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January 28, 1986

Mr. Richard L. Stamets
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87504

Re: Chaveroo Operating Co.
Salt Water Disposal
Tucker #5 Well
Unit M, Section 24, T7S, R32E
Roosevelt County, New Mexico

Dear Mr. Stamets:

On behalf of Chaveroo Operating Company, please set the enclosed application for hearing at the next available examiner's docket now set for March 5, 1986.

Very truly yours,

W. Thomas Kellahin

WTK:ca
Enc.

cc: Darrell McBride
Box 6069
Hobbs, New Mexico 88241

William Graham
G&P Exploration, Inc.
4800 San Felipe
Suite 620
Houston, Texas 77056

STATE OF NEW MEXICO
DEPARTMENT OF ENERGY AND MINERALS
OIL CONSERVATION DIVISION

IN THE MATTER OF THE APPLICATION
OF CHAVEROO OPERATING COMPANY,
FOR SALT WATER DISPOSAL, ROOSEVELT
COUNTY, NEW MEXICO. CASE: 8505

A P P L I C A T I O N

Comes now Chaveroo Operating Company, by and through its attorneys, Kellahin & Kellahin, and applies to the New Mexico Oil Conservation Division for authority to dispose of produced salt water into the San Andres Formation in the perforated intervals from 4101 feet to 4430 feet in its Tucker Well #5, located in Unit M, 1310 feet from the South line and 1310 feet from the West line of Section 24, T7S, R32E, NMPM,Roosevelt County, and in support thereof would show:

1. Applicant is the operator of its well located in Unit M of Section 24, T7S, R32E, Roosevelt County, New Mexico.

2. Applicant seeks to convert the subject well to a salt water disposal well in the San Andres Formation through perforations at 4101 feet to 4430 feet.

3. Applicant is preparing Division Form C-108 and will submit that application separately from this application.

4. Wherefore, Applicant requests that this application be set for hearing and that after notice and hearing the application be granted.

Kellahin & Kellahin

By _____
W. Thomas Kellahin
P. O. Box 2265
Santa Fe, New Mexico 87501

(505) 982-4285

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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

RECEIVED
FEB 18 1986
OIL CONSERVATION DIVISION

FORM C-108
Revised 7-1-81

Case 8843

APPLICATION FOR AUTHORIZATION TO INJECT

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

II. Operator: CHAVEROO OPERATING CO. INC.

Address: 4800 San Felipe, Suite 620, Houston, TEXAS 77056

Contact party: William Graham Phone: 713-627-2875

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: W. THOMAS KELLAHIN Title _____

Signature: W. Thomas Kellahin Date: 2/12/86

* 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. _____

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

Page 8843

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 or bridge plugs used to seal off such perforations.

(5) Give the depth to and 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;

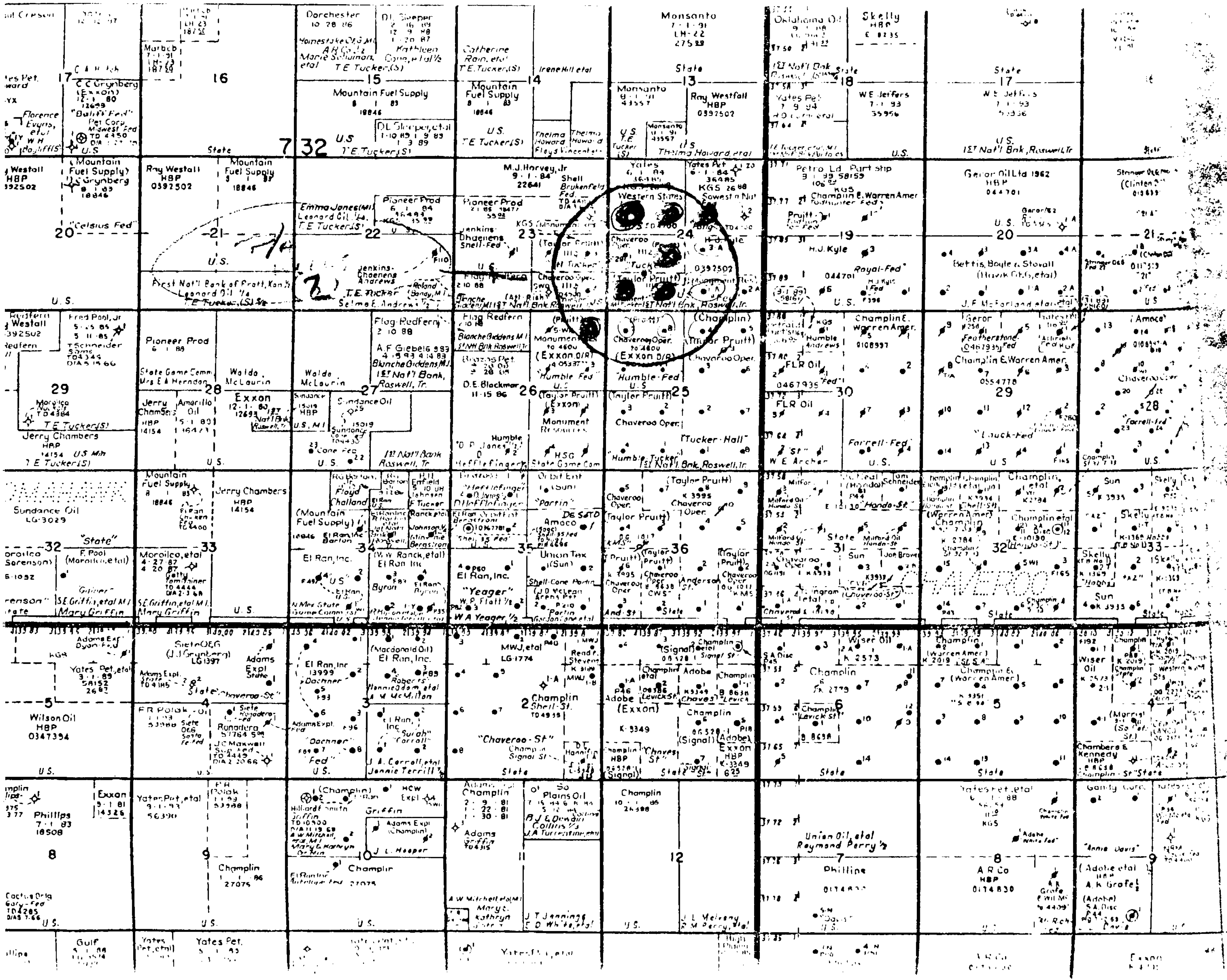
(2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells:

(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, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

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

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



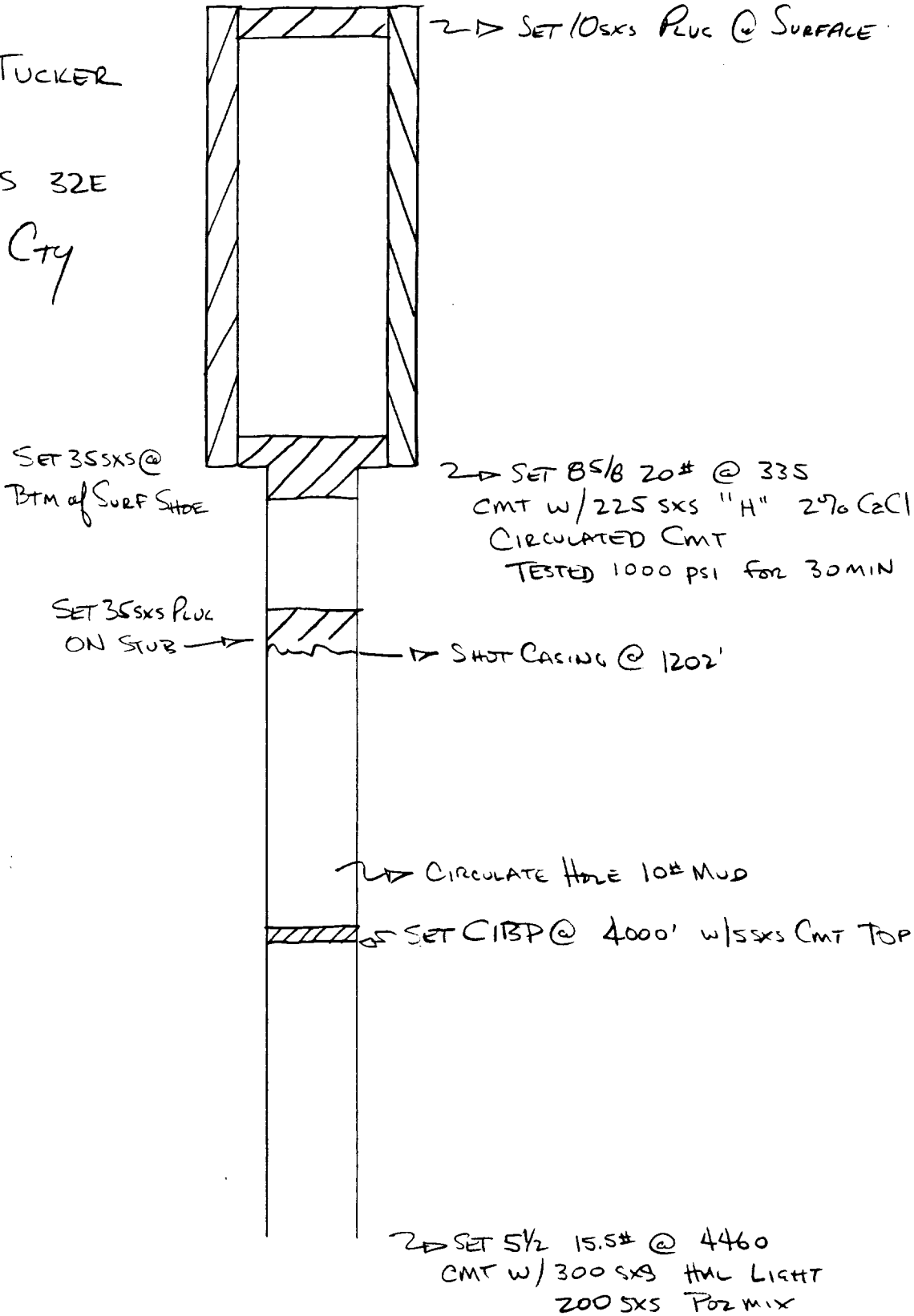
Monsanto
Skelly
Dorchester
Mountain Fuel Supply
Ray Westfall
T.E. Tucker (S)
Mountain Fuel Supply
Irene Hill etal
M.J. Harvey, Jr
Pioneer Prod
Emma Jones (MI)
Leonard Oil
Western States
Geror Oil Ltd 1962
H.J. Kyle
Royal-Fed
Bettis, Boyle & Stovall
First Nat'l Bank of Pratt, Kan.
Flag-Redfern
A.F. Giebel
Blanche Giddens MI
1st Nat'l Bank, Roswell, Tr.
D.E. Blackmar
Chaveroo Oper.
Humble-Fed
Taylor Pruitt
Champlin
FLR Oil
Champlin & Warren Amer.
Farrell-Fed
Jerry Chambers
Exxon
Waldo McLaurin
Sundance Oil
Monument Resources
Tucker-Hall
Lauck-Fed
Sun
Mountain Fuel Supply
State
El Ran, Inc.
Yeager
Union Tex
Amoco
Moroilco, etal
Mary Griffin
Sieto O&G
Adams Expl
MWJ, etal
Champlin
Adobe
Wiser Oil
Chaveroo-St
Wilson Oil
Signal
Union Oil, etal
Raymond Perry
A R Co
Phillips
Yates Pet.
Gulf
A.K. Grofe

Operator & Address	Perforations	Well Name TD	Legal	Casing	Depth Set	Cmt & Tops
Chaveroo Operating 1800 San Felipe Houston	4194-4421	Tucker #1 4500	1880 FSL 660 FWL 24, T7S, R32E	8 5/8 4 1/2	363 61 4495	250 Circ 300 (2941 Cal)
Shell Oil Co P.O. Box 1509 Midland, Tx 79701	Not Perf.	Shell Brukenfeld Federal #1 4677	1980 FNL 660 FEL 23, T7S, R32E	8 5/8 4 1/2	368.55 4677	300 Circ 675 Circ
Chaveroo Operating 1800 San Felipe Houston	4146-4450	Atlantic Tucker #3 4473	1980 FSL 660 FEL 23, T7S, R32E	8 5/8 5 1/2	347 4465	225 Circ (700 Circ Calculate)
Chaveroo Operating 1800 San Felipe Houston	4196-4410	Tucker #2 4500	660 FSL 690 FEL 23, T7S, R32E	8 5/8 4 1/2	361 4483	250 Circ 300 (2893 Cal)
Chaveroo Operating 1800 San Felipe Houston	4083-4477	Humble Federal #6 4500	660 FNL 1980 FWL 25, T7S, R32E	8 5/8 5 1/2	330 4499	225 Circ (650 Circ Cal)
Chaveroo Operating 1800 San Felipe Houston	4427-4464	Humble Federal #7 4500	660 FNL 660 FWL 25, T7S, R32E	8 5/8 5 1/2	334 4497	225 Circ (650 Circ Cal)
Chaveroo Operating 1800 San Felipe Houston	3986-4443	Tucker Hall #4 4500	660 FNL 1980 FEL 25, T7S, R32E	8 5/8 5 1/2	334 4499	225 Circ (300 2387 Cal)
Homer J. Kyle P.O. Box 387 Lovington, NM. 88260	4122-4354	Federal "A" #1 4430	660 FSL 1980 FEL 24, T7S, R32E	8 5/8 4 1/2	362 4430	250 Circ (150 3653 Cal)
Homer J. Kyle P.O. Box 387 Lovington, NM 88260	4160-4378	Federal "A" #3 4430	1980 FSL 1980 FEL 24, T7S, R32E	8 5/8 4 1/2	366 4422	250 Circ 150 sx (3645 Cal)

ATLANTIC TUCKER
#2

SEC 25 T 7S 32E

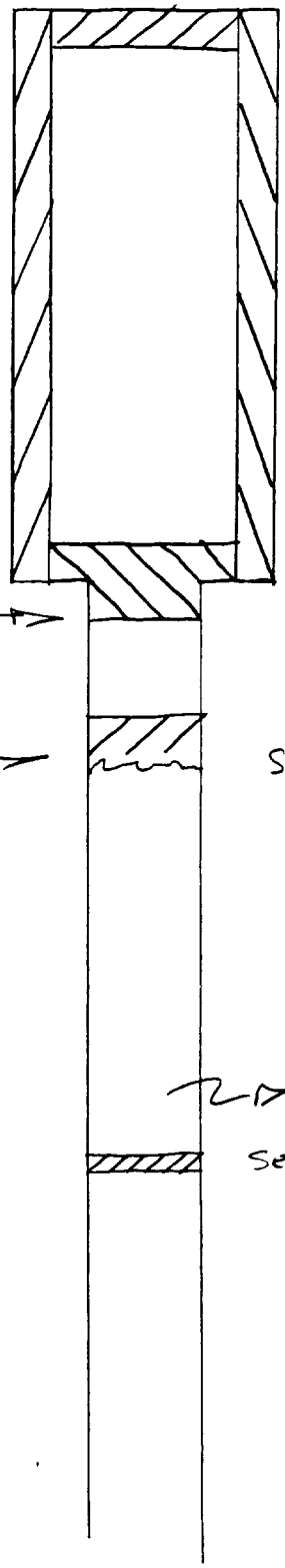
ROOSEVELT CTY



ATLANTIC TUCKER
#1

SEC 24 TS R32E

ROOSEVELT CTY



TOPPED OFF W/ 10SXS CMT

SET 25SXS PLUG FROM 350'

SET 8 5/8 20# @ 344 W/ 225SXS CIRCULATED CEMENT TESTED 1000# FOR 30MIN

SET 35 SXS @ STUB TO 950

SHOT OFF @ 1013

CIRCULATED 10# MUD

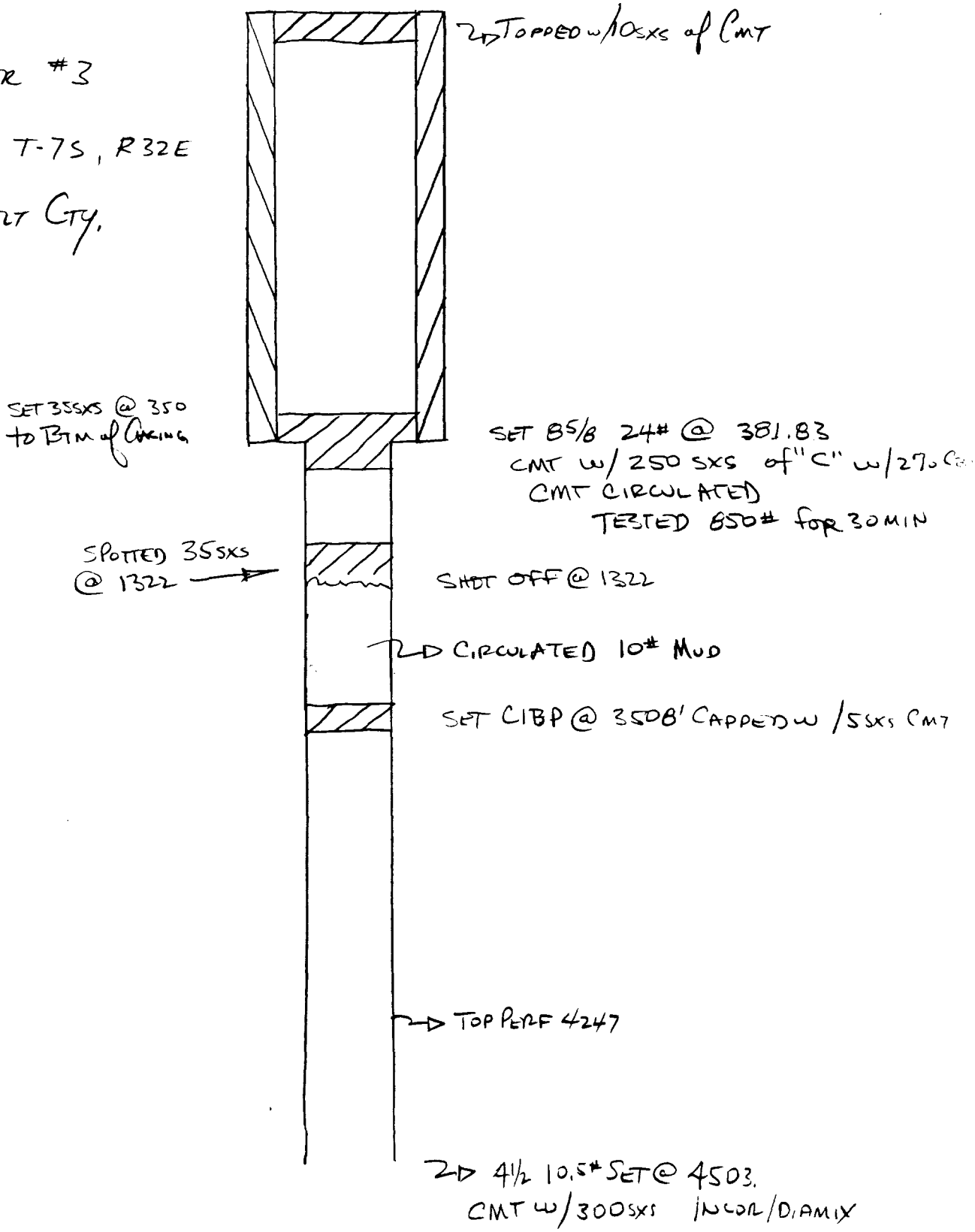
SET CIBP @ 4000' W/ 5SXS CMT TOP

SET 5 1/2 15.5# @ 4411 W CEMENT W/ 300 SXS HAL LIGHT AND 300 SXS POZMIX

TUCKER #3

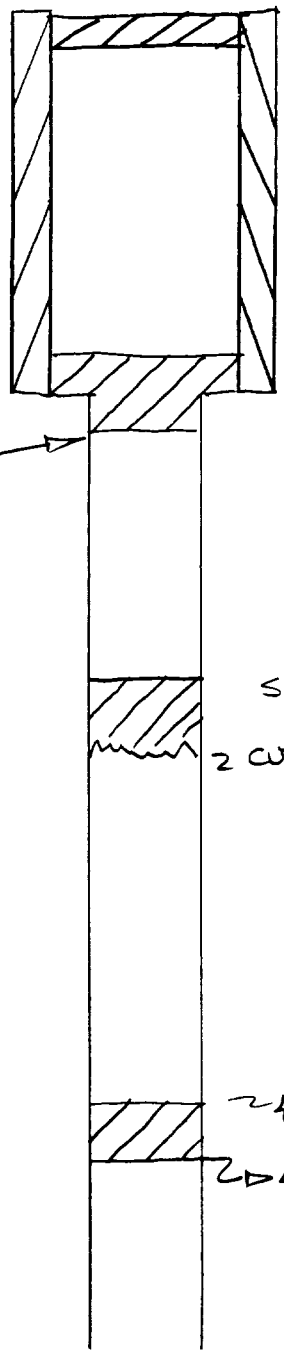
SEC 24, T-7S, R32E

ROOSEVELT CTY.



FEDERAL "24"
#1

SEC 24, T-7-S, R-32-E
1980'FNL & 1980FEL
ROOSEVELT CTY



TOPPED OFF W/10SXS CMT

SET 7" 23# @ 1824
W/250SXS "H" 8% GEL & 150SXS "H" 2%
WOC 24 HRS TESTED 1000PSI 30MIN

SPOTTED
50SXS PLUG @
1800

SPOTTED 50SXS @ STUBB

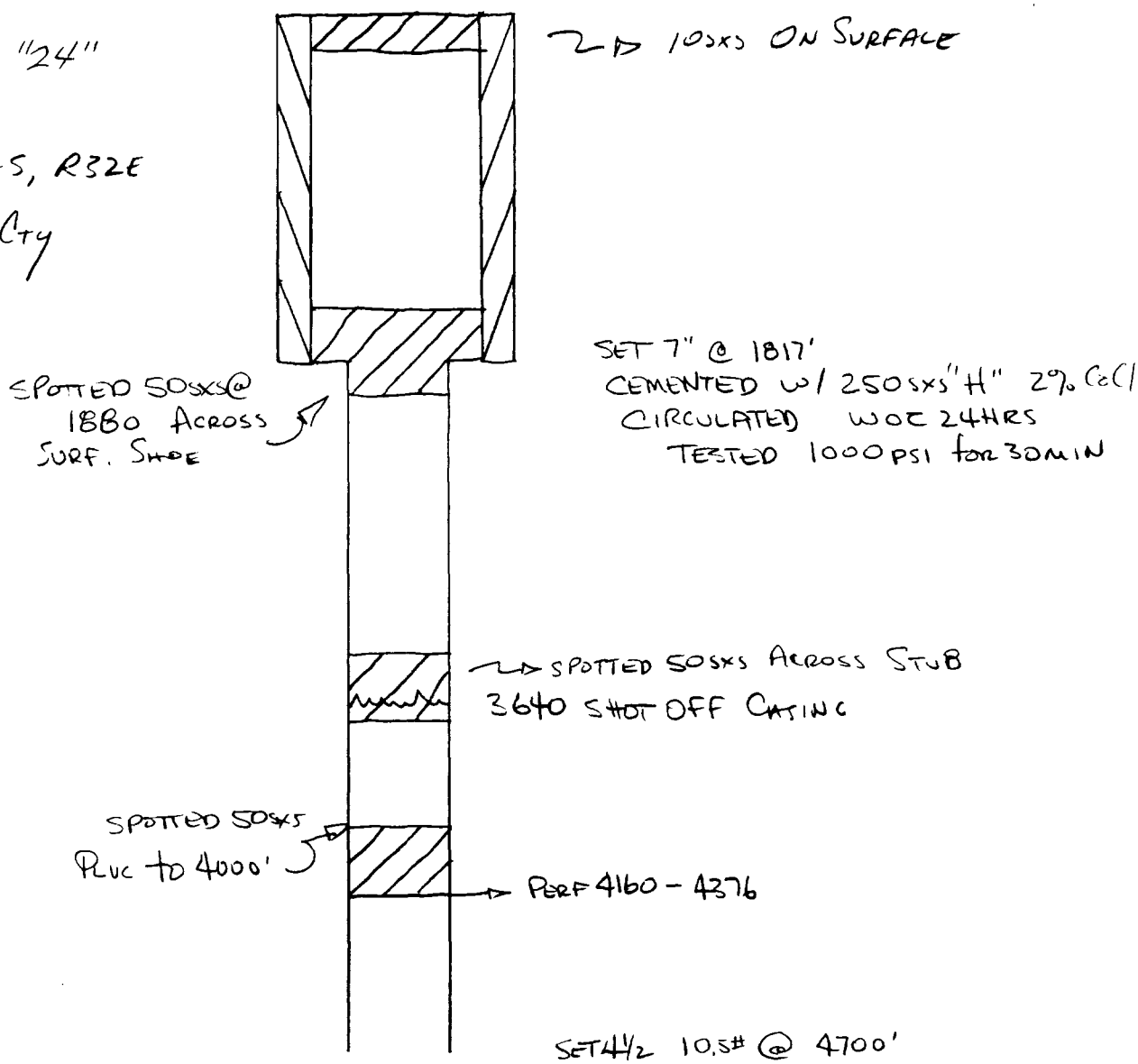
2 CUT OFF CASING @ 3300

~4000 TOP of 50SXS PLUG

4162 TOP PERF

SET 4½ 10.5# @ 4700'
CMT W/150SXS INCORE 2% GEL 5# SALT

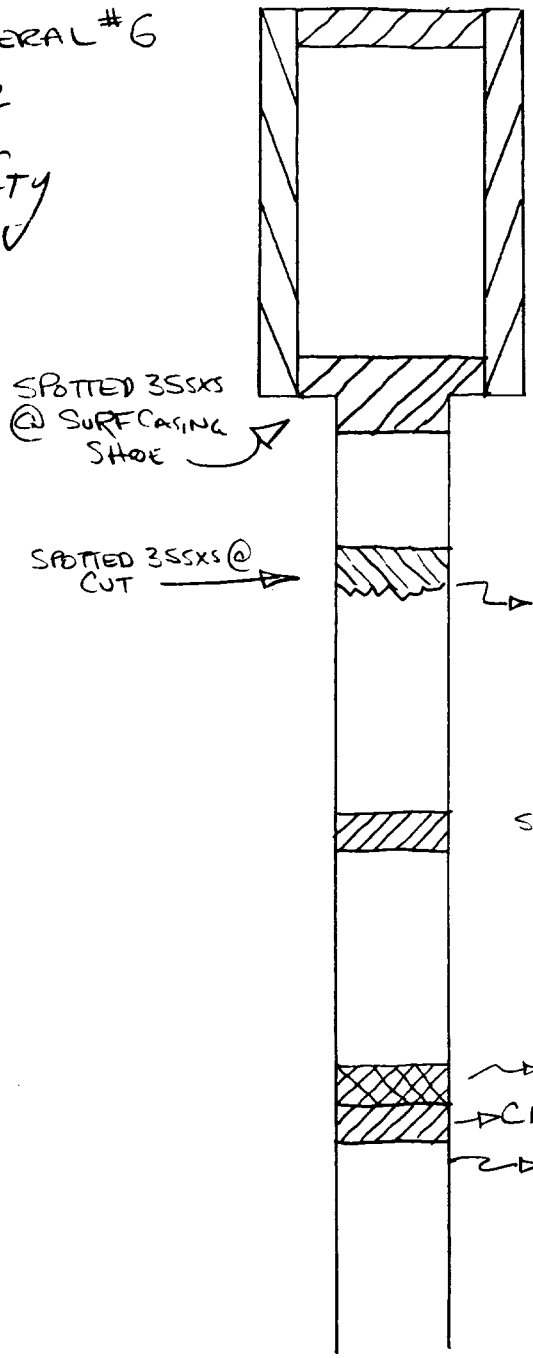
FEDERAL "24"
#2
SEC 24 - T-7-S, R32E
ROOSEVELT CTY



HUMBLE FEDERAL #6

26-7-32

ROOSEVELT CTY



DISPL 7 7/8 H X 5 1/2 → 1733 $\frac{ft^3}{ft}$

YEILD POZMIX → 1.22 $\frac{ft^3}{sxs}$

$350 \frac{sxs}{1} \times 1.22 \frac{ft^3}{sxs} \Rightarrow 427 ft^3 \times \frac{ft}{.1733 ft} = 2463.9 ft$

YEILD NEAT CMT - 1.18 $\frac{ft^3}{sxs}$

$\frac{338}{1206^2}$ → 5 1/2 IN 8 5/8 $\frac{ft^3}{ft}$ = NEG.

$300 \frac{sxs}{1} \times 1.18 \frac{ft^3}{sxs} = 354 ft^3 \times \frac{ft}{.1733 ft} = \underline{2042.7}$

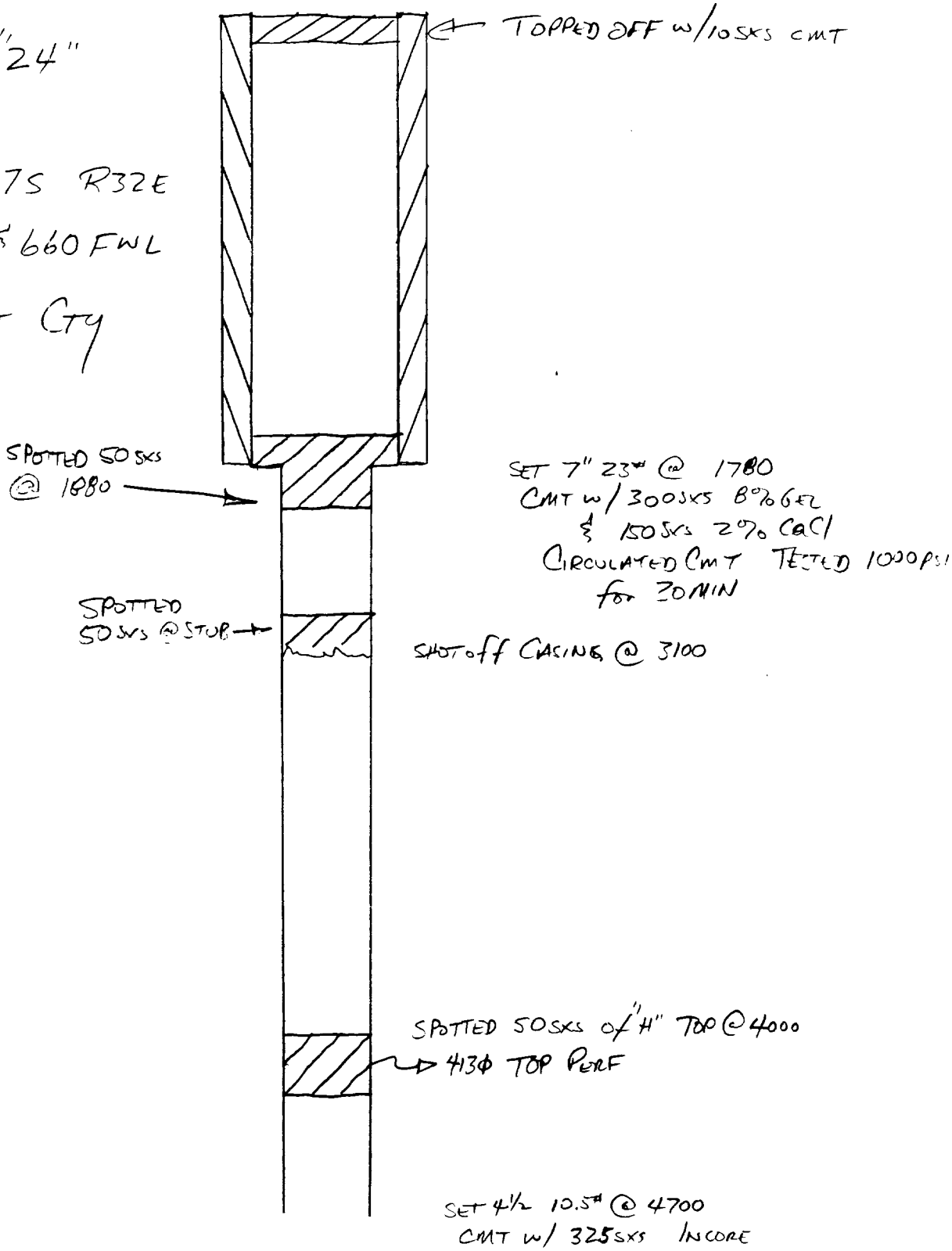
4506.6

FEDERAL "24"
#1

SEC 24 T 7S R 32E

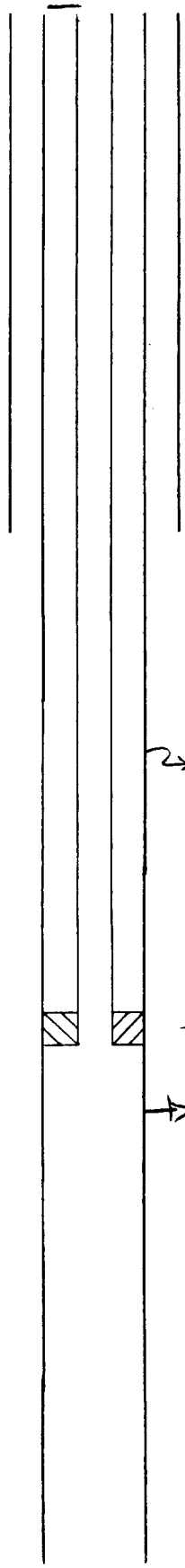
1980' FNL & 660 FWL

ROOSEVELT CTY



PROPOSED INJECTION WELL

TUCKER #5
SWD
SEC 24 T7S R32E
310 FSL
1310 FWL



8 5/8 SET @ 1754
CMT W/660 SXS
CMT CIRCULATED

CMT TOP @ 2000'
(BOND LOG)

VII

1. MAXIMUM DAILY RATE 400 BBLS
2. CLOSED SYSTEM
3. MAX INJECTION PRESSURE 850PSI

PACKER SET @ 4000'

PERFORATIONS
4137 - 4464

4½ SET @ 4530
CMT 300SXS 50/50 POZMIX

Exhibit "A"

NALCO

INJECTION WATER

REPORT OF WATER ANALYSIS

Company CHAVEROO OPERATING

Date 2-6-86
Analysis No.
Sampling Date
Date Sample Rec'd.

Sample Marked HUMBLE FEDERAL

DISSOLVED SOLIDS			RESULTS AS COMPOUNDS
Cations	mg/l	meq/l	mg/l
Sodium, Na (Calc.)	89,155	3,876	as NaCl
Calcium, Ca	7,160	358	as $CaCO_3$
Magnesium, Mg	1,032	85	as $CaCO_3$
Barium, Ba			as $BaSO_4$
Cations Total	97,348	4,319	
Anions			
Chloride, Cl	148,715	4,193	as NaCl
Sulfate, SO_4	3,920	81	as Na_2SO_4
Carbonate, CO_3			as $CaCO_3$
Bicarbonate, HCO_3	2,684	44	as $CaCO_3$
Anions Total	155,319	4,319	
Total Dissolved Solids (Calc.)	252,668		
Total Iron, Fe	42.2		as Fe
Acidity to Phenolphthalein, CO_2			as $CaCO_3$

OTHER PROPERTIES		$CaCO_3$ STABILITY INDEX
pH	6.90	@ 70° F.
Specific Gravity		@ 120° F.
Turbidity (JTU)		@ 160° F.
		Method of Stiff & Davis

Remarks:

NALCO CHEMICAL COMPANY
VISCO CHEMICALS
P. O. BOX 87 • SUGAR LAND, TEXAS 77478

Cu 12 8843

File

Dresser Atlas

DRESSER

COMPENSATED **DENSILOG®**
COMPENSATED **NEUTRON**
GAMMA RAY

FILE NO.

API NO.

Company CHAVEROO OPERATING
Well TUCKER NO. 5
Field CHAVERRO
County ROOSEVELT State N.M.

Calc 10' high to surrounding

Location:
1310' FSL & 1310' FWL

Sec 24 Twp 7-S Rge 32-E

OTHER SERVICES
MLL-DLL-GR
PROLOG

PERMANENT DATUM G.L. ELEV. 4452.6
LOGGING MEASURED FROM K.B. 11.0 FT. ABOVE P.D.
DRILLING MEASURED FROM K.B.

ELEVATIONS
KB 4463.6'
DF
GL 4452.6'

FIELD PRINT

DATE	2-22-85					
RUN	1					
SERVICE ORDER	53016					
DEPTH-DRILLER	4530'					
DEPTH-LOGGER	4524'					
BOTTOM LOGGED INTERVAL	4521'					
TOP LOGGED INTERVAL	3500'					
CASING - DRILLER	8-5/8"	@ 1754'	@		@	
CASING - LOGGER	NOT LOGGED					
BIT SIZE	7-7/8"					
TYPE FLUID IN HOLE	S. GEL					
DENSITY AND VISCOSITY	10.0	32				
PH AND FLUID LOSS	9.5	N.C.				
SOURCE OF SAMPLE	FLOWLINE					
RM AT MEAS. TEMP.	.049	@ 80	@		@	
RMF AT MEAS. TEMP.	.042	@ 80	@		@	
RMC AT MEAS. TEMP.		@	@		@	
SOURCE OF RMF / RMC	MEASURED					
RM AT BHT	.038	@ 106	@		@	
TIME SINCE CIRCULATION	8.0 HRS.					
MAX. REC. TEMP. DEG. F	106					
EQUIP. NO. / LOC.	HL 6316	ROSWELL				
RECORDED BY	TVEDE					
WITNESSED BY	D. MC BRIDE					

FOLD HERE

IN MAKING INTERP[...]
EMPLOYEES WILL G[...]
OF THEIR BEST JU[...]
INTERPRETATIONS [...]
INFER[...] FROM [...]
MEASU[...]
GUARA[...]
ANY [...]
OR R[...]
OR E[...]
SUS[...]
ANY [...]
EMP[...]