STATE OF NEW MEXICO
ENERGY MINERALS AND NATURAL
RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 SOUTH PACHECO
SANTA FE, NEW MEXICO 87505

FORM C-108
Revised 4-1-98

APPLICATION FOR AUTHORIZATION TO INJECT

I.. PURPOSE: X Secondary Recovery ____ Pressure Maintenance ____ Disposal ____ Storage
Application Qualifies for administrative approval? ____ Yes X No

II. OPERATOR: Falcon Creek Resources, Inc.

ADDRESS: 621 17th Street, Suite 1800, Denver, Colorado 80293-0621

CONTACT PARTY: Joe Cox, Senior Engineer, 303-675-0007

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 X 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 or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured of inferred from existing literature, studies, nearby well, etc.).

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

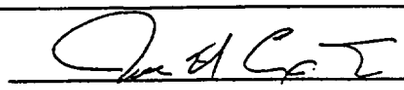
BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Case No. 12331 and 12332 Exhibit No. 18
Submitted by:
Falcon Creek Resources, Inc.
Hearing Date: February 17, 2000

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 sources 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: Joe H. Cox, Jr. TITLE: Senior Engineer

SIGNATURE:  DATE: August 19, 1999

* If the information required under Section VI, VIII, X and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: Completion Reports

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

Side 2

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

(1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement of bridge plugs used to seal off such perforations.

(5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

(2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;

(3) The formation name and depth with expected maximum injection rates and pressures; and,

(4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 2040 South Pacheco, Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners of offset operators must file any objections or request for hearing of administrative applications within 15 days from the date the application was mailed to them.

Falcon Creek Resources, Inc.
West Teas (Yates-Seven Rivers) Field, Lea County, NM
Appplication for Authorization to Inject
Injection Well Data, Section III, Form C-108

III. A.

							Surface Casing						Production Casing						Injection String and Packer			
Lease Name	No.	Ut.	Sec.	Twp.	Rge.	Footage	OD	Depth	Cement	Hole (in.)	Cmt. Top	Method	OD	Depth	Cmt. (sx)	Hole (in.)	Cmt. Top	Method	Size	Depth	Packer*	Depth
Anasazi "4"	3	J	4	20S	33E	1,650' FSL 1,980' FEL	8.625"	1,368'	710 sx	12.25"	Surface	Calc.	5.50"	3,550'	780 sx	7.875"	579'	Calc.	2.875"	3,130'	AD-1	3,130'
Scharbauer "4"	3	P	4	20S	33E	660' FSL 660' FEL	8.625"	1,354'	700 sx	12.25"	Surface	Calc.	4.50"	3,373'	815 sx	7.875"	70'	Temp.	2.375"	3,000'	AD-1	3,000'
Federal "9"	3	C	9	20S	33E	330' FNL 2,310' FWL	8.625"	1,300'	540 sx	12.25"	Surface	Report	5.50"	3,320'	580 sx	7.875"	Surface	Report	2.375"	3,050'	AD-1	3,050'
Barber Federal	2	E	9	20S	33E	1,980' FNL 660' FWL	8.625"	1,256'	700 sx	12.25"	Surface	Report	4.50"	3,400'	750 sx	7.875"	Surface	Report	2.375"	3,030'	AD-1	3,030'
Federal "9"	6	H	9	20S	33E	1,650' FNL 990' FEL	8.625"	1,320'	540 sx	12.25"	Surface	Report	5.50"	3,358'	785 sx	7.875"	Surface	Report	2.875"	2,950'	AD-1	2,950'
State "BF"	4	A	16	20S	33E	330' FNL 330' FEL	9.625"	1,115'	440 sx	12.25"	Surface	Report	5.50"	3,465'	635 sx	7.875"	Surface	Report	2.875"	3,050'	AD-1	3,050'

*Note: Packers are to be Baker model "AD-1" or equivalent

III. B.

Lease Name	No.	Ut.	Sec.	Twp.	Rge.	Footage	Name	Injection Interval	Perf/OH	Original Purpose	Other Intervals	Isolation Method
Anasazi "4"	3	J	4	20S	33E	1,650' FSL 1,980' FEL	Yates	3,230-3,292'	Perf	Prod.	None	N/A
							Yates	3,296-3,426'*	Perf	Injection*		
Scharbauer "4"	3	P	4	20S	33E	660' FSL 660' FEL	Yates	3,104-3,88'	Perf	Prod.	None	N/A
							Yates	3,263-3,279'	Perf	Prod.		
							Yates	3,248-3,312'*	Perf	Injection*		
Federal "9"	3	C	9	20S	33E	330' FNL 2,310' FWL	Yates	3,161-3,252'	Perf	Prod.	None	N/A
							Yates	3,147-3,154'*	Perf	Injection*		
							Yates	3,299-3,409'**	Perf	Injection*		
Barber Federal	2	E	9	20S	33E	1,980' FNL 660' FWL	Yates	3,138-3,219'	Perf	Prod.	None	N/A
							Yates	3,299-3,374'*	Perf	Injection*		
Federal "9"	6	H	9	20S	33E	1,650' FNL 990' FEL	Yates	3,060-3,176'	Perf	Prod.		
							Yates	3,194-3,260'*	Perf	Injection*		
							Seven Rivers		Perf	Prod.	3,285-3,300'	Proposed CIBP at 3,275' topped with approx 5 sx cement to isolate Seven Rivers interval from injection
State "BF"	4	A	16	20S	33E	330' FNL 330' FEL	Yates	3,160-3,294'	Perf	Prod.		
							Yates	3,150-3,156'*	Perf	Injection*		
							Yates	3,350-3,394'*	Perf	Injection*		
							Seven Rivers		Perf	Prod.	3,374-3,394'	CIBP set at 3,365' to isolate Seven Rivers

*Note: Additional perforations planned for injection

**Note: Federal "9" #3 is planned to be deepened into additional Yates interval, cased and perforated for injection

III. B. (5) Other Producing Intervals In Area

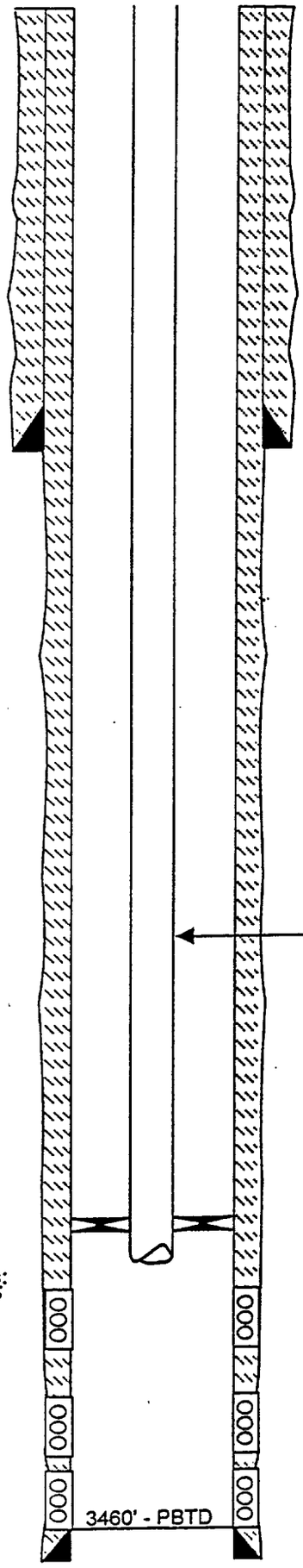
No zones shallower than the Yates have been productive in the field area. Historically productive deeper zones include Bone Springs and Morrow intervals at approximately 9,300' and 13,300' respectively. The only currently productive deeper interval is the Morrow in the Anasazi "9" Federal #1 in the SW/4 SE/4 of section 9, T20S R33E (13,289-13,428').

000004

Falcon Creek Resources, Inc.

Proposed Injector
Anasazi "4" State #3
Bass Enterprises Prod. Co.
West Teas Field
"J" Section 4, T20S, R33E
Lea County, New Mexico
GL: 3,556'; KB 3,573'

Initial Completion
Spud well 11-08-94
Perf Yates from 3230'-3292'
IPP: 41 BOPD; 27 BWPD, 15 MCFD



12-1/4" Hole
1,368' - 8-5/8" Casing,
cmt to surface w/710 sx

Cement circulated was estimated by calculations.

2-7/8" EUE J-55 Tubing

Proposed Baker AD-1 pkr Set @ approx. 3,130'

Yates 1 ~~Perfs~~:
3,230' - 3,292'

Proposed
Yates 1 Perfs:
3,296' - 3,300'
3,307' - 3,311'
3,316' - 3,319'

Proposed
Yates 3 Perfs
3,388'-3,400'
3,406'-3,426'

3460' - PBTD

Est 7-7/8" Hole
3,550' - 5-1/2" Casing, cmt w/780 sx Class
Cmt to surface, circ approx 301 cu ft

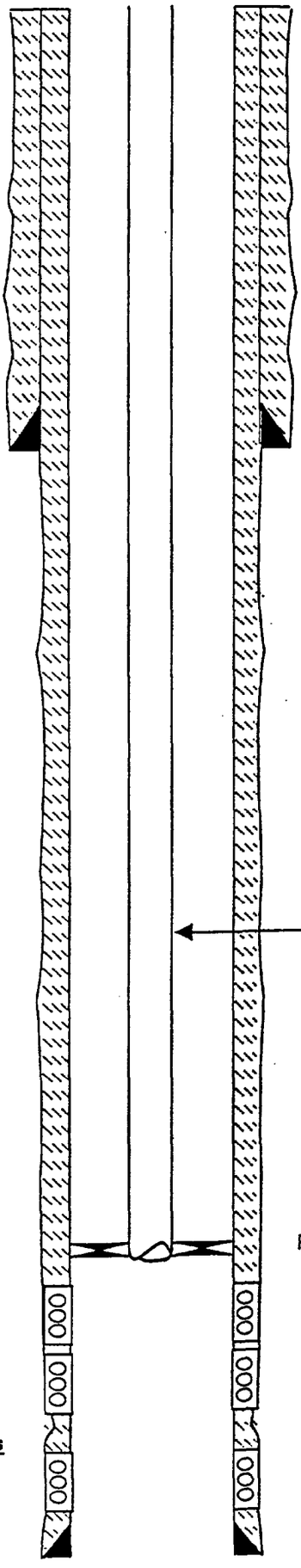
000005

Falcon Creek Resources, Inc.

Proposed Injector
Scharbauer "4" #3
Mitchell Energy
West Teas Field
"P" Section 4, T20S, R33E
Lea County, New Mexico
GL: 3,560'; KB 3,570'

Initial Completion
Spud well 9-7-95
Perf Yates from 3263'-3279'
Acidize w/ 2000 gal 7.5% NeFe
Swabbed .18 BO, 24 BW
Set CIBP @ 3230'
Perf Yates from 3104'-3188'
Acidize w/ 3000 gal 7.5% NeFe
Frac w/ 37016 gal 150,580 # sd
IPP: 98 BOPD; 10 MCFD

All Cement Information is Estimated by Calculations



1,354' - 8-5/8" Casing,
cmt to surface w/700 sx

2-3/8" EUE J-55 Tubing

Proposed Baker AD-1 Pkr @ approx. 3,000'

Yates Perfs:
3,104' - 3,188'

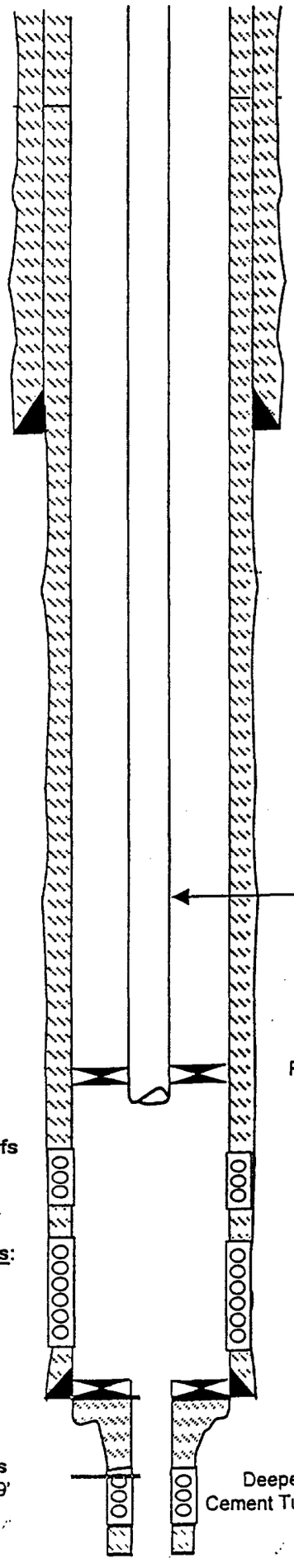
Proposed
Yates 3 Perfs
3,248'-3,312'

Est Hole Size: 7-7/8"
3,373' - 4-1/2" Casing, cmt w/815 sx Class
Cmt to surface, circ 189 cu ft to surface

000006

Falcon Creek Resources, Inc.

Proposed Injector
Federal 9 #3
Falcon Creek Resources
West Teas Field
"C" Section 9, T20S, R33E
Lea County, New Mexico
GL: 3,557'; KB: 3,559'



12-1/4" Hole
1,300' - 8-5/8", 24#, J-55 Casing,
cmt to surface w/ 540 sx "C"

2-3/8" EUE J-55 Tubing

Proposed Baker AD-1 Pkr @ approx. 3,050'

Proposed Y1 Perfs
3,147' - 3,154'

Yates Zone 1 Perfs:
3,161' - 3,252'

7-7/8" Hole
3,320' - 5-1/2", 17#, J-55 Casing, cmt w/580 sx Class "C"
Circulate 17 sx to surface

Proposed Y3 Perfs
approx. 3,299-3,409'

Deepen Hole Through Yates,
Cement Tubing In Place and Perforate

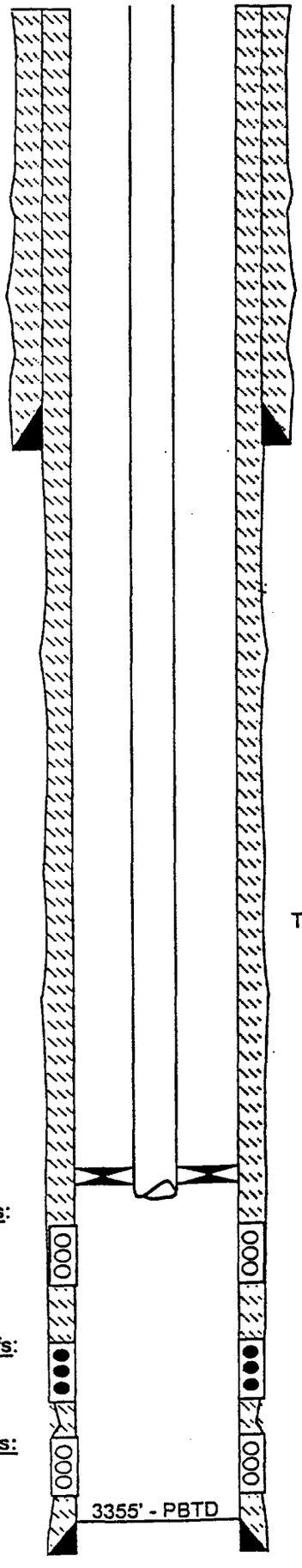
Initial Completion
Spud well 5-28-93
Perf Yates Zone 1
@ 3161'-3252' (22 Holes)
Acidize w/2000 gals 20% HCl
Frac w/ 40,000 gal gel &
87,000# 20/40 sd
IPP: 86 BOPD, 35 MCFD, 22 BWPD

Cement Information is from State Reports

000007

Falcon Creek Resources, Inc.

Proposed Injector
Barber Federal #2
Falcon Creek Resources
West Teas Field
"E" Section 9, T20S, R33E
Lea County, New Mexico
GL: 3,555'; KB; 3,565'



1,256' - 8-5/8" Casing,
cmt to surface w/750 sx

Tubing, 2 3/8", 3,030'

Proposed Baker AD-1 Pkr @ approx. 3,030'

Yates Y1 Perfs:
3,138' - 3,222'

Sqzd Yates 2 Perfs:
3,260' - 3,268'
3,278' - 1 shot

Proposed Y3 Perfs:
3,296' - 3,304'
3,310' - 3,320'
3,336' - 3,352'
3,360' - 3,364'

3355' - PBTD

7-7/8" Hole
3,400' - 4-1/2" Casing, cmt w/1100 sx Class
Cement to Surface & circ 67 sx

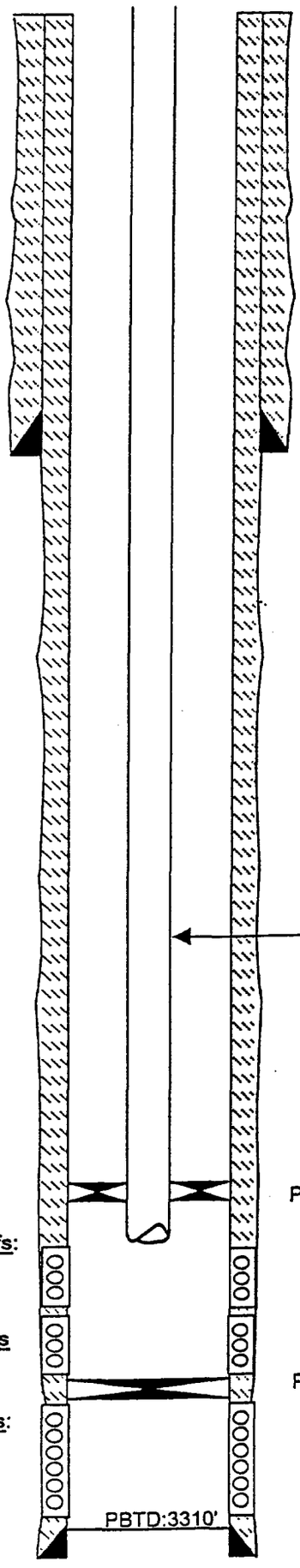
Initial Completion
Spud well 8-24-87
Perf Y2 3,260, 64, 66, 68 & 3,278' 2 SPF
Acidize w/ 750 gals 15% NeFe, swab load
and 0.3 Bbl/HR 8-10% oil
Set cement retainer @ 3,250'
Sqz 3,260-3,278' w/ 50 sx
Perf Y1 3,138, 41, 44, 52, 55, 59, 63, 66,
88, 93, 3202, 08, 16, 22' 1 SPF (14 holes)
Acidize w/ 1,000 gal 15% NeFe
Frac w/ 33,988 gal 50% CO_2 foam,
40,000# 20/40, 28,000# 10/20
IPP 35 BOPD 40 BWPD

All cement information was from
State Sundry Notices

000008

Falcon Creek Resources, Inc.

Proposed Injector
Federal 9 #6
Falcon Creek Resources, Inc.
West Teas Field
1,650' FNL 990' FEL
"H" Section 9, T20S, R33E
Lea County, New Mexico
GL: 3,551'; KB: 3,562'



12-1/4" Hole
1,320' - 8-5/8", 23#, J-55 Casing,
cmt to surface w/540 sx "C"

2-3/8" Tubing (2,960')

Proposed Baker AD-1 Packer, 2,950'

Yates Y1 & Y2 Perfs:
3,060' - 3,176'
2 JSPF

Proposed Y3 Perfs
3,194-3,260'

Proposed CIBP 3,275'

Seven Rivers Perfs:
3,285' - 3,288'
4 JSPF
3,288' - 3,300'
1 JSPF

PBTD:3310'

7-7/8" Hole
3,358' - 5-1/2", 15.5#, K-55 Casing, cmt w/785 sx Class "C"
Circulate 10 sx to surface per drlg. rpt. & Sundry

Initial Completion
Spud well 5-16-94
Perf Seven Rivers @ 3285'-3288' 4 JSPF
Acidize w/1000 gals 15% NeFe
Perf Seven Rivers from 3288'-3300' 1 JSPF
Acidize w/1000 gals 15% NeFe
Set CIBP @ 3270'
Perf Yates Y1 & Y2 3060'-3176' 2 JSPF
Acidize w/2500 gals 15% NeFe
Frac w/ 42,000 gal xlink gel &
133,000# of 12/20 sd.
IPP: 97 BO, 14 BW, 1 MCF

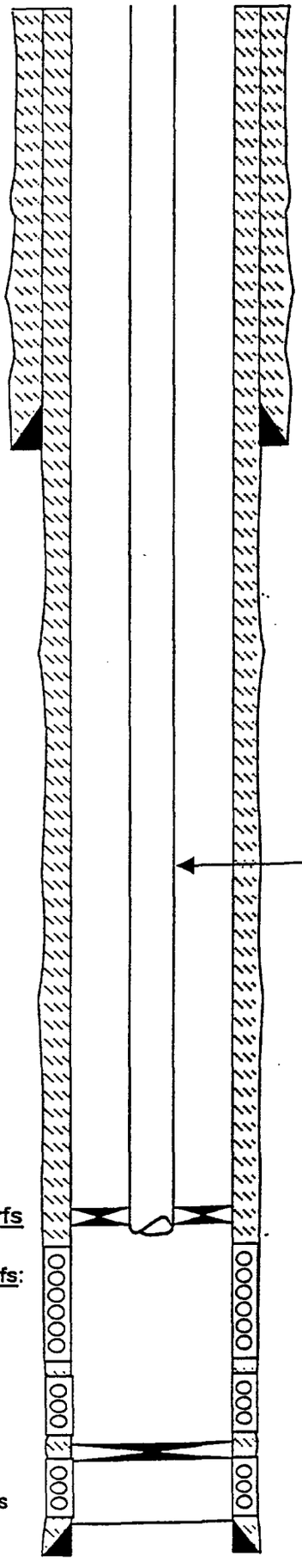
10/96
CIBP recovered and bailed out hole to
3,310' (add 7 Rivers)

Cement Information is from State Reports

000009

Falcon Creek Resources, Inc.

Proposed Injector
State BF #4
Falcon Creek Resources
West Teas Field
"A" Section 16, T20S, R33E
Lea County, New Mexico
GL: 3,552'; KB: 3,557'



12-1/4" Hole
1,115' - 9-5/8", 36.4#, Casing,
cmt to surface w/ 440 sx "C"

2-7/8" EUE J-55 Tubing

Proposed Baker AD-1 Pkr @ approx. 3,050'

3,365' - CIBP

7-7/8" Hole
3,465' - 5-1/2", 17# Casing, cmt w/635 sx Class "C"
Circulate 50 sx to surface

Proposed Y1 Perfs
3,150-3,156'

Yates Y1 & ~~Y2 Perfs~~:
3,160' - 3,294'
23 holes

Proposed Yates Y3 Perfs:
3,350' - 3,352'
3,358' - 3,361

Yates Y3 Perfs:
3,374' - 3,394'
w 2 JSPF - 40 holes

Initial Completion
Spud well 11-17-95
Perf Yates Y3 3374'-3,394'
Acidize w/ 1500 gals 15% NeFe
Set CIBP 3365'
Perf Y1 & Y2 @ 3160'-3294'
Acidize w/ 1500 gals 15% NeFe
Frac w/ 98,000# 12/20 sd & 786 bbls Borate gel.
Install Rods and Pump
IPP: 6 BO, 6 MCF, 50 BW (11% oil)

1/98
Acidize w/1000 gals 15% NeFe acid

1/26/98
A step injection rate test was conducted and seems to be permitted for SWD well.

Cement Information is from State Reports

000010

620000

625000

3610000

3605000

32 600

-103.700

Proposed West Teas (Yates-Seven Rivers) Unit Boundary

20S33E

Falcon Creek Resources, Inc.		
West Teas Field, Lea Co. NM Wells Proposed for Injection and Wells Within Two Miles		
Section V	Injection App.	Form C-108
Joe C	Scale 1:45000.	8/20/99

N

Scale 1:45000.

0.2 0. 0.2 0.4 0.6 0.8 1. miles

1. 0. 1. 2. 3. 4. 5. kilometers

110011

Falcon Creek Resources, Inc.
Tabulation of Data on Wells In Review Area
Application for Authorization to Inject

VI.

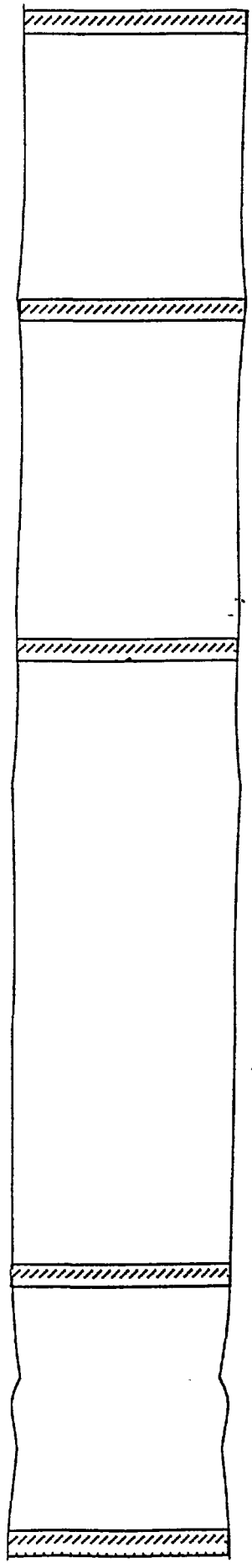
Operator	Lease/Well	Status	Location	Spud Date	Drilled TD PBTD	Surface Casing			Production Casing			Producing Perforations
						Size	Depth	Cement	Size	Depth	Cement	
McGrath & Smith	Trigg Federal #1	D&A	M, 3,T20S-R33E	1/29/57	3435'	All casing has been pulled from well						
Bass Enterprises Prod. Co.	Anasazi 4 State #3	Prod. Oil	J, 4-T20S-R33E	11/8/94	3550'	8-5/8"	1368'	710 sx "C"	5-1/2"	3550'	780 sx "C"	3230'-3292' (Yates)
L.S. & R. Petroleum Co.	Bass-State #1	D&A	M, 4-T20S-R33E	5/30/63	3410'	12-1/2"	219'	125 sx "C"	8-5/8" & 10" Pulled at Abandonment			
Mitchell Energy	Scharbauer "4" #1	Prod. Oil	O, 4-T20S-R33E	Apr-93	13,720'	13-3/8"	2,950'	2,207 sx	8-5/8"	5,382'	885 sx	3,156-3,273' (Yates)
Mitchell Energy	Scharbauer 4 #3	Prod. Oil	P, 4-T20S,R33E	9/7/95	3230'	8-5/8"	1354'	700 sx "C"	4-1/2"	3373'	815 sx "C"	3104'-3188' (Yates)
Falcon Creek Resources, Inc.	Federal "9" #5	Prod. Oil	A, 9-T20S-R33E	4/2/94	3384'	8-5/8"	1320'	680 sx "C"	5-1/2"	3384'	685 sx "C"	3076'-3158' (Yates)
Falcon Creek Resources, Inc.	Federal "9" #2	Prod. Oil	B, 9-T20S-R33E	10/7/92	3311'	8-5/8"	1300'	640 sx "C"	5-1/2"	3311'	475 sx "C"	3062'-3308' (Yates)
Falcon Creek Resources, Inc.	Federal "9" #3	Prod. Oil	C, 9-T20S-R33E	5/28/93	3320'	8-5/8"	1300'	540 sx "C"	5-1/2"	3320'	580 sx "C"	3161'-3252' (Yates)
Falcon Creek Resources, Inc.	Barber Federal #2	Prod. Oil	E, 9-T20S-R33E	8/24/87	3400'	8-5/8"	1256'	600 sx "C"	4-1/2"	3400'	750 sx "C"	3138'-3278' (Yates)
Falcon Creek Resources, Inc.	Barber Federal #1	Prod. Oil	F, 9-T20S-R33E	4/29/87	3404'	8-5/8"	1261'	650 sx "C"	4-1/2"	3400'	950 sx "C"	3092'-3147'
Falcon Creek Resources, Inc.	Federal "9" #1	Prod. Oil	G, 9-T20S-R33E	11/10/90	3445'	8-5/8"	1243'	450 sx "C"	5-1/2"	3445'	775 sx "C"	3042'-3257' (Yates)
Mitchell Energy	Anasazi 9 Fed #1	Prod. Gas	G, 9-T20S-R33E	5/12/92	13779'	13-3/8"	2947'	2350 sx "C"	8-5/8" 5-1/2"	5272' 13779'	1250 sx "C" 1950 sx "C"	13289'-13428' (Morrow)
Falcon Creek Resources, Inc.	Federal "9" #6	Prod. Oil	H, 9-T20S-R33E	5/16/94	3,378' 3,310'	8-5/8"	1,320'	540 sx "C"	5-1/2"	3,358'	785 sx "C"	3,060-3,300' (Yates-Seven R.)

						Surface Casing			Production Casing			
Operator	Lease/Well	Status	Location	Spud Date	Drilled TD PBTD	Size	Depth	Cement	Size	Depth	Cement	Producing Perforations
Falcon Creek Resources, Inc.	Federal "9" #7	Prod. Oil	I, 9-T20S-R33E	8/28/95	3358'	8-5/8"	1310'	800 sx "C"	5-1/2"	3358'	635 sx "C"	3270'-3227' (Seven Rivers)
Falcon Creek Resources, Inc.	Grover Federal #3	Prod. Oil	J, 9-T20S-R33E	2/26/88	3,425'	8-5/8"	1,218'	750 sx	4-1/2"	3,420'	650 sx	3,022-3,100' (Yates)
Falcon Creek Resources, Inc.	Grover Federal #1	Prod. Oil	K, 9-T20S-R33E	2/16/87	3400'	8-5/8"	1265'	750 sx "C"	4-1/2"	3398'	90 sx "C"	3154'-3180' (Yates)
Falcon Creek Resources, Inc.	Grover Federal #2	Prod. Oil	L, 9- T20S-R33E	11/12/87	3400'	8-5/8"	1256'	750 sx "C"	4-1/2"	3400'	1100 sx "C"	3217'-3239' (Yates)
Grover- McKinney Oil Co.	Grover Federal #4	D&A	M, 9- T20S-R33E	3/2/88	3400'	8-5/8"	1252'	700 sx "C"	Well has been plugged			
Atlantic Richfield Co.	Lea 6015 Fed #1	D&A	O, 9- T20S-R33E	4/3/60	3300'	9-5/8"	1357'	450 sx "C"	7" 5"	3022' 3300'	450 sx "C" 50 sx "C"	3054'-3264' (Yates)
Falcon Creek Resources, Inc.	Federal 9 #8	Prod. Oil	P, 9-T20S-R33E	7/12/96	3462'	8-5/8"	1313'	800 sx "C"	5-1/2"	3462'	610 sx "C"	3116'-3144' (Yates)
Falcon Creek Resources, Inc.	State BF #4	SI Oil	A, 16,T20S-R33E	11/17/95	3470'	12-1/4"	1115'	440 sx "C"	5-1/2"	3465'	635 sx "C"	3160'-3294'
Sinclair Oil & Gas	Lea 886 State #2	P&A	B, 16-T20S,R33E	2/26/60	3360'	9-5/8"	1308'	914 sx "C"	Well has been plugged			
Falcon Creek Resources, Inc.	Conoco St. #1	Prod. Oil	C, 16-T20S-R33E	7/23/96	3311'	8-5/8"	1313'	800 sx "C"	5-1/2"	3,311'	610 sx "C"	3205'-3215' (Seven Rivers)
Falcon Creek Resources, Inc.	Anasazi "16" State Com. #1	SWD	G, 16-T20S-R33E	5/28/93	13858'	20" 13-3/8"	497' 2964'	600 sx "C" 1850 sx "C"	8-5/8" 5-1/2"	5299' 13858'	700 sx "C" 1200 sx "C"	5554'-5684'
Falcon Creek Resources, Inc.	State BF #1	P&A Oil	G, 16-T20S-R33E		3275'	9-5/8" 7"	1245' 2970'	 800 sx "C"	5-1/2"	3275'	50 sx "C"	2989'-3212'
Olsen Energy	Snyder State 1 (Olsen)	D&A	H, 16-T20S-R33E	2/22/89	3429'	8-5/8"	1259'	640 sx "C"	Well has been plugged			
Knox, Gordon & Assoc.	Tenneco Federal #1	D&A	F, 20-T20S-R33E	12/31/63	3,418'	9-5/8"?	1,350'	7" & 4-1/2" Casing Pulled at Abandonment				

000013

Falcon Creek Resources, Inc.

Trigg Federal #1
McGrath & Smith
West Teas Field
660' FSL 660' FWL
"M" Section 3, T20S, R33E
Lea County, New Mexico
GL: 3,553'; KB: 3,568'



Cmt Plug @ 600' w/ 10 sx

1,300' - Cmt Plug w/ 25 sx

1300' - 3190' Wooden Plug

3,190' - 3250' Cmt Plug w/ 20 sx

3,375' - 3435' Cmt Plug w/ 20 sx

TD: 3435'

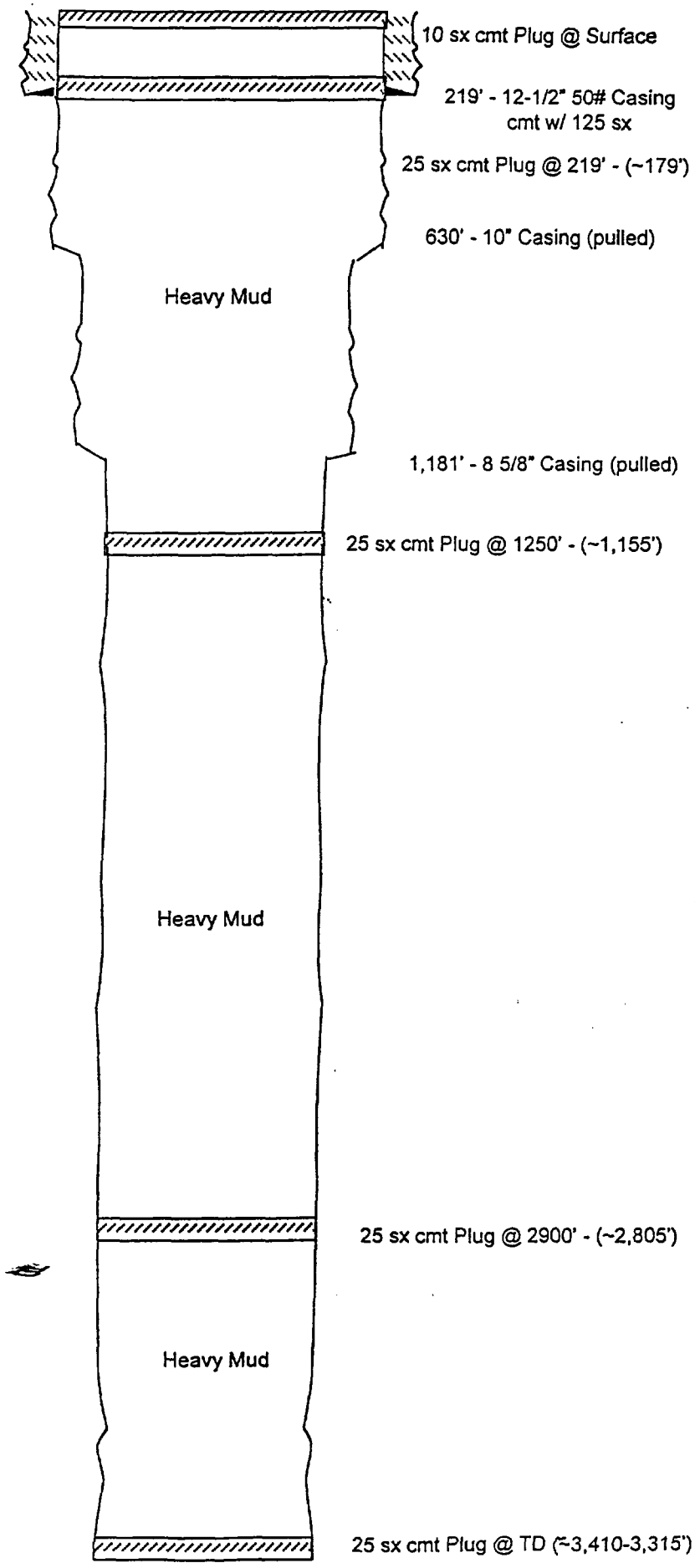
Initial Completion
Spud well 1-29-57
Swabbed 640 BW
P&A 2/57

Pulled all casing out of hole

P&A information is from State Reports

Falcon Creek Resources, Inc.

Bass State #1
L.S. & R. Petroleum Co.
West Teas Field
660' FSL 660' FWL
"M" Section 4, T20S, R33E
Lea County, New Mexico
DF: 3,556'

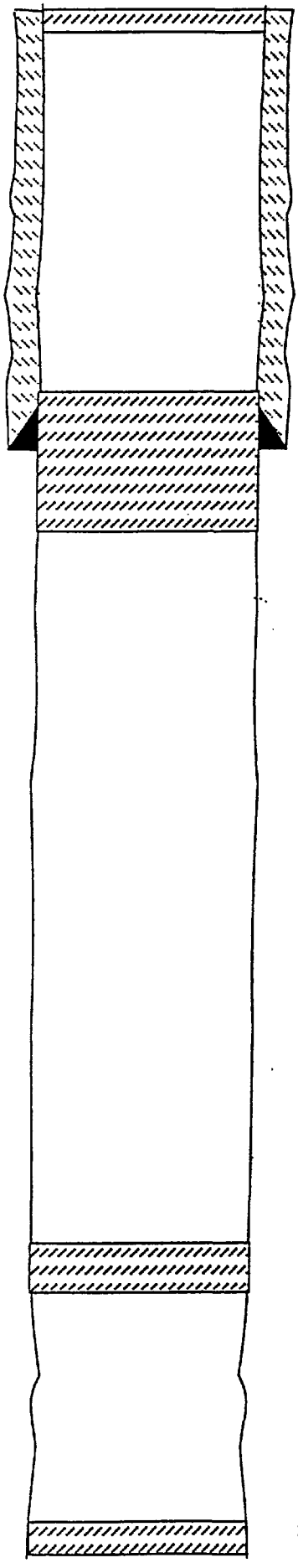


Initial Completion
Spud well 5-30-63
Hole Full of Water @ TD
P&A 7/10/63
8-5/8" & 10" Casing pulled
Heavy mud between plugs.

All plugging information was from State Reports

Falcon Creek Resources, Inc.

Federal #4
Grover - McKinney Oil Co.
West Teas Field
990' FSL 990' FWL
"M" Section 9, T20S, R33E
Lea County, New Mexico
GL: 3,531'; KB: 3,541'



Cmt Plug @ surface w/ 15 sx

12-1/4" Hole
1,252' - 8-5/8" Casing,
cmt to surface w/700 sx

1100' - 1445' Cmt Plug w/ 175 sx

2,650' - 2950' Cmt Plug w/90 sx

3300' - 3400' Cmt Plug w/ 30 sx

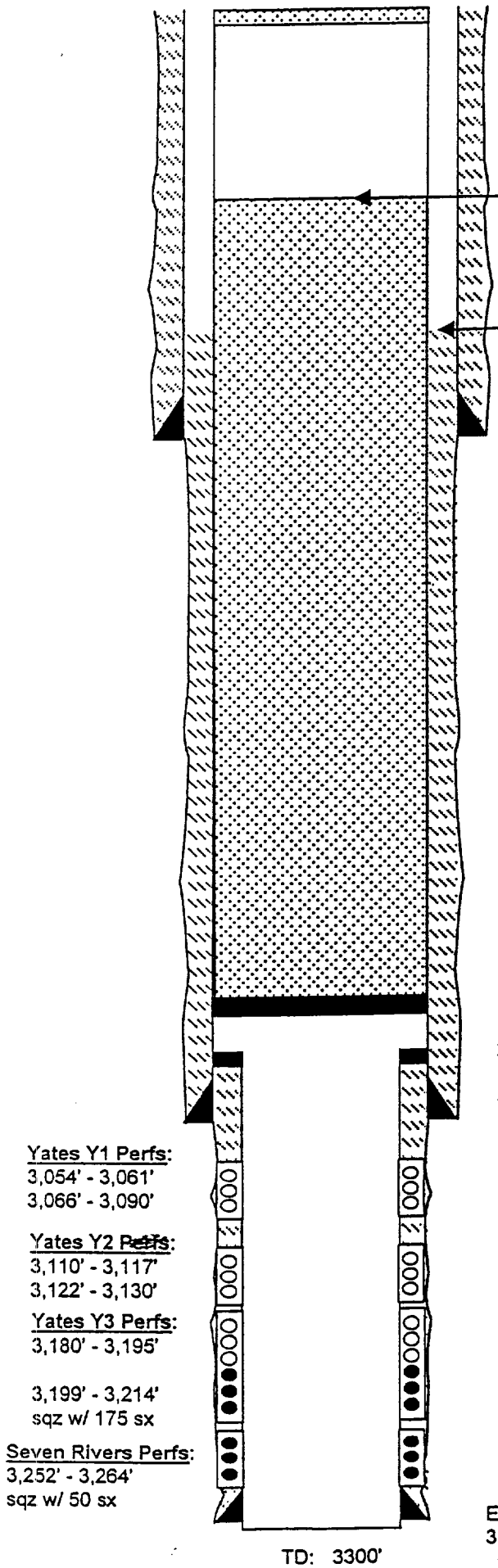
TD: 3400'

Initial Completion
Spud well 3-2-88
DST 3023'-3195'
R/60' DF, PFFP 114-114,
ISIP=343, FP 114-114, FSIP 251,
HP 1646-1646.
P&A

Plugging information is from
State Reports

Falcon Creek Resources, Inc.

Lea 6015 ARC Federal #1
Atlantic Richfield Co.
West Teas Field
660' FSL 1,980' FEL
"O" Section 9, T20S, R33E
Lea County, New Mexico
DF: 3,550'



Initial Completion
Spud 4-3-60
Perf Yates Y3 3199-3214
Acidize w/ 500 gals, Sqzd w/ 175 sx
Perf Seven Rivers 3252'-3264'
Acidize w/ 250 gals, Sqzd w/ 50 sx
Perf Y3 3199'-3215', Acidize w/ 250 gals
Frac w/ 2000 gals, Sqzd perfs
Perf Y2 3122'-3130', Acidize w/ 250 gal
Sqzd perfs.
D&A

1/69
Perf Yates Y2 3110'-3117'; 3122'-3130';
Perf Yates Y3 3180',3195', 3199'-3214' -
70 holes
Acidize w/ 2500 gals
Completed as SWD

12/70
Perf Yates Y1: 3054'-3061'; 3066'-3090';
Acidize w/ 3000 gals
Converted to WIW

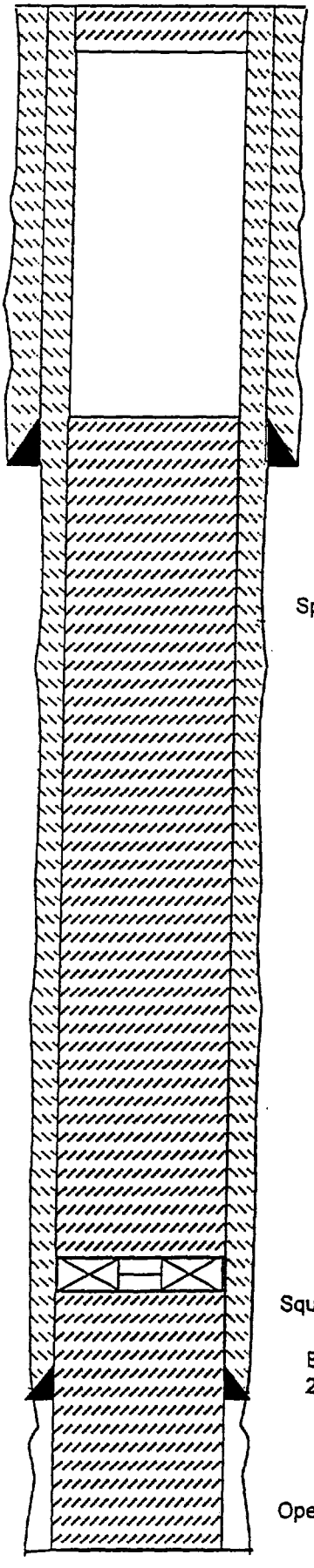
2/75
Set cmt retainer @ 2800'
Sqz thru retainer w/45 sx "C"
Spotted 225 sx "C"on top of retainer
Top of cmt @ 733'.
Spotted 10 sx "C" from 40'-surface

Note: Never Produced

000017

Falcon Creek Resources, Inc.

Lea 886 State #2
Sinclair Oil & Gas
West Teas Field
660' FNL 1,980 FEL
"B" Section 16, T20S, R33E
Lea County, New Mexico
GL: 3,544'



10 sk top plug
40 - 0'

1,308' - 9-5/8" Casing,
cmt to surface w/914 sx

Spot 225 sx. 2,850-1,200'

Squeeze under retainer w/ 50 sx

Est Hole Size: 8"
2,950' - 7" Casing, cmt w/450 sx
Calculated vol.

OH Yates:
2,950' - 3,274'

Open Hole Completion Y1, Y2, Y3, & 7Rivers

TD: 3360'

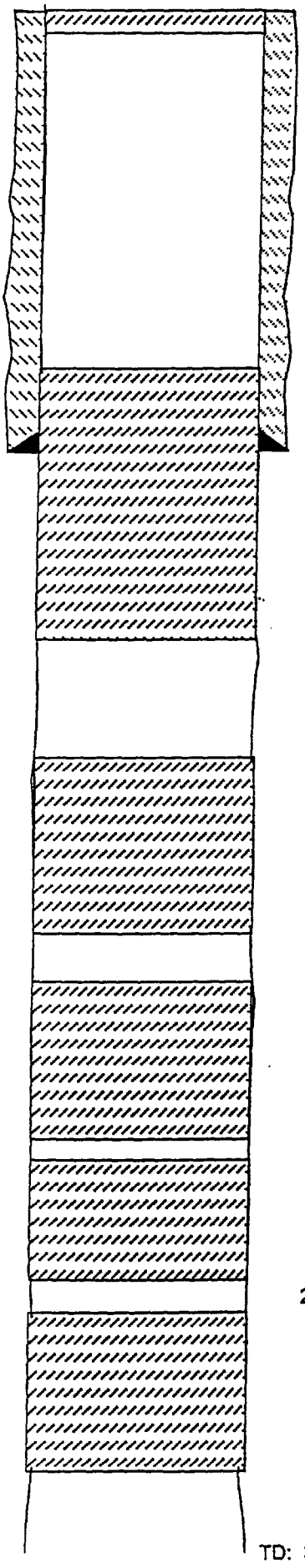
Initial Completion
Spud well 2-26-60
DST 3305'-3360' - wet
PB to 3274'
OH Yates from 2950'-3274'
IPP: 139 BOPD

P&A 2/4/75

All casing cement information was estimated by calculations.
Plugging data from Sundry.

Falcon Creek Resources, Inc.

Snyder State #1
Olsen Energy
West Teas Field
1,980' FNL 660' FEL
"H" Section 16, T20S, R33E
Lea County, New Mexico
GR: 3,550'



Initial Completion
Spud well 2-22-89
DST #1, 3060'-3200', Rec 1' mud
Opn 15 min, IFP 85, FFL 64,
Fnl Opn 30 min IFP 85, FFP 64, ISIP
233, FSIP 339, IHP 1650, FHP 1650
Open w/ weak blow dean in 6 min.
DST #2 3198-3299', Rec 100' mud,
Opn 30 min, IFP 42 FFP 127
Fnl Opn 1 hr, IFP 106, FFP 127
ISIP 1333, FSIP 1333, HP 1713-1692
Plugs set at 2933' w/ 148 sx,
3271' w/ 205', 2718' w/ 195 sx,
2132 w/ 195 sx, surface w/ 10 sx
P&A 3/2/89

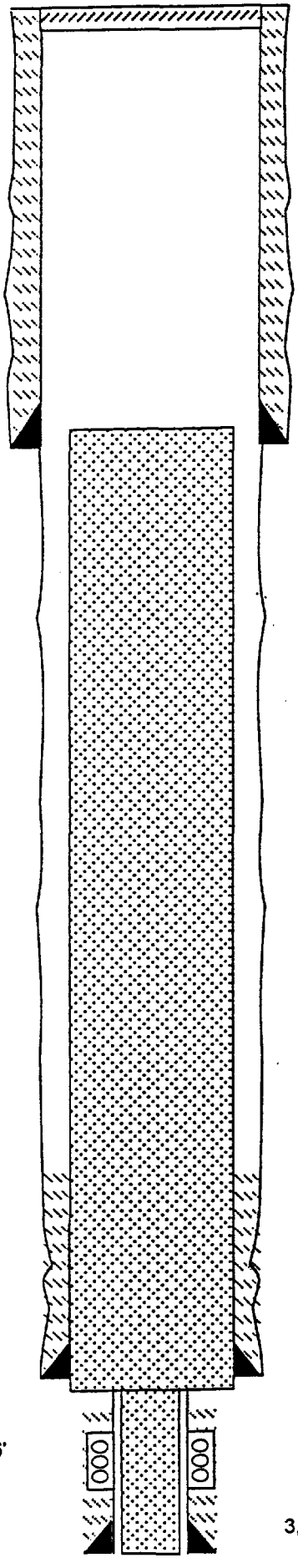
Plugging information is from State Forms

Falcon Creek Resources, Inc.

Tenneco Federal #1
Knox, Gordon & Assoc.
West Teas Field
1,980' FNL 1,980' FWL
"F" Section 15, T20S, R33E
Lea County, New Mexico
GL: 3,532'

Initial Completion
Spud well 12-31-63
Perf Yates from 3206'-321'
Acidize w/ 500 gals
Swabbed 95% water, 5% oil
P&A

All cementing information is from State Reports



Cmt Plug @ surface

Surface Csg @ 1,350'
Cmt to surface

1,200' - 3,050' Cmt Plug

7" Casing Pulled from Surface to 2685'

4-1/2" Casing Pulled from Surface to 2950'

3,038' - 7" Casing, cmt w/30 sx

3,418' - 3,050' Cmt Plug

Yates Perfs:
3,206' - 3,216'

3,418' - 4-1/2" Casing, cmt w/30 sx

000020

Falcon Creek Resources, Inc.
West Teas (Yates-Seven Rivers) Field
Application for Authorization to Inject
NMOCD Form C-108

VII. Proposed Injection Operations

1)	**Injection Rate (per well):**	Average Maximum	500 BWPD 750 BWPD
2)	**Injection System:**	Closed	
3)	**Injection Pressure (wellhead):**	Average Maximum	600 psig 1,200 psig
		Note: Following a step-rate test conducted on State "BF" #4 (NE/4 NE/4 16-T20S-R33E) on 1/26/98, the NMOCD approved a surface injection pressure of 1,282 psig into the Yates sand.	
4)	**Injection Fluid:**	Water from Yates and Seven Rivers production within proposed West Teas (Yates – Seven Rivers) Unit (analyses attached)	

VIII. Geologic Data

A. Injection Zone

1) **Name:** Yates Formation

2) **Description:**

Injection will be into the Yates Sand sub-units productive within the field. The sand units are developed within the field at depths ranging from 3,000' to 3,450'. These intervals are fine-grained to very fine-grained sandstones divided by siltstones and dense dolomitic layers. The total net thickness of the sands varies from 40 to 100 feet with lateral discontinuities present in the individual layers. Average porosity in the "pay" sands is 15.7%, average permeability is approximately 1 md.

B. Fresh Water Sources

The State Engineer's Office reports fresh water production potential from Quaternary alluvium at about 56' in the SW/4 of section 4 and the NE/4 of section 20, T20S R33E. One permitted water well was reported in SW/4 SE/4 SW/4 section 5 T20S R33E with sands noted in the interval 520-675' (Dewey Lake fm.?) A copy of the Well Record from the State Engineer's Office for that well is attached. No other sources are noted overlying the oil producing interval. The Seven Rivers Formation directly underlies the Yates, it is a hydrocarbon producing interval on the West Teas Field structure and is proposed to be included in the West Teas unitized interval. No injection is proposed for the Seven Rivers Formation.

IX. Proposed Stimulation Program

The Yates intervals proposed for injection in the six wells comprising Stage I of the proposed waterflood have generally been fracture stimulated for production. Additional Yates perforations, to be added at conversion to water injection, will be acidized with 100 gallons/foot 15% HCl and fracture stimulated when the new perforations are adequately isolated from the pre-existing perforated zones. Typical fracture stimulation treatments contain about 80,000 pounds of sand in a cross-linked, water-based gel.

X. Logging and Test Data

No additional drilling is proposed in Stage I waterflood development aside from the deepening of the Federal "9" #3 well to include additional Yates section. Any additional logs or tests will be submitted to the NMOCD at the time they are obtained.

XI. Fresh Water Analysis

A review of the area within one mile of proposed injection wells and a conversation with the local rancher indicates that there are no active fresh water wells in the area.

XII. Disposal Well Statement

This section does not apply to the application since no disposal wells are being proposed.

XIII. Proof of Notice

A copy of this application has been furnished to all surface owners and leasehold operators within the "area of review".

Permian Treating Chemicals

WATER ANALYSIS REPORT

SAMPLE

Oil Co. : Stevens & Tull
Lease : State "BF"
Well No.: Disp.
Salesman:

Sample Loc. :
Date Analyzed: 09-September-1997
Date Sampled :

ANALYSIS

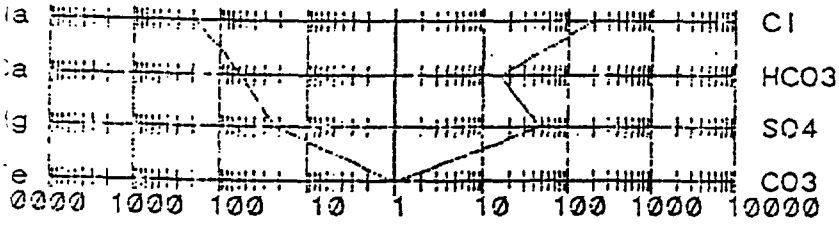
1.	pH		7.250	
2.	Specific Gravity 60/60 F.		1.010	
3.	$CaCO_3$ Saturation Index	@ 80 F.	+0.856	
		@ 140 F.	+1.756	

Dissolved Gasses		MG/L	EQ. WT.	*MEQ/L
4.	Hydrogen Sulfide	Present		
5.	Carbon Dioxide	Not Determined		
6.	Dissolved Oxygen	Not Determined		

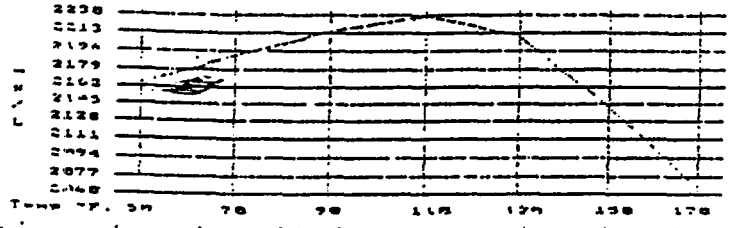
Cations			MG/L	EQ. WT.	*MEQ/L
7.	Calcium	(Ca^{++})	1,090	/ 20.1 =	54.23
8.	Magnesium	(Mg^{++})	265	/ 12.2 =	21.72
9.	Sodium	(Na^{+}) (Calculated)	4,181	/ 23.0 =	181.78
10.	Barium	(Ba^{++})	Not Determined		

Anions			MG/L	EQ. WT.	*MEQ/L
11.	Hydroxyl	(OH^{-})	0	/ 17.0 =	0.00
12.	Carbonate	($CO_3^{=}$)	0	/ 30.0 =	0.00
13.	Bicarbonate	(HCO_3^{-})	908	/ 61.1 =	14.86
14.	Sulfate	($SO_4^{=}$)	2,200	/ 48.8 =	45.08
15.	Chloride	(Cl^{-})	6,998	/ 35.5 =	197.13
16.	Total Dissolved Solids		15,642		
17.	Total Iron (Fe)		2	/ 18.2 =	0.08
18.	Total Hardness As $CaCO_3$		3,811		
19.	Resistivity @ 75 F. (Calculated)		0.352 /cm.		

LOGARITHMIC WATER PATTERN
*meq/L.



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X *meq/L	= mg/L.
$Ca(HCO_3)_2$	81.04	14.86	1,204
$CaSO_4$	68.07	39.37	2,680
$CaCl_2$	55.50	0.00	0
$Mg(HCO_3)_2$	73.17	0.00	0
$MgSO_4$	60.19	5.71	344
$MgCL_2$	47.62	16.21	772
$NaHCO_3$	84.00	0.00	0
$NaSO_4$	71.03	0.00	0
NaCl	58.46	191.12	10,598

*Milli Equivalents per Liter

his water is mildly corrosive due to the pH observed on analysis.
he corrosivity is increased by the content of mineral salts, and the presence of H2S in solution.

Permian Treating Chemicals

WATER ANALYSIS REPORT

SAMPLE

Oil Co. : Stevens & Tull
Lease : Federal 9
Well No.: # 7
Salesman:

Sample Loc. :
Date Analyzed: 09-September-1997
Date Sampled :

ANALYSIS

1.	pH	6.880	
2.	Specific Gravity 60/60 F.	1.008	
3.	$CaCO_3$ Saturation Index @ 80 F.	+0.417	
	@ 140 F.	+1.277	

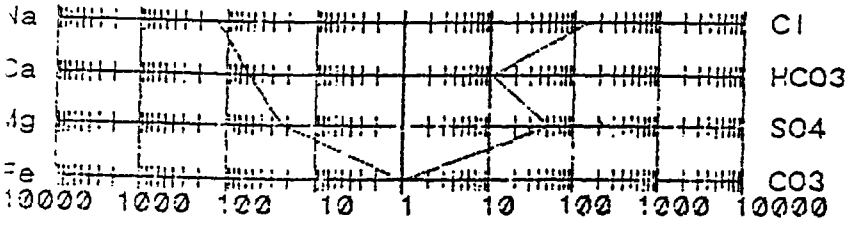
Dissolved Gasses	MG/L	EQ. WT.	*MEQ/L
4. Hydrogen Sulfide	Present		
5. Carbon Dioxide	Not Determined		
6. Dissolved Oxygen	Not Determined		

Cations			MG/L	EQ. WT.	*MEQ/L
7. Calcium	(Ca^{++})		1,090	/ 20.1 =	54.23
8. Magnesium	(Mg^{++})		265	/ 12.2 =	21.72
9. Sodium	(Na^{+})	(Calculated)	2,894	/ 23.0 =	125.83
10. Barium	(Ba^{++})		Not Determined		

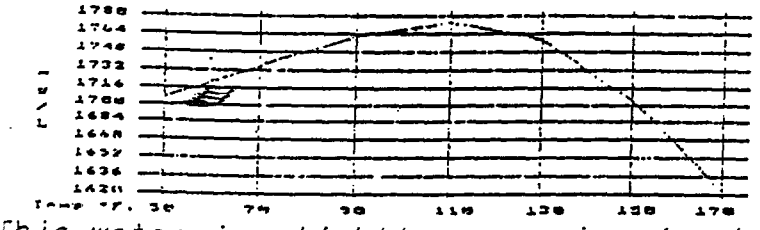
Anions		MG/L	EQ. WT.	*MEQ/L
11. Hydroxyl	(OH^{-})	0	/ 17.0 =	0.00
12. Carbonate	($CO_3^{=}$)	0	/ 30.0 =	0.00
13. Bicarbonate	(HCO_3^{-})	615	/ 61.1 =	10.07
14. Sulfate	($SO_4^{=}$)	2,450	/ 48.8 =	50.22
15. Chloride	(Cl^{-})	4,999	/ 35.5 =	140.82

16.	Total Dissolved Solids	12,313		
17.	Total Iron (Fe)	3	/ 18.2 =	0.14
18.	Total Hardness As $CaCO_3$	3,811		
19.	Resistivity @ 75 F. (Calculated)	0.387 /cm.		

LOGARITHMIC WATER PATTERN
*meq/L.



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT. X	*meq/L =	mg/L.
$Ca(HCO_3)_2$	81.04	10.07	816
$CaSO_4$	68.07	44.16	3,006
$CaCl_2$	55.50	0.00	0
$Mg(HCO_3)_2$	73.17	0.00	0
$MgSO_4$	60.19	6.04	364
$MgCl_2$	47.62	15.68	747
$NaHCO_3$	84.00	0.00	0
$NaSO_4$	71.03	0.00	0
NaCl	58.46	125.14	7,316

*Milli Equivalents per Liter

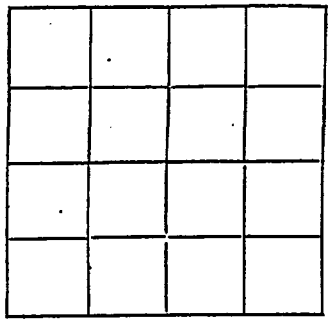
This water is slightly corrosive due to the pH observed on analysis.
The corrosivity is increased by the content of mineral salts, and the presence of H_2S in solution.

Form WR-23 FIELD ... STATE ENGINEER OFFICE

WELL RECORD

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1A and Section 5 need be completed.

Section 1



(Plat of 640 acres)

(A) Owner of well Pan American Pet. Corp.
Street and Number Box 68
City Hobbs, State N. M.
Well was drilled under Permit No. CP-317 and is located in the SW ¼ SE ¼ SW ¼ of Section 5 Twp. 20 Rge. 33
(B) Drilling Contractor Abbott Bros. License No. WD-46
Street and Number Box 637
City Hobbs State N. M.
Drilling was commenced Feb. 5 19 66
Drilling was completed Feb. 17 19 66

Elevation at top of casing in feet above sea level ____ Total depth of well 680'
State whether well is shallow or artesian shallow Depth to water upon completion 325'

Section 2 PRINCIPAL WATER-BEARING STRATA

No.	Depth in Feet From	Depth in Feet To	Thickness in Feet	Description of Water-Bearing Formation
1	520	540	20	Brown Water Sand
2	625	645	20	Brown Water Sand
3	660	675	15	Brown Water Sand
4				
5				

Section 3 RECORD OF CASING

Dia in.	Pounds ft.	Threads in	Depth Top	Depth Bottom	Feet	Type Shoe	Perforations From	Perforations To
7"	23	10	0	575	575	none	515	575

Section 4 RECORD OF MUDDING AND CEMENTING

Depth in Feet From	Depth in Feet To	Diameter Hole in in.	Tons Clay	No. Sacks of Cement	Methods Used

Section 5 PLUGGING RECORD

Name of Plugging Contractor ____ License No. ____
Street and Number ____ City ____ State ____
Tons of Clay used ____ Tons of Roughage used ____ Type of roughage ____
Plugging method used ____ Date Plugged ____ 19____
Plugging approved by:

Basin Supervisor

Cement Plugs were placed as follows:

No.	Depth of Plug From	Depth of Plug To	No. of Sacks Used

FOR USE OF STATE ENGINEER ONLY

Date Received 1966 FEB 24 AM 8:36 ✓

File No. CP-317 Use Domestic Location No. 20.33.35.3432

20.33.5.3432

000025

Section 6

LOG OF WELL

Depth in Feet From	Depth in Feet To	Thickness in Feet	Color	Type of Material Encountered
0	2	2	Brown	Sand
2	20	18	White	Caliche
20	110	90	Brown	Sand
110	520	410	Red	Clay & Shale
520	540	20	Brown	Water Sand
540	625	85	Red	Shale & Sand
625	645	20	Brown	Water Sand
645	660	15	Red	Shale
660	675	15	Brown	Water Sand
675	680	5	Red	Clay

L S Elev 3552'
Depth to K Trc 110'
Elev of K Trc 3442'

Loc. No. 20.33.5.3432
Hydro. Survey Field Check X

SOURCE OF ALTITUDE GIVEN
Interpolated from Topo. Sheet X
Determined by Inst. Leveling
Other

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described well.

Elliott Bros. By Merrell Elliott
Well Driller

000026