

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	740 MM	16.5
2	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	108 MM	0.9
3	4X4	TEE, STR, BW, SCH. 80, A234 GR WPB	1	5.6
4	4X2	REDUCER, CONC, BW, SCH. 80, A234 GR WPB	1	1.5
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	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	5.5
8	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
9	2	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
10	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
11	5/8X108	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
12	4	VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N	1	74.9
13	2	VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N	1	20.0

TOTAL FABRICATION WEIGHT 167.9

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	284	4
	456	4
<C>	108	2

APPROVED FOR CONSTRUCTION
[Signature]

PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010		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: SKID INLET (V-2100)					
C.A.: 1.6 mm	SANDBLAST: SP-6	DRAWING NO.: 070-01A					
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/13/2013	AP	WC	WC
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR

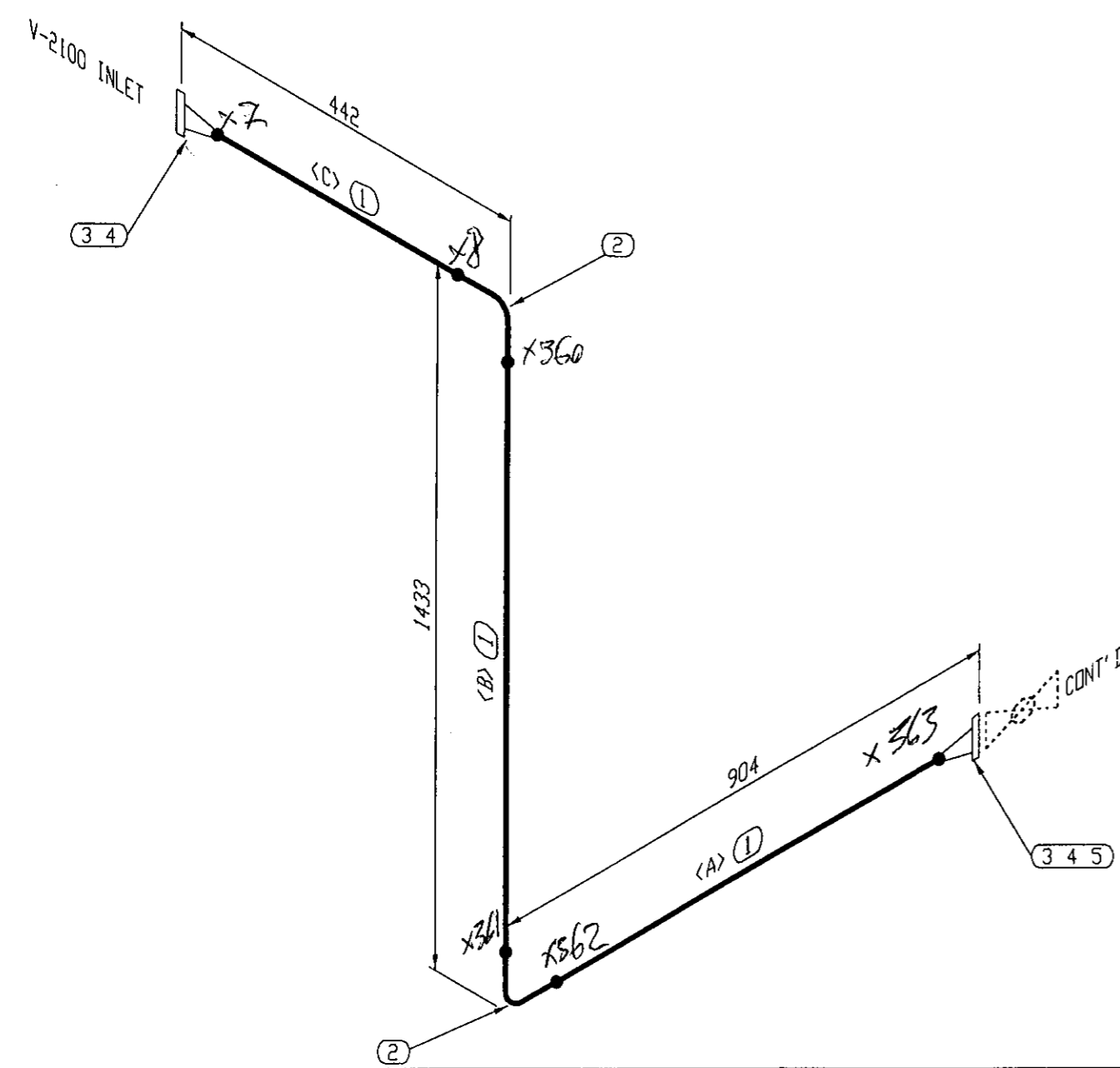
Unit # 1

BILL OF MATERIAL

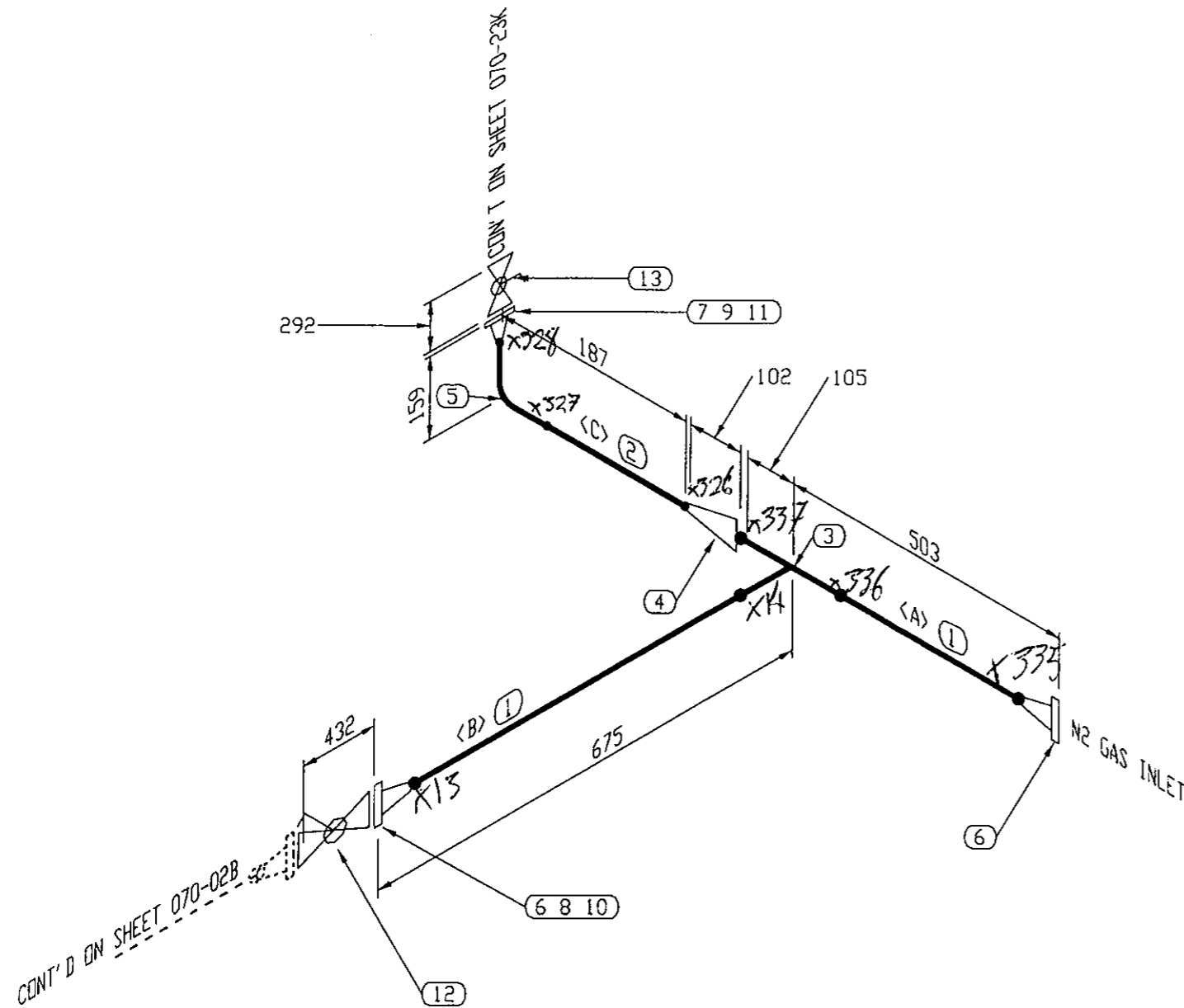
MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	1932 MM	43.7
2	4	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	2	10.7
3	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1
4	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	2	2.0
5	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
TOTAL FABRICATION WEIGHT				95.4

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	636	4
	1121	4
<C>	175	4



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-6					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: SKID INLET (V-2100)						
C.A.: 1.6 mm	SANDBLAST: SP-5	DRAWING NO.: 070-01B						
TEST PRESS.: 14064 KPAC	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC	REV. 0
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR	



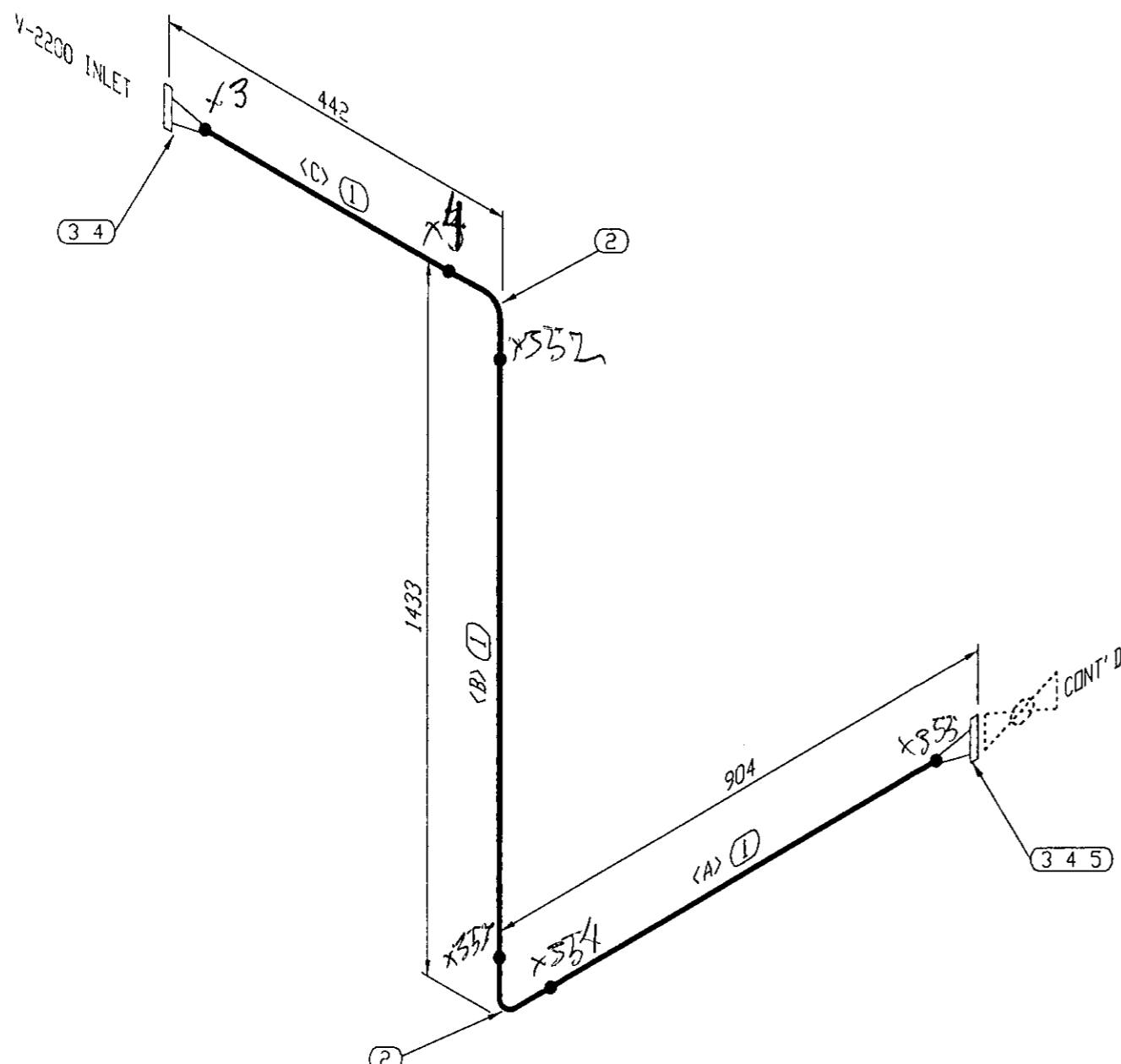
BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	740 MM	16.5
2	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	108 MM	0.9
3	4X4	TEE, STR, BW, SCH. 80, A234 GR WPB	1	5.6
4	4X2	REDUCER, CONC, BW, SCH. 80, A234 GR WPB	1	1.5
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	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	5.5
8	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
9	2	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
10	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
11	5/8X108	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
12	4	VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N	1	74.9
13	2	VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N	1	20.0
TOTAL FABRICATION WEIGHT				167.9

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	284	4
	456	4
<C>	108	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 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: SKID INLET (V-2200)	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-02A	
TEST PRESS.: 14064 KPAC	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	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	1932 MM	43.7
2	4	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	2	10.7
3	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1
4	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	2	2.0
5	7/8X146	(B) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
TOTAL FABRICATION WEIGHT				95.4

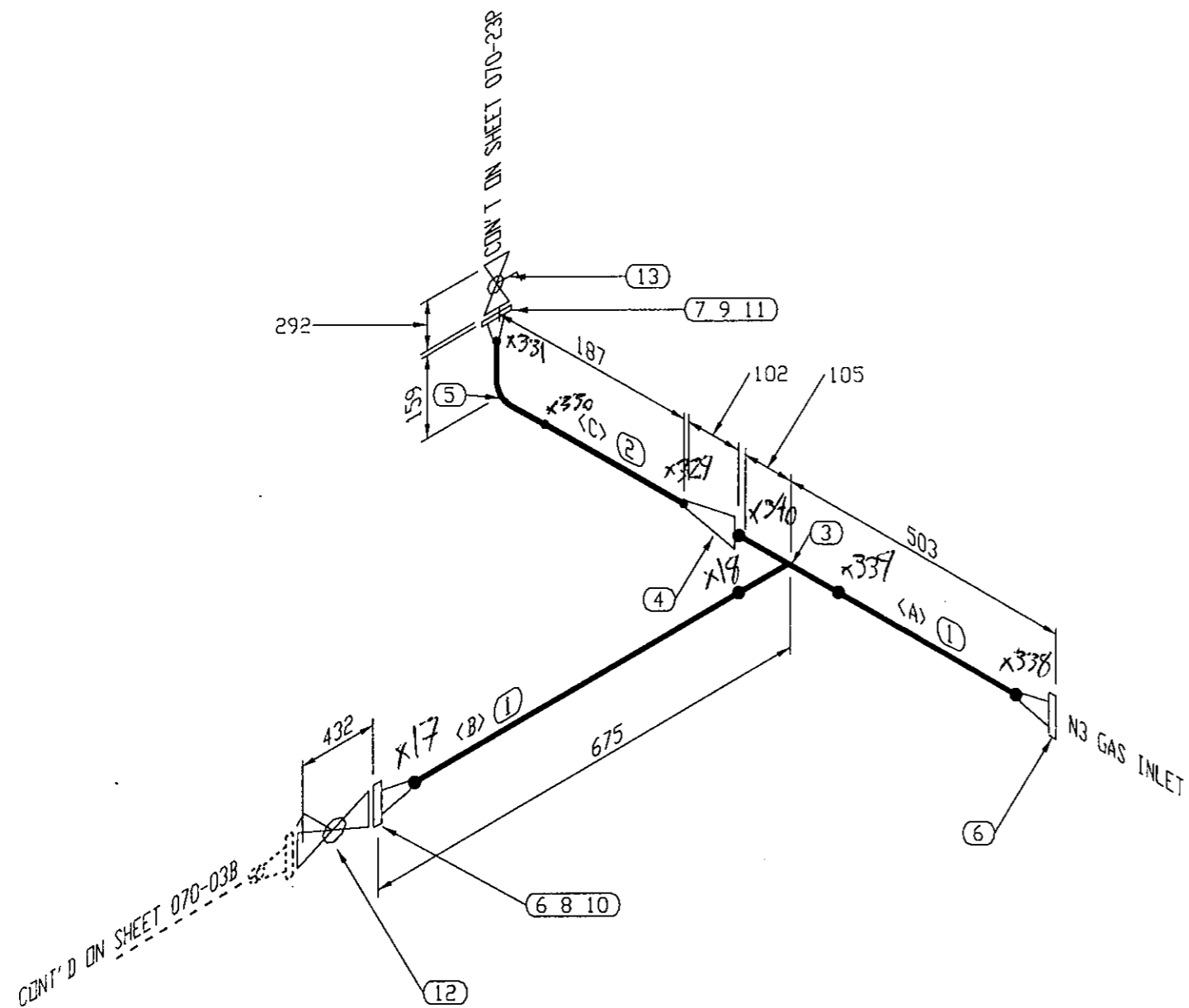
CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	636	4
	1121	4
<C>	175	4

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: WOG	INSULATION: N/A

CADO INDUSTRIES INC.			
7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8			
TEL: (403) 279-6662; FAX: (403) 279-6687			
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:	SKID INLET (V-2200)
DRAWING NO.:	070-02B
REV.	0



MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	740 MM	16.5
2	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	108 MM	0.9
3	4X4	TEE, STR, BW, SCH. 80, A234 GR WPB	1	5.6
4	4X2	REDUCER, CONC, BW, SCH. 80, A234 GR WPB	1	1.5
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	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	5.5
8	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
9	2	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
10	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
11	5/8X108	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
12	4	VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N	1	74.9
13	2	VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N	1	20.0
TOTAL FABRICATION WEIGHT				167.9

CUT PIPE LENGTH		
PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	284	4
	456	4
<C>	108	2

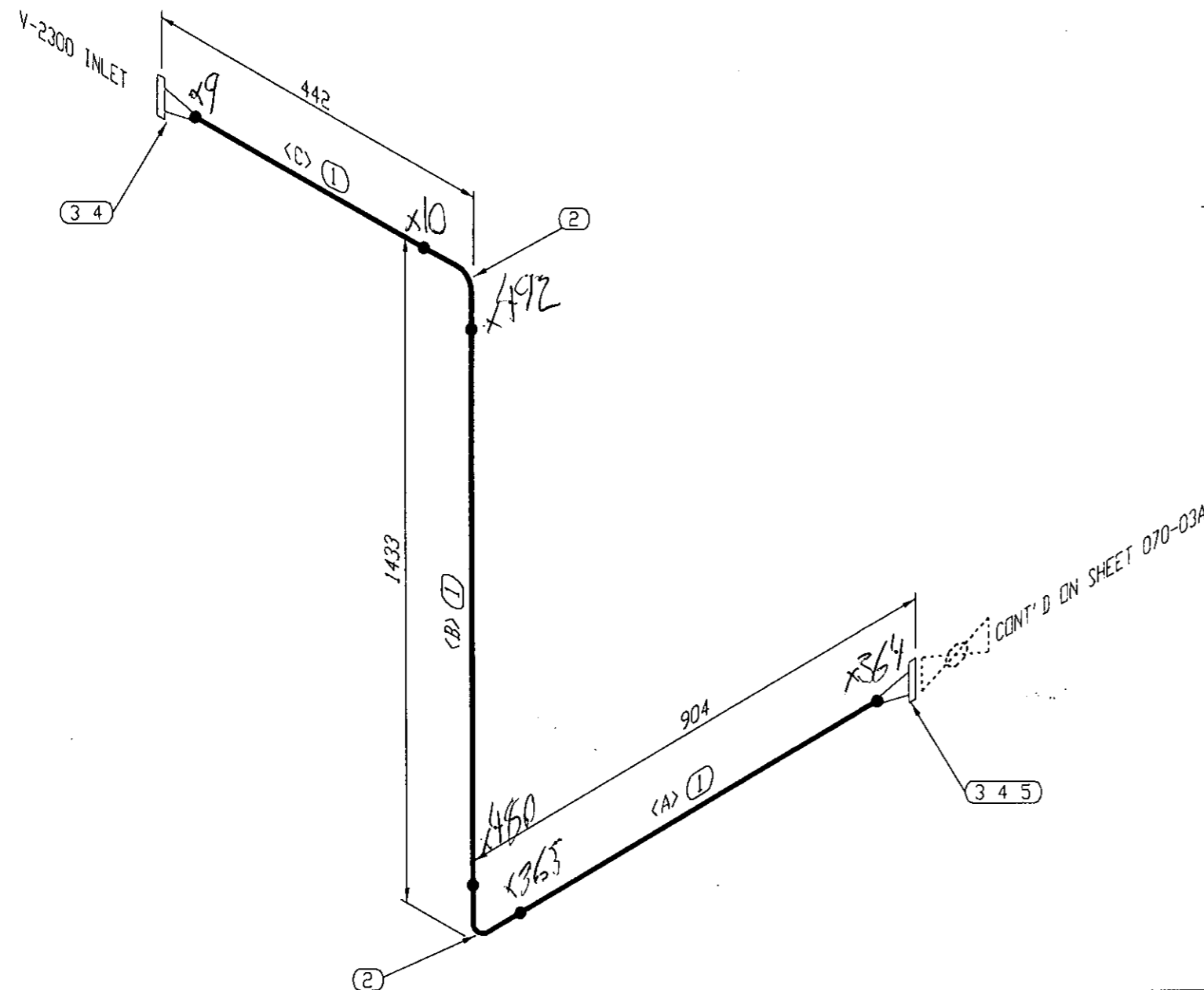
PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687				CUSTOMER: PENNWEST EXPLORATION	
PIPE SPEC.: CS	WELD PROC.: CADO-5					UNIT NO.: 2013-070-601	
DESIGN PRESS.: 9376 KPAG	RADIOGRAPHY: 100%					MODEL: 4-WELL SEPARATOR SKID (BU-2000)	
DESIGN TEMP.: 90 DEG. C	PWHT: N/A					LOCATION:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: SKID INLET (V-2300)	
C.A.: 1.6 mm	SANDBLAST: SP-8					DRAWING NO.: 070-03A	
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	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	1932 MM	43.7
2	4	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	2	10.7
3	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1
4	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	2	2.0
5	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
TOTAL FABRICATION WEIGHT				95.4

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	636	4
	1121	4
<C>	175	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:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: SKID INLET (V-2300)	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-03B	
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR

2A

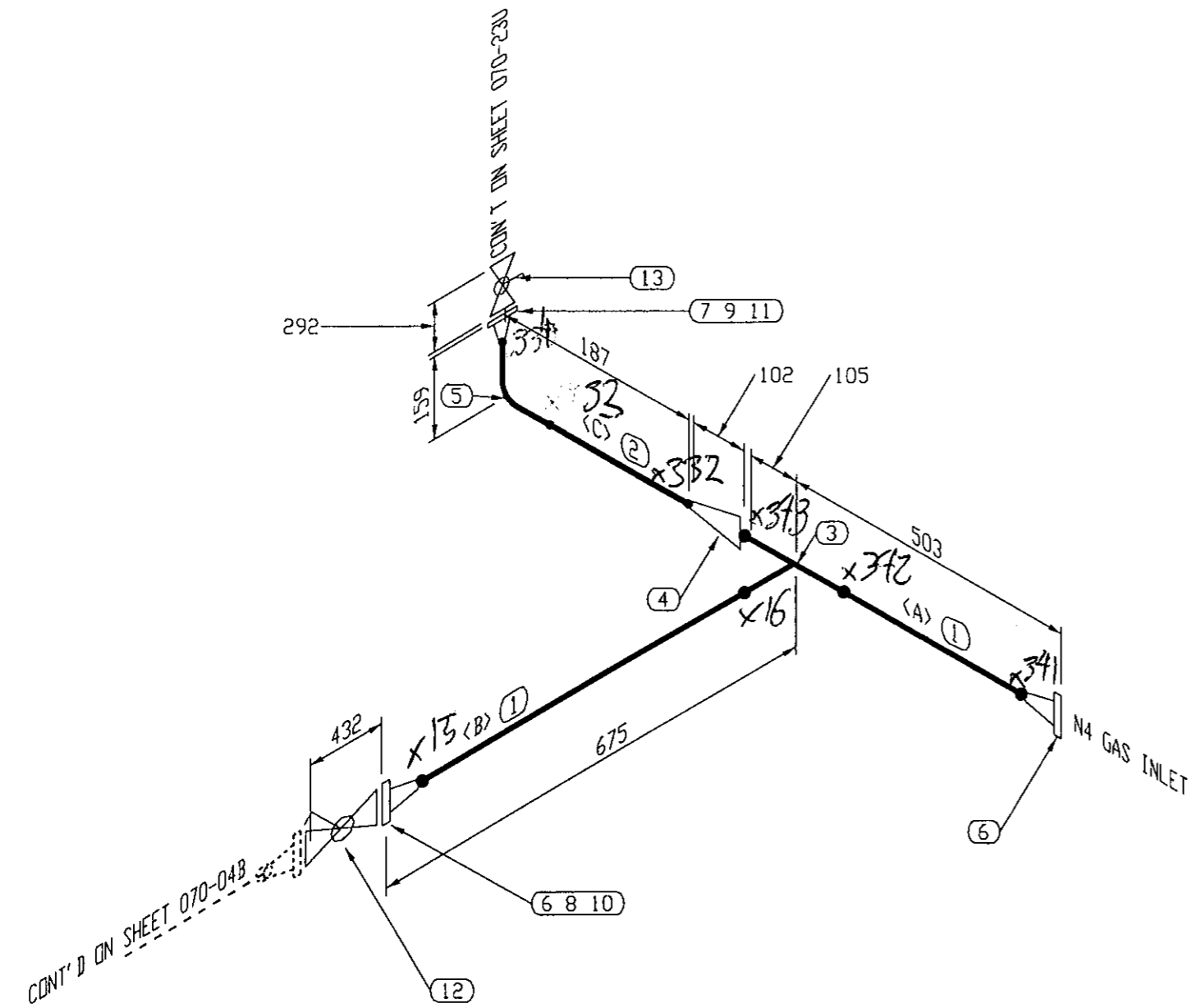
BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	740 MM	16.5
2	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	108 MM	0.9
3	4X4	TEE, STR, BW, SCH. 80, A234 GR WPB	1	5.6
4	4X2	REDUCER, CONC, BW, SCH. 80, A234 GR WPB	1	1.5
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	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	5.5
8	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
9	2	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	5/8X108	 STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
12	4	VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N	1	74.9
13	2	VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N	1	20.0

TOTAL FABRICATION WEIGHT 167.9

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	284	4
	456	4
<C>	108	2



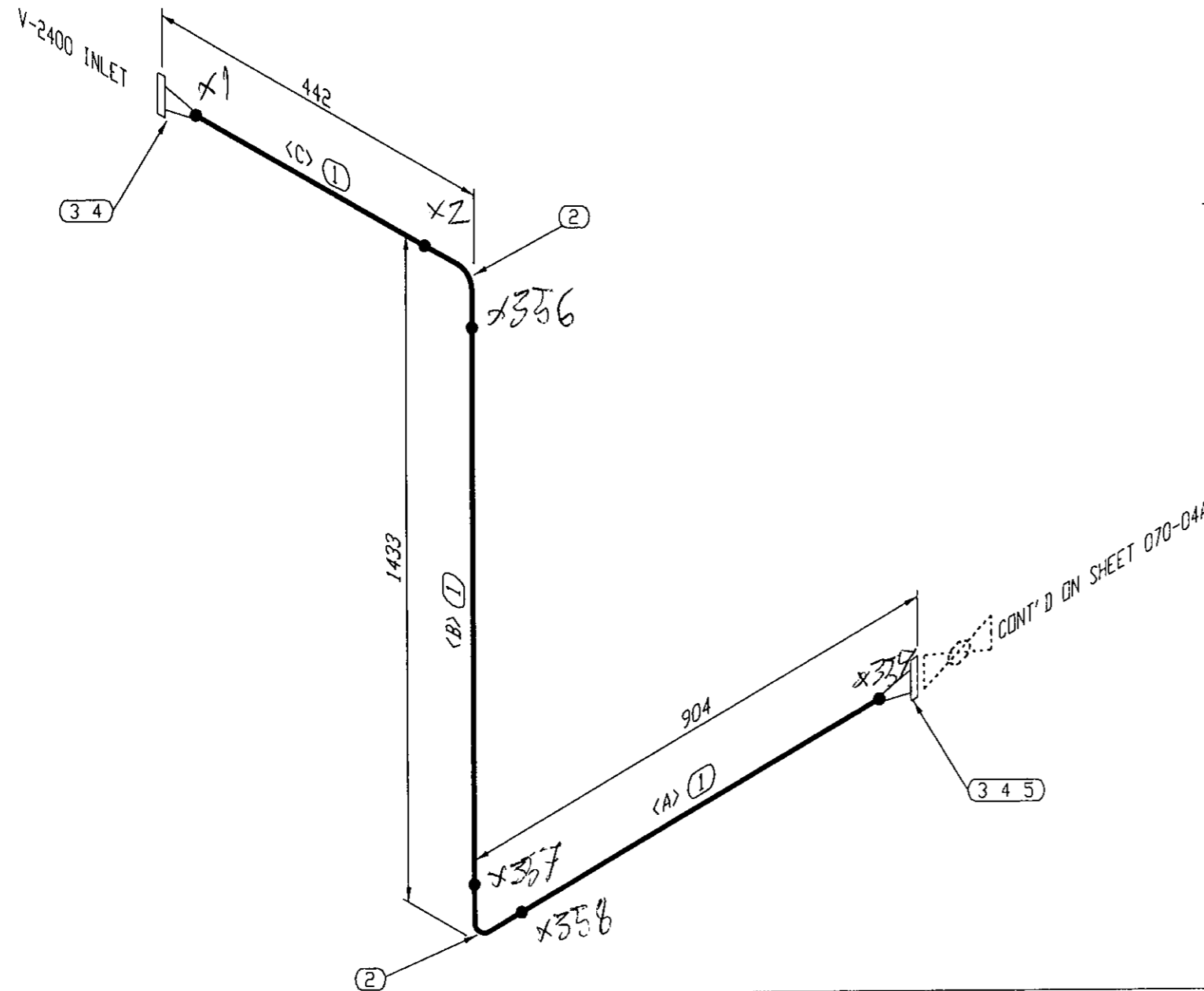
PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION, 2011 AD.		<p align="center">CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687</p>				CUSTOMER: PENNWEST EXPLORATION		
PIPE SPEC.: CS	WELD PROC.: CADO-6					UNIT NO.: 2013-070-601		
DESIGN PRESS.: 9376 KPAG	RADIOGRAPHY: 100%	MODEL: 4-WELL SEPARATOR SKID (BU-2000)						
DESIGN TEMP.: 38 DEG. C	PWHT: N/A	LOCATION:						
MDMT: -29 DEG. C	PICKLE & OIL: N/A	LINE TAG: SKID INLET (V-2400)						
C.A.: 3.2mm	SANDBLAST: SP-6	DRAWING NO.: 070-04A						
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

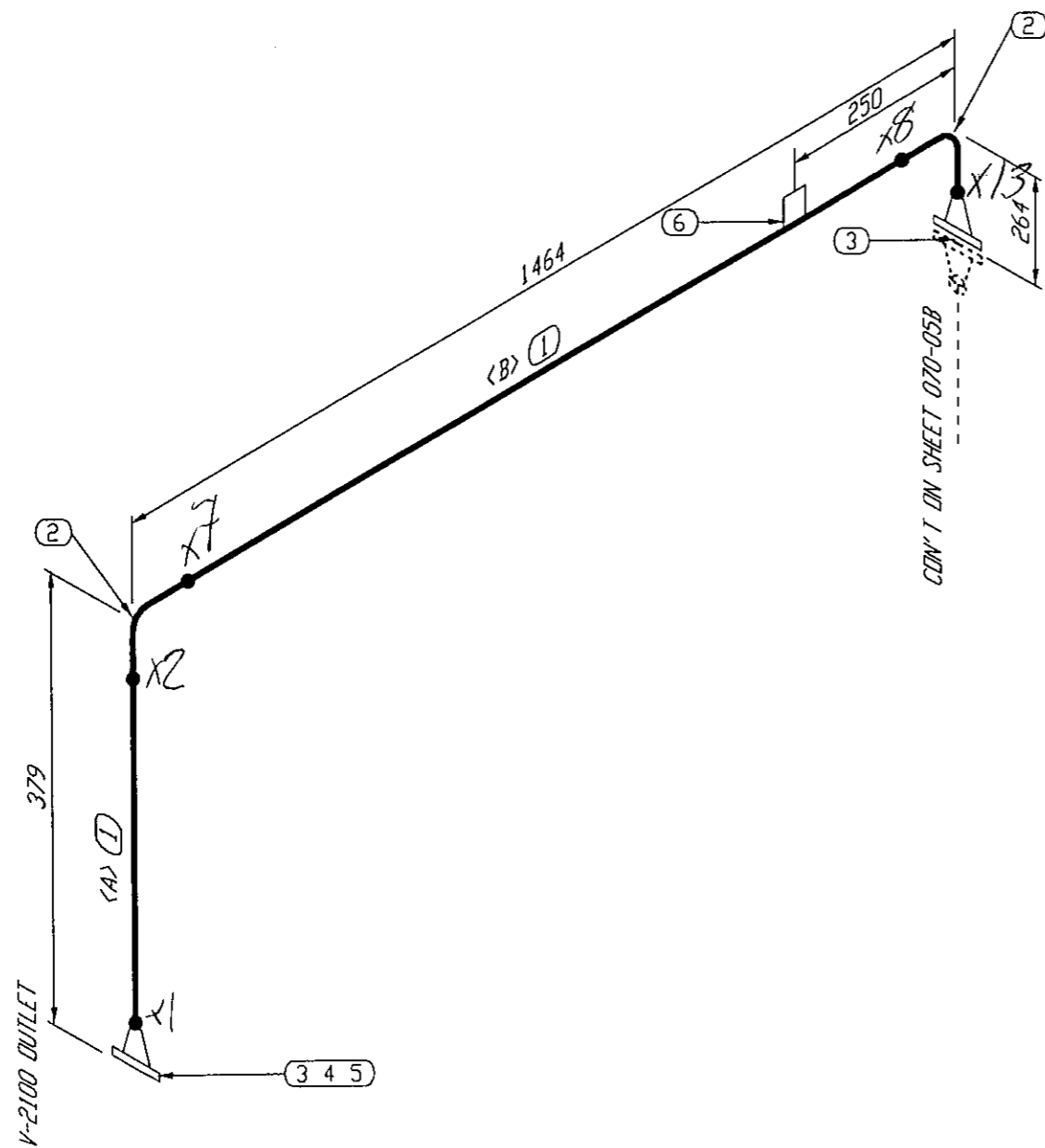
MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	1932 MM	43.7
2	4	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	2	10.7
3	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1
4	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	2	2.0
5	7/8X146	(B) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
TOTAL FABRICATION WEIGHT				95.4

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	636	4
	1121	4
<C>	175	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:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: SKID INLET (V-2400)	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-04B	
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/13/2013	AP	WC	WC
TEST MEDIA: WOG	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	1265 MM	28.3
2	4	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR	2	10.7
		WPB		
3	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1
4	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
5	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
6	3/4	CPLG 3000# NPT A105N	1	

TOTAL FABRICATION WEIGHT 79.0

CUT PIPE LENGTH

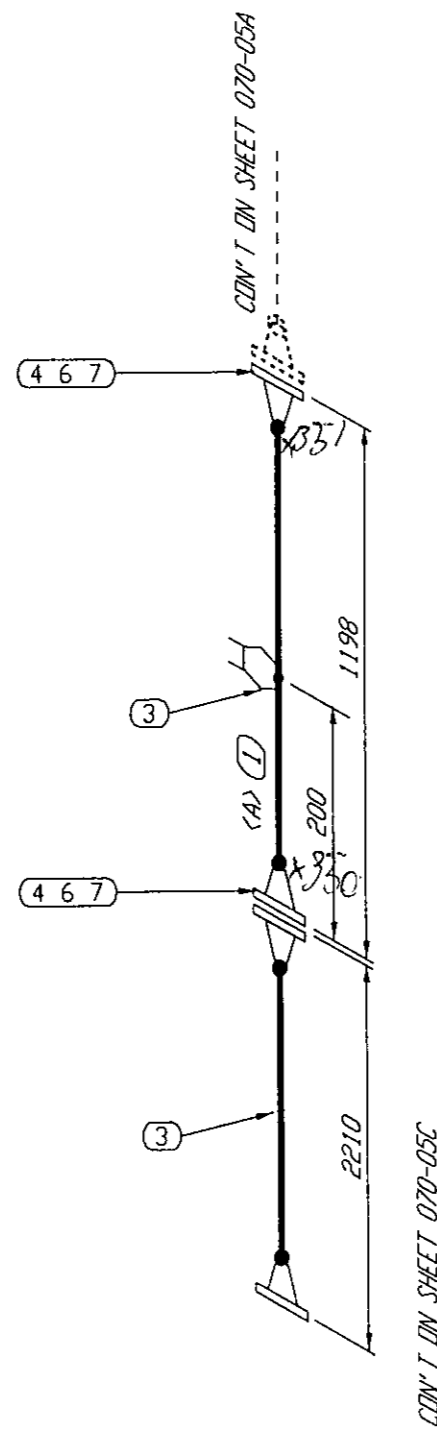
PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	112	4
	1153	4

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: WOG	INSULATION: N/A

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

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:	V-2100 PROCESS OUTLET
DRAWING NO.:	070-05A
REV.	0



BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	976 MM	26.9
2	4	METER RUN	1	44.4
3	4X1/2	THREDDLET, CL3000, A105N	1	0.2
4	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1
5	4	METER RUN	2	38.1
6	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	2	2.0
7	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	2	2.0
TOTAL FABRICATION WEIGHT				151.5

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	976	4

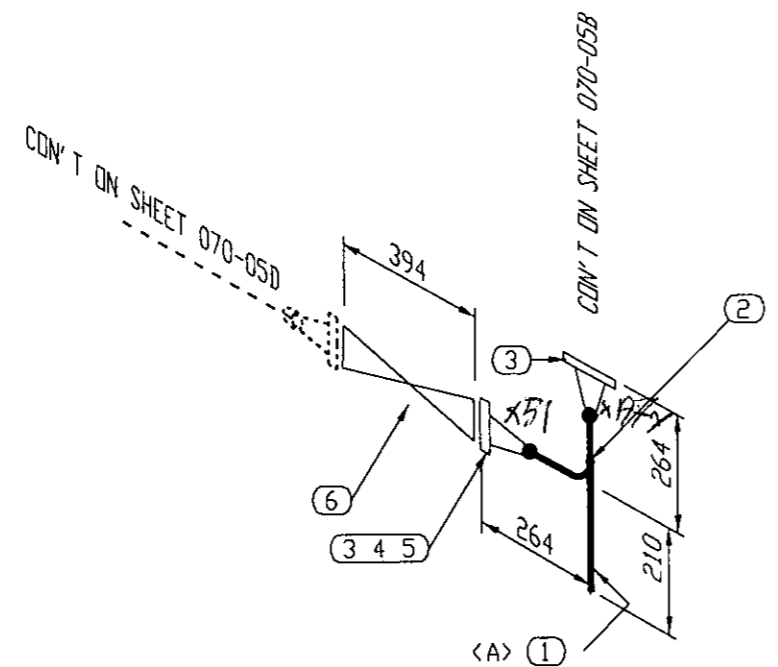
PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687				CUSTOMER: PENNWEST EXPLORATION	
PIPE SPEC.: CS	WELD PROC.: CADO-5					UNIT NO.: 2013-070-601	
DESIGN PRESS.: 9376 KPAG	RADIOGRAPHY: 100%					MODEL: 4-WELL SEPARATOR SKID (BU-2000)	
DESIGN TEMP.: 90 DEG. C	PWHT: N/A					LOCATION:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: V-2100 PROCESS OUTLET	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-05B	
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. 80, A106 GR B (STD-L-1)	253 MM	1.9
2	4	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	1	5.4
3	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1
4	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
5	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
6	4	CONTROL VALVE, FISHER ET, 600LB FLG, RF	1	1.0
TOTAL FABRICATION WEIGHT				48.3

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	253	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:					
MDMT: -29 DEG. C	PICKLE & OIL: N/A	LINE TAG: V-2100 PROCESS GAS OUTLET					
C.A.: 1.6 mm	SANDBLAST: SP-6	DRAWING NO.: 070-05C					
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR

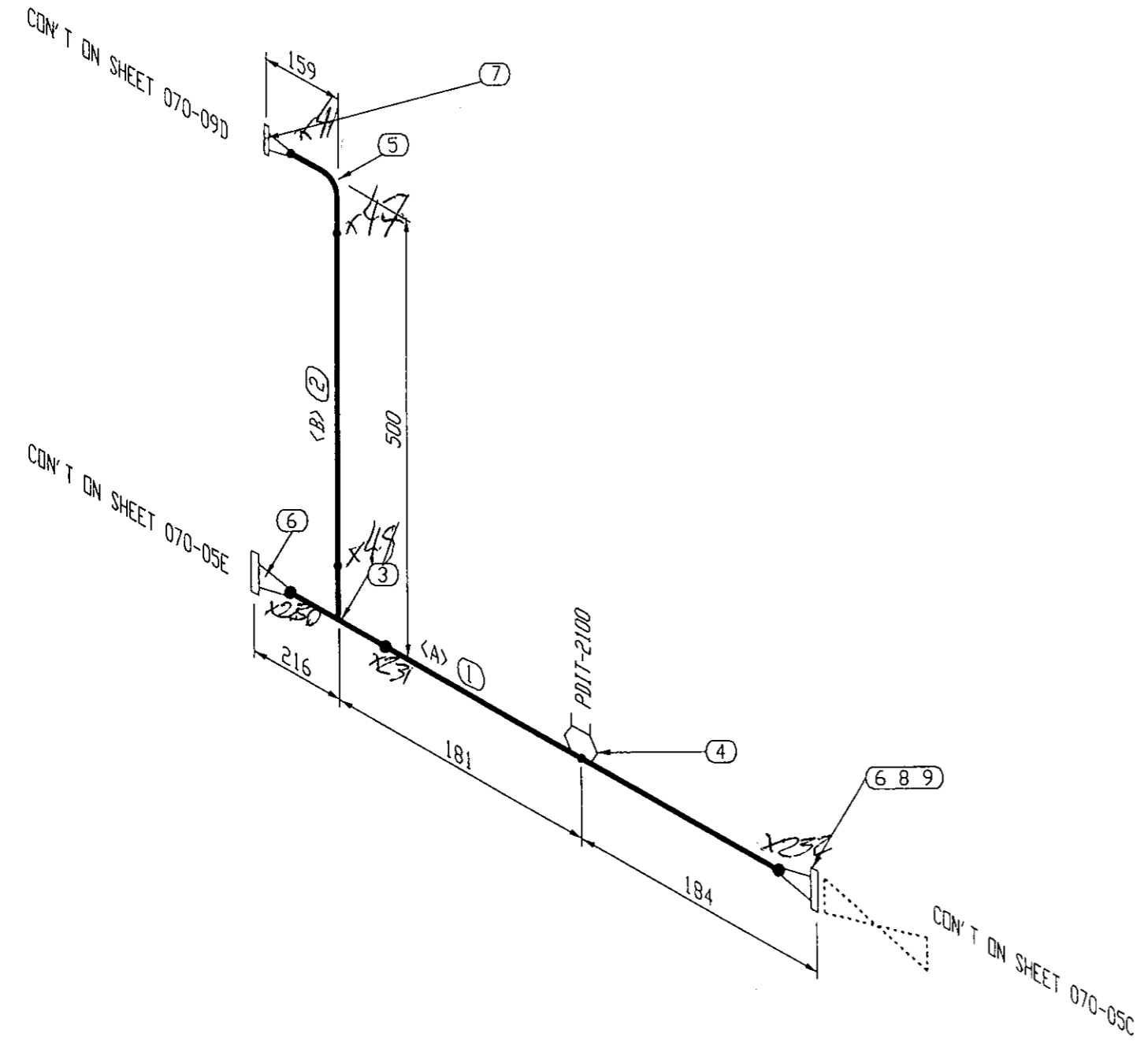
REV. 0

BILL OF MATERIAL

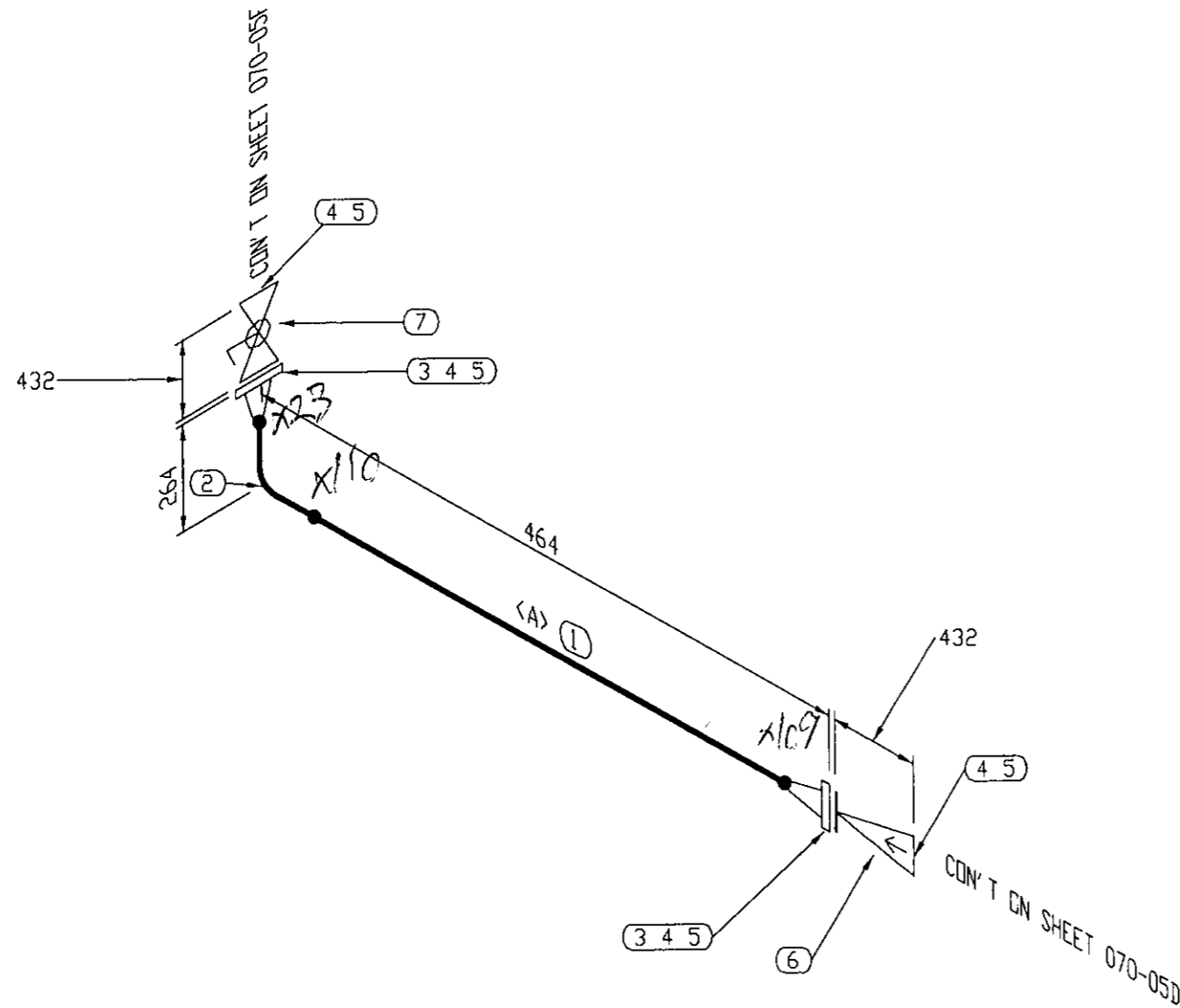
MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	147 MM	3.3
2	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	328 MM	2.5
3	4X2	TEE, RED, BW, SCH. 80, A234 GR WPB	1	4.9
4	4X1/2	THREDDLET, CL3000, A105N	1	0.2
5	2	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	1	0.9
6	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1
7	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	5.5
8	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
9	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
TOTAL FABRICATION WEIGHT				57.1

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	147	4
	328	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:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: V-2100 PROCESS GAS OUTLET	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-05D	
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR
							REV. 0



BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT	
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	198 MM	4.5	
2	4	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	1	5.4	
3	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1	
4	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	4	4.0	
5	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	4	4.0	
6	4	VALVE, SWING CHECK, RF, NACE, CLASS 600 ASME, A105N	1	115.7	
7	4	VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N	1	74.9	
TOTAL FABRICATION WEIGHT					246.4

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	198	4

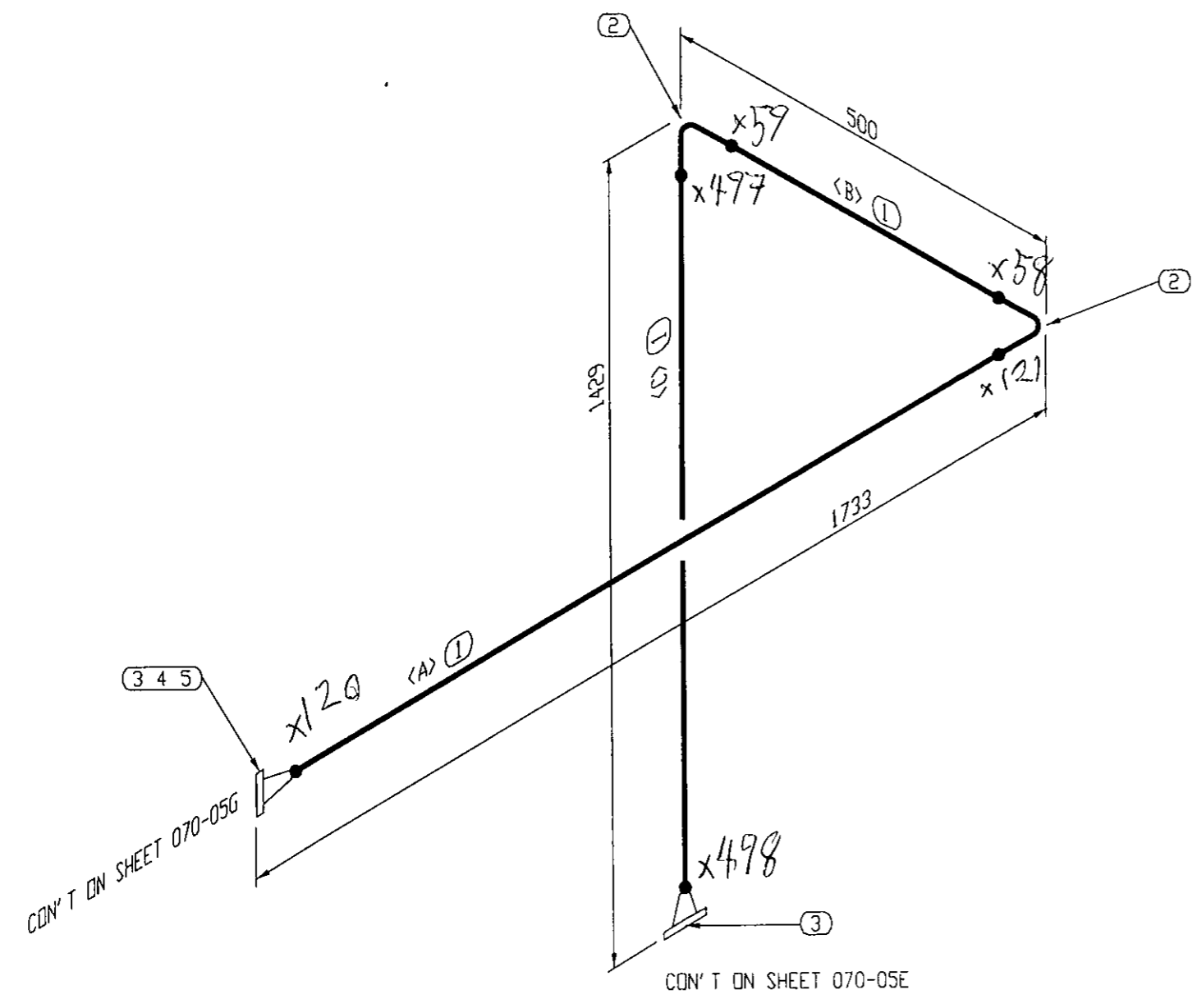
PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687				CUSTOMER: PENNWEST EXPLORATION	
PIPE SPEC.: CS	WELD PROC.: CADO-5					UNIT NO.: 2013-070-601	
DESIGN PRESS.: 9376 KPAG	RADIOGRAPHY: 100%					MODEL: 4-WELL SEPARATOR SKID (BU-2000)	
DESIGN TEMP.: 90 DEG. C	PWHT: N/A					LOCATION:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: V-2100 PROCESS GAS OUTLET	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-05E	
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR

BILL OF MATERIAL

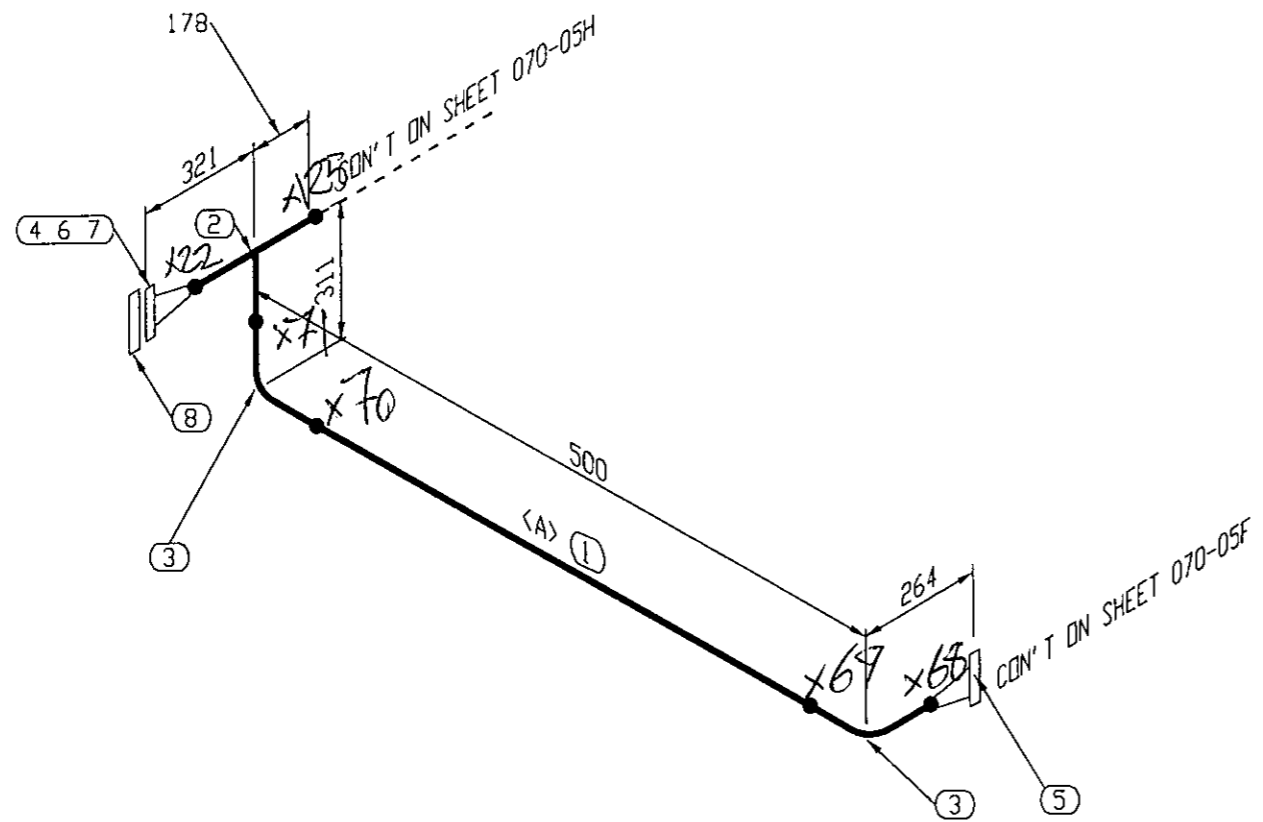
MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	2816 MM	62.8
2	4	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	2	10.7
3	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1
4	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
5	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
TOTAL FABRICATION WEIGHT				113.6

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	1467	4
	188	4
<C>	1161	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:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: V-2100 PROCESS GAS OUTLET	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-05F	
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR
							REV. 0



BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	188 MM	4.2
2	8X4	TEE, RED, BW, SCH. 80, A234 GR WPB	1	23.4
3	4	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	2	10.7
4	8	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	53.1
5	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	19.1
6	8	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
7	1 1/8X197	(12) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
8	8	FLANGE, RF, BLIND, CL600, A105N WITH 1/2' NPT HIGH POINT VENT OFF CENTER 3 7/16'	1	63.1
TOTAL FABRICATION WEIGHT				175.4

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	188	4

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 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: PROCESS GAS OUTLET HEADER					
C.A.: 1.6 mm	SANDBLAST: SP-6	DRAWING NO.: 070-05G					
TEST PRESS.: 14064 KPAC	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOC	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR

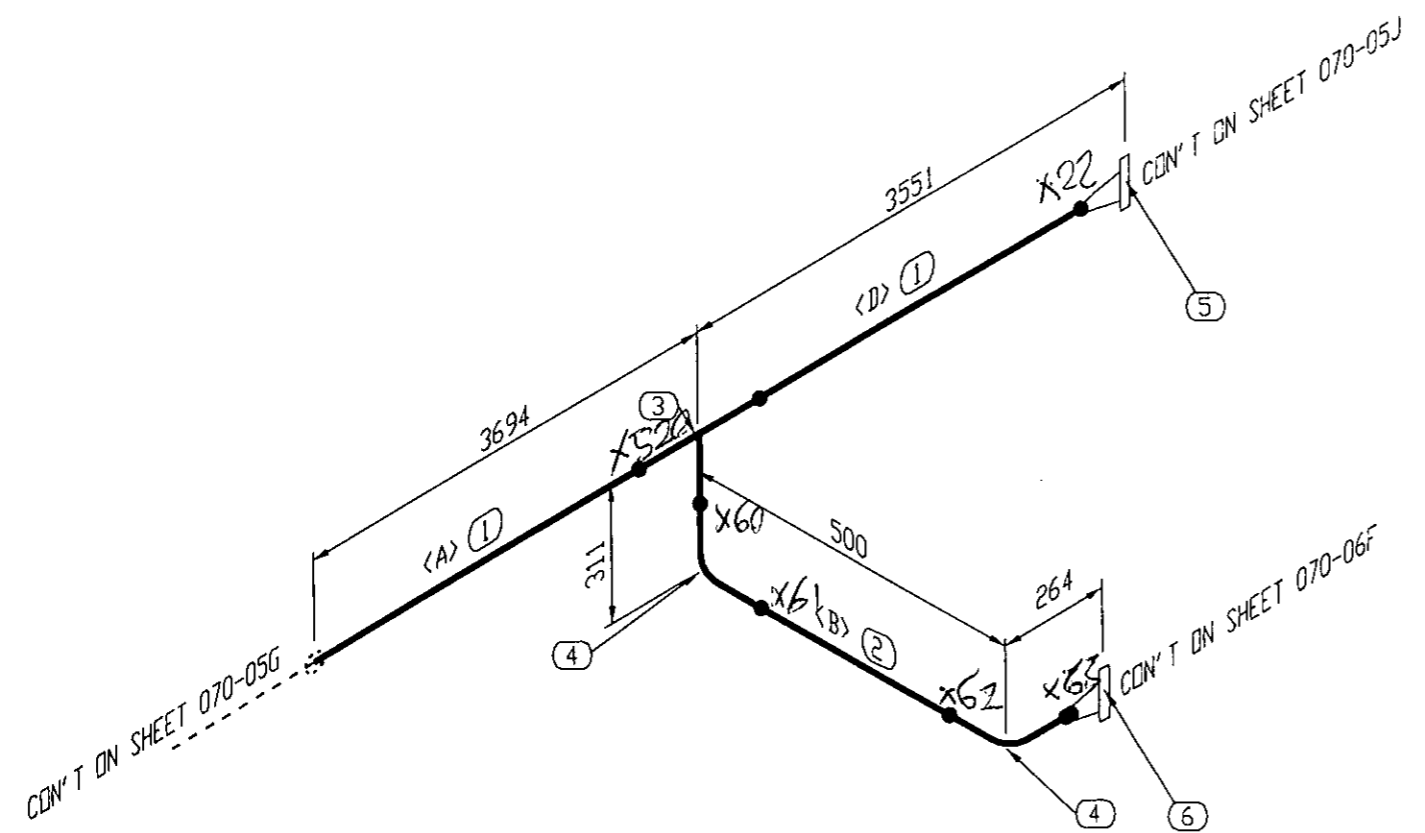
REV. 0

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	8	PIPE, SMLS, BW, SCH. 80, A106 GR B	6740 MM	435.8
2	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	188 MM	4.4
3	8X4	TEE, RED, BW, SCH. 80, A234 GR WPB	1	23.4
4	4	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	2	10.7
5	8	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	53.1
6	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	19.1
TOTAL FABRICATION WEIGHT				546.3

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	3513	8
	188	4
<D>	3227	8



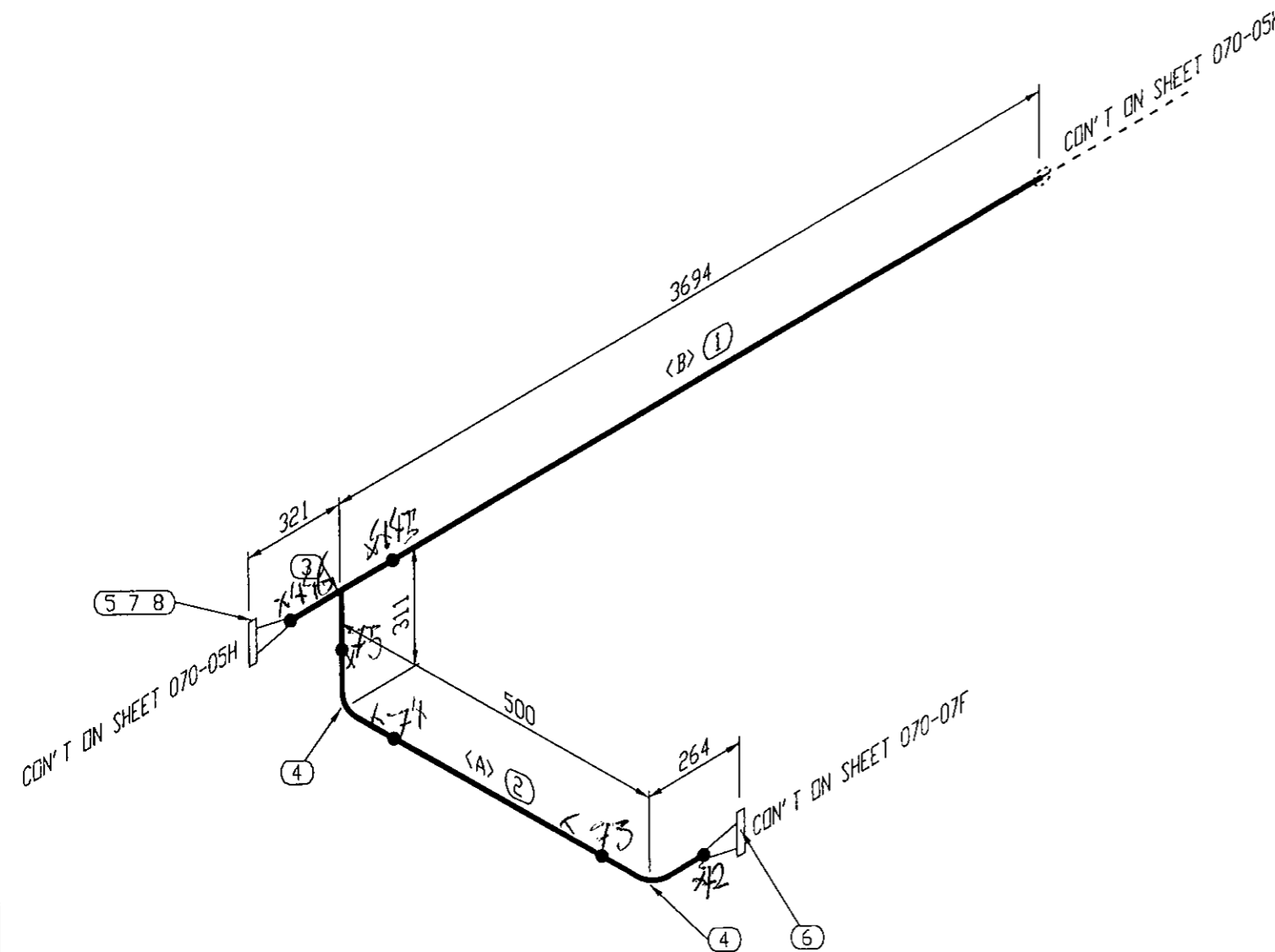
PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,		<p align="center">CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687</p>				CUSTOMER: PENNWEST EXPLORATION	
PIPE SPEC.: CS	WELD PROC.: CADO-5					UNIT NO.: 2013-070-601	
DESIGN PRESS.: 9376 KPAG	RADIOGRAPHY: 100%					MODEL: 4-WELL SEPARATOR SKID (BU-2000)	
DESIGN TEMP.: 90 DEG. C	PWHT: N/A					LOCATION:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: PROCESS GAS OUTLET HEADER	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-05H	
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR
						REV.	0

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	8	PIPE, SMLS, BW, SCH. 80, A106 GR B	3513 MM	226.5
2	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	188 MM	4.2
3	8X4	TEE, RED, BW, SCH. 80, A234 GR WPB	1	23.4
4	4	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	2	10.7
5	8	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	53.1
6	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	19.1
7	8	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
8	1 1/8X197	(12) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
TOTAL FABRICATION WEIGHT				338.9

CUT PIPE LENGTH

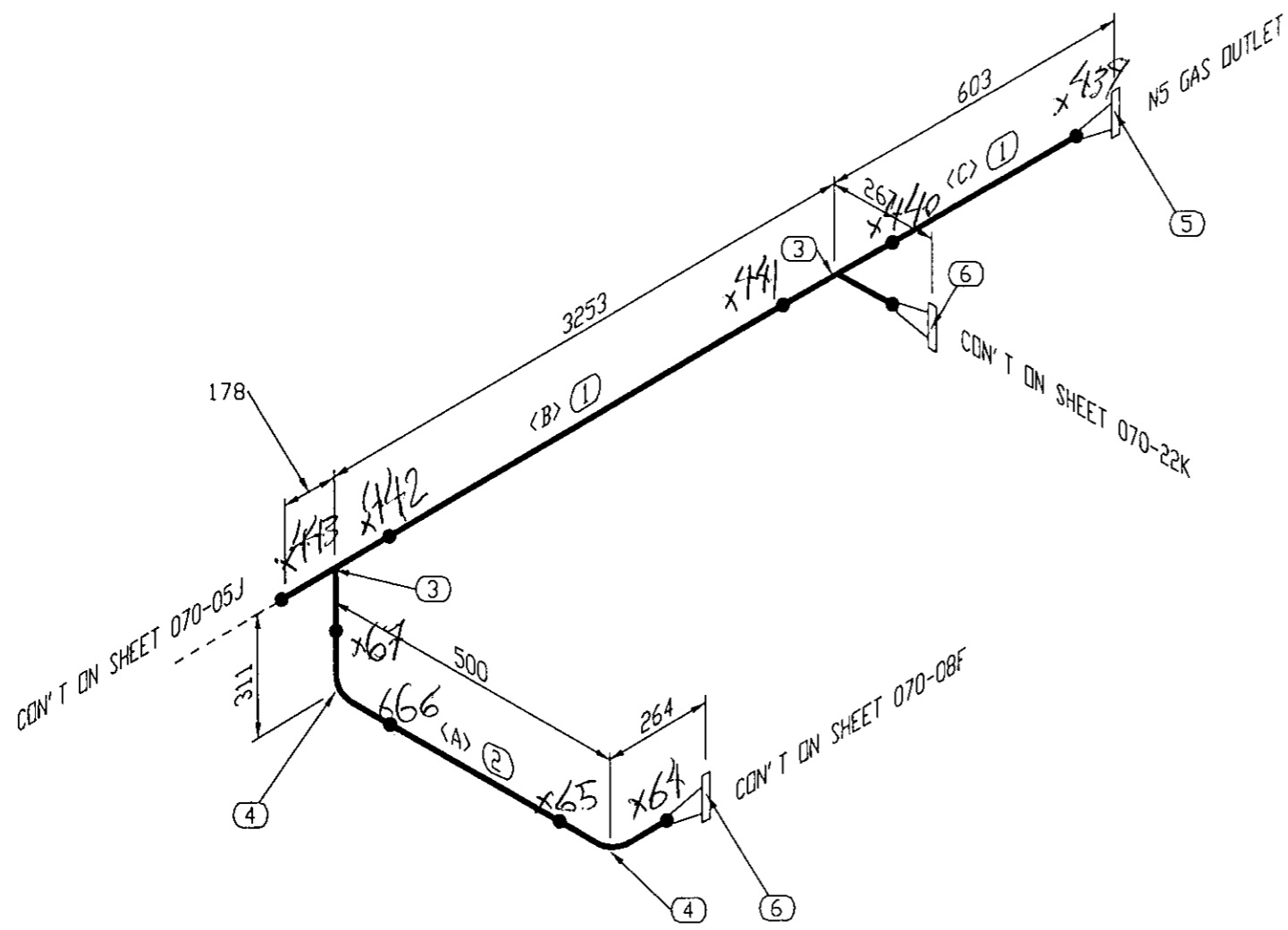
PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	188	4
	3513	8



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: PROCESS GAS OUTLET HEADER	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-05J	
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR
							REV. 0

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	8	PIPE, SMLS, BW, SCH. 80, A106 GR B	3170 MM	205.0
2	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	188 MM	4.2
3	8X4	TEE, RED, BW, SCH. 80, A234 GR WPB	2	46.8
4	4	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	2	10.7
5	8	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	53.1
6	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1
TOTAL FABRICATION WEIGHT				357.7



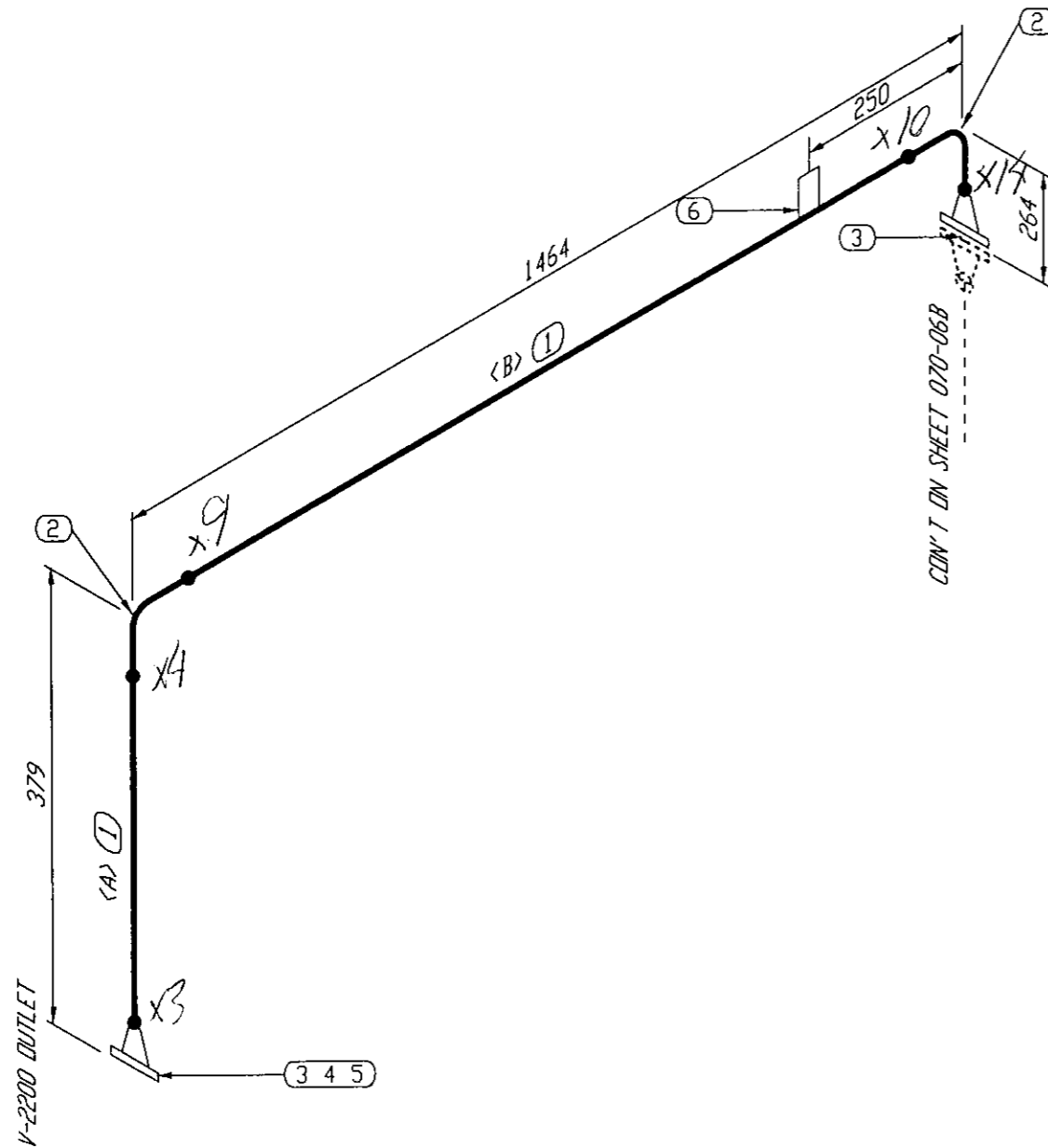
CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	188	4
	2890	8
<C>	280	8

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: WOG	INSULATION: N/A

CADO INDUSTRIES INC.			
7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8			
TEL: (403) 279-6662; FAX: (403) 279-6687			
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:	PROCESS GAS OUTLET HEADER
DRAWING NO.:	070-05K
REV.	0



BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT	
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	1265 MM	28.3	
2	4	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	2	10.7	
3	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1	
4	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0	
5	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0	
6	1/2	CPLG 3000# NPT A105N	1		
TOTAL FABRICATION WEIGHT					79.0

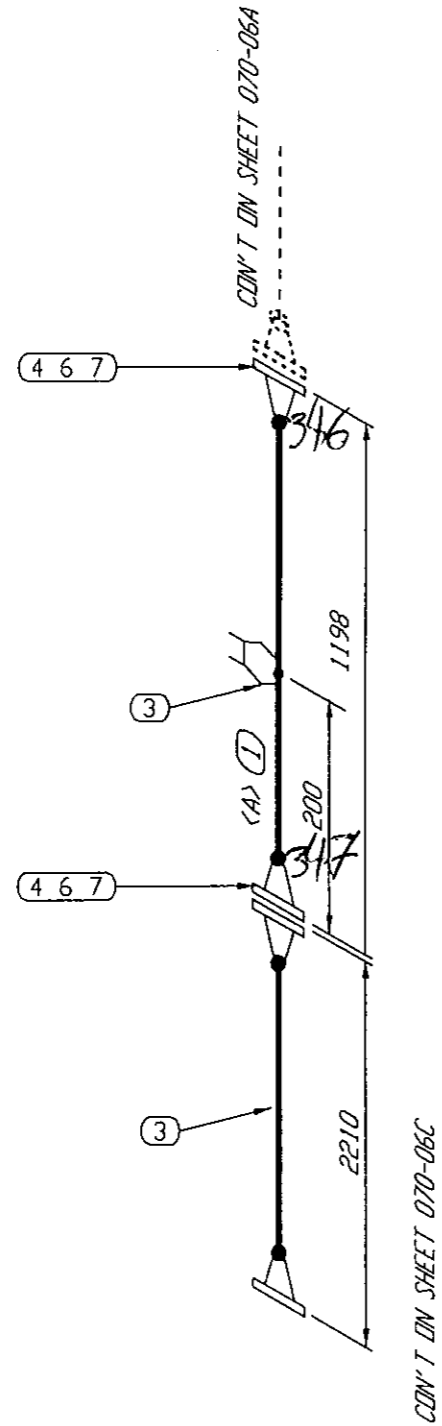
CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	112	4
	1153	4

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: WOG	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
0	ISSUED FOR CONSTRUCTION	11/10/2013	AP
			WC
			WC
			APR

CUSTOMER:	PENNWEST EXPLORATION
UNIT NO.:	2013-070-601
MODEL:	4-WELL SEPARATOR SKID (BU-2000)
LOCATION:	
LINE TAG:	V-2200 PROCESS OUTLET
DRAWING NO.:	070-06A
REV.	0



BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	976 MM	26.9
2	4	METER RUN	1	44.4
3	4X1/2	THREDOLET, CL3000, A105N	1	0.2
4	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1
5	4	METER RUN	2	38.1
6	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	2	2.0
7	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	2	2.0
TOTAL FABRICATION WEIGHT				151.5

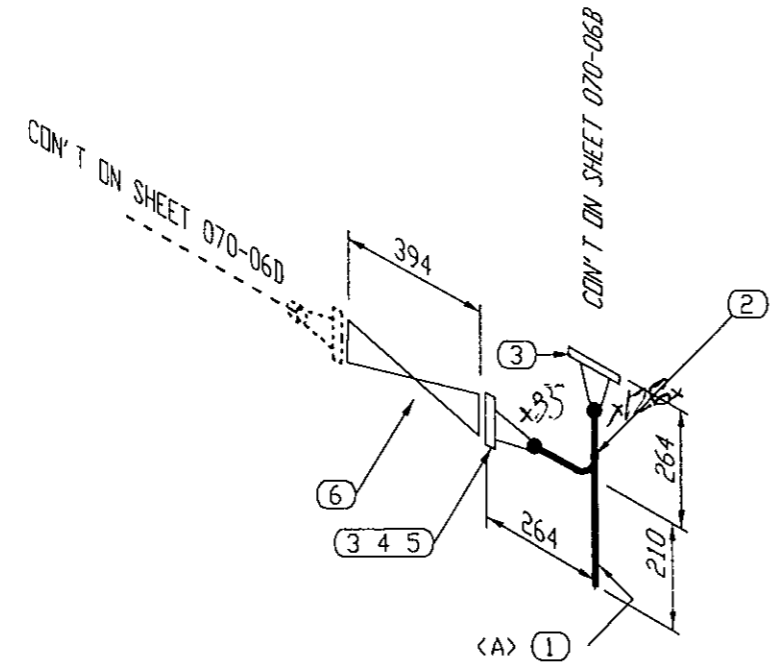
CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	976	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:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: V-2200 PROCESS OUTLET	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-06B	
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. 80, A106 GR B (STD-L-1)	253 MM	1.9
2	4	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	1	5.4
3	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1
4	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
5	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
6	4	CONTROL VALVE, FISHER ET, 600LB FLG, RF	1	1.0
TOTAL FABRICATION WEIGHT				48.3



CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	253	2

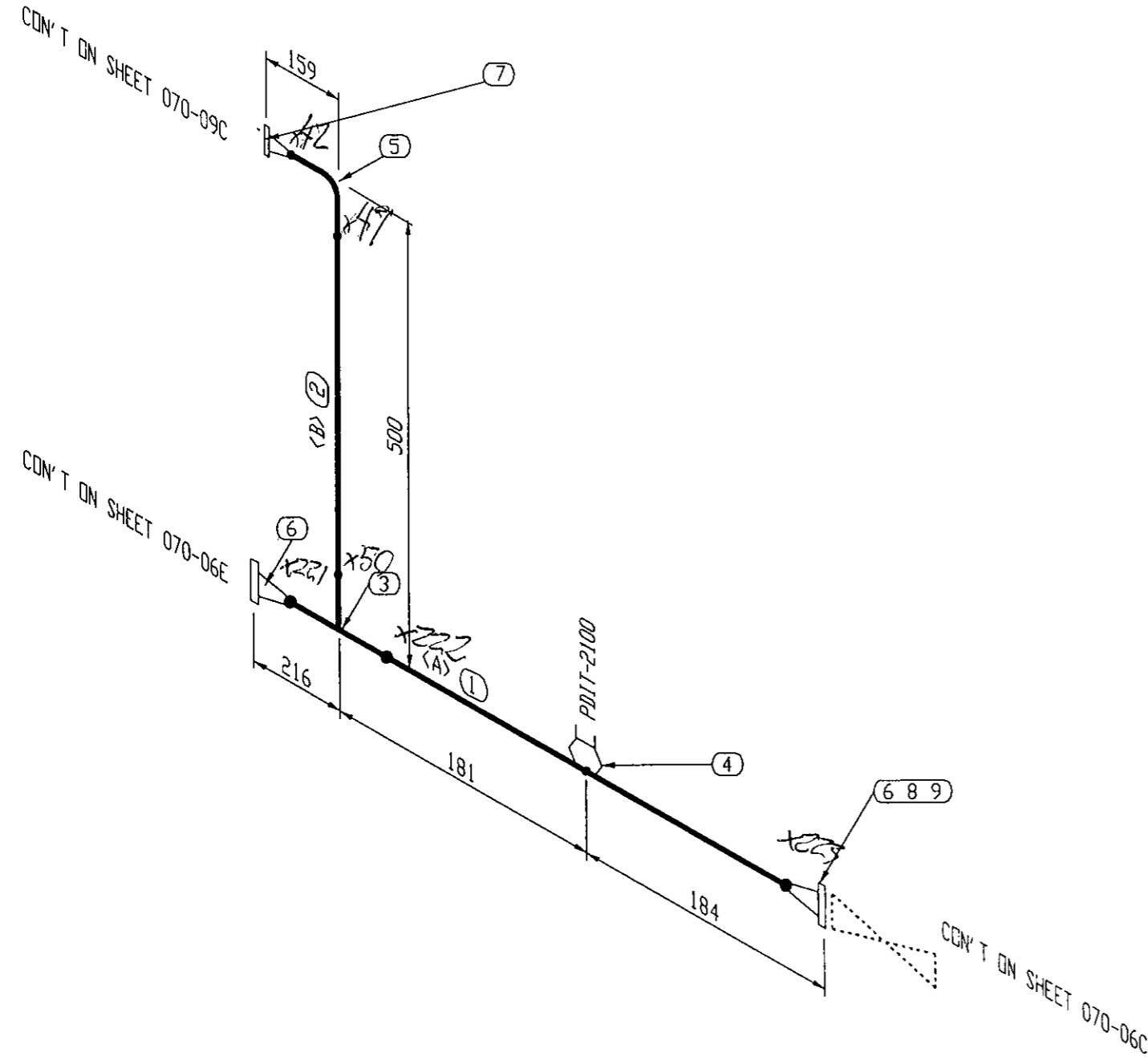
PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687				CUSTOMER: PENNWEST EXPLORATION		
PIPE SPEC.: CS	WELD PROC.: CADO-5					UNIT NO.: 2013-070-601		
DESIGN PRESS.: 9376 KPAG	RADIOGRAPHY: 100%	MODEL: 4-WELL SEPARATOR SKID (BU-2000)						
DESIGN TEMP.: 90 DEG. C	PWHT: N/A	LOCATION:						
MDMT: -29 DEG. C	PICKLE & OIL: N/A	LINE TAG: V-2200 PROCESS GAS OUTLET						
C.A.: 1.6 mm	SANDBLAST: SP-6	DRAWING NO.: 070-06C						
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC	REV. 0
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR	

BILL OF MATERIAL

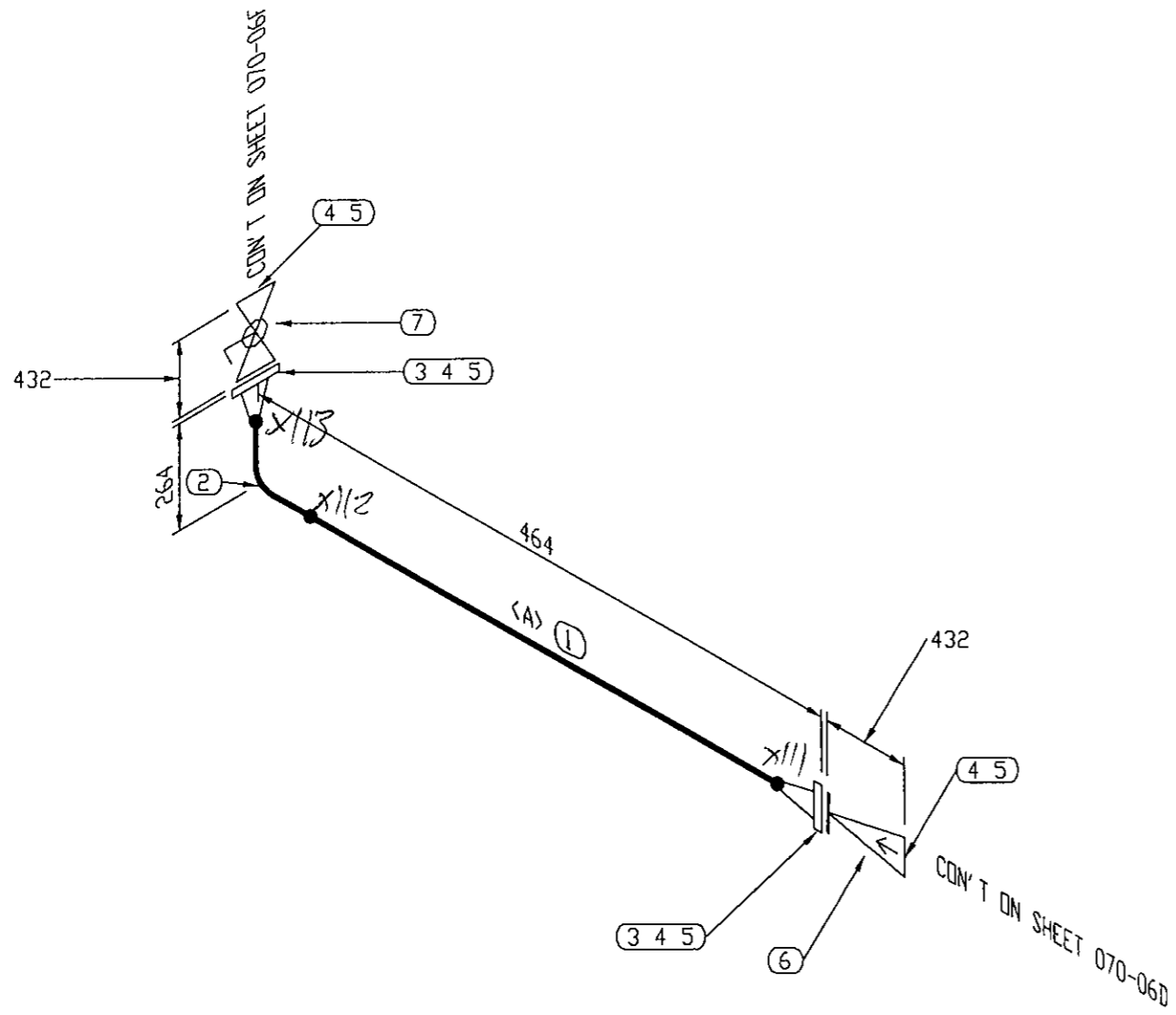
MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	147 MM	3.3
2	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	328 MM	2.5
3	4X2	TEE, RED, BW, SCH. 80, A234 GR WPB	1	4.9
4	4X1/2	THREDDLET, CL3000, A105N	1	0.2
5	2	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	1	0.9
6	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1
7	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	5.5
8	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
9	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
TOTAL FABRICATION WEIGHT				57.1

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	147	4
	328	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:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: V-2200 PROCESS GAS OUTLET	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-06D	
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	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	198 MM	4.5
2	4	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	1	5.4
3	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1
4	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	4	4.0
5	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	4	4.0
6	4	VALVE, SWING CHECK, RF, NACE, CLASS 600 ASME, A105N	1	115.7
7	4	VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N	1	74.9
TOTAL FABRICATION WEIGHT				246.4

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	198	4

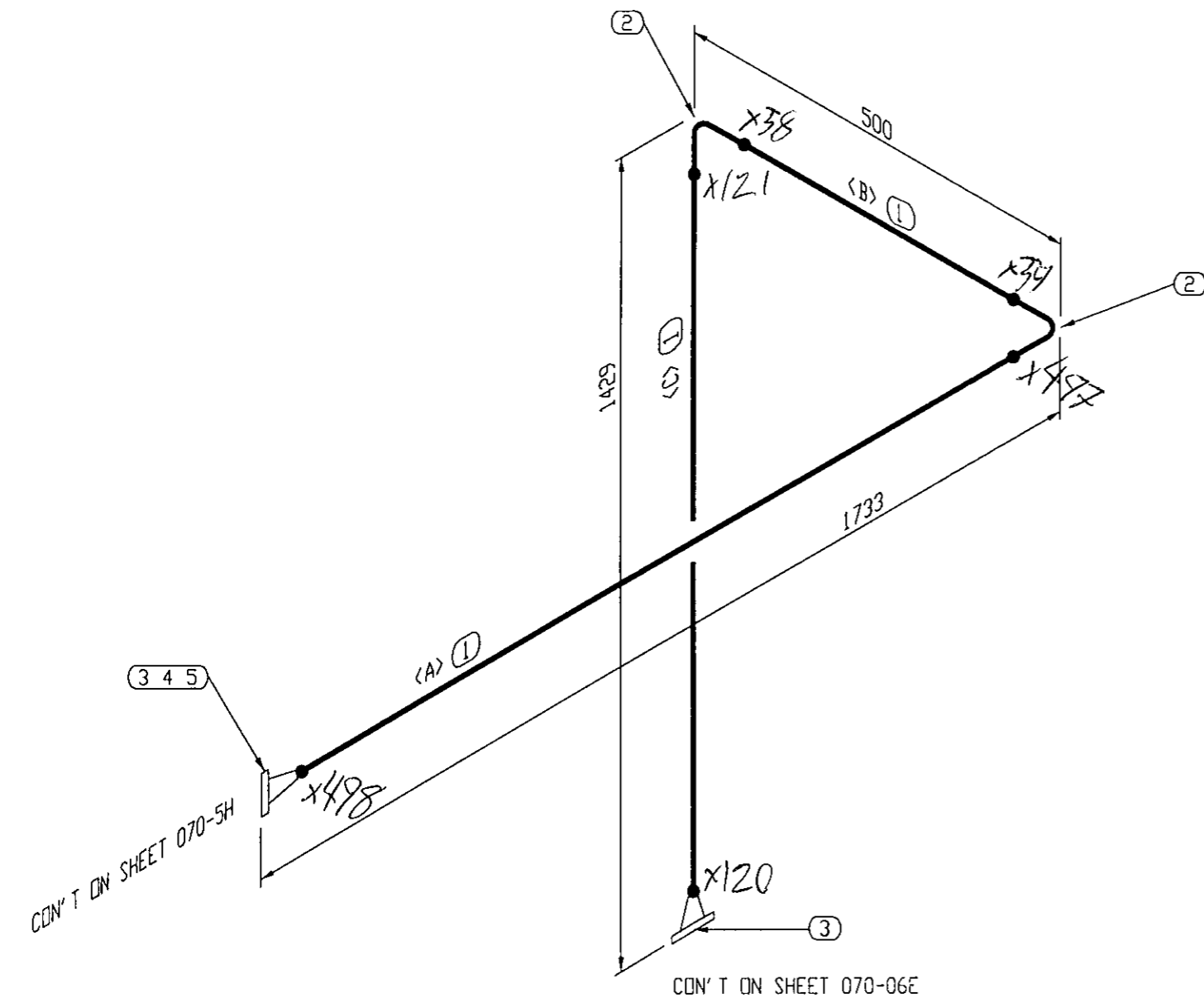
PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION, PIPE SPEC.: CS WELD PROC.: CADO-5 DESIGN PRESS.: 9376 KPAG RADIOGRAPHY: 100% DESIGN TEMP.: 90 DEG. C PWHT: N/A MDMT: -29 DEG. C PICKLE & OIL: N/A C.A.: 1.6 mm SANDBLAST: SP-6 TEST PRESS.: 14064 KPAG PAINT: WARM GREY TEST MEDIA: WCG INSULATION: 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: V-2200 PROCESS GAS OUTLET DRAWING NO.: 070-06E			
0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC	REV. 0			
NO.	REVISION	DATE	BY	CHK	APR				

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	2816 MM	62.8
2	4	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	2	10.7
3	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1
4	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
5	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
TOTAL FABRICATION WEIGHT				113.6

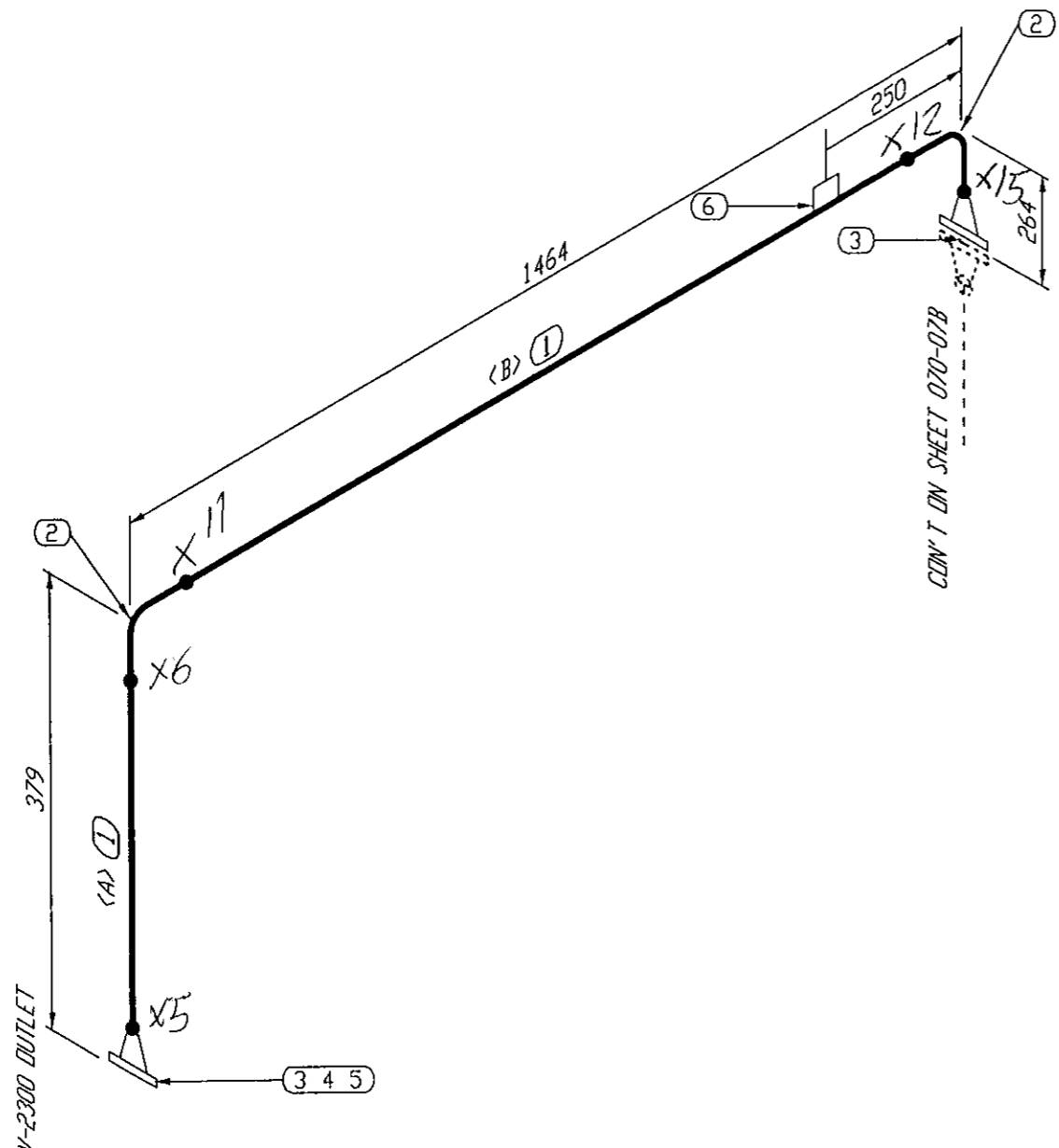
CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	1467	4
	188	4
<C>	1161	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:					
MDMT: -29 DEG. C	PICKLE & OIL: N/A	LINE TAG: V-2200 PROCESS GAS OUTLET					
C.A.: 1.6 mm	SANDBLAST: SP-6	DRAWING NO.: 070-06F					
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR

REV. 0



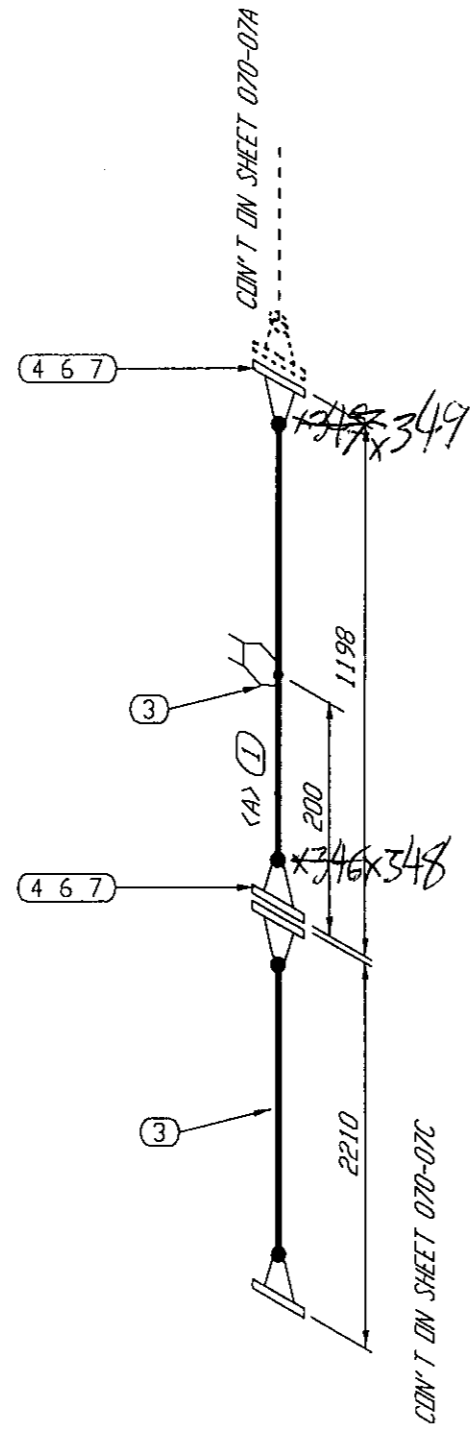
BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	1265 MM	28.3
2	4	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	2	10.7
3	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1
4	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
5	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
6	1/2	CPLG 3000# NPT A105N	1	
TOTAL FABRICATION WEIGHT				79.0

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	112	4
	1153	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:				
MDMT: -29 DEG. C	PICKLE & OIL: N/A			LINE TAG: V-2300 PROCESS OUTLET				
C.A.: 1.6 mm	SANDBLAST: SP-6			DRAWING NO.: 070-07A				
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC	REV. 0
TEST MEDIA: WOG	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	976 MM	26.9
2	4	METER RUN	1	44.4
3	4X1/2	THREDOLET, CL3000, A105N	1	0.2
4	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1
5	4	METER RUN	2	38.1
6	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	2	2.0
7	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	2	2.0
TOTAL FABRICATION WEIGHT				151.5

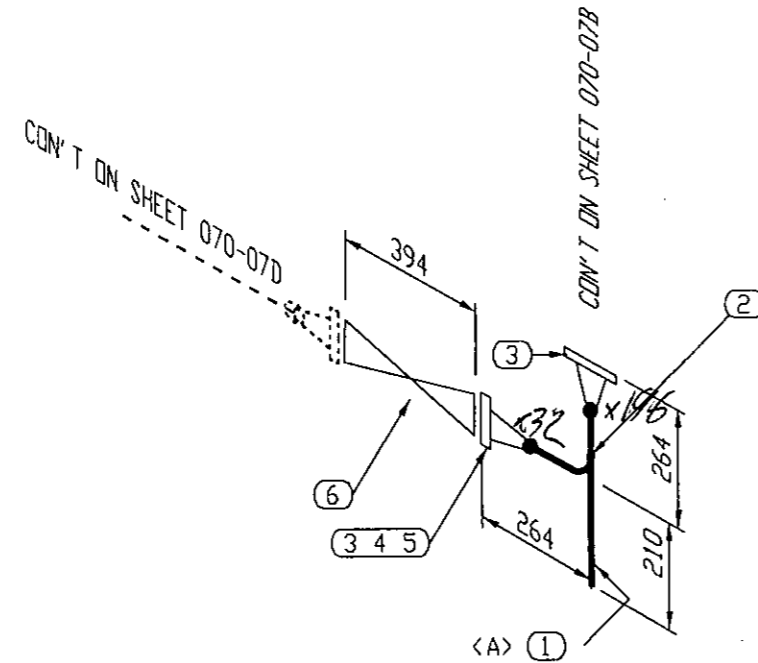
CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	976	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:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: V-2300 PROCESS OUTLET	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-07B	
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. 80, A106 GR B (STD-L-1)	253 MM	1.9
2	4	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	1	5.4
3	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1
4	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
5	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
6	4	CONTROL VALVE, FISHER ET, 600LB FLG, RF	1	1.0
TOTAL FABRICATION WEIGHT				48.3



CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	253	2

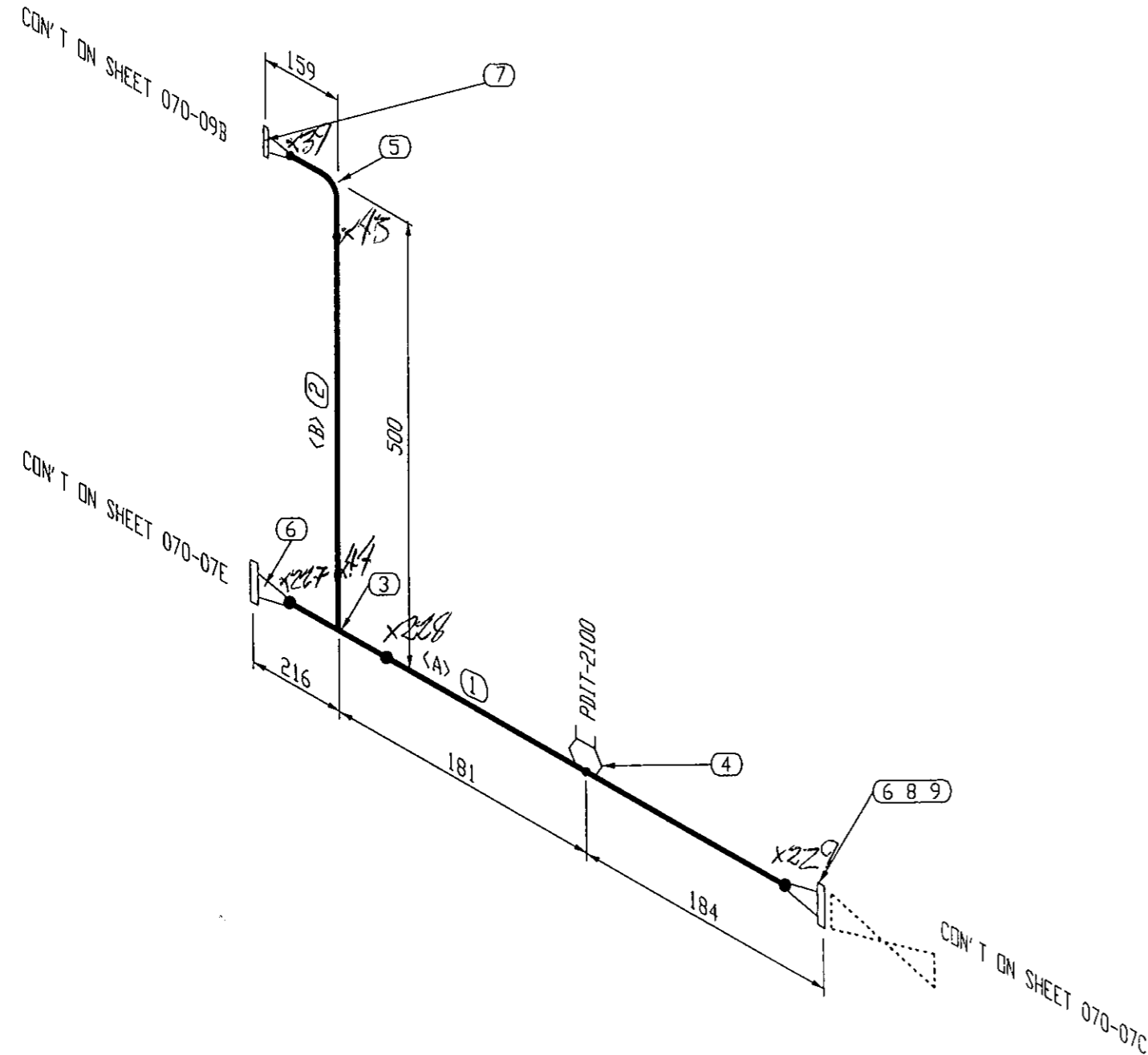
PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,		<p align="center">CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687</p>				CUSTOMER: PENNWEST EXPLORATION		
PIPE SPEC.: CS	WELD PROC.: CADO-5					UNIT NO.: 2013-070-601		
DESIGN PRESS.: 9376 KPAG	RADIOGRAPHY: 100%	MODEL: 4-WELL SEPARATOR SKID (BU-2000)						
DESIGN TEMP.: 90 DEG. C	PWHT: N/A	LOCATION:						
MDMT: -29 DEG. C	PICKLE & OIL: N/A	LINE TAG: V-2300 PROCESS GAS OUTLET						
C.A.: 1.6 mm	SANDBLAST: SP-6	DRAWING NO.: 070-07C						
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC	REV. 0
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR	

BILL OF MATERIAL

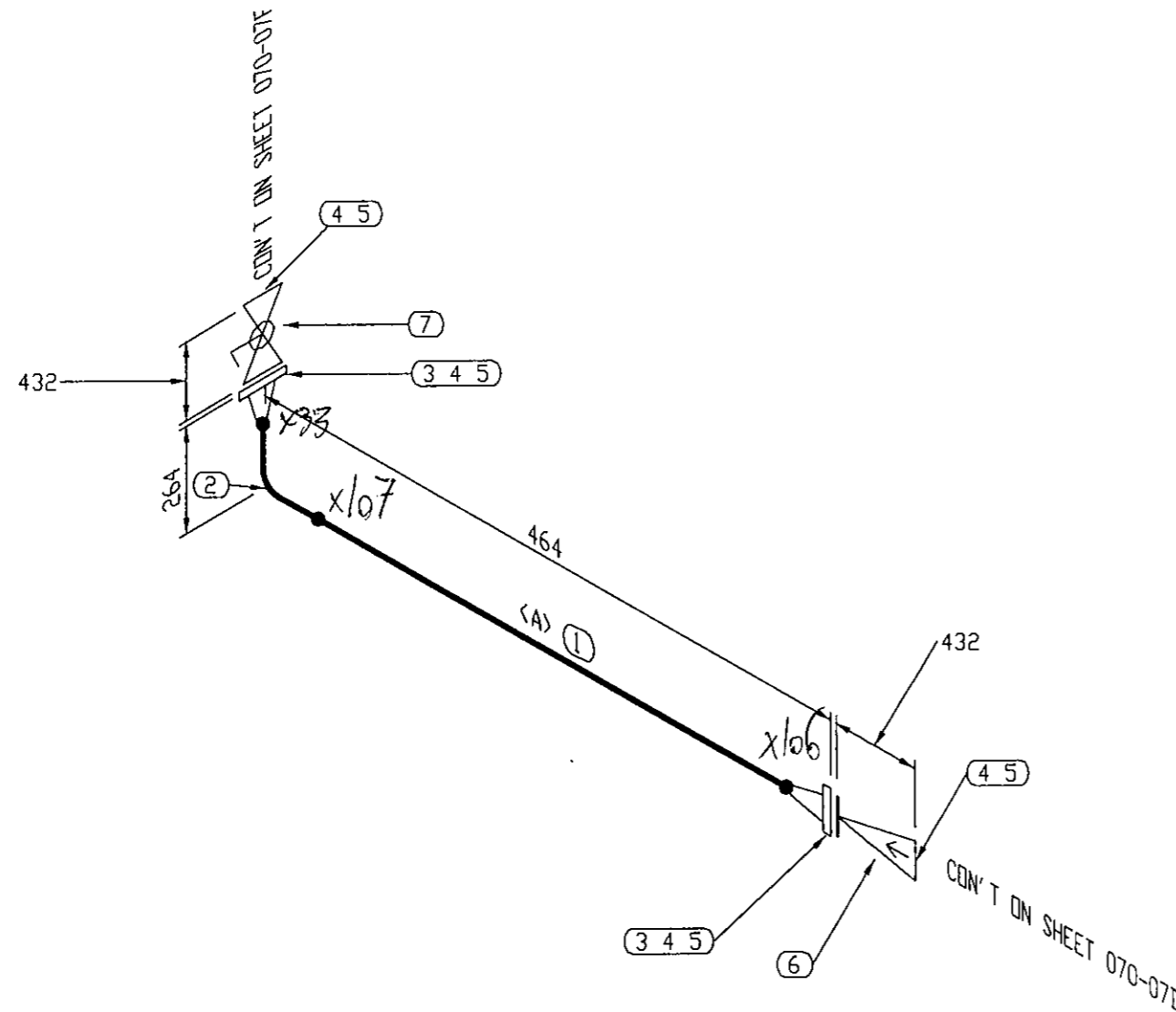
MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	147 MM	3.3
2	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	328 MM	2.5
3	4X2	TEE, RED, BW, SCH. 80, A234 GR WPB	1	4.9
4	4X1/2	THREDDLET, CL3000, A105N	1	0.2
5	2	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	1	0.9
6	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1
7	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	5.5
8	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
9	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
TOTAL FABRICATION WEIGHT				57.1

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	147	4
	328	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:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: V-2300 PROCESS GAS OUTLET	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-07D	
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR
							REV. 0



BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT	
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	198 MM	4.5	
2	4	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	1	5.4	
3	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1	
4	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	4	4.0	
5	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	4	4.0	
6	4	VALVE, SWING CHECK, RF, NACE, CLASS 600 ASME, A105N	1	115.7	
7	4	VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N	1	74.9	
TOTAL FABRICATION WEIGHT					246.4

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	198	4

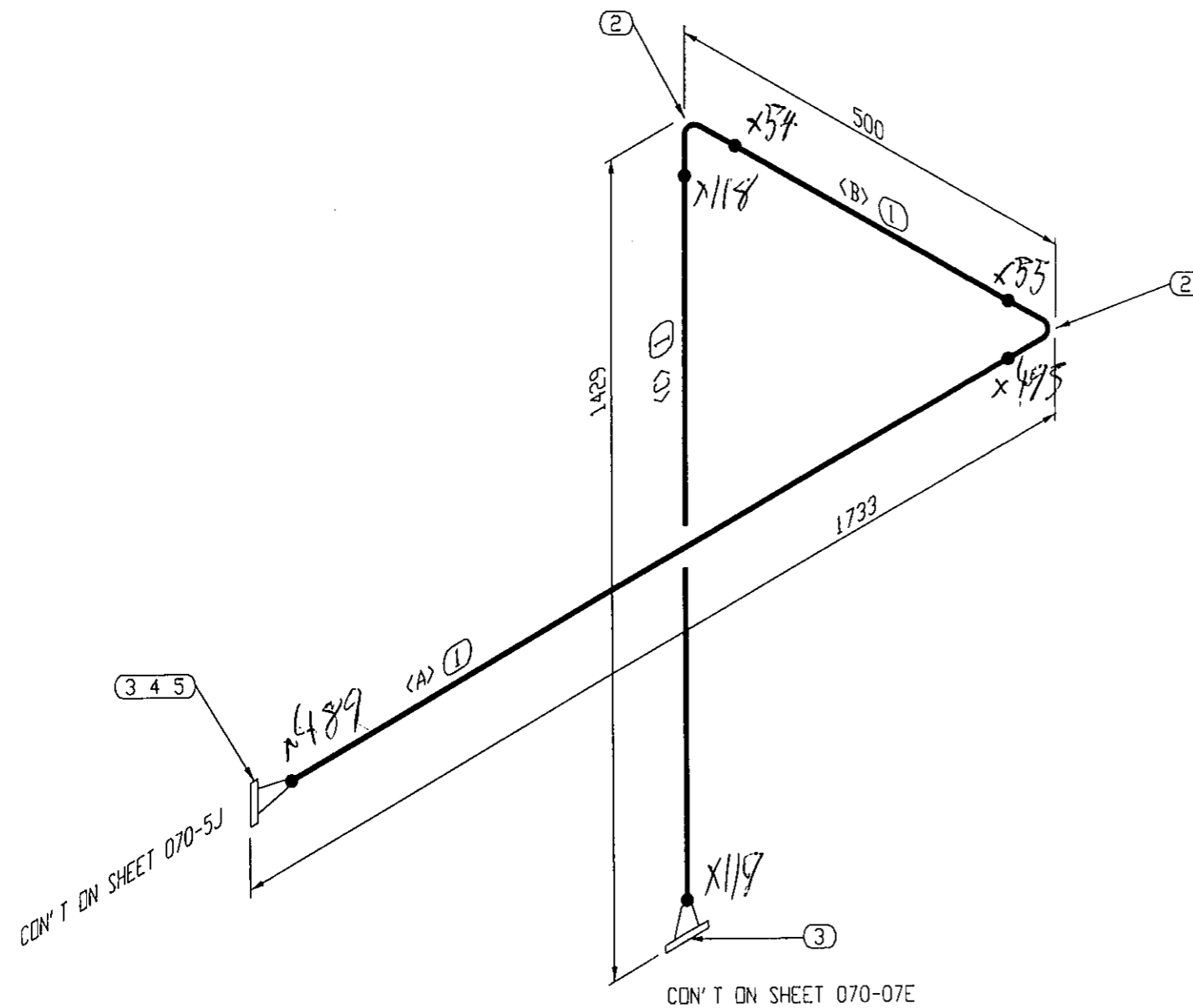
PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687				CUSTOMER: PENNWEST EXPLORATION	
PIPE SPEC.: CS	WELD PROC.: CADO-5					UNIT NO.: 2013-070-601	
DESIGN PRESS.: 9376 KPAC	RADIOGRAPHY: 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: V-2300 PROCESS GAS OUTLET	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-07E	
TEST PRESS.: 14064 KPAC	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR

BILL OF MATERIAL

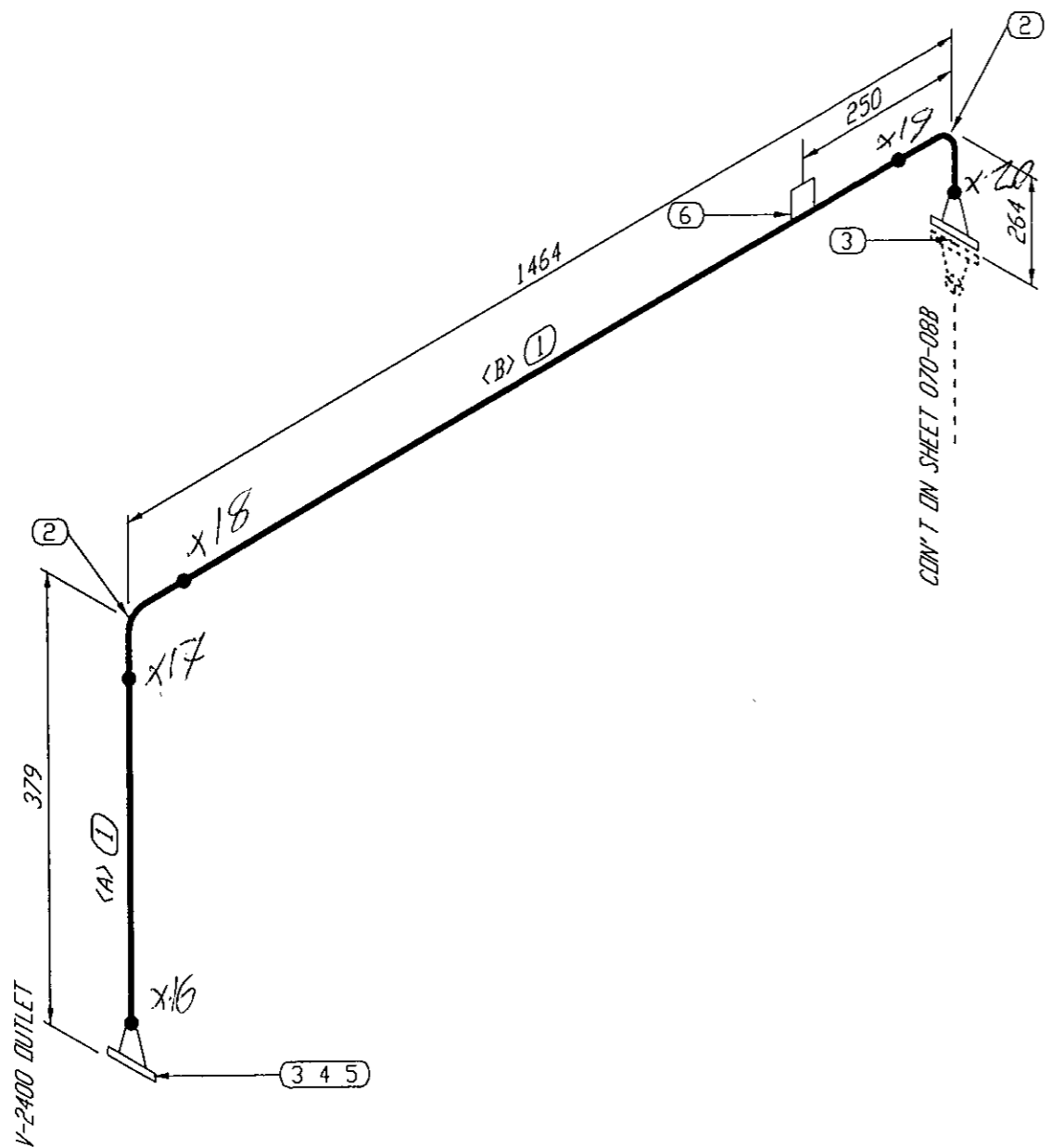
MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	2816 MM	62.8
2	4	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	2	10.7
3	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1
4	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
5	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
TOTAL FABRICATION WEIGHT				113.6

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	1467	4
	188	4
<C>	1161	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:						
MDMT: -29 DEG. C	PICKLE & OIL: N/A	LINE TAG: V-2300 PROCESS GAS OUTLET						
C.A.: 1.6 mm	SANDBLAST: SP-6	DRAWING NO.: 070-07F						
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC	REV. 0
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR	



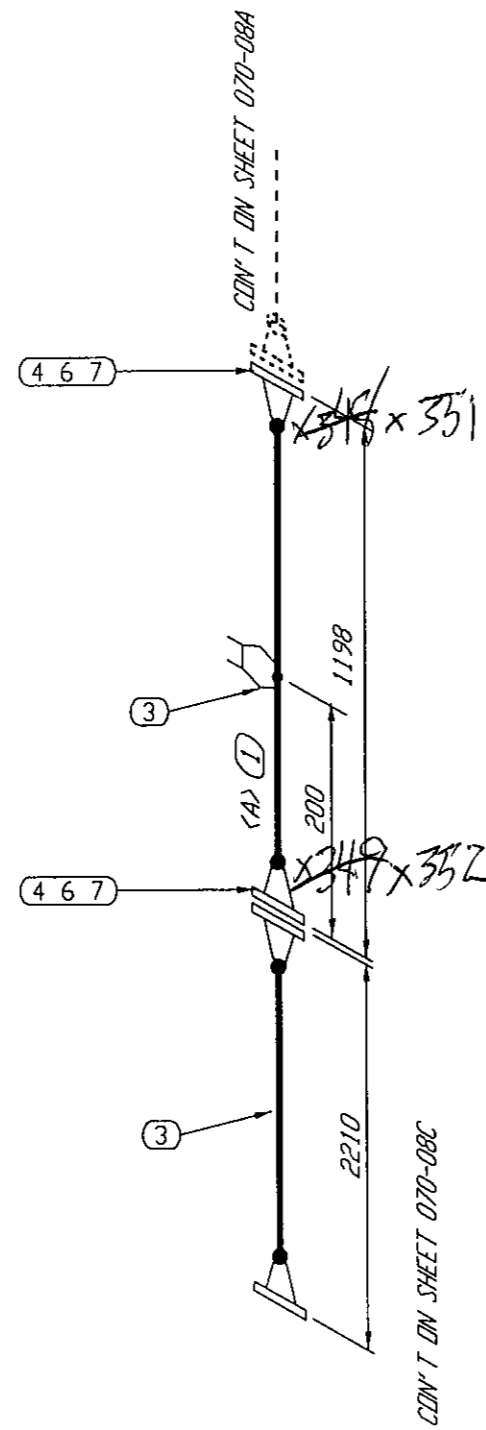
BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT	
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	1265 MM	28.3	
2	4	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	2	10.7	
3	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1	
4	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0	
5	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0	
6	1/2	CPLG 3000# NPT A-105N	1		
TOTAL FABRICATION WEIGHT					79.0

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	112	4
	1153	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:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: V-2400 PROCESS OUTLET	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-08A	
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	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	976 MM	26.9
2	4	METER RUN	1	44.4
3	4X1/2	THREDOLET, CL3000, A105N	1	0.2
4	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1
5	4	METER RUN	2	38.1
6	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	2	2.0
7	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	2	2.0
TOTAL FABRICATION WEIGHT				151.5

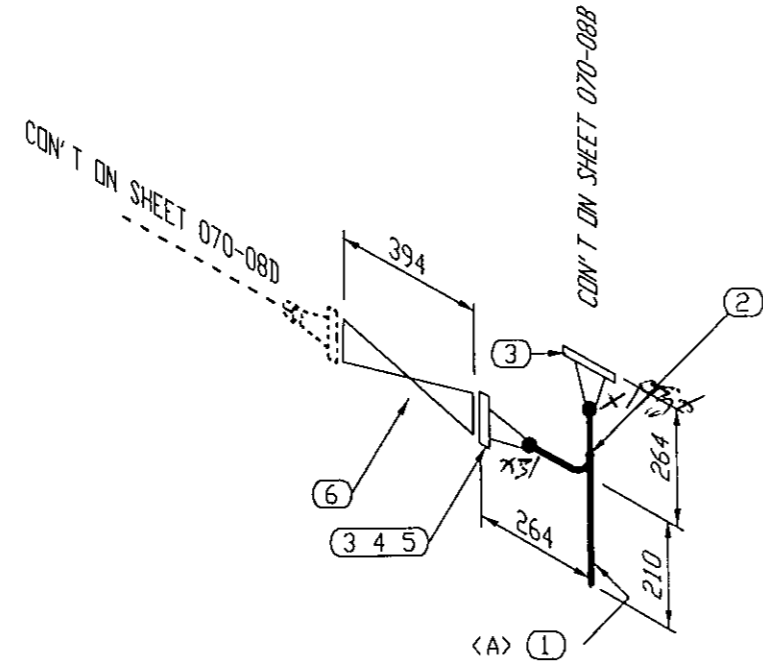
CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	976	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								
MDMT: -29 DEG. C	PICKLE & OIL: N/A	LOCATION:							
C.A.: 1.6 mm	SANDBLAST: SP-6								
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC	DRAWING NO.: 070-08B	REV. 0
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR		

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. 80, A106 GR B (STD-L-1)	253 MM	1.9
2	4	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	1	5.4
3	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1
4	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
5	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
6	4	CONTROL VALVE, FISHER ET, 600LB FLG, RF	1	1.0
TOTAL FABRICATION WEIGHT				48.3



CUT PIPE LENGTH

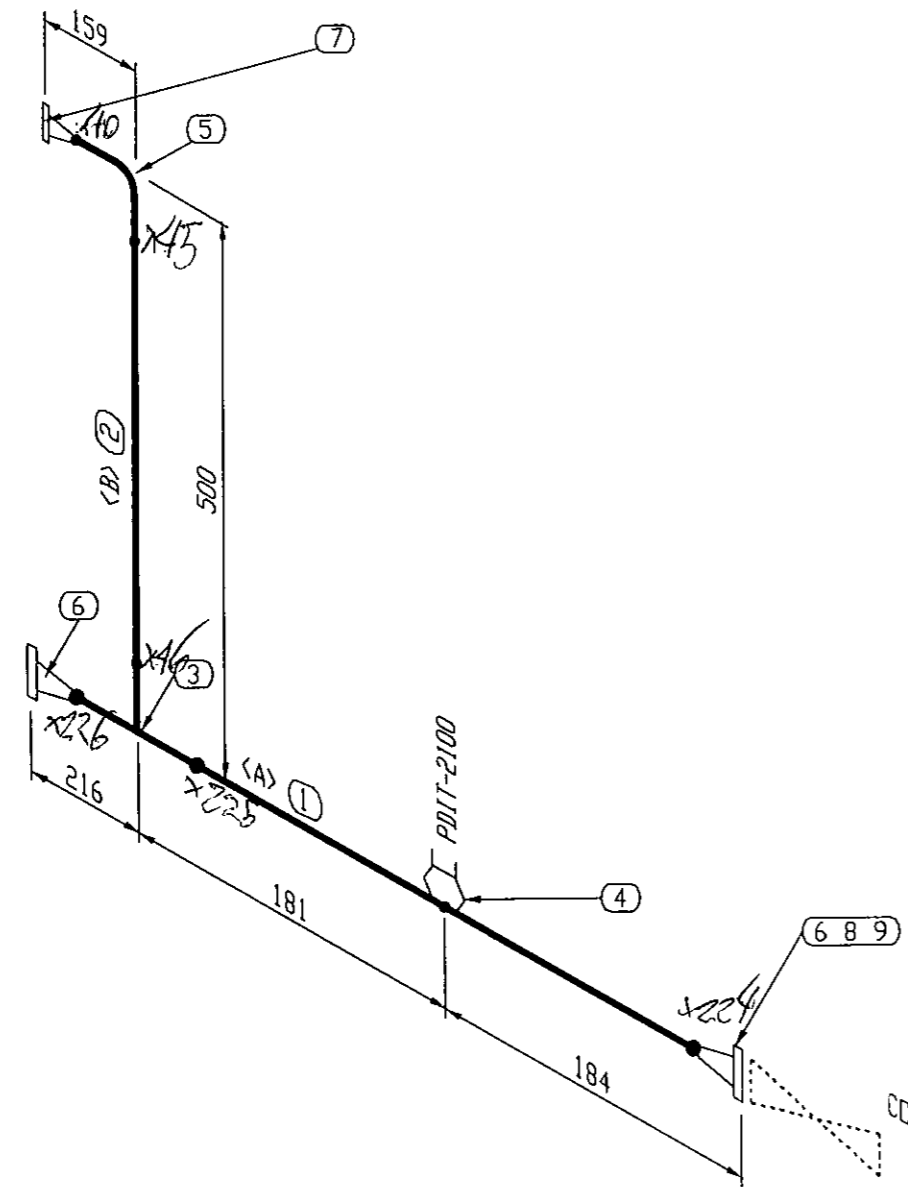
PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	253	2

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:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: V-2400 PROCESS GAS OUTLET	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-08C	
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR

REV. 0

CON'T ON SHEET 070-09A

CON'T ON SHEET 070-08E



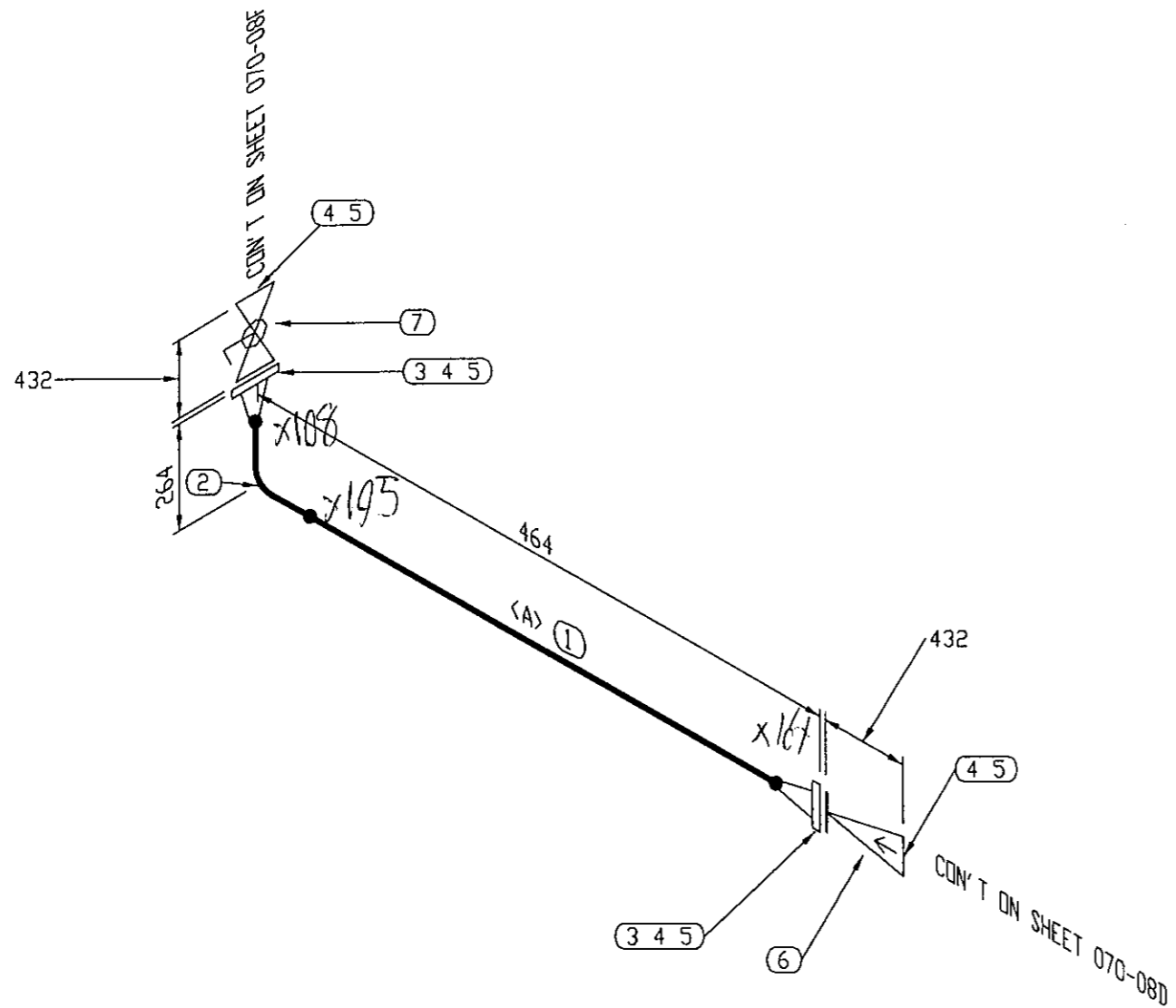
BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	147 MM	3.3
2	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	328 MM	2.5
3	4X2	TEE, RED, BW, SCH. 80, A234 GR WPB	1	4.9
4	4X1/2	THREDDLET, CL3000, A105N	1	0.2
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	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	5.5
8	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
9	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
TOTAL FABRICATION WEIGHT				57.1

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	147	4
	328	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:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: V-2400 PROCESS GAS OUTLET	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-08D	
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR
						REV.	0



BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	198 MM	4.5
2	4	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	1	5.4
3	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1
4	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	4	4.0
5	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	4	4.0
6	4	VALVE, SWING CHECK, RF, NACE, CLASS 600 ASME, A105N	1	115.7
7	4	VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N	1	74.9
TOTAL FABRICATION WEIGHT				<u>246.4</u>

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	198	4

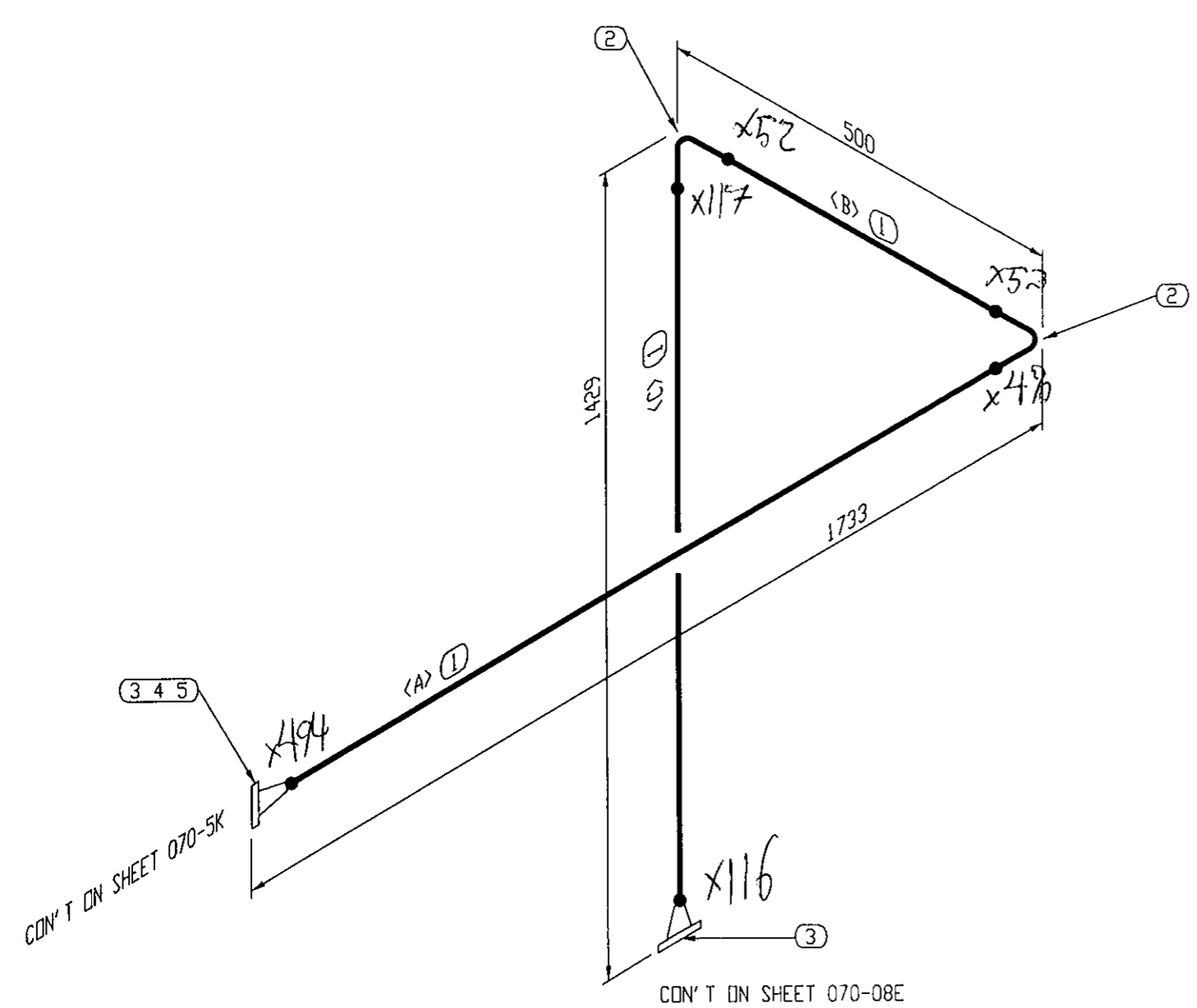
PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687				CUSTOMER: PENNWEST EXPLORATION	
PIPE SPEC.: CS	WELD PROC.: CADO-5					UNIT NO.: 2013-070-601	
DESIGN PRESS.: 9376 KPAG	RADIOGRAPHY: 100%					MODEL: 4-WELL SEPARATOR SKID (BU-2000)	
DESIGN TEMP.: 90 DEG. C	PWHT: N/A					LOCATION:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: V-2400 PROCESS GAS OUTLET	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-08E	
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR

BILL OF MATERIAL

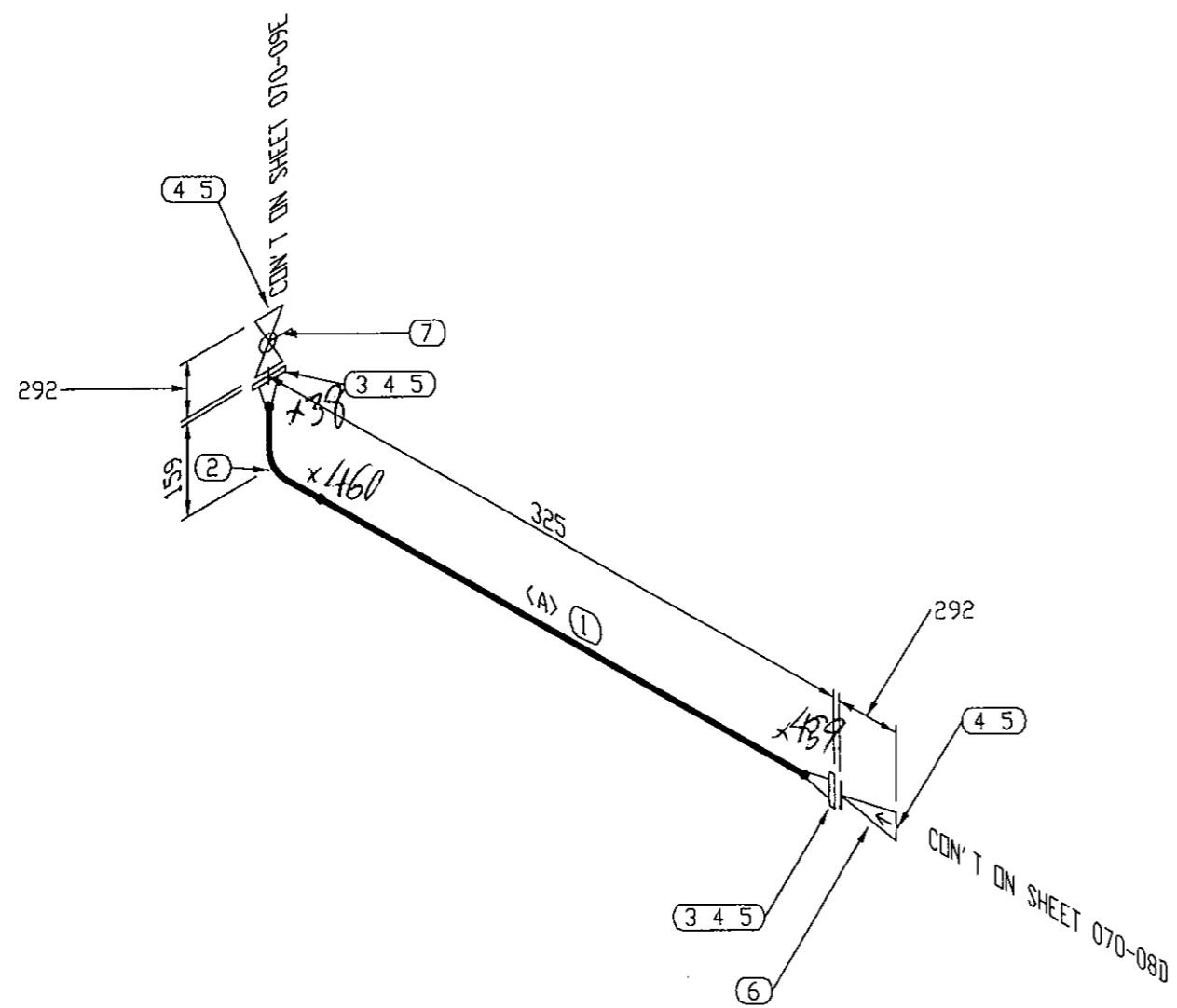
MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	4	PIPE, SMLS, BW, SCH. 80, A106 GR B	2816 MM	62.8
2	4	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	2	10.7
3	4	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	38.1
4	4	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
5	7/8X146	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
TOTAL FABRICATION WEIGHT				113.6

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	1467	4
	188	4
<C>	1161	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.: 38 DEG. C	PWHT: N/A					LOCATION:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: V-2400 PROCESS GAS OUTLET	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-08F	
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR



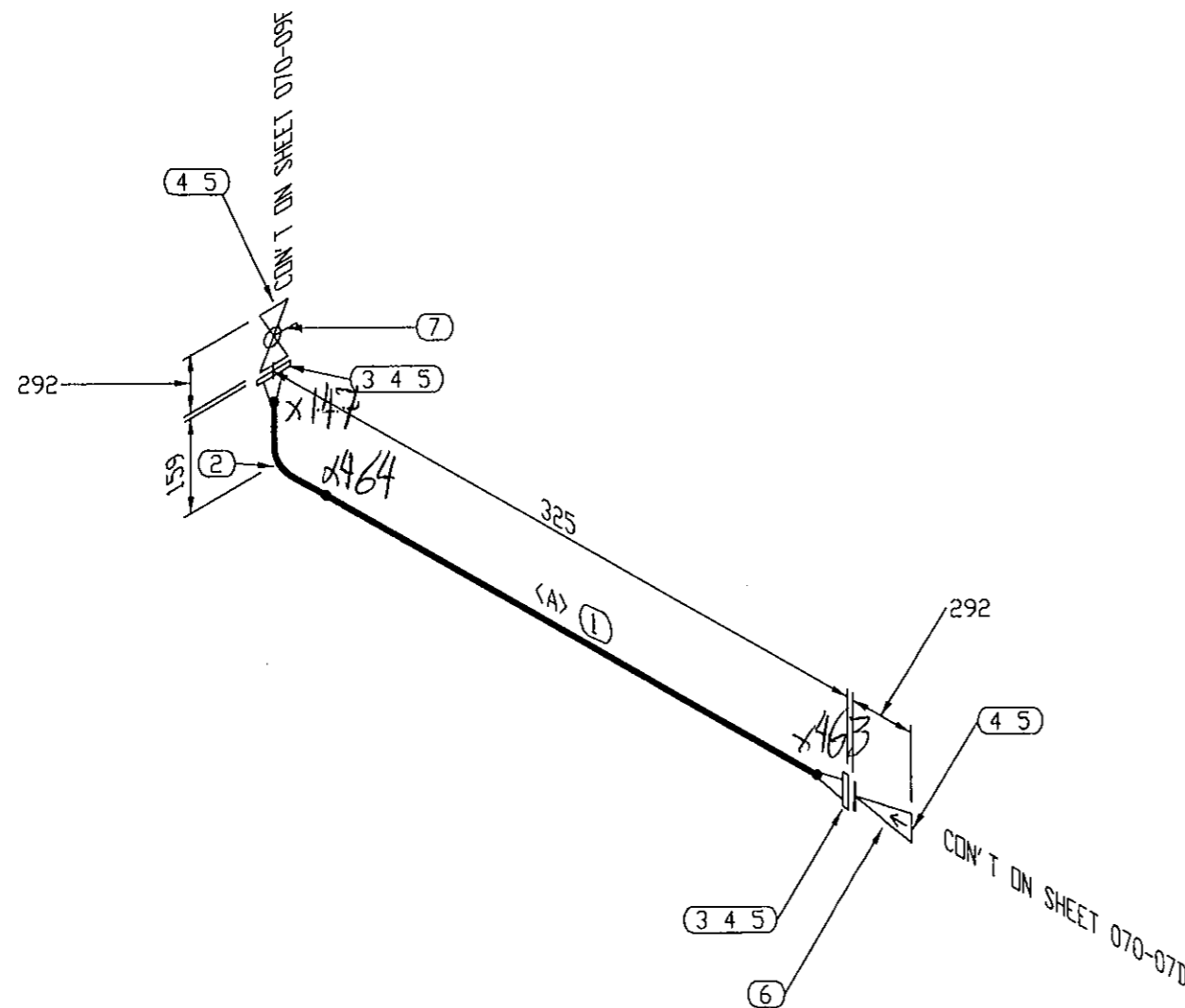
BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	163 MM	1.3
2	2	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	1	0.9
3	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	10.9
4	2	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	4	4.0
5	5/8X108	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	4	4.0
6	2	VALVE, SWING CHECK, RF, NACE, CLASS 600 ASME, A105N	1	31.8
7	2	VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N	1	20.0
TOTAL FABRICATION WEIGHT				<u>72.7</u>

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	163	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:				
MDMT: -29 DEG. C	PICKLE & OIL: N/A			LINE TAG: FUEL GAS OUTLET				
C.A.: 1.6 mm	SANDBLAST: SP-6			DRAWING NO.: 070-09A				
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC	REV. 0
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR	



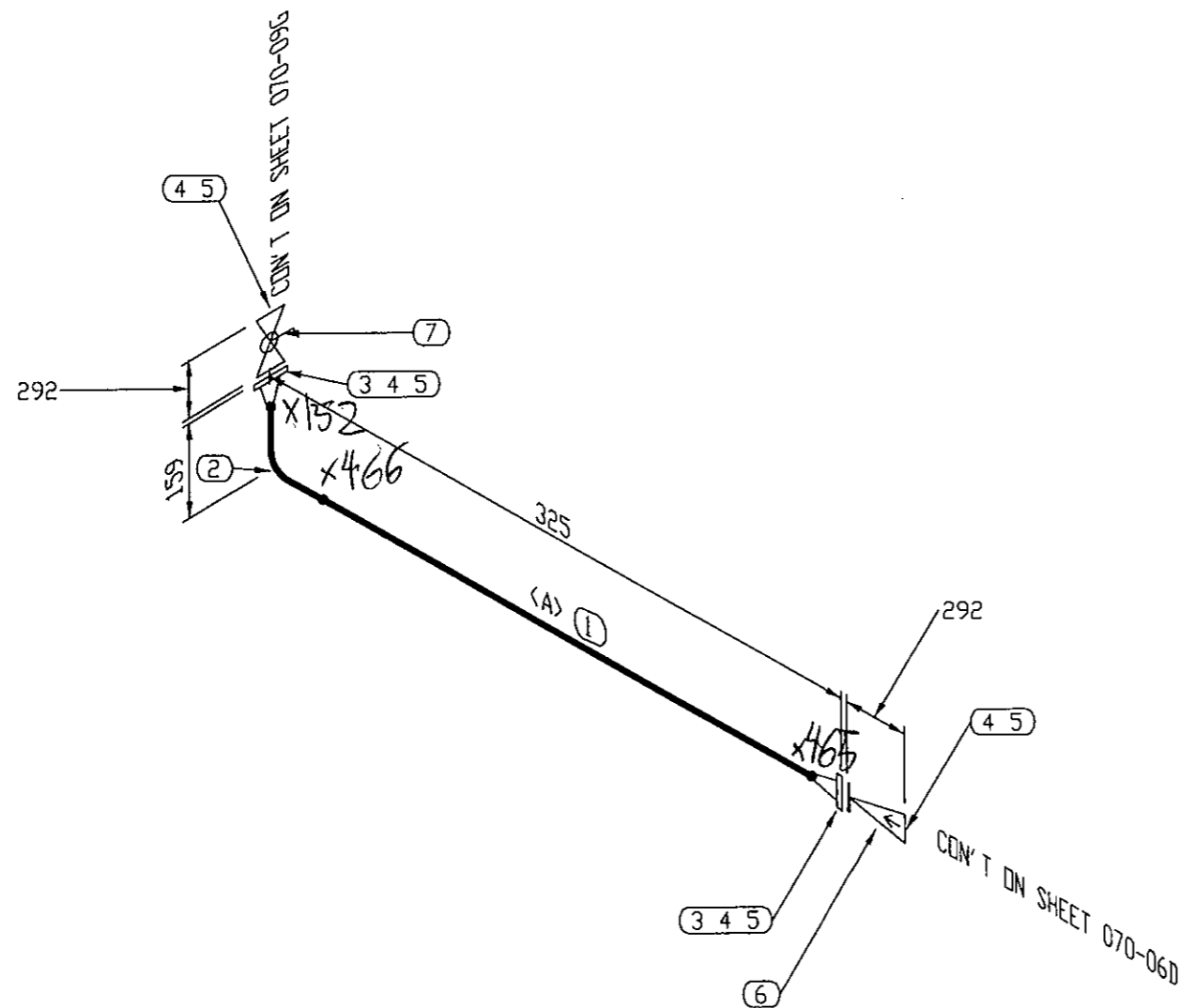
BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	163 MM	1.3
2	2	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	1	0.9
3	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	10.9
4	2	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	4	4.0
5	5/8X108	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	4	4.0
6	2	VALVE, SWING CHECK, RF, NACE, CLASS 600 ASME, A105N	1	31.8
7	2	VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N	1	20.0
TOTAL FABRICATION WEIGHT				72.7

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	163	2

PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6682; 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: FUEL GAS OUTLET	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-09B	
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR



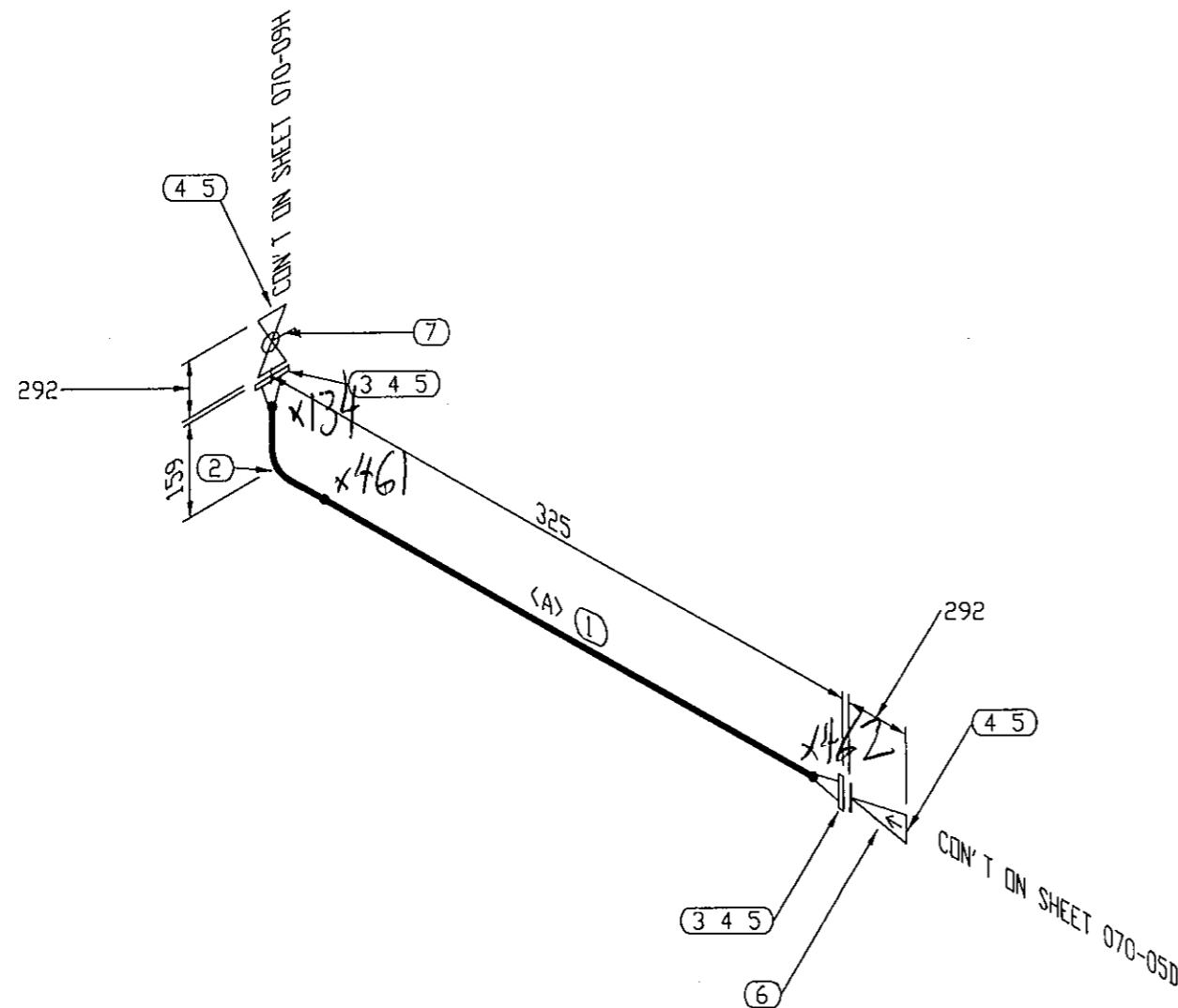
BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	163 MM	1.3
2	2	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR	1	0.9
3	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	10.9
4	2	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	4	4.0
5	5/8X108	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	4	4.0
6	2	VALVE, SWING CHECK, RF, NACE, CLASS 600 ASME, A105N	1	31.8
7	2	VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N	1	20.0
TOTAL FABRICATION WEIGHT				<u>72.7</u>

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	163	2

PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6682; 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: FUEL GAS OUTLET	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-09C	
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR



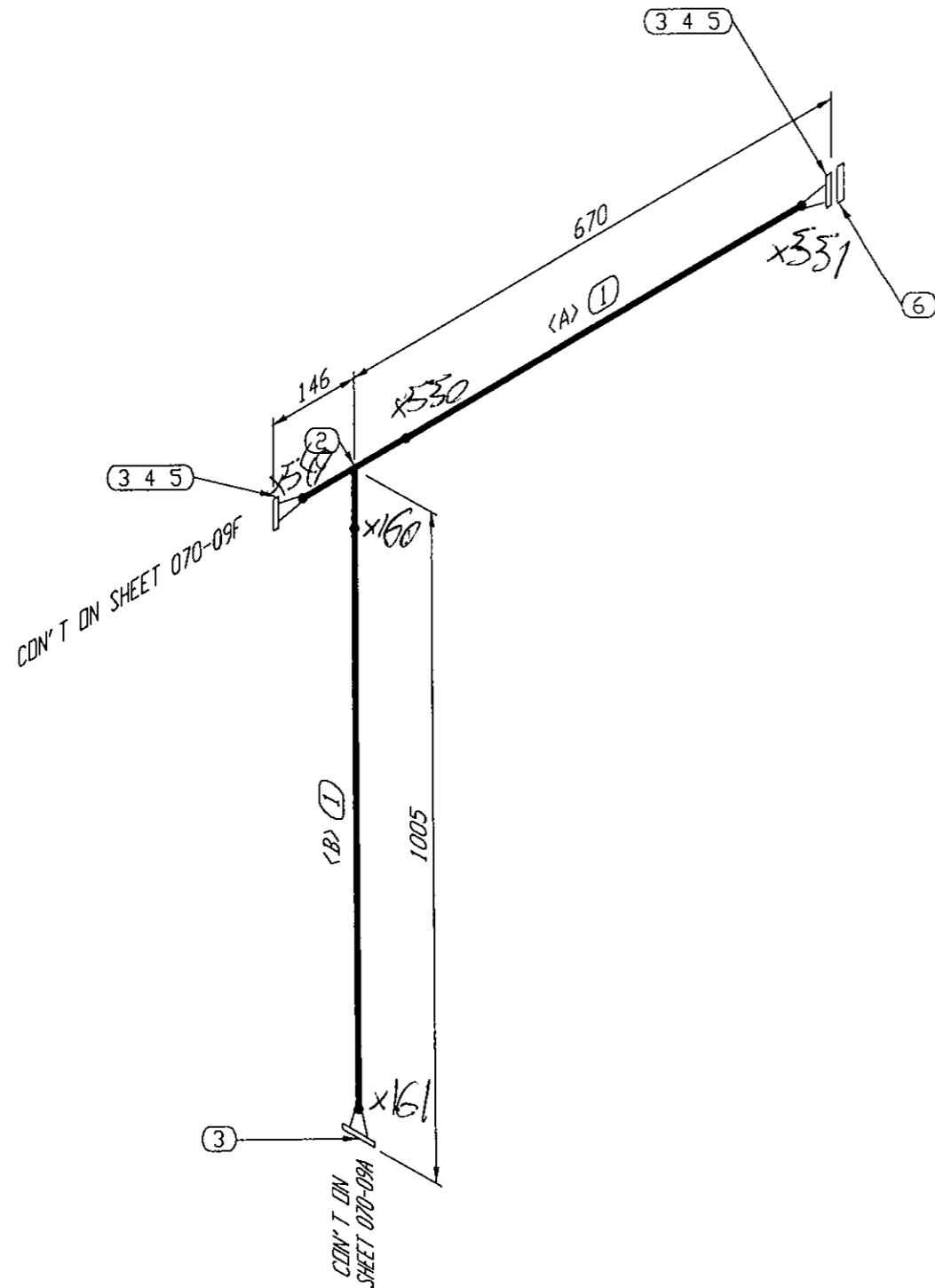
BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	163 MM	1.3
2	2	ELBDW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	1	0.9
3	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	10.9
4	2	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	4	4.0
5	5/8X108	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	4	4.0
6	2	VALVE, SWING CHECK, RF, NACE, CLASS 600 ASME, A105N	1	31.8
7	2	VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N	1	20.0
TOTAL FABRICATION WEIGHT				<u>72.7</u>

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	163	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:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: FUEL GAS OUTLET	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-09D	
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR



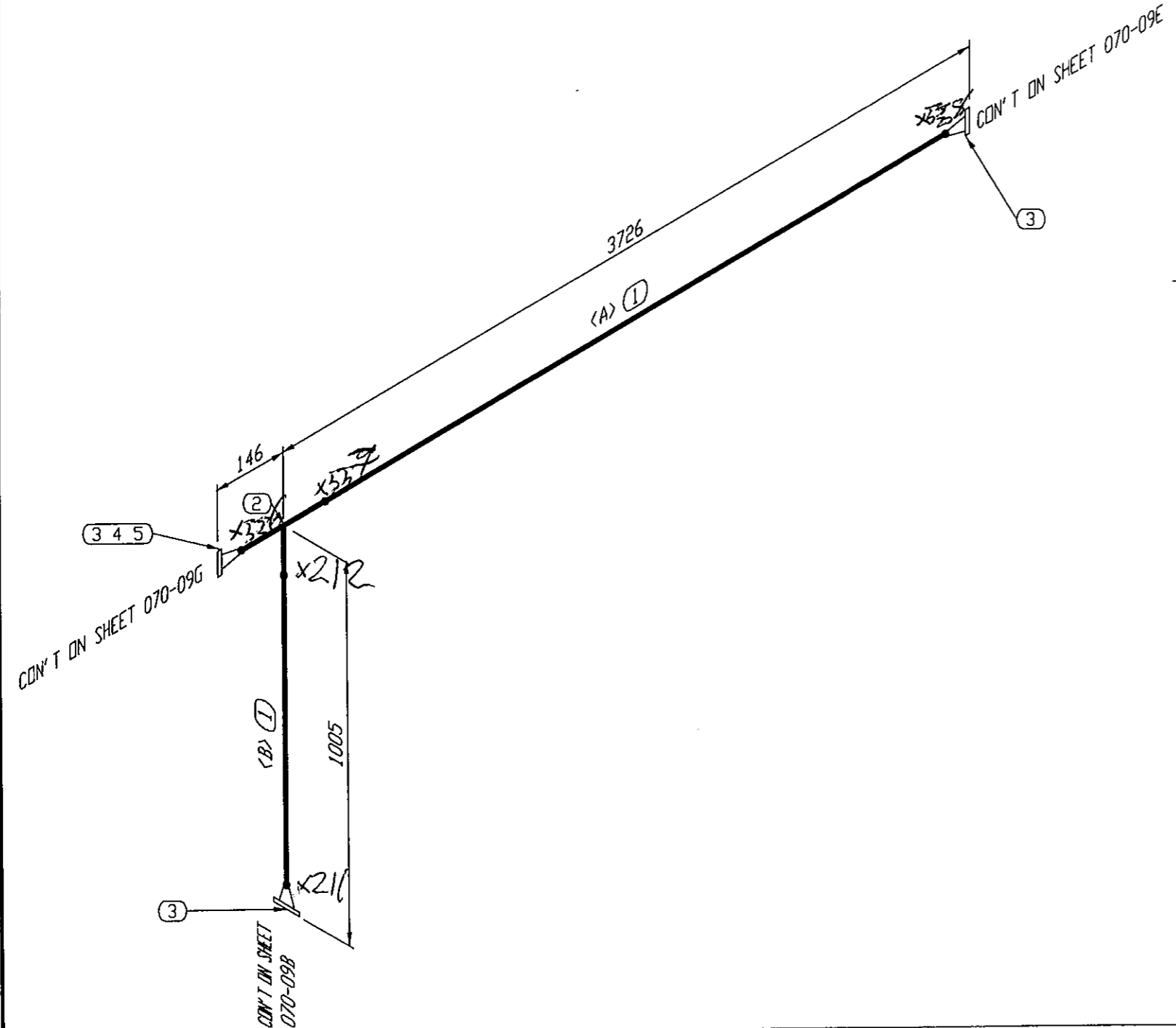
BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT	
1	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	1376 MM	10.3	
2	2X2	TEE, STR, BW, SCH. 80, A234 GR WPB	1	1.2	
3	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	3	16.4	
4	2	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	2	2.0	
5	5/8X108	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	2	2.0	
6	2	FLANGE, RF, BLIND, CL600, A105N	1	4.6	
TOTAL FABRICATION WEIGHT					36.3

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	521	2
	855	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:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: FUEL GAS OUTLET	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-09E	
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR



BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	4431 MM	33.1
2	2X2	TEE, STR, BW, SCH. 80, A234 GR WPB	1	1.2
3	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	3	16.4
4	2	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
5	5/8X108	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
TOTAL FABRICATION WEIGHT				52.6

CUT PIPE LENGTH

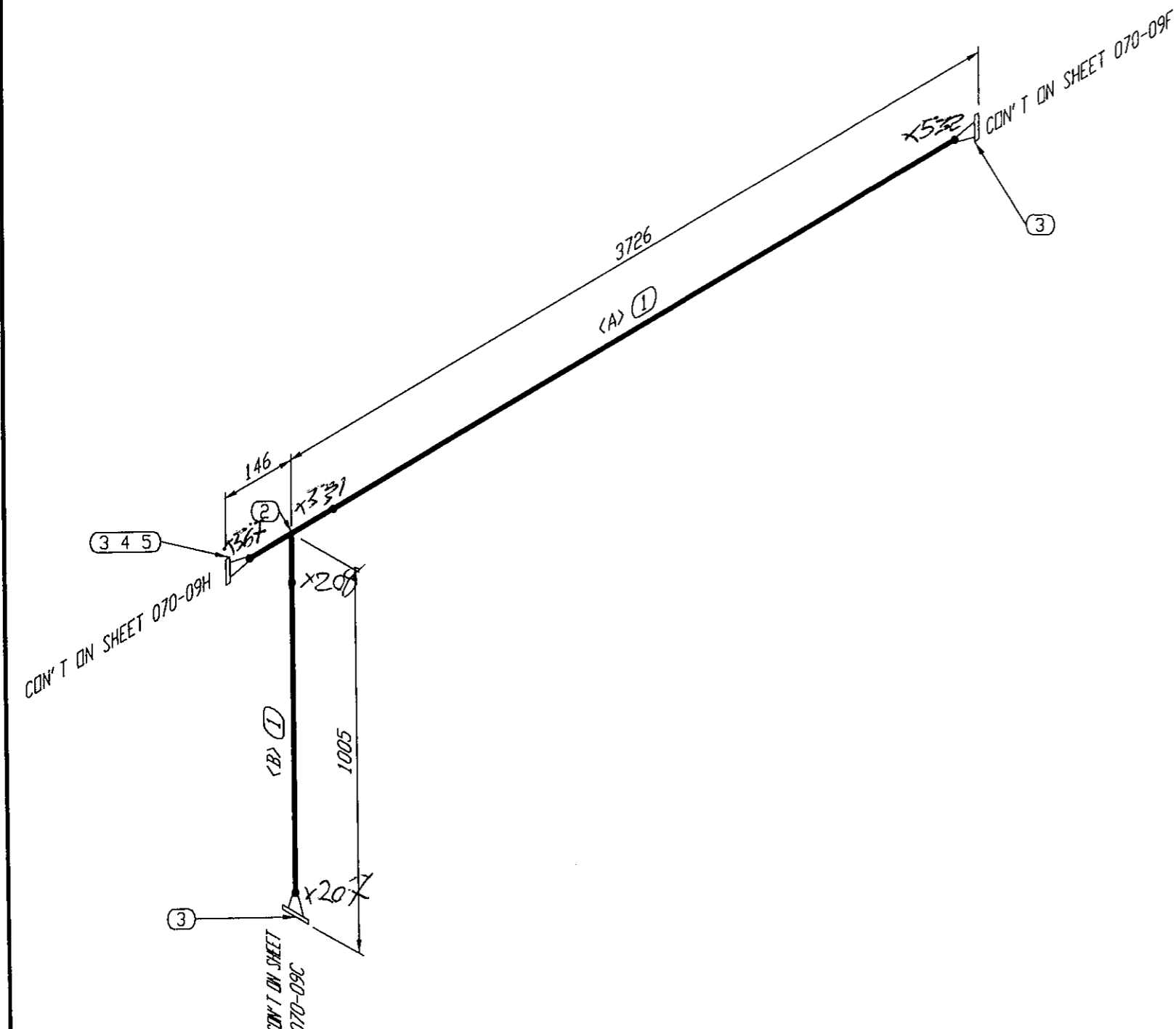
PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	3576	2
	855	2

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: WOG	INSULATION: N/A

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

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:	FUEL GAS OUTLET
DRAWING NO.:	070-09F
REV.	0



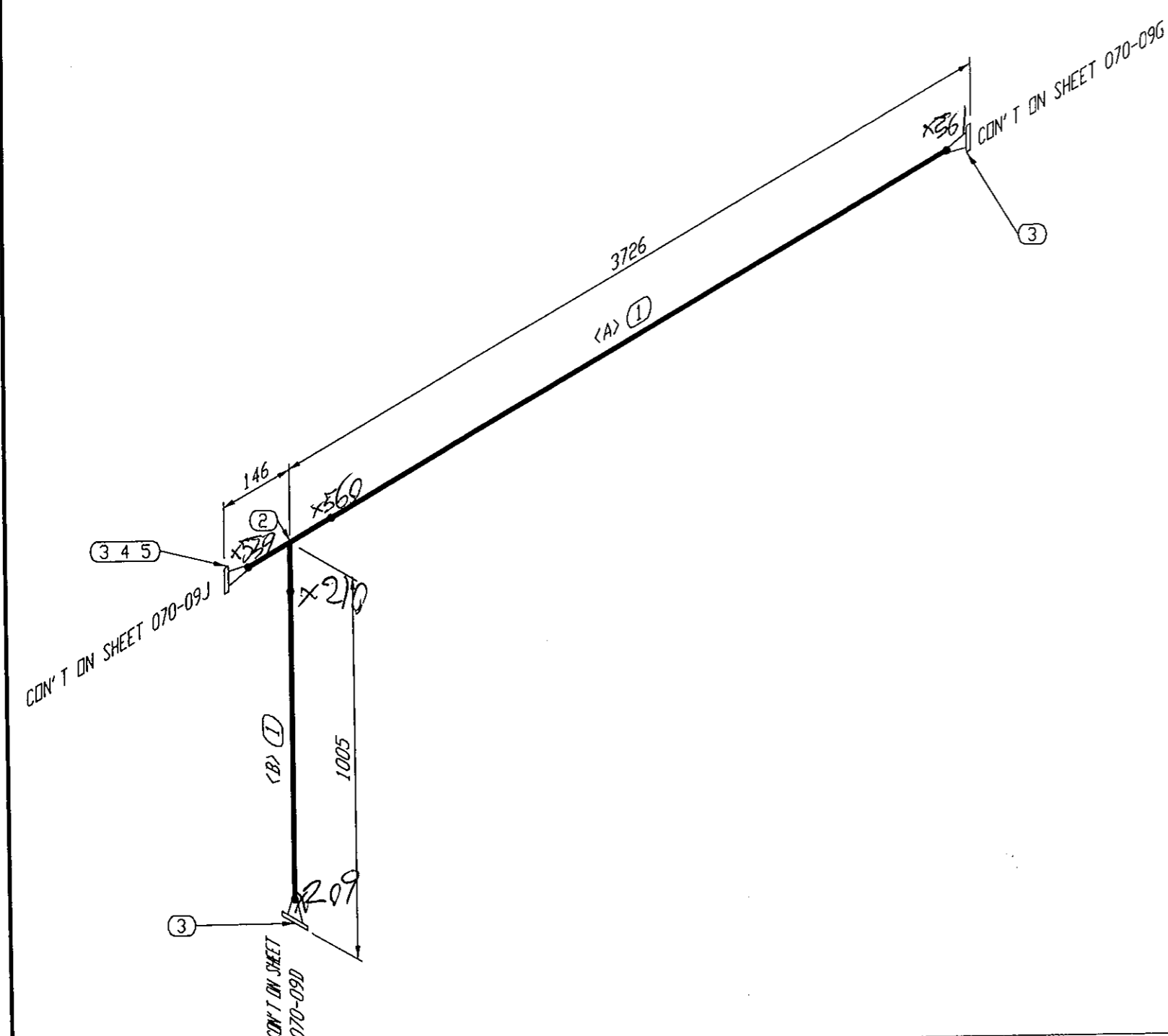
BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	4431 MM	33.1
2	2X2	TEE, STR, BW, SCH. 80, A234 GR WPB	1	1.2
3	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	3	16.4
4	2	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
5	5/8X108	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
TOTAL FABRICATION WEIGHT				52.6

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	3576	2
	855	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:					
MDMT: -29 DEG. C	PICKLE & OIL: N/A	LINE TAG: FUEL GAS OUTLET					
C.A.: 1.6 mm	SANDBLAST: SP-6	DRAWING NO.: 070-09G	REV. 0				
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR



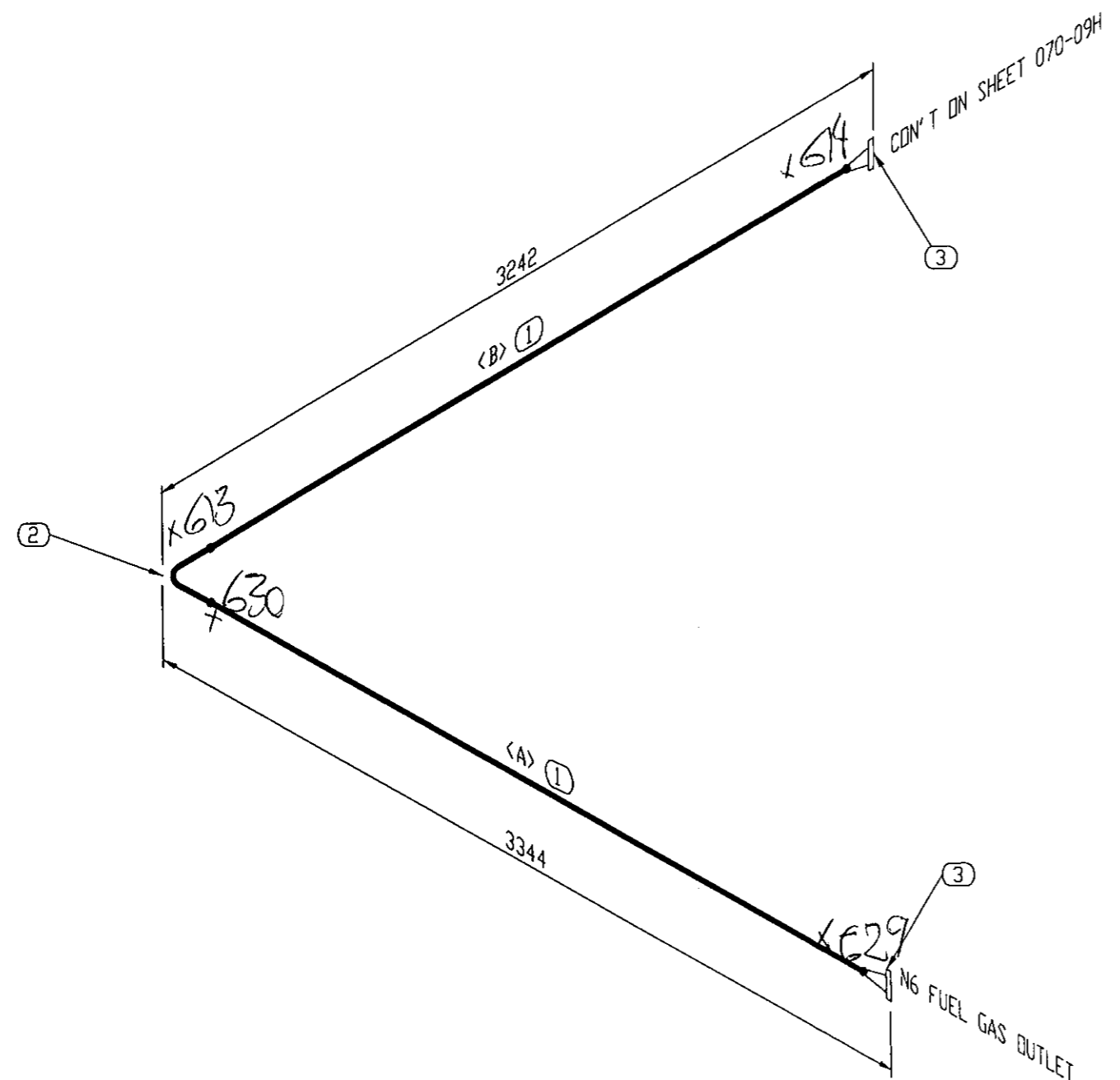
BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	4431 MM	33.1
2	2X2	TEE, STR, BW, SCH. 80, A234 GR WPB	1	1.2
3	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	3	16.4
4	2	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
5	5/8X108	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
TOTAL FABRICATION WEIGHT				52.6

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	3576	2
	855	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:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: FUEL GAS OUTLET	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-09H	
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR



BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	6262 MM	46.8
2	2	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR	1	0.9
3	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N WPB	2	10.9
TOTAL FABRICATION WEIGHT				58.6

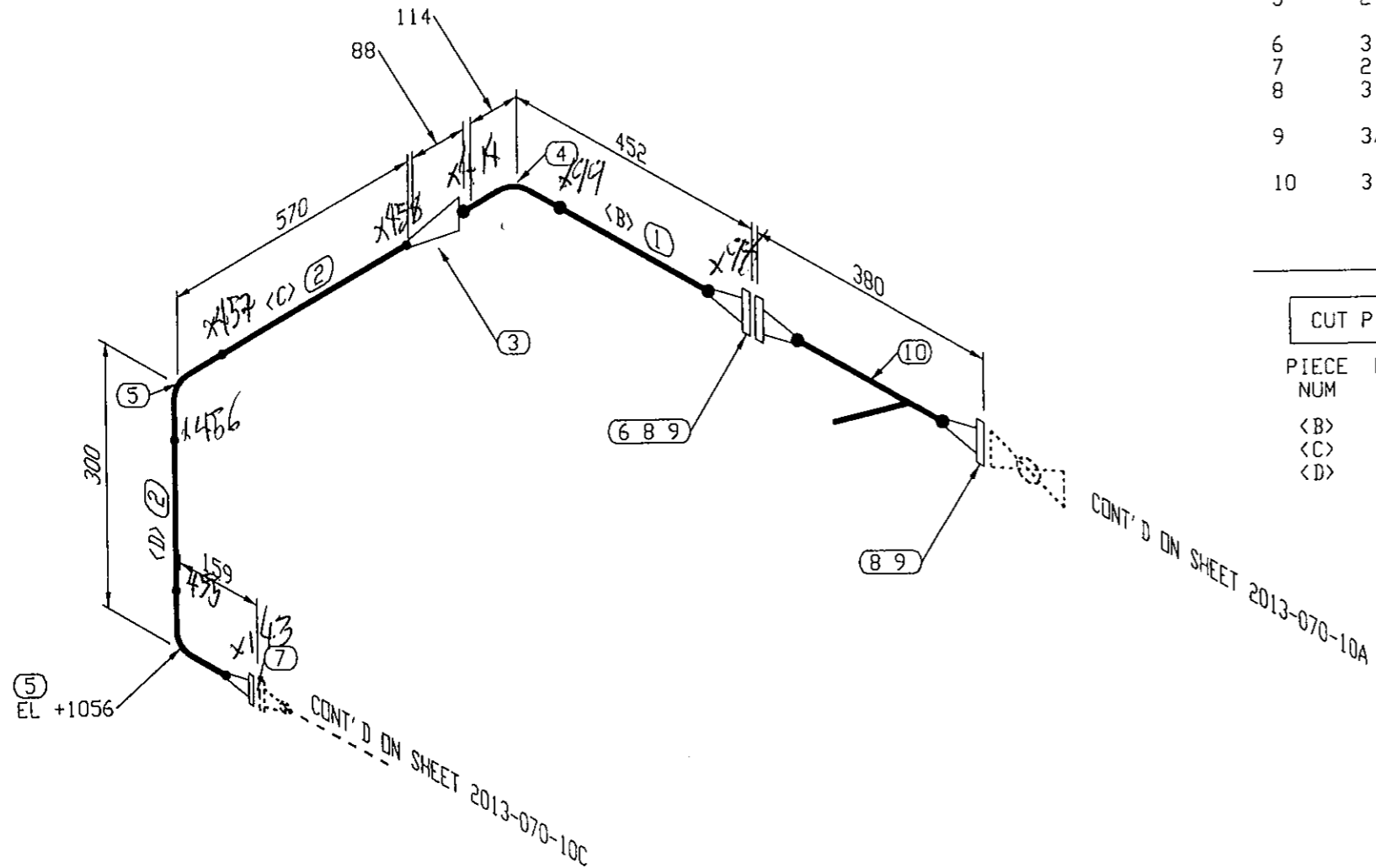
CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	3182	2
	3080	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:	
MDMT: -29 DEG. C	PICKLE & OIL: N/A					LINE TAG: FUEL GAS OUTLET	
C.A.: 1.6 mm	SANDBLAST: SP-6					DRAWING NO.: 070-09J	
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR
							REV. 0

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	3	PIPE, SMLS, BW, SCH. 80, A106 GR B	438 MM	5.0
2	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	631 MM	4.8
3	3X2	REDUCER, CONC, BW, SCH. 80, A234 GR WPB	1	0.9
4	3	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	1	2.1
5	2	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	2	1.8
6	3	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	31.3
7	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	5.5
8	3	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	2	2.0
9	3/4X127	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	2	2.0
10	3	Y-STRAINER	1	
TOTAL FABRICATION WEIGHT				55.0



CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
	242	3
<C>	490	2
<D>	141	2

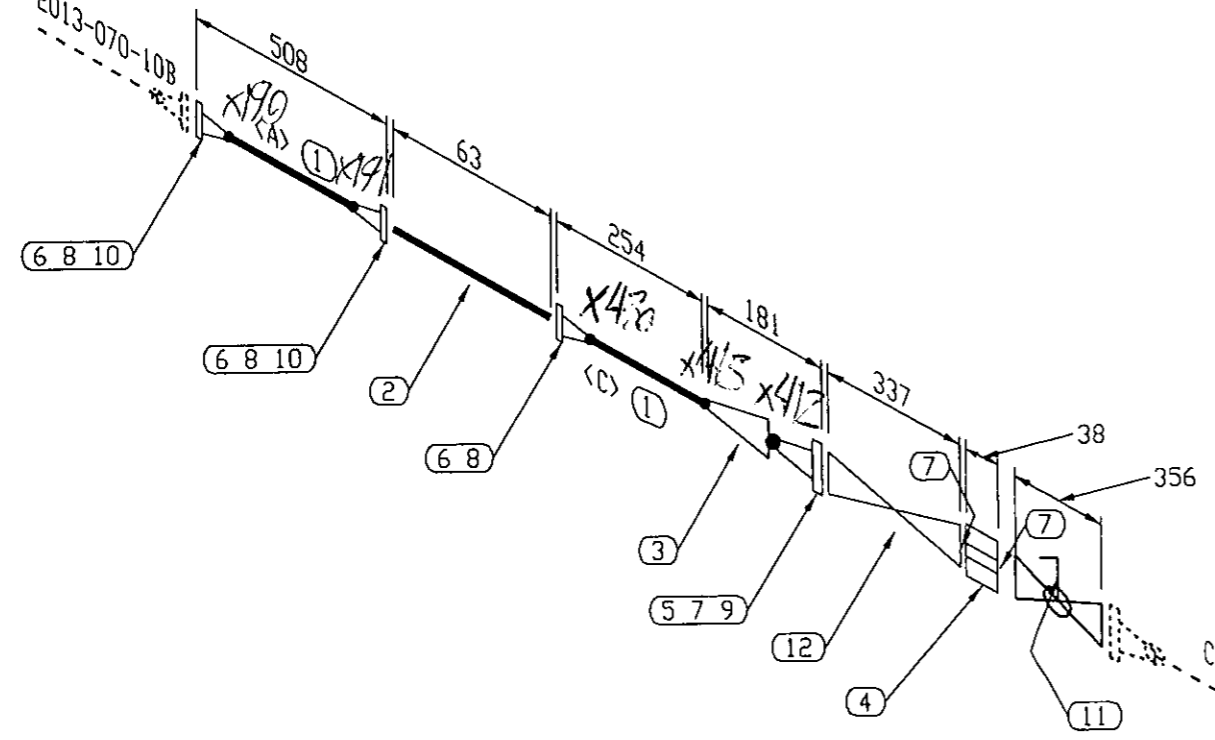
PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION,	
PIPE SPEC.: CS	WELD PROC.: CADO-5
DESIGN PRESS.: 9376 KPAG	RADIOGRAPHY: 100%
DESIGN TEMP.: 90 DEG. C	PWHT: N/A
MDMT: -29 DEG. C	PICKLE & OIL: N/A
C.A.: 1.6 mm	SANDBLAST: SP-6
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY
TEST MEDIA: WOG	INSULATION: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

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

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:	V-2100 CONDENSATE OUTLET
DRAWING NO.:	070-103
REV.	0

CONT'D ON SHEET 2013-070-10B



CONT'D ON SHEET 2013-070-10B

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	514 MM	3.9
2	2	TURBINE METER	1	0.5
3	3X2	REDUCER, CONC, BW, SCH. 80, A234 GR WPB	1	0.9
4	3	BLEED RING, RF, 600#, RF, 21mm HOLE	1	1.0
5	3	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	10.5
6	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	3	16.4
7	3	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	3	3.0
8	2	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	3	3.0
9	3/4X127	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
10	5/8X108	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	2	2.0
11	3	VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N	1	38.6
12	3	CONTROL VALVE, FISHER ET, 600LB FLG, RF	1	1.0
TOTAL FABRICATION WEIGHT				81.5

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	343	2
<C>	171	2

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: WOG	INSULATION: N/A

CADO INDUSTRIES INC.			
7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687			
0	ISSUED FOR CONSTRUCTION	11/10/2013	AP WC WC
NO.	REVISION	DATE	BY CHK APR

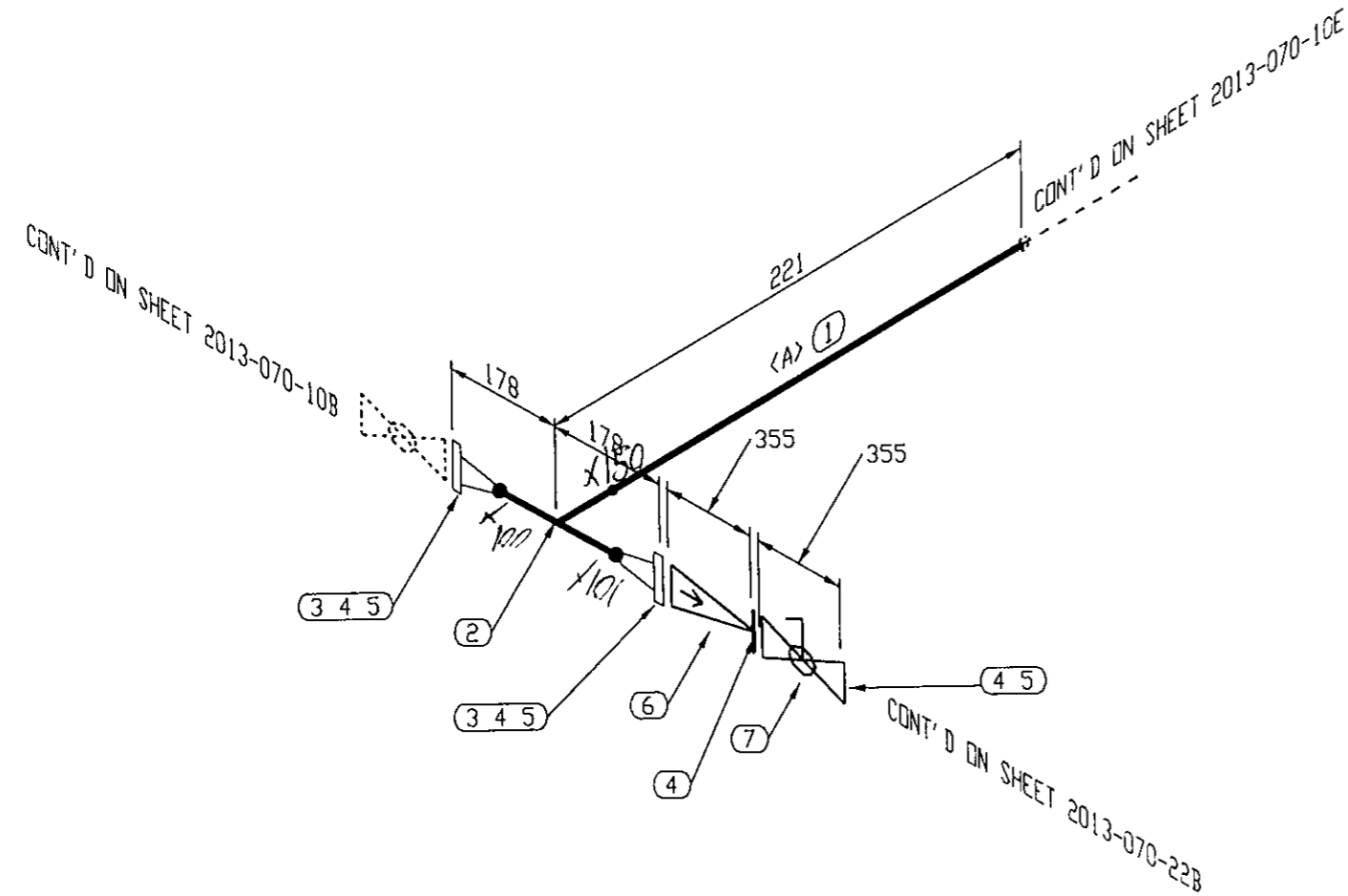
CUSTOMER:	PENNWEST EXPLORATION
UNIT NO.:	2013-070-601
MODEL:	4-WELL SEPARATOR SKID (BU-2000)
LOCATION:	
LINE TAG:	V-2100 CONDENSATE OUTLET
DRAWING NO.:	070-10C
REV.	0

BILL OF MATERIAL

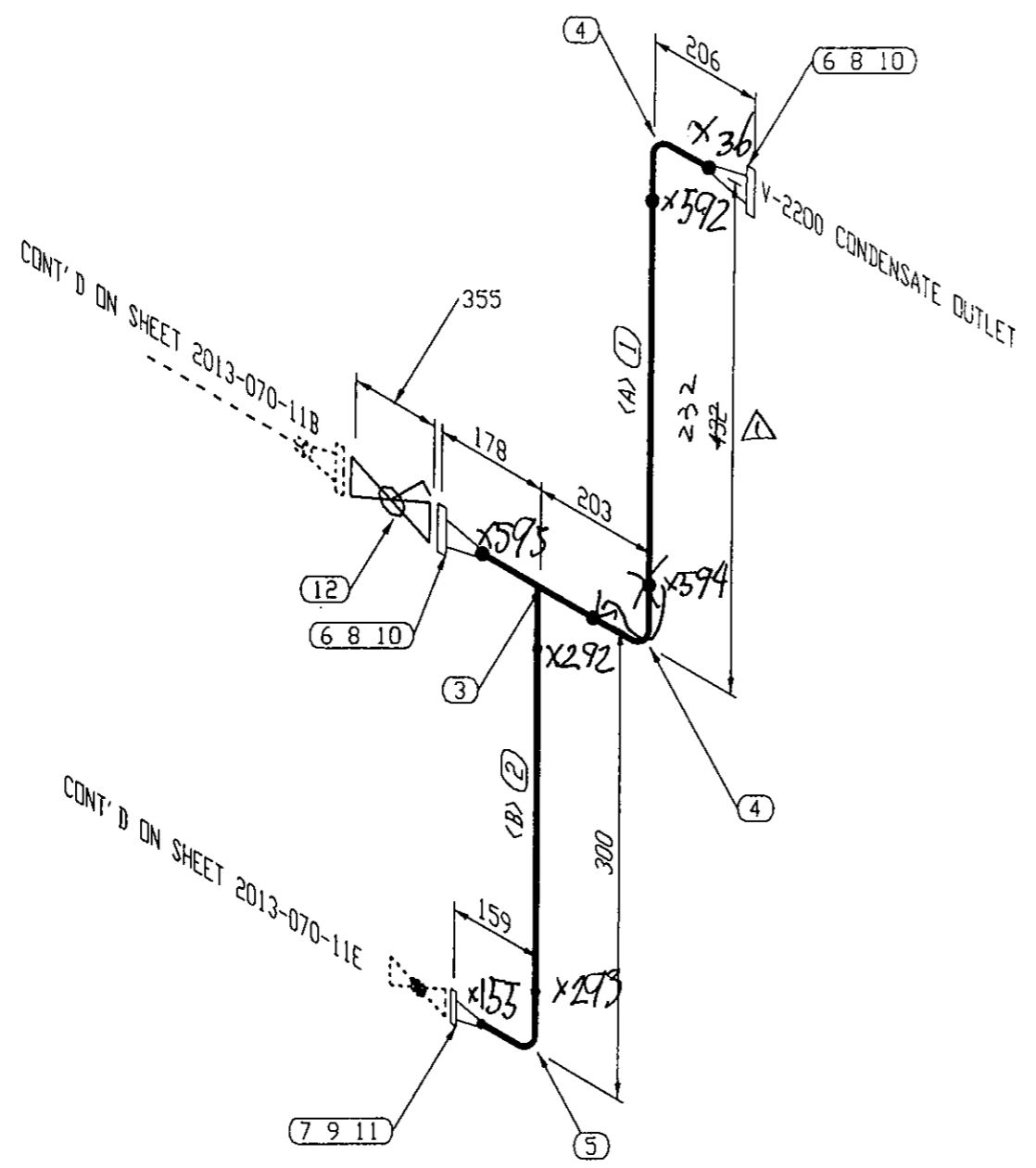
MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	141 MM	1.1
2	3X2	TEE, RED, BW, SCH. 80, A234 GR WPB	1	2.2
3	3	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	20.9
4	3	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	4	4.0
5	3/4X127	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	3	3.0
6	3	VALVE, SWING CHECK, RF, NACE, CLASS 600 ASME, A105N	1	61.3
7	3	VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N	1	38.6
TOTAL FABRICATION WEIGHT				130.8

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	141	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 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: V-2100 CONDENSATE OUTLET						
C.A.: 1.6 mm	SANDBLAST: SP-6	DRAWING NO.: 070-100						
TEST PRESS.: 14064 KPAC	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC	REV. 0
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR	



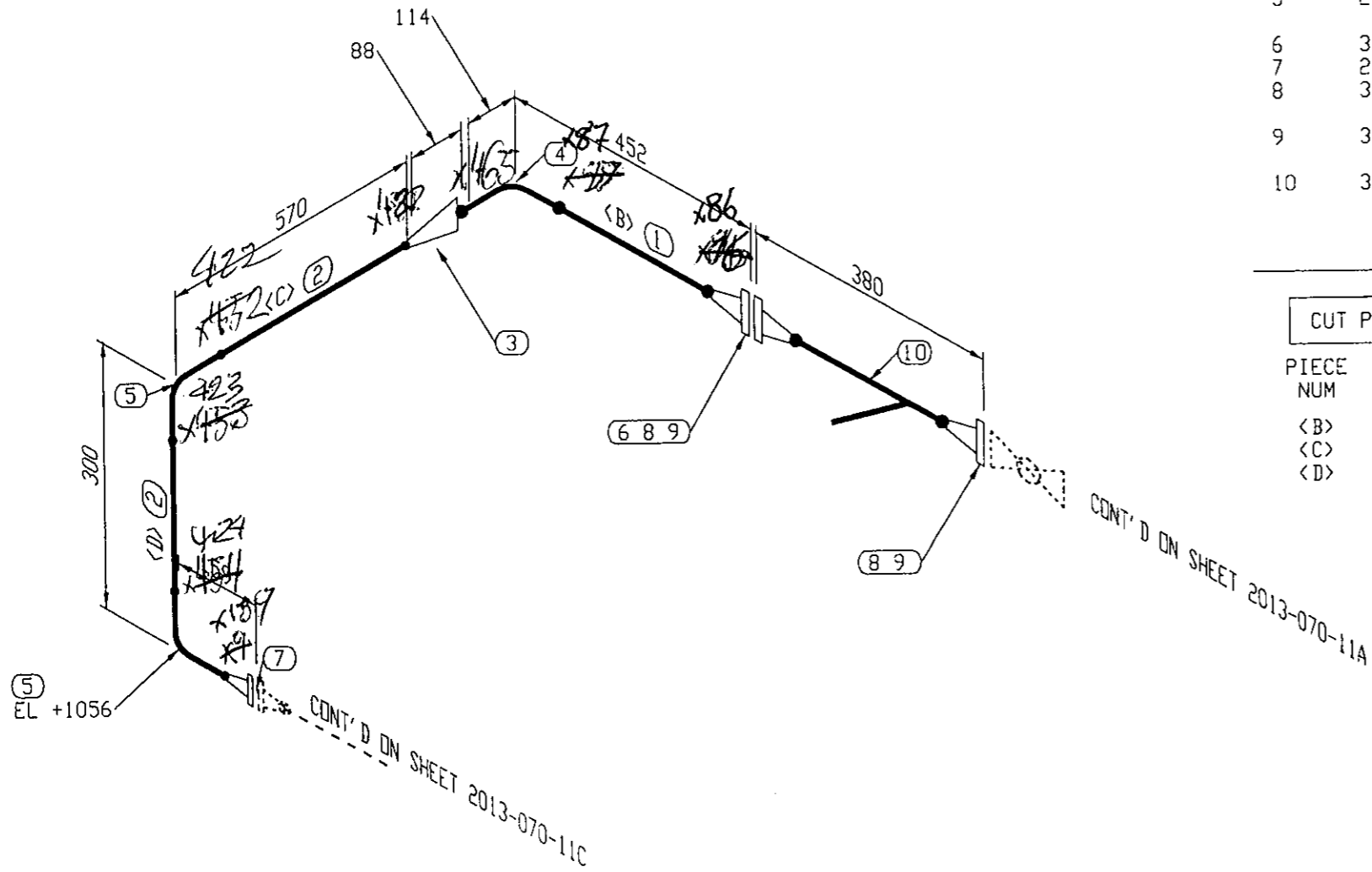
BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	3	PIPE, SMLS, BW, SCH. 80, A106 GR B	197 MM	2.3
2	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	141 MM	1.1
3	3X2	TEE, RED, BW, SCH. 80, A234 GR WPB	1	2.2
4	3	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	2	4.1
5	2	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	1	0.9
6	3	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	20.9
7	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	5.5
8	3	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	2	2.0
9	2	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	1	1.0
10	3/4X127	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	2	2.0
11	5/8X108	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
12	3	VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N	1	38.6
TOTAL FABRICATION WEIGHT				81.2

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	497	3
	141	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:				
MDMT: -29 DEG. C	PICKLE & OIL: N/A			LINE TAG: V-2200 CONDENSATE OUTLET				
C.A.: 1.6 mm	SANDBLAST: SP-6			DRAWING NO.: 070-11A				
TEST PRESS.: 14064 KPAG	PAINT: WARM GREY	0	ISSUED FOR CONSTRUCTION	11/10/2013	AP	WC	WC	REV. 0
TEST MEDIA: WOG	INSULATION: N/A	NO.	REVISION	DATE	BY	CHK	APR	



BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	3	PIPE, SMLS, BW, SCH. 80, A106 GR B	438 MM	5.0
2	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	631 MM	4.8
3	3X2	REDUCER, CONC, BW, SCH. 80, A234 GR WPB	1	0.9
4	3	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	1	2.1
5	2	ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB	2	1.8
6	3	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	31.3
7	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	5.5
8	3	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	2	2.0
9	3/4X127	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	2	2.0
10	3	Y-STRAINER	1	
TOTAL FABRICATION WEIGHT				55.0

CUT PIPE LENGTH

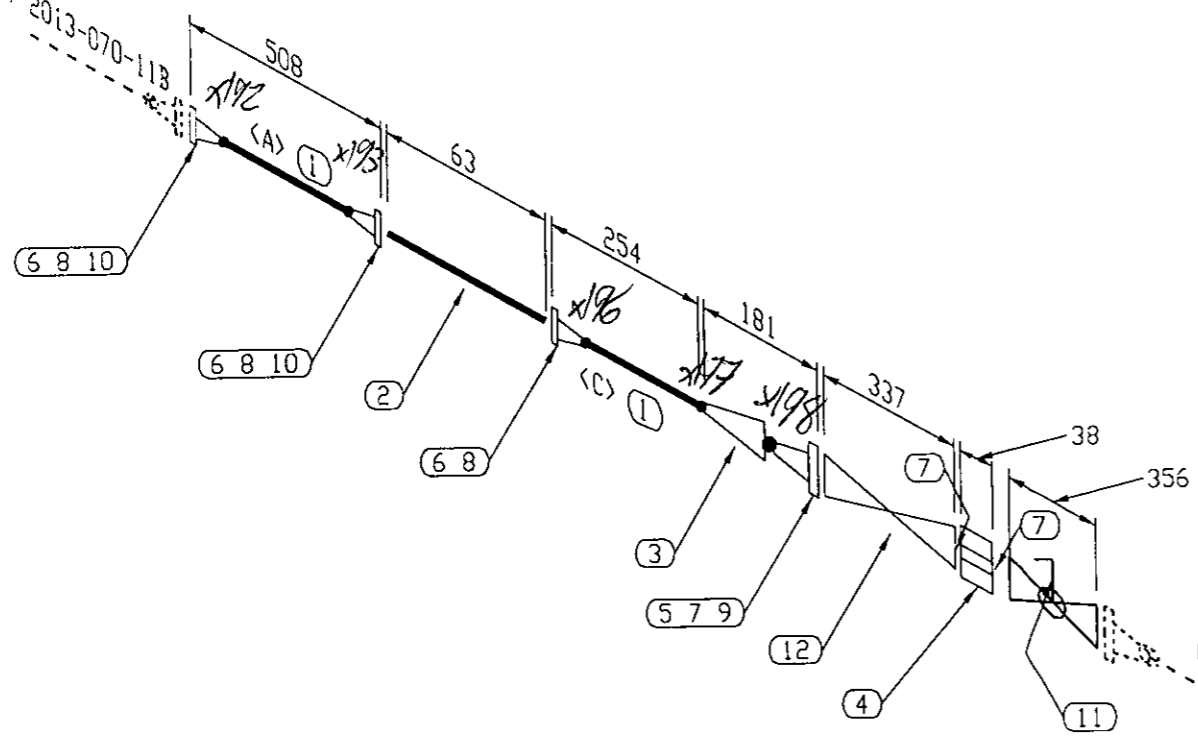
PIECE NUM	LENGTH (MM)	SIZE (INCH)
	242	3
<C>	490	2
<D>	141	2

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: WOG	INSULATION: N/A

CADO INDUSTRIES INC.			
7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8			
TEL: (403) 279-6662; FAX: (403) 279-6687			
0	ISSUED FOR CONSTRUCTION	11/10/2013	AP WC WC
NO.	REVISION	DATE	BY C-K APR

CUSTOMER:	PENNWEST EXPLORATION
UNIT NO.:	2013-070-601
MODEL:	4-WELL SEPARATOR SKID (BU-2000)
LOCATION:	
LINE TAG:	V-2200 CONDENSATE OUTLET
DRAWING NO.:	070-11B
REV.	0

CONT'D ON SHEET 2013-070-113



CONT'D ON SHEET 2013-070-110

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	514 MM	3.9
2	2	TURBINE METER	1	0.5
3	3X2	REDUCER, CONC, BW, SCH. 80, A234 GR WPB	1	0.9
4	3	BLEED RING, RF, 600#, RF, 21mm HOLE	1	1.0
5	3	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	1	10.5
6	2	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	3	16.4
7	3	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	3	3.0
8	2	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	3	3.0
9	3/4X127	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	1	1.0
10	5/8X108	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	2	2.0
11	3	VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N	1	38.6
12	3	CONTROL VALVE, FISHER ET, 600LB FLG, RF	1	1.0
TOTAL FABRICATION WEIGHT				81.5

CUT PIPE LENGTH

PIECE NUM	LENGTH (MM)	SIZE (INCH)
<A>	343	2
<C>	171	2

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: WCG	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	APR

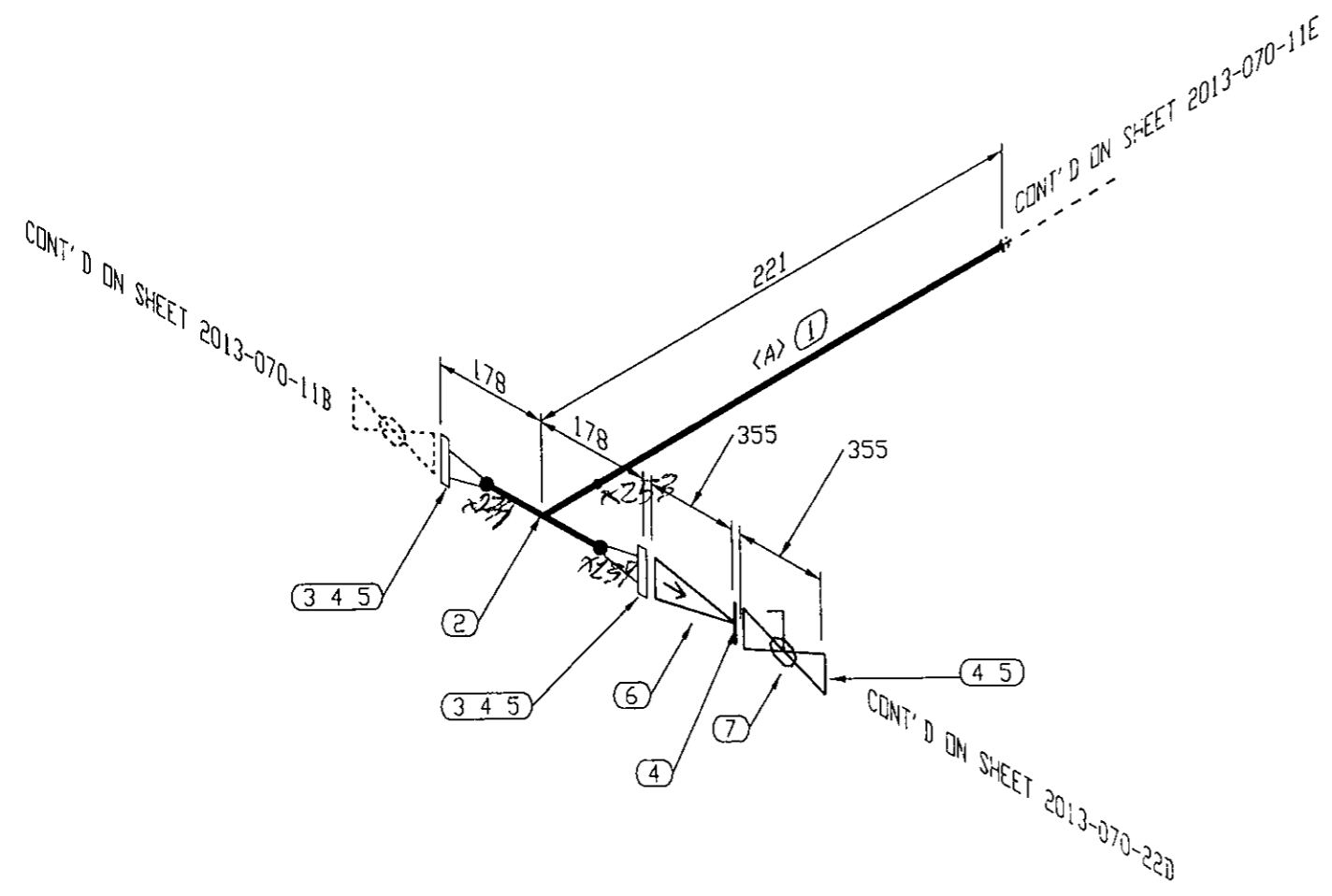
CUSTOMER:	PENNWEST EXPLORATION
UNIT NO.:	2013-070-601
MODEL:	4-WELL SEPARATOR SKID (BU-2000)
LOCATION:	
LINE TAG:	V-2200 CONDENSATE OUTLET
DRAWING NO.:	070-110
REV.	0

BILL OF MATERIAL

MARK	SIZE	DESCRIPTION	QTY	WEIGHT
1	2	PIPE, SMLS, BW, SCH. 80, A106 GR B	141 MM	1.1
2	3X2	TEE, RED, BW, SCH. 80, A234 GR WPB	1	2.2
3	3	FLANGE, RFWN, CL600, SCH. 80 BORE, A105N	2	20.9
4	3	GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE	4	4.0
5	3/4X127	(8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM	3	3.0
6	3	VALVE, SWING CHECK, RF, NACE, CLASS 600 ASME, A105N	1	61.3
7	3	VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N	1	38.6
TOTAL FABRICATION WEIGHT				130.8

CUT PIPE LENGTH

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



PIPE SPEC.: CS		WELD PROC.: CADO-5		CADO INDUSTRIES INC. 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8 TEL: (403) 279-6662; FAX: (403) 279-6687				CUSTOMER: PENNWEST EXPLORATION	
DESIGN PRESS.: 9376 KPAG		RADIOGRAPHY: 100%						UNIT NO.: 2013-070-601	
DESIGN TEMP.: 90 DEG. C		PWHT: N/A		MODEL: 4-WELL SEPARATOR SKID (BU-2000)		LOCATION:			
MONT: -29 DEG. C		PICKLE & OIL: N/A		LINE TAG: V-2200 CONDENSATE OUTLET		DRAWING NO.: 070-11D		REV. 0	
C.A.: 1.6 mm		SANDBLAST: SP-6		DATE: 11/10/2013		BY: AP			
TEST PRESS.: 14064 KPAG		PAINT: WARM GREY		NO. 0		CHK: WC			
TEST MEDIA: WOG		INSULATION: N/A		NO. 0		APR: WC			

