

RESULT OF WATER ANALYSES

TO: Mr. Larry Johnson
P. O. Box 730, Hobbs, NM 88240

LABORATORY NO. 29186 (Page 2)
SAMPLE RECEIVED 2-5-91
RESULTS REPORTED 2-12-91

COMPANY Texaco, Inc. LEASE Jal Water System

FIELD OR POOL _____

SECTION _____ BLOCK _____ SURVEY _____ COUNTY Lea STATE NM

SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Raw water - taken from Jal water supply well #3. 2-5-91

NO. 2 Unit Letter L, Section 4, T-24S, R-36E

NO. 3 _____

NO. 4

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES				
	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0110			
pH When Sampled	6.6			
pH When Received	7.14			
Bicarbonate as HCO ₃	659			
Supersaturation as CaCO ₃	0			
Undersaturation as CaCO ₃	--			
Total Hardness as CaCO ₃	3,325			
Calcium as Ca	860			
Magnesium as Mg	286			
Sodium and/or Potassium	3,537			
Sulfate as SO ₄	2,656			
Chloride as Cl	5,468			
Iron as Fe	0.48			
Barium as Ba	0			
Turbidity, Electric	6			
Color as Pt	9			
Total Solids, Calculated	13,465			
Temperature °F.	82			
Carbon Dioxide, Calculated	270			
Dissolved Oxygen,	0.000			
Hydrogen Sulfide	212			
Resistivity, ohms/m at 77° F.	0.550			
Suspended Oil	6			
Filtrable Solids as mg/l	4.7			
Volume Filtered, ml	4,000			

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks identify a minor amount of sand in all of the wells except Jal #3, but the magnitude of this sand is not sufficient to cause concern or any action. In summary, we have identified no development in any of these wells that would lead us to suggest any changes be made at this time.

Form No. 3

EXHIBIT 3
PRONGHORN SWD CASE NO.10693
Before Examiner Stogner
May 6, 1993

By

Waylan C. Martin, M.A.

Unichem International

707 North Leech

P.O.Box 1499

Hobbs, New Mexico 88240

Company : CHEVRON, USA

Date : 04-11-1990

Location: EMSU - #457 (on 04-09-1990)

Specific Gravity:

Total Dissolved Solids:

pH:

IONIC STRENGTH:

Sample 1

1.014

18955

7.10

0.421

CATIONS:

		<u>me/liter</u>	<u>mg/liter</u>
Calcium	(Ca ⁺²)	52.4	1050
Magnesium	(Mg ⁺²)	83.6	1020
Sodium	(Na ⁺¹)	190	4360
Iron (total)	(Fe ⁺²)	0.007	0.200
Barium	(Ba ⁺²)	0.010	0.700

ANIONS:

Bicarbonate	(HCO ₃ ⁻¹)	12.0	732
Carbonate	(CO ₃ ⁻²)	0	0
Hydroxide	(OH ⁻¹)	0	0
Sulfate	(SO ₄ ⁻²)	54.1	2600
Chloride	(Cl ⁻¹)	259	9200

DISSOLVED GASES

Carbon Dioxide	(CO ₂)	120
Hydrogen Sulfide	(H ₂ S)	255

SCALING INDEX (positive value indicates scale)

<u>Temperature</u>		<u>Calcium</u>	<u>Calcium</u>
		<u>Carbonate</u>	<u>Sulfate</u>
86°F	30°C	0.52	-6.0