

CASE 1912: Application of SOUTHERN  
UNION FOR GAS-OIL DUAL OF ITS  
JICARILLA 1-F, Unit L, Rio Arriba.

Case No.

1912

Application, Transcript,  
Small Exhibits, Etc.

New Mexico Oil Conservation Commission  
1000 RIO BRAZOS ROAD  
AZTEC, NEW MEXICO

Case 1912

February 4, 1960

Southern Union Gas Company  
Burt Building  
Dallas, Texas

Attn: Mr. Paul J. Clote, Manager  
Drilling & Production Department

Re: DG Application, Southern Union  
Jicarilla 1-F, L-27-26N-4W

Dear Mr. Clote:

Four copies of the above application were received in this office  
February 1, 1960.

In the future when making dual completion applications, will you  
please send two copies directly to the Oil Conservation Commission,  
Box 871, Santa Fe and two copies to this office.

As your dual is a gas-over oil dual I do not believe that under  
Rule 112 it is eligible for administrative approval. I therefore  
presume that the matter will be set for hearing by our Santa Fe  
Office. I am sending them three copies of your Application, along  
with a copy of this letter.

If we can be of any further service in this matter, please contact  
us.

Yours very truly

Emery C. Arnold  
Supervisor, District #3

cc: SAC

cc: Oil Conservation Commission  
Santa Fe, N.M.

## NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

7-3-58

## APPLICATION FOR DUAL COMPLETION

Field Name <b>Blanco Mesaverde</b>		County <b>Rio Arriba</b>	Date <b>January 26, 1960</b>
Operator <b>Southern Union Gas Company</b>		Lease <b>Jicarilla</b>	Well No. <b>1-F</b>
Location of Well <b>L</b>	Unit <b>27</b>	Township <b>26N</b>	Range <b>4W</b>

1. Has the New Mexico Oil Conservation Commission heretofore authorized the dual completion of a well in these same pools or in the same zones within one mile of the subject well? YES \_\_\_\_\_ NO X
2. If answer is yes, identify one such instance: Order No. \_\_\_\_\_ ; Operator, Lease, and Well No.:

3. The following facts are submitted:	Upper Zone	Lower Zone
a. Name of reservoir	<b>Mesaverde</b>	<b>Dakota (WC)</b>
b. Top and Bottom of Pay Section (Perforations)	<b>Pay Zone: 5900-6030' Perf. 5176-5180', 5900-6030'.</b>	<b>Pay Zone: 8151-8325' Perf. 8151-8182', 8193-8224', 8304-8325', 8285-8291', 8276-8266'.</b>
c. Type of production (Oil or Gas)	<b>Gas</b>	<b>Oil</b>
d. Method of Production (Flowing or Artificial Lift)	<b>Flow</b>	<b>Flow</b>

4. The following are attached. (Please mark YES or NO)

Yes a. Diagrammatic Sketch of the Dual Completion, showing all casing strings, including size and setting, top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.

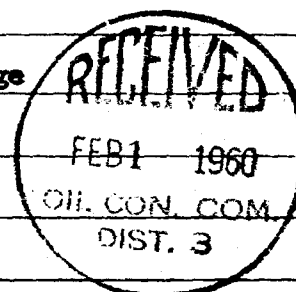
Yes b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.

--- c. Waivers consenting to such dual completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.\*

Yes d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed, it shall be submitted as provided by Rule 112-A.)

5. List all offset operators to the lease on which this well is located together with their correct mailing address.

Southern Union Gas Company is operator on all offset acreage



6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES \_\_\_\_\_ NO \_\_\_\_\_. If answer is yes, give date of such notification See Above

CERTIFICATE: I, the undersigned, state that I am the Mgr. Drlg. & Prod. of the Southern Union Gas

(company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Paul J. Clota  
Signature

Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.

NOTE: If the proposed dual completion will result in an unorthodox well location and/or a non-standard proration unit in either or both of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

*Doyle  
mailed  
2-15-60*

## NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

7-3-58

## APPLICATION FOR DUAL COMPLETION

Field Name <b>Blanco Manverde</b>		County <b>Rio Arriba</b>	Date <b>January 26, 1960</b>
Operator <b>Southern Union Gas Company</b>		Lease <b>Jicarilla</b>	Well No. <b>1-F</b>
Location of Well <b>L</b>	Unit <b>27</b>	Township <b>26N</b>	Range <b>4E</b>

1. Has the New Mexico Oil Conservation Commission heretofore authorized the dual completion of a well in these same pools or in the same zones within one mile of the subject well? YES \_\_\_\_\_ NO X
2. If answer is yes, identify one such instance: Order No. \_\_\_\_\_; Operator, Lease, and Well No.:

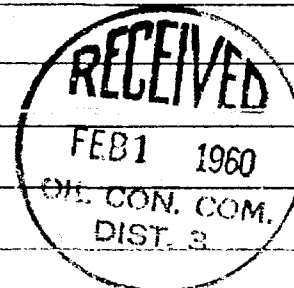
3. The following facts are submitted:	Upper Zone	Lower Zone
a. Name of reservoir	<b>Manverde</b>	<b>Dakota (WC)</b>
b. Top and Bottom of Pay Section (Perforations)	<b>Pay Zone: 5900-6030'</b> <b>Perf. 5176-5180', 5900-6030'.</b>	<b>Pay Zone: 8151-8325'</b> <b>Perf. 8151-8182', 8193-8204', 8304-8325', 8205-8221', 8276-8266'.</b>
c. Type of production (Oil or Gas)	<b>Gas</b>	<b>Oil</b>
d. Method of Production (Flowing or Artificial Lift)	<b>Flow</b>	<b>Flow</b>

4. The following are attached. (Please mark YES or NO)

- Yes a. Diagrammatic Sketch of the Dual Completion, showing all casing strings, including size and setting, top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.
- Yes b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.
- Yes c. Waivers consenting to such dual completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.\*
- Yes d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed, it shall be submitted as provided by Rule 112-A.)

5. List all offset operators to the lease on which this well is located together with their correct mailing address.

**Southern Union Gas Company is operator on all offset savings**



6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES \_\_\_\_\_ NO \_\_\_\_\_. If answer is yes, give date of such notification See Above.

CERTIFICATE: I, the undersigned, state that I am the **Mr. Edg. A. Ford** of the **Southern Union Gas** (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Original Signed By  
**P. J. CLUTE**

Signature

- \* Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.
- NOTE: If the proposed dual completion will result in an unorthodox well location and/or a non-standard proration unit in either or both of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

## NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

7-3-58

## APPLICATION FOR DUAL COMPLETION

Field Name <b>Blanco Manoverda</b>		County <b>Rio Arriba</b>	Date <b>January 26, 1960</b>
Operator <b>Southern Union Gas Company</b>		Lease <b>Jicarilla</b>	Well No. <b>1-F</b>
Location of Well <b>L</b>	Unit <b>27</b>	Township <b>26N</b>	Range <b>4W</b>

1. Has the New Mexico Oil Conservation Commission heretofore authorized the dual completion of a well in these same pools or in the same zones within one mile of the subject well? YES \_\_\_\_\_ NO X
2. If answer is yes, identify one such instance: Order No. \_\_\_\_\_; Operator, Lease, and Well No.:

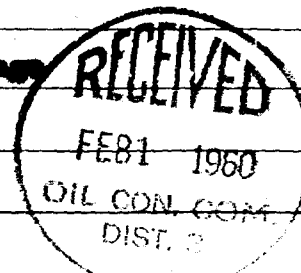
3. The following facts are submitted:	Upper Zone	Lower Zone
a. Name of reservoir	<b>Manoverda</b>	<b>Enchote (UC)</b>
b. Top and Bottom of Pay Section (Perforations)	<b>Pay Zone: 5900-6030'</b> <b>Perf. 5176-5180', 5900-6030'.</b>	<b>Pay Zone: 8151-8385'</b> <b>Perf. 8151-8182', 8193-8204', 8304-8385', 8393-8401', 8476-8486'.</b>
c. Type of production (Oil or Gas)	<b>Gas</b>	<b>Oil</b>
d. Method of Production (Flowing or Artificial Lift)	<b>Flow</b>	<b>Flow</b>

4. The following are attached. (Please mark YES or NO)

- Yes a. Diagrammatic Sketch of the Dual Completion, showing all casing strings, including size and setting, top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.
- Yes b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.
- Yes c. Waivers consenting to such dual completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.\*
- Yes d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed, it shall be submitted as provided by Rule 112-A.)

5. List all offset operators to the lease on which this well is located together with their correct mailing address.

**Southern Union Gas Company is operator on all offset acreage**



6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES \_\_\_\_\_ NO \_\_\_\_\_. If answer is yes, give date of such notification See Above

CERTIFICATE: I, the undersigned, state that I am the Mgr. Eng. & Prod. of the Southern Union Gas (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Original Signed By  
P. J. CLOTE

Paul J. Clote Signature

- \* Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.
- NOTE: If the proposed dual completion will result in an unorthodox well location and/or a non-standard proration unit in either or both of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

## NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

7-3-58

## APPLICATION FOR DUAL COMPLETION

Field Name <b>Blanco Mesquero</b>		County <b>Hio Arriba</b>		Date <b>January 26, 1960</b>
Operator <b>Southern Union Gas Company</b>		Lease <b>Hiorilla</b>		Well No. <b>1-F</b>
Location of Well	Unit <b>L</b>	Section <b>27</b>	Township <b>26N</b>	Range <b>4N</b>

1. Has the New Mexico Oil Conservation Commission heretofore authorized the dual completion of a well in these same pools or in the same zones within one mile of the subject well? YES \_\_\_\_\_ NO X
2. If answer is yes, identify one such instance: Order No. \_\_\_\_\_; Operator, Lease, and Well No.:

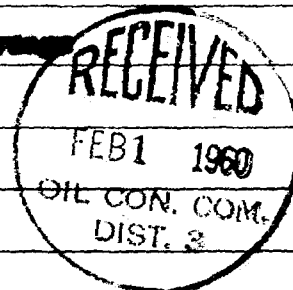
3. The following facts are submitted:	Upper Zone	Lower Zone
a. Name of reservoir	<b>Mesquero</b>	<b>Blanco (H)</b>
b. Top and Bottom of Pay Section (Perforations)	<b>Pay Zone: 5900-6030'</b> <b>Perf. 5176-5180', 5900-6030'</b>	<b>Pay Zone: 6151-6385'</b> <b>Perf. 6151-6180', 6193-6224', 6304-6325', 6305-6321', 6276-6286'</b>
c. Type of production (Oil or Gas)	<b>Gas</b>	<b>Oil</b>
d. Method of Production (Flowing or Artificial Lift)	<b>Flow</b>	<b>Flow</b>

4. The following are attached. (Please mark YES or NO)

- YES a. Diagrammatic Sketch of the Dual Completion, showing all casing strings, including size and setting, top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.
- YES b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.
- YES c. Waivers consenting to such dual completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.\*
- YES d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed, it shall be submitted as provided by Rule 112-A.)

5. List all offset operators to the lease on which this well is located together with their correct mailing address.

**Southern Union Gas Company is operator on all offset leases**



6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES \_\_\_\_\_ NO \_\_\_\_\_. If answer is yes, give date of such notification see above

CERTIFICATE: I, the undersigned, state that I am the **Mgr. Eng. & Prod.** of the **Southern Union Gas** (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

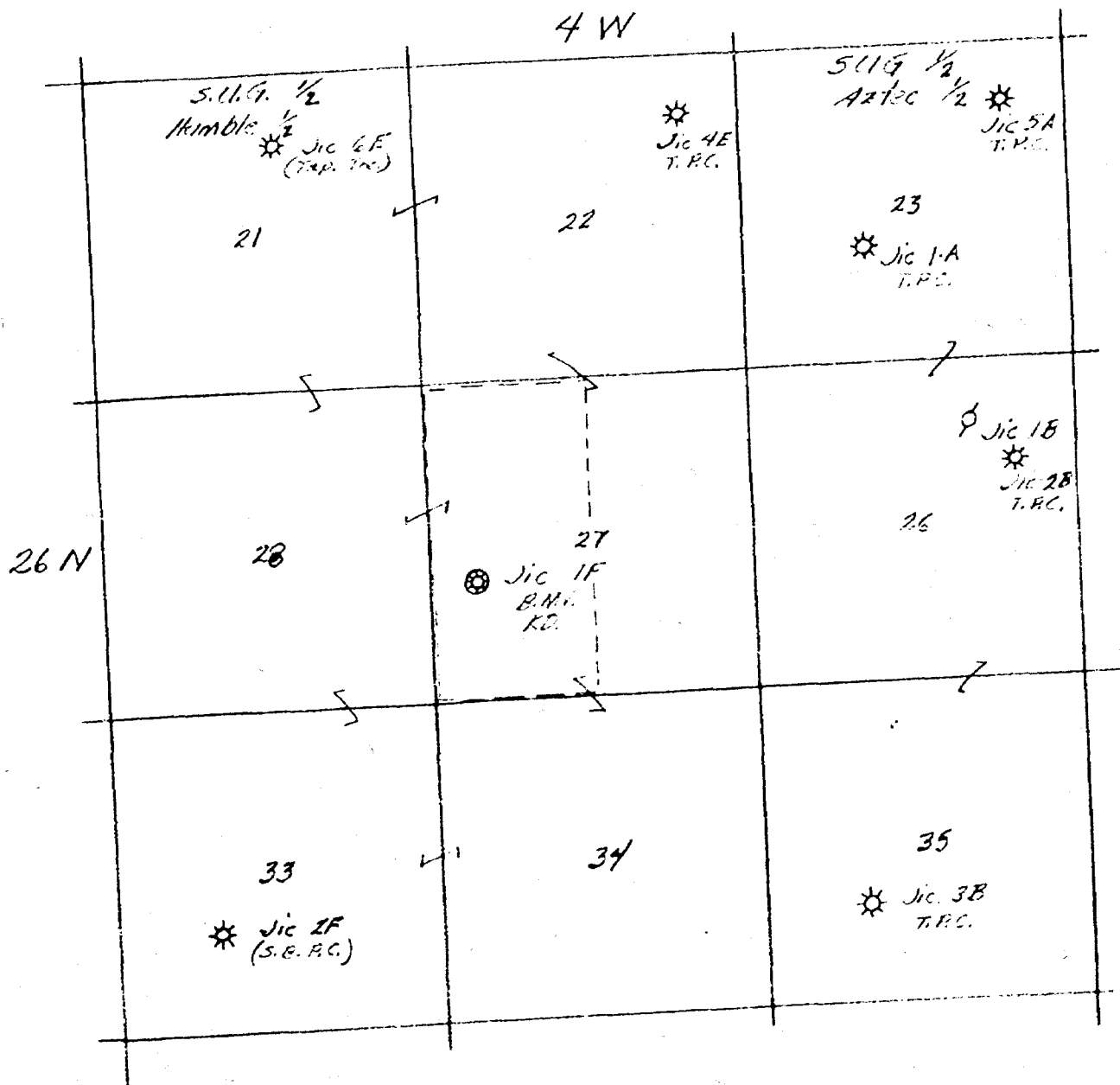
Original Signed By  
**P. J. CLOTE**

**Paul J. Clote**

Signature

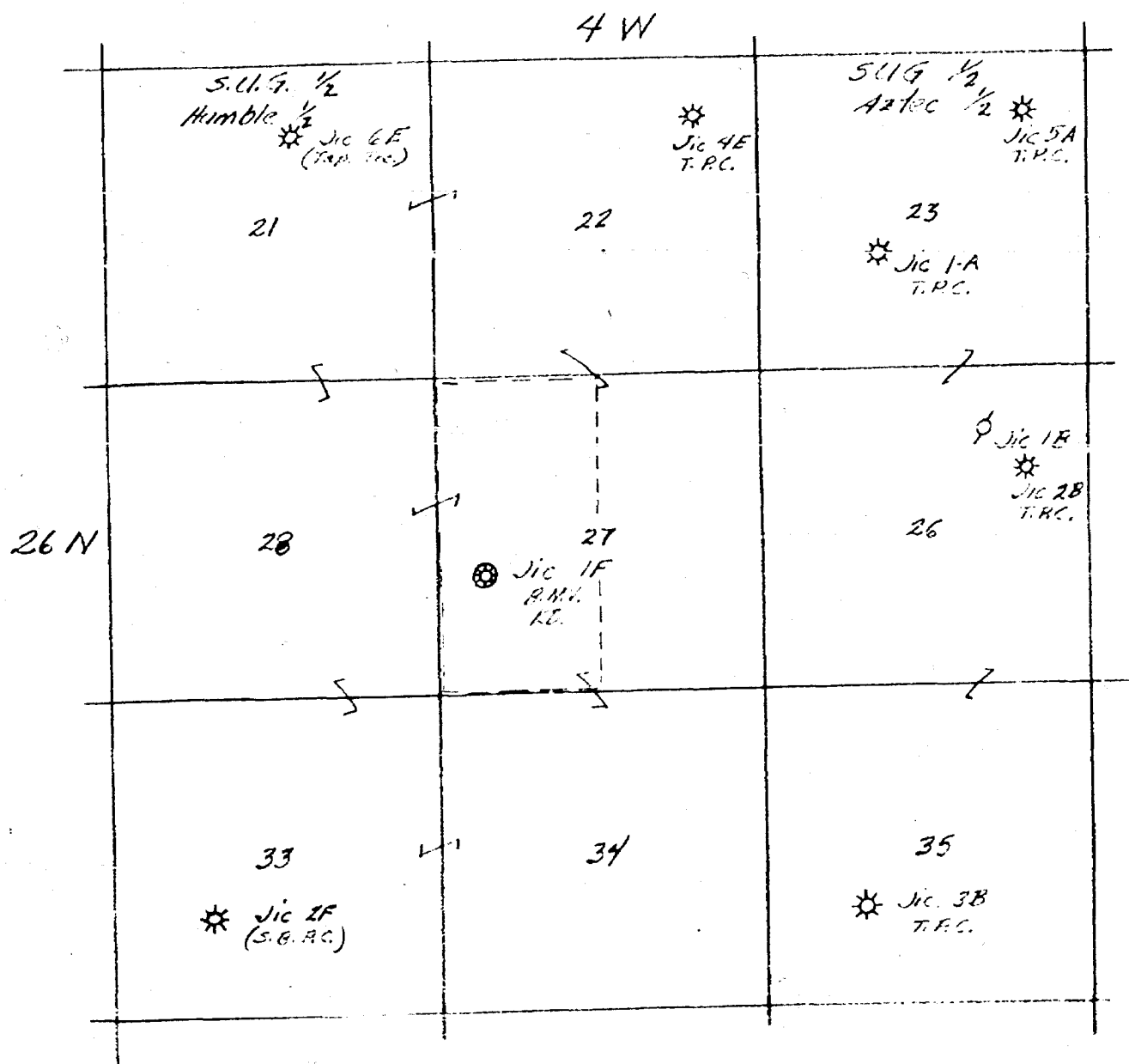
- \* Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.
- NOTE: If the proposed dual completion will result in an unorthodox well location and/or a non-standard proration unit in either or both of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

SOUTHERN UNION GAS COMPANY  
 APPLICATION FOR APPROVAL OF FINAL COMPLETION OF  
 S.U.G. CO. JICARILLA 1F  
 PLAT OF LEASES

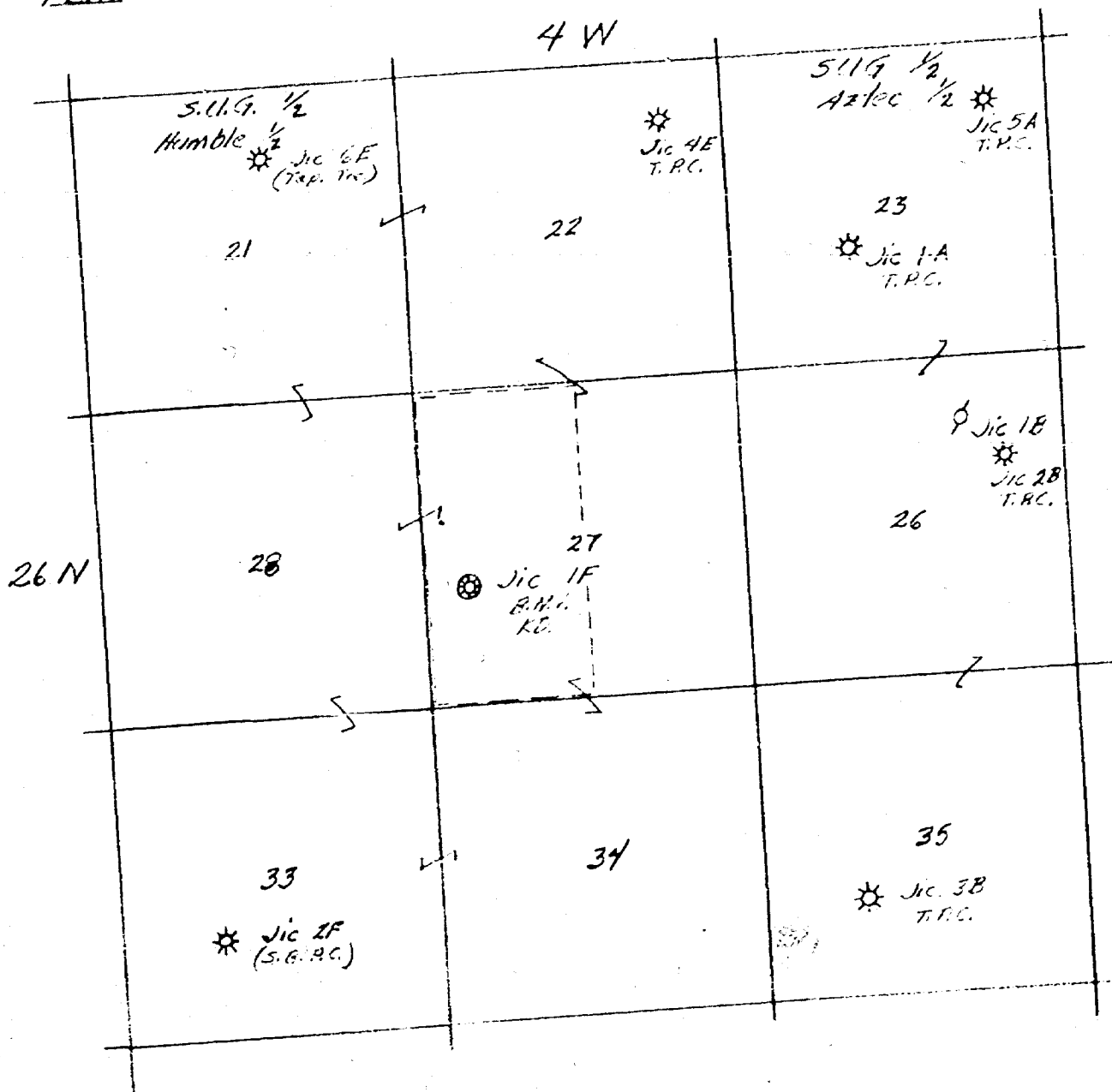




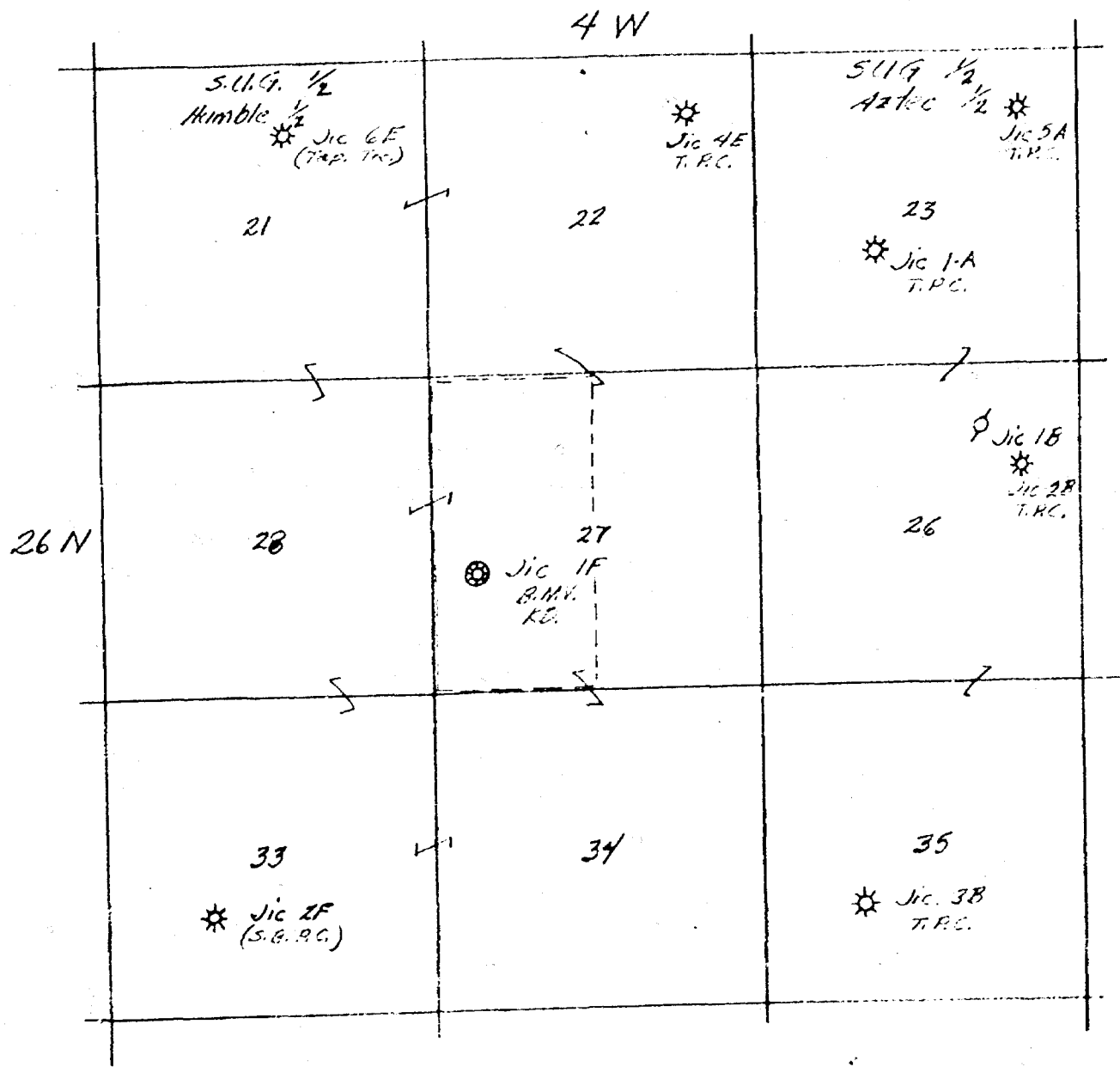
SOUTHERN UNION GAS COMPANY  
 APPLICATION FOR APPROVAL OF DUAL COMPLETION OF  
 S.U.G. CO. JICARILLA 1F  
 PLAT OF OFFSET LEASES



SOUTHERN UNION GAS COMPANY  
 APPLICATION FOR APPROVAL OF DIAL COMPLETION OF  
 S.U.G. CO. JICARILLA IF  
 PLAT OF LEASED LEASES



SOUTHERN UNION GAS COMPANY  
APPLICATION FOR APPROVAL OF FINAL COMPLETION OF  
S.U.G. CO. JICARILLA 1F  
PLAT OF OFFSET LEASES



INTERESTED IN THE SALT

1/2" 36" H-40

cm/d w/25 SA.

175'

2 3/8" EUE 4.7" J-55 14' @ 5180. 4' of J & pin collar.

7" 20" & 22"  
J-55 cm/d  
w/250 SA

5219  
Top of liner 58'  
w/75 SA

5411'

(PB) Whipstock 5437

Fish: 2 3/8" 4.7" 163,  
top at 5761

Open hole to 6084

Perf'd 2 hpf 6030-5900. Fract.

5" 15" J-55 cm/d  
w/450 cu. ft. 40%  
Unif. 15 SA reg.

2 3/8" EUE 4.7" J-55 163 w/2 J's 2 3/8" FS. 14' 143 @ 7879

Conco Collar Stop @ 6774

Gibson Type A 2" x 5" Picker @ 7816  
Setting nipple at 7848  
Tol at 7879 w/4' perf'd and pin collar

Perf'd 4 hpf 7940-8100. Squares w/100 SA reg.

Perf'd 4 hpf 8224-8193, 8182-8151 Acidized & Fract.

Perf'd 4 hpf 8325-8304, 8271-8285, 8276-8266.  
Acidized & Fract.

8350

2011-11-11 11:00 745 2011-11-11

Sketch of 40' & 10' 1115  
GL = 1110

1 7/8" 36" H-40  
cmt'd w/125 SA.

1115'

1" 20" & 22"  
J-55 cmt'd  
w/250 SA

Top of liner seg'd  
w/75 SA

5419'

(PB) Whipstock: 5439'

Fish: 2 3/8" 4.7" H-55,  
top at 5761

Open Hole to 6000'

5" 15" J-55 cmt'd  
w/450 cu. ft. 40%  
Perforated 75 SA reg.

2 3/8" EUE 4.7" J-55 1110 @ 5180. 4' perf. jt & pin collar.

5180'

Perf'd 2 hpf 6030-5900. Frac'd.

2 3/8" EUE 4.7" J-55 163 w/2 jts 2 3/8" EUE. Tail 163 @ 7879

Camco Collar Stop @ 8774

Guiberson Type A 2" x 5" Picker @ 7816

Sealing nipple at 7848

Tail at 7879 w/4' perf'd and pin collar

Perf'd 4 hpf 7940-8000. 5000-8000 w/100 SA reg.

Perf'd 4 hpf 8224-8193, 8182-8151 Acidized & Frac'd.

Perf'd 4 hpf 8325-8304, 8291-8285, 8276-8266.  
Acidized & Frac'd.

8350

Drill Hole 11 (1111) 782 211111

11111111

Sketch of 57' to 78' 111111

OL = 1110

1 7/8" 36" H-40  
cmt'd w/125 sax.

115'

7" 20" & 22"  
J-55 cmt'd  
w/250 sax

5219  
Top of liner cmt'd  
w/75 sax

5411'

(PB) Whipstock 5439

Fish: 2 3/8" 4.7" H-40,  
top at 5761

Open to 6600

5" 15" J-55 cmt'd  
w/450 cu. ft. 40%  
Gravel 75 sax reg.

2 3/8" EUE 4.7" J-55 1111 @ 5180. 4' 1/2" 14" 1/2" 9 pin 1111.

5180

Perf'd 2 hpf 6030-5900. Frac'd.

2 3/8" EUE 4.7" J-55 1111 w/2 jts 2 3/8" EUE 1111 @ 7677

Since Collar Stop @ 6974

Gibbsen Type A 2" x 5" Parker @ 7816  
Setting nipple at 7848

Tail at 7677 w/ 4" perf'd and pin collar

Perf'd 4 hpf 7940-8000. Squeezed w/100 sax reg.

Perf'd 4 hpf 8224-8193, 8182-8151 Acidized & Frac'd.

Perf'd 4 hpf 8325-8304, 8291-8285, 8276-8266.  
Acidized & Frac'd.

8350

SEILINGEN (WELL) GAS LANE

SEILINGEN (WELL)

Sketch of 51 & 761 Units

OL - 1110

1 3/8" 36" H-40  
cmt'd w/125 SA.

175'

1" 20" & 23"  
J-55 cmt'd  
w/250 SA

5219  
Top of liner 50'  
w/75 SA

5411'

(PR) Whipstock: 5437

Fish: 2 3/8" 4.7" H-40,  
top at 5761

Operative to 6030

2 3/8" EUE 4.7" J-55 Unit @ 5180. 4' perf'd jt & pin collar.

5181

Perf'd 2 hpf 6030-5900. Fract.

3" 15" J-55 cmt'd  
w/450 cu. ft. 40%  
Drilled to 58' reg.

2 3/8" EUE 4.7" J-55 16j w/2 jts 2 3/8" H-40. Trl 143 @ 7879

Comco Collar Stop @ 5774

Gambeson Type A 2" x 5" Picker @ 7816  
Sealing nipple at 7848  
Trl at 7879 w/4' perf'd and pin collar

Perf'd 4 hpf 7740-8000. Spacers w/100 SA reg.

Perf'd 4 hpf 8224-8193, 8182-8151 Acidized & Frac'd.

Perf'd 4 hpf 8325-8304, 8291-8285, 8276-8266.  
Acidized & Frac'd.

8350

NEW CASES

CASE 1901:

Application of Caulkins Oil Company for a gas-gas dual completion and for establishment of a 320-acre non-standard Dakota gas unit. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its PC-233 Well, located in Unit D, Section 16, Township 26 North, Range 6 West, Rio Arriba County, New Mexico, in such a manner as to permit the production of gas from the South Blanco-Pictured Cliffs Pool and the production of gas from the Dakota Producing Interval. Applicant further seeks the establishment of a 320-acre non-standard gas unit in the Dakota Producing Interval consisting of the N/2 N/2 and S/2 NW/4 and N/2 SW/4 of said Section 16 to be dedicated to said PC-233 Well.

CASE 1902:

Application of Kenneth Murchison & Company for permission to commingle the production from two separate non-contiguous leases. Applicant, in the above-styled cause, seeks permission to commingle the Bisti-Lower Gallup Oil Pool production from the Federal lease NM-036255-A, consisting of the S/2 SE/4 of Section 3 and the Federal Lease NM-036255-B, consisting of the S/2 NE/4 of said Section 3, Township 25 North, Range 12 West, San Juan County, New Mexico.

CASE 1903:

Application of Texaco Inc. for permission to commingle the production from two separate pools. Applicant, in the above-styled cause, seeks permission to commingle the liquid hydrocarbon production from the Moore-Pennsylvanian Pool and the Moore-Wolfcamp Gas Pool from all wells on its State "BN" (NCT-1) lease consisting of the SW/4 of Section 25, Township 11 South, Range 32 East, Lea County, New Mexico.

CASE 1904:

Application of Sunray Mid-Continent Oil Company for an amendment of Order R-1414, as amended by R-1414-A and R-1414-B. Applicant, in the above-styled cause, seeks an order amending the provisions of Order R-1414 which relate to assignment and transfer of allowables in the Central Bisti LPG-Gas-Water Injection Project, Bisti-Lower Gallup Oil Pool, San Juan County, New Mexico.

CASE 1905:

Application of Humble Oil & Refining Company for an oil-oil dual completion utilizing parallel strings of small diameter casing cemented in a common well bore. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its State M-20 Well, located 1930 feet from the North line and 1980 feet from



DOCKET: EXAMINER HEARING FEBRUARY 25, 1960

Oil Conservation Commission - 9 a.m., State Corporation Commission Hearing Room, Basement, Capitol Building, Santa Fe, New Mexico

The following cases will be heard before Elvis A. Utz, Examiner, or A. L. Porter, Jr., Secretary-Director:

CONTINUED CASES

- CASE 1868: Application of Hamilton Dome Oil Company, Ltd. for permission to commingle the production from three separate pools. Applicant, in the above-styled cause, seeks an order authorizing it to commingle the production from the Justis-Drinkard Pool, the Justis-Fusselman Pool and an undesignated Tubb pool from wells on a lease consisting of the S/2 SE/4 of Section 25, Township 25 South, Range 37 East, Lea County, New Mexico.
- CASE 1879: Application of Amerada Petroleum Corporation for a gas-oil dual completion and for a non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its State EM "A" Well No. 2, located 660 feet from the South and West lines of Section 22, Township 19 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of gas from the Eumont Gas Pool and the production of oil from the Eumont Gas Pool through the casing-tubing annulus and the tubing respectively. Applicant further seeks the establishment of a 160-acre non-standard gas proration unit in the Eumont Gas Pool consisting of the SW/4 of said Section 22 to be dedicated to the said State EM "A" Well No. 2.
- CASE 1888: Application of C. W. Trainer for off-lease storage of oil production. Applicant, in the above-styled cause, seeks permission to store the Pearl-Queen Oil Pool production from his Rushing lease, consisting of the W/2 NE/4 of Section 22, Township 19 South, Range 35 East, Lea County, New Mexico, in a tank battery located on his Signal State lease, consisting of the E/2 NW/4 of said Section 22.
- CASE 1894: (Continued)  
Application of Robert N. Enfield for designation of a unit area. Applicant, in the above-styled cause, seeks a designation of the following-described 560 acres as the Southwest Mescalero Unit Area: Section 32, E/2 NE/4; Section 33, S/2 and NW/4, Township 10 South, Range 32 East, Lea County, New Mexico.

the West line of Section 29, Township 22 South, Range 37 East, Lea County, in such a manner as to permit the production of oil from the Langlie-Mattix Pool and the production of oil from the Drinkard Pool through 2 7/8-inch casing and 4 1/2-inch casing respectively with said casing being cemented in a common well bore.

CASE 1906:

Application of El Paso Natural Gas Products Company for permission to produce more than sixteen wells in a common tank battery. Applicant, in the above-styled cause, seeks an order authorizing the production into a common tank battery of all Horseshoe-Gallup Oil Pool wells presently drilled or hereafter completed on its Horseshoe Ute lease, comprising portions of Sections 27, 28, 33 and 34, Township 31 North, Range 16 West, San Juan County, New Mexico.

CASE 1907:

Application of Gulf Oil Corporation for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its J. N. Carson (NCT-A) Well No. 11, located in Unit K of Section 28, Township 21 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Wantz-Abo Pool and the production of oil from the Paddock Pool through parallel strings of 2 3/8-inch tubing.

CASE 1908:

Application of Val R. Reese & Associates, Inc. for an oil-gas dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Sperling Well No. 1-30, located in Unit I, Section 30, Township 24 North, Range 6 West, Rio Arriba County, New Mexico, in such a manner as to permit the production of oil from the Gallup formation adjacent to the Escrito-Gallup Oil Pool and the production of gas from the Dakota Producing Interval through parallel strings of 2 3/8-inch tubing.

CASE 1909:

Application of Pan American Petroleum Corporation for a 386-acre non-standard gas unit in the Dakota Producing Interval. Applicant, in the above-styled cause, seeks the establishment of a 386-acre non-standard gas unit in the Dakota Producing Interval consisting of all of partial Section 7 and the W/2 of partial Section 8, Township 28 North, Range 10 West, San Juan County, New Mexico, said unit to be dedicated to the J. F. Day "F" Well No. 1, to be located in the E/2 of said partial Section 7.

CASE 1910:

Application of Roy H. Smith Drilling Company for permission to commingle the production from two separate pools. Applicant, in the above-styled cause, seeks permission to commingle the production from the Maljamar-Yates Pool and the Pearsall Pool from all wells on its Walker "A" lease in Section 5, Township 18 South, Range 32 East, and to commingle the production from the Baish Pool and the Maljamar Pool from wells on its Gulf State lease in Section 16, Township 17 South, Range 32 East, all in Lea County, New Mexico.

CASE 1911:

Application of Johnston and Shear for a multiple zone slim hole completion. Applicant, in the above-styled cause, seeks an order authorizing the multiple completion of its Jicarilla Well No. 1-4, located 985 feet from the North line and 805 feet from the West line of Section 4, Township 24 North, Range 5 West, Rio Arriba County, New Mexico, in such a manner as to produce gas from the South Blanco-Pictured Cliffs Pool (or Otero Chacra), gas from the Dakota Producing Interval, and oil from the Gallup formation adjacent to the Otero-Gallup Pool, each to be produced through 2 7/8-inch tubing which tubing is to be cemented in a common well bore.

CASE 1912:

Application of Southern Union Gas Company for a gas-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Jicarilla 1-F, Unit L, Section 27, Township 26 North, Range 4 West, Rio Arriba County, New Mexico, in such a manner as to permit the production of gas from the Blanco Mesaverde Pool, and the production of oil from the Dakota producing interval through parallel strings of 2 3/8-inch tubing.

CASE 1913:

Application of Continental Oil Company for a non-standard oil well location. Applicant, in the above-styled cause, seeks a non-standard oil well location for its Wm. Mitchell "A" Well No. 20, to be located 1320 feet from the North line and 1520 feet from the West line of Section 20, Township 17 South, Range 32 East, Maljamar Paddock Pool, Lea County, New Mexico.

OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

Date 3-1-60

CASE 1912 Hearing Date 2-25-60

My recommendations for an order in the above numbered cases are as follows:

1. Grant S.D.G. request for a Blanco-mesa and Gas - Undesignated Dakota-Oil.
2. 2 strings 2 7/8 E.D.E. tubing, + Guiberson Type A. retrievable packer Set @ 7816.
3. Well in S.D.G. Jicarilla 1-F, NW/4 SW/4. 27-26 N-4W.
4. This well is in violation of 107(d)(3) Tubing on MV. is set 720 ft above top of reef.
5. Packer tests on completion and annular of Blanco-MV. Rel. tests.

Christ. W. J.

Contingent upon  
107 exception

Staff Member

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

March 9, 1960

Mr. Oran L. Haseltine  
Southern Union Gas Company  
P. O. Box 815  
Farmington, New Mexico

Dear Mr. Haseltine:

We enclose herewith two copies of Order R-1626 in Case 1912 issued by the Oil Conservation Commission this date. This case was heard before an examiner on February 25, 1960.

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

1r/

Enclosures: (2)

*COO  
Lester +  
Hobbs*

C  
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BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE NO. 1912  
Order No. R-1626

APPLICATION OF SOUTHERN UNION  
GAS COMPANY FOR A GAS-OIL DUAL  
COMPLETION IN THE BLANCO-  
MESAVERDE POOL AND IN AN UN-  
DESIGNATED DAKOTA OIL POOL,  
RIO ARriba COUNTY, NEW MEXICO

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on February 25, 1960, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 9th day of March, 1960, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Southern Union Gas Company, is the owner and operator of the Jicarilla Well No. 1-F, located in Unit L, Section 27, Township 26 North, Range 4 West, NMPM, Rio Arriba County, New Mexico.
- (3) That the applicant proposes to dually complete the said Jicarilla Well No. 1-F in such a manner as to permit the production of gas from the Blanco-Mesa Verde Pool and the production of oil from an undesignated Dakota pool through parallel strings of 2-3/8 inch NUP tubing.
- (4) That the mechanics of the proposed dual completion are feasible and in accord with good conservation practices.
- (5) That approval of the subject application will neither cause waste nor impair correlative rights.

Case No. 1912  
Order No. R-1626

IT IS THEREFORE ORDERED:

That the applicant be and the same is hereby authorized to dually complete its Jicarilla Well No. 1-F, located in Unit L, Section 27, Township 26 North, Range 4 West, NMPM, Rio Arriba County, New Mexico, in such a manner as to permit the production of gas from the Blanco-Mesaverde Pool and the production of oil from an undesignated Dakota oil pool through parallel strings of 2-3/8 inch EUE tubing.

PROVIDED HOWEVER, That applicant shall complete, operate, and produce said well in accordance with the provisions of Section V, Rule 112-A.

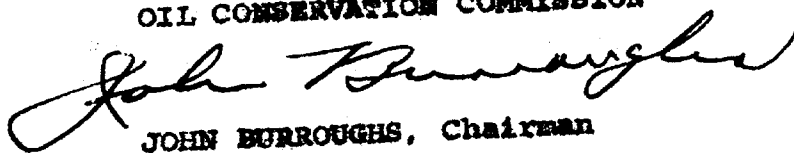
PROVIDED FURTHER, That applicant shall take packer-leakage tests upon completion and annually thereafter during the Annual Deliverability Test Period for the Blanco-Mesaverde Pool or as directed by the Secretary-Director of the Commission.

IT IS FURTHER ORDERED:

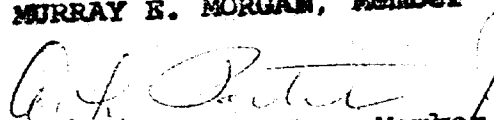
That jurisdiction of this cause is hereby retained by the Commission for such further order or orders as may seem necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of applicant to comply with any requirement of this order, after proper notice and hearing the Commission may terminate the authority hereby granted and require applicant or its successors and assigns to limit its activities to regular single-zone production in the interests of conservation.

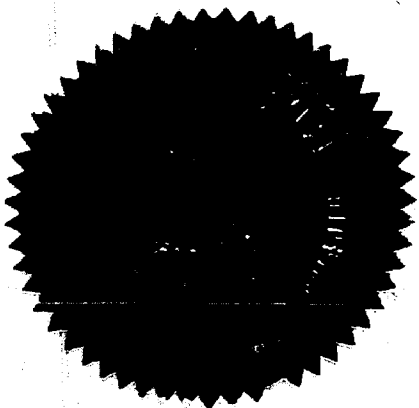
DONE at Santa Fe, New Mexico on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

  
JOHN BURROUGHS, Chairman

  
MURRAY E. MORGAN, Member

  
A. L. PORTER, Jr., Member & Secretary



esr/

BEFORE THE  
OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASE 1912: Application of Southern Union Gas Company for a gas-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Jicarillo 1-F, Unit L, Section 27, Township 26 North, Range 4 West, Rio Arriba County, New Mexico, in such a manner as to permit the production of gas from the Blanco Mesaverde Pool, and the production of oil from the Dakota producing interval through parallel strings of 2 3/8-inch tubing.

State Corporation Commission  
Hearing Room  
Capitol Building  
Santa Fe, New Mexico  
February 25, 1960

BEFORE:

Elvis A. Utz, Examiner.

TRANSCRIPT OF HEARING

MR. UTZ: Case 1912.

MR. FLINT: Case 1912. Application of Southern Union Gas Company for a gas-oil dual completion.

(Witness sworn.)

OREN HAZELTIN

called as a witness, having been first duly sworn, testified as follows:





DIRECT EXAMINATION

BY MR. VERITY:

Q Will you state your name, please?

A Oren Hazeltn.

Q Mr.. Hazeltn, what is your present employment?

A Southern Union Gas Company at Farmington, Production Superintendent.

Q What is your educational background?

A Graduate from University of California College of Engineering 1950.

Q You've testified before this Commission heretofore as an expert petroleum engineer, have you not?

A Yes, sir.

Q Are you familiar with the completion of the Southern Union Gas Company's Jicarilla 1-F well located in the Northwest quarter of the Southwest quarter of Section 27, 26 North, 4 West of Rio Arriba County?

A Yes, sir.

Q Did you complete that well?

A Yes, sir.

Q You are familiar, then, with the details on how it was completed, are you?

A Yes, sir.

Q I hand you what the Reporter has marked Exhibit "A", and ask you to tell us what it is, please?



A This is a tabulation of some of the facts and some of the official documents describing this completion, and including the application for dual, and letter of transmittal, packer setting affidavit, electric log, and so on.

Q Turning to part 3 of this Exhibit, explain to us what that is?

A Part 3 is a plat showing location of the well in question, Jicarilla 1-F marked in red, and the nine sections surrounding that area.

Q Does Southern Union own the lease on all of those nine sections?

A Yes, sir, Southern Union has half interest in all of that acreage that's shown there.

Q And Humble has the other half?

A Humble has the other half of the six most westerly sections, and Aztec has the other half in the three eastern sections, Southern Union being the operator in all cases.

Q Referring to the next portion of the Exhibit, part 4, will you please explain to us what it is?

A This is a schematic of the casing and tubing details as the well presently exists.

Q Referring to this Exhibit, tell us, if you will, please, the history of the completions of this well?

A This well was originally drilled to a total depth of six oh eight oh with seven inch pipe set to fifty-four nineteen,



and was completed as an open hole completion in the Mesa Verde subsequently.

Q Was it produced in the Mesa Verde at that time?

A Yes, sir.

Q Proceed.

A Subsequently, it was felt advisable to recomplate the well and, at the same time, deepen to the Dakota, the Dakota being wildcat in that area, and at that time, it was drilled to a total depth of eighty-three fifty and a liner, five inch liner, was set on bottom and hung at fifty-two nineteen up in the seventies.

Q At that juncture, what was done to the Mesa Verde?

A The Mesa Verde was recompleted. It was perforated and fractured, and has since been cleaned up, is presently shut in.

Q Have you set tubing in this hole?

A Yes, sir. The Dakota string is set on top of a packer with the tail of that Dakota string at seven eight seven nine, that being two and three-eighths O.D. tubing, and the Mesa Verde string of two and three-eighths O.D. tubing is hung to five one eight oh.

Q What type of a packer did you set between the zones, and where was it set?

A That's a Giberson type A set at seven eight sixteen.



Q Now, this is a picture of the packer  
being used. This has to be installed within the  
drilled hole and before we go to the next slide.

Q Referring to part 4, is this a picture of the packer  
with regard to the pressure test on the packer?

A Part 6 is the packer being used.

Q What is your back, the multiple pack program  
test, part 5?

A Part 5 is the productive test of the Mesa Verde  
zone.

Q And then, part 6 shows your pressure test between  
the zones?

A Yes, sir.

Q It did show no leakage at all?

A That's correct.

Q Can this well be effectively and efficiently produced  
as a gas-oil dually completed well?

A Yes, sir.

Q Is there any danger of waste being committed by  
virtue of it being dually completed?

A No, sir. Fluid from both zones can be kept separately.

Q And this will be done under the completion that you  
have outlined?

A Yes, sir.

MR. VERITY: I believe that's all. We offer Exhibit "A"



in evidence.

MR. UTZ: Without objection, Exhibit "A" will be entered in the record.

CROSS-EXAMINATION

BY MR. UTZ:

Q Your name is?

A Hazeltin.

Q Hazeltin?

A T-I-N.

Q What type of packer is the Gibersons, permanent type or retrievable?

A No, sir, that's a production packer, retrievable.

Q Now, I believe the top of your perforations for your Mesa Verde are fifty-nine hundred?

A That is right, sir.

Q And your tubing is hung at fifty-one eighty? Your tubing is to be seven hundred twenty feet above the top of the perforation on the Mesa Verde?

A Yes.

Q I cannot recall the Rule just now. There is a general rule that requires a tubing to be hung no higher than two hundred fifty feet above the top of the perforation. Is that how this well has been completed?

A As it is shown here.

Q And this well is completed in violation of that rule,

DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO



is it not--Dakota top of the perforation seventy-nine forty; is that correct?

A No, sir. Those perforations are squeezed off. The top of the perforations that are open, the top is eighty-one fifty-one.

Q This Exhibit is in error.

A No, it shows the perforations squeezed.

Q Eighty-one fifty-one?

A Right.

Q The tubing is hung at seventy-eight seventy-nine?

A Yes, sir.

Q A little closer on that two hundred.

A The reason that the top string is hung at fifty-one eighty is that we had a five inch liner which wouldn't admit two strings of two and three-eighths parallel, or actually wouldn't admit much else in the way of tubing.

Q Top of liner is at fifty-nine nineteen?

A Yes, sir.

Q So you had to hang your tubing above that?

A Right.

Q All this is caused by the fishing in the hole that you had to whipstock around, if I understand you correctly?

A No, the fishing was incidental to the redrilling, we hoped that we could reclean that old hole out. The reason for redrilling was twofold: The old hole had caved in around the



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ALBUQUERQUE, NEW MEXICO

tubing, and that's been the history with a lot of Mesa Verde completions in the San Juan Basin, that the old shotholes caved in, and have goine in later and cleaned them up and hung the liner against the Mesa Verde. Now, in this case, we went ahead and deepened to the Dakota at the same time because the bottom of the original Mesa Verde tubing string was caved in around to the point we couldn't recovery it.

Q The Rule that I'm speaking of is Rule 107.

MR. VERITY: 107?

MR. UTZ: Right.

#### CROSS EXAMINATION

BY MR. FLINT:

Q As I understand it, you are about seven hundred twenty feet above the pay with your tubing?

A The Mesa Verde is seven hundred and twenty feet above the top of the Mesa Verde zone, right.

Q So in fact, you are required to ask for an exception to this requirement as well as the normal dual?

MR. VERITY: That does not have to be until notice of hearing. I think that can be granted.

MR. UTZ: I think that can be granted administratively.

MR. VERITY: Isn't it possible the Commission could grant this gas-oil completion with provision that we comply with the



Rules which we must do. Recognize that.

MR. UTZ: That's true.

MR. VERITY: We will request administrative approval to leave this completion as it is.

MR. FLINT: I'm not clear as to the eligibility of this type of an exception for administrative approval. I don't see it. The provision for administrative exception in this Rule 107. I think we'll have to investigate that and handle it subsequent to this hearing the best we can.

MR. UTZ: The only thing we can determine here is that it is a violation of that Rule, and take whatever action is necessary.

Do you have bottom hole pressures for these two zones in this area?

A We have shutin casing head pressures, but we have not extroplated this or run bottom hole bombs. Shutin casing head pressure on the Mesa Verde is eleven seventy-seven gauge, and on the Dakota is thirteen hundred p.s.i.g.

MR. FLINT: Mr. Examiner, I do know that provision is made for administrative exception to that two hundred fifty foot limitation, and I suggest, if this dual completion, if approval of this dual completion is recommended, that it should be made subject to added approval of this deviation from the Statewide Rules.

MR. UTZ: Does the Dakota produce any liquids?





A Yes, sir.

Q That accounts for the thirteen hundred pound surface gauge?

A It is oil productive primarily. The gas-oil ratio attached to the Exhibit gives a gas-oil ratio twelve hundred ninety-eight cubic feet per barrel.

MR. UTZ: Any other questions of the witness?

MR. VERITY: I have one other question. Mr. Hazeltin, what cementing program did you use on your lower zone?

A That was-- The liner was cemented using Haliburton equipment, cemented with four hundred fifty sacks of dysel lightweight cement and four hundred fifty cubic feet of dysel and four hundred forty-five sacks of regular cement to give a good shoe cement job, and using temperature survey the height of that cement was determined, and the top of the liner was squeezed with, I believe, seventy-five sacks behind the top on the liner.

Q So that you had cement in the top and below?

A That is right.

MR. UTZ: No other questions? The witness may be excused.

(Witness excused.)

MR. UTZ: Any statements to be made in this case?

The case will be taken under advisement.



## C E R T I F I C A T E

STATE OF NEW MEXICO )  
 ) ss  
 COUNTY OF BERNALILLO )

I, J. A. TRUJILLO, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me in stenotype and reduced to typewritten transcript by me and/or under my personal supervision, and that the same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal, this, the 15<sup>th</sup> day of March, 1960, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Joseph A. Trujillo  
 NOTARY PUBLIC

My commission expires:  
 October 5, 1960.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 1912, heard by me on Feb. 25, 1960.  
Francis A. Rife Examiner  
 New Mexico Oil Conservation Commission

DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO



SOUTHERN UNION GAS COMPANY

JICARILLA 1-F

LIST OF EXHIBITS

1. Letter of Transmittal, Application for Dual Completion.
2. Application for Dual Completion
3. Plat of Offset Leases
4. Sketch of Casing and Tubing Details
5. Multi-Point Back Pressure Test for Gas Wells (Mesaverde)
6. Northwest New Mexico Packer Leakage Test
7. Packer Setting Affidavit
8. Subsequent Report of Redrilling (three pages)
9. Gas-Oil Report (Dakota)
10. Induction-Electrical Log

Ex. A

Case 1912

January 27, 1960

Mr. Emery C. Arnold  
New Mexico Oil Conservation Commission  
1000 Rio Brazos Road  
Aztec, New Mexico

Dear Mr. Arnold:

We are enclosing the following material on the Jicarilla #1-F well, a dual completion, which is located in Section 27, Township 26N, Range 1W in Rio Arriba County, New Mexico.

1. Original and four copies of Application for Dual Completion
2. Five copies of Plat of Offset Leases
3. Five copies covering Casing and Tubing Details
4. Original and four copies of Multi-Point Back Pressure Test for Gas Wells
5. Original and four copies of Northwest New Mexico Packer-Leakage Test
6. Original and two copies of Packer Setting Affidavit

If we can be of further assistance, please advise.

Yours very truly,

SOUTHERN UNION GAS COMPANY

PJC:rk  
Encls.

cc: Humble Oil & Refining Company  
Production & Exploration  
P. O. Box 2180  
Houston, Texas

Oran Haseltine  
Farmington, New Mexico

bcc: Land & Lease Dept. - Dallas  
Proration Dept. - Dallas

## NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

7-3-58

## APPLICATION FOR DUAL COMPLETION

Field Name		Blanco		County	Rio Arriba	Date	January 26, 1960
Operator		Southern Union Gas Co.		Lease	Jicarilla	Well No.	1-F
Location of Well	Unit	Section	27	Township	26N	Range	4W

1. Has the New Mexico Oil Conservation Commission heretofore authorized the dual completion of a well in these same pools or in the same zones within one mile of the subject well? YES \_\_\_\_\_ NO \_\_\_\_\_
2. If answer is yes, identify one such instance: Order No. \_\_\_\_\_; Operator, Lease, and Well No.:

3. The following facts are submitted:	Upper Zone	Lower Zone
a. Name of reservoir	Albuquerque	Nakota (NW)
b. Top and Bottom of Pay Section (Perforations)	Pay Zone: 5900-5930' Perf. 5976-5980', 5900-5930'	Pay Zone: 8151-8305' Perf. 8151-8182', 8193-8224', 8304-8325', 8285-8291', 8276-8286'
c. Type of production (Oil or Gas)	Gas	Oil
d. Method of Production (Flowing or Artificial Lift)	Flow	Flow

4. The following are attached. (Please mark YES or NO)

- Yes a. Diagrammatic Sketch of the Dual Completion, showing all casing strings, including size and setting, top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.
- Yes b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.
- Yes c. Waivers consenting to such dual completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.\*
- Yes d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed, it shall be submitted as provided by Rule 112-A.)

5. List all offset operators to the lease on which this well is located together with their correct mailing address.

Southern Union Gas Company is operator on all offset acreage

6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES \_\_\_\_\_ NO \_\_\_\_\_. If answer is yes, give date of such notification see above

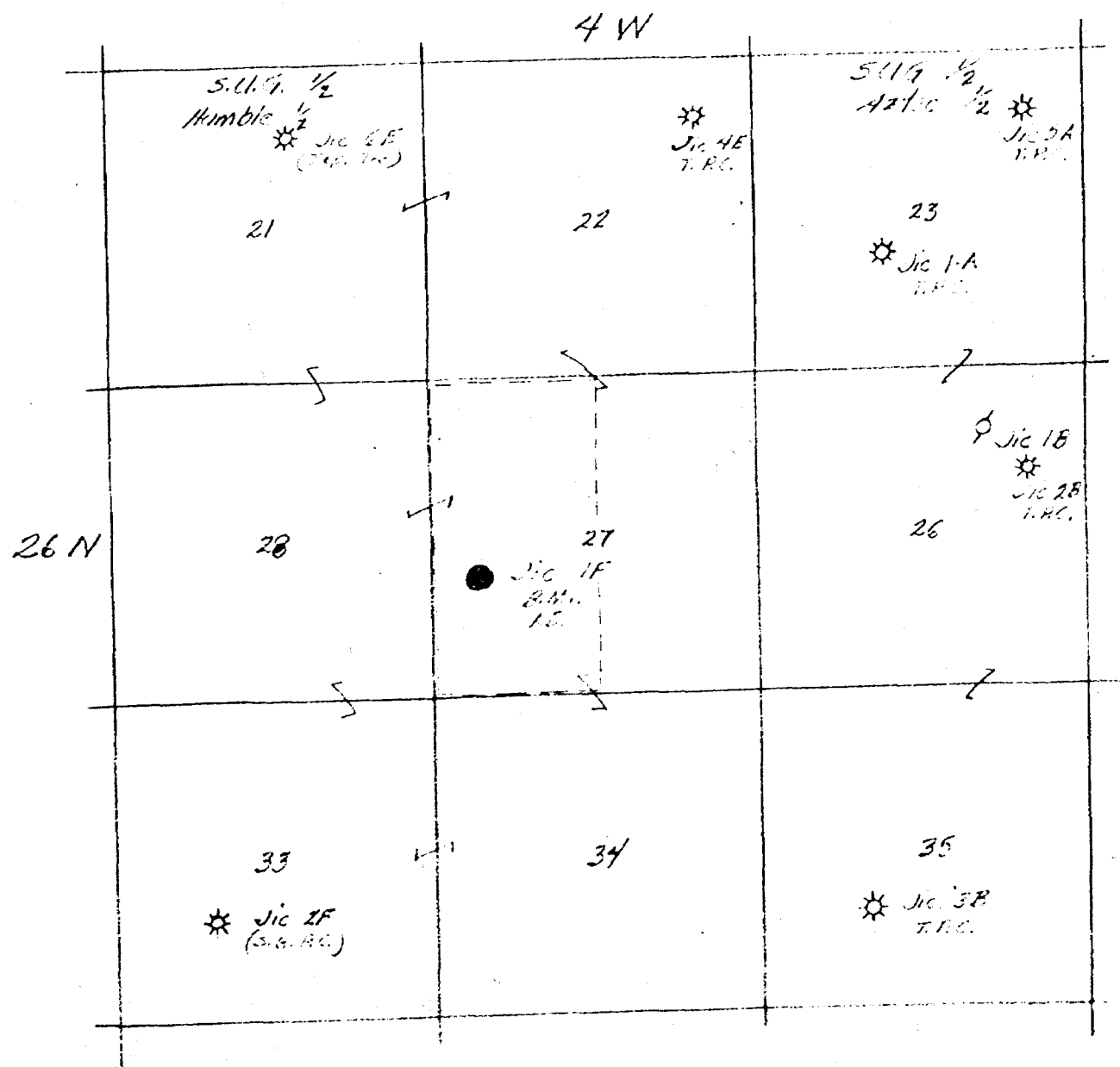
CERTIFICATE: I, the undersigned, state that I am the Mgr. Drilg. & Prod. of the Southern Union Gas Co. (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Original signed by  
P. J. Clote

Signature

- \* Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.
- NOTE: If the proposed dual completion will result in an unorthodox well location and/or a non-standard perforation unit in either or both of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

SOUTHERN UNION GAS COMPANY  
 APPLICATION FOR APPROVAL OF POOL COMPLETION OF  
 S.U.G. CO. JICARILLA, IF  
 PLAT OF RESECT LEASES



Section 11

Sketch of ...

7 3/8" 36" H-40  
cmtd w/125 ss.

110'

2 3/4" 47" J-55 ...

1" 20" & 23"  
J-55 cmtd  
w/250 ss

510'

Top of ...  
w/75 ss

(PB) map to ...  
Fish: 2 3/8" 47" H-40  
w/ 5761  
Cpmt to ...

Perf 1 2 hpt 6020-5100. Fract. 1M

5" 13" J-55 cmtd  
w/450 ss. 70.6  
Cpmt to ...

2 3/4" 47" J-55 ... 2 3/4" 47" ... 143 + 7677

... 114

Subsided Type A ...  
... w/47" ...

Perf 4 hpt 7140-6000 ...

Perf 2 hpt 8224-8193, 8182-8151 Activated & Fract. RD

Perf 4 hpt 8325-8304, 8271-8285, 8276-8266 RD  
Activated & Fract.

8256

## NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Blanco Reserverde Formation Reserverde County Rio Arriba  
 Initial \_\_\_\_\_ Annual \_\_\_\_\_ Special X Date of Test Jan. 21, 1960  
 Company Southern Union Gas Company Lease Jicarilla "F" Well No. 1-F  
 Unit L Sec. 27 Twp. 26N Rge. 4W Purchaser Southern Union Gas Company  
 Casing 5" Wt. 15# I.D. 4.408 Set at 8350 Perf. 6030 To 5900 (Reserverde)  
 Tubing 2-3/8" Wt. 4.7 I.D. 1.995 Set at 5180 Perf. 5180 To 5176  
 Gas Pay: From 6030 To 5900 (KVD) xG 0.67 -GL \_\_\_\_\_ Bar.Press. 12.0  
 Producing Thru: Casing \_\_\_\_\_ Tubing X Type Well Gas-Oil Dual  
 \_\_\_\_\_ Single-Bradenhead-G. G. or G.O. Dual  
 Date of Completion: 1-10-60 Packer 7816 Reservoir Temp. \_\_\_\_\_

## OBSERVED DATA

Tested Through (XXXXXX) (Choke) (XXXXX)

Type Taps \_\_\_\_\_

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						1177		1177		S.I. 7 days +
1.		3/8"	867		70	867	70	907		3 hrs.
2.										
3.										
4.										
5.										

## FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w p_f}$	Pressure psia	Flow Temp. Factor F <sub>t</sub>	Gravity Factor F <sub>g</sub>	Compress. Factor F <sub>pv</sub>	Rate of Flow Q-MCFPD @ 15.025 psia
1.	3.0300		879	0.9905	0.9463	1.100	2.746 MCFPD
2.							
3.							
4.							
5.							

## PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio (0) cf/bbl.  
 Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.  
 $P_c$  \_\_\_\_\_ (1-e<sup>-s</sup>)

Specific Gravity Separator Gas \_\_\_\_\_  
 Specific Gravity Flowing Fluid \_\_\_\_\_  
 $P_c$  1189  $P_c^2$  1413.7  
 $P_w$  919  $P_w^2$  844.6

No.	$P_w$ P <sub>t</sub> (psia)	$P_c^2$	F <sub>c</sub> Q	(F <sub>c</sub> Q) <sup>2</sup>	(F <sub>c</sub> Q) <sup>2</sup> (1-e <sup>-s</sup> )	$P_w^2$	$P_c^2 - P_w^2$	Cal. P <sub>w</sub>	$\frac{P_w}{P_c}$
1.						844.6	569.1		
2.									
3.									
4.									
5.									

Absolute Potential: 5432 MCFPD MCFPD; n 0.75COMPANY SOUTHERN UNION GAS COMPANYADDRESS P. O. Box 515 - Farmington, New MexicoAGENT and TITLE Oran L. Haseltine, Production Supt.WITNESSED G. L. HoffmanCOMPANY SOUTHERN UNION GAS COMPANY

REMARKS

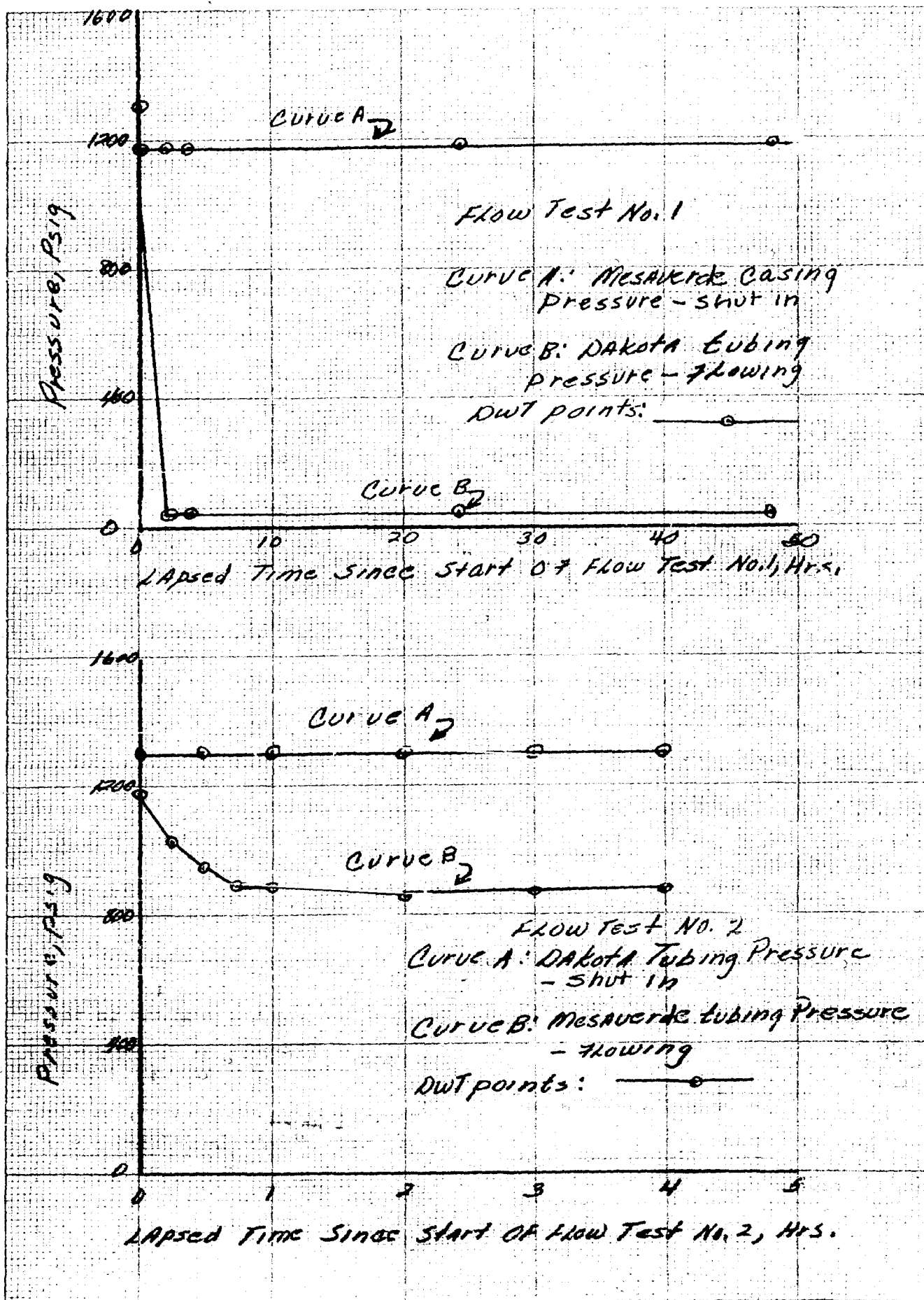


1. A pressure leakage test shall be conducted on each zone of the well within seven days after completion of the well. The test shall be conducted by flowing the well at a pressure of 1200 psig for 24 hours. The test shall be conducted by flowing the well at a pressure of 1200 psig for 24 hours. The test shall be conducted by flowing the well at a pressure of 1200 psig for 24 hours.
2. At least 24 hours prior to the commencement of any pressure leakage test, the operator shall submit the completion in writing of the exact time the test is to be conducted. The test shall be conducted at the time specified.
3. The pressure leakage test shall be conducted on each zone of the well. The test shall be conducted by flowing the well at a pressure of 1200 psig for 24 hours. The test shall be conducted by flowing the well at a pressure of 1200 psig for 24 hours.
4. For Flow Test No. 1, the zone of the well that completion shall be indicated at the normal rate of production shall be the zone that shall be shut-in. The test shall be conducted by flowing the well at a pressure of 1200 psig for 24 hours. The test shall be conducted by flowing the well at a pressure of 1200 psig for 24 hours.
5. Following completion of Flow Test No. 1, the well shall be shut-in in accordance with paragraph 3 above.
6. Flow Test No. 2 shall be conducted even though no leak was indicated during Flow Test No. 1. The test shall be conducted by flowing the well at a pressure of 1200 psig for 24 hours. The test shall be conducted by flowing the well at a pressure of 1200 psig for 24 hours.

Each zone of the well shall be shut-in with a pressure of 1200 psig for 24 hours. The test shall be conducted by flowing the well at a pressure of 1200 psig for 24 hours. The test shall be conducted by flowing the well at a pressure of 1200 psig for 24 hours.

The test shall be conducted by flowing the well at a pressure of 1200 psig for 24 hours. The test shall be conducted by flowing the well at a pressure of 1200 psig for 24 hours. The test shall be conducted by flowing the well at a pressure of 1200 psig for 24 hours.

The test shall be conducted by flowing the well at a pressure of 1200 psig for 24 hours. The test shall be conducted by flowing the well at a pressure of 1200 psig for 24 hours. The test shall be conducted by flowing the well at a pressure of 1200 psig for 24 hours.



NEW MEXICO OIL CONSERVATION COMMISSION

Revised 11-1-58

NORTHWEST NEW MEXICO PACKER-LEAKAGE TEST

Operator Southern Union Gas Company Lease Marilla "A" Well No. 1  
Location of Well: Unit 1 Sec. 27 Twp. 26N Rge. 4W County San Arriba

	Name of Reservoir or Pool	Type of Prod. (Oil or Gas)	Method of Prod. (Flow or Art. Lift)	Prod. Medium (Tbg. or Csg.)
Upper Completion	Blanco Mesavero	Gas	Flow	Tbg.
Lower Completion	Nakota (Wildcat)	Oil	Flow	Tbg.

PRE-FLOW SHUT-IN PRESSURE DATA

Upper Compl	Hour, date Shut-in 1-10-60	Length of time shut-in 11 days	SI press. psig 1177	Stabilized? (Yes or No) Yes
Lower Compl	Hour, date 9:00 AM Shut-in 1-14-60	Length of time shut-in 74 hours	SI press. psig 1300	Stabilized? (Yes or No) Yes

FLOW TEST NO. 1

Commenced at (hour, date)* 10:30 a.m. 1-17-60		Zone producing (Upper or Lower): Lower	
Time (hour, date)	Lapsed time since*	Pressure Upper Compl. Lower Compl.	Prod. Zone Temp. Remarks
10:30 a.m. 1-17-60	0	1172 1300	Ambient Start of test
12:30 p.m.	2 hrs.	1173 40	80
2:30 p.m.	4 hrs.	1175 40	80
10:30 a.m. 1-17-60	24 hrs.	1176 40	80
10:30 a.m. 1-17-60	48 hrs.	1176 40	80 End of test

Production rate during test

Oil: 50 BOPD based on 100 Bbls. in 48 Hrs. 44 deg. Grav. GOR  
Gas: MCPPD; Tested thru (Orifice or Meter):

MID-TEST SHUT-IN PRESSURE DATA

Upper Compl	Hour, date Shut-in 1-10-60	Length of time shut-in 11 days	SI press. psig 1177	Stabilized? (Yes or No) Yes
Lower Compl	Hour, date 10:30 a.m. Shut-in 1-17-60	Length of time shut-in 10:30 a.m. 1-21-60	SI press. psig 48	Stabilized? (Yes or No) Yes

FLOW TEST NO. 2

Commenced at (hour, date)** 10:30 a.m. 1-21-60		Zone producing (Upper or Lower):	
Time (hour, date)	Lapsed time since **	Pressure Upper Compl. Lower Compl.	Prod. Zone Temp. Remarks
10:30 a.m. 1-21-60	0	1177 1300	Ambient Start of test
10:45 a.m.	0.25 hrs.	1020 -	
11:00 a.m.	0.5 hrs.	930 1300	
11:15 a.m.	0.75 hrs.	890 -	
11:30 a.m.	1.00 hrs.	890 1300	
12:30 a.m.	2.00 hrs.	868 1300	70
1:30 a.m.	3.00 hrs.	866 1300	70
2:30 a.m.	4.00 hrs.	867 1300	70 End of test

Production rate during test

Oil: 2746 BOPD based on 2746 Bbls. in 48 Hrs. 44 deg. Grav. GOR  
Gas: MCPPD; Tested thru (Orifice or Meter): Choke

REMARKS:

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

Approved: 2-1 19 60  
New Mexico Oil Conservation Commission

By Sammy C. Arnold

Title Supervisor Dist. #3

Operator Southern Union Gas Company

By Oran Haseltine

Title Production Superintendent

Date 1-22-60

STATE OF NEW MEXICO)

COUNTY OF SAN JUAN )

I, A. T. Fry, being first duly sworn upon my oath depose and say as follows:

I am an employee of Guilbertson Corporation, and that on December 13, 1959 I was called to the location of the Southern Union Gas Company's Jicarilla #1-F well located in the NE/4 SW/4 of Section 27, Township 26N, Range 4W, N.M.P.M. for the purpose of installing a production packer. Under my direct supervision a Guilbertson Model A production packer was set at 7816 feet. The production packer was properly set in accordance with the usual practices and customs of the industry.

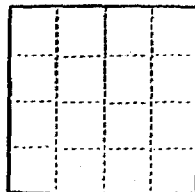
Guilbertson Corporation

s/s A. T. Fry

Subscribed and sworn to before me, a Notary Public in and for San Juan County, New Mexico, the 13 day of December, 1959.

s/s Patrick J. Eldredge  
Notary Public in and for San Juan  
County, New Mexico

Oct. 15, 1960  
My Commission Expires



(SUBMIT IN TRIPLICATE)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Budget Bureau No. 42-R258.4  
Approval expires 12-31-60.

Land Office Santa Fe  
Lease No. Jicarilla Cont. #107  
Unit NW 1/4, SW 1/4, Sec. 27, T-  
26N, R-4W, Rio Arriba  
Co., New Mexico

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL.....	SUBSEQUENT REPORT OF WATER SHUT-OFF.....	
NOTICE OF INTENTION TO CHANGE PLANS.....	SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING.....	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF.....	SUBSEQUENT REPORT OF ALTERING CASING.....	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL.....	SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR.....	XX
NOTICE OF INTENTION TO SHOOT OR ACIDIZE.....	SUBSEQUENT REPORT OF ABANDONMENT.....	
NOTICE OF INTENTION TO PULL OR ALTER CASING.....	SUPPLEMENTARY WELL HISTORY.....	
NOTICE OF INTENTION TO ABANDON WELL.....		

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

January 14, 1960

Jicarilla  
Well No. 1-F/ is located 3600 ft. from SW line and 850 ft. from W line of sec. 27  
NW 1/4 SW 1/4 27 26N 4W N.M.P.M.  
(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)  
Blanco-Monasterio Rio Arriba New Mexico  
(Field) (County or Subdivision) (State or Territory)

The elevation of the derrick floor above sea level is 7190 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

1. Re-drilling operations commenced on Aug. 25, 1959.
2. Attempt to pull 2" tbg. - Tbg. bridged - backed off 2" tbg. @ 5769'. Left 7 Jts. 120' in old shot hole.
3. Set Baker Model "K" 7" Magnesium Cement retainer @ 5336' on Aug. 30, 1959 - Sq. open shot hole from 5419 to 6000 w/285 ex cement w/2% gel.
4. Drld. model "K" 7" Baker ret. on Sept. 1, 1959 & cleaned out hole to T.D. of 5439' R.K.B.
5. Set 3 whipstock at 5439 on Sept. 2, 1959
6. Drld. 6 1/2" whipstock hole w/gas from 5439 to 6210
7. Mud drilled hole from 6210 to 6350 T.D.
8. Ran 97 Jts. 5", 15.00, J-55 cas. as a liner on Oct. 23, 1959 - Cased w/450 Cuft. 40% Diaseal Cnt. & 45 ex reg. cnt. w/2% gel - Bottom of liner set at 6350 R.K.B. Tip at 5219 R.K.B.

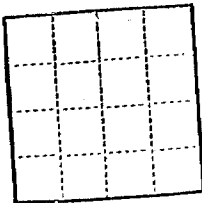
I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company SOUTHERN OXYGEN GAS COMPANY

Address P. O. Box 815  
Farmington, New Mexico

By Vernon J. Lowe  
Title Drilling Superintendent

Form 9-381a  
(Feb. 1951)



(SUBMIT IN TRIPLICATE)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Budget Bureau No. 42-R358.4  
Approval expires 12-31-60.

Land Office Santa Fe  
Lease No. Jicarilla Cont. #107  
Unit NW/4 SW/4, Sec. 27, T-  
26N, R-4W, Rio Arriba  
Cty., New Mexico

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL	SUBSEQUENT REPORT OF WATER SHUT-OFF
NOTICE OF INTENTION TO CHANGE PLANS	SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING
NOTICE OF INTENTION TO TEST WATER SHUT-OFF	SUBSEQUENT REPORT OF ALTERING CASING
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL	SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR
NOTICE OF INTENTION TO SHOOT OR ACIDIZE	SUBSEQUENT REPORT OF ABANDONMENT
NOTICE OF INTENTION TO PULL OR ALTER CASING	SUPPLEMENTARY WELL HISTORY
NOTICE OF INTENTION TO ABANDON WELL	

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

January 14, 1960

Well No. 1-F/ Jicarilla is located 1600 ft. from N line and 050 ft. from W line of sec. 27

NW/4 SW/4 27  
(1/4 Sec. and Sec. No.)

26N  
(Twp.)

1W  
(Range)

N.M.P.M.  
(Meridian)

Blanco-Mesa Verde  
(Field)

Rio Arriba  
(County or Subdivision)

New Mexico  
(State or Territory)

The elevation of the derrick floor above sea level is 7190 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

9. Ran temperature survey on Oct. 24, 1959 - Top of unit at 5750' K.R.
10. Ran Baker Model ngr 7" Magnesium Cnt. ret. set at 5075' R.K.R. Sq. top of 5" liner w/75 sq reg. on Oct. 31, 1959. Standing sq. pressure 1200 psi
11. Cleaned out hole to P.B.T.D. 8331
12. Perf. 4 shots/ft. 8325-8304, 8291-8285, 8278-8266; Ran Baker pack. acidized perfs w/1000 gal. 7% mud acid - Sand water frac perfs. w/58,968 gals. of water and 29,500# sand on Nov. 9, 1959.
13. Set Baker cast Iron Bridge Plug at 8253 - Perf. 4 shots/ft. 8224-8193, 8182-8151 Acidized perf. w/1000 gals. of 7% mud acid - Sand water frac perfs. w/50,000# sand and 65,982 gals. of water on Nov. 17, 1959
14. Set cast iron Bridge Plug at 8010 - Perf. 4 shots/ft. 7940-8000'. Acidized perfs w/500 gals. 15% mud acid - on Nov. 20, 1959. Re-acidized perfs. w/2000 gals. 15% mud acid on Nov. 21, 1959. Sand water frac perf. 7940-8000' w/15000# sand & 28,098 gals. water on Nov. 22, 1959.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company SOUTHERN UNION GAS COMPANY

Address P. O. Box 815  
Farmington, New Mexico

By Vernon J. Jones  
Title Drilling Superintendent

GPO 862040

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SUNDRY NOTICES DATA	
NOTICE OF INTENTION TO DRILL	SUBSEQUENT REPORT OF WELL SHUT-IN
NOTICE OF INTENTION TO CHANGE PLANS	SUBSEQUENT REPORT OF SHOOTING OR ABANDON
NOTICE OF INTENTION TO TEST WATER SHUT-OFF	SUBSEQUENT REPORT OF ALTERING CASING
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NOTICE OF INTENTION TO PULL OR ALTER CASING	SUPPLEMENTARY WELL HISTORY
NOTICE OF INTENTION TO ABANDON WELL	

QUICK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA

INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA

INDICATE ABOVE BY CHECKING

1946

Well No. 1-27 is located 100 ft. from [N] line and 100 ft. from [W] line of sec. 27.

100 ft. (Range) 100 ft. (Section)

100 ft. (Sec. and 1/4 Sec. No.)

Blanco-Avalon (Field)

(County or Subdivision)

(State or Territory)

The elevation of the derrick floor above sea level is 42.0 ft.

### DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudlogging jobs, cementing points, and all other important proposed work)

15. Clean hole out to Bridge Bluff at 1310 - Mesaverde Fm. 1910-1930' w/10,000 gals. acid on Nov. 25, 1959.
16. Ann Baker Model "A" Rotator set at 7700'. Sp. point. Fm. 1910-1930' w/100 gal. reg. cement - stirring squeeze pressure, 2400 psi.
17. Perforated Mesaverde Formation 2 shots/ft. Fm. 1910-1930 on Nov. 30, 1959 - sand water frac. perf. w/90,000 gal. sand & 60,480 gals. water.
18. Drilled bridge plugs and cleaned out to P.E.T.D. of 8331.
19. Run 258 jts. 2-3/8", 4.7#, J-55 Tbg. to Dakota Formation on Dec. 13, 1959. Set Oilerson Type "A" Cast Iron permanent type production packer at 7816 - bottom tubing at 7879 - R.K.B.
20. Run 169 jts. 2" E.U.E. 4.7#, J-55 Tbg. to Mesaverde formation on Dec. 13, 1959. Tubing landed at 5196 R.K.B.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company SOUTHERN UNION GAS COMPANY

Address P. O. Box 815

**FARFIELD, LOU** **AKA: [REDACTED]**

14-00000

Title Dealing Superintendant

CPD 862040

NEW MEXICO OIL CONSERVATION COMMISSION

GAS-OIL RATIO REPORT

OPERATOR Southern Union Gas Company POOL Dakota Wildcat  
ADDRESS P. O. Box 515, Farmington, New Mex. MONTH OF January, 19 60  
SCHEDULED TEST..... COMPLETION TEST X SPECIAL TEST..... (Check One)  
(See Instructions on Reverse Side)

Lease	Well No.	Date of Test	Producing Method	Choke Size	Test Hours	Daily Allowable Bbls.	Production During Test			GOR Cu. Ft. Per Bbl.
							Water Bbls.	Oil Bbls.	Gas MCF	
Jicarilla "F"	1	1-27-60	F	1"	24	-	20	84	109	1298

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 Commission.

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

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 certify that the information given is true and complete to the best of my knowledge.)

Date January 26, 1960

SOUTHERN UNION GAS COMPANY

Company

By S/S Oren L. Haseltine  
O. L. Haseltine

Production Superintendent  
Title