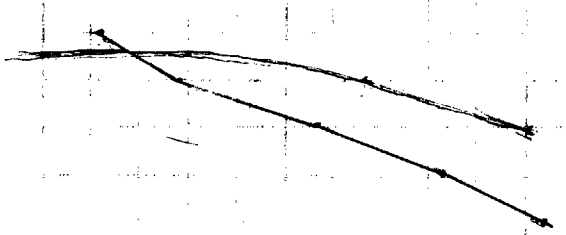
BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Shell Tex Exhibit No. 8
Case No. 6221-22

3300

3400

3500



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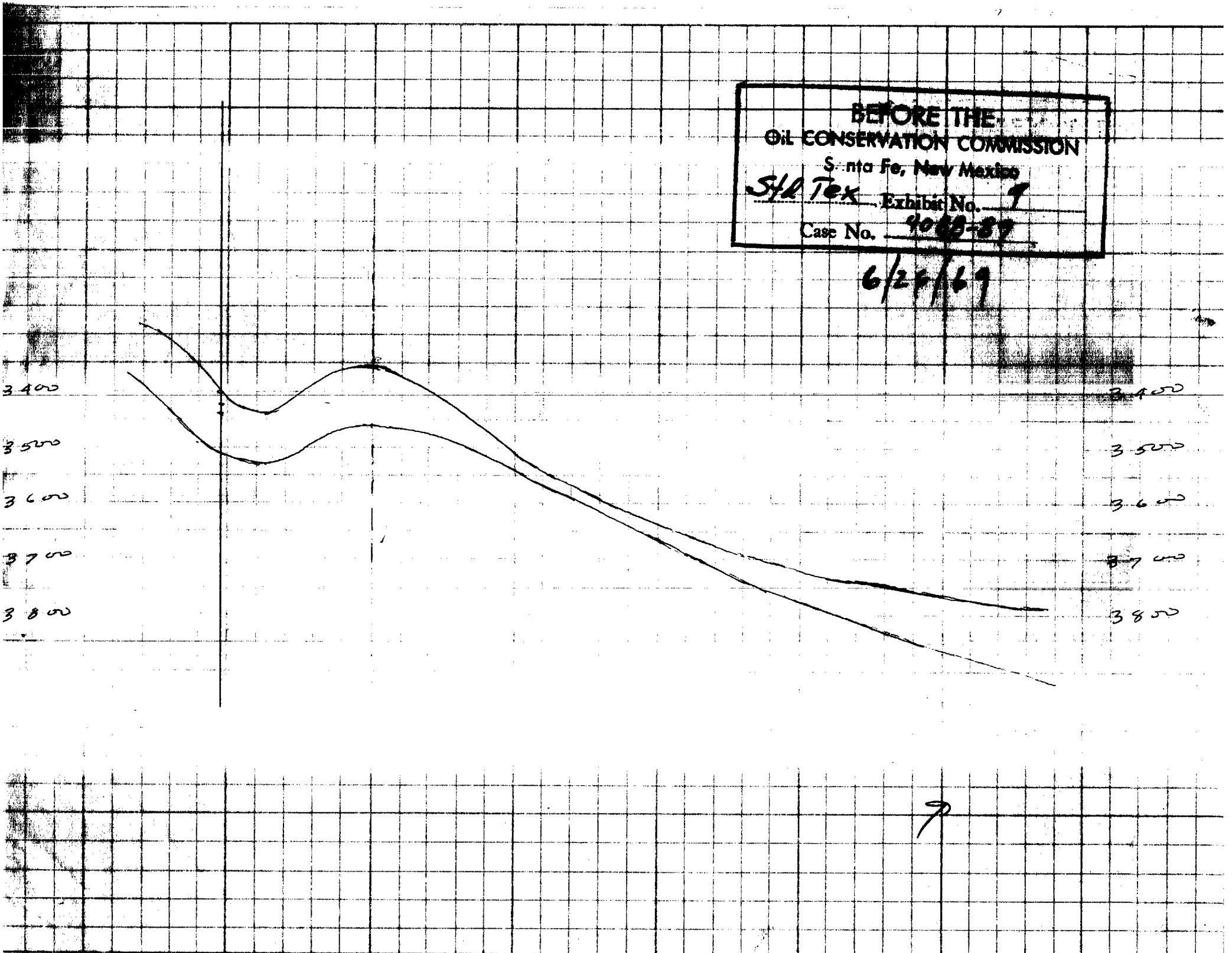
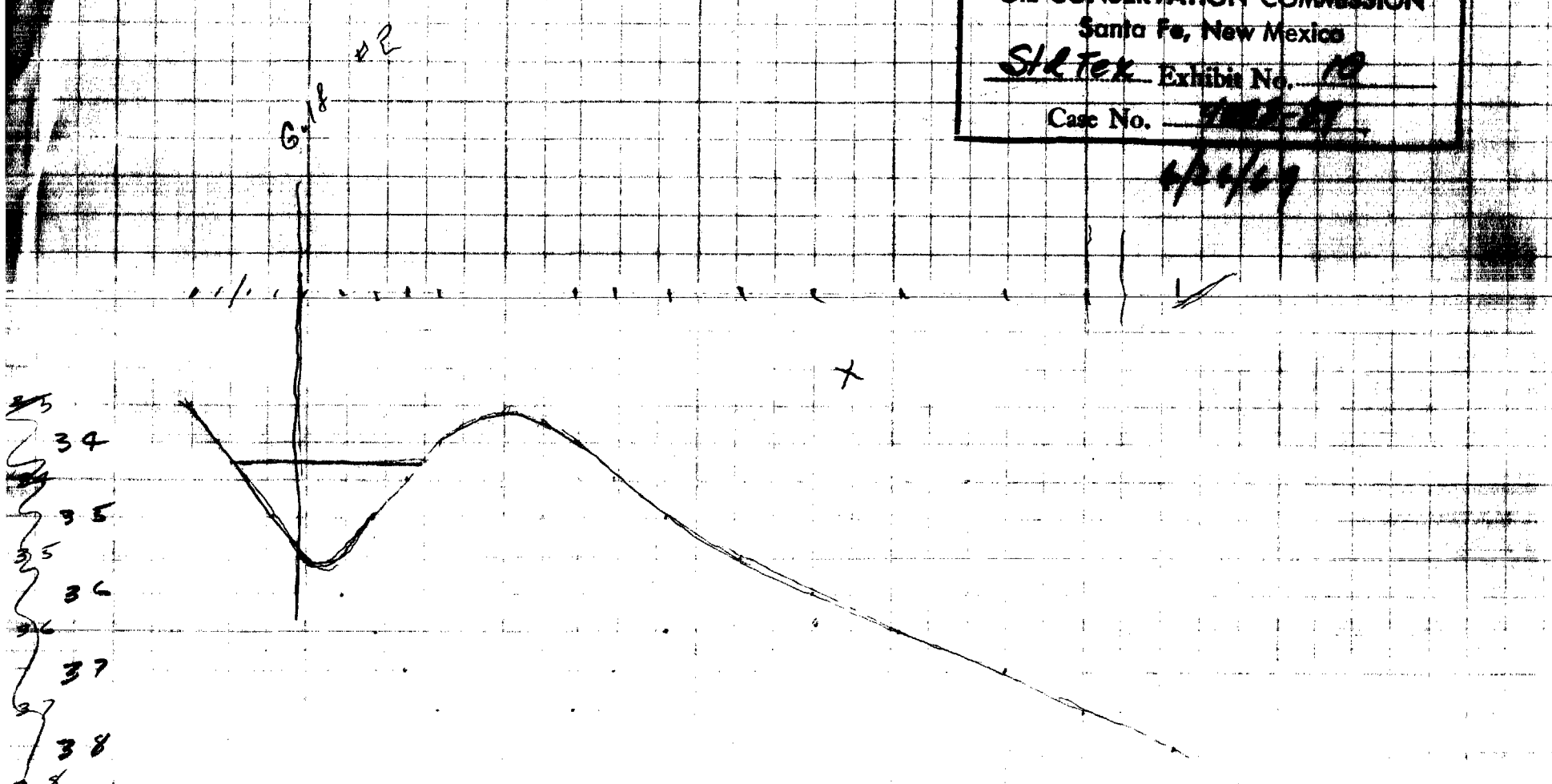

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Stl Tex Exhibit No. 1
Case No. 4088-89
6/29/89
3400
3500
3600
3700
3800
3400
3500
3600
3700
3800

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Siltex Exhibit No. 10
Case No. 4244



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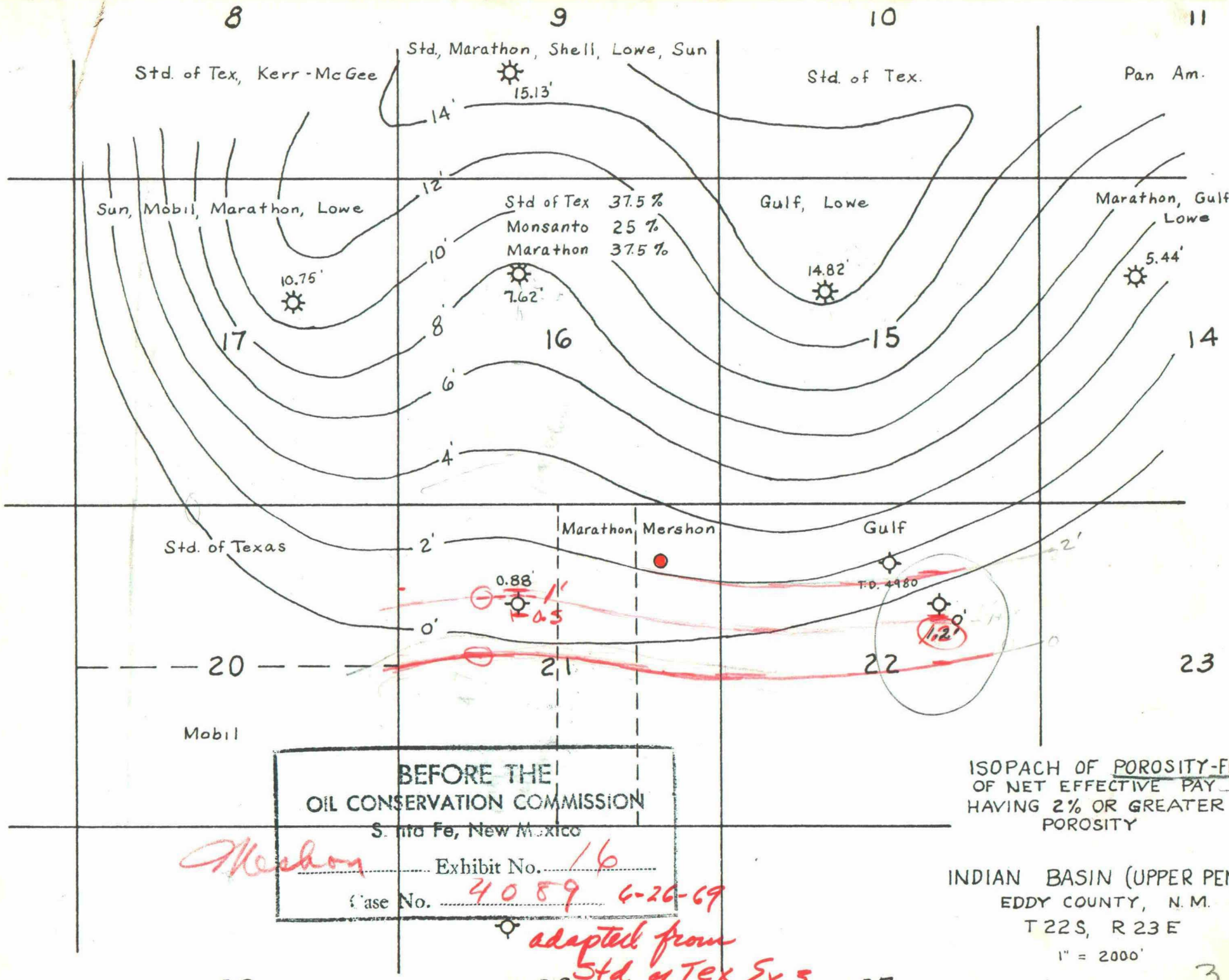
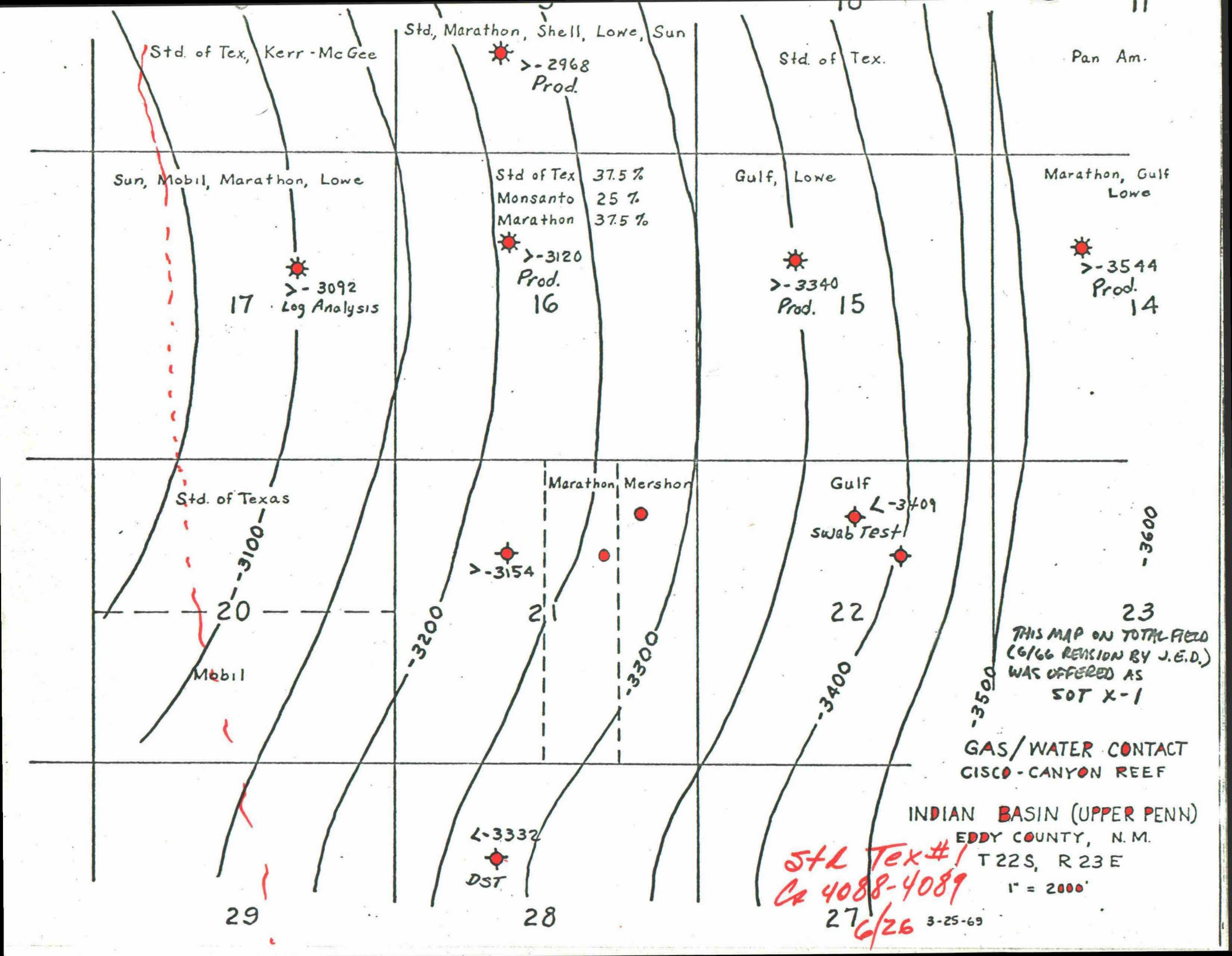


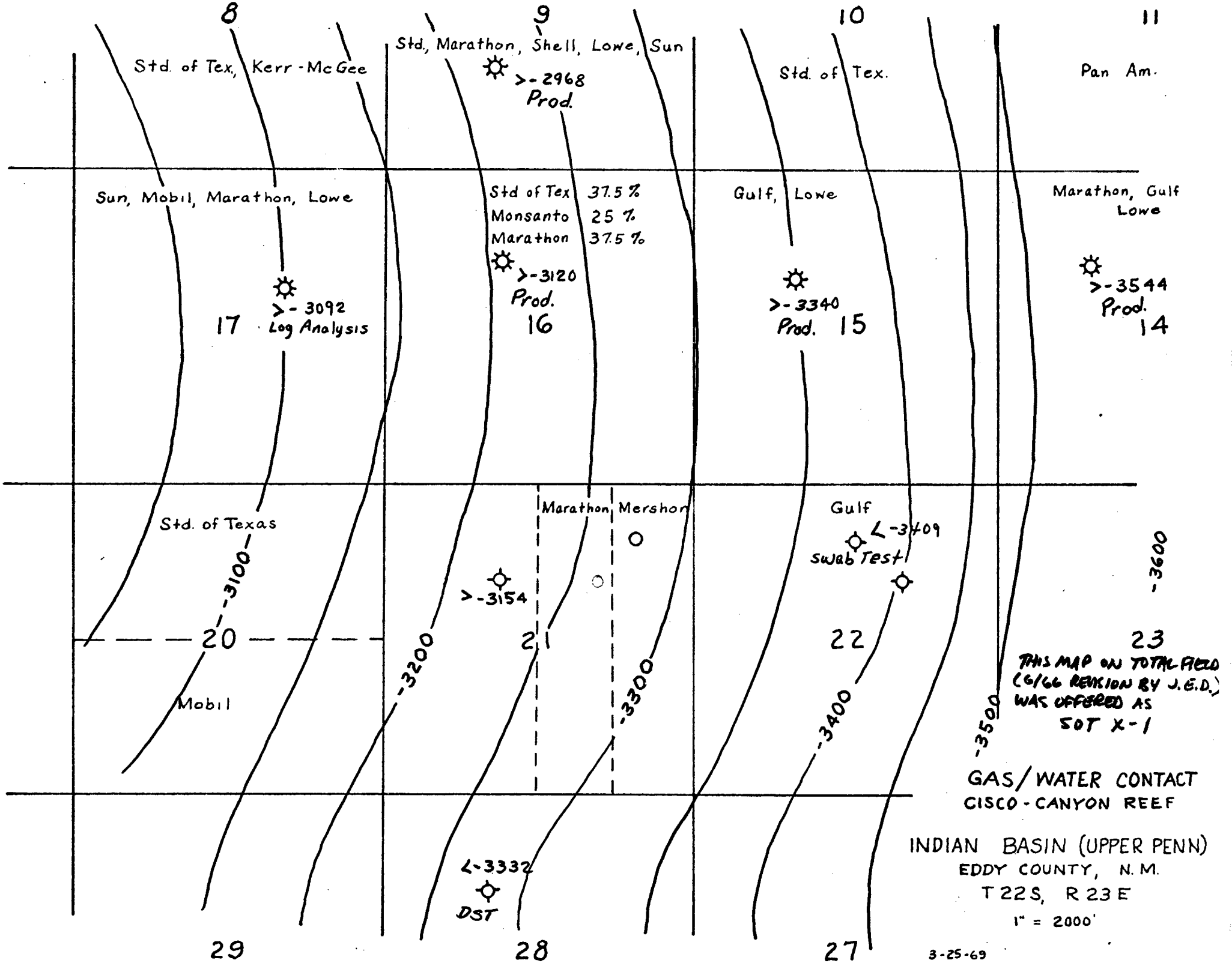
ISOPACH OF POROSITY-FEET OF NET EFFECTIVE PAY HAVING 2% OR GREATER POROSITY

INDIAN BASIN (UPPER PENN)
EDDY COUNTY, N. M.
T 22 S, R 23 E
1" = 2000'

3-25-69

3


Std. of Tex., Kerr-McGee
Std., Marathon, Shell, Lowe, Sun
>-2968
Prod.
Std. of Tex.
Pan Am.
Sun, Mobil, Marathon, Lowe
>-3092
Log Analysis
17
Std of Tex 37.5 %
Monsanto 25 %
Marathon 37.5 %
>-3120
Prod.
16
Gulf, Lowe
>-3340
Prod.
15
Marathon, Gulf
Lowe
>-3544
Prod.
14
Std. of Texas
-3100
Marathon
Mershon
>-3154
Gulf
<-3409
swab test
-3600
20
21
22
23
-3200
-3300
-3400
-3500
THIS MAP ON TOTAL FIELD (6/66 REVISION BY J.E.D.) WAS OFFERED AS SOT X-1
Mobil
GAS/WATER CONTACT
CISCO-CANYON REEF
INDIAN BASIN (UPPER PENN)
EDDY COUNTY, N.M.
T 22 S, R 23 E
1" = 2000'
<-3332
DST
Std Tex #1
Cr 4088-4089
29
28
27
6/26
3-25-69


8
9
10
11
Std. of Tex, Kerr-McGee
Std, Marathon, Shell, Lowe, Sun
>-2968
Prod.
Std. of Tex.
Pan Am.
Sun, Mobil, Marathon, Lowe
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Log Analysis
17
Std of Tex 37.5 %
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Gulf, Lowe
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Lowe
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Prod.
14
Std. of Texas
-3100
20
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Marathon, Mershon
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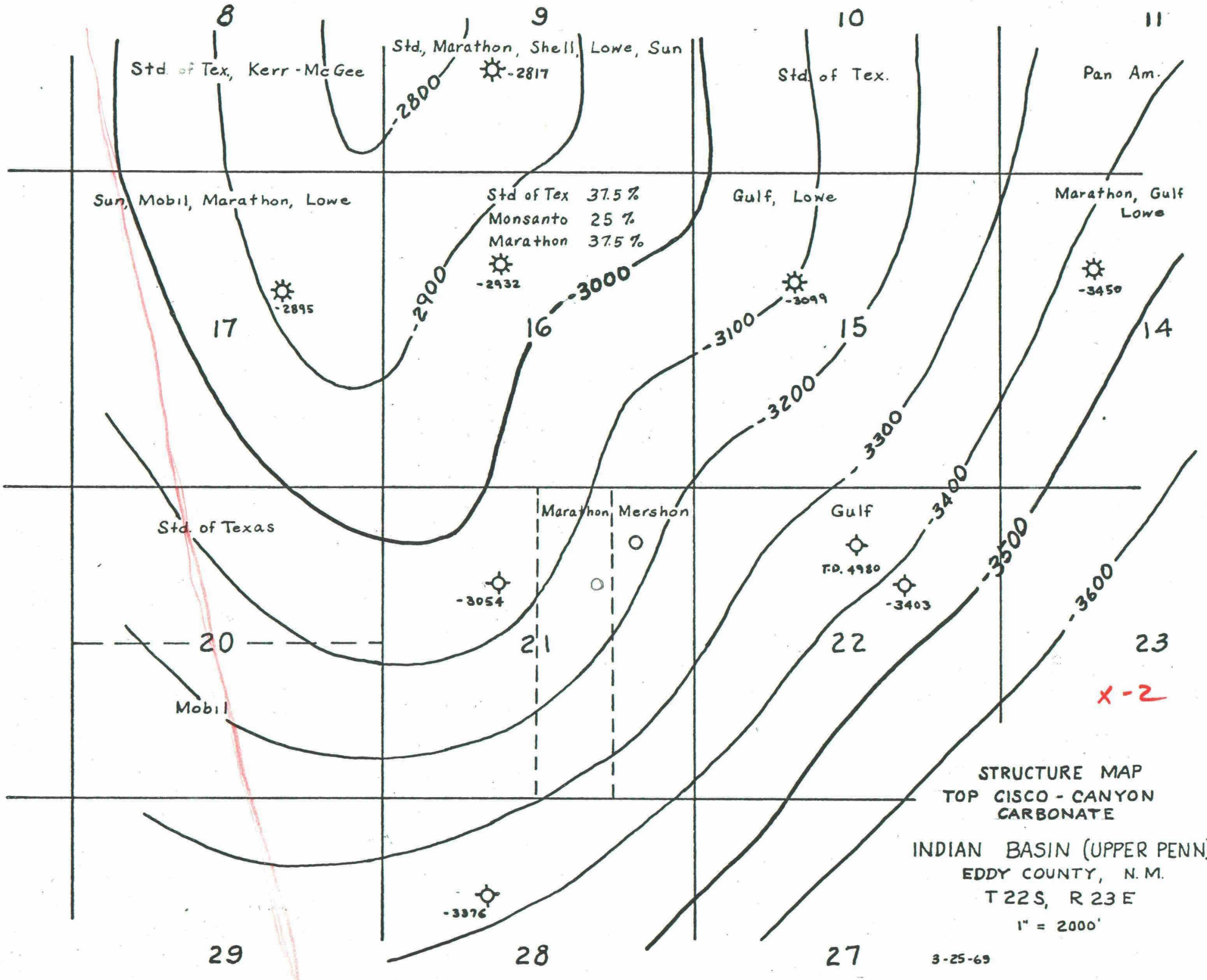
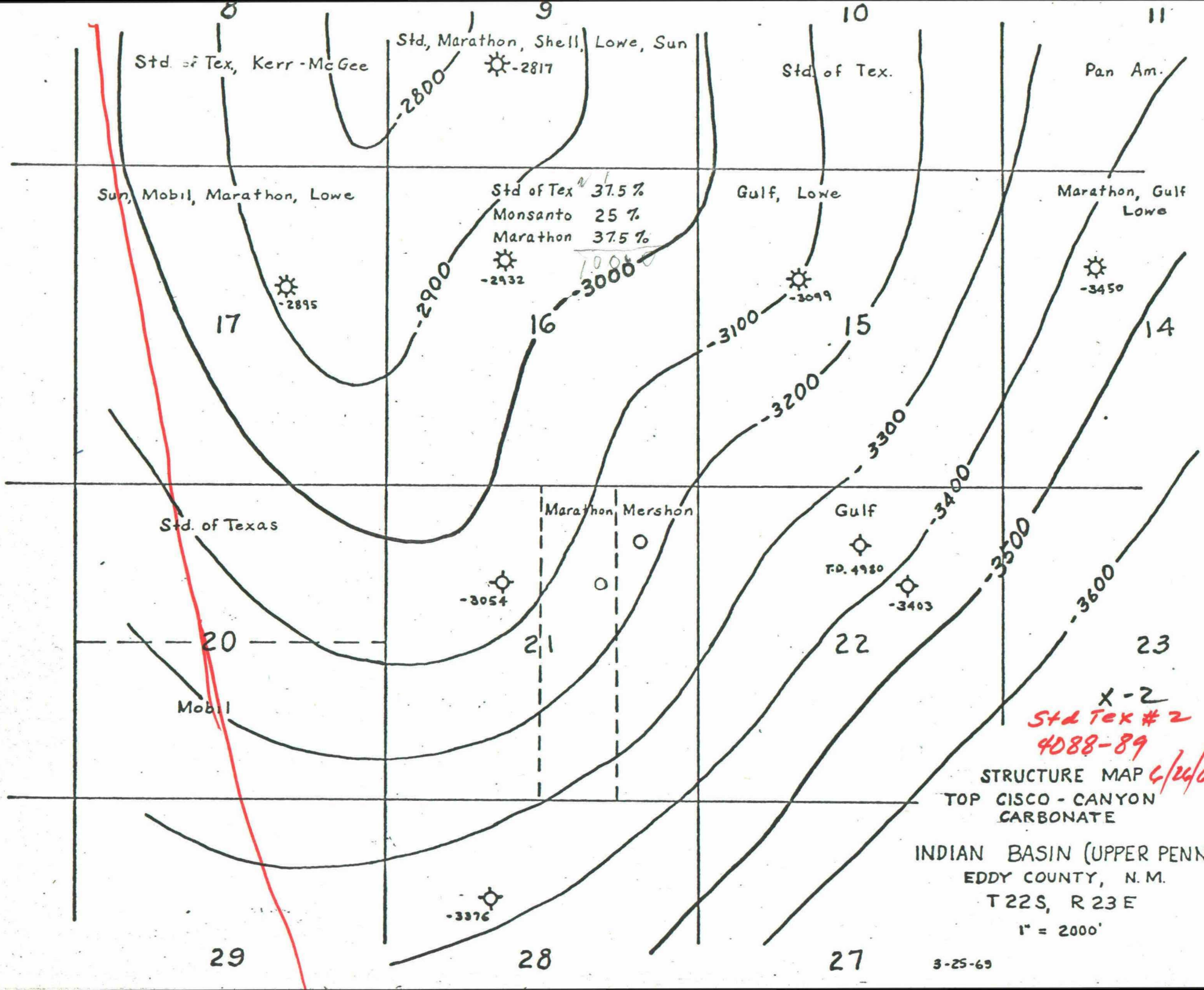
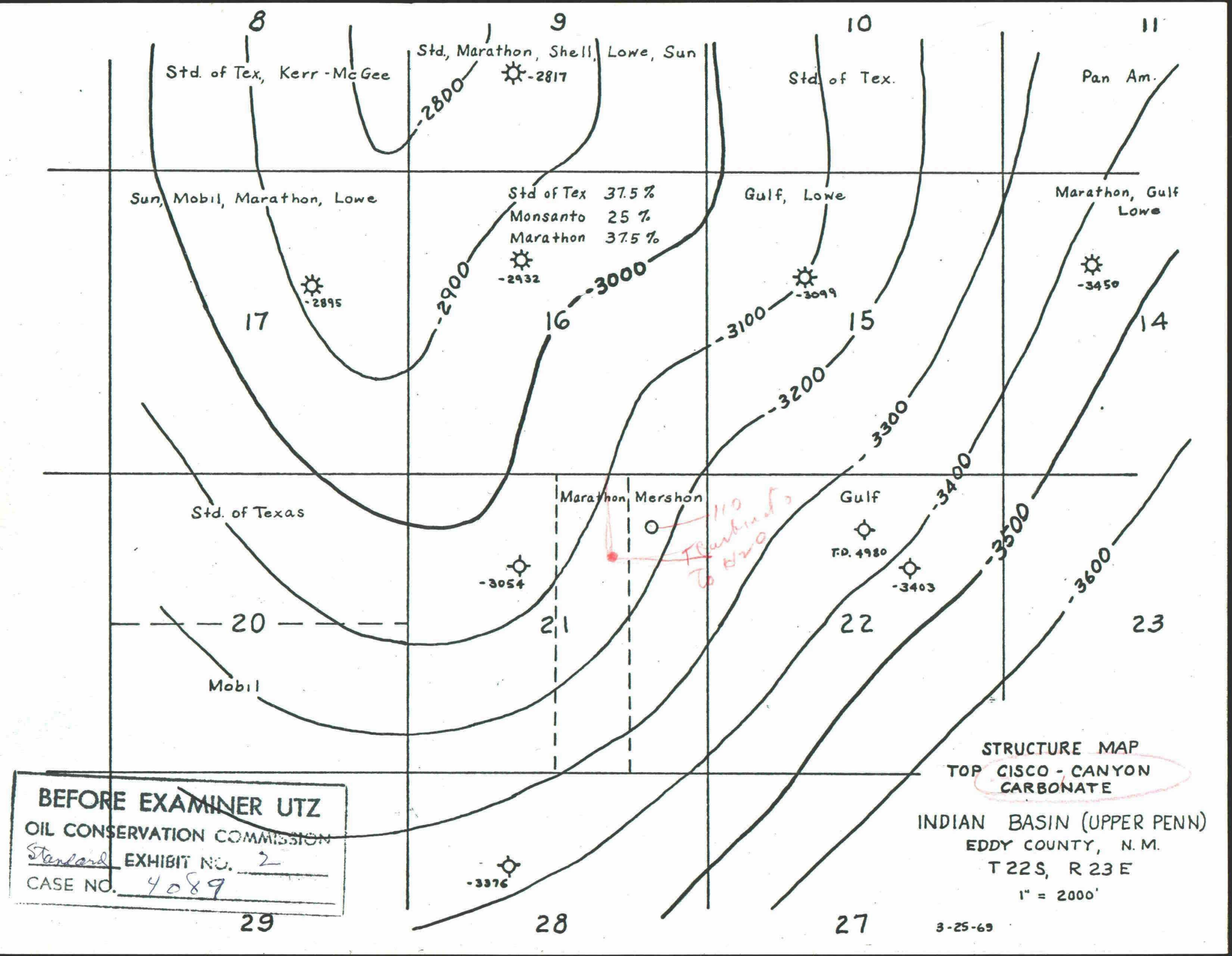
21
-3200
-3300
Gulf
L-3409
swab Test
22
-3400
-3500
-3600
23
THIS MAP ON TOTAL FIELD (6/66 REVISION BY J.E.D.) WAS OFFERED AS EXHIBIT X-1
GAS/WATER CONTACT
CISCO-CANYON REEF
L-3332
DST
29
28
27
INDIAN BASIN (UPPER PENN)
EDDY COUNTY, N.M.
T 22 S, R 23 E
1" = 2000'
3-25-69


8
9
10
11
Std. of Tex., Kerr-McGee
Std., Marathon, Shell, Lowe, Sun
-2817
-2800
Std. of Tex.
Pan Am.
Sun, Mobil, Marathon, Lowe
Std of Tex 37.5 %
Monsanto 25 %
Marathon 37.5 %
-2932
-2900
-3000
Gulf, Lowe
-3099
Marathon, Gulf
Lowe
-3450
-2895
17
16
15
14
-3100
-3200
-3300
-3400
-3500
-3600
Std. of Texas
Marathon, Mershon
Gulf
T.D. 4980
-3054
-3403
20
21
22
23
Mobil
X-2
STRUCTURE MAP
TOP CISCO - CANYON
CARBONATE
INDIAN BASIN (UPPER PENN)
EDDY COUNTY, N.M.
T 22 S, R 23 E
1" = 2000'
-3376
29
28
27
3-25-69

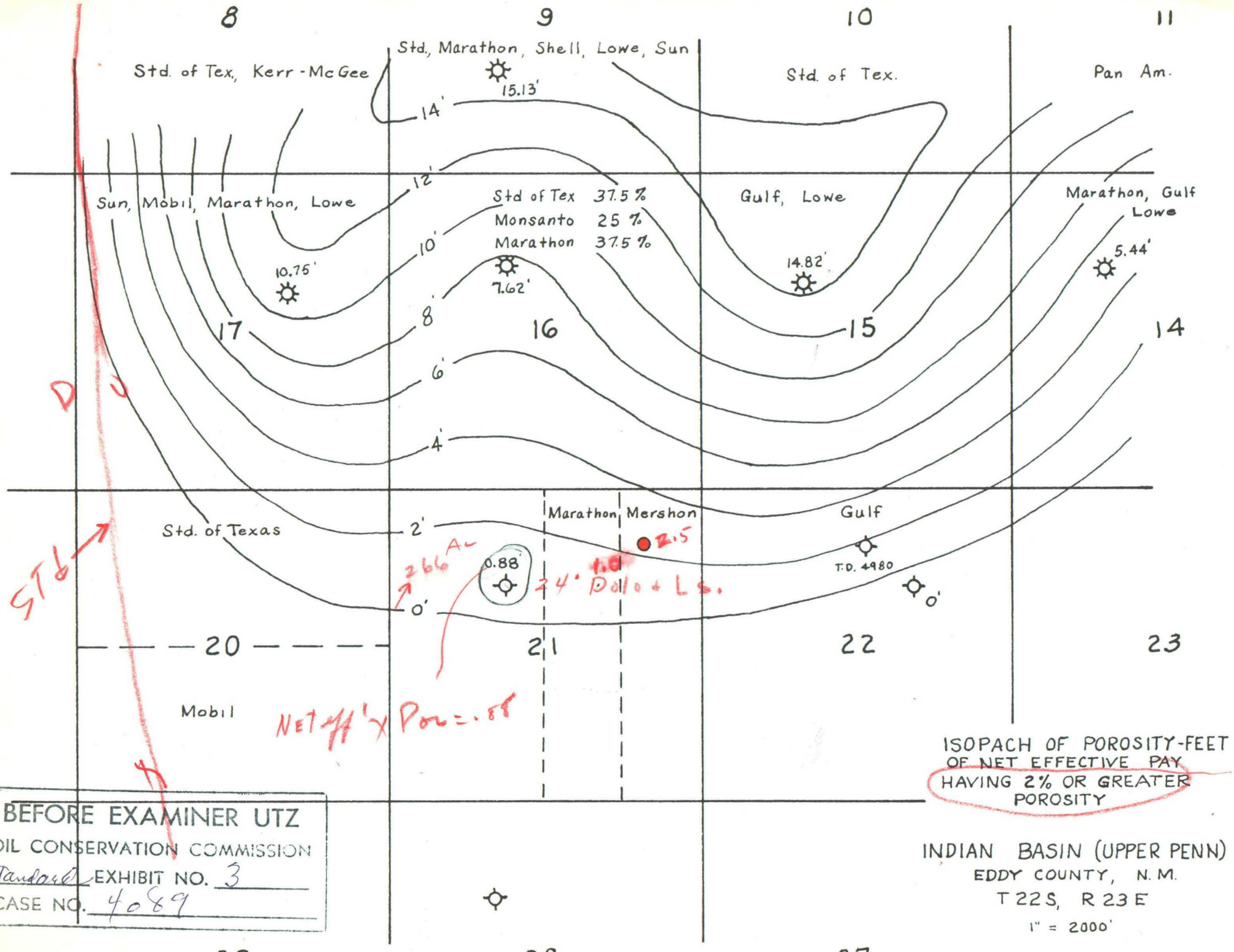
BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Exhibit No. 2
Case No. 4089

6/24/69


8
9
10
11
Std. of Tex., Kerr-McGee
Std., Marathon, Shell, Lowe, Sun
-2817
-2800
Std. of Tex.
Pan Am.
Sun, Mobil, Marathon, Lowe
Std of Tex 37.5%
Monsanto 25%
Marathon 37.5%
-2932
-2900
-3000
Gulf, Lowe
-3099
Marathon, Gulf
Lowe
-3450
-2895
17
16
15
14
-3100
-3200
-3300
-3400
-3500
-3600
Std. of Texas
Marathon, Mershon
Gulf
T.D. 4980
-3054
-3403
20
21
22
23
Mobil
-3376
29
28
27
X-2
Std Tex #2
4088-89
STRUCTURE MAP 6/24/69
TOP CISCO - CANYON
CARBONATE
INDIAN BASIN (UPPER PENN)
EDDY COUNTY, N.M.
T 22 S, R 23 E
1" = 2000'
3-25-69



BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
Standard EXHIBIT NO. 2
CASE NO. 4089



BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
Standard EXHIBIT NO. 3
CASE NO. 4089

SCHLUMBERGER

COMPENSATED FORMATION DENSITY LOG

COUNTY EDDY
FIELD or LOCATION INDIAN BASIN
WELL INDIAN FEDERAL #1
COMPANY HANAGAN PET. CORP.

COMPANY HANAGAN PETROLEUM CORPORATION

WELL INDIAN FEDERAL #1

FIELD INDIAN BASIN

COUNTY EDDY STATE NEW MEXICO

Location: 1650' FROM N/L
1980' FROM W/L

Sec. 21 Twp. 22S Rge. 23E

Other Services: SNP, ML, CDR

Permanent Datum: GL Elev.: 4256.6
Log Measured From KB 17.4 Ft. Above Perm. Datum
Drilling Measured From KB

Elev.: K.B. 4274
D.F. -
G.L. 4256.6

Date	12-9-66
Run No.	ONE
Type Log	FDC+GR
Depth—Driller	7585
Depth—Logger	7592
Bottom logged interval	7591
Top logged interval	0
Type fluid in hole	CHEM GEL
Salinity, PPM Cl.	2200
Density	8.7
Level	FULL
Max rec. temp., deg F.	148
Operating rig time	5 HOURS
Recorded by	TARRALL
Witnessed by	MR. HANAGAN

RUN No.	BORE-HOLE RECORD Bit	From	To	CASING RECORD Size	Wgt.	From	To
1	7 7/8	CASING	TD	8 5/8		SURFACE	2101

SCHLUMBERGER

COMPENSATED NEUTRON FORMATION DENSITY LOG

COUNTY EDDY
FIELD or LOCATION INDIAN BASIN
WELL INDIAN FEDERAL #1
COMPANY HANAGAN PET. CO.

COMPANY HANAGAN PETROLEUM CORPORATION

WELL INDIAN FEDERAL #1

FIELD INDIAN BASIN

COUNTY EDDY STATE NEW MEXICO

Location: 1650' FROM N/L
1980' FROM W/L

Sec. 21 Twp. 22S Rge. 23E

Other Services: FDC-GR, ML, CDR

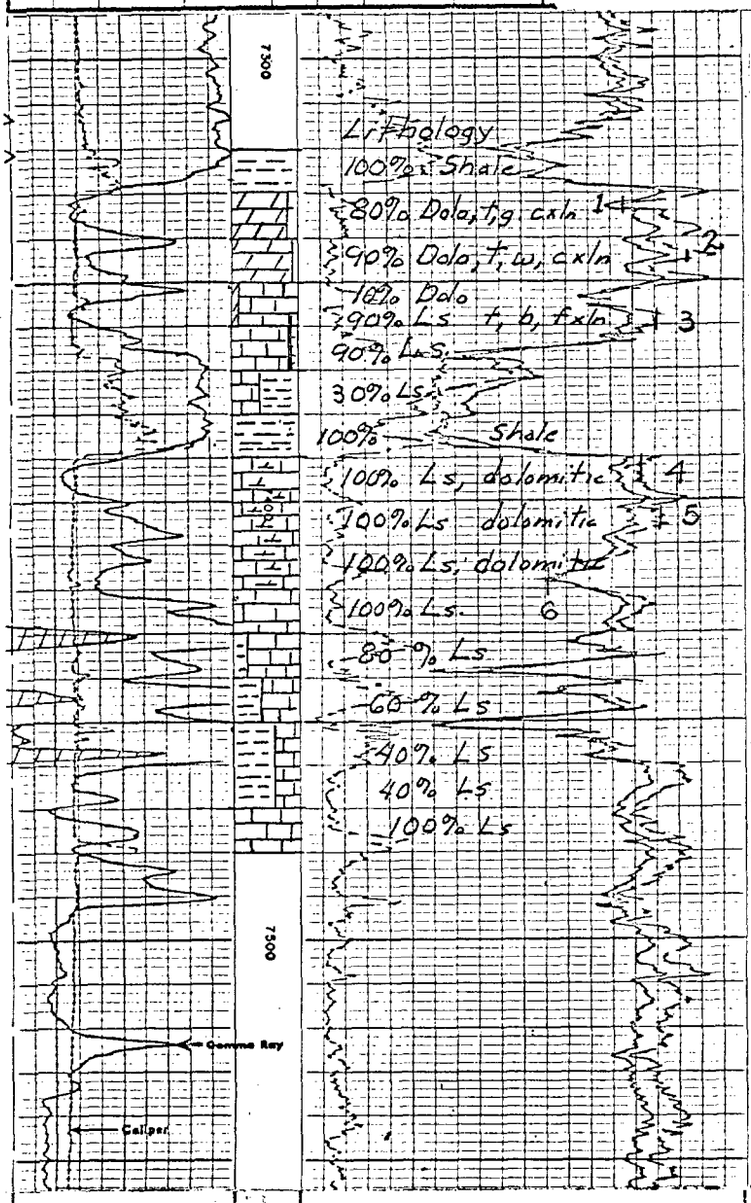
Permanent Datum: GL Elev.: 4256.6
Log Measured From KB 17.4 Ft. Above Perm. Datum
Drilling Measured From KB

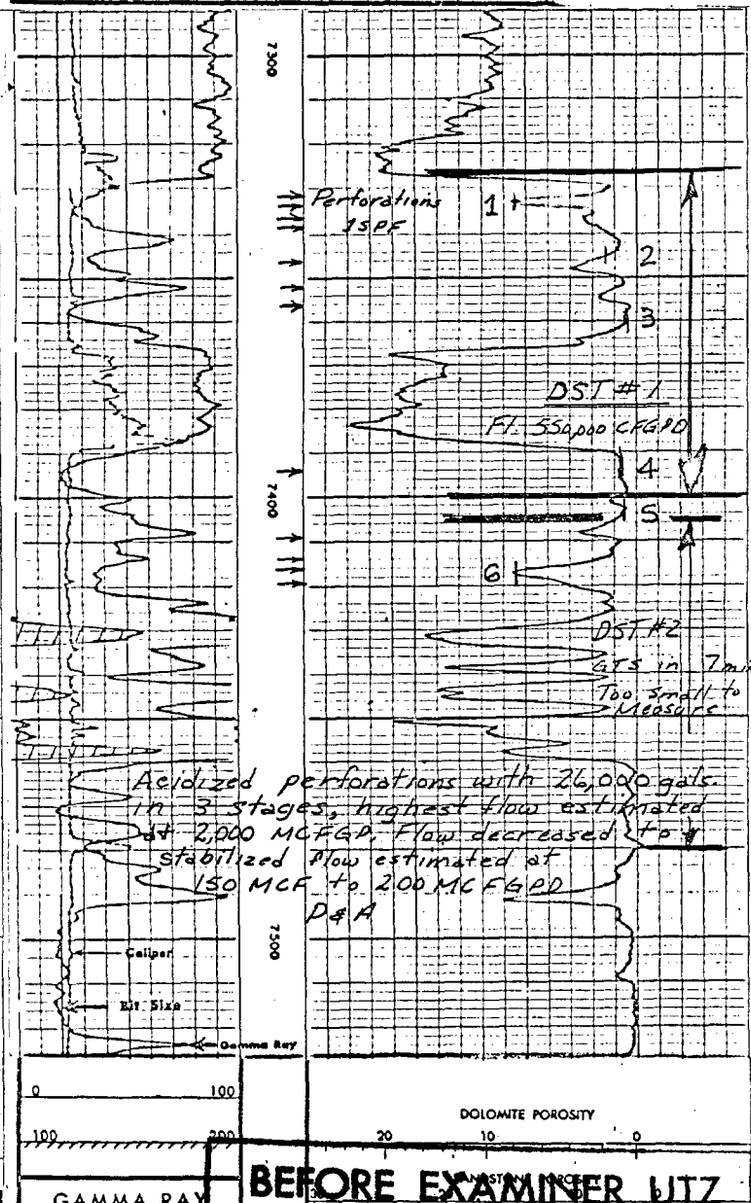
Elev.: K.B. 4274
D.F. -
G.L. 4256.6

4256.6

Date	12-9-66
Run No.	ONE
Type Log	SNP+GR
Depth—Driller	7585
Depth—Logger	7590
Bottom logged interval	7589
Top logged interval	6000
Type fluid in hole	CHEM GEL
Salinity, PPM Cl.	2200
Density	8.7
Level	FULL
Max rec. temp., deg F.	148
Operating rig time	2 HOURS
Recorded by	TARRALL
Witnessed by	MR. HANAGAN

RUN No.	BORE-HOLE RECORD Bit	From	To	CASING RECORD Size	Wgt.	From	To
1	7 7/8	CASING	TD	8 5/8		SURFACE	2101





BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 3
CASE NO. 4089

SCHLUMBERGER

COMPANY PAN AMERICAN PETROLEUM CORPORATION

WELL N. G. C. GAS UNIT WELL #1

FIELD INDIAN BASIN

COUNTY LEDDY STATE NEW MEXICO

COUNTY EDDY FIELD or LOCATION INDIAN BASIN WELL N. G. C. GAS UNIT #1 COMPANY PAN AMERICAN PETROLEUM CORP.

LOCATION 1650' FNL 1650' FWL

Sec. 13 Twp. 22-S Rge. 23 E

Other Services: OIL

Permanent Datum: GROUND LEVEL Elev. 4040.1

Log Measured From K.B. 13.90 Ft. Above Perm. Datum

Drilling Measured From K.B.

Elev.: K.B. 4054 D.F. -- G.L. 4054.1

Date	12-10-35			
Run No.	ONE			
Depth—Driller	7897			
Depth—Logger	7897			
Btm. Log Interval	7884			
Top Log Interval	20			
Casing—Driller	8 5/8"@2294	@	@	@
Casing—Logger	2294			
Bit Size	7 7/8"			
Type Fluid in Hole	CHEM OIL			
Dens. Visc.	8.6 40			
pH Fluid Loss	- 6 cc	ml	ml	ml
Source of Sample	PIT			
R_m @ Meas. Temp	1.35 @ 82°F	@ °F	@ °F	@ °F
R_{mf} @ Meas. Temp	1.1 @ 72°F	@ °F	@ °F	@ °F
R_{mc} @ Meas. Temp	-- @ --°F	@ °F	@ °F	@ °F
Source: R_{mf} R_{mc}	M			
R_m @ BHT	1.1 @ 131°F	@ °F	@ °F	@ °F
Time Since Circ.	--			
Max. Rec. Temp.	131 °F	°F	°F	°F
Equip. Location	4556 ART.			
Recorded By	WENDLAND			
Witnessed By	KLAAR & ARTHUR			

FOLD HERE

Perforations 2 SPF

Lithology

100% Shale

40% Dolo
60% Ls

20% Dolo
80% Ls

DST 7715' to T.D.
60% Dolo
40% Ls
open 3 hr. 45 min

90% Ls
10% Sh

90% Ls
10% Sh

Flow 920 mcf/gpd
for 1 hr 45 min

100% Ls

thru 20/64" ch
SFP 325 #

100% Ls

Rec. 120' O&GCM

100% Ls

ISIP 2873 #/hr
FSIP 2853 #/hr

100% Ls

100% Ls

7700

7800

Comp. RECORDED

6.5' SHALLOW

Sonic Curve

IPF 1,700 M.C.F.G.P.D. 22/64" ch

F. R. (GR)

RECORDED 6.5' SHALLOW

6 16

CALIPER
HOLE DIAM. IN INCHES

0 100
100 200

DEPTHS

CAMMA RAY
API UNITS

100 70 40
150 130 100

INTERVAL TRANSIT TIME
MICROSECONDS PER FOOT

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 4
CASE NO. 4089

PAUL M. MERSHON, JR.
789 CLARKSON STREET
DENVER, COLORADO 80218
PETROLEUM GEOLOGIST
TELEPHONE: 303 255-0716

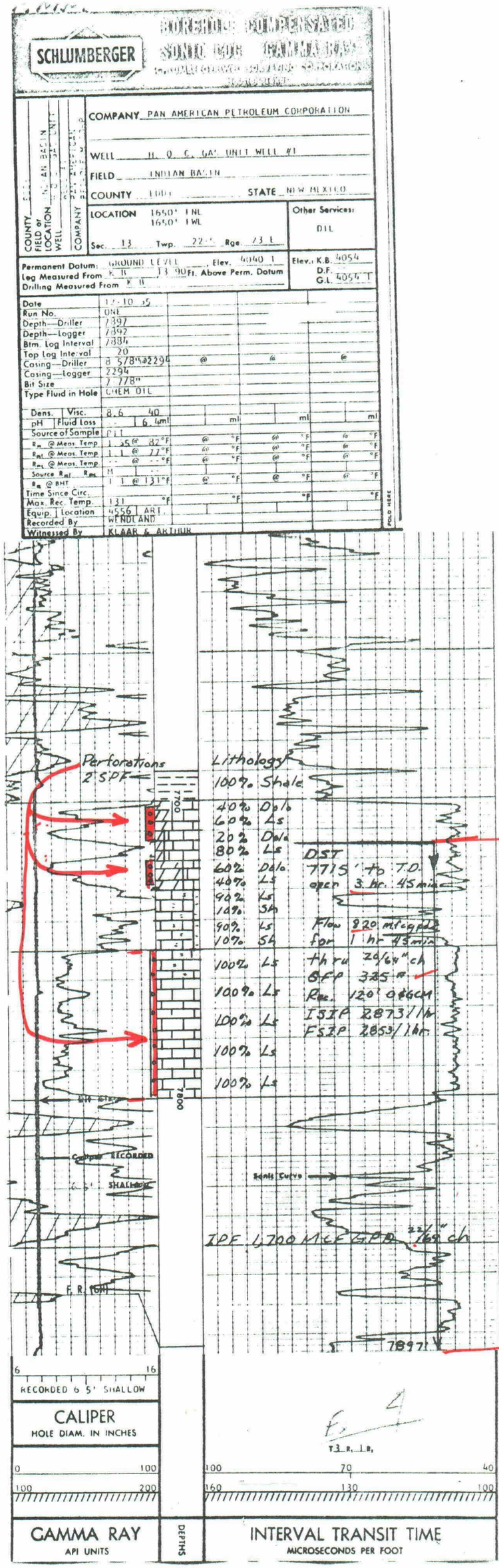
Indian Basin Upper Pennsylvanian Gas Field
Sec. 21, T. 22 S., R. 23 E.
990 FNL & FEL
Eddy County, New Mexico

ESTIMATED WELL COST

	COMPLETED	DRY HOLE
Survey Location and Damages	$ 500.00	$ 500.00
Prepare Roads and Location	2,500.00	2,500.00
Drilling 7600' @ $9.00 per foot ✓	68,400.00	68,400.00
Day Work 5 days @ $1,200.00 per day	6,000.00	6,000.00
Trucking	1,500.00	1,000.00
Mud and Chemicals	8,500.00	8,500.00
Cement and Services	8,000.00	6,200.00
Fuel and Water	7,500.00	7,500.00
Logging	4,000.00	4,000.00
Drill Stem Tests	1,700.00	1,700.00
Misc. Equip. (Stabilizers, shoes, etc.)	850.00	500.00
Float Equipment	750.00	400.00
Legal Fees	500.00	500.00
Supervision and Overhead	3,000.00	2,500.00
Plugging Costs		1,000.00
Casing and Tubing		
200 feet of 13 3/8 @ 7.50	1,500.00	1,500.00
2100 feet of 8 5/8 @ 3.20	6,720.00	6,720.00
7600 feet of 5 1/2 @ 2.50	19,000.00	
7500 feet of 2 3/8 @ .75	5,625.00	
Unit Time 4 days @ $700.00 per day	2,800.00	
Perforations	800.00	
Rental Equipment	350.00	
High Pressure Separator	5,800.00	
Well Stimulation	5,000.00	
Well Head and Flow Lines	4,000.00	
Installation Costs	700.00	
	$165,995.00	$119,420.00

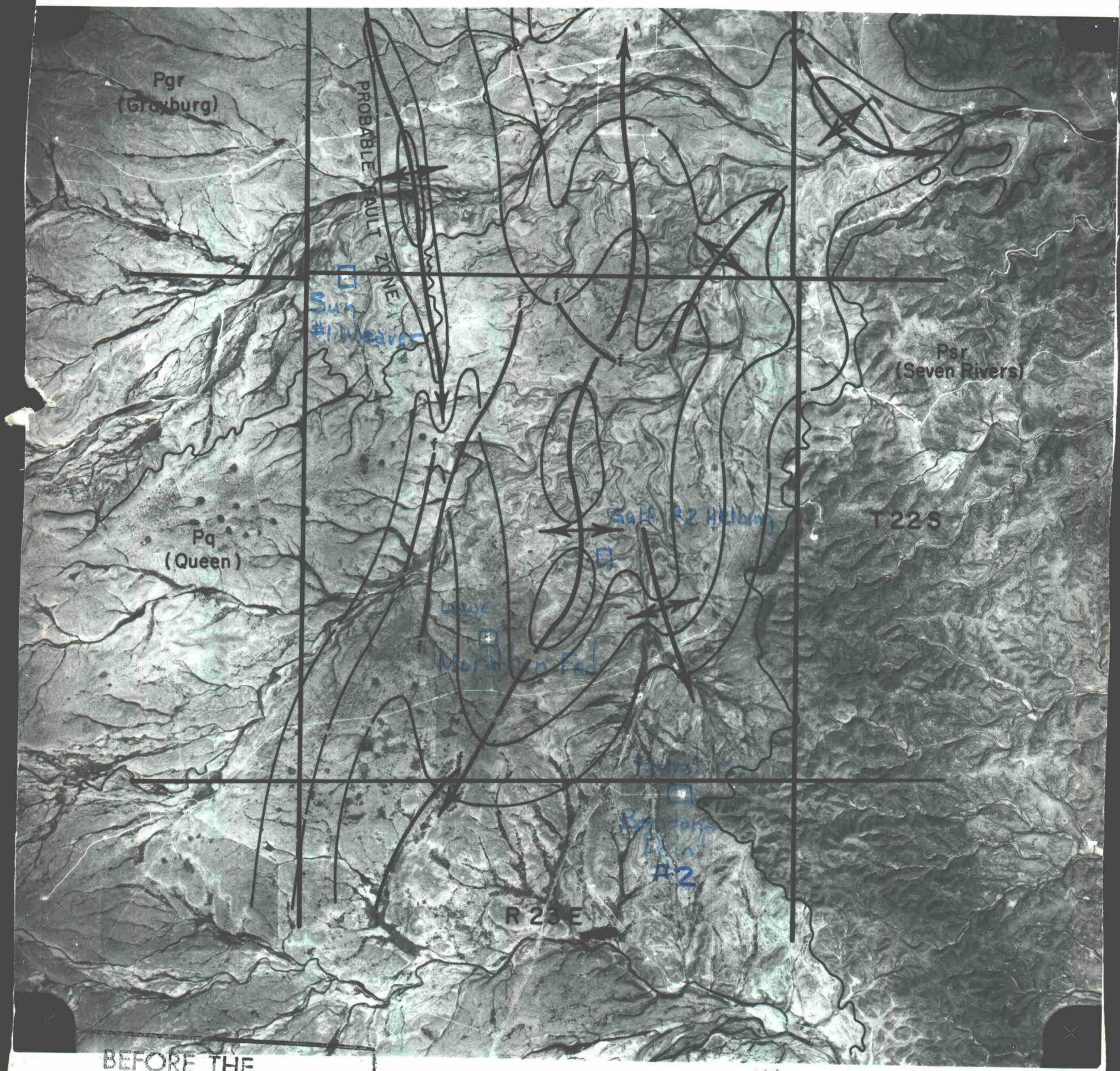
BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
Appl EXHIBIT NO. 2
CASE NO. 4088

EXHIBIT 2



2 SPF @
7702 - 13
20 28
50 90
-3648-3744

Case 4089 De N.
Exhibit 4



BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Mershon Exhibit No. 5
Case No. 4079

FIGURE 2C
INDIAN BASIN

West Texas Geological Soc
Guidebook
1968

Case 4089 DeNovo - Exhibit 5

PAUL M. MERSHON, JR.
789 CLARKSON STREET
DENVER, COLORADO 80218
PETROLEUM GEOLOGIST
TELEPHONE: 303 255-0716

INDIAN BASIN UPPER PENNSYLVANIAN POOL

PRODUCTION DATA

Year	Production to Mid-August	Cumulative to Mid-August	Annual Production	Cumulative Production
Prior to 1966				1,414,908
1966	21,843,902	23,258,810	37,825,083	39,239,991
1967	25,925,743	65,165,734	45,429,332	84,669,323
1968	42,954,031	127,623,354	67,672,053	152,341,376

DATA FOR P/Z vs. Q PLOT

Year	Average BHP	Z	P/Z	Cumulative to Mid-August
1966	2899	.823	3522	23,258,810
1967	2826	.823	3433	65,165,734
1968	2753	.822	3349	127,623,354

SCHLUMBERGER

COMPENSATED FORMATION DENSITY GUS

COMPANY HANAGAN PETROLEUM CORPORATION

WELL INDIAN FEDERAL #1

FIELD INDIAN BASIN

COUNTY EDDY STATE NEW MEXICO

Location: 1650' FROM N/L 1980' FROM W/L

Sec. 21 Twp. 22S Rge. 23E

Other Services: SNP, ML, CDR

COUNTY EDDY FIELD or LOCATION INDIAN BASIN WELL INDIAN FEDERAL #1 COMPANY HANAGAN PET. CORP.

Permanent Datum: GL ; Elev.: 4256.6

Log Measured From KB, 17.4 Ft. Above Perm. Datum

Drilling Measured From KB

Elev.: K.B. 4274 D.F. - G.L. 4256.6

Date	12-9-66
Run No.	ONE
Type Log	FDC+GR
Depth—Driller	7585
Depth—Logger	7592
Bottom logged interval	7591
Top logged interval	0
Type fluid in hole	CHEM GEL
Salinity, PPM Cl.	2200
Density	8.7
Level	FULL
Max rec. temp., deg F.	148
Operating rig time	5 HOURS
Recorded by	TARRALL
Witnessed by	MR. HANAGAN

RUN No.	BIT	BORE-HOLE RECORD From	To	CASING RECORD Size	Wgt.	From	To
1	7 7/8	CASING	TD	8 5/8		SURFACE	2101

The well name, location and borehole record must be filled in.

SCHLUMBERGER

COMPENSATED NEUTRON FORMATION DENSITY GUS

COMPANY HANAGAN PETROLEUM CORPORATION

WELL INDIAN FEDERAL #1

FIELD INDIAN BASIN

COUNTY EDDY STATE NEW MEXICO

Location: 1650' FROM N/L 1980' FROM W/L

Sec. 21 Twp. 22S Rge. 23E

Other Services: FDC-GR, ML, CDR

COUNTY EDDY FIELD or LOCATION INDIAN BASIN WELL INDIAN FEDERAL #1 COMPANY HANAGAN PET. CO.

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Run No.	ONE
Type Log	SNP+GR
Depth—Driller	7585
Depth—Logger	7590
Bottom logged interval	7589
Top logged interval	6000
Type fluid in hole	CHEM GEL
Salinity, PPM Cl.	2200
Density	8.7
Level	FULL
Max rec. temp., deg F.	148
Operating rig time	2 HOURS
Recorded by	TARRALL
Witnessed by	MR. HANAGAN

RUN No.	BIT	BORE-HOLE RECORD From	To	CASING RECORD Size	Wgt.	From	To
1	7 7/8	CASING	TD	8 5/8		SURFACE	2101

4256/6
313

Lithology
100% Shale
80% Dolo, f,g calc
90% Dolo, f, w, calc
10% Dolo
90% Ls f, b, f calc
90% Ls
30% Ls
100% Shale
100% Ls, dolomitic
100% Ls dolomitic
100% Ls; dolomitic
100% Ls.
80 % Ls
60 % Ls
40% Ls
40% Ls
100% Ls

DST #1
DST #2

7500
7500
7500

Gamma Ray
Caliper

Perforations 1 SPF

1
2
3
4
5
6

DST #1
Flt. 550,000 CFGPD

DST #2
Grs in 7 min
Too small to measure

Acidized perforations with 26,000 gals. in 3 stages, highest flow estimated at 2,000 MCFGPD. Flow decreased to stabilized flow estimated at 150 MCF to 200 MCFGPD
D&A

Caliper
Bit Size
Gamma Ray

0 100
100 200
GAMMA RAY
API UNITS

6" 16"
CALIPER
HOLE DIAM. IN INCHES

DOLOMITE POROSITY 20 10 0
SANDSTONE POROSITY 30 20 10 0
LIMESTONE POROSITY 30 20 10 0
Exhibit #3

0 100
100 600
GAMMA RAY
API UNITS

6" 16"

2.0 2.5 3.0
1.0 1.5 2.0
BULK DENSITY
GRAMS/CC.

POROSITY % ρ_G=2.71 ρ_F=1.00
30 20 10 0 -10

DEPTH

POROSITY (%)

Mershon Ex 3
Ca 4189 6/24

PAUL M. MERSHON, JR.
PETROLEUM GEOLOGIST
789 CLARKSON STREET
DENVER COLORADO 80218
TELEPHONE: 303 255-0716

INDIAN BASIN UPPER PENNSYLVANIAN POOL

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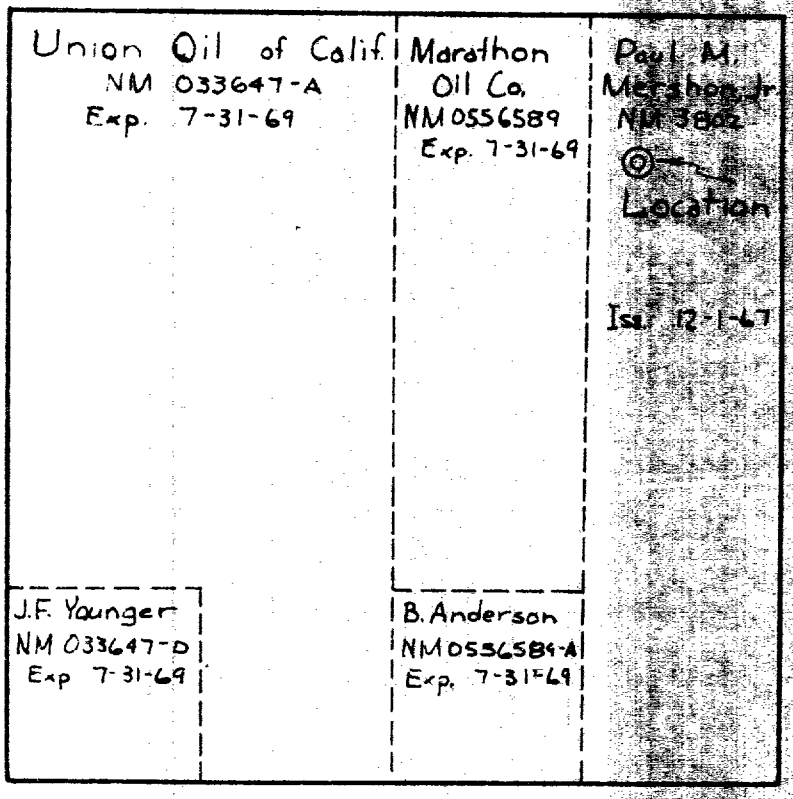
1967	2826	.823	3433	65,165,734
1968	2753	.822	3349	127,623,354

OWNERSHIP PLAT

Sec. 21, T. 22 S., R. 23 E.

Eddy County, New Mexico



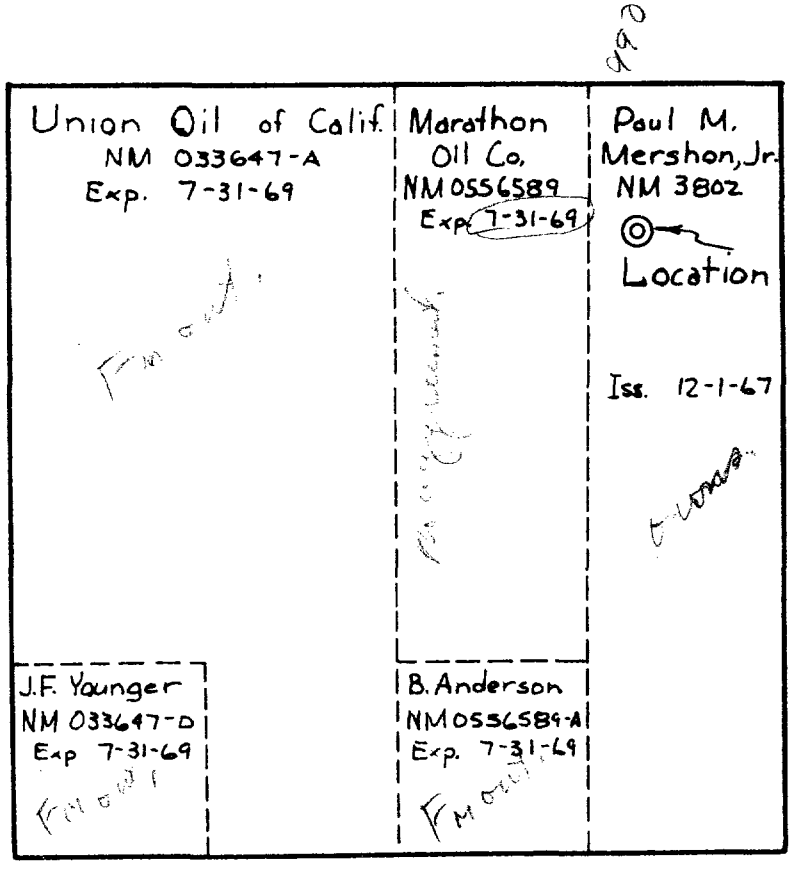
BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Exhibit No. 1
Case No. 4088

Case 4088 De Novo
Exhibit 1

OWNERSHIP PLAT

Sec. 21, T. 22 S., R. 23 E.

Eddy County, New Mexico



Mershon Ex 1
Ca 4088
6/26/69

4088

PAUL M. MERSHON, JR.
789 CLARKSON STREET
DENVER, COLORADO 80218
PETROLEUM GEOLOGIST
TELEPHONE: 303 255-0716

Indian Basin Upper Pennsylvanian Gas Field
Sec. 21, T. 22 S., R. 23 E.
990 FNL & FEL
Eddy County, New Mexico

ESTIMATED WELL COST

	COMPLETED	DRY HOLE
Survey Location and Damages	$ 500.00	$ 500.00
Prepare Roads and Location	2,500.00	2,500.00
Drilling 7600' @ $9.00 per foot	68,400.00	68,400.00
Day Work 5 days @ $1,200.00 per day	6,000.00	6,000.00
Trucking	1,500.00	1,000.00
Mud and Chemicals	8,500.00	8,500.00
Cement and Services	8,000.00	6,200.00
Fuel and Water	7,500.00	7,500.00
Logging	4,000.00	4,000.00
Drill Stem Tests	1,700.00	1,700.00
Misc. Equip. (Stabilizers, shoes, etc.)	850.00	500.00
Float Equipment	750.00	400.00
Legal Fees	500.00	500.00
Supervision and Overhead	3,000.00	2,500.00
Plugging Costs		1,000.00
Casing and Tubing		
200 feet of 13 3/8 @ 7.50	1,500.00	1,500.00
2100 feet of 8 5/8 @ 3.20	6,720.00	6,720.00
7600 feet of 5 1/2 @ 2.50	19,000.00	
7500 feet of 2 3/8 @ .75	5,625.00	
Unit Time 4 days @ $700.00 per day	2,800.00	
Perforations	800.00	
Rental Equipment	350.00	
High Pressure Separator	5,800.00	
Well Stimulation	5,000.00	
Well Head and Flow Lines	4,000.00	
Installation Costs	700.00	
	$165,995.00	$119,420.00

Marathon 169,000 plus.

Ex 2
4 of 8

#2

HANAGAN PETROLEUM CORPORATION

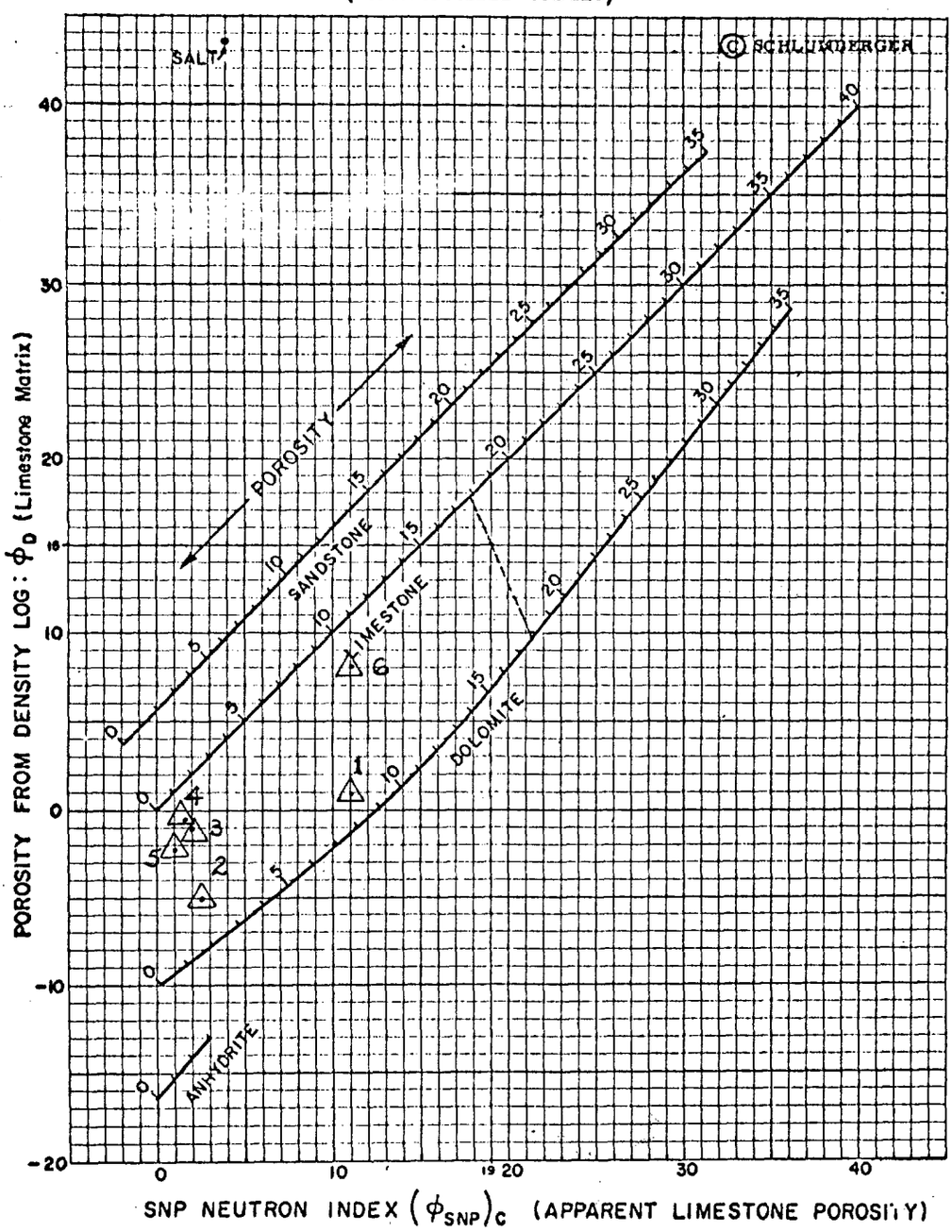
INDIAN FEDERAL # 1

Sec. 21, T. 22S., R. 23E.

SCHLUMBERGER

POROSITY AND LITHOLOGY DETERMINATION FROM FORMATION DENSITY LOG (COMPENSATED) AND SIDEWALL NEUTRON POROSITY LOG (SNP)

(WATER-FILLED HOLES)



Charts CP-1 and CP-2 are crossplots of FDC versus SNP and Sonic versus SNP, showing responses for various lithologies and porosities. The SNP values, corrected if necessary by Chart Por-13 to limestone porosity units, are entered in abscissa. The ϕ_D (for limestone matrix) or Δt value is entered in ordinate. The point so determined may be on or between the matrix lines if no gas or shale is present.

The main curves can be used with little error for both fresh or salt muds. (The salt point is for salt muds ($\rho_f = 1.15$). The anhydrite point is for $\rho_f = 1.1$; the vertical stem at zero porosity shows how the point shifts for $\rho_f = 1.0$ (top) to $\rho_f = 1.15$ (bottom).)

Continued on next page.

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Exhibit No. 13
Case No. 4284 6-26-69

N. M. O. C. C.

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Copy H.L.

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.: NM-059077

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL ☐ GAS WELL ☒ OTHER

7. UNIT AGREEMENT NAME:

2. NAME OF OPERATOR: PAN AMERICAN PETROLEUM CORPORATION

8. FARM OR LEASE NAME: HOC Federal Gas COM

3. ADDRESS OF OPERATOR: BOX 68, HOBBS, N. M. 88240

9. WELL NO.: 1

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 1650 FNL x 1650 FWL, Sec. 13 (Unit F, SE/4 NW/4)

10. FIELD AND POOL, OR WILDCAT: INDIAN BASIN-Upper Penn

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: 13-22-23 NMPM

14. PERMIT NO.:

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 4054' R.D.B.

12. COUNTY OR PARISH: EDDY

13. STATE: N.M.

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☒	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other)			
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

In accordance w/ Form C-331 dated 2-17-67, treated well w/ 20,000 gal 15% retarded dolofrac followed by 13000 gal 28% acid and overflushed w/ 7600 gal treated water containing 1000 Std Cu ft of CO_2.

On test, 22 hours, flw 2.23 MMCF on 45/64 ch. w/ 27 Bbls Dist & 28 BLW. TPF 600.

TD - 7897
PBD - 7857
PERFS - 7702-13, 7720-28, 50-98,
5½" CSA 7897; 2" thy @ 7676 w/ PSA 7638.

OC - 2-20-67
COMP - 3-1-67

18. I hereby certify that the foregoing is true and correct

SIGNED _____ TITLE AREA SUPERINTENDENT DATE 3-3-67

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

APPROVED
MAR 7 1967
R. L. BEEKMAN
ACTING DISTRICT ENGINEER

*See Instructions on Reverse Side

RECEIVED
MAR 6 1967
GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

4 USGS - Art
1 - NSW
1 - Susp
1 - RRY
Superior Oil Co
Box 1900
Midland Texas
Attn: D. H. Collins Jr.

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Exhibit No. 12
Case No. 4089

6/26/69

N. M. O. C. C. COPY

Copy

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL ☐ GAS WELL ☒ OTHER

2. NAME OF OPERATOR: Pan American Petroleum Corp

3. ADDRESS OF OPERATOR: Box 68, Hobbs, New Mexico 88240

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 1650' FNL x 1650' FWL, Sec. 13 (Unit F, SE/4 NW/4)

RECEIVED
JAN 14 1966
O. C. C.
ARTESIA, OFFICE

5. LEASE DESIGNATION AND SERIAL NO.: NM059077

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: HOC Federal Gas COM

9. WELL NO.: 1

10. FIELD AND POOL, OR WILDCAT: Indian Basin-Upper Penn

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: 13-22-23 NMPM

12. COUNTY OR PARISH: EDDY

13. STATE: NM

14. PERMIT NO.:

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 4054' R.D.B.

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☒	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other) Completion Oper			☒
(Other)	☐			(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Lease name changed from: Honolulu Oil Corp. Gas Unit No. 1 to: HOC Federal Gas COM, No. 1, in compliance w/ NMOCC directive memo.

On 12/13/65, 5½" OD 14-17# J-55 casing was set at 7897' (TD) with 150 sx Incor neat. Tested casing w/ 1100 psi for 30 minutes. Test O.K. Perforated intervals, 7702-13, 20-28, 50-98' w/ 2 JSPF. Stimulations were made of 5000 gal acid, Water frac 15000 gal water, 7500# sand, and 3000# glass beads, and reacidized w/ 20,000 gallons. On Oct 1/10/66, in 21 hours thru ¾" choke, flowed at rate of 1.7 MMCFPD TPF 600, Pkr-CPF, WATER. Det. of GOR info Not avail.

(TD-7897, PBD-7857, TPAY 7702-Cisco Canyon Zone)

U. S. GEOLOGICAL SURVEY ROSWELL, NEW MEXICO

18. I hereby certify that the foregoing is true and correct

SIGNED: _____ TITLE: Area Supt DATE: 1-12-66

(This space for Federal or State office use)

APPROVED BY: _____ TITLE: _____ DATE: _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

044-USGS
1-JWB
1-KWB
1-SUSD
1-RR
1-So. Union
2-Superior Oil Co
Box 1900
Midland, Texas

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Exhibit No. 11
Case No. 4289

6/24/69

U. O. C. C. COPY

Copy to S. F.

Form 9-330
(Rev. 5-63)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*
(See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DRY ☐ Other

b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other

FEB 9 1967
O. C. C.
ARTESIA, OFFICE

2. NAME OF OPERATOR
Hanagan Petroleum Corporation

3. ADDRESS OF OPERATOR
P. O. Box 1737, Roswell, New Mexico

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface 1980' FWL & 1650' FNL
At top prod. interval reported below
At total depth 202.69' N 69°W off vert.

5. LEASE DESIGNATION AND SERIAL NO.
NM 033647-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Indian Federal

9. WELL NO.
1

10. FIELD AND POOL, OR WILDCAT
Undesignated Indian Basin-Upper Penn.

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA
21-22S-23E

14. PERMIT NO. | DATE ISSUED

12. COUNTY OR PARISH: Eddy | 13. STATE: N. Mex.

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
11/21/66	12/9/66	1/24/67	4274 KB	4258

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
7585	7450	-	→	X	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
P & A

25. WAS DIRECTIONAL SURVEY MADE
Yes

26. TYPE ELECTRIC AND OTHER LOGS RUN
Schlumberger: GR-Density, Neutron, Microlog & directional

27. WAS WELL CORED

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13 3/8	48#	165'	17 1/2	100 sx Incor 2%Gel&CaCl	None
8 5/8	24#	2101	12 1/4	50+50+50+50+150+50 sxs. (7 stages) Circ.	None
4 1/2	11.6#	7575	7 7/8	300 Pos & 2%Gel 8#salt/sx	6500

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)

31. PERFORATION RECORD (*Interval, size and number*)
1 SPI 7332, 34, 36, 38, 46, 52 & 56
and 7396,7409,14,16, & 19
Total 12 Holes

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
7396-7419	1000 gals LST NE 20%
7332-7419	10,000 gals LST NE 20%
7332-7419	15,000 gals LST NE 20%

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
			→				

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
		→				

RECEIVED
FEB 8 - 1967
U. S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*)

TEST WITNESSED BY

35. LIST OF ATTACHMENTS
2 copies all logs, except directional, already given to USGS office in Artesia. 1 copy directional enclosed, no more available.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Hugh E. Hanagan TITLE Vice President DATE 2/7/67

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

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.
Cisco/Canyon	7326	7400	Op.60" GTS 12" [illegible] 580 MCF Rec. 360' HGCM FP 160-167 [illegible]PSI 2736-2734
Cisco/Canyon	7405	7480	Op.60" GTS 7" TSTM Rec.160'[illegible] FP 87-102 45"ISI 2807-[illegible]FSI 2726
Cisco/Canyon	7484	7544	Op.26" Test tool failed GTS 10" TSTM Rec. 1170' HGCM FP 132-590(?) 45" ISI 2867 No FSI
			No formation water recovered from DST's or production tests. After total 26,000 gal. acid, well stabilize @ est. 150 to 250 MCF.

38. GEOLOGIC MARKERS

NAME	TOP MEAS. DEPTH	TOP TRUE VERT. DEPTH
San Andres	572	
Glorieta	2020	
Bone Spring Lime	3610	
Basal Leonard	6416	
Wolfcamp Lime	6488	
Cisco Canyon	7323	

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Exhibit No. 10
Case No. 4089

6/26/69

SCHLUMBERGER

COMPANY HANAGAN PETROLEUM CORPORATION

WELL INDIAN FEDERAL #1

FIELD INDIAN BASIN

COUNTY EDDY STATE NEW MEXICO

Location: 1650' FROM N/L, 1980' FROM W/L

Sec. 21 Twp. 22S Rge. 23E

Other Services: SNP, HL, CDR

Permanent Datum: GL, Elev.: 4256.6

Log Measured From KB, 17.5 Ft. Above Perm. Datum

Drilling Measured From KB

Elev.: K.B. 4274, D.F. -, G.L. 4256.6

Date	12-9-66
Run No.	ONE
Type Log	SNP+GR
Depth—Driller	7585
Depth—Logger	7590
Bottom logged interval	7589
Top logged interval	6000
Type fluid in hole	CHEM GEL
Salinity, PPM Cl.	2200
Density	8.7
Level	FULL
Max rec. temp., deg F.	148
Operating rig time	2 HOURS
Recorded by	TARRALL
Witnessed by	MR. HANAGAN

RUN No.	BORE-HOLE RECORD Bit	From	To	CASING RECORD Size	Wgt.	From	To
1	7 7/8	CASING	TD	8 5/8		SURFACE	2101

SCHLUMBERGER

COMPANY HANAGAN PETROLEUM CORPORATION

WELL INDIAN FEDERAL #1

FIELD INDIAN BASIN

COUNTY EDDY STATE NEW MEXICO

Location: 1650' FROM N/L, 1980' FROM W/L

Sec. 21 Twp. 22S Rge. 23E

Other Services: FDC-GR, HL, CDR

Permanent Datum: GL, Elev.: 4256.6

Log Measured From KB, 17.5 Ft. Above Perm. Datum

Drilling Measured From KB

Elev.: K.B. 4274, D.F. -, G.L. 4256.6

Date	12-9-66
Run No.	ONE
Type Log	SNP+GR
Depth—Driller	7585
Depth—Logger	7590
Bottom logged interval	7589
Top logged interval	6000
Type fluid in hole	CHEM GEL
Salinity, PPM Cl.	2200
Density	8.7
Level	FULL
Max rec. temp., deg F.	148
Operating rig time	2 HOURS
Recorded by	TARRALL
Witnessed by	MR. HANAGAN

RUN No.	BORE-HOLE RECORD Bit	From	To	CASING RECORD Size	Wgt.	From	To
1	7 7/8	CASING	TD	8 5/8		SURFACE	2101

Lithology
100% Shale
20% Dolo, fg calc
90% Dolo, f, w, cx/n
10% Dolo
90% Ls, f, h, fx/o
90% Ls
30% Ls
100% Shale
100% Ls, dolomitic
100% Ls, dolomitic
100% Ls, dolomitic
100% Ls
80% Ls
60% Ls
40% Ls
40% Ls
100% Ls

Perforations 1 SPF

DST #1
F/ 550,000 CFGPD

DST #2
Grs in 7 min
Too small to measure

Acidized perforations with 26,000 gals. in 3 stages, highest flow estimated at 2,000 MCFGPD. Flow decreased to stabilized flow estimated at 150 MCF to 200 MCFGPD
D&A

Caliper
Bit Size
Gamma Ray

GAMMA RAY
API UNITS
0 100
100 200

BULK DENSITY
GRAMS/CC.
2.0 2.5 3.0
1.0 1.5 2.0

DOLOMITE POROSITY
SANDSTONE POROSITY
LIMESTONE POROSITY
30 20 10 0

CALIPER
HOLE DIAM. IN INCHES
6" 16"

POROSITY X ρ_G=2.71 ρ_F=1.00
30 20 10 0 -10

POROSITY (%)

Exhibit 3

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

Exhibit No. 5

Case No. 4163

SCHLUMBERGER

BOREHOLE COMPENSATED SONIC LOG – GAMMA RAY

COMPANY: PAN AMERICAN PETROLEUM CORPORATION

WELL: U. O. C. GAS UNIT WELL #1

FIELD: INDIAN BASIN

COUNTY: EDDY STATE: NEW MEXICO

LOCATION: 1650' FNL 1650' FWL

Sec. 13 Twp. 22 S Rge 23 E

Other Services: DIL

Permanent Datum: GROUND LEVEL, Elev. 4040.1

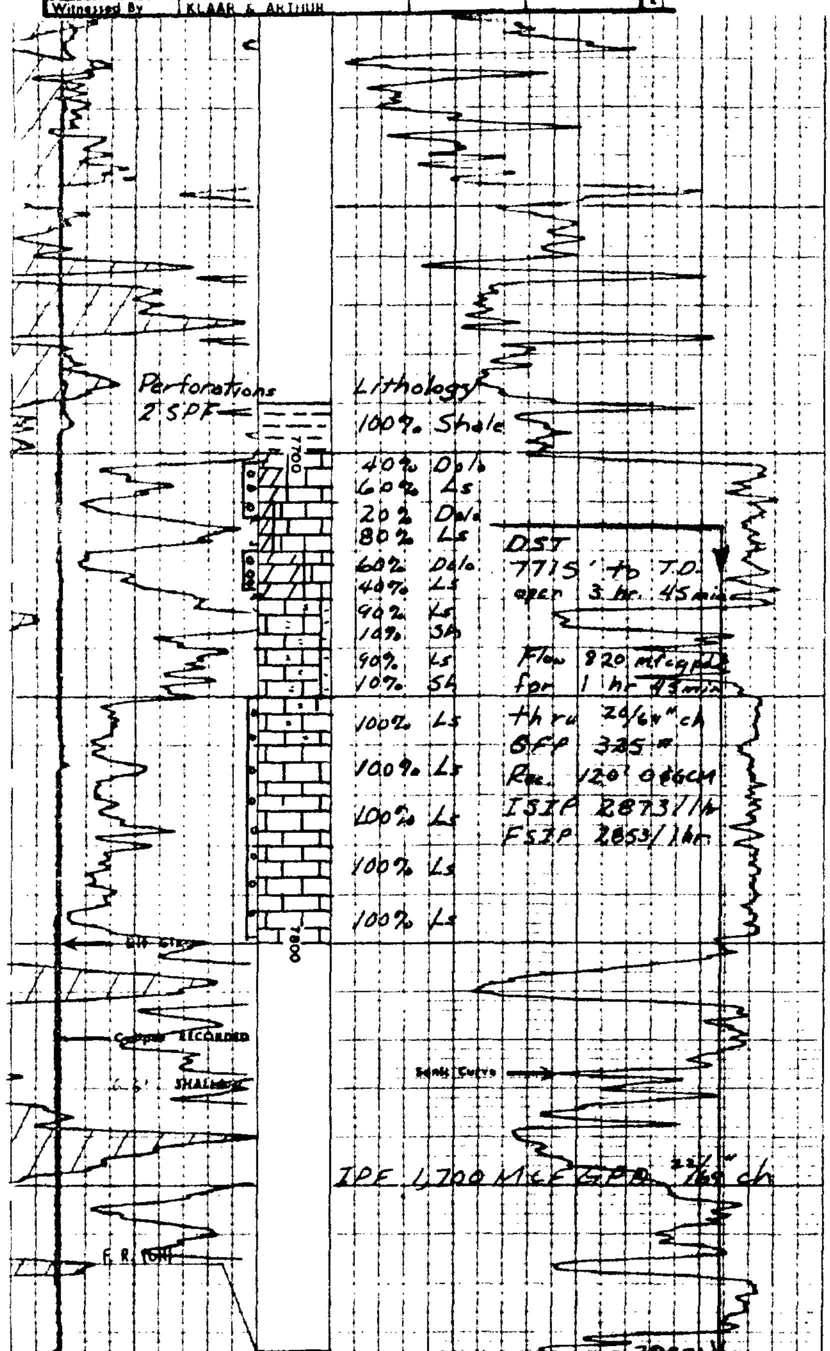
Log Measured From K.B., 13.90 Ft. Above Perm. Datum

Drilling Measured From K.B.

Elev.: K.B. 4054 D.F. G.L. 4054 T

Date	12-10-65			
Run No.	ONE			
Depth—Driller	7397			
Depth—Logger	7392			
Btm. Log Interval	7384			
Top Log Interval	20			
Casing—Driller	8 5/8" @ 2294	@	@	@
Casing—Logger	2294			
Bit Size	7 7/8"			
Type Fluid in Hole	CHEM OIL			
Dens. / Visc.	8.6 / 40			
pH / Fluid Loss	- / 6.4 ml	ml	ml	ml
Source of Sample	PIT			
R_m @ Meas. Temp.	1.25 @ 82 °F	@ °F	@ °F	@ °F
R_{mf} @ Meas. Temp.	1.1 @ 77 °F	@ °F	@ °F	@ °F
R_{mc} @ Meas. Temp.	-- @ -- °F	@ °F	@ °F	@ °F
Source R_{mf} / R_{mc}	M / --			
R_m @ BHT	1.1 @ 131 °F	@ °F	@ °F	@ °F
Time Since Circ.				
Max Rec. Temp.	131 °F	°F	°F	°F
Equip. / Location	4556 / ART.			
Recorded By	WENDLAND			
Witnessed By	KLAAR & ARTHUR			

FOLD HERE



6		16
RECORDED 6.5' SHALLOW		

CALIPER
HOLE DIAM. IN INCHES

			DEPTHS			
0		100		100	70	40
100		200		160	130	100

GAMMA RAY API UNITS

DEPTHS

INTERVAL TRANSIT TIME MICROSECONDS PER FOOT

Exhibit 4

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Exhibit No. 6
Case No. 4382

PAUL M. MERSHON, JR.
PETROLEUM GEOLOGIST
789 CLARKSON STREET
DENVER, COLORADO 80218
TELEPHONE: 303 255-0716

Indian Basin Upper Pennsylvanian Gas Field
Sec. 21, T. 22 S., R. 23 E.
990 FNL & FEL
Eddy County, New Mexico

ESTIMATED WELL COST

	COMPLETED	DRY HOLE
Survey Location and Damages	$ 500.00	$ 500.00
Prepare Roads and Location	2,500.00	2,500.00
Drilling 7600' @ $9.00 per foot	68,400.00	68,400.00
Day Work 5 days @ $1,200.00 per day	6,000.00	6,000.00
Trucking	1,500.00	1,000.00
Mud and Chemicals	8,500.00	8,500.00
Cement and Services	8,000.00	6,200.00
Fuel and Water	7,500.00	7,500.00
Logging	4,000.00	4,000.00
Drill Stem Tests	1,700.00	1,700.00
Misc. Equip. (Stabilizers, shoes, etc.)	850.00	500.00
Float Equipment	750.00	400.00
Legal Fees	500.00	500.00
Supervision and Overhead	3,000.00	2,500.00
Plugging Costs		1,000.00
Casing and Tubing		
200 feet of 13 3/8 @ 7.50	1,500.00	1,500.00
2100 feet of 8 5/8 @ 3.20	6,720.00	6,720.00
7600 feet of 5 1/2 @ 2.50	19,000.00	
7500 feet of 2 3/8 @ .75	5,625.00	
Unit Time 4 days @ $700.00 per day	2,800.00	
Perforations	800.00	
Rental Equipment	350.00	
High Pressure Separator	5,800.00	
Well Stimulation	5,000.00	
Well Head and Flow Lines	4,000.00	
Installation Costs	700.00	
	$165,995.00	$119,420.00

Case 4038

a/p

Exhibit 2

PAUL M. MERSHON, JR.
789 CLARKSON STREET
DENVER, COLORADO 80218
PETROLEUM GEOLOGIST
TELEPHONE: 303 255-0716

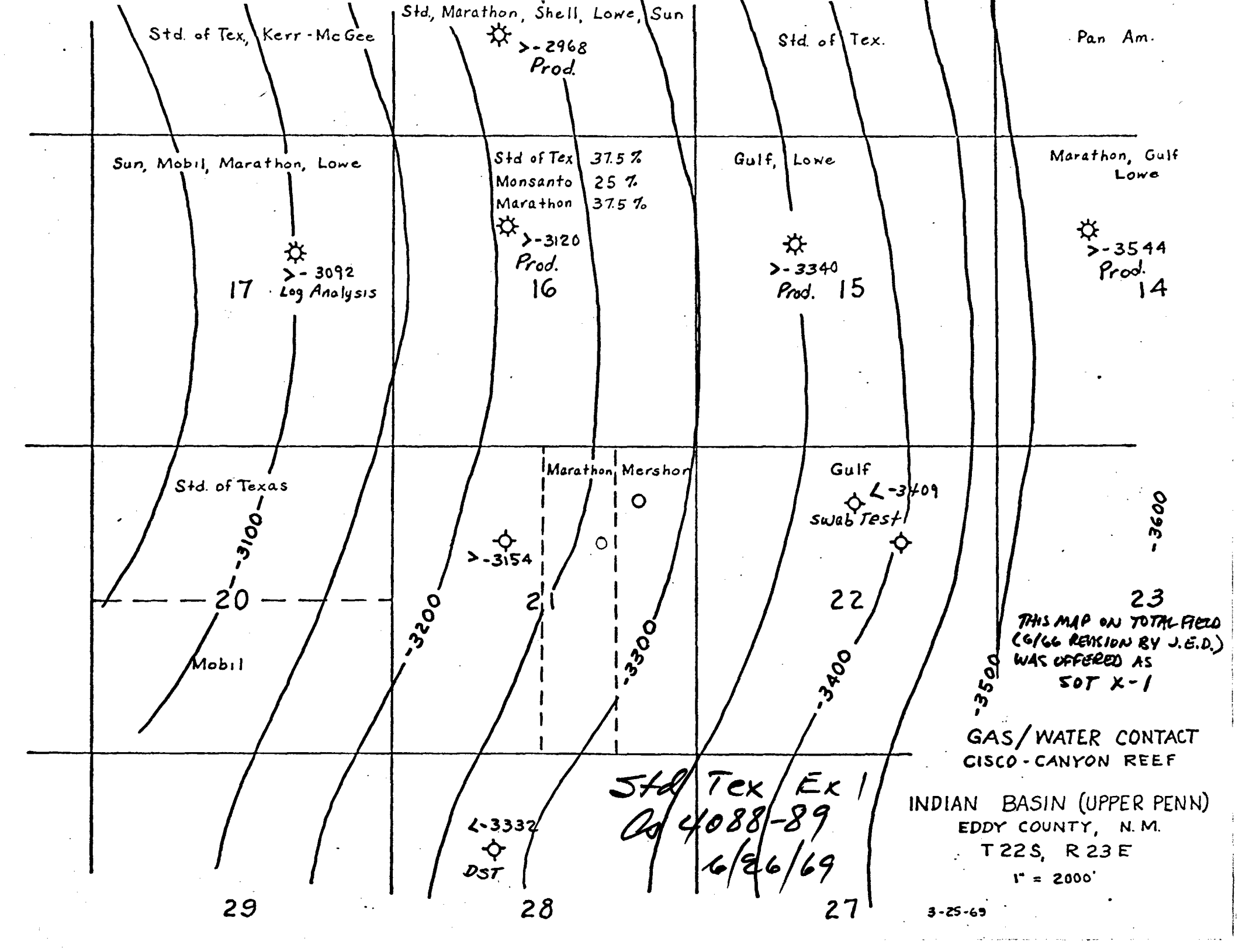
Indian Basin Upper Pennsylvanian Gas Field
Sec. 21, T. 22 S., R. 23 E.
990 FNL & FEL
Eddy County, New Mexico

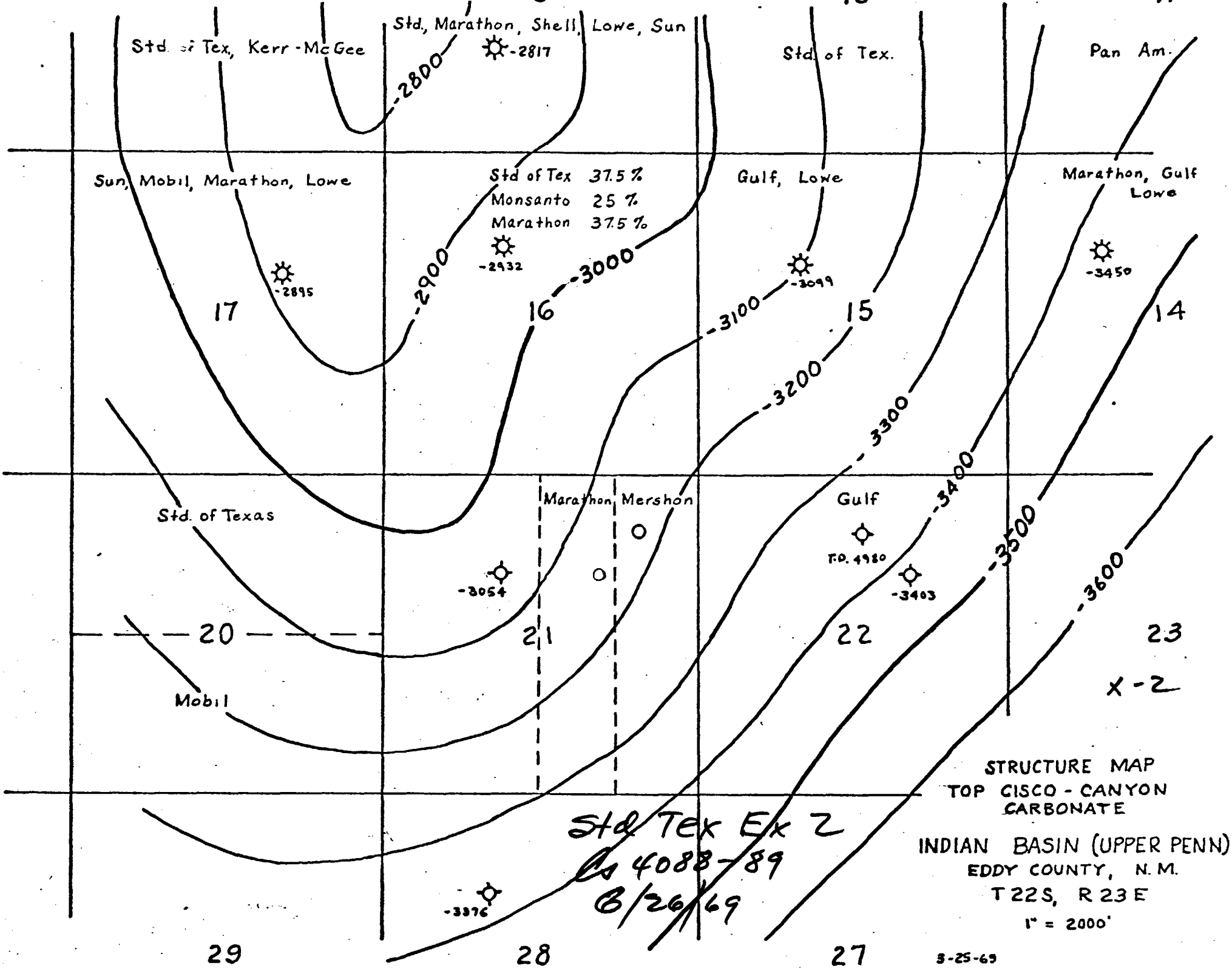
ESTIMATED WELL COST

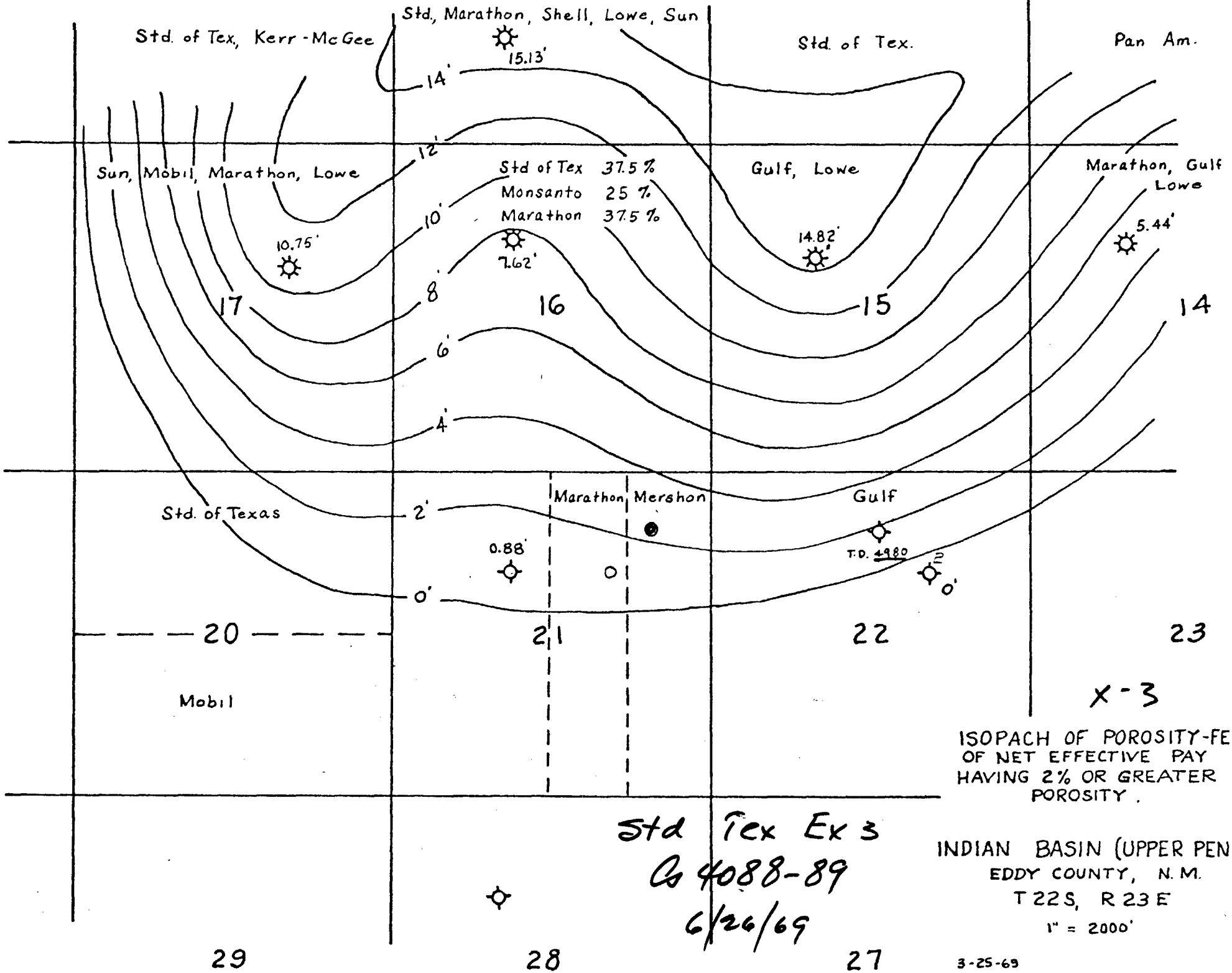
	COMPLETED	DRY HOLE
Survey Location and Damages	$ 500.00	$ 500.00
Prepare Roads and Location	2,500.00	2,500.00
Drilling 7600' @ $9.00 per foot	68,400.00	68,400.00
Day Work 5 days @ $1,200.00 per day	6,000.00	6,000.00
Trucking	1,500.00	1,000.00
Mud and Chemicals	8,500.00	8,500.00
Cement and Services	8,000.00	6,200.00
Fuel and Water	7,500.00	7,500.00
Logging	4,000.00	4,000.00
Drill Stem Tests	1,700.00	1,700.00
Misc. Equip. (Stabilizers, shoes, etc.)	850.00	500.00
Float Equipment	750.00	400.00
Legal Fees	500.00	500.00
Supervision and Overhead	3,000.00	2,500.00
Plugging Costs		1,000.00
Casing and Tubing		
200 feet of 13 3/8 @ 7.50	1,500.00	1,500.00
2100 feet of 8 5/8 @ 3.20	6,720.00	6,720.00
7600 feet of 5 1/2 @ 2.50	19,000.00	
7500 feet of 2 3/8 @ .75	5,625.00	
Unit Time 4 days @ $700.00 per day	2,800.00	
Perforations	800.00	
Rental Equipment	350.00	
High Pressure Separator	5,800.00	
Well Stimulation	5,000.00	
Well Head and Flow Lines	4,000.00	
Installation Costs	700.00	
	$165,995.00	$119,420.00

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Mershon Exhibit No. 2
Case No. 4038

Case No. 4038 De Novo
Exhibit No. 2


Std. of Tex, Kerr-McGee
Std, Marathon, Shell, Lowe, Sun
>-2968
Prod.
Std. of Tex.
Pan Am.
Sun, Mobil, Marathon, Lowe
>-3092
Log Analysis
17
Std of Tex 37.5 %
Monsanto 25 %
Marathon 37.5 %
>-3120
Prod.
16
Gulf, Lowe
>-3340
Prod.
15
Marathon, Gulf
Lowe
>-3544
Prod.
14
Std. of Texas
-3100
20
Mobil
-3200
Marathon
Mershon
>-3154
21
-3300
Gulf
L-3409
swab test
22
-3400
-3500
-3600
23
THIS MAP ON TOTAL FIELD (6/66 REVISION BY J.E.D.) WAS OFFERED AS SOT X-1
GAS/WATER CONTACT
CISCO-CANYON REEF
L-3332
DST
29
28
27
Std Tex Ex 1
Cs 4088-89
6/26/69
INDIAN BASIN (UPPER PENN)
EDDY COUNTY, N.M.
T 22S, R 23E
1" = 2000'
3-25-69


Std. of Tex, Kerr-McGee
Std., Marathon, Shell, Lowe, Sun
-2817
-2800
Std. of Tex.
Pan Am.
Sun, Mobil, Marathon, Lowe
Std of Tex 37.5 %
Monsanto 25 %
Marathon 37.5 %
-2932
-2895
-2900
-3000
-3099
Gulf, Lowe
Marathon, Gulf
Lowe
-3450
17
16
15
14
-3100
-3200
-3300
-3400
-3500
-3600
Std. of Texas
Marathon
Mershon
Gulf
T.D. 4980
-3054
-3403
20
21
22
23
Mobil
X-2
STRUCTURE MAP
TOP CISCO - CANYON
CARBONATE
INDIAN BASIN (UPPER PENN)
EDDY COUNTY, N. M.
T 22 S, R 23 E
1" = 2000'
-3376
Std Tex Ex 2
Cs 4088-89
6/26/69
29
28
27
3-25-69


Std. of Tex., Kerr-McGee
Std., Marathon, Shell, Lowe, Sun
15.13'
Std. of Tex.
Pan Am.
14'
12'
Sun, Mobil, Marathon, Lowe
Std of Tex 37.5 %
Monsanto 25 %
Marathon 37.5 %
Gulf, Lowe
Marathon, Gulf Lowe
10'
10.75'
7.62'
14.82'
5.44'
8'
17
16
15
14
6'
4'
Marathon
Mershon
Gulf
Std. of Texas
2'
0.88'
T.D. 4980
0'
0'
20
21
22
23
Mobil
X-3
ISOPACH OF POROSITY-FEET OF NET EFFECTIVE PAY HAVING 2% OR GREATER POROSITY.
INDIAN BASIN (UPPER PENN)
EDDY COUNTY, N. M.
T 22 S, R 23 E
1" = 2000'
Std Tex Ex 3
Cs 4088-89
6/26/69
29
28
27
3-25-69

INDIAN BASIN (UPPER PENN) FIELD
COMPARISONS OF SECTIONS 16 AND 21
T-22-S, R-23-E

Section	Productive Acreage (Acres)	Pore Volume (Ac-Ft)
16	640	5120
21	266	452

Conclusions:

1. Section 21 has 41.5% as much productive acreage as Section 16.

2. Section 21 has only 8.8% as much pore volume as Section 16; therefore, Section 21 is underlain by about 8.8% as much gas reserves as Section 16.

3. If Section 21 is assigned a full 640 acres, its allowable will be 1 ÷ 0.088 = 11.4 times as much as it should be to prevent drainage.

4. If Section 21 is assigned 266 acres, its allowable will be 0.415 ÷ 0.088 = 4.7 times as much as it should be to prevent drainage.

7.62
640
4480
3048
4572
4876.80

Std Tex #4
4088-89
6-26-69

Std Tex #4
4088-89

MONTGOMERY, FEDERICI, ANDREWS, HANNAHS & MORRIS
ATTORNEYS AND COUNSELORS AT LAW
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POST OFFICE BOX 2307
AREA CODE 505
TELEPHONE 982-3876

J. O. SETH (1883-1963)

A. K. MONTGOMERY
WM. FEDERICI
FRANK ANDREWS
FRED C. HANNAHS
RICHARD S. MORRIS
SUMNER G. BUELL
SETH D. MONTGOMERY

FRANK ANDREWS III

May 21, 1969

New Mexico Oil Conservation Commission
State Land Office Building
Santa Fe, New Mexico 87501

Re: Applications of Paul M. Mershon, Jr. for Compulsory Pooling and for an Unorthodox Gas Well Location, Eddy County, New Mexico; NMOCC Cases Nos. 4088 and 4089, Orders Nos. R-3736 and R-3737

Gentlemen:

Enclosed for filing are Applications of Marathon Oil Company for Hearing De Novo in each of the subject cases.

If possible, we would appreciate these cases being set for hearing on Friday, June 13, 1969.

Very truly yours,

Richard S. Morris

RSM:jh
Enclosures

cc: Mr. A. J. Losee
Attorney at Law
P. O. Box 239
Artesia, New Mexico 88210

Mr. Warren B. Leach
Division Attorney
Marathon Oil Company
Post Office Box 3128
Houston, Texas

Mr. Jason W. Kellahin
Attorney at Law
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Santa Fe, New Mexico 87501

COUNTY POOL

TOWNSHIP RANGE NMPM