



DOWELL SCHLUMBERGER  
CANADA

Laboratory report

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## SOLUBILITY REPORT

**CHEVRON CANADA RESOURCES LTD.**

**THREE WELLS FROM EACH:  
DALY FIELD;  
NORTH VIRDEN STALLION UNIT;  
ROSELEA FIELD; AND,  
ROUTLEDGE FIELD**

**MISSISSIPPIAN FORMATION**

**ART UNGER, ESTEVAN  
TECHNICAL REPRESENTATIVE**

**HARLEY FEAR  
LABORATORY REPRESENTATIVE**

**CALGARY LABORATORY  
C.L. NO.: 86-138**

**MARCH 13, 1986**



SOLUBILITY REPORT  
FOR  
CHEVRON CANADA RESOURCES LTD.

WELL DATA

THREE WELLS FROM EACH:  
DALY FIELD, NORTH VIRDEN STALLION UNIT; ROSELEA FIELD; AND,  
ROUTLEDGE FIELD.  
FORMATION: MISSISSIPPIAN

B.H.S.T. 32°C

INFORMATION REQUIRED

Solubility tests from samples from twelve different wells.  
Scanning Electron Microscope Analysis.

TYPE OF SAMPLE SUBMITTED

<u>Well Name</u>	<u>Locations</u>	<u>Depth</u>
Cal Stan Daly	11-12-10-28-W1M	2324.5 metres
Canadian Superior Haskett	15-2-10-28-W1M	2306.5 metres
Cal Stan Daly	15-13-10-28-W1M	2394.5 metres
Cal Stan Stallion	4-27-11-26-W1M	2037.5 metres
Canadian Devonian Hepburn	15-23-10-26-W1M	2013.0 metres
Cal Stan Stallion	16-15-11-26-W1M	2041.5 metres
Canadian Prospects Roselea	10-30-10-25-W1M	1904.0 metres
Canadian Prospect Roselea	1-30-10-25-W1M	1784.5 metres
Cal Stan South Virden Prov.	4-11-10-26-W1M	2031.0 metres
Halliburton Vanderschaeghe	13-17-9-25-W1M	2110.5 metres
Cal Stan Routledge	16-21-9-25-W1M	2072.5 metres
Cal Stan Routledge	12-22-9-25-W1M	2068.0 metres

SOLUBILITY REPORT  
RESULTS

SOLUBILITY TESTS

A portion of each sample was ground up into a fine powder, weighed and placed in 15% HCl. These solutions were then placed in a 66°C hot bath for one hour, after which time they were filtered, dried, re-weighed and the solubilities calculated.

<u>Well Location</u>	<u>Solubility in 15% HCl</u>
11-12-10-28-W1M	97%
15-2-10-28-W1M	71%
15-13-10-28-W1M	95%
4-27-11-26-W1M	100%
15-23-10-26-W1M	92%
16-15-11-26-W1M	97%
10-30-10-25-W1M	99%
1-30-10-25-W1M	99%
4-11-10-26-W1M	99%
13-17-9-25-W1M	97%
16-21-9-25-W1M	99%
12-22-9-25-W1M	100%

SCANNING ELECTRON MICROSCOPE AND ENERGY DISPERSIVE X-RAY ANALYSIS

In these analyses, small core chips were placed in the SEM chamber and visual examination under high magnification (220 times up to 231 times) was conducted. In conjunction with this, the core chips were subjected to an electron beam (EDX), which produced X-rays which were analyzed to give a semi-quantitative elemental analysis.

SOLUBILITY REPORT  
RESULTS

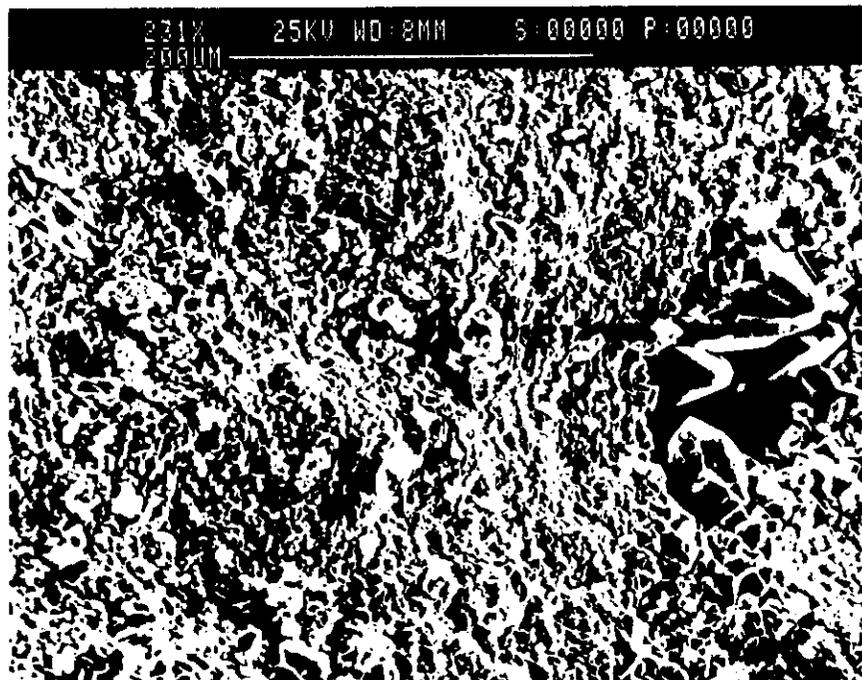


Figure	1
Formation	Mississippian
Depth	2041.5 metres
Magnification	231X
Stub No.	86-17
Location:	16-15-11-26-W1M

This photomicrograph shows well developed Calcite cubes as well as larger Calcite cubes surrounding a pore throat. EDX Analysis gave Ca as the major element present. A small amount of Si was also detected, from chert nodules. The bar at the top measures 200 microns long.

SOLUBILITY REPORT  
RESULTS

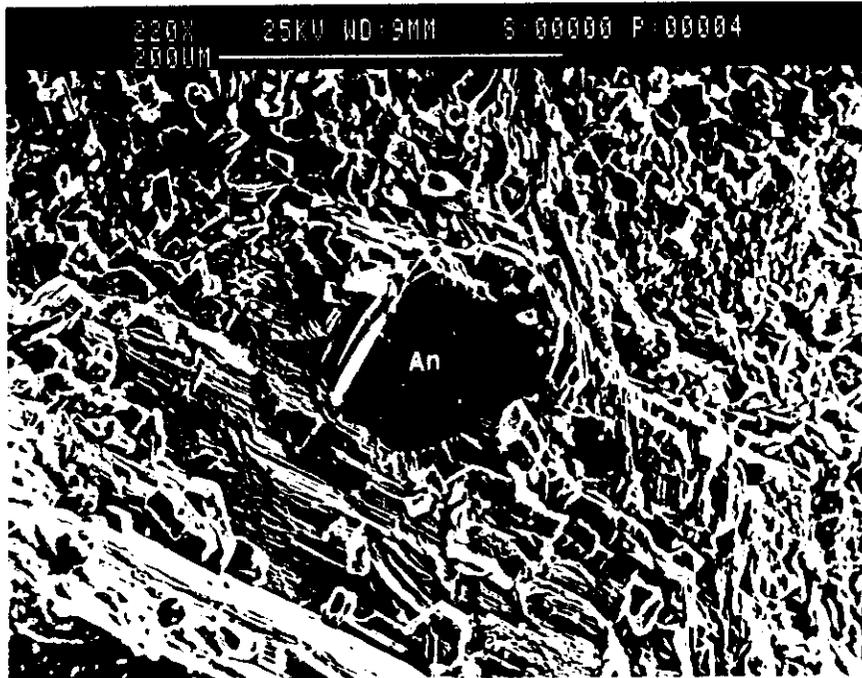


Figure	2
Formation	Mississippian
Depth	2306 metres
Magnification	220X
Stub No.	86-18
Location:	15-2-10-28-W1M

This photomicrograph shows well developed Calcite (Ca) and massive, blocky Anhydrite (An). EDX Analysis gave Ca and S as the major elements present. The bar at the top measures 200 microns long.

HARLEY FEAR  
Telephone No.: (403) 250-7891  
cc: Al McCallum, Calgary, Alberta  
Julie Ferriman, Tulsa, Oklahoma