

MARTIN YATES, III
1912 - 1985
FRANK W. YATES
1936 - 1986



105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

CONSERVATION DIVISION
RECEIVED

S. P. YATES
CHAIRMAN OF THE BOARD
JOHN A. YATES
PRESIDENT
PEYTON YATES
EXECUTIVE VICE PRESIDENT
RANDY G. PATTERSON
SECRETARY
DENNIS G. KINSEY
TREASURER

January 14, 1992

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

Attention: Mr. David Catanach

Dear Mr. Catanach,

Enclosed are the necessary documents for obtaining approval for the downhole commingling of the Parish IV Com #2 located in Unit letter F of Sec. 26-T19S-R24E of Eddy County.

Should you have any questions, please feel free to contact me at (505)748-1471.
Thank you.

Sincerely,

Chuck Morgan
Petroleum Engineer

Enclosures

CM/sj

Application for Downhole Commingling
Parish IV Com #2 [Com # NM-82106]
1980' FNL & 1980' FWL Unit F
Sec. 26-T19S-R24E Eddy County, NM

Reason for Application: Yates Petroleum Corporation requests approval to commingle the Morrow from 8900-8908' and 8921-8928' with the Atoka (8585-8588' and 8631-8646'). Production from the Morrow was tested and found to be marginal. Commingling with the Atoka will prevent the early abandonment (and resulting mineral resource waste) of the Morrow.

1. Name and Address of the Operator:
Yates Petroleum Corporation
105 S. Fourth Street
Artesia, NM 88210
Attention: Chuck Morgan
2. Lease Data:
Parish IV Com #2
1980' FNL & 1980' FWL Unit F
Sec. 26-T19S-R24E
Eddy County, NM
Pools: Hoag Tank Morrow
Undes. Atoka
3. Acreage dedication plat and lease map including offset operators. All offset leases adjoining the dedicated acreage are owned by Yates Petroleum Corporation. See Attachment A-I and A-II.
4. Productivity Test:
 - A. Morrow was flow tested after it was frac'd. for four days and then shut-in (1990). Flow test 1/7/92 showed well flowing with 75# on a 32/64 choke (435 Mcf). Last swab run recovered 1 BBL scattered fluid (KCL).
 - B. Atoka flow test 1/11/92 125 psi on 32/64 choke (782 Mcf) with scattered treating fluid.
5. Production History:
 - A. Morrow Data:
See attached pressure build-up plot and completion summary for the Morrow.
EUR for the Morrow are estimated at 170,000 Mcf (derived empirically from field study on 55 deep gas wells in the area comparing initial test rates with EUR). See attached graph.
 - B. Atoka Data:
See attached BHP data.
Atoka perfs: 8585-8588' and 8631-8646'
EUR for the Atoka are estimated at 280,000 Mcf (derived same as Morrow above). See attached graph.
6. Bottom Hole Pressure Data:
See attached SITP build-up test for the Morrow when it was completed.
BHP on the Morrow = 3078 psi (calc)
BHP on the Atoka = 3320 psi.
(Attached BHP data sheet)
7. Fluid Characteristics and Compatibility:
Both Morrow and Atoka will produce sweet gas. Don't anticipate any compatibility problems.
8. Value Data:
Both Morrow and Atoka will produce sweet gas. The value of the gas will not be affected by commingling.

9. Allocation Formula:

1. Volumetric analysis of the zones yielded the following ratios of total EUR reserves to EUR reserves of each zone as follows:

Morrow % EUR = 34.68%

Atoka % EUR = 65.32%

2. Ratios of initial flow test yielded the following flow ratios:

Morrow: $\frac{435}{435+782} = 35.74\%$

Atoka: $\frac{782}{435+782} = 64.25\%$

3. Empirical EUR Ratios:

Morrow EUR 170,000

Atoka EUR 280,000

Total EUR 450,000

Ratios: Morrow - $170,000/450,000 = 37.78\%$

Atoka - $280,000/450,000 = 62.22\%$

It is proposed to allocate future commingled reserves using an average of the above calculated ratios.:

Undes. Atoka 64%

Hoag Tank Morrow 36%

10. Notification Statement:

No offset operators to notify.

Application to commingle sent to BLM for like approval as 40 acres in 320 acre comm. are federal.

A-I

N. MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

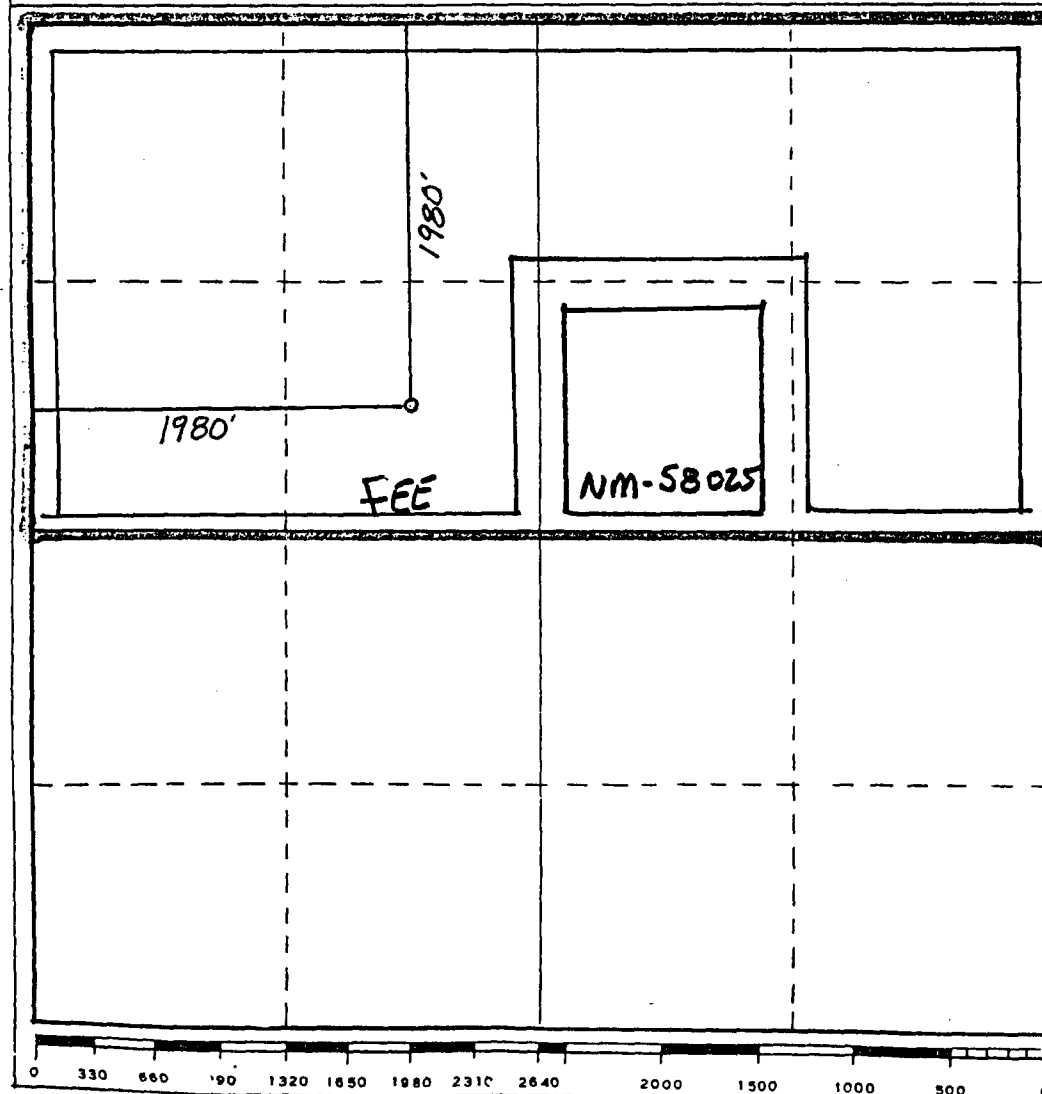
Operator YATES PETROLEUM CORPORATION			Lease Parish IV Com		Well No. 2
Unit Letter F	Section 26	Township 19 South	Range 24 East	County Eddy County, N.M.	
Actual Footage Location of Well: 1980 feet from the North line and 1980 feet from the West line					
Ground Level Elev. 3640.	Producing Formation Morrow		Pool Und. Hoag Tank Morrow		Dedicated Acreage: 3.20 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☒ Yes ☐ No If answer is "yes," type of consolidation Communitized

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

Ken Beardsdale

Name

KEN BEARDSDALE

Position

LANDMAN

Company

Yates Pet. Corp.

Date

8-23-89

DAN R. REDDY
NEW MEXICO
5412
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my knowledge and belief.
PROFESSIONAL ENGINEER

Date Surveyed

August 21, 1989

Registered Professional Engineer and/or Land Surveyor

Dan R. Reddy

Certificate No.

NM PE&LS NO. 5412

[illegible]

JARREL SERVICES, INC.
Box 1230
Hobbs, New Mexico 88240

<<Static Gradient Survey>>

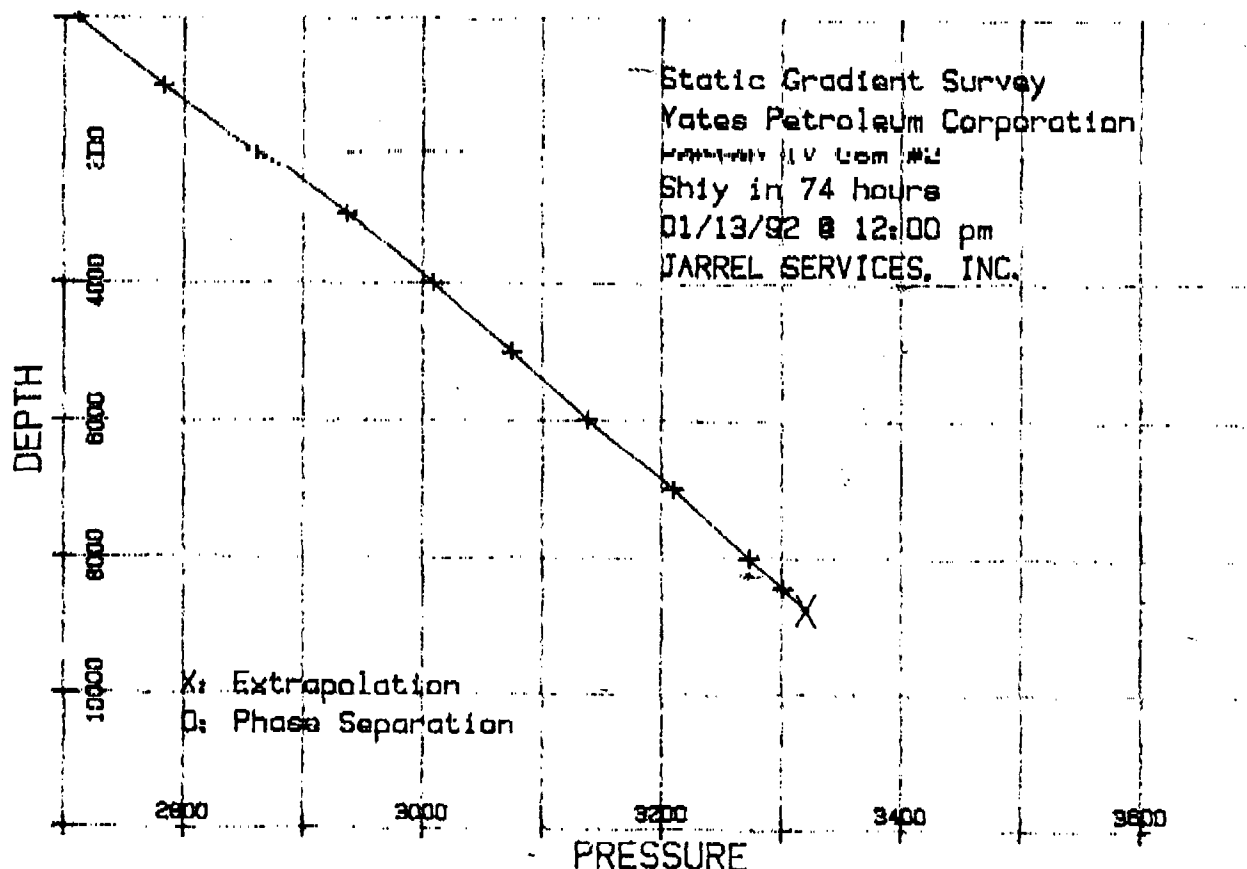
COMPANY: Yates Petroleum Corporation
LEASE: Parish IV Com
FIELD: Dagger Draw
COUNTY: Eddy
STATUS: Shut in 74 hours
PERFORATIONS FROM: 8585 ft
DEPTH: 8450 ft

Date: 01/13/92 @ 12:00 pm
CONTACT: Mike Allen
WELL: #2
ZONE: Atoka
STATE: New Mexico
OPERATOR: Harrah
TD: 8928 ft
TEMPERATURE: 146°F

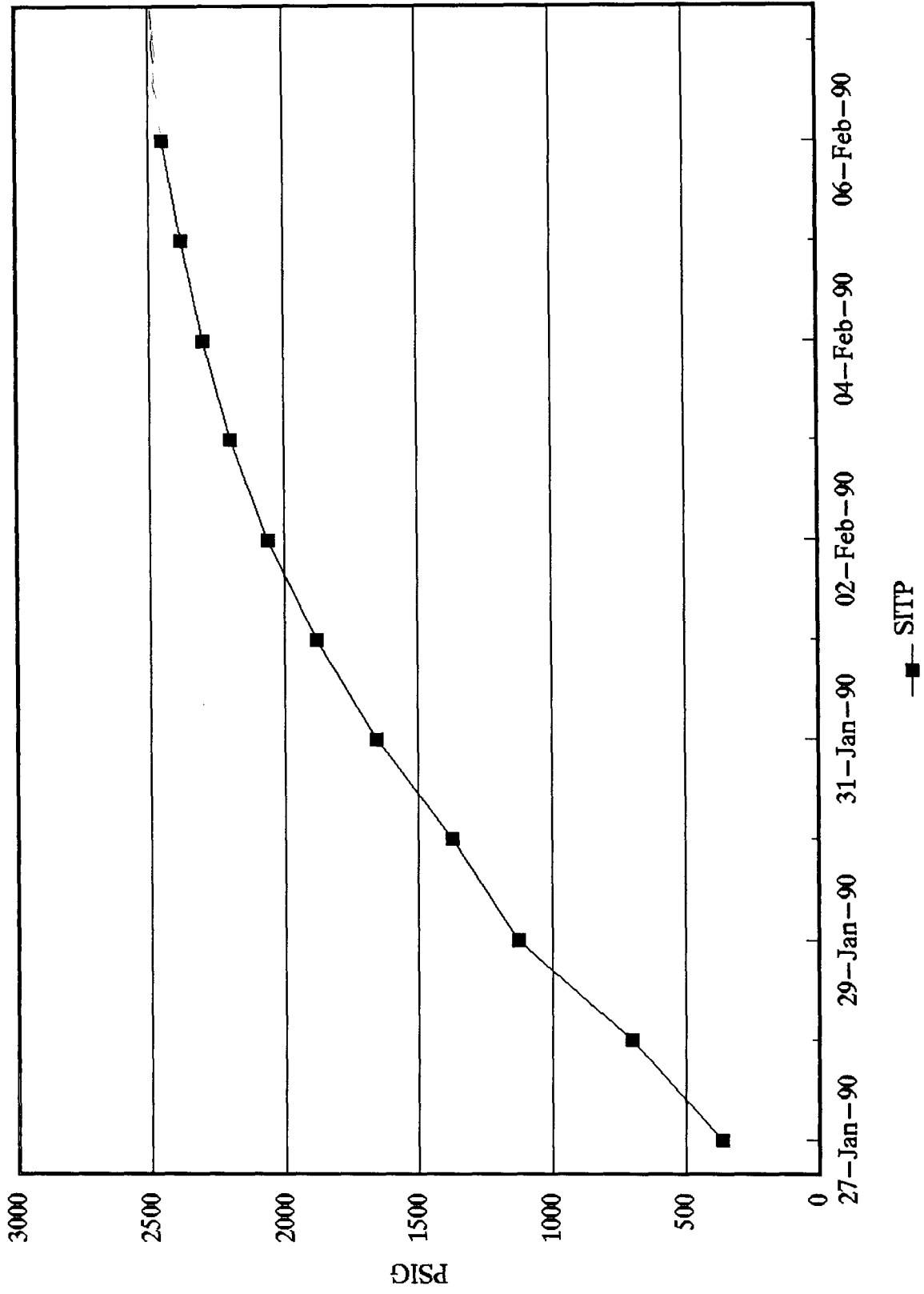
TABULAR DATA

DEPTH (ft)	PRESSURE (psi)	GRADIENT (psi/ft)	EXPLANATIONS
0	2711		
1000	2783	0.072	
2000	2861	0.078	
3000	2937	0.076	
4000	3009	0.072	
5000	3075	0.066	
6000	3138	0.063	
7000	3210	0.072	
8000	3273	0.063	
8450	3301	0.062	
8756	3320	0.062	<=Extrapolated BHP

NOTE: Explanations are included to clarify calculated data points.



PARISH IV COM #2

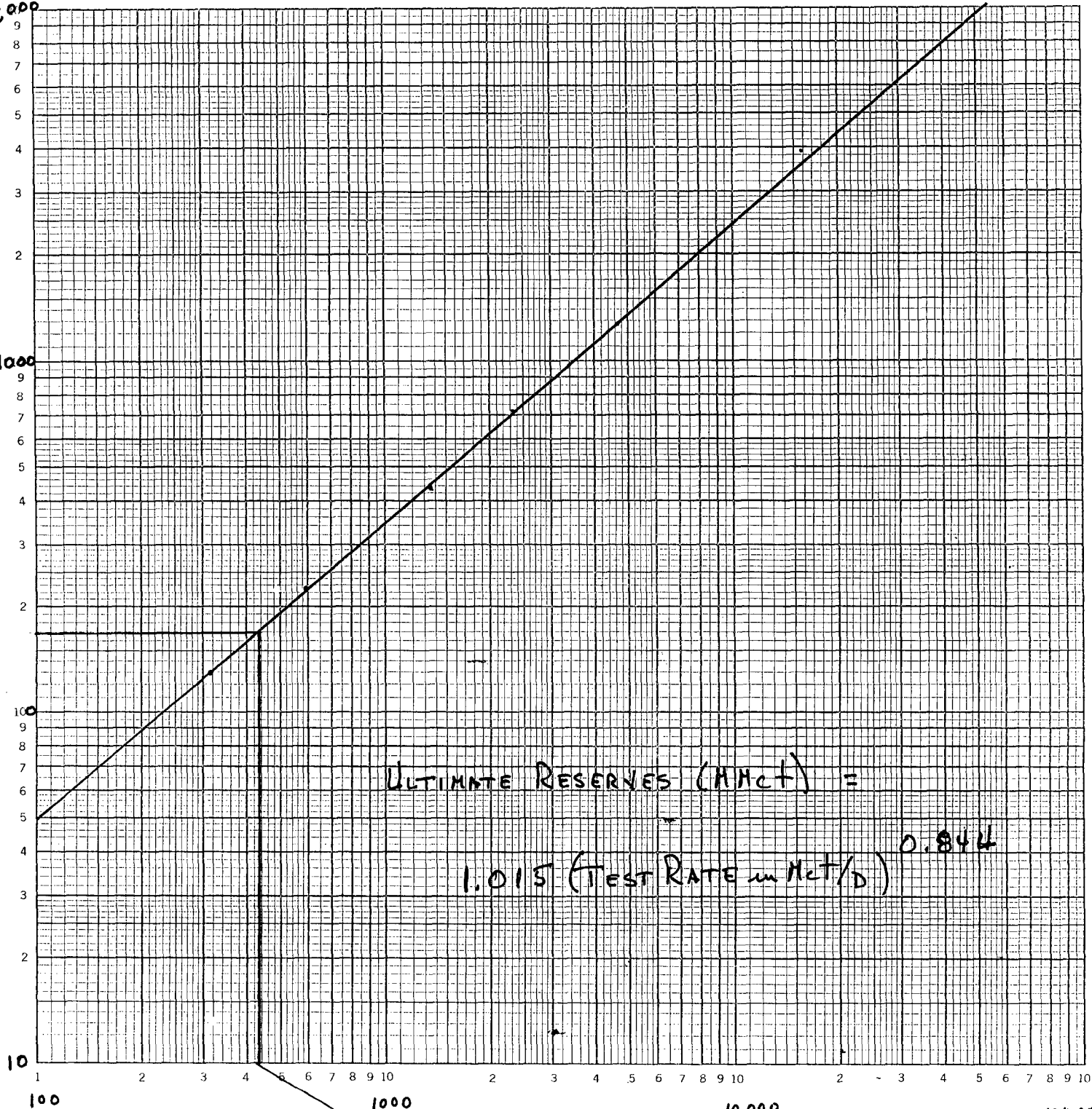


Yates Petroleum Corporation
 Empirical Relationship for Deep Gas Wells
 (Initial Test Results vs. EUR)

ULTIMATE RESERVES

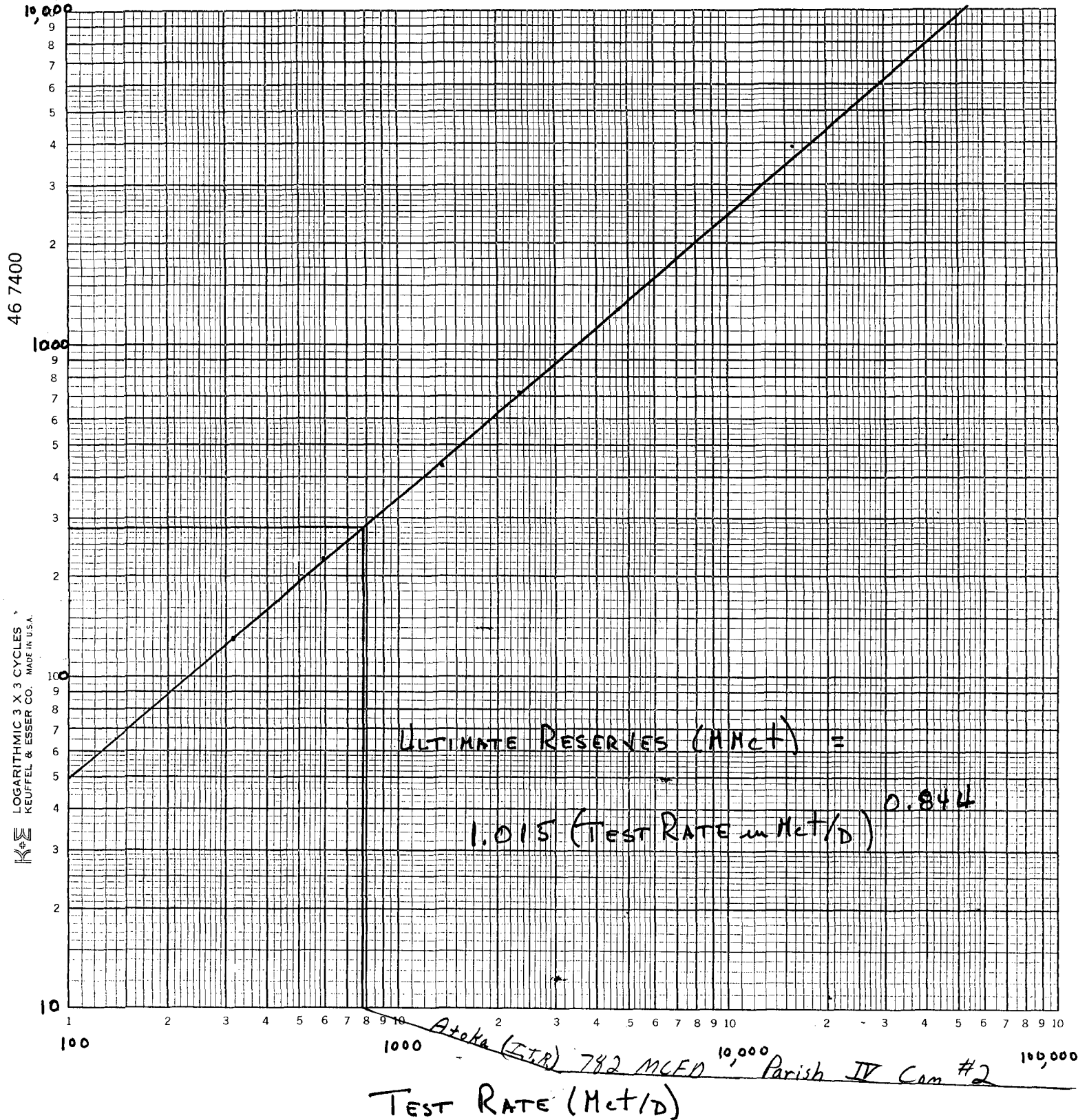
46 7400

KE LOGARITHMIC 3 X 3 CYCLES
 KEUFFEL & ESSER CO. MADE IN U.S.A.



Morrow (I.T.A.) 435 MCFD Parish IV Com #2
 TEST RATE (Mcf/D)

ULTIMATE
RESERVES
10,000



Yates Petroleum - Parish "IV" Com #2 (Unit F) 26-19S-24E Eddy Co., NM

tool. Ran tubing to 9095'. Circulate tubing capacity.
Shut in. Prep to trip for scraper run. DC \$3000
1-16-90 POH with tubing and drill collars. Laid down drill
collars. TIH with 7" scraper. Tagged TD. Circulate
hole with 2% KCL. POH. Shut in. Prep to log and
perforate. DC \$1400
1-17-90 Rig up Schlumberger. Ran GR/CCL/CNL from PBTD 9094' to
5400'. Perforated Morrow zone 8921-28' with 7 holes as
follows: 8921', 23', 24', 25', 26', 27' and 8928'. RIH
with 7" Uni-VI packer with 2.25 XL on/off tool and
knock out plug in packer. Set packer at 8995'. Flanged
well up. Dropped bar, knock out plug. Small blow on
tubing. Made swab run after 1 hour, no fluid. Waited
another hour made swab run, no fluid. Shut in. Prep
to acidize. DC \$12,000
1-18-90 Overnight SITP too small to measure. Tubing dry. Load
tubing. Unset packer and move down across perforations.
Spot 500 gals 7-1/2% Morrow acid. Pull up. Reset
packer at 8800'. Break perforations with 2200#. Acidize
Morrow perforations 8921-28. Avg rate 3 BPM @ 2000#.
ISIP 1500#, 5 min 1200#, 10 min 1050#, 15 min 910#.
Swabbed well dry. Make hourly swab runs. At 3:00 had
4' continuous flare, pulling 300' fluid per run.
Shut in at 5:00 PM. This AM overnight SITP 400#. Bled
off, continuous 6' flare (TSTM).
1-19-90 Overnight SITP 400#. Fluid level 7700'. Swabbed dry
in 2 runs. Load tubing. Released packer and POH. RIH
with RBP, correlate into position. Set at 8913'. Test
RBP to 2500#. POH. Shut in. Prep to perforate Upper
Morrow zone. DC \$2500
1-20-90 WIH and perforated Morrow 8900-08' with 9 holes as follows:
8900', 01', 02', 03', 04', 05', 06', 07' and 08'. RIH with
7" Uni-VI and 2.25 on/off tool. Set packer at 8800'.
at 8800'. Flange well up. Rig up swab. Swabbed dry with
8 runs. Made hourly run from 3:00 to 5:00. Had flare
while pulling swab. DC \$1900
1-21-22-90 Overnight SITP 15#. Fluid level 8400'. Swabbed dry in 1
run. Acidized with 500 gals 7-1/2% Morrow Flo acid.
Formation broke at 2150#. Avg rate 2.3 BPM @ 1800#.
ISDP 1530#, 5 min 1240#, 10 min 1110#, 15 min 1000#.
Load to recover 72 bbls. Swabbed dry in 12 runs, 6' flare
when pulling swab. Shut in. DC \$2300
1-23-90 Overnight SITP 650#. Initial fluid level 6200'. Swabbed
dry in 2 runs (small flare). Load tubing. Released
packer and POH. RIH with retrieving tool. Unset bridge
plug and start out of hole. Shut down. Prep to finish
pulling bridge plug, run packer back and swab both
Morrow zones together.
1-24-90 POH with remainder of tubing and RBP. RIH with 7" Uni
VI packer and 2.25 XL on/off tool. Set packer at 8800'.
Started swabbing. Initial fluid level 600'. Swabbed dry
in 9 runs. Made hourly runs from 3:00-5:00. Last run
recovered 200' fluid. DC \$1700
1-25-90 Overnight SITP 100#. Fluid level 7400'. Swabbed dry in
2 runs. Made hourly runs. Recovered 14 bbls in 9 hourly
runs. Last run 200' fluid in hole. Shut in. DC \$1500
1-26-90 SITP 200#. Fluid level 7600'. Made 3 swab runs, dry.
Recovered 8 bbls. Shut in. Rigged down pulling unit.
1-27-90 SITP 365#.
1-28-90 SITP 700#.
1-29-90 SITP 1125#.
1-30-90 SITP 1375#.
1-31-90 SITP 1650#.
2-1-90 SITP 1880#.

Yates Petroleum - Parish "IV" Com #2 (Unit F) 26-19S-24E Eddy Co., NM

2-2-90 SITP 2060#.
 2-3-90 SITP 2200#.
 2-4-90 SITP 2300#.
 2-5-90 SITP 2380#.
 2-6-90 SITP 2450#. Bled off in 23 minutes. Rigged up swabbing unit. Fluid scattered 7500'. Swabbed 4 runs, dry. Recovered 2-1/2 bbls water. Made hourly runs, dry. Shut in at 4:30. DC \$600
 2-7-90 Overnight SITP 450#. Bled off in 15 mins. Initial fluid level 7700' and scattered. Recovered 2 bbls water. Dry on 2nd run. Burning 3-4' lazy flare. Shut in. Rigged down. DC \$260
 2-8-90 Shut in.
 2-9-90 Shut in.
 2-10-12-90 Shut in.
 2-13-90 Shut in.
 2-14-90 SITP 2440 psi. Blew down in 20 minutes. Flowed for 20 hours. Stabilized at 29 psi on 1/8" choke = 15 MCFD. Left open on 1/8" choke.
 2-15-90 Prep to frac.
 2-16-90 Shut in.
 2-17-19-90 Shut in.
 2-20-90 Set frac tank and fill with 2% KCL water. Rigged up pulling unit. Prep to frac.
 2-21-90 SITP 2200#. Frac perforations 8900-08' and 8921-28' (16 holes) via 2-7/8" as follows:

GALS	GEL	CO2	SAND	RATE	PRESSURE
2500	--	--	--	7	3800
Drop 6 balls					
1000		500	acid	8	5270
2000		1000	pad		5290
7000		3500	1/2-1-1/2	14.1	5650
			10000#		
Block			250# rock salt	14	5580
2000		1000	pad	14	5590
7000		3500	1/2-1-1/2	14	5570
			10000#		
1575		775	flush	14	5570

ISDP 2800#, 5 min 2560#, 10 min 2520#, 15 min 2490#. Load to recover 530 bbls. Shut in 3-1/2 hours. Flow back on 1/2" positive choke as follows:

TIME	PRESSURE	BBLS RECOVERED	CHOKE
3:30 PM	400	119	1/2"
5:30 PM	220	56	1/2"
7:30 PM	80	19	1/2"
9:30 PM	70	12	1/2"
11:30 PM	60	8	1/2"
1:30 AM	40	5	1/2"
3:30 AM	20-30	5	1/2"

4:00 AM Rig up swab. Fluid level 2500'.
 6:00 AM Good blow. Swabbed 10 bbls from 4 to 6 AM.
 6:30 AM Well dry. Make mop up run. Lost swab and 200' of line. Prep to continue swabbing. Total recover 234. Total load left to recover 296 bbls.
 2-22-90 Flowed well on 1/4" positive choke until 2:00 PM with 70# on 1/4" choke (122 MCF) with trickle of water. Flare shows CO2, does not burn clean. Made swab run to 8000' at 2:00 PM and recovered 3 bbls. Made run at 3:00 PM and recovered 1 bbl. Made run at 5:00 PM, dry. Placed on 1/4" positive choke for night.
 2-23-90 At 7:00 AM had 35# on 1/4" choke - 70 MCF. Made swab run to 8000' and recovered 3 bbls scattered fluid. Placed on 1/4" choke at 11:00 AM. Had 70# on 1/4" choke - 122 MCF. Swab ran to 8000' and recovered 2 bbls scattered

yates Petroleum - Parish "IV" Com #2 (Unit F) 26-19S-24E Eddy Co., NM

fluid. At 5:00 PM well had 60 psi on 1/4" choke - 107 MCF. Made swab run and recovered 2 bbls. Placed on 1/4" positive choke for night. At 7:00 AM 2-23-90, well flowing 65 psi on 1/4" choke - 115 MCF. Water is still frac load. Load left to recover 285 bbls.
2-24-90 FTP 65# on 1/4" - 115 MCF. Made swab run. Recovered 2 bbls scattered fluid. At 1:00 PM FTP 60# on 1/4" - 107 MCF. Made swab run and recovered 2 bbls scattered fluid. At 5:00 PM had 55# on 1/4". Made swab run and recovered 1 bbl scattered fluid. Shut in. Prep to

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III
1000 Rio Brazos Rd, Aztec, NM 87410-026

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

RECEIVED

MAR - 9 1992

O. C. D.
OFFICE

Form C-107
Revised 4-1-91

Filing Instructions
Bottom of Page

APPLICATION FOR MULTIPLE COMPLETION

Yates Petroleum Corporation 105 S. 1st Str. Artesia, NM 88210

Operator	Address		
Parish IV Com	2	N	26-19S-24E
Lease	Well No.	Unit Ltr. - Sec - Twp - Rge	County
			Eddy

All applicants for multiple completion must complete Items 1 and 2 below.

1. The following facts are submitted:	Upper Zone	Intermediate Zone	Lower Zone
a. Name of Pool and Formation	Canyon		Atoka/Morrow
b. Top and Bottom of Pay Section (Perforations)	7629-7673'		8585-88' 8631-46' 8900-08'; 8921-28'
c. Type of production (Oil or Gas)	Oil & Gas		Gas
d. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing
e. Daily Production <input checked="" type="checkbox"/> Actual Canyon <input checked="" type="checkbox"/> Estimated Morrow Oil Bbls. Atoka Gas MCF Water Bbls.	400 MCF/D 300 BWPD		450 MCF/D 64% Atoka 36% Morrow Commingled by Adm. Order DHC-833

2. The following must be attached:
- 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.
 - 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.
 - 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-E)

OPERATOR:

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

Signature Chuck Morgan

Printed Name & Title Chuck Morgan, Engineer

Date 3/6/92 Telephone (505) 748-1471

OIL CONSERVATION DIVISION

Approved by: _____

Title: _____

Date: _____

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 separate application for approval of the same should be filed simultaneously with this application.

FILING INSTRUCTIONS:

- District Approval -- See rule 112-A-B -- Submit 4 copies of Form C-107 with attachments to appropriate district office.
- Division Director Administrative Approval -- See Rule 112-C -- Submit 2 copies of Form C-107 with attachments to Division office in Santa Fe and 2 copies of Form C-107 with attachments to appropriate district office.
- Multiple completions not qualifying for District or Division Director approval may be set for hearing as outlined in Rule 112-A-E.

**NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

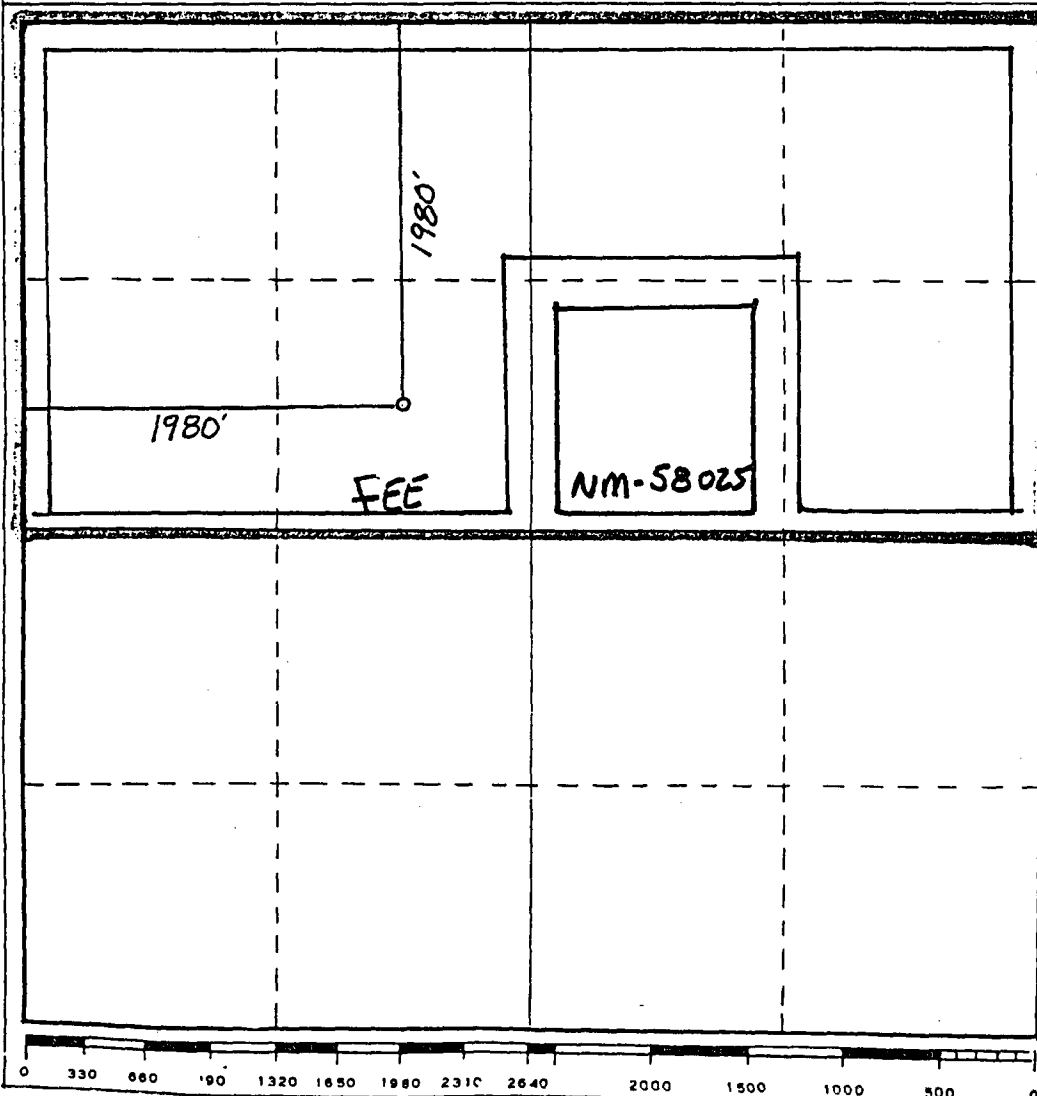
Operator YATES PETROLEUM CORPORATION			Lease Parish IV Com		Well No. 2
Unit Letter F	Section 26	Township 19 South	Range 24 East	County Eddy County, N.M.	
Actual Footage Location of Well: <div style="display: flex; justify-content: space-between;"> 1980 feet from the North line and 1980 feet from the West line </div>					
Ground Level Elev. 3640.	Producing Formation Morrow	Pool Und. Hoag Tank Morrow	Dedicated Acreage: 3.20 Acres		

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☒ Yes ☐ No If answer is "yes," type of consolidation **Communitized**

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

Ken Beardomph

Name

KEN BEARDOMPH

Position

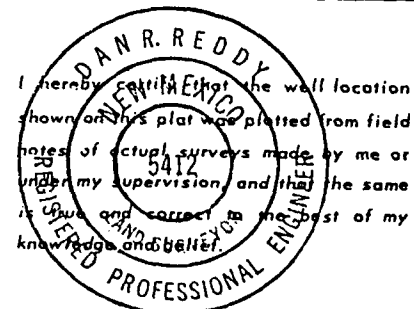
LANDMAN

Company

Yates Pet. Corp.

Date

8-23-89



Date Surveyed

August 21, 1989

Registered Professional Engineer
and/or Land Surveyor

Dan R. Reddy

Certificate No.

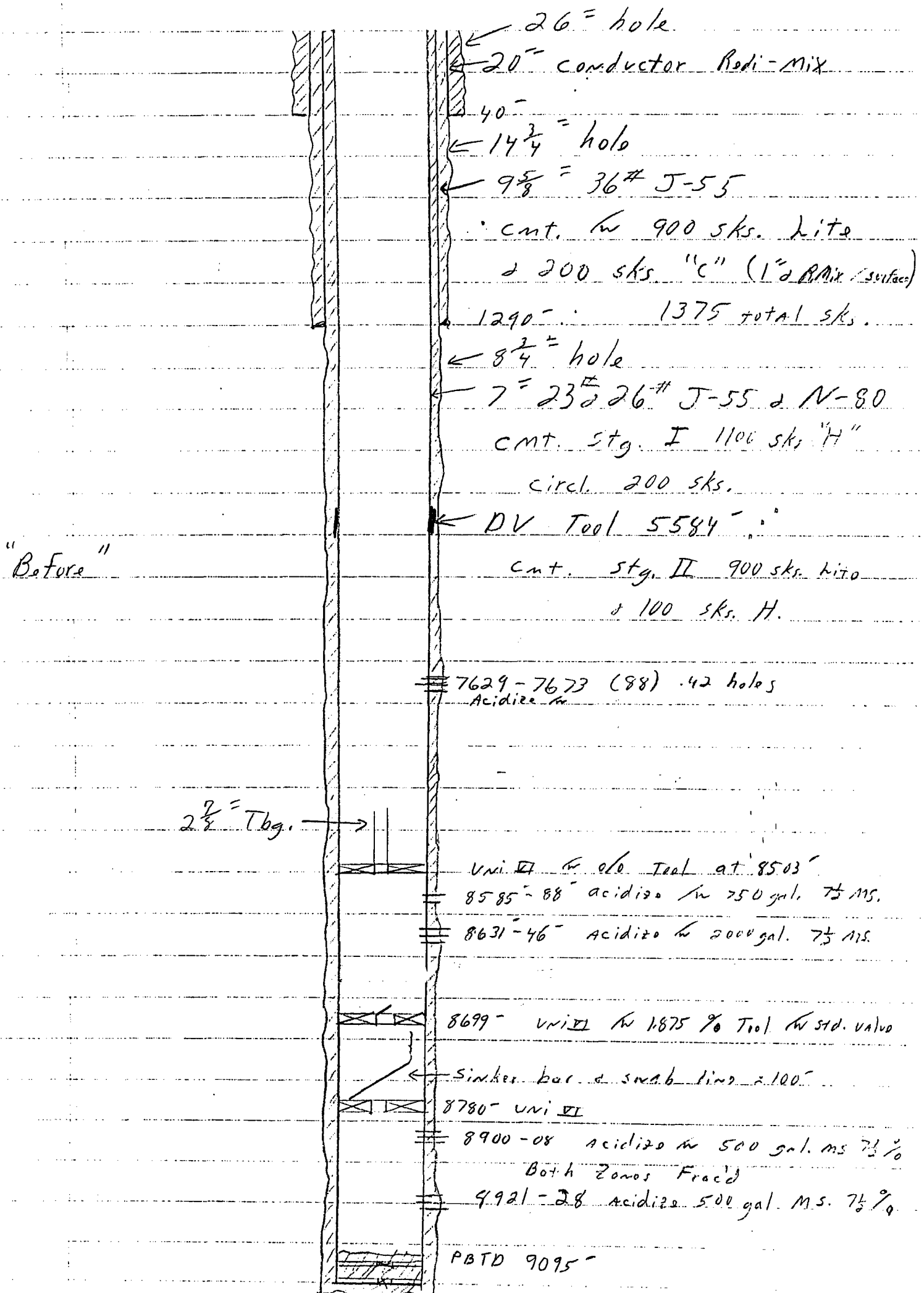
NM PERITS NO 5412

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Parish IV Com #2

Sec. 26-195-24E

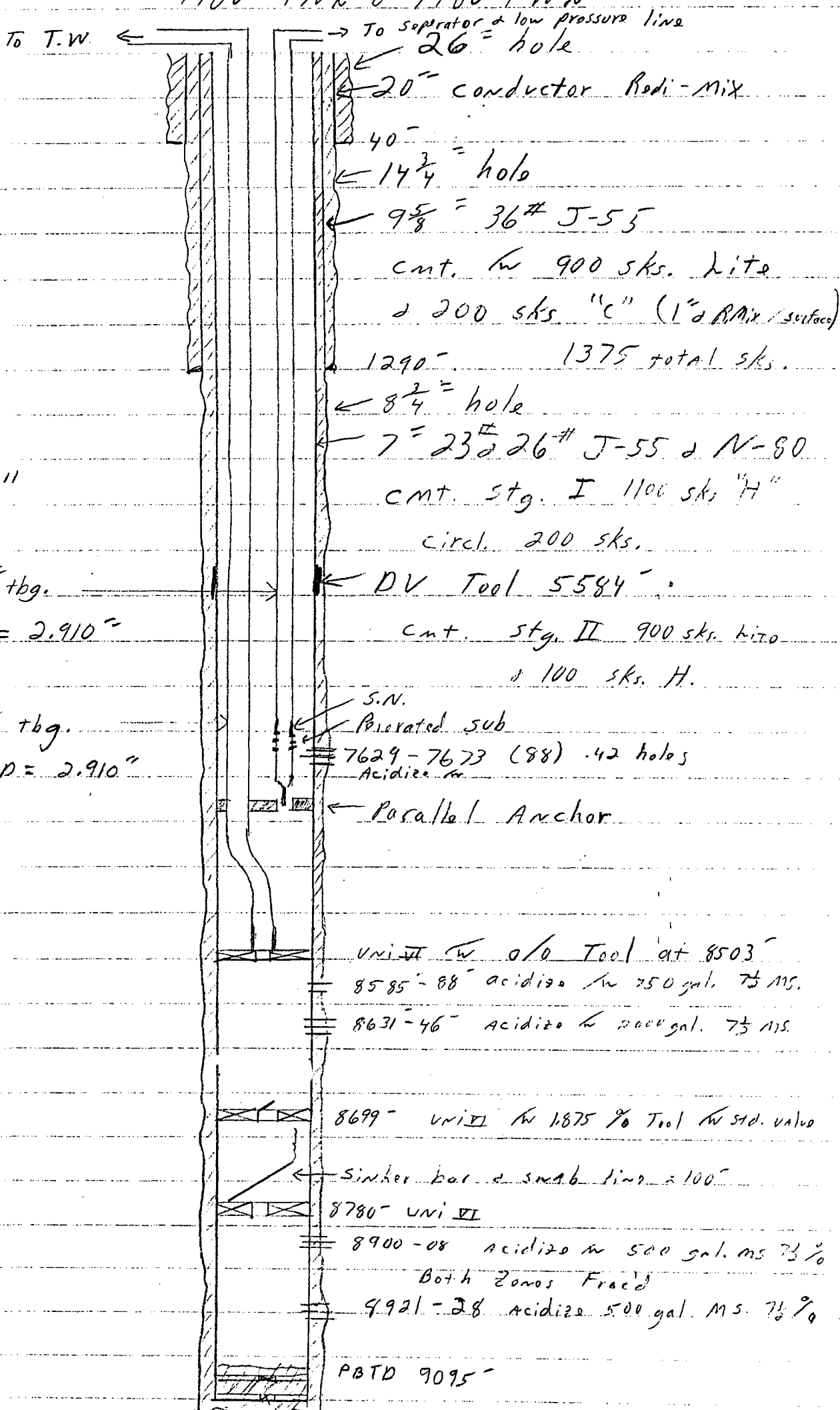
1980 FWH & 1980 FWH

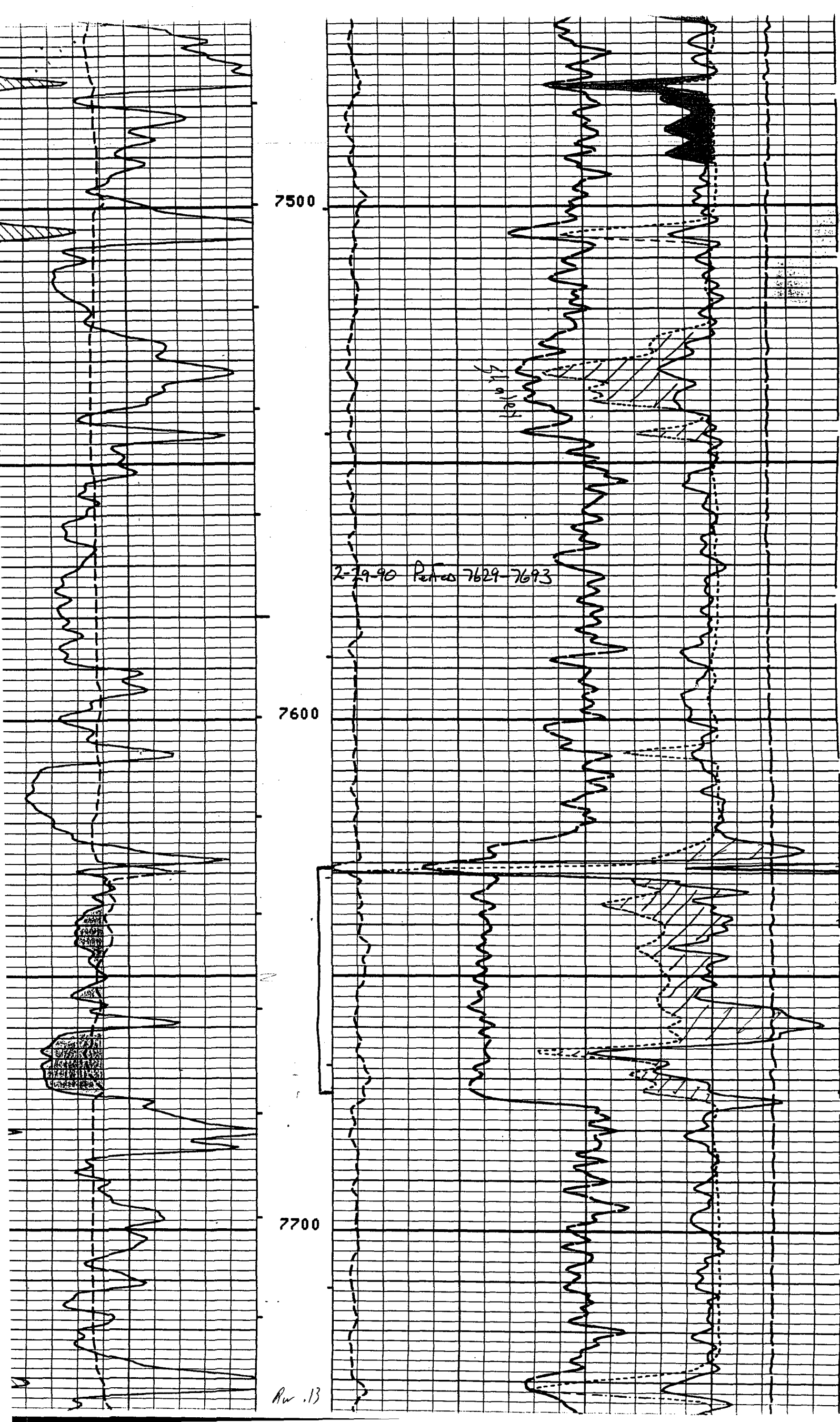


Parish IV Com #2

Sec. 26-195-24E

1980 FWH & 1980 FWH





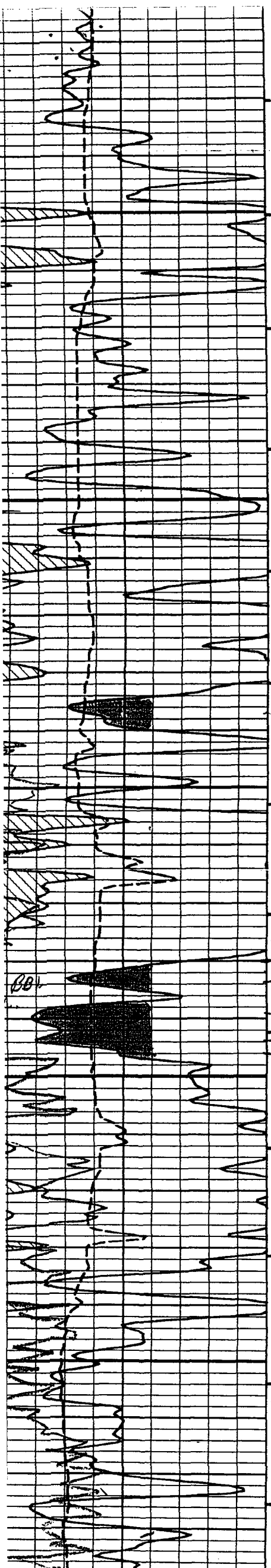
7500

2-79-90 Refs 7629-7693

7600

7700

Rw. 13



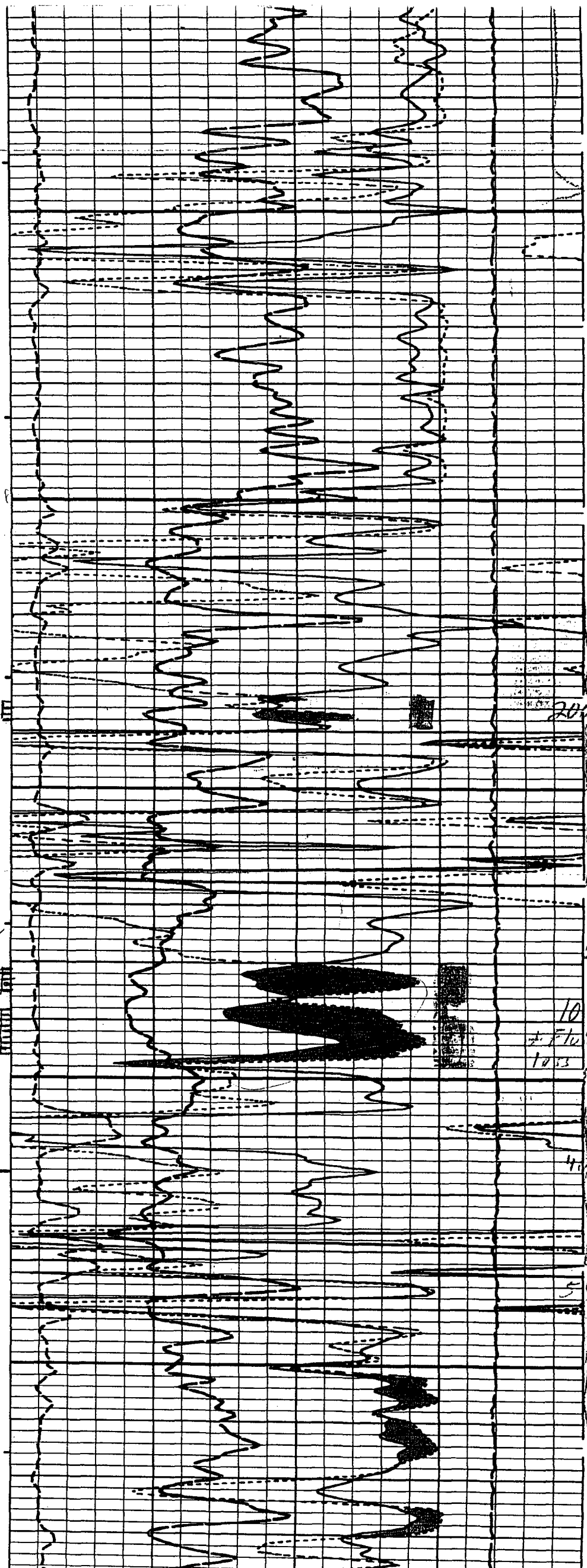
8500

10 160 21

8600

Ø 5W
9 120 21
8.5 300 14
9.5 200 16
4 1000 17
9 100 19

8700



200

100
± Fl. d
1053

4

50

8800

1-19-90 Perfor 8900-08 Swabbed dry w/ small blow

BROWN w/ 500 GALS 1/2 hr

2.5 BPM AT 8900 ESP - 1350 15 min @ 1000

Swabbed dry w/ Flow

8900

1-1-90

Perfor 8921-28 w/ 7 Holes

Dropped Bar, Small Blow

on tubing

BROWN w/ 500 gal 7/8" MS

3 BPM at 2000 PSL

ESP - 1500 15 min @ 910

Swab down w/ 4" Flow

STON - 400 PSI

2-20-90 Fraced w/ 20000 GALS - 5" Frac Gel & (D)

AT 4 BPM AT 8900 PERFOR 250 SX 20-40 SAND AND

Balls & Back - Flowed and Swabbed

60* on 1/2" Choke

9000