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**MICROFILMED**

MEMORANDUM REPORT ON ASSAYS OF

SELECTED MATERIAL FROM

OLD MINE DUMPS, DUNDAS

TASMANIA

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GEOPHOTO RESOURCES CONSULTANTS,

BRISBANE, QUEENSLAND, AUSTRALIA

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INTRODUCTION

From some two hundred specimens of "ore" and "gangue" from old mine dumps in the Dundas area, six different materials were selected for assay. This work was done by the Registered Sydney Laboratories of Cargo Superintendents Co. (A/asia) Pty. Ltd.

THE SAMPLES

Assays were made on materials of immediate interest to our proposed geophysical surveys. Especially sought was the measure of silver content in these materials -

- D1            Massive, galena-sphalerite ore Kosminsky Mine.
- D2            Galena ore - Adelaide Mine Area.
- D3            Disseminated mixed sulphide ore - Adelaide Mine Area.
- D4            Carbonate "gangue", West Comet Mine.
- D5            Massive galena-sphalerite ore, Maestries Mine.
- D6            Massive galena "ore", South Comet Mine.

RESULTS

Analytical results are appended. Dissatisfaction with some aspects of the analytical results resulted in the Analysts repeating the assays.

This resulted in significant revision for figures for Silver and Lead, but comparable results for Cu and Zn compared with results submitted for the first analysis.

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The original and second certificates are appended hereto.

They confirm that significant silver values occur in the mixed sulphide ores of the Dundas field.

RECOMMENDATIONS

Further assays (rather than analysis by rapid methods) is suggested for other "ores" samples notably from the West Comet area. Care should be exercised in selecting an analyst whose methods are adequate and whose results are reproducible.

J.H. RATTIGAN.

SUMMARY OF WET METHODS EMPLOYED BY  
CARGO SUPERINTENDENTS CO. (A/SIA) PTY. LTD.  
SYDNEY LABORATORY

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- LEAD : Sample taken into solution with HCl - HNO<sub>3</sub> and fumed with H<sub>2</sub>SO<sub>4</sub>, soluble salts taken up in H<sub>2</sub>O and filtered, insoluble salts washed and retained, filtrate reserved for copper determination. Residue treated with lead leach solution (ammonium acetate and acetic acid) heated to solution, filtered through No.40 paper. Lead acetate diluted to 400 ml, heated to boiling point and lead precipitated with 15 ml 3% H<sub>2</sub>O<sub>2</sub> and 45 ml ammonium dichromate (saturated), boiled for 15 mins, allowed to settle 1 hr and filtered through tared Koenig crucible type LA2 medium. Precipitate washed and dried at 110°C to constant weight.
- COPPER : Filtrate from lead diluted to 500 ml. boiled and 10 ml 50% Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> added and boiled 10 mins to precipitate, filtered and washed with H<sub>2</sub>S wash solution, precipitate dried, ignited at 520°C until carbon destroyed. Cooled, transferred to beaker with 5 ml. HNO<sub>3</sub> (3:5), crucible residues washed into beaker. Evaporate to 2-3 ml, cool, add 30 ml H<sub>2</sub>O then 1 gm NaF to prevent ferric iron interference. Neutralise with NH<sub>4</sub>OH, cool to room temperature acidify with acetic acid plus 1 ml excess. Add 3/4 gm KI in water and titrate with standard Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> (1 ml = 0.001 gm Cu) using starch indicator.
- ZINC : Sample dissolved in HCl (conc) and 5 ml HNO<sub>3</sub> (conc) added plus 5 drops HF. when solution complete, salts taken up in 10 ml HCl and diluted to 100 ml. with water and filtered. Transfer cooled solution to 500 ml separating funnel, adjust volume to 250 ml. add 30 ml KCNS solution and mix, add 50 ml MIBK and shake for 1 min, allow to settle. Draw off aqueous layer and extract again with MIBK, combine MIBK fractions. Add 100 ml ammonium thiocyanate wash solution 15 ml NH<sub>4</sub>F solution and shake. Allow the phases to separate, draw off aqueous layer and discard. To the organic fraction add 40 ml buffer solution pH10 and shake to strip zinc from organic phase. Add 60 ml H<sub>2</sub>O and shake, allow to separate. Draw off lower ammoniacal layer, filter if necessary, dilute to 300 ml, add 20 ml KCN and 5 drops Eriochrome Black-T indicator, stir, add small quantities of formaldehyde to demask zinc until colour changes to red, add 1 - 1 1/2 ml excess and titrate with EDTA to blue end point. Continue adding small portions of formaldehyde to ensure all zinc has been released.

Telegrams and Cables:

"Visor", Sydney

Telephones: 27 4588  
27 4589  
27 9263**CARGO  
SUPERINTENDENTS**

CO. (A/SIA.) PTY. LTD.

Scottish House,  
19 BRIDGE ST.,  
SYDNEY, 2000**Certification**

K 2425

**This is to Certify** that we did analyse the undermentioned:**APPLICANT:** Geophoto Resources Consultants  
30 Herschel Street,  
BRISBANE.....QUEENSLAND 4000**SUBJECT:** SIX (6) ORE SAMPLES received in our Registered  
Laboratory on 23. 10. 1968 for the purpose of  
analysing.**ANALYSIS:** Tested by conventional wet methods and fire assay**FINDINGS:** Results of our determinations are as under:

REFERENCE	CU		Pb		Zn	
	AS REPORT 31.10.68	CHECKS	AS REPORT 31.10.68	CHECKS	AS REPORT 31.10.68	CHECKS
D1	0.16%	0.19%	0.19%	2.2%	44.8%	42.9%
D2	100 ppm	110 ppm	9.6 %	(8.5%) (8.7%)	0.42%	0.43%
D3	480 ppm	460 ppm	0.11%	(2.4%) (2.4%)	2.2%	1.9 %
D4	0.12%	0.11%	0.30%	(2.8%) (2.9%)	0.15%	0.14%
D5	0.14%	0.13%	15.2 %	(20.9%) (19.9%)	9.3 %	8.8 %
D6	350 ppm	335 ppm	60.5 %	(55.0%) (54.2%)	9.9 %	9.7 %

REFERENCE	Ag	CHECKS
	AS REPORT 31.10.1968	
D1	11.2 ozs/ton	13.5 ozs/ton
D2	3.0 ozs/ton	3.3 ozs/ton
D3	1.8 ozs/ton	1.9 ozs/ton
D4	6.1 ozs/ton	6.6 ozs/ton
D5	10.1 ozs/ton	11.7 ozs/ton
D6	20.4 ozs/ton	(48.5 ozs/ton) (47.9 ozs/ton)

**REMARKS:**

Please refer to our letter of 4. 12. 1968. As reported therein close duplication has been obtained with all Cu & Zn figures. Our Ag figure (D6) as originally reported was seriously in error, apparently as a result of a calculation error. Similarly all of the low Pb results (D1,D3,D4) were wrongly reported as a result of calculation errors.

For  
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This Laboratory is Registered by the National Association of Testing Authorities, Australia. The tests reported herein have been performed in accordance with its terms of registration.

*Keane*  
Chief Chemist

SYDNEY : 6th December 1968

Telegrams and Cables:

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SYDNEY, 2000

Ref: D1 - D6

44 Balaclava Street,  
WOOLLOONGABBA. Bn.**Certification****This is to Certify** that we did analyse the undermentioned:APPLICANT: Geophoto Resources Consultants.SAMPLE: Six Ore Samples numbered D1 - D6, received in our Registered Laboratory on 21st October, 1968, for analysis.METHODS: Chemical analysis carried out in accordance with Standard Approved Methods.

<u>RESULTS:</u>	<u>Sample No.</u>	<u>Copper (Cu)</u>	<u>Lead (Pb)</u>	<u>Zinc (Zn)</u>	<u>Silver (Ag)</u>
	D1	0.16%	0.19%	<u>44.8%</u>	11.2 oz per ton
	D2	100 ppm	9.6%	0.42%	3.0 oz per ton
	D3	480 ppm	0.11%	2.2%	1.8 oz per ton
	D4	0.12%	0.30%	0.15%	6.1 oz per ton
	D5	0.14%	15.2%	<u>9.3%</u>	<u>10.1</u> oz per ton
	D6	350 ppm	60.5%	<u>9.9%</u>	20.4 oz per ton

BRISBANE  
31st October, 1968.For  
CARGO SUPERINTENDENTS CO. (A/SIA.) PTY. LTD.*[Signature]*  
Chief Chemist

31 OCT 1968

A.R.A.C.I.

