Form 3160-5
(May 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
SEP 27 2018

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE – *Other instructions on page 2.*

5. Lease Serial No.
NMNM 8005

6. If Indian, Allottee or Tribe Name
EASTERN NAVAJO

7. If Unit of CA/Agreement, Name and/or No.
NMNM132981A

1. Type of Well
☑ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
NAGEEZI UNIT 510H

2. Name of Operator
Encana Oil & Gas (USA) Inc.

9. API Well No.
30-045-35862

3a. Address
370 17th Street, Suite 1700, Denver CO 80202

3b. Phone No. *(include area code)*
505-599-2400

10. Field and Pool or Exploratory Area
MANCOS

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*
Surface: NENE / 260' FNL / 399' FEL / LAT 36.248044 / LONG -107.786725

11. County or Parish, State
SAN JUAN, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☑ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☑ Other NOTICE OF INSTALLATION OF GAS LIFT
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Encana Oil & Gas (USA) Inc. is giving notification of installation of gas lift at the Nageezi Unit 510H well. Attached hereto is a schematic of the well pad with the gas lift and gas allocation procedure.

NMOCD
OCT 22 2018
DISTRICT III

ACCEPTED FOR RECORD
OCT 16 2018
FARMINGTON FIELD OFFICE
By:

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)*
Shaw-Marie N. Ford

Title Production Technician

Signature

Date 09/27/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title PE

Date 10/16/18

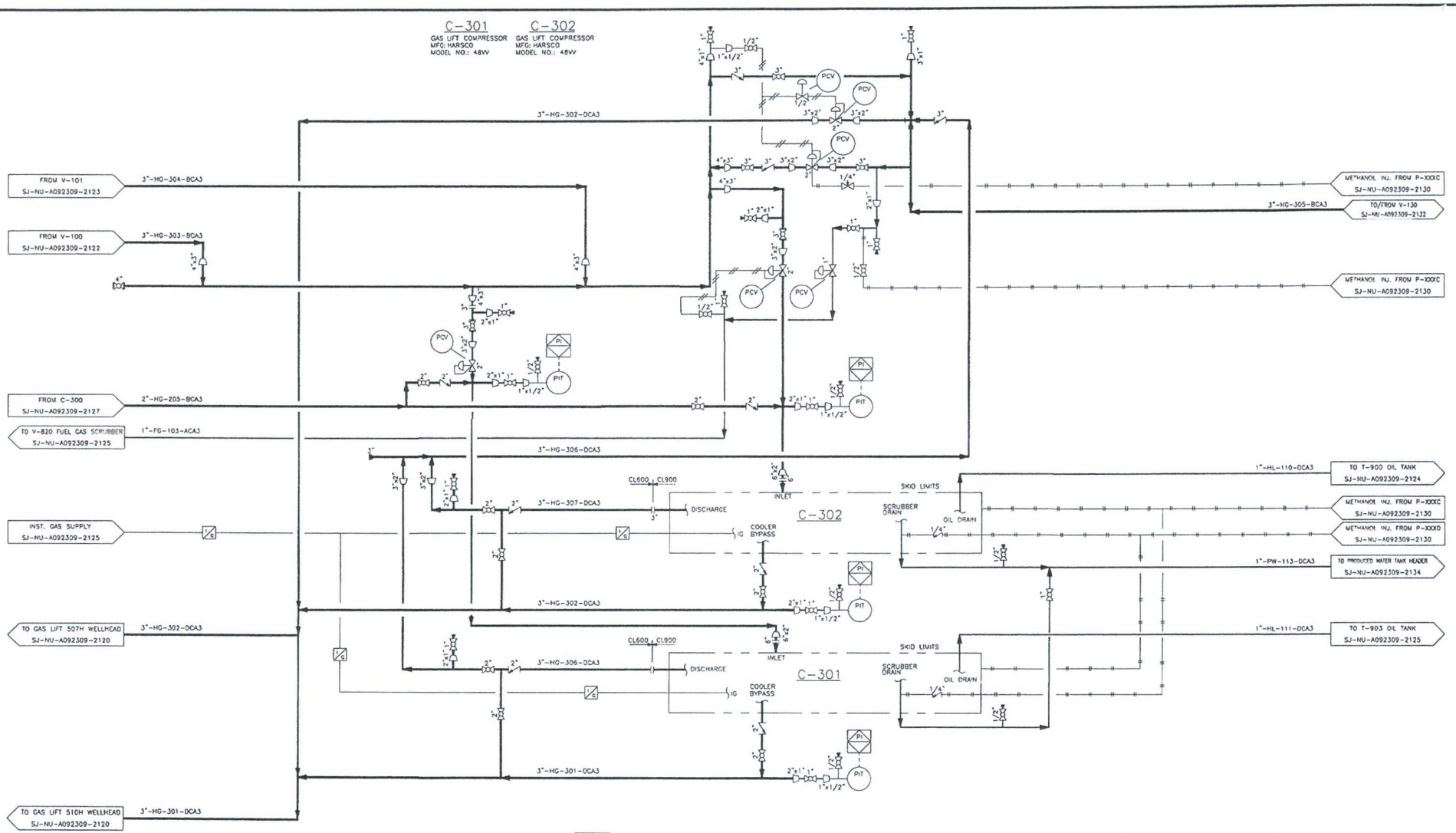
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office FFO

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

NMOCD



Date and Time Saved: 2018-05-03, 8:05 AM

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

PLOTTED: 5/15/2018 7:49:13 AM, BY: CHRIS BOURSON
LAST SAVED: 5/3/2018 8:05:36 AM BY: CBOURSON

REFERENCE DRAWINGS	DWG. NO.
-	-
-	-
-	-
-	-

CAUTION : READ BEFORE EXCAVATION

ALL EXCAVATIONS MUST BE CARRIED OUT AS PER "ENCANA'S GROUND DISTURBANCE PRACTICE"

AFE 18184696 18184699

NO.	DATE (mm-dd-yy)	PROJECT DESCRIPTION	PROJ.	AFE	EPCM Co.	EPCM No.	APPD.
A1	2018-04-19	ISSUED FOR REVIEW	SJ-NU-A092309	SEE ABOVE	PSI, LLC	-	-
C1	2018-05-17	ISSUED FOR CONSTRUCTION	SJ-NU-A092309	SEE ABOVE	PSI, LLC	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

REV. NUMBER	ISSUE STAGE		DATE (mm-dd-yy)	BY	CHKD.	APPD
C1	Prelim	(A)	2018-04-19	HAS	SBM	-
	Bid	(B)	-	-	-	-
	Constr	(C)	2018-05-17	CSB	SBM	-
	As-built	(D)	-	-	-	-
				-	-	-
				-	-	-
				-	-	-

PERMIT STAMP | ENGINEER'S STAMP

PERMIT STAMP AND PROFESSIONAL STAMP AFFIXED ABOVE SHALL APPLY ONLY TO REV(s) C1

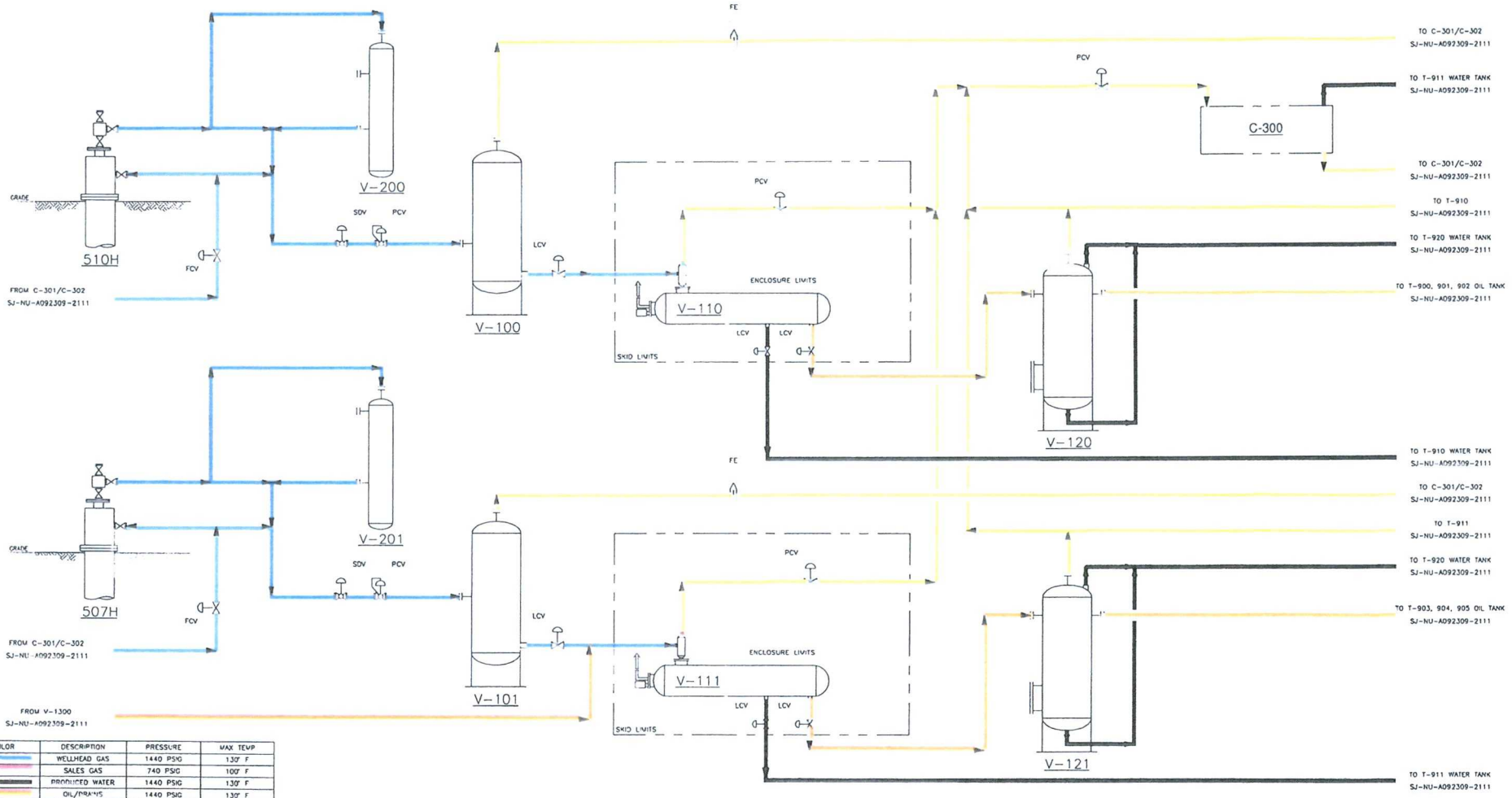
encana.

MAP/FAC	NAGEEZI UNIT A09-2309
MAP/SEC	SEC 9, TOWNSHIP 23 N, RANGE 9 W
FAC DESC	CENTRAL PROCESSING FACILITY
LOC DESC	SEC 9, TOWNSHIP 23N, RANGE 9 W
SCALE	NTS (A1 Size)
EPCM	TBD
DEV	PSI

TITLE: PIPING & INSTRUMENTATION DIAGRAM
GAS LIFT COMPRESSOR #1 (C-301) & #2 (C-302)

AREA: SAN JUAN | CLASS: A | FILE NO.: SJ-NU-A092309-2131

FILE: P:\ENGINEERING\PROJECTS\ECANA\2017-2018 SAN JUAN\NU A09-2309\04 DRAFTING\PAID\SJ-NU-A092309-2131.DWG



COLOR	DESCRIPTION	PRESSURE	MAX TEMP
	WELLHEAD GAS	1440 PSIG	130° F
	SALES GAS	740 PSIG	100° F
	PRODUCED WATER	1440 PSIG	130° F
	OIL/CONDENSATE	1440 PSIG	130° F
	VENT GAS	5 PSIG	150° F
	LOW PRESSURE GAS	740 PSIG	130° F
	GAS LIFT	1440 PSIG	130° F

REFERENCE DRAWINGS	DWG. NO.
PROCESS FLOW DIAGRAM	SJ-NU-A092309-2111
	-
	-
	-

CAUTION : READ BEFORE EXCAVATION
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NO.	DATE	PROJECT DESCRIPTION	PROJ.	AFE	EPCM Co.	EPCM No.	APPD.
A1	2018-04-19	ISSUED FOR REVIEW	SJ-NU-A092309	SEE ABOVE	PSI, LLC		
C1	2018-05-17	ISSUED FOR CONSTRUCTION	SJ-NU-A092309	SEE ABOVE	PSI, LLC		

AFE
*B154699
*B184699

REV. NUMBER	ISSUE STAGE	DATE	BY	CHKD	APPD.
C1	Issued (A)	2018-04-19	HAS	SDM	
	Issued (B)	-	-	-	
	Issued (C1)	2018-05-17	CSB	SDM	
	As-built (D)	-			
		-			
		-			
		-			

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encana.

PROJ.	NAGEEZI UNIT A09-2309
LOC.	SEC 9, TOWNSHIP 23N, RANGE 9W
FAC.	CENTRAL PROCESSING FACILITY
LOC.	SEC 9, TOWNSHIP 23N, RANGE 9W
SCALE	NTS (A1 Size)
DWG NO.	T80

DWG PIPELINE STRATEGIES & INTEGRITY

TITLE PROCESS FLOW DIAGRAM
2 WELL PAD

AREA SAN JUAN

CLASS A

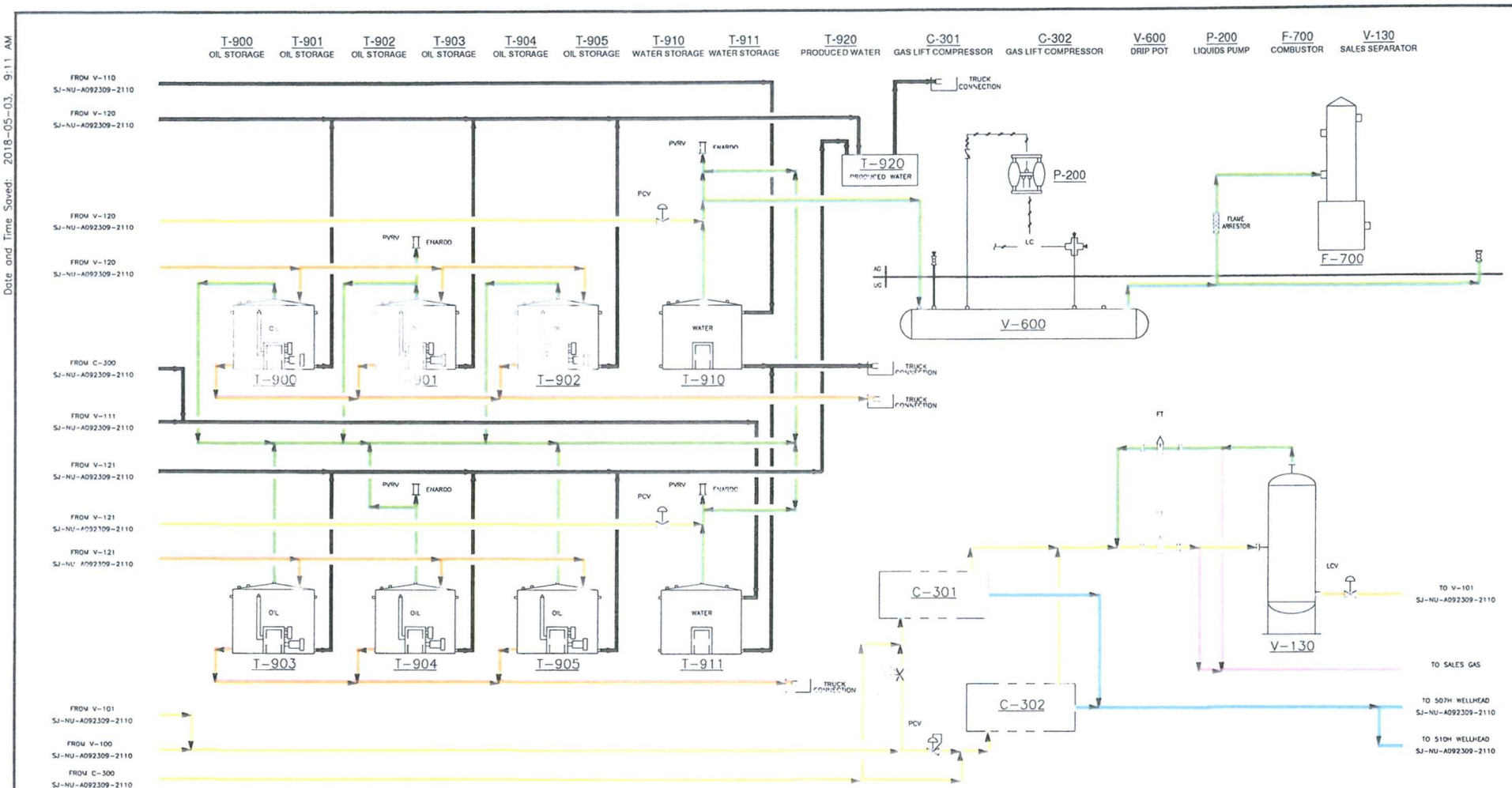
FILE NO. SJ-NU-A092309-2110

FILE: P:\ENGINEERING\PROJECTS\ENCANA\2017-2018 SAN JUAN\NU A09-2309\04 DRAFTING\OPERATIONAL SCHEMATICS\SJ-NU-A092309-2110.DWG

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

Date and Time Saved: 2018-05-03, 9:10 AM

PLOTTED: 5/15/2018 8:10:24 AM BY: CHRIS BOURDON
LAST SAVED: 5/3/2018 9:10:03 AM BY: CBOURDON



COLOR	DESCRIPTION	PRESSURE	MAX TEMP
	WELLHEAD GAS	1440 PSIG	130° F
	SALES GAS	740 PSIG	100° F
	PRODUCED WATER	1440 PSIG	130° F
	OIL/DRAINS	1440 PSIG	130° F
	VENT GAS	5 PSIG	150° F
	LOW PRESSURE GAS	740 PSIG	130° F
	GAS LIFT	1440 PSIG	130° F

REFERENCE DRAWINGS	DWG. NO.
PROCESS FLOW DIAGRAM	SJ-NU-A092309-2110

CAUTION : READ BEFORE EXCAVATION

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NO.	DATE	PROJECT DESCRIPTION	PROJ.	AFE	EPCM Co.	EPCM No.	APPD.
A1	2018-04-19	ISSUED FOR REVIEW	SJ-PJ-A092309	SEE ABOVE	PSI, LLC	-	-
-	-	-	SJ-NU-A092309	SEE ABOVE	PSI, LLC	-	-

AFE: 18184698, 18184699

REV. NUMBER	ISSUE STAGE	DATE	BY	CHKD.	APPD.
A	Design (A)	2018-04-19	HAS	SBW	-
B	Bid (B)	-	-	-	-
C	Constr (C)	2018-05-17	CSB	SBW	-
D	As-Built (D)	-	-	-	-

PERMIT STAMP

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encana.

NAGEEZI UNIT A09-2309
SEC 9, TOWNSHIP 23N, RANGE 9W
CENTRAL PROCESSING FACILITY
SEC 9, TOWNSHIP 23N, RANGE 9W
SCALE: NTS (A1 Size)
EPCM No.: TBD

EPCM Co.: PIPELINE STRATEGIES & INTEGRITY

TITLE: PROCESS FLOW DIAGRAM
2 WELL PAD

AREA: SAN JUAN
CLASS: A
DWG NO.: SJ-NU-A092309-2111

Date and Time Saved: 2018-05-03, 9:11 AM

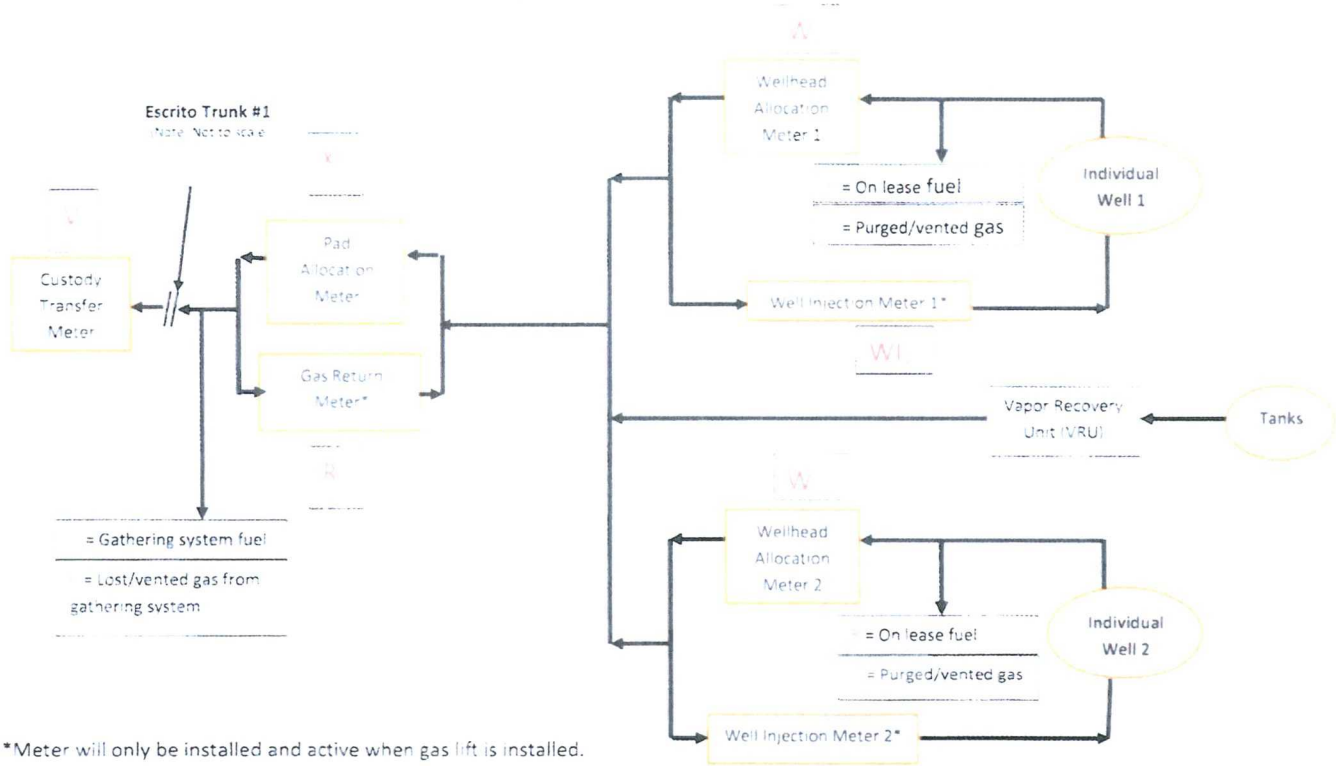
Drawings Must Comply with Encana Drafting Standards (ECA-DDM-S-01)

PLOTTED: 5/15/2018 8:10:32 AM, BY: CHRIS BOURDON
LAST SAVED: 5/2/2018 9:11:05 AM, BY: CBOURDON

FILE: P:\ENCANEERING\PROJECTS\ENCANA\2017-2018 SAN JUAN\NU A09-2309\04 DRAFTING\OPERATIONAL SCHEMATICS\SJ-NU-A092309-2111.DWG

Attachment No. 5
Encana Oil & Gas (USA) Inc.
Escrito Trunk #1 Gathering System
San Juan County, New Mexico

Gas Measurement Allocation Procedure for Multi-Well Pads



*Meter will only be installed and active when gas lift is installed.

Attachment No. 5
Encana Oil & Gas (USA) Inc.
Escrito Trunk #1 Gathering System
San Juan County, New Mexico

Base Data:

V = Gas Volume (MCF) from Custody Transfer Meter during allocation period (Enterprise Field Services, LLC)
X_n = Gas Volume (MCF) from Pad Allocation Meter during allocation period. (Encana)
R_n = Gas Volume (MCF) from Gas Return Meter at Well Pad (Encana)*
(X_n -R_n) = Gas Volume (MCF) for total Well Pad Production (Encana)
W_n = Gas Volume (MCF) from Wellhead Allocation Meter at individual wells during allocation period. (Encana)
WI_n = Gas Volume (MCF) from Well Injection Meter at individual wells during allocation period. (Encana)*
Y = Heating Value (BTU/scf) from Custody Transfer Meter during allocation period. (Enterprise Field Services, LLC)
Z = Heating Value (BTU/scf) from individual Wellhead Allocation Meter and Well Injection Meter. (Encana)

Allocation Period is typically a calendar month and will be the same for all Well Pads and individual wells.

Allocate the off lease Custody Transfer volume back to the well pad

A_{AL} = Well pad allocated volume (MCF) = $[(X_1-R_1)/((X_1-R_1)+(X_2-R_2)+(X_n-R_n))]*(V) + D + E$

Distribute (allocate) the allocated well pad production, (A_{AL}) back to each well on the pad

Gas production (MCF) allocated back to the individual wells on a Well Pad is calculated using the formula:
AL Net_n = $[(W_1-WI_1)/((W_1-WI_1)+(W_2-WI_2)+(W_n-WI_n))]* A_{AL}$

Determine the final allocated production for each well on the pad

Final allocated individual well production (MCF) = AL Net_n + B_n + C_n

B_n = On lease fuel usage attributed to an individual well, MCF. Determined from equipment specification and operating conditions. This includes, but is not limited to, compression, vapor recovery unit (VRU) compression, burners, and pump jacks.

Attachment No. 5
Encana Oil & Gas (USA) Inc.
Escrito Trunk #1 Gathering System
San Juan County, New Mexico

C_n = Lost and/or vented gas attributed to an individual well from well and/or lease equipment, MCF. Calculated using equipment and piping specifications and operating pressures.

D = Allocated fuel from gathering system equipment, MCF. The total fuel required to operate gathering system equipment will be allocated to the Well Pads benefiting from the equipment using allocation factors determined by $[(X_1-R_1)/((X_1-R_1)+(X_2-R_2)+(X_n-R_n))]$ and for individual wells using allocation factors determined by $[(W_1-WI_1)/((W_1-WI_1)+(W_2-WI_2)+(W_n-WI_n))]$.

E = Allocated volume of gas lost and/or vented from the gathering system, gathering system equipment, condensate collection, and water collection in MCF. The total volume will be determined using industry accepted procedures the time of the loss. The total volumes lost and/or vented will be allocated to the Well Pads affected using factors determined by $[(X_1-R_1)/((X_1-R_1)+(X_2-R_2)+(X_n-R_n))]$, and for individual wells using factors determined by $[(W_1-WI_1)/((W_1-WI_1)+(W_2-WI_2)+(W_n-WI_n))]$.

Individual Well BTU's = $[[\{(W_n-WI_n)*Z_n\}/\{SUM((W_n-WI_n)*Z_n)\}]*(V*Y)*1000]$
Individual well gas heating values to be determined in accordance with BLM regulations.