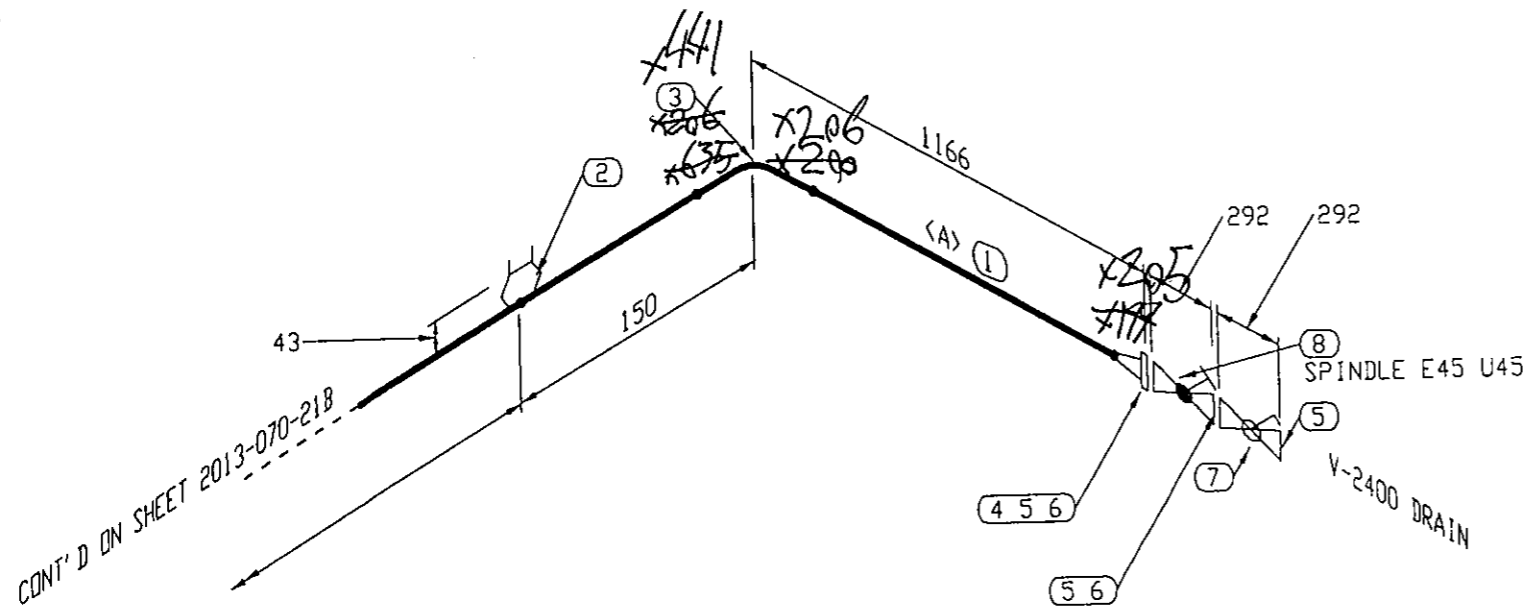


BILL OF MATERIAL

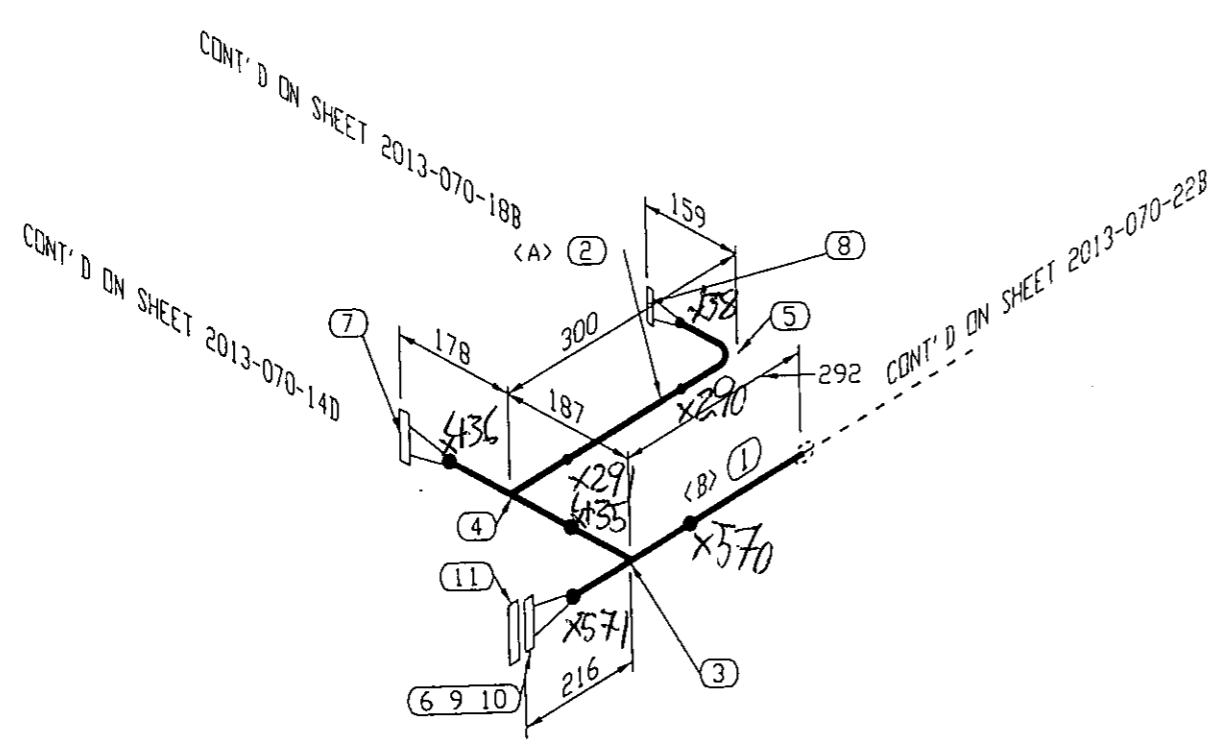
MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	1125 MM	8.5
2	2X1/2	THREDLET, CL3000, A105N	1	0.2
3	2	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	1	0.9
4	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	5.5
5	2	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	3	3.0
6	5/8X108	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	2	2.0
7	2	VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N	1	20.0
8	2	VALVE, GLOBE, RF, NACE, CLASS 600, ASME, A105N	1	40.9
TOTAL FABRICATION WEIGHT				80.7



CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	1004	2

PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687				CUSTOMER: PENNWEST EXPLORATION		
PIPE SPEC.: CS	WELD PROC.: CADO-5					UNIT NO.: 2013-070-601		
DESIGN PRESS.: 9376 KPAG	RADIOGRAPHY: 100%	MODEL: 4-WELL SEPARATOR SKID (BU-2000)						
DESIGN TEMP.: 90 DEG. C	PWHT: N/A	LOCATION:						
DMPT: -29 DEG. C	PICKLE & OIL: N/A	LINE TAG: V-2400 DRAIN						
C.A.: 1.6 mm	SANDBLAST: SP-6	DRAWING NO.: 070-21A						
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC	REV. 0
TEST MEDIA: WATER	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR	



BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	184 MM	4.1
2	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	141 MM	1.1
3	4X3	TEE, RED, BW, SCH. 80, A234 GR WPB	1	4.9
4	3X2	TEE, RED, BW, SCH. 80, A234 GR WPB	1	2.2
5	2	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	1	0.9
6	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	19.1
7	3	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	10.5
8	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	5.5
9	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
10	7/8X146	 STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
11	4	FLANGE, RF, BLIND, CL600, A105N DRILL AND TAP 1/2" NPT OFF CENTER 1 1/2"	1	18.6
TOTAL FABRICATION WEIGHT				68.6

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	141	2
	184	4

PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION, PIPE SPEC.: CS WELD PROC.: CADO-5 DESIGN PRESS.: 9376 KPAC RADIOGRAPHY: 100% DESIGN TEMP.: 90 DEG. C PWHT: N/A MDMT: -29 DEG. C PICKLE & OIL: N/A C.A.: 1.6 mm SANDBLAST: SP-6 TEST PRESS.: 14064 KPAC PAINT: WARM GREY TEST MEDIA: WATER INSULATION: N/A		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687				CUSTOMER: PENNWEST EXPLORATION UNIT NO.: 2013-070-601 MODEL: 4-WELL SEPARATOR SKID (BU-2000) LOCATION: LINE TAG: WATER OUTLET HEADER DRAWING NO.: 070-22A		REV. 0
		NO. REVISION 0 ISSUED FOR CONSTRUCTION		11/10/2013	AP	WC	WC	
				DATE	BY	CHK	APR	

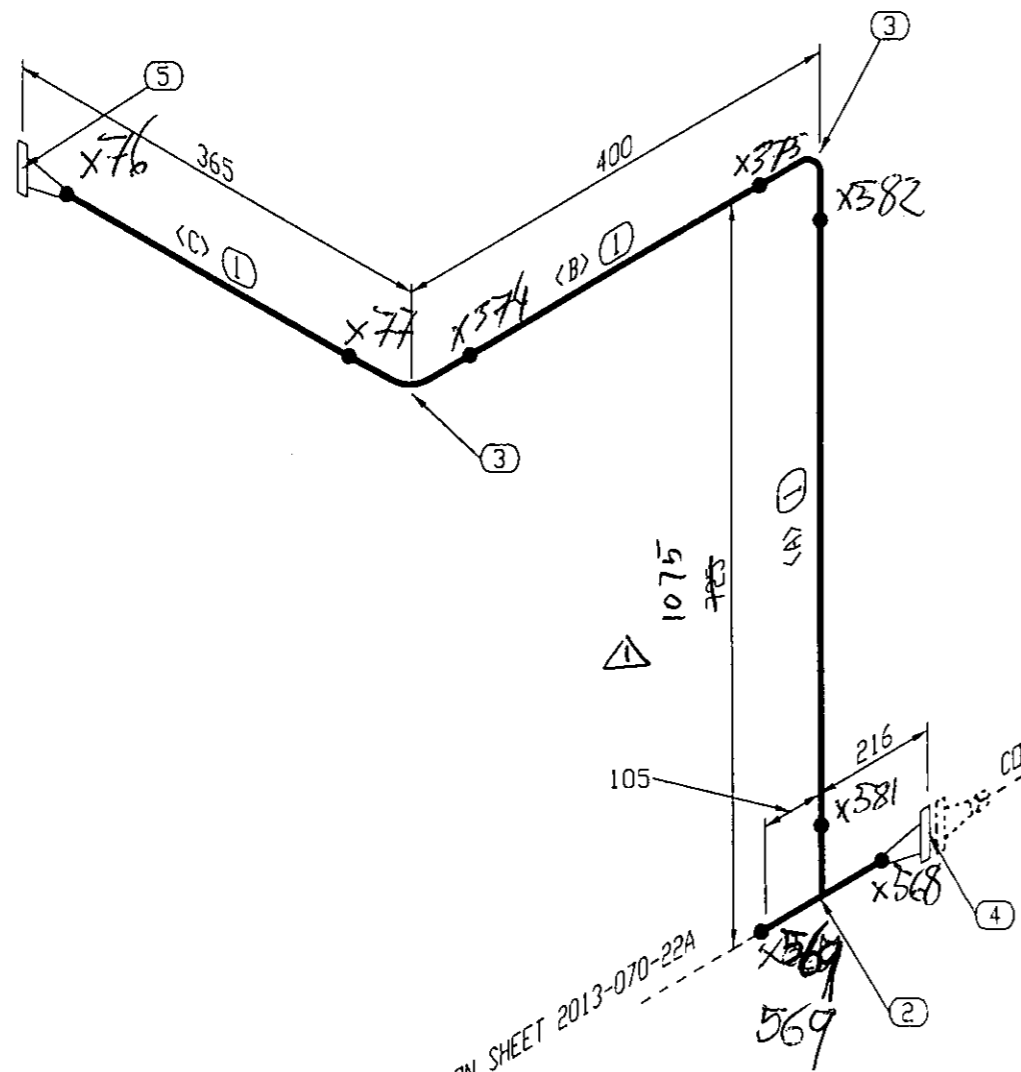
BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	3	PIPE, SMLS, BW, SCH. 80, A106 GR B	992 MM	11.2
2	4X3	TEE, RED, BW, SCH. 80, A234 GR WPB	1	4.9
3	3	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	2	4.1
4	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	19.1
5	3	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	10.5
TOTAL FABRICATION WEIGHT				49.6

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)	
<A>	507	3	⚠
	165	3	
<C>	155	3	

CONT'D ON SHEET
2013-070-100



CONT'D ON SHEET 2013-070-22A

CONT'D ON SHEET 2013-070-22C

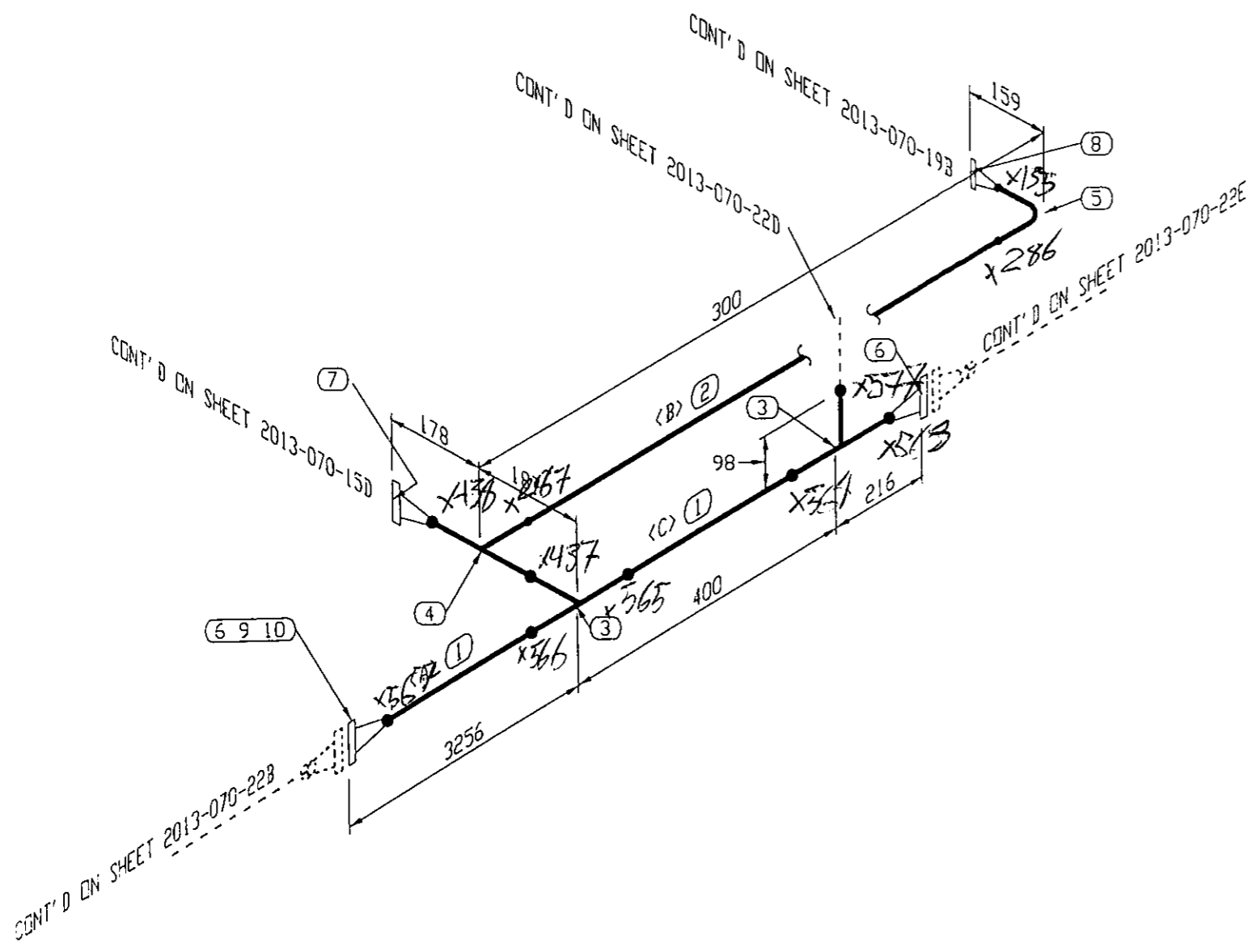
PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687				CUSTOMER: PENNWEST EXPLORATION	
PIPE SPEC.: CS	WELD PROC.: CADO-5					UNIT NO.: 2013-070-601	
DESIGN PRESS.: 9376 KPAC	RADIOGRAPHY: 100%					MODEL: 4-WELL SEPARATOR SKID (BU-2000)	
DESIGN TEMP.: 90 DEG. C	PWHT: N/A					LOCATION:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: WATER OUTLET HEADER	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-223	
TEST PRESS.: 14064 KPAC	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WATER	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	3221 MM	71.9
2	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	141 MM	1.1
3	4X3	TEE, RED, BW, SCH. 80, A234 GR WPB	2	9.8
4	3X2	TEE, RED, BW, SCH. 80, A234 GR WPB	1	2.2
5	2	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	1	0.9
6	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1
7	3	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	10.5
8	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	5.5
9	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
10	7/8X145	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
TOTAL FABRICATION WEIGHT				141.6

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	3037	4
	141	2
<C>	184	4



PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,	
PIPE SPEC.: CS	WELD PROC.: CADO-5
DESIGN PRESS.: 9376 KPAC	RADIOGRAPHY: 100%
DESIGN TEMP.: 90 DEG. C	PWHT: N/A
DMNT: -29 DEG. C	PICKLE & OIL: N/A
C.A.: 1.6 mm	SANDBLAST: SP-6
TEST PRESS.: 14064 KPAC	PAINT: WARM GREY
TEST MEDIA: WATER	INSULATION: N/A

CADO INDUSTRIES INC.
 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8
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ISSUED FOR CONSTRUCTION	11/13/2013	AP	WC	WC
NO. _____	DATE	BY	CHK	APP

CUSTOMER:	PENNWEST EXPLORATION
UNIT NO.:	2013-070-601
MODEL:	4-WELL SEPARATOR SKID (BU-2000)
LOCATION:	
LINE TAG:	WATER OUTLET HEADER
DRAWING NO.:	070-220
REV.	0

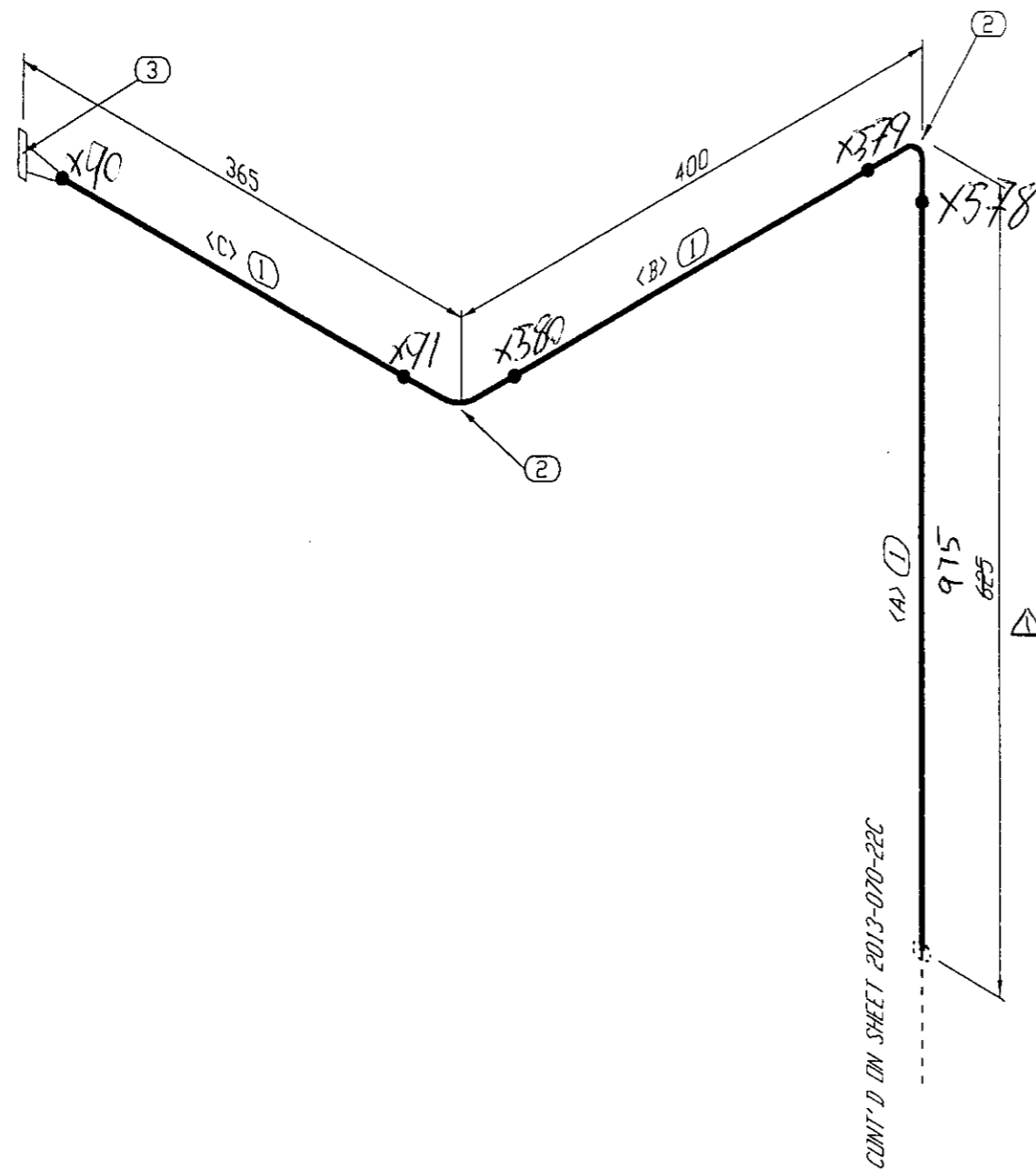
BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	3	PIPE, SMLS, BW, SCH. 80, A106 GR B	992 MM	11.2
2	3	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	2	4.1
3	3	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	10.5
TOTAL FABRICATION WEIGHT				25.7

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)	
<A>	507 857	3	△
	165	3	
<C>	155	3	

CONT'D ON SHEET
2013-070-11D



PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,

PIPE SPEC.: CS	WELD PROC.: CADO-5
DESIGN PRESS.: 9376 KPAG	RADIOGRAPHY: 100%
DESIGN TEMP.: 90 DEG. C	PWHT: N/A
MDMT: -29 DEG. C	PICKLE & OIL: N/A
C.A.: 1.6 mm	SANDBLAST: SP-6
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY
TEST MEDIA: WATER	INSULATION: N/A

CADO INDUSTRIES INC.
7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8
TEL: (403) 279-6662; FAX: (403) 279-6687

CUSTOMER:	PENNWEST EXPLORATION
UNIT NO.:	2013-070-601
MODEL:	4-WELL SEPARATOR SKID (BU-2000)
LOCATION:	
LINE TAG:	WATER OUTLET HEADER
DRAWING NO.:	070-22D
REV.	0

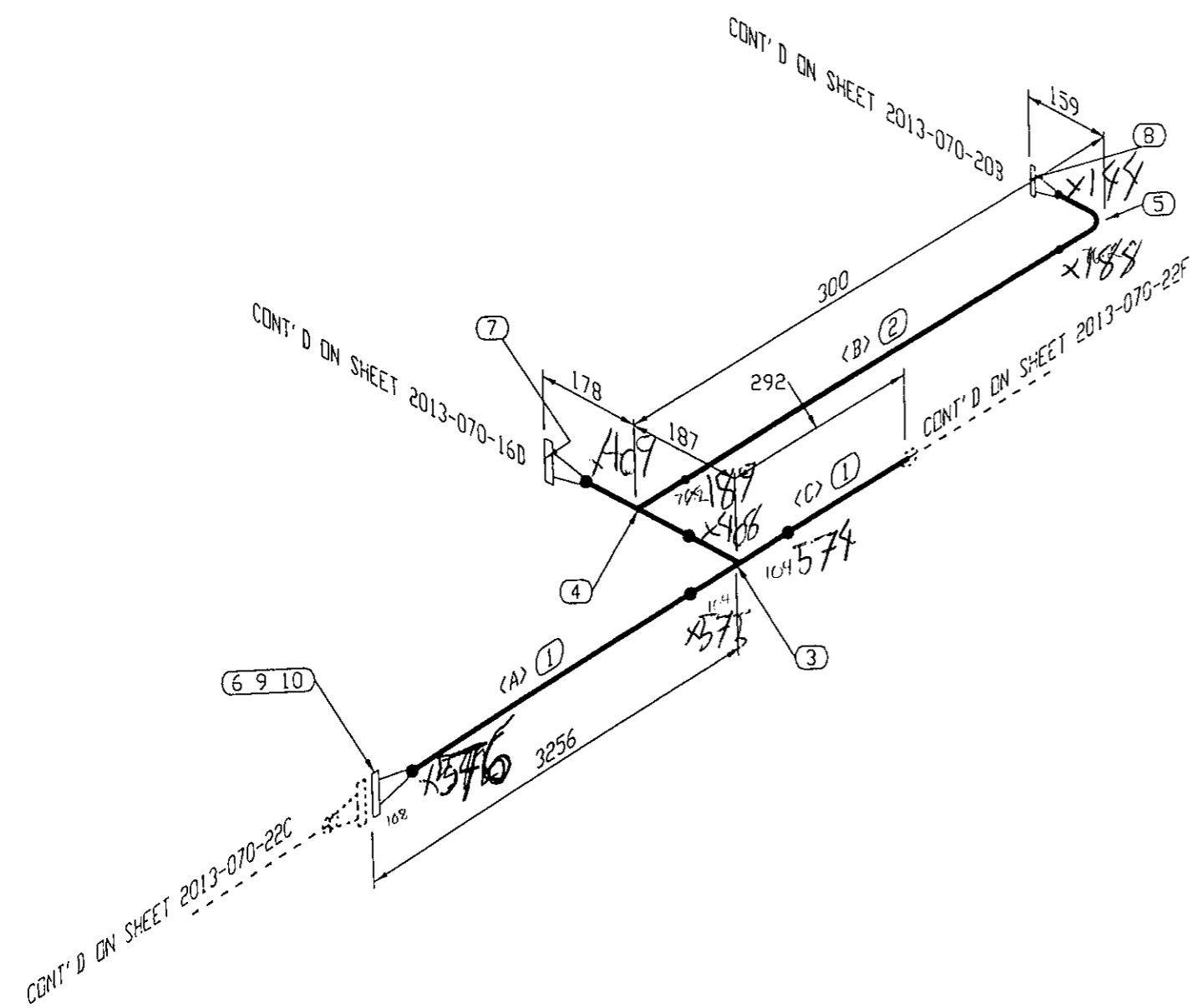
0	ISSUED FOR CONSTRUCTION	11/13/2013	AP	WC	WC
NO.	REVISION	DATE	BY	CHK	APR

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	3221 MM	71.9
2	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	141 MM	1.1
3	4X3	TEE, RED, BW, SCH. 80, A420 GR WPL6 <i>90</i>	1	4.9
4	3X2	TEE, RED, BW, SCH. 80, A234 GR WPB	1	2.2
5	2	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	1	0.9
6	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	19.1
7	3	FLANGE, RFWN, CL600, SCH. 40 BORE, A105N	1	10.5
8	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	5.5
9	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
10	7/8X145	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
TOTAL FABRICATION WEIGHT				117.7

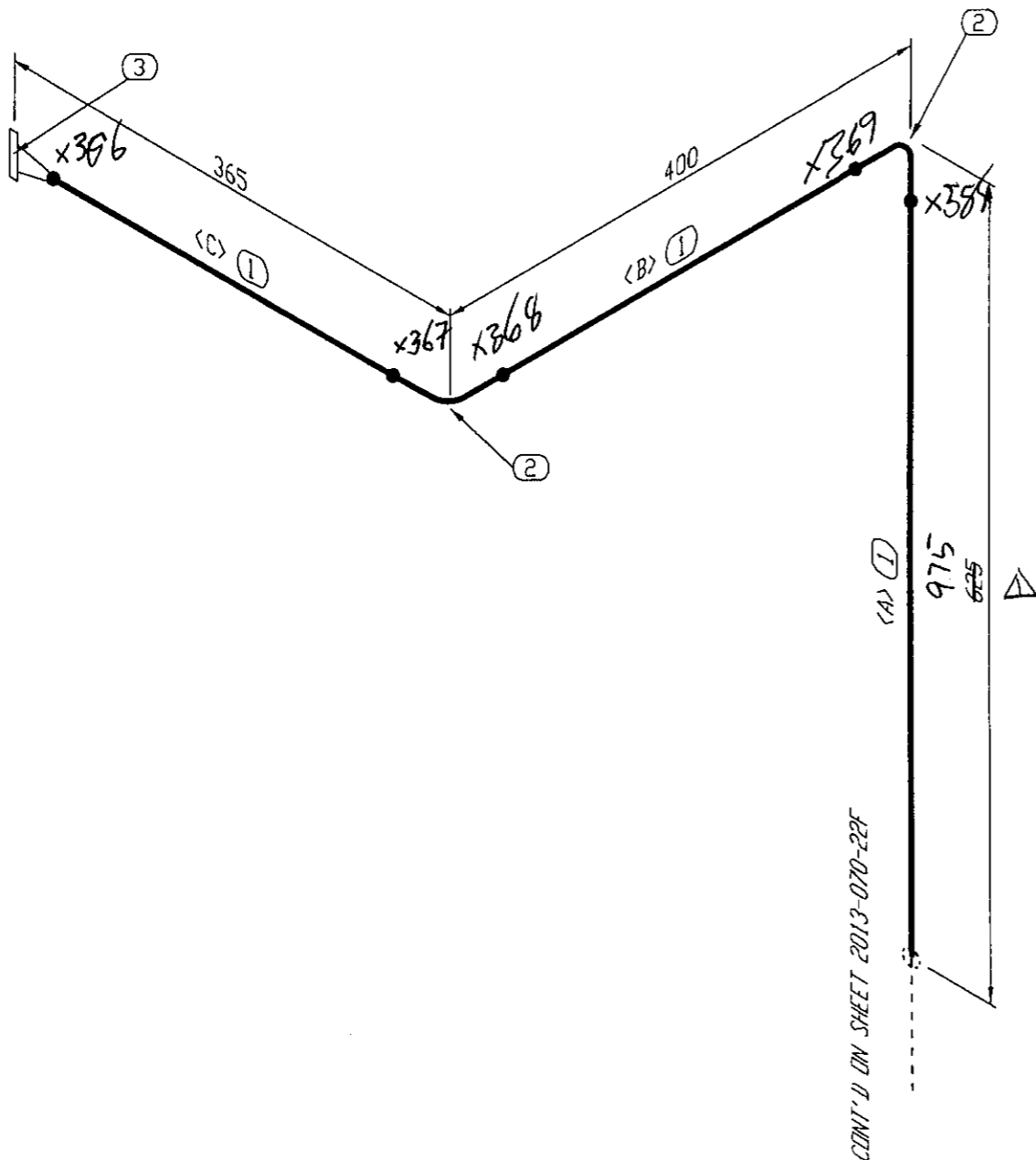
CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	3037	4
	141	2
<C>	184	4



PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687				CUSTOMER: PENNWEST EXPLORATION	
PIPE SPEC.: CS	WELD PROC.: CADO-5					UNIT NO.: 2013-070-601	
DESIGN PRESS.: 9376 KPAG	RADIOGRAPHY: 100%	MODEL: 4-WELL SEPARATOR SKID (BU-2000)					
DESIGN TEMP.: 90 DEG. C	PWHT: N/A	LOCATION:					
DMNT: -29 DEG. C	PICKLE & OIL: N/A	LINE TAG: WATER OUTLET HEADER					
C.A.: 1.6 mm	SANDBLAST: SP-6	DRAWING NO.: 070-22E					
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC	REV. 0
TEST MEDIA: WATER	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APP

CONT'D ON SHEET 2013-070-12D



CONT'D ON SHEET 2013-070-22F

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	3	PIPE, SMLS, BW, SCH. 40, A106 GR B	992 MM	11.2
2	3	ELBOW, 90 DEG, LR, BW, SCH. 40, A234 GR WPB	2	4.1
3	3	FLANGE, RFWN, CL600, SCH. 40 BORE, A105N	1	10.5
TOTAL FABRICATION WEIGHT				25.7

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	507 857	3
	165	3
<C>	155	3

PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,	
PIPE SPEC.: CS	WELD PROC.: CADO-5
DESIGN PRESS.: 9376 KPAG	RADIOGRAPHY: 100%
DESIGN TEMP.: 90 DEG. C	PWHT: N/A
MDMT: -29 DEG. C	PICKLE & OIL: N/A
C.A.: 1.6 mm	SANDBLAST: SP-6
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY
TEST MEDIA: WATER	INSULATION: N/A

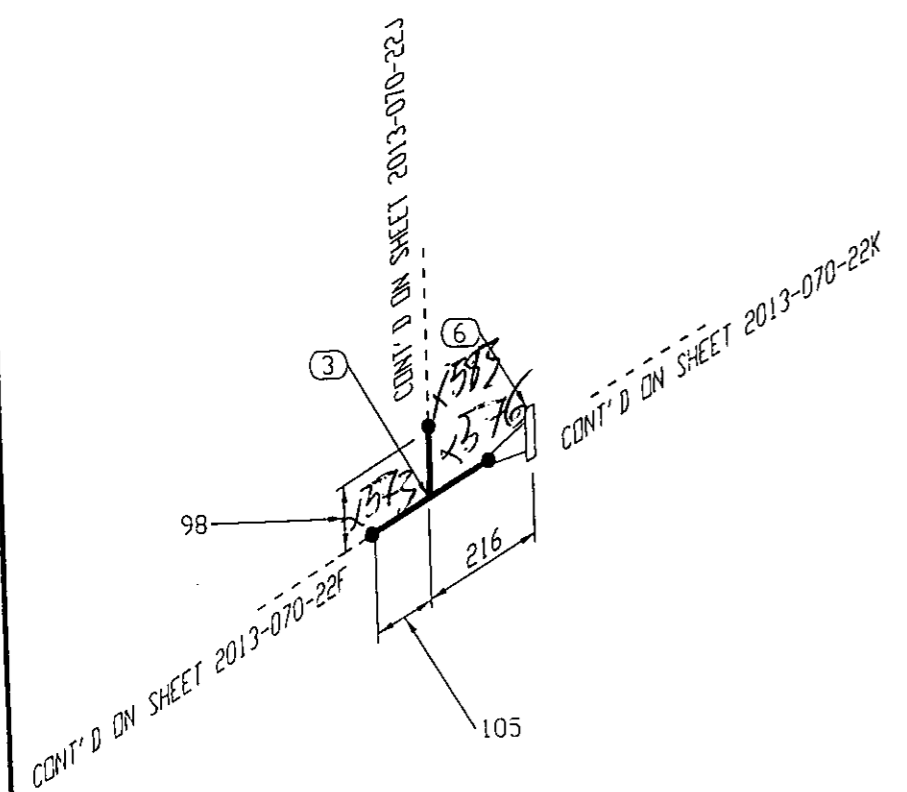
CADO INDUSTRIES INC.
 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8
 TEL: (403) 279-6662; FAX: (403) 279-6687

NO.	REVISION	DATE	BY	CHK	APR
0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC

CUSTOMER:	PENNWEST EXPLORATION
UNIT NO.:	2013-070-601
MODEL:	4-WELL SEPARATOR SKID (BU-2000)
LOCATION:	
LINE TAG:	WATER OUTLET HEADER
DRAWING NO.:	070-22G
REV.	0

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
3	4X3	TEE, RED, BW, SCH. 80, A234 GR WPB	1	9.8
6	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	38.1
TOTAL FABRICATION WEIGHT				141.6



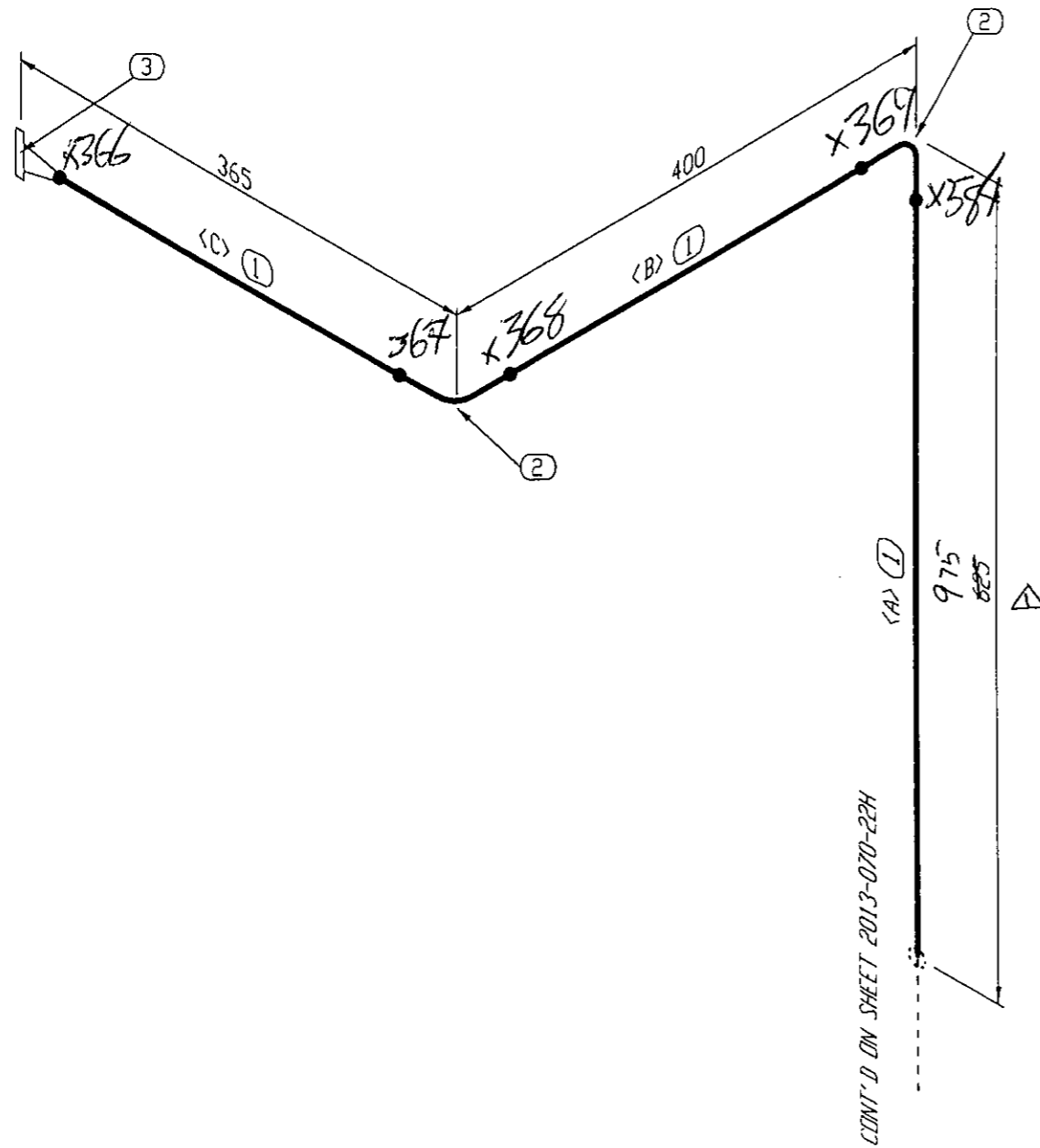
PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION. PIPE SPEC.: CS WELD PROC.: CADO-5 DESIGN PRESS.: 9376 KPAC RADIOGRAPHY: 100% DESIGN TEMP.: 90 DEG. C PWHT: N/A MDMT: -29 DEG. C PICKLE & OIL: N/A C.A.: 1.6 mm SANDBLAST: SP-6 TEST PRESS.: 14064 KPAC PAINT: WARM GREY TEST MEDIA: WATER INSULATION: N/A		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687		CUSTOMER: PENNWEST EXPLORATION UNIT NO.: 2013-070-601 MODEL: 4-WELL SEPARATOR SKID (BU-2000) LOCATION: LINE TAG: WATER OUTLET HEADER DRAWING NO: 070-22H	
		ISSUED FOR CONSTRUCTION REVISION		DATE: 11/03/2013 BY: AP	DATE: BY: WC DATE: BY: JHS DATE: BY: APR
				REV: 0	

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	3	PIPE, SMLS, BW, SCH. 80, A106 GR B	992 MM	11.2
2	3	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR	2	4.1
3	3	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	10.5
TOTAL FABRICATION WEIGHT				25.7

CUT PIPE LENGTH			
PIECE NUM	LENGTH (MM)	SIZE (INCH)	
<A>	507	857	3 Δ
	165	3	
<C>	155	3	

CONT'D ON SHEET
2013-070-13D

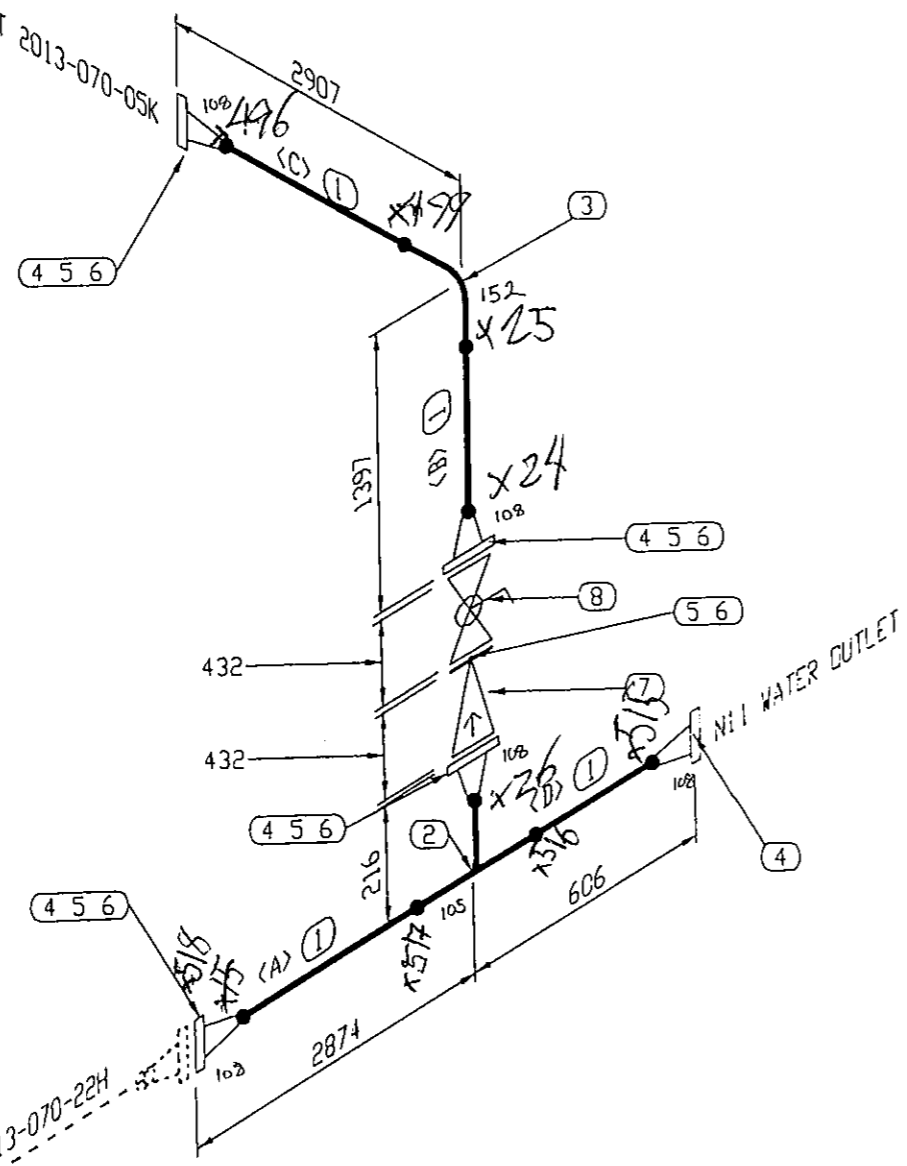


CONT'D ON SHEET 2013-070-22H

PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687				CUSTOMER: PENNWEST EXPLORATION		
PIPE SPEC.: CS	WELD PROC.: CADO-5					UNIT NO.: 2013-070-601		
DESIGN PRESS.: 9376 KPAG	RADIOGRAPHY: 100%	MODEL: 4-WELL SEPARATOR SKID (BU-2000)						
DESIGN TEMP.: 90 DEG. C	PWHT: N/A	LOCATION:						
MDMT: -29 DEG. C	PICKLE & OIL: N/A	LINE TAG: WATER OUTLET HEADER						
C.A.: 1.6 mm	SANDBLAST: SP-6	DRAWING NO.: 070-22J						
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC	REV. 0
TEST MEDIA: WATER	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR	

CONT'D ON SHEET 2013-070-05K

CONT'D ON SHEET 2013-070-22H



BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	6813 MM	152.0
2	4X4	TEE, STR, BW, SCH. 80, A234 GR WPB	1	5.6
3	4	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	1	5.4
4	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	5	95.3
5	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	5	5.0
6	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	5	5.0
7	4	VALVE, SWING CHECK, RF, NACE, CLASS 600 ASME, A105N	1	115.7
8	4	VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N	1	74.9
TOTAL FABRICATION WEIGHT				458.5

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
(A)	2655	4
(B)	1131	4
(C)	2640	4
(D)	387	4

PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,	
PIPE SPEC.: CS	WELD PROC.: CADO-5
DESIGN PRESS.: 9376 KPAC	RADIOGRAPHY: 100%
DESIGN TEMP.: 90 DEG. C	PWHT: N/A
MDMT: -29 DEG. C	PICKLE & OIL: N/A
C.A.: 1.6 mm	SANDBLAST: SP-6
TEST PRESS.: 14064 KPAC	PAINT: WARM GREY
TEST MEDIA: WATER	INSULATION: N/A

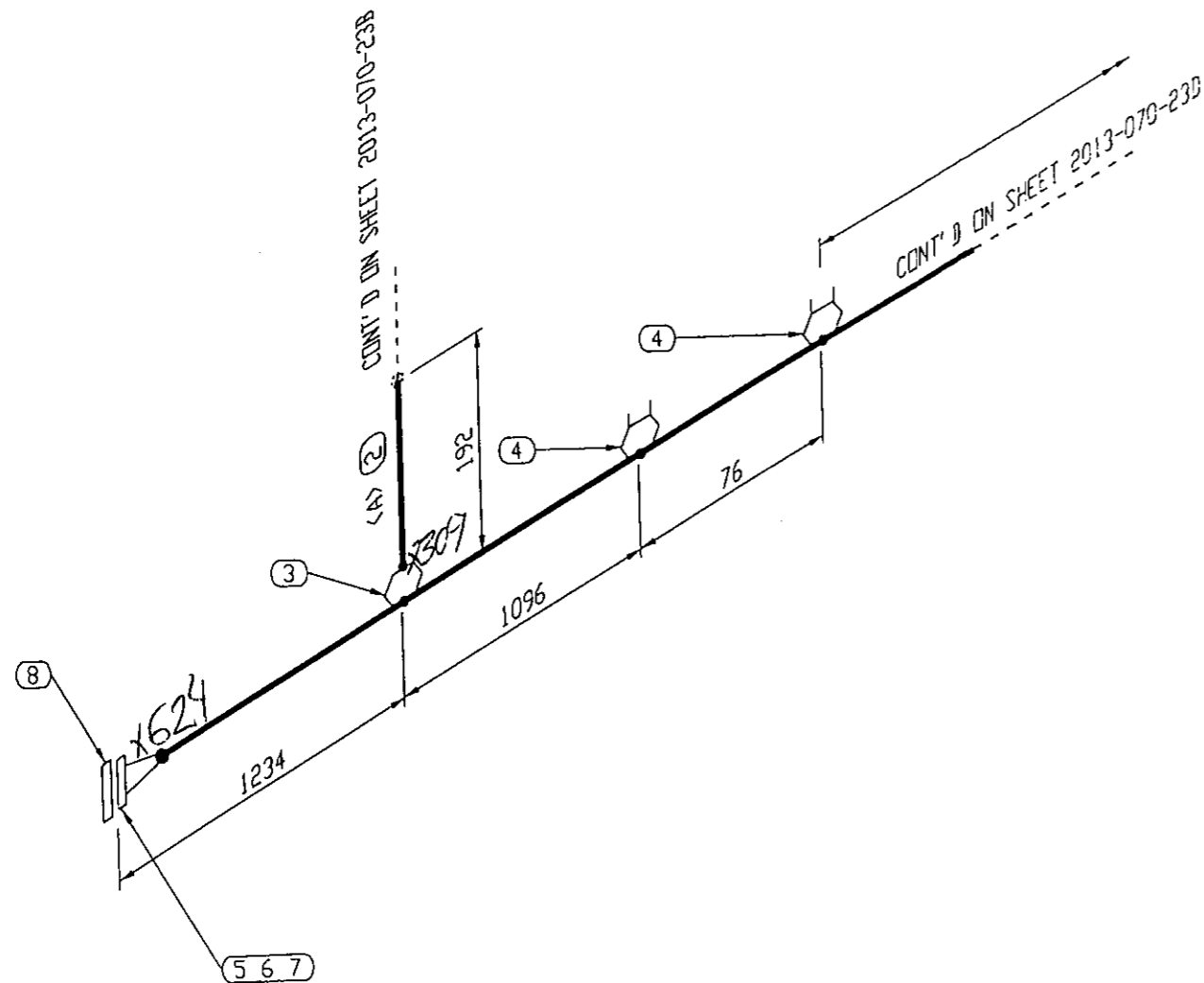
CADO INDUSTRIES INC.
 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8
 TEL: (403) 279-6662; FAX: (403) 279-6687

ISSUED FOR CONSTRUCTION

NO.	REVISION	DATE	BY	CHK	APR
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CUSTOMER:	PENNWEST EXPLORATION
UNIT NO.:	2013-070-601
MODEL:	4-WELL SEPARATOR SKID (BU-2000)
LOCATION:	
LINE TAG:	WATER OUTLET HEADER
DRAWING NO.:	070-22K

REV. 0



BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	6	PIPE, SMLS, BW, SCH. STD, A106 GR B	2351 MM	66.4
2	2	PIPE, SMLS, BW, SCH. STD, A106 GR B	64 MM	0.4
3	6X2	WELDOLET, SCH. STD FS, A105N	1	0.7
4	6X1/2	THREDDLET, 3000# FS, A105N	2	0.3
5	6	FLANGE, RFWN, CLASS 150, SCH. STD BORE, A105N	1	10.9
6	6	GASKET, 3mm, FLEX CG, RF, CLASS 150, 316SS GRAPHITE FILLED, CS CENTERING RING	1	1.0
7	3/4X102	(8) STUD BOLTS W/ NUTS, A193 GR B7M/A194 GR 2HM	1	1.0
8	6	FLANGE, RF, BLIND, CLASS 150, A105N	1	11.8
TOTAL FABRICATION WEIGHT				92.3

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	64	2

PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,

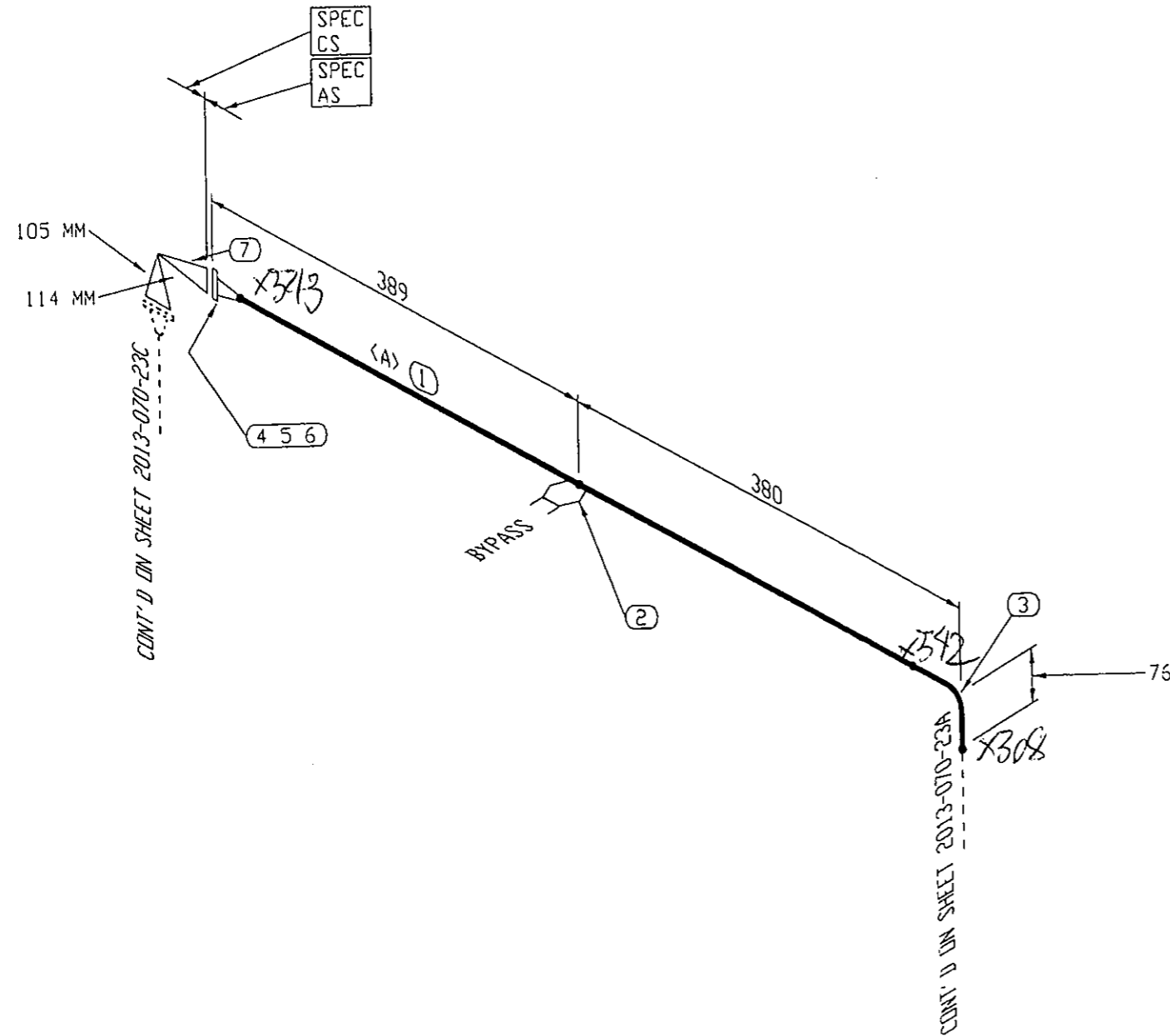
PIPE SPEC.: AS	WELD PROC.: CADO-5
DESIGN PRESS.: ATMOS.	RADIOGRAPHY: 100%
DESIGN TEMP.: 90 DEG. C	PWHT: N/A
DMNT: -29 DEG. C	PICKLE & OIL: N/A
C.A.: 1.6 mm	SANDBLAST: SP-6
TEST PRESS.: N/A	PAINT: WARM GREY
TEST MEDIA: AIR	INSULATION: N/A

CADO INDUSTRIES INC.
 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8
 TEL: (403) 279-6662; FAX: (403) 279-6687

CUSTOMER:	PENNWEST EXPLORATION
UNIT NO.:	2013-070-601
MODEL:	4-WELL SEPARATOR SKID (BU-2000)
LOCATION:	
LINE TAG:	H.P. FLARE HEADER
DRAWING NO.:	070-23A

ISSUED FOR CONSTRUCTION	11/13/2013	AP	WC	WC
NO. REVISION	DATE	BY	CHK	APR

REV. 0



BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. STD, A106 GR B	623 MM	3.4
2	2X1	THREDDLET, 3000# FS, A105N	1	0.3
3	2	ELBOW, 90 DEG, LR, BW, SCH. STD, A234 GR WPB	1	0.7
4	2	FLANGE, RFWN, CLASS 150, SCH. STD BORE, A105N	1	2.8
5	2	GASKET, 3mm, FLEX CG, RF, CLASS 150, 316SS GRAPHITE FILLED, CS CENTERING RING	1	1.0
6	5/8X83	(4) STUD BOLTS W/ NUTS, A193 GR B7M/A194 GR 2HM	1	1.0
7	2X1	VALVE, RELIEF, RF, NACE 2002, 600# X 150#, A352 GR LCC	1	12.7
TOTAL FABRICATION WEIGHT				<u>21.7</u>

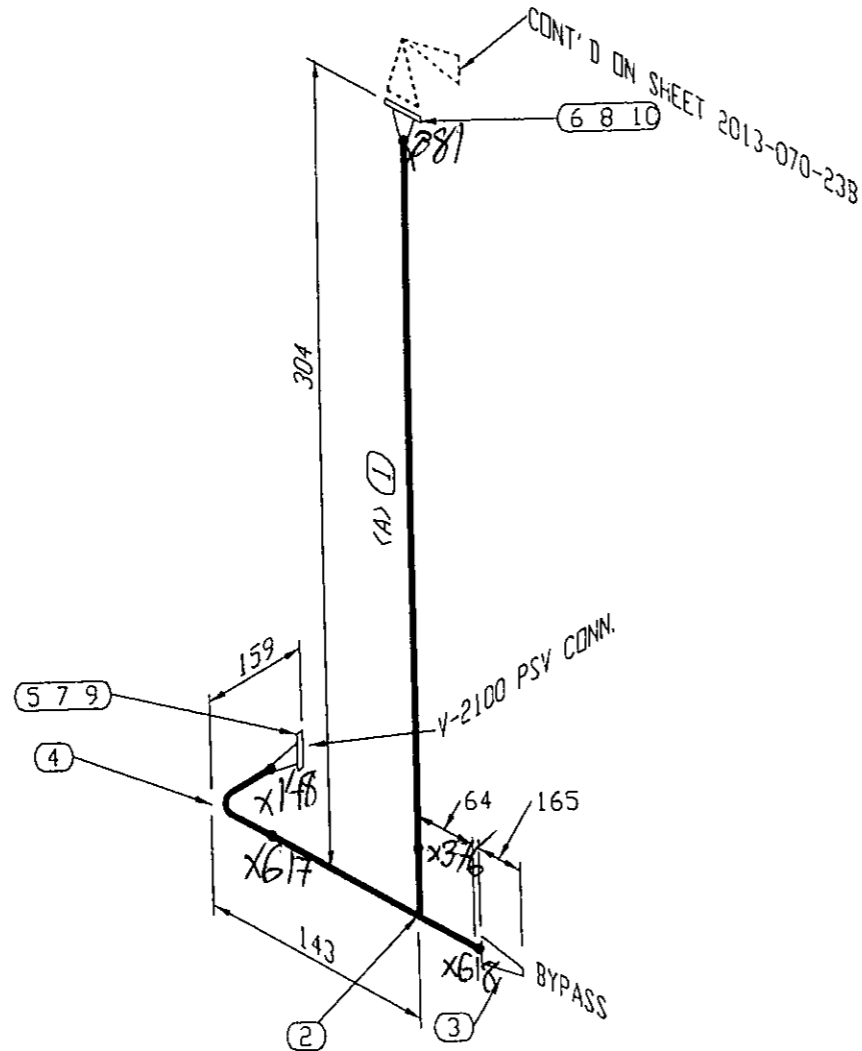
CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	623	2

PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687				CUSTOMER: PENNWEST EXPLORATION	
PIPE SPEC.: AS	WELD PROC.: CADO-5					UNIT NO.: 2013-070-601	
DESIGN PRESS.: ATMOS.	RADIOGRAPHY: 100%					MODEL: 4-WELL SEPARATOR SKID (BU-2000)	
DESIGN TEMP.: 90 DEG. C	PWHT: N/A					LOCATION:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: H.P. FLARE HEADER	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-23B	
TEST PRESS.: N/A	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: AIR	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	1	PIPE, SMLS, BW, SCH. 80, A106 GR B	179 MM	0.6
2	2X1	TEE, RED, BW, SCH. 80, A234 GR WPB	1	1.0
3	2X1	SWAGE, CONC, SCH80/SCH. 160, LBE/TSE A105N -	1	0.9
4	2	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	1	0.9
5	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	5.5
6	1	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	1.9
7	2	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
8	1	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
9	5/8X108	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
10	5/8X102	(4) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
TOTAL FABRICATION WEIGHT				13.6



CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	179	1

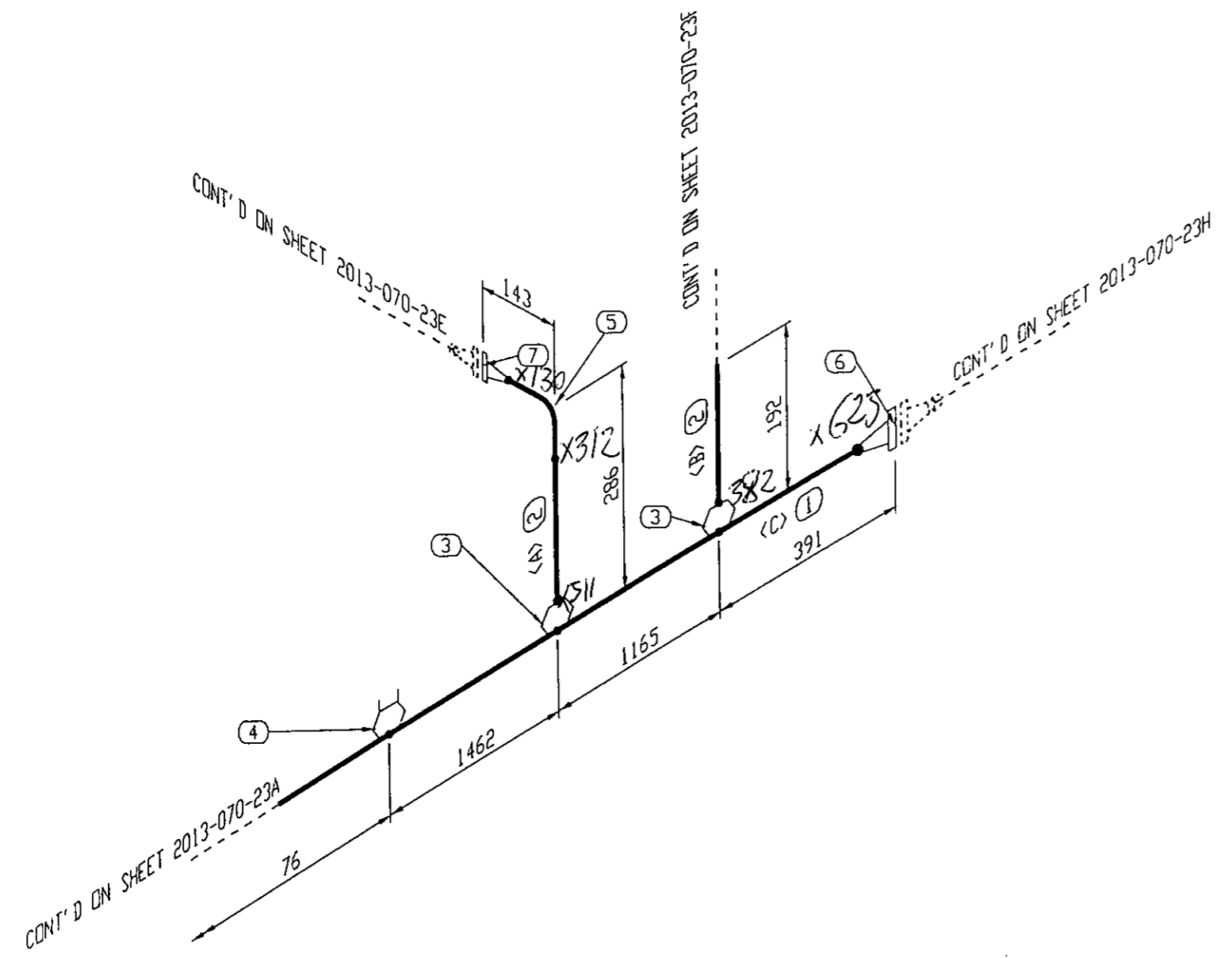
PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,		<p align="center">CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687</p>				CUSTOMER: PENNWEST EXPLORATION		
PIPE SPEC.: CS	WELD PROC.: CADO-5					UNIT NO.: 2013-070-601		
DESIGN PRESS.: 9376 KPAG	RADIOGRAPHY: 100%	MODEL: 4-WELL SEPARATOR SKID (BU-2000)		LOCATION:				
DESIGN TEMP.: 90 DEG. C	PWHT: N/A	LINE TAG: H.P. FLARE HEADER		DRAWING NO.: 070-230				
MDMT: -29 DEG. C	PICKLE & OIL: N/A	ISSUED FOR CONSTRUCTION		11/10/2013	AP	WC	WC	REV. 0
C.A.: 1.6 mm	SANDBLAST: SP-6	NO.	REVISION	DATE	BY	CHK	APR	
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY							
TEST MEDIA: WATER	INSULATION: N/A							

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	6	PIPE, SMLS, BW, SCH. STD, A106 GR B	2965 MM	83.8
2	2	PIPE, SMLS, BW, SCH. STD, A106 GR B	154 MM	0.9
3	6X2	WELDOLET, SCH. STD FS, A105N	2	1.3
4	6X1/2	THREDOLET, 3000# FS, A105N	1	0.2
5	2	ELBOW, 90 DEG, LR, BW, SCH. STD, A234 GR WPB	1	0.7
6	6	FLANGE, RFWN, CLASS 150, SCH. STD BORE, A105N	1	10.9
7	2	FLANGE, RFWN, CLASS 150, SCH. STD BORE, A105N	1	2.8
TOTAL FABRICATION WEIGHT				100.2

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	78	2
	64	2
<C>	5316	6

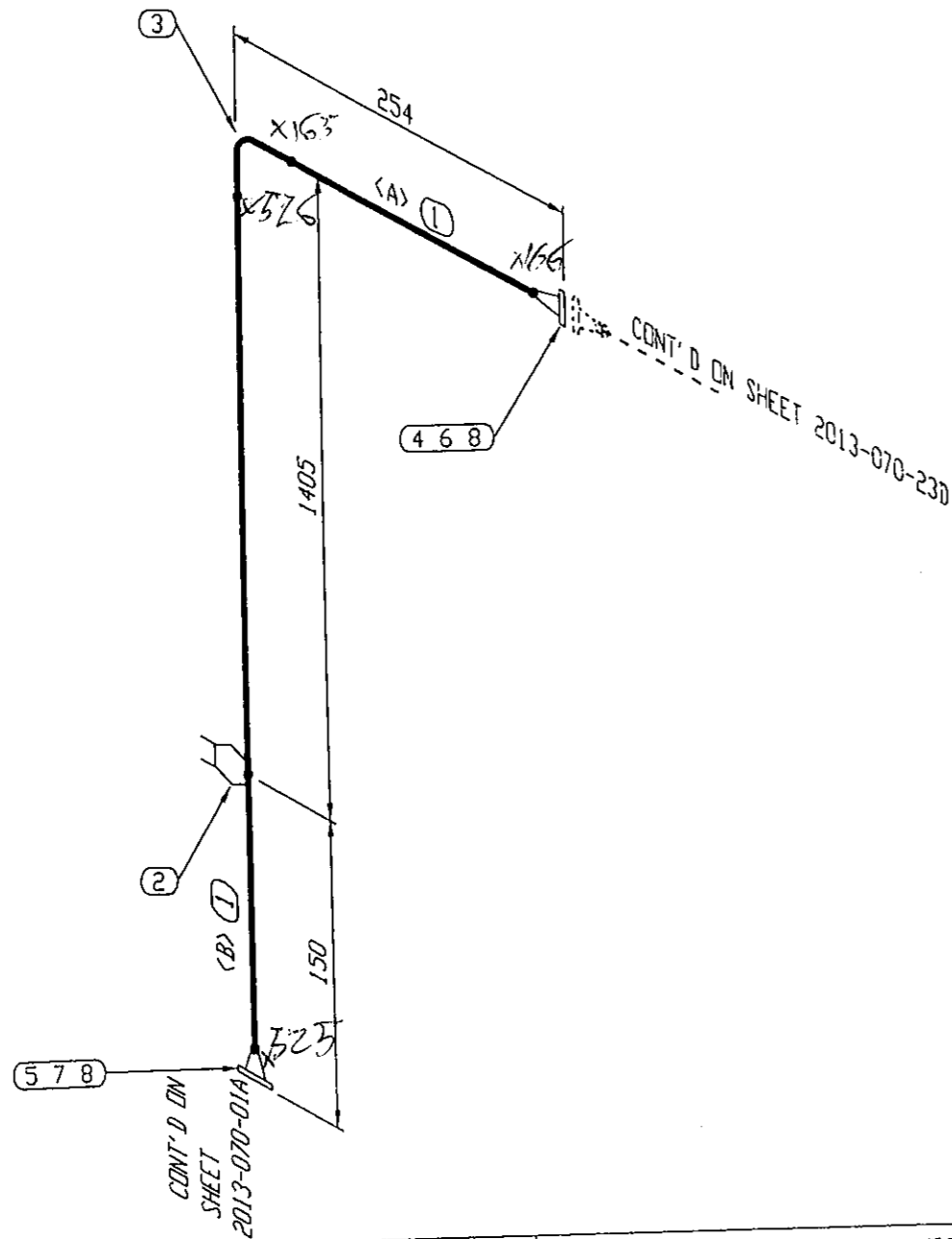


PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,	
PIPE SPEC.: AS	WELD PROC.: CADO-5
DESIGN PRESS.: ATMOS.	RADIOGRAPHY: 100%
DESIGN TEMP.: 90 DEG. C	PWHT: N/A
MDMT: -29 DEG. C	PICKLE & OIL: N/A
C.A.: 1.6 mm	SANDBLAST: SP-6
TEST PRESS.: N/A	PAINT: WARM GREY
TEST MEDIA: AIR	INSULATION: N/A

CADO INDUSTRIES INC.
 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8
 TEL: (403) 279-6662; FAX: (403) 279-6687

NO.	0	ISSUED FOR CONSTRUCTION	11/16/2013	AP	WC	WC
NO.		REVISION	DATE	BY	CHK	APR

CUSTOMER:	PENNWEST EXPLORATION
UNIT NO.:	2013-070-601
MODEL:	4-WELL SEPARATOR SKID (BU-2000)
LOCATION:	
LINE TAG:	H.P. FLARE HEADER
DRAWING NO.:	070-230
REV.	0



BILL OF MATERIAL

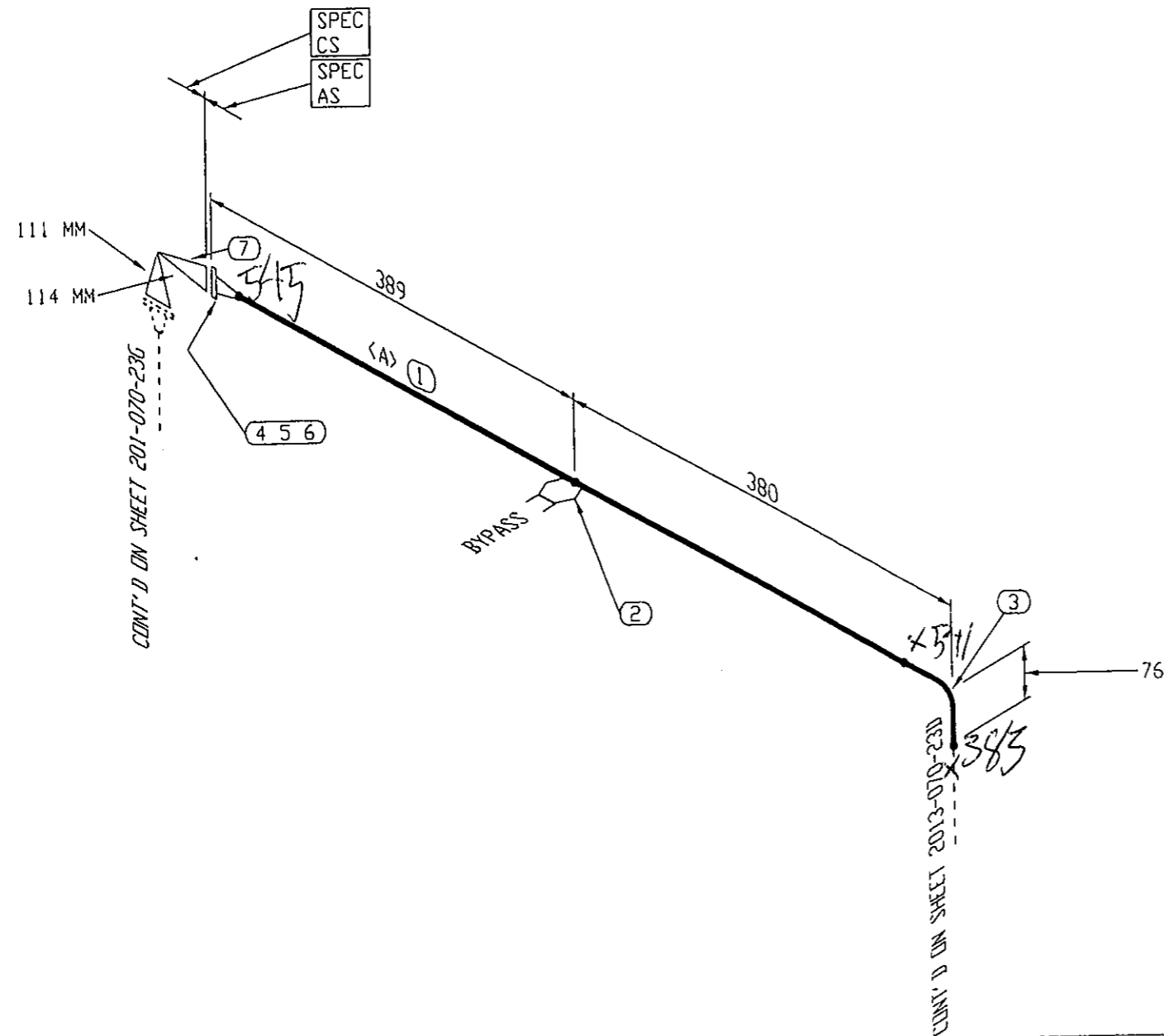
MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. STD, A106 GR B	1501 MM	8.2
2	2X1/2	THREDOLET, 3000# FS, A105N	1	0.2
3	2	ELBOW, 90 DEG, LR, BW, SCH. STD, A234 GR WPB	1	0.7
4	2	FLANGE, RFWN, CLASS 150, SCH. STD BORE, A105N	1	2.8
5	2	FLANGE, RFWN, CLASS 600, SCH. STD BORE, A105N	1	5.5
6	2	GASKET, 3mm, FLEX CG, RF, CLASS 150, 316SS GRAPHITE FILLED, CS CENTERING RING	1	1.0
7	2	GASKET, 3mm, FLEX CG, RF, CLASS 600, 316SS GRAPHITE FILLED, CS CENTERING RING	1	1.0
8	5/8X33	(4) STUD BOLTS W/ NUTS, A193 GR B7M/A194 GR 2HM	2	2.0
TOTAL FABRICATION WEIGHT				21.1

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	108	2
	1393	2

PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION.		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687				CUSTOMER: PENNWEST EXPLORATION	
PIPE SPEC.: AS	WELD PROC.: CADO-5					UNIT NO.: 2013-070-601	
DESIGN PRESS.: ATMOS.	RADIOGRAPHY: 100%					MODEL: 4-WELL SEPARATOR SKID (BU-2000)	
DESIGN TEMP.: 90 DEG. C	PWHT: N/A					LOCATION:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: H.P. FLARE HEADER	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-23E	
TEST PRESS.: N/A	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: AIR	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR

REV. 0



BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. STD, A106 GR B	623 MM	3.4
2	2X1	THREDDLET, 3000# FS, A105N	1	0.3
3	2	ELBOW, 90 DEG, LR, BW, SCH. STD, A234 GR	1	0.7
4	2	WPB FLANGE, RFWN, CLASS 150, SCH. STD BORE, A105N	1	2.8
5	2	GASKET, 3mm, FLEX CG, RF, CLASS 150, 316SS GRAPHITE FILLED, CS CENTERING RING	1	1.0
6	5/8X83	(4) STUD BOLTS W/ NUTS, A193 GR B7M/A194 GR 2HM	1	1.0
7	2X1	VALVE, RELIEF, RF, NACE 2002, 600# X 150#, A352 GR LCC	1	12.7
TOTAL FABRICATION WEIGHT				21.7

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	623	2

PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION.

PIPE SPEC.: AS	WELD PROC.: CADO-5
DESIGN PRESS.: ATMOS.	RADIOGRAPHY: 100%
DESIGN TEMP.: 90 DEG. C	PWHT: N/A
MDMT: -29 DEG. C	PICKLE & OIL: N/A
C.A.: 1.6 mm	SANDBLAST: SP-6
TEST PRESS.: N/A	PAINT: WARM GREY
TEST MEDIA: AIR	INSULATION: N/A

CADO INDUSTRIES INC.

7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8
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NO.	REVISION	DATE	BY	CHK	APR
0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC

CUSTOMER: PENNWEST EXPLORATION

UNIT NO.: 2013-070-601

MODEL: 4-WELL SEPARATOR SKID (BU-2000)

LOCATION:

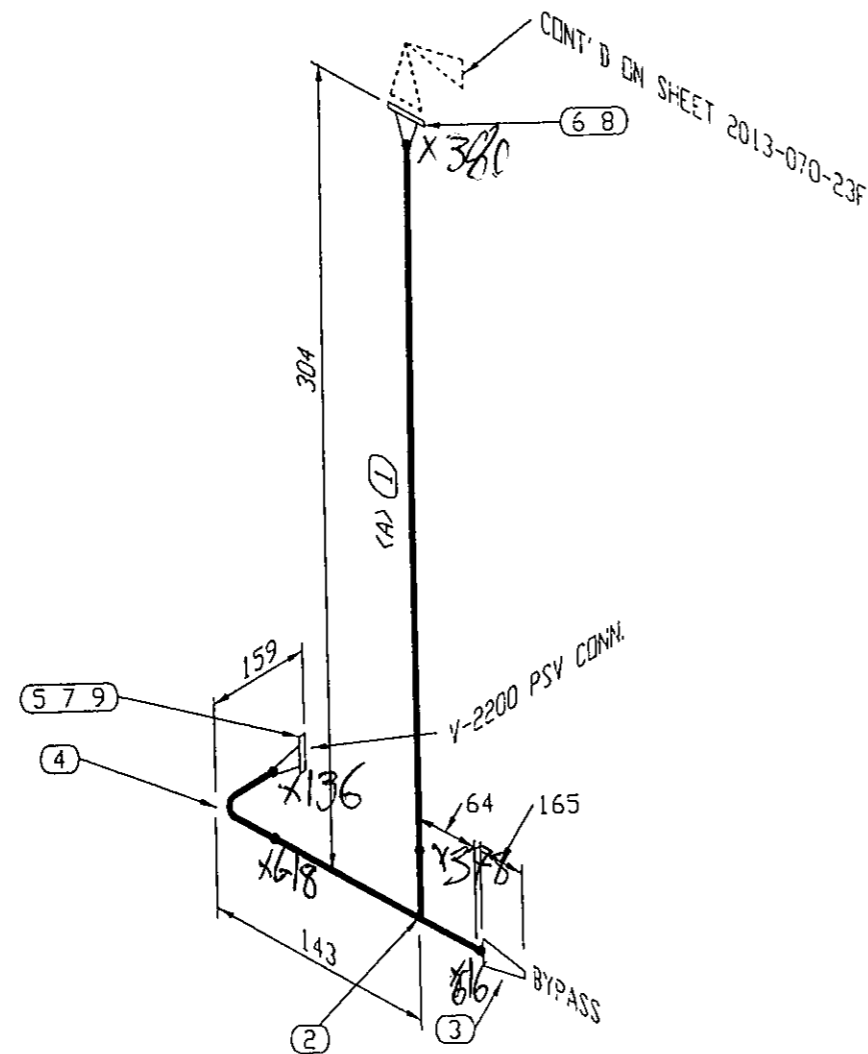
LINE TAG: H.P. FLARE HEADER

DRAWING NO.: 070-23F

REV. 0

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	1	PIPE, SMLS, BW, SCH. 80, A106 GR B	179 MM	0.6
2	2X1	TEE, RED, BW, SCH. 80, A234 GR WPB	1	1.0
3	2X1	SWAGE, CONC, SCH80/SCH. 160, BLE/TSE A105N	1	0.9
4	2	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	1	0.9
5	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	5.5
6	1	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	1.9
7	2	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
8	1	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
9	5/8X108	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
10	5/8X102	(4) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
TOTAL FABRICATION WEIGHT				13.6



CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	179	1

PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,

PIPE SPEC.: CS	WELD PROC.: CADO-5
DESIGN PRESS.: 9376 KPAC	RADIOGRAPHY: 100%
DESIGN TEMP.: 90 DEG. C	PWHT: N/A
MDMT: -29 DEG. C	PICKLE & OIL: N/A
C.A.: 1.6 mm	SANDBLAST: SP-6
TEST PRESS.: 14064 KPAC	PAINT: WARM GREY
TEST MEDIA: WATER	INSULATION: N/A

CADO INDUSTRIES INC.

7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8
 TEL: (403) 279-6662; FAX: (403) 279-6687

CUSTOMER: PENNWEST EXPLORATION

UNIT NO.: 2013-070-601

MODEL: 4-WELL SEPARATOR SKID (BU-2000)

LOCATION:

LINE TAG: H.P. FLARE HEADER

DRAWING NO.: 070-230

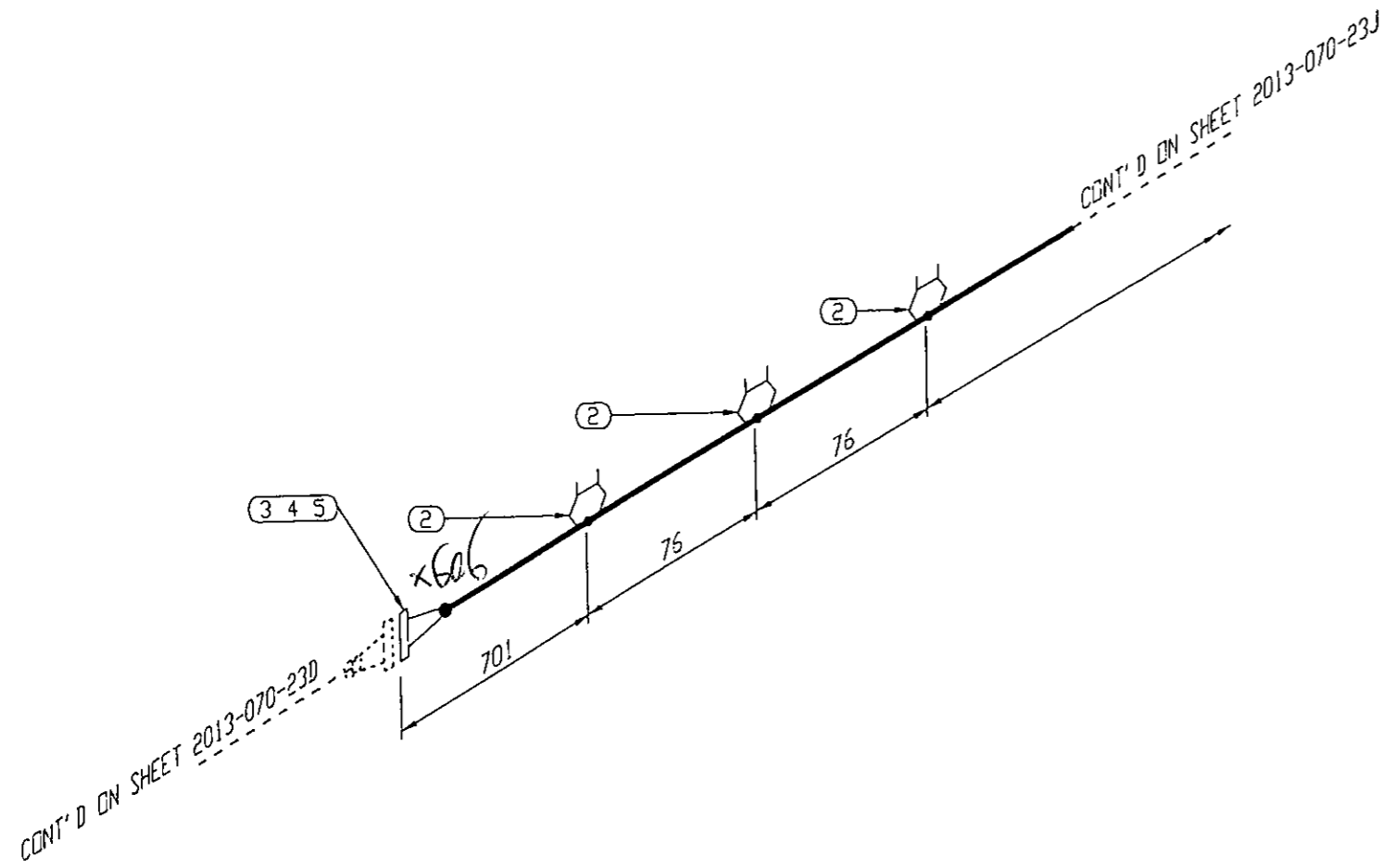
REV. 0

ISSUED FOR CONSTRUCTION

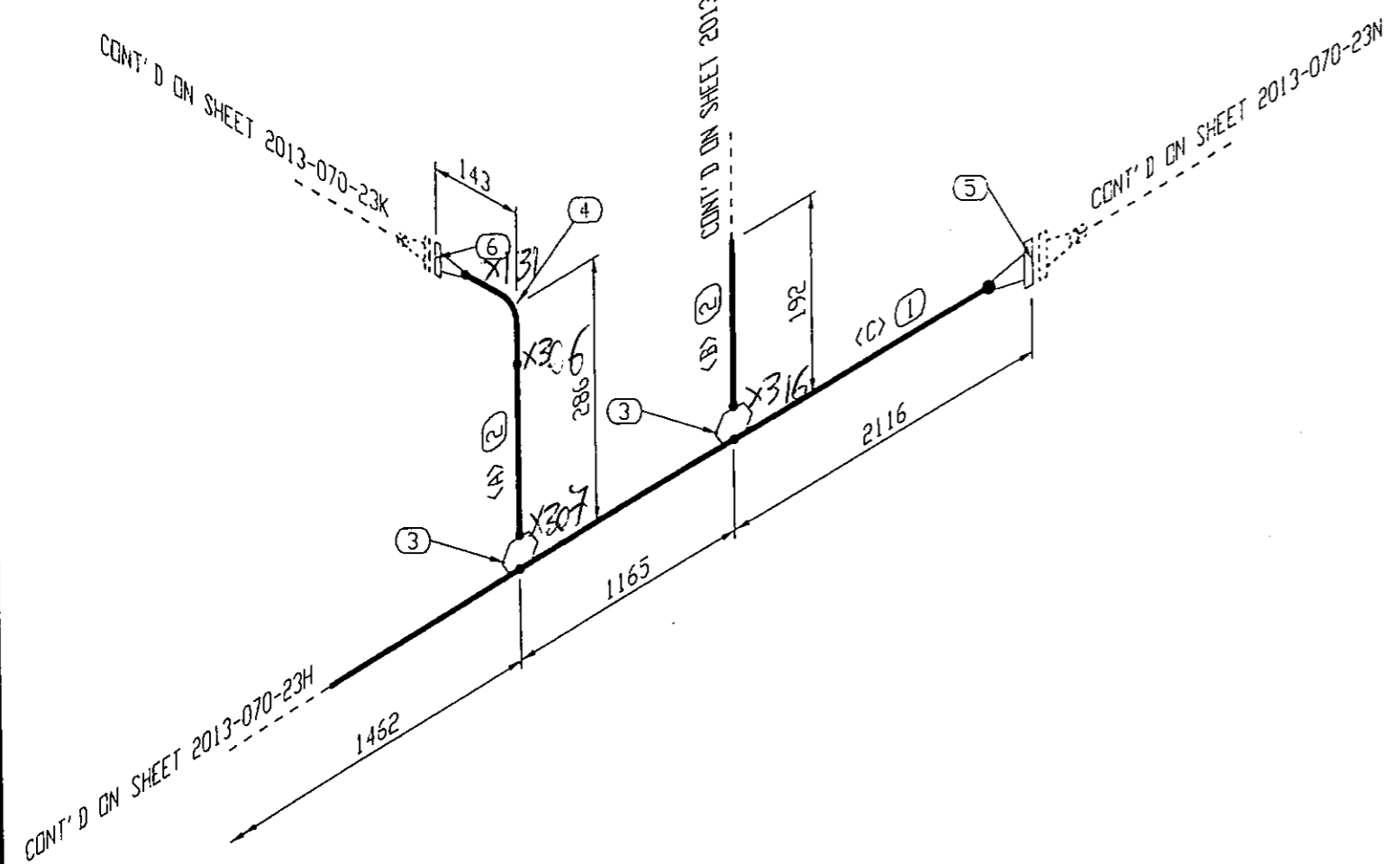
11/10/2013	AP	WC	WC
DATE	BY	CHK	APP

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	6	PIPE, SMLS, BW, SCH. STD, A106 GR B	1492 MM	42.2
2	6X1/2	THREDOLET, 3000# FS, A105N	3	0.4
3	6	FLANGE, RFWN, CLASS 150, SCH. STD BORE, A105N	1	10.9
4	6	GASKET, 3mm, FLEX CG, RF, CLASS 150, 316SS GRAPHITE FILLED, CS CENTERING RING	1	1.0
5	3/4X102	(8) STUD BOLTS W/ NUTS, A193 GR B7M/A194 GR 2HM	1	1.0
TOTAL FABRICATION WEIGHT				55.4



PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION.		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687				CUSTOMER: PENNWEST EXPLORATION	
PIPE SPEC.: AS	WELD PROC.: CADO-5					UNIT NO.: 2013-070-601	
DESIGN PRESS.: ATMOS.	RADIOGRAPHY: 100%	MODEL: 4-WELL SEPARATOR SKID (BU-2000)					
DESIGN TEMP.: 90 DEG. C	PWHT: N/A	LOCATION:					
MDMT: -29 DEG. C	PICKLE & OIL: N/A	LINE TAG: H.P. FLARE HEADER					
C.A.: 1.6 mm	SANDBLAST: SP-6	DRAWING NO.: 070-23H	REV. 0				
TEST PRESS.: N/A	PAINT: WARM GREY	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC	
TEST MEDIA: AIR	INSULATION: N/A	NO. REVISION	DATE	BY	CHK	APR	



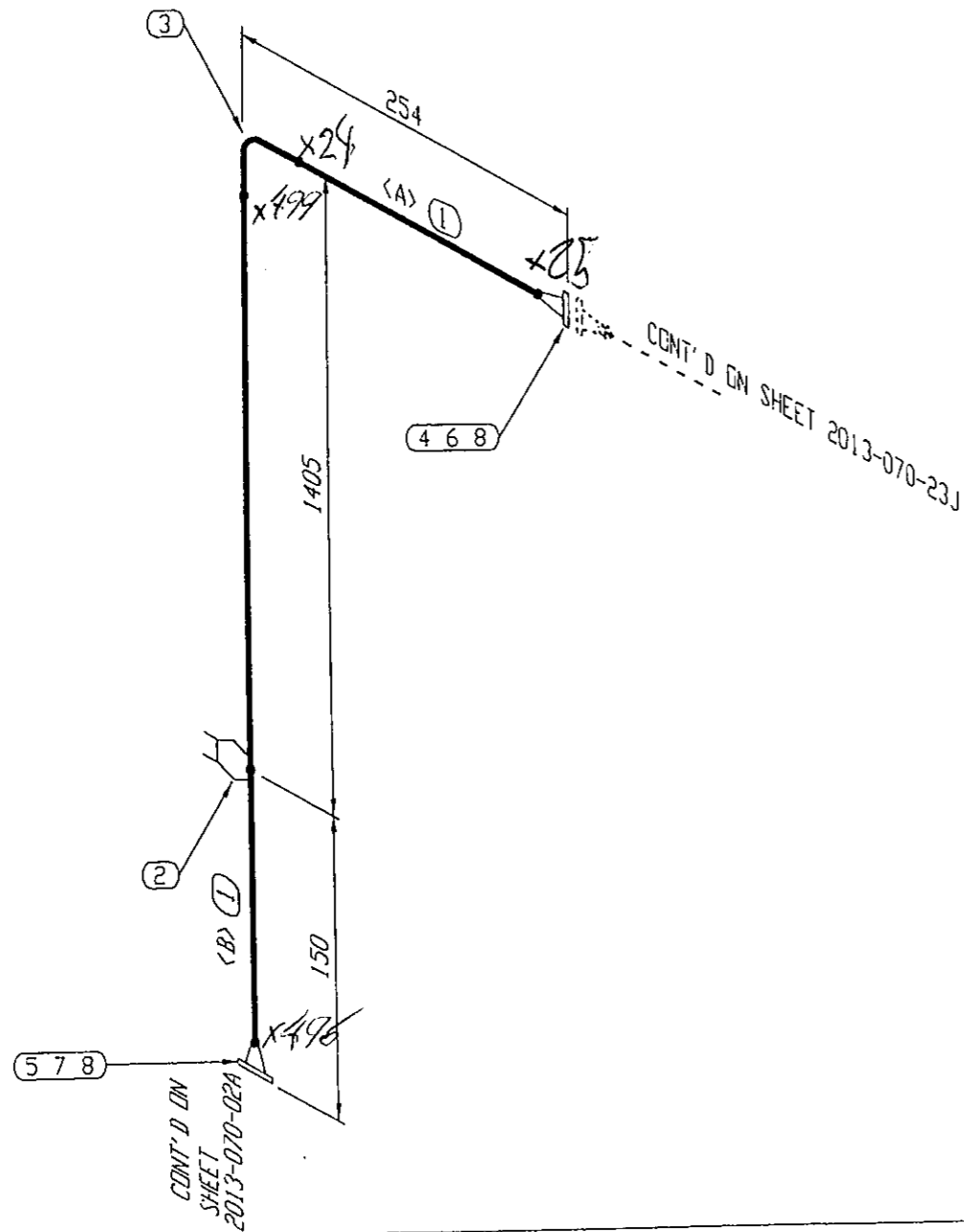
BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	6	PIPE, SMLS, BW, SCH. STD, A106 GR B	3921 MM	110.7
2	2	PIPE, SMLS, BW, SCH. STD, A106 GR B	154 MM	0.9
3	6X2	WELDOLET, SCH. STD FS, A105N	2	1.3
4	2	ELBOW, 90 DEG, LR, BW, SCH. STD, A234 GR WPB	1	0.7
5	6	FLANGE, RFWN, CLASS 150, SCH. STD BORE, A105N	1	10.9
6	2	FLANGE, RFWN, CLASS 150, SCH. STD BORE, A105N	1	2.8
TOTAL FABRICATION WEIGHT				127.1

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	78	2
	64	2
<C>	5413	6

PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687				CUSTOMER: PENNWEST EXPLORATION	
PIPE SPEC.: AS	WELD PROC.: CADO-5					UNIT NO.: 2013-070-601	
DESIGN PRESS.: ATMOS.	RADIOGRAPHY: 100%					MODEL: 4-WELL SEPARATOR SKID (BU-2000)	
DESIGN TEMP.: 90 DEG. C	PWHT: N/A					LOCATION:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: H.P. FLARE HEADER	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-23J	
TEST PRESS.: N/A	PAINT: WARM GREY	ISSUED FOR CONSTRUCTION	11/13/2013	AP	WC	WC	REV: 3
TEST MEDIA: AIR	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APP



BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. STD, A106 GR B	1501 MM	8.2
2	2X1/2	THREDDLET, 3000# FS, A105N	1	0.2
3	2	ELBOW, 90 DEG, LR, BW, SCH. STD, A234 GR WPB	1	0.7
4	2	FLANGE, RFWN, CLASS 150, SCH. STD BORE, A105N	1	2.8
5	2	FLANGE, RFWN, CLASS 600, SCH. STD BORE, A105N	1	5.5
6	2	GASKET, 3mm, FLEX CG, RF, CLASS 150, 316SS GRAPHITE FILLED, CS CENTERING RING	1	1.0
7	2	GASKET, 3mm, FLEX CG, RF, CLASS 600, 316SS GRAPHITE FILLED, CS CENTERING RING	1	1.0
8	5/8X83	(4) STUD BOLTS W/ NUTS, A193 GR B7M/A194 GR 2HM	2	2.0
TOTAL FABRICATION WEIGHT				21.1

CUT PIPE LENGTH

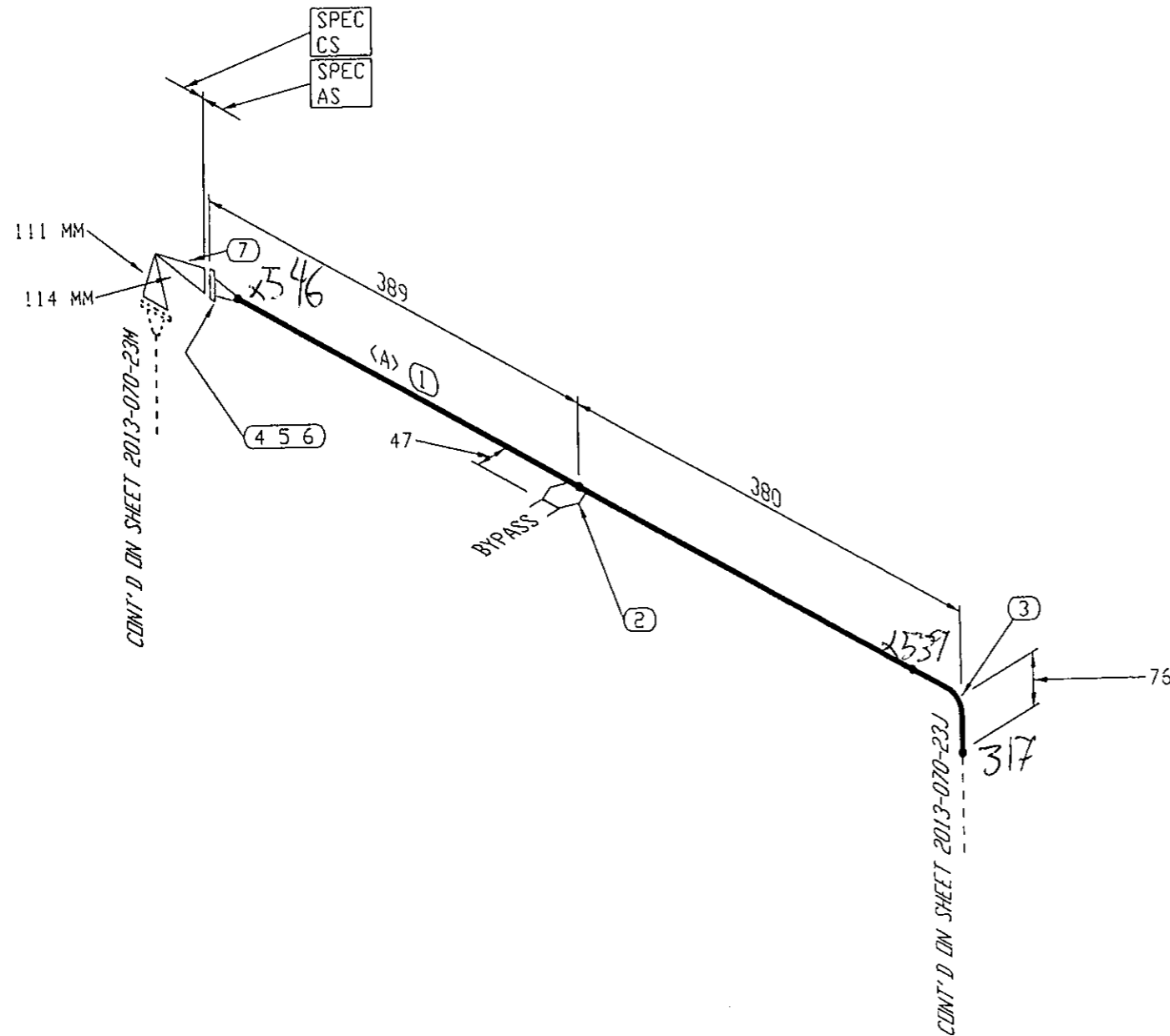
PIECE NUM	LENGTH (MM)	SIZE (INCH)
(A)	108	2
(B)	1393	2

PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,	
PIPE SPEC.: AS	WELD PROC.: CADO-5
DESIGN PRESS.: ATMOS.	RADIOGRAPHY: 100%
DESIGN TEMP.: 90 DEG. C	PWHT: N/A
MDMT: -29 DEG. C	PICKLE & OIL: N/A
C.A.: 1.6 mm	SANDBLAST: SP-6
TEST PRESS.: N/A	PAINT: WARM GREY
TEST MEDIA: AIR	INSULATION: N/A

CADO INDUSTRIES INC.
 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8
 TEL: (403) 279-6662; FAX: (403) 279-6687

NO.	ISSUED FOR CONSTRUCTION	11/13/2013	AP	WC	WC
NO.	REVISION	DATE	BY	CHK	APP

CUSTOMER:	PENNWEST EXPLORATION
UNIT NO.:	2013-070-601
MODEL:	4-WELL SEPARATOR SKID (BU-2000)
LOCATION:	
LINE TAG:	H.P. FLARE HEADER
DRAWING NO.:	070-23K
REV.	0



BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. STD, A106 GR B	623 MM	3.4
2	2X1	THREDOLET, 3000# FS, A105N	1	0.3
3	2	ELBOW, 90 DEG, LR, BW, SCH. STD, A234 GR	1	0.7
4	2	WPB FLANGE, RFWN, CLASS 150, SCH. STD BORE, A105N	1	2.8
5	2	GASKET, 3mm, FLEX CG, RF, CLASS 150, 316SS GRAPHITE FILLED, CS CENTERING RING	1	1.0
6	5/8X83	(4) STUD BOLTS W/ NUTS, A193 GR B7M/A194 GR 2HM	1	1.0
7	2X1	VALVE, RELIEF, RF, NACE 2002, 600# X 150#, A352 GR LCC	1	12.7
TOTAL FABRICATION WEIGHT				21.7

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	623	2

PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,	
PIPE SPEC.: AS	WELD PROC.: CADO-5
DESIGN PRESS.: ATMOS.	RADIOGRAPHY: 100%
DESIGN TEMP.: 90 DEG. C	PWHT: N/A
MDMT: -29 DEG. C	PICKLE & OIL: N/A
C.A.: 1.6 mm	SANDBLAST: SP-6
TEST PRESS.: N/A	PAINT: WARM GREY
TEST MEDIA: AIR	INSULATION: N/A

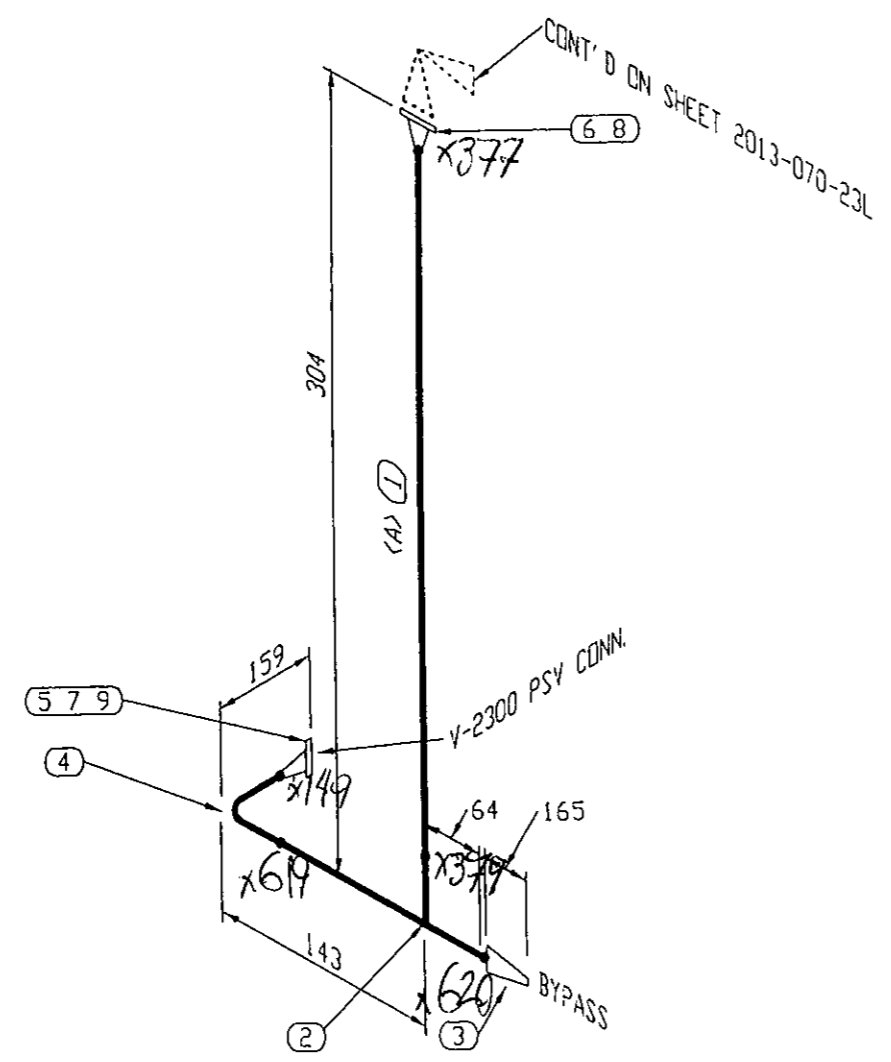
CADO INDUSTRIES INC.
 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8
 TEL: (403) 279-6662; FAX: (403) 279-6687

CUSTOMER:	PENNWEST EXPLORATION
UNIT NO.:	2013-070-601
MODEL:	4-WELL SEPARATOR SKID (BU-2000)
LOCATION:	
LINE TAG:	H.P. FLARE HEADER
DRAWING NO.:	070-23
REV.	0

NO.	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
NO.	REVISION	DATE	BY	CHK	APR

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	1	PIPE, SMLS, BW, SCH. 80, A106 GR B	179 MM	0.6
2	2X1	TEE, RED, BW, SCH. 80, A234 GR WPB	1	1.0
3	2X1	SWAGE, CONC, SCH80/SCH. 160, BLE/TSE A105N	1	0.9
4	2	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	1	0.9
5	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	5.5
6	1	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	1.9
7	2	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
8	1	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
9	5/8X108	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
10	5/8X102	(4) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
TOTAL FABRICATION WEIGHT				<u>13.6</u>



CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	179	1

PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,	
PIPE SPEC.: CS	WELD PROC.: CADO-5
DESIGN PRESS.: 9376 KPAG	RADIOGRAPHY: 100%
DESIGN TEMP.: 90 DEG. C	PWHT: N/A
DMNT: -29 DEG. C	PICKLE & OIL: N/A
C.A.: 1.6 mm	SANDBLAST: SP-6
TEST PRESS.: 14964 KPAG	PAINT: WARM GREY
TEST MEDIA: WATER	INSULATION: N/A

CADO INDUSTRIES INC.
 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8
 TEL: (403) 279-6662; FAX: (403) 279-6687

ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
NO.	REVISION	DATE	BY	CHK

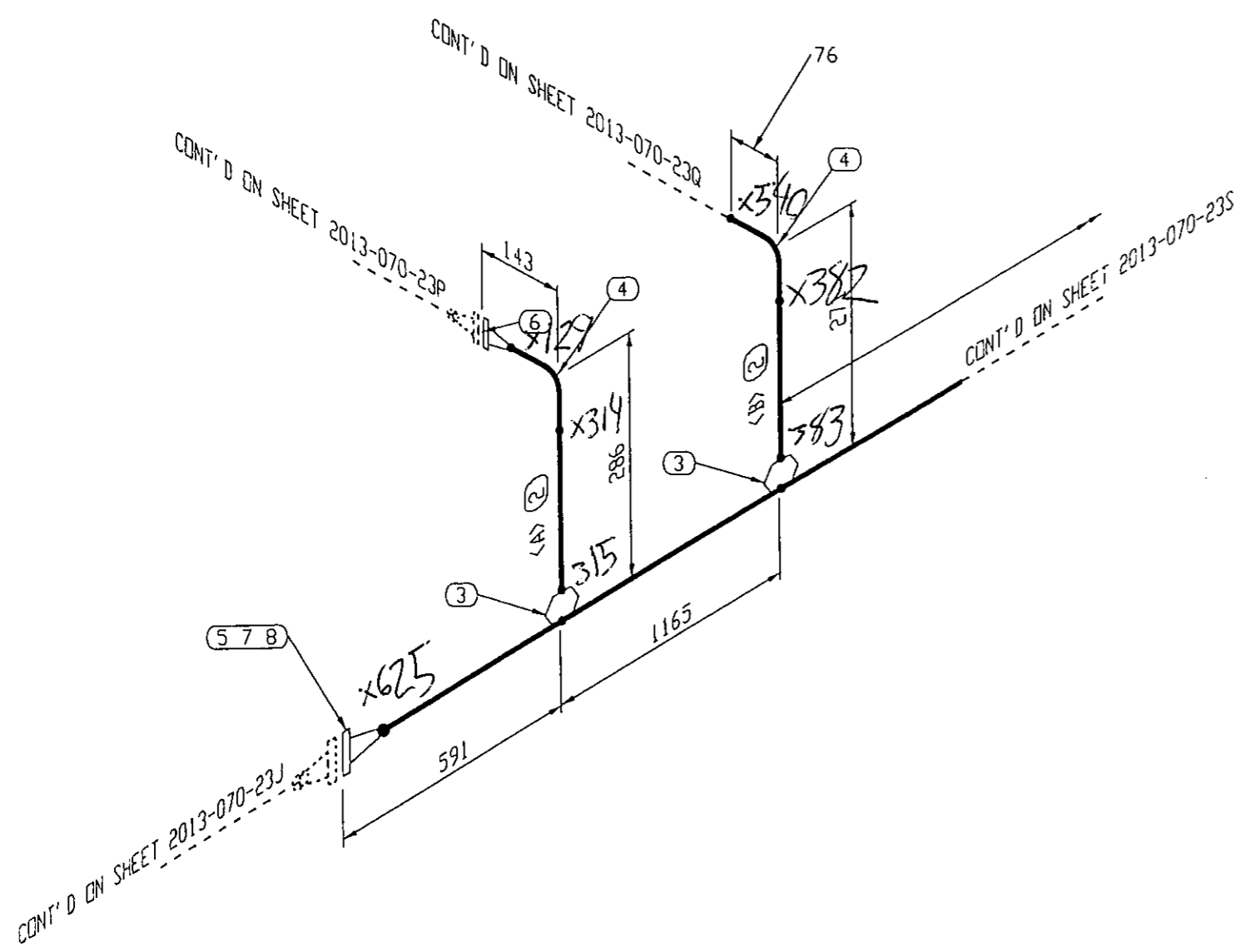
CUSTOMER:	PENNWEST EXPLORATION
UNIT NO.:	2013-070-601
MODEL:	4-WELL SEPARATOR SKID (BU-2000)
LOCATION:	
LINE TAG:	H.P. FLARE HEADER
DRAWING NO.:	070-23M
REV.	0

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	6	PIPE, SMLS, BW, SCH. STD, A106 GR B	2211 MM	62.5
2	2	PIPE, SMLS, BW, SCH. STD, A106 GR B	154 MM	0.9
3	6X2	WELDOLET, SCH. STD FS, A105N	2	1.3
4	2	ELBOW, 90 DEG, LR, BW, SCH. STD, A234 GR WPB	2	1.3
5	6	FLANGE, RFWN, CLASS 150, SCH. STD BORE, A105N	1	10.9
6	2	FLANGE, RFWN, CLASS 150, SCH. STD BORE, A105N	1	2.8
7	6	GASKET, 3mm, FLEX CG, RF, CLASS 150, 316SS GRAPHITE FILLED, CS CENTERING RING	1	1.0
8	3/4X102	(8) STUD BOLTS W/ NUTS, A193 GR B7M/A194 GR 2HM	1	1.0
TOTAL FABRICATION WEIGHT				81.4

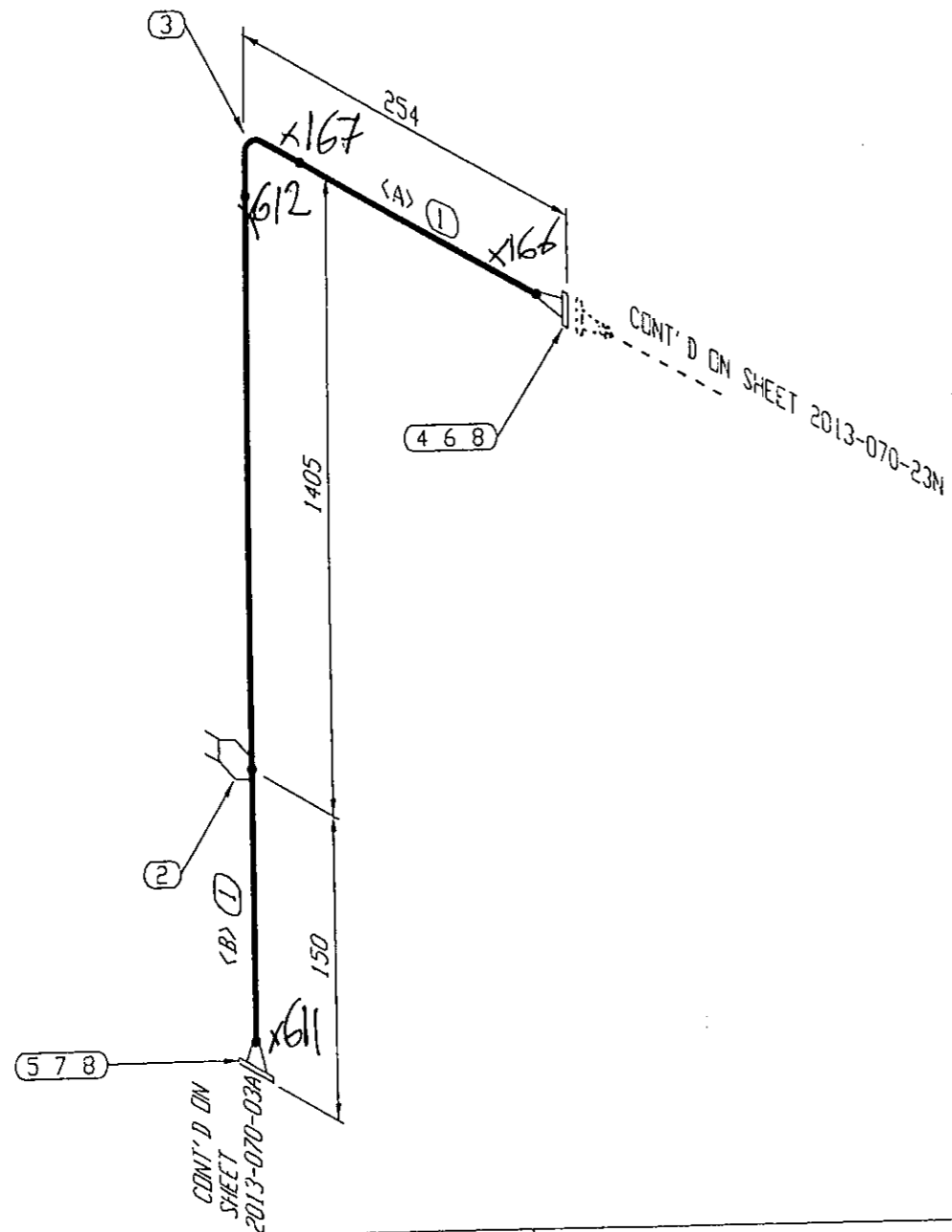
CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	78	2
	64	2



PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687				CUSTOMER: PENNWEST EXPLORATION	
PIPE SPEC.: AS	WELD PROC.: CADO-5					UNIT NO.: 2013-070-601	
DESIGN PRESS.: ATMOS.	RADIOGRAPHY: 100%					MODEL: 4-WELL SEPARATOR SKID (BU-2000)	
DESIGN TEMP.: 90 DEG. C	PWHT: N/A					LOCATION:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: H.P. FLARE HEADER	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-23N	
TEST PRESS.: N/A	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: AR	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR

REV: 0



BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. STD, A106 GR B	1501 MM	8.2
2	2X1/2	THREDOLET, 3000# FS, A105N	1	0.2
3	2	ELBOW, 90 DEG, LR, BW, SCH. STD, A234 GR WPB	1	0.7
4	2	FLANGE, RFWN, CLASS 150, SCH. STD BORE, A105N	1	2.8
5	2	FLANGE, RFWN, CLASS 600, SCH. STD BORE, A105N	1	5.5
6	2	GASKET, 3mm, FLEX CG, RF, CLASS 150, 316SS GRAPHITE FILLED, CS CENTERING RING	1	1.0
7	2	GASKET, 3mm, FLEX CG, RF, CLASS 600, 316SS GRAPHITE FILLED, CS CENTERING RING	1	1.0
8	5/8X83	(4) STUD BOLTS W/ NUTS, A193 GR B7M/A194 GR 2HM	2	2.0
TOTAL FABRICATION WEIGHT				21.1

CUT PIPE LENGTH

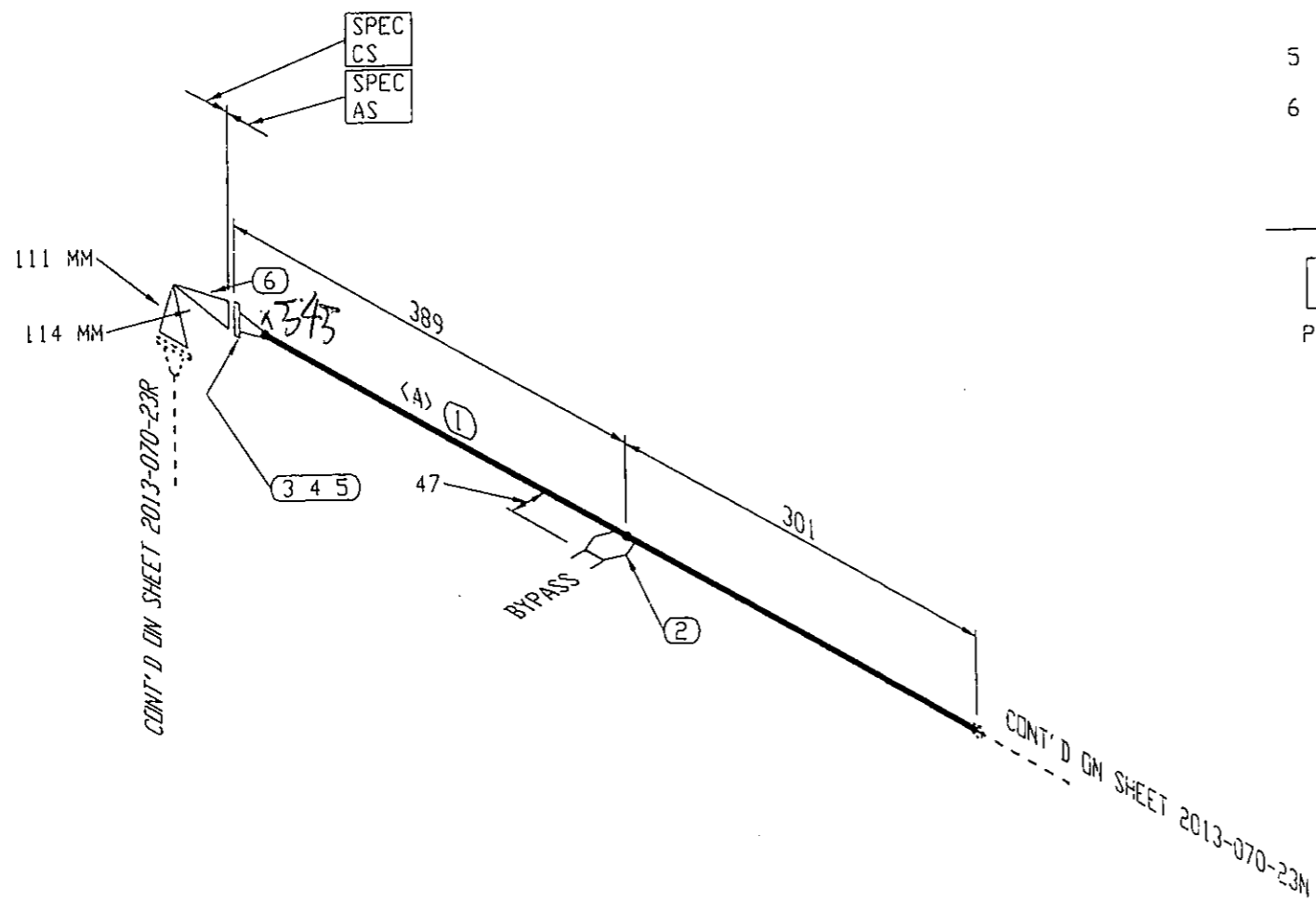
PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	108	2
	1393	2

PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,	
PIPE SPEC.: AS	WELD PROC.: CADO-5
DESIGN PRESS.: ATMOS.	RADIOGRAPHY: 100%
DESIGN TEMP.: 90 DEG. C	PWHT: N/A
MDMT: -29 DEG. C	PICKLE & OIL: N/A
C.A.: 1.6 mm	SANDBLAST: SP-6
TEST PRESS.: N/A	PAINT: WARM GREY
TEST MEDIA: AIR	INSULATION: N/A

CADO INDUSTRIES INC.
 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8
 TEL: (403) 279-6662; FAX: (403) 279-6887

NO.	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
NO.		REVISION	DATE	BY	CHK	APR

CUSTOMER:	PENNWEST EXPLORATION
UNIT NO.:	2013-070-601
MODEL:	4-WELL SEPARATOR SKID (BU-2000)
LOCATION:	
LINE TAG:	H.P. FLARE HEADER
DRAWING NO.:	070-23P
REV.	0



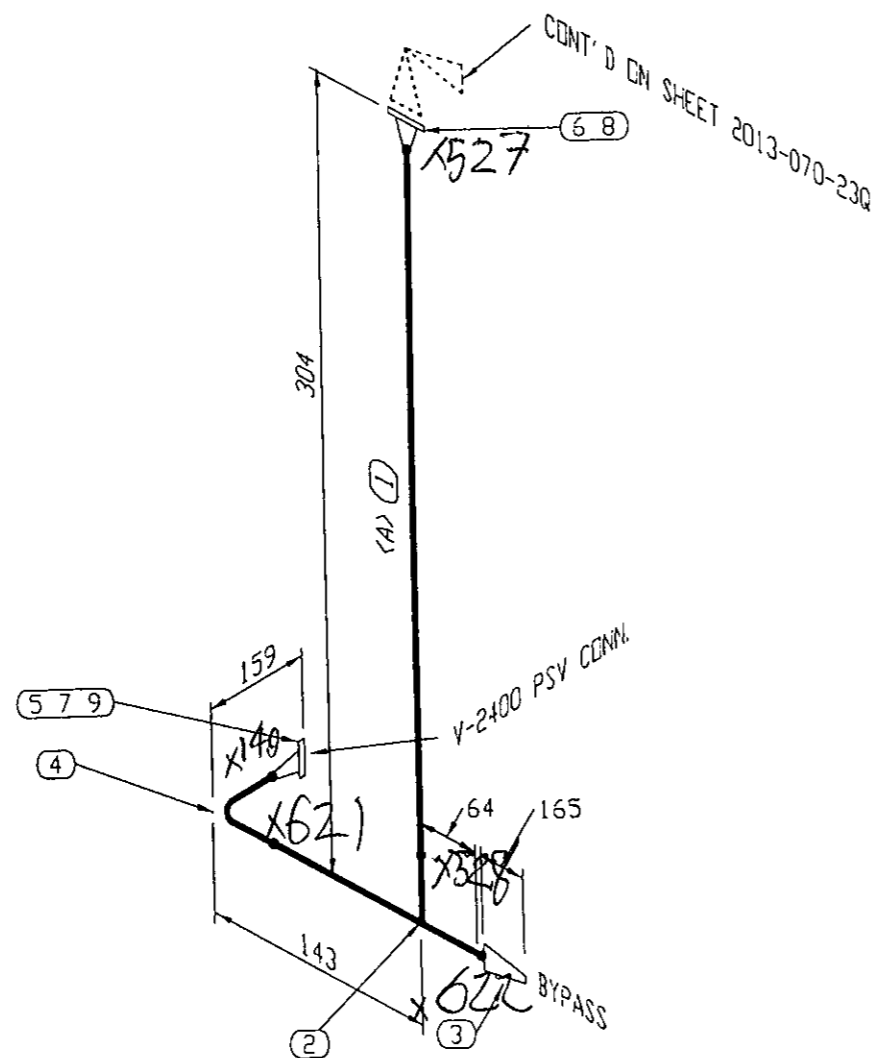
BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. STD, A106 GR B	623 MM	3.4
2	2X1	THREDDLET, 3000# FS, A105N	1	0.3
3	2	FLANGE, RFWN, CLASS 150, SCH. STD BDRE, A105N	1	2.8
4	2	GASKET, 3mm, FLEX CG, RF, CLASS 150, 316SS GRAPHITE FILLED, CS CENTERING RING	1	1.0
5	5/8X83	(4) STUD BOLTS W/ NUTS, A193 GR B7M/A194 GR 2HM	1	1.0
6	2X1	VALVE, RELIEF, RF, NACE 2002, 600# X 150#, A352 GR LCC	1	12.7
TOTAL FABRICATION WEIGHT				21.1

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
(A)	623	2

PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687				CUSTOMER: PENNWEST EXPLORATION	
PIPE SPEC.: AS	WELD PROC.: CADO-5					UNIT NO.: 2013-070-601	
DESIGN PRESS.: ATMOS.	RADIOGRAPHY: 100%					MODEL: 4-WELL SEPARATOR SKID (BU-2000)	
DESIGN TEMP.: 90 DEG. C	PWHT: N/A					LOCATION:	
DMNT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: H.P. FLARE HEADER	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-230	
TEST PRESS.: N/A	PAINT: WARM GREY	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC	REV. 0
TEST MEDIA: AIR	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APP



BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	1	PIPE, SMLS, BW, SCH. 80, A106 GR B	179 MM	0.6
2	2X1	TEE, RED, BW, SCH. 80, A234 GR WPB	1	1.0
3	2X1	SWAGE, CONC, SCH80/SCH. 160, BLE/TSE A105N	1	0.9
4	2	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	1	0.9
5	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	5.5
6	1	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	1.9
7	2	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
8	1	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
9	5/8X108	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
10	5/8X102	(4) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
TOTAL FABRICATION WEIGHT				13.6

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	179	1

PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,

PIPE SPEC.:	CS
DESIGN PRESS.:	9376 KPAG
DESIGN TEMP.:	90 DEG. C
MDMT:	-29 DEG. C
C.A.:	1.6 mm
TEST PRESS.:	14064 KPAG
TEST MEDIA:	WATER

WELD PROC.:	CADO-5
RADIOGRAPHY:	100%
PWHT:	N/A
PICKLE & OIL:	N/A
SANDBLAST:	SP-6
PAINT:	WARM GREY
INSULATION:	N/A

CADO INDUSTRIES INC.

7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8
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0 ISSUED FOR CONSTRUCTION
 NO REVISION

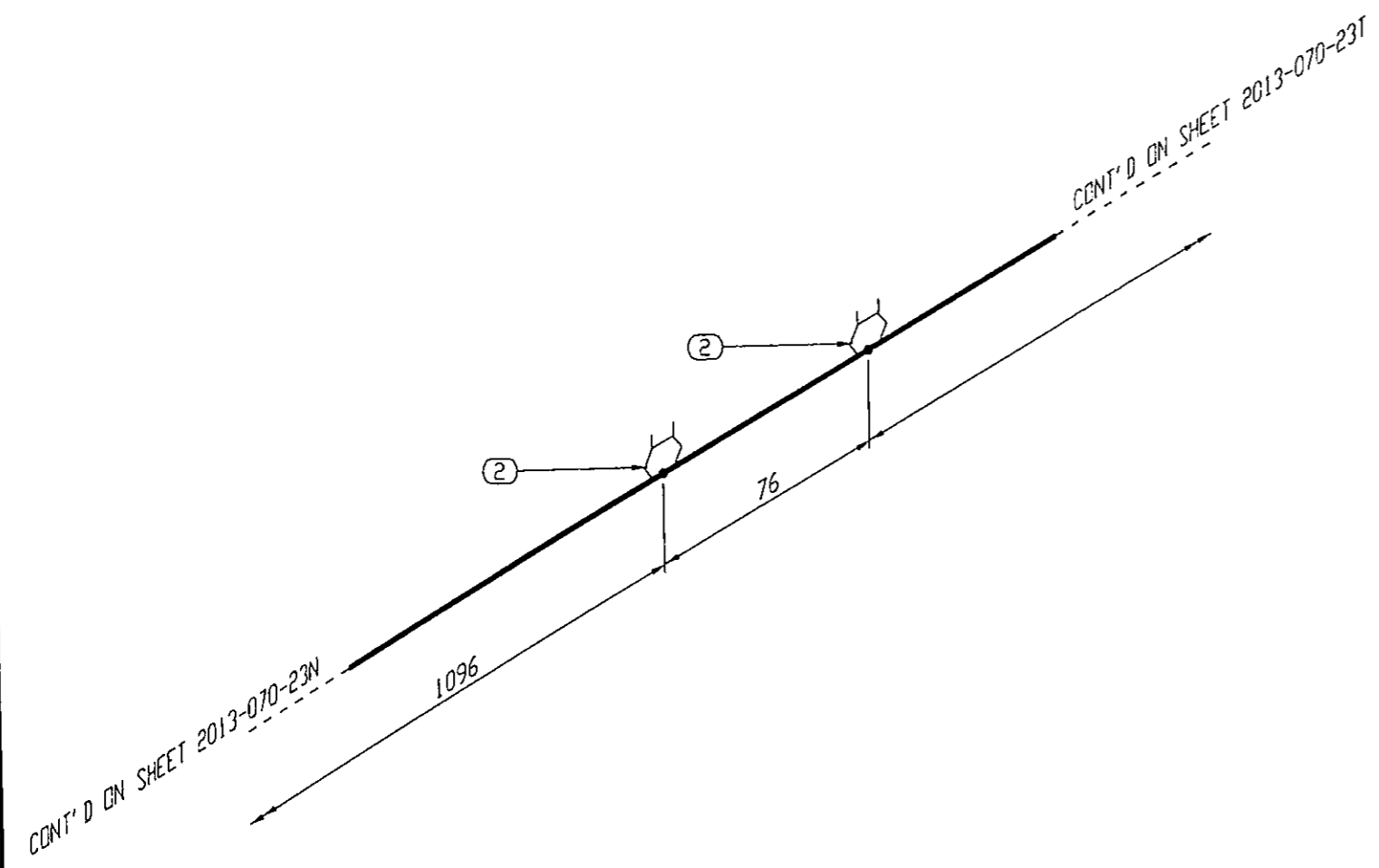
11/10/2013 AP WC WC
 DATE BY CHK APR

CUSTOMER:	PENNWEST EXPLORATION
UNIT NO.:	2013-070-601
MODEL:	4-WELL SEPARATOR SKID (BU-2000)
LOCATION:	
LINE TAG:	H.P. FLARE HEADER
DRAWING NO.:	070-23R

REV. 0

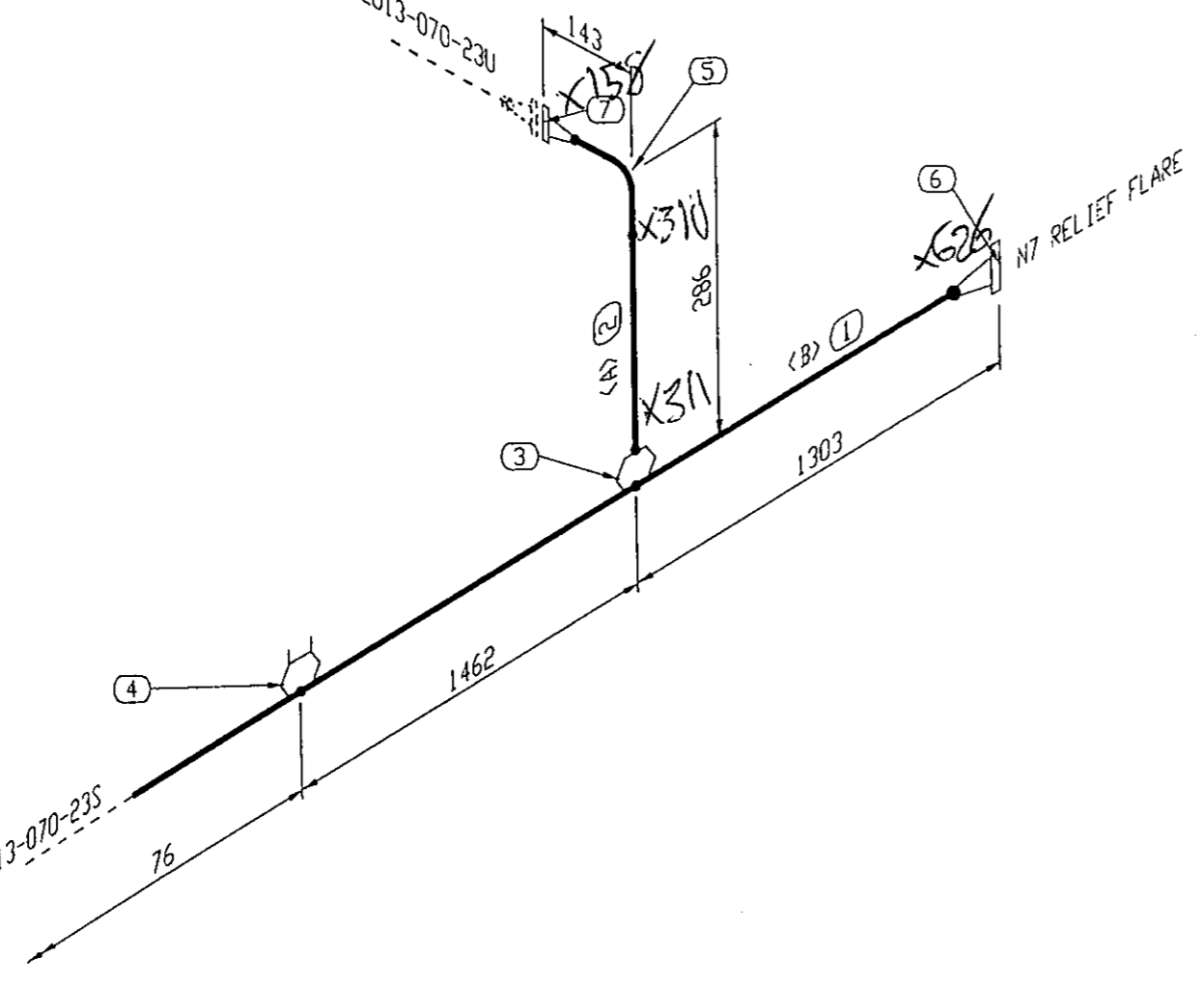
BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	6	PIPE, SMLS, BW, SCH. STD, A106 GR B	662 MM	18.7
2	6X1/2	THREDOLET, 3000# FS, A105N	2	0.3
TOTAL FABRICATION WEIGHT				18.9



PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION.		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687				CUSTOMER: PENNWEST EXPLORATION		
PIPE SPEC.: AS	WELD PROC.: CADO-5					UNIT NO.: 2013-070-601		
DESIGN PRESS.: ATMOS.	RADIOGRAPHY: 100%	MODEL: 4-WELL SEPARATOR SKID (BU-2000)						
DESIGN TEMP.: 90 DEG. C	PWHT: N/A	LOCATION:						
MDMT: -29 DEG. C	PICKLE & OIL: N/A	LINE TAG: H.P. FLARE HEADER						
C.A.: 1.6 mm	SANDBLAST: SP-6	DRAWING NO.: 070-23S						
TEST PRESS.: N/A	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/13/2013	AP	WC	WC	REV. 0
TEST MEDIA: AIR	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APP.	

CONT'D ON SHEET 2013-070-23U



BILL OF MATERIAL

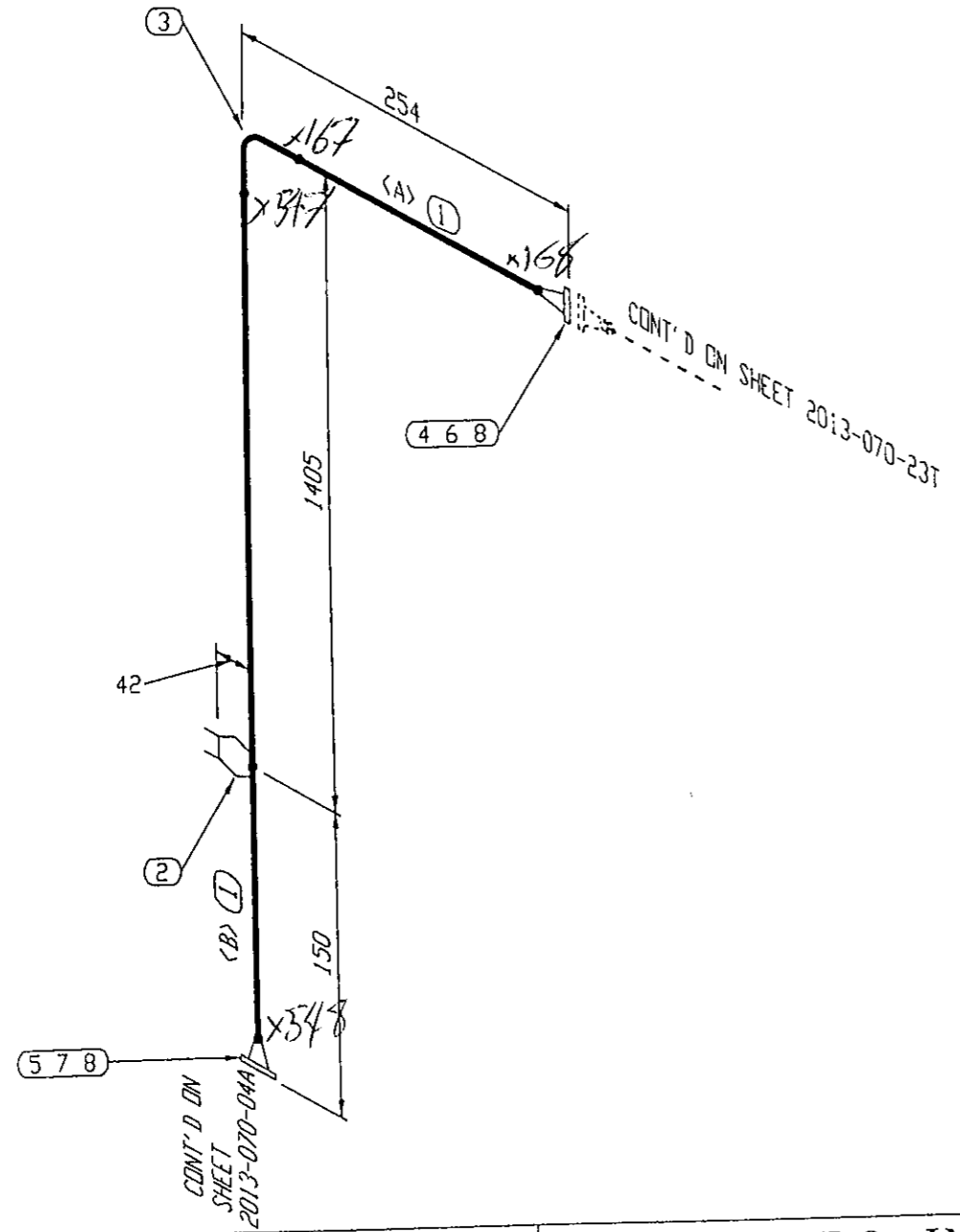
MARK	SIZE	DESCRIPTION	QTY	WEIGHT	
1	6	PIPE, SMLS, BW, SCH. STD, A106 GR B	2712 MM	76.6	
2	2	PIPE, SMLS, BW, SCH. STD, A106 GR B	78 MM	0.5	
3	6X2	WELDOLET, SCH. STD FS, A105N	1	0.7	
4	6X1/2	THREDOLET, 3000# FS, A105N	1	0.2	
5	2	ELBOW, 90 DEG, LR, BW, SCH. STD, A234 GR WPB	1	0.7	
6	6	FLANGE, RFWN, CLASS 150, SCH. STD BORE, A105N	1	10.9	
7	2	FLANGE, RFWN, CLASS 150, SCH. STD BORE, A105N	1	2.8	
TOTAL FABRICATION WEIGHT					92.0

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	78	2
	5585	6

CONT'D ON SHEET 2013-070-23S

PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687				CUSTOMER: PENNWEST EXPLORATION	
PIPE SPEC.: AS	WELD PROC.: CADO-5					UNIT NO.: 2013-070-601	
DESIGN PRESS.: ATMOS.	RADIOGRAPHY: 100%					MODEL: 4-WELL SEPARATOR SKID (BU-2000)	
DESIGN TEMP.: 90 DEG. C	PWHT: N/A					LOCATION:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: H.P. FLARE HEADER	
C.A.: 1.3 mm	SANDBLAST: SP-6					DRAWING NO.: 070-23T	
TEST PRESS.: N/A	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/13 2013	AP	WC	WC
TEST MEDIA: AIR	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR
						REV. 0	



BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. STD, A106 GR B	1501 MM	8.2
2	2X1/2	THREDOLET, 3000# FS, A105N	1	0.2
3	2	ELBOW, 90 DEG, LR, BW, SCH. STD, A234 GR WPB	1	0.7
4	2	FLANGE, RFWN, CLASS 150, SCH. STD BORE, A105N	1	2.8
5	2	FLANGE, RFWN, CLASS 600, SCH. STD BORE, A105N	1	5.5
6	2	GASKET, 3mm, FLEX CG, RF, CLASS 150, 316SS GRAPHITE FILLED, CS CENTERING RING	1	1.0
7	2	GASKET, 3mm, FLEX CG, RF, CLASS 600, 316SS GRAPHITE FILLED, CS CENTERING RING	1	1.0
8	5/8X83	(4) STUD BOLTS W/ NUTS, A193 GR B7N/A194 GR 2HM	2	2.0
TOTAL FABRICATION WEIGHT				<u>21.1</u>

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	108	2
	1393	2

PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,	
PIPE SPEC.: AS	WELD PROC.: CADO-5
DESIGN PRESS.: ATMOS.	RADIOGRAPHY: 100%
DESIGN TEMP.: 90 DEG. C	PWHT: N/A
MDMT: -29 DEG. C	PICKLE & OIL: N/A
C.A.: 1.6 mm	SANDBLAST: SP-6
TEST PRESS.: N/A	PAINT: WARM GREY
TEST MEDIA: AIR	INSULATION: N/A

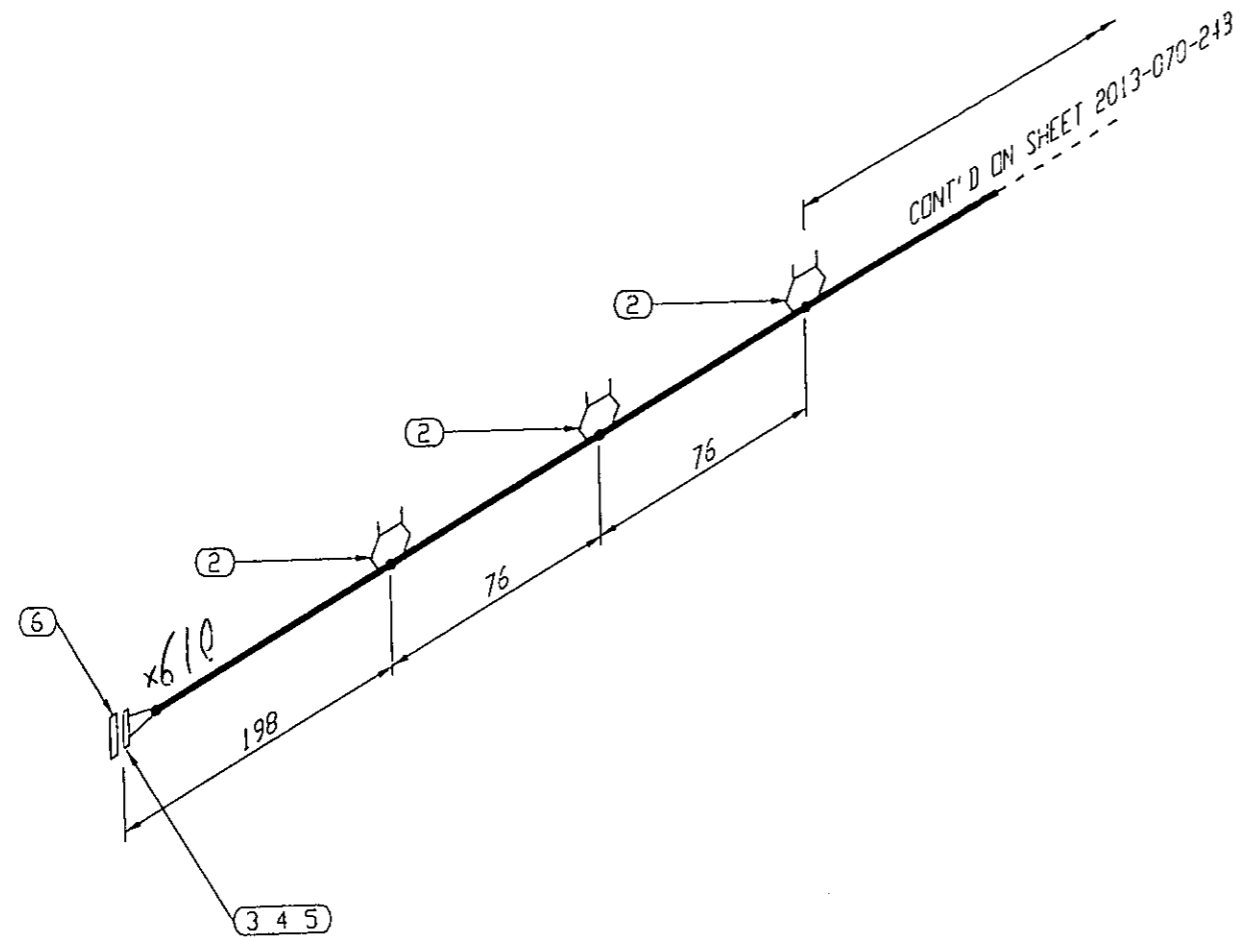
CADO INDUSTRIES INC.
 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8
 TEL: (403) 279-6662; FAX: (403) 279-6687

NO.	REVISION	DATE	BY	CHK	APR
0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC

CUSTOMER:	PENNWEST EXPLORATION
UNIT NO.:	2013-070-601
MODEL:	4-WELL SEPARATOR SKID (BU-2000)
LOCATION:	
LINE TAG:	H.P. FLARE HEADER
DRAWING NO.:	070-230
REV.	0

BILL OF MATERIAL

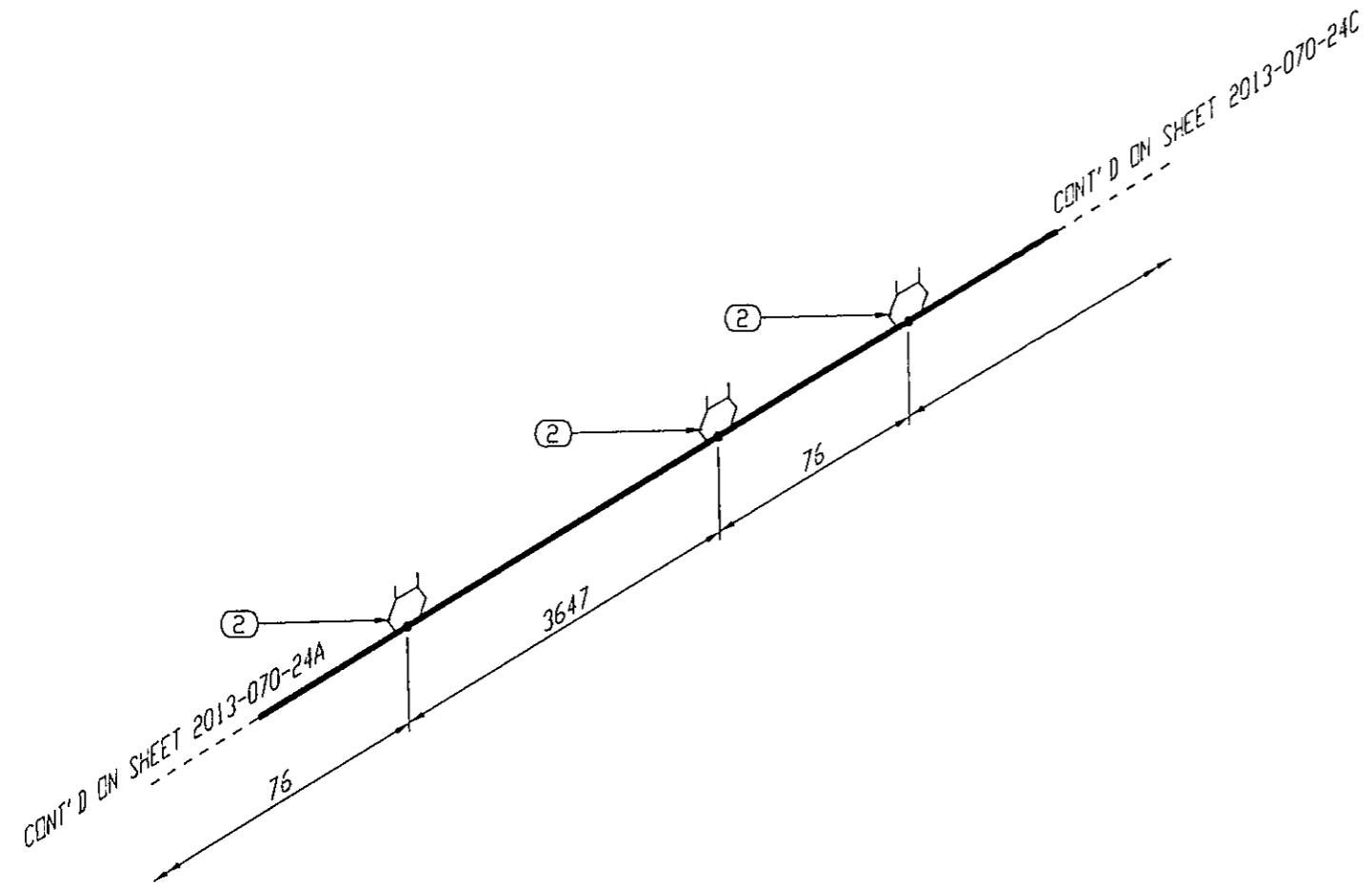
MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. STD, A106, GR B	321 MM	1.8
2	2X1/2	THREDDLET, 3000# FS, A105N	3	0.4
3	2	FLANGE, RFWN, CLASS 150, SCH. STD BORE, A105N	1	2.8
4	2	GASKET, 3mm, FLEX CG, RF, CLASS 150, 316SS GRAPHITE FILLED, CS CENTERING RING	1	1.0
5	5/8X83	(4) STUD BOLTS W/ NUTS, A193 GR B7M/A194 GR 2HM	1	1.0
6	2	FLANGE, RF, BLIND, CLASS 150, A105N	1	1.9
TOTAL FABRICATION WEIGHT				8.6



PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687				CUSTOMER: PENNWEST EXPLORATION	
PIPE SPEC.: AS	WELD PROC.: CADO-5					UNIT NO.: 2013-070-601	
DESIGN PRESS.: ATMOS.	RADIOGRAPHY: 100%	MODEL: 4-WELL SEPARATOR SKID (BU-2000)		LOCATION:			
DESIGN TEMP.: 90 DEG. C	PWHT: N/A			LINE TAG: L.P. FLARE HEADER			
MDMT: -29 DEG. C	PICKLE & OIL: N/A			DRAWING NO.: 070-24A		REV. 0	
C.A.: 1.6 mm	SANDBLAST: SP-6			11/13/2013	AP	WC	WC
TEST PRESS: N/A	PAINT: WARM GREY	ISSUED FOR CONSTRUCTION		DATE	BY	CHK	APR
TEST MEDIA: AIR	INSULATION: N/A	NO.	REVISION				

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. STD, A106 GR B	3799 MM	20.7
2	2X1/2	THREDOLET, 3000# FS, A105N	3	0.4
TOTAL FABRICATION WEIGHT				21.0



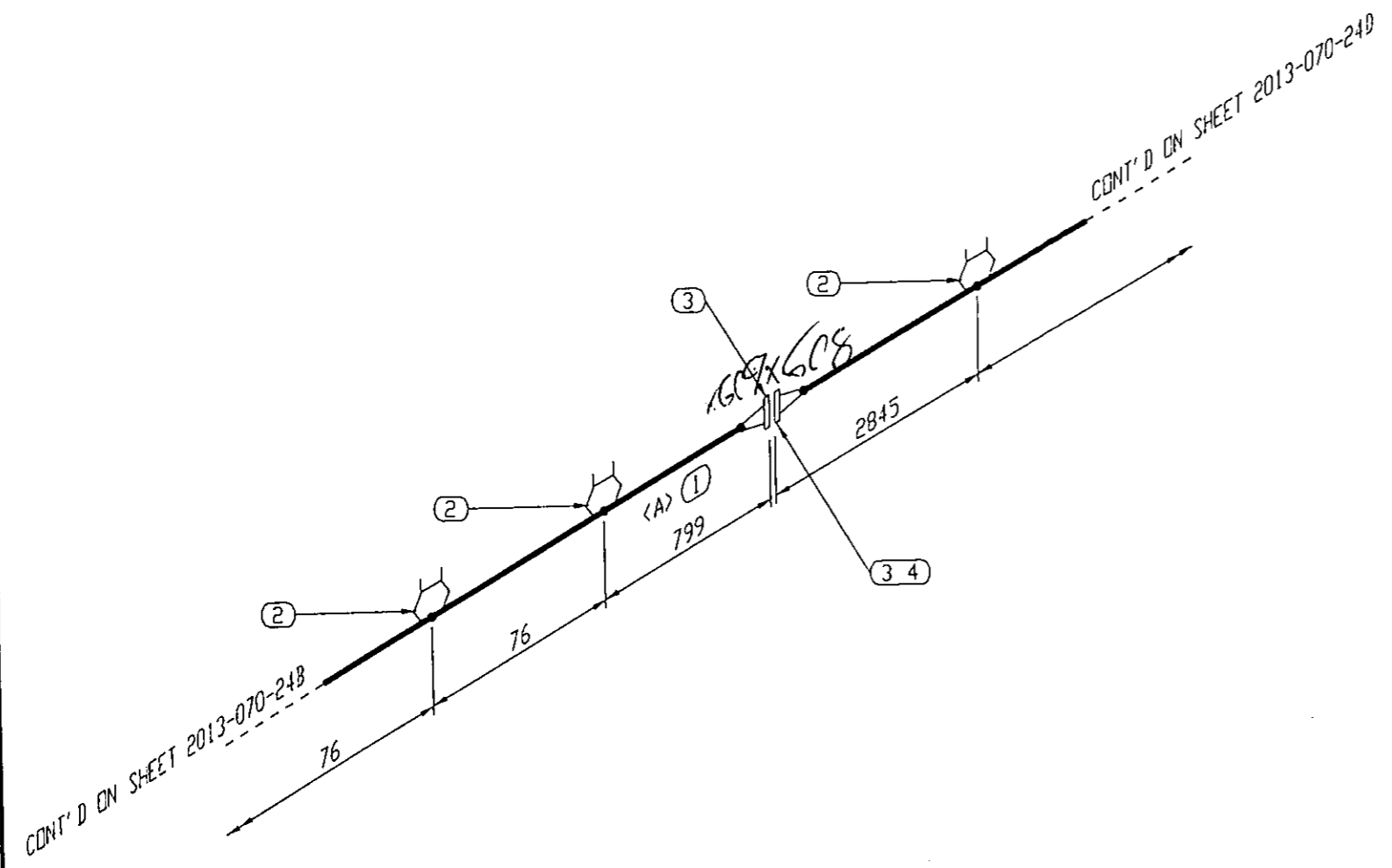
PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687				CUSTOMER: PENNWEST EXPLORATION	
PIPE SPEC.: AS	WELD PROC.: CADO-5					UNIT NO.: 2013-070-601	
DESIGN PRESS.: ATOMS.	RADIOGRAPHY: 100%					MODEL: 4-WELL SEPARATOR SKID (BU-2000)	
DESIGN TEMP.: 90 DEG. C	PWHT: N/A					LOCATION:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: L.P. FLARE HEADER	
C.A.: 1.5 mm	SANDBLAST: SP-6					DRAWING NO.: 070-24B	
TEST PRESS.: N/A	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: AIR	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APP
						REV. 0	

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. STD, A106 GR B	3663 MM	20.0
2	2X1/2	THREDOLET, 3000# FS, A105N	3	0.4
3	2	FLANGE, RFWN, CLASS 150, SCH. STD BORE, A105N	2	5.5
4	2	GASKET, 3mm, FLEX CG, RF, CLASS 150, 316SS GRAPHITE FILLED, CS CENTERING RING	1	1.0
TOTAL FABRICATION WEIGHT				26.7

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	4967	2



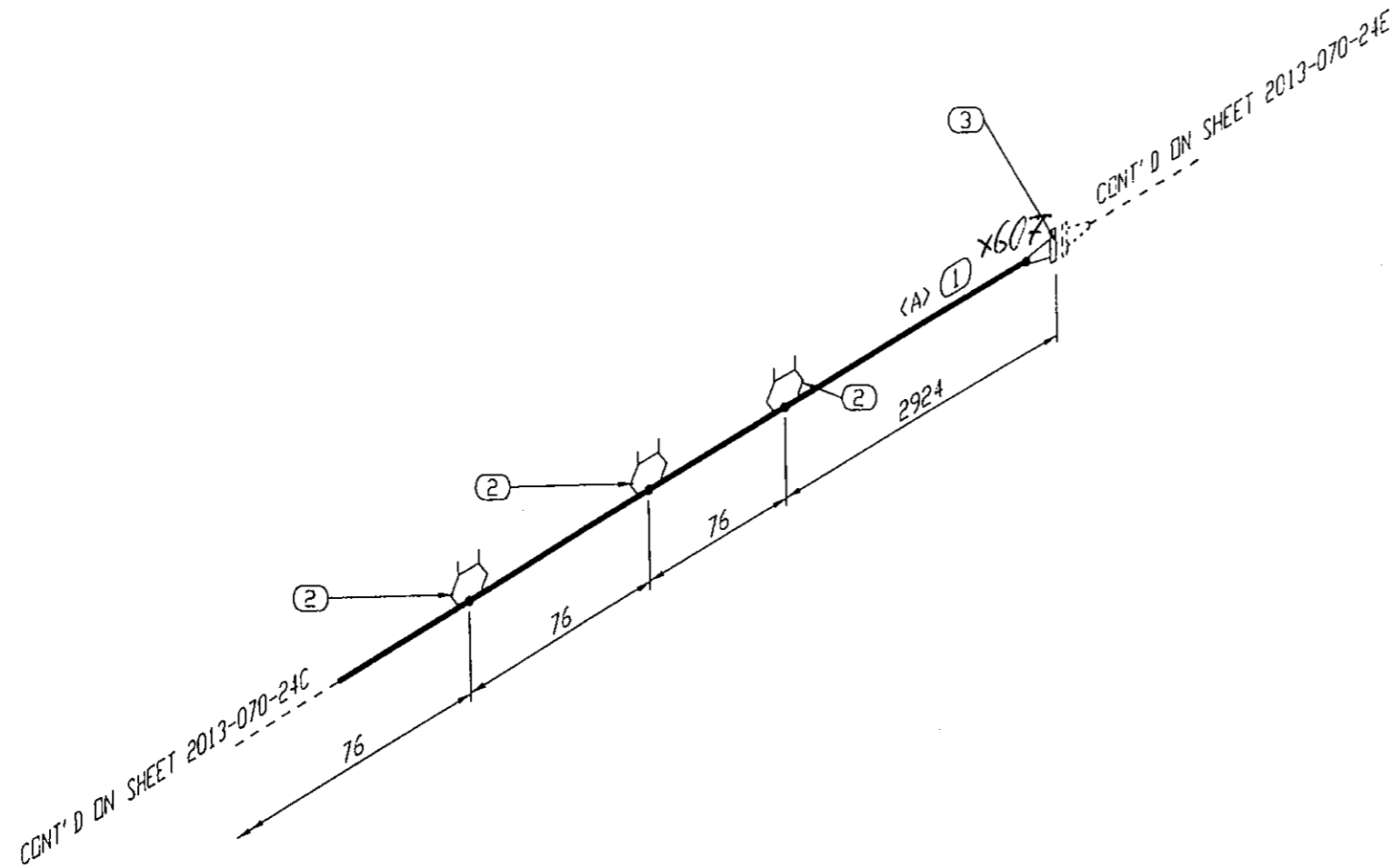
PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION, PIPE SPEC.: AS WELD PROC.: CADO-5 DESIGN PRESS.: ATMOS. RADIOGRAPHY: 100% DESIGN TEMP.: 90 DEG. C PWHT: N/A MDMT: -29 DEG. C PICKLE & OIL: N/A C.A.: 1.6 mm SANDBLAST: SP-6 TEST PRESS.: N/A PAINT: WARM GREY TEST MEDIA: A.R. INSULATION: N/A		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687				CUSTOMER: PENNWEST EXPLORATION UNIT NO.: 2013-070-601 MODEL: 4-WELL SEPARATOR SKID (BU-2000) LOCATION: LINE TAG: L.P. FLARE HEADER DRAWING NO.: 070-24C		REV. 0
		ISSUED FOR CONSTRUCTION NO. REVISION		DATE: 11/05/2013 BY: AP	WC WC	CHX APR		

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. STD, A106 GR B	3048 MM	16.6
2	2X1/2	THREDOLET, 3000# FS, A105N	3	0.4
3	2	FLANGE, RFWN, CLASS 150, SCH. STD BORE, A105N	1	2.8
TOTAL FABRICATION WEIGHT				19.6

CUT PIPE LENGTH

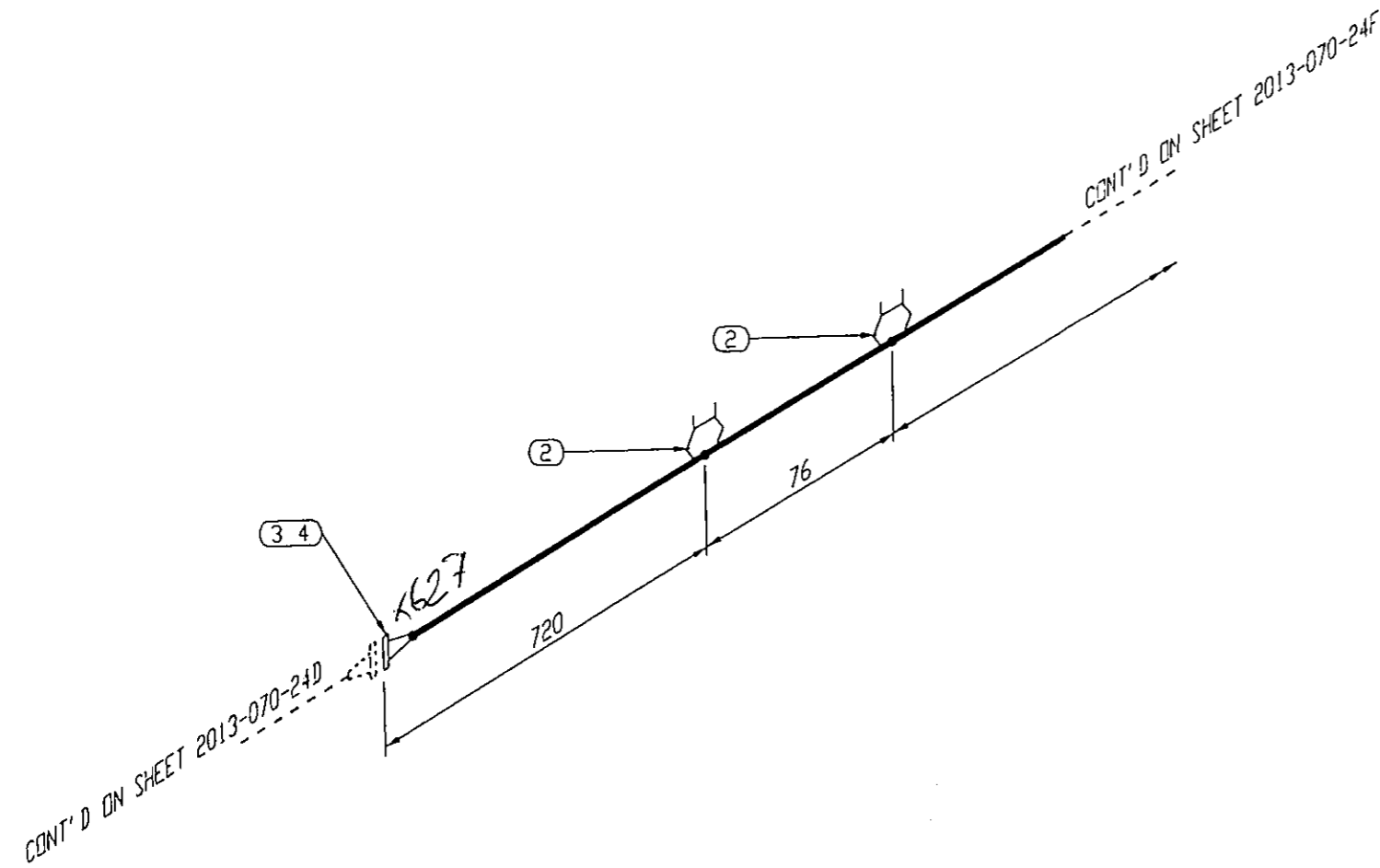
PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	5864	2



PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687				CUSTOMER: PENNWEST EXPLORATION	
PIPE SPEC.: AS	WELD PROC.: CADO-5					UNIT NO.: 2013-070-601	
DESIGN PRESS.: ATMOS.	RADIOGRAPHY: 100%	MODEL: 4-WELL SEPARATOR SKID (BU-2000)					
DESIGN TEMP.: 90 DEG. C	PWHT: N/A	LOCATION:					
MDMT: -29 DEG. C	PICKLE & OIL: N/A	LINE TAG: L.P. FLARE HEADER					
C.A.: 1.6 mm	SANDBLAST: SP-6	DRAWING NO.: 070-24D	REV. 0				
TEST PRESS.: N/A	PAINT: WARM GREY	ISSUED FOR CONSTRUCTION					
TEST MEDIA: AIR	INSULATION: N/A	NO. REVISION					

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. STD, A106 GR B	767 MM	4.2
2	2X1/2	THREDDLET, 3000# FS, A105N	2	0.3
3	2	FLANGE, RFWN, CLASS 150, SCH. STD BORE, A105N	1	2.8
4	2	GASKET, 3mm, FLEX CG, RF, CLASS 150, 316SS GRAPHITE FILLED, CS CENTERING RING	1	1.0
TOTAL FABRICATION WEIGHT				8.1



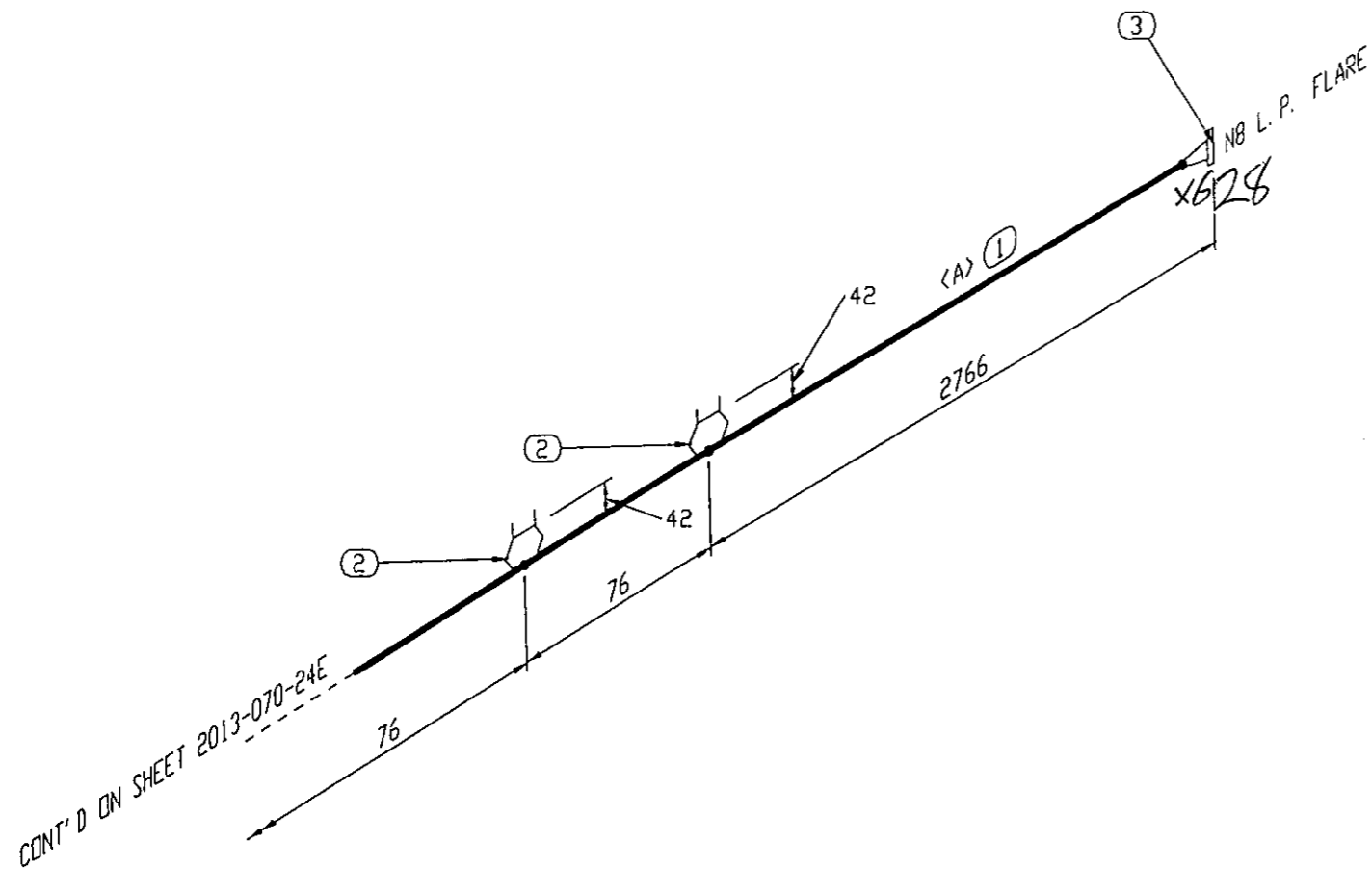
PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687				CUSTOMER: PENNWEST EXPLORATION	
PIPE SPEC.: AS	WELD PROC.: CADO-5					UNIT NO.: 2013-070-601	
DESIGN PRESS.: ATMOS.	RADIOGRAPHY: 100%	MODEL: 4-WELL SEPARATOR SKID (BU-2000)		LOCATION:			
DESIGN TEMP.: 90 DEG. C	PWHT: N/A	LINE TAG: L.P. FLARE HEADER		DRAWING NO.: 070-24E		REV. 0	
DMMT: -29 DEG. C	PICKLE & OIL: N/A	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
C.A.: 1.5 mm	SANDBLAST: SP-6			DATE	BY	CHK	APP
TEST PRESS.: N/A	PAINT: WARM GREY	NO.	REVISION				
TEST MEDIA: AIR	INSULATION: N/A						

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. STD, A106 GR B	2813 MM	15.3
2	2X1/2	THREDOLET, 3000# FS, A105N	2	0.3
3	2	FLANGE, RFWN, CLASS 150, SCH. STD BORE, A105N	1	2.8
TOTAL FABRICATION WEIGHT				18.2

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	3580	2



PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,

PIPE SPEC.: AS	WELD PROC.: CADO-5
DESIGN PRESS.: ATMOS.	RADIOGRAPHY: 100%
DESIGN TEMP.: 90 DEG. C	PWHT: N/A
MDMT: -29 DEG. C	PICKLE & OIL: N/A
C.A.: 1.6 mm	SANDBLAST: SP-6
TEST PRESS.: N/A	PAINT: WARM GREY
TEST MEDIA: AIR	INSULATION: N/A

CADO INDUSTRIES INC.
 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8
 TEL: (403) 279-6662; FAX: (403) 279-6687

CUSTOMER:	PENNWEST EXPLORATION
UNIT NO.:	2013-070-601
MODEL:	4-WELL SEPARATOR SKID (BU-2000)
LOCATION:	
LINE TAG:	L.P. FLARE HEADER
DRAWING NO.:	070-24F
REV.	0

0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
NO.	REVISION	DATE	BY	CHK	APR