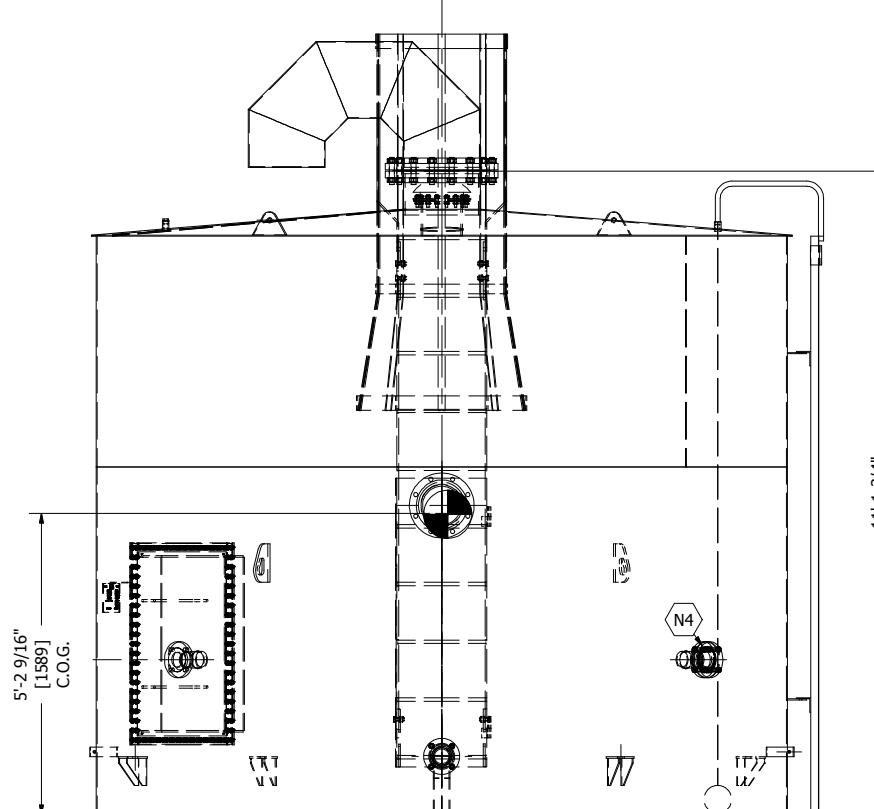
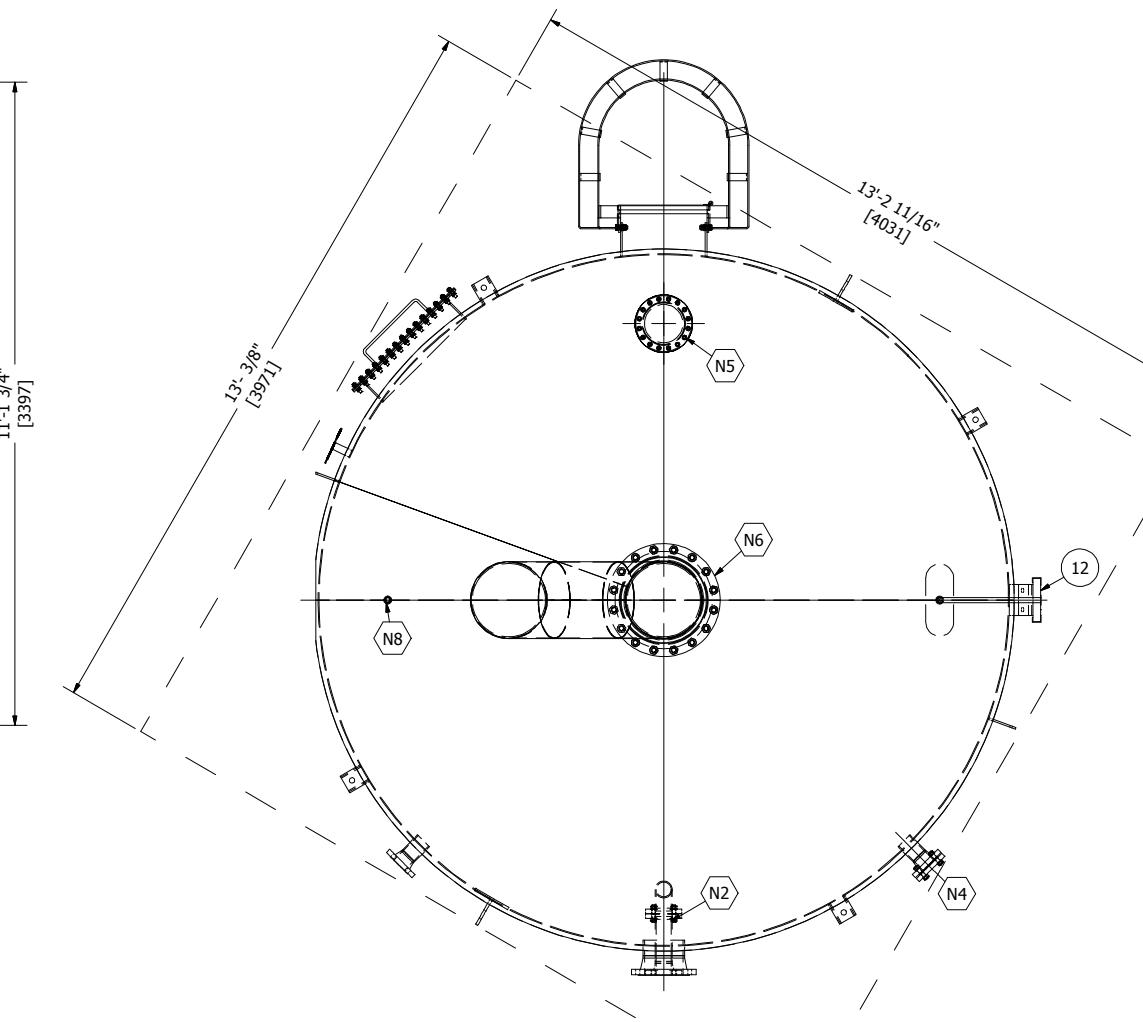
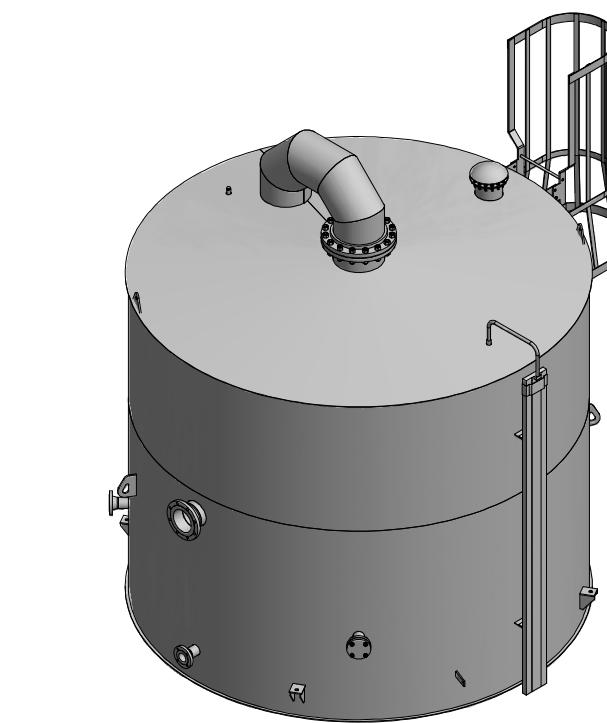


BILL OF MATERIALS

ITEM	QTY	REF.	PART No.	DESCRIPTION	LENGTH	MATERIAL	WEIGHT
1	1	N4	1-000891	3" x CLASS 150 RF BLIND FLG	SA-105-N	10.95	
2	2	N2,N4	1-001297	3" x CLASS 150 RF "CG" GRAPHITE FILLED GASKET	316SS	0.74	
3	8	N2,N4	1-002626	5/8" DIA x 3 1/2" LG STUD	SA-193-B7	2.49	
4	16	N2,N4	1-001867	5/8" DIA HEX NUT	SA-194-2H	2.08	
5	1	N5	1-005972	HAWKEYE MODEL 200 THIEFHATCH SET @16OZ	SA-36	82.62	
6	1	N5	1-004683	1/8" THK x 8" THIEF HATCH GASKET	NEOPRENE	0.18	
7	168	N5, MW	1-001864	1/2" DIA HEX NUT	SA-194-2H	12.05	
8	84	N5	1-002614	1/2" DIA x 2 1/2" LG STUD	SA-193-B7	12.00	
9	1	N6	1-012971	16" x CLASS 150 RF "CG" GRAPHITE FILLED GASKET	316SS	3.80	
10	16	N6	1-002666	1" DIA x 5 1/2" LG STUD	SA-193-B7	20.07	
11	32	N6	1-001876	1" DIA HEX NUT	SA-194-2H	15.08	
12	1	N7	1-006209	TGS-6010 LIQUID LEVEL INDICATOR (10' HIGH TANK)		281.18	
13	1	N8	1-004894	3/4" NPT HEX HEAD PLUG	SA-350-LF2-CL1	0.26	
14	1	-	1-015458	6" x 8" NAMEPLATE	304SS	0.50	
15	1	-	-	TANK WELDED ATTACHMENTS (SEE DRAWING -301)		5974.74	
16	1	MW	1-001256	GASKET:1 3/4" x 1/8" THK PREPUNCHED 2" C TO C	NEOPRENE	0.93	
17	6	LADDER	1-014369	5/8" DIA x 1 3/4" LG STRUCTURAL HEX BOLT, c/w NUT AND WASHER	SA-325	2.43	
18	2	TGS	1-000432	CLIP WIRE ROPE SS 1/8			

6422.09

**ELEVATION VIEW****ORIENTATION VIEW A-A****ISOMETRIC VIEW**

August 18, 2017

STANDARD DWG#: KDA-WA9000-MEC-DTL-BIL-4400-00001



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CHEVRON CANADA LTD.

200BBL POP TANK - TAG#: T-4410
TANK FINAL ASSEMBLY

QUOTE NUMBER:08837	SALE ORDER: 004785
PURCHASE ORDER:0011715840	JOB ORDER:
LOCATION: 03-23 (1130)	SIZE
D3952	D
DATE: 4/06/17	
SHEET: 1 OF 5	REV.
CRN DWG: N/A	
CRN NUMBER: N/A	D3952-101 1

REV	DATE	DESCRIPTION	BY	ENG	PM	APP
0	4/21/17	ISSUED FOR FABRICATION	AMC	VZ	AF	
1	7/24/17	AS-BUILT	AMC	VZ	AF	

GENERAL NOTES:

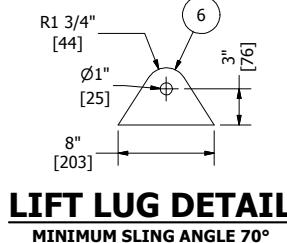
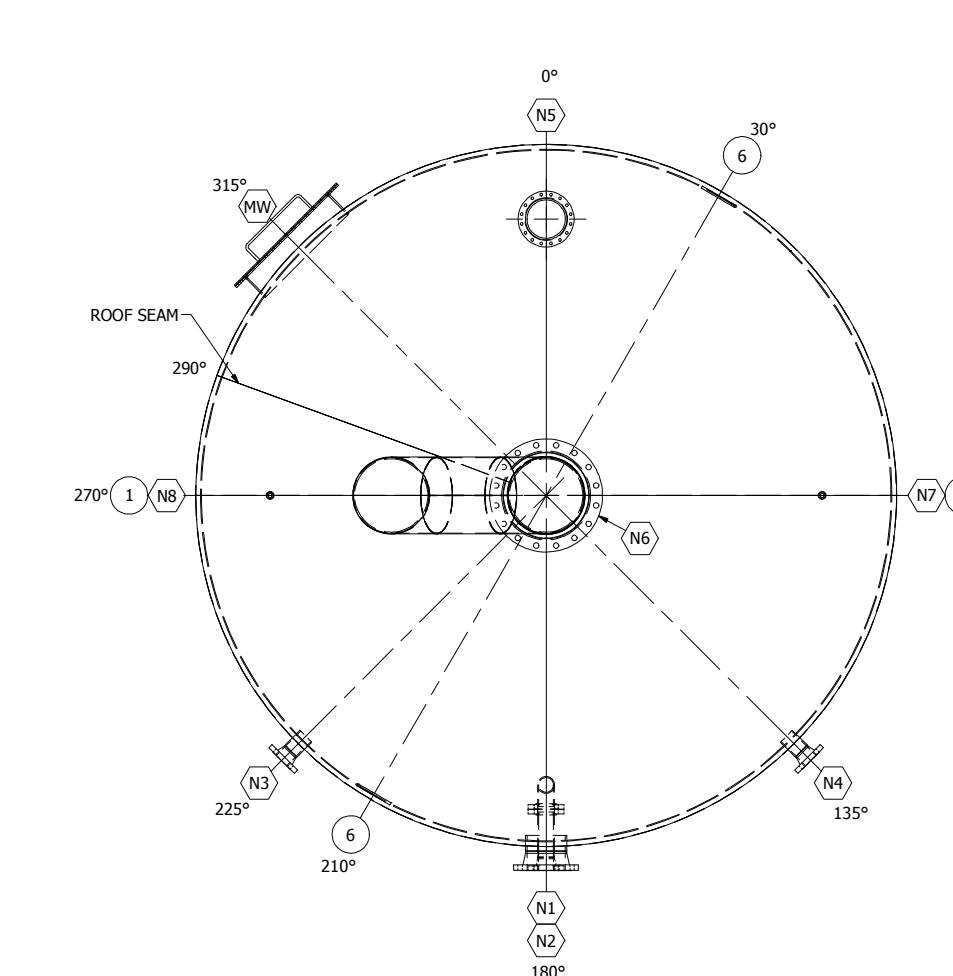
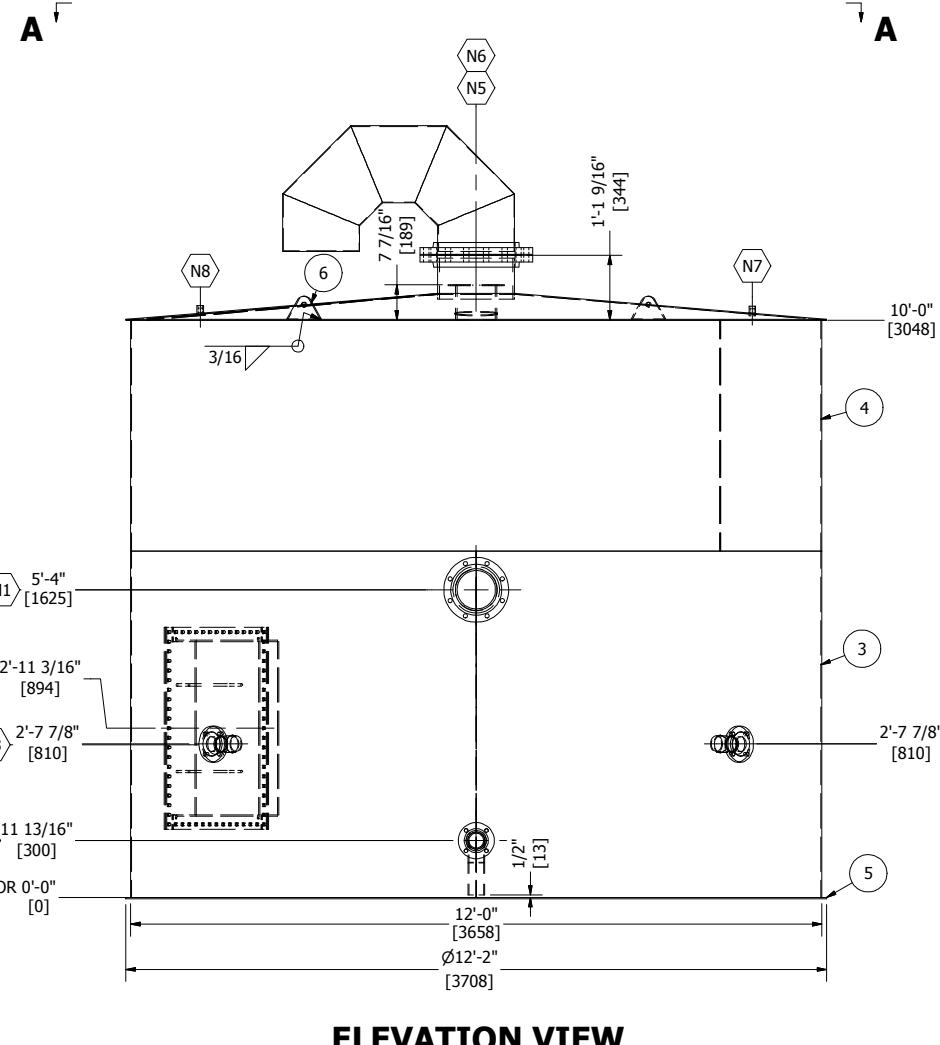
1. DESIGNED TO: API 12F MODIFIED
MPI: 100% FLOOR FILLETS
VACUUM BOX: FLOOR AND ROOF WELDS
HYDROTEST: NIL
AIR/SOAP LEAK TEST: 1.5 PSI
2. TANK SHELL, ROOF AND FLOOR MATERIAL: G40.21-38W
3. FLANGE MATERIAL: SA-350-LF2 CL1
4. PIPE MATERIAL: SA-333-GR6
5. BOLTING MATERIAL: SA193-B7/SA-194-2H
6. EXTERNAL SANDBLAST: SSPC-SP6 (COMMERCIAL)
7. EXTERNAL FINISH:
PRIMER: ONE (1) COAT CARBOGUARD 893
TOPCOAT: ONE (1) COAT CARBOTHANE 134 (COLOUR: QC-8315-TAN)
TOPCOAT EXTERNAL FLOOR: ONE (1) COAT DEVTAR 5A (COLOUR: BLACK)
8. INTERNAL SANDBLAST: NIL
9. INTERNAL FINISH: NIL
10. INSULATION: NIL
11. ALL BOLT HOLES TO STRADDLE CENTERLINE
12. ALL OUTSIDE PROJECTIONS MEASURED ALONG CENTERLINE OF NOZZLE
13. ALL INSIDE PROJECTIONS MEASURED ALONG SHORTSIDE OF NOZZLE
14. SERIAL NUMBER: 17384

NOZZLE SCHEDULE

MARK	QTY	DESCRIPTION	NPS	CLASS	TYPE	IS PROJ	OS PROJ	DETAIL	WELD A	WELD B	REPAD C	REPAD D	BOM
N1	1	INLET	8"	150	RFWN	1"	6"	4	3/16"				1
N2	1	OUTLET	3"	150	RFWN	6"	6"	4	3/16"				1
N3	1	LSHH	3"	150	RFWN	1"	6"	4	3/16"				1
N4	1	SPARE	3"	150	RFWN	1"	6"	4	3/16"				1
N5	1	THIEF HATCH	8"	-	API	1"	6"	4	3/16"				1
N6	1	VENT	16"	150	RFSO	1"	8"	4	3/16"				1
N7	1	LEVEL GAUGE	3/4"	3000	CPLG	1/4"	-	4	3/16"				1
N8	1	SPARE	3/4"	3000	CPLG	1/4"	-	4	3/16"				1
MW	1	MANWAY	24X36	-	API 12F	1/4"	4 1/2"	4	3/16"				1

BILL OF MATERIALS

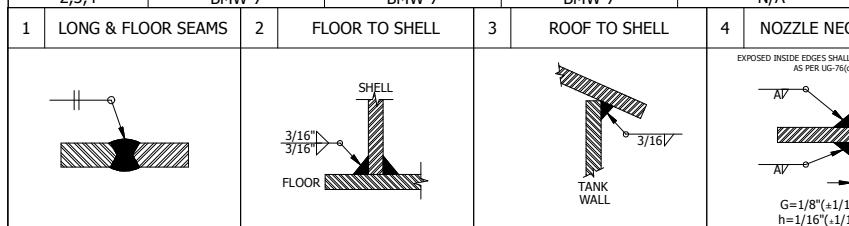
ITEM	QTY	REF.	PART No.	DESCRIPTION	LENGTH	MATERIAL	WEIGHT
1	1	-	-	SHELL NOZZLE ASSEMBLIES (SEE DRAWING -203 FOR DETAILS)			674.61
2	1	ROOF	2-012054/55/56	3/16" THK x 65 1/8" RADIUS HALF CIRCLE (12:1 SLOPE)		G40.21-38W	880.72
3	1	SHELL 1	1-013546	3/16" THK x 72" W x 451-3/4" LG, ROLLED TO 144" OD		G40.21-38W	1733.93
4	1	SHELL 2	1-013543	3/16" THK x 48" W x 451-3/4" LG, ROLLED TO 144" OD		G40.21-38W	1155.95
5	2	FLOOR	2-010482/83/84	1/4" THK x 146" OD (2 PCS)		G40.21-38W	1190.00
6	2	LIFT LUG	2-010473	1/2" THK x 8" W x 4 3/4" LG		SA-516-70N	6.39



PROFESSIONAL ENGINEER
P.E.
Z-HAO
AEC
August 18, 2017

TANK DESIGN SPECIFICATIONS	
DESIGN & FABRICATE TO: API-12F (MODIFIED)	
DESIGN PRESSURE: 6.89 kPag (16 oz) @ 93°C (200°F)	
DESIGN VACUUM: 0.22 kPag (0.5 oz)	CONTENT SPECIFIC GRAVITY: 0.792
MINIMUM DESIGN METAL TEMP: -40°C(-40°F)	STEEL GROUP: N/A
OPERATING PRESSURE: ATM.	CORROSION ALLOWANCE: NIL
SNOW LOAD: N/A	WIND LOAD: N/A
LIVE LOAD: N/A	DEAD LOAD: N/A
SEISMIC: N/A	
WEIGHT EMPTY: 6,400 lbs	WEIGHT FULL: 61,800 LBS
VOLUME: 31.7m³ (1123ft³)	
MODIFIED DESCRIPTION: ANCHOR CHAIRS, NON-FLUSH MANWAY	

REGISTERED WELDING PROCEDURE NUMBER				
WELD DETAIL	ROOT	HOT PASS	FILL AND CAP	GOUGE/BACKWELD
1	BMW-8 OR BWM-39	BMW-8 OR BWM-39	BMW-8 OR BWM-39	GTSM/BMW-8
2,3,4	BMW-39	BMW-39	BMW-39	N/A
2,3,4	BMW-7	BMW-7	BMW-7	N/A



REV	DATE	DESCRIPTION	BY	ENG	PM	APP
0	4/21/17	ISSUED FOR FABRICATION	AMC	VZ	AF	
1	7/24/17	AS-BUILT	AMC	VZ	AF	

BILTON
Welding and Manufacturing Ltd.

BOX 6106
5815 37 Street
INNISFAIL, AB
CANADA
403-227-7799
1-888-227-4923
FAX 227-7796

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CHEVRON CANADA LTD.
200BBL POP TANK - TAG#: T-4410
TANK ASSEMBLY
QUOTE NUMBER: 08837
PURCHASE ORDER: 0011715840
LOCATION: 03-23 (1130)
DATE: 4/06/17
SHEET: 2 OF 5
CRN DWG: N/A
CRN NUMBER: N/A
JOB ORDER: D3952
SIZE D
DRAWING NO.: D3952-201
REV. 1

BILL OF MATERIALS

ITEM	QTY	REF.	PART No.	DESCRIPTION	LENGTH	MATERIAL	WEIGHT (lbs)
1	2	MW	1-000077	1/2" MANWAY HANDLE ASSEMBLY	1'-10"	SA-36	2.54
2	1	MW	2-001854	MANWAY COVER 24" x 36" x 1/4" THK		G40.21-38W	88.08
3	1	MW	1-017434	MANWAY FRAME ASSEMBLY 38W - 24" x 36" x 5/16" THK			92.14
4	1	N1	1-003439	8" PIPE SCH STD/40 (COE,BOE)	3 3/16"	SA-333-GR6	7.62
5	1	N1	1-000992	8" x CLASS 150 RFWN FLG SCH STD		SA-350-LF2	40.60
6	1	N2	1-003422	3" PIPE SCH STD/40 (COE,BOE)	6 11/16"	SA-333-GR6	4.24
7	1	N2	1-003422	3" PIPE SCH STD/40 (COE,BOE)	9 5/16"	SA-333-GR6	5.91
8	2	N2	1-000979	3" x CLASS 150 RFSO FLG		SA-350-LF2	17.09
9	1	N2	1-001327	3" x 90° LR BW ELBOW SCH STD/40		SA-420-WPL6	4.48
10	3	N2,N3,N4	1-001257	3" x CLASS 150 RFWN FLG SCH STD		SA-350-LF2	34.76
11	2	N3,N4	1-003422	3" PIPE SCH STD/40 (COE,BOE)	4 5/16"	SA-333-GR6	5.49
12	1	N5	1-003439	8" PIPE SCH STD/40 (CBE)	7 1/4"	SA-333-GR6	17.28
13	1	N5	2-005091	1/4" THK x 8" THIEF HATCH FLANGE		G40.21-38W	3.11
14	3	N6	2-012057	ERW PIPE 1/8" THK x 16" OD x 20" LG		A-1011	71.06
15	2	N6	2-012058	ERW PIPE 1/8" THK x 16" OD x 12" LG		A-1011	30.77
16	1	N6	1-000782	3/4-9 EXPANDED METAL - FLATTENED x 15 1/2" OD (FOR BIRDSCREEN)		SA-36	7.01
17	2	N6	1-007578	16" x CLASS 150 RFSO FLG		SA-350-LF2	196.66
18	1	N6	1-003746	16" PIPE SCH STD/30 (CBE)	8 9/16"	SA-333-GR6	44.80
19	2	N7,N8	1-000542	3/4" x CL3000 THRD FULL COUPLING		SA-350-LF2	0.97

ELEVATION VIEW

ORIENTATION VIEW A-A

WELD NECK FLANGE **API FLANGE** **SLIP-ON FLANGE**

REGISTERED WELDING PROCEDURE NUMBER

WELD DETAIL	ROOT	HOT PASS	FILL AND CAP	GOUGE/BACKWELD
1,2,3	BMW-39	BMW-39	BMW-39	N/A
1,2,3	BMW-7	BMW-7	BMW-7	N/A

REV DATE DESCRIPTION BY ENG PM APP

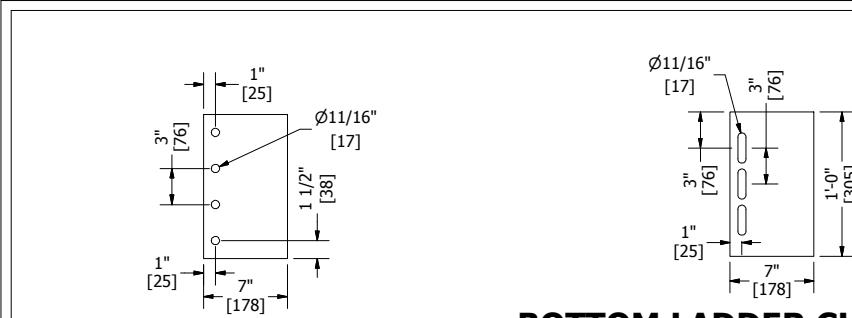
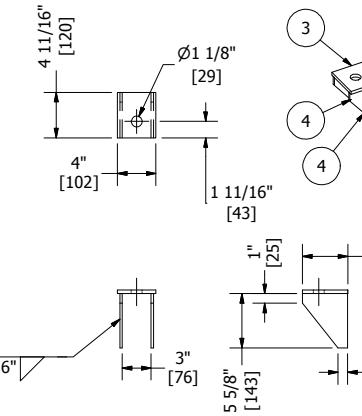
0	4/21/17	ISSUED FOR FABRICATION	AMC	VZ	AF	
1	7/24/17	AS-BUILT	AMC	VZ	AF	

BILTON Welding and Manufacturing Ltd. BOX 6106 5815 37 Street INNISFAIL, AB CANADA 403-227-7799 1-888-227-4923 FAX 227-7795

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CHEVRON CANADA LTD.
200BBL POP TANK - TAG#: T-4410 NOZZLE ASSEMBLY
QUOTE NUMBER: 08837 PURCHASE ORDER: 0011715840 LOCATION: 03-23 (1130)
SALE ORDER: 004785 JOB ORDER: D3952 SIZE D

DATE: 4/06/17 SHEET: 3 OF 5 DRAWING NO.: D3952-203 REV. 1
CRN DWG: N/A CRN NUMBER: N/A

**TOP LADDER CLIP DETAIL****BOTTOM LADDER CLIP DETAIL**OUTSIDE ONLY
TO 1" ABOVE BOTTOM
(TYP)

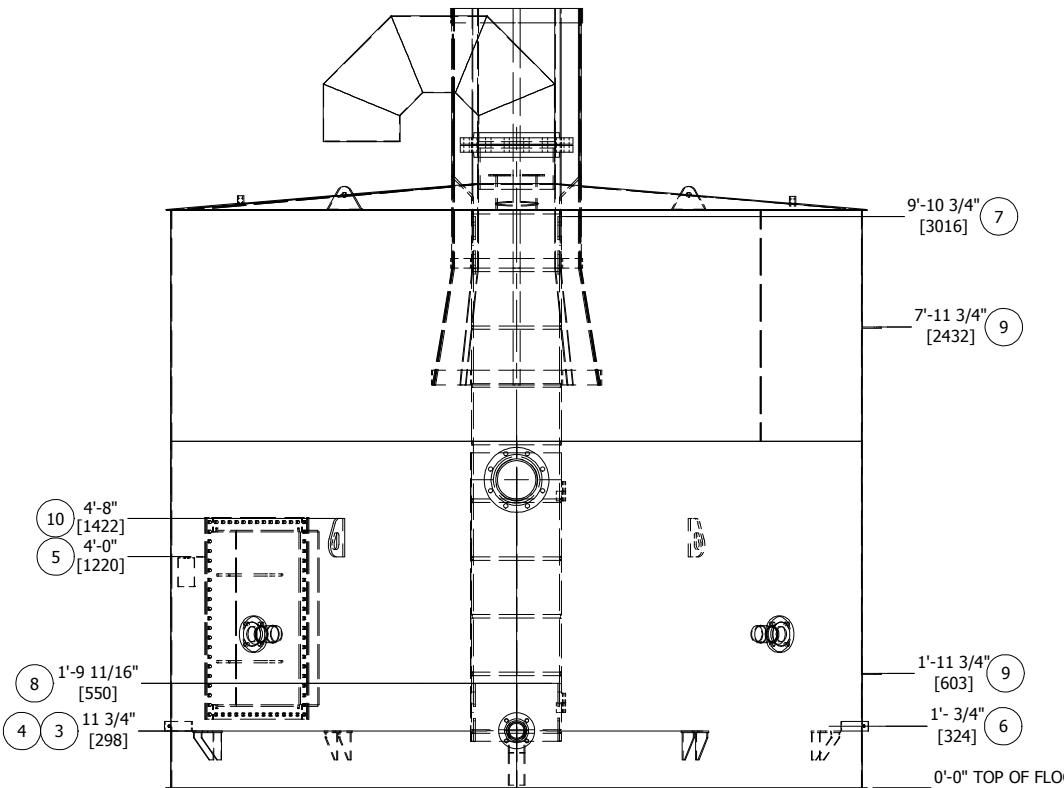
3/16" [76] 3" [76] 1" [25] 4 11/16" [120]

5 5/8" [143] 1" [25]

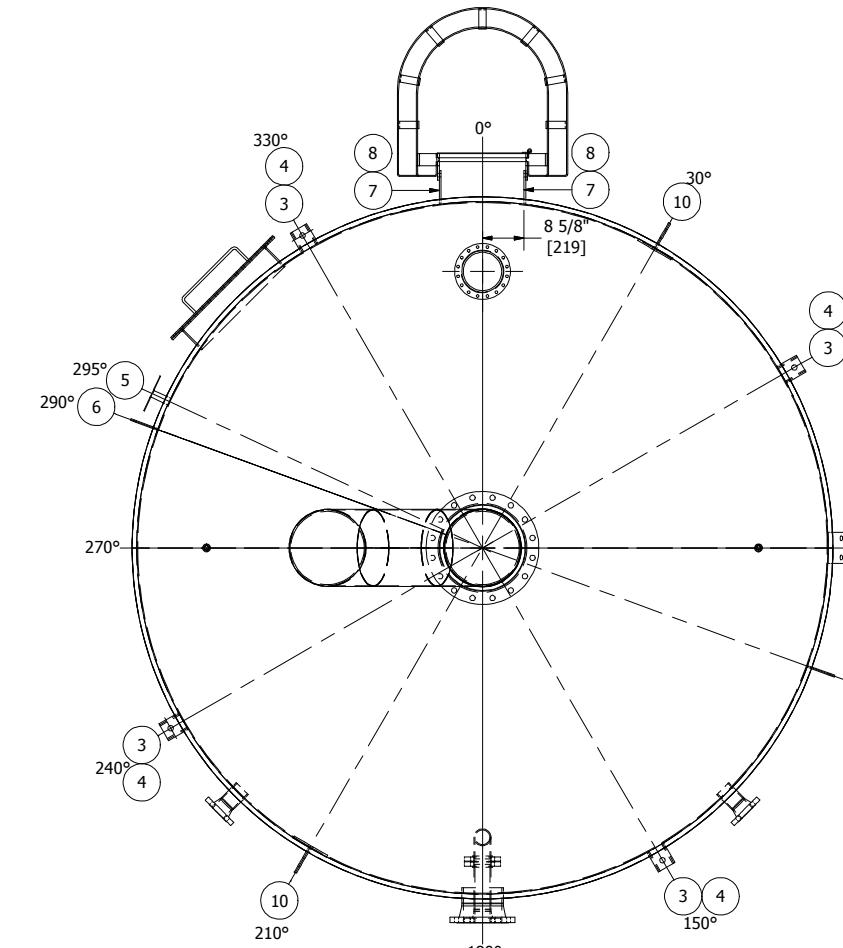
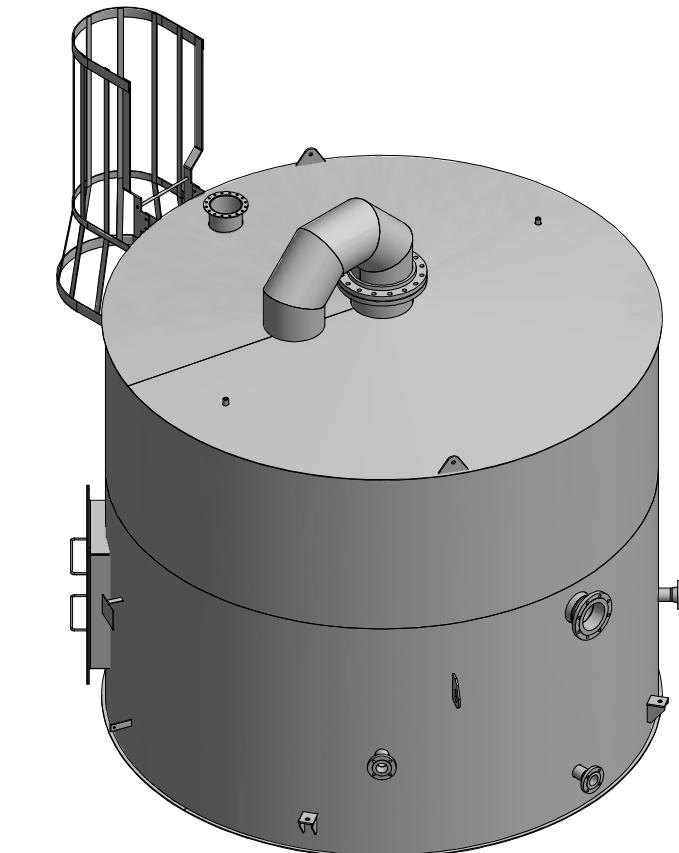
ANCHOR DETAIL

ITEM	QTY	REF.	PART No.	DESCRIPTION	LENGTH	MATERIAL	WEIGHT
1	1	-	-	TANK SHELL AND NOZZLE ASSEMBLY (SEE DRAWING -201 FOR DETAILS)			5636.77
2	1	LADDER	-	LADDER ASSEMBLY (SEE DRAWING-503 FOR DETAILS)			267.60
3	4	ANCHOR	2-005582	3/8" THK x 4" W x 4 11/16" LG	G40.21-38W	7.59	
4	8	ANCHOR	2-005583	1/4" THK x 4 11/16" W x 5 5/8" LG	G40.21-38W	10.17	
5	1	NAMEPLATE	2-000219	6" x 8" NAMEPLATE BRACKET	A-1011	2.07	
6	2	GROUND LUG	2-006876	GROUND LUG 3/8" THK x 2" W x 6" LG w/ HOLE	G40.21-38W	2.52	
7	2	LADDER	2-008388	LADDER CLIP TOP 3/8" THK x 7" W x 12" LG w/ HOLES	G40.21-38W	17.60	
8	2	LADDER	2-008389	LADDER CLIP MID 3/8" THK x 7" W x 12" LG w/ SLOT	G40.21-38W	16.88	
9	2	LEVEL GAUGE	2-008017	GAUGE BOARD TABS 1/4" THK (TEMPLATE #14)	G40.21-38W	3.58	
10	2	TIE DOWN	2-004400	TIE DOWN LUG: 1/2" THK x 8" x 6" (TEMPLATE#8)	G40.21-38W	9.96	

A A

**ELEVATION VIEW**

August 18, 2017

**ORIENTATION VIEW A-A****ISOMETRIC VIEW**

1	ATTACHMENT
3/16"	VESSEL WALL

REGISTERED WELDING PROCEDURE NUMBER				
WELD DETAIL	ROOT	HOT PASS	FILL AND CAP	GOUGE/BACKWELD
1	BMW-39	BMW-39	BMW-39	N/A
1	BMW-7	BMW-7	BMW-7	N/A

REV	DATE	DESCRIPTION	BY	ENG	PM	APP
0	4/21/17	ISSUED FOR FABRICATION	AMC	VZ	AF	
1	7/24/17	AS-BUILT	AMC	VZ	AF	



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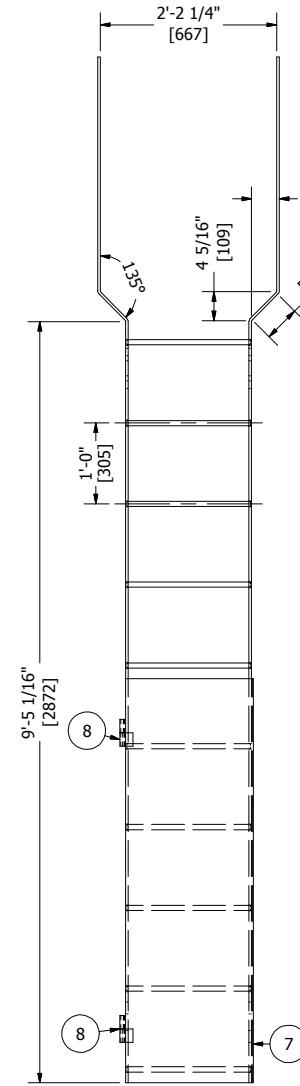
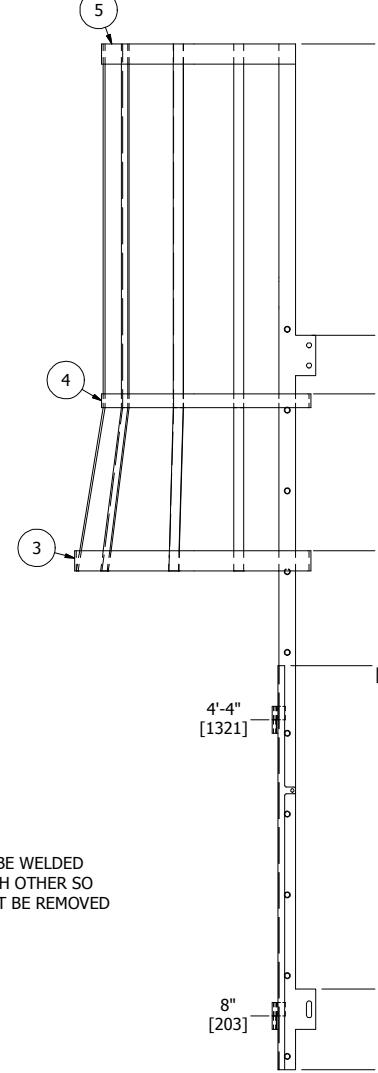
QUOTE NUMBER: 08837
PURCHASE ORDER: 0011715840
LOCATION: 03-23 (1130)
DATE: 4/06/17
SHEET: 4 OF 5
CRN DWG: N/A
CRN NUMBER: N/A

CHEVRON CANADA LTD.200BBL POP TANK - TAG#: T-4410
WELDED ATTACHMENTS

QUOTE NUMBER: 08837	SALE ORDER: 004785
PURCHASE ORDER: 0011715840	JOB ORDER:
LOCATION: 03-23 (1130)	SIZE
DATE: 4/06/17	D
SHEET: 4 OF 5	DRAWING NO.: D3952-301
CRN DWG: N/A	REV. 1
CRN NUMBER: N/A	

BILL OF MATERIALS

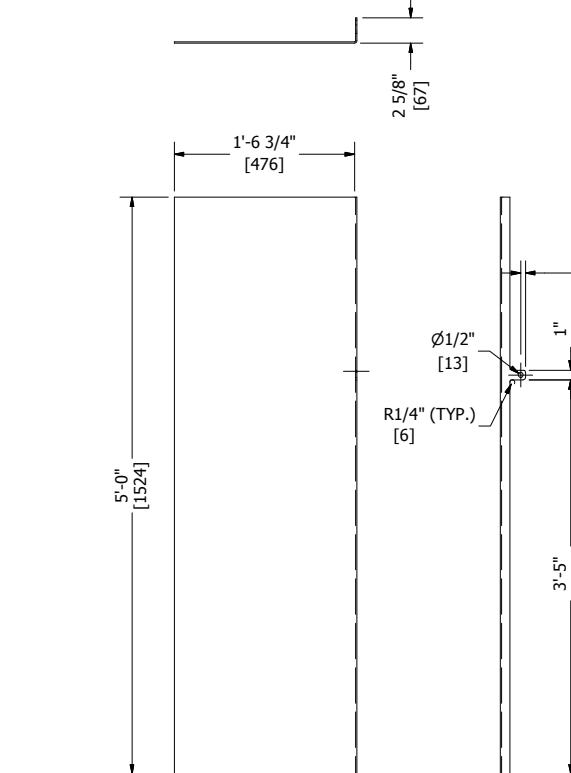
ITEM	QTY	REF.	PART No.	DESCRIPTION	LENGTH	MATERIAL	WEIGHT (lbs)
1	2		2-010474	3/8" THK x 2 1/2" W x 152 3/8" LG		SA-36	87.95
2	10		1-006299	3/4" DIA HR ROUND BAR	1'-6 3/8"	SA-36	23.08
3	1		1-014073	1/4" THK x 3" W BOTTOM LADDER BAND (SEE DETAIL)		SA-36	24.46
4	1		1-014074	1/4" THK x 2" W MID LADDER BAND (SEE DETAIL)		SA-36	13.39
5	1		1-014077	1/4" THK x 3" W TOP LADDER BAND (SEE DETAIL)		SA-36	15.58
6	7		1-001102	1 1/2x1/4 FLAT BAR	6'-6 5/8"	SA-36	58.66
7	1		2-005585	LADDER LOCK OUT PANEL 10GA. THK x 5'-0" LG		A-1011	42.26
8	2		1-015271	HINGE ASSEMBLY FAUCHER 7526032			2.22

**PLAN VIEW****ELEVATION VIEW**

NOTE:
HINGES ARE TO BE WELDED
OPPOSITE TO EACH OTHER SO
THE PANEL CAN NOT BE REMOVED



August 18, 2017



LOCK OUT PANEL DETAIL

ITEM 7

GENERAL NOTES:

1. LADDER CONFORMS TO PIP AND OH&S REQUIREMENTS
2. WELD PROCEDURE: GM-1/MC-1
3. SANDBLAST : SSPC-SP6 (COMMERCIAL)
4. FINISH:
PRIMER: CARBOGUARD 893
TOPCOAT: CARBOthane 134 (COLOUR:TAN)
5. ALL ACCESSIBLE WELDS OR SHARP EDGES ON LADDERS AND STRUCTURAL MEMBERS ARE TO BE GROUND SMOOTH AND CORNERS RADIUSED
6. SEE BWMS-001 FOR WELD DETAILS

REV	DATE	DESCRIPTION	BY	ENG	PM	APP
0	4/21/17	ISSUED FOR FABRICATION	AMC	VZ	AF	
1	7/24/17	AS-BUILT	AMC	VZ	AF	



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CHEVRON CANADA LTD.

200BBL POP TANK - TAG#: T-4410
LADDER ASSEMBLY

QUOTE NUMBER: 08837	SALE ORDER: 004785
PURCHASE ORDER: 0011715840	JOB ORDER:
LOCATION: 03-23 (1130)	D3952 D
DATE: 4/06/17	
SHEET: 5 OF 5	DRAWING NO.: D3952-503
CRN DWG: N/A	REV. 1
CRN NUMBER: N/A	

MADE IN
CANADAINNISFAIL
ALBERTA

CODE: API-12F

SERIAL NO: 17384

NOMINAL DIAMETER: 12' 0"

DESIGN LIQUID LEVEL: 10' 0"

MAXIMUM CAPACITY: 31.7 m³

DESIGN PRESSURE: 6.89 kPag @ 93°C

DESIGN VACUUM: 0.22 kPag

CORROSION ALLOW: NIL

YEAR COMPLETED: 2017

DES. SPEC. GRAVITY: 0.792

DESIGN METAL TEMP: -40°C

MAX DESIGN TEMP: 93°C

TEST: MPI/VACUUM/AIR

NOMINAL HEIGHT: 10' 0"

TAG NO: T-4410

SHELL COURSE:

Primary Floor

Primary Shell

Roof

2ndary Shell

MATERIAL:

G40.21-38W

G40.21-38W

G40.21-38W

G40.21-38W

THICKNESS:

1/4"

3/16"

3/16"

3/16"

INTERNAL COATING:

NIL

EXTERNAL COATING:

CARBOGUARD R93

CARBOTHANE 130 (color: QC-S315-Tan)

FLOOR: DEVTAN 54 (color: Black)