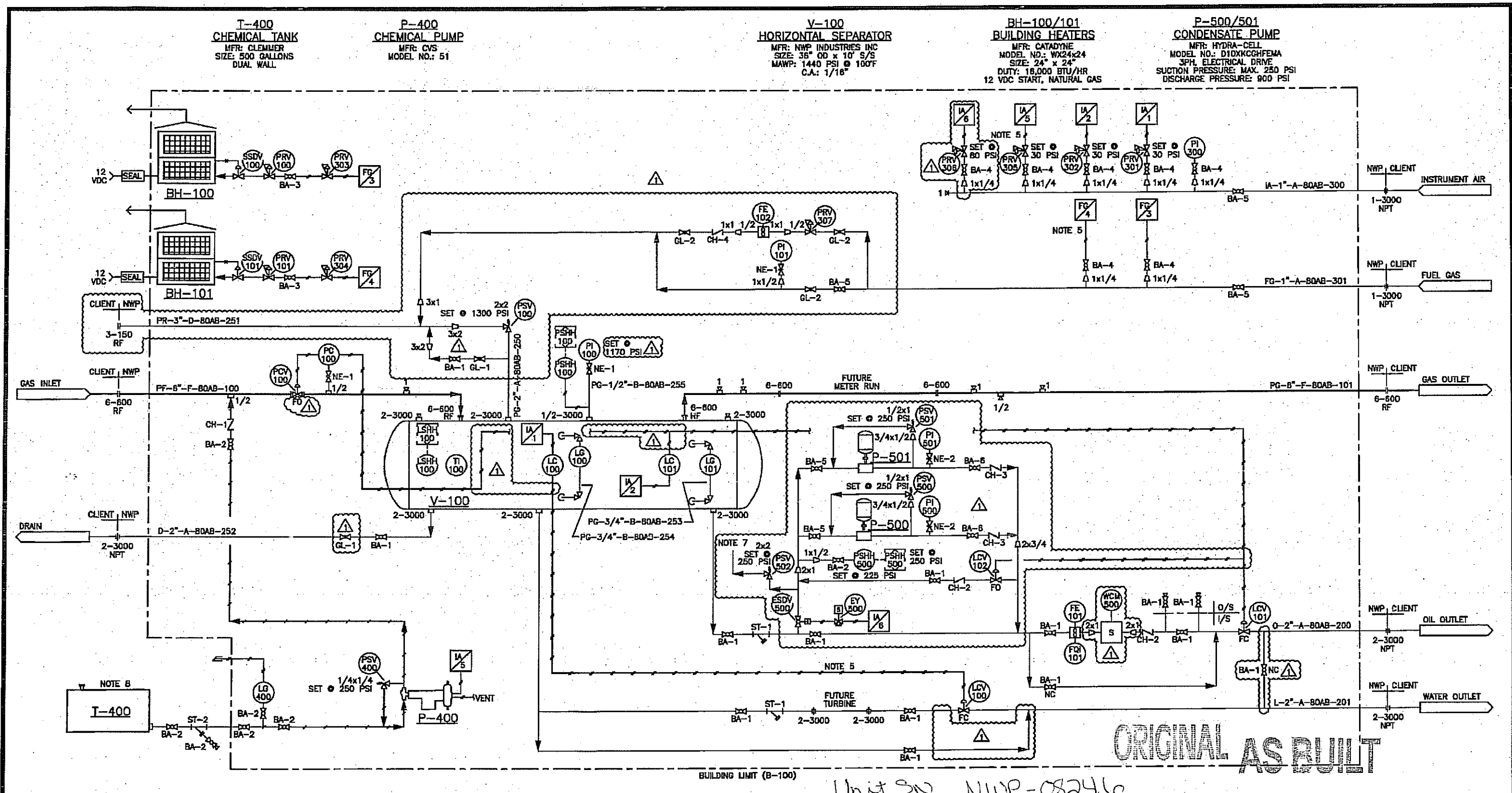




08246-5	VESSEL ASSEMBLY	1	2012.02.15	MSZ	GH	DF	RFDC #00769 CLIENT CHANGE ORDER
08246-3	SKID ASSEMBLY	0	2012.01.12	JHK	GH	DF	ISSUED FOR CONSTRUCTION
08246-2	PIPING ASSEMBLY	B	2011.11.30	JHK	-	-	RE-ISSUED FOR APPROVAL
08246	GENERAL ARRANGEMENT	A	2011.11.24	JHK	-	-	ISSUED FOR APPROVAL
DOCUMENT NO.	DESCRIPTION	REV	DATE	BY	CHK	APP	
REFERENCE DRAWINGS				DRAWING REVISIONS			

ISSUED FOR CONSTRUCTION

SIGNED: _____

DATE: _____

W.O.: 08246

S.O.: _____

ALL DIMENSIONS IN INCHES

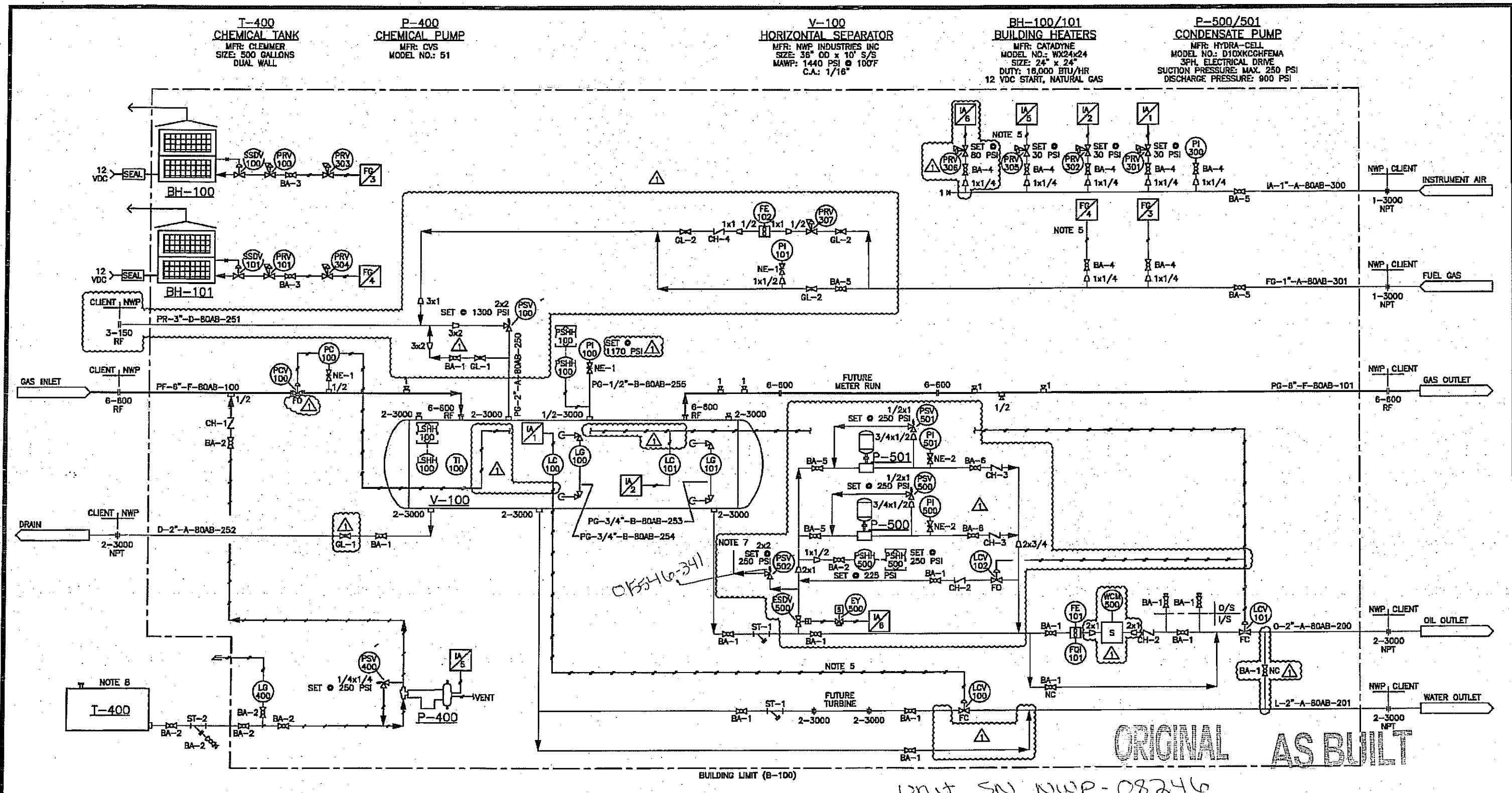
NWP INDUSTRIES INC.
Total oilfield supply.

P.O. BOX 6280, INNSFALL AB T4G 1S9
PH: (403) 227-4100 FAX: (403) 227-4102

THIS DRAWING IS PROPERTY OF NWP INDUSTRIES INC. AND MAY NOT BE REPRODUCED WITHOUT PERMISSION. THIS DRAWING MUST BE RETURNED UPON REQUEST.

PERPETUAL ENERGY
HORIZONTAL SEPARATOR PACKAGE
36" OD x 10' S/S 1440 PSI
SWEET SERVICE
PIPING AND INSTRUMENTATION DIAGRAM

DWN: JHK	CHK: GH	APP: DF
DATE: 11.11.24	DATE: 12.01.26	DATE: 12.01.25
SCALE: NTS	DWG: 08246-1	REV: 1
SHEET: 1 OF 3		



ISSUED FOR CONSTRUCTION SIGNED: _____ DATE: _____ W.O. 08246 S.O.: _____ ALL DIMENSIONS IN INCHES							PERPETUAL ENERGY HORIZONTAL SEPARATOR PACKAGE 36" OD x 10' S/S 1440 PSI SWEET SERVICE PIPING AND INSTRUMENTATION DIAGRAM		
08246-5 VESSEL ASSEMBLY 1 2012.02.15 MSZ DF RFDC #00769 CLIENT CHANGE ORDER 08246-3 SKID ASSEMBLY 0 2012.01.12 JHK GH DF ISSUED FOR CONSTRUCTION 08246-2 PIPING ASSEMBLY B 2011.11.30 JHK - - RE-ISSUED FOR APPROVAL 08246 GENERAL ARRANGEMENT A 2011.11.24 JHK - - ISSUED FOR APPROVAL							WCL INDUSTRIES INC. Total oilfield supply. P.O. BOX 6280, INNISFAIR, AB T4G 1S9 PH: (403) 227-4100 FAX: (403) 227-4102		
DOCUMENT NO DESCRIPTION REV DATE BY CHK APP REFERENCE DRAWINGS							THIS DRAWING IS PROPERTY OF NWP INDUSTRIES INC. AND MAY NOT BE REPRODUCED WITHOUT PERMISSION. THIS DRAWING MUST BE RETURNED UPON REQUEST. DWN: JHK CHK: GH APP: DF DATE: 11.11.24 DATE: 12.01.26 DATE: 12.01.25 SCALE: NTS DWG: 08246-1 REV: 1		
DRAWING REVISIONS							DATE: 11.11.24 DATE: 12.01.26 DATE: 12.01.25		

BILL OF MATERIALS									
TAG#	DESCRIPTION	QTY.	TAG#	DESCRIPTION	QTY.				
V-100	HORIZONTAL SEPARATOR - MFR: NWP INDUSTRIES INC, SIZE: 36" OD x 10' S/S, MAWP: 1440 PSI @ 130°F, C.A.: 1/16", 100% X-RAY	1	PRV-306	PRESSURE REGULATOR - MFR: FISHER, MODEL NO.: 67CFR, SIZE: 1/4" NPT 0-125 PSI, STD SERVICE	1				
BH-100	BUILDING HEATERS - MFR: CATADYNE, MODEL NO.: WX24x24, SIZE: 24" x 24", DUTY: 16,000 BTU/HR, 12 VDC START, NATURAL GAS c/w SAFETY SHUTOFF, 30' START CABLES, REGULATOR (PRV-100), HEATER GRILL	1	PRV-307	PRESSURE REGULATOR - MFR: FISHER, MODEL NO.: 627, 35-80 PSI, 1/8" ORIFICE, STD TRIM, CS BODY	1				
BH-101	BUILDING HEATERS - MFR: CATADYNE, MODEL NO.: WX24x24, SIZE: 24" x 24", DUTY: 16,000 BTU/HR, 12 VDC START, NATURAL GAS c/w SAFETY SHUTOFF, 30' START CABLES, REGULATOR (PRV-101), HEATER GRILL, STRATA FAN ASSEMBLY	1	PSH-100	PRESSURE SWITCH HIGH HIGH - MFR: FISHER, MODEL NO.: 4860 HI-LO PRESSURE PILOT 0-1500 PSI BOURDON TUBE, NON-INTERACTIVE SET POINTS	1				
T-400	CHEMICAL TANK - MFR: CLEMMER, SIZE: 500 GALLON, DUAL WALL STEEL c/w 4 FT STAND	1	PSH-500	PRESSURE SWITCH HIGH HIGH - MFR: CCS, MODEL NO.: 6900GZE-18 SET @ 225 PSI INCREASING	1				
P-400	CHEMICAL PUMP - MFR: CVS, MODEL NO.: 51	1	PSV-100	PRESSURE SAFETY VALVE - MFR: TAYLOR, MODEL NO.: 8200, SIZE: 2" x 2" NPT SET @ 1300 PSI	1				
P-500/501	CONDENSATE PUMPS - MFR: HYDRA-CELL, MODEL NO.: D10XKCGHFEMA, SIZE: 1" NPT INLET x 3/4" NPT OUTLET	1	PSV-400	PRESSURE SAFETY VALVE - MFR: NUPRO, SET @ 250 PSI	1				
ESDV-500	EMERGENCY SHUTDOWN VALVE - BALL VALVE - MFR: NUTRON, SIZE: 2" NPT, 3000 PSI, FULL PORT, STD TRIM c/w CVS 180SR-10 ACTUATOR, 80 PSI SUPPLY, FAIL CLOSED	1	PSV-500/501	PRESSURE SAFETY VALVE - MFR: FARRIS, MODEL NO.: 27CA13M20, SIZE: 1/2" x 1" MNPT, 'C' ORIFICE SET @ 250 PSI	2				
EY-500	SOLENOID - MFR: ASCO, MODEL NO.: EF8314G3D1, 24VDC LOW POWER	1	PSV-502	PRESSURE SAFETY VALVE - MFR: TAYLOR, MODEL NO.: 8200, SIZE: 1" x 1" NPT SET @ 250 PSI	1				
FE/FQ-101	TURBINE METER - MFR: NUFLO, SIZE: 2" MNPT, 40-400 m3/DAY LINEAR FLOW RANGE c/w MAGNETIC PICKUP AND MC-III TOTALIZER w/ PVC CASE, CALIBRATED TO METER 4-20mA OUTPUT	1	TI-100	TEMPERATURE INDICATOR - MFR: TREND, MODEL NO.: TBD, SIZE: 3" DIAL x 6" STEM x 1/2" NPT BACK CONNECTION 0-250°F DUAL SCALE c/w 1/2" FNPT x 3/4" MNPT x 6" LG 316 SST THERMOWELL	1				
FE-102	METER - MFR: ROOTS, MODEL NO.: B3-3M175-3000ACF/H, 175 PSI MAWP	1	BA-1	BALL VALVE - MFR: BARSTOCK, SIZE: 2" NPT	10				
LC-100/101	LEVEL CONTROL - MFR: FISHER, MODEL NO.: L2, SIZE: 2" NPT SNAP ACTING, DIRECT ACTING INSTRUMENT SIGNAL, NACE	2	BA-2	BALL VALVE - MFR: BARSTOCK, SIZE: 1/2" NPT	14				
LCV-100/101/102	LEVEL CONTROL VALVE - MFR: FISHER, MODEL NO.: D3, SIZE: 2" NPT 1" FLOPRO TRIM, 17-4PH SST PLUG AND SEAT, STD SERVICE, FAIL CLOSED, 0-35 PSI OPERATING SIGNAL	3	BA-3	BALL VALVE - MFR: CATADYNE, SIZE: 3/8" NPT c/w BH-100/101	2				
LG-100	LEVEL GAUGE - MFR: PENBERTHY, MODEL NO.: 1RM5, SIZE: 7 7/8" VISIBLE LENGTH c/w MODEL 330J GAUGE VALVES 3/4" NPT	1	BA-4	BALL VALVE - MFR: BARSTOCK SIZE: 1/4" NPT	7				
LG-101	LEVEL GAUGE - MFR: PENBERTHY, MODEL NO.: 1TM5, SIZE: 7 7/8" VISIBLE LENGTH c/w MODEL 330J GAUGE VALVES 3/4" NPT	1	BA-5	BALL VALVE - MFR: BARSTOCK, SIZE: 1" NPT	5				
LG-400	LEVEL GAUGE - MFR: KENCO, SIZE: 48" OAL	1	BA-6	BALL VALVE - MFR: BARSTOCK, SIZE: 3/4" NPT	2				
LSH-100	LEVEL SWITCH HIGH HIGH - MFR: SOR, MODEL NO.: 1530, SIZE: 2" NPT PNEUMATIC	1	CH-1	CHECK VALVE - MFR: PLAINSMAN, SIZE: 1/2" NPT	1				
PC-100	PRESSURE CONTROLLER - MFR: CVS, MODEL NO.: 4150 c/w ESDV-100	1	CH-2	CHECK VALVE - MFR: CROWN, SIZE: 2" NPT	2				
PCV-100	PRESSURE CONTROL VALVE - MFR: CVS, MODEL NO.: V-100, SIZE: 6" 800 ANSI RF, BALL VALVE, LCC BODY, TCM BALL SEAL, TFE PACKING, 1" SHAFT c/w CVS 1051 SIZE 60 ACTUATOR (0-33 PSI SPRING, FAIL OPEN), CVS ALP-1200 POSITIONER, CVS 4150 PRESSURE CONTROLLER	1	CH-3	CHECK VALVE - MFR: CROWN, SIZE: 3/4" NPT	2				
PI-100/500/501	PRESSURE INDICATOR - MFR: CPW, SIZE: 4 1/2" FACE x 1/2" NPT BOTTOM MOUNT ALUMINUM CASE AND CS INTERNALS, 0-500 PSI DUAL SCALE	3	CH-4	CHECK VALVE - MFR: CROWN, SIZE: 1" NPT	1				
PI-101	PRESSURE INDICATOR - MFR: CPW, SIZE: 4 1/2" FACE x 1/2" NPT BOTTOM MOUNT ALUMINUM CASE AND CS INTERNALS, 0-300 PSI DUAL SCALE	1	GL-1	GLOBE VALVE - MFR: BONNEY FORGE, SIZE: 2" NPT	2				
PI-300	PRESSURE INDICATOR - MFR: WIKA, SIZE: 2 1/2" FACE, 0-300 PSI, DUAL SCALE, LIQUID FILLED	1	GL-2	GLOBE VALVE - MFR: BONNEY FORGE, SIZE: 1" NPT	3				
PRV-100/101	PRESSURE REGULATOR - MFR: MAXITROL c/w BH-100/101	2	NE-1	NEEDLE VALVE - MFR: ANDERSON GREENWOOD, SIZE: 1/2" MNPT x 1/2" FNPT, 8000 PSI	3				
PRV-301/3/5	PRESSURE REGULATOR - MFR: FISHER, MODEL NO.: 67CFR, SIZE: 1/4" NPT 0-35 PSI, STD SERVICE	3	NE-2	NEEDLE VALVE - MFR: ANDERSON GREENWOOD, SIZE: 3/4" MNPT x 1/2" FNPT, 8000 PSI	2				
PRV-303/4	PRESSURE REGULATOR - MFR: CATADYNE, MODEL NO.: 912, SIZE: 1/4" NPT 250 PSI MAWP, STD SERVICE, 1-2.5 PSI SPRING RANGE c/w BH-100/101	2	ST-1	STRAINER - MFR: ALTA STRAINER, SIZE: 2" NPT	2				
WCM-500	DELTA C INLINE SERIES WATERCUT MONITOR, MODEL DC-1510 1" NPT STYLE	1	ST-2	STRAINER - MFR: ALTA STRAINER, SIZE: 1/2" NPT	1				

08246-5	VESSEL ASSEMBLY	1	2012.02.15	MSZ	GH	DF	RFDC #00769 CLIENT CHANGE ORDER
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ALL DIMENSIONS IN INCHES



NWP INDUSTRIES INC.
Total oilfield supply.
P.O. BOX 6280, INNISFAIR, AB T4G 1S9
PH: (403) 227-4100 FAX: (403) 227-4102

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PERPETUAL ENERGY
HORIZONTAL SEPARATOR PACKAGE
36" OD x 10' S/S, 1440 PSI
SWEET SERVICE
PIPING AND INSTRUMENTATION DIAGRAM

DWN: JHK	CHK: GH	APP: DF
DATE: 11.11.24	DATE: 12.01.26	DATE: 12.01.25
SCALE: NTS	DWG: 08246-1	REV: 1
SHEET: 2 OF 3		

NOTES

1. PIPE SUPPORTS WHERE REQUIRED.
2. AIR TEST TO 75 PSI AND ALL PNEUMATIC INSTRUMENTS TO BE FUNCTIONED TESTED.
3. SHIP LOOSE ITEMS TO BE BOXED AND SEALED PRIOR TO SHIPMENT.
4. PLUG ALL OUTLETS PRIOR TO SHIPMENT.
5. 3/8" (0.035" WT) 304 SS TUBING AND CS TUBE FITTINGS.
6. ALL CONNECTIONS TO BE ON ONE END OF BUILDING.
7. VENT OUTSIDE BUILDING TO SKID EDGE WITH NPT CONNECTION.
8. STAND-TO BE FIELD ASSEMBLED.

LEGEND

	MAJOR PROCESS LINE
	UTILITY LINE
	BUILDING LIMITS
	PROCESS/UTILITY TUBING LINE
	INSTRUMENT PNEUMATIC LINE
	INSTRUMENT CAPILLARY LINE
	ELECTRICAL DATALINK LINE
	ELECTRICAL CONNECTION LINE
	BALL VALVE
	GLOBE VALVE
	GATE VALVE
	CHECK VALVE
	PLUG VALVE
	NEEDLE VALVE
	STRAIGHT CHOKE VALVE
	SOCKET WELD VALVE
	RUPTURE VALVE
	SOLENOID VALVE
	BUTTERFLY VALVE
	3-WAY VALVE
	4-WAY VALVE
	DIAPHRAGM ACTUATED CONTROL VALVE
	PRESSURE REGULATOR
	3-WAY DIAPHRAGM CONTROL VALVE

LINE TAGGING

CONDENSATE - C	100-199 MAJOR PROCESS FLUIDS
DRAIN - D	200-249 MINOR PROCESS FLUIDS
FUEL GAS - FG	250-299 RELIEF, DRAINS
LIQUID - L	300-399 UTILITY VAPOURS
LEAN GLYCOL - LG	400-499 UTILITY LIQUIDS
METHANOL - M	
OIL - O	
PROCESS FLUID - PF	
PROCESS GAS - PG	
PRESSURE RELIEF - PR	
RICH GLYCOL - RG	
WATER - W	
NOMINAL PIPE SIZE	
CLASS 2000 THREADED - A	
CLASS 3000 THREADED - B	
CLASS 6000 THREADED - C	
150 ANSI FLANGED - D	
300 ANSI FLANGED - E	
600 ANSI FLANGED - F	
900 ANSI FLANGED - G	
1500 ANSI FLANGED - H	
2500 ANSI FLANGED - I	
	PIPE GRADE
	A - SA-108B
	B - SA-333 GR.6
	PIPE SCHEDULE

VALVE TAGGING

XX-X	START WITH 1
BALL VALVE - BA	
NEEDLE VALVE - NE	
GLOBE VALVE - GB	
CHECK VALVE - CH	
GATE VALVE - GA	
BUTTERFLY VALVE - BU	

	ANGLE VALVE
	RELIEF VALVE
	ANGLE CHOKE VALVE
	PRESSURE ACTUATED CONTROL VALVE/AMOT
	ORIFICE METER
	METER RUN
	TURBINE METER
	VENTURI
	5-VALVE MANIFOLD
	THREADOLET/WELDOLET c/w PLUG
	FLANGE SET
	UNION
	CAP
	PIPE BREAK
	SOCKET WELD CONNECTIN
	VENT
	REDUCER/SWAGE
	STRAINER
	FLEXIBLE HOSE
	SPECTACLE BLIND OPEN
	SPECTACLE BLIND CLOSED
	THREADOLET/COUPLING
	FLANGED NOZZLE
	MANWAY

	PAGE CONNECTOR
	SPEC/RESPONSIBILITY BREAK
	SPEC/RESPONSIBILITY BREAK
	LOCALLY MOUNTED INSTRUMENT
	SHARED DISPLAY SHARED CONTROL
	FIELD MOUNTED
	RTU PANEL
	1/6 TO AND FROM

ORIGINAL AS BUILT

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