



COMPLETION OF CONSTRUCTION

DECLARATION

NOTE: This declaration shall be completed and signed by the person responsible, in whole or in part, for the construction, installation, testing and inspection of the pressure piping system and forwarded to the Administrator/Chief Inspector.

- (1) Owner of Plant: Husky Oil Operations Ltd. Box 6525, Station D, 707 - 8th Ave SW. Calgary, AB T2P 3G7
(Name & Address)
- (2) Engineer or Contractor: Excelsior Engineering Ltd
400, 1110 Center St. NE Calgary AB. T2E 2R2
(Name & Address)
- (3) Type of Plant: One (1) Sweet Service ESDV & Metering Skid Package.
- (4) Location of Plant: LSD: Ansell Minehead 03-06-049-18 W5M
(Section, Township, Range)
- (5) Description of Pressure Piping System(s): 2" & 6" NPS Sch.80 SA-106B Piping/CL 900 RFWN SA-105N Flanges Refer to 1908577 QC
12" NPS Sch.80 SA-333G6 Piping/CL 600 RFWN SA-105N Flanges Refer to 1908577 QC
2" & 6" NPS Sch.80 SA-106B Piping/CL 600 RFWN SA-105N Flanges Refer to 1908577 QC
2",3",4" NPS Sch.40 SA-106 GR.B Piping/CL 150 RFWN SA-105N Flanges Refer to 1908577 QC
2" & 1" NPS Sch.160 SA-106 GR.B Threaded Piping

STATEMENT OF COMPLIANCE

I, the undersigned, declare that the described pressure piping system, approved under design registration number _____, complies in all respects with the regulations for construction, installation, testing and inspection and that all applicable pressure piping test data reports have been delivered to the owner.

(Signature)

Ron Sobie
(Print Name)

QC Manager
(Title)

May 5, 2011
(Date)

Paintearth Energy Services.
(Company)

Box 24
(Address)

Halkirk, AB T0C 1M0
(City, Postal Code)

The information you provide is necessary only for the administration of the programs as required by the Alberta Safety Codes Act and Regulations in the Boiler Discipline.



the pressure equipment safety authority

PRESSURE PIPING CONSTRUCTION AND TEST DATA REPORT

In accordance with the provisions of the PESR Section 31(1)

Shop Construction ☒: Field Construction ☐:
Final Data Report ☒: Partial Data Report ☐ (from one ABSA- authorized Contractor to another
ABSA- authorized Contractor).

Complete both sides of this Form

1. Constructed By: Paintearth Energy Services Owner's Job No: 1908577
(Name of ABSA authorized primary contractor or subcontractor)
Box 24, Halkirk, AB T0C 1M0
(Address)

Certificate of Authorization Permit No. AQP-1342 Expiry Date: August 20, 2011

2. Constructed For: Excelsior Engineering Ltd.
(Name of primary contractor if different from above)
400, 1110 Center St. NE Calgary AB. T2E 2R2
(Address)

Certificate of Authorization Permit No. AQP- Expiry Date:
(Required when the primary contractor undertakes some/all of the quality functions, e.g., NDE, PWHT, Tie-in, fabrication, hydro test, final assembly etc.)

3. Owner: Husky Oil Operations Limited, Box 4490, Stn D Calgary AB. T2P 3G7
(Name and address)
LSD: Ansell Minehead 03-06-049-18 W5M
(Location of installation)

Certificate of Authorization Permit No. AQP- Expiry Date:
(Required when the owner undertakes some/all of the quality functions, e.g., NDE, PWHT, Tie-in, fabrication, hydro test, final assembly etc.)

4. Piping Design Alberta Registration No.: PP-
(Required if aggregate piping volume is over 0.5m³)

5. Design Responsibility: Owner ☒; Contractor ☐

6. WP No.: WP-1684.2; Company: Paintearth Energy Services Inc. Owner's WP No. (If used): WP-
(Alberta Registration No.) (Alberta Registration No.)
WPS No(s). used: PESI-4; Owner's WPS No(s). (If used):

7. Code: ASME B31.1 Non Boiler External Piping ☐; ASME B31.1 Boiler External Piping ☐;
B31.5 ☐; B31.9 ☐; CSA Z662 Steam Pipelines ☐;
ASME B31.3 ☒ - Service Category: Normal ☒, D ☐, M ☐, High Pressure ☐; Severe Cyclic Condition ☐

Drawing No. Rev. No. Line No.	Fluid (Air/Stm. Etc.)	Des. Press. kPa	Des. Temp. ^{°C} (Max. & Min.)	Pressure Test kPa	Test Medium	Pipe Mat'l Spec. & Grade	C.A. mm	Pipe NPS & Schedule	Flange Material & Rating	PWHT/ Preheat Temp. ^{°C}	NDE
PES-1908577 Spools# 6,7,8	Hydro- Carbons	13100	38°C -29°C	19650	H2O	SA-106B	1.6	2", & 6" NPS Sch.80	SA-105N CL 900	N/A 38°C	RT 10% MT 10% Visual
PES-1908577 Spools# 1,2	Hydro- Carbons	10204	38°C -29°C	15306	H2O	SA-333 G6	1.6	12" NPS Sch.80	SA-105N CL 600	N/A 38°C	RT 10% MT 10% Visual
PES-1908577 Spools# 3-5, 9-14	Hydro- Carbons	10204	38°C -29°C	15306	H2O	SA-106B	1.6	2" & 6" NPS Sch.80	SA-105N CL 600	N/A 38°C	RT 10% MT 10% Visual
PES-1908577 Spools# 15 - 20	Hydro- Carbons	1965	38°C -29°C	2951	H2O	SA-106B	1.6	2", 3", 4" NPS Sch.40	SA-105N CL 150	N/A 38°C	RT 10% MT 10% Visual
PES-1908577 Threaded	Hydro- Carbons	10204	38°C -29°C	15306	H2O	SA-106B	N/A	1" NPS Sch.160	N/A	N/A	Visual
PES-1908577 Threaded	Hydro- Carbons	1965	38°C -29°C	2951	H2O	SA-106B	N/A	1" & 2" NPS Sch.160	N/A	N/A	Visual
Instrument Air Header, Tubing &	Hydro- Carbons	1206	38°C -29°C	1137	Air & Soap	SA-106B 316 SS	N/A	½", ¾", 1" Sch.80 3/8"	N/A	N/A	Visual

Constructed by: Paintearth Energy Services

Owner's Job # 1908577

Page 1 of 3.

Connections								0.035" wall			

Partial Data Reports certified by sub-contractors are listed below and attached to this Data Report ☐

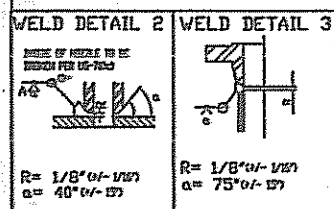
No.	Line No.	Spool No.	Dwg. No. (with Rev. No.)	Sub-contractor (Name)	AQP No. (if from Alberta)	Expiry (if from Alberta)

Remarks: For partial data report provide information about the code work that was not completed by the subcontractor (e.g., hydrostatic test, PWHT etc.). For final data report provide information about the code work that was not completed by subcontractors and subsequently completed by the primary contractor (e.g., hydrostatic test of entire assembly, PWHT etc.)

Endorse certificate 'A' or 'B'	
A. CERTIFICATE OF COMPLIANCE Signed by the subcontractor when supplying this certificate as a Partial Data Report We certify that the statements in this Data Report are correct and that materials, construction and workmanship of the piping fabrication conform to the registered quality system and the applicable Piping code(s). Date: _____ _____ Contractor _____ Print Authorized Representative's Name Signature This certificate is not valid unless it forms part of a Final Data Report signed by Primary Contractor	B. CERTIFICATE OF COMPLIANCE Signed by the primary contractor when supplying this certificate as a Final Data Report We certify that the statements in this Data Report are correct and that piping job no. <u>1908577</u> described in this Data Report was constructed in accordance with the Province of Alberta Safety Codes Act and Regulations, and applicable ASME Piping Code(s). Date: <u>May 5, 2011</u> <u>Paintearth Energy Services</u> _____ Contractor <u>Ron Sobie</u> Print Authorized Representative's Name Signature

CERTIFICATE OF INSPECTION	
I, the undersigned, employed by <u>Husky Oil Operations Ltd.</u> have verified that all required examination and testing has been completed, and inspected the piping described in this construction data report to the extent necessary to be satisfied that it conforms to all applicable examination requirements of the Code and of the engineering design, and state that, to the best of my knowledge and belief, the contractor has constructed this piping in accordance with the Alberta Safety Codes Act and Regulations. By signing this certificate neither the inspector nor his or her employer makes any warranty, expressed or implied, concerning the piping described in this construction data report. Furthermore, neither the inspector nor his or her employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.	
Date: <u>May 5, 2011</u> <u>Kevin Fundytus</u> Owner's Inspector Name (please print) _____ Owner's Inspector Signature:	Date: _____ ABSA Safety Codes Officer (please print) (BOILER EXTERNAL PIPING ONLY) _____ ABSA Safety Codes Officer's Signature

Current version of this Form may be obtained from www.absa.ca

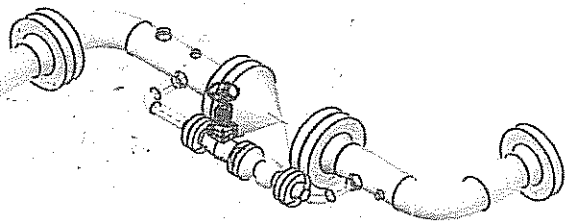


CUT LIST				
MARK	QTY	SIZE	DESCRIPTION	LENGTH
1A	1	2'	PIPE, Sch.XS SMLS, SA-106 Gr.B EBM	6'
1B	1	2'	PIPE, Sch.XS SMLS, SA-106 Gr.B FBM	1'-8 5/16"
1C	1	2'	PIPE, Sch.XS SMLS, SA-106 Gr.B EBM	6'
2A	1	12"	PIPE, Sch.80 SMLS, SA-333 Gr.6 EBM	4'-7 1/8"
2B	1	12"	PIPE, Sch.80 SMLS, SA-333 Gr.6 EBM ^o	13'-9 7/8"

DESIGN DATA	
SPOOL TAG NO.: 1, 2 --12" GAS	SPOOL TAG NO.:
DESIGN PRESSURE: 1480 PSIG @ 100°F	DESIGN PRESSURE: 0
DMT: -20°F @ 1480 PSIG	DMT:
CORROSION ALLOWANCE: 1/16"	CORROSION ALLOWANCE:
RADIOGRAPHY: 10% B31.3 NORMAL	RADIOGRAPHY:
PWHT: NO	PWHT:
HYDROTEST: (1.5 x D.P.) 2220 PSIG	HYDROTEST: (1.5 x D.P.)
WPS: PES-3	WPS:
SPOOL CAPACITY (this page only): 4.3 cu.ft. 	

1. PIPING DESIGNED & FABRICATED TO THE LATEST EDITION OF ASME CODE B31.3.
2. ALL BOLT HOLES, WHEN PRESENT, TO STRADDLE CENTERLINES, UNLESS OTHERWISE NOTED
3. O-LETS ARE SA-105N MATERIAL.
4. SHOP/FIELD CHECK ALL DIMENSIONS.
5. NDE: 10% MPI REQUIRED

				 Paintearth ENERGY SERVICES		DATE 11-03-10		CLIENT HUSKY OIL OPERATIONS LIMITED	
						DESIGNED BY PES		LSO: 03-06-049-18 WSM	
						DRAWN BY PES		TITLE SPOOL DRAWING	
						CHECKED BY 		SWEET SERVICE ESDV AND METERING PACKAGED 12" GAS	
						PROJECT NO. 1899562		MATERIAL 1899562PS	
						SCALE N.T.S.		SHEET NO. 1 OF 8	
								REVISION NO. 	
1 11-03-20 ADDED SPOOL CAPACITY AND REVISED PROJECT # AS NOTED				FL 		THIS DRAWING IS THE PROPERTY OF PAINT-EARTH ENERGY SERVICES. ANY UNAUTHORIZED USE OR REPRODUCTION OF THIS DESIGN OR DRAWING WITHOUT WRITTEN AUTHORIZATION IS STRICTLY PROHIBITED.			
0 11-03-10 ISSUED FOR CONSTRUCTION				PL					
(N1) DATE REVISIONS				OWN CHD/APP.					



BILL OF MATERIAL

MARK	QTY	SIZE	DESCRIPTION	LENGTH
1	1	2'	PIPE, Sch.XS SMLS, SA-106 Gr.B	1'-8"
2	1	6'	PIPE, Sch.XS SMLS, SA-106 Gr.B	24'-0"
3	2	2'	ELL, 90° LR Sch.XS, SA-234-WPB	8788
4	2	6'	ELL, 90° LR Sch.XS, SA-234-WPB	10N00013
5	2	2'	FLG, RFWN CL600 Sch.XS BDRE, SA-105N	70148
6	6	6'	FLG, RFWN CL600 Sch.XS BDRE, SA-105N	40747
7	3	1'	(12) STUDS SA-193-B7M c/w (2) HEX NUTS SA-194-2HM (6'-CL600)	6 3/4'
8	3	5/8"	(8) STUDS SA-193-B7M c/w (2) HEX NUTS SA-194-2HM (2'-CL600)	4 1/4'
9	3	2"	GASKET, 1/8" Thk, CL600 RF, GRAPHOIL 316SS	
10	3	6"	GASKET, 1/8" Thk, CL600 RF, GRAPHOIL 316SS	
11	1	6"x1"	THREDLET, CL6000 FS, SA-105N	58181
12	2	6"x3/4"	THREDLET, CL6000 FS, SA-105N	58217
13	2	6"x2"	WELDOLET, Sch.XS, SA-105N	57614

X-2
G-6
E-47
T-4
C-2

CUT LIST

MARK	QTY	SIZE	DESCRIPTION	LENGTH
1A	1	2'	PIPE, Sch.XS SMLS, SA-106 Gr.B EBM	5 1/8"
1B	1	2'	PIPE, Sch.XS SMLS, SA-106 Gr.B EBM	7 15/16"
1C	1	2'	PIPE, Sch.XS SMLS, SA-106 Gr.B EBM	5 1/8"
2A	1	6'	PIPE, Sch.XS SMLS, SA-106 Gr.B DJJ	9 7/8"
2B	1	6'	PIPE, Sch.XS SMLS, SA-106 Gr.B DJJ	1'-2 5/8"
2C	1	6'	PIPE, Sch.XS SMLS, SA-106 Gr.B DFD	1'-8"
2D	1	6'	PIPE, Sch.XS SMLS, SA-106 Gr.B DFD	19'-4 1/8"

DESIGN DATA

SPOOL TAG NO.: 3, 4, 5 --6" PIGGING		SPOOL TAG NO.:	
DESIGN PRESSURE:	1480 PSIG @ 100°F	DESIGN PRESSURE:	
MDMT:	-20°F @ 1480 PSIG	MDMT:	
CORROSION ALLOWANCE:	1/16"	CORROSION ALLOWANCE:	
RADIOGRAPHY:	10% B31.3 NORMAL	RADIOGRAPHY:	
PWHT:	NO	PWHT:	
HYDROTEST: (1.5x D.P.)	2220 PSIG	HYDROTEST: (1.5x D.P.)	
WPS:	PES-4	WPS:	
SPOOL CAPACITY (this page only): 1.72 cu.ft. Δ			
1. PIPING DESIGNED & FABRICATED TO THE LATEST EDITION OF ASME CODE B31.3. 2. ALL BOLT HOLES, WHEN PRESENT, TO STRADDLE CENTERLINES, UNLESS OTHERWISE NOTED. 3. O-LETS ARE SA-105N MATERIAL. 4. SHOP/FIELD CHECK ALL DIMENSIONS. 5. NDE: 10% MPI REQUIRED			

10% per Welder

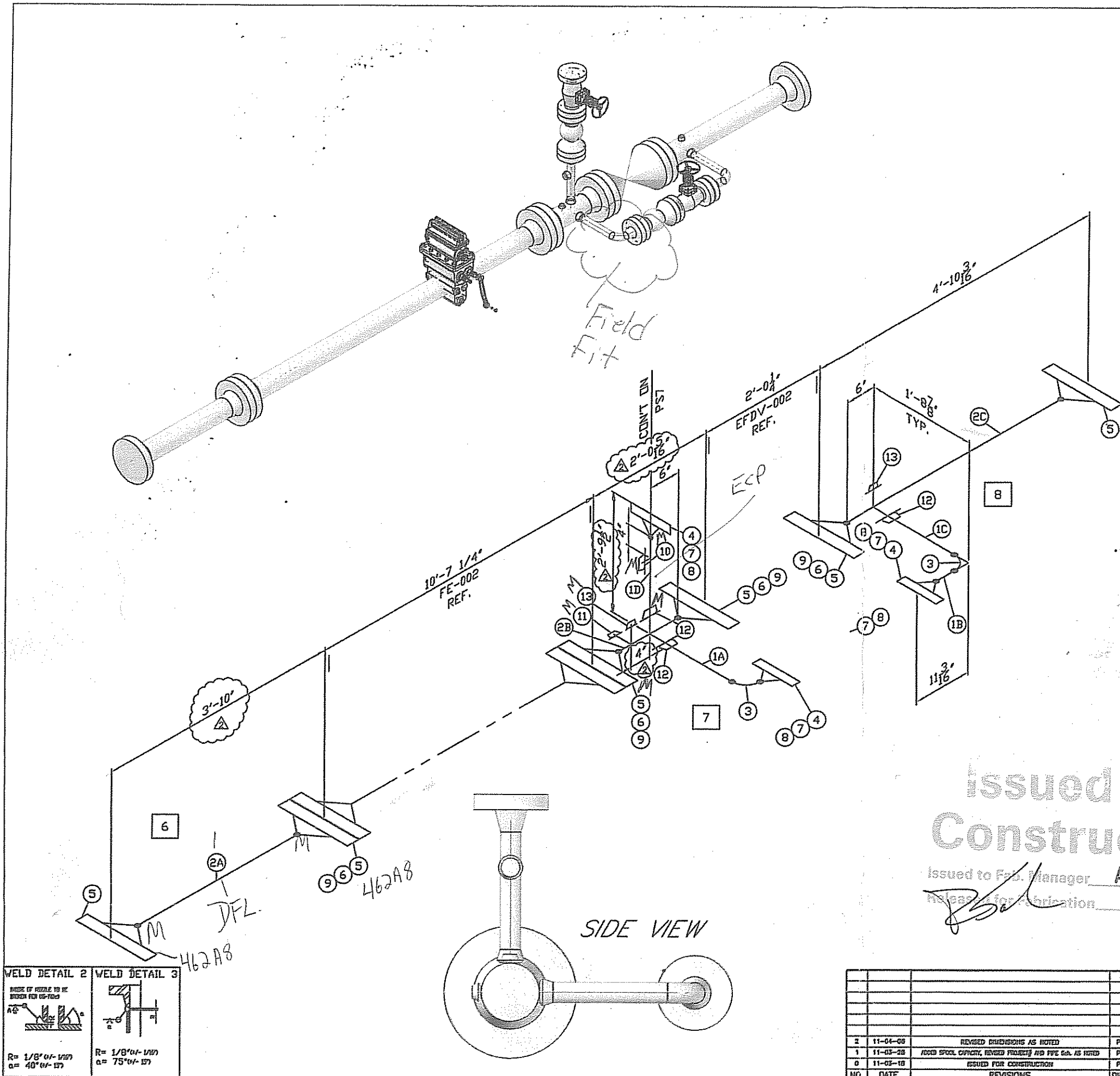
WELD DETAIL 2	WELD DETAIL 3
R= 1/8" (A-V) 1/8" a= 40" (A-V) 1/8"	R= 1/8" (A-V) 1/8" a= 75" (A-V) 1/8"

Issued For
Construction

Issued to Fabricator
MAR 28 2011

NO.	DATE	REVISIONS	OWN	CHK	APP.
1	11-03-25	ADDED SPOOL CAPACITY AND REVISED PROJECT # AS NOTED	PL		
2	11-03-18	ISSUED FOR CONSTRUCTION	PL		

Paintearth ENERGY SERVICES		11-03-10	CLERK	HUSKY OIL OPERATIONS LIMITED
THIS DRAWING IS THE PROPERTY OF PAINT EARTH ENERGY SERVICES. ANY UNAUTHORIZED USE OR REPRODUCTION OF THIS DESIGN OR DRAWING WITHOUT WRITTEN AUTHORIZATION IS STRICTLY PROHIBITED.		DESIGNED BY PES	DATE 03-06-049-18 W5M	PROJECT NO. 1899562
		CHECKED BY PES	DATE 03-06-049-18 W5M	PROJECT NO. 1899562
		APPROVED BY PES	DATE 03-06-049-18 W5M	PROJECT NO. 1899562
		DATE 03-06-049-18 W5M	DATE 03-06-049-18 W5M	DATE 03-06-049-18 W5M
		DATE 03-06-049-18 W5M	DATE 03-06-049-18 W5M	DATE 03-06-049-18 W5M



BILL OF MATERIAL				
MARK	QTY	SIZE	DESCRIPTION	LENGTH
1	1	2"	PIPE, Sch.XS SMLS, SA-106 Gr.B	3'-10"
2	1	6"	PIPE, Sch.80 SMLS, SA-106 Gr.B	8'-4"
3	2	2"	ELL, 90° LR Sch.XS, SA-234-WPB	
4	3	2"	FLG, RFWN CL900 Sch.XS BORE, SA-105N	
5	6	6"	FLG, RFWN CL900 Sch.80 BORE, SA-105N	
6	4	1 1/8"	(12) STUDS SA-193-B7M c/w (2) HEX NUTS SA-194-2HM (6'-CL900)	7 3/4"
7	5	7/8"	(8) STUDS SA-193-B7M c/w (2) HEX NUTS SA-194-2HM (2'-CL900)	5 3/4"
8	5	2"	GASKET, 1/8" Thk, CL900 RF, GRAPHOIL, 316SS	
9	4	6"	GASKET, 1/8" Thk, CL900 RF, GRAPHOIL 316SS	
10	1	2"x1'	THREDDLET, CL6000 FS, SA-105N	58146
11	1	6"x1/2'	THREDDLET, CL6000 FS, SA-105N	55769
12	3	6"x2"	WELDDLET, SCH XS, SA-105	
13	2	6"x3/4"	THREDDLET, CL6000 FS, SA-105N	58217

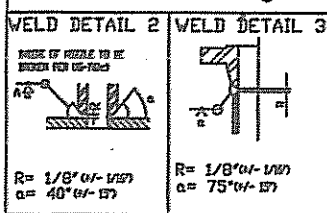
CUT LIST				
MARK	QTY	SIZE	DESCRIPTION	LENGTH
1A	1	2"	PIPE, Sch.XS SMLS, SA-106 Gr.B	1'-0 15/16"
1B	1	2"	PIPE, Sch.XS SMLS, SA-106 Gr.B	3 13/16"
1C	1	2"	PIPE, Sch.XS SMLS, SA-106 Gr.B	1'-0 15/16"
1D	1	2"	PIPE, Sch.XS SMLS, SA-106 Gr.B ECP	2'-5 1/16"
2A	1	6"	PIPE, Sch.80 SMLS, SA-106 Gr.B DFL	2'-10 7/16"
2B	1	6"	PIPE, Sch.80 SMLS, SA-106 Gr.B	1'-11 1/16"
2C	1	6"	PIPE, Sch.80 SMLS, SA-106 Gr.B	3'-10 5/8"

DESIGN DATA	
SPOOL TAG NO.: 6, 7, 8 — 6" SALE GAS SPOOL TAG NO.:	
DESIGN PRESSURE: 1900 PSIG @ 100°F	DESIGN PRESSURE:
MDMT: -20°F @ 1900 PSIG	MDMT:
CORROSION ALLOWANCE: 1/16"	CORROSION ALLOWANCE:
RADIOGRAPHY: 10% B31.3 NORMAL	RADIOGRAPHY:
PWHT: NO	PWHT:
HYDROTEST: (1.5x D.P.) 2850 PSIG	HYDROTEST: (1.5x D.P.)
WFS: PESI-4	WFS:
SPOOL CAPACITY (this page only): 1.44 cu.ft. Δ	
1. PIPING DESIGNED & FABRICATED TO THE LATEST EDITION OF ASME CODE B31.3. 2. ALL BOLT HOLES, WHEN PRESENT, TO STRADDLE CENTERLINES, UNLESS OTHERWISE NOTED. 3. O-LETS ARE SA-105N MATERIAL. 4. SHOP/FIELD CHECK ALL DIMENSIONS. 5. NDE: 10% MPI REQUIRED	

Issued For Construction

Issued to Fab. Manager APR 07 2011

Released for Fabrication APR 07 2011



Paintearth ENERGY SERVICES		HUSKY OIL OPERATIONS LIMITED	
11-03-10		LSD: 03-06-049-18 WSM	
PES		SPOOL DRAWING	
PES		SWEET SERVICE ESDV AND METERING PACKAGED	
PES		6" SALE GAS	
1899562 Δ		1899562PS Δ	
N.T.S.		3 OF 8	
PES-1908577PS3			

1908577

BILL OF MATERIAL

MARK	QTY	SIZE	DESCRIPTION	LENGTH
1	1	2"	PIPE, Sch.XS SMLS, SA-106 Gr.B	3'-10"
2	1	6"	PIPE, Sch.80 SMLS, SA-106 Gr.B	8'-4"
3	2	2"	ELL, 90° LR Sch.XS, SA-234-WPB	4288
4	3	2"	FLG, RFWN CL900 Sch.XS BORE, SA-105N	108A3159
5	6	6"	FLG, RFWN CL900 Sch.80 BORE, SA-105N	462A8
6	4	1 1/8"	(12) STUDS SA-193-B7M c/w (2) HEX NUTS SA-194-2HM (6'-CL900)	7 3/4"
7	5	7/8"	(8) STUDS SA-193-B7M c/w (2) HEX NUTS SA-194-2HM (2'-CL900)	5 3/4"
8	5	2"	GASKET, 1/8" Thk, CL900 RF, GRAPHOIL, 316SS	
9	4	6"	GASKET, 1/8" Thk, CL900 RF, GRAPHOIL 316SS	
10	1	2"x1"	THREDOLET, CL6000 FS, SA-105N	57991
11	1	6"x1/2"	THREDOLET, CL6000 FS, SA-105N	58769
12	3	6"x2"	WELDOLET, SCH XS, SA-105	57614
13	2	6"x3/4"	THREDOLET, CL6000 FS, SA-105N	58217

CUT LIST

MARK	QTY	SIZE	DESCRIPTION	LENGTH
1A	1	2"	PIPE, Sch.XS SMLS, SA-106 Gr.B	1'-0 15/16"
1B	1	2"	PIPE, Sch.XS SMLS, SA-106 Gr.B	3 13/16"
1C	1	2"	PIPE, Sch.XS SMLS, SA-106 Gr.B	1'-0 15/16"
1D	1	2"	PIPE, Sch.XS SMLS, SA-106 Gr.B	1'-1 5/16"
2A	1	6"	PIPE, Sch.80 SMLS, SA-106 Gr.B	1'-6 7/16"
2B	1	6"	PIPE, Sch.80 SMLS, SA-106 Gr.B	2'-4 11/16"
2C	1	6"	PIPE, Sch.80 SMLS, SA-106 Gr.B	3'-10 5/8"

DESIGN DATA

DESIGN PRESSURE: 1900 PSIG @ 100°F	DESIGN PRESSURE:
MDMT: -20°F @ 1900 PSIG	MDMT:
CORROSION ALLOWANCE: 1/16"	CORROSION ALLOWANCE:
RADIOGRAPHY: 10% B31.3 NORMAL	RADIOGRAPHY:
PWHT: NO	PWHT:
HYDROTEST: (1.5 x D.P.) 2850 PSIG	HYDROTEST: (1.5 x D.P.)
WPS: PESI-4	WPS:
SPOOL CAPACITY (this page only): 1.44 cu.ft.	
1. PIPING DESIGNED & FABRICATED TO THE LATEST EDITION OF ASME CODE B31.3. 2. ALL BOLT HOLES, WHEN PRESENT, TO STRADDLE CENTERLINES, UNLESS OTHERWISE NOTED. 3. O-LETS ARE SA-105N MATERIAL. 4. SHOP/FIELD CHECK ALL DIMENSIONS. 5. NDE: 10% MPI REQUIRED	

WELD DETAIL 2	WELD DETAIL 3

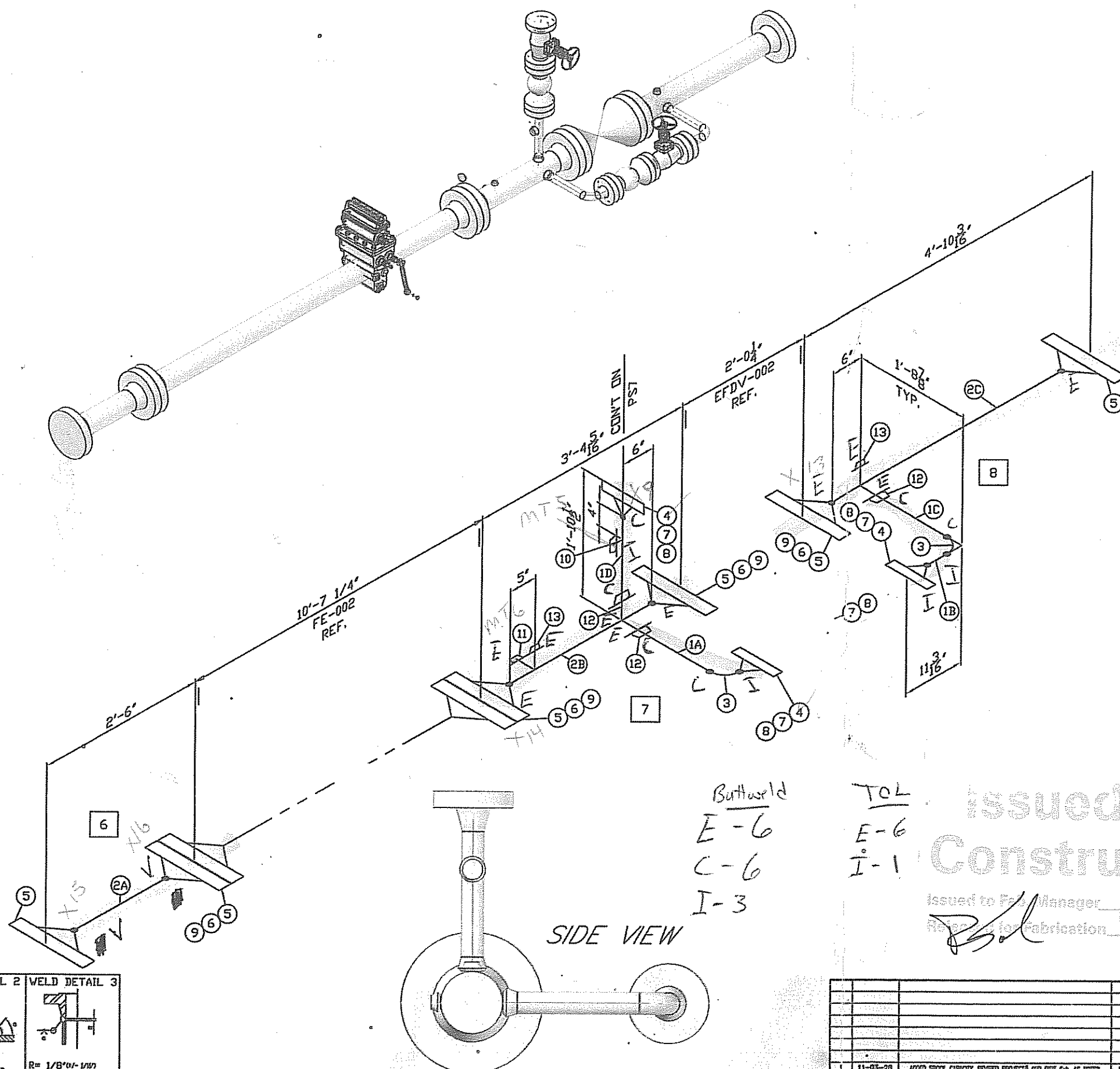
NO.	DATE	REVISIONS	OWN	CHK	APP.
1	11-03-28	ISSUED FOR CONSTRUCTION	PL		
2	11-03-28	ISSUED FOR CONSTRUCTION	PL		

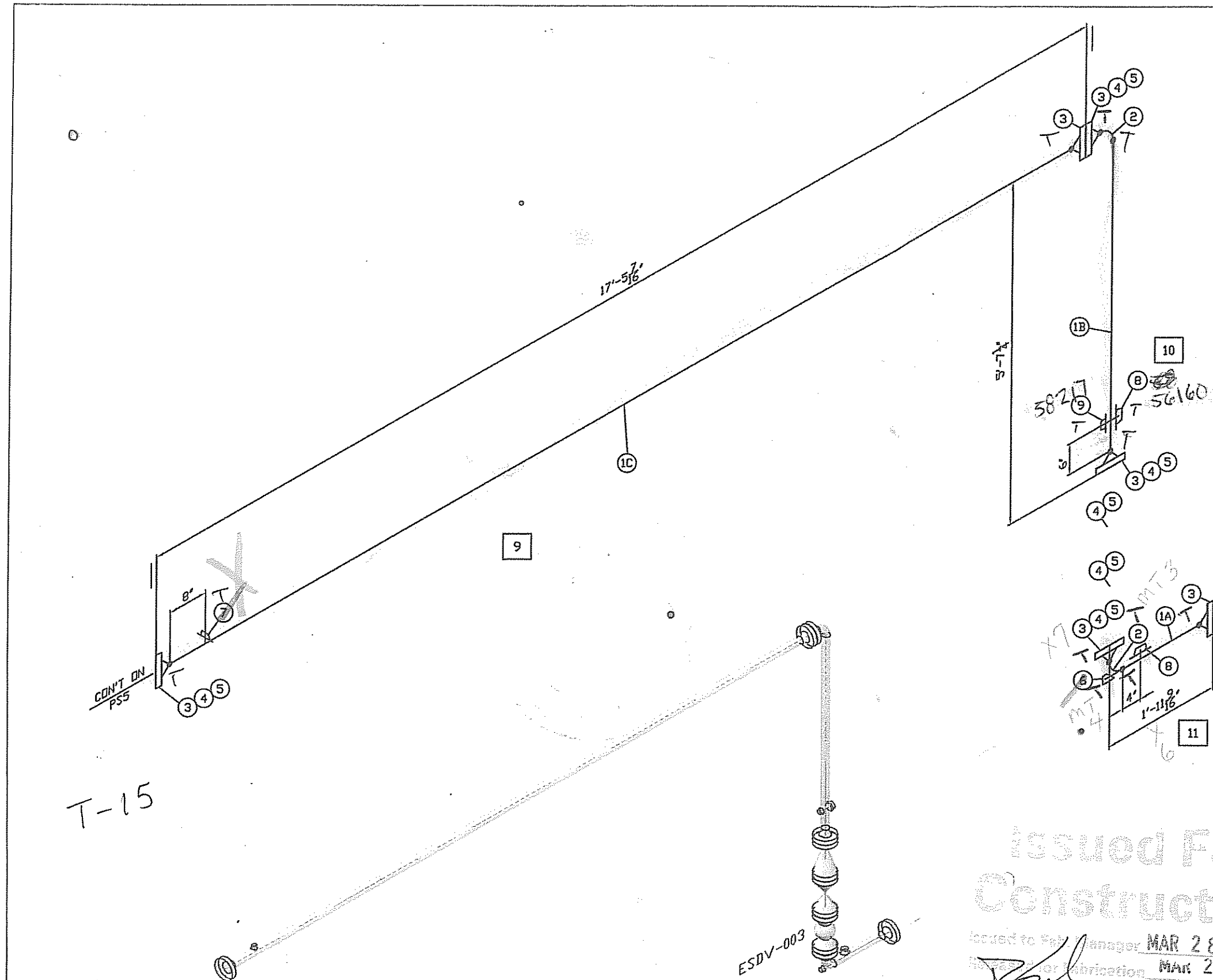
	11-03-10 PES PES N.T.S.	HUSKY OIL OPERATIONS LIMITED LSD: 03-06-049-18 WSM SPOOL DRAWING SWEET SERVICE ESDV AND METERING PACKAGED 6" SALE GAS 1899562PS 1899562PS 3 OF 8 PES-1908577PS3
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Issued For Construction
 Issued to Field Manager
 MAR 28 2011
 MAR 28 2011

Butt weld
 E-6
 C-6
 I-3

SIDE VIEW

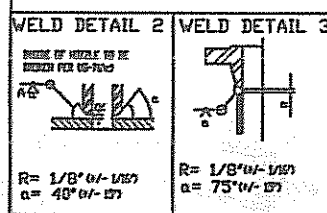




BILL OF MATERIAL				
MARK	QTY	SIZE	DESCRIPTION	LENGTH
1	1	2"	PIPE, Sch.XS SMLS, SA-106 Gr.B	26'-0"
2	2	2"	ELL, 90° LR Sch.XS, SA-234-WPB	12.88
3	6	2"	FLG, RFWN CL600 Sch.XS BDRE, SA-105N	701.98
4	6	5/8"	(8) STUDS SA-193-B7M c/w (2) HEX NUTS SA-194-2HM (2"-CL600)	4 1/4"
5	6	2"	GASKET, 1/8" Thk, CL600 RF, GRAPHDIL 316SS	-
6	1	2"x3/4"	EDL, THRD CL6000 FS, SA-105N	57.547
7	1	2"x1/2"	THREDOLET, CL6000 FS, SA-105N	58.146
8	2	2"x1"	THREDOLET, CL6000 FS, SA-105N	58.146
9	1	2"x3/4"	THREDOLET, CL6000 FS, SA-105N	57.547

CUT LIST				
MARK	QTY	SIZE	DESCRIPTION	LENGTH
1A	1	2"	PIPE, Sch.XS SMLS, SA-106 Gr.B EBM	1'-5 5/16"
1B	1	2"	PIPE, Sch.XS SMLS, SA-106 Gr.B EBM	5'-1"
1C	1	2"	PIPE, Sch.XS SMLS, SA-106 Gr.B EBM	16'-11 1/16"

DESIGN DATA	
SPOOL TAG NO.: 9, 10, 11 --2" FUEL GAS INLET SPOOL TAG NO.:	
DESIGN PRESSURE: 1480 PSIG @ 100°F	DESIGN PRESSURE:
MDMT: -20°F @ 1480 PSIG	MDMT:
CORROSION ALLOWANCE: 1/16"	CORROSION ALLOWANCE:
RADIOGRAPHY: 10% B31.3 NORMAL	RADIOGRAPHY:
PWHT: NO	PWHT:
HYDROTEST: (1.5x D.P.) 2220 PSIG	HYDROTEST: (1.5x D.P.)
WPS: PESI-4	WPS:
SPOOL CAPACITY (this page only): 0.22 cu.ft. Δ	
1. PIPING DESIGNED & FABRICATED TO THE LATEST EDITION OF ASME CODE B31.3. 2. ALL BOLT HOLES, WHEN PRESENT, TO STRADDLE CENTERLINES, UNLESS OTHERWISE NOTED. 3. O-LETS ARE SA-105N MATERIAL. 4. SHOP/FIELD CHECK ALL DIMENSIONS. 5. NDE: 10% MPI REQUIRED	



NO. DATE REVISIONS

1 11-03-28 ADDED SPOOL CAPACITY AND REVISED PROJECT # AS NOTED FL

2 11-03-18 ISSUED FOR CONSTRUCTION FL

Paintearth

ENERGY SERVICES

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11-03-10

DESIGNED BY PES

CHECKED BY PES

APPROVED BY PES

DATE 7. N.T.S.

HUSKY OIL OPERATIONS LIMITED

LSD: 03-06-049-18 WSM

SPOOL DRAWING

SWEET SERVICE ESDV AND METERING PACKAGED

2" FUEL GAS INLET 1

1899562 Δ 1899562PS Δ

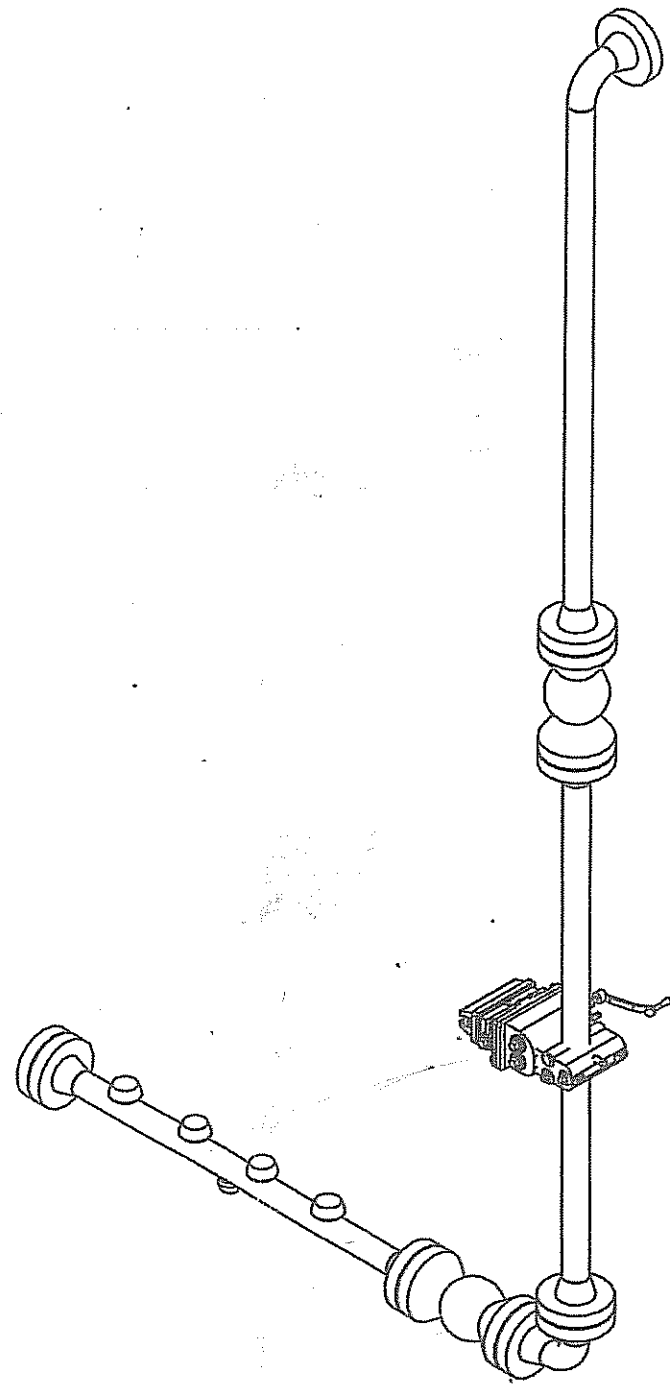
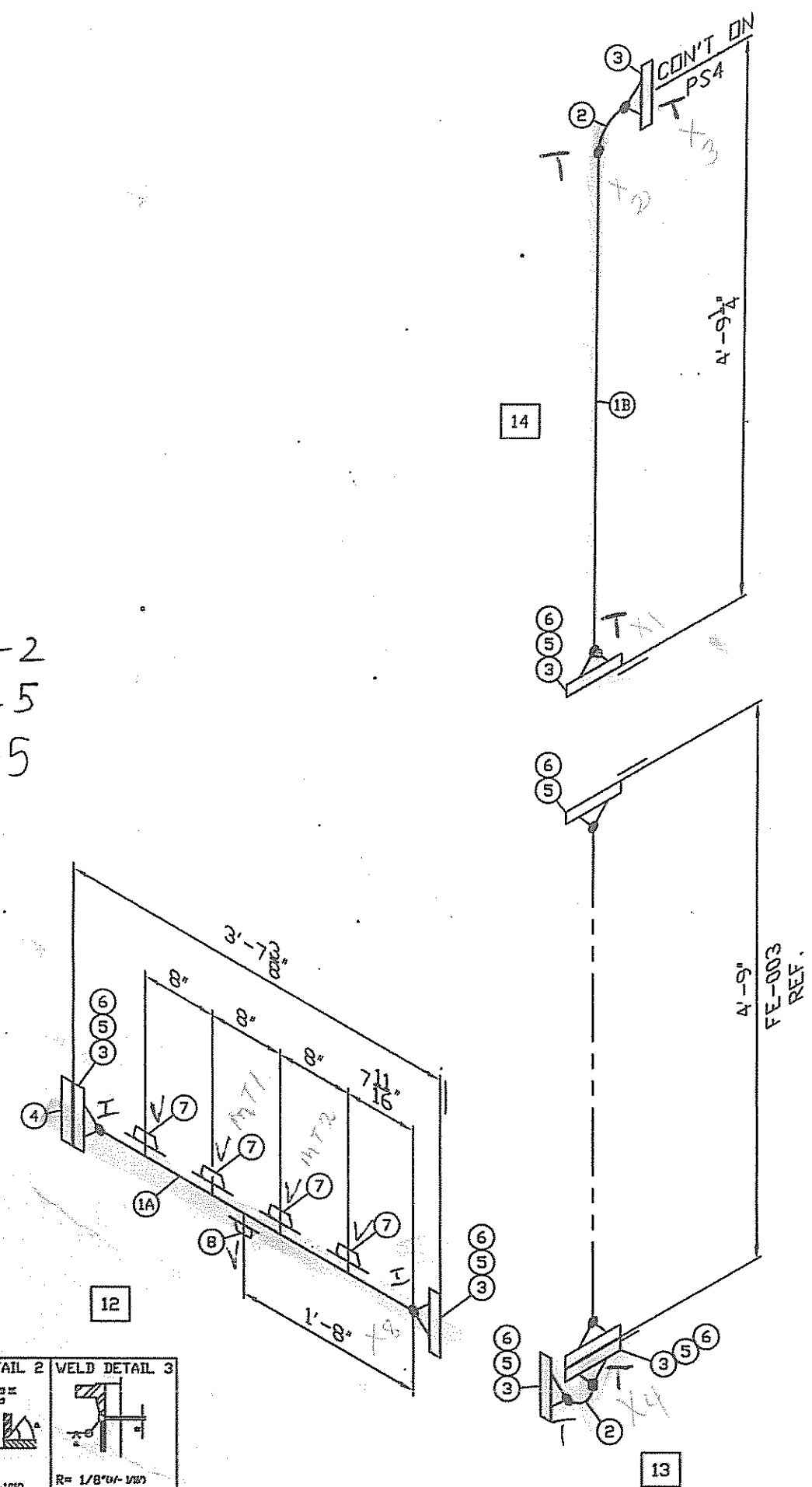
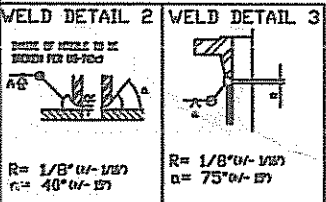
4 OF 8 PES-1903577PS4

Issued For Construction

Issued to Project Manager MAR 28 2011

Issued for Fabrication MAR 28 2011

I-2
V-5
T-5



BILL OF MATERIAL				
MARK	QTY	SIZE	DESCRIPTION	LENGTH
1	1	2'	PIPE, Sch.XS SMLS, SA-106 Gr.B	7'-10'
2	2	2'	ELL, 90° LR Sch.XS, SA-234-WPB	A288
3	6	2'	FLG, RFWN CL600 Sch.XS BDRE, SA-105N	70198
4	1	2'	FLG, RF BLIND CL600, SA-105N	—
5	6	5/8"	(8) STUDS SA-193-B7M c/w (2) HEX NUTS SA-194-2HM (2"-CL600)	4 1/4'
6	6	2'	GASKET, 1/8" Thk, CL600 RF, GRAPHOIL 316SS	—
7	4	2"x1"	THREDDLET, CL6000 FS, SA-105N	57991
8	1	2"x1/2"	THREDDLET, CL6000 FS, SA-105N	55769

CUT LIST				
MARK	QTY	SIZE	DESCRIPTION	LENGTH
1A	1	2'	PIPE, Sch.XS SMLS, SA-106 Gr.B - EISM	3'-1'
1B	1	2'	PIPE, Sch.XS SMLS, SA-106 Gr.B - ERM	4'-3'

Issued For Construction

Issued to Field Manager MAR 28 2011

Approved for Fabrication MAR 28 2011

DESIGN DATA	
SPOOL TAG NO.: 12, 13, 14 --2" FUEL GAS INLET SPOOL TAG NO.:	
DESIGN PRESSURE: 1480 PSIG @ 100°F	DESIGN PRESSURE:
MDMT: -20°F @ 1480 PSIG	MDMT:
CORROSION ALLOWANCE: 1/16"	CORROSION ALLOWANCE:
RADIOGRAPHY: 10% B31.3 NORMAL	RADIOGRAPHY:
PWHT: NO	PWHT:
HYDROTEST: (1.5x D.P.) 2220 PSIG	HYDROTEST: (1.5x D.P.)
WPS: PESI-4	WPS:
SPOOL CAPACITY (this page only): 0.13 cu.ft.	
1. PIPING DESIGNED & FABRICATED TO THE LATEST EDITION OF ASME CODE B31.3. 2. ALL BOLT HOLES, WHEN PRESENT, TO STRADDLE CENTERLINES, UNLESS OTHERWISE NOTED 3. O-LETS ARE SA-105N MATERIAL 4. SHOP/FIELD CHECK ALL DIMENSIONS. 5. NDE: 10% MPI REQUIRED	

Paintearth ENERGY SERVICES

11-03-10

DESIGNED BY PES

CHECKED BY PES

APPROVED BY PES

DATE 11-03-10

NO. DATE

REVISIONS

OWN/CHK'D/APP.

HUSKY OIL OPERATIONS LIMITED

11-03-10

DESIGNED BY PES

CHECKED BY PES

APPROVED BY PES

DATE 11-03-10

NO. DATE

REVISIONS

OWN/CHK'D/APP.

1899562 PS

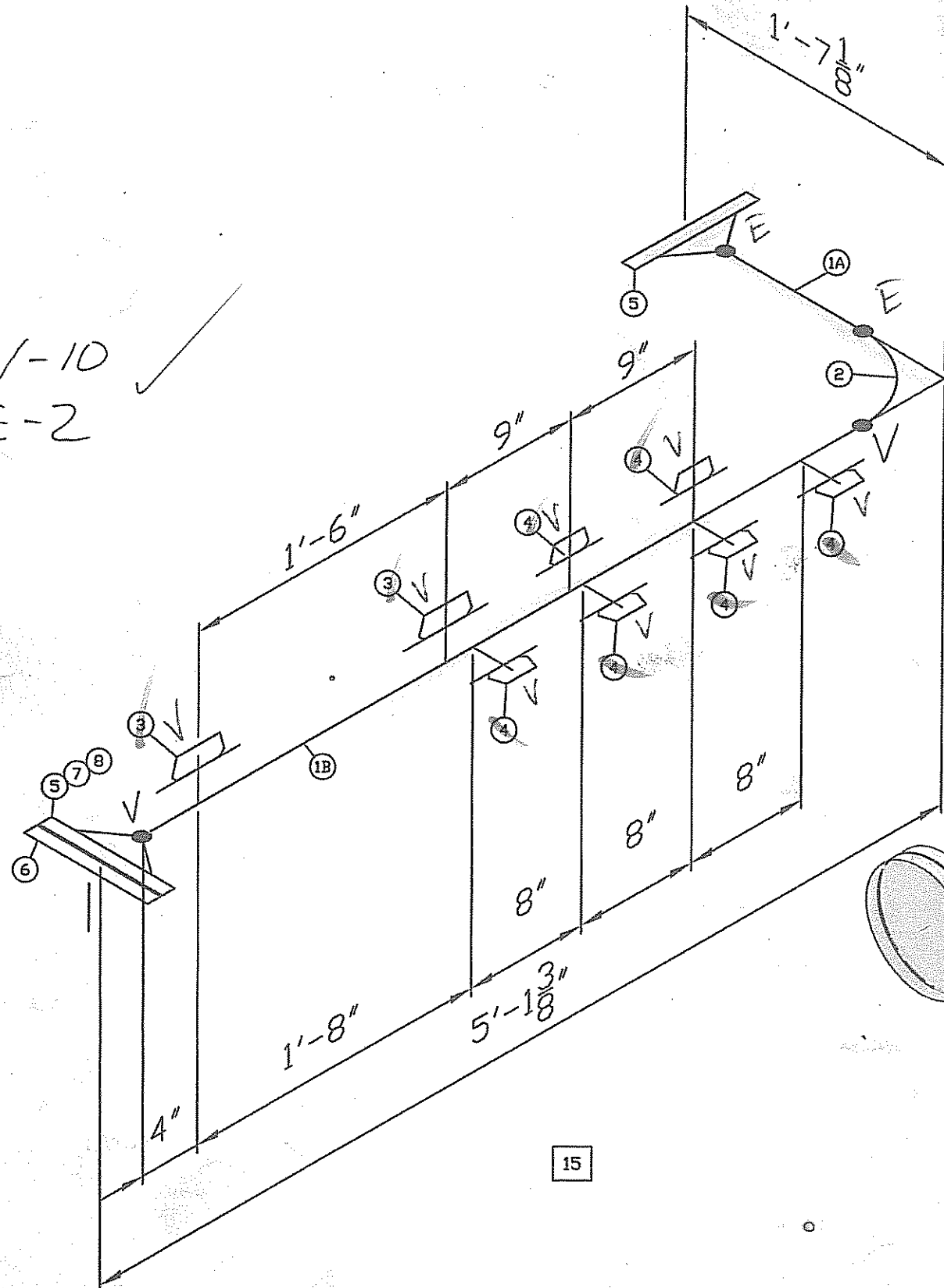
1899562 PS

5 OF 8

PES-180857TPSS

1908577

V-10 ✓
E-2



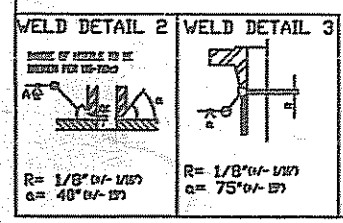
BILL OF MATERIAL				
MARK	QTY	SIZE	DESCRIPTION	LENGTH
1	1	4"	PIPE, Sch.STD SMLS, SA-106 Gr.B	5'-6"
2	1	4"	ELL, 90° LR Sch.STD, SA-234-WPB	10'00002
3	2	4"x2"	THREDOLET, CL3000 FS, SA-105N	57.959
4	6	4"x1"	THREDOLET, CL3000 FS, SA-105N	58.188
5	2	4"	FLG, RFWN CL150 Sch.STD BORE, SA-105N	80.407
6	1	4"	FLG, RF BLIND CL150, SA-105N	
7	1	5/8"	(8) STUDS SA-193-B7M c/w (2) HEX NUTS SA-194-2HM (4"-CL150)	3 3/4"
8	1	4"	GASKET, 1/8" Thk, CL150 RF, GRAPHOIL, 316SS	

CUT LIST				
MARK	QTY	SIZE	DESCRIPTION	LENGTH
1A	1	4"	PIPE, Sch.STD SMLS, SA-106 Gr.B DGN	10'
1B	1	4"	PIPE, Sch.STD SMLS, SA-106 Gr.B DGN	4'-4 3/16"

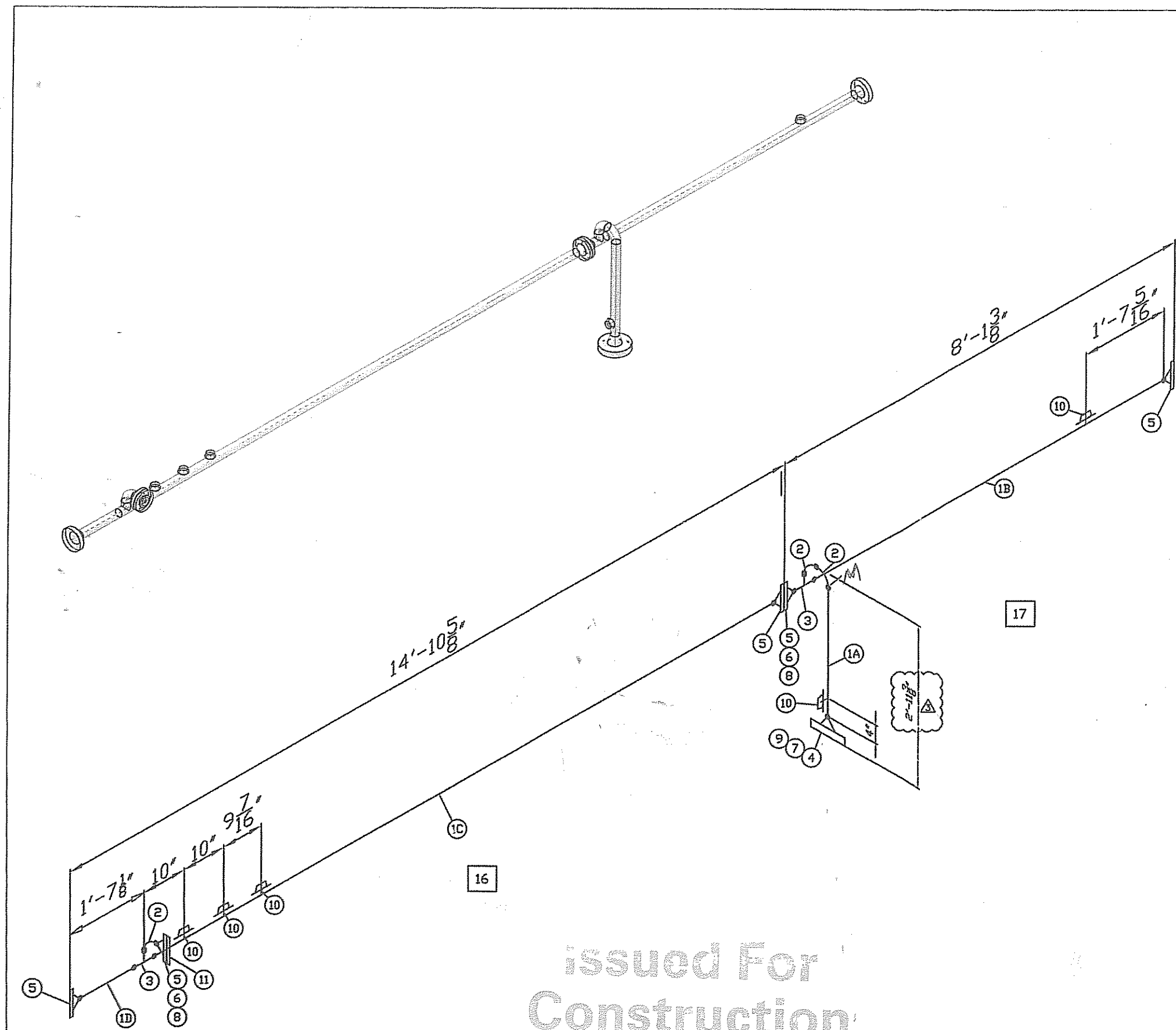
DESIGN DATA	
SPOOL TAG NO.: 15 --4" FUEL GAS OUTLET	SPOOL TAG NO.:
DESIGN PRESSURE: 285 PSIG @ 100°F	DESIGN PRESSURE:
MDMT: -20°F @ 285 PSIG	MDMT:
CORROSION ALLOWANCE: 1/16"	CORROSION ALLOWANCE:
RADIOGRAPHY: 10% B31.3 NORMAL	RADIOGRAPHY:
PWHT: NO	PWHT:
HYDROTEST: (1.5x D.P.) 428 PSIG	HYDROTEST: (1.5x D.P.)
WPS: PESI-4	WPS:
SPOOL CAPACITY (this page only): 0.14 cu.ft. ⚠	
1. PIPING DESIGNED & FABRICATED TO THE LATEST EDITION OF ASME CODE B31.3. 2. ALL BOLT HOLES, WHEN PRESENT, TO STRADDLE CENTERLINES, UNLESS OTHERWISE NOTED. 3. O-LETS ARE SA-105N MATERIAL. 4. SHOP/FIELD CHECK ALL DIMENSIONS. 5. NDE: 10% MPI REQUIRED	

Issued For
Construction

Issued to Feb. Manager
Released for Fabrication
MAR 28 2011
MAR 28 2011



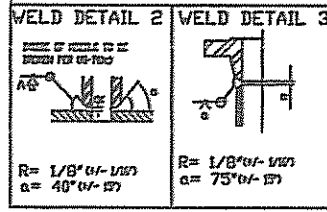
Paintearth ENERGY SERVICES				HUSKY OIL OPERATIONS LIMITED	
11-03-10				LSD: 03-06-049-18 WSM	
PES				SPOOL DRAWING	
PES/1				SWEET SERVICE ESQV AND METERING PACKAGED	
67				2" FLARE HEADER	
1899562				1899562PS	
N.T.S.				6 OF 8	
PES-1808577P66					



BILL OF MATERIAL				
MARK	QTY	SIZE	DESCRIPTION	LENGTH
1	1	2"	PIPE, Sch.STD SMLS, SA-106 Gr.B	25'-6"
2	3	2"	ELL, 90° LR Sch.STD, SA-234-WPB	
3	2	2"	TEE, STR. Sch.STD, SA-234-WPB	
4	1	2"	FLG, RFVN CL900 Sch.STD BDRE, SA-105N	
5	5	2"	FLG, RFVN CL150 Sch.STD BDRE, SA-105N	
6	2	5/8"	(4) STUDS SA-193-B7M c/w (2) HEX NUTS SA-194-2HM (2"-CL150)	3 1/4"
7	1	7/8"	(8) STUDS SA-193-B7M c/w (2) HEX NUTS SA-194-2HM (2"-CL900)	5 1/2"
8	2	2"	GASKET, 1/8" Thk, CL150 RF, GRAPHOIL, 316SS	
9	1	2"	GASKET, 1/8" Thk, CL900 RF, GRAPHOIL, 316SS	
10	5A	2"x1"	THREDDLET, CL3000 FS, SA-105N	
11	1	2"	FLG, RF THRD CL150, SA-105N	

CUT LIST				
MARK	QTY	SIZE	DESCRIPTION	LENGTH
1A	1	2"	PIPE, Sch.STD SMLS, SA-106 Gr.B	2'-4"
1B	1	2"	PIPE, Sch.STD SMLS, SA-106 Gr.B	7'-3 3/16"
1C	1	2"	PIPE, Sch.STD SMLS, SA-106 Gr.B	12'-10 1/4"
1D	1	2"	PIPE, Sch.STD SMLS, SA-106 Gr.B	1'-2"

DESIGN DATA	
SPOOL TAG NO.: 16, 17 --2" FLARE HEADER	SPOOL TAG NO.:
DESIGN PRESSURE: 285 PSIG @ 100°F	DESIGN PRESSURE:
MDMT: -20°F @ 285 PSIG	MDMT:
CORROSION ALLOWANCE: 1/16"	CORROSION ALLOWANCE:
RADIOGRAPHY: 10% B31.3 NORMAL	RADIOGRAPHY:
PWHT: NO	PWHT:
HYDROTEST: (1.5x D.P.) 428 PSIG	HYDROTEST: (1.5x D.P.)
WPS: PESI-4	WPS:
SPOOL CAPACITY (this page only): 0.2 cu.ft. A	
1. PIPING DESIGNED & FABRICATED TO THE LATEST EDITION OF ASME CODE B31.3. 2. ALL BOLT HOLES, WHEN PRESENT, TO STRADDLE CENTERLINES, UNLESS OTHERWISE NOTED. 3. O-LETS ARE SA-105N MATERIAL. 4. SHOP/FIELD CHECK ALL DIMENSIONS. 5. NDE: 10% MPI REQUIRED	

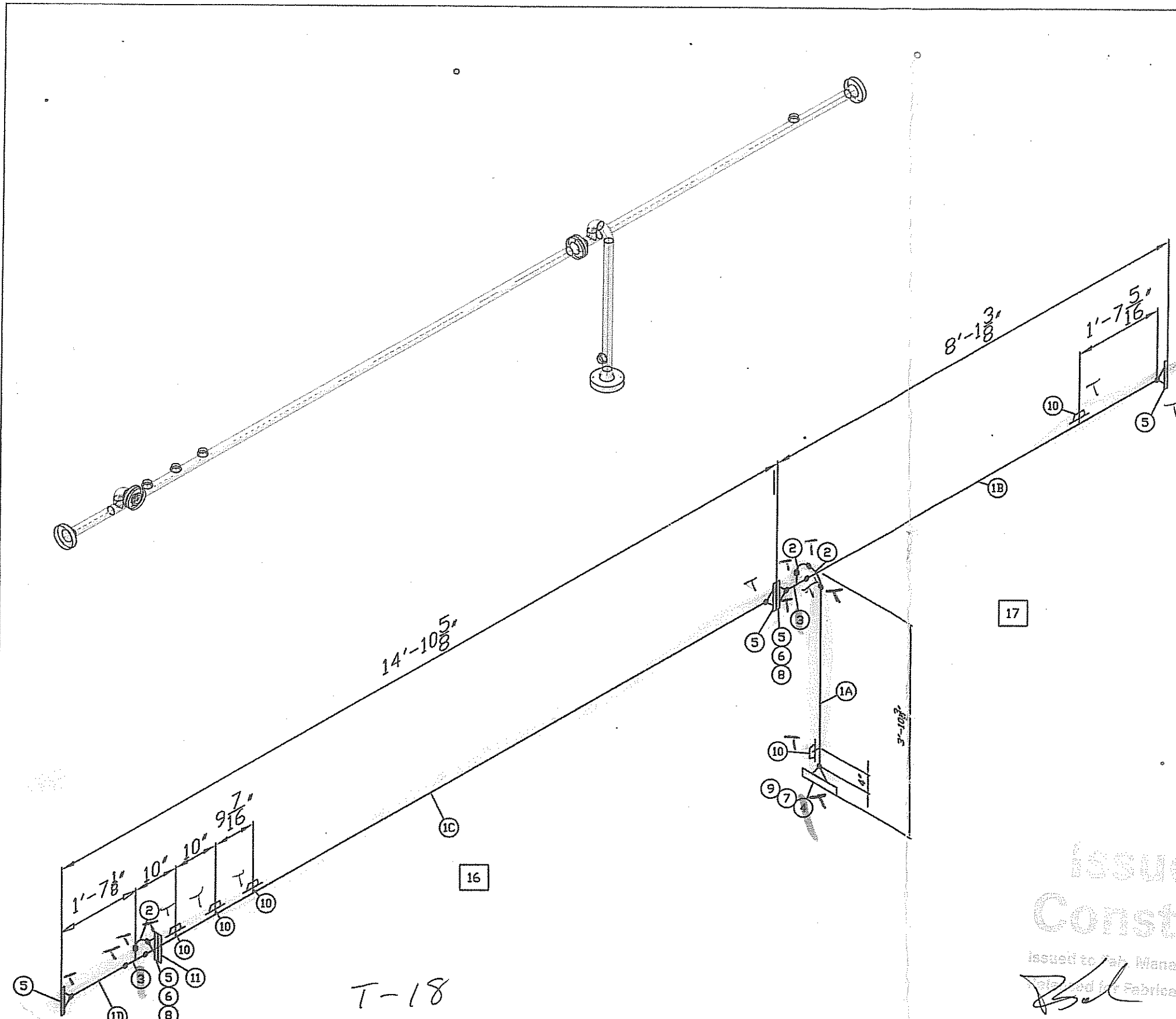


issued For
Construction

Issued to: Fm. Manager
Released for fabrication

APR 07 2011
APR 07 2011

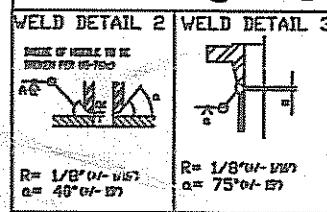
Paintearth ENERGY SERVICES		HUSKY OIL OPERATIONS LIMITED	
NO.	DATE	NO.	DATE
3	11-04-09	11-03-10	
2	11-03-28		
1	11-03-22		
0	11-03-18		
ITEM 1A LENGTH WAS 3'-3"		LSD: 03-06-049-18 WSM	
ADDED SPOOL CAPACITY AS NOTED		SPOOL DRAWING	
ITEM 10 WAS QTY. 6 AND REVISED PROJECT # AS NOTED		SWEET SERVICE ESDV AND METERING PACKAGED	
ISSUED FOR CONSTRUCTION		2" FLARE HEADER	
REVISIONS		1899562PS	
DWN CHK'D APP.		1899562PS	
THIS DRAWING IS THE PROPERTY OF PAINTHEARTH ENERGY SERVICES. ANY UNAUTHORIZED USE OR REPRODUCTION OF THIS DESIGN OR DRAWING WITHOUT WRITTEN AUTHORIZATION IS STRICTLY PROHIBITED.		N.T.S.	
		7 OF 8	
		PES-1808577PS7	



BILL OF MATERIAL				
MARK	QTY	SIZE	DESCRIPTION	LENGTH
1	1	2"	PIPE, Sch.STD SMLS, SA-106 Gr.B	25'-6"
2	3	2"	ELL, 90° LR Sch.STD, SA-234-WPB	06155
3	2	2"	TEE, STR. Sch.STD, SA-234-WPB	38034
4	1	2"	FLG, RFWN CL900 Sch.STD BDRE, SA-105N	189A4
5	5	2"	FLG, RFWN CL150 Sch.STD BDRE, SA-105N	21374
6	2	5/8"	(4) STUDS SA-193-B7M c/w (2) HEX NUTS SA-194-2HM (2"-CL150)	3 1/4"
7	1	7/8"	(8) STUDS SA-193-B7M c/w (2) HEX NUTS SA-194-2HM (2"-CL900)	5 1/2"
8	2	2"	GASKET, 1/8" Thk, CL150 RF, GRAPHOIL, 316SS	1
9	1	2"	GASKET, 1/8" Thk, CL900 RF, GRAPHOIL, 316SS	1
10	5A	2"x1"	THREDDLET, CL3000 FS, SA-105N	58141
11	1	2"	FLG, RF THRD CL150, SA-105N	-

CUT LIST				
MARK	QTY	SIZE	DESCRIPTION	LENGTH
1A	1	2"	PIPE, Sch.STD SMLS, SA-106 Gr.B	3'-3"
1B	1	2"	PIPE, Sch.STD SMLS, SA-106 Gr.B	7'-3 3/16"
1C	1	2"	PIPE, Sch.STD SMLS, SA-106 Gr.B	12'-10 1/4"
1D	1	2"	PIPE, Sch.STD SMLS, SA-106 Gr.B	1'-2"

DESIGN DATA	
SPOOL TAG NO.: 16, 17 --2" FLARE HEADER SPOOL TAG NO.:	
DESIGN PRESSURE: 285 PSIG @ 100°F	DESIGN PRESSURE:
MDMT: -20°F @ 285 PSIG	MDMT:
CORROSION ALLOWANCE: 1/16"	CORROSION ALLOWANCE:
RADIOGRAPHY: 10% B31.3 NORMAL	RADIOGRAPHY:
PWHT: NO	PWHT:
HYDROTEST: (1.5x D.P.) 428 PSIG	HYDROTEST: (1.5x D.P.)
WPS: PESI-4	WPS:
SPOOL CAPACITY (this page only): 0.2 cu.ft. A	
1. PIPING DESIGNED & FABRICATED TO THE LATEST EDITION OF ASME CODE B31.3. 2. ALL BOLT HOLES, WHEN PRESENT, TO STRADDLE CENTERLINES, UNLESS OTHERWISE NOTED. 3. O-LETS ARE SA-105N MATERIAL. 4. SHOP/FIELD CHECK ALL DIMENSIONS. 5. NDE: 10% MPI REQUIRED	



NO.	DATE	REVISIONS	OWN	CHK	APP.
2	11-03-28	ADDED SPOOL CAPACITY AS NOTED	PL		
1	11-03-22	ITEM 10 WAS QTY. 6 AND REVISED PROJECT # AS NOTED	PL		
C	11-03-18	ISSUED FOR CONSTRUCTION	PL		

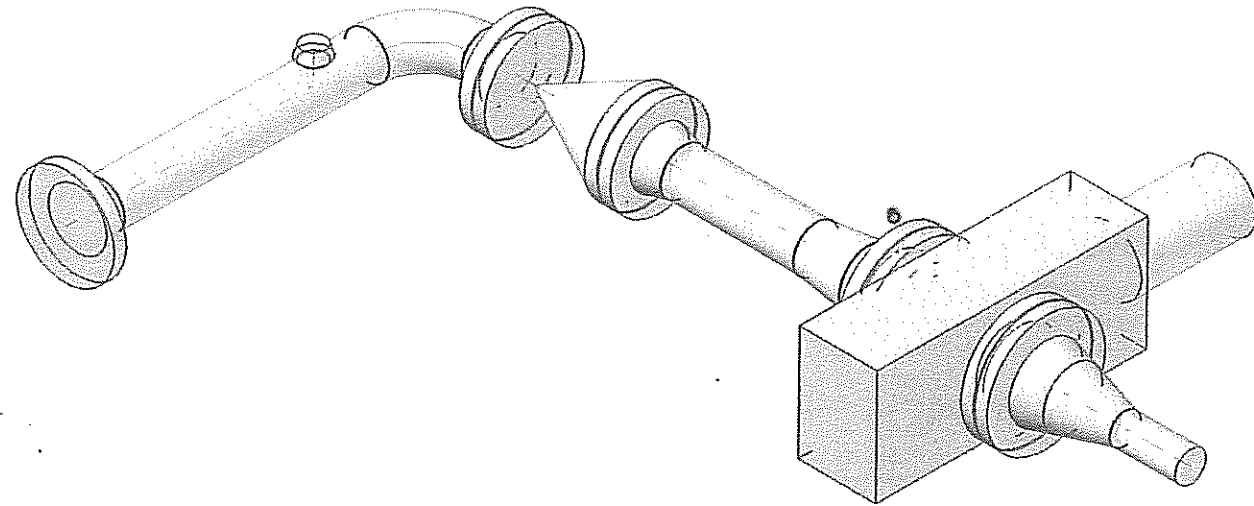
Paintearth
ENERGY SERVICES

DATE: 11-03-10
DESIGNED BY: PES
CHECKED BY: PES
APPROVED BY: [Signature]
PROJECT NO.: 1899562
SHEET NO.: 7 OF 8
N.T.S.

HUSKY OIL OPERATIONS LIMITED
LSD: 03-06-049-18 WSM
SPOOL DRAWING
SWEET SERVICE ESDV AND METERING PACKAGED
2" FLARE HEADER
1899562PSA
PES-1908577P57

Issued For Construction
Issued to Job Manager
MAR 28 2011
Issued for Fabrication
MAR 28 2011

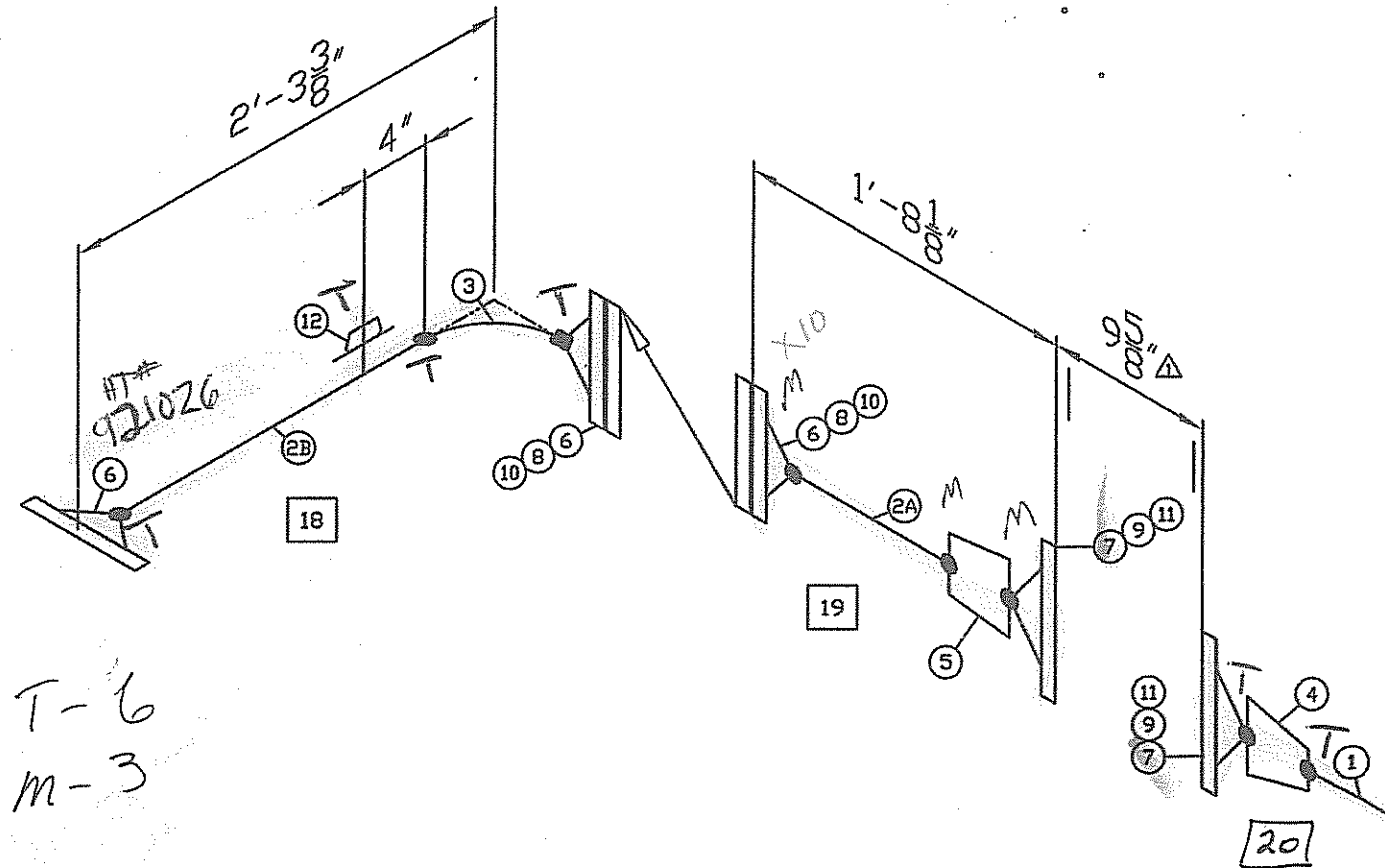
1908577



BILL OF MATERIAL				
MARK	QTY	SIZE	DESCRIPTION	LENGTH
1	1	2'	PIPE, Sch.XS SMLS, SA-106 Gr.B BOE-TDE	5'
2	1	3'	PIPE, Sch.STD SMLS, SA-106 Gr.B	2'-10"
3	1	3'	ELL, 90° LR Sch.STD, SA-234-WPB	53N00118
4	1	4"x2'	REDUCER, CONC Sch.STDXSch.XS, SA-234-WPB	10N20015
5	1	4"x3'	REDUCER, CONC Sch.STD, SA-234-WPB	10N20013
6	3	3'	FLG, RFWN CL150 Sch.STD BORE, SA-105N	57370
7	2	4'	FLG, FF CL150 Sch.STD BORE, SA-105N	09/79424
8	2	5/8"	(4) STUDS SA-193-B7M c/w (1) HEX NUTS SA-194-2HM (3'-CL150)	3 1/2'
9	2	5/8"	(8) BOLT 5/8"-11 UNC-2B X 2.375' LONG SA-193-B7M c/w ONE(1) WASHER AND ONE(1) LOCK WASHER EA.	2 3/8'
10	2	3'	GASKET, 1/8" Thk, CL150 RF, GRAPHOIL, 316SS	
11	2	4'	FULL FACE GASKET, 1/8" Thk, CL150 RF, GRAPHOIL, 316SS	
12	1	3"x3/4"	THREDDLET, CL3000 FS, SA-105N	57261

3-M
6-T

CUT LIST				
MARK	QTY	SIZE	DESCRIPTION	LENGTH
1	1	2'	PIPE, Sch.XS SMLS, SA-106 Gr.B BOE-TDE EBM	5'
2A	1	3'	PIPE, Sch.STD SMLS, SA-106 Gr.B EAG	10 3/16"
2B	1	3'	PIPE, Sch.STD SMLS, SA-106 Gr.B EAG	1'-8"



Issued For
Construction
Issued to Project Manager
for fabrication
MAR 28 2011

DESIGN DATA	
SPOOL TAG NO.: 18, 19 GAS ASSIST	SPOOL TAG NO.:
DESIGN PRESSURE: 285 PSIG @ 100°F	DESIGN PRESSURE:
MDMT: -20°F @ 285 PSIG	MDMT:
CORROSION ALLOWANCE: 1/16"	CORROSION ALLOWANCE:
RADIOGRAPHY: 10% B31.3 NORMAL	RADIOGRAPHY:
PWHT: NO	PWHT:
HYDROTEST: (1.5x D.P.) 428 PSIG	HYDROTEST: (1.5x D.P.)
WPS: PESI-4	WPS:
SPOOL CAPACITY (this page only): 0.1 cu.ft.	
1. PIPING DESIGNED & FABRICATED TO THE LATEST EDITION OF ASME CODE B31.3. 2. ALL BOLT HOLES, WHEN PRESENT, TO STRADDLE CENTERLINES, UNLESS OTHERWISE NOTED. 3. O-LETS ARE SA-105N MATERIAL. 4. SHOP/FIELD CHECK ALL DIMENSIONS. 5. NDE: 10% MPI REQUIRED	

WELD DETAIL 2	WELD DETAIL 3
R= 1/8" (A-VIS) α= 40° (A-VIS)	R= 1/8" (A-VIS) α= 75° (A-VIS)

Paintearth ENERGY SERVICES		HUSKY OIL OPERATIONS LIMITED	
11-03-10		LSD: 03-08-049-18 WSM	
PES		SPOOL DRAWING	
PES		SWEET SERVICE ESDV AND METERING PACKAGED	
PES		3" GAS ASSIST TO FLARE	
1899562		1899562P5	
8 OF 8		PES-1908577P5	

RADIATION SOURCE

Isotope: IR.192

Focal Spot Size 3.8mm

Screens: Lead

Front: .010" Back: .010"

INVOICE NUMBER

37008

FILM CHARGES

☐ X
☐ X
☐ X
☐ X
☐ X

SHEET CHARGES

☐ 4 1/2 X 17
☐ 14 X 17
☐ 7 X 17

Technician: CLAYTON RAMSTAD
Helper: CLAYTON RAMSTAD
Devlin Haley
SNT LII
CGSB.48.9712 LII
Reg # 11581

Total	Regular	OT	KM
5 1/2	5 1/2		40

RADIOGRAPHIC INTERPRETATION REPORT



STETTNER, AB
(403) 742-4868
Fax (403) 742-4858

LACOMBE, AB
(403) 782-7855
Fax (403) 782-0260

BROOKS, AB
(403) 501-8929
Fax (403) 362-7862

☒ Check if Applicable

WELD DEFECTS

1. Slight 2. Moderate 3. Severe

Report#: 77068

Date: April 4/11 Page 1 of 1

Client: HUSKY C/O PAINTEARTH ENERGY

Inspector

Print

Inspector

Sign:

P.O.#:

A.F.E.#:

O.C.#:

Job#: 1908577

Ser.#:

Contractor:

Items Inspected:

PRODUCTION PIPING

Code: ASME B31.3 Normal

Field Weld Number(s)		Size	Wall Thickness	No. Of Exposures	Welder Symbol	Material C.S. Carbon Steel S.T. Stainless	Hunt Q.C. Procedure No.	Source to Object Distance	Object to Film Distance	Film Brand and Class	Penetrometer & Placement F.S. Film Side S.S. Source Side	Single Wall Exposure	Double Wall Exposure	Single Wall Viewing	Double Wall Viewing	Window	Crack	Undercut	Slag	Lack of Fusion	Concave Bead	Irregular Penetration	Loose	Porosity	Low Cover	Burn Through	Crater	High Low	Hollow Bead	Gas Pocket	Suck Back	Excess Penetration	Other	Location: PAINT EARTH FACILITIES	Remarks	Accept	Reject
1																																					
2	X. 1	2"	.218"	3	T	C.S. P11.4.3	2"	.280"	Q4	AGFA ASTA IAFS		✓	✓																								
3	2				T																																
4	3				T																																
5	4				T																																
6	5				T																																
7	6				T																																
8	7				T																																
9	8				H																																
10	9	↓	↓		C			↓	↓																												
11	10	3"	.216"		M			3"	.238"	↓	↓																										
12	11	6"	.432"		G			6"	.557"	Q5	IBFS																										
13	12				F																																
14	13				F																																
15	14				F																																
16	15				✓																																
17	16				✓																																
18	17				X																																
19	18	↓	↓	↓	G		↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		
20																																					
21																																					
22																																					
23																																					
24																																					
25																																					

Reviewed

APR 5/14

Stamp 01

Stamp 02

Stamp 03

Stamp 04

Stamp 05

Stamp 06

Stamp 07

Stamp 08

Stamp 09

Stamp 10

Stamp 11

Stamp 12

Stamp 13

Stamp 14

Stamp 15

Stamp 16

Stamp 17

Stamp 18

Stamp 19

Stamp 20

Stamp 21

Stamp 22

Stamp 23

Stamp 24

Stamp 25

Reviewed
APR 5/11
[Signature]

AK

RADIATION SOURCE

Isotope: IR.192

Focal Spot Size 3.8mm

Screens: Lead

Front: .010" Back: .010"

INVOICE NUMBER

37017

FILM CHARGES

☐ ☐ X
☐ ☐ X
☐ ☐ X
☐ ☐ X

SHEET CHARGES

☐ 4 1/2 X 17
☐ 14 X 17
☐ 7 X 17

Technician: JASON WIEBE

Helper: JASON WIEBE

Devin Haley
SNT LII
CGSB.48.9712 LII
Reg # 11581

Total	Regular	OT	KM
1	1		24

RADIOGRAPHIC INTERPRETATION REPORT



STETTLER, AB (403) 742-4868 Fax (403) 742-4858
LACOMBE, AB (403) 782-7855 Fax (403) 782-0260
BROOKS, AB (403) 501-8029 Fax (403) 362-7862

☒ Check if Applicable

WELD DEFECTS

1. Slight 2. Moderate 3. Severe

Report#: 77092

Date: APR 12/11 Page 1 of 1

Client: HUSKY C/O

PAINT EARTH ENERGY SERVICES INC.

Inspector

Print

Inspector

Sign:

P.O.#: _____

A.F.E.#: _____

Q.C.#: _____

Job#: 1908577

Ser.#: _____

Contractor: _____

Items Inspected: _____

PRODUCTION PIPING

Code: ASME B31.3 NORMAL

Field Weld Number(s)	Size	Wall Thickness	No. Of Exposures	Welder Symbol	Material C.S. Carbon Steel S.T. Stainless	Hunt Q.C. Procedure No.	Source to Object Distance	Object to Film Distance	Film Brand and Class	Penetrameter & Placement F.S. Film Side S.S. Source Side	Single Wall Exposure	Double Wall Exposure	Single Wall Viewing	Double Wall Viewing	Window	Crack	Undercut	Slag	Lack of Fusion	Concave Bead	Incomplete Penetration	Idios	Porosity	Low Cover	Burn Through	Crater	High Low	Hollow Bead	Gas Pocket	Suck Back	Excess Penetration	Other	Location:	Accept	Reject
																																	PAINT EARTH FACILITIES		
Remarks																																			
1																																			1
2																																			2
3	X. 19	2"	.218"	3 m	C.S. Rm. 4.3	2"	.280"		AGFA ASTIN D4 IAFS		✓	✓																						✓	3
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Reviewed
Apr. 11 / 11

Reviewed
Apr. 11/11
[Signature]

PRESSURE TEST / CERTIFICATE

ISSUED		1908577		PACKAGE # 1899655		DATE		APR 18 / 11.	
LOCATION ISSUED		Paintearth Shop				DUSKY,			
DESIGN PRESSURE		TEST PRESSURE REQUIRED		GAUGE NO'S USED:					
1900 psi		2850 psi		Two (2)					
TEST HOLD TIME REQUIRED				ID NO:		RANGE:			
60 Minutes				PI-2118		0 - 6000 psi			
TEST MEDIUM				MEDIUM TEMPERATURE REQUIRED					
H ₂ O				50°F					
PRESSURE INCREASE NOT TO EXCEED				1,000		kPa / MINUTE			
DESCRIPTION EQUIPMENT / SYSTEM									
HYDRO TEST ONE (1) ESDV & METERING PACKAGE									
* 6" & 2" SCH 80 CL 900 WELDED SALE GAS SPOOLS (Spools # 6,7,8) Page 3									
NOTES:									
1. EQUIPMENT / SYSTEM TO BE INSPECTED BY QUALITY CONTROL REPRESENTATIVE AND AUTHORIZED INSPECTOR BEFORE HYDROSTATIC TEST.									
2. SEAL ALL NOZZLES USING BLANK FLANGES AND GASKETS - NO GREASE OR OTHER COMPOUNDS TO BE APPLIED TO GASKET SURFACE.									
3. COUPLINGS AND WELD-O-LETS ETC. TO BE PLUGGED AND TEFLON TAPE OR WHITELEAD MIXTURE MAY BE USED FOR SEALING.									
4. PROVIDE AT LEAST ONE (1) VENT OPENING AT HIGHEST POINT DURING FILLING.									
5. WATER TEMPERATURES SHOULD BE AS SPECIFIED BUT NOT LESS THAN 50°F OR MORE THAN 120°F FOR ALLOY STEELS.									
6. ONE PRESSURE GAUGE SHALL BE USED ON THE TEST PIECE AND ONE GAUGE ON THE PUMP.									
7. TEST GAUGES SHOULD SHOW CALIBRATION DATE WITHIN 12 MONTHS OF DATE OF USE.									
8. TEST PRESSURE SHOULD BE HELD AS SPECIFIED BEFORE VIEWING.									
CONTRACTOR					OWNER				
Paintearth Energy Services Inc.									
PRINT OR TYPE NAME HERE					DATE				
APR 18 / 11.									
WITNESSED BY					WITNESSED BY				
DATE					DATE				
APR 18 / 11.					APR 18 / 11				
FIELD TEST COMPLIANCE CERTIFICATE									
This is to certify the above listed equipment / system was tested as stated above and not witnessed by the Authorized Inspector									
WITNESSED BY			DATE		SIGNATURE			OF OWNER	
								QUALITY ASSURANCE	



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PH: 780-451-6888 FAX: 780-451-6878



DEADWEIGHT CERTIFICATION REPORT

CUSTOMER NAME: Paintearth Energy Services
PO ORDER # 58644
SERIAL # PI/2118
MANUFACTURER: CPW
DIAL SIZE: 4 1/2"
PRESSURE RANGE: 6000 psi/40000 kPa
SUB DIVISIONS: 100 psi
CONNECTION: 1/2"
INSPECTOR: Scott Culver

AMBIENT TEMPERATURE: 21C
MODEL: 502
TESTING DEVICE: Deadweight
TEST MEDIUM: Oil
MAXIMUM ERROR: 25 psi
DATE: May 10, 2010
LOCATION TESTED: #100, 7503 Girard Rd.
EDMONTON, ALBERTA
T6B 2H2

Deadweight Tester: Ashcroft Model 1305B Serial Number GN 118

The Ashcroft Deadweight Tester was calibrated against a Chandler Model 23-145, S/N 21270 Deadweight Tester traceable through Institute for National Measurement Standards (I.N.M.S.) Ottawa, Canada, Report Number MS-214-A

<u>READING</u>	<u>DEADWEIGHT</u>	<u>GAUGE READING</u>
<u>NO.</u>	<u>psi</u>	<u>psi</u>
1	1000	1000
2	2000	2000
3	3000	3000
4	4000	4000
5	5000	5000
6	6000	6025



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DEADWEIGHT CERTIFICATION REPORT

CUSTOMER NAME: Flint Process Systems Ltd.

PO ORDER # Verbal

AMBIENT TEMPERATURE: 21C

SERIAL # PI/1068

MODEL: 502

MANUFACTURER: CPW

TESTING DEVICE: Deadweight

DIAL SIZE: 4 1/2"

TEST MEDIUM: Oil

PRESSURE RANGE: 6000 psi/40000 kPa MAXIMUM ERROR: 25 psi

SUB DIVISIONS: 100 psi

DATE: March 8, 2011

CONNECTION: 1/2"

LOCATION TESTED: #100, 7503 Girard Rd.

INSPECTOR: Scott Culver

EDMONTON, ALBERTA

T6B 2H2

Deadweight Tester: Ashcroft Model 1305B Serial Number GN 118

The Ashcroft Deadweight Tester was calibrated against a Chandler Model 23-145, S/N 21270 Deadweight Tester traceable through Institute for National Measurement Standards (I.N.M.S.) Ottawa, Canada, Report Number MS-214-A

<u>READING</u>	<u>DEADWEIGHT</u>	<u>GAUGE READING</u>
<u>NO.</u>	<u>psi</u>	<u>psi</u>
1	1000	1000
2	2000	2000
3	3000	3000
4	4000	4000
5	5000	5000
6	6000	6025

PAINT EARTH ENERGY SERVICES INC.

PRESSURE TEST / CERTIFICATE

ISSUED 1908577 <i>PACKAGE # 1899655</i>		DATE <i>APR 18/11.</i>	
LOCATION ISSUED Paintearth Shop		<i>Husky.</i>	
DESIGN PRESSURE 1480 psi	TEST PRESSURE REQUIRED 2220 psi	GAUGE NO'S USED: <i>PI-716</i> <i>Four (4) Two (2) PI-2117</i>	
TEST HOLD TIME REQUIRED 60 Minutes		ID NO: <i>PI-1855</i>	RANGE:
		ID NO: <i>PI-1065</i>	0 - 6000 psi
TEST MEDIUM H₂O	MEDIUM TEMPERATURE REQUIRED 50°F		
PRESSURE INCREASE NOT TO EXCEED 1,000 kPa / MINUTE			
DESCRIPTION EQUIPMENT / SYSTEM			
HYDRO TEST ONE (1) ESDV & METERING PACKAGE			
<i>*12" & 2" SCH 80 CL 600 WELDED GAS INLET SPOOLS (Spools # 1 & 2) Page 1</i>			
<i>* 6" & 2" SCH 80 CL 600 WELDED PIGGING SPOOLS (Spools # 3,4,5) Page 2</i>			
<i>* 2" SCH 80 CL 600 WELDED FUELGAS INLET 1 SPOOLS (Spools # 9,10,11) Page 4</i>			
<i>* 2" SCH 80 CL 600 WELDED FUELGAS INLET 2 SPOOLS (Spools # 12,13,14) Page 5</i>			
<i>1" SCH 160 THREADED PIPING.</i>			
NOTES:			
1. EQUIPMENT / SYSTEM TO BE INSPECTED BY QUALITY CONTROL REPRESENTATIVE AND AUTHORIZED INSPECTOR BEFORE HYDROSTATIC TEST.			
2. SEAL ALL NOZZLES USING BLANK FLANGES AND GASKETS - NO GREASE OR OTHER COMPOUNDS TO BE APPLIED TO GASKET SURFACE.			
3. COUPLINGS AND WELD-O-LETS ETC. TO BE PLUGGED AND TEFLON TAPE OR WHITELEAD MIXTURE MAY BE USED FOR SEALING.			
4. PROVIDE AT LEAST ONE (1) VENT OPENING AT HIGHEST POINT DURING FILLING.			
5. WATER TEMPERATURES SHOULD BE AS SPECIFIED BUT NOT LESS THAN 50°F OR MORE THAN 120°F FOR ALLOY STEELS.			
6. ONE PRESSURE GAUGE SHALL BE USED ON THE TEST PIECE AND ONE GAUGE ON THE PUMP.			
7. TEST GAUGES SHOULD SHOW CALIBRATION DATE WITHIN 12 MONTHS OF DATE OF USE.			
8. TEST PRESSURE SHOULD BE HELD AS SPECIFIED BEFORE VIEWING.			
CONTRACTOR Paintearth Energy Services Inc. PRINT OR TYPE NAME HERE		OWNER _____ PRINT OR TYPE NAME HERE	
<i>APR 18/11.</i> DATE		_____ DATE	
<i>α Terry Wardstrom</i>		QUALITY ASSURANCE ENGINEER	
WITNESSED BY <i>[Signature]</i>	DATE <i>APR 18/11.</i>	WITNESSED BY <i>[Signature]</i>	DATE <i>APR 18/11</i>
FIELD TEST COMPLIANCE CERTIFICATE			
This is to certify the above listed equipment / system was tested as stated above and not witnessed by the			
Authorized Inspector			
WITNESSED BY	DATE	SIGNATURE	OF OWNER QUALITY ASSURANCE



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DEADWEIGHT CERTIFICATION REPORT

CUSTOMER NAME: Flint Process Systems Ltd.

PO ORDER # 59661

SERIAL # PI-716

MANUFACTURER: CPW

DIAL SIZE: 4 1/2"

PRESSURE RANGE: 6000 psi/40000 kPa

SUB DIVISIONS: 100 psi

CONNECTION: 1/2"

INSPECTOR: Scott Culver

AMBIENT TEMPERATURE: 21C

MODEL: 901

TESTING DEVICE: Deadweight

TEST MEDIUM: Oil

MAXIMUM ERROR: 20 psi

DATE: September 1, 2010

LOCATION TESTED: #100, 7503 Girard Rd.

EDMONTON, ALBERTA

T6B 2H2

Deadweight Tester: Ashcroft Model 1305B Serial Number GN 118

The Ashcroft Deadweight Tester was calibrated against a Chandler Model 23-145, S/N 21270 Deadweight Tester traceable through Institute for National Measurement Standards (I.N.M.S.) Ottawa, Canada, Report Number MS-214-A

<u>READING</u>	<u>DEADWEIGHT</u>	<u>GAUGE READING</u>
<u>NO.</u>	<u>psi</u>	<u>psi</u>
1	1000	1000
2	2000	2000
3	3000	3000
4	4000	4000
5	5000	4980
6	6000	6000



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DEADWEIGHT CERTIFICATION REPORT

CUSTOMER NAME: Flint Process Systems Ltd.

PO ORDER # Verbal

AMBIENT TEMPERATURE: 21C

SERIAL # PI/2117

MODEL: 901

MANUFACTURER: CPW

TESTING DEVICE: Deadweight

DIAL SIZE: 4 1/2"

TEST MEDIUM: Oil

PRESSURE RANGE: 6000 psi/40000 kPa

MAXIMUM ERROR: 0

SUB DIVISIONS: 100 psi

DATE: March 8, 2011

CONNECTION: 1/2"

LOCATION TESTED: #100, 7503 Girard Rd.

INSPECTOR: Scott Culver

EDMONTON, ALBERTA

T6B 2H2

Deadweight Tester: Ashcroft Model 1305B Serial Number GN 118

The Ashcroft Deadweight Tester was calibrated against a Chandler Model 23-145, S/N 21270 Deadweight Tester traceable through Institute for National Measurement Standards (I.N.M.S.) Ottawa, Canada, Report Number MS-214-A

<u>READING</u>	<u>DEADWEIGHT</u>	<u>GAUGE READING</u>
<u>NO.</u>	<u>psi</u>	<u>psi</u>
1	1000	1000
2	2000	2000
3	3000	3000
4	4000	4000
5	5000	5000
6	6000	6000



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DEADWEIGHT CERTIFICATION REPORT

CUSTOMER NAME: Flint Process Systems Ltd.

PO ORDER # 59869

SERIAL # PI/1855

MANUFACTURER: CPW

DIAL SIZE: 4 1/2"

PRESSURE RANGE: 6000 psi/40000 kPa

SUB DIVISIONS: 100 psi

CONNECTION: 1/2"

INSPECTOR: Scott Culver

AMBIENT TEMPERATURE: 21C

MODEL: 502

TESTING DEVICE: Deadweight

TEST MEDIUM: Oil

MAXIMUM ERROR: 0

DATE: September 14, 2010

LOCATION TESTED: #100, 7503 Girard Rd.

EDMONTON, ALBERTA

T6B 2H2

Deadweight Tester: Ashcroft Model 1305B Serial Number GN 118

The Ashcroft Deadweight Tester was calibrated against a Chandler Model 23-145, S/N 21270 Deadweight Tester traceable through Institute for National Measurement Standards (I.N.M.S.) Ottawa, Canada, Report Number MS-214-A

<u>READING</u>	<u>DEADWEIGHT</u>	<u>GAUGE READING</u>
<u>NO.</u>	<u>psi</u>	<u>psi</u>
1	1000	1000
2	2000	2000
3	3000	3000
4	4000	4000
5	5000	5000
6	6000	6000



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DEADWEIGHT CERTIFICATION REPORT

CUSTOMER NAME: Flint Process Systems Ltd.

PO ORDER # Verhal

SERIAL # PI/1065

MANUFACTURER: CPW

DIAL SIZE: 4 1/2"

PRESSURE RANGE: 6000 psi/40000 kPa

SUB DIVISIONS: 100 psi

CONNECTION: 1/2"

INSPECTOR: Scott Culver

AMBIENT TEMPERATURE: 21C

MODEL: 502

TESTING DEVICE: Deadweight

TEST MEDIUM: Oil

MAXIMUM ERROR: 0

DATE: March 9, 2011

LOCATION TESTED: #100, 7503 Girard Rd.

EDMONTON, ALBERTA

T6B 2H2

Deadweight Tester: Ashcroft Model 1305B Serial Number GN 118

The Ashcroft Deadweight Tester was calibrated against a Chandler Model 23-145, S/N 21270 Deadweight Tester traceable through Institute for National Measurement Standards (I.N.M.S.) Ottawa, Canada, Report Number MS-214-A

<u>READING</u>	<u>DEADWEIGHT</u>	<u>GAUGE READING</u>
<u>NO.</u>	<u>psi</u>	<u>psi</u>
1	1000	1000
2	2000	2000
3	3000	3000
4	4000	4000
5	5000	5000
6	6000	6000

PAINT EARTH ENERGY SERVICES INC.

PRESSURE TEST / CERTIFICATE

ISSUED 1908577		PACKAGE # 1899655		DATE Apr 18/11.	
LOCATION ISSUED Paintearth Shop				Husky.	
DESIGN PRESSURE 285 psi		TEST PRESSURE REQUIRED 428 psi		GAUGE NO'S USED: Two (2)	
TEST HOLD TIME REQUIRED 60 Minutes				ID NO: PI-1380	RANGE:
				ID NO: PI-3031	0 - 1000 psi
TEST MEDIUM H₂O			MEDIUM TEMPERATURE REQUIRED 50°F		
PRESSURE INCREASE NOT TO EXCEED 1,000 kPa / MINUTE					
DESCRIPTION EQUIPMENT / SYSTEM					
HYDRO TEST ONE (1) ESDV & METERING PACKAGE					
*4" SCH 40 CL 150 WELDED FUEL GAS OUTLET SPOOLS (Spools # 15) Page 6					
*2" SCH 40 CL 150 WELDED FLARE HEADER SPOOLS (Spools # 16 & 17) Page 7					
*3" SCH 40 CL 150 WELDED GAS ASSIST TO FLARE SPOOLS (Spools # 18 & 19) Page 8					
*2" SCH 80 CL 150 WELDED GAS ASSIST TO FLARE SPOOLS (Spools # 20) Page 8					
1" SCH 160 THREADED PIPING.					
2" SCH 160 THREADED PIPING.					
NOTES:					
1. EQUIPMENT / SYSTEM TO BE INSPECTED BY QUALITY CONTROL REPRESENTATIVE AND AUTHORIZED INSPECTOR BEFORE HYDROSTATIC TEST.					
2. SEAL ALL NOZZLES USING BLANK FLANGES AND GASKETS - NO GREASE OR OTHER COMPOUNDS TO BE APPLIED TO GASKET SURFACE.					
3. COUPLINGS AND WELD-O-LETS ETC. TO BE PLUGGED AND TEFLON TAPE OR WHITELEAD MIXTURE MAY BE USED FOR SEALING.					
4. PROVIDE AT LEAST ONE (1) VENT OPENING AT HIGHEST POINT DURING FILLING.					
5. WATER TEMPERATURES SHOULD BE AS SPECIFIED BUT NOT LESS THAN 50°F OR MORE THAN 120°F FOR ALLOY STEELS.					
6. ONE PRESSURE GAUGE SHALL BE USED ON THE TEST PIECE AND ONE GAUGE ON THE PUMP.					
7. TEST GAUGES SHOULD SHOW CALIBRATION DATE WITHIN 12 MONTHS OF DATE OF USE.					
8. TEST PRESSURE SHOULD BE HELD AS SPECIFIED BEFORE VIEWING.					
CONTRACTOR Paintearth Energy Services Inc. PRINT OR TYPE NAME HERE			OWNER _____ PRINT OR TYPE NAME HERE		
DATE Apr 18/11.			DATE _____		
α Terry Wardstrom			QUALITY ASSURANCE ENGINEER		
WITNESSED BY [Signature]		DATE Apr 18/11.		WITNESSED BY [Signature]	
				DATE Apr 18/11	
FIELD TEST COMPLIANCE CERTIFICATE					
This is to certify the above listed equipment / system was tested as stated above and not witnessed by the Authorized Inspector					
WITNESSED BY		DATE		SIGNATURE	
				OF OWNER QUALITY ASSURANCE	



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DEADWEIGHT CERTIFICATION REPORT

CUSTOMER NAME: Flint Process Systems Ltd.

PO ORDER # Verbal

SERIAL # PI/1380

MANUFACTURER: CPW

DIAL SIZE: 4 1/2"

PRESSURE RANGE: 1000 psi/7000 kPa

SUB DIVISIONS: 10 psi

CONNECTION: 1/2"

INSPECTOR: Scott Culver

AMBIENT TEMPERATURE: 21C

MODEL: 502

TESTING DEVICE: Deadweight

TEST MEDIUM: Oil

MAXIMUM ERROR: 0

DATE: March 7, 2011

LOCATION TESTED: #100, 7503 Girard Rd.

EDMONTON, ALBERTA

T6B 2H2

Deadweight Tester: Ashcroft Model 1305B Serial Number GN 118

The Ashcroft Deadweight Tester was calibrated against a Chandler Model 23-145, S/N 21270 Deadweight Tester traceable through Institute for National Measurement Standards (I.N.M.S.) Ottawa, Canada, Report Number MS-214-A

<u>READING</u>	<u>DEADWEIGHT</u>	<u>GAUGE READING</u>
<u>NO.</u>	<u>psi</u>	<u>psi</u>
1	100	100
2	300	300
3	500	500
4	700	700
5	900	900
6	1000	1000



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DEADWEIGHT CERTIFICATION REPORT

CUSTOMER NAME: Flint Process Systems Ltd.

PO ORDER # Verbal

SERIAL # PI/3031

MANUFACTURER: CPW

DIAL SIZE: 4 1/2"

PRESSURE RANGE: 1000 psi/7000 kPa

SUB DIVISIONS: 10 psi

CONNECTION: 1/2"

INSPECTOR: Scott Culver

AMBIENT TEMPERATURE: 21C

MODEL: 502

TESTING DEVICE: Deadweight

TEST MEDIUM: Oil

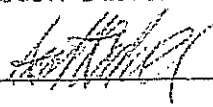
MAXIMUM ERROR: 0

DATE: March 7, 2011

LOCATION TESTED: #100, 7503 Girard Rd.

EDMONTON, ALBERTA

T6B 2H2


Deadweight Tester: Ashcroft Model 1305B Serial Number GN 118

The Ashcroft Deadweight Tester was calibrated against a Chandler Model 23-145, S/N 21270 Deadweight Tester traceable through Institute for National Measurement Standards (I.N.M.S.) Ottawa, Canada, Report Number MS-214-A

<u>READING</u>	<u>DEADWEIGHT</u>	<u>GAUGE READING</u>
<u>NO.</u>	<u>psi</u>	<u>psi</u>
1	100	100
2	300	300
3	500	500
4	700	700
5	900	900
6	1000	1000



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DEADWEIGHT CERTIFICATION REPORT

CUSTOMER NAME: Flint Process Systems Ltd.

PO ORDER # 61007

SERIAL # PI/3030

MANUFACTURER: CPW

DIAL SIZE: 4 1/2"

PRESSURE RANGE: 1000 psi/7000 kPa

SUB DIVISIONS: 10 psi

CONNECTION: 1/2"

INSPECTOR: Scott Culver

AMBIENT TEMPERATURE: 21C

MODEL: 502

TESTING DEVICE: Deadweight

TEST MEDIUM: Oil

MAXIMUM ERROR: 0

DATE: September 16, 2010

LOCATION TESTED: #100, 7503 Girard Rd.

EDMONTON, ALBERTA

T6B 2H2

Deadweight Tester: Ashcroft Model 1305B Serial Number GN 118

The Ashcroft Deadweight Tester was calibrated against a Chandler Model 23-145, S/N 21270 Deadweight Tester traceable through Institute for National Measurement Standards (I.N.M.S.) Ottawa, Canada, Report Number MS-214-A

<u>READING</u>	<u>DEADWEIGHT</u>	<u>GAUGE READING</u>
<u>NO.</u>	<u>psi</u>	<u>psi</u>
1	100	100
2	300	300
3	500	500
4	700	700
5	900	900
6	1000	1000



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DEADWEIGHT CERTIFICATION REPORT

CUSTOMER NAME: Flint Process Systems Ltd.

PO ORDER # 59661

SERIAL # PI/105

MANUFACTURER: CPW

DIAL SIZE: 4 1/2"

PRESSURE RANGE: 1500 psi/10000 kPa

SUB DIVISIONS: 20 psi

CONNECTION: 1/2"

INSPECTOR: Scott Culver

AMBIENT TEMPERATURE: 21C

MODEL: 502

TESTING DEVICE: Deadweight

TEST MEDIUM: Oil

MAXIMUM ERROR: 0

DATE: August 30, 2010

LOCATION TESTED: #100, 7503 Girard Rd.

EDMONTON, ALBERTA

T6B 2H2

Deadweight Tester: Ashcroft Model 1305B Serial Number GN 118

The Ashcroft Deadweight Tester was calibrated against a Chandler Model 23-145, S/N 21270 Deadweight Tester traceable through Institute for National Measurement Standards (I.N.M.S.) Ottawa, Canada, Report Number MS-214-A

<u>READING</u>	<u>DEADWEIGHT</u>	<u>GAUGE READING</u>
<u>NO.</u>	<u>psi</u>	<u>psi</u>
1	250	250
2	500	500
3	750	750
4	1000	1000
5	1250	1250
6	1500	1500

PAINTEARTH ENERGY LIMITED

PRESSURE TEST / CERTIFICATE

ISSUED	1899655	HUSKY	DATE	MAY 5/11
LOCATION ISSUED	PAINTEARTH ENERGY LIMITED			
DESIGN PRESSURE	TEST PRESSURE REQUIRED		GAUGE NO'S USED:	
150 PSI	165 PSI		1850/1033/1031	
TEST HOLD TIME REQUIRED			ID NO: PI-	RANGE:
As Required			ID NO: PI-	0-300 PSI
TEST MEDIUM		MEDIUM TEMPERATURE REQUIRED		
Air		50°F Minimum		
PRESSURE INCREASE NOT TO EXCEED 1,000 kPa / MINUTE				
DESCRIPTION EQUIPMENT / SYSTEM				
* AIR & SOAP TEST 1" INSTRUMENT HEADER.				
* AIR & SOAP TEST ALL 3/8" & 1/2" TUBING & FITTINGS.				
*FUNCTION PNEUMATIC INSTRUMENTS.(OPEN/CLOSE ALL ESDV actuated valves.)				
*AIR & SOAP TEST ALL PNEUMATIC INSTRUMENTS.				
*AIR & SOAP TEST 2" METER RUN.				
*AIR & SOAP TEST ALL 1/2" & 3/4" THREADED PIPING.				
NOTES:				
1. EQUIPMENT / SYSTEM TO BE INSPECTED BY QUALITY CONTROL REPRESENTATIVE AND AUTHORIZED INSPECTOR BEFORE HYDROSTATIC TEST.				
2. SEAL ALL NOZZLES USING BLANK FLANGES AND GASKETS - NO GREASE OR OTHER COMPOUNDS TO BE APPLIED TO GASKET SURFACE.				
3. COUPLINGS AND WELD-O-LETS ETC. TO BE PLUGGED AND TEFLON TAPE OR WHITELEAD MIXTURE MAY BE USED FOR SEALING.				
4. PROVIDE AT LEAST ONE (1) VENT OPENING AT HIGHEST POINT DURING FILLING.				
5. WATER TEMPERATURES SHOULD BE AS SPECIFIED BUT NOT LESS THAN 50°F OR MORE THAN 120°F FOR ALOY STEELS.				
6. ONE PRESSURE GAUGE SHALL BE USED ON THE TEST PIECE AND ONE GAUGE ON THE PUMP.				
7. TEST GAUGES SHOULD SHOW CALIBRATION DATE WITHIN 12 MONTHS OF DATE OF USE.				
8. TEST PRESSURE SHOULD BE HELD AS SPECIFIED BEFORE VIEWING.				
CONTRACTOR			OWNER	
PAINTEARTH ENERGY LIMITED				
MAY 5/11				
PRINT OR TYPE NAME HERE			PRINT OR TYPE NAME HERE	
DATE			DATE	
* 				
			QUALITY ASSURANCE ENGINEER	
WITNESSED BY		DATE	WITNESSED BY	
		MAY 5/11		
FIELD TEST COMPLIANCE CERTIFICATE				
This is to certify the above listed equipment / system was tested as stated above and not witnessed by the Authorized Inspector				
WITNESSED BY		DATE	SIGNATURE	
			OF OWNER	
			QUALITY ASSURANCE	

EXHIBIT 20.3 PRESSURE PIPING EXAMINATION GUIDE

PRESSURE PIPING EXAMINATION GUIDE

Husky.
1908577.

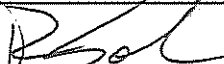
EXAMINATION PRIOR TO PRESSURE TEST (PUNCHING)		Q.C. INSP
1	Pipe Material; schedule and specification correct.	PK
2	Flanges; rating, schedule and material specification correct.	PK
3	Fittings; tees, return bends, reducers, couplings and weld-o-lets etc. Correct schedule and material specification.	PK
4	Valves; Identification - Manufacturer's name tag, etc., correct.	PK
5	Valves; installed correctly, flow direction, assesses, rising stems free from obstructions, clearance for removal adequate.	PK
6	Lubrication fittings, drains, etc., installed as required.	PK
7	Bolts, Studs, Nuts; length and material correct. Studs at least flush with heads (max. Thread exposure beyond nut should be about 2 threads.)	PK
8	Gaskets are correct type, material, size, etc.	PK
9	All welding satisfactory and traceable to welders symbol.	PK
10	Seal welding complete - all threads covered.	N/A
11	All attachment welds satisfactory.	N/A
12	All N.D.E., heat treatment complete, records filed.	PK
13	Guide anchors and shoes required installed correctly. (High temp. lines)	N/A
14	Line supports adequate - supports to be checked against drawings.	PK
15	Spring hangers - correct type, correct installation.	N/A
16	Lines have adequate allowance for expansion	PK
17	Bellows type expansion joints - correct type, pressure rating and correct installation.	N/A
18	Required cold spring applied.	N/A
19	Orifice runs have specified straight length of pipe - located correctly etc.	PK
20	All deficiencies recorded on Punch List.	PK
Q.C. Inspector Signature: 		Date: APRIL 18/11.

EXHIBIT 20.2 PRESSURE PIPING EXAMINATION CHECKLIST

PRESSURE PIPING EXAMINATION CHECKLIST

Husky Welded Spools (Metering Pkg)

JOB NUMBER: 1908577

NO.	FUNCTION	MANUAL REFERENCE	SIGNATURE, INITIAL AND DATE	
			QC INSPECTOR	OWNERS INSPECTOR
1	DRAWINGS: ABSA registration over 0.5M3. Approved by Owner. Approved for Construction (signed & dated)	20.3, 20.4	/	
2	A.B.S.A. Safety Codes Officer and Owner's Inspector notified.	20.19, 20.20	/	
3	Registered Welding Procedures, Q.C. Manual and Forms available at site, Job File started.	20.18	Jc 4-5-11	
4	Welders qualified for Procedures and have valid Performance Qualification cards. Welders Log completed. WPS reviewed with welders.	11.4	Jc 4-5-11	
5	Material checked against P.O., drawings, and specifications. Identification confirmed. Colour coding applied.	20.11-20.16	Jc 4-5-11	
6	Sample of each welder's work examined, including root spacing, alignment, cleaning, joint preparation, preheat and electrode control.	20.19	PS. APR 5/11.	
7	Nondestructive Examination completed. Reports and radiographs reviewed, signed by Level II, Radiograph I.D. detailed on drawings.	13.3	PS. APR 5/11.	
8	Visual Examination of all completed welds. Welders I.D. stamped and recorded on drawings.	20.19	PS. APR 5/11.	
9	Heat Treatment verified and recorded on drawings.	14.6	N/A.	
10	Each system checked against specifications and drawings before test, using Exhibit 20.2 and Exhibit 20.3	20.19, 20.22	PS. APR 18/11	
11	All deficiencies recorded and signed off by Q.C.I. and Owner's Inspector before test.		PS. APR 18/11	
12	Pressure Test checked. Gauge calibration verified, gauge #'s recorded.	20.22	PS. APR 18/11.	
13	System checked after test. Deficiencies recorded and corrected. (Exhibit 20.4)	20.22	PS. MAY 5/11	
14	Construction and test data reports prepared and signed by Q.C.I. And Owner's Inspector.	20.19(g)	PS. MAY 5/11.	
15	Declaration form submitted to ABSA.	20.18(b)	—	
16	As built drawings accepted by Owner.	20.19(h)	—	