APPENDIX 3: KEMESS CENTRE

1. **Geological Drill Logs KC-00-01 to KC-00-04**
2. **Drill Hole Assay Results for KC-00-01 to KC-00-04**
3. **Assay Certificates for Drill Holes KC-00-01 to KC-00-04**
4. **Figures 19 to 22: 1:1,000 Drill Hole Sections KC-00-01 to KC-00-04**

SYNOPTIC DRILL LOG
NORTHGATE EXPLORATION LTD.
KEMESS PROJECT

D.D.H. NO. KC-00-01 **PAGE 1 OF** 2

	GRID	SURVEY		
NORTHING	10800N	10724.47N	**TOTAL DEPTH**	300.84
EASTING	9200E	9181.18E	**TOATL CASING**	3.05m (10')
ELEVATION	1418.28		**DATE START**	JUNE 19, 2000
PROJECT/AREA	KEMESS CENTRE		**DATE END**	JUNE 25, 2000
AZIMUTH	045°		**CORE DIAMETER**	NQ II
INCLINATION	-47°		**GEOLOGIST**	BRETT LAPEARE

SAMPLE SERIES: 19102 **TO** 19125

TARGET/PURPOSE: To test potassic anomaly as defined by DELTA GEOSCIENCE and mag trend along south flank of magnetic high

COMMENTS (target intersected? / describe): Potassic anomaly due to moderate to well developed biotite within siliceous / silicified seds. Top of hole exh. bits magnetic mafic/int flows. Fault @ 94-106 m possibly explaining mag trend.

Downhole Survey

Depth	Type	Azimuth	Dip
0.00	SURVEY CREW	45°31'46"	-47°46'34"
99.65 m	EASTMAN	45°	-44.7°
185.10 m	"	45.5°	-48.5°
300.84 m	"	51.0°	-55.0°
E.O.H			

From	To	Rock Type	Alteration	Mineralization	Comments
0.0	3.05m	OVERBURDEN	—	—	—
3.05	18.28	INT/MAFIC FLOW	chl, ser, carb	<tr py	wk to mod magnetic
					2-3% carb stringers
18.28	32.35	INTERCALATED FLOW/TUFF	chl +/- bio	tr py	wkly magnetic
32.35	49.25	DIORITIC DYKE/SILL	ser + clay	tr py	non-magnetic
49.25	88.62	INT/MAFIC FLOW	chl, ser, carb	tr to <1% py	wk to mod magnetic
88.62	88.82	FAULT GOUGE			
88.82	91.30	INT/MAFIC FLOW	chl + ser + bio	<1% py	
		(sub-unit w/ inc mv veining)			
91.30	99.65	INT/MAFIC FLOW	chl ser	tr py	non-magnetic

From	To	Rock Type	Alteration	Mineralization	Comments
99.65	102.00	FAULT ZONE	clay	—	60-70° C.A
102.00	105.90	INT/MAFIC FLOW	chl	<1% py	non-magnetic
105.90	106.95	FAULT ZONE	clay	—	70-80° C.A
106.95	110.80	INT/MAFIC FLOW	chl	2-4% py w/ tr cpy	non-magnetic
110.80	111.54	FAULT ZONE	clay, w/ bio	<1% py	banded mylonitic texture locally
111.54	114.23	INT/MAFIC FLOW	chl + bio	1% py	
114.23	135.00	SILICEOUS SILTSTONE (not cherty)	bio+clay	<tr py	massive to well bedded
135.00	136.88	MAFIC SILL	local clay	tr py	local veinlets of carb
136.88	189.90	SILICEOUS SILTSTONE w/ INTERBEDDED MUDSTONE	ser+chl relay well developed locally	±1% py	local pervasive & tr flooding/ silicification
189.90	219.23	MAFIC TUFFS w/ THIN FLOWS	chl @ upper contact	tr py & one py veinlet	locally, v.fn, magnetic
219.23	235.50	SILICEOUS/SILICIFIED SILTSTONE	clay+sericite	<1% py	protolith mostly destroyed
235.50	242.24	MAFIC DYKE	pyx to chl	—	non-magnetic
242.24	252.83	SILICEOUS/SILICIFIED SILTSTONE	carb+clay+ chl on local fx's	<1% py	well preserved bedding locally
252.83	255.07	MAFIC DYKE (poss flow)	patchy, bio+ chl	<1% py	fine gr thru out
255.07	259.10	SILICEOUS SILTSTONE			
259.10	261.50	MAFIC DYKE			
261.50	289.53	SILICEOUS SILTSTONE			
289.53	293.90	MAFIC DYKE			
293.90	300.84	SILICEOUS SILTSTONE			
	E.O.H				

KEMESS EXPLORATION
CORE LOGGING FORM

D.D.H. NO. KC-00-01

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
0.00	3.05	CASING / OVERBURDEN						
3.05	18.28	INT / MAFIC FLOW						
		- dk greenish grey, fine grained, massive						
		- plag + qtz + chl + sericite + mag						
		- unit exhibits locally, well developed med to coarse grained, anhedral grains of						
		chlorite (9.7 - 11.0 m) and/or sericite (6.0 - 7.0 m) → altered phenocrysts (?)						
		- From 7.25 m the unit is wkly to moderately magnetic throughout	N.A					
		- magnetite is not visible → very fine gr / disseminated						
		- altn is low grade chl + ser → chlorite increases on fractures						
		- carbonate occurs as thin (1-4 mm) irregular stringers @ various angles						
		(2-3%) → very common on fractures assoc w/ chlorite → local ank and/or siderite						
		- mineralization occurs as < trace pyrite assoc w/ carb on fy's or						
		stringers						
		- structure → unit is massive but moderately to highly fractured (RQD =						
		20-60%) ; fractures are @ random angles but predominantly, 40-75° CA.						
		- lower contact diffuse @ 70° CA						
18.28	32.35	INTERCALATED ANDESITIC FLOW / TUFF						
		- sub units vary from <1 to <3 m in thickness						
		- flow subunits are same as 3.05 - 18.28						
		- tuffaceous subunits exhibit altered banding @ 60-70° → texture is						
		commonly mottled → local bands of coarse, rounded fragments						
		- top 0.5 m of unit exhibits moderately to well developed fine grained						
		biotite (?) → banding is also commonly, curvilinear around lapilli fragments						

D.D.H. #. KC-00-01

From	To	DECRIPTION	Sample #	From	To	%Cu ppm	Au g/t ppm	Ag g/t ppm
		exhibiting a gneissic agglomeratic texture						
		→ altn same as 3.05 - 18.28 : wk pervasive chl to well developed chl altn on fractures and of original pyroxene xtl's + carb on fractures + very local biotite +/- clay on fractures						
		→ veining is minor : thin irregular stringers of carb						
		→ trace pyrite assoc w/ carb stringers						
		- structure : local banding / bedding @ 60-70° => fxd thin cut (RQD ≥ 50%)						
		@ random °'s	19102	30.90	32.35	25	< 5	< 0.2
32.35	49.25	SUBVOLCANIC DIORITIC DYKE/SILL (+/- volcanics)						
		- mottled lite/dk grey w/ local dull pink overprinting, massive	19103	32.35	34.45			
		- lite grey, fine matrix of plag+chl+sericite +/- altn w/ meal gr orthoclase	19104	34.45	36.20			
		+ hbl (amph or pyroxene)	19105	36.20	38.10			
		- intrusive texture is mottled to locally diffuse (more fine gr)	19106	38.10	40.00			
		- non-magnetic	19107	40.00	41.75			
		- local fragments (remnants beds??) of andesite flow	19108	41.75	43.50			
		- altn is minor → wk sericitic altn of plag & wk clay altn of coarser gr	19109	43.50	45.00			
		orthoclase => orthoclase maybe secondary K° altn	19110	45.00	46.75			
			19111	46.75	49.25			
		- veining is confined to thin (<1-2mm) carb stringers						
		- mineralization => << to to moist, absent						
		- highly to moderately fxd - poor RQD						
		- lower contact @ 80° C.A						

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
49.25	88.62	INT / MAFIC FLOW						
		- same as 3.05 - 18.28						
		- dk greenish grey, fine gr, massive → local mottled / patchy texture						
		- mod magnetic to ≈ 75m → below 75 m mostly non-magnetic to locally wk magnetite						
		- local mottled texture due to small (0.2 - 0.5 cm) anhedral patches of						
		chloritic altrd pyroxene (augite) xtls → +/- mod magnetite						
		- from 77.80 to 79.30 local irregular stringers of dull pnk Fe carb (ankerite?)						
		- vemmg: carb stringers @ random angles & qtz carb vemlets +/- py →						
		py best developed @ 75.85 within qtz + carb vemlet → local, irregular						
		qtz @ 83.15 to 83.80 +/- py						
		- altn is pervasive chlorite throughout; chl on fxs & assoc w/ stringers						
		and vemlets & altn of coarse pyx grains → chlorite + magnetite						
		decreases significantly below 75 m						
		- mineralization: trace py best developed in qtz + carb vemlets						
		(very local) → @ 83.80 - 83.95' py occurs within thin fxs (< 1 mm wide)						
		- lower contact @ 70-80° C.A						
88.62	88.82	FAULT GOUGE						
		- dull grey, fine to med gr, massive						
		- > 80% clay + carbonate w/ mafic + qtz rock fragments						
		- lower contact @ 65°						
88.82	91.30	INT/MAFIC FLOW (sub-unit)	19112	88.80	89.90			
			19113	89.90	91.30			
		- as 49.25 - 88.62 but w/ inc in local qtz, qtz+carb vemlets AND biotite +						
		sericite + chlorite altn						

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
		- moderately mottled due to patchy, dull brown biotite altn +/- sericite						
		- veinlets ≈ 5-7% of sub unit → veinlets vary from 5-15 mm wide @						
		50°-60° C.A → one veinlet @ 91.20 = 70 mm @ 65° c/ wall rock fragments						
		- <1% py assoc w/ local veinlets						
		- lower contact marked by, 70 mm wide veinlet						
91.30	99.65	INT/MAFIC FLOW	19114	95.90	98.00			
		- similar to 49.25-88.62 except no magnetite						
		- dk grey to black, fine gr, massive						
		- plag + mafics (pyx +/- chl)						
		- 3-4% qtz as fracture fill +/- carb						
		- trace py on selvages of local qtz stringers						
99.65	102.00	FAULT ZONE						
		- mafic flow characterized by broken rubbly core & fault gouge @						
		100.30-100.50 / 101.20-101.30 / 101.45-101.60 / 101.90-102.00						
		- @ 99.75-99.90 → qtz +carb flooding w/ wk chl altn and brecciation						
		: gouge zones occur @ steep angles to C.A						
102.00	105.40	INT/MAFIC FLOW						
		- same as 91.30 - 99.65						
105.40	106.95	FAULT ZONE						
		- well developed clay gouge w/ rock fragments @ 105.65-106.10 => @ 80°						
		C.A → remainder of unit is blocky w/ Ø RQD → gouge is dull greenish						
		grey						

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
		- local banding @ 80-90° ⇒ quasi mylonitic? texture ⇒ exhibits chl + bio + sericitic altn w/ locally, well developed pyrite (esp. @ 106.25 to 106.95) ⇒ pyrite occurs along bands and as one ¼ cutting veinlet (@ 106.70) ⇒ lower contact of unit @ 80°						
106.95	110.80	INT/MAFIC FLOW	19115	106.90	109.10			
			19116	109.10	110.80			
		- similar to 88.82 - 91.30 and 49.25 - 88.62						
		- dk grey, fine to medium grained, massive, patchy, mottled texture						
		- typical Fine gr flow unit w/ med gr anhedral chlorite grains ('clots') throughout (altd augite??) ≈ 30% of unit						
		- irregular qtz + qtz/carb stringers ≈ 5-6% of unit						
		- increase in pyrite to 2-4% ⇒ occurs within very thin fx's, within qtz stringers and locally disseminated						
		- lower contact @ 80°						
110.80	111.54	FAULT ZONE						
		-same as 105.40 - 106.95 ⇒ banded, biotite rich mylonitic texture w/ clay gouge and very rubbly core @ 110.95 - 111.10 ⇒ gouge @ 60° C.A ⇒ local py as patchy fx fillings ⇒ local qtz stringers and one veinlet @ 05° C.A ⇒ lower contact @ gradational						
111.54	114.23	INT / MAFIC FLOW						
		- Fine gr, dk brownish grey, massive						
		- similar to above FLOW units ⇒ except ⇒ increase in patchy to semi pervasive very fine grained biotite AND no chl grains/patches ⇒ non-magnetic						
		- lower contact obscured by rubbly/broken core						

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From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
114.23	135.00	Siliceous Siltstone (60%) / Mudstone (20%)						
			19117	126.90	127.70			
		- dull grey to brownish grey, fine to very fine grained, massive to well bedded	19118	127.70	129.90			
		- unit is predominantly qtz w/ local patchy, secondary, biotite altn						
		- approx 10-15% of unit is qtz and/or qtz+carb veinlets + qtz fillings of hairline fx						
		- majority of biotite altn assoc'd as wall rock altn of veinlets & fx's						
		- pyrite occurs locally within hairline fx's assoc w/ chl altn → best developed @ 115.40 - 116.00						
		- @ 116.25 - 116.95 → very well developed biotite +/- dull greenish sericite (?) altn						
		- @ 119.25 - 119.35 → brecciation from very irregular qtz+carb veinlet						
		- biotite altn exhibits quasi anastomosing texture						
		- top of the unit is predominantly massive from 114.23						
		- massive texture w/ biotite altn persists to 125.55 → below this depth, altn is minor beige coloured clay altn (but locally well developed) along randomly orientated fractures						
		- 2-3% py @ 125.85 - 129.85 assoc w/ secondary qtz veinlets						
		⇒ moderately developed bedding @ 125.55 - 131.20 : planer to curvilinear dithnic clay rich beds are <1 - 3cm wide @ 60 - 45° C.A						
		⇒ well developed bedding @ 131.20 - 135.00 : very planar, dk grey/black mudstone beds within fine/very fine grained qtz rich siltstone → widths of beds varies from <1cm to 20cm wide @ 40-50° CA						
		- lower metre proximal to lower contact exhibits greenish hue due to chloritic altn from lower dyke						
		- lower contact @ 50° C.A - parallell w/ bedding						

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
135.00	136.88	MAFIC SILL						
		- dk green, fine to med gr, massive						
		- fine gr matrix of plag + mafics supports 30% medium grained subhedral						
		crystals of pyroxene altd to chlorite						
		- local veinlets of carb ⇒ most prevalent proximal to contacts ⇒ x-cutting						
		relationships show 2 phases of carb veinlets ⇒ to py proximal to contacts						
		- well developed clay altn @ 136.70 - 136.88						
		- lower contact @ 35° CA						
136.88	189.40	SILICEOUS SILTSTONE / MUDSTONE	19119	157.00	158.25			
			19120	158.25	159.45			
		- same as 114.23 - 135.00 w/ various changes / differences throughout						
			19121	184.15	185.55			
		① 135.00 - 145.55 ⇒ very well bedded; 15-20% dk grey / blk, very fine gr						
		mudstone beds ⇒ <1cm to 10 cm wide ⇒ @ 40-55° C.A ⇒ interbedded with						
		thicker, qtz rich beds ⇒ graded bedding is very poorly developed to mostly						
		absent; possible younging appears to be uphole (⇒ mudstones +/- carbonate)						
		② 145.55 - 148.50 ⇒ as above except mudstone increases giving a much more						
		'striped' appearance AND qtz / siltstone approaches cryptocrystalline / cherty						
		texture PLUS bedding angles increase to 55 to 75° C.A						
		③ 148.50 - 157.00 ⇒ same as ① except beds @ 30° C.A @ 155.50 - 156.20						
		④ 157.00 - 159.45 ⇒ pervasive qtz flooding ⇒ top 1 metre of sub-unit						
		exhibits pervasive dull beige qtz + sericite altn w/ minor hematite +/- py,						
		also locally dull green chlorite altn ⇒ relict bedding is rare @ 20-30° C.A						
		lower 1.5 m is very patchy semi-pervasive secondary qtz within highly						
		deformed, irregular bedding						

< same as ①

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
		⑤ 159.95 - 166.33 → bedded sub-unit similar to ④ except black mudstone beds exhibit thinning of clay and bedding angles decrease to 15° (top half) to 30° (lower half)						
		⑥ 166.33 - 185.60 → altd & overprinted: siltstone / mudstone protolith has been pervasively overprinted by secondary qtz flooding / silicification w/ associated, patchy, local clay and/or sericitic altn → unit exhibits highly mottled texture → local relict mudstone beds @ 40-55° are generally harder due to silicification → texture varies from bedded to massive to brecciated → brecciated @ 183.90 to 185.60; brecciation consists of silica-qtz matrix with angular to sub-angular fragments (ø ≈ 1cm) of siliceous siltstone and darker silicified mudstone - possible FAULT BRECCIA						
		⑦ 185.60 - 187.45 → qtz w/ well developed sericite + clay altn → possible fault gouge @ 185.60 - 185.80 - wk relict bedding within lower 25 cm of sub-unit @ 50-55° C.A → beds are bleached from sericite/clay altn						
		⑧ 187.45 - 189.90 → predominantly dk grey/black mudstone - not silicified w/ patchy clay +/- sericite altn → contains high degree of clay(?) +/- carb stringers @ highly random angles						
		* ENTIRE UNIT → <2% to trace py → mod to good RQD w/ fractures varying from 30-70° C.A						
189.40	219.23	MAFIC VOLCANIC → devitrified tuffs/flow						
		- dk greenish grey, fine gr., massive						
		- non-magnetic to locally wkly magnetic						
		- top 1.30 metres of unit exhibit chl + bio altn → possible oxidational						

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
		zone between upper sediments and lower volcanic unit						
		- @ 196.40 to 219.13 : wkly developed banding (local) @ 75-85° C.A						
		representing possible tuffaceous sub unit → moderately developed fragments						
		@ 204.85 to 208.40 → agglomeratic texture ⇒ local bands 1-2cm wide exhibit						
		clay w/ rock fragments = possible small scale faulting → highly fract @ 202.4-208.9						
		⇒ 2-4% of unit carb + clay (?) stringers @ random angles = irregular						
		⇒ tr py but one py + carb veinlet @ 192.46; 3cm wide @ 30° C.A						
		- unit appears to be predominantly a mafic tuff w/ local thin flows →						
		banding @ 60-80° C.A						
		- lower contact diffuse @ 65° C.A						
219.23	235.50	SILICIFIED SEDIMENT (SILTSTONE?)	19122	223.90	225.15			
		- similar to 166.33 - 185.60 (sub-unit at 136.88-189.40)						
		- protolith completely overprinted						
		- fine to very fine grained, highly mottled light/dk grey, to patchy beige,						
		massive to local relict beds to locally, brecciated						
		- from 219.23 - 220.90 ⇒ dk grey, soft mudstone beds within massive fine gr						
		qtz - bedding @ 60-70° C.A → local biotite altn						
		- From 223.90 - 225.15 ⇒ fine gr, highly siliceous matrix w/ 40%, coarse,						
		angular to subrounded very fine gr qtz clasts						
		- remainder of unit is mottled w/ semi pervasive secondary qtz + patchy						
		dull beige clay +/- sericite altn → @ 231.90 a 2cm wide dull green						
		clay altn						
		⇒ high to moderate degree of highly random, hairline fractures						
		⇒ minor stringers / veinlets of milky white qtz						
		⇒ 1% to <1% diss py locally						
		⇒ lower contact @ 20°						

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
235.50	242.24	MAFIC DYKE						
		- dk green → chloritic, fine to med gr → fine gr plagioclase w/med gr chloritized pyroxenes						
		- top 55 cm → well developed chl+clay +/- carb altn						
		- 3-5% → random carb stringers / veinlets						
		- non-magnetic						
		- massive						
		- lower contact @ 65° → sharp						
242.24	252.83	SILICEOUS SILTSTONE						
		- mottled to wkly banded lite smoky gray to brown → grey from fine to very fine grained qtz interbedded c/ biotite altd bands → banding @ 60-80° C.A → bands (beds) range from very planar to locally offset to irregular → beds locally well preserved (298-250m)						
		- weak to moderately developed, locked microfractures @ random, irregular angles → locally, fractures may contain carb and/or chl+clay						
		- <1% py as locally disseminated and on fractures						
		- lower contact @ 60° C.A						
252.83	255.07	MAFIC DYKE (possible Flow)						
		- similar to 235.50-242.24 → more fine gr with no altd pyroxene clasts → colour is mottled green/brown due to semi pervasive very fine gr biotite (hornfels altn??)						
		- 2-4% local qtz veinlets w/ <1% py (+/- carbonate)						
		- @ 254.40-254.65 → med gr porphyritic texture						
		- lower contact @ gradational						

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
255.07	259.10	SILTSTONE - HIGHLY ALTERED	19123	255.05	256.10			
			19124	256.10	257.45			
		- highly mottled from local well developed altn to locally, bedded	19125	257.45	259.10			
		@ 255.07 - 255.93 ⇒ pervasive clay altn ⇒ colour is dull beige w/ greenish						
		tint ⇒ healed microfractures exhibit 2-3% pyrite ⇒ local remnant qtz ⇒						
		local carbonate veinlets w/ chl+py						
		@ 255.93 - 257.04 ⇒ qtz w/ irregular biotite rich bandings ⇒ microfractures						
		exhibit very well developed clay altn						
		@ 257.04 - 257.50 ⇒ pervasive, well developed clay + sericite +						
		epidote (??) altn ⇒ dull beige green w/ small (1 cm) patches of olive						
		apple green altn ⇒ one qtz veinlet w/ well developed pyrite @ 257.10 ⇒						
		altn contacts are very sharp @ 80° & 60° (Upper & lower)						
		@ 257.50 - 258.00 ⇒ well bedded @ 45° C.A ⇒ beds are 1 - 4 cm wide						
		of qtz & dk grey mudstone ⇒ top 15 cm exhibit minor qtz stockwork						
		@ 258.00 - 259.10 ⇒ massive to locally banded, fine to very coarsed qtz						
		w/ moderate local microfractures ⇒ fine veinlets of qtz; milky, white to						
		smoky grey						
		- lower contact @ 30°						
259.10	261.50	MAFIC DYKE						
		- exact same as 235.50 - 292.24 ⇒ lower contact @ 65° C.A						
261.50	289.53	SILICEOUS SILTSTONE						
		- massive to locally banded, siliceous ± semi pervasive silicification						
		- texture is highly mottled lite grey to local patchy beige from minor						
		clay altn						
		- fine to very fine grained throughout						

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From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
		relict bedding is 1-5cm wide @ 60-80° CA						
		@ 272.90-282.00 ⇒ anastomosing healed microfractures w/ chl						
		altn ⇒ within sub unit @ 277.90-278.20 ⇒ very well developed,						
		greenish clay altn w/ relict chl altd microfractures						
		⇒ above anastomosing texture also occurs locally, thru out entire unit						
		⇒ lower 90 cm of unit is chloritic due to altn from lower dyke						
		⇒ trace to <1% py, on local microfractures						
		⇒ lower contact @ 65° CA.						
289.53	293.90	MAFIC DYKE						
		- exact same as 235.50-242.24 & 259.10-261.50						
		- lower contact @ 80° ⇒ very wkly magnetic throughout						
293.90	300.84	SILICEOUS SILTSTONE						
		- same as 261.50-289.53						
		- relict bedding @ 50°-60° C.A						
		- <1% py, esser w/ local qz stringers						
		E.O.H						

KEMESS CENTRE DRILL HOLE ASSAY RESULTS FOR KC-00-01

Hole_ID	Sam_ID	From	To	Width	Cu_ppm	Au_ppb	Ag_ppm
KC-00-01	19102	30.90	32.35	1.45	25	2.5	0.1
KC-00-01	19103	32.35	34.45	2.10	27	2.5	0.1
KC-00-01	19104	34.45	36.20	1.75	15	2.5	0.1
KC-00-01	19105	36.20	38.10	1.90	27	2.5	0.1
KC-00-01	19106	38.10	40.00	1.90	24	2.5	0.1
KC-00-01	19107	40.00	41.75	1.75	31	10	0.1
KC-00-01	19108	41.75	43.50	1.75	16	2.5	0.1
KC-00-01	19109	43.50	45.00	1.50	20	2.5	0.1
KC-00-01	19110	45.00	46.75	1.75	31	2.5	0.1
KC-00-01	19111	46.75	49.25	2.50	14	2.5	0.1
KC-00-01	19112	88.80	89.90	1.10	21	5	0.1
KC-00-01	19113	89.90	91.30	1.40	207	15	0.2
KC-00-01	19114	95.90	98.00	2.10	37	2.5	0.1
KC-00-01	19115	106.90	109.10	2.20	65	45	0.1
KC-00-01	19116	109.10	110.80	1.70	79	60	0.1
KC-00-01	19117	126.90	127.70	0.80	67	20	0.1
KC-00-01	19118	127.70	129.90	2.20	412	2.5	0.2
KC-00-01	19119	157.00	158.25	1.25	96	10	0.1
KC-00-01	19120	158.25	159.45	1.20	17	2.5	0.1
KC-00-01	19121	184.15	185.55	1.40	26	5	0.1
KC-00-01	19122	223.90	225.15	1.25	57	2.5	0.1
KC-00-01	19123	255.05	256.10	1.05	209	2.5	0.2
KC-00-01	19124	256.10	257.45	1.35	95	2.5	0.1
KC-00-01	19125	257.45	259.10	1.65	145	2.5	0.2

ALS Chemex

Aurom Laboratory Services Ltd.
Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: KEMESS MINE

P.O. BOX 3519
SMITHERS, BC
V0J 2N0

A0023510

Comments: ATTN: BRETT LAPEARE

CERTIFICATE A0023510

(PIL) - KEMESS MINE

Project: KEMESS CENTER
P.O. #: 200950

Samples submitted to our lab in Vancouver, BC.
This report was printed on 27-JUL-2000.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
225	101	Run as received
238	20	Nitric-aqua-regia digestion
229	20	ICP - AQ Digestion charge

* NOTE 1:

The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Sr, Ti, Tl, W.

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	99	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
6	99	Ag ppm: HNO3-aqua regia digest	AAS-BKGD CORR	0.2	100.0
2	99	Cu ppm: HNO3-aqua regia digest	AAS	1	10000
2118	20	Ag ppm: 32 element, soil & rock	ICP-AES	0.2	100.0
2119	20	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
2120	20	As ppm: 32 element, soil & rock	ICP-AES	2	10000
557	20	B ppm: 32 element, rock & soil	ICP-AES	10	10000
2121	20	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
2122	20	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
2123	20	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
2124	20	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
2125	20	Cd ppm: 32 element, soil & rock	ICP-AES	0.5	500
2126	20	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
2127	20	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
2128	20	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
2150	20	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
2130	20	Ga ppm: 32 element, soil & rock	ICP-AES	10	10000
2131	20	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
2132	20	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
2151	20	La ppm: 32 element, soil & rock	ICP-AES	10	10000
2134	20	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
2135	20	Mn ppm: 32 element, soil & rock	ICP-AES	5	10000
2136	20	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
2137	20	Na %: 32 element, soil & rock	ICP-AES	0.01	10.00
2138	20	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
2139	20	P ppm: 32 element, soil & rock	ICP-AES	10	10000
2140	20	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
551	20	S %: 32 element, rock & soil	ICP-AES	0.01	5.00
2141	20	Sb ppm: 32 element, soil & rock	ICP-AES	2	10000
2142	20	Sc ppm: 32 elements, soil & rock	ICP-AES	1	10000
2143	20	Sr ppm: 32 element, soil & rock	ICP-AES	1	10000
2144	20	Ti %: 32 element, soil & rock	ICP-AES	0.01	10.00
2145	20	Tl ppm: 32 element, soil & rock	ICP-AES	10	10000
2146	20	U ppm: 32 element, soil & rock	ICP-AES	10	10000
2147	20	V ppm: 32 element, soil & rock	ICP-AES	1	10000
2148	20	W ppm: 32 element, soil & rock	ICP-AES	10	10000
2149	20	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000

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To: KEMESS MINE

P.O. BOX 3519
SMITHERS, BC
V0J 2N0

Project : KEMESS CENTER
Comments: ATTN: BRETT LAPEARE

Page Number :1-A
Total Pages :3
Certificate Date: 27-JUL-2000
Invoice No. :10023510
P.O. Number :200950
Account :PIL

CERTIFICATE OF ANALYSIS A0023510

KC-00-01

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm Aqua R	Cu ppm	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %
19102	225	238	< 5	< 0.2	25	< 0.2	2.75	2	< 10	320	2.0	< 2	0.60	< 0.5	9	49	25	3.76	10	1	0.78
19103	225	--	< 5	< 0.2	27	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19104	225	--	< 5	< 0.2	15	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19105	225	--	< 5	< 0.2	27	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19106	225	--	< 5	< 0.2	24	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19107	225	238	10	< 0.2	31	< 0.2	1.36	< 2	< 10	130	0.5	< 2	0.60	0.5	2	31	30	1.63	< 10	< 1	0.26
19108	225	--	< 5	< 0.2	16	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19109	225	--	< 5	< 0.2	20	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19110	225	--	< 5	< 0.2	31	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19111	225	--	< 5	< 0.2	14	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19112	225	238	5	< 0.2	21	< 0.2	3.77	10	< 10	480	< 0.5	12	4.91	< 0.5	17	111	15	4.90	< 10	2	0.09
19113	225	--	15	0.2	207	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19114	225	--	< 5	< 0.2	37	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19115	225	--	45	< 0.2	65	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19116	225	--	60	< 0.2	79	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19117	225	238	20	< 0.2	67	< 0.2	0.40	22	< 10	130	< 0.5	4	6.28	< 0.5	10	60	61	1.40	< 10	< 1	0.04
19118	225	--	< 5	0.2	412	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19119	225	--	10	< 0.2	96	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19120	225	--	< 5	< 0.2	17	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19121	225	--	5	< 0.2	26	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19122	225	238	< 5	< 0.2	57	< 0.2	0.61	42	< 10	320	< 0.5	< 2	3.20	< 0.5	8	67	54	1.80	< 10	< 1	0.09
19123	225	--	< 5	0.2	209	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19124	225	--	< 5	< 0.2	95	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19125	225	--	< 5	0.2	145	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19126	225	--	< 5	0.2	265	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19127	225	238	15	0.8	470	0.8	1.80	4	< 10	140	0.5	< 2	2.83	0.5	99	29	448	3.12	< 10	< 1	0.11
19128	225	--	< 5	0.2	233	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19129	225	--	< 5	< 0.2	104	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19130	225	--	< 5	< 0.2	151	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19131	225	--	< 5	< 0.2	151	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19132	225	238	< 5	< 0.2	86	< 0.2	1.34	< 2	< 10	130	< 0.5	< 2	2.15	< 0.5	9	42	81	2.93	< 10	1	0.06
19133	225	--	10	< 0.2	66	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19134	225	--	5	0.2	240	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19135	225	--	< 5	0.2	84	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19136	225	--	< 5	< 0.2	57	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19137	225	238	< 5	< 0.2	118	< 0.2	1.59	< 2	< 10	150	< 0.5	< 2	1.73	< 0.5	12	34	125	3.11	< 10	< 1	0.07
19138	225	--	< 5	< 0.2	147	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19139	225	--	< 5	< 0.2	105	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19140	225	--	< 5	< 0.2	62	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19141	225	--	< 5	< 0.2	36	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

CERTIFICATION: _____

ALS Chemex

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To: KEMESS MINE

P.O. BOX 3519
SMITHERS, BC
V0J 2N0

Project : KEMESS CENTER
Comments: ATTN: BRETT LAPEARE

Page Number :1-B
Total Pages :3
Certificate Date: 27-JUL-2000
Invoice No. :10023510
P.O. Number :200950
Account :PIL

CERTIFICATE OF ANALYSIS A0023510

SAMPLE	PREP CODE		La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
19102	225	238	< 10	1.21	250	11	0.07	8	570	< 2	0.20	< 2	8	41	0.12	< 10	< 10	43	< 10	146
19103	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19104	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19105	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19106	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19107	225	238	10	0.40	335	6	0.04	5	60	4	0.07	< 2	1	31	< 0.01	10	< 10	6	< 10	64
19108	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19109	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19110	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19111	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19112	225	238	< 10	2.85	1315	3	0.20	35	600	< 2	0.21	< 2	15	125	0.19	< 10	< 10	128	< 10	114
19113	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19114	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19115	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19116	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19117	225	238	< 10	0.53	1815	8	0.01	43	150	< 2	0.56	4	6	74	< 0.01	< 10	< 10	13	< 10	44
19118	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19119	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19120	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19121	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19122	225	238	< 10	1.35	1380	9	0.03	28	520	2	0.30	2	6	183	< 0.01	< 10	< 10	21	< 10	50
19123	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19124	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19125	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19126	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19127	225	238	10	0.84	435	37	0.06	4	650	4	0.45	< 2	6	120	< 0.01	< 10	< 10	56	< 10	32
19128	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19129	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19130	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19131	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19132	225	238	< 10	0.87	420	9	0.08	5	660	< 2	0.03	2	7	87	< 0.01	< 10	< 10	67	< 10	26
19133	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19134	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19135	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19136	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19137	225	238	10	1.00	410	7	0.09	3	700	< 2	0.08	2	7	107	< 0.01	< 10	< 10	69	< 10	28
19138	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19139	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19140	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19141	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

CERTIFICATION: _____

SYNOPTIC DRILL LOG
NORTHGATE EXPLORATION LTD.
KEMESS PROJECT

D.D.H. NO. KC-00-02 **PAGE 1 OF** 3

	Grid	Survey		
NORTHING	10885 N	10781.51N	TOTAL DEPTH	219.15
EASTING	8800 E	8779.98E	TOATL CASING	4.57
ELEVATION	1413.15		DATE START	JUNE 26, 2000
PROJECT/AREA	KEMESS CENTRE		DATE END	JUNE 30, 2000
AZIMUTH	N/A		CORE DIAMETER	NQ
INCLINATION	-90°		GEOLOGIST	BRETT LAPEARE

SAMPLE SERIES: 19126 **TO** 19224

TARGET/PURPOSE: To test trend between resistivity low & chargeability high w/ an associated potassic high

COMMENTS (target intersected? / describe): Hole intersected + 110m of monzonite in the main intersection plus local dykes. Locally monzonite exhibits trace cpy

Downhole Survey

Depth	Type	Azimuth	Dip
99.70 m	EASTMAN	143°	-87°
215.55 m	"	202°	-87.5°

From	To	Rock Type	Alteration	Mineralization	Comments
0.00	4.57	CASING/ OVB			
4.57	71.25	MONZONITE	sericite+ clay	<1% py + tr cpy	wkly magnetic
71.25	73.05	ANDESITIC DYKE		<1% py	wkly magnetic
73.05	76.60	MONZONITE			same as 4.5-71.25
76.60	81.75	QTZ + BIOTITE SILTSTONE	biotite	2% py	
81.75	82.65	ANDESITE DYKE		2-3% py	
82.65	84.07	QTZ+BIOTITE SILTSTONE			
84.07	84.90	Q.F.P		≤ 5% py	
84.90	90.00	QTZ+ BIOTITE SILTSTONE		≤ 4%	py w/ ca-b stringers

From	To	Rock Type	Alteration	Mineralization	Comments
90.00	93.05	ANDESITE DYKE		3-5% py	
93.05	93.86	QTZ + BIOTITE SILTSTONE	biotite	2-3% py	
93.86	95.70	SILICIFIED SILTSTONE		2-3% py	possible skarning locally
95.70	97.00	BEDDED SILTSTONE		<2% py	
97.00	97.65	MONZONITE DYKE	sericite / clay	trace py	
97.65	113.65	SILICIFIED SILTSTONE		≤1% py	fault @ 110 m
113.65	119.04	MONZONITE		2-3% py	py / secondary q/z
119.04	124.15	SILICIFIED SILTSTONE	clay (?)		dark coloured altn - unique
124.15	125.10	MONZONITE		<1% py	
125.10	126.95	SILICEOUS SILTSTONE		<1% py	
126.95	128.70	MAFIC DYKE		≤2% py	
128.70	159.15	MONZONITE	variable from Kspar to sericite	≤1% py + tr cpy	
159.15	159.95	SILICIFIED SILTSTONE		<1% py + tr cpy	
159.95	162.55	MAFIC DYKE		>2% py	
162.55	166.55	SILICEOUS MUDSTONE		<1% py	
166.55	167.70	GRANODIORITE DYKE		trace py	
167.70	168.90	SILICEOUS MUDSTONE			
168.90	171.15	SILICIFIED SILTSTONE		≤1% diss py	
171.15	173.00	MAFIC FLOW		—	
173.00	174.80	SILICIFIED SILTSTONE			

KC-00-02

From	To	Rock Type	Alteration	Mineralization	Comments
174.80	180.45	MAFIC TUFF		<1% py-diss	
180.45	182.08	SILTSTONE	gtz+chl+clay	trace py	
182.08	184.75	MONZONITE DYKE		—	minor mag
184.75	193.60	MAFIC VOLCANICS		<2% py	
193.60	200.30	ALTERED MAFIC VOL'C	clay	<2% py	local brecciation
200.30	202.25	DIORITE DYKE		——	
202.25	202.60	FAULT	clay gouge		
202.60	205.35	FAULT (?) BRECCIA		<1% py-diss	healed
205.35	219.15	SILICEOUS SILTSTONE		<1% py	
		E.O.H.			

KC

D.D.H. NO. 00-02

KEMESS EXPLORATION
CORE LOGGING FORM

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
0.00	4.57	CASING / OVERBURDEN						
4.57	71.25	MONZONITE	19126	4.57	6.57			
			19127	6.57	8.57			
		- mottled, wkly reddish brown to lite grey, fine to med grained, massive	19128	8.57	10.57			
		- typical intrusive texture → fine grained matrix of K-spar & plag	19129	10.57	12.57			
		supporting medium grained phenocrysts of white to wkly greenish grey, anhedral	19130	12.57	14.57			
		plag AND anhedral to subhedral mafic minerals → hornblende+biotite ± pyroxene	19131	14.57	16.57			
		→ plag phenocrysts can vary from <10% to >50% locally	19132	16.57	18.57			
		MATRIX = 60% Kspar + 30% plag + 10% qtz + mag + clay minerals =100%	19133	18.57	20.57			
		PHENOCRYSTS = 70% plag + 30% mafics +/- magnetite +/- clay/sericite =100%	19134	20.57	22.50			
		± MATRIX ≈ 65% : PHENOCRYSTS ≈ 35% → can vary significantly	19135	22.50	24.50			
		→ unit is wkly to moderately magnetic throughout majority of unit	19136	24.50	26.50			
		- phenocrysts are wkly to moderately altrd → plag to sericite / mafics to chl	19137	26.50	28.50			
		- Fine gr, disseminated clay minerals evident throughout → within mafics & plag → secondary	19138	28.50	30.50			
		- core can be scratched to a moderate degree suggesting wk altn of	19139	30.50	32.50			
		fine gr feldspars to sericite +/- clay minerals → chemically on-local infiltration?	19140	32.50	34.50			
		- mafic phenocrysts also exhibit partial to complete altn to talc	19141	34.50	36.50			
		→ <1% py as disseminated knots w/ veinlets + trace cpy w/ veinlets	19142	36.50	38.50			
		→ veining is rare @ ≈ 1% of unit (up to 47m) consisting of qtz,	19143	38.50	40.50			
		qtz+carb and carb → occur @ low angles : 0-30° ∴ steeply dipping	19144	40.50	42.50			
		→ local wall rock altn may or may not occur w/ local veinlets : @ 8.10m	19145	42.50	44.50			
		chlorite altn is well developed as well rock altn up to 3cm from veinlet	19146	44.50	46.50			
		of qtz+py+chl w/ rare cpy → @ 37.50 a carb+chl veinlet w/ clay altn	19147	46.50	48.50			
		and destruction of magnetite → @ 26.75 a 1cm wide black clay + plag	19148	48.50	50.50			
		fragments + minor diss py & cpy occurs w/ no wall rock altn	19149	50.50	52.50			
			19150	52.50	54.65			
		→ unit exhibits moderate RQD w/ majority of fractures @ 50-90° C.A	19151	54.65	56.85			

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From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
		*remainder of description done as core is received	19152	56.85	58.60			
			19153	58.60	60.50			
		-@ 49.65 → well developed clay + carb (5cm wide)	19154	60.50	62.55			
		-@ 51.10 → 52.50 → well developed chl altn assoc. w/ a convoluted	19155	62.55	64.50			
		fracture sub parallel w/ C.A → local brecciation	19156	64.50	66.50			
		-@ 53.85 - 59.70 → patchy to well developed clay altn of matrix + weak	19157	66.50	68.50			
		carbonate	19158	68.50	70.05			
		-@ 56.60 → 57.27 → carb vein let @ low angle w/ chl altn	19159	70.05	71.25			
		-@ 57.27 - 71.25 → well developed clay (kaolinization) + carb pervasive						
		→ lower contact @ 50° C.A						
71.25	73.05	ANDESITE DYKE? → (possible remnant volcanic xenolith)	19160	71.25	73.05			
		- fine gr, dk grey, massive						
		- wkly magnetic → wk to moderately carbonated throughout						
		- random carb stringers (2-3% of unit)						
		- locally, well developed py as wispy stringers to patchy → <1%						
		- local intercepts of monzonite → 10-20 cm across						
		- lower contact @ 50° CA						
73.05	76.60	MONZONITE	19161	73.05	75.10			
			19162	75.10	76.60			
		- similar to 9.57 - 71.25						
		- mottled texture locally, due to local silicification & mixing w/ local						
		andesitic intercepts (dyke or xenoliths?) → where silicified local hematitic altn						
		of magnetite along fractures (however colour is closer to K-spar altn ???)						
		- wkly magnetic						
		- lower 50 cm of unit altd to chl + biotite → magnetite destroyed → assoc						
		w/ wk carbonate → lower contact @ 65° C.A						

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
76.60	84.07	Qtz + BIOTITE SILTSTONE	19163	76.60	78.80			
			19164	78.80	80.00			
		- silicified siltstone w/ very well developed secondary biotite altn	19165	80.00	81.75			
		- fine to very fine gr, lite smoky grey, to dk brown, massive/mottled texture	19166	81.75	82.65			
		- qtz is massive and exhibits very diffuse green hue due to wk chlor altn	19167	82.65	84.07			
		- biotite = 40% of unit as wispy bands and semi pervasive patches ⇒ bands						
		range from 40°-80° C.A ⇒ some bending as chlorite						
		- unit is wkly carbonated due to < 5% carbonate stringers						
		- @ 81.75 - 82.65 ⇒ an andesite dyke w/ biotite altn ⇒ highly clay altid @						
		upper contact of dyke						
		- 2-3% pyrite occurs thruout as wispy patches ⇒ well developed in dyke						
		- lower contact @ 50° C.A						
84.07	84.90	QTZ FELDSPAR PORPHYRY DYKE (QFP)	19168	84.07	84.90			
								✓
		- fine grained clay altid dull brown matrix w/ 20-30% anhedral strongly phenocrysts						
		- upper & lower sections are kaolinized w/ mod 50 cm dk mottled brown/grey						
		due to qtz phenocrysts and wkly clay altered matrix						
		- carb + chl stringers/veinlets +/- py						
		- pyrite is evident thruout unit ± 5% as disseminated to patchy						
		- lower contact @ 40° C.A						
84.90	90.00	QTZ + BIOTITE SILTSTONE	19169	84.90	86.50			
			19170	86.50	88.40			
		- similar to 76.60-84.07 ⇒ except qtz % up to 65-75% ⇒ wispy	19171	88.40	90.00			
		biotite more localized ⇒ local fractures exhibit carb infill w/ black chlorite						
		altn ⇒ well developed carbonate veinlets @ 88.30-88.40 ⇒ local pyrite						
		as disseminated, patchy, fracture filling but best developed w/ carb						
		stringers (except 88.30-88.40) ⇒ 3-4% overall ⇒ lower contact clay						
		altid @ 75° C.A - curvilinear						

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
90.00	93.05	ANDESITIC DYKE	19172	90.00	91.50			
			19173	91.50	93.05			
		- fine to med gr, dk greenish grey, massive						
		- wkly carbonated - non magnetic						
		- exhibits well developed py @ 91.75 - 92.80 as mostly, linear, parallel stringers (7-10% within intercept) - stringers @ 30° C.A ⇒ 3-5% py overall → local hematic altn on fractures						
		- local carb veinlets @ 25 - 50° C.A						
		- local more medium grained texture - wkly porphyritic & dk brown						
		- lower contact @ 60° C.A						
93.05	93.86	QTZ + BIOTITE SILTSTONE	19174	93.05	93.86			
		- same as 84.90 - 90.00						
		- 30% biotite as wispy bands sub parallel @ 60-70° C.A						
		- qtz is wkly chloritic						
		- 2-3% py → diss & assoc w/ either qtz+bio rich bands/veinlets or w/ carb						
		lower contact @ 50° CA						
93.86	95.70	SILICIFIED SILTSTONE	19175	93.86	95.70			
		- similar to above But no biotite						
		- very fine gr, dull smoky grey, massive						
		- high degree of healed micro fractures - random angles						
		- massive aphanitic qtz w/ wk local chl altn						
		- 2-3% py as disem. nuclei & along fractures +/- chl						
		- doc clay rich bed - 20 cm wide ⇒ @ 60° CA → carbonated throughout						
		⇒ dull beige green - possible skarn type altn of limey clasts interbed						
		- lower contact @ gradational						

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
95.70	97.00	BEDDED SILTSTONE	19176	95.70	97.00			
		- fine gr, dk grey to dull green, bedded to locally massive						
		- local carb rich beds w/ highly siliceous beds ranging from very dk grey						
		to dk brown (biotite?) ⇒ carb rich beds also siliceous ⇒ carb rich beds						
		exhibit py + epidote thin stringers						
		- bedding - planer well defined @ 65-70° ⇒ beds are 5-25 cm wide						
		w/ 1cm wide inter-bedding within each type of bed ⇒ gradual bedding to						
		diffuse to distinguish younging						
		- lower 25 cm silicified w/ weak chlorite						
		- altered 'skarn' beds should be checked for forsterite and/or fayalite						
		- ≤2% py as described above						
97.00	97.65	MONZONITE DYKE	19177	97.00	97.65			
		- 65 cm wide dyke of monzonite within siliceous / silicified sediments						
		- fine to med gr, mottled grey/green, massive						
		- fine gr matrix ⇒ ~~##~~ is predominantly plag + sericite + clay ⇒ plag phenocrysts						
		altered to mostly sericite - mafics are dissolved - fine grained ⇒ matrix						
		again exhibit 'punkelitic' beige coloured clay						
		- trace diss py						
		- minor stringers of carb						
		- lower contact @ 70°						
97.65	113.65	SILICIFIED SILTSTONE	19178	97.65	99.67			
			19179	99.67	101.15			
		- fine gr to aphanitic, lite smoky grey, massive to locally bedded	19180	101.15	103.15			
		- bedded sub-unit occurs from 97.65 to 101.15 ⇒ thin (0.5-2cm) yellow/	19181	103.15	105.00			
		beige clay rich planer beds within highly siliceous massive siltstone	19182	105.00	106.60			
		(silicified) ⇒ beds are 10-15% of subunit; @ 50-60° C.A	19183	106.60	108.40			

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
		- remainder of unit does not exhibit bedding	19184	108.90	110.25			
		- From 101.15 to bottom of unit @ 113.65 the unit is characterized by	19185	110.25	111.10			
		massive smoky grey gtz w/ a moderate to high degree of healed micro	19186	111.10	112.60			
		fractures @ highly random angles - NOT PLANAR ⇒ micro fractures give the unit a	19187	112.60	113.65			
		mottled texture due to infill by sheet chlorite, carb and most common						
		dull yellow / beige clay - kaolinite AND local pyrite						
		- From 109.45 - 110.70 @ steeply dipping large fracture w/ clay +/- carb						
		plus local unconsolidated fragments suggests a fault zone						
		- as the unit becomes proximal to the lower monzonite clay altn of micro						
		fractures becomes more developed						
		- pyrite occurs as disseminated + fracture fill ⇒ one veinlet @ 1cm wide						
		occurs @ 108.70						
		- lower contact @ irregular but sharp						
113.65	119.04	MONZONITE	19188	113.65	115.80			
			19189	115.80	117.85			
		- highly altered ⇒ CLAY / KAOLINITE	19190	117.85	119.05			
		- v.k carb throughout						
		- clay in a light beige colour - halo ⇒ porphyritic texture completely						
		overprinted except @ upper 50 cm						
		- 2-3% py esses w/ patchy, secondary gtz						
		- clay altn esp. intensely developed @ 116.15 - 117.45 w/ local carb						
		- lower contact @ 50° C.A						
119.04	124.15	SILICIFIED SILTSTONE	19191	119.05	120.55			
			19192	120.55	122.50			
		- fine to very fine grained, massive bedded, smoky grey	19193	122.50	124.15			
		- similar to 97.65 - 113.65						
		- remnant bedding is diffuse but well preserved @ 50-55° - beds are						
		<1 - 7 cm wide ⇒ some exhibit dunn coloured clay altn - soft						

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From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
		- moderate microfractures w/ clay or qtz or py						
		- 1-2% py thruout within fxs or disseminated → well developed @ 124.00						
		- lower contact @ 55° C.A						
124.15	125.10	MONZONITE	19194	124.15	125.10			
		- pervasive, well developed clay altn						
		- clay + plag + biotite +/- sericite						
		- intrusive texture preserved thruout						
		- very light greenish grey						
		- 1% diss py within interstitials						
		- minor carb veinlets						
		- biotite absent within lower 40 cm but qtz eyes(?) present						
		- lower contact @ 70° CA						
125.10	126.95	SILICEOUS SILTSTONE	19195	125.10	126.95			
		- similar to 119.04 - 124.15'						
		- bedding well preserved @ lower half of unit @ 50° CA → bedding varies						
		from clay rich to biotite rich → unit still > 60% qtz						
		- <1% py as disseminated						
		- lower contact @ 50° CA						
126.95	128.70	MAFIC DYKE	19196	126.95	128.70			
		- dk greenish green, fine to med gr, massive						
		- typical unit w/ fine gr elt plag matrix w/ 30% anhedral, med gr						
		'clots' or phenocrysts of chloritic altered pyroxene						
		- locally, very wkly, magnetic → one magnetite veinlet @ 127.25' w/						
		carb and wk hematite wall rock altn						

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
		- unit exhibits well developed py locally, assoc w/ 2-3% qtz stringers and veinlets → 1-2% overall						
		- lower contact @ 50° C.A						
128.70	159.15	MONZONITE						
		* due to various altn assemblages the overall unit will be logged as subunits						
		@ 128.70 - 138.50 : typical intrusive texture overprinted to varying	19197	128.70	130.95			
		degrees by K spar + clay + sericite altn → colour is mottled dull	19198	130.95	133.20			
		light pink w/ buff coloured greyish screen → phenocrysts of euhedral plag	19199	133.20	135.15			
		mostly altd to white clay and possibly sericite → fine gr biotite as phenocrysts	19200	135.15	137.00			
		occur throughout → 30% of biotite exhibits 'poikilitic' altn to buff	19201	137.00	138.50			
		coloured, fibrous clay like mineral → talc(??)						
		- 1-2% of unit is random qtz stringers/veinlets						
		- trace diss py						
		- bottom metre begins to exhibit better preserved porphyritic texture and decrease in altn, esp K spar - plag phenocrysts only locally altd here						
		@ 138.50 - 146.25 : very wkly altd to 'fresh' → dk mottled grey w/	19202	138.50	140.50			
		well preserved porphyritic texture - plag phenocrysts white and anhedral and	19203	140.50	142.60			
		medium grained → biotite is dominant matic - euhedral and again displays	19204	142.60	144.35			
		wk but consistent poikilitic altn to light coloured, fibrous clay type	19205	144.35	146.25			
		mineral → very wk maroon hue to matrix - iron rich → K spar altn is						
		mostly absent → @ 139.30 @ steeply dipping (5° to CA) qtz-py veinlet						
		w/ hematite + sericite + clay, wall rock altn → one K spar patch @ 145.70						
		- trace diss cpy + <1% diss py						
		next page						

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
-		@ 146.25-149.55 ; well developed but patchy K-spar altn → altn is very fine grained and obliterates /overprints intrusive /porphyritic texture → rock is dull pink/orange → local vugs of carb +/- qtz occur → sulphides are trace disp w/ << trace cpy (core scan @ 149.20 → ground core locally	19206	146.25	149.55			
		@ 149.55 - 151.30 ; fresh to very wkly altered (clay+sericite) → porphyritic /intrusive texture well preserved → minor qtz-carb veinlets are planar @ various angles and are <1cm wide → matrix also exhibits very wk dull pink K-spar altn → <<1% disp cpy noted on broken face of core	19207	149.55	151.30			
		@ 151.30 - 152.75 ; substantial increase in clay+sericite altn plus wk patchy K-spar altn (not as strong as 146.25-149.55) → clay altn increases down-hole → local "white" calcite in vugs → no sulphides observed	19208	151.30	152.75			
		@ 152.75 - 154.60 ; highly-sericitized matrix exhibits a very light greenish grey colour → plag phenocrysts diffuse to absent due to sericitization → biotite visible thru most of subunit → subunit exhibits highly random veinlets of qtz + carb w/ well developed irregular black chlorite(?) altn and very fine gr sericitic wall rock → thin altn completely overprints intrusive texture including absence of biotite → wallrock altn exhibits patchy py +cpy @ <1% of subunit	19209	152.75	154.60			
		@ 154.60 - 156.05 ; sericitic matrix → intrusive /porphyritic texture diffuse but evident thruout → thin planar qtz stringers @ 60-80° CA exhibit wk to moderate K-spar wall rock altn → plag phenocrysts mostly altd to sericite or clay → trace disp py	19210	154.60	156.05			
		@ 156.05 - 159.15 ; pervasive clay +sericitic altn throughout → biotite present only locally → wkly developed, patchy K-spar 'staining' → two veinlets of very qtz rich siltstone (silicified) @ 15° and 40° CA to core (both within sample # 19211) → possibly qtz veins but doubtful due to banding within	19211	156.05	157.80			
			19212	157.80	159.15			

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
		qtz and pervasive, at significant wallrock altn → proximal to lower contact coarse sub angular fragments of qtz ø ≈ 1 cm across also occur						
		- sulphides are very rare except within qtz intercepts where cpy ≈ ≤ 1% within qtz → lower contact 80°						
159.15	159.95	SILICIFIED SILTSTONE	19213	159.15	159.95			
		- very fine gr, dk smoky grey, massive w/ very weak / diffuse local banding						
		- complete overprint of protolith by secondary qtz						
		- moderate degree of healed microfractures - filled by carb and to a lesser degree pyrite → cpy observed on broken face of core w/ cpy ≈ < 1% py:cpy						
		- lower contact @ 60°						
159.95	162.55	MAFIC DYKE	19214	159.95	162.55			
		- dk greenish grey, fine grained massive						
		- wkly carbonated throughout						
		- locally well developed pyrite associated w/ carb infill and veinlets ≥ 3%						
		- chill margins @ both contacts → esp well developed @ lower contact → anhedral to rare euhedral augite phenocrysts in chill margin @ lower contact						
162.55	166.55	SILICEOUS MUDSTONE	19215	162.55	164.40			
			19216	164.40	166.55			
		- very fine gr, mottled black / beige, massive						
		- highly siliceous mudstone w/ patchy, moderately to well developed clay altn → also exhibits 'salmon' coloured patchy altn locally associated w/ secondary qtz flooding → second phase of qtz veinlets cross cuts 'salmon' altn → local carb stringers						
		- < 1% py assoc w/ more common beige coloured clay altn and locally as Fracture fill						

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
		- @ 164.70 - 165.00 → an intensely, cla, altd mafic dyke w/ wk qtz veins →						
		contacts are 10-20° C.A → thus steeply dipping						
		- lower contact of unit @ 60° C.A						
166.55	167.70	GRANODIORITE DYKE	19217	166.55	167.70			
		- massive, mottled grey, light greenish green & pink fine to coarse gr						
		- coarse to medium grained crystals of mostly plag and minor K-spar PEGS						
		biotite within qtz rich matrix → 'textbook' intrusive texture						
		- trace diss py						
		- lower contact @ 'L' shaped → half of contact @ 90° the half @ 5° C.A						
		and is moderately clay altd						
1.7								
167.70	168.90	SILICEOUS MUDSTONE	19218	167.70	168.90			
		- same as 162.55 - 166.55'						
		- diffuse bedding planes @ 50-55° C.A → no 'salmon' coloured altn						
		- lower contact @ gradational						
168.90	171.15	SILICIFIED SILTSTONE (?) (- completely overprinted mafic flow ????)	19219	168.90	171.15			
		- very fine grained, massive → highly mottled unit						
		- dk smoky grey aphanatic qtz w/ patchy to semi pervasive beige/cream coloured						
		clay altn - clay altn is also moderately siliceous						
		- protolith totally obliterated						
		- moderate degree of randomly oriented healed microfractures - w/ qtz						
		- up to 1% diss py						
		- lower contact @ 35°						

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From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
171.15	173.00	MAFIC FLOW						
		- dk grey / black, fine gr., massive						
		- v- cutting stringers of qtz and carb						
		- no visible sulphides						
		- lower contact gradational						
173.00	174.80	SILICIFIED SILTSTONE (over-printed flow ???)						
		- exact same as 168.90 - 171.15						
		- lower contact gradational						
174.80	180.45	MAFIC VOLCANICS -- TUFF						
		- dk grey / black, fine gr., massive to wkly banded						
		- very diffuse banding @ 1-3 cm wide w/ local intercepts of more massive						
		texture → banding represents poorly formed tuffaceous beds → banding @						
		70-90° CA → bands are commonly lens shaped on cm scale						
		- unit exhibits 3-4% qtz and qtz/carb stringers @ highly variable						
		random orientation → stringers locally exhibit wk chlorite alt'n						
		- <1% py as disseminated						
		- lower contact sharp @ 55° CA - clay altd						
180.45	182.08	SILTSTONE - ALT'D						
		- fine gr. massive, mottled / patchy grey - dull greenish grey colour						
		- protolith texture completely overprinted by patchy qtz + chl +/- clay						
		alt'n : %chl = %qtz => diffuse fragmental / breccia texture proximal to lower contact						
		- trace diss py						
		- lower contact sharp @ 90° C.A						

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
182.08	184.75	MONZONITE DYKE	19220	182.08	184.75			
		- completely altered to clay → crumbles at slight pressure of hammer						
		- biotite crysts completely to chl						
		- wk pervasive K spar staining throout						
		- contains one xenolith of lower volcanics						
		- lower 80 cm shows less intense clay altn w/ biotite present						
		- 1% fine disc magnetite						
		- no visible sulphides						
		- lower contact @ 80° CA						
184.75	193.60	MAFIC VOLCANICS	19221	190.50	193.10			
		- top 4 metres same as 174.80 - 180.45						
		- remainder of unit is dark greenish grey and massive throout representing a Flow → wkly chloritic						
		- 2% of unit is carb veinlets @ various / random orientations + wkly developed hematite altn						
		- locally well developed py assoc w/ carb or as fx fill and diss → 1% overall						
		- lower contact w/ clay altn @ 40° C.A						
193.60	200.30	MAFIC VOLCANICS						
		- different from above due to semi pervasive altn						
		- dk grey/black to dull light greenish grey → mottled texture locally						
		- local but very well developed clay altn zones up to 50 cm wide → clay altn zones are usually orientated @ ≈ 40-50° C.A and						
		contain carb + chl +/- py → carb veinlets @ random orientation occur throughout @ ≈ 10% of unit → 1% py overall → local brecciation of						
		wall rock within carb veinlets → qtz+ carb veinlets @ 199.40 w/ associated						

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From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
		patchy, silicification of wall rock						
		- lower contact sharp @ 45°						
200.30	202.25	DIORITE DYKE						
		- mottled lite grey / dk green fine to medium gr, massive						
		- lite grey due to pervasive clay + sericite alt'n of plag in matrix and phenocrysts -> mafic phenocrysts to chl => patchy, mottled green from pervasive secondary overprinting by chlorite (& possibly mafic xenolithic host dissolved)						
		- no visible sulphides						
		- lower contact @ 90° C.A						
202.25	202.60	FAULT ZONE / GOUGE						
		- overturned @ 40° C.A						
		- clay + chl + carb + sub angular rock fragments w/ local bands (10 cm) of less altered volcanic						
		- lower contact @ 90° C.A						
202.60	205.35	FAULT (??) BRECCIA	19222	202.60	203.85			
			19223	203.85	205.35			
		- clast supported -> coarse angular - sub-angular to sub rounded fragments of predominantly aphanitic q+z and to a much lesser degree softer dull brown sediment fragments ≈ 60% of unit -> matrix is very fine gr, moderately soft and slightly chloritic -> minor carb as infill => <1% py as disseminated clusters						
		- lower contact sharp @ 50° C.A -> cross cuts bedding @ angle						
		EOH @ 205.35 m						

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From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
205.35	219.15	SILICEOUS SILTSTONE	19224	212.80	214.65			
		- fine gr, grey, massive to locally bedded						
		- beds are generally dk brown mudstone → <1-4cm wide → @ 40-50°CA →						
		siliceous siltstone beds are wider (up to 1m) and massive						
		- @ 212.70 - 214.85 → silicification w/ wk chl + py occurs						
		- carbonate on local fractures						
		- ≤ 1% py overall						
		E.O.H.						

KEMESS CENTRE DRILL HOLE ASSAY RESULTS FOR KC-00-02

Hole_ID	Sam_ID	From	To	Width	Cu_ppm	Au_ppb	Ag_ppm
KC-00-02	19126	4.57	6.57	2.00	265	2.5	0.2
KC-00-02	19127	6.57	8.57	2.00	470	15	0.8
KC-00-02	19128	8.57	10.57	2.00	233	2.5	0.2
KC-00-02	19129	10.57	12.57	2.00	104	2.5	0.1
KC-00-02	19130	12.57	14.57	2.00	151	2.5	0.1
KC-00-02	19131	14.57	16.57	2.00	151	2.5	0.1
KC-00-02	19132	16.57	18.57	2.00	86	2.5	0.1
KC-00-02	19133	18.57	20.57	2.00	66	10	0.1
KC-00-02	19134	20.57	22.50	1.93	240	5	0.2
KC-00-02	19135	22.50	24.50	2.00	84	2.5	0.2
KC-00-02	19136	24.50	26.50	2.00	57	2.5	0.1
KC-00-02	19137	26.50	28.50	2.00	118	2.5	0.1
KC-00-02	19138	28.50	30.50	2.00	147	2.5	0.1
KC-00-02	19139	30.50	32.50	2.00	105	2.5	0.1
KC-00-02	19140	32.50	34.50	2.00	62	2.5	0.1
KC-00-02	19141	34.50	36.50	2.00	36	2.5	0.1
KC-00-02	19142	36.50	38.50	2.00	21	2.5	0.1
KC-00-02	19143	38.50	40.50	2.00	25	2.5	0.1
KC-00-02	19144	40.50	42.50	2.00	14	2.5	0.1
KC-00-02	19145	42.50	44.50	2.00	14	2.5	0.1
KC-00-02	19146	44.50	46.50	2.00	12	2.5	0.1
KC-00-02	19147	46.50	48.50	2.00	31	2.5	0.1
KC-00-02	19148	48.50	50.50	2.00	12	2.5	0.1
KC-00-02	19149	50.50	52.50	2.00	12	2.5	0.1
KC-00-02	19150	52.50	54.65	2.15	30	2.5	0.1
KC-00-02	19151	54.65	56.85	2.20	12	2.5	0.1
KC-00-02	19152	56.85	58.60	1.75	9	2.5	0.1
KC-00-02	19153	58.60	60.50	1.90	11	2.5	0.1
KC-00-02	19154	60.50	62.55	2.05	64	2.5	0.1
KC-00-02	19155	62.55	64.50	1.95	67	2.5	0.1
KC-00-02	19156	64.50	66.50	2.00	85	2.5	0.1
KC-00-02	19157	66.50	68.50	2.00	35	2.5	0.1
KC-00-02	19158	68.50	70.05	1.55	74	2.5	0.1
KC-00-02	19159	70.05	71.25	1.20	34	2.5	0.1
KC-00-02	19160	71.25	73.05	1.80	487	2.5	0.2
KC-00-02	19161	73.05	75.10	2.05	189	2.5	0.1
KC-00-02	19162	75.10	76.60	1.50	25	2.5	0.1
KC-00-02	19163	76.60	78.80	2.20	73	2.5	0.1
KC-00-02	19164	78.80	80.00	1.20	68	2.5	0.1
KC-00-02	19165	80.00	81.75	1.75	66	2.5	0.1
KC-00-02	19166	81.75	82.65	0.90	60	2.5	0.1
KC-00-02	19167	82.65	84.07	1.42	63	2.5	0.1
KC-00-02	19168	84.07	84.90	0.83	67	2.5	0.1
KC-00-02	19169	84.90	86.50	1.60	91	2.5	0.1
KC-00-02	19170	86.50	88.40	1.90	45	2.5	0.1
KC-00-02	19171	88.40	90.00	1.60	64	2.5	0.1
KC-00-02	19172	90.00	91.50	1.50	102	2.5	0.2
KC-00-02	19173	91.50	93.05	1.55	217	2.5	0.2
KC-00-02	19174	93.05	93.86	0.81	205	10	0.2
KC-00-02	19175	93.86	95.70	1.84	137	2.5	0.2
KC-00-02	19176	95.70	97.00	1.30	368	10	0.2

KEMESS CENTRE DRILL HOLE ASSAY RESULTS FOR KC-00-02

Hole_ID	Sam_ID	From	To	Width	Cu_ppm	Au_ppb	Ag_ppm
KC-00-02	19177	97.00	97.65	0.65	37	2.5	0.1
KC-00-02	19178	97.65	99.67	2.02	211	2.5	0.1
KC-00-02	19179	99.67	101.15	1.48	137	2.5	0.1
KC-00-02	19180	101.15	103.15	2.00	81	2.5	0.2
KC-00-02	19181	103.15	105.00	1.85	59	5	0.2
KC-00-02	19182	105.00	106.60	1.60	47	2.5	0.2
KC-00-02	19183	106.60	108.40	1.80	51	2.5	0.1
KC-00-02	19184	108.40	110.25	1.85	175	5	0.4
KC-00-02	19185	110.25	111.10	0.85	300	45	0.1
KC-00-02	19186	111.10	112.60	1.50	92	2.5	0.1
KC-00-02	19187	112.60	113.65	1.05	181	2.5	0.2
KC-00-02	19188	113.65	115.80	2.15	175	10	0.2
KC-00-02	19189	115.80	117.85	2.05	332	10	0.4
KC-00-02	19190	117.85	119.05	1.20	300	15	0.6
KC-00-02	19191	119.05	120.55	1.50	112	15	0.1
KC-00-02	19192	120.55	122.50	1.95	65	5	0.2
KC-00-02	19193	122.50	124.15	1.65	100	5	0.4
KC-00-02	19194	124.15	125.10	0.95	182	2.5	0.1
KC-00-02	19195	125.10	126.95	1.85	125	2.5	0.1
KC-00-02	19196	126.95	128.70	1.75	1120	30	0.8
KC-00-02	19197	128.70	130.95	2.25	172	2.5	1
KC-00-02	19198	130.95	133.20	2.25	41	2.5	0.1
KC-00-02	19199	133.20	135.15	1.95	75	2.5	0.1
KC-00-02	19200	135.15	137.00	1.85	70	2.5	0.1
KC-00-02	19201	137.00	138.50	1.50	322	10	0.2
KC-00-02	19202	138.50	140.30	1.80	436	2.5	0.2
KC-00-02	19203	140.30	142.60	2.30	210	5	0.1
KC-00-02	19204	142.60	144.35	1.75	288	2.5	0.1
KC-00-02	19205	144.35	146.25	1.90	31	2.5	0.1
KC-00-02	19206	146.25	149.55	3.30	143	2.5	0.1
KC-00-02	19207	149.55	151.30	1.75	35	2.5	0.1
KC-00-02	19208	151.30	152.75	1.45	20	2.5	0.1
KC-00-02	19209	152.75	154.60	1.85	601	5	4.4
KC-00-02	19210	154.60	156.05	1.45	257	2.5	0.2
KC-00-02	19211	156.05	157.80	1.75	270	2.5	0.1
KC-00-02	19212	157.80	159.15	1.35	262	2.5	0.1
KC-00-02	19213	159.15	159.95	0.80	727	10	0.6
KC-00-02	19214	159.95	162.55	2.60	258	30	0.2
KC-00-02	19215	162.55	164.40	1.85	116	5	0.1
KC-00-02	19216	164.40	166.55	2.15	153	2.5	0.1
KC-00-02	19217	166.55	167.70	1.15	43	2.5	0.1
KC-00-02	19218	167.70	168.90	1.20	22	2.5	0.1
KC-00-02	19219	168.90	171.15	2.25	41	2.5	0.1
KC-00-02	19220	182.08	184.75	2.67	88	2.5	0.1
KC-00-02	19221	190.50	193.10	2.60	470	2.5	0.2
KC-00-02	19222	202.60	203.85	1.25	872	20	0.2
KC-00-02	19223	203.85	205.35	1.50	75	2.5	0.1
KC-00-02	19224	212.80	214.65	1.85	139	2.5	0.1

ALS Chemex

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o: KEMESS MINE

P.O. BOX 3519
SMITHERS, BC
V0J 2N0

A0023510

Comments: ATTN: BRETT LAPEARE

CERTIFICATE A0023510

(PIL) - KEMESS MINE

Project: KEMESS CENTER
P.O. # : 200950

Samples submitted to our lab in Vancouver, BC.
This report was printed on 27-JUL-2000.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
225	101	Run as received
238	20	Nitric-aqua-regia digestion
229	20	ICP - AQ Digestion charge

* NOTE 1:

The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Sr, Ti, Tl, W.

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	99	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
6	99	Ag ppm: HNO3-aqua regia digest	AAS-BKGD CORR	0.2	100.0
2	99	Cu ppm: HNO3-aqua regia digest	AAS	1	10000
2118	20	Ag ppm: 32 element, soil & rock	ICP-AES	0.2	100.0
2119	20	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
2120	20	As ppm: 32 element, soil & rock	ICP-AES	2	10000
557	20	B ppm: 32 element, rock & soil	ICP-AES	10	10000
2121	20	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
2122	20	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
2123	20	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
2124	20	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
2125	20	Cd ppm: 32 element, soil & rock	ICP-AES	0.5	500
2126	20	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
2127	20	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
2128	20	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
2150	20	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
2130	20	Ga ppm: 32 element, soil & rock	ICP-AES	10	10000
2131	20	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
2132	20	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
2151	20	La ppm: 32 element, soil & rock	ICP-AES	10	10000
2134	20	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
2135	20	Mn ppm: 32 element, soil & rock	ICP-AES	5	10000
2136	20	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
2137	20	Na %: 32 element, soil & rock	ICP-AES	0.01	10.00
2138	20	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
2139	20	P ppm: 32 element, soil & rock	ICP-AES	10	10000
2140	20	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
551	20	S %: 32 element, rock & soil	ICP-AES	0.01	5.00
2141	20	Sb ppm: 32 element, soil & rock	ICP-AES	2	10000
2142	20	Sc ppm: 32 elements, soil & rock	ICP-AES	1	10000
2143	20	Sr ppm: 32 element, soil & rock	ICP-AES	1	10000
2144	20	Ti %: 32 element, soil & rock	ICP-AES	0.01	10.00
2145	20	Tl ppm: 32 element, soil & rock	ICP-AES	10	10000
2146	20	U ppm: 32 element, soil & rock	ICP-AES	10	10000
2147	20	V ppm: 32 element, soil & rock	ICP-AES	1	10000
2148	20	W ppm: 32 element, soil & rock	ICP-AES	10	10000
2149	20	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000

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To: KEMESS MINE

P.O. BOX 3519
SMITHERS, BC
V0J 2N0

Project : KEMESS CENTER
Comments: ATTN: BRETT LAPEARE

Page Number :1-A
Total Pages :3
Certificate Date: 27-JUL-2000
Invoice No. :I0023510
P.O. Number :200950
Account :PIL

CERTIFICATE OF ANALYSIS A0023510

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm Aqua R	Cu ppm	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %
19102	225	238	< 5	< 0.2	25	< 0.2	2.75	2	< 10	320	2.0	< 2	0.60	< 0.5	9	49	25	3.76	10	1	0.78
19103	225	--	< 5	< 0.2	27	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19104	225	--	< 5	< 0.2	15	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19105	225	--	< 5	< 0.2	27	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19106	225	--	< 5	< 0.2	24	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19107	225	238	10	< 0.2	31	< 0.2	1.36	< 2	< 10	130	0.5	< 2	0.60	0.5	2	31	30	1.63	< 10	< 1	0.26
19108	225	--	< 5	< 0.2	16	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19109	225	--	< 5	< 0.2	20	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19110	225	--	< 5	< 0.2	31	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19111	225	--	< 5	< 0.2	14	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19112	225	238	5	< 0.2	21	< 0.2	3.77	10	< 10	480	< 0.5	12	4.91	< 0.5	17	111	15	4.90	< 10	2	0.09
19113	225	--	15	0.2	207	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19114	225	--	< 5	< 0.2	37	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19115	225	--	45	< 0.2	65	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19116	225	--	60	< 0.2	79	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19117	225	238	20	< 0.2	67	< 0.2	0.40	22	< 10	130	< 0.5	4	6.28	< 0.5	10	60	61	1.40	< 10	< 1	0.04
19118	225	--	< 5	0.2	412	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19119	225	--	10	< 0.2	96	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19120	225	--	< 5	< 0.2	17	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19121	225	--	5	< 0.2	26	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19122	225	238	< 5	< 0.2	57	< 0.2	0.61	42	< 10	320	< 0.5	< 2	3.20	< 0.5	8	67	54	1.80	< 10	< 1	0.09
19123	225	--	< 5	0.2	209	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19124	225	--	< 5	< 0.2	95	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19125	225	--	< 5	0.2	145	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19126	225	--	< 5	0.2	265	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19127	225	238	15	0.8	470	0.8	1.80	4	< 10	140	0.5	< 2	2.83	0.5	99	29	448	3.12	< 10	< 1	0.11
19128	225	--	< 5	0.2	233	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19129	225	--	< 5	< 0.2	104	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19130	225	--	< 5	< 0.2	151	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19131	225	--	< 5	< 0.2	151	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19132	225	238	< 5	< 0.2	86	< 0.2	1.34	< 2	< 10	130	< 0.5	< 2	2.15	< 0.5	9	42	81	2.93	< 10	1	0.06
19133	225	--	10	< 0.2	66	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19134	225	--	5	0.2	240	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19135	225	--	< 5	0.2	84	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19136	225	--	< 5	< 0.2	57	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19137	225	238	< 5	< 0.2	118	< 0.2	1.59	< 2	< 10	150	< 0.5	< 2	1.73	< 0.5	12	34	125	3.11	< 10	< 1	0.07
19138	225	--	< 5	< 0.2	147	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19139	225	--	< 5	< 0.2	105	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19140	225	--	< 5	< 0.2	62	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19141	225	--	< 5	< 0.2	36	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

KC-00-02

CERTIFICATION: _____

ALS Chemex

Aurora Laboratory Services Ltd.
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To: KEMESS MINE

P.O. BOX 3519
SMITHERS, BC
V0J 2N0

Project : KEMESS CENTER
Comments: ATTN: BRETT LAPEARE

Certificate Date: 27-JUL-2000
Invoice No. :10023510
P.O. Number :200950
Account :PIL

CERTIFICATE OF ANALYSIS A0023510

SAMPLE	PREP CODE		La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
19102	225	238	< 10	1.21	250	11	0.07	8	570	< 2	0.20	< 2	8	41	0.12	< 10	< 10	43	< 10	146
19103	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19104	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19105	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19106	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19107	225	238	10	0.40	335	6	0.04	5	60	4	0.07	< 2	1	31	< 0.01	10	< 10	6	< 10	64
19108	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19109	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19110	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19111	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19112	225	238	< 10	2.85	1315	3	0.20	35	600	< 2	0.21	< 2	15	125	0.19	< 10	< 10	128	< 10	114
19113	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19114	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19115	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19116	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19117	225	238	< 10	0.53	1815	8	0.01	43	150	< 2	0.56	4	6	74	< 0.01	< 10	< 10	13	< 10	44
19118	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19119	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19120	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19121	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19122	225	238	< 10	1.35	1380	9	0.03	28	520	2	0.30	2	6	183	< 0.01	< 10	< 10	21	< 10	50
19123	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19124	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19125	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19126	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19127	225	238	10	0.84	435	37	0.06	4	650	4	0.45	< 2	6	120	< 0.01	< 10	< 10	56	< 10	32
19128	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19129	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19130	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19131	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19132	225	238	< 10	0.87	420	9	0.08	5	660	< 2	0.03	2	7	87	< 0.01	< 10	< 10	67	< 10	26
19133	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19134	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19135	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19136	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19137	225	238	10	1.00	410	7	0.09	3	700	< 2	0.08	2	7	107	< 0.01	< 10	< 10	69	< 10	28
19138	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19139	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19140	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19141	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

KC-10-02

CERTIFICATION: _____

ALS Chemex

Aurora Laboratory Services Ltd.
Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: KEMESS MINE

P.O. BOX 3519
SMITHERS, BC
V0J 2N0

Project : KEMESS CENTER
Comments: ATTN: BRETT LAPEARE

Page Number :2-A
Total Pages :3
Certificate Date: 27-JUL-2000
Invoice No. :I0023510
P.O. Number :200950
Account :PIL

KC-00-52

CERTIFICATE OF ANALYSIS A0023510

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm Aqua R	Cu ppm	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %
19142	225	238	< 5	< 0.2	21	< 0.2	1.51	2	< 10	180	< 0.5	< 2	2.30	0.5	10	42	24	2.88	< 10	< 1	0.10
19143	225	--	< 5	< 0.2	25	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19144	225	--	< 5	< 0.2	14	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19145	225	--	< 5	< 0.2	14	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19146	225	--	< 5	< 0.2	12	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19147	225	238	< 5	< 0.2	31	< 0.2	1.41	< 2	< 10	140	< 0.5	< 2	1.79	< 0.5	9	46	31	3.40	< 10	< 1	0.08
19148	225	--	< 5	< 0.2	12	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19149	225	--	< 5	< 0.2	12	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19150	225	--	< 5	< 0.2	30	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19151	225	--	< 5	< 0.2	12	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19152	225	238	< 5	< 0.2	9	< 0.2	1.88	2	< 10	360	0.5	< 2	3.24	< 0.5	9	37	7	2.74	< 10	< 1	0.14
19153	225	--	< 5	< 0.2	11	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19154	225	--	< 5	< 0.2	64	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19155	225	--	< 5	< 0.2	67	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19156	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
19157	225	238	< 5	< 0.2	35	< 0.2	1.58	< 2	< 10	440	< 0.5	< 2	3.00	< 0.5	9	45	33	2.73	< 10	< 1	0.14
19158	225	--	< 5	< 0.2	74	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19159	225	--	< 5	< 0.2	34	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19160	225	--	< 5	0.2	487	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19161	225	--	< 5	< 0.2	189	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19162	225	238	< 5	< 0.2	25	< 0.2	1.85	6	< 10	390	< 0.5	< 2	1.32	< 0.5	10	87	23	3.58	< 10	< 1	0.31
19163	225	--	< 5	< 0.2	73	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19164	225	--	< 5	< 0.2	68	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19165 A	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19165 B	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19166	225	--	< 5	< 0.2	60	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19167	225	238	< 5	< 0.2	63	< 0.2	2.17	62	< 10	70	0.5	8	5.10	0.5	14	117	59	2.98	< 10	< 1	0.20
19168	225	--	< 5	< 0.2	67	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19169	225	--	< 5	< 0.2	91	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19170	225	--	< 5	< 0.2	45	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19171	225	--	< 5	< 0.2	64	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19172	225	238	< 5	0.2	102	< 0.2	2.43	36	< 10	30	< 0.5	< 2	4.94	< 0.5	19	217	96	4.46	< 10	< 1	0.28
19173	225	--	< 5	0.2	217	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19174	225	--	10	0.2	205	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19175	225	--	< 5	0.2	137	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19176	225	--	10	0.2	368	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19177	225	238	< 5	< 0.2	37	< 0.2	1.10	2	< 10	830	0.5	< 2	5.50	< 0.5	7	58	34	2.81	< 10	< 1	0.19
19178	225	--	< 5	< 0.2	211	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19179	225	--	< 5	< 0.2	137	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19180	225	--	< 5	0.2	81	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

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To: KEMESS MINE
P.O. BOX 3519
SMITHERS, BC
V0J 2N0

Project : KEMESS CENTER
Comments: ATTN: BRETT LAPEARE

Certificate Date: 27-JUL-2000
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KC-00-82

CERTIFICATE OF ANALYSIS A0023510

SAMPLE	PREP CODE		La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
19142	225	238	< 10	0.88	460	6	0.09	4	660	2	0.15	2	6	107	< 0.01	< 10	< 10	67	< 10	28
19143	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19144	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19145	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19146	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19147	225	238	< 10	1.10	555	6	0.09	5	680	< 2	< 0.01	6	7	70	< 0.01	< 10	< 10	76	< 10	30
19148	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19149	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19150	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19151	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19152	225	238	10	0.92	480	6	0.09	4	630	< 2	0.12	< 2	5	177	< 0.01	< 10	< 10	51	< 10	26
19153	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19154	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19155	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19156	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
19157	225	238	10	0.88	500	6	0.08	4	660	6	0.04	< 2	5	138	< 0.01	< 10	< 10	56	< 10	26
19158	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19159	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19160	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19161	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19162	225	238	< 10	1.20	405	15	0.09	10	700	2	0.06	6	5	90	0.04	< 10	< 10	71	< 10	30
19163	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19164	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19165 A	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19165 B	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19166	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19167	225	238	< 10	1.37	1005	36	0.07	37	900	< 2	1.17	2	9	144	0.04	< 10	< 10	158	< 10	82
19168	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19169	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19170	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19171	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19172	225	238	< 10	2.21	1260	11	0.08	54	920	< 2	1.63	6	15	118	0.10	< 10	< 10	121	< 10	118
19173	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19174	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19175	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19176	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19177	225	238	10	0.63	975	7	0.09	18	610	< 2	0.11	< 2	6	157	< 0.01	< 10	< 10	43	< 10	36
19178	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19179	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19180	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

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SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm Aqua R	Cu ppm	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %
19181	225	--	5	0.2	59	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19182	225	238	< 5	0.2	47	0.2	0.22	42	< 10	50	< 0.5	< 2	2.97	2.5	6	126	60	1.49	< 10	< 1	0.05
19183	225	--	< 5	< 0.2	51	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19184	225	--	5	0.4	175	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19185	225	--	45	< 0.2	300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19186	225	--	< 5	< 0.2	92	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19187	225	238	< 5	0.2	181	0.2	0.48	104	< 10	160	< 0.5	< 2	2.42	< 0.5	6	165	184	1.82	< 10	1	0.07
19188	225	--	10	0.2	175	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19189	225	--	10	0.4	332	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19190	225	--	15	0.6	300	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19191	225	--	15	< 0.2	112	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19192	225	238	5	0.2	65	0.2	0.38	226	< 10	40	< 0.5	< 2	2.33	0.5	15	183	66	2.05	< 10	< 1	0.05
19193	225	--	5	0.4	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19194	225	--	< 5	< 0.2	182	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19195	225	--	< 5	< 0.2	125	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19196	225	--	30	0.8	1120	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19197	225	--	< 5	1.0	172	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19198	225	--	< 5	< 0.2	41	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19199	225	238	< 5	< 0.2	75	< 0.2	0.62	< 2	< 10	410	0.5	< 2	5.34	< 0.5	6	34	70	2.30	< 10	< 1	0.17
19200	225	--	< 5	< 0.2	70	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19201	225	--	10	0.2	322	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19202	225	--	< 5	0.2	436	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

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19181	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19182	225	238	< 10	0.48	475	18	0.01	41	80	44	0.90	< 2	3	40	< 0.01	< 10	< 10	8	< 10	270
19183	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19184	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19185	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19186	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19187	225	238	< 10	0.22	400	35	0.02	31	1940	< 2	0.38	6	3	38	< 0.01	< 10	< 10	101	< 10	32
19188	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19189	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19190	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19191	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19192	225	238	< 10	0.80	530	26	0.02	86	370	20	1.20	4	5	66	< 0.01	< 10	< 10	14	< 10	142
19193	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19194	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19195	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19196	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19197	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19198	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19199	225	238	10	0.32	560	5	0.07	5	650	2	0.03	< 2	6	163	< 0.01	< 10	< 10	41	< 10	24
19200	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19201	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19202	225	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

CERTIFICATION: _____

ALS Chemex

Aurora Laboratory Services Ltd.
Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: KEMESS MINE

P.O. BOX 3519
SMITHERS, BC
V0J 2N0

A0024183

Comments: ATTN: BRETT LAPEARE

CERTIFICATE A0024183

(PIL) - KEMESS MINE

Project: KEMESS CENTRE
P.O. # : 200950

Samples submitted to our lab in Vancouver, BC.
This report was printed on 07-AUG-2000.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
214	119	Rcvd as pulp; mesh size checked
238	119	Nitric-aqua-regia digestion
229	23	ICP - AQ Digestion charge
* NOTE	1:	

The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Sr, Ti, Tl, W.

ANALYTICAL PROCEDURES 2 of 2

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
3	32	Mo ppm: HNO3-aqua regia digest	AAS	1	1000

ALS Chemex

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Project : KEMESS CENTRE
Comments: ATTN: BRETT LAPEARE

Certificate Date: 01-AUG-2000
Invoice No. :I0024183
P.O. Number :200950
Account :PIL

CERTIFICATE OF ANALYSIS A0024183

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm Aqua R	Cu ppm	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %
19203	214	238	5	< 0.2	210	< 0.2	0.94	< 2	< 10	190	< 0.5	< 2	2.66	< 0.5	9	72	212	3.09	< 10	< 1	0.12
19204	214	238	< 5	< 0.2	288	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19205	214	238	< 5	< 0.2	31	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19206	214	238	< 5	< 0.2	143	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19207	214	238	< 5	< 0.2	35	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19208	214	238	< 5	< 0.2	20	< 0.2	0.73	2	< 10	470	0.5	< 2	5.49	< 0.5	7	28	17	2.70	< 10	< 1	0.18
19209	214	238	5	4.4	601	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19210	214	238	< 5	0.2	257	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19211	214	238	< 5	< 0.2	270	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19212	214	238	< 5	< 0.2	262	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19213	214	238	10	0.6	727	0.4	0.30	12	< 10	230	< 0.5	< 2	2.74	< 0.5	15	172	687	1.49	< 10	< 1	0.03
19214	214	238	30	0.2	258	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19215	214	238	5	< 0.2	116	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19216	214	238	< 5	< 0.2	153	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19217	214	238	< 5	< 0.2	43	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19218	214	238	< 5	< 0.2	22	< 0.2	1.36	10	< 10	600	< 0.5	< 2	2.15	< 0.5	9	105	18	2.78	< 10	< 1	0.67
19219	214	238	< 5	< 0.2	41	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19220	214	238	< 5	< 0.2	88	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19221	214	238	< 5	0.2	470	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19222	214	238	20	0.2	872	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19223	214	238	< 5	< 0.2	75	< 0.2	1.46	30	< 10	250	< 0.5	< 2	1.94	< 0.5	8	113	66	2.66	< 10	< 1	0.09
19224	214	238	< 5	< 0.2	139	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19225	214	238	< 5	< 0.2	24	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19226	214	238	25	< 0.2	129	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19227	214	238	50	< 0.2	230	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19228	214	238	55	0.6	231	0.6	0.78	32	< 10	720	< 0.5	< 2	8.50	0.5	12	14	237	2.57	< 10	< 1	0.09
19229	214	238	10	< 0.2	91	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19230	214	238	75	< 0.2	113	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19231	214	238	380	1.0	686	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19232	214	238	15	< 0.2	61	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19233	214	238	20	< 0.2	106	0.6	0.52	34	< 10	60	< 0.5	< 2	10.15	0.5	19	40	98	3.42	< 10	< 1	0.06
19234	214	238	20	< 0.2	96	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19235	214	238	10	< 0.2	51	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19236	214	238	< 5	< 0.2	20	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19237	214	238	< 5	< 0.2	31	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19238	214	238	< 5	< 0.2	38	0.2	0.72	8	< 10	30	< 0.5	< 2	5.85	< 0.5	19	84	38	3.37	< 10	< 1	0.09
19239	214	238	< 5	< 0.2	25	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19240	214	238	< 5	< 0.2	24	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19241	214	238	< 5	< 0.2	20	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19242	214	238	< 5	< 0.2	9	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

CERTIFICATION: _____

ALS Chemex

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To: KEMESS MINE

P.O. BOX 3519
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V0J 2N0

Project : KEMESS CENTRE
Comments: ATTN: BRETT LAPEARE

Page Number :1-B
Total Pages :3
Certificate Date: 01-AUG-2000
Invoice No. : I0024183
P.O. Number :200950
Account :PIL

CERTIFICATE OF ANALYSIS A0024183

KL-00-02

SAMPLE	PREP CODE		La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Mo ppm
19203	214	238	10	0.67	450	9	0.08	6	680	< 2	0.03	< 2	7	96	< 0.01	< 10	< 10	64	< 10	22	-----
19204	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19205	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19206	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19207	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19208	214	238	10	0.37	725	2	0.07	4	680	< 2	0.01	< 2	6	190	< 0.01	< 10	< 10	41	< 10	26	-----
19209	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19210	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19211	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19212	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19213	214	238	< 10	0.19	755	126	0.01	27	750	< 2	0.50	< 2	4	33	< 0.01	< 10	< 10	24	< 10	54	-----
19214	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19215	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19216	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19217	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19218	214	238	< 10	0.81	1205	8	0.05	22	140	2	0.14	< 2	10	60	0.10	< 10	< 10	36	< 10	70	-----
19219	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19220	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19221	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19222	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19223	214	238	< 10	0.57	570	18	0.03	28	240	6	0.25	< 2	6	47	0.01	< 10	< 10	17	< 10	58	-----
19224	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19225	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19226	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19227	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19228	214	238	10	0.35	1145	2	0.01	7	1030	106	0.21	< 2	8	59	< 0.01	< 10	< 10	75	< 10	82	-----
19229	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19230	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19231	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19232	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19233	214	238	< 10	0.95	2230	11	0.01	27	360	< 2	1.20	2	9	94	< 0.01	< 10	< 10	62	< 10	122	-----
19234	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19235	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19236	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19237	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19238	214	238	< 10	0.61	640	8	0.01	52	440	< 2	1.74	< 2	10	85	< 0.01	< 10	< 10	77	< 10	44	-----
19239	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19240	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19241	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19242	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

CERTIFICATION:

SYNOPTIC DRILL LOG
NORTHGATE EXPLORATION LTD.
KEMESS PROJECT

D.D.H. NO. KL-00-03 **PAGE 1 OF** 2

	GRID	SURVEY		
NORTHING	11200	11161.143	**TOTAL DEPTH**	175.87 m
EASTING	9650	9619.957	**TOATL CASING**	4.70 m
ELEVATION	1503.840		**DATE START**	July 1, 2000
PROJECT/AREA	KEMESS CENTRE		**DATE END**	July 3, 2000
AZIMUTH	N/A		**CORE DIAMETER**	NQ II
INCLINATION	-90°		**GEOLOGIST**	BRETT LAPEARE

SAMPLE SERIES: 19226 23151 **TO** 19250 23179

TARGET/PURPOSE: To test trailing chargeability high similar to the anomaly over the surface supergene / hypogene contact
COMMENTS (target intersected? / describe): highly oxidized fractures at tuff from groundwater to depth of 16.60 m caused similar anomaly. However, monzonite was intersected w/ trace diss cpy

Downhole Survey

Depth	Type	Azimuth	Dip
99.70 m	EASTMAN	189°	-87°
175.87 m	EASTMAN	242°	-87°

From	To	Rock Type	Alteration	Mineralization	Comments
0.00	4.70	CASING / OVB			
4.70	22.65	CRYSTAL / LAPILLI TUFF	oxidation	tr py	
22.65	37.70	ASH TUFF		<2% py, + tr cpy	cpy + / qtz veinlets
37.70	56.24	MONZONITE	5% biot + K spar	1% diss py	
56.24	60.70	SILICIFIED SILTSTONE	clay alt'n of beds	<1% py	
60.70	62.75	Q.F.P.		1% py, + tr cpy	porphyritic texture
62.75	69.00	BEDDED SILT/MUD STONE		<1% py	by + bx veinlets
69.00	83.32	MONZONITE	patchy K-spar	≤2% py + tr cpy	
83.32	105.45	MUD/SILT STONE		tr py	qtz / qtz-carb stringers

KC-00-03

From	To	Rock Type	Alteration	Mineralization	Comments
105.45	143.60	MAFIC FLOW			
143.60	148.77	FAULT ZONE	clay gouge	1% py	locally sheared(?)
148.77	151.85	MAFIC FLOW		≤ 1% py	
151.85	155.30	QUARTZ PORPHYRY	chl + biot clay	≤1% py	
155.30	175.87	MAFIC FLOW			
		E. O. H.			

KEME EXPLORATION
CORE LOGGING FORM

D.D.H. NO. KC 00-03

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
0.00	4.70	OVERBURDEN -> CASING						
4.70	22.65	CRYSTAL / LAPILLI TUFF	19226	4.70	8.23			
			19227	8.23	10.40			
		- light beige, fine gr, massive	19228	10.40	13.55			
		@ 4.70 - 16.66 -> highly oxidized from groundwater -> oxidation ≈ 80%	19229	13.55	16.55			
		of sub unit -> where fresh rock does occur the rock is generally massive,	19230	16.55	17.15			
		light beige grey -> I.D. is difficult due to weathering -> local, rounded	19231	17.15	19.75			
		coarse (1-1.5 cm) clasts of plag mod altd to white clay -> smaller (1-3mm)	19232	19.75	21.25			
		round lapilli @ 14.00 m	19233	21.25	22.65			
		@ 16.66 - 22.65 -> oxidation decreases but still well developed on fractures ->						
		this subunit exhibits extensive qtz + carbonate veinlets @ highly						
		random orientations -> crosscuts -> very weak / diffuse thin (<1cm) banding /						
		bedding @ 20.00m @ 55-60° C.A						
		=> altn throughout unit is predominantly clay altn of plag +/- wk sericitic						
		altn -> silicification occurs w/ qtz + carb veining => trace diss py						
22.65	37.70	ASH TUFF	19234	22.65	24.90			
			19235	24.90	27.65			
		- light beige/grey, fine gr, massive to locally well bedded	19236	27.65	29.55			
		-> bedding is thin 1-10mm (laminae) @ 35° CA -> very well preserved @	19237	29.55	31.50			
		top of unit -> majority of unit is massive from overprinting by silicification	19238	31.50	33.50			
		and associated altn to light beige clay +/- sericite -> very diffuse bedding	19239	33.50	35.65			
		proximal to lower contact @ 75° (@ 36.60)	19240	35.65	37.70			
		-> moderate degree of qtz + carb veinlets @ highly random orientations -> where						
		silicification occurs unit is dk smoky grey, aphanitic w/ moderate microfractures						
		filled w/ white milky qtz +/- carb (oxidation of fvs @ 25.75 - 27.50)						

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
		- pyrite occurs w/ qtz veinlets/stringers, disseminated and on fractures → trace cpy assoc w/ py → ≤2% + trace cpy (cpy @ 31.20)						
		- lower contact diffuse due to silicification + py						
37.70	56.24	MONZONITE						
			19241	37.70	39.45			
			19242	39.45	41.75			
		- light grey to light beige grey, medium to fine grained, massive	19243	41.75	43.30			
		- typical porphyritic - intrusive texture	19244	43.30	44.80			
		- fine to very fine grained matrix of plag+clay+sericite w/ ≈ 25-40% anhedral, white, med gr plag phenocrysts → plag phenocrysts are soft due to altn to clay → no biotite and/or K-spar occurs until after 50 metres →	19245	44.80	46.85			
			19246	46.85	48.25			
			19247	48.25	49.72			
		from 50.00-56.24 the unit becomes more mottled w/ minor inc in qtz &	19248	49.72	51.67			
		qtz±carb veinlets in addition to a decrease in sericitic + clay altn →	19249	51.67	53.80			
		presence of 5% disseminated euhedral biotite → presence of wk K-spar	19250	53.80	56.24			
		altn as well rock altn of qtz veinlets & and very wkly altd matrix to K-spar → @ 55.50 - 30 cm wide intercept of phenocrysts wkly altn to K-spar						
		- <1% diss pyrite - also within fractures w/ qtz						
		- lower contact @ ≈ 25° - irregular not planar						
56.24	60.70	SILICEOUS SILTSTONE - SILICIFIED	23151	56.24	57.80			
			23152	57.80	59.15			
		- fine to very fine gr, dk smoky grey, bedded	23153	59.15	60.70			
		- >80% aphanitic beds 5-90 cm wide interbedded w/ thin (<1-3 cm) clay altn beds → thin beds are dk brn beige in colour → angle of bedding @ 60-75°						
		- qtz exhibits healed microfractures throughout → minor local brecciation assoc w/ local irregular qtz veinlets						
		- <1% py in microfractures and within clay rich thin beds						
		- lower contact @ ≈ 75° CA.						

D.D.H. No. KC 00-03

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
60.70	62.75	QUARTZ FELDSPAR PORPHYRY	23154	60.70	62.75			
		- very well developed porphyritic texture → 40-50% anhedral medium white plagioclase xtls within fine gr matrix → phenocrysts are white and altered to white clay → coarser, unaltered anhedral phenocrysts of qtz ≈ 15% → matrix is altered to K-spar + sericite within 60% of intersection →						
		local thin stringers exhibit well developed 'bleach' altn of phenocrysts proximal to selvages → some phenocrysts exhibit poikolitic texture to black mineral → possibly very fine grained aggregates of biotite but doubtful → this texture occurs @ 61.25 & 61.55 → trace diss cpy observed proximal to altn						
		- lower 60 cm of unit does not exhibit K-spar altn but plag phenocrysts are still highly altered to clay						
		- 1% diss py + trace cpy						
		- lower contact @ 70°						
62.75	69.00	INTERBEDDED WACKE/SILTSTONE/MUDSTONE	23155	62.75	64.60			
			23156	64.60	66.55			
		- fine to very fine gr, dkgy beige to black, bedded - beds @ 30-5 cm wide	23157	66.55	69.00			
		- due to visible rounded grains in some beds → wacke						
		- unit has been wkly to moderately altered overprinting remnant textures to various degrees → altn predominantly within pervasive, moderately developed microfractures - local silicification from qtz & qtz±cpb veinlets						
		- bedding planes @ 70-80° CA → diffuse lamination within local beds → very weak graded bedding shows youngins is uphole						
		- minor local brecciation from qtz veinlets w/ wk pyrite mineralization						
		- lower contact @ 80° CA						
69.00	83.32	MONZONITE	23158	69.00	71.07			
			23159	71.07	72.90			
		- fine to med gr, patchy grey / dull pink, massive	23160	72.90	75.03			

D.D.H. No. KC 00-03

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
		- typical texture of medium gr. anhedral wh.tk plag phenocrysts within	23161	75.03	76.95			
		fine gr matrix of plag + sericite +/- clay → local anhedral crysts of	23162	76.95	78.95			
		med gr qtz ≈ 3-5% of unit	23163	78.95	80.40			
		- unit exh.bits very patchy appearance due to patchy/semi pervasive	23164	80.40	81.95			
		mod/well developed K-spar altn which overprints original plag rich,	23165	81.95	83.82			
		mottled grey clay+sericite altd unit → Two-three phases of altn						
		→ 2% of unit exhibits planar qtz veinlets commonly w/ py +/- trace						
		cpy → py to hematite locally → py is also disseminated → ≈ <2% py						
		overall						
		→ local black clay (chl??) altn → rare						
		→ primary biotite absent → minor secondary bio w/ veinlets						
		→ lower contact @ 90° C.A						
83.32	105.45	MUDSTONE/SILTSTONE	23166	88.32	85.00			
			23167	88.25	89.25			
		- interbedded unit, predominantly dk grey w/ dkr coloured clay altn	23168	100.95	102.50			
		of beds & locally x-cutting bedding	23169	102.50	103.75			
		- beds are diffuse to well preserved w/ high, variable thickness of <1 cm	23170	103.75	105.45			
		to ≈ 50 cm → local beds exhibit wk laminations within → attitude of						
		bedding @ 60° C.A						
		- unit is x-cut by numerous, qtz and/or carb stringers & veinlets → may						
		or may not exhibit wk chloritic altn						
		- # trace py → seen w/ one carb veinlet						
		@ 102.50 to 103.75 → extensive qtz flooding w/ local brecciation w/ <1%						
		patchy py						
		→ lower contact @ 90° C.A → possible mixing of upper beds with						
		lower mafic flow						

D.D.H. KC 00-03

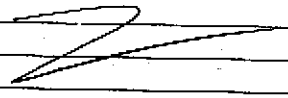
From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
105.45	143.60	MAFIC FLOW	23171	105.93	107.80			
			23172	107.80	109.40			
		- fine gr, black, massive						
		- typical, non-descript massive flow → @ 115.40 - 116.75 → local disseminated med gr pyroxene grains						
		- unit is v-cut by 1-4% carb stringers/veinlets +/- pyrite → veinlets are irregular to planar @ 45-60° CA						
		- moderately to highly frac'd @ 129.00 - 135.75						
		- @ 132.60 - 134.60 → locally, well developed chl alt'n						
		- lower contact @ ?						
143.60	144.30	SHEAR ZONE (?)	23173	143.60	144.30			
		- fine to very fine grained, dk brownish grey to wk maroon colour, wkly banded						
		- wk to mod microfractures filled w/ qtz						
		- wk banding @ 45° CA → ≤ 1cm wide → very diffuse						
		- well developed py on local fractures → ≤ 1% overall						
		* this unit may represent a wkly developed shear zone						
		- lower contact @ 60° CA						
144.30	144.55	MAFIC FLOW						
		- same as 105.45 - 143.60						
		- lower contact @ 70° CA						
144.55	149.77	FAULT ZONE	23174	145.90	146.90			
		- altered mafic flow w/ 7 seperate clay gouge intercepts						
		- the flow exhibits mottled texture due to sub-hedral/euhedral mod gr xtls of pyroxene(?) → xtls are best developed proximal to ccst +/- py veinlets						

D.D.H. No. KC 00-03

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
		- gouge zones are predominantly clay, +chl +/- carb → width of zones vary from 5-40 cm → zones range from 40-70° CA → best developed gouge zone @ 146.95-147.35						
		- local carb +/- py veinlets ≈ 3-4% of unit → py ≤ 1%						
		- lower contact @ 65° CA						
148.77	151.85	MAFIC FLOW	23175	149.90	151.85			
		- massive, dk grey, fine gr						
		- local carb veinlets @ 50-55° to highly irregular → ≤ 5% of unit; +/- py with veinlets						
		- @ 151.80-152.35 → well developed chl altn w/ local patchy, pyrite → assoc w/ carb in microfractures						
		- lower contact @ 45° and highly clay altd due to fault contact → clay altn is only 5 cm wide						
151.85	155.30	QUARTZ PORPHYRY	23176	151.85	153.30			
			23177	153.30	155.30			
		- fine to med gr, dk brownish grey to lt light yellowish grey, mottled texture, massive						
		- altd intrusive dyke → medium gr (4-8mm) embedded qtz phenocrysts in an altd matrix → matrix exhibits various colours from altn ranging from chloritic, to clay, to bleached → unit is locally, moderately siliceous						
		- locally, (@ 154.50) embedded crystals of chl occur						
		- unit exhibits ≤ 1% disseminated py						
		- lower contact @ 70° CA						
155.30	175.87	MAFIC FLOW	23178	155.30	156.45			
			23179	156.45	158.00			
		- same as 105.45-143.60						

D.D.H. No. KC 00-03

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
		- upper 1 metre exhibits local mod clay altn ../						
		- chl ± clay common fractures throughout						
		- local mottled texture @ 0.50 to 1.5m of patchy, secondary						
		chl altn +/- well developed pyrite						
		E.O.H						



KEMESS CENTRE DRILL HOLE ASSAY RESULTS FOR KC-00-03

Hole_ID	Sam_ID	From	To	Width	Cu_ppm	Au_ppb	Ag_ppm
KC-00-03	19226	4.70	8.23	3.53	129	25	0.1
KC-00-03	19227	8.23	10.40	2.17	230	50	0.1
KC-00-03	19228	10.40	13.55	3.15	231	55	0.6
KC-00-03	19229	13.55	16.55	3.00	91	10	0.1
KC-00-03	19230	16.55	17.15	0.60	113	75	0.1
KC-00-03	19231	17.15	19.75	2.60	686	380	1
KC-00-03	19232	19.75	21.25	1.50	61	15	0.1
KC-00-03	19233	21.25	22.65	1.40	106	20	0.1
KC-00-03	19234	22.65	24.90	2.25	96	20	0.1
KC-00-03	19235	24.90	27.65	2.75	51	10	0.1
KC-00-03	19236	27.65	29.55	1.90	20	2.5	0.1
KC-00-03	19237	29.55	31.50	1.95	31	2.5	0.1
KC-00-03	19238	31.50	33.50	2.00	38	2.5	0.1
KC-00-03	19239	33.50	35.65	2.15	25	2.5	0.1
KC-00-03	19240	35.65	37.70	2.05	24	2.5	0.1
KC-00-03	19241	37.70	39.45	1.75	20	2.5	0.1
KC-00-03	19242	39.45	41.75	2.30	9	2.5	0.1
KC-00-03	19243	41.75	43.30	1.55	12	2.5	0.1
KC-00-03	19244	43.30	44.80	1.50	15	2.5	0.1
KC-00-03	19245	44.80	46.85	2.05	21	2.5	0.1
KC-00-03	19246	46.85	48.25	1.40	14	2.5	0.1
KC-00-03	19247	48.25	49.72	1.47	18	2.5	0.1
KC-00-03	19248	49.72	51.67	1.95	16	2.5	0.1
KC-00-03	19249	51.67	53.80	2.13	38	2.5	0.1
KC-00-03	19250	53.80	56.24	2.44	29	2.5	0.1
KC-00-03	23151	56.24	57.80	1.56	34	2.5	0.1
KC-00-03	23152	57.80	59.15	1.35	64	2.5	0.1
KC-00-03	23153	59.15	60.70	1.55	30	2.5	0.1
KC-00-03	23154	60.70	62.75	2.05	14	2.5	0.1
KC-00-03	23155	62.75	64.60	1.85	23	2.5	0.1
KC-00-03	23156	64.60	66.55	1.95	25	2.5	0.1
KC-00-03	23157	66.55	69.00	2.45	26	2.5	0.1
KC-00-03	23158	69.00	71.07	2.07	20	2.5	0.1
KC-00-03	23159	71.07	72.90	1.83	29	2.5	0.1
KC-00-03	23160	72.90	75.03	2.13	129	2.5	0.1
KC-00-03	23161	75.03	76.95	1.92	28	2.5	0.1
KC-00-03	23162	76.95	78.95	2.00	57	2.5	0.1
KC-00-03	23163	78.95	80.40	1.45	23	2.5	0.1
KC-00-03	23164	80.40	81.95	1.55	34	2.5	0.1
KC-00-03	23165	81.95	83.32	1.37	66	2.5	0.1
KC-00-03	23166	83.32	85.00	1.68	19	2.5	0.1
KC-00-03	23167	88.25	89.25	1.00	121	2.5	0.1
KC-00-03	23168	100.95	102.50	1.55	28	2.5	0.1
KC-00-03	23169	102.50	103.75	1.25	60	2.5	1.6
KC-00-03	23170	103.75	105.45	1.70	65	2.5	0.1
KC-00-03	23171	105.93	107.80	1.87	120	5	0.1
KC-00-03	23172	107.80	109.40	1.60	107	2.5	0.1
KC-00-03	23173	143.60	144.30	0.70	17	5	0.1
KC-00-03	23174	145.90	146.90	1.00	62	20	0.1
KC-00-03	23175	149.90	151.85	1.95	272	15	0.1
KC-00-03	23176	151.85	153.30	1.45	45	2.5	0.1
KC-00-03	23177	153.30	155.30	2.00	72	2.5	0.1
KC-00-03	23178	155.30	156.45	1.15	81	2.5	0.1
KC-00-03	23179	156.45	158.00	1.55	198	430	0.1

ALS Chemex

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To: KEMESS MINE

P.O. BOX 3519
SMITHERS, BC
V0J 2N0

A0024183

Comments: ATTN: BRETT LAPEARE

CERTIFICATE A0024183

(PIL) - KEMESS MINE

Project: KEMESS CENTRE
P.O. # : 200950

Samples submitted to our lab in Vancouver, BC.
This report was printed on 07-AUG-2000.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
214	119	Rcvd as pulp; mesh size checked
238	119	Nitric-aqua-regia digestion
229	23	ICP - AQ Digestion charge
* NOTE	1:	

The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Sr, Ti, Tl, W.

ANALYTICAL PROCEDURES 2 of 2

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
3	32	Mo ppm: HNO3-aqua regia digest	AAS	1	1000

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Project : KEMESS CENTRE
Comments: ATTN: BRETT LAPEARE

Page Number :1-A
Total Pages :3
Certificate Date: 01-AUG-2000
Invoice No. :I0024183
P.O. Number :200950
Account :PIL

CERTIFICATE OF ANALYSIS A0024183

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm Aqua R	Cu ppm	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %
19203	214	238	5	< 0.2	210	< 0.2	0.94	< 2	< 10	190	< 0.5	< 2	2.66	< 0.5	9	72	212	3.09	< 10	< 1	0.12
19204	214	238	< 5	< 0.2	288	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19205	214	238	< 5	< 0.2	31	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19206	214	238	< 5	< 0.2	143	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19207	214	238	< 5	< 0.2	35	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19208	214	238	< 5	< 0.2	20	< 0.2	0.73	2	< 10	470	0.5	< 2	5.49	< 0.5	7	28	17	2.70	< 10	< 1	0.18
19209	214	238	5	4.4	601	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19210	214	238	< 5	0.2	257	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19211	214	238	< 5	< 0.2	270	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19212	214	238	< 5	< 0.2	262	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19213	214	238	10	0.6	727	0.4	0.30	12	< 10	230	< 0.5	< 2	2.74	< 0.5	15	172	687	1.49	< 10	< 1	0.03
19214	214	238	30	0.2	258	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19215	214	238	5	< 0.2	116	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19216	214	238	< 5	< 0.2	153	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19217	214	238	< 5	< 0.2	43	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19218	214	238	< 5	< 0.2	22	< 0.2	1.36	10	< 10	600	< 0.5	< 2	2.15	< 0.5	9	105	18	2.78	< 10	< 1	0.67
19219	214	238	< 5	< 0.2	41	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19220	214	238	< 5	< 0.2	88	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19221	214	238	< 5	0.2	470	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19222	214	238	20	0.2	872	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19223	214	238	< 5	< 0.2	75	< 0.2	1.46	30	< 10	250	< 0.5	< 2	1.94	< 0.5	8	113	66	2.66	< 10	< 1	0.09
19224	214	238	< 5	< 0.2	139	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19225	214	238	< 5	< 0.2	24	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19226	214	238	25	< 0.2	129	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19227	214	238	50	< 0.2	230	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19228	214	238	55	0.6	231	0.6	0.78	32	< 10	720	< 0.5	< 2	8.50	0.5	12	14	237	2.57	< 10	< 1	0.09
19229	214	238	10	< 0.2	91	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19230	214	238	75	< 0.2	113	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19231	214	238	380	1.0	686	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19232	214	238	15	< 0.2	61	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19233	214	238	20	< 0.2	106	0.6	0.52	34	< 10	60	< 0.5	< 2	10.15	0.5	19	40	98	3.42	< 10	< 1	0.06
19234	214	238	20	< 0.2	96	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19235	214	238	10	< 0.2	51	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19236	214	238	< 5	< 0.2	20	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19237	214	238	< 5	< 0.2	31	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19238	214	238	< 5	< 0.2	38	0.2	0.72	8	< 10	30	< 0.5	< 2	5.85	< 0.5	19	84	38	3.37	< 10	< 1	0.09
19239	214	238	< 5	< 0.2	25	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19240	214	238	< 5	< 0.2	24	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19241	214	238	< 5	< 0.2	20	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19242	214	238	< 5	< 0.2	9	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

KL-00-03

CERTIFICATION: _____

ALS Chemex

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To: KEMESS MINE

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SMITHERS, BC
V0J 2N0

Project : KEMESS CENTRE
Comments: ATTN: BRETT LAPEARE

Certificate Date: 01-AUG-2000
Invoice No. :10024183
P.O. Number :200950
Account :PIL

CERTIFICATE OF ANALYSIS A0024183

SAMPLE	PREP CODE		La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Mo ppm
19203	214	238	10	0.67	450	9	0.08	6	680	< 2	0.03	< 2	7	96	< 0.01	< 10	< 10	64	< 10	22	-----
19204	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19205	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19206	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19207	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19208	214	238	10	0.37	725	2	0.07	4	680	< 2	0.01	< 2	6	190	< 0.01	< 10	< 10	41	< 10	26	-----
19209	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19210	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19211	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19212	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19213	214	238	< 10	0.19	755	126	0.01	27	750	< 2	0.50	< 2	4	33	< 0.01	< 10	< 10	24	< 10	54	-----
19214	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19215	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19216	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19217	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19218	214	238	< 10	0.81	1205	8	0.05	22	140	2	0.14	< 2	10	60	0.10	< 10	< 10	36	< 10	70	-----
19219	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19220	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19221	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19222	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19223	214	238	< 10	0.57	570	18	0.03	28	240	6	0.25	< 2	6	47	0.01	< 10	< 10	17	< 10	58	-----
19224	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19225	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19226	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19227	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19228	214	238	10	0.35	1145	2	0.01	7	1030	106	0.21	< 2	8	59	< 0.01	< 10	< 10	75	< 10	82	-----
19229	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19230	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19231	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19232	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19233	214	238	< 10	0.95	2230	11	0.01	27	360	< 2	1.20	2	9	94	< 0.01	< 10	< 10	62	< 10	122	-----
19234	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19235	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19236	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19237	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19238	214	238	< 10	0.61	540	8	0.01	52	440	< 2	1.74	< 2	10	85	< 0.01	< 10	< 10	77	< 10	44	-----
19239	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19240	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19241	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19242	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

KC-00-33

CERTIFICATION:

ALS Chemex

Aurora Laboratory Services Ltd.
Analytical Chemists * Geochemists * Registered Assayers
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To: KEMESS MINE

P.O. BOX 3519
SMITHERS, BC
V0J 2N0

Project : KEMESS CENTRE
Comments: ATTN: BRETT LAPEARE

Certificate Date: 01-AUG-2000
Invoice No. : I0024183
P.O. Number :200950
Account : PIL

CERTIFICATE OF ANALYSIS A0024183

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm Aqua R	Cu ppm	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %
19243	214	238	< 5	< 0.2	12	0.2	0.65	< 2	< 10	30	0.5	< 2	4.66	< 0.5	5	31	9	2.63	< 10	< 1	0.15
19244	214	238	< 5	< 0.2	15	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19245	214	238	< 5	< 0.2	21	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19246	214	238	< 5	< 0.2	14	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19247	214	238	< 5	< 0.2	18	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19248	214	238	< 5	< 0.2	16	< 0.2	0.85	2	< 10	260	0.5	< 2	6.19	< 0.5	5	27	14	2.51	< 10	< 1	0.19
19249	214	238	< 5	< 0.2	38	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19250	214	238	< 5	< 0.2	29	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23151	214	238	< 5	< 0.2	34	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23152	214	238	< 5	< 0.2	64	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23153	214	238	< 5	< 0.2	30	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23154	214	238	< 5	< 0.2	14	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23155	214	238	< 5	< 0.2	23	< 0.2	1.06	6	< 10	240	0.5	< 2	2.78	< 0.5	9	39	20	3.40	< 10	< 1	0.29
23156	214	238	< 5	< 0.2	25	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23157	214	238	< 5	< 0.2	26	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23158	214	238	< 5	< 0.2	20	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23159	214	238	< 5	< 0.2	29	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23160	214	238	< 5	< 0.2	129	0.2	0.36	6	< 10	30	< 0.5	< 2	2.51	< 0.5	16	123	126	2.43	< 10	< 1	0.22
23161	214	238	< 5	< 0.2	28	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23162	214	238	< 5	< 0.2	57	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23163	214	238	< 5	< 0.2	23	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23164	214	238	< 5	< 0.2	34	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23165	214	238	< 5	< 0.2	66	0.2	0.60	8	< 10	70	< 0.5	< 2	2.56	< 0.5	8	81	62	2.28	< 10	< 1	0.30
23166	214	238	< 5	< 0.2	19	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23167	214	238	< 5	< 0.2	121	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23168	214	238	< 5	< 0.2	28	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23169	214	238	< 5	1.6	60	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23170	214	238	< 5	< 0.2	65	< 0.2	1.06	86	< 10	130	0.5	< 2	5.57	< 0.5	33	44	57	6.92	< 10	< 1	0.08
23171	214	238	5	< 0.2	120	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23172	214	238	< 5	< 0.2	107	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23173	214	238	5	< 0.2	17	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23174	214	238	20	< 0.2	62	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23175	214	238	15	< 0.2	272	0.2	2.99	24	< 10	50	0.5	< 2	2.78	< 0.5	43	239	253	6.37	10	< 1	0.33
23176	214	238	< 5	< 0.2	45	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23177	214	238	< 5	< 0.2	72	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23178	214	238	< 5	< 0.2	81	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23179	214	238	430	< 0.2	198	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23180	214	238	10	< 0.2	120	< 0.2	1.34	2	< 10	180	< 0.5	< 2	1.35	< 0.5	8	84	126	3.17	< 10	< 1	0.13
23181	214	238	< 5	< 0.2	130	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23182	214	238	< 5	< 0.2	43	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

KC-00-53

CERTIFICATION:

ALS Chemex

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To: KEMESS MINE

P.O. BOX 3519
SMITHERS, BC
V0J 2N0

Project : KEMESS CENTRE
Comments: ATTN: BRETT LAPEARE

Page Number :2-B
Total Pages :3
Certificate Date: 01-AUG-2000
Invoice No. :I0024183
P.O. Number :200950
Account :PIL

CERTIFICATE OF ANALYSIS A0024183

SAMPLE	PREP CODE		La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Mo ppm
19243	214	238	10	0.95	600	2	0.02	4	600	16	2.25	< 2	5	111	< 0.01	< 10	< 10	26	< 10	52	-----
19244	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19245	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19246	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19247	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19248	214	238	10	0.96	720	2	0.01	4	610	< 2	0.52	< 2	6	105	< 0.01	< 10	< 10	41	< 10	38	-----
19249	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19250	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23151	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23152	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23153	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23154	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23155	214	238	< 10	1.40	1430	3	0.02	12	230	< 2	0.16	< 2	9	115	0.01	< 10	< 10	55	< 10	86	-----
23156	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23157	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23158	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23159	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23160	214	238	< 10	0.48	955	16	0.02	11	250	4	1.62	< 2	< 1	44	< 0.01	< 10	< 10	5	< 10	42	-----
23161	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23162	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23163	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23164	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23165	214	238	< 10	0.91	1405	6	0.02	9	250	2	1.31	< 2	1	57	< 0.01	< 10	< 10	9	< 10	54	-----
23166	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23167	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23168	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23169	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23170	214	238	< 10	1.78	1755	1	0.03	41	1220	< 2	0.90	2	29	101	0.01	< 10	< 10	180	< 10	68	-----
23171	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23172	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23173	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23174	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23175	214	238	< 10	2.10	605	7	0.07	44	980	< 2	1.86	2	17	65	0.08	< 10	< 10	159	< 10	54	-----
23176	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23177	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23178	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23179	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23180	214	238	< 10	1.01	425	9	0.07	7	680	< 2	0.30	< 2	6	37	0.03	< 10	< 10	74	< 10	30	-----
23181	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	8
23182	214	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	8

KC-00-03

CERTIFICATION:

SYNOPTIC DRILL LOG
NORTHGATE EXPLORATION LTD.
KEMESS PROJECT

D.D.H. NO. KC 00-04 PAGE 1 OF 2

NORTHING	11500	TOTAL DEPTH	319.14
EASTING	8,600	TOATL CASING	15'
ELEVATION	1,430	DATE START	July 14, 2000
PROJECT/AREA	KEMESS CENTRE	DATE END	July 19, 2000
AZIMUTH	078° - Grid East	CORE DIAMETER	NQ
INCLINATION	- 65°	GEOLOGIST	BRETT LAPEARE

SAMPLE SERIES: 23180 / 23251 / 23401 TO 23200 / 23300 / 23500 — 23651 - 23677

TARGET/PURPOSE: To test chargeability high anomaly, proximal to radiometric potassic high

COMMENTS (target intersected? / describe): 1 to 3% py, +/- cpy, -> disseminated, fracture controlled, and w/ stockwork locally => patchy to semi-pervasive K-spar alt'n

Downhole Survey

Depth	Type	Azimuth	Dip
99.70 m	EASTMAN	081°	-62°
200.30 m	EASTMAN	084°	-62°
300.91 m	EASTMAN	089°	-60.5°

From	To	Rock Type	Alteration	Mineralization	Comments
0.00	4.57	CASING / Overburden			
4.57	319.14	QUARTZ MONZONITE			
		-> NOTE: varying % of			
		qtz shows range from			
		monzodiorite to granodiorite			
		-> patchy / semi pervasive			
		K-spar alt'n overprints			
		and is intercalated w/			
		very wk to moderately			
		developed propylitic alt'n			
		-> local, well developed			
		cpy as disseminated and			
		w/ qtz +/- early veinlets			
		next page =>			

KC-00-04

From	To	Rock Type	Alteration	Mineralization	Comments
		cpy best observed from			
		100.00 - 155.00 m → esp.			
		@ 143.80 - 144.50 &			
		150.60 - 150.95'			

KEMESS EXPLORATION
CORE L[illegible]GING FORM

D[illegible]. NO. KC 00-04

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
0.00	4.57	CASING - OVERBURDEN						
4.57		QUARTZ MONZONITE	23180	4.57	8.23			
			23181	8.23	10.60			
		- fine/med/coarse grained, mottled dk grey - dull pink/tan grey, massive	23182	10.60	12.80			
		- medium to coarse anhedral/subhedral plagioclase w/ medium to fine	23183	12.80	14.70			
		grained K-spar + qtz + med/coarse mafics (hornblende +/- biotite)	23184	14.70	17.00			
		+/- magnetite +/- pyrite ⇒ the unit also exhibits local well developed	23185	17.00	18.90			
		propylitic alteration zones w/ plag + chl + ser ⇒ thus 2 styles of altn;	23186	18.90	20.90			
		POTASSIC:	23187	20.90	22.70			
		- 50% plagioclase + 15% Kspar + 10-15% quartz + 15-20% mafics +/- 5%	23188	22.70	25.15			
		magnetite +/- pyrite +/- cpy (trace)	23189	25.15	27.45			
		PROPYLITIC:	23190	27.45	29.10			
		40% plagioclase + 5-10% Kspar + 30% chlorite + 10-15% sericite +/- 5%	23191	29.10	30.75			
		carbonate +/- py +/- cpy (trace)	23192	30.75	32.55			
			23193	32.55	34.30			
		- the K-spar is probably from secondary alteration ⇒ this protolith was	23194	34.30	36.50			
		possibly monzodiorite	23195	36.50	38.70			
			23196	38.70	40.25			
		* VEINING - ≈ 2-3% of unit; predominantly quartz though qtz + carb	23197	40.25	42.06			
		and carb veinlets occur ⇒ width of veinlets is ≤ 1cm w/ thin (≤ 1mm)	23198	42.06	44.05			
		stringers being more common ⇒ K-spar is commonly associated w/ the	23199	44.05	46.15			
		veinings as well developed wall rock altn and vein selvages ⇒ also common	23200	46.15	47.85			
		is Fe+ CARB altn to sericite - this an iron rich altn front occurs						
		* ALTERATION - as mentioned above, altn varies between potassic & propylitic	23251	47.85	50.20			
		as well developed discrete zones ⇒ the tenor of potassic altn is variable	23252	50.20	52.10			
		from; diffuse but pervasive to well developed but patchy ⇒ propylitic altn	23253	52.10	53.95			
		is total to limited to the mafic (hble) crystals ⇒ magnetite destroyed as	23254	53.95	56.15			

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
		absent within propylitic altn => Timing of altn appears to be	23255	56.15	58.15			
		propylitic → potassic : good evidence of this @ 149 m where	23256	58.15	60.05			
		thin qtz stringers w/ cpy + py exhibit well developed potassic (K-spar)	23257	60.05	61.95			
		wall-rock altn up to 3-4cm from veinlet → where altn stops unit	23258	61.95	63.30			
		is dk green and propylitic	23259	63.30	65.15			
			23260	65.15	66.75			
		* MINERALIZATION - consists of pyrite & chalcopyrite → pyrite occurs	23261	66.75	68.75			
		throughout associated w/ qtz and qtz+carb veinlets, on fracture planes	23262	68.75	70.10			
		and disseminated → pyrite is the most common sulphide @ 2-3% →	23263	70.10	72.25			
		chalcopyrite is rare but well developed locally → it occurs as very fine	23264	72.25	74.00			
		grained disseminations within pyrite (very difficult to see) → however, it	23265	74.00	76.10			
		is easily identifiable locally, within qtz veinlets/stringers and as clusters	23266	76.10	77.35			
		proximal to veinlets/stringers → py also occurs as seperate stringers	23267	77.35	79.40			
			23268	79.40	81.85			
		The following is a sub-unit description of various altn assemblages,	23269	81.85	83.25			
		cpy mineralization and any fault zones	23270	83.25	85.00			
			23271	85.00	86.15			
		4.57 - 17.00 : potassic altn is diffuse but pervasive	23272	86.15	88.05			
		17.00 - 22.70 : propylitic altn is very well developed w/ rare patches	23273	88.05	90.20			
		of K-spar altn ~10cm across	23274	90.20	92.05			
		22.70 - 25.15 : potassic - semi-pervasive, well developed	23275	92.05	93.55			
		22.15 - 32.55 : alternating patchy, due to wk pervasive K-spar altn w/	23276	93.55	95.70			
		local well developed potassic & weak propylitic altn	23277	95.70	97.60			
		32.55 - 40.25 : potassic altn is diffuse but well developed locally, as well	23278	97.60	99.10			
		rock altn of qtz veinlets +/- pyrite	23279	99.10	100.90			
		40.25 - 56.15 : moderate to very well developed propylitic altn w/ minor	23280	100.90	102.70			
		patchy K-spar altn	23281	102.70	103.30			
		56.15 - 65.15 : potassic altn w/ minor patchy propylitic weak altn	23282	103.30	105.75			
		65.15 - 70.10 : moderately developed linear feature w/ clay + local rock	23283	105.75	107.30			
		fragments - FAULT ZONE - sub parallel w/ C.A - discontinuous	23284	107.30	108.80			

D.D. NO. KC 00-04

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
		70.10 - 81.85 : weakly altd monzonite (monzodiorite ???) w/ local moderately developed propylitic altn → unit exhibits moderate/density of quartz veinlets → veinlets exhibit well developed siderite as vein selvages → rare thin stringers of pyrite +/- < trace cpy	23285	108.80	110.30			
			23286	110.30	111.85			
			23287	111.85	113.35			
			23288	113.35	114.90			
			23289	114.90	115.65			
		81.85 - 83.25 : FAULT ZONE - very well developed clay + chl + carb + rock fragments → angle appears to be 30-40° C.A.	23290	115.65	117.95			
			23291	117.95	119.45			
		83.25 - 86.15 : pervasive, locally, well developed potassic altn → only minor qtz veining → < 1% py + cpy as disseminated grains and rare clusters	23292	119.45	121.00			
			23293	121.00	122.70			
			23294	122.70	124.05			
		86.15 - 99.10 : wk, patchy propylitic alteration to unaltered monzodiorite (???) → < 1% qtz stringers w/ mostly, moderately developed K-spar altn and to a lesser degree siderite selvages → < 1% cpy + py as disseminated + clusters proximal to siderite + qtz stringers → one py + cpy veinlet @ 98.40 as mostly py w/ very fine gr cpy disseminated within veinlet	23295	124.05	125.55			
			23296	125.55	127.10			
			23297	127.10	129.60			
			23298	128.60	130.15			
			23299	130.15	131.65			
			23300	131.65	133.20			
		99.10 - 100.90 : - wkly developed discontinuous fault zone w/ local clay + chlorite						
			23401	133.20	134.70			
		100.90 - 143.70 : monzonite to monzodiorite → dull greenish grey w/ extensive to semi pervasive to patchy K-spar altn assoc., w/ 2-4% qtz / qtz + carb veinlets/stringers → from 101 - 117 m up to 2% diss cpy → this is only the visible cpy → from 117 - 143.70 cpy is still visible as disseminated but slightly decreased to < 1% → tenor of K-spar altn increases down hole	23402	134.70	136.25			
			23403	136.25	137.75			
			23404	137.75	139.30			
			23405	139.30	140.85			
			23406	140.85	142.35			
			23407	142.35	143.70			
			23408	143.70	145.40			
			23409	145.40	146.95			
		143.70 - 149.65 : dull greenish grey w/ only very minor, pervasive K-spar	23410	146.95	148.45			
		box-26-27 altn assoc w/ rare local qtz veinlets / stringers → diameter decrease in K-spar altn relative to 100.90 - 143.70 →	23411	148.45	149.65			
			23412	149.65	150.95			
		however the sub unit exhibits very well developed, local	23413	150.95	152.50			

*Forebeer

From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
		con't	23414	152.50	154.53			
		- patchy chalcopyrite → the most visible cpy that I've observed in the hole, esp @ 143.80 - 144.50 → cpy is also common as local clusters and is disseminated → 1% throughout	23415	154.53	156.05			
			23416	156.05	157.58			
			23417	157.58	159.10			
		149.65 - 152.50: pervasive, well developed pinkish K-spar altn → two	23418	159.10	160.63			
		veinlets w/ py ± cpy @ 150.60 - 150.95 @ 30° ∫ 5° CA	23419	160.63	162.20			
		w/ bleach chlorite (?) selvages → also @ 151.09 ∫ very	23420	162.20	163.68			
		thin @ 152.40	23421	163.68	165.30			
		152.50 - 173.40: propylitic altn wk to well developed locally, → dull greenish	23422	165.30	166.73			
		grey throughout - potassic altn ABSENT → @ 154.50 - 160.10	23423	166.73	168.55			
		fault gouge - 2-3% qtz / qtz + calc veinlets exhibit	23424	168.55	169.77			
		well developed Fe carb altn → 2% disseminated pyrite	23425	169.77	171.25			
		± trace cpy → py ± cpy also locally, w/ milky white veinlets (≤ 5mm)	23426	171.25	172.82			
		which exhibit weak K-spar wall rock altn → very similar to	23427	172.82	173.40			
		143.80 - 144.50 → @ 166.25 local wispy hematite altn	23428	173.40	174.25			
		173.40 - 174.25: finer gr version of above → possible magma mixing (???) → one	23429	174.25	175.87			
		qtz veinlet w/ 3-4 cm of K-spar wall rock altn exhibits	23430	175.87	177.25			
		diss. py within potassic altn, < 1% diss py overall	23431	177.25	178.15			
		174.25 - 177.25: similar to 152.50 - 173.40 but tenor of propylitic altn is	23432	178.15	179.65			
		decreased; local diss cpy in matrix with actl's trace to << 1%	23433	179.65	181.00			
		177.25 - 179.65: propylitic altn is wispy/patchy w/ remnants of unaltered	23434	181.00	181.97			
		diorite → chl +/- clay +/- hematite → altn is well developed,	23435	181.97	183.40			
		subsequent is very soft	23436	183.40	185.01			
		179.65 - 191.55: wkly propylitic to unaltered monzonite / microdiorite → < 1%	23437	185.01	186.50			
		milky white qtz +/- calc veinlets / stringers w/ K-spar selvages (1-2 mm)	23438	186.50	188.06			
		- hematite common fractures	23439	188.06	189.55			
		- K-spar on local fractures "	23440	189.55	191.55			
		- trace diss cpy ∫ py - mafics are preferred sites	23441	191.55	192.75			
			23442	192.75	194.16			
		→	23443	194.16	195.70			

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From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
		191.55 - 214.00 : unaltered to wkly propylitic w/ 30-40% overprinting by K-spar altn - increase is due to increase in qtz veinlets → veinlets ≈ 10-15% of sub-unit @ random angles, averaging ≤ 1cm in width - rare veinlets are vuggy w/ well developed qtz xtls - very rare carb veinlets (@ 197.05) → epidotic altn w/ local veinlets → trace diss sph+py mono	23444	195.70	197.21			
			23445	197.21	198.80			
			23446	198.80	200.25			
			23447	200.25	201.70			
			23448	201.70	203.30			
			23449	203.30	204.80			
			23450	204.80	206.35			
		- local intrusive texture of white plag + mafics → diorite	23451	206.35	207.90			
		- sph locally, well developed on fractures → see 200.20	23452	207.90	209.40			
		214.00 - 230.65 : - propylitic altn; weak to moderately developed throughout → 2-3% qtz stringers w/ sericitic altn throughout → locally fine gr → magmatic mixing? andesitic dyke injected while intrusion still hot??	23453	209.40	210.95			
			23454	210.95	212.45			
			23455	212.45	214.00			
			23456	214.00	215.49			
		- sub unit is sulphide poor - < trace diss visible sph+py	23457	215.49	217.00			
			23458	217.00	218.54			
		230.65 - 246.65 : patchy, to semi pervasive K-spar altn is moderately developed to diffuse → only 3-5% carb +/- qtz veinlets/stringers - random and highly discontinuous - sericite common with many veinlets → diorite intrusive texture well preserved thru out - K-spar altn is assoc. w/ numerous but very thin + discontinuous carb+ qtz stringers	23459	218.54	220.10			
			23460	220.10	221.59			
			23461	221.59	223.15			
			23462	223.15	224.64			
			23463	224.64	226.20			
			23464	226.20	227.69			
			23465	227.69	229.25			
		246.65 - 258.17 : as above but K-spar altn + qtz-carb stringers highly decreased - hematite on local fractures → K-spar almost absent → sulphides difficult to see but patchy well developed py @ 252.50 → qtz stringers < 1%	23466	229.25	230.65			
			23467	230.65	232.25			
			23468	232.25	233.78			
			23469	233.78	235.30			
		258.17 - 265.40 : patchy to semi pervasive K-spar altn assoc w/ carb +/- qtz veinlets - rare qtz veinlets are vuggy K-spar altn w/ patchy propylitic altn → K-spar is secondary after propylitic - sulphide poor visually	23470	235.30	236.83			
			23471	236.83	238.35			
			23472	238.35	239.88			
			23473	239.88	241.40			

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From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
		265.40 - 276.65 : very wk K-spar → decrease from above sulphide poor	23474	241.40	242.93			
			23475	242.93	244.00			
		276.65 - 278.10 : pervasive, moderate K-spar altn w/ local carb veinlets	23476	244.00	245.97			
			23477	245.97	246.65			
		278.10 - 279.35 : weak K-spar - chl+clay, gouge (?) @ 279.20	23478	246.65	248.15			
		279.35 - 280.75 : same as 276.65 - 278.10	23479	248.15	249.02			
		280.75 - 290.05 : unaltered to wk propylitic altn of monzonite/monzodiorite	23480	249.02	250.60			
			23481	250.60	252.07			
		290.05 - 301.70 : patchy K-spar w/ local wk propylitic altn	23482	252.07	253.60			
		301.70 - 302.25 : well developed propylitic altn → possible local gouge	23483	253.60	255.12			
		302.25 - 319.14 : unaltered monzodiorite/monzonite w/ wk to moderate patchy, K-spar altn - rare, visible disseminated	23484	255.12	256.65			
			23485	256.65	258.17			
			23486	258.17	259.70			
		↓ lower 100 m of hole exhibits well preserved porphyritic texture of intrusive	23487	259.70	261.21			
			23488	261.21	262.85			
			23489	262.85	264.26			
			23490	264.26	265.40			
		E.O.H.	23491	265.40	266.20			
			23492	266.20	267.31			
			23493	267.31	268.60			
			23494	268.60	270.36			
			23495	270.36	271.85			
			23496	271.85	273.41			
			23497	273.41	274.95			
			23498	274.95	276.65			
			23499	276.65	278.10			
			23500	278.10	279.35			
		SEE NEXT PAGE FOR REMAINDER OF SAMPLES						
			23691	279.35	280.75			
			23692	280.75	282.55			

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From	To	DECRIPTION	Sample #	From	To	%Cu	Au g/t	Ag g/t
			23653	282.55	284.05			
			23654	284.05	285.60			
			23655	285.60	287.15			
			23656	287.15	288.65			
			23657	288.65	290.05			
			23658	290.05	291.69			
			23659	291.69	293.15			
			23660	293.15	294.74			
			23661	294.74	296.25			
			23662	296.25	297.79			
			23663	297.79	299.30			
			23664	299.30	300.84			
			23665	300.84	301.70			
			23666	301.70	302.25			
			23667	302.25	303.84			
			23668	303.89	305.40			
			23669	305.40	306.93			
			23670	306.93	308.45			
			23671	308.45	309.98			
			23672	309.98	311.50			
			23673	311.50	313.03			
			23674	313.03	314.55			
			23675	314.55	316.08			
			23676	316.08	317.60			
			23677	317.60	319.14			
			E.O.H					

KEMESS CENTRE DRILL HOLE ASSAY RESULTS FOR KC-00-04

Hole_ID	Sam_ID	From	To	Width	Cu_ppm	Au_ppb	Ag_ppm
KC-00-04	23180	4.57	8.23	3.66	120	10	0.1
KC-00-04	23181	8.23	10.60	2.37	130	2.5	0.1
KC-00-04	23182	10.60	12.80	2.20	43	2.5	0.1
KC-00-04	23183	12.80	14.70	1.90	54	2.5	0.1
KC-00-04	23184	14.70	17.00	2.30	169	5	0.1
KC-00-04	23185	17.00	18.90	1.90	235	15	0.2
KC-00-04	23186	18.90	20.90	2.00	151	10	0.1
KC-00-04	23187	20.90	22.70	1.80	108	2.5	0.1
KC-00-04	23188	22.70	25.15	2.45	82	2.5	0.1
KC-00-04	23189	25.15	27.45	2.30	61	2.5	0.1
KC-00-04	23190	27.45	29.10	1.65	147	10	0.1
KC-00-04	23191	29.10	30.75	1.65	308	20	0.4
KC-00-04	23192	30.75	32.55	1.80	372	10	0.1
KC-00-04	23193	32.55	34.30	1.75	243	10	0.1
KC-00-04	23194	34.30	36.50	2.20	94	2.5	0.1
KC-00-04	23195	36.50	38.70	2.20	116	10	0.1
KC-00-04	23196	38.70	40.25	1.55	237	20	0.2
KC-00-04	23197	40.25	42.06	1.81	142	5	0.1
KC-00-04	23198	42.06	44.05	1.99	196	10	0.1
KC-00-04	23199	44.05	46.15	2.10	99	2.5	0.1
KC-00-04	23200	46.15	47.85	1.70	153	5	0.1
KC-00-04	23251	47.85	50.20	2.35	100	2.5	0.1
KC-00-04	23252	50.20	52.10	1.90	228	5	0.1
KC-00-04	23253	52.10	53.95	1.85	333	2.5	0.2
KC-00-04	23254	53.95	56.15	2.20	257	25	2.2
KC-00-04	23255	56.15	58.15	2.00	78	2.5	1
KC-00-04	23256	58.15	60.05	1.90	516	45	0.8
KC-00-04	23257	60.05	61.95	1.90	37	2.5	0.1
KC-00-04	23258	61.95	63.30	1.35	113	2.5	1
KC-00-04	23259	63.30	65.15	1.85	302	20	0.2
KC-00-04	23260	65.15	66.75	1.60	195	15	0.6
KC-00-04	23261	66.75	68.75	2.00	182	15	0.6
KC-00-04	23262	68.75	70.10	1.35	196	5	0.2
KC-00-04	23263	70.10	72.25	2.15	186	2.5	0.2
KC-00-04	23264	72.25	74.00	1.75	128	10	0.1
KC-00-04	23265	74.00	76.10	2.10	261	55	0.1
KC-00-04	23266	76.10	77.35	1.25	173	15	0.1
KC-00-04	23267	77.35	79.40	2.05	181	2.5	0.1
KC-00-04	23268	79.40	81.85	2.45	187	10	0.8
KC-00-04	23269	81.85	83.25	1.40	259	25	0.8
KC-00-04	23270	83.25	85.00	1.75	417	15	0.4
KC-00-04	23271	85.00	86.15	1.15	487	45	1
KC-00-04	23272	86.15	88.05	1.90	1015	35	0.2
KC-00-04	23273	88.05	90.20	2.15	690	40	0.6
KC-00-04	23274	90.20	92.05	1.85	356	5	0.2
KC-00-04	23275	92.05	93.55	1.50	785	25	0.6
KC-00-04	23276	93.55	95.70	2.15	592	70	0.6
KC-00-04	23277	95.70	97.60	1.90	684	25	0.2
KC-00-04	23278	97.60	99.10	1.50	1110	75	1
KC-00-04	23279	99.10	100.90	1.80	670	35	4
KC-00-04	23280	100.90	102.70	1.80	2470	170	2.6

KEMESS CENTRE DRILL HOLE ASSAY RESULTS FOR KC-00-04

Hole_ID	Sam_ID	From	To	Width	Cu_ppm	Au_ppb	Ag_ppm
KC-00-04	23281	102.70	103.30	0.60	1195	110	1.2
KC-00-04	23282	103.30	105.75	2.45	1750	70	1.2
KC-00-04	23283	105.75	107.30	1.55	1300	80	1.2
KC-00-04	23284	107.30	108.80	1.50	2960	85	1.8
KC-00-04	23285	108.80	110.30	1.50	3040	95	2.2
KC-00-04	23286	110.30	111.85	1.55	1210	55	0.8
KC-00-04	23287	111.85	113.35	1.50	816	40	0.6
KC-00-04	23288	113.35	114.90	1.55	1120	55	0.6
KC-00-04	23289	114.90	115.65	0.75	1025	50	0.8
KC-00-04	23290	115.65	117.95	2.30	506	35	0.2
KC-00-04	23291	117.95	119.45	1.50	619	45	0.2
KC-00-04	23292	119.45	121.00	1.55	318	40	0.2
KC-00-04	23293	121.00	122.70	1.70	238	15	0.2
KC-00-04	23294	122.70	124.05	1.35	236	55	0.2
KC-00-04	23295	124.05	125.55	1.50	243	10	0.1
KC-00-04	23296	125.55	127.10	1.55	131	2.5	0.1
KC-00-04	23297	127.10	128.60	1.50	186	2.5	0.1
KC-00-04	23298	128.60	130.15	1.55	89	2.5	0.1
KC-00-04	23299	130.15	131.65	1.50	180	10	0.1
KC-00-04	23300	131.65	133.20	1.55	22	2.5	0.1
KC-00-04	23401	133.20	134.70	1.50	28	2.5	0.1
KC-00-04	23402	134.70	136.25	1.55	88	10	0.1
KC-00-04	23403	136.25	137.75	1.50	448	2.5	0.2
KC-00-04	23404	137.75	139.30	1.55	472	2.5	0.2
KC-00-04	23405	139.30	140.85	1.55	145	2.5	0.1
KC-00-04	23406	140.85	142.35	1.50	370	2.5	0.4
KC-00-04	23407	142.35	143.70	1.35	175	2.5	0.1
KC-00-04	23408	143.70	145.40	1.70	2560	10	5.6
KC-00-04	23409	145.40	146.95	1.55	564	2.5	0.6
KC-00-04	23410	146.95	148.45	1.50	1100	10	1.2
KC-00-04	23411	148.45	149.65	1.20	689	2.5	0.8
KC-00-04	23412	149.65	150.95	1.30	2180	2.5	1.6
KC-00-04	23413	150.95	152.50	1.55	700	2.5	0.8
KC-00-04	23414	152.50	154.53	2.03	174	2.5	0.1
KC-00-04	23415	154.53	156.05	1.52	80	2.5	0.1
KC-00-04	23416	156.05	157.58	1.53	242	5	0.2
KC-00-04	23417	157.58	159.10	1.52	74	2.5	0.1
KC-00-04	23418	159.10	160.63	1.53	95	2.5	0.1
KC-00-04	23419	160.63	162.20	1.57	38	2.5	0.1
KC-00-04	23420	162.20	163.68	1.48	33	2.5	0.1
KC-00-04	23421	163.68	165.30	1.62	824	10	1.2
KC-00-04	23422	165.30	166.73	1.43	125	2.5	0.1
KC-00-04	23423	166.73	168.55	1.82	359	2.5	0.2
KC-00-04	23424	168.55	169.77	1.22	105	2.5	0.2
KC-00-04	23425	169.77	171.25	1.48	96	2.5	0.1
KC-00-04	23426	171.25	172.82	1.57	466	5	0.2
KC-00-04	23427	172.82	173.40	0.58	130	2.5	0.1
KC-00-04	23428	173.40	174.25	0.85	536	10	0.4
KC-00-04	23429	174.25	175.87	1.62	323	2.5	0.2
KC-00-04	23430	175.87	177.25	1.38	183	2.5	0.1
KC-00-04	23431	177.25	178.15	0.90	299	5	0.1

KEMESS CENTRE DRILL HOLE ASSAY RESULTS FOR KC-00-04

Hole_ID	Sam_ID	From	To	Width	Cu_ppm	Au_ppb	Ag_ppm
KC-00-04	23432	178.15	179.65	1.50	481	5	0.2
KC-00-04	23433	179.65	181.00	1.35	87	2.5	0.1
KC-00-04	23434	181.00	181.97	0.97	65	2.5	0.1
KC-00-04	23435	181.97	183.40	1.43	407	5	0.4
KC-00-04	23436	183.40	185.01	1.61	443	25	0.2
KC-00-04	23437	185.01	186.50	1.49	371	5	0.2
KC-00-04	23438	186.50	188.06	1.56	264	2.5	0.2
KC-00-04	23439	188.06	189.55	1.49	497	2.5	0.6
KC-00-04	23440	189.55	191.55	2.00	231	2.5	0.4
KC-00-04	23441	191.55	192.75	1.20	259	2.5	0.6
KC-00-04	23442	192.75	194.16	1.41	270	2.5	0.6
KC-00-04	23443	194.16	195.70	1.54	84	2.5	0.1
KC-00-04	23444	195.70	197.21	1.51	22	2.5	0.1
KC-00-04	23445	197.21	198.80	1.59	180	2.5	0.1
KC-00-04	23446	198.80	200.25	1.45	360	2.5	0.1
KC-00-04	23447	200.25	201.70	1.45	404	2.5	0.2
KC-00-04	23448	201.70	203.30	1.60	178	2.5	0.6
KC-00-04	23449	203.30	204.80	1.50	18	2.5	0.1
KC-00-04	23450	204.80	206.35	1.55	35	5	0.1
KC-00-04	23451	206.35	207.90	1.55	23	2.5	0.1
KC-00-04	23452	207.90	209.40	1.50	18	2.5	0.1
KC-00-04	23453	209.40	210.95	1.55	46	2.5	0.2
KC-00-04	23454	210.95	212.45	1.50	19	2.5	0.1
KC-00-04	23455	212.45	214.00	1.55	40	2.5	0.1
KC-00-04	23456	214.00	215.49	1.49	14	2.5	0.1
KC-00-04	23457	215.49	217.00	1.51	11	2.5	0.1
KC-00-04	23458	217.00	218.54	1.54	14	2.5	0.1
KC-00-04	23459	218.54	220.10	1.56	11	2.5	0.2
KC-00-04	23460	220.10	221.59	1.49	13	2.5	0.1
KC-00-04	23461	221.59	223.15	1.56	15	2.5	0.1
KC-00-04	23462	223.15	224.64	1.49	9	2.5	0.1
KC-00-04	23463	224.64	226.20	1.56	8	2.5	0.2
KC-00-04	23464	226.20	227.69	1.49	11	2.5	0.1
KC-00-04	23465	227.69	229.25	1.56	16	2.5	0.6
KC-00-04	23466	229.25	230.65	1.40	99	2.5	0.4
KC-00-04	23467	230.65	232.25	1.60	45	2.5	0.1
KC-00-04	23468	232.25	233.78	1.53	32	2.5	0.1
KC-00-04	23469	233.78	235.30	1.52	50	2.5	0.1
KC-00-04	23470	235.30	236.83	1.53	29	2.5	0.1
KC-00-04	23471	236.83	238.35	1.52	14	2.5	0.1
KC-00-04	23472	238.35	239.88	1.53	16	2.5	0.1
KC-00-04	23473	239.88	241.40	1.52	18	2.5	0.1
KC-00-04	23474	241.40	242.93	1.53	19	2.5	0.1
KC-00-04	23475	242.93	244.00	1.07	17	2.5	0.1
KC-00-04	23476	244.00	245.97	1.97	18	2.5	0.1
KC-00-04	23477	245.97	246.65	0.68	13	2.5	0.1
KC-00-04	23478	246.65	248.15	1.50	22	2.5	0.1
KC-00-04	23479	248.15	249.02	0.87	17	2.5	0.1
KC-00-04	23480	249.02	250.60	1.58	67	2.5	0.2
KC-00-04	23481	250.60	252.07	1.47	36	2.5	0.1
KC-00-04	23482	252.07	253.60	1.53	36	2.5	0.1

KEMESS CENTRE DRILL HOLE ASSAY RESULTS FOR KC-00-04

Hole_ID	Sam_ID	From	To	Width	Cu_ppm	Au_ppb	Ag_ppm
KC-00-04	23483	253.60	255.12	1.52	28	2.5	0.1
KC-00-04	23484	255.12	256.65	1.53	33	2.5	0.1
KC-00-04	23485	256.65	258.17	1.52	31	2.5	0.1
KC-00-04	23486	258.17	259.70	1.53	23	2.5	0.1
KC-00-04	23487	259.70	261.21	1.51	13	2.5	0.1
KC-00-04	23488	261.21	262.85	1.64	12	2.5	0.1
KC-00-04	23489	262.85	264.26	1.41	22	2.5	0.1
KC-00-04	23490	264.26	265.40	1.14	45	2.5	0.1
KC-00-04	23491	265.40	266.20	0.80	35	2.5	0.1
KC-00-04	23492	266.20	267.31	1.11	24	2.5	0.1
KC-00-04	23493	267.31	268.60	1.29	42	2.5	0.1
KC-00-04	23494	268.60	270.36	1.76	73	2.5	0.2
KC-00-04	23495	270.36	271.85	1.49	15	2.5	0.1
KC-00-04	23496	271.85	273.41	1.56	56	2.5	0.1
KC-00-04	23497	273.41	274.95	1.54	20	2.5	0.1
KC-00-04	23498	274.95	276.65	1.70	26	2.5	0.1
KC-00-04	23499	276.65	278.10	1.45	39	2.5	0.1
KC-00-04	23500	278.10	279.35	1.25	26	2.5	0.1
KC-00-04	23651	279.35	280.75	1.40	88	2.5	0.2
KC-00-04	23652	280.75	282.55	1.80	14	2.5	0.1
KC-00-04	23653	282.55	284.05	1.50	46	2.5	0.2
KC-00-04	23654	284.05	285.60	1.55	98	2.5	0.2
KC-00-04	23655	285.60	287.15	1.55	97	2.5	0.2
KC-00-04	23656	287.15	288.65	1.50	219	2.5	0.1
KC-00-04	23657	288.65	290.05	1.40	58	2.5	0.1
KC-00-04	23658	290.05	291.69	1.64	36	2.5	0.2
KC-00-04	23659	291.69	293.15	1.46	62	2.5	0.1
KC-00-04	23660	293.15	294.74	1.59	45	2.5	0.2
KC-00-04	23661	294.74	296.25	1.51	88	2.5	0.6
KC-00-04	23662	296.25	297.79	1.54	69	2.5	0.1
KC-00-04	23663	297.79	299.30	1.51	79	2.5	0.1
KC-00-04	23664	299.30	300.84	1.54	41	2.5	0.1
KC-00-04	23665	300.84	301.70	0.86	17	2.5	0.2
KC-00-04	23666	301.70	302.25	0.55	29	2.5	0.1
KC-00-04	23667	302.25	303.89	1.64	25	2.5	0.1
KC-00-04	23668	303.89	305.40	1.51	95	2.5	0.1
KC-00-04	23669	305.40	306.93	1.53	14	2.5	0.1
KC-00-04	23670	306.93	308.45	1.52	22	2.5	0.1
KC-00-04	23671	308.45	309.98	1.53	40	2.5	0.1
KC-00-04	23672	309.98	311.50	1.52	346	2.5	0.4
KC-00-04	23673	311.50	313.03	1.53	31	2.5	0.1
KC-00-04	23674	313.03	314.55	1.52	28	2.5	0.1
KC-00-04	23675	314.55	316.08	1.53	21	2.5	0.1
KC-00-04	23676	316.08	317.60	1.52	20	2.5	0.1
KC-00-04	23677	317.60	319.14	1.54	23	2.5	0.1

ALS Chemex

Aurora Laboratory Services Ltd.
Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

To: KEMESS MINE

P.O. BOX 3519
SMITHERS, BC
V0J 2N0

A0024183

Comments: ATTN: BRETT LAPEARE

CERTIFICATE A0024183

(PIL) - KEMESS MINE

Project: KEMESS CENTRE
P.O.#: 200950

Samples submitted to our lab in Vancouver, BC.
This report was printed on 07-AUG-2000.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
214	119	Rcvd as pulp; mesh size checked
238	119	Nitric-aqua-regia digestion
229	23	ICP - AQ Digestion charge

* NOTE 1:

The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Sr, Ti, Tl, W.

ANALYTICAL PROCEDURES 1 of 2

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	119	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
6	119	Ag ppm: HNO3-aqua regia digest	AAS-BKGD CORR	0.2	100.0
2	119	Cu ppm: HNO3-aqua regia digest	AAS	1	10000
2118	23	Ag ppm: 32 element, soil & rock	ICP-AES	0.2	100.0
2119	23	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
2120	23	As ppm: 32 element, soil & rock	ICP-AES	2	10000
557	23	B ppm: 32 element, rock & soil	ICP-AES	10	10000
2121	23	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
2122	23	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
2123	23	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
2124	23	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
2125	23	Cd ppm: 32 element, soil & rock	ICP-AES	0.5	500
2126	23	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
2127	23	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
2128	23	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
2150	23	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
2130	23	Ga ppm: 32 element, soil & rock	ICP-AES	10	10000
2131	23	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
2132	23	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
2151	23	La ppm: 32 element, soil & rock	ICP-AES	10	10000
2134	23	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
2135	23	Mn ppm: 32 element, soil & rock	ICP-AES	5	10000
2136	23	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
2137	23	Na %: 32 element, soil & rock	ICP-AES	0.01	10.00
2138	23	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
2139	23	P ppm: 32 element, soil & rock	ICP-AES	10	10000
2140	23	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
551	23	S %: 32 element, rock & soil	ICP-AES	0.01	5.00
2141	23	Sb ppm: 32 element, soil & rock	ICP-AES	2	10000
2142	23	Sc ppm: 32 elements, soil & rock	ICP-AES	1	10000
2143	23	Sr ppm: 32 element, soil & rock	ICP-AES	1	10000
2144	23	Ti %: 32 element, soil & rock	ICP-AES	0.01	10.00
2145	23	Tl ppm: 32 element, soil & rock	ICP-AES	10	10000
2146	23	U ppm: 32 element, soil & rock	ICP-AES	10	10000
2147	23	V ppm: 32 element, soil & rock	ICP-AES	1	10000
2148	23	W ppm: 32 element, soil & rock	ICP-AES	10	10000
2149	23	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000

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To: KEMESS MINE

P.O. BOX 3519
SMITHERS, BC
V0J 2N0

Project : KEMESS CENTRE
Comments: ATTN: BRETT LAPEARE

Page Number :2-A
Total Pages :3
Certificate Date: 01-AUG-2000
Invoice No. :10024183
P.O. Number :200950
Account :PIL

CERTIFICATE OF ANALYSIS A0024183

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm Aqua R	Cu ppm	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %
19243	214	238	< 5	< 0.2	12	0.2	0.65	< 2	< 10	30	0.5	< 2	4.66	< 0.5	5	31	9	2.63	< 10	< 1	0.15
19244	214	238	< 5	< 0.2	15	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19245	214	238	< 5	< 0.2	21	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19246	214	238	< 5	< 0.2	14	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19247	214	238	< 5	< 0.2	18	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19248	214	238	< 5	< 0.2	16	< 0.2	0.85	2	< 10	260	0.5	< 2	6.19	< 0.5	5	27	14	2.51	< 10	< 1	0.19
19249	214	238	< 5	< 0.2	38	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19250	214	238	< 5	< 0.2	29	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23151	214	238	< 5	< 0.2	34	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23152	214	238	< 5	< 0.2	64	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23153	214	238	< 5	< 0.2	30	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23154	214	238	< 5	< 0.2	14	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23155	214	238	< 5	< 0.2	23	< 0.2	1.06	6	< 10	240	0.5	< 2	2.78	< 0.5	9	39	20	3.40	< 10	< 1	0.29
23156	214	238	< 5	< 0.2	25	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23157	214	238	< 5	< 0.2	26	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23158	214	238	< 5	< 0.2	20	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23159	214	238	< 5	< 0.2	29	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23160	214	238	< 5	< 0.2	129	0.2	0.36	6	< 10	30	< 0.5	< 2	2.51	< 0.5	16	123	126	2.43	< 10	< 1	0.22
23161	214	238	< 5	< 0.2	28	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23162	214	238	< 5	< 0.2	57	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23163	214	238	< 5	< 0.2	23	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23164	214	238	< 5	< 0.2	34	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23165	214	238	< 5	< 0.2	66	0.2	0.60	8	< 10	70	< 0.5	< 2	2.56	< 0.5	8	81	62	2.28	< 10	< 1	0.30
23166	214	238	< 5	< 0.2	19	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23167	214	238	< 5	< 0.2	121	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23168	214	238	< 5	< 0.2	28	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23169	214	238	< 5	1.6	60	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23170	214	238	< 5	< 0.2	65	< 0.2	1.06	86	< 10	130	0.5	< 2	5.57	< 0.5	33	44	57	6.92	< 10	< 1	0.08
23171	214	238	5	< 0.2	120	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23172	214	238	< 5	< 0.2	107	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23173	214	238	5	< 0.2	17	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23174	214	238	20	< 0.2	62	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23175	214	238	15	< 0.2	272	0.2	2.99	24	< 10	50	0.5	< 2	2.78	< 0.5	43	239	253	6.37	10	< 1	0.33
23176	214	238	< 5	< 0.2	45	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23177	214	238	< 5	< 0.2	72	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23178	214	238	< 5	< 0.2	81	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23179	214	238	430	< 0.2	198	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23180	214	238	10	< 0.2	120	< 0.2	1.34	2	< 10	180	< 0.5	< 2	1.35	< 0.5	8	84	126	3.17	< 10	< 1	0.13
23181	214	238	< 5	< 0.2	130	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23182	214	238	< 5	< 0.2	43	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

CERTIFICATION:

KJ-00-K

ALS Chemex

Aurora Laboratory Services Ltd.
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British Columbia, Canada V7J 2C1
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To: KEMESS MINE

P.O. BOX 3519
SMITHERS, BC
V0J 2N0

Project : KEMESS CENTRE
Comments: ATTN: BRETT LAPEARE

Certificate Date: 01-AUG-2000
Invoice No. : I0024183
P.O. Number :200950
Account :PIL

CERTIFICATE OF ANALYSIS A0024183

SAMPLE	PREP CODE	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Mo ppm
19243	214 238	10	0.95	600	2	0.02	4	600	16	2.25	< 2	5	111	< 0.01	< 10	< 10	26	< 10	52	-----
19244	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19245	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19246	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19247	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19248	214 238	10	0.96	720	2	0.01	4	610	< 2	0.52	< 2	6	105	< 0.01	< 10	< 10	41	< 10	38	-----
19249	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19250	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23151	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23152	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23153	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23154	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23155	214 238	< 10	1.40	1430	3	0.02	12	230	< 2	0.16	< 2	9	115	0.01	< 10	< 10	55	< 10	86	-----
23156	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23157	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23158	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23159	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23160	214 238	< 10	0.48	955	16	0.02	11	250	4	1.62	< 2	< 1	44	< 0.01	< 10	< 10	5	< 10	42	-----
23161	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23162	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23163	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23164	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23165	214 238	< 10	0.91	1405	6	0.02	9	250	2	1.31	< 2	1	57	< 0.01	< 10	< 10	9	< 10	54	-----
23166	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23167	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23168	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23169	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23170	214 238	< 10	1.78	1755	1	0.03	41	1220	< 2	0.90	2	29	101	0.01	< 10	< 10	180	< 10	68	-----
23171	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23172	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23173	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23174	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23175	214 238	< 10	2.10	605	7	0.07	44	980	< 2	1.86	2	17	65	0.08	< 10	< 10	159	< 10	54	-----
23176	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23177	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23178	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23179	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23180	214 238	< 10	1.01	425	9	0.07	7	680	< 2	0.30	< 2	6	37	0.03	< 10	< 10	74	< 10	30	-----
23181	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	8
23182	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	8

CERTIFICATION: _____

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KC-00-04

CERTIFICATE OF ANALYSIS A0024183

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm Aqua R	Cu ppm	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %
23183	214	238	< 5	< 0.2	54	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23184	214	238	5	< 0.2	169	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23185	214	238	15	0.2	235	< 0.2	1.22	2	< 10	130	0.5	< 2	3.05	< 0.5	9	40	218	2.23	< 10	< 1	0.26
23186	214	238	10	< 0.2	151	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23187	214	238	< 5	< 0.2	108	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23188	214	238	< 5	< 0.2	82	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23189	214	238	< 5	< 0.2	61	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23190	214	238	10	< 0.2	147	< 0.2	1.85	< 2	< 10	540	< 0.5	< 2	1.89	< 0.5	9	53	140	2.46	< 10	< 1	0.13
23191	214	238	20	0.4	308	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23192	214	238	10	< 0.2	372	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23193	214	238	10	< 0.2	243	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23194	214	238	< 5	< 0.2	94	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23195	214	238	10	< 0.2	116	< 0.2	1.60	< 2	< 10	150	< 0.5	< 2	1.25	< 0.5	15	104	116	3.21	< 10	< 1	0.15
23196	214	238	20	0.2	237	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23197	214	238	5	< 0.2	142	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23198	214	238	10	< 0.2	196	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23199	214	238	< 5	< 0.2	99	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23200	214	238	5	< 0.2	153	< 0.2	1.25	< 2	< 10	140	< 0.5	< 2	1.52	< 0.5	8	74	147	2.66	< 10	< 1	0.21
23251	214	238	< 5	< 0.2	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23252	214	238	5	< 0.2	228	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23253	214	238	< 5	0.2	333	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23254	214	238	25	2.2	257	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23255	214	238	< 5	1.0	78	0.2	1.28	< 2	< 10	170	< 0.5	< 2	1.61	< 0.5	7	70	76	3.06	< 10	< 1	0.14
23256	214	238	45	0.8	516	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23257	214	238	< 5	< 0.2	37	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23258	214	238	< 5	1.0	113	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23259	214	238	20	0.2	302	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23260	214	238	15	0.6	195	0.4	1.92	< 2	< 10	320	0.5	< 2	3.46	< 0.5	9	33	190	2.56	< 10	< 1	0.19
23261	214	238	15	0.6	182	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23262	214	238	5	0.2	196	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23263	214	238	< 5	0.2	186	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23264	214	238	10	< 0.2	128	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23265	214	238	55	< 0.2	261	0.2	1.95	< 2	< 10	130	0.5	< 2	2.97	< 0.5	8	29	283	2.77	< 10	< 1	0.11
23266	214	238	15	< 0.2	173	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23267	214	238	< 5	< 0.2	181	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23268	214	238	10	0.8	187	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23269	214	238	25	0.8	259	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19156	214	238	< 5	< 0.2	85	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19165	214	238	< 5	< 0.2	66	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

KC-00-04

CERTIFICATION:

ALS Chemex

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British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: KEMESS MINE
P.O. BOX 3510
SMITHERS, BC
V0J 2N0

Project : KEMESS CENTRE
Comments: ATTN: BRETT LAPFARE

Page Number :3-B
Total Pages :3
Certificate Date: 01-AUG-2000
Invoice No. :I0024183
P.O. Number :200950
Account :PII

CERTIFICATE OF ANALYSIS A0024183

SAMPLE	PREP CODE	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Mo ppm
23183	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	6
23184	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	36
23185	214 238	10	0.43	305	63	0.06	4	620	< 2	0.36	< 2	3	111	< 0.01	< 10	< 10	38	< 10	24	-----
23186	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	12
23187	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	13
23188	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	7
23189	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	6
23190	214 238	< 10	1.03	410	10	0.11	5	620	< 2	0.18	< 2	5	168	0.01	< 10	< 10	54	< 10	32	-----
23191	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	6
23192	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	6
23193	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	10
23194	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	10
23195	214 238	< 10	1.18	435	12	0.11	8	670	< 2	0.47	< 2	7	59	0.10	< 10	< 10	75	< 10	28	-----
23196	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	15
23197	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	5
23198	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	19
23199	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	10
23200	214 238	< 10	0.61	290	9	0.07	6	610	< 2	0.37	< 2	4	65	0.01	< 10	< 10	49	< 10	24	-----
23251	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	7
23252	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	13
23253	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	13
23254	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	10
23255	214 238	< 10	0.81	340	7	0.09	6	600	< 2	0.12	< 2	6	69	0.03	< 10	< 10	68	< 10	26	-----
23256	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	6
23257	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	5
23258	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	6
23259	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	6
23260	214 238	10	0.84	570	5	0.09	4	630	< 2	0.34	< 2	5	147	< 0.01	< 10	< 10	51	< 10	26	-----
23261	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	4
23262	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	5
23263	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	7
23264	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	9
23265	214 238	10	0.93	720	7	0.10	4	620	< 2	0.18	2	5	130	< 0.01	< 10	< 10	61	< 10	34	-----
23266	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	10
23267	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	10
23268	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	8
23269	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	6
19156	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
19165	214 238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

KK-00-04

CERTIFICATION: _____

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P.O. BOX 3519
SMITHERS, BC
V0J 2N0

A0024500

Comments: ATTN: BRITT LAPEARE

CERTIFICATE A0024500

(PIL) - KEMESS MINE

Project: KEMESS CENTRE
P.O. # : 200950

Samples submitted to our lab in Vancouver, BC.
This report was printed on 07-AUG-2000.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
225	89	Run as received
238	89	Nitric-aqua-regia digestion
229	18	ICP - AQ Digestion charge

* NOTE 1:

The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Sr, Ti, Tl, W.

ANALYTICAL PROCEDURES 1 of 2

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	89	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
6	89	Ag ppm: HNO3-aqua regia digest	AAS-BKGD CORR	0.2	100.0
2	89	Cu ppm: HNO3-aqua regia digest	AAS	1	10000
3	71	Mo ppm: HNO3-aqua regia digest	AAS	1	1000
2118	18	Ag ppm: 32 element, soil & rock	ICP-AES	0.2	100.0
2119	18	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
2120	18	As ppm: 32 element, soil & rock	ICP-AES	2	10000
557	18	B ppm: 32 element, rock & soil	ICP-AES	10	10000
2121	18	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
2122	18	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
2123	18	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
2124	18	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
2125	18	Cd ppm: 32 element, soil & rock	ICP-AES	0.5	500
2126	18	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
2127	18	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
2128	18	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
2150	18	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
2130	18	Ga ppm: 32 element, soil & rock	ICP-AES	10	10000
2131	18	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
2132	18	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
2151	18	La ppm: 32 element, soil & rock	ICP-AES	10	10000
2134	18	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
2135	18	Mn ppm: 32 element, soil & rock	ICP-AES	5	10000
2136	18	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
2137	18	Na %: 32 element, soil & rock	ICP-AES	0.01	10.00
2138	18	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
2139	18	P ppm: 32 element, soil & rock	ICP-AES	10	10000
2140	18	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
551	18	S %: 32 element, rock & soil	ICP-AES	0.01	5.00
2141	18	Sb ppm: 32 element, soil & rock	ICP-AES	2	10000
2142	18	Sc ppm: 32 elements, soil & rock	ICP-AES	1	10000
2143	18	Sr ppm: 32 element, soil & rock	ICP-AES	1	10000
2144	18	Ti %: 32 element, soil & rock	ICP-AES	0.01	10.00
2145	18	Tl ppm: 32 element, soil & rock	ICP-AES	10	10000
2146	18	U ppm: 32 element, soil & rock	ICP-AES	10	10000
2147	18	V ppm: 32 element, soil & rock	ICP-AES	1	10000
2148	18	W ppm: 32 element, soil & rock	ICP-AES	10	10000

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A0024500

Comments: ATTN: BRETT LAPEARE

CERTIFICATE A0024500

(PIL) - KEMESS MINE

Project: KEMESS CENTRE
P.O. # : 200950

Samples submitted to our lab in Vancouver, BC.
This report was printed on 07-AUG-2000.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
225	89	Run as received
238	89	Nitric-aqua-regia digestion
229	18	ICP - AQ Digestion charge
* NOTE	1:	

The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Sr, Ti, Tl, W.

ANALYTICAL PROCEDURES 2 of 2

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
2149	18	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000

ALS Chemex

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V0J 2N0

Project : KEMESS CENTRE
Comments: ATTN: BRETT LAPLANTE

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Invoice No. :10024500
P.O. Number :200950
Account :PIL

KC-00-84

CERTIFICATE OF ANALYSIS A0024500

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm Aqua R	Cu ppm	Mo ppm	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm
23270	225	238	15	0.4	417	-----	0.6	2.36	< 2	< 10	120	< 0.5	< 2	2.27	< 0.5	13	31	447	2.82	< 10	< 1
23271	225	238	45	1.0	487	12	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23272	225	238	35	0.2	1015	30	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23273	225	238	40	0.6	690	29	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23274	225	238	5	0.2	356	6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23275	225	238	25	0.6	785	-----	0.8	2.08	< 2	< 10	210	< 0.5	< 2	2.05	< 0.5	9	38	838	2.91	< 10	< 1
23276	225	238	70	0.6	592	6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23277	225	238	25	0.2	684	9	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23278	225	238	75	1.0	1110	10	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23279	225	238	35	4.0	670	12	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23280	225	238	170	2.6	2470	-----	1.8	1.57	< 2	< 10	70	< 0.5	< 2	1.55	0.5	10	40	2420	2.76	< 10	< 1
23281	225	238	110	1.2	1195	15	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23282	225	238	70	1.2	1750	28	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23283	225	238	80	1.2	1300	8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23284	225	238	85	1.8	2960	26	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23285	225	238	95	2.2	3040	-----	2.4	1.73	< 2	< 10	70	< 0.5	< 2	1.58	< 0.5	7	40	3020	2.34	< 10	< 1
23286	225	238	55	0.8	1210	9	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23287	225	238	40	0.6	816	22	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23288	225	238	55	0.6	1120	16	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23289	225	238	50	0.8	1025	17	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23290	225	238	35	0.2	506	-----	0.6	2.11	< 2	< 10	110	< 0.5	< 2	1.66	< 0.5	7	53	609	2.72	< 10	< 1
23291	225	238	45	0.2	619	10	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23292	225	238	40	0.2	318	12	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23293	225	238	15	0.2	238	5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23294	225	238	55	0.2	236	8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23295	225	238	10	< 0.2	243	-----	0.2	2.19	< 2	< 10	670	< 0.5	< 2	2.23	< 0.5	7	49	280	2.65	< 10	< 1
23296	225	238	< 5	< 0.2	131	5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23297	225	238	< 5	< 0.2	186	5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23298	225	238	< 5	< 0.2	89	8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23299	225	238	10	< 0.2	180	8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23300	225	238	< 5	< 0.2	22	-----	< 0.2	2.43	< 2	< 10	130	< 0.5	< 2	2.26	< 0.5	5	39	24	2.39	< 10	< 1
23401	225	238	< 5	< 0.2	28	6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23402	225	238	10	< 0.2	88	7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23403	225	238	< 5	0.2	448	9	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23404	225	238	< 5	0.2	472	11	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23405	225	238	< 5	< 0.2	145	-----	0.2	2.94	< 2	< 10	370	0.5	< 2	2.34	< 0.5	8	38	182	2.70	< 10	< 1
23406	225	238	< 5	0.4	370	57	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23407	225	238	< 5	< 0.2	175	13	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23408	225	238	10	5.6	2560	28	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23409	225	238	< 5	0.6	564	19	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

CERTIFICATION: _____

ALS Chemex

Aurora Laboratory Services Ltd.
Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: KEMESS MINE
P.O. BOX 3510
SMITHERS, BC
V0J 2N0

Project : KEMESS CENTRE
Comments: ATTN: BRETT LAPEARE

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23270	225	238	0.20	10	1.03	450	32	0.09	5	670	6	0.60	< 2	4	127	< 0.01	< 10	< 10	47	< 10	42
23271	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23272	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23273	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23274	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23275	225	238	0.13	< 10	1.12	450	18	0.10	5	700	< 2	0.36	< 2	5	149	< 0.01	< 10	< 10	58	< 10	30
23276	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23277	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23278	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23279	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23280	225	238	0.13	< 10	0.99	380	10	0.07	5	620	12	0.74	< 2	3	76	< 0.01	< 10	< 10	48	< 10	44
23281	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23282	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23283	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23284	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23285	225	238	0.14	< 10	1.02	340	13	0.08	6	620	< 2	0.53	< 2	4	76	0.01	< 10	< 10	44	< 10	34
23286	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23287	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23288	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23289	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23290	225	238	0.12	< 10	1.02	325	16	0.11	6	650	< 2	0.35	< 2	4	90	0.09	< 10	< 10	52	< 10	28
23291	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23292	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23293	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23294	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23295	225	238	0.17	< 10	0.85	375	6	0.10	6	650	6	0.12	< 2	4	233	0.04	< 10	< 10	53	< 10	36
23296	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23297	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23298	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23299	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23300	225	238	0.12	< 10	0.91	435	4	0.11	5	560	< 2	0.08	< 2	4	101	0.07	< 10	< 10	46	< 10	24
23401	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23402	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23403	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23404	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23405	225	238	0.16	< 10	0.86	390	18	0.11	4	640	2	0.28	< 2	4	124	0.05	< 10	< 10	55	< 10	36
23406	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23407	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23408	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23409	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

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23410	225	238	10	1.2	1100	-----	1.2	1.44	< 2	< 10	130	< 0.5	< 2	2.66	0.5	17	76	1080	2.53	< 10	< 1
23411	225	238	< 5	0.8	689	33	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23412	225	238	< 5	1.6	2180	15	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23413	225	238	< 5	0.8	700	16	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23414	225	238	< 5	< 0.2	174	27	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23415	225	238	< 5	< 0.2	80	-----	< 0.2	1.53	< 2	< 10	130	< 0.5	< 2	2.90	2.0	7	33	81	2.45	< 10	< 1
23416	225	238	5	0.2	242	27	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23417	225	238	< 5	< 0.2	74	17	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23418	225	238	< 5	< 0.2	95	16	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23419	225	238	< 5	< 0.2	38	8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23420	225	238	< 5	< 0.2	33	-----	< 0.2	1.71	< 2	< 10	160	< 0.5	< 2	2.28	< 0.5	7	55	32	2.67	< 10	< 1
23421	225	238	10	1.2	824	36	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23422	225	238	< 5	< 0.2	125	5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23423	225	238	< 5	0.2	359	535	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23424	225	238	< 5	0.2	105	>1000	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23425	225	238	< 5	< 0.2	96	-----	< 0.2	1.64	< 2	< 10	110	< 0.5	< 2	2.28	< 0.5	7	63	109	2.56	< 10	< 1
23426	225	238	5	0.2	466	44	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23427	225	238	< 5	< 0.2	130	19	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23428	225	238	10	0.4	536	45	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23429	225	238	< 5	0.2	323	68	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23430	225	238	< 5	< 0.2	183	-----	< 0.2	1.48	< 2	< 10	400	< 0.5	< 2	2.43	0.5	7	56	189	2.61	< 10	< 1
23431	225	238	5	< 0.2	299	17	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23432	225	238	5	0.2	481	29	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23433	225	238	< 5	< 0.2	87	9	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23434	225	238	< 5	< 0.2	65	6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23435	225	238	5	0.4	407	-----	0.4	1.44	< 2	< 10	200	< 0.5	< 2	1.93	0.5	9	48	436	2.66	< 10	< 1
23436	225	238	25	0.2	443	22	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23437	225	238	5	0.2	371	22	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23438	225	238	< 5	0.2	264	20	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23439	225	238	< 5	0.6	497	29	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23440	225	238	< 5	0.4	231	-----	0.8	1.46	< 2	< 10	160	< 0.5	< 2	1.72	< 0.5	8	53	241	2.59	< 10	< 1
23441	225	238	< 5	0.6	259	19	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23442	225	238	< 5	0.6	270	13	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23443	225	238	< 5	< 0.2	84	6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23444	225	238	< 5	< 0.2	22	7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23445	225	238	< 5	< 0.2	180	-----	< 0.2	1.86	< 2	< 10	190	< 0.5	< 2	1.72	< 0.5	6	51	177	2.64	< 10	< 1
23446	225	238	< 5	< 0.2	360	26	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23447	225	238	< 5	0.2	404	25	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23448	225	238	< 5	0.6	178	32	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23449	225	238	< 5	< 0.2	18	5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

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23410	225	238	0.21	< 10	0.75	830	23	0.05	7	600	14	0.81	< 2	3	77	< 0.01	< 10	< 10	40	< 10	86
23411	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23412	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23413	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23414	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23415	225	238	0.20	< 10	0.52	425	21	0.07	5	660	32	0.33	< 2	3	90	< 0.01	< 10	< 10	41	< 10	190
23416	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23417	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23418	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23419	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23420	225	238	0.12	< 10	0.74	360	10	0.08	7	600	4	0.06	< 2	4	88	< 0.01	< 10	< 10	44	< 10	30
23421	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23422	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23423	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23424	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23425	225	238	0.15	< 10	0.87	365	29	0.08	6	620	2	0.01	< 2	4	84	< 0.01	< 10	< 10	50	< 10	26
23426	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23427	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23428	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23429	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23430	225	238	0.18	10	0.67	375	23	0.06	6	620	2	0.24	< 2	4	92	< 0.01	< 10	< 10	48	< 10	32
23431	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23432	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23433	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23434	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23435	225	238	0.16	20	0.79	335	40	0.07	6	650	2	0.13	< 2	5	77	< 0.01	< 10	< 10	57	< 10	26
23436	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23437	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23438	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23439	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23440	225	238	0.08	< 10	0.88	425	22	0.10	6	620	< 2	0.04	< 2	5	73	0.03	< 10	< 10	54	< 10	24
23441	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23442	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23443	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23444	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23445	225	238	0.09	< 10	1.01	445	16	0.12	6	630	2	0.04	< 2	5	78	0.08	< 10	< 10	55	< 10	26
23446	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23447	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23448	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23449	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

CERTIFICATION: David Lehnert

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23450	225	238	5	< 0.2	35	-----	< 0.2	2.95	< 2	< 10	240	< 0.5	< 2	2.20	< 0.5	7	39	41	2.71	10	< 1
23451	225	238	< 5	< 0.2	23	12	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23452	225	238	< 5	< 0.2	18	4	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23453	225	238	< 5	0.2	46	6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23454	225	238	< 5	< 0.2	19	7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23455	225	238	< 5	< 0.2	40	-----	< 0.2	2.64	< 2	< 10	570	< 0.5	< 2	2.37	0.5	6	46	47	2.61	< 10	< 1
23456	225	238	< 5	< 0.2	14	11	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23457	225	238	< 5	< 0.2	11	13	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23458	225	238	< 5	< 0.2	14	15	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

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23450	225	238	0.11	< 10	1.01	440	6	0.13	5	620	< 2	0.02	< 2	5	113	0.08	< 10	< 10	54	< 10	28
23451	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23452	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23453	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23454	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23455	225	238	0.14	< 10	0.78	390	7	0.15	6	640	4	< 0.01	< 2	5	335	0.02	< 10	< 10	55	< 10	26
23456	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23457	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23458	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

CERTIFICATION:

ALS Chemex

Aurora Laboratory Services Ltd.
Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: KEMESS MINE

P.O. BOX 3519
SMITHERS, BC
V0J 2N0

A0024976

Comments: ATTN: BRETT LAPEARE

CERTIFICATE A0024976

(PIL) - KEMESS MINE

Project: KEMESS CENTRE
P.O. # : 200950

Samples submitted to our lab in Vancouver, BC.
This report was printed on 11-AUG-2000.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
225	69	Run as received
238	69	Nitric-aqua-regia digestion
229	14	ICP - AQ Digestion charge
* NOTE	1:	

The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Nb, Ti, Tl, W.

ANALYTICAL PROCEDURES 2 of 2

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
2149	14	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000

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Project : KEMESS CENTRE
Comments: ATTN: BRETT LAPLANTE

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KC-00-04

CERTIFICATE OF ANALYSIS A0024976

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm Aqua R	Cu ppm	Mo ppm	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm
23459	225	238	< 5	0.2	11	9	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23460	225	238	< 5	< 0.2	13	-----	0.2	1.53	< 2	< 10	160	< 0.5	< 2	1.93	< 0.5	7	84	11	2.91	< 10	< 1
23461	225	238	< 5	< 0.2	15	9	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23462	225	238	< 5	< 0.2	9	7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23463	225	238	< 5	0.2	8	6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23464	225	238	< 5	< 0.2	11	9	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23465	225	238	< 5	0.6	16	-----	0.2	1.49	< 2	< 10	80	< 0.5	< 2	2.12	< 0.5	6	55	13	2.54	< 10	< 1
23466	225	238	< 5	0.4	99	5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23467	225	238	< 5	< 0.2	45	52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23468	225	238	< 5	< 0.2	32	22	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23469	225	238	< 5	< 0.2	50	12	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23470	225	238	< 5	< 0.2	29	-----	0.2	1.37	< 2	< 10	160	< 0.5	< 2	2.10	< 0.5	6	55	27	2.36	< 10	< 1
23471	225	238	< 5	< 0.2	14	6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23472	225	238	< 5	< 0.2	16	7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23473	225	238	< 5	< 0.2	18	9	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23474	225	238	< 5	< 0.2	19	8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23475	225	238	< 5	< 0.2	17	-----	< 0.2	1.71	< 2	< 10	170	0.5	< 2	1.78	< 0.5	7	95	16	2.95	< 10	1
23476	225	238	< 5	< 0.2	18	10	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23477	225	238	< 5	< 0.2	13	6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23478	225	238	< 5	< 0.2	22	6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23479	225	238	< 5	< 0.2	17	7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23480	225	238	< 5	0.2	67	-----	< 0.2	1.29	< 2	< 10	200	0.5	2	1.45	< 0.5	8	107	64	2.83	< 10	< 1
23481	225	238	< 5	< 0.2	36	7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23482	225	238	< 5	< 0.2	36	6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23483	225	238	< 5	< 0.2	28	7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23484	225	238	< 5	< 0.2	33	7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23485	225	238	< 5	< 0.2	31	-----	< 0.2	1.99	< 2	< 10	180	0.5	< 2	2.03	< 0.5	8	79	30	2.96	< 10	< 1
23486	225	238	< 5	< 0.2	23	8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23487	225	238	< 5	< 0.2	13	4	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23488	225	238	< 5	< 0.2	12	5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23489	225	238	< 5	< 0.2	22	8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23490	225	238	< 5	< 0.2	45	-----	0.2	3.32	< 2	< 10	290	1.0	< 2	3.50	< 0.5	15	89	46	2.47	< 10	< 1
23491	225	238	< 5	< 0.2	35	8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23492	225	238	< 5	< 0.2	24	6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23493	225	238	< 5	< 0.2	42	8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23494	225	238	< 5	0.2	73	7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23495	225	238	< 5	< 0.2	15	-----	0.2	1.87	2	< 10	180	0.5	< 2	2.44	< 0.5	16	94	12	2.47	< 10	< 1
23496	225	238	< 5	< 0.2	56	57	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23497	225	238	< 5	< 0.2	20	8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23498	225	238	< 5	< 0.2	26	8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

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To: KEMESS MINE
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V0J 2N0

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23459	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23460	225	238	0.12	< 10	0.81	400	22	0.07	8	650	2	< 0.01	< 2	4	117	< 0.01	< 10	< 10	53	< 10	24
23461	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23462	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23463	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23464	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23465	225	238	0.17	< 10	0.63	330	5	0.07	7	590	6	< 0.01	< 2	3	100	< 0.01	< 10	< 10	44	< 10	24
23466	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23467	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23468	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23469	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23470	225	238	0.12	10	0.68	445	5	0.07	5	570	2	< 0.01	< 2	5	98	< 0.01	< 10	< 10	50	< 10	20
23471	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23472	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23473	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23474	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23475	225	238	0.13	< 10	0.90	380	13	0.08	8	620	8	0.03	< 2	5	97	0.04	< 10	< 10	59	< 10	20
23476	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23477	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23478	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23479	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23480	225	238	0.13	< 10	0.90	345	9	0.07	9	670	4	0.01	< 2	6	83	0.03	< 10	< 10	61	< 10	22
23481	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23482	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23483	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23484	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23485	225	238	0.15	< 10	0.99	400	7	0.08	8	610	6	0.02	< 2	6	95	0.04	< 10	< 10	59	< 10	20
23486	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23487	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23488	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23489	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23490	225	238	0.11	< 10	0.76	305	7	0.11	8	610	8	0.14	< 2	6	138	0.08	< 10	< 10	56	< 10	18
23491	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23492	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23493	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23494	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23495	225	238	0.14	< 10	0.73	280	8	0.08	8	550	8	0.12	2	5	120	< 0.01	< 10	< 10	50	< 10	20
23496	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23497	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23498	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

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SAMPLE	PREP CODE		Au ppb FAAA	Ag ppm Aqua R	Cu ppm	Mo ppm	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm
23499	225	238	< 5	< 0.2	39	9	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23500	225	238	< 5	< 0.2	26	-----	< 0.2	1.70	2	< 10	150	0.5	2	2.00	< 0.5	6	89	22	2.45	< 10	< 1
23651	225	238	< 5	0.2	88	6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23652	225	238	< 5	< 0.2	14	7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23653	225	238	< 5	0.2	46	9	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23654	225	238	< 5	0.2	98	6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23655	225	238	< 5	0.2	97	-----	0.2	1.26	< 2	< 10	120	< 0.5	< 2	2.10	< 0.5	7	109	91	2.60	< 10	1
23656	225	238	< 5	< 0.2	219	7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23657	225	238	< 5	< 0.2	58	7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23658	225	238	< 5	0.2	36	6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23659	225	238	< 5	< 0.2	62	7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23660	225	238	< 5	0.2	45	-----	0.2	2.46	2	< 10	130	0.5	< 2	2.72	< 0.5	8	92	54	2.83	< 10	< 1
23661	225	238	< 5	0.6	88	7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23662	225	238	< 5	< 0.2	69	6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23663	225	238	< 5	< 0.2	79	8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23664	225	238	< 5	< 0.2	41	5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23665	225	238	< 5	0.2	17	-----	0.2	1.67	< 2	< 10	120	< 0.5	< 2	2.41	< 0.5	7	74	14	2.46	< 10	< 1
23666	225	238	< 5	< 0.2	29	6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23667	225	238	< 5	< 0.2	25	8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23668	225	238	< 5	< 0.2	95	6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23669	225	238	< 5	< 0.2	14	7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23670	225	238	< 5	< 0.2	22	-----	< 0.2	1.20	2	< 10	80	< 0.5	< 2	1.81	< 0.5	6	94	19	2.44	< 10	< 1
23671	225	238	< 5	< 0.2	40	6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23672	225	238	< 5	0.4	346	5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23673	225	238	< 5	< 0.2	31	8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23674	225	238	< 5	< 0.2	28	5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23675	225	238	< 5	< 0.2	21	-----	< 0.2	1.43	< 2	< 10	150	0.5	< 2	1.70	< 0.5	7	95	20	2.64	< 10	< 1
23676	225	238	< 5	< 0.2	20	5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23677	225	238	< 5	< 0.2	23	6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

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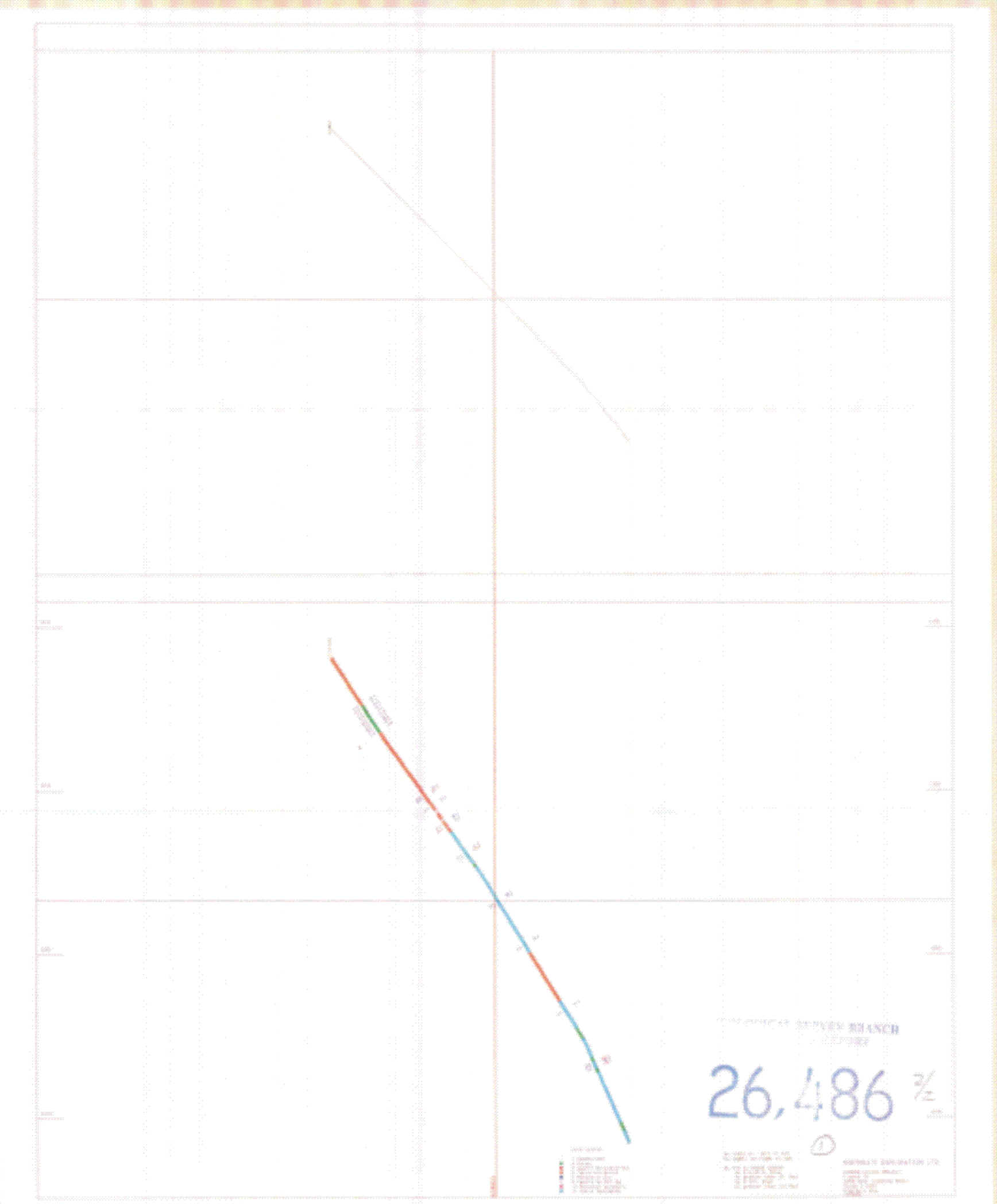
23499	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23500	225	238	0.15	< 10	0.83	320	8	0.07	7	570	6	< 0.01	< 2	4	100	< 0.01	< 10	< 10	49	< 10	14
23651	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23652	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23653	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23654	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23655	225	238	0.11	10	0.68	325	9	0.06	10	580	6	0.06	< 2	5	83	< 0.01	< 10	< 10	53	< 10	16
23656	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23657	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23658	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23659	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23660	225	238	0.11	10	0.82	335	7	0.10	9	640	6	0.01	< 2	5	114	< 0.01	< 10	< 10	59	< 10	16
23661	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23662	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23663	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23664	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23665	225	238	0.09	10	0.70	330	6	0.08	7	580	4	< 0.01	< 2	4	127	< 0.01	< 10	< 10	54	< 10	16
23666	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23667	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23668	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23669	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23670	225	238	0.10	< 10	0.81	340	8	0.07	7	610	< 2	< 0.01	< 2	5	64	< 0.01	< 10	< 10	53	< 10	14
23671	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23672	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23673	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23674	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23675	225	238	0.11	< 10	0.88	350	8	0.08	8	580	2	< 0.01	< 2	6	96	0.02	< 10	< 10	63	< 10	16
23676	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
23677	225	238	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

CERTIFICATION: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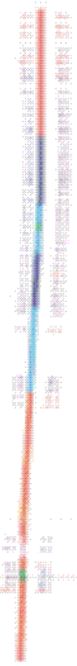

GEOLOGICAL SURVEY BRANCH
REPORT

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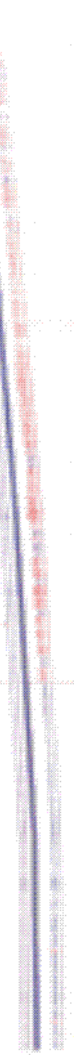

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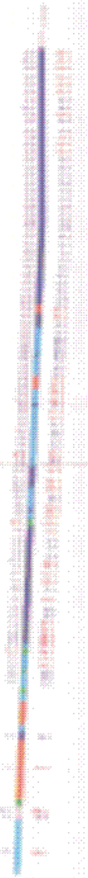

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APPENDIX 4: DETAILED COST ACCOUNTING

SUMMARY OF 2000 EXPLORATION DIAMOND DRILLING COSTS

Date	Item	Cost	Invoice #	Comments
4-Jul-00	Diamond Drilling	30579.83	00-445	KC-00-01, KC-00-02
1-Aug-00	Diamond Drilling	28736.41	00-447	KC-00-03, KC-00-04
2-Aug-00	Diamond Drilling	27425.01	00-449	KN-00-05
22-Aug-00	Diamond Drilling	82568.58	00-453	KN-00-04/3/6/7/2/1
5-Oct-00	Diamond Drilling	23532.18	00-460	KN-00-08
18-Oct-00	Diamond Drilling	29910.24	00-462	KN-00-08/9
27-Jul-00	Diamond Drilling	1254.00	648768	Eastman Camera Rental
27-Aug-00	Diamond Drilling	1254.00	648769	Eastman Camera Rental
20-Oct-00	Diamond Drilling	1525.20	648770	DDH Survey Tool Rental & Repairs
7-Nov-00	Diamond Drilling	566.31	648771	DDH Survey Tool Rental
8-Nov-00	Diamond Drilling	17663.40	00-469	2000-06
20-Nov-00	Diamond Drilling	3010.98	00-469-A	Core Boxes
20-Nov-00	Diamond Drilling	68472.41	00-471	KN-00-10/12
5-Dec-00	Diamond Drilling	34748.78	00-472	KN-00-11
6-Dec-00	Diamond Drilling	1254.00	648772	DDH Survey Tool Rental
25-Aug-00	Credit	2738.13	ADJ-447/449	Credit Inv. #00-447, 00-449
	TOTAL	**349763.20**		

SUMMARY OF 2000 EXPLORATION HELICOPTER COSTS

Date	Hours	Cost	Subtotal	Feul	Tax	Total	Invoice/P.O. #	Comments
4-Jul-00	0.30	658.00	197.40		13.82	211.22	216832	
12-Jul-00	0.30	658.00	197.40	41.04	16.69		216820	
26-Jul-00	7.70	658.00	5066.60	223.44	370.30	5660.34	206783	
27-Jul-00	4.60	658.00	3026.80		211.88	3238.68	206784	
28-Jul-00	2.20	658.00	1447.60		101.33	1548.93	206785	
29-Jul-00	1.60	658.00	1052.80		73.70	1126.50	206788	
29-Jul-00	0.70	658.00	460.60		32.24	492.84	216688	
30-Jul-00	1.40	658.00	921.20		64.48	985.68	216689	
31-Jul-00	1.70	658.00	1118.60		119.76	1238.36	216692	less 0.9 hrs for photographer
1-Aug-00	3.70	658.00	2434.60		170.42	2605.02	216695	
2-Aug-00	3.30	658.00	2171.40		193.45	2364.85	216699	less 0.9 hrs for environmental
3-Aug-00	1.10	658.00	723.80		50.67	774.47	216902	
4-Aug-00	1.00	658.00	658.00		46.06	704.06	216907	
5-Aug-00	1.10	658.00	723.80		50.67	774.47	216910	
6-Aug-00	3.30	658.00	2171.40		152.00	2323.40	216915	
7-Aug-00	1.90	658.00	1250.20		87.51	1337.71	216919	
8-Aug-00	1.10	658.00	723.80		50.67	774.47	216920	
9-Aug-00	2.20	658.00	1447.60		101.33	1548.93	216922	
10-Aug-00	2.70	658.00	1776.60		124.36	1900.96	216925	
11-Aug-00	1.30	658.00	855.40		59.88	915.28	216778	
12-Aug-00	2.90	658.00	1908.20		133.57	2041.77	216780	
13-Aug-00	1.60	658.00	1052.80		73.70	1126.50	216783	
14-Aug-00	3.20	658.00	2105.60		147.39	2252.99	216785	
15-Aug-00	1.30	658.00	855.40		59.88	915.28	216788	
16-Aug-00	3.60	658.00	2368.80		165.82	2534.62	216790	
17-Aug-00	1.10	658.00	723.80		50.67	774.47	216794	
18-Aug-00	6.10	658.00	4013.80		280.97	4294.77	216797	
19-Aug-00	2.70	658.00	1776.60		124.36	1900.96	216926	
20-Aug-00	0.30	658.00	197.40		13.82	211.22	216929	
22-Aug-00	0.60	658.00	394.80		27.64	422.44	216933	
23-Aug-00	2.70	658.00	1776.60		124.36	1900.96	216939	
30-Aug-00	1.50	658.00	987.00	222.30	84.65	1293.95	207262	
21-Sep-00	4.30	658.00	2829.40	445.74	229.26	3504.40	207155	
25-Sep-00	7.60	851.00	6467.60	197.40	466.55	7131.55	207160	
26-Sep-00	1.40	851.00	1191.40		83.40	1274.80	207161	
27-Sep-00	1.90	658.00	1250.20	119.70	95.89	1465.79	207166	
27-Sep-00	1.60	870.00	1392.00		97.44	1489.44	207163	
28-Sep-00	1.10	658.00	723.80		50.67	774.47	207167	
29-Sep-00	1.40	658.00	921.20		64.48	985.68	207169	
30-Sep-00	1.20	658.00	789.60		55.27	844.87	207171	
1-Oct-00	1.60	658.00	1052.80		73.70	1126.50	207173	
2-Oct-00	1.70	658.00	1118.60		78.30	1196.90	207174	
3-Oct-00	2.10	658.00	1381.80		96.73	1478.53	220451	
4-Oct-00	3.20	658.00	2105.60		147.39	2252.99	220452	
5-Oct-00	1.50	658.00	987.00		69.09	1056.09	220454	
6-Oct-00	1.40	658.00	921.20		64.48	985.68	220456	
7-Oct-00	1.60	658.00	1052.80		73.70	1126.50	220458	
8-Oct-00	2.30	658.00	1513.40		105.94	1619.34	220459	
9-Oct-00	1.90	658.00	1250.20		87.51	1337.71	220460	
26-Oct-00	4.50	658.00	2961.00	215.46	222.35	3398.81	160170	
3-Nov-00	2.60	700.00	1820.00	218.88	142.72	2181.60	4056	Interior Helicopters
4-Nov-00	5.80	700.00	4060.00		284.20	4344.20	4057	Interior Helicopters
4-Nov-00	3.60	690.00	2484.00	131.25	183.07	2798.32	213095	
5-Nov-00	1.00	690.00	690.00		48.30	738.30	213096	
6-Nov-00	2.30	690.00	1587.00		111.09	1698.09	213097	
7-Nov-00	0.60	690.00	414.00		28.98	442.98	213098	
7-Nov-00	1.10	690.00	759.00		53.13	812.13	218962	

SUMMARY OF 2000 EXPLORATION HELICOPTER COSTS

Date	Hours	Cost	Subtotal	Feul	Tax	Total	Invoice/P.O. #	Comments
8-Nov-00	2.60	690.00	1794.00		125.58	1919.58	218963	
9-Nov-00	2.50	690.00	1725.00		120.75	1845.75	218964	
10-Nov-00	2.40	690.00	1656.00		115.92	1771.92	218965	
11-Nov-00	3.70	690.00	2553.00		178.71	2731.71	218966	
12-Nov-00	3.30	690.00	2277.00		159.39	2436.39	218967	
13-Nov-00	3.40	690.00	2346.00		164.22	2510.22	218968	
14-Nov-00	2.50	690.00	1725.00		120.75	1845.75	218969	
15-Nov-00	2.40	690.00	1656.00		115.92	1771.92	218970	
16-Nov-00	2.10	690.00	1449.00		101.43	1550.43	218971	
17-Nov-00	1.10	690.00	759.00		53.13	812.13	218972	
18-Nov-00	2.50	690.00	1725.00		120.75	1845.75	218973	
19-Nov-00	1.10	690.00	759.00		53.13	812.13	218974	
20-Nov-00	3.70	690.00	2553.00		178.71	2731.71	218975	
21-Nov-00	2.60	690.00	1794.00		125.58	1919.58	220626	
22-Nov-00	2.00	690.00	1380.00		96.60	1476.60	220627	
23-Nov-00	0.40	690.00	276.00		19.32	295.32	220628	
23-Nov-00	1.40	690.00	966.00		67.62	1033.62	220610	
24-Nov-00	2.20	690.00	1518.00		106.26	1624.26	220611	
25-Nov-00	3.40	690.00	2346.00		164.22	2510.22	220614	
26-Nov-00	7.30	690.00	5037.00		352.59	5389.59	220616	
27-Nov-00	3.40	690.00	2346.00		164.22	2510.22	220617	
	185.50	**51522.00**	**126555.20**	**1774.17**	**9065.98**	**137395.35**		

SUMMARY OF 2000 EXPLORATION CAMP COSTS

Name	Dates	# of Days	Cost/Day	Total	Comments
GEOLGOGISTS					
Karen Lam	May 9-23	14	85	1190	
	June 7-21	14	85	1190	
	July 5-19	14	85	1190	
	Aug 2-16	14	85	1190	
	Aug 30-Sept 13	14	85	1190	
	Sept 27-Oct 11	14	85	1190	
	Oct 25-Nov 8	14	85	1190	
	Nov 22-Dec 6	14	85	1190	
	May-Dec	8	210	1680	8 return flights, P.G. to Kemess
			SUBTOTAL	**11200**	
Melanie MacKay	May 24-June 6	14	85	1190	
	June 20-July 3	14	85	1190	
	July 17-31	14	85	1190	
	Aug 14-28	14	85	1190	
	Oct 10-23	14	85	1190	
	Nov 8-22	14	85	1190	
	Dec 5-15	11	85	935	
	May-Dec	7	210	1470	
			SUBTOTAL	**9545**	7 return flights, P.G. to Kemess
Adrian Bray	Nov 8-28	21	85	1785	
	Dec 6-13	8	85	680	
	Nov -Dec	2	210	420	2 return flights, P.G. to Kemess
	Nov-Dec		**SUBTOTAL**	**2885**	
Brett Lapeare	June 13-30	18	85	1530	
	July 1-18	18	85	1530	
	July 19-31	10	85	850	
	Aug 1-8	5	85	425	
	Aug 11-15	5	85	425	
	Aug 16-30	15	85	1275	
	June-August	2	210	420	2 return flights, P.G. to Kemess
			SUBTOTAL	**6455**	
GEOPHYSICS	Sept 24-30	21	85	1785	3 men @ 7 days
		3	210	630	3 return flights, P.G. to Kemess
			SUBTOTAL	**2415**	
DIAMOND DRILLERS	June 12-July 4	92	85	7820	KC-01-01 to -03 (23 days)
(4 men)	July 12-19	32	85	2720	KC-00-04 (8 days)
	July 27-Aug 19	88	85	7480	KN-00-01 to -07 (22 days)
	Sept 25-Oct 8	56	85	4760	KN-00-08 to -09 (14 days)
	Oct 29-Nov 2	20	85	1700	2000-06 (5 days)
	Oct 30-Nov 26	112	85	9520	KN-00-10 to -12 (28 days)
	June-Dec	5	210	1050	drillers helpers, Smithers to Kemess
			SUBTOTAL	**35050**	
CHOPPER PILOT	July 26-31	7	85	595	
	Aug 1-23	23	85	1955	
	Sept 21-Oct 8	19	85	1615	
	Nov 3-26	24	85	2040	
			SUBTOTAL	**6205**	
	TOTALS			**73755**	

SUMMARY OF 2000 EXPLORATION SALARIES

Person	Total To Date	Comments
Karen Lam	19919.98	to November 15th
Melanie MacKay	11533.76	to November 15th
Brett LaPeare	26608.36	to November 6th
Adrian D. Bray	10860.50	Nov 8-Dec 7
Karen Lam	1538.46	Nov 16-Dec 7
Melanie MacKay	1107.69	Nov 16-Dec 7
TOTAL	71568.75	

SUMMARY OF 2000 EXPLORATION FUEL COSTS

Date	Item	Cost	Invoice #/P.O. #	Comments
19-Jul-00	Jet B	12179.54	825303	Gary Youny Agencies Ltd.
20-Sep-00	Jet B	4951.24	250294	Imperial Oil
5-Oct-00	Jet B	2947.85	250617	Petro Canada Lubricants
25-Oct-00	Jet B	4421.78	251065	Petro Canada Lubricants
15-Nov-00	Jet B	2816.24	251522	Imperial Oil
June 12-July 24 (23 days)	Diesel	1932.74	stocked item	23 drums (4714 litres)
July 12-19 (8 days)	Diesel	672.40	stocked item	8 drums (1640 litres)
July 27-Aug 19 (22 days)	Diesel	1849.10	stocked item	22 drums (4510 litres)
Sept 25- Oct 8 (14 days)	Diesel	1176.70	stocked item	14 drums (2870 litres)
Oct 29-Nov 2 (5 days)	Diesel	420.25	stocked item	5 drums (1025 litres)
Oct 30-Nov 24 (26 days)	Diesel	2185.30	stocked item	26 drums (5330 litres)
Sept 25- Oct 8 (14 days)	Propane	656.62	stocked item	2100 pounds of propane
Oct 29-Nov 2 (5 days)	Propane	234.51	stocked item	750 pounds of propane
Oct 30-Nov 24 (26 days)	Propane	1219.43	stocked item	3900 pounds of propane
	TOTAL	37663.70		

DIESEL: 1 drum/day (205 litres/drum @ $.41/litre)   PROPANE: 150 lbs/day (100 lbs=75 litres propane, $0.4169/litre)

SUMMARY OF 2000 EXPLORATION ANALYTICAL COSTS

Date	Item	Cost	Invoice #	Comments
27-Jul-00	Chemex Analytical Costs	1389.76	I0023510	KC-00-01/2
7-Aug-00	Chemex Analytical Costs	1382.23	I0024500	KC-00-04
7-Aug-00	Chemex Analytical Costs	1760.58	I0024183	KC-00-02/3/4
11-Aug-00	Chemex Analytical Costs	1071.84	I0024976	KC-00-04
17-Aug-00	Chemex Analytical Costs	2825.06	I0025694	KN-00-05
1-Sep-00	Assayers Canada Costs	1284.00	40776	KN-00-04/5
14-Sep-00	Assayers Canada Costs	2593.68	40846	KN-00-03/4
23-Sep-00	Assayers Canada Costs	1951.68	40990	KN-00-08/9
25-Sep-00	Assayers Canada Costs	963.00	40884	KN-00-03
27-Sep-00	Assayers Canada Costs	963.00	40997	KN-00-09
29-Sep-00	Assayers Canada Costs	2349.72	40909	KN-00-01/2/3/6/7
29-Sep-00	Assayers Canada Costs	642.00	40911	KN-00-01
13-Oct-00	Assayers Canada Costs	963.00	40966	KN-00-08
30-Oct-00	Assayers Canada Costs	1425.24	41020	KN-00-09
May-Dec	Sample Shipment to Lab	600.00		2500 samples @ $0.25/sample
	TOTAL	22164.79		

SUMMARY OF 2000 EXPLORATION GEOPHYSICAL COSTS

Date	Item	Cost	Invoice #	Comments
Sept/Oct.	Delta Geophysics	20693.80	Q.011	6.55 line kilometres
Nov. 26, 2000	Delta Geophysics	1170.85	Q.016	Geophysical Report
	TOTAL	21864.65		

SUMMARY OF 2000 EXPLORATION ADMINISTRATION COSTS

Date	Item	Cost	Comments
May	Administraton	1333.33	
June	Administraton	1333.33	
July	Administraton	1333.33	
August	Administraton	1333.33	
September	Administraton	1333.33	
October	Administraton	1333.33	
November	Administraton	1333.33	
December	Administraton	333.33	
	TOTAL	9666.64	

SUMMARY OF 2000 EXPLORATION VEHICLE COSTS

Date	Days	Cost/Day	Gas/Day	Total Daily Cost	Total
May	31	50.00	10	60.00	1860
June	30	50.00	10	60.00	1800
July	31	50.00	10	60.00	1860
August	31	50.00	10	60.00	1860
September	30	50.00	10	60.00	1800
October	31	50.00	10	60.00	1860
November	30	50.00	10	60.00	1800
December	15	50.00	10	60.00	900
				Total	13740

SUMMARY OF 2000 EXPLORATION SAMPLE PREPARATION COSTS

Number of Samples	Cost/Sample	Subtotal	GST	Total	Comments
24	3.00	72.00	5.04	77.04	KC-00-01
99	3.00	297.00	20.79	317.79	KC-00-02
54	3.00	162.00	11.34	173.34	KC-00-03
198	3.00	594.00	41.58	635.58	KC-00-04
62	3.00	186.00	13.02	199.02	KN-00-01
52	3.00	156.00	10.92	166.92	KN-00-02
201	3.00	603.00	42.21	645.21	KN-00-03
167	3.00	501.00	35.07	536.07	KN-00-04
181	3.00	543.00	38.01	581.01	KN-00-05
56	3.00	168.00	11.76	179.76	KN-00-06
61	3.00	183.00	12.81	195.81	KN-00-07
226	3.00	678.00	47.46	725.46	KN-00-08
187	3.00	561.00	39.27	600.27	KN-00-09
257	3.00	771.00	53.97	824.97	KN-00-10
254	3.00	762.00	53.34	815.34	KN-00-11
254	3.00	762.00	53.34	815.34	KN-00-12
40	3.00	120.00	8.40	128.40	2000-06
2373	51	7119	498.33	7617.33	

SUMMARY OF 2000 EXPLORATION MATERIALS COSTS

Date	Supplier	Cost	Invoice #	Comments
7-Jun-00	Neville Crosby	1341.71	0092102	Geological Supplies
11-Jul-00	Neville Crosby	119.43	0092710	Geological Supplies
17-Jul-00	Forest Power?	45.55	004764	Shifter Pedal for Quad
15-Aug-00	Neville Crosby	75.12	0103088	Geological Supplies
24-Aug-00	Neville Crosby	1720.93	0099646	Geological Supplies
17-Oct-00	Neville Crosby	980.28	0107586	Rock Saw Blades
May-Dec	2,500 Plastic Sample Bags	997.55		reference NCI Invoice # 0096904
	50 pails @ 6.86	343.00		Plastic Sample Pails
	TOTAL	5623.57		

SUMMARY OF 2000 EXPLORATION EQUIPMENT COSTS

Date	Item	Cost/Hr	Hours	Total
July-August	D10R	301.5	12	3618
	Total			3618

SUMMARY OF 2000 EXPLORATION ASSESSMENT REPORT COSTS

Date	Item	Cost	Comments
20-Nov-00	Photocopy Geophysical Maps	32.94	
Nov-Dec	Set of 5 Plotter Cartridges for Sections	113.55	reference Neville Crosby Invoice # 0073626
	TOTAL	146.49	

SUMMARY OF 2000 EXPLORATION SURVEYING COSTS

Date	Item	Days	Cost/Day	Total
July-Nov	Kemess Diamond Drill Surveying	5.00	330	1650
	TOTAL			1650

GEOPHYSICAL REPORT
KEMESS CENTRE PROPERTY
OMINECA MINING DIVISION
NTS 94E/2
FOR
NORTHGATE EXPLORATION LTD
BY
DELTA GEOSCIENCE LTD

NOV. 26, 2000.

GRANT A. HENDRICKSON, P.GEO.

GEOPHYSICAL REPORT

KEMESS CENTRE PROPERTY
LAT. 57° 02' NORTH, LONG. 126° 47' WEST

OMINECA MINING DIVISION
BRITISH COLUMBIA

NTS 94E/2

FOR

NORTHGATE EXPLORATION LTD

BY

DELTA GEOSCIENCE LTD

NOVEMBER 26, 2000.

G.A. HENDRICKSON, P.GEO.

TABLE OF CONTENTS

INTRODUCTION

At the request of Northgate Exploration, Delta Geoscience Ltd has conducted Induced Polarization, Resistivity, Magnetic Field Strength and Gamma Ray Spectrometry surveys on an area 2 km northwest of the large Kemess South open pit gold/copper deposit.

These surveys (6.5 line kilometers) were completed during the period September 25th to October 3, 2000. This geophysical program was a significant western extension of six lines surveyed by Lloyd Geophysics in 1991 and by Delta Geoscience Ltd in 1999. These previous surveys have been reported on separately. The topography of the grid extension area is very moderate. A large north-south trending swamp (likely a major fault structure) is centered in the grid extension area at approx. 8200E.

Access to the survey area is possible by 4x4 trucks utilising a series of old drill roads just north of the pit. Access to these roads is through the Kemess South open pit, thus is strictly controlled.

Detailed discussions regarding the scope of this project were initiated by Kemess Mine's Chief Geologist, Mike Hibbitts, who also liased with Delta Geoscience on a day-to-day basis during the course of the survey.

The surveys were conducted to assist with the ongoing evaluation of the area (Kemess Center) for additional sources of porphyry gold/copper ore for the high capacity Kemess concentrator.

The Kemess South gold/copper deposit (lateral dimensions 1700m east-west and 650m north-south) is hosted in a highly altered flat lying Jurassic-age Monzodiorite body. Intense alteration by hydrothermal fluids and by subsequent arid weathering processes has resulted in numerous changes to the physical properties of the mineralised Monzodiorite. These physical property changes and their possible geophysical signatures are as follows:

a) fracture controlled disseminated sulphide mineralization can increase the Induced Polarization response over a very large area. Concurrent silica flooding can increase the rock's resistivity significantly, which locally improves the signal to noise ratio.

b) Extensive alteration of Magnetite mineralization to Limonite/Hematite by hydrothermal fluids can result in localised magnetic lows. Magnetite mineralization can also be enhanced in the peripheral parts of the intrusion, which results in strong magnetic anomalies.

c) dramatic lowering of the resistivity due to the development of hydrothermal clay minerals, in conjunction with deep surficial weathering can mask the true I.P. response and seriously lower the signal to noise ratio for I.P. surveys, which will offset the depth of investigation.

d) potassic alteration, i.e. the introduction of potassium feldspar, causes an increased K40 gamma ray response. Frequently, the best grades in a porphyry deposit occur within the Potassic core.

e) hydrothermally altered intrusives can often be differentiated by elevated Uranium and Thorium levels (in the ppm range).

The geophysical survey has been designed to search for mineralization within altered Monzodiorite. Clearly, a correlation between the various geophysical techniques employed that can be related to the alteration processes discussed above, would help select and establish a priority to drill targets.

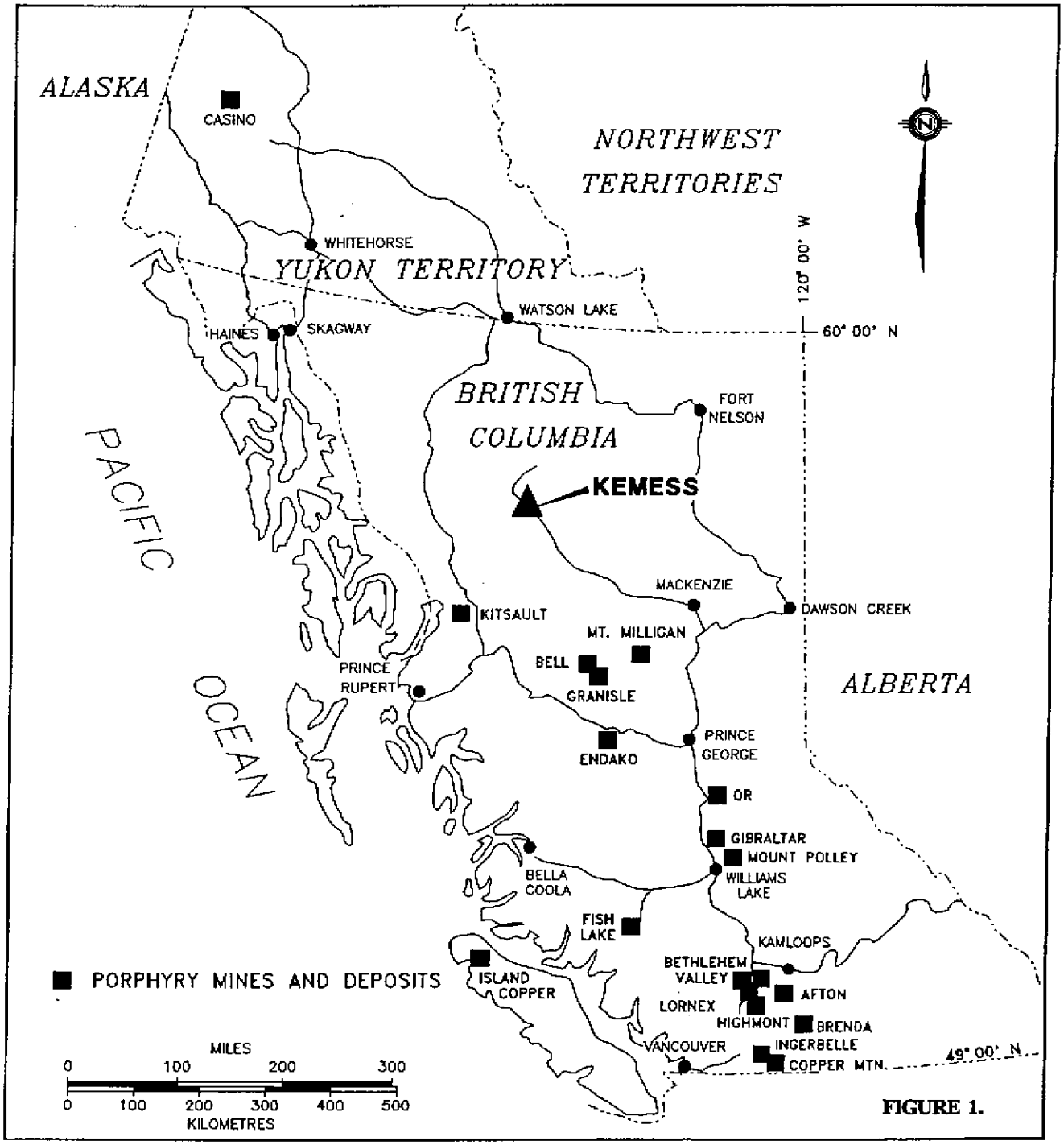
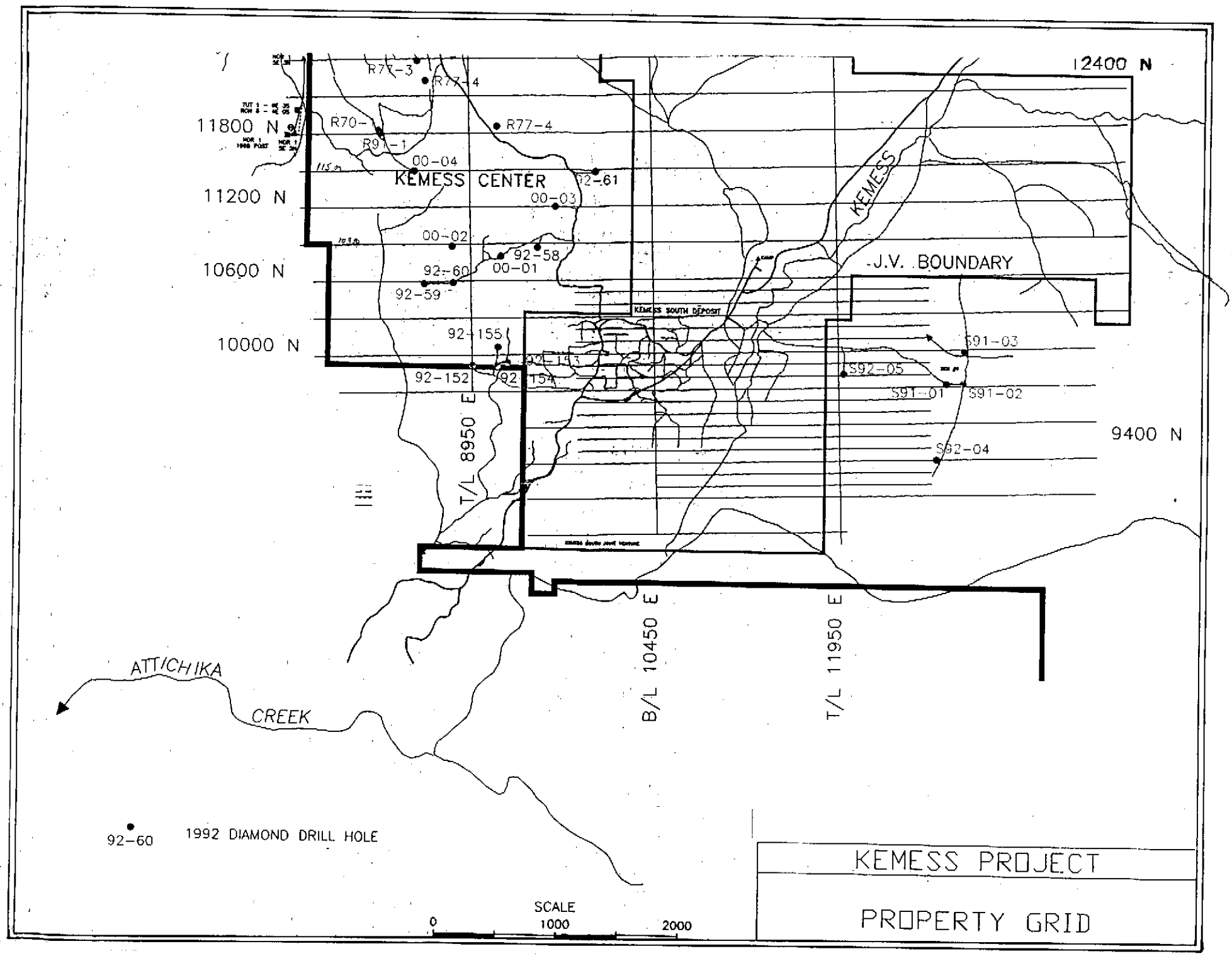

ALASKA
CASINO
NORTHWEST TERRITORIES
WHITEHORSE
YUKON TERRITORY
120° 00' W
WATSON LAKE
60° 00' N
HAINES
SKAGWAY
BRITISH COLUMBIA
FORT NELSON
PACIFIC OCEAN
KEMESS
MACKENZIE
DAWSON CREEK
KITSAULT
MT. MILLIGAN
BELL
GRANISLE
PRINCE RUPERT
ALBERTA
PRINCE GEORGE
ENDAKO
OR
GIBRALTAR
MOUNT POLLEY
BELLA COOLA
WILLIAMS LAKE
FISH LAKE
KAMLOOPS
BETHLEHEM
VALLEY
ISLAND COPPER
AFTON
LORNEX
HIGHMONT
BRENDA
VANCOUVER
INGERBELLE
COPPER MTN.
49° 00' N
PORPHYRY MINES AND DEPOSITS
MILES
0 100 200 300
0 100 200 300 400 500
KILOMETRES

FIGURE 1.


12400 N
11800 N
11200 N
10600 N
10000 N
9400 N
R77-3
R77-4
R70-
R91-1
00-04
KEMESS CENTER
92-61
00-03
00-02
92-58
00-01
92-60
92-59
KEMESS SOUTH DEPOSIT
92-155
92-152
92-154
J.V. BOUNDARY
KEMESS
S91-03
S92-05
S91-01
S91-02
S92-04
T/L 8950 E
B/L 10450 E
T/L 11950 E
ATTICHIKA
CREEK
92-60
1992 DIAMOND DRILL HOLE
SCALE
0
1000
2000
KEMESS PROJECT
PROPERTY GRID

PERSONNEL

Grant Hendrickson	- Senior Geophysicist
Ladislav Zabo	- Geographer
Eric Mackenzie	- Senior Technician
Marika Zabo	- Field Assistant
Ellen Thompson	- Field Assistant

EQUIPMENT

1	-	Iris Instruments IP-10 Receiver.
1	-	Iris Instruments VIP 4000 Transmitter.
1	-	GEM GSM19 Portable Magnetometer.
1	-	GEM GSP19 Base Station Magnetometer.
1	-	Exploranium GR320 Spectrometer with 21cu.in detection (0.35 litre).
1	-	Toshiba Field Computer.
1	-	4x4 Vehicle (Ford Excursion).

DATA PRESENTATION

All the maps that accompany this report are at a scale of 1:5000.

The I.P/Resistivity data (pole-dipole, a=50m, N=1-6) is presented in the standard pseudosection format (Figs. #10 to 15) and as contoured grid plans of the filtered I.P/Resistivity data (Figs. #3 and 4). The filtering algorithm is designed to remove the geometric effects of the electrode array geometry. This very valid filtering procedure (especially for porphyry exploration) produces a value that can be contoured line-to-line. The filtering process does however reduce the spatial resolution. The I.P/Resistivity filtered data is also presented as a posted raw data plan (Fig. #6).

The magnetic field strength data is presented in contoured plan format (Fig. #5) and as a posted raw data plan (Fig. #17).

The gamma ray data (in counts/minute) is background corrected and Compton effect stripped. The R.O.I. (region of interest) or windows in the gamma ray spectrum) are as follows:

Total Count	817 – 2842 KeV
K40	1324 – 1500 KeV
U	1663 – 1833 KeV
Th.	2330 – 2842 KeV

This data is presented as contoured plans (Figs. #6 to 9) and as posted raw data plans (Figs. #18 and 19).

A random gridding algorithm was used to produce all the contour plans. This procedure minimises any unnecessary line-to-line bias that often occurs with widely spaced lines.

Note – as this report is to be appended to Kemess geological reports, no claim maps are provided.

SURVEY PROCEDURE

The old E-W bearing grid lines were found to be in excellent shape due to the good line-cutting job done in 1991. Almost all of the station pickets (25m intervals) were found. Most of these pickets had fallen down, however were in place with their aluminium tags still quite readable.

Magnetic field strength data was acquired at 12.5m intervals on lines spaced 300 meters apart. A base station magnetometer monitored the magnetic field every 30 seconds. This data was used to remove the diurnal changes from the magnetic survey data. Many repeat or overlapping readings were taken to verify the operation of the magnetometer.

Gamma Ray Spectrometer data (Radiometrics) was acquired over 25m intervals, wit the centre of the interval used as the plotting point. The Spectrometer acquired data for one minute (the approximate time it took to slowly walk the 25 meter distance between survey stations). The instrument was adjusted to acquire counts from four regions of interest (R.O.I's), spread over the gamma ray spectrum. These R.O.I's are listed in the previous section on data presentation. Again, many overlapping readings were taken to ensure the instrument was operating correctly.

All of the induced polarization/resistivity pole-dipole surveying was set up so that the moving current electrode was to the east of the array (a = 50m, N = 1 to 6) as the array moved down slope to the west. The infinite current electrode was placed out to the northeast side of the survey area, approx. 1km from the east end of line 12100N. The previous I.P. survey (1991) was also pole dipole, a = 50m, however only N = 1 to 4 were recorded.

The dry soil conditions, plus rocky overburden, created some problems for the current electrodes. To transmit sufficient power into the ground generally required deep electrode holes and copious amounts of salt water. Water was also required on the potential electrodes to ensure the electrode contacts were well below the input impedance of the I.P. receiver.

Current electrodes were stainless steel bars (usually 3) wired together and buried in a shallow salt water soaked trench.

Potential electrodes were porous ceramic pots filled with a solution of copper sulphate surrounding a centre copper electrode.

The Induced Polarization signal was stacked in the receiver (multiple recordings) until the standard deviations were acceptable (generally well below 1%).

Survey data was transferred to the field computer each evenings, whereupon it was further processed and available for viewing by the senior explorationist to ensure everything was satisfactory and to assist with day-to-day exploration planning.

DISCUSSION OF THE DATA

Horizontal resolution of geological features is controlled largely by the 300m line separation, despite the high density of readings along the lines. This large line separation is just adequate for mapping out the larger geological features of porphyry deposits. The effectiveness of the gamma ray spectrometry survey in particular suffers from the widespread lines. A tighter grid would produce a better map, however the important feature is the recognition of alteration.

The Magnetic Field Strength and Induced Polarisation/Resistivity data provides important information from various depths (10m-300m) over the survey area, whereas the Gamma Ray Spectrometry data originates from the very near-surface material, thus is indicative of the composition of the overburden, outcropping rock and the glacial history. Water saturated areas (swamps) significantly attenuate the gamma ray response. Large areas of outcrop will tend to enhance the gamma ray response.

Overall, the geophysical data indicates two very significant structural zones. The first is a very broad north-trending zone centered at approx. 8200E. The second is a narrower northwest trending zone crossing through the grid at approx. 11200N, 8600E. The intersection of these two zones has produced a significant NW trending I.P. and Resistivity low. Extensive weathering and/or alteration along these two postulated structures may be obscuring or severely attenuating the geophysical response.

Three significant I.P. anomalies have been detected and are listed below in order of significance:

Anomaly 1 – a partially defined, near surface complex response of good amplitude and width. This anomaly, centered at 11800N, 8450E, is flat lying or dipping very shallowly to the east. The anomaly quickly becomes deeply buried to the east since the topography rises to the northeast. To the north, the anomaly remains open, however appears combined with the response of a weakly pyritic cover rock, i.e. the Talka group. To the south, this anomaly has an excellent correlation with a very significant Potassium 40 and Uranium anomaly. There is also a good correlation with a strong increase in magnetic field strength. This magnetic anomaly is indicative of a large body containing disseminated magnetite mineralization. There is also a partial correlation with high resistivity, possibly indicative of silicification. This anomaly is an excellent target for porphyry gold/copper mineralization.

Anomaly 2 – centered at 10600N, 8600E. This partially defined, but significant anomaly does not correlate with a Potassium 40 gamma ray response, however the area (which has been clearcut) was observed to have a relatively thick overburden cover which may account for a reduced gamma ray response. In addition, this shallow, broad I.P. response does not correlate directly with an increase in magnetic field strength. It does however correlate with a relatively low resistivity response. The above two features may indicate that the anomaly is within an area of extensive alteration, like Kemess South, thus it remains a good target for porphyry copper/gold mineralization.

Anomaly 3 – centered at 10750N, 7500E. These modest, narrow, near surface I.P. responses correlate with a very broad area of higher resistivity that has a relatively low magnetic expression. The higher resistivity appears, in part, to be due to silica flooding above narrow sulphide rich veins. There are some modest flanking narrow Potassium 40 responses, particularly on the northern extension of these postulated veins, but overall the gamma ray responses reflect increased outcrop. In all, this I.P. anomaly appears derived mainly from near surface veins of relatively limited tonnage potential. The precious metal content of these postulated veins could be significant. The I.P. anomaly does extend further north than illustrated by Fig. #3, however the number of vein-like responses diminishes and appears narrower. Centered around 7750E, 11500N there is a significant dense cluster of these postulated sulphide vein anomalies occurring at a depth below the surface of approx. 80m.

CONCLUSION AND RECOMMENDATIONS

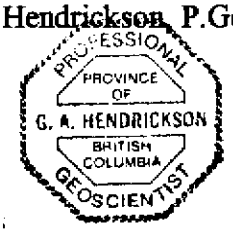
Integration of the geophysical results with the detailed geology and geochemistry is the next step. This important step will provide further insight into the economic significance of the geophysical anomalies.

Anomaly #1 (centered at 11800N, 8450E) is a very significant target that would benefit from more detailed study. A deeper looking, very focused I.P/Resistivity survey may be able to define the deep eastern extension of this anomaly. This anomaly can be related to outcrops of mineralised Monzodiorite.

Anomalies 2 and 3 do not appear to outcrop, but are near surface targets, thus their significance may be further revealed by the soil geochemistry results. The tonnage potential of Anomaly 2 could be very significant, whereas Anomaly 3 has limited tonnage potential.

At some point in the future, this geophysical survey should be integrated with the previous year's surveys.

Grant A. Hendrickson, P.Geo.



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STATEMENT OF QUALIFICATIONS

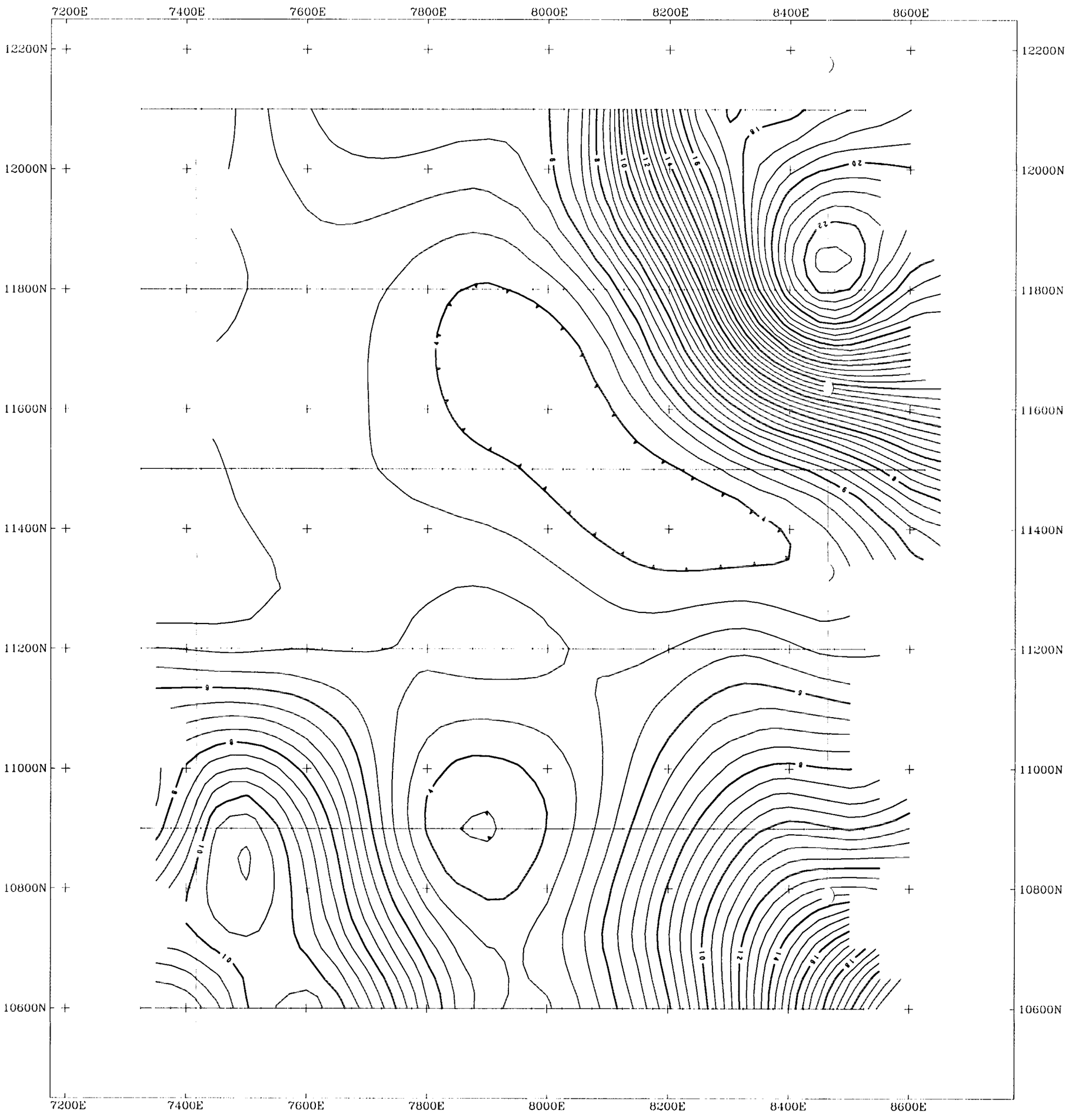
Grant A. Hendrickson

- B.Science, University of British Columbia, Canada, 1971. Geophysics option.
- For the past 28 years, I have been actively involved in mineral exploration projects throughout Canada, the United States, Europe, Central and South America and Asia.
- Registered as a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of the Province of British Columbia, Canada.
- Registered as a Professional Geophysicist with the Association of Professional Engineers, Geologists and Geophysicists of Alberta, Canada.
- Active member of the Society of Exploration Geophysicists, European Association of Geoscientists and Engineers, and the British Columbia Geophysical Society.

Dated at Delta, British Columbia, Canada, this 27 day of Nov, 2000.

Grant A. Hendrickson, P.Geo.

PROVINCIAL PROVINCE OF G. A. HENDRICKSON BRITISH COLUMBIA GEOSCIENTIST



Scale 1:5000

100 0 100 200 300
(meters)

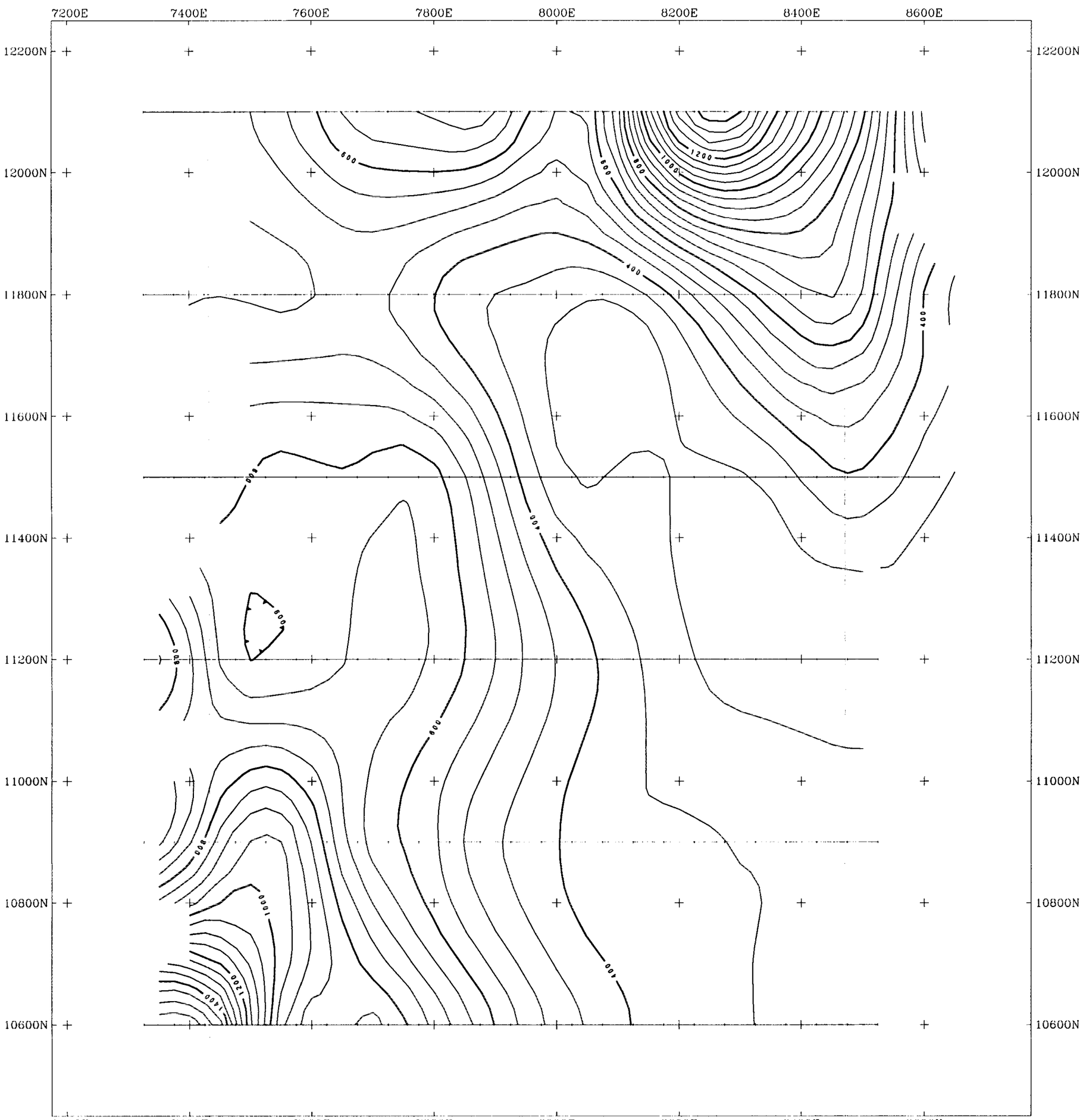
NORTHGATE – KEMESS OPERATIONS

KEMESS CENTER PROJECT
NORTH CENTRAL BRITISH COLUMBIA
INDUCED POLARIZATION PLAN (filtered)

Contour interval 0.5 mV/V
Pole Dipole data, N = 1-6, 50m dipoles
Iris instruments
Sept, 2000

(5)

DELTA GEOSCIENCE LTD *Fig # 3*



Scale 1:5000

100 0 100 200 300
(meters)

26,496 2/2

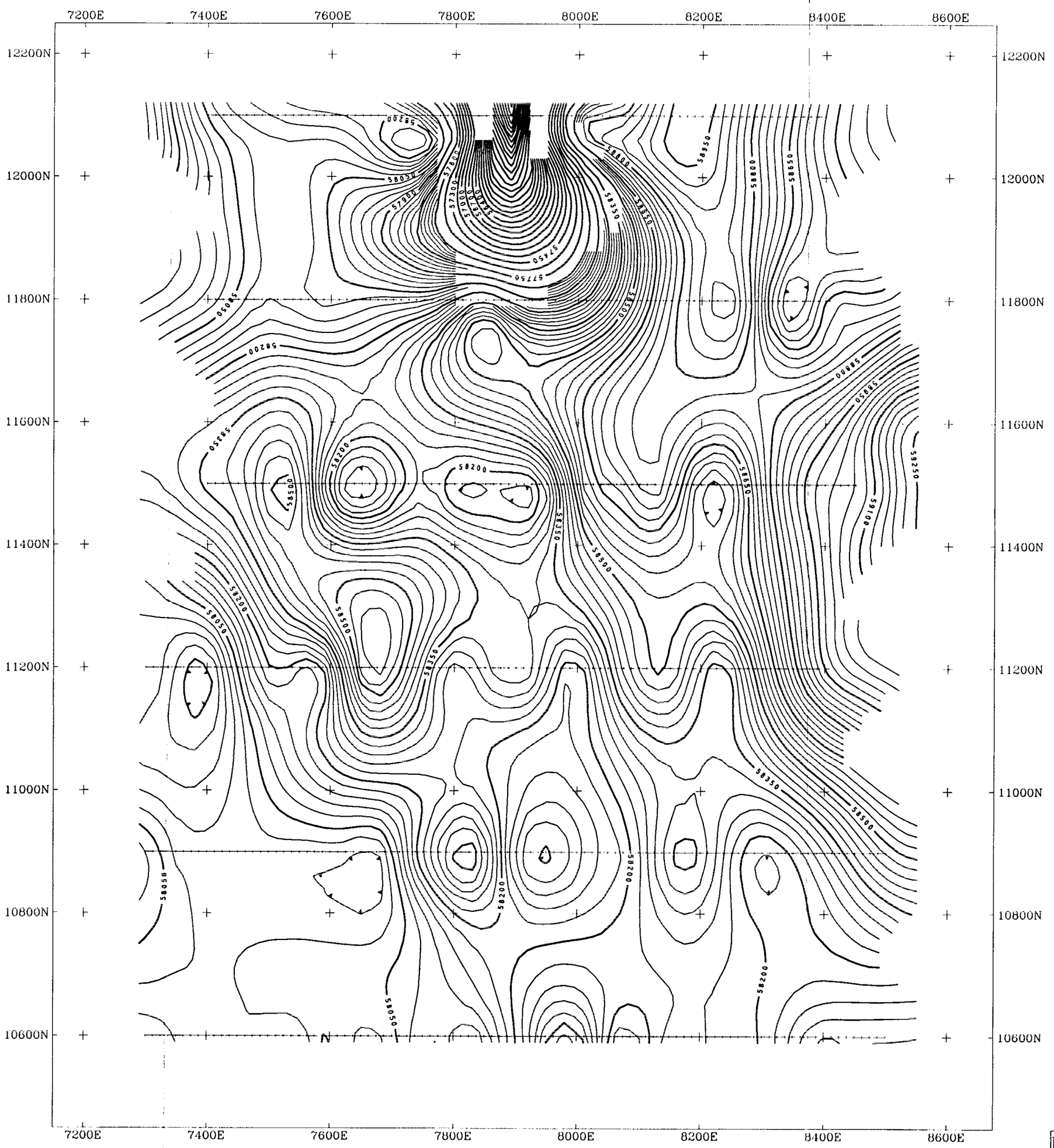
NORTHGATE – KEMESS OPERATIONS

KEMESS CENTER PROJECT
NORTH CENTRAL BRITISH COLUMBIA
RESISTIVITY PLAN (filtered)

Contour interval 50 ohm-m
Pole Dipole data, N = 1-6, 50m dipoles
Iris Instruments
Sept, 2000

(6)

DELTA GEOSCIENCE LTD *Fig # 4*



Scale 1:5000

100 0 100 200 300

(meters)

26,486 2/2

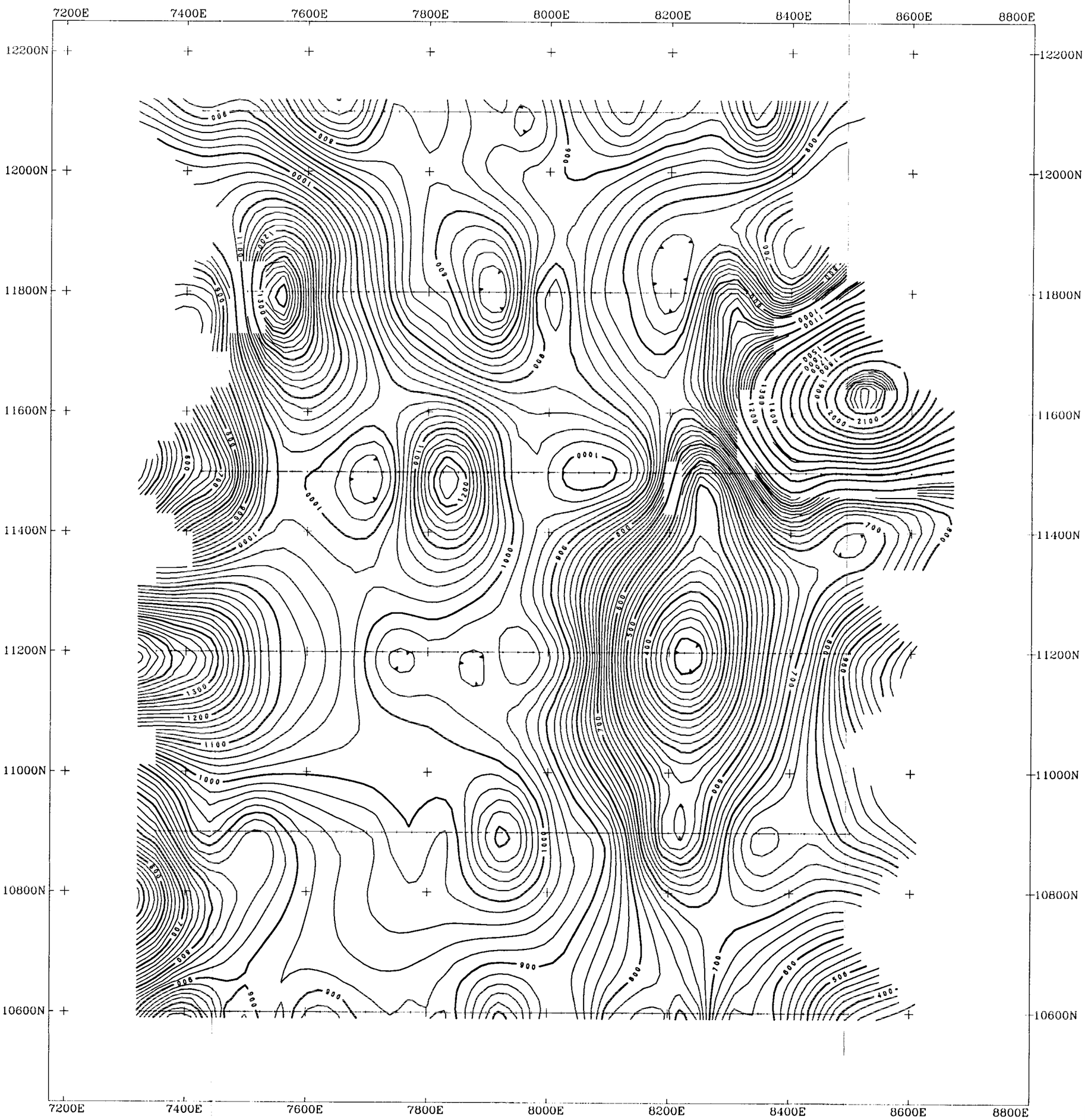
NORTHGATE – KEMESS OPERATIONS

KEMESS CENTER PROJECT
NORTH CENTRAL BRITISH COLUMBIA
MAGNETIC FIELD STRENGTH PLAN

Contour interval 30 nt
total field data
Gem instruments
Sept, 2000

(7)

DELTA GEOSCIENCE LTD *Fig # 5*



Scale 1:5000

100 0 100 200 300
(meters)

26,486 2/2

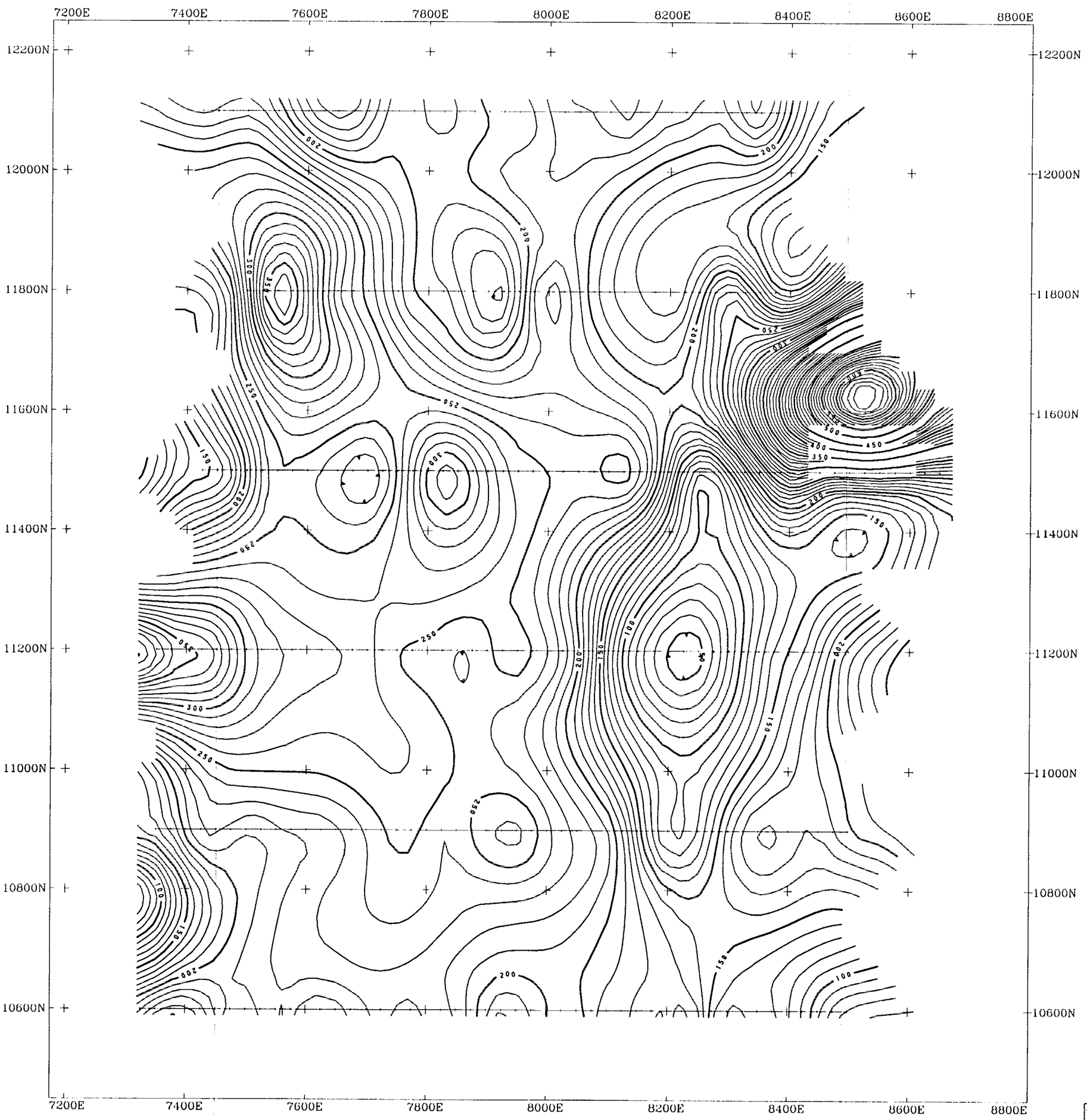
NORTHGATE – KEMESS OPERATIONS

KEMESS CENTER PROJECT
NORTH CENTRAL BRITISH COLUMBIA
RADIOMETRICS – TOTAL COUNT

Contour interval 20 counts/minute
averaged over 25 meter intervals
Exploranium GR320 instrument
Sept, 2000

(8)

DELTA GEOSCIENCE LTD *Fig # 6*



Scale 1:5000

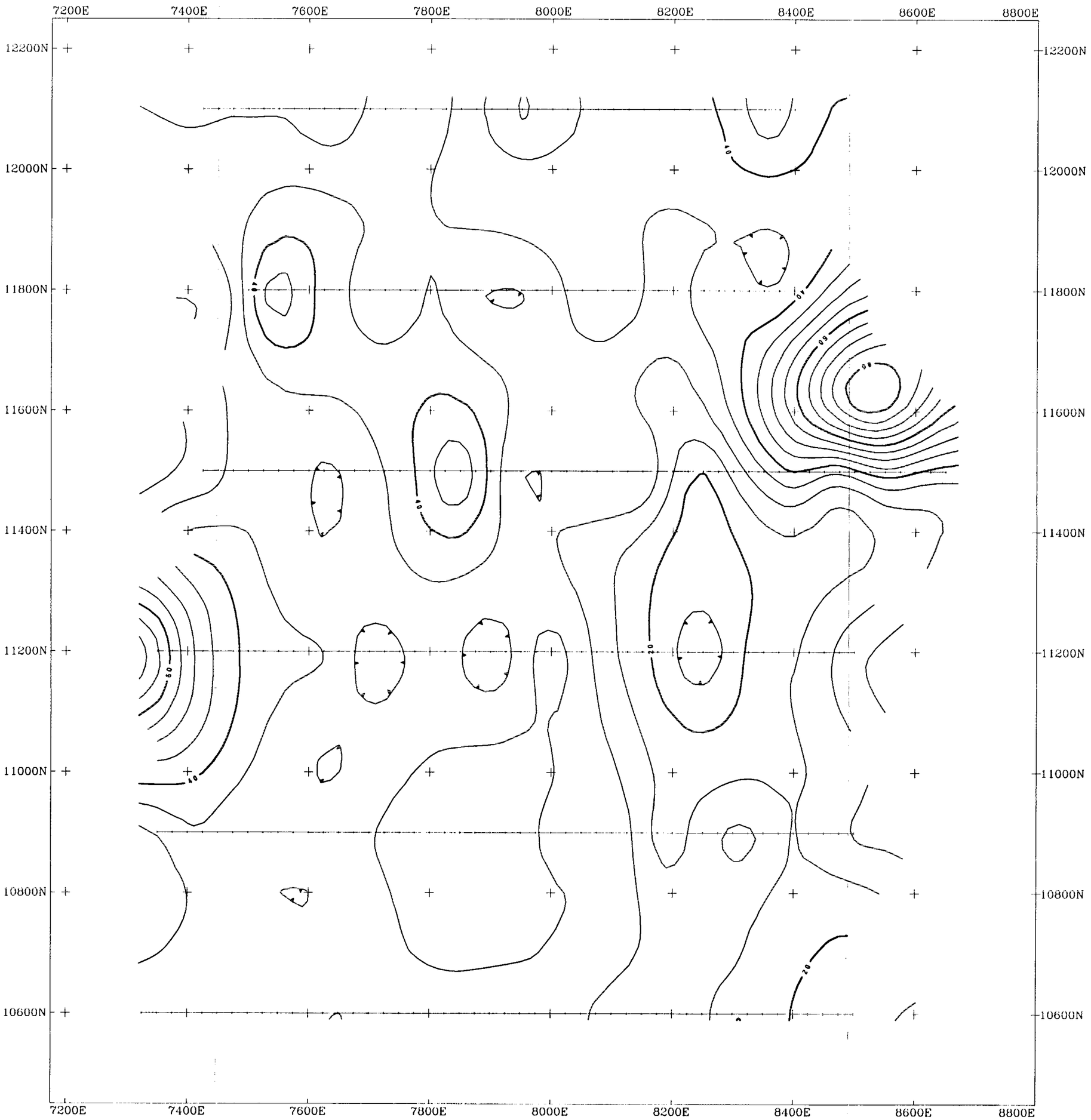
NORTHGATE – KEMESS OPERATIONS

KEMESS CENTER PROJECT
NORTH CENTRAL BRITISH COLUMBIA
RADIOMETRICS – POTASSIUM

Contour interval 10 counts/minute
averaged over 25 meter intervals
Exploranium GR320 instrument
Sept. 2000

(9)

DELTA GEOSCIENCE LTD *Fig # 7*



Scale 1:5000

100 0 100 200 300
(meters)

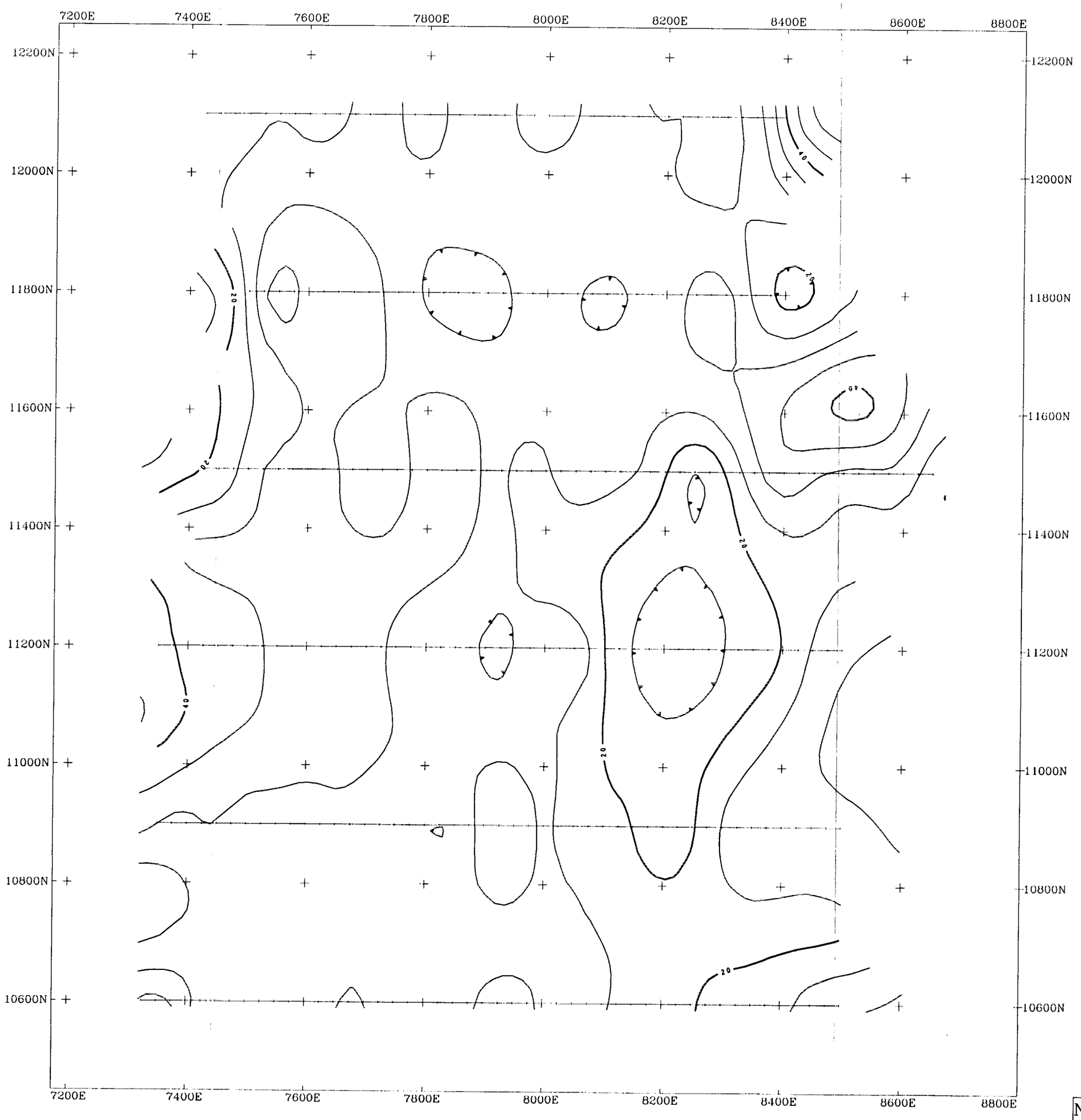
NORTHGATE KEMESS OPERATIONS

KEMESS CENTER PROJECT
NORTH CENTRAL BRITISH COLUMBIA
RADIOMETRICS – URANIUM

Contour interval 5 counts/minute
averaged over 25 meter intervals
Exploranium GR320 instrument
Sept, 2000

(10)

DELTA GEOSCIENCE LTD *Fig # 8*



Scale 1:5000

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

26,486 2/2

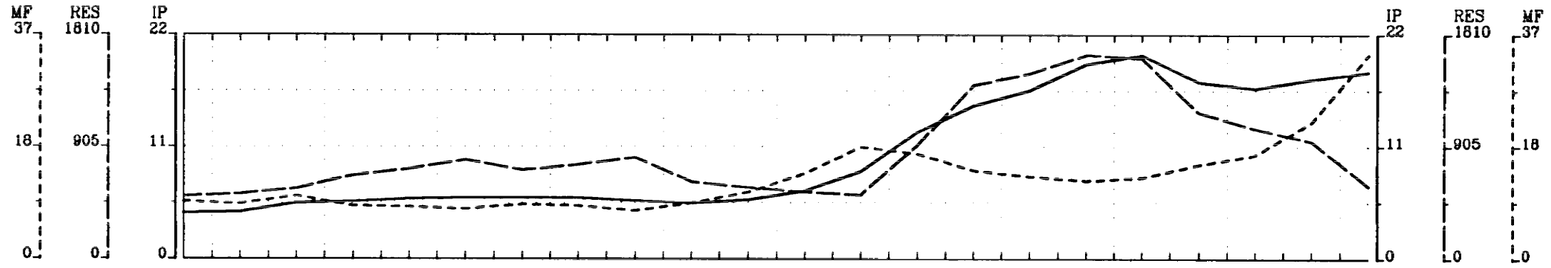
NORTHGATE – KEMESS OPERATIONS

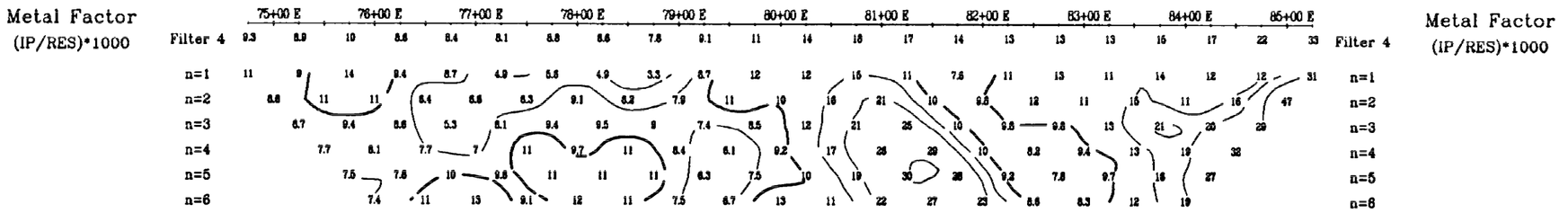
KEMESS CENTER PROJECT
NORTH CENTRAL BRITISH COLUMBIA
RADIOMETRICS – THORIUM

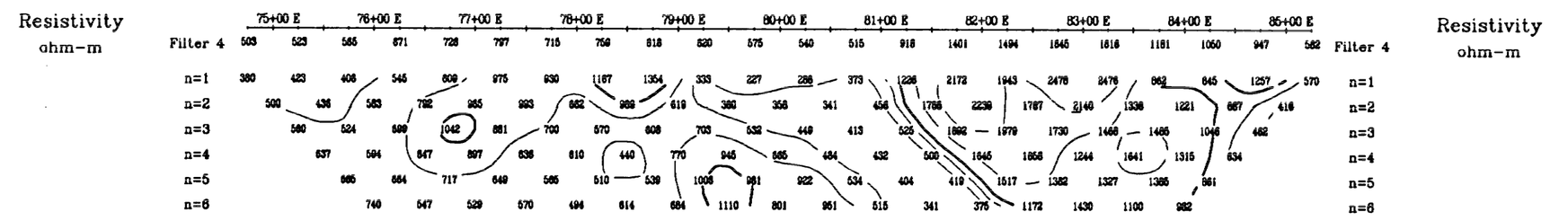
Contour interval 5 counts/minute
averaged over 25 meter intervals
Exploranium GR320 instrument
Sept, 2000

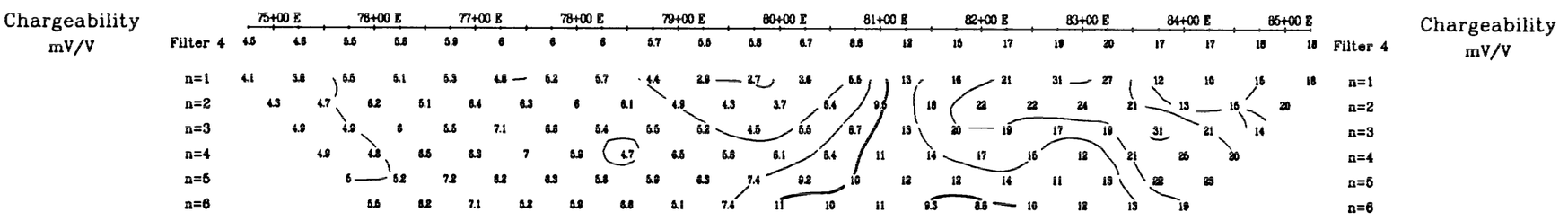
(11)

DELTA GEOSCIENCE LTD *Fig # 9*



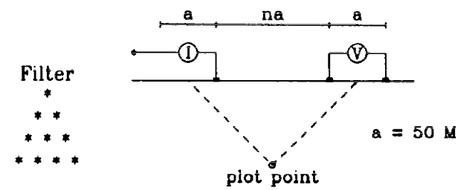






Line 12100 N

Pole-Dipole Array



Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,..

INTERPRETATION

- ■ Strong increase in polarization accompanied by marked decrease in resistivity.
- □ Well defined increase in polarization without marked resistivity decrease.
- □ Poorly defined polarization increase with no resistivity signature.
- ▼ Low resistivity feature.

Scale 1:5000

50 0 50 100 150 200 250 300

(meters)

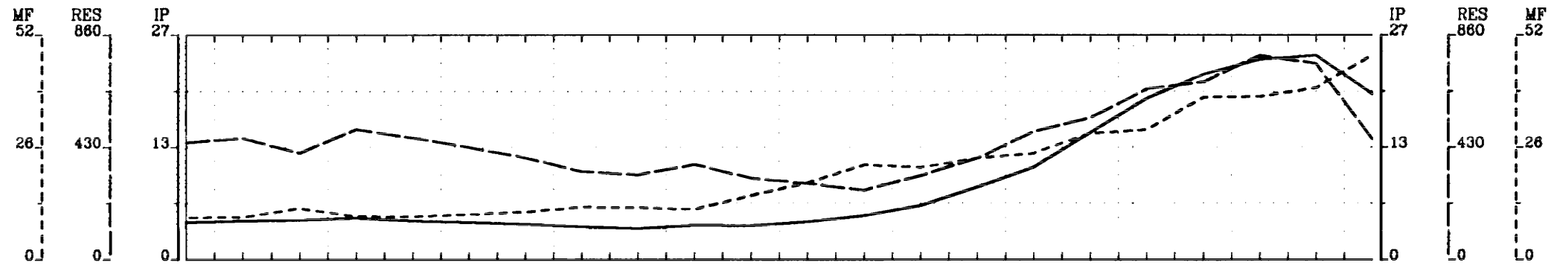
NORTHGATE – KEMESS OPERATIONS

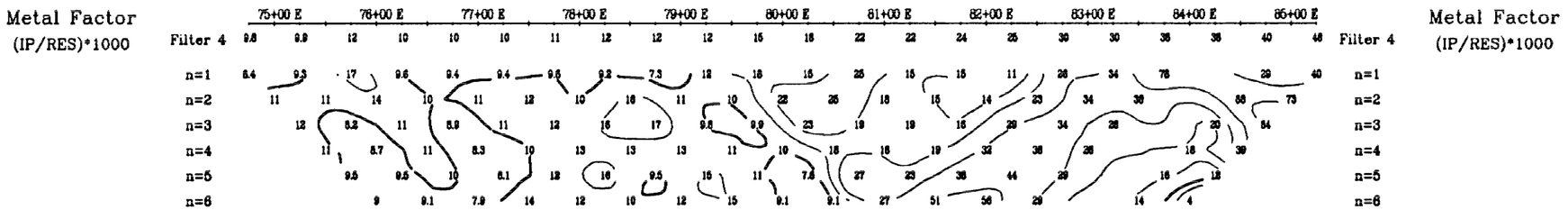
INDUCED POLARIZATION SURVEY
KEMESS CENTER PROJECT
WEST EXTENSIONS

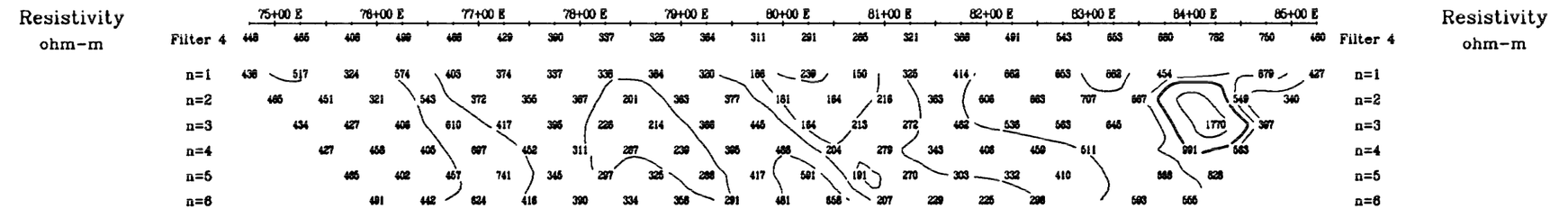
(12)

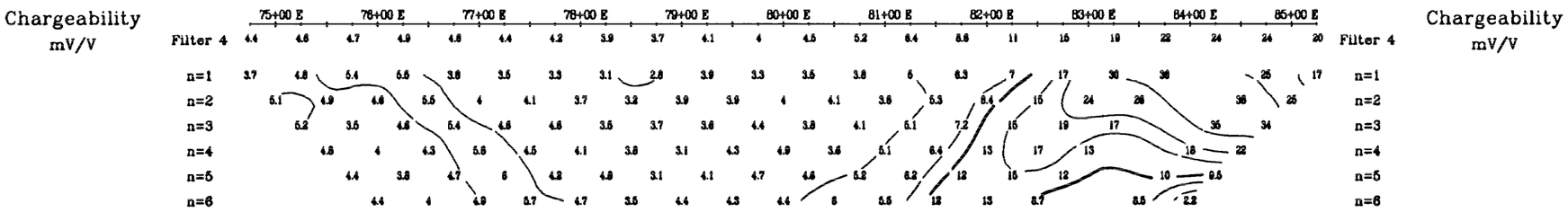
Date: 00/11/22
Interpretation: DELTA

DELTA GEOSCIENCE LTD ***Fig 10***



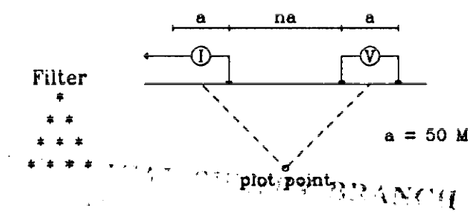






Line 11800 N

Pole-Dipole Array



26,486

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,..

INTERPRETATION

- ■ Strong increase in polarization accompanied by marked decrease in resistivity.
- ◘ Well defined increase in polarization without marked resistivity decrease.
- □ Poorly defined polarization increase with no resistivity signature.
- ▼ Low resistivity feature.

Scale 1:5000

50 0 50 100 150 200 250 300

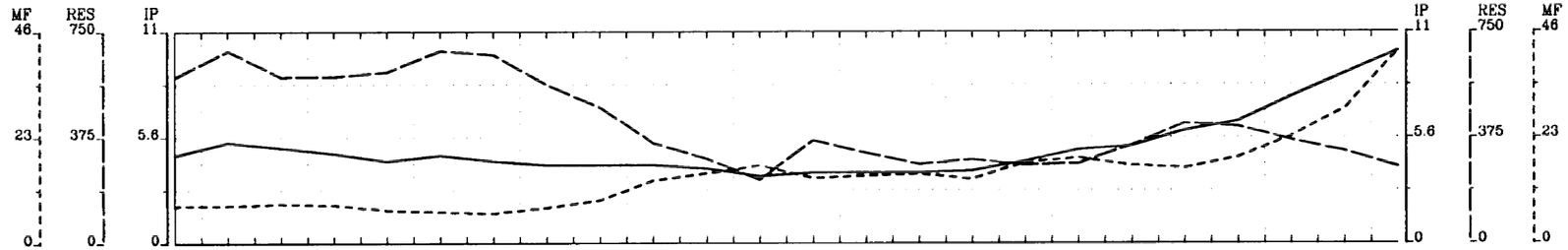
(meters)

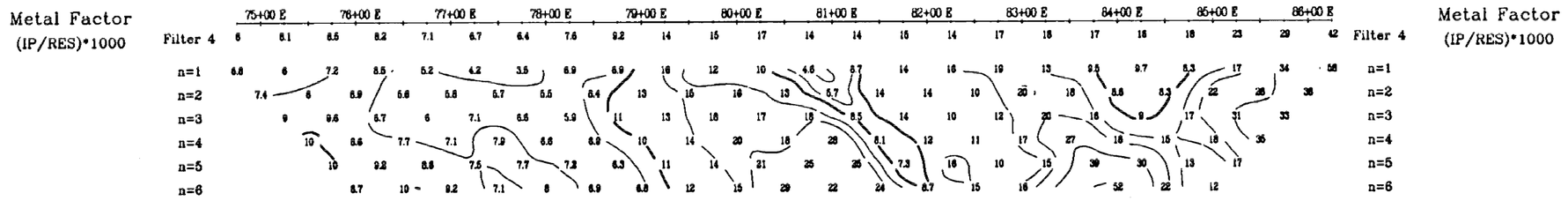
NORTHGATE – KEMESS OPERATIONS

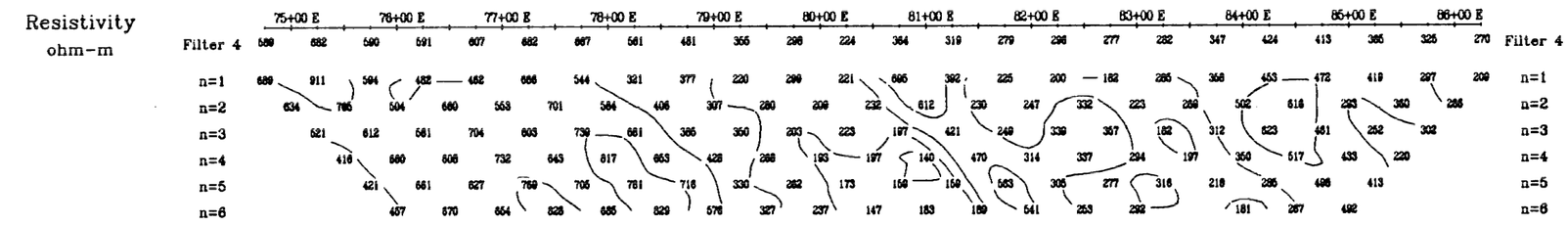
INDUCED POLARIZATION SURVEY
KEMESS CENTER PROJECT
WEST EXTENSIONS (12)

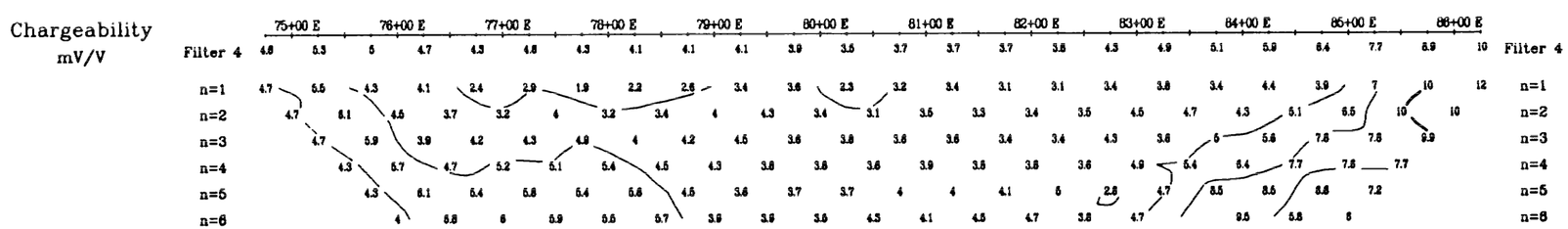
Date: 00/11/22
Interpretation: DELTA

DELTA GEOSCIENCE LTD ***Fig 11***



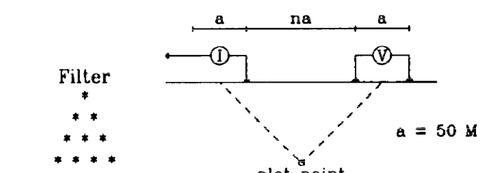






Line 11500 N

Pole-Dipole Array



26,486

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,..

INTERPRETATION

- ■ Strong increase in polarization accompanied by marked decrease in resistivity.
- □ Well defined increase in polarization without marked resistivity decrease.
- □ Poorly defined polarization increase with no resistivity signature.
- ▼ Low resistivity feature.

Scale 1:5000

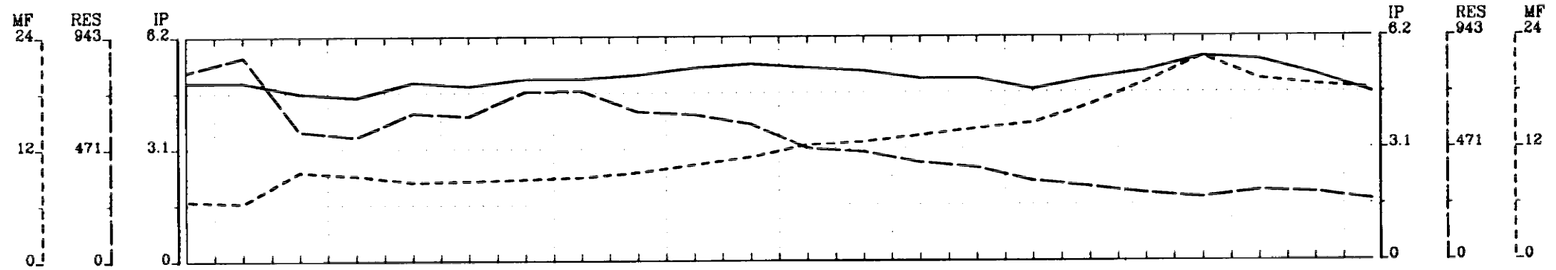
50 0 50 100 150 200 250 300
(meters)

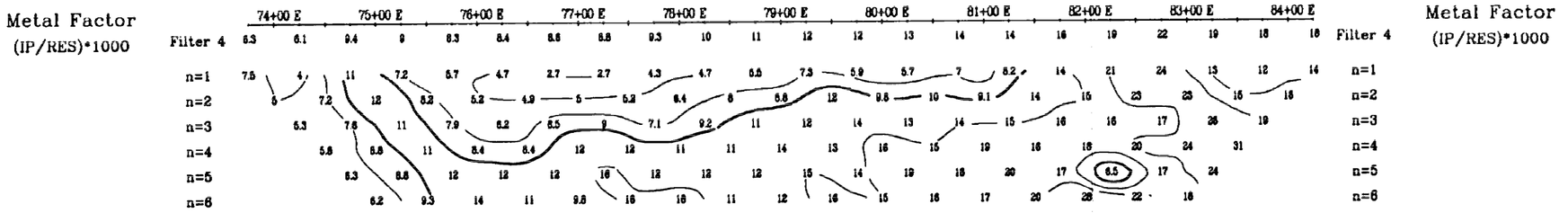
NORTHGATE – KEMESS OPERATIONS

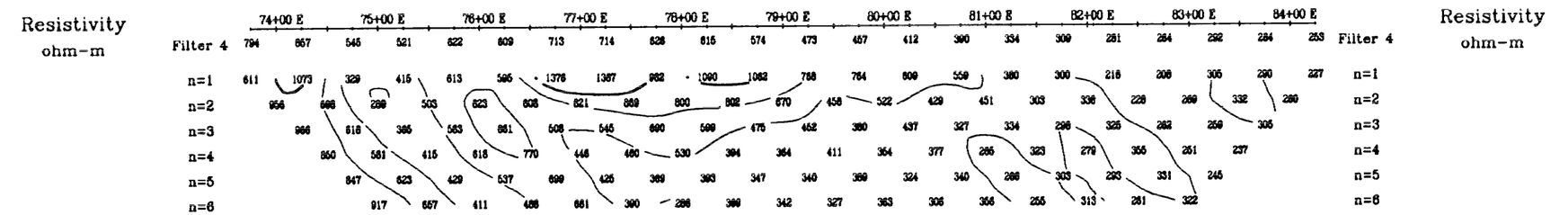
INDUCED POLARIZATION SURVEY
KEMESS CENTER PROJECT
WEST EXTENSIONS (14)

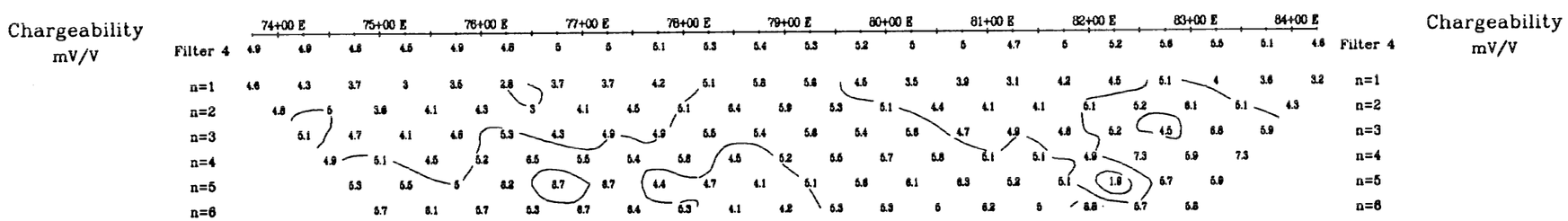
Date: 00/11/22
Interpretation: DELTA

DELTA GEOSCIENCE LTD ***Fig 12***



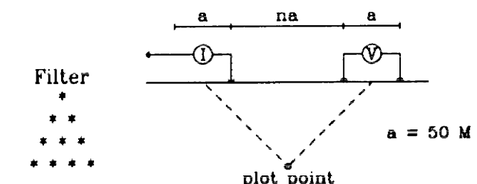






Line 11200 N

Pole-Dipole Array



26,186

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,..

INTERPRETATION

- ■ Strong increase in polarization accompanied by marked decrease in resistivity.
- □ Well defined increase in polarization without marked resistivity decrease.
- □ Poorly defined polarization increase with no resistivity signature.
- ▼ Low resistivity feature.

Scale 1:5000

50 0 50 100 150 200 250 300

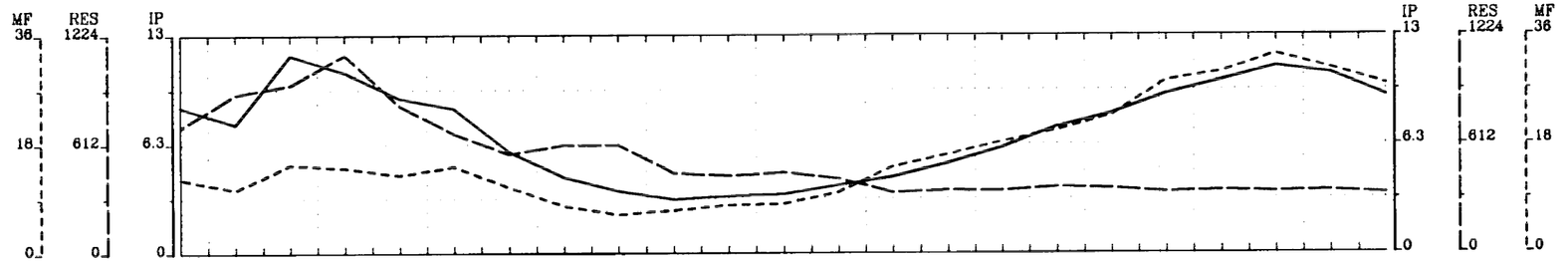
(meters)

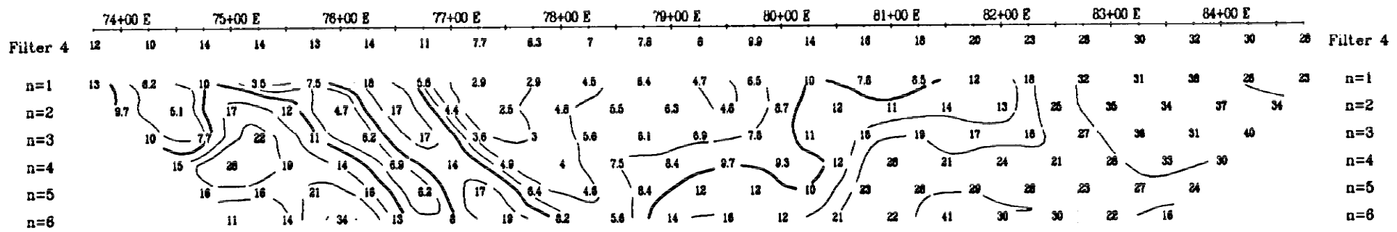
NORTHGATE – KEMESS OPERATIONS

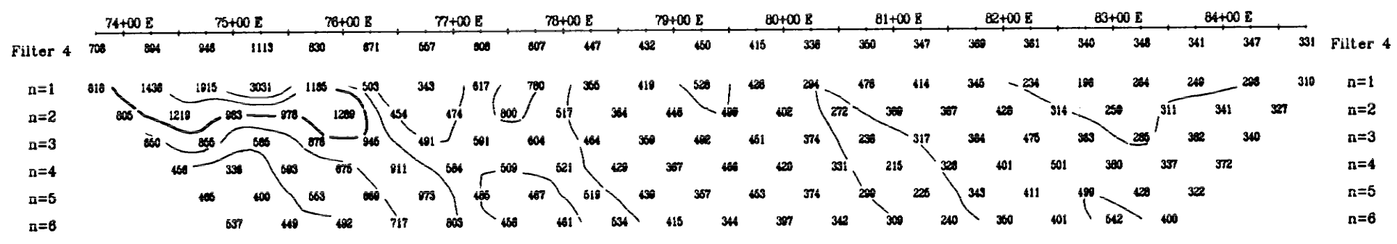
INDUCED POLARIZATION SURVEY
KEMESS CENTER PROJECT
WEST EXTENSIONS (15)

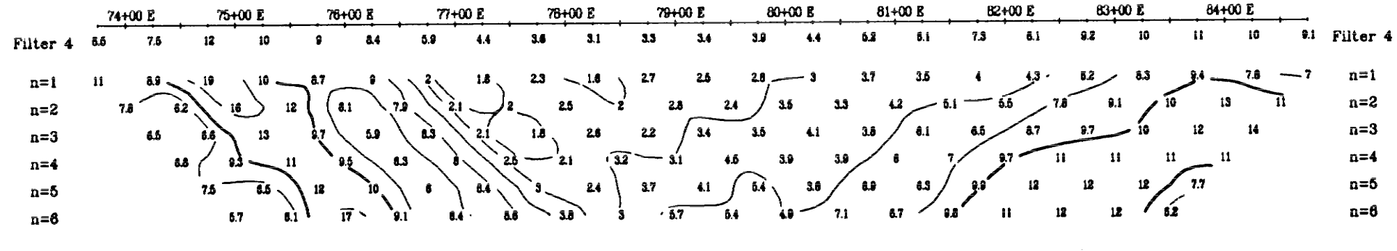
Date: 00/11/22
Interpretation: DELTA

DELTA GEOSCIENCE LTD ***Fig 13***



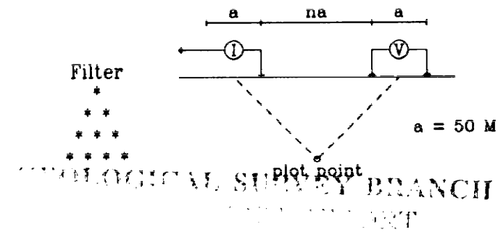






Line 10900 N

Pole-Dipole Array



Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,..

INTERPRETATION

- ■ Strong increase in polarization accompanied by marked decrease in resistivity.
- □ Well defined increase in polarization without marked resistivity decrease.
- □ Poorly defined polarization increase with no resistivity signature.
- ▼ Low resistivity feature.

Scale 1:5000

50 0 50 100 150 200 250 300

(meters)

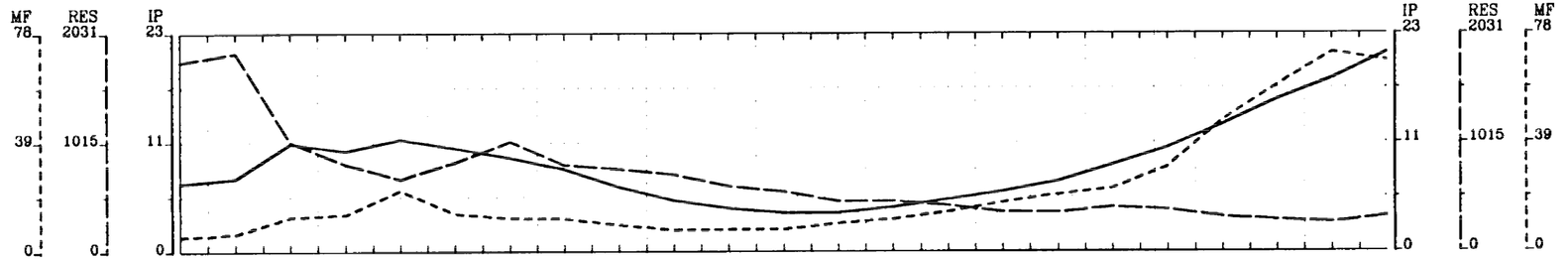
NORTHGATE – KEMESS OPERATIONS

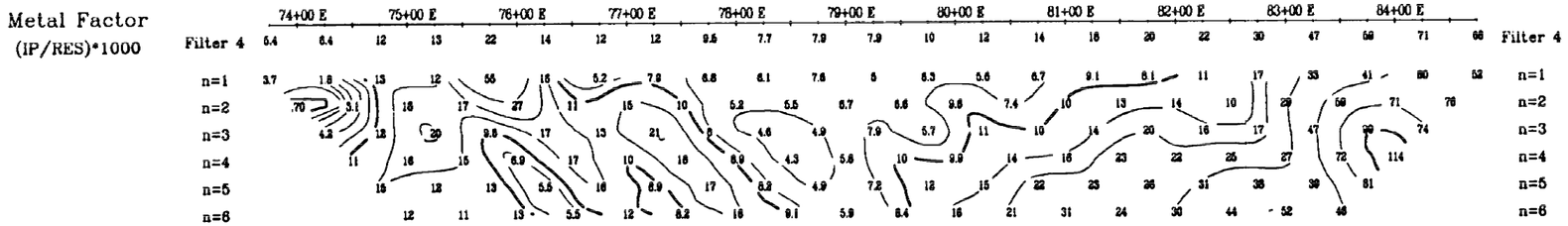
INDUCED POLARIZATION SURVEY
KEMESS CENTER PROJECT
WEST EXTENSIONS

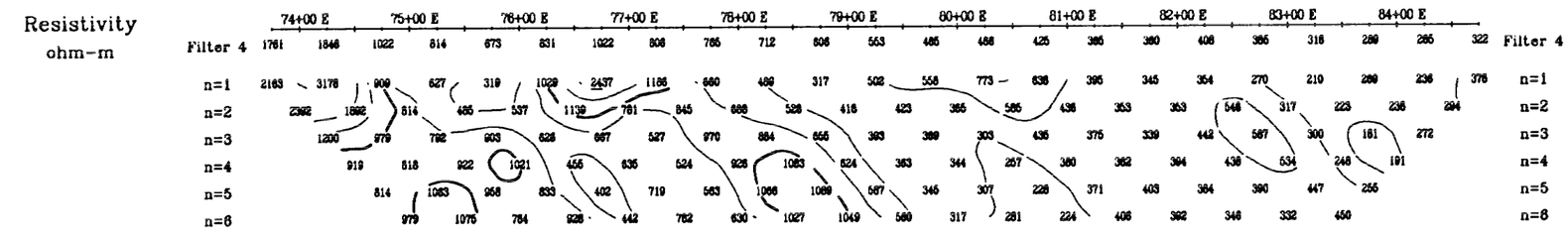
(16)

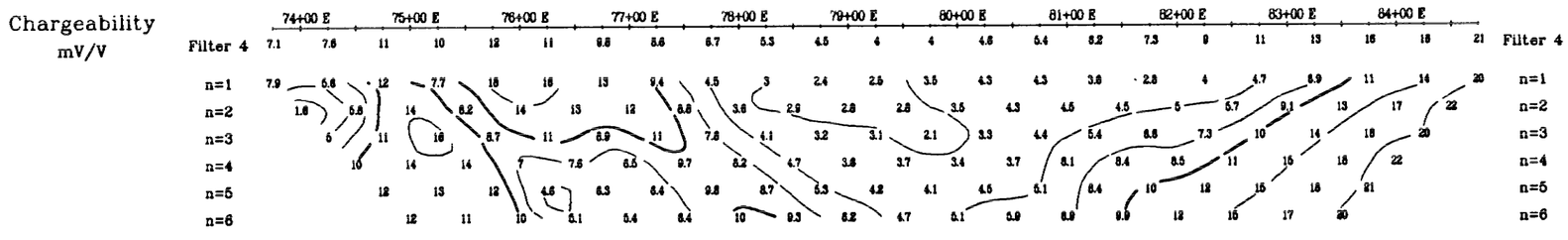
Date: 00/11/22
Interpretation: DELTA

DELTA GEOSCIENCE LTD ***Fig 14***



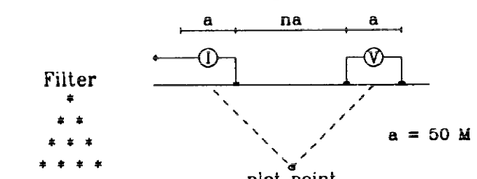






Line 10600 N

Pole-Dipole Array



Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,..

INTERPRETATION

- ■ Strong increase in polarization accompanied by marked decrease in resistivity.
- □ Well defined increase in polarization without marked resistivity decrease.
- □ Poorly defined polarization increase with no resistivity signature.
- ▼ Low resistivity feature.

Scale 1:5000

50 0 50 100 150 200 250 300

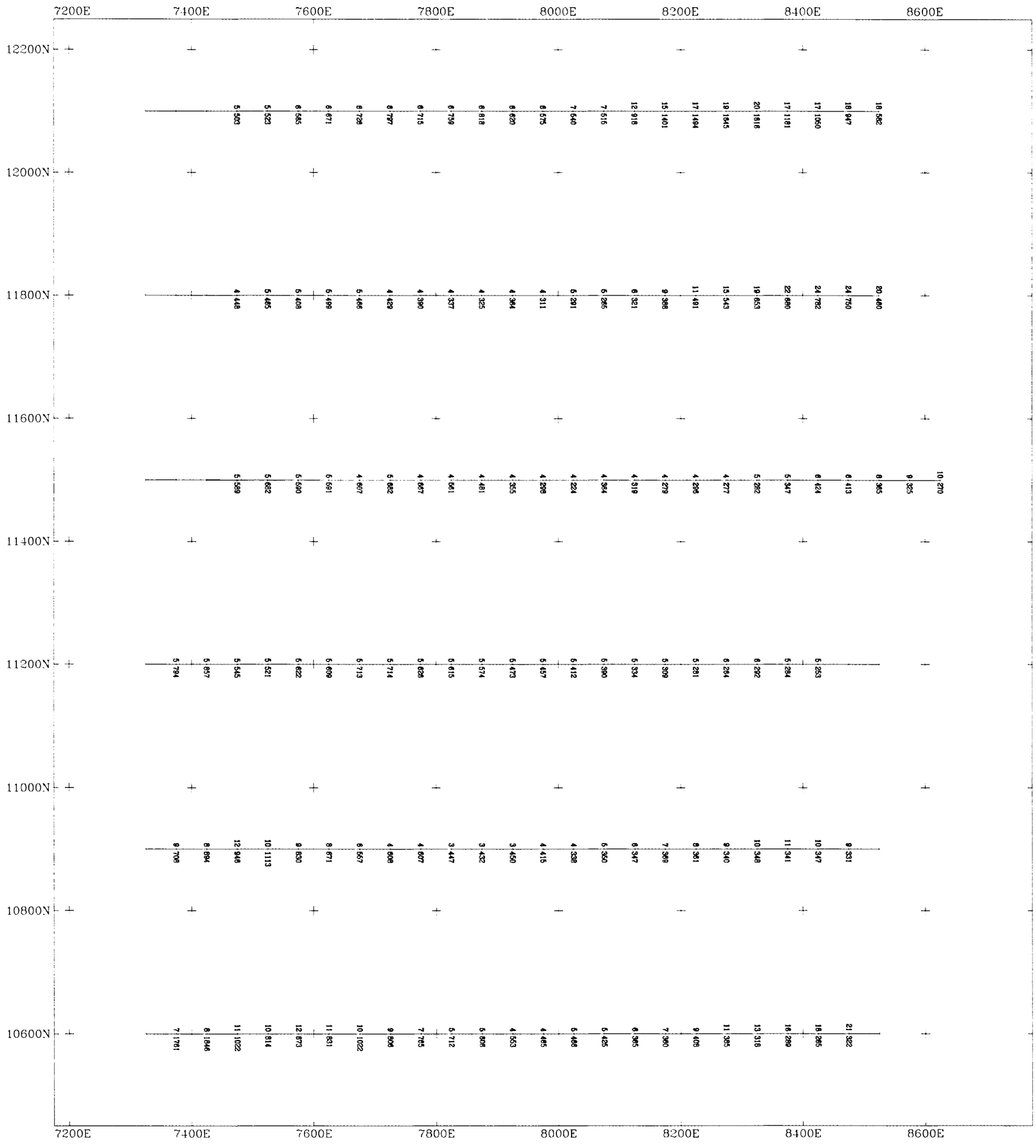
(meters)

NORTHGATE – KEMESS OPERATIONS

INDUCED POLARIZATION SURVEY
KEMESS CENTER PROJECT
WEST EXTENSIONS (17)

Date: 00/11/22
Interpretation: DELTA

DELTA GEOSCIENCE LTD ***Fig 15***



Scale 1:5000

100 0 100 200 300
(meters)

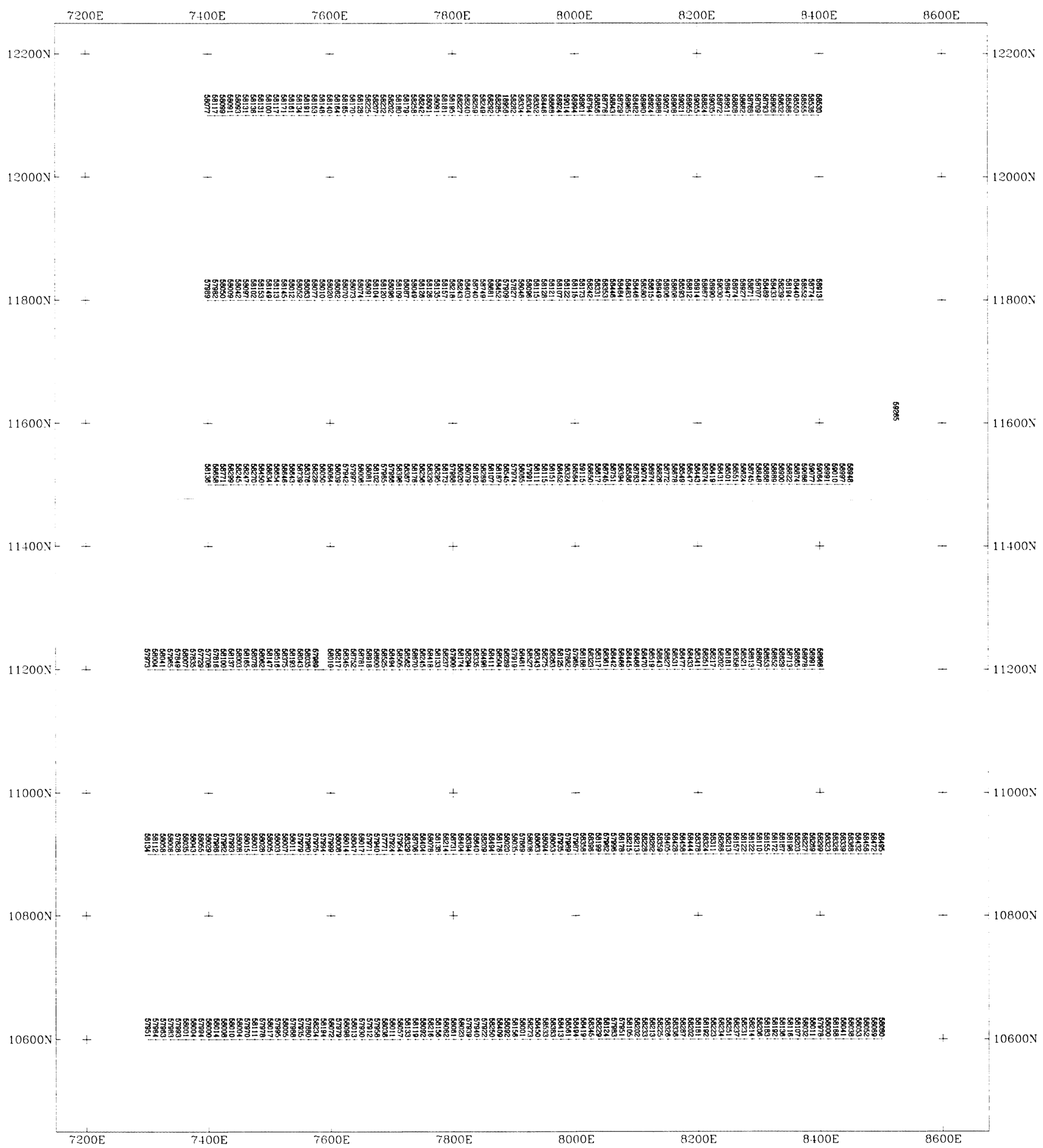
NORTHGATE – KEMESS OPERATIONS

KEMESS CENTER PROJECT
NORTH CENTRAL BRITISH COLUMBIA
INDUCED POLARIZATION / RESISTIVITY PLAN

Posted data, IP above, Resistivity below
filtered data, Pole dipole, a = 50m, N 1-6
Iris instruments
Sept. 2000

(18)

DELTA GEOSCIENCE LTD *Fig # 16*



GEOLOGICAL SURVEY BRANCH

ASSESSMENT

26,136 2/2

Scale 1:5000

100 0 100 200 300

(meters)

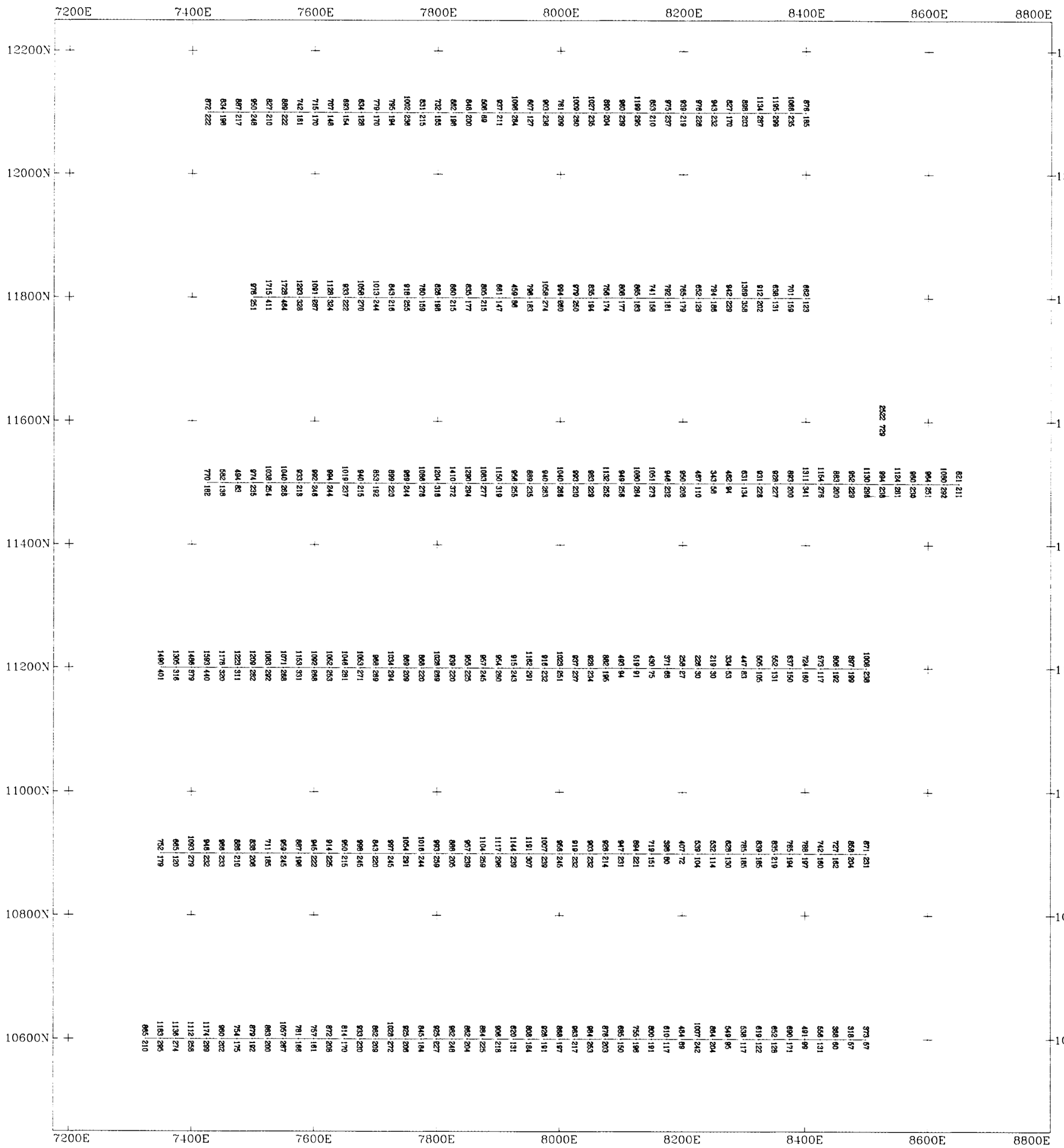
NORTHGATE – KEMESS OPERATIONS

KEMESS CENTER PROJECT
NORTH CENTRAL BRITISH COLUMBIA
MAGNETIC FIELD STRENGTH PLAN

Posted data
total field
Gem instruments
Sept, 2000

(19)

DELTA GEOSCIENCE LTD *Fig # 17*



GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

26,486 2/2

Scale 1:5000

100 0 100 200 300
(meters)

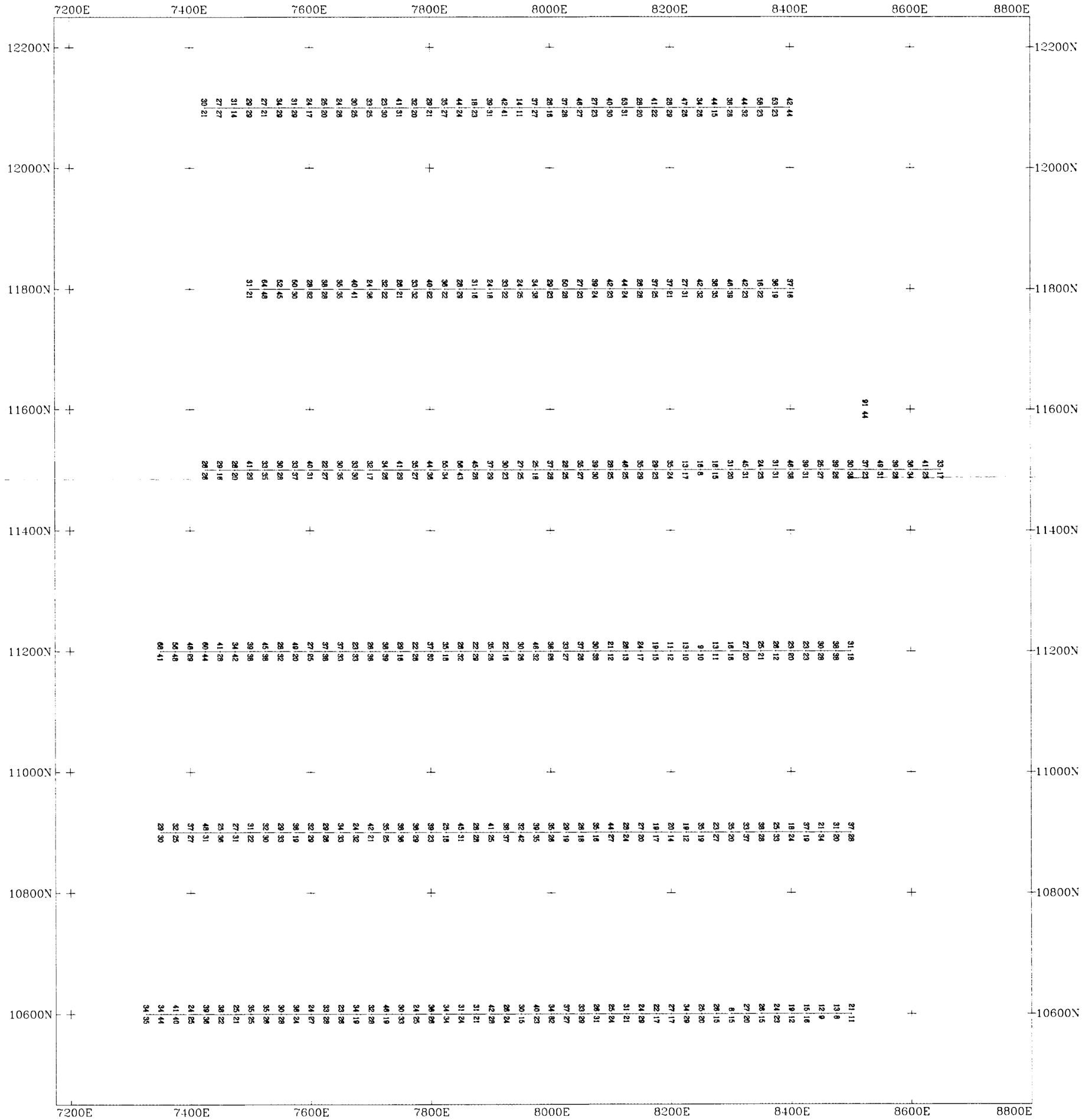
NORTHGATE – KEMESS OPERATIONS

KEMESS CENTER PROJECT
NORTH CENTRAL BRITISH COLUMBIA
RADIOMETRICS – TOTAL COUNT & POTASSIUM

Posted data, Total above, Potassium below
averaged over 25 meter intervals
Exploranium GR320 instrument
Sept, 2000

(20)

DELTA GEOSCIENCE LTD *Fig # 18*



Scale 1:5000

100 0 100 200 300
(meters)

NORTHGATE – KEMESS OPERATIONS

KEMESS CENTER PROJECT
NORTH CENTRAL BRITISH COLUMBIA
RADIOMETRICS – URANIUM & THORIUM

Posted data, Uranium above, Thorium below
averaged over 25 meter intervals
Exploranium GR320 instrument
Sept. 2000

(21)

DELTA GEOSCIENCE LTD *Fig # 19*