MEMO TO FILE SWD-163

This proposal thoroughly discussed with Nutter, Gressett, Stamets and Porter. Amoco contacted concerning perforations at 6484' to 6499'. They decline to squeeze here due to costs; likewsie do not wish to set dual or triple packers over interval. They desire to set packer at top of these perforations if O.C.C. would permit.

Probably no fluid would enter Devonian at 6484' to 6499'; either from casing-tubing annulus or from injected water but since water to be disposed of is from offset Devonian well (also operated by Amoco) and no other Devonian production occurs in immediate area, little if any damage could result. (Amoco would actually like to have water enter Devonian, as it would give them a water flood reaction, however, they feel there is little possibility of this occurring.) If packer is set at top of Devonian perforations, we would be more certain of detecting possible leaks in tubing or packer. (A small amount of casing-tubing annulus fluid escaping into perforations at 6484'-6499' could be offset by a small leak in tubing or packer under proposed method).

Production from offset (Amoco #4-J-13-11S-27E) is as follows:

> Feb. '75 -1345 bbls oil, no gas,
> 15040 bbls wtr, 28 days producing.
> This is approximately 48 bbls oil
> per day and 111 bbls wtr per bbl
> oil.

Porter agreed that setting packer immediately above Devonian perforations at 6484' - 6499' would be acceptable under conditions here existing.

Carl Ulvog

SWD-163

Form C-108
Revised 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR	ADDRESS
Amoco Production Company	P. O. Box 367, Andrews, Texas 79714

LEASE NAME	WELL NO.	FIELD	COUNTY
State "CF"	5	Chisum Devonian	Chaves

LOCATION

UNIT LETTER K ; WELL IS LOCATED 1980 FEET FROM THE South LINE AND 1980 FEET FROM THE West LINE, SECTION 13 TOWNSHIP 11-S RANGE 27-E NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	13-3/8"	461	500	SURF	CIRC. CMT
INTERMEDIATE	8-5/8"	2,194	1,200	341	TEMP SURVEY
LONG STRING	5-1/2"	6,747	700	UNKNOWN EST. 2,750	THEOR. CALC.
TUBING	2-7/8"	6,560	NAME, MODEL AND DEPTH OF TUBING PACKER: Baker Model "D" at 6,560'		

NAME OF PROPOSED INJECTION FORMATION	TOP OF FORMATION	BOTTOM OF FORMATION
Fusselman	6610	6721

IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?	PERFORATIONS OR OPEN HOLE?	PROPOSED INTERVAL(S) OF INJECTION
Tubing	Perf	6612-22

IS THIS A NEW WELL DRILLED FOR DISPOSAL?	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED?	HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE?
No	Produce Devonian	Yes

LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH

6484-99. Not Squeezed. Tested very tight. Gave up only water.

DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA	DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA
300'	6,548	None Known

ANTICIPATED DAILY INJECTION VOLUME (BBLS.) MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSI)
500	2,500	Closed	Pressue	100 - Initial 2,000 - Maximum

ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE —	WATER TO BE DISPOSED OF	NATURAL WATER IN DISPOSAL ZONE	ARE WATER ANALYSES ATTACHED?
	Yes	Yes	Yes

NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)

Lyman R. Graham, Drawer 8, Caprock, New Mexico 88213

LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (½) MILE OF THIS INJECTION WELL

Franklin, Aston & Fair, P. O. Box 1090, Roswell, New Mexico 88201

Texaco, Inc., P. O. Box 728, Hobbs, New Mexico 88240

HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING? SURFACE OWNER	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL	THE NEW MEXICO STATE ENGINEER
Yes	Yes	No

ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B) PLAT OF AREA	ELECTRICAL LOG	DIAGRAMMATIC SKETCH OF WELL
Yes	Yes	Yes

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

(Signature) ALEX CLARKE, JR. (Title) Area Superintendent (Date) 4-16-75

1-NMOCC,SF
1-NMOCC,ART
1-FAF
1-TEXACO
1-DIV
1-SUSP

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

SALT WATER DISPOSAL APPLICATION STATE "CF" WELL NO. 5

Amoco proposes to dispose of water produced from the Devonian formation in the State "CF" Well No. 5. This water has a chloride content of 24,400 ppm, which is too great for animal consumption.

Disposal will be into the Fusselman zone, 6612-22'. The natural fluid content of the disposal horizon is water with chloride content of 25,893 ppm, also too great for animal consumption.

Propose to inject without squeezing perforations 6484-99'. This interval, after acidizing with 2,000 gals. 15% HCl, swabbed down to 6000' and gave up only 8 barrels in 3 hours, all water. Since zone is very tight and produces only water, propose to leave open and isolate with packer.

Amoco Production Company

ENGINEERING CHART

SHEET NO. OF

FILE

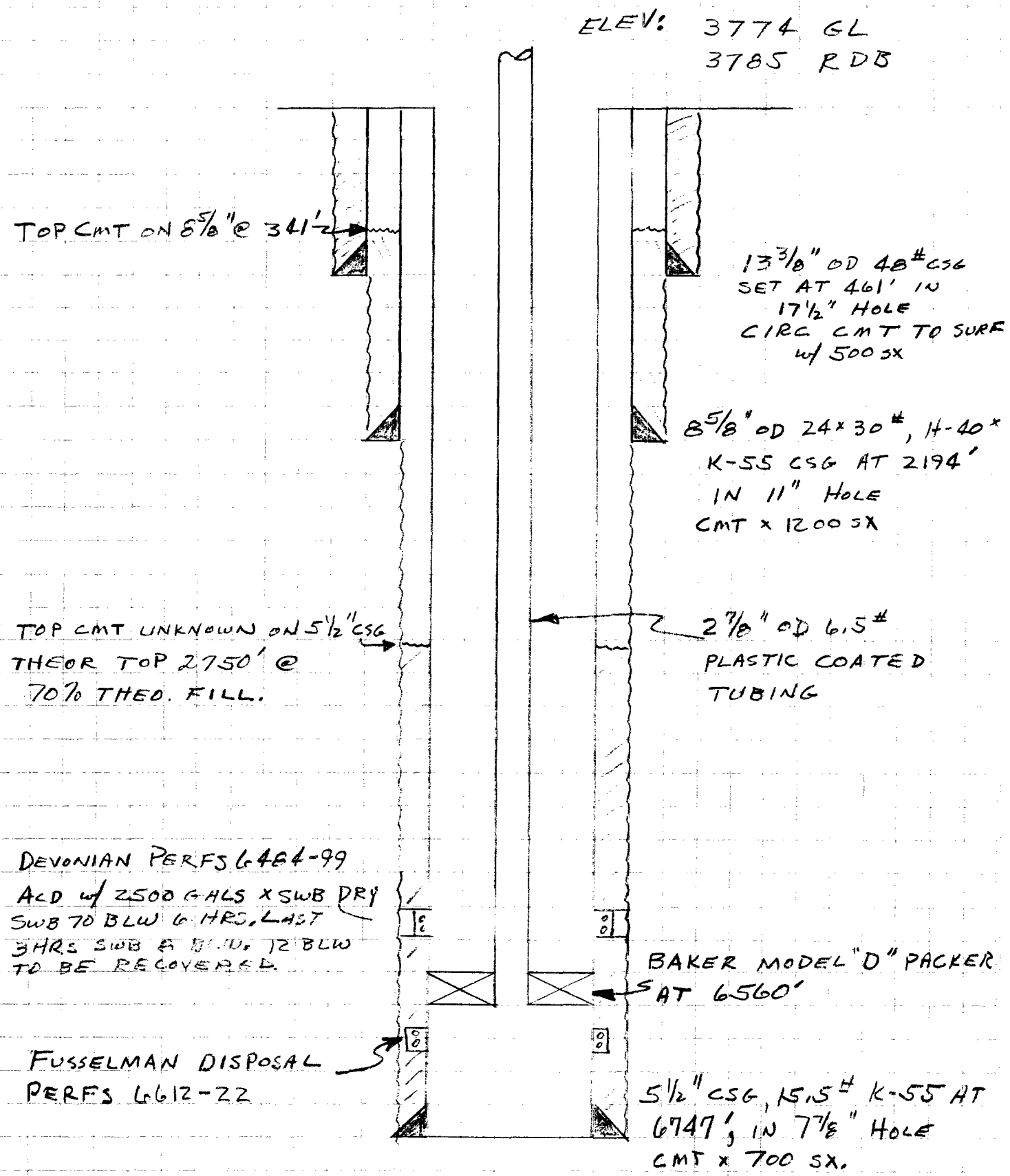
APPN

DATE 4-14-75

BY JAD

SUBJECT STATE CF No 5 - DISPOSAL

WELL BORE - PROPOSED CONDITION



Form 171 2-71

FORM LR 4

A BJ Laboratory Report

Byron Jackson Inc.

FILE 720 — Chisum Devonian

SUBJECT:
DEPTH:
FORMATION: Fusselman

Company Amoco Farm State "CF" Well No. #5

Location _____ County Chaves State N. M. Date 4-4-75

Pool _____ Date Sampled 4-4-75 Submitted by _____

SPECIFIC GRAVITY: 1.035
pH: 6.4

Principal Constituents

RADICAL	PARTS PER MILLION	REACTING VALUE EQUIVALENTS PER MILLION	PER CENT
SODIUM	12,773		
CALCIUM	2754		
MAGNESIUM	925		
CHLORIDE	25,893		
SULPHATE	1353		
BICARBONATE	637		

Water produced from Fusselman

PRIMARY SALINITY: 72.24 PER CENT TOTAL REACTING VALUE

SECONDARY SALINITY: 26.40 PER CENT TOTAL REACTING VALUE

SECONDARY ALKALINITY: 1.36 PER CENT TOTAL REACTING VALUE

General Remarks:

LAB. NO. 1527

DISTRICT Hobbs

ANALYZED BY B.J. INC.

Signed Danny Russell

DISTRIBUTION _____

1-7-3

SAMPLE NO._____

THE WESTERN COMPANY
Service Laboratory
West Highway 80
Box 310
Midland, Texas

Phone MU 3-2781 Day or Night

Chisum Devonian

WATER ANALYSIS

Operator	Honolulu Oil Corp.	**Date Sampled**	February 2, 1961
Well	New Mexico State B-1	**Date Received**	February 3, 1961
Field	Chisum	**Submitted by**	Mr. John B. Nixon
Formation	Devonian	**Worked by**	Jim Looney
Depth	6500	**Other Description**	
County	Chaves, New Mexico		

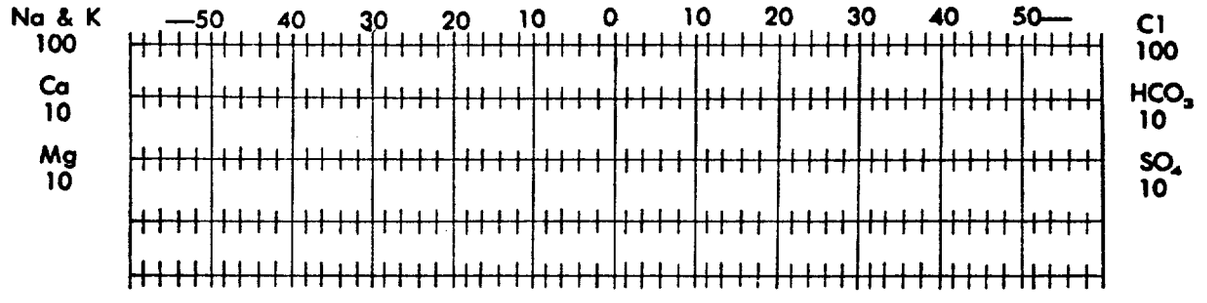
CHEMICAL DETERMINATIONS

Density	1.030 @ 73° F	**pH**	7
Iron	None	**Hydrogen Sulfide**	Fair trace
Sodium and Potassium	14,421 ppm	**Bicarbonate**	1037 ppm
Calcium	1480 ppm	**Sulfate**	1550 ppm
Magnesium	437 ppm	**Phosphate**	ppm
Chloride	24,400 ppm	**as Sodium Chloride**	ppm

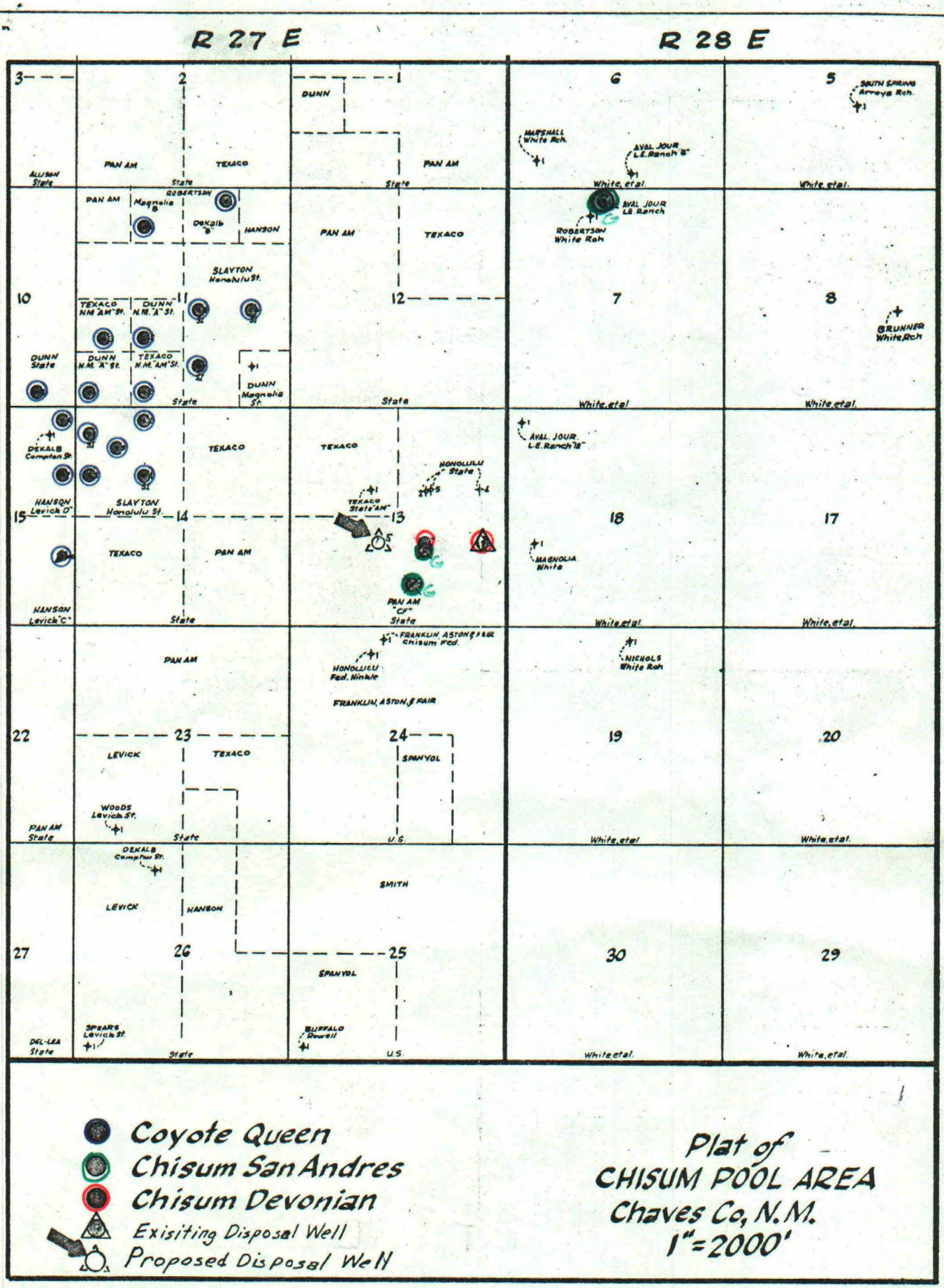
Resistivity .145 ohm-meters @ 77 °F

Remarks:

for Stiff type plot (in meq./l.)



Per _____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ALLISON State
PAN AM
TEXACO
State
DUNN
PAN AM
State
MARSHALL White Rch.
AVAL JOUR L.E. Ranch "B"
White, et al.
SOUTH SPRING Arroyo Rch.
White, et al.
PAN AM
Magnolia "B"
ROBERTSON
DeKalb "B"
HANSON
PAN AM
TEXACO
AVAL JOUR L.E. Ranch
ROBERTSON White Rch
SLAYTON Honolulu St.
TEXACO N.M. "AM" St.
DUNN N.M. "A" St.
DUNN State
DUNN N.M. "A" St.
TEXACO N.M. "AM" St.
DUNN Magnolia St.
State
State
White, et al.
BRUNNER White Rch
White, et al.
DEKALB Compton St.
TEXACO
TEXACO
HONOLULU State
AVAL. JOUR L.E. Ranch "B"
HANSON Levick "D"
SLAYTON Honolulu St.
TEXACO State "AM"
TEXACO
PAN AM
MAGNOLIA White
HANSON Levick "C"
State
PAN AM "CF" State
White, et al.
White, et al.
PAN AM
FRANKLIN, ASTON & FAIR Chisum Fed.
HONOLULU Fed. Hinkle
FRANKLIN, ASTON & FAIR
NICHOLS White Rch
LEVICK
TEXACO
SPANYOL
PAN AM State
WOODS Levick St.
State
U.S.
White, et al.
White, et al.
DEKALB Compton St.
SMITH
LEVICK
HANSON
SPEARS Levick St.
State
BUFFALO Dowell
U.S.
SPANYOL
DEL-LEA State
White, et al.
White, et al.
Coyote Queen
Chisum San Andres
Chisum Devonian
Exisiting Disposal Well
Proposed Disposal Well
Plat of
CHISUM POOL AREA
Chaves Co, N.M.
1" = 2000'