

Case Number

60019

Application

Transcripts.

Small Exhibits

ETC.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
31 August 1977

EXAMINER HEARING

IN THE MATTER OF:

Application of Gulf Oil Corporation
for a dual completion, Eddy County,
New Mexico.

CASE
6019

BEFORE: Daniel S. Nutter,

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil Conservation Commission: Lynn Teschendorf, Esq.
Legal Counsel for the Commission
State Land Office Building
Santa Fe, New Mexico

For the Applicant: Jeffrey Shrader, Esq.
Legal Counsel for Gulf Oil
Corporation,
Midland, Texas.

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General Court Reporting Service
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501
Phone (505) 982-9212

I N D E X

CHARLES F. KALTEYER

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1 MR. NUTTER: We'll call Case Number 6019.

2 MS. TESCHENDORF: Case 6019. Application of Gulf
3 Oil Corporation for a dual completion, Eddy County, New
4 Mexico.

5 MR. SHRADER: Mr. Examiner, my name is Jeffrey
6 Shrader. I'm an attorney employed by Gulf Oil in Midland,
7 Texas.

8 MR. NUTTER: How do you spell your last name,
9 please?

10 MR. SHRADER: S-H-R-A-D-E-R.

11 MR. NUTTER: I have one witness to be sworn.

12 MR. NUTTER: Jeffrey spelled with a "G" or a "J"?

13 MR. SHRADER: "J"

14 MR. NUTTER: Okay, thank you.

15 (Witness sworn.)

16 MR. SHRADER: Mr. James Sperling of the Albuquer-
17 que law firm, the Modrall, Sperling firm, has entered an
18 entry of appearance by letter in this case.

19 MR. NUTTER: We have your appearance.

20 MR. SHRADER: Thank you.

21

22 CHARLES F. KALTEYER

23 being called as a witness and being duly sworn upon his oath,
24 testified as follows, to-wit:

25

DIRECT EXAMINATION

BY MR. SHRADER:

Q. Will you please state your name, by whom you are employed and in what capacity?

A. My name is Charles F. Kalteyer, K-A-L-T-E-Y-E-R. I'm employed by Gulf Oil Corporation; classified as Chief Proration Engineer of the Southwest Division in Midland, Texas.

Q. Have you previously testified before the New Mexico Oil Conservation Commission and stated your qualifications?

A. Yes, sir, I have.

MR. SHRADER: Mr. Examiner, is the witness qualified?

MR. NUTTER: Yes, he is.

Q. (Mr. Shrader continuing.) What is Gulf seeking in this application?

A. Gulf is seeking authority for a dual completion of its Littlefield "EM" Federal Com Well No. 1, an undesignated Atoka and Morrow Formations. This well is located 980 feet from the south and east lines of Section 20, Township 18 South, Range 31 East, Eddy County, New Mexico.

Q. Is that 1900 feet from the south and east lines?

A. 1980 feet.

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1 Q Do you have a copy of Gulf's application for multiple
2 completion, Form C-107?

3 A Yes, sir. This form is our Exhibit Number 1, was
4 submitted in April of this year, and was set for hearing
5 since the Commission has not authorized most multiple com-
6 pletions in a well in these undesignated zones within a mile.

7 You will note under Item 3 that the upper zone is
8 the undesignated Atoka with perforations from 11,102 to
9 11,120. Production from this interval is gas.

10 The lower zone is undesignated Morrow with per-
11 forations indicated from 11,567 to 11,735. Production from
12 this interval is also gas.

13 Q Do you have an exhibit which shows the Littlefield
14 "EM" Federal Com Unit outline, the location of Well No. 1
15 and the offset wells on offset leases?

16 A Yes, sir, Exhibit 2 is a plat of the area. You
17 will note that the 320-acre Littlefield "EM" Federal Com Unit
18 is outlined in red and the Well No. 1 is circled in yellow.
19 It consists of the east half of Section 20. It is located
20 in a 2000-acre working interest drilling unit operated by
21 Gulf, which is outlined in green, and Gulf has filed an ap-
22 plication for Well No. 1, Keohane, et al, C Federal Com,
23 1980 feet from the north line and 990 feet from the west line
24 of Section 21, with the west half of the section dedicated
25 to the well and that's outlined in orange.

1 We are currently completing the North Shugart Deep
2 Well No. 1, 660 feet from the north line and 1980 from the
3 west line of Section 29, immediately south of our "EM" Fed-
4 eral No. 1, a little in.

5 MR. NUTTER: That would be 1980 from the east
6 line, wouldn't it?

7 A. 1980 from the east line, right. The north half
8 of Section 29 is dedicated to this well and it's outlined
9 in yellow.

10 Gulf has also filed application for its Eddy D
11 Federal Com Well Number 1, 1980 feet from the north line
12 and 1980 from the west line of Section 20. The west half
13 of Section 20 is to be dedicated to this well and is out-
14 lined in orange, also. Work has not started on this well.

15 The southwest quarter and north half of the south
16 one-quarter of Section 17 and the southwest quarter of the
17 southwest quarter of Section 17 is, according to our latest
18 information, leased to Kenwood. The adjoining quarter of
19 the southwest quarter the northeast -- to the northeast in
20 Section 16 is under lease to R. D. Collier.

21 In Section 28 to the southeast, the northwest
22 quarter of the northwest quarter of Section 28 is under
23 lease to Texaco.

24 Q What is the nearest comparable production to the
25 Atoka and Morrow gas production in Gulf's Littlefield "EM"

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1 Federal Com Well No. 1?

2 A. You'll note there on Exhibit 2 that there were
3 three wells were completed in what is known as the Shugart
4 Penn Gas Pool in excess of two miles to the southeast of our
5 well.

6 Amoco's Greenwood Federal Com Well No. 2 in Unit
7 G of Section 34 is completed in the Atoka and Morrow inter-
8 vals, 10,912 to 10,948, and 11,425 to 11,438, and commingled
9 as Pennsylvanian.

10 The shut-in surface pressure on the -- on August
11 3rd, 1976, the Engineering Report showed 1,030 psi.

12 MR. NUTTER: That's on the Amoco well?

13 A. Yes, sir.

14 Well No. 3 in Unit H of Section 27 is completed
15 in the Morrow through selective perforations 11,370 to
16 11,497. The shut-in surface pressure on this well on August
17 2nd, of 1976 was 947 psi.

18 Conoco's Greenwood Unit Federal Com Well No. 6 in
19 Unit J of Section 26 was approved for plugging in 1967.

20 Q. What were the shut-in surface pressures on the
21 Atoka and Morrow completions of the Littlefield "EM" Federal
22 Com Well No. 1?

23 A. On April 15th of 1977 the shut-in surface pressure
24 on Atoka was 3303 psi and 3252 psi on the Morrow.

25 Q. Do you have a log on the subject well with the tops

1 and bottoms of the Atoka and Morrow Formations indicated
2 thereon?

3 A. Yes, our Exhibit 3 is a Compensated Neutron Den-
4 sity -- Compensated Neutron Formation Density Log . You'll
5 note that the top of the Atoka is indicated at 10,944 and the
6 top of the Morrow is indicated at 11,382.

7 The Atoka perforated in the interval of 11,102 to
8 20. The Morrow is perforated through selective perforations
9 an overall interval of 11,567 to 11,735. The perforation
10 of these two horizons are separated by some 465 feet.

11 Q. Do you have a diagrammatic sketch which depicts
12 the particulars of this wellbore, and if so, please explain
13 to the Examiner.

14 A. Exhibit 4 is a diagram of the wellbore which in-
15 dicates 13-3/8ths inch OD casing set at 620 feet, cemented
16 with 525 sacks circulated to the surface. An intermediate
17 string of 9-5/8ths is set at 4507 feet, cemented with 800
18 sacks.

19 A DV tool was located in the string at 1197 feet
20 and cemented with 1150 sacks of cement.

21 A 7-inch production casing was set at 12,145 feet
22 with 900 sacks of cement. Top of cement by temperature
23 survey was 7960 feet.

24 Thirty-four scratchers were set at fifteen foot
25 intervals from 10,930 to 11,160 and 11,530 to 11,760.

1 Twenty centralizers were set at eight foot intervals
2 from 10,530 to 12,130.

3 The tubing string for the Morrow completion is
4 2-3/8ths inch tubing set in a Baker lock-set packer at
5 11,510 and the short string of tubing for the Atoka completed
6 to 2-3/8ths inch Hydril set in a Baker Model A-5 Dual Hydro-
7 static packer at 11,047.

8 Q Do you have copies of the Commission Form C-122,
9 Multi Point Back Pressure Test for Gas Wells on these two
10 completions?

11 A Yes, sir, Exhibit 5-A is a Multi Point Back Pres-
12 sure Test for the Atoka completion. There is an overflow
13 potential of 3,210 McF per day. The maximum rate of pro-
14 duction is 2,269 McF per day. Gas Liquid Hydrocarbon Ratio
15 was 14,291 to 1, and the Gravity of the liquid was 57.0° API.

16 The Multi Point Back Pressure Test for the Morrow
17 completion, which is our Exhibit 5-B, indicated an overflow
18 potential of 14,900 McF and the maximum flow rate on that
19 test was 5,904 McF per day. The Gas Liquid Hydrocarbon Ratio
20 was 49,875 and the gravity of the liquid was 51.5° API.

21 Q Do you also have copies of the USGS Form 9-330
22 for these two completions?

23 A Yes, sir, Exhibit 6 is the Well Completion Report
24 for the Morrow horizon. 6-A is the completion report for
25 the Atoka horizon and 6-B is the completion report for the

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1 Morrow horizon.

2 Q Will you please summarize what Gulf is requesting
 3 at this hearing?

4 A We're seeking authority for this dual completion
 5 of the Littlefield "EM" Federal Com Well No. 1 in the unde-
 6 signated Atoka and Morrow Formation. The well is located
 7 1980 feet from the south and east lines of Section 20, Town-
 8 ship 18 South, Range 31 East, Eddy County, New Mexico.

9 Q Were Exhibits 2, 3, and 4 prepared by you or under
 10 your supervision?

11 A Yes, they were.

12 MR. SHRADER: Mr. Examiner, I have no further
 13 questions at this time for this witness. I'd move at this
 14 time that our exhibits be admitted into evidence.

15 MR. NUTTER: Gulf's Exhibits 1 through 6-B will
 16 be admitted in evidence.

17
 18 CROSS EXAMINATION

19 BY MR. NUTTER:

20 Q Mr. Kalteyer, apparently Gulf does have the dis-
 21 covery in this well here --

22 A Yes, sir.

23 Q -- for the two formations.

24 A Yes, sir.

25 Q And what is the current state of development on

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1 these other wells? Now, the well south of the subject well
 2 has now been completed, you say?

3 A. Right, yes, sir. It has now been completed to the
 4 Morrow zone, has been perforated, and they are preparing to
 5 test the Atoka.

6 Q. And the one in Section 21 to the east, you've
 7 staked that location?

8 A. Yes, sir, that location has been staked and a
 9 communitization has been agreed upon with Texaco. That
 10 small green rectangle was excluded from the drilling area
 11 but now that upper 40-acres has been included in the drilling

12 Q. And it's communitized, then, to a drilling tract,
 13 then?

14 A. Yes.

15 Q. And you have filed for the well to the northwest?

16 A. Yes, sir, the Eddy D Federal as well as the -- in
 17 the adjoining section to the west, the Gulf Keohane Federal
 18 Number 1, that has also been filed.

19 So there are three additional locations have been
 20 staked there.

21 Q. Do you plan to use the drilling rig that is working
 22 on the well to the south to drill these other wells? Will
 23 they be drilled in sequence?

24 A. Yes, sir, the well that's now on the North Shugart
 25 Deep Unit there in Section 29 will move over to the Keohane

1 Federal there to the west -- the west of the -- the Little-
2 field "EM" Federal.

3 MR. NUTTER: Are there any further questions of
4 this witness?

5 He may be excused. Do you have anything further,
6 Mr. Shrader?

7 MR. SHRADER: No, sir.

8 MR. NUTTER: Does anyone have anything further
9 they wish to offer in Case Number 6019?

10 We'll take the case under advisement.

11 (Hearing concluded.)
12
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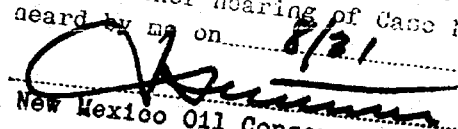
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REPORTER'S CERTIFICATE

I, SIDNEY F. MORRISH, a Certified Shorthand Reporter,
do hereby certify that the foregoing and attached Transcript
of Hearing before the New Mexico Oil Conservation Commission
was reported by me, and the same is a true and correct record
of the said proceedings to the best of my knowledge, skill
and ability.


Sidney F. Morrish, C.S.R.

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I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 6019
heard by me on 8/21, 1972.
, Examiner
New Mexico Oil Conservation Commission

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. 6019
Order No. R-5526

APPLICATION OF GULF OIL CORPORATION
FOR A DUAL COMPLETION, EDDY COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on August 31, 1977, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 6th day of September, 1977, 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, Gulf Oil Corporation, seeks authority to complete its Littlefield "EM" Federal Com Well No. 1, located in Unit J of Section 20, Township 18 South, Range 31 East, NMPM, Eddy County, New Mexico, as a dual completion (conventional) to produce gas from undesignated Atoka and Morrow gas pools through parallel strings of 2 3/8-inch tubing, separation of the zones to be achieved by means of a packer set at approximately 11,510 feet.

(3) That the mechanics of the proposed dual completion are feasible and in accord with good conservation practices.

(4) That approval of the subject application will prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Gulf Oil Corporation, is hereby authorized to complete its Littlefield "EM" Federal Com Well No. 1, located in Unit J of Section 20, Township 18 South, Range 31 East, NMPM, Eddy County, New Mexico, as a dual completion (conventional) to produce gas from undesignated Atoka and Morrow gas pools through 2 3/8-inch tubing, with a packer set at approximately 11,510 feet.

-2-

Case No. 6019
Order No. R-5526

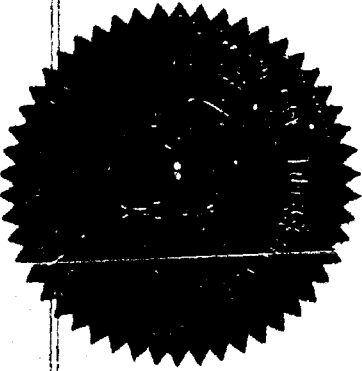
PROVIDED HOWEVER, that the applicant shall complete, operate, and produce said well in accordance with the provisions of Rule 112-A of the Commission Rules and Regulations insofar as said rule is not inconsistent with this order;

PROVIDED FURTHER, that the applicant shall take packer-leakage tests upon completion and annually thereafter during the Annual Shut-in Pressure Test Period for the Morrow zone.

(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


Phil R. Lucero
PHIL R. LUCERO, Chairman

EMERY C. ARNOLD, Member

Joe D. Ramey
JOE D. RAMEY, Member & Secretary

S E A L

jr/

NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
APPLICATION FOR MULTIPLE COMPLETION

Form O-107
5-1-67

Operator Gulf Oil Corporation		County Eddy	Date 4-15-77
Address Box 670, Hobbs, New Mexico 88240		Location Littlefield "W" Fed. Com. #1	Well No. #1
Location of Well J	Section 20	Township 18S	Range 31E

1. Has the New Mexico Oil Conservation Commission heretofore authorized the multiple completion of a well in these same pools or in the same zones within one mile of the subject well? YES _____ NO X

2. If answer is yes, identify one such instance: Order No. _____; Operator Lease, and Well No.: _____

3. The following facts are submitted:	Upper Zone	Intermediate Zone	Lower Zone
a. Name of Pool and Formation	Undes. Atoka		Undes. Morrow
b. Top and Bottom of Pay Section (Perforations)	11,102 - 11,120'		11,567 - 11,735'
c. Type of production (Oil or Gas)	Gas		Gas
d. Method of Production (Flowing or Artificial Lift)	Flow		Flow

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

- | | | |
|-------------------------------------|-------------------------------------|--|
| Yes | No | |
| ☒ | ☐ | a. Diagrammatic Sketch of the Multiple Completion, showing all casing strings, including diameters and setting depths, centralizers and/or tubularizers and location thereof, quantities used and top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent. |
| ☒ | ☐ | b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease. |
| ☒ | ☐ | c. Waivers consenting to such multiple completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.* |
| ☐ | ☒ | d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed it shall be submitted as provided by Rule 112-A) |

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

Texaco, Inc., Box 3109, Midland, Texas 79701

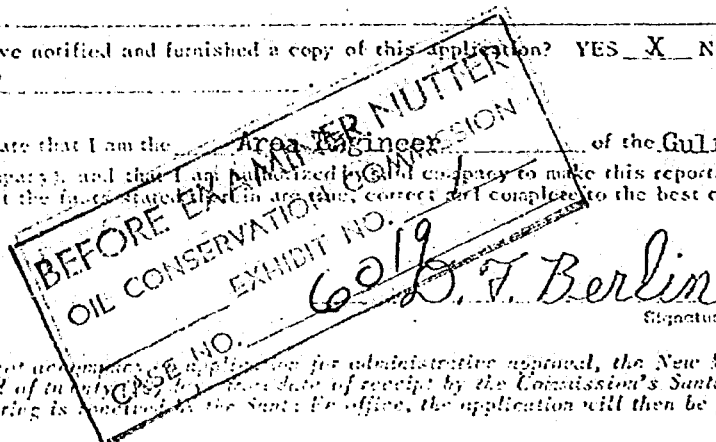
Shenandoah Oil Corp., Box 2189, Hobbs, N.M. 88240 **1500 Commerce Bldg Ft Worth 76102**

Nobil Oil Corp., Box 1800, Hobbs, N.M. 88240

6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES X NO _____. If answer is yes, give date of such notification **4-15-77**

CERTIFICATE: I, the undersigned, state that I am the **Area Engineer** of the **Gulf Oil Corporation** (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Exhibit 1
Case No. **6019**
Date **8-31-77**



*Should a dissent from all offset operators not accompany the application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty day period, no protest or request for hearing is received by the Santa Fe office, the application will then be processed.

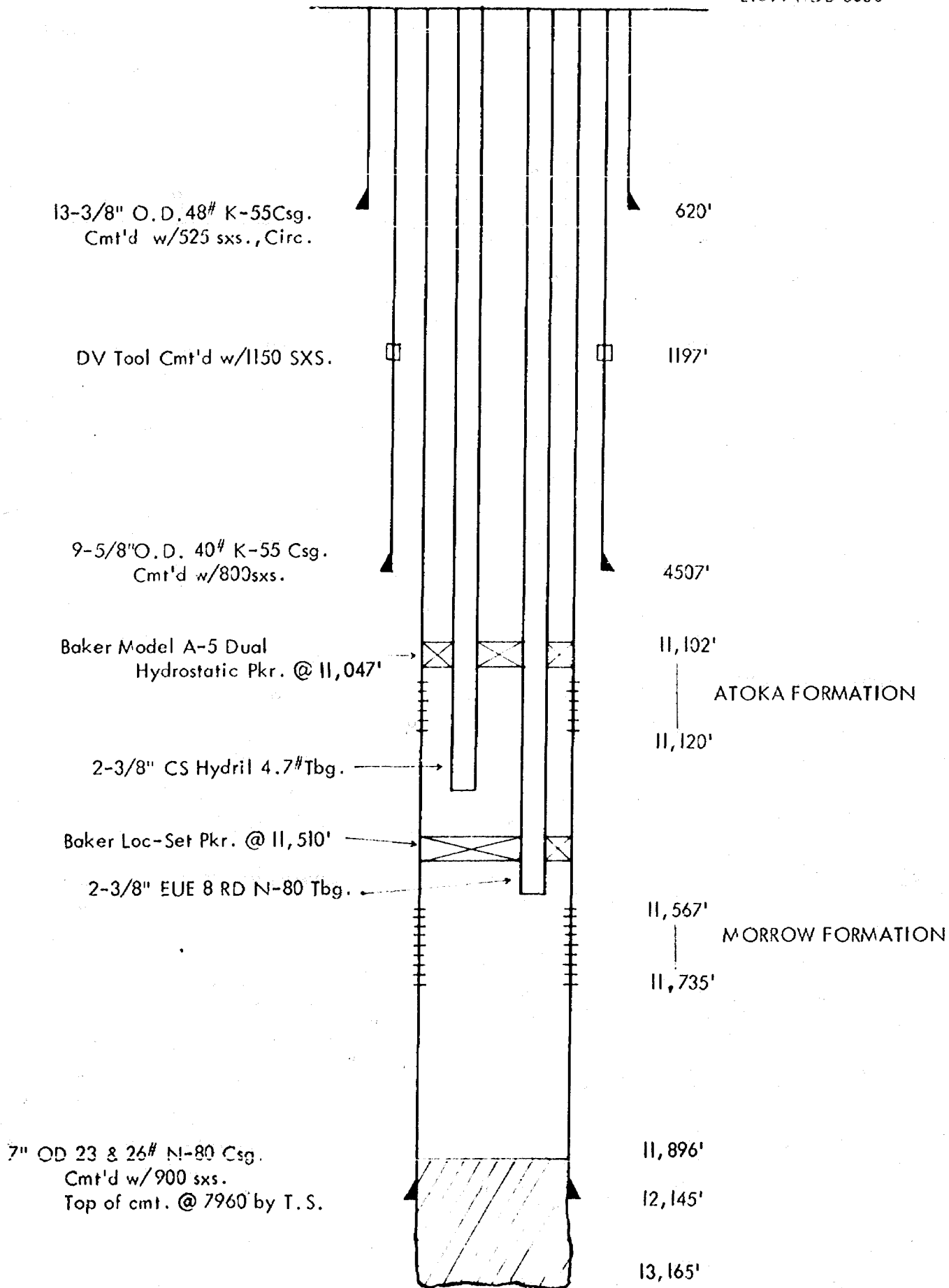
NOTE: If the proposed multiple completion will result in an unorthodox well location and/or a non-standard perforation unit in one or more of the producing zones, then a separate application for approval of the same should be filed simultaneously with this application.

Schematic Diagram

LITTLEFIELD EM FED. COM. Well No. 1
Undesignated Atoka & Morrow Pools

Location: 1980' FSL & 1980' FEL Sec. 20 - T18S-R31E
EDDY COUNTY, NEW MEXICO

Elev. KDB 3650'



BEFORE EXAMINED NUTTER

OIL CONSERVATION COMMISSION

Apple

4
6019

EXHIBIT
CASE NO.
DATE

4
6019
8-31-77

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 4-15-77	
Company GULF ENERGY & MINERALS		Connection AIR	
Well WILDCAT		Formation Atoka	
Completion Date 4-14-77	Total Depth -12145	Plug Back TO 11096	Elevation 3629 Gr.
Form or Lease Name LITTLEFIELD "EM" COM		Well No. 1	
Cas. Size 7.00"	Wt. 26.00#	Set At 12145	Perforations: From 11102 To 11120
Perf. Size 2.375 CS Hydril 4.70#	Wt. 1.995'	Set At 11050	Perforations: From To
Type Well - Single - Standalone - G.G. or G.O. Multiple Dual Completion Gas-Gas		Packoff Set At 11050	County EDDY
Producing Thru Tubing	Reservoir Temp. °F 180	Mean Annual Temp. °F 60	Zero. Press. - P _g 13.2
State NEW MEXICO		State	
L 11111	H 11111	G _g 0.694	% CO ₂ 0.00
		% N ₂ 0.02	% H ₂ S 0.00
Provor X		Meter Run X	Taps FLG.

FLOW DATA						TUBING DATA		CASING DATA		Direction of Flow	
NO.	Provor Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
1.	4.00		1.50	630	4.00"	102	2680	70			1.00 Hr.
2.	4.00		1.50	630	9.00"	103	2520	70			1.00 Hr.
3.	4.00		1.50	645	21.00"	93	2188	70			1.00 Hr.
4.	4.00		1.50	660	40.00"	73	1693	70			1.00 Hr.
5.											

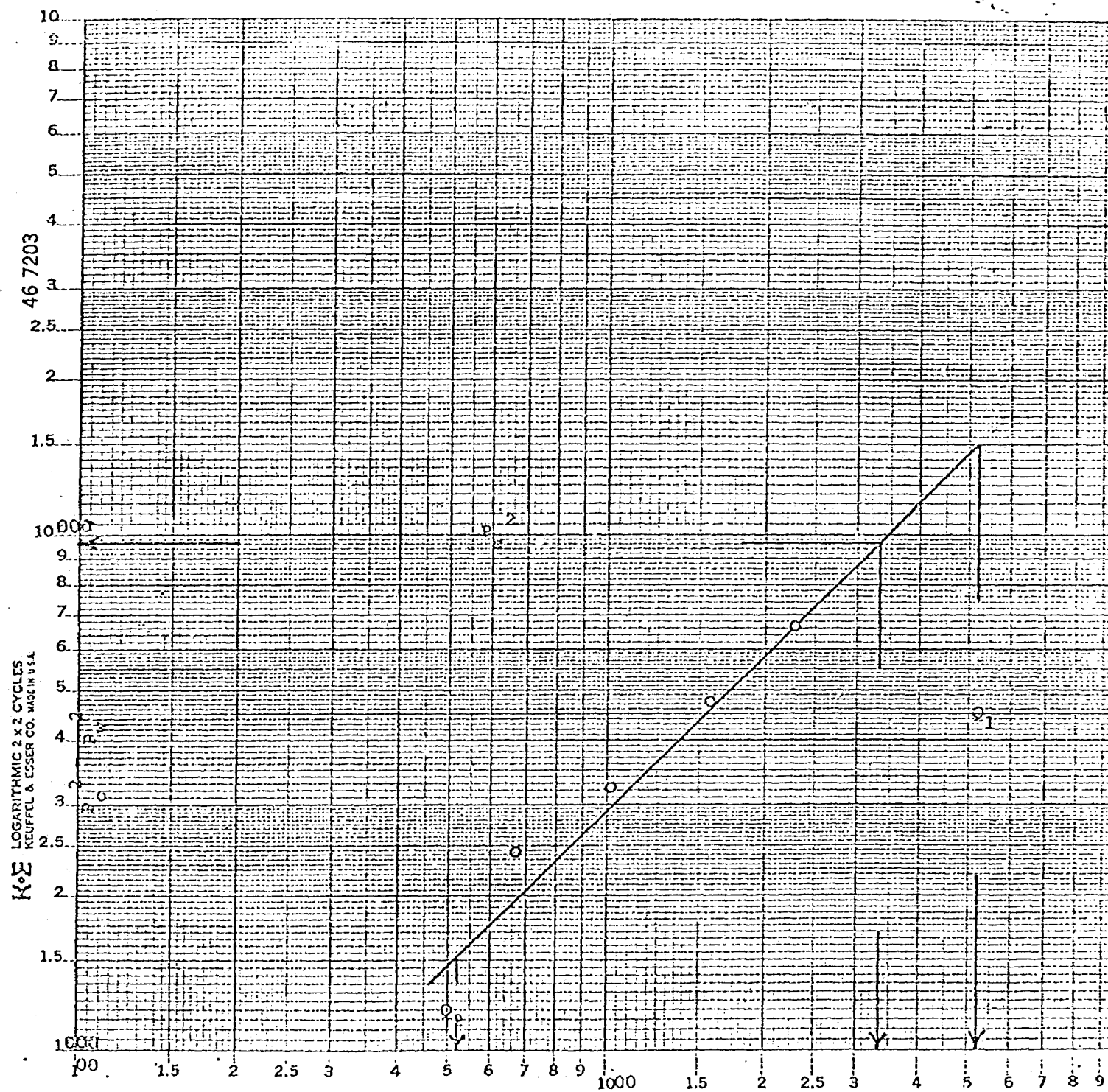
RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft	Gravity Factor Fg	Super Compress. Factor, F _{pv}	Rate of Flow O. Mgd
1.	10.84	50.723	643.20	0.9619	1.2004	1.0570	671
2.	10.84	76.084	643.20	0.9611	1.2004	1.0580	1007
3.	10.84	117.568	658.20	0.9697	1.2004	1.0620	1575
4.	10.84	164.098	673.20	0.9877	1.2004	1.0760	2269
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1.	0.96	562	1.45	0.894	14291 (= 70 B/Hcf)	57.00	0.694	XXXXXXX	669	663
2.	0.96	563	1.45	0.894				XXXXX	388	451
3.	0.98	553	1.43	0.877						
4.	1.01	533	1.37	0.855						
5.										

NO.	P _r ²	P _w ²	P _w ² - P _r ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.45898$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.45898$
1.	2696.7	7272	2439		
2.	2541.5	6455	3251		
3.	2221.2	4937	4777		
4.	1747.7	3058	6656		
5.					

Absolute Open Flow	3310	Mold @ 15.025	Slope @ 45	Slope, n 1.00
Exhibit	5A			
Case No.	6019			
Date	8-31-77			
Approved By: <i>Sanfrans</i>	Conducted By: <i>Sanfrans</i>	Calculated By: <i>Sanfrans</i>	Checked By: <i>R. M. Magee</i>	

OPERATOR: GULF ENERGY & MATERIALS
 LEASE: LITTLEFIELD "EM" COM
 WELL NO.: 1
 FIELD: ATOKA
 COUNTY: EDDY
 DATE: 4-14-77



Q in MCF/Day
 $Q_1 = 5200$ MCF $\log Q_1 = 3.71600$
 $Q_2 = 520$ MCF $\log Q_2 = 2.71600$
 $n = 1.00000$

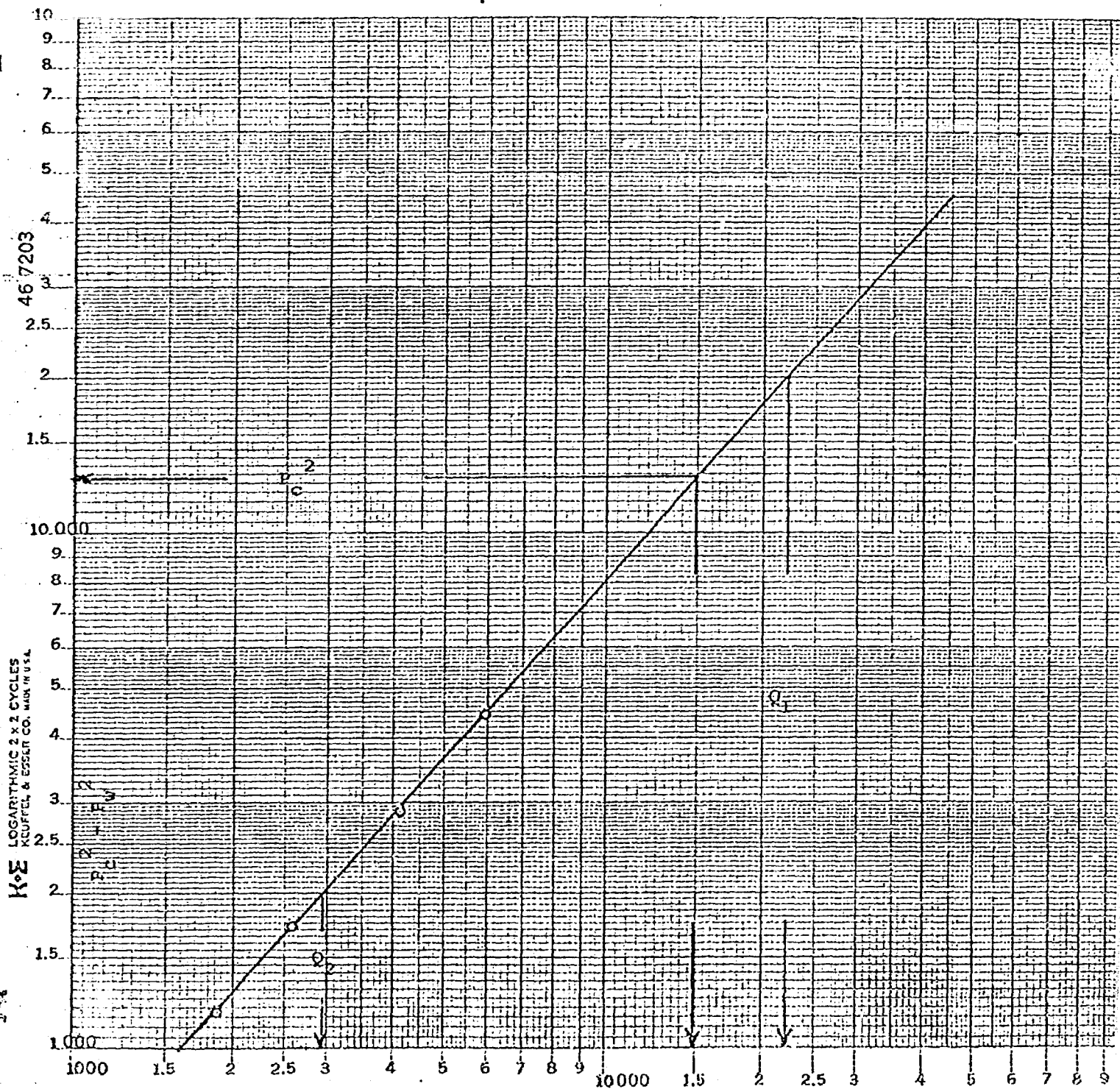
ABSOLUTE OPEN FLOW 3310 MCF/DAY

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-125
Revised 1-1-65

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 4-14-77	
Company GULF ENERGY & MINERALS		Connection AIR	
Pool WILDCAT		Formation Morrow	
Completion Date 4-14-77	Total Depth 12145	Plug Back TD 11096	Elevation 3629 Gr.
Form or Lease Name LITTLEFIELD "EM" COM			Well No. 1
Cas. Size 7.00"	Wt. 26.00#	d 7.386"	Set At 12145
Perforations: From 11567 To 11735	Well No. 1		
Perf. Size 2.375EUR	Wt. 4.70#	d 1.995"	Set At 11510
Perforations: From To	Unit 20 18 31		
Type Well - Single - Broadhead - G.G. or G.O. Multiple Dual Completion Gas-Gas		Packer Set At 11510	
Producing thru Tubing		Reservoir Temp. °F 185 @ 11651	Mean Annual Temp. °F 60
Baro. Press. - P _a 13.2		State NEW MEXICO	
L 11651	H 11651	Gg 0.666	% CO ₂ 0.01
% N ₂ 0.00	% H ₂ S 0.00	Prover X	Meter Run FLG.
FLOW DATA			
NO.	Prover Line Size	Orifice Size	Press. p.s.i.g.
1.	4.00	2.00	630
2.	4.00	2.00	630
3.	4.00	2.00	630
4.	4.00	2.00	630
5.			
TUBING DATA			
NO.	Press. p.s.i.g.	Temp. °F	Duration of Flow
1.	3252	70	1.00 Hr.
2.	3351	70	1.00 Hr.
3.	3255	70	1.00 Hr.
4.	3011	70	1.00 Hr.
5.	2640	70	1.00 Hr.
CASING DATA			
NO.	Press. p.s.i.g.	Temp. °F	Duration of Flow
1.			
2.			
3.			
4.			
5.			
RATE OF FLOW CALCULATIONS			
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m
1.	19.81	76.034	643.20
2.	19.81	104.568	643.20
3.	19.81	166.306	643.20
4.	19.81	233.820	643.20
5.			
NO.	P _r	Temp. °R	T _r
1.	0.96	557	1.47
2.	0.96	559	1.48
3.	0.96	554	1.47
4.	0.96	541	1.43
5.			
Gas Liquid Hydrocarbon Ratio 49875			
A.P.L. Gravity of Liquid Hydrocarbons 51.50			
Specific Gravity Separator Gas 0.694			
Specific Gravity Flowing Fluid 0.754			
Critical Pressure 669 P.S.I.A.			
Critical Temperature 388 °R			
P _r 3565.2 P _c 12711			
NO.	P _r ²	P _w ²	P _c ² - P _w ²
1.	3395.0	11526	1185
2.	3311.1	10963	1747
3.	3136.0	9838	2872
4.	2882.5	8309	4402
5.			
(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.88757$			
(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 14900$			
Absolute Open Flow 14900			
Mold @ 15.025			
Angle of slope 48.88			
Slope 0.873			
Remarks: Exhibit 5B			
Case No. 6019			
Date 8-31-77			
Approved by Commission		Conducted By: [Signature]	Calculated By: [Signature]
		Checked By: [Signature]	

OPERATOR: GULF ENERGY & MINING CO.
 LEASE: LITTLEFIELD "EM" COM.
 WELL NO.: 1
 FIELD: MORROW
 COUNTY: EDDY
 DATE: 4-14-77



Q in MCF/Day
 $Q_1 = 22020$ MCF
 $Q_2 = 2950$ MCF

$\log Q_1 = 4.34282$
 $\log Q_2 = 3.46982$
 $n = .87300$

ABSOLUTE OPEN FLOW 14900 MCF/Day

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other in-
structions on
reverse side)Form approved,
Budget Bureau No. 42-R455.6.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *											
1A. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other _____					5. LEASE DESIGNATION AND SERIAL NO. NM 12210						
b. TYPE OF COMPLETION: NEW WELL ☐ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. REGR. ☐ Other _____					6. IF INDIAN, ALLOTTEE OR TRIBE NAME						
2. NAME OF OPERATOR Gulf Oil Corporation					7. UNIT AGREEMENT NAME						
3. ADDRESS OF OPERATOR P. O. Box 670, Hobbs, New Mexico 88240					8. FARM OR LEASE NAME Littlefield EM Fed Com						
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface 1980' FS & EL, Sec 20, T-18-S, R-31-E At top prod. interval reported below At total depth					9. WELL NO. 1						
14. PERMIT NO.					DATE ISSUED		12. COUNTY OR PARISH Eddy		13. STATE NM		
15. DATE SPUDDED 12-23-76		16. DATE T.D. REACHED 3-11-77		17. DATE COMPL. (Ready to prod.) 4-4-77		18. ELEVATIONS (DV, RKB, RT, CR, ETC.)*		19. ELEV. CASINOHEAD			
20. TOTAL DEPTH, MD & TVD 13,165'		21. FLUO. BACK T.D., MD & TVD 11,896'		22. IF MULTIPLE COMPL., HOW MANY* Dual		23. INTERVALS DRILLED BY 10 to 13,165'		ROTARY TOOLS		CABLE TOOLS	
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 11,657' to 11,735' Undes Morrow - Form 9-330 Submitted 4-13-77 11,102' to 11,120' Undes Atoka										25. WAS DIRECTIONAL SURVEY MADE No	
26. TYPE ELECTRIC AND OTHER LOGS RUN GR- Comp Neutron, Density, Dual Laterolog, GR-Sonic and dipmeter										27. WAS WELL CORED No	
23. CASINO RECORD (Report all strings set in well)											
CASINO SIZE		WEIGHT, LB./FT.		DEPTH SET (MD)		HOLE SIZE		CEMENTING RECORD		AMOUNT PULLED	
13 3/8"		48#		620		17 1/2"		525 sacks, circ			
9 5/8"		40#		4,507		12 1/4"		1920 sacks, circ			
7"		23 & 26#		12,145'*		8 3/4"		900 sacks, TOC at 7960'			
*DV tool at 1197'											
29. LINER RECORD						30. TUBING RECORD					
SIZE		TOP (MD)		BOTTOM (MD)		SACKS CEMENT*		SCREEN (MD)		SIZE	
										2 3/8"	
										11,057'	
										11,057'	
31. PERFORATION RECORD (Interval, size and number)						32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.					
Perforated 7" casing at 11,102' and 11,120'						DEPTH INTERVAL (MD)		AMOUNT AND KIND OF MATERIAL USED			
						11,102-11,120		2000 gallons of 7 1/2% acid			
33. PRODUCTION											
DATE FIRST PRODUCTION 4-4-77		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Flowing						WELL STATUS (Producing or shut-in) shut-in			
DATE OF TEST 4-10-77		HOURS TESTED 24		CHOKE SIZE 22/64		PROD'N. FOR TEST PERIOD 170		OIL—BDL. 170		GAS—MCF. 2614	
FLOW. TUBING PRESS. 1000#		CASINO PRESSURE —		CALCULATED 24-HOUR RATE 170		OIL—BDL. 170		GAS—MCF. 2614		WATER—BDL. —	
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) Shut-in - waiting on pipeline connection and multiple completion											
35. LIST OF ATTACHMENTS											
36. I hereby certify that the foregoing and attached information is complete and correct as far as known from all available records											
SIGNED H. P. Sikes, Jr.		TITLE Area Engineer						DATE 8-17-77			
* (See Instructions and Spaces for Additional Data on Reverse Side)											
Exhibit 6A											
Case No. 6019											
Date 8-31-77											

6-A

OPERATOR'S COPY
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other in-
structions on
reverse side)

INDIVIDUAL WELL FILE

Form approved
Bureau No. 12-R3555

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other _____		5. LEASE DESIGNATION AND SERIAL NO. W-01403 111-12210	
2. NAME OF OPERATOR Gulf Oil Corporation		6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
3. ADDRESS OF OPERATOR Box 670, Hobbs, New Mexico 88240		7. UNIT AGREEMENT NAME	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface: 1980' FS & EL, Section 20, 18-S, 31-E At top prod. interval reported below: At total depth:		8. FARM OR LEASE NAME Littlefield El Fed Com	
14. PERMIT NO. 3		9. WELL NO. 1	
DATE ISSUED		10. FIELD AND POOL, OR WILDCAT Undesignated Morrow	
15. DATE SPUDDED 12-23-76		11. SEC., T., R., M., OR LOCATION OF WELL OR AREA Sec 20, 18-S, 31-E	
16. DATE T.D. REACHED 3-11-77		12. COUNTY OR PARISH Eddy	
17. DATE COMPL. (Ready to prod.) 3-28-77		13. STATE N. M.	
18. ELEVATIONS (DF, FWD, RT, GR, ETC.)* 3629' GL		19. ELEV. CASINGHEAD	
20. TOTAL DEPTH, MD & TVD 13,165'		21. PLUG, BACK T.D., MD & TVD 11,896'	
22. IF MULTIPLE COMPL., HOW MANY? Single		23. INTERVALS DEPLETED BY 10-13,165'	
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 11,567' to 11,735'		25. WAS DIRECTIONAL SURVEY MADE No	
26. TYPE ELECTRIC AND OTHER LOGS RUN GR-Comp Neutron, Density, Dual laterolog, GR-Sonic & Dipmeter		27. WAS WELL CORED No	
28. CASING RECORD (Report all strings set in well)			
CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	ROLE SIZE
13-3/8"	48#	620'	17-1/2"
9-5/8"	40#	4,507'	12-1/4"
7"	23 & 26#	12,145'*	8-3/4"
* DV tool at 1197'			
29. LINER RECORD			
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*
30. TUBING RECORD			
SIZE	DEPTH SET (MD)	PACKER SET (MD)	
2-3/8"	11,530'	11,530'	
31. PERFORATION RECORD (Interval, size and number) Perf 7" csg at 11,732-35', 11,664-81', 11,623-30', 11,608-20', 11,582-94' and 11,567-69'			
32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.			
DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED		
11,567 - 11,735'	300 gal of 7-1/2% acid.		
33. PRODUCTION			
DATE FIRST PRODUCTION 3-28-77	PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Flowing		
DATE OF TEST 3-29-77	HOURS TESTED 24	CHOKE SIZE 1/2"	PROD'N. FOR TEST PERIOD 28
FLOW. TUBING PRESS. 600#	CASING PRESSURE —	CALCULATED 24-HOUR RATE —	OIL—BBL. 28
GAS—MCF. 3100		WATER—BBL. 2	
OIL GRAVITY-API (CORR.) 53.5		GAS-OIL RATIO 110,714	
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) Shut in - Waiting on Pipeline Connection			
35. LIST OF ATTACHMENTS			
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records			
SIGNED <u>D. F. Berlin</u>		TITLE <u>Area Engineer</u>	
DATE <u>April 13, 1977</u>			

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

Exhibit 6B
Case No. 6019
Date 8-31-77

6-B

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 32, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 36.

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

Item 16: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments. Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 32. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

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

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

37. SUMMARY OF PRODUCTIVE ZONES:

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

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	MEAN DEPTH	TRUE VERT. DEPTH
	0'	2,080'	Red Bed, Salt & Anhy	Top Anhy		520'
		5,976'	Dolo, SS & Shale	Top Salt		681'
		9,632'	Shale, SS & LS	Base Salt		1,930'
		10,639'	Dolo, LS & Shale	Top Yates		2,080'
		12,570'	LS, Shale & SS	Queen		3,200'
		12,644'	Shale	Bone Springs		5,976'
		13,163'	Dolo, LS & Chert	Wolfcamp		9,632'
DST #1 5575-5675'. Open tool W/good blow, dec to fair blow in 15 min. Tool open 30 min				Strawn		10,639'
CI 1 hr. Open tool for 60 min W/good blow, dec to fair blow. Rec 280' DN W/tr oil &				Atoka		10,944'
2820' salt water. IHP 2786, 30 min IFF 338 - 851, 60 min ISIP 2235, 60 min 2nd flow				Morrow LS		11,354'
351 to 1488, 120 min PSIP 2235, IHP 2786. BHT 960.				Barnett		11,760'
DST #2 7750-7854'. Rep tool W/fair blow thru 30 min IF. CI 1 hr. Open tool W/fair				Mississippian		12,058'
blow, incr to good blow after 15 min. Rec 233' GCW W/tr oil. IHP 3836, 30 min IFF				Woodford Shale		12,570'
36 - 196. 1 hr CI 2982. 1 hr 2nd blow 231 to 392. 2 hr CIP 3000#, IHP 3836. BHT 1120.				Devonian		12,644'
DST #3 9150' to 8250'. Open tool W/wk blow, incr to strong blow in 4 min & cont for 30						
min IF. Rec 3' oil and 381' salt wtr. IHP 4636, 30 min 1st flow 117 - 120, 60 min CI						
3720, 60 min 2nd flow 164-304, 120 min CI 2803, IHP 4636.						
DST #4 9520-9570'. Open tool W/wk blow, cont for 30 min preflow. Rec 80' IHP 4755, 30						
min 2nd flow 92-92.						
DST #5 11,075' to 11,175'. Open tool W/strong blow. Fld 1 hr at est 8041 MCFFD, Rec 110						
IHP 5646, 30 min IFF 1449-2779, 30 min ISIP 4722, 60 min 2nd flow 2298-30-32, 135 min PSIP						
DST #6 11,525' to 11,583'. Open tool W/strong blow. GTS in 18 min. IHP 5875, IFF 231-369, IFF						

See attachment.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
OPERATOR'S COPY
SUBMIT IN DUPLICATE
(See other instructions on reverse side)

INDIVIDUAL WELL FILE

Form approved,
Bureau of Reclamation, Bureau No. 12 R1113.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other _____		5. LEASE DESIGNATION AND SERIAL NO. SEC-01403 1/11-12210	
2. NAME OF OPERATOR Gulf Oil Corporation		7. UNIT AGREEMENT NAME	
3. ADDRESS OF OPERATOR Box 670, Hobbs, New Mexico 88240		8. FARM OR LEASE NAME Littlefield E1 Fed Com	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface 1980' FS & EL, Section 20, 18-S, 31-E At top prod. interval reported below At total depth		9. WELL NO. 1	
10. FIELD AND POOL, OR WILDCAT Undesignated Morrow		11. SEC., T., R., M., OR B. & AREA Sec 20, 18-S, 31-E	
12. COUNTY OR PARISH Eddy		13. STATE N. M.	
15. DATE SPOOLED 12-23-76	16. DATE T.D. REACHED 3-11-77	17. DATE COMPL. (Ready to prod.) 3-28-77	18. ELEVATIONS (DF, RSH, RT, GR, ETC.)* 3629' GL
19. ELEV. CASINGHEAD ---	20. TOTAL DEPTH, MD & TVD 13,165'		
21. PLUG, BACK T.D., MD & TVD 11,896'	22. IF MULTIPLE COMPL., HOW MANY? Single	23. INTERVALS DELETED BY 10-13,165'	24. ROTARY TOOLS CABLE TOOLS
25. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 11,567' to 11,735'			26. WAS DIRECTIONAL SURVEY MADE No
27. TYPE ELECTRIC AND OTHER LOGS RUN GR-Comp Neutron, Density, Dual laterolog, GR-Sonic & Dipmeter			28. WAS WELL CORED No
33. CASING RECORD (Report all strings set in well)			
CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE
13-3/8"	48#	620'	17-1/2"
9-5/8"	40#	4,507'	12-1/4"
7"	23 & 26#	12,145'*	8-3/4"
* DV tool at 1197'			
30. TUBING RECORD			
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*
2-3/8"	11,530'	11,530'	
31. PERFORATION RECORD (Interval, size and number) Perf 7" csg at 11,732-35', 11,664-81', 11,623-30', 11,608-20', 11,582-94' and 11,567-69'			
32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.			
DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED		
11,567 - 11,735'	300 gal of 7-1/2% acid.		
33.* PRODUCTION			
DATE FIRST PRODUCTION 3-28-77	PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Flowing		WELL STATUS (Producing or Shut In) Shut In.
DATE OF TEST 3-29-77	HOURS TESTED 24	CHOKE SIZE 1/2"	PROD'N. FOR TEST PERIOD 28
FLOW. TUBING PRESS. 600#	CASINO PRESSURE ---	CALCULATED 24-HOUR RATE 28	GAS—MCF. 3100
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) Shut in - Waiting on Pipeline Connection		TEST WITNESSED BY R. N. Magee	
35. LIST OF ATTACHMENTS			
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records			
SIGNED <u>D. F. Berlin</u>		TITLE <u>Area Engineer</u>	
DATE <u>April 13, 1977</u>			

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

Exhibit 6B
Case No. 6019
Date 8-31-77

INSTRUCTIONS

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

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 32.

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

Item 15: Indicate which elevation is used as reference (where not otherwise shown), for depth measurements given in other spaces on this form and in any attachments. Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

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

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 23 and 24 above.)

37. SUMMARY OF POROUS ZONES:

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

FORMATION	TO TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	38. GEOLOGIC NAMES	MEAS. DEPTH	TRUE VERT. DEPTH
	0'	2,080'	Red Bed, Salt & Anhy	Top Anhy		520'
		5,976'	Dolo, SS & Shale	Top Salt		681'
		9,632'	Shale, SS & LS	Base Salt		1,930'
		10,639'	Dolo, LS & Shale	Top Yates		2,080'
		12,570'	LS, Shale & SS	Queen		3,200'
		12,644'	Shale	Bone Springs		5,976'
		13,163'	Dolo, LS & Chert	Wolfcamp		9,632'
OST #1 5575-5675'. Open tool W/good blow, dec to fair blow in 15 min. Tool open 30 min.				Strawn		10,639'
CI 1 hr. Open tool for 60 min W/good blow, dec to fair blow. Rec 280' DM W/tr oil & 2820' salt water. IUP 2786, 30 min IFF 338, 851, 60 min ISIP 2235, 60 min 2nd flow				Atoka		10,944'
361 to 1488, 120 min ISIP 2235, IUP 2786, IFF 960.				Morrow LS		11,354'
OST #2 7750-7854'. Pen tool W/fair blow thru 30 min IF. CI 1 hr. Open tool W/fair blow, incr to good blow after 15 min. Rec 233' GCW W/tr oil. IUP 3836, 30 min IFF 36 - 106. 1 hr CI 2982. 1 hr 2nd blow 231 to 392. 2 hr CI 3000#, IUP 3836. BHT 1120.				Barnett		11,760'
OST #3 9150' to 8250'. Open tool W/wk blow, incr to strong blow in 4 min & cont' for 30 min IF. Rec 3' oil and 381' salt wtr. IUP 4636, 30 min 1st flow 117 - 120, 60 min CI 3720, 60 min 2nd flow 164-304, 120 min CI 2803, IUP 4636.				Mississippian		12,058'
OST #4 9520-9570'. Open tool W/wk blow, cont' for 30 min preflow. Rec 80' IUP 4755, 30 min 1st flow 66-69, 60 min CI 115, 60 min 2nd flow 92-92.				Woodford Shale		12,570'
OST #5 11,075' to 11,175'. Open tool W/strong blow. Fld 1 hr at est 8041 MCFFD, Rec 110 IUP 5646, 30 min IFF 1449-2779, 60 min ISIP 4722, 60 min 2nd flow 2298-30-32, 135 min ISIP 4732, IUP 5646, BHT 1560.				Devonian		12,644'
OST #6 11,525' to 11,583'. Open tool W/strong blow. GTS in 18 min. IUP 5875, IFF 231-369, IUP 277-599, IUP 5875.						

See attachment.

INSTRUCTIONS

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

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

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

Item 16: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

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

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

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

37. SUMMARY OF POROUS ZONES:

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

38.

GEOLOGIC MARKERS

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP	MEAN. DEPTH	TRUE VERT. DEPTH
	0'	2,080'	Red Bed, Salt & Anhy	Top Anhy			520'
		5,976'	Dolo, SS & Shale	Top Salt			681'
		9,632'	Shale, SS & LS	Base Salt			1,930'
		10,639'	Dolo, LS & Shale	Top Yates			2,080'
		12,570'	LS, Shale & SS	Queen			3,200'
		12,644'	Shale	Bone Springs			5,976'
		13,163'	Dolo, LS & Chert	Wolfcamp			9,632'
DST #1 5575-5675'. Open tool W/good blow, dec to fair blow in 15 min. Tool open 30 min. CI 1 hr. Open tool for 60 min W/good blow, dec to fair blow. Rec 280' DM W/tr oil & 2820' salt water. IHP 2786, 30 min IFP 338 - 851, 60 min ISIP 2235, 60 min 2nd flow 861 to 1488, 120 min FSIP 2235, FHP 2786. BHT 96°.				Strawn			10,639'
DST #2 7750-7854'. Pen tool W/fair blow thru 30 min IF. CI 1 hr. Open tool W/fair blow, incr to good blow after 15 min. Rec 233' GCW W/tr oil. IHP 3836, 30 min IFP 36 - 196. 1 hr CI 2982. 1 hr 2nd blow 231 to 392. 2 hr CIP 3000#, FHP 3836. BHT 112°.				Atoka			10,944'
DST #3 9150' to 8250'. Open tool W/wk blow, incr to strong blow in 4 min & cont for 30 min IF. Rec 3' oil and 381' salt wtr. IHP 4636, 30 min 1st flow 117 - 120, 60 min CI 3720, 60 min 2nd flow 164-304, 120 min CI 2303, FHP 4636.				Morrow LS			11,354'
DST #4 9520-9570'. Open tool W/wk blow, cont for 30 min preflow. Rec 80' IHP 4755, 30 min 1st flow 66-69, 60 min CI 115, 60 min 2nd flow 92-92.				Barnett			11,760'
DST #5 11,075' to 11,175. Open tool W/strong blow. Fld 1 hr at est 8041 MCFPD, Rec 110' GCM, 1200' dist & GCM & 500' dist. IHP 5646, 30 min IFP 1449-2779, 60 min ISIP 4722, 60 min 2nd flow 2298-30-32, 135 min FSIP 4732, FHP 5646, BHT 156°.				Mississippian			12,058'
DST #6 11,525' to 11,583'. Open tool W/strong blow. GTS in 18 min. IHP 5875, IFP 231-369, ISIP 4847, IFP 2774-599, FHP 5875.				Woodford Shale			12,570'
				Devonian			12,644'

See attachment.

INSTRUCTIONS

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

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

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

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

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

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

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

37. SUMMARY OF POROUS ZONES:

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

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
	0'	2,080'	Red Bed, Salt & Anhy
		5,976'	Dolo, SS & Shale
		9,632'	Shale, SS & LS
		10,639'	Dolo, LS & Shale
		12,570'	LS, Shale & SS
		12,644'	Shale
		13,163'	Dolo, LS & Chert

TEST #1 5575-5675'. Open tool W/good blow, dec to fair blow in 15 min. Tool open 30 min CI 1 hr. Open tool for 60 min W/good blow, dec to fair blow. Rec 280' DM W/tr oil & 2820' salt water. IHP 2786, 30 min IFP 338 - 851, 60 min ISIP 2235, 60 min 2nd flow 361 to 1488, 120 min FSIP 2235, FHP 2786. BHT 96°.

TEST #2 7750-7854'. Pen tool W/fair blow thru 30 min IF. CI 1 hr. Open tool W/fair blow, incr to good blow after 15 min. Rec 233' GCW W/tr oil. IHP 3836, 30 min IFP 36 - 196. 1 hr CI 2982. 1 hr 2nd blow 231 to 392. 2 hr CIP 3000#, FHP 3836. BHT 112°.

TEST #3 9150' to 8250'. Open tool W/wk blow, incr to strong blow in 4 min & cont for 30 min IF. Rec 3' oil and 381' salt wtr. IHP 4636, 30 min 1st flow 117 - 120, 60 min CI 3720, 60 min 2nd flow 164-304, 120 min CI 2303, FHP 4636.

TEST #4 9520-9570'. Open tool W/wk blow, cont for 30 min preflow. Rec 30'. IHP 4755, 30 min 1st flow 66-69, 60 min CI 115, 60 min 2nd flow 92-92.

TEST #5 11,075' to 11,175'. Open tool W/strong blow. Fld 1 hr at est 8041 MCFFPD, Rec 110' GCM, 1200' dist & GCM & 500' dist. IHP 5646, 30 min IFP 1449-2779, 60 min ISIP 4722, 60 min 2nd flow 2298-30-32, 135 min ISIP 4732, FHP 5646, BHT 156°.

TEST #6 11,525' to 11,583'. Open tool W/strong blow. GTS in 18 min. IHP 5875, IFP 231-369, ISIP 4847, IFP 277-599, FHP 5875.

38.

GEOLOGIC MARKERS

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH
Top Anhy		520'
Top Salt		681'
Base Salt		1,930'
Top Yates		2,080'
Queen		3,200'
Bone Springs		5,976'
Wolfcamp		9,632'
Strawn		10,639'
Atoka		10,944'
Morrow LS		11,354'
Barnett		11,760'
Mississippian		12,058'
Woodford Shale		12,570'
Devonian		12,644'

See attachment.

BEFORE THE OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION
OF GULF OIL CORPORATION FOR DUAL
COMPLETION OF GULF'S LITTLEFIELD
"EM" FED. COM. UNIT WELL NO. 1,
EDDY COUNTY, NEW MEXICO

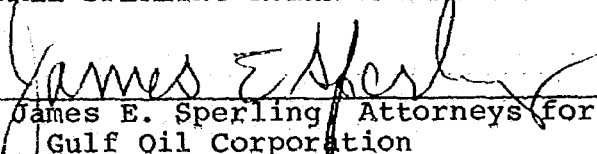
Case No. 6019

ENTRY OF APPEARANCE

The undersigned, Modrall, Sperling, Roehl, Harris & Sisk,
of Albuquerque, New Mexico, hereby enter their appearance for
the applicant, Gulf Oil Corporation, with its house counsel
of Midland, Texas.

MODRALL SPERLING ROEHL, HARRIS & SISK

By:


James E. Sperling Attorneys for
Gulf Oil Corporation
P. O. Box 2168
Albuquerque, New Mexico 87103
Telephone: (505) 243-4511

Booklets Nos. 77-77 and 78-77 are tentatively set for hearing on September 14 and 23, 1977. Applications for hearing must be filed at least 22 days in advance of hearing date.

EXAMINER HEARING - VOLUNTARY - AUGUST 31, 1977

9 A.M. - OIL CONSERVATION COMMISSION CHAMBER OF COMMERCE,
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Rafael A. Rutter, Examiner, or Richard L. Stumetz, Alternate Examiner:

CASE 6016: In the matter of the hearing called by the Oil Conservation Commission on its application to permit Land Oil Company, American Employers' Insurance Company, and all other interested parties to appear and show cause why the Garner Well No. 1 located in Unit B of Section 23, Township 14 South, Range 25 East, Chaves County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

CASE 6017: Application of E. L. Latham, Jr. and Roy G. Barton, Jr., for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests underlying the E/2 NE/4 of Section 30, Township 2 South, Range 33 East, Flying H-San Andres Pool, Lea County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof, as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6018: Application of Walter Dunsen for salt water disposal, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Dakota formation through the open-hole interval from 637 feet to 703 feet in his North Hogback 1 Well No. 24 located in Unit C of Section 1, Township 29 North, Range 17 West, and from 691 feet to 702 in his North Hogback 6 Well No. 3 in Unit L of Section 6, Township 29 North, Range 16 West, Slickrock-Dakota Pool, San Juan County, New Mexico.

CASE 6019: Application of Gulf Oil Corporation for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Littlefield "EM" Federal Com. Well No. 1 located in Unit J of Section 20, Township 18 South, Range 31 East, Eddy County, New Mexico, to produce gas from undesignated Atocha and Morrow gas pools.

CASE 6020: Application of Yates Petroleum Corporation for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Blevins "I-K" Well No. 1 to be drilled 660 feet from the North and West lines of Section 35, Township 17 South, Range 26 East, Eddy County, New Mexico, to test the Morrow formation, the N/2 of said Section 35 to be dedicated to the well.

CASE 6021: Application of Yates Petroleum Corporation for salt water disposal, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the interval from 962 feet to 1240 feet in its Federal H Well No. 1 located in Unit A of Section 31, Township 6 South, Range 26 East, Linda-San Andres Pool, Chaves County, New Mexico.

CASE 6022: Application of Continental Oil Company for an unorthodox gas well location, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Conoco 29-4 Well No. 8 to be drilled 2265 feet from the South line and 1675 feet from the West line of Section 20, Township 29 North, Range 4 West, Gobernador-Pictured Cliffs Pool, Rio Arriba County, New Mexico, the SW/4 of said Section to be dedicated to the well.

CASE 6023: Application of Inxco Oil Company for downhole commingling and a tubing exception, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority for the downhole commingling of Upper Penn and Strain production in the wellbore of its Federal 10 State Com Well No. 1 located in Unit L of Section 10, Township 21 South, Range 26 East, Avalon Gas Field, Eddy County, New Mexico. Applicant further seeks an exception to Commission Rule 107(d) to permit setting tubing 370 feet above the uppermost perforation in said well.

CASE 6057: (Continued from July 6, 1977, Examiner Hearing)

Application of Belco Petroleum Corporation for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying all of Section 8 and in the other Pennsylvania formations underlying the E/2 of said Section 8, Township 24 South, Range 35 East, Cinda Raja-Morrow Gas Pool, Lea County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof, as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 117: (Continued from August 17, 1977, Examiner Hearing)

Application of Gulf Energy and Mineral Company for a well production well, also known as dedication interest, for production, in the above-styled cause, in the above-styled cause, made approval for a 20-acre dedication, for production, in the above-styled cause, except the 20/24 1/2 acre of, Township 26 North, Range 2 West, San Juan County, New Mexico, located, respectively, in Units F and I of Section 24, F of Section 14, and M and L of Section 13, all in Township 26 North, Range 2 West, San Juan County, New Mexico.

CASE 118: (Continued from August 17, 1977, Examiner Hearing)

Application of Minner Gas Inc. for a well production well, also known as dedication interest, for production, in the above-styled cause, made approval for a 20-acre dedication, for production, in the above-styled cause, except the 20/24 1/2 acre of, Township 26 North, Range 2 West, San Juan County, New Mexico, located, respectively, in Units F and I of Section 24, F of Section 14, and M and L of Section 13, all in Township 26 North, Range 2 West, San Juan County, New Mexico. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof, as well as actual operating costs and charges for an invasion. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 119: (Continued from August 17, 1977, Examiner Hearing)

Application of Tennessee Oil Company for a well production well, also known as dedication interest, for production, in the above-styled cause, made approval for the downhole commingling of Blanco Reservoir and Basin Dakota production in the wellbore of its Jicarilla "A" Well No. 1 in Unit L of Section 18, "B" Well No. 2 in Unit B of Section 15, "C" Wells Nos. 4, 5, 6, 7, and 8, located, respectively, in Units F and I of Section 24, F of Section 14, and M and L of Section 13, all in Township 26 North, Range 2 West, San Juan County, New Mexico.

Case 6019

Gulf Energy and Minerals Company - U. S.

C. D. Borland
AREA PRODUCTION MANAGER

SOUTHWEST DIVISION
HOBBS AREA
AUG - 9 1977
August 8, 1977
OIL CONSERVATION COMM.
Santa Fe

P. O. Box 670
Hobbs, NM 88240

Re: Littlefield "EM" Federal No. 1
Eddy County, New Mexico

Mr. Carl Ulvog
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, NM 87501

Dear Sir:

Confirming our telephone conversation of August 5, 1977,
please set our application for dual discovery and allowable on the sub-
ject well for the August 31st docket.

Yours very truly,

D. T. Berlin

D. T. BERLIN
Assistant Area Production Manager

DTB/dch



A DIVISION OF GULF OIL CORPORATION

4/19/77: I called Dave Berlin
on this and explained why we
couldn't give administrative approval;
told him it could go on May 11th
hearing docket if Gulf wished. He
said Midland would have to make
decision and Katterer would call
back. He was advised that 4/21 was
deadline for May 11th ad.

Set for hearing Aug 31

NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
APPLICATION FOR MULTIPLE COMPLETION

Form C-107
5-1-61

Case 6019

APR 18 1977
NEW MEXICO OIL CONSERVATION COMMISSION

Operator Gulf Oil Corporation		County Eddy	Date 4-15-77
Address Box 670, Hobbs, New Mexico 88240		Lease Littlefield "EM" Fed. Com. #1	Well No.
Location of Well J	Unit 20	Township 18S	Range 31E

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

3. The following facts are submitted:	Upper Zone	Intermediate Zone	Lower Zone
a. Name of Pool and Formation	Undes. Atoka		Undes. Morrow
b. Top and Bottom of Pay Section (Perforations)	11,102 - 11,120'		11,567 - 11,735'
c. Type of production (Oil or Gas)	Gas		Gas
d. Method of Production (Flowing or Artificial Lift)	Flow		Flow

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

- | | | |
|---------------------------------------|---------------------------------------|---|
| Yes | No | |
| ☒ X | ☐ | a. Diagrammatic Sketch of the Multiple Completion, showing all casing strings, including diameters and setting depths, centralizers and/or turbolizers and location thereof, quantities used and top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent. |
| ☒ X | ☐ | b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease. |
| ☒ X | ☐ | c. Waivers consenting to such multiple completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.* |
| ☐ | ☒ X | d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed it shall be submitted as provided by Rule 112-A.) |

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

Texaco, Inc., Box 3109, Midland, Texas 79701

Shenandoah Oil Corp., Box 2189, Hobbs, N.M. 88240

Mobil Oil Corp., Box 1800, Hobbs, N.M. 88240

6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES ☒ X NO _____. If answer is yes, give date of such notification 4-15-77.

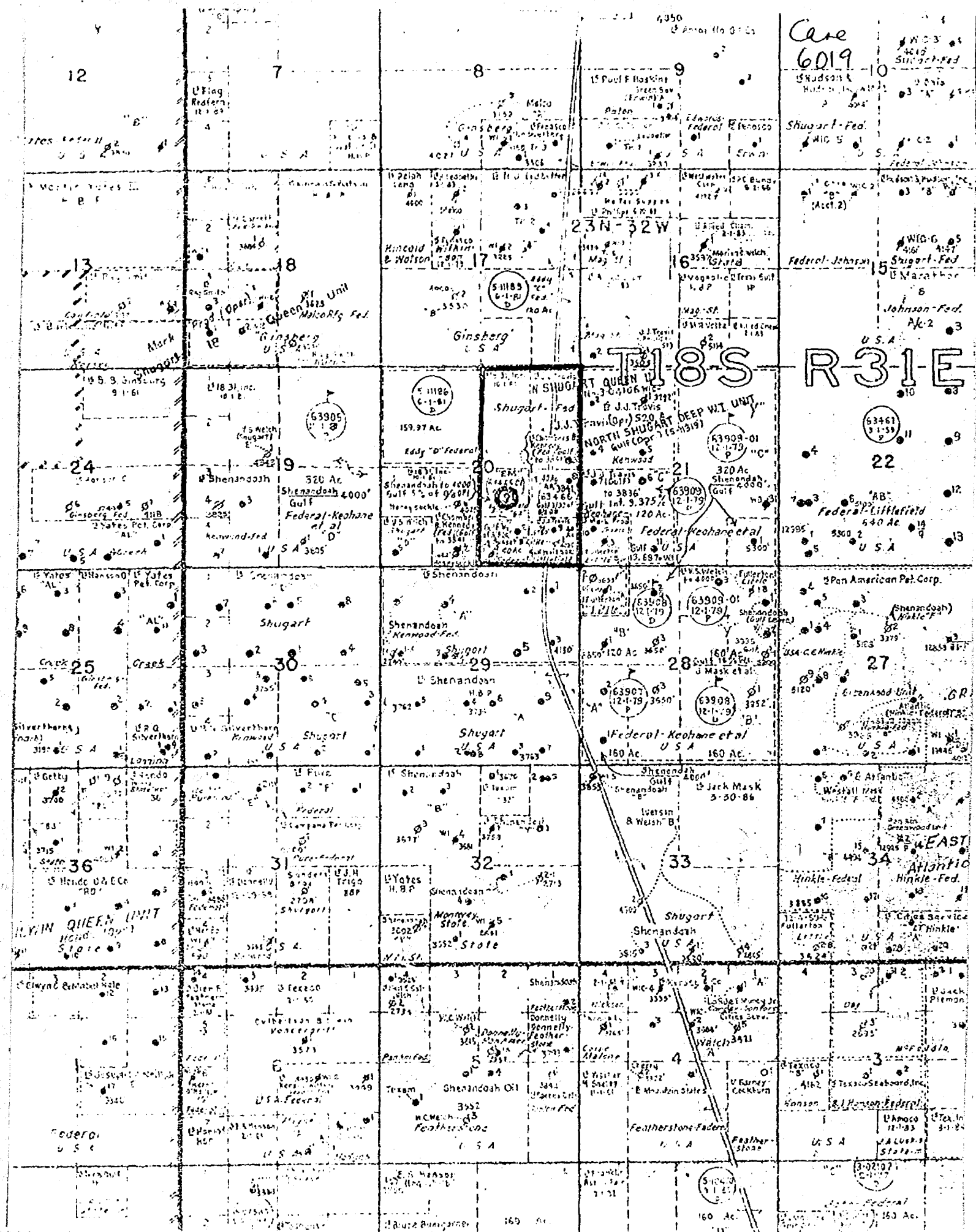
CERTIFICATE: I, the undersigned, state that I am the Area Engineer of the Gulf Oil Corporation (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

D. T. Berlin

Signature

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

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



Lease Littlefield "EM" Federal Well No. 1 Pool Wildcat
 Location 1780 FS & EL, Sec 20-18E-31E County _____ State _____

GLE: 3629

KDB:

H = 20.7' KDB to GL

Initial Comp. Date: _____

Producing Formation: _____

Zone	Comp. Date	Date Abandon

Treatment History: (Current Zone)

13 3/4" OD 48 # Grade K-55

Set @ 620' w/ 525 sxs

Top of Cmt @ Surface by:

Cmt circulated

DV tool @ 1197' w/ 1150 sxs

343 jts 2 3/4" CS H₂ drill
w/ Baker Model 3 Snap-
latch Seal nipple.

2 3/4" EUE 8 1/2" N-80 x 60.

9 5/8" 40" K-55

set @ 4507' w/ 800 sxs

Producing History:

Baker Model A-5 Dual Hydraulic
PKR @ 11,052' approx.

Formation: _____

11,102'-20' Atokc

Month or Year	Oil	Wtr	Gas

Baker Loc-Set PKR @ 11,530'

approx. Last Test Dated: _____

11,567'-69'

11,572'-94'

11,608'-20'

11,623'-30'

11,664'-71'

11,732'-25'

PRTO 11,796' w/ 55 sxs

7" OD 26 23/4" Grade N-20, K-55

Set @ 12145' w/ 700 sxs

Top of Cmt @ 7960 by TS

Remarks and Recommendation:

50 sxs CIH @ 12,700'

Prepared By: G.W.H.Date: 4-12-77

DRAFT

dr/

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. 6019

Order No. R- 5526

APPLICATION OF GULF OIL CORPORATION
FOR A DUAL COMPLETION, EDDY
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on
August 31, 1977, at Santa Fe, New Mexico, before
Examiner Daniel S. Nutter.

NOW, on this day of September, 1977, 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, Gulf Oil Corporation,
seeks authority to complete its Littlefield "EM" Federal Com
Well No. 1, located in Unit J of Section 20, Township
18 South East
 Range 31 NMPM, Eddy County, New
Mexico, as a dual completion (conventional) xxx
(tubingless) (combination) to produce gas

from ~~the~~ undesigned Atoka and Morrow gas pools through
parallel strings of 2 3/8-inch tubing, separation
of the zones to be achieved by means of
a packer set at approximately 11,510 feet.

(3) That the mechanics of the proposed dual completion
are feasible and in accord with good conservation practices.

(4) That approval of the subject application will prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Gulf Oil Corporation,
is hereby authorized to complete its Littlefield "EM" Federal Com
Well No. 1, located in Unit J of Section 20, Township
18 ~~North~~ ^{South} Range 31 ~~West~~ ^{East} NMPM, Eddy County, New

Mexico, as a dual completion ^(conventional) ~~(combination)~~ to produce gas ~~(tubingless)~~

from ~~the~~ undesigned Atoka and Morrow gas pools ^{through 2 3/8}
inch tubing, with a packer set at approximately
11,510 feet.

PROVIDED HOWEVER, that the applicant shall complete, operate,
and produce said well in accordance with the provisions of Rule
112-A of the Commission Rules and Regulations insofar as said rule
is not inconsistent with this order;

PROVIDED FURTHER, that the applicant shall take packer-leakage
tests upon completion and annually thereafter during the Annual
Shut-in Pressure
Gas-Oil Ratio Test Period for the Morrow zone. ~~pool~~
Deliverability

(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.

