

YATES DRILLING COMPANY

YATES BUILDING - 207 SOUTH 4TH ST. - (505) 746-3558

ARTESIA, NEW MEXICO - 88210

January 29, 1979

PEYTON YATES,
PRESIDENT

S. P. YATES,
VICE PRESIDENT

B. W. HARPER,
SEC.-TREAS.

JACK W. MCCAUL,
ASST. SEC.-TREAS.

Oil Conservation Division
Energy and Minerals Department
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Proposed Conversion to
Water Injection Well AMU #52
Artesia Metex Unit
Eddy County, New Mexico

Gentlemen:

Yates Drilling Company, as operator of the Artesia Metex Unit Waterflood Project, Eddy County, New Mexico, hereby resubmits an application for administrative approval of the conversion of Artesia Metex Unit #52 from a producing well to an injection well under the administrative procedure set forth in Commission Order R-4609.

In compliance with the provision of Commission Order R-4609, we include the following:

- (a) A land plat showing the location of the proposed well, all wells within the project area, and offset operators, locating wells which offset the project area.
- (b) A schematic drawing of the proposed injection well.
- (c) A schematic of a plugged and abandoned well, the Gulf State-35, within a one-half mile radius and Form C-103 of the plugging of the Gulf State-35.
- (d) A tabular summary of all wells within one-half mile of the proposed injection well.
- (e) Division form C-101 of our proposal to convert AMU #52 to injection.

The well, located in unit letter M of Section 25-T18S-R27E, is offset in all directions by the Artesia Metex Unit. The working interest owners of the unit have approved of the proposed conversion. A waiver of objection from the offset operator is, therefore, hereby given by the unit operator.

Page Two
Oil Conservation Division
January 29, 1979

The well is presently making six BOPD and eighteen BWPD. We request that the conversion be approved in order that the unit may improve oil recovery in the southwestern part of the unit. Also, enclosed is a plat showing cumulative oil produced (or water injected) at each well since the unit was formed. The poorer quality of the sands in the southwestern most part of the unit have limited injection rates and restricted production. We believe that only by increasing the volume of water injected without exceeding fracture pressures can we improve the waterflood response in that area of the unit. Furthermore, as of now, we have no normal "five-spot" patterns in the flood. If the result of the conversion is successful, we may wish to implement more five-spots throughout the unit. If we can supply any additional information, please let us know.

Yours truly,

YATES DRILLING COMPANY



Bill Davis
Drilling Supervisor

BD:jg
Enclosures



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR
LARRY KEHOE
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

December 19, 1979

Yates Drilling Company
207 South 4th Street
Artesia, New Mexico 88210

case 680

Re: Order No. R-472

Gentlemen:

By authority granted me in Order No. R-472, you are hereby authorized to increase the surface injection pressure on:

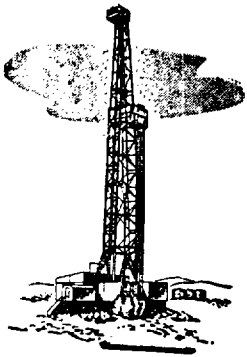
Artesia Metex Unit Well No. 52 in Unit
M of Section 25, Township 18 South,
27 East, Eddy County, New Mexico,
to 1220 psi.

Very truly yours,


JOE D. RAMEY
Division Director

JDR/MH/og

cc: Oil Conservation Division
Drawer DD
Artesia, New Mexico



YATES DRILLING COMPANY

YATES BUILDING - 207 SOUTH 4TH ST. - (505) 746-3458

ARTESIA, NEW MEXICO 88210

December 13, 1979

PEYTON YATES.
PRESIDENT

S. P. YATES.
VICE PRESIDENT

B. W. HARPER.
SEC. TREAS.

JACK W. MCCAW.
ASST. SEC. TREAS.

Oil Conservation Division
Energy and Minerals Department
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Conversion of Artesia Metex Unit Well #52 to Water Injection,
Eddy County, New Mexico

Gentlemen:

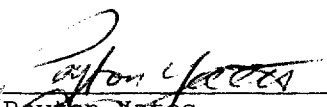
New Mexico Oil Conservation Division Administrative Order WFX No. 472 for the Artesia Metex Unit Well No. 52 located in Unit M of Section 25-18S-27E, Eddy County, New Mexico, authorized Yates Drilling Company, Operator, to inject water into the Grayburg formation through cement-lined tubing set in a packer at approximately 1800' for purposes of secondary recovery. It was further ordered that the injection well be equipped with a pop-off valve or device which would limit the wellhead pressure to a maximum of 365 pounds per square inch, provided that the Division Director may administratively authorize a pressure limitation in excess of the above upon the operator's establishing that such higher pressure will not result in fracturing of confining strata.

We are enclosing Step Rate Tests conducted by Aztec Gas, Inc. on the above well showing test data of injection rate and surface pressure. The results of the step rate test indicate an estimated frac pressure of 1242 psig (surface). As a result of this test, we respectfully request an allowable injection pressure of 1240 psig be set for the subject well.

If additional information is needed, please let us know.

Yours truly,

YATES DRILLING COMPANY


Peyton Yates

PY:jg
xc: Oil Conservation Division, Artesia

DATE: 11-23-79

COMPANY: Yates Drilling Company

TEST DATA

Final Instantaneous Shut Down Pressure: _____

Estimated Frac Point: 1242 PSI

645 BPD

ISDP PSI

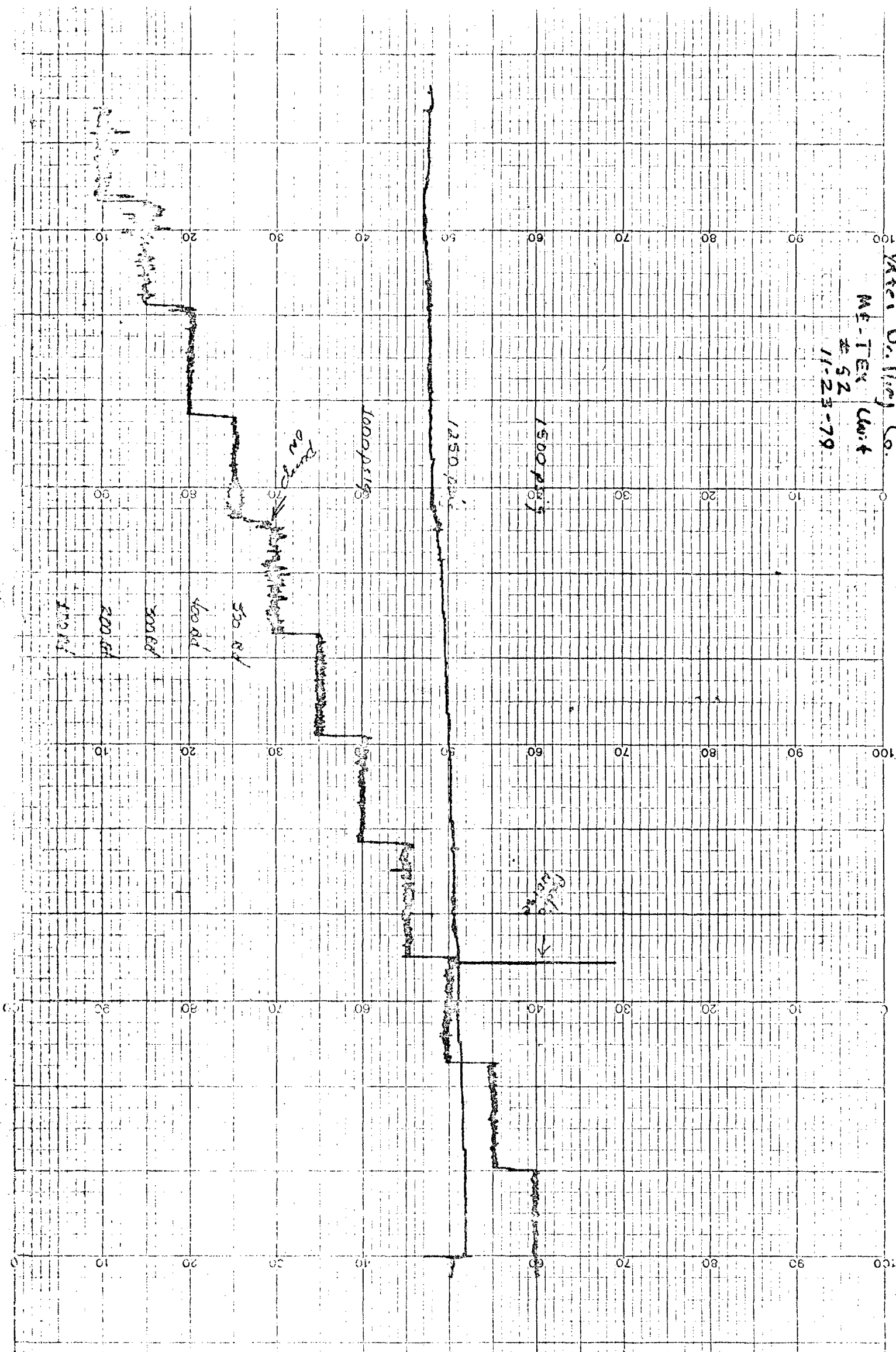
COMMENT: New injection well (3 weeks on injection)

Water Drilling Co.

M-E-TEX Unit

52

11-23-79

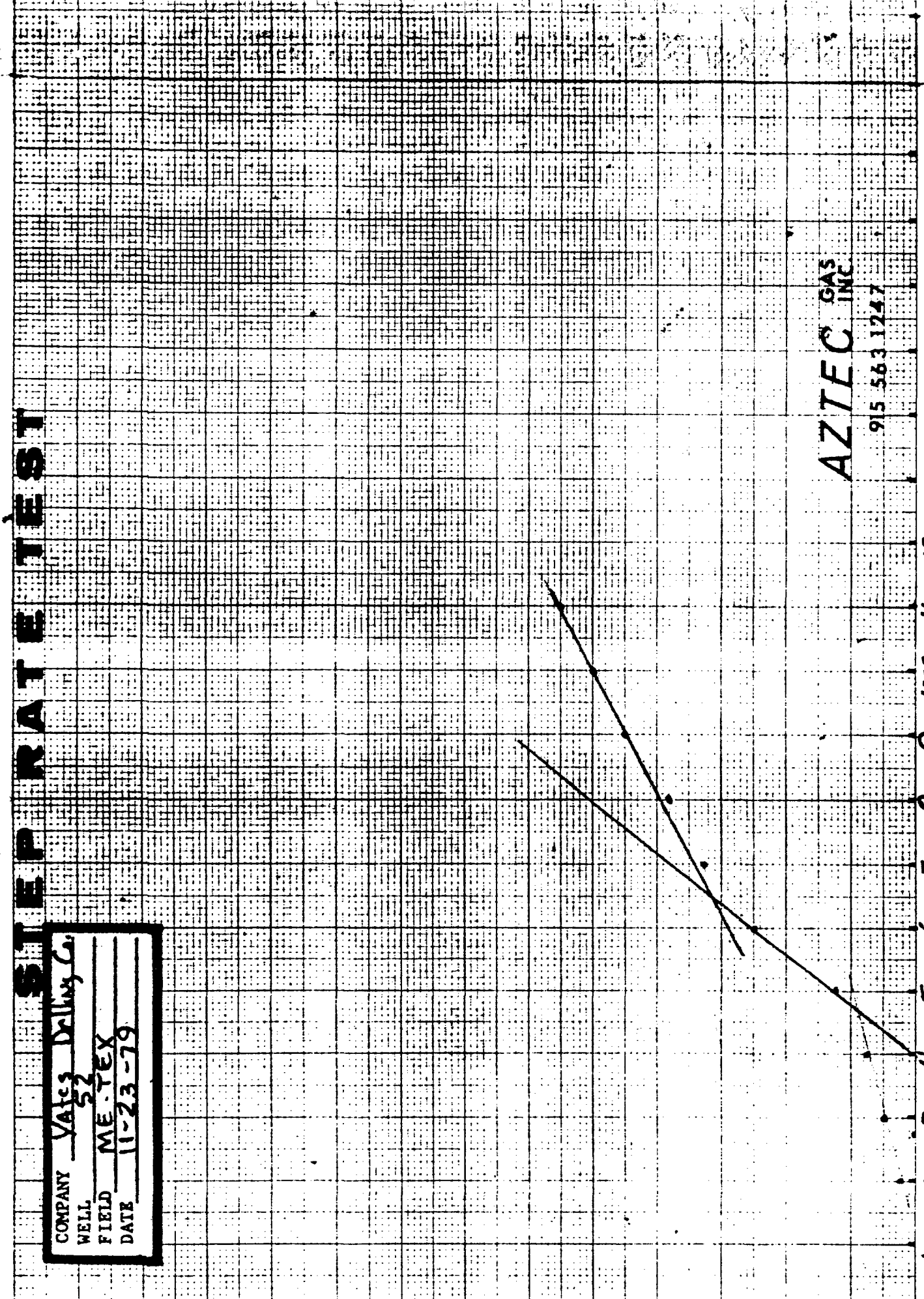


STEP RATE TEST

COMPANY	Valco Drilling Co.
WELL	52
FIELD	ME-TEX
DATE	11-23-79

1600
1400
1200
1000
800
600
400
200
0

PRESSURE



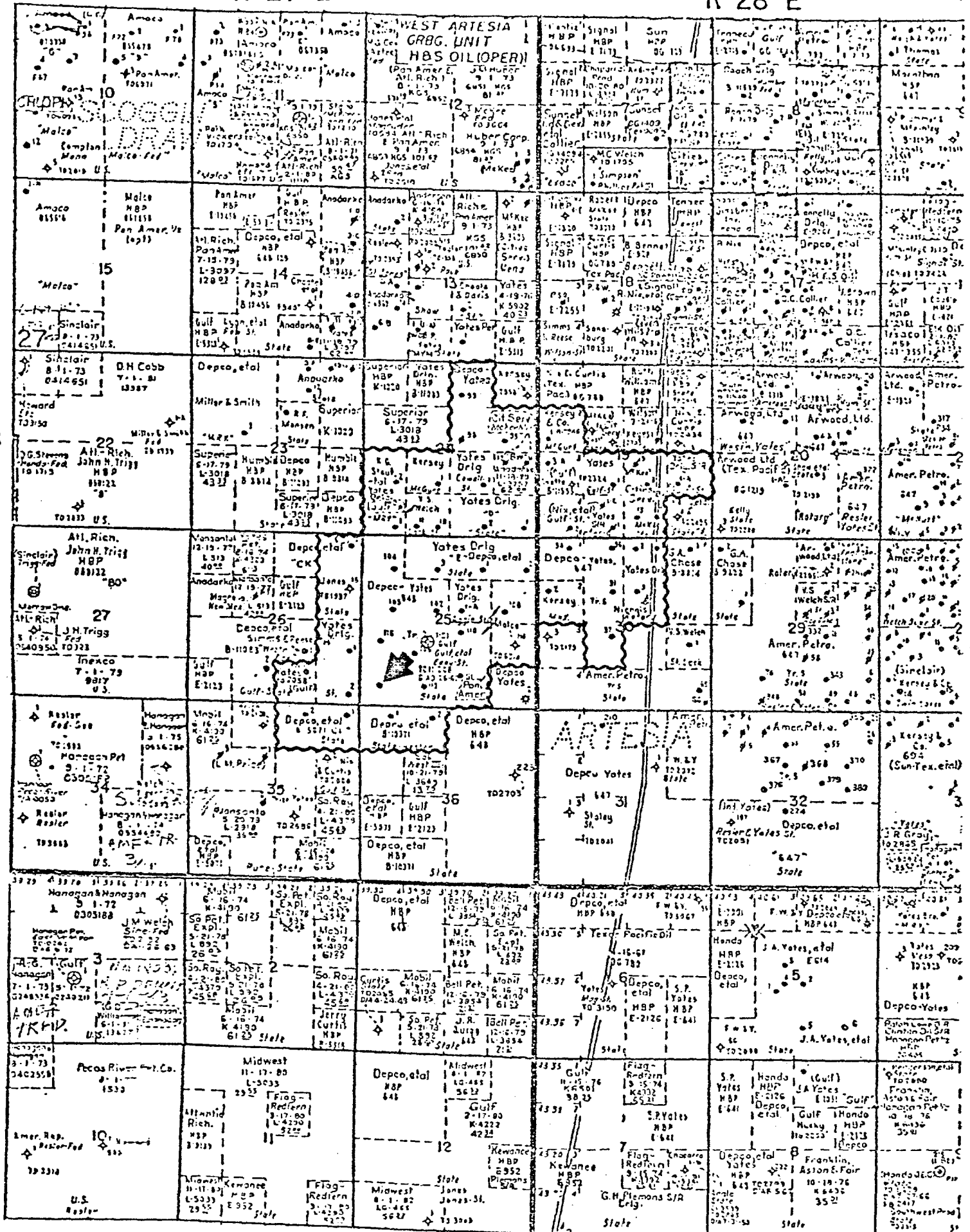
AZTEC GAS INC.

915 563 1247

100 2. 3 4 500 6 7 Q IN BVWD¹²

R 27 E

R 28 E



UNIT OUTLINE

YATES DRILLING COMPANY

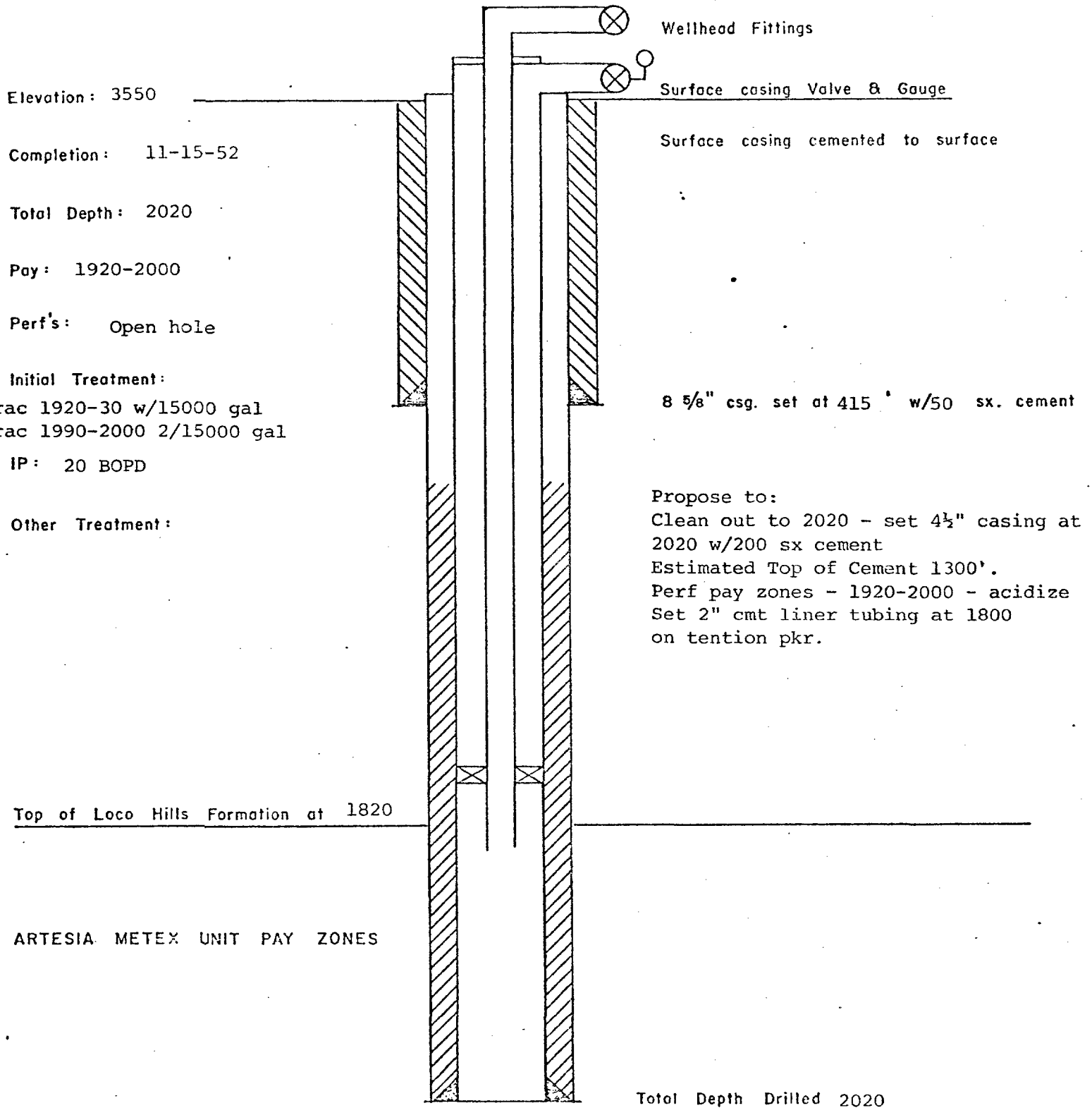
ARTESIA METEX UNIT

EDDY COUNTY, NEW MEXICO

DIAGRAMMATIC SKETCH OF INJECTION WELL
YATES DRILLING COMPANY
ARTESIA METEX UNIT #52

Unit Letter M 660 FWL - 660FSL

Section 25-18S-27E

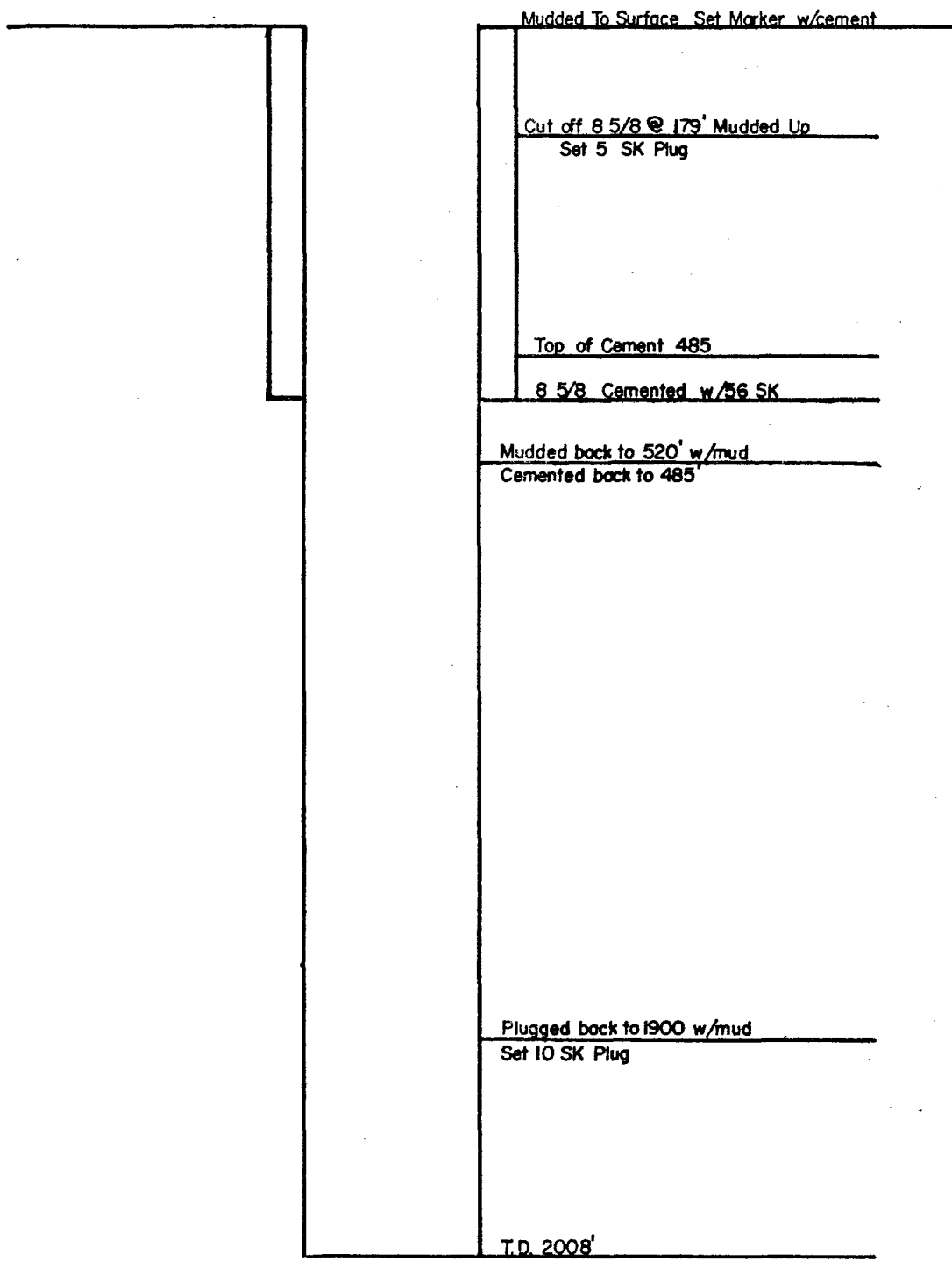


Ralph Nix and Jerry Curtiss-Gulf-State-35

Well²

SE 1/4 - NE 1/4 of Sec.35 -18S- 27E

Plugged April 7, 1955



NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

MISCELLANEOUS REPORTS ON WELLS

Submit this report in TRIPLICATE to the District Office, Oil Conservation Commission, within 10 days after the work specified is completed. It should be signed and filed as a report on Beginning Drilling Operations, Results of test of casing shut-off, result of plugging of well, result of well repair, and other important operations, even though the work was witnessed by an agent of the Commission. See additional instructions in the Rules and Regulations of the Commission.

Indicate Nature of Report by Checking Below

REPORT ON BEGINNING DRILLING OPERATIONS		REPORT ON RESULT OF TEST OF CASING SHUT-OFF		REPORT ON REPAIRING WELL	
REPORT ON RESULT OF PLUGGING WELL	X	REPORT ON RECOMPLETION OPERATION		REPORT ON (Other)	

April 14, 1955 (Date) Artesia, New Mexico (Place)

Following is a report on the work done and the results obtained under the heading noted above at the

Artesia, New Mexico (Company or Operator) Gulf State-35 (Lease)

Donald L. Smith (Contractor), Well No. 2 in the 33 1/4 17 1/2 of Sec. 35

T. J. L., R. G. L., NMPM, Artesia Pool, El Paso County.

The Dates of this work were as follows: Completed April 7, 1955

Notice of intention to do the work (was not) submitted on Form C-102 on _____, 19____, (Cross out incorrect words)

and approval of the proposed plan (was) (not) obtained orally from Mr. Hanson.

DETAILED ACCOUNT OF WORK DONE AND RESULTS OBTAINED

T.B. 2000 ft., 5 5/8" cemented at 502 with 53 sac.
P.B. to 1900 with mud. Ran 20 sac, then mudded back to 500 with mud.
Cemented back to 400 and cut off pipe at 179. Tested hole and had no water.
Mudded back to 179 and dumped 5 sac cement. Mudded back to surface and cut casing with 100 ft.

ILLEGIBLE

Witnessed by: H. J. Thompson (Name) Houch & Chapman (Company) (Title)

Approved: OIL CONSERVATION COMMISSION

(Signature) (Name)

I hereby certify that the information given above is true and complete to the best of my knowledge.

Name: Jerry Cantor

Position: District Engineer

Representing: El Paso Oil & Gas Company

Metex #44

Unit I - 1650 FSL and 330 FEL

Section 26 - T18S - R27E

9-9-51

8 5/8 csg. set at 502'; cemented 50 sks.

Metex #45

Unit L - 1980 FSL and 660 FWL

Section 25 - T18S - R27E

August 31, 1951

8 5/8 set at 500'; cemented 50 sks.

January 17, 1958

Ran 2010' 11.6# 4 1/2 csg. cemented 175 sks.

Perf. (1996-2005) (1969-74) (1954-60) (1922-40) (1884-90) (1873-73)

Metex #46

Unit K - 1650 FSL and FWL

Section 25 - T18S - R27E

June 8, 1950

8 5/8 Set at 510'; cemented 75 sks.

Metex #50

Unit O - 1060 FSL and 1560 FEL

Section 26 - T18S - R27E

September 8, 1959

8 5/8 - 24# set 492

5 1/2 set 1940 - cemented 35 sks.

This well was plugged in June 1968 - 5 1/2 shot off at 1650'

Re-entered 5-26-70 - 4 1/2 csg. set inside old 5 1/2 - cemented 50 sks.

Open hole 1946-1958.

Metex #51

Unit P - 330 FEL and 330 FSL

Section 26 - T18S - R27E

September 15, 1951

8 5/8 - 24# set at 500' - cemented 50 sks.

Metex #53

Unit N - 660 FSL and 1980 FWL

Section 25 - T18S - R27E

4-10-51

8 5/8 set at 509' - cemented 50 sks.

Metex #54

Unit O - 990 FSL and 2310 FEL

Section 25 - T18S - R27E

2-7-51

8 5/8 set at 509' - cemented 50 sks.

5-8-74

Cleaned out - Ran 2060' 4 1/2 - 9.5# csg. - cemented 250 sks.

Class C - Top of cement 1300

Perf. 3 shts. ft. (1856-60) (1868-74) (1910-16) (1929-32) (1949-52)

(1972-74) (1993-97) 84 shots

Metex #55

Unit B - 330 FNL and 1650 FEL

Section 35 - T18S - R27E

3-20-55

8 5/8 set at 450' - cemented 50 sks.

5 1/2 set at 1908' - cemented 35 sks.

T.D. 1939

Metex #56

Unit P - 330 FNL and 330 FEL

Section 35 - T18S - R27E

5-22-52

8 5/8 - Set 490' - cemented 50 sks.

2-28-55

Bridged back from 2020' to 1877' - Ran 1865' - 14# - 5 1/2 seamless csg.
and cemented with 40 sks. cement.

Metex #57

Unit D - 330 FNL and 990 FWL

Section 36 - T18S - R27E

6-12-52

8 5/8 set 480' cemented 50 sks.

Metex #58

Unit C - 330 FNL and 2310 FWL

Section 36 - T18s - R27E

September 9, 1952

8 5/8 set 433' - cemented 50 sks.

4-12-74

Cleaned out to 2020' - Ran 50 joints 9.5# - 4 1/2 csg.

Set at 2016' - cemented 200 sks. class C - Top cement 1320

Perf 3 shts. ft. (1848-54) (1859-63) (1868-71) (1907-11) (1927-30)
(1939-44) (1969-71) (1973-76) 90 shots

Metex #59

Unit K - 1980 FSL and 2008.6 FWL

Section 25 - T18S - R27E

4-9-76

Re-entry

13 3/8 set at 527 - cement - circ.

9 5/8 set at 3312 - cemented 780 sks.

3-30-76

Re-entered, Ran csg. scraper to 2450' - Ran C.R.-Tie-in

Perf. 2 shots ft. (1891-95) (1901-09) (1939-40) (1942-47) (1949-53)
(1967-72) (1948-88) (2009-12) (2014-18)

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OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

JAN 30 1979

S.C.C.
LAND OFFICE

Form C-101
Revised 1-1-65

5A. Indicate Type of Lease	
STATE ☒	FEE ☐

5. State Oil & Gas Lease No.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work		7. Unit Agreement Name	
b. Type of Well OIL WELL ☒ GAS WELL ☐ OTHER ☐ Convert to injection ☐ SINGLE ZONE ☐ MULTIPLE ZONE ☐		Artesia metex unit	
2. Name of Operator Yates Drilling Company ✓		8. Farm or Lease Name Artesia Metex Unit	
3. Address of Operator 207 So. 4th Street, Artesia, NM 88210		9. Well No. 52	
4. Location of Well UNIT LETTER M LOCATED 660 FEET FROM THE West LINE AND 660 FEET FROM THE South LINE OF SEC. 25 TWP. 18S RGE. 27E NMPM		10. Field and Pool, or Wildcat Artesia	
		12. County Eddy	
		19. Proposed Depth 2020	
		19A. Formation	
		20. Rotary or C.T. Reverse Unit	
21. Elevations (Show whether DF, RT, etc.) 3550		21A. Kind & Status Plug. Bond Blanket	
		21B. Drilling Contractor	
		22. Approx. Date Work will start When approved	

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
	8-5/8	24#	415	50	
	4-1/2	10.5	2020	200	1500

Propose to:

Clean out to T.D. 2020 - Set 4-1/2 at 2020 with 200 sx. cement.

Perf. Metex zones from 1920 - 2000' acidize - set 2" cmt. lined tubing at 1800' on tension pkr. - Put well on injection.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE, GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

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

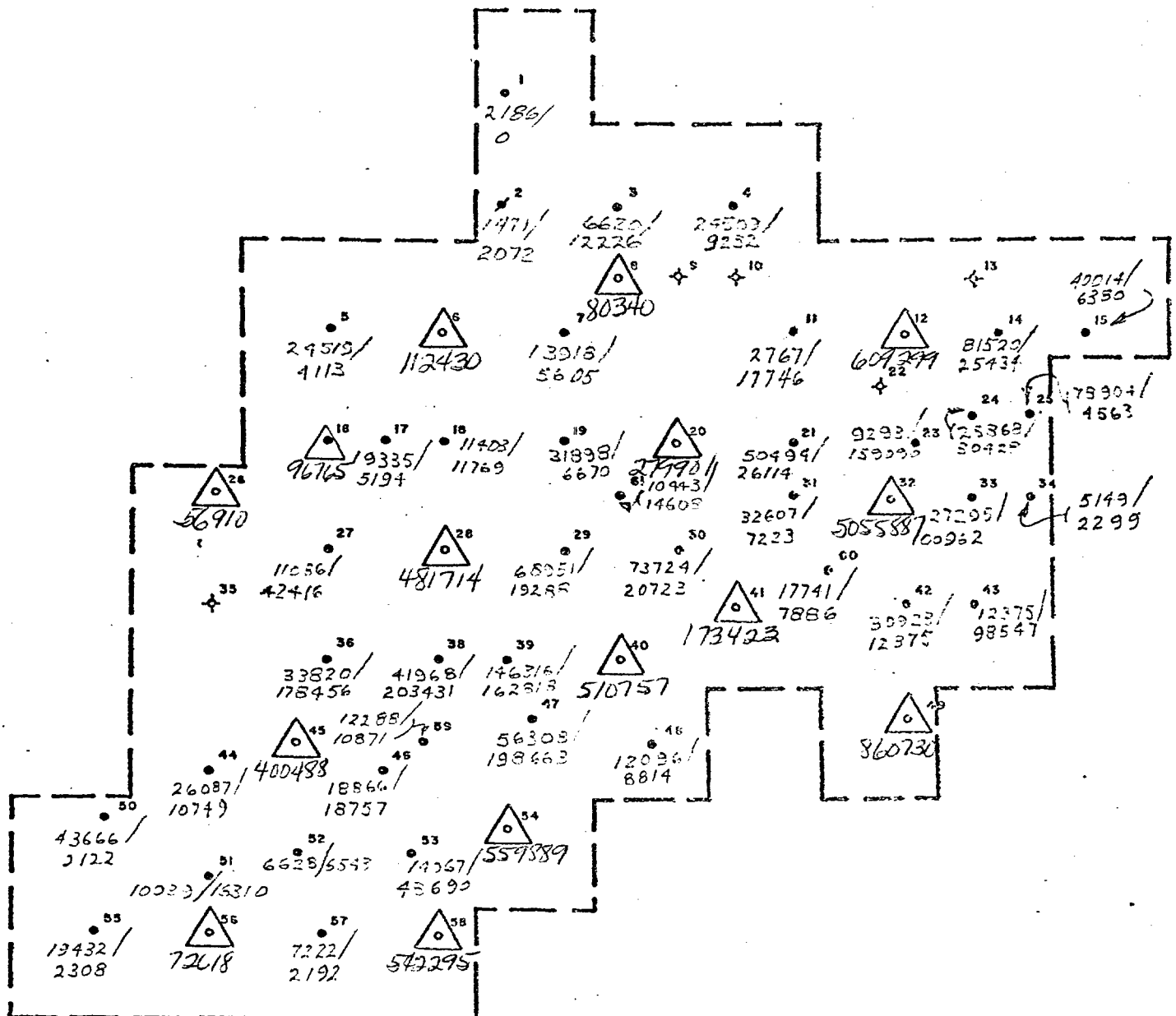
Signed Don Davis Title Drilling Supervisor Date 1-29-79

(This space for State Use)

APPROVED BY W. A. Grasset TITLE SUPERVISOR, DISTRICT II DATE JAN 31 1979

CONDITIONS OF APPROVAL, IF ANY:
Subject to Santa Fe approval of WFX

ARTESIA METEX UNIT
YATES DRILLING CO.



ACCUMULATIVE PRODUCTION

OIL & NATURAL GAS TO JULY 1978

Accumulative Water Injection