

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

October 30, 1959

Mr. Jack Campbell
Box 721
Roswell, New Mexico

Dear Mr. Campbell:

On behalf of your client, Southwestern Hydrocarbon Company, we enclose two copies of Order No. R-1517 in Case 1763, issued by the Oil Conservation Commission effective this date.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ir

Enclosures: (2)

*Copy to Hobbs
& Howard Bratton*

C
O
P
Y

October 22, 1959

Mr. W. M. Stanley
District Landman
Union Oil Company of California
P. O. Box 6738
Roswell, New Mexico.

Re: OP90 - Southwestern Hydrocarbon Company
Boundary Prospect
Lea County, New Mexico

Dear Sir:

Reference is made to our letter of September 18, 1959, concerning the above mentioned operating agreement.

Testimony for Southwestern Hydrocarbon Company's application concerning the Sawyer Area of Lea County, New Mexico was presented to the New Mexico Oil Conservation Commission in an examiner's hearing at Santa Fe on September 30. On October 20, Mr. D. S. Nutter, examining engineer for said Commission, was consulted as to whether this regulatory body has made a decision on this case. Mr. Nutter indicated that the Conservation Commission presently is reviewing this case; however, because of its nature, no immediate decision can be expected. He further indicated that the Commission was more than 30 days behind in publishing their orders. Mr. Nutter is aware that Southwestern Hydrocarbon Company is operating on an extension to November 1, 1959, granted by Union Oil Company in its letter to Southwestern Hydrocarbon Company, dated September 22, 1959.

In view of the above information, we request that Union Oil Company of California grant our company an extension from November 1, to that date at which both of our companies receive copies of the published order, plus 15 days, but not to exceed 90 days from November 1, 1959, to commence the next well on the above captioned farmout. This will allow our company sufficient time to take care of the necessary work in staking the location for the next well.

Very truly yours,

JAS:B
cc: D. S. Nutter, OCC
B. S. Guthrie
Lonnie Kemper

SOUTHWESTERN HYDROCARBON COMPANY
By J. A. Sheldon
J. A. Sheldon

KELLER AND PETERSON

PETROLEUM CONSULTANTS

*Petroleum and Geological Engineering Property Appraisals
Reserve Estimates Reservoir Analysis*W. T. WAGGONER BUILDING
FORT WORTH, TEXAS

October 2, 1959

Mr. D. S. Nutter, Chief Engineer
New Mexico Oil Conservation Commission
107 Mabry Hall, Capitol Building
Santa Fe, New Mexico

Dear Mr. Nutter:

Reference is to your request made at the hearing in Santa Fe on September 30, 1959, in regard to the Sawyer and South Sawyer hearing. You will recall that you requested a copy of the Texas Railroad Commission rules governing San Andres gas wells drilled in the Levelland Field area located east of the Sawyer area and adjacent to the Buckshot Field area in Texas. Levelland Field Rule No. 8 and State-Wide Rule No. 6-B govern this situation. A copy of each of these rules is enclosed as per your request.

If there are any further questions in this regard, please do not hesitate to call me.

Yours very truly,

KELLER AND PETERSON

By 
W. O. Keller

WOKfr

Enclosures

cc: Mr. C. A. Powell
Alamo Corporation
Lubbock, Texas

Mr. Howard Bratten
Hinkle Building
Roswell, New Mexico

(LEVELLAND SAN ANDRES UNIT (SECONDARY RECOVERY)—Cont'd)

hours and for such additional time up to twenty-four (24) consecutive hours as will permit the well being tested, if it is capable of so doing, to produce a volume of oil equivalent to the allowable to which it is entitled under the applicable rules of the Commission. The oil produced during whatever period the well is tested shall be converted to a twenty-four (24) hour basis by multiplying such production during such period by the required factor.

RULE 8. (As Amended by Order No. 8-34,408, Effective October 10, 1956, Order No. 8-37,458, Effective January 21, 1958, and Order No. 8-39,633, Effective January 1, 1959.) A gas well in the area hereinafter described producing from the same reservoir as oil wells shall be allowed to produce monthly that number of cubic feet of gas which, without this rule, are permitted to be produced from such gas well from 42.5 acres under Statewide Rule 6(b); provided, however, that where the acreage assigned by the operator to such gas well is less than or exceeds 42.5 acres, such gas allowable shall be decreased or increased, as the case may be, by multiplying the same by a fraction, the numerator of which is the amount of such assigned acreage and the denominator of which is 42.5. Acreage assigned to an oil proration unit shall not be assigned to a gas well producing from the same reservoir. No acreage can be assigned to a gas well in excess of 708 acres plus a tolerance of 10% thereof, and any so assigned shall consist of acreage which can reasonably be considered to be productive of gas. Acreage assigned to a gas well shall constitute a gas proration unit which shall not be in length more than twice its width and shall be rectangular in shape; provided, however, that in cases of long and narrow leases or where

leases are of such geometric design that it is impossible to comply with the provisions hereof, the Commission may, after proper showing, grant exceptions to the limitations as to the shape of such gas proration units. The provisions of this rule shall be effective only with respect to the following described area lying in the Levelland Field in Cochran County, Texas: That portion of said field lying west of the East Line of the Potter County School Land Surveys and west of the East Line of the Harrison and Brown Survey, Cochran County, Texas, that portion of said field is embraced in Labors 7, 8, 9, 10, 11, 12, 25, 26, and 27 Mills County School Land, A-91, and Labors 8 and 9 Mills County School Land, A-93, and that portion of said field that adjoins on the east the area heretofore described, which is further delineated on the south as the South Line of League 95, Mills County School Land, A-91, on the east as the East Lines of Labors 5, 14, and 23 in Leagues 95, 96, and 97, and Labors 23, 14, 56, and 47, League 98, Mills and Brewster County School Lands A-84, 82, 90, and 91, and on the north as the North Line of League 98, Brewster County School Land, A-84, Cochran County, Texas.

IT IS FURTHER ORDERED That the provisions of this Special Order take precedence over and supersede the provisions of Special Order No. 8-9617, effective October 1, 1946, and Special Orders No. 8-10,707, effective May 19, 1947, No. 8-11,594, effective December 1, 1947, and No. 8-12,141, effective March 22, 1948, amending such order, adopting operating rules for the Levelland Field, Hockley County, Texas, and other prior orders, if any, relating to operating rules for said field; and any and all such orders are hereby rescinded.

IT IS FURTHER ORDERED That this cause be held open on the docket for such other and further orders as may be necessary.

(CONSERVATION RULES—Cont'd)

to the provision of Chapter 100 of the Acts of the Forty-third Legislature of Texas, Regular Session, 1933, usually referred to as Senate Bill No. 92, amending Article 6008, Revised Statutes, 1925.

RULE 4. APPROVED METHODS OF PREVENTING WASTE TO BE USED.—Any person, corporation, company or group of individuals drilling for or producing crude oil or natural gas, or piping oil or gas for any purpose, shall use every possible precaution in accordance with the most approved methods to stop and prevent waste of oil or gas, or both, in drilling and producing operations, storage, or in piping or distributing, the same shall not wastefully utilize oil or gas, or allow same to leak or escape from natural reservoirs, wells, tanks, containers, or pipe lines.

RULE 5. "COMMERCIAL QUANTITIES" DEFINED.—Any gas stratum showing a well-defined gas formation and producing gas shall be considered capable of producing gas in commercial quantities, and any gas coming from such a gas stratum or formation shall be considered a commercial quantity, and such stratum or formation shall be protected the same as under Rule 3.

RULE 6. (Effective December 15, 1933, as Amended by Order No. 20-3,708, Effective June 14, 1942, and Order No. 20-6,839, Effective October 20, 1944.)

(a) Any oil well producing with a gas-oil ratio in excess of two thousand (2,000) cubic feet of gas per barrel of oil produced shall be allowed to produce daily only that volume of gas obtained by multiplying its daily oil allowable, as determined by the allocation formula applicable to said well, by two thousand (2,000) cubic feet. The gas volume thus obtained shall be known as the daily gas limit of such well. The daily oil allowable of such well shall then be determined by dividing its daily gas limit, obtained as herein provided, by its producing gas-oil ratio in cubic feet per barrel of oil produced.

RULE 6(b). (As Added by Order No. 20-6,839, Effective October 20, 1944, and Amended by Order No. 20-22,428, Effective December 12, 1951.) Any gas well producing from the same reservoir in which oil wells are completed and producing shall be allowed to produce daily only that amount of gas which is volumetric equivalent in reservoir displacement of the gas and oil produced from that oil well in the reservoir which withdraws the maximum amount of gas in the production of its daily oil allowable.

The following formula shall be used in the determination of the allowable of a gas well producing with a gas-oil ratio of 100,000 or more under the provisions of this rule:

$$Q = A(r_1 - r_2 + \frac{199.3 PrB}{TrZ})$$

Where:

Q = Gas well allowable, cubic feet per day @ 14.65 PSIA and 60°F.

A = Top oil well allowable, barrels per day at 60°F.

r₁ = Permissible gas-oil ratio applicable to reservoir, cubic feet @ 14.65 PSIA and 60°F per barrel @ 60°F.

r₂ = Cubic feet of gas dissolved in one (1) barrel of oil at average reservoir conditions, cubic feet @ 14.65 PSIA and 60°F per barrel @ 60°F.

Pr = Average reservoir pressure at gas-oil contact, PSIA.

Tr = Average reservoir temperature at gas-oil contact, degrees Rankine.

B = Formation Volume factor of reservoir oil at average reservoir conditions, dimensionless.

Z = Deviation factor of gas from ideal gas laws at average reservoir pressure and temperature, dimensionless.

The following formula shall be used in the determination of the allowable of a gas well producing with a gas-oil ratio of less than 100,000 under the provisions of this rule:

$$Q = \frac{A(r_1 - r_2 + \frac{199.3 PrB}{TrZ})}{1 - \frac{r_1}{r_2} + \frac{199.3 PrB}{r_2 TrZ}}$$

Where r₁ = Gas-oil ratio of gas well, cubic feet @ 14.65 PSIA and 60°F per barrel @ 60°F. Other symbols are as above.

The necessary reservoir data shall be obtained from the most recent MER hearing file or estimated by the Commission's Engineering Department unless more recent information is submitted by the operators.

IT IS FURTHER PROVIDED, HOWEVER, That where gas produced from an oil reservoir in a field is returned to the same reservoir from which it was produced, only the volume of gas not returned to the reservoir shall be considered in applying the above rule.

(Unnumbered Order Amending Statewide Rule 6-B, Effective May 25, 1954.)

MEMORANDUM TO ALL OPERATORS IN RESERVOIRS HAVING NET GAS-OIL RATIO RULES.

This is to advise that effective June 1, 1954, Statewide Rule 6-B will not be applied to associated gas wells in reservoirs for which a net gas-oil ratio rule has been adopted for oil wells with net gas defined as total gas produced less gas diverted to legal uses. This does not apply where net gas is defined as total gas produced less gas returned to the reservoir or where special field rules have been adopted for associated gas wells.

Associated gas wells in this category will be dropped from the Associated Gas Well Schedule the next time it is revised. The allowables of all such wells will no longer apply after June 1, 1954, however.

ERNEST O. THOMPSON,
Chairman
W. A. MURRAY, JR.,
Commissioner

RULE 7. COMMISSION WILL REGULATE THE TAKING OF NATURAL GAS.—The Railroad Commission of Texas will, as occasion arises, prescribe rules and regulations for the determination of the natural flow of any well or wells in this State, and will regulate the taking of natural gas from any and all sources of supply within the State so as to prevent waste and protect the interests of the public and of all those having a right to produce therefrom in so far as it may lawfully do so.

RULE 8. GAS TO BE MEASURED. (As Amended by Order No. 20-1,035, Effective October 26, 1939, Order No. 20-23,342, Effective April 7, 1952, and Order No. 20-24,164, Effective August 1, 1952.)

a. All natural gas produced from wells completed in gas reservoirs shall be accounted for by measurement, and the producer shall report the volume produced to the Commission.

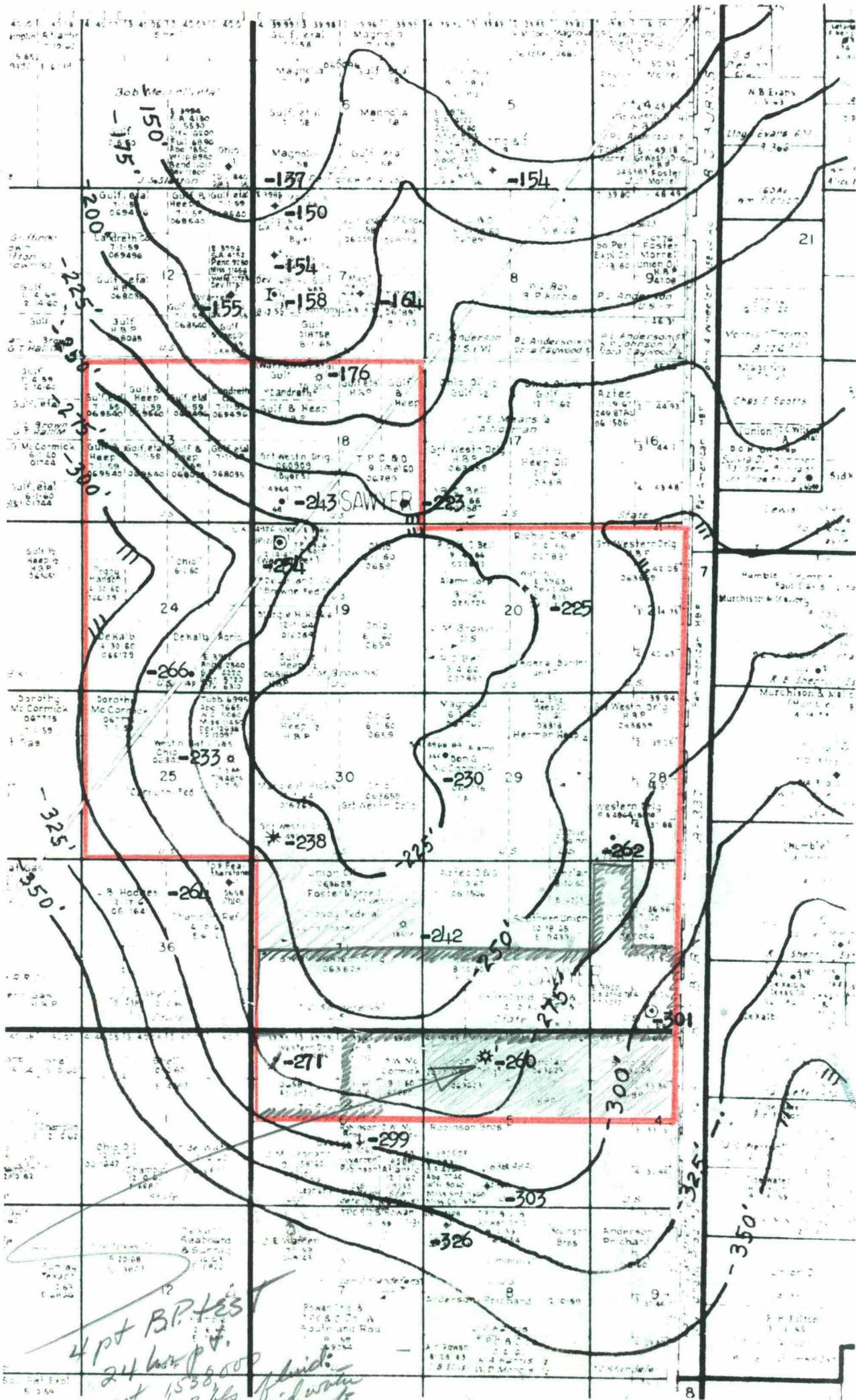
b. All natural gas produced from wells completed in an oil reservoir but not listed on the oil proration schedule shall be accounted for by measurement, and the producer shall report the volume produced to the Commission.

c. All natural gas produced from oil wells and sold, processed for its gasoline content, used in a field other than that in which it is produced, or used in recycling or repressuring operations, shall be accounted for by measurement, and the producer shall report the volume produced to the Commission.

d. All natural gas produced from oil wells in this State which is not covered by the provisions of 8-c above, shall be accounted for by measurement or an accurate estimate based on its use or periodic test, and reported to the Commission by the producer. The volume of gas produced by wells exempt from gas-oil ratio surveys may be estimated based on general knowledge of the characteristics of the wells without the use of periodic test data. It is further provided that it shall not be necessary for a producer to report any natural gas produced from a marginal well that is exempt from gas-oil ratio survey, if such gas is not sold or utilized off the lease.

e. Exceptions to this order shall be granted only upon written application and proper showing to the Commission.

A record of all measurements or estimates required by this rule shall be maintained for not less than two (2) years in a permanent file and made available to the Commission representatives at all reasonable times. Where settlement or payment for gas is based on measurement made by a plant, a purchaser, or other person taking the gas, the producer may use the volumes determined by such measurement in making this report. The



STRUCTURE MAP

CONTOURS ON TOP OF THE SAN ANDRES FM.

BEFORE EXAMINER NUTC. 1.: 25 FT.

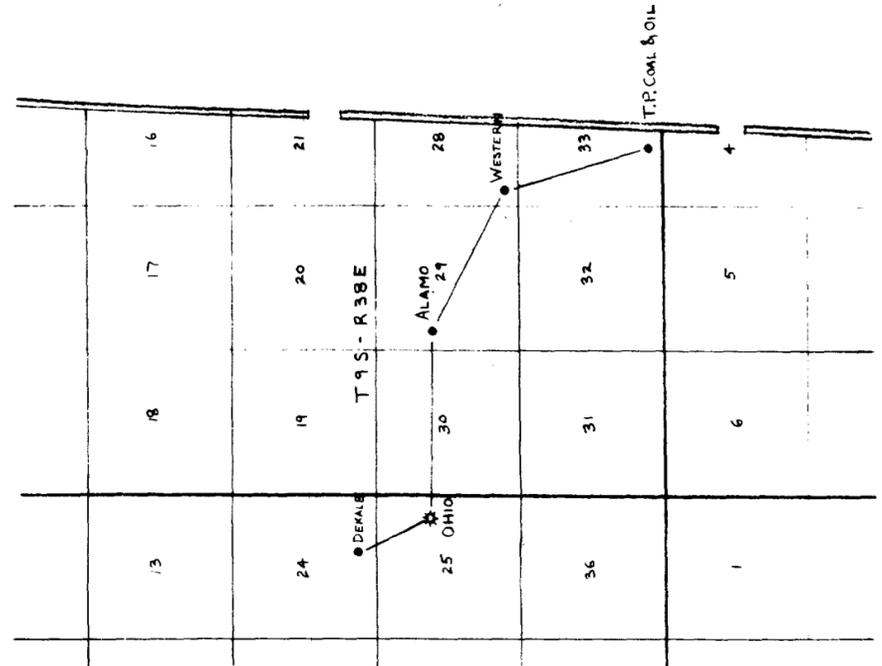
SEPT. 1, 1959

OIL CONSERVATION COMMISSION

BY: J. A. SHELDON

Southwestern EXHIBIT NO. 1

CASE NO. 1763



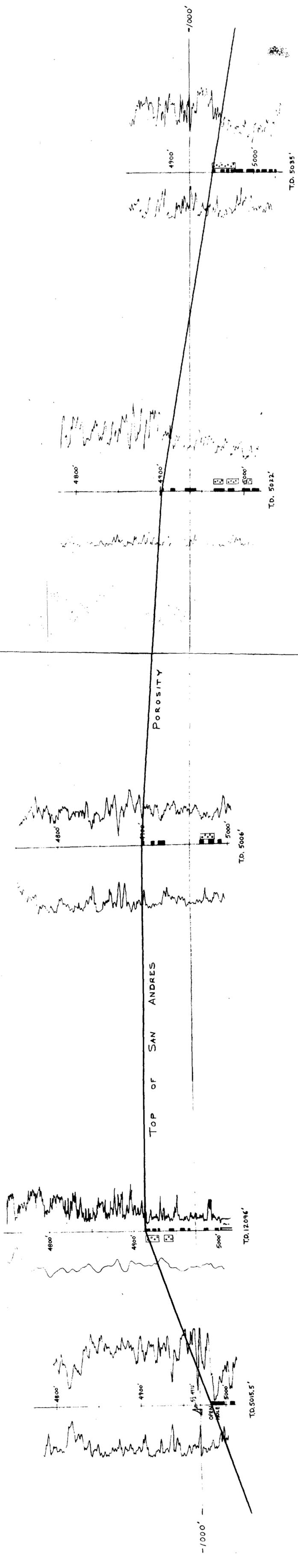
T.P. COAL & OIL No. 1 FED.

WESTERN No. 1 GREATWESTERN-FED.

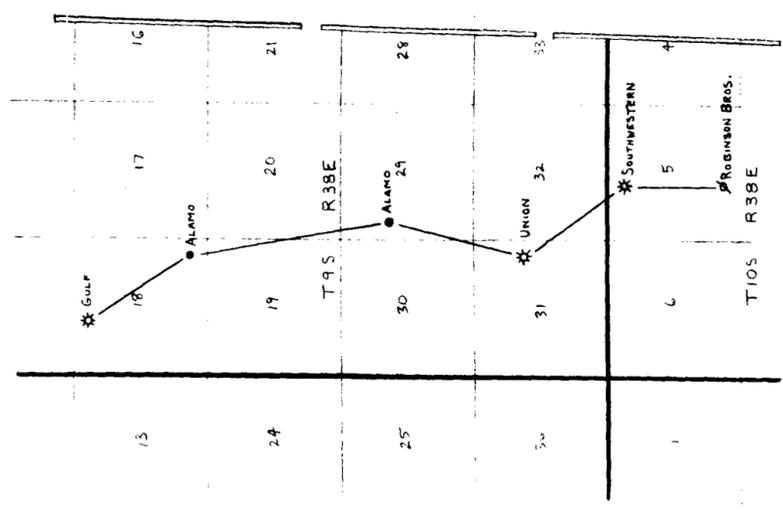
ALAMO No. 1 MCCORMICK-FED.

OHIO No. 1 CARRUTH-FED.

DEKALB No. 1 OHIO-FED.



POROSITY: [Symbol]



Porosity :

Robinson Bros. No. 1 Union - Fed.

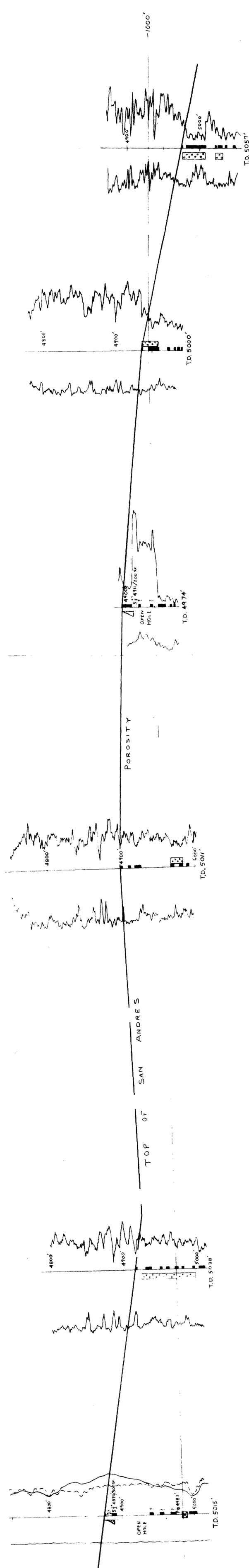
Southwestern Hydrocarbon Co.
No. 1 Union - Fed.

Union No. 1 Crosby - Fed.

Alamo No. 1 McCormick - Fed.

Alamo No. 1 Brown - Fed.

Gulf No. 1 Landreth - Fed.



-1000'

SOUTHWESTERN HYDROCARBON COMPANY

P. O. Box 578

ROSWELL, NEW MEXICO

SAWYER AREA, LEA COUNTY, N. M.

CASE NO. 1763

EXHIBIT NO. _____

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

Southwestern EXHIBIT NO. 2

CASE NO. 1763

SINCLAIR OIL & GAS COMPANY

SINCLAIR OIL BUILDING

TULSA 25, OKLAHOMA

August 12, 1959



GAS AND GAS PRODUCTS DEPARTMENT

PAUL T. DAVIS, JR.
V.P. & GENERAL MANAGER

Southwest Hydrocarbon Company
P. O. Box 578
Roswell, New Mexico

Re: Lots 1 and 2,
Section 4 and S/2 NE/4
Section 5-10S-38E,
Lea County, New Mexico.

Gentlemen:

By letter dated July 28, 1959, we directed a letter to the attention of Mr. Paul N. Belmont, P. O. Box 530, Corsicana, Texas, advising your Company that we would appreciate being considered a prospective purchaser of gas produced from your well located in the NW/4 of Section 5-10S-38E, Lea County, New Mexico. We now have been furnished with the open flow potential on your well in the NW/4 of Section 5-10S-38E, Lea County, New Mexico and will greatly appreciate your furnishing us with the correct legal description and ownership of the lands upon which your Union-Federal Well #1 is located.

We have now been advised of the farmout by our Company of the acreage described in the lure to this letter to your Company. Please be advised that promptly upon completion of wells drilled on this acreage, and the determination of the availability of commercial quantities of gas for sale, that we will provide marketing facilities for such gas.

Sincerely yours,


P. T. Davis

GAC:eh

ILLEGIBLE

SINCLAIR OIL & GAS COMPANY



MIDLAND, TEXAS

August 5, 1959

W. T. MILLER
V. L. BRADY
J. H. HARRIS
R. L. HARRIS
J. H. HARRIS

Mr. John A. Shelton
Southwestern Hydrocarbon Company
P. O. Box 578
Roswell, New Mexico

Re: Southwestern Hydrocarbon Co. -
Union-Federal, Well No. 1,
Section 5-10S-38E,
Lea County, New Mexico

Dear Sir:

As discussed in our telephone conversation, we are attaching three copies of Multi-Point Back Pressure Test dated July 23-27, 1959, for your Union-Federal, Well No. 1. This Test was run by our Gas Analyst, Mr. W. R. Lord.

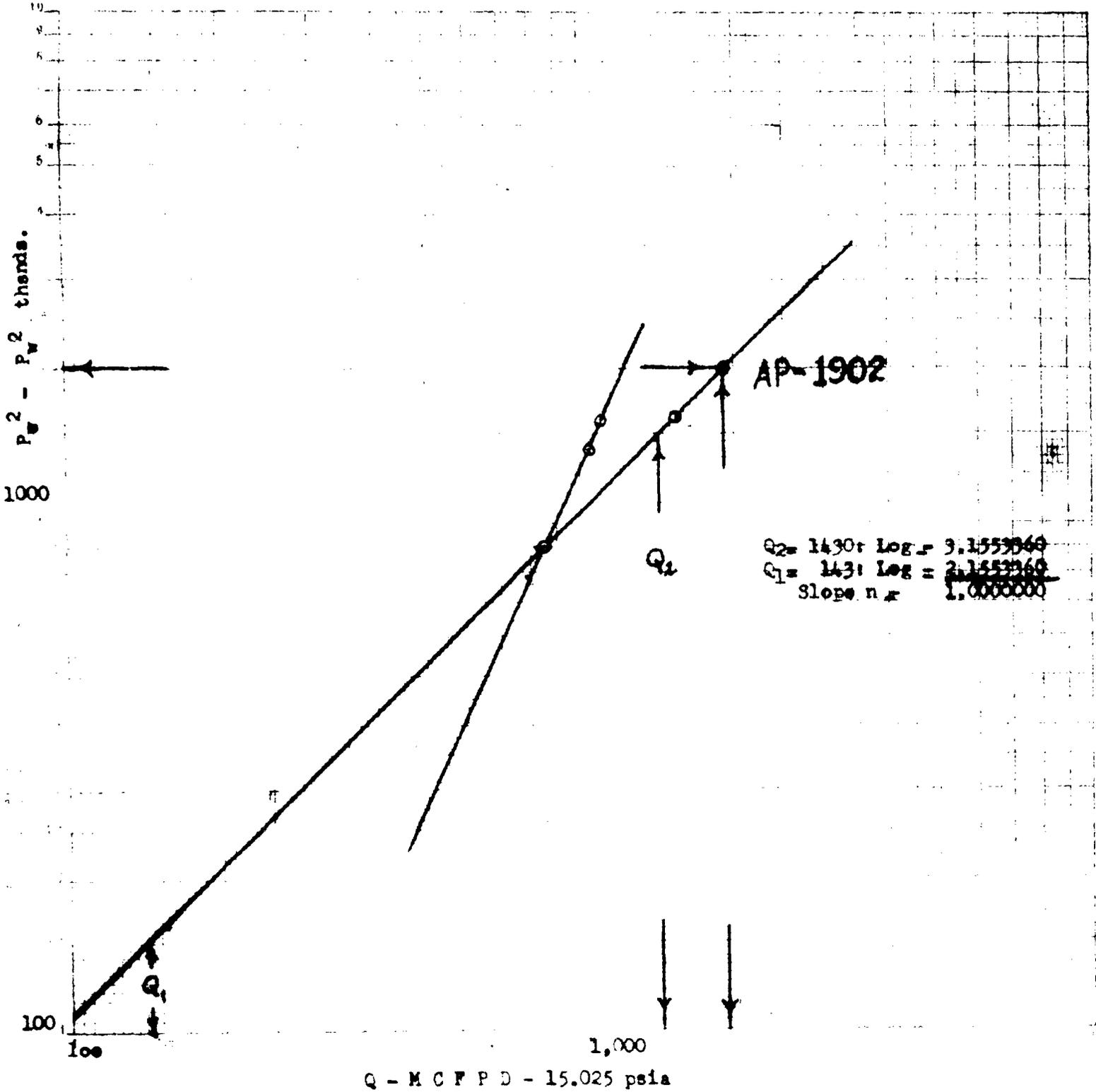
Very truly yours,

A handwritten signature in cursive script that reads "C. Wilbur Brady".

C. Wilbur Brady
Assistant Division Superintendent
Gas and Gas Products Department

CWE/fa

COMPANY Southwestern Hydrocarbon Co.
 WELL A Union-Federal
 LOCATION Unit C Sec. 5-108-38E
 COUNTY Lea
 DATE 7/23-27/59



NEW MEXICO OIL CONSERVATION COMMISSION

RECEIVED
JUL 30 1959
F. C. R. Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Wildcat Formation San Andres County Lea
 Initial X Annual _____ Special _____ Date of Test 7/23-27/59
 Company Southwestern Hydrocarbon Co. Lease Union-Federal Well No. 1
 Unit C Sec. 5 Twp. 10S Rge. 38E Purchaser None
 Casing 4 1/2 Wt. 11.6# I.D. 4.009 Set at 4999 Perf. 4936 To 4958
 Tubing 2 3/8 Wt. 4.7# I.D. 1.995 Set at 4975 Perf. 4941 To 4945
 Gas Pay: From 4936 To 4958 L 4941 xG .800 -GL 3952 Bar.Press. 13.2
 Producing Thru: Casing _____ Tubing X Type Well Single
 Date of Completion: 7-24-59 Packer Yes Single-Bradenhead-G. G. or G.O. Dual _____
 Reservoir Temp. ?

OBSERVED DATA

Tested Through: (Prover) ~~(Coke)~~ ~~(Mud)~~ Type Taps ---

No.	Flow Data			Tubing Data		Casing Data		Duration of Flow Hr.	
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.		Press. psig
SI						1104			70
1.	2"	3/16"	1,045		69	1,035	74		3
2.	2"	1/4"	755		71	755	74		3
3.	2"	1 1/2"	9.2		52	590	74		3
4.	2"	1 1/2"	18.9		42	561	80		24
5.									

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wp}}$	Pressure psia	Flow Temp. Factor Ft	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	.7851		1048.2	0.9915	0.8460	1.111	841.6
2.	1.020		768.2	0.9896	0.8460	1.119	1034
3.	54.3653		23.1	1.0178	0.8460	1.000	1096
4.	54.3653		23.1	1.0178	0.8460	1.000	1538
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl. Specific Gravity Separator Gas .800
 Gravity of Liquid Hydrocarbons _____ deg. Specific Gravity Flowing Fluid _____
 F_c 9.936 (1-e^{-s}) 0.238 P_c 1417.2 P_c² 2008.4

No.	F _w Ft (psia)	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-s})	P _w ²	P _c ² -P _w ²	Cal. P _w	P _w /P _c
1.	1048.2	1099	8.362	69.92	14.64	1115.4	893.0	1056.1	74.5
2.	768.2	590.1	10.27	105.47	25.16	515.2	1393.2	784.4	55.3
3.	633.2	400.9	10.89	118.59	28.22	429.2	1579.2	655.1	46.2
4.	574.2	329.7	15.28	233.48	55.57	385.3	1623.2	620.7	43.8
5.									

Absolute Potential: 1902 MCFPD; n 1.000 Used (See Notes)

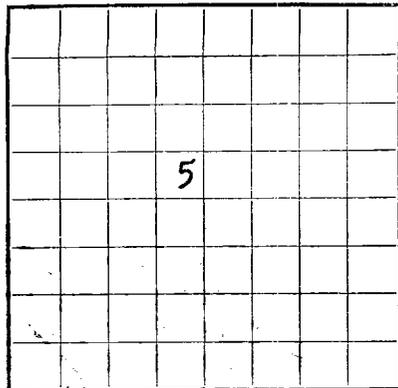
COMPANY Sinclair Oil & Gas Co.
 ADDRESS Mr. Fred Rogers
 AGENT and TITLE W.R. Lord Gas Analyst Box 2431 Hobbs New Mexico
 WITNESSED Mr. John A. Sheldon
 COMPANY Southwestern Hydrocarbon Co. P.O. Box 578 Roswell, New Mexico

REMARKS

H₂S Content - 432 Grains/100 Cu.Ft.
 GPM ----- .355
 Production -- Well Made Approx. 1bbl. Oil & Approx. 1bbl. Water
 n Slope ----- Points above 1,000 Therefore 45 Deg. drawn through 24 Hr. Point

ILLEGIBLE

U. S. LAND OFFICE
SERIAL NUMBER
LEASE OR PERMIT TO PROSPECT



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

LOCATE WELL CORRECTLY

Company Southwestern Hydrocarbon Co Address P.O. Box 578, Roswell, N.M.
Lessor or Tract Union-Federal Field Wildcat State New Mexico
Well No. 1 Sec. 4 T. 10S R. 38E Meridian NMPM County Lea
Location 552.9 ft. S. of N. Line and 1980. E. of W. Line of Section 5 Elevation 3945 ^{DF}
(Derrick floor relative to sea level)

The information given herewith is a complete and correct record of the well and all work done thereon so far as can be determined from all available records.

Signed J. A. Sheldon
Title Geological Consultant

Date 8-17-59

The summary on this page is for the condition of the well at above date.

Commenced drilling 6-28-59, 19..... Finished drilling 7-11-59, 19.....

OIL OR GAS SANDS OR ZONES
(Denote gas by G)

No. 1, from 4936 to 5000
No. 2, from to
No. 3, from to
No. 4, from to
No. 5, from to
No. 6, from to

IMPORTANT WATER SANDS

No. 1, from to
No. 2, from to
No. 3, from to
No. 4, from to

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated		Purpose
							From-	To-	
<u>8-5/8"</u>	<u>24</u>		<u>CF&I</u>	<u>371</u>	<u>Texas</u>				<u>Surface Oil String</u>
<u>4-1/2</u>	<u>11.6</u>		<u>CP&I</u>	<u>4999</u>	<u>Texas</u>		<u>4936</u>	<u>4958</u>	

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
<u>8-5/8"</u>	<u>371</u>	<u>208</u>	<u>circulated</u>		
<u>4-1/2</u>	<u>4999</u>	<u>200</u>	<u>Circulated-two stages</u>		

PLUGS AND ADAPTERS

Heaving plug—Material Length Depth set
Adapters—Material Size

SHOOTING RECORD

Size	Shell used	Explosive used	Quantity	Date	Depth shot	Depth cleaned out

TOOLS USED

Rotary tools were used from surface feet to 5000 feet, and from feet to feet
Cable tools were used from feet to feet, and from feet to feet

DATES

August 17, 19 59 Completed Shut-in 8-15 19 59
Put to producing 8.5 barrels of fluid of which 5.88 % was oil; 76.5 %

acid water and 17.62% salt water emulsion; % water; and % sediment. gauged Gravity, 37° API

If gas well, cu. ft. per 24 hours 1,538,000 Gallons gasoline per 1,000 cu. ft. of gas ?
Rock pressure, lbs. per sq. in. 70 hr. SITP 1404 psig; FTP 561 psig.

EMPLOYEES

Verna Drilling Co., Driller Driller
..... Driller Driller

FORMATION RECORD

FROM-	TO-	TOTAL FEET	FORMATION
			<u>Rotary Drilling Samples</u>
<u>0</u>	<u>18</u>	<u>18</u>	<u>Caliche & Sd.</u>
<u>18</u>	<u>390</u>	<u>372</u>	<u>Sh. & Sd. (Ogallala)</u>
<u>390</u>	<u>2210</u>	<u>1820</u>	<u>Red, green & gray sh. & sd. (Dockum Group-Undiff)</u>
<u>2210</u>	<u>2315</u>	<u>105</u>	<u>Red sh. & sd. (Dewey Lake)</u>
<u>2315</u>	<u>2370</u>	<u>55</u>	<u>Anhy, red sh. (Rustler)</u>
<u>2370</u>	<u>2920</u>	<u>550</u>	<u>Anhy, salt & red sh. (Salado)</u>
<u>2920</u>	<u>3660</u>	<u>740</u>	<u>Anhy, red sh. & red sd. (Yates-7 Rivers) Undiff) Yates sd. 2920-3040, no shows.</u>
<u>3660</u>	<u>4250</u>	<u>545</u>	<u>Anhy, red sh. & red sd. w/tr ls. (Queen Grayburg Undiff) Queen sd. 3660-3755'</u>
<u>4205</u>	<u>5000</u>	<u>795</u>	<u>sl stn Premier sd. 4154-4205' no show Anhy, red sh & dolomite (San Andres) 4935-5000' smpls. bldg. O&G, good cut, stn. & flour.</u>

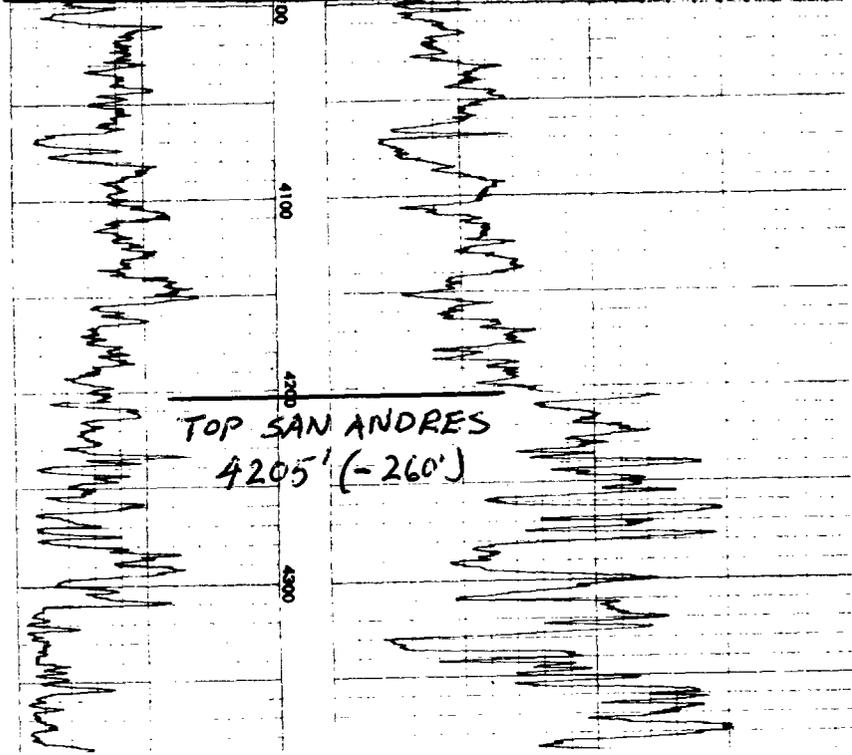
Spudded well 6-28-59 with Verma Drilling Co. rotary tools. Ran 8-5/8" OD, 2 1/2" ID, CR&I seamless surface casing to 371 ft. in red beds and circulated 208 sx of cmt. to surface. Pressured up to 500# for 30 minutes. Cement set for 24 hrs. before drilling ahead. Drid. ahead w/7-7/8" bit for 30 inches bit to 4952'. Cored w/7-13/16" core bit from 4952 to 4993', cut and recovered 41' of tan-gray dolomite w/many inclusions, generally fair porosity throughout, broken and fractured, bleeding oil and gas throughout. Ran 8-1/2" OD, 9.5" ID, CR&I seamless casing with 200 sx of Halliburton 50-50 pozmix 1' shoe to 5000'. Cemented with 200 sx of Halliburton 50-50 pozmix (4% gel) two stages. First stage: Pumped to bottom & circulated 125 sx. Leaving 5' in bottom of pipe. Pumped water behind first stage up to Halliburton DV tool located at 3041' in the oil string from surface. Pumped second stage of 75 sx of same type cement through DV tool and circulated up across Yates sd. Pumped wire line plug down to DV tool with water and let set for 30 minutes. Plug held. Let cement set for 8 hrs. then drilled out plug at DV tool and bottom plug to 4997'. Cement set for additional 12 hrs. Perforated with 4 shots per foot (Lene Wells Bullets) from 4936-58'. Ran 2" ID, external upset J-55, tubing with 4" perforation anchor and Halliburton J-3 packer to 4974'. Packer set at 4880'. Perforated anchor set at 4941-45'. Spotted 20 bbls Dowell reg. acid in tbg. Set packer. Acidized w/10,000 Gal's Dowell reg. acid w/de-emulsifier added. Formation broke at 2400#. Treated formation at 3000# w/avg. injection rate of 5 bbls/min. Shut well in for 2 hrs. Opened well head and swabbed thru tbg. On third swab, well kicked off and flowed for 2-1/2 hrs. and died. On 15th swabbing pull well kicked off and flowed by heads, oil cut acid water and gas. Well flowed back 240 bbls of oil cut acid water in 1-1/2 days. Est oil volume 10 bbls. Est. gas volume over 1,000,000 CFPD. Sinclair's Gladys gas Department ran an unofficial 4-point back pressure test to determine gas volume. 70 hr. STIP 1404 psig. On 24 hr. potential flow test, well flowed 1,538 MCFPD thru 1-1/2" critical prover choke and 8.5 bbls fluid being 6.5 bbls acid wtr., 1.5 bbls salt water, and 0.5 bbls oil. Gravity of oil 37° API corrected. Tbg. RP 561 psig. Well completed 8-15-59, shut-in waiting on pipeline connections.

It is of the greatest importance to have a complete history of the well. Please state in detail the dates of redrilling, together with the reasons for the work and its results. If there were any changes made in the casing, state fully, and if any casing was "sidetracked" or left in the well, give its size and location. If the well has been dynamited, give date, size, position, and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position, and results of pumping or balling.

HISTORY OF OIL OR GAS WELL

COMPANY: *Southwestern Petroleum Products*
 WELL: *No. 1*
 FIELD: *San Juan*
 LOCATION: *San Juan Co., N.M.*
 COUNTY: *San Juan* STATE: *N.M.*
 LOG ZERO: *4205* ELEV. 2382.5
 DATE ZERO: *1-17-53* ELEV. 2382.5
 FROM DATUM: *CONV. LEVEL*

TYPE OF LOG	DATE	TIME	DEPTH	LOG ZERO	ELEV.
TOTAL DEPTH (DRILLER)	1-17-53	1:20	4323	4205	2382.5
EFFECTIVE DEPTH (DRILLER)			4323	4205	2382.5
TOP OF LOGGED INTERVAL			4323	4205	2382.5
BOTTOM OF LOGGED INTERVAL			4323	4205	2382.5
TYPE OF FLUID IN HOLE					
LIQUID LEVEL					
MAXIMUM RECORDED TEMP.					
SOURCE STRENGTH & TYPE					
SOURCE SPACING — IN					
DETECTOR CLASS					
DETECTOR TYPE					
LENGTH OF MASS DEVICE — IN					
I.D. OF INSTRUMENT — IN					
TIME CONSTANT — SECONDS					
LOGGING SPEED FT./MIN					
STATISTICAL VARIATION — IN					
SENSITIVITY REFERENCE					
RECORDED BY					
WITNESSED BY					



WELL RECORD	FROM WELL RECORD	FROM LOG
RUN BIT SIZE	8 3/8	8 3/8
CASING WT.-LB	271	271
SHRINKAGE TO 271	271	271
SHRINKAGE TO 4323	271	271
TO	TO	TO
TO	TO	TO

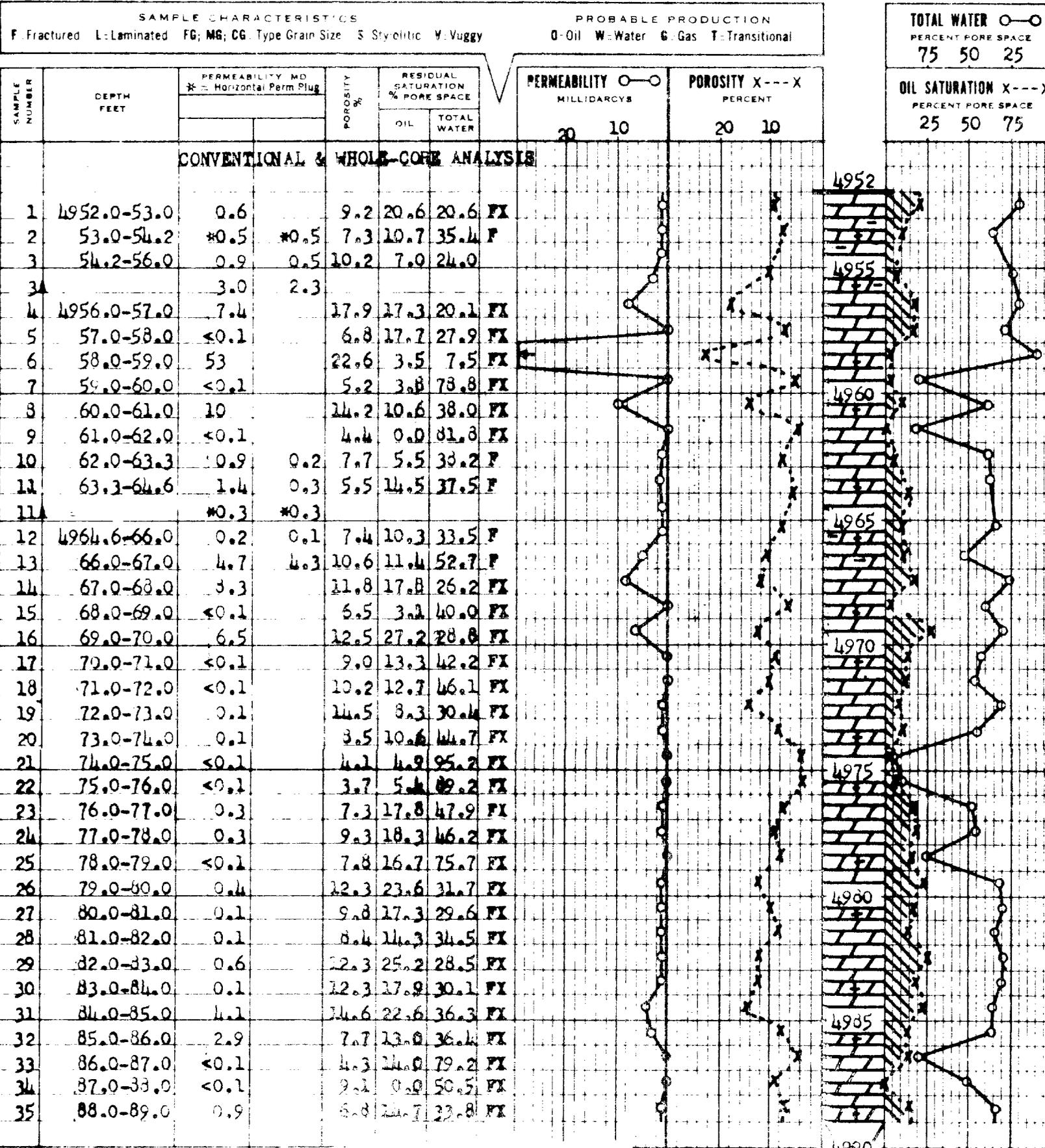
LAB

COMPANY SOUTHWESTERN HYDROCARBON COMPANY FILE NO. WP-3-1299
 WELL UNION FEDERAL NO. 1 DATE 7-10-59 ENGRS. BOONE
 FIELD WILDCAT FORMATION SAN ANDRES ELEV. 3945' KB
 COUNTY LEA STATE NEW MEXICO ORIG. FLD. WATER BASE MUD CORFS. DIAMOND L"
 LOCATION 552 FN & 1980 FWL SEC 5-T10S-R38E REMARKS SAMPLED AS DIRECTED BY CLIENT

COMPLETION COREGRAPH

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted). Core Laboratories, Inc. and its officers and employees assume no responsibility and make no warranty or representation as to the productivity, pressure operation or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

SAND LIMESTONE CONGLOMERATE CHERT
 SHALE DOLOMITE OOLITES ANHYDRITE



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BEFORE EXAMINER MUTTER
 OIL CONSERVATION COMMISSION
 EXHIBIT NO. 4
 CASE NO. 1766

PRODUCTION AND PRODUCTIVITY STATUS
 SAWYER AREA - LEA COUNTY, NEW MEXICO
 AUGUST 1, 1959

OPERATOR Lease and Well No.	Location		Completion Data		Cumulative Oil Production Bbls. 8-1-59	July Production Bbls.	Remarks
	S	T	Date	Zone			
ALAMO CORPORATION Brown-Federal 1	18	9 38	5-59	1 and 2	510	105	GOR 173,000 5-59
McCormick "A" 1	29	9 38	3-59	2	1,219	260	GOR 66,700 5-59 <i>2 1/2 hrs. 2,100 Bbls. 5-11-59</i>
DeKALB AGRICULTURAL ASSOCIATION Ohio-Federal 1	24	9 37	10-58	1	2,775	392	
DEVONIAN OIL COMPANY Landreth 1	18	9 38	6-48	1 and 2	SHUT-IN GAS WELL		Potentialled 2,750 MCFD in 1948
GREAT WESTERN DRILLING COMPANY Brown-Federal 1	18	9 38	N.A.	1	31,390	22	GOR 27,200 5-59
Byers-Federal 1	30	9 38	N.A.	1	SHUT-IN GAS WELL		Tested 330 MCF + 3 BO 8-58 <i>GOR 100,700 10/1/59</i>
GULF OIL CORPORATION Brown-Federal 1	19	9 38	N.A.	1	24,249	140	
OHIO OIL COMPANY Carruth-Federal 1	25	9 37	12-51	1	SHUT-IN GAS WELL		Potentialled 735 MCF + 10 BO and 17 BW 12-51 <i>100 Bbls. 10/1/59</i>
GEORGE P. LIVERMORE Crosby-Federal 1	31	9 38	9-50	1 and 2	SHUT-IN GAS WELL		Potentialled 385 MCF 9-50
TEXAS PACIFIC COAL AND OIL COMPANY Federal 1	33	9 38	1-58	1	11,173	616	GOR T.S.T.M. 4-58 <i>11,173 bo Total prod.</i>
SOUTHWEST HYDROCARBON Union-Federal 1	5	10 38	7-59	1	SHUT-IN GAS WELL		Potentialled 1,902 MCF 7-59 <i>1,902 MCF</i>
WESTERN DRILLING COMPANY Federal 1	28	9 38	5-58	2	12,164	855	GOR 50,600 5-59 <i>100 Bbls. 5/1/59</i>

El Paso Natural Gas Company

127-31

El Paso, Texas

D. H. TUCKER
VICE PRESIDENT

September 21, 1959

ADDRESS REPLY TO:
1008 MAIN STREET - ROOM 1801
HOUSTON 2, TEXAS

RECEIVED
SEP 23 1959

HERVEY DOW & HINKLE
ROSWELL, NEW MEXICO

Alamo Corporation
1005 Lubbock National Bank Building
Lubbock, Texas

Attention: Mr. C. A. Powell, Jr.

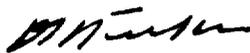
Gentlemen:

It is our understanding that you contemplate the development of the Sawyer area in Northeast Lea County, New Mexico as a gas field in the event you are assured of production rules which will warrant such development, and of a satisfactory market.

We have made a preliminary examination of this area and agree with you that its development as a gas field may be possible. In the event satisfactory quantities were available, El Paso would be interested in laying a line into the area.

You realize, of course, that no definite decision can be made until further development has taken place. The actual construction of facilities to market the gas will be dependent upon our satisfying ourselves that sufficient quantities are available to warrant the necessary facilities, and also upon our being able to obtain requisite Federal Power Commission authority for the construction of such facilities.

Yours truly,



D. H. Tucker

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Alamo EXHIBIT NO. 5
CASE NO. 1763

CLASS OF SERVICE

This is a fast message unless its deferred character is indicated by the proper symbol.

WESTERN UNION TELEGRAM

W. P. MARSHALL, PRESIDENT

1201

SYMBOLS

DL=Day Letter
NL=Night Letter
LT=International Letter Telegram

The filing time shown in the date line on domestic telegrams is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination

LA 192 DA449

D MDA206 NL PD=MIDLAND TEX 29=

1959 SEP 29 PM 3 39

NEW MEXICO CONSERVATION COMMISSION=

SANTA FE NMEX:

=REFERENCE CASE 1763 AS OWNER OF AN INTEREST IN THE SAWYER POOL WE SUPPORT SOUTHWESTERN HYDROCARBONS APPLICATION THAT SAWYER AND SOUTH-SAWYER POOLS BE CONSOLIDATED AND CLASSIFIED AS A GAS POOL TO BE PLACED UNDER STATE-WIDE RULES=

COOLEY AND HOLCOMB.

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

CLASS OF SERVICE

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WESTERN UNION TELEGRAM

W. P. MARSHALL, PRESIDENT

1201

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LA 195 DB307

D MDA208 NL PD=MIDLAND TEX 29=1

1959 SEP 29 PM 3 41

NEW MEXICO CONSERVATION COMMISSION=

SANTA FE NMEX:

=REFERENCE CASE 1763 AS OWNER OF A WORKING INTEREST IN THE SAWYER POOL WE SUPPORT SOUTHWESTERN HYDROCARBONS APPLICATION THAT SAWYER AND SOUTH-SAWYER POOLS BE CONSOLIDATED AND CLASSIFIED AS A GAS POOL TO BE PLACED UNDER STATE-WIDE RULES=

WESTERN DRILLING CO OF LONGVIEW TEXAS.

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

CLASS OF SERVICE
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WESTERN UNION TELEGRAM

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1201

W. P. MARSHALL, PRESIDENT

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 SANTA FE NMEX=

REFERENCE CASE 1763 AS OWNER OF A WORKING INTEREST IN
 THE SAWYER POOL WE SUPPORT SOUTHWESTERN HYDROCARBONS
 APPLICATION THAT SAWYER AND SOUTH-SAWYER POOLS BE
 CONSOLIDATED AND CLASSIFIED AS A GAS POOL TO BE PLACED
 UNDER STATE-WIDE RULES=
 GREAT WESTERN DRILLING CO.

SEP 29 4 15 PM '59
 JMI 6132
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THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE