

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

Edmonton — Fort St. John — Calgary

WATER ANALYSIS REPORT

Field Well No. **Kotaneelee A-1**
 Operator **Pan American Petroleum Corporation** Date Received **May 21, 1963**
 Formation **Mid Devonian Carbonate** Depths **14,407' - 14,470'**
 Other pertinent data **D.S.T. #1, Middle sample. DST #1 Middle Sample**
11300-14470 Hook wall packer inside 7" CBA 11560 TO 4 hrs. 49 min. Shut-in
4 hrs 28 min. IHP 5276 psi, ISIP NA, IFF 643 psi, FFP 724 psi, FSIP 1036 psi,
FHP 5276 psi. Gas to surface 40 min. TSTM Date Sampled: **Not Known** Lab. No. **E21663-1**
Rec. 1500 gas cut mud.

PARTS PER MILLION (MILLIGRAMS PER LITER)

Na + K	Ca	Mg	Fe	SO ₄	Cl	CO ₃	HCO ₃	OH	H ₂ S
26979	159	21	present	8979	23300	1870	16900		

MILLIGRAM EQUIVALENTS

1173.59	7.93	1.73		186.76	657.06	62.27	277.16		
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MILLIGRAM EQUIVALENTS IN PERCENT

49.59	0.34	0.07		7.89	27.77	2.63	11.71		
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Total Solids in Parts per Million

By evaporation **98,700**
 After ignition **49,100**
 Calculated **69,631**
 Specific Gravity **1.058**
 Observed pH **8.8**
 Resistivity **0.216** ohm meters @ 68° F.

Properties of Reaction in Percent

Primary salinity **71.32**
 Secondary salinity **----**
 Primary alkalinity **27.86**
 Secondary alkalinity **0.82**
 Chloride salinity **77.87**
 Sulfate salinity **22.13**

Remarks and conclusions **Extremely large amount of organic matter present in total solids. The analyses were made on water extracted from mud. The water was dark wine colored and is a filtrate.**

LOGARITHMIC PATTERN
 MEQ per unit



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WATER ANALYSIS REPORT

Field Well No. **Kotaneecan A-1**
 Operator **Pan American Petroleum Corporation** Date Received **May 23, 1963**
 Formation Depths **14,407' - 14,470'**
 Other pertinent data **D.S.T. #1. Bottom Sample.**

Date Sampled: **Not Known** Lab. No. **E21663-2**

PARTS PER MILLION (MILLIGRAMS PER LITER)

Na & K	Ca	Mg	Fe	SO ₄	Cl	CO ₂	HCO ₃	OH	H ₂ S
23591	146	18	present	8238	19200	1255	17100		

MILLIGRAM EQUIVALENTS

1026.25	7.29	1.48		171.35	541.44	41.79	280.44		
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MILLIGRAM EQUIVALENTS IN PERCENT

49.58	0.35	0.07		8.28	26.15	2.02	13.55		
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Total Solids in Parts per Million		Properties of Reaction in Percent	
By evaporation	96,800	Primary salinity	68.86
After ignition	47,520	Secondary salinity	----
Calculated	60,870	Primary alkalinity	30.30
Specific Gravity	1.054	Secondary alkalinity	0.84
Observed pH	8.7	Chloride salinity	75.95
Resistivity	0.228 ohm meters @ 68° F.	Sulfate salinity	24.05

Remarks and conclusions **Extremely large amount of organic matter present in total solids. The analyses were made on water extracted from mud. The water was dark wine colored and is a filtrate.**

LOGARITHMIC PATTERN
MEQ per unit

