Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

CONFIDENTIAL

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

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.

AUG 21 201

5. Lease Serial No.
NMNM.112953

6. If Indian, Allottee or Tribe Name
N/A

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

1. Type of Well

[✓] Oil Well [ ] Gas Well [ ] Other

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

8. Well Name and No.
Lybrook M28-2306 01H

9. API Well No.
30-043-21178

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 Lybrook Gallup

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*
SHL: 354' FSL and 1265' FWL Sec 28, T23N, R6W
BHL: 330'FSL and 400'FWL Sec 33, T23N, R6W

11. Country or Parish, State
Sandoval, New Mexico

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
	[ ] Alter Casing	[ ] Fracture Treat	[ ] Reclamation	[ ] Well Integrity
[ ] Subsequent Report	[ ] Casing Repair	[ ] New Construction	[ ] Recomplete	[✓] Other
	[ ] Change Plans	[ ] Plug and Abandon	[ ] Temporarily Abandon	Installation of Gas Lift
[ ] Final Abandonment Notice	[ ] 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 Lybrook M28-2306 01H well. Attached is a schematic of the pad with gas lift and the gas allocation procedure.

RCVD SEP 8 '14
OIL CONS. DIV.
DIST. 3

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct.

Name *(Printed/Typed)* Cristi Bauer	Title OperationsTechnologist
Signature *Cristi Bauer*	Date 8/20/14

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

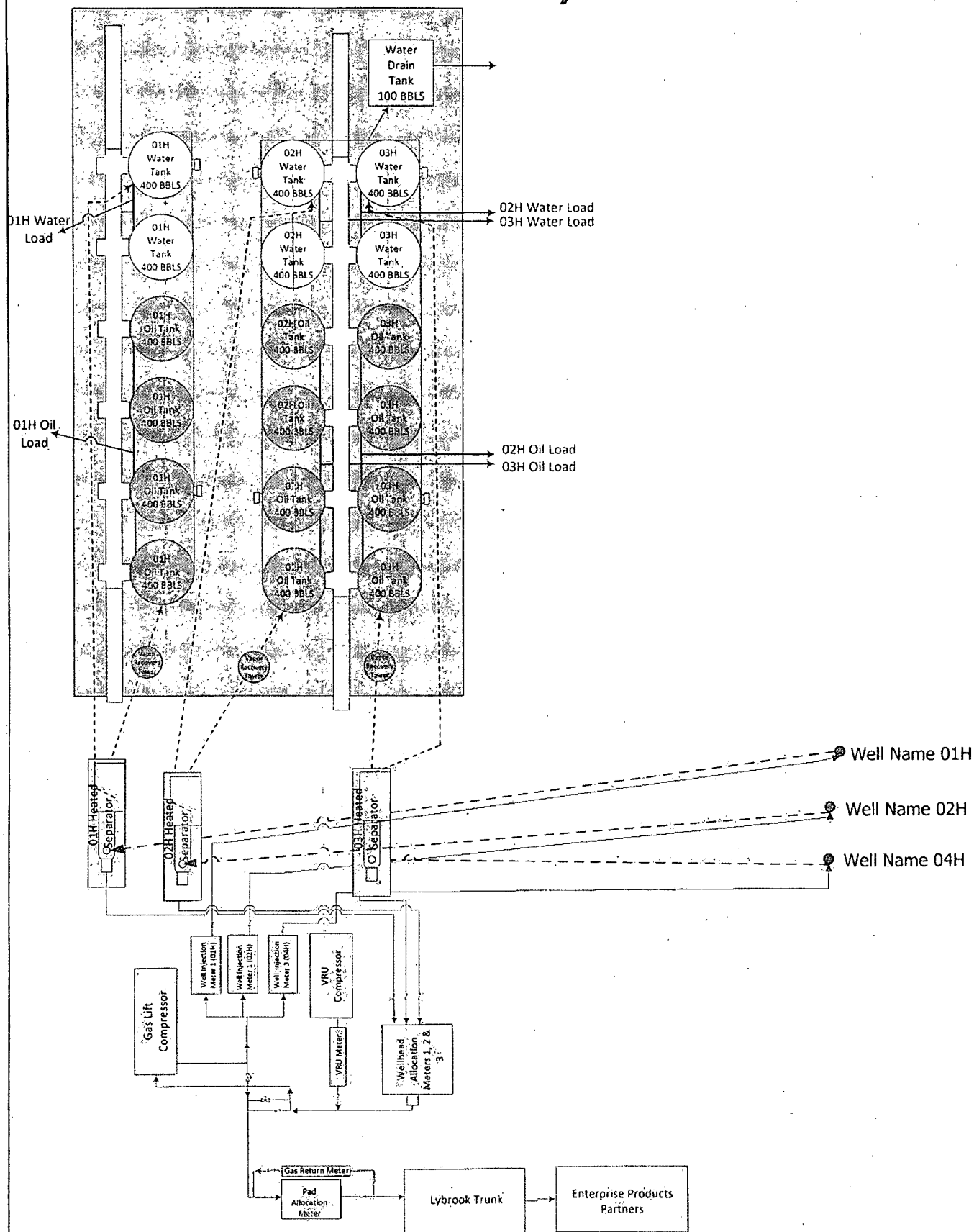| Approved by	Title Petr. Eng	Date 9/5/14
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office	

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.
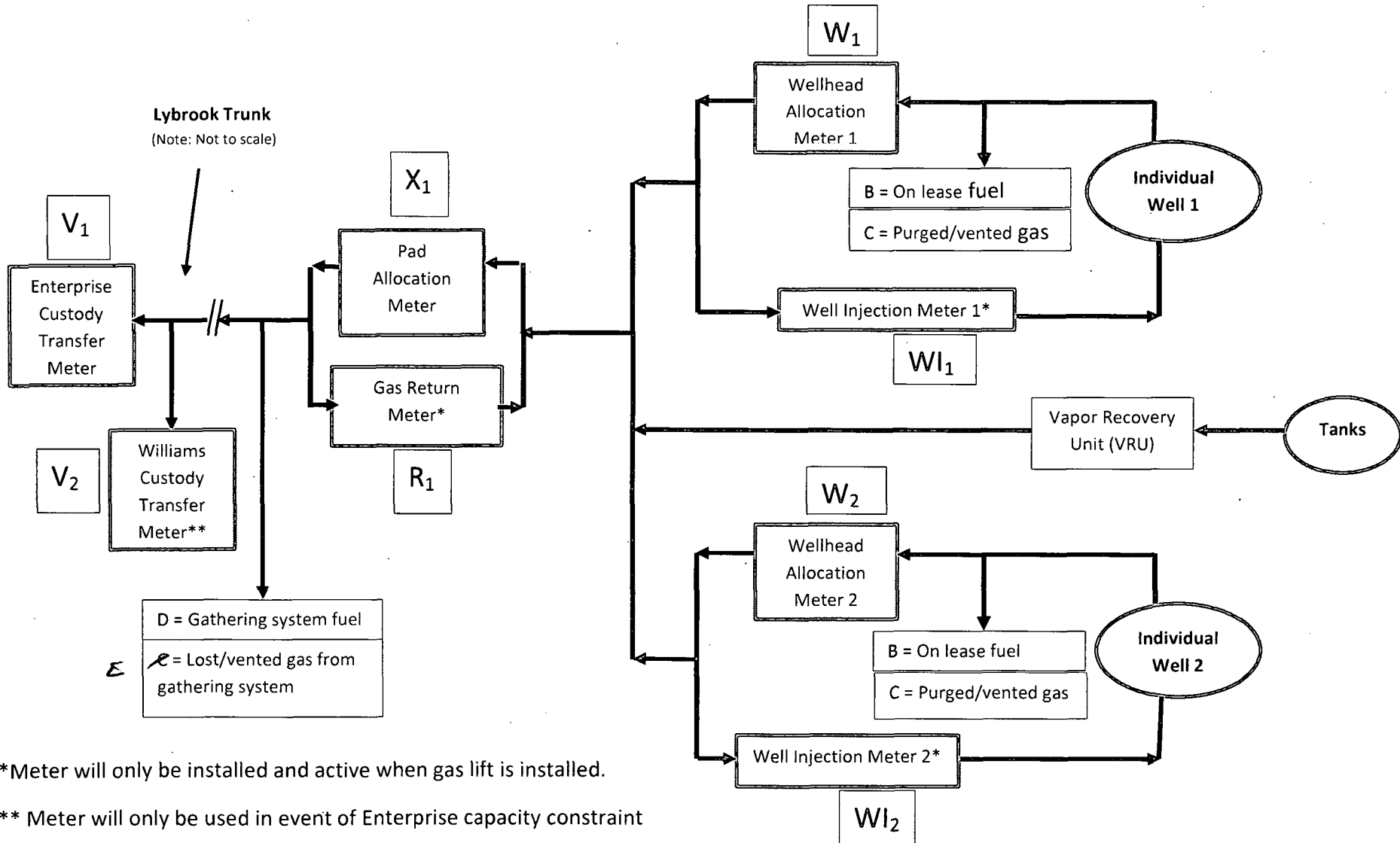
(Instructions on page 2)

NMOCD FV

9

Lybrook M28-2306 01H - 03H

Water
Drain
Tank
100 BBLS

01H
Water
Tank
400 BBLS

02H
Water
Tank
400 BBLS

03H
Water
Tank
400 BBLS

01H
Water
Tank
400 BBLS

02H
Water
Tank
400 BBLS

03H
Water
Tank
400 BBLS

02H Water Load
03H Water Load

01H Water
Load

01H
Oil Tank
400 BBLS

02H Oil
Tank
400 BBLS

03H
Oil Tank
400 BBLS

01H
Oil Tank
400 BBLS

02H Oil
Tank
400 BBLS

03H
Oil Tank
400 BBLS

02H Oil Load
03H Oil Load

01H Oil
Load

01H
Oil Tank
400 BBLS

02H
Oil Tank
400 BBLS

03H
Oil Tank
400 BBLS

01H
Oil Tank
400 BBLS

02H
Oil Tank
400 BBLS

03H
Oil Tank
400 BBLS

Vapor
Recovery
Tower

Vapor
Recovery
Tower

Vapor
Recovery
Tower

01H Heater Separator

02H Heater Separator

03H Heater Separator

Well Name 01H

Well Name 02H

Well Name 04H

Gas Lift Compressor

Well Injection Meter 1 (01H)

Well Injection Meter 1 (02H)

Well Injection Meter 3 (04H)

VRU Compressor

VRU Meter

Wellhead Allocation Meters 1, 2 & 3

Gas Return Meter

Pad
Allocation
Meter

Lybrook Trunk

Enterprise Products
Partners

NOT TO SCALE

Gas Measurement Allocation Procedure for Multi-Well Pads

W_1

Wellhead Allocation Meter 1

Lybrook Trunk
(Note: Not to scale)

X_1

V_1

B = On lease fuel

C = Purged/vented gas

Individual Well 1

Enterprise Custody Transfer Meter

Pad Allocation Meter

Well Injection Meter 1*

WI_1

Gas Return Meter*

Vapor Recovery Unit (VRU)

Tanks

V_2

Williams Custody Transfer Meter**

R_1

W_2

Wellhead Allocation Meter 2

Individual Well 2

B = On lease fuel

C = Purged/vented gas

D = Gathering system fuel

$\mathcal{E}$ | $\mathcal{L}$ = Lost/vented gas from gathering system

Well Injection Meter 2*

WI_2

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

** Meter will only be used in event of Enterprise capacity constraint

Base Data:

V_1 = Gas Volume (MCF) from Custody Transfer Meter during allocation period (Enterprise)

V_2 = Gas Volume (MCF) from Custody Transfer Meter during allocation period (Williams)

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_1 = Heating Value (BTU/scf) from Custody Transfer Meter during allocation period. (Enterprise)

Y_2 = Heating Value (BTU/scf) from Custody Transfer Meter during allocation period. (Williams)

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.

Well Pad Gas Production = A + B + C + D + E

A = Allocated Gas production off lease for Well Pad, MCF: $[(X_1-R_1)/((X_1-R_1)+(X_2-R_2)+(X_n-R_n))]*(V_1+V_2)$

Please note, gas production (MCF) for individual wells on a Well Pad is calculated using the formula:
$[(W_1-WI_1)/((W_1-WI_1)+(W_2-WI_2)+(W_n-WI_n))]*(X_1-R_1)$

B = On lease fuel usage, 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 = Lost and/or vented gas from well and/or lease equipment, MCF. Calculated using equipment and piping specifications and operating pressures.
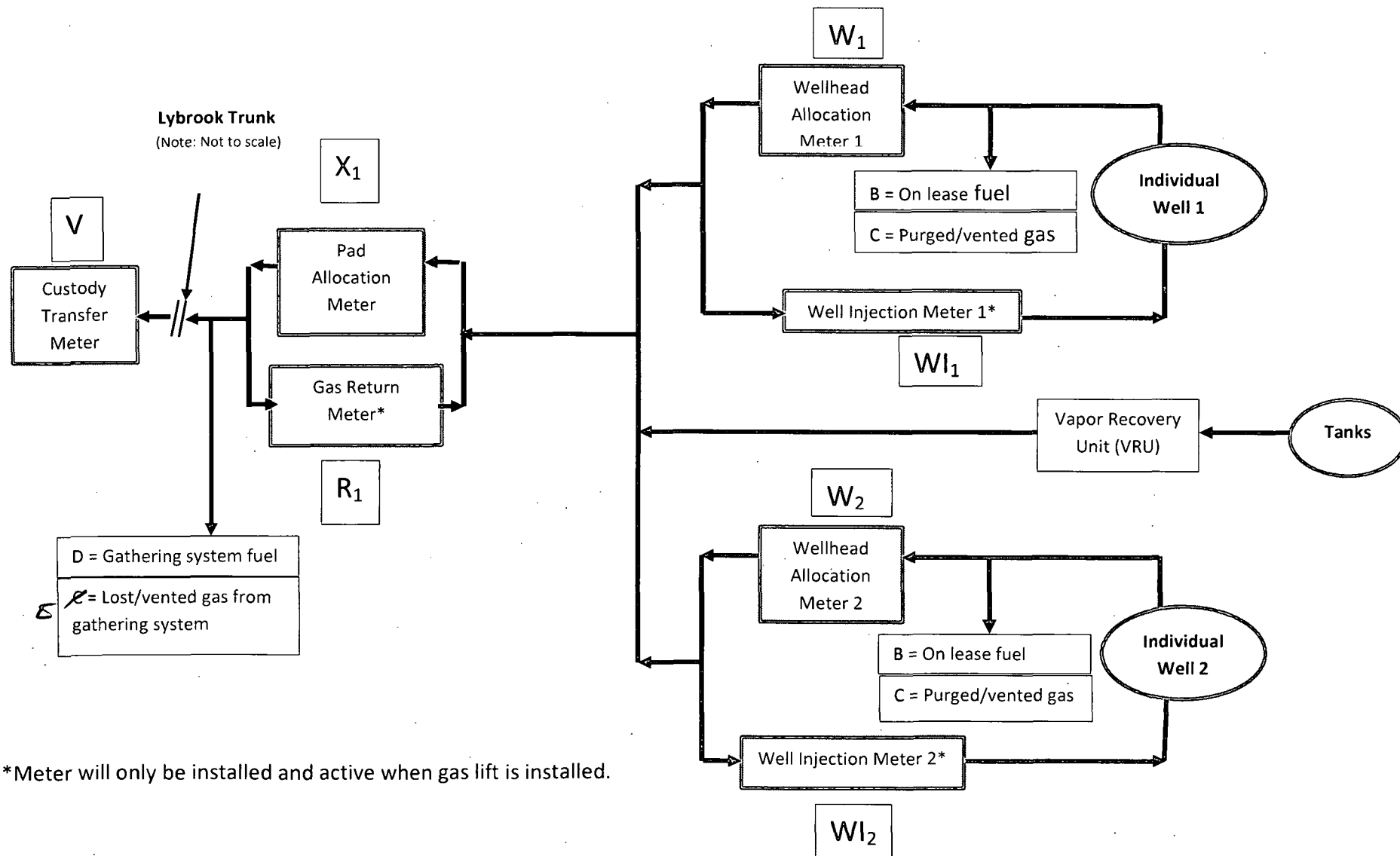
D = Allocated fuel from gathering system equipment, MCF. The total fuel required to operate gathering system equipment will be allocated to the Well Pads benefiting from the equipment using allocation factors determined by $[(X_1-R_1)/((X_1-R_1)+(X_2-R_2)+(X_n-R_n))]$ and for individual wells using allocation 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 = $[[\{(W_n-WI_n)*Z_n\}/\{SUM((W_n-WI_n)*Z_n)\}]*(V_1*Y_1+V_2*Y_2)*1000]$
Individual well gas heating values to be determined in accordance with BLM regulations.

Gas Measurement Allocation Procedure for Multi-Well Pads

W_1

Wellhead Allocation Meter 1

Lybrook Trunk
(Note: Not to scale)

X_1

V

Custody Transfer Meter

Pad Allocation Meter

B = On lease fuel

C = Purged/vented gas

Individual Well 1

Well Injection Meter 1*

WI_1

Gas Return Meter*

Vapor Recovery Unit (VRU)

Tanks

R_1

W_2

Wellhead Allocation Meter 2

D = Gathering system fuel

$\mathcal{L}$ = Lost/vented gas from gathering system

B = On lease fuel

C = Purged/vented gas

Individual Well 2

Well Injection Meter 2*

WI_2

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

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.

Well Pad Gas Production = A + B + C + D + E

A = Allocated Gas production off lease for Well Pad, MCF: $[(X_1-R_1)/((X_1-R_1)+(X_2-R_2)+(X_n-R_n))]*(V)$

Please note, gas production (MCF) for individual wells on a Well Pad is calculated using the formula:
$[(W_1-WI_1)/((W_1-WI_1)+(W_2-WI_2)+(W_n-WI_n))]*(X_1-R_1)$

B = On lease fuel usage, 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 = Lost and/or vented gas 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

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

o   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 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 sign that **Clearly identifies <u>both</u> the sales and by-back meters.**