

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

WATER ANALYSIS

Lab No. E69-9401-4

Received: Mar. 4, 1969 Reported: Mar. 8, 1969

Well: Location: Pan Am. Shell Merrill ^{YT} L-60

Operator: PAN AMERICAN PETROLEUM CORPORATION

Field or Area: Yukon

Elev.: K.B. Grd. Zone/Formation: Nahanni

Sample Interval: 4989' - 5362'

Method of Production: D.S.T. #1

Sampled from: Bottom

Sampled by:

Date: Mar. 2, 1969

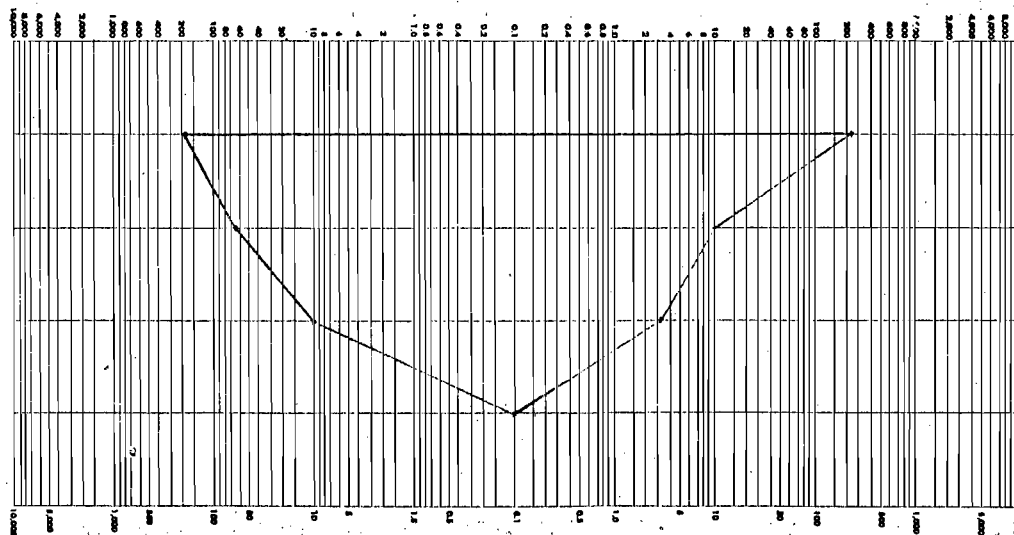
OTHER PERTINENT DATA

(Signed)

	Na	K	Ca	Mg				SO ₄	Cl			CO ₃	HCO ₃		
Mg./L	4203		1299	126				155	8668				630		
Meq./L	182.81		64.82	10.36				3.22	244.44				10.33		
Meq. %	35.43		12.56	2.01				0.62	47.37				2.00		

Total Solids Mg/L: By Evaporation **16,536** Fe Present Specific Gravity **1.013** @60°F Observed pH **6.7** @ **72** °F
 Calculated **15,081** After Ignition **14,904** H₂S Nil Refractive Index **1.3362** @25°C Resistivity **0.511** ohm meters @ **68** °F

Pattern Unit Meq./L



Remarks & Conclusions: Analysis determined on colourless water filtered from muddy water.

E69-9401-1 Drill fluid. Colourless water filtered from mud. Resistivity: 1.70 OHM meters @68°F

E69-9401-2 Top. Colourless water filtered from mud. Resistivity: 0.923 OHM meters @68°F

E69-9402-3 Middle. Colourless water filtered from slightly muddy water. Resistivity: 0.511 OHM meters @68°F

Received: March 13, 1969 Reported: March 18, 1969 Well: Location: Pan Am. Shell Merrill YT. L-60 60° 19' 30" 124° 26' 00"

Operator: PAN AMERICAN PETROLEUM CORPORATION Field or Area: Yukon

Elev.: K.B. Grd. Zone/Formation: Nahanni Sample Interval: 4989' - 5362'

Method of Production: D.S.T. #1 Sampled from: Bottom Sampled by: --- Date: March 2, 1969

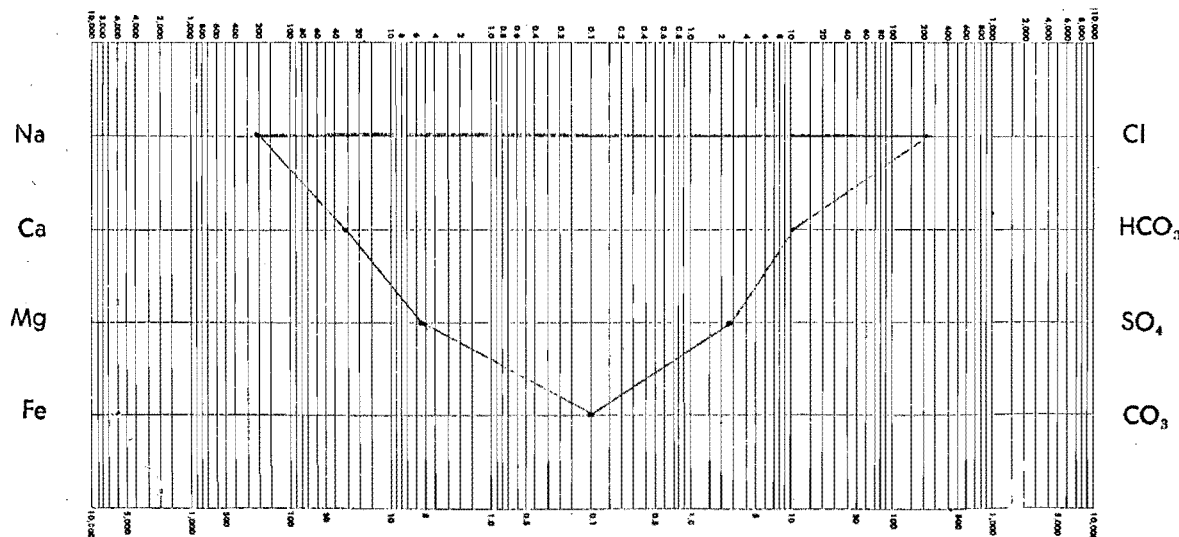
OTHER PERTINENT DATA "Whitecourt Area"

(Signed)

	Na	K	Ca	Mg				SO ₄	Cl			CO ₃	HCO ₃		
Mg./L	5057		639	68				140	8660				630		
Meq./L	219.97		31.89	5.59				2.91	244.21				10.33		
Meq. %	42.72		6.19	1.09				0.57	47.43				2.01		

Total Solids Mg/L: By Evaporation 16,360 Fe Present Specific Gravity 1.012 @60°F Observed pH 6.7 @ 74 °F
 Calculated 15,194 After Ignition 14,332 H₂S Nil Refractive Index 1.3360 @25°C Resistivity 0.508 ohm meters @68 °F

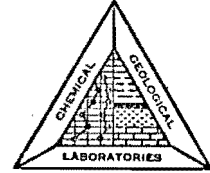
Pattern Unit Meq./L



Remarks and Conclusions

Analysis determined on light greenish coloured water filtered from muddy water.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.



OPERATOR: PAN AMERICAN PETROLEUM CORPORATION

REPORT NUMBER: E69-9471

DATE SAMPLED: March 2, 1969

DATE RECEIVED March 13, 1969

DATE REPORTED March 18, 1969

WELL: Pan Am. Shell Merrill

LOCATION: 60° 19' 30" 124° 26' 00"

FORMATION: Nahanni

YT L-60 60° 19' 30" 124° 26' 00"

FIELD: Yukon

METHOD OF PRODUCTION: D.S.T. #1

INTERVAL: 4989' - 5362'

"Whitecourt Area"

<u>LABORATORY NUMBER</u>	<u>IDENTIFICATION</u>	<u>RESISTIVITY (OHM-METERS @ 68°F.)</u>	<u>REMARKS & CONCLUSIONS</u>
E69-9471-1:	Drill fluid	1.74	Water filtered from mud.
E69-9471-2:	Top sample	0.896	Water filtered from watery mud.
E69-9471-3:	Middle sample	0.515	Water with some black sediment present.

Merril L-60

**THIN SECTION STUDY
NAHANNI FORMATION
KOTANEELEE AREA**

*Report in
Liard M-25 file*

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Ian Hunter Consulting Ltd.**

January, 2001