

Case Number

4425

Application  
Transcripts.

Small Exhibits

ETC.

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SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

209 SIMMS BLDG. • P.O. BOX 1072 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO



BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
October 14, 1970

EXAMINER HEARING

IN THE MATTER OF:

Application of Southern Gulf Production  
Company for an unorthodox gas well  
location, San Juan County, New Mexico.

Case No. 4425

BEFORE: Daniel S. Nutter, Examiner.

TRANSCRIPT OF HEARING

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MR. HATCH: Application of Southern Gulf Production Company for an unorthodox gas well location, San Juan County, New Mexico.

MR. NUTTER: Are there any appearances by anyone in Case No. 4425? The case as heard on September 16th, 1970, will be taken under advisement.

STATE OF NEW MEXICO )  
 ) ss  
COUNTY OF BERNALILLO )

I, GLENDA BURKS, Court Reporter in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.

Blenda Burks  
Court Reporter

I do hereby certify that the foregoing is a complete record of the proceedings in the Franklin hearing of Case No. 4425 heard by me on 10/14 1970.

New Mexico Oil Conservation Co. 10100

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BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
September 16, 1970

EXAMINER HEARING

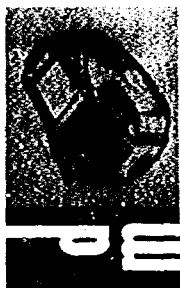
IN THE MATTER OF:

Application of Eastern Petroleum  
Company for an unorthodox gas well  
location, San Juan County, New Mexico.

CASE 4425

BEFORE: Daniel S. Nuttér, Examiner.

TRANSCRIPT OF HEARING



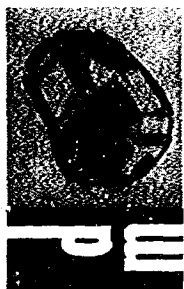
MR. NUTTER: Case 4425.

MR. HATCH: Application of Eastern Petroleum Company as agent for Southern Gulf Production Company for an unorthodox gas well location, San Juan County, New Mexico.

MR. DURRETT: If the Examiner, please, J. M. Durrett of Albuquerque representing the Applicant. I have one witness, Mr. Walsh.

I would like to make a very brief statement, Mr. Examiner, before we start here. We lost this well for a couple of days on the surface. We do have a problem in the Docket in the advertising of the well. It is advertised to be located 2023 feet from the South line and 1157 feet from the West line of Section 10, Township 26 North, Range 18 West. That is an error which we will point out as we go through the testimony here. We had that well surveyed, I think Sunday, just very recently, and the well is located in our resurvey 977 feet from the West line and 1963 feet from the South line.

Now the original notice of intent to drill was to drill the well 990 from the West line and 1980 from the South line so, as you can see, we were pretty close to that original notice of intent. We think there may be a jurisdictional problem from the Commission standpoint on entering an order due to the way it was advertised and what we would like is to request



permission to present the case as we are prepared to do it and request the Commission readvertise the case and take it under advisement and if an order is to be issued to do so after the next Hearing when this testimony could be incorporated by reference.

MR. NUTTER: The well is operating on 30 day allowable?

MR. DURRETT: I believe that's correct. I believe we have contacted the Aztec Office and I will ask Mr. Walsh about this and they said they can give us an additional period of time.

MR. NUTTER: Pending period of readvertisement and calling up the case again?

MR. DURRETT: Yes, sir.

EWELL N. WALSH

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

DIRECT EXAMINATION

BY MR. DURRETT:

- Q Would you state your name and address?
- A Ewell N. Walsh, located in Farmington, New Mexico.
- Q Are you a petroleum engineer?
- A Yes, I am.



Q And have you previously testified before this Commission as an expert and had your qualifications accepted as an expert witness?

A Yes, I have.

MR. DURRETT: Is the witness qualified, Mr. Examiner?

MR. NUTTER: Yes, he is.

Q (By Mr. Durrett) Mr. Walsh, what is it that Southern Gulf is seeking with this Application today in Case 4425?

A Approval of the Southern Gulf Production Company Navajo Tocito Number 4 as a wildcat gas well.

(Whereupon, Applicant's Exhibits Nos. 1 through 7 were marked for identification.)

Q (By Mr. Durrett) Mr. Walsh, refer to your Exhibit No. 1, which I believe is a map of this area, and would you please state for the Examiner what that map shows?

A This map indicates the area of Township 26 North, a portion of Township 27 North, Range 18 West, San Juan County, New Mexico. On the map indicated as oil wells and some gas wells or wells of the Tocito Dome Pool which essentially are in Section 8, 9, 16, 17, 20, 21, 22, 27, 28 of Township 26 North, Range 18 West, also are the wells drilled by Southern Gulf Production Company the Navajo Tocito 1 in Section 9 and



Navajo Tocito Number 4 located in Section 10 of Township 26 North, Range 18 West.

Q The well which is the subject matter of this Hearing is the Number 4 well in Section 10?

A Yes, it is located in the Northwest Quarter of the Southwest Quarter of Section 10, Township 26 North, Range 18 West.

Q From your survey that we just conducted about a day or two ago, what is the footage location of that well?

A On the resurvey, which was made to check the original Application with the intention to drill and the footage that was entered with the Application for administrative approval of the Wildcat gas well, this survey indicated this well to be 977 feet from the west line and 963 feet from the south line of Section 10, Township 26 North, Range 18 West. This compares with the original survey of the well prior to drilling of 990 from the west and 1980 from the south of the same Section, Township and Range.

Q Am I correct, Mr. Walsh, this well is within one mile of an existing pool?

A Within one mile of the Navajo Tocito, Pennsylvanian "D" Oil Pool.

Q You have made calculation, I believe, of your own





showing as to whether this would be standard location for that pool or a standard wildcat location, is that correct?

A Yes, I did.

Q I don't have an extra copy of this. I would like to have the witness come up there so we can both look at it and I will make copies. Would you refer to the little plat you have here where you have made your calculations?

A This plat indicates in red the orthodox locations according to the Tocito Dome Pennsylvanian "D" Pool Rules, Oil Pool Rules, and in blue orthodox locations due to drills for wildcat gas wells, San Juan County.

Q To be correct on either one of these theories we would be in the red square or the blue square?

A That's correct.

Q The well is a little north of the blue and a little east to the red?

A A hundred and thirty feet north of the orthodox wildcat gas well location, 180 feet east of the Tocito Dome Oil Pool orthodox location.

Q If we are crowding any acreage with this well, which way would we be crowding?

A We would be crowding acreage presently owned by Southern Gulf Production Company.

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PAGE

Q You would be crowding in on the Section, you are not crowding out toward the Section?

A No, sir.

Q Let's go to your Exhibit No. 2 which I believe is the permit to drill?

A This is the Application, permit to drill, deepen or plug back for the subject well filed in 1968 by W. B. Strickland, a petroleum geologist. Attached to the Application is a plat by the surveyor indicating the footage of the location at that time.

Q Now Mr. Walsh, this permit here or Application for permit indicates that this was to be drilled as an oil well, I believe, is that correct?

A Yes, sir.

Q Am I also correct that this location as proposed on this plat would not be a standard oil well location?

A Not according to the Tooto Dome Rules.

Q Do we have any knowledge as to why we would drill at this location?

A None other than probably structural position.

Q At any rate that 990 feet from the west and 1980 from the south, was it originally approved to be drilled?

A Yes, it was.



Q Go to Exhibit No. 3, which is your dedication plat?

A This is a plat on a resurvey of the location conducted September 13, 1970 by a different surveyor. I requested that he do this due to one, the footages that were in the Docket advertisement and the difference between those footages and the original Application and Mr. Eckhoff did perform this survey and the plat indicates the well as he surveyed it.

Q To the best of your knowledge and belief, this is actually where this well is located on the surface, is that correct?

A Using the last survey on it, yes.

Q All right, move to your Exhibit No. 4. I believe that is also from your surveyor. What does that show?

A Exhibit No. 4 was also prepared by Mr. Eckhoff, the surveyor, indicating the points or corners he used and establishing the location of this well.

Q That's pretty well self-explanatory, is it not?

A I would say so unless there are some questions concerning it.

Q Do you have some logs that you would like to present to the Examiner or copies of logs?

A Possibly prior to going into Exhibit 4 -- or 5, excuse me, Navajo Tocito No. 4 was completed as a gas well and

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PAGE 9

is considered to be down structure and however being adjacent to the Navajo Tocito Dome Oil Pool. The well was completed in January of 1969 and during the month of January it was tested. The test was an attempt to run a four point multi-point pressure test to determine initial potential of the well. However, due to limitations of the production unit that was set on the well to measure both gas and oil that the well would produce, we were unable to obtain a four point back pressure test because of the tremendous capability of the well and limitation of the test unit. The well at the highest flow rate was produced at the rate of six million, eight hundred MCF per day, approximately eight barrels of condensate per hour. The well-head pressure, working-wellhead pressure was decreased three pounds from 2585 to 2582. Therefore, because of the limitation on the unit we were unable to get what was considered an absolute open flow.

Q When did you say that test was taken?

A In January 1969. This well does differ from wells in the Navajo Tocito Dome Oil Pool by virtue of its high gas capabilities and although the well is even down structure of the Navajo Tocito Dome Oil Pool, Exhibit 5 is a series of 4, copies of 4 logs of the area of the subject well. One of the copies of the log is of the Campbell Keough and Rockwell now



Southern Gulf Production Company No. 1 Navajo Tocito located in the Southwest of the Northeast of Section 9, Township 26 North, Range 18 West. It also is a log of Mobil Oil Corporation's Mobil No. 1 Navajo Tocito located in the Southwest of the Southwest, Section 9, Township 26 North, Range 18 West, a copy of the log of Pan American Petroleum Corporation's Navajo Tribal "U" Number 8 located in the Southeast to the Northwest, Section 16, Township 26 North, Range 18 West and a copy of the log of the Navajo Tocito Southern Gulf No. 4, located Northwest-Southwest, Section 10, 26 North, Range 18 West

Q So you actually have logs or copies of the logs of almost all the surrounding wells, don't you?

A Of the immediate offset wells toward the Navajo Tocito Dome Oil Pool.

Q Where are the logs you have in Exhibit No. 5, what does that indicate to you?

A The logs have been marked to show the approximate top of the Pennsylvanian "D" producing horizon, also beneath the indicated top of the horizon is the subsea datum obtained from taking the top of the horizon and subtracting your Kelly Bush and elevation. Also is indicated the interval which was perforated in each of these wells. Using the log, the Mobil



Navajo Tocito Number 1 and the Pan American Navajo "U" 8, these indicate a structural datum of the Mobil Well of minus 511, of the Pan American Well minus 475. The Pan American Well is evidently higher structurally than the Mobil Well.

Also indicated is the Campbell Keough Rockwell, Navajo Tocito "U", of a subsea datum minus 592. This is indicated structurally higher than Pan American's and Mobil's Well and for the Navajo Southern Gulf Tosito 4, you have a subsea minus 636 which indicates this is the lowest structural well of the four wells indicated here by the copies of the logs. The Mobil Navajo Tocito 1 and Pan American Navajo Tribal "U" 8 are oil wells producing as oil wells whereas the number 4 Navajo Tocito Southern Gulf and the Number 1 Navajo Tocito Southern Gulf have been completed as gas wells.

Q Do you have some gas analysis you can present to the Commission? I believe that is your Exhibit No. 6?

A Exhibit No. 6 is the copy of the gas analysis performed by the U. S. Bureau of Mines on gas from the Navajo Tocito Number 4. I might point out in this analysis the high content of nitrogen, 51.2 and your helium content of 5.4. Also, the BTU per cubic feet has been calculated at 584 BTU.

Q Now am I correct that the helium plant that is up in this area has been shut down and is open now?

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PAGE 12

A At the present time under temporary approval by the Commission Eastern Petroleum Company is purchasing gas from this well at the wellhead and transporting to the helium plant previously operated by the Bureau of Mines at Shiprock. The Lindy Company has brought in some new equipment and has been running tests on this area with this equipment, not only with this gas from the Navajo Tocito 4 but also Table Mesa. Their tests are being made to determine helium recovery with their equipment for possible full operation of the plant.

MR. NUTTER: The wells were formerly operated by Continental?

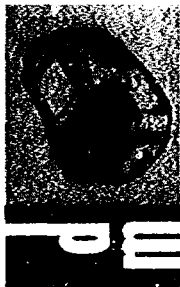
A They were tied in to the helium plant, yes.

MR. NUTTER: The plant hasn't officially opened, just running tests?

A Not officially opened, they have been more or less taking down equipment to see what recoveries they will get in comparison to wellhead samples.

Q (By Mr. Durrett) Let's move to your Exhibit No. 7, Mr. Walsh.

A Exhibit No. 7 is a copy of a gas analysis by El Paso Natural Gas Company of the gas that passes through their metering station from the Navajo Tocito Dome Oil Pool into their 24 inch main line. The reason for this gas analysis is to show a



comparison of the difference in content of the two gases and the gas from Navajo Tocito Dome Oil Pool you will please note that the nitrogen content is 4.61 percent considerably below the gas from Navajo Tocito Dome.

MR. NUTTER: This is a field meter. This has not been through a plant?

A No, sir.

MR. NUTTER: This would be a field analysis by comparison with your Exhibit 6?

A The sample from the two gases are obtained in the same manner.

MR. NUTTER: Neither one has been processed?

A No, sir. Also, I would like to have you note that the BTU or heating value of the gas from the oil pool is 1195 BTU per cubic feet in comparison to 586 BTU per cubic feet of gas from the Navajo Tocito 4. This is more or less presented in this manner to show that there is evidently no connection between this present gas area and the oil zone of the Navajo Tocito Dome Oil Pool.

Q (By Mr. Durrett) From the information you have available to you at this time, is it your opinion that you are possibly in another pool?

A Yes, I would say so with the information we have at





this time. In addition to the gas analysis, for your information the gravity of the oil or condensate from the Navajo Tocito Dome Oil Pool is approximately 60. It has an API degree of 62 whereas your Navajo Tocito Dome Oil Pool is considerably lower in the 40 range.

Q Do you have anything further, Mr. Walsh?

A Other than possibly that, as Mr. Nutter brought out, this well is operating, being produced under a temporary 30 days' authorization by the Aztec District Office which will end the end of this month, September 30th, and if an Order cannot be issued by this time I have talked to Mr. Emery Arnold and he did indicate he would extend this time for temporarily producing this well and until an Order can be written.

Q It is your opinion, am I correct, that no correlative rights would be violated by approving a non-standard location as you are actually crowding into your own acreage?

A That's correct.

Q Where did you obtain Exhibit No. 1?

A Exhibit No. 1, the map, was prepared by W. D. Strickland and I obtained copies of the map in order to present the well locations in this case.

Q Exhibit No. 2 is a Commission form?

A USGS.

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PAGE 15

Q Exhibit 3 and 4 were prepared by the surveyor and presented to you?

A Yes, they were.

Q And Exhibit 5 was prepared by you from logs, is that correct?

A That's correct.

Q What about your No. 6, Gas Analysis?

A This was prepared by me from my copy, original copy, of the gas analysis.

Q And what about No. 7?

A 7 was prepared from copies of the gas analysis presented to me by El Paso Natural Gas.

MR. DURRETT: If the Examiner please, I would move the introduction of Exhibits 1 through 7 and that would conclude our Direct Examination.

MR. NUTTER: Shouldn't this be labeled Exhibit 8 for the record?

MR. DURRETT: I move for the introduction of this Exhibit No. 8 and we will make copies.

MR. NUTTER: Applicant's Exhibits 1 through 8 will be admitted in evidence.

CROSS EXAMINATION

BY MR. NUTTER:



Q Mr. Walsh, how about Campbell, Keough and Rockwell Well in Section 9, does the gas analysis compare with the gas analysis on the Southern Gulf Well?

A To the Number 4 well?

Q Yes?

A Yes, there is even a slight difference there, Mr. Nutter, in that your nitrogen content is not as high. It is only 34.2 percent.

Q How about helium?

A Helium is 3.26 percent and a BTU value of 752.

Q Must have more methane?

A A little more methane, I believe, but the nitrogen content is making the big change.

Q It again, by having the helium present in that gas, apparently has a greater similarity to the Southern Gulf Well than it would to these wells over in the Tocito Dome Pool itself?

A Yes, it does compare to the Navajo Tocito 4 rather than the oil pool wells in the oil pool.

Q Any other gas wells on this northeast flange of the structure?

A On the Northeast you have to go quite a ways north of here and the Sinclair Well indicated in the Southwest-Southwest of 34, Township 27 North, Range 18 West, there is a



dry hole, will produce some hydrocarbon gas along with some helium when they had it open before.

Q Is there any trace of helium in the Tocito Dome gas?

A In talking with the Pan American representative, there is a slight trace. However, he did not know -- he didn't consider it any concern to their operation.

MR. NUTTER: Does anyone have any further questions of Mr. Walsh? He may be excused. Do you have anything further, Mr. Durrett?

MR. DURRETT: I do not.

MR. NUTTER: Does anyone have anything else to offer in Case 4425? We will continue the case to the Hearing scheduled for 9:30 o'clock A.M., October 14, 1970, this same place. The location will be readvertised then.

MR. DURRETT: Thank you, Mr. Examiner.

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PAGE 18

I N D E X

WITNESS

EWELL N. WALSH

Direct Examination by Mr. Durrett

3

Cross Examination by Mr. Nutter

15

PAGE

E X H I B I T S

Applicant's Exhibits 1 through 7

Marked  
4

Admitted  
15

Applicant's Exhibit No. 8

15

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PAGE 19

STATE OF NEW MEXICO )  
COUNTY OF BERNALILLO )

I, SOVEIDA GONZALES, Court Reporter in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

*Soveida Gonzales*  
COURT REPORTER

I do hereby verify that the foregoing is a complete record of the proceedings in the final hearing of Case No. 4425  
dated by me on 9/16 1970

*[Signature]*  
New Mexico Oil Conservation Commission

November 12, 1970

Elliott Oil Company  
P. O. Box 1355  
Roswell, New Mexico 88201

Re: Federal Oil & Gas Lease  
LC 069048, LC 062170-A,  
LC 057443-A, and State of  
New Mexico Lease B-11232

Gentlemen:

This is to inform you that approval is hereby granted to commingle San Andres production from wells located on the above referenced leases and to continue to produce into a centralized tank battery. This approval is subject to the approval by the New Mexico Oil Conservation Commission. Also, this is granted with the understanding that the Commissioner of Public Lands reserves the right to withdraw this approval, if at any time he feels this operation is not to the best interest of the State.

Your ten dollar filing fee has been received.

Very truly yours,

GORDON G. MARCUM, II, Director  
Oil and Gas Department

AJA/GKM/s

cc: Mr. Dan Nutter  
Oil Conservation Commission  
Santa Fe, New Mexico

Oil and Gas Accounting Commission  
Santa Fe, New Mexico

Elliott Oil Company  
Box 1355  
Roswell, New Mexico 88201

FRANK D. ELLIOTT

November 4, 1970

RECEIVED  
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STATE LAND OFFICE  
SANTA FE, N.M.  
505/622-5840

Mr. Ted Bilberry  
Director, Oil and Gas Department  
New Mexico State Land Office  
P. O. Box 1148  
Santa Fe, New Mexico 87501

Re: Federal Oil & Gas Lease LC 069048,  
LC 062170-A, LC 057443-A, and  
State of New Mexico Lease B-11232

Dear Mr. Bilberry:

As you are aware, effective October 1, 1970, the Littman San Andres Unit will be terminated with the operation of the respective leases returning to the original operator. Our concern is confined to that portion of the Littman Unit on the New Mexico side, and involving the above referenced leases. Under Unit operation, the wells on these leases have been produced into a common tank battery located on Lot 4, Section 9, Township 21S, Range 38E, and to justify continued operation of these leases, it is absolutely essential that approval be obtained to continue to produce into a centralized tank battery.

Effective October 1, 1970, we will take over the operation of LC 062170-A and LC 069048, and effective November 1, 1970, we will take over the operation of the other two leases.

The status of the eight wells involved is as follows: 3-1 temporarily abandoned (estimated production capability 5 BOPD), 3-2, 6 BOPD, 3-3 water injection well, 2-2 water injection well, 2-3 temporarily abandoned (estimated producing capability 3 BOPD), 1-1, 5 BOPD, 4-1, 7 BOPD, and 4-2 water injection well.

We propose to continue to produce these wells into the present central tank battery, setting a separate heater treater to handle the fluid produced from well #4-1 (State Lease B-11232), metering the oil from this separate treater into the tank battery, thereby having a separate measurement for the State of New Mexico oil. We would further propose to run individual well tests on the wells located on the Federal lands quarterly for settlement purposes.



page 2

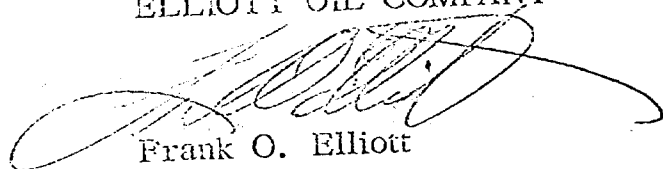
Mr. Ted B. Berry  
New Mexico State Land Office

All of the above wells are completed in the same zone (San Andrés) and all are in their last stages of depletion. However, the San Andres production historically has produced a considerable amount of oil at these very low rates, provided they can be combined into a low cost operation.

We respectfully request your approval of the above commingling procedure.

Respectfully,

ELLIOTT OIL COMPANY



Frank O. Elliott

FOE:bm

Elliott Oil Company

LITMAN San Andreas

L.C. 057443-A Well #1-1

L.C. 062170-A Well #2-3

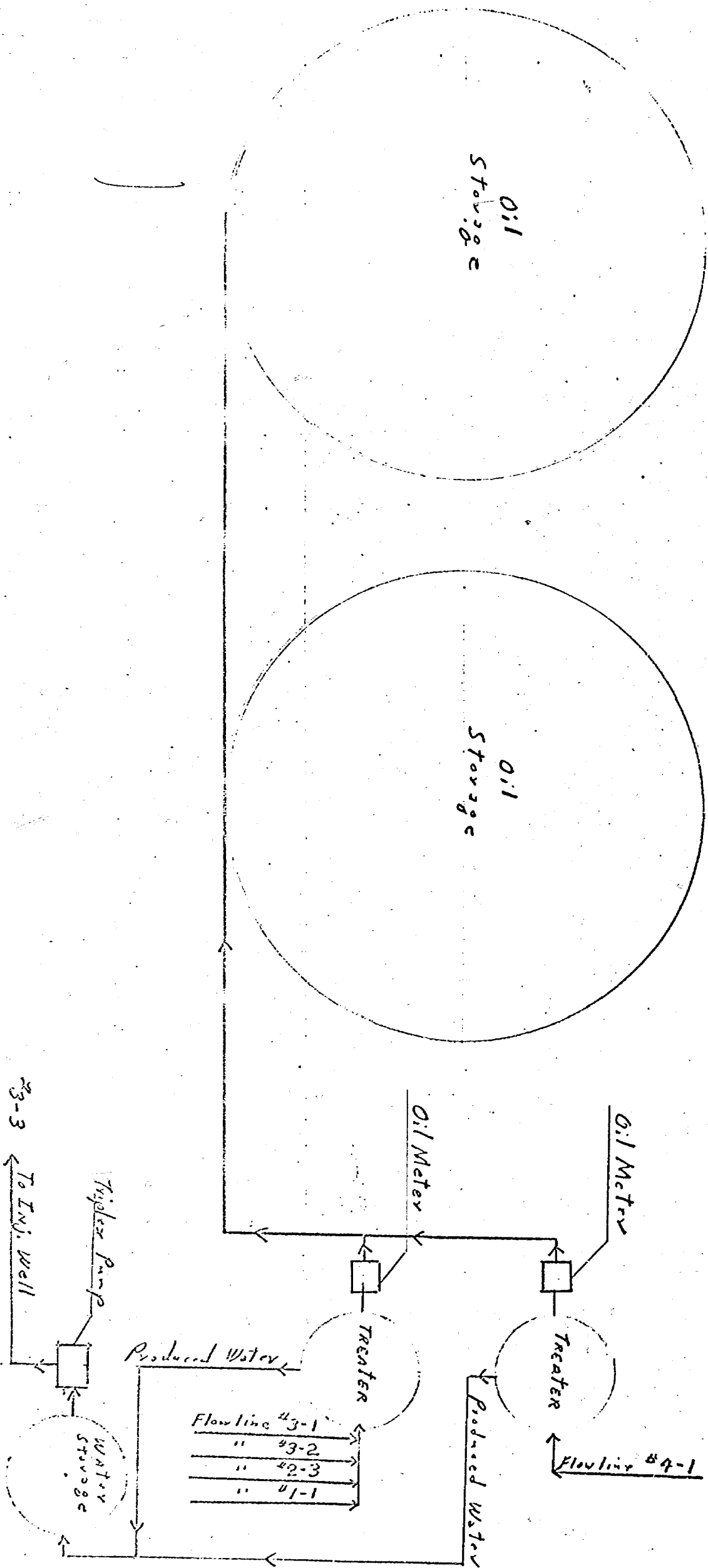
L.C. 069048 Well #3-1, 3-2, 3-3

B-11232 Well #4-1

RECEIVED

NOV 5 10 24 AM '70

STATE LAND OFFICE  
SANTA FE, N.M.





# OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO  
P. O. BOX 2088 - SANTA FE  
87501

GOVERNOR  
DAVID F. CARGO  
CHAIRMAN  
LAND COMMISSIONER  
ALEX J. ARMIJO  
MEMBER  
STATE GEOLOGIST  
A. L. PORTER, JR.  
SECRETARY - DIRECTOR

October 27, 1970

Mr. James M. Durrett  
Attorney at Law  
Post Office Box 3001  
Albuquerque, New Mexico

Re: Case No. 4425  
Order No. R-4045  
Applicant:

Southern Gulf Production Co.

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x

Artesia OCC       

Aztec OCC x

Other \_\_\_\_\_

GOVERNOR  
DAVID F. CARGO  
CHAIRMAN

State of New Mexico  
Oil Conservation Commission



LAND COMMISSIONER  
GUYTON B. HAYS  
MEMBER

1000 RIO BRAZOS ROAD  
AZTEC

December 5, 1968

STATE GEOLOGIST  
A. L. PORTER, JR.  
SECRETARY - DIRECTOR

Southern Gulf Production Co.  
1801 C & I Building  
Houston, Texas

Attn: Mr. W. D. Stricklin

Dear Bill:

Since our discussion of your location problem for the Navajo Tocito #4 well at Tocito Dome, I have discussed the problem with our attorney in Santa Fe, Mr. George Hatch.

I explained to Mr. Hatch that the production zone in the Tocito Dome Pennsylvanian D Pool correlates with your production zone to the north although production characteristics exhibited by your first well in that area indicate that it is in a separate reservoir.

Mr. Hatch states that the pool rules are specific in stating that any well completed in the Pennsylvanian within one mile of the Tocito Dome Pennsylvanian D Pool boundary are governed by the pool rules. He also thinks it will be difficult to establish a new reservoir on the basis of development to date. He therefore suggests that you make application for a non-standard location on your new well rather than to apply for establishment of a new pool at this time.

I do not believe there will be objection to approval of the location as I have talked to the offset operators.

It might be well to make early application for the non-standard location so that there will not be a delay in producing the well upon completion.

If you need further information, please contact me or Mr. George Hatch in our Santa Fe office. His address is P. O. Box 2088, Santa Fe, New Mexico 87501, and his telephone number is 827-2741.

Yours very truly,

*Emery C. Arnold*  
Emery C. Arnold  
Supervisor, District #3

ECA:mc  
cc: Mr. George Hatch

MAILED  
DEC 6 AM 10 25

*Case 4425*

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. 4425  
Order No. R-4045

APPLICATION OF SOUTHERN GULF PRODUCTION  
COMPANY FOR AN UNORTHODOX GAS WELL LOCA-  
TION, SAN JUAN COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9:30 a.m. on October 14, 1970, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 27th day of October, 1970, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, 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 Gulf Production Company, seeks, as an exception to the gas well location requirements of the Commission Rules and Regulations, approval for an unorthodox gas well location in an undesignated Pennsylvanian gas pool for its Navajo Tocito Well No. 4 1963 feet from the South line and 977 feet from the West line of Section 10, Township 26 North, Range 18 West, NMPM, San Juan County, New Mexico.

(3) That said well was originally projected as an oil well in the Tocito Dome Pennsylvanian "D" Pool, but it was completed instead as a gas well producing from an undesignated Pennsylvanian "E" gas pool.

(4) That the subject well was inadvertently drilled at the above-described non-standard location.

-2-

CASE No. 4425  
Order No. R-4045

(5) That approval of the subject application will afford the applicant the opportunity to produce its just and equitable share of gas in the undesignated Pennsylvanian gas pool, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That an unorthodox gas well location is hereby approved for the Southern Gulf Production Company Navajo Tocito Well No. 4 in an undesignated Pennsylvanian "E" zone gas pool at a point 1963 feet from the South line and 977 feet from the West line of Section 10, Township 26 North, Range 18 West, NMPM, San Juan County, New Mexico.

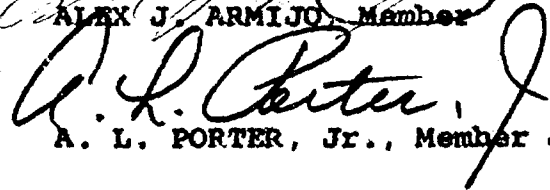
(2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

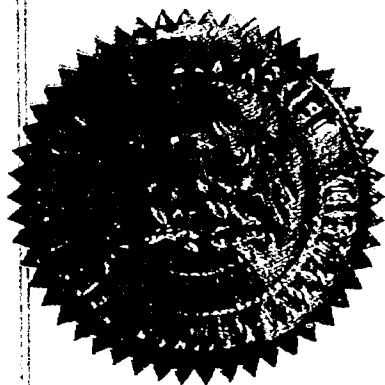
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

  
DAVID F. CARGO, Chairman

  
ALEX J. ARMIJO, Member

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



esr/

Docket No. 23-70

DOCKET: REGULAR HEARING - WEDNESDAY - OCTOBER 14, 1970

OIL CONSERVATION COMMISSION - 9 A.M. - MORGAN HALL, STATE LAND OFFICE BUILDING,  
SANTA FE, NEW MEXICO

ALLOWABLE: (1) Consideration of the oil allowable for November and December, 1970;

(2) Consideration of the allowable production of gas for November, 1970, from fifteen prorated pools in Lea, Eddy, Roosevelt and Chaves Counties, New Mexico. Consideration of the allowable production of gas from nine prorated pools in San Juan, Rio Arriba and Sandoval Counties, New Mexico, for November, 1970.

CASE 4436: (THIS CASE WILL BE HEARD BEFORE THE FULL COMMISSION OR BY EXAMINER DANIEL S. NUTTER)

Application of El Paso Natural Gas Company for the amendment of the General Rules and Regulations governing the prorated gas pools of New Mexico and the amendment of the Special Rules and Regulations governing the Tapacito-Pictured Cliffs and Basin-Dakota Gas Pools located in Rio Arriba, San Juan, and Sandoval Counties, New Mexico. Applicant, in the above-styled cause, seeks the amendment of the General Rules and Regulations governing the prorated gas pools of Northwest and Southeast New Mexico and the Special Rules and Regulations governing the Tapacito-Pictured Cliffs and Basin-Dakota Gas Pools located in Rio Arriba, San Juan, and Sandoval Counties, to permit substantial changes in the method of classifying marginal wells, and the assignment of allowable to marginal wells governed by the aforesaid rules and regulations, as well as a substantial change in the balancing of production procedure required by said rules. Copies of the proposed amendments will be circulated by way of the Commission's general mailing list and will be available upon request made to the Commission at its Santa Fe office.

\* \* \* \* \*

THE FOLLOWING CASES WILL BE HEARD BEFORE DANIEL S. NUTTER, EXAMINER, OR ELVIS A. UTZ, ALTERNATE EXAMINER, IN THE OIL CONSERVATION COMMISSION CONFERENCE ROOM ON THE SECOND FLOOR OF SAID BUILDING AT 9:30 A.M.

CASE 4437: Southeastern New Mexico nomenclature case calling for the creation, abolishment and extension of certain pools in Lea and Roosevelt Counties, New Mexico.

(a) Create a new pool in Lea County, New Mexico, classified as an oil pool for Wolfcamp production and designated as the East Corbin-Wolfcamp Pool. The discovery well is the Phillips Petroleum Company Lea No. 23 located in Unit P of Section 30, Township 17 South, Range 34 East, NMPM. Said pool would comprise:

TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM  
SECTION 30: SE/4

(Case 4437 continued)

(b) Create a new pool in Rossevelt County, New Mexico, classified as a gas pool for Pennsylvanian production and designated as the East New Hope-Pennsylvanian Gas Pool. The discovery well is the H. L. Brown, Jr., Mary Martin No. 1 located in Unit P of Section 29, Township 6 South, Range 34 East, NMPM. Said pool would comprise:

TOWNSHIP 6 SOUTH, RANGE 34 EAST, NMPM  
SECTION 29: S/2

(c) Abolish the Warren-Abo Pool in Lea County, New Mexico, described as:

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM  
SECTION 25: S/2  
SECTION 26: SE/4  
SECTION 35: NE/4  
SECTION 36: N/2

TOWNSHIP 20 SOUTH, RANGE 39 EAST, NMPM  
SECTION 30: S/2

(d) Extend the Dk-Abo Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM  
SECTION 25: S/2  
SECTION 26: SE/4  
SECTION 35: NE/4  
SECTION 36: N/2

TOWNSHIP 20 SOUTH, RANGE 39 EAST, NMPM  
SECTION 30: S/2

(e) Extend the North Baum-Upper Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 13 SOUTH, RANGE 32 EAST, NMPM  
SECTION 25: SE/4

(f) Extend the Lea-Bone Springs Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 34 EAST, NMPM  
SECTION 36: SW/4



(Case 4437 continued)

(g) Extend the Townsend-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 35 EAST, NMPM  
SECTION 8: SW/4

(h) Extend the Tres Papalotes-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGE 34 EAST, NMPM  
SECTION 34: NW/4

(i) Extend the Tulk-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 14 South, Range 32 East, NMPM  
SECTION 33: SE/4  
SECTION 34: S/2

CASE 4438: Application of Eastland Oil Company for an exception to Order No. R-3221, as amended, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil on the surface of the ground in Lea, Eddy, Chaves and Roosevelt Counties, New Mexico, after January 1, 1969. Said exception would be for applicant's leases comprising the NW/4 NW/4 of Section 5 and the NE/4 NE/4 of Section 6, Township 18 South, Range 31 East, Grayburg-Jackson Field area, Eddy County, New Mexico.

CASE 4439: Application of Shenandoah Oil Corporation for an unorthodox gas well location, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox Pennsylvanian well location 1980 feet from the South line and 660 feet from the West line of Section 22, Township 6 South, Range 27 East, undesignated Pennsylvanian gas pool, Chaves County, New Mexico. The S/2 of said Section 22 to be dedicated to the well.

CASE 4440: Application of Moran Oil Producing & Drilling Corporation for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pilot waterflood project in the Hobbs Pool by the injection of water into the Grayburg formation through one well located in the NW/4 NE/4 of Section 13, Township 18 South, Range 37 East, Lea County, New Mexico. Applicant further seeks a procedure whereby additional injection wells may be approved administratively.

CASE 4425: (Readvertised)

Application of Southern Gulf Production Company for an unorthodox gas well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks as an exception to the gas well location requirements of the Commission Rules and Regulations, approval for the Southern Gulf Production Company Nava'jo Tocito Well No. 4 at an unorthodox gas well location 1963 feet from the South line and 977 feet from the West line of Section 10, Township 26 North, Range 18 West, undesignated Pennsylvanian gas pool, San Juan County, New Mexico.

CASE 4426: (Readvertised)

Application of Texaco Inc. for salt water disposal, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian formation in the open-hole interval from 11,150 feet to 11,794 feet in its Peery Federal Well No. 4 located in Unit A of Section 29, Township 15 South, Range 30 East, Little Lucky Lake-Devonian Pool, Chaves County, New Mexico.

CASE 4441: Application of Texaco Inc. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Seven Rivers formation in the open-hole interval from 3260 feet to 3415 feet in its C. E. Penny Federal (NCT-4) Well No. 2 located in Unit F of Section 19, Township 25 South, Range 38 East, Langlie Mattix-Seven Rivers Pool, Lea County, New Mexico.

CASE 4442: Application of Texaco Inc. for an exception to Rule 505 of the Commission Rules and Regulations, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 505 of the Commission Rules and Regulations to permit the assignment of more than one single top unit allowable for the Vacuum-Abo Reef Pool to two wells, the surface locations of which are in Unit E of Section 12, Township 18 South, Range 34 East, Lea County, New Mexico, as follows:

State "AE" Well No. 8 - 2310 feet from the North line and 330 feet from the West line;

State "AE" Well No. 10 - 1980 feet from the North line and 990 feet from the West line;

Said Well No. 10 is a relatively straight hole with all perforations confined entirely to said Unit 8, while said Well No. 8 is a crooked hole and would have perforations both in said Unit E of Section 12 and in Unit H of Section 11 of said Township and Range.

# Memo

From

WALDO ALARID  
CHIEF ACCOUNTANT

To

on ad put corrected  
location -

2023 FSL

1157 FWL



# OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO  
1000 RIO BRAZOS ROAD - AZTEC  
87410

70 SEP 25 PM 1 13

GOVERNOR  
DAVID F. CARGO  
CHAIRMAN

LAND COMMISSIONER  
ALEX ARMIJO  
MEMBER

STATE GEOLOGIST  
A. L. PORTER, JR.  
SECRETARY - DIRECTOR

September 21, 1970

Walsh Engineering & Production Corp.  
Petroleum Club Plaza Bldg.  
P. O. Box 254  
Farmington, New Mexico 87401

Re: Extension Testing Period  
Southern Gulf Production Co., Navajo #4  
SW Quarter, Sec. 10, Township 26 North, Range 18 West  
Undesignated Pool

Dear Mr. Walsh:

On August 25, 1970, a letter was written from this office authorizing production and transportation of oil and gas from the above well for a thirty-day testing period ending September 30, 1970. This was necessary due to the fact that approval of the non-standard location had not been approved. Since that time you have had the matter to hearing before the Commission. I have been informed by Mr. Dan Nutter, the examiner, that a non-standard location order will be issued as soon as certain legal technicalities have been cleared up.

We are therefore extending the authorized testing period until October 30, 1970, and I feel certain that a non-standard location order will have been entered by that date.

Yours very truly,

*Emery C. Arnold*  
Emery C. Arnold  
Supervisor, District #3

ECA:mc

cc: Eastern Petroleum Corp.  
3001 Northwood Circle  
Farmington, New Mexico

The Inland Corp.  
Box 1528  
Farmington, New Mexico

Oil Conservation Commission  
Box 2088  
Santa Fe, New Mexico

*Call 9425*

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

August 21, 1970

Mr. Robert A. Fullop  
Agent for Southern Gulf Production Company  
3001 Northwood Circle  
Farmington, New Mexico 87401

DOCKET MAILED

Re: Southern Gulf Production Company  
Navajo Tocito No. 4  
SW/4, NE/4, Sec. 10 - T 26 N, R 18 W  
San Juan County, New Mexico  
Lease No. 14-20-603-5019

Date 9-2-70

DOCKET MAILED

Dear Mr. Fullop:

Date 10-2-70

This will acknowledge receipt of your application dated August 19, 1970, for administrative approval for the unorthodox location of the subject well.

The subject application is not eligible for administrative approval and will be set for hearing before an examiner on September 16, 1970.

A copy of the docket will be mailed to you within the next few days.

Very truly yours,

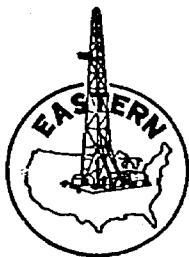
GEORGE M. HATCH  
Attorney

GMH/esr

cc: Oil Conservation Commission  
1000 Rio Brazos Road  
Aztec, New Mexico 87410

C  
O  
P  
Y

Case 4425



EASTERN PETROLEUM CO.

P.O. BOX 291 CARM, ILLINOIS 62821  
3001 NORTHWOOD CIRCLE  
FARMINGTON, NEW MEXICO 87401  
August 19, 1970

*Case 4425*

0 AUG 20 PM 1 03

Mr. A. L. Porter, Jr.  
New Mexico Oil Conservation Commission  
P.O. Box 2088  
Sante Fe, New Mexico

RE: Southern Gulf Production Co.  
Navajo Tocito No. 4  
SW/4, NE/4, Sec. 10 - T26N - R13W  
San Juan County, New Mexico  
Lease No. 14-20-603-5019

Dear Mr. Porter:

In reference to our telephone conversation of August 17, 1970, regarding the above mentioned well, I am formally requesting Administrative Approval of the unorthodox location associated with said well.

The following history of Navajo Tocito No. 4 will aid in explaining the occurrence of the unorthodox location:

Navajo Tocito No. 4 was originally located and permitted in accordance with the Tocito Dome Pennsylvanian "D" Pool. Upon completion of Navajo No. 4 in the "Penn" formation, geological studies established the well as being located in a pool separate from that of the Tocito Dome.

These findings therefore established Navajo No. 4 as a wildcat. Under wildcat lease spacing regulations, Navajo No. 4 was further classified as an unorthodox location.

The only offset, indicated by red markings on the enclosed map, to Navajo No. 4 is Navajo Tocito No. 1 also owned by Southern Gulf Production Co.

Mr. Porter

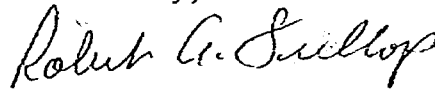
-2-

August 19, 1970

Also enclosed is a copy of the letter sent to Mr. Arnold in respect to a test on the well in question. The letter has been submitted by Walsh Engineering and Production Co. on behalf of Eastern Petroleum Co.

Your prompt attention will be appreciated.

Sincerely,



Robert A. Fullop  
Agent for Southern Gulf

Enclosures: Map  
Letter

ms

cc: Southern Gulf Production Company  
840 Houston Natural Gas Bldg.  
Houston, Texas 77002

New Mexico Oil Conservation Commission  
1000 Rio Bravos Road  
Aztec, New Mexico 87410

Walsh Engineering & Production Corporation  
P.O. Box 254  
Farmington, New Mexico 87401

PETROLEUM ENGINEERING  
RESERVOIR STUDIES  
EVALUATIONS  
GEOLOGICAL STUDIES

EWELL N. WALSH, P.E.  
President

**WALSH  
ENGINEERING & PRODUCTION  
CORPORATION**

PETROLEUM CLUB PLAZA BUILDING  
P. O. BOX 254  
FARMINGTON, NEW MEXICO 87401

LEASE MANAGEMENT  
CONTRACT PUMPING  
DRILLING SUPERVISION  
WORKOVER SUPERVISION

TELEPHONE 325-8203

August 17, 1970

Mr. Emery Arnold  
New Mexico Oil Conservation Commission  
1000 Rio Brazos Road  
Aztec, New Mexico 87410

'70 AUG 20 PM 1 01

*Case 4425*

Ref: Southern Gulf Production Co. Navajo  
Tocito No. 4, L-Section 10-T26N-R18W,  
San Juan County, New Mexico

Dear Mr. Arnold:

The above-referred-to well is drilled 990 ft. from the west line and 1980 ft. from the south line of Section 10. At the time the well was drilled, regulations required that the well be drilled at a location governed by the established pool rules for the Tocito Dome-Pennsylvanian "D" Pool. The Tocito Dome Pool is classified as an oil pool.

The completion of the above-referred-to well indicated the well to be a gas well with a G.O.R. of 35,480 cubic feet gas per barrel of liquid hydrocarbon.

At the time a test was conducted to determine an initial potential of the well, the well was flowed at rates of 2,393 MCF/D, 3,487 MCF/D, 5,217 MCF/D and 6,864 MCF/D through a production unit. The casing pressure was decreased only 3 psi during the highest flow rate. Due to limitations of the production test unit the well could not be flowed at sufficient rates to lower the casing pressure to the degree necessary to obtain a multipoint back pressure test.

A gas analysis, conducted by the United States Bureau of Mines, indicated the gas from the well to contain 5.40% helium. The calculated gross B.T.U. quality of the gas Southern Gulf Production Company has not been successful in obtaining an economical and satisfactory gas purchase contract with El Paso Natural Gas Company. Therefore, the well has been shut in since it was completed in January, 1969.

Eastern Petroleum Company has entered into a contractual agreement with Southern Gulf Production Company to purchase the gas from the well and transport the gas, by pipeline, to the Helium Plant at Shiprock, New Mexico. The Linde Company



Mr. Emery Arnold

-2-

August 17, 1970

(Division of Union Carbide) has installed some new equipment at the Helium Plant and desires to conduct tests, in relation to Helium removal, of the gas from the above-referred-to well.

On behalf of Southern Gulf Production Company it is requested that permission be given to produce the above-referred-to well, without administrative approval or approval after a hearing of the unorthodox location of a gas well, for 30 days. During the 30 days the test should indicate if continued production is feasible, for the removal of helium, and if the test is satisfactory Southern Gulf Production Company will request approval of the unorthodox gas well location.

Your immediate approval is requested due to Eastern Petroleum Company, by virtue of contract with Linde Company, desires to take gas from the well on Friday, August 21, 1970.

Thank you for your consideration in this matter.

Very truly yours,



Ewell N. Walsh, P.E.  
President

cc; Mr. Gordon Puckett  
Southern Gulf Production Company  
840 Houston Natural Gas Bldg.  
Houston, Texas 77002

Mr. Henry Fullop  
Eastern Petroleum Company  
P.O. Box 291  
Carmi, Illinois 62821

Mr. Robert Fullop  
Eastern Petroleum Company  
3001 Northwood Circle  
Farmington, New Mexico 87401

Docket No. 21-70

DOCKET: REGULAR HEARING - WEDNESDAY - SEPTEMBER 16, 1970

OIL CONSERVATION COMMISSION - 9 A.M. - MORGAN HALL, STATE LAND OFFICE BUILDING,  
SANTA FE, NEW MEXICO

**ALLOWABLE:** Consideration of the allowable production of gas for October, 1970, from fifteen prorated pools in Lea, Eddy, Roosevelt and Chaves Counties, New Mexico. Consideration of the allowable production of gas from nine prorated pools in San Juan, Rio Arriba and Sandoval Counties, New Mexico, for October, 1970.

CASE 4367: (De Novo)

Application of Mobil Oil Corporation for a waterflood expansion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its Bridges State Waterflood Project, Vacuum Grayburg-San Andres Pool, by the injection of water into the Grayburg San Andres formations through two additional injection wells to be drilled at locations in Township 17 South, Range 34 East, Lea County, New Mexico, as follows:

A well to be drilled at a standard location 2310 feet from the North line and 860 feet from the West line of Section 25; and

A well to be drilled at an unorthodox location 100 feet from the South line and 1980 feet from the West line of Section 26.

Upon application of Mobil Oil Corporation this case will be heard De Novo under the provisions of Rule 1220.

CASE 4368: Application of Mobil Oil Corporation for a waterflood expansion and amendment of rules governing same, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its Bridges State Waterflood Project, Vacuum Grayburg-San Andres Pool, to the conversion of water injection of 13 additional wells at standard locations in Sections 25, 26, and 27, Township 17 South, Range 34 East, Lea County, New Mexico. Applicant further seeks the amendment of the rules governing said project to permit expansion of the project administratively without a showing of well response.

Upon application of Mobil Oil Corporation this case will be heard De Novo under the provisions of Rule 1220.

THE FOLLOWING CASES WILL BE HEARD BEFORE DANIEL S. NUTTER, EXAMINER, OR ELVIS A. UTZ, ALTERNATE EXAMINER, IN THE OIL CONSERVATION COMMISSION CONFERENCE ROOM ON THE SECOND FLOOR OF SAID BUILDING AT 9:30 A.M.

CASE 4413: (Continued from the August 19, 1970, Examiner Hearing)  
In the matter of the hearing called by the Oil Conservation Commission upon its own motion to permit Stanley Leonard Jones dba Francisca Corporation and all other interested parties to appear and show cause why the Francisca Corporation Beeman Well No. 1 located 1980 feet from the South and West lines of Section 2, Township 24 South, Range 28 East, Eddy County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

- CASE 4416: (Continued for the September 2, 1970, Examiner Hearing)  
Application of Robert L. Parker Trust for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a cooperative waterflood project in the Langlie Mattix Pool on its George L. Erwin Lease by the injection of water through its Erwin Well No. 2 located in Unit L of Section 35, Township 24 South, Range 37 East, Lea County, New Mexico.
- CASE 4424: Southeastern New Mexico nomenclature case calling for an order for the extensions of certain pools in Lea, Eddy, Chaves and Roosevelt Counties, New Mexico:
- a) Extend the Blinebry Oil Pool in Lea County, New Mexico, to include therein:
- TOWNSHIP 21 SOUTH, RANGE 36 EAST, NMPM  
SECTION 25: SE/4
- b) Extend the Bluitt-San Andres Associated Pool in Roosevelt County, New Mexico, to include therein:
- TOWNSHIP 8 SOUTH, RANGE 38 EAST, NMPM  
SECTION 17: SE/4
- c) Extend the South-Carlsbad Morrow Gas Pool in Eddy County, New Mexico, to include therein:
- TOWNSHIP 23 SOUTH, RANGE 26 EAST, NMPM  
SECTION 1: W/2
- d) Extend the Double L-Queen Pool in Chaves County, New Mexico, to include therein:
- TOWNSHIP 14 SOUTH, RANGE 29 EAST, NMPM  
SECTION 25: SE/4 SW/4  
SECTION 36: NE/4 NW/4
- e) Extend the Eagle Creek-San Andres Pool in Eddy County, New Mexico, to include therein:
- TOWNSHIP 17 SOUTH, RANGE 25 EAST, NMPM  
SECTION 22: E/2 NE/4
- f) Extend the Lusk-Morrow Gas Pool in Lea County, New Mexico, to include therein:
- TOWNSHIP 19 SOUTH, RANGE 32 EAST, NMPM  
SECTION 32: All

(Case 4424 continued)

- g) Extend the Midway-San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 37 EAST, NMPM  
SECTION 16: SW/4

- h) Extend the West Sawyer-San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 37 EAST, NMPM  
SECTION 34: S/2

- i) Extend the North Vacuum-Abo Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM  
SECTION 11: SW/4

- j) Extend the North Vacuum-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM  
SECTION 14: N/2  
SECTION 15: E/2

- k) Extend the Vada-Pennsylvanian Pool in Lea and Roosevelt Counties, New Mexico to include therein:

TOWNSHIP 8 SOUTH, RANGE 35 EAST, NMPM  
SECTION 34: NW/4

TOWNSHIP 8 SOUTH, RANGE 36 EAST, NMPM  
SECTION 27: SE/4  
SECTION 28: NE/4

TOWNSHIP 9 SOUTH, RANGE 33 EAST, NMPM  
SECTION 24: All  
SECTION 25: NE/4

TOWNSHIP 9 SOUTH, RANGE 34 EAST, NMPM  
SECTION 19: N/2 and SW/4

TOWNSHIP 9 SOUTH, RANGE 35 EAST, NMPM  
SECTION 16: SE/4

CASE 4425: Application of Eastern Petroleum Company as agent for Southern Gulf Production Company for an unorthodox gas well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks as an exception to the gas well location requirements of the Commission Rules and Regulations, approval for the Southern Gulf

(Case 4425 continued).

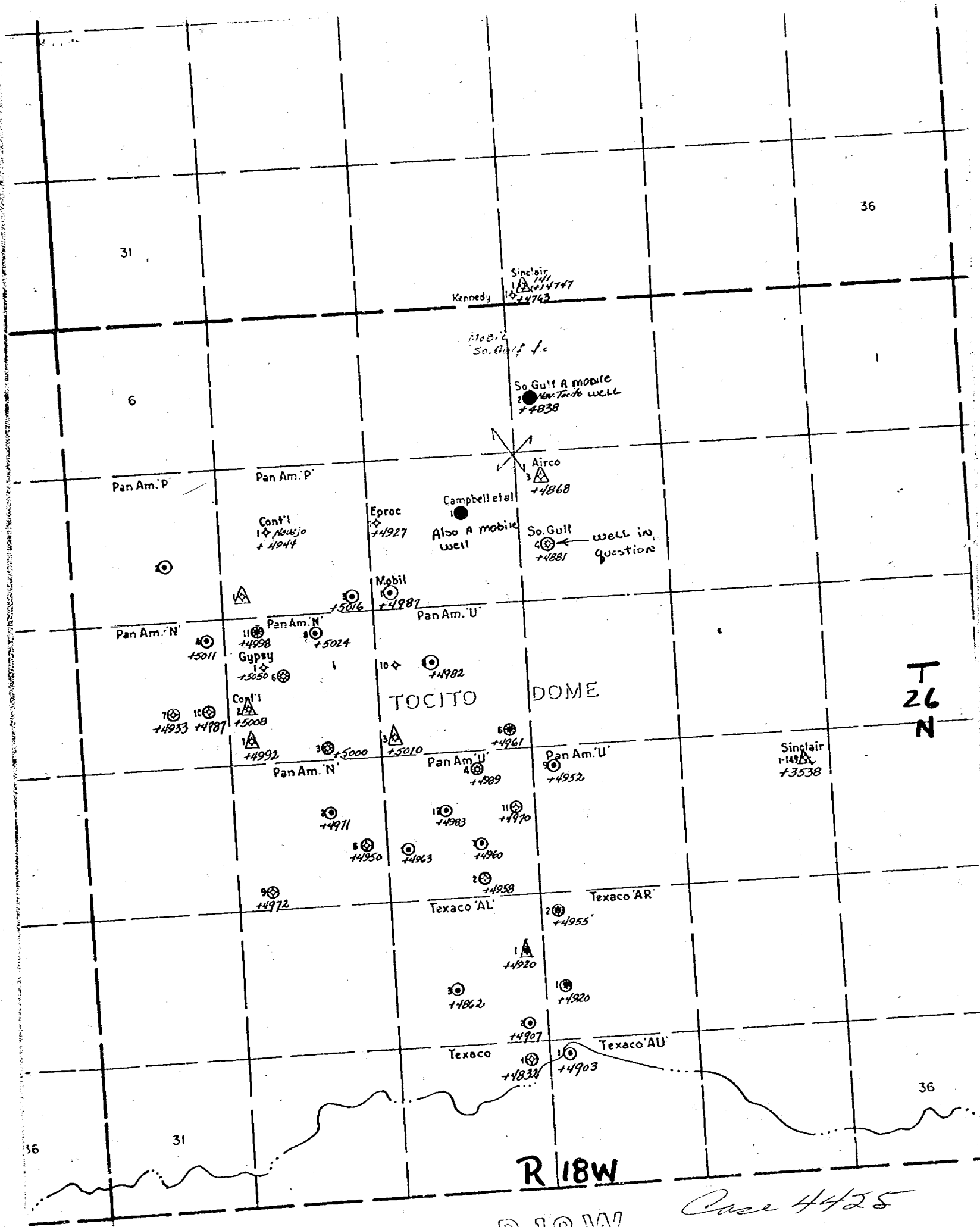
Production Company Navajo Tocito Well No. 4 at an unorthodox gas well location 2023 feet from the South line and 1157 feet from the West line of Section 10, Township 26 North, Range 18 West, undesignated Pennsylvanian gas pool, San Juan County, New Mexico.

CASE 4426: Application of Texaco Inc. for salt water disposal, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian formation in the open-hole interval from 11,150 feet to 11,750 feet in its Peery Federal Well No. 4 located in Unit A of Section 29, Township 15 South, Range 30 East, Little Lucky Lake-Devonian Pool, Chaves County, New Mexico.

CASE 4427: Application of David F. Fasken for the creation of a new gas pool and special pool rules therefor, and a non-standard gas spacing unit, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Morrow gas pool for his well located 3630 feet from the South line and 660 feet from the East line of Section 1, Township 21 South, Range 25 East, Eddy County, New Mexico, and for the promulgation of special rules therefor, including a provision for 640-acre spacing units. Applicant further seeks approval of a 854.62-acre non-standard gas spacing unit comprising all of said Section 1 to be dedicated to the above-described well.

CASE 4428: Application of Texas Oil and Gas Corporation for a non-standard gas spacing unit, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of an approximately 240-acre non-standard gas proration unit comprising the E/2 NE/4, SW/4 NE/4, W/2 NW/4, and SE/4 NW/4 of Section 11, Township 23 South, Range 26 East, South Carlsbad Field, Eddy County, New Mexico, to be dedicated to a well to be drilled at a standard location in the N/2 of said Section 11 to test any and all formations from the surface of the ground down to and including the Morrow formation.

CASE 4354: (Continued from the July 1, 1970, Examiner Hearing) and the August 5, 1970, Examiner Hearing. Application of Michael P. Grace and Corinne Grace for compulsory pooling, Eddy County, New Mexico. Applicants, in the above-styled cause, seek an order pooling all mineral interests from the surface of the ground down to and including the Morrow formation underlying the N/2 of Section 11, Township 23 South, Range 26 East, South Carlsbad Field, Eddy County, New Mexico, said acreage to be dedicated to a well to be drilled in either the NE/4 NW/4 or the NW/4 NE/4 of said Section 11. Also to be considered will be the costs of drilling said well, a charge for the risk involved, a provision for the allocation of actual operating costs, and the establishment of charges for supervision of said well.



© 1967

Case 4425

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

## APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL ☒ DEEPEN ☐ PLUG BACK ☐

b. TYPE OF WELL  
OIL WELL ☒ GAS WELL ☐ OTHER ☐ SINGLE ZONE ☐ MULTIPLE ZONE ☐

2. NAME OF OPERATOR  
SOUTHERN CUP PRODUCTION COMPANY

3. ADDRESS OF OPERATOR  
1801 GAY BLVD. HOUSTON, TEXAS

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)  
At surface 290°/1 & 1980°/3  
At proposed prod. zone

5. LEASE DESIGNATION AND SERIAL NO.  
1-20-100-5000

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
N/A

7. UNIT AGREEMENT NAME  
N/A

8. FARM OR LEASE NAME  
N/A

9. WELL NO.  
N/A

10. FIELD AND POOL, OR WILDCAT  
N/A

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
N/A

12. COUNTY OR PARISH  
CLAY COUNTY

13. STATE  
TX

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE  
2.5 MILES SOUTH OF SHILOH, TX

15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any)  
990'

16. NO. OF ACRES IN LEASE  
2560

17. NO. OF ACRES ASSIGNED TO THIS WELL  
160

18. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.  
2400'

19. PROPOSED DEPTH  
6500'

20. ROTARY OR CABLE TOOLS  
ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
5705' GROUND

22. APPROX. DATE WORK WILL START  
DEC. 1, 1968

PROPOSED CASING AND CEMENTING PROGRAM				
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/4"	13 3/8"	48.000	93'	100 BAGS
11"	8 5/8"	24.000	1600'	400 BAGS
7 7/8"	4 1/2"	9.5	6500'	125 BAGS

IT IS INTENDED TO DRILL THIS HOLE TO A TOTAL DEPTH OF 6500', SET PIPE, AND COMPLETE IN THE PENNSYLVANIAN "E" ZONE.

RECEIVED

DEC 2 1968

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

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED W. D. Johnston TITLE PETROLEUM GEOLOGIST DATE 12/2/68  
(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

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

DEC 1 1968

P. T. McGRATH

DISTRICT ENGINEER

\*See Instructions On Reverse Side

BEFORE EXAMINER NUTTER

NOTATION COMMITTEE

Applicant EXHIBIT NO. 2  
4425

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

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

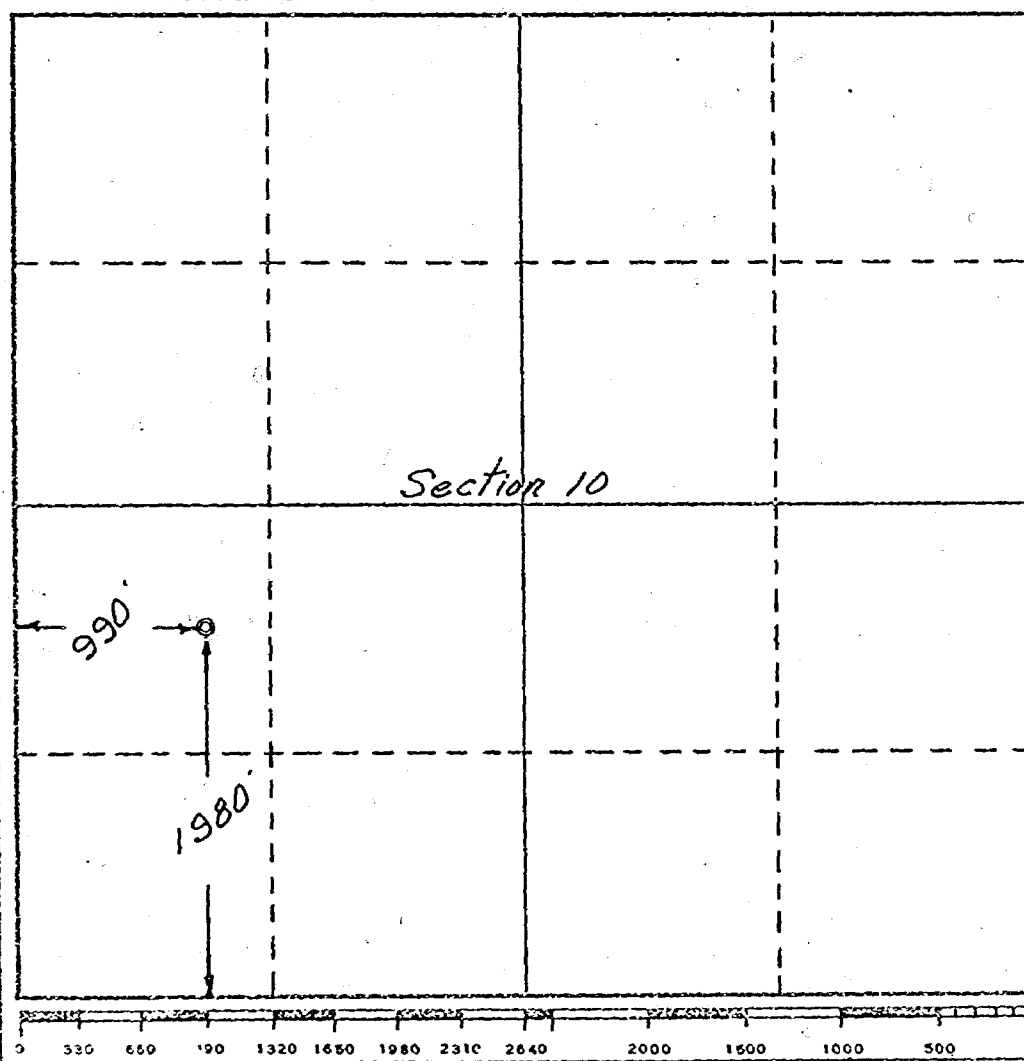
All distances must be from the outer boundaries of the Section.

Operator <b>Southern Gulf Production Company</b>		Lease <b>Navajo Tocito</b>		Well No. <b>4</b>
Unit Letter <b>L</b>	Section <b>10</b>	Township <b>26 North</b>	Range <b>18 West</b>	County <b>San Juan</b>
Actual Footage Location of Well: <b>1980</b> feet from the <b>South</b> line and <b>990</b> feet from the <b>West</b> line				
Ground Level Elev. <b>5705</b>	Producing Formation <b>Pennsylvania</b>	Pool <b>Undesignated</b>	Dedicated Acreage: <b>160</b> Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?  
☐ Yes ☐ No If answer is "yes," type of consolidation \_\_\_\_\_

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

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



CERTIFICATION

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

Name \_\_\_\_\_

Position \_\_\_\_\_

Company \_\_\_\_\_

Date \_\_\_\_\_

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

Date Surveyed \_\_\_\_\_

**November 27, 1968**

Registered Professional Engineer and Land Surveyor

Certificate No. **3084**



**NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACERAGE DEDICATION PLAT**

All distances must be from the outer boundaries of the Section

Operator <b>Southern Production Co.</b>			Lease <b>Navajo Tocito</b>		Well No. <b>4</b>
Unit Letter <b>L</b>	Section <b>10</b>	Township <b>26 North</b>	Range <b>18 West</b>	County <b>San Juan</b>	
Actual Footage Location of Well: <b>1963</b> feet from the <b>South</b> line and <b>977</b> feet from the <b>West</b> line					
Ground Level Elev.	Producing Formation		Pool	Dedicated Acreage:  Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

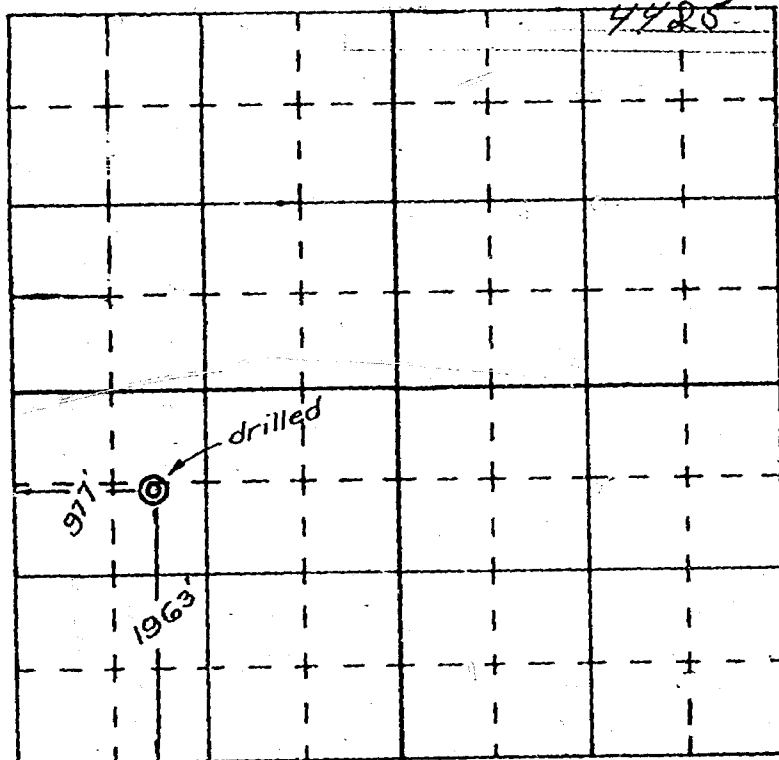
( ) Yes ( ) No If answer is "yes," type of consolidation \_\_\_\_\_

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

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

**BEFORE EXAMINER NUTTER**

*Appl's* EXHIBIT NO. **3**



**CERTIFICATION**

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

Name \_\_\_\_\_

Position \_\_\_\_\_

Company \_\_\_\_\_

Date \_\_\_\_\_

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

Date Surveyed \_\_\_\_\_

**September 13, 1970**  
Registered Professional Engineer  
and/or Land Surveyor

*E. J. [Signature]*  
Certificate No. **3602**

#3

BEFORE EXAMINER NUTTER

Applicant

SECTION

NO. 4

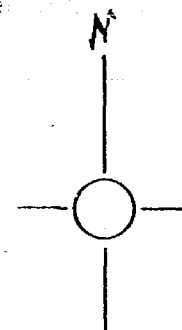
4425

Southern Gulf Production Co.,  
Navajo Tocito # 4  
(drilled)  
Well Head Location:  
1963' from So. line &  
977' from West line  
of Sec. 10-26-18.

Sec. cor. set by E.V.E., 1961.  
cor. used to check existing  
S.W. cor. of Sec. 10-26-18.

8 | 9  
17 | 16  
N 89° 59' E  
5290.8'  
2" I.P.  
Brass cap

N 26° 26' E  
2191.7'  
1 3/4" Galvanized metal  
pipe, stamped.  
Set by?

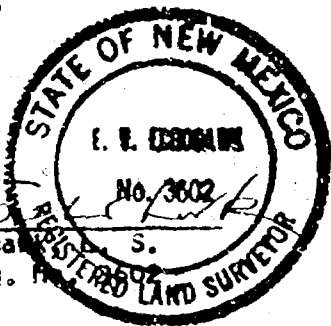


SOUTHERN GULF PRODUCTION CO.

Survey to check position of drilled  
Well in S. W. 1/4 of Section 10, T-26-N,  
R-18-W, N. M. P. M., San Juan Co., N.M.

September 13, 1970 Scale, 1" = 400'

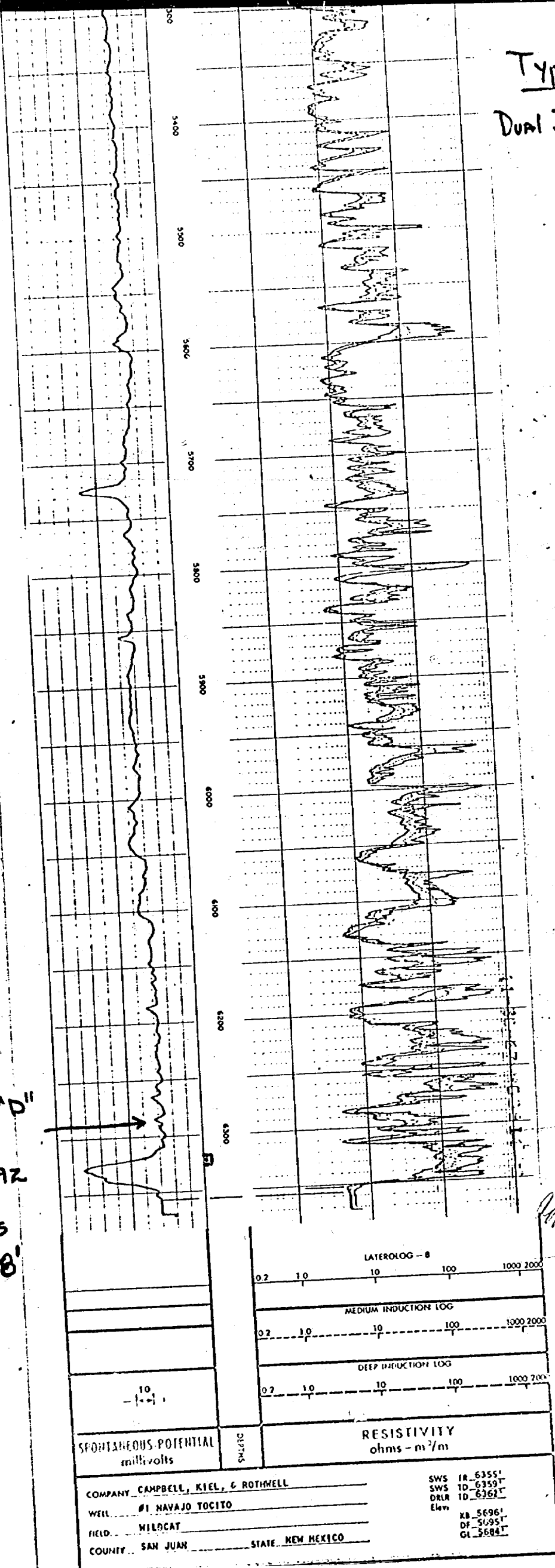
Surveyed by: E. V. Echols  
N. Mex. Reg. No. 3602



# 4

Type Log  
Dual Induction-Laterolog

TOP PENN "D"  
6288'  
Sub Sea -592  
Perforations  
6322'-6328'



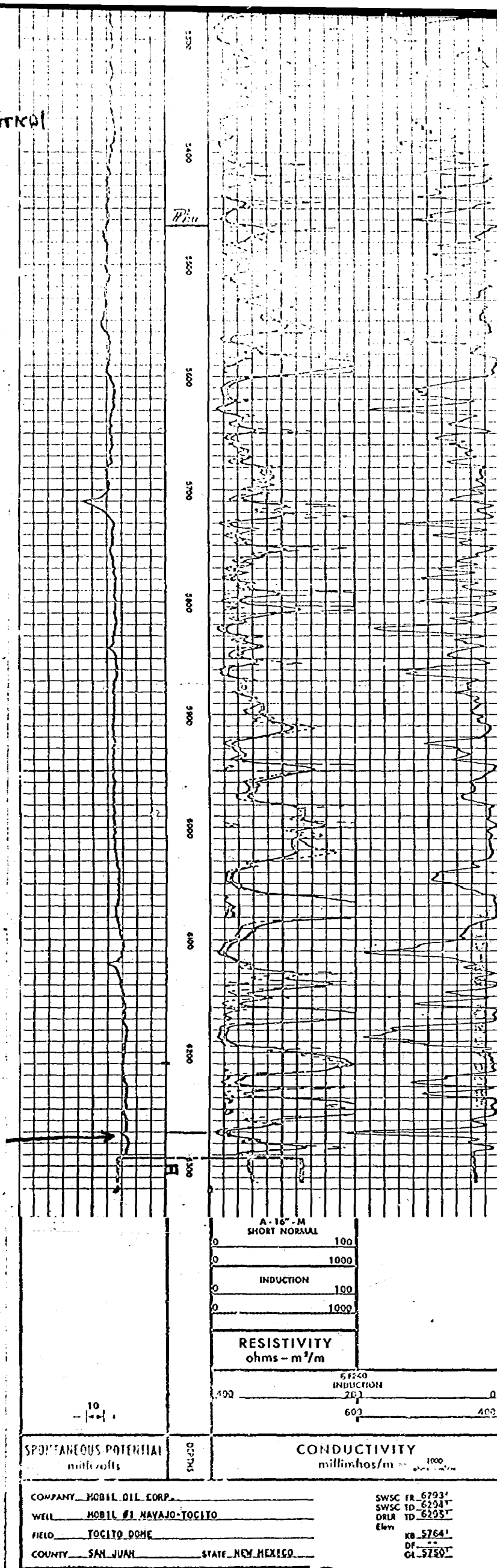
EXAMINED NUT  
LOCATION  
Applicant AMBIT NO. 5  
4425

5057NE 7

H 5

Type Log  
Induction-Electrical

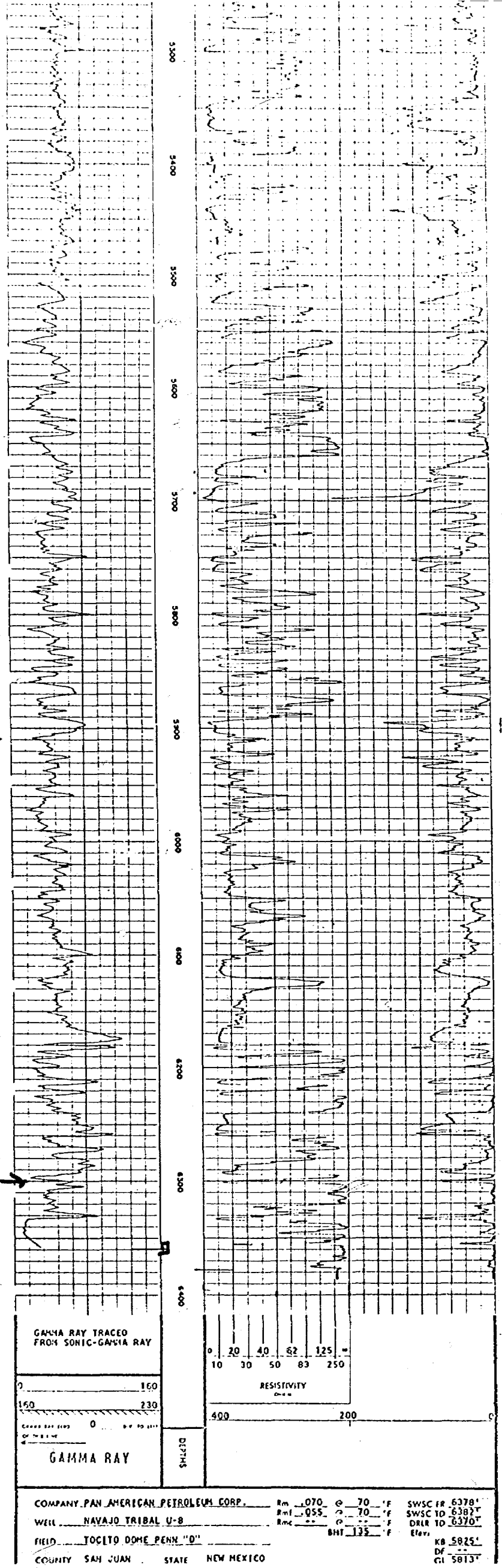
Top Penn "D"  
6275'  
Sub Sea -511'  
Perforations  
6300'-6306'



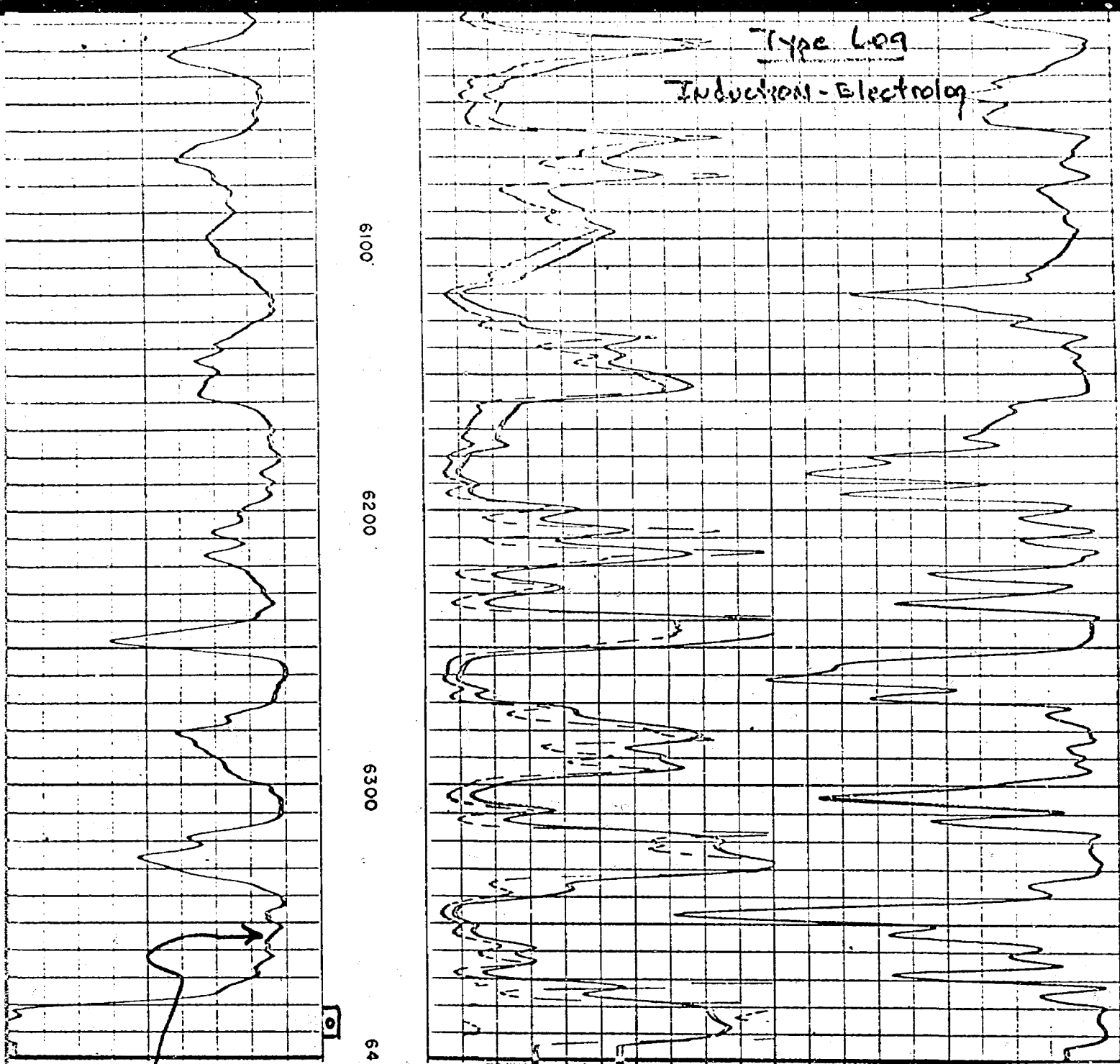
SW SW 9

Type Log  
 Laterolog-Gamma Ray

Top Penn "D"  
 6300'  
 Sub Sea -475'  
 Perforations  
 6355-6362



SE NW  
 Sec 16



<p>Top Penn "D"</p> <p>6354'</p> <p>Sub Sea - 636</p> <p>Perforations</p> <p>6382'-6292'</p> <p>-  &lt; &gt;  +</p> <p>10</p>	
SPONTANEOUS POTENTIAL	DEPTH
Millivolts	

<p>0 1000</p> <p>0 100</p> <p>*INDUCTION RESISTIVITY</p> <p>40" SPACING</p> <p>0 1000</p> <p>0 100</p> <p>16" NORMAL</p> <p>RESISTIVITY</p> <p>Ohms m<sup>2</sup>/m</p> <p>800 400</p> <p>400 0</p> <p>INDUCTION CONDUCTIVITY</p> <p>40" SPACING</p>	
CONDUCTIVITY	
Millimhos/m	

Company	SOUTHERN GULF PRODUCTION CO.	Drillers T.D.	6397
Well	#4 NAVAJO TOCITO	log F.R.	6395
Field	TOCITO DOME	Log T.D.	6399
County	SAN JUAN	Elevations:	
Slate	NEW MEXICO	K.B. 5718 D.F. 5717 G.L. 5705	

NW SW  
Sec 10

## REPORT OF ANALYSIS

Well file

F. S. - 11829 M.S. N-45706 ,H 5.15 OBS. PRES. 69.2 CAL. PRES. 66.5

STATE- NEW MEXICO COUNTY- SAN JUAN

FIELD- TOCITO WELL NAME- TOCITO NAVAJO NO. 4

LOCATION- SEC. 10, T26N, R18W. OWNER- SOUTHERN GULF PRODUCTION CO.

DATE COMPLETED- 01/13/69 DATE SAMPLED- 04/16/69

SAMPLED BY- COLLINS

NAME OF PRODUCING FORMATION- PENNSYLVANIAN

DEPTH IN FEET- 6397 THICKNESS IN FEET-

SHUT IN WELLHEAD PRES., PSIG- 2585 OPEN FLOW, MCF/D- 155126

CHECK OF DATA-  
THE WELL DATA ARE ACCURATE, ( ) WITHOUT CORRECTION, ( ) AS CORRECTED ABOVE.

## REMARKS-

## ANALYSIS-

METHANE	32.6 %	NORMAL PENTANE	.5 %	OXYGEN	0.0 %
ETHANE	4.8 %	ISOPENTANE	.2 %	ARGON	.6 %
PROPANE	2.6 %	CYCLOPENTANE	.1 %	HYDROGEN	.1 %
NORMAL BUTANE	1.0 %	HEXANES PLUS	.3 %	H <sub>2</sub> S	0.0 %
ISOBUTANE	.5 %	NITROGEN	51.2 %	CO <sub>2</sub>	.1 %
SPECIFIC GRAV	.844			HELIUM	5.40 %
				TOTAL	100.0 %

534.

CALCULATED GROSS BTU/CU. FT., DRY AT 60 DEG. F AND 30 IN. MERCURY-

## PERMISSION FOR RELEASE:

Permission is hereby granted for the Bureau of Mines to release the above data, together with similar data released by other operators as public information and as parts of a series of papers on analyses of gases from various fields, states, or regions.

COMPANY \_\_\_\_\_

BY \_\_\_\_\_

TITLE \_\_\_\_\_

BEFORE EXAMINER NUMBER

Applicant's

4425

N

# El Paso Natural Gas Company

El Paso, Texas 79999

ADDRESS REPLY TO  
POST OFFICE BOX 990  
FARMINGTON, NEW MEXICO 87401

September 14, 1970

Mr. Ewell N. Walsh  
Walsh Engineering and Production Corp.  
Post Office Box 254  
Farmington, New Mexico 87401


Re: Tocito Dome Meter Run  
Meter Code Number 01-781-01

Dear Mr. Walsh:

In accordance with your request we are enclosing a copy of our  
gas analysis for August, 1970 of the gas from the captioned  
meter run.

Very truly yours,

EL PASO NATURAL GAS COMPANY

  
Lowell M. Parrish, Jr.  
Superintendent  
Technical Operations

LMP:ja

cc: E. W. Woody  
Enclosure

BEFORE EXAMINER NUTTER	
OIL CONSERVATION COMMISSION	
Applicant's Permit NO.	7
CASE NO.	4425



EL PASO NATURAL GAS COMPANY  
CHROMATOGRAPHIC GAS ANALYSIS REPORT

RUN DATE 08 22 70  
CALC DATE 09 10 70

METER 0178102  
OPER 6715

TYPE CODE 20 SAMPLE DATE 08 18 70 EFF. DATE 09 70 USE HOS. 03 SCALE H2S GRAINS 0000 LOCATION

NORMAL  
MOL%

GPM

C O 2

00.97

0.000

H 2 S

00.00

0.000

N 2

04.61

0.000

METHANE

76.44

0.000

ETHANE

09.67

0.000

PROPANE

04.84

1.334

ISO-BUTANE

00.82

0.269

NORM-BUTANE

01.65

0.521

ISO-PENTANE

00.37

0.136

NORM-PENTANE

00.36

0.131

HEXANE PLUS

00.27

0.118

TOTALS

100.00

2.509

SPECIFIC GRAVITY

0.736

MIXTURE HEATING VALUE

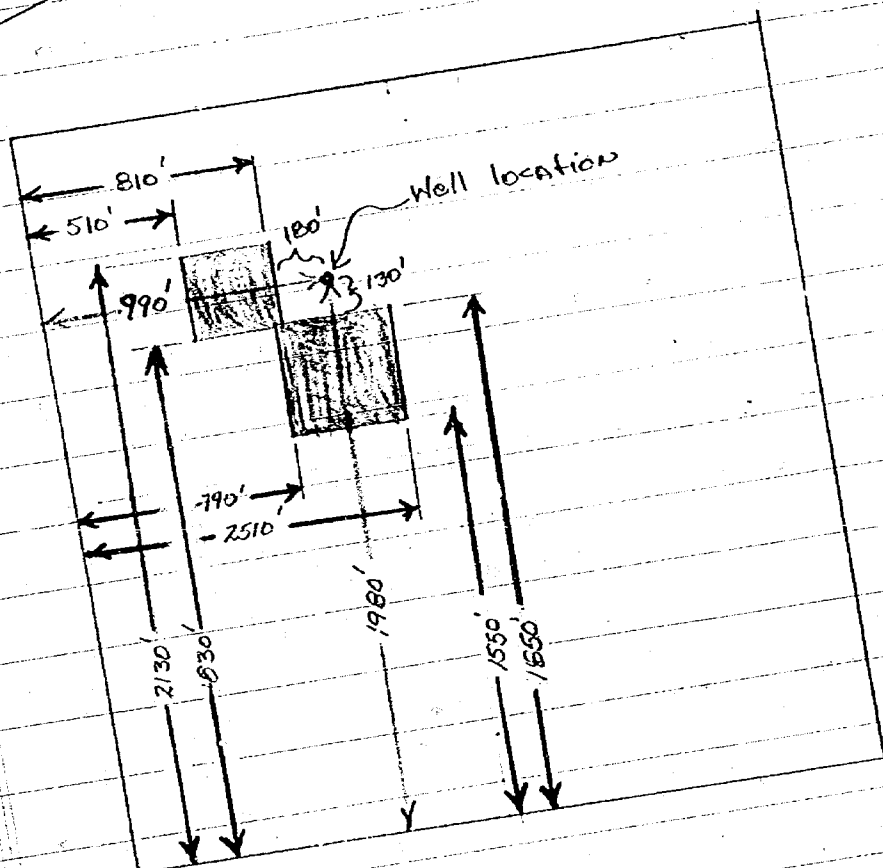
(BTU/CF @ 14.73 PSIA, 60 DEGREES, DRY)

1195

RATIO OF SPECIFIC HEATS

1.285

BEFORE EXAMINER NUTTER  
 CONFERENCE NO. 8  
 Applicant's EXHIBIT NO. 4425  
 CASE NO.



1/4 Section

- orthodox location due to Texas Dome Penn "D" Rules
- orthodox location due to Wilcat Gas Well Rules

DRAFT

GMH/esr

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. 4425

Order No. R- 4045

APPLICATION OF SOUTHERN GULF PRODUCTION  
COMPANY FOR AN UNORTHODOX GAS WELL LOCA-  
TION, SAN JUAN COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9:30 a.m. on October 14, 1970,  
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this \_\_\_\_\_ day of October, 1970, the Commission, a  
quorum being present, having considered the testimony, the record,  
and the recommendations of the Examiner, 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 Gulf Production Company,  
seeks, as an exception to the gas well location requirements of  
the Commission Rules and Regulations, approval for an unorthodox  
gas well location in an undesignated Pennsylvanian gas pool for  
its Navajo Tocito Well No. 4 1963 feet from the South line and  
977 feet from the West line of Section 10, Township 26 North,  
Range 18 West, NMPM, San Juan County, New Mexico.

~~(3) That the subject well was drilled originally at a  
standard location for the production of oil from the Tocito  
Dome Pennsylvanian "D" Pool, but was productive of gas in an  
undesignated Pennsylvanian gas pool.~~

*(4) That the subject well was inadvertently drilled  
at the above described non-standard location, as a producer  
from the Pennsylvanian gas pool from the E zone of the Pennsylvanian formation.*

(4) That said well was originally projected as a  
an oil well in the Tocito Dome Pennsylvanian "D" Pool,  
but it was completed instead as a gas well pro-  
-2- ducing from an undesignated Pennsylvanian "F"  
CASE No. 4425 gas pool.

(4) That approval of the subject application will afford the applicant the opportunity to produce its just and equitable share of gas in the undesignated Pennsylvanian gas pool, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That an unorthodox gas well location is hereby approved for the Southern Gulf Production Company Navajo Tocito Well No. 4 in an undesignated Pennsylvanian <sup>"E" ~~gas~~ gone</sup> gas pool at a point 1963 feet from the South line and 977 feet from the West line of Section 10, Township 26 North, Range 18 West, NMPM, San Juan County, New Mexico.

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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