

BILL OF MATERIALS				
MARK	QTY	MATL	DESCRIPTION	SERVICE
1	1	A36	6.4 PL. x 3710 DIA. FLAT BOTTOM	
2	2	A36	4.8 PL. x 1524 x 11477 LG. BOTTOM SHELL	
3	1	A36	4.8 PL x 3671 DIA. CONED ROOF (1:12 SLOPE)	
4	2	A36	LIFT LUG w/ REPAD	
5	1		NAMEPLATE c/w BRACKET	
6	1	A36	CAGED LADDER c/w 1405 EXT. (SEE SHT. B-2615 CL FOR DETAILS)	
7	1	A36	200 BBL BASE SKID (SEE SHT. B-2615 SK FOR DETAILS)	
8	1	A36	ROOF PLATFORM (SEE SHT. B-2615 RP FOR DETAILS)	
M1	1	A36	610 x 914 (24"x36") RECT. MANWAY (FLUSH w/FLOOR)	
	1	A36	762 x 1066 (30" x 42") RECTANGULAR SPLIT MANWAY COVER	
TH	1		219 DIA (8") ENARDO 660 THIEF HATCH SET @ 16 oz. PRESSURE / 0.4 oz. VACUUM	
	1		8" ARG0 FAB. THIEF HATCH EXTENSION	
LI	2	316SS	42 DIA. (1-1/4") 3000# NPT FULL CPLG.	
	1	316SS	48 DIA. (1-1/2") 3000# NPT FULL CPLG.	
	1		SPARROW HAWK MODEL GAUGE BOARD/ FLOAT SYSTEM c/w GAUGE BOARD BRACKET (ARGO TO INSTALL BRACKETS & ANCHORS ONLY, GAUGE SYSTEM SUPPLIED & INSTALLED BY OTHERS) GAUGE BRACKET TO BE TRIMMED WIDTH TO 121mm	
C1	1	316SS	60 DIA. (2") 3000# NPT FULL CPLG x 89 LG. w/ PLUG	HLSD
C2	1	316SS	60 DIA. (2") 3000# NPT FULL CPLG x 89 LG. w/ PLUG	LLSD
N1	1	A105	89 DIA. (3") 150# RFSO FLANGE	OUTLET
	1	A106	89 DIA. (3") SCH 40 SMLS PIPE x 228 LG	
N2	1	A105	89 DIA. (3") 150# RFSO FLANGE	DRAIN/TRUCK OUT
	1	A106	89 DIA. (3") SCH 40 SMLS PIPE x 218 LG	
N3	1	A105	114 DIA. (4") 150# RFSO FLANGE	VENT
	1	A106	114 DIA. (4") SCH 40 SMLS PIPE x 223 LG	
N4	1	A105	89 DIA. (3") 150# RFSO FLANGE	SPARE
	1	A106	89 DIA. (3") SCH 40 SMLS PIPE x 228 LG	
N5	1	A105	60 DIA. (2") 150# RFSO FLANGE	TIT
	1	A106	60 DIA. (2") SCH 40 SMLS PIPE x 218 LG	
HE	2	316SS	89 DIA. (3") 150# RFSO FLANGE	HEATER
	1	316SS	89 DIA. (3") SCH 40 SMLS PIPE x 355 LG (SEE SHT. B-2615 D1 FOR DETAILS)	

NOZZLES				
MARK	PROJECTIONS	ORIE.	ELEV.	NOTES
	EXT.	INT.		
C1	64mm	--	245° 2743mm	HLSD
C2	64mm	--	245° 610mm	LLSD
LI	76mm	--	265° ROOF	LI
N1	209mm	25mm	0° 294mm	INLET
N2	203mm	25mm	180° 127mm	DRAIN/TRUCKOUT
N3	203mm	25mm	-- ROOF	VENT
N4	209mm	25mm	0° 294mm	SPARE
N5	203mm	25mm	300° 305mm	TIT
HE	203mm	25mm	315° 305mm	ELECTRIC HEATER

DESIGN NOTES

- TANK TO BE BUILT AND TESTED TO API-12F SPEC. (NON LABELED)
- TANK TO BE AIR/SOAP LEAK TESTED TO 12 OZ./ SQ. IN.
- ROOF/SHELL JOINTS NOT TO BE BACKWELDED TO MEET API-2000 SPECS
- ESTIMATED SHIPPING WEIGHT = 3860 LBS. (8500 KG.)
- REFER TO ORIENTATION DRAWING FOR PROPER LOCATION OF ALL NOZZLES, COUPLINGS, ETC.
- ALL DIMENSIONS ARE IN mm.
- ALL ELEVATIONS TAKEN FROM TOP OF TANK FLOOR.
- CAGE LADDER AND ROOF PLATFORM TO BE SHIPPED LOOSE.
- RECORD HEAT NUMBERS AND MTR's
- ALL BOLT HOLES TO STRADDLE PRIMARY CENTER LINES.
- IMMERSION HEATER TO BE SHIPPED LOOSE.
- SPARROW HAWK GAUGE SYSTEM TO BE SUPPLIED AND INSTALLED BY OTHERS.

INTERNAL & EXTERNAL FINISH

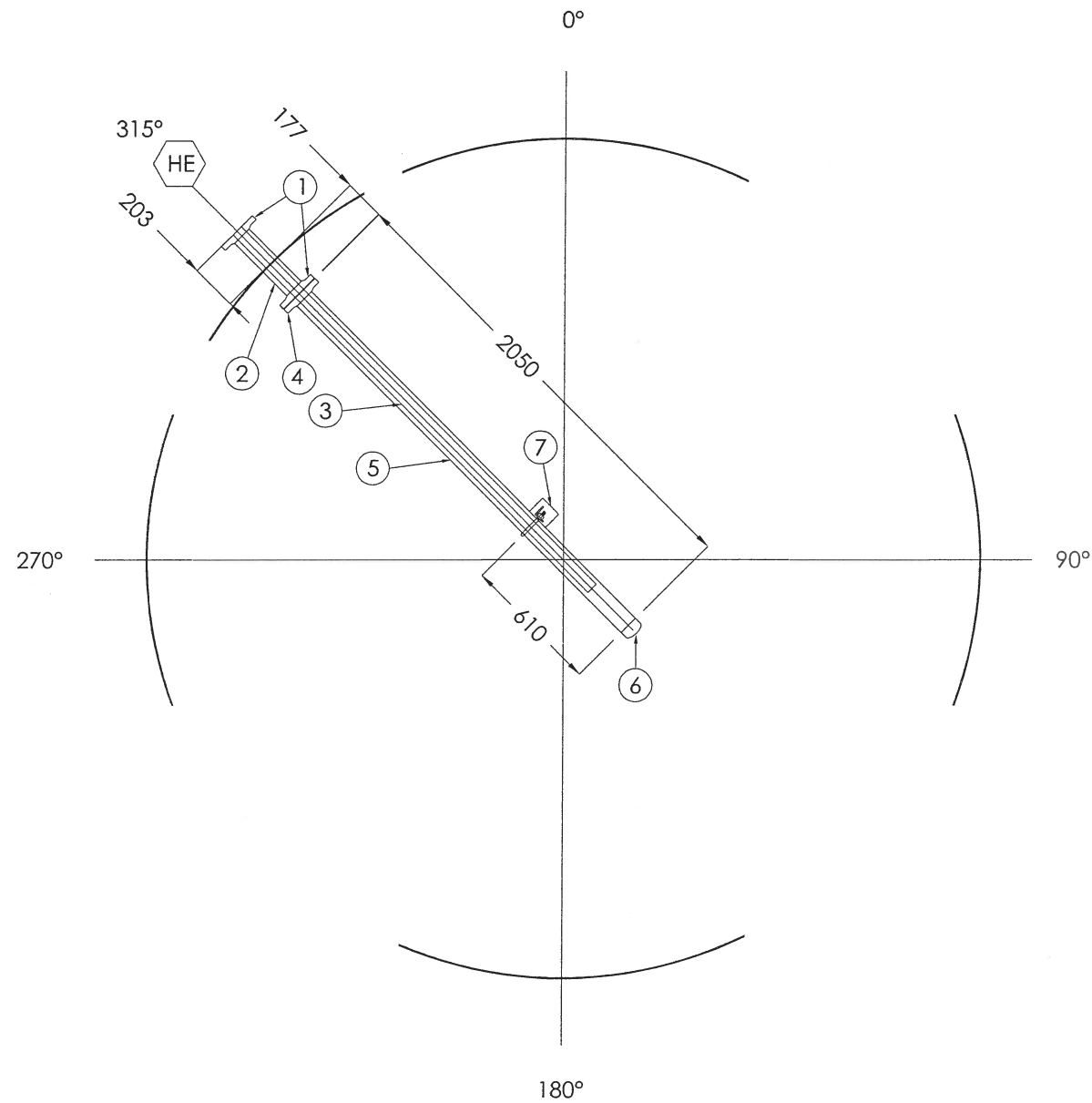
- INTERNAL FINISH**
 BLAST: SSPC-SP5 WHITE METAL BLAST USING SIL 7 SAND
 COATING: 20.0 - 40.0 MILS DFT OF ENVIROLINE EC-376 EPOXY COATING
- EXTERNAL FINISH**
 BLAST: SSPC-SP6 COMMERCIAL BLAST USING SIL 7 SAND
 PRIMER: 1.5 - 2.0 MILS DFT OF CLOVERDALE TOWER OR RUSTEX #71024 GRAY
 INSULATION: 2" MINERAL WOOL INSULATION & 0.20" SMOOTH CORRUGATED ALUMINUM CLADDING c/w 3/4" STAINLESS STEEL BANDING. COLOR: STONE GRAY
 PAINT: ALL PROJECTIONS, 1.5 - 2.0 MILS DFT OF CLOVERDALE MARINE ENAMEL- COLOR STONE GRAY
- BOTTOM FINISH**
 BLAST: SSPC-SP6 COMMERCIAL BLAST
 COATING: 15 - 20 MILS DFT OF COAL TAR EPOXY

REVISIONS				
NO.	DESCRIPTION	BY	DATE	
1	ISSUED FOR FABRICATION	CY	10.24.05	
0	ISSUED FOR REVIEW / APPROVAL	CY	10.11.05	

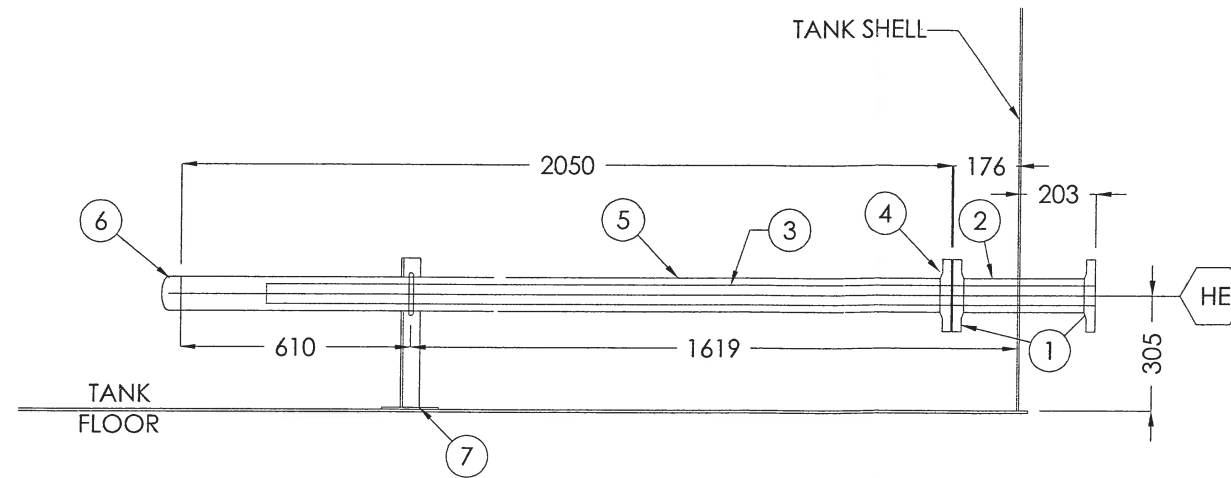
CUSTOMER: FORT ENERGY CORPORATION c/o BDR ENGINEERING LTD.
 RPO# 54000-20 Rev. 0
 LOCATION: L.S.D. 07-25-62-06-W5M (SANDHILLS GAS PLANT)

TITLE:
 ONE (1) 32 CU. M. (200 BBL)
 3658 DIA. x 3048 HIGH
 BASE SKIDDED WATER MAKE-UP TANK

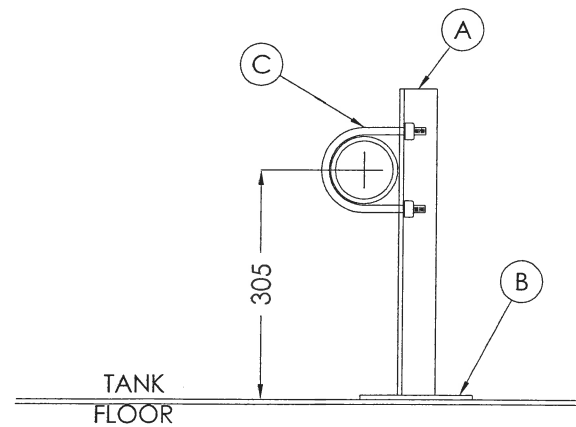
APPROVED BY:	CHECKED BY:	DRAWN BY:	CY
DATE: 10.11.05	TAG #: T-707	DRAWING#: B-2615	REV.
SHEET: 1 of 5	SCALE: NTS	SERIAL#: 2615	



IMMERSION HEATER WELL ORIENTATION



IMMERSION HEATER WELL ELEVATION



SUPPORT BRACKET DETAIL

BILL OF MATERIALS

MARK	QTY	MAT'L	DESCRIPTION	SERVICE
HE- IMMERSION HEATER WELL				
1	2	316SS	89 DIA. (3") 150# RFSO FLANGE	
2	1	316SS	89 DIA. (3") STD. SMLS x 355 LG.	
3	1		2210 LG. (87") PIPE-INSERT (SEE DESIGN NOTE #2)	
4	1	316SS	89 DIA. (3") 150# RFSO FLANGE	
5	1	316SS	89 DIA. (3") STD. SMLS x 2035 LG.	
6	1	316SS	89 DIA. (3") STD. SCH. 40 WELD CAP	
7	1		SUPPORT BRACKET (SEE DETAIL THIS SHT.)	
HEATER WELL SUPPORT BRACKET				
A	1	316SS	6.4 x 51 x 51 ANGLE x LG. TO BE SHOP DETERMINED	
B	1	316SS	6.4 x 100 x 100 BASEPLATE	
C	1	316SS	89 DIA. (3") U-BOLT c/w NUTS	

CUSTOMER: FORT ENERGY CORPORATION c/o BDR ENGINEERING LTD.
R.P.O# 54000-20 REV. 0
LOCATION: LSD 07-25-62-06-W5M (SANDHILLS GAS PLANT)

TITLE: ELECTRIC HEATERS DETAILS

NOZZLES					
MARK	PROJECTIONS		ELEV.	ORIE.	NOTES
	EXT.	INT.			
HE	203mm	152mm	305mm	315°	ELEC. HEATER

DESIGN NOTES
 1. ALL DIMENSIONS ARE IN mm.
 2. PIPE INSERT IMMERSION HEATER :
 -MODEL # MX1304F3871X 480V 3Φ 4KW
 -3" 150 # FLANGE
 -87" INSERT LENGTH
 -EXPLOSION PROOF TERMINAL BOX
 -300°F TO 700°F PILOT DUTY CYCLING HIGH LIMIT
 -3" HEATER WELL (316SS SCH. 40) c/w FLOOR SUPPORTS

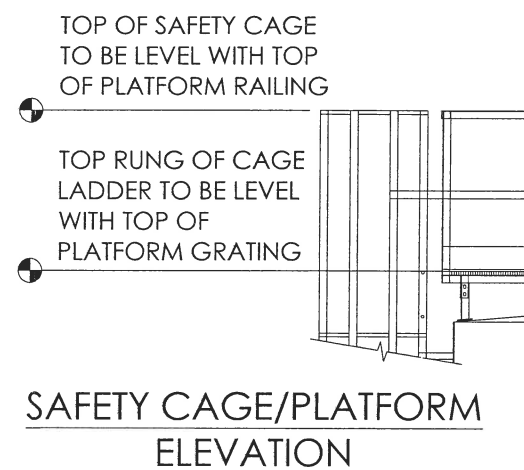
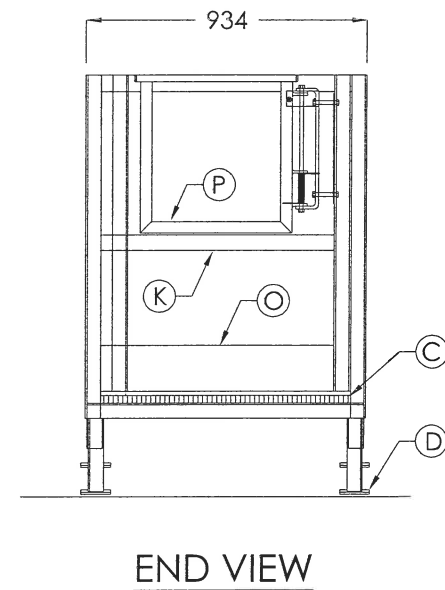
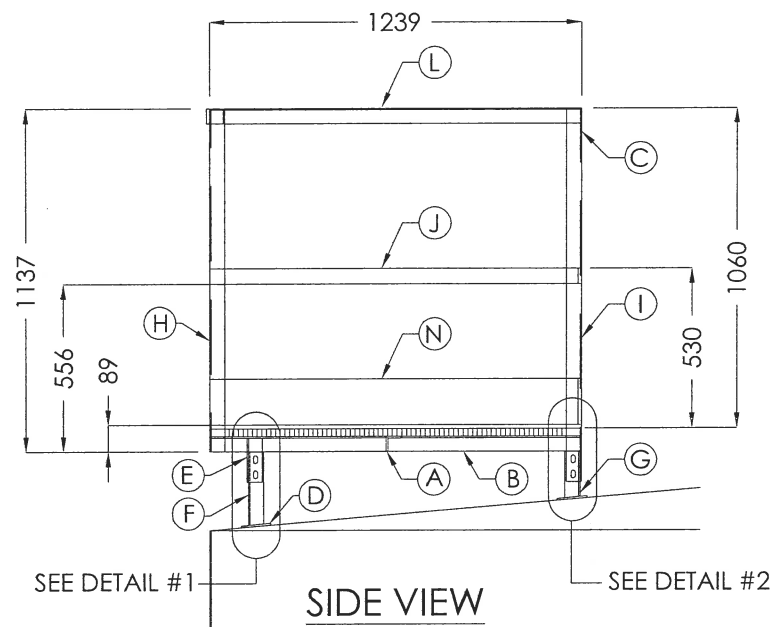
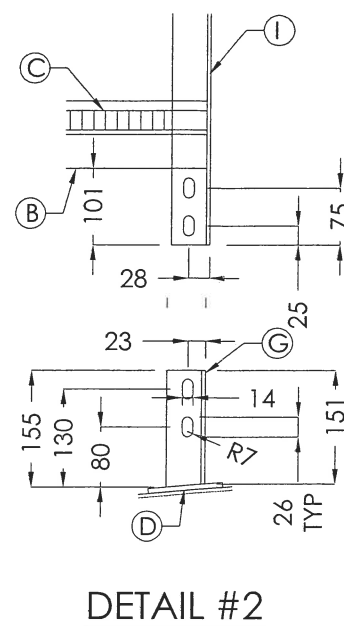
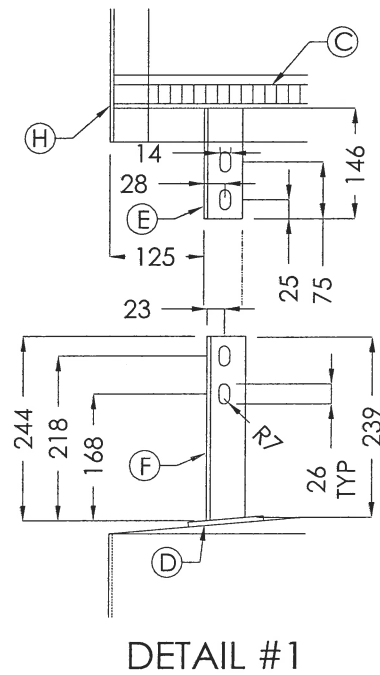
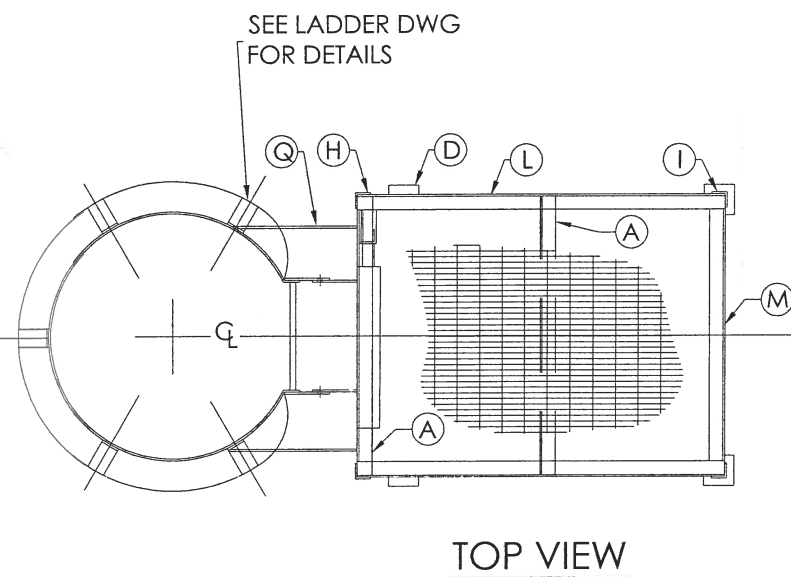
INTERNAL & EXTERNAL FINISH			
REVISIONS			
NO.	DESCRIPTION	BY	DATE
1	ISSUED FOR FABRICATION	CY	10.24.05
0	ISSUED FOR REVIEW/ APPROVAL	CY	10.11.05

	APPROVED BY:	CHECKED BY:	DRAWN BY:	CY
	DATE:	10.11.05	TAG #:	T-707
	SHEET:	2 of 5	SCALE:	NTS
		DRAWING#:	B-2615_D1	REV.
		SERIAL#:	2615	

FORT ENERGY c/o BDR ENGINEERING LTD.

NOZZLE DETAILS

TITLE: TQ05-436C QUOTE #:



BILL OF MATERIALS				
MARK	QTY	MATL	DESCRIPTION	SERVICE
A	3	A36	51 x 51 x 6.4 ANGLE 922 LG. (COPE TO FIT)	
B	2	A36	51 x 51 x 6.4 ANGLE IRON 1227 LG.	
C	1	A36	25 x 4.8 BAR GRATING 12 sq. ft.	
D	4	A36	102 x 102 REPAD 6.4 THK.	SUPPORT BASE
E	2	A36	51 x 51 x 6.4 ANGLE IRON 146 LG.	FRONT LEG
F	2	A36	51 x 51 x 6.4 ANGLE IRON 244 LG.	FRONT SUPPORT
G	2	A36	51 x 51 x 6.4 ANGLE IRON 155 LG.	REAR SUPPORT
H	2	A36	51 x 51 x 6.4 ANGLE IRON 1137 LG.	FRONT POST
I	2	A36	51 x 51 x 6.4 ANGLE IRON 1238 LG.	REAR POST
J	2	A36	51 x 6.4 FLAT BAR 1227 LG.	MID RAIL
K	1	A36	51 x 6.4 FLAT BAR 910 LG.	REAR MID RAIL
L	2	A36	51 x 51 x 6.4 ANGLE IRON 1227 LG.	TOP RAIL
M	1	A36	51 x 51 x 6.4 ANGLE IRON 914 LG.	REAR TOP RAIL
N	2	A36	152 x 6.4 FLAT BAR x 1227 LG.	SIDE TOE RAIL
O	1	A36	152 x 6.4 FLAT BAR 910 LG.	REAR TOE RAIL
P	1	A36	SAFETY GATE	SAFETY GATE
Q	2	A36	6.4 THK x 51 FLAT BAR CAGE BRACE (SHOP TO FIT C/W BOLT CONNECTION)	

NOZZLES			
MARK	PROJ.	ELEV.	NOTES

DESIGN NOTES

1. ALL DIMENSIONS ARE IN mm

INTERNAL & EXTERNAL FINISH			
ROOF PLATFORM FINISH			
BLAST:	SSPC-SP6 COMMERCIAL BLAST USING SIL7 SAND		
PRIME:	1.5 - 2.0 mils DFT CLOVERDALE TOWER OR RUSTEX #71024		
PAINT:	1.5 - 2.0 mils DFT CLOVERDALE MARINE ENAMEL, COLOR- STONE GRAY		
REVISIONS			
1	ISSUED FOR FABRICATION	CY	10.24.05
0	ISSUED FOR REVIEW/APPROVAL	CY	10.11.05
NO.	DESCRIPTION	BY	DATE

CUSTOMER: FORT ENERGY CORPORATION c/o BDR ENGINEERING LTD.
 RPO# 54000-20 Rev. 0
 LOCATION: L.S.D. 07-25-62-06-W5M (SANDHILLS GAS PLANT)

TITLE:
 - ROOF PLATFORM DETAIL -

APPROVED BY:	CHECKED BY:	DRAWN BY:	CY
DATE: 10.11.05	TAG #: T-707	DRAWING #: B-2615_RP	REV.
SHEET: 4 OF 5	SCALE: NTS	SERIAL #: 2615	

CUSTOMER: FORT ENERGY CORPORATION c/o BDR ENGINEERING LTD.
 TITLE: - ROOF PLATFORM DETAIL -
 QUOTE #: TQ05-436C

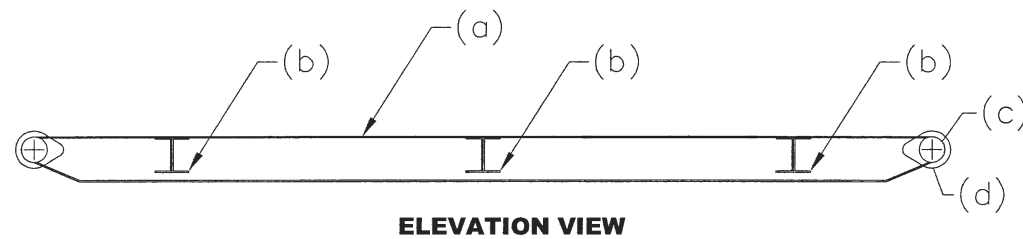
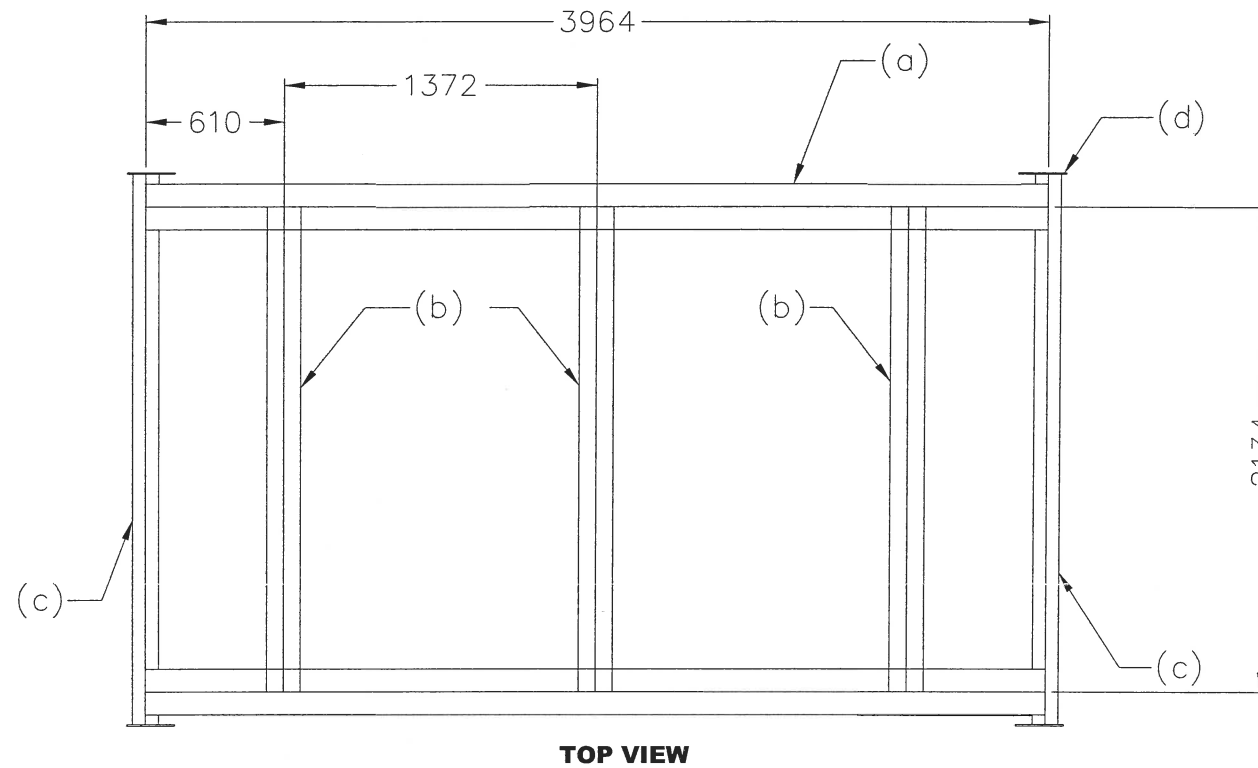
CUSTOMER: FORT ENERGY CORPORATION c/o BDR ENGINEERING LTD.

TITLE: 200 BBL BASE SKID

QUOTE #: TQ05-436C

BILL OF MATERIALS:

MARK	QTY	MAT'L	DESCRIPTION	SERVICE:
a	2	A36	200 x 27 WIDE FLANGE x 3964 LG. MAIN MEMBERS	
b	3	A36	150 x 22 WIDE FLANGE x 2128 LG. CROSS MEMBERS	
c	2	A106	1 1/4 DIA. (4") COMMERCIAL GRADE ROLL BAR x 2420 LG.	
d	4	A36	TEARDROP	



NOZZLES:

MARK:	PROJEC.:	ELEVATION:	NOTES:

DESIGN NOTES:

1) WIDE FLANGES ARE TO COPE FITTED WHERE APPLICABLE.

INTERNAL & EXTERNAL FINISH:



2) **EXTERNAL FINISH**
 BLAST: SSPC-SP6 COMMERCIAL BLAST
 PRIME: 1.5 - 2.0 MILS DFT CLOVERDALE RUSTEX 71024 (GREY)
 PAINT: 1.5 - 2.0 MILS DFT CLOVERDALE MARINE ENAMEL
COLOR STONE GRAY

REVISIONS:

NO.:	DESCRIPTION:	BY:	DATE:
1	ISSUED FOR FABRICATION	CY	10.24.05
0	ISSUED FOR REVIEW / APPROVAL	CY	10.11.05

CUSTOMER: FORT ENERGY CORPORATION c/o BDR ENG. LTD.
R.P.O# : 54000-20 REV. 0
LOCATION: L.S.D: 07-25-62-06-W5M (SANDHILLS GAS PLANT)

TITLE: 200 BBL BASE SKID

	APPROVED BY:	CHECKED BY:	DRAWN BY: CY
	DATE: 10.11.05	TAG #: T-707	DRAWING #: B-2615_SK
	SHEET: 5OF 5	REV.: 	SERIAL #: 2615