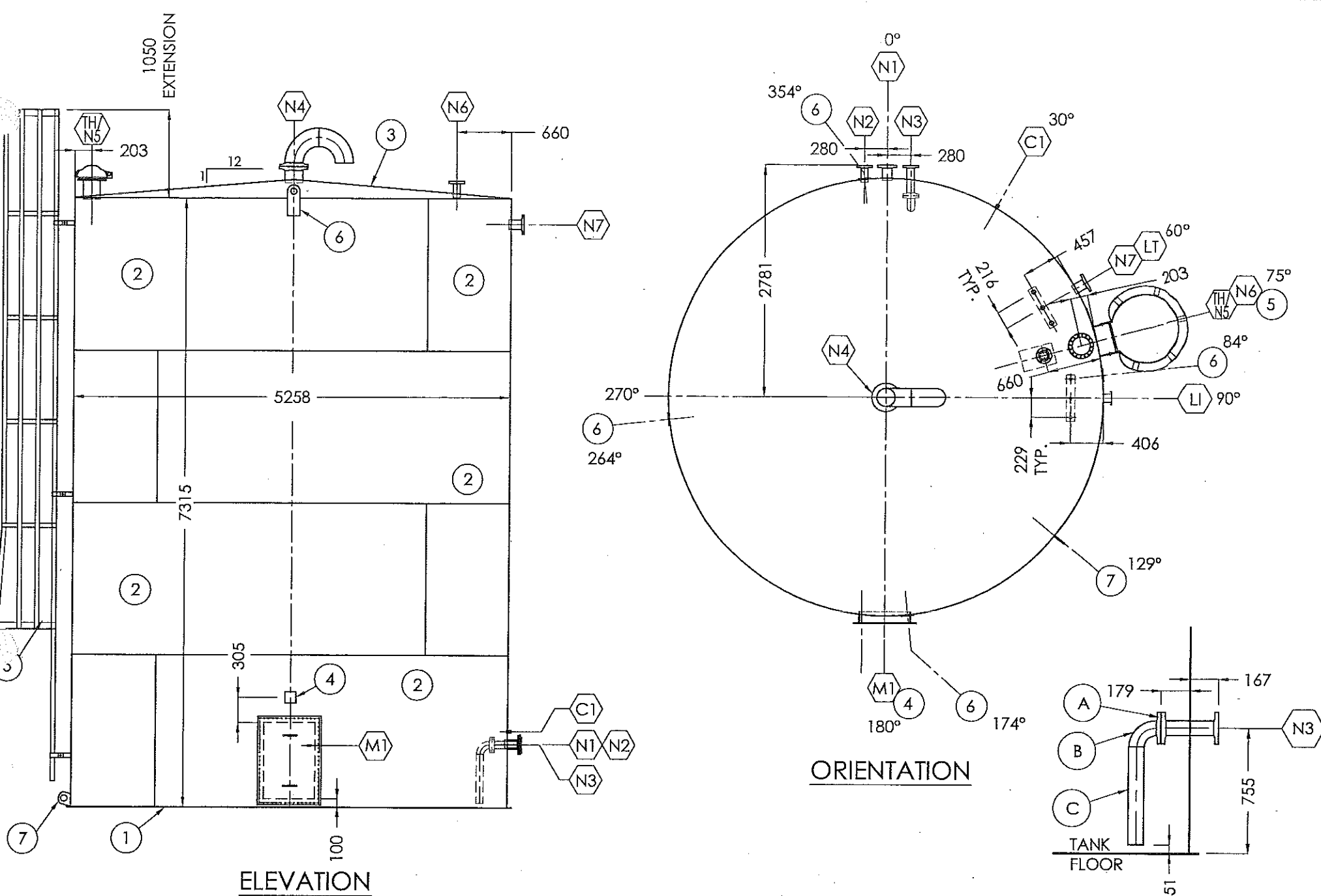


C:\Documents and Settings\j... Temporary Internet Files\OLKF91B-8315_R2.dwg, 05/04 01:48:10 PM, traceyn



BILL OF MATERIALS				
MARK	QTY	MATL	DESCRIPTION	SERVICE
1	1	A36	6.4 PL. x 5360 DIA. FLAT BOTTOM	
2	4	A36	4.8 PL. x 1829 x 16518 LG. SHELL	
3	1	A36	6.4 PL. x 5297 DIA. CONED ROOF	
4	1		NAMEPLATE AND BRACKET	
5	1	A36	1000 BBL CAGED LADDER c/w 1050 (3'-6") EXTENSION (SEE SHT. B-8315-CL FOR DETAILS)	
6	4	A36	LARGE LIFT LUG	
7	1	A36	TAIL LUG c/w REPAD	
M1	1	A36	610x914 (24"x36") RECTANGULAR MANWAY (100mm ABOVE TANK FLOOR)	
	1	A36	762x1066 RECTANGULAR MANWAY COVER	
TH	1		219 DIA. (8") ENARDO 1000 SERIES LOCK DOWN HATCH	
	1		219 DIA. (8") ARGO FABRICATED THIEF HATCH EXTENSION	
LI	3	316SS	27 DIA. (3/4") 3000# NPT FULL COUPLING	LEVEL INDICATOR
	2	316SS	CABLE ANCHORS (INSTALLED DIRECTLY BENEATH OUTSIDE CPLGS)	
			TANK GAUGING SYSTEMS SOUR SERVICE MECHANICAL LEVEL GAUGE. INSTALL GAUGE BOARD BRACKETS AS SUPPLIED BY TGS. SEE ATTACHED INSTALLATION GUIDE FOR FURTHER INFORMATION.	
LT	3	316SS	48 DIA. (1-1/2") 3000# NPT FULL CPLG	LEVEL TRANSMITTER
	2	316SS	CABLE ANCHORS (INSTALLED DIRECTLY BENEATH OUTSIDE CPLGS) LEVEL TRANSMITTER TO BE SUPPLIED AND INSTALLED BY OTHERS.	
C1	1	316SS	27 DIA. (3/4") 3000# NPT FULL CPLG w/ HEX PLUG	TEMP. INDICATOR
N1	1	A105	114 DIA. (4") 150# RFSO FLG.	INLET
	1	A106	114 DIA. (4") STD. SMLS PIPE x 168 LG.	
N2	1	A105	89 DIA. (3") 150# RFSO FLG.	OUTLET
	1	A106	89 DIA. (3") STD. SMLS PIPE x 188 LG.	
N3	2	A105	89 DIA. (3") 150# RFSO FLG.	CLEAN OUT
	1	A106	89 DIA. (3") STD. SMLS PIPE x 318 LG. INTERNAL STINGER SEE DETAIL THIS SHEET	
N4	1	A105	219 DIA. (8") 150# RFSO FLG.	VENT
	1	A106	219 DIA. (8") STD. SMLS PIPE x 178 LG.	
	1	A234	219 DIA. (8") SCH. STD. SMLS GOOSENECK VENT w/ BIRDSCREEN	
N5			SEE "THIEF HATCH" LISTED ABOVE	
N6	1	A105	89 DIA. (3") 150# RFSO FLG.	ENARDO VENT
	1	A106	89 DIA. (3") STD. SMLS PIPE x 178 LG.	
	1		ENARDO MODEL 950-3-111-24/0.4 PRESSURE VACUUM VENT VALVE SET @ 4 OZ. PRESSURE / 0.4 OZ. VACUUM VALVE TO BE SHIPPED LOOSE.	
N7	1	A105	114 DIA. (4") 150# RFSO FLG.	LEVEL SWITCH
	1	A106	114 DIA. (4") STD. SMLS PIPE x 193 LG.	
A	1	A105	N3 INTERNAL STINGER	
B	1	A234	89 DIA. (3") 90° LRWE	
C	1	A106	89 DIA. (3") STD. SMLS PIPE x 590 LG.	

NOZZLES			
MARK	PROJ.	ELEV.	NOTES
C1	N/A	915mm	TEMP. INDICATOR
N1		152mm	762mm INLET
N2		167mm	762mm OUTLET (PARALLEL TO N1)
N3		167mm	755mm CLEAN OUT (PARALLEL TO N1)
N4		152mm	ROOF VENT
TH/N5			ROOF THIEF HATCH
N6		152mm	ROOF ENARDO VENT
N7		152mm	7010mm LEVEL SWITCH

DESIGN NOTES

- TANK TO BE BUILT AND TESTED TO API-12F SPEC. **MODIFIED** (NON LABELED)
- TANK TO BE AIR/SOAP LEAK TESTED TO 9 OZ. / SQ. IN.
- ROOF/SHELL JOINTS NOT TO BE BACKWELDED TO MEET API-2000 SPECS
- ESTIMATED SHIPPING WEIGHT = 14082 LBS. (6400 KG)
- REFER TO ORIENTATION DRAWING FOR PROPER LOCATION OF ALL NOZZLES, COUPLINGS, ETC.
- ALL DIMENSIONS ARE IN mm.
- EXTERNAL STUDS / NUTS / GASKETS : B7M / 2HM / NEO(STD) SOUR (MANWAY) / 316SS FLEX (FLANGES)
- CAGE LADDER TO BE SHIPPED LOOSE.
- ENARDO PRESSURE / VACUUM VENT VALVE w/ INSTALLATION MANUAL TO BE SHIPPED LOOSE.
- RECORD MATERIAL HEAT NUMBERS AND MTR'S.

PROJECT NAME: Granada
 DATE: May 11, 2004 I.W.
 PROJECT #: 03405 Vermilion

INTERNAL & EXTERNAL FINISH

- INTERNAL FINISH (TANK BOTTOM AND 3'-0" UP SHELL)**
 BLAST: SSPC-SP5 WHITE METAL BLAST
 COATING: 12.0 - 15.0 MILS DFT OF DEVOE 253 EPOXY
- EXTERNAL FINISH**
 BLAST: SSPC-SP7 BRUSH BLAST USING SIL 7 SAND
 PRIMER: 1.5 - 2.0 MILS DFT OF CLOVERDALE TOWER OF RUSTEX #71024 GRAY PRIMER
 PAINT: 1.5 - 2.0 MILS DFT OF CLOVERDALE **WHITE MARINE ENAMEL**
- BOTTOM FINISH**
 NO BOTTOM FINISH

REVISIONS

NO.	DESCRIPTION	BY	DATE
2	ISSUED FOR FABRICATION	WE	05.06.04
1	ISSUED FOR FINAL APPROVAL	WE	04.22.04
0	ISSUED FOR REVIEW	WE	03.25.04

CUSTOMER: VERMILION ENERGY TRUST c/o TUNDRA ENGINEERING LTD.
 TUNDRA PROJECT # 03405 L.S.D.: 01-18-052-11-W5M

TITLE: ONE(1) 160 CU. M. (1000 BBL)
 5258 DIA. x 7315 HIGH
 STORAGE TANK

APPROVED BY: _____ CHECKED BY: _____ DRAWN BY: WE

DATE: 08/14/01 TAG #: S-900 DRAWING #: B-8315_R2 REV. _____

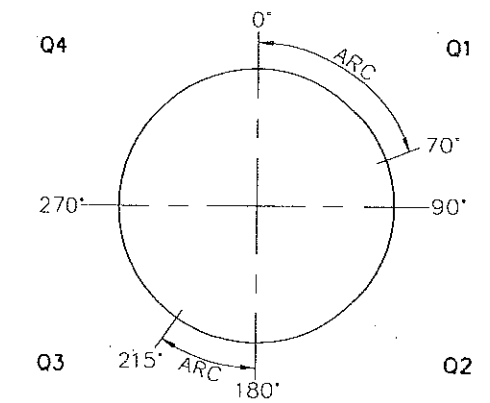
SHEET: 1 OF 2 SCALE: NTS SERIAL #: 8315

CUSTOMER: VERMILION ENERGY TRUST c/o TUNDRA ENGINEERING LTD. TITLE: 1000 BBL STORAGE TANK QUOTE #: TQ04-092A

FITTING / STRUCTURAL SCHEDULE

CUST. MARK	GLM. MARK	GLM. ASSY	QTY.	SIZE	DESCRIPTION	SERVICE	PIPE SCH	O.S.P.	I.S.P.	REFERENCE DATUM	ELEVATION FROM DATUM	QUADRANT	ORIENTATION ANGLE	ARC LENGTH FROM MAJOR C	GLM. MARK
N1	N1	9-D	1	2"	150# RFSO NOZZLE c/w BLIND FLANGE	SPARE	XS WT	SEE GP	1/4"	T.O.B.	3'-10 15/16"	Q4	274.06°	0'-10" (T)	N1
N2	N2	9-B	1	4"	150# RFSO NOZZLE c/w BLIND FLANGE	SPARE	XS WT	SEE GP	1/4"	T.O.B.	4'-0"	Q3	(REF. ONLY)	(REF. ONLY)	N2
N3	N3	9-C	1	2"	150# RFSO NOZZLE c/w BLIND FLANGE	SPARE	XS WT	0'-6"	1/4"	T.O.B.	0'-10"	Q3/Q4	270°	(REF. ONLY)	N3
N4	N4	9-A	1	3"	150# RFSO NOZZLE	SPARE	XS WT	SEE GP	1/4"	T.O.B.	0'-10"	Q3	261.01°	16'-7 17/32" (T)	N4
N5	N5	5-B	1	8"	PIPE c/w NON-REMOVABLE 180° GOOSENECK VENT c/w BIRDSCREEN MESH	VENT	STD WT	SEE GP	FLUSH	ROOF	CTR OF ROOF	CTR OF ROOF	CTR OF ROOF	CTR OF ROOF	N5
N6	TH	5-C	1	8"	FABRICATED THIEF HATCH NECK c/w ENARDO 660 PT SOUR SERVICE THIEF HATCH (SET @ 4.0 oz P/0.4 oz VAC)	THIEF HATCH	STD WT	0'-6"	1/4"	ROOF	ROOF	Q2	100°	2'-0 5/8"	TH
N7	N7	9-E	1	3"	150# FFSO NOZZLE c/w ENARDO ROOF VENT MODEL# 905-3-111-z4.0/0.4	ENARDO VENT	STD WT	0'-6"	FLUSH	ROOF	ROOF	Q2	100°	2'-0 5/8"	N7
N8	C1	9-G	1	1 1/2"	3000# NPT HALF COUPLING c/w TANK GAUGE SYSTEMS CORP. LEVEL TRANSMITTER ASSEMBLY INCL. DNB TRANSMITTER, FLOAT, GUIDE WIRES, NIPPLES & UNIONS, AND BOTTOM ANCHORS (CUST. SUPPLIED)	LEVEL TRANSMITTER	N/A	FULL	1/4"	ROOF	ROOF	Q2	110°	4'-1 1/4"	C1
N9	LI	9-F	1	3/4"	3000# NPT HALF COUPLING c/w TANK GAUGE SYSTEMS CORP. LEVEL GAUGE ASSEMBLY INCL. FIBERGLASS FLOAT, TENSIONERS, GUIDE WIRES, GAUGE BOARD, BOARD BRACKETS AND BOTTOM ANCHORS (CUST. SUPPLIED)	LEVEL INDICATOR	N/A	FULL	1/4"	ROOF	ROOF	Q1/Q2	90°	0'-0"	LI
N10	N10	5-A	1	4"	150# RFSO NOZZLE	LEVEL SWITCH	XS WT	0'-6"	1/4"	T.O.B.	38'-0"	Q2	115°	5'-1 9/16"	N10
M1	M1	6-A	1	30"	FABRICATED API-650 SHELL MANWAY c/w (1) PIECE COVER, GASKET, BOLTING & REPAD	MANWAY	1/4" WL	0'-6"	1/4"	T.O.B.	3'-0"	Q2	105°	3'-0 15/16"	M1
NP	NP-A		1		GLM STD ALUMINUM NAMEPLATE c/w C.S. BRACKET	NAMEPLATE	N/A	N/A	N/A	T.O.B.	4'-6"	Q2	120°	6'-1 29/32"	NP
L1	LAD-1	7-B	1		FABRICATED LADDER c/w SAFETY CAGE	LADDER	N/A	N/A	N/A	T.O.B.	SEE GP	Q2	105°	3'-0 15/16"	LAD-1
L2	LAD-2	7-A	1		FABRICATED LADDER c/w SAFETY CAGE	LADDER	N/A	N/A	N/A	T.O.B.	SEE GP	Q2	116°	5'-4 1/32"	LAD-2
PLT	8-A		1		36" x 36" FABRICATED INTERMEDIATE PLATFORM	PLATFORM	N/A	N/A	N/A	T.O.B.	20'-0"	Q2	105°	3'-0 15/16"	PLT
LL	FLGLUG		2		G.L.M. STD. GRANDPA LIFT LUG	LIFT LUG	N/A	N/A	N/A	T.O.B.	SHOP LOCATE	N/A	SHOP LOCATE	N/A	LL
TL	TLUG		1		G.L.M. STD. TAIL LUG	TAIL LUG	N/A	N/A	N/A	T.O.B.	SHOP LOCATE	N/A	SHOP LOCATE	N/A	TL
-	N11	10-F	1	2"	150# RFSO NOZZLE	INLET	XS WT	SEE GP	1/4"	T.O.B.	2'-4 15/16"	Q4	274.06°	0'-10" (T)	N11
-	N12	10-A	1	4"	150# RFSO NOZZLE	OUTLET	XS WT	SEE GP	1/4"	T.O.B.	2'-6"	Q3	(REF. ONLY)	(REF. ONLY)	N12
-	N13	10-B	1	2"	150# RFSO NOZZLE c/w INTERNAL REMOVABLE SYPHON	RECYCLE	XS WT	0'-6"	0'-6"	T.O.B.	2'-4 15/16"	Q3/Q4	270°	(REF. ONLY)	N13

- NOZZLE LOCATION NOTES:**
- ELEVATIONS ARE GIVEN REFERENCING NEAREST DATUM LOCATED BELOW ITEM LOCATION
 - ALL ARC LENGTHS ARE MEASURED ON OUTSIDE OF BOTTOM SHELL COURSE (OUTSIDE DIAMETER = 23'-6 1/4")
 - ARCS ARE MEASURED CLOCKWISE REFERENCING NEAREST MAJOR CENTERLINE
 - TANK CIRCUMFERENCE = 73'-10 23/32" 90° ARC LENGTH = 18'-5 11/16"
 - (T) - INDICATES TANGENTIAL NOZZLES.
 - (T.O.B.) - TOP OF BOTTOM
 - (REF.) - INDICATES REFERENCE DIMENSION ONLY SEE ORIENTATION VIEW FOR ACTUAL DIMENSIONS.



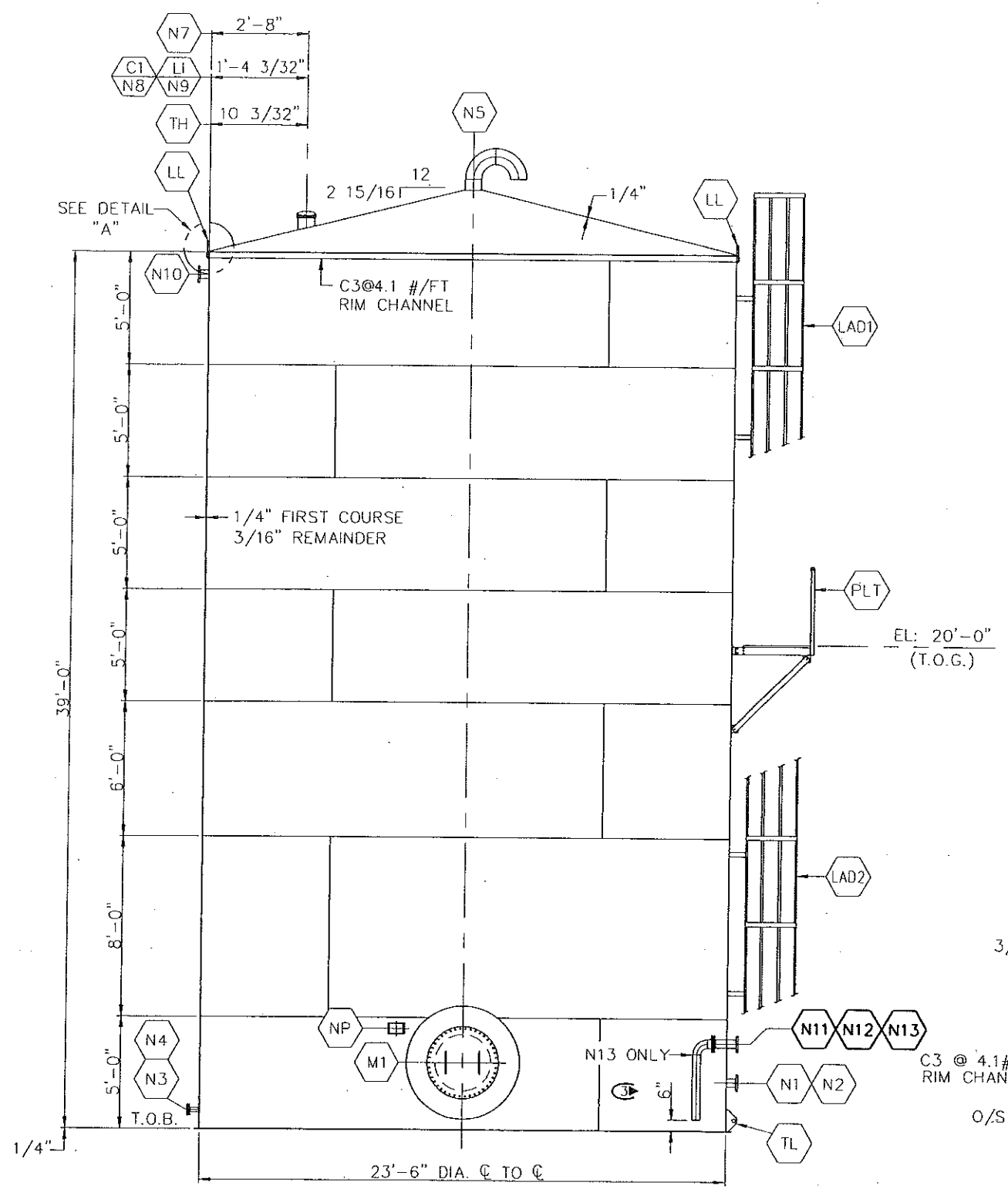
ARC DIMENSION DIAGRAM

CERTIFIED FOR CONSTRUCTION
 BY: RP
 DATE: MAY 3/04
 ANY CHANGES AFTER THIS DATE MAY CAUSE SIGNIFICANT DELAYS AND/OR ADDITIONAL COSTS TO THE PROJECT.

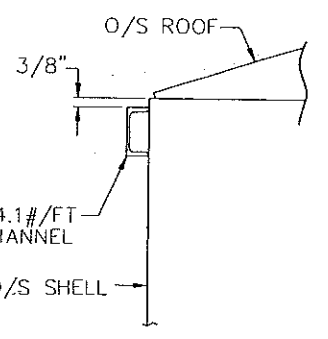
G.L.M. Tanks & Equipment Ltd.
 NISKU, AB CALGARY, AB BATTLEFORD, SK

ENGINEERING: NISKU.	FABRICATION: NISKU
PROJECT ENG. APPROVAL & DATE: <u>RP MAY 3/04</u>	
CHECKED BY & DATE: <u>RP MAY 3/04</u>	1 04/30/04 REV'D AS SHOWN IN BOLD JY RP 3 04/28/04 REV'D AS PER CUST. MARK-UPS JY RP REC'D 04/28/04 2 04/19/04 REV'D AS SHOWN IN BOLD JY RP 1 04/13/04 REV'D AS PER CUST. MARK-UPS JY RP REC'D 04/13/04
DRAWN BY: MARCH 22, 2004 & DATE: S. CHAN	NO. DATE REVISION BY/CHK'D
TOLERANCES: API-650 (MODIFIED)	DESCRIPTION: NOZZLE SCHEDULE VERMILLION ENERGY TRUST c/o TUNDRA ENG. LTD. 23'-6" DIA. x 39'-0" HIGH OIL STORAGE TANK LSD 1-18-52-11-W5M
CRN # / NAIL BD # N/A	SCALE: N.T.S.
PURCHASE ORDER # 03405-0002	DRAWING NUMBER J-04-087-1/2-2
	REV. 4

THIS DRAWING IS THE PROPERTY OF G.L.M. TANKS AND EQUIPMENT LTD. AND IS TO BE USED ONLY IN CONNECTION WITH WORK PERFORMED BY G.L.M. TANKS AND EQUIPMENT LTD. THE DRAWING IS NOT TO BE COPIED IN WHOLE OR IN PART AND MUST BE RETURNED UPON REQUEST.

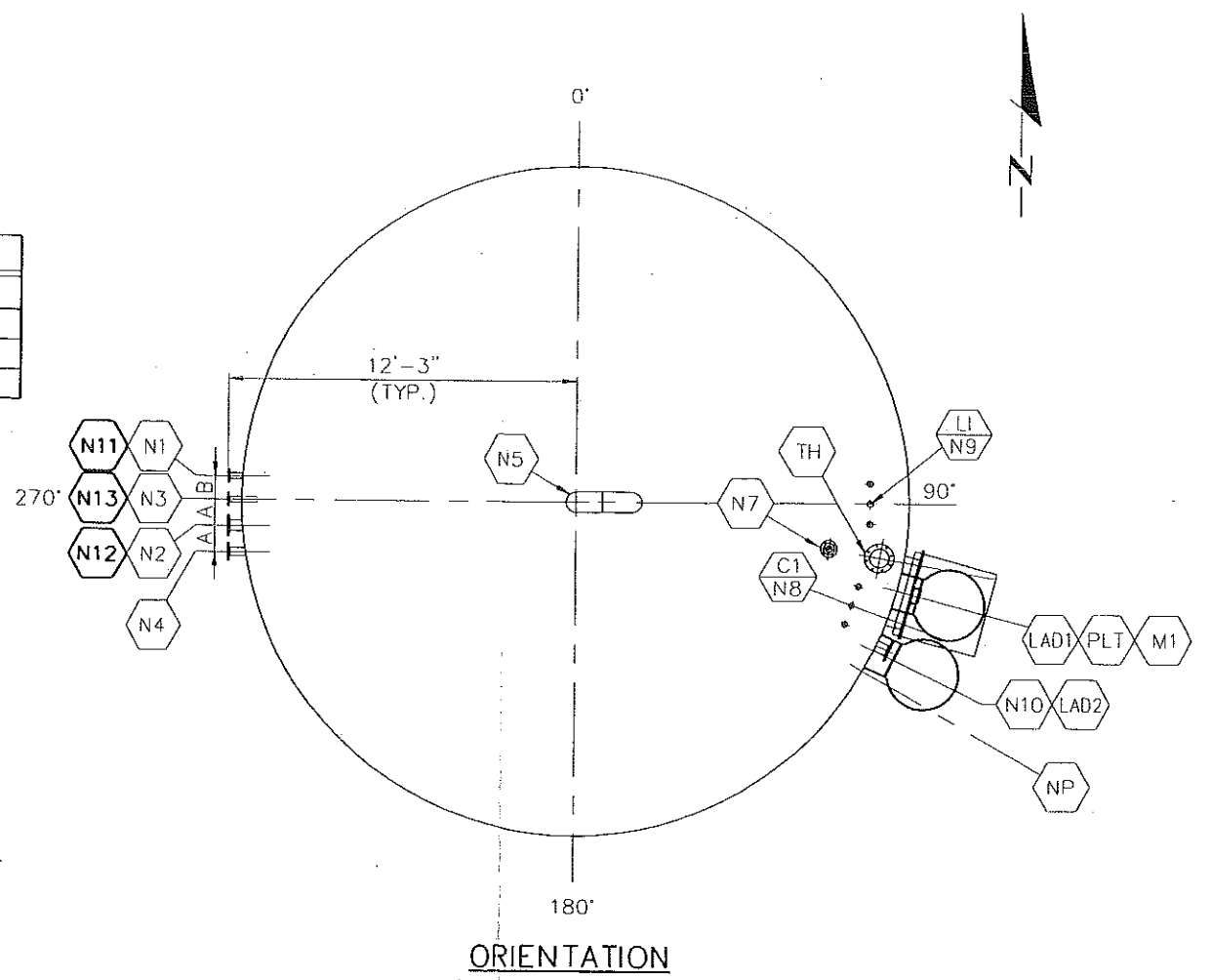


ELEVATION



DETAIL "A"

SMALL DIM'S TABLE	
TAG	DIMENSION
'A'	0'-11 1/32"
'B'	0'-10"



ORIENTATION

G.L.M. Tanks & Equipment Ltd.
 NISKU, AB CALGARY, AB BATTLEFORD, SK

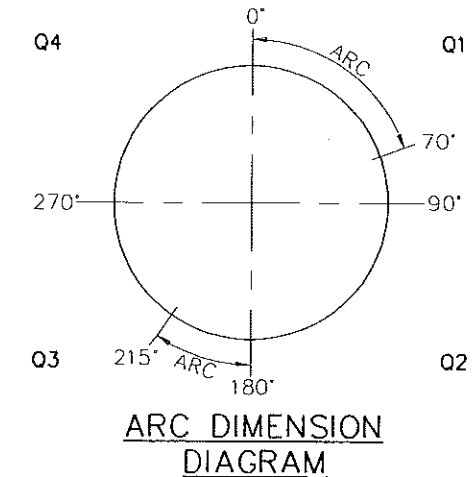
ENGINEERING: NISKU	FABRICATION: NISKU
PROJECT ENG. APPROVAL & DATE: <i>RP APR 29/09</i>	
CHECKED BY & DATE: <i>RP APR 29/09</i>	3-04/29/04 REVD AS PER CUST. MARK-UPS JY <i>RP</i> REC'D 04/28/04 2-04/19/04 REVD LAD2 LOC'N & PLT SIZE JY RP AS SHOWN IN CLOUD 1-04/14/04 REVD AS PER CUST. MARK-UPS JY RP REC'D 04/13/04
DRAWN BY MARCH 22, 2004 & DATE: S. CHAN	NO DATE REVISION BY CHK'D
TOLERANCES: API-650 (MODIFIED)	DESCRIPTION: GENERAL PLAN VERMILLION ENERGY TRUST c/o TUNDRA ENG. LTD. 23'-6" DIA. x 39'-0" HIGH. OIL STORAGE TANK LSD 1-18-52-11-W5M
CRN # / NATL BD # N/A	SCALE: N.T.S.
PURCHASE ORDER # 03405-0002	DRAWING NUMBER J-04-087-1/2-3

CERTIFIED FOR CONSTRUCTION
 BY: *RP*
 DATE: *APR 29/09*
 ANY CHANGES AFTER THIS DATE MAY CAUSE SIGNIFICANT DELAYS AND/OR ADDITIONAL COSTS TO THE PROJECT.

FITTING / STRUCTURAL SCHEDULE

CUST. MARK	G.L.M. MARK	G.L.M. ASS'Y	QTY.	SIZE	DESCRIPTION	SERVICE	PIPE SCH	O.S.P.	I.S.P.	REFERENCE DATUM	ELEVATION FROM DATUM	QUADRANT	ORIENTATION ANGLE	ARC LENGTH FROM MAJOR C	G.L.M. MARK
N1	N1	9-D	1	2"	150# RFSO NOZZLE	INLET	XS WT	SEE GP	1/4"	T.O.B.	2'-4 15/16"	Q4	274.06°	0'-10" (T)	N1
N2	N2	9-B	1	4"	150# RFSO NOZZLE	OUTLET	XS WT	SEE GP	1/4"	T.O.B.	2'-6"	Q3	265.52° (REF. ONLY)	17'-6 21/32" (T)	N2
N3	N3	10-A	1	2"	150# RFSO NOZZLE c/w INTERNAL REMOVABLE SYPHON	RECYCLE	XS WT	0'-6"	0'-6"	T.O.B.	2'-4 15/16"	Q3/Q4	270°	0'-0"	N3
N4	N4	9-A	1	3"	150# RFSO NOZZLE	SPARE WATER OUT	XS WT	SEE GP	1/4"	T.O.B.	0'-10"	Q3	261.01° (REF. ONLY)	16'-7 17/32" (T)	N4
N5	N5	5-B	1	8"	PIPE c/w NON-REMOVABLE 180° GOOSENECK VENT c/w BIRDSCREEN MESH	VENT	STD WT	SEE GP	FLUSH	ROOF	CTR OF ROOF	CTR OF ROOF	CTR OF ROOF	CTR OF ROOF	N5
N6	TH	5-C	1	8"	FABRICATED THIEF HATCH NECK c/w ENARDO 660 PT SOUR SERVICE THIEF HATCH (SET @ 4.0 oz P/0.4 oz VAC)	THIEF HATCH	STD WT	0'-6"	1/4"	ROOF	ROOF	Q2	100°	2'-0 5/8"	TH
N7	N7	9-E	1	3"	150# FFSO NOZZLE c/w ENARDO ROOF VENT MODEL# 905-3-111-24.0/0.4	ENARDO VENT	STD WT	0'-6"	FLUSH	ROOF	ROOF	Q2	100°	2'-0 5/8"	N7
N8	C1	9-G	1	1 1/2"	3000# NPT HALF COUPLING c/w TANK GAUGE SYSTEMS CORP. LEVEL TRANSMITTER ASSEMBLY INCL. DNB TRANSMITTER, FLOAT, GUIDE WIRES, NIPPLES & UNIONS, AND BOTTOM ANCHORS (CUST. SUPPLIED)	LEVEL TRANSMITTER	N/A	FULL	1/4"	ROOF	ROOF	Q2	110°	4'-1 1/4"	C1
N9	LI	9-F	1	3/4"	3000# NPT HALF COUPLING c/w TANK GAUGE SYSTEMS CORP. LEVEL GAUGE ASSEMBLY INCL. FIBERGLASS FLOAT, TENSIONERS, GUIDE WIRES, GAUGE BOARD, BOARD BRACKETS AND BOTTOM ANCHORS (CUST. SUPPLIED)	LEVEL INDICATOR	N/A	FULL	1/4"	ROOF	ROOF	Q1/Q2	90°	0'-0"	LI
N10	N10	5-A	1	4"	150# RFSO NOZZLE	LEVEL SWITCH	XS WT	0'-6"	1/4"	T.O.B.	38'-0"	Q2	115°	5'-1 9/16"	N10
M1	M1	6-A	1	30"	FABRICATED API-650 SHELL MANWAY c/w (1) PIECE COVER, GASKET, BOLTING & REPAD	MANWAY	1/4" WL	0'-6"	1/4"	T.O.B.	3'-0"	Q2	105°	3'-0 15/16"	M1
NP	NP-A		1		GLM STD ALUMINUM NAMEPLATE c/w C.S. BRACKET	NAMEPLATE	N/A	N/A	N/A	T.O.B.	4'-6"	Q2	120°	6'-1 29/32"	NP
L1	LAD-1	7-B	1		FABRICATED LADDER c/w SAFETY CAGE	LADDER	N/A	N/A	N/A	T.O.B.	SEE GP	Q2	105°	3'-0 15/16"	LAD-1
L2	LAD-2	7-A	1		FABRICATED LADDER c/w SAFETY CAGE	LADDER	N/A	N/A	N/A	T.O.B.	SEE GP	Q2	116°	5'-4 1/32"	LAD-2
PLT	8-A		1		36" x 36" FABRICATED INTERMEDIATE PLATFORM	PLATFORM	N/A	N/A	N/A	T.O.B.	20'-0"	Q2	105°	3'-0 15/16"	PLT
LL	FLUG		2		G.L.M. STD. GRANDPA LIFT LUG	LIFT LUG	N/A	N/A	N/A	T.O.B.	SHOP LOCATE	N/A	SHOP LOCATE	N/A	LL
TL	TLUG		1		G.L.M. STD. TAIL LUG	TAIL LUG	N/A	N/A	N/A	T.O.B.	SHOP LOCATE	N/A	SHOP LOCATE	N/A	TL

- NOZZLE LOCATION NOTES:**
- ELEVATIONS ARE GIVEN REFERENCING NEAREST DATUM LOCATED BELOW ITEM LOCATION
 - ALL ARC LENGTHS ARE MEASURED ON OUTSIDE OF BOTTOM SHELL COURSE (OUTSIDE DIAMETER = 23'-6 1/4")
 - ARCS ARE MEASURED CLOCKWISE REFERENCING NEAREST MAJOR CENTERLINE
 - TANK CIRCUMFERENCE = 73'-10 23/32" 90° ARC LENGTH = 18'-5 11/16"
 - (T) - INDICATES TANGENTIAL NOZZLES.
 - (T.O.B.) - TOP OF BOTTOM
 - (REF.) - INDICATES REFERENCE DIMENSION ONLY SEE ORIENTATION VIEW FOR ACTUAL DIMENSIONS.

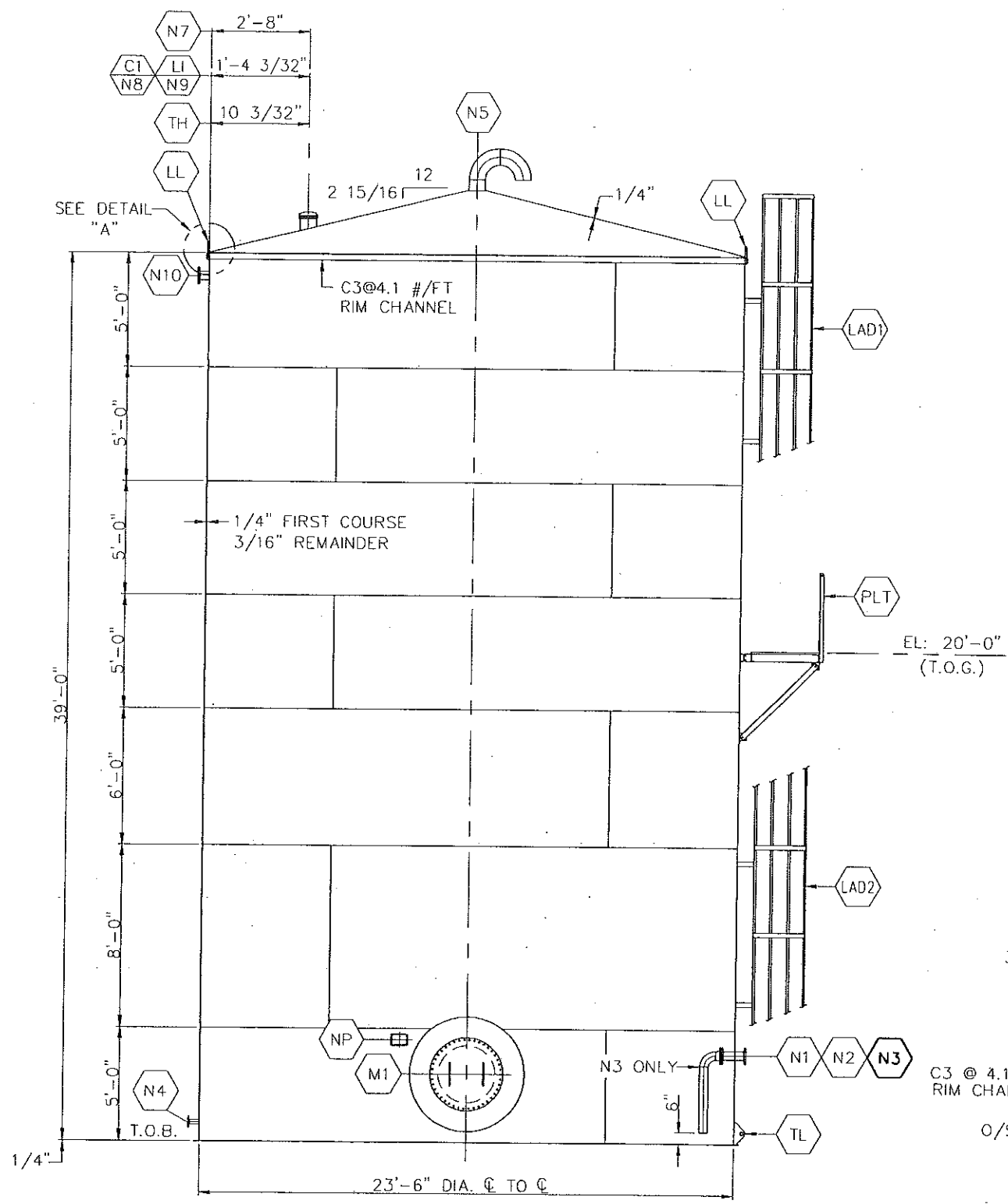


CERTIFIED FOR CONSTRUCTION
 BY RP
 DATE MAY 3/04
 ANY CHANGES AFTER THIS DATE MAY CAUSE SIGNIFICANT DELAYS AND/OR ADDITIONAL COSTS TO THE PROJECT.

G.L.M. Tanks & Equipment Ltd.
 NISKU, AB CALGARY, AB BATTLEFORD, SK

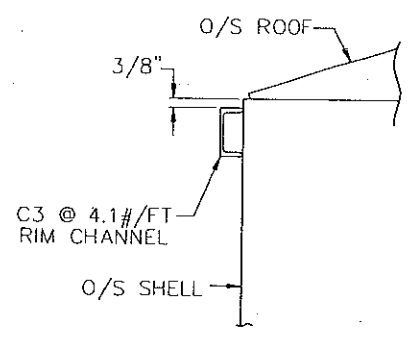
ENGINEERING: NISKU.	FABRICATION: NISKU
PROJECT ENG. APPROVAL & DATE: <u>RP MAY 3/04</u>	
CHECKED BY & DATE: <u>RP MAY 3/04</u>	4-04/30/04 REV'D AS SHOWN IN BOLD 3-04/28/04 REV'D AS PER CUST. MARK-UPS REC'D 04/29/04
DRAWN BY MARCH 22, 2004 & DATE: S. CHAN	2-04/19/04 REV'D AS SHOWN IN BOLD 1-04/13/04 REV'D AS PER CUST. MARK-UPS REC'D 04/13/04
TOLERANCES: API-650 (MODIFIED)	DESCRIPTION: NOZZLE SCHEDULE VERMILLION ENERGY TRUST c/o TUNDRA ENG. LTD. 23'-6" DIA. x 39'-0" HIGH OIL STORAGE TANK LSD 1-18-52-11-W5M
CRN # / NAIL BD # N/A	SCALE: N.T.S.
PURCHASE ORDER # 03405-0002	DRAWING NUMBER J-04-087-3/5-2
	REV. 4

THIS DRAWING IS THE PROPERTY OF G.L.M. TANKS AND EQUIPMENT LTD. AND IS TO BE USED ONLY IN CONNECTION WITH WORK PERFORMED BY G.L.M. TANKS AND EQUIPMENT LTD. THE DRAWING IS NOT TO BE COPIED IN WHOLE OR IN PART AND MUST BE RETURNED UPON REQUEST.

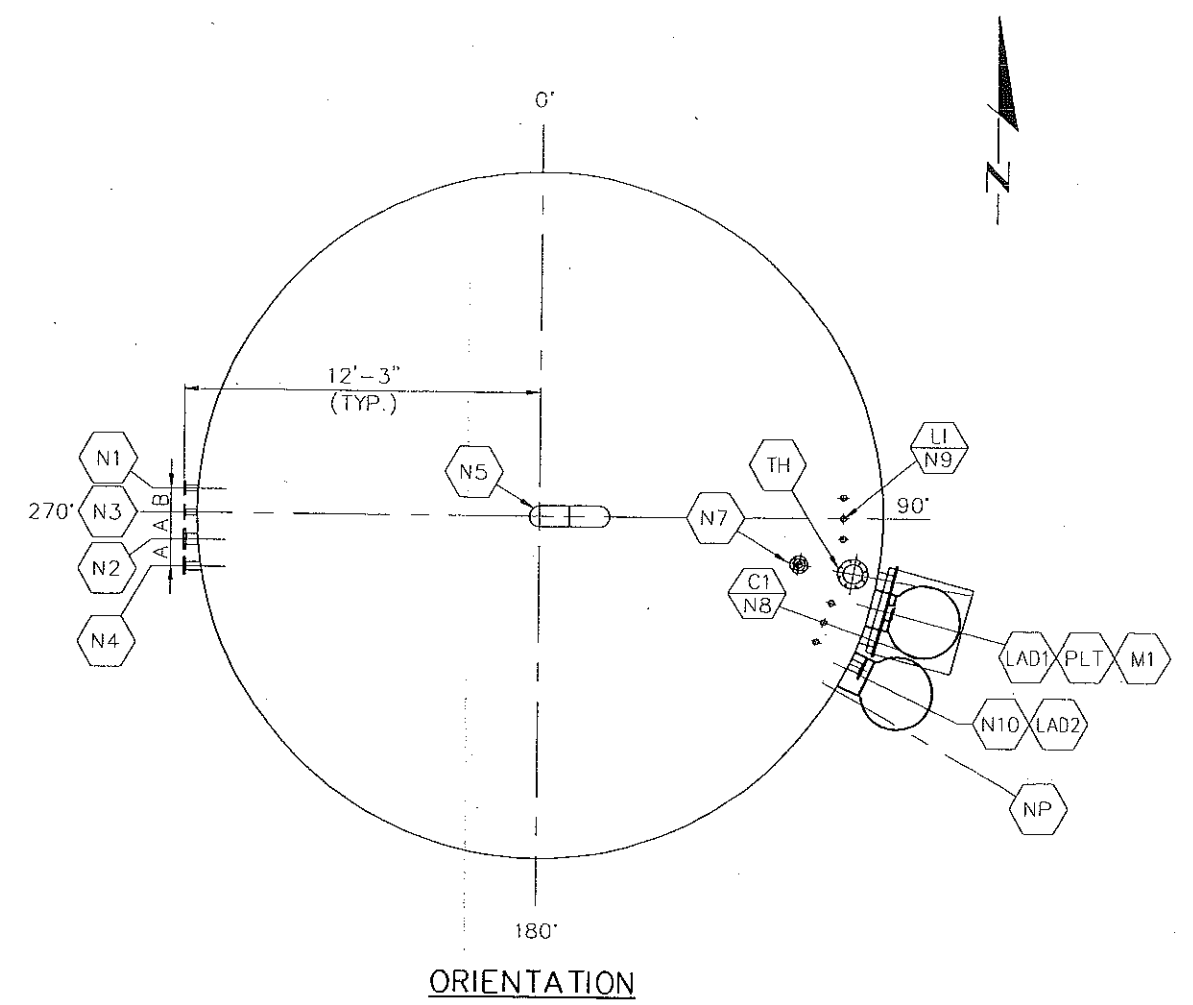


ELEVATION

TAG	DIMENSION
'A'	0'-11 1/32"
'B'	0'-10"



DETAIL "A"



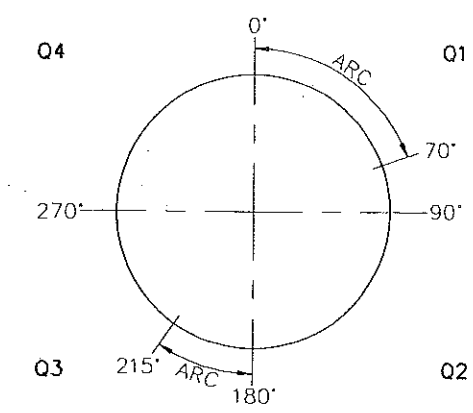
CERTIFIED FOR CONSTRUCTION
BY: RR
DATE: APR 29/04
ANY CHANGES AFTER THIS DATE MAY CAUSE SIGNIFICANT DELAYS AND/OR ADDITIONAL COSTS TO THE PROJECT.

G.L.M. Tanks & Equipment Ltd. NISKU, AB CALGARY, AB BATTLEFORD, SK	
ENGINEERING: NISKU	FABRICATION: NISKU
PROJECT ENG. APPROVAL & DATE: <u>RR APR 29/04</u>	
CHECKED BY & DATE: <u>RR APR 29/04</u>	3-04/29/04 REVD AS PER CUST. MARK-UPS JY RR 2-04/19/04 REVD LAD2 LOC'N & PLT SIZE JY RR 1-04/14/04 REVD AS PER CUST. MARK-UPS JY RR REC'D 04/28/04 AS SHOWN IN CLOUD REC'D 04/13/04
DRAWN BY MARCH 22, 2004 & DATE: S. CHAN	NO. DATE REVISION BY CHK'D
TOLERANCES: API-650 (MODIFIED)	DESCRIPTION: GENERAL PLAN VERMILLION ENERGY TRUST c/o TUNDRA ENG. LTD. 23'-6" DIA. x 39'-0" HIGH OIL STORAGE TANK LSD 1-18-52-11-W5M
CRN # / NATL. BD # N/A	SCALE: N.T.S.
PURCHASE ORDER # 03405-0002	DRAWING NUMBER J-04-087-3/5-3
	REV. 3

FITTING / STRUCTURAL SCHEDULE

CUST. MARK	G.L.M. MARK	G.L.M. ASSY	QTY.	SIZE	DESCRIPTION	SERVICE	PIPE SCH	O.S.P.	I.S.P.	REFERENCE DATUM	ELEVATION FROM DATUM	QUADRANT	ORIENTATION ANGLE	ARC LENGTH FROM MAJOR C	G.L.M. MARK
N1	N1	9-D	1	2"	150# RFSO NOZZLE	INLET	XS WT	SEE GP	1/4"	T.O.B.	2'-4 15/16"	Q4	274.06°	0'-10" (T)	N1
N2A	N2	9-B	1	4"	150# RFSO NOZZLE c/w BLIND FLANGE	OUTLET	XS WT	SEE GP	1/4"	T.O.B.	2'-6"	Q3	261.04°	16'-7 9/32" (T)	N2A
N2B	N2	9-B	1	4"	150# RFSO NOZZLE	OUTLET	XS WT	SEE GP	1/4"	T.O.B.	2'-6"	Q3	265.52°	17'-6 21/32" (T)	N2B
N3	N3	10-A	1	2"	150# RFSO NOZZLE c/w INTERNAL REMOVABLE SYPHON	RECYCLE	XS WT	0'-6"	0'-6"	T.O.B.	2'-4 15/16"	Q3/Q4	269.49°	18'-4 7/16" (T)	N3
N4	N4	9-A	1	3"	150# RFSO NOZZLE	SPARE WATER OUT	XS WT	SEE GP	1/4"	T.O.B.	0'-10"	Q3	256.53°	15'-8 1/2"	N4
N5	N5	5-B	1	8"	PIPE c/w NON-REMOVABLE 180° GOOSENECK VENT c/w BIRDSCREEN-MESH	VENT	STD WT	SEE GP	FLUSH	ROOF	CTR OF ROOF	CTR OF ROOF	CTR OF ROOF	GTR OF ROOF	N5
N6	TH	5-C	1	8"	FABRICATED THIEF HATCH NECK c/w ENARDO 660 PT SOUR SERVICE THIEF HATCH (SET @ 4.0 oz P/0.4 oz VAC)	THIEF HATCH	STD WT	0'-6"	1/4"	ROOF	ROOF	Q2	100°	2'-0 5/8"	TH
N7	N7	9-E	1	3"	150# FFSO NOZZLE c/w ENARDO ROOF VENT MODEL# 905-3-111-Z4.0/0.4	ENARDO VENT	STD WT	0'-6"	FLUSH	ROOF	ROOF	Q2	100°	2'-0 5/8"	N7
N8	C1	9-G	1	1 1/2"	3000# NPT HALF COUPLING c/w TANK GAUGE SYSTEMS CORP. LEVEL TRANSMITTER ASSEMBLY INCL. DNB TRANSMITTER, FLOAT, GUIDE WIRES, NIPPLES & UNIONS, AND BOTTOM ANCHORS (CUST. SUPPLIED)	LEVEL TRANSMITTER	N/A	FULL	1/4"	ROOF	ROOF	Q2	110°	4'-1 1/4"	C1
N9	LI	9-F	1	3/4"	3000# NPT HALF COUPLING c/w TANK GAUGE SYSTEMS CORP. LEVEL GAUGE ASSEMBLY INCL. FIBERGLASS FLOAT, TENSIONERS, GUIDE WIRES, GAUGE BOARD, BOARD BRACKETS AND BOTTOM ANCHORS (CUST. SUPPLIED)	LEVEL INDICATOR	N/A	FULL	1/4"	ROOF	ROOF	Q1/Q2	90°	0'-0"	LI
N10	N10	5-A	1	4"	150# RFSO NOZZLE	LEVEL SWITCH	XS WT	0'-6"	1/4"	T.O.B.	38'-0"	Q2	115°	5'-1 9/16"	N10
M1	M1	6-A	1	30"	FABRICATED API-650 SHELL MANWAY c/w (1) PIECE COVER, GASKET, BOLTING & REPAD	MANWAY	1/4" WL	0'-6"	1/4"	T.O.B.	3'-0"	Q2	105°	3'-0 15/16"	M1
NP	NP-A		1		GLM STD ALUMINUM NAMEPLATE c/w C.S. BRACKET	NAMEPLATE	N/A	N/A	N/A	T.O.B.	4'-6"	Q2	120°	6'-1 29/32"	NP
L1	LAD-1	7-B	1		FABRICATED LADDER c/w SAFETY CAGE	LADDER	N/A	N/A	N/A	T.O.B.	SEE GP	Q2	105°	3'-0 15/16"	LAD-1
L2	LAD-2	7-A	1		FABRICATED LADDER c/w SAFETY CAGE	LADDER	N/A	N/A	N/A	T.O.B.	SEE GP	Q2	116°	5'-4 1/32"	LAD-2
PLT		8-A	1		36" x 36" FABRICATED INTERMEDIATE PLATFORM	PLATFORM	N/A	N/A	N/A	T.O.B.	20'-0"	Q2	105°	3'-0 15/16"	PLT
LL	FLGLUG		2		G.L.M. STD. GRANDPA LIFT LUG	LIFT LUG	N/A	N/A	N/A	T.O.B.	SHOP LOCATE	N/A	SHOP LOCATE	N/A	LL
TL	TLUG		1		G.L.M. STD. TAIL LUG	TAIL LUG	N/A	N/A	N/A	T.O.B.	SHOP LOCATE	N/A	SHOP LOCATE	N/A	TL

- NOZZLE LOCATION NOTES:**
- ELEVATIONS ARE GIVEN REFERENCING NEAREST DATUM LOCATED BELOW ITEM LOCATION.
 - ALL ARC LENGTHS ARE MEASURED ON OUTSIDE OF BOTTOM SHELL COURSE (OUTSIDE DIAMETER = 23'-6 1/4")
 - ARCS ARE MEASURED CLOCKWISE REFERENCING NEAREST MAJOR CENTERLINE
 - TANK CIRCUMFERENCE = 73'-10 23/32" 90° ARC LENGTH = 18'-5 11/16"
 - (T) - INDICATES TANGENTIAL NOZZLES.
 - (T.O.B.) - TOP OF BOTTOM
 - (REF.) - INDICATES REFERENCE DIMENSION ONLY SEE ORIENTATION VIEW FOR ACTUAL DIMENSIONS.



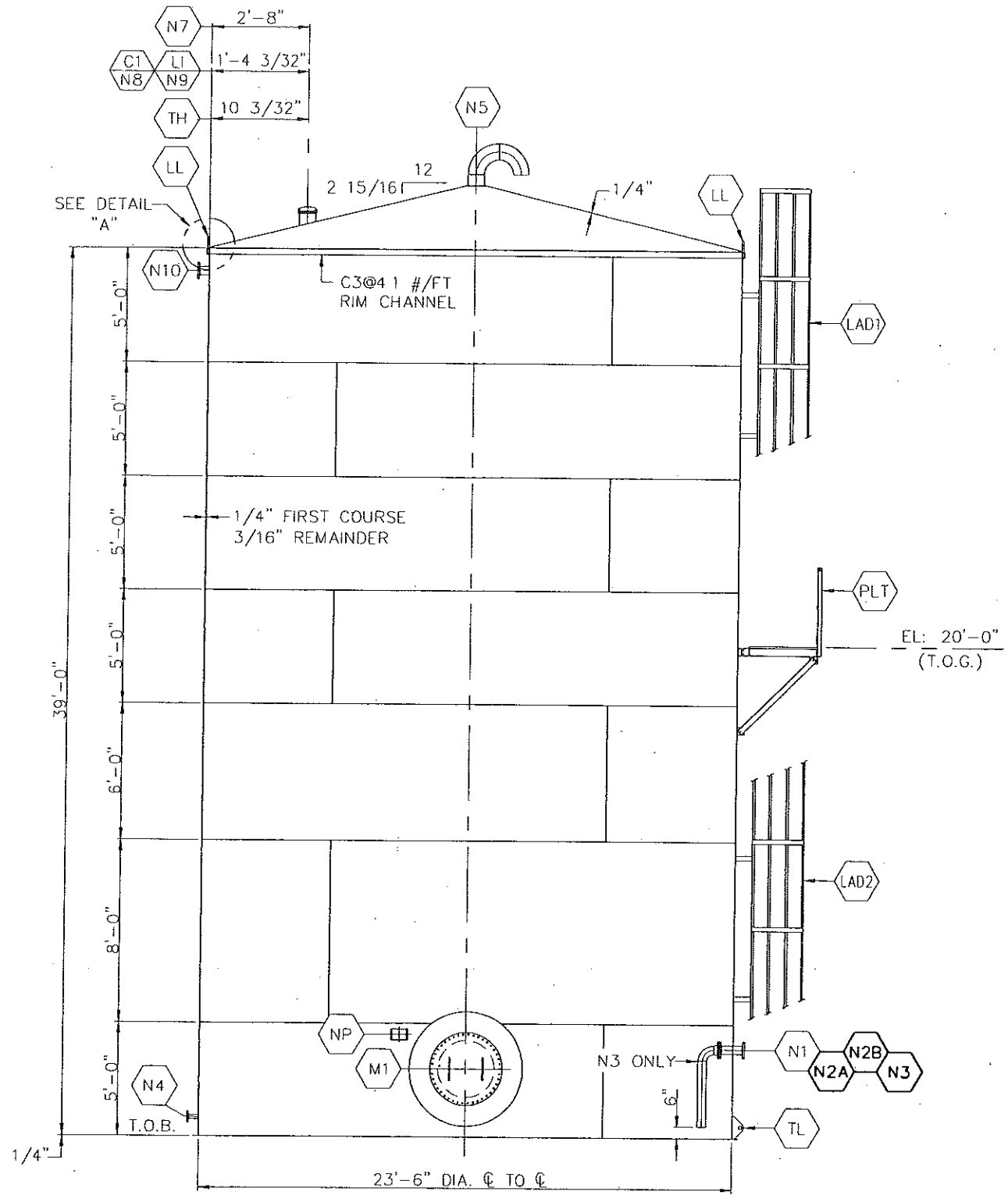
ARC DIMENSION DIAGRAM

PROJECT NAME: Granada
 DATE: May 19, 2004 J.W.
 PROJECT #: 03405 Vermilion

CERTIFIED FOR CONSTRUCTION
 BY: RP
 DATE: MAR 14/04
 ANY CHANGES AFTER THIS DATE MAY CAUSE SIGNIFICANT DELAYS AND/OR ADDITIONAL COSTS TO THE PROJECT.

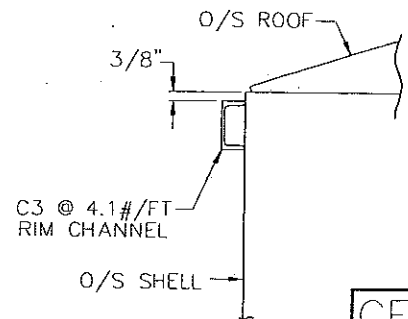
G.L.M. Tanks & Equipment Ltd.
 NISKU, AB CALGARY, AB BATTLEFORD, SK

ENGINEERING: NISKU	FABRICATION: NISKU
PROJECT ENG. APPROVAL & DATE: <u>RP MAR 14/04</u>	5-05/12/04 REVD AS SHOWN IN BOLD 4-04/30/04 REVD AS SHOWN IN BOLD 3-04/28/04 REVD AS PER CUST. MARK-UPS REC'D 04/29/04
CHECKED BY: <u>RP MAR 14/04</u>	2-04/19/04 REVD AS SHOWN IN BOLD 1-04/13/04 REVD AS PER CUST. MARK-UPS REC'D 04/13/04
DRAWN BY: MARCH 22, 2004 & DATE: S. CHAN	NO. DATE REVISION BY CHK'D
TOLERANCES:	DESCRIPTION:
API-650 (MODIFIED)	NOZZLE SCHEDULE VERMILION ENERGY TRUST c/o TUNDRA ENG. LTD. 23'-6" DIA. x 39'-0" HIGH OIL STORAGE TANK LSD 1-18-52-11-W5M
CRN # / NATL BD # N/A	SCALE: N.T.S.
PURCHASE ORDER # 03405-0002	DRAWING NUMBER J-04-087-4-2
	REV. 5

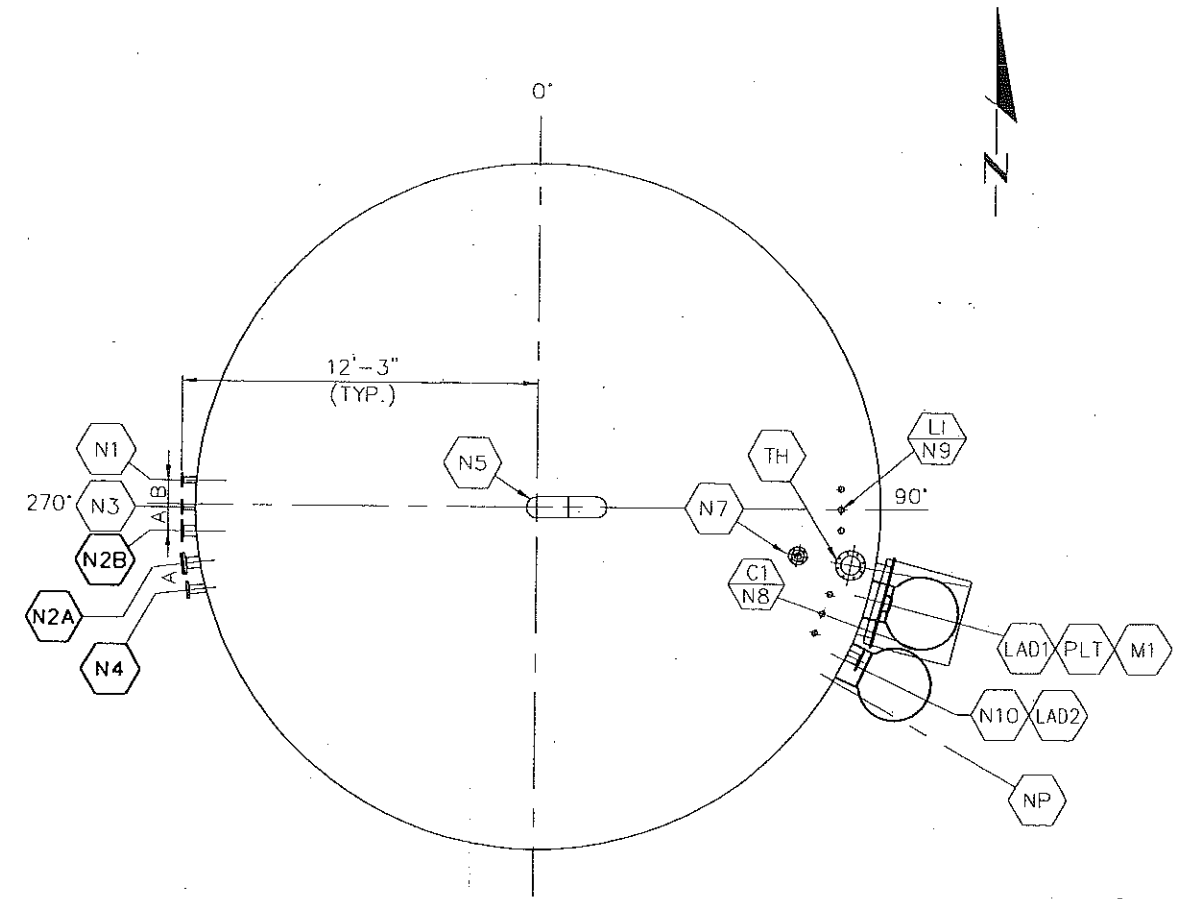


ELEVATION

TAG	DIMENSION
'A'	0'-11 1/32"
'B'	0'-10"



DETAIL "A"



ORIENTATION

PROJECT NAME: <u>Granada</u>
DATE: <u>May 19, 2004 I.W.</u>
PROJECT #: <u>03405 Vermilion</u>



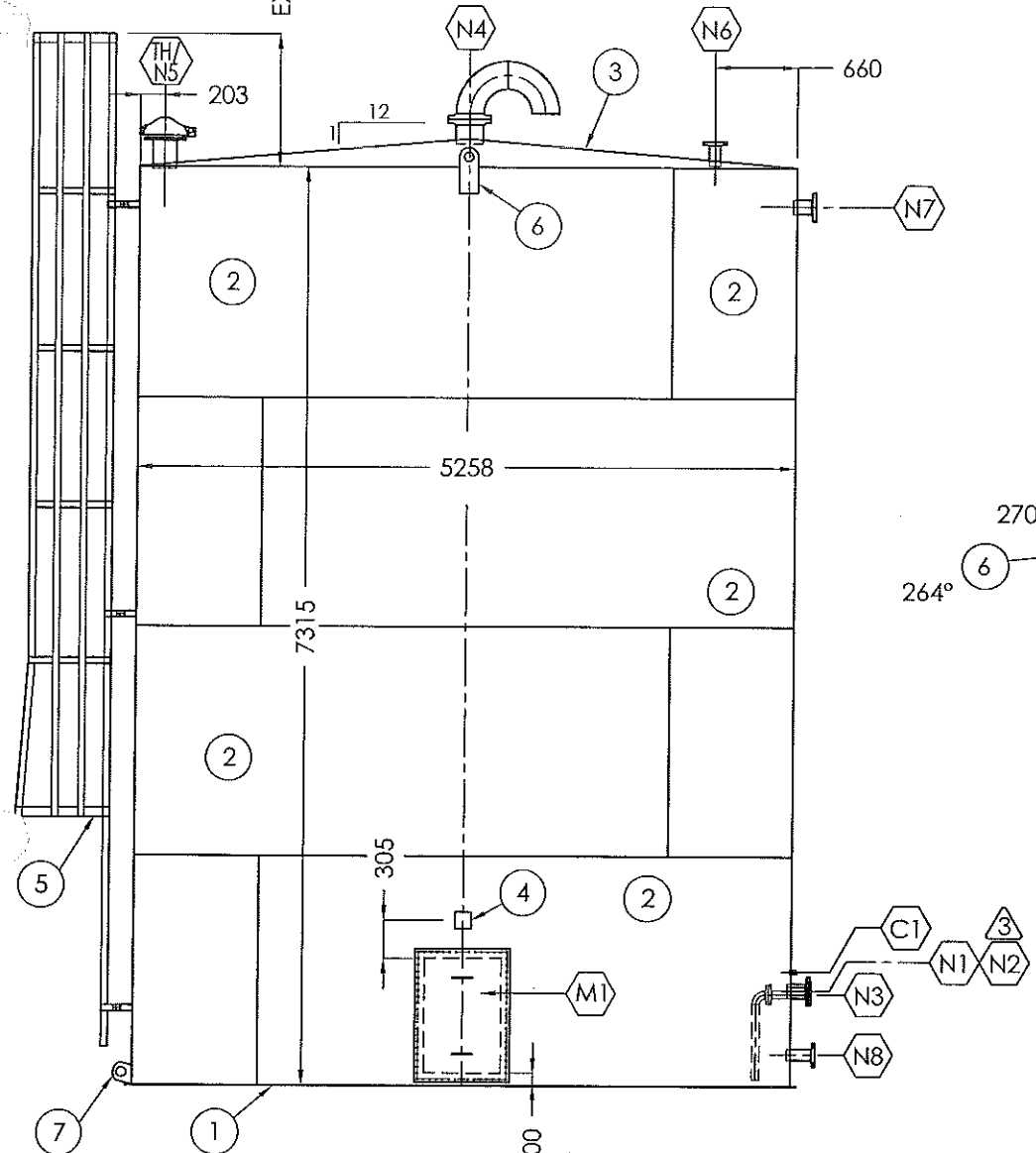
G.L.M. Tanks & Equipment Ltd.
NISKU, AB CALGARY, AB BATTLEFORD, SK

ENGINEERING: NISKU	FABRICATION: NISKU																				
PROJECT ENG. APPROVAL & DATE: <u>RP Mar 14/04</u>	<table border="1"> <tr> <td>4</td> <td>05/12/04</td> <td>REV'D AS SHOWN IN BOLD & MARK</td> <td>JY</td> <td>RP</td> </tr> <tr> <td>3</td> <td>04/29/04</td> <td>REV'D AS PER CUST. MARK-UPS REC'D 04/28/04</td> <td>JY</td> <td>RP</td> </tr> <tr> <td>2</td> <td>04/19/04</td> <td>REV'D LAD2 LOC'N & PLT SIZE AS SHOWN IN CLOUD</td> <td>JY</td> <td>RP</td> </tr> <tr> <td>1</td> <td>04/14/04</td> <td>REV'D AS PER CUST. MARK-UPS REC'D 04/13/04</td> <td>JY</td> <td>RP</td> </tr> </table>	4	05/12/04	REV'D AS SHOWN IN BOLD & MARK	JY	RP	3	04/29/04	REV'D AS PER CUST. MARK-UPS REC'D 04/28/04	JY	RP	2	04/19/04	REV'D LAD2 LOC'N & PLT SIZE AS SHOWN IN CLOUD	JY	RP	1	04/14/04	REV'D AS PER CUST. MARK-UPS REC'D 04/13/04	JY	RP
4	05/12/04	REV'D AS SHOWN IN BOLD & MARK	JY	RP																	
3	04/29/04	REV'D AS PER CUST. MARK-UPS REC'D 04/28/04	JY	RP																	
2	04/19/04	REV'D LAD2 LOC'N & PLT SIZE AS SHOWN IN CLOUD	JY	RP																	
1	04/14/04	REV'D AS PER CUST. MARK-UPS REC'D 04/13/04	JY	RP																	
CHECKED BY & DATE: <u>RP Mar 14/04</u>																					
DRAWN BY MARCH 22, 2004 & DATE: <u>S. CHAN</u>																					
TOLERANCES: API-650 (MODIFIED)	DESCRIPTION: GENERAL PLAN VERMILLION ENERGY TRUST c/o TUNDRA ENG. LTD. 23'-6" DIA. x 39'-0" HIGH OIL STORAGE TANK LSD 1-18-52-11-W5M																				
CRN # / NATL BD # N/A	SCALE: N.T.S.																				
PURCHASE ORDER # 03405-0002	DRAWING NUMBER J-04-087-4-3																				
	REV. 4																				

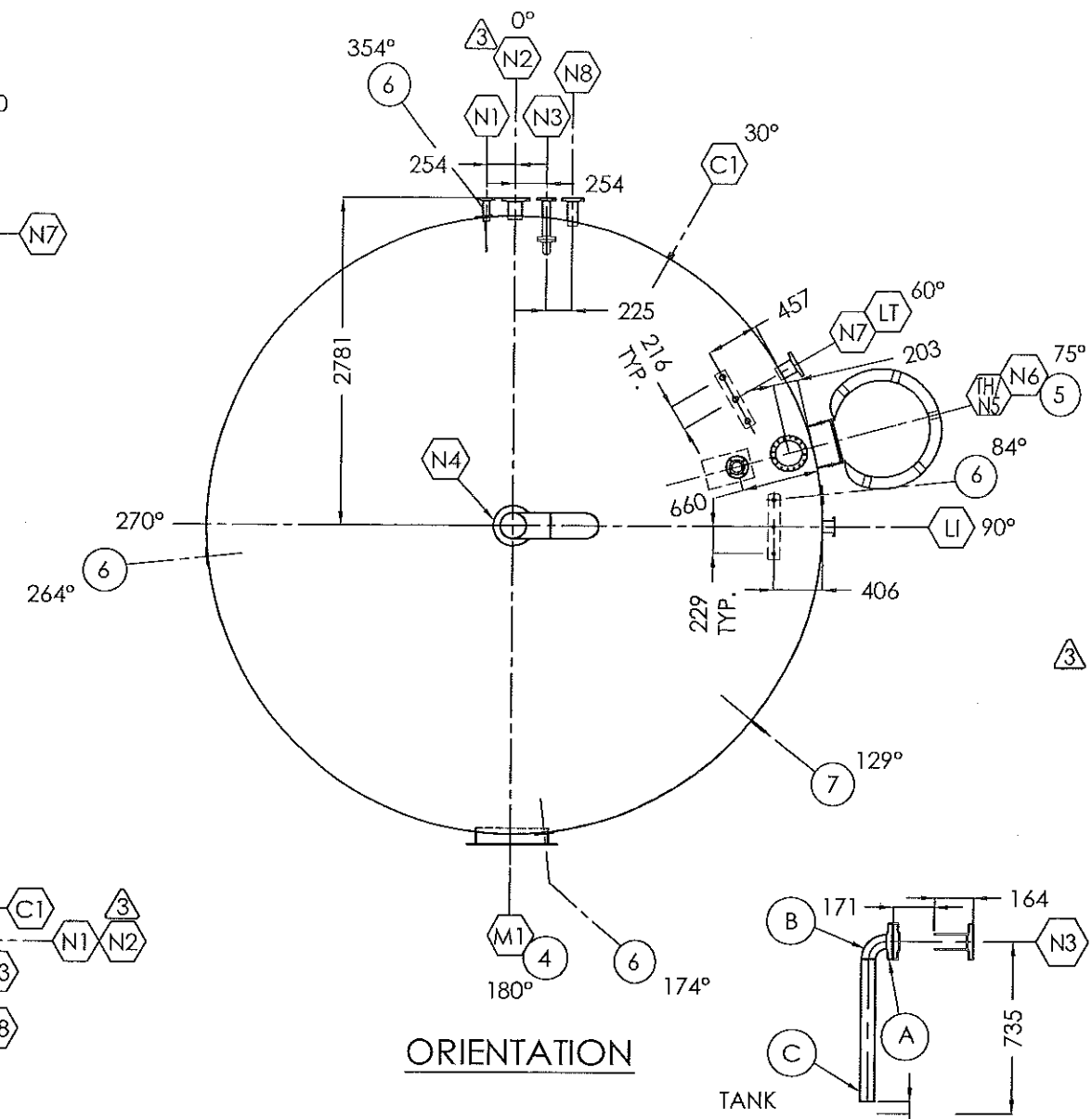
CERTIFIED FOR CONSTRUCTION
BY RP
DATE Mar 14/04
ANY CHANGES AFTER THIS DATE MAY CAUSE SIGNIFICANT DELAYS AND/OR ADDITIONAL COSTS TO THE PROJECT.

THIS DRAWING IS THE PROPERTY OF G.L.M. TANKS AND EQUIPMENT LTD AND IS TO BE USED ONLY IN CONNECTION WITH WORK PERFORMED BY G.L.M. TANKS AND EQUIPMENT LTD. THE DRAWING IS NOT TO BE COPIED IN WHOLE OR IN PART AND MUST BE RETURNED UPON REQUEST.

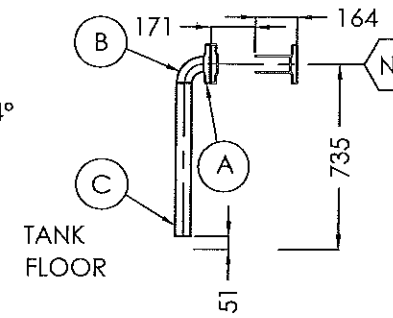
1050
EXTENSION



ELEVATION



ORIENTATION



N3 - INTERNAL STINGER

BILL OF MATERIALS

MARK	QTY	MATL	DESCRIPTION	SERVICE
1	1	A36	6.4 PL. x 5360 DIA. FLAT BOTTOM	
2	4	A36	4.8 PL. x 1829 x 14518 LG. SHELL	
3	1	A36	6.4 PL. x 5297 DIA. CONED ROOF	
4	1		NAMEPLATE AND BRACKET	
5	1	A36	1000 BBL CAGED LADDER c/w 1050 (3'-6") EXTENSION (SEE SHT. B-8316-CL FOR DETAILS)	
6	4	A36	LARGE LIFT LUG	
7	1	A36	TAIL LUG c/w REPAD	
M1	1	A36	610x914 (24"x36") RECTANGULAR MANWAY (100mm ABOVE TANK FLOOR)	
	1	A36	762x1066 RECTANGULAR MANWAY COVER	
TH	1		219 DIA. (8") ENARDO 1000 SERIES LOCK DOWN HATCH	
	1		219 DIA. (8") ARGO FABRICATED THIEF HATCH EXTENSION	
LI	3	316SS	27 DIA. (3/4") 3000# NPT FULL COUPLING	LEVEL INDICATOR
	2	316SS	CABLE ANCHORS (INSTALLED DIRECTLY BENEATH OUTSIDE CPLGS)	
	1		TANK GAUGING SYSTEMS SOUR SERVICE MECHANICAL LEVEL GAUGE. INSTALL GAUGE BOARD BRACKETS AS SUPPLIED BY TGS. SEE ATTACHED INSTALLATION GUIDE FOR FURTHER INFORMATION.	
LT	3	316SS	48 DIA. (1-1/2") 3000# NPT FULL CPLG	LEVEL TRANSMITTER
	2	316SS	CABLE ANCHORS (INSTALLED DIRECTLY BENEATH OUTSIDE CPLGS) LEVEL TRANSMITTER TO BE SUPPLIED AND INSTALLED BY OTHERS.	
C1	1	316SS	27 DIA. (3/4") 3000# NPT FULL CPLG w/ HEX PLUG	TEMP. INDICATOR
N1	1	A105	60 DIA. (2") 300# RFSO FLG.	INLET
	1	A106	60 DIA. (2") SCH. 80 SMLS PIPE x 183 LG.	
N2	1	A105	114 DIA. (4") 150# RFSO FLG.	OUTLET
	1	A106	114 DIA. (4") STD. SMLS PIPE x 188 LG.	
N3	2	A105	60 DIA. (2") 150# RFSO FLG.	CLEAN OUT
	1	A106	60 DIA. (2") STD. SMLS PIPE x 318 LG.	
			INTERNAL STINGER SEE DETAIL THIS SHEET	
N4	1	A105	219 DIA. (8") 150# RFSO FLG.	VENT
	1	A106	219 DIA. (8") STD. SMLS PIPE x 178 LG.	
	1	A234	219 DIA. (8") SCH. STD. SMLS GOOSENECK VENT w/ BIRDSCREEN	
N5			SEE "THIEF HATCH" LISTED ABOVE	
N6	1	A105	89 DIA. (3") 150# RFSO FLG.	ENARDO VENT
	1	A106	89 DIA. (3") STD. SMLS PIPE x 178 LG.	
	1		ENARDO MODEL 950-3-111-24/0.4 PRESSURE VACUUM VENT VALVE SET @ 4 OZ. PRESSURE / 0.4 OZ. VACUUM VALVE TO BE SHIPPED LOOSE.	
N7	1	A105	114 DIA. (4") 150# RFSO FLG.	LEVEL SWITCH
	1	A106	114 DIA. (4") STD. SMLS PIPE x 193 LG.	
N8	1	A105	89 DIA. (3") 150# RFSO FLG.	WATER CUT
	1	A106	89 DIA. (3") STD. SMLS PIPE x 220 LG.	
A	1	A105	60 DIA. (2") 150# RFSO FLG.	
B	1	A234	60 DIA. (2") 90° LRWE	
C	1	A106	60 DIA. (2") STD. SMLS PIPE x 608 LG.	

CUSTOMER: VERMILION ENERGY TRUST c/o TUNDRA ENGINEERING LTD.
TUNDRA PROJECT # 03405 L.S.D.: 01-18-052-11-W5M

TITLE: ONE(1) 160 CU. M. (1000 BBL)
5258 DIA. x 7315 HIGH
STORAGE TANK

APPROVED BY:	CHECKED BY:	DRAWN BY:	WE
DATE: 08/14/01	TAG #: S-930	DRAWING #: B-8316_R2	REV.:
SHEET: 1 of 2	SCALE: NTS	SERIAL #: 8316	3

C:\Documents and Settings\traceyn\Temporary Internet Files\OLKF91B-8316_R3.dwg, U 004 01:21:14 PM, traceyn

NOZZLES

MARK	PROJ.	ELEV.	NOTES
1	N/A	915mm	TEMP INDICATOR
N1	164mm	762mm	INLET (PARALLEL TO N2)
N2	152mm	762mm	OUTLET
N3	164mm	735mm	CLEAN OUT (PARALLEL TO N2)
N4	202mm	ROOF	VENT
TH/N5		ROOF	THIEF HATCH
N6	152mm	ROOF	ENARDO VENT
	152mm	7010mm	LEVEL SWITCH
N8	196mm	254mm	WATER CUT (PARALLEL TO N2)

DESIGN NOTES

- TANK TO BE BUILT AND TESTED TO API-12F SPEC. **MODIFIED** (NON LABELED)
- TANK TO BE AIR/SOAP LEAK TESTED TO 9 OZ. / SQ. IN.
- ROOF/SHELL JOINTS NOT TO BE BACKWELDED TO MEET API-2000 SPECS
- ESTIMATED SHIPPING WEIGHT = 14082 LBS. (6400 KG)
- REFER TO ORIENTATION DRAWING FOR PROPER LOCATION OF ALL NOZZLES, COUPLINGS, ETC.
- ALL DIMENSIONS ARE IN mm.
- EXTERNAL STUDS / NUTS / GASKETS : B7M / 2HM / NEO(STD) SOUR (MANWAY) / 316SS FLEX (FLANGES)
- CAGE LADDER TO BE SHIPPED LOOSE.
- ENARDO PRESSURE / VACUUM VENT VALVE w/ INSTALLATION MANUAL TO BE SHIPPED LOOSE.
- RECORD MATERIAL HEAT NUMBERS & MTR'S.

PROJECT NAME: Granada
DATE: June 11, 2004 I.W.
PROJECT #: 03405 Vermilion

INTERNAL & EXTERNAL FINISH

- INTERNAL FINISH (TANK BOTTOM AND 3'-0" UP SHELL)
BLAST: SSPC-SP5 WHITE METAL BLAST
COATING: 12.0 - 15.0 MILS DFT OF DEVOE 253 EPOXY
**** REPAIR COATING AS NECESSARY WHERE N2 HAS BEEN REPLACED **** 3
- EXTERNAL FINISH
BLAST: SSPC-SP7 BRUSH BLAST USING SIL 7 SAND
PRIMER: 1.5 - 2.0 MILS DFT OF CLOVERDALE TOWER OF RUSTEX #71024 GRAY PRIMER
PAINT: 1.5 - 2.0 MILS DFT OF CLOVERDALE WHITE MARINE ENAMEL
**** REPAIR PAINT AS NECESSARY WHERE N2 HAS BEEN REPLACED **** 3
- BOTTOM FINISH
NO BOTTOM FINISH

REVISIONS

NO.	DESCRIPTION	BY	DATE
3	CORRECT NOZZLE SIZE FOR NOZZLE N2	WE	06.11.04
2	ISSUED FOR FABRICATION	WE	05.06.04
1	ISSUED FOR FINAL APPROVAL	WE	04.22.04
0	ISSUED FOR REVIEW	WE	03.25.04

CUSTOMER: VERMILION ENERGY TRUST c/o TUNDRA ENGINEERING LTD. TITLE: 1000 BBL STORAGE TANK QUOTE #: TQ04-092A

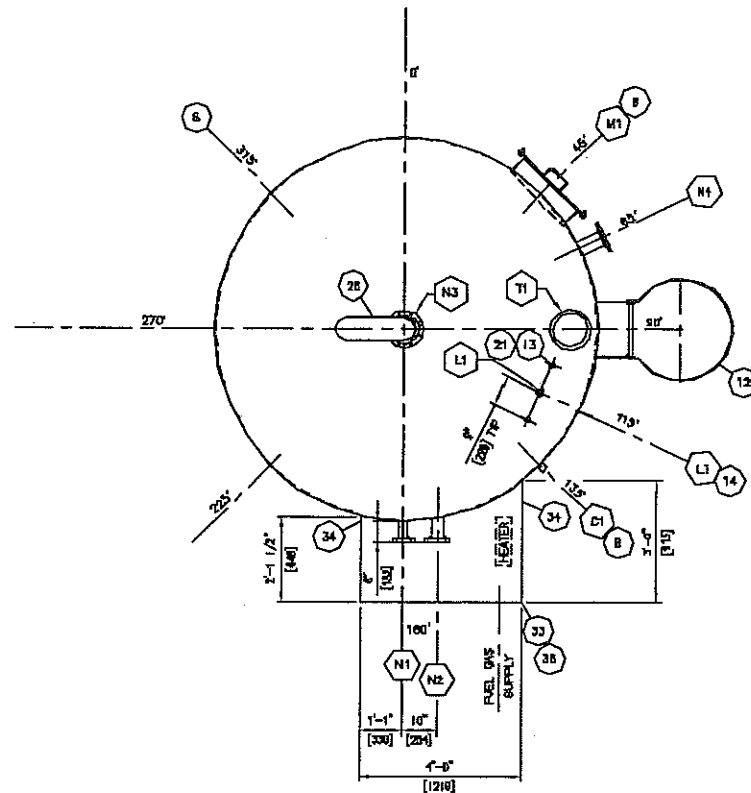
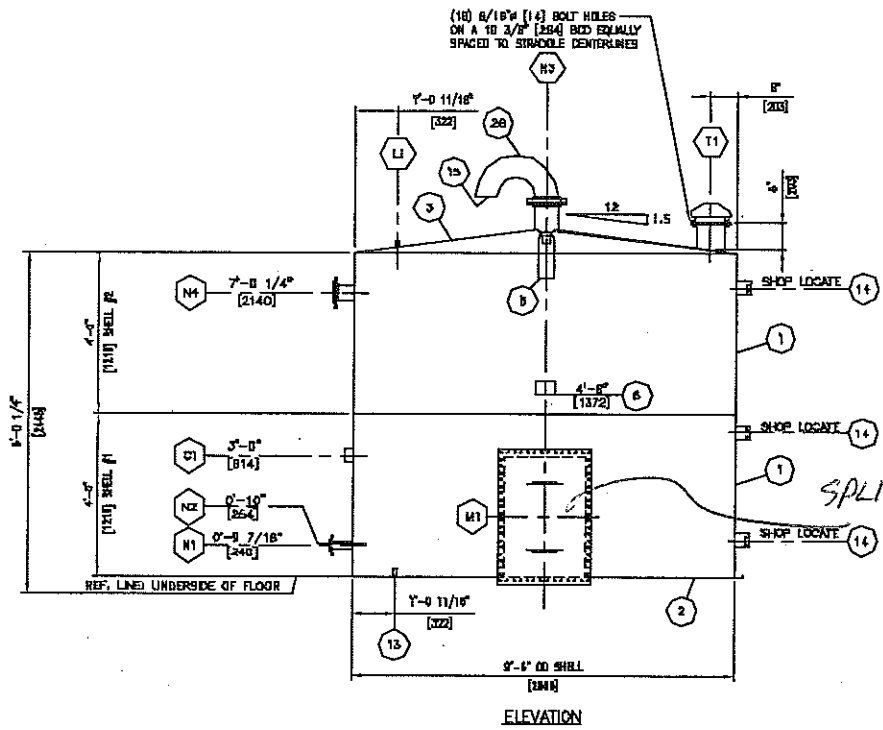
THIS DRAWING IS THE PROPERTY OF NUSCO MANUFACTURING & SUPPLY LTD. AND IS LOANED TO THE RECIPIENT FOR THEIR CONFIDENTIAL USE ONLY. IN CONSIDERATION OF THE LOAN OF THIS DRAWING, THE RECIPIENT AGREES THAT IT SHALL NOT BE USED IN ANY WAY DETRIMENTAL TO THE INTERESTS OF NUSCO MANUFACTURING & SUPPLY LTD. THAT IT SHALL BE RETURNED UPON REQUEST AND THAT IT SHALL NOT BE REPRODUCED, COPIED, LENT OR OTHERWISE DEPICTED OR DIRECTLY OR INDIRECTLY WITHOUT THE WRITTEN PERMISSION OF NUSCO MANUFACTURING & SUPPLY LTD.

LAYOUT ORIENTATION TABLE

300° = 6114	135° = 3418
15° = 25317	180° = 4337
45° = 1139	225° = 5888
60° = 1846	270° = 8836
90° = 2279	315° = 7875
110° = 2811	

NOZZLE SCHEDULE

MARK	SIZE	RATING	TYPE		SERVICE	NOZZLE BORE	CLOSING PLATE	PROV'D	ITEM NO.'S
			EXTERNAL	INTERNAL					
N1	2"	#150	RF30	N/A	INLET	SCH STD	N/A	SHOWN	15,22
N2	3"	#150	RF30	N/A	OUTLET	SCH STD	N/A	SHOWN	17,23
N3	6"	#150	RF30	N/A	VENT o/w GOOSENECK	SCH STD	N/A	8"	18,24,25,30,35
N4	4"	#150	RF30	N/A	LEVEL SWITCH	SCH STD	N/A	8"	18,25
C1	1"	3000#	DPLB	N/A	TEMPERATURE INDICATOR	N/A	N/A	2 1/2"	20
T1	8"	FMS	-	N/A	THEF HATCH c/v EXTENSION	STD	N/A	SHOWN	7,10,29,31
M1	24"x36"	API 12F	-	N/A	CLEANOUT	N/A	N/A	4"	11,27,34,31
L1	3/4"	3000#	DPLB	N/A	LEVEL INDICATOR	N/A	N/A	2 1/2"	6,21
	3/4"	3000#	DPLB	N/A	LEVEL INDICATOR SUPPORT	N/A	N/A	2 1/2"	13,21



DESIGN DATA

BUILT ACCORDING TO NUSCO CONSTRUCTION STANDARDS

100 BBL, 8'-6\"/>

MATERIAL LIST

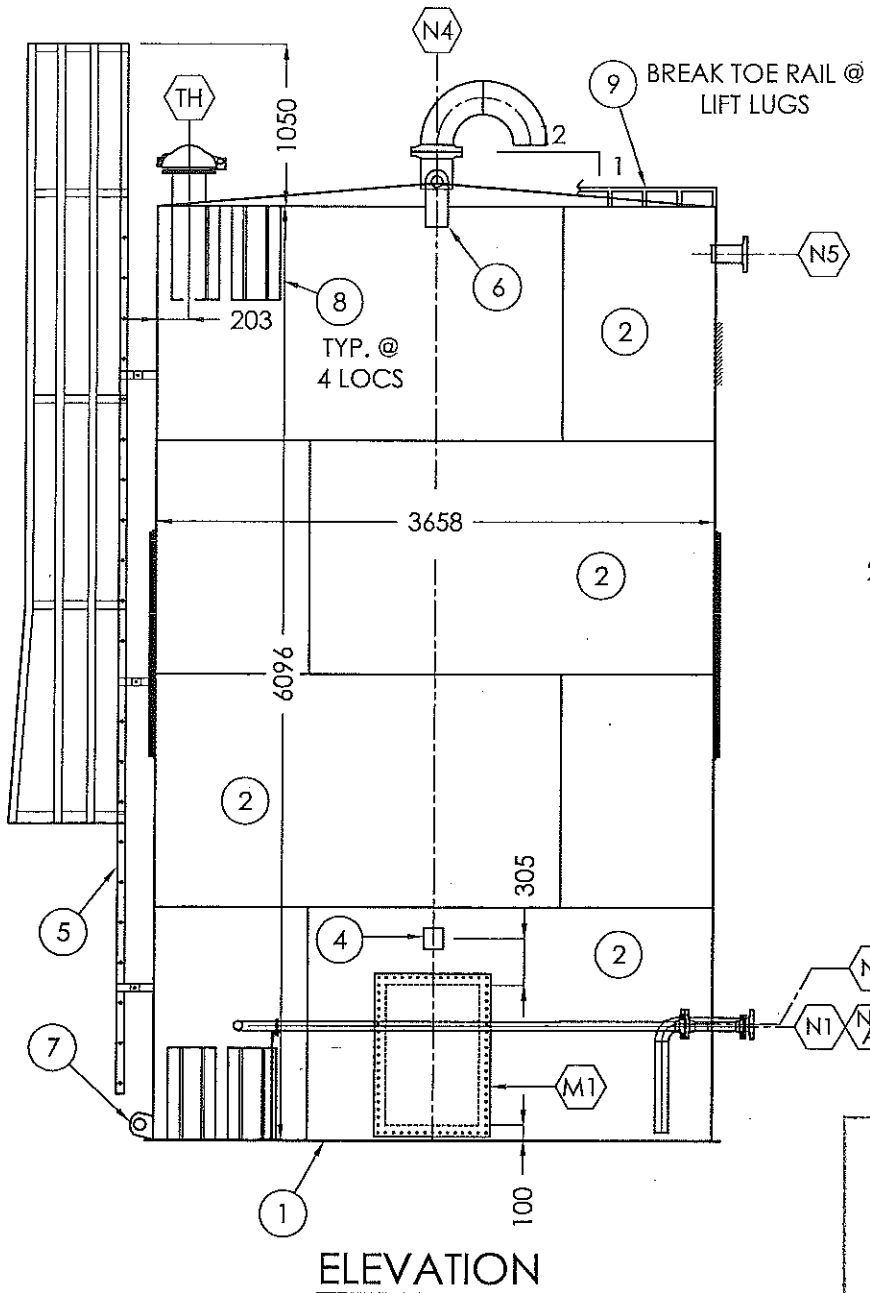
ITEM	QTY	PART	DESCRIPTION	MATERIAL
1	2	SHELL	4'-0\"/>	
2	1	FLOOR	6'-0\"/>	
3	1	ROOF	6'-0\"/>	
4				
5				
6	1	NAME PLATE	STD NAME PL. BRACKET (DWG. BRKT-0) c/v NAME PLATE	A-36/SS
7	1	THEF HATCH	8\"/>	
8	2	LEFT LUG	210 BBL LIFTING LUG (DWG. LUG210-A)	A-36
9	1	LEVEL IND.	TBIS-0010 LEVEL INDICATOR'S SYSTEM	
10	1	EXTENSION	THEF HATCH EXTENSION (DWG. TH-08-A)	
11	1	CLEANOUT	24"x30\"/>	
12	1	LADDER	STD 6'-0\"/>	
13	2	ANCHOR	RAILG BOARD ANCHOR (DWG. CLP-0)	
14	3	GAUGE BRACKET	GAUGE BOARD BRKT (DWG. BRKT-0) SHOP LOCATE	
15	1	BRIDGESCREEN	3/4\"/>	
16	1	FLANGE	2\"/>	
17	1	FLANGE	3\"/>	
18	2	FLANGE	6\"/>	
19	1	FLANGE	4\"/>	
20	1	COUPLING	1\"/>	
21	3	COUPLING	3/4\"/>	
22	1	PIPE	2\"/>	
23	1	PIPE	3\"/>	
24	1	PIPE	6\"/>	
25	1	PIPE	4\"/>	
26	1	RETURN BEND	6\"/>	
27	1	GASKET	1 3/4\"/>	
28	4	GASKET	FILLET RUBBER x 3\"/>	
29	1	GASKET	8\"/>	
30	1	GASKET	8\"/>	
31	80	BOLTING	1/2\"/>	
32	8	BOLTING	3/4\"/>	
33	1	HEATER ENCLURE	48\"/>	
34	4	ENCLOSURE CLIP	4\"/>	
35	1	HEATER	DATYL HR CHIMNEY WITH(2)400 HLB 120V AC o/v CIVIL, REG, TOV & VERT HOOD.	

- NOTES:
- 1.) MAINTAIN EXTERNAL PROJECTION ON ALL COUPLINGS FOR INSULATION.
 - 2.) ALL INTERNAL COATING THICKNESS MEASUREMENTS TO BE MEASURED AND RECORDED PER MANUFACTURER'S SPECIFICATION
 - 3.) HOLIDAY TESTING OF INTERNALLY COATED SURFACES TO BE PERFORMED PER NACE RP0188-88.
 - 4.) SHOP LOCATE VERT. BEAMS.

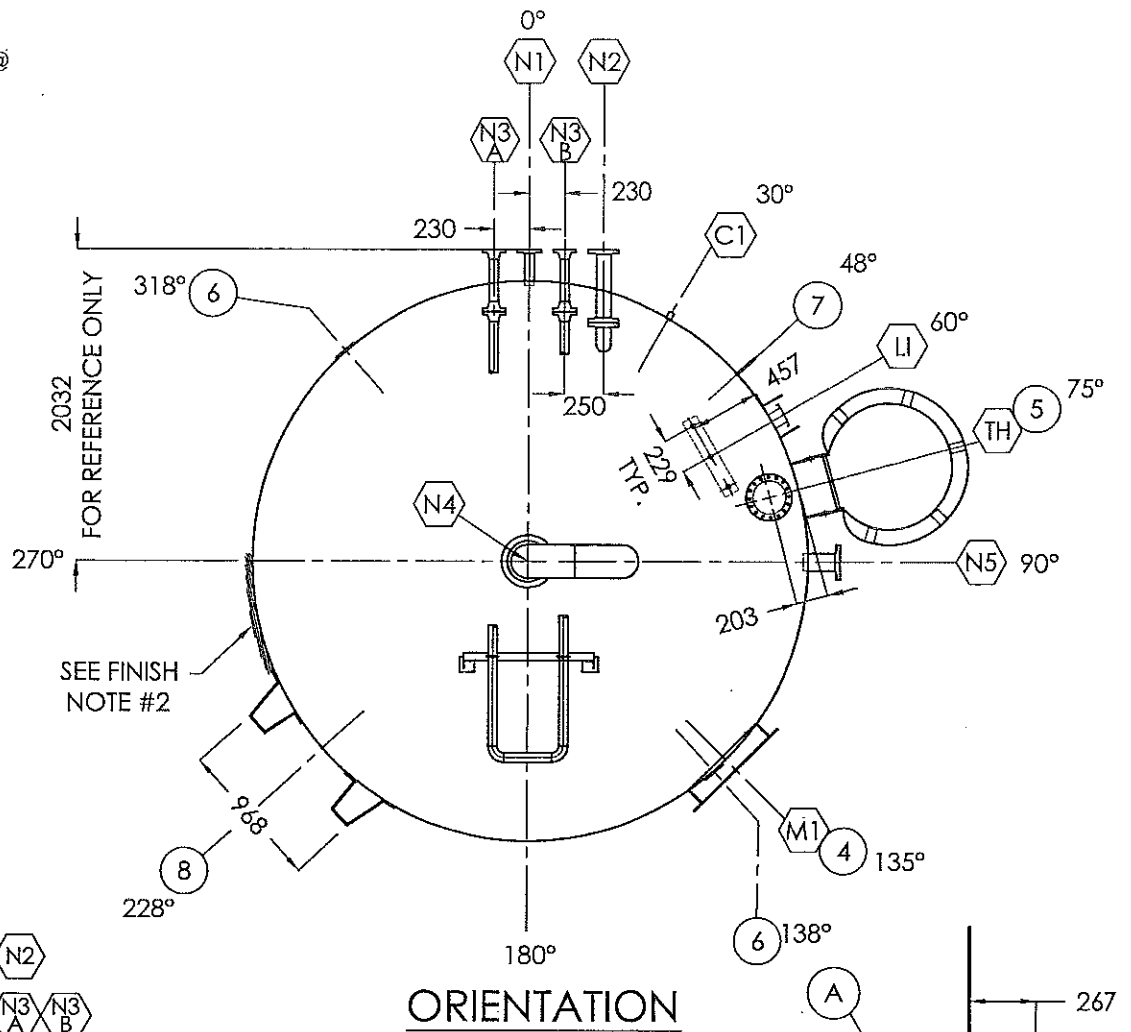
PROJECT NAME: Granada
 DATE: May 12, 2004 J.W.
 PROJECT #: 03405 Vermilion

<p>NUSCO SUPPLY & MANUFACTURING INC.</p>			
<p>VERMILION ENERGY TRUST c/o TUNDRA ENGINEERING LTD. P.O.: P003405-0004</p>			
<p>100 BBL SINGLE WALL STORAGE TANK 8'-6\"/> </p>			
<p>ISSUED FOR CONSTRUCTION</p>		<p>ISSUED FOR APPROVAL</p>	
DATE	BY	DATE	BY
04/05/05	YB		
04/04/12	YB		
<p>REVISIONS</p>		<p>DATE 03/04/10 11:21-1-0'</p>	
REV	DATE	BY	DESCRIPTION

C:\Documents and Settings\... Internet Files\OLKF9B-16094-R1.dwg, 05/04 02:58:51 PM, traceyn

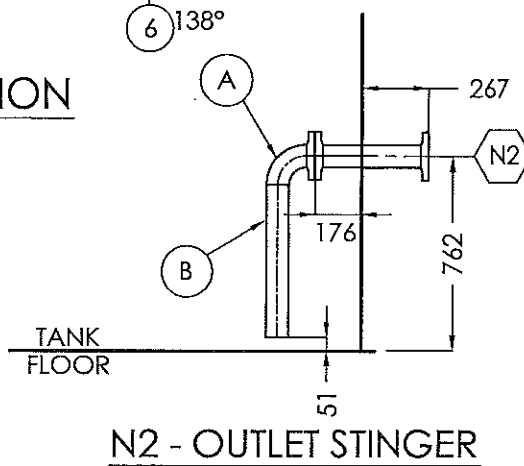


ELEVATION



ORIENTATION

VENDOR TO PROCEED AS NOTED
 APPROVED FOR CONSTRUCTION.
 APPROVED FOR CONST. AS NOTED
 REVISE AND RESUBMIT AS NOTED
 SIGNED: *[Signature]*
 DATE: 04. MAY 11



N2 - OUTLET STINGER

BILL OF MATERIALS

MARK	QTY	MAT'L	DESCRIPTION	SERVICE
1	1	A36	6.4 PL. x 3710 DIA. FLAT BOTTOM	
2	4	A36	4.8 PL. x 1524 x 11492 LG. SHELLS	
3	1	A36	4.8 PL. x 3685 DIA. CONED ROOF	
4	1		NAMEPLATE AND BRACKET	
5	1	A36	400 BBL CAGED LADDER C/W 1050 EXTENSION (SEE DWG. B-16094-CL FOR DETAILS)	
6	2	A36	LARGE LIFT LUGS	
7	1	A36	TAIL LUG c/w REPAD	
8	4	A36	INSULATION STAND OFFS	
9	1	A36	SAFETY TOE RAIL	
M1	1	A36	610x914 (24"x36") RECT. MANWAY SET 100mm OFF OF FLOOR	
	1	A36	762x1066 RECTANGULAR MANWAY COVER	
TH	1		219 DIA. (8") ENARDO 330 SWEET SERVICE SET @ 4 OZ. PRESS./0.4 OZ. VAC	
	1	A36	219 DIA. (8") THIEF HATCH FLG. EXTENSION	
LI	3	316SS	27 DIA. (3/4") 3000# NPT FULL COUPLING	LEVEL INDICATOR
	2	316SS	CABLE ANCHORS (INSTALLED DIRECTLY BENEATH OUTSIDE CPLGS)	
	1		TANK GAUGING SYSTEMS SOUR SERVICE MECHANICAL LEVEL GAUGE. INSTALL GAUGE BOARD BRACKETS AS SUPPLIED BY TGS. SEE ATTACHED INSTALLATION GUIDE FOR FURTHER INFORMATION.	
C1	1	316SS	27 DIA. (3/4") 3000# NPT FULL COUPLING w/ PLUG	TEMP. INDICATOR
N1	1	A105	60 DIA. (2") 150# RFSO FLG.	INLET
	1	A106	60 DIA. (2") STD. SMLS x 218 LG.	
N2	2	A105	89 DIA. (3") 150# RFSO FLG.	OUTLET
	1	A106	89 DIA. (3") STD. SMLS x 444 LG. (SEE THIS SHEET FOR STINGER DETAILS)	
N3 A-B	4	A105	60 DIA. (2") 300# SCH. 80 RFWN FLG.	HEAT COIL IN/OUT
	2	A106	60 DIA. (2") SCH. 80 SMLS x 275 LG. (SEE DWG. B-16094-HC FOR DETAILS)	
N4	1	A105	219 DIA. (8") 150# RFSO FLG.	VENT
	1	A106	219 DIA. (8") STD. SMLS x 228 LG.	
	1		219 DIA. (8") SCH. STD. SMLS GOOSENECK VENT w/ BIRDSCREEN	
N5	1	A105	114 DIA. (4") 150# RFSO FLG.	LEVEL SWITCH
	1	A106	114 DIA. (4") STD. SMLS x 219 LG.	
A	1	A234	N2 INTERNAL STINGER 89 DIA. (3") 90° LRWE	
B	1	A106	89 DIA. (3") STD. SMLS PIPE x 599 LG.	

MARK	PROJ.	ELEV.	NOTES
	N/A	915mm	TEMP. INDICATOR
	203mm	748mm	INLET
	267mm	762mm	OUTLET "PARALLEL TO N1"
	217mm	748mm	HEAT COIL IN "PARALLEL TO N1"
	217mm	748mm	HEAT COIL IN "PARALLEL TO N1"
	203mm	ROOF	ROOF VENT
	203mm	5791mm	LEVEL SWITCH

DESIGN NOTES

- TANK TO BE BUILT AND TESTED TO API-12F SPEC. MODIFIED (NON LABELED)
- TANK TO BE AIR/SOAP LEAK TESTED TO 1.5 PSI
- ROOF/SHELL JOINTS NOT TO BE BACKWELDED TO MEET API-2000 SPECS
- ESTIMATED SHIPPING WEIGHT = 9200 LBS. (4173 KG)
- REFER TO ORIENTATION DRAWING FOR PROPER LOCATION OF ALL NOZZLES, COUPLINGS, ETC.
- ALL DIMENSIONS ARE IN mm.
- INSTALL CPLGS TO ENSURE MAXIMUM PROJECTION
- HEAT COIL ASSEMBLY TO BE SHIPPED LOOSE
- CAGED LADDER TO BE SHIPPED LOOSE

HOLD - CUSTOMER TO CONFIRM EXTERIOR FINISH AND BOTTOM FINISH

PROJECT NAME: Granada
 DATE: May 11, 2004 I.W.
 PROJECT #: 03405 Vermilion

INTERNAL & EXTERNAL FINISH

- INTERNAL FINISH (FLOOR & 3'-0" UP SHELL)**
 BLAST: SSPC-SP5 WHITE METAL BLAST
 COATING: 10.0 - 12.0 MILS DFT OF DEVOE 253 EPOXY COATING
- EXTERNAL FINISH**
 BLAST: SSPC-SP7 BRUSH BLAST
 PRIMED: 1.5 - 2.0 MILS DFT CLOVERDALE TOWER OR RUSTEX #71024 GRAY
 INSULATION: 1-1/2" MINERAL WOOL INSULATION & 0.020" SMOOTH CORRUGATED ALUMINUM CLADDING c/w 3/4" STAINLESS STEEL BANDING
 PAINT: ALL PROJECTIONS 1.5 - 2.0 MILS DFT CLOVERDALE WHITE MARINE ENAMEL
- BOTTOM FINISH**
 BLAST: SSPC-SP6 COMMERCIAL BLAST
 PRIMED: 1.5 - 2.0 MILS DFT CLOVERDALE TOWER OR RUSTEX #71024 GRAY

REVISIONS

NO.	DESCRIPTION	BY	DATE
1	RESUBMITTED FOR FINAL APPROVAL	WE	05.06.04
0	ISSUED FOR APPROVAL	WE	04.20.04

CUSTOMER: VERMILION ENERGY TRUST c/o TUNDRA ENGINEERING LTD.

TITLE: ONE (1) 64 CU. M. (400 BBL)
3658 DIA. x 6096 HIGH
NON-SKIDDED INSULATED STORAGE TANK

APPROVED BY: [Signature] **CHECKED BY:** S-940 **DRAWN BY:** WE

DATE: 04/20/04 **TAG #:** **DRAWING #:** B-16094-R1

SHEET: 1 OF 3 **REV.:** **SERIAL #:** 16094

SCALE: QUOTE # 1004-136 **N.T.S.**

CUSTOMER: VERMILION ENERGY TRUST c/o TUNDRA ENGINEERING LTD. TITLE: 400 BBL NON-SKIDDED INSULATED STORAGE TANK SCALE: QUOTE # 1004-136 N.T.S.