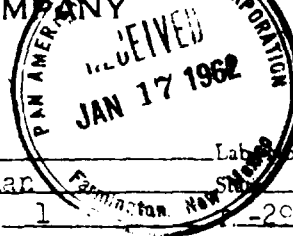


STANDARD OIL AND GAS COMPANY
RESEARCH DEPARTMENT
WATER ANALYSIS



Lease Navyco "C" Well No. 1 Lab. No. T-14,600
Field Undersaturated Pennsylvanian County San Juan State New Mexico
Quarter or Survey 27W/4 Bk. 1 Section 1 T. 20-N R. 17-W
Exact Location _____ Sample Series No. HC-1
Producing Stratum Paradox PBTD _____ Total Depth 6399-PED
Stratum Yielding Sample Perforations From 6366 To 6390
Condition of Well _____
Sample Collected From Separator Method Used Direct form Discharge
Collected by T. H. Whitmire Date Collected 1-3-62 Date Received 1-8-62
Transmittal Letter by L. C. Speer, Jr. Date 1-4-62 File N-1006-535.11

Radicle	Per Cent by Analysis	(a) P. P. M.	(b)	(a) X (b)	Per Cent Reacting Value	Calculated Compound	P. P. M.
Na	28.30	21,311	.0415	835.60	35.53	Na ₂ SO ₄	
Ca	7.80	5,880	.0499	293.11	11.14	NaCl	53,721
Mg	1.55	1,170	.0822	87.95	3.33	Na ₂ CO ₃	
Fe						NaHCO ₃	733
						CaSO ₄	560
						CaCl ₂	15,825
SO ₄	.52	395	.0208	8.22	.31	CaCO ₃	
Cl	61.12	46,100	.0282	1300.02	49.36	Ca(HCO ₃) ₂	
CO ₂		0	.0333			MgSO ₄	
HCO ₃	.71	532	.0164	8.72	.33	MgCl ₂	4,582
H ₂ S						MgCO ₃	
						Mg(HCO ₃) ₂	
Total solids as a summation of radicles							75,421 P.P.M.
Total solids by evaporation and ignition of residue at low red heat							70,040 P.P.M.
Sample as received: Resistivity: ohms/M.M. .0969 at 77°F. •H Value 6.2 Specific Gravity 60°/60°F. 1.057							

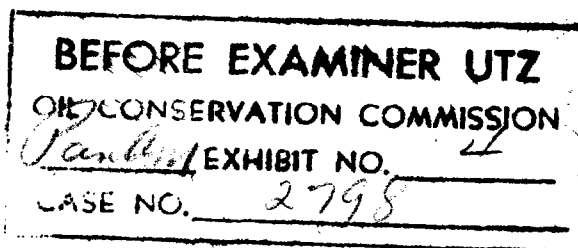
PROPERTIES OF REACTION IN PER CENT

PRIMARY SALINITY: SO₄ + Cl = _____ with equal value Na (K) _____ = 71.06 %
SECONDARY SALINITY: If SO₄ + Cl is greater than Na (K) _____ = _____ %
Then SO₄ + Cl = _____ with equal value of Ca + Mg _____ = 28.18 %
PRIMARY ALKALINITY: Excess Na (K) over SO₄ + Cl = _____ with equal value of CO₂ + S _____ = _____ %
SECONDARY ALKALINITY: Excess Ca + Mg over SO₄ + Cl = _____ with equal value of CO₂ + _____ = .66 %
CHLORIDE SALINITY: Cl + (SO₄ + Cl) = _____ X 100% = 99.38 %
SULPHATE SALINITY: SO₄ + (SO₄ + Cl) = _____ X 100% = .62 %

NOTE: Multiply Parts per Million by .0583 to obtain Grains per Gallon.

REMARKS: Resistivity: ohms/M.M. .0459 at 172°F

J. L. Hoyt, Jr.
W. T. Smith
T. V. Curtis
L. C. Speer, Jr.
T. T. Martin (2)



FARMINGTON DISTRICT	
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ILLEGIBLE

Analyst James E. Smith Date 1-8-62