

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
**SUNDRY NOTICES AND REPORTS ON WELLS**

**OCD-HOBBS**

FORM APPROVED  
OMB NO. 1004-0135  
EXPIRES: NOVEMBER 30, 2000

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

1a. Type of Well ☐ Oil Well ☒ Gas Well ☐ Other \_\_\_\_\_

2. Name of Operator  
**DEVON ENERGY PRODUCTION COMPANY, LP**

3. Address and Telephone No.  
**P. O. Box 250 - Artesia, NM 88211-0250 505-748-3371**

4. Location of Well (Report location clearly and in accordance with Federal requirements)\*  
**660' FSL & 660' FEL of Section 15-T23S-R34E (Unit P, SESE)**

5. Lease Serial No.  
**NM-13641**

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.

8. Well Name and No.  
**Mad Dog 15 Federal Com #1**

9. API Well No.  
**30-025-36778**

10. Field and Pool, or Exploratory  
**Wildcat Devonian**

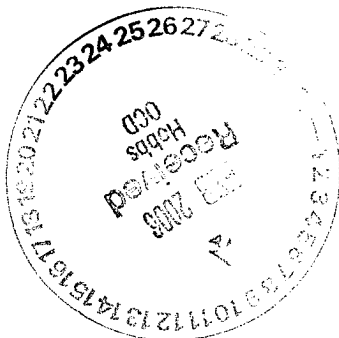
12. County or Parish 13. State  
**Lea New Mexico**

**CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

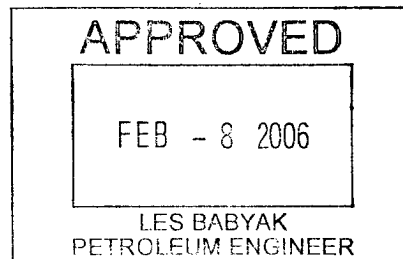
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal
			<input type="checkbox"/> Water Shut-Off
			<input type="checkbox"/> Well Integrity
			<input checked="" type="checkbox"/> Other <u>Alternate method</u> of oil measurement

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work and approximate duration thereof. If the proposal deepen directionally or recomplete

Devon Energy Production Company respectfully requests approval of an alternate oil measurement method as outlined in the attached documents provided by Taylor Propane Gas, Inc. The Mad Dog 15 Federal Com #1 battery, located in Unit P of Section 15-T23S-R34E, will be used as a test site for the alternate method of oil measurement.



**APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED**



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

Signed Rusty Klein Name Rusty Klein  
Title Field Tech II Date 2/3/2006

(This space for Federal or State Office use)

Approved by \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_  
Conditions of approval, if any:

GWW



## Gauging Steps

- #1 Drop in woodback thermometer to the middle level of the oil. This must remain in the tank for 5 minutes, before taking a reading.
- #2 Drop thief into middle of the oil height, with the bottom of thief open and handle latched. Snap thief closed and pull back to the top of tank. Get middle sample.
- #3 Hang thief off on tank top and drop in hydrometer. This hydrometer must remain in oil sample for 5 minutes.
- #4 Get gravity and temperature readings and dump the oil back into the tank.
- #5 Drop thief into tank with the bottom open and the handle unlatched. Tag bottom and snap thief closed.
- #6 Pull thief to top of tank and get sample out of petcock at 8" and 12". Pour out remainder of oil slowly to determine the amount of tank bottom. Pour out remainder of oil into tank.
- #7 Hand gauge tank 2 times for top gauge. Must be within 1/4" on 2 gauges.
- #8 Check woodback temperature.
- #9 Mix 100ml varsol and 100ml oil for each of the 3 samples. The 8" sample is to check for merchantable oil only. The middle sample and the 12" sample will be added together and then divide the total by 2 to determine the shakeout. All samples must be at 140° F before spinning and not drop below 120° F after spinning. Samples must spin for 5 minutes.
- #10 After determining if oil is merchantable, load the product.
- #11 After loading is complete drop woodback thermometer back into tank in the middle of the remaining oil for 5 minutes. Gauge tank for bottom gauge 2 times and check woodback temperature.

WGM

602 West Broadway • P.O. Box 438 • Winnsboro, Texas 75494  
903-342-1300 • Fax - 903-342-5396



### Alternate Gauging Procedure

- #1 Arrive at location and determine correct tank to buy/haul.
- #2 Check all tanks for correct valve positions, make sure tank that is being bought is isolated and valves are sealed prior to opening up the tank.
- #3 Check outside tank gauge for product level.
- #4 Open all trailer valves, connect load hose, open valve at front of tank. Return to truck and open valve at pump allowing product to load at an idle.
- #5 Load enough product to displace load line and header, then pull a 100ml sample to heat for the 12" pipeline sample. This must be heated to 140°F. After sample has reached correct temperature, place in the centerfuge and spin for 5 minutes. Check sample to determine if bottom sample is less than 2.0 % shakeout, if so idle engine up and continue to load product, if not, unload product back into tank, reseal tank and leave a tank refusal sheet.
- #6 Load 70 to 80 barrels of product, then fill and drain sampler on side of truck 2 times and refill. We will check the gravity, temperature, and shakeout at this point. (It could take 1 or 2 more times of refilling to stabilize the temperature between the product and the sampler on days when the weather temperature changes dramatically.)
- #7 Pull 100ml of product heat to 140°F, put in centerfuge and spin for 5 minutes. Take this reading plus the one from the 12" sample, add together, divide by two to get your total BS&W content for the tank.
- #8 Check trailer temperature gauge for gauge/product temperature.
- #9 After loading and unhooking from load valve, close all valves, seal tank and check outside gauge for product level. Fill out appropriate paperwork.

## TANK GAUGING REQUIREMENTS

### III.C.3. - Oil Sampling (API Chapter 8.1 and 10.4)

- a. Isolate and settle tank for 30 minutes before sampling or gauging.
  - b. Two-way sample.
    - On tanks larger than 1,000 barrel capacity which contain between 10 and 15 feet of oil, take 2 equal volume samples, one in the middle of the upper 1/3 of the tank content and one in the lower 1/3 or at the sales outlet.
  - Three-way sample.
    - On tanks larger than 1,000 barrel capacity which contain 15 feet or more of oil, take 3 equal volume samples, one in the middle of the upper 1/3 of the tank content, one in the middle of the tank content, and one in the middle of the lower 1/3 or at the sales outlet.
- Note: Either method may be used on tanks up to and including 1,000 barrel capacity.

### III.C.4. - Sales Tank Gauging (API Standard 2545)

- a. Tapes shall be made of steel or corrosion-resistant material, not kinked or spliced, traceable to standards of the National Bureau of Standards (NBS) and certified accurate by either the manufacturer or an independent testing facility. Working tapes when checked against an NBS certified tape are acceptable.
- b. Two identical gauges shall be taken to the nearest 1/4 inch for tanks with a capacity of less than 1000 barrels, and 2 identical gauges shall be taken to the nearest 1/8 inch for tanks of 1000 barrels or more. Use the proper bob for innage or outage gauging.

### III.C.5. - Oil Gravity (API Chapter 9)

- a. Gravity test shall be performed on a representative sales tank oil sample following API Ch. 8.1.
- b. Test shall be complete before oil sales are made.
- c. Accuracy of the instruments shall be traceable to NBS and certified accurate by either the manufacturer or an independent testing facility.
- d. Hydrometer shall be clean, free of shot weights, or detached gravity scale.
- e. Hydrometer shall be calibrated for a gravity range that includes the observed gravity of the sample being tested.
- f. Gravity shall be measured to the nearest 0.1° API gravity, and shall be corrected to 60°F using API Tables 5A and 6A.
- g. Temperature of sample shall be measured to the nearest 1.0°F.

### III.C.6. - Tank Temperature (API Standard 2543)

- a. All thermometers shall be traceable to NBS and certified as accurate by either the manufacturer or an independent testing facility. Working thermometers checked against a thermometer certified as accurate to NBS standards shall be permitted.
  - b. Thermometers shall be kept clean and free of mercury separation.
  - c. Temperature should be taken:
    - > 15' liquid: 3' below surface, middle of tank, 3' above bottom of tank.
    - 10'-15' liquid: 3' below surface of oil, 3' above bottom of tank.
    - < 10' liquid: middle of tank.
- NOTE: For crude oil tanks over 10 ft in height, having a capacity of less than 5000 bbl, one temperature measurement at the middle of the oil may be used.
- d. Immerse thermometer not less than 12" from shell of tank, for at least 5 minutes, and read to the nearest 1.0°F.

### III.C.7. - Sediment & Water (S&W) (API Chapter 10)

- a. Use solvent of Toluene, Xylene, Kerosine, or White Gasoline. (Toluene, and Xylene must be water saturated.)
- b. Thoroughly mix oil sample-solvent combination (50 ml solvent & 50 ml sample), stopper tubes and shake vigorously.
- c. Heat samples in bath to 140°F (minimum 10 min.); vapor pressure @ 140°F is double that @ 100°F.
- d. Invert tubes to assure oil and solvent are mixed.
- e. Whirl heated sample tubes in the centrifuge not less than 5 minutes, with the temperature at the end of centrifuging a minimum of 115°F without water-saturated diluent (125°F with water-saturated diluent.)
- f. Volume of S&W at the bottom of 100 ml tube shall be read:
  1. estimated to nearest 0.025 if volume < 0.1 ml.
  2. to nearest 0.05 ml in range from 0.1-1 ml.
  3. to nearest 0.1 ml if above the 1 ml mark.
- g. Multiply the reading obtained by 2 = S&W.

Innage - Height of oil level from tank bottom or fixed datum plane upward to surface of oil in tank.  
Outage - Measurement from fixed reference point at top of tank downward to surface of oil in tank.