

Issuing Authority: Marvin J. (Ty) DeBelsler

Date of Issue: March 13, 2008



Quality Control

QCFO Final Inspection Release Certificate R00

### FINAL INSPECTION RELEASE CERTIFICATE

CUSTOMER: **Encana Oil and Gas**

SALES ORDER#: **200286**

PRODUCT: **1.25 mm btu/hr Lineheater / 3' Single Meter Pkg (Coil # NWP-2060-01) Unit 1 of 3**

WO#: **2069**

DATE: **Sept 14, 10**

#### FINAL INSPECTION DOCUMENTATION

REVIEWED BY:

ACCEPTED:

REJECTED:

STANDARD DOCUMENTATION REQUIREMENTS: (SEE DOCUMENT REQUIREMENT LIST)

ADDITIONAL DOCUMENT REQUIREMENTS: (TO BE RECORDED HERE IF APPLICABLE I.E. DOCUMENT PACKAGE

REQUIRED BY CUSTOMER ETC.)

Q.C. FILE CLOSURE BY: *[Signature]*

DATE: **SEPT. 17, 10**

#### LOOSE COMPONENTS REQUIRED / PREPARED

ITEMS REQUIRED:

NO. OF BOXES OR PKGS. **see packing list**

**1.25 mm BTU Lineheater Pkg Unit 1 of 3**

ADDITIONAL HARDWARE OR FASTENERS REQUIRED

YES  NO

#### PREPARATION FOR SHIPMENT / STORAGE

PREPARATION NEEDED / COMPLETED

**Ready to ship**

S/N # **NWF-2069-01**

PART # **101477**

INVENTORY TAGS ATTACHED

YES  NO

#### SHIPPING INSTRUCTIONS

CUSTOMER P.O. REVIEWED

YES  N/A

CONTACT PERSON AUTHORIZED TO RELEASE PRODUCT:

PHONE:

FAX:

RELEASED TO INVENTORY:

DATE:

RELEASED TO CUSTOMER: *[Signature]*

DATE: **Sept 14, 10**



Box 6280, 4017-60<sup>th</sup> Avenue, Innisfail, AB. T4G 1S9 Phone: 403.227.4100 Fax: 403.227.4102  
www.nwp.ca

## SHIPPING MANIFEST FOR SHIPPED LOOSE ITEMS

Work Order # 2069 Serial Number: SO200286  
 Description of Product: 1.25 mm BTU/HR Lineheater Metering Skid Package  
 Completed By: Colleen Tysoe Date: 14/09/10

QTY	UNIT	ITEM DESCRIPTION
1	EA	TEG
1	EA	Vent Stack
1	Crate	includes:
		4 Batteries - Stack Gasket, nuts and bolts
		2 Thermowells
		Studs, Bolts, Nuts
		3 gauges- 1@ 10000psi, 1@2000psi, 1@30psi
		2 H2S Brackets
		1 Indicator Light
		1 H2S sensors with connections to be shipped direct to GP Yard
		1 Flex Gaskets
		2 Mufflers for pumps
	Misc	includes:
		Bolt-On Platform and Hand Rails
		Awnings, eavestroughs, 1 tubing line in building
1	Pallet	1 choke valves

Is a third party release certificate required Yes  No   
 All parts are boxed/on pallets Yes  No   
 There is no visible Damage Yes  No   
 All openings are plugged Yes  No

Signature: Colleen Tysoe

ACCEPTANCE / REJECTION REPORT
FACILITIES ENGINEERING DEPARTMENT

Vendor NWP Industries Vendor Rep. (print) Colleen Tysoe Vendor Shop No. N/A

Project Name 1.25 MM BTU Meter/Line Heater Project No. N/A A.F.E. No. N/A P.O. No. CEDDB-38884

Material Description: 1 x 1.25 MM BTU Metering/Line Heater Pkg. - Unit Tag 200286

Status [X] Conditional Acceptance (explain below) [ ] Rejected (explain below)

Table with 2 columns: Item No. and Description. Contains 7 rows of inspection items.

QUALITY INSPECTOR ACKNOWLEDGES:

Signing this release is solely for the purpose of authorizing the supplier to ship the goods in accordance with the order. Such authorization shall not relieve the supplier of its obligations set out in the purchase order, including without limitation the warranty that the goods are free from defects.

SUPPLIER'S CONFORMANCE STATEMENT: We certify that the PO items listed, and the required QC / Shipping documentation meet or will meet the requirements at our costs all applicable Code, Standards, specification and other related documents as set forth in the purchase order document.

The accepted preliminary QC documentation, bill of lading, packing slip, and all related shipping documents must accompany the shipped goods and be added as a line item on the packing list.

Vendor Rep. Signature [Signature] Date Sept 10, 10
Inspectors Signature [Signature] Date Sept 10/10

Issuing Authority: Marvin J. (Ty)

DeBelsler / Dale Karg

Date of Issue: November 30, 2007

Rev Status: 1.0



**NWP**  
INDUSTRIES INC.

ABSA

FORM-NDE-001

N.D.E. Requirements

CLIENT: Encana Corp - Steeprock

W.O.# 2009

PROJECT: Threaded Piping for 1.25mm LH

DATE: Aug 19.0

PIPING:  PRESSURE VESSEL:

TANK:

OTHER:

X-RAY

100% PSN

A.SME SECTION VIII-UW-51

GAMMA RAY

FULL

A.SME SECTION VIII-UW-52

ULTRASONICS

25%

A.SME B31.1

LIQUID PENETRANT

10% random

A.SME B31.3 NFS

MAGNETIC PARTICLE

OTHER (DEFINE)

OTHER (SPECIFY)

ACOUSTIC EMISSION

Encana Spec

GENERAL INSTRUCTIONS:

Vessel #/n SD 200286

P1 Material

Welder ID

Shell-T=

Pipe-T=

1" Sch 80

Total Welds

8 shots on PSN line, 5 shots random.

Please use wire type IQ1

Follow x-ray map provided.

Please note all indications on films on reports

Please include O.F.D - S.O.D S.F.D on reports

Acceptance is 7 threads engaged or 3/4" measured.

SPECIAL REQUIREMENTS:

P.O#

**Buttweld X-ray to be identified as X-#.**

**Gap shots to be identified as GS-#.**

**Threaded shots to be identified as XT-#.**

**Identify on Envelope part of package being shot. IE: Coil, Piping, Etc.**

PREPARED BY:

DATE:

**RADIOGRAPHIC INSPECTION REPORT**

DATE: AUG 19 / 10 PAGE 1 OF         
 W.D.        S.N.         
 JOB #: 2069 P.O. # 200286

5304-2612  
P.O.

CLIENT: M.W. A. CODE: ENCANA SPEC

LOCATION: ENCANA PIPING - THREADS

DEFECT LEGEND				CODE LEGEND				TECHNIQUES			
IF - INCOMPLETE FUSION	P - POROSITY	C - CRACK	1. ASME B31.3 NORMAL	5. ASME B31.1	1. SINGLE WALL EXPOSURE		3. SINGLE WALL VIEWING				
IP - INCOMPLETE PENETRATION	HL - HIGH / LOW	AC - ARC BURNS	2. ASME B31.3 SEVERE	6. CSA Z 662	2. DOUBLE WALL EXPOSURE		4. DOUBLE WALL VIEWING				
UC - UNDERCUTTING	IC - INTERNAL CONCAVITY	EP - EXCESSIVE PENETRATION	3. ASME VIII DIV 1 UW 51	7. API 650							
S - SLAG	LG - LOW COVER	SH - SHRINKAGE	4. ASME VIII DIV UW 52	8. OTHER <u>ENCANA SPEC</u>							
BT - BURN THROUGH	HB - HOLLOW BEAD	1 - SLIGHT, 2 - MEDIUM, 3 - SEVERE									

FILM #	LOCATION	THK	DIA.	WLDG SYM	IF	IP	UC	S	BT	P	IC	LC	TECH #	CODE #	ACC.	REMARKS	REJECT
1															<input type="checkbox"/>	1	
2	<u>XT-1</u>		<u>XH 1"</u>										<u>2</u>	<u>8</u>	<input checked="" type="checkbox"/>	2	
3	<u>2</u>														<input checked="" type="checkbox"/>	3	
4	<u>3</u>														<input checked="" type="checkbox"/>	4	
5	<u>4</u>														<input checked="" type="checkbox"/>	5	
6	<u>5</u>														<input checked="" type="checkbox"/>	6	
7	<u>6</u>														<input checked="" type="checkbox"/>	7	
8	<u>7</u>														<input checked="" type="checkbox"/>	8	
9	<u>8</u>														<input checked="" type="checkbox"/>	9	
10	<u>9</u>														<input checked="" type="checkbox"/>	10	
11	<u>10</u>														<input checked="" type="checkbox"/>	11	
12	<u>11</u>														<input checked="" type="checkbox"/>	12	
13	<u>12</u>														<input checked="" type="checkbox"/>	13	
14	<u>13</u>												<u>↓</u>	<u>↓</u>	<input checked="" type="checkbox"/>	14	
15															<input type="checkbox"/>	15	
16															<input type="checkbox"/>	16	
17															<input type="checkbox"/>	17	
18															<input type="checkbox"/>	18	
19															<input type="checkbox"/>	19	
20															<input type="checkbox"/>	20	
21															<input type="checkbox"/>	21	
22															<input type="checkbox"/>	22	
23															<input type="checkbox"/>	23	
24															<input type="checkbox"/>	24	
25															<input type="checkbox"/>	25	

No. of Exp.	Film Brand & Design	Screen Type & Thickness	No. of Film per Cassette	Type of Energy	Physical Size	Activity or K.V.	Maximum Source to Object Distance	Minimum Source to Object Distance	Material	Thickness			IQI		Exp. Time C/Min (mAs)
										Base	Weld	R.F.	Type	Size	
<u>1</u>	<u>AGFA D-4</u>	<u>lead -01"</u>	<u>1</u>	<u>Ir 192</u>	<u>2.7 mm</u>	<u>31 Cu.</u>	<u>12" S.F.O.</u>		<u>CS</u>	<u>AS</u>	<u>ABOVE</u>	<u>WIRE</u>	<u>B</u>		<u>—</u>

This Certificate or Report is valid only for that work which was specifically requested. The Company is not responsible for any views or opinions expressed by employees performing this work which fall outside the contract terms or reference. All Certificates and / or reports are the result of work performed in conformance with applicable specifications and standards to the best of our ability and intent. However, the Company will not be responsible for deviation within the normal limits of accuracy in accordance with the standard practices. Final Code Acceptance shall require Client and Manufacturer Representative's signatures.

A.M.		P.M.		TOTAL HOURS	KILOMETERS	SUBSISTENCE		FILM	
TIME IN	TIME OUT	TIME IN	TIME OUT	S.T. hrs.	O.T. hrs.	MANDAY	OT / MEALS		
				<u>4</u>				<u>13</u>	<u>11</u>

Film Interpretation is done in accordance with the specified code, to the best of my professional ability.  
 Radiographer: T. T. Doo 2nd 2nd SNT/CGSB Level: II Reg. No. 4056 Assistant: C. Langford  
 The above interpretation is a professional opinion, final film interpretation is the responsibility of the client.  
 I am in full agreement with the contents of this report and accept receipt of the associated film. Client Representative: [Signature] 1 AUG. 21/10

# NWP INDUSTRIES INCORPORATED

**SKIDDED EQUIPMENT TRAVEL SHEET**

APPROVED BY: *[Signature]*

DATE: *AUG-06-2010*

UNIT SN NWP-2069-01 ~ SO 200286

WO #: 2069

DESCRIPTION:

1.25 mm btu/hr Lineheater / 3" Single Meter Pkg (Coil # NWP-2060-01)  
Unit 1 of 3

DRAWING #:

101477 Rev. 0, 101477-1 Rev. 0, 101477-2 Rev. 0

	REQ.	HOLD	EMPLOYEE INT.	DATE COMPLETE	QC INIT.	DATE
QUOTATION REVIEWED	✓					
WORK INSTRUCTIONS ISSUED	✓				<i>[Signature]</i>	<i>Aug 9.10</i>
WORK INSTRUCTIONS REVIEWED	✓	✓			<i>[Signature]</i>	<i>Aug 9.10</i>
ABSA NOTIFIED FOR INSTALLATION INSPECTION	N/A					
MATERIAL & PARTS RELEASED	✓	✓			<i>J.F.</i>	<i>SEPT 12/10</i>
HYDRO TEST PIPING	<i>NA</i>	✓				
INSTRUMENTATION	✓		<i>N Milk miles</i>		<i>[Signature]</i>	<i>Sept 14</i>
PNEUMATIC LEAK TEST	✓	✓	<i>NA</i>		<i>[Signature]</i>	<i>Sept 14</i>
INSTRUMENTATION VALVES/FUNCTION TEST	✓	✓	<i>NA</i>		<i>[Signature]</i>	<i>Sept 14</i>
VISUAL INSPECTION P & ID CHECKED	✓	✓			<i>J.F.</i>	<i>SEPT 12/10</i>
VISUAL INSPECTION OF BUILDING & RECEIVING OF P.O.	✓				<i>[Signature]</i>	<i>Sept 14</i>
ANY CHANGE ORDERS VERIFIED COMPLETE	N/A					
PREPARED FOR SHIPMENT & PACKAGE LOOSE ITEMS, TEST, CRATED AND DOCUMENTED	✓	✓			<i>[Signature]</i>	<i>Sept 14</i>
VISUAL INSPECTION AFTER PAINT & RECEIVING OF P.O.	✓	✓			<i>[Signature]</i>	<i>Sept 14</i>
PACKAGING / PRESERVATION REQUIREMENTS COMPLETE	✓				<i>[Signature]</i>	<i>Sept 14</i>
SERVICING REQUIREMENTS DEFINED AND APPROVED	N/A					
QC INSPECTION & FINAL RELEASE AND STICKER ATTACHED	✓	✓			<i>[Signature]</i>	<i>Sept 14</i>

ACCEPTED BY CUSTOMER \_\_\_\_\_

DATE \_\_\_\_\_



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: NWP Industries Inc. Owner's Job No: so 200286  
(Name of ABSA authorized primary contractor or subcontractor)  
4017 60th Ave, Innisfail AB, T4G-1S2

(Address)

Certificate of Authorization Permit No. AQP-1253 Expiry Date: Nov 24, 2011

2. Constructed For: \_\_\_\_\_  
(Name of primary contractor if different from above)

(Address)

Certificate of Authorization Permit No. AQP-1253 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: Encana Corp Inc.  
(Name and address)

1313 10 Avenue Southwest, Calgary, AB T3C 3P9

(Location of installation)

Certificate of Authorization Permit No. AQP-1253 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 0.5m<sup>3</sup>)

5. WP No.: WP-; Company: \_\_\_\_\_ Owner's WP No. (If used): WP-  
(Alberta Registration No.) (Alberta Registration No.)  
 WPS No(s). used: \_\_\_\_\_; Owner's WPS No(s). (If used): \_\_\_\_\_

6. Code: ASME B31.1 Non Boiler External Piping ; ASME B31.1 Boiler External Piping   
 ASME B31.3  - Service category: Normal , D , M , High Pressure ; B31.5 ; B31.9

Drawing No. Rev. No. Line No.	Fluid (Air/Stm. Etc.)	Des. Press. PSI	Des. Temp°F	Pressure Test PSI	Test Medium	Pipe Mat'l Spec. & Grade	C.A.	Pipe NPS & Schedule	Flange Material & Rating	PWHT/ Preheat Temp.°C	R.T. %	Other NDE
101477-1 Rev0												
Fuel Gas Line	Fuel Gas	150	130/ -20	165	Air	SA-106B/ SA-105	1/16"	1" Sch . 80 1/4" Sch . 80	N/A	NA	NA	Visual
Methanol Pump Discharge	Methanol	5301	130/ -20	7952	Automatic Transmission Fluid	316 SS	NA	3/8" 0.065" WT	NA	NA	NA	Visual

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

No.	Line No.	Spool No.	Drg. 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., hydrotest, 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., hydrotest 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: \_\_\_\_\_  
Subcontractor

\_\_\_\_\_  
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. s/o200286 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: Sept 10, 2010 NWP Industries  
Primary Contractor

Colleen Tysoe \_\_\_\_\_  
Print Authorized Representative's Name                      Signature

**CERTIFICATE OF INSPECTION**

I, the undersigned, employed by Encana Oil & Gas have inspected the piping

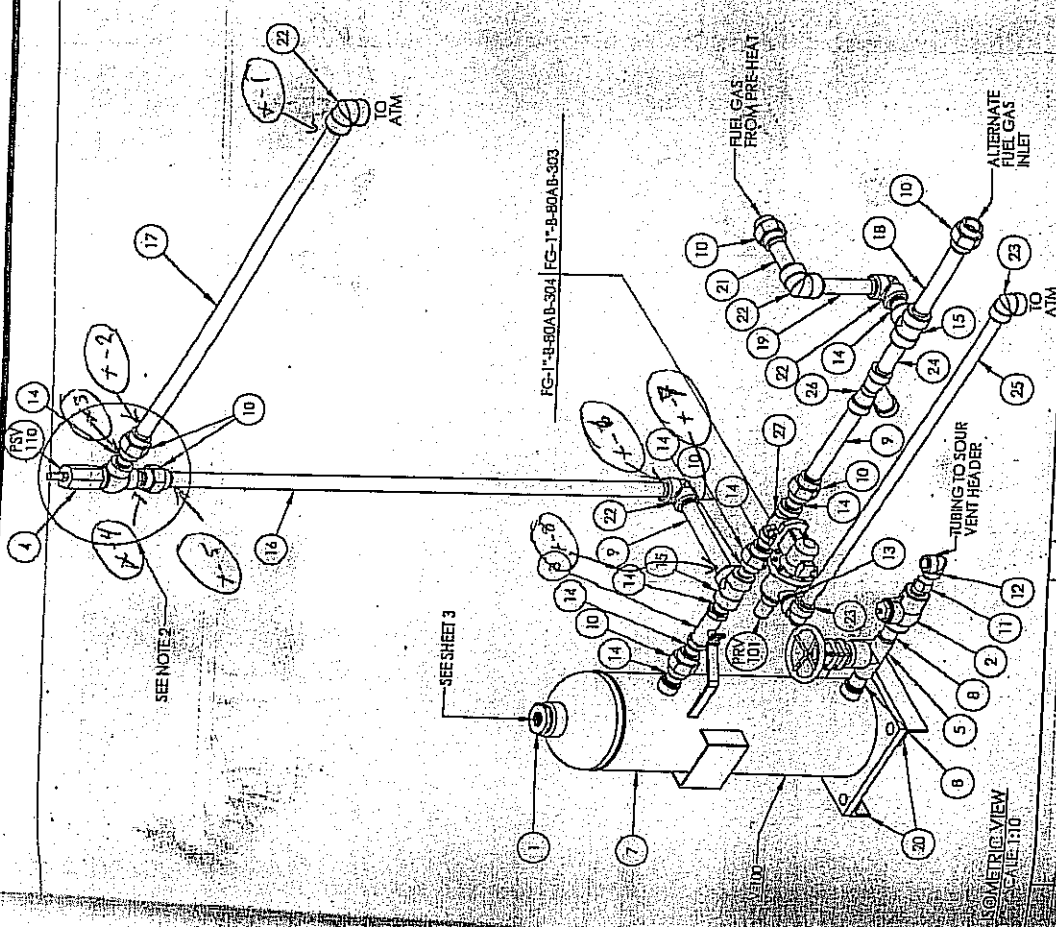
job no. s/o200286 described in this Pressure Piping Construction and Test Data Report and state that, to the best of my knowledge and belief, the Contractor has constructed this piping in accordance with the applicable Sections of the ASME Piping Codes and the Province of Alberta Safety Codes Act and Regulations.

Date: Sept 10, 2010  
Kevin Fundytus \_\_\_\_\_  
Print Owner's Inspector's Name                      Owner's Inspector's Signature

Date: \_\_\_\_\_  
Name: \_\_\_\_\_ Sign.: \_\_\_\_\_  
ABSA Safety Codes Officer  
(BOILER EXTERNAL PIPING ONLY)

Current version of this Form may be obtained from [www.absa.ca](http://www.absa.ca)





ITEM	MATERIAL	PART #	DESCRIPTION	MTR #	LENGTH	QTY
1	SC RUBBER HOSE		FOR BLDG ON LOGTECH SCRUBBER			
2	CS	051868	CROWN 1" 2100 PSI SWING CHECK VALVE (1510S1R21)			1
3	CS	072084	1" 3000 PSI NUTRON 13 STD TRM RP BALL VALVE			1
4		100209	FARRIS RELIEF VALVE 1" X 1" SET @ 150 PSI NACE TRIM (2200 SERIES)			1
5		100927	VALVE GLOBE NEW/CD 1" NPT CL 800 NACE			1
6	SA-105	131971	1/2" CL 6000 THRD HEX PLUG			1
7	SA-105	173990	LOGTECH FUEL GAS SCRUBBER 8 5/16" OD X 25 1/2" S/S			1
8	SA-105	209895	1" X 5" SCH. 40 NIPPLE			2
9	SA-105	313964	1" X 10" SCH. 40 NIPPLE			2
10	SA-105	342671	1" CL 3000 THRD UNION			2
11	SA-105	410658	1" X 1/2" SCH. 40 SWAGE			1
12	SA-105	552849	1/2" CL 3000 THRD 90 ELBOW			1
13	SA-105	587227	3/4" X 1 1/2" SCH. 40 NIPPLE			1
14	SA-105	610180	1" X 2 1/2" SCH. 40 NIPPLE			1
15	SA-105	687228	1" CL 3000 THRD TEE			8
16	SA-105	687228	1" CL 3000 THRD TEE			2
17	SA-105	687228	1" SCH. 40 PIPE		52 3/16"	1
18	SA-105	687228	1" SCH. 40 PIPE		39 3/16"	1
19	SA-105	687228	1" SCH. 40 PIPE		9 5/16"	1
20	SA-105	687228	1" SCH. 40 PIPE		6 13/16"	1
21	SA-105	749719	STEEL ANGLE IRON - 2" X 2" X 1/4"		11"	2
22	SA-105	752666	1" X 4 1/2" SCH. 40 NIPPLE		47 1/5"	1
23	SA-105	778134	1" CL 3000 THRD 90 ELBOW			4
24	SA-105	778134	9/16" CL 3000 THRD 90 ELBOW			2
25	SA-105	778134	1" X 5" SCH. 40 NIPPLE		5"	1
26	SA-105	778134	3/4" SCH. 40 PIPE		37 1/8"	1
27	SA-105	896697	1" CL 3000 THRD 90 ELBOW			1

**NOTES:**  
 1. ALL SA-105 REQUIRED ON SOUR TUBING UNLESS NOTED OTHERWISE.  
 2. 100% NACE REQUIRED.

DESIGN DATA	
LINE NUMBER	FG-1-B-80A-B-304
CLIENT SPECIFICATION	CA
DESIGN & FABRICATED TO	ANSI/ASME B31.3 NPS 2008 EDITION
DESIGN PRESSURE	1440 PSI
MAXIMUM DESIGN TEMPERATURE	130°F
MINIMUM DESIGN TEMPERATURE	-20°F
HYDROSTATIC TEST PRESSURE	2160 PSI
OPERATING TEMPERATURE	145°F
CORROSION ALLOWANCE	0.0001 IN

**ISSUED FOR CONSTRUCTION**

**WMP**  
 WOODHEAD METERING PACKAGES  
 14500 WOODHEAD DRIVE, SUITE 100  
 FORT WORTH, TEXAS 76155-3909  
 PHONE: (817) 424-1100 FAX: (817) 424-1101  
 WWW.WOODHEADMETERING.COM

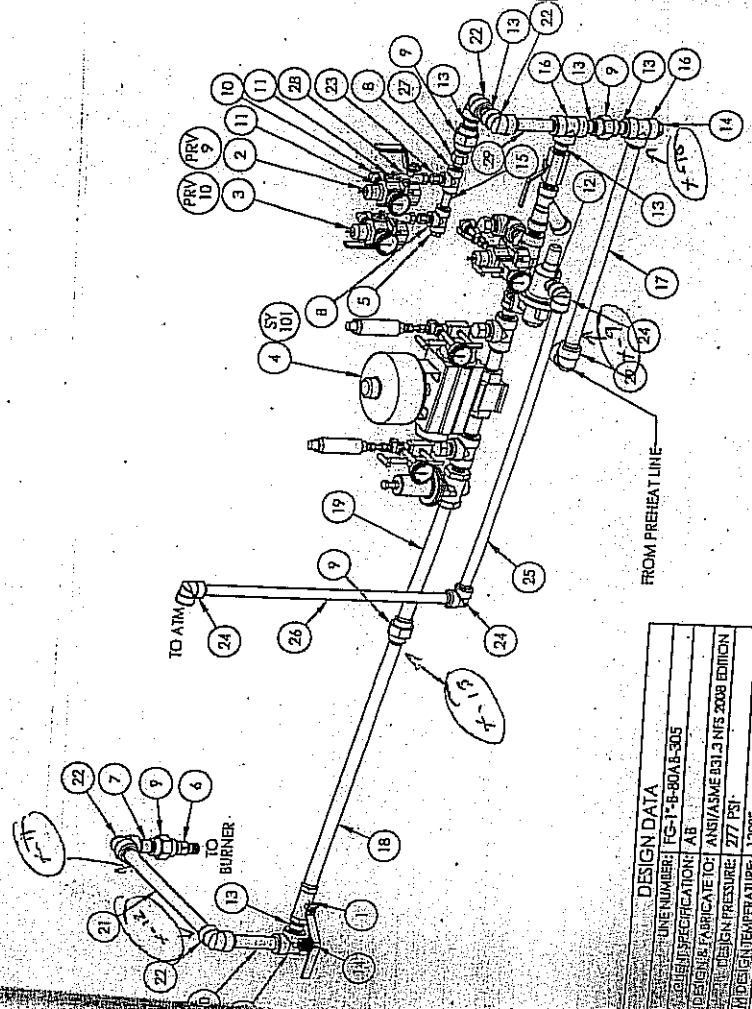
PROJECT: ENIGANA STEEROCK - STEEROCK  
 LINE ITEM: WMP METERING PACKAGE  
 1.25 MMIDU/HR 48" OD X 180" S/S  
 1000'S - 600 ANSI JR METER RUN  
 ASSEMBLY

DATE: 02/16/10  
 DRAWN: CW  
 CHECKED: [Signature]  
 SCALE: 1:10  
 SHEET NO: 1/2  
 REV: 0

REV	DATE	BY	CHK	APP	DESCRIPTION
0	2010.08.03	CW	[Signature]	[Signature]	ISSUED FOR CONSTRUCTION

DRAWING REVISIONS

ITEM	MATERIAL	PART #	DESCRIPTION	MTR #	LENGTH	QTY.
1	CS	092084	1" 5000 PSI NUTRION T3 STD TRIM RP BALL VALVE			1
2	STD TRIM	100144	REGULATOR FISHER, 47CFR, 0-50 PSI C/W GAUGE			1
3	STD TRIM	100402	REGULATOR FISHER, 47CFR, 0-125 PSI C/W GAUGE			1
4		100491	VALVE TRAIN (RIGHT TO LEFT) ENCAMA SPEC			1
5	SA-105	181991	1/2" CL 6000 THRD HEX PLUG			1
6	SA-105H	186371	1" x 3/4" SCH. XH/80 SWAGE			1
7	SA-106B	209895	1" x 3" SCH. XH/80 NIPPLE			1
8	SA-105	301604	1/2" CL 3000 THRD TEE			2
9	SA-105	362871	1" CL 3000 THRD UNION			2
10	SA-105	438424	1/4" CL 3000 THRD 90 ELBOW			2
11	SA-106B	444123	1/4" x 2" SCH. XH/80 NIPPLE			4
12	SA-106B	597297	3/4" x 1 1/2" SCH. XH/80 NIPPLE			1
13	SA-106B	610180	1" x 2 1/2" SCH. XH/80 NIPPLE			6
14	SA-106B	627588	1" CL 6000 THRD HEX PLUG			2
15	SA-106B	640311	1/2" x 3" SCH. XH/80 NIPPLE			1
16	SA-105	681628	1" CL 3000 THRD TEE			3
17	SA-106B	686796	1" SCH. XH/80 PIPE		24 3/4"	1
18	SA-106B	686796	1" SCH. XH/80 PIPE		31 3/16"	1
19	SA-106B	686796	1" SCH. XH/80 PIPE		15 3/8"	1
20	SA-106B	686796	1" SCH. XH/80 PIPE		6 5/8"	1
21	SA-106B	686796	1" SCH. XH/80 PIPE		18 13/16"	1
22	SA-105	732666	1" CL 3000 THRD 90 ELBOW			5
23	SA-105	769584	1/2" x 1/4" SCH. XH/80 SWAGE			2
24	SA-106B	778194	3/4" CL 3000 THRD 90 ELBOW			3
25	SA-106B	806808	3/4" SCH. XH/80 PIPE		3 1/8"	1
26	SA-106B	806808	3/4" SCH. XH/80 PIPE		29 5/8"	1
27	SA-105	833938	1" x 1/2" SCH. XH/80 SWAGE			1
28	CS	897613	1/4" 3000 PSI NUTRION T3 STD TRIM RP BALL VALVE			2
29	SA-106B	943792	1" x 6" SCH. XH/80 NIPPLE			1



ISOMETRIC VIEW  
SCALE 1:12

ORIGINAL

ISSUED FOR CONSTRUCTION

REV	DATE	BY	CHK	APP	DESCRIPTION
0	20100303	CW	AK	AK	ISSUED FOR CONSTRUCTION

REV	DATE	BY	CHK	APP	DESCRIPTION
0	20100303	CW	AK	AK	ISSUED FOR CONSTRUCTION

NOTES  
1. USER MAY REQUIRED ON SHOP THREADED PIPE UNLESS NOTED OTHERWISE



P.O. BOX 6280, MINISAL AB, TCS 157  
PH: 498-527-4100 FAX: 498-527-4101

ISSUED FOR CONSTRUCTION  
DATE: AUG 03 2010  
BY: CW  
CHK: AK  
APP: AK

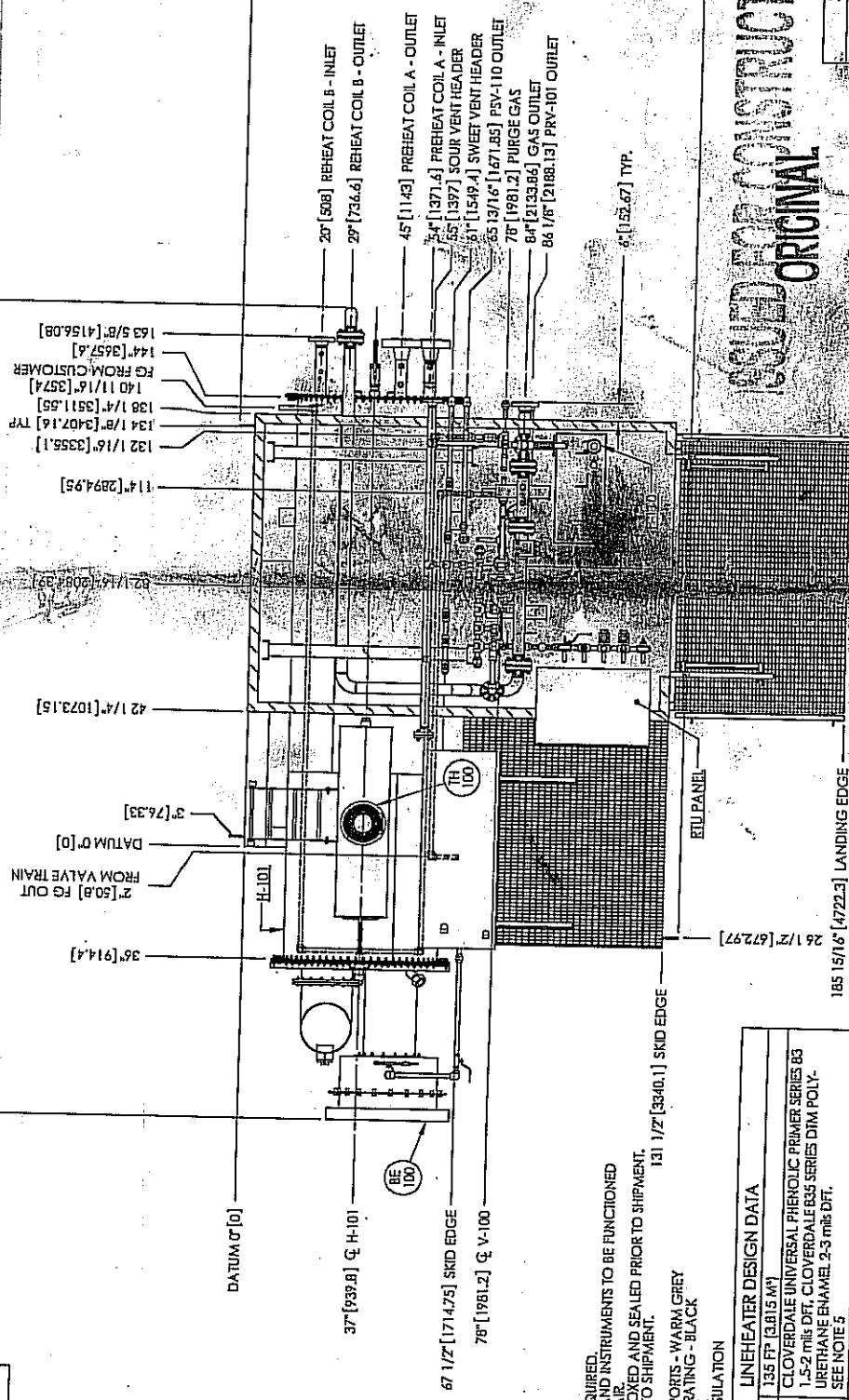
ENCANK CORPORATION - STEEPROCK  
LINE HEATER AND METERING PACKAGE  
1.25 MMBTU/HR. 48" OD x 180" S/S  
(1) 3" 400 ANSI JR METER RUN  
ASSEMBLY

DATE: 08/03/10  
SCALE: 1:12  
SHEET: 02 OF 02  
DATE: 08/03/10  
DWG: 101477-2

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ENCANA PO# CEDD06-38984  
 SO# 200284  
 SO# 200287  
 SO# 200288

262' [6654.45] OAL SHIPPING



163 5/8" [4156.09]  
 144" [3657.6]  
 140 11/16" [3574]  
 138 1/4" [3511.65]  
 134 1/8" [3407.16] TYP  
 132 1/16" [3355.1]  
 114" [2894.95]  
 42 1/4" [1073.15]  
 37" [939.8] Q. H-101  
 67 1/2" [1714.25] SKD EDGE  
 78" [1981.2] Q. V-100  
 131 1/2" [3340.1] SKD EDGE  
 26 1/2" [672.97]  
 185 15/16" [4722.3] LANDING EDGE  
 142 1/4" [3603.5]  
 140 11/16" [3574]  
 138 1/4" [3511.65]  
 134 1/8" [3407.16] TYP  
 132 1/16" [3355.1]  
 114" [2894.95]  
 42 1/4" [1073.15]  
 37" [939.8] Q. H-101  
 67 1/2" [1714.25] SKD EDGE  
 78" [1981.2] Q. V-100  
 131 1/2" [3340.1] SKD EDGE  
 26 1/2" [672.97]  
 185 15/16" [4722.3] LANDING EDGE

- NOTES**
1. PIPE SUPPORTS WHERE REQUIRED.
  2. ALL PNEUMATIC VALVES AND INSTRUMENTS TO BE FUNCTIONED TESTED WITH 75 PSIG AND TO BE FLOODED AND SEALED PRIOR TO SHIPMENT.
  3. SHIP LOOSE ITEMS TO BE FLOODED AND SEALED PRIOR TO SHIPMENT.
  4. PLUG ALL OUTLETS PRIOR TO SHIPMENT.
  5. SKID - BLACK VESSELS, PIPING, PIPE SUPPORTS - WARM GREY GUARD RAILS, LADDER, GRATING - BLACK STACK - HIGH HEAT BLACK 4. 2" THICK UNDER FLOOR INSULATION

LINE HEATER DESIGN DATA	
HEAT MEDIUM REQUIREMENT:	135 FP (3815 MW)
PAINT:	CLOVERDALE UNIVERSAL PHENOLIC PRIMER SERIES 83 1.5-2 mils DFT. CLOVERDALE EBS SERIES DIM POLY-URETHANE ENAMEL 2-3 mils DFT. SEE NOTE 5.
SURFACE PREPARATION:	SSPC-SP6-63 (COMMERCIAL BLAST)
INSULATION:	1 1/2" MICROFLEX W/ D.020 STUCCO EMBOSSED ALUMINUM TACKER C/W SS BANDING

DOCUMENT NO.	DESCRIPTION	REV	DATE	CW	BY	CHK	APP
108745	SKID ASSEMBLY	0	2010.06.03				
108743	COIL ASSEMBLY						
101277-1	PIPING AND INSTRUMENTATION DIAGRAM						

REFERENCE DRAWINGS

ISSUED FOR CONSTRUCTION  
 SCALE: 1/8" = 1'-0"  
 100%  
 300284

ISSUED FOR CONSTRUCTION  
 SCALE: 1/8" = 1'-0"  
 100%  
 300284

ISSUED FOR CONSTRUCTION  
 SCALE: 1/8" = 1'-0"  
 100%  
 300284

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 SCALE: 1/8" = 1'-0"  
 100%  
 300284

ISSUED FOR CONSTRUCTION  
 SCALE: 1/8" = 1'-0"  
 100%  
 300284

SHIPPING DATA	
OVERALL HEIGHT	10' - 6 7/16"
OVERALL LENGTH	21' - 10"
OVERALL WIDTH	11' - 9 5/16"
NET WEIGHT	14,835 LBS

ENCANA CONSTRUCTION - STEEL ROCK  
 REHEATER AND INSTRUMENTING PACKAGE  
 2550 W. 100' X 180' X 5'S  
 1175 W. 100' X 180' X 5'S  
 GENERAL ARRANGEMENT  
 DATE: 2010.06.03  
 SCALE: 1/8" = 1'-0"  
 SHEET: 1 OF 3

NMP  
 INDUSTRIES INC.  
 P.O. BOX 4280, INNSFALL AB, T4S 1S5  
 (403) 277-4100 FAX: (403) 277-4107  
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ENCANA CONSTRUCTION  
 DATE: 2010.06.03  
 SCALE: 1/8" = 1'-0"  
 SHEET: 1 OF 3

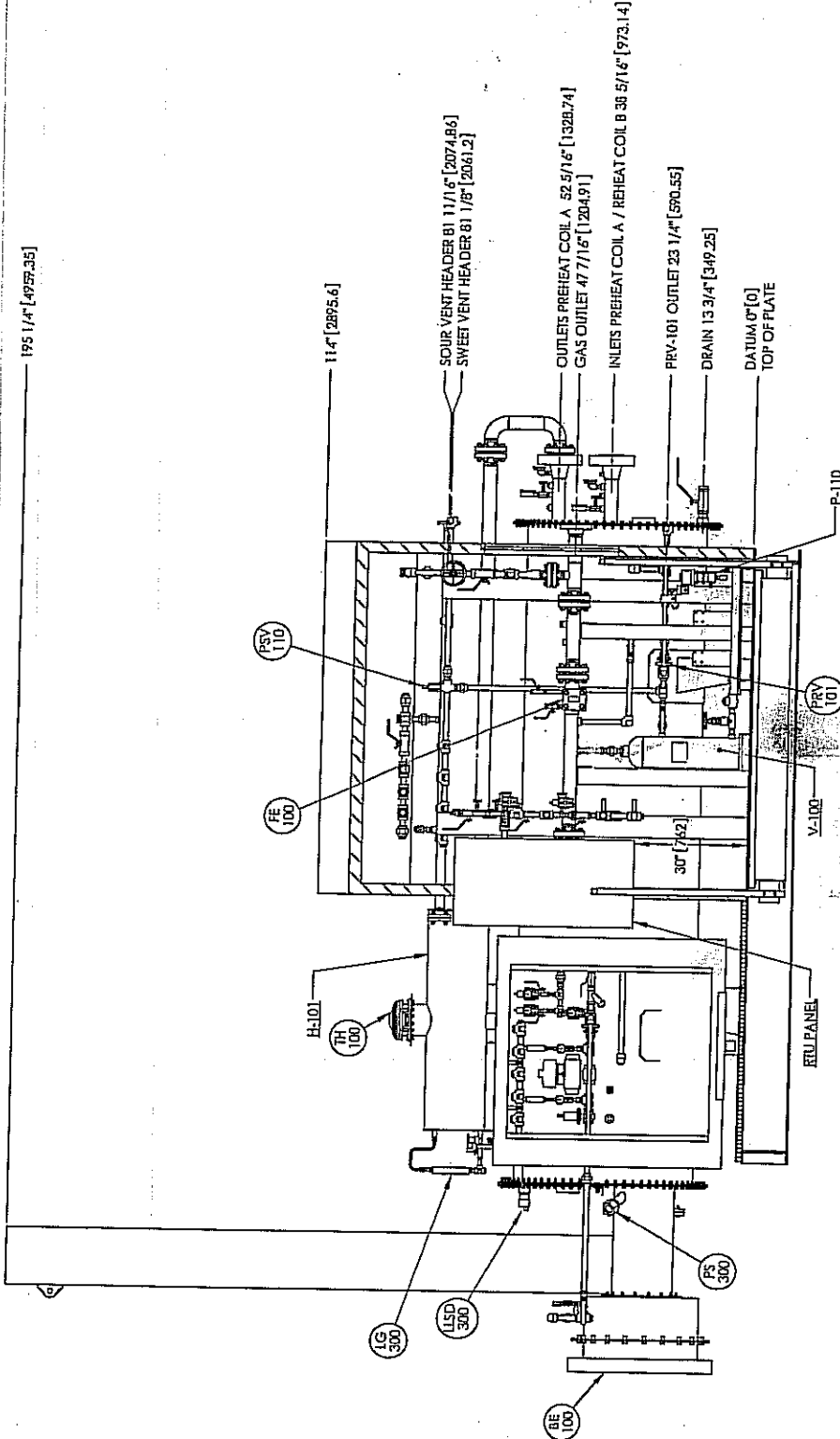
ENCANA CONSTRUCTION  
 DATE: 2010.06.03  
 SCALE: 1/8" = 1'-0"  
 SHEET: 1 OF 3

ENCANA CONSTRUCTION  
 DATE: 2010.06.03  
 SCALE: 1/8" = 1'-0"  
 SHEET: 1 OF 3

ENCANA CONSTRUCTION  
 DATE: 2010.06.03  
 SCALE: 1/8" = 1'-0"  
 SHEET: 1 OF 3

ENCANA CONSTRUCTION  
 DATE: 2010.06.03  
 SCALE: 1/8" = 1'-0"  
 SHEET: 1 OF 3

195 11/4" [4927.35]



ISSUED FOR CONSTRUCTION

SIGNED: [Signature] 04/20/20  
DATE: 03 2010

ISSUED FOR CONSTRUCTION

DATE: 2010.08.03

SCALE: 1:30

SHEET: 2 OF 3

DWG: 101477

ENCANA CORPORATION - STEEROCK  
LINE HEATER AND METERING PACKAGE  
1.25 MMBTU/HR, 48" OD x 180" S/S  
(1) 3"-400 ANSI JR METER RUN  
GENERAL ARRANGEMENT.

DWN: CW  
CHK: [Signature]  
APP: [Signature]

DATE: 2010.08.03  
DATE: 4/23/10

SCALE: 1:30  
SHEET: 2 OF 3

DWG: 101477

**NMP**  
INDUSTRIES INC.  
Total oilfield supply.  
P.O. BOX 4280, INNSFALL AB T4G 1S9  
PH: (403) 227-4180 FAX: (403) 227-4102

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ISSUED FOR CONSTRUCTION

SIGNED: [Signature] 04/20/20  
DATE: 03 2010

ISSUED FOR CONSTRUCTION

DATE: 2010.08.03

SCALE: 1:30

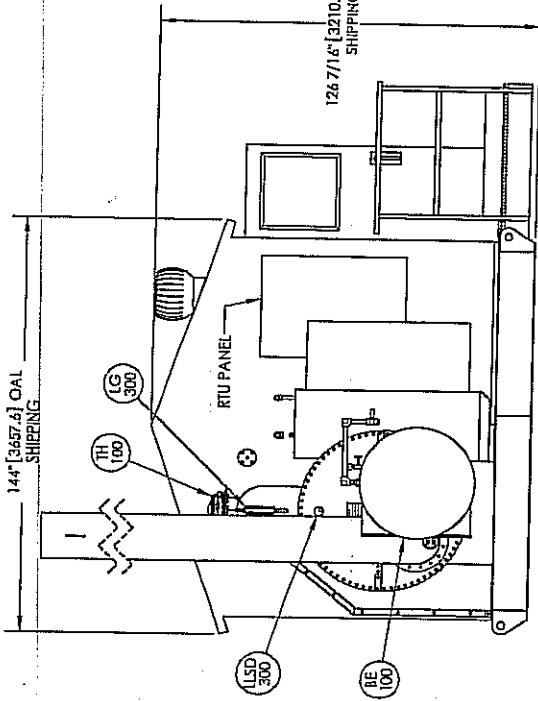
SHEET: 2 OF 3

DWG: 101477

REV	DATE	BY	CHK	APP	DESCRIPTION
0	2010.08.03	CW	[Signature]	[Signature]	PIPING AND INSTRUMENTATION DIAGRAM
REFERENCE DRAWINGS					

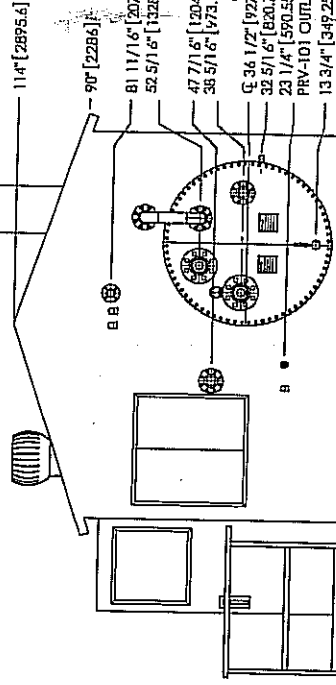
DRAWING REVISIONS

144" [3657.4] OAL SHIPPING

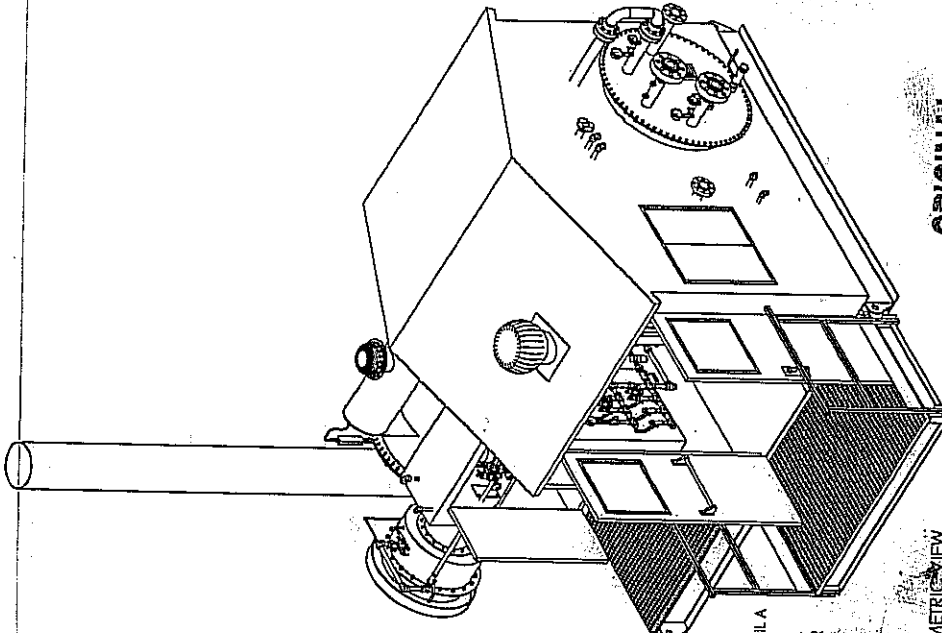


LEFT VIEW  
SCALE 1:40

126 7/16" [3210.75] OAL SHIPPING



RIGHT VIEW  
SCALE 1:40



ISOMETRIC VIEW  
SCALE 1:40

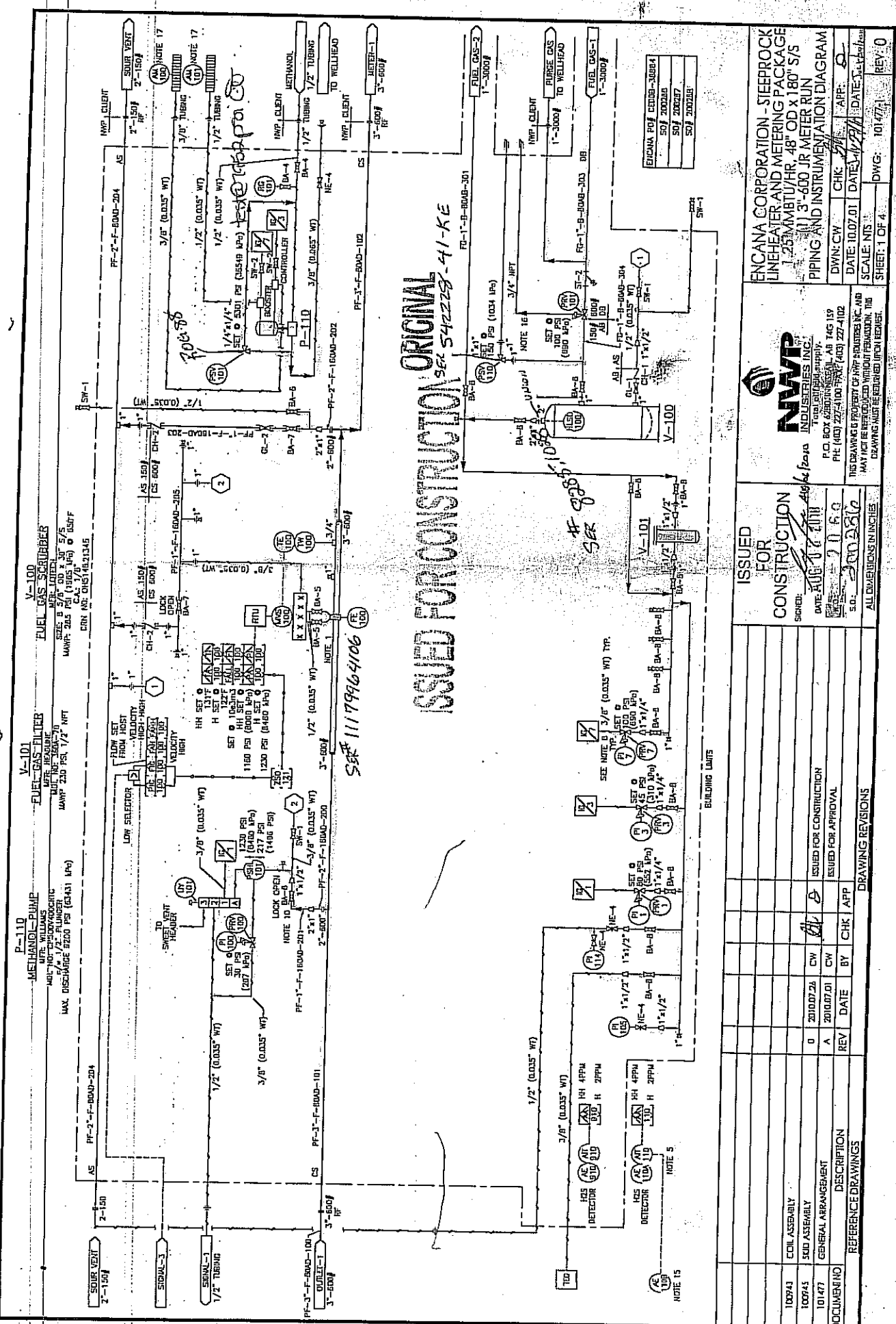
**ORIGINAL  
ISSUED FOR CONSTRUCTION**

ENCANA CORPORATION - STEEROCK  
LINE HEATER AND METERING PACKAGE  
1.25 MMBTU/HR. 48" OD X 180" S/S  
(1) 3"-400 ANSI JR METER RUN  
GENERAL ARRANGEMENT  
DWN: CW  
CHK: [Signature]  
DATE: 2010.08.03  
SCALE: 1:40  
SHEET: 3 OF 3  
REV: 0

**NWP**  
INDUSTRIES INC.  
Total field supply.  
P.O. BOX 4280, INNSFALL AB T4G 1S9  
PH: (403) 257-4166 FAX: (403) 257-4169  
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SIGN: [Signature]  
DATE: 03 2011  
REV: 0  
100-200381  
ALL DIMENSIONS IN INCHES

REV	DATE	BY	CHK	APP	DESCRIPTION
0	2010.08.03	CW	[Signature]	[Signature]	ISSUED FOR CONSTRUCTION
REFERENCE DRAWINGS					
10745					3RD ASSEMBLY
10743					COIL ASSEMBLY
10727-1					PIPING AND INSTRUMENTATION DIAGRAM



ORIGINAL  
 SER 54228-41-KE  
 ISSUED FOR CONSTRUCTION

SER 11179964106

ENCANA CORPORATION - STEERROCK LINEHEATER AND METERING PACKAGE	DWN: CW	CHK: <i>[Signature]</i>	DATE: 10/07/01	APP: <i>[Signature]</i>
1.25" MBTU/HR, 48" OD X 180" S/S	SCALE: NTS	DATE: 10/07/01	DWG: 10147A	REV: 0
PIPING AND INSTRUMENTATION DIAGRAM				

**NWP INDUSTRIES INC.**  
 P.O. BOX 62000, NIGEL AR 745 159  
 PH: (403) 227-4100 FAX: (403) 227-4102  
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ISSUED FOR CONSTRUCTION	DATE: AUG 17 2011	BY: <i>[Signature]</i>
DATE: 2010.07.01	BY: <i>[Signature]</i>	DATE: 2010.07.01

DOCUMENT NO	DESCRIPTION	REV	DATE	BY	CHK	APP
102941	COIL ASSEMBLY	0	20100724	CW	<i>[Signature]</i>	<i>[Signature]</i>
100745	SKID ASSEMBLY	0	20100724	CW	<i>[Signature]</i>	<i>[Signature]</i>
101477	GENERAL ARRANGEMENT	A	20100701	CW	<i>[Signature]</i>	<i>[Signature]</i>

DRAWING REVISIONS

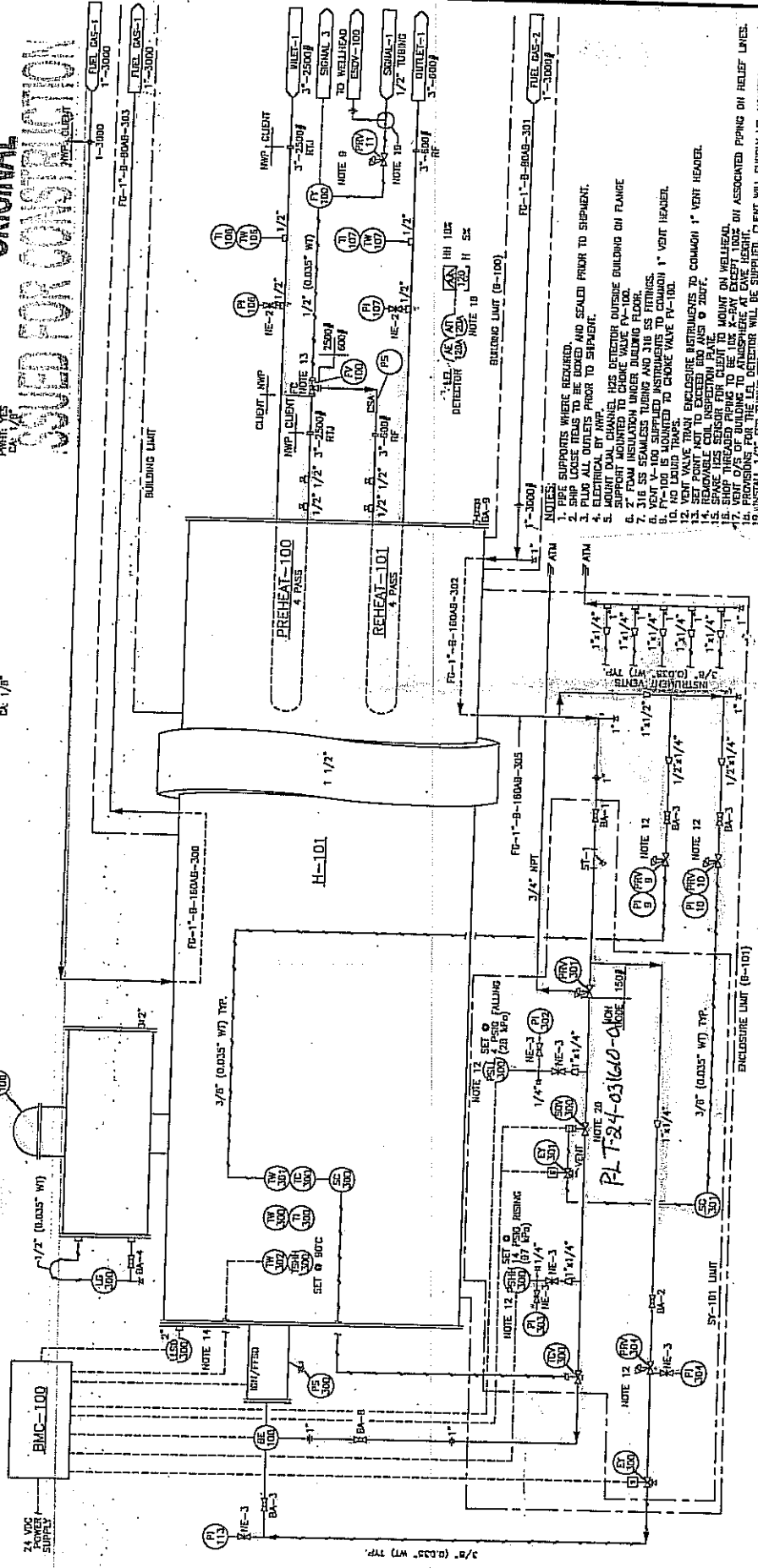
**ORIGINAL**  
**VALID FOR CONSTRUCTION**

REHEAT-101  
 COIL B  
 MFR: NWP INDUSTRIES  
 DESIGN: 1350  
 SERIAL: 0000 MP# 0 2007  
 PART: YES  
 DIA: 1/2"

PREHEAT-100  
 COIL A  
 MFR: NWP INDUSTRIES  
 DESIGN: 5031  
 SERIAL: 0000 MP# 0 2007  
 PART: YES  
 DIA: 1/2"

H-101  
 LINE HEATER  
 SIZE: 48" x 180" x 72"  
 DUTY: 1.25 MMBTU/HR

BMC-100  
 BURNER MANAGEMENT SYSTEM  
 MODEL: JIC-AC-10000  
 24 VDC



- NOTES:
1. SHIP DOCUMENTS WHERE REQUIRED.
  2. SHIP DOCUMENTS TO BE USED AND SEALED PRIOR TO SHIPMENT.
  3. ELECTRICAL BY NWP.
  4. MOUNT DUAL CHANNEL H2S DETECTOR OUTSIDE BUILDING ON FLANGE SUPPORT MOUNTED TO CHOKE VALVE PA-100.
  5. 316 SS INSULATION UNDER BUILDING FLOOR.
  6. VENT PA-100 IS MOUNTED TO CHOKE VALVE PA-100.
  7. VENT PA-100 IS MOUNTED TO CHOKE VALVE PA-100.
  8. VENT PA-100 IS MOUNTED TO CHOKE VALVE PA-100.
  9. VENT PA-100 IS MOUNTED TO CHOKE VALVE PA-100.
  10. NO LIQUID TRAPS.
  11. VENT VALVE TRAP ENCLOSURE INSTRUMENTS TO COMMON 1" VENT HEADER.
  12. REMOVABLE COIL SUPPORTED 800 AND 9 2007.
  13. SHIP H2S SENSOR FOR CLIENT TO MOUNT ON VENT HEAD ON ASSOCIATED PIPING TO ATMOSPHERE AT GATE HEIGHT.
  14. SHIP H2S SENSOR FOR CLIENT TO MOUNT ON VENT HEAD ON ASSOCIATED PIPING TO ATMOSPHERE AT GATE HEIGHT.
  15. SHIP H2S SENSOR FOR CLIENT TO MOUNT ON VENT HEAD ON ASSOCIATED PIPING TO ATMOSPHERE AT GATE HEIGHT.
  16. SHIP H2S SENSOR FOR CLIENT TO MOUNT ON VENT HEAD ON ASSOCIATED PIPING TO ATMOSPHERE AT GATE HEIGHT.
  17. SHIP H2S SENSOR FOR CLIENT TO MOUNT ON VENT HEAD ON ASSOCIATED PIPING TO ATMOSPHERE AT GATE HEIGHT.
  18. SHIP H2S SENSOR FOR CLIENT TO MOUNT ON VENT HEAD ON ASSOCIATED PIPING TO ATMOSPHERE AT GATE HEIGHT.
  19. SHIP H2S SENSOR FOR CLIENT TO MOUNT ON VENT HEAD ON ASSOCIATED PIPING TO ATMOSPHERE AT GATE HEIGHT.
  20. SHIP H2S SENSOR FOR CLIENT TO MOUNT ON VENT HEAD ON ASSOCIATED PIPING TO ATMOSPHERE AT GATE HEIGHT.

ENCANA CORPORATION - STEEPROCK  
 LINEHEATER AND METERING PACKAGE  
 1.25 MMBTU/HR, 48" OD x 180" S/S  
 PIPING AND INSTRUMENTATION DIAGRAM

DWN: CW | CHK: JH | APP: S  
 DATE: 10/07/01 | DATE: 10/27/01  
 SCALE: NTS | SHEET: 2 OF 4 | DWG: 101477-1 | REV: 0

**NWP**  
 INDUSTRIES INC.  
 Total offsite supply.  
 P.O. BOX 6294, MINNEAPOLIS, MN 55416  
 PH: (612) 227-4100 FAX: (612) 227-4102

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ISSUED FOR CONSTRUCTION  
 SERIALIZED: 2008  
 DATE: 10/27/01  
 S.D.: JAC/SBC

DOCUMENT NO	DESCRIPTION	REV	DATE	BY	CHK	APP	DRAWING REVISIONS
100743	COIL ASSEMBLY						
100945	SHD ASSEMBLY	0	2010.07.26	CW			
101477	GENERAL ARRANGEMENT	A	2010.07.01	CW			
	REFERENCE DRAWINGS						



BILL OF MATERIALS

TAG#	DESCRIPTION	QTY.	PART#	TAG#	DESCRIPTION	QTY.	PART#
H-101	LINEHEATER - MFR: NMP INDUSTRIES INC, SIZE: 48" OD X 180' 5/8" DUTY: 1.25 MMBTU/HR C/W 1 1/2" FERRULOUS INCL. SHELL ONLY	1	100944	PH-105/114	PRESSURE INDICATOR - MFR: HYDROPOSE, MODEL NO.: 402 1/2" NPT, 4" FACE, 0-300 PSI DUAL SCALE, 304 SST CASE SST INTERNALS	2	480369
PH-101	COIL ASSEMBLY	1	100943	PH-106	PRESSURE INDICATOR - MFR: HYDROPOSE, MODEL NO.: 402 1/2" NPT, 4 1/2" FACE, 0-1000 PSI DUAL SCALE, 304 SST CASE AND SS INTERNALS	1	101221
PH-102	SCD ASSEMBLY	1	100943	PH-107	PRESSURE INDICATOR - MFR: HYDROPOSE, MODEL NO.: 402 1/2" NPT, 4 1/2" FACE, 0-2000 PSI DUAL SCALE, 304 SST CASE AND SS INTERNALS	1	894388
PH-103	GENERAL ARRANGEMENT	1	100943	PH-113	PRESSURE INDICATOR - MFR: WKA, MODEL NO.: 20333 1/4" NPT, 2 1/2" FACE, 0-30 PSI DUAL SCALE, ALUMINUM CASE AND SS INTERNALS	1	122378
BMC-100	BURNER IGNITION CONTROLLER - MFR: ACL, MODEL NO.: 5800, 24 VDC OPERATION, 48V 4" ENCLOSURE MICROPROCESSOR BASED FLAME FAILURE SYSTEM WITH AUTO RESTART, SHUTDOWN INPUT, ALARM RELAY	1	859485	PRV-100	PRESSURE REGULATOR - MFR: FISHER, MODEL NO.: 62CFR 1/4" NPT, 250 PSIG WAMP, 0-80 PSI SPRING, STD TRIM C/W PRESSURE INDICATOR	1	100164
V-100	FUEL GAS SCHEMATIC - MFR: LORAIN, SIZE: 8 5/8" OD X 30" 5/8" WAMP: 265 PSIG @ 50FT, C/A: 1/8" C/W HILSO-100	1	130088	PRV-101	PRESSURE REGULATOR - MFR: FISHER, MODEL NO.: 62CFR 1/4" NPT, 250 PSIG WAMP, 0-125 PSI SPRING, STD TRIM C/W PRESSURE INDICATOR	1	894889
V-101	FUEL GAS FILTER - MFR: HEARNE, MODEL NO.: 350A-70C	1	100210	PRV-3	PRESSURE REGULATOR - MFR: FISHER, MODEL NO.: 62CFR 1/4" NPT, 250 PSIG WAMP, 0-80 PSI SPRING, STD TRIM C/W PRESSURE INDICATOR	1	100164
P-110	METHANOL PUMPS - MFR: WILLIAMS, MODEL NO.: CP5004000CITE, WAMP: 9200 PSI C/W 1/2" PLUMBER, TEFLOON SEALS	1	632781	PRV-1/7	PRESSURE REGULATOR - MFR: FISHER, MODEL NO.: 62CFR 1/4" NPT, 250 PSIG WAMP, 0-125 PSI SPRING, STD TRIM C/W PRESSURE INDICATOR	2	100402
AM-100/101	AIR MUFFLER MFR: MOTION INDUSTRIES, ALLED WITH MODEL M650111015	2	101242	PRV-9	PRESSURE REGULATOR - MFR: FISHER, MODEL NO.: 62CFR 1/4" NPT, 250 PSIG WAMP, 0-80 PSI SPRING, STD TRIM C/W PRESSURE INDICATOR	1	100164
BE-100	BURNER - MFR: WENDO, 24" FLAME CELL, 18" FRETURLE CONNECTION, 1.25 MMBTU/HR (NET), 1 PIECE ALUMINUM HOUSING C/W ACL-1150 AIR/DAS LEXER, ACL-B15010 VENTURUR BARREL, ACL-0115012 HE BURNER NOZZLE, 2" FEEDPIPE	1	101095	PRV-10	PRESSURE REGULATOR - MFR: FISHER, MODEL NO.: 62CFR 1/4" NPT, 250 PSIG WAMP, 0-125 PSI SPRING, STD TRIM C/W PRESSURE INDICATOR	1	100402
TH-100	TEMP HATCH - MFR: EMWOOD, MODEL NO.: 330 8", 16 oz PRESSURE, 0.4 oz VOLUME C/W GASKET	1	101087	PSI-101	PRESSURE PILOT - MFR: FISHER, MODEL NO.: 4660 1/4" NPT PRESSURE PILOT, 0-1800 PSI Bourdon Tube, NON INTERMEDIATE SET POINTS, SET @ 725 PSI DESIGN, 317 PSI FALLING	1	394873
LP-300	LEVEL GAUGE - MFR: KENDO, MODEL NO.: 5700 1/2" NPT, 12" OAL	1	100301	PSI-110	RELIEF VALVE - MFR: FAIRBANKS, MODEL NO.: 274333-420 COURTESY TO MAKE MP-01-725 IN THE PRIMARY ZONE 1" x 1", 150 PSIG SET PRESSURE, 316 SST BASE, DESI BEZEL, CS CHURNER SST SPRING	1	101227
USD-306	LEVEL SWITCH - MFR: SMIT 2" NPT 310 SS BODY 314 SS FLANT MODEL: 1510C-20A-C-WG-ES-TS-100	1	101408	WS-100	MULTI-VARIABLE SENSOR - MFR: CONTROL MICRO SYSTEMS, MODEL NO.: 4102-1000T01U-1 1/4" NPT, 10-160 In H2O, ABSOLUTE PRESS. SPAN: 30-1800 PSI, DIGITAL LOGIC PROTOCOL, 316SS PROCESS COVER WITH SCRAPACK AND RELAY, EXPLOSION PROOF CSA APPROVED CLASS 1, DIV 1 GROUP 0-0	1	576033
RG-101	RACE GAUGE - MFR: PLANSWAN, MODEL NO.: P5700 1/2" NPT, 48" OAL	1	630060	WAMP	MFR: ARKERSON GREENWOOD, MODEL NO.: W4VES-4-SS 5 VALVE WAMP, 316 SS BODY, FEED EIGHT SEAT	1	106684
TC-300	TEMPERATURE CONTROLLER - MFR: KILBAY, MODEL NO.: TR-11 1/2" NPT, 30-400F TEMP. RANGE, 12" PROBE C/W THERMOWELL	1	389284	FE-100	MFR: HILLO, SINGLE CHAMBER (80) 3" 600 ANSI RF SCH 40/100, 64" OAL ANALOG LATEST EDITION, 100% PARALLELITY WITH P/NIT C/W (1) 1" AND (1) 3/4" TOL. DOWNSTREAM	1	385089
TE/TW-100	3 WIRE RTD, 24 VDC, SS THERMOWELL, 3/4" WAPT X 1/2" RWPT	1	023100	RV-100	CHOKE VALVE - MFR: MASTERFLO, MODEL NO.: PZE C/W FY-100, PRV-11 3" 2500 ANSI RTD INLET X 3" 600 ANSI RF OUT, TUNGSTEN CARBIDE TRIM, C/W FISHER 657 SEIZ TO PNEUMATIC SR ACTUATOR	1	-
TI-105/7	TEMPERATURE INDICATOR - MFR: TREND, MODEL NO.: 32 1/2" NPT, 0-250F DUAL SCALE, 3" DIA., 2 1/2" STEM C/W THERMOWELL	2	762876	UT-101	SWITCHING VALVE - MFR: AMOT, MODEL NO.: 4187 1/4" NPT, MANUAL LATCH	1	404351
TI-300	TEMPERATURE INDICATOR - MFR: TREND, MODEL NO.: 33 1/2" NPT, 0-250F DUAL SCALE, 3" DIA., 8" STEM C/W THERMOWELL	1	551887	H2S ANALYZER - (1) MODEL WAP-1P-A-571220 TRANSMITTER (1) MODEL ST-1200-100-CM SENSOR	1	-	-
TS/SH-300	24 VDC, SET @ 50TC C/W THERMOWELL	1	800881	H2S ANALYZER - (1) MODEL NO W22-A-4-HIS TRANSMITTER (2) MODEL ST-1200-100-ASST SENSORS (2 SENSORS PER TRANSMITTER)	1	-	-
100943	COIL ASSEMBLY	1	809330	LEI DETECTOR - CUSTOMER SUPPLIED	1	-	-
100945	SCD ASSEMBLY	1	809330		1	-	-
101477	GENERAL ARRANGEMENT	1	809330		1	-	-
101477	GENERAL ARRANGEMENT	1	809330		1	-	-
101477	GENERAL ARRANGEMENT	1	809330		1	-	-

REPRODUCED FROM ORIGINAL  
 ORIGINAL

**ENCANA CORPORATION - STEEPROCK**  
**LINEHEATER AND METERING PACKAGE**  
 1.25 MMBTU/HR, 48" OD X 180' 5/8"  
 (1) 3" 600 JR METER RUN  
 PIPING AND INSTRUMENTATION DIAGRAM  
 DWN: CW    CHK: [Signature]    APP: [Signature]  
 DATE: 10/07/01    DATE: 1/18/01  
 SCALE: NIS    SHEET: 3 OF 4  
 DWG: 101477-1    REV: 0

**NWP**  
**INDUSTRIES INC.**  
 Total onfield supply.  
 P.O. BOX 2800, HINESFELD, AS TAG 157  
 RE (405) 227-4100 FAX: (405) 227-4102  
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 DATE: 10/07/01  
 BY: [Signature]  
 CHECKED BY: [Signature]  
 APPROVED BY: [Signature]

DOCUMENT NO	DESCRIPTION	REV	DATE	BY	CHK	APP
100943	COIL ASSEMBLY	0	201007/25	CW	[Signature]	ISSUED FOR CONSTRUCTION
100945	SCD ASSEMBLY	0	201007/25	CW	[Signature]	ISSUED FOR APPROVAL
101477	GENERAL ARRANGEMENT	0	201007/01	CW	[Signature]	ISSUED FOR APPROVAL
101477	GENERAL ARRANGEMENT	1	201007/01	CW	[Signature]	ISSUED FOR APPROVAL

DRAWING REVISIONS



**BILL OF MATERIALS**

TAG#	DESCRIPTION	QTY	PART#	TAG#	DESCRIPTION	QTY	PART#
SV-101	VALVE TRAIN - ENCAM SPC	1	100081	BA-3	BALL VALVE - WFR. NUTRON, SIZE: 1/2" NPT x NPT	3	987513
SV-1	PNEUMATIC VALVE TRAIN ** SEE BELOW**	1	732029	BA-4	BALL VALVE - WFR. NUTRON, MODEL NO. 13, SIZE: 1/2" NPT x NPT	3	112856
PIV-301	Y-STRAINER	1	100692	BA-5	3000 WOG, CS BODY, FULL PORT, STD TRIM	2	100305
SOV-300	MANV REGULATOR - FISHER 627	1	110054	BA-6	BALL VALVE - WFR. NUTRON, SIZE: 1/2" NPT x NPT	2	768000
TOV-300	MANV SOLENOID - ACL-ASV-1P-21	1	100686	BA-7	3000 WOG, CS BODY, REG PORT, NACE	2	316818
SC-300/1	PNEUMATIC, CSA #5 WITH PROOF OF CLOSURE, 1" NPT, PNEUMATIC ACTUATOR, 60 PSI SUPPLY, SS BODY, 24 VDC	1	100071	BA-8	BALL VALVE - WFR. NUTRON, MODEL NO. 13, SIZE: 1" NPT x NPT	15	072084
PIV-304	TEMPERATURE CONTROL VALVE - FISHER 11P	2	973550	BA-9	BALL VALVE - WFR. NUTRON, MODEL NO. 13, SIZE: 1" NPT x NPT	1	914874
PSIH-300	SPEED CONTROL VALVE - MAS0000	1	100695	GL-1	BALL VALVE - WFR. NUTRON, MODEL NO. 13, SIZE: 1" NPT x NPT OR EQUAL	1	-
PSIL-300	PILOT REGULATOR - FISHER 87EF8	1	100694	GL-2	COUPE VALVE - WFR. NEWCO, SIZE: 1" NPT x NPT OR EQUAL	1	-
EY-300	HIGH FUEL PRESSURE SHUTDOWN SWITCH SET @ 14 PSI RISING	1	100655	SW-1	CLASS 800, 316 SS TRIM	4	100421
PR-302/2/4	LOW FUEL PRESSURE SHUTDOWN SWITCH SET @ 4 PSI FALLING	1	100655	SW-2	CLASS 1500, 316 SS TRIM	2	100483
BA-1	PILOT SOLENOID - ACL-SV-550-1-24	3	100609	SW-100	VALVE - WFR. SWAGelok, MODEL NO.: SS-40320	1	100945
BA-2	PRESSURE GAUGES	1	100657	SW-100	1/2" TURNING x 1/2" TURNING	1	-
CH-1	BALL VALVE - ENCO	1	100657	SW-100	3/8" TURNING, 316 SS	1	-
CH-2	BALL VALVE - ENCO	1	100658	SW-100	3/8" TURNING, 316 SS	1	-
ST-2	Y-STRAINER - WFR. ALTA STRAINER, MODEL NO.: Y5800	1	100100	SW-100	500 - SIZE 11" x 14" L. MAIN MEMBERS 12" @ 26 WIDE FLANGE, 3/16" CHECKER FLOORING (BUILDING AREA)	1	-
NE-1	NEEDLE VALVE - WFR. ANDERSON GREENWOOD, SIZE: 1/2" NPT x F	2	-	SW-100	3/16" x 1/4" SEPARATED BARI GRATING (LANDING), 4 POINT LIFT, HANDRAILS, 2" SPRAY ON FIRE RETARDANT UNDERFLOOR INC.	1	-
NE-3	NEEDLE VALVE - WFR. ANDERSON GREENWOOD, 1/4" 6000 M X F STRAIGHT SS BODY	6	-	SW-100	SELF FRAME BUILDING - SIZE: 8' W x 11' L x 8' H. CABLE STYLE ROOF, EXT: 22 ga. TAN w/ METRO BROWN, INT: 24 ga. FLUTED ALUMINUM c/w R12 INSULATION & 4 mil VAPOUR BARRIER.	1	-
NE-4	NEEDLE VALVE - WFR. ANDERSON GREENWOOD 1/2" 6000 M X F STRAIGHT SS BODY	4	-	SW-100	(2) 3" x 7' DOORS c/w IRC, CHECK CHAIN, CANOPY, AND WEATHER STOPPING, (1) 30" x 36" 36" DOUBLE GLAZED SLIDING WINDOW ENCLOSURE - SIZE: 24" W x 63" L x 61" H	1	-
				PAINT	SPF-SP 6-63 COMMERCIAL BLAST CLOVERDALE UNIVERSAL PNEUMATIC PRIMER SERIES 63 1.5-2 mil DFT		
					CLOVERDALE 633 SERIES DTM POLYURETHANE ENAMEL 2-3 mil DFT		
					SKID, GUARD RAILS, LADDER, COATING - BLACK, FRETEBU STACK - HIGH HEAT BLACK		
					VESSELS, PIPING, PIPE SUPPORTS - WARM GREY		

**ORIGINAL**

**ISSUED FOR CONSTRUCTION**

ENCANA CORPORATION - STEEPROCK LINEHEATER AND METERING PACKAGE  
1.25 MMBTU/HR, 48" OD x 180' S/S  
PIPING AND INSTRUMENTATION DIAGRAM

**NWAP INDUSTRIES INC.**  
INDUSTRIES INC.  
That entitles supply.  
P.O. BOX 9290, MINNEAPOLIS, MN 55409  
PH: (403) 227-4100 FAX: (403) 227-4102

DATE: 2010.07.01  
CHK: CW  
APP: [Signature]DATE: 10/07/01  
DWG: 10147-1  
SHEET: 4 OF 4  
REV: 0

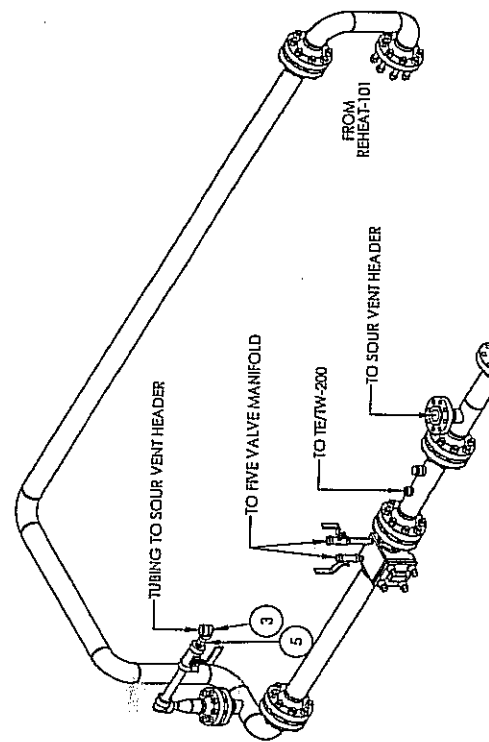
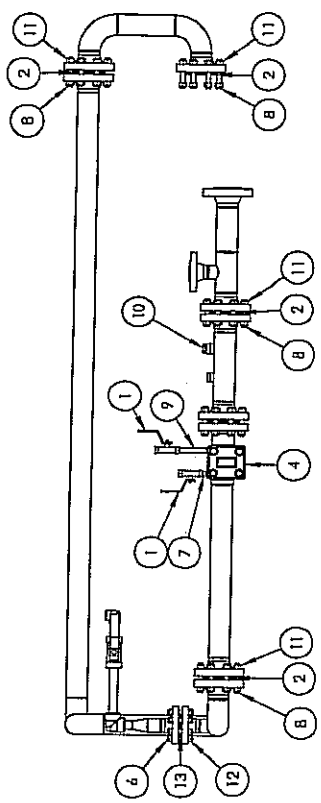
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A	2010.07.01	CW	[Signature]	[Signature]	ISSUED FOR APPROVAL

**DRAWING REVISIONS**

ALL DIMENSIONS IN INCHES

ITEM	MATERIAL	PART #	DESCRIPTION	MTR #	LENGTH	QTY.
1		100345	1/2" 3000 PSI NUTRON TRIM GAGE TRIM FR BALL VALVE			2
2	316 SS	107910	3"-300/600 ANSI RF SPIRAL WOUND GASKET			4
3	SA-105N	240832	1/2" CL 6000 THRD 90 ELBOW			1
4		395099	METER RUN, 3"-200 ANSI RF, NUTRO TORRIFICE, AGA-3C (2000 ED) SOUR		64"	1
5	SA-105	410638	1" x 1/2" SCH. XXH SWAGE			1
6	ASTM-A193	433978	B7M STUD 5/8" DIA. x 4 1/4" LG			8
7	SA-105B	455437	NIPPLE, 1/2" x 2" SCH XXH			1
8	ASTM-A193	529250	B7M STUD 3/4" DIA. x 5" LG			32
9	SA-105B	544433	1/2" x 6" SCH. XXH NIPPLE			1
10	SA-105N	627588	1" CL 6000 THRD HEX PLUG			1
11	ASTM-A194	655055	2HM HEX NUT 3/4" DIA.			64
12	ASTM-A194	698353	2HM HEX NUT 5/8" DIA.			16
13	316 SS	777116	2"-300/600 ANSI RF SPIRAL WOUND GASKET			1



**ORIGINAL**

**ISSUED FOR CONSTRUCTION**

NOTES  
 1. USE XRAY REQUIRED ON SHOP THREADED PIPE UNLESS NOTED OTHERWISE

ENCANA CORPORATION - STEERROCK  
 LINEHEATER AND METERING PACKAGE  
 1.25 MMBTU/HR. 48" OD x 180" S/S  
 (1) 3"-400 ANSI JR METER RUN

DWN: CW  
 CHK: *[Signature]*  
 DATE: 2010.08.03  
 APP: *[Signature]*

SCALE: 1:20  
 DATE: 08/03/10  
 DWG: 101477-2  
 REV: 0

**NMP INDUSTRIES INC.**  
 Total field supply.  
 P.O. BOX 4280, INDIANAPOLIS, IN 46216  
 PH: (463)-297-4100 FAX: (463)-297-4100

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ISSUED FOR CONSTRUCTION  
 SIGNED: *[Signature]*  
 DATE: 08/03/10  
 BY: *[Signature]*  
 SO: 200038/2  
 ALL DIMENSIONS IN INCHES

REV	DATE	BY	CHK	APP	DESCRIPTION
0	2010.08.03	CW	<i>[Signature]</i>	<i>[Signature]</i>	GRID ASSEMBLY
					COIL ASSEMBLY
					PIPING AND INSTRUMENTATION DIAGRAM
					REFERENCE DRAWINGS

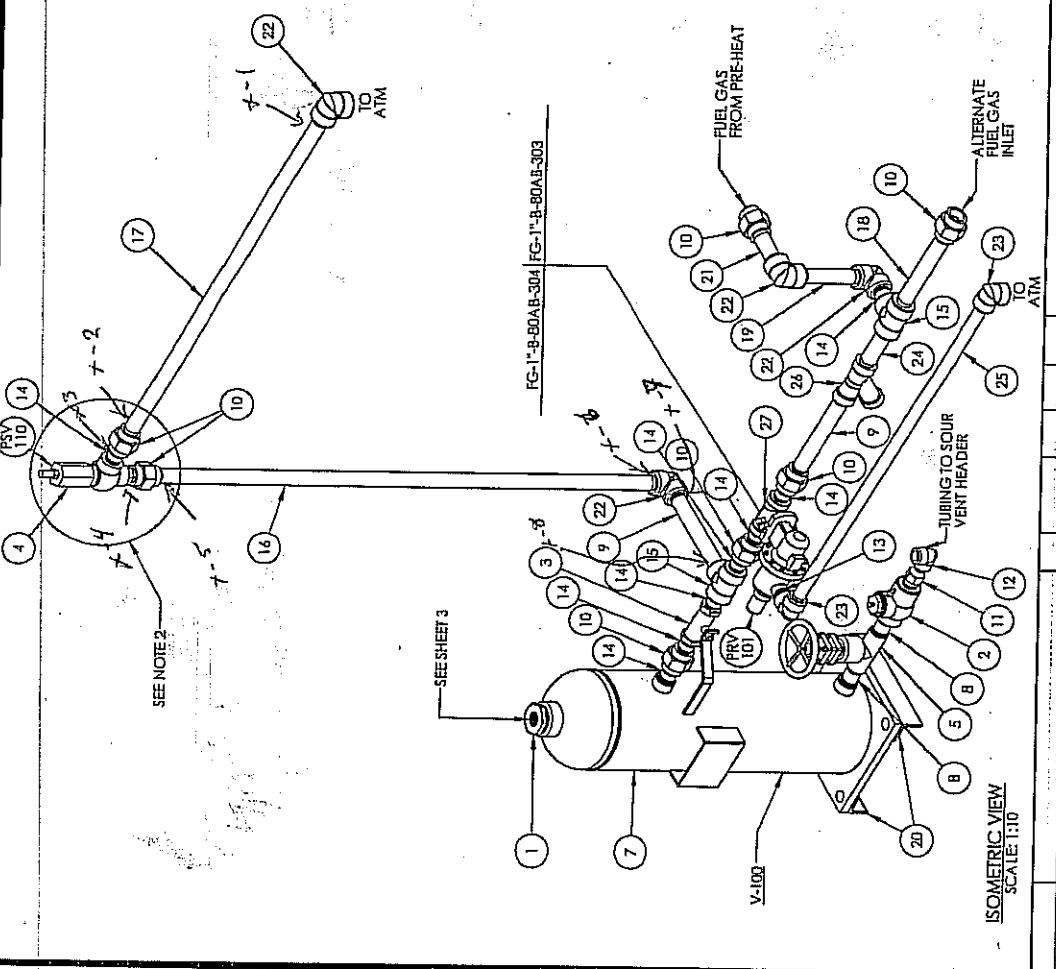
2010 FOR ORIGINAL ACTION

NOTES:  
 1. 10% XRAY REQUIRED ON SHOP THREADED PIPE UNLESS NOTED OTHERWISE  
 2. 100% XRAY REQUIRED

ITEM	MATERIAL	PART #	DESCRIPTION	MTR #	LENGTH	QTY.
1	SC-RUBBER FLOATED PORTLAND CEMENT					
2	CS	051868	CROWN 1" 2180 PSI SWING CHECK VALVE (IS-10SR21-F)			1
3	CS	072084	1" 3000 PSI NUTRON T3 STD TRIM RP BALL VALVE			1
4		100209	FARRIS RELIEF VALVE 1" X 1" SET @ 150 PSI, NACE TRIM (2200L SERIES)			1
5		100927	VALVE GLOBE NEWCO 1" NPT CL 800 NACE			1
6	SA-105	131991	1/2" CL 6000 THRD HEX PLUG			1
7		193978	LOTECH FUEL GAS SCRUBBER 8.5" OD x 25 1/2" S/S			1
8	SA-106B	209895	1" X 3" SCH. XH/80 NIPPLE			2
9	SA-106B	319964	1" X 10" SCH. XH/80 NIPPLE			2
10	SA-105	342471	1" CL 3000 THRD UNION			7
11	SA-105	410658	1" X 1/2" SCH. XH SWAGE			7
12	SA-105	532669	1/2" CL 3000 THRD 90 ELBOW			1
13	SA-106B	597227	3/4" X 1 1/2" SCH. XH/80 NIPPLE			1
14	SA-106B	610180	1" X 2 1/2" SCH. XH/80 NIPPLE			8
15	SA-105	681628	1" CL 3000 THRD TEE			2
16	SA-106B	686796	1" SCH. XH/80 PIPE		52 3/16"	1
17	SA-106B	686796	1" SCH. XH/80 PIPE		39 3/16"	1
18	SA-106B	686796	1" SCH. XH/80 PIPE		9 5/16"	1
19	SA-106B	686796	1" SCH. XH/80 PIPE		6 13/16"	1
20	SA-36/44W	742597	STEEL ANGLE IRON - 2" X 2" X 1/4"		11"	2
21	SA-106B	743719	1" X 4 1/2" SCH. XH/80 NIPPLE		4 7/16"	1
22	SA-105	752666	1" CL 3000 THRD 90 ELBOW			4
23	SA-105	778134	3/4" CL 3000 THRD 90 ELBOW			2
24	SA-106B	785175	3/4" SCH. XH/80 NIPPLE		5"	1
25	SA-106B	804008	3/4" SCH. XH/80 PIPE		37 1/8"	1
26	CS	846205	1" CL 800 ANS1 THRD Y-STRAINER (YS800)			1
27		898489	FISHER 227 PRESSURE REGULATOR 1" NPT 70-150 PSI 2000 MAX WP 1/8" ORIFICE			1

DESIGN DATA	
LINE NUMBER:	FG-1-B-80A-B-304
CLIENT SPECIFICATION:	AB
DESIGN & FABRICATE TO:	ANSI/ASME B31.3 NPS 2008 EDITION
DESIGN PRESSURE:	27.7 PSI
MAXIMUM DESIGN TEMPERATURE:	130°F
MINIMUM DESIGN TEMPERATURE:	-20°F
SERVICE:	SW/EET
HYDROSTATIC TEST PRESSURE:	41.6 PSI
JOINT SEALANT:	JET LUBE TF-15
CORROSION ALLOWANCE:	1/16"
G.C. PROGRAM NO.:	ADP-1253

DESIGN DATA	
LINE NUMBER:	FG-1-B-80A-B-303
CLIENT SPECIFICATION:	CA
DESIGN & FABRICATE TO:	ANSI/ASME B31.3 NPS 2008 EDITION
DESIGN PRESSURE:	14.40 PSI
MAXIMUM DESIGN TEMPERATURE:	130°F
MINIMUM DESIGN TEMPERATURE:	-20°F
SERVICE:	SWEET
HYDROSTATIC TEST PRESSURE:	21.60 PSI
JOINT SEALANT:	JET LUBE TF-15
CORROSION ALLOWANCE:	1/16"
G.C. PROGRAM NO.:	ADP-1253



REV	DATE	BY	CHK	APP	DESCRIPTION
1	20100803	CW			ISSUED FOR CONSTRUCTION
2					ISSUED FOR CONSTRUCTION

**ISSUED FOR CONSTRUCTION**  
 NWP INDUSTRIES INC.  
 P.O. BOX 6280, MINNEAPOLIS, MN 55416-0280  
 PH: (612) 555-4100 FAX: (612) 555-4102  
 THE DRAWING IS PROPERTY OF NWP INDUSTRIES INC. ALL RIGHTS RESERVED. THIS DRAWING MUST BE RETURNED UPON REQUEST.  
 ALL DIMENSIONS IN INCHES

REV	DATE	BY	CHK	APP	DESCRIPTION
1	20100803	CW			ISSUED FOR CONSTRUCTION
2					ISSUED FOR CONSTRUCTION

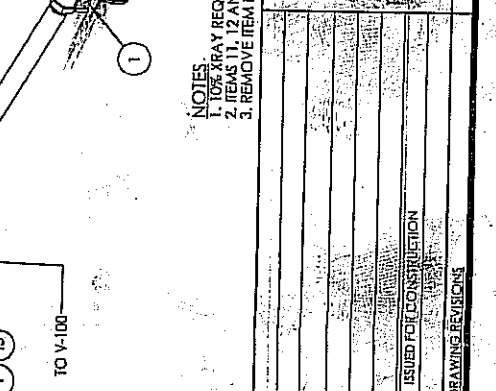
REV	DATE	BY	CHK	APP	DESCRIPTION
1	20100803	CW			ISSUED FOR CONSTRUCTION
2					ISSUED FOR CONSTRUCTION

ITEM	MATERIAL	PART #	DESCRIPTION	MIR #	LENGTH	QTY.
1	CS	072084	1" 3000 PSI NUTTINGS STD TRIM RP BALL VALVE			13
2	SA-105	077921	1" CL 3000 THRD CROSS			3
3	STD TRIM	100164	REGULATOR FISHER 67CFR 0-60 PSI 1/2" CW GAUGE			1
4		100218	FILTER HEADLINE MDL 3400-70. WAWP 230 PSI 1/2" NPT			1
5	STD TRIM	100402	REGULATOR FISHER 67CFR 0-125 PSI 1/2" CW GAUGE			2
6		101228	NEEDLE VALVE MAGNUM 1/2" FAF 6000 PSI FF50			3
7	SA-106B	209895	1" x 3" SCH. XH/80 NIPPLE			9
8	SA-105	301604	1/2" CL 3000 THRD TEE			1
9	SA-105	362671	1" CL 3000 THRD UNION			8
10	SA-106B	365152	1" x 1.5" SCH. XH/80 NIPPLE			1
11	SA-105	438424	1/4" CL 3000 THRD 90 ELBOW			3
12	SA-106B	444123	1/4" x 2" SCH. XH/80 NIPPLE			3
13	SS	486369	HYDROPOISE PRESSURE GAUGE MDL 402-4 *FACE X 1/2" NPT 0-300 PSI			2
14	SA-106B	525621	1/2" x 2" SCH. XH/80 NIPPLE			2
15	SA-106B	583042	1" x 2" SCH. XH/80 NIPPLE			4
16	SA-106B	610180	1" x 2 1/2" SCH. XH/80 NIPPLE			5
17	SA-105N	627588	1" CL 6000 THRD HEX PLUG			10
18	SA-106B	673640	1" x 4" SCH. XH/80 NIPPLE			8
19	SA-105	681628	1" CL 3000 THRD TEE			12
20	SA-106B	686796	1" SCH. XH/80 PIPE		9 1/8"	1
21	SA-106B	686796	1" SCH. XH/80 PIPE		16"	1
22	SA-106B	686796	1" SCH. XH/80 PIPE		16 7/16"	1
23	SA-106B	711561	1" x 1/2" SCH. XH/80 NIPPLE			1
24	SA-105	752666	1" CL 3000 THRD 90 ELBOW			5
25	SA-105	839738	1" x 1/2" SCH. XH/80 SWAGE			5
26	SA-105N	840339	1" x 1/4" SCH. XH/80 SWAGE			3
27	SA-106B	963772	1" x 6" SCH. XH/80 NIPPLE			8

ISSUED FOR CONSTRUCTION ORIGINAL

DESIGN DATA	
LINE NUMBER	EG-1-B-804B-301
CLIENT SPECIFICATION	AB
DESIGN & FABRICATE TO	ANSI/ASME B31.3 NF5 2008 EDITION
DESIGN PRESSURE	277 PSI
MAXIMUM DESIGN TEMPERATURE	130°F
MINIMUM DESIGN TEMPERATURE	20°F
SERVICE	SWEET
HYDROSTATIC TEST PRESSURE	416 PSI
JOINT SEALANT	JET LUBE TF-15
CORROSION ALLOWANCE	1716"
G.C. PROGRAM NO.	AGP-1293

ENCANA CORPORATION - STEEPROCK LINEHEATER AND METERING PACKAGE	
1.25 MMBTU/HR, 48" OD x 180" S/S (1) 3" 400 ANSI JR METER RUN	
DRAWN: CW	CHK: SW
DATE: 2010.08.03	DATE: AUG 21 2010
SCALE: 1"=1'	SHEET: 3 OF 8
REV: 0	DWG: 101477-2



NOTES:  
 1. 10% XRAY REQUIRED ON SHOP THREADED PIPE UNLESS NOTED OTHERWISE  
 2. ITEMS 11, 12 AND 27 ARE TYPICAL WITH REGULATOR ASSEMBLIES #3 AND 5  
 3. REMOVE ITEM PRIOR TO HYDROTESTING LINE

ISOMETRIC VIEW  
SCALE: 1"=1'

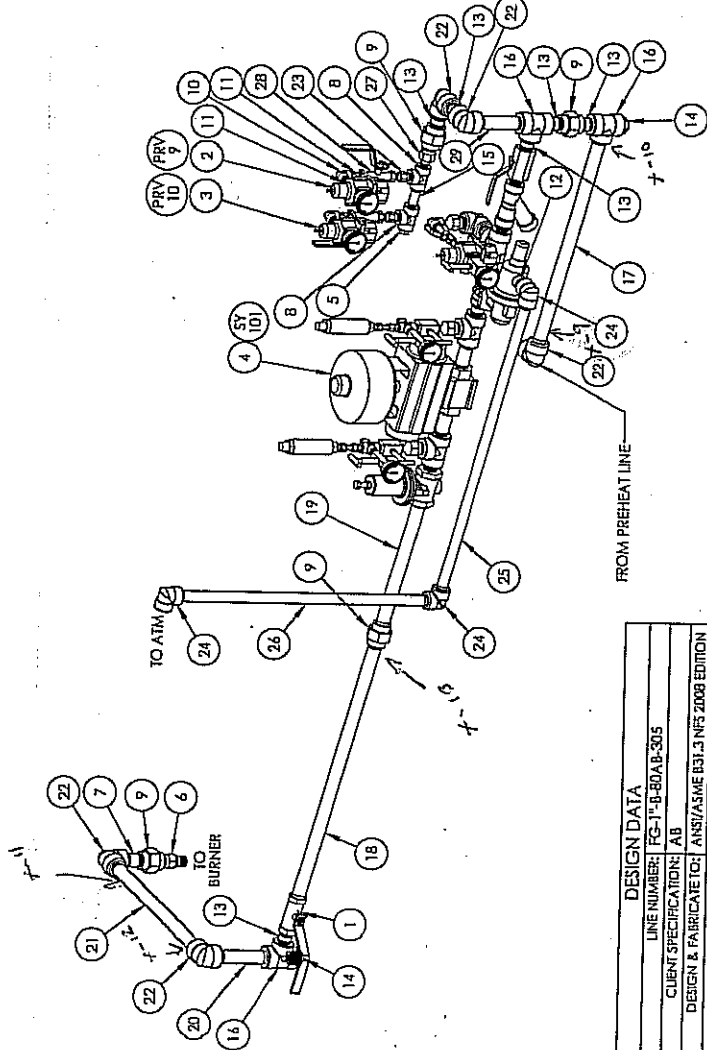
ISSUED FOR CONSTRUCTION	
DATE	AUG 21 2010
BY	CW
CHK	SW
APP	

REFERENCE DRAWINGS	
10745	SKID ASSEMBLY
10749	COIL ASSEMBLY
101477-1	PIPING AND INSTRUMENTATION DIAGRAM
0	REV DATE BY CHK APP

DRAWING REVISIONS	
NO.	DESCRIPTION
0	ISSUED FOR CONSTRUCTION

ENCANA CORPORATION - STEEPROCK LINEHEATER AND METERING PACKAGE	
1.25 MMBTU/HR, 48" OD x 180" S/S (1) 3" 400 ANSI JR METER RUN	
DRAWN: CW	CHK: SW
DATE: 2010.08.03	DATE: AUG 21 2010
SCALE: 1"=1'	SHEET: 3 OF 8
REV: 0	DWG: 101477-2

ENCANA CORPORATION - STEEPROCK LINEHEATER AND METERING PACKAGE	
1.25 MMBTU/HR, 48" OD x 180" S/S (1) 3" 400 ANSI JR METER RUN	
DRAWN: CW	CHK: SW
DATE: 2010.08.03	DATE: AUG 21 2010
SCALE: 1"=1'	SHEET: 3 OF 8
REV: 0	DWG: 101477-2



DESIGN DATA	
LINE NUMBER:	FG-1"-B-80A-B-305
CLIENT SPECIFICATION:	AB
DESIGN & FABRICATOR:	ANSI/ASME B31.3 NPS 2008 EDITION
DESIGN PRESSURE:	277 PSI
MAXIMUM DESIGN TEMPERATURE:	130°F
MINIMUM DESIGN TEMPERATURE:	-20°F
SERVICE:	SWEET
HYDROSTATIC TEST PRESSURE:	414 PSI
JOINT SEALANT:	JET LUBE TF-15
CORROSION ALLOWANCE:	1/16"
G.C. PROGRAM NO.:	AGP-1253

DOCUMENT NO.	DESCRIPTION	REV	DATE	BY	CHK	APP
10177-1	PIPING AND INSTRUMENTATION DIAGRAM	0	2010.08.03	CW	AK	APP

REFERENCE DRAWINGS	
100945	SPOD ASSEMBLY
100943	COIL ASSEMBLY

ISOMETRIC VIEW  
SCALE: 1/12

ISSUED FOR CONSTRUCTION

ORIGINAL

ITEM	MATERIAL	PART #	DESCRIPTION	MTR #	LENGTH	QTY.
1	CS	072084	1" 3000 PSI NUTRON STD TRM FP BALL VALVE			1
2	STD TRIM	100144	REGULATOR FISHER, 47CFR, D-50 PSI C/W GAUGE			1
3	STD TRIM	100402	REGULATOR FISHER, 47CFR, 0-125 PSI C/W GAUGE			1
4		100691	VALVE TRAIN (RIGHT TO LEFT) ENCANA SPEC			1
5	SA-105	131991	1/2" CL 6000 THRD HEX PLUG			1
6	SA-105N	188371	1" x 3/4" SCH. XH/80 SWAGE			1
7	SA-106B	208895	1" x 3" SCH. XH/80 NIPPLE			1
8	SA-105	301604	1/2" CL 3000 THRD TEE			2
9	SA-105	362671	1" CL 3000 THRD UNION			4
10	SA-105	438424	1/4" CL 3000 THRD 90 ELBOW			2
11	SA-106B	444123	1/4" x 2" SCH. XH/80 NIPPLE			4
12	SA-106B	587227	3/4" x 1 1/2" SCH. XH/80 NIPPLE			1
13	SA-106B	610180	1" x 2 1/2" SCH. XH/80 NIPPLE			6
14	SA-105N	627588	1" CL 6000 THRD HEX PLUG			2
15	SA-106B	640311	1/2" x 3" SCH. XH/80 NIPPLE			1
16	SA-105	681628	1" CL 3000 THRD TEE			3
17	SA-106B	686796	1" SCH. XH/80 PIPE		24 3/4"	1
18	SA-106B	686796	1" SCH. XH/80 PIPE		31 3/8"	1
19	SA-106B	686796	1" SCH. XH/80 PIPE		15 3/8"	1
20	SA-106B	686796	1" SCH. XH/80 PIPE		6 5/8"	1
21	SA-106B	686796	1" SCH. XH/80 PIPE		18 13/16"	1
22	SA-105	752666	1" CL 3000 THRD 90 ELBOW			5
23	SA-105	769584	1/2" x 1/4" SCH. XH/80 SWAGE			2
24	SA-105	778134	3/4" CL 3000 THRD 90 ELBOW			3
25	SA-106B	806008	3/4" SCH. XH/80 PIPE		34 1/8"	1
26	SA-106B	806008	3/4" SCH. XH/80 PIPE		29 5/8"	1
27	SA-105	833938	1" x 1/2" SCH. XH/80 SWAGE			1
28	CS	897613	1/4" 3000 PSI NUTRON TS STD TRM FP BALL VALVE			2
29	SA-106B	963772	1" x 6" SCH. XH/80 NIPPLE			1

NOTES  
1. 10% XRAY REQUIRED ON SHOP THREADED PIPE UNLESS NOTED OTHERWISE

ISSUED FOR CONSTRUCTION	
SIGNED:	<i>[Signature]</i>
DATE:	08/03/2010
SCALE:	1/12
SO.:	200258
ALL DIMENSIONS IN INCHES	

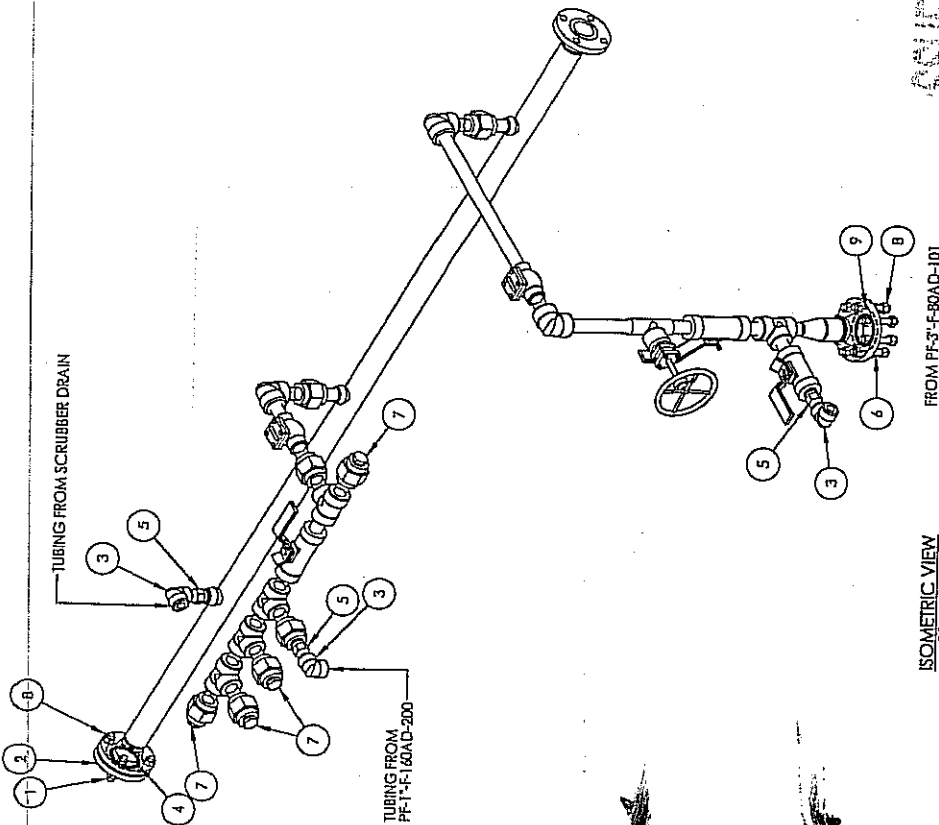
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SIGNED:	<i>[Signature]</i>
DATE:	08/03/2010
SCALE:	1/12
SO.:	200258
ALL DIMENSIONS IN INCHES	

ISSUED FOR CONSTRUCTION	
SIGNED:	<i>[Signature]</i>
DATE:	08/03/2010
SCALE:	1/12
SO.:	200258
ALL DIMENSIONS IN INCHES	

ISSUED FOR CONSTRUCTION	
SIGNED:	<i>[Signature]</i>
DATE:	08/03/2010
SCALE:	1/12
SO.:	200258
ALL DIMENSIONS IN INCHES	

ENGANA CORPORATION - STEERPROCK  
LINEHEATER AND METERING PACKAGE  
1.25 MMBTU/HR, 48" OD x 180' S/S  
(1) 3"-600 ANSI JR METER RUN  
ASSEMBLY  
DWG: 101477.2  
DATE: 08/03/10  
SCALE: 1/12  
SHEET: 4 OF 6  
REV: 0

ITEM	MATERIAL	PART #	DESCRIPTION	MTR #	LENGTH	QTY.
1	ASTM A193	054020	B7M STUD 3/8" DIA. x 3 1/2" LG			4
2	SA-105N	101096	2"-150 ANSI RF BUND 1/2" TAPPED FLANGE			1
3	SA-105N	246832	1/2" CL 6000 THRD 90 ELBOW			3
4	316 SS	263242	2"-150 ANSI RF SPIRAL WOUND GASKET			1
5	SA-105	410438	1" x 1/2" SCH. XXH SWAGE			3
6	ASTM A193	433978	B7M STUD 3/8" DIA. x 4 1/4" LG			8
7	SA-105N	627588	1" CL 6000 THRD HEX PLUG			4
8	ASTM A194	698353	2HM HEX NUT 3/8" DIA.			24
9	316 SS	777116	2"-300/600 ANSI RF SPIRAL WOUND GASKET			1



ISOMETRIC VIEW  
SCALE: 1:12

FROM PF-3-F-80AD-101

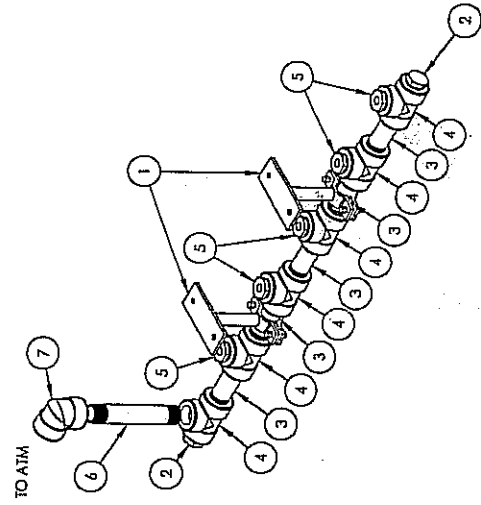
**ORIGINAL**

**ISSUED FOR CONSTRUCTION**

NOTES  
1. X-RAY REQUIRED ON SHOP THREADED PIPE UNLESS NOTED OTHERWISE

ERICANA CORPORATION - STEEPROCK LINEHEATER AND METERING PACKAGE 1.25 MMRTU/HR. 48" OD x 180" S/S (1) 3"-600 ANSI JR. METER RUN ASSEMBLY	DWG: CW CHK: [Signature] DATE: 2010.08.03 SCALE: 1:12 SHEET: 5 OF 8	APP: [Signature] DATE: 2010.08.31/10 DATE: 2010.08.31/10 DATE: 2010.08.31/10	REV: 0 DWG: 101477-2
	P.O. BOX 6250, INDUSTRIAL AB T4G 1S9 PH: (409) 257-4400 FAX: (409) 257-4102 <small>This is an initial supply.</small> <b>NWP INDUSTRIES INC.</b> <small>THIS DRAWING IS PROPERTY OF NWP INDUSTRIES INC. AND MAY NOT BE REPRODUCED WITHOUT PERMISSION. THIS DRAWING MUST BE RETURNED UPON REQUEST.</small>		
ISSUED FOR CONSTRUCTION SIGNED: [Signature] DATE: AUG 13 2010	S.O. [Signature] ALL DIMENSIONS IN INCHES	ISSUED FOR CONSTRUCTION REV: 0 DATE: 2010.08.03 BY: CW CHK: [Signature] APP: [Signature]	DRAWING REVISIONS
SKID ASSEMBLY COIL ASSEMBLY PIPING AND INSTRUMENTATION DIAGRAM REFERENCE DRAWINGS			

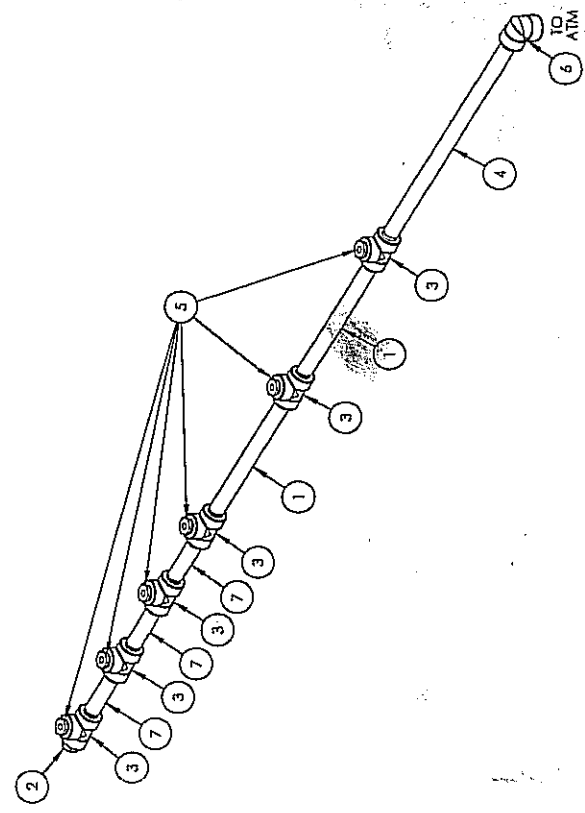
ITEM	MATERIAL	PART #	DESCRIPTION	MTR #	LENGTH	QTY.
1	-	100812	BRACKET, FUEL GAS VENT HEADER 1"			2
2	SA-105N	627588	1" CL 6000 THRD HEX PLUG			2
3	SA-106B	673640	1" x 4" SCH. XH/80 NIPPLE			5
4	SA-105	681628	1" CL 3000 THRD TEE			6
5	SA-105N	706720	1" x 1/4" FS THRD HEX BUSHING			5
6	SA-106B	718211	1" x 7" SCH. XH/80 NIPPLE			1
7	SA-105	752666	1" CL 3000 THRD 90 ELBOW			1



VALVE TRAIN HEADER  
SCALE 1:8

NOTES  
1. 10% XRAY REQUIRED ON SHOP THREADED PIPE UNLESS NOTED OTHERWISE

ITEM	MATERIAL	PART #	DESCRIPTION	MTR #	LENGTH	QTY.
1	SA-106B	365192	1" x 15" SCH. XH/80 NIPPLE			2
2	SA-105N	627588	1" CL 6000 THRD HEX PLUG			1
3	SA-105	681628	1" CL 3000 THRD TEE			6
4	SA-106B	686776	1" x 1/4" FS THRD HEX BUSHING			1
5	SA-105N	706720	1" x 7" SCH. XH/80 NIPPLE			6
6	SA-105	752666	1" CL 3000 THRD 90 ELBOW			1
7	SA-106B	963792	1" x 6" SCH. XH/80 NIPPLE			3



SWEET HEADER  
SCALE 1:10

ORIGINAL

ISSUED FOR CONSTRUCTION

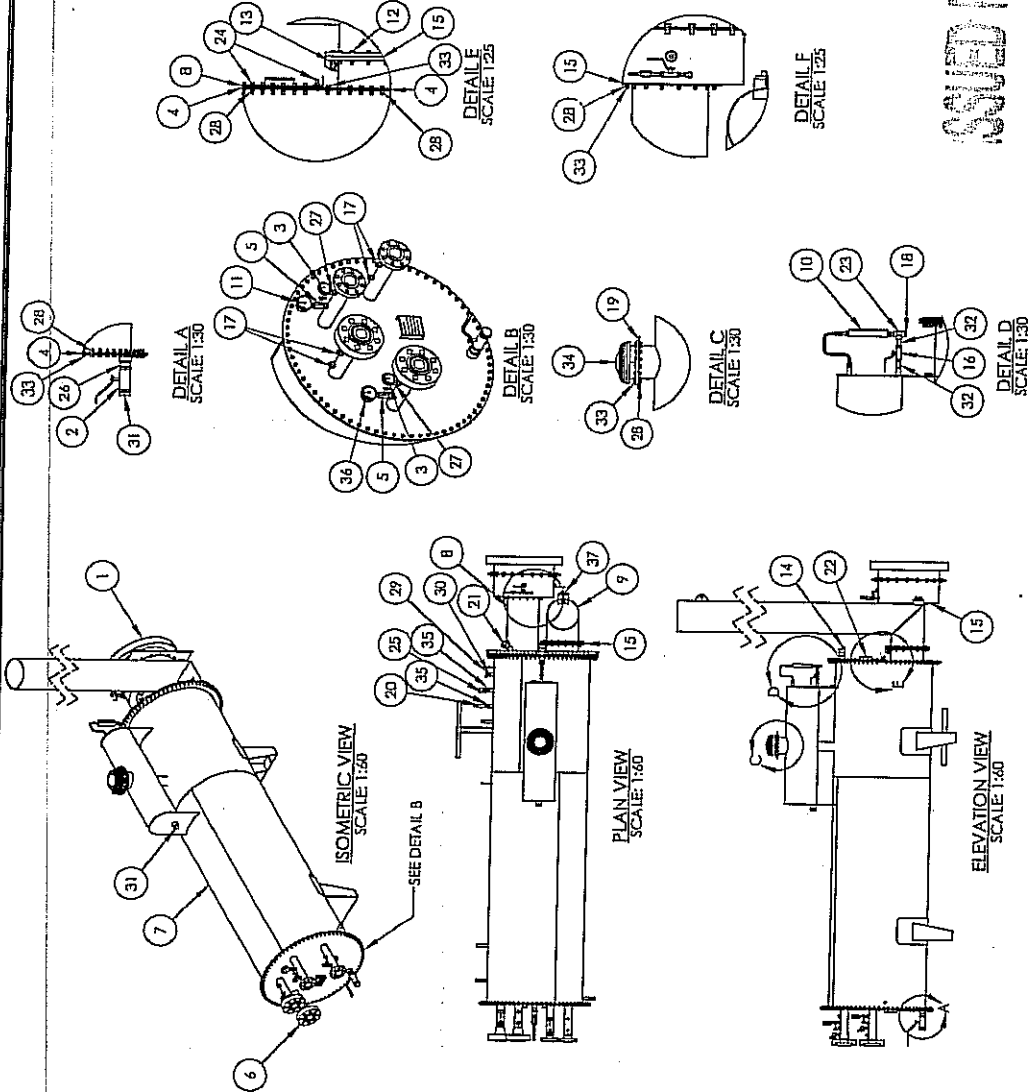
ISSUED FOR CONSTRUCTION  
SIGNED: [Signature]  
DATE: AUG 13 2010  
P.O. BOX 4280, INNSFALL AB T4G 1S9  
PH: (403) 597-4168 FAX: (403) 597-4169  
Total official supply.  
INDUSTRIES INC.  
NAMP  
ENGANA CORPORATION - STEEPROCK  
LINEHEATER AND METERING PACKAGE  
1.25 MM BTU/HR, 48" OD x 180" S/S  
(1) 3"-600 ANSI JR METER RUN  
ASSEMBLY

REV	DATE	BY	CHK	APP	DESCRIPTION
0	2010.08.03	CW	[Signature]		ISSUED FOR CONSTRUCTION

ALL DIMENSIONS IN INCHES  
DRAWING REVISIONS

ENGANA CORPORATION - STEEPROCK  
LINEHEATER AND METERING PACKAGE  
1.25 MM BTU/HR, 48" OD x 180" S/S  
(1) 3"-600 ANSI JR METER RUN  
ASSEMBLY  
DWG: 101477-2  
SHEET: 6 OF 6  
DATE: 2010.08.03  
SCALE: 1:8  
DATE: 2010.08.03  
APP: [Signature]  
REV: 0

ITEM	MATERIAL	PART #	DESCRIPTION	LENGTH	QTY
1	CS	082379	WENCO BURNER ASSEMBLY - SEE SHEET B		1
2	304 SS	100217	2" 3000 PSI NUTRON STD TRIM T3 FP BALL VALVE		1
3	DURLON	100489	THERMOMETER TRENDS 3" DIA. X 2 1/2" STEM 0-250 DEGREES F ADJUSTABLE HEAD		2
4	SS	100785	BARREL GASKET - 55" OD X 48" ID X 1/8" THK		2
5	SS	100943	AGCO NEEDLE VALVE 1/2" M X F NPT HI 4000 PSI		2
6	SS	100944	1.25 MM BTU LINE HEATER BATH / ENCANNA 3" SINGLE METERS PIG 48" X 15"		1
7	SS	100944	1.25 MM BTU LINE HEATER BATH / ENCANNA 3" SINGLE METERS PIG 48" X 15"		1
8	SS	100944	1.25 MM BTU LINE HEATER BATH / ENCANNA 3" SINGLE METERS PIG 48" X 15"		1
9	SS	100946	1.25 MM BTU LINE HEATER BATH / ENCANNA 3" SINGLE METERS PIG 48" X 15"		1
10	SS	101084	RATE GAUGE RENCOC 1/2" NPT MDL 5700-9-C-1-RH		1
11	SS	101221	PRESSURE INDICATOR HYDROPOISE 3" FACE 172" MATH 152000		1
12	ASTM A325	101241	BOLT - 1/2" X 2 1/2"		16
13	ASTM A325	101244	HEX NUT - 1/2"		16
14	DURLON	101409	LEVEL SWITCH ELECTRIC SOR 2" NPT MODEL 1510C-GZA-C-392-52-53-54-55		1
15	DURLON	105655	LH GASKET - 1 1/2" PRETUBE/STACK		2
16	CS	112056	1/2" 3000 PSI NUTRON T3 STD TRIM FP BALL VALVE		1
17	SA-105	131971	1/2" CL 6000 THRD HEX PLUG		4
18	SA-105	131971	1/2" CL 6000 THRD HEX PLUG		4
19	DURLON	174096	THIEF HATCH BASE GASKET		1
20	SS	271958	CCS TEMPERATURE SWITCH MODEL 49001E		1
21	ALUMINUM	293652	PEEP SIE GLASS 2" ZIRCO		1
22	ALUMINUM	301604	NAME PLATE MIA C/S SILVER DEEP ETCHED		1
23	SA-105	312733	1/2" CL 3000 THRD TEE		1
24	SS	367274	BOLT - 1/2" DIA. X 2" LG		34
25	SA-1068	403922	TEMP. CONTROL KIMRAY HT-12		1
26	304 SS	467701	2" X 3" SCH. 40/80 NIPPLE		1
27	304 SS	467701	THERMOWELL 1/2" X 1/2" X 2 1/2" STEM		2
28	GRADE 2	484536	HEX NUT 1/2" DIA.		174
29	304 SS	551697	THERMOMETER 3" DIA. TRENDS 6" STEM 0-250 DEGREES F		1
30	304 SS	608681	1" X 1/2" X 6" 240 BORE THERMOWELL		1
31	SA-105N	639630	2" CL 6000 THRD HEX PLUG		2
32	SA-1048	640311	1/2" X 3" SCH. 40/80 NIPPLE		2
33	GRADE 2	698333	BOLT - 1/2" DIA. X 1 1/2" LG		140
34	ALUMINUM	732147	BIG ENARDO 330 THIEF HATCH		1
35	SS	839530	1" SS-1255 H.C.I. KIMRAY SEPARABLE SOCKET		2
36	SS	839533	PRESSURE INDICATOR HYDROPOISE 3" FACE 172" MATH 152000		1
37	M.L.	876985	4" 150 PSI THRD PLUG		1



ISSUED FOR CONSTRUCTION ORIGINAL

ISSUED FOR CONSTRUCTION  
 SIGNED: *[Signature]*  
 DATE: AUG 03 2010  
 S.O.: 200280  
 ALL DIMENSIONS IN INCHES

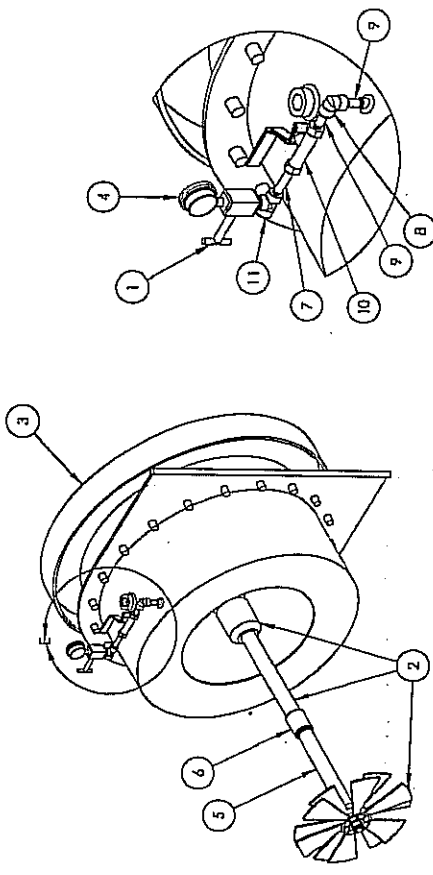
DOCUMENT NO.	REV	DATE	BY	CHK	APP	DESCRIPTION
100945	0	2010.08.03	CW			SRD ASSEMBLY
100943						COIL ASSEMBLY
101774						PIPING AND INSTRUMENTATION DIAGRAM
						REFERENCE DRAWINGS

**NWAP**  
 INDUSTRIES INC.  
 total central supply  
 P.O. BOX 6290, INNSTAIL AB 14G 159  
 PH: (408) 527-4480 FAX: (408) 527-4102  
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ENCANA CORPORATION - STEEPROG  
 LINE HEATER AND METERING PACKAGE  
 1.25 MM BTU/HR. 48" OD X 180" S/S  
 (1) 3"-600 ANSI JR METER RUN  
 ASSEMBLY  
 DWG: CW  
 CHK: *[Signature]* APP: *[Signature]*  
 DATE: 2010.08.03  
 SCALE: 1:50  
 SHEET: 7 OF 8  
 DWG: 101772  
 REV: 0



ITEM	MATERIAL	PART #	DESCRIPTION	MTR #	LENGTH	QTY.
1	-	108864	NEEDLE VALVE MAGNUMA 1/4" Mx F. 4000 PSI. MP25			1
2	-	101087	INTERVALS 1.25MM			1
3	-	101095	BURNER WENICO 1.25M TPC ALUMINUM FLAME CELL			1
4	SS	122376	WIKA PRESSURE GAUGE 2 1/2" FACE X 1 1/4" NPT 0-30 PSI			1
5	SA-106-B	176510	PIPE 1-1/2" SCH 80		16"	1
6	SA-105N	240322	FULL COUPLING 1 1/2" CL 3000			1
7	SA-106H	341114	1/4" x 3" SCH. XH/80 NIPPLE			1
8	SA-105	438424	1/4" CL 3000 THRD 90 ELBOW			1
9	SA-106H	444125	1/4" x 2" SCH. XH/80 NIPPLE			2
10	CS	877613	1/4" 3000 PSI NUTRON T3 STD TRIM FP BALL VALVE			1
11	SA-105	942045	1/4" CL 3000 THRD TEE			1

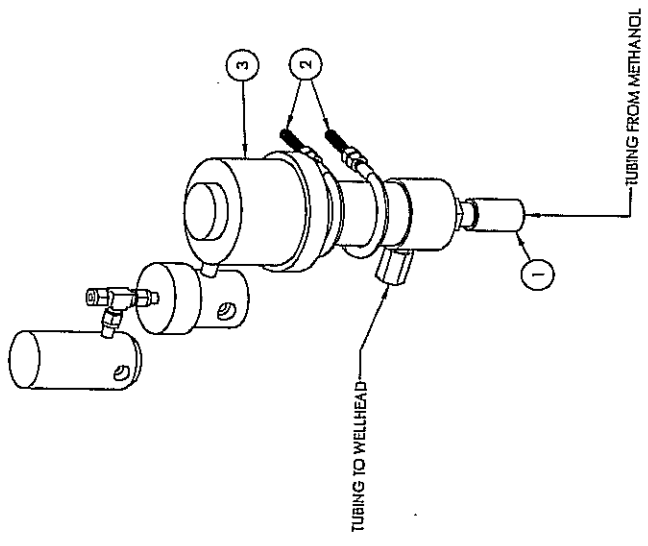


ISOMETRIC VIEW  
SCALE 1:15

DETAIL F  
SCALE 2:15

NOTES  
1. 10% XRAY REQUIRED ON SHOP THREADED PIPE UNLESS NOTED OTHERWISE

ITEM	MATERIAL	PART #	DESCRIPTION	MTR #	LENGTH	QTY.
1	SA-105N	080249	FULL COUPLING 1 1/2" CL 3000			1
2	-	354568	U-BOLT, 2" C/W 4 NUTS			2
3	-	632761	WILLIAMS. CHR900V400. METHANOL PUMP			1



ISOMETRIC VIEW  
SCALE 1:4

**NOTED FOR CONSTRUCTION**

**ORIGINAL**

ISSUED FOR CONSTRUCTION  
 SIGNED: [Signature]  
 DATE: AUG 13 2011  
 SO: [Signature]  
 ALL DIMENSIONS IN INCHES

ENGANA CORPORATION - STEERPROK  
 LINEHEATER AND METERING PACKAGE  
 1.25 MMBTU/HR. 48" OD x 180" S/S  
 (1) 3"-600 ANSI LR METER RUN ASSEMBLY  
 DWG: CW  
 CHK: [Signature]  
 DATE: 2010.08.03  
 DATE: 2010.08.03  
 SCALE: 1:15  
 SHEET: 8 OF 8  
 DWG: 10147-2  
 REV: 0

NO.	DATE	BY	CHK	APP	DESCRIPTION
108745					SKID ASSEMBLY
08943					COIL ASSEMBLY
107474	08/20/10	CW	[Signature]	[Signature]	PIPING AND INSTRUMENTATION DIAGRAM
000000					REBERG DRAWINGS

**NWIP**  
 INDUSTRIAL PIPING  
 P.O. BOX 6280, MINNEAPOLIS, MN 55416  
 (612) 403-2222 FAX (612) 403-2224  
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