

Case No.

188

Application, Transcript,
Small Exhibits, Etc.



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

P. O. Box 997
Roswell, New Mexico
June 7, 1949

Exhibit A

RECEIVED

JUN 8 1949

JOHN E. COCHRAN, Jr.
ATTORNEY-AT-LAW

Mr. John E. Cochran, Jr.
Carper Building
Artesia, New Mexico

Dear Mr. Cochran:

Re: Lease Las Cruces 029410(a)

Reference is made to your letter of June 4 transmitting a copy of an application executed by you as attorney for applicant for Carper Drilling Company, Inc., which you are filing with the New Mexico Oil Conservation Commission for permission to drill well No. 9N Simon at an unorthodox location in sec. 29, T. 17 S., R. 30 E., N.M.P.M., Maljamar pool, New Mexico. The proposed well is to be located 1345 feet from the east line and 1295 feet from the south line of said section 29.

The land on which the proposed well is to be drilled is embraced in Federal oil and gas lease Las Cruces 029410(a).

The unorthodox well location as described in the application is approximately 25 feet from the common intersection of the boundaries of a 40-acre legal subdivision. No encroachment of the outer boundaries of the leasehold is involved as the proposed location is 1295 feet from the lease boundary.

No objection is offered by this office to the drilling of well No. 9N Simon at the location specified. It is the opinion of this office that the drilling of such additional wells on the leasehold should be encouraged to increase the ultimate recovery of oil and gas from the Maljamar pool.

Approval to drill the proposed well at the unorthodox location will be contingent upon (1) the approval of such location by the Oil Conservation Commission of the State of New Mexico for proration purposes and (2) the filing of a stipulation in triplicate executed by the Carper Drilling Company, Inc., wherein it agrees to treat the 40-acre tracts surrounding the well as a single unit for purposes of assignment and that none of the 40-acre tracts involved will be separately assigned until the well has been properly plugged and abandoned.

Very truly yours,

Foster Morrell
Foster Morrell,
Oil and Gas Supervisor,
Southwestern Region.

cc: Mr. Cochran (2)

Gulf - Case 188
Paul Evans

Hobbs, New Mexico
June 14, 1949

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Gentlemen:

The Gulf Oil Corporation will present evidence to show the Commission cause whereby they should be allowed to dually complete the Gulf Holt "B" No. 1, located 660 feet from the east line and 1980 feet from the south line of Section 36-23S-36E, Lea County, New Mexico.

The witness for the Gulf Oil Corporation is Mr. Paul C. Evans, District Engineer, Hobbs, New Mexico. Mr. Evans has previously qualified as a witness before the New Mexico Oil Conservation Commission. He graduated from Texas A. & M. College in 1937 with a B. S. degree in Petroleum Production Engineering. He obtained 3-1/2 years of engineering experience with the Gulf Oil Corporation as training engineer and production engineer in various phases in New Mexico, Oklahoma, Illinois, and Indiana. Then, he was transferred to Michigan as District Engineer for 1/2 year prior to entering military service where he served in the Field Artillery for 4 years. He has been employed as District Engineer for Gulf in New Mexico for the past 4 years. He is a registered professional engineer and land surveyor in the State of New Mexico.

Stafford and May Drilling Company's rotary tools were rigged up and drilling operations commenced on April 23, 1949. The 9-5/8" OD, 36#, H-40, S.S. casing was set at 322 feet and cemented with 200 sacks of cement which circulated to the surface. The Yates sand was encountered at 2960 feet and extended to 3245 feet to the top of the Seven Rivers formation. The offset information and geological data indicated the commercial gas producing possibilities of this section. The 5-1/2" OD, 17#, S.S. casing was set at 3450 feet in the Seven Rivers formation and cemented with 750 sacks of cement. A temperature survey indicated the top of the cement behind the 5-1/2" casing to be at 1650 feet. Prior to running casing, this well was drilled to a total depth of 3610 feet in the Queen sand. A Lane Wells radio-activity survey was run from total depth to 2300 feet and three copies of this log are submitted to the Commission for their information. A drill stem test with a hookwall packer set at 3420 feet was taken with total depth of 3610 feet. The Halliburton tool was left open for 4 hours and we received 400 feet of oil and gas cut mud and 1200 feet of clean oil. The flowing pressure was 800 psi and the 15 minute build-up pressure was 930 psi. This information indicated that the exposed Seven Rivers and Queen formations needed to be shot with nitroglycerin to obtain maximum production. The rotary rig was dismantled and cable tools were rigged up.

Two hundred quarts of special oil well explosive No. 1, solidified nitroglycerin, was placed from 3610 feet to 3501 feet. A proper solid stem was placed above the explosive and it was stemmed to the surface with oil. After cleaning out to total depth after the shot exploded, this well flowed 137 barrels of oil in 12 hours and is now producing its daily allowable to the lease stock tanks in a normal manner.

After permission is obtained to dually complete this well, it is planned to "kill" the well with oil base mud on bottom and water to the surface and pull the 2-7/8" OD tubing. The Yates sand section from 2940 feet to 3120 feet will be perforated with 360 jet holes. Then, a permanent type 5-1/2" x 2-7/8" Baker model "L" retainer production packer will be set at 3420 feet. The tubing string will then be run from bottom up as follows:

1. Standard perforated anchor with 2-7/8" tubing from 3605 feet to 3420 feet.
2. Baker packing element to set in permanent type packer at 3420 feet.
3. 2-7/8" x 6' tubing nipple
4. 2-7/8" OD Otis type "L" side door choke with landing nipple at 3412 feet.
5. 2-7/8" OD tubing to the surface

The attached schematic drawing shows the intended producing equipment to be installed in Holt "B" No. 1.

The Otis side door choke will be run which will shut-off the lower oil producing Queen sand and expose the Yates gas sand to the tubing through perforations in the landing nipple. The Yates gas sand will be produced through the tubing until it cleans up. Then, the Otis side door choke will be pulled and re-run to allow the Yates gas sand to be segregated from the tubing and the oil producing Queen sand section to be produced through the tubing. This installation will now allow the Yates gas sand to be produced through the casing and the Queen oil section to be produced through the tubing without commingling of fluids.

Segregation tests will then be obtained in the following manner:

1. Both zones will be shut-in until maximum tubing and casing pressures are observed. A dual pressure recorder will be installed so that both tubing and casing pressure can be recorded on the same chart and at the same time.
2. Prior to opening the casing, a bottom hole pressure recording instrument will be run in the tubing to record the static BHP of the oil producing zone. With the BHP gauge in the tubing, the Yates gas will be flowed through the casing at a reasonable rate. The dual recorder will still be installed to obtain casing and tubing pressures during this operation.

3. If there is no evidence of communication on the above test, the casing will be shut-in until maximum casing pressure is obtained.

4. Then, the oil zone will be flowed through the tubing with the casing shut-in, and the dual recorder will record the tubing and casing pressures. The oil and gas produced through the tubing will be measured.

5. The dual recording pressure charts, static BHP of the oil zone, and measured volumes of fluid from each zone will be reported to the Commission.

The oil that will be produced from the Queen section will be stored in tanks on the lease. There will be a separate line from the tubing to the lease storage tanks through a low pressure separator. A commercial market will be obtained for the gas that will be produced through a separate line from the casing. The gas produced from the Yates section is classified as "sweet" gas and the oil produced from the Queen formation is slightly corrosive. There is no doubt that the two above described zones are each definite and distinct reservoirs.

To date, permission has been granted by the Commission to produce the two zones described above through a single well bore on three other wells in this immediate area. The attached plat shows the location of Gulf Holt "B" No. 1 with respect to the other dual completed wells in the immediate area.

Respectfully Submitted,

Paul C. Evans
District Engineer
Gulf Oil Corporation

PCE:lfr

Att'd.

NOTICE OF PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

The State of New Mexico by its Oil Conservation Commission hereby gives notice, pursuant to law, of the following public hearing to be held June 28, 1949, beginning at 10:00 A. M., on that day in the City of Santa Fe, New Mexico, in the Senate Chambers.

STATE OF NEW MEXICO TO:

All named parties in the following case,
and notice to the public:

Case 187

In the matter of the application of Carper Drilling Company, Incorporated, for an order granting permission to drill unorthodox location, designated as Well No. 9N, on that portion of its Simon "A" lease, described as the SW/4 of the SE/4 of Section 29, Township 17 South, Range 32 East, N.M.P.M. in the Maljamar Field of Lea County, New Mexico.

Case 188

In the matter of the application of Gulf Oil Corporation for an order to dually complete and produce from the Queen formation and the Yates formation from a single well bore in the J. R. Holt "B" No. 1, located 660' from east line and 1980' from south line of Section 36, Township 23 South, Range 36 East, Lea County, New Mexico.

Given under the seal of the Oil Conservation Commission of New Mexico, at Santa Fe, New Mexico, on June 13, 1949.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

/s/ R.R. SPURRIER, SECRETARY

LEA COUNTY OPERATORS COMMITTEE
HOBBS, NEW MEXICO
June 14, 1949

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE NO. 188
ORDER NO. 829

IN THE MATTER OF THE APPLICATION OF
GULF OIL CORPORATION FOR AN ORDER
TO DUALY COMPLETE AND PRODUCE FROM
QUEEN FORMATION AND THE YATES FORMA-
TION FROM A SINGLE WELL BORE, THE J. R.
HOLT "B" NO. 1, LOCATED 660 FEET FROM
THE EAST LINE AND 1980 FEET FROM THE SOUTH
LINE (NE/4SE/4) OF SECTION 36, TOWNSHIP
23 SOUTH, RANGE 36 EAST, N.M.P.M., IN
THE LANGLIE-MATTIX POOL, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 10:00 a.m. on June 28, 1949, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission".

NOW, on this 28th day of June, 1949, the Commission having before it for consideration the testimony and other evidence adduced at the hearing of said cause together with the application of the petitioner and being fully advised in the premises;

FINDS:

1. That due public notice of hearing upon said application having been given fixing the date of said hearing as of June 28, 1949, at Santa Fe, New Mexico, the Commission has jurisdiction of the case;
2. That in previous dual completion cases before the Commission, and in this case, there remains a question as to the absolute efficiency of packers and mechanical devices to absolutely prevent comingling of gas and fluid hydrocarbons from two or more different strata through a single well bore, under all conditions.
3. That the subject well sought to be dually produced is in the near vicinity of other wells being dually produced under the authority of Commission Orders Nos. 750, 801 and 810 in the Langlie-Mattix pool, Lea County, New Mexico;
4. That the dual completion of this well will add to information previously gained as to the efficiency of mechanical packers in the prevention of comingling of gas and fluid hydrocarbons in two or more different producing horizons.

IT IS THEREFORE ORDERED that effective June 28, 1949, Gulf Oil Corporation be, and it hereby is granted permission to dually complete and produce its J. R. Holt "B" No. 1 well, in the Langlie-Mattix pool, Lea County, New Mexico, in such manner that gas and/or fluid hydrocarbons may be produced through the tubing from the Queen formation, the 3420 foot to 3610 foot zone, and that gas well gas may be produced through the annular space between the casing and tubing from the Yates sand, that is, from the 2940 foot to 3120 foot zone, provided, however, that said J. R. Holt

"B" No. 1 well, NE/4 SE/4, Section 36, Township 23 South, Range 36 East, shall be dually completed and produced in such a manner that there is absolutely no comingling within the bore of the well of gas well gas or fluid hydrocarbons produced from each of the separate productive stratum encountered therein.

In order to prevent comingling of gas well gas, gas or fluid hydrocarbons within said well bore the dual completion thereof shall be made substantially as follows: the well having been completed to the 3610 foot horizon (Queen formation) through appropriate casing perforations at the proper depth; the upper zone in like manner may be produced by casing perforations at the 2940 foot to 3120 foot zone (Yates) and each zone or formation carefully tested. Such tests and subsequent tests shall be witnessed by an agent of the Commission, and by representatives of any offset operation, if any there be. In event intercommunication between the zones behind the casing is indicated by formation tests, corrective measures shall be applied and such tests continued and corrective measures applied until it is known that no intercommunication between the respective zones behind the casing exists. Should the test or tests establish the absence of intercommunication between the horizons outside of the casing, the Gulf Oil Corporation may proceed with the dual completion of said well as follows: a suitable packer of the type approved by applicant's consulting engineer, as indicated in applicant's petition, shall be so set as to effectively prevent migration of reservoir gas and fluid hydrocarbons from one horizon to the other inside the casing; the well shall be tubed through the packer; provided further, however, that it shall not be necessary for the petitioner to install a circulating choke above the packer if the upper horizon (Yates) sand reflects only gas production; however, should fluid hydrocarbons be encountered in the upper Yates formation, such corrective measures shall be undertaken as may be proper in the premises and as the conditions may require and provided further that any packer installed in said well between the separate horizons shall be properly tested for leakage at the time of the dual completion and shall be carefully retested at six month intervals thereafter. The original and all subsequent tests shall be witnessed by a representative of the Commission and by representatives of offset operations if any there be, and the results of each test properly attested to by the petitioner and all the witnesses and shall be filed with the Commission within ten days after the actual completion of each such test.

IT IS FURTHER ORDERED::

That in event intercommunication between the zones is found or is suspected by any witness as the result of any test, the well shall be immediately shut in, the Commission notified and prompt and immediate action shall be taken by the petitioner to stop such intercommunication; following which a retest for leakage shall be made forthwith and witnessed aforesaid; provided further that intercommunication tests between the zones required by this order shall be made as follows: both zones shall be simultaneously closed in and kept closed a sufficient length of time to reach stabilization as determined by a dead weight tester. A recording depth pressure gauge shall then be run at the maximum depth possible; the zone (Yates) open to the annulus shall be produced at a maximum safe rate until stabilized flow conditions are obtained. In the event a significant decrease in pressure is shown by the recording pressure gauge, intercommunication shall be deemed to exist.

The Gulf Oil Corporation, the petitioner herein, shall submit in writing any changes in procedure in the actual completion of said well. Upon final completion of said dual completion of said well, the petitioner shall file with the Commission a report of the step by step procedure followed in producing each zone and an expository statement of the merits and/or

demerits of the actual performance of equipment and mechanical devices used and employed to effect the separation of the productive horizons and the respective production from each zone.

IT IS FURTHER ORDERED::

That upon failure of the petitioner herein to comply with any provision or provisions of this order, that the authority granted hereunder shall immediately terminate.

IT IS FURTHER ORDERED::

That this case is held open on the docket for such order or orders as may seem necessary to the Commission, is not to be taken as being a precedent for dual completions except in the Langlie-Mattix pool.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

Thomas J. Mabry
THOMAS J. MABRY, CHAIRMAN

Guy Shepard
GUY SHEPARD, MEMBER

R. R. Spurrer
R. R. SPURRER, SECRETARY

re: May

*Case
198*

Graham

May 24, 1949

Mr. S. G. Sanderson, Manager of Production
Gulf Oil Corporation
P. O. Box 661
Tulsa 2, Oklahoma

Dear Mr. Sanderson:

This will acknowledge receipt of your application dated May 11, 1949.

The date for our next hearing has not been set, but we will notify you in regard to same, in the very near future.

Very truly yours,

R. R. Spurrier
Secretary and Director

RRS:bw

LEG ADVERTISEMENT

NOTICE OF PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION
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STATE OF NEW MEXICO TO:
All named parties in the following case, and notice to the public:
Case 187
In the matter of the application of Carper Drilling Company, Incorporated, for an order granting permission to drill unorthodox location, designated as Well No. 9N, on that portion of its Simon "A" lease, described as the SW/4 of the SE/4 of Section 29, Township 17 South, Range 33 East, N.M.P.M. in the Maljamar Field of Lea County, New Mexico.
Case 188
In the matter of the application of Gulf Oil Corporation for an order to dually complete and produce from the Queen formation and the Yates formation from No. 1, located 660' from east line and 1980' from south line of Section 36, Township 23 South, Range 36 East, Lea County, New Mexico.
Given under the seal of the Oil Conservation Commission of New Mexico, at Santa Fe, New Mexico, on June 15, 1949.
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION
R. R. SPURRIER, Secretary
Pub: June 15, 1949



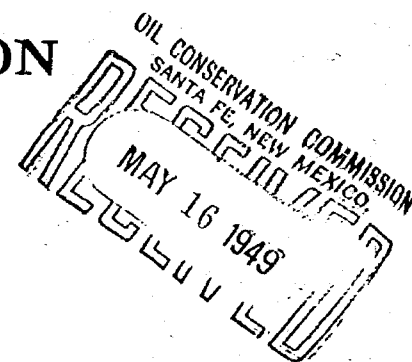
PETROLEUM AND ITS PRODUCTS

GULF OIL CORPORATION

P.O. BOX 661 · TULSA 2, OKLAHOMA

May 11, 1949

GYPSY
DIVISION



Mr. R. R. Spurrier
Oil Conservation Commission
Santa Fe, New Mexico

Dear Sir:

Attached please find three copies of an application to dually complete Gulf's Holt "B" No. 1 located 660' from the east line and 1980' from the south line of Section 36-23S-36E, Lea County, New Mexico. It is proposed to produce from the Queen formation at an approximate depth of 3550' through the tubing and produce from the Yates formation at an approximate depth of 2930' through the annulus ^{between} tubing and casing. It is further proposed that packer be set on tubing in conventional manner in order to segregate production from these two zones.

We will be pleased to hear from you regarding date for the hearing.

Yours very truly,

S. G. Sanderson
Manager of Production

EWB:wh

Att'd

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF :
GULF OIL CORPORATION for an order to :
dually complete and produce from the :
Queen formation and the Yates forma- :
tion from a single well bore in the :
J. R. Holt "B" No. 1, located 660' :
from east line and 1980' from south :
line of Section 36, Township 23 South, :
Range 36 East, Lea County, New Mexico. :

*Case
188*

A P P L I C A T I O N

COMES NOW THE GULF OIL CORPORATION, hereinafter called the applicant, and shows to the Honorable Oil Conservation Commission of the State of New Mexico that:

1. Gulf Oil Corporation is incorporated in the State of Pennsylvania and is duly authorized to do business in the State of New Mexico.
2. Gulf Oil Corporation is actively engaged in the exploration, development and production of oil and gas in the State of New Mexico, and that Gulf Oil Corporation is one of the larger producers of crude oil in that state.
3. Gulf Oil Corporation is the operator of an oil and gas lease covering the east half of the southeast quarter of Section 36-23S-36E, Lea County, New Mexico, and other acreage not here involved.
4. The J. R. Holt "B" No. 1 is located 660' from the east line and 1980' from the south line of Section 36-23S-36E. The top of the Yates formation is expected at approximately 2930' and 5-1/2" S.S. casing will be set at approximately 3450' and cemented with 750 sacks of cement. Open hole will be drilled to approximately 3600' in the Queen formation which should be topped at approximately 3550'.
5. The Queen producing section will be shot with sufficient solidified nitroglycerin to induce natural flow. Then this well will be tested through tubing to ascertain its oil producing rate.
6. This well will be dually completed by perforating the 5-1/2" casing in the Yates section from 2930' to 3100' with 340 jet holes and a Baker production type packer set at approximately 3400'. In the tubing string immediately above the packer, an Otis side door choke will be run which will permit obtaining bottom hole pressure data in either zone.

7. Applicant proposes to produce the Queen formation through tubing and to produce the Yates gas section through the annular space between tubing and casing in the manner shown above. This manner of production will prevent commingling within the well bore of hydrocarbons from separate strata.

8. Applicant further proposes to test the well after dually completing and at periodic intervals thereafter in accordance with previous orders of the Commission to assure that communication does not exist between the two zones.

9. This well is in the vicinity of other wells dually completed in the Langlie-Mattix Pool, Lea County, New Mexico.

Wherefore your applicant prays that this Honorable Commission promulgate an order that will permit dual completion of the Queen oil section and the Yates gas section in Holt "B" No. 1.

Respectfully Submitted,

GULF OIL CORPORATION

By

S. G. Sanderson

Manager of Production

May 11, 1949