



**COMPOSITION OF A SCALE SAMPLE
FROM TARDRUM-1**

for

SAMSON INTERNATIONAL (AUSTRALIA) PTY LTD

by

ACS LABORATORIES PTY LTD



15 October, 2003

Samson International (Australia) Pty Ltd
Level 24, AMP Place
10 Eagle Street
BRISBANE QLD 4000

Attention: Cam Rathie / Bob Merrill

FINAL REPORT: 0471-01 – TARDRUM-1 SCALE SAMPLE

MATERIAL: One scale sample
LOCALITY: Tardrum-1
WORK REQUIRED: Compositional analysis by EDS and XRD

Please direct technical enquiries regarding this work to the signatory below under whose supervision the work was carried out.

NICK COX
pVT Laboratory Manager

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Head Office:	8 Cox Road, Windsor Qld 4030, Australia ☎: 61 7 3357 1133 Facsimile: 61 7 3357 1100 E-mail: acs.bris@acslabs.com.au	ACS Laboratories Pty Ltd ABN: 81 008 273 005
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A report prepared for

SAMSON INTERNATIONAL (AUSTRALIA) PTY LTD

by

JULIAN C. BAKER Ph.D.

October 2003

1. INTRODUCTION

Scale flakes from Tardrum-1 were analysed using energy dispersive spectroscopy (EDS) and X-ray diffractometry (XRD) in order to provide information on elemental and mineral composition.

2. RESULTS

EDS analyses for clean surfaces of several scale flakes indicate the presence of calcium, carbon and oxygen.

EDS analyses for scattered fine particles that are adhered to flake surfaces indicate the presence of potassium and chlorine.

Bulk XRD analysis indicates that the sample consists of major calcite (CaCO_3) and very minor sylvite (KCl) (Appendix 1).

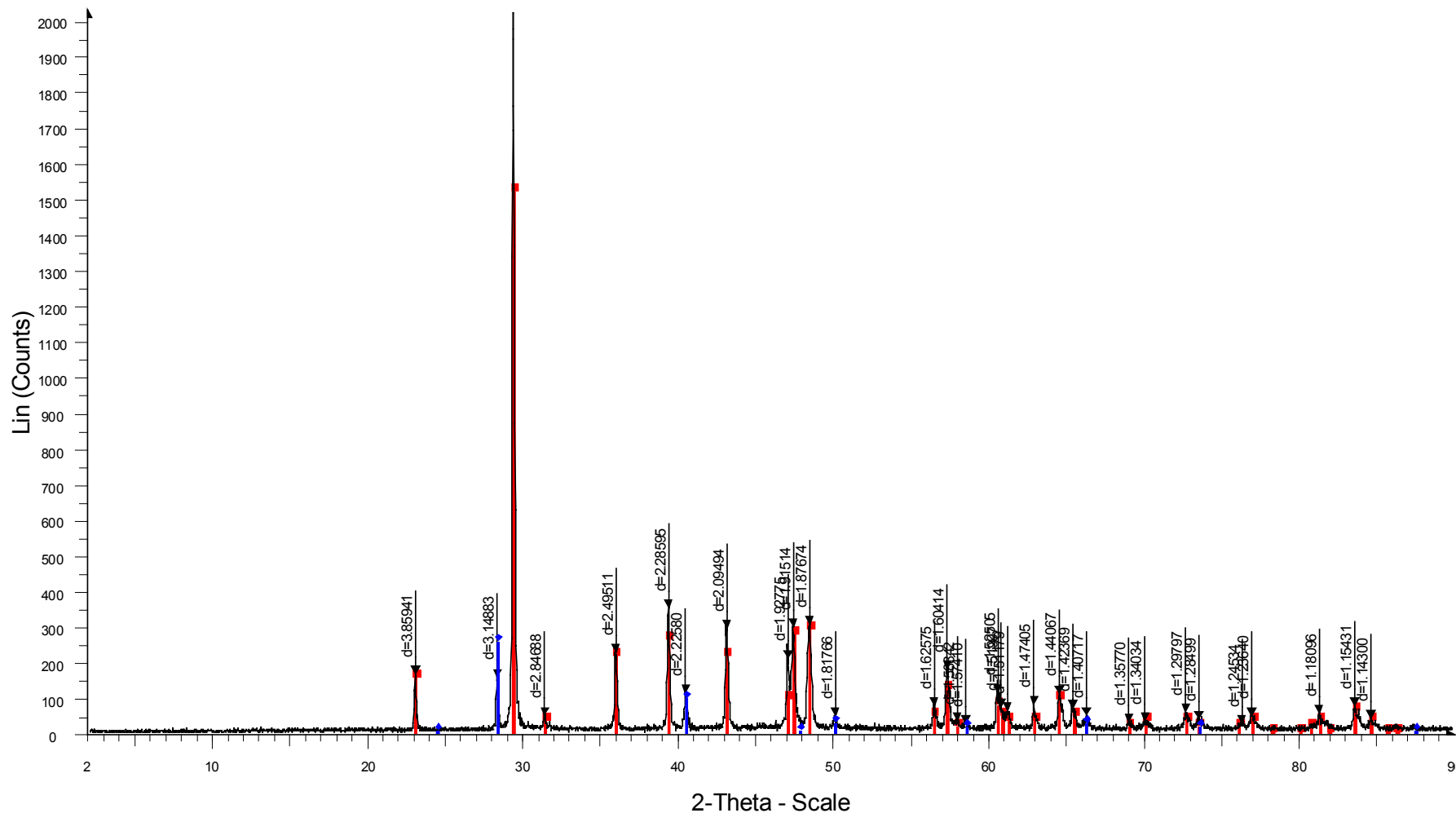
3. CONCLUSIONS

Scale consists of calcite. Fine sylvite particles are attached to flake surfaces.

APPENDIX 1

XRD TRACE

Tardrum-1 Scale 29/8/03



Tardrum-1 Scale 29/8/03 - File: scale.raw - Type: 2Th/Th locked - Start: 2.000 ° - End: 90.000 ° - Step: 0.020 ° - Step time: 1.1 s - Temp.: 27 °C - Time Started: 15 s - 2-Theta: 2.000 ° - Theta: 1.000 ° - Chi: 0.00 ° - Phi: 0
 Operations: Import
 81-2027 (C) - Calcite, syn - Ca(CO₃) - Y: 75.00 % - d x by: 1. - WL: 1.5406 - Rhombohedral - I/lc PDF 3.2 -
 41-1476 (*) - Sylvite, syn - KCl - Y: 12.50 % - d x by: 1. - WL: 1.5406 - Cubic -