

20SEP11 21:56

- TE-3010/3110/3210**
TEMPERATURE TRANSMITTER
RTD
SEE MVT-3210/3110/3410 DESCRIPTION
- EY-3011/3111/3211/3040**
SOLENOID VALVE
MAKE: ASCO
24VDC LOW WATTAGE
MAWP: 1034kPa (150psig)
- FE-3010/3110/3210**
METER RUN
SUPPLIER: CAMERON CANADA CORP.
114mm OD 600 ANSI SCH 80 w/ PLATE STYLE FLOW CONDITIONER
DUAL CHAMBER METER
MODEL/MAKE: 40554-NUFLO
CONFIGURATION: 54-1-S-S-2-C-N-00-SB-FG-0-C-0-C-TB-TC-00-M-FS-52.00inch-30.00inch-2-A-0-0-A AGA2000
SINGLE CHAMBER METER (OPTIONAL)
MODEL/MAKE: 40424-NUFLO
CONFIGURATION: 24-1-S-S-2-C-00-SB-FG-0-C-0-C-TB-TC-00-M-FS-52.00inch-30.00inch-2-A-0-0-A AGA2000
- MVT-3010/3110/3210**
FLOW TRANSMITTER
MAKE: CONTROL MICROSYSTEMS
c/w RTD (PART No. 29B184)
BRACKET (PART No. 29B277)
5 VALVE MANIFOLD - FULL PORT (PART No. 29B388)
Y-SPAN OPTION
MODEL: 4102-DM22Y101U-L
Z-SPAN OPTION
MODEL: 4102-DM22Z101U-L
TO BE SPECIFIED BY ENCANA AT TIME OF ORDER
- HIC-3010/3110/3210**
MANUAL LOAD STATION
MAKE: CVS CONTROLS
MODEL: CVS 670 PANEL
OR EQUIVELANT
c/w DUAL CONANT SELECTOR VALVE
SUITABLE FOR DUAL PISTON ACTUATOR

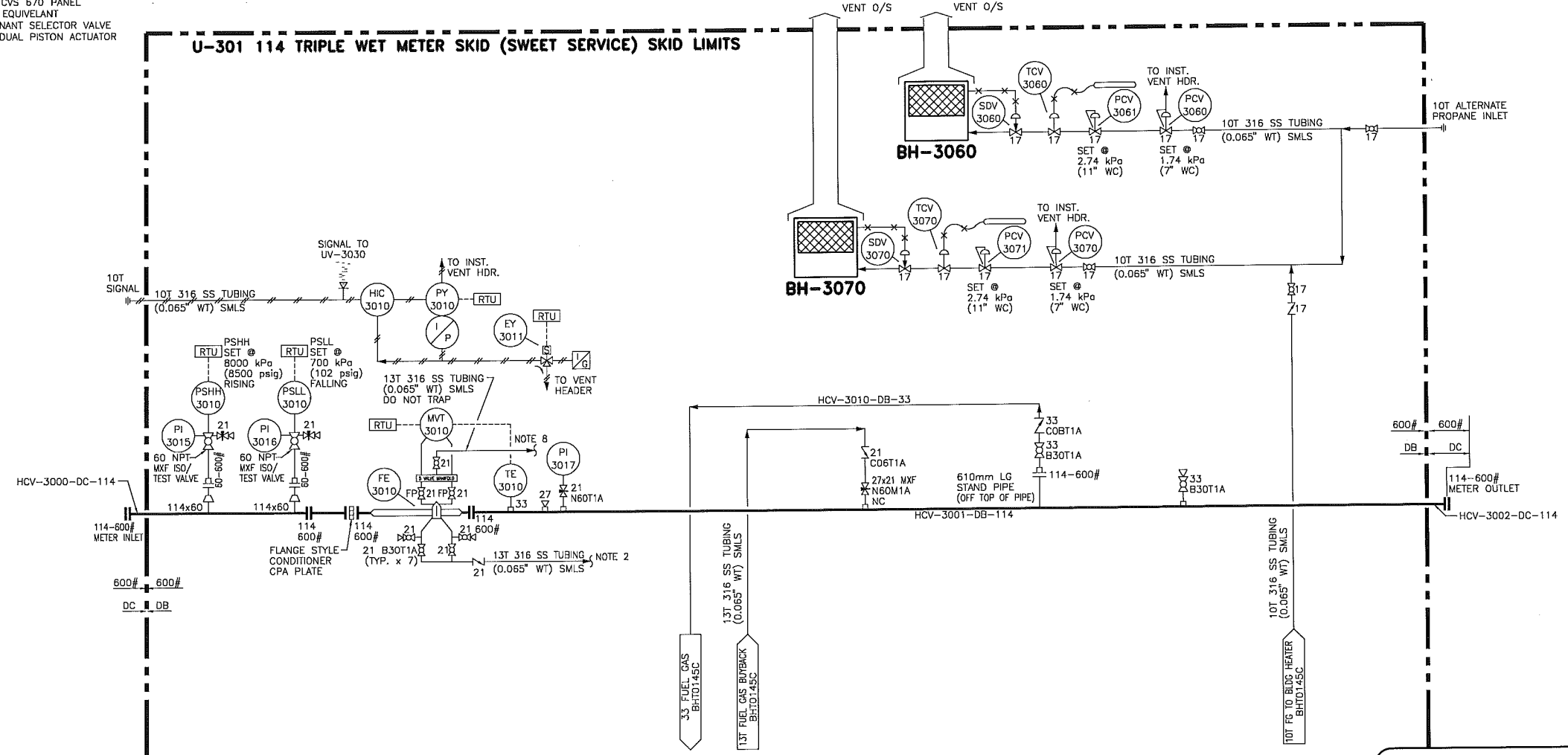
- PSLL-3010/3110/3210**
LOW PRESSURE SWITCH
MAKE: ARGUS
MODEL: AEF-2.0
RANGE: 138-1379kPa (20-200psig)
c/w ARGUS PRESSURE ISOLATION VALVE (60 NPT MXF)
- PSHH-3010/3110/3210**
HIGH PRESSURE SWITCH
MAKE: ARGUS
MODEL: AEF-14
RANGE: 1034-9653kPa (150-1400psig)
c/w ARGUS PRESSURE ISOLATION VALVE (60 NPT MXF)
- PY-3010/3110/3210**
VALVE POSITIONER
DIGITAL VALVE POSITIONER
MAKE: FISHER CONTROLS
VERTICAL WELL (SHOP INSTALL BY VENDOR)
MODEL: I2P-100
HORIZONTAL WELL (FIELD INSTALL BY ENCANA)
MODEL: DVC-6035 c/w REMOTE MOUNT
TO BE SPECIFIED BY ENCANA AT TIME OF ORDER
NOTE 13
- PCV-3020**
REGULATOR
MAKE: FISHER
MODEL: 627
ORIFICE: 3.2mm (1/8")
33 NPTF
c/w FULL SIZE VENT O/S SKID
- HLSD-3020**
HIGH LEVEL SHUT DOWN
INTEGRAL w/FUEL GAS SCRUBBER
c/w PUSH OFF 2000 MANUAL RESET

- V-3020**
FUEL GAS SCRUBBER
SIZE: 219mm OD x 762mm LG (8" OD x 30" S/S)
SCH 40 CRN
CA: 3.2mm (1/8")
MAWP: 1931kPa (280psig)
- PSV-3020**
RELIEF VALVE
MAKE: TAYLOR
MODEL: B200-T
PART: #B2E4351341
CAPACITY: 493 SCFM
ORIFICE: E
- F-3020/3021**
COALESCING FILTERS
MAKE: PARKER
PART: #400794 21 NPT
- F-3022**
CACTUS DRYER
MAKE: AIR PRODUCTS
MODEL: PPC-22-G
- F-3030**
FILTER
MAKE: WIX
PART: #24006

- LG-3030/3040**
RATE/LEVEL GAUGE
- FC-3030/3130/3230/3040**
RATE CONTROLLER
MAKE: WILLIAMS
OSCILLAMATIC PNEUMATIC CONTROLLER
MODEL: MKIIA
SUPPLY: 207-690kPa (30-100psig)
- P-3030/3130/3230**
METHANOL INJECTION PUMP
MAKE: WILLIAMS
MODEL: CRP500V400
CAPACITY: 8.7L/HR (2.3 GAL./HR)
MAWP: 43439kPa (6300psig)
- PSV-3030/3130/3230/3040**
RELIEF VALVE
MAKE: SWAGELOCK
MODEL: SS-4R3A-BU
(OR EQUIVELANT)
- PCV-3021/3022/3023/3024/3025**
REGULATOR
MAKE: FISHER
MODEL: 67CFR-601SC
MAX. SUPPLY: 1724kPa (250psig)
SPRING RANG: 0-862kPa (0-125psig)

- P-3040**
INHIBITOR INJECTION PUMP
MAKE: WILLIAMS
MODEL: CP250V225
CAPACITY: 2.16L/HR (0.57 GAL./HR)
MAWP: 49644kPa (7200psig)
- PCV-3060/3070**
REGULATOR
MAKE: MAXITROL
MODEL: ES404-7
- PCV-3061/3071**
REGULATOR
MAKE: FISHER
MODEL: 912
- BH-3060/3070**
BUILDING HEATER
MAKE: CATADYNE
MODEL: BX 24X24
DUTY: 24000 BTU/HR
FUEL GAS/PROPANE TO BE SPECIFIED BY ENCANA AT TIME OF ORDER
- UV-3030/3130/3230**
SWITCHING VALVE
MAKE: FISHER
MODEL: 167DA
- EY-3020**
SCRUBBER DUMP VALVE
MAKE: WHITEY VALVE
MODEL: (STANDARD)
SWAGELOCK ACTUATOR (MODEL # 1315R)

- NOTES:
- RTU DENOTES RTU/SCADA PACK
 - INSTALL METER RUN w/PRESSURE TAPS ON TOP & DRAIN ON BOTTOM
 - ALL PIPING PENETRATING BUILDING WALLS MUST BE SUITABLE FOR LOW TEMP SERVICE
 - NO INSTRUMENTS SHALL BE SUPPORTED OFF PROCESS PIPING UNLESS DIRECT MOUNTED. ALL REMOTE MOUNT INSTRUMENTS SHALL BE MOUNTED ON PIPE STANDS.
 - FUEL GAS SCRUBBER OUTLET PIPING, VALVES, FILTERS, REGULATORS, ETC. SHALL BE STAND MOUNTED & NOT SUPPORTED OFF VESSEL
 - ALL CHEMICAL PUMPS TO BE MOUNTED APPROX. 300mm OFF FLOOR IN COMMON DRIP PAN. ADDITIONAL SPACE IN DRIP PAN REQUIRED FOR FIELD INSTALLATION OF TEXTTEAM 5100 (OR EQUIVALENT) METHANOL PUMP.
 - ALL CHEMICAL PUMP TUBING TO BE ASSEMBLED w/COMMON INSTRUMENT GAS HEADER & SUPPLY HEADER(S). ALL VALVES, PSV, ETC. TO BE TUBED NEAR COMMON HEADERS, ALLOWING FOR EASY REMOVAL & REPLACEMENT OF CHEMICAL PUMPS.
 - ALL VENTED INSTRUMENTS SHALL BE VENTED INDEPENDENTLY TO VENT HEADER.
 - FUEL GAS SCRUBBER TO BE ELEVATED SO VISUAL INSPECTION OF UNDERSIDE MAY BE COMPLETED WHILE IN SERVICE
 - THE METER VENTS/DRAINS INTO DRAIN HEADER
 - V-3020 FUEL GAS DRAIN TO EXIT BUILDING AT 1200mm ABOVE SKID FLOOR. DRAIN PIPING TO BE TRAPPED INSIDE SKID TO ALLOW FOR SLOPED DRAIN LINE TO DRAIN TANK AS PART OF FIELD INSTALL.
 - ALL INSTRUMENT/PROCESS TUBING MUST BE EXAMINED AND HYDROTESTED IN ACCORDANCE WITH THE REQUIREMENTS OF ASME B31.3. TEST PRESSURES SHALL BE 1.5x THE DESIGN PRESSURE OF THE PIPING SYSTEM IN WHICH THE TUBING IS CONNECTED. TEST WHILE DISCONNECTED FROM ANY PIECE OF EQUIPMENT, INSTRUMENTATION, VALVE ACTUATOR, ETC.
 - REGARDLESS WHETHER VALVE POSITIONER IS SHOP INSTALLED BY VENDOR OR FIELD INSTALLED BY ENCANA, VENDOR IS TO PROVIDE NECESSARY MOUNTING BRACKET(S), TUBING AND ELECTRICAL CONNECTIONS.
 - ALL TUBING TO BE 316 SS, 0.065" SMLS.



CAUTION : READ BEFORE EXCAVATION
ALL EXCAVATIONS MUST BE CARRIED OUT AS PER "ENCANA'S GROUND DISTURBANCE PRACTICE"

REFERENCE DRAWINGS	DWG. NO.	NO.	DATE (YY-MM-DD)	PROJECT DESCRIPTION	PROJ.	AFE	EPCM Co.	EPCM No.	APPD.	ISSUE STAGE	DATE (YY-MM-DD)	BY	CHKD.	APPD.	PERMIT STAMP	ENGINEER'S STAMP
		1	2011-11-14	2012 BIGHORN METER SKID RFQ			PEI	1334		Rev. (A)						
										Rev. (B)	2011-11-14	R.V.	W.J.			
										Constr. (C)						
										As-built (D)						

encana
natural gas

MAIN FAC:	BIGHORN TYPICALS
USEN:	VARIES
FACE:	PADSITE
SITE USE:	VARIES
SCALE:	NTS (At Size)
EPC No.:	1334

PRECISION ENGINEERING INC.
TITLE: PIPING AND INSTRUMENTATION DIAGRAM
TYPICAL 114mm OD TRIPLE METER SKID SHT 1 of 2

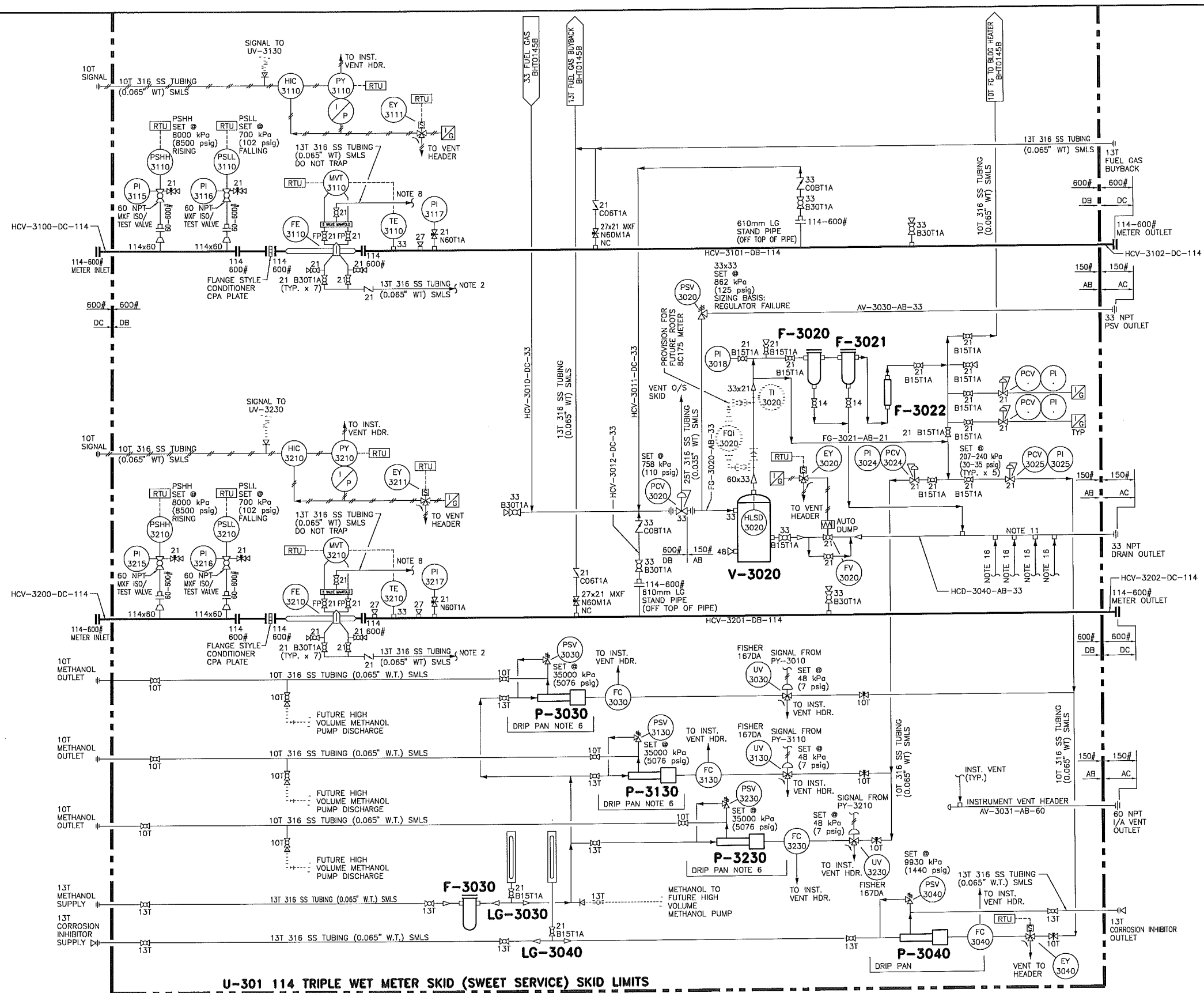
AREA: BIGHORN CLASS: A FILE NO.: BHT0145B

Drawings Must Comply with Encana Drafting Standards (ECA-DDM-S-01)

PLOTTER: 1/11/2011 11:53:46 AM BY: JAMES KANKONEN
JOB NUMBER: 1/11/2011 11:53:01 AM BY: JAMES

6: V:\DRAWING\1334

20SEP11 21:57



U-301 114 TRIPLE WET METER SKID (SWEET SERVICE) SKID LIMITS

11/11/2011 12:35:02 PM BY: JAMES KANKKONEN
 LAST SAVED: 11/11/2011 12:29:35 PM BY: JAMES

1-4020.DWG (DRAWING AT SIZE THE BOOK) V7

CAUTION : READ BEFORE EXCAVATION
 ALL EXCAVATIONS MUST BE CARRIED OUT AS PER
 "ENCANA'S GROUND DISTURBANCE PRACTICE"

REFERENCE DRAWINGS	DWG. NO.	NO.	DATE	PROJECT DESCRIPTION	PROJ.	AFE	EPCM Co.	EPCM No.	APPD.	ISSUE STAGE	DATE	BY	CHKD.	APPD.	PERMIT STAMP	ENGINEER'S STAMP
		1	2011-11-14	2012 BIGHORN METER SKID RFQ			PEI	1334		Prelim. (A)						
										Bid (B)	2011-11-14	R.V.	W.H.			
										Constr. (C)						
										As-built (D)						

MAN FAC	BIGHORN TYPICALS
MAN LES	VARIES
MAN PADSITE	VARIES
MAN VENT	VARIES
SCALE	NTS (A1 Size)
EPCO No.	1334

PRECISION ENGINEERING INC.

TITLE: PIPING AND INSTRUMENTATION DIAGRAM
 TYPICAL 114mm OD TRIPLE METER SKID SHT 2 of 2

PERMIT STAMP AND PROFESSIONAL STAMP
 AFFIXED ABOVE SHALL APPLY ONLY TO REV(s)

1B-1

BIGHORN

CLASS FILE NO.
BHT0145C

Drawings Must Comply with Encana Drafting Standards (ECA-DDM-S-01)

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20SEP11 22:20

LINE DESIGNATION				DESCRIPTION			OPERATING CONDITIONS		DESIGN CONDITIONS				TEST CONDITIONS			INSULATION		TRACING		X-RAY %	STRESS RELIEVE	REFERENCE P&ID	SPECIAL NOTES	REVISION
COMMODITY	LINE NO.	PIPING SPEC	SIZE (NPS)	FROM	TO	SERVICE	PRESS. (kPa)	TEMP. (°C)	PRESS. (kPa)	TEMP. (°C)	CORR. ALLOW. (mm)	ACTUAL THK/SCH (mm)	PRESS. (kPa)	TEMP. (°C)	MEDIUM	THK. (mm)	TYPE	TYPE	No.					
HCV	3000	DC	114	SKID METER INLET CONN	HCV-3001-DB-114	SWEET GAS			9930	-45/54	1.6	SCH 80	14895	AMB	WATER	-	-	-	-	10%	NO	BHT0145B	1B-1	
HCV	3001	DB	114	HCV-3000-DC-114	HCV-3002-DC-114	SWEET GAS			9930	-29/54	1.6	SCH 80	14895	AMB	WATER	-	-	-	-	10%	NO	BHT0145B	1B-1	
HCV	3002	DC	114	HCV-3001-DB-114	SKID METER OUTLET CONN	SWEET GAS			9930	-45/54	1.6	SCH 80	14895	AMB	WATER	-	-	-	-	10%	NO	BHT0145B	1B-1	
HCV	3100	DC	114	SKID METER INLET CONN	HCV-3101-DB-114	SWEET GAS			9930	-45/54	1.6	SCH 80	14895	AMB	WATER	-	-	-	-	10%	NO	BHT0145C	1B-1	
HCV	3101	DB	114	HCV-3100-DC-114	HCV-3102-DC-114	SWEET GAS			9930	-29/54	1.6	SCH 80	14895	AMB	WATER	-	-	-	-	10%	NO	BHT0145C	1B-1	
HCV	3102	DC	114	HCV-3101-DB-114	SKID METER OUTLET CONN	SWEET GAS			9930	-45/54	1.6	SCH 80	14895	AMB	WATER	-	-	-	-	10%	NO	BHT0145C	1B-1	
HCV	3200	DC	114	SKID METER INLET CONN	HCV-3201-DB-114	SWEET GAS			9930	-45/54	1.6	SCH 80	14895	AMB	WATER	-	-	-	-	10%	NO	BHT0145C	1B-1	
HCV	3201	DB	114	HCV-3200-DC-114	HCV-3202-DC-114	SWEET GAS			9930	-29/54	1.6	SCH 80	14895	AMB	WATER	-	-	-	-	10%	NO	BHT0145C	1B-1	
HCV	3202	DC	114	HCV-3201-DB-114	SKID METER OUTLET CONN	SWEET GAS			9930	-45/54	1.6	SCH 80	14895	AMB	WATER	-	-	-	-	10%	NO	BHT0145C	1B-1	
HCV	3010	DB	33	HCV-3001-DB-114	FG-3020-AB-33	SWEET			9930	-29/54	1.6	SCH 80	14895	AMB	WATER	-	-	-	-	-	NO	BHT0145B/C	1B-1	
HCV	3011	DB	33	HCV-3101-DB-114	FG-3020-AB-33	SWEET			9930	-29/54	1.6	SCH 80	14895	AMB	WATER	-	-	-	-	-	NO	BHT0145B/C	1B-1	
HCV	3012	DB	33	HCV-3201-DB-114	FG-3020-AB-33	SWEET			9930	-29/54	1.6	SCH 80	14895	AMB	WATER	-	-	-	-	-	NO	BHT0145B/C	1B-1	
FG	3020	AB	33	HCV-3010-DB-33	V-3020 INLET	SWEET	758	10	1965	-29/54	1.6	SCH 80	2948	AMB	WATER	-	-	-	-	-	NO	BHT0145C	1B-1	
FG	3021	AB	21	V-3020 OUTLET	I/G CONN'S	SWEET	758	10	1965	-29/54	1.6	SCH 80	2948	AMB	WATER	-	-	-	-	-	NO	BHT0145C	1B-1	
AV	3030	AB	33	PSV-3020	O/S SKID	SWEET	ATMOS	15	ATMOS	-29/54	1.6	SCH 80	ATMOS	AMB	SERVICE	-	-	-	-	-	NO	BHT0145C	1B-1	
AV	3031	AB	60	INST. VENTS	O/S SKID	SWEET	ATMOS	15	ATMOS	-29/54	1.6	SCH 80	ATMOS	AMB	SERVICE	-	-	-	-	10%	NO	BHT0145C	1B-1	
HCD	3040	AB	33	V-3020 DRAIN	SKID DRAIN OUTLET CONN	SWEET	ATMOS	15	1965	-29/54	1.6	SCH 80	2948	AMB	WATER	-	-	-	-	-	NO	BHT0145C	1B-1	

NOTE:
1. RANDOM HARDNESS TESTING TO BE PERFORMED ON 10% OF ALL WELDS. 15% X-RAY TO BE PERFORMED ON ALL THREADED CONNECTIONS AND 100% X-RAY ON ALL PSV CONNECTIONS.

20SEP11 10:21:45 PM BY: JAMES KAWKORINEN
LAST SAVED: 9/20/2011 9:22:49 PM BY: ADMINISTRATOR


ENCANA (DRAWING AT THE BACK) 07

REFERENCE DRAWINGS	DWG. NO.	NO.	DATE (MM-DD-YY)	PROJECT DESCRIPTION	PROJ.	A/E	EPCM Co.	EPCM No.	APPD.	ISSUE STAGE	DATE (MM-DD-YY)	BY	CHKD.	APPD.	PERMIT STAMP	ENGINEER'S STAMP
		1	2011-11-14	2012 BIGHORN METER SKID RFQ	-	-	PEI	1334	-	Prelim. (A)	-	-	-	-		
		-	-	-	-	-	-	-	-	Bid (B)	2011-11-14	R.V.	W.H.	-		
		-	-	-	-	-	-	-	-	Constr. (C)	-	-	-	-		
		-	-	-	-	-	-	-	-	As-built (D)	-	-	-	-		

CAUTION : READ BEFORE EXCAVATION
ALL EXCAVATIONS MUST BE CARRIED OUT AS PER "ENCANA'S GROUND DISTURBANCE PRACTICE"

REV. NUMBER	DATE	DESCRIPTION	BY	CHKD.	APPD.
1					

PERMIT STAMP	ENGINEER'S STAMP



MAIN FAC.	BIGHORN TYPICALS
MAIN L334	VARIES
LOC TYPE	PADSITE
SCALE	VARIES
SCALE	NTS (A1 Size)
EPCO No.	1334

PRECISION ENGINEERING INC.

TITLE: LINE LIST
TYPICAL 114mm OD TRIPLE METER SKID

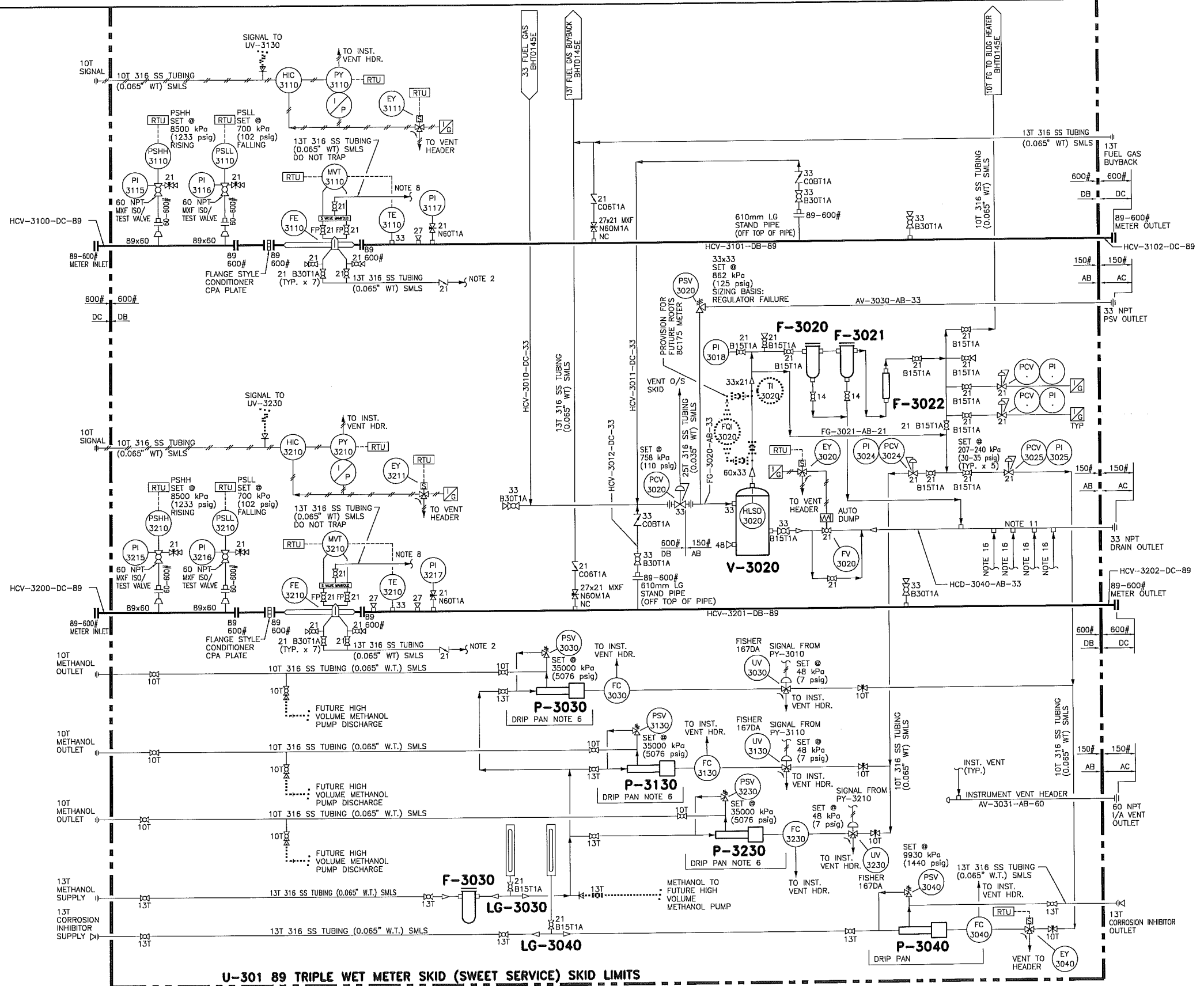
AREA: BIGHORN CLASS: L FILE NO.: BHT0146B

PERMIT STAMP AND PROFESSIONAL STAMP AFFIXED ABOVE SHALL APPLY ONLY TO REV(s) 1B-1

Drawings Must Comply with Encana Drafting Standards (ECA-DDM-S-01)

48-dwg 02-DRAFTING\1334

11NOV11 12:24



U-301 89 TRIPLE WET METER SKID (SWEET SERVICE) SKID LIMITS

PLOTTED: 09/08/2011 10:05:48 AM BY: DAVID ALJAN
 LAST SAVED: 10/09/2011 9:26:57 PM BY: DALLAN

REFERENCE DRAWINGS	DWG. NO.	NO.	DATE	PROJECT DESCRIPTION	PROJ.	AFE	EPCM Co.	EPCM No.	APPD.	ISSUE STAGE	DATE	BY	CHKD.	APPD.	PERMIT STAMP	ENGINEER'S STAMP
		1	2011-11-14	2012 BIGHORN METER SKID RFD			PEI	1334		Prelim. (A)						
										Bid (B)	2011-11-14	R.V.	W.H.			
										Constr. (C)						
										As-built (D)						

CAUTION : READ BEFORE EXCAVATION
 ALL EXCAVATIONS MUST BE CARRIED OUT AS PER
 "ENCANA'S GROUND DISTURBANCE PRACTICE"

MAN. FAC.	BIGHORN TYPICALS
MAN. STD.	VARIABLES
PAC. TYPE	PADSITE
SIZE	VARIABLES
SCALE	NTS (A1 Size)
EPC No.	1334

PRECISION ENGINEERING INC.

PIPING AND INSTRUMENTATION DIAGRAM

TYPICAL 89mm OD TRIPLE METER SKID SHT 2 of 2

PERMIT STAMP AND PROFESSIONAL STAMP
 AFFIXED ABOVE SHALL APPLY ONLY TO REV(S)

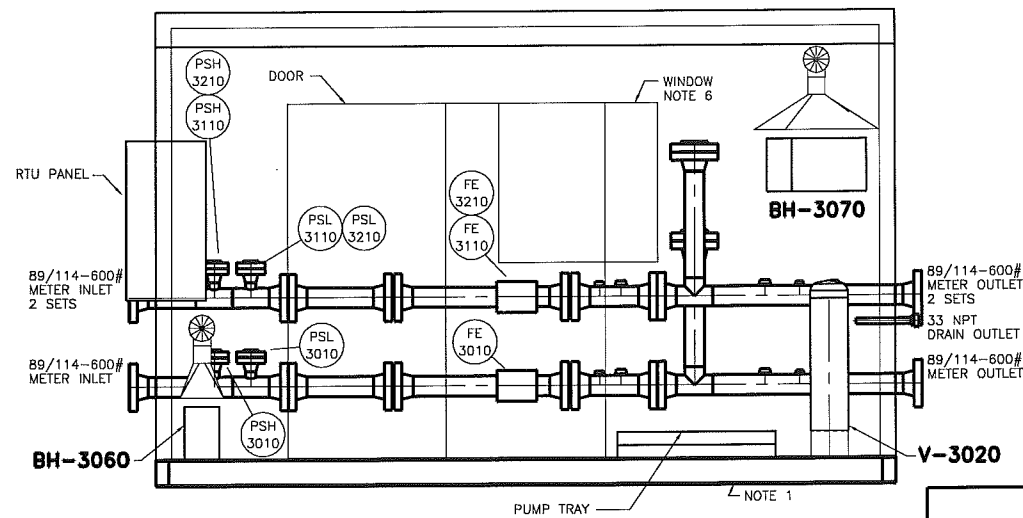
1B-1

BIGHORN

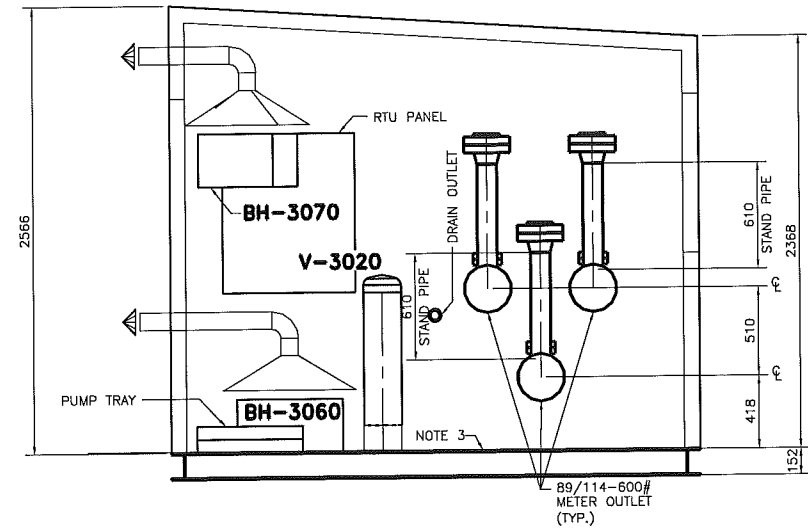
CLASS | FILE NO. | BHT0145E

Drawings Must Comply with Encana Drafting Standards (ECA-DDM-S-01)

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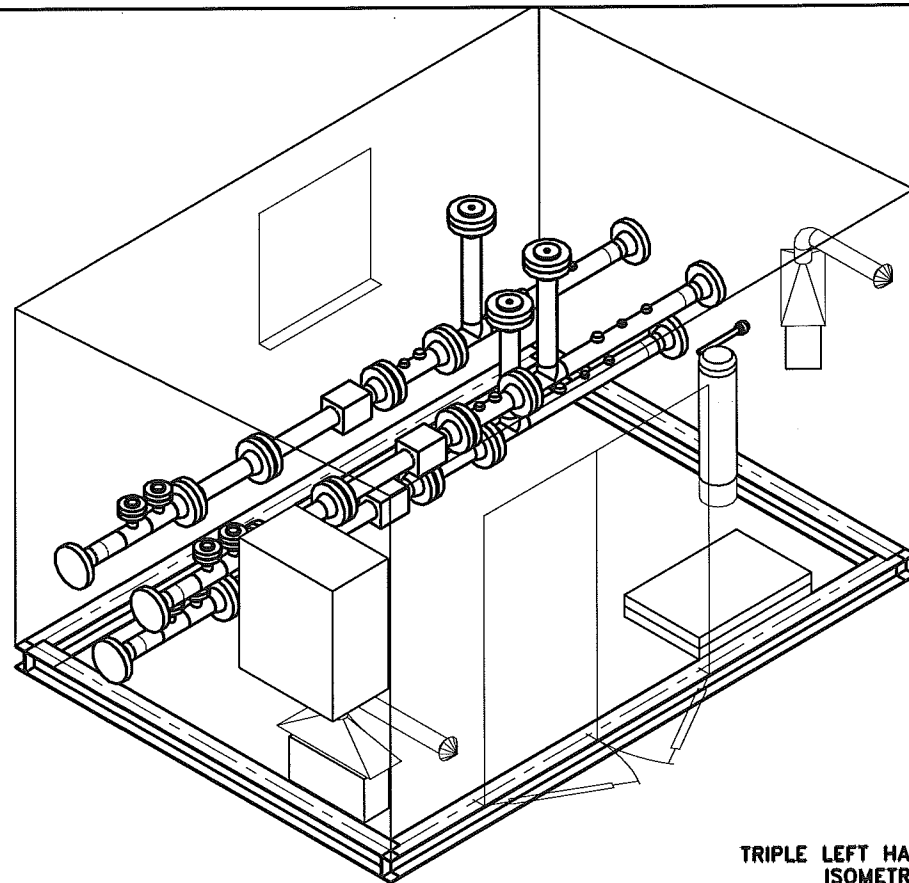


**TRIPLE LEFT HAND METER SKID
FRONT ELEVATION VIEW**
SCALE: 1:20

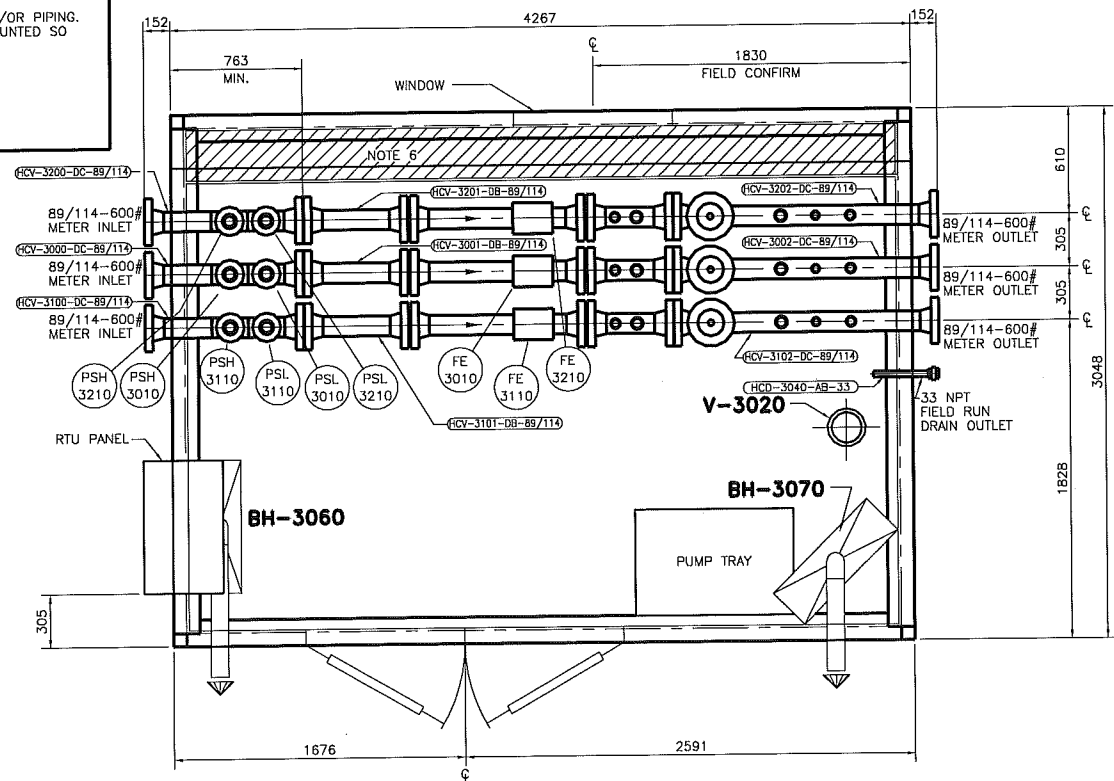


**TRIPLE LEFT HAND METER SKID
RIGHT SIDE VIEW**
SCALE: 1:20

- NOTE:
1. UNDERSIDE OF SKID TO BE INSULATED WITH 75mm TK URETHANE SPRAY FOAM INSULATION.
 2. FABRICATOR TO PROVIDE PIPE SUPPORTS AND INSTRUMENTATION STANDS AS REQUIRED.
 3. 50mm HIGH DRIP LIP AROUND SKID PERIMETER.
 4. THREAD PIPING AND TUBING TO BE SHOP RUN BY FABRICATOR.
 5. REFER TO P&ID DWG. No. BHT0145A FOR EQUIPMENT AND INSTRUMENTATION TAG DESCRIPTIONS.
 6. DO NOT BLOCK WINDOW WITH INSTRUMENTATION AND/OR PIPING.
 7. INSTRUMENTATION TO BE LOCATED IN THIS AREA, MOUNTED SO EASILY ACCESSIBLE.



**TRIPLE LEFT HAND METER SKID
ISOMETRIC VIEW**
SCALE: NTS



**TRIPLE LEFT HAND METER SKID
PLAN VIEW**
SCALE: 1:20

REFERENCE DRAWINGS	DWG. NO.	NO.	DATE (MM-DD-YY)	PROJECT DESCRIPTION	PROJ.	AFE	EPCM Co.	EPCM No.	APPD.	ISSUE STAGE	DATE (MM-DD-YY)	BY	CHKD.	APPD.	PERMIT STAMP	ENGINEER'S STAMP
		1	2011-11-14	2012 BIGHORN METER SKID RFO			PEI	1274		Prelim. (A)	2011-11-14	J.K.	W.H.			
										Bid (1)						
										Constr. (C)						
										As-built (D)						

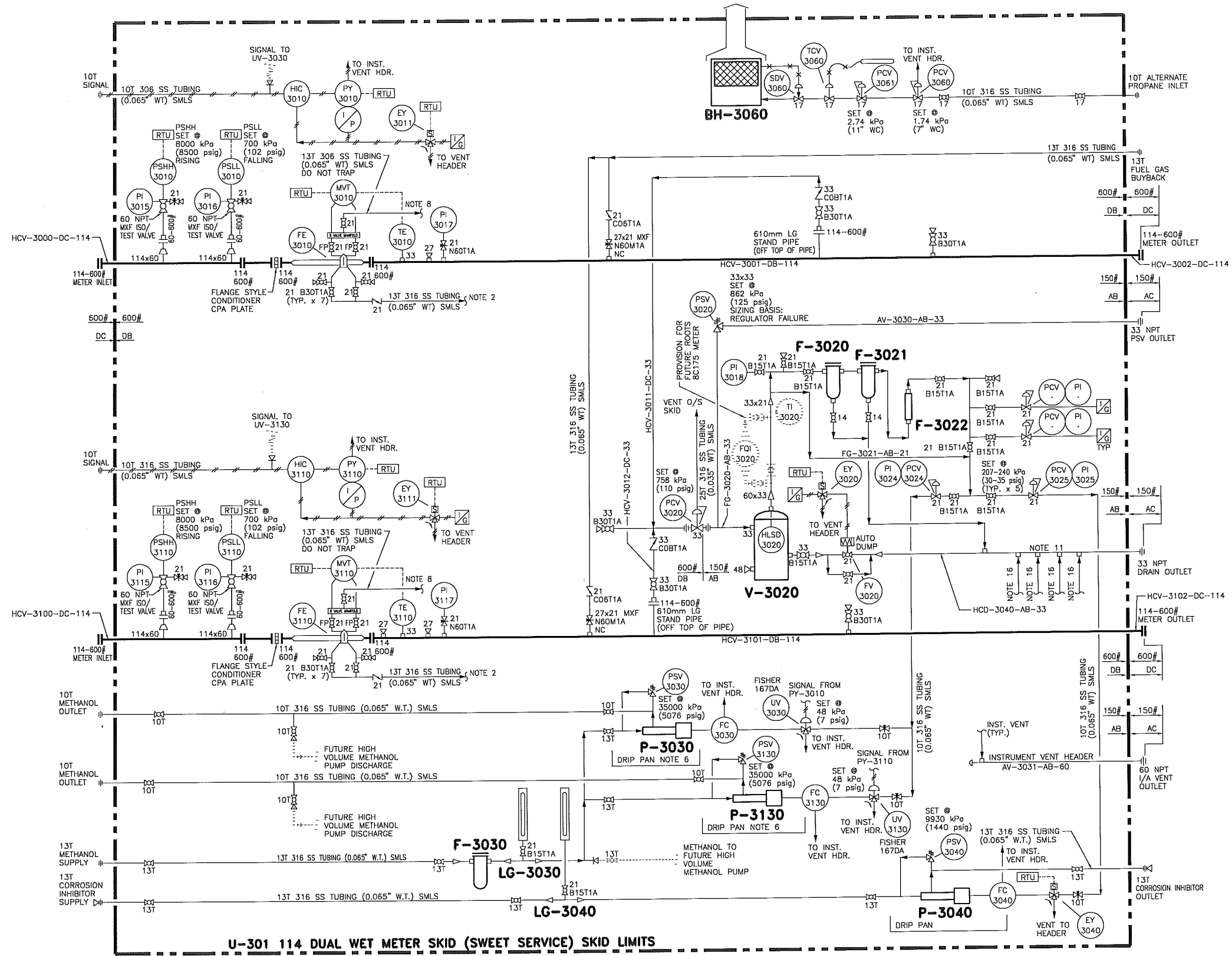
CAUTION : READ BEFORE EXCAVATION
ALL EXCAVATIONS MUST BE CARRIED OUT AS PER "ENCANA'S GROUND DISTURBANCE PRACTICE"

MAN FAC:	BIGHORN TYPICALS
MAN LES:	VARIES
FAC TR:	PADSITE
SITE LES:	VARIES
SCALE:	NTS (A1 Size)
EPCM No.:	1334

PRECISION ENGINEERING INC.

TITLE: PIPING LAYOUT
TYPICAL 89mm/114mm OD TRIPLE LEFT HAND METER SKID

AREA: BIGHORN CLASS: L FILE NO.: **BHT0147B**



U-301 114 DUAL WET METER SKID (SWEET SERVICE) SKID LIMITS

PLOTTED: 11/11/2011 12:43:30 PM BY: JAMES KANKONEN
 LAST SAVED: 11/11/2011 12:41:48 PM BY: JAMES

REFERENCE DRAWINGS	DWG. NO.	NO.	DATE	PROJECT DESCRIPTION	PRQJ.	AFE	EPCM Co.	EPCM No.	APPD.
		1	2011-11-14	2012 BIGHORN METER SKID RFD			PEI	1334	

ISSUE STAGE	DATE	BY	CHKD.	APPD.	PERMIT STAMP	ENGINEER'S STAMP
Prelim. (A)						
Bid (B)	2011-11-14	R.V.	W.H.			
Constr. (C)						
As-built (D)						

REV. NUMBER	DATE	BY	CHKD.	APPD.	PERMIT STAMP AND PROFESSIONAL STAMP	FILE NO.
1B-1					1B-1	BHT0145G

MAN. FAC: BIGHORN TYPICALS
 MAN. LSN: VARIES
 FAC. TYPE: PADSITE
 SITE LSN: VARIES
 SCALE: NTS (A1 Size) EPDM No. 1334

PRECISION ENGINEERING INC.

TITLE: PIPING AND INSTRUMENTATION DIAGRAM
 TYPICAL 114mm OD DUAL METER SKID SHT 2 of 2

AREA: BIGHORN CLASS: A FILE NO. BHT0145G

Drawings Must Comply with Encana Drafting Standards (ECA-DDM-S-01)

452.dwg G:\DRWTG\1334

CAUTION : READ BEFORE EXCAVATION
 ALL EXCAVATIONS MUST BE CARRIED OUT AS PER "ENCANA'S GROUND DISTURBANCE PRACTICE"

11 NOV 11 12:30


LINE DESIGNATION				DESCRIPTION			OPERATING CONDITIONS		DESIGN CONDITIONS				TEST CONDITIONS			INSULATION		TRACING		X-RAY %	STRESS RELIEVE	REFERENCE P&ID	SPECIAL NOTES	REVISION
COMMODITY	LINE NO.	PIPING SPEC	SIZE (NPS)	FROM	TO	SERVICE	PRESS. (kPa)	TEMP. (°C)	PRESS. (kPa)	TEMP. (°C)	CORR. ALLOW. (mm)	ACTUAL THK/SCH (mm)	PRESS. (kPa)	TEMP. (°C)	MEDIUM	THK. (mm)	TYPE	TYPE	No.					
HCV	3000	DC	114	SKID METER INLET CONN	HCV-3001-DB-114	SWEET GAS			9930	-45/54	1.6	SCH 80	14895	AMB	WATER	-	-	-	-	10%	NO	BHT0145G	1B-1	
HCV	3001	DB	114	HCV-3000-DC-114	HCV-3002-DC-114	SWEET GAS			9930	-29/54	1.6	SCH 80	14895	AMB	WATER	-	-	-	-	10%	NO	BHT0145G	1B-1	
HCV	3002	DC	114	HCV-3001-DB-114	SKID METER OUTLET CONN	SWEET GAS			9930	-45/54	1.6	SCH 80	14895	AMB	WATER	-	-	-	-	10%	NO	BHT0145G	1B-1	
HCV	3100	DC	114	SKID METER INLET CONN	HCV-3101-DB-114	SWEET GAS			9930	-45/54	1.6	SCH 80	14895	AMB	WATER	-	-	-	-	10%	NO	BHT0145G	1B-1	
HCV	3101	DB	114	HCV-3100-DC-114	HCV-3102-DC-114	SWEET GAS			9930	-29/54	1.6	SCH 80	14895	AMB	WATER	-	-	-	-	10%	NO	BHT0145G	1B-1	
HCV	3102	DC	114	HCV-3101-DB-114	SKID METER OUTLET CONN	SWEET GAS			9930	-45/54	1.6	SCH 80	14895	AMB	WATER	-	-	-	-	10%	NO	BHT0145G	1B-1	
HCV	3010	DB	33	HCV-3001-DB-114	FG-3020-AB-33	SWEET			9930	-29/54	1.6	SCH 80	14895	AMB	WATER	-	-	-	-	-	NO	BHT0145G	1B-1	
HCV	3011	DB	33	HCV-3101-DB-114	FG-3020-AB-33	SWEET			9930	-29/54	1.6	SCH 80	14895	AMB	WATER	-	-	-	-	-	NO	BHT0145G	1B-1	
HCV	3012	DB	33	HCV-3201-DB-114	FG-3020-AB-33	SWEET			9930	-29/54	1.6	SCH 80	14895	AMB	WATER	-	-	-	-	-	NO	BHT0145G	1B-1	
FG	3020	AB	33	HCV-3010-DB-33	V-3020 INLET	SWEET	758	10	1965	-29/54	1.6	SCH 80	2948	AMB	WATER	-	-	-	-	-	NO	BHT0145G	1B-1	
FG	3021	AB	21	V-3020 OUTLET	I/G CONN'S	SWEET	758	10	1965	-29/54	1.6	SCH 80	2948	AMB	WATER	-	-	-	-	-	NO	BHT0145G	1B-1	
AV	3030	AB	33	PSV-3020	O/S SKID	SWEET	ATMOS	15	ATMOS	-29/54	1.6	SCH 80	ATMOS	AMB	SERVICE	-	-	-	-	-	NO	BHT0145G	1B-1	
AV	3031	AB	60	INST. VENTS	O/S SKID	SWEET	ATMOS	15	ATMOS	-29/54	1.6	SCH 80	ATMOS	AMB	SERVICE	-	-	-	-	10%	NO	BHT0145G	1B-1	
HCD	3040	AB	33	V-3020 DRAIN	SKID DRAIN OUTLET CONN	SWEET	ATMOS	15	1965	-29/54	1.6	SCH 80	2948	AMB	WATER	-	-	-	-	-	NO	BHT0145G	1B-1	

NOTE:
1. RANDOM HARDNESS TESTING TO BE PERFORMED ON 10% OF ALL WELDS. 15% X-RAY TO BE PERFORMED ON ALL THREADED CONNECTIONS AND 100% X-RAY ON ALL PSV CONNECTIONS.

REFERENCE DRAWINGS
DWG. NO.
NO. DATE (YY-MM-DD)
PROJECT DESCRIPTION
PROJ. AFE EPCM Co. EPCM No. APPD.
ISSUE STAGE DATE (YY-MM-DD) BY CHKD. APPD.
PERMIT STAMP ENGINEER'S STAMP
REV. NUMBER 1B-1
PRELIM. (A) - - - -
BID (B) 2011-11-14 R.V. W.H. -
CONSTR. (C) - - - -
AS-BUILT (D) - - - -
CAUTION : READ BEFORE EXCAVATION
ALL EXCAVATIONS MUST BE CARRIED OUT AS PER "ENCANA'S GROUND DISTURBANCE PRACTICE"

NO.	DATE (YY-MM-DD)	PROJECT DESCRIPTION	PROJ.	AFE	EPCM Co.	EPCM No.	APPD.
1	2011-11-14	2012 BIGHORN METER SKID RFD	-	-	PEI	1334	-

ISSUE STAGE	DATE (YY-MM-DD)	BY	CHKD.	APPD.	PERMIT STAMP	ENGINEER'S STAMP
Prelim. (A)	-	-	-	-		
Bid (B)	2011-11-14	R.V.	W.H.	-		
Constr. (C)	-	-	-	-		
As-built (D)	-	-	-	-		



MAIN FAC.	BIGHORN TYPICALS
MAIN LGS	VARIES
P&ID	PADSITE
SITE	VARIES
SCALE	NTS (A1 Size)
EPC No.	1334

PRECISION ENGINEERING INC.

LINE LIST
TYPICAL 114mm OD DUAL METER SKID

AREA	BIGHORN	CLASS	L	FILE NO.	BHT0146D
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PERMIT STAMP AND PROFESSIONAL STAMP AFFIXED ABOVE SHALL APPLY ONLY TO REV(S) 1B-1

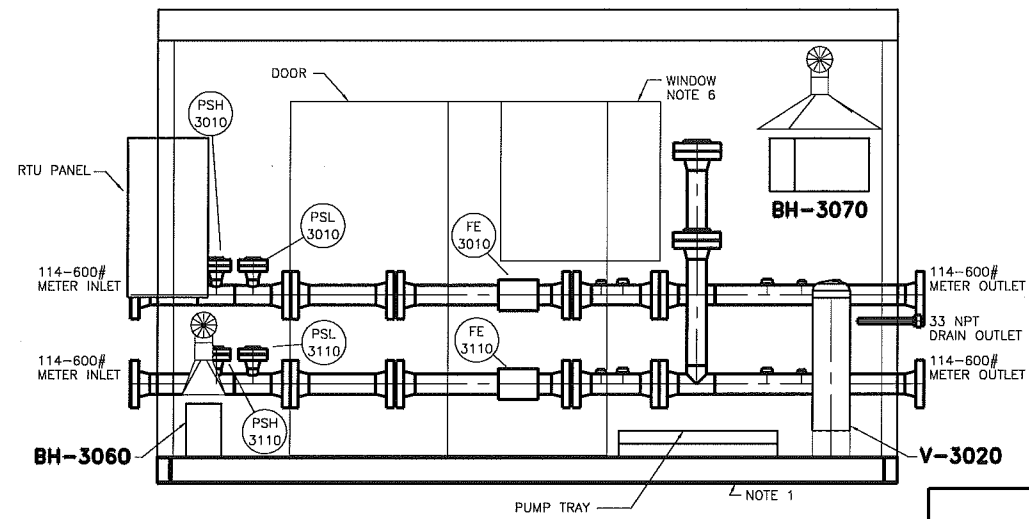
Drawings Must Comply with Encana Drafting Standards (ECA-DDM-S-01)

PLOTTER: BY: ANDRE TUCQUE LAST SAVED: 5/27/2010 3:11:04 PM BY: ANDRE TUCQUE

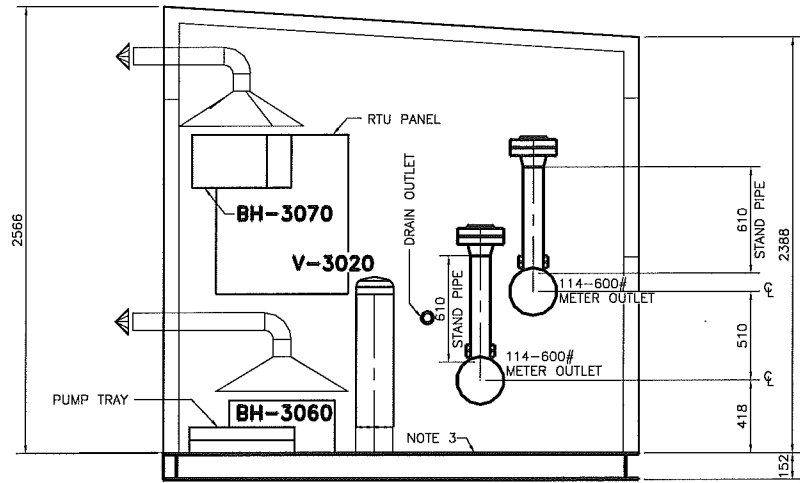
ENCANA (Drawn by: See the sheet)

ENCANA (Drawing: 1334)

01APR11 14:39

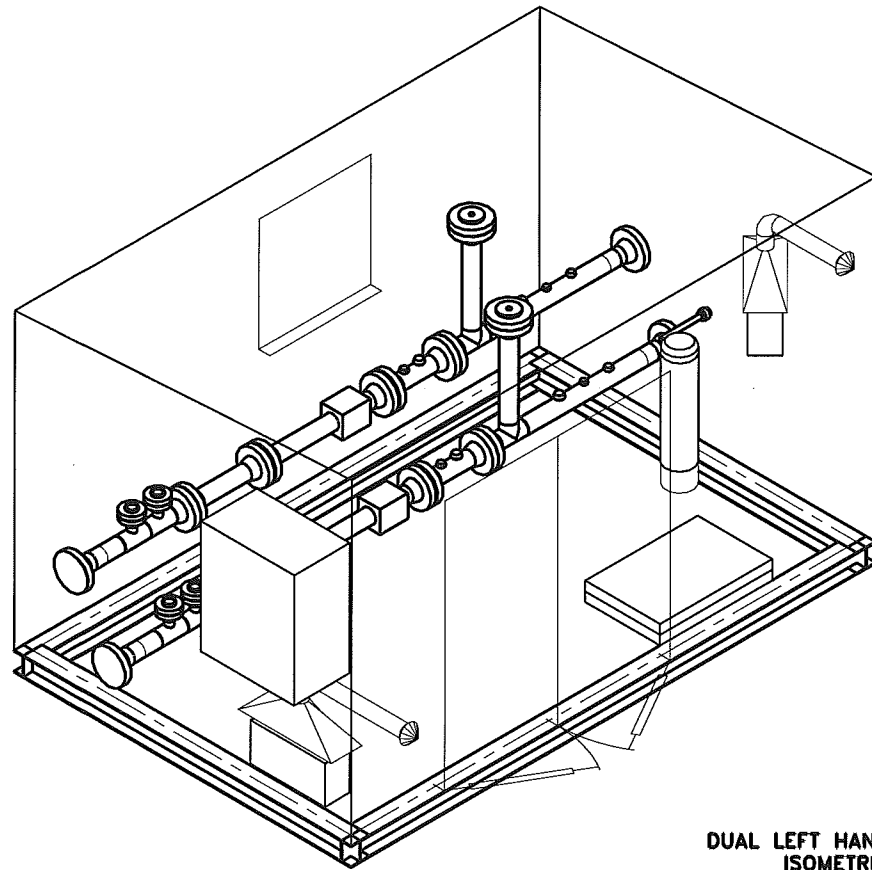


**DUAL LEFT HAND METER SKID
FRONT ELEVATION VIEW**
SCALE: 1:20

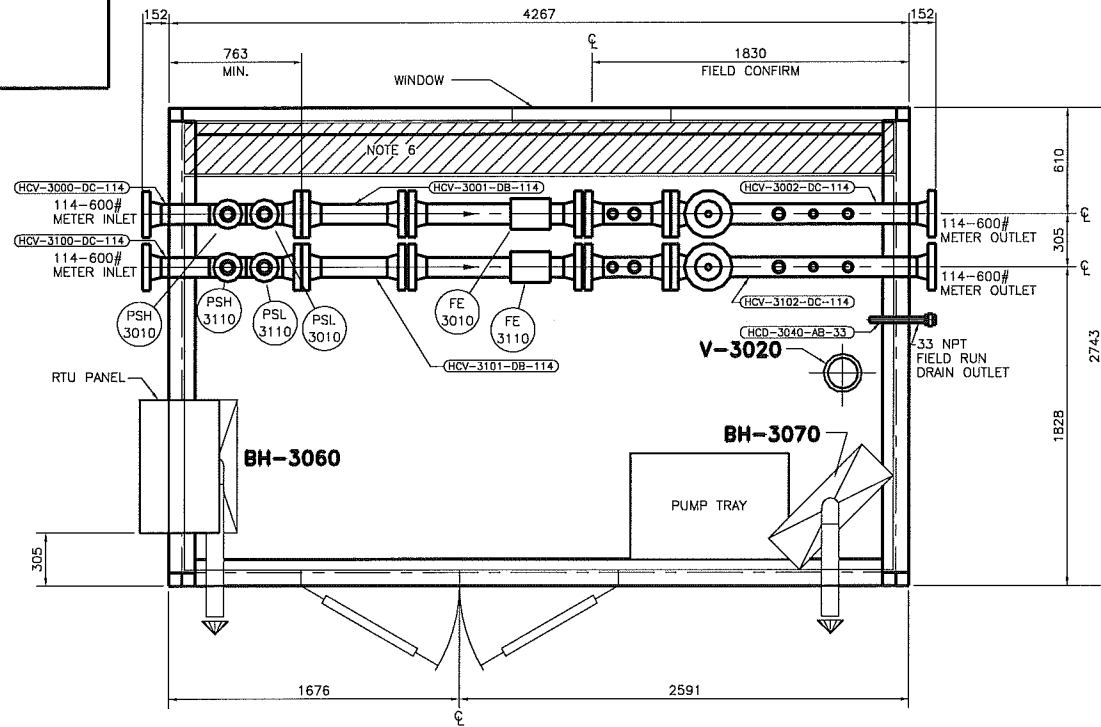


**DUAL LEFT HAND METER SKID
RIGHT SIDE VIEW**
SCALE: 1:20

NOTE:
 1. UNDERSIDE OF SKID TO BE INSULATED WITH 75mm TK URETHANE SPRAY FOAM INSULATION.
 2. FABRICATOR TO PROVIDE PIPE SUPPORTS AND INSTRUMENTATION STANDS AS REQUIRED.
 3. 50mm HIGH DRIP LIP AROUND SKID PERIMETER.
 4. THREAD PIPING AND TUBING TO BE SHOP RUN BY FABRICATOR
 5. REFER TO P&ID DWG. No. BHT0145A FOR EQUIPMENT AND INSTRUMENTATION TAG DESCRIPTIONS.
 6. DO NOT BLOCK WINDOW WITH INSTRUMENTATION AND/OR PIPING.
 7. INSTRUMENTATION TO BE LOCATED IN THIS AREA, MOUNTED SO EASILY ACCESSIBLE.



**DUAL LEFT HAND METER SKID
ISOMETRIC VIEW**
SCALE: NTS



**DUAL LEFT HAND METER SKID
PLAN VIEW**
SCALE: 1:20

PLOTTED: 11/11/2011 12:34:01 PM BY: RYAN, SCHAUB
 LAST SAVED: 11/11/2011 12:31:32 PM BY: JAMES

REFERENCE DRAWINGS	DWG. NO.	NO.	DATE	PROJECT DESCRIPTION	PROJ.	AFE	EPCM Co.	EPCM No.	APPD.
		1	2011-04-01	METER PACKAGE DESIGN			PEI	1274	
		2	2011-11-14	2012 BIGHORN METER SKID RFD			PEI	1334	

ISSUE STAGE	DATE	BY	CHKD.	APPD.	PERMIT STAMP	ENGINEER'S STAMP
Prelim. (A)						
Bid (2)	2011-11-14	J.K.	W.H.			
Constr. (C)						
As-built (D)						

encana
natural gas

MAIN FAC.	BIGHORN TYPICALS
MAIN L.S.D.	VARIES
FAC. PIPE	PADSITE
FILE TSD.	VARIES
SCALE	NTS (A1 Size)
EPCM No.	1334

PRECISION ENGINEERING INC.
 TITLE: PIPING LAYOUT TYPICAL 114mm OD DUAL LEFT HAND METER SKID
 AREA: BIGHORN CLASS: L FILE NO.: BHT0147A

Drawings Must Comply with Encana Drafting Standards (ECA-DDM-S-01)

147A.dwg C:\DRAWING\1334