Form 3160-5
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

AMENDED

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2014

CONFIDENTIAL

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.

RECEIVED

OCT 24 2014

Farmington Field Office
Bureau of Land Management

SUBMIT IN TRIPLICATE – Other instructions on page 2.

1. Type of Well ☑ Oil Well ☐ Gas Well ☐ Other	5. Lease Serial No. NM16760
	6. If Indian, Allottee or Tribe Name N/A
	7. If Unit of CA/Agreement, Name and/or No. N/A
	8. Well Name and No. Escrito L18-2409 01H
2. Name of Operator Encana Oil & Gas (USA) Inc.	9. API Well No. 30-045-35486
3a. Address 370 17th Street, Suite 1700 Denver, CO 80202	3b. Phone No. *(include area code)* 720-876-5867
	10. Field and Pool or Exploratory Area Bisti Lower-Gallup
4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)* SHL: 1482' FSL and 440' FWL Section 18, T24N, R9W BHL: 2240' FSL and 330' FWL Section 13, T24N, R10W	11. County or Parish, State San Juan County

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 BP	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☑ Other 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 requesting authorization to install gas lift at the Escrito L18-2409 01H well. Attached is a schematic of the pad with gas lift and the gas allocation procedure.

Amended attachment: Gas Measurement Allocation Procedure for Multi-Well Pads

RECEIVED
FEB 06 2015
NMOCD
DISTRICT III

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

CONDITIONS OF APPROVAL

Adhere to previously issued stipulations

14. I hereby certify that the foregoing is true and correct: Name *(Printed/Typed)*

Cristi Bauer — Title Operations Technician

Signature CRISTI BAUER — Date 10/23/14

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by William Tambekou — Title Petroleum Engineer — Date 2/4/2015

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

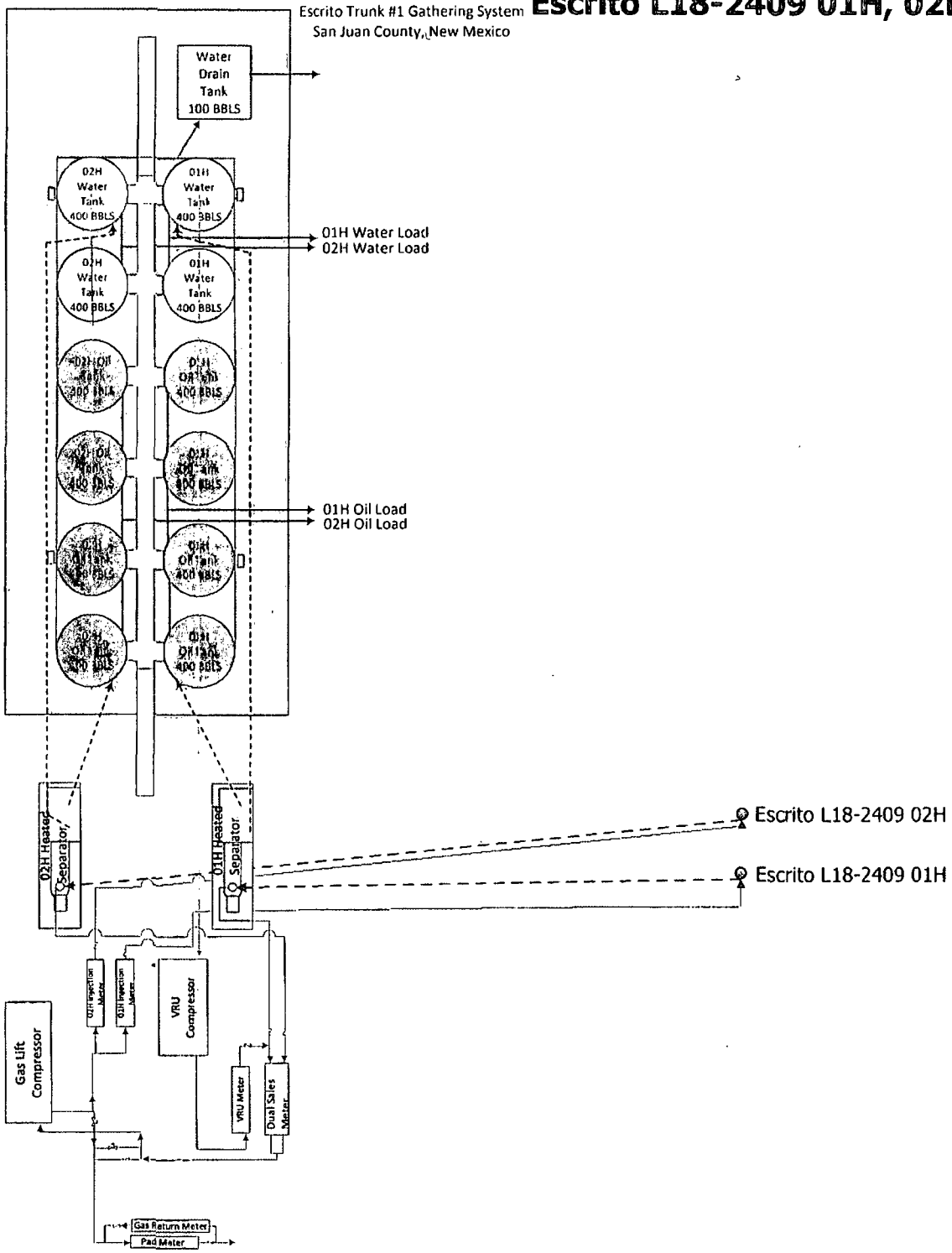
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

NMOCD

Attachment No. 6
Encana Oil & Gas (USA) Inc.
Escrito Trunk #1 Gathering System
San Juan County, New Mexico

Escrito L18-2409 01H, 02H



FILENAME	
L18 Schematic	
NOT TO SCALE	DATE 04/01/2013

Attachment No. 6
Encana Oil & Gas (USA) Inc.
Escrito Trunk #1 Gathering System
San Juan County, New Mexico

Gas Metering on the Escrito L18-2409 01H Well Pad with Gas Lift

Outlined below is an overview of the additional metering that will be installed on the Escrito L18-2409 01H well pad location due to the wells having gas lift installed on them. As this is a two well pad, additional meters will be installed for allocation purposes.

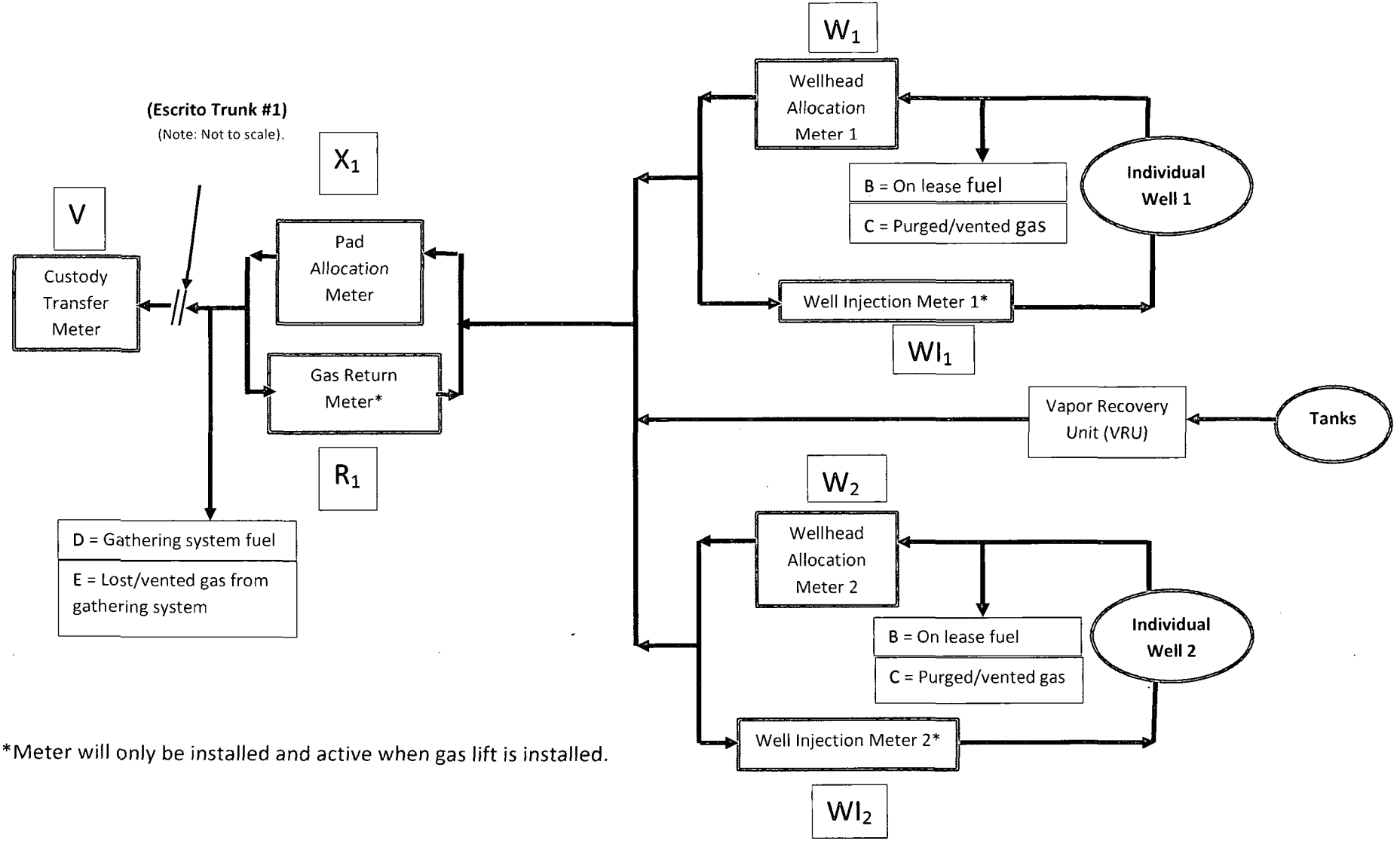
In order to minimize surface equipment on the pad, a common gas lift compressor will be utilized for the two Escrito L18-2409 01H and 02H wells. This setup calls for additional metering compared to a single well gas lift system where the compressor is setup to pull and discharge gas upstream of the wellpad meter. With a multi well system, the gas from each well is measured prior to going to the gas lift compressor. The compressed gas is either injected or sent to the custody transfer meter. The injected gas for each well is individually metered with an injection meter. In order to get the produced gas from each well, the injection metered volume is subtracted from the wellhead metered volume. An additional pad sales and gas return meter will be installed to ensure allocations from the Escrito Trunk #1 Pipeline are correct.

For initial kick off, gas from the Escrito Trunk #1 Pipeline will go through a gas return meter to the Escrito L18-2409 01H well pad to allow for initiation of production from the wells. The gas return meter is used to meter any gas that is moved from the Escrito Trunk #1 Pipeline for kickoff and start up purposes only. This meter is installed in parallel to the sales meter and with the use of check valves, flow can only occur in one meter at a time. The gas return volume is expected to be minimal on a monthly basis. Once the wells are producing excess gas from what is being circulated, the gas will be sold and no return gas will be required. At the end of the month, the sales meter and gas return meter are combined to determine the net sales volume.

Finally, the Escrito L18-2409 01H well pad will be equipped with a VRU (vapor recovery unit). The VRU consists of an additional compressor and is gathering any vapors that are released off the tanks. The discharge of the VRU will be tied in upstream of the wellhead meter so the volume will be captured there. Initially, Encana will install an additional VRU meter for information purposes to help aid in equipment and modeling sizing and economics for future installations.

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 Products Partners)
X_x = Gas Volume (MCF) from Pad Allocation Meter during allocation period. (Encana)
R_x = Gas Volume (MCF) from Gas Return Meter at Well Pad (Encana)*
$(X_x - R_x)$ = Gas Volume (MCF) for total Well Pad Production (Encana)
W_x = Gas Volume (MCF) from Wellhead Allocation Meter at individual wells during allocation period. (Encana)
WI_x = 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 Products Partners)
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.

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.

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Farmington Field Office
6252 College Blvd., Suite A
Farmington, New Mexico 87402

IN REPLY REFER TO:

CONDITIONS OF APPROVAL FOR GAS LIFT & BUY BACK METER INSTALLATIONS:

- The buy-back meter isolation valve, either up or down stream of the buy-back meter must be effectively sealed in the closed position to prevent produced gas from potentially by-passing the measurement and sales meter. In lieu of the seal requirement at least two check valves can be installed either up and down stream of the buyback meter or in line with the buy-back meter to prevent produced gas from potentially by-passing the measurement and sales meter.

  Contact this office so a BLM witness verify installation of either the seal or check valves.

- If seals are installed, seal records must be maintained and made available upon request.

  - **Post a Facility Card or Sign that clearly identifies <u>both</u> the sales and buy-back meters.**
  - **Gas Meters must be installed and calibrated in accordance with Onshore Order 5.**