

BILL OF MATERIAL

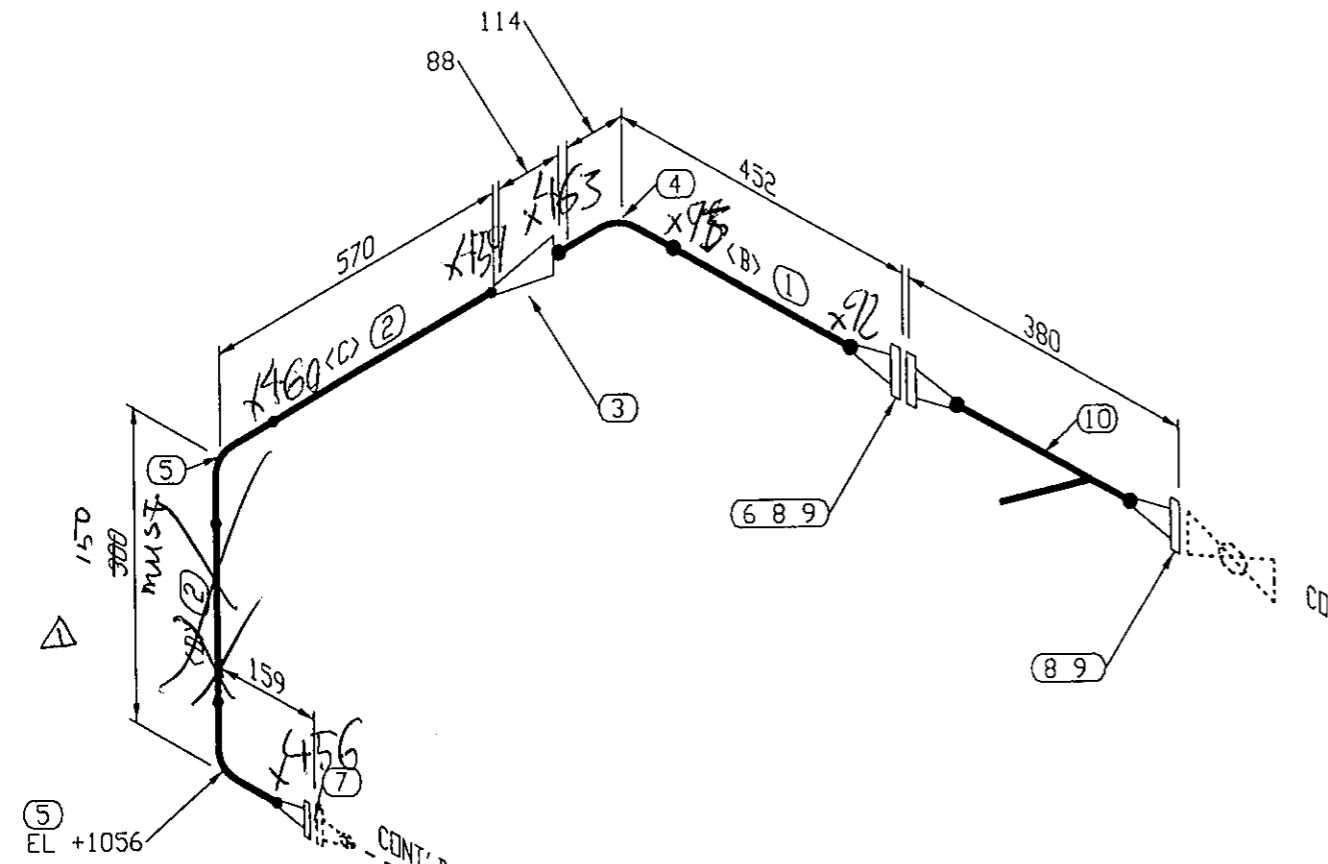
| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|--|--------|--------|
| 1 | 3 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 197 MM | 2.3 |
| 2 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 141 MM | 1.1 |
| 3 | 3X2 | TEE, RED, BW, SCH. 80, A234 GR WPB | 1 | 2.2 |
| 4 | 3 | ELBOW, 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> | 1970 | 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-2300 CONDENSATE OUTLET | |
| C.A.: 1.6 mm | SANDBLAST: SP-6 | | | | | DRAWING NO.: 070-12A | |
| 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> | 1410 | 2 |

CONT'D ON SHEET 2013-070-12A

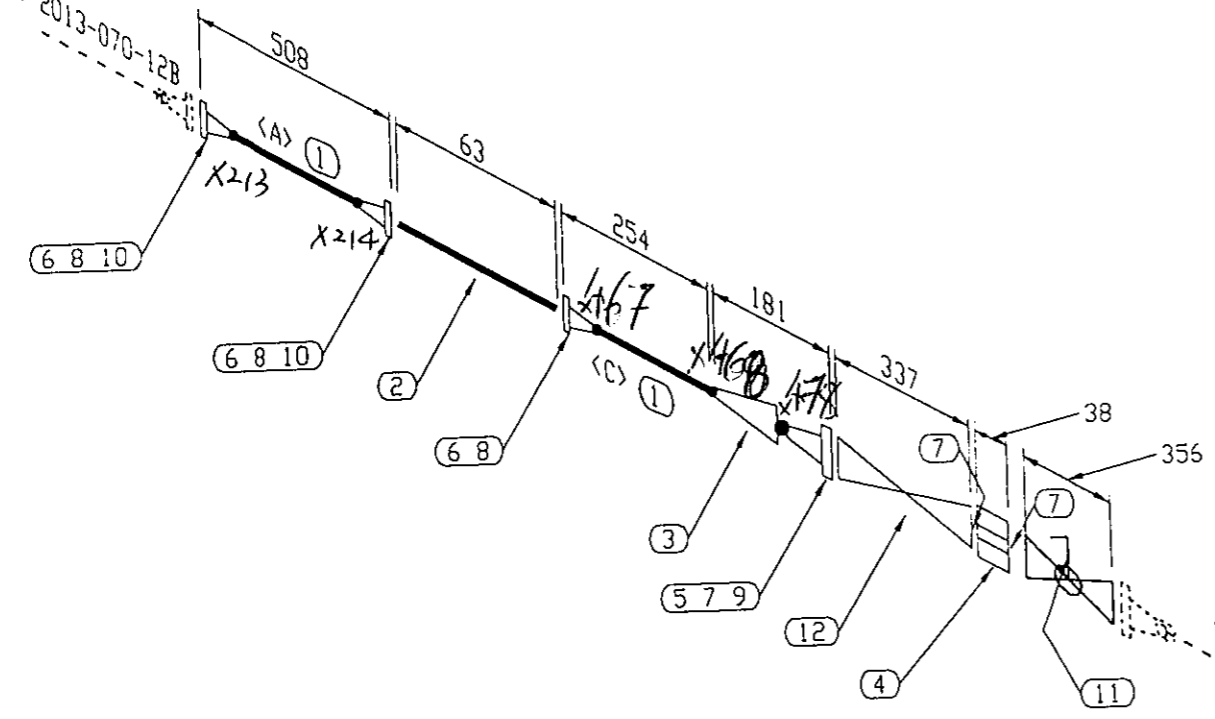
CONT'D ON SHEET 2013-070-12C

| | | | | | | | |
|---|--------------------|--|--|----------------------|----|--------------------------------|-----|
| 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) | | LOCATION: | | | |
| DESIGN TEMP.: 90 DEG. C | PWHT: N/A | LINE TAG: V-2300 CONDENSATE OUTLET | | DRAWING NO.: 070-12B | | REV. 0 | |
| MDMT: -29 DEG. C | PICKLE & OIL: N/A | ISSUED FOR CONSTRUCTION | | 11/10/2013 | AP | WC | WC |
| C.A.: 1.6 mm | SANDBLAST: SP-6 | NO. REVISION | | DATE | BY | CHK | APR |
| TEST PRESS.: 14064 KPAC | PAINT: WARM GREY | | | | | | |
| TEST MEDIA: WOG | INSULATION: N/A | | | | | | |

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 |

CONT'D ON SHEET 2013-070-12B



CUT PIPE LENGTH

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

CONT'D ON SHEET 2013-070-12B

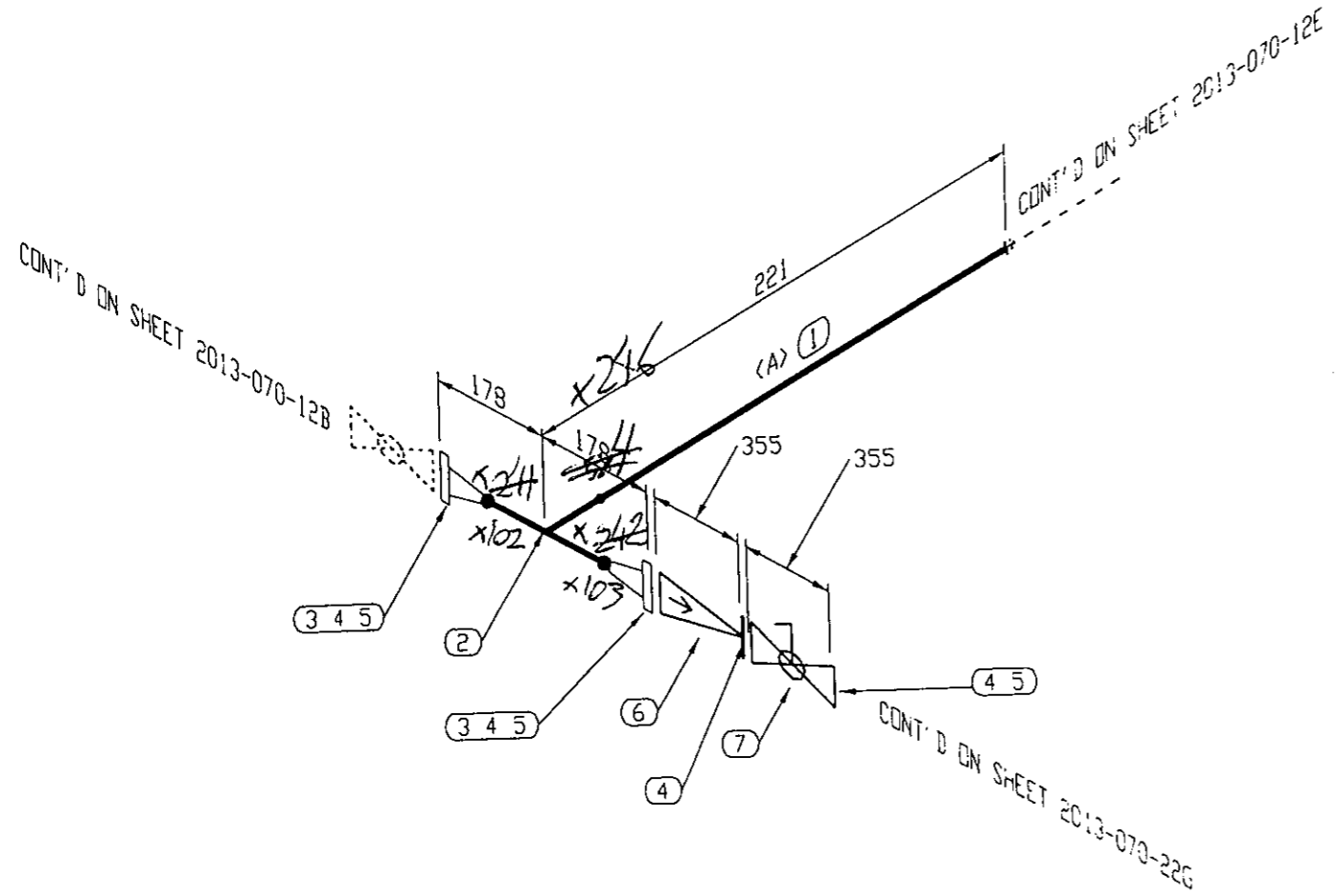
| | | | | | | | |
|---|-------------------------|--|----|-----|-----|---|--|
| PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION, PIPE SPEC.: CS WELD PROC.: CADO-5 DESIGN PRESS.: 9376 KPAG RADIOGRAPHY: 100% DESIGN TEMP.: 90 DEG. C PWHT: N/A MDMT: -29 DEG. C PICKLE & OIL: N/A C.A.: 1.6 mm SANDBLAST: 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-2300 CONDENSATE OUTLET DRAWING NO.: 070-12C | |
| 0 | ISSUED FOR CONSTRUCTION | 11/10/2013 | AP | WC | WC | REV. 0 | |
| NO. | REVISION | DATE | BY | CHK | APR | | |

BILL OF MATERIAL

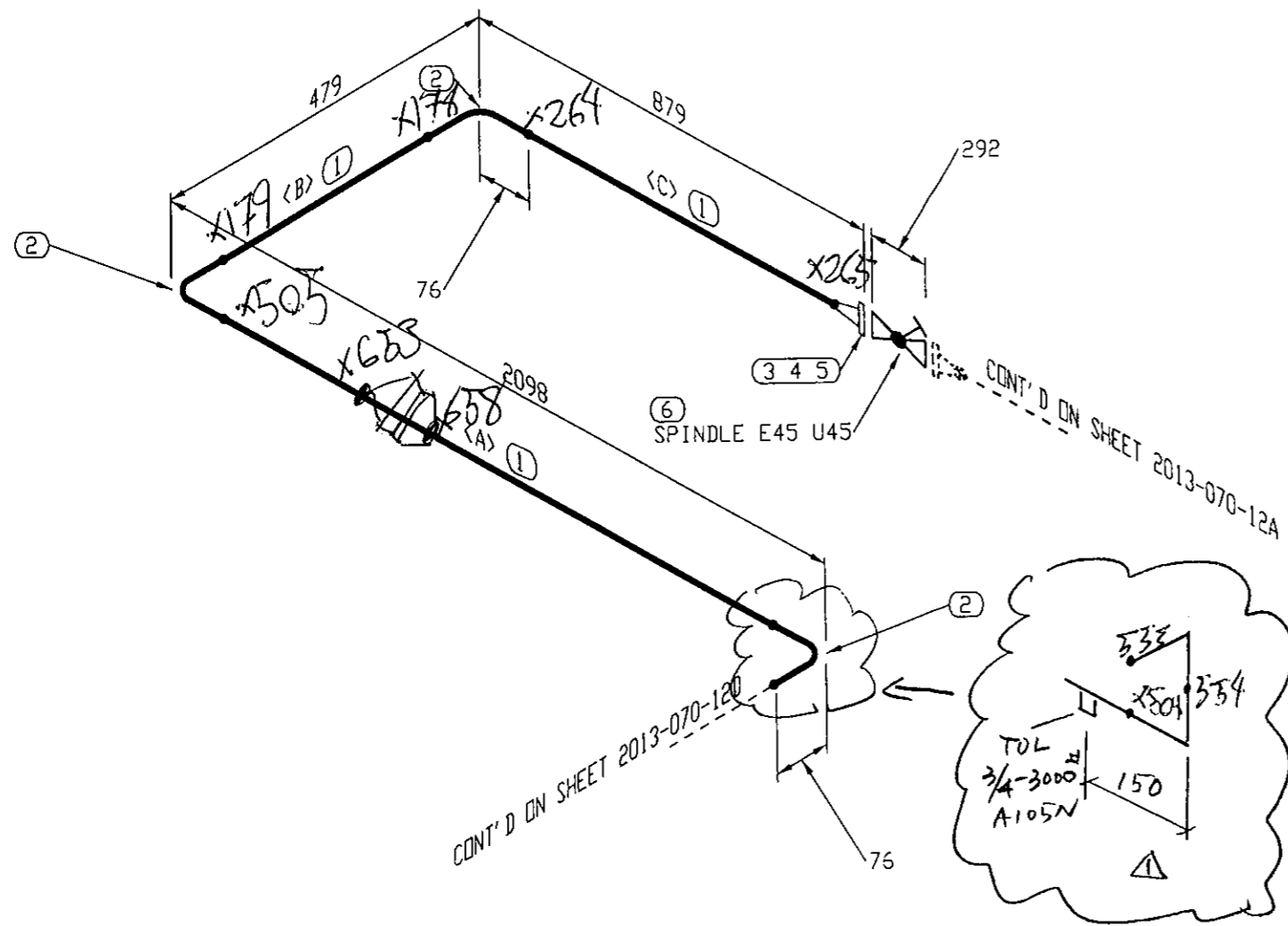
| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|--|--------|--------|
| 1 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 141 MM | 1.1 |
| 2 | 3X2 | TEE, RED, BW, SCH. 80, A234 GR WPB | 1 | 2.2 |
| 3 | 3 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 2 | 20.9 |
| 4 | 3 | GASKET, 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 KPAG | RADIOGRAPHY: 100% | MODEL: 4-WELL SEPARATOR SKID (BU-2000) | | LOCATION: | | LINE TAG: V-2300 CONDENSATE OUTLET | |
| DESIGN TEMP.: 90 DEG. C | PWHT: N/A | DRAWING NO.: 070-12D | | REV. 0 | | DATE: 11/10/2013 | |
| MDMT: -29 DEG. C | PICKLE & OIL: N/A | ISSUED FOR CONSTRUCTION | | AP | WC | WC | |
| C.A.: 1.6 mm | SANDBLAST: SP-6 | NO. | REASON | BY | CHK | APR | |
| TEST PRESS.: 14064 KPAG | PAINT: WARM GREY | | | | | | |
| TEST MEDIA: WOG | INSULATION: N/A | | | | | | |



BILL OF MATERIAL

| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|--|---------|--------|
| 1 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 2976 MM | 22.0 |
| 2 | 2 | ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB | 3 | 2.7 |
| 3 | 2 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 5.5 |
| 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 |
| 6 | 2 | VALVE, GLOBE, RF, NACE, CLASS 600, ASME, A105N | 1 | 40.9 |
| TOTAL FABRICATION WEIGHT | | | | 72.8 |

CUT PIPE LENGTH

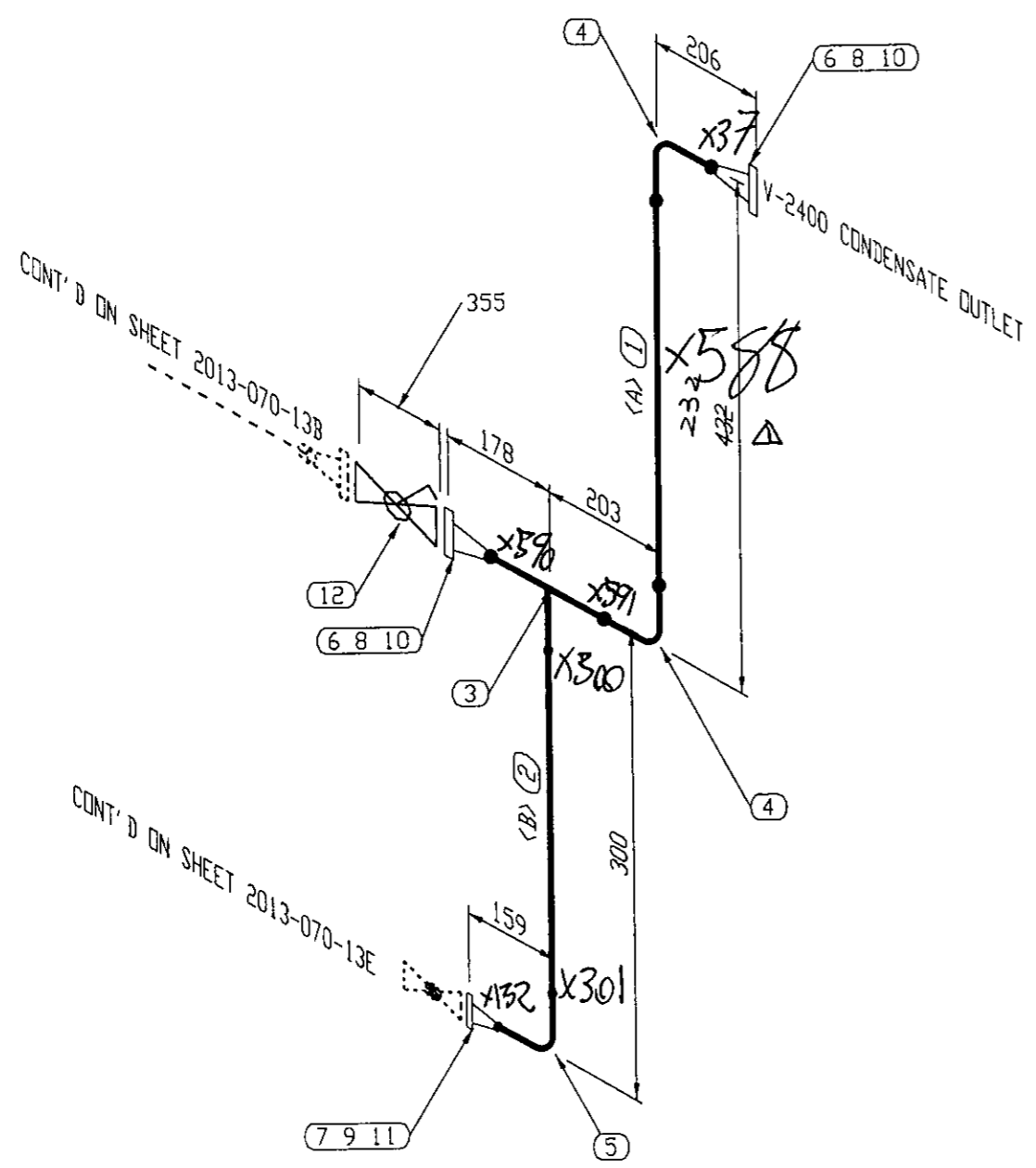
| PIECE NUM | LENGTH (MM) | SIZE (INCH) |
|-----------|-------------|-------------|
| <A> | 1939 | 2 |
| | 320 | 2 |
| <C> | 717 | 2 |

| | |
|---|--------------------|
| 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-2300 CONDENSATE OUTLET |
| DRAWING NO.: | 070-12E |
| REV. | 0 |



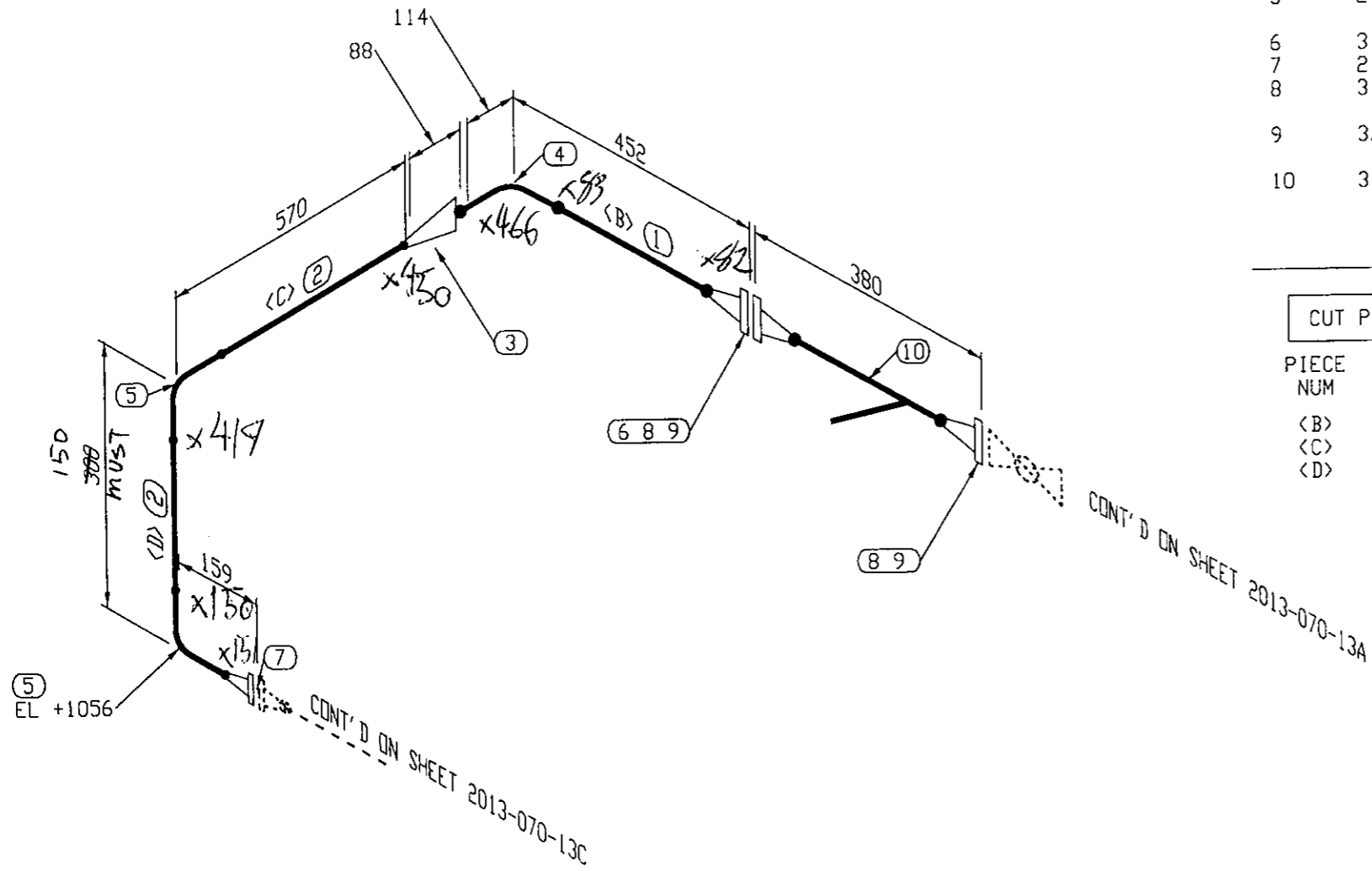
BILL OF MATERIAL

| 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> | 197 | 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-2400 CONDENSATE OUTLET | | | | | |
| C.A.: 1.6 mm | SANDBLAST: SP-6 | DRAWING NO.: 070-13A | REV. 0 | | | | |
| TEST PRESS.: 14064 KPAG | PAINT: WARM GREY | 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 | 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> | 1110 | 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

| | | | | | |
|-----|-------------------------|------------|----|-----|-----|
| 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: | V-2400 CONDENSATE OUTLET |
| DRAWING NO.: | 070-13B |
| REV. | 0 |

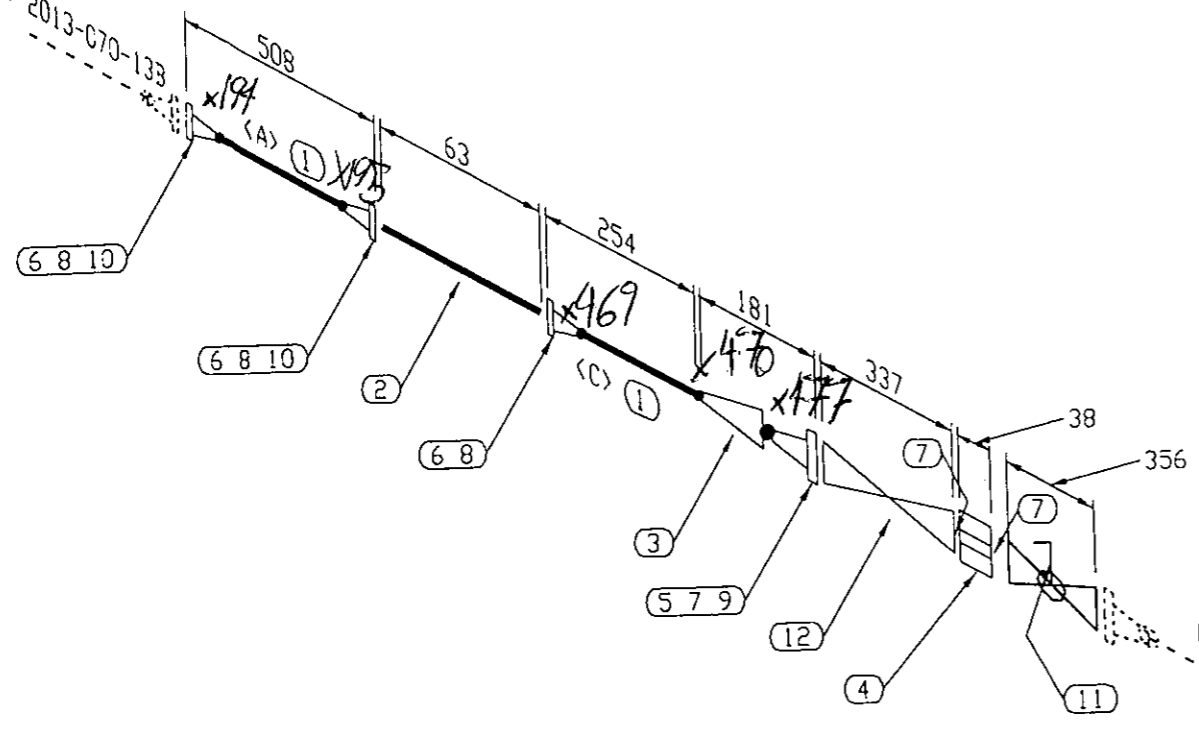
BILL OF MATERIAL

| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|--|--------|--------|
| 1 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 514 MM | 3.9 |
| 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 |

CONT'D ON SHEET 2013-070-133



CONT'D ON SHEET 2013-070-133

| | |
|---|--------------------|
| 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

| | |
|--------------|---------------------------------|
| CUSTOMER: | PENNWEST EXPLORATION |
| UNIT NO.: | 2013-070-601 |
| MODEL: | 4-WELL SEPARATOR SKID (BU-2000) |
| LOCATION: | |
| LINE TAG: | V-2400 CONDENSATE OUTLET |
| DRAWING NO.: | 070-13C |

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

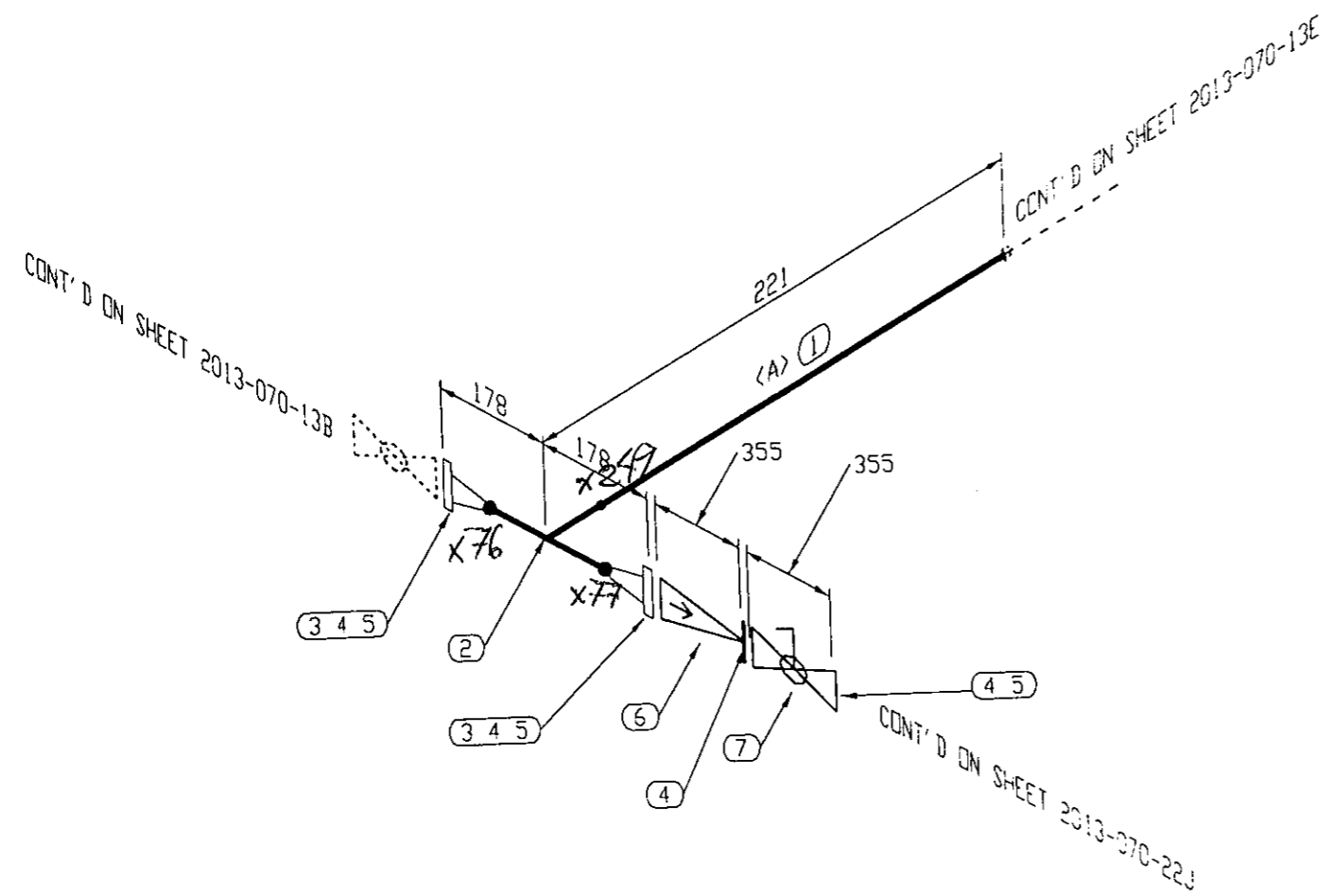
REV. 0

BILL OF MATERIAL

| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|--|--------|--------|
| 1 | 2 | PIPE, SMLS, BW, SCH. 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

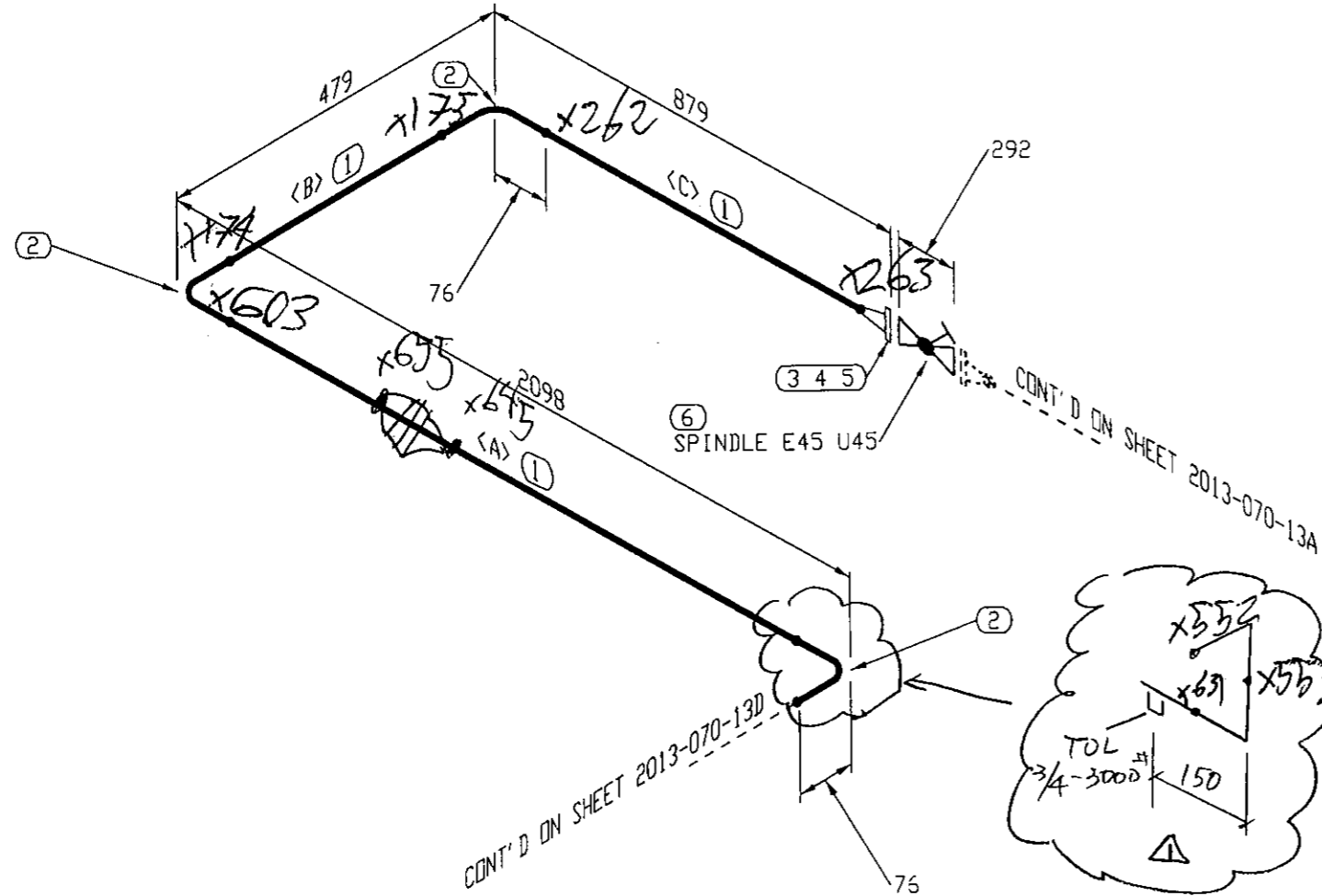
| PIECE NUM | LENGTH (MM) | SIZE (INCH) |
|-----------|-------------|-------------|
| <A> | 141 | 2 |



| | | | | | | | | |
|---|--|--|--------------------|----------|-----------|---|--|--------|
| PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION, 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 | | | | CUSTOMER: PENNWEST EXPLORATION UNIT NO.: 2013-070-601 MODEL: 4-WELL SEPARATOR SKID (BU-2000) LOCATION: LINE TAG: V-2400 CONDENSATE OUTLET DRAWING NO.: 070-13D | | REV. 0 |
| | | 0 ISSUED FOR CONSTRUCTION NO. REVISION | 11/10/2013 DATE | AP BY | WC CHK | WC APR | | |

BILL OF MATERIAL

| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|--|---------|--------|
| 1 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 2976 MM | 22.0 |
| 2 | 2 | ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB | 3 | 2.7 |
| 3 | 2 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 5.5 |
| 4 | 2 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 1 | 1.0 |
| 5 | 5/8X108 | STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM | 1 | 1.0 |
| 6 | 2 | VALVE, GLOBE, RF, NACE, CLASS 600, ASME, A105N | 1 | 40.9 |
| TOTAL FABRICATION WEIGHT | | | | 72.8 |



CUT PIPE LENGTH

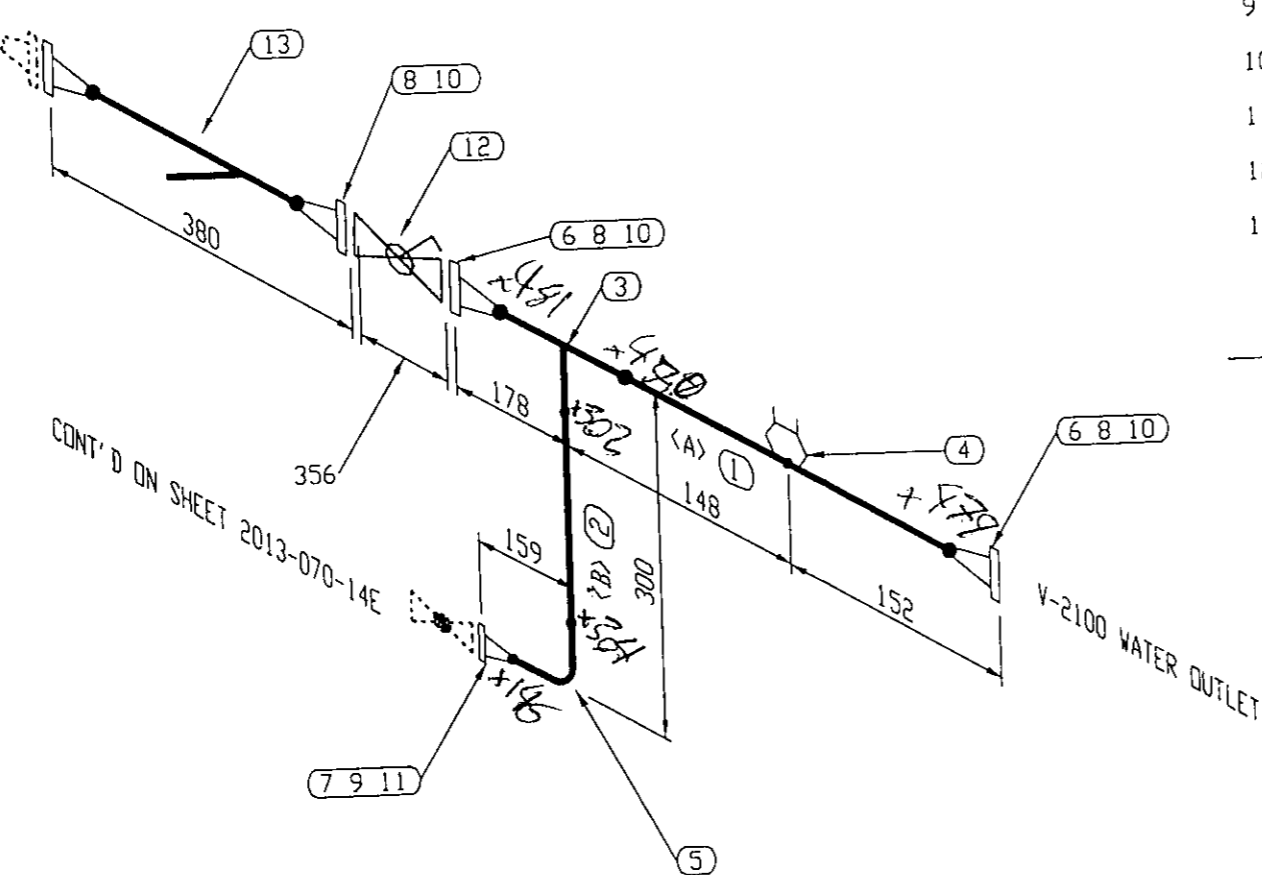
| PIECE NUM | LENGTH (MM) | SIZE (INCH) |
|-----------|-------------|-------------|
| <A> | 1939 | 2 |
| | 320 | 2 |
| <C> | 717 | 2 |

| | | | | | | | | |
|---|--------------------|--|-------------------------|------------|----|--------------------------------|-----|--------|
| 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 CONDENSATE OUTLET | | | | | | |
| C.A.: 1.6 mm | SANDBLAST: SP-6 | DRAWING NO.: 070-13E | | | | | | |
| 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 | 119 MM | 3.6 |
| 2 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 141 MM | 1.0 |
| 3 | 3X2 | TEE, RED, BW, SCH. 80, A234 GR WPB | 1 | 2.2 |
| 4 | 3X1/2 | THREDOLET, CL3000, A105N | 1 | 0.2 |
| 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 | 41.8 |
| 7 | 2 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 5.5 |
| 8 | 3 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 3 | 3.0 |
| 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 | 3 | 3.0 |
| 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 |
| 13 | 3 | Y-STRAINER | 1 | 1.0 |
| TOTAL FABRICATION WEIGHT | | | | 101.4 |

CONT'D ON SHEET 2013-070-14B



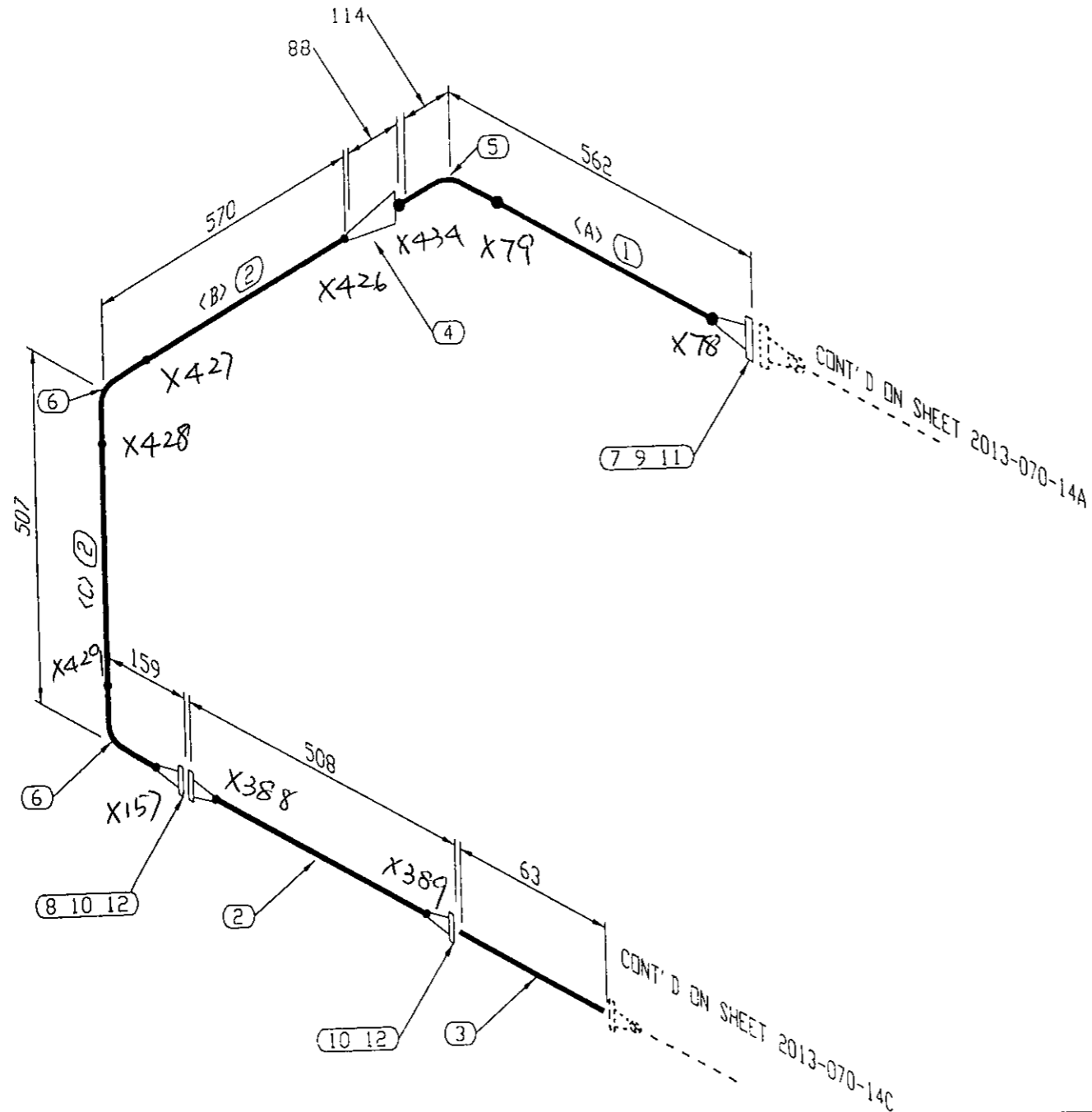
CONT'D ON SHEET 2013-070-14E

CUT PIPE LENGTH

| PIECE NUM | LENGTH (MM) | SIZE (INCH) |
|-----------|-------------|-------------|
| <A> | 119 | 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-2100 WATER OUTLET | |
| C.A.: 1.6 mm | SANDBLAST: SP-6 | | | | | DRAWING NO.: 070-14A | |
| TEST PRESS.: 14064 KPAG | 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 |

REV. 0



BILL OF MATERIAL

| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|--|---------|--------|
| 1 | 3 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 352 MM | 4.0 |
| 2 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 1181 MM | 8.9 |
| 3 | 2 | TURBINE METER | 63 MM | 0.5 |
| 4 | 3X2 | REDUCER, CONC, BW, SCH. 80, A234 GR WPB | 1 | 0.9 |
| 5 | 3 | ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB | 1 | 2.1 |
| 6 | 2 | ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB | 2 | 1.8 |
| 7 | 3 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 10.5 |
| 8 | 2 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 16.4 |
| 9 | 3 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 1 | 1.0 |
| 10 | 2 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 2 | 2.0 |
| 11 | 3/4X127 | (8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM | 1 | 1.0 |
| 12 | 5/8X108 | (8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM | 2 | 2.0 |
| TOTAL FABRICATION WEIGHT | | | | 50.7 |

CUT PIPE LENGTH

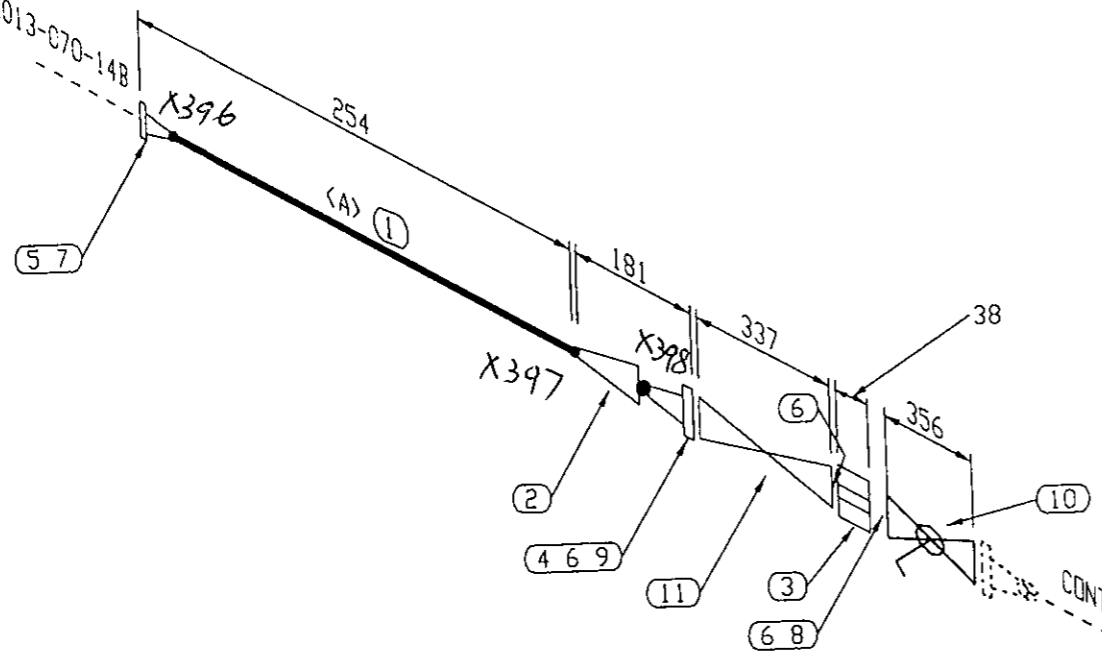
| PIECE NUM | LENGTH (MM) | SIZE (INCH) |
|-----------|-------------|-------------|
| <A> | 352 | 3 |
| | 490 | 2 |
| <C> | 348 | 2 |
| <D> | 343 | 2 |

| | | | | | |
|---|--|--|--|--|--|
| 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: 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: V-2100 WATER OUTLET DRAWING NO.: 070-14B | |
| NO. REVISION 0 ISSUED FOR CONSTRUCTION 1 | | 11/10/2013 AP WC WC DATE BY CHK APR | | REV. 0 | |

BILL OF MATERIAL

| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|--|--------|--------|
| 1 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 171 MM | 1.3 |
| 2 | 3X2 | REDUCER, CONC, BW, SCH. 80, A234 GR WPB | 1 | 0.9 |
| 3 | 3 | BLEED RING, RF, 600#, RF, 21mm HOLE | 1 | 1.0 |
| 4 | 3 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 10.5 |
| 5 | 2 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 5.5 |
| 6 | 3 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 3 | 3.0 |
| 7 | 2 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 1 | 1.0 |
| 8 | 3/4X171 | (8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM | 1 | 1.0 |
| 9 | 3/4X127 | (8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM | 1 | 1.0 |
| 10 | 3 | VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N | 1 | 38.6 |
| 11 | 3 | CONTROL VALVE, FISHER ET, 600LB FLG, RF | 1 | 1.0 |
| TOTAL FABRICATION WEIGHT | | | | 64.5 |

CONT'D ON SHEET 2013-070-148



CONT'D ON SHEET 2013-070-140

CUT PIPE LENGTH

| PIECE NUM | LENGTH (MM) | SIZE (INCH) |
|-----------|-------------|-------------|
| <A> | 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 |
| MMT: -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: | V-2100 WATER OUTLET |
| DRAWING NO.: | 070-14C |
| REV. | 0 |

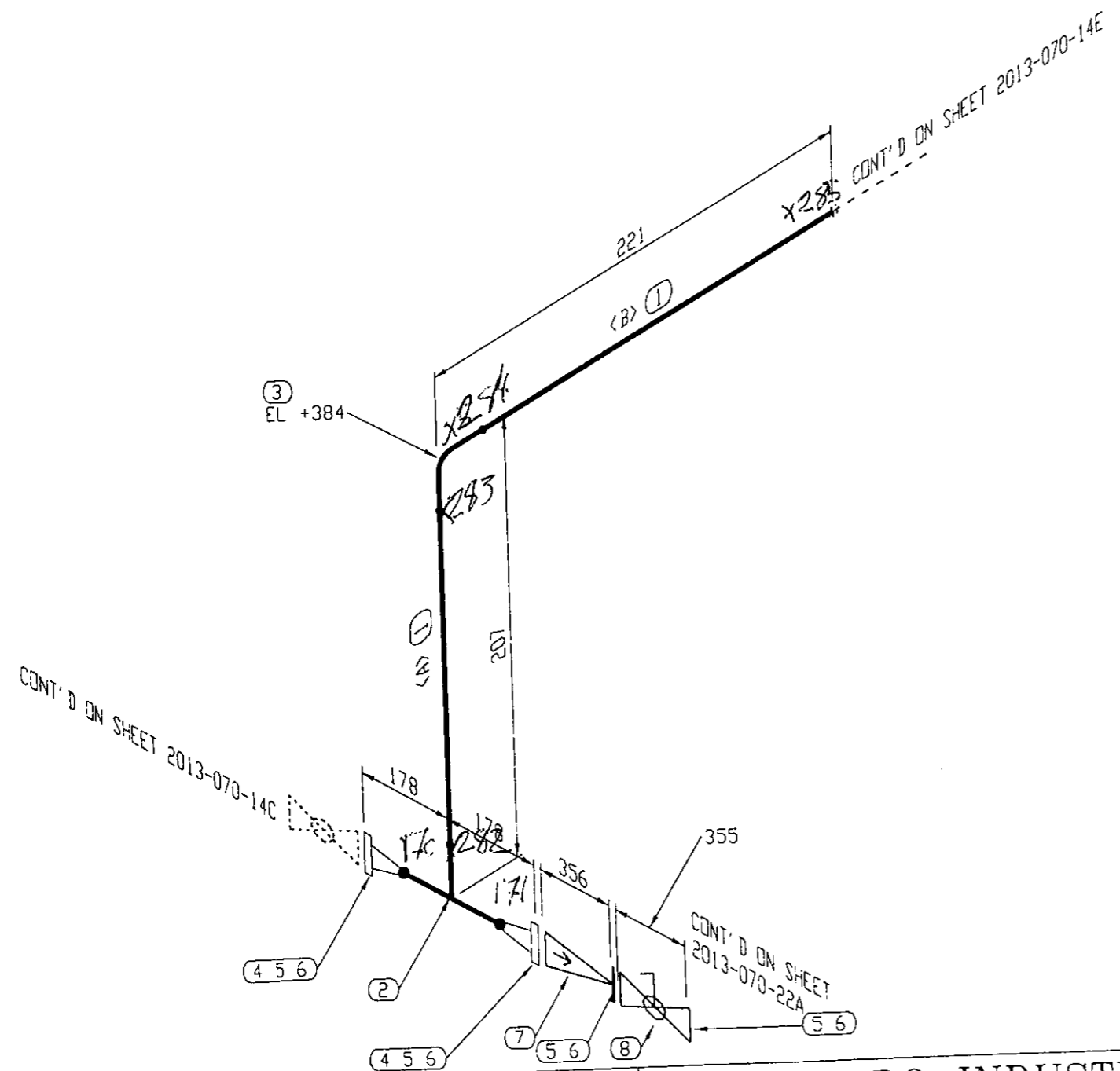
| | | | | | |
|-----|-------------------------|------------|----|-----|-----|
| 0 | ISSUED FOR CONSTRUCTION | 11/12/2013 | AP | WC | WC |
| NO. | REVISION | DATE | BY | CHK | APR |

BILL OF MATERIAL

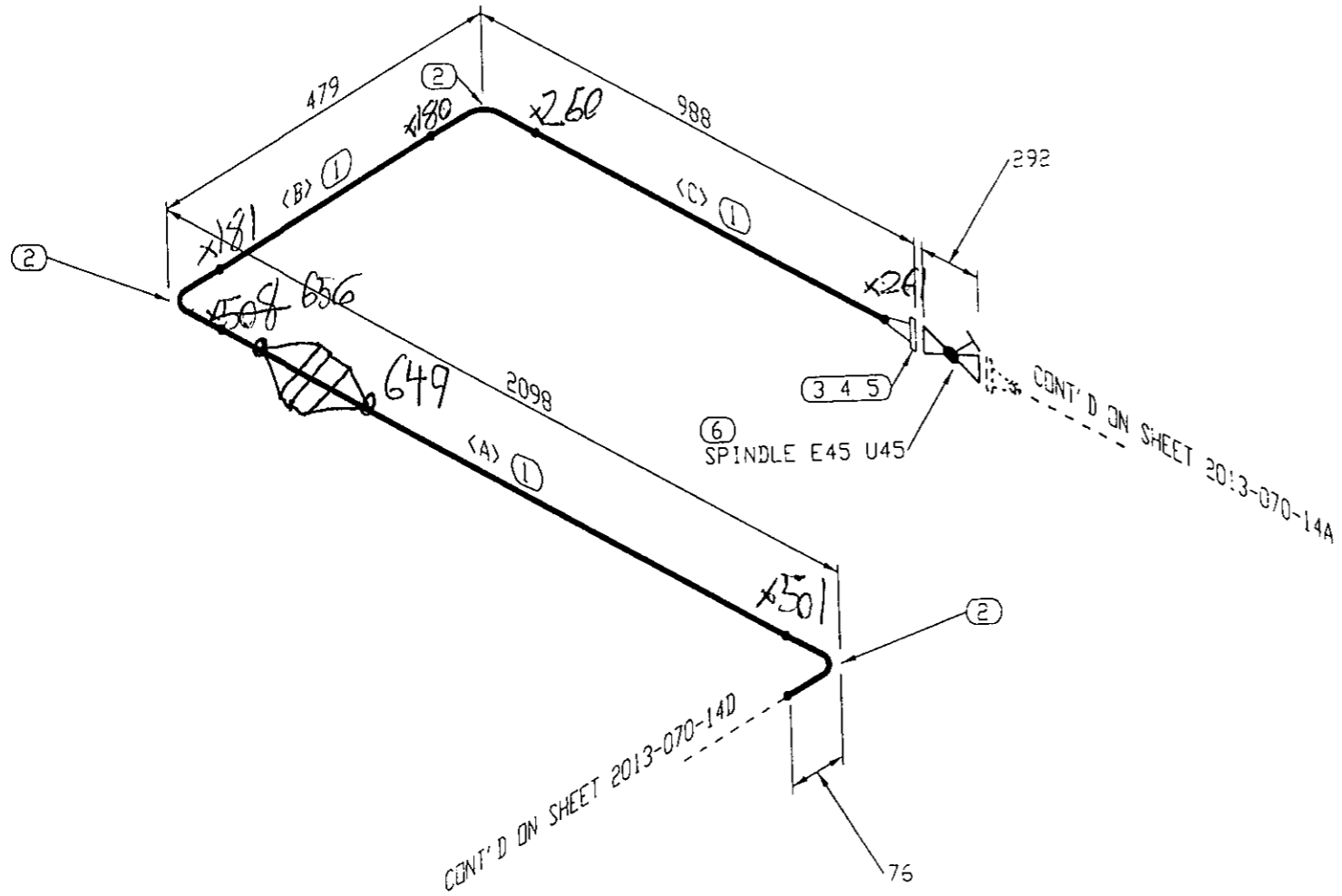
| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|--|--------|--------|
| 1 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 189 MM | 1.5 |
| 2 | 3X2 | TEE, RED, BW, SCH. 80, A234 GR WPB | 1 | 2.2 |
| 3 | 2 | ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB | 1 | 0.9 |
| 4 | 3 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 2 | 20.9 |
| 5 | 3 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 4 | 4.0 |
| 6 | 3/4X127 | (8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM | 4 | 4.0 |
| 7 | 3 | VALVE, SWING CHECK, RF, NACE, CLASS 600 ASME, A105N | 1 | 61.3 |
| 8 | 3 | VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N | 1 | 38.6 |
| TOTAL FABRICATION WEIGHT | | | | 133.2 |

CUT PIPE LENGTH

| PIECE NUM | LENGTH (MM) | SIZE (INCH) |
|-----------|-------------|-------------|
| <A> | 48 | 2 |
| | 141 | 2 |



| | | | | | | | | | | |
|--|--|---|--|--|--|--------------------------|--|--|--|--------|
| 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.: 14364 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 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-2100 WATER OUTLET DRAWING NO.: 370-14D | | REV. 3 |
| | | | | ISSUED FOR CONSTRUCTION NO. 0 | | DATE 11/13/2013 BY AP | | WC WC CHK APR | | |



BILL OF MATERIAL

| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|---|---------|--------|
| 1 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 3085 MM | 22.8 |
| 2 | 2 | ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR | 3 | 2.7 |
| 3 | 2 | WPB FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 5.5 |
| 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 |
| 6 | 2 | VALVE, GLOBE, RF, NACE, CLASS 600, ASME, A105N | 1 | 40.9 |
| TOTAL FABRICATION WEIGHT | | | | 73.7 |

CUT PIPE LENGTH

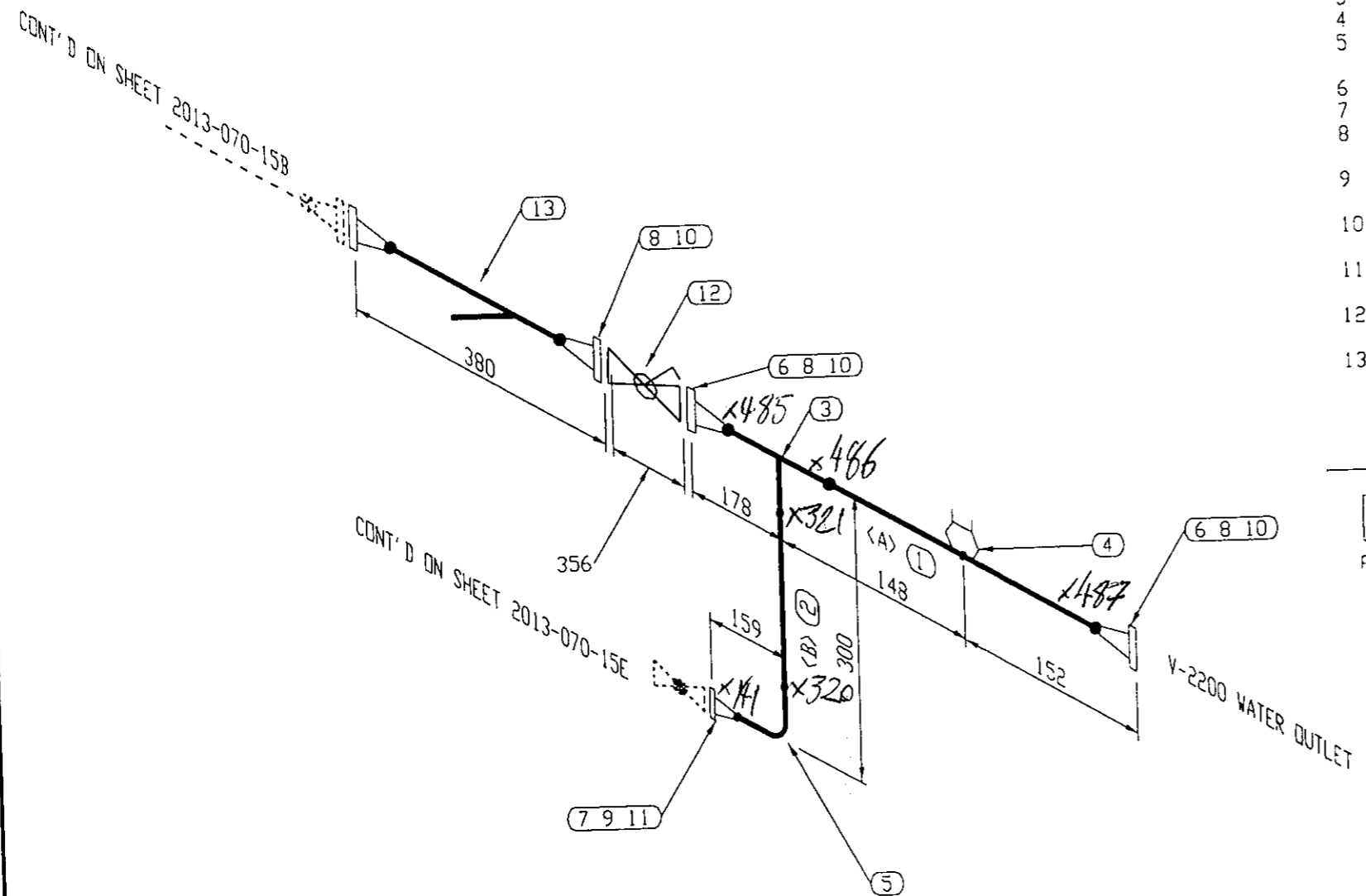
| PIECE NUM | LENGTH (MM) | SIZE (INCH) |
|-----------|-------------|-------------|
| <A> | 1939 | 2 |
| | 320 | 2 |
| <C> | 826 | 2 |

| | | | | | | | |
|---|--------------------|--|-------------------------|------------|----|--|-----|
| 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 WATER OUTLET | |
| C.A.: 1.6 mm | SANDBLAST: SP-6 | | | | | DRAWING NO.: 070-14E | |
| TEST PRESS.: 14064 KPAG | 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 |

REV. 0

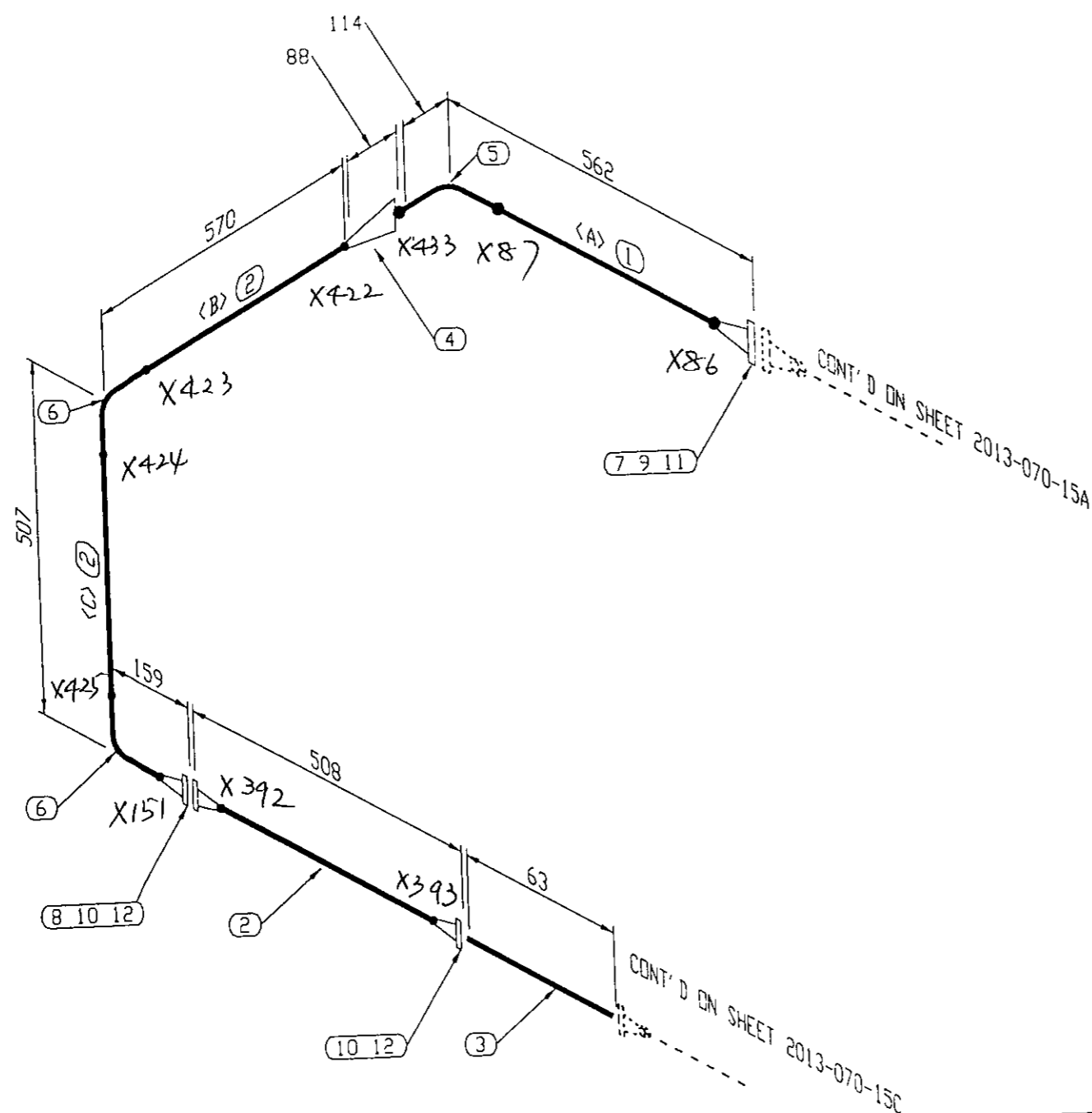
BILL OF MATERIAL

| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|--|--------|--------|
| 1 | 3 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 119 MM | 3.6 |
| 2 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 141 MM | 1.0 |
| 3 | 3X2 | TEE, RED, BW, SCH. 80, A234 GR WPB | 1 | 2.2 |
| 4 | 3X1/2 | THREDDLET, CL3000, A105N | 1 | 0.2 |
| 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 | 41.8 |
| 7 | 2 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 5.5 |
| 8 | 3 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 3 | 3.0 |
| 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 | 3 | 3.0 |
| 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 |
| 13 | 3 | Y-STRAINER | 1 | 1.0 |
| TOTAL FABRICATION WEIGHT | | | | 101.4 |



| CUT PIPE LENGTH | | |
|-----------------|-------------|-------------|
| PIECE NUM | LENGTH (MM) | SIZE (INCH) |
| <A> | 119 | 3 |
| | 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: 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: V-2200 WATER OUTLET DRAWING NO.: 070-15A | |
| | | ISSUED FOR CONSTRUCTION NO. REVISION | | 11/13/2013 DATE | AP WC AC BY CHK APR | REV. 0 | |



BILL OF MATERIAL

| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|---------------------------------|---------|--|---------|-------------|
| 1 | 3 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 352 MM | 4.0 |
| 2 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 1181 MM | 8.9 |
| 3 | 2 | TURBINE METER | 63 MM | 0.5 |
| 4 | 3X2 | REDUCER, CONC, BW, SCH. 80, A234 GR WPB | 1 | 0.9 |
| 5 | 3 | ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB | 1 | 2.1 |
| 6 | 2 | ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB | 2 | 1.8 |
| 7 | 3 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 10.5 |
| 8 | 2 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 16.4 |
| 9 | 3 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 1 | 1.0 |
| 10 | 2 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 2 | 2.0 |
| 11 | 3/4X127 | STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM | 1 | 1.0 |
| 12 | 5/8X108 | STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM | 2 | 2.0 |
| TOTAL FABRICATION WEIGHT | | | | 50.7 |

CUT PIPE LENGTH

| PIECE NUM | LENGTH (MM) | SIZE (INCH) |
|-----------|-------------|-------------|
| <A> | 352 | 3 |
| | 490 | 2 |
| <C> | 348 | 2 |
| <D> | 343 | 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: WATER | INSULATION: N/A |

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

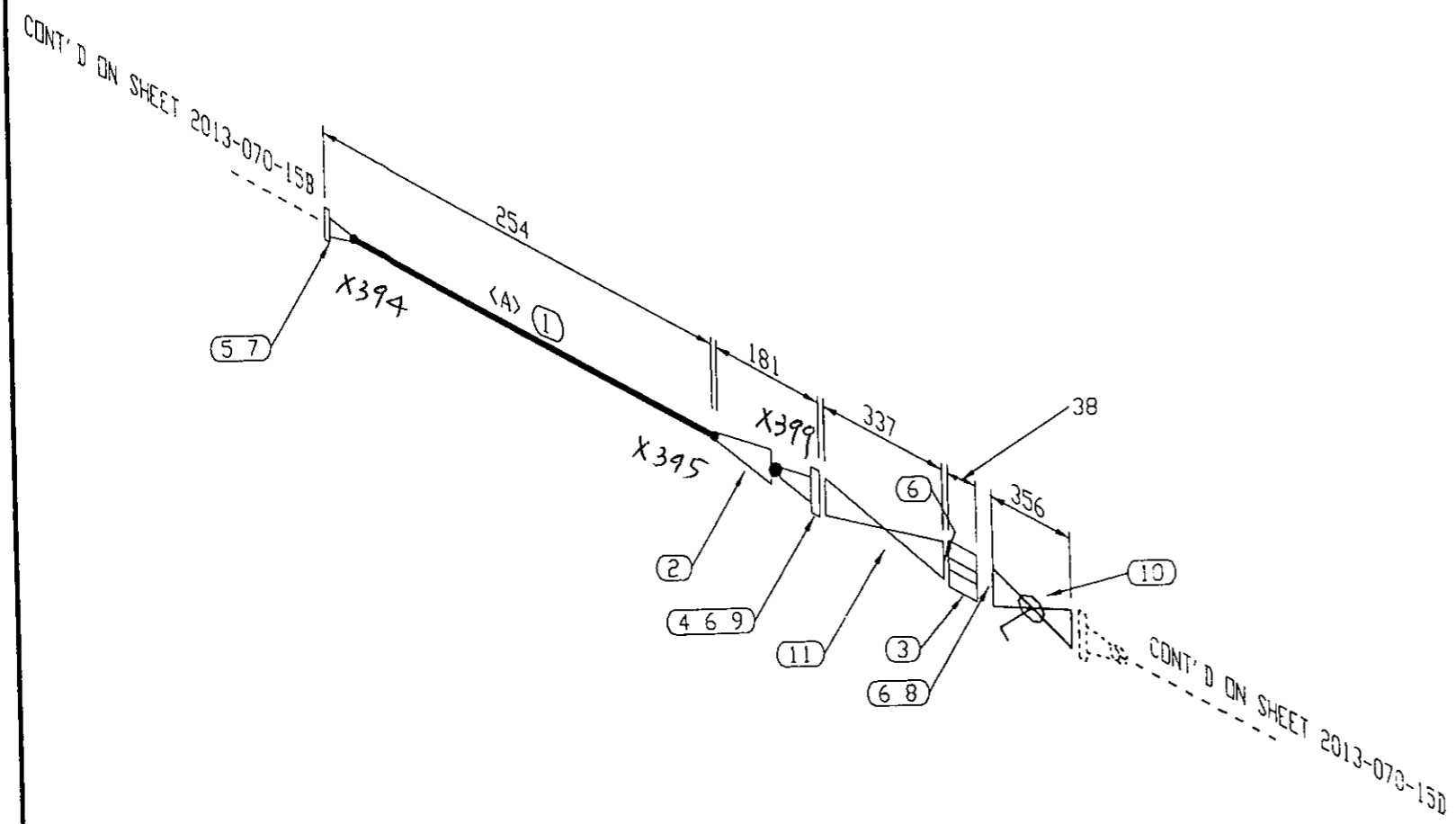
| | |
|--------------|---------------------------------|
| CUSTOMER: | PENNWEST EXPLORATION |
| UNIT NO.: | 2013-070-601 |
| MODEL: | 4-WELL SEPARATOR SKID (BU-2000) |
| LOCATION: | |
| LINE TAG: | V-2200 WATER OUTLET |
| DRAWING NO.: | 070-15B |

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

REV. C

BILL OF MATERIAL

| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|--|--------|--------|
| 1 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 171 MM | 1.3 |
| 2 | 3X2 | REDUCER, CONC, BW, SCH. 80, A234 GR WPB | 1 | 0.9 |
| 3 | 3 | BLEED RING, RF, 600#, RF, 21mm HOLE | 1 | 1.0 |
| 4 | 3 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 10.5 |
| 5 | 2 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 5.5 |
| 6 | 3 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 3 | 3.0 |
| 7 | 2 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 1 | 1.0 |
| 8 | 3/4X171 | (8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM | 1 | 1.0 |
| 9 | 3/4X127 | (8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM | 1 | 1.0 |
| 10 | 3 | VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N | 1 | 38.6 |
| 11 | 3 | CONTROL VALVE, FISHER ET, 600LB FLG, RF | 1 | 1.0 |
| TOTAL FABRICATION WEIGHT | | | | 64.5 |



CUT PIPE LENGTH

| PIECE NUM | LENGTH (MM) | SIZE (INCH) |
|-----------|-------------|-------------|
| <A> | 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 |
| DMNT: -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: | V-2200 WATER OUTLET |
| DRAWING NO.: | 070-15C |
| REV. | 0 |

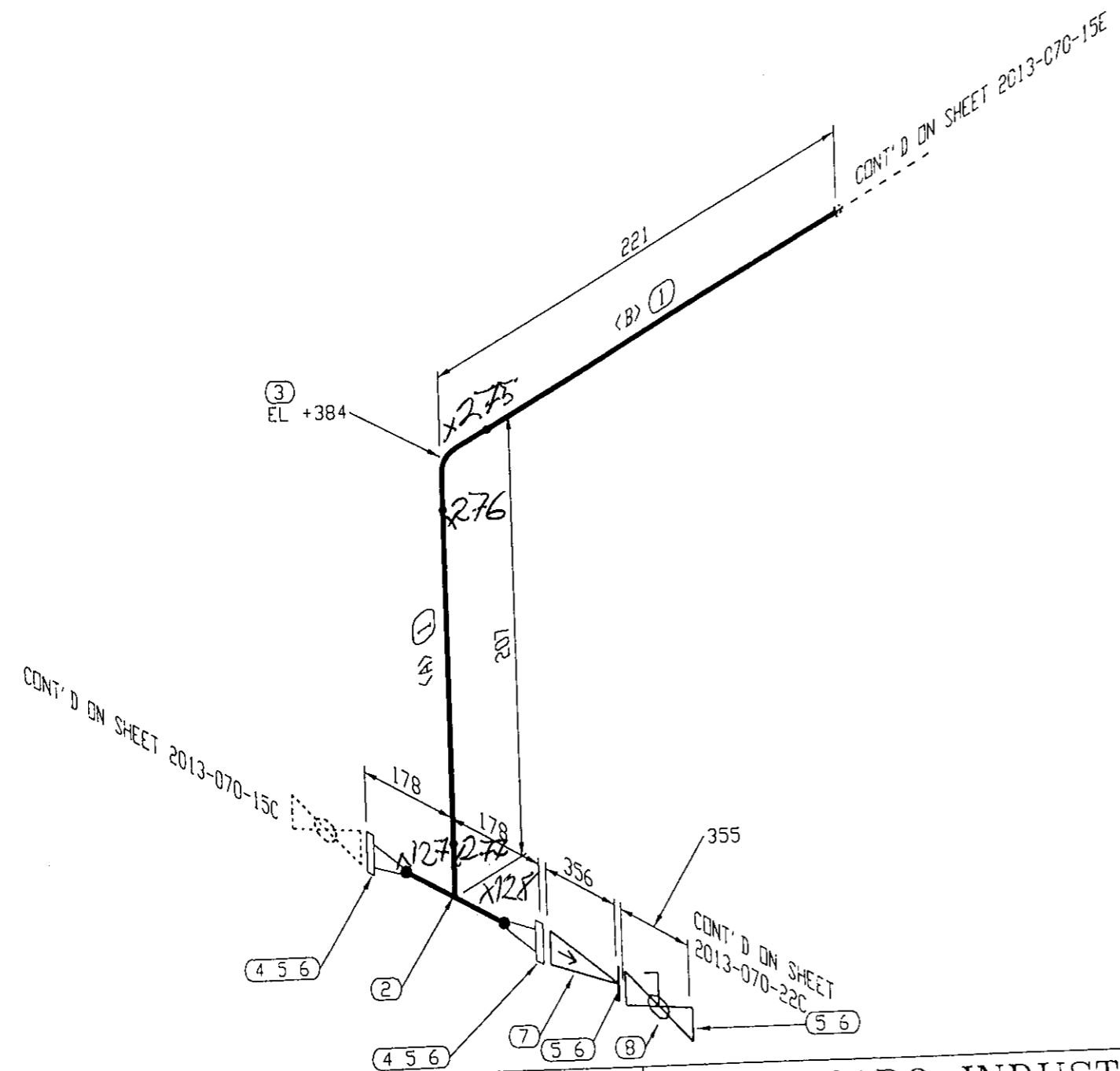
| | | | | |
|-------------------------|------------|----|-----|-----|
| ISSUED FOR CONSTRUCTION | 11/10/2013 | AP | WC | WC |
| REVISION | DATE | BY | CHK | APR |

BILL OF MATERIAL

| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|--|--------|--------|
| 1 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 189 MM | 1.5 |
| 2 | 3X2 | TEE, RED, BW, SCH. 80, A234 GR WPB | 1 | 2.2 |
| 3 | 2 | ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB | 1 | 0.9 |
| 4 | 3 | FLANGE, RFWN, CL600, SCH. 40 BORE, A105N | 2 | 20.9 |
| 5 | 3 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 4 | 4.0 |
| 6 | 3/4X127 | (8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM | 4 | 4.0 |
| 7 | 3 | VALVE, SWING CHECK, RF, NACE, CLASS 600 ASME, A105N | 1 | 61.3 |
| 8 | 3 | VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N | 1 | 38.6 |
| TOTAL FABRICATION WEIGHT | | | | 133.2 |

CUT PIPE LENGTH

| PIECE NUM | LENGTH (MM) | SIZE (INCH) |
|-----------|-------------|-------------|
| <A> | 48 | 2 |
| | 141 | 2 |

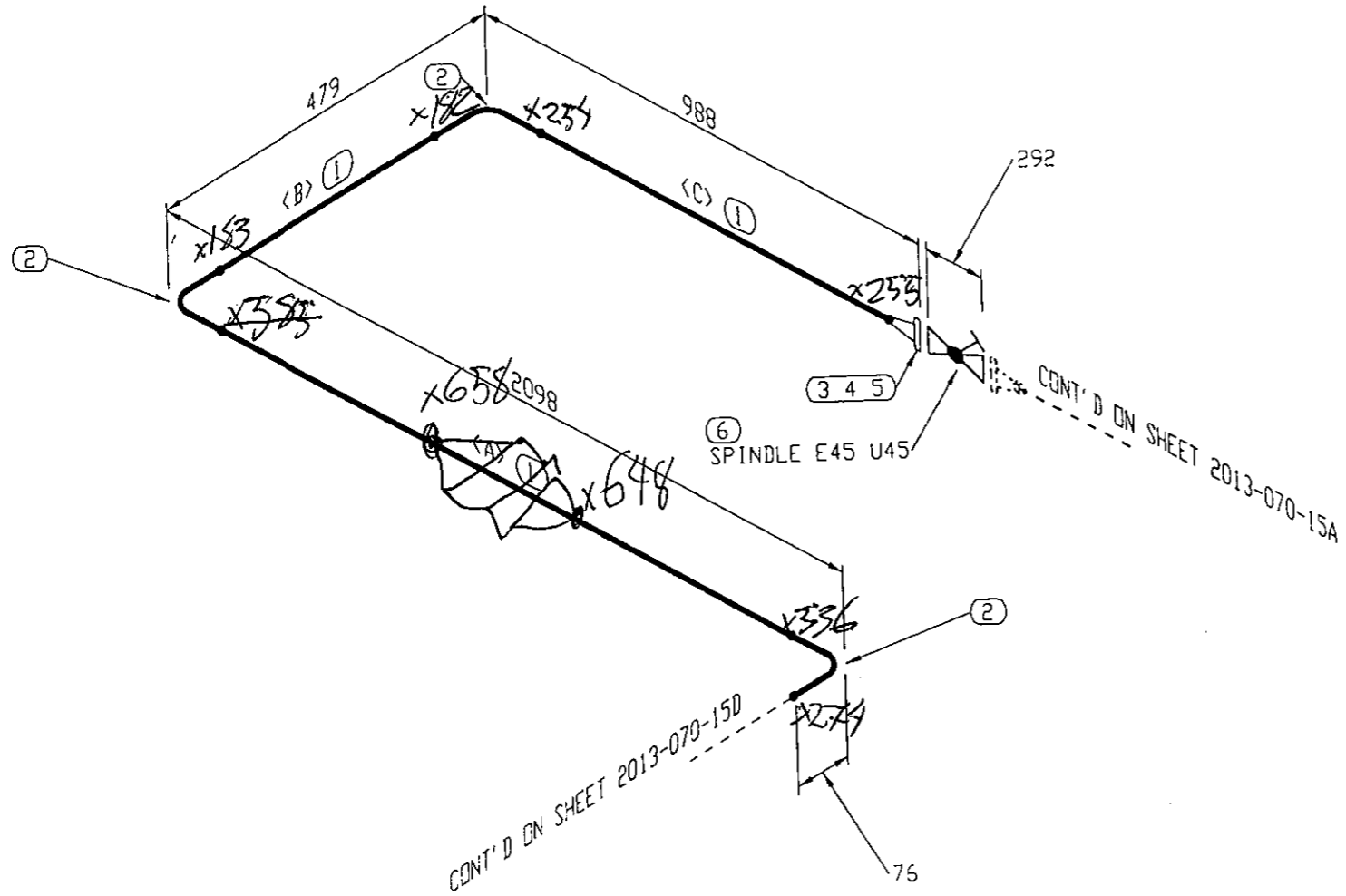


| | |
|---|--------------------|
| PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION, | |
| PIPE SPEC.: CS | WELD PROC.: CADO-5 |
| DESIGN PRESS.: 9376 KPAG | RADIOGRAPHY: 100% |
| DESIGN TEMP.: 90 DEG. C | PWHT: N/A |
| MMT: -29 DEG. C | PICKLE & OIL: N/A |
| C.A.: 1.6 mm | SANDBLAST: SP-6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

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| | | | | |
|-------------------------|------------|----|-----|-----|
| 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 WATER OUTLET |
| DRAWING NO.: | 370-15D |
| REV. | 0 |



BILL OF MATERIAL

| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|--|---------|--------|
| 1 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 3085 MM | 22.8 |
| 2 | 2 | ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR | 3 | 2.7 |
| 3 | 2 | WPB FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 5.5 |
| 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 |
| 6 | 2 | VALVE, GLOBE, RF, NACE, CLASS 600, ASME, A105N | 1 | 40.9 |
| TOTAL FABRICATION WEIGHT | | | | 73.7 |

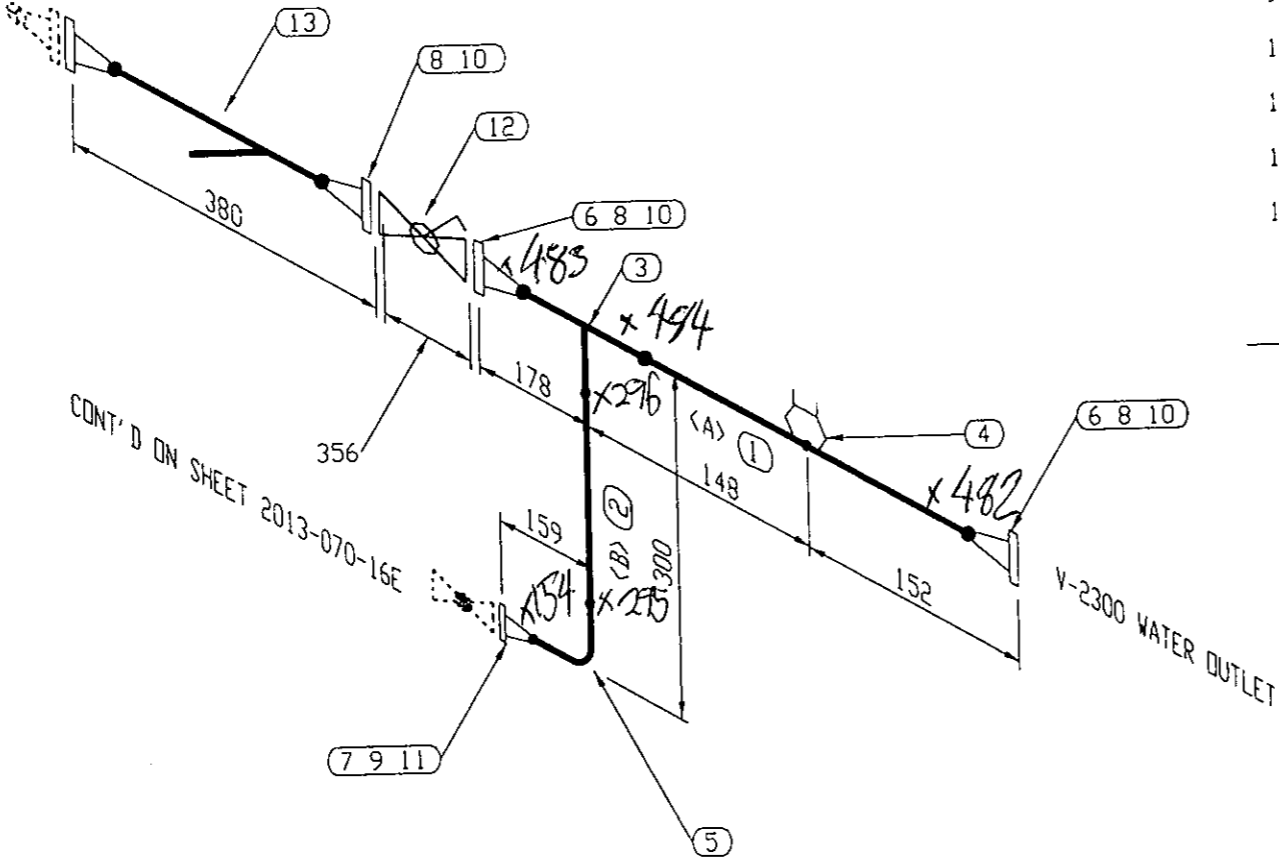
CUT PIPE LENGTH

| PIECE NUM | LENGTH (MM) | SIZE (INCH) |
|-----------|-------------|-------------|
| <A> | 1939 | 2 |
| | 320 | 2 |
| <C> | 826 | 2 |

| | | | | | | | | |
|---|--|--|--|------------|----|--|-----|--------|
| 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: V-2200 WATER OUTLET DRAWING NO.: 070-15E | | |
| | | ISSUED FOR CONSTRUCTION NO. REVISION | | 11/13/2013 | AP | WC | WC | REV. 0 |
| | | | | DATE | BY | CHK | APR | |

CONT'D ON SHEET 2013-070-16B

CONT'D ON SHEET 2013-070-16E



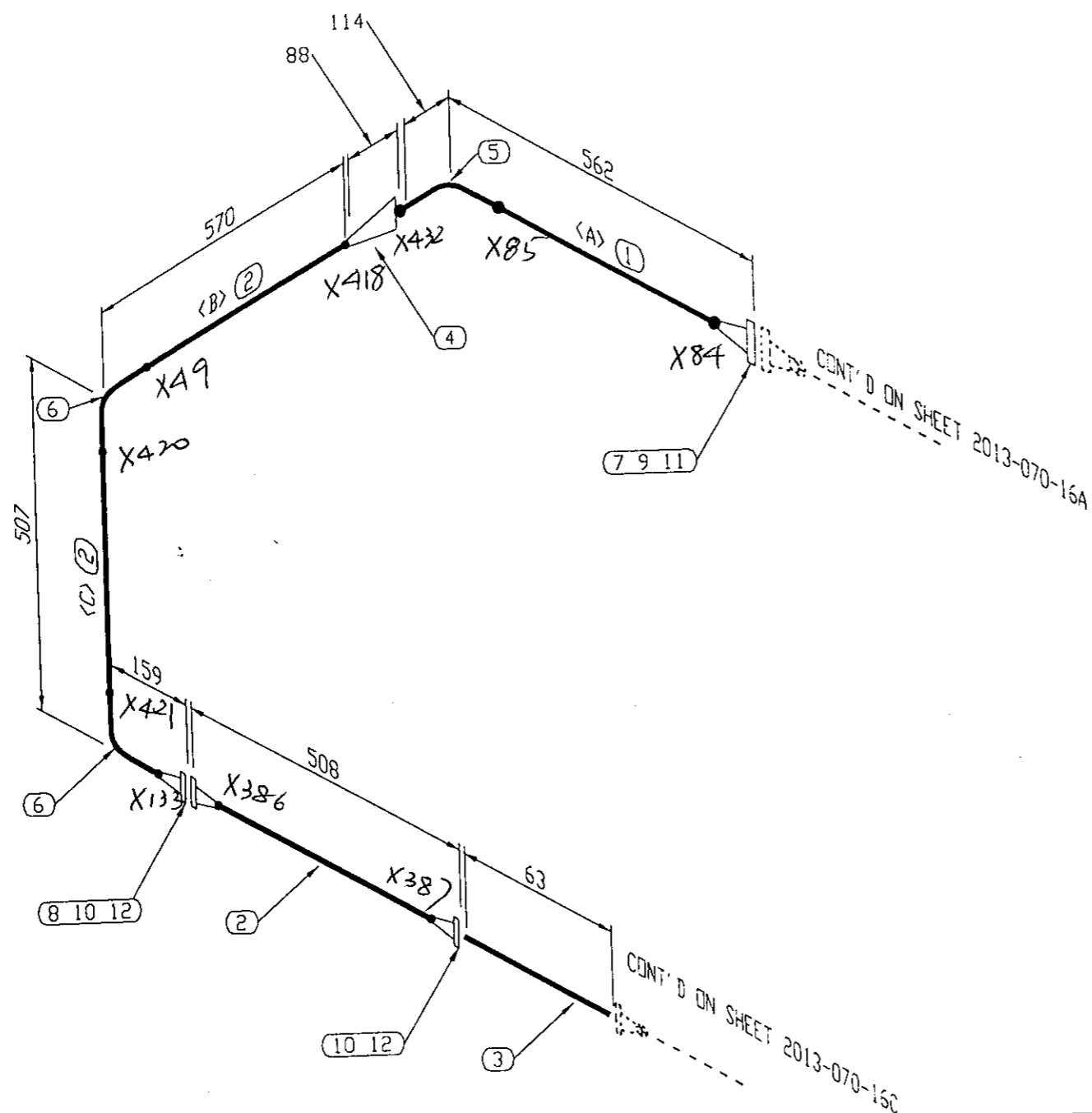
| BILL OF MATERIAL | | | | |
|--------------------------|---------|--|--------|--------|
| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
| 1 | 3 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 119 MM | 3.6 |
| 2 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 141 MM | 1.0 |
| 3 | 3X2 | TEE, RED, BW, SCH. 80, A234 GR WPB | 1 | 2.2 |
| 4 | 3X1/2 | THREDOLET, CL3000, A105N | 1 | 0.2 |
| 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 | 41.8 |
| 7 | 2 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 5.5 |
| 8 | 3 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 3 | 3.0 |
| 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 | 3 | 3.0 |
| 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 |
| 13 | 3 | Y-STRAINER | 1 | 1.0 |
| TOTAL FABRICATION WEIGHT | | | | 101.4 |

| CUT PIPE LENGTH | | |
|-----------------|-------------|-------------|
| PIECE NUM | LENGTH (MM) | SIZE (INCH) |
| <A> | 119 | 3 |
| | 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: 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 |
| 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: | V-2300 WATER OUTLET |
| DRAWING NO.: | 070-16A |
| REV. | 0 |



BILL OF MATERIAL

| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|--|---------|--------|
| 1 | 3 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 352 MM | 4.0 |
| 2 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 1181 MM | 8.9 |
| 3 | 2 | TURBINE METER | 63 MM | 0.5 |
| 4 | 3X2 | REDUCER, CONC, BW, SCH. 80, A234 GR WPB | 1 | 0.9 |
| 5 | 3 | ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB | 1 | 2.1 |
| 6 | 2 | ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB | 2 | 1.8 |
| 7 | 3 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 10.5 |
| 8 | 2 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 16.4 |
| 9 | 3 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 1 | 1.0 |
| 10 | 2 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 2 | 2.0 |
| 11 | 3/4X127 | (8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM | 1 | 1.0 |
| 12 | 5/8X108 | (8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM | 2 | 2.0 |
| TOTAL FABRICATION WEIGHT | | | | 50.7 |

CUT PIPE LENGTH

| PIECE NUM | LENGTH (MM) | SIZE (INCH) |
|-----------|-------------|-------------|
| <A> | 352 | 3 |
| | 490 | 2 |
| <C> | 348 | 2 |
| <D> | 343 | 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 |
| DMNT: -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 |

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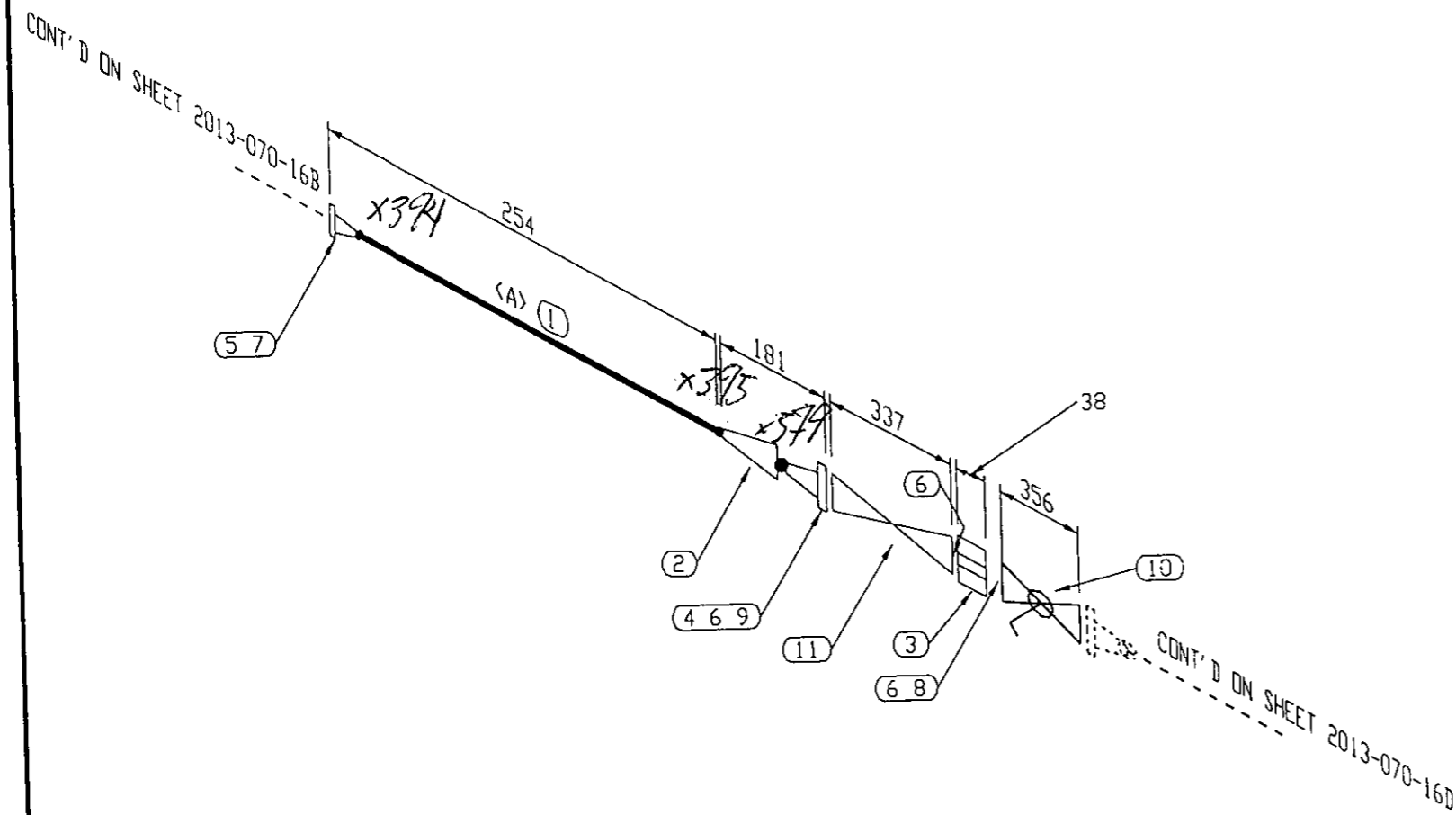
| | |
|--------------|---------------------------------|
| CUSTOMER: | PENNWEST EXPLORATION |
| UNIT NO.: | 2013-070-601 |
| MODEL: | 4-WELL SEPARATOR SKID (BU-2000) |
| LOCATION: | |
| LINE TAG: | V-2300 WATER OUTLET |
| DRAWING NO.: | 070-16B |

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

REV. 0

BILL OF MATERIAL

| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|--|--------|--------|
| 1 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 171 MM | 1.3 |
| 2 | 3X2 | REDUCER, CONC, BW, SCH. 80, A234 GR WPB | 1 | 0.9 |
| 3 | 3 | BLEED RING, RF, 600#, RF, 21mm HOLE | 1 | 1.0 |
| 4 | 3 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 10.5 |
| 5 | 2 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 5.5 |
| 6 | 3 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 3 | 3.0 |
| 7 | 2 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 1 | 1.0 |
| 8 | 3/4X171 | (8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM | 1 | 1.0 |
| 9 | 3/4X127 | (8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM | 1 | 1.0 |
| 10 | 3 | VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N | 1 | 38.6 |
| 11 | 3 | CONTROL VALVE, FISHER ET, 600LB FLG, RF | 1 | 1.0 |
| TOTAL FABRICATION WEIGHT | | | | 64.5 |



CUT PIPE LENGTH

| PIECE NUM | LENGTH (MM) | SIZE (INCH) |
|-----------|-------------|-------------|
| <A> | 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: WATER | INSULATION: N/A |

CADO INDUSTRIES INC.
 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8
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| | | | | | |
|-----|-------------------------|------------|----|-----|-----|
| 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-2300 WATER OUTLET |
| DRAWING NO.: | 070-16C |

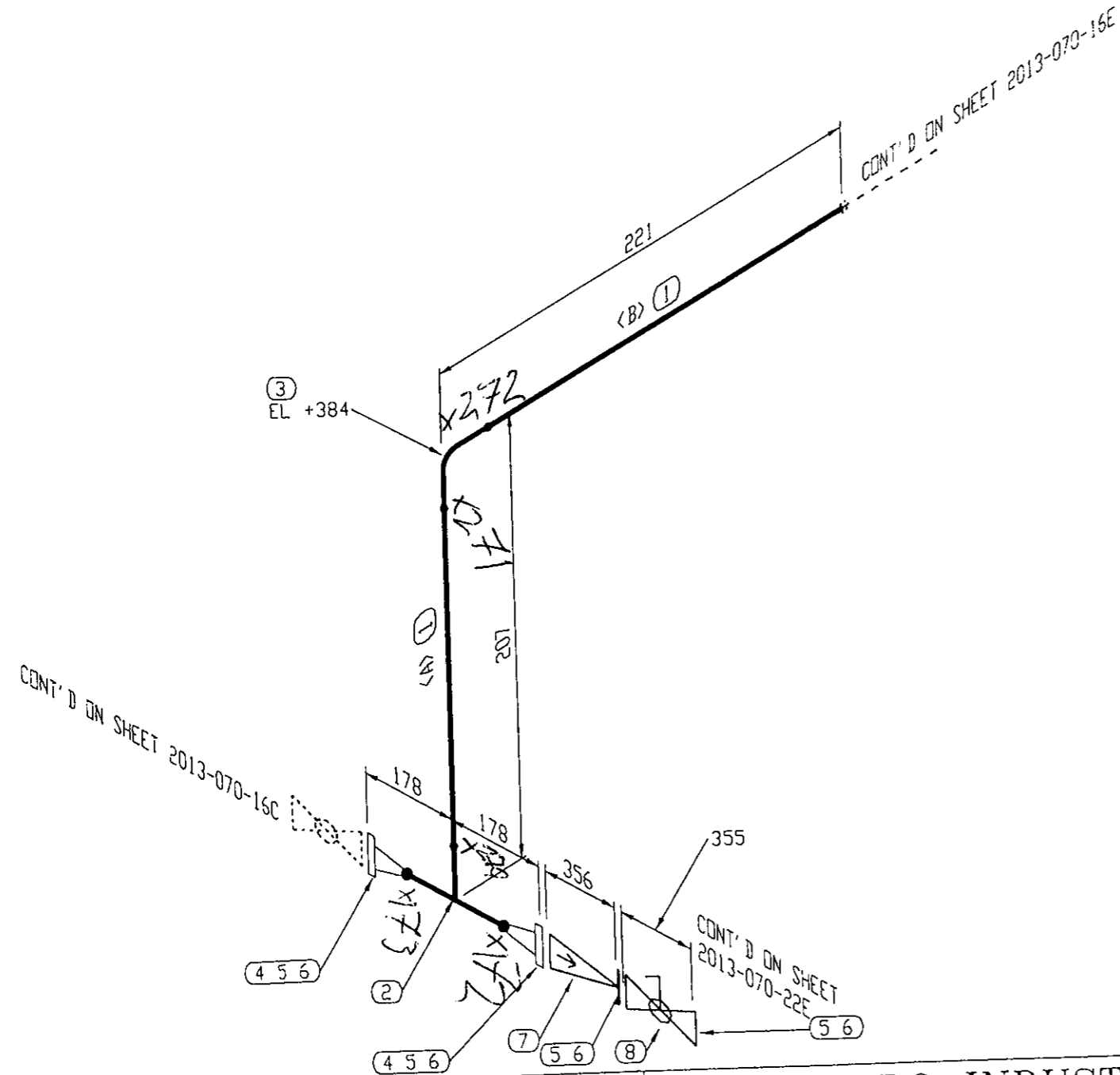
REV. 0

BILL OF MATERIAL

| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|--|--------|--------|
| 1 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 189 MM | 1.5 |
| 2 | 3X2 | TEE, RED, BW, SCH. 80, A234 GR WPB | 1 | 2.2 |
| 3 | 2 | ELBOW, 90 DEG. LR, BW, SCH. 80, A234 GR WPB | 1 | 0.9 |
| 4 | 3 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 2 | 20.9 |
| 5 | 3 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 4 | 4.0 |
| 6 | 3/4X127 | (8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM | 4 | 4.0 |
| 7 | 3 | VALVE, SWING CHECK, RF, NACE, CLASS 600 ASME, A105N | 1 | 61.3 |
| 8 | 3 | VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N | 1 | 38.6 |
| TOTAL FABRICATION WEIGHT | | | | 133.2 |

CUT PIPE LENGTH

| PIECE NUM | LENGTH (MM) | SIZE (INCH) |
|-----------|-------------|-------------|
| <A> | 48 | 2 |
| | 141 | 2 |



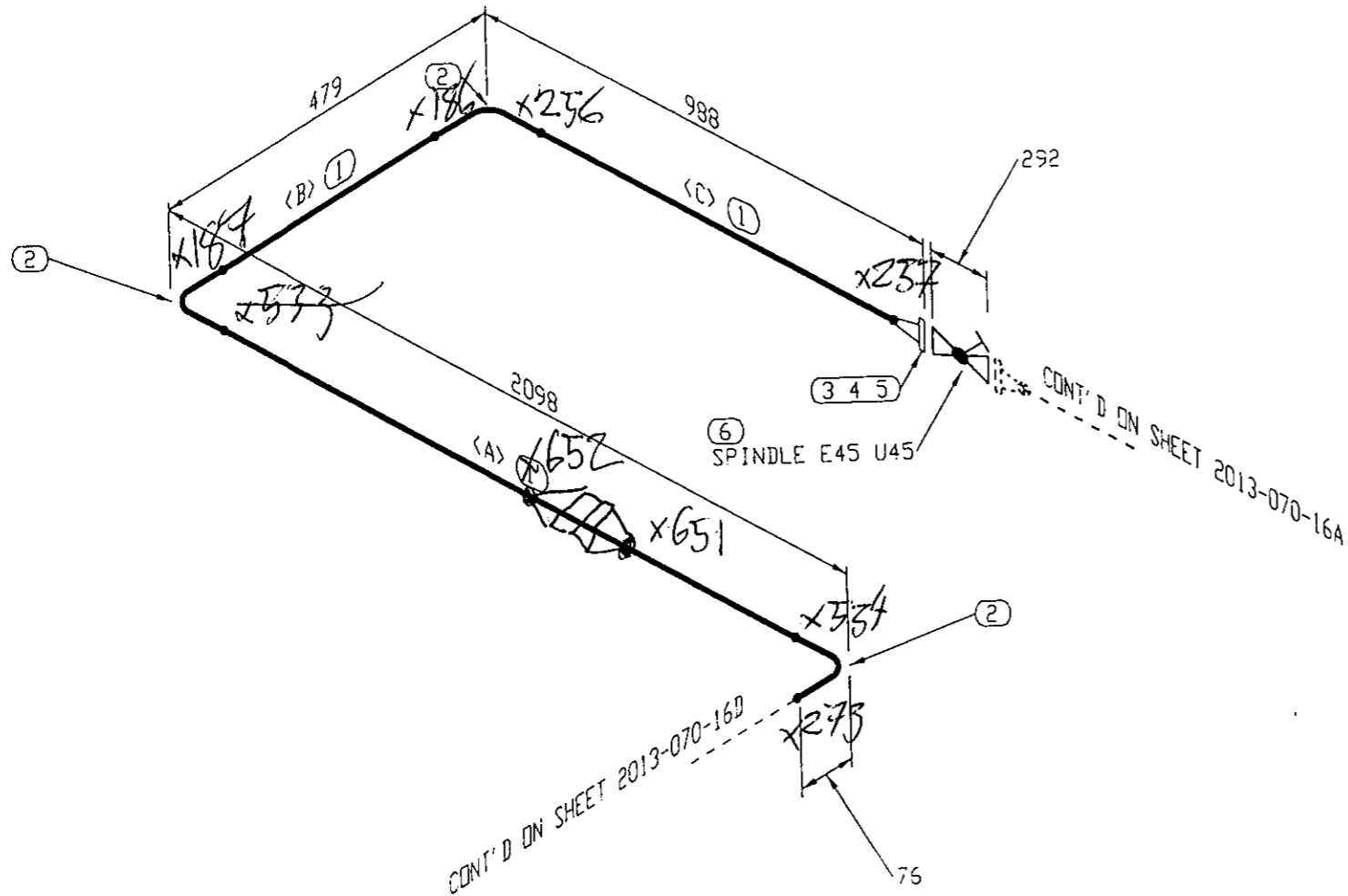
| | |
|---|--------------------|
| PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION. | |
| PIPE SPEC.: CS | WELD PROC.: CADO-5 |
| DESIGN PRESS.: 9376 KPAG | RADIOGRAPHY: 100% |
| DESIGN TEMP.: 90 DEG. C | PWHT: N/A |
| MDMT: -29 DEG. C | PICKLE & OIL: N/A |
| C.A.: 1.6 mm | SANDBLAST: SP-6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

CADO INDUSTRIES INC.
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| | | | | | |
|-----|-------------------------|------------|----|-----|-----|
| NO. | REVISION | DATE | BY | CHK | APR |
| 0 | ISSUED FOR CONSTRUCTION | 11/13/2013 | AP | WC | WC |

| | |
|--------------|---------------------------------|
| CUSTOMER: | PENNWEST EXPLORATION |
| UNIT NO.: | 2013-070-601 |
| MODEL: | 4-WELL SEPARATOR SKID (BU-2000) |
| LOCATION: | |
| LINE TAG: | V-2300 WATER OUTLET |
| DRAWING NO.: | 070-16D |

REV. 0



BILL OF MATERIAL

| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|--|---------|--------|
| 1 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 3085 MM | 22.8 |
| 2 | 2 | ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR | 3 | 2.7 |
| 3 | 2 | WPB FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 5.5 |
| 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 |
| 6 | 2 | VALVE, GLOBE, RF, NACE, CLASS 600, ASME, A105N | 1 | 40.9 |
| TOTAL FABRICATION WEIGHT | | | | 73.7 |

CUT PIPE LENGTH

| PIECE NUM | LENGTH (MM) | SIZE (INCH) |
|-----------|-------------|-------------|
| <A> | 1939 | 2 |
| | 320 | 2 |
| <C> | 826 | 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: WATER | INSULATION: N/A |

CADO INDUSTRIES INC.
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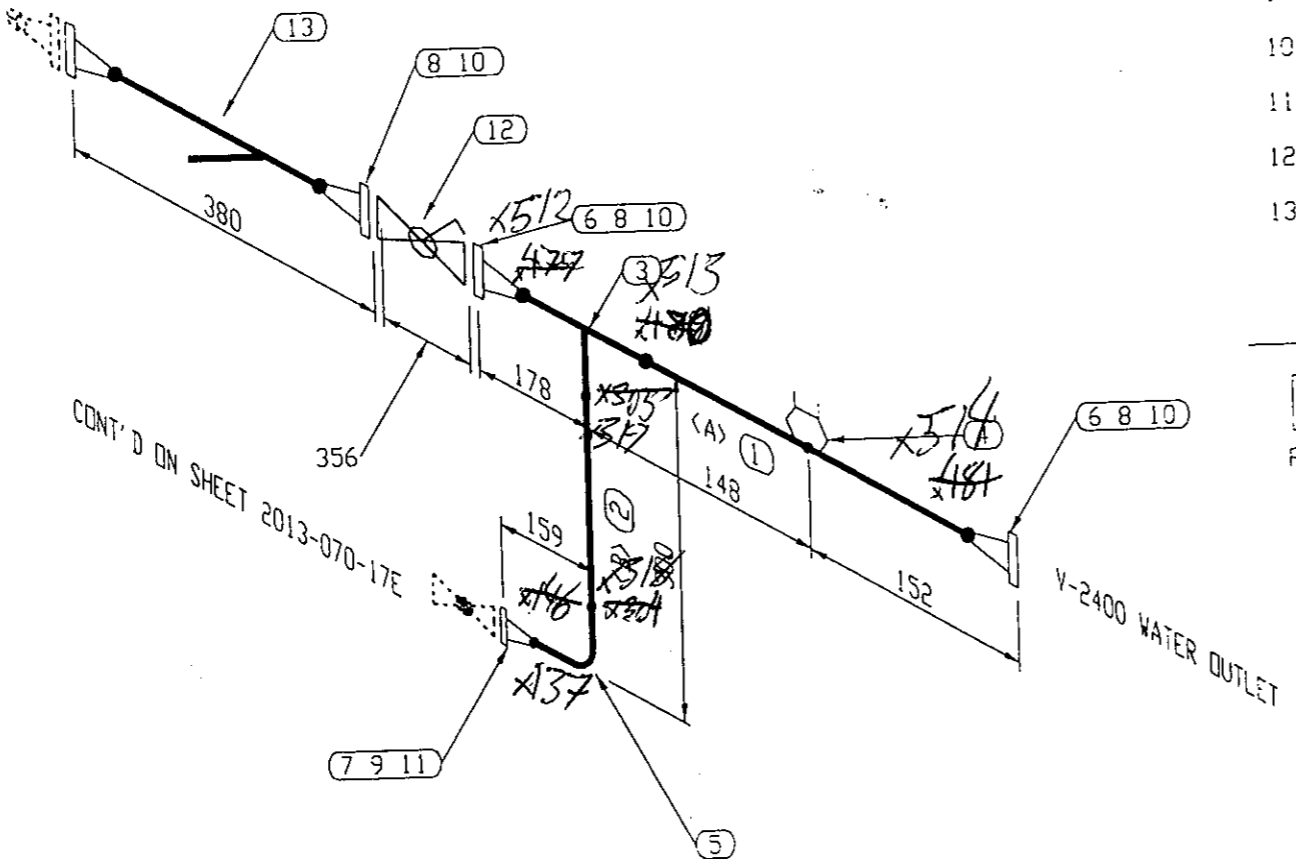
| | |
|--------------|---------------------------------|
| CUSTOMER: | PENNWEST EXPLORATION |
| UNIT NO.: | 2013-070-601 |
| MODEL: | 4-WELL SEPARATOR SKID (BU-2000) |
| LOCATION: | |
| LINE TAG: | V-2300 WATER OUTLET |
| DRAWING NO.: | 070-16E |

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

REV. 0

CONT'D ON SHEET 2013-070-17B

CONT'D ON SHEET 2013-070-17E



BILL OF MATERIAL

| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|--|--------|--------|
| 1 | 3 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 119 MM | 3.6 |
| 2 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 141 MM | 1.0 |
| 3 | 3X2 | TEE, RED, BW, SCH. 80, A234 GR WPB | 1 | 2.2 |
| 4 | 3X1/2 | THREDOLET, CL3000, A105N | 1 | 0.2 |
| 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 | 41.8 |
| 7 | 2 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 5.5 |
| 8 | 3 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 3 | 3.0 |
| 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 | 3 | 3.0 |
| 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 |
| 13 | 3 | Y-STRAINER | 1 | 1.0 |
| TOTAL FABRICATION WEIGHT | | | | 101.4 |

CUT PIPE LENGTH

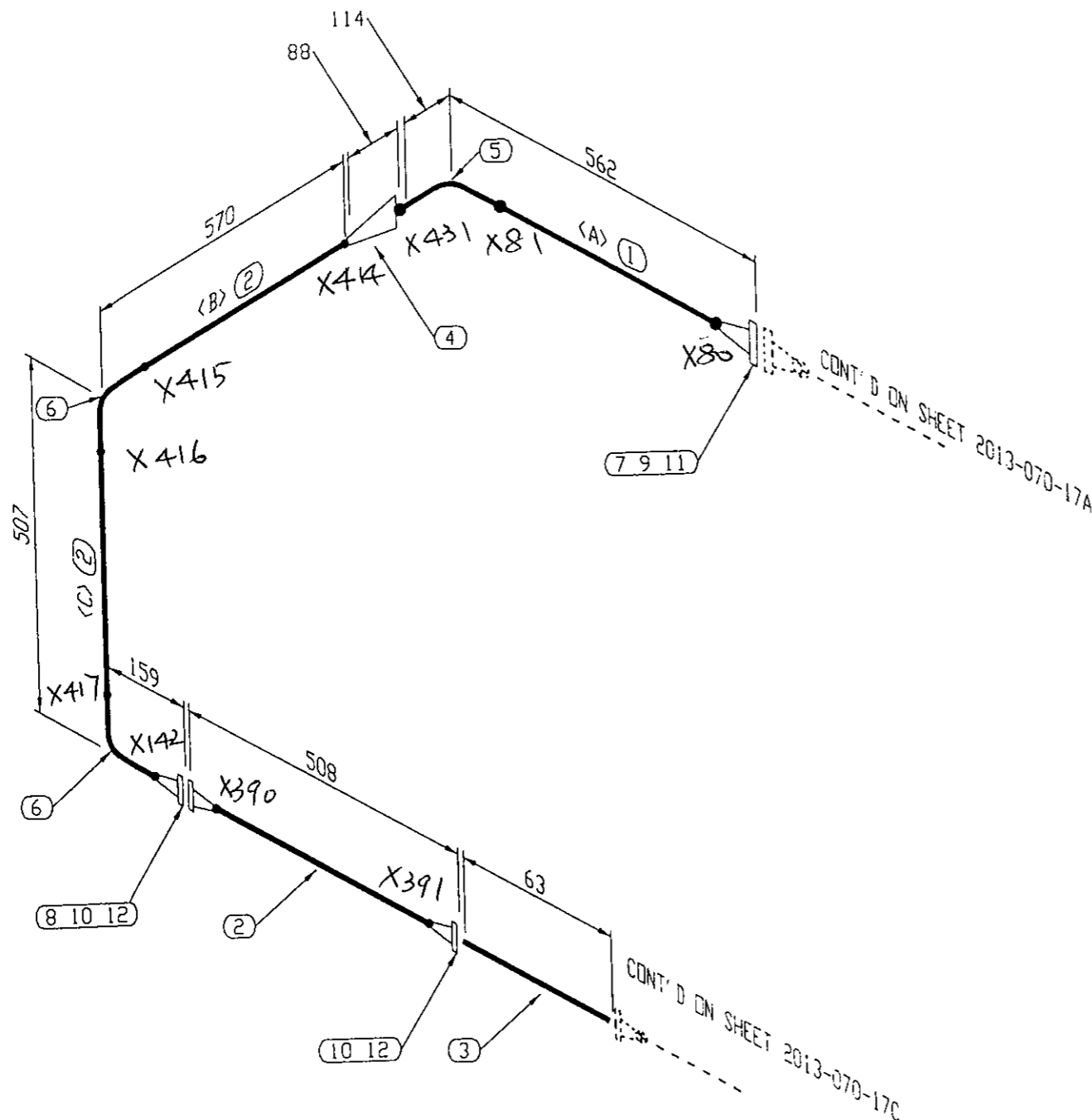
| PIECE NUM | LENGTH (MM) | SIZE (INCH) |
|-----------|-------------|-------------|
| <A> | 119 | 3 |
| | 141 | 2 |

| | |
|---|--------------------|
| 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: 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: | V-2400 WATER OUTLET |
| DRAWING NO.: | 070-17A |
| REV. | 0 |

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



BILL OF MATERIAL

| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|--|---------|--------|
| 1 | 3 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 352 MM | 4.0 |
| 2 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 1181 MM | 8.9 |
| 3 | 2 | TURBINE METER | 63 MM | 0.5 |
| 4 | 3X2 | REDUCER, CONC, BW, SCH. 80, A234 GR WPB | 1 | 0.9 |
| 5 | 3 | ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB | 1 | 2.1 |
| 6 | 2 | ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB | 2 | 1.8 |
| 7 | 3 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 10.5 |
| 8 | 2 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 16.4 |
| 9 | 3 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 1 | 1.0 |
| 10 | 2 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 2 | 2.0 |
| 11 | 3/4X127 | (8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM | 1 | 1.0 |
| 12 | 5/8X108 | (8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM | 2 | 2.0 |
| TOTAL FABRICATION WEIGHT | | | | 50.7 |

CUT PIPE LENGTH

| PIECE NUM | LENGTH (MM) | SIZE (INCH) |
|-----------|-------------|-------------|
| <A> | 352 | 3 |
| | 490 | 2 |
| <C> | 348 | 2 |
| <D> | 343 | 2 |

| | |
|---|--------------------|
| 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 | 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: | V-2400 WATER OUTLET |
| DRAWING NO.: | 070-17B |

| | | | | | |
|-----|-------------------------|------------|----|-----|-----|
| 0 | ISSUED FOR CONSTRUCTION | 11/13/2013 | AP | WC | WC |
| NO. | REVISION | DATE | BY | C-K | APR |

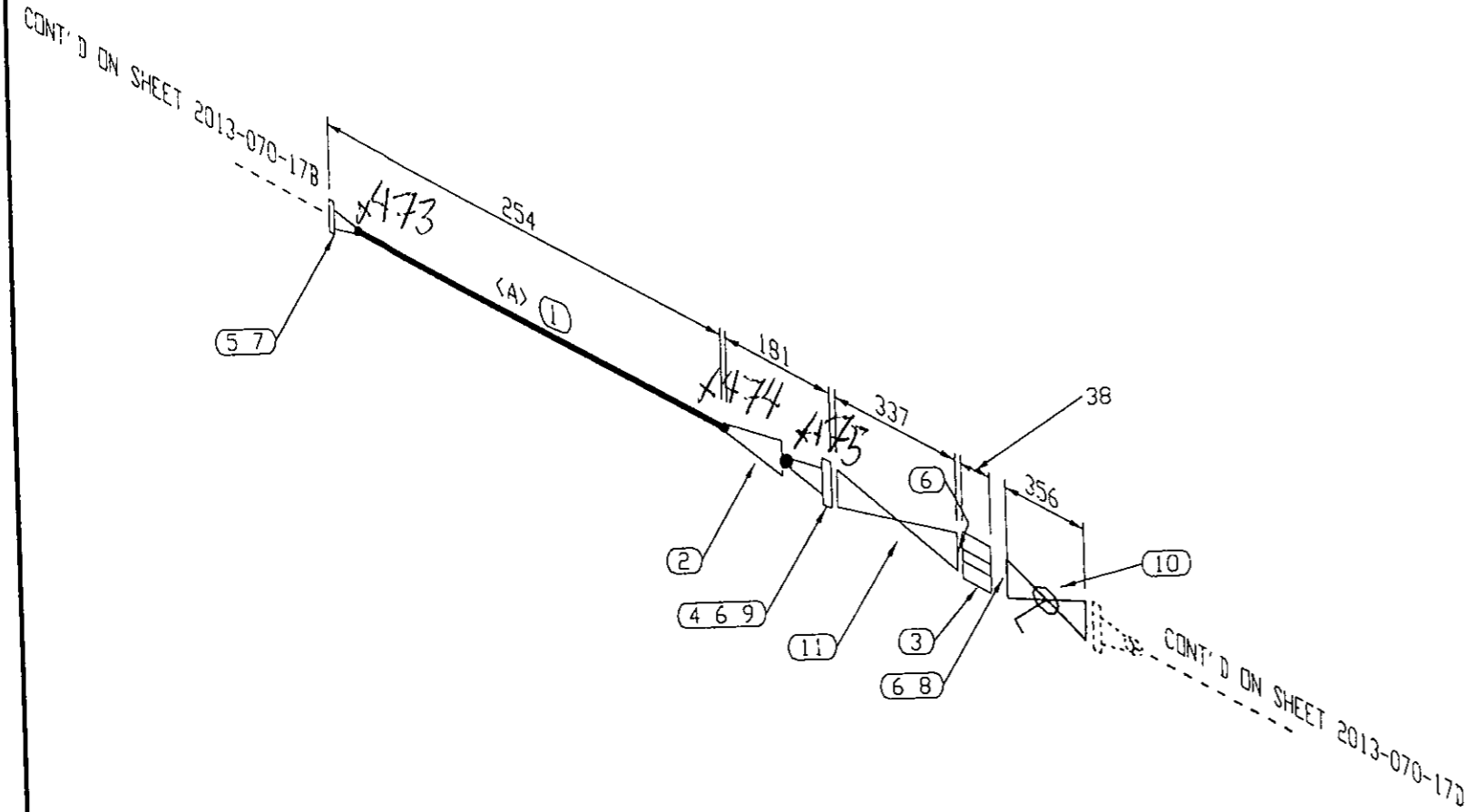
REV. 0

BILL OF MATERIAL

| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|--|--------|--------|
| 1 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 171 MM | 1.3 |
| 2 | 3X2 | REDUCER, CONC, BW, SCH. 80, A234 GR WP3 | 1 | 0.9 |
| 3 | 3 | BLEED RING, RF, 600#, RF, 21mm HOLE | 1 | 1.0 |
| 4 | 3 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 10.5 |
| 5 | 2 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 5.5 |
| 6 | 3 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 3 | 3.0 |
| 7 | 2 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 1 | 1.0 |
| 8 | 3/4X171 | (8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM | 1 | 1.0 |
| 9 | 3/4X127 | (8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM | 1 | 1.0 |
| 10 | 3 | VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N | 1 | 38.6 |
| 11 | 3 | CONTROL VALVE, FISHER ET, 600LB FLG, RF | 1 | 1.0 |
| TOTAL FABRICATION WEIGHT | | | | 64.5 |

CUT PIPE LENGTH

| PIECE NUM | LENGTH (MM) | SIZE (INCH) |
|-----------|-------------|-------------|
| <A> | 171 | 2 |



| | |
|---|--------------------|
| PIPING DESIGNED IN ACCORDANCE WITH ASME 331.3 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.: 1.5 mm | SANDBLAST: SP-6 |
| TEST PRESS.: 14054 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: | V-2400 WATER OUTLET |
| DRAWING NO.: | 070-17C |
| REV. | 0 |

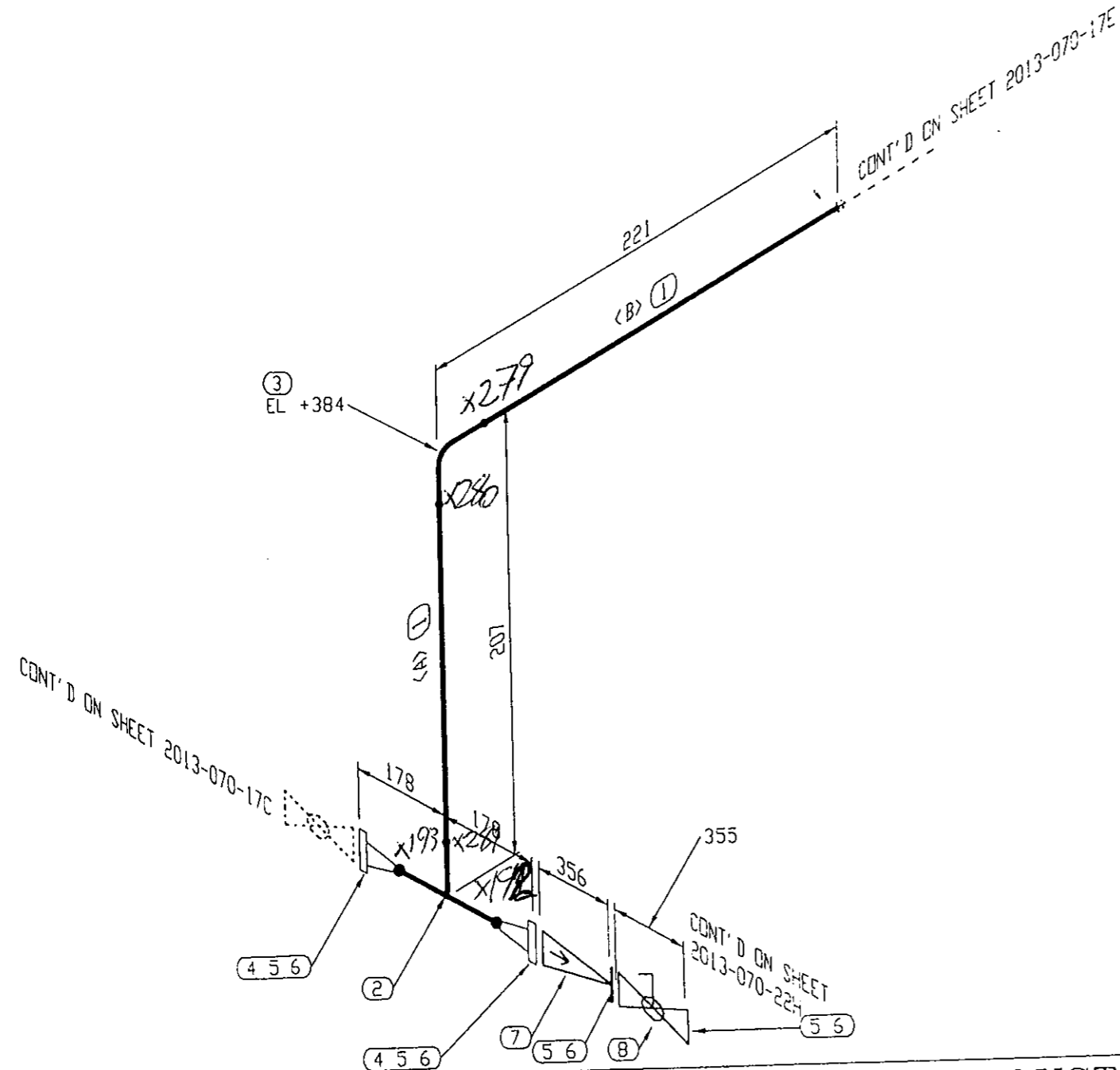
| | | | | | |
|-----|-------------------------|------------|----|-----|-----|
| 0 | ISSUED FOR CONSTRUCTION | 11/10/2013 | AP | WC | WC |
| NO. | REVISION | DATE | BY | CHK | APR |

BILL OF MATERIAL

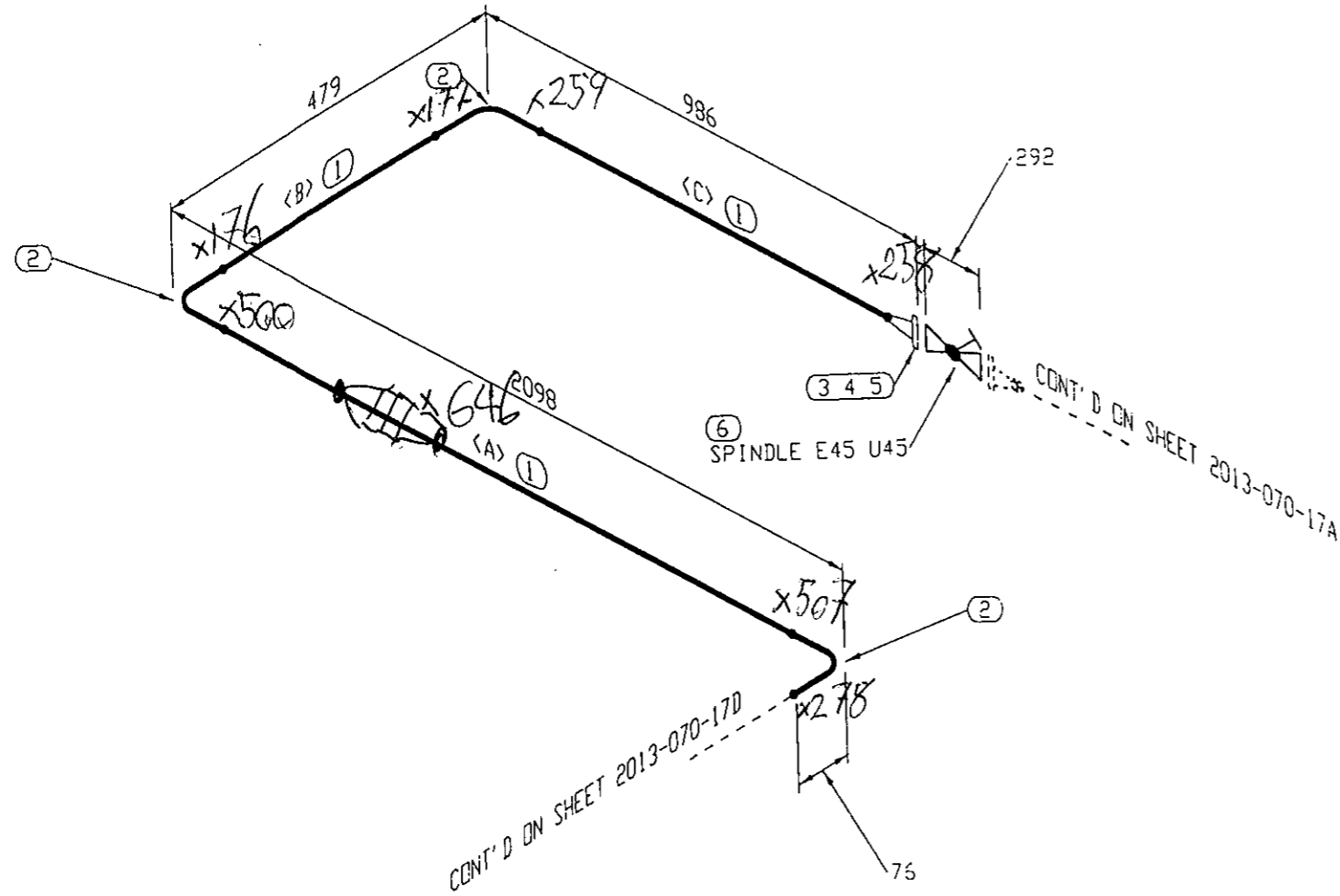
| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|--|--------|--------|
| 1 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 189 MM | 1.5 |
| 2 | 3X2 | TEE, RED, BW, SCH. 80, A234 GR WPB | 1 | 2.2 |
| 3 | 2 | ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB | 1 | 0.9 |
| 4 | 3 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 2 | 20.9 |
| 5 | 3 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 4 | 4.0 |
| 6 | 3/4X127 | (B) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM | 4 | 4.0 |
| 7 | 3 | VALVE, SWING CHECK, RF, NACE, CLASS 600 ASME, A105N | 1 | 61.3 |
| 8 | 3 | VALVE, BALL, RP, RF, NACE, CLASS 600 ASME, A105N | 1 | 38.6 |
| TOTAL FABRICATION WEIGHT | | | | 133.2 |

CUT PIPE LENGTH

| PIECE NUM | LENGTH (MM) | SIZE (INCH) |
|-----------|-------------|-------------|
| <A> | 48 | 2 |
| | 141 | 2 |



| | | | | | | | | |
|---|--|--|--|--------------------|----------|--|-----------|--------|
| 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: V-2400 WATER OUTLET DRAWING NO.: 070-17D | | |
| | | ISSUED FOR CONSTRUCTION NO. REVISION | | 11/10/2013 DATE | AP BY | WC CHK | WC APR | REV. 0 |



BILL OF MATERIAL

| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|--|---------|--------|
| 1 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 3085 MM | 22.8 |
| 2 | 2 | ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB | 3 | 2.7 |
| 3 | 2 | FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 5.5 |
| 4 | 2 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 1 | 1.0 |
| 5 | 5/8X108 | (B) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM | 1 | 1.0 |
| 6 | 2 | VALVE, GLOBE, RF, NACE, CLASS 600, ASME, A105N | 1 | 40.9 |
| TOTAL FABRICATION WEIGHT | | | | 73.7 |

CUT PIPE LENGTH

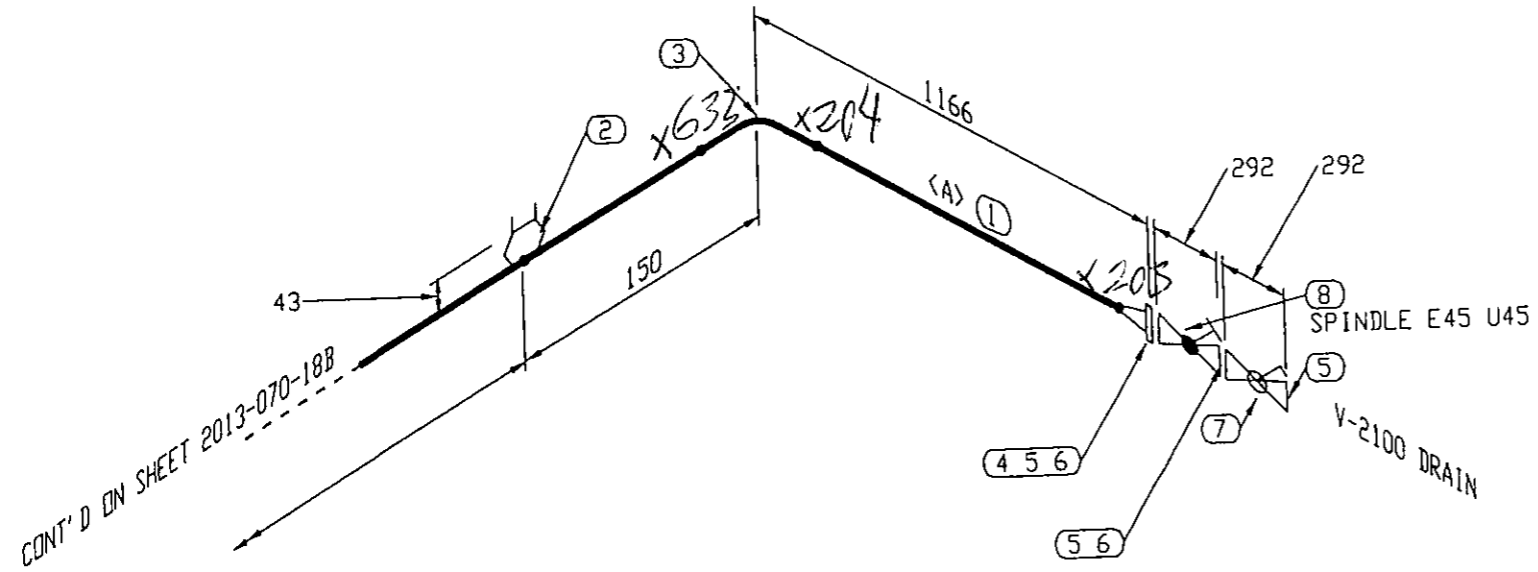
| PIECE NUM | LENGTH (MM) | SIZE (INCH) |
|-----------|-------------|-------------|
| <A> | 1939 | 2 |
| | 320 | 2 |
| <C> | 826 | 2 |

| | | | | | | | |
|---|--------------------|--|-------------------------|------------|----|--|-----|
| 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 WATER OUTLET | |
| C.A.: 1.6 mm | SANDBLAST: SP-6 | | | | | DRAWING NO: 07C-17E | |
| TEST PRESS.: 14064 KPAG | 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 |

REV. 0

BILL OF MATERIAL

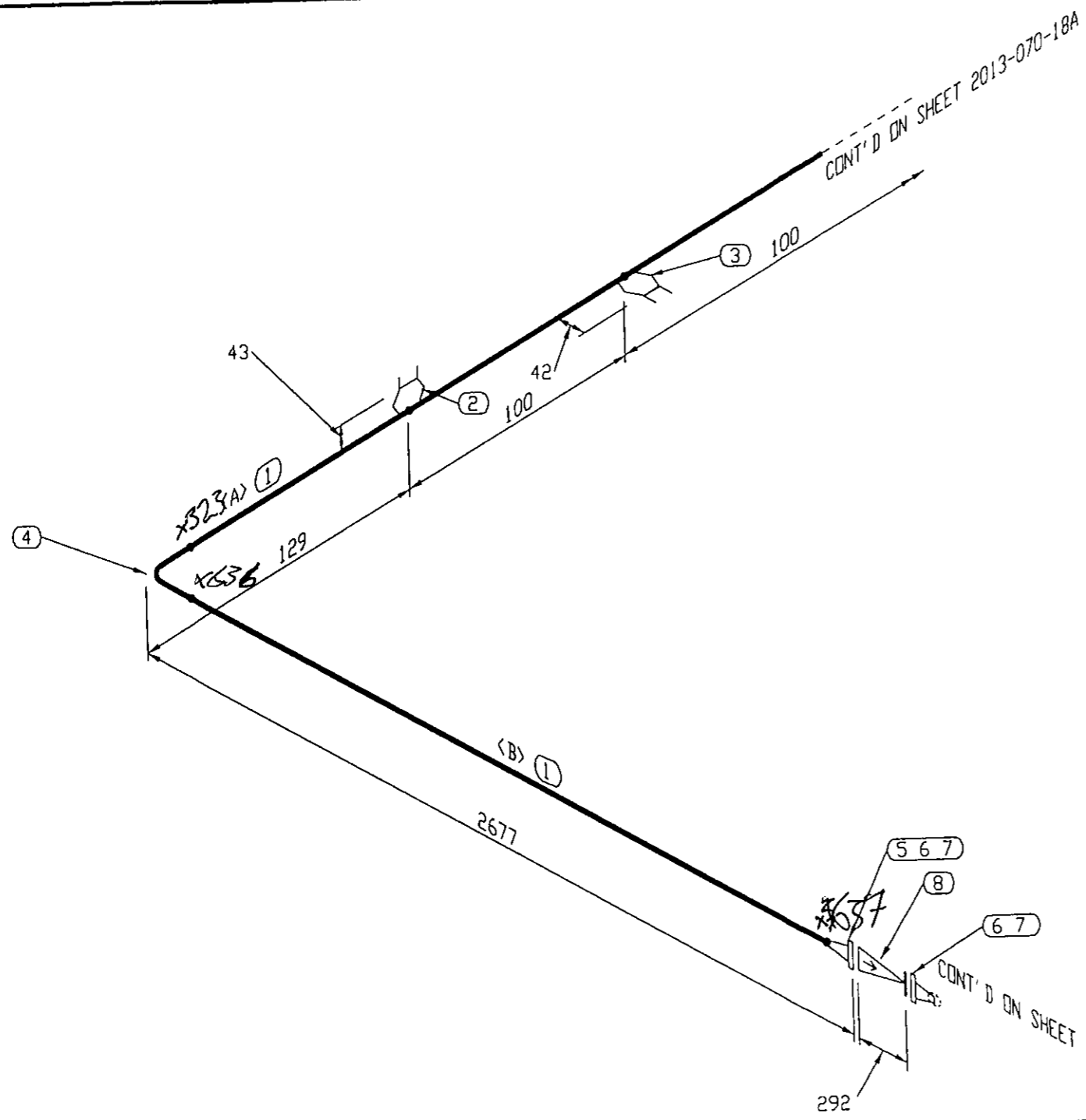
| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|--|---------|--------|
| 1 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 1125 MM | 8.5 |
| 2 | 2X1/2 | THREDDLET, CL3000, A105N | 1 | 0.2 |
| 3 | 2 | ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB | 1 | 0.9 |
| 4 | 2 | FLANGE, 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: | | | | | |
| MDMT: -29 DEG. C | PICKLE & OIL: N/A | LINE TAG: V-2100 DRAIN | | | | | |
| C.A.: 1.6 mm | SANDBLAST: SP-6 | DRAWING NO.: 070-18A | REV. 0 | | | | |
| TEST PRESS.: 14064 KPAG | PAINT: WARM GREY | ISSUED FOR CONSTRUCTION | | | | | |
| TEST MEDIA: WATER | INSULATION: N/A | NO. | REVISION | | | | |
| | | DATE | BY | CHK | WC | WC | APR |



BILL OF MATERIAL

| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|--|---------|--------|
| 1 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 2715 MM | 20.3 |
| 2 | 2X1/2 | THREDDLET, CL3000, A105N | 1 | 0.2 |
| 3 | 2X1/2 | THREDDLET, CL3000, A105N | 1 | 0.2 |
| 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 | 10.9 |
| 6 | 2 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 2 | 2.0 |
| 7 | 5/8X108 | (8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM | 2 | 2.0 |
| 8 | 2 | VALVE, SWING CHECK, RF, NACE, CLASS 600 ASME, A105N | 1 | 31.8 |
| TOTAL FABRICATION WEIGHT | | | | 68.1 |

CUT PIPE LENGTH

| PIECE NUM | LENGTH (MM) | SIZE (INCH) |
|-----------|-------------|-------------|
| <A> | 321 | 2 |
| | 2515 | 2 |

| | |
|--------------|---------------------------------|
| CUSTOMER: | PENNWEST EXPLORATION |
| UNIT NO.: | 2013-070-601 |
| MODEL: | 4-WELL SEPARATOR SKID (BU-2000) |
| LOCATION: | |
| LINE TAG: | V-2100 DRAIN |
| DRAWING NO.: | 070-18B |
| REV. | 0 |

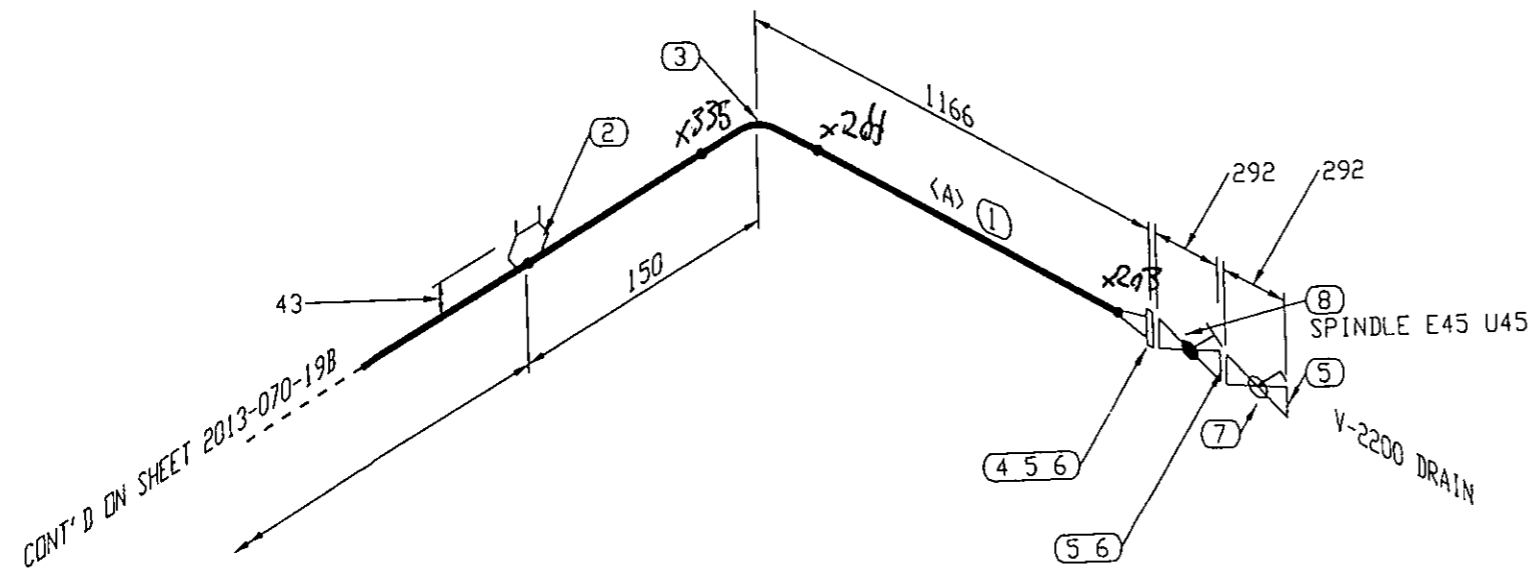
CADO INDUSTRIES INC.
 7491 - 110 AVE SE, CALGARY, ALBERTA T2C 3B8
 TEL: (403) 279-6662; FAX: (403) 279-6687

| | |
|---|--------------------|
| 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 |
| MOHT: -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 |

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

BILL OF MATERIAL

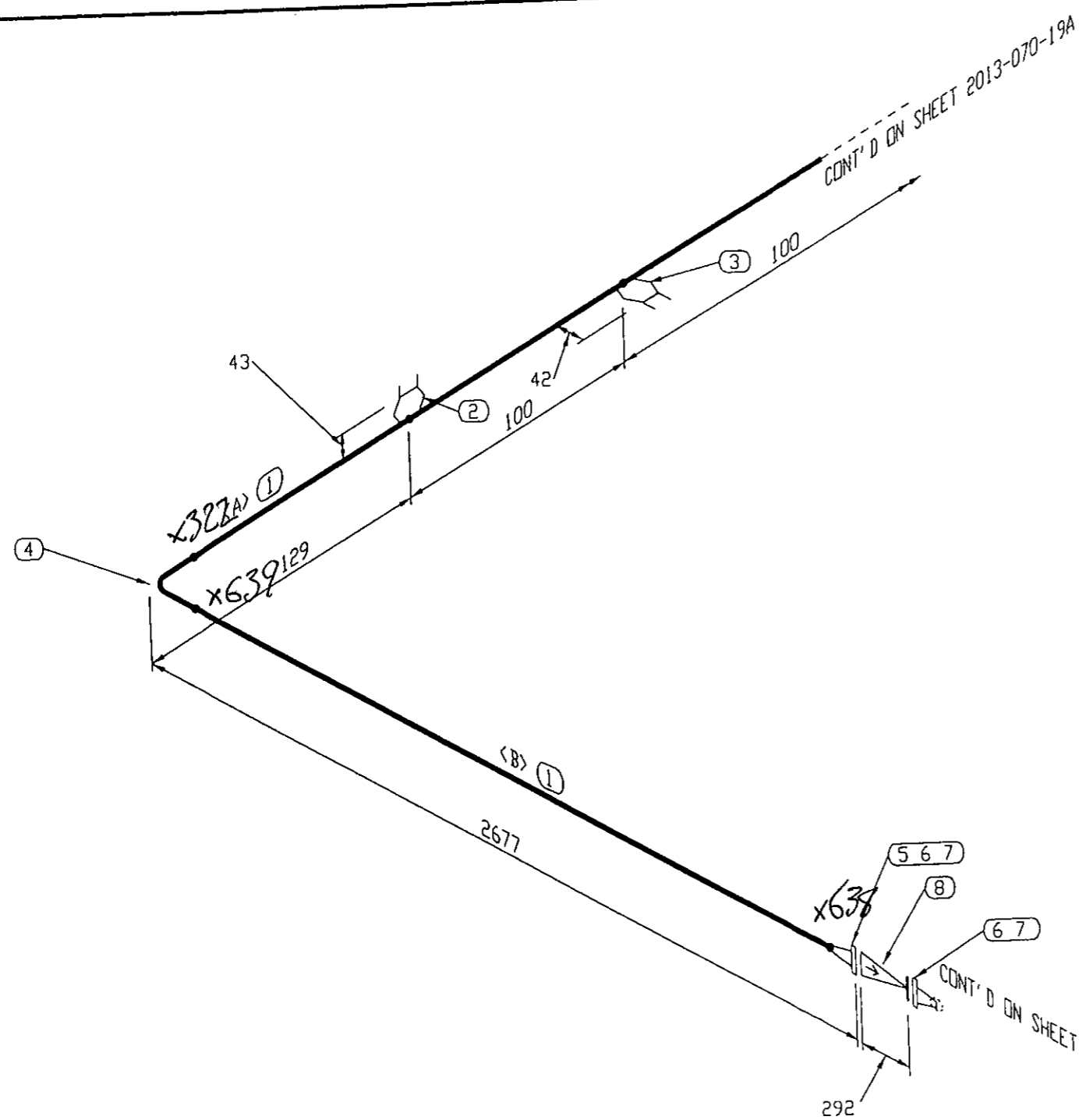
| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|--|---------|--------|
| 1 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 1125 MM | 8.5 |
| 2 | 2X1/2 | THREDDLET, CL3000, A105N | 1 | 0.2 |
| 3 | 2 | ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB | 1 | 0.9 |
| 4 | 2 | FLANGE, 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: | | | | | | |
| MDMT: -29 DEG. C | PICKLE & OIL: N/A | LINE TAG: V-2200 DRAIN | | | | | | |
| C.A.: 1.6 mm | SANDBLAST: SP-6 | DRAWING NO.: 070-19A | | | | | | |
| 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 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 2715 MM | 20.3 |
| 2 | 2X1/2 | THREDOLET, CL3000, A105N | 1 | 0.2 |
| 3 | 2X1/2 | THREDOLET, CL3000, A105N | 1 | 0.2 |
| 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 | 10.9 |
| 6 | 2 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 2 | 2.0 |
| 7 | 5/8X108 | (8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM | 2 | 2.0 |
| 8 | 2 | VALVE, SWING CHECK, RF, NACE, CLASS 600 ASME, A105N | 1 | 31.8 |
| TOTAL FABRICATION WEIGHT | | | | <u>68.1</u> |

CUT PIPE LENGTH

| PIECE NUM | LENGTH (MM) | SIZE (INCH) |
|-----------|-------------|-------------|
| <A> | 321 | 2 |
| | 2515 | 2 |

CADO INDUSTRIES INC.

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

| | |
|---|--------------------|
| 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 |

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

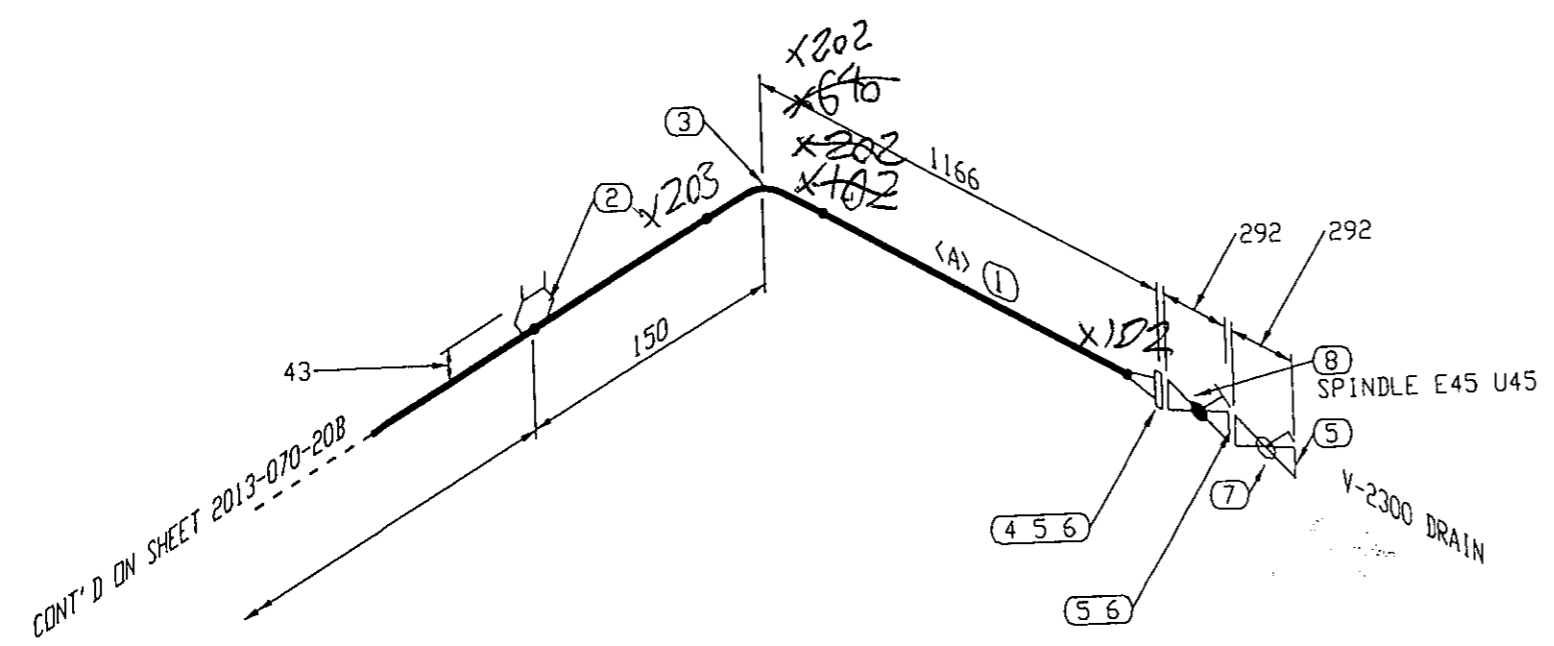
| | |
|--------------|---------------------------------|
| CUSTOMER: | PENNWEST EXPLORATION |
| UNIT NO.: | 2013-070-601 |
| MODEL: | 4-WELL SEPARATOR SKID (BU-2000) |
| LOCATION: | |
| LINE TAG: | V-2200 DRAIN |
| DRAWING NO.: | 070-19B |
| REV. | 0 |

BILL OF MATERIAL

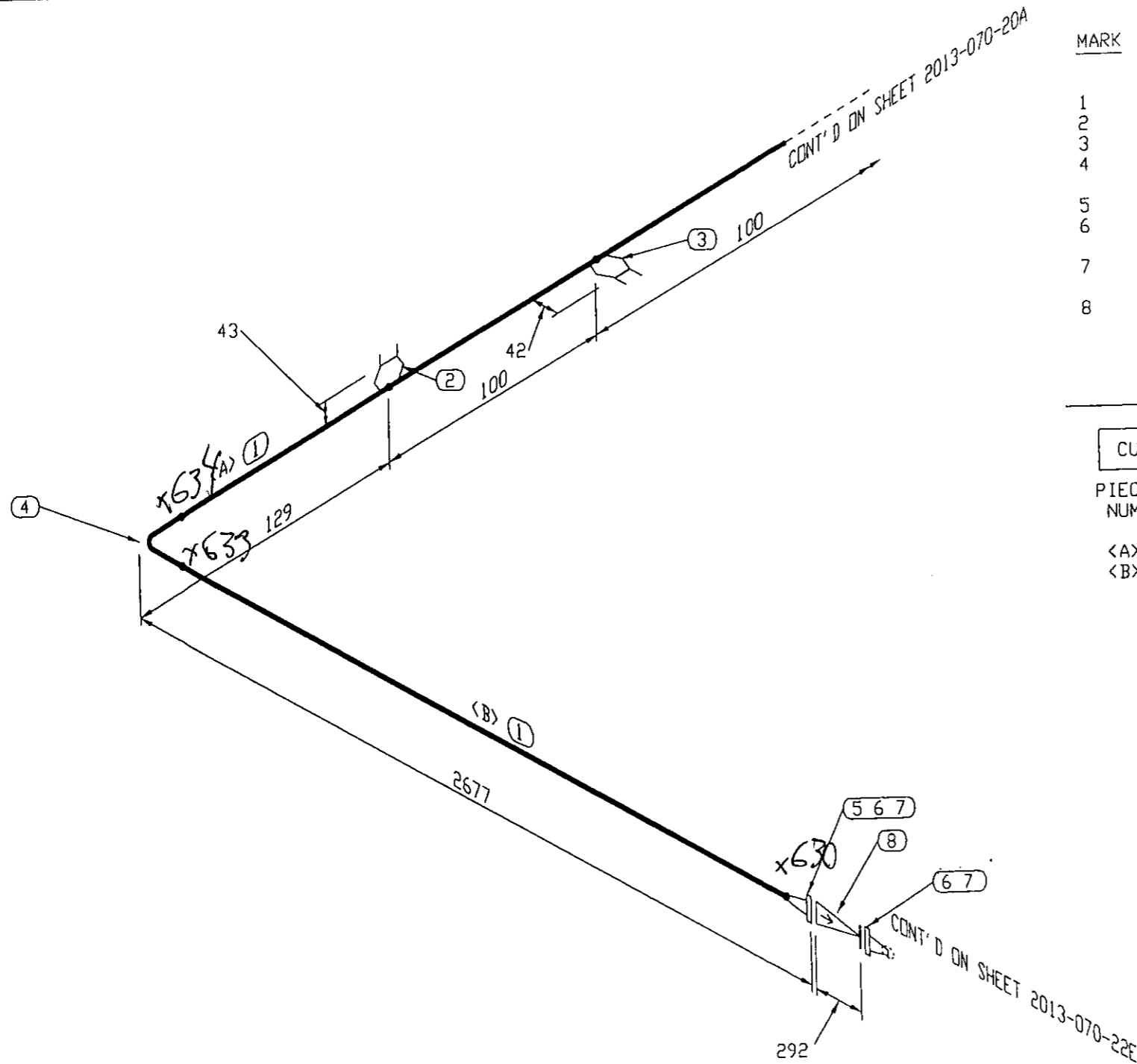
| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|--|---------|--------|
| 1 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 1125 MM | 8.5 |
| 2 | 2X1/2 | THREDOLET, CL3000, A105N | 1 | 0.2 |
| 3 | 2 | ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR WPB | 1 | 0.9 |
| 4 | 2 | FLANGE, 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, 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 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-2300 DRAIN DRAWING NO.: 070-20A | | REV. 0 |
| | | | | ISSUED FOR CONSTRUCTION NO. 0 | | 11/10/2013 | AP | WC | WC | |
| | | | | REVISION | | DATE | BY | CHK | APR | |



BILL OF MATERIAL

| MARK | SIZE | DESCRIPTION | QTY | WEIGHT |
|--------------------------|---------|---|---------|--------|
| 1 | 2 | PIPE, SMLS, BW, SCH. 80, A106 GR B | 2715 MM | 20.3 |
| 2 | 2X1/2 | THREDOLET, CL3000, A105N | 1 | 0.2 |
| 3 | 2X1/2 | THREDOLET, CL3000, A105N | 1 | 0.2 |
| 4 | 2 | ELBOW, 90 DEG, LR, BW, SCH. 80, A234 GR | 1 | 0.9 |
| 5 | 2 | WPB FLANGE, RFWN, CL600, SCH. 80 BORE, A105N | 1 | 10.9 |
| 6 | 2 | GASKET, CL600 SPIRAL WOUND, 316 SS / FLEXIBLE GRAPHITE | 2 | 2.0 |
| 7 | 5/8X108 | (8) STUD BOLTS W/ NUTS, A193 GR B7M / A194 GR 2HM | 2 | 2.0 |
| 8 | 2 | VALVE, SWING CHECK, RF, NACE, CLASS 600 ASME, A105N | 1 | 31.8 |
| TOTAL FABRICATION WEIGHT | | | | 68.1 |

CUT PIPE LENGTH

| PIECE NUM | LENGTH (MM) | SIZE (INCH) |
|-----------|-------------|-------------|
| <A> | 321 | 2 |
| | 2515 | 2 |

PIPING DESIGNED IN ACCORDANCE WITH ASME B31.3 2010 EDITION, 2011 AD.

| | | | |
|----------------|------------|---------------|-----------|
| 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: | V-2300 DRAIN |
| DRAWING NO.: | 070-20B |
| REV. | 0 |

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