SHELL OIL COMPANY
1700 BROADWAY
DENVER, COLORADO 80202

CTB-252

April 10, 1974

Subject: Request for Lease Commingling Approval
Basin Dakota Gas Pool
San Juan County, New Mexico

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Attention Mr. A. L. Porter, Jr.

Gentlemen:

In accordance with New Mexico Oil Conservation Commission Rule No. 309-B, we are soliciting your temporary approval of our proposal to commingle gas and condensate production from our Mudge No. 300 and 301 wells, which lie outside our Carson Unit, with Well No. 113-17, which lies inside the Carson Unit. We have obtained temporary approval from the U.S.G.S. for this proposal and have attached their authorization, dated April 4, 1974. We are requesting only temporary approval through October 1, 1974.

Attached is a plat showing well and flowline locations and a proposed gas flow diagram for the three wells which we desire to commingle into our Central Storage Battery in the Carson Unit. Shell Oil Company owns 100% of the working interest in all three wells and royalty ownership for the Dakota formation is all Federal.

At present all three wells are shut-in pending commingling approval or hook-up to the El Paso high pressure gathering system. The Carson 113-17 well will be capable of producing into El Paso's high pressure gathering system and is scheduled for hook-up this month. However, we have been unable to successfully complete the Mudge #300 and Mudge #301 wells. It is apparent that if we are able to accomplish sustained production from these wells that they will not be able to produce into El Paso's high pressure system. It is therefore necessary that we commingle the gas and condensate production from these two wells with the condensate production from our Carson 113-17 well. We already have an existing condensate flowline to the two Mudge wells (as shown in the attached plat) and our Central Storage facilities are capable of handling production as shown in the gas flow diagram.

As indicated in the gas flow diagram, we plan to commingle all condensate and low-pressure gas production from the two Mudge wells

with condensate production from the Carson 113-17 well. The condensate and gas production will be metered separately at the wellhead and then be commingled and piped to our Central Storage Battery in Sec. 13, T25N, R12W. All gas separators to be used are three phase separators and we plan to separate the water from the condensate before metering the condensate. At our Central Storage Battery we plan to sell gas into El Paso's low pressure system through an orifice meter and tank gauge condensate sales into the Four Corners Pipeline.

We plan to use orifice meters to measure all gas production and turbine meters for the condensate production. We will check and calibrate the orifice meters upon start-up and every six months thereafter and furnish you copies of the gas tester's reports.

A copy of our meter proving procedure for tubine meters is also attached. The procedure has been approved by the State of Utah, Division of Oil and Gas Conservation. We will work with you and the U.S.G.S. in establishing a similarly agreeable procedure for use in New Mexico as the need arises.

Payment for production from the three subject wells will be accomplished through allocation of gas and condensate sales at the Central Storage Battery back to the wells according to the meter readings at the individual gas well separators.

Our only alternative to commingling the two Mudge wells will be to plug the wells since we do not feel they have sufficient potential to justify any further expenditures for surface facilities. If commingling is permissible, we plan to attempt producing the Mudge wells to further evaluate their productive potential. However, commingling permission is required first to permit disposal of anticipated production. We have requested only temporary approval for commingling in order to determine if the wells can be produced commercially or should be plugged. If justified, we plan to solicit your approval for permanent commingling approval.

We feel the above proposal will be an economical and competent manner of producing the three subject wells as well as providing a means of equitable payment for royalty owners. Your temporary approval of this commingling proposal to comply with New Mexico Oil Conservation Commission Rule No. 309-B will be appreciated. Approval through October 1, 1974 should be satisfactory to meet our requirements to properly evaluate the subject wells.

Should further considerations arise which we have overlooked, please contact Mr. R. D. Reese (303) 572-2333 and we will make any appropriate modifications that may be necessary.

Very truly yours,

L. G. Roark
Division Operations Manager
Rocky Mountain Operations Office

RDR:cc

Attachments

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

Operator	Lease	Well No.
Shell Oil Company	Carson Unit	113

Unit Letter	Section	Township	Range	County
	17	25N	11W	San Juan

Actual Footage Location of Well:
1980 feet from the south line and 660 feet from the west line Section 17

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
6414.5	Dakota "B"	Basin Dakota Gas Pool	320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

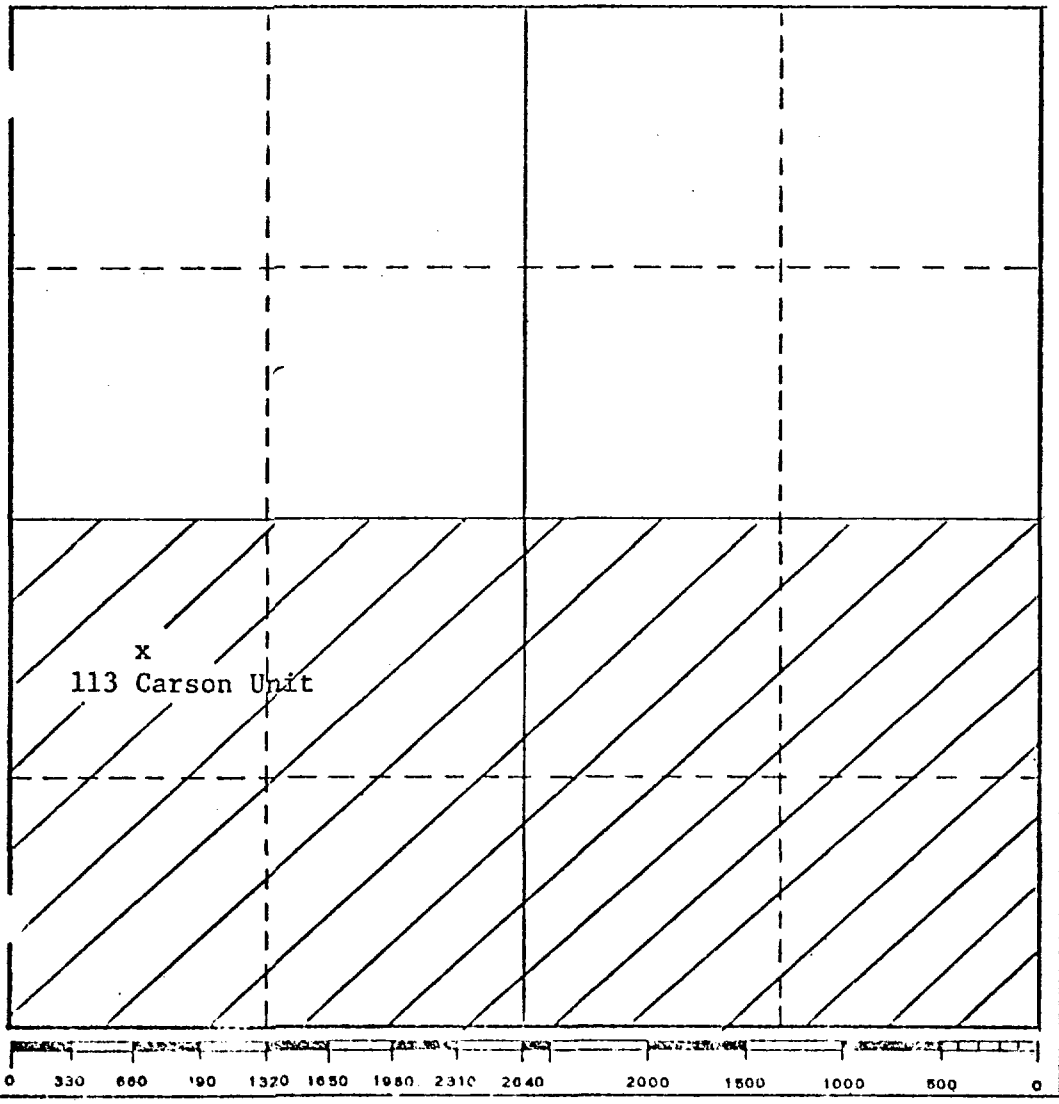
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc?

[x] Yes [ ] No If answer is "yes," type of consolidation Unitization

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Name: o/s J S Mize

Position: Division Operations Engr.

Company: Shell Oil Company

Address: 1700 Broadway
Denver, Colorado 80202

Date: 1/29/74

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

Registered Professional Engineer and/or Land Surveyor

Certificate No.

United States Department of the Interior

GEOLOGICAL SURVEY

Drawer 1857
Roswell, New Mexico 88201

April 4, 1974

Shell Oil Company
1700 Broadway
Denver, Colorado 80202

Gentlemen:

Your letter of March 26 requests temporary approval, for a period of six months, to commingle production from leases Santa Fe 078061, Santa Fe 078062, and New Mexico 0468006.

As set forth in your application, it is understood that condensate and low-pressure gas production from Mudge No. 300 (NE¼ sec. 8, T. 25 N., R. 11 W.) and Mudge No. 301 (SW¼ sec. 9, T. 25 N., R. 11 W.) will be commingled with condensate production from Carson No. 113-17 (SW¼ sec. 17, T. 25 N., R. 11 W.). Such oil and gas production will be metered separately at each wellhead and then piped to the battery in sec. 13, T. 25 N., R. 12 W. The low-pressure gas will then be metered and sold into El Paso's low-pressure gas line. The condensate will be gauged and sold into the Four Corners Pipeline. Such oil and gas sales will be allocated back to the three wells based on the metered production at the individual well separators.

The method of commingling production as described and outlined in your diagram is hereby approved subject to like approval by the New Mexico Oil Conservation Commission. This approval is temporary and will expire on October 1, 1974. If you desire the continuation of commingling operations after October 1, 1974, it will be necessary for you to file an appropriate application with this office. Any change in this approved system must receive prior approval from this office. Form 9-361a, "Lessee's Monthly Report of Sales and Royalty," must show all computations used in oil and gas production allocated to each well.

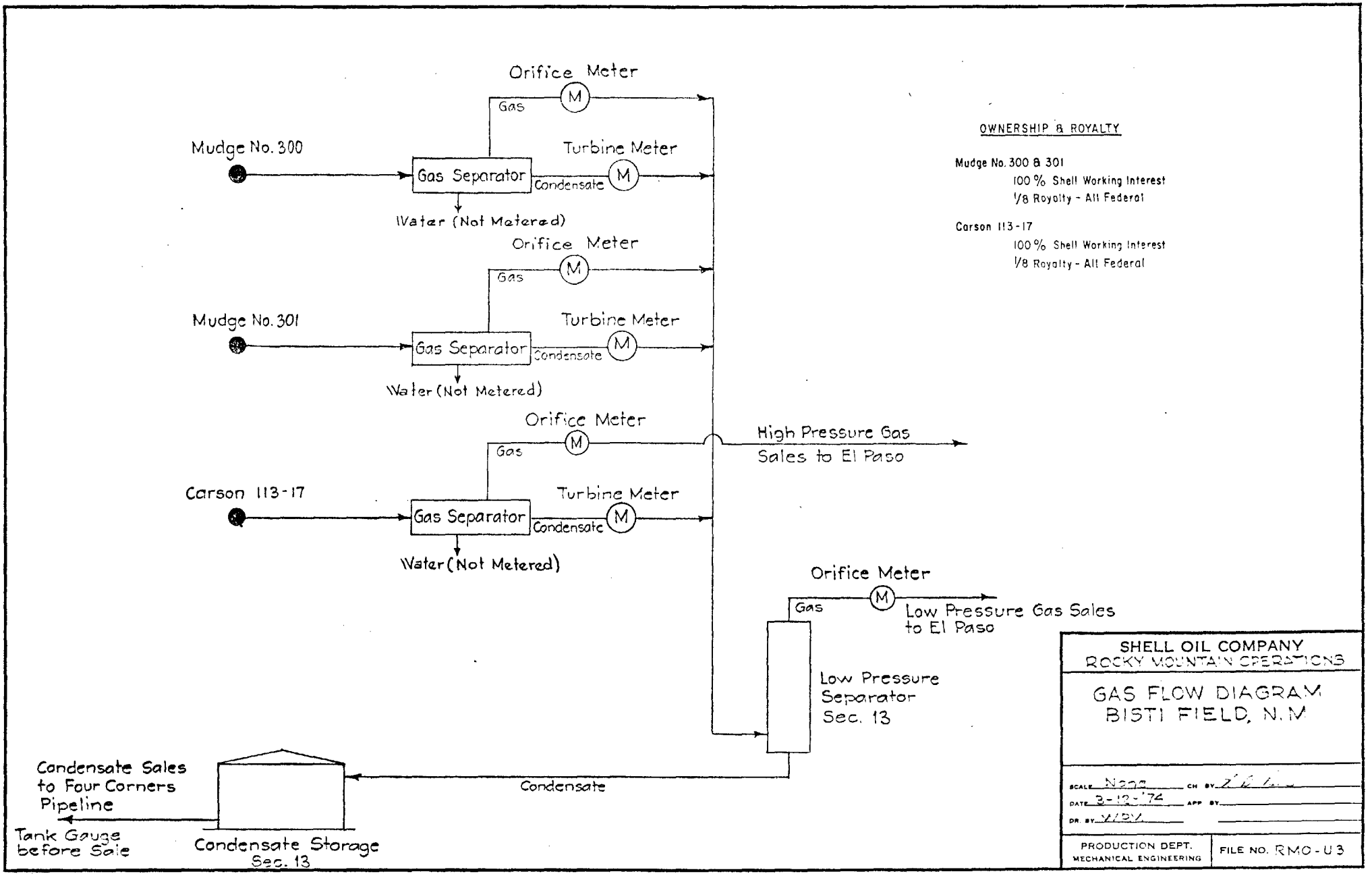
You are requested to notify the Farmington office when the installation has been completed so that a field inspection of the facilities can be made.

Sincerely yours,

any problems ? fdr

Carl C. Traywick

CARL C. TRAYWICK
Acting Area Oil and Gas Supervisor



OWNERSHIP & ROYALTY

Mudge No. 300 & 301
100 % Shell Working Interest
1/8 Royalty - All Federal

Carson 113-17
100 % Shell Working Interest
1/8 Royalty - All Federal

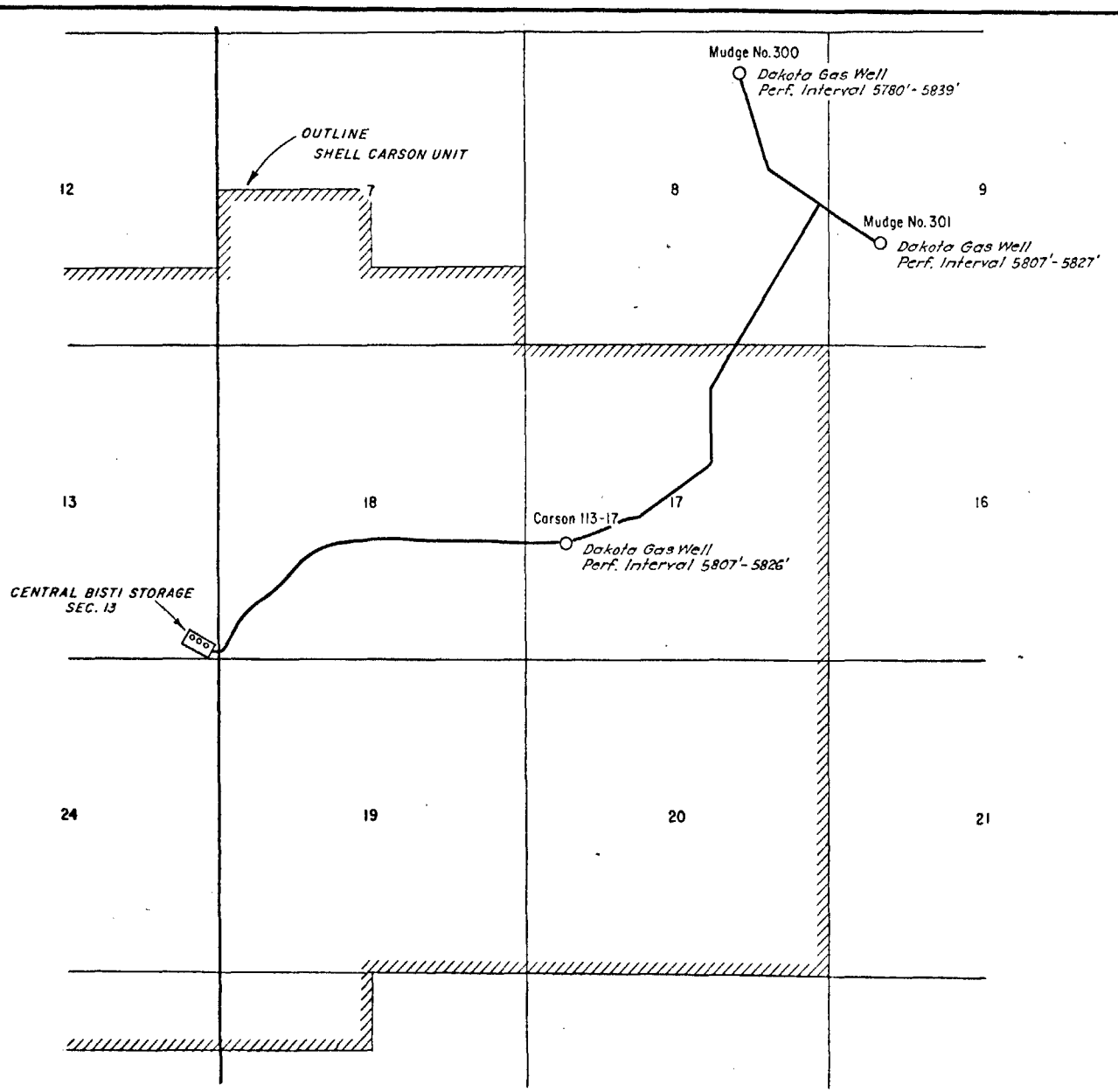
SHELL OIL COMPANY
ROCKY MOUNTAIN OPERATIONS

GAS FLOW DIAGRAM
BISTI FIELD, N.M

SCALE None CH BY
DATE 3-12-'74 APP BY
DR. BY V.P.V.

PRODUCTION DEPT.
MECHANICAL ENGINEERING

FILE NO. RMO-U3



SHELL OIL COMPANY
ROCKY MOUNTAIN OPERATIONS

PORTION OF
SHELL CARSON UNIT - BISTI AREA
SAN JUAN COUNTY, NEW MEXICO

SCALE 1" = 2000' CH BY
DATE March 12 - 74 APP BY
DR. BY W. P. V.

PRODUCTION DEPT.
MECHANICAL ENGINEERING

FILE NO. RMC-U4

OPERATIONS INSTRUCTION
LETTER NO. 59

SUBJECT: COMMINGLED PRODUCTION METER PROVING

CATEGORY: PRODUCTION-OPERATIONS

I. Purpose and Scope: These instructions outline the installation, operation and proving of meters used to commingle oil production in the state of Utah, and apply only to the Dresser Vortex-Velocity oil meter and existing A. O. Smith oil meters.

II. Installation: Each oil metering installation should conform as closely as possible to Drawing No. C16-1341 and API Std. 1101, Section I and Appendix C - Crude Oil Meters.

III. Operation: Each oil meter should be operated within the flow range of 1500 to 3000 BO/D (62.5 to 125 B/H) for good accuracy. Within a given commingled tank battery each heater-treater should be adjusted such that the metering flow rate during oil dumps are within ± 360 B/D (15 B/H) of each other. Further, treaters should each be operated at approximately the same pressure (± 5 psig) and temperature (± 10°F).

IV. Proving: Proving (i.e., check performance) of the meters to determine a "Gross Meter Factor" (i.e., gross barrels measured in tank ÷ barrels registered on meter) is very important to assure metering accuracy, comply with State and USGS requirements, and assure that the oil is being properly allocated to the various wells. The proving procedure is basically the "Open Volumetric Prover Method" as discussed in API Std. 1101, Section III, paragraphs 3018 thru 3022, Figure 5 and gauging procedures discussed in API Std. 2500, paragraph 1001 thru 1001.5.

The meter factor is to be determined a minimum of every four months; and, at any time the meter is repaired, installation changed or operating conditions are altered beyond the following limits from the previous proving: Temp. ± 20°F, Press. ± 10 psig, Flow Rate ± 15 B/H.

A minimum of two proving runs (not necessarily consecutive) should be used to determine the average factor, with each run being in excess of 250 barrels in a 2000-bbl tank or 125 barrels in a 1000-bbl tank. Each factor should be calculated to four (4) decimal places (i.e., 0.XXXX) with the average meter factor to be used rounded to three places (i.e., 0.XXX). If the two runs are not within a tolerance range of ± 0.0050, then another run is to be made and the two factors within these limits used to develop the factor to be used. If meter repeatability cannot be established after four (4) runs, the meter or installation should be repaired or replaced. Further, if the new meter factor deviates more than ± 0.0100 from the previous meter proving, the system should be adjusted, repaired or replaced, and the meter proved again.

RM-476 (10-73)

Page ___ of ___

SHELL OIL COMPANY
ALTAMONT FIELD, UTAH

COMMINGLING METER PROVER REPORT NO. _____
OPEN VOLUMETRIC PROVER METHOD
OIL NO. 59

LOCATION _____ DATE _____

METER: SIZE _____ MAKE _____ SERIAL NO. _____

PROVER TANK: SIZE _____ BBLS

A. PREVIOUS PROVING DATA

DATE OF LAST PROVING _____ RPT. NO. _____ METER FACTOR _____

METER: TEMP. _____ °F, PRESS. _____ PSIG, FLOW RATE _____ BBL/HR

DATE METER INSTALLED OR LAST REPAIRED _____

TANK TEMP. _____ °F.

B. PROVER TANK MEASUREMENT DATA

	RUN NO. 1	RUN NO. 2	RUN NO. 3
1. Observed Temperature, °F			
2. Closing Reading, ft & ins/8bl*	___/___	___/___	___/___
3. Opening Reading, ft & ins/8bl*	___/___	___/___	___/___
4. Gross Barrels Measured (2-3)			

* Read to nearest 1/8".

C. METERED VOLUME DATA

6. Flow rate, bbls/hr			
7. Pressure, psig			
8. Temperature, °F			
9. Closing meter reading*			
10. Opening meter reading*			
11. Barrel Registered (9-10)			

* Read to nearest 1/10 barrel (0.X)

D. METER FACTOR DATA

12. Gross Meter Factor, 4 - 11 (0.XXXX)*			
13. Average Factor (0.XXXX)			
14. Gross Meter Factor to be Used (0.XXX)			

Must be within ± 0.01 of previous factor to be used.

* Have to be within ± 0.0050 of each other to use.

Remarks: _____ Signed by: _____

_____ For: _____