BEFORE THE OIL CONSERVATION DIVISION

OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF YATES PETROLEUM CORPORATION TO INJECT WATER FOR THE PURPOSE OF WATER DISPOSAL, LEA COUNTY, NEW MEXICO

CASE NO. 7873

APPLICATION

COMES NOW Yates Petroleum Corporation, by its attorneys, pursuant to Rule 701, and in support hereof, respectfully states:

1. Applicant proposes to dispose of water into its Midwest State No. 1 Well, located 660 feet from the north line and 1,980 feet from the east line of Section 19, Township 14 South, Range 33 East, N.M.P.M., through perforations from 10,378 to 10,578 feet in the Canyon (Permo-Upper Penn) formation.

2. There is attached hereto as Exhibit "A" and incorporated by reference, Form C-108 showing the location of the proposed disposal well, and the location of all other wells within a radius of two miles from said proposed disposal well, and the formation from which said wells are producing or have produced, and indicating the lessees within said two mile radius. The log of the proposed disposal well and a diagrammatic sketch thereof with other pertinent information concerning the proposed project are a part thereof.

WHEREFORE, applicant prays:

A. That this application be set for hearing before an examiner and that notice of said hearing be given as required by law.

B. That upon hearing, the Division enter its order authorizing applicant to dispose of water into its Midwest State No. 1 Well, located 660 feet from the north line and 1,980 feet from the east line of Section 19, Township 14 South, Range 33 East, N.M.P.M., through perforations from 10,378 to 10,578 feet in the Canyon (Permo-Upper Penn) formation.

C. And for such other and further relief as may be just in the premises.

YATES PETROLEUM CORPORATION

By: Chad Dickerson
Chad Dickerson

LOSEE, CARSON & DICKERSON, P.A.
P. O. Drawer 239
Artesia, New Mexico 88210

Attorneys for Applicant

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108
Revised 7-1-81

RECEIVED
MAY 02 1983
OIL CONSERVATION DIVISION
SANTA FE

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ yes ☒ no

II. Operator: Yates Petroleum Corporation

Address: 207 S. 4th Street; Artesia, N.M. 88210

Contact party: Nelson Muncy Phone: (505) 746-3558

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? ☐ yes ☒ no
If yes, give the Division order number authorizing the project _____.

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Nelson Muncy Title Engineer

Signature: Nelson Muncy Date: 4/22/83

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. Subject well logs were submitted to NMOCD in Hobbs

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office.

FORM C-108 Supplement

Midwest State #1

I. Purpose:

To reenter and deepen the D/A Midwest State #1 from old TD of 10,510' to 10,650' for a salt water disposal well.

II. The Operator is: Yates Petroleum Corporation
207 South Fourth Street
Artesia, New Mexico 88210

III. Well Data:

See attached NMOCD well data sheet.

IV. See form C-108.

V. Ownership map attached (Midland Map Co.) with a scale of: 1" = 2,000'.
Well and lease information posted through 4-15-83. Map has a two-mile radius circle and a one-half mile radius circle.

VI. There are no wells except for the proposed disposal well within the area of review, as indicated by the attached map. The subject well was P/A on 12/28/72 (Schematic attached) see attached C-105 (dated: 12/28/72).

VII. Data on proposed operations:

(1). The proposed average daily rate of injection is 2,000 bbls per day and the estimated ultimate maximym daily rate is 4,000 bbls per day. The estimated total volume of fluids to be injected is 2.19×10^7 bbls.

(2). The system will be closed with an oil seal.

(3). The average injection pressure is 0 to 2,076 PSIG.

(4). The source of the injection fluid will be produced water from the following Yates Petroleum Corporation wells that are producing from the Permo-Upper Penn zone in the general area of the subject well, identified as follows:

a. Woodpecker "SY" St. #1
660' FNL & 660' FEL
Sec. 21-T14S-R33E
See attached analysis

b. Woodpecker "SY" St. #2
1980' FNL & 660' FEL
Sec. 21-T14S-R33E
See attached analysis.

c. Woodpecker "SY" St. #3
660' FNL & 1800' FEL
Sec. 21-T14S-R33E
See attached analysis.

d. Woodpecker "SY" St. #4
660' FNL & 1980' FWL
Sec. 21-T14S-R33E
See attached analysis.

e. Woodpecker "SY" St. #5
1980' FNL & 1980' FEL
Sec. 21-T14S-R33E
No analysis available at this time. Any analysis should be consistant with those of other wells in this area.

f. Swan "VB" St. #1
1980' FSL & 660' FEL
Sec. 21-T14S-R33E
See attached analysis.

g. Dove "VK" St. #1
2980' FSL & 660' FEL
Sec. 3-T14S-R33E
See attached analysis

h. Hanladdie "WR" St. #1
1980' FSL & 1980' FWL
Sec. 9-T14S-R33E
See attached analysis.

The water produced from subsequently drilled wells in this area will utilize the disposal well covered by this application.

(4). & (5).

The produced chlorides range from 10,897-92,00 MG/L in the wells that are proposed to be the source of injected fluids. A water analysis is available from the LDM Amoco "GX" State #1 (0.8 of a mile south in Sec. 19-T14S-R33E). The chlorides were reported at 18,000 MG/L from the attached DST #5 (10,410-450'). The subject well was D/A and a water analysis is not available from the proposed injection zone. Therefore, injection compatibility appears acceptable.
The proposed injection zone is included with the vertical limits of the Saunders Permo-Upper Penn pool, as corralative with the Adobe Gray 35-1 in Unit N of Sec. 36-T14S-R33E, the type well for the field rule. However, the proposed injection zone is stratigraphically lower than the oil productive zone in this field.

VIII. Geological Data:

Injection zone: Canyon (Permo-Upper Penn) 10,378-578', Dolomite wht, creamy, xln, vuggy good porosity, decreasing porosity with depth.

The underground source of drinking water in this area is the Ogallala formation of Tertiary age. The base of which is estimated at 250' at the location of the proposed disposal well. The Chinlee formation is also a fresh water aquifer which immediately underlies the Ogollala formation. Both of these aquifers are behind two strings of casing with both strings circulated with cement.

IX. The proposed stimulation program is to break down the perforations from 10,378-478' with 5,000 gallons of 15% acid.

If necessary, an acid fracture will be performed.

X. GR, SMP, ML, PML, DIL logs have been submitted to the NMOCD in Hobbs. DST data found on attached C-103.

XI. The State Water Engineer's (Roswell office), advises there is only one fresh water well of record within one-mile and it lies in the SE/4 SW/4 of Sec. 18-T14S-R33E within the area of review. However, such office does not have a water analysis but advises that the Ogollala water in this area would show 40-80 MG/L total chlorides, if an analysis was available. A Visual area check idicates that the well was T/A.

XII. Available geological and engineering data have been examined and no evidence of open faults or any other hydrologic connections between the disposal zone and any underground fresh water acquifers have been found.

XIII. The off-set operators listed below have been furnished a copy of this application by certified mail.

Yates Petroleum Corporation
207 S. 4th Street
Artesia, NM 88210

Pogo Production Company
P.O. Box 2504
Houston, Tx 77001

Texacc, Inc.
P.O. Box 88107
Dallas, Tx 75388

Gulf Oil Corporation
P.O. Box 1150
Midland, Tx 79701

The surface owners listed below have been furnished a copy of this application by certified mail.

Gerald Tulk
Box 666
Lovington, NM 88260

N.M. State Land Office
P.O. Box 1148
Santa Fe, NM 87501

Additonal data submitted:

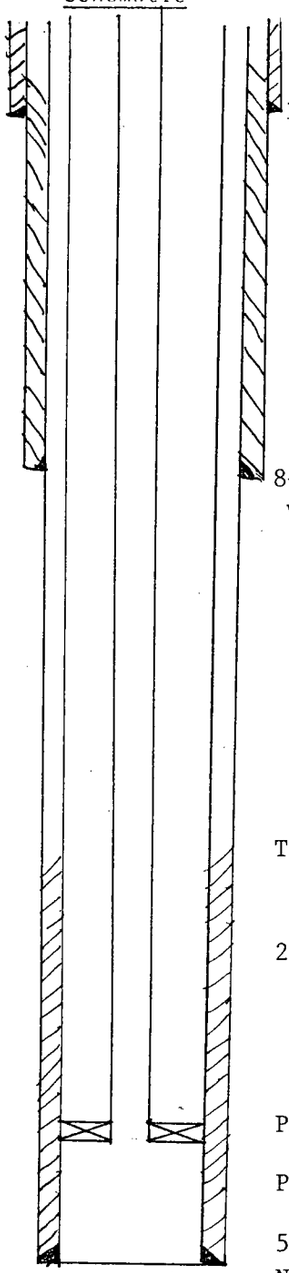
Petroleum Information (P.I.) cards on all wells within the two-mile radius circle.

INJECTION WELL DATA SHEET

Yates Petroleum Corporation	Midwest State #1	(Lease #K-2865)
OPERATOR	LEASE	

#1	660 FNL & 1980 FEL	19	14S	33E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Schematic



Tabular Data

Surface Casing

Size 13 3/8 " Cemented with 400 sx.

TOC surface feet determined by calculation

Hole size 17 ½"

Intermediate Casing

Size 8 5/8" " Cemented with 300 sx.

TOC 2978' feet determined by calculation

Hole size 11"

Long string

Size 5½" " Cemented with approx. 1000 sx.

TOC approx. 7000' feet determined by Bond log

Hole size 7 7/8"

Total depth 10,510'

Injection interval

10,378 feet to 10,578' feet
(perforated or open-hole, indicate which)

Tubing size 2 7/8" lined with plastic (material) set in a

Baker Model-R (Plasted coated) (brand and model) packer at 10,300' feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Canyon (Permo-Upper Penn)

2. Name of Field or Pool (if applicable) Undesignated

3. Is this a new well drilled for injection? / / Yes /X/ No

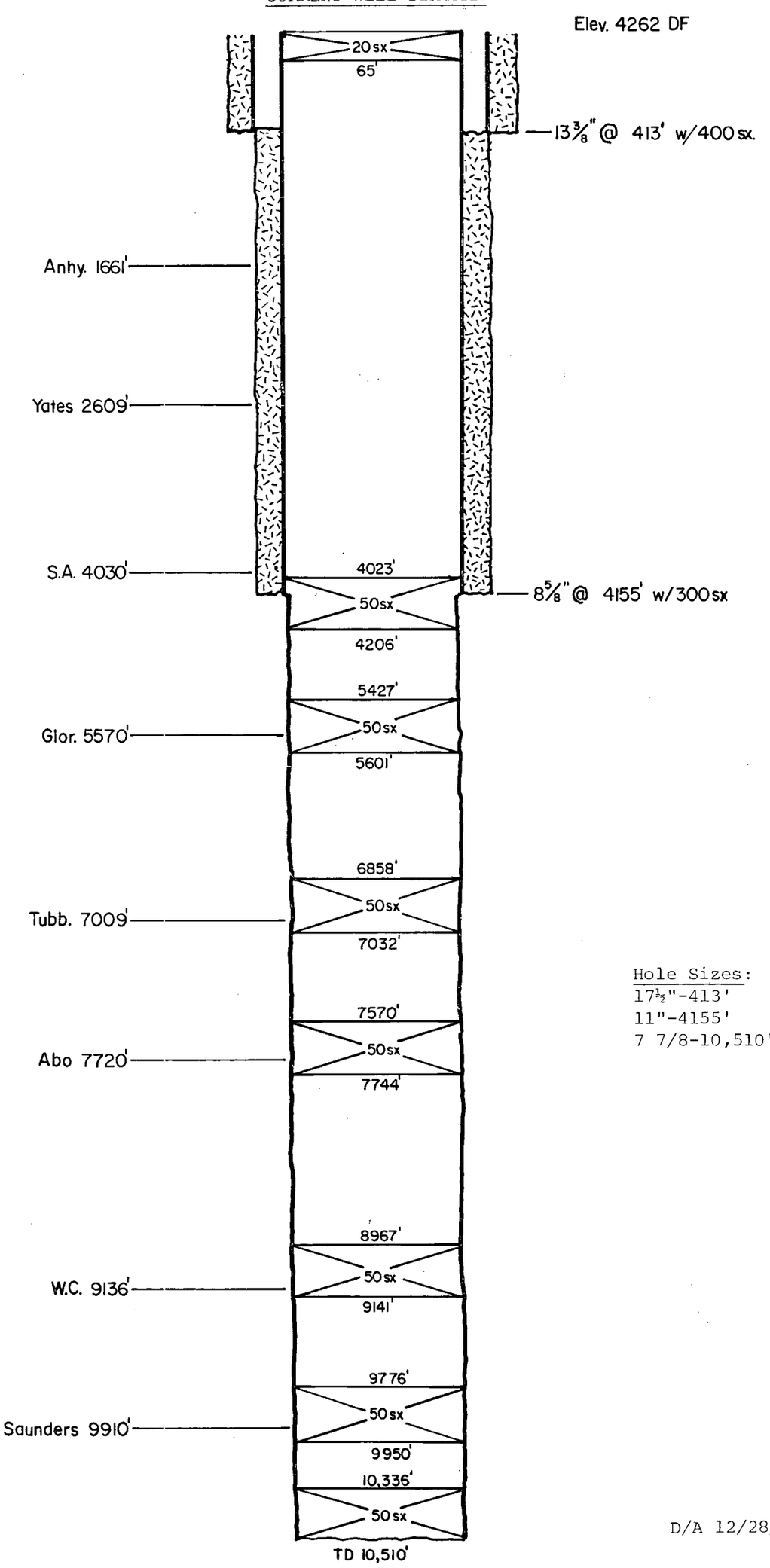
   If no, for what purpose was the well originally drilled? Oil and/or gas test

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) No, production casing was not run. The well was plugged as shown in the attached schematic.

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. None is this section. Approximately one-mile East is the Saunders Permo-Upper Penn oil pool. Corresponding depth of pay in this well is from 9,910' to 10,378'.

Midwest State No.1
660' FNL - 1980' FEL
Sec.19, T-14-S, R-33-E

CURRENT WELL DIAGRAM



Hole Sizes:
17½"-413'
11"-4155'
7 7/8-10,510'

D/A 12/28/72

COUNTY LEA FIELD Wildcat STATE NM API 30-025-24294

OPR BELL PETROLEUM CO SERIAL

NO 1 LEASE Midwest State MAP

Sec 19, T-14-S, R-33-E CO-ORD

660' FNL, 1980' FEL of Sec ELEV. DF L & S

CLASS GL

SPD 11-19-72 CMP 12-28-72	FORMATION	DATUM	FORMATION	DATUM
CSG & SX				
13 3/8" at 413' w/400 sx				
8 5/8" at 4155' w/300 sx				
LOGS EL GR RA IND HC A	TD 10,510'		PBD	

PLUGGED & ABANDONED

CONTR Robinson Bros. OPRS ELEV 4262 DF PD 10,500' TYPE RT

FR 11-20-72
(Pennsylvanian)

11-27-72 Drlg. 3280' anhy

12-5-72 TD 4823' dolo; Prep DST 4686-4823'
Cored 4731-72', rec 41' dolo w/fracs & sli odor
Cored 4773-4823', rec 50' dolo, w/fracs, bldg oil in fracs

12-12-72 Drlg. 8020' lm
DST 4686-4823', open 2 hrs, rec 970' DF, 1 hr ISIP 1889#, FP 144-468#, 2 hr FSIP 1739#, HP 2125-2125#, BHT 110 deg

12-19-72 Drlg 9815' lm & sh

1-2-73 TD 10,510'; PLUGGED & ABANDONED
DST 10,441-510', open 1 hr 50 mins, rec 2980' DM, 1 hr ISIP failed, FP 1013-1842#, 1 hr 35 min FSIP 3321#, HP 4966-4966#

NO. OF COPIES RECEIVED		
DISTRIBUTION		
SANTA FE		
FILE		
U.S.G.S.		
LAND OFFICE		
OPERATOR		

Form C-105
Revised 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5a. Indicate Type of Lease: State [X] Fee [ ]

5. State Oil & Gas Lease No.: K-2865

1a. TYPE OF WELL

b. TYPE OF COMPLETION

OIL WELL [XX] GAS WELL [ ] DRY [ ] OTHER

NEW WELL [Y] WORK OVER [ ] DEEPEN [ ] PLUG BACK [ ] DIFF. RESVR. [ ]

7. Unit Agreement Name:

8. Farm or Lease Name: Midwest State

2. Name of Operator: Bell Petroleum Company

9. Well No.: 1

3. Address of Operator: P.O. Box 1538 Midland, Texas 79701

10. Field and Pool, or Wildcat: Wildcat

RECEIVED
MAY 02 1983
OIL CONSERVATION DIVISION
SANTA FE

4. Location of Well

UNIT LETTER "B" LOCATED 660' FEET FROM THE North LINE AND 1980' FEET FROM THE East LINE OF SEC. 19 TWP. 14S RGE. 33E NMPM

12. County: Lea

15. Date Spudded	16. Date T.D. Reached	17. Date Compl. (Ready to Prod.)	18. Elevations (DF, RKB, RT, GR, etc.)	19. Elev. Cashinghead
11-20-72	12-23-72	Plug & Abandon	4249.8 GL 4262 DF	3.5 below GL

20. Total Depth	21. Plug Back T.D.	22. If Multiple Compl., How Many	23. Intervals Drilled By	Rotary Tools	Cable Tools
10510'	--	none	→	0-TD	-

24. Producing Interval(s), of this completion — Top, Bottom, Name: None

25. Was Directional Survey Made: Yes

26. Type Electric and Other Logs Run: GR-SMP-ML-PML-DIL (Schlumberger)

27. Was Well Cored: yes

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

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13 3/8"	61#	413'	17½"	400 sax	None
8 5/8"	24# & 32#	4155'	11"	300 Sax	None

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN
	None			

30. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
	None	

31. Perforation Record (Interval, size and number): none

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

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
none	

33. PRODUCTION

Date First Production	Production Method (Flowing, gas lift, pumping — Size and type pump)	Well Status (Prod. or Shut-in)
		Plug & Abandon

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.)

34. Disposition of Gas (Sold, used for fuel, vented, etc.)

Test Witnessed By

35. List of Attachments

36. *I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.*

SIGNED Joan Herring TITLE Production Supervisor DATE January 5, 1973

NO. OF COPIES RECEIVED		
DISTRIBUTION		
SANTA FE		
FILE		
U.S.G.S.		
LAND OFFICE		
OPERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease
State [X] Fee [ ]

5. State Oil & Gas Lease No.
K-2865

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 —" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL [X] GAS WELL [ ] OTHER-

7. Unit Agreement Name

2. Name of Operator
Bell Petroleum Company

8. Farm or Lease Name
Midwest State

3. Address of Operator
P.O. Box 1538 Midland, Texas 79701

9. Well No.
#1

4. Location of Well
UNIT LETTER "B", 660' FEET FROM THE North LINE AND 1980' FEET FROM THE East LINE, SECTION 19 TOWNSHIP 14S RANGE 33E NMPM.

10. Field and Pool, or Wildcat
Wildcat

15. Elevation *(Show whether DF, RT, GR, etc.)*
4249.8 GL DF 4262

12. County
Lea

RECEIVED
MAY 02 1983
OIL CONSERVATION DIV.
SANTA FE

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK [ ]	PLUG AND ABANDON [ ]	REMEDIAL WORK [ ]	ALTERING CASING [ ]
TEMPORARILY ABANDON [ ]		COMMENCE DRILLING OPNS. [ ]	PLUG AND ABANDONMENT [X]
PULL OR ALTER CASING [ ]	CHANGE PLANS [ ]	CASING TEST AND CEMENT JOB [ ]	
OTHER [ ]		OTHER [ ]	

17. Describe Proposed or Completed Operations *(Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work)* SEE RULE 1103.

12/5/72 DST #1 4686'- 4823' San Andres Recovered 970' Drlg. Fluid.
12/22/72 Ran Logs to TD 10510
12/23/72 DST #2 10441-10510' Penn. Recovered 2980' Mud (Bottom 30' Sulphur wtr. Cut).
12/26/72 DST #3 (retest DST #2) 10443-10510' Penn. Recovered: 1590' mud, 2947' sulphur wtr.
12/27/72 Plug and Abandon- Cement plugs spotted as follows:
Plug #1 10510 50 sax 10336' Plug #2 9950- 50 sax 9776'
Plug #3 9141 50 sax 8967' Plug #4 7744 50 sax 7570'
Plug #5 7032 50 sax 6858' Plug #6 5601 50 sax 5427'
Plug #7 4206 50 sax 4023'
Shoe at 4155' Across, below and above.
Plug in top of Pipe 0- 65' 20 sax.
Used Halliburton Class H. Cement , 2% Cal. Chloride.
Will not recover any pipe.

Verbal approval given by J.D. Ramey 12-27-72

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

SIGNED Joan Nemir@ TITLE Production Supervisor DATE 12/28/72

APPROVED BY Orig. Signed by John Runyan TITLE DATE JAN 5 1973

CONDITIONS OF APPROVAL, IF ANY:

NO. OF COPIES RECEIVED		
DISTRIBUTION		
SANTA FE		
FILE		
U.S.G.S.		
LAND OFFICE		
OPERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5q. Indicate Type of Lease
State [X] Fee [ ]

5. State Oil & Gas Lease No.
K-2865

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 —" (FORM C-101) FOR SUCH PROPOSALS.)

RECEIVED
MAY 02 1983
OIL CONSERVATION DIVISION
SANTA FE

1. OIL WELL [X] GAS WELL [ ] OTHER-

7. Unit Agreement Name

2. Name of Operator
Bell Petroleum Company

8. Farm or Lease Name
Midwest State

3. Address of Operator
P.O. Box 1538 Midland, Texas 79701

9. Well No.
#1

4. Location of Well
UNIT LETTER "B" , 660' FEET FROM THE North LINE AND 1980' FEET FROM THE East LINE, SECTION 19 TOWNSHIP 14S RANGE 33E NMPM.

10. Field and Pool, or Wildcat
Wildcat

15. Elevation (Show whether DF, RT, GR, etc.)
4249.8 GL DF 4262

12. County
Lea

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK [ ]	PLUG AND ABANDON [ ]	REMEDIAL WORK [ ]	ALTERING CASING [ ]
TEMPORARILY ABANDON [ ]		COMMENCE DRILLING OPNS. [ ]	PLUG AND ABANDONMENT [X]
PULL OR ALTER CASING [ ]	CHANGE PLANS [ ]	CASING TEST AND CEMENT JOB [ ]	
OTHER [ ]		OTHER [ ]	

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

12/5/72 DST #1 4686'- 4823' San Andres Recovered 970' Drlg. Fluid.
12/22/72 Ran Logs to TD 10510
12/23/72 DST #2 10441-10510' Penn. Recovered 2980' Mud (Bottom 30' Sulphur wtr. Cut).
12/26/72 DST #3 (retest DST #2) 10443-10510' Penn. Recovered: 1590' mud, 2947' sulphur wtr.
12/27/72 Plug and Abandon- Cement plugs spotted as follows:
Plug #1 10510 50 sax 10336' Plug #2 9950- 50 sax 9776'
Plug #3 9141 50 sax 8967' Plug #4 7744 50 sax 7570'
Plug #5 7032 50 sax 6858' Plug #6 5601 50 sax 5427'
Plug #7 4206 50 sax 4023'
Shoe at 4155' Across, below and above.
Plug in top of Pipe 0- 65' 20 sax.
Used Halliburton Class H. Cement , 2% Cal. Chloride.
Will not recover any pipe.

Verbal approval given by J.D. Ramey 12-27-72

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

SIGNED [signature] TITLE Production Supervisor DATE 12/28/72

APPROVED BY Orig. Signed by John Runyan TITLE _____ DATE JAN 5 1973

CONDITIONS OF APPROVAL, IF ANY:

UNICHEM INTERNATIONAL

601 NORTH LEECH P.O BOX1499

HOBBS, NEW MEXICO 88240

COMPANY : YATES PETROLEUM
DATE : 11-22-82
FIELD,LEASE&WELL : WOODPECKER #1
SAMPLING POINT: WELLHEAD
DATE SAMPLED : 11-19-82

SPECIFIC GRAVITY = 1.026
TOTAL DISSOLVED SOLIDS = 38398
PH = 7.59

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	80	1603.
MAGNESIUM	(MG)+2	180	2188.
SODIUM	(NA).CALC.	408	9383.
ANIONS			
BICARBONATE	(HCO3)-1	17.4	1061.
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	86.7	4166.
CHLORIDES	(CL)-1	564	19995
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	.45	19.9
HYDROGEN SULFIDE	(H2S)	14	238.
OXYGEN	(O2)	NOT RUN	
IRON(TOTAL)	(FE)		3.5
BARIUM	(BA)+2	NOT RUN	
MANGANESE	(MN)	NOT RUN	

SCALING INDEX	TEMP
	30C
	86F
CARBONATE INDEX	1.19
CALCIUM CARBONATE SCALING	LIKELY
SULFATE INDEX	3.74
CALCIUM SULFATE SCALING	LIKELY

UNICHEM INTERNATIONAL

601 NORTH LEECH P O BOX 1499

HOBBS, NEW MEXICO 88240

COMPANY : YATES PETROLEUM
DATE : 11-22-82
FIELD,LEASE&WELL : WOODPECKER #2
SAMPLING POINT: WELLHEAD
DATE SAMPLED : 11-19-82

SPECIFIC GRAVITY = 1.044
TOTAL DISSOLVED SOLIDS = 65676
PH = 6.92

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	106.	2137.
MAGNESIUM	(MG)+2	183.	2228.
SODIUM	(NA),CALC.	859.	19765
ANIONS			
BICARBONATE	(HCO3)-1	11.8	719.
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	38.1	1833.
CHLORIDES	(CL)-1	1099.	38991.
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	45	19.9
HYDROGEN SULFIDE	(H2S)	30	511.
OXYGEN	(O2)	NOT RUN	
IRON(TOTAL)	(FE)		17.6
BARIUM	(BA)+2	NOT RUN	
MANGANESE	(MN)	NOT RUN	

SCALING INDEX	TEMP
	30C
	86F
CARBONATE INDEX	.406
CALCIUM CARBONATE SCALING	LIKELY
SULFATE INDEX	-2.7
CALCIUM SULFATE SCALING	UNLIKELY

UNICHEM INTERNATIONAL

601 NORTH LEECH P O BOX 1499

HOBBS, NEW MEXICO 88240

MPANY : YATES PETROLEUM
TE : 11-22-82
ELD,LEASE&WELL : WOODPECKER #3
MPLING POINT: WELLHEAD
TE SAMPLED : 11-19-82

ECIFIC GRAVITY = 1.018
TAL DISSOLVED SOLIDS = 27850
= 7.56

		ME/L	MG/L
CATIONS			
LCIUM	(CA)+2	48.6	975.
GNESIUM	(MG)+2	39.3	478.
DIUM	(NA),CALC.	370.	8513.
ANIONS			
CARBONATE	(HCO3)-1	23.4	1427.
RBONATE	(CO3)-2	0	0
DROXIDE	(OH)-1	0	0
FATE	(SO4)-2	82.4	3958.
ORIDES	(CL)-1	352.	12497.
DISSOLVED GASES			
BON DIOXIDE	(CO2)	22	9.9
DROGEN SULFIDE	(H2S)	18	306.
YGEN	(O2)	NOT RUN	
ON(TOTAL)	(FE)		3.9
RIUM	(BA)+2	NOT RUN	
NGANESE	(MN)	NOT RUN	

SCALING INDEX	TEMP
	30C
	86F
RBONATE INDEX	1.19
LCIUM CARBONATE SCALING	LIKELY
FATE INDEX	-2.9
LCIUM SULFATE SCALING	UNLIKELY

UNICHEM INTERNATIONAL

601 NORTH LEECH

P.O. BOX 1499

HOBBS, NEW MEXICO 88240

COMPANY : YATES PETROLEUM
DATE : 11-22-82
FLD,LEASE&WELL : SWAN #1
SAMPLING POINT : WELLHEAD
DATE SAMPLED : 11-19-82

SPECIFIC GRAVITY = 1.016
TOTAL DISSOLVED SOLIDS = 21376
PH = 7.49

CATIONS		ME/L	MG/L
CALCIUM	(CA)+2	46	921
MAGNESIUM	(MG)+2	17	521
SODIUM	(NA),CALC	309	7116
ANIONS			
BICARBONATE	(HCO3)-1	22.4	1366
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	72.8	3500
CHLORIDES	(CL)-1	307	10897
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	0	0
HYDROGEN SULFIDE	(H2S)	2.1	35.7
OXYGEN	(O2)	NOT RUN	
IRON(TOTAL)	(FE)	NOT RUN	2.1
BARIUM	(BA)+2	NOT RUN	
MANGANESE	(MN)		

SCALING INDEX	TEMP
CALCIUM CARBONATE INDEX	30C
CALCIUM CARBONATE SCALING	86F
CALCIUM SULFATE INDEX	1.11
CALCIUM SULFATE SCALING	LIKELY
	-5.1
	UNLIKELY

Deviation 3002 3/4 660----

1342-A

HALLIBURTON DIVISION LABORATORY
HALLIBURTON SERVICES
MIDLAND DIVISION
HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. W83-195

To Yates Petroleum Corporation

207 S. 4th Street

Artesia, New Mexico

ATTN: Mr. Eddie Mahfood

Date 2-14-83

Submitted by _____ Date Rec. 2-14-83

Well No. Hanladdie "WR" St. #1 Depth 9,900' Formation _____

County Eddy Field Saunders Source _____

	2-11-83	2-12-83	
Resistivity	0.082 @ 74°F.	0.082 @ 74°F.	
Specific Gravity	1.104	1.104	
pH	5.7	5.8	
Calcium (Ca)	24,000	23,200	*MPL
Magnesium (Mg)	2,520	2,400	
Chlorides (Cl)	92,000	92,000	
Sulfates (SO_4)	1,150	1,200	
Bicarbonates (HCO_3)	1,030	1,050	
Soluble Iron (Fe)	110	100	
API Gr.	31.0 @ 60°F.	31.2 @ 60°F.	

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Brewer

HALLIBURTON COMPANY

By W L Brewer
CHEMIST

cc:

NOTICE

HALLIBURTON DIVISION LABORATORIES
HALLIBURTON SERVICES
MIDLAND DIVISION
HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. W83-001

To Yates Petroleum Corporation

207 S. 4th Street

Artesia, New Mexico

ATTN: Mr. Eddie Mahfood

Date 1-1-83

Submitted by _____ Date Rec. 1-1-83

Well No. Dove #1 Depth _____ Formation _____

County _____ Field _____ Source _____

Resistivity	0.063 @ 70°F.		
Specific Gravity	1.110		
pH	5.3		
Calcium (Ca)	11,250		*MPL
Magnesium (Mg)	6,000		
Chlorides (Cl)	89,500		
Sulfates (SO_4)	800		
Bicarbonates (HCO_3)	805		
Soluble Iron (Fe)	125		

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Thompson

HALLIBURTON COMPANY

By W. L. Brunel
CHEMIST

cc: Harvey Apple, GeoVann, Inc.
Box 38
Artesia, New Mexico

SCHLUMBERGER — PROXIMITY-LOG-MICROLOG WITH CALIPER

COMPANY BELL PETROLEUM COMPANY
WELL #1 MIDWEST STATE
FIELD WILDCAT
COUNTY LEA STATE NEW MEXICO
LOCATION 660' FNL & 1980' FEL
Sec. 19 Twp. 14-S Rge. 33-E
Other Services: SNP, DIL

COUNTY LEA
FIELD or LOCATION WILDCAT
WELL #1 MIDWEST STATE
COMPANY BELL PETR. CO.

Permanent Datum: G.L. Elev. 4249
Log Measured From D.F. 12 Ft. Above Perm. Datum
Drilling Measured From D.F.
Elev.: K.B. 4261, D.F. -, G.L. 4249

Date	12-23-72			
Run No.	ONE			
Depth—Driller	10510			
Depth—Logger	10510			
Btm. Log Interval	10506			
Top Log Interval	4155			
Casing—Driller	8 5/8@ 4155	@	@	@
Casing—Logger	4155			
Bit Size	7 7/8			
Type Fluid in Hole	FRESH MUD			
Dens. / Visc.	9.1 / 39			
pH / Fluid Loss	10.0 / 10.2ml	ml	ml	ml
Source of Sample	CIRC			
R_m @ Meas. Temp.	.94 @ 65 °F	@ °F	@ °F	@ °F
R_{mf} @ Meas. Temp.	.36 @ 65 °F	@ °F	@ °F	@ °F
R_{mc} @ Meas. Temp.	- @ - °F	@ °F	@ °F	@ °F
Source: R_{mf} / R_{mc}	M / -			
R_m @ BHT	.46 @ 138 °F	@ °F	@ °F	@ °F
Time Since Circ.	14 HOURS			
Max. Rec. Temp.	138 °F	°F	°F	°F
Equip. / Location	7645 / HOBBS			
Recorded By	J.R. WILSON			
Witnessed By	KELLY, MADSEN			

Schlumberger — DUAL INDUCTION-LATEROLOG

COMPANY BELL PETROLEUM COMPANY
WELL #1 MIDWEST STATE
FIELD WILDCAT
COUNTY LEA STATE NEW MEXICO
LOCATION 660' FNL & 1980' FEL
Sec. 19 Twp. 14-S Rge. 33-E
Other Services: PML, SNP

COUNTY LEA
FIELD or LOCATION WILDCAT
WELL #1 MIDWEST STATE
COMPANY BELL PETR. CO.

Permanent Datum: G.L. Elev. 4249
Log Measured From D.F. 12 Ft. Above Perm. Datum
Drilling Measured From D.F.
Elev.: K.B. 4263, D.F. 4262, G.L. 4249

Date	12-23-72			
Run No.	ONE			
Depth—Driller	10510			
Depth—Logger	10510			
Btm. Log Interval	10503			
Top Log Interval	4155			
Casing—Driller	8 5/8@ 4155	@	@	@
Casing—Logger	4155			
Bit Size	7 7/8			
Type Fluid in Hole	FRESH MUD			
Dens. / Visc.	9.1 / 39			
pH / Fluid Loss	10.0 / 10.2ml	ml	ml	ml
Source of Sample	CIRC			
R_m @ Meas. Temp.	.94 @ 65 °F	@ °F	@ °F	@ °F
R_{mf} @ Meas. Temp.	.36 @ 65 °F	@ °F	@ °F	@ °F
R_{mc} @ Meas. Temp.	- @ - °F	@ °F	@ °F	@ °F
Source: R_{mf} / R_{mc}	M / -			
R_m @ BHT	.46 @ 138 °F	@ °F	@ °F	@ °F
Time Since Circ.	10 HOURS			
Max. Rec. Temp.	138 °F	°F	°F	°F
Equip. / Location	7645 / HOBBS			
Recorded By	J.R. WILSON			
Witnessed By	KELLY, MADSEN			

The well name, location and borehole reference data were furnished by the customer.

RKS

ges in Mud Type or Additional Samples

Sample No.			
— Driller			
Fluid in Hole			
Visc.			
Fluid Loss		ml	
ce of Sample			
Meas. Temp.	@ °F	@ °F	
Meas. Temp.	@ °F	@ °F	
Meas. Temp.	@ °F	@ °F	
R_{mf} / R_{mc}	/		
@ BHT	@ °F	@ °F	
@ BHT	@ °F	@ °F	
@ BHT	@ °F	@ °F	

Scale Changes

Type Log	Depth	Scale Up Hole	Scale Down Hole

Equipment Data

Run No.	Tool Type	Pad Type	Tool Pos.	Other

Used: CART. No.: MPC-D-282
PANEL No.: MPP-131
SONDE No.: MPS-C-53

This Logarithmic Overlay method of presentation simplifies detection of hydrocarbons. It is based upon a comparison of values derived from resistivity and porosity measuring devices.

Every formation is characterized by a Formation Resistivity Factor (F) which relates the resistivity of the formation, when 100% water saturated, to the resistivity of the saturating water. This F is also related to the formation porosity. These relationships are given under Computation Equations. With each of the Formation Density Compensated Log, the Sidewall Neutron Porosity Log, and the Borehole Compensated Sonic Log, automatic computations plot the F curve. To facilitate overlay comparisons, films of both the F curve and the resistivity curves are recorded on logarithmic scales.

This presentation is made by overlaying the films, shifted to account for water-sensitivity and tracing the curve from one film onto the other. With the resistivity curves properly positioned, the presence of hydrocarbons, in hydrocarbon-bearing zones, the F curve, [illegible] appropriate for 100% water saturation, reads a lower value than the resistivity curves.

When curves of both deep and shallow investigation resistivity devices are traced, and are properly positioned to account for the resistivities of waters in their respective fields of investigation, the logarithmic overlay presentation also indicates the amount of oil displaced by invasion.

On the Logarithmic Overlay presentation, appropriate scales permit direct reading for values of porosity and water saturation.

COMPUTATION EQUATIONS

Apparent Porosity Computations:

Density: $\phi_D = \frac{\rho_{ma} - \rho_b}{\rho_{ma} - \rho_f}$

Sonic: $\phi_S = \frac{\Delta t - \Delta t_{ma}}{\Delta t_f - \Delta t_{ma}} \cdot \frac{1}{C_p}$

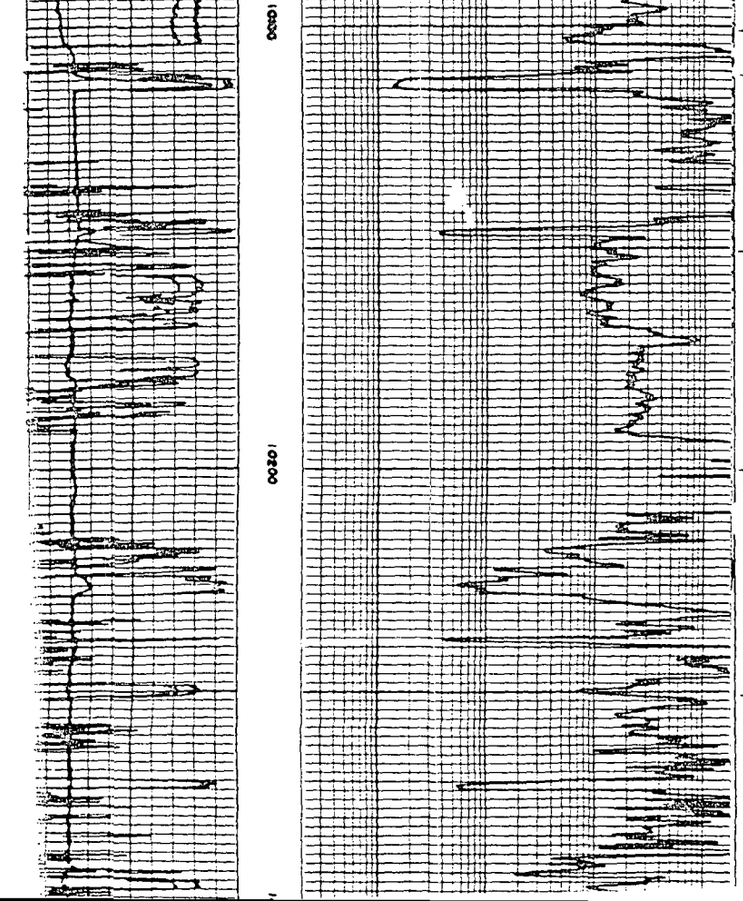
Neutron: ϕ_N = As recorded on Sidewall Neutron Porosity Log.

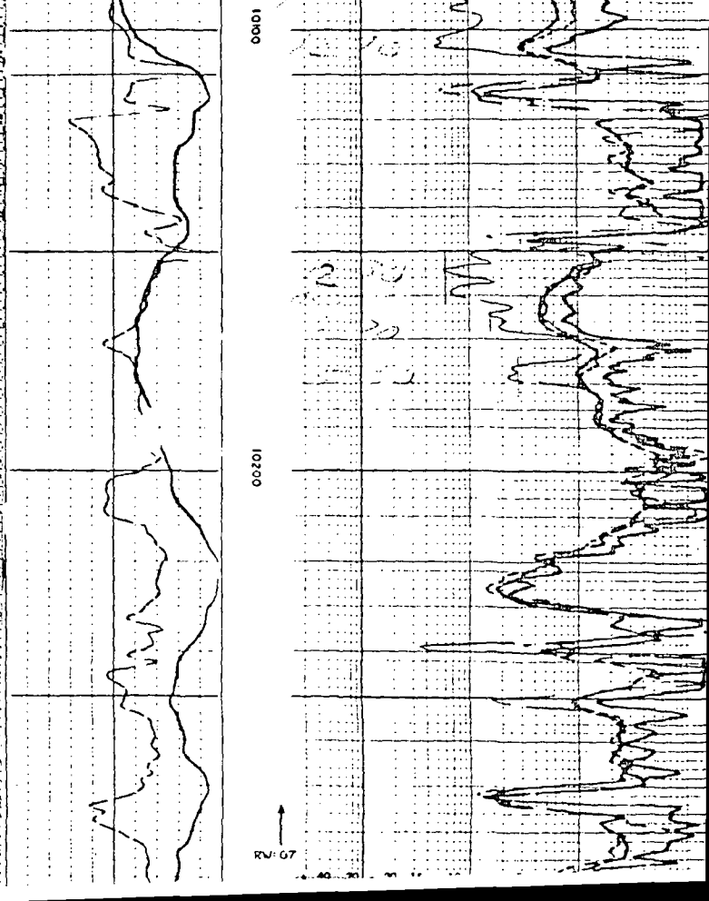
Formation Factor Computations:

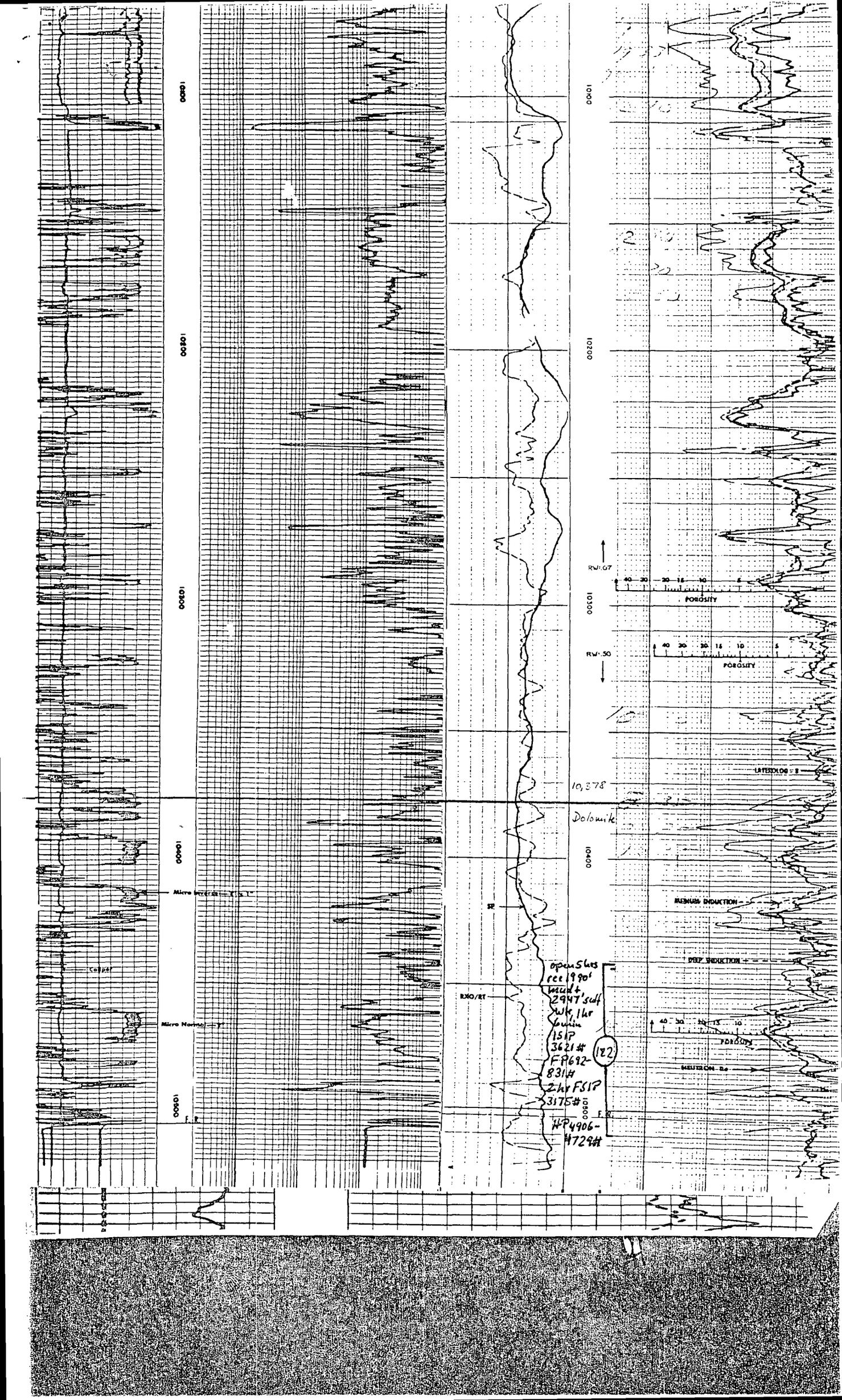
$F = \frac{a}{\phi^m}$ $\qquad F = \frac{R_o}{R_w}$

Water Saturation Computations:

$S_w = \sqrt{\frac{F R_w}{R_t}} = \sqrt{\frac{R_o}{R_t}}$






10,378
Dolomite
RW: 07
RW: 50
POROSITY
LITHOLOG
MEDIUM INDUCTION
DEEP INDUCTION
NEUTRON
RXO/RT
Micro Inverse
Micro Normal
Caliper
open 5hrs
rec 1990'
mud +
2947' suff
SIP
3621#
FP 692-
831#
2hr FSIP
3175#
HP 4906-
4729#
122

DRILL STEM TESTS

Yates Petroleum Corporation
LDM-AMOCO GX State No. 1 (L-45 Lease #)
Section 19-T14S-R33E
Lea County, New Mexico

DST No. 1 - 10052-10168' TO 30", SI 60", OP 60", SI 120". TO w/blow, Reop w/blow and died. Recovered: - 700' DM 3100' SW - no gas. Sampler: 1800 cc salt water. Pressures: HP 4828-4786'; IFP 518-1549; ISIP 1679; FFP 1549-1634; FSIP 1677. BHT 146 deg.

DST #2 - 10190-10321' - TO 30", SI 90", OP 120", SI 240". Op w/fair blow, GTS in 18" increased to 50# on 1/4" choke. Reop w/weak blow, 2# on 1/4" choke, decreased to 1/2#. Recovered: 4 BOCM, 12 BO&GCM, 5 BGC sulphur water. Sampler: 1400 cc O & G cut water. Pressures: HP 4845-4803; IFP 345-432; ISIP 3655; FFP 432-1079; FSIP 3312.

* DST #3 - 10332-10386' - TO 30", SI 90", TO 30", SI 60". Op w/good blow, 2# on 1/4" choke decreasing. Reop w/weak blow, dead in 15". Recovered: 300' of black mud and water, 8250' of salty sulphur water, no oil or gas. Sampler: 160#, 1900 cc sulphur water, no oil or gas. Pressures: HP 4972-4930' IFP 1036-3655; ISIP 3826; FFP 3655-3826; FSIP 3826.

DST #4 - 12656-830' - TO 30", SI 90", OP 120", SI 180". Op w/weak blow. Reop w/weak blow. No GTS. Recoveree: 1500' WC, 289' GCM. Sampler: No fluid. 540 psi 1.4 cfg. Pressures: HP 6205-6205; IFP no reading. ISIP 909; FFP 909-974; FSIP 1509.

* DST #5 - 10410-450 (Straddle) - TO 30", SI 60", TO 60", SI 90". TO w/strong blow. Reop w/strong blow, 5# on 1/8" choke after 45", decreased to weak blow. Recovered: 1000' WB, sli GC slphur wtr at 7646'. Sampler: 2800 cc sulphur water, 18000 ppm cl. Pressures: HP 5204-5204, IFP 1388-3393, ISIP 3850, FFP 3419-3850, FSIP 3850.

* Proposed injection zone

P.I. Reports on surrounding wells

Co. LEA Pool SAUNDERS State KROENLEIN 172-62

Company Cosden Pet. Corp. - #1 - State "E" Elev. 4232 DF (12' Kelly?)

Loc. 660'FSL & FWL Sec. 21, T.14-S, R. 33-E 10,200'RT-Penn. Abb NO File (W) LOGS

Acid or Shot	Casing Record	Tops
Perf: 9925-10,000 26,500 acid	13 3/8- 310- 325 8 5/8-4179-1600 5 1/2-10042- 300	Anhy. 1695 (+2537) Yates 2655 (+1577) Glor. 5670 (-1438) Tubb 6997 (-2765) Abo 7780 (-3548) W.C. 9318 (-5086) Saunders 9855 (-5623)

Spd. 1-26-62 Comp. 5-14-62

I. P. P. 20 BO & 95 BW/24 hrs.

Gr. GOR TP CP

Remarks DST 9380-9915 op. 1 hr.15 mins. gas in 8 mins. rec. 250' oil & 250' HMCO; FP 245-285; ISIP 3540/30"; CONT'D. PAGE 2.

TP 9925
TD 10,042
PBD

K-172-62
PAGE 2.

LEA, N.M. 21-14-33
Cosden Pet. Corp. - #1 - State "E"

FSIP 3170/30".

DST 9915-9970 op. 2 hrs. 5 mins., gas in 15 mins., est. 195,000 CFG; rec. 1760' oil & 40' wtr.; FP 180-448; ISIP 3133/30"; FSIP 1594/30".

DST 9970-10030 misrun

DST 9962-10030 op. 2 hrs. rec. 100' DM & 1950' salty sul. wtr.; no FP; ISIP 3690/30"; FSIP3630/30".

Perf: 20/9925-9935, 4/9950-9952, 16/9972-80; 5000 acid; swb. 140 bbls. fluid/9 hrs. (45 BO & 95 BW); reA/10,000 swb. 210 bbls. fluid/12 hrs. (24 BO & 186 BAW); PB 9910' Swb. 84 BO & 146 BW/16 hrs.; BP/9910'

Perf: 12/9836-42, 12/9856-62, 8/9866-70, 16/9873-81, 16/9887-95; 2000 acid in 3 stages; swb. 256 BAW & form. wtr. & 22 BO/24 hrs./9836-9842'; swb. 310 bbls. wtr. & trace of oil/24 hrs. 9856-9881'; swb. 213 BW/6 1/2 hrs., 9887-9895'; resqz. perfs 9836-95' w/125 sx; reA.12,000

Perf: 24/9994-10,000; 500 acid; P. 14 BO & 80 BW/24 hrs.; P. 10 BO & 95 BW/24 hrs.

LEA COUNTY NEW MEXICO SAUNDERS FIELD

Well: YATES PETROLEUM CORP, 5 Woodpecker "SY"State Result: OIL DO

Loc'n: 21 mi SE/Caprock; 1980' FNL,1980' FEL Sec 21-14S-33E

Spud:10-9-82;Comp:1-10-83;Elev:4212'Grd;TD:10,160'Penn; PB:9976'
Casing: 13-3/8" 450'/450 sx;8-5/8"4185'/1350 sx;5½" 10,071'/1300 sx;2-7/8" 9830'
Prod Zone:(Permo-Penn),Prod thru Perfs 9886-9962'
IPP: 290 BOPD + 115 BW,Grav 42.7, GOR 914
Comp Info: Perf (Perm-Penn) 9941-42, 9949-53', 9955-62'/ 1 SPF, A/3000 gals; Perf (Permo-Penn) 9886-99,9903-05' w/1 SPF, A/3500 gals; C/Landis #3
Tops EL: Rustler 1660', B/Salt 2 533',Yates 2648', Queen 3422', San And 4088',Tubb 7013', Abo 7760', Wolfc 9101; Cisco 9982'
API No: 30-025-27963

LEA COUNTY NEW MEXICO SAUNDERS FIELD

Well: YATES PETROLEUM CORP, 3 Woodpecker "SY"State Result: OIL DO
Loc'n: 21 mi SE/Caprock; 660' FNL,1800' FEL Sec 21-14S-33E
10,0

Spud:7-5-82;Comp:8-26-82;Elev:4213' Grd;TD:10,150'Penn;PB:
Casing: 13-3/8" 452'/450 sx;8-5/8"4200'/1815 sx;5½"10,150',
700 sx; 2-7/8" 9880'
Prod Zone:(Permo-Penn), T/Pay 9816',Prod thru Perfs 9816-99
IPP: 428 BOPD + 180 BW, Grav 41, GOR 1401
Comp Info: Perf (U/Penn) 9816-9942',A/5000 gals; C/Collier #11
Tops EL: Rustler 1674',Yates 2652', Queen 3421', San And 4089', Glorieta 5588',Tubb 7012', Drinkard 7123',Abo 7743 Wolfc 8134', Cisco 9978'
API No: 30-025-27874

Petroleum Information®
CORPORATION
A Subsidiary of A.C. Neilson Company

Date: 9-22-82 Card No.: 7 dh

LEA COUNTY NEW MEXICO SAUNDERS FIELD

Well: YATES PETROLEUM CORP,4 Woodpecker "SY"State Result: OIL DO
Loc'n: 22 mi SE/Caprock; 660' FNL,1980' FWL Sec 21-14S-33E
PB:10,329'

Spud:9-30-82;Comp:1-9-83;Elev:4219'Grd;TD:10,425'Penn
Casing: 13-3/8" 450'/450 sx;8-5/8" 4193'/2250 sx;5½"
10,425'/1000 sx;2-7/8" 10,114'
Prod Zone:(Permo-Penn),Prod thru Perfs 9775-10,061'
IPP: 281 BOPD + 45 BW,Grav 42.7, GOR 623
Comp Info:Perf (Cisco) 20/9973-10,017, 10,044-061',A/ 9000 gals; Perf (Permo-Penn) 15/9891-9940',A/2500 gals Perf (Permo-Penn) 11/9775-9816',A/2500 gals; C/Ard #6
Tops EL: Rustler 1702', Yates 2650', Queen 3420', San And 4023',Tubb 7001',Abo 7748',Wolfc 9112',Cisco 9988'
API No: 30-025-27942

Replaces card 3 5 dated 1-19-83 for results of suspended completion

Petroleum Information®
CORPORATION
A Subsidiary of A.C. Neilson Company

Date: 2-9-83 Card No.: 80 dh

LEA COUNTY NEW MEXICO BAUM

Well: MWJ PRODUCING CO. 1 Baum "17"State
Loc'n: 21 mi SE/Caprock,Sec 17-14S-33E-660 FNL,660 FWL Sec
Result: OIL DO
/000

Spud:3-14-81,Comp:6-29-81,Elev: 4247'Grd,TD:10,150(PSLV)PB:10/
Casing:13 3/8"375'/400sx,8 5/8"4113'/1300sx,5 1/2"10,150-300sx
Prod Zone:(U/Penn)T/Pay 9933',Prod thru Perfs 9933-43'
IPP: 69 BOPD + 110 BW,Grav (NR) GOR(NR)
Comp Info: Perf(Penn)10,035-056',w/2 SPF,A/1000 gals,No gauges PB to 10,000,Perf(U/Penn)9933-38',9940-43',A/1000 gals,C/Tri-Service #8
Tops:(EL) NR
API No: 30-025-27309

Petroleum Information®
CORPORATION

Date: 7-29-81 Card No.: 9 mja

LEA COUNTY NEW MEXICO SAUNDER, S. FIELD

Well: GULF OIL CORP. 1 Lea "VF" State "OWWO" Result: OIL DO
Loc'n: 21 mi SE/Caprock; Sec 16-14S-33E; 330' FSL 330' FEL of Sec;
(Orig. Comp 5-7-81 thru (Permo-Penn) Perfs 9935-84', OTD 10,100; OWDD & Re-Comp 6-8-82 thru (Permo-Penn) Perfs 9935-84', OTD 10,120', OPB: 10,043');

Spud:9-2-82;Comp:11-9-82;Elev:4208'Grd;TD:10,120'Penn;PB: 10,043'
Casing:11-3/4"412'/400sx;8-5/8"4157'/1500sx;5-1/2"10,100'/ 400sx (pulled);5-1/2"10,120'/1370sx;2-3/8"10,019'
Prod. Zone: (Permo-Penn)T/Pay 9847',Prod Perfs 9847-9984'
IPP:155 BOPD + 55 BW, GOR 581-1,Grav 40.7
Comp Info; Perf (Permo-Penn) 9847-49', 9861-63', 9885-87' w/ 4 SPF; A/3750 gals; C/NR
Tops: (EL) NR
API No:30-025-27239

Petroleum Information®
CORPORATION
A Subsidiary of A.C. Neilson Company

Date: 12-22-82 Card No.: 24 bc

LEA COUNTY NEW MEXICO BAUM FIELD

Well: MWJ PRODUCING CO, 1 Baum "17-B" State Result: OIL DO
Loc'n: 21 mi SE/Caprock; 660' FSL, 660' FEL Sec 17-14S-33E

Spud:10-30-83;Comp:2-19-83;Elev:4229'Grd;TD:10,200'Cisco;PB: 10,127'
Casing: 13-3/8" 408'/425 sx;8-5/8"4178'/1500 sx;5½"10,200'/ 450 sx; 2-3/8" 10,003'
Prod Zone:(U/Penn),Prod thru Perfs 9962-78'
IPF: 240 BOPD + 10 BW 22/ 64"ch,Grav 39.2,GOR 1500, TP 250#
Comp Info: Perf (Cisco) 9962-78'/2 SPF,A/1000 gals; flwd 240 BO & 10 BW/24 hrs; C/Tri Service #8
Tops EL: Yated 2625', Queen 3540', San Andres 4090',Glorieta 5570',Tubb 7110',Abo 7735',Wolfc 9180',Penn 9810',Cisco 9950'
API No: 30-025-28000

Petroleum Information®
CORPORATION
A Subsidiary of A.C. Neilson Company

Date: 3-16-83 Card No.: 32 dh

LEA COUNTY NEW MEXICO BAUM FIELD

Well: MWJ PRODUCING CO, 1 Baum "18" State Result: OIL DO
Loc'n: 20 mi SE/Caprock; 660' FNL,660' FEL Sec 18-14S-33E

Spud:1-10-82;Comp:3-17-82;Elev: 4256'Grd;TD:10,150'Cisco; PB:10,031'
Casing: 8-5/8" 4104'/755 sx;5 ½" 10,150'/300 sx;2-3/8"9953'
Prod Zone:(U/Penn), T/Pay 9906',Prod thru Perfs 9906-20'
IPF: 110 BOPD + 70 BW, 40/64"ch, GOR 2100,Grav 40.5,TP70#
Comp Info: Perf (U/Penn) 9906-20', A/2000 gals; C/Tri-Service #8
Tops EL: Yates 2590', San And 4068', Glorieta 5310', Tubb 7070', Abo 7700',Penn 9900', Cisco 10,050'
API No: 30-025-27701

Petroleum Information®
CORPORATION
A Subsidiary of A.C. Neilson Company

Date: 4-14-82 Card No.: 17 dh

LEA COUNTY | NEW MEXICO | BAUM FIELD

Well: MWJ PROD. CO. 1 Baum "17-A" State Result: D&A D
Loc'n: 20 mi S/Caprock; Sec 17-14S-33E; 1980' FSL 1980' FWL of Sec;

Spud:7-9-82;Comp:1-14-83;Elev:4251'Grd;4261'KB;TD:10,250' Penn;
Casing:13-3/8"386'/425sx;8-5/8"4149'/1700sx;5½"10,250'/300sx;
Comp Info: Ran ACSL,CBND,GRL; Perf (Penn) 9906-10', 9924-28', 9933-35', 9940-45', 9956-58', 10,008-010', 10,018-022', A/3000 gals; C/Tri-Service #8.
Tops:(EL) Salt 2615', Queen 3520', San Andres 4090', Glorieta 5570', Tubb 7115', Abo 7750', Wolfcamp 9180', Cisco 9860'.
API No:30-025-27883

Replaces Card 23 dated 2-9-83 to show results fr Temp Comp;

Date: 3-9-83 Card No.: 51 bc

LEA COUNTY | NEW MEXICO | BAUM FIELD

Well: DWIGHT A. TIPTON 1 Baum State OWWO Result: OIL DO
Loc'n: 19 mi S/Caprock, Sec 8-14S-33E,1980 FSL, 1980 FEL Sec

Spud:7-7-82,Comp:10-1-82,Elev:4245'GL,TD:10,050(PSLV)PB:9946
Casing:13 3/8"372'/450sx,8 5/8"4100'/2250sx,5 1/2"10,050'/700sx,2 3/8"9940
Prod Zone:(UPSLV)T/Pay 9892',Prod thru Perfs 9892-9902'
IPP: 7 BOPD+ 7 BW,Gty(NR)GOR 1428
Comp Info: DO to 10,050,Ran 5½Csg,PB to 9946,Perf(Cisco) 9892-9902',A/4000 gals,
Tops:(EL) NR
API No: 30-025-27724

Date: 11-3-82 Card No.: 32 mja

LEA COUNTY | NEW MEXICO | BAUM FIELD

Well: COASTAL OIL & GAS CORP. 3 State "8" Result: OIL DO
Loc'n: 19 mi SE/Caprock, SEc 8-14S-33E,1980 FNL, 660 FWL Sec 10,089

Spud:9-23-82,Comp:10-28-82,Elev:4257'GL,TD:10,150(CSCO)PB:
Casing: 13 3/8"385'/350sx,8 5/8"4100'/2570sx,5 1/2"10,148'/550
Prod Zone:(U/PSLV)T/Pay 9872',Prod thru Perfs 9872-9887'
IPP:285 BOPD+ 71 BW,Gty 41.8,GOR 645
Comp Info: Crd(PSLV)9833-37,rec 34'no descr,Perf(PSLV)9872-75 9879-87 w/1 SPF,A/2000 gals,C/Warton #1
Tops:(EL) Glorieta 5524', Tubb 6925',Abo 7728',Wolfc 9130' PSLV 9779',Cisco 9985'
API No: 30-025-27853

Date: 11-24-82 Card No.: 15 mja

LEA COUNTY | NEW MEXICO | BAUM FIELD

Well: MARALO,INC. 2 Samantha"7"State Result: SUS OPR
Loc'n: 19 mi S/Caprock, Sec 7-14S-33E-1980 FSL,1914 FWL Sec

Spud:2-3-82,Comp:4-26-82,Elev:4260'GL,TD:10,100(PSLV)PB:9940
Casing: 13 3/8"411'/425sx,8 5/8"4075'/2250sx,5 1/2"10,100'/ 450sx
Comp Info:Perf(PSLV)9902-06,9918-32,9944-48,10,022-032 w/1 SPF,A/3000 gals,S/109 BW w?NS,CIBP @10,015,ret @ 9827,Sqz/ 100 sx,DO to 10,065,Ret@9972,Sqz/100sx,DO to 10,000,Perf (PSLV)9920-30 w/4 SPF,Ret @9794,Sqz/100sx,DOC to 9940& set CIBP ,Perf(PSLV)9920-30,A/500 gals,S/wtr w/NS,C/McVay #4
Tops:(EL)NR
API No:30-025-27723

Date: 5-5-82 Card No.: 34 mja

LEA COUNTY | NEW MEXICO | BAUM FIELD

Well: MARALO,INC, 1 Samantha"7"State Result: OIL DO
Loc'n: 20 mi S/Caprock,Sec 7-14S-33E-660 FSL,660 FEL Sec

Spud: 11-25-81,Comp:2-1-82,Elev:4258'GL,TD:10,140(PSLV)
Casing: 13 3/8"431'/400sx,8 5/8"4100'/2700sx,5 1/2"10,140'/ 434sx
Prod Zone: (U/PSLV)T/Pay 9903',Prod thru Perfs 9903-50'
IPF: 480 BOPD+ 20 BW,Gty 40,GOR 1044,CP Pkr,TP 225
Comp Info: Perf(PSLV)9903-20,9946-50 w/1 SPF,A/500 gals,F/ 160 BO+8 BW/8 hrs,S/27 BO/2 hrs 30 mins,C/Cherokee #3
Tops:(EL) Rustler 1644', Yates 2600', Seven Rivers 2744', Queen 3364', Grayb 3730', San And 4024',Glorieat 5520',Tubb 6927'Wolfc 9138', PSLV 9840'
API No: 30-025-27631

Date: 3-3-82 Card No.: 28 mja

LEA COUNTY | NEW MEXICO | BAUM FIELD

Well: MWJ PRODUCING CO, 3 Baum "7" State Result: OIL DO
Loc'n: 19 mi SE/Caprock; 1980'FNL,660' FEL Sec 7-14S-33E

PB:10,069'
Spud:12-2-82;Comp:3-18-83;Elev:4261'Grd;TD:10,100'Cisco
Casing: 13-3/8" 398'/425 sx;8-5/8"4120'/200sx;5½"10,100'/ 450 sx; 2-3/8"9848'
Prod Zone:(U/Penn),Prod thru Perfs 9875-9920'
IPP: 95 BOPD + 45 BW, Grav 45.9,GOR 875
Comp Info: Perf (U/Penn) 9875-9920'/2 SPF,A/3000gals; C/Tri-Service #8
Tops EL: Wolfc 9100', Penn 9820',Cisco 9985'
API No:30-025-28037

Date: 4-13-83 Card No.: 22 dh

B-14-14-32

CO. LEA POOL BAUM-PENN STATE N.M. KROENLEIN

COMPANY Sam Boren - #1 - Humble-Tulk

ELEV.

LOC. 660'FNL & 510'FEL
Sec. 14, T.14-S, R.32-E
10,100'RT-Penn.

PAY STIMULATION	CASING	TOPS
PERF:	10 3/4- 415- 400 8 5/8-4095- 400	

SPD. 10-2-69 COMP. 11-2-69

I. P. P & A

GR. GOR TP CP

DST 9625-9651 op. undes. time, rec. 30' drlg. mud; FP 18-18; ISIP 2007/__; FSIP 1079/__. CONT'D. PAGE 2.

TP

TD 10,300

PBD

B-14-14-32

LEA, N.M.
Sam Boren - #1 - Humble-Tulk

PAGE 2.

DST 9894-9921 op. undes. time, rec. 60' drlg. mud; FP 56-56; ISIP 2708/__; FSIP 2461/__.

DST 10014-033 op. 30 mins., rec. 1116' salt wtr.; FP 355-533; ISIP 2719/30 mins.; FSIP 2719/1 hr.

DST 10171-200 op. undes. time, rec. 180' salt wtr.; FP 75-113; ISIP 3752/__; FSIP 3638/__.