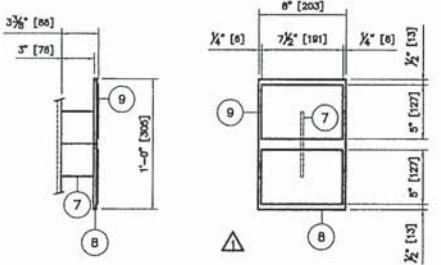
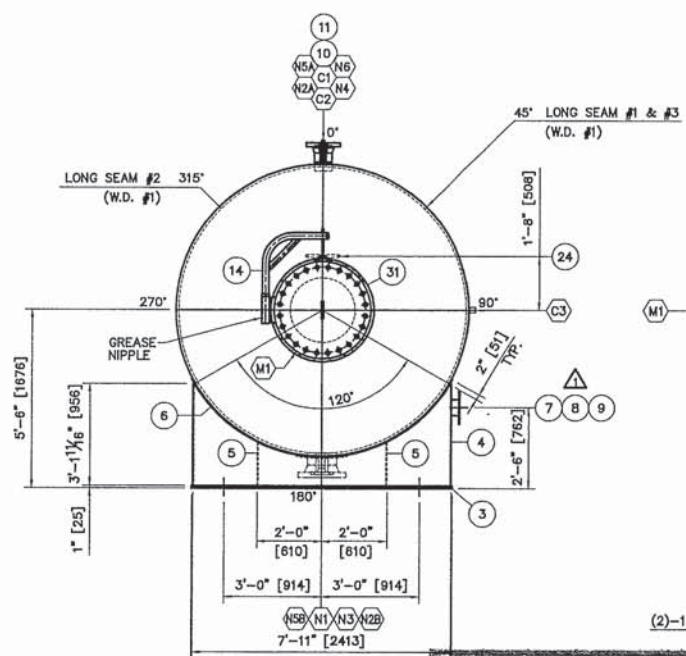


LIFT LUG DETAIL  
SCALE: 1 1/2"=1'-0"

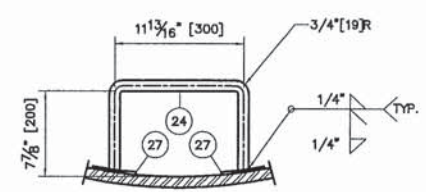


NAME PLATE DETAIL  
SCALE: 1 1/2"=1'-0"

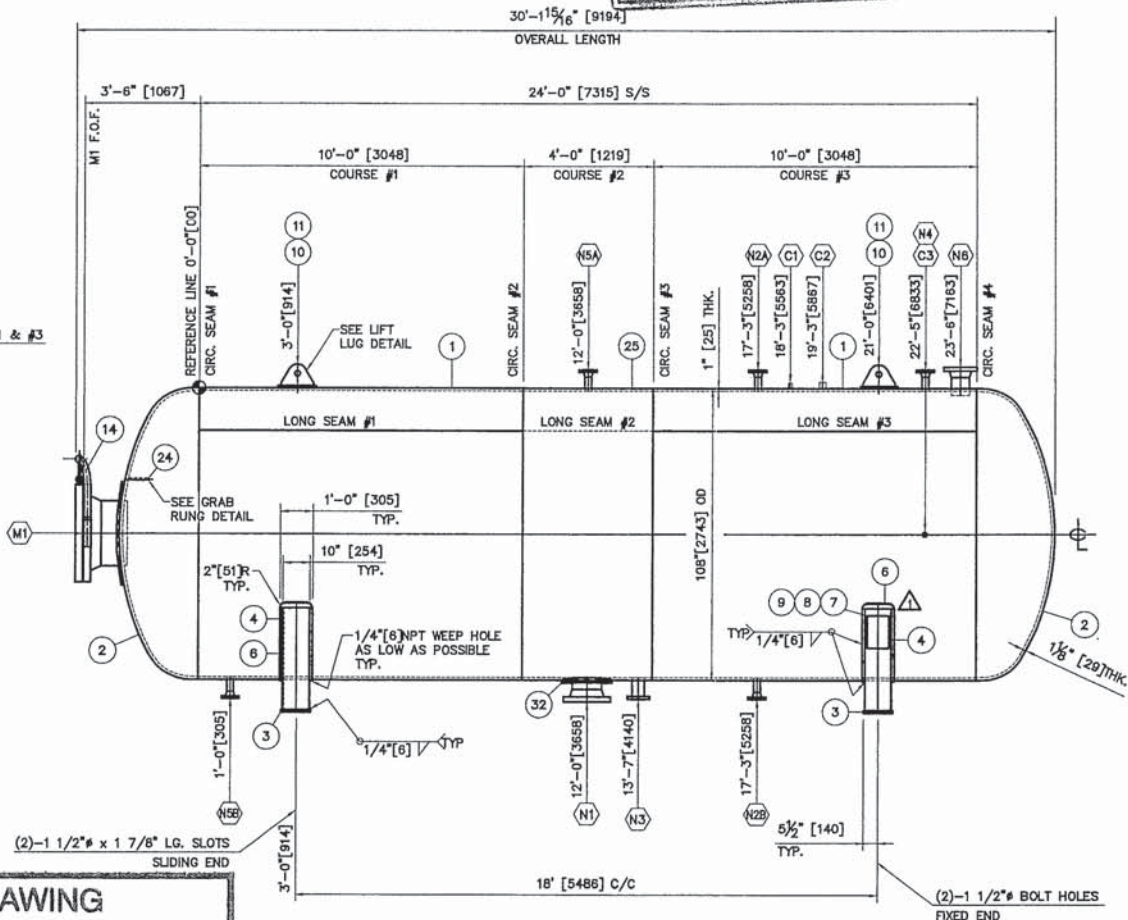


END VIEW  
SCALE: 3/8"=1'-0"

AS-BUILT DRAWING  
NAME: *Black*  
MAR 18 2009



GRAB RUNG DETAIL  
SCALE: 1 1/2"=1'-0"



ELEVATION VIEW  
SCALE: 3/8"=1'-0"

**REVISED DRAWING**  
ISSUED FOR CONSTRUCTION  
DESTROY PREVIOUS ISSUE  
DATE MAR 18 2009

NOZZLE SCHEDULE															
MARK	NO. REQD	SERVICE	SIZE	RTD.	TYPE	NOZZLE O.D.	NOZZ BORE	WELD DETAIL	WELD SIZE			PROJECTION	ITEM	REMARKS	
									"A"	"B"	"C"				
N1	1	INLET/OUTLET	10"	CL300	RFWN	10 3/4"	SCH.60	2,3	3/8"	-	5/8"	SET FLUSH	18,26,32	c/w REPAD	
N2A	1	BRIDLE	2"	CL300	RFWN	2 3/8"	SCH.160	2,3	3/8"	-	-	SET FLUSH	7	19,28	
N2B	1	BRIDLE	2"	CL300	RFWN	2 3/8"	SCH.160	2,3	3/8"	-	-	SET FLUSH	7	19,28	
N3	1	DRAIN	3"	CL300	RFLWN	4.62"	3"	3	3/8"	-	-	SET FLUSH	7	20	
N4	1	PSV	2"	CL300	RFWN	2 3/8"	SCH.160	2,3	3/8"	-	-	SET FLUSH	7	19,28	
N5A	1	STEAM OUT	2"	CL300	RFWN	2 3/8"	SCH.160	2,3	3/8"	-	-	SET FLUSH	7	19,28	
N5B	1	STEAM OUT	2"	CL300	RFWN	2 3/8"	SCH.160	2,3	3/8"	-	-	SET FLUSH	7	19,28	
N6	1	VENT	6"	CL300	RFWN	6 5/8"	SCH.100	2,3	3/8"	3/8"	-	1 1/2"	8"	29,30	
C1	1	PIT	3/4"	CL6000	CPLG.	1 3/4"	N/A	3	3/8"	-	-	SET FLUSH	22		
C2	1	BLANKET GAS	1"	CL6000	CPLG.	2 1/4"	N/A	3	3/8"	-	-	SET FLUSH	23		
C3	1	TG	1"	CL6000	CPLG.	2 1/4"	N/A	3	3/8"	-	-	SET FLUSH	23		
M1	1	MANWAY	24"	CL300	RFWN	24"	SCH.XH	4	3/8"	3/8"	5/8"	1"	SHOWN	12-17,21,31	c/w BLIND,DAWT & REPAD

BILL OF MATERIALS											
ITEM	QTY	DESCRIPTION	MATERIAL								
1	2	SHELL: 108" [2743] OD x 1" [25] THK. x 10'-0" [3048] LG. (BBE)	SA-516-70N								
2	2	HEADS: 108" [2743] OD x 1 1/8" [28] THK. (1.00" MIN) 2:1 S.E. w/ 2" S.F.	SA-516-70N								
3	2	BASE PLATE: 1" [25] THK. x 11' [279] WD. x 8'-0" [2438] LG.	G40.21-300W								
4	2	SADDLE: 10" [254] WD. (N1) x 7-11" [213] THK. x 3'-1 1/16" [956] LG (FORM CHWD)	G40.21-300W								
5	4	SADDLE RIB: 9 5/8" [244] WD. x 1/2" [13] THK. x 1'-4" [408] LG.	G40.21-300W								
6	2	WEAR PLATE: 12" [305] WD. x 3/8" [10] THK. x 9'-9 1/2" [2985] LG. (FORM TO 54" LR.)	SA-516-70N								
7	1	PL: 1/4" [6] THK. x 3" [76] WD. x 6" [203] LG. (NAME PLATE BRACKET)	SA-516-70N								
8	1	PL: 1/4" [6] THK. x 8" [203] WD. x 12" [305] LG. (NAME PLATE BRACKET)	G40.21-300W								
9	1	PYRAMID/ENCANA STANDARD NAME PLATE	SS								
10	2	LIFT LUGS: 12" [305] x 8" [203] x 1 1/4" [32] THK. c/w 2 1/8" [54] HOLE (TRIM AS SHOWN)	G40.21-300W								
11	2	LIFT LUG REPAD: 5" [127] WD. x 14" [356] LG. x 1" [25] THK. (ROLL TO 54" IR)	SA-516-70N								
12	1	24"-CL300 ANSI RFWN FLG. x c/w SCH.XH BORE	(M1) SA-350-LF2 CL1								
13	1	24"-CL300 ANSI RF BLIND FLG	(M1) SA-350-LF2 CL1								
14	1	24"-CL300 PYRAMID STD. MANWAY DAWT ASSY. (DWG. B-08-3190-0000-003)	(M1) -								
15	1	24" ANSI CL300 RF FLEXITALLIC GASKET x 1/8" THK. (GREY STRIPE)	(M1) 316 SS								
16	24	1 1/2" x 9 1/4" LG. STUD (24"-CL300)	(M1) SA-193-B7M								
17	48	1 1/2" HEX HD. NUTS (24"-CL300)	(M1) SA-194-2HM								
18	1	10"-CL300 ANSI RFWN FLG. c/w SCH.60 BORE	(N1) SA-350-LF2 CL1								
19	5	2"-CL300 ANSI RFWN FLG. c/w SCH.160 BORE (N2A/B,N4,N5A/B)	SA-350-LF2 CL1								
20	1	3"-CL300 ANSI RFLWN FLG. x 10" LG. (TRIM AS NEEDED)	(N3) SA-350-LF2 CL1								
21	1	24" SCH.XH SMLS PIPE x 9 1/4" [235] LG. (BOE,POE)	(M1) SA-333-GR.6								
22	1	3/4"-CL6000 THRD FULL CPLG.	(C1) SA-350-LF2 CL1								
23	2	1"-CL6000 THRD FULL CPLG.	(C2,C3) SA-350-LF2 CL1								
24	1	RB: 7/8" [22] x 2-3 1/16" [87] ± LG. (BEND AS PER DETAIL)	(GRAB RUNG) G40.21-300W								
25	1	SHELL: 108" [2743] OD x 1" [25] THK. x 4'-0" [1219] LG. (BBE)	SA-516-70N								
26	1	10" SCH.80 SMLS PIPE x 4 5/8" [118] LG. (BOE,POE)	(N1) SA-333-GR.6								
27	2	PL: 3" [76] WD. x 1/4" [6] THK. x 3" [76] LG. (FORM TO ID HEAD) (GRAB RUNG POSION PAD)	SA-516-70N								
28	5	2" SCH.160 SMLS PIPE x 5 1/4" [134] LG. (BOE,POE) (N2A/B,N4,N5A/B)	SA-333-GR.6								
29	1	6"-CL300 ANSI RFWN FLG. c/w SCH.XH BORE	(N6) SA-350-LF2 CL1								
30	1	6" SCH.XH SMLS PIPE x 6 3/4" [171] LG. (BOE,POE)	(N6) SA-333-GR.6								
31	1	REPAD: 1" THK 36" O.D. x 24 1/8" I.D. (FORM TO HEAD)	(M1) SA-516-70N								
32	1	REPAD: 1" THK 18 3/4" O.D. x 10 7/8" I.D. (ROLLED TO 54" LR.)	(N1) SA-516-70N								

**SHOP NOTES**

- ALL BOLT HOLES STRADDLE NATURAL VESSEL CENTERLINES.
- CLEAN ENTIRE VESSEL OF WELD SLAG AND OTHER FOREIGN MATERIAL.
- ALL MISCELLANEOUS AND ATTACHMENT WELDS SHALL BE 1/4" FILLET WELDS UNLESS SHOWN OTHERWISE.
- COATING SPECIFICATIONS  
SURFACE PREP: - EXTERNAL: SSPC-SP8  
- INTERNAL: NONE  
PRIMING: - EXTERNAL: ONE (1) COAT OF DEVCO BAR RUST 236 EPOXY COAT TO DFT OF 4-8mils  
- INTERNAL: NONE  
FINISH: - EXTERNAL: TWO (2) COATS OF DEVCO DEVTHANE 379 URETHANE TO A DFT OF 2-3mils (WARM GREY)  
- INTERNAL: NONE
- IMPACT TEST REQUIREMENTS:  
- MATERIAL IMPACT TESTS REQUIRED TO -50°F PER UG-84 FOR ITEMS #1, #2, #25, #31, #32  
- NOZZLES AND FLANGES ARE EXEMPT FROM IMPACT TESTING PER UCS-66(g)  
- STUDS & NUTS ARE EXEMPT FROM IMPACT TESTING PER UCS-66 NOTE(e)  
- PRODUCTION IMPACT TESTS REQUIRED PER UG-84(i) AT -50°F. THE RESULTS REQUIRED ARE NO ONE (1) TEST BELOW 12 FT LB MIN., AND THE AVERAGE OF THREE THREE (3) TESTS NOT BELOW 15 FT LB MIN.
- ALL NOZZLE LENGTH INCLUDES 1/8" WELD GAP.
- BLEND ALL INTERNAL ROOT AND FILLET WELDS. RADIUS ALL INTERNAL EDGES.
- DIMENSIONS IN [ ] ARE IN mm.
- HYDROTEST SHALL BE HELD FOR A MINIMUM OF ONE (1) HOUR.
- THE HYDROTEST WATER SHALL BE ATLEAST 59°F (15°C) THROUGHOUT THE TESTING CYCLE
- A MINIMUM OF TWO (2) PRESSURE GAUGES WILL BE USED FOR THE HYDROTEST, ONE (1) AT THE PUMP AND ONE (1) AT THE SYSTEM HIGH POINT.
- GASKETS USED FOR THE HYDROTEST SHALL BE OF THE SAME MATERIAL AND DESIGN AS THE GASKETS TO BE FURNISHED WITH THE VESSEL.
- THE USE OF SHELLAC, GLUE, COMPOUND, LEAD, ETC., ON HYDROTEST GASKETS IS NOT PERMITTED
- ONLY NEW, UNUSED, STUDS, NUTS AND GASKETS SHALL BE FURNISHED WITH THE VESSEL
- NO VESSEL OR ITS COMPONENT SHALL BE GIVEN A HYDROSTATIC TEST UNLESS APPROVAL IS OBTAINED IN WRITING FROM ENCANA FCCL OIL SANDS LTD. OR ITS REPRESENTATIVE.
- ALL WELD HOLES ARE TO BE PNEUMATICALLY TESTED WITH 103 KPa AIR PRIOR TO THERMAL STRESS RELIEF AND/OR HYDROSTATIC TEST.
- WELD HOLES SHALL NOT BE PLUGGED DURING THE FINAL HYDROSTATIC TEST OF THE VESSEL. AFTER HYDROTEST, WELD HOLES SHALL BE PLUGGED WITH GREASE. WHERE THE WELD HOLES IS COVERED BY INSULATION, A NIPPLE SHALL BE FITTED TO EXTEND THE HOLE OUTSIDE THE INSULATION CLADDING.
- LONG SEAMS: FULL LW-11(c).
- CIRC. SEAM: SPOT LW-11(c)(5)b. RADIOGRAPH AT "T" INTERSECTION (TYP).
- MP VESSEL OR ITS COMPONENT SHALL BE GIVEN A HYDROSTATIC TEST UNLESS APPROVAL IS OBTAINED IN WRITING FROM ENCANA FCCL OIL SANDS LTD. OR ITS REPRESENTATIVE.
- REGISTER VESSEL IN ALBERTA
- HEAT #s STAMPED ON ALL MATERIAL
- 100% UT EXAMINATION ON ALL CATEGORY 'D' WELDS. THIS IS TO BE DONE BEFORE REINFORCING PADS ARE WELDED TO THE NOZZLES.
- VESSEL TO BE BLOWN DRY AFTER HYDROTEST.
- NO FCAW ON WELDS
- AFTER WELDING, HARDNESS IN THE BASE MATERIAL AND HEAT AFFECTED ZONE (HAZ) SHALL NOT EXCEED 225 BHN FOR LOW CARBON STEEL MATERIALS.
- MAKE SURE ALL THE MIG ROOTS ARE MADE USING ER-70S-6 WIRE, IMPACT TESTED TO -50°F.

**SHIPPING NOTES**

- ALL FLANGE SURFACES TO BE PROTECTED WITH AN ASPHALTIC RUST PREVENTIVE, TYPE B SUCH AS RUST VETO 344 OR TECTYL 891
- EQUIPMENT SHALL BE ADEQUATELY PREPARED TO PROVIDE AGAINST ENTRY OF DIRT OR WATER DURING SHIPMENT
- ALL OPEN FLANGES TO BE COVERED WITH 12.5mm PLYWOOD COVERS SECURELY FASTENED WITH BOLTS OR CLAMPS.
- ALL DRAINS, VENTS AND SMALL PIPING CONNECTIONS SHALL BE CAPPED OR PLUGGED.
- BEFORE SHIPMENT, MARK ON, OR SECURELY ATTACH TO THE EQUIPMENT, OR IN THE SHIPPING CONTAINER, A LIST OF THE SPECIFIC RUST PREVENTIVES USED TO PROTECT THE EQUIPMENT. THIS LIST SHALL INCLUDE INTERNAL AS WELL AS EXTERNAL RUST PREVENTIVE, ORIGINAL MANUFACTURER AND TYPE NUMBER, AND THE LOCATIONS WHERE EACH HAS BEEN APPLIED
- INCLUDE WITH THE ABOVE LIST ANY SPECIAL INSTRUCTIONS NECESSARY FOR THE REMOVAL OR REPLACEMENT OF ANY RUST PREVENTIVE. TOGETHER WITH ANY SPECIAL PRECAUTIONS TO BE TAKEN IN THE CARE OF THE EQUIPMENT DURING THE PERIOD OF JOBSITE STORAGE.
- A COPY OF THIS INFORMATION SHALL BE SUPPLIED, UNDER SEPARATE COVER, TO THE BUYER AT THE JOBSITE

PYRAMID PROCESS FABRICATORS  
 DOCUMENT CONTROL  
 RECEIVED  
 MAR 18 2009

**DESIGN DATA**

CONSTRUCTION:	ASME SECTION VIII DIV 1 2007 EDITION
INTERNAL DESIGN PRESSURE:	334 PSIG @ 389°F [2300 kPa @ 204°C] (MAX)
EXTERNAL DESIGN PRESSURE:	15 PSIG @ 389°F [103 kPa @ 204°C] (MAX)
HYDROTEST PRESSURE:	501 PSIG @ 80°F [3454 kPa @ 16°C] (ONE HR. MIN.)
MINIMUM DESIGN METAL TEMP.:	-50°F @ 334 PSIG [-46°C @ 2300 kPa @ 3]
CORROSION ALLOWANCE:	1/16" [1.6] RADIOGRAPHY: RT-SEE SKP NOTE #7 & #8
P.W.H.T.:	NONE VOLUME: 1770 ft³ [50 m³]
WEIGHT (EMPTY):	42,075 LBS [18,884 kg]
WEIGHT (TEST):	152,574 LBS [69,208 kg]
C.R.N.:	PENDING SERIAL NO.: 08-3190-0000 SERVICE: SWEET

1. SEAMS	2. NOZZLE TO WN FLG.	3. SET-THRU NOZZLE/CPLG	4. SET-THRU NOZZLE/CPLG	5. SET-ON NOZZLE/CPLG	6. O'LET	7. SOCKET WELD	8. MISCELLANEOUS
WPS: PEC-21R1	WPS: PEC-21R1	WPS: PEC-21R1	WPS: PEC-21R1	WPS: PEC-21R1	WPS: PEC-21R1	WPS: PEC-21R1	WPS: PEC-21R1

REV.	BY	DESCRIPTION	DATE				
3	RG	MA	DM	MA	2	REVISED DESIGN DATA AS SHOWN	MAR.18/09
2	RG	MA	DM	MA	2	REVISED NOZZLE SCHEDULE AS SHOWN	FEB.25/09
1	RG	MA	DM	MA	1	ISSUED AS SHOWN	JAN.22/09
0	FL	DK	DM	RE	1	ISSUED FOR CONSTRUCTION	NOV.03/08



PYRAMID PROCESS FABRICATORS	
108" [2743] O.D. x 24'-0" [7315] LG. S/S x 334 PSIG [2300 kPa] PROCESS GLYCOL SURGE TANK (V-5985)	
ENCANA FCCL OIL SANDS LTD. c/o DPH FOCUS	FOSTER CREEK
SCALE: (1)-ONE 3/8"=1'-0"	D-08-3190-0000-001 3