

CASE 1838: Application of EL PASO GAS
CO. for gas-gas deal of its Huerfano
Unit Well No. 111 in Unit F.

Case No.

1838

Application, Transcript,
Small Exhibits, Etc.

JANUARY 6, 1960

DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
JANUARY 6, 1960

IN THE MATTER OF:

CASE 1838: Application of El Paso Natural Gas Company for a gas-gas dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Huerfano Unit Well No. 111 (GD), located in Unit F, Section 20, Township 26 North, Range 9 West, San Juan County, New Mexico, in such a manner as to permit the production of gas from an undesignated Gallup pool and the production of gas from an undesignated Dakota pool through parallel strings of tubing.

BEFORE:

Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: The hearing will come to order, please. The next case on the docket will be Case 1838.

MR. PAYNE: Case 1838. Application of El Paso Natural Gas Company for a gas-gas dual completion.

MR. SETH: Mr. Examiner, I would like to enter my appearance in two cases, Cases 1838 and 1848, together with Mr. Garrett Whitworth.

MR. WHITWORTH: We have one witness, Mr. John Mason.

(Witness sworn.)



JOHN MASON

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

DIRECT EXAMINATION

BY: MR. WHITWORTH

Q Please state your name, by whom and in what capacity you are employed?

A My name is John Mason, I am employed by the El Paso Natural Gas Company as proration engineer.

Q Have you previously testified before this Commission as a proration engineer?

A Yes, sir, I have.

MR. WHITWORTH: We ask that the witness' qualifications be accepted.

MR. NUTTER: They are. Please proceed.

Q (By Mr. Whitworth) Are you familiar with El Paso Natural Gas Company's Huerfano Unit No. 111 and the application in this case?

A Yes, sir.

Q What does El Paso seek by this application?

A By this application El Paso seeks an order to dual complete its Huerfano Unit No. 111 in such a manner as to produce the undesignated Gallup and undesignated Dakota formations through a parallel string of tubing.

Q Do you have a plat showing the location of this well

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and the offset operators?

A Yes, sir, I do.

MR. WHITWORTH: We ask that be marked as El Paso's Exhibit No. 1.

(Thereupon El Paso's Exhibit No. 1 was marked for identification.)

Q Now, by this plat will you explain where this well is located and identify the offset operator.

A This well is located 1550 feet from the West boundary, Section 20, Township 26 North, Range 9 West. This well is within the Huerfano unit, of which El Paso Natural Gas is the operator. This shows that there is a well. Rock Island Oil and Refining Company has a lease in Section 16 to the northeast. Within that section there is a pictured Cliffs completion, but there is no Gallup completion. That is part of the unit also.

Q Do you have any documentary evidence depicting the physical equipment in this well?

A Yes, sir. I have a schematic diagram of the physical equipment in this well.

Q Now, by this exhibit, would you explain how this well was completed?

A This is Exhibit 2, which shows the equipment that was put into this well. The was completed in this manner: Ten and three quarter inch surfacing casing was set at 334 feet and cement circulated to the surface. Seven inch production string,

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combination production string set at 6786. This well was two-stage cemented; the first stage I don't believe the diagram shows it, but the first stage, the top is at 4500 feet, and the second stage is at 1590. It shows the Gallup formation to have been perforated from, at various intervals, from 5603 to 5727. This is the upper Gallup, and fractured with oil and sand. The lower Gallup perforated from 5799 to 5894, and fractured with oil and sand. Production from the Gallup formation is through two and three-eighths inch tubing, which is landed at 5934. There is a Baker dual string anchor set at 5934. The Dakota formation has been perforated in this manner: The upper Dakota was perforated from 6455 to 6471. The middle Dakota, 6548 to 6578; the lower Dakota 6628 to 6723, and fractured with water and sand. Production from the Dakota formation is through two and three-eighths inch tubing which is landed at 6730. This well has a Guiberson model "A" production packer, which is a permanent type packer set at 5998.

Q This well is a gas-gas dual completed in an undesignated Gallup pool and undesignated Dakota pool, is that correct?

A That is correct.

Q What prompted El Paso to install a permanent type production packer, do you know?

A Well, this was just one of the conditions, and it has been a practice for El Paso to use a permanent type packer in dually completing a Gallup and Dakota well. The conditions there seem



to warrant this type of packer.

Q Do you have any potential and shutin data from this well?

A Yes, sir, I do. The Gallup formation was tested in the latter part of November, 1959 and has a shutin pressure of 1181, flowing pressure of 175 psi through a three quarter inch choke, and produced a volume of 1923 MCF's per day with a calculated open flow of 2,198 MCF per day.

Q Do you have --

A I would like to complete that last question, please, sir. I have some potential information on the Dakota formation. The Dakota formation was tested in October of 1959, had a shutin pressure of 1956 psi, and flowing pressure of 297 psi. It produced a volume of 3,410 MCF per day through a three-quarter inch choke and had a calculated AOF of 3703 MCF per day.

Q Do you have any well log data concerning this well?

A No, sir, I don't have the well logs, they were not available at the time we left El Paso, and I would like to ask permission from the Commission to submit those at a later date.

MR. NUTTER: That will be satisfactory.

Q [By Mr. Whitworth] To your knowledge is there a case pending before this Commission which would include the area this well is situated in as a designated gas pool, and would render formal hearing unnecessary, to make it possible that this well could be approved as a dual completion administratively?

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A Yes, sir, there is a case that is set for the January 13th docket, nomenclature case, which would include this area in the Angels Peak Gallup and Angels Peak Dakota pool.

Q In your opinion, would the granting of this application for this dual completion prevent waste?

A Yes, sir.

Q And would it violate or prejudice correlative rights?

A No, sir.

Q How were El Paso's Exhibits 1 and 2 prepared?

A They were prepared by our Farmington engineering office at my request.

MR. WHITWORTH: We ask that these exhibits be accepted.

MR. NUTTER: El Paso's Exhibits 1 and 2 will be entered in evidence in this case.

Q (By Mr. Whitworth) Is there anything else you would like to add to your testimony, Mr. Mason?

A Only that this well is completed in such a manner that any test that the Commission might require can be conducted.

MR. WHITWORTH: That's all.

MR. NUTTER: Does anyone have any questions of Mr. Mason?

MR. PAYNE: Yes, sir.

MR. NUTTER: Mr. Payne.

CROSS EXAMINATION

BY MR. PAYNE:

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Q Mr. Mason, I take it from your testimony that this well is adjacent to the Angels Peak Gallup pool?

A Well, it is several sections removed. It is more than a mile away. Just offhand -- well, I'm not sure of what the limits of the Angels Peak pool are, the southern boundary, but it is several miles removed from that, several miles south of it.

Q There is a case on the nomenclature to include this as an Angels Peak Gallup.

A Yes, sir, I think so.

Q Mr. Mason, what leads you to believe that this will be a gas well in the Gallup rather than an oil well?

A Well, we can't say definitely. During its potential test there was a show of oil, a spray of oil, but when the well was planned, they expected to encounter gas in this portion.

Q Generally speaking, when you find a gas well in the Gallup, the oil pool is not far behind, is --

A Well, I think that has been the experience thus far.

Q That is the way the Angels Peak Oil pool was discovered, is it not?

A Yes, sir, I believe so.

Q So you are aware if this dual completion is granted, that the Gallup zone might very well become an oil well and in all probability would be a penalized well?

A Yes, sir, we are.

MR. PAYNE: Thank you. That's all.



MR. NUTTER: Any further questions of Mr. Mason?

He may be excused.

(Witness excused.)

MR. NUTTER: Does anyone have anything further they wish to offer in this case? Take the case under advisement.

STATE OF NEW MEXICO)
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 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 13th day of January, 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. 1838 heard by me on 1-6, 1960.

[Signature], Examiner
New Mexico Oil Conservation Commission

DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO



El Paso Natural Gas Company

El Paso, Texas

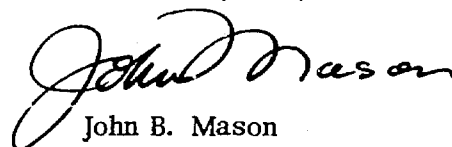
January 25, 1960

Mr. Dan Nutter
Chief Engineer
New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Dear Dan:

Enclosed are two Induction-Electrical Logs on the Huerfano No. 111 which were not available at the time hearing was held on El Paso's Application for Dual Completion, designated as Case No. 1838. The top and base of each producing formation and the perforated intervals are shown in red on the five-inch scale of each log.

Yours very truly,



John B. Mason
Proration Department

JBW:jmh
Enclosures

DOCKET: EXAMINER HEARING JANUARY 6, 1960OIL CONSERVATION COMMISSION - 9 a.m., Mabry Hall, State Capitol, Santa Fe, New Mexico

The following cases will be heard before Daniel S. Nutter, Examiner, or A. L. Porter, Jr., Secretary-Director.

- CASE 1835: Application of Continental Oil Company for two non-standard gas proration units. Applicant, in the above-styled cause, seeks an order establishing two non-standard gas proration units in the Eumont Gas Pool, one consisting of the N/2 of Section 3, the other consisting of the S/2 of said Section 3, Township 20 South, Range 36 East, Lea County, New Mexico. Applicant proposes to dedicate the units respectively to its Reed A-3 Well No. 2, located 1980 feet from the North line and 660 feet from the East line of said Section 3 and to its Reed A-3 Well No. 3, located 1980 feet from the South line and 660 feet from the East line of said Section 3. Applicant further proposes the cancellation of an existing Eumont gas proration unit comprising the E/2 of said Section 3 and presently dedicated to the said Reed A-3 Well No. 3.
- CASE 1836: Application of Continental Oil Company for approval of an automatic custody transfer system. Applicant, in the above-styled cause, seeks an order authorizing it to install an automatic custody transfer system to handle the Arrowhead Pool production from all wells on its State J-2 lease consisting of the N/2 and the SE/4 of Section 2, Township 22 South, Range 36 East, Lea County, New Mexico.
- CASE 1837: Application of Continental Oil Company for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Balsh "A" Well No. 27, located in the NE/4 SE/4 of Section 21, Township 17 South, Range 32 East, Lea County, New Mexico, in such a manner as to permit the production of oil from an undesignated Abo pool and the production of oil from an undesignated Wolfcamp pool through parallel strings of tubing.
- CASE 1838: Application of El Paso Natural Gas Company for a gas-gas dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Huerfano Unit Well No. 111 (GD), located in Unit F, Section 20, Township 26 North, Range 9 West, San Juan County, New Mexico, in such a manner as to permit the production of gas from an undesignated Gallup pool and the production of gas from an undesignated Dakota pool through parallel strings of tubing.
- CASE 1839: Application of Franklin, Aston & Fair, Inc., for permission to commingle the production from three separate leases. Applicant, in the above-styled cause, seeks permission to commingle the Empire-Abo Pool production from three separate State leases, one in Section 6, Township 18 South, Range 28 East, and the other two in Section 31, Township 17 South, Range 28 East, Eddy County, New Mexico.
- CASE 1840: Application of Pan American Petroleum Corporation for a non-standard gas unit. Applicant, in the above-styled cause, seeks an order establishing a 264-acre non-standard gas unit in the Blanco-Pictured Cliffs Pool consisting of the N/2 of Section 6, Township 29 North, Range 9 West, San Juan County, New Mexico, to be dedicated to the Houck Gas Unit Well No. 1, located 1650 feet from the North and East lines of said Section 6.

- CASE 1841: Application of Sinclair Oil & Gas Company for the creation of a new pool in the Potash-Oil Area and for the promulgation of special rules and regulations pertaining thereto. Applicant, in the above-styled cause, seeks an order creating a new pool for Yates production in the Potash-Oil Area as defined by Order R-111-A, said pool to comprise the SE/4 NW/4 of Section 16, Township 20 South, Range 33 East, Lea County, New Mexico, and such other acreage as may reasonably be proven productive from the same common source of supply. Applicant further seeks the promulgation of special rules and regulations for said pool as follows:
- A. Cable Tool Casing Program.
Same as Order R-1078 for Teas Pool.
 - B. Rotary Tool Casing Program.
Surface casing set at 600 feet and cement circulated. No salt protection string. Production casing to be set through pay from 3146 feet to 3232 feet (approximately) with cement circulated to at least 50 feet into surface casing.
- CASE 1842: Application of Skelly Oil 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 Langlie-Mattix Pool and the Drinkard Pool from all wells on its Baker "A" lease comprising the NW/4 of Section 26, Township 22 South, Range 37 East, Lea County, New Mexico.
- CASE 1843: 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, comprising the S/2 NE/4 of Section 5, Township 18 South, Range 32 East, Lea County, New Mexico.
- CASE 1844: Application of Texaco Inc. for permission to commingle the production from two separate pools and for permission to install an automatic custody transfer system. Applicant, in the above-styled cause, seeks an order authorizing it to commingle the production from the Justis-Eilenburger and Justis-McKee Pools from all wells on its C. E. Penny lease consisting of the NW/4 of Section 19, Township 25 South, Range 38 East, Lea County, New Mexico, and for permission to install an automatic custody transfer system to handle said commingled production.
- CASE 1845: Application of Western Natural Gas Company for an oil-gas dual completion and for an unorthodox gas well location. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Bonnie Schlosser Federal Well No. 1, located 790 feet from the North line and 1980 feet from the West line of Section 10, Township 27 North, Range 11 West, San Juan County, New Mexico, in such a manner as to permit the production of oil from an undesignated Gallup pool and the production of gas from an undesignated Dakota pool through parallel strings of tubing. Applicant further seeks an unorthodox Dakota gas well location for the said Bonnie Schlosser Federal Well No. 1.

-3-
Docket No. 1-60

CASE 1846: Application of Rice Engineering and Operating, Inc. for an order authorizing a salt water disposal well. Applicant, in the above-styled cause, seeks an order authorizing it to recomplete the Lowe Oberholtzer Well No. 2 as a salt water disposal well. Said well is located 1980 feet from the North and East lines of Section 8, Township 12 South, Range 38 East, Gladiola Pool, Lea County, New Mexico. Applicant proposes to inject the produced salt water in the Devonian formation in the interval from 12,223 feet to 12,500 feet.

CASE 1847: Application of Rice Engineering and Operating, Inc. for an order authorizing a salt water disposal well. Applicant, in the above-styled cause, seeks an order authorizing the disposal of produced salt water through its Hobbs SWD Well No. F-29 to be located 1880 feet from the North line and 1742 feet from the West line of Section 29, Township 18 South, Range 38 East, Hobbs, Pool, Lea County, New Mexico. Applicant proposes to inject the produced salt water into the San Andres formation in the interval from 4700 feet to 5000 feet.

CASE 1848: Application of El Paso Natural Gas Company for an exception to Paragraph 3 of Order R-1065. Applicant, in the above-styled cause, seeks an extension of time to make up the accrued underproduction of the Jones 4-A Well (a pressure build-up test well), located in Unit B, Section 13, Township 28 North, Range 8 West, Blanco-Mesaverde Pool, San Juan County, New Mexico.

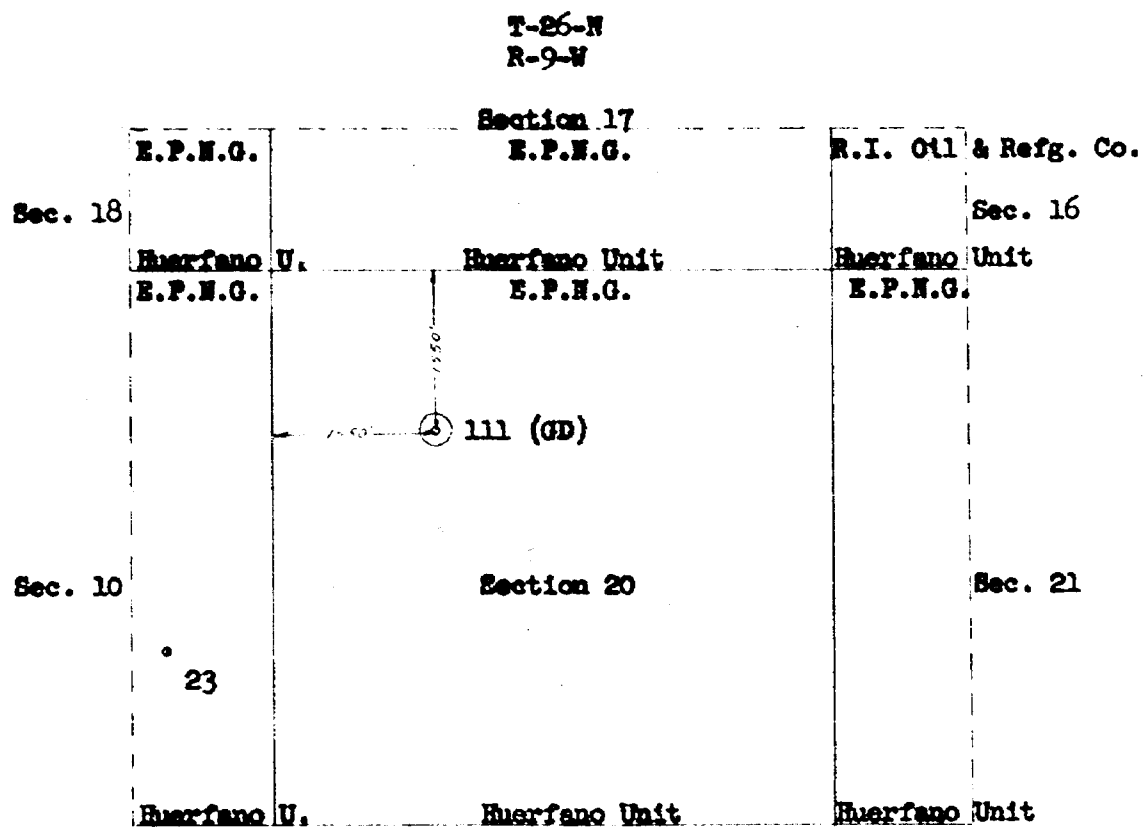
CASE 1849: Application of Western Natural Gas Company for an exception to the over-production shut-in provisions of Order R-520, as amended by Order No. R-967, for 3 wells in the Jalmat Gas Pool. Applicant, in the above-styled cause, seeks an order permitting the following-described gas wells in the Jalmat Gas Pool, Lea County, New Mexico, to compensate for their overproduced status without being completely shut-in in order to prevent possible waste.

Wells Federal No. 1 Well, SW/4 NE/4 of Section 6,
T-26-S, R-37-E.

Guthrie No. 1 Well, SW/4 SE/4 of Section 34,
T-23-S, R-36-E.

State McDonald A-15 Well No. 1, NW/4 SW/4 of Section 15,
T-22-S, R-36-E.

PLAT SHOWING LOCATION OF DUALY COMPLETED
El Paso Natural Gas Co. Huerfano Unit No. 111 (GD)
and Offset Acreage

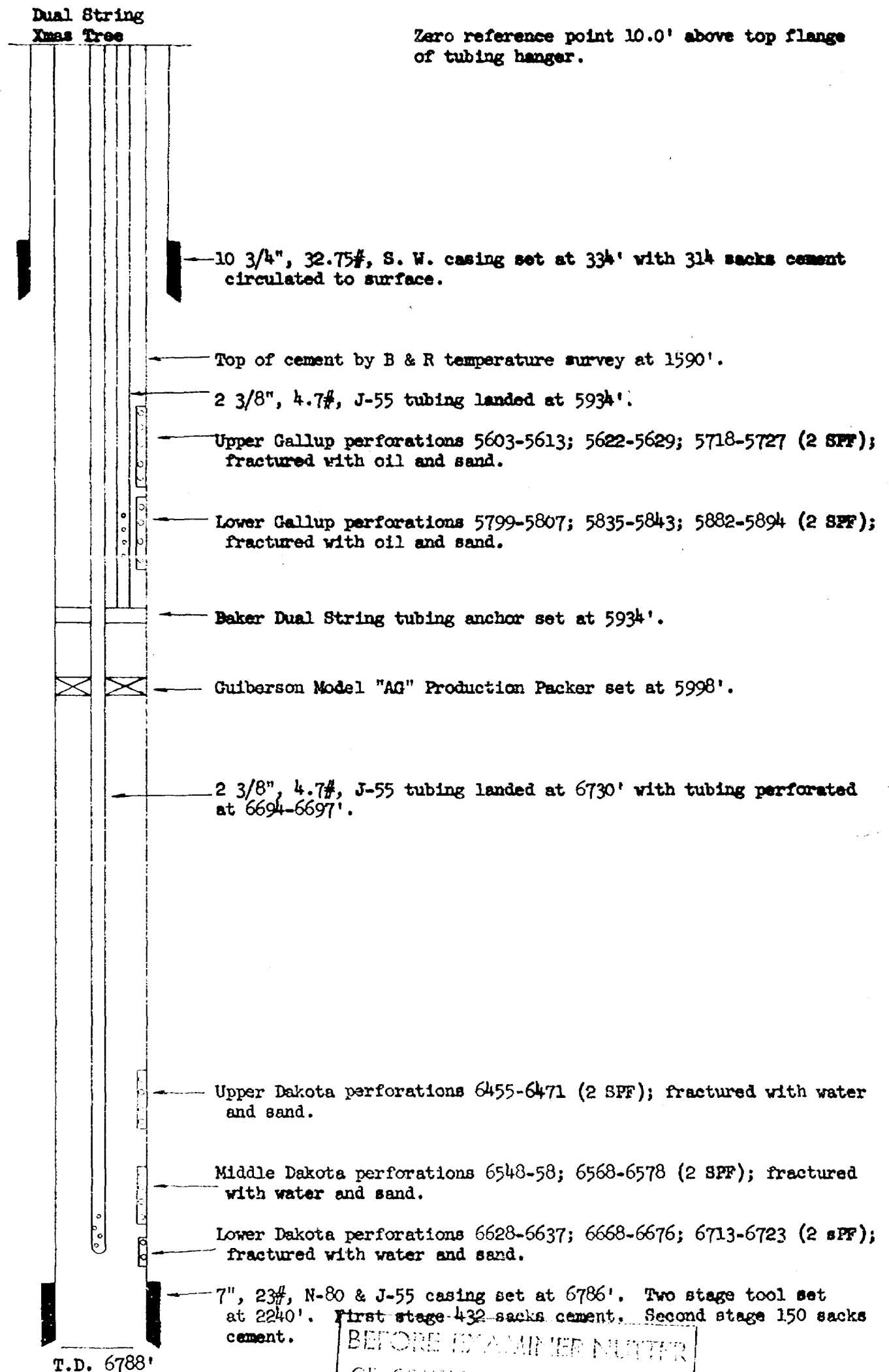


BEFORE EXAMINER NOTED
OIL CONSERVATION COMMISSION
EPNG EXHIBIT NO. 1
CASE NO. 1838

EL PASO NATURAL GAS COMPANY
EL PASO, TEXAS

SCALE	DATE	No.
DRAWN BY	CHECKED BY	

SCHEMATIC DIAGRAM OF DUAL COMPLETION
El Paso Natural Gas Co. Huerfano Unit No. 111 (GD)
NW/4 Section 20, T-26-N, R-9-W



Zero reference point 10.0' above top flange of tubing hanger.

BEFORE EXAMINED BY	DATE
OR COMPLETED BY	DATE
EPNG	NO. 2
CASE NO.	1838

DOCKET: EXAMINER HEARING JANUARY 6, 1960

OIL CONSERVATION COMMISSION - 9 a.m., Mabey Hall, State Capitol, Santa Fe, New Mexico

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John Queen Eng

Kellahin

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CASE 1836:

Kellahin
Queen

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Kellahin
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Oliver
Seth
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Oliver Seth

CASE 1849: Application of Western Natural Gas Company for an exception to the over-production shut-in provisions of Order R-520, as amended by Order No. R-967, for 3 wells in the Jalmat Gas Pool. Applicant, in the above-styled cause, seeks an order permitting the following-described gas wells in the Jalmat Gas Pool, Lea County, New Mexico, to compensate for their overproduced status without being completely shut-in in order to prevent possible waste.

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T-23-S, R-36-E.

State McDonald A-15 Well No. 1, NW/4 SW/4 of Section 15,
T-22-S, R-36-E.

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

January 19, 1960

C
O
P
Y

Mr. Oliver Seth
Box 828
Santa Fe, New Mexico

Dear Mr. Seth:

On behalf of your client, El Paso Natural Gas Company,
we enclose two copies of Order No. R-1583 in Case No.
1838 issued by the Oil Conservation Commission on
January 18, 1960.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

Enclosures: (2)
ir/

SPC:
Clyde
Hobbs

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. 1838
Order No. R-1583

APPLICATION OF EL PASO NATURAL
GAS COMPANY FOR A DUAL COMPLETION
IN AN UNDESIGNATED GALLUP POOL AND
AN UNDESIGNATED DAKOTA POOL, SAN
JUAN COUNTY, NEW MEXICO

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on January 6, 1960, at Santa Fe, New Mexico, before Daniel S. Mutter, 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 18th day of January, 1960, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Mutter, 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 is the owner and operator of the Huerfano Unit Well No. 111 (G.D.) located in Unit F, Section 20, Township 26 North, Range 9 West, NMPM, San Juan County, New Mexico.
- (3) That the applicant proposes to dually complete the above-described Huerfano Unit Well No. 111 (G.D.) in such a manner as to permit the production of gas from an undesignated Gallup pool and the production of gas from an undesignated Dakota pool through parallel strings of 2-3/8 inch 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.

-2-

Case No. 1838
Order No. R-1583

IT IS THEREFORE ORDERED:

That the applicant be and the same is hereby authorized to dually complete the Marfano Unit Well No. 111 (S.D.) located in Unit F, Section 20, Township 26 North, Range 9 West, NEEN, San Juan County, New Mexico, in such a manner as to permit the production of gas from an undesignated Gallup pool and the production of gas from an undesignated Dakota pool through parallel strings of 2-3/8 inch tubing.

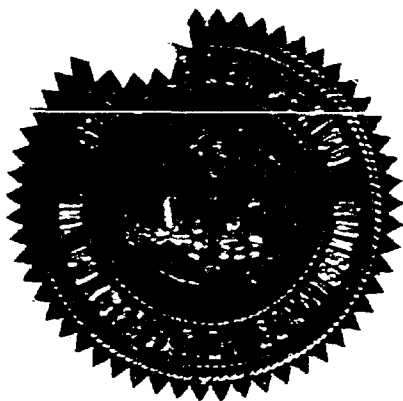
PROVIDED HOWEVER, That applicant shall complete, operate, and produce said well in accordance with the provisions of Section V, Rule 112-A.

PROVIDED FURTHER, That applicant shall take packer-leakage tests upon completion and annually thereafter during the Annual Deliverability Test Period for the Dakota producing interval.

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
JOHN BURROUGHS, Chairman

Murray E. Morgan
MURRAY E. MORGAN, Member

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

ven/

P-17-10

860

OIL CONSERVATION COMMISSION
1000 Rio Brazos Rd.
Aztec, New Mexico

OIL CONSERVATION COMMISSION
BOX 871
SANTA FE, NEW MEXICO

DATE 11-30-59

RE: Proposed NSP _____

Proposed NSL _____

Proposed NFO _____

Proposed DC ✓

Gentlemen:

I have examined the application dated 11-23-59
for the EPNG Huertano # 111 F-20-26N-9W
Operator Lease and Well No. S-T-R

and my recommendations are as follows:

This is a Gallup-Dakota Oil over Gas Dual
& Technically according to the order would
require a hearing

Yours very truly,

Emery C. Smith
OIL CONSERVATION COMMISSION

Case 1838
NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

APPLICATION FOR DUAL COMPLETION

Set for
hearing 1st
7-3-58
Ex lry-Jan

Field Name Wildcat Gallup & Dakota		County San Juan	Date November 23, 1959
Operator El Paso Natural Gas Company		Lease Huerfano Unit	Well No. 111 (GD)
Location of Well F	Unit 20	Township 26N	Range 9W

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	<u>Gallup</u>	<u>Dakota</u>
b. Top and Bottom of Pay Section (Perforations)	<u>5603-5727 (Upper Gallup)</u>	<u>6455-6471 (Upper Dakota)</u> <u>6548-6578 (Middle Dakota)</u> <u>6628-6723 (Lower Dakota)</u>
c. Type of production (Oil or Gas)	<u>Gas</u>	<u>Gas</u>
d. Method of Production (Flowing or Artificial Lift)	<u>Flowing</u>	<u>Flowing</u>

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.
- No 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.*
- No 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.

El Paso Natural Gas Co is Huerfano Unit Operator.

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 _____.

CERTIFICATE: I, the undersigned, state that I am the Division Petroleum Engr. of the El Paso Natural 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.

E. S. Olney
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 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.

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 Guiberson Corporation, and that on
September 4, 1959, I was called to the location of the El Paso Natural
Gas Company Huerfano Unit No. 111 (GD) Well located in the SENW/4 of
Section 20, Township 26 North, Range 9 West, N.M.P.M., for advisory
service in connection with installation of a production packer. In my
presence, a Guiberson Model "AG" Production Packer was set in this well
at 5998 feet in accordance with the usual practices and customs of the
industry.

A. T. Fry

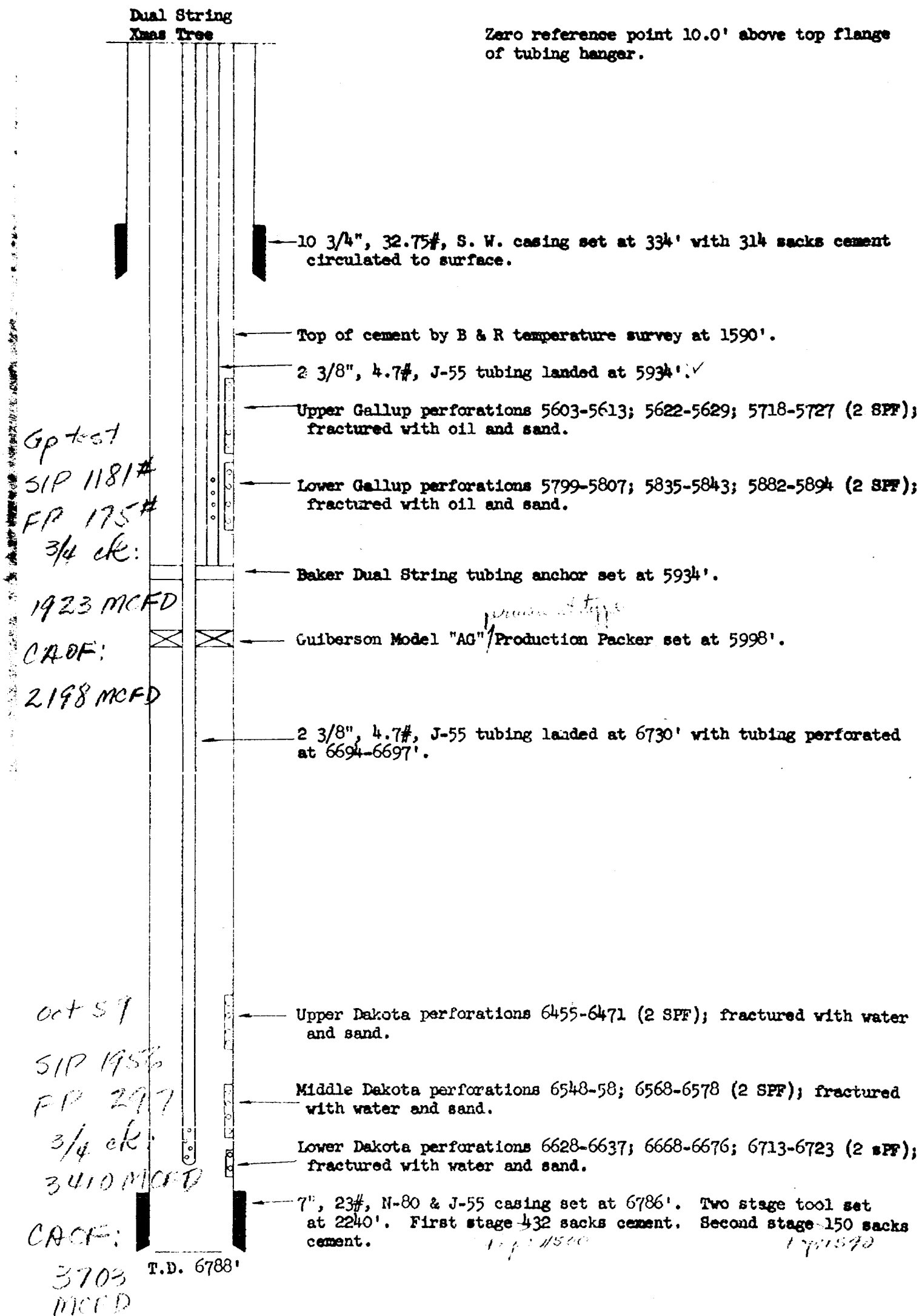
Subscribed and sworn to before me this 24th day of November,
1959.

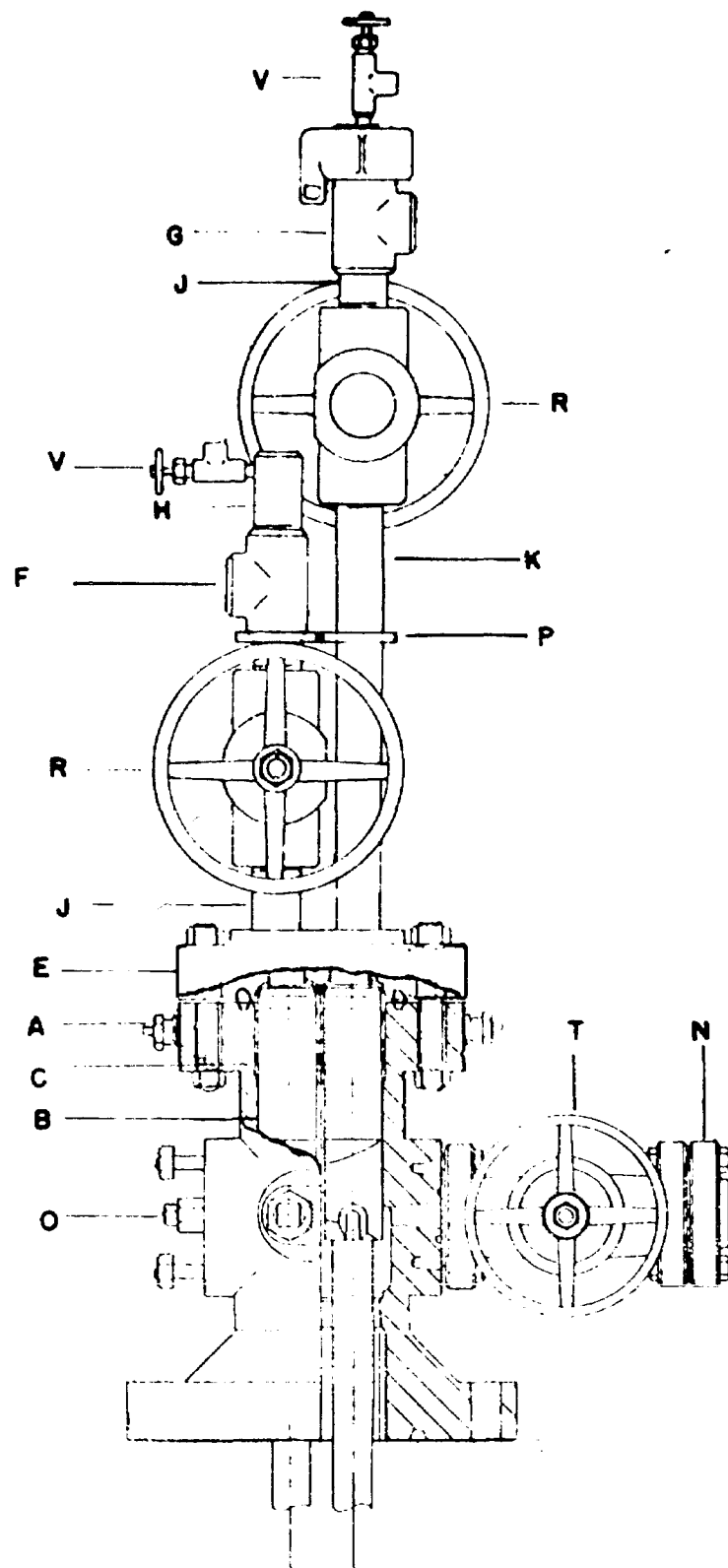
Paul S. Schaefer
Notary Public in and for San Juan County,
New Mexico

My commission expires February 24, 1960.

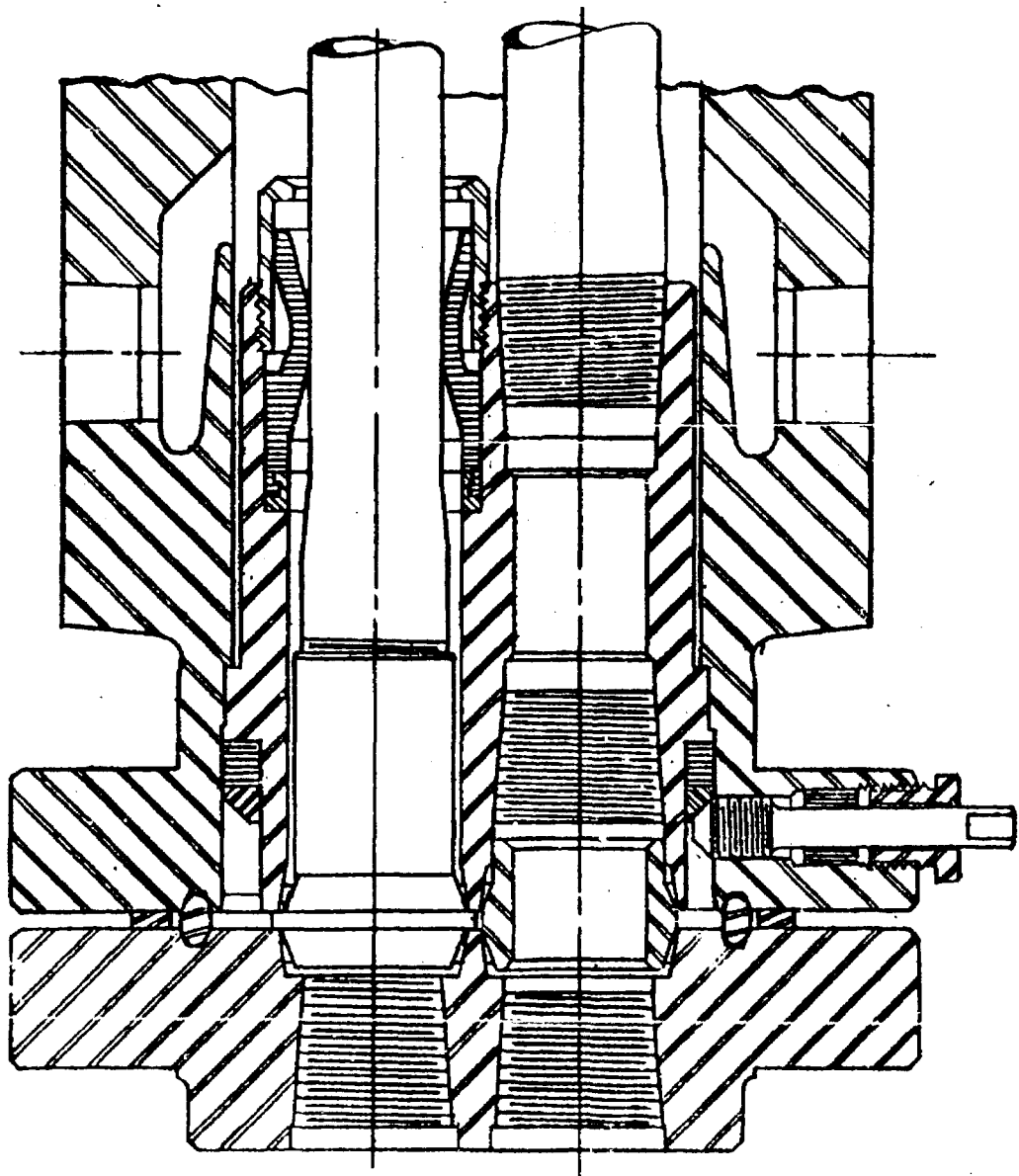
10211828

SCHEMATIC DIAGRAM OF DUAL COMPLETION
El Paso Natural Gas Co. Huerfano Unit No. 111 (OD)
NW/4 Section 20, T-26-N, R-9-W

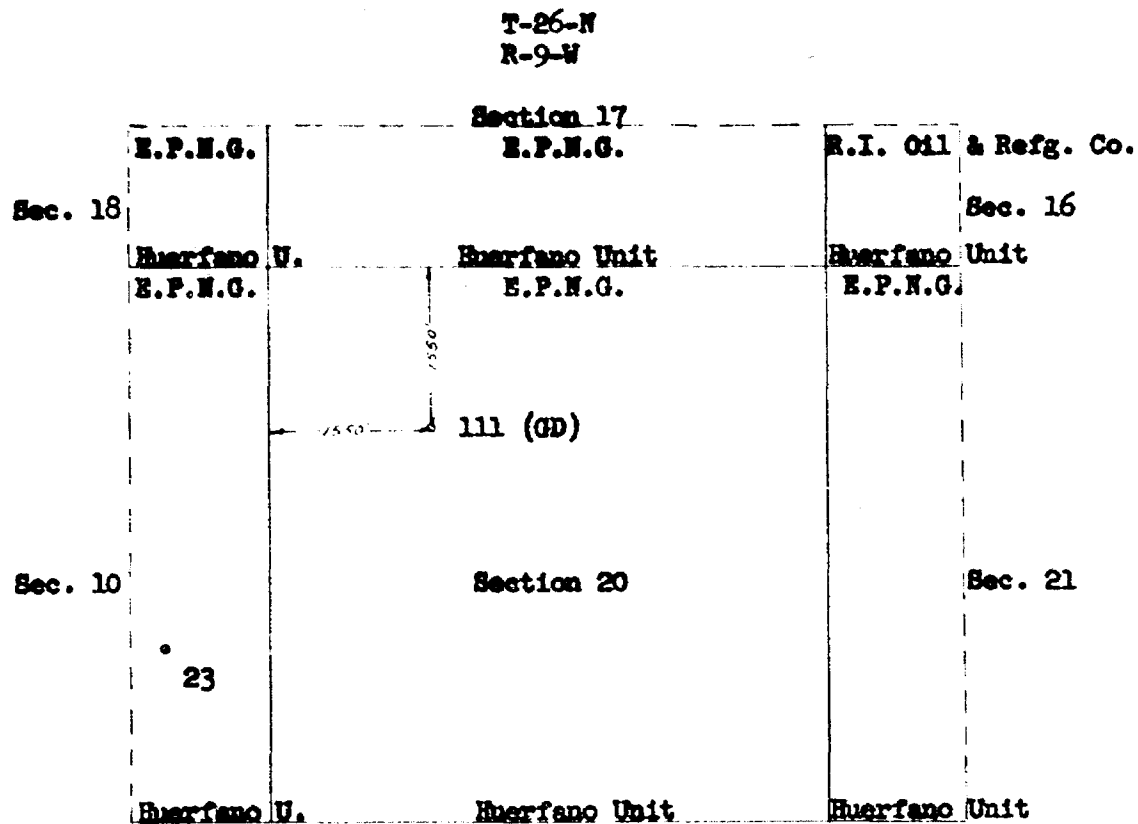




CHRISTMAS TREE ASSEMBLY NO. X-1148-U REV.13			PROPERTY OF OIL CENTER TOOL CO., INC. HOUSTON, TEXAS		
PART NO.	SCALE	PATTERN NO.	DATE 2-24-58	SIZE	FILE NO.
MATERIAL SPEC. FOR EL PASO NATURAL GAS CO			DRN. BY GOC CRD. BY APPRVD.		Dwg. No.



PLAT SHOWING LOCATION OF DUALY COMPLETED
El Paso Natural Gas Co. Huerfano Unit No. 111 (GD)
and Offset Acreage



EL PASO NATURAL GAS COMPANY
EL PASO, TEXAS

SCALE	DATE	No.
DRAWN BY	CHECKED BY	

EL PASO NATURAL GAS COMPANY
OPEN FLOW TEST DATA

DUAL COMPLETION

DATE

November 2, 1959

Operator: El Paso Natural Gas Company		Lease: Huerfano No. 111 (G)	
Location: 1550N, 1550W; 20-26-9		County: San Juan	State: New Mexico
Formation: Gallup		Pool: Undesignated	
Casing: Diameter 7	Set At: Feet 6776	Tubing: Diameter 2	Set At: Feet 5921
Pay Zone: From 5603	To 5894	Total Depth: 6788 c/o 6770	Shut In: 10/7/59
Stimulation Method: Sand Oil Frac.		Flow Through Casing	Flow Through Tubing X

Choke Size, Inches .75	Choke Constant, C 12.365	Shut-In Pressure, Casing, PSIG 1169 (G)	Shut-In Pressure, Tubing, PSIG 897 (G)
Days in Min 26	Flowing Pressure, P, PSIG 163	Working Pressure, Pw, PSIG 465	Temperature, T, °F 63
Flowing Pressure, P, PSIG 163	Temperature, T, °F 63	Flow Through Casing 1.026	Flow Through Tubing .798

Initial SIPT (Dak) = 1440 psig

Final SIPT (Dak) = 1463 psig

Packer at 5998

CHOKE VOLUME: $Q = C \times P_r \times F_c \times F_g \times F_p$

$$Q = 12.365 \times 175 \times .9971 \times .8687 \times 1.026 = 1923 \text{ MCF/D}$$

$$\text{OPEN FLOW } A_{of} = Q \left(\frac{P_r^2}{P_c^2 - P_w^2} \right)^n$$

Note: Unloaded heavy stream of oil for 15 minutes then heavy fog for remainder of test.

$$A_{of} = \left(\frac{1394761}{1167232} \right)^n \quad 1.1949^{.75} \times 1923 = 1.1428 \times 1923$$

$$A_{of} = 2198 \text{ MCF/D}$$

TESTED BY: **T. B. Grant & J. B. Goodwin**

WITNESSED BY:

Lewis D. Galloway
L. D. Galloway

OPEN FLOW TEST DATA

DUAL COMPLETION

DATE October 27, 1959

Operator El Paso Natural Gas		Well No. Huerfano No. 111 (D)	
Location 1550N, 1550W; 20-26-9		County San Juan State New Mexico	
Formation Dakota		Undesignated	
Casing Diameter 7	6776	Casing Diameter 2	6720
Flow Zone Depth 6548	6723	Flow Zone Depth 6788 c/o 6770	Shut In: 9/5/59
Stimulation Method Sand Water Frac.		X	

Initial SIPT (G) = 852 psig	Final SIPT (G) = 1175 psig	Packer at 5998
12.365	53	1944 (Dak)
1154 (Gal)	1166	1956
285	297	Calc.
66	.75	1.037
		.740

Initial SIPT (G) = 852 psig
Final SIPT (G) = 1175 psig

Packer at 5998

$$12.365 \times 297 \times .9943 \times .9005 \times 1.037 = 3410$$

Note: Made water throughout test with intermittent slugs of oil.

3825936
3427775

$$1.1161^{.75} \times 3410 = 1.0858 \times 3410$$

3703

J.B. Goodwin & T. B. Grant

Original Signed
Lewis D. Galloway

L. D. Galloway