

BUILDING DETAILS	
BALDOR G5010Z/ARIEL JGJ/2 / AIR-X 81AEF	
CUSTOMER: TOURMALINE OIL CORP c/o OEL PROJECTS LTD	
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



FABRICATION NOTES	
CRN REQUIRED	AB, BC, SK
TAIL DIMENSIONS	FROM DATUM LINE
TOLERANCES	PER BIDE LL STANDARD (MFG-STD-0005)
ACCEPTABLE MATERIAL SUBSTITUTION	USE SA-333-6 IN PLACE OF SA-106-B USE SA-350-LF2 CL1 IN PLACE OF SA-105N USE SA-420-WPL6 IN PLACE OF SA-234-WPB USE SA-516-70N IN PLACE OF SA-36
NACE COMPLIANCE	YES
TACK & ATTACHMENT WELD WPS	BE-10 / BE-17
ATTACHMENT WELDS	1/4" FILLET WELD UNLESS OTHERWISE NOTED
WEEP HOLES	ONE 1/4" NPT REQUIRED ON EACH REPAD, POISON PAD & SADDLE WEAR PLATE AT LOWEST POINTS
NOZZLE REPADS	ONE PIECE, NO SPLIT PERMITTED
SCRUBBER DRAINS	CONTOURED FLUSH TO VESSEL I.D
SUCTION BOTTLE DRAINS	1/4" WEEP HOLE/SLOT ABOVE INTERNAL WELD, BOTH SIDES OF PIPE
FLANGE BOLT HOLES	STRADDLE NATURAL CENTERLINES OF THE VESSELS
INTERIOR SURFACE PREP.	FLUSHED AND RUST PROTECTED
EXTERIOR SURFACE PREP.	SSPC-SP3 (POWER TOOL CLEANED)
FINISH	ONE COAT OF SHOP PRIMER
INSULATION	NONE
ADDITIONAL NOTES	

Vessel to be constructed in strict accordance with the ASME Code for Pressure Vessels Section VIII Div. 1, 2013 Edition		
	MAWP	TEMPERATURE
INTERNAL	1310 PSIG	300°F
EXTERNAL	N/A	N/A
MIN. DESIGN METAL TEMP.	-20°F @ 1310 PSIG	
CORR. ALLOWANCE	0.125 in	3.18 mm
SERVICE:	SOUR GAS SERVICE	
MATERIAL	SHELL: SA-106-B	HEAD: SA-516-70N
NOMINAL THICKNESS	SHELL: 0.937 in	HEAD: 1.000 in
SHIPPING WEIGHT	1919 lb	870 kg
VOLUME	9.14 ft <sup>3</sup>	0.259 m <sup>3</sup>
CRN:	TBD	
SERIAL NO.	15-943-501	
YEAR BUILD	2015	
TAG NO.	V-501	
LSD:	12-06-81-7 W6M	
REGISTRATION NO.	WP 2111.2	AQP 1338
NDE TABLE		
RADIOGRAPHY	RT-1 INCLUDE ALL BUTT WELDS	
ULTRASONIC	SHEAR WAVE UT ON VESSEL CAT D WELDS	
MPI	100% NOZZLE SUPPORT GUSSETS & LIFTING LUGS	
LPI	NONE	
HARDNESS TEST	NONE	
IMPACT TEST	EXEMPT: PER UG-20(f) 1-5	
POSTWELD HT TR	1150°F ± 25°F FOR 1 HOUR	
HYDROTEST PRESSURE	1703 PSIG @ AMBIENT ( Min. 1 Hr duration)	
HYDROTEST FLUID	WATER	
CHECKED BY:		DATE: 16-07-2015
APPROVED BY:		DATE: 17-7-15



TOLERANCES	1 WPS # BE-1 BE-2 BE-10 BE-11	2 WPS # BE-1 BE-2 BE-10 BE-11	3 WPS # BE-1 BE-2 BE-10 BE-12	4 WPS # BE-1 BE-2 BE-10 BE-12	5 WPS # BE-1 BE-2 BE-10 BE-12
	CIR. SEAM W/ SCARFING BE-12 BE-17	CIRCULAR SEAM BE-12 BE-17	NOZZLE THROUGH SHELL BE-17	NOZZLE THROUGH SHELL W/ REPAD BE-17	DRAIN NOZZLE BE-17
	SKIRT WELD BE-17	NOZZLE THROUGH HEAD BE-17	FLAT HEAD	POISON PAD	LIFTING LUG

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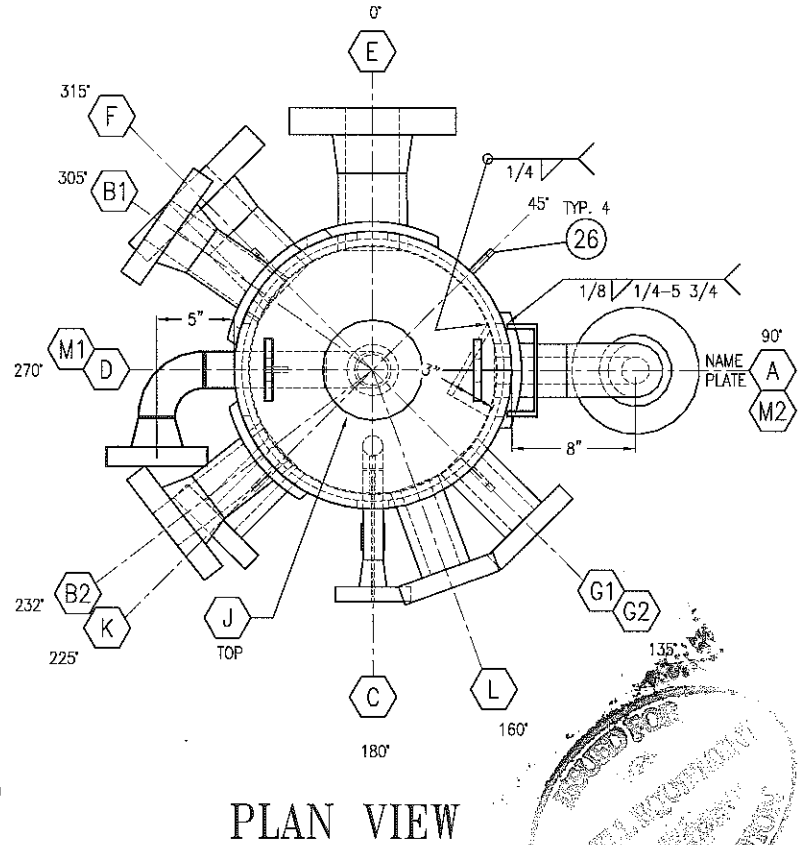
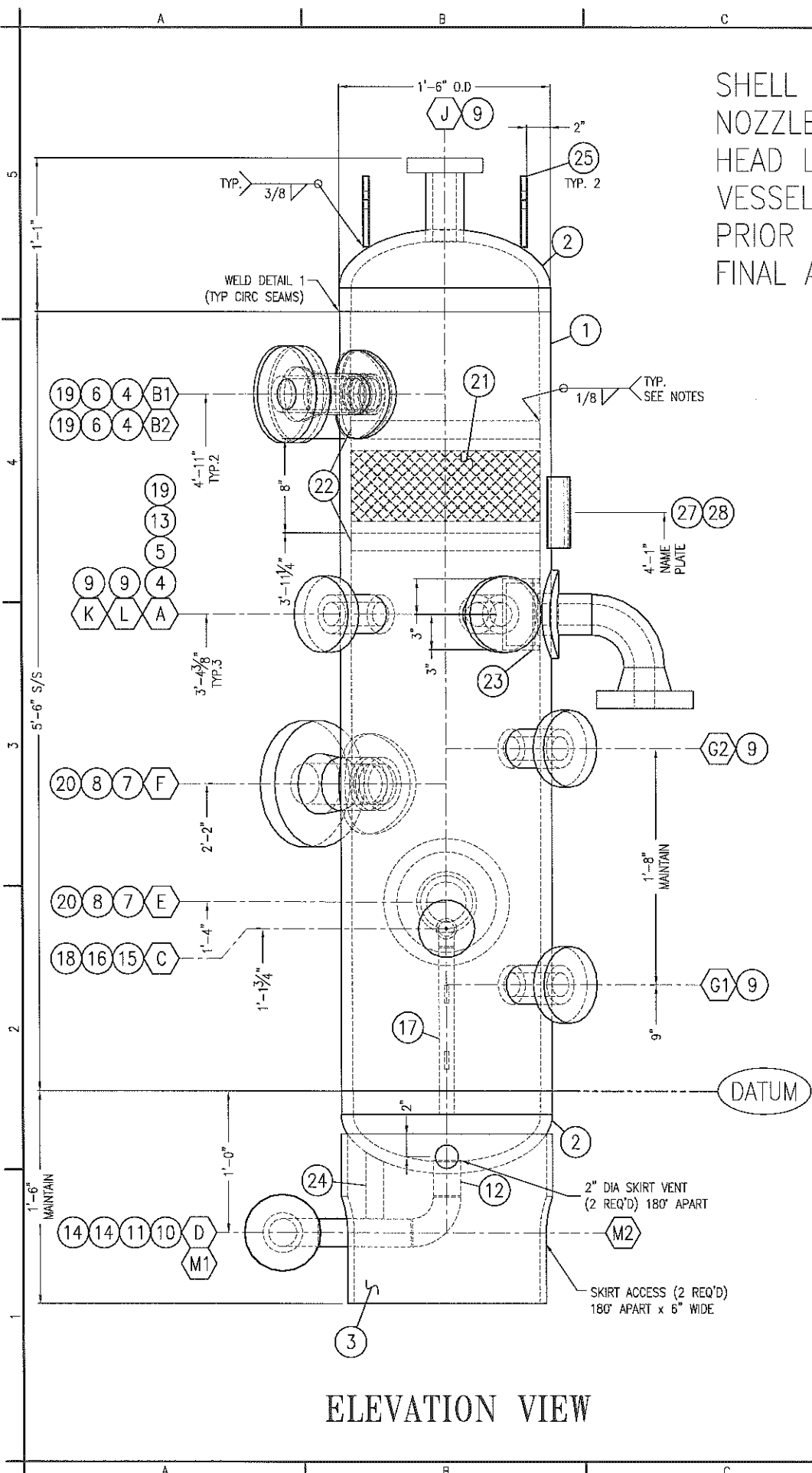
**ISSUED FOR CONSTRUCTION**

# IFC

2015/07/16

DA	CP	JR	ISSUED FOR CONSTRUCTION		
0	15-07-07	DA	CP	JR	ISSUED FOR CONSTRUCTION
REV	DATE	DRAWN	REVIEWED	APPROVED	DESCRIPTION
REVISIONS					
MAIN SHOP / OFFICE 6900 - 112th AVENUE S.E. CALGARY, AB T2C 4Z1 PHONE: (403) 235-5877 FAX: (403) 272-7749			<b>BIDELL</b> ™ GAS COMPRESSION APEGA PERMIT NUMBER P08318		
CUSTOMER: TOURMALINE OIL CORP c/o OEL PROJECTS LTD					
LOCATION: 9969 GAS LIFT COMPRESSOR					
LSD: 12-6-81-7 W6M					
PAPER SIZE	SCALE	DWG#	15-943-501		
11"x17"	NIS		REV	0	

SHELL LAYOUT BY: \_\_\_\_\_  
 NOZZLE FIT BY: \_\_\_\_\_  
 HEAD LAYOUT BY: \_\_\_\_\_  
 VESSEL CHECKED FOR DEBRIS  
 PRIOR TO CLOSING: \_\_\_\_\_  
 FINAL ASSEMBLY BY: \_\_\_\_\_



PLAN VIEW

ELEVATION VIEW

BILL OF MATERIALS					
MK	QTY	PART NUMBER	DESCRIPTION	LENGTH	MAT'L SUB/HEAT NO./CODE
1	1	PIP-01804	PIPE, SMLS, SA106B, S80, 18" (MIN THK 0.819")	66"	
2	2	VES-H1810	HEAD, 2:1 SE, 18" OD X 1" THK, 2" SF, SA516-70N (MIN THK 0.9375")	-	
3	1	PIP-01803	PIPE, SMLS, SA106B, XXH, 18"	1'-2 3/8"	
4	3	BWF-A39F	FLANGE, RFWN, 3"-600#, XXH, SA105N	-	
5	1	PIP-00309	PIPE, SMLS, SA106B, XXH, 3" BBE	5"	
6	2	PIP-00309	PIPE, SMLS, SA106B, XXH, 3", BOE/POE	6"	
7	2	BWF-A39G	FLANGE, RFWN, 4"-600#, XXH, SA105N	-	
8	2	PIP-00409	PIPE, SMLS, SA106B, XXH, 4", BOE/POE	5 1/2"	
9	5	BWF-L200	FLANGE, RFLWN, 2"-600#, 9" LG, SA105N	9"	
10	1	BWF-A39D	FLANGE, RFWN, 2"-600#, XXH, SA105N	-	
11	1	PIP-00209	PIPE, SMLS, SA106B, XXH, 2", BBE	7 3/4"	
12	1	PIP-00209	PIPE, SMLS, SA106B, XXH, 2", BOE/POE	5"	
13	1	BWF-09F	ELBOW, BW, 90° LR, 3", XXH, SA234-WPB	-	
14	2	BWF-09D	ELBOW, BW, 90° LR, 2", XXH, SA234-WPB	-	
15	1	BWF-A39A	FLANGE, RFWN, 1"-600#, XXH, SA105N	-	
16	1	PIP-00109	PIPE, SMLS, SA106B, XXH, 1", BBE	5 11/16"	
17	1	PIP-00109	PIPE, SMLS, SA106B, XXH, 1", BOE/POE	1'-2 1/8"	
18	1	BWF-09A	ELBOW, BW, 90° LR, 1", XXH, SA234-WPB	-	
19	3	VES-R625R	REPAD, 5/8" THK X 3 5/8" ID X 7 5/8" OD, ROLLED TO 18" ID, SA516-70N	-	
20	2	VES-R625R	REPAD, 5/8" THK X 4 5/8" ID X 8 5/8" OD, ROLLED TO 18" ID, SA516-70N	-	
21	1	VES-7317	MESH PAD, 6" THK, 9# DENSITY, 17" OD, 316SS, CS GRID	-	
22	4	VES-040	STEEL, FLATBAR, BP, 3/8X1-1/2, SA-516-70N	-	
23	1	VES-006	INLET BAFFLE, F/CHANNEL, 3/8" THK, 3"x6" X3" OD, 48" LG, SA516-70N	-	
24	3	STL-0415	STEEL, FLATBAR, 3/8"x1-1/2", SA-516-70N	CTS	
25	2	VES-400V	LIFTING LUG, 1/2" THK, SA516-70N MFG: MODEL: BES-500-01	-	
26	4	STL-0420	STEEL, FLATBAR, 3/8"x2", SA-A36/44W	1'-0 1/2"	
27	1	VES-601	BRACKET, NAME PLATE, 1/4" TH MFG: MODEL: BES-601, SA-516-70N	-	
28	1	VES-605	NAMEPLATE, VESSEL, SS	-	

NOZZLE SCHEDULE												
Ref.	Size	Rating	Type	Service	Weld Proc.	FILLET WELD SIZE			PROJECTION		Repad	
						W.D.	A (W41)	B (W42)	C (W43)	H		EXT. PROJ.
A	3"	600#	RFWN	GAS INLET		2,4	3/8"	9/16"	0"	0"	AS SHOWN	YES
B <sub>1,2</sub>	3"	600#	RFWN	GAS OULET		2,4	3/8"	9/16"	0"	0"	8"	YES
C	1"	600#	RFWN	AUTO DUMP		2,3	3/8"	0"	0"	0"	6"	NO
D	2"	600#	RFWN	MANUAL DRAIN		2,5	3/8"	0"	0"	0"	AS SHOWN	NO
E	4"	600#	RFWN	LIQUID LEVEL CONTROLLER		2,4	3/8"	9/16"	0"	0"	8"	YES
F	4"	600#	RFWN	HIGH LEVEL SWITCH		2,4	3/8"	9/16"	0"	0"	8"	YES
G <sub>1,2</sub>	2"	600#	RFLWN	GAUGE GLASS / INSP. OPENING PER UC-46(f7)		3	3/8"	0"	0"	0"	6"	NO
H												
J	2"	600#	RFLWN	VENT / INSPECTION OPENING		3	3/8"	0"	0"	0"	AS SHOWN	NO
K	2"	600#	RFLWN	TEMPERATURE INDICATOR		3	3/8"	0"	0"	0"	6"	NO
L	2"	600#	RFLWN	PRESSURE INDICATOR		3	3/8"	0"	0"	0"	6"	NO
M <sub>1,2</sub>				SKIRT ACCESS								
N												

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ISSUED FOR CONSTRUCTION

**IFC**

2015/07/16

REV	DATE	DRAWN	REVIEWED	APPROVED	DESCRIPTION
0	15-07-07	DA	CP	JR	ISSUED FOR CONSTRUCTION

REVISIONS

MAIN SHOP / OFFICE  
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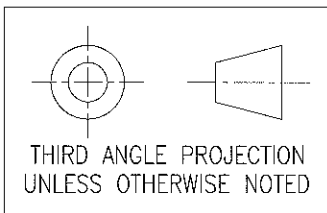
**BIDELL™** APEGA PERMIT NUMBER P08318  
 GAS COMPRESSION

STAGE 1 SCRUBBER (V-501)  
 18" OD X 66" S/S

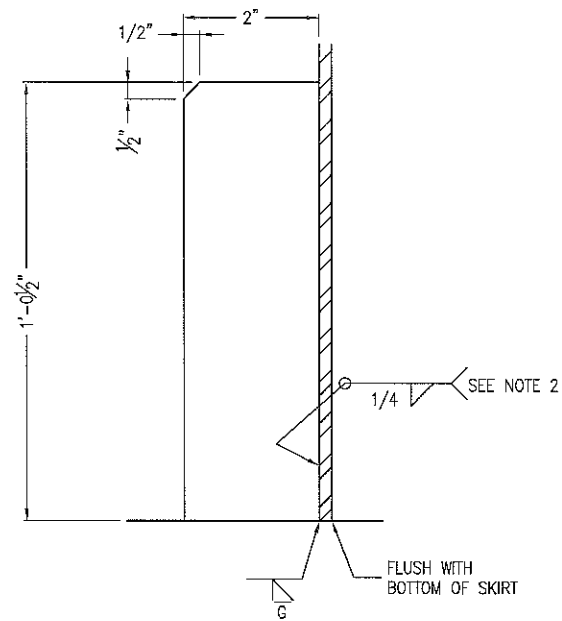
CUSTOMER: TOURMALINE OIL CORP c/o OEL PROJECTS LTD  
 LOCATION: 9969 GAS LIFT COMPRESSOR  
 LSD: 12-6-81-7 W6M

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

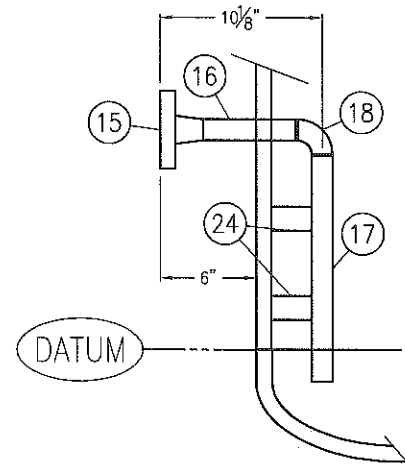
PAPER SIZE 11"x17" SCALE NTS DWG# 15-943-501 REV 0



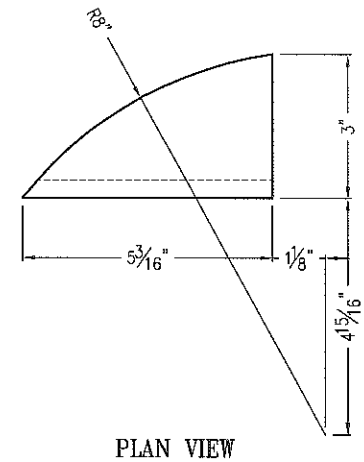




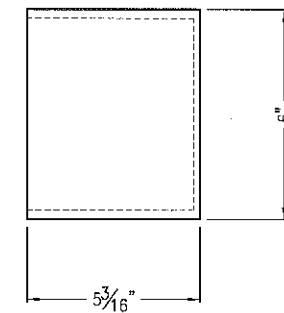
**GUSSET DETAIL**  
SEE PLAN VIEW FOR ORIENTATION



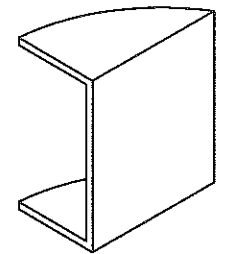
**SIPHON DRAIN DETAIL**



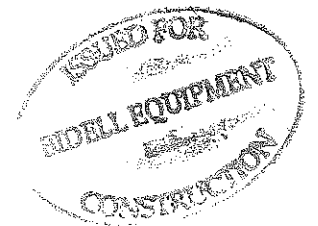
**PLAN VIEW**



**ELEVATION**  
**BAFFLE DETAIL**



**ISOMETRIC**



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**ISSUED FOR CONSTRUCTION**

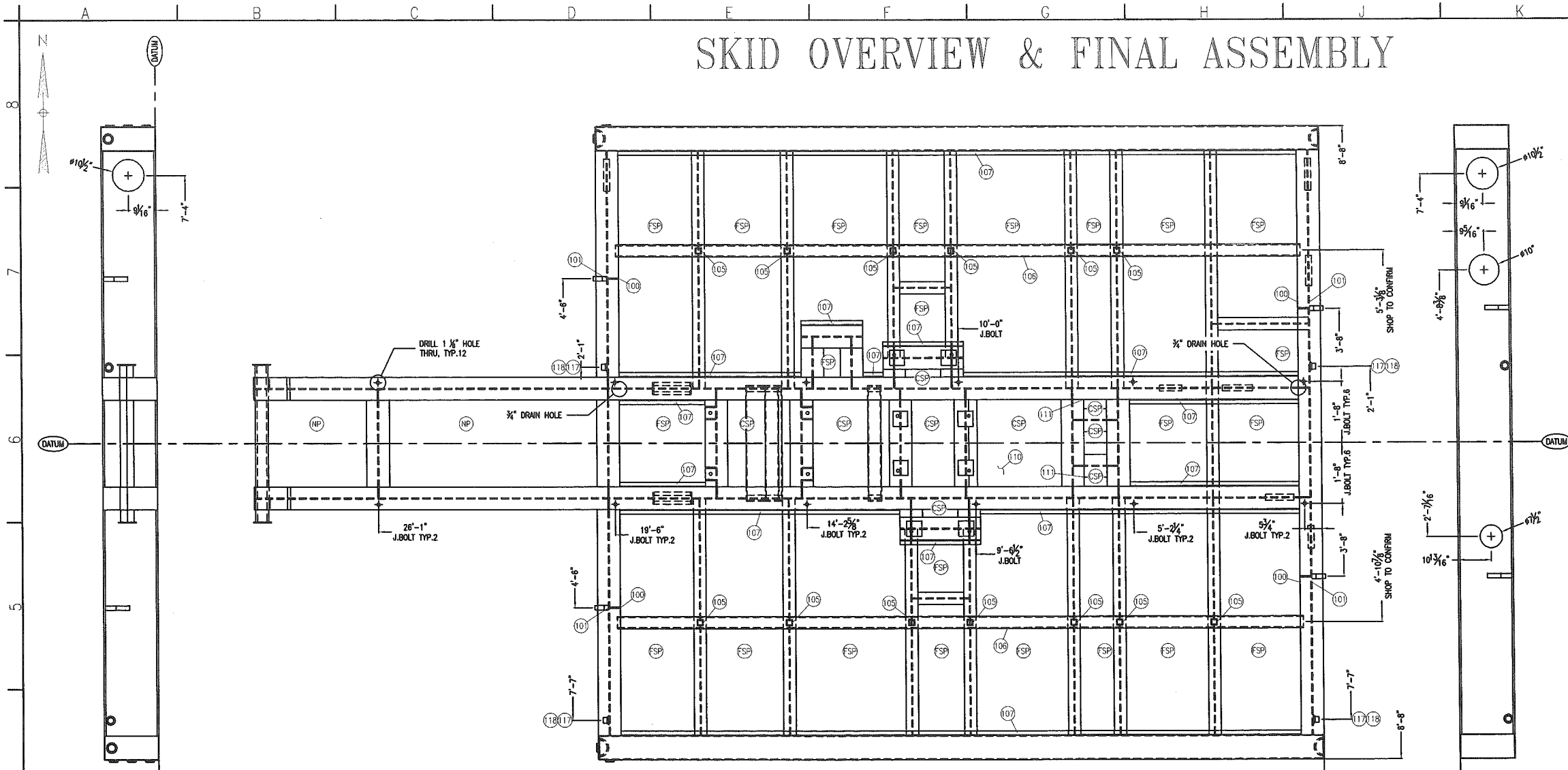
**IFC**

2015/07/13

REV	DATE	DRAWN	REVIEWED	APPROVED	DESCRIPTION
0	15-07-07	DA	CP	JR	ISSUED FOR CONSTRUCTION
REVISIONS					
MAIN SHOP / OFFICE 6900 - 112th AVENUE S.E. CALGARY, AB T2C 4Z1 PHONE: (403) 235-5877 FAX: (403) 272-7749					
<b>BIDELL™</b>					
APEGA PERMIT NUMBER P08318					
GAS COMPRESSION					
STAGE 1 SCRUBBER (V-501) 18" OD X 66" S/S					
CUSTOMER: TOURMALINE OIL CORP c/o OEL PROJECTS LTD					
LOCATION: 9969 GAS LIFT COMPRESSOR				SHEET#: 3 OF 3	
LSD: 12-6-81-7 W6M				JOB#: 15-943	
PAPER SIZE 11"x17"		SCALE NTS		DWG# 15-943-501	
				REV 0	

# SKID OVERVIEW & FINAL ASSEMBLY

BILL OF MATERIAL - LIFTING DEVICES									
MK	QT	ST	P/N	DESCRIPTION	LG	WT	MAT	COPE	
100	4	0	STL-C711	3/8" GUSSET PLATE W18x50, W18x55, W18x60 (REFER TO DWG# BES-405-05)	1'-4 5/8"	24.30	44W/A36	3.59	
101	4	0	STL-S750	PLATE 1 1/2 X 8 X 4 1/2 (REFER TO BES-400-637)	8"	38.00	44W/A36	2.37	
TOTAL WEIGHT: 62.30									
BILL OF MATERIAL - GRATING SUPPORT									
MK	QT	ST	P/N	DESCRIPTION	LG	WT	MAT	COPE	
105	13	0	STL-4100	HSS 2x2x0.250	1'-0 5/16"	31.62	A500-C	15.59	
106	2	0	STL-2040	C4X5.4	18'-11"	204.31	44W/A36	44.04	
107	1	1	STL-1310	L 1 1/2x1 1/2x3/16	84'-4 1/16"	151.81	44W/A36	42.17	
TOTAL WEIGHT: 235.93									
BILL OF MATERIAL - SHIP LOOSE PLATE									
MK	QT	ST	P/N	DESCRIPTION	LG	WT	MAT	COPE	
110	1	0	STL-M38	PLATE 3/8 X 30.75 X 28.50	2'-6 3/4"	93.20	44W/A36	12.48	
111	2	0	STL-M38	PLATE 3/8 X 7.50 X 3.00	7 1/2"	4.80	44W/A36	0.74	
TOTAL WEIGHT: 98.00									
BILL OF MATERIAL - MISC.									
MK	QT	ST	P/N	DESCRIPTION	LG	WT	MAT	COPE	
115	12	0	FST-EL35	JACKING BOLT, GR8 UNC ZP, 1"x3-1/2" (FULL THREAD)	N/A	N/A	CR.8	N/A	
116	12	0	FST-FL1	NUT, HEX, UNC, ZP, 1"	N/A	N/A	CR.5	N/A	
117	4	0	TNK-415	1 1/2" WELD IN TANK FLANGE	N/A	N/A	N/A	N/A	
118	4	0	FS-9270	1 1/2" PLUG, HEX HEAD, THRD, 6000# FS	N/A	N/A	N/A	N/A	
119	8	0	STL-C012	STEEL, SHEET, GS 12 ga, 5'x10'	N/A	1313	N/A	N/A	

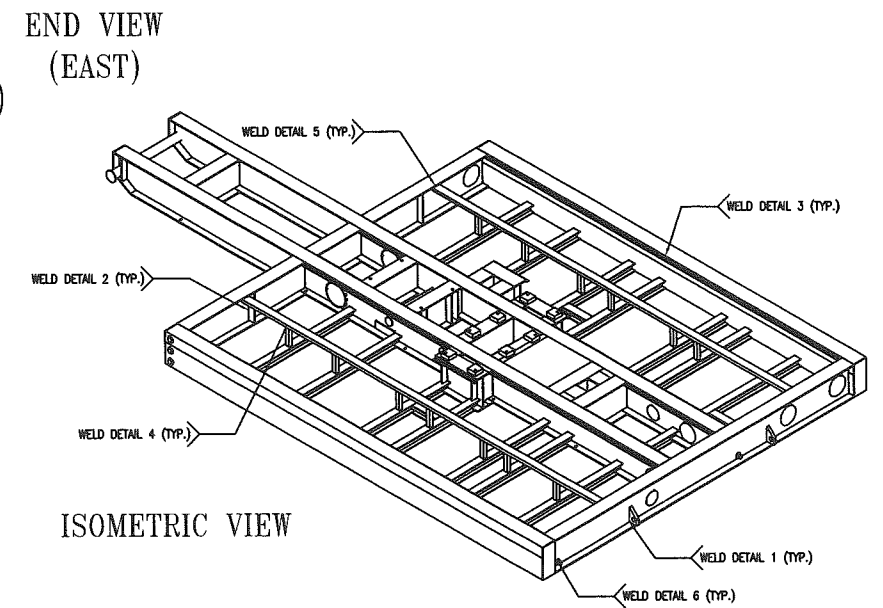


END VIEW (WEST)

END VIEW (EAST)

PLAN VIEW

ELEVATION VIEW



ISOMETRIC VIEW

**SKID WEIGHT SUMMARY**

<b>CENTER ASSEMBLY</b>	
NORTH COMPRESSOR BOX:	169 LBS
SOUTH COMPRESSOR BOX:	169 LBS
JIB CRANE BOX:	189 LBS
CENTER SECTION:	4,156 LBS
CENTER ASSEMBLY TOTAL:	4,685 LBS
<b>TANKS</b>	
NORTH TANK:	316 LBS
SOUTH TANK:	316 LBS
SOUTH TANK TOTAL:	632 LBS
<b>OTHER STEEL</b>	
ALL OTHER STRUCTURAL STEEL:	3,569 LBS
(END BEAMS, COOLER ALIGNMENT BEAMS, STRINGERS, CHANNEL, GRATING SUPPORT, PASSTHROUGHS, OUTBOARD SUPPORTS)	
SEAL PAN:	1,313 LBS
OTHER STEEL TOTAL:	4,882 LBS
<b>TOTAL STEEL WEIGHT:</b>	<b>10,119 LBS</b>

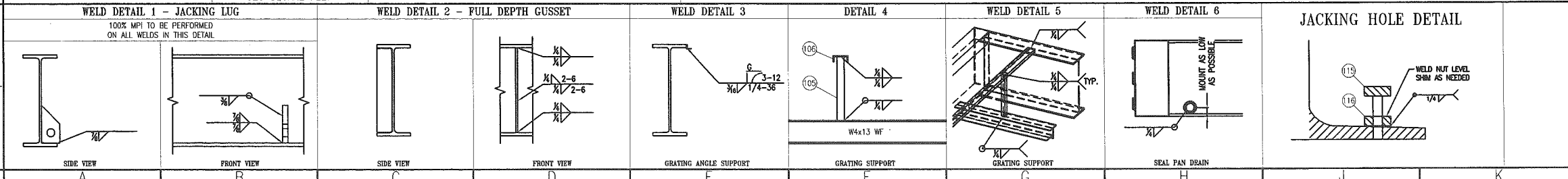
**SEAL PAN LEGEND**

	CONCRETE SUPPORT SEAL PAN
	FLAT SEAL PAN
	NO SEAL PAN

**BOM ITEM# 119**

**TOTAL AREA REQUIRED:**  
320 SQUARE FEET

- SKID FABRICATION NOTES**
1. SEAL PAN TO BE LEAK TESTED (15 MINUTE WATER TEST)
  2. ALL ITEMS DIMENSIONED TO CENTER-LINE (EXCEPT WHERE OTHERWISE NOTED)
  3. ALL TAIL DIMENSIONS FROM MAIN SKID DATUM.
  4. WELDING TO BE PERFORMED BY CWB QUALIFIED WELDERS ONLY.



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ISSUED FOR CONSTRUCTION

**IFC**

2015/08/12

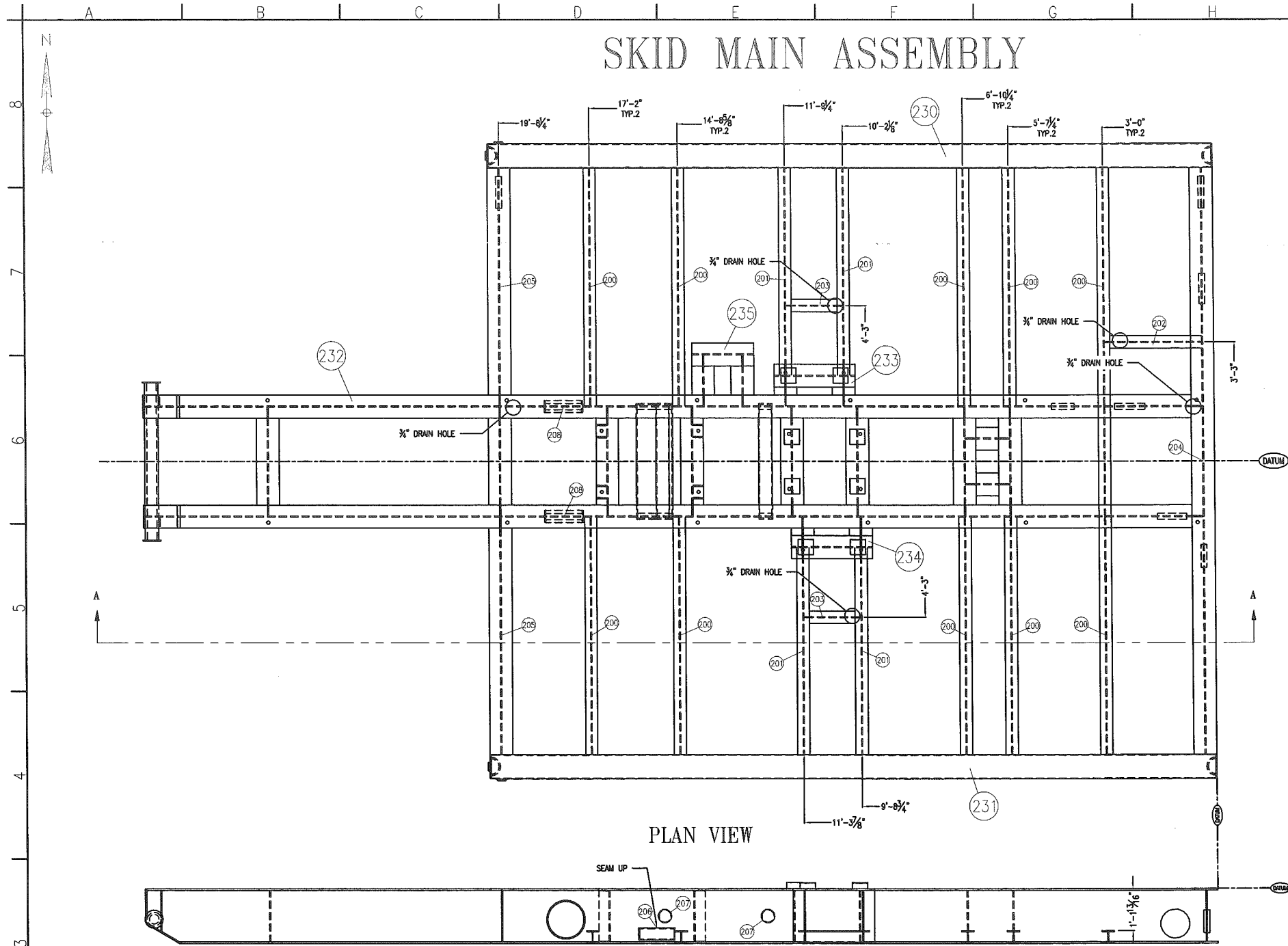
15-943-400

REVISIONS:

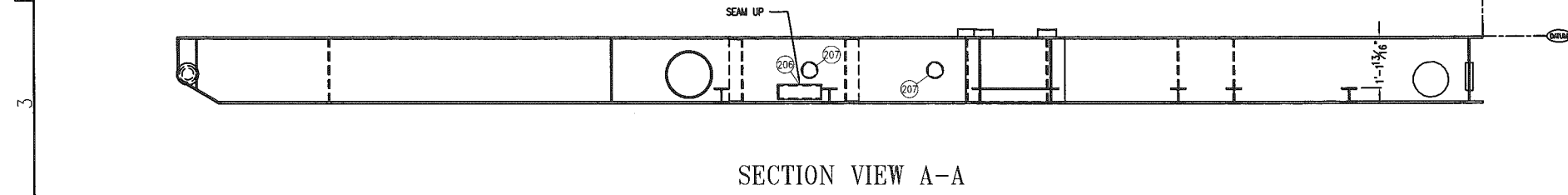
NO.	DATE	ISSUED BY	REVISION
A	15-08-12	JR	REVISED MOTOR MOUNTING BEAM LOCATION/REMOVED HOLD
B	15-08-26	JR	ISSUED FOR CONSTRUCTION

CUSTOMER: TOURMALINE OIL CORP. c/o OEL PRODUCTS LTD  
 LOCATION: 9855 GAS LIFT COMPRESSOR  
 LBL: 12-08-81-07 WIM  
 PAPER SIZE: 36x24" SCALE: NTS DWG#: 15-943-400 REV: A

# SKID MAIN ASSEMBLY



PLAN VIEW



SECTION VIEW A-A

BILL OF MATERIAL - GENERAL									
MK	QT	ST	P/N	DESCRIPTION	LG	WT	MAT	COPE	
200	10	0	STL-3040	W4X13	6'-5 13/16"	828.07	A572-50	129.70	
201	4	0	STL-3040	W4X13	5'-7 3/4"	287.67	A572-50	45.18	
202	1	0	STL-3040	W4X13	2'-7 15/16"	31.58	A572-50	5.32	
203	2	0	STL-3040	W4X13	1'-6 7/8"	34.75	A572-50	6.28	
204	1	0	STL-3180	W18X50	16'-0"	800.00	A572-50	87.00	
205	2	0	STL-3180	W18X50	6'-5 13/16"	631.02	A572-50	70.53	

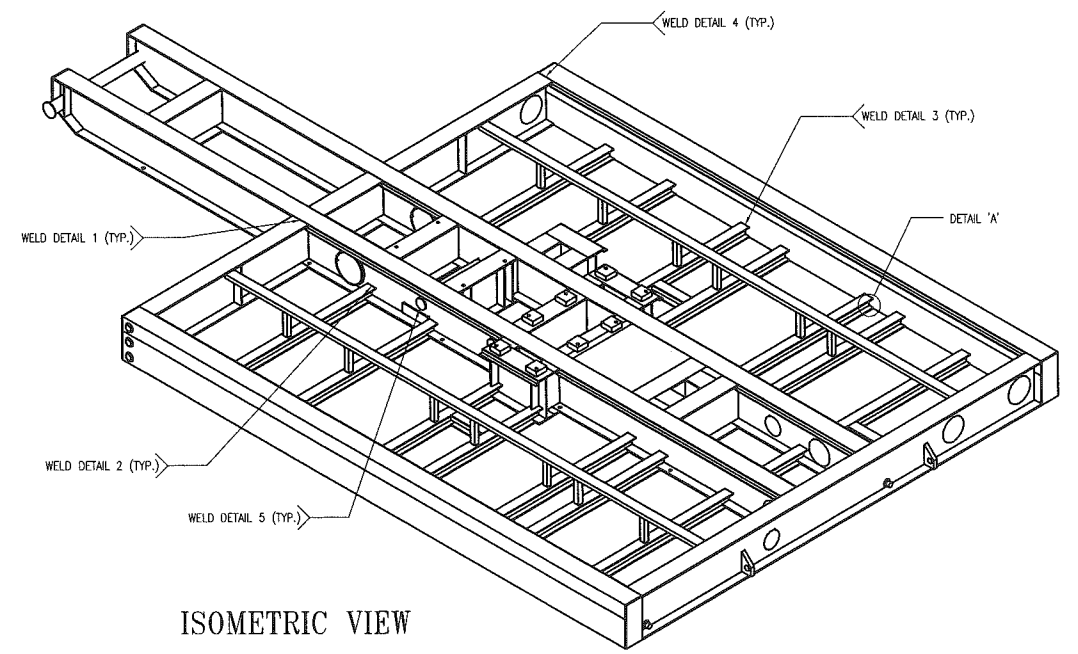
  

BILL OF MATERIAL - PASS-THROUGHS									
206	1	0	NPN	HSS 12x4x0.250	3'-1 1/8"	12.89	A500-C	15.98	
207	2	1	PIP-00400	4" PIPE, SMLS, SCH STD	3'-1 1/8"	13.32	SA-106-B	13.80	
208	2	1	PIP-01200	12" PIPE, SMLS, SCH STD	4"	3.77	SA-106-B	4.32	

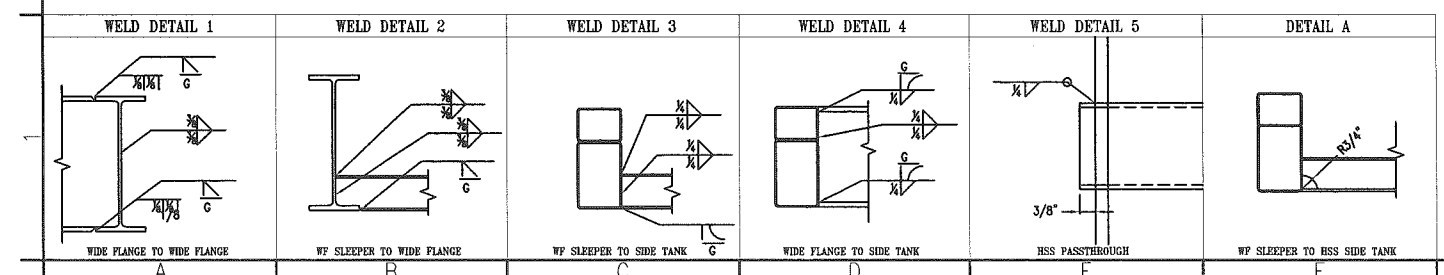
TOTAL WEIGHT: 2643.07

BILL OF MATERIAL - SUB-ASSEMBLIES									
230	1	N/A	NPN	WASTE TANK, NORTH, REFER TO 15-943-400 PG 4	-	-	44W/A36	N/A	
231	1	N/A	NPN	WASTE TANK, SOUTH, REFER TO 15-943-400 PG 4	-	-	44W/A36	N/A	
232	1	N/A	NPN	CENTER ASSEMBLY, REFER TO 15-943-400 PG 3	-	-	44W/A36	N/A	
233	1	N/A	NPN	COMPRESSOR BOX, NORTH, REFER TO 15-943-400 PG 4	-	-	44W/A36	N/A	
234	1	N/A	NPN	COMPRESSOR BOX, SOUTH, REFER TO 15-943-400 PG 4	-	-	44W/A36	N/A	
235	1	N/A	NPN	JIB CRANE BOX, REFER TO 15-943-400 PG 4	-	-	44W/A36	N/A	



ISOMETRIC VIEW



- SKID FABRICATION NOTES**
1. ALL ITEMS DIMENSIONED TO CENTER-LINE (EXCEPT WHERE OTHERWISE NOTED)
  2. ALL TAIL DIMENSIONS FROM MAIN SKID DATUM.
  3. WELDING TO BE PERFORMED BY CWB QUALIFIED WELDERS ONLY.

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ISSUED FOR CONSTRUCTION

# IFC

2015/08/12

THIRD ANGLE PROJECTION UNLESS OTHERWISE NOTED

REV	DATE	BY	CHKD	APPD	DESCRIPTION
A	15-08-12	JG	CP	AR	REVISED WORK WORKING FROM LOCATION/REMOVED HOLD

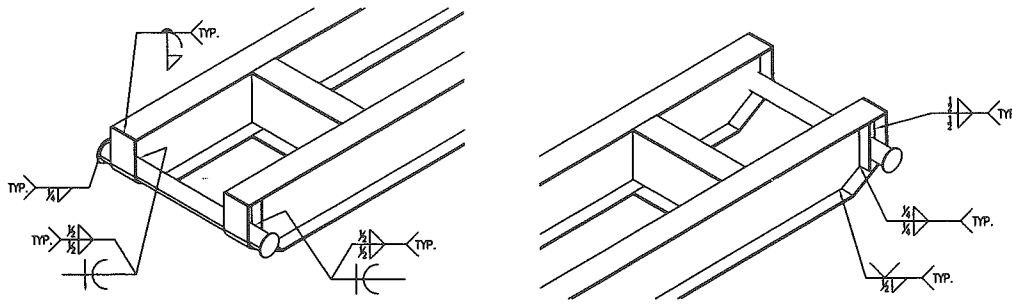
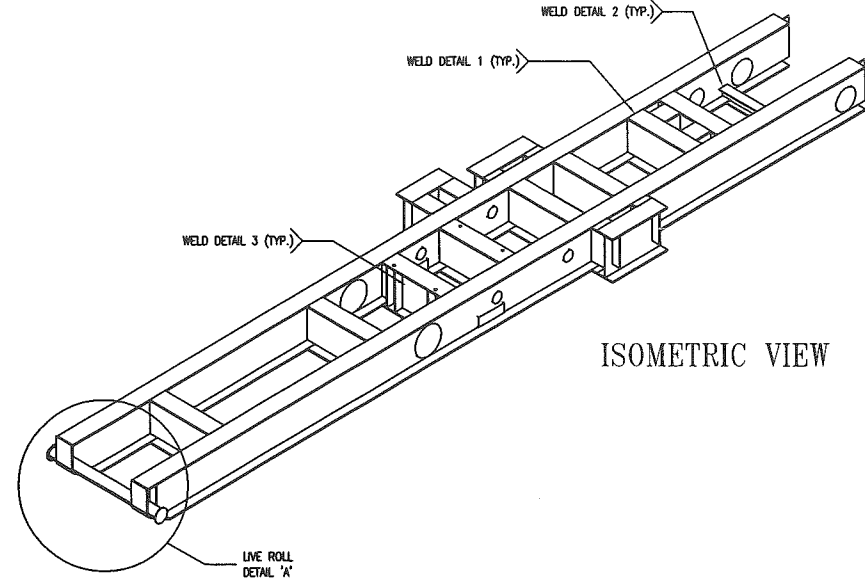
REVISIONS

**BIDELL** GAS COMPRESSION

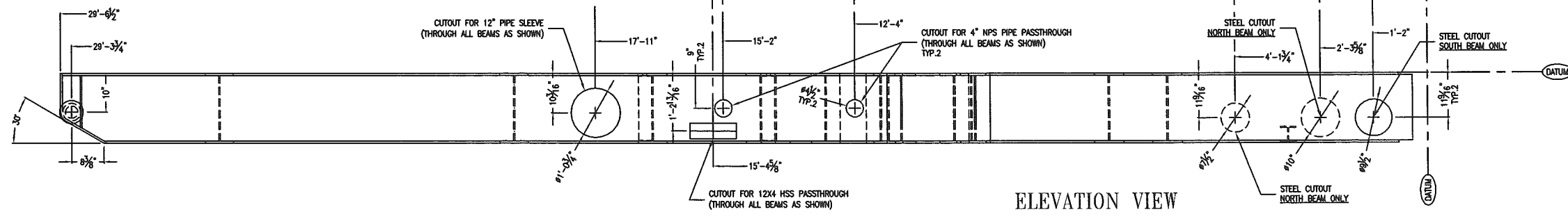
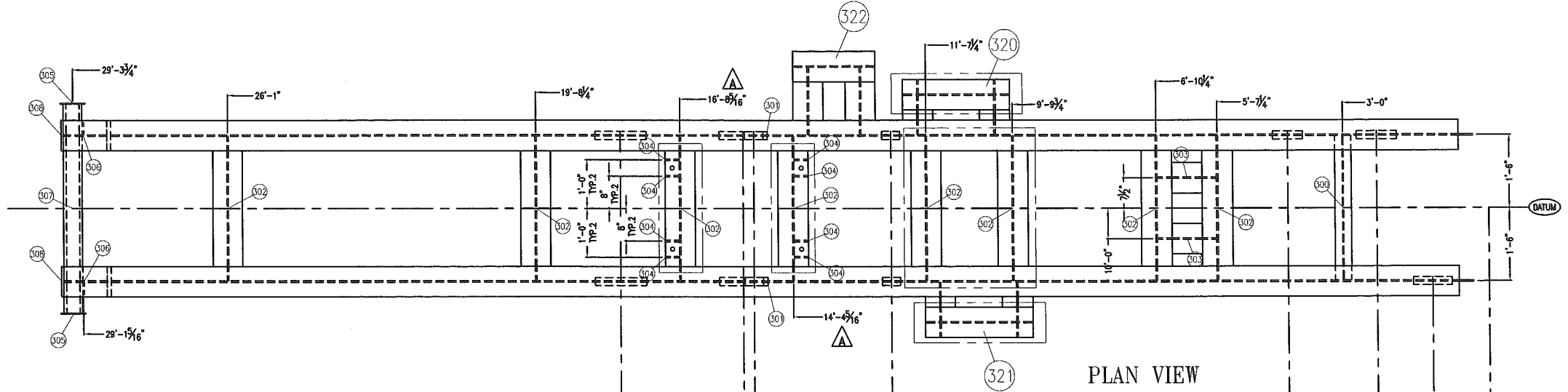
SKID FABRICATION DRAWING MAIN ASSEMBLY

CUSTOMER: TOURMALINE OIL CORP. c/o OIL PRODUCTS LTD  
 LOCATION: 2269 GAS LIFT COMPRESSOR  
 LST: 12-06-81-07 WSM  
 PAPER SIZE: 36x24" SCALE: NTS DWG# 15-943-400 REV A

# CENTER ASSEMBLY

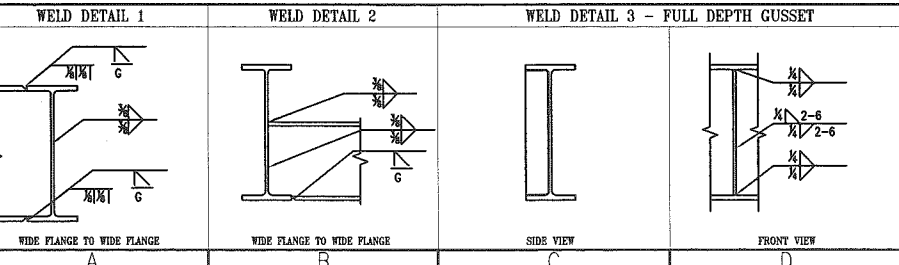


NOTE:  
AREAS OUTLINED AS SHOWN ARE EQUIPMENT MOUNTING SURFACES (SKID SHOP TO ENSURE FLATNESS AT TOP OF SKID)



BILL OF MATERIAL									
MK	QT	ST	P/N	DESCRIPTION	LG	WT	MAT	COPE	
300	1	0	STL-3040	W4X13	2'-11 5/8"	35.61	A572-50	5.94	
301	2	0	STL-3180	W18X50	29'-2 1/16"	2865.87	A572-50	317.26	
302	8	0	STL-3180	W18X50	2'-11 5/8"	1048.17	A572-50	129.21	
303	2	0	STL-3180	W18X50	1'-2 5/8"	87.04	A572-50	13.27	
304	8	0	STL-C711	3/8" GUSSET PLATE W18X50, W18X55, W18X60 (REFER TO DWG# BES-405-05)	1'-4 5/8"	48.61	44W/A36	7.18	
305	2	0	STL-M14	PLATE 1/4 (10.2 lb/sq ft) X 6#	6"	4.01	44W/A36	0.85	
306	2	0	STL-0430	FLATBAR 3/8x3	1'-1 1/2"	8.61	44W/A36	1.26	
307	1	1	PIP-00409	4" PIPE, SMLS, SCH XXH	4'-3 1/2"	60.20	SA-106-B	8.60	
308	2	1	STL-M12	PLATE 1/2 X 24.625 X 7.50	2'-0 5/8"	52.56	44W/A36	8.60	
TOTAL WEIGHT: 4210.69									

BILL OF MATERIAL - SUB-ASSEMBLIES								
320	1	N/A	NPN	COMPRESSOR BOX, NORTH, REFER TO 15-943-400 PG 4	-	-	44W/A36	N/A
321	1	N/A	NPN	COMPRESSOR BOX, SOUTH, REFER TO 15-943-400 PG 4	-	-	44W/A36	N/A
322	1	N/A	NPN	JIB CRANE BOX, REFER TO 15-943-400 PG 4	-	-	44W/A36	N/A



- SKID FABRICATION NOTES**
- ALL ITEMS DIMENSIONED TO CENTER-LINE (EXCEPT WHERE OTHERWISE NOTED)
  - ALL TAIL DIMENSIONS FROM MAIN SKID DATUM
  - SKID SHOP TO ENSURE FLATNESS FOR EQUIPMENT MOUNTING IN AREAS SHOWN.
  - WELDING TO BE PERFORMED BY CWB QUALIFIED WELDERS ONLY.

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ISSUED FOR CONSTRUCTION

**IFC**

2015/08/12

THIRD ANGLE PROJECTION UNLESS OTHERWISE NOTED

REVISIONS

REV	DATE	DESCRIPTION
1	15-08-12	ISSUED FOR CONSTRUCTION

CLIENT: TOURNAINE OIL CORP. / OIL PROJECTS LTD  
LOCATION: SKID GAS LEFT COMPRESSOR  
JOB#: 15-943-400  
SHEET: 3 OF 4  
REV: A

# COMPRESSOR BOXES

# JIB CRANE BOX

BILL OF MATERIAL - NORTH COMPRESSOR BOX

MK	QT	ST	P/N	DESCRIPTION	LG	WT	MAT	COPE
400	1	0	STL-3180	W18X50	2'-2 5/8"	110.92	A572-50	12.06
401	2	0	STL-3180	W18X50	9 11/16"	45.82	A572-50	8.79
402	2	0	STL-C711	3/8" GUSSET PLATE W18X50, W18X55, W18X60 (REFER TO DWG# BES-405-05)	1'-4 5/8"	12.15	44W/A36	7.18

TOTAL WEIGHT: 168.89

BILL OF MATERIAL - SOUTH COMPRESSOR BOX

MK	QT	ST	P/N	DESCRIPTION	LG	WT	MAT	COPE
405	1	0	STL-3180	W18X50	2'-2 5/8"	110.92	A572-50	12.06
406	2	0	STL-3180	W18X50	9 11/16"	45.82	A572-50	8.79
407	2	0	STL-C711	3/8" GUSSET PLATE W18X50, W18X55, W18X60 (REFER TO DWG# BES-405-05)	1'-4 5/8"	12.15	44W/A36	7.18

TOTAL WEIGHT: 168.89

BILL OF MATERIAL - JIB CRANE BOX

MK	QT	ST	P/N	DESCRIPTION	LG	WT	MAT	COPE
410	1	0	STL-3180	W18X50	1'-8 1/2"	85.40	A572-50	9.29
411	2	0	STL-3180	W18X50	1'-4 5/8"	103.71	A572-50	15.08

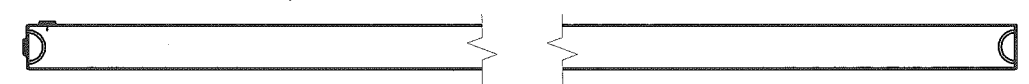
TOTAL WEIGHT: 188.11

BILL OF MATERIAL - NORTH/SOUTH WASTE TANK

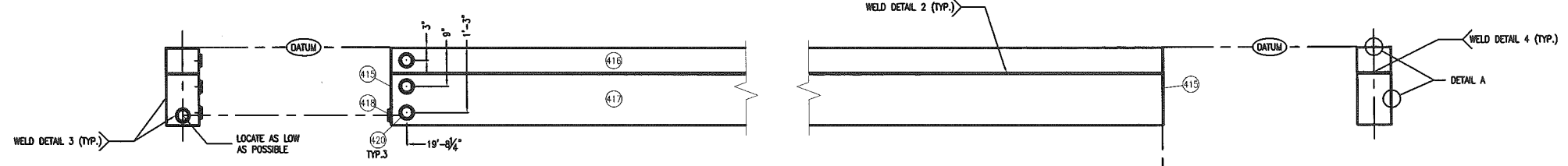
MK	QT	ST	P/N	DESCRIPTION	LG	WT	MAT	COPE
415	4	0	STL-C751	18" SKID SIDE TANK END PLATE, 1'-5 3/4" x 7 3/4" x 3/8" (REFER TO DWG# BES-405-48)	1'-5 3/4"	58.50	44W/A36	8.17
416	2	0	STL-4730	HSS 8x6x0.250	19'-11 1/4"	125.72	A500-C	179.44
417	2	1	NPN	HSS 12x8x0.250	19'-11 1/4"	132.15	A500-C	259.19
418	2	0	TNK-420	2" WELD IN TANK FLANGE	-	-	-	-
420	6	0	TNK-420	2" WELD IN TANK FLANGE	N/A	N/A	N/A	N/A

TOTAL WEIGHT: 316.37

# NORTH WASTE TANK ASSEMBLY

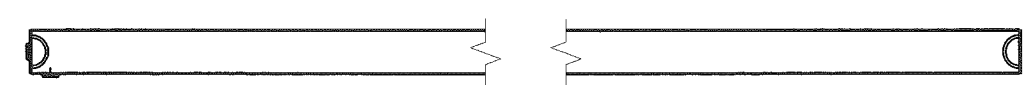


PLAN

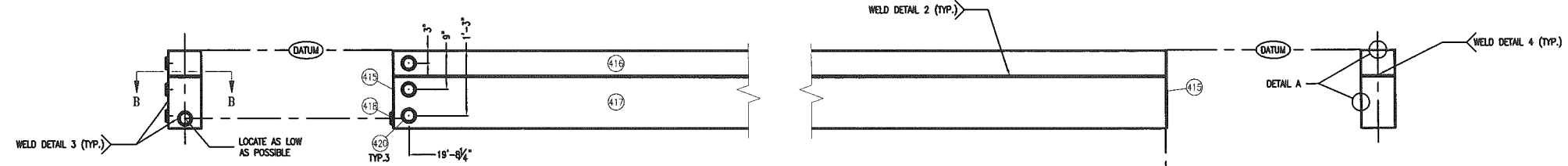


ELEVATION

# SOUTH WASTE TANK ASSEMBLY

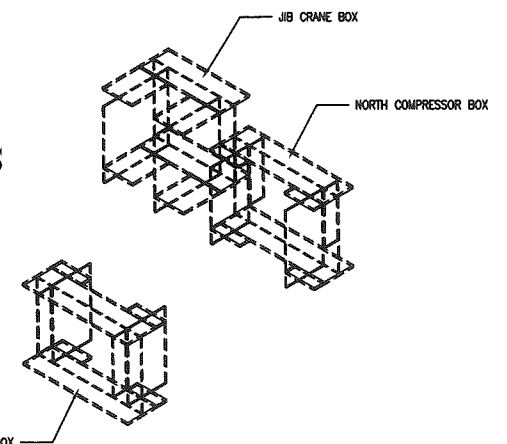


PLAN



ELEVATION

ISOMETRIC VIEWS



## SKID FABRICATION NOTES

1. ALL ITEMS DIMENSIONED TO CENTER-LINE (EXCEPT WHERE OTHERWISE NOTED)
2. ALL TAIL DIMENSIONS FROM MAIN SKID DATUM.
3. WELDING TO BE PERFORMED BY CWB QUALIFIED WELDERS ONLY.
4. TANK TO BE LEAK TESTED WITH SHOP AIR AT 3PSI FOR 15 MIN.

<p>WELD DETAIL 1</p>	<p>WELD DETAIL 2</p>	<p>WELD DETAIL 3</p>	<p>WELD DETAIL 4</p>	<p>DETAIL A</p>	<p>SECTION VIEW B-B DETAIL</p>
WIDE FLANGE TO WIDE FLANGE	HSS TO HSS	END PLATE/WTF	HSS TO HSS	WASTE TANK SEAMS	HSS TO HSS

ISSUED FOR CONSTRUCTION

**IFC**

2015/08/12

THIRD ANGLE PROJECTION UNLESS OTHERWISE NOTED

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REVISED WELDING BEAM LOCATION/REMOVED HOLD

REV DATE (DRAWN) (REVISION) (APP) DESCRIPTION

REVISIONS

APCA PERMIT NUMBER F08318

SKID FABRICATION DRAWING SUB-ASSEMBLES

CUSTOMER: TOURMALINE OIL CORP. c/o OEL PROJECTS LTD

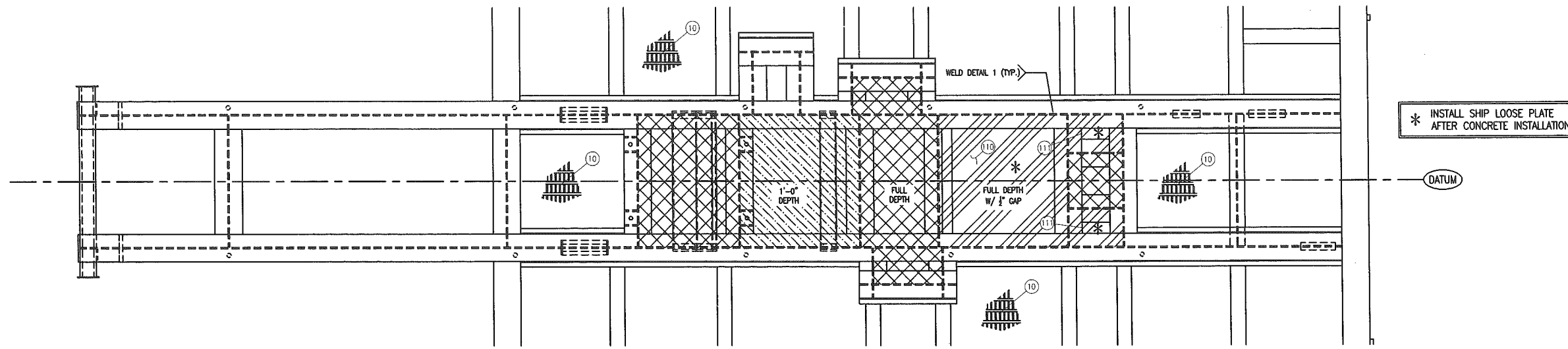
LOCATION: 2909 GAS LIFT COMPRESSOR

DATE: 12-08-07 WEM

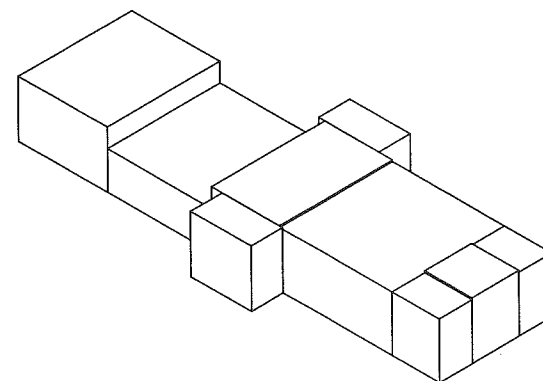
PAPER SIZE: 36x48" SCALE: 1:1 DWG# 15-943-400 REV A

# SKID CONCRETE

BILL OF MATERIAL (GRATING SUPPORT)							
10	AR	0	STL-9010	1"x3/16" THK. D.B. GRATING	245 FT <sup>2</sup>	1776	N/A
BILL OF MATERIAL - SHIP LOOSE PLATE (FROM SKID SHOP)							
MK	QT	ST	P/N	DESCRIPTION	LG	WT	COPE
110	1	0	STL-M38	PLATE 3/8 X 30.75 X 28.50	2'-6 3/4"	93.20	44#/A36 12.48
111	2	0	STL-M38	PLATE 3/8 X 7.50 X 3.00	7 1/2"	4.80	44#/A36 0.74
TOTAL WEIGHT: 98.00							



PLAN VIEW

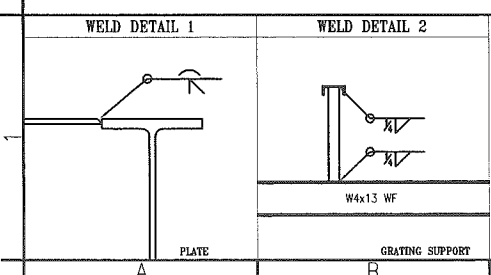


ISOMETRIC VIEW (CONCRETE ONLY)

CONCRETE LEGEND		
FULL DEPTH	FULL DEPTH W/ 1/2" GAP	1'-0" DEPTH
CONCRETE DETAILS		
MIX#20E05GM1 GENERAL MIX COMPRESSIVE STRENGTH: 20 MPA ROCK: 14 MM SLUMP: 20 AIR: NONE CEMENT: TYPE 10 DENSITY: 149 LB / CUBIC FOOT (2,381 KG / CUBIC METER)		

WEIGHTS		CONCRETE VOLUME: 48.8 CUBIC FEET	
SKID FROM SKID SHOP:	10,119 LBS	1.38 CUBIC METERS	
CONCRETE:	7,271 LBS		
TOTAL:	17,390 LBS	CONCRETE MASS: 7,271 LBS	

- FABRICATION NOTES**
- CONCRETE TO BE FIELD POURED BY OTHERS.
  - GRATING SUPPORT TO BE SHOP-LOCATED. REFER TO DETAIL 'A' FOR ASSEMBLY AND WELDING DETAILS.
  - WELDING TO BE PERFORMED BY CWB QUALIFIED WELDERS ONLY.



ISSUED FOR CONSTRUCTION

**IFC**

2015/08/13

THIRD ANGLE PROJECTION UNLESS OTHERWISE NOTED

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REV	DATE	CREATED	REVISED	DESCRIPTION
0	15-08-13	MS	OF	

**BIDELL**  
 CIVIL ENGINEERING  
 275-275-7756  
 15-943-404  
 PERMIT NUMBER: P08318  
 SHEET: 1 OF 1  
 JOB#: 15-943  
 DATE: 15-08-13