

Case No.

461

Application, Transcript,
Small Exhibits, Etc.

RECEIVED
JAN 16 1953

BEFORE THE
OIL CONSERVATION COMMISSION
STATE OF NEW MEXICO

CASE 4601

Cities Service dual completion of State 3-2 well, SW NW 15-21S-37E, Drinkard Pool, to produce oil from Drinkard, gas from Elmore.

CASE 4611

Cities Service dual completion of State 3-2 well, SE NW 15-21S-37E, Drinkard Pool, to produce oil from Drinkard, gas from Tubb formation.

TRANSCRIPT OF HEARING

December 16, 1952

BEFORE: Hon. Ed. Macken, Governor and Chairman
Hon. Guy Shepard, Land Commissioner and Member
Hon. R. H. Spurrier, Director and Member

STATE OF NEW MEXICO

COUNTY OF BERNALILLO

I HEREBY CERTIFY That the within transcript of hearing in the above styled case before the Oil Conservation Commission of the State of New Mexico is a true record of the same to the best of my knowledge, skill and ability.

DONE at Albuquerque, New Mexico, December 20, 1952.

E. E. Gresson
E. E. Gresson
Reporter

(Mr. Graham reads the notice of publication.)

MR. SPURRIER: Also, Case 461, I presume, Mr.

Adams?

MR. ADAMS: Yes, sir.

6

(Mr. Graham reads the notice of publication in
Case 461.)

MR. ADAMS: My name is R. E. Adams with the Cities
Service Oil Company.

I would like to request that the application we
filed in this case be made a part of the transcript of this
record.

MR. SPURRIER: Without objection, it will be done.
Is there any other objection to Mr. Adams' proposal?

H. E. MASSEY,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. ADAMS:

Q Mr. Massey, you are familiar with the application
that was filed in this case?

A I am.

MR. ADAMS: I forgot to qualify Mr. Massey.

Q You are division engineer for the Cities Service
Oil Company?

A I am.

Q And the State S lease is under your jurisdiction and in the Hobbs area, isn't it?

A That is correct.

Q Under your supervision. You are familiar with the application which you have filed in this case to dual complete the State S No. 1 well?

A I am.

Q And the allegations made in that application, are they true, to your knowledge, and correct?

A They are with one exception. In the application to dually complete the State S No. 1 well between the Drinkard and the Blinebry, the application in Item 1 reads that "Said well is currently producing as an oil well in the Drinkard formation from 6650 to 6669." That figure is a typographical error, and should read 6550 to 6669.

Q Is there an available market for gas that could be produced from this Blinebry formation?

A Yes. The market at the present time is in the process of being supplied.

MR. ADAMS: I think that's all we have.

MR. SPURRIER: Are there any questions of this witness? Any objections to these two proposed duals?

MR. ADAMS: We just concluded the one, Mr. Spurrier.

MR. SPURRIER: Just have the one so far. All right.

Q You are also familiar, Mr. Massey, with the applica-

tion Cities Service Oil Company has filed for the dual completion of the State S-2 Well?

A I am.

Q To the best of your knowledge and belief, are the allegations made in that application true and correct?

A They are.

Q Attached to the application is the plat of the location and the diagramatic sketch of the proposed installation?

A That's right.

Q And there is also a market available for that gas?

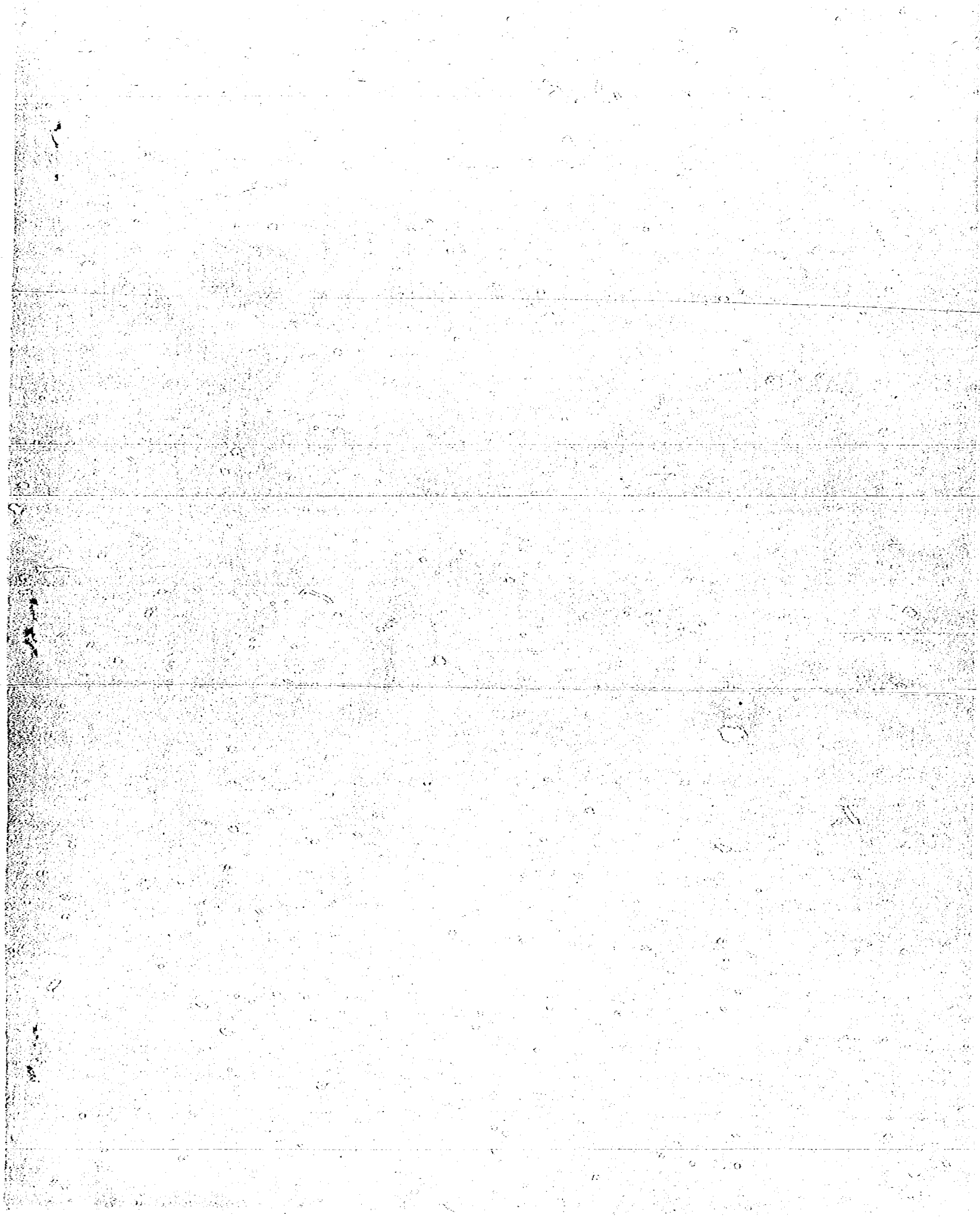
A That is correct.

MR. ADAMS: I think that's all.

MR. SPURRIER: Is there any question of this witness in this case? If not, the witness may be excused.

If there is no further comment, the case will be taken under advisement.

—o—





CITIES SERVICE OIL COMPANY

PRODUCERS - REFINERS - MARKETERS OF PETROLEUM PRODUCTS

BARTLESVILLE
OKLAHOMA

November 24, 1952

Re: Application to Dually Complete
Cities Service Oil Company's
State "S" No. 2 Well, Drinkard
Field, Lea County, New Mexico

Oil Conservation Commission
State of New Mexico
Santa Fe, New Mexico

Gentlemen:

By means of this application, Cities Service Oil Company wishes to state the following:

1. That Cities Service Oil Company's State "S" No. 2 well located in the SE/4 of the NW/4 of Section 15, T21S, R37E, Lea County, was completed July 7, 1948, at a total depth of 6676 feet. Five and one-half inch production casing was set at 6586 feet. That said well is currently producing as an oil well in the Drinkard formation from 6586 feet to a plugged back total depth of 6655 feet through open hole.
2. That attached Exhibit "A" shows the location of said well, other wells on the same lease, and the ownership and location of all the offset wells to Cities Service Oil Company's State "S" lease.
3. That applicant proposes to dually complete said well to produce oil from the Drinkard formation through the tubing and gas from the Tubb formation through the tubing-casing annulus in the following manner:
 - a. Perforate the 5 1/2-inch casing from 6060-6245 feet opposite the Tubb formation.
 - b. Set a production type packer below the casing perforations.That the manner and method of the proposed dual completion is shown on the attached diagrammatic sketch marked as Exhibit "B".
4. That an electric log of said State "S" Well No. 2 is attached hereto marked as Exhibit "C".
5. That the granting of this application for permission to produce the well as a dual completion with oil from the Drinkard formation and gas from the Tubb formation is in the interest of conservation and the protection of correlative rights.
6. That applicant will comply with all rules and regulations of the New Mexico Oil Conservation Commission to maintain separation of production from the two pay zones.
7. That the manner and method of the proposed dual completion is

Page 2 - Nov. 24, 1932

mechanically feasible and practical.

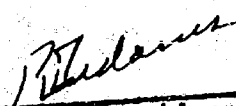
8. That copies of this application have been sent to the operators of all leases directly or diagonally offsetting the said State "S" lease of applicant.

Therefore, Cities Service Oil Company respectfully requests that the New Mexico Oil Conservation Commission set a certain day upon which this application may be heard, and after said hearing to grant permission in order that applicant may duly complete its State "S" Well No. 2 so that oil from the Drinkard formation may be produced through the tubing and gas from the Tubb formation through the casing-tubing annulus.

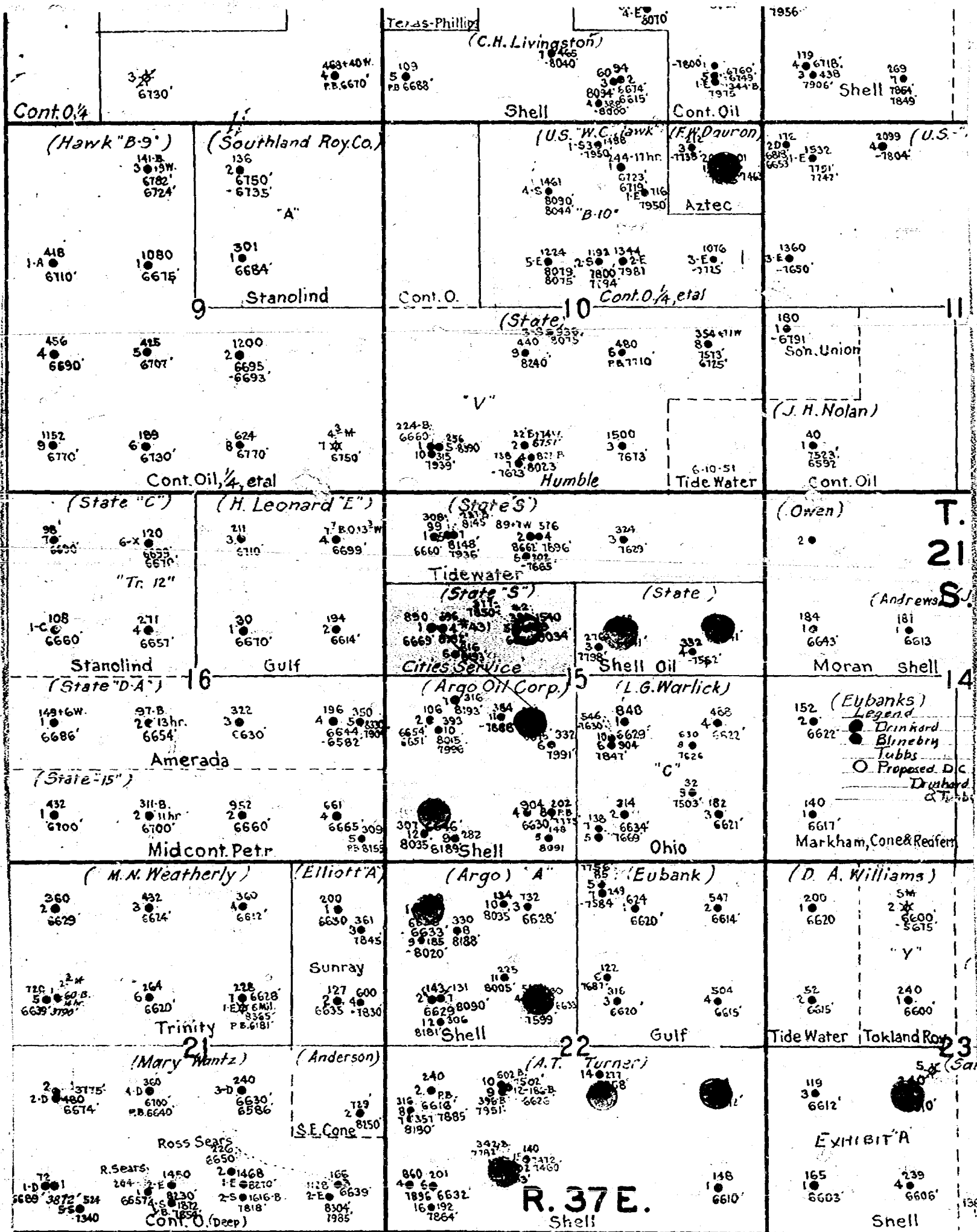
Respectfully submitted,

CITIES SERVICE OIL COMPANY

By


R. E. Adams
Proration Engineer

BBA:lk



DIAGRAMATIC SKETCH SHOWING PROPOSED DUAL
GAS-OIL COMPLETION

COMPANY: Cities Service Oil
WELL: State "S" No. 2
GAS ZONE: Tubb
OIL ZONE: Drinkard

Tubing set at 6650'
2" XUE to 6545'
2" Regular from 6540 to 6650'

NAME: Tubb
PRODUCTION: Gas

Top of Drinkard pay @ 6465'

NAME: Drinkard
PRODUCTION: Oil

PB Depth 6655'

Estimate top of cement behind
5 1/2" casing at 5900'

This zone to produce through casing
Perforate 6060' to 6245'

Otis side door choke set at 6540'

Baker Model D Production packer
set at 6545'

5 1/2" casing set at 6586'

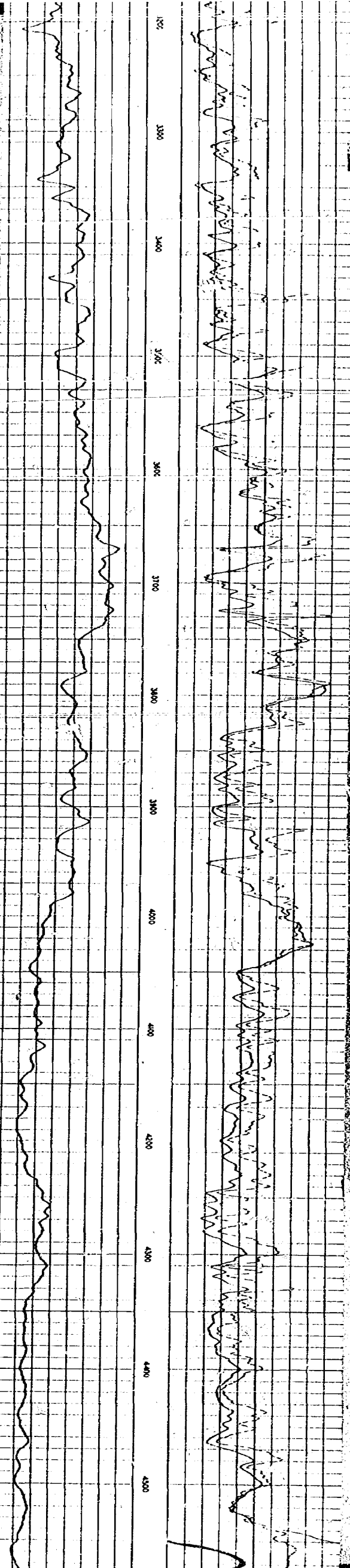
Will produce through tubing,
from open hole (6586' to 6655')

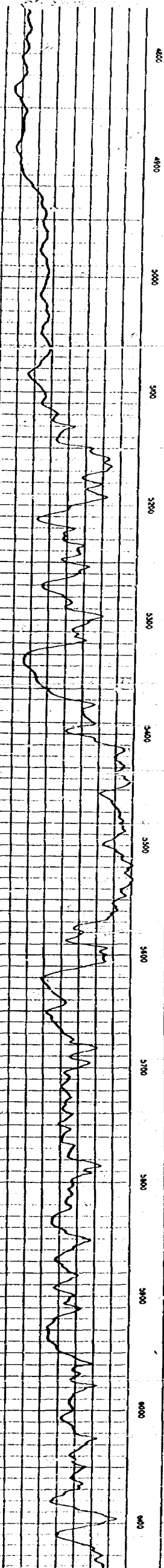
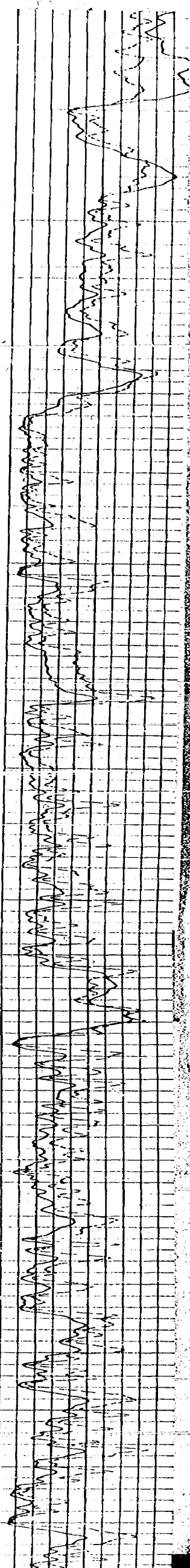
EXHIBIT "B"

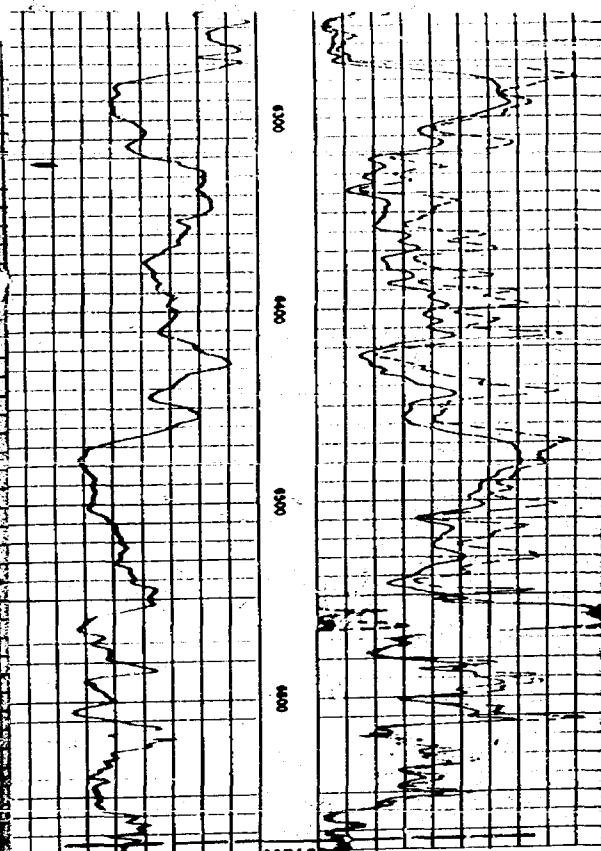
REPRODUCED BY
WEST TEXAS ELECTRICAL LOG SERVICE
 1305 Commerce Street
 Dallas 1, Texas

REFERENCE No. 563-E

S C H L U M B E R G E R					
Location of Well 1980' FMAFL Sec. 15-21S-37E Elevation K.B. D.F. 3045' or O.L.		COMPANY, CITIES SERVICE OIL COMPANY WELL STATE S. #2 RUN NO. 1 FIELD DRINKARD LOCATION SEC. 15-21S-37E COUNTY LEA STATE NEW MEXICO FILING No.		COUNTY LEA FIELD OR DEPT. DRINKARD LOCATION SEC. 15-21S-37E WELL STATE S. #2 COMPANY CITIES SERVICE OIL CO.	
RUN	I	Date	6-30-46		
First Reading	6574				
Last Reading	2790				
Footage Measured	3836				
Cog Shoe Schlus.	2120				
Cog Shoe Driller	2000				
Max. Depth Reached	6574				
Bottom Driller	R.T.				
Depth Datum	Caustic-Quaracho				
Fluid Nature	B.P.				
Density	1.0				
Viscosity	0.80 @ 84°F				
Maximum Temp.	7-7/8-6550				
Bit Size	7-7/8				
Spacings AM	16"				
AM	32" IS				
CA					
Observer	Decker				
Log Time	1 1/2 hrs.				
REMARKS					
SELF-POTENTIAL millivolts		DEPTH	RESISTIVITY ohms. m ² /m.		
$- \frac{12.5}{100} +$		0 200 400 600 800 1000 1200 1400 1600 1800 2000 2200 2400 2600 2800 3000 3200 3400 3600 3800 4000 4200 4400 4600 4800 5000 5200 5400 5600 5800 6000 6200 6400 6600 6800 7000 7200 7400 7600 7800 8000 8200 8400 8600 8800 9000 9200 9400 9600 9800 10000	NORMAL 0 200 200 400 LATERAL 0 Cog to 6550 150 0 6550 to 70 300		







6674EN.
6677TD.

CITIES SERVICE OIL CO
STATE "A" NO. 2
ORINKARD FIELD
LEA CO. N.M.

EXHIBIT "C"



CITIES SERVICE OIL COMPANY

PRODUCERS-REFINERS-MARKETERS OF PETROLEUM PRODUCTS

BARTLESVILLE
OKLAHOMA

November 24, 1952

Case 461

Oil Conservation Commission
State of New Mexico
Santa Fe, New Mexico

Re: Application to Dually Complete
Cities Service Oil Company's
State "S" No. 2 Well, Drinkard
Field, Lea County, New Mexico

Gentlemen:

By means of this application, Cities Service Oil Company wishes to state the following:

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 - b. Set a production type packer below the casing perforations.That the manner and method of the proposed dual completion is shown on the attached diagramatic sketch marked as Exhibit "B".
4. That an electric log of said State "S" Well No. 2 is attached hereto marked as Exhibit "C".
5. That the granting of this application for permission to produce the well as a dual completion with oil from the Drinkard formation and gas from the Tubb formation is in the interest of conservation and the protection of correlative rights.
6. That applicant will comply with all rules and regulations of the New Mexico Oil Conservation Commission to maintain separation of production from the two pay zones.
7. That the manner and method of the proposed dual completion is

Page 2 - Nov. 24, 1952

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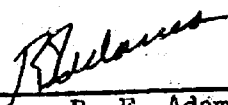
8. That copies of this application have been sent to the operators of all leases directly or diagonally offsetting the said State "S" lease of applicant.

Therefore, Cities Service Oil Company respectfully requests that the New Mexico Oil Conservation Commission set a certain day upon which this application may be heard, and after said hearing to grant permission in order that applicant may dually complete its State "S" Well No. 2 so that oil from the Drinkard formation may be produced through the tubing and gas from the Tubb formation through the casing-tubing annulus.

Respectfully submitted,

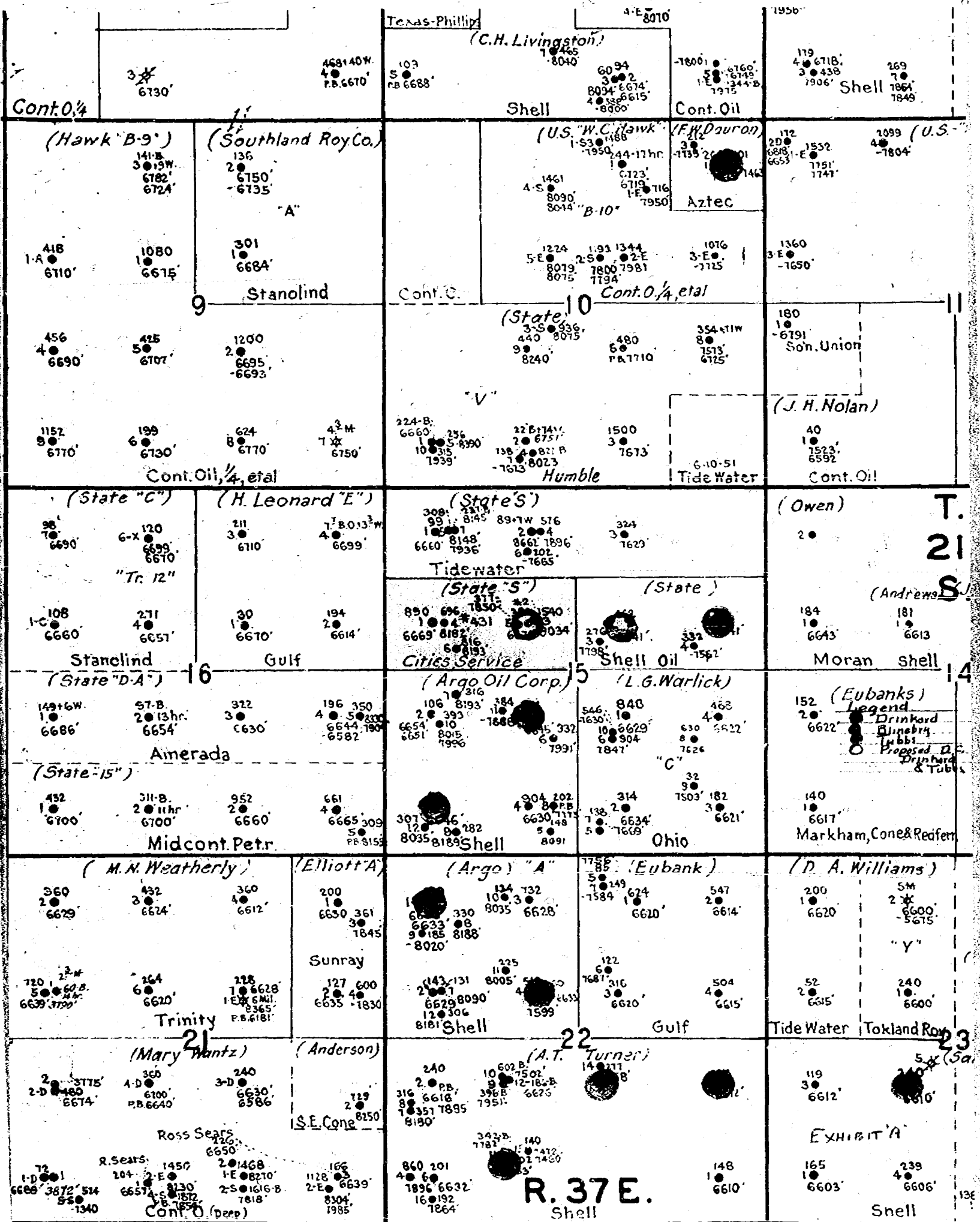
CITIES SERVICE OIL COMPANY

By



R. E. Adams
Proration Engineer

REA:lk



DIAGRAMATIC SKETCH SHOWING PROPOSED DUAL

GAS-OIL COMPLETION

COMPANY: Cities Service Oil
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 GAS ZONE: Tubb
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Tubing set at 6650'
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 2" Regular from 6540 to 6650'

NAME: Tubb
 PRODUCTION: Gas

Top of Drinkard pay @ 6465'

NAME: Drinkard
 PRODUCTION: Oil

PB Depth 6655'

Estimate top of cement behind
 5 1/2" casing at 5900'

This zone to produce through casing
 Perforate 6060' to 6245'

Otis side door choke set at 6540'

Baker Model D Production packer
 set at 6545'
 5 1/2" casing set at 6586'

Will produce through tubing,
 from open hole (6586' to 6655')

EXHIBIT "B"

REPRODUCED BY
WEST TEXAS ELECTRICAL LOG SERVICE
 1305 Commerce Street
 Dallas 1, Texas
 REFERENCE No. 563-E

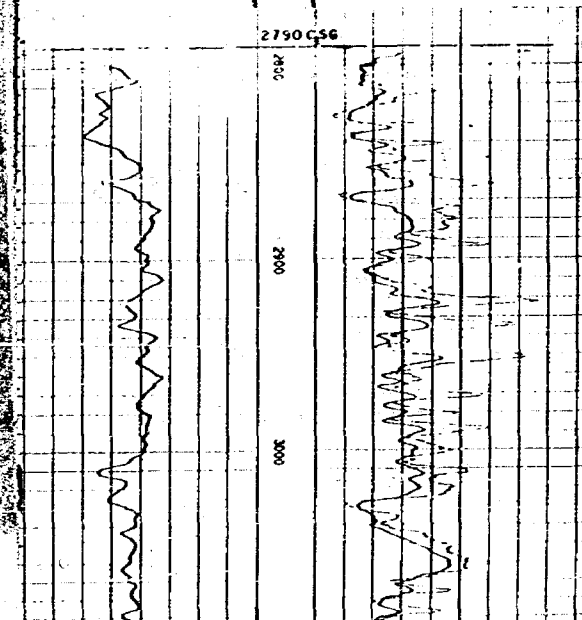
SCHLUMBERGER

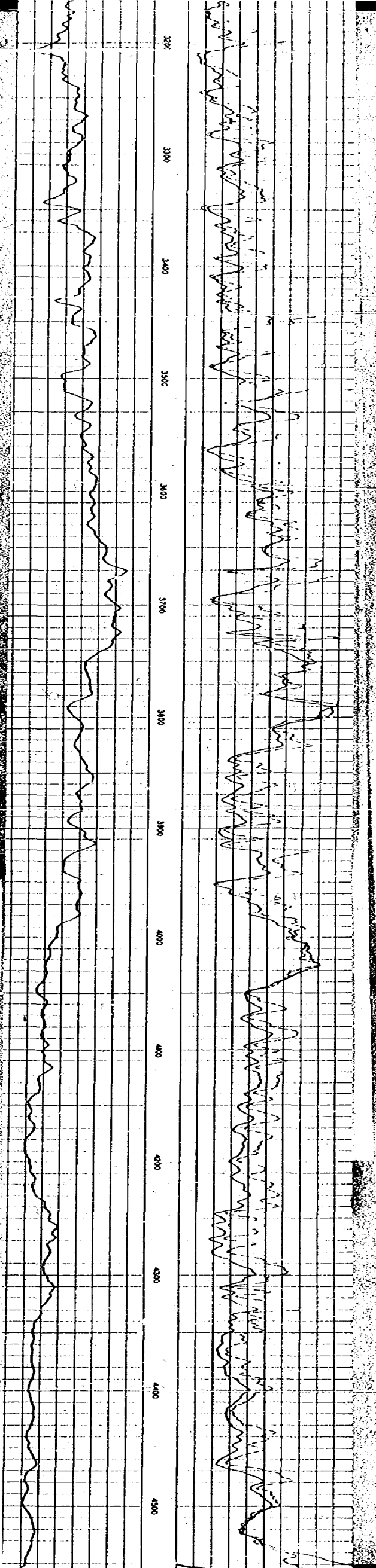
Location of Well 1980' FMSWL Sec. 15-21S-37E	COMPANY, <u>CITIES SERVICE OIL</u> WELL, <u>STATE S #2</u> RUN NO. <u>1</u> FIELD, <u>DEINKARD</u> LOCATION, SEC. 15-21S-37E COUNTY, <u>LEA</u> STATE, <u>NEW MEXICO</u> FRING No. _____	COUNTY, <u>LEA</u> FIELD OR DEINKARD LOCATION, SEC. 15-21S-37E WELL, STATE S #2 COMPANY, CITIES SERVICE OIL CO.
Elevation K.R. D.F. <u>3451</u> or O.L.		

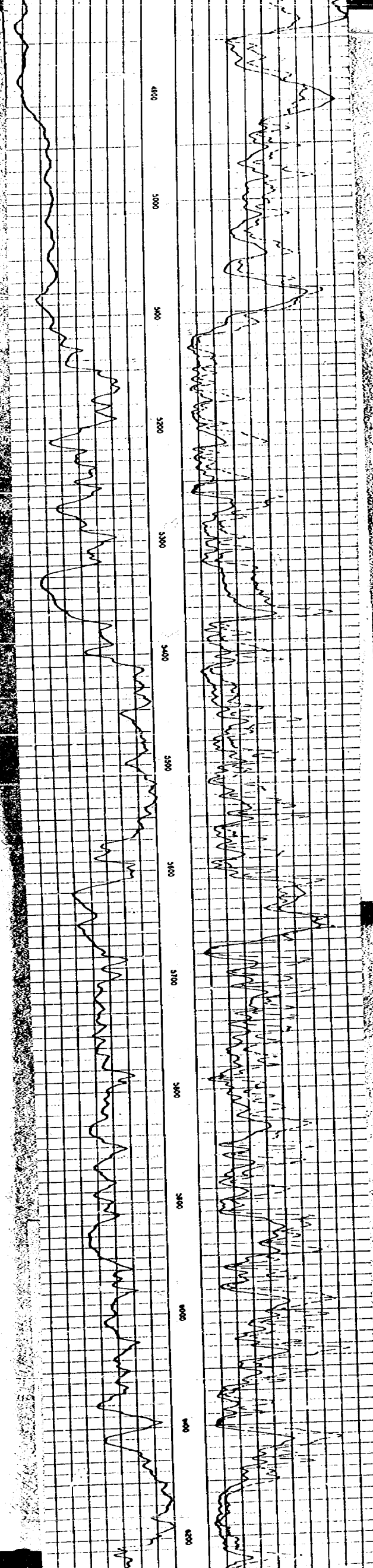
R/N	1				
Date	6-30-48				
First Reading	6674				
Last Reading	2780				
Footage Measured	3886				
Cog Shoe Schlum.	2780				
Cog Shoe Driller	2800				
Max. Depth Reached	6677				
Bottom Driller	6676				
Depth Driven	8.1				
Mud Nature	Calcic-Quartzite				
" Density	8.9				
" Viscosity	10				
" Resistivity	0.90 @ 84°F	@ °F	@ °F	@ °F	@ °F
Maximum Temp.	1-7/8-6550	2 3/8			
Dr. Size					
Spools AM	10"				
AM					
CA	2 3/8 LS				
Observer	Decker				
Log Time	1 1/2 hrs.				

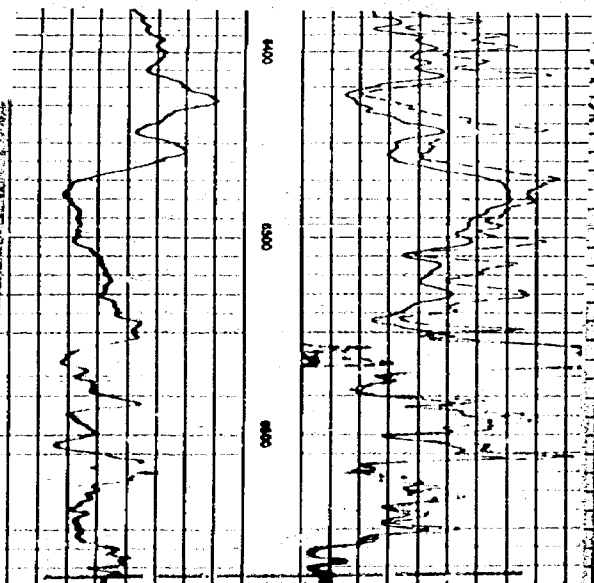
REMARKS

SELF-POTENTIAL millivolts	DEPTH feet	RESISTIVITY ohms. m.m.
-12.5 +1.4		NORMAL
		0 200
		200 100
		LATERAL
		0 Cog to 6550 150
		0 6550 to 70 300





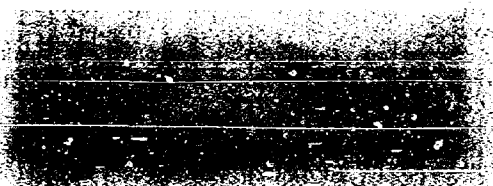




6674RN
6677ED

CITIES SERVICE OIL CO
STATE "B" NO.
CRINKARD FIELD
LEA CO. N.M.

EXHIBIT "C"



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. 461
ORDER NO. R-254

THE APPLICATION OF CITIES SERVICE
OIL COMPANY FOR AN ORDER GRANTING
PERMISSION TO DUALY COMPLETE AND
PRODUCE ITS STATE "S", WELL NO. 2,
LOCATED IN THE SE/4 NW/4 OF SECTION
15, TOWNSHIP 21 SOUTH, RANGE 37 EAST,
NMPM, LEA COUNTY, NEW MEXICO, IN
THE DRINKARD POOL.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on December 16, 1952, at Santa Fe, New Mexico, before the Oil Conservation Commission, hereinafter referred to as the "Commission".

NOW, on this 5th day of January, 1953, the Commission, a quorum being present, having considered the records and the testimony adduced, and being fully advised in the premises,

FINDS:

(1) That due notice having been given as required by law, the Commission has jurisdiction of the case and the persons and subject matter thereof.

(2) That Applicant's State "S", Well No. 2, SE/4 NW/4, Section 15, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, was completed in July, 1948, as an oil well producing from Drinkard formation in the open-hole interval 6586-6655, having drilled through the Tubb gas zone, 6060-6245.

(3) That although recent experiments tend to show that mechanical packers and other devices are ordinarily available for successful dual/multiple completions of oil - gas wells, the Commission is unconvinced of the soundness as a waste-prevention practice, of such dual/multiple completions as a general practice in New Mexico without specific controls over each such project.

IT IS THEREFORE ORDERED:

That the Applicant herein, Cities Service Oil Company, be, and it hereby is authorized to dually complete and produce its State "S", Well No. 2, SE/4 NW/4, Section 15, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, in such a manner that gas from the Tubb formation may be produced through the annular space between the casing and the tubing and oil from the Drinkard formation through the tubing by proper perforations and the installation of a proper packer or packers.

Case No. 461
Order No. R-254

PROVIDED, HOWEVER, That subject well shall be completed, and thereafter produced, in such a manner that there will be no commingling within the well bore, either within or outside the casing of gas, oil and gas, or oil produced from either or both of the separate strata, and,

PROVIDED FURTHER, That said subject well for dual completion and production shall be equipped in such a way that reservoir pressures may be determined separately for each of the two specified strata, and further, be equipped with all necessary connections required to permit recording meters to be installed and used, at any time, as may be required by the Commission or its representatives, in order that natural gas, oil or oil and gas from each separate stratum may be accurately measured and the gas-oil ratio thereof determined, and,

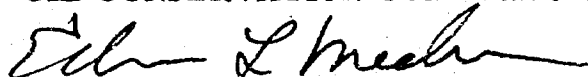
PROVIDED FURTHER, That the operator applicant shall make any and all tests, including segregation tests, but not excluding other tests and/or determinations at any convenient time and in such manner as deemed necessary by the Commission; the original and all subsequent tests shall be witnessed by representatives of the Commission and by representatives of offset operators, if any there be, at their election, and the results of each test properly attested to by the applicant herein and all witnesses, and shall be filed with the Commission within ten (10) days after the completion of such test, and,

PROVIDED FURTHER, That upon the actual dual completion of such subject well, applicant shall submit to the Commission a diagrammatic sketch of the mechanical installation which was actually used to complete and produce the seal between the strata, and a special report of production, gas/oil ratio and reservoir pressure determination of each producing zone or stratum immediately following completion.


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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


EDWIN L. MECHEM, Chairman


E. S. WALKER, Member


R. R. SPURRIER, Secretary

S E A L