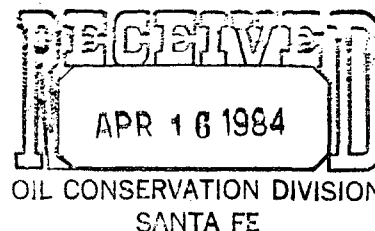


# dugan production corp.

April 13, 1984

Gilbert Quintana  
New Mexico Oil Conservation Division  
P O Box 2088  
Santa Fe, NM 87501



Dear Gilbert:

As we discussed on the phone April 12th, I am attaching copies of our original application for downhole commingling on Dugan Production Corp.'s MF No. 3 and surface commingling for Dugan Production's Kinsale No. 1 and No. 2 and also the Five of Diamonds No. 2 and #2S. All three applications have been pending for some time and we appreciate your attention to this matter.

Regarding our application for downhole commingling on the MF No. 3, which is located in Sec. 14 of T-24N, R-10W, our application was originally submitted on April 7, 1982, and at the time of application, only the Dakota interval had been perforated 6067-6074 and 6245-6255 with an initial potential of 12 BOPD plus 15 BWPD and a GOR of 2500. At the time of this test (11-19-81), essentially no production had occurred and the potential test was based upon an 8 hour swab test. Also, since this well was some distance from a gas pipeline, we had not fraced the Dakota. The development of the Dakota formation at this location was very poor and water saturations were higher than normal for the Dakota in this area. Upon further evaluation, we determined that the perforations 6245-55 were likely responsible for the water production and thus, were abandoned with a cast iron bridge plug set at 6200' and capped with 50' of cement. We then fraced the Dakota perforations 6067-6074 and perforated and fraced the Gallup interval 5069-5334'. Upon swab testing following the frac jobs, we recovered some oil and gas; however, it appeared that the well was making formation water and after further evaluation, it was proposed that the Dakota perforations 6067-6074' be abandoned with a cast iron bridge plug. (Ref. 9-28-82 letter from T.A. Dugan to Jim Sims) The well was shut in awaiting this remedial work; however, upon further evaluation, it was decided to production test the Dakota and Gallup intervals prior to doing any further remedial work in the Dakota. We installed a rod pump and pumping unit in the MF No. 3 during March, 1984, and placed the well on production 3-24-84, assuming that our application for commingling had been approved. Upon checking and discussions with you, we find that our application in fact had not been approved and thus, with the attached copy along with the discussion contained herein, we request that the Commission consider our application for administrative approval to commingle the Gallup and Dakota intervals as timely as possible.

April 13, 1984

I have made some notes on the attached copy of the application as initially submitted, to reflect data that is more current or that was not existent at the time of our application. As mentioned above, at the time of our application, we were expecting that the Dakota would be better than it actually was, and had not completed the Gallup. I am attaching a copy of the reported completions for the Gallup and Dakota as well as a copy of the C-116 for both zones, reflecting a production test taken on 4-11-84. Based upon the C-116 test, approximately 85% of the oil, 14% of the water and 80% of the gas is from the Gallup, while approximately 15% of the oil, 86% of the water, and 20% of the gas is from the Dakota. We proposed using these factors to allocate production in the future. As indicated by the total production from both zones being 5 BOPD, 3.5 BWPD, and 12.6 MCFGPD, this well is, at best, marginal. In addition to our application, I am attaching a copy of a letter from Tenneco wherein they waive objection to our proposed commingling as an offset operator. All offset operators were initially notified of our application.

As a matter of interest, there are 7 other wells in this immediate area that have previously been authorized to commingle downhole production from the Gallup and Dakota. These wells are all operated by Dugan Production and are the Big Eight No. 1E (O-8-24N-9W, Order R-6825), Holly No. 1 (L-16-24N-9W, Order R-7143), Merry May No. 1 (I-24-24N-10W, Order R-6571), July Jubilee No. 1 (G-30-24N-9W, Order R-6826), June Joy No. 2 (B-25-24N-10W, Order R-6396), April Surprise No. 4 (L-19-24N-9W, Order R-7210), Mary Anne No. 3 (L-9-24N-9W, Order DHC-430).

Regarding our application for surface commingling of gas production from Dugan Production's Five of Diamonds Wells No. 2 and No. 2S, located in Sec. 10 of T-30N, R-13W, I have attached a copy of the application as submitted on 5-11-83 and also a copy of a letter from Michael Stogner returning our application unapproved on 5-27-83. I then discussed this matter with Frank Chavez on 6-28-83 and jointly with Frank and Michael on 8-5-83. Also attached is a copy of a letter dated 8-5-83 wherein Dugan Production resubmitted our application for surface commingling with some minor modifications in order to accomodate Michael's original objections. As a matter of interest, during 1983 production from the Five of Diamonds No. 2 averaged 10.7 MCFD and the Five of Diamonds No. 2S remains shut in.

Regarding our application for surface commingling of gas production from the Kinsale No. 1 (Undesignated Chacra) and the Kinsale No. 2 (Lybrook Gallup), both wells located in Sec. 26, T-23N, R-7W, I am attaching a copy of the application as submitted on 10-17-83, and have indicated a change that has occurred since our application. At the time of our application, both wells were qualified for Section 103 pricing; however, since our application, the Kinsale No. 1 has been certified Section 102. In order to more accurately allocate the commingled stream of gas between the two wells, Dugan Production would agree to install a standard meter run with a Barton dry flow meter on one of the two wells. As indicated in the original application, the commingled stream will be measured with a master meter maintained by Northwest Pipeline. In addition to our application,

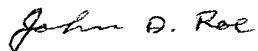
Gilbert Quintana, NMOCD  
Page 3

April 13, 1984

I am attaching a copy of our 10-31-83 letter transmitting a letter from the BLM indicating they had no objection to this commingling. The Kinsale No. 1 produced a total of 268 MCF during 43 days of production during the latter part of 1983. (1st delivered 9-6-83) The Kinsale No. 2 was placed on production during May and during 90 days of production, a total of 1704 bbls. of oil plus 1511 MCF of gas was produced during 1983. Production during February 1984 averaged 6.2 BOPD plus 39 MCFD.

Should you need additional information or need to discuss any of these applications, please feel free to contact me. Thank you for your efforts.

Sincerely,



John D. Roe  
Petroleum Engineer

fp

Attachments

cc: Frank Chavez, NMOCD, Aztec

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE\*

(See other in-  
structions on  
reverse side)Form approved.  
Budget Bureau No. 42-R355.5.

## WELL COMPLETION OR RECOMPLETION REPORT AND LOG \*

|   |                       |   |                                    |   |                                    |   |                                |
|---|-----------------------|---|------------------------------------|---|------------------------------------|---|--------------------------------|
| 1a. TYPE OF WELL:   |                       | OIL WELL <input checked="" type="checkbox"/>                                    | GAS WELL <input type="checkbox"/>  | DRY <input type="checkbox"/>                              | Other <input type="checkbox"/>     |   |                                |
| b. TYPE OF COMPLETION:  |                       | NEW WELL <input checked="" type="checkbox"/>                                    | WORK OVER <input type="checkbox"/> | DEEP-EN <input type="checkbox"/>                          | PLUG BACK <input type="checkbox"/> | DIFF. RESVR. <input type="checkbox"/>   | Other <input type="checkbox"/> |
| 2. NAME OF OPERATOR<br>DUGAN PRODUCTION CORP.   |                       |   |                                    |   |                                    | 5. LEASE DESIGNATION AND SERIAL NO.<br>NM 16760   |                                |
| 3. ADDRESS OF OPERATOR<br>P O Box 208, Farmington, NM 87499   |                       |   |                                    |   |                                    | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME  |                                |
| 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*<br>At surface 1850' FSL - 790' FEL<br>At top prod. interval reported below<br>At total depth |                       |   |                                    |   |                                    | 7. UNIT AGREEMENT NAME  |                                |
| 14. PERMIT NO.  |                       |   |                                    |   |                                    | DATE ISSUED<br>9-1-81   |                                |
| 15. DATE SPUDDED<br>10-5-81   |                       |   |                                    |   |                                    | 16. DATE T.D. REACHED<br>10-13-81   |                                |
| 17. DATE COMPL. (Ready to prod.)<br>3-23-84   |                       |   |                                    |   |                                    | 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*<br>6848' GL   |                                |
| 19. ELEV. CASINGHEAD<br>6848' GL  |                       |   |                                    |   |                                    | 20. TOTAL DEPTH, MD & TVD<br>6300'  |                                |
| 21. PLUG, BACK T.D., MD & TVD<br>6150'  |                       |   |                                    |   |                                    | 22. IF MULTIPLE COMPL., HOW MANY*<br>Two*   |                                |
| 23. INTERVALS DRILLED BY<br>→ TD.   |                       |   |                                    |   |                                    | 24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*<br>5069-5334', Gallup |                                |
| 25. WAS DIRECTIONAL SURVEY MADE<br>No   |                       |   |                                    |   |                                    | 26. TYPE ELECTRIC AND OTHER LOGS RUN<br>IES, CDL, GR-CCL  |                                |
| 27. WAS WELL CORED<br>No  |                       |   |                                    |   |                                    | 28. CASING RECORD (Report all strings set in well)  |                                |
| CASING SIZE   |                       | WEIGHT, LB./FT.   | DEPTH SET (MD)                     | HOLE SIZE   | CEMENTING RECORD                   |   | AMOUNT PULLED                  |
| 8-5/8"  | 24                    | 207' RKB  | 12-1/4"                            | 159 cf class B + 2% CaCl <sub>2</sub>                     |                                    | ---   |                                |
| 4-1/2"  | 10.5                  | 6289' RKB   | 7-7/8"                             | 1st stg 250 sx class B + 4% gel                           |                                    | ---   |                                |
| % 1/4# flocele/sk - 387 cf; 2nd stg 400 gel - 1203 cf. TOTAL SLURRY 1590 cf.  |                       |   |                                    | sx 65-35 + 12% gel & 100 sx class B w/ 4%                 |                                    |   |                                |
| 29. LINER RECORD  |                       |   |                                    | 30. TUBING RECORD   |                                    |   |                                |
| SIZE  | TOP (MD)              | BOTTOM (MD)   | SACKS CEMENT*                      | SCREEN (MD)   | SIZE                               | DEPTH SET (MD)  | PACKER SET (MD)                |
| None  |                       |   |                                    |   | 2-3/8"                             | 6078' RKB   |                                |
| 31. PERFORATION RECORD (Interval, size and number)<br>See reverse.  |                       |   |                                    | 32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.            |                                    |   |                                |
| DEPTH INTERVAL (MD)   |                       |   |                                    | AMOUNT AND KIND OF MATERIAL USED                          |                                    |   |                                |
| 5069-5334   |                       |   |                                    | 52,500 gal. slickwater;<br>60,000# 20-40 sand + additives |                                    |   |                                |
| 33. PRODUCTION  |                       |   |                                    | WELL STATUS (Producing or shut-in)                        |                                    |   |                                |
| DATE FIRST PRODUCTION<br>3-24-84  |                       | PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)<br>Pumping |                                    |   |                                    |   |                                |
| DATE OF TEST<br>3-25-84   | HOURS TESTED<br>24    | CHOKE SIZE<br>---   | PROD'N. FOR TEST PERIOD<br>→       | OIL—BBL.<br>13  | GAS—MCF.<br>25                     | WATER—BBL.<br>1   | GAS-OIL RATIO<br>1923          |
| FLOW. TUBING PRESS.<br>---  | CASING PRESSURE<br>40 | CALCULATED 24-HOUR RATE<br>→  | OIL—BBL.<br>13                     | GAS—MCF.<br>25  | WATER—BBL.<br>1                    | OIL GRAVITY-API (CORR.)<br>38.0 (est.)  |                                |
| 34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)<br>Sold - Dugan Production Good Times Gathering System.  |                       |   |                                    |   |                                    | TEST WITNESSED BY   |                                |
| 35. LIST OF ATTACHMENTS   |                       |   |                                    |   |                                    |   |                                |
| 36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records   |                       |   |                                    |   |                                    |   |                                |
| SIGNED<br>Jim V. Jacobs   |                       | TITLE<br>Geologist  |                                    | DATE<br>4-13-84   |                                    |   |                                |

\*(See Instructions and Spaces for Additional Data on Reverse Side)

# INSTRUCTIONS

**General:** This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

**Item 4:** If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

**Item 18:** Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments. **Items 22 and 24:** If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s), and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

**Item 29: "Sacks Cement":** Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool. **Item 33:** Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

## 37. SUMMARY OF POROUS ZONES:

SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF: CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

| FORMATION | TOP | BOTTOM | DESCRIPTION, CONTENTS, ETC.             |
|-----------|-----|--------|---|
|           |     |        | ITEM #31 - Gallup perforations:         |
|           |     |        | 5069-79 (5 holes); 5096-5114 (9 holes); |
|           |     |        | 5125-31 (3 holes); 5164-70 (3 holes);   |
|           |     |        | 5178-82 (2 holes); 5200-5214 (7 holes); |
|           |     |        | 5258-64 (3 holes); 5328-34 (3 holes).   |
|           |     |        | Total of 35 holes.                      |

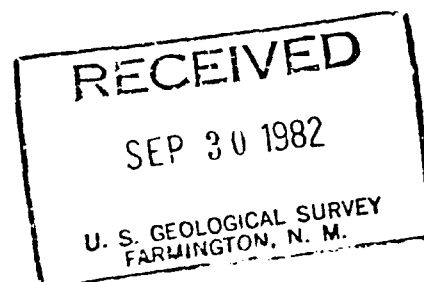
## 38. GEOLOGIC MARKERS

| NAME            | MEAS. DEPTH | TOP | TRUE VERT. DEPTH |
|-----------------|-------------|-----|------------------|
| Ojo Alamo       | 767'        |     |                  |
| Kirtland        | 887'        |     |                  |
| Fruitland       | 1170'       |     |                  |
| Pictured Cliffs | 1575'       |     |                  |
| Lewis Shale     | 1756'       |     |                  |
| Chacra          | 1923'       |     |                  |
| Cliff House     | 3032'       |     |                  |
| Menefee         | 3084'       |     |                  |
| Point Lookout   | 3940'       |     |                  |
| Mancos          | 4217'       |     |                  |
| Gallup          | 4810'       |     |                  |
| Greenhorn       | 5958'       |     |                  |
| Graneros        | 6033'       |     |                  |
| Dakota          | 6066'       |     |                  |

325-1841

dugan production corp.

dp



September 28, 1982

Mr. James Sims  
Minerals Management Service  
Drawer 600  
Farmington, NM 87401

RE: Lease No. NM 16760 - Your Letter of September 23, 1982  
Dugan Production Corp. MF #3 Well  
SE/4 Sec. 14 T24N R10W  
San Juan County, NM

Dear Mr. Sims:

This well was originally completed as a small oil well in the upper zone (6067-74 and 6245-55, Dakota). We did not frac that zone at that time because we were waiting to get a gas line to this well. We did succeed in getting a line to the MF #3 and MF #4. At that point we stimulated the Dakota and Gallup zones in August 1982. We swabbed, and began getting water with small amounts of hydrocarbons. Water analysis indicates that it is coming from the Dakota zone. Therefore, we want to permanently plugback the Dakota and complete this well in the Gallup zone.

Enclosed for your convenient reference is a complete set of our daily reports on this well, including the swabbing reports after the Dakota and Gallup stimulations. Also enclosed is a copy of the Gallup C-102.

Sincerely,

*T. A. Dugan*  
Thomas A. Dugan

fp

Encl.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

## SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well ☐ gas well ☐ other Commingled/ Ap pending2. NAME OF OPERATOR  
DUGAN PRODUCTION CORP.3. ADDRESS OF OPERATOR  
P O Box 208, Farmington, NM 87401

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)

AT SURFACE: 1850' FSL - 790' FELAT TOP PROD. INTERVAL:AT TOTAL DEPTH:

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

## REQUEST FOR APPROVAL TO:

TEST WATER SHUT-OFF ☐  
FRACTURE TREAT ☐  
SHOOT OR ACIDIZE ☐  
REPAIR WELL ☐  
PULL OR ALTER CASING ☐  
MULTIPLE COMPLETE ☐  
CHANGE ZONES ☒  
ABANDON\* ☐

(other) \_\_\_\_\_

## SUBSEQUENT REPORT OF:

☐  
☐  
☐  
☐  
☐  
☐  
☐  
☐

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Request permission to plug back Dakota perms (6067-74) by setting a cast iron bridge plug at 6017 and dump 50' cement on bridge plug with adump bailer. This would be a permanent plug.

Then plan to set a pumping unit and produce the Gallup Formation only. The Gallup Formation has been perforated and fraced per sundry notice of 9-16-82.

RECEIVED

OCT 06 1982

U. S. GEOLOGICAL SURVEY  
FARMINGTON, N. M.

Subsurface Safety Valve: Manu. and Type \_\_\_\_\_

Set @ \_\_\_\_\_ Ft.

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

SIGNED Thomas A. Dugan TITLE Petroleum Engineer DATE 9-17-82

APPROVED

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANYJames F. Sims  
JAMES F. SIMS  
DISTRICT ENGINEER

OPERATOR

\*See Instructions on Reverse Side

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

## SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

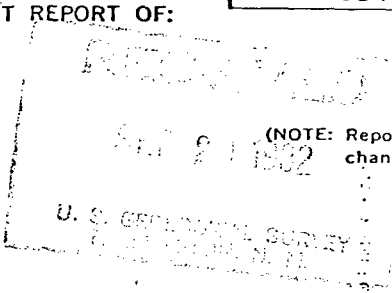
1. oil well ☐ gas well ☐ other Commingled/ Ap pending
2. NAME OF OPERATOR  
DUGAN PRODUCTION CORP.
3. ADDRESS OF OPERATOR  
P O Box 208, Farmington, NM 87401
4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)  
AT SURFACE: 1850' FSL - 790' FEL  
AT TOP PROD. INTERVAL:  
AT TOTAL DEPTH:
16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

## REQUEST FOR APPROVAL TO:

- TEST WATER SHUT-OFF ☐  
FRACTURE TREAT ☐  
SHOOT OR ACIDIZE ☐  
REPAIR WELL ☐  
PULL OR ALTER CASING ☐  
MULTIPLE COMPLETE ☐  
CHANGE ZONES ☐  
ABANDON\* ☐  
(other) ☐

## SUBSEQUENT REPORT OF:

- ☐  
☐  
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(NOTE: Report results of multiple completion on zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

See attached for plugback of one set of Dakota perf (6245-55)  
Dakota frac (6067-74)  
Gallup perfs (5069-5334)  
Gallup frac  
2-3/8" tubing

Subsurface Safety Valve: Manu. and Type \_\_\_\_\_

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

SIGNED Thomas A. Dugan TITLE Petroleum Engineer DATE 9-16-82

ACCEPTED FOR RECORD

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:

SEP 23 1982

OPERATOR

FARMINGTON DISTRICT

BY STR

\*See Instructions on Reverse Side



# dugan production corp.

DUGAN PRODUCTION CORP.  
MF #3

## Recompletion

8-19-82 Tubing 270 psi. Opened well up. Tried to flow. Mostly oil. Swabbed tubing. Fluid level at 1100'; oil down to 3300'. Water down to 6000'. Well gassing most of time. Shut in.

8-21-82 R.U. Geosource

Set bridge plug at 6200'. Ran dump bailer - dumped 50' cement atop plug. PBTD 6150'.

R. U. Western Co. to Frac Dakota.

6300 gal. 20# X-link gel pad.

5000 gal 20# X-link gel w/1#/gal 20-40 sd.

5000 gal 20# X-link gel with 1½#/gal 20-40 sd.

3750 gal 20# X-link gel with 2#/gal 20-40 sd.

Flushed to top perf. (6067') w/fresh water.

Gel water contained 1680 gal. lease crude, 24 gal Aquaflo, 25# B-5. Total sand - 20,000 lbs. 20-40. Treating Volume (fluid) 20,034 gals. Mini Max - III.

4000 psi max treating pressure controlled pumping rate between 7 and 17 BPM thru-out treatment. ISDP 2600 psi. 15 min. S.I. 1750 psi. Max 4100'. Min 3750. Waited four hours for gel to break w/ well shut in.

R. U. Geosource to perforate Gallup ftn. w/total 35 holes:

5328-34 1s/2F - 6 feet - 3 holes

5258-64 1s/2F - 6 feet - 3 holes

5200-5214 1s/2F - 14 feet - 7 holes

5178-82 1s/2F - 4 feet - 2 holes

5164-70 1s/2F - 6 feet - 3 holes

5125-31 1s/2F - 6 feet - 3 holes

5096-5114 1s/2F 18 feet - 9 holes

5069-79 1s/2F - 10 feet - 5 holes

(Continued)

8-21-82 R. U. Western Co. to slickwater frac the Gallup.  
(Cont.)

Pumped 7,500 gal. slickwater pad  
15,000 gal slickwater w/ 1#/gal 20-40 sand.  
30,000 gal slickwater w/ 1½#/gal 20-40 sand  
Flushed to perfs w/ slick water.

All water w/ 1 gal/1000 Aquaflo & 1½#/1000 gal FR-2

Total fluid volume - 52,500 gal  
Total sand - 60,000# 20-40 sand

This pumped at 40 BPM and pressure ranged from 1700 initially to 1350 w/ 1.5# gone.

10,000 gal into 1½# - dropped 5 ball sealers and got 150 psi ball action; also at 14,000 gal, 18,000 gal, 20,000 gal & 24,000 gal. into 1½#/gal sand. Dropped 5 ball sealers with similar results. Total 25 ball sealers.

ISDP 350 psi  
Max 2100 psi

15 min SI 350 psi  
Min 1200 psi

8-22-82 Shut down - Sunday

8-23-82 Opened well up. Flowed back strong for 30 min. to 1 hour.  
Went in hole with tubing. Tag sand at 5907'. P.O.H.

8-24-82 G.I.H. with Baker Hydrostatic bailer. Cleaned out 80' sand.  
T.O.H. Dump sand. T.I.H. Clean out sand to 6150'. T.O.H.  
Dump sand. T.I.H. Land tubing as follows: 192 jts. 2-3/8" O.D.,  
4.7#, J-55, 8RD, EUE tubing. T.E. 6070.68' set at 6078' RKB.  
Seating nipple at 6041' with tubing bull plugged on bottom. N.D.  
BOP. N.U. well head. Released F.W.S.

DUGAN PRODUCTION CORP.  
MF #3

- 8-25-82 MI & RU Hinson Service Swabbing unit. Casing pressure zero. Fluid level at 600' at start of day. Made 17 swab runs. Estimated 250 bbls frac water. Fluid level at 1600'. Casing pressure 25 psi,
- 8-26-82 Casing pressure 25 psi. Tubing pressure TSTM. Fluid level at 1460' at start of day. Made 21 swab runs to pit. Estimated 180 bbls. frac water. Oil percentage becoming approx. 10%. Made 4 runs to tank. Total of 35 bbls., est. 2 bbls. oil. Casing pressure at end of day 25 psi. Fluid level at 3200'. Good show of gas ahead of swab and all fluid gas-cut.
- 8-27-82 Casing pressure 45 psi. Tubing pressure TSTM. Fluid level at 2100' at start of day. Made 5 runs to pit and 16 runs to tank. Estimated 180 bbls. total fluid - 8 bbls. oil and 172 bbls. water. Casing pressure at end of day 80 psi and fluid level at 3500'.
- 8-28-82 Casing pressure 100 psi. Fluid level at 2500'. Made 6 swab runs to pit and 15 runs to tank. Casing pressure at end of day 175 psi. Fluid level at end of day 3700'. Swabbed estimated 175 bbls. fluid - 98% water. Caught water sample to get analysis to check for formation water.
- 8-29-82 Sunday - did not work
- 8-30-82 Initially SICP + 250 psi. Fluid level 3200'. Had Hinson's rig over hole to swab. Made six runs and recovered  $\pm 8$  bbl/run salty water with traces of oil. Finally SICP was 225 psi. Fluid at 3800'. Shut in well to build up. Moved the rig over to the Rodeo Rosie #1.
- 9-30-82 MI & RU Hinson Service Co. swabbing unit. Tubing pressure 25 psi. Casing pressure 350 psi. Fluid level at 2200'. Made 17 swab runs. Estimated 10 bbls. with very slight show of oil and gas. Casing pressure at end of day 275 psi.

**Tenneco Oil**  
**Exploration and Production**  
A Tenneco Company



Rocky Mountain Division

P.O. Box 3249  
Englewood, Colorado 80155  
(303) 740-4800

Delivery Address:  
6061 South Willow Drive  
Englewood, Colorado

April 20, 1982

Dugan Production Corporation  
P. O. Box 208  
Farmington, NM 87401

Attention: J. McHugh Jr.

Re: MF #3, #4  
Section 14, T24n, R10W  
San Juan County, New Mexico

Gentlemen:

Tenneco Oil Company does not object to your proposed commingling of gas production in the two above referenced wells.

Very truly yours,

TENNECO OIL COMPANY

A handwritten signature in dark ink, appearing to read "J. M. Thibeaux".

J. M. Thibeaux  
Division Petroleum Engineer

JMT:RdC:pe

GAS-OIL RATIO TESTS

|                                    |  |  |        |  |          |  |
|------------------------------------|--|--|--------|--|----------|--|
| DUGAN RPRODUCTION CORP.            |  | Well   | County |  | San Juan |  |
| Box 208, Farmington, NM 87499      |  | Bisti Gallup   |        |  |          |  |
| TYPE OF TEST - (X)                 |  | Completion <input checked="" type="checkbox"/> Spont: <input type="checkbox"/> |        |  |          |  |
| SCHEDULED <input type="checkbox"/> |  |  |        |  |          |  |

| LEASE NAME | WELL NO. | LOCATION |    |     | DATE OF TEST | CHOKE SIZE | TBG. PRESS. | DAILY ALLOW. ABLE | LENGTH OF TEST HOURS | PROD. DURING TEST |           |           | GAS - OIL RATIO CU.FT/BBL |
|------------|----------|----------|----|-----|--------------|------------|-------------|-------------------|----------------------|-------------------|-----------|-----------|---------------------------|
|            |          | U        | S  | T   |              |            |             |                   |                      | WATER BBL'S       | GRAV. OIL | OIL BBL'S |                           |
| MF         | 3        | I        | 14 | 24N | 10W          | 4-11-84    | P           | --                | 24                   | 1 1/2             | 38.3      | 4.25      | 10.10 2,376               |

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Division in accordance with Rule 331 and appropriate pool rules.

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

*Medina Thelma*

(Signature)  
Production Report Supervisor

4-13-80

GAS-OIL RATIO TESTS

| LEASE NAME |  | WELL NO. | LOCATION |    |     | DATE OF TEST | CHOKE SIZE | TBG. PRESS. | DAILY ALLOW. ABLE | LENGTH OF TEST HOURS | PROD. DURING TEST |           |           | GAS - OIL RATIO |           |      |      |       |
|------------|--|----------|----------|----|-----|--------------|------------|-------------|-------------------|----------------------|-------------------|-----------|-----------|-----------------|-----------|------|------|-------|
|            |  |          | U        | S  | T   | R            |            |             |                   |                      | WATER BBL'S       | GRAV. OIL | OIL BBL'S | GAS M.C.F.      | CU.FT/BBL |      |      |       |
| MF         |  | 3        | I        | 14 | 24N | 10W          |            | 4-11-84     | P                 | --                   | --                | --        | 24        | 3.0             | 38.3      | 0.75 | 2.50 | 3,333 |

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.

Gas volumes must be reported in MCF measured at a pressure base of 15,025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Well original and one copy of this report to the district office of the New Mexico Oil Conservation Division in accordance with Rule 331 and appropriate pool rules.

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

*Martine Muller*  
(Signature)  
Production Report Supervisor

4-13-84

OPERATOR

FARMINGTON DISTRICT  
BY 1973

# INSTRUCTIONS

**General:** This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions. If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

**Item 4:** If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

**Item 18:** Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

**Items 22 and 24:** If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

**Item 29:** "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

**Item 33:** Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

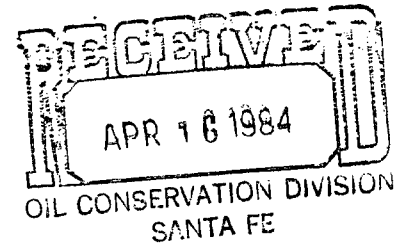
| 37. SUMMARY OF POROUS ZONES:   |     |        |                             | 88. GEOLOGIC MARKERS |                  |
|--|-----|--------|-----------------------------|----------------------|------------------|
| SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES |     |        |                             |                      |                  |
| FORMATION  | TOP | BOTTOM | DESCRIPTION, CONTENTS, ETC. | NAME                 | MEAS. DEPTH      |
|  |     |        |                             |                      | TRUE VERT. DEPTH |
|  |     |        |                             | Ojo Alamo            | 767'             |
|  |     |        |                             | Kirtland             | 887'             |
|  |     |        |                             | Fruitland            | 1170'            |
|  |     |        |                             | Pictured Cliffs      | 1575'            |
|  |     |        |                             | Lewis Shale          | 1756'            |
|  |     |        |                             | Chacra               | 1923'            |
|  |     |        |                             | Cliff House          | 3032'            |
|  |     |        |                             | Menefee              | 3084'            |
|  |     |        |                             | Point Lookout        | 3940'            |
|  |     |        |                             | Mancos               | 4217'            |
|  |     |        |                             | Gallup               | 4810'            |
|  |     |        |                             | Greenhorn            | 5958'            |
|  |     |        |                             | Graneros             | 6033'            |
|  |     |        |                             | Dakota               | 6066'            |



# dugan production corp.

April 7, 1982

Joe D. Ramey  
New Mexico Oil Conservation Commission  
P.O. Box 2088  
Santa Fe, NM 87501



Re: Application for Downhole Commingling  
MF #3 Well  
Basin Dakota Pool and Undesignated Gallup Pool  
T-24-N, R-10-W, NMPM  
Sec. 14: NE/4 SE/4  
San Juan County, New Mexico

*BISH Lower Gallup*

Dear Mr. Ramey:

Enclosed please find duplicate copies of the above referenced Application for Downhole Commingling which we would like to have administratively approved under Rule 303-C.

The criteria for commingling under Rule 303-C would require the well to be completed dually and each zone tested separately. However, we feel that we can forego this requirement on the grounds that data collected from nearby wells imply that the criteria will be met by the subject well. This would save the costs of a dual completion, the additional separator and meter, and the pump which would be required. Our experience in the area indicates that the production from both the Basin Dakota and the Undesignated Gallup formations in this well would be marginal. Gas chromatograph analyses of the Sixteen G's #1 Well, (Unit letter E, Sec. 7, T24N, R9W)(Undesignated Gallup formation) and the MF #1 Well, (Unit letter L, Sec. 18, T24N, R9W)(Basin Dakota formation) indicate that these flow streams will be miscible.

Also, our successful commingling of these zones in nearby wellbores shows that the liquid flowstreams are compatible and mutually non-damaging to their counterpart zones. This experience also serves to show that, in this area, there is not enough pressure disparity at the flowing conditions to create a crossflow problem. The commingling of the zones further will facilitate the production of the Undesignated Gallup zone by the device of gas lift. The mixture of the Dakota gas and Gallup effluent will be lighter than the Gallup fluids alone. This will allow production from the Gallup without the need for a pump, lower operating costs, extend the production until abandonment and prevent waste.

*Rod Pump  
Installed  
during 3/84* →

New Mexico Oil Conservation Commission  
March 31, 1982  
Page Two

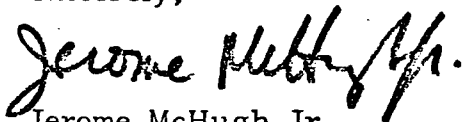
In this case, the price for which the production will be sold is not the same for the two zones. The Basin Dakota formation has been designated a Tight Gas Sand in this area, and the price for the Dakota gas will be twice that of the Gallup gas. By the use of an appropriate allocation formula, we can be sure that the value of the commingled production will not be less than the sum of the values of the individual streams.

There is a common ownership of the two zones, and the distribution of royalties is the same for both zones. For this reason, there is no danger to correlative rights which would arise from the commingling of the zones in this wellbore.

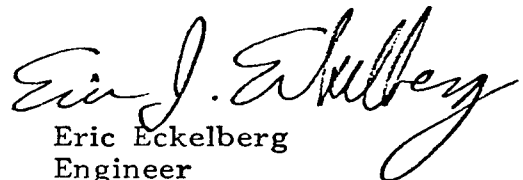
We have notified all off-set operators and/or lessees of surrounding federal leases of the proposed downhole commingling application.

We trust that all is in order for this application. If there are any questions concerning this matter, please feel free to contact either of us.

Sincerely,



Jerome McHugh Jr.  
Landman



Eric Eckelberg  
Engineer

JM/EE:nw

cc: Frank Chavez  
New Mexico Oil Conservation Commission  
1000 Rio Brazos Rd.  
Aztec, NM 87410

T24N - R10W N.M.P.M

|    |   |                                      |   |
|----|---|--------------------------------------|---|
| 10 | Indian w/draw Application... not open for leasing<br>Unleased Fed.<br>Tenneco Oil Company | 11<br>Tenneco Oil Company<br>NM16763 | 12<br>Chevron USA $\frac{3}{8}$<br>Energy Reserves Group $\frac{5}{8}$<br>H.B.P.<br>SF 078301<br>Supron |
| 15 |   | NO. 4 MF *                           |   |
|    |   | 14<br>Dugan Production<br>NM16760    | 13<br>NM45210<br>Dugan  |
|    | NM25841<br>Dugan o  | R.K. Cramer<br>NM30019               | NM16760<br>Unleased Federal EXPIRED<br>NM03245  |
| 22 | NM15654   | 23                                   | 24  |

DUGAN PRODUCTION CORP.  
MF #3  
NE/4 SE/4 Sec 14 T24N R10W  
San Juan County, NM

Proration Unit: S/2 Sec 14 T24N R10W

APPLICATION FOR DOWNHOLE COMMINGLING

Offset Operators

Township 24 North Range 10 West

- Section 13: NW/4 Supron Energy Corp.  
SW/4 Dugan Production Corp.
- Section 14: N/2 Dugan Production Corp.
- Section 15: E/2 Tenneco Oil Co.
- Section 22: NE/4 Dugan Production Corp.
- Section 23: N/2 R.K. Cramer
- Section 24: NW/4 Unleased Federal - Expired

# RULE 303-C (§ 2e and § 2i)

The following information shows a segment of the decline curves from the MF #1 Well, Unit letter L, Sec. 18, T24N, R9W, a Dakota producer, and the Sixteen G's #1 Well, Unit letter E, Sec. 7, T24N, R9W, an Undesignated Gallup producer. This will serve as a prognostication of future production from these zones in this area, and as an example of their relative productions, for use in arriving at an allocation formula.

For eight months, from June, 1981 until January, 1982, both the Sixteen G's and the MF #1 Wells were producing. For this period the average contribution of the Gallup well to the total production of both wells was 85.66% of the oil and 12.47% of the gas.

Two other wells in the same area are producing the commingled fluids from these zones. The July Jubilee #1 Well, Unit letter G, Sec. 30, T24N, R9W, has the gas allocated 90% to the Dakota and 10% to the Gallup, while the oil is allocated 10% to the Dakota and 90% to the Gallup. The Merry May #1 Well, Unit letter I, Sec. 24, T24N, R10W, has the gas allocated 85% to the Dakota and 15% to the Gallup. The oil from this well is allocated 15% to the Dakota and 85% to the Gallup.

Using this data as a guideline, we feel it would be appropriate to allocate the gas production from the July Jubilee #2 Well 85% to the Dakota and 15% to the Gallup. Since the oil is all valued the same, its allocation here is not critical, and the allocation of 15% of the oil to the Dakota and 85% to the Gallup should be acceptable.

Dakota parts 6067-6074 + 6245-6255' completed 12/19/81  
WI IP = 12 BOPD + 15 BOPD at GOR = 2500'. No major stimulation done at time of IP.

8/82 - isolated Dakota parts 6245-55' at CIBP @ 6200' w/ 50' cement.

FRAC Dakota parts 6067-74

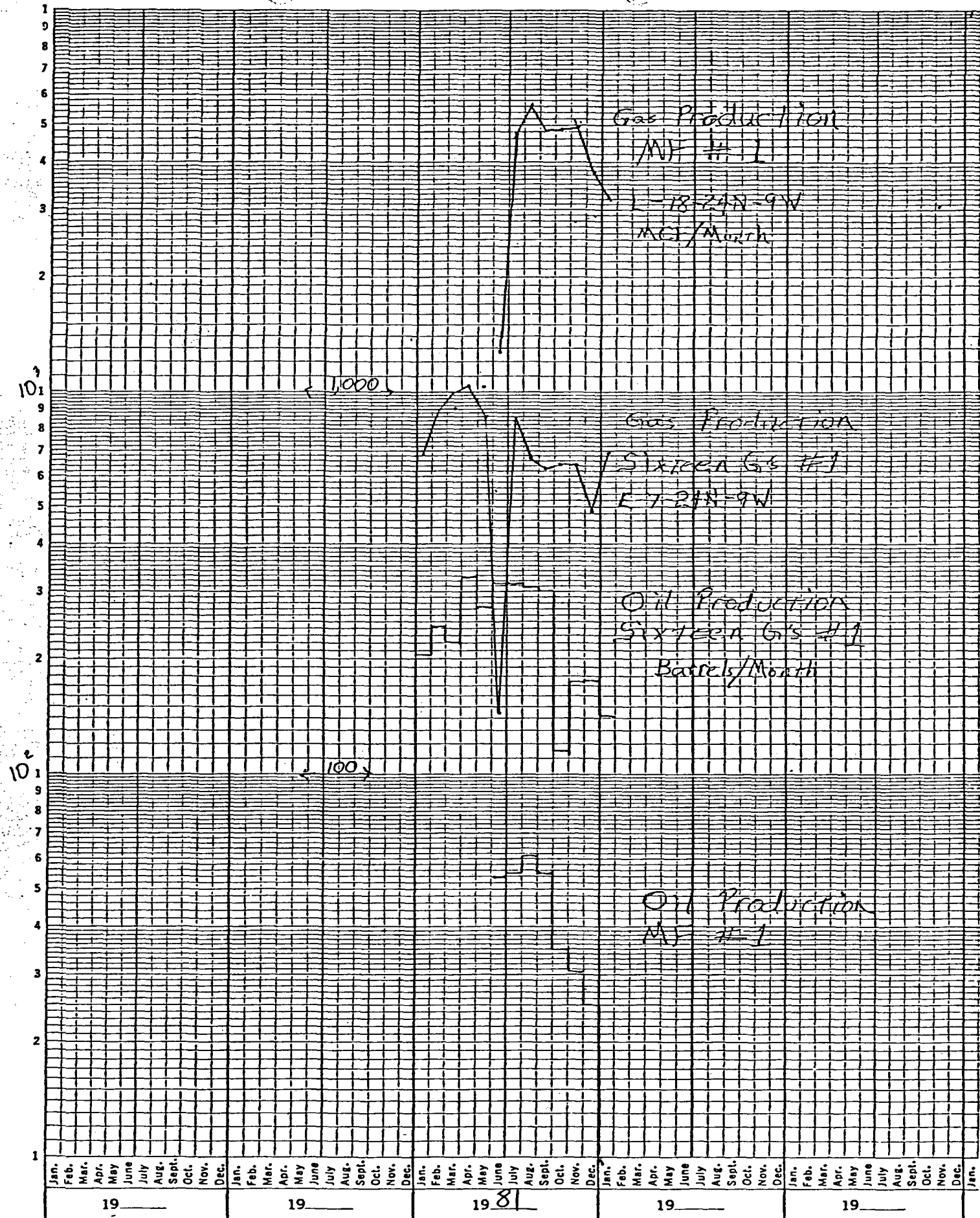
part + FRAC Gallup parts 5069-5334'.

Swab Dakota + Gallup parts Recovering water, some oil + gas.

Shut in Evaluating. -

3/84 - installed Rod pump to production test.

| C-116 TAKEN | BOPD       | BWPD       | MIFD        | GOR  |
|-------------|------------|------------|-------------|------|
| GALLUP -    | 4.25 (85%) | 0.50 (14%) | 10.10 (80%) | 2376 |
| DAKOTA -    | 0.75 (15%) | 3.00 (86%) | 2.50 (20%)  | 3333 |
| TOTAL       | 5.0        | 3.50       | 12.60       |      |



11/13/81

EL PASO NATURAL GAS COMPANY  
MEASUREMENT DEPARTMENT  
POST OFFICE BOX 1492  
EL PASO, TEXAS 79959

## CHROMATOGRAPHIC GAS ANALYSIS REPORTS

OCCAN PRODUCTION CORP.  
P.O. BOX 208  
FARMINGTON, NM 87401

ANAL DATE 11 11 81

METER STATION NAME  
GOOD TIMES METER SITE

METER STA 9375  
OPER 1862

| TYPE CODE | SAMPLE DATE | EFF. DATE | USE NOS. | SCALE | H2S GRAINS | LOCAT |
|-----------|-------------|-----------|----------|-------|------------|-------|
| CO        | 11 10 81    | 11 13 81  | 06       |       |            | 4 F   |

NORMAL  
MOL%

GPM

|              |       |       |
|--------------|-------|-------|
| CO2          | .58   | .000  |
| H2S          | .00   | .000  |
| N2           | .73   | .000  |
| METHANE      | 87.10 | .000  |
| ETHANE       | 6.56  | 1.753 |
| PROPANE      | 2.62  | .721  |
| ISO-BUTANE   | .57   | .186  |
| NORM-BUTANE  | .72   | .227  |
| ISO-PENTANE  | .36   | .132  |
| NORM-PENTANE | .28   | .101  |
| HEXANE PLUS  | .48   | .210  |

TOTALS

100.00

3.330

SPECIFIC GRAVITY

.665

MIXTURE HEATING VALUE

(BTU/CF AT 14.73 PSIA, 60 DEGREES, DRY) 1,159

RATIO OF SPECIFIC HEATS

1.291

NO TEST SECURED FOR H2S CONTENT

11/13/81

EL PASO NATURAL GAS COMPANY  
 MEASUREMENT DEPARTMENT  
 POST OFFICE BOX 1492  
 EL PASO, TEXAS 79999

## CHROMATOGRAPHIC GAS ANALYSIS REPORTS

DUGAN PRODUCTION CORP.  
 P.O. BOX 208  
 FARMINGTON, NM 87401

ANAL DATE 11 11 81

METER STATION NAME  
 SIXTEEN G'S #1

METER STA 8952  
 OPER 1862

| TYPE CODE | SAMPLE DATE | EFF. DATE | USE MOS. | SCALE | H2S GRAINS | LOCAT |
|-----------|-------------|-----------|----------|-------|------------|-------|
| 00        | 11 10 81    | 11 13 81  | 03       |       |            | 4 F   |

NORMAL  
 MOL%

GPM

|              |       |       |
|--------------|-------|-------|
| CO2          | .82   | .000  |
| H2S          | .00   | .000  |
| N2           | .91   | .000  |
| METHANE      | 65.93 | .000  |
| ETHANE       | 13.47 | 3.601 |
| PROPANE      | 11.02 | 3.032 |
| ISO-BUTANE   | 1.38  | .451  |
| NORM-BUTANE  | 3.66  | 1.153 |
| ISO-PENTANE  | .65   | .315  |
| NORM-PENTANE | .93   | .337  |
| HEXANE PLUS  | 1.02  | .446  |

TOTALS

100.00

9.335

SPECIFIC GRAVITY

.877

MIXTURE HEATING VALUE

(BTU/CF AT 14.73 PSIA, 60 DEGREES, DRY) 1,479

RATIO OF SPECIFIC HEATS

1.257

NO TEST SECURED FOR H2S CONTENT

No well will be assigned an allowable greater than the amount of oil produced on the official test.

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Gas volumes must be reported in MCF measured at a pressure base of 15,025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

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

Paul Cravie  
(Signature)

Production Superintendent

(File) 12-30-77



