803/64

APPENDIX 1(a)

PETROGRAPHIC REPORT ON ROCKS

FROM

MITCHELL-SULPHURETS CREEK AREA

BY

J.H. MONTGOMERY Ph.D., P.Eng.,

JUNE 15, 1975

PETROGRAPHIC REPORT
ON ROCKS FROM
MITCHELL - SULPHURETS
CREEKS AREA

J. H. Montgomery, Ph.D., P. Eng.
June 15, 1975

SPECIMEN 32

ROCK TYPE: Albite Porphyry (trachyte)

MACROSCOPIC DESCRIPTION:

The rock is holocrystalline and porphyritic. It is composed mainly of light, greenish-grey feldspar (medium-grained; 2-5 mm.) with small aggregates of epidote and chlorite (plus sericite). Small grains of pyrite mantled with hematite are disseminated throughout the rock. A trace of chalcopyrite and malachite is present.

MICROSCOPIC DESCRIPTION:

Major Minerals

1. ALBITE- Subhedral to euhedral phenocrysts, slightly sericitized and carbonatized.
2. K-feldspar- Euhedral to subhedral phenocrysts; slight clay alteration.
3. MATRIX- Fine-grained intergrowth of albite and K-feldspar.

ACCESSORY MINERALS

1. PYRITE- Euhedral to subhedral grains of pyrite mantled with hematite. In some cases, better described as hematite with remnant cores of pyrite.
2. APATITE- A few small, euhedral crystals.
3. PSEUDOMORPHS- A number of subhedral pseudomorphs resembling amphibole crystals have been completely replaced by aggregates of chlorite and carbonate ($\pm$ epidote).

ALTERATION

Albite is slightly sericitized and carbonatized. Epidote occurs throughout the rock, appearing to have formed at the expense of plagioclase both in phenocrysts and matrix. It occurs as anhedral crystal aggregates with chlorite and carbonate.

Mineralization consists of finely desseminated pyrite mantled with hematite and a trace of chalcopyrite with malachite.

SPECIMEN 370

ROCK TYPE: Albite porphyry (trachyte)

MACROSCOPIC DESCRIPTION:

The rock is holocrystalline and porphyritic. It is composed of white phenocrysts of feldspar (medium-grained, 4-6 mm.) in a pale grey matrix. Fine carbonate-filled fractures.

MICROSCOPIC DESCRIPTION:

Major Minerals

1. ALBITE- Subhedral to euhedral phenocrysts; some crystals show antiperthitic texture, as a result of replacement by K-feldspar. Slight sericitization and carbonatization.
2. PSEUDOMORPHS- Elongate, anhedral pseudomorphs composed of aggregates of carbonate, chlorite, leucoxene and sericite. Probably originally amphibole.
3. MATRIX- A fine-grained intergrowth of albite and K-feldspar. Finely disseminated patches of white opaque material are present throughout the rock. (probably leucoxene) Patches of very fine ilmenite or titaniferous magnetite are associated with some of the patches.

ACCESSORY MINERALS

1. APATITE- Very fine, euhedral crystals.

ALTERATION

Albite is slightly sericitized and carbonatized. The feldspathic matrix is also slightly sericitized and carbonatized. Patches of

leucoxene occuring throughout the matrix are probably altered ilmenite or titaniferous magnetite. Mafic minerals have been completely replaced by carbonate, chlorite, sericite and leucoxene.

Veinlets of chlorite-leucoxene and chlorite-sericite-carbonate traverse the rock.

SPECIMEN 135

ROCK TYPE: Albite Porphyry (Trachyte)

MACROSCOPIC DESCRIPTION:

The rock is holocrystalline and porphyritic. It is composed mainly of greenish-white feldspar phenocrysts and a greenish-grey matrix. Small aggregates of chlorite occur throughout the rock. Many fine fractures are present and small, euhedral crystals of pyrite are disseminated throughout the rock.

MICROSCOPIC DESCRIPTION:

Major Minerals

1. ALBITE- Euhedral to subhedral phenocrysts; major replacement by sericite.
2. K-feldspar- Anhedral crystals of relatively unaltered feldspar.
3. MATRIX- Fine-grained intergrowth of albite and K-feldspar.

ACCESSORY MINERALS

1. PSEUDOMORPHS- Irregular patches containing aggregates of chlorite, sericite are probably pseudomorphic after amphibole.
2. APATITE- Small, euhedral crystals.

ALTERATION

The rock has undergone moderately intense alteration. Plagioclase has been strongly sericitized, the mafics have been replaced by chlorite and sericite, and the matrix has been partly altered to chlorite and sericite. The rock is tranversed by a network of small fractures containing sericite, quartz and pyrite. Considerable amounts of fine-grained, euhedral to subhedral pyrite are also disseminated throughout the rock.

SPECIMEN 142

ROCK TYPE: Albite Porphyry (Trachyte)

MACROSCOPIC DESCRIPTION:

The rock is holocrystalline and porphyritic. The rock is composed mainly of pink and pale green feldspar phenocrysts in a pale green matrix containing irregular aggregates of chlorite. Traces of fine pyrite are disseminated throughout the rock.

MICROSCOPIC DESCRIPTION:

Major Minerals

1. K-feldspar- Euhedral crystals of relatively unaltered feldspar; contains finely disseminated hematite; microperthite texture due to exsolved albite.
2. ALBITE- Euhedral to subhedral phenocrysts; moderate sericitization and some replacement by carbonate.
3. MATRIX- Fine-grained intergrowth of albite, K-feldspar, quartz, carbonate, chlorite and leucoxene.

ACCESSORY MINERALS

1. PSEUDOMORPHS- Elongate anhedral to subhedral aggregates of chlorite, leucoxene and carbonate.
2. MAGNETITE- Small, euhedral crystals.
3. SPHENE- Small, euhedral crystals disseminated throughout rock; some are mantled with hematite and are closely associated with chlorite.

ALTERATION

Plagioclase has undergone moderate sericitization and carbon-

atization. K-feldspar (microperthite) is slightly hematitized. Mafic minerals (probably amphibole) have been completely pseudomorphed by chlorite, carbonate and leucoxene.

The matrix has been silicified, chloritized and carbonatized. Fine-grained pyrite is present throughout the rock. Both pyrite and magnetite have hematitized rims.

SPECIMEN 554

ROCK TYPE: Granite Porphyry

MACROSCOPIC DESCRIPTION:

The rock is holocrystalline and porphyritic. It is composed mainly of pink and white feldspar and quartz. The feldspars commonly show color zoning with pink cores or rims. A little pyrite and chalcopyrite with chalcocite are present. Malachite also observed.

MICROSCOPIC DESCRIPTION:

Major Minerals

1. MICROPERTHITE- Coarse phenocrysts of microperthite with exsolved albite; some Carlsbad twinning.
2. QUARTZ- Anhedral grains of quartz are interstitial to the microperthite.

ACCESSORY MINERALS

1. APATITE- Small, euhedral crystals.
2. MAGNETITE- Irregular patches commonly associated with chlorite and leucoxene, may be replacing previous mineral.
3. PLAGIOCLASE- A little subhedral plagioclase (probably albite) occures with quartz interstitial to K-feldspar.

ALTERATION

The microperthite is slightly hematitized. The somewhat cloudy crystals may also have incipient clay alteration. Magnetite and chlorite appear to be a replacement of some previous unknown mineral. Mineralization consists of trace amounts of chalcopyrite mantled with iron oxides and closely associated with chalcocite?

SPECIMEN 539

ROCK TYPE: Arkosic siltstone

MACROSCOPIC DESCRIPTION:

The rock is grey and buff, fine-grained and traversed by at least two ages of fractures. Alteration has obliterated the original texture. Pyrite and chalcopyrite are finely disseminated throughout rock and in fractures.

MICROSCOPIC DESCRIPTION:

Major Minerals

Fragments- Subangular fragments of quartz, albite and possibly K-feldspar. The boundaries are, in some cases, outlined by thin bands of matrix and in other cases are sutured possibly by recrystallization of quartz.

2. MATRIX- Is almost entirely fine-grained sericite with some iron oxide. The matrix constitutes about 15% of the rock.

ACCESSORY MINERALS

1. CARBONATE- Mainly irregular patches throughout rock but also in veinlets. Rhoubic shape of some crystals indicative of dolomite.

2. PYRITE- Subhedral to anhedral grains disseminated throughout rock and in fractures.

3. CHALCOPYRITE- Fine, anhedral grains with pyrite.

ALTERATION

The rocks have undergone at least two periods of fracturing and hydrothermal alteration. The first consisted of carbonate veining, the second mainly of quartz. Mineralization by sulfides appears to have been associated with both.

Some recrystallization of quartz fragments appears to have occurred and the matrix has been reconstituted to sericite. Some carbonatization of the rock has also taken place.

SPECIMEN 480

ROCK TYPE: Arkosic Siltstone (brecciated)

MACROSCOPIC DESCRIPTION:

The rock is fine-grained and equigranular. It is pink and green and contains abundant red iron oxides. One end of the rock specimen is green due tothe presence of large amounts of chlorite and appears to be strongly brecciated. Pyrite and chalcopyrite are disseminated throughout.

MICROSCOPIC DESCRIPTION:

Major Minerals

1. FRAGMENTS- Subangular fragments of quartz and albite (and possibly K-feldspar). Grain boundaries are, in some cases outlined by thin layers of chlorite and sericite. In other instances, the grain boundaries are sutured possibly as a result of partial recrystallization.
2. MATRIX- Composed of chlorite and sericite with some iron oxide. It constitutes about 15% of the rock.

ACCESSORY MINERALS

1. MAGNETITE- Occurs with chlorite in fractures and aggregates.
2. APATITE- A few euhedral to subhedral crystals.
3. PYRITE- Euhedral to subhedral crystals in fractures and also disseminated.
4. CHALCOPYRITE- A little anhedral chalcopyrite with pyrite.

ALTERATION

The original rock has been strongly brecciated and chloritized. Mineralization consists of pyrite and chalcopyrite in fractures and disseminations. Carbonatization accompanied mineralization.

SPECIMEN 105

ROCK TYPE: Arkosic Siltstone

MACROSCOPIC DESCRIPTION:

The rock is very fine-grained and pale greenish-grey. It is traversed by pyrite veinlets and a complex network of carbonate veins. A little chalcopyrite occurs with pyrite.

MICROSCOPIC DESCRIPTION:

Major Minerals

1. QUARTZ- Very fine sub-angular fragments.
2. ALBITE- Very fine sub-angular fragments with quartz.

ACCESSORY MINERALS

1. SERICITE - Fine-grained white mica oriented sub-parallel to a plane.
2. CARBONATE- Occurs in small, irregular patches throughout the rock.
3. PYRITE- Euhedral to anhedral grains disseminated and in fractures.
4. CHALCOPYRITE- A little anhedral chilcopyrite occurs with pyrite.
5. LEUCOXENE- Very small anhedral grains scattered throughout rock.

ALTERATION

Intensive fracturing followed by mineralization of fractures and adjacent wall rock with pyrite, chalcopyrite and abundant carbonate. A number of veinlets show cross-cutting relationships indicating several periods of fracturing and carbonate veining.

SPECIMEN 83

ROCK TYPE: Arkosic Siltstone

MACROSCOPIC DESCRIPTION:

The rock is fine-grained and pale greenish-grey. It is traversed by a complex network of fractures which contain carbonate, quartz, pyrite and/or chlorite. Pyrite also occurs disseminated throughout the rock. Traces of chalcopyrite and malachite are also associated with pyrite. A few coarse fragments of pink feldspar are present.

MICROSCOPIC DESCRIPTION

Major Minerals

1. ALBITE- Very fine, subangular particles.
2. QUARTZ- Very fine, subangular particles.

ACCESSORY MINERALS

1. CHLORITE- occurs as irregular patches throughout the rock and in fractures with pyrite, quartz and magnetite.
2. APATITE- Small subhedral crystals
3. PYRITE- Anhedral to euhedral grains in fractures and disseminated throughout the rock.
4. LEUCOXENE- Small irregular patches throughout the rock.
5. CARBONATE- Disseminated throughout the rock and in fractures.
6. MAGNETITE- A few subhedral grains associated with pyrite in veins.

ALTERATION

The original rock has been thoroughly fractured and moderately altered. The quart-feldspar fragments appear to have been partly re-

crystallized, chloritized and carbonatized. A few of the coarser grains of albite show chlorite replacement along twin planes.

Mineralization consists of pyrite with traces of chalcopyrite and magnetite. Some of the chalcopyrite has been altered to malachite.

Veinlets or fracture-fillings are of several types. Carbonate-quartz, chlorite-pyrite, sericite and quartz-pyrite (hematite)-magnetite-chlorite.

SPECIMEN 428

ROCK TYPE: Arkosic Siltstone

MACROSCOPIC DESCRIPTION:

The rock is very fine-grained and is light greenish-white. Most of the exposed surfaces are limonite-coated fractures with traces of pyrite. Some coarse, angular fragments (green) contain abundant disseminated pyrite.

MICROSCOPIC DESCRIPTION:

Major Minerals

The rock is composed of very fine angular fragments of quartz and feldspar in a matrix of chlorite and sericite. Abundant white opaque material is disseminated throughout the rock.

ACCESSORY MINERALS

Euhedral pyrite is present in fractures and disseminated within coarse fragments composed of fine angular particles of quartz and feldspar. The particles in these coarse fragments are less fine-grained than those in the rest of the rock and chlorite and sericite is also coarser and more abundant.

ALTERATION

Sericitization, silicification and chloritization of the rock matrix have taken place. Veinlets of chlorite-quartz-iron oxide and quartz are present. The latter quartz veinlets are earlier.

SPECIMEN 9

ROCK TYPE: Greywacke

MACROSCOPIC DESCRIPTION:

The rock is fine-grained and light grey. Fine pyrite is abundant, both in fractures with quartz and disseminated throughout the rock. The rock is composed mainly of fine angular particles which have a rough sub-parallel orientation.

MICROSCOPIC DESCRIPTION:

Major Minerals

The rock is composed mainly of a very fine-grained matrix composed of an intergrowth of sericite and chlorite. Angular particles of quartz and others of feldspar, which have been completely replaced by sericite are present.

Veinlets of quartz-pyrite and sericite cut the rock. The latter are later.

Subhedral to euhedral pyrite is distributed abundantly throughout the rock in fractures and in streaks and patches which are subparallel to the particle orientation.

ALTERATION

The original rock has undergone intense sericitization, silicification, and pyritization.

SPECIMEN 59

ROCK TYPE: Albite Porphyry (trachyte)

MACROSCOPIC DESCRIPTION:

The rock is fine-grained and light grey. Fine pyrite is abundant and is contained both in fractures and disseminated throughout the rock. No structure is apparent in hand specimen.

MICROSCOPIC DESCRIPTION

Major Minerals

1. ALBITE- Subhedral to euhedral phenocrysts, strongly sericitized.
2. MATRIX- Very fine-grained feldspathic in teyrowth.

ACCESSORY MINERALS

1. PYRITE- Euhedral pyrite is disseminated throughout the rock and also occurs in veinlets with quartz and sericite.
2. LEUCOXENE- A few irregular patches are present.
3. QUARTZ- Occurs in patches or aggregates of grains and also in veinlets.
4. SERICITE- Occurs in veinlets and in abundance as an alteration product of plagioclase phenocrysts and feldspathic matrix.
5. APATITE- A few small subhedral to euhedral crystals.

ALTERATION

Albite is moderately sericitized. The matrix is more strongly replaced by sericite and pyrite.

SPECIMEN 54

ROCK TYPE: Arkosic Sandstone

MACROSCOPIC DESCRIPTION:

The rock is fine-grained and very pale grey. Fine pyrite is disseminated sparsely throughout the rock. No structure is apparent in hand specimen.

MICROSCOPIC DESCRIPTION

Major Minerals

The rock is composed mainly of subangular particles of quartz and feldspar (albite) in a matrix of sericite and fine-grained feldspathic material. The quartz fragments have sutured grain boundaries as though partly recrystallized.

ACCESSORY MINERALS

1. PYRITE- Fine pyrite is disseminated throughout the rock.
2. SERICITE- Occurs as a replacement of the albite phenocrysts and of the feldspathic matrix.

ALLTERATION

Sericitization of the albite particles and feldspathic matrix. Pyrite and possibly a trace of chalcocite occur as disseminations.

SPECIMEN 80

ROCK TYPE: Albite Porphyry (Trachyte)

MACROSCOPIC DESCRIPTION:

The rock is light grey, fine-grained and is traversed by numerous rusty fractures filled mainly with quartz and carbonate. Fine-grained pyrite is disseminated throughout the rock with small amounts of chalcopyrite and specular hematite. Some malachite is present in fractures.

MICROSCOPIC DESCRIPTION

Major Minerals

1. ALBITE- subhedral to euhedral phenocrysts, sericitized and carbonatized.
2. K-FELDSPAR- subhedral phenocrysts, some microperthite texture; partly replaced by carbonate.
3. MATRIX- Very fine-grained feldspathic intergrowth.

ACCESSORY MINERALS

1. PYRITE- Euhedral to subhedral crystals are disseminated throughout the rock.
2. APATITE- Very small subhedral crystals.
3. SERICITE- Alteration of feldspar phenocrysts and matrix.
4. QUARTZ-CARBONATE- In numerous veinlets traversing the rock.

ALTERATION

Sericitization and carbonatization of feldspar, both in phenocrysts and matrix, is moderately strong. Quartz-carbonate veining is prevalent. In some cases, quartz appears contemporaneous with carbonate and in others, it appears to be later.

Mineralization consists of disseminated pyrite with minor chalcopyrite (malachite) and specularite.

SPECIMEN 192

ROCK TYPE: Felspathic greywacke

MACROSCOPIC DESCRIPTION:

The rock is fine-grained and pale grey. Small angular fragments are oriented subparallel to a plane. Very fine-grained pyrite is disseminated throughout the rock.

MICROSCOPIC DESCRIPTION

Major Minerals

The rock is composed mainly of subangular particles of quartz and angular particles of feldspar which have been completely replaced by sericite. The sericitic particles show subparallel alignment with each other and also appear to have been stretched in the same direction. The matrix is composed of carbonate, sericite and chlorite and comprises about 50% of the rock.

ACCESSORY MINERALS

1. PYRITE- Euhedral to subhedral grains disseminated throughout the rock.
2. APATITE- Few small crystals.

ALTERATION

Sericitization of feldspar particles and matrix along with carbonatization and chloritization. Mineralization consists of finely disseminated pyrite.

SPECIMEN 312

ROCK TYPE: Arkosic Sandstone

MACROSCOPIC DESCRIPTION:

The rock is pale grey and fine-grained. No structure is evident. Fine-grained pyrite is disseminated throughout the rock.

MICROSCOPIC DESCRIPTION:

Major Minerals

The rock is composed mainly of subangular particles of quartz and feldspar (albite) in a matirx of sericite, carbonate, chlorite and fine-grained feldspathic material.

ACCESSORY MINERALS

1. PYRITE- Fine-grained, euhedral to subhedral pyrite is disseminated throughout the rock.
2. ZIRCON- Small equant grain.
3. SERICITE- Replaces both feldspar particles and metrix with chlorite and carbonate.
4. CARBONATE- in matrix and particles as well as in small veinlets.
5. CHLORITE- In matrix.

ALTERATION

Sericitization of feldspars in particles and matrix. Carbonatization and chloritization of matrix. Mineralization consists of pyrite.

SPECIMEN 566

ROCK TYPE: Arkosie Siltstone

MACROSCOPIC DESCRIPTION:

The rock is dark grey and medium-grained with rusty, siliceous fractures. Pyrite is finely disseminated throughout the rock with minor chalcopyrite and malachite.

MICROSCOPIC DESCRIPTION

Major Minerals

1. FRAGMENTS- The rock is composed mainly of subangular particles of quartz and albite (and possible K-feldspar). Grain boundaries are sutured probably as a result of some recrystallization.
2. MATRIX- Composed of greenish-brown biotite with some iron oxide.

ACCESSORY MINERALS

1. PYRITE- Euhedral to subhedral crystals mantled with hematite.
2. APATITE- Small euhedral to subhedral crystals.

ALTERATION

Biotite grade metamorphism and silicification (quartz veinlets with pyritization).

SPECIMEN 584

ROCK TYPE:

MACROSCOPIC DESCRIPTION:

The rock is pale grey and fine-grained. It is traversed by a network of fine quartz-carbonate veinlets. Pyrite is finely disseminated throughout the rock.

MICROSCOPIC DESCRIPTION

Major Minerals

1. FRAGMENTS- The rock is composed mainly of subangular particles of quartz and albite.
2. MATRIX- Composed of very fine-grained sericite. Irregular patches of carbonate are also present.

ACCESSORY MINERALS

1. PYRITE- Fine euhedral to subhedral grains of pyrite are scattered throughout the rock.
2. ZIRCON- A few equant grains.
3. APATITE- Small subhedral crystals.
4. QUARTZ-CARBONATE- Veinlets.

ALTERATION

Carbonatization and silicification. Mineralization consists of pyrite.

APPENDIX 1(b)

PETROGRAPHIC REPORT ON ROCKS

FROM

MITCHELL-SULPHURETS CREEK AREA

BY

J.H. MONTGOMERY Ph.D., P.Eng.,

MARCH 1976

APPENDIX 2

GEOCHEMICAL ANALYSES - COPPER, MOLYBDENUM, LEAD, SILVER, GOLD

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 36155

TO: Granduc Mines Ltd.
2009 - 1177 W. Hastings
Vancouver, B.C.

INVOICE NO. 15515

RECEIVED Sept.23/75

ATTN: Mr. Erik Ostensoe

ANALYSED Oct.17/75

SAMPLE NO. :	PPM Copper	PPM Molybdenum	PPM Lead	PPM Silver	PPB Gold	ROCKS
607	800	6	16	<0.5	<15	
608	3480	24	17	2.0	<15	
609	1320	34	16	1.0	30	
610	157	<1	20	<0.5	<15	
611	58	<1	8	<0.5	<15	
612	46	<1	14	<0.5	<15	
613	1280	20	16	<0.5	<15	
614	1280	<1	16	<0.5	<15	
615	100	<1	12	<0.5	<15	
616	106	<1	16	<0.5	<15	
617	1520	2	13	<0.5	<15	
618	4000	10	21	3.0	30	
619	920	3	43	2.5	130	
620	540	<1	17	1.5	<15	
621	148	<1	11	<0.5	<15	
622	1080	11	16	1.0	<15	
623	152	3	13	<0.5	<15	
624	920	<1	13	<0.5	<15	
625	1920	33	14	1.0	<15	
626	1240	26	19	0.5	<15	
627	165	<1	16	<0.5	<15	
628	180	<1	8	<0.5	<15	
629	112	<1	5	<0.5	<15	
630	304	18	15	0.5	15	
631	270	2	14	0.5	<15	
632	161	66	12	<0.5	<15	
633	>4000	33	5	1.5	30	
634	>4000	30	14	3.0	250	
635	840	65	8	<0.5	<15	
636	1640	2	11	<0.5	<15	
637	270	4	12	<0.5	<15	
638	241	7	12	<0.5	<15	
639	1160	41	9	0.5	30	
640	1840	70	7	0.5	<15	
641	72	7	19	3.0	<15	
642	670	45	7	<0.5	<15	
643	97	10	10	<0.5	<15	
644	112	13	4	<0.5	<15	
645	97	190	11	<0.5	<15	
646	920	3	14	0.5	<15	
STD.	70	26	58			

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: .....

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TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 36156

INVOICE NO. 15525

RECEIVED Sept.23/75

ANALYSED Oct.20/75

TO: Granduc Mines Ltd.
2009 - 1177 W. Hastings
Vancouver, B.C.

ATTN: Mr. Erik Ostensoe

SAMPLE NO. : ROCKS	PPM Copper	PPM Molybdenum	PPM Lead	PPM Silver	PPB Gold
647	106	3	20	<0.5	80
648	270	<1	10	<0.5	<15
649	587	26	200	1.0	<15
650	379	<1	32	0.5	<15
651	1120	1	27	2.5	<15
652	670	<1	35	1.5	<15
653	170	<1	36	<0.5	<15
654	102	<1	4	<0.5	<15
655	333	1	9	<0.5	<15
656	670	9	9	0.5	<15
657	72	2	5	<0.5	<15
658	587	6	7	0.5	<15
659	1560	2	24	1.0	<15
660	333	<1	11	0.5	<15
661	51	<1	3	<0.5	<15
662	355	19	7	<0.5	<15
663	540	33	6	<0.5	<15
664	222	4	13	<0.5	<15
665	118	<1	7	<0.5	<15
666	500	7	17	0.5	<15
667	1000	<1	13	0.5	<15
668	920	<1	33	<0.5	<15
669	500	<1	20	<0.5	<15
670	2970	2	315	2.5	<15
671	118	<1	66	0.5	<15
672	165	10	170	8.5	<15
673	122	158	155	1.5	<15
674	98	24	22	<0.5	<15
675	2160	62	27	2.0	<15
676	800	145	43	16	<15
677	78	67	32	<0.5	<15
678	255	9	13	<0.5	<15
679	313	5	14	<0.5	<15
680	40	<1	10	<0.5	<15
681	465	1	11	<0.5	<15
682	880	12	25	<0.5	<15
683	344	11	9	<0.5	<15
684	700	6	16	<0.5	<15
685	1280	8	17	2.0	80
686	286	<1	6	<0.5	<15
STD.	70	25	59		

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Ken Arnaeini

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 36157
INVOICE NO. 15525
RECEIVED Sept.23/75
ANALYSED Oct.20/75

TO: Granduc Mines Ltd.
2009 - 1177 W. Hastings
Vancouver, B.C.

ATTN: Mr. Erik Ostensoe

SAMPLE NO. :	ROCKS	PPM Copper	PPM Molybdenum	PPM Lead	PPM Silver	PPB Gold
687		209	4	15	1.0	30
688		304	16	14	<0.5	<15
689		134	21	16	<0.5	<15
690		96	9	20	<0.5	<15
691		161	3	22	<0.5	<15
692		66	3	23	0.5	<15
693		215	80	4000	11	30
694		700	18	93	2.5	<15
695		920	>500	45	55	<15
696		170	380	13	2.5	<15
697		587	290	20	0.5	<15
698		255	110	52	0.5	<15
699		3480	40	630	12	440
700		800	1	46	1.0	15
701		2710	23	66	1.5	80
702		58	3	16	0.5	<15
703		880	90	183	9.0	<15
704		450	12	18	<0.5	<15
705		235	80	59	9.5	30
706		540	210	30	1.0	50
707		146	95	10	<0.5	<15
708		1920	10	10	0.5	<15
709		1400	5	19	1.5	190
710		1040	97	29	0.5	<15
711		3070	42	33	75	310
712		295	1	11	<0.5	<15
713		>4000	22	80	1.4	15
714		108	12	47	2.0	80
715		1160	14	81	2.0	470
716		>4000	71	440	97	280
717		125	9	22	1.5	<15
718		323	1	12	<0.5	<15
719		1200	105	24	1.5	<15
720		1400	1	920	21	190
721		1160	270	25	1.0	<15
722		640	11	11	2.0	<15
723		2520	32	19	0.5	<15
724		1000	1	12	<0.5	<15
725		262	13	12	<0.5	<15
726		1560	1	15	<0.5	<15
STD.		72	25	58		

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Gen Fraccini

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 36158
INVOICE NO. 15525
RECEIVED Sept.23/75
ANALYSED Oct.20/75

TO: Granduc Mines Ltd.
2009 - 1177 W. Hastings
Vancouver, B.C.

ATTN: Mr. Erik Ostensoe

SAMPLE NO. : ROCKS	PPM Copper	PPM Molybdenum	PPM Lead	PPM Silver	PPB Gold
727	222	<1	5	< 0.5	< 15
728	419	70	58	4.0	< 15
729	56	175	22	< 0.5	< 15
730	157	5	41	3.0	< 15
731	323	<1	18	1.0	160
732	>4000	2	220	3.5	130
733	2080	16	140	2.5	205
734	1360	70	140	2.5	< 15
735	1200	9	42	< 0.5	< 15
736	136	89	58	0.5	< 15
737	98	3	10	2.0	30
738	76	95	17	2.0	< 15
739	2160	8	250	2.0	80
740	2880	4	67	2.0	< 15
741	1720	4	34	< 0.5	235
742	367	<1	23	< 0.5	< 15
743	379	<1	11	< 0.5	< 15
744	840	<1	45	< 0.5	< 15
745	482	2	36	1.5	15
746	1200	13	10	3.5	680
747	1240	10	12	2.5	280
748	1280	9	11	6.5	290
749	1320	4	10	1.5	175
750	3170	25	28	4.0	< 15
751	1520	5	61	2.5	< 15
752	840	1	31	< 0.5	< 15
753	613	<1	5	0.5	205
754	110	340	10	2.5	< 15
755	3460	46	153	2.0	30
756	465	6	46	1.0	< 15
757	960	>500	44	1.0	30
758	295	23	18	1.5	50
759	106	4	14	1.5	30
760	670	78	26	1.5	30
761	540	37	36	1.5	< 15
762	1000	180	20	2.5	350
763	262	8	20	2.5	130
764	920	510	12	2.0	130
765	450	130	18	< 0.5	30
766	482	8	14	< 0.5	< 15
STD.	72	24	58		

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: [signature]

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 36159

INVOICE NO. 15525

RECEIVED Sept.23/75

ANALYSED Oct.20/75

TO: Granduc Mines Ltd.
2009 - 1177 W. Hastings
Vancouver, B.C.

ATTN: Mr. Erik Ostensoe

SAMPLE NO. :	PPM Copper	PPM Molybdenum	PPM Lead	PPM Silver	PPB Gold
767	63	3	28	<0.5	<15
768	235	31	318	1.0	220
769	248	380	32	0.5	190
770	313	8	18	<0.5	<15
771	2360	11	68	1.5	<15
772	2240	15	300	1.5	<15
773	50	58	30	<0.5	<15
774	34	21	10	1.0	50
775	58	58	8	<0.5	<15
776	48	>500	6	1.0	15
777	74	78	28	<0.5	350
778	670	240	14	0.5	350
779	50	78	60	0.5	560
780	50	>500	22	<0.5	375
781	34	80	79	<0.5	30
782	392	176	20	1.5	1150
783	44	80	16	1.0	190
784	1870	25	12	1.0	310
785	76	10	20	1.5	190
786	3370	3	8	1.5	130
787	92	1	12	0.5	80
788	24	27	22	<0.5	<15
789	191	19	119	1.5	145
790	304	15	22	<0.5	80
791	278	2	10	<0.5	30
792	262	1	8	<0.5	<15
793	392	13	16	<0.5	<15
794	640	2	22	0.5	<15
795	1840	7	14	0.5	15
796	800	2	12	0.5	<15
797	840	1	24	0.5	80
798	1200	38	20	0.5	190
799	1560	15	30	2.0	130
800	92	44	36	<0.5	<15
801	128	3	8	<0.5	80
802	2610	1	12	2.5	470
803	222	4	18	1.0	80
804	180	11	14	0.5	160
805	379	115	18	0.5	265
806	60	60	26	0.5	110
STD.	70	25	60		

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Jon Armstrong

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 36299
INVOICE NO. 15583
RECEIVED Oct. 9/75
ANALYSED Oct. 24/75

TO: Granduc Mines Ltd.
2009 - 1177 W. Hastings
Vancouver, B.C.
ATTN: Mr. Erik Ostensoe

SAMPLE NO. : ROCKS	PPM Copper	PPM Molybdenum	PPM Lead	PPM Silver	PPB Gold
807	73	360	74	1.5	280
808	67	146	11	1.0	280
809	56	138	7	3.5	1695
810	26	82	45	1.5	250
811	105	66	20	1.5	235
812	56	66	8	<0.5	30
813	40	1	17	<0.5	< 15
814	78	1	32	<0.5	50
815	22	4	12	<0.5	80
816	23	21	50	<0.5	< 15
817	17	< 1	25	0.5	50
818	15	< 1	14	0.5	30
819	21	< 1	15	<0.5	< 15
820	32	< 1	22	<0.5	< 15
821	100	< 1	22	<0.5	< 15
822	265	23	17	18	< 15
823	370	54	20	0.5	250
824	300	190	56	2.5	760
825	117	130	17	2.0	130
826	213	21	12	1.5	250
827	77	64	27	1.5	130
828	86	19	33	1.5	30
829	620	76	11	1.5	< 15
830	48	82	37	1.5	80
831	97	104	17	1.0	130
832	97	52	7	<0.5	190
833	215	395	9	1.0	160
834	127	164	4	0.5	80
835	143	138	51	1.0	280
836	405	130	14	1.0	310
837	295	46	10	2.0	160
838	335	164	48	8.0	< 15
839	82	6	9	0.5	220
840	265	1	10	<0.5	160
841	2240	3	17	<0.5	< 15
842	57	< 1	43	<0.5	< 15
843	25	< 1	20	<0.5	< 15
844	305	3	14	4.5	220
845	148	< 1	25	<0.5	< 15
846	127	< 1	24	0.5	< 15
STD.	70	26	61		

CERTIFIED BY: [signature]

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 36300

INVOICE NO. 15551

RECEIVED October 9/75

ANALYSED October 21/75

TO: Granduc Mines Ltd.
2009 - 1177 West Hastings St.
Vancouver, B.C.

ATTN:

SAMPLE NO. :	PPM Copper	PPM Molybdenum	PPM Lead	PPM Silver	PPB Gold	(Rock geochems)
847	18	< 1	28	< 0.5	< 15	
848	14	< 1	18	< 0.5	< 15	
849	48	< 1	191	< 0.5	< 15	
850	51	< 1	94	1.0	< 15	
851	52	2	40	0.5	< 15	
852	295	18	48	0.5	< 15	
853	152	88	14	< 0.5	250	
854	66	220	54	< 0.5	80	
855	46	10	32	< 0.5	80	
856	22	< 1	50	< 0.5	< 15	
857	51	2	375	3.0	280	
858	16	< 1	42	< 0.5	< 15	
859	16	< 1	24	< 0.5	50	
860	50	< 1	16	3.0	310	
861	80	5	20	< 0.5	130	
862	26	< 1	32	< 0.5	< 15	
863	161	< 1	30	< 0.5	190	
864	392	< 1	12	< 0.5	< 15	
865	434	< 1	24	< 0.5	220	
866	54	1	24	< 0.5	< 15	
867	63	< 1	26	< 0.5	< 15	
868	10	< 1	16	< 0.5	< 15	
869	112	< 1	18	0.5	< 15	
870	100	1	20	< 0.5	< 15	
871	613	< 1	20	< 0.5	< 15	
872	146	< 1	20	< 0.5	< 15	
873	58	4	12	< 0.5	< 15	
874	120	1	38	1.5	< 15	
875	122	< 1	14	< 0.5	< 15	
876	367	< 1	150	1.5	130	
877	41	< 1	34	1.0	< 15	
878	197	< 1	30	< 0.5	< 15	
879	640	65	8	1.5	130	
880	84	< 1	14	0.5	< 15	
881	120	< 1	12	1.0	< 15	
882	228	< 1	50	0.5	< 15	
883	50	< 1	20	0.5	< 15	
884	22	1	16	< 0.5	< 15	
885	112	< 1	24	< 0.5	< 15	
886	248	< 1	20	< 0.5	< 15	
STD.	70	26	62			

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: [signature]

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 36301

TO: Granduc Mines Ltd.
2009 - 1177 West Hastings St.
Vancouver, B.C.

INVOICE NO. 15551

RECEIVED October 9/75

ATTN:

ANALYSED October 21/75

SAMPLE NO. :	PPM Copper	PPM Molybdenum	PPM Lead	PPM Silver	PPB Gold	(Rock geo.)
887	16	< 1	20	< 0.5	< 15	
888	116	< 1	24	0.5	< 15	
889	66	1	24	1.0	< 15	
890	255	2	22	2.0	15	
891	141	10	8	< 0.5	80	
892	2800	180	4	1.0	220	
893	1920	5	14	1.0	80	
894	36	1	6	< 0.5	30	
895	40	< 1	6	< 0.5	< 15	
896	22	< 1	60	< 0.5	< 15	
897	13	< 1	14	< 0.5	< 15	
898	13	< 1	10	< 0.5	< 15	
899	94	< 1	14	< 0.5	< 15	
900	76	< 1	32	< 0.5	< 15	
901	88	< 1	22	< 0.5	< 15	
902	90	< 1	20	< 0.5	< 15	
903	100	< 1	34	< 0.5	< 15	
904	94	< 1	20	< 0.5	< 15	
905	84	< 1	30	< 0.5	< 15	
906	26	< 1	191	< 0.5	< 15	
907	112	< 1	10	< 0.5	130	
908	3720	2	4	2.0	220	
909	3170	2	8	< 0.5	80	
910	270	7	8	< 0.5	50	
911	60	< 1	26	< 0.5	< 15	
912	62	< 1	8	< 0.5	< 15	
913	1120	3	4	< 0.5	130	
914	104	3	6	< 0.5	80	
915	482	6	8	0.5	80	
916	13	9	18	< 0.5	< 15	
917	80	< 1	22	< 0.5	< 15	
918	186	< 1	20	0.5	< 15	
919	120	< 1	48	0.5	< 15	
920	82	< 1	30	< 0.5	< 15	
921	44	< 1	34	< 0.5	< 15	
922	14	< 1	14	< 0.5	< 15	
923	13	< 1	14	< 0.5	< 15	
924	86	< 1	18	< 0.5	< 15	
925	40	< 1	20	< 0.5	< 15	
926	116	1	290	1.0	< 15	
STD.	72	24	60			

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: .....

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Granduc Mines Ltd.
2009 - 1177 W. Hastings
Vancouver, B.C.

ATTN: Mr. Erik Ostensoe

CERTIFICATE NO. 36302
INVOICE NO. 15584
RECEIVED Oct.9/75
ANALYSED Oct. 27/75

SAMPLE NO. :	PPM Copper	PPM Molybdenum	PPM Lead	PPM Silver	PPB Gold	PPM Arsenic ROCKS
927	14	< 1	20	< 0.5	< 15	
928	273	< 1	10	2.5	30	
929	2880	7	8	0.5	15	
930	945	4	11	0.5	15	
931	130	< 1	13	< 0.5	15	
932	56	< 1	13	< 0.5	15	
933	650	14	12	0.5	160	
934	345	< 1	10	< 0.5	< 15	
935	570	< 1	12	< 0.5	80	
936	45	5	9	< 0.5	< 15	
937	480	20	16	< 0.5	280	
938	130	< 1	28	0.5	15	
939	17	< 1	20	< 0.5	< 15	
940	20	< 1	22	< 0.5	< 15	
941	93	< 1	45	< 0.5	< 15	
942	50	< 1	23	< 0.5	< 15	
943	166	< 1	30	0.5	< 15	
944	120	< 1	41	2.5	350	
945	24	< 1	37	< 0.5	< 15	
946	38	< 1	15	< 0.5	< 15	
947	18	< 1	9	< 0.5	< 15	
948	36	< 1	17	< 0.5	< 15	
949	47	< 1	22	< 0.5	15	
950	14	< 1	22	0.5	< 15	
951	19	< 1	13	2.0	50	
952	173	2	15	23	680	
953	152	< 1	16	< 0.5	< 15	
954	36	< 1	14	< 0.5	< 15	
955	107	< 1	19	1.0	620	
956	82	1	36	1.0	< 15	120
957	20	< 1	14	< 0.5	< 15	18
958	58	< 1	15	15	680	4500
959	22	1	13	< 0.5	< 15	
960	90	< 1	24	< 0.5	< 15	
961	49	< 1	18	< 0.5	< 15	
962	53	< 1	34	< 0.5	< 15	
963	12	< 1	35	< 0.5	< 15	
964	56	< 1	39	< 0.5	80	
965	205	< 1	53	< 0.5	220	
966	215	19	22	< 0.5	80	
STD.	72	26	61			

CERTIFIED BY: Hart Bell

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 36303

TO: Granduc Mines Ltd.
2009 - 1177 W. Hastings
Vancouver, B.C.

ATTN: Mr. Erik Ostensoe

INVOICE NO. 15584

RECEIVED Oct.9/75

ANALYSED Oct.28/75

SAMPLE NO. :	PPM Copper	PPM Molybdenum	PPM Lead	PPM Silver	PPB Gold	PPM Arsenic	ROCKS
967	60	< 1	30	< 0.5	30		
968	15	< 1	29	< 0.5	< 15		
969	19	1	25	< 0.5	< 15		
970	47	< 1	45	< 0.5	< 15		
971	8	< 1	18	< 0.5	< 15		
972	31	< 1	23	< 0.5	< 15		
973	30	2	21	2.5	30		
974	52	< 1	20	< 0.5	< 15		
975	83	< 1	21	< 0.5	< 15		
976	34	< 1	23	< 0.5	< 15		
977	13	2	20	< 0.5	< 15		
978	58	< 1	19	< 0.5	< 15		
979	40	< 1	20	< 0.5	< 15		
980	26	1	11	< 0.5	< 15		
981	110	< 1	20	< 0.5	< 15		
982	8	1	17	< 0.5	< 15		
983	16	< 1	10	< 0.5	< 15		
984	22	< 1	27	< 0.5	< 15		
985	33	4	22	0.5	< 15	4	
986	109	2	23	1.0	80	40	
987	235	3	25	1.0	80	8	
988	85	1	38	0.5	15		
989	175	< 1	44	< 0.5	< 15		
990	47	< 1	32	< 0.5	< 15		
991	287	3	36	0.5	< 15		
992	120	< 1	30	0.5	< 15		
993	87	1	27	0.5	< 15		
994	225	1	17	< 0.5	30		
995	61	2	27	< 0.5	< 15		
996	100	2	34	0.5	< 15		
997	106	< 1	37	0.5	< 15		
998	76	3	22	< 0.5	< 15		
999	80	< 1	19	< 0.5	15		
1000	36	< 1	28	< 0.5	30	7	
1001	91	< 1	20	< 0.5	110	6	
1002	114	1	81	5.0	30	190	
1003	83	< 1	41	1.0	< 15	14	
1004	24	2	36	< 0.5	< 15		
1005	54	< 1	27	< 0.5	< 15		
1006	90	< 1	27	1.0	< 15		
STD.	72	26	59	12			

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biller

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 36304

TO: Granduc Mines Ltd.
2009 - 1177 W. Hastings
Vancouver, B.C.

INVOICE NO. 15584

RECEIVED Oct.9/75

ATTN: Mr. Erik Ostensoe

ANALYSED Oct.27/75

SAMPLE NO. : ROCKS	PPM Copper	PPM Molybdenum	PPM Lead	PPM Silver	PPB Gold	PPM Arsenic
1007	27	< 1	41	< 0.5	< 15	
1008	27	4	42	0.5	30	
1009	15	< 1	32	10	810	
1010	29	38	46	1.0	405	
1011	100	14	56	1.5	15	
1012	95	48	184	< 0.5	310	
1013	21	2	58	1.5	80	
1014	235	10	9	2.0	350	
1015	49	< 1	43	< 0.5	15	
1016	31	< 1	28	< 0.5	< 15	
1017	188	< 1	16	< 0.5	< 15	
1018	115	< 1	20	< 0.5	< 15	
1019	18	< 1	13	< 0.5	< 15	
1020	45	< 1	15	< 0.5	< 15	
1021	50	< 1	17	< 0.5	< 15	
1022	45	< 1	28	< 0.5	< 15	
1023	37	< 1	20	< 0.5	< 15	
1024	62	< 1	21	< 0.5	< 15	
1025	9	< 1	23	< 0.5	< 15	
1026	28	< 1	32	< 0.5	< 15	
1027	21	< 1	25	< 0.5	< 15	
1028	67	1	33	1.5	< 15	
1029	26	< 1	23	< 0.5	< 15	
1030	21	1	19	< 0.5	< 15	
1031	81	< 1	16	< 0.5	< 15	
1032	93	< 1	16	< 0.5	< 15	
1033	100	< 1	17	< 0.5	< 15	
1034	109	< 1	67	< 0.5	< 15	
1035	15	< 1	22	< 0.5	< 15	8
1036	21	< 1	14	< 0.5	< 15	3
1037	175	< 1	21	< 0.5	< 15	13
1038	28	< 1	19	< 0.5	< 15	
1039	21	< 1	21	< 0.5	< 15	
1040	45	< 1	21	< 0.5	< 15	
1041	295	9	26	0.5	< 15	
1042	145	1	28	< 0.5	< 15	
1043	290	2	16	< 0.5	< 15	
1044	61	< 1	29	< 0.5	< 15	
1045	358	< 1	16	< 0.5	< 15	
1046	80	< 1	19	< 0.5	< 15	
STD.	73	25	62			17

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biller

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 36305

TO: Granduc Mines Ltd.
2009 - 1177 W. Hastings
Vancouver, B.C.

INVOICE NO. 15584

RECEIVED Oct.9/75

ANALYSED Oct.27/75

ATTN: Mr. Erik Ostensoe

SAMPLE NO. :	PPM Copper	PPM Molybdenum	PPM Lead	PPM Silver	PPB Gold	ROCKS
1047	2500	< 1	19	3.0	650	
1048	95	< 1	16	< 0.5	< 15	
1049	58	< 1	28	< 0.5	< 15	
1050	120	< 1	25	< 0.5	< 15	
1051	145	< 1	20	0.5	< 15	
1052	150	< 1	21	< 0.5	< 15	
1053	67	< 1	17	< 0.5	< 15	
1054	105	< 1	19	< 0.5	< 15	
1055	90	< 1	18	< 0.5	< 15	
1056	73	< 1	18	< 0.5	< 15	
1057	175	< 1	26	0.5	< 15	
1058	115	1	33	0.5	< 15	
1059	260	< 1	23	< 0.5	< 15	
1060	100	1	23	1.0	< 15	
1061	10	1	25	0.5	< 15	
1062	21	2	23	1.0	< 15	
1063	23	< 1	18	3.0	440	
1064	24	< 1	23	0.5	< 15	
1065	90	< 1	29	1.0	< 15	
1066	41	< 1	26	1.0	< 15	
1067	26	< 1	20	0.5	< 15	
1068	35	< 1	15	3.5	2800	
1069	107	< 1	18	< 0.5	< 15	
1070	75	< 1	26	0.5	30	
1071	100	< 1	24	< 0.5	< 15	
1072	80	< 1	43	0.5	< 15	
1073	150	< 1	25	< 0.5	< 15	
1074	57	< 1	28	< 0.5	< 15	
1075	59	< 1	23	< 0.5	< 15	
1076	103	< 1	50	0.5	< 15	
1077	460	4	35	1.0	< 15	
1078	500	< 1	38	2.0	< 15	
1079	345	6	21	0.5	< 15	
1080	245	2	36	< 0.5	< 15	
1081	175	5	17	< 0.5	< 15	
1082	48	< 1	76	0.5	< 15	
1083	48	< 1	27	< 0.5	< 15	
1084	85	< 1	33	0.5	< 15	
1085	12	< 1	22	< 0.5	< 15	
1086	97	< 1	18	0.5	< 15	
STD.	72	25	61			

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Billes

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TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 36306

TO: Granduc Mines Ltd.
2009 - 1177 W. Hastings
Vancouver, B.C.

INVOICE NO. 15584

RECEIVED Oct.9/75

ATTN: Mr. Erik Ostensoe

ANALYSED Oct.27/75

SAMPLE NO. :	PPM	PPM	PPM	PPM	PPB	PPM
ROCKS	Copper	Molybdenum	Lead	Silver	Gold	Arsenic
1087	100	< 1	22	< 0.5	< 15	
1088	105	< 1	19	< 0.5	< 15	
1089	100	1	20	0.5	< 15	
1090	115	1	42	1.0	< 15	
1091	87	< 1	29	0.5	< 15	
1092	63	1	19	< 0.5	< 15	
1093	13	< 1	16	< 0.5	< 15	
1094	140	1	19	< 0.5	< 15	
1095	112	1	22	< 0.5	< 15	
1096	126	1	17	< 0.5	< 15	
1097	78	1	15	< 0.5	30	
1098	95	< 1	12	< 0.5	< 15	
1099	155	1	27	1.0	< 15	
1100	43	< 1	17	< 0.5	< 15	
1101	51	< 1	28	< 0.5	< 15	
1102	38	< 1	27	< 0.5	< 15	
1103	20	< 1	17	< 0.5	< 15	
1104	53	1	21	0.5	< 15	
1105	11	2	41	25	50	
1106				510	528	350

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Russell

APPENDIX 3

SOIL SURVEY IN VICINITY OF

ARSENOPYRITE OCCURRENCE