

PAN AMERICAN PETROLEUM CORPORATION
RESEARCH CENTER
WATER ANALYSIS

LOCATION SAMPLED: Division Fort Worth District Lubbock Area Hobbs
Operator (Plant) Pan American Well No. 7 Lease South Mattix Unit
State (Province) New Mexico County (Parish) Lea
Twp. _____ Rng. _____ Sec. _____ Quarter (Lsd.) _____ Other (Meridian) _____
Field name Fowler Ellenburger Sample used for detailed analyses _____
Sample collected from _____ Sample collected by T. W. Wilson Date _____
Interval sampled _____ to _____ Interval name _____
Recovery _____
Form 97 transmitted by V. E. Staley Date transmitted 8-3-67, File: VES-317-538
Technical Service request authorized by _____ Office _____
Technical Service Number: 3094

ORGANIC CONSTITUENTS in mg/l

	BOTTOM	MIDDLE	TOP	MUD
Benzene				
Toluene				
Phenols				
HC Gases				

DESCRIPTION OF SAMPLE

Condition as received _____
Color _____
Odor _____
Suspended solids _____
Bottom sediment _____
Oil content _____

QUALITY OF SAMPLE

Chloride BOTTOM MIDDLE TOP
ion mg/l: _____
Comments on quality _____

CONVENTIONAL MAJOR ION ANALYSIS

		Major Ions mg/l ¹	% of Total Major Ions	Reaction Value meq/l ²	% of Total Reaction Value
CATIONS	Sodium Na ⁺	59,642	29.79	2,524.42	37.23
	Calcium Ca ⁺⁺	15,100	7.54	753.49	10.81
	Magnesium Mg ⁺⁺	1,660	.83	136.45	1.96
ANIONS	Potassium K ⁺				
	Chloride Cl ⁻	123,000	61.45	3,468.60	49.77
	Bicarbonate HCO ₃ ⁻	73	.04	1.20	.02
	Sulfate SO ₄ ⁻	700	.35	14.56	.21
	Carbonate CO ₃ ⁻	0	0	0	0
	TOTAL	200,175			

Total solids by evaporation 207,000 mg/l
NaCl resistivity equivalent (Dunlap) 200,677 mg/l
Resistivity .050 ohm-meters at 77 °F
pH 5.9 Specific gravity 1.140 at _____ °F
Ryznar stability index (2pHs-pH) _____ at _____ °F

OTHER IONS AND DISSOLVED SOLIDS

CATIONS	mg/l	ANIONS	mg/l	OTHERS	mg/l
Lithium Li ⁺		Bromide Br ⁻		Iron Fe	
		Iodide I ⁻		Boron B	
				Silica SiO ₂	

¹ Data previously reported on Form 66 7-62 under the heading P.P.M. was actually in milligrams per liter. By definition, ppm = mg/l /sp. gr.
² meq/l means milligram equivalents per liter.

REMARKS AND CONCLUSIONS:

cc: _____ Date received 8-22-67 Field sample no. _____
Analyst DW Lab. no. 7-18717 Date 9-6-67