

PROPRIETARY MATERIAL
 NOT TO BE REPRODUCED OR DISTRIBUTED
 WITHOUT THE PRIOR WRITTEN CONSENT OF
 TOLSON ENERGY SYSTEMS INC.

No.	REVISION	DATE	BY
2	AS BUILT	03/31/04	JN
1	CHANGED STAGE 1 & 2 PSH, ADDED GLOBE VALVE TO BLOWDOWN, CHANGED FUEL/START GAS LAYOUT	02/24/04	JN
0	ISSUED FOR CONSTRUCTION	12/19/03	JN

CUSTOMER CONNECTIONS

10" - 300# RFWN	3" - 150# RFWN	1" - PIPE (c/w BIRDSCREEN)
4" - 900# RFWN	1" - 3000# NPT	1" - PIPE (c/w BIRDSCREEN)
6" - 150# RFWN	2" - 3000# NPT	2" - 3000# NPT
2" - 300# RFWN	2" - 3000# NPT	2" - 300# RFWN
2" - 300# RFWN	2" - 300# RFWN	2" - 150# RFWN
1" - 150# RFWN	2" - 300# RFWN	1" - 3000# NPT
1" - 3000# NPT	3" - PIPE (c/w BIRDSCREEN)	

CUSTOMER CONNECTIONS

7	START GAS VENT FLANGE	13	LOW PRESSURE INSTRUMENT VENT HEADER
8	OIL FILL	14	LOW PRESSURE PUMP VENT HEADER
9	GLYCOL TANK PUMPOUT DRAIN	15	LOCAL COMPRESSOR OIL FILL
10	WASTE OIL TANK PUMPOUT DRAIN	16	START GAS
11	FUEL GAS DEHYDRATOR	17	WASTE OIL DRAIN
12	START GAS VENT	18	INSTRUMENT AIR

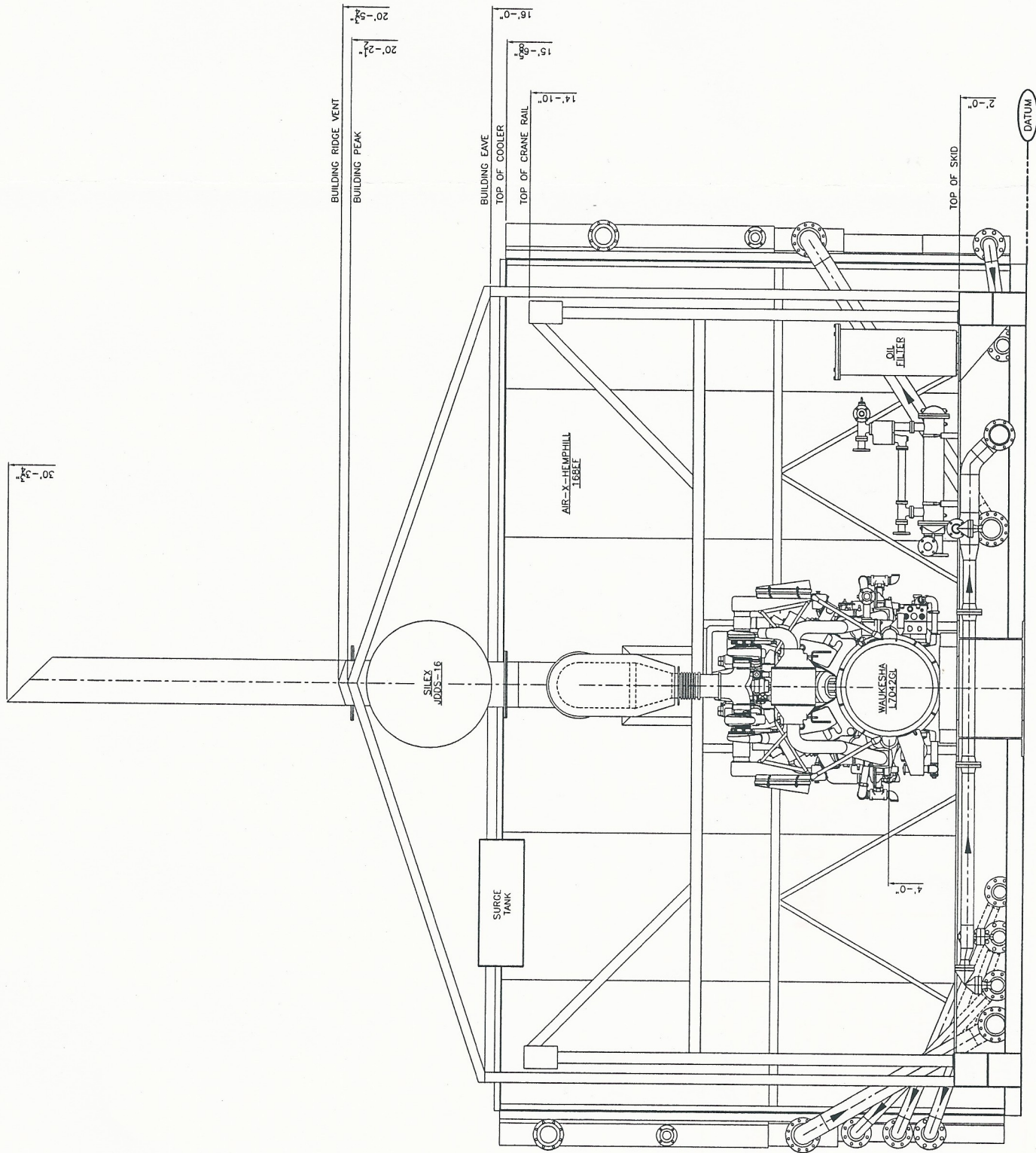
GENERAL SPECIFICATIONS

OVERALL PACKAGE LENGTH	50'-4"
OVERALL PACKAGE WIDTH	27'-6"
OVERALL PACKAGE HEIGHT (14'-0" BLDG.)	20'-5 3/4"
OVERALL PACKAGE WEIGHT	223,500 lbs
WASTE OIL STORAGE CAPACITY (U.S. GAL.)	465
GLYCOL STORAGE CAPACITY (U.S. GAL.)	465
SOUR WASTE OIL STORAGE CAPACITY (U.S. GAL.)	N/A
BRIDGE CRANE	<input type="checkbox"/> 56 U.S. GAL. <input type="checkbox"/> NO
SEAL PAN	<input type="checkbox"/> YES <input type="checkbox"/> NO
LOADING METHOD	<input type="checkbox"/> JACK & ROLL <input type="checkbox"/> LIVE ROLL
PROCESS GAS	<input type="checkbox"/> SWEET <input type="checkbox"/> SOUR <input type="checkbox"/> ACID GAS

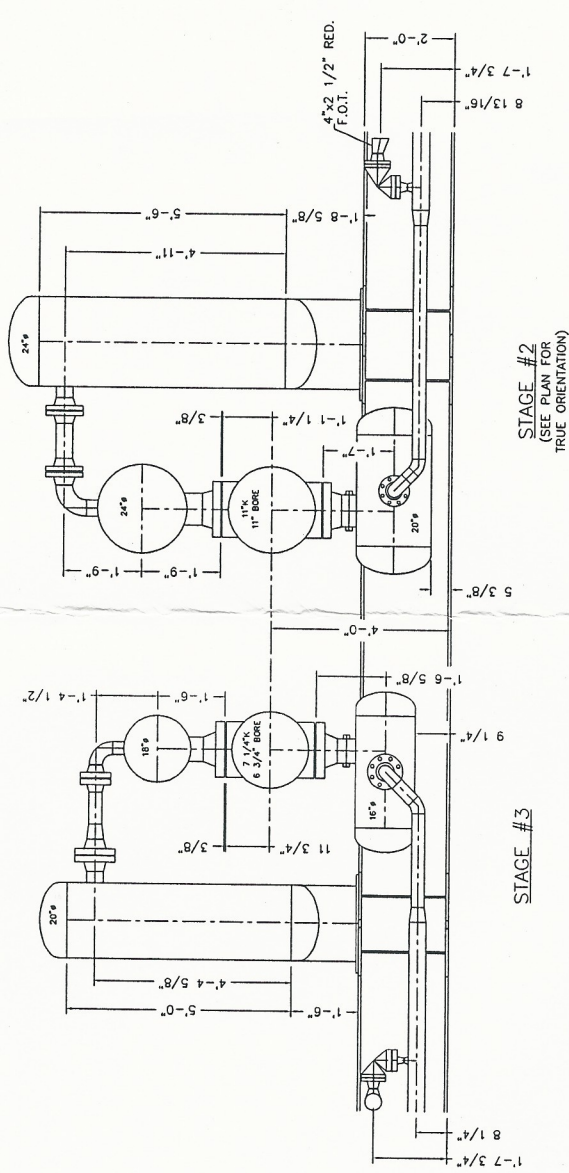
NOTES:
 1. ALL DIMENSIONS TAKEN FROM BOTTOM OF SKID.
 2. ALL OTHER NOTES FOUND ON DWG. #PLOW.

PLAN

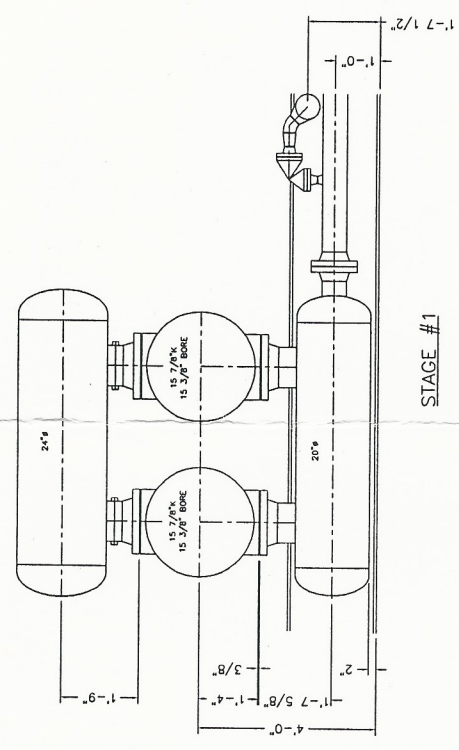
ENERGY INC.
 4303 - 117TH STREET N.E. CALGARY ALBERTA CANADA
 CUSTOMER: HUSKY OIL OPERATIONS LTD.
 WALKESHA L7042QL
 AIR-X-HEMPHILL 168EF-122-26
 SCALE: 1/2"=1'-0" DATE: 12/19/03 BY: JN
 W.O. # N/A UNIT # 1036-CA REV. 2



END VIEW



STAGE #2
(SEE PLAN FOR TRUE ORIENTATION)



STAGE #1

PROPRIETARY MATERIAL
NOT TO BE REPRODUCED OR DISTRIBUTED
WITHOUT THE PRIOR WRITTEN CONSENT OF
TOROMONT ENERGY SYSTEMS INC.

No.	REVISION	DATE	BY
1	CHANGED STAGE 1 & 2 PSV'S SIZES	02/24/04	JN
0	ISSUED FOR CONSTRUCTION	12/19/03	JN

PROPRIETARY MATERIAL: NOT TO BE REPRODUCED OR DISTRIBUTED WITHOUT THE PRIOR WRITTEN CONSENT OF ENERGY INDUSTRIES INC.

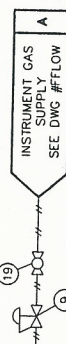
ENERGY INDUSTRIES INC. 4303 - 11TH STREET N.E. CALGARY ALBERTA CANADA

TITLE: ELEVATIONS
 WAUKESHA L70426L
 AIR-X-HEMPHILL 188F
 AIR-X-HEMPHILL 188F

CUSTOMER: HUSKY OIL OPERATIONS LTD.
 C/O: BDR ENGINEERING LTD.
 WHITE BEAR COMPRESSOR STATION
 LSD: 02-03-23-16 WSM

SCALE: 1/2" = 1'-0" DATE: 12/19/03 BY: JN DATE RELEASED: 12/25/03 RELEASED BY: JLN

W.C. # N/A UNIT # 1036 DRAWING NO.: 1036-ELEV REV. 1



PAINT:
OVERALL UNIT: VALSPAR 20-F-34, "WARM GREY" ENAMEL
DO NOT PAINT TURBO/WASTEGATE ON ENGINE
COMMERCIAL IRON OXIDE NON-LIFTING PRIMER

PRIMER:
PROCESS TUBING - 316SS TYPE "SS" FITTINGS w/ 304SS TUBING
TUBING FITTINGS - 316SS BODY w/ SS BACK FERRULE
INSTRUMENTATION TUBING - CADIUM PLATED, "ST" TYPE FITTINGS
304SS TUBING (C/S FITTINGS - CARBON STEEL BODY w/ SS BACK FERRULE & CARBON STEEL FRONT FERRULE)

PROCESS:
PIPING
10X X-RAY, 1/16" CORROSION ALLOWANCE
ALL PROCESS PIPING TO BE PICKLE & OILED.

SCRUBBERS:
10X X-RAY, 1/16" CORROSION ALLOWANCE, ALL VESSELS & BOTTLES TO BE PICKLE & OILED.

OIL:
ESSELUBE OIL-X-30 IN ENGINE & COMPRESSOR FRAME.

GLYCOL:
50% INHIBITED FERRULES, CHLORIDE/WATER SOLUTION IN ENGINE AND AUXILIARY JACKET WATER SYSTEMS.

BILL OF MATERIALS

NOTE #1:
SPACER PLATES ARE PROVIDED FOR FUTURE INSTALLATION OF ORIFICE PLATES (IF REQUIRED)

NOTE #2:
ALL THREADED PIPING ON SCRUBBERS IS S/160.

NOTE #3:
-

NOTE #4:
PRESSURE VESSELS TO BE REGISTERED IN AB & SK.

NOTE #5:
-

NOTE #6:
BOILING ON ALL PROCESS FLANGE CONNECTIONS TO BE 3A-15-87 STUDS, 3A-19A-2H NUTS & 316SS GASKETS.

NOTE #7:
-

NOTE #8:
-

NOTE #9:
-

MATERIAL SPECIFICATIONS

GENERAL INFORMATION

COMPR. FRAME
- AREL JGK/4-3
- SERIAL NUMBER F-19179

ENGINE
- WALKESHA L7042G
- RATED 1478 HP @ 1200 RPM
- SERIAL NUMBER = C13564/1

COOLER
- AIR-X-HEMPHILL - MODEL 168EF-122-26
- SERIAL NUMBER = 36231-9389

CYL. STAGE #1 THROW #1
- SERIAL NUMBER = C-60357
- SERIAL NUMBER = C-60360

CYL. STAGE #1 THROW #2
- SERIAL NUMBER = C-60358
- SERIAL NUMBER = C-60359

CYL. STAGE #2 THROW #4
- SERIAL NUMBER = C-60356
- SERIAL NUMBER = C-60355

CONTROL PANEL
- ALLEN BRADLEY - S/C5/04
- SERIAL NUMBER = DC-10573-AA

LEGEND

PROCESS LINES
FUEL GAS, START GAS, DRAIN AND VENT LINES
SUPPLY (CLEAN) OIL LINES
WASTE OIL LINES
WATER LINES
PNEUMATIC TUBING
ELECTRICAL WIRING
CAPILLARY LINES
SPACER
SPECTRAL BLIND
SCREEN (CONE STRAINER)
PANEL ALARM/SHUTDOWN (ELECTRIC)
PANEL ALARM/SHUTDOWN (PNEUMATIC)
LOCAL MOUNTED INSTRUMENT
PANEL MOUNTED INSTRUMENT
PNEUMATIC TO CURRENT

NOTE: SWEET PROCESS GAS

3	AS BUILT		
2	ADDED INSTRUMENTATION TAGS	03/31/04	JN
1	STAGE 1 & 2 PSV REVISED - CUSTOMER REQUESTS ADDED	03/17/04	JN
0	ISSUED FOR CONSTRUCTION	02/24/04	JN
		12/19/03	JN

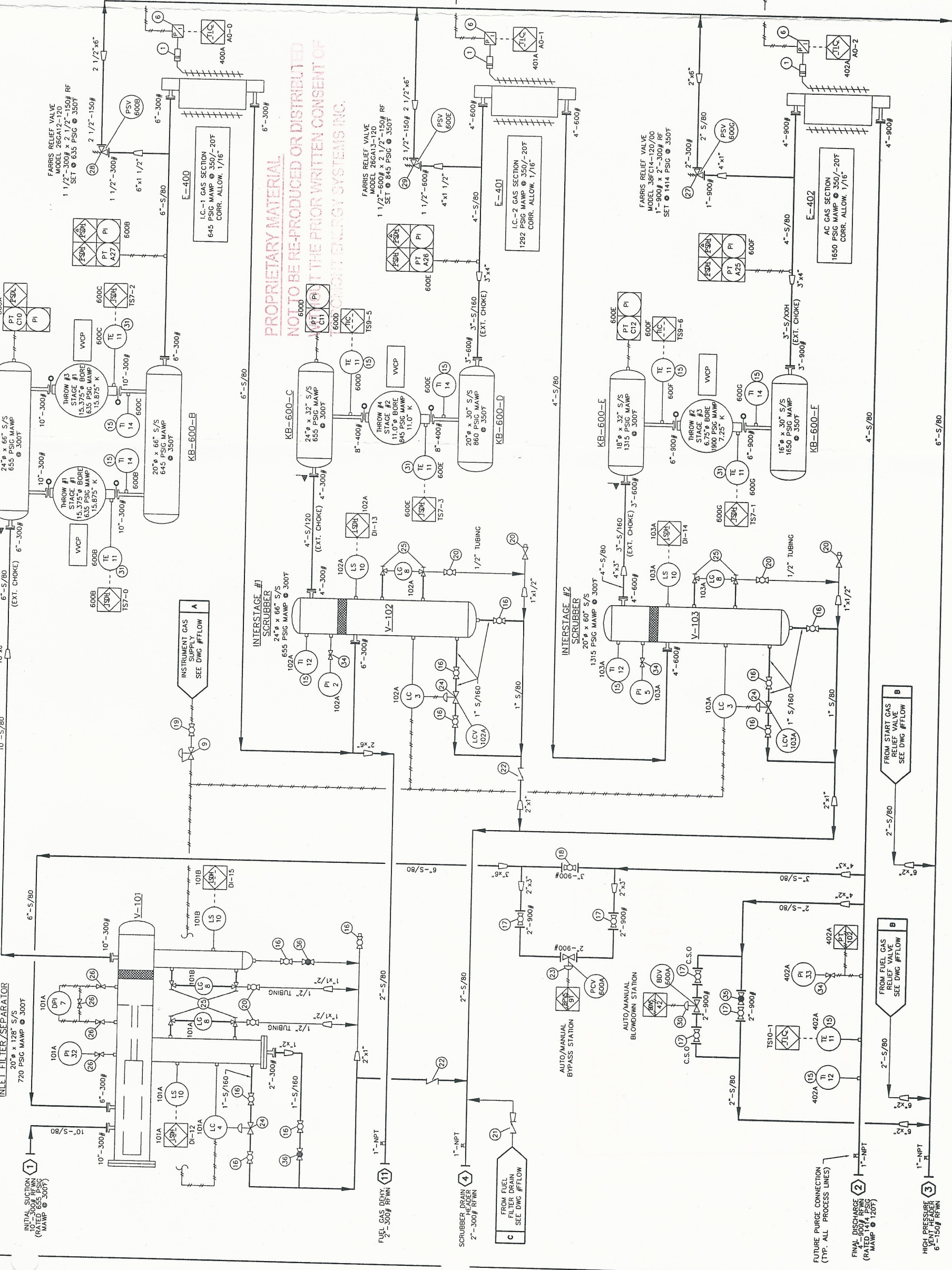
PROPRIETARY MATERIAL. NOT TO BE REPRODUCED OR DISTRIBUTED WITHOUT THE PRIOR WRITTEN CONSENT OF ENERGY INDUSTRIES INC.

ENERGY INDUSTRIES INC.
4303 - 117TH STREET N.E. CALGARY ALBERTA CANADA

CUSTOMER:
HUSKY OIL OPERATIONS LTD.
AC OPERATIONS ENGINEERING LTD.
WHITE BEAR OPERATIONS
LSD: 02-03-23-16 W3M

SCALE: N/A DATE: 12/19/03 BY: JN RELEASED BY: JN
STEP # 410 UNIT # 1036 DRAWING NO.: 1036-PFLOW REV. 3

PROPRIETARY MATERIAL
NOT TO BE REPRODUCED OR DISTRIBUTED
WITHOUT THE PRIOR WRITTEN CONSENT OF
ENERGY INDUSTRIES INC.



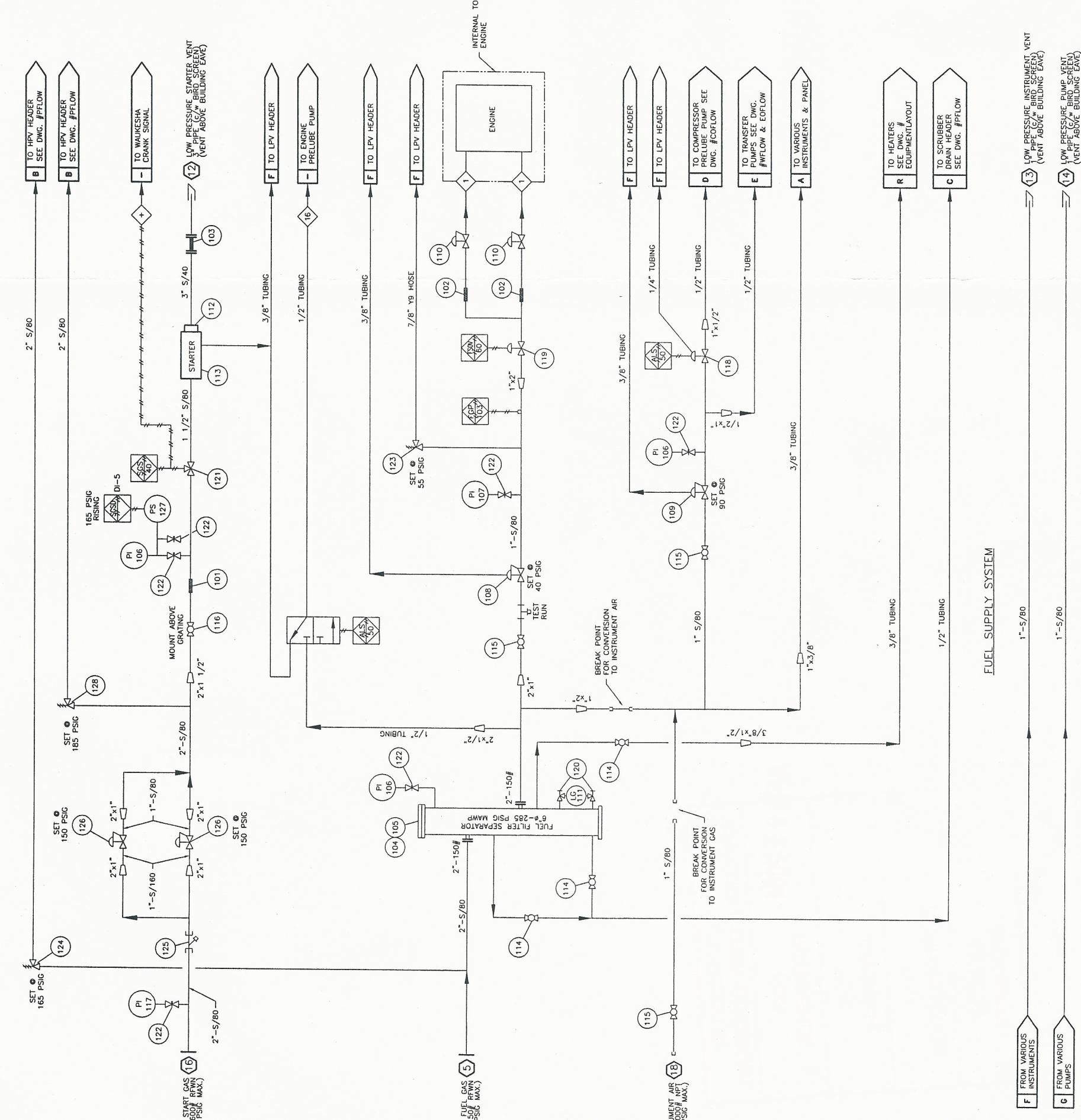
EQUIPMENT #K-600, HUSKY ORDER #

BILL OF MATERIALS

No.	PART No.	DESCRIPTION	QUANTITY
101	8BA361	CONNECTOR, BRAIDED, MAGIC SPAN, MCX 1-1/2-12, 1.5" FNPT, 530 PSIG @ 70F, 12" LG, 1321 SS HOSE & BRAD, CARBON STEEL FITTINGS	1
102	12C177	CONNECTOR, BRAIDED, MAGIC SPAN, MCX 2-12, 2" FNPT, 535 PSIG @ 70F, 12" LG, 1321 SS HOSE & BRAD, CARBON STEEL FITTINGS	2
103	8BE124	CONNECTOR, BRAIDED, MAGIC SPAN, MCX 3-12, 3" FNPT, 535 PSIG @ 70F, 12" LG, 1321 SS HOSE & BRAD, CARBON STEEL FITTINGS	1
104	12A720L	FILTER, HOUSING, FUEL, ENERGY INDUSTRIES, 2" FNPT, 6" DIA, 285 PSIG, LEFT HAND, 2" FNPT LC & LS CONNECTIONS	1
105	11A167	FILTER, ELEMENT, FUEL, PECO, POH (C/W FILTER)	1
106	10X113	GAUGE, PRESSURE, WKA, 213.53.063, 0.25" MNPT, BOTTOM MNT, 0-200 PSIG, MAX 140F, 2.5" FACE, LIQUID FILLED, DUAL SCALE, SS CASE, BRASS INTERNALS	3
107	8BA726	GAUGE, PRESSURE, WKA, 213.53.063, 0.25" MNPT, BOTTOM MNT, 0-60 PSIG, MAX 140F, 2.5" FACE, LIQUID FILLED, DUAL SCALE, SS CASE, BRASS INTERNALS	1
108	NPN	REGULATOR, PRESSURE, FISHER, 627-498, 1" FNPT, 30-80 PSIG, 750 PSIG INLET, 0.5" TRIM, BLUE SPRING, DUCTILE IRON	1
109	NPN	REGULATOR, PRESSURE, FISHER, 627-499, 1" FNPT, 70-150 PSIG, 750 PSIG INLET, 0.5" TRIM, RED SPRING, DUCTILE IRON	1
110	NPN	REGULATOR, PRESSURE, SCHLUMBERGER (C/W ENGINE)	2
111	8BE057	SIGHT GLASS, REDLINE, PEACOCK, 41100108, 0.625" OD, 330 PSIG @ 100F, 12" LG	1
112	T100-28012	STARTER, FLANGE, TDI, T100-28012, 3" BW ELBOW	1
113	NPN	STARTER, GAS, TDI, T112-60001-R18, 2" FNPT INLET, 90-150 PSIG OPERATING PRESSURE, ALUMINUM, 600 PSI PROOF PRESSURE	1
114	8BA226	VALVE, BALL, BALON, LM-05361, 0.5" FNPT, 3000 PSIG @ 150F, AISI 1215 ZINC PLATED	3
115	NPN	VALVE, BALL, BALON, 1F-S83-SE, 1.0" FNPT, 2500 PSIG @ 150F, ASTM A216 WCB	3
116	NPN	VALVE, BALL, NUTRON, T3-R15530B, 1.5" FNPT, 3000 PSIG @ 120 F, REC. PORT, ASTM A105	1
117	NPN	GAUGE, PRESSURE, WKA, 0.25" MNPT, BOTTOM MNT, 0-1500 PSIG, MAX 140F, 2.5" FACE, LIQUID FILLED, DUAL SCALE, SS CASE, BRASS INTERNALS	1
118	8BA829	VALVE, CONTROL, RELAY, FISHER, 119-N12, 1" FNPT, 3-15 PSIG, 150 PSIG, MAX 170F, ASTM A216 WCB	1
119	11A496	VALVE, CONTROL, GLOBE, KMM, 500-211-111, 2" FNPT, 600 PSIG, MAX 180F, ASTM A395	1
120	11C	VALVE, GAUGE, DANIEL, 209-01-049C 11C, 0.5" FNPT X 0.625" TUBE, 150 PSIG, 3600 PSIG @ 250F, 1 SET, CARBON STEEL	1
121	11A708	VALVE, CONTROL, RELAY, TDI, RIVA, 25683001201, 1.5" FNPT, 18-70 PSIG, 450 PSIG @ 200F, ALUMINUM	1
122	8BA607	VALVE, NEEDLE, CENTURY, CM2-3-M22T-B-V, 0.25" MNPT X 0.25" FNPT, 6000 PSIG @ 100F	6
123	8BE254	VALVE, RELIEF, FISHER, 1805-13X1, 1" FNPT, 10-60 PSIG, SET AT 55 PSIG, MAX 150F, CADMIUM SPRING	1
124	82C5651311	VALVE, RELIEF, TAYLOR, 8200, 2" MNPT X 2" FNPT, SET @ 165 PSIG, G ORIFICE, CARBON STEEL	1
125	8BE093SW	Y-STRAINER, MUELLER, 581, 2" SW, 600#, CAST IRON	1
126	NPN	REGULATOR, PRESSURE, FISHER, 627, 1" FNPT, 70-150 PSIG, 1750 PSIG INLET, 0.25" TRIM, RED SPRING, STEEL	2
127	6900018	SWITCH, PRESSURE, CCS DUAL SNAP, #6900018, 30/375 PSIG, SET @ 165 PSIG RISING	1
128	NPN	VALVE, RELIEF, TAYLOR, 8200, 2" MNPT X 2" FNPT, SET @ 185 PSIG, G ORIFICE, CARBON STEEL	1

PROPRIETARY MATERIAL
NOT TO BE REPRODUCED OR DISTRIBUTED
WITHOUT THE PRIOR WRITTEN CONSENT OF
TOROMONT ENERGY SYSTEMS INC.

- NOTES:
- FOR ALL OTHER NOTES & GENERAL INFORMATION SEE DWG. #PFLOW.
 - ALL TUBING IS 304SS C/W CADMIUM PLATED 'S' TYPE FITTINGS EXCEPT AS NOTED. ('S' FITTINGS - CS BODY W/ SS BACK FERRULE & CS FRONT FERRULE)
 - SIGNAL TUBING IS 1/4".
 - BUTTWELD ALL 2" LINES.
 - 1 1/2" & UNDER PIPING BELOW GRATING TO BE SOCKETWELDED OR BUTTWELDED.



FUEL SUPPLY SYSTEM

VENT HEADERS

- F FROM VARIOUS INSTRUMENTS
- C FROM VARIOUS PUMPS
- 13 LOW PRESSURE INSTRUMENT VENT (PIPE (C/W BRD SCREEN) (VENT ABOVE BUILDING LEAVE))
- 14 LOW PRESSURE (PUMP VENT) (PIPE (C/W BRD SCREEN) (VENT ABOVE BUILDING LEAVE))



4303 - 11TH STREET N.E. CALGARY ALBERTA CANADA

FUEL FLOW DIAGRAM
WAUKESHA VHP
L70426L

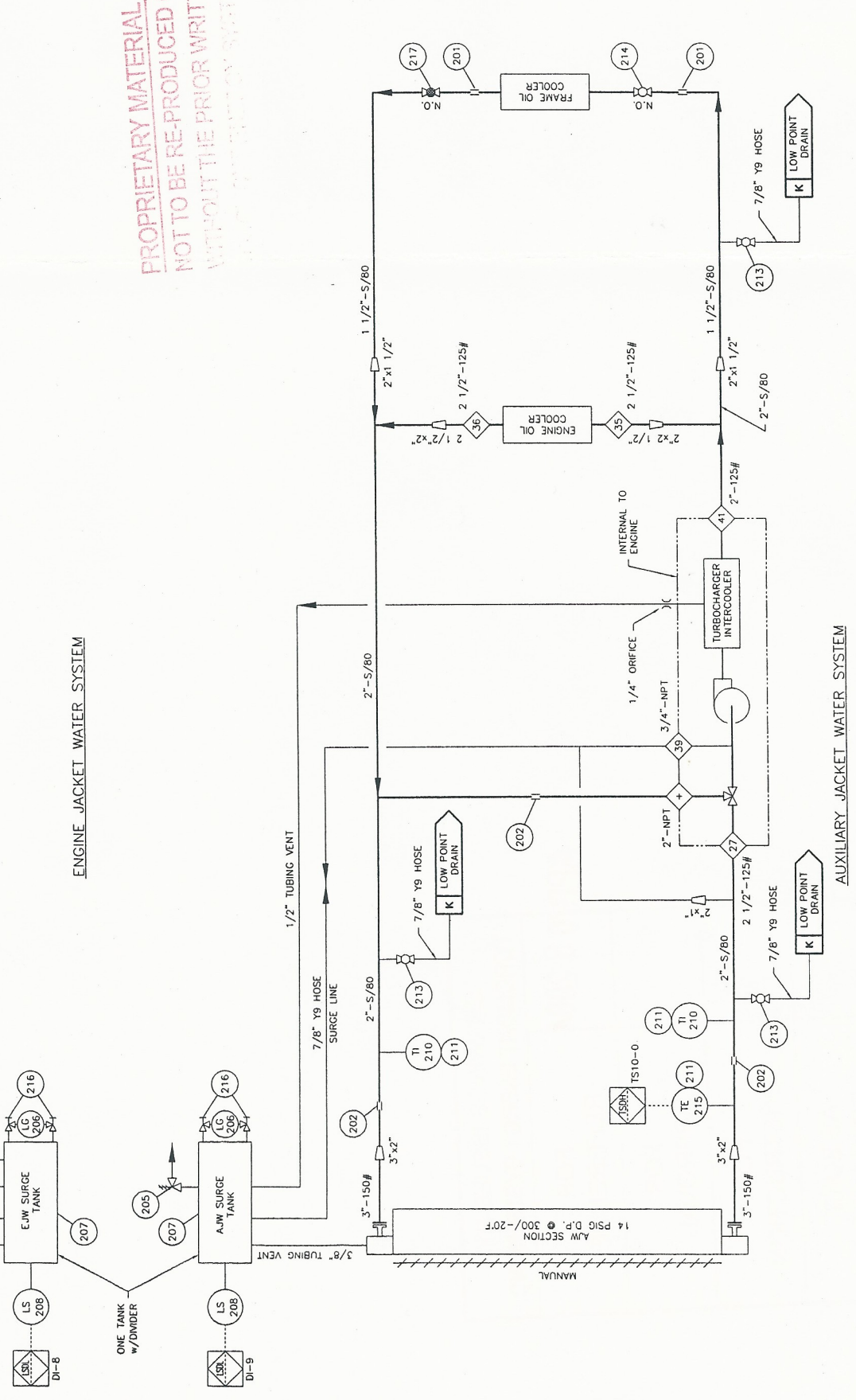
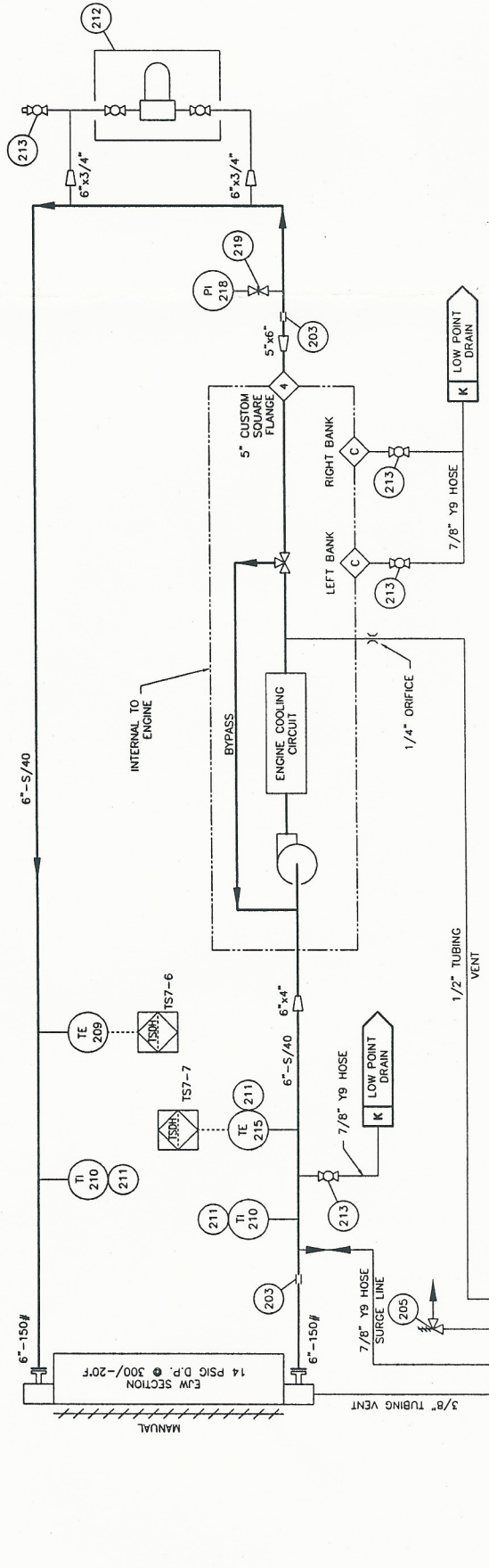
CUSTOMER: HUSKY OIL OPERATIONS LTD.
c/o: BDR ENGINEERING LTD.
WHITE BEAR COMPRESSOR STATION
LSD: 02-03-23-16 W3M

SCALE: NONE	DATE: 12/19/03	BY: JIN	RELEASED BY: [Signature]
STEP #510	UNIT #1036	DRAWING NO.: 03/12/03	REV. NO.: 1

EQUIPMENT # -----, HUSKY ORDER # -----

No.	PART No.	DESCRIPTION	QUANTITY
201	11A306	COUPLING, PIPE, AERQUIP, MHI600C15080350, 1.5" PIPE	2
202	0038-0013-011	COUPLING, PIPE, DRESSER, 0038-0013-011, 2" PIPE, 1500 PSIG, MAX 212F, STYLE 3B, CARBON STEEL W/ BUNA S GASKET	3
203	0038-0057-011	COUPLING, PIPE, DRESSER, 0038-0057-011, 6" PIPE, 1029 PSIG, 212F, STYLE 3B, CARBON STEEL W/ BUNA S GASKET	2
204	12C281	GLYCOL, UCATHERM, 50% ETHYLENE GLYCOL - 50% WATER (SEE STEP #921)	615 L
205	TRC-104	CAP, RADIATOR, STANT, STN-10294, SET AT 15 PSIG	2
206	8BE067	SIGHT GLASS, REDLINE, PEACOCK, 411001108, 0.625" OD, 330 PSIG @ 100 F, 12" LG	2
207	8BE239	SURGE TANK, 16" x 45" LG, DUAL COMPARTMENT (DWG. #5116M45D REV. 4) (SEE STEP #621)	1
208	11A913	SWITCH, LEVEL, MURPHY, 45-11200, 2" MNPT, CSA CLASS I DIV I GRP C.D	2
209	NPN	THERMOCOUPLE, TYPE 'K' (C/W ENGINE)	1
210	BBA186	THERMOMETER, BI METALLIC, TRENCO, 330254006640, 0.5" MNPT, 0-250F, 3" FACE, 2.50" PROBE, 0.250" OD, DUAL SCALE	4
211	37D003	THERMOWELL, 0.5" FNPT X 0.75" MNPT, 2.50" DEPTH, 0.260" BORE, 304 SS	6
212	NPN	FILTER, COOLANT, SLIPSTREAM, FFSCK-509-50-IND30, 3/4" NPT CONNECTIONS	1
213	NPN	VALVE, BALL, BALON, 1F-593-SE, 1.0" FNPT, 2500 PSIG @ 150F, ASTM A216 WCB	9
214	NPN	VALVE, BALL, BALON, 1 1/2F-F93-SE, 1.5" FNPT, 2500 PSIG @ 150F, ASTM A216 WCB	1
215	TKC-K-250-40	THERMOCOUPLE, THERMOKINETICS, TYPE 'K', K-250-316-006, 0-B-80X99	2
216	1TC	VALVE, GAUGE, DANIEL, 209-01-048C 1TC, 0.5" FNPT X 0.625" TUBE, 1 SET, CARBON STEEL	2
217	8BE271	VALVE, GLOBE, NEWCO, 1 1/2" 281-F52, 1.5" FNPT CLASS 800, 2000 PSIG @ 100 F, REG. PORT, ASTM A105	1
218	BBA726	GAUGE, PRESSURE, WKA, 213-533-063, 0.25" MNPT BOTTOM MNT, 0-60 PSIG, MAX 140F, 2.5" FACE, LIQUID FILLED, DUAL SCALE, SS CASE, BRASS INTERNALS	1
219	BBA607	VALVE, NEEDLE, CENTURY, CMZ-3-M271-B-V, 0.25" FNPT X 0.25" FNPT, 6000 PSIG @ 150F, ASTM A108	1
220	-	-	-
221	D73-525	PUMP, PNEUMATIC, DIAPHRAGM, GRACO, D73-525, 1" FNPT, MAX 100 PSIG SUPPLY, ALUMINUM	1
222	BBA226	VALVE, BALL, BALON, LM-05361, 0.5" FNPT, 3000 PSIG @ 150F, AISI 1215 ZINC PLATED	1
223	NPN	VALVE, BALL, BALON, 1F-593-SE, 1.0" FNPT, 2500 PSIG @ 150F, ASTM A216 WCB	6
224	-	-	-
225	-	-	-

PROPRIETARY MATERIAL
 NOT TO BE REPRODUCED OR DISTRIBUTED
 WITHOUT THE PRIOR WRITTEN CONSENT OF
 ENERGY INDUSTRIES INC.



- NOTES:
- FOR ALL OTHER NOTES, LEGEND & GENERAL INFORMATION SEE DWG. #FLOW.
 - ALL TUBING IS 304SS 6/W CASIMIR PLATED 'S' TYPE FITTINGS.
 - ALL TUBING IS 304SS 6/W CASIMIR PLATED 'S' TYPE FITTINGS.
 - SLOPE ALL VENT LINES UP TO SURGE TANK.
 - BUTTWELD ALL 2" PIPING.
 - 1 1/2" & UNDER PIPING BELOW GRATING TO BE SOCKETWELDED OR BUTTWELDED.

No.	REVISION	DATE	BY	DATE
1	AS BUILT	03/31/04	JN	
0	ISSUED FOR CONSTRUCTION	12/19/03	JN	

ENERGY INDUSTRIES INC. 4303 - 11TH STREET N.E. CALGARY ALBERTA CANADA
 CUSTOMER: HUSKY OIL OPERATIONS LTD.
 WATER FLOW DIAGRAM c/o: BDR ENGINEERING LTD.
 WAUKESHA VHP WHITE BEAR COMPRESSOR STATION
 L7042GL LSD: 02-03-23-16 W3M
 SCALE: NONE DATE: 12/19/03 BY: JN DATE RELEASED: 05/31/04 RELEASED BY: [Signature]
 STEP #520 UNIT #1036 DRAWING NO.: 1036-WFLOW REV. NO.: 1

EQUIPMENT # _____ HUSKY ORDER # _____

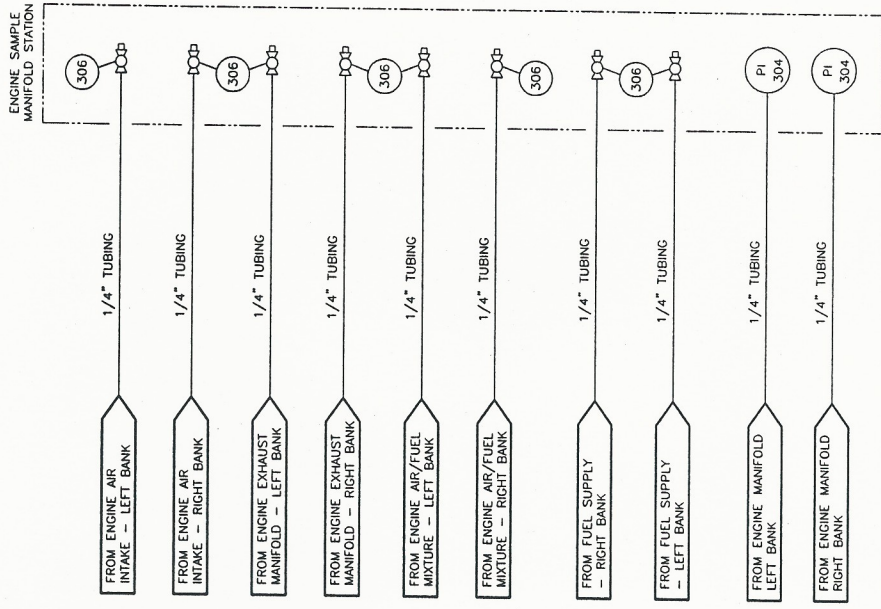
BILL OF MATERIALS

No.	PART No.	DESCRIPTION	QUANTITY
301	11A016	AIR DIVERTER BOX, ENERGY INDUSTRIES, 14" FF, 18" LG X 16" W X 16" H, SA-36 (SEE STEP #531)	1
302	NPN	EXPANSION JOINT, 4"-150# FF X CUSTOM WAUK, CONN., 12" LG., SS (C/W ENGINE)	1
303	NPN	EXPANSION JOINT, NUCO SPAN, 1615-L-33, 16" FF, 150 PSIG, 16" LG, 1321 SS BELLOWS, CARBON STEEL FITTINGS	1
304	88A844	GAUGE, PRESSURE, WIKO, 213.53.063, 0.25" MNPT BOTTOM MNT., -30" Hg - 30 PSIG, MAX 140F, 2.5" FACE, LIQUID FILLED, DUAL SCALE, SS CASE, BRASS INTERNALS	2
305	NPN	MUFFLER, SILEX, JDD5-18-S150-612, HOSPITAL GRADE, SIDE IN/SIDE OUT C/W GUSSETS ON OUTLET	1
306	NPN	VALVE, BALL, BALON, LM-02362, 0.25" FNPT, 3000 PSIG @ 150F, AISI 1215 ZINC PLATED	8
307	NPN	IGNITION, WAUKESHA, CEC C/W DSM (C/W ENGINE)	1
308	-	-	-
309	-	-	-
310	-	-	-
311	-	-	-
312	-	-	-
313	-	-	-
314	-	-	-
315	-	-	-
316	-	-	-

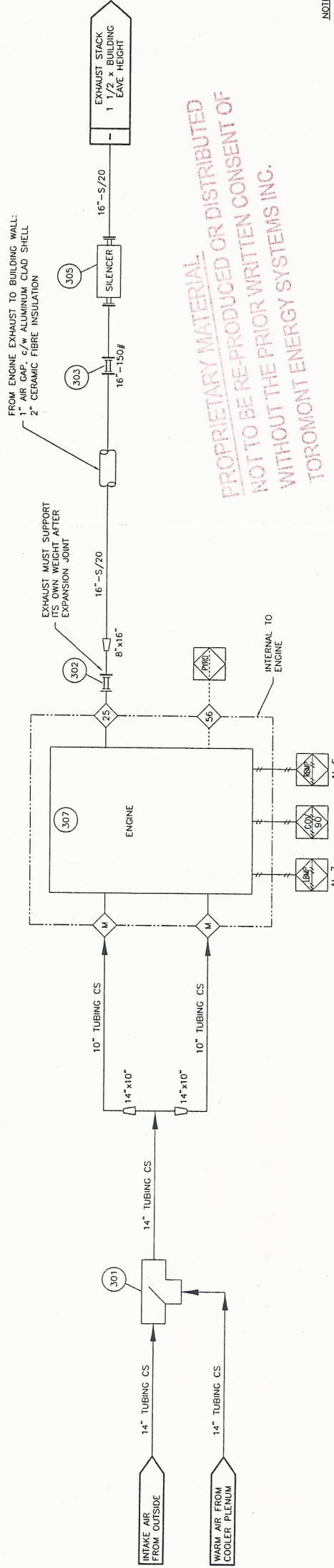
ENGINE / PANEL INTERFACE WIRING

TERM #	CONTROL PANEL J. BOX	TECH CABLE #	ENGINE J. BOX	TERM #
NEG13	POWER RETURN SWITCHED	1	CEC(-24VDC)	J2-9
DCF13	POWER SUPPLY SWITCHED	2	CEC(+24VDC)	J1-10
NEG11	POWER RETURN	3	DSM(-24VDC)	J2-2
DCF11	POWER SUPPLY	4	DSM(+24VDC)	J4-19
DCI12	DSM INPUT	5	DSM SHUTDOWN	J4-2
-	SPARE	6	SPARE	-
TS8-0 1/2	CYL #1-L	-	CYL #1-L	-
TS8-1 3/4	CYL #2-L	-	CYL #2-L	-
TS8-2 5/6	CYL #3-L	-	CYL #3-L	-
TS8-3 7/8	CYL #4-L	-	CYL #4-L	-
TS8-4 9/10	CYL #5-L	-	CYL #5-L	-
TS8-5 11/12	CYL #6-L	-	CYL #6-L	-
-	PRETURBO-L	-	PRETURBO-L	-
-	MANIFOLD-L	-	MANIFOLD-L	-
TS8-6 13/14	CYL #1-R	-	CYL #1-R	-
TS8-7 15/16	CYL #2-R	-	CYL #2-R	-
TS9-0 1/2	CYL #3-R	-	CYL #3-R	-
TS9-1 3/4	CYL #4-R	-	CYL #4-R	-
TS9-2 5/6	CYL #5-R	-	CYL #5-R	-
TS9-3 7/8	CYL #6-R	-	CYL #6-R	-
-	PRETURBO-R	-	PRETURBO-R	-
-	MANIFOLD-R	-	MANIFOLD-R	-
TS7-5 11/12	LUBE OIL TEMP	-	LUBE OIL TEMP	-
TS7-6 13/14	EJW TEMP	-	EJW TEMP	-

- NOTES:
- FOR ALL OTHER NOTES & GENERAL INFORMATION SEE DWG. #FFLOW.
 - ALL TUBING IS 304SS C/W CADMIUM PLATED 'S' TYPE FITTINGS, EXCEPT AS NOTED. ('S' FITTINGS - CS BODY W/ SS BACK FERRULE & CS FRONT FERRULE)
 - SIGNAL TUBING IS 1/4".



LABEL EACH SAMPLE POINT



PROPRIETARY MATERIAL
NOT TO BE RE-PRODUCED OR DISTRIBUTED
WITHOUT THE PRIOR WRITTEN CONSENT OF
TOROMONT ENERGY SYSTEMS INC.

AIR INTAKE & EXHAUST SYSTEMS

No.	REVISION	DATE	BY	UNIT #1036	DATE	BY
1	AS BUILT	12/19/03	JN		03/31/04	JN
0	ISSUED FOR CONSTRUCTION				12/19/03	JN



4303 - 117TH STREET N.E. CALGARY ALBERTA CANADA

TITLE: AIR & EXHAUST FLOW DIAGRAM
WAUKESHA VHP
L7042GL

CUSTOMER: HUSKY OIL OPERATIONS LTD.
c/o: BDR ENGINEERING LTD.
WHITE BEAR COMPRESSOR STATION
LSD: 02-03-23-16 W3M

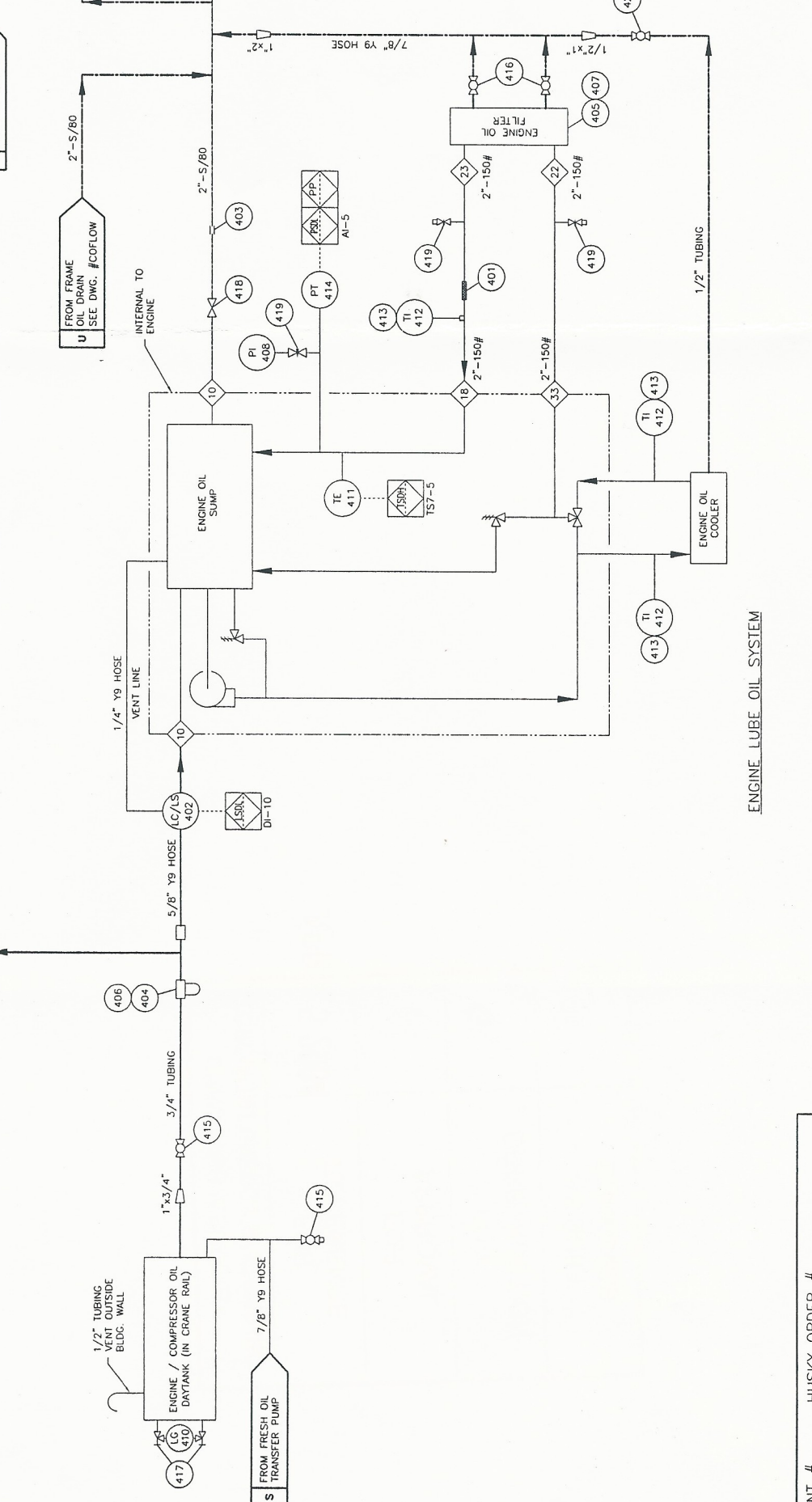
SCALE:	DATE:	BY:	UNIT #1036	DATE:	BY:
NONE	12/19/03	JN			
STEP #530					

EQUIPMENT # _____, HUSKY ORDER # _____

DATE RELEASED: 03/31/04
DRAWING NO.: 1036-AEFLOW
REV. NO.: 1

BILL OF MATERIALS

No.	PART No.	DESCRIPTION	QUANTITY
401	12C177	CONNECTOR, BRASS, MCK 2-12, 2" FNPT, 535 PSIG @ 70F, 12" LG, 1321 SS HOSE & BRAD, CARBON STEEL FITTINGS	1
402	LCM-12	CONTROLLER, LEVEL, KENCO, LCM-12, 0.5" FNPT, 6.5 PSIG @, MAX 180F, 0.5" POST MOUNT, ALUMINUM, CSA CLASS III, TYPE 4	1
403	11A315	COUPLING, PIPE, AERQUIP, NH1600C20B0400, 2" PIPE	1
404	405-047	FILTER, HOUSING, OIL, GEMINI, 0.75" FNPT, C/W ELEMENT	1
405	NPN	FILTER, ASSEMBLY, AET167600N, OIL (C/W ENGINE)	1
406	B7251	FILTER, ELEMENT, OIL, BALDWIN, B7251, SPIN ON	1
407	NPN	FILTER, ELEMENT, OIL (C/W ENGINE) 186660B	7
408	10X113	GAUGE, PRESSURE, WKA, 213.53.063, 0.25" MNPT BOTTOM MNT, 0-200 PSIG, MAX 140F, 2.5" FACE, LIQUID FILLED, DUAL SCALE, SS CASE, BRASS INTERNALS	1
409	88A892	OIL, LUBE, ESSO, ESSOLUBE GLX-30 (SEE STEP #921)	615 L
410	88E057	SIGHT GLASS, REDLINE, PEACOCK, 411001108, 0.625" OD, 330 PSIG @ 100F, 12" LG	1
411	NPN	THERMOCOUPLE, K TYPE (C/W ENGINE)	1
412	88A166	THERMOMETER, BI METALLIC, TRENK, 33025A006640, 0.5" MNPT, 0-250F, 3" FACE, 2.50" PROBE, 0.250" OD, DUAL SCALE	3
413	37D003	THERMOWELL, 0.5" FNPT X 0.75" MNPT, 2.50" DEPTH, 0.260" BORE, 304SS	3
414	11A205	TRANSMITTER, PRESSURE, WKA, 88213500/160, 0.25" MNPT, 0-180 PSIG, MAX 212F, 316SS WETTED PARTS, CSA CLASS I DIV 1(S)/DIV II (N.I.) (C/W PANEL)	1
415	88A262	VALVE, BALL, BALON, LM-07362, 0.75" FNPT, 3000 PSIG @ 150F, AISI 1215 ZINC PLATED	2
416	NPN	VALVE, BALL, BALON, 1F-S93-SE, 1.0" FNPT, 2500 PSIG @ 150F, ASTM A216 WCB	12
417	11C	VALVE, GAUGE, DANIEL, 209-01-049C 11C, 0.5" FNPT X 0.625" TUBE, 3600 PSIG @ 250F 1 SET CARBON STEEL	1
418	88E400	VALVE, GATE, BONNEYFORGE, HL108-11, 2" FNPT CLASS 800, 800 PSIG @ 850F, REG. PORT, ASTM A105	1
419	88A607	VALVE, NEEDLE, CENIURY, CM2-3-M221-B-V, 0.25" MNPT X 0.25" FNPT, 6000 PSIG @ 150F, ASTM A108	3
420	NPN	VALVE, BALL, BALON, 2R-F13, 2.0"-150# RF, 285 PSIG @ 150F, ASTM A216 WCB	2
421	88A226	VALVE, BALL, BALON, LM-05361, 0.5" FNPT, 3000 PSIG @ 150F, AISI 1215 ZINC PLATED	1
422	-	-	-
423	-	-	-
424	D73-525	PUMP, PNEUMATIC, DIAPHRAGM, GRACO, D73-525, 1" FNPT, MAX 100 PSIG SUPPLY, ALUMINUM	1
425	88A226	VALVE, BALL, BALON, LM-05361, 0.5" FNPT, 3000 PSIG @ 150F, AISI 1215 ZINC PLATED	1
426	88A262	VALVE, BALL, BALON, LM-07362, 0.75" FNPT, 3000 PSIG @ 150F, AISI 1215 ZINC PLATED	4
427	NPN	VALVE, BALL, BALON, 1F-S93-SE, 1.0" FNPT, 2500 PSIG @ 150F, ASTM A216 WCB	1
428	88A306	VALVE, CHECK, SWING, WHEATLEY, 820-013127-131, 1.0" FNPT, 280 PSIG, ASTM A216 WCB OR LCC, NACE, MR01-75	1



PROPRIETARY MATERIAL
 NOT TO BE REPRODUCED OR DISTRIBUTED
 WITHOUT THE PRIOR WRITTEN CONSENT OF
 HUSKY OIL OPERATIONS LTD.

- NOTES:
- FOR ALL OTHER NOTES & GENERAL INFORMATION SEE DWG. #FFLOW.
 - ALL TUBING IS 304SS C/W CADMIUM PLATED 'S' TYPE FITTINGS EXCEPT AS NOTED. ('S' FITTINGS - CS BODY W/ SS BACK FERRULE & CS FRONT FERRULE)
 - BUTTWELD ALL 2" PIPING.
 - 1 1/2" & UNDER PIPING BELOW GRATING TO BE SOCKETWELDED OR BUTTWELDED.

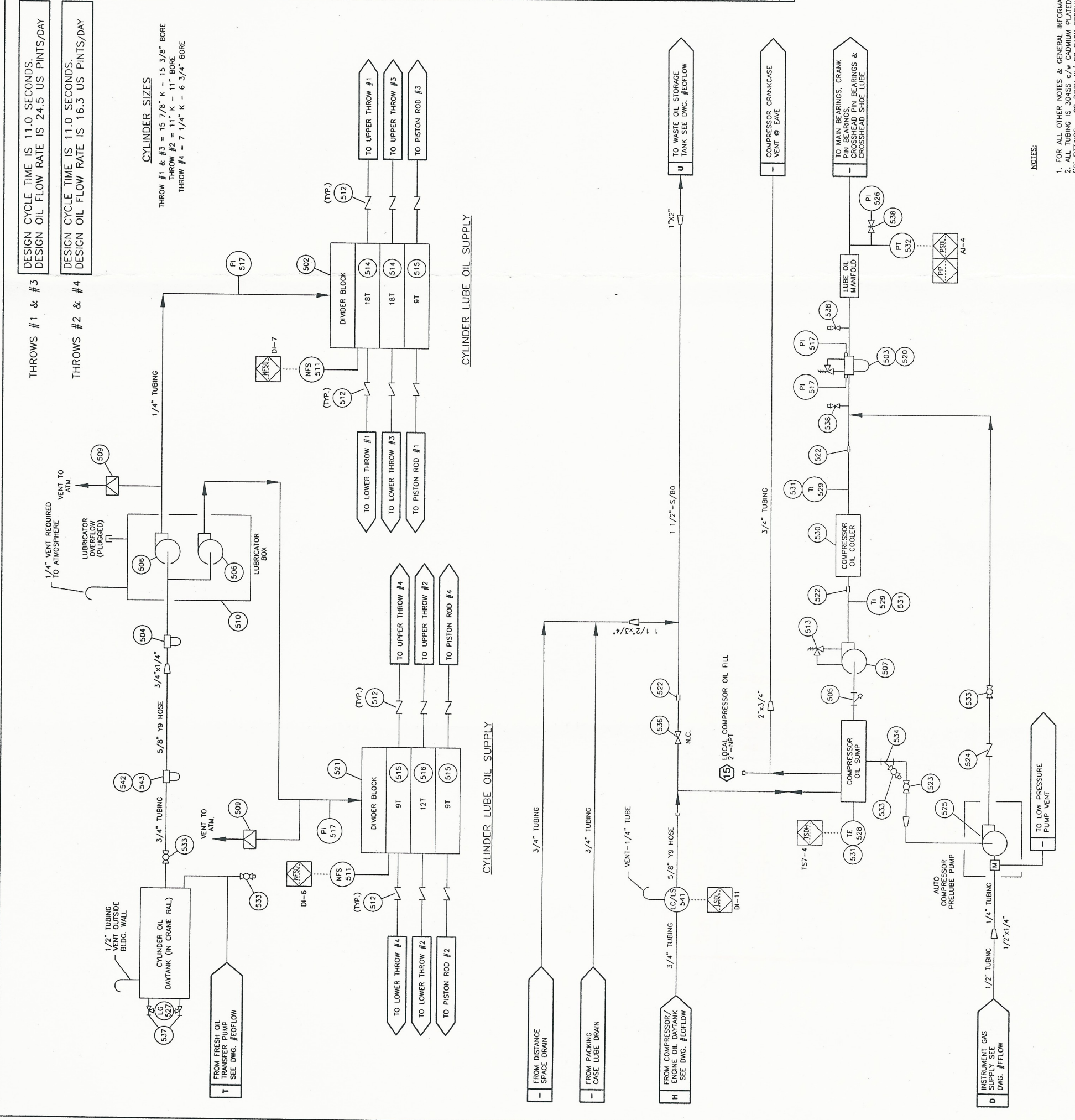
ENERGY INDUSTRIES INC.
 4303 - 117th STREET N.E. CALGARY ALBERTA CANADA

TITLE: ENGINE OIL FLOW DIAGRAM
 WAUKESHA VHP
 L7042GL

CUSTOMER: HUSKY OIL OPERATIONS LTD.
 c/o: BDR ENGINEERING LTD.
 WHITE BEAR COMPRESSOR STATION
 LSD: 02-03-23-16 W3M

SCALE: NONE DATE: 12/19/03 BY: JN
 STEP #540 UNIT #1036

DATE RELEASED: C3/31/04
 DRAWING NO.: 1036-E0FLOW
 RELEASED BY: JLN
 REV. NO.: 1



THROWS #1 & #3
 DESIGN CYCLE TIME IS 11.0 SECONDS.
 DESIGN OIL FLOW RATE IS 24.5 US PINTS/DAY

THROWS #2 & #4
 DESIGN CYCLE TIME IS 11.0 SECONDS.
 DESIGN OIL FLOW RATE IS 16.3 US PINTS/DAY

CYLINDER SIZES
 THROW #1 & #3 = 15 7/8" K - 15 3/8" BORE
 THROW #2 = 11" K - 11" BORE
 THROW #4 = 7 1/4" K - 6 3/4" BORE

CYLINDER LUBE OIL SUPPLY

CYLINDER LUBE OIL SUPPLY

- NOTES:
- FOR ALL OTHER NOTES & GENERAL INFORMATION SEE DWG. #BLOW.
 - ALL TUBING IS 304SS 1/2" O.D. CADMIUM PLATED 'S' TYPE FITTINGS EXCEPT AS NOTED. ('S' FITTINGS - CS BODY W/ SS BACK FERRULE & CS FRONT FERRULE)
 - 1 1/2" & UNDER PIPING BELOW GRATING TO BE SOCKETWELDED OR BUTTWELDED.

EQUIPMENT # _____, HUSKY ORDER # _____

No.	PART No.	DESCRIPTION	QUANTITY
501	-	-	-
502	A-2476	DISTRIBUTION BLOCK ASSEMBLY, SLOAN, 13ROS	1
503	D-0744	FILTER, HOUSING, OIL, ARIEL, 3 HEAD	1
504	A-8723	FILTER, INLINE, SINTERED, 150 MICRON	1
505	A-8249	WTE STRAINER, 1 1/2" NPT	1
506	A-9478	PUMP, PLUNGER, PREMIER, 0.375" PLUNGER	2
507	NPN	PUMP, JCK/4	1
508	-	-	-
509	A-0080	RUPTURE DISK, PURPLE	2
510	D-2001	LUBRICATOR, w/o PUMP	2
511	A-10753	TIMER, NO-FLOW, ARIEL DIGITAL, FITS TRABON LUBE BLOCKS, CLASS I, DIV I, GRP B.C.D	2
512	A-3780	VALVE, CHECK, BALL, 0.5" NPT	12
513	N/A	VALVE, RELIEF, INTERNAL OIL	1
514	NPN	VALVE, DIVIDER, TRABON, 18T	2
515	NPN	VALVE, DIVIDER, TRABON, 12T	3
516	NPN	VALVE, DIVIDER, TRABON, 9T	1
517	A-0261	GAUGE, PRESSURE, ASHCROFT, 0.25" NPT	4
518	-	-	-
519	-	-	-
520	A-0661	FILTER, ELEMENT, OIL	3
521	A-2584	DISTRIBUTION BLOCK ASSEMBLY, SLOAN 13ROS	1

No.	PART No.	DESCRIPTION	QUANTITY
522	11A306	COUPLING, PIPE, AERODUJIP, NH00C150B0350, 1.5" PIPE	3
523	NPN	VALVE, BALL, BALON, 1F-SB3-SE, 1.0" FNPT, 2500 PSIG @ 150F, ASTM A216 WCB	1
524	BA112	VALVE, SWING CHECK, WHEATLEY, 0.75" NPT, 2160#	1
525	241-006	PUMP, PNEUMATIC, DIAPHRAGM, GRACO, 241-006, .75" FNPT	1
526	10X113	GAUGE, PRESSURE, WIKA, 213.53.063, 0.25" MNPT BOTTOM MNT, 0-200 PSIG, MAX 140F, 2.5" FACE, LIQUID FILLED, DUAL SCALE, SS CASE, BRASS INTERNALS	1
527	8BE057	SIGHT GLASS, RED-LINE, PEACOCK, 411001108, 0.625" OD, 330 PSIG @ 100F, 12" LG	1
528	TKC-K-250-40	THERMOCOUPLE, TYPE 'K', THERMOMETRICS, K-250-316-006, 0-8-80X89	1
529	88A186	THERMOMETER, BI METALLIC, TREND, 33025A006G40, 0.5" MNPT, 0-250F, 3" FACE, 2.50" PROBE, 0.250" OD, DUAL SCALE	2
530	F-503-ER-IP	COOLER, OIL, SHELL & TUBE, YOUNG, B07101, SW JCC, 150 PSIG MAMP @ 350F	1
531	8BE012	THERMOWELL, 1210025304, 0.5" FNPT X 1" MNPT, 2.50" DEPTH, 0.260" BORE, 304 SS	3
532	NPN	TRANSMITTER, PRESSURE, WIKA, 0.25" MNPT, 0-160 PSIG, MAX 212F, 316SS WETTED PARTS, CSA CLASS I DIV I I.S./DIV II N.I.	1
533	88A262	VALVE, BALL, BALON, LM-07361, 0.75" FNPT, 3000 PSIG @ 150F, AISI 1215 ZINC PLATED	4
534	12A226	Y-STRAINER, MATCO, MODEL# 140504, 1" NPT, CAST IRON, 20 MESH	1
535	0038-0013-011	COUPLING, PIPE, DRESSER, 0038-0013-011, 2" PIPE, 1500 PSIG MAX 212 F, STYLE 3B	1
536	88A249	VALVE, GATE, BONNEYFORGE, HL107-1T, 1.5" FNPT CLASS 800, 800 PSIG @ 850F, REG. PORT	1
537	11C	VALVE, GAUGE, DANIEL, 209-01-049C 11C, 0.5" FNPT X 0.625" TUBE, 3600 PSIG @ 250F 1 SET, CARBON STEEL	1
538	88A607	VALVE, NEEDLE, CENTURY, CMZ-3-M22T-B-Y, 0.25" MNPT X 0.25" FNPT, 6000 PSIG @ 100F	3
539	-	-	-
540	-	-	-
541	LCM-12	CONTROLLER, LEVE, KENCO, LCM-12, 0.5" FNPT, 6.5 PSIG MAMP, MAX 180F, 0.5" POST MOUNT, ALUMINUM, CSA CLASS III TYPE 4	1
542	BF1307	FILTER, HOUSING, OIL, BALDWIN, BF1307, 0.75" FNPT	1
543	BF915	FILTER, ELEMENT, OIL, BALDWIN, BF915, SPIN ON RIVAL	1
544	-	-	-

BILL OF MATERIALS c/w FRAME

BILL OF MATERIALS SUPPLIED BY E.I.

NOT TO BE REPRODUCED OR DISTRIBUTED WITHOUT THE PRIOR WRITTEN CONSENT OF TORCROMONT ENERGY SYSTEMS INC.

SCALE:	NONE	DATE:	12/19/03	BY:	JN	DATE:	03/31/04	JN
STEP #	550	UNIT #	1036	COFLOW	REV. 1	RELEASED BY:		

REVISION	DATE	BY
0	ISSUED FOR CONSTRUCTION	JN
1	AS BUILT	JN



CUSTOMER: HUSKY OIL OPERATIONS LTD.
 COMPRESSOR/CYLINDER OIL FLOW
 c/o: BDR ENGINEERING LTD.
 WHITE BEAR COMPRESSOR STATION
 JKEL/4-3
 LSD: 02-03-23-16 W3M

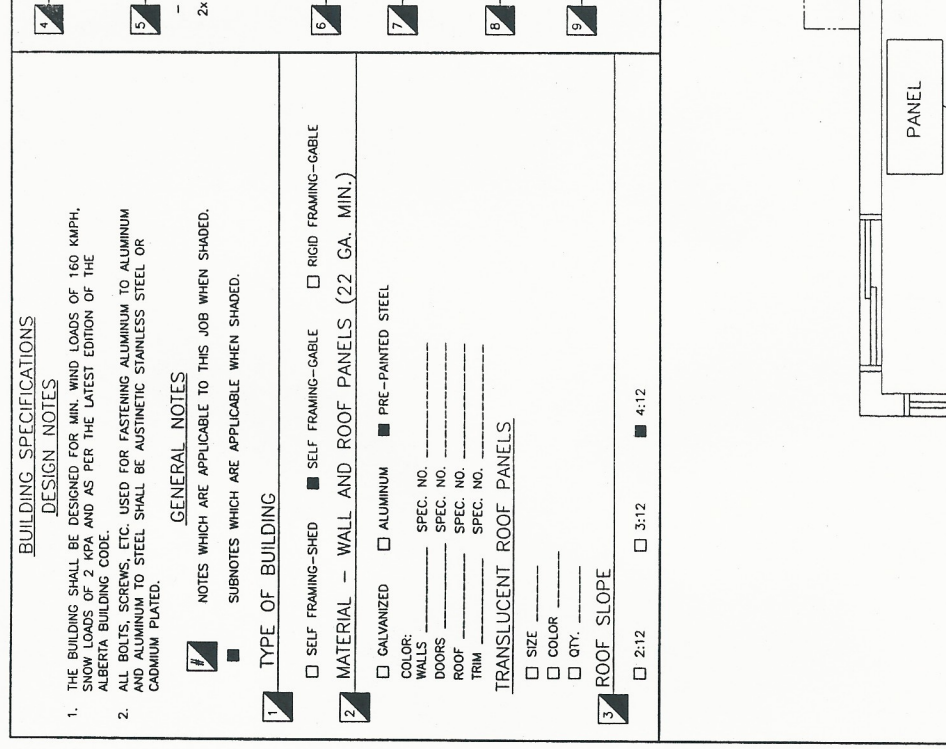
4303 - 117th STREET N.E. CALGARY ALBERTA CANADA

No.	Part No.	Description	Quantity
701	B8E099	BEARING, PILLON BLOCK, 2 1/16" BORE, EXP. DODGE S2000	2
702	B8E098	BEARING, PILLON BLOCK, 2 1/16" BORE, NON-EXP. DODGE S2000	2
703	NPN	BELT, COOLER, TYPE SV, 5 GROOVE, PART # (SHOP TO ORDER) SIZE 5V-2360	1
704	NPN	BELT, ENGINE, TYPE SV, 4 GROOVE, PART # (SHOP TO ORDER) SIZE	1
705	NPN	BUSHING, COOLER SHEAVE, TYPE 'J', 3 7/16" BORE, c/w 7/8" x 7/16" KNY	1
706	12C088	BUSHING, COOLER IDLER, TYPE 'E', 2 7/16" BORE, c/w 5/8" x 5/16" KNY	1
707	B8E103	BUSHING, COOLER JACKSHAFT, TYPE 'E', 2 1/16" BORE, c/w 5/8" x 7/16" KNY	1
708	NPN	BUSHING, ENGINE (c/w ENGINE)	1
709	12A899	BUSHING, ENGINE IDLER, TYPE 'E', 1 15/16" BORE, c/w 1/2" x 1/4" KNY	1
710	B8E103	BUSHING, ENGINE JACKSHAFT, TYPE 'E', 2 1/16" BORE, c/w 5/8" x 5/16" KNY	1
711	NPN	CONTROL PANEL, ALLEN-BRADLEY, SLC504, 24 VDC, CLASS II, GROUP D, TEMP CODE T20 (SEE STEP #15)	1
712	NPN	COUPLING, COMPRESSOR, FSH SERIES 70, ARIEL KEYLESS COMPRESSOR HUB ASSY #PK, 28.875" OD x 27.25" B.C. ENGINE ADAPTOR PLATE, SAE BOLTING, 1400 RPM RATED	1
713	NPN	COUPLING, SHAFT, GRID-LIGN, 110V/1PH/60HZ, 24 x 48	1
714	NPN	HEATER, CATADYNE, 110V/1PH/60HZ, 24 x 48	2
715	13A333	IDLER ASSEMBLY, ENGINE, w/o SHEAVE, 1.9375" SHAFT c/w 2 IMPERIAL NON EXP PILLON BLOCKS 1/2" x 1/4" x 6" KNY	1
716	B8E096	JACKSHAFT, 2.6875" x 54" LG., c/w 0.625" x 0.4375" KNY x 6" LG. BOTH ENDS	1
717	B8E096	JACKSHAFT, 2.6875" x 54" LG., c/w 0.625" x 0.4375" KNY x 6" LG. BOTH ENDS	1
718	30D050	SHEAVE, COOLER, 31.5" P.D., TYPE SV, 5 GROOVE	1
719	30D028	SHEAVE, COOLER IDLER, 9.25" P.D., TYPE SV, 5 GROOVE	1
720	30D028	SHEAVE, COOLER JACKSHAFT, 9.25" P.D., TYPE SV, 5 GROOVE	1
721	NPN	SHEAVE, ENGINE, 9.88" P.D., TYPE SV, 6 GROOVE (c/w ENGINE)	1
722	30D047	SHEAVE, ENGINE IDLER, 9.75" P.D., TYPE SV, 5 GROOVE	1
723	NPN	SHEAVE, ENGINE JACKSHAFT, 16.0" P.D., TYPE SV, 5 GROOVE	1
724	NPN	TRANSMITTER, VIBRATION, METRIX	3
725	NPN	JCK TOOLBOX (c/w FRAME)	1
726	30904F2	PICKUP, MAGNETIC, 3 WIRE (c/w ENGINE)	1
727	NPN	HEATER, CATADYNE, 110V/1PH/60HZ, 12 x 24	2
728	-	-	-
729	-	-	-
730	-	-	-

ENERGY INDUSTRIES SCOPE OF SUPPLY	
10	RIDGE VENTILATOR <input type="checkbox"/> RIDGE VENTILATOR c/w MANUAL CONTROLS & BIRDSCREEN <input type="checkbox"/> ACCOUNTIC TYPE RIDGE VENTILATOR c/w MANUAL CONTROLS & BIRDSCREEN <input type="checkbox"/> LENGTH FULL
11	ROLL-UP DOORS/SECTIONAL O/H DOORS/SLIDING DOORS <input type="checkbox"/> STEEL ROLL-UP DOOR <input type="checkbox"/> DIRECT DRIVE CHAIN HOIST <input type="checkbox"/> STEEL HINGED ACCESS DOOR <input type="checkbox"/> GEARED CHAIN HOIST <input type="checkbox"/> STEEL BOLTED ACCESS DOOR <input type="checkbox"/> MANUAL OPER. CHAIN HOIST <input type="checkbox"/> INSULATED
12	FANS - ROOF/WALL <input type="checkbox"/> ELECTRIC DRIVEN FAN CAPABLE OF PROVIDING A MIN. OF 12,400 CFM OF AIR <input type="checkbox"/> HOUSING AND BIRDSCREEN c/w 1/2" SPACER, 1/2" DAMPERS, ALUM. <input type="checkbox"/> 2" WALL <input type="checkbox"/> EXPLOSION PROOF (CLASS 1, GROUP D, DIVISION 1), EXTERNALLY MOUNTED. <input type="checkbox"/> 120/240 V - 1 PHASE <input type="checkbox"/> PENN DOMEX <input type="checkbox"/> 240/480 V - 3 PHASE <input type="checkbox"/> STD. PROPELLER <input type="checkbox"/> SOUND ATTENUATOR
13	POLYETHYLENE VAPOUR BARRIER <input type="checkbox"/> 2 MIL <input type="checkbox"/> 4 MIL <input type="checkbox"/> 6 MIL
14	EAVESTROUGH, DOWNSPOUT AND ICE RAKES <input type="checkbox"/> EAVESTROUGHS <input type="checkbox"/> ICE RAKES
15	BUILDING SIZE <input type="checkbox"/> LENGTH 34'-0" <input type="checkbox"/> WIDTH 23'-6" <input type="checkbox"/> EAVE HEIGHT 14'-0" (FROM TOP OF SKID)

4	INSULATION - FIBREGLASS <input type="checkbox"/> R-12 <input type="checkbox"/> 3 LB/CU.FT. DENSITY SOUND <input type="checkbox"/> R-20 <input type="checkbox"/> R-12 <input type="checkbox"/> 3 LB/CU.FT. DENSITY SOUND <input type="checkbox"/> R-20
5	DOORS - 20 GA. METAL, INSULATED (NORMAL SIZES) <input type="checkbox"/> 3'x7' SINGLE <input type="checkbox"/> WS <input type="checkbox"/> WG <input type="checkbox"/> PH <input type="checkbox"/> LS <input type="checkbox"/> DC <input type="checkbox"/> SF <input type="checkbox"/> CC <input type="checkbox"/> CP <input type="checkbox"/> 6'x7' DOUBLE <input type="checkbox"/> WS <input type="checkbox"/> WG <input type="checkbox"/> PH <input type="checkbox"/> LS <input type="checkbox"/> DC <input type="checkbox"/> SF <input type="checkbox"/> CC <input type="checkbox"/> CP <input type="checkbox"/> WGWBD WS - WEATHER STRIPPING LS - LOCKSET CC - CHECKCHAIN WGW - WIRE GLAZED WINDOW DC - DOOR CLOSURE CP - CANOPY PH - PANIC HARDWARE SF - STEEL FRAME WGWBD - WIRE GLAZED WINDOW IN BOTH DOORS
6	WINDOWS-HORIZ. SLIDING c/w SCREEN (DOUBLE GLAZED) <input type="checkbox"/> QTY 40x40 <input type="checkbox"/> QTY 40x60 <input type="checkbox"/> QTY 40x80 <input type="checkbox"/> QTY WIRE GLAZED
7	LINING <input type="checkbox"/> 24 GA. FLUTED ALUMINUM <input type="checkbox"/> 22 GA. PERFORATED ALUMINUM <input type="checkbox"/> 24 GA. FLUTED ALUMINUM - WHITE
8	ERECTION <input type="checkbox"/> ON SITE BY BLDG. MANUFACTURER <input type="checkbox"/> AT FAB. SHOP BY BLDG. MANUFACTURER
9	WALL LOUVRES (NOMINAL SIZES) <input type="checkbox"/> STAMPED LOUVRE c/w SLIDE CLOSURE AND SCREEN <input type="checkbox"/> 2'-18"x32" ADJUSTABLE LOUVRE c/w MANUAL CONTROL AND SCREEN

1	TYPE OF BUILDING <input type="checkbox"/> SELF FRAMING-SHED <input type="checkbox"/> SELF FRAMING-GABLE <input type="checkbox"/> RIGID FRAMING-GABLE
2	MATERIAL - WALL AND ROOF PANELS (22 GA. MIN.) <input type="checkbox"/> GALVANIZED <input type="checkbox"/> ALUMINUM <input type="checkbox"/> PRE-PANDED STEEL COLOR: _____ SPEC. NO. _____ WALLS: _____ SPEC. NO. _____ DOORS: _____ SPEC. NO. _____ ROOF: _____ SPEC. NO. _____ TRIM: _____ SPEC. NO. _____
3	ROOF SLOPE <input type="checkbox"/> 2:12 <input type="checkbox"/> 3:12 <input type="checkbox"/> 4:12



PROPRIETARY MATERIAL
 NOT TO BE RE-PRODUCED OR DISTRIBUTED
 WITHOUT THE PRIOR WRITTEN CONSENT OF
 TOROMONT ENERGY SYSTEMS INC.

NOTES:
 1. FOR ALL OTHER NOTES & GENERAL INFORMATION SEE DWG. #FFLOW.
 2. MANIFOLD BEARING GREASE LINES TO A SINGLE LOCATION.

No.	Revision	Date	By
1	AS BUILT	03/31/04	JN
0	ISSUED FOR CONSTRUCTION	12/19/03	JN

PROPRIETARY MATERIAL: NOT TO BE REPRODUCED OR DISTRIBUTED WITHOUT THE PRIOR WRITTEN CONSENT OF ENERGY INDUSTRIES INC.

ENERGY INDUSTRIES INC. 4303 - 11TH STREET N.E. CALGARY ALBERTA CANADA

CUSTOMER: HUSKY OIL OPERATIONS LTD.
 c/o: BDR ENGINEERING LTD.
 WHITE BEAR COMPRESSOR STATION
 LSD: 02-03-23-16 W3M
 DATE RELEASED: 03/31/04 RELEASED BY: JN
 DRAWING NO.: 1036-EQUIPMENT LAYOUT REV. 1

Scale	None	Date	12/19/03	By	JN
W.O. #	570	Unit #	1036		

EQUIPMENT # _____ HUSKY ORDER # _____

MAJOR COMPONENT WEIGHTS	
Description	Weight (lbs.)
COMPRESSOR FRAME:	8,500
ENGINE:	21,000
COOLER: (DRY)	33,050
INLET SAND FILTER/SEPARATOR:	3,150
INTERSTAGE #1 SCRUBBER:	1,670
INTERSTAGE #2 SCRUBBER:	1,530
THROW #1 & #3 CYLINDERS & BOTTLES:	10,933
THROW #2 CYLINDER & BOTTLES:	5,000
THROW #4 CYLINDER & BOTTLES:	4,425
SKID BASE: (w/o CONCRETE)	53,956
SKID BASE: (w/ CONCRETE)	79,516
SILENCER/AIR/EXHAUST	5,335
PIPING:	12,405
BUILDING	10,000
INSTRUMENTATION & ELECTRICAL:	5,000
FLUIDS:	2,000
TOTAL PACKAGE:	223,500

**PROPRIETARY MATERIAL
NOT TO BE RE-PRODUCED OR DISTRIBUTED
WITHOUT THE PRIOR WRITTEN CONSENT OF
TOROMONT ENERGY SYSTEMS INC.**

⊗ - SUPPORT POINT (NOT NECESSARILY A PILE LOCATION)

PLEASE READ CAREFULLY

1. INSTALLATION OF THIS SKIDDED COMPRESSOR PACKAGE IS THE RESPONSIBILITY OF THE OWNER.
2. ALL PILE CAPS MUST BE SHIMMED AND WELDED TO THE SKID WITH CONTINUOUS WELDMENTS USING GOOD WELDING PRACTICES. STITCH WELDING IS NOT ACCEPTABLE. ENERGY INDUSTRIES INC. DOES NOT WARRANT VIBRATION ISSUES RELATING TO POOR PILE TO SKID CONNECTIONS, OR INSUFFICIENT PILE DESIGN.
3. PACKAGES INCORPORATING SEAL PANS (DRIP) IN THE WINGS WILL RESTRICT ACCESS TO SUPPORTS BELOW. IT MAY BE NECESSARY TO CUT THE SEAL PAN TO GAIN ACCESS TO THESE AREAS.
4. A RECIPROCATING COMPRESSOR IS CAPABLE OF PRODUCING VERY HIGH HORIZONTAL COUPLES ABOUT THE CENTERLINE OF THE CRANKCASE. CAREFUL CONSIDERATION MUST BE GIVEN TO THE LOCATION OF SUPPORT BELOW THE CYLINDER CROSSHEAD AREA OF THE SKID. A SINGLE POINT OF SUPPORT BELOW EACH THROW IS NOT SUFFICIENT.
5. THIS DRAWING INDICATES THE MINIMUM RECOMMENDED NUMBER OF SUPPORT POINTS. THE ACTUAL NUMBER AND LOCATION REQUIRED MAY BE MORE, DEPENDING ON SOIL CONDITIONS, DEPTH OF REFUSAL, ETC.. ENERGY INDUSTRIES INC. DOES NOT AND CANNOT WARRANT THIS SUGGESTED DESIGN AND IT IS STRONGLY RECOMMENDED THAT A CIVIL ENGINEER FAMILIAR WITH PACKAGED COMPRESSORS BE CONSULTED TO DESIGN THE FOUNDATION FOR THIS COMPRESSOR PACKAGE.

No.	ISSUED FOR REFERENCE	REVISION	DATE	BY
0			12/19/03	JN

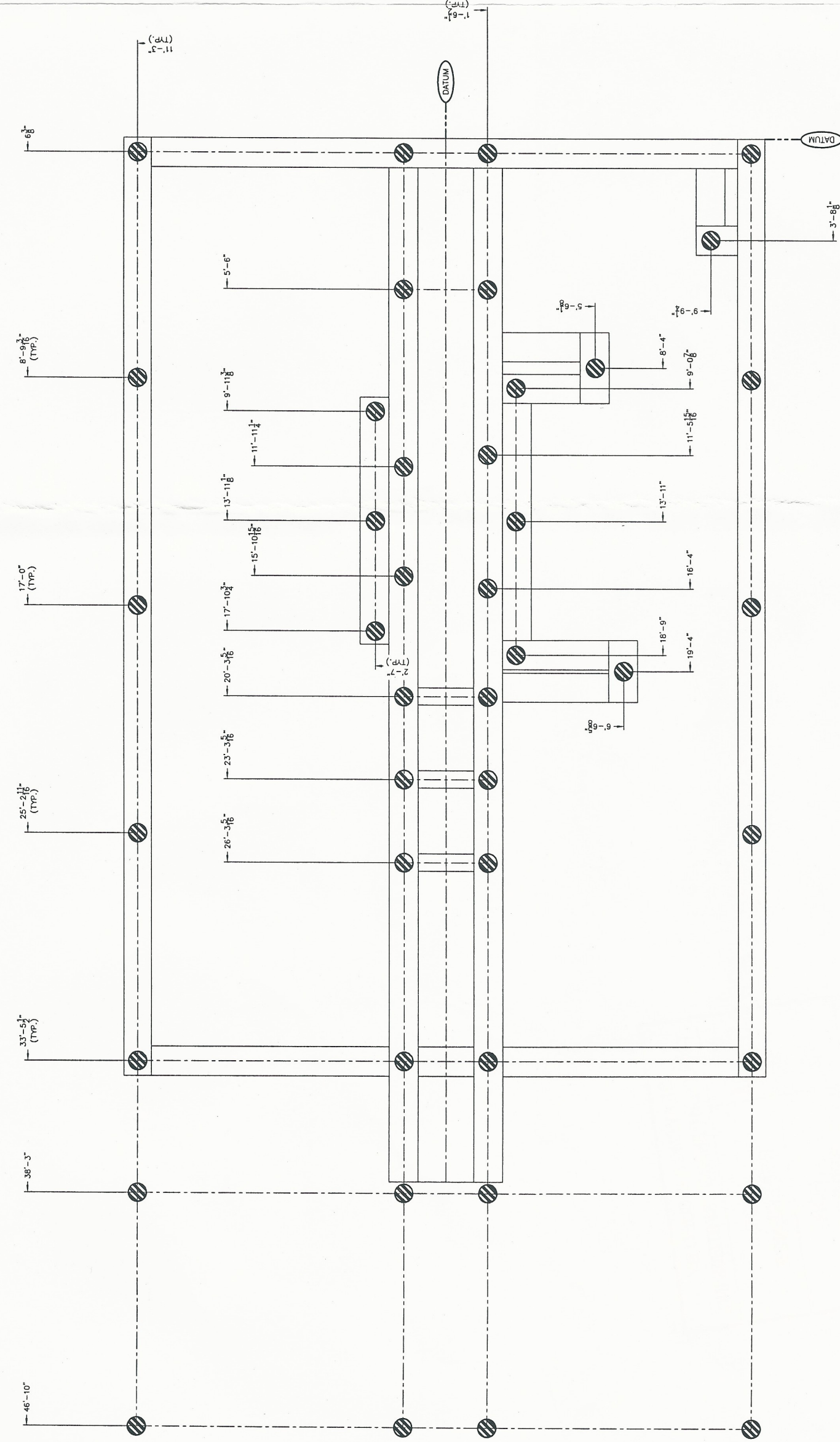
SCALE: 1/2"=1'-0" DATE: 12/19/03 BY: JN UNIT # 1036 REV. 0
STEP # N/A DRAWING NO.: 1036-PILE

ENERGY INDUSTRIES INC. 4303 - 11TH STREET N.E. CALGARY ALBERTA CANADA

TITLE: SUGGESTED PILE LOCATIONS
WALESHA LYONZOL / AREEL JOK / A-3
AIR-X-HEMPHILL 10867-122-26

CUSTOMER: HUSKY OIL OPERATIONS LTD.
ENR ENGINEERING LTD.
WHITE BEAR COMPRESSOR STATION
LSD: - - - 23-16 W3M

DATE RELEASED: 12/12/03 RELEASED BY: JN



THROW #	COMPRESSOR UNBALANCED FORCES @ 1200 RPM			
	1	2	3	4
CYLINDER BORE (IN.)	15 3/8"	11"	15 3/8"	6 3/4"
UNBALANCED SHAKING FORCES = NIL (ALL FRAMES)				
Description	Tag			
	Ft. lbs.			
	CV1	CV1	CV1	16,905
	CH1	CH1	CH1	18,142
CV2	CV2	CV2	NIL	
CH2	CH2	CH2	78	

