

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III  
1000 Rio Brazos Road, Aztec, NM 87410

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

Form C-136  
Originated 12/23/91

Submit original and 4 copies to the  
appropriate district office.

APPLICATION FOR APPROVAL TO USE AN ALTERNATE GAS MEASUREMENT METHOD  
Rule 403.B(1) or (2)

Operator Name: LARRY F. NERY Operator No. ETN 6226  
Operator Address: 126 W. 1st St., Hobbs, NM 88241  
Lease Name: NAVAJO #1 Type: State      Federal X Fee X  
Location: SAN JUAN COUNTY - 1100  
Pool: 1100  
Requested Effective Time Period: Beginning 9/1/92 Ending 1/1/97

APPROVAL PROCEDURE: RULE 403.B.(1)

Please attach a separate sheet with the following information.

- 1) A list of the wells (including well name, number, ULSTR location, and API No.) included in this application.
- 2) A one year production history of each well included in this application (showing the annual and daily volumes).
- 3) The established or agreed-upon daily producing rate for each well and the effective time period.
- 4) Designate wells to be equipped with a flow device (required for wells capable of producing 5 MCF per day or more).
- 5) The gas transporter(s) connected to each well.

RECEIVED  
MAR 8 1992

APPROVAL PROCEDURE: RULE 403.B.(2)

Please attach a separate sheet with the following information.

A separate application is required for each Central Point Delivery (CPD).

Working interest, royalty and overriding royalty ownership must be common for all wells to be connected to the subject CPD.

- 1) An ownership plat showing a description of the lease and all of the wells to be produced through this CPD.
  - a) List the wells which will be metered separately, including API No.
  - b) List the wells which will not be metered separately, including API No.
- 2) Describe the proposed method of allocating production from non-metered wells.
- 3) A one year production history of the wells which will not be metered showing the annual and daily volumes.
- 4) The gas transporter(s) connected to this CPD.

Applicant will be responsible for filing OCD Form C-111 for the CPD.

OPERATOR

I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Signature: [Signature]

Printed Name & Title: Owner/Operator

OIL CONSERVATION DIVISION

This approval may be cancelled at anytime that operating conditions indicate that re-tests may be necessary to prevent waste and protect correlative rights.

Approved Until: 3-31-97

By: [Signature]

Signed by FRANK T. CHAVEZ

Title: SUPERVISOR DISTRICT # 3

100-443882

44-38861-10

100

ALTERNATE MEASUREMENT REQUEST FORM  
FOR TIME CALCULATED VOLUME

I hereby request government approval for use of this Alternative Measurement method for marginal low flow wells. I have consented, upon receipt of all necessary regulatory approvals, to El Paso Natural Gas Company's installation and use of the Alternative Measurement method described below for my low flow natural gas wells producing into El Paso's pipeline system.

1. REASON FOR PROPOSAL

Try to reduce likelihood of well shut-in and loss of production due to uneconomical operations. Low flow production wells incur most of the same fixed costs experienced for wells producing much greater amounts of natural gas, but do not enjoy the same economies of scale. Therefore, the per unit cost of measurement for low flow wells can be unacceptably high for a prudent operator.

Failure to approve use of this Alternative Measurement could result in premature abandonment of production from these low flow wells.

2. EXPLANATION AND DIAGRAM

Please refer to the detailed explanation of the Alternative Measurement method to be used and the schematic flow diagram provided as Attachment A.

3. MAP AND LEASE NUMBERS

A township plat map listing all lease, communitization, and Unit numbers and showing the location of these properties and related wells is provided as Attachment B.

4. SCHEMATIC DIAGRAM AND LOCATION OF EQUIPMENT

Please refer to information provided with item numbers 2 and 3.

5. CENTRAL POINT DELIVERY PRODUCTION ALLOCATION METHOD

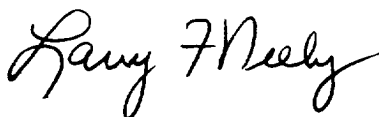
A copy of the CFD Agreement between the operator and the pipeline is provided as Attachment C.

6. ESTIMATED LEASE PRODUCTION

A table listing the estimated hourly or daily production rate for each well on the lease, communitization, or Unit property is provided as Attachment D.

7. ADDITIONS TO APPROVED COMMINGLING OR OFF-LEASE MEASUREMENT

None are proposed.



## "TIME CALCULATED VOLUME" ALTERNATIVE MEASUREMENT METHOD

1. Recommended Flow Rate Range - 5 to 15 dth/D
2. Determine Daily/Hourly Average Flow Rate for Low Volume Well
  - a. Use the 1990 Annual (Latest) Measured Production Volume and Flow Hours to Establish an "Average Hourly" Volume of Low Rate.
  - b. Formula:
 
$$\frac{\text{Annual Measured Flow Volume}}{\text{Annual Flow Hours}} = \text{"Average Hourly" Volume Flow Rate}$$
3. Pipeline and Well Operator Execute Letter Agreement to Use Alternative Methods (Well(s) Listed by Appropriate Meter Number, Meter Name, and Average Hourly Flow Rate From Last Test Period).
4. Meter Station Equipment
  - a. Leave Primary Measurement Elements on Location for Annual Production Test.
  - b. Install Smallest Recognized Orifice Plate Beta Ratio to Ensure Reliable Pressure Drop Detection (i.e. 4.026 I.D. and 0.250 Orifice Plate Bore).
  - c. Remove Orifice Recorder and Recording Thermometer and Thermowell.
  - d. Install Differential Switch with Hour Meter
    - (1) Hour Meter must not have an external hour reset button.
    - (2) Differential Switch "ON" setpoint to be at or near 0.5 inches W.C. but not more than 0.9 inches W.C.
    - (3) Hour Meter must have external flow status indicator to indicate when hour meter is counting (i.e. flashing decimal point).
    - (4) Report equipment change to appropriate Volume Calculation Dept.
5. Periodic Hour Meter Reports (Quarterly)
  - a. Establish Hour Meter "READ" Schedule
  - b. Report Start and Stop Hourly Meter Readings and Flow Hours Difference on Appropriate Form to the Volume Calculation Division at Least Every Three (3) Months.
  - c. Monitor Switch/Hour Meter Serviceability
6. Volume Calculation Department
  - a. Code Volume Calculation Method as "Time Calculated Volume".
  - b. Verify and Enter Reported Flow Hours Into the Volume Calculation Routine.
  - c. Use 60°F As the Flowing Temperature Base Value (Factor 1.0) For Volume Calculation.
  - d. Use the Most Recent Gas Analysis For Specific Gravity and BTU Calculation Factors.
  - e. Enter the Most Recent "Average Hourly" Flow Rate Volume Into the Volume Calculation Routine.
  - f. Calculate Settlement Volume and MMBTU (dth) Formula.  
 Flow Meter Hours X Average MCF Hourly Flow Rate = Volume (MCF)  
 Volume (MCF) X BTU Factor = MMBTU (dth) for the Period Indicated.  
 Example: 1971 (Hours) X .31 (MCF) = 611 MCF  
 611 MCF X 1097 BTU = 670 MMBTU (dth) for the Period.
  - g. Identify and report "Time Calculated Volume" MMBTU(dth) on the Appropriate Volume Statement(s).

## **"TIME CALCULATED VOLUME" ALTERNATIVE MEASUREMENT METHOD**

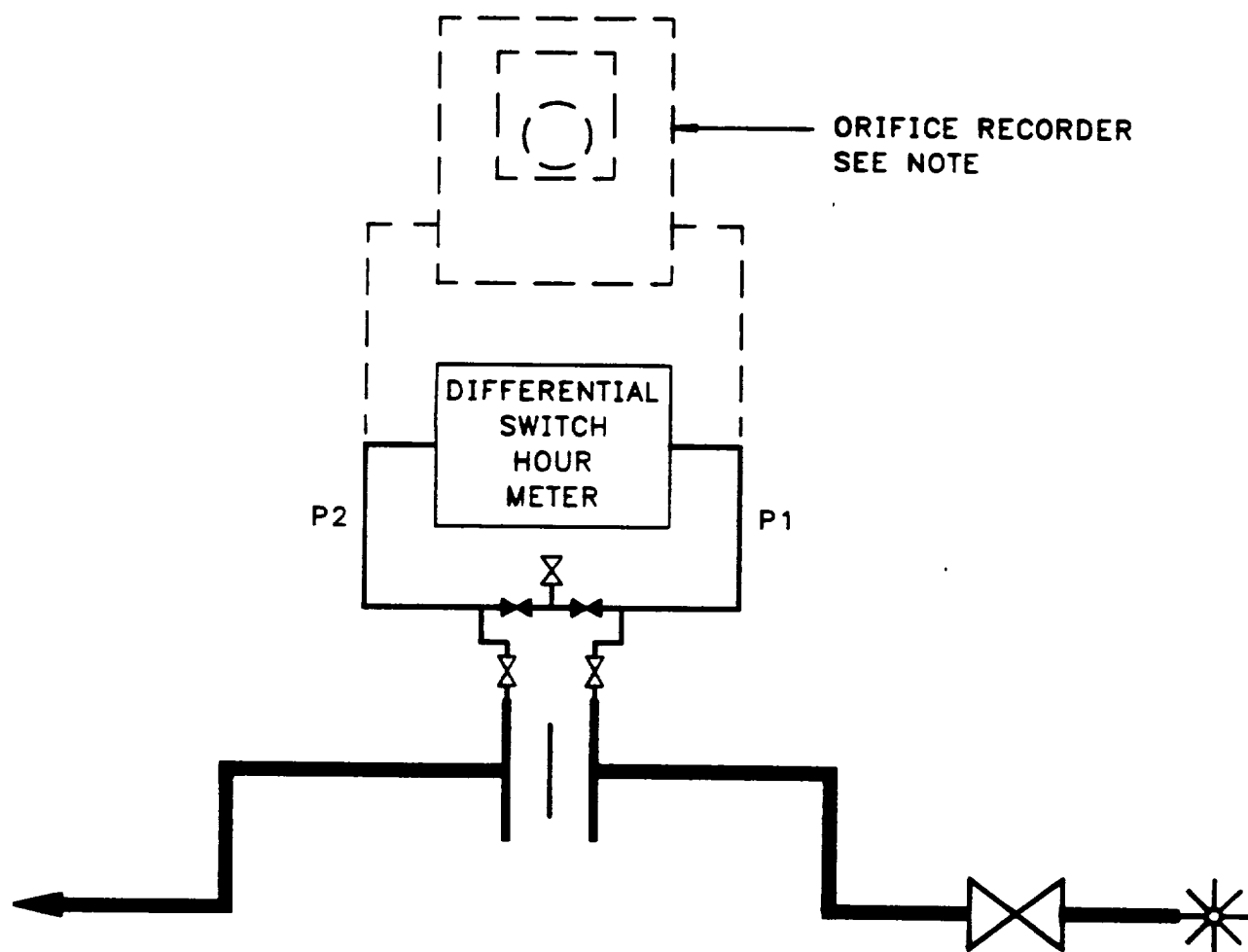
**-2-**

- 7. Perform Annual Production Measurement Test to Update Hourly Flow Rates**
  - a. Schedule Annual Production Measurement Test**
  - b. Conduct 16 Day Test Period**
    - (1) Install and calibrate test orifice recorder**
    - (2) Note Test Hour Meter start reading**
    - (3) Inspect orifice plate and meter tube for serviceability**
    - (4) Procure and process representative gas sample**
    - (5) Complete test and remove test orifice recorder**
    - (6) Compare test Hour Meter Start and Stop reading difference with orifice chart recording**
    - (7) Check Differential Switch/Hour Meter for serviceability**
    - (8) Forward test charts and equipment inspection reports to the Volume Calculation Department**
  - c. Volume Calculation Department makes Re-Determination of New Average Hourly Flow Rate for Use During the Subsequent Year and Notifies Well Operator of New MCF or dth Values.**

# TIME CALCULATED VOLUME

## ALTERNATIVE METHOD SCHEMATIC

PRIMARY ELEMENT AND DIFFERENTIAL SWITCH/HOUR METER  
USED FOR FLOW TIME DETECTION AND ANNUAL TEST



TOWNSHIP PLAT  
Form 17-217 (8-77)

(SCALE 1 IN = 1 MI.)

TOWNSHIP 26N RANGE 11W COUNTY SAN JUAN STATE NEW MEXICO

				② MEAD B#1	
6	5	4	3	2	1
			① NAVASO #1		
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Lease Numbers ① I-149-IND-9108 API # 30045060610051  
② SF-078641-A API # 30045060780051

**El Paso**  
Natural Gas Company

P.O. BOX 1492  
EL PASO, TEXAS 79978  
PHONE: 915-541-5050

LARRY R. TARVER VICE PRESIDENT

February 12, 1992

L. F. Neely  
Operator - 6336  
126 Wood Lane  
Radnor, PA 19087

File: L. F. Neely

Re: Agreement to Use Alternative  
Measurement Method for Low Flow Meters

Dear Larry:

**ALTERNATE MEASUREMENT METHOD FOR LOW FLOW WELL METERS  
PRODUCING 15 DTH - 1 DTH PER DAY**

This Letter Agreement, when accepted by you, authorizes El Paso Natural Gas Company ("El Paso") to use the Alternative Measurement Methods described below for those low flow meter locations listed on the attachment hereto, as revised from time to time.

In return, El Paso agrees to use the applicable Alternative Measurement Method as soon as practicable for the listed low flow meters on wells producing 15 dekatherm ("dth") to 1 dth per day during the past year.

**ALTERNATE MEASUREMENT METHODS TO BE USED**

The Alternative Measurement Method applicable shall be in accordance with the attached procedures and determined by the anticipated production range, as outlined below.

**15 Dth to 5 Dth Per Day  
"Timed Calculated Volume" Method**

The 1990 Annual Production Volume, or the most recent annual test, shall be used to establish an "Average hourly" flow rate, and each year thereafter the Annual Production Measurement Test results shall be used to establish an updated Average hourly flow rate for the meter. A differential pressure switch and an hour meter also shall be used to calculate the time when the well flows. Each well is deemed to produce a "Timed Calculated Volume," to be calculated by the flow hours metered times the Average hourly flow rate. Primary measurement elements will be kept on site for Annual Production Tests; however, the Timed Calculated Volume is deemed to represent a reasonable approximation of actual production and permanent measurement recorders on site shall not be required or used.

**5 Dth to 1 Dth Per Day  
"Agreed Volume" Method**

The 1990 Annual Production Volume, or the most recent annual test, shall be used to establish an "Agreed Volume" average hourly flow rate for the meter during the first year this Letter Agreement is effective. Each year



thereafter, the Annual Production Measurement Test results shall be used to establish an updated Agreed Volume for the next year of 5 dth to 1 dth per day. Operator agrees to cause the production valves to be open at all times during the period of this agreement. This well is deemed to produce at all times at the Agreed Volume hourly flow rate, subject to adjustments for well shutins due to well workovers, no market for production, or other production valve closed conditions. Primary measurement elements will be left on site for Annual Production Tests; however, the Agreed Volume is deemed to represent a reasonable approximation of actual production and permanent measurement recorders on site shall not be required or used.

#### MISCELLANEOUS

If any well previously subject to the "Agreed Volume" Method that later increases production to the 15 dth to 5 dth per day range, on an annual basis, that well prospectively shall become subject to the "Time Calculated" Method. If any well previously subject to either Alternative Measurement Method herein later increases production to 25 dth per day or more, on an annual basis, that well prospectively shall become subject to another conventional measurement method for larger volumes, the specific provisions of which are to be agreed upon by El Paso and the well operator at that time. In no event shall this Letter Agreement obligate El Paso to accept natural gas from wells with an anticipated production range of less than one (1) Dth per day.

This Letter Agreement is effective as of the date first set forth above and shall remain in effect for a Primary Term of five (5) years, and from month to month thereafter subject to termination at the end of any month by either party giving written notice to the other party at least one month in advance. This Letter Agreement is subject to all valid laws, regulations and rules. Neither party hereto is obligated to accept measurement results from an Alternative Measurement Method that has not received all necessary regulatory approvals, when applicable, such as approvals from the Bureau of Land Management, or State conservation agencies. The Attachments to this Letter Agreement, as revised from time to time, are incorporated herein.

If the foregoing accurately sets forth our agreement on Alternate Measurement Methods, please cause an authorized individual to sign both original counterparts of this Letter Agreement on behalf of the well operator in the space provided below and return one signed original to the address below:

Director, Measurement Technical Operations Department  
El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, Texas 79978

Very truly yours,

WELL OPERATOR NAME

By Larry F Neely  
LARRY F NEELY  
Name (Type or Print)

OWNER / OPERATOR  
Title (Type or Print)

3-2-92  
Date

EL PASO NATURAL GAS COMPANY

By Larry R. Tarver  
Larry R. Tarver  
Name

Vice President, Field Services Division  
Title

2-19-92  
Date

Attachments

WPPPSA:LA

PAGE 1 OF 1

Operator Code EPN 6336  
Operator Name LARRY F. NEELY

[illegible]

**AV = Agreed Upon Volume (Daily)**

ACCEPTED BY: Larry F. Neely  
02652:108

0265z:108