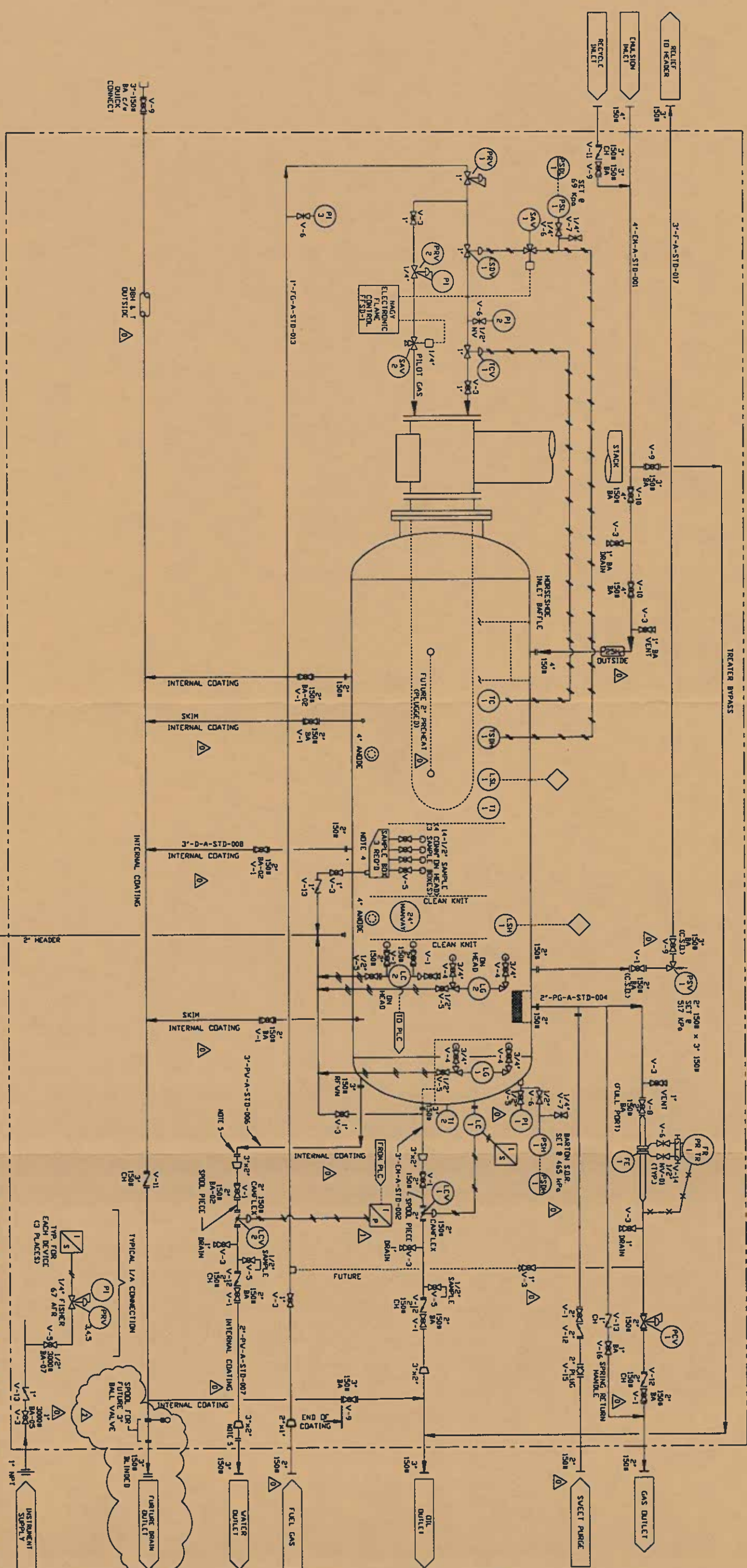


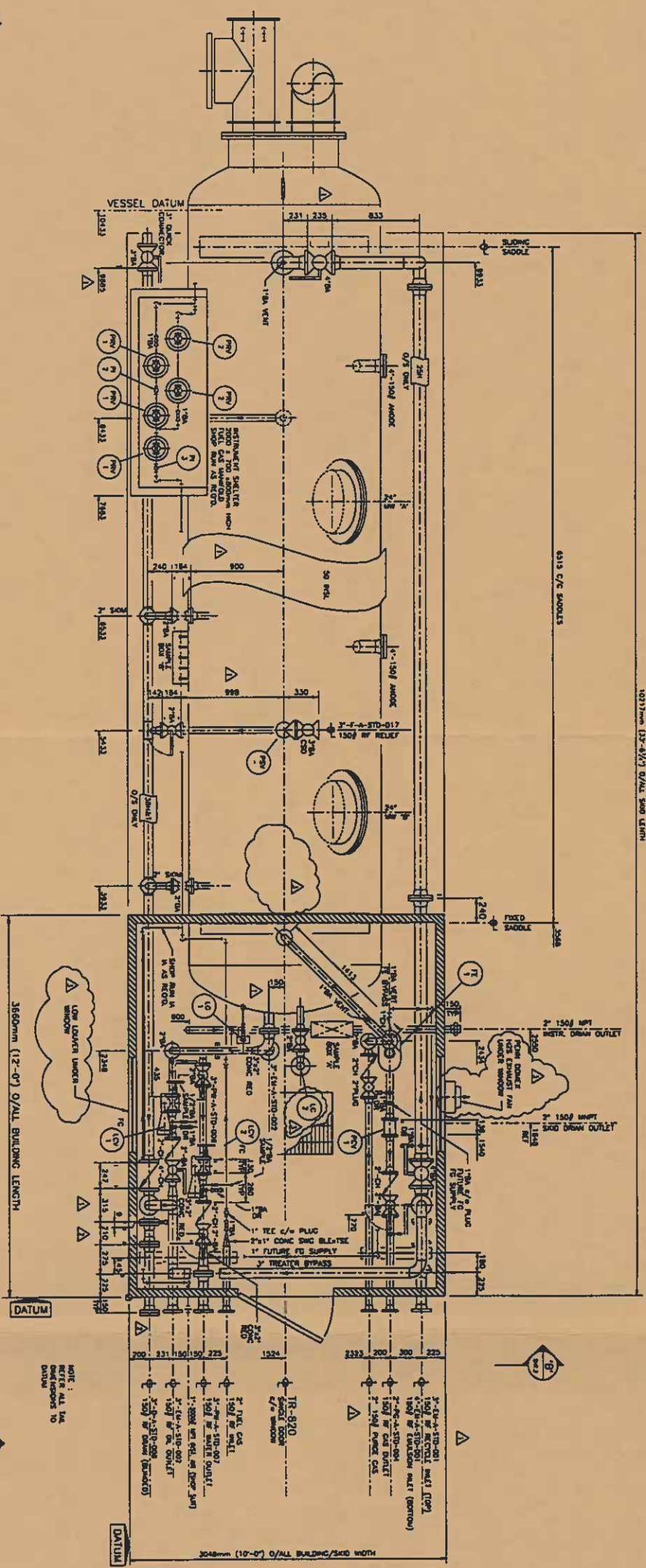
TREATER (TR-820)
 SIZE: 72" O.D. x 24'-0" S/S
 NO CORROSION ALLOWANCE
 INTERNAL COATING DEVICE E53
 10 mm BTU/HR



- GENERAL NOTES:
- 1) DEMONSTRATES 3/8" O.D. SS TUBING.
 - 2) DEMONSTRATES 1/2" O.D. SS TUBING.
 - 3) TUBING FITTINGS TO BE S.S. SWAGelok WITH SS FERULES.
 - 4) 3 SAMPLE BOXES REQUIRED.
 - 5) 2 ON SHELL INSIDE BUILDING.
 - 6) 2 ON SHELL OUTSIDE.
 - 7) SAMPLE BOXES OUTSIDE ARE NOT TO BE PIPED TO INST. DRAIN HEADER ON O/S.
 - 8) BALL VALVE (V-3) REQUIRED ON O/S SAMPLE BOXES C/V PLUG.
 - 9) 3" 150# BREAK FLANGES FOR FUTURE CHANGE TO 3" LCV STATION.

REV.	DESCRIPTION	BY	DATE
1	REPLACED BALL VALVE AT DRAIN WITH SPEC. BLIND & SPOOL	NS	96.10.23
2	REVISED L.C-2 GENERAL NOTES REVISED.	HF	
0	REVISED PER MARK-UP RECD SEPT 20 96	JH	96-10-02
B	REVISED AS PER CUSTOMER MARK UP	JH	96-09-16
A	ISSUED FOR CUSTOMER APPROVAL	HF	
REV.	DESCRIPTION	BY	DATE

CAN/CAD/US/3731-1	DATE
MALONEY INDUSTRIES INC.	96-08-18
DESIGNERS AND FABRICATORS OF OIL & GAS PROCESSING EQUIPMENT	96-09-16
8825 Shepard Rd. S.E., Calgary, Alberta, Canada	96-09-16
TREATER (TR-820)	96-09-16
P & I.D.	
NORTHSTAR ENERGY CORPORATION	
c/o BOWER DAMBERGER ROUSSETH ENG. LTD.	
LONG COULEE, ALBERTA	
INDEX	REV.
C3731-100	2



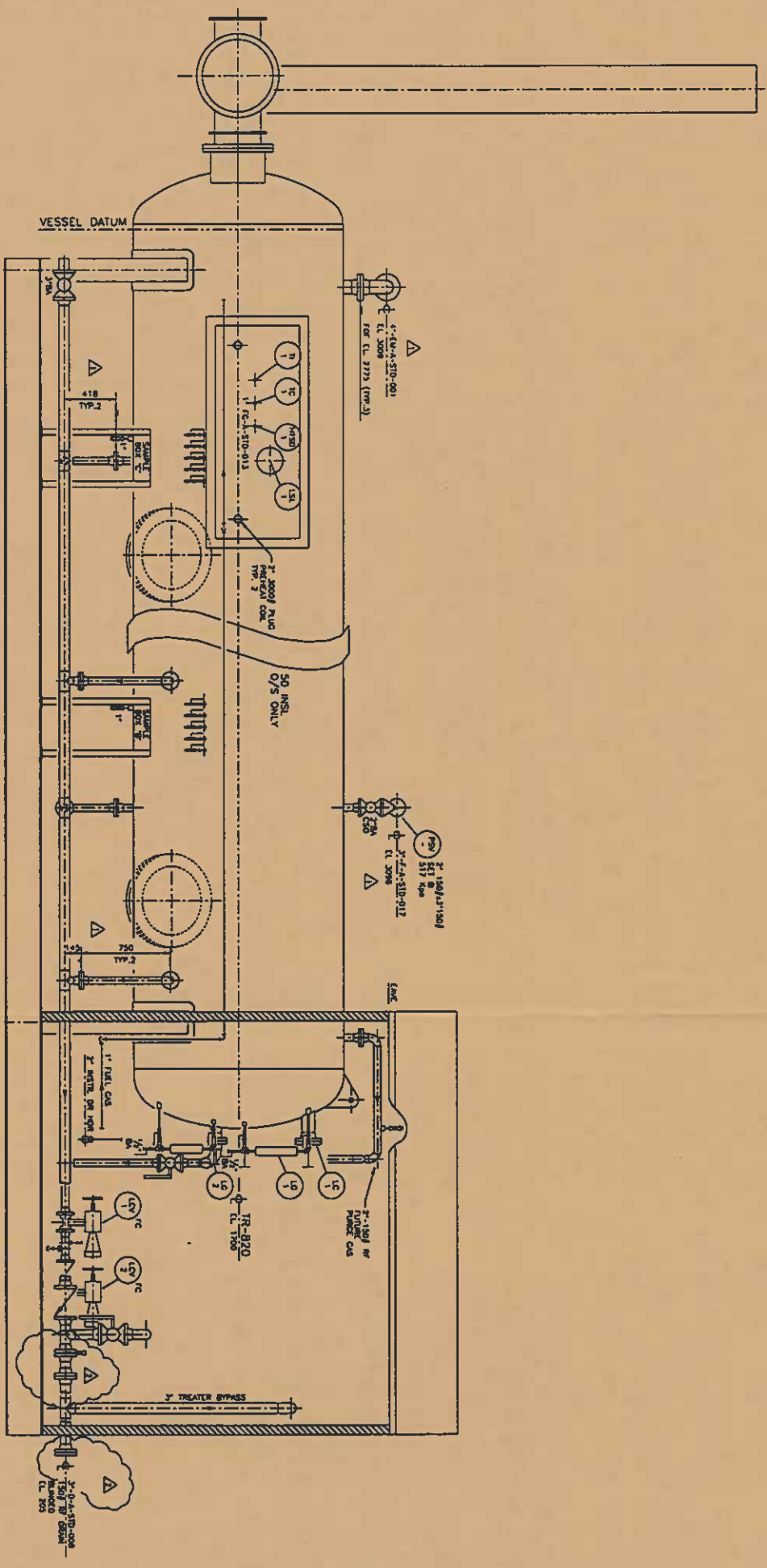
GENERAL NOTES

1. PIPE : ASTM A-106 GRADE B SEAMLESS
150# LINES : 1/2" TO 2" SCH 40 (THREADED)
2" TO 6" SCH 40 (BUTTWELDED)
2. NIPPLES & SWAGES : SAME SCHEDULE & MATERIAL AS PIPE
3. FLANGES : ANSI 150# RF ASTM A-105 - SCHEDULE TO MATCH PIPE
(2" THRD FLGS ON SAMPLE BOX DRAIN LINES)
4. FITTINGS :
150# LINES : 1/2" & SMALLER 3000# SCHED ASTM A-105
2" & LARGER BUTTWELD, ASTM A234 GRADE WPB
SCHEDULE TO MATCH PIPE
5. CASKETS : SPIRAL WOUND, ASBESTOS FREE, 316 SS
FLEXIBLICK STYLE CG OR EQUAL, API-601
6. STUDS & NUTS : SA-193-87M STUDS & SA-194-2M NUTS
7. HYDROTEST : 150# LINES - 427 PSI (HOLD FOR 1 HOUR) Δ
8. RADIOSQUARED : PER B31.3 CODE
(10% OF ALL BUTTWELDED JOINTS - 100% ON INTERNALLY COATED PIPING)
9. TUBING : 3/8" O.D. x 0.035" WT STAINLESS STEEL AND
C.D. P. SWAGelok FITTINGS w/ S.S. FERRULES
ALL TUBING TO BE SUPPORTED FROM VESSEL OR SADDLES
AND RUN IN CHANNEL, RACKINGS OR ATTACHED
TO VESSEL OR SADDLES WITH PLASTIC CUPS.
INSTRUMENTS TO VENT OUTSIDE.
10. PAINT : SEE DWG. C3731-9000 SMT.1
11. PIPING CODE B-31.3
12. INSULATION AND TRACING (BY OTHERS) : SEE PAID C3731-100 SMT.1 FOR LOCATION.
2" FIBERGLASS INSULATION WITH SMOOTH ALUMINUM COVER
13. DRAINS AND WATER LINE TO BE INTERNALLY COATED.
14. APPROX. SHIPPING WEIGHT : 31,450 lbs 14,300 KG.
APPROX. WEIGHT FULL OF WATER : 77,910 lbs 35,350 KG.
15. BUILDING :
3660mm SPAN x 3660mm LENGTH END MOUNT WITH GABLE ROOF.
(10'-0" SPAN x 12'-0" LENGTH)
EAVE HEIGHT 3048mm (10'-0") FROM T.O. SKID BEAM.
EXTERIOR SHEATHING 22 GA. PRE-PAINTED STEEL
INTERIOR SHEATHING AND ROOF ROOF CO. TYPED ALUMINUM.
EXTERIOR COLOUR - BONE WHITE WALLS, 2" ROOF DOORS & BURGUNDY ROOF FLASHING.
INTERIOR COLOUR - BONE WHITE WALLS, 2" ROOF DOORS & BURGUNDY ROOF FLASHING.
1 SINGLE DOOR 815mm x 2134mm (3'3" x 7'0") INSULATED STEEL DOOR.
PANE HARDWARE, LOCKSET, 24" x 24" WING WINDOW, CHECK CHAIN, HYDRAULIC CLOSER.
TWO WINDOWS 1015mm x 1015mm (4'0" x 4'0") DOUBLE GLAZED.
SLIDING WINDOWS WITH 1/2" SCREEN AND LATCH.
BUILDING WITH CONTINUOUS BASE FLASHING STRIP.
NATURAL VENTILATION ROOF VENT WITH MANUAL DAMPER AND SCREEN
ONE WALL LOUVER 457mm x 457mm WITH MANUAL CLOSURE AND SCREEN.
MOUNTED UNDER WINDOW.
16. INSTRUMENT ENCLOSURE DWG. 100 WIDE
(2'-7 1/2" HIGH x 6'-6 1/2" LONG x 2'-3 1/4" WIDE)
EXTERIOR SHEATHING 22 GA. PRE-PAINTED STEEL
INTERIOR SHEATHING AND ROOF 24 GA. FLUDED ALUMINUM.
INSULATION RATING - WALL & ROOF R-12 c/w 4 W.L. POLY.
EXTERIOR COLOUR - BONE WHITE.
17. ELECTRICAL HEATER (RUFFNECK) SUPPLIED BY NORTHESTAR

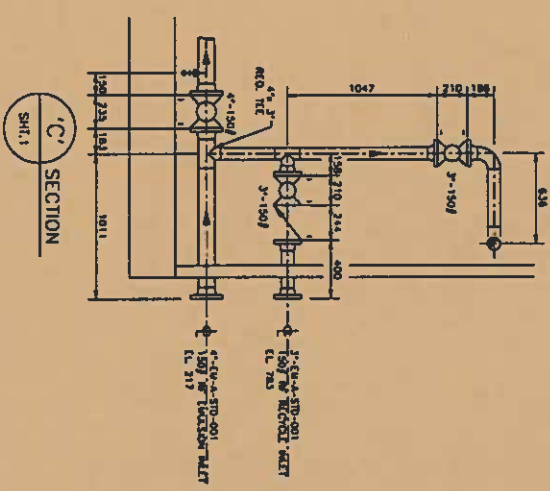
REV.	DESCRIPTION	BY	CHKD./APP.	DATE
3	REVISED PER CLIENT WORK-UP RECTO OCT.07	NS		96.10.31
2	REPLACED BALL VALVE AT DRAIN OUTLET WITH SPEC. BLIND & SPOON	NS		96.10.23
1	REVISIONS AS PER CLIENT WORK-UP & AS NOTED	NS		96.10.04
0	ISSUED FOR CONSTRUCTION	CH	JH	30.09.96
A	ISSUED FOR APPROVAL	CH		16.09.96

MALONEY INDUSTRIES INC. DESIGNERS AND FABRICATORS OF OIL & GAS PROCESSING EQUIPMENT 8025 Shepard Rd. S.E., Calgary, Alberta, Canada		DRAWN CH 08.08.96
TITLE HORIZONTAL TREATER PIPING GENERAL ARRANGEMENT		CHECKED OF 06.10.02
CUSTOMER NORTHESTAR ENERGY LTD. c/o BOWER DÄHLBERGER, ROLSTETH ENG. LONG COULEE		APPROVED JH 06.10.02
SHEET 1 OF 2	DRAWING NO. C3731-4000	REV. 3

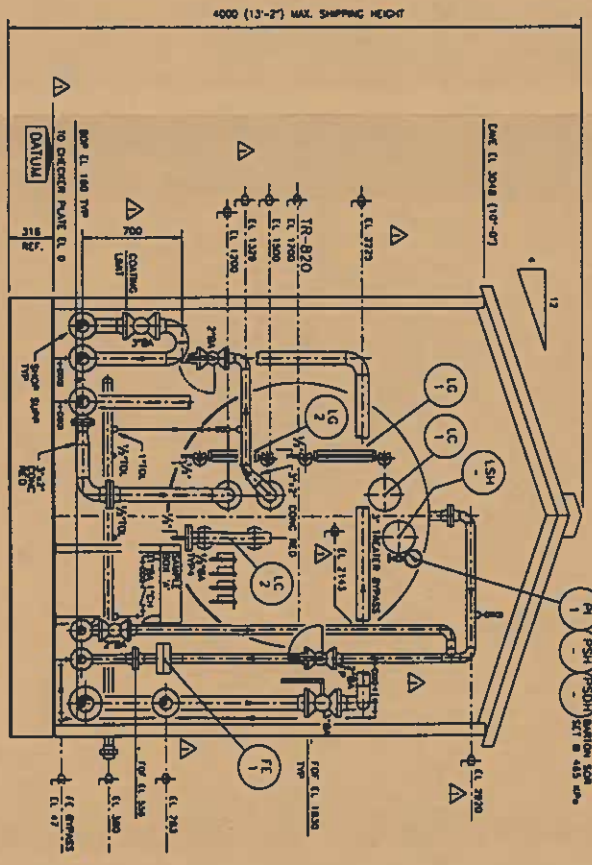
REV.	DESCRIPTION	BY	CHKD./APP.	DATE
3	REVISED PER CLIENT WORK-UP RECTO OCT.07	NS		96.10.31
2	REPLACED BALL VALVE AT DRAIN OUTLET WITH SPEC. BLIND & SPOON	NS		96.10.23
1	REVISIONS AS PER CLIENT WORK-UP & AS NOTED	NS		96.10.04
0	ISSUED FOR CONSTRUCTION	CH	JH	30.09.96
A	ISSUED FOR APPROVAL	CH		16.09.96



'A' SECTION
SHT. 1



'C' SECTION
SHT. 1



'B' SECTION
SHT. 1

REV.	DESCRIPTION	CHG./APP.	DATE
3	REPLACED BALL VALVE AT DRAIN OUTLET WITH SPEC. BLIND & SPOOL	NS	98.10.23
2	REMOVED DRAIN TE IN	NS	98.10.04
1	REMOVED PER CLIENT MARK-UP & AS NOTED	CH	30.09.98
0	ISSUED FOR CONSTRUCTION	CH	18.08.98
A	ISSUED FOR APPROVAL	CH	18.08.98

MALONEY INDUSTRIES INC.
DESIGNERS AND FABRICATORS OF
OIL & GAS PROCESSING EQUIPMENT
8825 Shepard Rd. S.E., Calgary, Alberta, Canada

**HORIZONTAL TREATER
PIPING GENERAL ARRANGEMENT**

CUSTOMER: **NORTHSTAR ENERGY LTD.**
FOR: **c/o BOWER DAMBERGER, ROLSETH ENG.
LONG COULEE**

SCALE	SHEET	OF	DATE	REV.
1:25	2	2	98.10.02	2

DESIGNED NO. **C3731-4000**

This drawing and design is the property of Maloney Industries Inc. and shall remain the property of Maloney Industries Inc. unless otherwise stated.