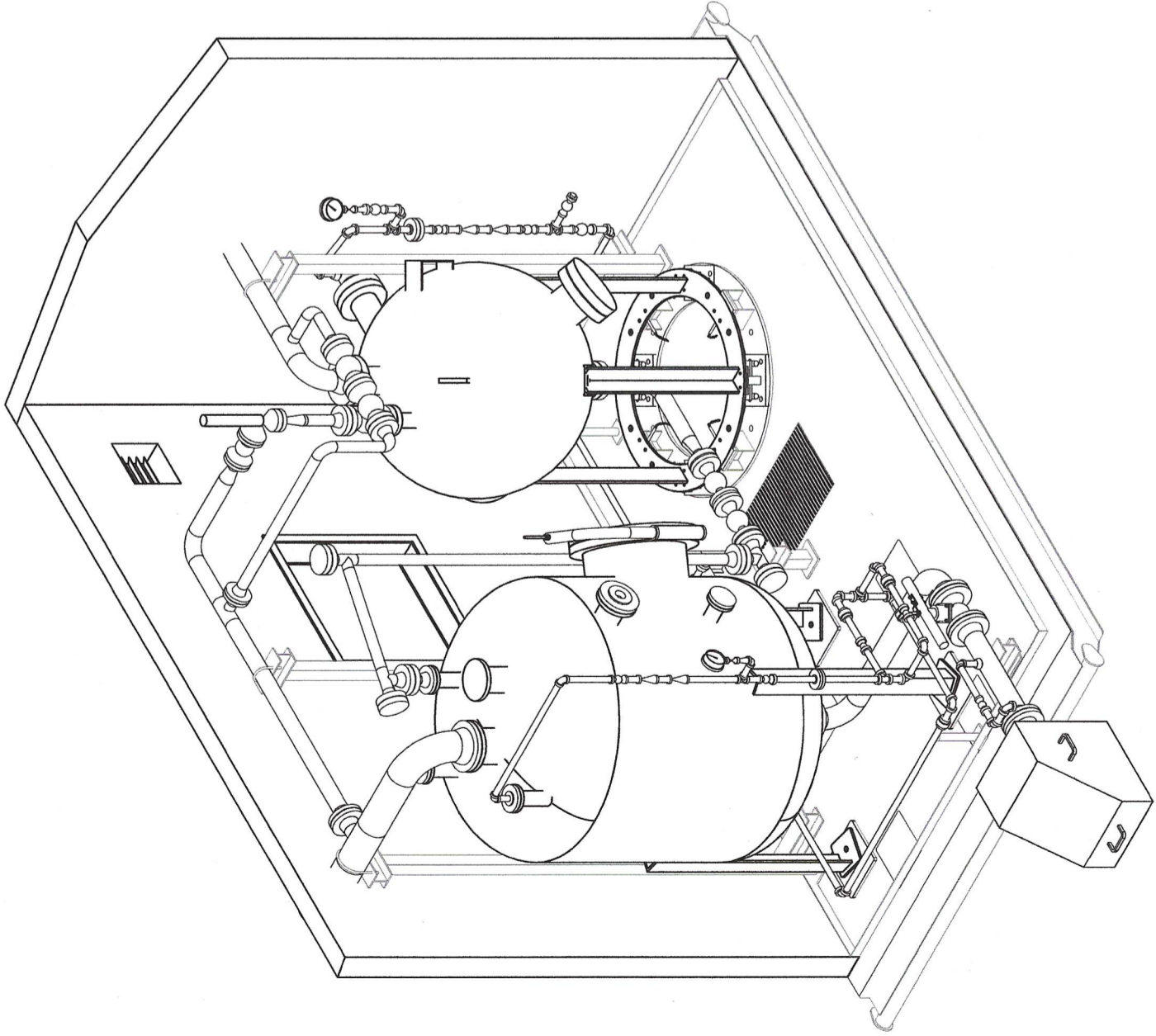




SERIES: Q48SC21-4300
SAND SEPARATOR PACKAGE

48" SOUR, 9701 kPag, CLASS 600
UNITS: Q48SC21-4301 THRU 43010
RE-ISSUED FOR CONSTRUCTION



DRAWING INDEX		
DRAWING NUMBER	REV.	DESCRIPTION
Q48SC21-4301-100/01	6	PIPING AND INSTRUMENTATION DIAGRAM
Q48SC21-4301-LDT	4	LINE DESIGNATION TABLE
Q48SC21-4301-200/01	1	PIPING: ISOMETRIC VIEW
Q48SC21-4301-200/02	1	PIPING: ISOMETRIC VIEW
Q48SC21-4301-200/03	1	PIPING: PLAN
Q48SC21-4301-200/04	1	PIPING ELEVATION: FRONT
Q48SC21-4301-200/05	1	PIPING ELEVATION: RIGHT SIDE
Q48SC21-4301-200/06	0	BUILDING DETAILS: PLANS AND ELEVATIONS
Q48SC21-4301-200/07	0	PIPE SUPPORT DETAILS

PREPARED FOR: KEYWEST / PIPESTONE
PROJECT NUMBER: 18039

DATE: DECEMBER 17, 2018

V-2000 THRU 2900
 V48SC21-1006 THRU 1015
SAND SEPARATOR
 MAKE: CATADYNE WX SERIES
 SIZE: 1219mm I.D.
 MAMP: 9701 kPa
 DESIGN TEMP: -40/70 °C
 SERVICE: SOUR
 CA: 3.2mm

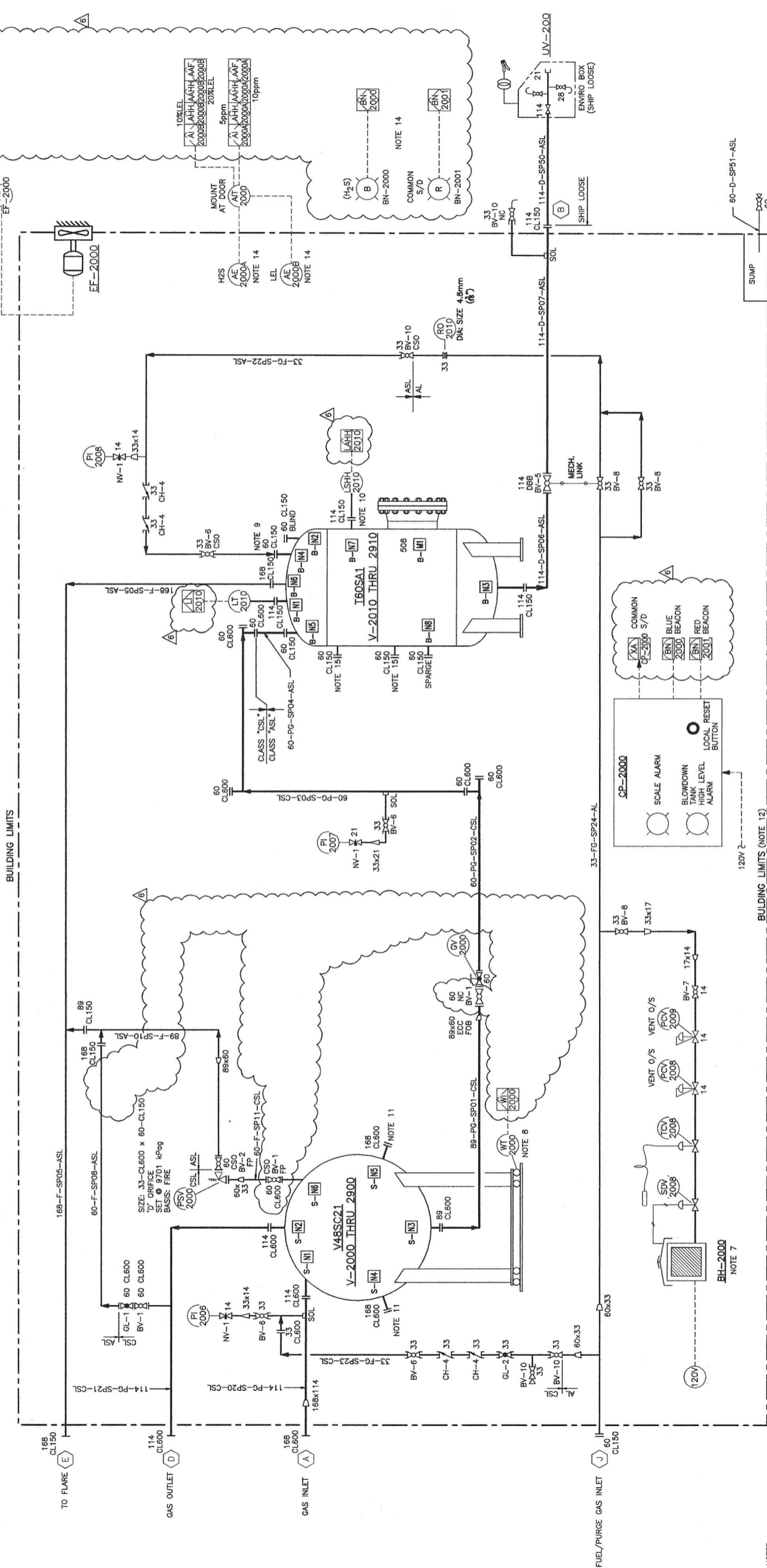
BH-2000
BUILDING HEATER
 MAKE: CATADYNE WX SERIES
 MODEL: WX810x762
 MAX OUTPUT: 25,000 BTU (7.3 kW)
 POWER: 120/240 VAC
 CA: 3.2mm

V-2010 THRU 2910
 I60SA1-0024 THRU 0033
BLOWDOWN TANK
 SIZE: 1524" I.D. x 1219" S/S
 MAMP: 1172 kPa
 DESIGN TEMP: -29/70 °C
 SERVICE: SOUR
 CA: 3.2mm

EF-2000
BUILDING EXHAUST FAN
 MAKE: SOPER
 MODEL: V12XUL/46
 VOLT: 120/240 VAC, 1 PH 60HZ
 HP: 0.19kW, XP

CP-2000
SAND SEPARATOR CONTROL PANEL
 POWER: 120 VAC
 NOTE 16

BUILDING LIMITS



GENERAL NOTES

- PROCESS/SENSING TUBING (GAS) TO BE 21 X 1.2mm W.T. 316SS TUBING.
- PROCESS/SENSING TUBING (HYDRAULIC) TO BE 21 X 1.2mm W.T. 316SS.
- INSTRUMENT LINE TUBING TO BE 17 X 0.89mm W.T. 316SS.
- ALL TUBE FITTINGS TO BE SS (PROCESS/SENSING), SS (INSTRUMENT).
- ALL LOW PRESSURE REGULATORS ON BUILDING HEATERS TO BE VENTED OUTSIDE.
- FUNCTION TEST INSTRUMENTS AND FLANGES THAT NEED TO BE SHIPPED LOOSE AFTER CAN BE REMOVED AND PACKAGED UP.
- HEATER INSTALLATION, TESTING AND COMMISSIONING TO BE IN ACCORDANCE WITH CSA B149.1 AND THE ALBERTA GAS CODE REGULATION (LATEST EDITION).
- FOR FULFILLING THE ABOVE REQUIREMENTS, THE SUPPLIER SHALL PROVIDE:
10. 114-150CL, RF x 60 NPT HUB FLANGE.
11. 168mm INSPECTION NOZZLES.
12. PACKAGE TO COME WITH 2" DRIP LIPS.
13. ALL INSTRUMENTATION TAGS ARE ASSOCIATED WITH SAND SEPARATOR PACKAGE Z-2000 THAT MUST BE MINIMUM 4.5m FROM ANY WINDOWS, DOORS OR OPENINGS.
14. MUST BE MINIMUM 4.5m FROM ANY WINDOWS, DOORS OR OPENINGS.
15. FOR FUTURE POTENTIAL LG CONNECTIONS.
16. PROVIDED COMPLETE WITH PHOENIX CONTACT QUINT SERIES 120VAC-24VDC RECTIFIER.

REF.	DESCRIPTION	DWG. NO.	DATE	CHKD	ENG	APPR.	REVISION DESCRIPTIONS
1	ISSUED FOR CONSTRUCTION		18.08.30	G. WOHLGEMUTH	G. WOHLGEMUTH		
2	RE-ISSUED FOR APPROVAL						
3	RE-ISSUED FOR APPROVAL						
4	RE-ISSUED FOR APPROVAL						

PERMIT TO PRACTICE P 7207
 RHEALINE ENGINEERING INC.
 ASSOCIATION OF PROFESSIONAL ENGINEERS
 AND GEOSCIENTISTS OF ALBERTA

DATE: 17.10.2018
 ENGINEER AND PERMIT STAMPS: G. WOHLGEMUTH
 DATE: 18.08.30
 DRAWN: G. WOHLGEMUTH
 PROJECT NO: 18039
 SCALE: NTS

SANDTINEL TECHNOLOGY INC. - www.sandtinelt.com

SANDTINEL

6002-116 ST Grande Prairie AB, T8V 2P5 CAN. PH: 1-825-559-7283
 "This drawing is prepared solely for the use of the contractual customer of Sandtinel, and Sandtinel assumes no liability to any other party for any representations contained in this drawing."

SERIES: Q48SC21-4300
 SAND SEPARATOR PACKAGE
 48" SOUR, 1407 PSI, CLASS 600
 PIPING AND INSTRUMENTATION DIAGRAM
 UNIT: Q48SC21-4301 THRU 43010

LINE DESIGNATION				INSULATION		OPERATING CONDITIONS				DESIGN SPECIFICATION				FLUID				PIPE				REFERENCE P&ID(s)		LINE ROUTING		REMARKS		REV.
SIZE	COMM.	LINE #	SPEC.	THICK.	TYPE																							
NORMAL		UPSET	DESIGN CONDITIONS		PRESS. TEST		PHASE	NORMAL FLOW RATE			TRACING TEMP. (°C)	SCH OR THICK.	INT. COAT	X-RAY (%)	PWHT	OTHER NDT	FROM	TO	REV.									
PRESS. (kPa)	TEMP. (°C)	PRESS. (kPa)	TEMP. (°C)	PRESS. (kPa)	TEMP. (°C)	CODE		PRESS. (kPa)	MED.	GAS (m³/d)										OIL (m³/d)	WATER (m³/d)							
89	PG	SP01	CSL			9701	70	9701	70	B31.3	15038	H20			No	100	No	Note 3	Q48SC21-4301-100/01	V48SC21 Drain (S-N3)	SP02	Note 1	4					
60	PG	SP02	CSL			9701	70	9701	70	B31.3	15038	H20			No	100	No	Note 3	Q48SC21-4301-100/01	SP01	SP03	Note 1	4					
60	PG	SP03	CSL			9701	70	9701	70	B31.3	15038	H20			No	100	No	Note 3	Q48SC21-4301-100/01	SP02	SP04	Note 1	4					
60	PG	SP04	ASL			1860	70	1860	70	B31.3	2883	H20			No	100	No	Note 3	Q48SC21-4301-100/01	SP03	T60SA1 Inlet (B-N5)	Note 1	4					
168	F	SP05	ASL			1172	70	1172	70	B31.3	1820	H20			No	100	No	Note 3	Q48SC21-4301-100/01	T60SA1 Gas Outlet (B-N6)	Flare (E)	Note 1	4					
114	D	SP06	ASL			1172	70	1172	70	B31.3	1820	H20			No	100	No	Note 3	Q48SC21-4301-100/01	T60SA1 Drain (B-N3)	SP07	Note 1	4					
114	D	SP07	ASL			1172	70	1172	70	B31.3	1820	H20			No	100	No	Note 3	Q48SC21-4301-100/01	SP06	SP50	Note 1	4					
60	F	SP08	ASL			1172	70	1172	70	B31.3	1820	H20			No	100	No	Note 3	Q48SC21-4301-100/01	SP21	SP10	Note 1	4					
89	F	SP10	ASL			1172	70	1172	70	B31.3	1820	H20			No	100	No	Note 3	Q48SC21-4301-100/01	PSV-2000	SP05	Note 1	4					
60	F	SP11	CSL			9701	70	9701	70	B31.3	15038	H20			No	100	No	Note 3	Q48SC21-4301-100/01	V48SC21 PSV (S-N6)	PSV-2000	Note 1	4					
114	PG	SP20	CSL			9701	70	9701	70	B31.3	15038	H20			No	100	No	Note 3	Q48SC21-4301-100/01	Gas Inlet (A)	V48SC21 Inlet (S-N1)	Note 1	4					
114	PG	SP21	CSL			9701	70	9701	70	B31.3	15038	H20			No	100	No	Note 3	Q48SC21-4301-100/01	V48SC21 Outlet (S-N2)	Gas Outlet (D)	Note 1	4					
33	FG	SP22	ASL			1900	70	1900	70	B31.3	2945	H20			No	100	No	Note 3	Q48SC21-4301-100/01	SP24	T60SA1 Fuel Gas Inlet (B-N4)	Note 1	4					
33	FG	SP23	CSL			9701	70	9701	70	B31.3	15038	H20			No	100	No	Note 3	Q48SC21-4301-100/01	SP24	SP20	Note 1	4					
33	FG	SP24	AL			1900	54	1900	54	B31.3	2945	H20			No	10	No	Note 4	Q48SC21-4301-100/01	Fuel Gas Inlet (J)	SP22	Note 2	4					
114	D	SP50	ASL			1172	70	1172	70	B31.3	1820	H20			No	100	No	Note 3	Q48SC21-4301-100/01	SP07	ENVIROBOX (UV-200)	Note 1	4					
60	D	SP51	ASL			ATM	AMB	ATM	AMB	B31.3					No	100	No	Note 3	Q48SC21-4301-100/01	Sump	Drain	Note 1	4					

PERMIT TO PRACTICE P 7207
RHEAUME ENGINEERING INC
ASSOCIATION OF PROFESSIONAL ENGINEERS
AND GEOLOGISTS OF ALBERTA



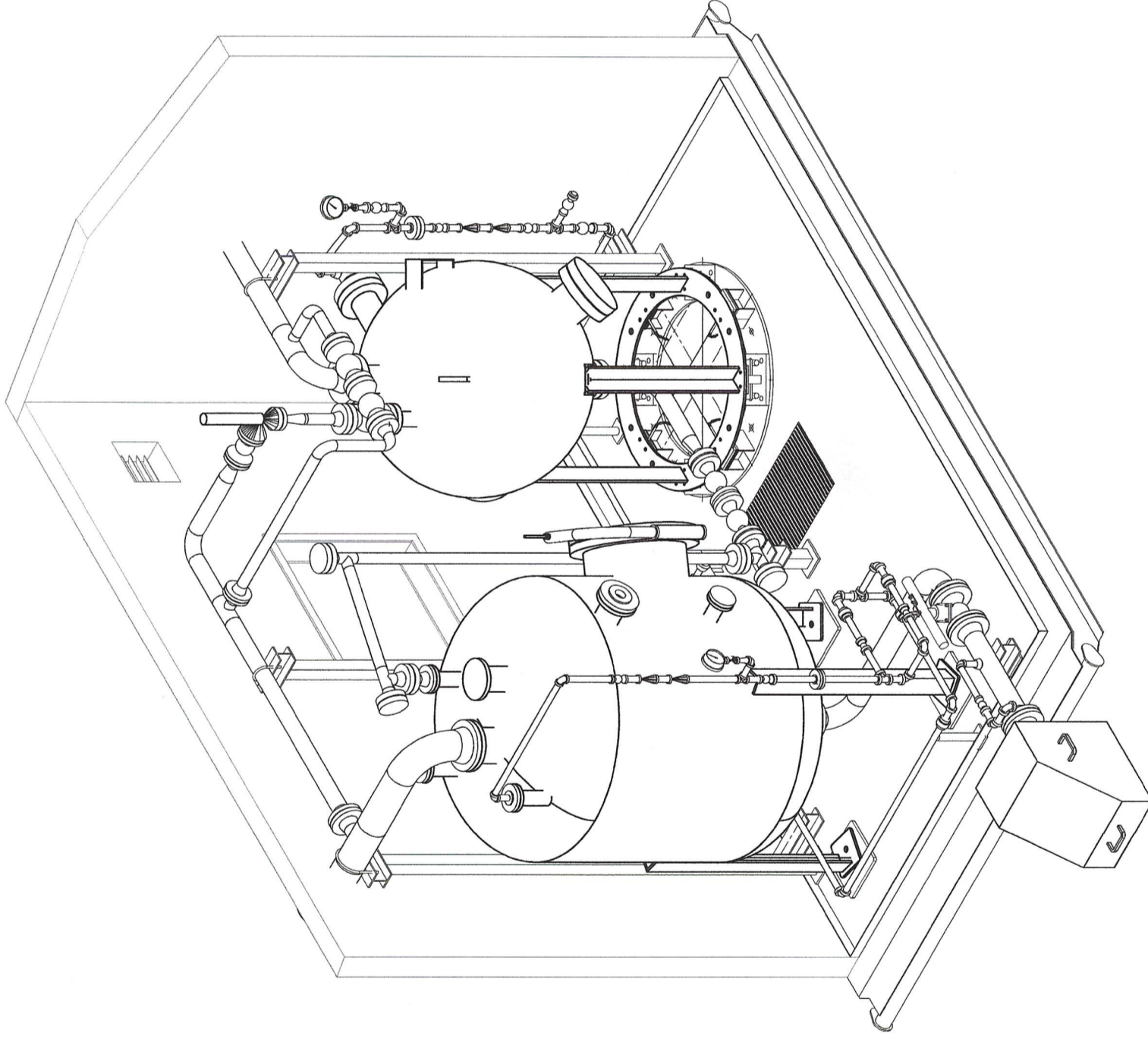
NOTES:
1. Corrosion allowance = 3.2mm
2. Corrosion allowance = 1.6mm
3. Random hardness test on minimum 10% of process piping welds in lieu of PWHT
4. Socket weld: 5% RT + 100% MT

REV	DESCRIPTION	DATE	BY	QA/QC	DATE
4	Re-ISSUED FOR CONSTRUCTION	17-Dec-18	GDW	GDW	
3	ISSUED FOR CONSTRUCTION	29-Nov-18	DB	GDW	
2	RE-ISSUED FOR APPROVAL	27-Nov-18	GDW	GP	14-Nov-18
1	RE-ISSUED FOR APPROVAL	14-Nov-18	DB	GDW	14-Nov-18
0	ISSUED FOR APPROVAL	1-Nov-18	DB	GDW	14-Nov-18

TITLE:
SANDTINEL TECHNOLOGY INC.
UNIT: Q48SC21-4301 THRU -43010

SANDTINEL

PROJECT NO. **18039** DOCUMENT NO. **Q48SC21-4301-LDT**



ISOMETRIC VIEW
NTS

REF.	REFERENCE DRAWING NUMBER	DESCRIPTION	DWG. TYPE	NO.	BY	DATE	CHKD	ENG	APPR.	REVISION DESCRIPTIONS
1	048SC21-4301-100/01	P&ID			JJP	18.12.14	KR	GDW		RE-ISSUED FOR CONSTRUCTION
0					JJP	18.12.07	KR	GDW		ISSUED FOR CONSTRUCTION
1	048SC21-4301-4301				JJP	18.11.29	GDW	GDW		ISSUED FOR APPROVAL

PERMIT TO PRACTICE P 7207
 RHEALIME ENGINEERING INC.
 ASSOCIATION OF PROFESSIONAL ENGINEERS
 AND GEOLOGISTS OF ALBERTA

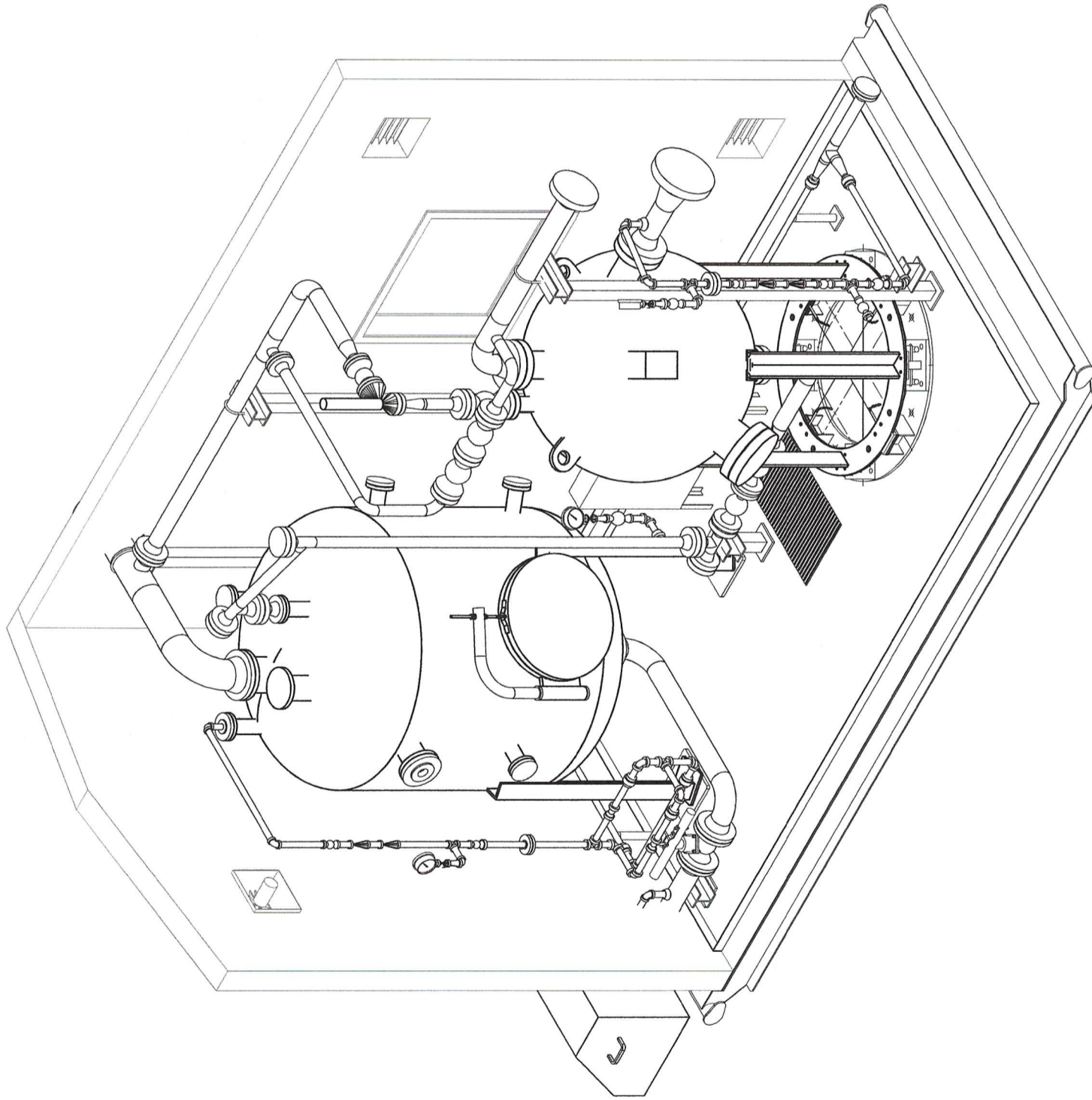
PROJECT No: 18039
 SCALE: AS SHOWN
 CRN No: -
 DATE: 18.11.29
 DRAWN: G. PHILLIPS
 ENGINEER AND PERMIT STAMPS
 DATE: 18.11.29
 PROJ. ENR: G. WOHLGEUTH

SANDTINEL TECHNOLOGY INC. - www.sandtinel.com

 8602-115 ST Grande Prairie AB, T8V 2P5 CAN. Pkt 1-985-539-7983
 *This drawing is prepared solely for the use of the contracted customer of Sandtinel, and Sandtinel
 assumes no liability to any other party for any representations contained in this drawing.
 FAB/SERIAL No: -
 PROJECT No: 18039

SERIES: Q48SC21-4300
 SAND SEPARATOR PACKAGE
 48" SOUR, 1407 PSI, CLASS 600
 UNIT: Q48SC21-4301 THRU 43010
 Q48SC21-4301-200/01
 REV. 1

CAD FILE: C:\Users\Greg_Phillips\Desktop\Greg's Work Folder\Sandtinel\Sandtinel Q48SC21-4301 to 43010



ISOMETRIC VIEW
NTS

NO	DESCRIPTION	BY	DATE	CHK	ENG	APPR.
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0	ISSUED FOR CONSTRUCTION	JGP	18.12.07	KR	GDW	
A	ISSUED FOR APPROVAL	JGP	18.11.28	GDW	GDW	
	DWG TYPE					
	REFERENCE DRAWING NUMBER					
	DESCRIPTION					



PERMIT TO PRACTICE P 7207
RHEAUME ENGINEERING INC.
ASSOCIATION OF PROFESSIONAL ENGINEERS
AND GEOSCIENTISTS OF ALBERTA

PROJ. MGR.: G. WOHLGENUTH
PROJ. ENG.: G. WOHLGENUTH
DATE: 18.11.28
DRAWN: G. WOHLGENUTH
DATE: 18.11.28

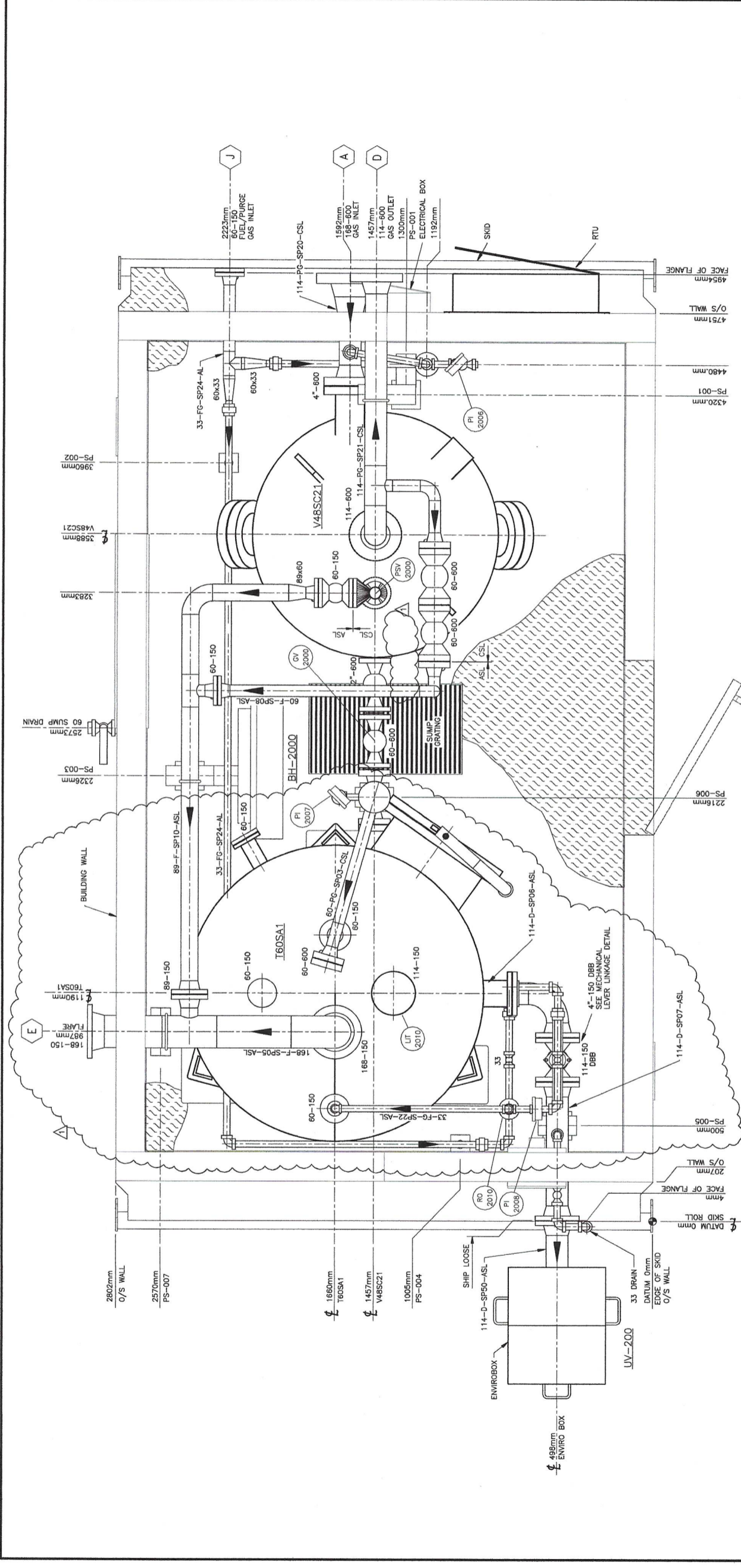
SANDTINEL TECHNOLOGY INC. - www.sandtinel.com



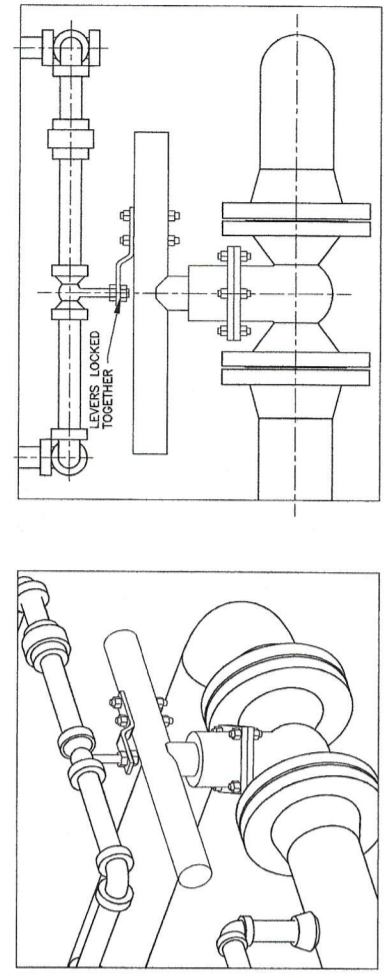
8502-115 ST Grande Prairie AB T8V 2P5 CAN PH: 1-888-539-7263
*This drawing is prepared solely for the use of the contracted customer of Sandtinel and Sandtinel
assumes no liability for any other party for any representations contained in this drawing.

PROJECT No: 18039
SCALE: AS SHOWN
CRN No: -
FAB/SERIAL No: -
DWG. No: Q48SC21-4301-200/02

SERIES: Q48SC21-4300
SAND SEPARATOR PACKAGE
48" SOUR, 1407 PSI, CLASS 600
UNIT: Q48SC21-4301 THRU 43010
PIPING ISOMETRIC VIEW
REV. 1



PIPING PLAN
SCALE 1:10



MECHANICAL LEVER LINKAGE DETAIL

NO	DATE	CHK	ENG	APPR.	REVISION DESCRIPTIONS
3	18.12.14	JGP	KR	GDW	RE-ISSUED FOR CONSTRUCTION
2	18.12.07	JGP	KR	GDW	ISSUED FOR CONSTRUCTION
1	18.11.29	JGP	GDW	GDW	ISSUED FOR APPROVAL
REF.					REFERENCE DRAWING NUMBER - DESCRIPTION

PERMIT TO PRACTICE P 7207
RHEAUME ENGINEERING INC.
 ASSOCIATION OF PROFESSIONAL ENGINEERS AND GEOSCIENTISTS OF ALBERTA

PROFESSIONAL ENGINEER ALBERTA
 G. WOHLGEMUTH
 REG. NO. 18039

DATE: 18.11.29
 PROJECT NO.: 18039
 SCALE: AS SHOWN
 DATE: 18.11.29
 DRAWN: G. WOHLGEMUTH
 DATE: 18.11.29
 ENGINEER AND PERMIT STAMPS: G. WOHLGEMUTH

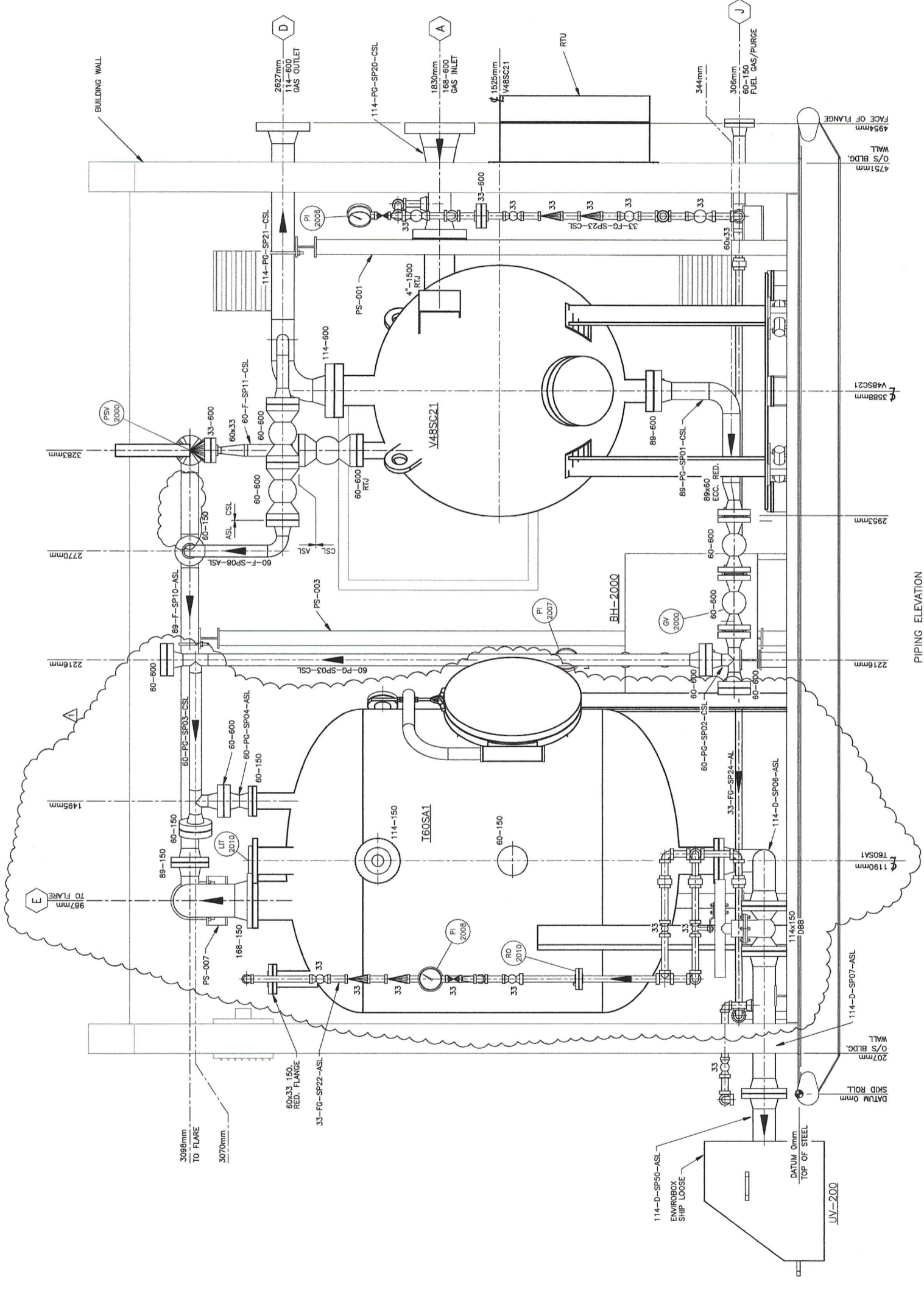
SANDTINEL
 SANDTINEL TECHNOLOGY INC. - www.sandtinell.com

SERIES: Q48SC21-4300
 SAND SEPARATOR PACKAGE
 48" SOUR, 1407 PSI, CLASS 600

UNIT: Q48SC21-4301 THRU 43010
 PIPING PLAN
 Q48SC21-4301-200/03

5502-115 ST Grande Prairie AB, T8V 9P6 CAN. PH: 1-833-539-7263
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DWG. NO.: 1



SANDTINEL
SANDTINEL TECHNOLOGY INC. - www.sandtinel.com

SANDTINEL
8502-115 ST Grande Prairie AB, T6V 2P5 CAN. PH: 1-883-539-7283
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SERIES: Q48SC21-4300
SAND SEPARATOR PACKAGE
48" SOUR, 1407 PSI, CLASS 600
PIPING ELEVATION: FRONT
UNIT: Q48SC21-4301 THRU 43010

PROJECT No:	18039	SCALE:	AS SHOWN	COR No:	-	FAB/SERIAL No:	-	DWG. No:	Q48SC21-4301-200/04	REV.	1
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PERMIT TO PRACTICE P 7207
RHEAUME ENGINEERING INC.
ASSOCIATION OF PROFESSIONAL ENGINEERS
AND GEOSCIENTISTS OF ALBERTA

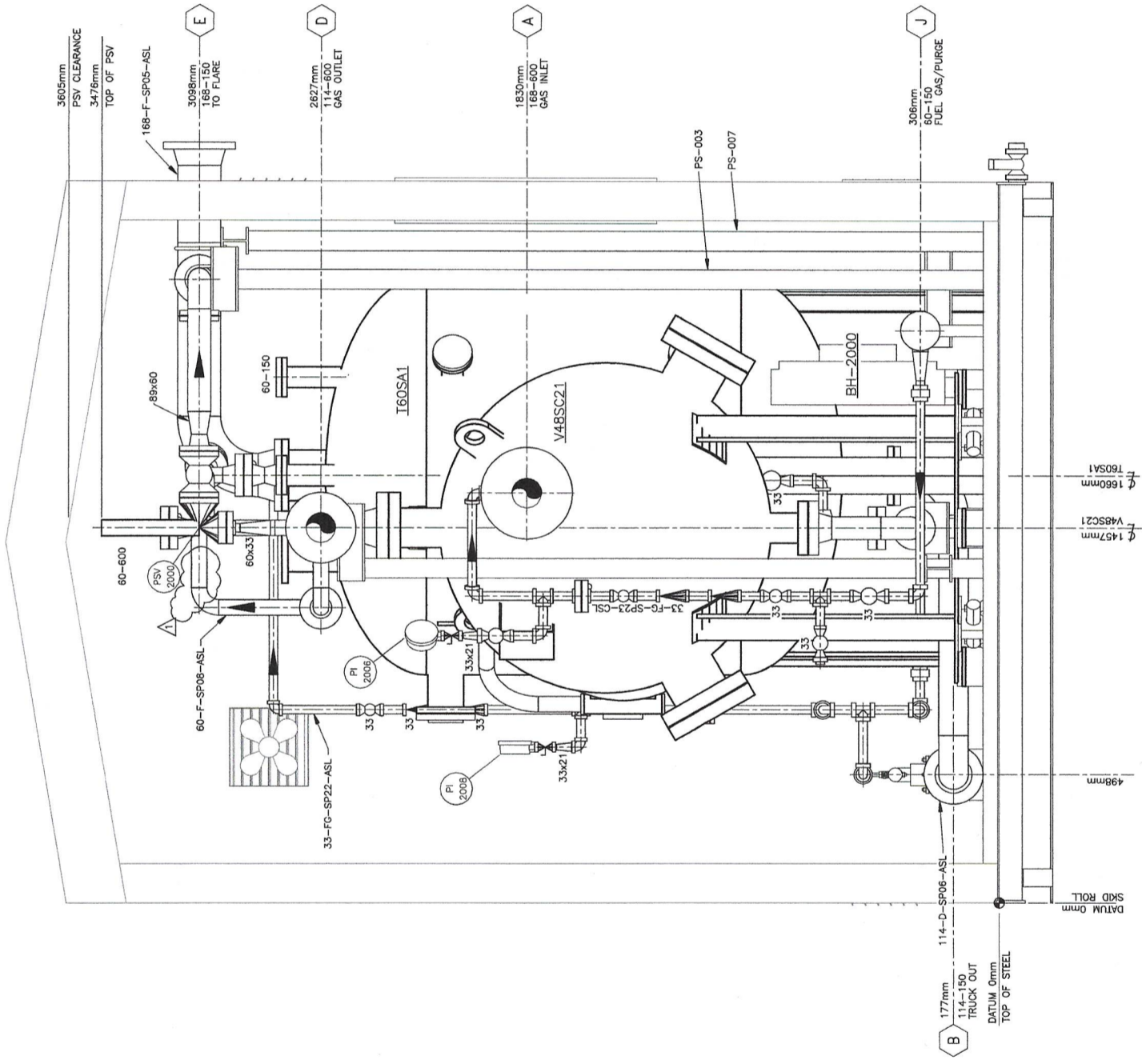
PROFESSIONAL ENGINEER
GEOFFREY W. PHILLIPS
18 FEB 2008

PROJ. WORK:	DATE:	PROJ. ENG.:	DATE:	DRAWN:	DATE:	ENGINEER AND PERMIT STAMPS
114-D-SP06-ASL	18.11.30	G. WOHLGEMUTH	18.11.30	G. PHILLIPS	18.11.30	

NO	DATE	CHK	ENG	APPR.	REVISION DESCRIPTIONS
1	18.12.14	KR	GDW		RE-ISSUED FOR CONSTRUCTION
2	18.12.07	KR	GDW		ISSUED FOR CONSTRUCTION
3	18.11.30	GDW	GDW		ISSUED FOR APPROVAL

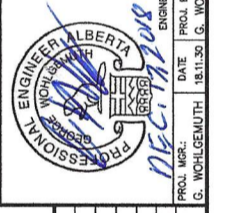
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1	SAN-TYP-ST05-02	STRUCUTURAL	1
2	Q48SC21-4301-300/01 - 05	STRUCUTURAL	0
3	Q48SC21-4301-100/01	PAID	A

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PIPING RIGHT SIDE ELEVATION
SCALE 1:10

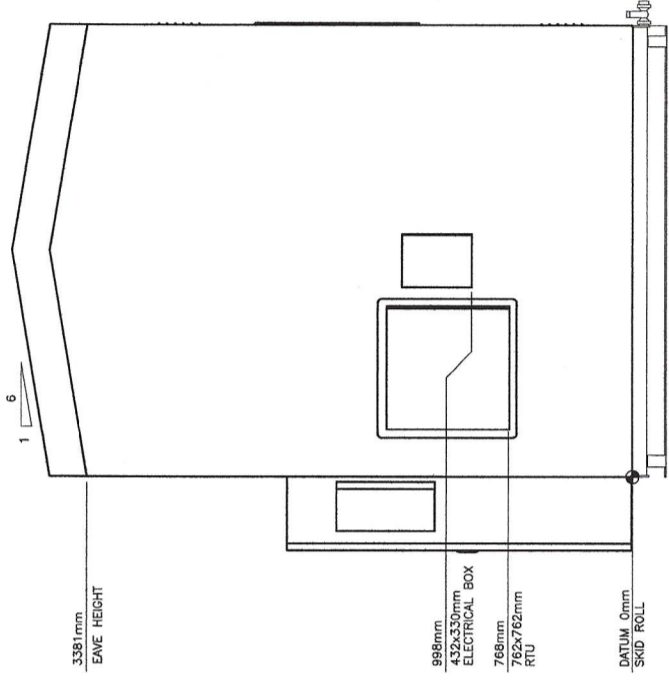
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2	Q48SC21-4301-300/01 - 05	STRUCTURAL	18.12.07	JGP	KR	GDW	
1	Q48SC21-4301-100/01	P&ID	18.11.30	JGP	GDW	GDW	
		DWG TYPE					
		NO					



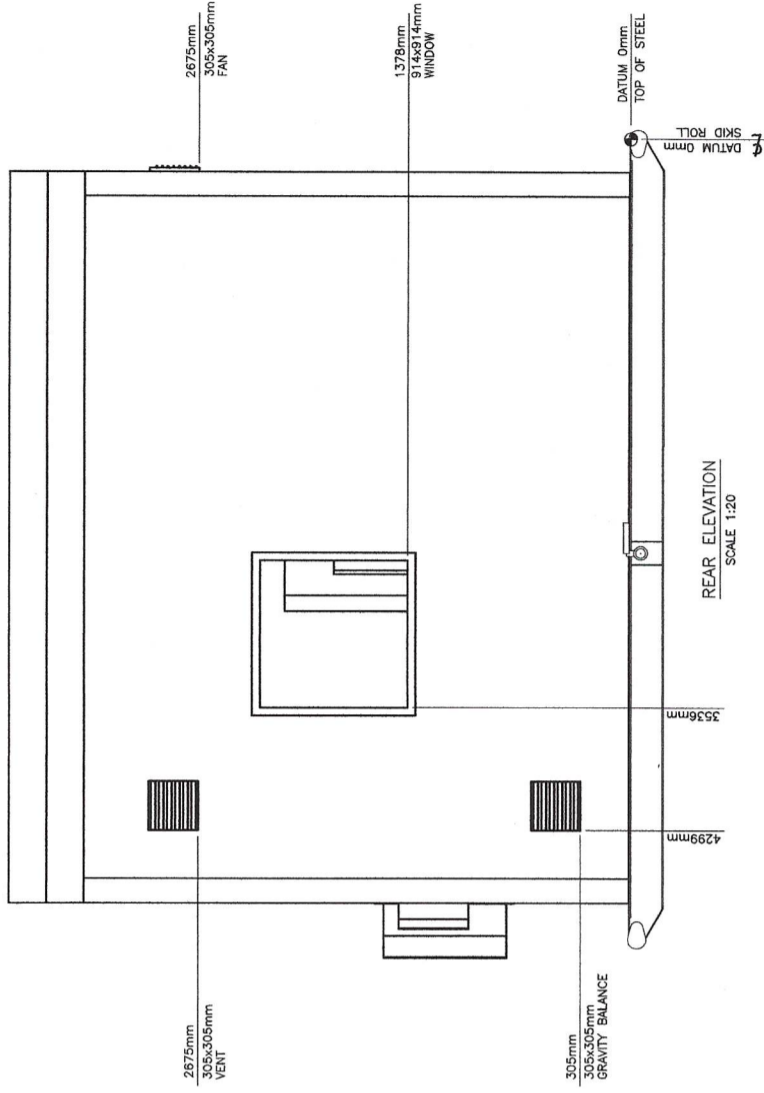
PERMIT TO PRACTICE P 7207
RHEAUME ENGINEERING INC.
 ASSOCIATION OF PROFESSIONAL ENGINEERS
 AND GEOSCIENTISTS OF ALBERTA

SANDTINEL
 SANDTINEL TECHNOLOGY INC. - www.sandtinel.com
 8502-115 ST. Grande Prairie AB, T8V 2P5 CAN. PH: 1-833-539-7283
 This drawing is prepared solely for the use of the contractual customer of Sandtinel, and Sandtinel assumes no liability to any other party for any representations contained in this drawing.

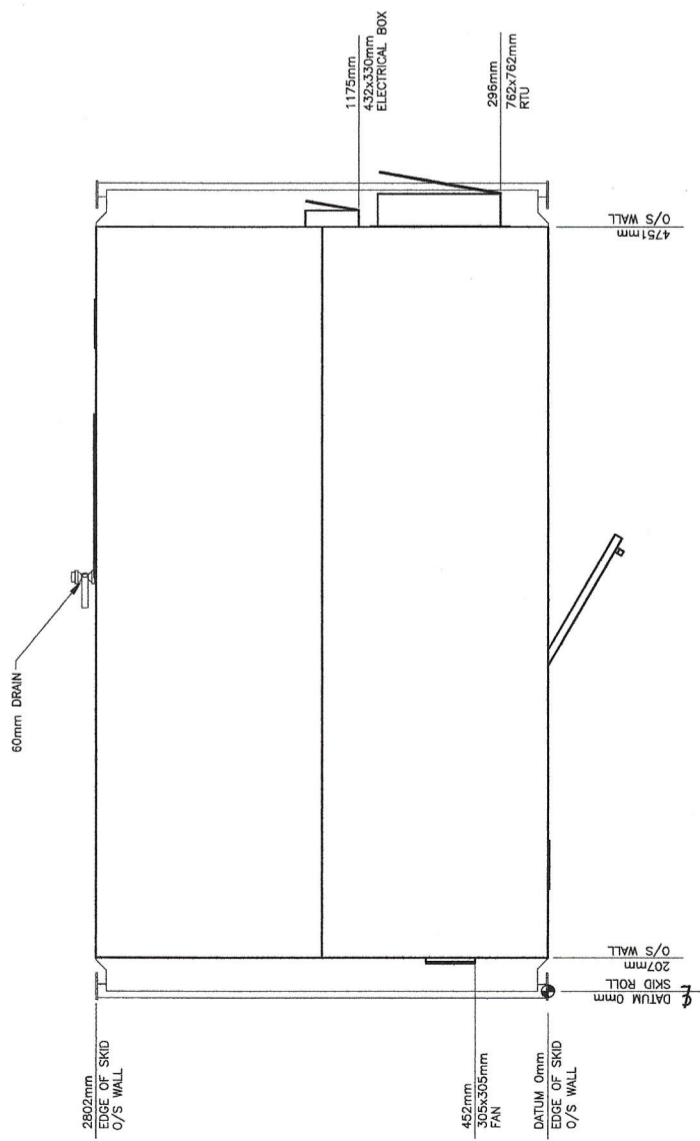
SERIES: Q48SC21-4300
 SAND SEPARATOR PACKAGE
 48" SOUR, 1407 PSI, CLASS 600
 PIPING ELEVATION: RIGHT SIDE
 UNIT: Q48SC21-4301 THRU 43010
 Q48SC21-4301-200/05



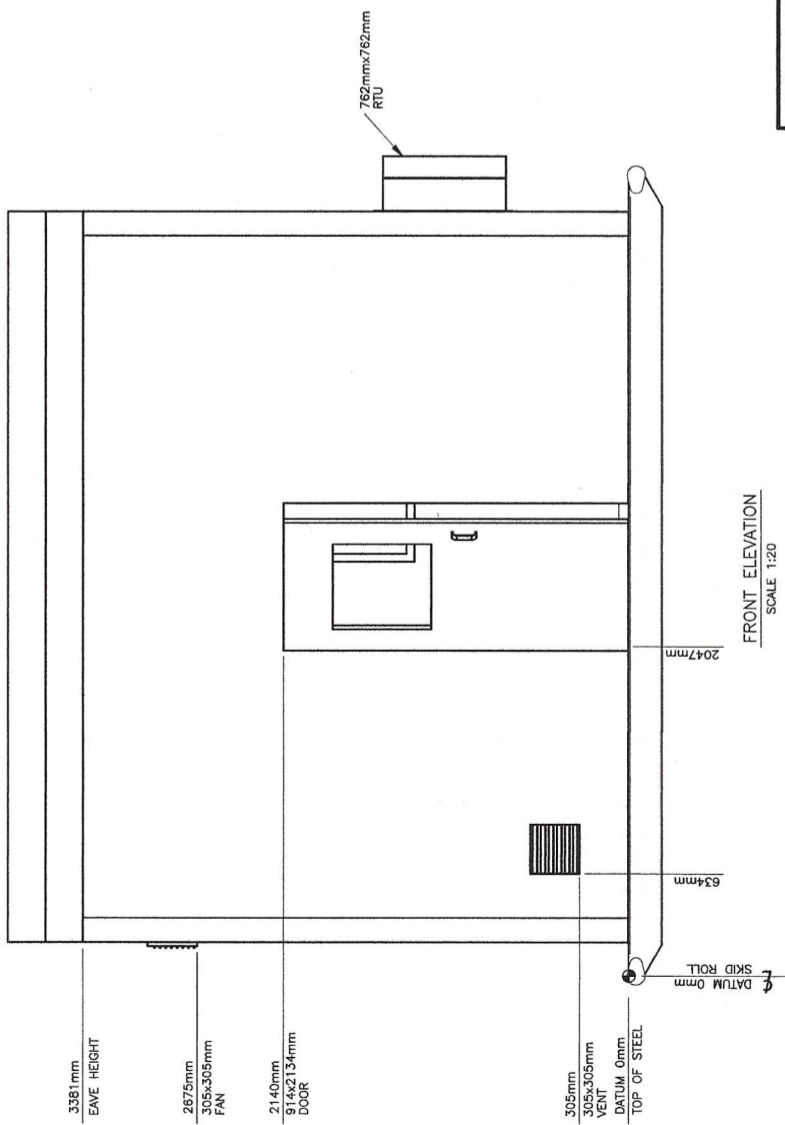
RIGHT SIDE ELEVATION
SCALE 1:20



REAR ELEVATION
SCALE 1:20



PLAN
SCALE 1:20



FRONT ELEVATION
SCALE 1:20

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8502-115 ST Grande Prairie AB, T6V 2P5 CAN. PH: 1-855-539-7263
 This drawing is prepared solely for the use of the contractual customer of Sandtinel and Sandtinel assumes no liability to any other party for any representations contained in this drawing.

SERIES: Q48SC21-4300
 SAND SEPARATOR PACKAGE
 48" SOUR, 1407 PSI, CLASS 600
 BUILDING DETAILS
 PLAN AND ELEVATIONS
 UNIT: Q48SC21-4301 THRU 43010

PERMIT TO PRACTICE P 7207
 RHEAUME ENGINEERING INC.
 ASSOCIATION OF PROFESSIONAL ENGINEERS
 AND GEOSCIENTISTS OF ALBERTA

PROJ. WGR: G. WOHLGEMUTH | 18.12.03 | G. WOHLGEMUTH | 18.12.03 | G. PHILLIPS | 18.12.03
 ENGINEER AND PERMIT STAMPS
 DATE | PROJ. ENG. | DATE | DRAWN: | DATE | DATE
 18.12.03 | G. WOHLGEMUTH | 18.12.03 | G. PHILLIPS | 18.12.03 | G. PHILLIPS | 18.12.03

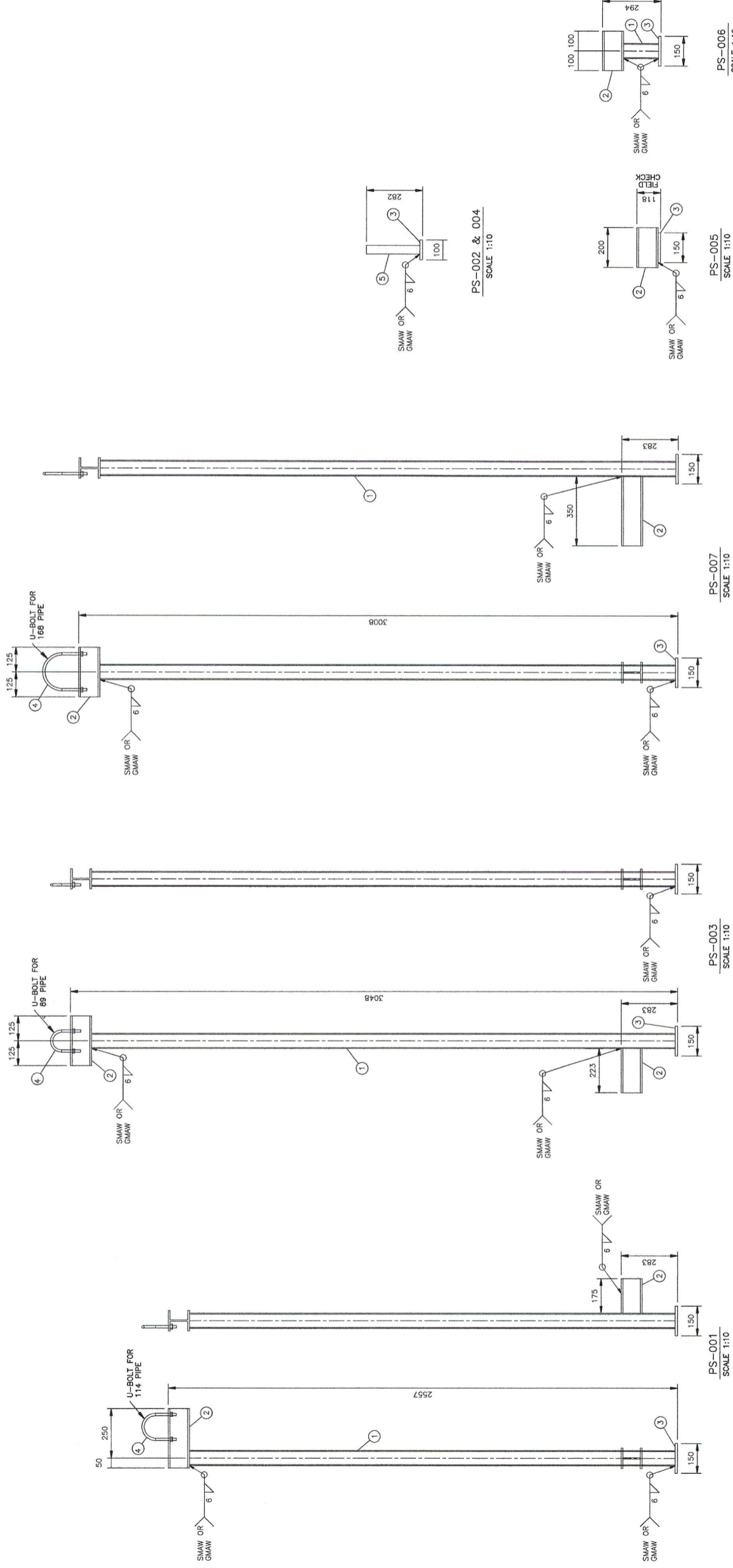
REV.	REFERENCE DRAWING NUMBER	DESCRIPTION	DATE	BY	CHK	ENG	APPR.	
3	SAN-TYP-S1805-02	STRUCTURAL	0	ISSUED FOR CONSTRUCTION	JGP	18.12.14	KR	GDW
2	Q48SC21-4301-300/01 - 05	STRUCTURAL	0	ISSUED FOR APPROVAL	JGP	18.12.03	GDW	GDW
0	Q48SC21-4301-100/01	P&ID	A	ISSUED FOR APPROVAL	JGP	18.12.03	GDW	GDW
0	Q48SC21-4301-100/01	P&ID	A	ISSUED FOR APPROVAL	JGP	18.12.03	GDW	GDW



REF. DESCRIPTION

DWG. No: Q48SC21-4301-200/06
 DWG. No: Q48SC21-4301-200/06
 REV. 0

CAD FILE: C:\Users\Greg_Phillips\Desktop\Greg's Work Folder\Sandtinel\Sandtinel Q48SC21-4301 to 43010

BILL OF MATERIAL		
ITEM	DESCRIPTION	MATERIAL
1	H5767/6X4.8	A992-50/350W
2	W100X19	A992-50/350W
3	12 PLATE	A786/260W
4	U-BOLTS	-
5	33 PIPE	-
6		



		PERMIT TO PRACTICE P 7207 RHEAUME ENGINEERING INC. ASSOCIATION OF PROFESSIONAL ENGINEERS AND GEOSCIENTISTS OF ALBERTA	
PROJ. MGR:	G. WOHLGEMUTH	DATE:	18.12.04
ENGINEER AND PERMIT STAMPS:		DATE:	18.12.04
PROJ. ENG.:	G. WOHLGEMUTH	DATE:	18.12.04
DRAWN:	G. PHILLIPS	DATE:	18.12.04
SCALE:	AS SHOWN	CRI No:	
PROJECT No:	18039	FAB/SERIAL No:	
SANDTINEL TECHNOLOGY INC. - www.sandtinel.com 		SERIES: Q48SC21-4300 SAND SEPARATOR PACKAGE 48" SOUR, 1407 PSI, CLASS 600 PIPE SUPPORT DETAILS UNIT: Q48SC21-4301 THRU 43010	
8602-115 ST Grade Profile Jib, TBV 2PS, CMA, Ph1-983-539-7283 *This drawing is provided solely for the use of the contracted customer and Sandtinel assumes no liability for any other party for any reproduction without the written consent.		DWG. No: Q48SC21-4301-200/07 REV. 0	

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