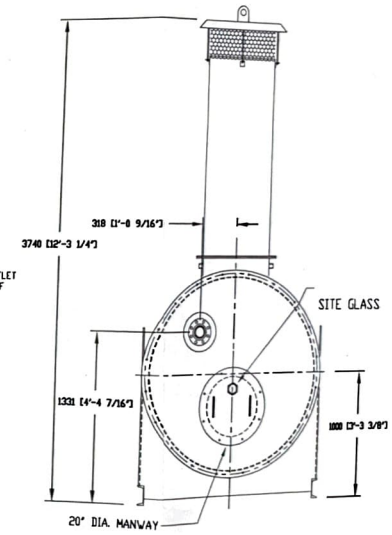
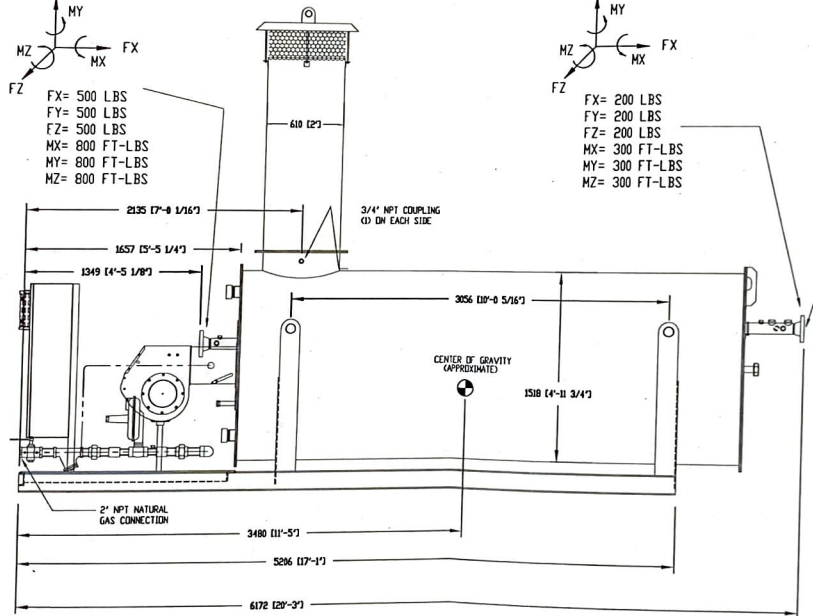
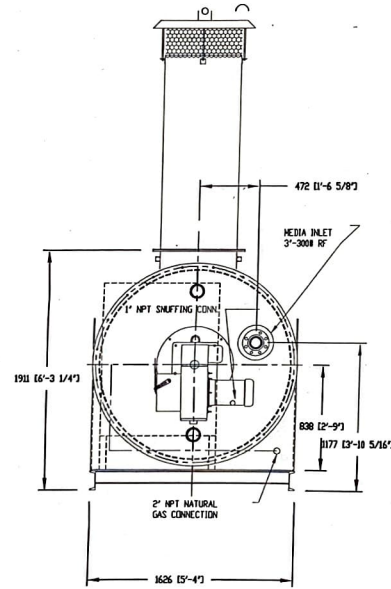
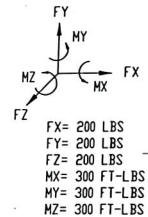
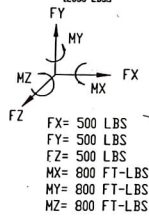


DESIGNED PER ASME CODE SECTION I, 2004 EDITION, 2005 ADDENDA  
 DESIGN PRESSURE: 200 P.S.I.G. (1379 kPaG) @ 650 ° F. (339 D C)  
 TRANSFER MEDIA: 60/40% TEG/WATER  
 COIL CAPACITY: 181 GALLON (685 LITERS)  
 OUTPUT: 5,500,000 BTU/HR (1610 kW/HR)  
 INPUT: 7,193,830 BTU/HR (2106 kW/HR)  
 HEATING SURFACE 430 SQ. FT. (39.95 SQ. M)  
 PRESS. DROP 13 PSI (89.63 kPa) @ NORMAL FLOW  
 PRESS. DROP 11 PSI (75.79 kPa) @ MINIMUM FLOW  
 FLOW RATE: 155 GPM (58 LITERS/SEC)  
 INLET MEDIA TEMP. 203°F (95 DEG C)  
 OUTLET MEDIA TEMP. 284°F OPERATING (140 DEG C)  
 ESTIMATED SHIPPING WEIGHT: 16,000 LBS/DRY (7258 KG)  
 ESTIMATED OPERATING WEIGHT: 17,538 LBS/DRY (7955 KG)

**ORIGINAL**  
 DATE MAY 10 2007 HTH



REFERENCE DRAWINGS

100-608-47 - GENERAL ARRANGEMENT DRAWING

GENERAL NOTES

THIS DOCUMENT CONTAINS MATERIAL AND/OR INFORMATION WHICH IS PROPERTY OF HTH HEATECH INC. AND SUPPLIED ONLY ON A CONFIDENTIAL BASIS. NO TRANSMITTAL OR DISCLOSURE SHALL BE MADE TO ANY PERSON, FIRM OR CORP. WITHOUT THE PRIOR WRITTEN APPROVAL OF HTH HEATECH INC.

REVISIONS

NO.	BY	CHK'D	DESCRIPTION	DATE
A	DP		ISSUED FOR INFORMATION	07-05-10

CUSTOMER TAG NO.	-
CUSTOMER PROJECT NO.	-
CUSTOMER PO NO.	0000001133-0
DRAWN BY	DP/ATEL
DATE	2007-05-10
APPROVED BY	
PROJECT GEO	
CONCESSION	
NEW TAG NO.	
NEW JOB NO.	HTH-608-47

**HEATECH**  
 HTH HEATECH INC.  
 CALGARY, ALBERTA, CANADA

FILE: HEATER GENERAL ARRANGEMENT

END USER/CUSTOMER: PIONEER NATURAL RESOURCES CANADA INC. SOLARIS MANAGEMENT CONSULTANTS INC.

PROJECT/LOCATION: CHINOWAGA, B.C. LSD 4-32-10/01-11-8

SCALE: NTS

DRAWING NO.: 101-608-47

REV A

SHOP CODE: N/A

**V-904**  
 EXPANSION TANK  
 MFR: GILFAB  
 SIZE: 762mm x 2286mm S/S (30ins x 90 in)  
 D.P.: 1438.9 kPa (208.7 psig) @ 34°C/-29°C (650°F/-20°F)  
 CAPACITY: 0.946 m<sup>3</sup> (250 GAL)  
 ASME SECTION VIII  
 OPERATING PRESSURE: 345 kPa (50 psig)  
 CRN#: T9696.21

**P-902/903**  
 CIRCULATION PUMP  
 MODEL: ZINDO40200AGBC19E  
 MOTOR: 22.4 kW (30HP), 3500 RPM TEFC  
 480V/3 PH/ 60HZ  
 FLOW RATE 46.01 m<sup>3</sup>/hr (203 USGPM)  
 TOTAL DISCHARGE HEAD 80.4m (264')

**P-904**  
 GLYCOL MAKE UP PUMP  
 MODEL: 01-10744 (PX1)/AAAA/MS/VT/AVT  
 AIR INLET: 861 kPa (125 psig) MAXIMUM  
 TEMPERATURE: 178°C (350°F)  
 FLOW RATE 3.768 m<sup>3</sup>/hr (16.6 USGPM)

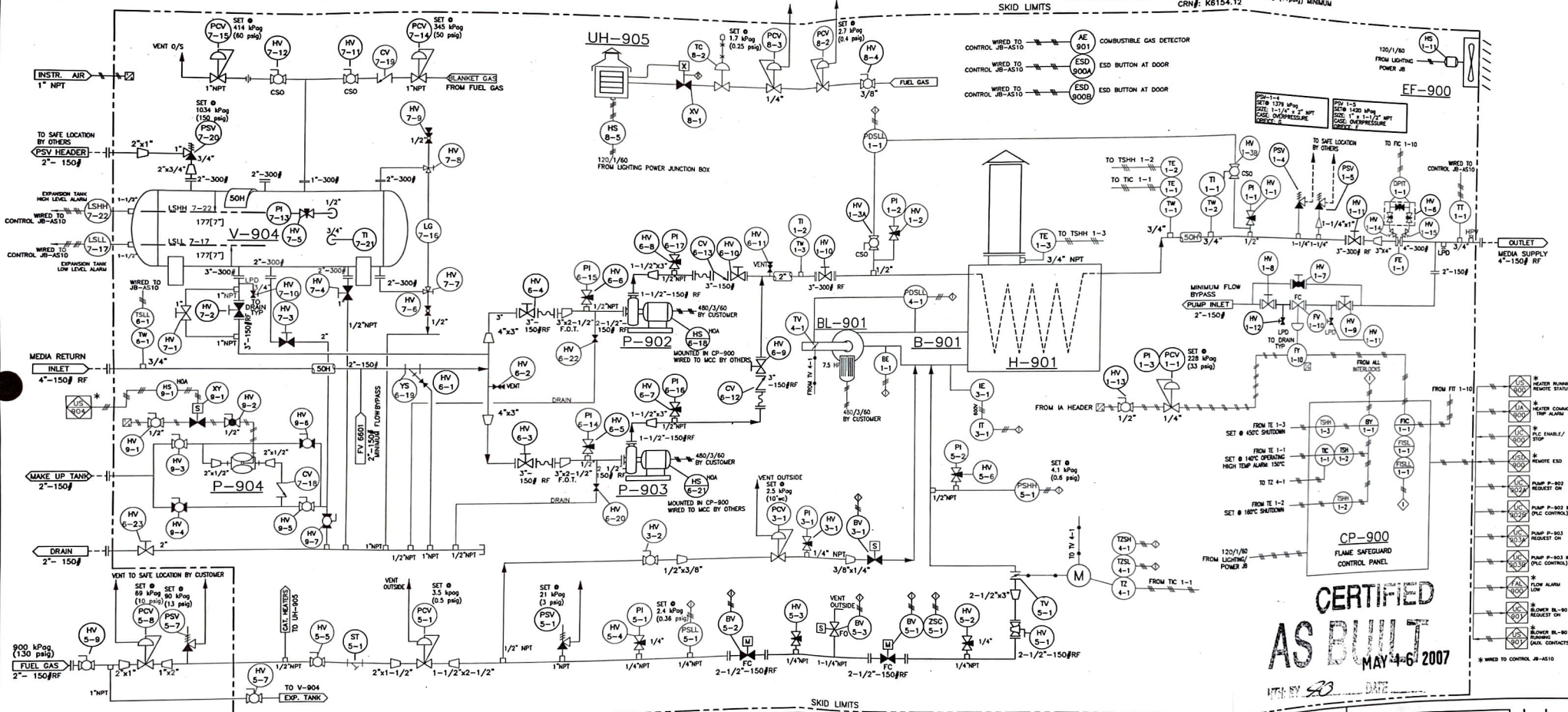
**B-901**  
 BURNER  
 MODEL: POWER FLAME C5-0-308  
 MANIFOLD PRESSURE: 0.8 kPa (0.3"wc)  
 FURNACE PRESSURE: 0.25 kPa (1"wc)

**BL-901**  
 BLOWER  
 INTEGRAL TO BURNER  
 MOTOR: 5.59275 kW (7.5 HP) 3450 RPM TEFC  
 480V/3 PH/60HZ

**H-901**  
 HEATER MODEL: HEATEC HIC-3010-30-G  
 THERMO FLUID 18, ASME SECTION I  
 INPUT: 2108 kW (7.19 MMBTU/HR)  
 DUTY: 1612 kW (5.5 MMBTU/HR)  
 D.P./D.T.: 1379 kPa (200 psig) @ 34°C/-28°C (650°F/-20°F)  
 INLET: 95°C (203 F)  
 OUTLET: 140°C (284 F)  
 FLOW: 35.2 m<sup>3</sup>/hr (155 USGPM) NORMAL  
 31.3 m<sup>3</sup>/hr (138 USGPM) MINIMUM  
 PRESSURE DROP: 145 kPa (13psig) NORMAL, 75 kPa (11psig) MINIMUM  
 CRN#: K6154.12

**EH-900**  
 EXHAUST FAN  
 MOTOR: 186 W (1/4 hp)  
 AIR CHANGES: 12/hr

**UH-905**  
 CATAYNE HEATER  
 MODEL: NW 2436  
 DUTY: 7.029 kW (24,000 BTU/HR)  
 120V/1PH/60HZ



**REFERENCE DRAWINGS**

102-608-47	GENERAL ARRANGEMENT
103-608-47	GENERAL ARRANGEMENT
200-608-47	FLAME SAFEGUARD ELECTRICAL DIAGRAM
308-608-47	LIGHTING/POWER JUNCTION BOX

**GENERAL NOTES**

- FUEL GAS VENT VALVES, PRESSURE REGULATOR VENTS & RELIEF VALVE VENTS TO BE PIPED TO OUTSIDE OF ENCLOSURE TO ATMOS.
- ALL ELECTRICAL EQUIPMENT SHALL BE CSA APPROVED & LABELED.
- FINAL SET POINTS TO BE DETERMINED AT START-UP.
- FUEL TRAIN BUILT TO CSA 149.3.
- ALL CUSTOMER CONNECTIONS IN PIPERACK END OF BUILDING, LOW.
- INDOOR FLOURESCENT LIGHTING, OUTDOOR HPS LIGHT WITH PHOTOCELL AND RECEPTABLE TO BE WIRED TO JIB ON OUTSIDE OF BUILDING, CIRCUIT PROTECTION BY OTHERS.

**PIPING BY OTHERS**  
 ELECTRICAL/ELECTRONIC SIGNAL  
 FLAME SAFEGUARD CONNECTION  
 PANEL MOUNTED  
 CUSTOMER PLC  
 LOCAL INST. TAG

**REVISIONS**

NO.	BY	CHK'D	DESCRIPTION	DATE
5	DP		AS BUILT AS INDICATED	07-05-10
4	CPB		REVISED AS INDICATED	07-04-25
3	JS		CONSTRUCTION REVISION	07-04-19
2	DP		REVISED MAKE UP TANK PIPING	07-04-12
1	DP		REVISED AS INDICATED - IFC	07-04-28
0	DP		REVISED AS INDICATED - ISSUED FOR CONSTRUCTION	07-01-04
A	DP		ISSUED FOR APPROVAL	06-10-30

**CUSTOMER INFO**

CUSTOMER PROJ NO.	
CUSTOMER PO NO.	00000135-0
ISSUE NO.	00
DATE	20-10-08
BY	
CHK'D	
DATE	

**HEATECH**  
 HTH HEATECH INC.  
 CALGARY, ALBERTA

**PROCESS & INSTRUMENTATION DIAGRAM**

PROJECT/LOCATION: PIONEER NATURAL RESOURCES CANADA INC. SOLARS MANAGEMENT CONSULTANTS INC.  
 PIONEER CHINCHUCA HUI SKID  
 L50 C-32-H/54-H-8

SCALE: 300-508-17  
 DRAWING NO.: 300-508-17  
 REV: 5

SHOP CODE: N/A

THIS DOCUMENT CONTAINS MATERIAL AND/OR INFORMATION WHICH IS PROPERTY OF HTH HEATECH INC. AND SUPPLIED ONLY ON A CONFIDENTIAL BASIS. NO TRANSMITTAL OR DISCLOSURE SHALL BE MADE TO ANY PERSON, FIRM, OR CORP. WITHOUT THE PRIOR WRITTEN APPROVAL OF HTH HEATECH INC.