

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

CONFIDENTIAL
TIGHT HOLE

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.

RECEIVED

SUBMIT IN TRIPLICATE - Other instructions on page 2

DEC 10 2015

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

Energen Resources Corporation

3a. Address

2010 Afton Place, Farmington, NM 87401

3b. Phone No. (include area code)

(505) 325-6800

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

SHL - 1281' FSL 1385' FWL Sec. 11 T27N R13W (N) SE/SW

BHL - 382' FSL 255' FWL Sec. 10 T27N R13W (M) SW/SW

5. Lease Serial No.

NMSE077972

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.

Richardson Navajo 27 13 10 #4H

9. API Well No.

30-045-35242

10. Field and Pool, or Exploratory Area

Basin Mancos

11. County or Parish, State

San Juan NM

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

TYPE OF SUBMISSION

- ☒ Notice of Intent
☐ Subsequent Report
☐ Final Abandonment Notice

TYPE OF ACTION

- | | | | |
|---|---|--|--|
| <input type="checkbox"/> Acidize | <input type="checkbox"/> Deepen | <input type="checkbox"/> Production (Start/Resume) | <input type="checkbox"/> Water Shut-Off |
| <input type="checkbox"/> Alter Casing | <input type="checkbox"/> Fracture Treat | <input type="checkbox"/> Reclamation | <input type="checkbox"/> Well Integrity |
| <input type="checkbox"/> Casing Repair | <input type="checkbox"/> New Construction | <input type="checkbox"/> Recomplete | <input checked="" type="checkbox"/> Other <u>Measurement</u> |
| <input type="checkbox"/> Change Plans | <input type="checkbox"/> Plug and Abandon | <input type="checkbox"/> Temporarily Abandon | <u>Installment</u> |
| <input type="checkbox"/> Convert to Injection | <input type="checkbox"/> Plug Back | <input type="checkbox"/> 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 recompleate 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 shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleation in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the final site is ready for final inspection.)

Please see the attached request.

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

OIL CONS. DIV DIST. 3

JAN 26 2016

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

Name (Printed/Typed)

Theresa McAndrews

Title **Production Supervisor**

Signature

Theresa McAndrews

Date **12/10/15**

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

William Tambekou

Title

Petroleum Engineer

Date

01/20/2016

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, makes 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.

NMOCD

4 PC

Richardson Navajo 27-13 10 #4H (API# 3004535242)
UL N, Section 11- 27N-13W

Energen Resources respectfully requests authorization to install a gas lift measurement system on the above well as part of our artificial lift operations. In addition, oil production from this well will be measured and reported using a Coriolis meter installed on the separator outlet. Liquid levels, both oil and water will be measured using the BLM approved Advanced Telemetrics Liquid Measurement System. This equipment uses a dual float level measurement system that measures oil and water levels and temperature. One unit will be installed on each storage tank. This liquid level measurement system allows Energen to use a vapor recovery system for tank vapor capture and sales and eliminates the need for manual tank gauging. Oil will be sold to Western Refining using standard load out procedures. No LACT unit will be used.

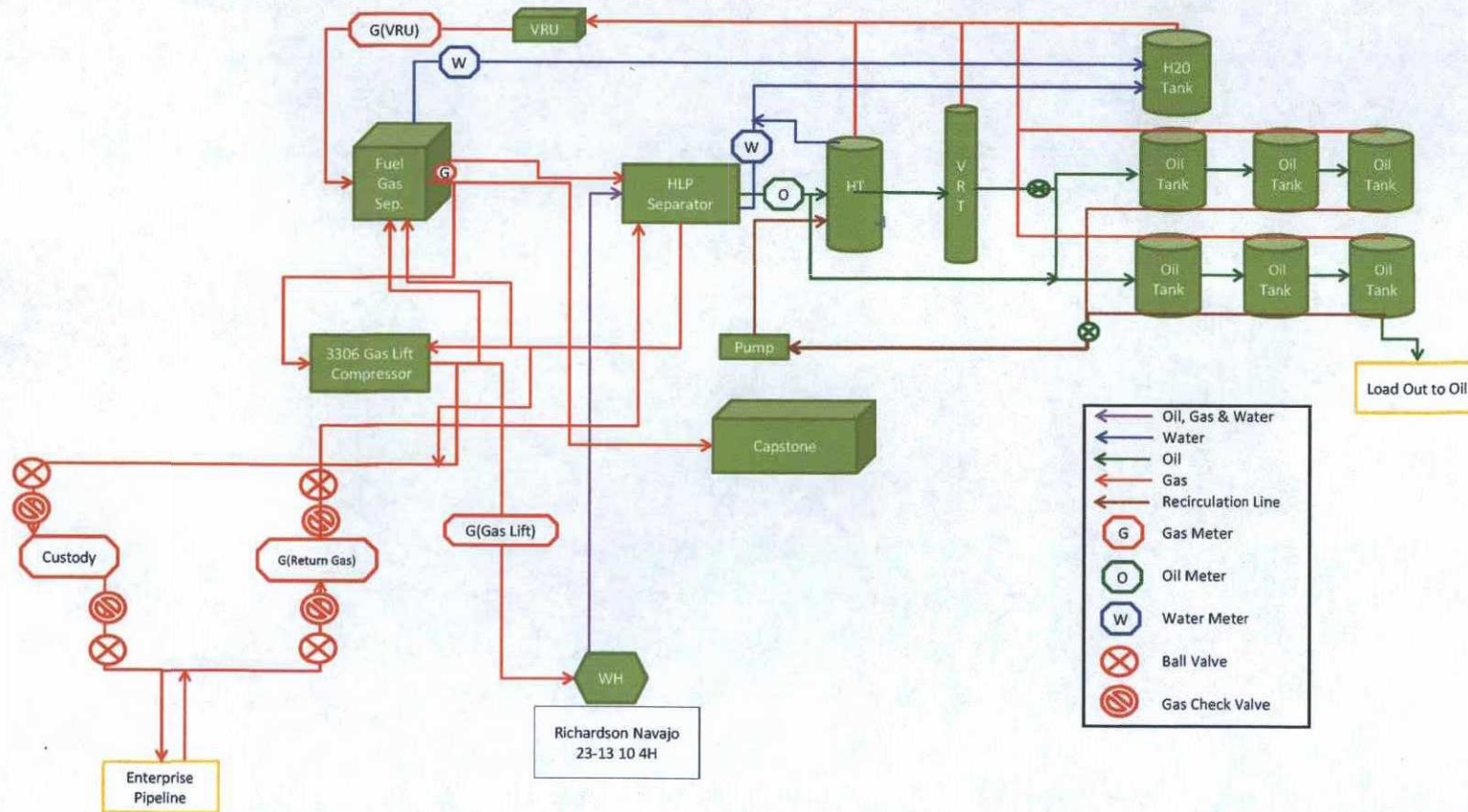
The gas measurement skid will utilize both a sales meter (meter # 911149) and buy back (meter # 15801) metering system. This skid will meter gas from the above well and when necessary, gas will be bought back from the pipeline for workovers and well start-up operations. Per BLM requirements, the skid will be equipped with four check valves, one upstream and the other downstream of each meter to provide one directional flow and prevent gas bypass.

Attached for your review is a detailed process flow and measurement diagram and production reporting methodology for the above well. Utilizing this method of measurement will allow Energen to optimize well performance and maximize oil and gas recovery while maintaining the measurement accuracy and reporting requirements outlined in the BLM and OCD regulations.

Note: The Navajo Richardson 27-13 10 4H well (3004535242) is co-located on the same well pad as the **Richardson 2E well (API #3004526153)**. Both wells are on a common federal oil and gas lease (NMSF077972). The Richardson 2E well is currently shut-in and will remain so until the Richardson Navajo 27-13 10 4H is completed. Production from the Richardson 2E well will be measured separately from the Richardson Navajo 27-13 10 4H well. The **Richardson 2E well** will use its own separator, oil storage tanks and gas meter (meter # 98055). The vapor recovery system will be common to both wells. When the Richardson 2E is returned to production, a sundry notice will be filed.

PROCESS FLOW DIAGRAM

Richardson Navajo 27-13 10 4H
Energen Resources



Measurement & Reporting Methodology:

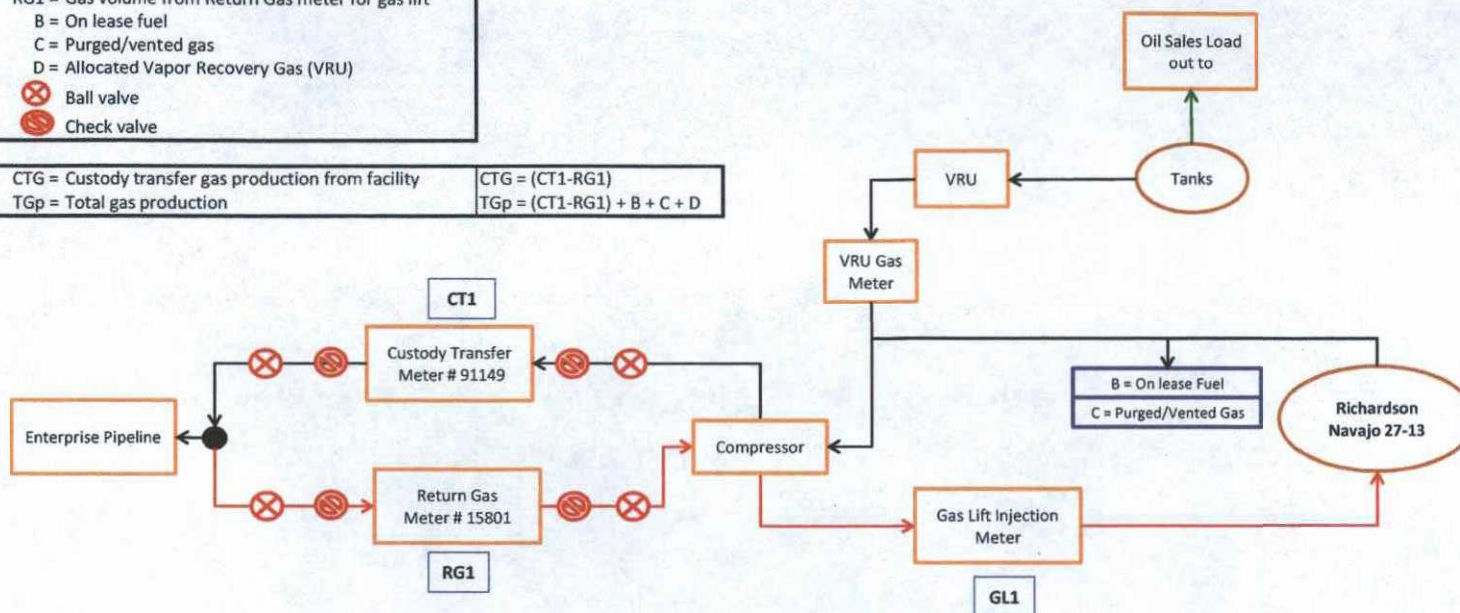
Richardson Navajo 27-13 10 4H

GL1 = Gas volume for gas lift injection
 CT1 = Gas volume from Custody Transfer meter
 RG1 = Gas volume from Return Gas meter for gas lift
 B = On lease fuel
 C = Purged/vented gas
 D = Allocated Vapor Recovery Gas (VRU)

⊗ Ball valve
 ⊙ Check valve

CTG = Custody transfer gas production from facility
 TGP = Total gas production

$CTG = (CT1 - RG1)$
 $TGP = (CT1 - RG1) + B + C + D$



*** Note:

The Vapor Recovery Unit (VRU) Gas Meter measures gas from both the Richardson Navajo 27-13 10 4H well and the Richardson 2E well. Allocated VRU gas production for each well will be reported based on the oil production ratios for each well during the report period multiplied by the VRU metered volume.