



**Ministry of Energy & Mines** Energy & Minerals Division Geological Survey Branch

#### ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT [type of survey(s)]
AUTHOR(S) V.T. SHEARER, M.S.C. P.Geo SIGNATURE(S) Julanes
NOTICE OF WORK PERMIT NUMBER(S)/DATE(S)YEAR OF WORK_2011
STATEMENT OF WORK - CASH PAYMENT EVENT NUMBER(S)/DATE(S)
JULY 31 2011 EVENT # 493664
PROPERTY NAME LANG BAY
CLAIM NAME(S) (on which work was done) DUCK Lake
514349
COMMODITIES SOUGHT GERMANIUM
MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN
LATITUDE <u>49 ° 48 48</u> LONGITUDE <u>124 ° 24 29</u> (at centre of work)
OWNER(S) 1) <u>ELECTRA GOLD LTD</u> 2)
MAILING ADDRESS
UNIT 5-2330 TYNER ST.,
PORT COQUITLAM, B.C.
OPERATOR(S) [who paid for the work] V3C ZZ1
1) <u>Same above</u> <sup>2)</sup>
MAILING ADDRESS
- Same above.
as a port
PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):
A small Cretaceous sedimentary basin contains silitationes, shalls,
Sandstones, conglomerates and thing coal, The basin is a pour 3km
wide and to Kin long, Previous samples report up to 1.4m of 136 grams
Geographic V
REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS ASSESS RAT 10,384
125000 Ryt 29,269

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			See 25 St.
Ground			
Magnetic			
Electromagnetic			
Radiometric			
Seismic			
Airborne			
GEOCHEMICAL			
(number of samples analysed for)			
Soil			
Silt	7	<u></u>	
Silt Z Sam	ples		3000
Other			
DRILLING (total metres; number of holes, size) Core	ens of core		3100
Non-core			
RELATED TECHNICAL			
Sampling/assaying	2 Samples		2000
	V		
Mineralographic			
PROSPECTING (scale, area)			
PREPARATORY/PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/tra	il		
Trench (metres)			
Underground dev. (metres)			
Other			H
		TOTAL COST	18100

## GERMANIUM ASSESSMENT REPORT on the LANG BAY (DUCK LAKE) KAOLINITE DEPOSIT

Tenure # 514350, 514352,514363, 514264, 514349, 514353-355, 514357, 514362 Longitude 124°24'29"/Latitude 49°48'48" NTS: 92F/16W (92F.088) Vancouver M.D.

**Prepared for** 

BC Geological Survey Assessment Report 32786

Electra Gold Ltd. Unit 5 – 2330 Tyner St., Port Coquitlam, BC V3C 2Z1 Phone: 604-970-6402 / Fax: 604-944-6102 Website: <u>www.ElectraGoldLtd.com</u>

Prepared by J. T. Shearer, M.Sc., P.Geo. (BC & Ont.) Geologist

September 15, 2011

Fieldwork completed between May 1, 2011 and July 31, 2011

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#### SUMMARY

- 1) The Lang Bay (Duck Lake) Property consists of the 20 cell mineral claims totalling 2,731.1 ha.
- 2) The claims are located 3 km north of Highway 101 at Myrtle Point. Access is via the Duck Lake Forest Service Road or along the powerline from Zilinski Road.
- 3) The claims cover the western and eastern margins of an Upper Cretaceous sedimentary basin containing shale, sandstone and minor coal.
- 4) Work on the sedimentary basin originally (1940's to 1960's) focussed on germanium in the ash of the coal beds exposed in Lang Creek. Subsequently the kaolinite potential was realized in 1986.
- 5) A previous owner entered into a joint-venture agreement with Brenda Mines Ltd., a Noranda Group company, in September 1987. An extensive exploration program was initiated in September 1987, which continued until February 1989. Work completed during that time consisted of 6,700 metres of seismic refraction survey, 10,500 metres of magnetometer survey, 11,000 metres of Dipole-Dipole resistivity survey, 4 Schlumberger electrical soundings and 2,100 metres of reverse circulation and diamond drilling.
- 6) In February 1992 Fletcher Challenge Canada carried out a trial at Elk Falls paper mill near Campbell River. The trial produced 60 tonnes of newsprint containing up to 5% load of kaolin from the eastern margin of the Duck Lake area. This test was apparently favourable.
- 7) Overburden consisting of bouldery gravels, sand, till and clay-rich glaciofulvial units, is highly variable in thickness.
- 8) In 1999, a program was completed of 4 diamond drill holes (198.88m) and 4.3 km of seismic refraction geophysics and metallurgical work was done in 2006.
- 9) In 2006, a 5 hole diamond drill program completed in December 2006 for a total footage of 293.53m (963 ft.).
- 10) The 2006 drill program intersected a series of interbedded kaolinized sandstone and shale beds in 5 holes, however the overburden was relatively deep, up to 27m deep.
- 11) Placing the resulting filler products with industrial end users is recommended to obtain feedback on optimizing product specifications.
- 12) Sampling in 2011 focussed on re-examination of the Germanium content of 2.13 and 2.07 g/tonne. Future sampling should focus on carbonaceous or coaly intervals.

Respectfully submitted,

J.T. (Jo) Shearer, M.Sc., P.Geo. Geologist September 15, 2011

#### INTRODUCTION

In 1999, the Duck Lake Mineral Claims were staked covering the western margin of the Cretaceous Sedimentary Basin near Powell River, British Columbia. Subsequently, the eastern portion was acquired in 2001. These claims cover a basin, which contains a large inferred resource of kaolin. Additionally, the property is known to contain highly anomalous values of germanium and gallium in some of the more carbonaceous horizons of the deposit.

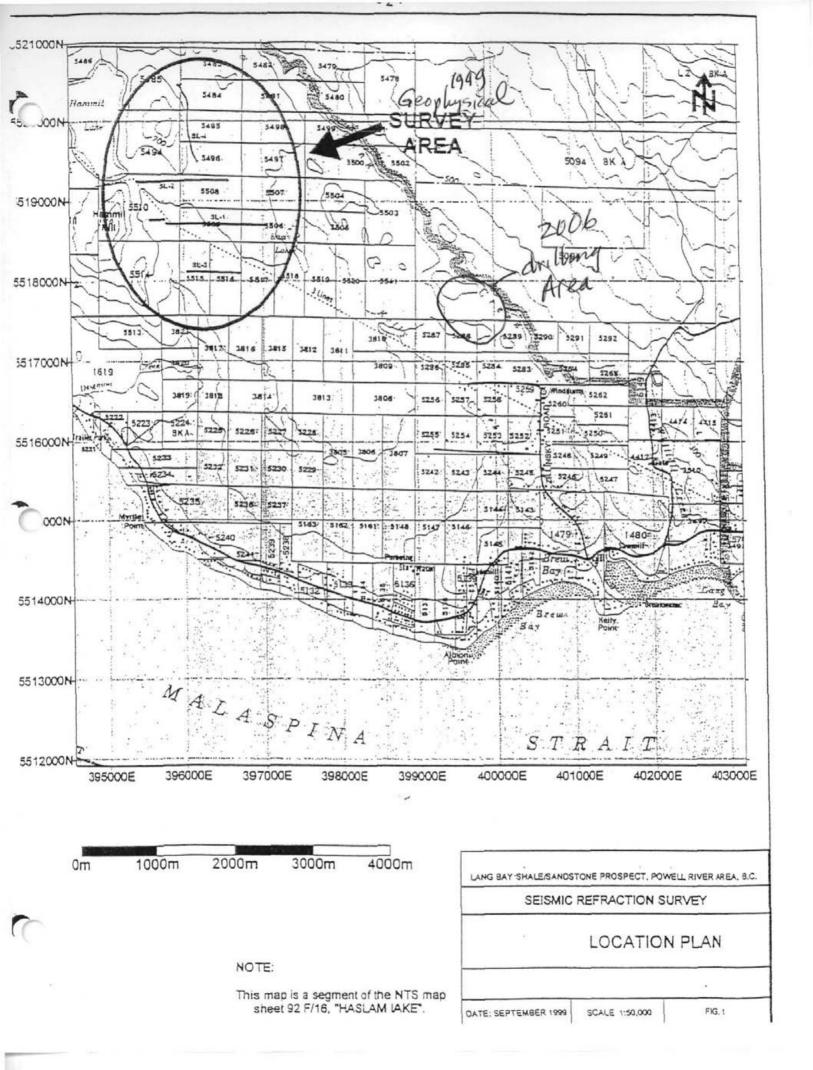
Basement granitoid rocks, which in places are extensively altered to kaolin, are overlain by shales containing kaolin clays. Work in 1999 consisted of 4 diamond drillholes and 4.3 km of seismic refraction surveys. In the late 1980's and early 1990's an effort was made to evaluate the eastern margin of the basin. In February 1992 Fletcher Challenge Canada carried out a trial at Elk Falls paper mill near Campbell River. The trial produced 60 tonnes of newsprint containing up to 5% load of kaolin from the eastern margin of the Duck Lake area. This test was apparently favourable.

A calcining test was carried out on a sample of Lang Bay kaolin by Nord Kaolin Company of Jeffersonville, Georgia. The sample was first beneficiated by Magnetic separation and ozone bleaching and this improved the brightness to that of a standard performance filler. The sample was then calcined and brightness values equivalent to those of imported calcined grades were achieved. This is significant because calcined kaolin produces a superior performance and sells for up to four times the price of filler grade. The calcined grade requires heating by natural gas, which only recently has been made available for industrial users in the Powell River area.

Previously in 2006, a program consisting of continued organizing of the core logging facility, continuing assessing the previously drilled core and reverse circulation samples and completing a 293.53m (963 ft.) diamond drill program in 5 holes during December 2006.

The current program included a re-evaluation of the germanium content and germanium potential of the area.

Renewed industry interest in Germanium prompted by the Company to re-evaluate this property. The purpose of our program was to reconsider the area underlain by this small sedimentary outlier and examine the best with reported anomalous germanium values; the aim was to assess the germanium potential at Lang Bay.



#### LOCATION and ACCESS

The Duck Lake Claims are northeast of Myrtle Point near the town of Powell River. Highway 101 follows the coast from Saltery Bay to Powell River and passes 2 km south of the southern border of the Duck Lake claim group. A good paved secondary road (Zilinski Road) connecting to Highway 101 between Lang Creek and Kelly Creek extends north end then west where a tote road along the power line in useable condition, gives access to the area where the drilling was undertaken. The drill area is also accessible by driving north along the Duck Lake Forest Service Road to the power line area.

The claim group lies 15 km southeast of the town of Powell River, British Columbia and centred on Kelly Creek. General physiographic boundaries are Malaspina Strait between Lang Bay and Myrtle Point to the south, Myrtle Creek and Hammil Lake to the west and northwest, Lang Creek to the north and Whitall Creek to the east. The approximate co-ordinates are 49°48'N and 124°25'W. The NTS map reference for the area is 92F/16W.

The moderately undulating terrain has a maximum elevation of approximately one hundred and eighty metres above sea level near the northeast corner of the property. The ground slopes gently to the southeast. Kelly Creek has cut its valley about 10 metres below the general level of the surrounding area.

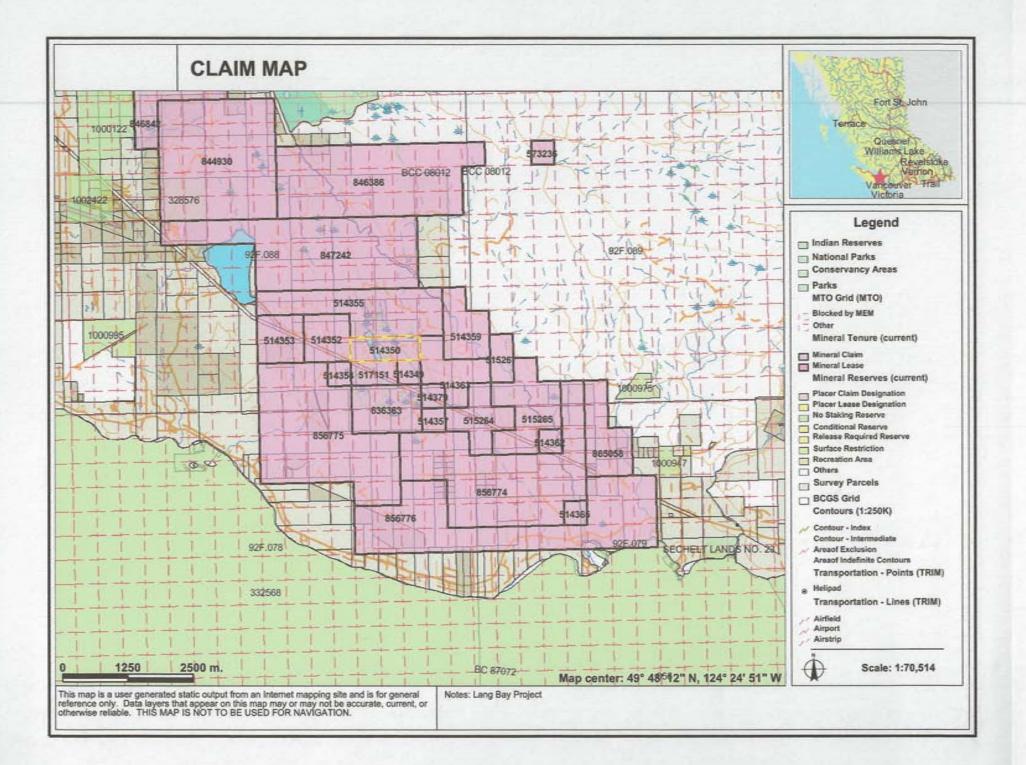
The area is covered with a mixed second growth forest consisting mainly of fir, hemlock, cedar and alder. The area was first logged around 1920.

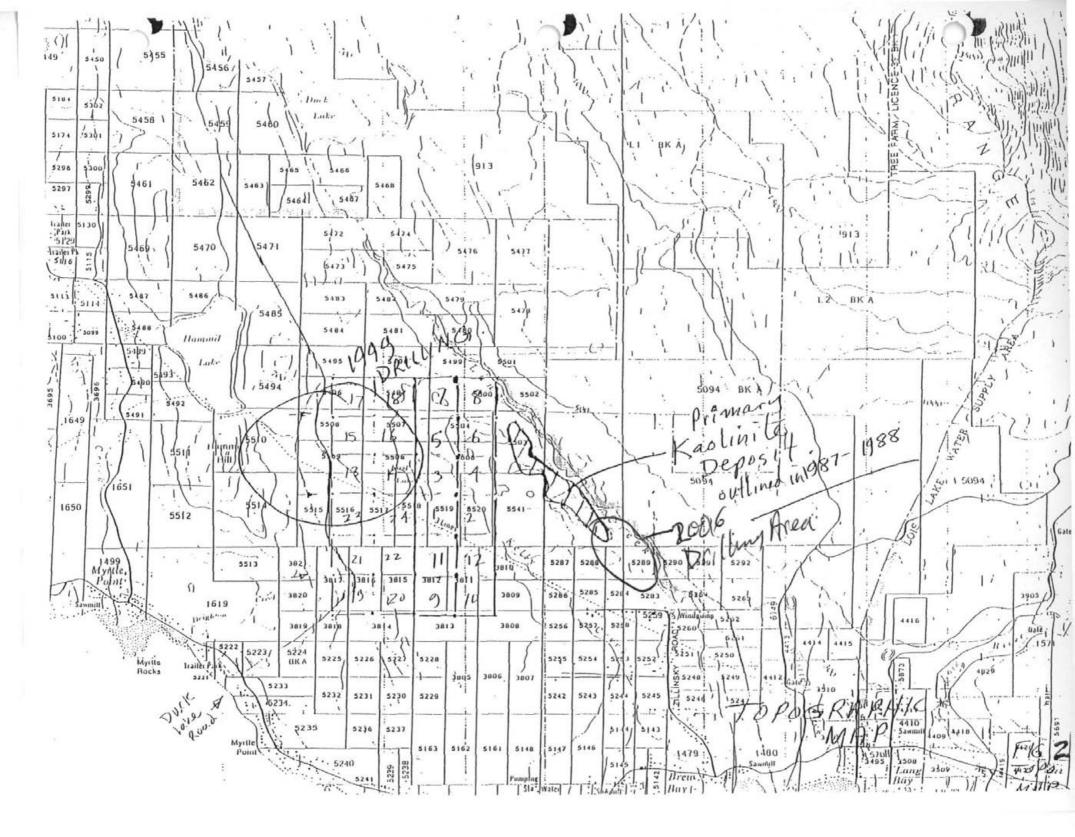
The water supply is plentiful due to the many streams and creeks on the property, the main ones being centrally located, Lang Creek and Kelly Creek, both flowing southeasterly and to the west, Deighton Creek flowing southerly into Malaspina Strait.

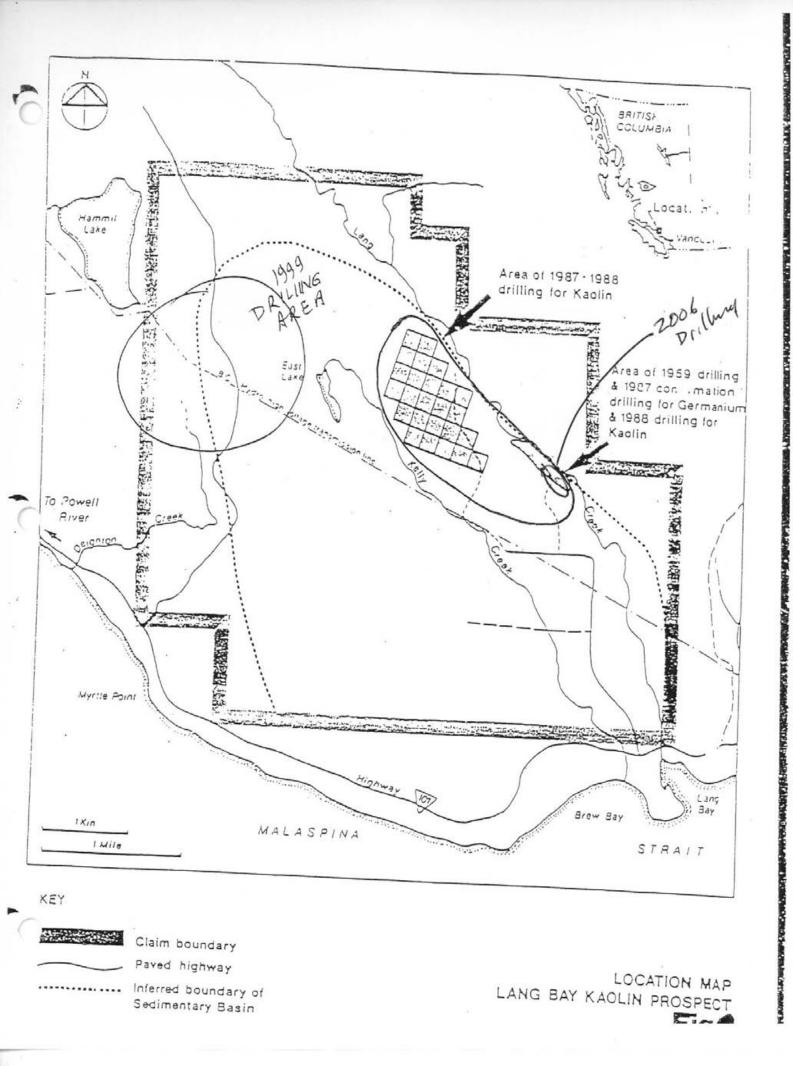
The climate is mild with an annual rainfall from 40 to 50 inches (100 – 125mm) and minimal snowfall in the winter.

Dissecting the property in a northwest to southeast line is a high voltage power line to the town of Powell River and the pulp mill.

The 2006 drill sites were accessed by the old road which continues north on crownland from the core logging facility.







#### **CLAIM STATUS**

The Duck Lake Property consists of the 19 claims totalling ? cells of 2,732.1 ha as tabulated in Table I and shown on Figure 3.

Claim Name	Tenure	Cells	Area (ha)	Registered Owner	Issue Date	Current Good To
	#					Date*
Duck Lake	514349	1	20.85	J. T. Shearer	June 11, 2005	September 11, 2012
	514350	3	62.55	J. T. Shearer	June 11, 2005	September 11, 2012
	514352	4	83.40	J. T. Shearer	June 11, 2005	September 11, 2012
	514353	4	83.40	J. T. Shearer	June 11, 2005	September 11, 2012
Duck Lake Southwest	514354	1	20.85	J. T. Shearer	June 11, 2005	September 11, 2012
	514355	12	250.16	J. T. Shearer	June 11, 2005	September 11, 2012
Duck Lake South	514357	1	20.86	J. T. Shearer	June 11, 2005	September 11, 2012
	514359	5	104.24	J. T. Shearer	June 11, 2005	September 11, 2012
Duck Lake Southeast	514362	1	20.86	J. T. Shearer	June 11, 2005	September 11, 2012
	514363	5	104.26	J. T. Shearer	June 11, 2005	September 11, 2012
Duck Lake South 1	514365	1	20.86	J. T. Shearer	June 11, 2005	September 11, 2012
	514379	1	20.85	J. T. Shearer	June 11, 2005	September 11, 2012
	515264	5	104.28	Electra Gold Ltd	June 11, 2005	September 11, 2012
	515265	8	166.84	J. T. Shearer	June 25, 2005	September 11, 2012
	515267	2	41.70	Electra Gold Ltd	June 11, 2005	September 11, 2012
Lang Bay Pick up	517151	2	41.70	J. T. Shearer	July 12, 2005	September 11, 2012
LB 1	856774		521.48		June 12, 2011	September 11, 2012
LB 2	856775		521.40		June 12, 2011	September 11, 2012
LB 3	856776		521.56		June 12, 2011	September 11, 2012

#### TABLE I List of Claims

Total 2,732.1 ha

\* with application of assessment work documented in this report.

Under the present status of mineral claims in British Columbia, the consideration of industrial minerals requires careful designation of the product end use. An industrial mineral is a rock or naturally occurring substance that can be mined and processed for its unique qualities and used for industrial purposes (as defined in the *Mineral Tenure Act*). It does not include "Quarry Resources". Quarry Resources includes earth, soil, marl, peat, sand and gravel, and rock, rip-rap and stone products that are used for construction purposes (as defined in the *Land Act*). Construction means the use of rock or other natural substances for roads, buildings, berms, breakwaters, runways, rip-rap and fills and includes crushed rock. Dimension stone means any rock or stone product that is cut or split on two or more sides, but does not include crushed rock.

The apparent expected end use of the Alumina resource (that of supporting a cement plant raw materials) from Duck Lake Mineral Claim comes within the Industrial Use definition and therefore can be considered under the *Mineral Tenure Act*. Claims require \$4 of assessment work per ha (or cash-in-lieu) each of the first three years and \$8 per ha each year after.

Claim 532098 lapsed (April 14, 2007, 125.124 ha (6 cells) was owned by J. M. Owen but has now been added to the claim package.

#### HISTORY

In 1948 a spectrographic research study on the coals of British Columbia discovered high values of germanium in the carbonaceous shales and sandstones found in the Lang Creek area. In 1957 the mineral rights to the area were acquired by the now defunct Taiga Mines Ltd. who carried out a bulldozer trenching and a churn and diamond drilling program throughout 1958 and 1959.

In 1981 the property was acquired by Fargo Resources Limited, who conducted a number of trenching and sampling programs between August 1981 and April 1984. Work in 1985 consisted of research on methods of recovering germanium from the arkosic sandstone formation.

In 1986-1987, a drilling program of 9 holes was carried out for a more detailed exploration of germanium bearing brown beds. Tests on clay/shale horizons contained within the brown beds determined that they contain a high quality kaolin.

In May 1987, a hole drilled a distance of 1 km to the northwest of the previous area of sampling also contained kaolin, indicating a potentially large resource of this commodity at Lang Bay.

Starting in May 1987, most of the work at Lang Bay centred on evaluating the property as a kaolin deposit. It was envisaged that if a mine were to ever come into production, the primary product would be kaolin clay with germanium and gallium being valuable by-products.

#### The 1987 Program

The 1987 drilling program confirmed the presence of a significant thickness of kaolin clay within the prospect. However, the reverse circulation drilling method destroyed the texture of the Insitu clay structure and confused any distinction between:

- a) primary kaolins derived from Insitu alteration (weathering or basement granitoid rocks; or
- b) secondary kaolins within the basin sediments.

The geophysical surveys included seismic profiling, ground magnetic surveys, dipole-dipole resistivity surveys and Schlumberger vertical electric soundings. The seismic surveys were undertaken to define the profile of the basement rocks across the basin. The magnetic surveys were carried out to locate near surface basement rocks, which were found to have strong magnetic signatures. The electrical resistivity surveys were used to locate conductive clay horizons in the subsurface.

The magnetic surveys successfully modelled the shallowing of the basement rocks towards the edge of the basin, although significant 'geologic noise' was encountered due to the presence of large altered granitic boulders in the glacial till. Interpretation of the seismic profiling was constrained by the complexity of the sedimentary units in the basin and the lack of contrast in seismic velocity between certain of these units and the basement. The electrical resistivity surveys successfully delineated conductive clay horizons although it was not possible to distinguish between the primary and secondary kaolins.

Benefication studies and laboratory testing of selected samples from the 1987 reverse circulation drilling were carried out by Sutton (1987) who confirmed that certain of the clay horizons were suitable for processing to paper filler clay specifications. Mineralogical investigations of borehole samples from the 1987 drilling by Mak (1987) demonstrated that the kaolin content of the primary kaolin (weathered granitoid rocks) decreases with increasing depth below the surface.

Preliminary testing and examination of cores of the secondary kaolin indicates that the quality and composition of these clays may be highly variable. A test sample of 6 tonnes was shipped to the Elk Falls paper mill near Campbell

Germanium Assessment Report on the Lang Bay (Duck Lake) Kaolinite Deposit
 September 15, 2011

River in 1992 with apparently favourable results. Other samples were sent to pulp and paper concerns to be mill tested for linerboard and filler in the manufacture of adhesives.

A calcining test was carried out on a sample of Lang Bay kaolin by Nord Kaolin Company of Jeffersonville, Georgia. The sample was first beneficiated by Magnetic separation and ozone bleaching and this improved the brightness to that of a standard performance filler. The sample was then calcined and brightness values equivalent to those of imported calcined grades were achieved. This is significant because calcined kaolin produces a superior performance and sells for up to four times the price of filler grade. The calcined grade requires heating by natural gas, which only recently has been made available for industrial users in the Powell River area.

#### 1999 DIAMOND DRILLING

	TABLE II DIAMOND DRILL HOLE DATA 1999												
	Loca	ation											
Hole #	Northing Easting		Elevation	Azimuth	Dip	Length	Comments						
DL-99-01	2600N	2400E	154m	000	-90	56.24m (184.5ft)	92 ft overburden						
DL-99-02	0600N	2200W	135m	000	-90	50.29m (165ft)	15 ft overburden						
DL-99-03	3800N	6000W	142m	000	-90	47.85m (153ft)	115 ft overburden						
DL-99-00	9200N	1600W	156m	000	-90	(150ft)	>150' of overburden						
					Total	198.88m							

In May 1999 a program of 4 diamond drill holes were completed as summarized in Table II.

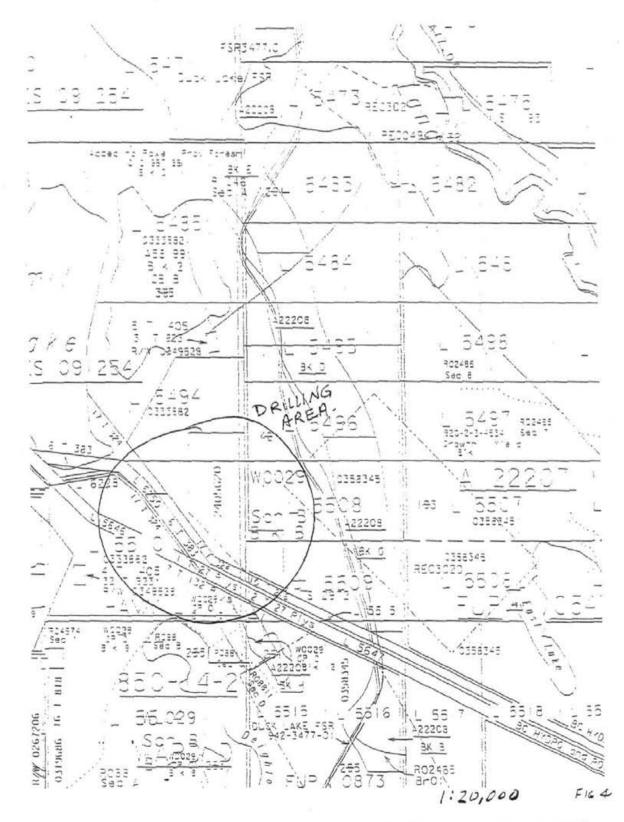
(652.5ft)

Grid centre was at the intersection of the Duck Lake Road and the Powerline Road.

The drill used was a unitized Boyles 37A which was required to penetrate the variable thickness of boulder gravel, sand and till.

Hole #DL-99-01, located 260m north of the powerline encountered 92 feet (28.04m) of coarse gravel and till. The Cretaceous section consists of dark green shale which grades to shaly sandstone. Well altered green pebble conglomerate occurs between 152'2" to 156'5". Green to brown sandstone was found below the pebble conglomerate horizon which contain minor slickensides at 30° to core axis. A well altered, friable pebble conglomerate occurs at the bottom of the hole. This pebble conglomerate is characterized by matrix supported granite clasts. More whitish matrix is found at the bottom of the hole.

Diamond drill hole #DL-99-02 was located west of Duck Lake Road on the north side of the powerline. Overburden was only 16.5fr (4.72m) and consists of boulders, glaciomarine stony clay over 1 foot of granitic boulders. The Cretaceous sequence was similar to Hole #1 which was alternating green-brown shale and coarse green speckled sandstone. Minor wispy coal partings were noted in the sandstone between 50.3m to 51.4m. The layering bedding is at 82° to core axis. The sequence appears to be a prograding deltaic depositional environment in which minor coal is forming elsewhere in lagoonal portions in the immediate vicinity and being eroded and redeposited in the outer delta turbiditic sequence. Near the bottom of Hole #2 an intense brown shale was encountered. Some sections are a dark red brown. Slickensides at 55° to core axis were noted between 137.10 ft to 139.5ft.



SURFACE TENURE

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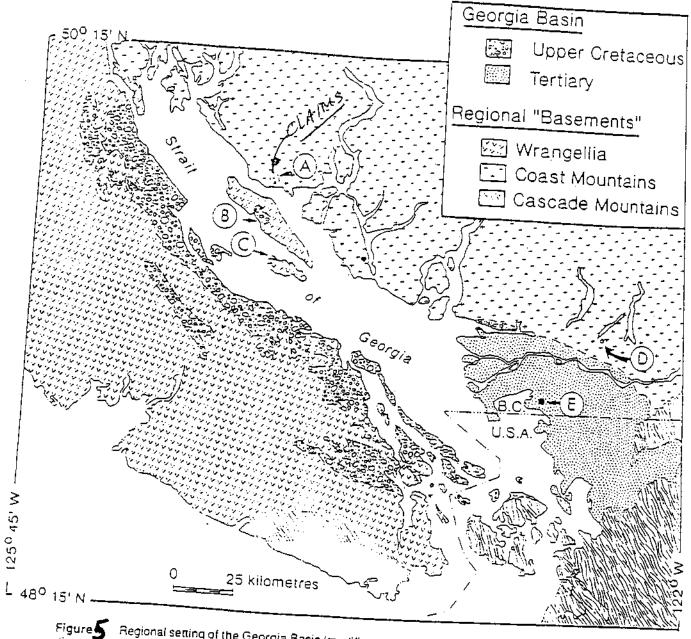


Figure S Regional setting of the Georgia Basin (modified from Monger, 1990). Letters indicate localities discussed in this study. A. Lang Bay outlier: B. Mouet Creek outlier; C. Lasqueti Island outlier; D. Blue Mountain outlier; E. Richfield-Pure Sunnyside exploration well.

Figure 5

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Hole #DL-99-03 was drilled close to the west edge of the basin west of hole #2 along the powerline. There was over 115 feet of coarse gravel and sand overburden. Strong water inflow at 52' and again at 80' made driving of the casing difficult. The Cretaceous sequence is characterized by dark brown shale. The bottom of the hole encountered grey-green conglomerate composed of matrix supported rounded to angular fragments of mostly lighter grey shale. Numerous narrow lamphrophic dykes were noted. Some sections (approx 15%) are heavily oxidized and leached particularly at the bottom of the hole.

Hole #DL-99-04 was located on the Duck Lake Road, however over 150 feet of sand and gravel was encountered without hitting bedrock.

#### **REGIONAL GEOLOGY**

The sedimentary rocks underlying the Duck Lake Claims are a small outlier of the extensive Georgia Basin, which is well known in the Nanaimo-Comox area due to large scale coal mining.

The Georgia Basin overlies three different basement entities: Wrangellia terrane on Vancouver Island: the Coast Belt on the mainland of British Columbia: and Cascade terranes in northwest Washington State. The main structural control on the sub-Georgia Basin rocks and the Georgia Basin itself is underthrusting of the Farallon/Kula oceanic plates beneath the North American Plate (Mustard and Rouse, 1991). A mid to late Cretaceous west-vergent thrust system is preserved at the southern margin of the Georgia Basin and in the eastern Coast Belt, mainly east of Harrison Lake. Dextral strike-slip faults influenced both basin formation and depositional patterns during the Tertiary. The basin has also been affected by early Tertiary compression, which resulted in southwest directed thrusting in the Nanaimo Group and possibly caused northwest plunging folds in the Chuckanut Formation. Younger (Miocene?) northeast trending faults and folds are evident on gravity and seismic profiles of the Fraser River lowlands. These are probably the subsurface expression of Tertiary structures preserved in the Coast and Cascade Mountains to the east and north (Mustard and Rouse, 1991).

The Nanaimo Group constitutes up to 4 km of Santonian (locally Turonian) to Maastrichtian age sedimentary rocks. The strata are commonly subdivided into nine formations comprising conglomerate, sandstone and mudstone with coal in lower units. The basal, coal-bearing formations appear to have formed in coastal plain, deltatic and shallow marine environments. Most recent interpretations of the other formations emphasize submarine fan models. Interpretations of the tectonic controls on basin sedimentation include forearc, strike-slip and foreland models (Mustard and Rouse, 1991).

Except for an isolated occurrence of Paleocene rocks on Lasqueti Island, the Tertiary rocks of the Georgia Basin are only exposed in the lower Fraser Valley and northwestern Washington. The main stratigraphic components are non-marine clastics of the Paleocene-Eocene Chuckanut Formation of Washington State, the partly equivalent upper Burrard and Kitsilano Formations of the Vancouver area, the late Eocene to Oligocene age Huntingdon Formation and younger (mostly Miocene) sedimentary rocks known from a few surface exposures and subsurface drilling. Upper Cretaceous rocks occur disconformably beneath the Tertiary strata at Burrard Inlet in Vancouver (Rouse et al., 1975) and in the western Fraser River delta subsurface.

#### LOCAL GEOLOGY

A sedimentary outlier of about 35 km is preserved at Lang Bay, about 13 km southeast of Powell River. Outcrop is limited to discontinuous exposures in Lang Creek (Mustard and Rouse, 1991). Conglomerate, sandstone and mudstone dip 10-15° to the southwest. The sequence unconformably overlies granodiorite and, in the northwest, part of the outlier, mafic volcanics. Crickmay and Pocock (1963) and Bradley (1972) reported late Cretaceous palynomorphs from this outlier and suggested correlation with the lower Nanaimo Group (Comox or Extension Formations). White (1986) reviewed the exploration history of the area, which most recently was evaluated for industrial kaolin. More than 50 drillholes were emplaced during 1987-89 by Fargo Resources Ltd. and Brenda Mines Ltd. to evaluate the kaolin deposits. The thickest drill intersection of Upper Cretaceous strata is about 70m, with Quaternary alluvium directly overlying the Cretaceous strata.

Two of the core logs from the 1987 work are shown in Figure 7 (Mustard and Rouse, 1991). Fining and thinning upward trends are apparent, both on the scale of the preserved sequence (tens of metres) and as smaller cycles (a few metres or less). Conglomerates are clast-supported and moderately sorted with subround pebbles and rare cobbles in an arkosic matrix. Conglomerate clasts are predominantly granitic or mafic volcanic in composition, compatible with local derivation. Sandstones are arkosic or lithic arenites. Mudstones are brown or grey-green and massive, rarely laminated. Normal grading is common in both conglomerate and sandstone beds. Many sandstones display planar or (less common) trough crossbedding. The few well-exposed crossbeds in Lang Creek indicate paleoflow towards the southwest. The small scale fining upward cycles display gradational upward change from coarse, graded sandstone with abundant mudstone ripups to trough crossbedded medium grained sandstone, to rippled or wavy bedded fine grained sandstone and siltstone, to massive mudstone. Many mudstones are carbonaceous and contain abundant plant debris. Rare coal lenses are present in Lang Creek and in one place; in situ root systems are preserved (Mustard and Rouse, 1991).

The metre-scale cycles display features of fluvial channel and point-bar deposits. The isolated graded sandstone beds in mudstones are interpreted as crevasse-splay deposits. These features, plus the presence of coal lenses, and in situ rootlets support a fluvial-floodplain depositional model.

Palynomorph assemblages have been obtained from about 6 surface samples along Lang Creek and 6 mudstone layers in drillcore (Table 1). Most palynomorphs range from the Santonian to Campanian, but a few range to Albian-Cenomanian, and others into the Maastrichtian. The Santonian-Campanian range agrees with the invertebrate-based range given for the Comox through Extension Formations.

At Lang Bay, several palynomorph species appear restricted to the upper beds, viz. *Proteacidites thalmanni, P. marginus, Tricolpopollenites divergens,* and *Tricolporopollinitespunctatus* (Mustard and Rouse, 1991). These are also found in the Extension-Protection Formations of Vancouver Island, and the Lions Gate Formation at Vancouver (Rouse et al., 1975, p. 469, Table 1), but appear absent from Comox and older equivalents. Hence, preliminary results suggest that there is a contact between younger and older segments of the Santonian-Campanian series near the top of the Lang Bay sequence.

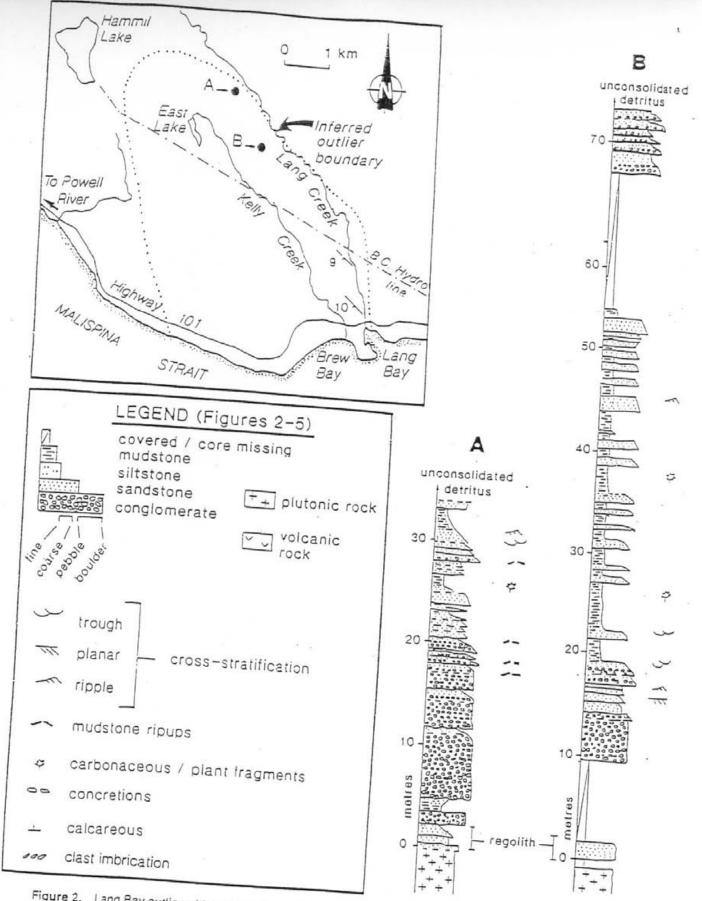


Figure 2. Lang Bay outlier with logs from two drillholes. Outlier boundary is modified from White (1986).

#### 2006 DIAMOND DRILLING

A short program of diamond drilling was completed in December 2006.

Hole locations are plotted on Figure 7. The core was split and assayed at Chemex Labs Ltd. The drillcore is stored in our locked core shed located on private property just south of the 2006 drilled area located at N49°49.881 + W124°23.253

TABLE III Diamond Drill Hole Data 2006											
	Lo	cation									
Hole #	Northing	Easting	Elevation	Azimuth	Dip	Length					
LB-06-01	49°48.320	124°23.318	125m	Vertical	-90	92.97m (305 ft)					
LB-06-02	49°48.370	124°23.533	125m	Vertical	-90	71.62m (235 ft)					
LB-06-03	49°48.410	124°23.609	125m	Vertical	-90	51.21m (168 ft)					
LB-06-04	49°48.417	124°23.645	125m	Vertical	-90	48.77m (160 ft)					
LB-06-05	49°48.368	124°23.492	125m	Vertical	-90	28.96m (95 ft)					
					Tatal	202 52 (062 ft)					

Total 293.53m (963 ft)

The sequence of sandstone and shale encountered in the 2006 program consisted of lesser shale and more abundant kaolinized sandstone.

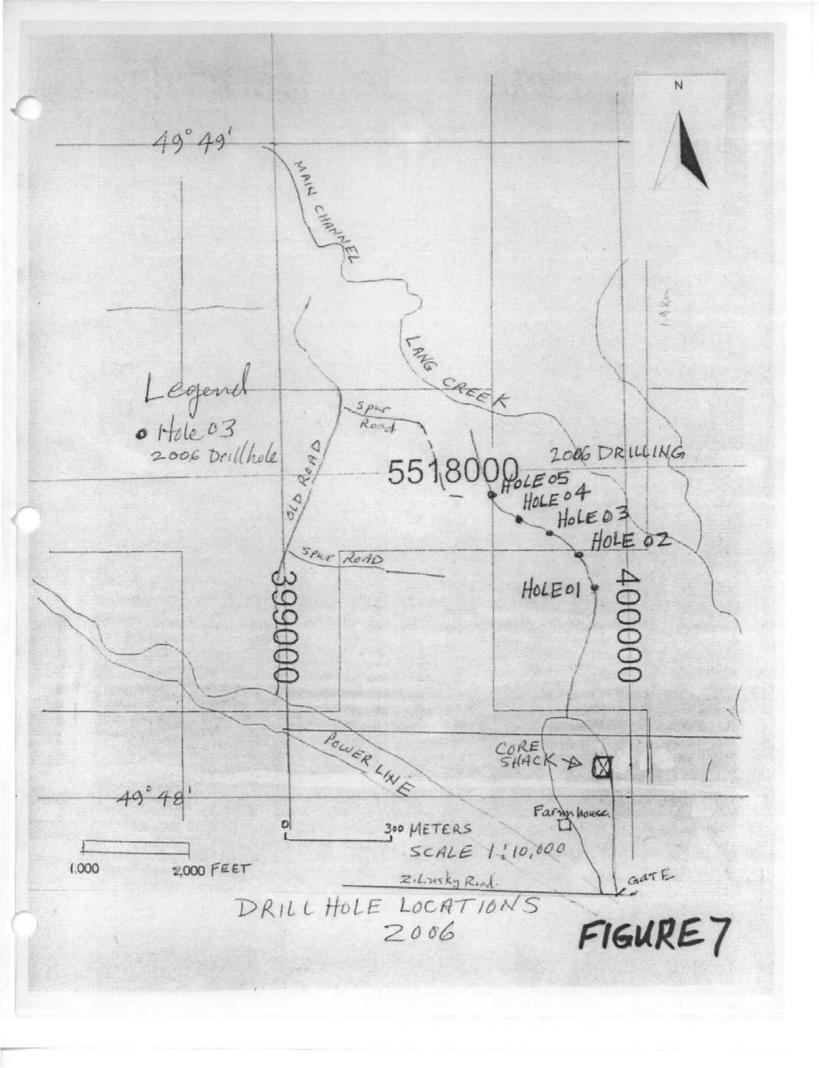
Chemical analysis by Chemex Labs was by MEXRF06 protocol for high precision results plus loss on ignition. All elements were by lithium meta or tetra borate fusion.

Discussions have been held with major cement producers as to the suitability of the sandstone-shale sequence for cement raw materials as a source of  $SiO_2$  and  $Al_2O_3$ .

Average chemistry of the drillholes is as follows:

	Weighted average $SiO_2$	Weighted average $Al_2O_3$	Weighted average Alkali (Na $_2$ O + K $_2$ O)
Hole LB-06-1	62.15%	16.01%	2.49%
Hole LB-06-2	59.63%	15.88%	2.38%
Hole LB-06-3	63.03%	14.35%	2.42%
Hole LB-06-04	62.03%	16.16%	2.44%

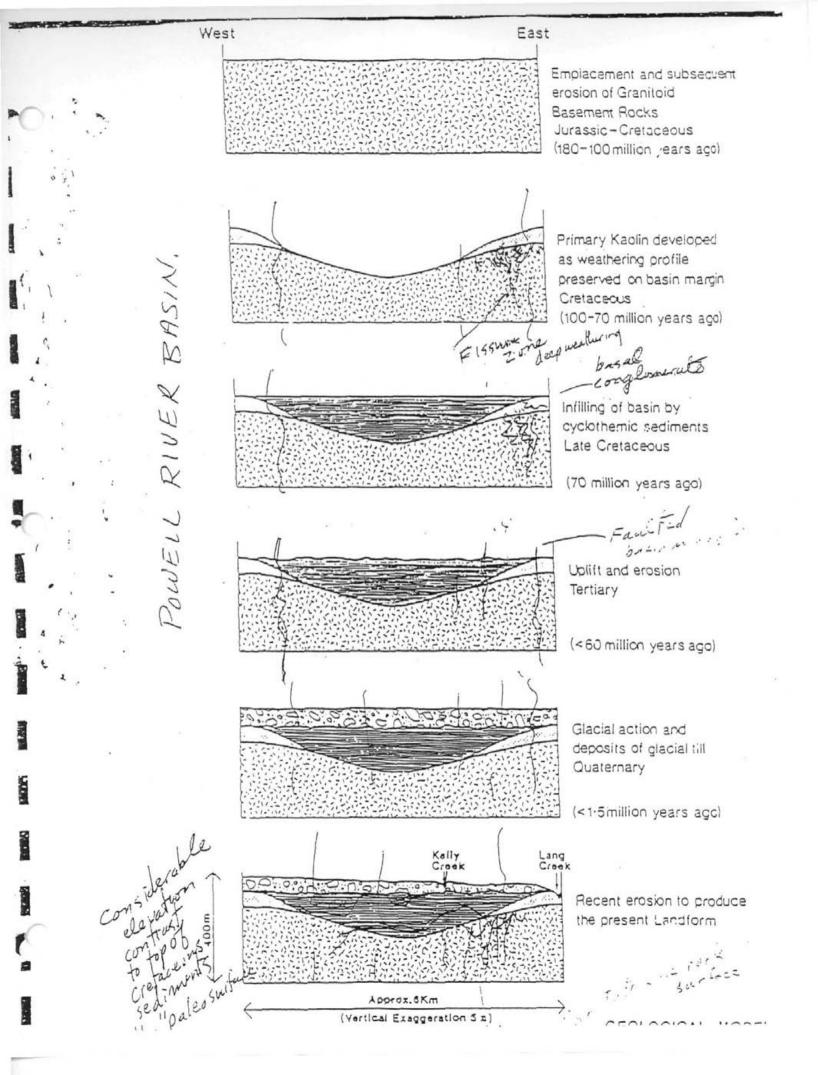
These averages are within the specifications of the cement producers and further work will be done by the Cement Plant in house XRF and pulps have been delivered to the Cement Plant.

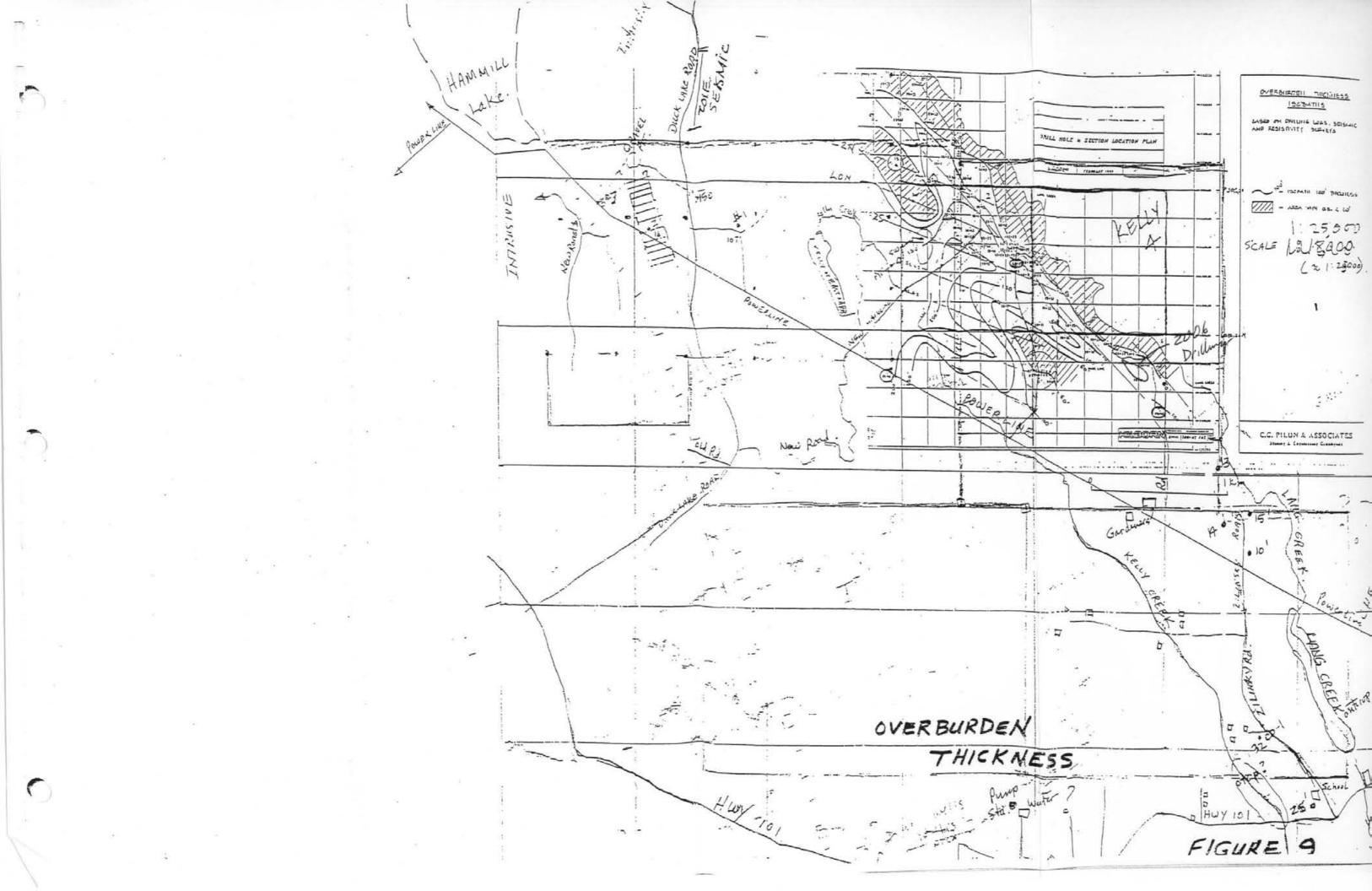


#### GEOPHYSICS

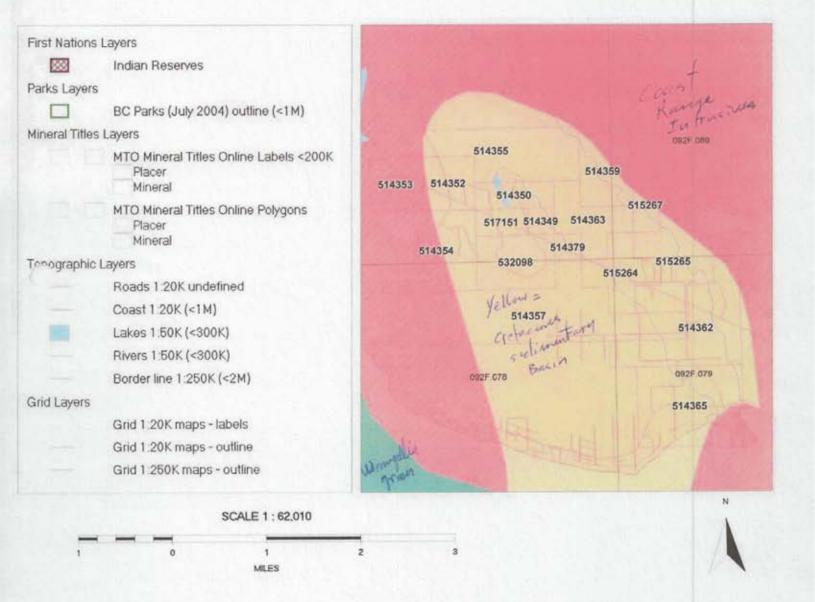
A large amount of geophysical testing was completed in the period 1986 to 1989 including ground magnetometer, seismic refraction, electrical conductivity, dipole-dipole resistivity and some down-the-hole electrical soundings.

Seismic refraction work in 1999 was carried out primarily to give some indication on the areas of thinner overburden but unfortunately the velocities of the compacted clay-rich till and glacial-fluvial stony clays give very similar values to the velocities encountered in the Cretaceous shales which form the bedrock.





# LANG BAY Geology



#### **GERMANIUM EXPLORATION 2011**

In 1949, the British Columbia Ministry of Mines reported results of a reconnaissance examination of coal samples from Lang Bay: the germanium values in as were reported as high as 1%. This report led Dr. F. C. Buckland to Taiga Mines Ltd. to stake 136 claims in the Lang Creek area. Subsequently, the company drilled 7 auger holes and 19 churn holes near the northeast edge of the property to examine the coal strata at depth, and excavated 6 trenches and a few small pits.

Reported results (Skerl. 1959) indicated intersections of:

1.4 metres with 68 grams  $GeO_2$  per tonne, 1.4 metres with 136 grams  $GeO_2$  per tonne, 0.6 metres with 139 grams  $GeO_2$  per tonne, 0.7 metres with 90 grams  $GeO_2$  per tonne.

Fargo Oil Corporation of Vancouver acq1uired the preoperty in 1981 and has carried out laboratory studies and benefication tests on samples recovered from two re-opened trenches.

The two samples, Hole 87-17: 170'-122; and Hole 87-19: 80'-82' (see figure ? for Locations) assayed 2.13 and 2.07 g/tonne. Other Ge assay values are listed on the flowing pages 23, 24 and 25.

ICPMS 50 element 4 acid Ultra Trace Level was applied to sample intervals Lang Bay 87-17, 120' to 122' and Lang Bay 87-19, 80' to 82'and confirmed Germanium and Gallium as well as additional rare earth element presence:

This 2011 testing analyzed for Germanium and Gallium, also gave values for Scandium, Sc, 11.7 and 15.9 ppm; Yttrium, Y, 15.4 and 16.4ppm; Lantharum 15.7 and 16.8ppm; and Cerium, Ce, 49 and 70ppm. These values point to broad potential for greater concentration of rare earth elements in selected beds.



		Ge	Ga
Sample	Footage	g/T	9/3
86-1	68-70	36	1
86-1	70-72	34	1
86-1	72-74	73	1
86-1	74-76	4	
86-1	76-78	3	1
86-2	72-74	4	1
86-2	74-76	40	1
86-2	76-78	3	- 22
86-3	85-87	18	1
86-3	87-89	112	1
86-3	89-91	8	1
86-4	62-64	8, 16	-
86-4	64-66	17	3
86-4	66-68	12	3
86-4	68-70	4, 5	1
86-4	70-72	129	2
86-4	72-74	196, 210	2
86-4	74-76	48	2
86-4	76-78	9, 13	
86-4	78-80	<3	-
86-5	64-66	15	
86-5	66-68	2, 6	1
86-5	68-70	5	1
86-5	70-72	21	3
86-5	72-74	27	3
86-5	74-76	28	2
86-5	76-78	137	4
86-5	78-80	17, 19	3
86-6	66-68	12	4
86-6	68-70	11, 14	3
86-6	70-72	12	3
86-6	72-74	10	1
86-6	74-76	5	2
86-6	76-78	13	1
86-6	78-80	12	3
86-6 86-6	80-82 82-84	63, 66 36	3

86-7         72-74         <3	Sample	Footage	Ge g/T	Ga g/T
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	86-7	74-76	<3	10
$\begin{array}{cccccccccccccccccccccccccccccccccccc$				20
$\begin{array}{cccccccccccccccccccccccccccccccccccc$				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			<3	20
$\begin{array}{cccccccccccccccccccccccccccccccccccc$				30
$\begin{array}{cccccccccccccccccccccccccccccccccccc$				
86-7         92-94         <3         30           86-7         94-96         <3				
86-7         94-96         <3         25           86-8         57-59         17         30           86-8         59-61         <3, 2			4, 1	
86-8         59-61         <3, 2         10           86-8         61-63         9         25           86-8         63-65         28, 37         20           86-8         65-67         26         20           86-8         67-69         8, 12         35           86-8         69-71         30         30           86-9         73-75         8         10           86-9         75-77         115, 114         20           86-9         77-79         88         10           86-9         79-81         44, 40         10				
86-8         61-63         9         25           86-8         63-65         28, 37         20           86-8         65-67         26         20           86-8         67-69         8, 12         35           86-8         69-71         30         30           86-9         73-75         8         10           86-9         75-77         115, 114         20           86-9         77-79         88         10           86-9         79-81         44, 40         10			17	
86-8         63-65         28, 37         20           86-8         65-67         26         20           86-8         67-69         8, 12         35           86-8         69-71         30         30           86-9         73-75         8         10           86-9         75-77         115, 114         20           86-9         77-79         88         10           86-9         79-81         44, 40         10				
86-8         65-67         26         20           86-8         67-69         8, 12         35           86-8         69-71         30         30           86-9         73-75         8         10           86-9         75-77         115, 114         20           86-9         77-79         88         10           86-9         79-81         44, 40         10				
86-8         69-71         30         30           86-9         73-75         8         10           86-9         75-77         115, 114         20           86-9         77-79         88         10           86-9         79-81         44, 40         10		65-67	26	20
86-9         73-75         8         10           86-9         75-77         115, 114         20           86-9         77-79         88         10           86-9         79-81         44, 40         10				
86-9         75-77         115, 114         20           86-9         77-79         88         10           86-9         79-81         44, 40         10	86-8	69-71	30	30
86-9 77-79 88 10 86-9 79-81 44,40 10				
86-9 79-81 44, 40 10				

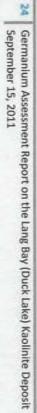
CYANAMID

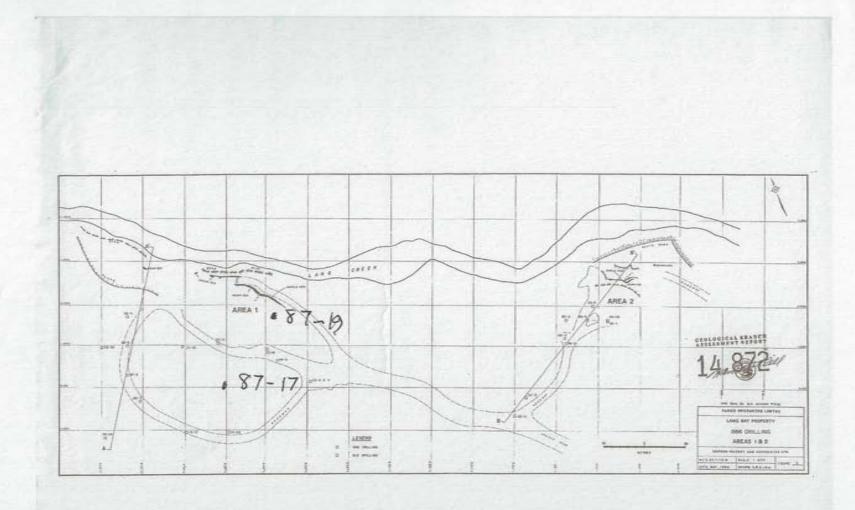
The following data represent semiguantitative analyses of rew and calcined coal ores, previously prepared for Germanium and Gallium analyses. The sample dissolution process is effective for dissolving Ge and Ga but may not be sufficient for all other elements present in these materials. Care should be exercised when evaluating this data since it is semiquantitative. Some precipitated species existed in most of the samples. These species are assumed to be fluoruide salts of calcium, magnesium, aluminum and possibly silicon.

#### ST-S15683 p 170,172

E																			
1		Ra		Raw		Calcin		Rau		Raw	C	alcin	ed	Raw		Raw	6	Ra	iii -
e		86-	- C	86-4		86-5		86-5		86-6		86-6		86-7		86-8		86-	
		72-	74	70-7	2	76-7	8	76-7	8	80-8	2	80-8	2	72-7	4	69-7	1	75-	7-
s		18%	-	14%	-	18%	5	1.7%		15%	-	16%		18%		17%	_	. 2%	-
A	1	7*		9*		10*		10"		9*		11*		6"		8"		10"	
F	e	1.3"		1.2"		2.7*		2.5"		2.0*		2.5"		2.6"		3.3"		1.5"	
C	ā.	.2"		.1"		.2*		.2"		.3"		.2"		.2"		.2"		.2"	
11	9	.6"		.3"		.1*		.1"		.2"		.2*		.2*		.4*		.1"	
T.	í	.3"		.4"		.4"		.4"		.4"		.2"		.3*		.3*		.4*	
11	n	.01		.01		.03		.03		.02		.02		.04		.05		.02	
B.	ā	.01		.01		.01		.01		<.01		(.01		.01		.01		.01	
Z	n	601	ppm		ppm	901	pm		mga		ppm		ppm	100		100			
B		100		200		200		200		100		100		100		200		200	1
Ci		20		20		20		20		30		20		20		30		20	
CI	ii ii	40		40		70		70		50		60		40		60		50	
N		10		10		10		10		10		10		10		10		10	
St	r	50		40		60		70		70		60		40		50		90	
M	0	<50		(50		<50		<50		<50		(50		<50		\$50		150	
00	0	<10		<10	<b>n</b> .:	<10		<10		<10		<10		<10		(10		(13	
Sr	n	(100	3 "	<100	• 0	(100	3.4	(10)	1.	(10)	*	(100	3.0	(100	2.4	(10)		(10	
12		<10		<10		<10		(10		<10		<10		<10		(10		120	
Be	e	<1		<1		<1		<1		(1		<1	*	<1		1		1	
A	u i	<1		<1		(1		<1		<1		<1		<1		1		22	
In	n.	(3		(3		(3		(3		<3		(3		(3		(3		(3	
11		(2		(2		<2		(2		<2		<2		(2		(2		<2	
P	d	(3		<3		(3		(3		<3		<3		(3		(3		(3	
P	5	<3		<3		<3	*	(3		<3		(3	*	<3		(3		(3)	
A	9	<1		<1		<1		<1		<1		(1		<1		a		<1	
Y	S	10		<10		10		<10		10		(10		(10		(10		(10	
Ge		-200		140		160		160		60		160		(3		30		120	

Stan Pourte





#### CONCLUSIONS and RECOMMENDATIONS

The Duck Lake Property (Lang Bay Project) consists of 20 cell claims located about 15 km southeast of Powell River Townsite. The claims are 3 km north of Highway 101 at Myrtle Point. Access is via the Duck Lake Forestry Road or alternatively along the Powerline of Zilinsky Road.

The area is underlain by Upper Cretaceous shale-sandstone and minor coal, which can be correlated with the Nanaimo Group.

Previous work on the eastern margin of the outlier basin in the 1980's and early 1990's suggest that there is good potential to define primary and secondary low alkali kaolin deposits.

A 1999 program consisted of 4 diamond drillholes (totalling 198.88m) and 4.3 km of seismic refraction geophysics. The drilling encountered dark green shale, shaly sandstone and green pebble conglomerate. In some holes a distinct alternating sequence of green to very brown shale. The interval appears to be a prograding detatic depositional environment in which minor coal is forming in lagoonal portions in the immediate vicinity and then being eroded and redeposited in the outer delta-turbiditic sequence.

The five holes drilled in the current 2006 program intersected a series of interbedded green and brown sandstone and shale.

A major problem in the economic evaluation the area is the variable thickness of till and clay-rich overburden which ranges from <15 feet to >150 feet within relatively short distances.

The seismic refraction survey gave ambiguous results since the velocities of the compacted till are very similar to the velocities in the Cretaceous shale. It is recommended that a resistivity survey be done over the seismic lines to differentiate between overburden and altered bedrock. The resistivity data will provide location and depth distribution of shallow, electrically conductive materials that may be correlated with alteration zones. Based on previous experience in the area, the sedimentary bedrock where the alteration occurs has seismic velocities of the order of 2500 m/s to 3100 m/s. In order to clarify that the conductive anomalies are in the sedimentary rock sequence and not within the overburden, seismic refraction surveying should be carried out in the target areas. This seismic information together with the resistivity data would be used to select drillhole locations and would serve as the basis for additional exploration in the area.

The Lang Bay outlier consists of interbedded chert-quartzite conglomerates, arkosic sandstones, siltstones, mudstones and coals. The sediments were deposited in a fluvial environment of varying intensity which is reflected in the generalized geological section.

Past exploration near the northeast edge of the outlier has identified coal-bearing sediments of variable thickness, which have anomalous germanium values and which extend over at least a 350 metre distance.

These beds which lie immediately above basement rocks belonging to the Coast Plutonic Complex have been the main exploration target. If the beds host economic grades of germanium and a successful recovery process can be developed, then excellent potential for expanding the reserves westward exists. Coal-bearing sediments situated Stratigraphically above these beds may host significant germanium values as well, although further investigation is required to assess their potential.

Respectfully submitted,

J.T. (Jo) Shearer, M.Sc., P.Geo. **Consulting Geologist** September 15, 2011

#### COST ESTIMATE for FUTURE WORK

The Duck Lake Claims require continued geological mapping and hand trenching in certain areas. A small diamond drill program is recommended. The nature of industrial minerals suggests that a bulk sample would be useful to conduct test work for specific markets.

Drill Supervision				
Senior Geologist, 12 days @ \$500			\$ 6,000.00	
Assistant, 12 days @ \$250		3,000.00		
		GST	540.00	
		Subtotal	\$ 9,540.00	
Diamond Drilling of 10 Holes @ 100m Depth Each:				
Footage price	\$21 x 1,500 (NQ)		\$31,500.00	
Mob/demob			2,500.00	
Standby/machine time (if required) Field costs			5,500.00	
Moving	Field costs		3,000.00	
Meals/Accommodations	•		At Contractor's Expense	
Set up	Field costs		3,000.00	
		Subtotal	\$45,500.00	
Dozer time in moves/road access				
	Road - 15 hrs @ \$85		\$ 1,275.00	
	Moves - 15 hrs @ \$85		1,275,00	
		Subtotal	42,550.00	
		GST	2,883.00	
	Diamond Drilling Subtota	I	\$50,933.00	
Metallurgical Ongoing Work				
Samples out to end users & Followup			\$ 6,000.00	
Calcining Followup			2,500.00	
Magnetic Separation to Address Iron Content			2,500.00	
Classification of Undersize Thickener &			,	
Hydrocycloning			10,000.00	
Market & Customer Study, Update of 1989 Study			19,000.00	
		Subtotal	\$ 40,000.00	
Bulk Sample				
Environmental Survey & Report			\$ 8,000.00	
Application & Preparation of required reports &			, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
documents for Bulk Sample Permit			6,000.00	
Tote Road Preparation			10,000.00	
Bulk Sample Mining & Crushing 10,000 tons + Loadout		45,000.00		
Trucking Sample to Loadout		35,000.00		
Final Report Preparation			6,000.00	
		Subtotal	\$110,000.00	
		TOTAL	\$200,933.00	

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Palynology of Cretaceous and Tertiary Strata of Georgia Basin, Southwestern British Columbia; in Current Research. Part F. Geological Survey of Canada, Paper 90-1F, p. 109-113.

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Mining Permit Application Summary on the South Slesse Limestone Quarry, Mx7-114, for I.G. Machine & Fibers Ltd., Dated January 10, 1998, 23 pages.

#### 1999:

Diamond Drilling Report on the Duck Lake Claims, Assessment Report, 18 pp.

2006:

Geological and Metallurgical Assessment Report on the Lang Bay (Duck Lake) Kaolinite Deposit for Electra Gold Ltd., dated August 15, 2006.

2007:

Diamond Drilling Assessment Report on the Lang Bay (Duck Lake) Kaolinite Deposit, for Electra Gold Ltd., Dated May 15, 2007, Assessment Report #29,269

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Preliminary Report. Lang Bay Germanium Prospect (92F/1610). Paper 1986-1, Geological Field Work (1985), Ministry EMPR of British Columbia

**APPENDIX I** 

## STATEMENT of QUALIFICATIONS

#### Appendix I

#### **STATEMENT OF QUALIFICATIONS**

I, Johan T. Shearer of 3572 Hamilton Street, in the City of Port Coquitlam, in the Province of British Columbia, do hereby certify:

- 1. I graduated in Honours Geology (B.Sc., 1973) from the University of British Columbia and the University of London, Imperial College, (M.Sc. 1977).
- 2. I have practiced my profession as an Exploration Geologist continuously since graduation and have been employed by such mining companies as McIntyre Mines Ltd., J.C. Stephen Explorations Ltd., Carolin Mines Ltd. and TRM Engineering Ltd. I am presently employed by Homegold Resources Ltd.
- 3. I am a fellow of the Geological Association of Canada (Fellow No. F439). I am also a member of the Canadian Institute of Mining and Metallurgy, and the Geological Society of London. I am a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia (P.Geo., Member Number 19,279).
- 4. I am an independent consulting geologist employed since December 1986 by Homegold Resources Ltd. at Unit #5 2330 Tyner Street, Port Coquitlam, British Columbia.
- 5. I am the author of the report entitled "Germanium Assessment Report on the Lang Bay (Duck Lake) Kaolinite Deposit, September 15, 2011".
- 6. I visited the property between May 1, 2011 and July 31, 2011 (on June 1+2, 2011) and in May, June, July and August 1999. I supervised and logged the diamond drill core. I worked on drillcore and reverse circulation samples on January 5 to 7 and 10 to 12, 2006. I supervised the diamond drilling completed between November 15, 2006 and December 14, 2006. I am familiar with the regional geology and geology of nearby properties. I have become familiar with the previous work conducted on the Duck Lake Property by examining in detail the available reports, plans and sections, and have discussed previous work with persons knowledgeable of the area.

Dated at Port Coquitlam, British Columbia, this 15<sup>th</sup> day of September, 2011.

Respectfully Submitted

J.T. Shearer, M.Sc., F.G.A.C., P.Geo. September 15, 2011

## **APPENDIX II**

## STATEMENT of COSTS

#### Appendix II

## STATEMENT of COSTS 2006 and 2007

### LANG BAY PROJECT (DUCK LAKE CLAIMS)

### **Diamond Drilling Assessment Report**

	Total without HST
Wages & Benefits	
J. T. Shearer, M.Sc., P.Geo., Senior Geologist (June 1+2, 2011)	
Quarry Supervisor 98-3550, 2 days @ \$700/day	\$ 1,400.00
Ron Savelieff, 2 days @ \$600/day (June 1+2, 2011)	1,200.00
Sub-total Wages	\$ 2,600.00
Expenses	
Truck Rental, fully equipped 4x4, 2 days @ \$120/day	240.00
Gas	145.00
Motel	249.00
Meals	125.00
Analytical, IPL-Inspectorate Labs,	244.00
Core Shack Rental (to house voluminous core & chip samples)	2,000.00
Ferry	260.00
Report Preparation and Data Interpretation	2,100.00
Word Processing and Reproduction	350.00
Sub-total Expenses	\$ 5,713.00
Grand Total	\$ 8,313.00

On July 31, 2011 Event # 4936647 Total Work - \$8,100 PAC - \$3,420.17 Total Applied - \$11,520.17

## **APPENDIX II**

## ASSAY CERTIFICATES



#### 11-360-08392-01

Inspectorate Exploration & Mining Services Ltd. #200 - 11620 Horseshoe Way Richmond, British Columbia V7A 4V5 Canada Phone: 604-272-7818

Distribution List Attention: Ron Savelieff 15467 Kildave Dr Surrey, BC V3S 6L2 Phone: 6045766244 EMail: rjs7@shaw.ca	Attention	<ul> <li>Electra Gold Ltd</li> <li>15467 Kildave Dr</li> <li>Surrey, BC V3S 6L2</li> <li>Ron Savelieff</li> <li>Lang Bay</li> </ul>		Date Received: 10/12/2011 Date Completed: 10/19/2011 Invoice:
	<b>Location</b> Vancouver, BC	Samples 2	<b>Type</b> Pulp	<b>Preparation Description</b> SP-PU/Pulp Handling, submitted pulps
	Location Vancouver, BC	Method 50-4A-UT		Description 50 Element, 4 Acid, ICPMS, Ultra Trace Level

The results of this assay were based solely upon the content of the sample submitted. Any decision to invest should be made only after the potential investment value of the claim or deposit has been determined based on the results of assays of multiple samples of geologic materials collected by the prospective investor or by a qualified person selected by him and based on an evaluation of all engineering data which is available concerning any proposed project. For our complete terms and conditions please see our website at www.inspectorate.com.

For and on behalf of Inspectorate Exploration and Mining Services Ltd

By

Michael Caron - Operations Manager



11-360-08392-01

Electra Gold Ltd 15467 Kildave Dr Surrey, BC V3S 6L2

A Bureau Veritas Group Company

#200 - 11620 Horseshoe Way

		Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe
		50-4A-UT													
Sample	Sample	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%
Description	Туре	0.01	0.01	0.2	5	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01
Hole 87-17 120'-122'	Pulp	0.96	9.68	11.2	482	1.54	0.02	0.51	0.08	49.03	8.7	8	4.60	27.4	3.20
Hole 87-19 80'-82'	Pulp	0.59	>10	23.4	232	1.12	0.07	0.42	0.08	70.00	10.5	10	3.52	69.0	3.93



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		Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	Р
		50-4A-UT													
Sample	Sample	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
Description	Type	0.05	0.05	0.1	0.01	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
Hole 87-17 120'-122'	Pulp	13.52	2.13	2.3	0.03	1.79	15.7	145.9	0.59	494	1.29	0.17	8.8	5.3	74
Hole 87-19 80'-82'	Pulp	14.88	2.07	2.4	0.05	0.69	16.8	182.2	0.52	384	0.79	0.07	9.3	5.4	107



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		Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Та	Te	Th	Ti	Tl
		50-4A-UT													
Sample	Sample	ppm	ppm	ppm	%	ppm	%	ppm							
Description	Туре	0.5	0.1	0.002	0.01	0.05	0.1	1.0	0.2	0.2	0.05	0.05	0.2	0.005	0.02
Hole 87-17 120'-122'	Pulp	7.0	78.0	0.003	< 0.01	0.51	11.7	<1.0	1.0	65.6	0.91	< 0.05	9.9	0.260	0.38
Hole 87-19 80'-82'	Pulp	13.1	35.9	0.004	0.024	0.48	15.9	<1.0	1.2	56.7	0.96	< 0.05	9.6	0.321	0.27



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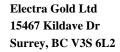
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		U	V	W	Y	Zn	Zr
		50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT
Sample	Sample	ppm	ppm	ppm	ppm	ppm	ppm
Description	Type	0.1	1	0.1	0.1	2	0.5
Hole 87-17 120'-122'	Pulp	1.9	115	6.8	15.4	52	15.9
Hole 87-19 80'-82'	Pulp	2.2	144	5.9	16.4	72	18.2



## Certificate of Analysis 11-360-08392-01



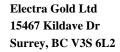
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#200 - 11620 Horseshoe Way

ſ			Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe
			50-4A-UT													
	Sample	Sample	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%
	Description	Туре	0.01	0.01	0.2	5	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01
	Hole 87-17 120'-122'	Pulp	0.96	9.68	11.2	482	1.54	0.02	0.51	0.08	49.03	8.7	8	4.60	27.4	3.20
	Hole 87-17 120'-122' Dup		0.64	9.41	13.6	587	1.42	0.02	0.51	0.12	60.25	9.3	8	4.74	29.8	3.32
	QCV1110-01056-0002-BLK		< 0.01	< 0.01	< 0.2	<5	< 0.05	< 0.01	< 0.01	< 0.02	< 0.01	< 0.1	<1	< 0.05	< 0.2	< 0.01
ST	D-OREAS94-4A expected		3.37					8.02				23.1			11400	
	STD-OREAS94-4A result		3.38		9.5	460	2.67	8.14		0.21		22.7		7.49	>10000	



## Certificate of Analysis 11-360-08392-01



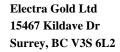
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#200 - 11620 Horseshoe Way

			Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	Р
			50-4A-UT													
	Sample	Sample	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	Description	Туре	0.05	0.05	0.1	0.01	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
	Hole 87-17 120'-122'	Pulp	13.52	2.13	2.3	0.03	1.79	15.7	145.9	0.59	494	1.29	0.17	8.8	5.3	74
	Hole 87-17 120'-122' Dup		13.94	2.04	2.0	0.04	1.79	15.4	143.6	0.57	536	1.68	0.17	8.2	5.3	77
	QCV1110-01056-0002-BLK		< 0.05	< 0.05	< 0.1	< 0.01	< 0.01	< 0.5	< 0.2	< 0.01	<5	< 0.05	< 0.01	< 0.1	< 0.2	<10
ST	D-OREAS94-4A expected															
	STD-OREAS94-4A result		16.87		6.1	1.23		41.6	28.5					14.8	44.9	



## Certificate of Analysis 11-360-08392-01



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[			Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Та	Te	Th	Ti	Tl
			50-4A-UT													
	Sample	Sample	ppm	ppm	ppm	%	ppm	%	ppm							
	Description	Туре	0.5	0.1	0.002	0.01	0.05	0.1	1.0	0.2	0.2	0.05	0.05	0.2	0.005	0.02
	Hole 87-17 120'-122'	Pulp	7.0	78.0	0.003	< 0.01	0.51	11.7	<1.0	1.0	65.6	0.91	< 0.05	9.9	0.260	0.38
	Hole 87-17 120'-122' Dup		9.0	75.8	< 0.002	0.010	0.46	12.2	<1.0	1.0	66.6	0.74	< 0.05	8.1	0.258	0.37
	QCV1110-01056-0002-BLK		< 0.5	< 0.1	< 0.002	< 0.01	< 0.05	< 0.1	<1.0	< 0.2	< 0.2	< 0.05	< 0.05	< 0.2	< 0.005	< 0.02
ST	D-OREAS94-4A expected		30.9			1.380	2.36		12.9	22.6						
	STD-OREAS94-4A result		30.5	184.1	< 0.002	1.351	2.63	13.4	12.8	23.7	35.0	1.10	< 0.05			0.84



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			U	V	W	Y	Zn	Zr
			50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT
	Sample	Sample	ppm	ppm	ppm	ppm	ppm	ppm
	Description	Туре	0.1	1	0.1	0.1	2	0.5
	Hole 87-17 120'-122'	Pulp	1.9	115	6.8	15.4	52	15.9
	Hole 87-17 120'-122' Dup		1.8	112	6.1	15.7	56	15.3
	QCV1110-01056-0002-BLK		< 0.1	<1	< 0.1	< 0.1	<2	< 0.5
S	TD-OREAS94-4A expected						171	
	STD-OREAS94-4A result		3.1			24.4	187	119.9

**APPENDIX IV** 

## SAMPLE DESCRIPTION

#### APPENDIX IV

#### SAMPLE DESCRIPTION

Sample: Hole 87-17 120'-122':	kaolinitic, light tan to cream coloration, Al2O3
	at 17.7 and 18.3 sandy shale composition

Sample: Hole 87-19 80'-82': 18.3% Al2O3, kaolinitc, light tan in colour, sandy shale composition