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**Ministry of Energy and Mines**
BC Geological Survey

**Assessment Report**
**Title Page and Summary**

TYPE OF REPORT [type of survey(s)]: GEOLOGICAL & GEOCHEMICAL

TOTAL COST: $112,860.49

AUTHOR(S): Neil McCallum & Stephanie Krysa

SIGNATURE(S):

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): n/a

YEAR OF WORK: 2012

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5440092

PROPERTY NAME: Liard Fluorspar Property

CLAIM NAME(S) (on which the work was done): 503370

COMMODITIES SOUGHT: fluorite

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 094M 005; 094M 007

MINING DIVISION: Liard

NTS/BCGS: 094M060

LATITUDE: 59 ° 31 ' 59 " LONGITUDE: 126 ° 05 ' 06 " (at centre of work)

OWNER(S):
1) Prima Fluorspar Corp
2)

MAILING ADDRESS:
#1450, 789 W. Pender St.
Vancouver, BC, V6C 1H2

OPERATOR(S) [who paid for the work]:
1) Prima Fluorspar Corp
2)

MAILING ADDRESS:
#1450, 789 W. Pender St.
Vancouver, BC, V6C 1H2

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):
Dunedin Limestone, Besa River Shale, fluorite, witherite, barytocalcite, karst, barite, breccia

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: 00109, 03840, 03975, 33580

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| 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 | 1:5,000 | 503370 | $16,929 |
| Photo interpretation | | | |
| GEOPHYSICAL (line-kilometres) | | | |
| Ground | | | |
| Magnetic | | | |
| Electromagnetic | | | |
| Induced Polarization | | | |
| Radiometric | | | |
| Seismic | | | |
| Other | | | |
| Airborne | | | |
| GEOCHEMICAL (number of samples analysed for...) | | | |
| Soil | | 503370 | $11,286 |
| Silt | | | |
| Rock | | 503370 | $84,645 |
| Other | | | |
| DRILLING (total metres; number of holes, size) | | | |
| Core | | | |
| Non-core | | | |
| RELATED TECHNICAL | | | |
| Sampling/assaying | | | |
| Petrographic | | | |
| Mineralographic | | | |
| Metallurgic | | | |
| PROSPECTING (scale, area) | | | |
| PREPARATORY / PHYSICAL | | | |
| Line/grid (kilometres) | | | |
| Topographic/Photogrammetric (scale, area) | | | |
| Legal surveys (scale, area) | | | |
| Road, local access (kilometres)/trail | | | |
| Trench (metres) | | | |
| Underground dev. (metres) | | | |
| Other | | | |
| | | TOTAL COST: | $112,860.49 |

# ASSESSMENT REPORT ON THE
# LIARD FLUORSPAR PROJECT
# SEPTEMBER 2012

Liard Mining Division,

North-central British Columbia

**Approximate Geographic Coordinates:**
126°05' W
59°32' N



**Date:**
May 6, 2013

**OWNERS AND OPERATORS:**

**Prima Fluorspar Corp.**
#1450, 789 West Pender St.
Vancouver, BC
V6C 1H2

**BY:**

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# 1.0 SUMMARY

The Liard Fluorspar Project consists of 55 contiguous mineral tenures, totaling approximately 22,588 hectares, in the north-central portion of British Columbia. All of the mineral tenures are 100% owned by Prima Fluorspar Corp. (“Prima Fluorspar”).

The purpose of the September 2012 sampling program was to test the fluorspar grades and thickness of the mineralized zone at two historic fluorite showings on the property, the Tam Showing and the Coral Showing. In total, 106 samples were collected, and they were subsequently sent to 2 labs for verification purposes.

The Liard Fluorspar Project is located in the Liard Plateau physiographic region, approximately 200 kilometres northwest of Fort Nelson, British Columbia, and approximately 160 kilometres southeast of Watson Lake, Yukon. The Property is located on map sheets 94M/08 and 94M/09 of the National Topography System (NTS). Access to the Liard Fluorspar Project from Fort Nelson is via the Alaska Highway (No. 97) travelling northwest for 309 kilometres, then via an un-marked gravel trail travelling north.

In 1954, the GEM mineral showings were mapped and an access road was built through the Liard Hot Springs Park. Additionally, stripping with a combination of pick and shovel and bulldozer exposed several showings. Bulk samples of approximately 4 tons were taken from these showings for metallurgical testing.

Starting again in 1971, renewed activity in the area uncovered several new showings to the north of the GEM claims. Between 1971 and 1972 exploration activities of prospecting and geological mapping was conducted on several showings. Detailed mapping, trenching and diamond drilling and bulk sampling was conducted. In total, 60 drill holes are recorded to have been drilled on the current Liard Fluorspar Property. Metallurgical samples were collected from several of these new showings; subsequent testing indicates that a >97% $CaF_2$, acid-grade, product can be produced. No work has been reported on the property since 1972.

The Liard Fluorspar Project is located within the Foreland Belt of the Canadian Cordillera. The Foreland Belt represents the western end of the Paleozoic to early Mesozoic continental margin of the North American Craton. The sediments deposited in the generally northeastward-

tapering wedge represent the sequence of rocks known as the Western Canada Sedimentary Basin (WCSB).

The rocks of the property were deposited on a shallow inner continental shelf, known locally as the MacDonald Shelf. Formations that outcrop in the Property area include carbonates of the Middle Devonian Dunedin Formation overlain by Late Devonian to early Mississippian siltstone sequences of the Besa River Formation.

The Dunedin Formation consists of mid- to dark grey, massive to thinly-bedded fossiliferous limestone. It is generally exposed in the Teeter and Mould Creek valleys, which are characterized by karst and 'mesa and butte' topography. The overlying Besa River Formation is predominantly black shale or slate and argillite, with some calcareous shale and minor, buff-brown dolomitic layers. The unconformity between the units is characterized by brecciation and is very irregular in detail, probably due to an erosional or disconformable relationship between them, or to later faulting along the contact.

In most fluorite showings, the mineralization is predominantly in the limestone, with minor amounts in the overlying shales. The fluorite mineralization occurs as infillings and replacements in limestone or shale breccias, or as fracture fillings in the host rock. In some instances, vein-type mineralization of fluorite also occurs, or mineralization occurs as replacement pods that are devoid of host rock fragments. The mineralization predominantly consists of fluorite, calcite and witherite. Lesser amounts of barytocalcite, barite and quartz are also found in variable amounts. The fluorite crystals are fine- to coarse-grained. Fine-grained fluorite is commonly dark purple to black; whereas the coarse-grained variety varies from transparent to purple and black. The coarse-grained variety occurs predominantly in the breccia matrix.

A number of historical resource estimates have been published for the Liard Fluorspar deposits. Two estimates have been found in the public literature. They are included in the summary, below, and detailed explanations are in the report.

In 1975, an engineering report submitted to the government of BC included a resource estimate quoted as: *"The ore body consists of a series of pods which would be mined by open pit* *methods. Reserves of 3,500,000 tons (3.2 million tonnes) of ore grading 32% CaF2 are estimated."*

In 1981, a Conwest Exploration Company Limited; Annual Report, December 31, 1981 includes a mineral resource estimate quoted as: *"Exploration during the early 1970's established geological reserves of about 2.6 million tons (2.4 million tonnes) of fluorspar mineralization averaging 30% fluorite in several deposits"*

60 of the historic drill holes that were drilled by Conwest Exploration are on the current Liard Fluorspar Property, so the bulk of this historic estimate is likely to be on the current property. Without acquiring additional historic technical information, it is difficult to say exactly what proportion of the historic resource estimates are on the current property. The author believes that they were defined as "*reserves*" due to the economic studies applied at that time. Based on an evaluation of the drill-spacing and the nature of the deposit, the confidence level of the historic resource estimate would likely be in the inferred category by today's NI 43-101 standards.

Conwest Exploration is known for high quality work, and based in the available historic data, all of the work on the Liard Fluorspar Property appears to be high quality. The drill core from the 1971 and 1972 drilling is poorly degraded, so no verification sampling can be made on the historic drilling. Due to the advances in analytical procedures for fluorite, some of the historic fluorite results may be over or under-reported. So even if the company is able to obtain the historic drilling results, a current mineral resource estimate cannot be completed based on the historic drill hole information.

## 2.0 PROPERTY DESCRIPTION AND LOCATION

The Liard Fluorspar Project consists of 55 mineral tenures, totaling approximately 22,588 hectares, in the north-central portion of British Columbia (Figure 1). All of the mineral tenures are in the name of Prima Fluorspar Corp. Details of each mineral tenure are summarized in Table 1, and plotted on Figure 2.

The main showings of the Liard Fluorspar property are centred at approximately longitude 126°05' W and latitude 59°32' N, and located on NTS map sheets 094M/08 and 094M/09. According to the Mineral Titles Online system, the mineral claims are all in good standing, with the first group of claims requiring renewal before March 15th, 2014.

## Table 1. List of Mineral Tenures, Liard Fluorspar Property

| Tenure ID | Claim Name | Issue Date | Good To Date | Area (ha) | Owner |
|---|---|---|---|---|---|
| 503370 | | 2005/jan/14 | 2016/mar/15 | 131.3 | Prima Fluorspar Corp. (100%) |
| 504817 | tam 2 | 2005/jan/25 | 2016/mar/15 | 65.7 | Prima Fluorspar Corp. (100%) |
| 515587 | CAMP 2 | 2005/jun/29 | 2016/mar/15 | 32.8 | Prima Fluorspar Corp. (100%) |
| 940998 | RMFLUORCLIFF | 2012/jan/15 | 2015/mar/15 | 32.8 | Prima Fluorspar Corp. (100%) |
| 950544 | GRAYLING | 2012/feb/18 | 2016/mar/15 | 410.4 | Prima Fluorspar Corp. (100%) |
| 950560 | BERMANNUS | 2012/feb/18 | 2016/mar/15 | 410.3 | Prima Fluorspar Corp. (100%) |
| 952458 | BAR | 2012/feb/24 | 2015/mar/15 | 411.0 | Prima Fluorspar Corp. (100%) |
| 975744 | TEE | 2012/mar/31 | 2015/mar/15 | 147.5 | Prima Fluorspar Corp. (100%) |
| 975745 | FIRE | 2012/mar/31 | 2015/mar/15 | 147.8 | Prima Fluorspar Corp. (100%) |
| 975746 | STRAP | 2012/mar/31 | 2015/mar/15 | 98.3 | Prima Fluorspar Corp. (100%) |
| 975747 | NICKH111 | 2012/apr/01 | 2014/mar/15 | 65.7 | Prima Fluorspar Corp. (100%) |
| 978132 | TEE2 | 2012/apr/04 | 2015/mar/15 | 409.8 | Prima Fluorspar Corp. (100%) |
| 978152 | TEE3 | 2012/apr/04 | 2015/mar/15 | 410.0 | Prima Fluorspar Corp. (100%) |
| 978172 | FIRE 2 | 2012/apr/04 | 2014/mar/15 | 279.1 | Prima Fluorspar Corp. (100%) |
| 978192 | TEE4 | 2012/apr/04 | 2014/mar/15 | 196.6 | Prima Fluorspar Corp. (100%) |
| 978372 | PURPLE 1 | 2012/apr/06 | 2015/mar/15 | 410.7 | Prima Fluorspar Corp. (100%) |
| 978373 | PURPLE 2 | 2012/apr/06 | 2014/mar/15 | 411.0 | Prima Fluorspar Corp. (100%) |
| 978374 | PURPLE 3 | 2012/apr/06 | 2014/mar/15 | 410.5 | Prima Fluorspar Corp. (100%) |
| 978375 | PURPLE 4 | 2012/apr/06 | 2014/mar/15 | 410.2 | Prima Fluorspar Corp. (100%) |
| 978377 | PURPLE 6 | 2012/apr/06 | 2014/mar/15 | 197.4 | Prima Fluorspar Corp. (100%) |
| 978389 | PURPLE 7 | 2012/apr/06 | 2014/mar/15 | 410.1 | Prima Fluorspar Corp. (100%) |
| 978390 | PURPLE 8 | 2012/apr/06 | 2014/mar/15 | 409.6 | Prima Fluorspar Corp. (100%) |
| 978391 | PURPLE 9 | 2012/apr/06 | 2014/mar/15 | 409.5 | Prima Fluorspar Corp. (100%) |
| 978392 | PURPLE 10 | 2012/apr/06 | 2014/mar/15 | 409.4 | Prima Fluorspar Corp. (100%) |
| 978395 | PURPLE 11 | 2012/apr/06 | 2014/mar/15 | 410.1 | Prima Fluorspar Corp. (100%) |
| 978396 | PURPLE 13 | 2012/apr/06 | 2014/mar/15 | 278.7 | Prima Fluorspar Corp. (100%) |
| 978613 | FLUORITE 1 | 2012/apr/07 | 2014/mar/15 | 410.1 | Prima Fluorspar Corp. (100%) |
| 978614 | FLUORITE 2 | 2012/apr/07 | 2014/mar/15 | 409.8 | Prima Fluorspar Corp. (100%) |
| 978615 | FLUORITE 3 | 2012/apr/07 | 2014/mar/15 | 409.5 | Prima Fluorspar Corp. (100%) |
| 978616 | FLUORITE 4 | 2012/apr/07 | 2014/mar/15 | 409.2 | Prima Fluorspar Corp. (100%) |
| 978617 | FLUORITE 5 | 2012/apr/07 | 2014/mar/15 | 115.2 | Prima Fluorspar Corp. (100%) |
| 978773 | ANTICLINE 1 | 2012/apr/10 | 2014/mar/15 | 409.5 | Prima Fluorspar Corp. (100%) |
| 978774 | ANTICLINE 2 | 2012/apr/10 | 2014/mar/15 | 409.4 | Prima Fluorspar Corp. (100%) |
| 981725 | WEST CLAIMS | 2012/apr/23 | 2014/mar/15 | 394.1 | Prima Fluorspar Corp. (100%) |
| 981726 | WEST 2 | 2012/apr/23 | 2014/mar/15 | 393.9 | Prima Fluorspar Corp. (100%) |
| 981727 | WEST3 | 2012/apr/23 | 2014/mar/15 | 197.0 | Prima Fluorspar Corp. (100%) |
| 981729 | WEST4 | 2012/apr/23 | 2014/mar/15 | 409.9 | Prima Fluorspar Corp. (100%) |
| 981730 | WEST 6 | 2012/apr/23 | 2014/mar/15 | 410.1 | Prima Fluorspar Corp. (100%) |
| 981731 | WEST 5 | 2012/apr/23 | 2014/mar/15 | 409.8 | Prima Fluorspar Corp. (100%) |
| 981732 | WEST 7 | 2012/apr/23 | 2014/mar/15 | 410.1 | Prima Fluorspar Corp. (100%) |
| 981733 | WEST 8 | 2012/apr/23 | 2014/mar/15 | 197.1 | Prima Fluorspar Corp. (100%) |
| 981734 | WEST 9 | 2012/apr/23 | 2014/mar/15 | 213.2 | Prima Fluorspar Corp. (100%) |
| 981782 | FRIDGE 1 | 2012/apr/23 | 2014/mar/15 | 410.4 | Prima Fluorspar Corp. (100%) |
| 981822 | FRIDGE 2 | 2012/apr/23 | 2014/mar/15 | 410.5 | Prima Fluorspar Corp. (100%) |
| 981823 | FRIDGE 3 | 2012/apr/23 | 2014/mar/15 | 410.4 | Prima Fluorspar Corp. (100%) |
| 981824 | FRIDGE 4 | 2012/apr/23 | 2014/mar/15 | 410.4 | Prima Fluorspar Corp. (100%) |
| 981825 | FRIDGE 5 | 2012/apr/23 | 2014/mar/15 | 410.4 | Prima Fluorspar Corp. (100%) |
| 981826 | FRIDGE 6 | 2012/apr/23 | 2014/mar/15 | 279.1 | Prima Fluorspar Corp. (100%) |
| 982968 | PIPSTHEFROG | 2012/apr/28 | 2015/mar/15 | 394.4 | Prima Fluorspar Corp. (100%) |
| 1011685 | SW 1 | 2012/aug/01 | 2014/mar/15 | 821.4 | Prima Fluorspar Corp. (100%) |
| 1011686 | SW 2 | 2012/aug/01 | 2014/mar/15 | 1643.8 | Prima Fluorspar Corp. (100%) |
| 1011687 | SW3 | 2012/aug/01 | 2014/mar/15 | 1627.1 | Prima Fluorspar Corp. (100%) |
| 1011689 | SW 4 | 2012/aug/01 | 2014/mar/15 | 1184.4 | Prima Fluorspar Corp. (100%) |
| 1011690 | SW5 | 2012/aug/01 | 2014/mar/15 | 855.5 | Prima Fluorspar Corp. (100%) |
| 1011691 | SW 6 | 2012/aug/01 | 2014/mar/15 | 706.2 | Prima Fluorspar Corp. (100%) |
| | | | **Total Area (ha):** | **22588.1** | |


**Figure 1. Location Map, Liard Fluorspar Property**

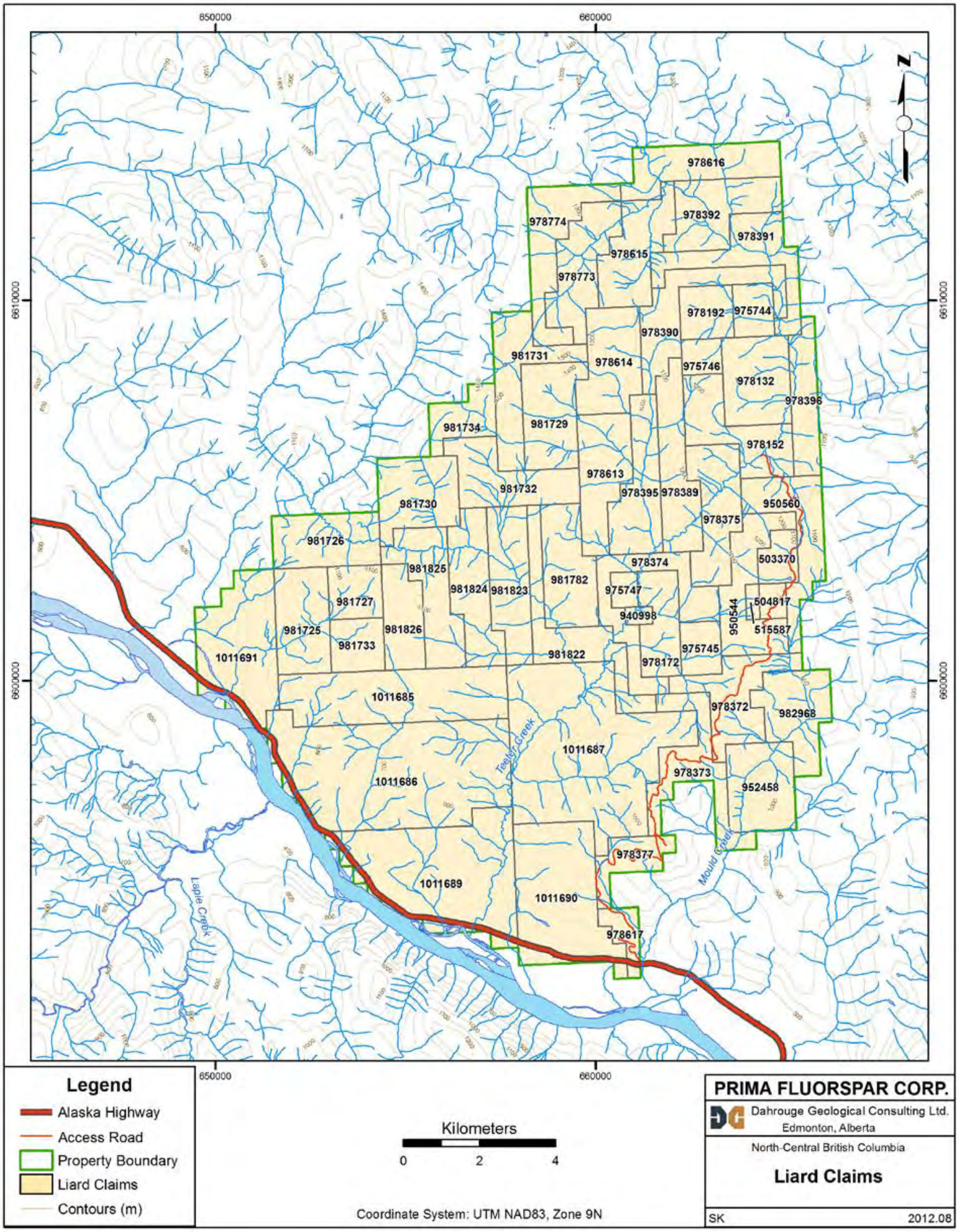



**Figure 2. Claim Map, Liard Fluorspar Claims**

## 3.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The Liard Fluorspar Project is located in the Liard Plateau physiographic region, approximately 200 kilometres northwest of Fort Nelson, British Columbia, and approximately 160 kilometres southeast of Watson Lake, Yukon. The Property is located on map sheets 94M/08 and 94M/09 of the National Topography System (NTS).

Access to the Liard Fluorspar claim block from Fort Nelson is via the Alaska Highway (No. 97) travelling northwest for 309 kilometres, then via an un-marked gravel trail travelling north. The un-marked gravel trail is located approximately 5 kilometres past the bridge that crosses the Liard River. The privately owned un-marked gravel trail is well maintained and provides access to the communications tower at the top of the ridge. At the top of the ridge, there is a smaller access trail that leads northward for an additional 12 kilometres towards the historic showings. Prior to the September geological work program performed on the property, a small crew of workers cleared fallen trees and widened the trail to allow for All-Terrain Vehicle access.

The property is located at the south end of the Liard Plateau physiographic zone and north of the Rocky Mountain Foothills physiographic zone. In general, elevation varies from about approximately 430 metres above sea level at the Liard River to 1530 metres at the peak of Mount Halkett. The Property area is one of moderate to steep relief. Bedrock outcrop exposure on and near the Property is commonly found along steeper valleys near the top of hills. Vertical cliffs and canyons are not uncommon topographic features. In some areas, karst topography of sporadic troughs and basins has developed due to underlying limestone bedrock.

At lower elevations the Property is mostly forested where the forest cover is made up of white spruce with variable amounts of lodge- pole pine and trembling aspen in the valley bottoms and on lower slopes. Higher on the slopes, subalpine fir dominates the forest. Subalpine fir commonly forms open forest and woodland on steep, moist, cold, middle slopes, especially on northern and eastern exposures, where it often forms nearly pure stands. Black spruce and balsam poplar are less common. Much of the Property consists of younger aspen re-growth from a major forest fire that occurred in the 1970's.

According to the Climate Atlas of Canada, January marks the coldest month of the year with mean daily minimum temperatures of between -20°C to -24°C. July is the warmest month of the year with mean daily minimum temperatures of between 6°C to 10°C. Annual mean total precipitation ranges between 401 to 600 mm, and average maximum snow depth ranges between 50 – 99 cm.
http://atlas.nrcan.gc.ca/auth/english/maps/environment/climate

The nearest urban and industrial centre is Fort Nelson, 305 km (highway distance) southeast of the property. Fort Nelson has a population of about 5,000, which includes a pool of professionals and technical/tradespeople. Fort St. John is 387 km south of Fort Nelson, and has a population of approximately 19,000. Both centers supply personnel and equipment to the oil and gas industry in northeast BC. There are several small communities, such as Lower Post, Toad River and Watson Lake located along the Alaska Highway.

The Property itself is bounded to the south by the Alaska Highway, and the majority of the showings are located approximately 10 kilometres north of the highway. The Alaska Highway is a paved, all-weather highway that was originally built to connect Alaska to the contiguous United States during World War II. Mileage post references along the highway that are mentioned in many historic reports start at Dawson Creek, BC. The highway is now a major freight transportation route that connects the Yukon and Alaska with the remainder of Canada and the United States.

The nearest rail line is located in Fort Nelson, and is located approximately 300 kilometres to the east along the Alaska Highway. Feasibility studies have been completed on a project called the Alaska Canada Rail Link, which proposes a connection between Watson Lake and Fort Nelson, also presumably along the Alaska Highway. The last report was produced in 2007, and additional feasibility studies are needed to assess the project.

# 4.0 HISTORY

### 1953 to 1954 - Conwest Exploration Company Limited

Fluorite mineral showings were first reported in the area in 1953, where Conwest Exploration Company Limited acquired the mineral claims that constituted the GEM claims. The GEM claims are not part of the current property which is the subject of this report. The summary is included as it is relevant to the context of the Liard Fluorspar Property.

In 1954, the mineral showings on the GEM claims were mapped and an access road was built through the Liard Hot Springs Park. Additionally, stripping with a combination of pick and shovel and bulldozer exposed several showings. Bulk samples of approximately 4 tons were taken from a few showings for metallurgical testing (Holland, 1955; Woodcock, 1955).

The mapping outlined several large zones of fluorite, witherite, barite, calcite and quartz mineralization. Outcrops containing mineralized lenses were found over an area 120 metres by 210 metres, and several exposures of mineralization were found around the margins of this area. The observed mineralization was confirmed by petrographic examination and assaying of representative samples. Analytical results returned the presence of between 2 and 64% $CaF_2$.

### 1971 to 1972 - Conwest Exploration Company Limited & Jorex Limited

Starting again in 1971, renewed activity in the area uncovered several new showings to the north of the GEM claims. Between 1971 and 1972 exploration activities of prospecting and geological mapping was conducted on several showings. Detailed mapping, trenching and diamond drilling and bulk sampling was conducted. Table 2 summarizes the work on each of the individual showings.

In total, 60 drill holes are recorded to have been drilled on the current Liard Fluorspar Property. No work has been recorded on the property since 1972.

The results of the surface sampling and drilling outlined mineralization which constitutes the historic mineral resources, and historic metallurgical work. Drilling intervals of between 10 and 20 metres thick, and consisting of between 10 and 50% $CaF_2$, which is very encouraging.

The detailed results of the exploration constitute the description in section 7.3: “Mineralization”

**Table 2. Summary of Historic Drilling and Bulk Sampling**

| Showing | Drill holes | | | 1971-1972 Bulk Sample | |
|---|---|---|---|---|---|
| | 1971 | 1972 | Total | | |
| *GEM A* | - | *4* | *4* | | |
| *GEM E* | - | *15* | *15* | | |
| CLIFF | 2 | 2 | 4 | | Current Liard Fluorspar Property |
| CORAL | - | 12 | 12 | 2 | |
| FIRE | - | 18 | 18 | 2 | |
| TAM | 12 | 11 | 23 | 6 | |
| TEE | - | 3 | 3 | | |
| CAMP | - | - | - | | |
| **TOTALS** | **14** | **65** | **79** | **10** | |

## 4.1 Historic Resource Estimates

A number of historic resource estimates have been published for the Liard Fluorspar deposits. Two estimates have been found in the public literature.

The original drill logs and assays for the 79 drill holes have not been preserved in the public archives; and the search for these records in the private domain continues. This, in combination with the por condition of the drill-core and the inability to re-locate the historic drill collars requires that the company will need to conduct its own drilling campaign in order to build a current resource estimate.

The following is a listing of all available estimates, with a source of the information, the quote, and a comment from the current author.

TAM showing

Source: Federal Minfile 094M9 FSP 1
National Mineral Inventory; Energy, Mines and Resources Canada
http://www.em.gov.bc.ca/dl/PropertyFile/NMI/094M9_Fsp1.pdf

Quote: *"Work on the Tam showing in 1971 included geological mapping, trenching, stripping, and 1,891 feet of diamond driilling in 14 holes on Tam 2, 4, and West 55, 57. This drilling indicated a potential of over 500,000 tons averaging 36.7% $CaF_2$ . (Ref. Jorex Limited, Filing Statement, May 1972)."*

Metric: **454,000 tonnes of 36.7% $CaF_2$**

Original Date: 1972

Comment: The original filing statement cannot be found, but the nature of the estimate seems reasonable based on other detailed descriptions of the showing. The "indicated potential" should not be confused with the indicated resource classification terminology, and it is more akin to the current "exploration potential".

Liard Fluorspar Property, 1975

Source: Forecast of Development in the Mineral Sector of the Northeast Region of BC By Wright Engineers Ltd. and H.N. Halvorson Consultants Ltd. http://www.em.gov.bc.ca/DL/COALReports/530a.pdf

Quote: *"The orebody consists of a series of pods which would be mined by open pit methods. Reserves of 3,500,000 tons of ore grading 32% $CaF_2$ are estimated."*

Metric: **3.2 million tonnes of 32% $CaF_2$**

Original Date: 1975

Comment: There is no indication of exactly which deposits the estimate includes, and may include some tonnage from the GEM showings, which is not the subject of this report or the current Liard Fluorspar Property.

The source mentions an evaluation by Conwest Exploration, where references to mining rates, milling techniques, capital cost estimates, mining and transport costs as a part of this evaluation. This evaluation is presumably the feasibility studies associated with the reserve estimate. This feasibility report has not been located, so the current author cannot comment on it's relevance.

Liard Fluorspar Property, 1981

Source: Conwest Exploration Company Limited; Annual Report, December 31, 1981 Federal Corporate Files

Quote: *"Exploration during the early 1970's established geological reserves of about 2.6 million tons of fluorspar mineralization averaging 30% fluorite in several deposits"*

Metric: **2.4 million tonnes of 30% $CaF_2$**

Original Date: 1981

Comment: Again, there is no indication of exactly which deposits the estimate include. The source of the estimate uses the term "*reserves*",and although there are no details as to the nature of the estimate, the previous report from Wright Engineers refers to feasibility studies on the project.

There is no information as to the methods used, key assumptions, parameters and category of the estimates.

The author believes that the 1975 and 1981 historic estimates were defined as "reserves" due to the economic studies applied at that time. Based on an evaluation of the drill-spacing and the nature of the deposit, the confidence level of the historic resource estimate would likely be in the inferred category by today's NI 43-101 standards.

It is unclear exactly why the historic reserves are smaller in 1981 compared to the 1975 estimate. Reasons may include a change in property size, where in 1972 Conwest Exploration had staked an additional 678 claims; the company only had 44 claims in 1981. As no work had been completed on the property since 1972, the company presumably let some of the claims with the less promising deposits expire; leaving only 2.6 million tons on their property in 1981.

Conwest Exploration created a company called ***Liard Fluorspar Mines Limited***, which is currently owned by Nyrstar. Nyrstar, which acquired Breakwater Resources Ltd., currently owns title to some of the original 28 Crown Granted mineral claims on the GEM showings, which are not the subject of this report. According to Mineral Titles Online as of 2001, Breakwater Resources Ltd. who owned Liard Fluorspar Mines Limited owned 15 of the original 1971 mineral claims, which cover the TAM, CORAL and TEE showings. This is a logical way to explain the smaller reserves in 1981, where some small tonnages from the FIRE and CLIFF and possibly other showings were excluded. Table 3 summarizes the probable distribution of the historic resource estimates in relation to the current Property.

Aside from the difference in the resources between 1975 and 1981, the current Liard Fluorspar Property, which is the subject of this report, does not include historic resources covering the GEM showings. 19 holes are reported on the GEM showings, leaving 60 of the 79 drill holes on the current Property, so the bulk of this historic estimate is likely to be on the current property. Without acquiring additional historic technical information, it is difficult to say exactly what proportions of the historic reserves are on the current property.

Conwest Exploration is known for high quality work, so if the drilling data can be acquired, some of the historic reserves can be verified for internal purposes. The drill core from the 1971 and 1972 drilling is poorly degraded due to exposure, so no verification sampling can be made on the historic drilling. Due to the advances in analytical procedures for fluorite, some of the historic fluorite results may be over or under-reported. So even if the company is able to obtain the historic drilling results, a current mineral resource estimate cannot be completed. But, as there is only very sparse information on the drilling results in the presently available reports, the results will be very useful for guiding the proposed exploration program.

**Table 3. Summary of Historic Resource Estimates in Relation to Current Liard Fluorspar Property**

| Original Resource Estimate | Year | Included Showings | Current property |
|---|---|---|---|
| 3.5 million tons of 32% CaF2 | 1975 | GEM | NO |
| | | TAM | YES |
| | | TEE | YES |
| | | CORAL | YES |
| | | FIRE? | YES |
| | | CLIFF? | YES |
| | | Others? | YES |
| 2.6 million tons of 30% CaF2 | 1981 | GEM | NO |
| | | TAM | YES |
| | | TEE | YES |
| | | CORAL | YES |

## 4.2 Historic Mineral Processing and Metallurgical Testing

In 1971, a shipment of several samples from the Liard Fluorspar project was sent to Lakefield Research, of Lakefield Ontario. A total of 39 tests were carried out on various samples from the TAM, CORAL and FIRE showings. Specific attention made to separate samples with varying geological compositions, i.e. limestone-breccia vs. shale-breccia.

The majority of the flotation tests used a “modified United States Bureau of Mines procedure”, also referred to as the lignin sulphonate-sodium fluoride method.

In general, a concentrate of greater than 93% $CaF_2$ was produced from all but one (low-grade) sample, with recoveries between 75 to 95 percent (with the exception of the low-grade sample).

A discrepancy in the analytical testing was noted, and the “bidtel method” of analysis gave results which were 3.5 to 4.3 percent higher than the corresponding standard distillation method analysis. The authors of the report thereby concluded that fluorspar concentrate containing 93.5% $CaF_2$ by distillation would obtain 97% $CaF_2$ by the Bidtel method, and hence qualify as acid-grade product.

The current author believes that the samples are representative of the expected deposits, as the historic operators selected the samples to represent varying amounts of limestone breccia and shale breccia. The assumption that the Bidtel method is more representative should be verified by modern processing and analytical work. The authors of the previous reports did not explain the reasoning behind the different grades, and what went into their assumption that the Bidtel method was more appropriate. The Bidtel analytical method was apparently still in use by some of the last producing fluorite producers (Ozark-Mahoning) in the Illinois-Kentucky district (Peng, 1996).

The deleterious elements in a >97% $CaF_2$ acid-grade fluorspar include up to 1.5% $CaCO_3$, 1.0% $SiO_2$, 0.03 - 0.1% S, 10 - 12 ppm As and 100 - 550 ppm Pb (Bide et al. 2011).

The historic results for those elements are included for three composite samples include between 0.44 - 1.40% $CaCO_3$ and 0.96 – 1.28% $SiO_2$. These indicate that a product below the carbonate threshold, and a silica content that is near the threshold, can be produced. The

2012 sampling revealed less than 8 ppm Pb in the grab samples, so even with concentrating; the Pb content is likely to remain low. As and S were not analyzed for, but those levels are also expected to be quite low as the mineralization in general is very sulphur-poor.

**Table 4. Summary of Metallurgical Results, Lakefield Research, 1971, distillation method**

| Ore Description | Sample Type | Showing | Head Assay % $CaF_2$ | Concentrate % $CaF_2$ | % Recovery $CaF_2$ |
|---|---|---|---|---|---|
| Bulk Composite No. 1 | Outcrop pit | TAM | 60.50 | 94.0 | 89.5 |
| Bulk Composite No. 2 | Outcrop pit | TAM | 49.78 | 93.7 | 90.4 |
| Bulk Composite No. 3 | Outcrop pit | TAM | 36.12 | 94.3 | 89.6 |
| Bulk Composite No. 4 | Outcrop pit | CORAL | 64.88 | 93.8 | 95.3 |
| Bulk Composite No. 5 | Outcrop pit | FIRE | 42.94 | 94.2 | 87.6 |
| Tam Prospect No. 1 | Channel composite | TAM | 17.56 | 89.3 | 33.2 |
| Tam Prospect No. 2 | Channel composite | TAM | 63.44 | 93.7 | 95.4 |
| Tam Prospect No. 3 | Channel composite | TAM | 59.05 | 94.9 | 74.9 |
| Coral Prospect No.1 | Channel composite | CORAL | 53.68 | 95.5 | 55.8 |
| Fire Prospect | Channel composite | FIRE | 50.75 | 93.5 | 89.9 |
| Drill Core LBM Composite | Drill Hole composite | TAM | 33.50 | 93.6 | 83.5 |
| Drill Core SBM Composite | Drill Hole composite | TAM | 30.73 | 93.5 | 79.6 |

## 5.0 GEOLOGICAL SETTING AND MINERALIZATION

### 5.1 Regional Geology

The Liard Fluorspar Project is located within the Foreland Belt of the Canadian Cordilleran. The Foreland Belt represents the western end of the Paleozoic to early Mesozoic continental margin of the North American Craton. The sediments deposited in the generally northeastward-tapering wedge represent the sequence of rocks known as the Western Canada Sedimentary Basin (WCSB).

**Stratigraphy**

Above the crystalline rocks of the North American Craton, the Property area is underlain in general terms by: A) Mesoproterozoic, clastic-dominated succession deposited in shelf environments after Mesoproterozoic rifting; B) unconformably overlying clastic-dominated and rift-related uppermost Neoproterozoic–Cambrian strata; C) unconformably overlying carbonate-dominated, shelf-platform succession that persisted through the Middle Devonian; D) a clastic-dominated upper Paleozoic succession that records local block faulting, extension and subsidence.

The formations that outcrop in the region have been well mapped in the neighbouring map sheet (094N, Toad River) by McMechan et al. (2012), and the stratigraphic column, below was compiled from this work. The map sheet at that the property encompasses was regionally mapped at a scale of 1:253,440 in 1961 by Gabrielse (1962). The regional geology, as compiled by Massey et al. (2005) is represented in Figure 3.

**Table 5. Generalized Stratigraphic Chart of the Study Area (from McMechan et al., 2012)**

<table>
<tr><td colspan="2">Permian</td><td>Tika Formation,<br>Fantastique Formation</td></tr>
<tr><td rowspan="3">Carboniferous</td><td>Pennsylvanian</td><td rowspan="2">Mattson Formation,<br>Kindle Formation</td></tr>
<tr><td rowspan="2">Mississippian</td></tr>
<tr><td rowspan="3">Besa River Formation</td></tr>
<tr><td rowspan="7">Devonian</td><td>Upper</td></tr>
<tr><td rowspan="3">Middle</td></tr>
<tr><td>Dunedin Formation</td></tr>
<tr><td rowspan="2">Stone Formation</td></tr>
<tr><td rowspan="3">lower</td></tr>
<tr><td>Wokkpash Formation</td></tr>
<tr><td rowspan="2">Muncho-McConnell Formation</td></tr>
<tr><td colspan="2" rowspan="2">Silurian</td></tr>
<tr><td>Nonda Formation</td></tr>
<tr><td colspan="2">Ordovician</td><td rowspan="2">Kechika Group</td></tr>
<tr><td colspan="2" rowspan="2">Cambrian</td></tr>
<tr><td>Mount Roosevelt Formation</td></tr>
<tr><td colspan="2">Proterozoic</td><td>Unnamed Siltstones, quartzites</td></tr>
<tr><td colspan="2">MesoProterozoic</td><td>Tuchodi Formation,<br>Muskwa Group</td></tr>
</table>

### Structure

At a more detailed level, the western margin of the WCSB consists of a series of sub-basins (troughs) and structural highs (arches) which influence the type and thickness of sediments that were accumulated. The Property area is located at the western margin of one of these sub-basins, termed the Liard Basin (also known as the Root Basin in the Yukon). The eastern edge of the basin is bound by the north-south trending Bovie Lake Fault complex, where predominantly normal faults displaced Middle Devonian strata a staggering 1200 vertical metres (Wright et al., 1994). The original architecture of the western edge of the Liard Basin is not known due to the present-day fold-and-thrust belt structure produced during the late Cretaceous Laramide orogeny where the rocks are folded into a series north-northeast trending anticline-syncline fold axes, and cut by a number of east-verging thrust faults. Older rocks are exposed in the eroded cores of these anticlines and on the hanging-walls of the thrust faults.

In addition to the obvious fold and thrust structures of the Laramide Orogeny, northeastern BC has been transected by several underlying northeast-trending linear features which likely represent the position of ancestral strike-slip or transfer faults which extend into the underlying craton. This series of northeast-trending linear features have been active periodically from Late Precambrian to the Late Devonian, and then again starting in the Early Cretaceous due to the predominantly compressional Cordilleran orogenesis. The Liard Line (Miall, 2008) is one such structure which may have influenced the structure and regional hydrodynamic framework of the property area.

## 5.2 Property Geology

The rocks of the property were deposited on a shallow inner continental shelf, known locally as the MacDonald Shelf.

### Stratigraphy

Formations that outcrop in the Property area include carbonates of the Middle Devonian Dunedin Formation overlain by Late Devonian to early Mississippian siltstone sequences of the Besa River Formation.

The Dunedin Formation consists of mid- to dark grey, massive to thinly-bedded fossiliferous limestone. It is generally exposed in the Teeter and Mould creek valleys, which are characterized by karst and 'mesa and butte' topography. The overlying Besa River Formation is predominantly black shale or slate and argillite, with some calcareous shale and minor, buff-brown dolomitic layers. The unconformity between the units is characterized by brecciation and is very irregular in detail, probably due to an erosional or disconformable relationship between them, or to later faulting along the contact.

### Structure

Immediately to the south of the property is the northern end of the Rocky Mountain physiographic belt, where a tight series of thrust and folds have been developed into a northwest-trending orientation during Laramide orogenesis. North of the Liard River, a dramatic change in the regional structural trend changes into a more gentle series of north-trending thrust and folds, constituting the southern extent of the Mackenzie Mountain range (Liard Plateau).

At the property scale, the stratigraphic units have developed into an open anticline, with a gently south-plunging axis, in the Upper Devonian Besa River Formation, with the Middle Devonian Dunedin Formation exposed in a several-kilometre wide zone in the core of the fold.

It is possible that the broad anticlinal structure that has been mapped is influenced by the paleotopography of the top of the Dunedin Formation itself. The Dunedin correlatives to the south, the Keg River and Pine Point Formations, have developed extensive barrier reef complexes. In the area of the fluorite showing, coral colonies are common at the contact with the overlying Besa River shales (Woodcock, 1972b), which suggests a thicker succession (mound build-up) of Dunedin carbonates in portions of the property area. The lack of outcrop in the property area makes the exact nature of the contact difficult to determine. The location of the fluorine-barium mineralization at the upper contact of the Dunedin carbonates and Besa River shales, and the distinct facies change between the two, and the irregular nature of the contact suggest the possibility for karst development at this contact during surface exposure. The influence of possible karst development on mineralization is discussed in the next section (section 5.3).

Locally, the gently dipping stratigraphic units have been disturbed by localized faulting and brecciation which constituting the fluorite-barium mineralization. The actual emplacement age of the fluorite-barium mineralization is discussed in the next section (section 5.3).

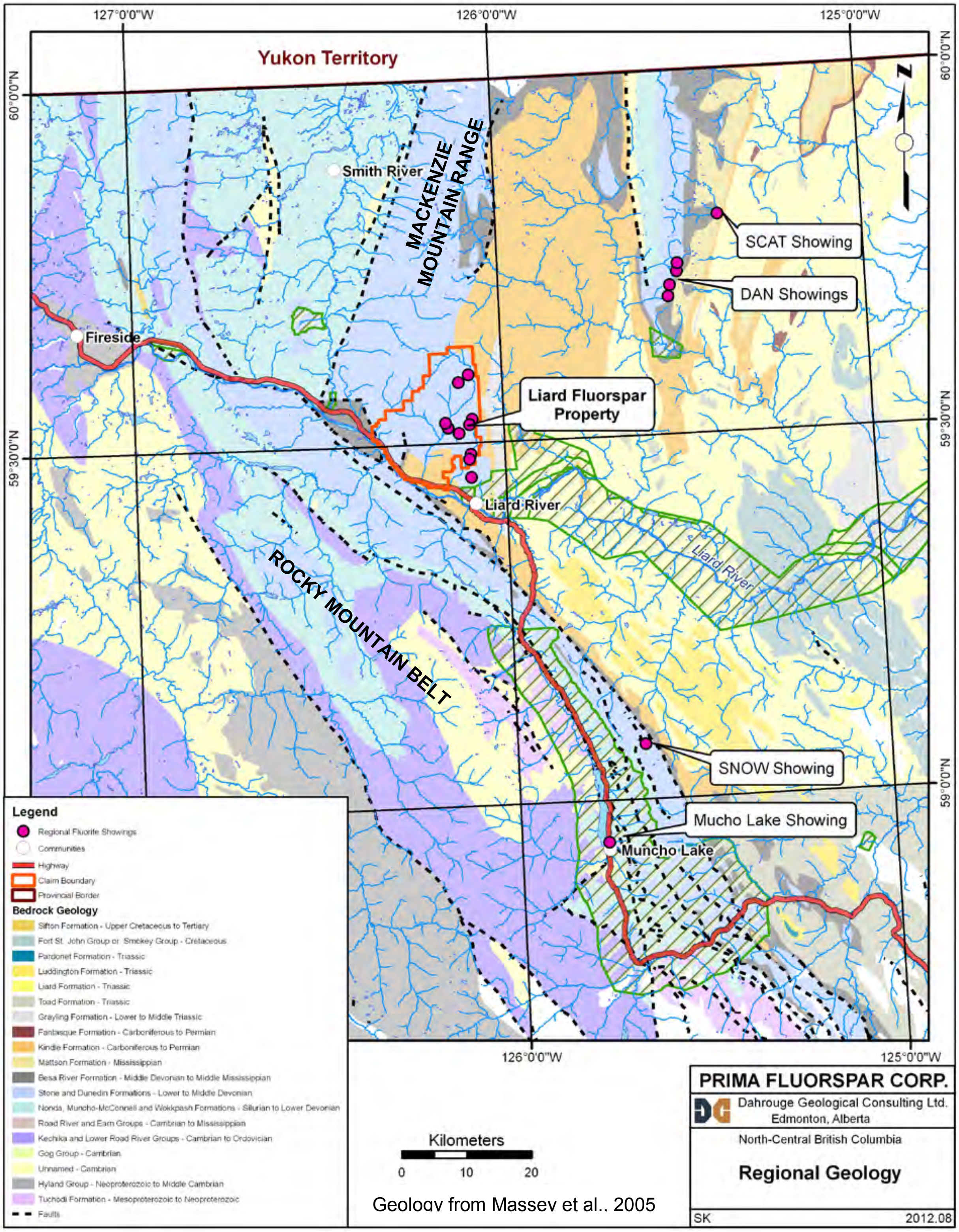



**Figure 3. Regional Geology, Northeastern BC**

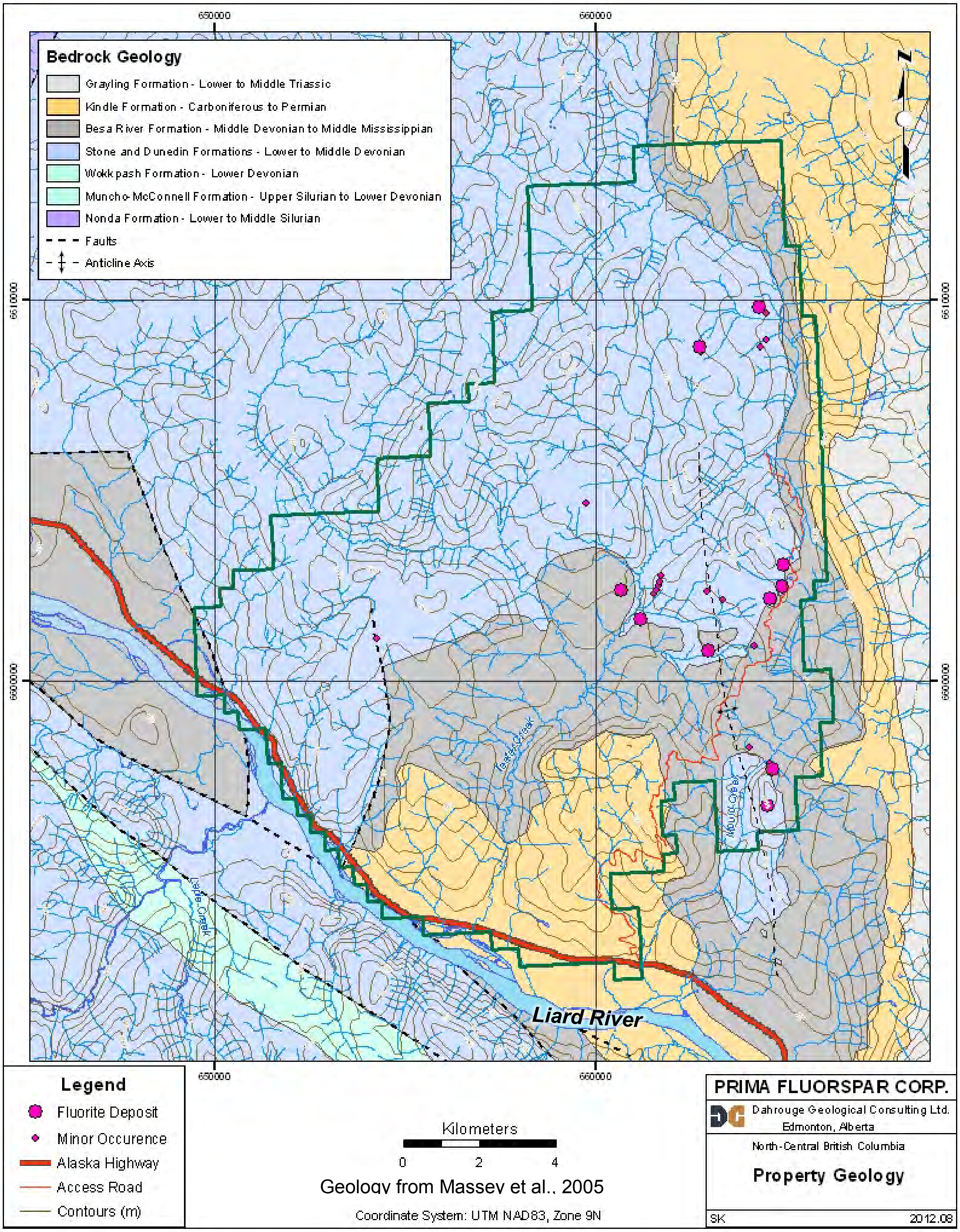



**Figure 4. Property Geology, Liard Fluorspar Property**

## 5.3 Mineralization

### Mineralogy

The mineralization of the numerous showings on the Liard Fluorspar Property consists predominantly of fluorite, calcite and witherite. Lesser amounts of barytocalcite, barite and quartz are also found in variable amounts (Woodcock, 1972a). The mineralogy noted in previous reports are reported in Table 7.

**Table 6. Summary of Mineralogy, Liard Fluorspar Property**

| Mineral | Formula |
|---|---|
| Fluorite | $CaF_2$ |
| Calcite | $CaCO_3$ |
| Witherite | $BaCO_3$ |
| Barytocalcite | $BaCa(CO_3)_2$ |
| Barite | $BaSO_4$ |
| Quartz | $SiO_2$ |

The flourite crystals are fine- to coarse-grained. Fine-grained fluorite is commonly dark purple to black, whereas the coarse-grained variety varies from transparent to purple and black. The coarse-grained variety occurs predominantly in the breccia matrix.

### Nature of Mineralization

The fluorite mineralization occurs near the contact between the Dunedin limestone and the Besa River shales. In most showings, the mineralization is predominantly in the limestone, with minor amounts in the overlying shales. The fluorite mineralization occurs as infillings and replacements in limestone or shale breccias, or as fracture fillings in the host rock. In some instances, vein-type mineralization of fluorite also occurs, or mineralization occurs as replacement pods that are devoid of host rock fragments. Rare crustiform layering texture has been observed by the current author.

Various styles of breccia have been observed, and range between crackle breccia, mosaic breccia and chaotic breccia. Fluorite, occurs as partial to complete replacement of limestone host-rock, and as the matrix of breccia. Calcite, witherite and barytocalcite also occur as major constituents of the breccia matrix.

**Extent of mineralization**

Woodcock (1972b) describes each of the fluorite showing on the property, and as this is the best information available at this time, the descriptions are directly quoted from the historic assessment report. Additionally, some drilling interval results are reported from McCammon (1972). Channel sample results are compiled from the maps of Woodcock (1972a). Selected intervals of mineralization from each of the major showings are summarized in Figure 7.

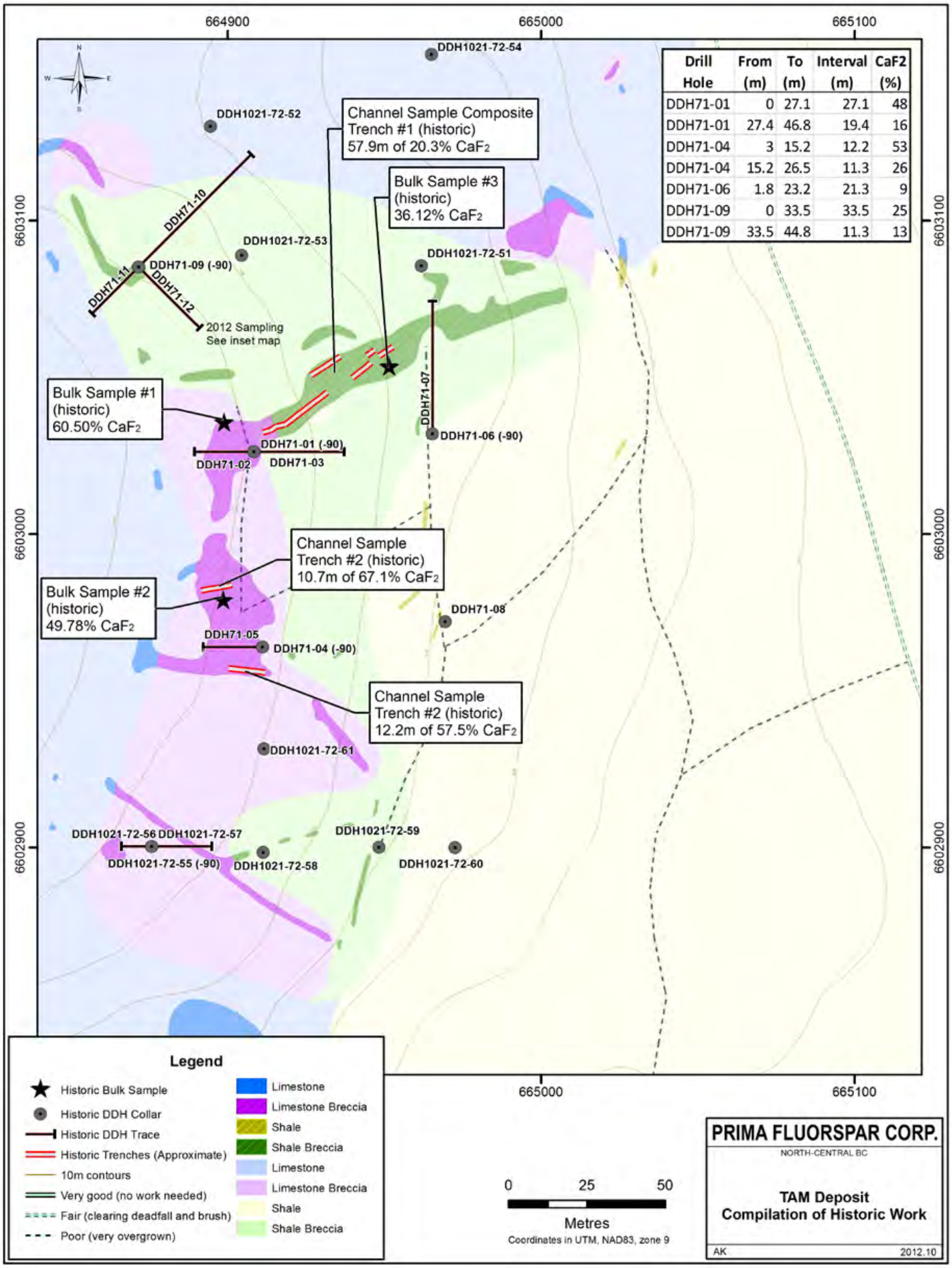
<u>TAM Deposit</u>

> *Mineralization occurs at the contact between the limestone and the overlying Besa River shales; a contact which generally dips easterly. In the zone of mineralization the limestone and the shale at the contact are brecciated. The shale breccia, in many places, consists of chaotic angular blocks. The mineralization occurs in the breccia and in fractures in the overlying shale and underlying limestone.*
>
> *The mineralized zone, which is of variable thickness, generally also dips easterly and it pinches rapidly to the east where there is no shale breccia. Along the west side, the limestone-shale contact is eroded; and the west boundary of "ore" is quite sharp againt barren limestone.*
>
> *The mineralization extends along the hillside in a northerly direction for 900 feet (274 m) as indicated by surface exposures and diamond drillholes. It is still open to the north. Widths vary from a minimum of 160 feet (49 m) to a maximum of 550 feet (168 m).*

Intervals from the TAM deposit, as reported by McCammon (1972) are included in Table 8. The mapping from Woodcock (1972a) reports the results of several samples from a semi-continuous channel sample, revealing a weighted average of 20.3% $CaF_2$ over 57.9 metres in Trench 1. Other continuous channel samples revealing a weighted average of 67.1% CaF2 over 10.7 metres in Trench 2; and 57.5% $CaF_2$ over 12.2 metres in Trench 3. Figure 5 shows the results of the historic exploration, and its location with respect to the Property is shown in Figure 7.

**Table 7. Drilling results compiled from McCammon (1972), TAM Deposit**

| Drill Hole | From (m) | To (m) | Interval (m) | $CaF_2$ (%) |
|---|---|---|---|---|
| DDH71-01 | 0 | 27.1 | 27.1 | 48 |
| DDH71-01 | 27.4 | 46.8 | 19.4 | 16 |
| DDH71-04 | 3.0 | 15.2 | 12.2 | 53 |
| DDH71-04 | 15.2 | 26.5 | 11.3 | 26 |
| DDH71-06 | 1.8 | 23.2 | 21.3 | 9 |
| DDH71-09 | 0 | 33.5 | 33.5 | 25 |
| DDH71-09 | 33.5 | 44.8 | 11.3 | 13 |




| Drill Hole | From (m) | To (m) | Interval (m) | CaF2 (%) |
|---|---|---|---|---|
| DDH71-01 | 0 | 27.1 | 27.1 | 48 |
| DDH71-01 | 27.4 | 46.8 | 19.4 | 16 |
| DDH71-04 | 3 | 15.2 | 12.2 | 53 |
| DDH71-04 | 15.2 | 26.5 | 11.3 | 26 |
| DDH71-06 | 1.8 | 23.2 | 21.3 | 9 |
| DDH71-09 | 0 | 33.5 | 33.5 | 25 |
| DDH71-09 | 33.5 | 44.8 | 11.3 | 13 |

**Figure 5. TAM Deposit, Compilation of Historic Exploration**

TEE Deposit

*To facilitate the description, four areas of mineralization labelled zones “A” to “D” inclusive are indicated on the map.*

*Zone A, the most northwesterly one exposed, consists of remnants of highly mineralized limestone surrounded by and presumably resting on areas of barren limestone. A few shale remnants in the eastern part of this zone indicated that the zone was originally at the limestone-shale contact. Most of the fluorite mineralization in this zone is colourless. The high grade exposure in the southwest part of the zone has an exposed thickness of up to 15 feet (4.6 m).*

*Zone B is exposed on the sharp ridge that occurs on the interfluve between Teeter Creek and the above metioned subsidiary stream from the west. The mineralization in this place is also at the contact of the shale and limestone with considerable replacement of shale breccia and limestone breccia. The steep cliffs at the west end of the exposure show that the main “ore” zone is underlain by fractured limestone containing abundant veins and lenses of fluorite. The exposures of good grade mineralization at the west end of zone B are over a vertical interval of 60 feet (18.3 m). The mineralized area extends easterly down the steep hillside (approximately 30°), for a distance of 700 feet with an average width of about 200 feet (61 m). Some prominent east-west fracturing or faulting is exposed in places and this might indicate some additional east-west control of this zone.*

*Zone C includes the mineralization that occurs in the vicinity of some limestone cliffs trending 330° azimuth across the property. Most of this mineralization is exposed along the face of the cliff in discontinuous lenses. Shale remnants are also found along these limestone cliffs. The strike of these limestone cliffs is essentially parallel to the valley side and also almost parallel to the strike of the limestone-shale contact. Presumably it is the major regional strike in this part of the Teeter Creek Valley. The exact structure along these cliffs is not evident. Hoever there is some suggestion that the limestone has been thrust from the west over shale and shale breccia. The amount of exposed mineralization is not significant in the overall ore reserve picture.*

*Zone D includes an area of exposures of shale and shale breccia lying downslope to the east of the limestone cliffs of Zone C. Some of these exposures are mineralized with barium carbonates and/or fluorspar. The exposures of shale and shale breccia occur over an area 76 x 91 m.*

The drill results, as reported by Woodcock (1972b), only reveal one of the three drill holes with any mineralization ; hole 72-63 with 18.3 metres of 8.8% $CaF_2$. Difficulties with placing the drill at the top of the steeper slopes at the TEE deposits inhibited the intersection of significant amounts of fluorite which were noted in the mapping. The intersection in hole 72-63 is located over 60 metres vertically below the main mineralized outcrops to the west. The location of the TEE showing with respect to the Property is shown in Figure 7.

Coral Deposit

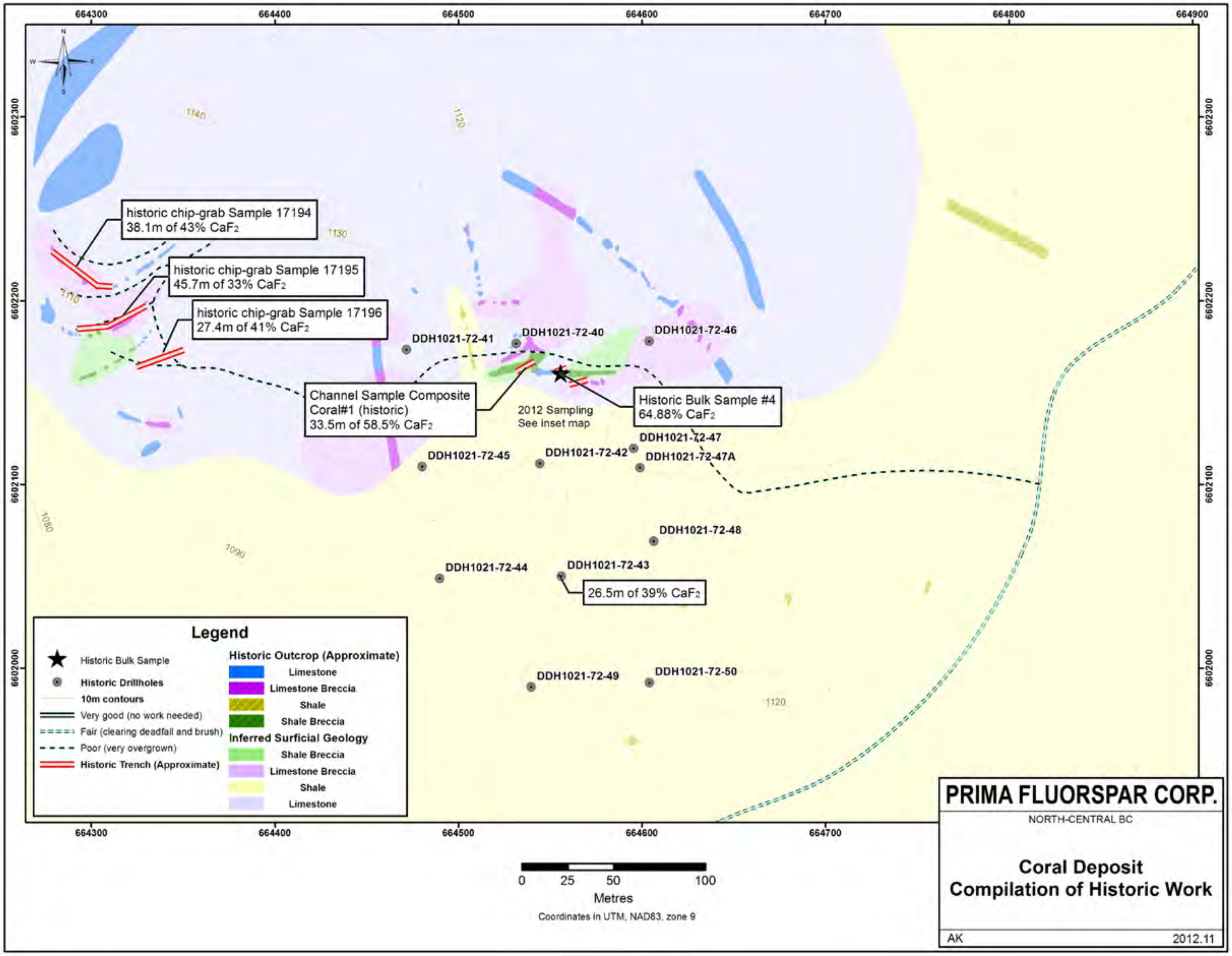
*The fluorspar mineralization is at the limestone-shale contact. This contact dips gently southward from the mineralized exposures. In most cases there is some brecciation of the shale and/or the limestone along this contact and considerable intersections of both the limestone breccia and shale breccia have been logged in the core. However the exposures do not have the chaotic breccia of the large blocks that are visible at the Tam prospect. Whether of not such chaotic breccia occurs in the core is not evident from the data. Much of the breccia that has been logged as such is broken rock some of which consists of remnant shale fragments in a replacement matrix, without the chaotic orientation of the blocks.*

*The largest exposure of mineralization occurs at the west end of the prospect on the Tam 24 claim. This mineralization is exposed over a length of 300 feet (91.4m)(in a northwesterly direction) and a width of 150 feet (45.7m). However the appearance of this mineralization in the trenches is that it is a skin or remnant left on top of the limestone formation and that it has very little vertical extent.*

*At the main showing (on Tam claim 23) mineralization is exposed in trenches over an east-west distance of 600 feet (183m) and a north-south distance of about 200 feet (61m).*

The mapping from Woodcock (1972a) reports the results of several samples from a semi-continuous channel sample, revealing a weighted average of 58.5% $CaF_2$ over 33.5 metres in Trench 1. Other surface sampling to the west of the Coral showing, with chip-grab samples averaging 43% $CaF_2$ over 38.1 metres; 33% $CaF_2$ over 45.7 metres; and 41% $CaF_2$ over 27.4 metres. Woodcock (1972b) reports the best hole at the Coral showing, hole 72-43 with 26.5 metres of 39% $CaF_2$. Figure 6 shows the results of the historic exploration, and its location with respect to the Property is shown in Figure 7.

Figure 6. CORAL Deposit, Compilation of Historic Exploration



Fire Deposit

> *In this area the limestones are generally flat-lying remnants of overlying shales are widespread. In places, this overlying shale appears to be brecciated and also mineralized with fluorspar and barium minerals.*
>
> *At the southeast end of the prospect, a narrow, highly mineralized zone extends at azimuth 330° for 900 feet (274m). It has exposed widths between 100 feet (30.5m) and 200 feet (61m). Diamond drilling has shown that most of the fluorspar mineralization occurs in the shale breccia with some underlying limestone breccia. The thickness of the mineralized zones are generally less than 50 feet (15.2m).*

The mapping from Woodcock (1972a) reports the results of several samples from a semi-continuous channel sample, revealing a weighted average of 57.9% $CaF_2$ over 21.3 metres in Trench 1. Woodcock (1972b) reports the best hole at the northwest end of the Fire showing, hole 72-37 with 19.8 metres of 37% $CaF_2$. The location of the TEE showing with respect to the Property is shown in Figure 7.

Cliff Deposit

> *This linear zone of mineralization is exposed along the face of some low limestone cliffs over a north-south length of 500 feet (152m), and up to 100 feet (30.5m) wide. On the east is is bounded by an upper bench of flat-lying barren limetsone. On the west it is separated from another hill of flat-lying barren limestones by an overburden-covered north south pass.*
>
> *The fluorspar mineralization is unusual for this mining camp in that horizontal banding occurs in the main exposure. Also much of the fluorite is colourless, although purple varieties also occur. The banded "ore" is quite silicious and has been mapped as impure quartzite. Possibly some siliceous zones were present in the limestone. However the silica could have been added during the introduction of fluorspar.*
>
> *Just south of the mineralized exposures, shale debris and one shale outcrop have been noted. A drillhole in this south area intersected a very thin layer of fluorite mineralization at the contact of the shale and the underlying limestone.*

Woodcock (1972b) reports one hole at the Fire showing, hole 72-39 with 15.2 metres of 39.6% $CaF_2$. The location of the TEE showing with respect to the Property is shown in Figure 7.

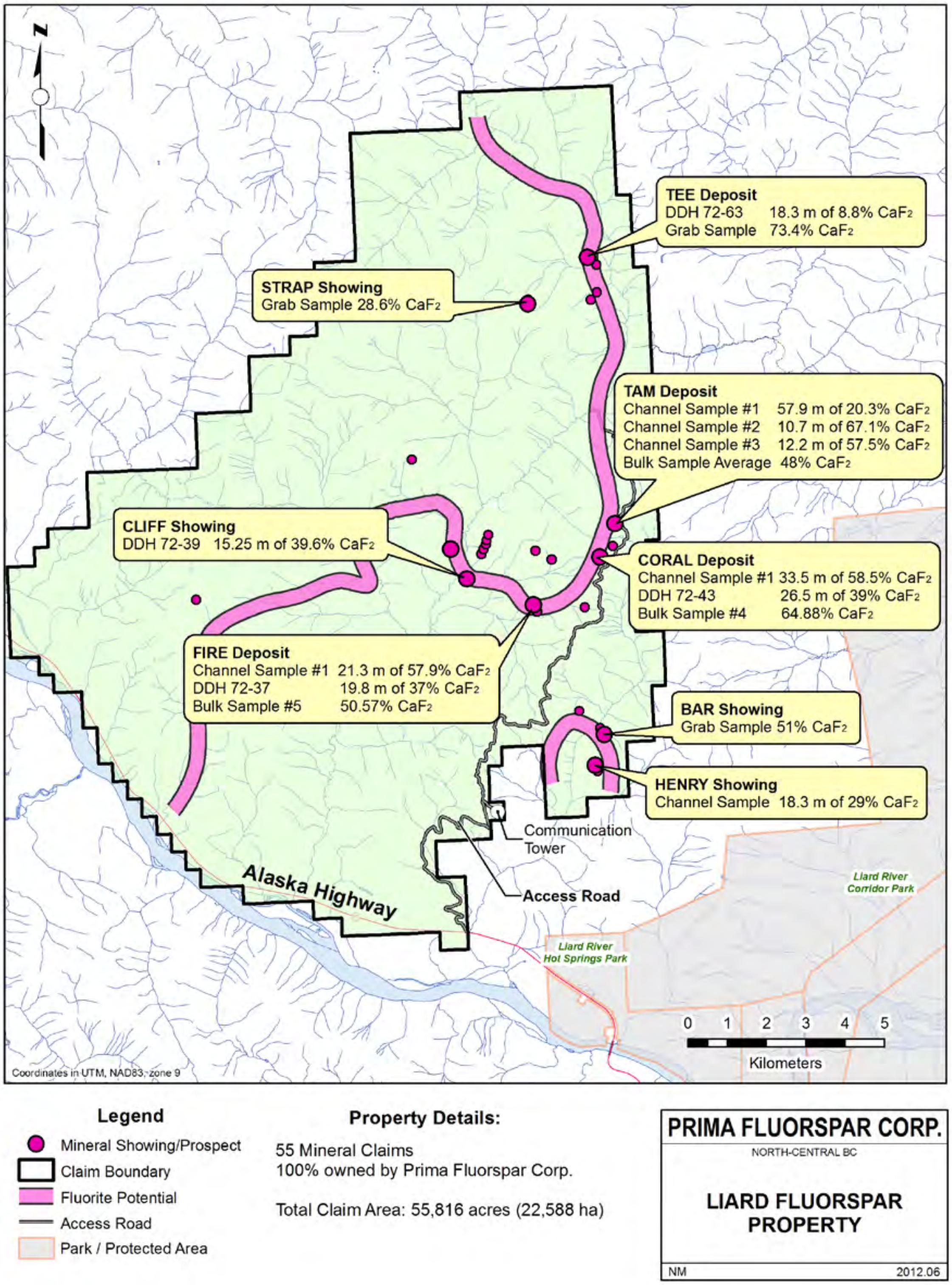



**Figure 7. Summary of Historic Mineralization, Liard Fluorspar Property**

Other mineralized areas that were explored in the 1971 and 1972 exploration program by Conwest include the Strap, Camp, Nick, Bar and Henry showings (Figure 7). Similar styles of mineralization were noted at these prospects, but only early stage exploration of trenching, mapping and grab samples were taken at each showing. Similar intervals are expected at these showings with an advanced exploration program.

## 6.0 DEPOSIT TYPES

Fluorite mineralization has been found in many geologic environments and in a multitude of forms. Significant deposit types are associated with carbonatites and alkaline intrusions; Mississippi Valley-Type (MVT) Pb-Zn-F-Ba deposits; F-Ba (+/- Pb-Zn) veins; hydrothermal Fe (+/- Au, Cu) deposits; carbonate replacement (manto-style); and other varied vein-style deposits.

The fluorite carbonate-breccia-hosted infilling and replacement mineralization at the Liard Fluorspar Property have been spatially and genetically related to MVT deposits (Pell and Fontaine, 1989). This affinity was based on their stratigraphic setting and nature of the host breccias in relation to the Robb Lake MVT belt to the south, some of which contain variable amounts of fluorite. Given these similarities, a genetic link is also proposed, relating their genesis being formed by solutions originating during dewatering of the sedimentary basin, representing a sulphur-poor and fluorine-barium-rich end-member. Age dating of the Robb Lake deposit (370 +/- 30 Ma; Godwin et al., 1982) and fission-track studies of fluorite from the GEM showing (332 +/- 56 Ma; V. Harder, personal communication to Z.D. Hora, 1987) produce similar results within error limits supporting a genetic affinity.

The present author suggests that although the age dating and mineralization modes at the Liard Fluorspar area and Robb Lake are very similar, it is not enough to assume a genetic link between the deposits. The genetic link does not explain the large amount of fluorite mineralization at the Liard Fluorspar Property and the lack of sulphides. The lack of dolomite in a regional and deposit-scale also calls the MVT link into question. The dewatering of a sedimentary basin hypothesis does not provide an explanation of the source of the fluorine. Other carbonate-hosted fluorite have been associated with alkaline intrusions, such as the Illinois-Kentucky lead-zinc-fluorite belt where the Hick's Dome alkaline intrusion has been proposed as being a source of fluid flow and high-grade fluorite vein and replacement style deposits (Denny et al, 2008).

The Liard Fluorspar deposits likely also have an alkaline affinity, though without detailed fluid-inclusions and isotopic studies this conclusion is largely speculative. An alkaline intrusion-related affinity would explain the development of the fluorine-barium-strontium-rich and sulphur-poor bulk mineralogy of the Liard Fluorspar deposits. The lack of magnesium (less than 0.05%

MgO was returned in the verification sampling of the current report) suggests that the fluorite mineralization is not linked to a basin-wide dewatering event. Dolomitization is an almost universal association with MVT-style deposits in northeastern British Columbia (Nelson, 1991).

Dolomitic breccias have been noted to the south in the Dunedin Formation (Nadjiwon et al., 2000) and to the north in the upper Devonian equivalent Nahanni Formations (Morris and Nesbitt, 1998). These have informally been referred to as Manetoe Facies, which include sparry dolomite forming veins, the matrix within vertical and horizontal breccia zones, and as replacements of grey dolomite. Although the Liard Fluorspar brecciation appears to be physically similar, the lack of dolomite precludes a genetic affinity with these Manetoe Facies breccias.

The location of the mineralization at the top of the Dunedin Formation limestones at the contact with the Besa River Formation shales suggests that paleokarsting may have been a precursor to Ba-F mineralization. Such a disconformity indicates a depositional hiatus and a subsequent erosional surface. Karstification of the porous reef-facies most likely occurred during a period of subaerial exposure. Woodcock (1972b) notes the occurrence of coral colonies, brachiopods and crinoids at the upper section of the Dunedin limestones, suggesting a reefal facies and thence a paleotopographic high which would be preferentially karsted during exposure.

The Dunedin limestones were then rapidly buried by Besa River dark grey to black carbonaceous siltstones during transgression, or subsidence due to rifting. A model of subsidence due to rifting is supported by the large-scale normal Bovie Fault to the east, which was active as early as Late Devonian time. Alkaline intrusive activity, common during periods of rifting, would explain the high fluorine content of the Liard Fluorspar and surrounding deposits.

The pore space created due to the reefal facies, and probable karsting, would act as a conduit for the circulation of groundwater. With the impermeable Besa River shales acting as an aquitard and barrier to fluid-flow, hydraulic fracturing and brecciation would be expected at such an area of differing hydrodynamic properties.

Morrow et al. (1978) have suggested, based on sulphur isotopic ratios, than many of the barite deposits (some, with secondary fluorite) in northeastern BC have formed due to the mixing of euxinic seawater with meteoric groundwater near the seawater edge of a large coastal aquifer caused the solution of the shelf carbonates and induced low-temperature precipitation of barite in the resultant solution cavities. In this scenario, the timing of mineralization is restricted to the late Middle Devonian. The sulphur isotopic ratios at the Liard Fluorspar deposits from this study are $\delta^{34}S$ of +38.1, whereas most other Ba-F deposits in the study are between +24.2 to +30.1. The Liard River mineralization is also remarkably chemically different that the others in the study with much higher strontium and fluorine, and lower barite (due to lower total sulphur). So although some solution of the Dunedin Formation may have occurred due to the processes proposed by Morrow et al. (1978), it is not enough to explain the differences of the chemistry at the Liard Fluorspar deposits. Additionally, the proposed timing of mineralization is not likely to be the same as other Ba-F deposits in northeastern BC.

Authors working in the MacKenzie Mountains, Northwest Territories (Morris and Nesbitt, 1998) have proposed a series of fluid flow events in the Cambrian to Devonian strata. They have identified six major events based on isotopic evidence and relative timing relationships. The two later events, the Laramide events and the Calcite/Barite events, are similar to the mineralization at the Liard Fluorite district based on the lack of dolomite. Both events in that study are proposed to be early Cretaceous to early Tertiary in age and associated with thrust fault-hosted veins (compressional, orogenic events) to high-angle brittle veins (extensional, post-orogenic events). The Calcite/Barite event is characterized by megacrystalline void filling mineralization in upper Devonian strata.

In conclusion, the fluorite mineralization at the Liard Fluorspar deposits may have resulted from multiple events based on the fission-track dating, and other fluid-flow events that have been observed in other MacKenzie Platform carbonates. The fission-track dating of 332 +/- 56 Ma likely represents the earliest and most significant period of fluorite emplacement. Other events in the Laramide orogeny likely redistributed and structurally affected fluorite mineralization. Previous operators of the property (Woodcock et al., 1972b) favored a thrust-related Laramide-aged event due to the common structural observation of older limestone above younger shale units in areas of significant mineralization. Authors working on the Rio Grande fluorite district (Harder, 1987) have observed fluorite of differing ages in the same deposit, suggesting that once a route for mineralizing fluids has been established, subsequent mineralization can take place along the same conduits.

# 7.0 SEPTEMBER 2012 EXPLORATION

The 2012 exploration, conducted by Prima Fluorspar, totaled $112,860.49, and consisted of channel sampling and soil sampling. The statement of expenditures is included in Appendix 1, for reference.

The exploration program was performed from September 7th to September 21st, 2012. The purpose of the investigation was to determine the thickness of the mineralized zone at the TAM and CORAL showings, by channel sampling. In total, 60 rock samples were collected at the TAM showing, and 22 were collected at the CORAL showing (Figure 8 and Figure 9).

An additional component of the exploration involved soil sampling near the TAM showing; the purpose of this was to determine if soil sampling is an effective exploration method for identifying areas of potential for fluorite mineralization. 24 soil samples were collected on the property (Figure 10).

The property was accessed via All-Terrain Vehicles on existing access trails that were refurbished prior to the geological exploration. Accommodations were provided by the nearby Liard Hotsprings Lodge.

The rock types identified in the channel samples are presented in Figures 8 and 9, and the fluorite ($CaF_2$) grade results are summarized in Table 8. Results of the soil sampling are included in Figure 10, and $CaF_2$ values calculated from the results can be found in Table 9. Complete assay results of the sampling program can be found in the form of analytical certificates in Appendices 4, 5, and 6 at the end of this report. The channel sampling was successful in sampling across the width of the historically noted high-grade fluorite zones at both the TAM and CORAL showings.

**Table 8. Summary of 2012 Channel Sampling**

| Continuous Channel Sample | | | | Semi-Continuous Channel Composite | | |
|---|---|---|---|---|---|---|
| Channel | Length (m) | CaF2 (%) | | Composite | Length (m) | CaF2 (%) |
| CORAL A - B | 11.15 | 27.25 | | | | |
| CORAL C - D | 3.85 | 29.92 | | **CORAL A-F** | **19.55** | **23.76** |
| CORAL E - F | 4.55 | 10.01 | | | | |
| CORAL I - J | 7.70 | 36.46 | | | | |
| | | | | | | |
| TAM A - B | 25.00 | 44.77 | | | | |
| TAM C - D | 30.80 | 9.62 | | **TAM A-H** | **74.55** | **23.49** |
| TAM E - F | 8.75 | 11.76 | | | | |
| TAM G - H | 10.00 | 23.26 | | | | |

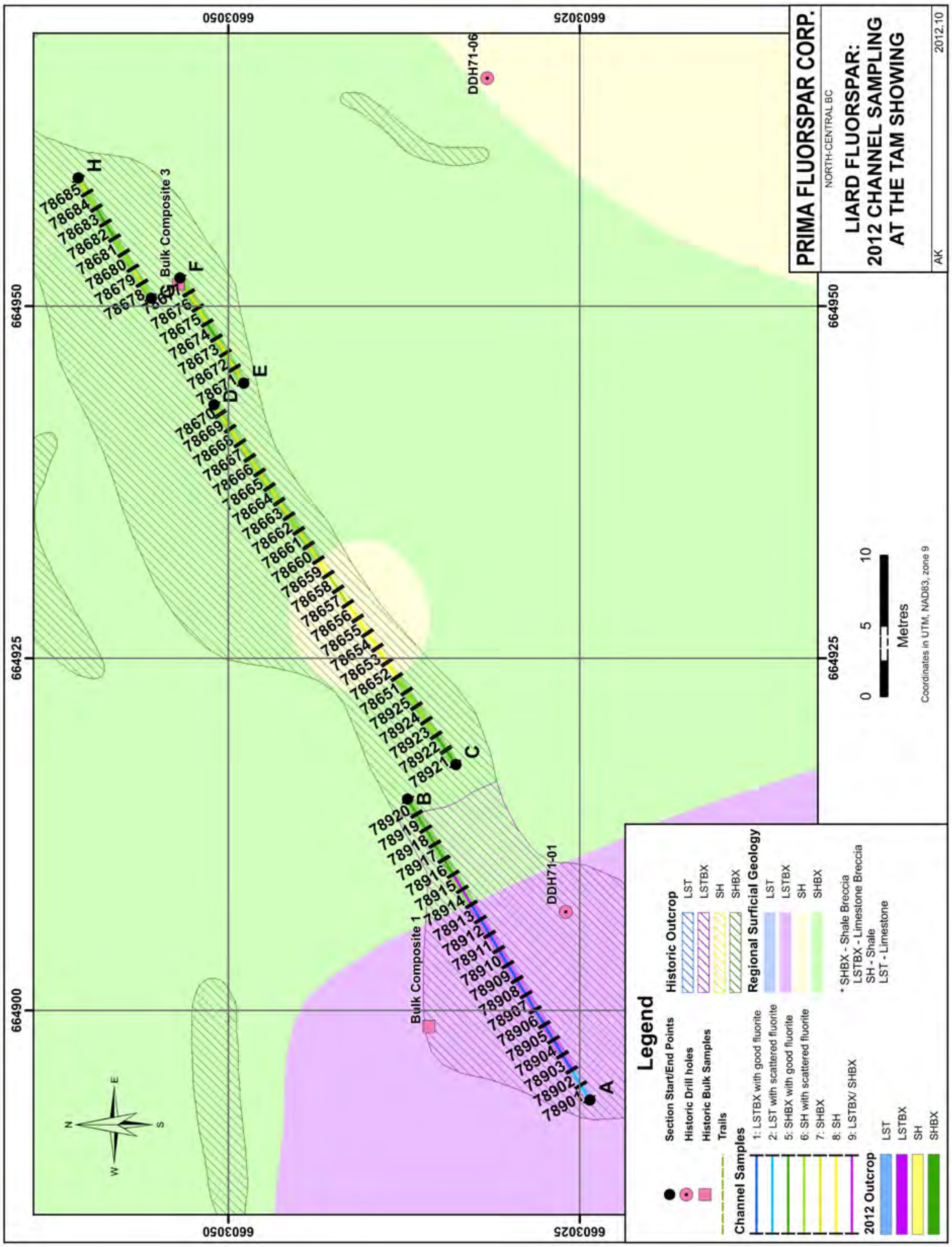



Figure 8. 2012 Channel Sampling at the TAM Showing

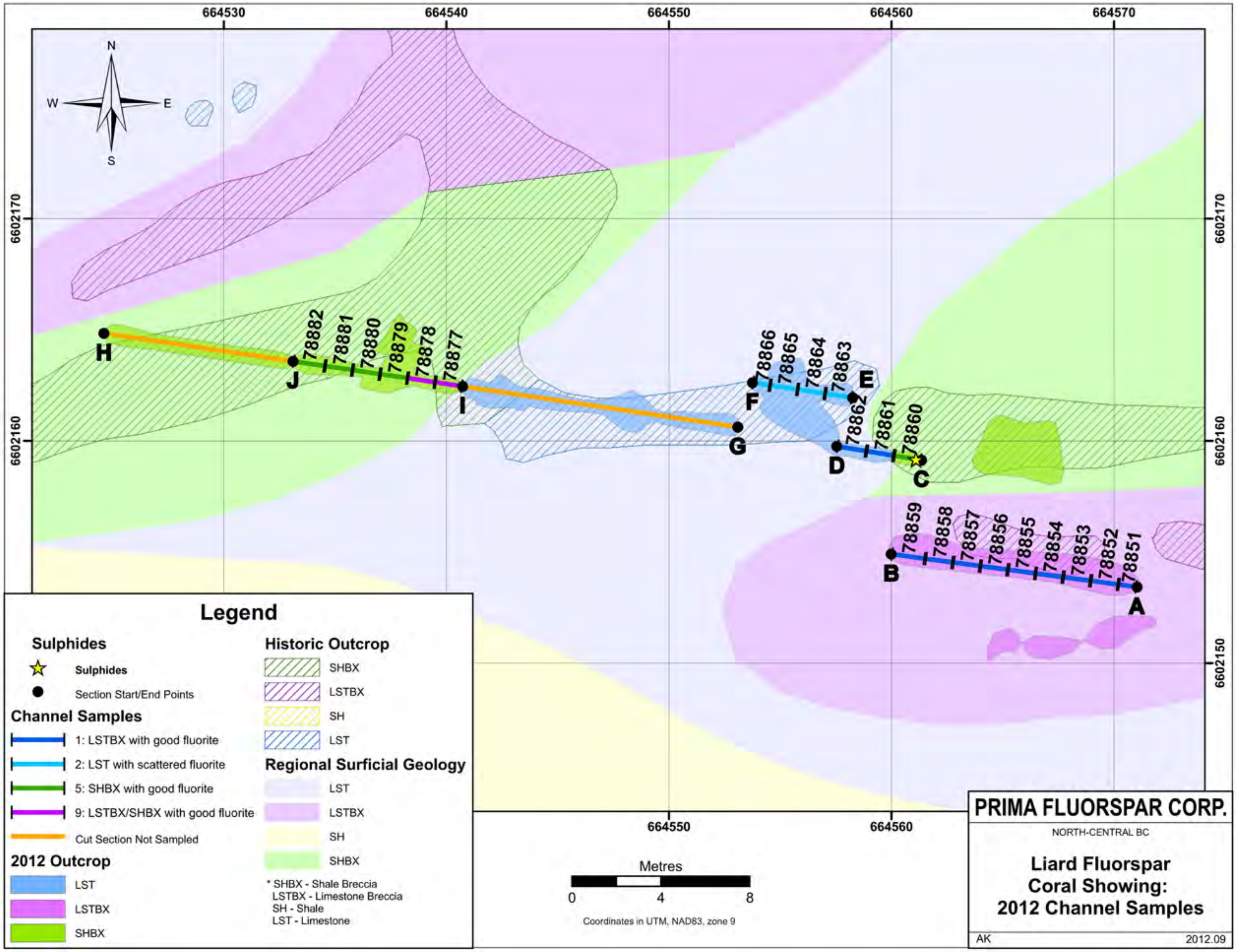
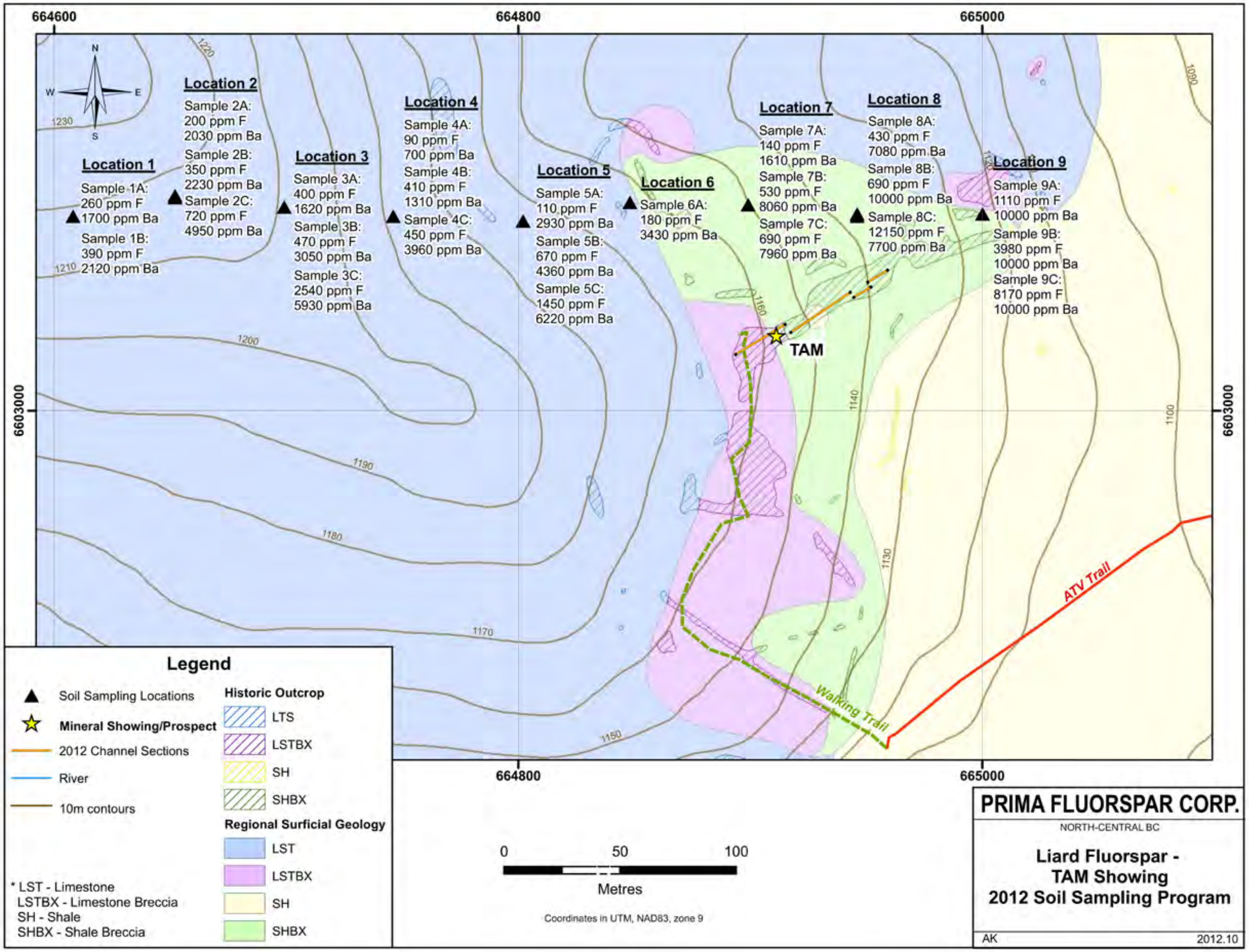



**Figure 9. 2012 Channel Sampling at the CORAL Showing**

**Figure 10. TAM Showing, 2012 Soil Sampling Program**



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## 8.0 SAMPLE PREPARATION, ANALYSIS AND SECURITY

Channel samples were collected from the historically documented TAM and CORAL showings. Channels were cut approximately perpendicular to the identified contacts (Figure 11: TAM Deposit; Figure 13: CORAL Deposit), and were approximately 4 cm wide and 4 cm in depth. Each sample consisted of approximately 1.25 metres of channel length; samples were also ended when the channel intersected a contact, to avoid having more than one rock type in a single sample. Duplicate samples were created for 12 of the 82 samples. Standards were not inserted into the sample stream because no reliable commercial standards are available at this time.

Soil sample spacing is approximately 50 meters, and samples were collected at varying soil horizons at each location. The “A” horizon at the property is generally the first 5 to 20 centimetres of soil, and is organic rich. The “C” horizon is the bottom-most soil horizon, generally immediately above the bedrock, and contains several sub-rounded clasts of bedrock. The “B” horizon is the transition zone between the “A” and “C”. For each sample location, samples were taken to represent each of the three horizons. However, occasionally the “B” and “C” soil horizons were not present, so only material from the “A” horizon was available for collection. The colour, depth, water content and general description of each sample was recorded and placed in a sealed paper envelope.

In total, 60 channel samples and 24 soil samples were collected from the TAM showing area, and 22 channel samples were collected from the CORAL showing. Rock sample descriptions recorded on site can be found in Appendix 2 of this report, and soil sample descriptions are recorded in Appendix 3. The samples were transported by Future Metals Inc. to Vancouver, whereupon they were delivered to ALS Canada Ltd. (ALS) by Future Metals Inc. personnel. Samples were then fine-crushed to 70% passing 2mm, then pulverized to 85% passing 75 micron. Subsequently, a series of analysis including high-level fluorite, whole rock geochemistry and ultra-trace multi-element testing was performed. ALS is an ISO 9001-2000 certified laboratory. Appendix 4 contains the laboratory certificates for the rock analysis, and Appendix 5 contains the certificates for the soil analysis from ALS Canada Ltd.

Each duplicate sample was delivered to Activation Laboratories Ltd, of Ancaster Ontario

(ActLabs), whereupon a check analysis for $CaF_2$ content using the Specific Ion Electrode (SIE) method. Actlabs is an ISO 9001 and ISO 17025 certified laboratory. Appendix 6 contains the laboratory certificates for the analysis of the duplicates from Activation Laboratories Ltd. The results of the ActLabs check samples are comparable to those of ALS (Table 10).

### ALS Canada Inc. Analysis Method Summary

The high-level fluorite testing (lab code F-ELE82) for rock samples consists of the Specific Ion Electrode (SIE) method, whereby:
*"A prepared sample (0.1g) is fused with sodium hydroxide. The fused sample is leached with demineralized water and then neutralized with citric acid. The solution is transferred to a plastic volumetric flask (100 ml), diluted to volume with demineralized water, and mixed. An aliquot of the solution is added to TISAB buffer. The pH is adjusted to between 5 and 5.5 and the fluorine is measured with an ion specific electrode."*

This method is advertised as being acceptable for samples containing up to 100% $CaF_2$, whereas the other Specific Ion Electrode method, package F-ELE81a, apparently has a reliable detection limit of up to 2% $CaF_2$. The channels with corresponding samples and fluorite grades are depicted in Figure 12 for the TAM Deposit and Figure 14 for the CORAL Deposit.

Whole rock geochemistry (lab code ME-ICP06) consists of the ICP-AES method, whereby:
*"A prepared sample (0.200 g) is added to lithium metaborate/lithium tetraborate flux (0.90 g), mixed well and fused in a furnace at 1000°C. The resulting melt is cooled and dissolved in 100 mL of 4% nitric acid/2% hydrochloric acid. This solution is then analyzed by ICP-AES and the results are corrected for spectral inter-element interferences. Oxide concentration is calculated from the determined elemental concentration and the result is reported in that format."*

Ultra-trace level element geochemistry method (lab code ME-MS61) consists of using Inductively Coupled Plasma – Atomic Emission Spectroscopy (ICP-AES) and Inductively Coupled Plasma – Mass Spectrometry (ICP-MS) for testing for a suite of 48 elements, whereby:
*"A prepared sample (0.25 g) is digested with perchloric, nitric and hydrofluoric acids. The residue is leached with dilute hydrochloric acid and diluted to volume. It is then analyzed by inductively coupled plasma-atomic emission spectrometry and inductively coupled plasma-mass spectrometry. Results are corrected for spectral interelement interferences."*

Soil samples from the TAM showing area were analyzed for fluorite using the lower level fluorite testing Specific Ion Electrode method (lab code F-ELE81a), whereby:

*"A prepared sample (0.2 g) is fused with potassium hydroxide and leached with de-ionized water. The pH is then adjusted. Fluoride concentration is determined potentiometrically by specific ion electrode in conjunction with matrix matched reference materials."*

This procedure allowed for detection of fluorite up to a limit of 2% $CaF_2$. Soil samples were also analyzed by ultra-trace level methods using the same ICP-AES and ICP-MS procedure as for the rock samples (package ME-MS61).

Results for fluorine, fluorite and barium from the soil samples can be found in Table 9; samples with greater than 1000 ppm fluorine are considered anomalous. Fluorite ($CaF_2$) grade for each sample calculated from the results is also included in the table. Because of the known association of barium minerals with fluorite on the property (witherite, barite, and barytocalcite), barium may be used as an indicator for locating new fluorite showings on the property.

**Activation Laboratories Ltd. Analysis Method Summary**

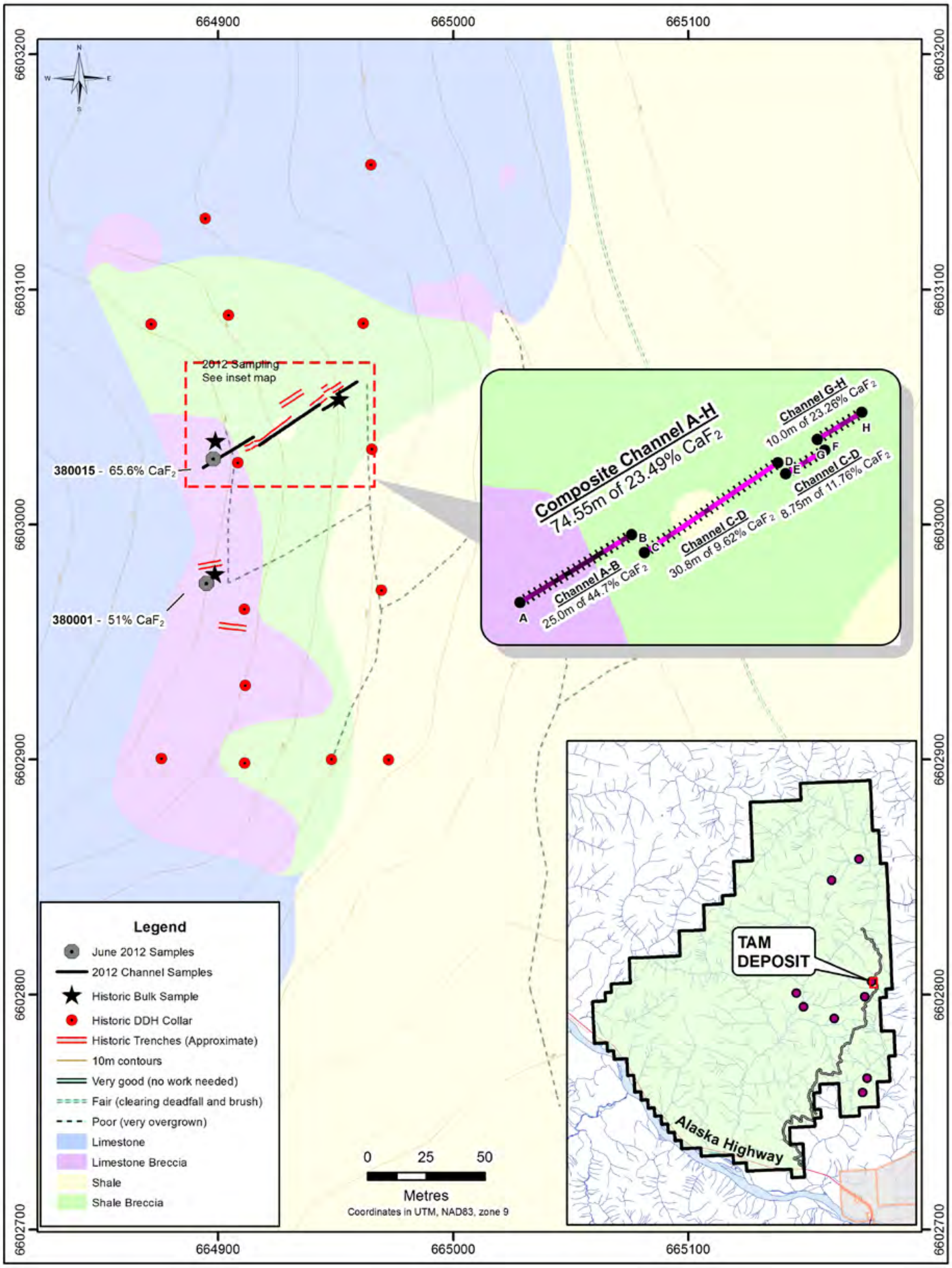
Using the 4F-F-ISE analysis code, 0.2 g samples are fused with a combination of lithium metaborate and lithium tetraborate in an induction furnace to release the fluoride ions from the sample matrix. The fuseate is dissolved in dilute nitric acid, prior to analysis the solution is complexed and the ionic strength adjusted with an ammonium citrate buffer. The fluoride ion electrode is immersed in this solution to measure the fluoride-ion activity directly. An automated fluoride analyzer from Mandel Scientific is used for the analysis.

**Table 9. 2012 Soil Sample Results for Fluorine, Fluorite and Barium**

| SAMPLE ID | F-ELE81a F (ppm) | CaF2 (%) | ME-ICP61 Ba (ppm) |
|---|---|---|---|
| 1A | 260 | 0.05 | 1700 |
| 1B | 390 | 0.08 | 2120 |
| 2A | 200 | 0.04 | 2030 |
| 2B | 350 | 0.07 | 2230 |
| 2C | 720 | 0.15 | 4950 |
| 3A | 400 | 0.08 | 1620 |
| 3B | 470 | 0.10 | 3050 |
| 3C | 2540 | 0.52 | 5930 |
| 4A | 90 | 0.02 | 700 |
| 4B | 410 | 0.08 | 1310 |
| 4C | 450 | 0.09 | 3960 |
| 5A | 110 | 0.02 | 2930 |
| 5B | 670 | 0.14 | 4360 |
| 5C | 1450 | 0.30 | 6220 |
| 6A | 180 | 0.04 | 3430 |
| 7A | 140 | 0.03 | 1610 |
| 7B | 530 | 0.11 | 8060 |
| 7C | 690 | 0.14 | 7960 |
| 8A | 430 | 0.09 | 7080 |
| 8B | 690 | 0.14 | >10000 |
| 8C | 12150 | 2.50 | 7700 |
| 9A | 1110 | 0.23 | >10000 |
| 9B | 3980 | 0.82 | >10000 |
| 9C | 8170 | 1.68 | >10000 |

## Table 10. Check Samples, ALS vs. Actlabs, High-Grade Fluorite Analysis

| Sample Number | FUS-ISE Actlabs | F-ELE82 ALS | Relative Mean Difference |
|---|---|---|---|
| | $CaF_2$ (%) | $CaF_2$ (%) | Actlabs vs. ALS |
| 78903 | 46.0 | 41.7 | 9.8 |
| 78912 | 59.0 | 56.1 | 5.0 |
| 78921 | 16.0 | 16.2 | 1.5 |
| 78654 | 1.6 | 1.8 | 10.8 |
| 78660 | 10.5 | 9.7 | 7.9 |
| 78667 | 2.9 | 2.7 | 6.5 |
| 78676 | 15.2 | 15.6 | 2.7 |
| 78682 | 33.7 | 34.6 | 2.7 |
| 78855 | 30.6 | 29.2 | 4.8 |
| 78860 | 30.6 | 30.0 | 2.0 |
| 78877 | 56.5 | 51.6 | 9.1 |
| 78882 | 26.9 | 28.8 | 6.6 |




## Figure 11. TAM Deposit, Overview of 2012 Sampling

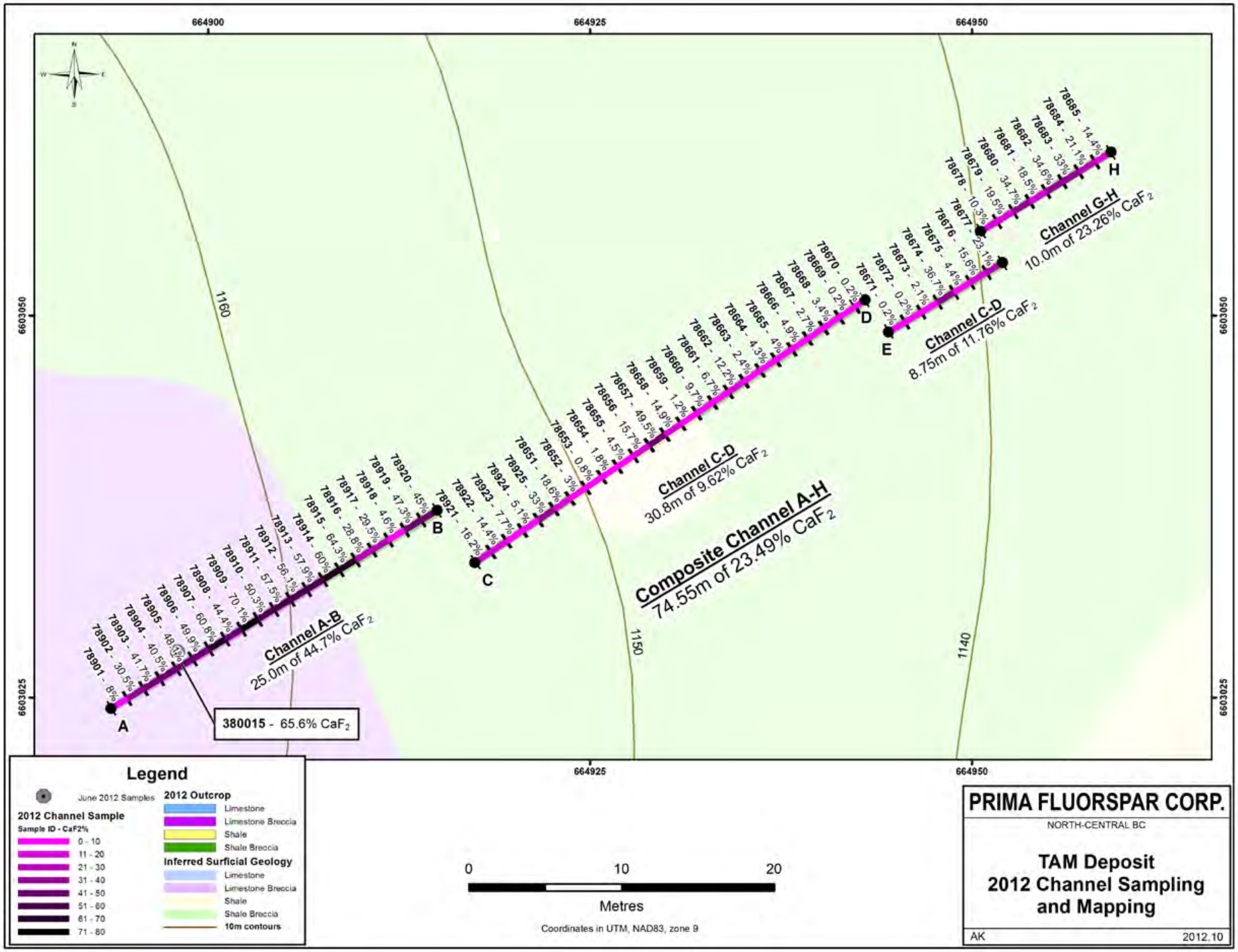
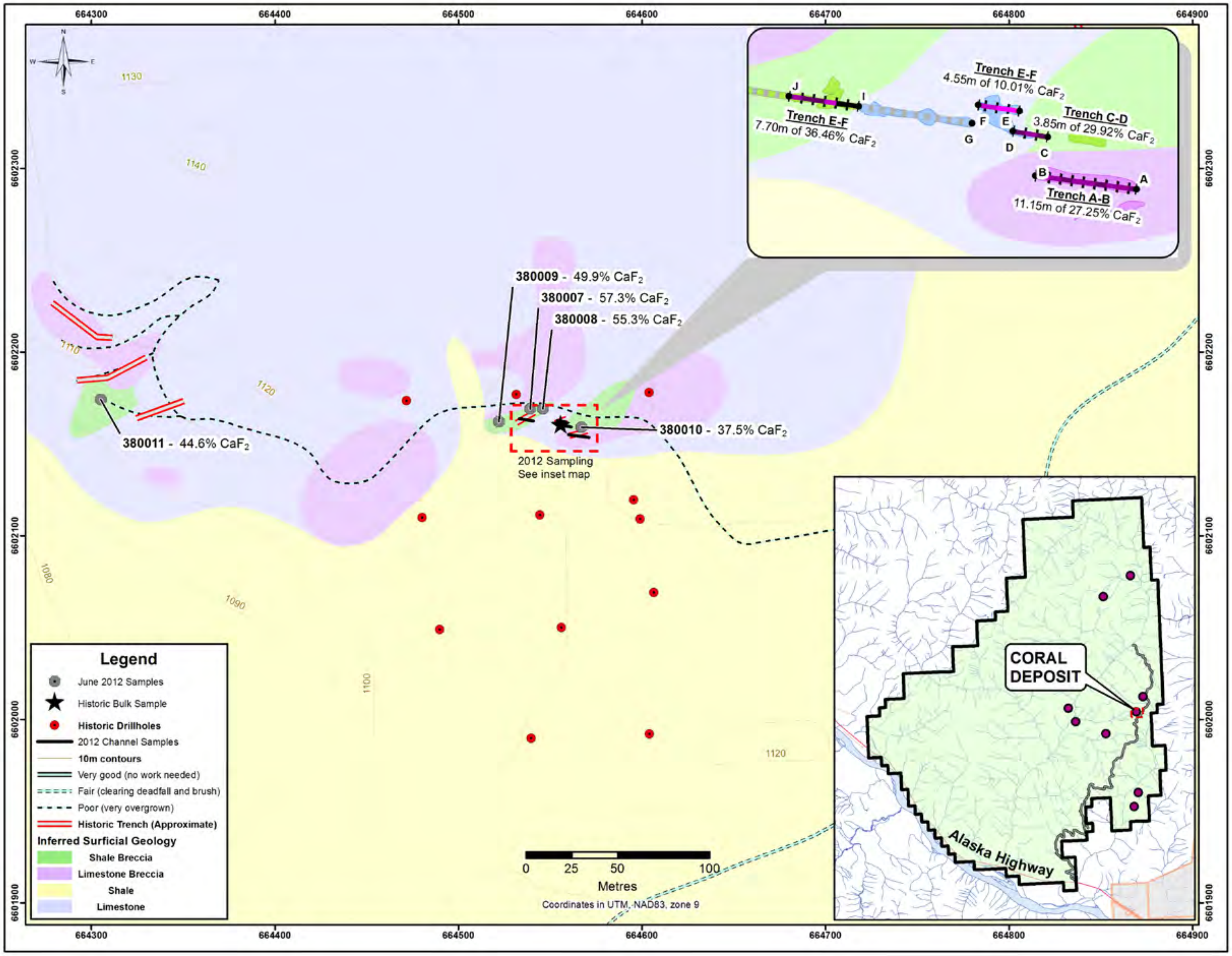



**Figure 12. TAM Deposit, Detailed Channel Sampling Results, 2012**

**Figure 13. CORAL Deposit, Overview of 2012 Sampling**



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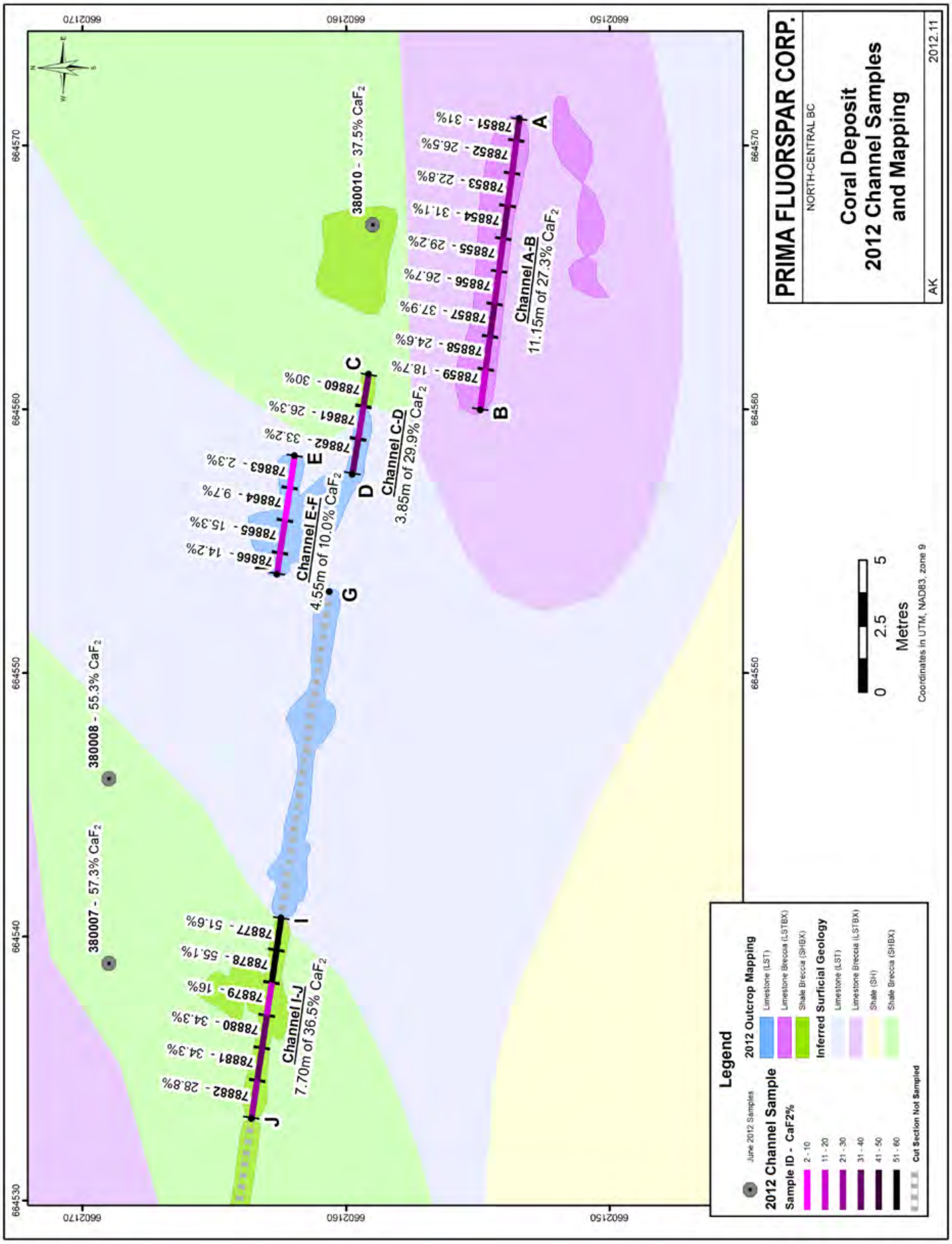


**Figure 14. CORAL Deposit, Detailed Channel Sampling Results, 2012**

## 9.0 ADJACENT PROPERTIES

The Author is unaware of any exploration/development of fluorite projects in the immediate area of the property. There are some fluorite showings in the region of northeastern BC, but because of either their distance to current infrastructure, or their location with respect to National Parks, they have received very little attention

The DAN fluorite showings, currently operated by Stikine Energy Corp., are located approximately 40 km to the northeast of the Property. Several occurrences of up to 53% fluorite, and associated barite, witherite and calcite occur as vein fillings, bedded replacements and as breccia fillings (Gjelsteen and Smith, 1973; Lane and Jacobson, 2011). Due to their stratigraphic location at the upper Dunedin Formation and the similar mineralization style, the deposits likely share a similar genetic history with the deposits at the Liard Fluorspar Property.

The SNOW fluorite/barite showings, located approximately 55 km to the southeast of the property have not seen any recent exploration, and grades of approximately 17.9% $CaF_2$ were found in the Middle Devonian Stone Formation (Brander and Woodcock, 1972).

## 10.0 INTERPRETATIONS AND CONCLUSIONS

Prima Fluorspar's 2012 work program confirmed the presence of high grade fluorspar mineralized zones at both the TAM and CORAL showings of the Liard Property. The most significant result is 54.0% fluorite across 16.25 m of limestone breccia at the TAM deposit. The largest notable interval at the CORAL deposit is 27.5% fluorite over 22.5 m of shale breccia and limestone breccia. Results of the soil orientation survey demonstrate that anomalous fluorine and barium values occur over known mineralization, and thus soil sampling can be used in future exploration programs to identify new potential fluorite showings.

The Liard Fluorspar property would be considered an early-stage exploration project, with excellent potential to build a substantial amount of resources of fluorite. Although 60 drill holes were made on the property, due to the antiquity and sparsely recorded details of the work, much of this work can only be used as a very rough guideline for directing future exploration. The property does have a good base of showing-specific and regional-scale geological mapping which will aid in the exploration proposed.

Due to the nature of the mineralization style on the property, tight drill spacing will be needed to build a resource estimate with good confidence. The showings that have been discovered to date are all near-surface so only shallow drilling of 100-200 metre holes will be required. The remarkable association of mineralization at the contact between the Dunedin and Besa River Formations suggests that the potential for the discovery of new fluorite showings is very high. Due to the large amount of overburden and vegetation cover over the property, the short mapping and prospecting campaigns of 1971-1972 have only briefly assessed the potential of the Liard Fluorspar Property.

The economic viability studies conducted by the historic operators of the Liard Fluorspar Property deemed that transportation costs of the final fluorspar concentrate to market was a significant factor. Since the last evaluation of the project (1970's), transport costs, markets, mining and processing costs and dynamics have changed significantly. The Alaska Highway remains the only transport route near the property, so transportation costs are likely to be a significant uncertainty to the economics of the project.

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# APPENDIX 1: ITEMIZED COST STATEMENT FOR THE 2012 EXPLORATION

## a) Personnel

| | | | | | | |
|---|---|---|---|---|---|---|
| N. McCallum, geologist | | | | | | |
| 6.30 | days | | planning, logistics, program management | | | |
| 6.30 | days | @ | $ 790.00 | $ 5,225.85 | | |
| S. Krysa, geologist | | | | | | |
| 15.00 | days | | field work and travel September 7 - 21 | | | |
| 6.60 | days | | Field preparation, data entry | | | |
| 21.60 | days | @ | $ 470.00 | $ 10,659.60 | | |
| A. Kochan, geologist | | | | | | |
| 15.00 | days | | field work and travel September 7 - 21 | | | |
| 17.20 | days | | data entry | | | |
| 32.20 | days | @ | $ 470.00 | $ 15,890.70 | | |
| D. Smith, geologist | | | | | | |
| 0.10 | days | | GIS | | | |
| 0.10 | days | @ | $ 1,025.00 | $ 107.63 | | |
| M. Renning, Future Metals Inc. | | | | | | |
| 29.00 | days | | road rehabilitation and geotechnical labour | | | |
| 29.00 | days | @ | $ 550.00 | $ 17,864.00 | | |
| Iyon Kechika Personnel | | | | | | |
| 223 | hours | | road rehab and field labour | | | |
| 223 | hours | @ | $ 65.00 | $ 16,234.40 | | |
| L. Bruer | | | | | | |
| 3.5 | hours | | logistics | | | |
| 3.5 | hours | @ | $ 40.00 | $ 147.00 | | |
| | | | | | $ 66,129.18 | |

## b) Food and Accommodation

| | | | | | | |
|---|---|---|---|---|---|---|
| 24 | man-days | @ | $ 70.00 | DGC Accommodations - Liard Hotsprings Lodge | $ 1,881.60 | |
| | | | | DGC Accommodations - Travel | $ 354.36 | |
| 28 | man-days | @ | $ 50.00 | Meals - DCG Personnel | $ 1,400.00 | |
| | | | | Meals - FMI and IK Personnel | $ 2,195.06 | |
| | | | | Accommodations/Camp - FMI and IK Personnel | $ 845.18 | |
| | | | | | | $ 6,676.20 |

## c) Transportation

| | | |
|---|---|---|
| Dahrouge Mileage | $ 13.91 | |
| Dahrouge Rental Vehicle - Driving Force | $ 719.25 | |
| Fuel - Dahrouge | $ 365.21 | |
| Fuel - Future Metals Inc. | $ 2,833.06 | |
| Taxi | $ 38.80 | |
| | | $ 3,970.23 |

**d) Analyses**

Soil - ALS Minerals

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 24 | samples | @ | $ | 1.45 | PREP-41: dry, sieve soil | $ | 36.54 | |
| 6.18 | kg | @ | $ | 2.35 | PREP-41: weight charge | $ | 15.25 | |
| 24 | samples | @ | $ | 18.60 | F-ELE81a: F by Specific Ion Electrode | $ | 468.72 | |
| 24 | samples | @ | $ | 14.90 | ME-ICP61: 33 element four acid ICP-AES | $ | 375.48 | |
| | | | | | | $ | 895.99 | |

Rock - ALS Minerals

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | fee | @ | $ | 33.10 | BAT-01: Administration Fee | $ | 34.76 | | |
| 82 | samples | @ | $ | 7.45 | PREP-31: crush, split, pulverize | $ | 641.45 | | |
| 82 | samples | @ | $ | 30.90 | ME-ICP06: whole rock package - ICP-AES | $ | 2,660.49 | | |
| 378.08 | kg | @ | $ | 0.70 | PREP-31: weight charge | $ | 277.89 | | |
| 12 | samples | @ | $ | 1.20 | LOG-22d: sample login - Rcd w/o barcode dup | $ | 15.12 | | |
| 12 | samples | @ | $ | 0.65 | SPL-34: pulp splitting charge | $ | 8.19 | | |
| 94 | samples | @ | $ | 27.90 | F-ELE82: F - high level | $ | 2,753.73 | | |
| 12 | samples | @ | $ | 27.90 | ME-MS61: 48 element four acid ICP-MS | $ | 351.54 | | |
| 2 | samples | @ | $ | 16.70 | Au-ICP21: Au 30g ICP-AES finish | $ | 35.07 | | |
| | | | | | | $ | 6,778.23 | | |
| | | | | | | | | $ | 7,674.22 |

**e) Other**

| | | | | |
|---|---|---|---|---|
| DGC Rental Equipment | $ | 426.93 | | |
| Future Metals Inc. Rental Equipment | $ | 21,168.00 | | |
| Future Metals Inc. Supplies | $ | 678.76 | | |
| Future Metals Inc. Generator Fuel | $ | 412.52 | | |
| Overhead and Supply Fee | $ | 1,160.78 | | |
| Dahrouge Expenses + 10% | $ | 1,316.74 | | |
| Software Rental | $ | 2,399.25 | | |
| Courier and Shipping | $ | 140.61 | | |
| Vehicle Repair | $ | 280.11 | | |
| Disposable Supplies | $ | 426.97 | | |
| | | | $ | 28,410.67 |

**Total** $ 112,860.49

Edmonton, AB
March 19, 2013

Neil McCallum, B.Sc., P.Geol.

**FIELD WORK SUMMARY**

**Prima Fluorspar Corp.**

Liard Fluorspar
106 samples collected (82 rock, 24 soil)
Prospecting area for outcrops and access
Field personnel: S. Krysa; A. Kochan; M. Renning

## Appendix 2: Liard Fluorspar Project 2012 Channel Sample Descriptions

| Sample | Length (m) | Azimuth | Fluorite % (estimate) | Description |
|---|---|---|---|---|
| **TAM Showing: Section A to B** | | | | |
| 78901 | 1.25 | 060 | 5 | **Limestone Breccia:** Dark grey fossiliferous limestone clasts (large) in white-creamy calcite (barytocalcite?) and purple fluorite (fine-grained to coarse-grained) matrix. Dominantly clasts. Moderately siliceous (hard to break). Syringopora fossils recrystallized by white calcite. Minor calcite veinlets. |
| 78902 | 1.25 | 058 | 10 | **Limestone Breccia:** Same as 78901. Minor black fluorite. Syringopora smaller than in 78901, show some fluorite replacement. Rusty orange patches, primarily in matrix. |
| 78903 | 1.25 | 060 | 20 | **Limestone Breccia:** Same as 78902. No oxidation. Not siliceous. |
| 78904 | 1.25 | 058 | 20 | **Limestone Breccia:** Same as 78903. |
| 78905 | 1.25 | 061 | 25 | **Limestone Breccia:** Same as 78903. Minor white fluorite present. |
| 78906 | 1.25 | 060 | 40 | **Limestone Breccia:** Same as 78903. Minor light blue-grey mineral, no HCL rxn. Fluorite fine-grained to very coarse-grained; up to 1.5 cm. Some rusty oxidized veinlets, fluorite xtals (dark orange), and oxidized patches. |
| 78907 | 1.25 | 061 | 60 | **Limestone Breccia:** Same 78903. Fluorite fine-grained to very coarse-grained, dominantly as replacement of clasts, as well as in matrix. Syringopora larger but fewer than in previous samples. |
| 78908 | 1.25 | 058 | 45 | **Limestone Breccia:** Same as 78903 - large dark grey limestone clasts containing rare large syringopora fossils with moderate black fluorite replacement. Matrix (white calcite/barytocalcite and purple fluorite) ~20% of rock. |
| 78909 | 1.25 | 055 | up to 60 | **Limestone Breccia:** Same as 78908. Fluorite dominantly black (possibly partially black shale) . Matrix only ~15% of rock. Syringopora rare, poorly defined. |
| 78910 | 1.25 | 060 | up to 60 | **Limestone Breccia:** Same as 78909. Slight increase in matrix percentage. Few calcite veinlets. |
| 78911 | 1.25 | 061 | up to 60 | **Limestone Breccia:** Same as 78909. Minor oxidation in patches. |
| 78912 | 1.25 | 053 | up to 60 | **Limestone Breccia:** Same as 78909. ~25% limestone clasts, ~15% (calcite/barytocalcite + fluorite) matrix. |
| 78913 | 1.25 | 061 | 45 | **Limestone Breccia:** Same as 78912. Fluorite dominantly black, very minor purple. ~25% matrix. |
| 78914 | 1.25 | 058 | 60 | **Limestone Breccia with minor Shale Breccia:** Contact; dominantly limestone clasts, some shale clasts. ~10% matrix. Moderately oxidized in patches, abundant clay - very friable. |
| 78915 | 1.25 | 057 | 60 | **Shale Breccia with minor Limestone Breccia:** Contact; dominantly shale clasts, some limestone clasts. ~10% matrix. Fluorite fine-grained to very coarse-grained, ~25% purple, ~35% black. Moderately fractured with calcite and clay (oxidized) infill. Moderately oxidized in patches, abundant clay - very friable. Common calcite-replaced syringopora fossils. Rare stromatopora(?). |
| 78916 | 1.25 | 060 | 35 | **Shale Breccia:** ~35% fluorite, dominantly black, minor purple. ~35% shale clasts, dark grey to black, angular to subrounded. 30% matrix (calcite + fluorite). Moderately oxidized, moderate clay alteration. Weakly fractured with clay infill. Common observed calcified fossils (syringopora, stromatopora). |
| 78917 | 1.25 | 062 | 20 | **Shale Breccia:** ~45% shale clasts. Calcite/barytocalcite matrix, white and grey, with 20% fluorite (dominantly black) and minor barite. Stylolites oxidized. Minor oxidation and clay alteration (in patches and along fractures). Minor calcite replacement of fossils. |

| Sample | Length (m) | Azimuth | Fluorite % (estimate) | Description |
|---|---|---|---|---|
| 78918 | 1.25 | 063 | 20 | **Shale Breccia:** Same as 78917. Rare clusters of syringopora. Slightly argillic in small patches. |
| 78919 | 1.25 | 062 | 40 | **Shale Breccia:** Fluorite dominantly purple. Rare shale clasts. Matrix moderately oxidized. Few grey limestone clasts(?). Fossiliferous matrix - fossils poorly defined and recrystallized by calcite and fluorite (syringopora). |
| 78920 | 1.25 | 060 | 35 | **Shale Breccia:** Same as 78919. Some shale clasts replaced by fluorite. Moderately oxidized. Fossiliferous (recrystallized by fluorite and calcite). Minor black stylolites. About 10cm of missing bedrock near end of sample = smaller sample. |
| **TAM Showing: Section C to D** | | | | |
| 78921 | 1.25 | 067 | 20 | **Shale Breccia:** Fluorite is ~15% black, ~5% purple. 30% clay. Trace to no calcite. Fossiliferous - syringopora in large clusters. Rare veinlets with clay infill. Moderate to high oxidation (orange-red). Rare shale clasts. |
| 78922 | 1.25 | 059 | 15 | **Shale Breccia:** Same as 78921. ~40% clay. Fluorite both black and purple. Fossils replaced by white mineral (Barite?). Increase in amount of shale clasts. Few to no stylolites. |
| 78923 | 1.25 | 062 | <5 | **Shale Breccia:** Minor fluorite, black. ~15% clay. Majority is shale clasts (fissile, angular, rare clusters of syringopora recrystallized with white barite[?]). Moderate oxidation in patches. No calcite. |
| 78924 | 1.25 | 060 | 0 | **Shale Breccia/Shale:** 10% clay. Few shale clasts showing minimal interstitial space (<5mm) - due to small-scale hydraulic fracturing? Interstitial space filled with rusty clay. Dominantly shale, no carbonates. Moderately oxidized. Clusters of syringopora recrystallized by white mineral - barite? |
| 78925 | 1.25 | 062 | 10 | **Shale:** Displays minor hydraulic fracturing with white clay infill. Rare black stylolites. Some strongly calcareous shale, dark grey to blue grey. 10% fluorite, coarse-grained light to dark purple crystals. Some large stromatopora, some syringopora. Minor oxidation. |
| 78651 | 1.25 | 068 | <10 | **Shale:** Blue grey calcareous shale, oily, fossiliferous (recrystallized brachiopods, syringopora). Moderate oxidation. Fluorite dominantly purple, some black. |
| 78652 | 1.25 | 054 | 1 | **Shale:** Same as 78651. Fluorite purple. |
| 78653 | 1.25 | 062 | 0 | **Shale:** 90% non-calcareous shale, rest is calcareous. Limonite and oxidation. Rare narrow white stringers. Few fossil imprints (indeterminate). Oily. |
| 78654 | 1.25 | 064 | 0 | **Shale:** Black and grey non-calcareous shale, oily. Minor small-scale hydraulic fracturing with clay infill. Moderate recrystallized fossils (syringopora, stromatopora) to calcite. Minor limonite, moderate oxidation. |
| 78655 | 1.25 | 064 | 0 | **Shale:** Same as 78654. No hydraulic fracturing. Common syringopora clusters. Rare calcite. Moderate oxidation and limonite alteration. |
| 78656 | 1.25 | 064 | 0 | **Shale:** Black non-calcareous shale. Oily. Very minor calcite as replacement. Few clusters of syringopora, rare other indeterminate fossils. Minor limonite, moderate oxidation. |
| 78657 | 1.25 | 054 | 10 | **Shale:** Same as 78656. Moderate limonite. 10% purple medium-grained to coarse-grained fluorite. Rare stromatopora. |
| 78658 | 1.25 | 058 | 5 | **Shale:** Same as 78657. |
| 78659 | 1.25 | 056 | 0 | **Shale:** Same as 78657. no calcite, no stromatopora. |

| Sample | Length (m) | Azimuth | Fluorite % (estimate) | Description |
|---|---|---|---|---|
| 78660 | 1.25 | 058 | Trace | **Shale Breccia:** Oily shale, moderate clay alteration, moderate oxidation. Trace purple fluorite in clay. Rare syringopora fossils replaced by clay. Small scale hydraulic fracturing with clay infill. No calcite. |
| 78661 | 1.25 | 058 | Trace | **Shale Breccia:** Same as 78660. Dominantly shale, minor hydraulic fracturing with clay infill or void. |
| 78662 | 1.25 | 058 | 5 | **Shale Breccia:** Same as 78661. Fossils replaced by calcite (15%) and clay. Fluorite purple, medium-grained to coarse-grained. |
| 78663 | 1.25 | 062 | Trace | **Shale Breccia:** Dominantly black oily angular shale clasts (up to 6cm). Minor calcite (~2%), minor clay. Minor limonite and moderate oxidation. Rare fossils, altered to clay. |
| 78664 | 1.25 | 061 | 1 | **Shale Breccia:** Smaller shale clasts (up to 3cm), oily. 25% clay matrix. Rare syringopora fossils replaced by clay, veinlets with clay infill. Trace calcite, very minor limonite, moderate oxidation. Fluorite purple, medium-grained to coarse-grained. |
| 78665 | 1.25 | 061 | Trace | **Shale Breccia:** Same as 78664. No observed calcite. |
| 78666 | 1.25 | 061 | 1 | **Shale Breccia:** Same as 78664. Increase in clast size. Minor limonite, minor to moderate oxidation. |
| 78667 | 1.25 | 062 | 2 | **Shale Breccia:** Same as 78664. Medium-grained to coarse-grained fluorite, purple. No observed calcite. |
| 78668 | 1.25 | 062 | 1 | **Shale Breccia:** ~75% shale clasts (angular, up to 13 cm long in sample), ~20% clay,~ 5% calcite, ~1% fluorite (coarse-grained, purple). Rare clusters of syringopora, other indeterminate fossils present. Minor limonite, moderate oxidation. Oily. |
| 78669 | 1.25 | 064 | 0 | **Shale Breccia:** 65% shale clasts (angular, smaller than in 78668, minor clay veinlets), 35% clay matrix. No observed fluorite or calcite. Sample less oily. Moderate syringopora clusters replaced by clay. Very minor limonite, moderate oxidation. |
| 78670 | 0.80 | 061 | 0 | **Shale Breccia:** Same as 78669. 60% shale clasts (angular, up to 7 cm long in sample), 40% clay. |
| **TAM Showing: Section E to F** | | | | |
| 78671 | 1.25 | 061 | Trace | **Shale Breccia:** Same as 78670. Trace fine-grained to medium-grained black fluorite. Minor localized limonite. |
| 78672 | 1.25 | 070 | 0 | **Shale Breccia:** Same as 78670, with slightly larger clasts. Trace calcite. Thick clay veins (up to 5 mm). |
| 78673 | 1.25 | 054 | Trace | **Shale Breccia:** 35% dark grey shale clasts (up to 8cm long in sample). 45% clay, moderately oxidized. Rare fossils (dominantly syringopora) altered to clay. ~20% quartz (translucent, white to pale blue-grey, fine-grained to coarse-grained). |
| 78674 | 1.25 | 064 | 40 | **Shale Breccia:** ~30% dark grey shale clasts (up to 10cm long in sample). Matrix is 25% clay (moderately oxidized, rare syringopora clusters altered to clay) + fluorite (dominantly purple, medium-grained to coarse-grained), 5% calcite (as veinlets or fossil replacement). Trace fine-grained clear barite in fluorite. |
| 78675 | 1.25 | 060 | Trace | **Shale Breccia:** 60% dark grey shale clasts (angular to sub-angular, rare clay veinlets in clasts), 40% clay matrix (moderately oxidized, minor limonite, rare syringopora clusters altered to clay). Trace purple coarse-grained fluorite, no observed calcite. |
| 78676 | 1.25 | 052 | 2 | **Shale Breccia:** Same as 78675. 2% purple coarse-grained fluorite and trace calcite in matrix. |
| 78677 | 1.25 | 052 | 5 | **Shale Breccia:** Same as 78675. 5% fluorite, no observed calcite. |

| Sample | Length (m) | Azimuth | Fluorite % (estimate) | Description |
|---|---|---|---|---|
| **TAM Showing: Section G to H** | | | | |
| 78678 | 1.25 | 064 | 5 | **Shale Breccia:** 65% shale clasts (dark grey to black, angular). Matrix is clay (15%), calcite (15%), 5% coarse-grained purple fluorite. Rare syringopora clusters replaced by clay and calcite. Moderate oxidation, minor limonite, minor black stylolites(?). |
| 78679 | 1.25 | 059 | 2 | **Shale Breccia:** Same as 78676. Matrix dominantly clay, vuggy. Minor localized limonite, moderate oxidation. Calcite and fluorite (purple, coarse-grained) replacing rare fossils (syringopora, indeterminate). |
| 78680 | 1.25 | 057 | 5 | **Shale Breccia:** Same as 78679. Veinlets up to 5 mm wide, moderately oxidized clay infill. 70% shale clasts, 30% (clay + calcite + fluorite) matrix. |
| 78681 | 1.25 | 060 | 5 | **Shale Breccia:** Same as 78679. 50% shale clasts (dark grey to black, angular, some slightly calcareous), 50% matrix (5% purple medium-grained to coarse-grained fluorite, 15% calcite, 30% clay). Trace limonite. |
| 78682 | 1.25 | 061 | 20 | **Shale Breccia:** Same as 78679. 55% shale clasts, non-calcareous. Rare fossils, altered to clay. Clay moderately oxidized. |
| 78683 | 1.25 | 071 | 15 | **Shale Breccia:** Same as 78682. 50% matrix (15% fluorite + 25% calcite + 10% moderately oxidized clay). Fossils (dominantly syringopora) replaced by calcite or altered to clay. |
| 78684 | 1.25 | 059 | 5 | **Shale Breccia:** Same as 78682. 60% shale clasts. Matrix is clay (25%) + calcite (10%) + fluorite (5%). Minor veinlets (micro scale hydraulic fracturing?) with clay infill. |
| 78685 | 1.25 | 062 | Trace | **Shale Breccia:** 85% shale clasts with very minor limonite, very minor veinlets with clay infill. No observed calcite. Trace purple coarse-grained fluorite. 15% clay as matrix and veinlets and altered syringopora fossils. |
| **CORAL Showing: Section A to B** | | | | |
| 78851 | 0.85 | 281 | 15 | **Limestone Breccia:** Dark to light grey fossiliferous limestone clasts in calcite/barytocalcite/fluorite matrix. Minor barite in matrix (clear, truncated prismatic crystals). Fluorite fine-grained to coarse-grained, dominantly purple. Black very narrow stylolites. Syringopora fossils with calcite/fluorite replacement. Some clasts replaced by fluorite. Weathered surfaces creamy yellow to dark brown. Fetid odour. |
| 78852 | 1.25 | 278 | 25 | **Limestone Breccia:** Same as 78851. Minor witherite(?) in matrix. Brachiopod shell imprints, rare crinoid ossicles recrystallized calcite. |
| 78853 | 1.25 | 275 | 5 | **Limestone Breccia:** Same as 78851. Rare calcite veinlets. Fluorite replaced limestone clasts up to 5 cm. |
| 78854 | 1.25 | 276 | 15 | **Limestone Breccia:** Same as 78851. Rare localized oxidation. Fluorite dominantly black. |
| 78855 | 1.25 | 274 | 15 | **Limestone Breccia:** Same as 78854. |
| 78856 | 1.25 | 277 | 20 | **Limestone Breccia:** Same as 78854. More stylolites, slightly thicker. Large aggregates of fluorite, some crystals 1cm. Areas of stipply fine-grained fluorite with calcite. |
| 78857 | 1.25 | 271 | 25 | **Limestone Breccia:** Same as 78854. Less oxidation. Syringopora fossils common. |
| 78858 | 1.25 | 277 | 15 | **Limestone Breccia:** Same as 78854. Few calcite veinlets. Syringopora common. |
| 78859 | 1.55 | 280 | 10 | **Limestone Breccia:** Same as 78854. Increase in black stylolites. More fluorite-replaced limestone clasts. Fluorite up to very coarse-grained. Black calcite/witherite starts 15 cm from end of sample - very fine-grained to fine-grained, dull, in aggregates/lenses. |

| Sample | Length (m) | Azimuth | Fluorite % (estimate) | Description |
|---|---|---|---|---|
| **CORAL Showing: Section C to D** | | | | |
| 78860 | 1.25 | 284 | 25 | **Shale Breccia:** Dominantly dark grey to black shale clasts, very large (up to 8cm). Minor light to medium grey limestone clasts. Calcite/barytocalcite/fluorite matrix. Fluorite dominantly purple, up to very coarse grained (crystals > 1 cm). Common black very narrow stylolites, few calcite veinlets. 5 cm with fine-grained trace sulphides (malachite, azurite(?), pyrite, galena(?)). |
| 78861 | 1.25 | 282 | 20 | **Limestone:** Calcite/barytocalcite/fluorite matrix, trace barite. Fluorite dark purple to black, fine-grained to very coarse-grained. Stylolites, calcite veinlets. Minor localized tan-orange oxidation patches. Fossiliferous (dominantly syringopora), recrystallized with calcite and fluorite. Friable. |
| 78862 | 1.35 | 283 | 30 | **Limestone:** Same as 78861. |
| **CORAL Showing: Section E to F** | | | | |
| 78863 | 1.25 | 276 | 3 | **Limestone:** Dominantly calcite/barytocalcite, minor barite. Weathered light to medium orange-brown. Black very narrow stylolites common. Fossils abundant - syringopora, stromatopora. |
| 78864 | 1.25 | 276 | 3 | **Limestone:** Same as 78863. |
| 78865 | 1.25 | 282 | 5 | **Limestone:** Same as 78863. Increase in fluorite as replacement in fossils. |
| 78866 | 0.80 | 281 | 10 | **Limestone:** Same as 78865. Increase in stromatopora. |
| **CORAL Showing: Section I to J** | | | | |
| 78877 | 1.25 | 281 | 55 | **Shale Breccia:** Contact zone between Limestone to the east and Shale Breccia to the west. First 30cm clay-rich zone, highly oxidized. Mostly large shale clasts (up to 8cm long) in argillaceous matrix. Fluorite occurs as purple to black, fine-grained to very coarse-grained. Friable in highest fluorite concentration zones. |
| 78878 | 1.25 | 279 | 40 | **Shale Breccia:** Same as 78877, with no clay-rich zone. Fluorite dominantly purple. |
| 78879 | 1.25 | 276 | 20 | **Shale Breccia:** Same as 78878. Black stylolites common. Limestone matrix, minor vuggy. No shale clasts observed in sample. Moderate orange oxidation. |
| 78880 | 1.25 | 273 | 15 | **Shale Breccia:** Very large (>20cm) dark grey angular to sub-angular shale clasts. Same as 78879. |
| 78881 | 1.25 | 270 | 15 | **Shale Breccia:** Same as 78880. |
| 78882 | 1.45 | 274 | 20 | **Shale Breccia:** Same as 78880, but fewer and smaller shale clasts. |

## Appendix 3: Liard Fluorspar 2012 Soil Sample Descriptions

| Sample | Easting | Northing | Colour | Interval (depth in cm) | Water Content | Rock Fragments | Notes |
|---|---|---|---|---|---|---|---|
| 1A | 664608 | 6603084 | black | 2-4 | MOIST | SUBCROP OF LIMESTONE | |
| 1B | 664608 | 6603084 | medium orange-brown | 4-20 | MOIST | SUBCROP OF LIMESTONE | POORLY DEVELOPED SOIL; OLD TALUS BLOCKS |
| 2A | 664652 | 6603092 | black | 5-15 | MOIST | | |
| 2B | 664652 | 6603093 | light orange-brown | 15-20 | MOIST | SUBROUNDED CLASTS | FOREST BURN 30-40 YEARS AGO |
| 2C | 664652 | 6603092 | grey-brown | 40-45 | MOIST | SUBROUNDED CLASTS | |
| 3A | 664699 | 6603088 | black | 7-15 | MOIST | | |
| 3B | 664699 | 6603088 | medium orange-brown | 15-20 | DRY | SUBROUNDED CLASTS | SOME DECOMPOSED ORGANICS |
| 3C | 664699 | 6603088 | medium grey-brown | 35-40 | MOIST | | SOME DECOMPOSED ORGANICS, BEDROCK? |
| 4A | 664746 | 6603084 | black | 10-15 | MOIST | | |
| 4B | 664746 | 6603084 | medium orange-brown | 15-20 | MOIST | SUBROUNDED CLASTS | |
| 4C | 664746 | 6603084 | medium brown | 55-60 | MOIST | SUBROUNDED CLASTS | B - C TRANSITION; COULD NOT DIG DEEPER - BEDROCK/BOULDER? |
| 5A | 664802 | 6603082 | black | 5-20 | MOIST | | VERY THICK |
| 5B | 664802 | 6603082 | dark brown | 35-40 | MOIST | | |
| 5C | 664802 | 6603082 | light grey-brown | 60-65 | MOIST | SUBROUNDED CLASTS | GOOD 'C' DEVELOPMENT |
| 6A | 664848 | 6603090 | black | 5-30 | | | VERY THICK |
| 7A | 664899 | 6603089 | black | 6-8 | | | |
| 7B | 664899 | 6603089 | light brown | 8-18 | MOIST | ANGULAR FRAGMENTS | NEAR BEDROCK |
| 7C | 664899 | 6603089 | medium brown | 45-50 | MOIST | ANGULAR FRAGMENTS | B - C TRANSITION; COULD NOT DIG DEEPER - BEDROCK/BOULDER? |
| 8A | 664946 | 6603084 | black | 5-10 | MOIST | | |
| 8B | 664946 | 6603085 | dark brown | 10-15 | MOIST | | |
| 8C | 664946 | 6603085 | dark grey-brown | 55-60 | MOIST | ANGULAR FRAGMENTS | PREVIOUSLY DISTURBED SOIL? |
| 9A | 665000 | 6603085 | black | 7-15 | MOIST | | |
| 9B | 665000 | 6603085 | medium orange-brown | 15-25 | MOIST | ANGULAR FRAGMENTS | SOME DECOMPOSED ORGANICS; 4-5 METRES EAST OF LIMESTONE BRECCIA? |
| 9C | 665000 | 6603085 | medium grey-brown | 47-55 | MOIST | ANGULAR FRAGMENTS | SOME DECOMPOSED ORGANICS; 4-5 METRES EAST OF LIMESTONE BRECCIA? |

* Location coordinates in UTM NAD83 Zone 9

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: 604 984 0221 Fax: 604 984 0218 www.alsglobal.com

To: DAHROUGE GEOLOGICAL CONSULTING LTD.
18-10509 81ST AVE. NW
EDMONTON AB T6E 1X7


Finalized Date: 2-NOV-2012
This copy reported on
9-NOV-2012
Account: DAHGEO

# CERTIFICATE VA12234434

Project: Liard Fluorspar
P.O. No.: 14850
This report is for 94 Rock samples submitted to our lab in Vancouver, BC, Canada on 26-SEP-2012.
The following have access to data associated with this certificate:

| | | |
|---|---|---|
| NEIL MCCALLUM | | |

## SAMPLE PREPARATION

| ALS CODE | DESCRIPTION |
|---|---|
| WEI-21 | Received Sample Weight |
| LOG-22 | Sample login - Rcd w/o BarCode |
| CRU-31 | Fine crushing - 70% <2mm |
| SPLIT-Z | Pulp split for send out |
| SPL-21 | Split sample - riffle splitter |
| PUL-31 | Pulverize split to 85% <75 um |
| LOG-22d | Sample login - Rcd w/o BarCode dup |
| SPL-34 | Pulp Splitting Charge |

## ANALYTICAL PROCEDURES

| ALS CODE | DESCRIPTION | INSTRUMENT |
|---|---|---|
| TOT-ICP06 | Total Calculation for ICP06 | ICP-AES |
| F-ELE82 | F - High Level | |
| ME-MS61 | 48 element four acid ICP-MS | |
| Au-ICP21 | Au 30g FA ICP-AES Finish | ICP-AES |
| ME-ICP06 | Whole Rock Package - ICP-AES | ICP-AES |
| OA-GRA05 | Loss on Ignition at 1000C | WST-SEQ |

To: DAHROUGE GEOLOGICAL CONSULTING LTD.
ATTN: NEIL MCCALLUM
SUITE 1450 - 789 WEST PENDER STREET
VANCOUVER BC V6C 1H2

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

Signature:
Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: 604 984 0221 Fax: 604 984 0218 www.alsglobal.com

To: DAHROUGE GEOLOGICAL CONSULTING LTD.
18-10509 81ST AVE. NW
EDMONTON AB T6E 1X7


Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method / Analyte / Units / LOR | WEI-21 Recvd Wt. kg 0.02 | ME-ICP06 SiO2 % 0.01 | ME-ICP06 Al2O3 % 0.01 | ME-ICP06 Fe2O3 % 0.01 | ME-ICP06 CaO % 0.01 | ME-ICP06 MgO % 0.01 | ME-ICP06 Na2O % 0.01 | ME-ICP06 K2O % 0.01 | ME-ICP06 Cr2O3 % 0.01 | ME-ICP06 TiO2 % 0.01 | ME-ICP06 MnO % 0.01 | ME-ICP06 P2O5 % 0.01 | ME-ICP06 SrO % 0.01 | ME-ICP06 BaO % 0.01 | OA-GRA05 LOI % 0.01 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 78901 | | 5.28 | 14.20 | 0.14 | 0.07 | 31.2 | 0.06 | 0.04 | 0.01 | <0.01 | 0.01 | <0.01 | 0.01 | 0.43 | 24.4 | 25.4 |
| 78902 | | 5.62 | 33.9 | 0.22 | 0.13 | 29.2 | 0.01 | <0.01 | 0.02 | <0.01 | 0.01 | <0.01 | <0.01 | 0.30 | 15.50 | 9.84 |
| 78903 | | 3.40 | 15.40 | 0.15 | 0.08 | 32.9 | 0.01 | 0.17 | <0.01 | <0.01 | 0.01 | <0.01 | 0.02 | 0.64 | 18.90 | 5.80 |
| 78903D | | <0.02 | | | | | | | | | | | | | | |
| 78904 | | 4.90 | 7.37 | 0.09 | 0.13 | 33.9 | 0.01 | 0.38 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.98 | 31.6 | 11.00 |
| 78905 | | 4.40 | 7.16 | 0.10 | 0.08 | 44.3 | 0.01 | <0.01 | 0.01 | <0.01 | <0.01 | <0.01 | 0.02 | 0.61 | 20.3 | 5.72 |
| 78906 | | 7.70 | 2.70 | 0.05 | 0.08 | 41.6 | 0.01 | 0.28 | <0.01 | <0.01 | <0.01 | <0.01 | 0.01 | 0.71 | 21.7 | 3.55 |
| 78907 | | 6.96 | 20.8 | 0.18 | 0.19 | 47.2 | 0.01 | 0.07 | 0.02 | <0.01 | 0.01 | <0.01 | 0.01 | 0.27 | 8.77 | 5.99 |
| 78908 | | 7.76 | 18.40 | 0.14 | 0.12 | 35.2 | 0.01 | 0.26 | <0.01 | <0.01 | <0.01 | <0.01 | 0.03 | 0.71 | 22.3 | 9.96 |
| 78909 | | 8.28 | 7.72 | 0.09 | 0.09 | 57.3 | 0.01 | 0.07 | 0.01 | <0.01 | <0.01 | <0.01 | 0.02 | 0.25 | 8.72 | 5.21 |
| 78910 | | 5.12 | 15.95 | 0.12 | 0.11 | 39.1 | <0.01 | 0.23 | <0.01 | <0.01 | <0.01 | <0.01 | 0.01 | 0.70 | 20.7 | 8.85 |
| 78911 | | 5.58 | 11.55 | 0.12 | 0.10 | 45.3 | <0.01 | <0.01 | 0.01 | <0.01 | <0.01 | <0.01 | 0.02 | 0.35 | 14.75 | 5.46 |
| 78912 | | 4.06 | 28.7 | 0.28 | 0.37 | 40.6 | 0.01 | 0.06 | 0.02 | <0.01 | 0.01 | <0.01 | 0.01 | 0.27 | 9.71 | 5.83 |
| 78912D | | <0.02 | | | | | | | | | | | | | | |
| 78913 | | 5.70 | 17.25 | 0.17 | 0.23 | 44.7 | 0.01 | <0.01 | 0.01 | <0.01 | 0.01 | <0.01 | 0.01 | 0.61 | 16.75 | 6.62 |
| 78914 | | 4.94 | 16.35 | 0.40 | 0.37 | 45.7 | 0.01 | 0.08 | 0.01 | <0.01 | 0.01 | <0.01 | 0.02 | 0.15 | 12.75 | 4.12 |
| 78915 | | 7.18 | 11.25 | 0.92 | 1.73 | 51.4 | 0.01 | 0.06 | 0.01 | <0.01 | <0.01 | 0.01 | 0.03 | 0.17 | 9.50 | 4.29 |
| 78916 | | 3.60 | 33.8 | 0.86 | 0.89 | 21.7 | <0.01 | <0.01 | 0.11 | <0.01 | 0.03 | 0.01 | 0.04 | 0.77 | 23.6 | 6.37 |
| 78917 | | 3.40 | 46.5 | 1.72 | 0.89 | 22.9 | 0.03 | <0.01 | 0.29 | 0.01 | 0.10 | 0.01 | 0.10 | 0.28 | 14.25 | 6.36 |
| 78918 | | 2.62 | 74.5 | 1.09 | 1.42 | 3.31 | 0.01 | <0.01 | 0.14 | 0.01 | 0.06 | 0.01 | 0.05 | 0.18 | 12.60 | 3.32 |
| 78919 | | 7.30 | 4.50 | 0.12 | 0.07 | 34.9 | 0.01 | 0.32 | <0.01 | <0.01 | <0.01 | <0.01 | 0.03 | 1.09 | 31.6 | 9.79 |
| 78920 | | 3.86 | 3.31 | 0.11 | 0.07 | 32.9 | <0.01 | 0.34 | <0.01 | <0.01 | <0.01 | <0.01 | 0.03 | 1.17 | 34.6 | 10.15 |
| 78921 | | 5.08 | 46.6 | 2.40 | 2.69 | 11.70 | 0.02 | 0.17 | 0.29 | <0.01 | 0.09 | 0.01 | 0.05 | 0.17 | 20.6 | 5.12 |
| 78921D | | <0.02 | | | | | | | | | | | | | | |
| 78922 | | 4.64 | 40.3 | 2.58 | 1.92 | 10.20 | 0.04 | <0.01 | 0.33 | 0.01 | 0.11 | 0.01 | 0.07 | 0.17 | 21.7 | 4.97 |
| 78923 | | 3.44 | 65.9 | 3.81 | 2.50 | 5.18 | 0.08 | 0.07 | 0.45 | 0.01 | 0.19 | 0.01 | 0.08 | 0.06 | 12.25 | 7.53 |
| 78924 | | 3.54 | 68.6 | 3.93 | 2.88 | 3.61 | 0.06 | <0.01 | 0.41 | 0.01 | 0.18 | <0.01 | 0.36 | 0.11 | 11.90 | 5.40 |
| 78925 | | 5.82 | 29.3 | 1.53 | 0.93 | 29.9 | 0.02 | <0.01 | 0.05 | <0.01 | 0.02 | <0.01 | 0.02 | 0.23 | 15.35 | 8.61 |
| 78651 | | 4.70 | 22.3 | 0.37 | 0.38 | 39.7 | 0.08 | 0.02 | 0.05 | <0.01 | 0.01 | 0.01 | <0.01 | 0.13 | 8.58 | 21.1 |
| 78652 | | 3.30 | 22.7 | 0.30 | 0.52 | 32.8 | 0.08 | 0.10 | 0.01 | <0.01 | 0.01 | 0.01 | <0.01 | 0.24 | 14.60 | 24.3 |
| 78653 | | 3.10 | 72.3 | 2.41 | 1.66 | 2.72 | 0.04 | 0.04 | 0.35 | 0.01 | 0.12 | 0.01 | 0.10 | 0.11 | 10.80 | 5.70 |
| 78654 | | 3.26 | 71.8 | 2.47 | 1.58 | 1.28 | 0.04 | <0.01 | 0.37 | 0.01 | 0.15 | <0.01 | 0.04 | 0.22 | 16.00 | 5.14 |
| 78654D | | <0.02 | | | | | | | | | | | | | | |
| 78655 | | 3.94 | 66.1 | 4.63 | 2.40 | 3.63 | 0.28 | <0.01 | 0.89 | 0.01 | 0.26 | <0.01 | 0.09 | 0.14 | 13.15 | 8.02 |
| 78656 | | 3.36 | 53.1 | 4.60 | 2.19 | 11.35 | 0.37 | 0.08 | 0.92 | 0.01 | 0.29 | <0.01 | 0.13 | 0.12 | 12.00 | 11.35 |
| 78657 | | 2.68 | 30.5 | 2.26 | 1.14 | 36.2 | 0.12 | 0.07 | 0.34 | <0.01 | 0.09 | <0.01 | 0.04 | 0.10 | 10.45 | 6.40 |
| 78658 | | 4.90 | 62.4 | 3.79 | 2.01 | 10.95 | 0.10 | <0.01 | 0.67 | 0.01 | 0.20 | 0.01 | 0.05 | 0.11 | 10.25 | 8.22 |
| 78659 | | 3.30 | 76.9 | 4.22 | 2.02 | 0.68 | 0.05 | <0.01 | 0.80 | 0.01 | 0.21 | <0.01 | 0.06 | 0.07 | 9.34 | 5.43 |
| 78660 | | 3.30 | 63.4 | 2.84 | 2.86 | 7.13 | 0.05 | <0.01 | 0.42 | 0.01 | 0.15 | 0.01 | 0.06 | 0.14 | 14.35 | 7.07 |
| 78660D | | <0.02 | | | | | | | | | | | | | | |

A10

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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To: DAHROUGE GEOLOGICAL CONSULTING LTD.
18-10509 81ST AVE. NW
EDMONTON AB T6E 1X7


Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | TOT-ICP06 | F-ELE82 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Total | F | Ag | Al | As | Ba | Be | Bi | Ca | Cd | Ce | Co | Cr | Cs | Cu |
| Units | % | % | ppm | % | ppm | ppm | ppm | ppm | % | ppm | ppm | ppm | ppm | ppm | ppm |
| LOR | 0.01 | 0.01 | 0.01 | 0.01 | 0.2 | 10 | 0.05 | 0.01 | 0.01 | 0.02 | 0.01 | 0.1 | 1 | 0.05 | 0.2 |
| 78901 | 95.97 | 3.91 | | | | | | | | | | | | | |
| 78902 | 89.13 | 14.85 | | | | | | | | | | | | | |
| 78903 | 74.08 | 20.3 | 0.02 | 0.09 | <5 | >10000 | 0.20 | 0.01 | 23.0 | 0.09 | 0.99 | 0.9 | <1 | <0.05 | <0.2 |
| 78903D | | 19.80 | | | | | | | | | | | | | |
| 78904 | 85.46 | 19.70 | | | | | | | | | | | | | |
| 78905 | 78.31 | 23.4 | | | | | | | | | | | | | |
| 78906 | 70.69 | 24.3 | | | | | | | | | | | | | |
| 78907 | 83.52 | 29.6 | | | | | | | | | | | | | |
| 78908 | 87.13 | 21.6 | | | | | | | | | | | | | |
| 78909 | 79.49 | 34.1 | | | | | | | | | | | | | |
| 78910 | 85.77 | 24.5 | | | | | | | | | | | | | |
| 78911 | 77.66 | 28.0 | | | | | | | | | | | | | |
| 78912 | 85.87 | 27.3 | 0.03 | 0.14 | <5 | >10000 | 0.16 | 0.04 | 28.4 | 0.25 | 1.51 | 2.8 | <1 | 0.05 | <0.2 |
| 78912D | | 27.0 | | | | | | | | | | | | | |
| 78913 | 86.37 | 28.2 | | | | | | | | | | | | | |
| 78914 | 79.97 | 29.2 | | | | | | | | | | | | | |
| 78915 | 79.38 | 31.3 | | | | | | | | | | | | | |
| 78916 | 88.18 | 14.00 | | | | | | | | | | | | | |
| 78917 | 93.44 | 14.35 | | | | | | | | | | | | | |
| 78918 | 96.70 | 2.23 | | | | | | | | | | | | | |
| 78919 | 82.43 | 23.0 | | | | | | | | | | | | | |
| 78920 | 82.68 | 21.9 | | | | | | | | | | | | | |
| 78921 | 89.91 | 7.90 | 0.18 | 1.23 | 29.7 | >10000 | 0.86 | 0.08 | 8.60 | 3.99 | 3.37 | 8.8 | 23 | 0.13 | 36.8 |
| 78921D | | 7.83 | | | | | | | | | | | | | |
| 78922 | 82.41 | 7.01 | | | | | | | | | | | | | |
| 78923 | 98.12 | 3.74 | | | | | | | | | | | | | |
| 78924 | 97.45 | 2.46 | | | | | | | | | | | | | |
| 78925 | 85.96 | 16.05 | | | | | | | | | | | | | |
| 78651 | 92.73 | 9.07 | | | | | | | | | | | | | |
| 78652 | 95.67 | 1.46 | | | | | | | | | | | | | |
| 78653 | 96.37 | 0.38 | | | | | | | | | | | | | |
| 78654 | 99.10 | 0.88 | 0.63 | 1.25 | 13.8 | >10000 | 0.35 | 0.08 | 0.99 | 3.97 | 6.28 | 10.4 | 49 | 0.19 | 32.5 |
| 78654D | | 0.90 | | | | | | | | | | | | | |
| 78655 | 99.60 | 2.21 | | | | | | | | | | | | | |
| 78656 | 96.51 | 7.63 | | | | | | | | | | | | | |
| 78657 | 87.71 | 24.1 | | | | | | | | | | | | | |
| 78658 | 98.77 | 7.26 | | | | | | | | | | | | | |
| 78659 | 99.79 | 0.59 | | | | | | | | | | | | | |
| 78660 | 98.49 | 4.72 | 0.54 | 1.41 | 9.9 | 7730 | 0.44 | 0.06 | 5.25 | 1.73 | 9.16 | 15.5 | 40 | 0.25 | 48.7 |
| 78660D | | 4.70 | | | | | | | | | | | | | |

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

A11

ALS Canada Ltd.

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**ALS Minerals**

To: **DAHROUGE GEOLOGICAL CONSULTING LTD.**
**18-10509 81ST AVE. NW**
**EDMONTON AB T6E 1X7**


Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method / Analyte / Units / LOR | ME-MS61 Fe % 0.01 | ME-MS61 Ga ppm 0.05 | ME-MS61 Ge ppm 0.05 | ME-MS61 Hf ppm 0.1 | ME-MS61 In ppm 0.005 | ME-MS61 K % 0.01 | ME-MS61 La ppm 0.5 | ME-MS61 Li ppm 0.2 | ME-MS61 Mg % 0.01 | ME-MS61 Mn ppm 5 | ME-MS61 Mo ppm 0.05 | ME-MS61 Na % 0.01 | ME-MS61 Nb ppm 0.1 | ME-MS61 Ni ppm 0.2 | ME-MS61 P ppm 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 78901 | | | | | | | | | | | | | | | | |
| 78902 | | | | | | | | | | | | | | | | |
| 78903 | | 0.06 | 0.14 | <0.05 | 0.1 | <0.005 | 0.02 | 1.4 | 7.6 | <0.01 | <5 | 1.53 | <0.01 | 0.2 | 5.2 | 60 |
| 78903D | | | | | | | | | | | | | | | | |
| 78904 | | | | | | | | | | | | | | | | |
| 78905 | | | | | | | | | | | | | | | | |
| 78906 | | | | | | | | | | | | | | | | |
| 78907 | | | | | | | | | | | | | | | | |
| 78908 | | | | | | | | | | | | | | | | |
| 78909 | | | | | | | | | | | | | | | | |
| 78910 | | | | | | | | | | | | | | | | |
| 78911 | | | | | | | | | | | | | | | | |
| 78912 | | 0.27 | 0.25 | 0.05 | <0.1 | <0.005 | 0.02 | 1.2 | 12.0 | <0.01 | 17 | 2.87 | <0.01 | 0.3 | 24.7 | 60 |
| 78912D | | | | | | | | | | | | | | | | |
| 78913 | | | | | | | | | | | | | | | | |
| 78914 | | | | | | | | | | | | | | | | |
| 78915 | | | | | | | | | | | | | | | | |
| 78916 | | | | | | | | | | | | | | | | |
| 78917 | | | | | | | | | | | | | | | | |
| 78918 | | | | | | | | | | | | | | | | |
| 78919 | | | | | | | | | | | | | | | | |
| 78920 | | | | | | | | | | | | | | | | |
| 78921 | | 1.90 | 3.78 | 0.10 | 0.3 | 0.007 | 0.25 | 3.7 | 19.3 | 0.01 | 59 | 22.3 | <0.01 | 2.1 | 221 | 340 |
| 78921D | | | | | | | | | | | | | | | | |
| 78922 | | | | | | | | | | | | | | | | |
| 78923 | | | | | | | | | | | | | | | | |
| 78924 | | | | | | | | | | | | | | | | |
| 78925 | | | | | | | | | | | | | | | | |
| 78651 | | | | | | | | | | | | | | | | |
| 78652 | | | | | | | | | | | | | | | | |
| 78653 | | | | | | | | | | | | | | | | |
| 78654 | | 1.09 | 5.57 | 0.08 | 0.5 | 0.009 | 0.32 | 5.3 | 23.2 | 0.02 | 30 | 45.8 | <0.01 | 3.0 | 143.0 | 210 |
| 78654D | | | | | | | | | | | | | | | | |
| 78655 | | | | | | | | | | | | | | | | |
| 78656 | | | | | | | | | | | | | | | | |
| 78657 | | | | | | | | | | | | | | | | |
| 78658 | | | | | | | | | | | | | | | | |
| 78659 | | | | | | | | | | | | | | | | |
| 78660 | | 1.93 | 2.63 | 0.09 | 0.5 | 0.006 | 0.35 | 6.1 | 17.5 | 0.03 | 39 | 29.5 | <0.01 | 2.8 | 111.0 | 240 |
| 78660D | | | | | | | | | | | | | | | | |

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: DAHROUGE GEOLOGICAL CONSULTING LTD.
18-10509 81ST AVE. NW
EDMONTON AB T6E 1X7


Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method / Analyte / Units / LOR | ME-MS61 Pb ppm 0.5 | ME-MS61 Rb ppm 0.1 | ME-MS61 Re ppm 0.002 | ME-MS61 S % 0.01 | ME-MS61 Sb ppm 0.05 | ME-MS61 Sc ppm 0.1 | ME-MS61 Se ppm 1 | ME-MS61 Sn ppm 0.2 | ME-MS61 Sr ppm 0.2 | ME-MS61 Ta ppm 0.05 | ME-MS61 Te ppm 0.05 | ME-MS61 Th ppm 0.2 | ME-MS61 Ti % 0.005 | ME-MS61 Tl ppm 0.02 | ME-MS61 U ppm 0.1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 78901 | | | | | | | | | | | | | | | | |
| 78902 | | | | | | | | | | | | | | | | |
| 78903 | | 1.0 | 0.7 | <0.002 | <0.01 | 0.63 | 0.2 | 1 | <0.2 | 5150 | <0.05 | <0.05 | <0.2 | <0.005 | 0.06 | 2.3 |
| 78903D | | | | | | | | | | | | | | | | |
| 78904 | | | | | | | | | | | | | | | | |
| 78905 | | | | | | | | | | | | | | | | |
| 78906 | | | | | | | | | | | | | | | | |
| 78907 | | | | | | | | | | | | | | | | |
| 78908 | | | | | | | | | | | | | | | | |
| 78909 | | | | | | | | | | | | | | | | |
| 78910 | | | | | | | | | | | | | | | | |
| 78911 | | | | | | | | | | | | | | | | |
| 78912 | | 5.1 | 0.8 | <0.002 | <0.01 | 0.58 | 0.4 | 2 | <0.2 | 2340 | <0.05 | <0.05 | <0.2 | <0.005 | 0.07 | 5.1 |
| 78912D | | | | | | | | | | | | | | | | |
| 78913 | | | | | | | | | | | | | | | | |
| 78914 | | | | | | | | | | | | | | | | |
| 78915 | | | | | | | | | | | | | | | | |
| 78916 | | | | | | | | | | | | | | | | |
| 78917 | | | | | | | | | | | | | | | | |
| 78918 | | | | | | | | | | | | | | | | |
| 78919 | | | | | | | | | | | | | | | | |
| 78920 | | | | | | | | | | | | | | | | |
| 78921 | | 16.5 | 9.1 | 0.027 | 0.04 | 5.24 | 1.7 | 5 | 0.6 | 1130 | 0.11 | 0.13 | 0.6 | 0.050 | 1.06 | 16.3 |
| 78921D | | | | | | | | | | | | | | | | |
| 78922 | | | | | | | | | | | | | | | | |
| 78923 | | | | | | | | | | | | | | | | |
| 78924 | | | | | | | | | | | | | | | | |
| 78925 | | | | | | | | | | | | | | | | |
| 78651 | | | | | | | | | | | | | | | | |
| 78652 | | | | | | | | | | | | | | | | |
| 78653 | | | | | | | | | | | | | | | | |
| 78654 | | 13.2 | 10.8 | 0.347 | 0.01 | 8.53 | 1.2 | 10 | 1.7 | 1700 | 0.17 | 0.19 | 1.4 | 0.089 | 2.13 | 6.6 |
| 78654D | | | | | | | | | | | | | | | | |
| 78655 | | | | | | | | | | | | | | | | |
| 78656 | | | | | | | | | | | | | | | | |
| 78657 | | | | | | | | | | | | | | | | |
| 78658 | | | | | | | | | | | | | | | | |
| 78659 | | | | | | | | | | | | | | | | |
| 78660 | | 7.6 | 13.1 | 0.020 | 0.04 | 4.36 | 1.5 | 5 | 1.8 | 1010 | 0.17 | 0.10 | 1.6 | 0.083 | 1.26 | 9.5 |
| 78660D | | | | | | | | | | | | | | | | |

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

A13

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To: **DAHROUGE GEOLOGICAL CONSULTING LTD.**
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**EDMONTON AB T6E 1X7**


Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method<br>Analyte<br>Units<br>LOR | ME-MS61<br>V<br>ppm<br>1 | ME-MS61<br>W<br>ppm<br>0.1 | ME-MS61<br>Y<br>ppm<br>0.1 | ME-MS61<br>Zn<br>ppm<br>2 | ME-MS61<br>Zr<br>ppm<br>0.5 | Au-ICP21<br>Au<br>ppm<br>0.001 |
|---|---|---|---|---|---|---|---|
| 78901 | | | | | | | |
| 78902 | | | | | | | |
| 78903 | | 3 | 0.4 | 11.5 | 23 | 1.1 | |
| 78903D | | | | | | | |
| 78904 | | | | | | | |
| 78905 | | | | | | | |
| 78906 | | | | | | | |
| 78907 | | | | | | | |
| 78908 | | | | | | | |
| 78909 | | | | | | | |
| 78910 | | | | | | | |
| 78911 | | | | | | | |
| 78912 | | 8 | 0.5 | 12.3 | 87 | 1.5 | |
| 78912D | | | | | | | |
| 78913 | | | | | | | |
| 78914 | | | | | | | |
| 78915 | | | | | | | |
| 78916 | | | | | | | |
| 78917 | | | | | | | |
| 78918 | | | | | | | |
| 78919 | | | | | | | |
| 78920 | | | | | | | |
| 78921 | | 187 | 0.9 | 13.6 | 945 | 12.9 | |
| 78921D | | | | | | | |
| 78922 | | | | | | | |
| 78923 | | | | | | | |
| 78924 | | | | | | | |
| 78925 | | | | | | | |
| 78651 | | | | | | | |
| 78652 | | | | | | | |
| 78653 | | | | | | | |
| 78654 | | 311 | 5.1 | 4.5 | 681 | 19.6 | |
| 78654D | | | | | | | |
| 78655 | | | | | | | |
| 78656 | | | | | | | |
| 78657 | | | | | | | |
| 78658 | | | | | | | |
| 78659 | | | | | | | |
| 78660 | | 255 | 7.1 | 13.4 | 420 | 16.3 | |
| 78660D | | | | | | | |

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

ALS Minerals

ALS Canada Ltd.
2103 Dollarton Hwy
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Phone: 604 984 0221 Fax: 604 984 0218 www.alsglobal.com

To: DAHROUGE GEOLOGICAL CONSULTING LTD.
18-10509 81ST AVE. NW
EDMONTON AB T6E 1X7


Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method | WEI-21 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | OA-GRA05 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Analyte | Recvd Wt. | SiO2 | Al2O3 | Fe2O3 | CaO | MgO | Na2O | K2O | Cr2O3 | TiO2 | MnO | P2O5 | SrO | BaO | LOI |
| | Units | kg | % | % | % | % | % | % | % | % | % | % | % | % | % | % |
| | LOR | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| 78661 | | 3.08 | 67.3 | 3.43 | 2.01 | 4.58 | 0.15 | <0.01 | 0.65 | 0.01 | 0.18 | <0.01 | 0.05 | 0.12 | 13.10 | 7.61 |
| 78662 | | 2.46 | 33.4 | 2.11 | 1.54 | 8.70 | 0.10 | 0.34 | 0.28 | 0.01 | 0.10 | <0.01 | 0.04 | 1.15 | 33.4 | 9.64 |
| 78663 | | 2.36 | 78.7 | 3.96 | 1.91 | 1.68 | 0.31 | <0.01 | 0.78 | 0.01 | 0.20 | 0.01 | 0.06 | 0.07 | 7.54 | 6.19 |
| 78664 | | 2.24 | 60.1 | 2.17 | 1.39 | 3.19 | 0.12 | <0.01 | 0.41 | 0.01 | 0.12 | <0.01 | 0.03 | 0.30 | 21.0 | 4.61 |
| 78665 | | 2.74 | 55.3 | 1.70 | 1.14 | 3.02 | 0.09 | <0.01 | 0.35 | <0.01 | 0.09 | <0.01 | 0.04 | 0.29 | 21.4 | 4.00 |
| 78666 | | 2.04 | 54.2 | 1.53 | 1.00 | 3.67 | 0.06 | 0.19 | 0.25 | <0.01 | 0.08 | <0.01 | 0.01 | 0.47 | 20.4 | 4.12 |
| 78667 | | 2.82 | 47.0 | 1.86 | 0.88 | 1.98 | 0.11 | <0.01 | 0.39 | <0.01 | 0.09 | <0.01 | 0.01 | 1.40 | 22.4 | 3.29 |
| 78667D | | <0.02 | | | | | | | | | | | | | | |
| 78668 | | 3.40 | 47.4 | 1.59 | 1.08 | 2.43 | 0.05 | 0.02 | 0.35 | <0.01 | 0.09 | <0.01 | 0.01 | 0.70 | 24.5 | 3.34 |
| 78669 | | 2.58 | 49.6 | 2.24 | 1.99 | 0.07 | 0.05 | <0.01 | 0.37 | <0.01 | 0.09 | <0.01 | 0.05 | 0.39 | 22.7 | 2.72 |
| 78670 | | 1.70 | 55.2 | 2.69 | 2.50 | 0.08 | 0.03 | <0.01 | 0.33 | 0.01 | 0.10 | 0.01 | 0.03 | 0.22 | 23.4 | 3.23 |
| 78671 | | 3.42 | 52.9 | 3.22 | 2.40 | 0.12 | 0.04 | <0.01 | 0.31 | 0.01 | 0.11 | 0.01 | 0.02 | 0.25 | 23.6 | 3.82 |
| 78672 | | 3.50 | 58.6 | 4.18 | 1.43 | 0.08 | 0.02 | <0.01 | 0.27 | <0.01 | 0.09 | <0.01 | 0.03 | 0.24 | 19.00 | 4.57 |
| 78673 | | 2.84 | 65.8 | 2.28 | 3.69 | 1.48 | 0.02 | 0.17 | 0.24 | 0.01 | 0.08 | 0.01 | 0.06 | 0.34 | 17.10 | 3.47 |
| 78674 | | 2.92 | 34.6 | 1.49 | 2.42 | 29.9 | 0.02 | 0.10 | 0.22 | <0.01 | 0.06 | 0.01 | 0.03 | 0.28 | 13.60 | 6.45 |
| 78675 | | 2.68 | 47.9 | 2.64 | 3.84 | 3.16 | 0.05 | 0.23 | 0.24 | <0.01 | 0.07 | 0.02 | 0.04 | 0.52 | 22.5 | 5.32 |
| 78676 | | 3.72 | 54.2 | 2.29 | 1.95 | 11.05 | 0.05 | <0.01 | 0.34 | 0.01 | 0.08 | 0.01 | 0.07 | 0.40 | 17.20 | 6.53 |
| 78676D | | <0.02 | | | | | | | | | | | | | | |
| 78677 | | 2.94 | 59.7 | 1.82 | 1.34 | 17.00 | 0.05 | 0.06 | 0.35 | <0.01 | 0.08 | <0.01 | 0.04 | 0.16 | 8.59 | 6.33 |
| 78678 | | 4.32 | 40.1 | 1.05 | 0.53 | 7.33 | 0.04 | 0.43 | 0.17 | <0.01 | 0.05 | <0.01 | 0.02 | 2.08 | 31.6 | 11.55 |
| 78679 | | 2.38 | 66.4 | 1.60 | 0.95 | 15.25 | 0.05 | <0.01 | 0.35 | 0.01 | 0.09 | <0.01 | 0.05 | 0.36 | 9.17 | 7.34 |
| 78680 | | 4.46 | 41.2 | 1.13 | 0.66 | 25.6 | 0.03 | 0.13 | 0.22 | <0.01 | 0.06 | <0.01 | 0.01 | 0.61 | 15.05 | 7.47 |
| 78681 | | 2.08 | 58.5 | 1.52 | 0.75 | 13.90 | 0.03 | <0.01 | 0.25 | <0.01 | 0.06 | <0.01 | 0.03 | 0.52 | 15.75 | 7.33 |
| 78682 | | 2.88 | 38.6 | 0.99 | 0.64 | 26.4 | 0.03 | 0.12 | 0.18 | <0.01 | 0.05 | <0.01 | 0.02 | 0.56 | 15.20 | 7.34 |
| 78682D | | <0.02 | | | | | | | | | | | | | | |
| 78683 | | 2.88 | 48.6 | 1.34 | 0.73 | 26.3 | 0.03 | 0.07 | 0.24 | <0.01 | 0.06 | 0.01 | 0.03 | 0.15 | 9.50 | 6.78 |
| 78684 | | 3.80 | 53.2 | 1.87 | 1.60 | 15.20 | 0.05 | 0.10 | 0.27 | <0.01 | 0.08 | 0.01 | 0.03 | 0.26 | 14.15 | 6.91 |
| 78685 | | 2.84 | 72.4 | 2.11 | 1.14 | 10.55 | 0.07 | <0.01 | 0.41 | 0.01 | 0.10 | <0.01 | 0.04 | 0.06 | 6.09 | 6.47 |
| 78851 | | 5.86 | 3.95 | 0.08 | 0.04 | 23.6 | 0.01 | 0.66 | <0.01 | <0.01 | <0.01 | <0.01 | 0.01 | 3.44 | 40.6 | 13.85 |
| 78852 | | 7.78 | 3.94 | 0.05 | 0.04 | 21.3 | 0.01 | 0.66 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 3.72 | 43.0 | 15.25 |
| 78853 | | 6.02 | 9.10 | 0.10 | 0.06 | 17.35 | 0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.02 | 4.14 | 44.3 | 16.05 |
| 78854 | | 7.00 | 6.77 | 0.16 | 0.09 | 24.2 | 0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.03 | 4.29 | 39.5 | 14.20 |
| 78855 | | 5.88 | 6.06 | 0.09 | 0.06 | 21.6 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.02 | 4.82 | 42.8 | 15.35 |
| 78855D | | <0.02 | | | | | | | | | | | | | | |
| 78856 | | 6.54 | 14.40 | 0.10 | 0.09 | 22.7 | 0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.03 | 3.51 | 36.6 | 15.65 |
| 78857 | | 5.24 | 22.8 | 0.15 | 0.14 | 30.0 | 0.02 | <0.01 | <0.01 | <0.01 | 0.01 | <0.01 | 0.04 | 2.42 | 24.7 | 11.10 |
| 78858 | | 5.56 | 10.05 | 0.09 | 0.07 | 21.1 | 0.04 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.01 | 4.32 | 39.8 | 15.65 |
| 78859 | | 7.44 | 8.06 | 0.05 | 0.05 | 15.55 | 0.02 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.02 | 4.71 | 46.3 | 17.35 |
| 78860 | | 6.80 | 11.90 | 0.41 | 0.19 | 22.7 | 0.03 | <0.01 | <0.01 | <0.01 | 0.02 | <0.01 | <0.01 | 4.33 | 37.3 | 13.55 |
| 78860D | | <0.02 | | | | | | | | | | | | | | |

A15

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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EDMONTON AB T6E 1X7


Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method / Analyte / Units / LOR | TOT-ICP06 Total % 0.01 | F-ELE82 F % 0.01 | ME-MS61 Ag ppm 0.01 | ME-MS61 Al % 0.01 | ME-MS61 As ppm 0.2 | ME-MS61 Ba ppm 10 | ME-MS61 Be ppm 0.05 | ME-MS61 Bi ppm 0.01 | ME-MS61 Ca % 0.01 | ME-MS61 Cd ppm 0.02 | ME-MS61 Ce ppm 0.01 | ME-MS61 Co ppm 0.1 | ME-MS61 Cr ppm 1 | ME-MS61 Cs ppm 0.05 | ME-MS61 Cu ppm 0.2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 78661 | | 99.19 | 3.27 | | | | | | | | | | | | | |
| 78662 | | 90.81 | 5.92 | | | | | | | | | | | | | |
| 78663 | | 101.42 | 1.18 | | | | | | | | | | | | | |
| 78664 | | 93.45 | 2.08 | | | | | | | | | | | | | |
| 78665 | | 87.42 | 1.94 | | | | | | | | | | | | | |
| 78666 | | 85.98 | 2.40 | | | | | | | | | | | | | |
| 78667 | | 79.41 | 1.33 | 0.66 | 0.92 | 3.5 | 1680 | 0.32 | 0.03 | 1.46 | 0.35 | 5.07 | 18.1 | 21 | 0.35 | 23.1 |
| 78667D | | | 1.32 | | | | | | | | | | | | | |
| 78668 | | 81.56 | 1.64 | | | | | | | | | | | | | |
| 78669 | | 80.27 | 0.10 | | | | | | | | | | | | | |
| 78670 | | 87.83 | 0.10 | | | | | | | | | | | | | |
| 78671 | | 86.81 | 0.11 | | | | | | | | | | | | | |
| 78672 | | 88.51 | 0.11 | | | | | | | | | | | | | |
| 78673 | | 94.75 | 1.01 | | | | | | | | | | | | | |
| 78674 | | 89.18 | 17.85 | | | | | | | | | | | | | |
| 78675 | | 86.53 | 2.14 | | | | | | | | | | | | | |
| 78676 | | 94.18 | 7.58 | 0.39 | 1.17 | 9.8 | 6260 | 0.57 | 0.04 | 8.22 | 1.47 | 4.42 | 13.1 | 31 | 0.26 | 76.4 |
| 78676D | | | 7.33 | | | | | | | | | | | | | |
| 78677 | | 95.52 | 11.25 | | | | | | | | | | | | | |
| 78678 | | 94.95 | 5.02 | | | | | | | | | | | | | |
| 78679 | | 101.62 | 9.48 | | | | | | | | | | | | | |
| 78680 | | 92.17 | 16.90 | | | | | | | | | | | | | |
| 78681 | | 98.64 | 9.00 | | | | | | | | | | | | | |
| 78682 | | 90.13 | 16.85 | 0.13 | 0.52 | <5 | >10000 | 0.27 | 0.03 | 18.05 | 1.11 | 4.06 | 2.0 | 18 | 0.19 | <0.2 |
| 78682D | | | 17.10 | | | | | | | | | | | | | |
| 78683 | | 93.84 | 16.05 | | | | | | | | | | | | | |
| 78684 | | 93.73 | 10.25 | | | | | | | | | | | | | |
| 78685 | | 99.45 | 7.00 | | | | | | | | | | | | | |
| 78851 | | 86.24 | 15.10 | | | | | | | | | | | | | |
| 78852 | | 87.97 | 12.90 | | | | | | | | | | | | | |
| 78853 | | 91.13 | 11.10 | | | | | | | | | | | | | |
| 78854 | | 89.25 | 15.15 | | | | | | | | | | | | | |
| 78855 | | 90.80 | 14.20 | 0.01 | 0.05 | <5 | >10000 | <0.05 | 0.01 | 14.15 | 0.14 | 0.69 | 0.2 | <1 | <0.05 | <0.2 |
| 78855D | | | 13.95 | | | | | | | | | | | | | |
| 78856 | | 93.09 | 13.00 | | | | | | | | | | | | | |
| 78857 | | 91.38 | 18.45 | | | | | | | | | | | | | |
| 78858 | | 91.13 | 11.95 | | | | | | | | | | | | | |
| 78859 | | 92.11 | 9.10 | | | | | | | | | | | | | |
| 78860 | | 90.43 | 14.60 | 0.03 | 0.21 | <5 | >10000 | 0.12 | 0.02 | 15.25 | 0.13 | 1.49 | 0.6 | <1 | 0.16 | 72.8 |
| 78860D | | | 14.55 | | | | | | | | | | | | | |

A16

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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EDMONTON AB T6E 1X7


Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method / Analyte / Units / LOR | ME-MS61 Fe % 0.01 | ME-MS61 Ga ppm 0.05 | ME-MS61 Ge ppm 0.05 | ME-MS61 Hf ppm 0.1 | ME-MS61 In ppm 0.005 | ME-MS61 K % 0.01 | ME-MS61 La ppm 0.5 | ME-MS61 Li ppm 0.2 | ME-MS61 Mg % 0.01 | ME-MS61 Mn ppm 5 | ME-MS61 Mo ppm 0.05 | ME-MS61 Na % 0.01 | ME-MS61 Nb ppm 0.1 | ME-MS61 Ni ppm 0.2 | ME-MS61 P ppm 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 78661 | | | | | | | | | | | | | | | | |
| 78662 | | | | | | | | | | | | | | | | |
| 78663 | | | | | | | | | | | | | | | | |
| 78664 | | | | | | | | | | | | | | | | |
| 78665 | | | | | | | | | | | | | | | | |
| 78666 | | | | | | | | | | | | | | | | |
| 78667 | | 0.59 | 2.22 | 0.05 | 0.3 | <0.005 | 0.29 | 2.9 | 27.4 | 0.06 | 24 | 20.8 | 0.01 | 1.6 | 46.3 | 80 |
| 78667D | | | | | | | | | | | | | | | | |
| 78668 | | | | | | | | | | | | | | | | |
| 78669 | | | | | | | | | | | | | | | | |
| 78670 | | | | | | | | | | | | | | | | |
| 78671 | | | | | | | | | | | | | | | | |
| 78672 | | | | | | | | | | | | | | | | |
| 78673 | | | | | | | | | | | | | | | | |
| 78674 | | | | | | | | | | | | | | | | |
| 78675 | | | | | | | | | | | | | | | | |
| 78676 | | 1.35 | 1.78 | 0.08 | 0.3 | <0.005 | 0.27 | 3.7 | 14.9 | 0.02 | 59 | 35.0 | <0.01 | 1.7 | 109.5 | 260 |
| 78676D | | | | | | | | | | | | | | | | |
| 78677 | | | | | | | | | | | | | | | | |
| 78678 | | | | | | | | | | | | | | | | |
| 78679 | | | | | | | | | | | | | | | | |
| 78680 | | | | | | | | | | | | | | | | |
| 78681 | | | | | | | | | | | | | | | | |
| 78682 | | 0.46 | 1.18 | 0.06 | 0.2 | 0.005 | 0.18 | 3.7 | 8.9 | 0.02 | 20 | 23.7 | <0.01 | 1.2 | 24.8 | 140 |
| 78682D | | | | | | | | | | | | | | | | |
| 78683 | | | | | | | | | | | | | | | | |
| 78684 | | | | | | | | | | | | | | | | |
| 78685 | | | | | | | | | | | | | | | | |
| 78851 | | | | | | | | | | | | | | | | |
| 78852 | | | | | | | | | | | | | | | | |
| 78853 | | | | | | | | | | | | | | | | |
| 78854 | | | | | | | | | | | | | | | | |
| 78855 | | 0.05 | 0.14 | 0.05 | 0.1 | <0.005 | <0.01 | 3.3 | 1.2 | <0.01 | <5 | 1.60 | <0.01 | 0.1 | 6.5 | 70 |
| 78855D | | | | | | | | | | | | | | | | |
| 78856 | | | | | | | | | | | | | | | | |
| 78857 | | | | | | | | | | | | | | | | |
| 78858 | | | | | | | | | | | | | | | | |
| 78859 | | | | | | | | | | | | | | | | |
| 78860 | | 0.13 | 0.44 | 0.05 | 0.1 | <0.005 | 0.04 | 3.9 | 3.2 | 0.02 | <5 | 1.91 | <0.01 | 0.4 | 8.8 | 50 |
| 78860D | | | | | | | | | | | | | | | | |

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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**EDMONTON AB T6E 1X7**


Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Analyte | Pb | Rb | Re | S | Sb | Sc | Se | Sn | Sr | Ta | Te | Th | Ti | Tl | U |
| | Units | ppm | ppm | ppm | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % | ppm | ppm |
| | LOR | 0.5 | 0.1 | 0.002 | 0.01 | 0.05 | 0.1 | 1 | 0.2 | 0.2 | 0.05 | 0.05 | 0.2 | 0.005 | 0.02 | 0.1 |
| 78661 | | | | | | | | | | | | | | | | |
| 78662 | | | | | | | | | | | | | | | | |
| 78663 | | | | | | | | | | | | | | | | |
| 78664 | | | | | | | | | | | | | | | | |
| 78665 | | | | | | | | | | | | | | | | |
| 78666 | | | | | | | | | | | | | | | | |
| 78667 | | 3.3 | 14.1 | 0.029 | 0.18 | 1.02 | 1.2 | 3 | 2.0 | 6120 | 0.10 | 0.07 | 1.2 | 0.053 | 0.92 | 3.2 |
| 78667D | | | | | | | | | | | | | | | | |
| 78668 | | | | | | | | | | | | | | | | |
| 78669 | | | | | | | | | | | | | | | | |
| 78670 | | | | | | | | | | | | | | | | |
| 78671 | | | | | | | | | | | | | | | | |
| 78672 | | | | | | | | | | | | | | | | |
| 78673 | | | | | | | | | | | | | | | | |
| 78674 | | | | | | | | | | | | | | | | |
| 78675 | | | | | | | | | | | | | | | | |
| 78676 | | 6.6 | 11.4 | 0.034 | 0.08 | 2.48 | 1.3 | 5 | 0.9 | 2600 | 0.10 | 0.06 | 0.6 | 0.047 | 0.73 | 9.5 |
| 78676D | | | | | | | | | | | | | | | | |
| 78677 | | | | | | | | | | | | | | | | |
| 78678 | | | | | | | | | | | | | | | | |
| 78679 | | | | | | | | | | | | | | | | |
| 78680 | | | | | | | | | | | | | | | | |
| 78681 | | | | | | | | | | | | | | | | |
| 78682 | | 5.3 | 7.2 | 0.028 | <0.01 | 1.77 | 0.7 | 3 | 0.3 | 5090 | 0.06 | 0.06 | 0.9 | 0.034 | 0.50 | 4.3 |
| 78682D | | | | | | | | | | | | | | | | |
| 78683 | | | | | | | | | | | | | | | | |
| 78684 | | | | | | | | | | | | | | | | |
| 78685 | | | | | | | | | | | | | | | | |
| 78851 | | | | | | | | | | | | | | | | |
| 78852 | | | | | | | | | | | | | | | | |
| 78853 | | | | | | | | | | | | | | | | |
| 78854 | | | | | | | | | | | | | | | | |
| 78855 | | 0.9 | 0.4 | <0.002 | <0.01 | 0.77 | 0.1 | 1 | <0.2 | >10000 | <0.05 | 0.10 | <0.2 | <0.005 | 0.10 | 3.0 |
| 78855D | | | | | | | | | | | | | | | | |
| 78856 | | | | | | | | | | | | | | | | |
| 78857 | | | | | | | | | | | | | | | | |
| 78858 | | | | | | | | | | | | | | | | |
| 78859 | | | | | | | | | | | | | | | | |
| 78860 | | 1.5 | 2.5 | <0.002 | <0.01 | 0.78 | 0.6 | 1 | <0.2 | >10000 | <0.05 | 0.06 | 0.3 | 0.008 | 0.09 | 2.3 |
| 78860D | | | | | | | | | | | | | | | | |

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

A18

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EDMONTON AB T6E 1X7


Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method / Analyte / Units / LOR | ME-MS61 V ppm 1 | ME-MS61 W ppm 0.1 | ME-MS61 Y ppm 0.1 | ME-MS61 Zn ppm 2 | ME-MS61 Zr ppm 0.5 | Au-ICP21 Au ppm 0.001 |
|---|---|---|---|---|---|---|---|
| 78661 | | | | | | | |
| 78662 | | | | | | | |
| 78663 | | | | | | | |
| 78664 | | | | | | | |
| 78665 | | | | | | | |
| 78666 | | | | | | | |
| 78667 | | 208 | 9.8 | 3.3 | 48 | 10.4 | |
| 78667D | | | | | | | |
| 78668 | | | | | | | |
| 78669 | | | | | | | |
| 78670 | | | | | | | |
| 78671 | | | | | | | |
| 78672 | | | | | | | |
| 78673 | | | | | | | |
| 78674 | | | | | | | |
| 78675 | | | | | | | |
| 78676 | | 332 | 4.6 | 16.9 | 322 | 10.3 | |
| 78676D | | | | | | | |
| 78677 | | | | | | | |
| 78678 | | | | | | | |
| 78679 | | | | | | | |
| 78680 | | | | | | | |
| 78681 | | | | | | | |
| 78682 | | 199 | 1.0 | 15.7 | 106 | 7.7 | |
| 78682D | | | | | | | |
| 78683 | | | | | | | |
| 78684 | | | | | | | |
| 78685 | | | | | | | |
| 78851 | | | | | | | |
| 78852 | | | | | | | |
| 78853 | | | | | | | |
| 78854 | | | | | | | |
| 78855 | | 9 | 0.1 | 8.6 | 18 | 0.8 | |
| 78855D | | | | | | | |
| 78856 | | | | | | | |
| 78857 | | | | | | | |
| 78858 | | | | | | | |
| 78859 | | | | | | | |
| 78860 | | 36 | 0.1 | 8.6 | 28 | 2.1 | 0.001 |
| 78860D | | | | | | | |

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: 604 984 0221 Fax: 604 984 0218 www.alsglobal.com

To: DAHROUGE GEOLOGICAL CONSULTING LTD.
18-10509 81ST AVE. NW
EDMONTON AB T6E 1X7


Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | WEI-21 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | OA-GRA05 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Recvd Wt. | SiO2 | Al2O3 | Fe2O3 | CaO | MgO | Na2O | K2O | Cr2O3 | TiO2 | MnO | P2O5 | SrO | BaO | LOI |
| Units | kg | % | % | % | % | % | % | % | % | % | % | % | % | % | % |
| LOR | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| 78861 | 6.02 | 4.68 | 0.05 | 0.03 | 22.3 | 0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.02 | 4.82 | 46.7 | 15.25 |
| 78862 | 8.80 | 6.58 | 0.06 | 0.04 | 26.4 | 0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.02 | 3.89 | 39.2 | 13.80 |
| 78863 | 4.70 | 5.45 | 0.07 | 0.03 | 3.49 | 0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.01 | 5.04 | 61.9 | 15.20 |
| 78864 | 6.38 | 4.01 | 0.09 | 0.03 | 10.95 | 0.02 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 4.32 | 53.8 | 18.75 |
| 78865 | 5.78 | 1.28 | 0.02 | 0.01 | 13.70 | 0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.04 | 4.89 | 52.8 | 19.40 |
| 78866 | 4.02 | 3.15 | 0.08 | 0.05 | 15.75 | 0.02 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 3.44 | 50.4 | 19.75 |
| 78877 | 7.06 | 15.65 | 1.72 | 0.87 | 41.2 | 0.01 | <0.01 | 0.08 | <0.01 | 0.06 | <0.01 | 0.09 | 0.58 | 17.05 | 5.20 |
| 78877D | <0.02 | | | | | | | | | | | | | | |
| 78878 | 5.88 | 5.69 | 0.23 | 0.17 | 44.9 | 0.02 | <0.01 | <0.01 | <0.01 | 0.01 | <0.01 | 0.01 | 1.44 | 23.1 | 7.91 |
| 78879 | 3.86 | 7.65 | 0.33 | 0.18 | 23.6 | 0.03 | <0.01 | <0.01 | <0.01 | 0.01 | <0.01 | 0.04 | 1.03 | 38.7 | 20.3 |
| 78880 | 7.14 | 18.60 | 1.28 | 0.56 | 30.6 | 0.02 | <0.01 | 0.06 | <0.01 | 0.06 | <0.01 | 0.03 | 0.88 | 25.8 | 12.40 |
| 78881 | 6.90 | 20.6 | 1.00 | 0.49 | 26.5 | 0.03 | <0.01 | 0.06 | <0.01 | 0.05 | <0.01 | 0.07 | 2.21 | 29.3 | 11.20 |
| 78882 | 8.32 | 13.40 | 0.28 | 0.16 | 21.7 | 0.01 | <0.01 | <0.01 | <0.01 | 0.01 | <0.01 | 0.02 | 3.06 | 38.7 | 12.80 |
| 78882D | <0.02 | | | | | | | | | | | | | | |

A20

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
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Phone: 604 984 0221 Fax: 604 984 0218 www.alsglobal.com

To: DAHROUGE GEOLOGICAL CONSULTING LTD.
18-10509 81ST AVE. NW
EDMONTON AB T6E 1X7


Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method<br>Analyte<br>Units<br>LOR | TOT-ICP06<br>Total<br>%<br>0.01 | F-ELE82<br>F<br>%<br>0.01 | ME-MS61<br>Ag<br>ppm<br>0.01 | ME-MS61<br>Al<br>%<br>0.01 | ME-MS61<br>As<br>ppm<br>0.2 | ME-MS61<br>Ba<br>ppm<br>10 | ME-MS61<br>Be<br>ppm<br>0.05 | ME-MS61<br>Bi<br>ppm<br>0.01 | ME-MS61<br>Ca<br>%<br>0.01 | ME-MS61<br>Cd<br>ppm<br>0.02 | ME-MS61<br>Ce<br>ppm<br>0.01 | ME-MS61<br>Co<br>ppm<br>0.1 | ME-MS61<br>Cr<br>ppm<br>1 | ME-MS61<br>Cs<br>ppm<br>0.05 | ME-MS61<br>Cu<br>ppm<br>0.2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 78861 | | 93.86 | 12.80 | | | | | | | | | | | | | |
| 78862 | | 90.00 | 16.15 | | | | | | | | | | | | | |
| 78863 | | 91.20 | 1.12 | | | | | | | | | | | | | |
| 78864 | | 91.97 | 4.72 | | | | | | | | | | | | | |
| 78865 | | 92.15 | 7.45 | | | | | | | | | | | | | |
| 78866 | | 92.64 | 6.93 | | | | | | | | | | | | | |
| 78877 | | 82.51 | 25.1 | 0.12 | 0.87 | <5 | >10000 | 0.21 | 0.02 | 28.0 | 0.37 | 4.80 | 2.7 | 10 | 0.08 | 19.2 |
| 78877D | | | 25.2 | | | | | | | | | | | | | |
| 78878 | | 83.48 | 26.8 | | | | | | | | | | | | | |
| 78879 | | 91.87 | 7.77 | | | | | | | | | | | | | |
| 78880 | | 90.29 | 16.70 | | | | | | | | | | | | | |
| 78881 | | 91.51 | 16.70 | | | | | | | | | | | | | |
| 78882 | | 90.14 | 14.00 | 0.04 | 0.15 | <5 | >10000 | 0.06 | 0.05 | 15.00 | 0.31 | 1.18 | 1.1 | <1 | 0.05 | <0.2 |
| 78882D | | | 13.80 | | | | | | | | | | | | | |

A21

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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ALS Minerals

To: DAHROUGE GEOLOGICAL CONSULTING LTD.
18-10509 81ST AVE. NW
EDMONTON AB T6E 1X7


Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method / Analyte / Units / LOR | ME-MS61 Fe % 0.01 | ME-MS61 Ga ppm 0.05 | ME-MS61 Ge ppm 0.05 | ME-MS61 Hf ppm 0.1 | ME-MS61 In ppm 0.005 | ME-MS61 K % 0.01 | ME-MS61 La ppm 0.5 | ME-MS61 Li ppm 0.2 | ME-MS61 Mg % 0.01 | ME-MS61 Mn ppm 5 | ME-MS61 Mo ppm 0.05 | ME-MS61 Na % 0.01 | ME-MS61 Nb ppm 0.1 | ME-MS61 Ni ppm 0.2 | ME-MS61 P ppm 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 78861 | | | | | | | | | | | | | | | | |
| 78862 | | | | | | | | | | | | | | | | |
| 78863 | | | | | | | | | | | | | | | | |
| 78864 | | | | | | | | | | | | | | | | |
| 78865 | | | | | | | | | | | | | | | | |
| 78866 | | | | | | | | | | | | | | | | |
| 78877 | | 0.62 | 0.36 | 0.06 | 0.2 | <0.005 | 0.08 | 3.9 | 2.8 | 0.01 | 10 | 22.8 | <0.01 | 1.5 | 89.5 | 340 |
| 78877D | | | | | | | | | | | | | | | | |
| 78878 | | | | | | | | | | | | | | | | |
| 78879 | | | | | | | | | | | | | | | | |
| 78880 | | | | | | | | | | | | | | | | |
| 78881 | | | | | | | | | | | | | | | | |
| 78882 | | 0.12 | 0.20 | 0.05 | 0.1 | <0.005 | 0.02 | 3.1 | 3.7 | <0.01 | 10 | 6.75 | <0.01 | 0.3 | 84.8 | 70 |
| 78882D | | | | | | | | | | | | | | | | |

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

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Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method<br>Analyte<br>Units<br>LOR | ME-MS61<br>Pb<br>ppm<br>0.5 | ME-MS61<br>Rb<br>ppm<br>0.1 | ME-MS61<br>Re<br>ppm<br>0.002 | ME-MS61<br>S<br>%<br>0.01 | ME-MS61<br>Sb<br>ppm<br>0.05 | ME-MS61<br>Sc<br>ppm<br>0.1 | ME-MS61<br>Se<br>ppm<br>1 | ME-MS61<br>Sn<br>ppm<br>0.2 | ME-MS61<br>Sr<br>ppm<br>0.2 | ME-MS61<br>Ta<br>ppm<br>0.05 | ME-MS61<br>Te<br>ppm<br>0.05 | ME-MS61<br>Th<br>ppm<br>0.2 | ME-MS61<br>Ti<br>%<br>0.005 | ME-MS61<br>Tl<br>ppm<br>0.02 | ME-MS61<br>U<br>ppm<br>0.1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 78861 | | | | | | | | | | | | | | | | |
| 78862 | | | | | | | | | | | | | | | | |
| 78863 | | | | | | | | | | | | | | | | |
| 78864 | | | | | | | | | | | | | | | | |
| 78865 | | | | | | | | | | | | | | | | |
| 78866 | | | | | | | | | | | | | | | | |
| 78877 | | 2.9 | 3.3 | 0.018 | 0.01 | 5.35 | 1.6 | 3 | 0.8 | 4730 | 0.07 | <0.05 | 0.6 | 0.033 | 0.37 | 13.8 |
| 78877D | | | | | | | | | | | | | | | | |
| 78878 | | | | | | | | | | | | | | | | |
| 78879 | | | | | | | | | | | | | | | | |
| 78880 | | | | | | | | | | | | | | | | |
| 78881 | | | | | | | | | | | | | | | | |
| 78882 | | 4.6 | 0.9 | <0.002 | <0.01 | 2.48 | 0.2 | 3 | 0.2 | >10000 | <0.05 | 0.09 | 0.3 | 0.006 | 0.14 | 4.8 |
| 78882D | | | | | | | | | | | | | | | | |

A23

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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EDMONTON AB T6E 1X7


Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method / Analyte / Units / LOR | ME-MS61 V ppm 1 | ME-MS61 W ppm 0.1 | ME-MS61 Y ppm 0.1 | ME-MS61 Zn ppm 2 | ME-MS61 Zr ppm 0.5 | Au-ICP21 Au ppm 0.001 |
|---|---|---|---|---|---|---|---|
| 78861 | | | | | | | |
| 78862 | | | | | | | |
| 78863 | | | | | | | |
| 78864 | | | | | | | |
| 78865 | | | | | | | |
| 78866 | | | | | | | |
| 78877 | | 71 | 0.4 | 23.4 | 117 | 7.2 | <0.001 |
| 78877D | | | | | | | |
| 78878 | | | | | | | |
| 78879 | | | | | | | |
| 78880 | | | | | | | |
| 78881 | | | | | | | |
| 78882 | | 24 | 0.3 | 7.9 | 54 | 2.2 | |
| 78882D | | | | | | | |

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

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# CERTIFICATE OF ANALYSIS VA12234434

| Method | CERTIFICATE COMMENTS |
|---|---|
| ME-MS61 | REE's may not be totally soluble in this method. |
| ME-MS61 | Interference: Samples with Ca>10% on ICP-MS As. ICP-AES As results reported (5 ppm DL) |

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Finalized Date: 2-NOV-2012
This copy reported on 9-NOV-2012
Account: DAHGEO

# QC CERTIFICATE VA12234434

Project: Liard Fluorspar
P.O. No.: 14850
This report is for 94 Rock samples submitted to our lab in Vancouver, BC, Canada on 26-SEP-2012.
The following have access to data associated with this certificate:

| | | |
|---|---|---|
| NEIL MCCALLUM | | |

## SAMPLE PREPARATION

| ALS CODE | DESCRIPTION |
|---|---|
| WEI-21 | Received Sample Weight |
| LOG-22 | Sample login - Rcd w/o BarCode |
| CRU-31 | Fine crushing - 70% <2mm |
| SPLIT-Z | Pulp split for send out |
| SPL-21 | Split sample - riffle splitter |
| PUL-31 | Pulverize split to 85% <75 um |
| LOG-22d | Sample login - Rcd w/o BarCode dup |
| SPL-34 | Pulp Splitting Charge |

## ANALYTICAL PROCEDURES

| ALS CODE | DESCRIPTION | INSTRUMENT |
|---|---|---|
| TOT-ICP06 | Total Calculation for ICP06 | ICP-AES |
| F-ELE82 | F - High Level | |
| ME-MS61 | 48 element four acid ICP-MS | |
| Au-ICP21 | Au 30g FA ICP-AES Finish | ICP-AES |
| ME-ICP06 | Whole Rock Package - ICP-AES | ICP-AES |
| OA-GRA05 | Loss on Ignition at 1000C | WST-SEQ |

To: DAHROUGE GEOLOGICAL CONSULTING LTD.
ATTN: NEIL MCCALLUM
SUITE 1450 - 789 WEST PENDER STREET
VANCOUVER BC V6C 1H2

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature:
Colin Ramshaw, Vancouver Laboratory Manager

***** See Appendix Page for comments regarding this certificate *****

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

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Finalized Date: 2-NOV-2012
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# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | ME-ICP06 | OA-GRA05 | TOT-ICP06 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | SiO2 | Al2O3 | Fe2O3 | CaO | MgO | Na2O | K2O | Cr2O3 | TiO2 | MnO | P2O5 | SrO | BaO | LOI | Total |
| Units | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % |
| LOR | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| **STANDARDS** | | | | | | | | | | | | | | | |
| AMIS0085 | 72.0 | 10.75 | 3.43 | 3.20 | 1.64 | 1.73 | 4.54 | 0.08 | 0.21 | 0.07 | 0.06 | 0.01 | 0.05 | | |
| Target Range - Lower Bound | 67.0 | 10.40 | 3.32 | 3.11 | 1.65 | 1.63 | 4.45 | 0.06 | 0.19 | 0.05 | 0.05 | <0.01 | 0.02 | | |
| Upper Bound | 74.1 | 11.55 | 3.69 | 3.45 | 1.85 | 1.83 | 4.93 | 0.10 | 0.23 | 0.09 | 0.09 | 0.03 | 0.06 | | |
| AMIS0167 | 93.4 | 2.45 | 3.51 | 0.13 | 0.23 | 0.19 | 0.52 | 0.06 | 0.15 | 0.02 | 0.03 | <0.01 | 0.03 | | |
| AMIS0167 | 91.8 | 2.45 | 3.36 | 0.13 | 0.23 | 0.07 | 0.48 | 0.06 | 0.15 | 0.02 | 0.03 | <0.01 | 0.01 | | |
| AMIS0167 | 91.7 | 2.30 | 3.36 | 0.13 | 0.22 | 0.08 | 0.47 | 0.06 | 0.14 | 0.02 | 0.02 | <0.01 | 0.01 | | |
| AMIS0167 | 94.8 | 2.41 | 3.40 | 0.14 | 0.22 | 0.08 | 0.48 | 0.06 | 0.15 | 0.02 | 0.05 | <0.01 | 0.02 | | |
| AMIS0167 | 94.8 | 2.47 | 3.57 | 0.14 | 0.24 | 0.08 | 0.50 | 0.06 | 0.16 | 0.02 | 0.03 | <0.01 | 0.02 | | |
| Target Range - Lower Bound | 86.9 | 2.29 | 3.27 | 0.11 | 0.22 | 0.07 | 0.47 | 0.04 | 0.13 | <0.01 | <0.01 | <0.01 | <0.01 | | |
| Upper Bound | 96.0 | 2.55 | 3.63 | 0.15 | 0.26 | 0.11 | 0.54 | 0.08 | 0.17 | 0.04 | 0.05 | 0.02 | 0.02 | | |
| AMIS0167 | | | | | | | | | | | | | | 1.53 | |
| AMIS0167 | | | | | | | | | | | | | | 1.70 | |
| AMIS0167 | | | | | | | | | | | | | | 1.50 | |
| AMIS0167 | | | | | | | | | | | | | | 1.39 | |
| AMIS0167 | | | | | | | | | | | | | | 1.73 | |
| Target Range - Lower Bound | | | | | | | | | | | | | | 1.53 | |
| Upper Bound | | | | | | | | | | | | | | 1.71 | |
| GBM908-10 | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| GBM908-5 | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| GEOMS-03 | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| GLG307-4 | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| GPP-01 | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |

A27

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

ALS Minerals
ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: 604 984 0221 Fax: 604 984 0218 www.alsglobal.com

To: DAHROUGE GEOLOGICAL CONSULTING LTD.
18-10509 81ST AVE. NW
EDMONTON AB T6E 1X7


Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | F-ELE82 F % 0.01 | ME-MS61 Ag ppm 0.01 | ME-MS61 Al % 0.01 | ME-MS61 As ppm 0.2 | ME-MS61 Ba ppm 10 | ME-MS61 Be ppm 0.05 | ME-MS61 Bi ppm 0.01 | ME-MS61 Ca % 0.01 | ME-MS61 Cd ppm 0.02 | ME-MS61 Ce ppm 0.01 | ME-MS61 Co ppm 0.1 | ME-MS61 Cr ppm 1 | ME-MS61 Cs ppm 0.05 | ME-MS61 Cu ppm 0.2 | ME-MS61 Fe % 0.01 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **STANDARDS** | | | | | | | | | | | | | | | |
| AMIS0085 | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| AMIS0167 | | | | | | | | | | | | | | | |
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| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
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| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| GBM908-10 | | 2.91 | 6.84 | 52.8 | 1090 | 1.20 | 1.09 | 3.74 | 1.74 | 103.0 | 25.3 | 138 | 3.63 | 3570 | 5.67 |
| Target Range - Lower Bound | | 2.69 | 6.40 | 49.3 | 930 | 1.19 | 1.09 | 3.33 | 1.52 | 99.0 | 23.3 | 125 | 3.37 | 3270 | 5.21 |
| Upper Bound | | 3.31 | 7.84 | 60.7 | 1280 | 1.57 | 1.35 | 4.10 | 1.90 | 121.0 | 28.7 | 155 | 4.23 | 3990 | 6.39 |
| GBM908-5 | | 64.9 | 7.77 | 6.6 | 2470 | 2.64 | 0.69 | 2.03 | 0.16 | 232 | 10.1 | 26 | 1.67 | 514 | 3.42 |
| Target Range - Lower Bound | | 52.0 | 6.79 | 5.7 | 1950 | 2.27 | 0.81 | 1.70 | 0.11 | 198.0 | 9.8 | 23 | 1.48 | 448 | 3.14 |
| Upper Bound | | 63.6 | 8.32 | 7.5 | 2670 | 2.89 | 1.01 | 2.10 | 0.20 | 242 | 12.2 | 30 | 1.92 | 548 | 3.86 |
| GEOMS-03 | | 0.71 | 5.28 | 633 | 2450 | 1.60 | 0.40 | 0.41 | 0.41 | 54.4 | 11.8 | 114 | 10.45 | 138.0 | 4.14 |
| Target Range - Lower Bound | | 0.67 | 4.61 | 570 | 2060 | 1.34 | 0.31 | 0.33 | 0.30 | 47.0 | 10.7 | 105 | 9.04 | 120.5 | 3.64 |
| Upper Bound | | 0.85 | 5.65 | 697 | 2810 | 1.74 | 0.41 | 0.43 | 0.42 | 57.4 | 13.3 | 131 | 11.15 | 147.5 | 4.48 |
| GLG307-4 | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| GPP-01 | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |

A28

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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EDMONTON AB T6E 1X7


Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method / Analyte / Units / LOR | ME-MS61 Ga ppm 0.05 | ME-MS61 Ge ppm 0.05 | ME-MS61 Hf ppm 0.1 | ME-MS61 In ppm 0.005 | ME-MS61 K % 0.01 | ME-MS61 La ppm 0.5 | ME-MS61 Li ppm 0.2 | ME-MS61 Mg % 0.01 | ME-MS61 Mn ppm 5 | ME-MS61 Mo ppm 0.05 | ME-MS61 Na % 0.01 | ME-MS61 Nb ppm 0.1 | ME-MS61 Ni ppm 0.2 | ME-MS61 P ppm 10 | ME-MS61 Pb ppm 0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **STANDARDS** | | | | | | | | | | | | | | | | |
| AMIS0085 | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
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| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
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| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| GBM908-10 | | 20.4 | 0.40 | 3.9 | 0.074 | 2.15 | 49.1 | 10.6 | 1.82 | 793 | 66.0 | 2.15 | 11.3 | 2190 | 980 | 2040 |
| Target Range - Lower Bound | | 18.65 | 0.18 | 3.2 | 0.064 | 1.86 | 49.0 | 9.8 | 1.59 | 704 | 57.9 | 2.02 | 9.3 | 2030 | 870 | 1860 |
| Upper Bound | | 22.9 | 0.40 | 4.1 | 0.092 | 2.29 | 61.0 | 12.4 | 1.97 | 871 | 70.9 | 2.50 | 11.6 | 2480 | 1090 | 2270 |
| GBM908-5 | | 23.4 | 0.27 | 4.7 | 0.062 | 3.76 | 122.0 | 14.8 | 0.93 | 505 | 55.0 | 2.77 | 17.5 | 440 | 1420 | 410 |
| Target Range - Lower Bound | | 21.8 | 0.18 | 4.3 | 0.052 | 3.15 | 100.5 | 13.5 | 0.76 | 430 | 49.5 | 2.27 | 16.8 | 376 | 1160 | 340 |
| Upper Bound | | 26.7 | 0.41 | 5.5 | 0.078 | 3.87 | 124.0 | 16.9 | 0.95 | 537 | 60.6 | 2.80 | 20.8 | 460 | 1450 | 416 |
| GEOMS-03 | | 14.05 | 0.16 | 1.2 | 0.055 | 1.17 | 30.5 | 43.2 | 0.52 | 526 | 3.51 | 0.08 | 15.7 | 57.2 | 1160 | 7.9 |
| Target Range - Lower Bound | | 12.00 | 0.06 | 1.1 | 0.032 | 1.03 | 25.6 | 37.6 | 0.48 | 483 | 3.05 | 0.06 | 13.1 | 48.1 | 970 | 5.5 |
| Upper Bound | | 14.75 | 0.28 | 1.7 | 0.056 | 1.29 | 32.4 | 46.4 | 0.60 | 601 | 3.83 | 0.11 | 16.3 | 59.3 | 1210 | 8.2 |
| GLG307-4 | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| GPP-01 | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |



Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Rb | Re | S | Sb | Sc | Se | Sn | Sr | Ta | Te | Th | Ti | Tl | U | V |
| Units | ppm | ppm | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % | ppm | ppm | ppm |
| LOR | 0.1 | 0.002 | 0.01 | 0.05 | 0.1 | 1 | 0.2 | 0.2 | 0.05 | 0.05 | 0.2 | 0.005 | 0.02 | 0.1 | 1 |
| **STANDARDS** | | | | | | | | | | | | | | | |
| AMIS0085 | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| AMIS0167 | | | | | | | | | | | | | | | |
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| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
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| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| GBM908-10 | 174.0 | 0.002 | 0.36 | 1.56 | 17.7 | 3 | 3.1 | 287 | 0.79 | 0.05 | 17.3 | 0.649 | 1.29 | 2.2 | 142 |
| Target Range - Lower Bound | 153.0 | <0.002 | 0.33 | 1.40 | 17.0 | <1 | 2.5 | 258 | 0.68 | <0.05 | 16.9 | 0.591 | 1.00 | 2.0 | 123 |
| Upper Bound | 187.0 | 0.006 | 0.43 | 2.01 | 21.0 | 4 | 3.6 | 316 | 0.97 | 0.16 | 21.1 | 0.733 | 1.40 | 2.6 | 153 |
| GBM908-5 | 122.5 | 0.003 | 0.17 | 0.31 | 7.7 | 2 | 3.8 | 430 | 1.21 | 0.07 | 41.7 | 0.381 | 0.77 | 4.8 | 63 |
| Target Range - Lower Bound | 111.0 | <0.002 | 0.14 | 0.18 | 7.2 | <1 | 3.5 | 381 | 1.14 | <0.05 | 35.9 | 0.313 | 0.59 | 4.1 | 52 |
| Upper Bound | 135.5 | 0.006 | 0.19 | 0.44 | 9.0 | 4 | 4.8 | 466 | 1.51 | 0.18 | 44.4 | 0.393 | 0.85 | 5.3 | 66 |
| GEOMS-03 | 64.9 | 0.003 | 0.04 | 19.20 | 13.7 | 3 | 2.7 | 177.5 | 0.98 | 0.15 | 6.6 | 0.467 | 1.29 | 3.6 | 114 |
| Target Range - Lower Bound | 55.7 | <0.002 | 0.02 | 15.85 | 12.4 | <1 | 2.0 | 157.5 | 0.80 | <0.05 | 6.2 | 0.409 | 0.99 | 3.1 | 104 |
| Upper Bound | 68.3 | 0.006 | 0.06 | 21.5 | 15.4 | 5 | 3.0 | 192.5 | 1.10 | 0.24 | 8.0 | 0.511 | 1.39 | 4.0 | 130 |
| GLG307-4 | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| GPP-01 | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |

A30

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

## STANDARDS

| Sample Description | ME-MS61 W ppm 0.1 | ME-MS61 Y ppm 0.1 | ME-MS61 Zn ppm 2 | ME-MS61 Zr ppm 0.5 | Au-ICP21 Au ppm 0.001 |
|---|---|---|---|---|---|
| AMIS0085 | | | | | |
| Target Range - Lower Bound | | | | | |
| Upper Bound | | | | | |
| AMIS0167 | | | | | |
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| Target Range - Lower Bound | | | | | |
| Upper Bound | | | | | |
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| AMIS0167 | | | | | |
| Target Range - Lower Bound | | | | | |
| Upper Bound | | | | | |
| GBM908-10 | 3.5 | 41.6 | 1060 | 145.5 | |
| Target Range - Lower Bound | 2.7 | 36.2 | 939 | 109.0 | |
| Upper Bound | 3.9 | 44.5 | 1155 | 148.5 | |
| GBM908-5 | 4.3 | 51.8 | 257 | 178.5 | |
| Target Range - Lower Bound | 3.8 | 45.2 | 207 | 148.0 | |
| Upper Bound | 5.4 | 55.5 | 257 | 201 | |
| GEOMS-03 | 22.9 | 23.6 | 50 | 44.0 | |
| Target Range - Lower Bound | 19.3 | 19.8 | 40 | 44.0 | |
| Upper Bound | 26.4 | 24.4 | 54 | 60.8 | |
| GLG307-4 | | | | | 0.051 |
| Target Range - Lower Bound | | | | | 0.048 |
| Upper Bound | | | | | 0.056 |
| GPP-01 | | | | | 0.897 |
| Target Range - Lower Bound | | | | | 0.850 |
| Upper Bound | | | | | 0.960 |

A31

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

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# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description / Method / Analyte / Units / LOR | ME-ICP06 SiO2 % 0.01 | ME-ICP06 Al2O3 % 0.01 | ME-ICP06 Fe2O3 % 0.01 | ME-ICP06 CaO % 0.01 | ME-ICP06 MgO % 0.01 | ME-ICP06 Na2O % 0.01 | ME-ICP06 K2O % 0.01 | ME-ICP06 Cr2O3 % 0.01 | ME-ICP06 TiO2 % 0.01 | ME-ICP06 MnO % 0.01 | ME-ICP06 P2O5 % 0.01 | ME-ICP06 SrO % 0.01 | ME-ICP06 BaO % 0.01 | OA-GRA05 LOI % 0.01 | TOT-ICP06 Total % 0.01 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **STANDARDS** | | | | | | | | | | | | | | | |
| LKSD-2 | | | | | | | | | | | | | | 13.60 | |
| LKSD-2 | | | | | | | | | | | | | | 13.55 | |
| Target Range - Lower Bound | | | | | | | | | | | | | | 12.90 | |
| Upper Bound | | | | | | | | | | | | | | 14.30 | |
| MRGeo08 | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| OxK95 | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| SRM-120c | | | | | | | | | | | | | | | |
| SRM-120c | | | | | | | | | | | | | | | |
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| SRM-120c | | | | | | | | | | | | | | | |
| SRM-120c | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| SRM88B | 1.23 | 0.35 | 0.29 | 30.6 | 21.8 | 0.02 | 0.11 | <0.01 | 0.02 | 0.02 | 0.01 | 0.01 | <0.01 | | |
| SRM88B | 1.23 | 0.33 | 0.27 | 30.3 | 21.6 | 0.03 | 0.11 | <0.01 | 0.02 | 0.02 | <0.01 | 0.01 | 0.01 | | |
| Target Range - Lower Bound | 1.06 | 0.31 | 0.25 | 28.4 | 19.95 | <0.01 | 0.08 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | | |
| Upper Bound | 1.20 | 0.36 | 0.30 | 31.5 | 22.1 | 0.05 | 0.12 | 0.03 | 0.04 | 0.04 | 0.02 | 0.03 | 0.03 | | |
| STSD-4 | | | | | | | | | | | | | | 11.45 | |
| STSD-4 | | | | | | | | | | | | | | 11.45 | |
| STSD-4 | | | | | | | | | | | | | | 11.10 | |
| STSD-4 | | | | | | | | | | | | | | 11.25 | |
| STSD-4 | | | | | | | | | | | | | | 11.55 | |
| Target Range - Lower Bound | | | | | | | | | | | | | | 11.00 | |
| Upper Bound | | | | | | | | | | | | | | 12.20 | |
| SY-4 | 50.4 | 20.0 | 6.02 | 7.81 | 0.51 | 7.33 | 1.60 | <0.01 | 0.29 | 0.11 | 0.11 | 0.15 | 0.04 | | |
| SY-4 | 52.1 | 21.4 | 6.15 | 8.16 | 0.53 | 7.41 | 1.66 | <0.01 | 0.30 | 0.11 | 0.13 | 0.15 | 0.02 | | |
| SY-4 | 51.0 | 20.0 | 6.08 | 7.99 | 0.51 | 7.19 | 1.62 | <0.01 | 0.28 | 0.11 | 0.12 | 0.14 | 0.04 | | |
| SY-4 | 52.1 | 21.1 | 6.12 | 8.10 | 0.51 | 7.37 | 1.66 | <0.01 | 0.30 | 0.11 | 0.14 | 0.15 | 0.04 | | |
| SY-4 | 51.5 | 20.5 | 6.05 | 7.91 | 0.50 | 7.34 | 1.61 | <0.01 | 0.29 | 0.11 | 0.13 | 0.15 | 0.04 | | |
| Target Range - Lower Bound | 47.4 | 19.65 | 5.89 | 7.64 | 0.50 | 6.74 | 1.57 | <0.01 | 0.26 | 0.09 | 0.11 | 0.12 | 0.02 | | |
| Upper Bound | 52.4 | 21.7 | 6.53 | 8.46 | 0.58 | 7.47 | 1.75 | 0.03 | 0.31 | 0.13 | 0.15 | 0.16 | 0.06 | | |
| SY-4 | | | | | | | | | | | | | | 4.45 | |

A32

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

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Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | F-ELE82 F % 0.01 | ME-MS61 Ag ppm 0.01 | ME-MS61 Al % 0.01 | ME-MS61 As ppm 0.2 | ME-MS61 Ba ppm 10 | ME-MS61 Be ppm 0.05 | ME-MS61 Bi ppm 0.01 | ME-MS61 Ca % 0.01 | ME-MS61 Cd ppm 0.02 | ME-MS61 Ce ppm 0.01 | ME-MS61 Co ppm 0.1 | ME-MS61 Cr ppm 1 | ME-MS61 Cs ppm 0.05 | ME-MS61 Cu ppm 0.2 | ME-MS61 Fe % 0.01 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **STANDARDS** | | | | | | | | | | | | | | | |
| LKSD-2 | | | | | | | | | | | | | | | |
| LKSD-2 | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| MRGeo08 | | 4.48 | 7.22 | 31.5 | 1310 | 3.04 | 0.70 | 2.61 | 2.34 | 74.0 | 18.7 | 92 | 12.20 | 613 | 3.89 |
| Target Range - Lower Bound | | 4.16 | 7.00 | 29.7 | 920 | 2.80 | 0.63 | 2.35 | 2.01 | 68.7 | 17.7 | 82 | 11.00 | 568 | 3.61 |
| Upper Bound | | 5.10 | 8.57 | 36.7 | 1270 | 3.54 | 0.79 | 2.90 | 2.50 | 83.9 | 21.9 | 102 | 13.60 | 694 | 4.43 |
| OxK95 | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| SRM-120c | 3.77 | | | | | | | | | | | | | | |
| SRM-120c | 3.77 | | | | | | | | | | | | | | |
| SRM-120c | 3.75 | | | | | | | | | | | | | | |
| SRM-120c | 3.71 | | | | | | | | | | | | | | |
| SRM-120c | 3.74 | | | | | | | | | | | | | | |
| SRM-120c | 3.73 | | | | | | | | | | | | | | |
| SRM-120c | 3.69 | | | | | | | | | | | | | | |
| SRM-120c | 3.71 | | | | | | | | | | | | | | |
| Target Range - Lower Bound | 3.67 | | | | | | | | | | | | | | |
| Upper Bound | 3.97 | | | | | | | | | | | | | | |
| SRM88B | | | | | | | | | | | | | | | |
| SRM88B | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| STSD-4 | | | | | | | | | | | | | | | |
| STSD-4 | | | | | | | | | | | | | | | |
| STSD-4 | | | | | | | | | | | | | | | |
| STSD-4 | | | | | | | | | | | | | | | |
| STSD-4 | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| SY-4 | | | | | | | | | | | | | | | |
| SY-4 | | | | | | | | | | | | | | | |
| SY-4 | | | | | | | | | | | | | | | |
| SY-4 | | | | | | | | | | | | | | | |
| SY-4 | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| SY-4 | | | | | | | | | | | | | | | |

A33

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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To: DAHROUGE GEOLOGICAL CONSULTING LTD.
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EDMONTON AB T6E 1X7


Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method / Analyte / Units / LOR | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Analyte | Ga | Ge | Hf | In | K | La | Li | Mg | Mn | Mo | Na | Nb | Ni | P | Pb |
| | Units | ppm | ppm | ppm | ppm | % | ppm | ppm | % | ppm | ppm | % | ppm | ppm | ppm | ppm |
| | LOR | 0.05 | 0.05 | 0.1 | 0.005 | 0.01 | 0.5 | 0.2 | 0.01 | 5 | 0.05 | 0.01 | 0.1 | 0.2 | 10 | 0.5 |
| **STANDARDS** | | | | | | | | | | | | | | | | |
| LKSD-2 | | | | | | | | | | | | | | | | |
| LKSD-2 | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| MRGeo08 | | 19.40 | 0.21 | 3.3 | 0.180 | 3.17 | 33.4 | 33.9 | 1.29 | 552 | 16.35 | 1.92 | 21.9 | 679 | 1020 | 1050 |
| Target Range - Lower Bound | | 17.50 | <0.05 | 2.8 | 0.161 | 2.79 | 32.9 | 30.4 | 1.24 | 506 | 13.65 | 1.76 | 19.3 | 617 | 910 | 965 |
| Upper Bound | | 21.5 | 0.27 | 3.6 | 0.207 | 3.43 | 41.3 | 37.6 | 1.54 | 630 | 16.75 | 2.18 | 23.8 | 755 | 1140 | 1180 |
| OxK95 | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| SRM-120c | | | | | | | | | | | | | | | | |
| SRM-120c | | | | | | | | | | | | | | | | |
| SRM-120c | | | | | | | | | | | | | | | | |
| SRM-120c | | | | | | | | | | | | | | | | |
| SRM-120c | | | | | | | | | | | | | | | | |
| SRM-120c | | | | | | | | | | | | | | | | |
| SRM-120c | | | | | | | | | | | | | | | | |
| SRM-120c | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| SRM88B | | | | | | | | | | | | | | | | |
| SRM88B | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| STSD-4 | | | | | | | | | | | | | | | | |
| STSD-4 | | | | | | | | | | | | | | | | |
| STSD-4 | | | | | | | | | | | | | | | | |
| STSD-4 | | | | | | | | | | | | | | | | |
| STSD-4 | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| SY-4 | | | | | | | | | | | | | | | | |
| SY-4 | | | | | | | | | | | | | | | | |
| SY-4 | | | | | | | | | | | | | | | | |
| SY-4 | | | | | | | | | | | | | | | | |
| SY-4 | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| SY-4 | | | | | | | | | | | | | | | | |

A34

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method / Analyte / Units / LOR | ME-MS61 Rb ppm 0.1 | ME-MS61 Re ppm 0.002 | ME-MS61 S % 0.01 | ME-MS61 Sb ppm 0.05 | ME-MS61 Sc ppm 0.1 | ME-MS61 Se ppm 1 | ME-MS61 Sn ppm 0.2 | ME-MS61 Sr ppm 0.2 | ME-MS61 Ta ppm 0.05 | ME-MS61 Te ppm 0.05 | ME-MS61 Th ppm 0.2 | ME-MS61 Ti % 0.005 | ME-MS61 Tl ppm 0.02 | ME-MS61 U ppm 0.1 | ME-MS61 V ppm 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **STANDARDS** | | | | | | | | | | | | | | | | |
| LKSD-2 | | | | | | | | | | | | | | | | |
| LKSD-2 | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| MRGeo08 | | 204 | 0.010 | 0.29 | 4.42 | 11.8 | 2 | 4.1 | 325 | 1.64 | <0.05 | 19.9 | 0.483 | 1.14 | 5.6 | 108 |
| Target Range - Lower Bound | | 187.0 | 0.006 | 0.27 | 4.08 | 11.0 | <1 | 3.5 | 272 | 1.48 | <0.05 | 18.3 | 0.454 | 0.87 | 5.0 | 99 |
| Upper Bound | | 229 | 0.016 | 0.35 | 5.64 | 13.6 | 4 | 4.7 | 332 | 1.92 | 0.15 | 22.8 | 0.566 | 1.23 | 6.4 | 123 |
| OxK95 | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| SRM-120c | | | | | | | | | | | | | | | | |
| SRM-120c | | | | | | | | | | | | | | | | |
| SRM-120c | | | | | | | | | | | | | | | | |
| SRM-120c | | | | | | | | | | | | | | | | |
| SRM-120c | | | | | | | | | | | | | | | | |
| SRM-120c | | | | | | | | | | | | | | | | |
| SRM-120c | | | | | | | | | | | | | | | | |
| SRM-120c | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| SRM88B | | | | | | | | | | | | | | | | |
| SRM88B | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| STSD-4 | | | | | | | | | | | | | | | | |
| STSD-4 | | | | | | | | | | | | | | | | |
| STSD-4 | | | | | | | | | | | | | | | | |
| STSD-4 | | | | | | | | | | | | | | | | |
| STSD-4 | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| SY-4 | | | | | | | | | | | | | | | | |
| SY-4 | | | | | | | | | | | | | | | | |
| SY-4 | | | | | | | | | | | | | | | | |
| SY-4 | | | | | | | | | | | | | | | | |
| SY-4 | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| SY-4 | | | | | | | | | | | | | | | | |

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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ALS Minerals

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EDMONTON AB T6E 1X7


Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method / Analyte / Units / LOR | ME-MS61 W ppm 0.1 | ME-MS61 Y ppm 0.1 | ME-MS61 Zn ppm 2 | ME-MS61 Zr ppm 0.5 | Au-ICP21 Au ppm 0.001 |
|---|---|---|---|---|---|---|
| **STANDARDS** | | | | | | |
| LKSD-2 | | | | | | |
| LKSD-2 | | | | | | |
| Target Range - Lower Bound | | | | | | |
| Upper Bound | | | | | | |
| MRGeo08 | | 5.2 | 28.7 | 799 | 109.5 | |
| Target Range - Lower Bound | | 4.3 | 24.3 | 712 | 92.2 | |
| Upper Bound | | 6.1 | 29.9 | 874 | 126.0 | |
| OxK95 | | | | | | 3.53 |
| Target Range - Lower Bound | | | | | | 3.32 |
| Upper Bound | | | | | | 3.75 |
| SRM-120c | | | | | | |
| SRM-120c | | | | | | |
| SRM-120c | | | | | | |
| SRM-120c | | | | | | |
| SRM-120c | | | | | | |
| SRM-120c | | | | | | |
| SRM-120c | | | | | | |
| SRM-120c | | | | | | |
| Target Range - Lower Bound | | | | | | |
| Upper Bound | | | | | | |
| SRM88B | | | | | | |
| SRM88B | | | | | | |
| Target Range - Lower Bound | | | | | | |
| Upper Bound | | | | | | |
| STSD-4 | | | | | | |
| STSD-4 | | | | | | |
| STSD-4 | | | | | | |
| STSD-4 | | | | | | |
| STSD-4 | | | | | | |
| Target Range - Lower Bound | | | | | | |
| Upper Bound | | | | | | |
| SY-4 | | | | | | |
| SY-4 | | | | | | |
| SY-4 | | | | | | |
| SY-4 | | | | | | |
| SY-4 | | | | | | |
| Target Range - Lower Bound | | | | | | |
| Upper Bound | | | | | | |
| SY-4 | | | | | | |

A36

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description / Method / Analyte / Units / LOR | ME-ICP06 SiO2 % 0.01 | ME-ICP06 Al2O3 % 0.01 | ME-ICP06 Fe2O3 % 0.01 | ME-ICP06 CaO % 0.01 | ME-ICP06 MgO % 0.01 | ME-ICP06 Na2O % 0.01 | ME-ICP06 K2O % 0.01 | ME-ICP06 Cr2O3 % 0.01 | ME-ICP06 TiO2 % 0.01 | ME-ICP06 MnO % 0.01 | ME-ICP06 P2O5 % 0.01 | ME-ICP06 SrO % 0.01 | ME-ICP06 BaO % 0.01 | OA-GRA05 LOI % 0.01 | TOT-ICP06 Total % 0.01 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **STANDARDS** | | | | | | | | | | | | | | | |
| SY-4 | | | | | | | | | | | | | | 4.46 | |
| Target Range - Lower Bound | | | | | | | | | | | | | | 4.32 | |
| Upper Bound | | | | | | | | | | | | | | 4.80 | |
| **BLANKS** | | | | | | | | | | | | | | | |
| BLANK | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
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| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| BLANK | 0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | | |
| BLANK | <0.01 | <0.01 | <0.01 | <0.01 | 0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | | |
| BLANK | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | | |
| BLANK | 0.01 | 0.02 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.01 | <0.01 | <0.01 | | |
| BLANK | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | | |
| BLANK | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | | |
| BLANK | 0.03 | <0.01 | 0.01 | 0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | | |
| Target Range - Lower Bound | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | | |
| Upper Bound | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | | |
| BLANK | | | | | | | | | | | | | | | |
| BLANK | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| BLANK | | | | | | | | | | | | | | 0.00 | |
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| BLANK | | | | | | | | | | | | | | 0.00 | |
| BLANK | | | | | | | | | | | | | | 0.00 | |
| Target Range - Lower Bound | | | | | | | | | | | | | | <0.01 | |
| Upper Bound | | | | | | | | | | | | | | 0.02 | |

A37

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method / Analyte / Units / LOR | F-ELE82 F % 0.01 | ME-MS61 Ag ppm 0.01 | ME-MS61 Al % 0.01 | ME-MS61 As ppm 0.2 | ME-MS61 Ba ppm 10 | ME-MS61 Be ppm 0.05 | ME-MS61 Bi ppm 0.01 | ME-MS61 Ca % 0.01 | ME-MS61 Cd ppm 0.02 | ME-MS61 Ce ppm 0.01 | ME-MS61 Co ppm 0.1 | ME-MS61 Cr ppm 1 | ME-MS61 Cs ppm 0.05 | ME-MS61 Cu ppm 0.2 | ME-MS61 Fe % 0.01 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **STANDARDS** | | | | | | | | | | | | | | | | |
| SY-4 | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| **BLANKS** | | | | | | | | | | | | | | | | |
| BLANK | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| BLANK | | 0.02 | | | | | | | | | | | | | | |
| BLANK | | 0.01 | | | | | | | | | | | | | | |
| BLANK | | 0.01 | | | | | | | | | | | | | | |
| BLANK | | 0.01 | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | <0.01 | | | | | | | | | | | | | | |
| Upper Bound | | 0.02 | | | | | | | | | | | | | | |
| BLANK | | | | | | | | | | | | | | | | |
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| BLANK | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| BLANK | | | <0.01 | <0.01 | <0.2 | <10 | <0.05 | <0.01 | <0.01 | <0.02 | <0.01 | <0.1 | <1 | <0.05 | 0.3 | <0.01 |
| BLANK | | | <0.01 | <0.01 | <0.2 | <10 | <0.05 | 0.01 | <0.01 | <0.02 | 0.01 | <0.1 | <1 | <0.05 | 0.3 | <0.01 |
| Target Range - Lower Bound | | | <0.01 | <0.01 | <0.2 | <10 | <0.05 | <0.01 | <0.01 | <0.02 | <0.01 | <0.1 | <1 | <0.05 | <0.2 | <0.01 |
| Upper Bound | | | 0.02 | 0.02 | 0.4 | 20 | 0.10 | 0.02 | 0.02 | 0.04 | 0.02 | 0.2 | 2 | 0.10 | 0.4 | 0.02 |
| BLANK | | | | | | | | | | | | | | | | |
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| BLANK | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |



Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description / Method / Analyte / Units / LOR | ME-MS61<br>Ga<br>ppm<br>0.05 | ME-MS61<br>Ge<br>ppm<br>0.05 | ME-MS61<br>Hf<br>ppm<br>0.1 | ME-MS61<br>In<br>ppm<br>0.005 | ME-MS61<br>K<br>%<br>0.01 | ME-MS61<br>La<br>ppm<br>0.5 | ME-MS61<br>Li<br>ppm<br>0.2 | ME-MS61<br>Mg<br>%<br>0.01 | ME-MS61<br>Mn<br>ppm<br>5 | ME-MS61<br>Mo<br>ppm<br>0.05 | ME-MS61<br>Na<br>%<br>0.01 | ME-MS61<br>Nb<br>ppm<br>0.1 | ME-MS61<br>Ni<br>ppm<br>0.2 | ME-MS61<br>P<br>ppm<br>10 | ME-MS61<br>Pb<br>ppm<br>0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **STANDARDS** | | | | | | | | | | | | | | | |
| SY-4 | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| **BLANKS** | | | | | | | | | | | | | | | |
| BLANK | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
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| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
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| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| BLANK | <0.05 | <0.05 | <0.1 | <0.005 | <0.01 | <0.5 | <0.2 | <0.01 | <5 | 0.08 | <0.01 | <0.1 | <0.2 | 10 | <0.5 |
| BLANK | <0.05 | 0.05 | <0.1 | <0.005 | <0.01 | <0.5 | 0.2 | <0.01 | <5 | 0.08 | <0.01 | <0.1 | 0.3 | <10 | <0.5 |
| Target Range - Lower Bound | <0.05 | <0.05 | <0.1 | <0.005 | <0.01 | <0.5 | <0.2 | <0.01 | <5 | <0.05 | <0.01 | <0.1 | <0.2 | <10 | <0.5 |
| Upper Bound | 0.10 | 0.10 | 0.2 | 0.010 | 0.02 | 1.0 | 0.4 | 0.02 | 10 | 0.10 | 0.02 | 0.2 | 0.4 | 20 | 1.0 |
| BLANK | | | | | | | | | | | | | | | |
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| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |

A39

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method / Analyte / Units / LOR | ME-MS61 Rb ppm 0.1 | ME-MS61 Re ppm 0.002 | ME-MS61 S % 0.01 | ME-MS61 Sb ppm 0.05 | ME-MS61 Sc ppm 0.1 | ME-MS61 Se ppm 1 | ME-MS61 Sn ppm 0.2 | ME-MS61 Sr ppm 0.2 | ME-MS61 Ta ppm 0.05 | ME-MS61 Te ppm 0.05 | ME-MS61 Th ppm 0.2 | ME-MS61 Ti % 0.005 | ME-MS61 Tl ppm 0.02 | ME-MS61 U ppm 0.1 | ME-MS61 V ppm 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **STANDARDS** | | | | | | | | | | | | | | | | |
| SY-4 | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| **BLANKS** | | | | | | | | | | | | | | | | |
| BLANK | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
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| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
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| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| BLANK | | <0.1 | <0.002 | <0.01 | <0.05 | 0.1 | 1 | <0.2 | <0.2 | <0.05 | <0.05 | <0.2 | <0.005 | <0.02 | <0.1 | <1 |
| BLANK | | <0.1 | <0.002 | <0.01 | <0.05 | <0.1 | <1 | <0.2 | <0.2 | <0.05 | <0.05 | <0.2 | <0.005 | <0.02 | <0.1 | <1 |
| Target Range - Lower Bound | | <0.1 | <0.002 | <0.01 | <0.05 | <0.1 | <1 | <0.2 | <0.2 | <0.05 | <0.05 | <0.2 | <0.005 | <0.02 | <0.1 | <1 |
| Upper Bound | | 0.2 | 0.004 | 0.02 | 0.10 | 0.2 | 5 | 0.4 | 0.4 | 0.10 | 0.10 | 0.4 | 0.010 | 0.04 | 0.2 | 2 |
| BLANK | | | | | | | | | | | | | | | | |
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| BLANK | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |

A40

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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ALS Minerals

To: DAHROUGE GEOLOGICAL CONSULTING LTD.
18-10509 81ST AVE. NW
EDMONTON AB T6E 1X7


Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method<br>Analyte<br>Units<br>LOR | ME-MS61<br>W<br>ppm<br>0.1 | ME-MS61<br>Y<br>ppm<br>0.1 | ME-MS61<br>Zn<br>ppm<br>2 | ME-MS61<br>Zr<br>ppm<br>0.5 | Au-ICP21<br>Au<br>ppm<br>0.001 |
|---|---|---|---|---|---|---|
| **STANDARDS** | | | | | | |
| SY-4 | | | | | | |
| Target Range - Lower Bound | | | | | | |
| Upper Bound | | | | | | |
| **BLANKS** | | | | | | |
| BLANK | | | | | | <0.001 |
| Target Range - Lower Bound | | | | | | <0.001 |
| Upper Bound | | | | | | 0.002 |
| BLANK | | | | | | |
| BLANK | | | | | | |
| BLANK | | | | | | |
| BLANK | | | | | | |
| Target Range - Lower Bound | | | | | | |
| Upper Bound | | | | | | |
| BLANK | | | | | | |
| BLANK | | | | | | |
| BLANK | | | | | | |
| BLANK | | | | | | |
| BLANK | | | | | | |
| BLANK | | | | | | |
| BLANK | | | | | | |
| Target Range - Lower Bound | | | | | | |
| Upper Bound | | | | | | |
| BLANK | | <0.1 | <0.1 | <2 | <0.5 | |
| BLANK | | <0.1 | <0.1 | <2 | <0.5 | |
| Target Range - Lower Bound | | <0.1 | <0.1 | <2 | <0.5 | |
| Upper Bound | | 0.2 | 0.2 | 4 | 1.0 | |
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| BLANK | | | | | | |
| Target Range - Lower Bound | | | | | | |
| Upper Bound | | | | | | |

A41

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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EDMONTON AB T6E 1X7


Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | ME-ICP06 SiO2 % 0.01 | ME-ICP06 Al2O3 % 0.01 | ME-ICP06 Fe2O3 % 0.01 | ME-ICP06 CaO % 0.01 | ME-ICP06 MgO % 0.01 | ME-ICP06 Na2O % 0.01 | ME-ICP06 K2O % 0.01 | ME-ICP06 Cr2O3 % 0.01 | ME-ICP06 TiO2 % 0.01 | ME-ICP06 MnO % 0.01 | ME-ICP06 P2O5 % 0.01 | ME-ICP06 SrO % 0.01 | ME-ICP06 BaO % 0.01 | OA-GRA05 LOI % 0.01 | TOT-ICP06 Total % 0.01 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DUPLICATES** | | | | | | | | | | | | | | | |
| ORIGINAL | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| ORIGINAL | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| ORIGINAL | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| ORIGINAL | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| 78902 | 33.9 | 0.22 | 0.13 | 29.2 | 0.01 | <0.01 | 0.02 | <0.01 | 0.01 | <0.01 | <0.01 | 0.30 | 15.50 | | |
| DUP | 34.9 | 0.24 | 0.13 | 28.8 | 0.01 | 0.09 | 0.01 | <0.01 | 0.01 | <0.01 | 0.02 | 0.31 | 16.25 | | |
| Target Range - Lower Bound | 33.5 | 0.21 | 0.12 | 28.3 | <0.01 | 0.04 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.29 | 15.45 | | |
| Upper Bound | 35.3 | 0.25 | 0.14 | 29.7 | 0.02 | 0.06 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.32 | 16.30 | | |
| 78905 | | | | | | | | | | | | | | 5.72 | |
| DUP | | | | | | | | | | | | | | 5.86 | |
| Target Range - Lower Bound | | | | | | | | | | | | | | 5.64 | |
| Upper Bound | | | | | | | | | | | | | | 5.94 | |
| 78914 | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| 78915 | | | | | | | | | | | | | | 4.29 | |
| DUP | | | | | | | | | | | | | | 4.36 | |
| Target Range - Lower Bound | | | | | | | | | | | | | | 4.21 | |
| Upper Bound | | | | | | | | | | | | | | 4.44 | |

A42

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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EDMONTON AB T6E 1X7


Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description / Method / Analyte / Units / LOR | F-ELE82 F % 0.01 | ME-MS61 Ag ppm 0.01 | ME-MS61 Al % 0.01 | ME-MS61 As ppm 0.2 | ME-MS61 Ba ppm 10 | ME-MS61 Be ppm 0.05 | ME-MS61 Bi ppm 0.01 | ME-MS61 Ca % 0.01 | ME-MS61 Cd ppm 0.02 | ME-MS61 Ce ppm 0.01 | ME-MS61 Co ppm 0.1 | ME-MS61 Cr ppm 1 | ME-MS61 Cs ppm 0.05 | ME-MS61 Cu ppm 0.2 | ME-MS61 Fe % 0.01 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DUPLICATES** | | | | | | | | | | | | | | | |
| ORIGINAL | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| ORIGINAL | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| ORIGINAL | 11.95 | | | | | | | | | | | | | | |
| DUP | 11.90 | | | | | | | | | | | | | | |
| Target Range - Lower Bound | 11.60 | | | | | | | | | | | | | | |
| Upper Bound | 12.25 | | | | | | | | | | | | | | |
| ORIGINAL | | 0.02 | 0.82 | 5.0 | 80 | 0.22 | 0.10 | 0.04 | 0.02 | 9.43 | 1.3 | 27 | 0.74 | 5.2 | 0.91 |
| DUP | | 0.02 | 0.81 | 5.1 | 100 | 0.26 | 0.11 | 0.04 | 0.02 | 9.85 | 1.3 | 25 | 0.78 | 5.3 | 0.90 |
| Target Range - Lower Bound | | <0.01 | 0.76 | 4.6 | 70 | 0.18 | 0.09 | 0.03 | <0.02 | 9.15 | 1.1 | 24 | 0.67 | 4.8 | 0.85 |
| Upper Bound | | 0.03 | 0.87 | 5.5 | 110 | 0.30 | 0.12 | 0.05 | 0.04 | 10.15 | 1.5 | 28 | 0.85 | 5.7 | 0.96 |
| 78902 | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| 78905 | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| 78914 | 29.2 | | | | | | | | | | | | | | |
| DUP | 29.0 | | | | | | | | | | | | | | |
| Target Range - Lower Bound | 28.4 | | | | | | | | | | | | | | |
| Upper Bound | 29.8 | | | | | | | | | | | | | | |
| 78915 | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

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Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method / Analyte / Units / LOR | ME-MS61 Ga ppm 0.05 | ME-MS61 Ge ppm 0.05 | ME-MS61 Hf ppm 0.1 | ME-MS61 In ppm 0.005 | ME-MS61 K % 0.01 | ME-MS61 La ppm 0.5 | ME-MS61 Li ppm 0.2 | ME-MS61 Mg % 0.01 | ME-MS61 Mn ppm 5 | ME-MS61 Mo ppm 0.05 | ME-MS61 Na % 0.01 | ME-MS61 Nb ppm 0.1 | ME-MS61 Ni ppm 0.2 | ME-MS61 P ppm 10 | ME-MS61 Pb ppm 0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DUPLICATES** | | | | | | | | | | | | | | | | |
| ORIGINAL | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| ORIGINAL | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| ORIGINAL | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| ORIGINAL | | 2.11 | 0.06 | 0.5 | 0.008 | 0.23 | 4.2 | 16.0 | 0.11 | 115 | 1.16 | 0.11 | 1.3 | 4.7 | 160 | 8.8 |
| DUP | | 2.21 | 0.07 | 0.5 | 0.007 | 0.22 | 4.5 | 15.7 | 0.11 | 112 | 1.06 | 0.11 | 1.3 | 4.7 | 160 | 8.8 |
| Target Range - Lower Bound | | 2.00 | <0.05 | 0.4 | <0.005 | 0.20 | 3.6 | 14.9 | 0.09 | 103 | 1.00 | 0.09 | 1.1 | 4.3 | 140 | 7.9 |
| Upper Bound | | 2.32 | 0.10 | 0.6 | 0.010 | 0.25 | 5.1 | 16.8 | 0.13 | 124 | 1.22 | 0.13 | 1.5 | 5.1 | 180 | 9.7 |
| 78902 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 78905 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 78914 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 78915 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |

A44

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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EDMONTON AB T6E 1X7


Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method / Analyte / Units / LOR | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Analyte | Rb | Re | S | Sb | Sc | Se | Sn | Sr | Ta | Te | Th | Ti | Tl | U | V |
| | Units | ppm | ppm | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % | ppm | ppm | ppm |
| | LOR | 0.1 | 0.002 | 0.01 | 0.05 | 0.1 | 1 | 0.2 | 0.2 | 0.05 | 0.05 | 0.2 | 0.005 | 0.02 | 0.1 | 1 |
| **DUPLICATES** | | | | | | | | | | | | | | | | |
| ORIGINAL | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| ORIGINAL | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| ORIGINAL | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| ORIGINAL | | 12.5 | <0.002 | 0.01 | 0.40 | 1.4 | 1 | 0.2 | 4.6 | 0.10 | <0.05 | 1.7 | 0.042 | 0.06 | 0.4 | 7 |
| DUP | | 12.1 | <0.002 | <0.01 | 0.43 | 1.3 | 1 | 0.3 | 6.6 | 0.09 | <0.05 | 1.6 | 0.040 | 0.06 | 0.3 | 7 |
| Target Range - Lower Bound | | 11.6 | <0.002 | <0.01 | 0.33 | 1.2 | <1 | <0.2 | 5.1 | <0.05 | <0.05 | 1.4 | 0.034 | 0.04 | 0.2 | 6 |
| Upper Bound | | 13.0 | 0.004 | 0.02 | 0.50 | 1.5 | 2 | 0.4 | 6.1 | 0.10 | 0.10 | 1.9 | 0.048 | 0.08 | 0.5 | 8 |
| 78902 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 78905 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 78914 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 78915 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |

A45

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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EDMONTON AB T6E 1X7


Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method / Analyte / Units / LOR | ME-MS61 W ppm 0.1 | ME-MS61 Y ppm 0.1 | ME-MS61 Zn ppm 2 | ME-MS61 Zr ppm 0.5 | Au-ICP21 Au ppm 0.001 |
|---|---|---|---|---|---|---|
| **DUPLICATES** | | | | | | |
| ORIGINAL | | | | | | 1.690 |
| DUP | | | | | | 1.580 |
| Target Range - Lower Bound | | | | | | 1.550 |
| Upper Bound | | | | | | 1.720 |
| ORIGINAL | | | | | | 0.001 |
| DUP | | | | | | 0.002 |
| Target Range - Lower Bound | | | | | | <0.001 |
| Upper Bound | | | | | | 0.002 |
| ORIGINAL | | | | | | |
| DUP | | | | | | |
| Target Range - Lower Bound | | | | | | |
| Upper Bound | | | | | | |
| ORIGINAL | | 0.3 | 2.8 | 10 | 18.4 | |
| DUP | | 0.3 | 2.6 | 10 | 17.2 | |
| Target Range - Lower Bound | | 0.2 | 2.5 | 8 | 16.4 | |
| Upper Bound | | 0.4 | 2.9 | 13 | 19.2 | |
| 78902 | | | | | | |
| DUP | | | | | | |
| Target Range - Lower Bound | | | | | | |
| Upper Bound | | | | | | |
| 78905 | | | | | | |
| DUP | | | | | | |
| Target Range - Lower Bound | | | | | | |
| Upper Bound | | | | | | |
| 78914 | | | | | | |
| DUP | | | | | | |
| Target Range - Lower Bound | | | | | | |
| Upper Bound | | | | | | |
| 78915 | | | | | | |
| DUP | | | | | | |
| Target Range - Lower Bound | | | | | | |
| Upper Bound | | | | | | |

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | ME-ICP06 SiO2 % 0.01 | ME-ICP06 Al2O3 % 0.01 | ME-ICP06 Fe2O3 % 0.01 | ME-ICP06 CaO % 0.01 | ME-ICP06 MgO % 0.01 | ME-ICP06 Na2O % 0.01 | ME-ICP06 K2O % 0.01 | ME-ICP06 Cr2O3 % 0.01 | ME-ICP06 TiO2 % 0.01 | ME-ICP06 MnO % 0.01 | ME-ICP06 P2O5 % 0.01 | ME-ICP06 SrO % 0.01 | ME-ICP06 BaO % 0.01 | OA-GRA05 LOI % 0.01 | TOT-ICP06 Total % 0.01 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DUPLICATES** | | | | | | | | | | | | | | | |
| 78922 | 40.3 | 2.58 | 1.92 | 10.20 | 0.04 | <0.01 | 0.33 | 0.01 | 0.11 | 0.01 | 0.07 | 0.17 | 21.7 | | |
| DUP | 38.6 | 2.50 | 1.86 | 9.96 | 0.04 | 0.15 | 0.32 | <0.01 | 0.11 | 0.01 | 0.07 | 0.17 | 25.3 | | |
| Target Range - Lower Bound | 38.5 | 2.47 | 1.83 | 9.82 | 0.03 | 0.07 | 0.31 | <0.01 | 0.10 | <0.01 | 0.06 | 0.16 | 22.9 | | |
| Upper Bound | 40.4 | 2.61 | 1.95 | 10.35 | 0.05 | 0.09 | 0.34 | 0.02 | 0.12 | 0.02 | 0.08 | 0.18 | 24.1 | | |
| 78661 | 67.3 | 3.43 | 2.01 | 4.58 | 0.15 | <0.01 | 0.65 | 0.01 | 0.18 | <0.01 | 0.05 | 0.12 | 13.10 | | |
| DUP | 66.2 | 3.38 | 1.96 | 4.55 | 0.15 | <0.01 | 0.65 | 0.01 | 0.18 | <0.01 | 0.05 | 0.11 | 12.70 | | |
| Target Range - Lower Bound | 65.1 | 3.31 | 1.93 | 4.44 | 0.14 | <0.01 | 0.62 | <0.01 | 0.17 | <0.01 | 0.04 | 0.10 | 12.55 | | |
| Upper Bound | 68.4 | 3.50 | 2.04 | 4.69 | 0.16 | 0.02 | 0.68 | 0.02 | 0.19 | 0.02 | 0.06 | 0.13 | 13.25 | | |
| 78666 | | | | | | | | | | | | | | 4.12 | |
| DUP | | | | | | | | | | | | | | 3.85 | |
| Target Range - Lower Bound | | | | | | | | | | | | | | 3.88 | |
| Upper Bound | | | | | | | | | | | | | | 4.09 | |
| 78668 | 47.4 | 1.59 | 1.08 | 2.43 | 0.05 | 0.02 | 0.35 | <0.01 | 0.09 | <0.01 | 0.01 | 0.70 | 24.5 | | |
| DUP | 48.0 | 1.52 | 1.06 | 2.40 | 0.06 | 0.24 | 0.29 | <0.01 | 0.08 | <0.01 | 0.01 | 0.65 | 20.6 | | |
| Target Range - Lower Bound | 46.5 | 1.51 | 1.03 | 2.34 | 0.04 | 0.12 | 0.30 | <0.01 | 0.07 | <0.01 | <0.01 | 0.65 | 22.0 | | |
| Upper Bound | 48.9 | 1.60 | 1.11 | 2.49 | 0.07 | 0.14 | 0.34 | 0.02 | 0.10 | 0.02 | 0.02 | 0.70 | 23.1 | | |
| 78671 | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| 78861 | 4.68 | 0.05 | 0.03 | 22.3 | 0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.02 | 4.82 | 46.7 | | |
| DUP | 4.46 | 0.04 | 0.03 | 21.0 | 0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.02 | 4.93 | 40.9 | | |
| Target Range - Lower Bound | 4.45 | 0.03 | 0.02 | 21.1 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 4.74 | 42.7 | | |
| Upper Bound | 4.69 | 0.06 | 0.04 | 22.2 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 5.01 | 44.9 | | |
| 78862 | 6.58 | 0.06 | 0.04 | 26.4 | 0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.02 | 3.89 | 39.2 | 13.80 | 90.00 |
| DUP | 6.61 | 0.07 | 0.04 | 26.2 | 0.02 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.05 | 3.85 | 38.8 | 13.85 | 89.49 |
| Target Range - Lower Bound | 6.42 | 0.05 | 0.03 | 25.6 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.02 | 3.76 | 38.0 | 13.45 | 87.49 |
| Upper Bound | 6.77 | 0.08 | 0.05 | 27.0 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.05 | 3.98 | 40.0 | 14.20 | 92.00 |
| 78877 | | | | | | | | | | | | | | 5.20 | |
| DUP | | | | | | | | | | | | | | 5.11 | |
| Target Range - Lower Bound | | | | | | | | | | | | | | 5.02 | |
| Upper Bound | | | | | | | | | | | | | | 5.29 | |

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description / Method | F-ELE82 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | F | Ag | Al | As | Ba | Be | Bi | Ca | Cd | Ce | Co | Cr | Cs | Cu | Fe |
| Units | % | ppm | % | ppm | ppm | ppm | ppm | % | ppm | ppm | ppm | ppm | ppm | ppm | % |
| LOR | 0.01 | 0.01 | 0.01 | 0.2 | 10 | 0.05 | 0.01 | 0.01 | 0.02 | 0.01 | 0.1 | 1 | 0.05 | 0.2 | 0.01 |
| **DUPLICATES** | | | | | | | | | | | | | | | |
| 78922 | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| 78661 | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| 78666 | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| 78668 | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| 78671 | 0.11 | | | | | | | | | | | | | | |
| DUP | 0.11 | | | | | | | | | | | | | | |
| Target Range - Lower Bound | 0.10 | | | | | | | | | | | | | | |
| Upper Bound | 0.12 | | | | | | | | | | | | | | |
| 78861 | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| 78862 | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| 78877 | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

A48

ALS Minerals

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Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method / Analyte / Units / LOR | ME-MS61 Ga ppm 0.05 | ME-MS61 Ge ppm 0.05 | ME-MS61 Hf ppm 0.1 | ME-MS61 In ppm 0.005 | ME-MS61 K % 0.01 | ME-MS61 La ppm 0.5 | ME-MS61 Li ppm 0.2 | ME-MS61 Mg % 0.01 | ME-MS61 Mn ppm 5 | ME-MS61 Mo ppm 0.05 | ME-MS61 Na % 0.01 | ME-MS61 Nb ppm 0.1 | ME-MS61 Ni ppm 0.2 | ME-MS61 P ppm 10 | ME-MS61 Pb ppm 0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DUPLICATES** | | | | | | | | | | | | | | | | |
| 78922 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 78661 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 78666 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 78668 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 78671 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 78861 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 78862 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 78877 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method / Analyte / Units / LOR | ME-MS61 Rb ppm 0.1 | ME-MS61 Re ppm 0.002 | ME-MS61 S % 0.01 | ME-MS61 Sb ppm 0.05 | ME-MS61 Sc ppm 0.1 | ME-MS61 Se ppm 1 | ME-MS61 Sn ppm 0.2 | ME-MS61 Sr ppm 0.2 | ME-MS61 Ta ppm 0.05 | ME-MS61 Te ppm 0.05 | ME-MS61 Th ppm 0.2 | ME-MS61 Ti % 0.005 | ME-MS61 Tl ppm 0.02 | ME-MS61 U ppm 0.1 | ME-MS61 V ppm 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DUPLICATES** | | | | | | | | | | | | | | | | |
| 78922 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 78661 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 78666 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 78668 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 78671 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 78861 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 78862 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 78877 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |

A50

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

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Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method<br>Analyte<br>Units<br>LOR | ME-MS61<br>W<br>ppm<br>0.1 | ME-MS61<br>Y<br>ppm<br>0.1 | ME-MS61<br>Zn<br>ppm<br>2 | ME-MS61<br>Zr<br>ppm<br>0.5 | Au-ICP21<br>Au<br>ppm<br>0.001 |
|---|---|---|---|---|---|---|
| **DUPLICATES** | | | | | | |
| 78922 | | | | | | |
| DUP | | | | | | |
| Target Range - Lower Bound | | | | | | |
| Upper Bound | | | | | | |
| 78661 | | | | | | |
| DUP | | | | | | |
| Target Range - Lower Bound | | | | | | |
| Upper Bound | | | | | | |
| 78666 | | | | | | |
| DUP | | | | | | |
| Target Range - Lower Bound | | | | | | |
| Upper Bound | | | | | | |
| 78668 | | | | | | |
| DUP | | | | | | |
| Target Range - Lower Bound | | | | | | |
| Upper Bound | | | | | | |
| 78671 | | | | | | |
| DUP | | | | | | |
| Target Range - Lower Bound | | | | | | |
| Upper Bound | | | | | | |
| 78861 | | | | | | |
| DUP | | | | | | |
| Target Range - Lower Bound | | | | | | |
| Upper Bound | | | | | | |
| 78862 | | | | | | |
| DUP | | | | | | |
| Target Range - Lower Bound | | | | | | |
| Upper Bound | | | | | | |
| 78877 | | | | | | |
| DUP | | | | | | |
| Target Range - Lower Bound | | | | | | |
| Upper Bound | | | | | | |

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

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Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method / Analyte / Units / LOR | ME-ICP06 SiO2 % 0.01 | ME-ICP06 Al2O3 % 0.01 | ME-ICP06 Fe2O3 % 0.01 | ME-ICP06 CaO % 0.01 | ME-ICP06 MgO % 0.01 | ME-ICP06 Na2O % 0.01 | ME-ICP06 K2O % 0.01 | ME-ICP06 Cr2O3 % 0.01 | ME-ICP06 TiO2 % 0.01 | ME-ICP06 MnO % 0.01 | ME-ICP06 P2O5 % 0.01 | ME-ICP06 SrO % 0.01 | ME-ICP06 BaO % 0.01 | OA-GRA05 LOI % 0.01 | TOT-ICP06 Total % 0.01 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DUPLICATES** | | | | | | | | | | | | | | | | |
| 78877D | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| ORIGINAL | | | | | | | | | | | | | | | 25.3 | |
| DUP | | | | | | | | | | | | | | | 25.5 | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | 24.8 | |
| Upper Bound | | | | | | | | | | | | | | | 26.0 | |
| ORIGINAL | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| ORIGINAL | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| ORIGINAL | | | | | | | | | | | | | | | 30.7 | |
| DUP | | | | | | | | | | | | | | | 30.3 | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | 29.7 | |
| Upper Bound | | | | | | | | | | | | | | | 31.3 | |
| **PREP DUPLICATES** | | | | | | | | | | | | | | | | |
| 78676 | | 54.2 | 2.29 | 1.95 | 11.05 | 0.05 | <0.01 | 0.34 | 0.01 | 0.08 | 0.01 | 0.07 | 0.40 | 17.20 | 6.53 | 94.18 |
| 78676 PREP DUP | | 59.0 | 2.04 | 1.75 | 10.35 | 0.04 | <0.01 | 0.31 | <0.01 | 0.08 | 0.01 | 0.09 | 0.35 | 15.10 | 6.28 | 95.40 |

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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ALS Canada Ltd.

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To: DAHROUGE GEOLOGICAL CONSULTING LTD.
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EDMONTON AB T6E 1X7


Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | F-ELE82 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 | ME-MS61 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Method / Analyte | F | Ag | Al | As | Ba | Be | Bi | Ca | Cd | Ce | Co | Cr | Cs | Cu | Fe |
| Units | % | ppm | % | ppm | ppm | ppm | ppm | % | ppm | ppm | ppm | ppm | ppm | ppm | % |
| LOR | 0.01 | 0.01 | 0.01 | 0.2 | 10 | 0.05 | 0.01 | 0.01 | 0.02 | 0.01 | 0.1 | 1 | 0.05 | 0.2 | 0.01 |
| **DUPLICATES** | | | | | | | | | | | | | | | |
| 78877D | 25.2 | | | | | | | | | | | | | | |
| DUP | 25.5 | | | | | | | | | | | | | | |
| Target Range - Lower Bound | 24.7 | | | | | | | | | | | | | | |
| Upper Bound | 26.0 | | | | | | | | | | | | | | |
| ORIGINAL | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| ORIGINAL | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| ORIGINAL | | 0.28 | 4.93 | 23.8 | 1100 | 1.29 | 0.43 | 2.27 | 0.49 | 65.9 | 5.9 | 78 | 4.53 | 16.4 | 2.32 |
| DUP | | 0.28 | 5.04 | 23.5 | 1140 | 1.46 | 0.44 | 2.31 | 0.44 | 67.6 | 5.9 | 57 | 4.53 | 16.3 | 2.34 |
| Target Range - Lower Bound | | 0.26 | 4.73 | 22.3 | 1030 | 1.26 | 0.40 | 2.17 | 0.42 | 63.4 | 5.5 | 63 | 4.25 | 15.3 | 2.20 |
| Upper Bound | | 0.30 | 5.24 | 25.0 | 1210 | 1.49 | 0.47 | 2.41 | 0.51 | 70.1 | 6.3 | 72 | 4.81 | 17.4 | 2.46 |
| ORIGINAL | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | |
| **PREP DUPLICATES** | | | | | | | | | | | | | | | |
| 78676 | 7.58 | 0.39 | 1.17 | 9.8 | 6260 | 0.57 | 0.04 | 8.22 | 1.47 | 4.42 | 13.1 | 31 | 0.26 | 76.4 | 1.35 |
| 78676 PREP DUP | 7.14 | 0.33 | 1.09 | 9.3 | 6260 | 0.59 | 0.08 | 7.88 | 1.22 | 5.78 | 10.7 | 26 | 0.28 | 90.1 | 1.23 |

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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EDMONTON AB T6E 1X7


Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method / Analyte / Units / LOR | ME-MS61 Ga ppm 0.05 | ME-MS61 Ge ppm 0.05 | ME-MS61 Hf ppm 0.1 | ME-MS61 In ppm 0.005 | ME-MS61 K % 0.01 | ME-MS61 La ppm 0.5 | ME-MS61 Li ppm 0.2 | ME-MS61 Mg % 0.01 | ME-MS61 Mn ppm 5 | ME-MS61 Mo ppm 0.05 | ME-MS61 Na % 0.01 | ME-MS61 Nb ppm 0.1 | ME-MS61 Ni ppm 0.2 | ME-MS61 P ppm 10 | ME-MS61 Pb ppm 0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DUPLICATES** | | | | | | | | | | | | | | | | |
| 78877D | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| ORIGINAL | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| ORIGINAL | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| ORIGINAL | | 12.15 | 0.16 | 1.9 | 0.048 | 1.58 | 34.7 | 25.1 | 0.83 | 500 | 4.70 | 0.48 | 9.8 | 29.7 | 1130 | 23.8 |
| DUP | | 12.30 | 0.14 | 1.9 | 0.053 | 1.65 | 36.9 | 26.0 | 0.84 | 498 | 4.48 | 0.49 | 10.0 | 23.0 | 1150 | 23.8 |
| Target Range - Lower Bound | | 11.55 | 0.09 | 1.7 | 0.043 | 1.52 | 33.5 | 24.1 | 0.78 | 469 | 4.31 | 0.45 | 9.3 | 24.8 | 1070 | 22.1 |
| Upper Bound | | 12.90 | 0.21 | 2.1 | 0.058 | 1.71 | 38.1 | 27.0 | 0.89 | 529 | 4.87 | 0.52 | 10.5 | 27.9 | 1210 | 25.5 |
| ORIGINAL | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| **PREP DUPLICATES** | | | | | | | | | | | | | | | | |
| 78676 | | 1.78 | 0.08 | 0.3 | <0.005 | 0.27 | 3.7 | 14.9 | 0.02 | 59 | 35.0 | <0.01 | 1.7 | 109.5 | 260 | 6.6 |
| 78676 PREP DUP | | 1.85 | 0.08 | 0.3 | 0.009 | 0.28 | 4.1 | 15.0 | 0.03 | 49 | 33.2 | <0.01 | 1.5 | 100.0 | 250 | 6.8 |

A54

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method / Analyte / Units / LOR | ME-MS61 Rb ppm 0.1 | ME-MS61 Re ppm 0.002 | ME-MS61 S % 0.01 | ME-MS61 Sb ppm 0.05 | ME-MS61 Sc ppm 0.1 | ME-MS61 Se ppm 1 | ME-MS61 Sn ppm 0.2 | ME-MS61 Sr ppm 0.2 | ME-MS61 Ta ppm 0.05 | ME-MS61 Te ppm 0.05 | ME-MS61 Th ppm 0.2 | ME-MS61 Ti % 0.005 | ME-MS61 Tl ppm 0.02 | ME-MS61 U ppm 0.1 | ME-MS61 V ppm 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DUPLICATES** | | | | | | | | | | | | | | | | |
| 78877D | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| ORIGINAL | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| ORIGINAL | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| ORIGINAL | | 76.2 | 0.019 | 0.14 | 2.71 | 7.9 | 4 | 2.3 | 156.0 | 0.67 | 0.05 | 9.9 | 0.283 | 0.87 | 6.4 | 118 |
| DUP | | 75.8 | 0.015 | 0.14 | 2.62 | 8.0 | 3 | 2.3 | 159.5 | 0.68 | <0.05 | 10.3 | 0.293 | 0.84 | 6.4 | 120 |
| Target Range - Lower Bound | | 72.1 | 0.014 | 0.12 | 2.42 | 7.5 | 2 | 2.0 | 149.5 | 0.59 | <0.05 | 9.4 | 0.269 | 0.77 | 6.0 | 112 |
| Upper Bound | | 79.9 | 0.020 | 0.16 | 2.91 | 8.4 | 5 | 2.6 | 166.0 | 0.76 | 0.10 | 10.8 | 0.307 | 0.94 | 6.8 | 126 |
| ORIGINAL | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| **PREP DUPLICATES** | | | | | | | | | | | | | | | | |
| 78676 | | 11.4 | 0.034 | 0.08 | 2.48 | 1.3 | 5 | 0.9 | 2600 | 0.10 | 0.06 | 0.6 | 0.047 | 0.73 | 9.5 | 332 |
| 78676 PREP DUP | | 10.5 | 0.032 | 0.04 | 2.66 | 1.2 | 4 | 0.9 | 2620 | 0.09 | 0.10 | 1.1 | 0.049 | 0.75 | 8.4 | 330 |

A55

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Sample Description | Method / Analyte / Units / LOR | ME-MS61 W ppm 0.1 | ME-MS61 Y ppm 0.1 | ME-MS61 Zn ppm 2 | ME-MS61 Zr ppm 0.5 | Au-ICP21 Au ppm 0.001 |
|---|---|---|---|---|---|---|
| **DUPLICATES** | | | | | | |
| 78877D | | | | | | |
| DUP | | | | | | |
| Target Range - Lower Bound | | | | | | |
| Upper Bound | | | | | | |
| ORIGINAL | | | | | | |
| DUP | | | | | | |
| Target Range - Lower Bound | | | | | | |
| Upper Bound | | | | | | |
| ORIGINAL | | | | | | 0.006 |
| DUP | | | | | | 0.010 |
| Target Range - Lower Bound | | | | | | 0.007 |
| Upper Bound | | | | | | 0.009 |
| ORIGINAL | | 1.3 | 11.9 | 126 | 70.9 | |
| DUP | | 1.3 | 12.2 | 127 | 72.4 | |
| Target Range - Lower Bound | | 1.1 | 11.3 | 118 | 67.6 | |
| Upper Bound | | 1.5 | 12.8 | 135 | 75.7 | |
| ORIGINAL | | | | | | |
| DUP | | | | | | |
| Target Range - Lower Bound | | | | | | |
| Upper Bound | | | | | | |
| **PREP DUPLICATES** | | | | | | |
| 78676 | | 4.6 | 16.9 | 322 | 10.3 | |
| 78676 PREP DUP | | 3.4 | 13.3 | 281 | 11.4 | |

A56

Comments: Some variability in results observed for higher grade BaO samples by the ME-ICP06 method. Interference from high Ba on Na & K checked and confirmed for ME-ICP06; may result in lower TOT-ICP06 values. Interference from high Ba on Cu for ME-MS61.

***** See Appendix Page for comments regarding this certificate *****

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Finalized Date: 2-NOV-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234434

| Method | CERTIFICATE COMMENTS |
|---|---|
| ME-MS61 | REE's may not be totally soluble in this method. |
| ME-MS61 | Interference: Samples with Ca>10% on ICP-MS As. ICP-AES As results reported (5 ppm DL) |

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Finalized Date: 16-OCT-2012
This copy reported on
26-OCT-2012
Account: DAHGEO

# CERTIFICATE VA12234435

Project: Liard Fluorspar

P.O. No.: 14850

This report is for 24 Soil samples submitted to our lab in Vancouver, BC, Canada on 26-SEP-2012.

The following have access to data associated with this certificate:

| | | |
|---|---|---|
| NEIL MCCALLUM | | |

## SAMPLE PREPARATION

| ALS CODE | DESCRIPTION |
|---|---|
| WEI-21 | Received Sample Weight |
| LOG-22 | Sample login - Rcd w/o BarCode |
| SCR-41 | Screen to -180um and save both |

## ANALYTICAL PROCEDURES

| ALS CODE | DESCRIPTION | INSTRUMENT |
|---|---|---|
| F-ELE81a | F by Specific Ion Electrode | WST-SIM |
| ME-ICP61 | 33 element four acid ICP-AES | ICP-AES |

To: DAHROUGE GEOLOGICAL CONSULTING LTD.
ATTN: NEIL MCCALLUM
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VANCOUVER BC V6C 1H2

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature:
Colin Ramshaw, Vancouver Laboratory Manager

A58

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Finalized Date: 16-OCT-2012
Account: DAHGEO

Project: Liard Fluorspar

# CERTIFICATE OF ANALYSIS VA12234435

| Sample Description | Method | WEI-21 | F-ELE81a | ME-ICP61 | ME-ICP61 | ME-ICP61 | ME-ICP61 | ME-ICP61 | ME-ICP61 | ME-ICP61 | ME-ICP61 | ME-ICP61 | ME-ICP61 | ME-ICP61 | ME-ICP61 | ME-ICP61 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Analyte | Recvd Wt. | F | Ag | Al | As | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Ga |
| | Units | kg | ppm | ppm | % | ppm | ppm | ppm | ppm | % | ppm | ppm | ppm | ppm | % | ppm |
| | LOR | 0.02 | 20 | 0.5 | 0.01 | 5 | 10 | 0.5 | 2 | 0.01 | 0.5 | 1 | 1 | 1 | 0.01 | 10 |
| 1A | | 0.16 | 260 | <0.5 | 3.67 | 7 | 1700 | 0.9 | <2 | 2.33 | 2.0 | 6 | 42 | 14 | 1.70 | 10 |
| 2A | | 0.14 | 200 | <0.5 | 2.73 | <5 | 2030 | 0.6 | <2 | 1.75 | 6.3 | 6 | 33 | 28 | 1.05 | 10 |
| 3A | | 0.22 | 400 | <0.5 | 2.67 | <5 | 1620 | 0.6 | <2 | 0.95 | 4.1 | 3 | 34 | 22 | 0.95 | 10 |
| 4A | | 0.12 | 90 | <0.5 | 1.16 | <5 | 700 | <0.5 | <2 | 0.74 | 1.0 | 1 | 18 | 7 | 0.50 | <10 |
| 5A | | 0.14 | 110 | <0.5 | 1.19 | 5 | 2930 | <0.5 | <2 | 2.16 | 2.8 | 2 | 15 | 8 | 0.58 | <10 |
| 6A | | 0.20 | 180 | <0.5 | 2.89 | <5 | 3430 | 0.7 | <2 | 1.92 | 1.9 | 4 | 33 | 8 | 1.18 | 10 |
| 7A | | 0.14 | 140 | <0.5 | 2.05 | <5 | 1610 | 0.5 | 3 | 0.65 | 1.2 | 2 | 24 | 11 | 0.79 | 10 |
| 8A | | 0.24 | 430 | <0.5 | 3.42 | 6 | 7080 | 0.9 | <2 | 0.78 | 2.4 | 3 | 43 | 11 | 1.20 | 10 |
| 9A | | 0.18 | 1110 | <0.5 | 2.08 | <5 | >10000 | 0.9 | <2 | 1.56 | 13.1 | 8 | 17 | 27 | 0.85 | 10 |
| 1B | | 0.28 | 390 | <0.5 | 6.46 | 9 | 2120 | 2.1 | 3 | 1.12 | 1.6 | 11 | 81 | 7 | 3.58 | 20 |
| 2B | | 0.28 | 350 | <0.5 | 5.01 | 13 | 2230 | 1.3 | 2 | 0.80 | <0.5 | 8 | 62 | 11 | 2.76 | 10 |
| 3B | | 0.26 | 470 | <0.5 | 5.04 | 15 | 3050 | 1.1 | 2 | 0.57 | 0.6 | 6 | 65 | 11 | 3.16 | 20 |
| 4B | | 0.26 | 410 | <0.5 | 5.80 | 10 | 1310 | 1.7 | 4 | 0.73 | <0.5 | 9 | 75 | 12 | 3.49 | 10 |
| 5B | | 0.26 | 670 | <0.5 | 3.45 | 33 | 4360 | 2.0 | 4 | 2.56 | 2.7 | 15 | 48 | 36 | 2.96 | 10 |
| 7B | | 0.34 | 530 | <0.5 | 5.39 | 22 | 8060 | 1.3 | <2 | 0.63 | 0.7 | 6 | 68 | 16 | 3.00 | 20 |
| 8B | | 0.22 | 690 | <0.5 | 4.87 | 10 | >10000 | 1.2 | <2 | 0.84 | 1.9 | 5 | 61 | 11 | 2.18 | 20 |
| 9B | | 0.38 | 3980 | <0.5 | 4.83 | 18 | >10000 | 1.4 | 4 | 1.34 | 4.2 | 9 | 61 | 31 | 2.62 | 10 |
| 2C | | 0.42 | 720 | <0.5 | 4.11 | 40 | 4950 | 2.3 | <2 | 3.10 | 2.0 | 19 | 54 | 40 | 3.23 | 10 |
| 3C | | 0.28 | 2540 | <0.5 | 5.41 | 32 | 5930 | 2.6 | <2 | 0.56 | 1.6 | 20 | 57 | 22 | 3.39 | 10 |
| 4C | | 0.26 | 450 | <0.5 | 6.53 | 12 | 3960 | 2.6 | 2 | 1.24 | <0.5 | 14 | 82 | 12 | 3.50 | 10 |
| 5C | | 0.30 | 1450 | <0.5 | 3.48 | 28 | 6220 | 2.1 | <2 | 5.68 | 2.5 | 16 | 45 | 36 | 2.77 | 10 |
| 7C | | 0.42 | 690 | <0.5 | 5.15 | 14 | 7960 | 1.2 | 4 | 0.59 | 0.8 | 6 | 72 | 25 | 3.00 | 20 |
| 8C | | 0.32 | 12150 | <0.5 | 4.89 | 16 | 7700 | 1.6 | 2 | 2.71 | 4.3 | 15 | 65 | 22 | 2.76 | 10 |
| 9C | | 0.36 | 8170 | <0.5 | 4.61 | 19 | >10000 | 1.5 | 3 | 2.08 | 4.6 | 12 | 59 | 30 | 2.71 | 10 |

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Finalized Date: 16-OCT-2012
Account: DAHGEO

Project: Liard Fluorspar

# CERTIFICATE OF ANALYSIS VA12234435

| Sample Description | Method / Analyte / Units / LOR | ME-ICP61 K % 0.01 | ME-ICP61 La ppm 10 | ME-ICP61 Mg % 0.01 | ME-ICP61 Mn ppm 5 | ME-ICP61 Mo ppm 1 | ME-ICP61 Na % 0.01 | ME-ICP61 Ni ppm 1 | ME-ICP61 P ppm 10 | ME-ICP61 Pb ppm 2 | ME-ICP61 S % 0.01 | ME-ICP61 Sb ppm 5 | ME-ICP61 Sc ppm 1 | ME-ICP61 Sr ppm 1 | ME-ICP61 Th ppm 20 | ME-ICP61 Ti % 0.01 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1A | | 0.88 | 20 | 0.36 | 2310 | 1 | 0.58 | 20 | 580 | 13 | 0.06 | <5 | 6 | 106 | <20 | 0.24 |
| 2A | | 0.68 | 20 | 0.22 | 852 | 2 | 0.51 | 18 | 550 | 12 | 0.06 | <5 | 4 | 93 | <20 | 0.20 |
| 3A | | 0.60 | 20 | 0.17 | 147 | 3 | 0.54 | 17 | 470 | 9 | 0.05 | <5 | 4 | 92 | <20 | 0.24 |
| 4A | | 0.33 | 10 | 0.12 | 175 | 2 | 0.22 | 10 | 570 | 4 | 0.09 | <5 | 2 | 42 | <20 | 0.09 |
| 5A | | 0.28 | 10 | 0.10 | 70 | 2 | 0.18 | 15 | 440 | 5 | 0.13 | <5 | 2 | 67 | <20 | 0.07 |
| 6A | | 0.71 | 20 | 0.20 | 227 | 3 | 0.56 | 15 | 530 | 8 | 0.13 | <5 | 4 | 130 | <20 | 0.19 |
| 7A | | 0.54 | 10 | 0.16 | 195 | 3 | 0.39 | 12 | 730 | 10 | 0.08 | <5 | 3 | 74 | <20 | 0.16 |
| 8A | | 0.91 | 30 | 0.22 | 164 | 4 | 0.65 | 20 | 440 | 11 | 0.16 | <5 | 5 | 182 | <20 | 0.24 |
| 9A | | 0.34 | 10 | 0.11 | 519 | 3 | 0.19 | 64 | 800 | 10 | 0.06 | <5 | 3 | 431 | <20 | 0.09 |
| 1B | | 1.23 | 50 | 0.61 | 563 | 2 | 0.91 | 58 | 280 | 22 | 0.01 | <5 | 9 | 146 | <20 | 0.37 |
| 2B | | 1.19 | 30 | 0.50 | 225 | 4 | 0.91 | 37 | 210 | 18 | 0.01 | <5 | 7 | 152 | <20 | 0.35 |
| 3B | | 1.03 | 30 | 0.44 | 194 | 5 | 0.82 | 33 | 290 | 20 | 0.05 | <5 | 7 | 147 | <20 | 0.34 |
| 4B | | 1.52 | 40 | 0.69 | 277 | 3 | 1.02 | 39 | 270 | 20 | 0.02 | 5 | 8 | 159 | <20 | 0.32 |
| 5B | | 0.79 | 40 | 0.41 | 305 | 14 | 0.28 | 115 | 890 | 31 | 0.16 | 7 | 6 | 357 | <20 | 0.18 |
| 7B | | 1.31 | 40 | 0.45 | 230 | 7 | 0.95 | 38 | 300 | 21 | 0.16 | <5 | 8 | 215 | <20 | 0.38 |
| 8B | | 1.24 | 40 | 0.38 | 192 | 4 | 0.94 | 25 | 320 | 15 | 0.18 | 5 | 7 | 226 | <20 | 0.35 |
| 9B | | 0.99 | 30 | 0.37 | 201 | 9 | 0.70 | 113 | 470 | 18 | 0.08 | <5 | 7 | 622 | <20 | 0.28 |
| 2C | | 0.90 | 30 | 0.45 | 357 | 15 | 0.33 | 126 | 570 | 29 | 0.14 | 7 | 8 | 423 | <20 | 0.21 |
| 3C | | 0.54 | 20 | 0.27 | 277 | 10 | 0.16 | 114 | 530 | 32 | 0.14 | 5 | 7 | 281 | <20 | 0.17 |
| 4C | | 1.39 | 40 | 0.79 | 454 | 2 | 1.02 | 65 | 430 | 21 | 0.06 | 8 | 12 | 182 | 20 | 0.31 |
| 5C | | 0.82 | 20 | 0.72 | 227 | 14 | 0.23 | 131 | 780 | 24 | 0.18 | 7 | 6 | 400 | <20 | 0.17 |
| 7C | | 1.26 | 30 | 0.42 | 230 | 13 | 0.87 | 49 | 360 | 19 | 0.14 | <5 | 7 | 246 | <20 | 0.36 |
| 8C | | 1.00 | 30 | 0.42 | 370 | 8 | 0.66 | 84 | 810 | 19 | 0.11 | 7 | 8 | 511 | <20 | 0.25 |
| 9C | | 0.91 | 30 | 0.41 | 301 | 9 | 0.61 | 134 | 790 | 16 | 0.06 | 8 | 8 | 788 | <20 | 0.23 |

A60

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To: DAHROUGE GEOLOGICAL CONSULTING LTD.
18-10509 81ST AVE. NW
EDMONTON AB T6E 1X7


Finalized Date: 16-OCT-2012
Account: DAHGEO

Project: Liard Fluorspar

# CERTIFICATE OF ANALYSIS VA12234435

| Sample Description | Method / Analyte / Units / LOR | ME-ICP61 Tl ppm 10 | ME-ICP61 U ppm 10 | ME-ICP61 V ppm 1 | ME-ICP61 W ppm 10 | ME-ICP61 Zn ppm 2 |
|---|---|---|---|---|---|---|
| 1A | | <10 | 10 | 78 | <10 | 172 |
| 2A | | <10 | <10 | 63 | <10 | 157 |
| 3A | | <10 | <10 | 64 | <10 | 106 |
| 4A | | <10 | <10 | 29 | <10 | 49 |
| 5A | | <10 | <10 | 38 | <10 | 77 |
| 6A | | <10 | <10 | 66 | <10 | 51 |
| 7A | | 10 | <10 | 51 | <10 | 54 |
| 8A | | <10 | <10 | 93 | <10 | 116 |
| 9A | | <10 | <10 | 42 | <10 | 188 |
| 1B | | 10 | <10 | 157 | <10 | 189 |
| 2B | | <10 | <10 | 146 | <10 | 123 |
| 3B | | 10 | <10 | 157 | <10 | 154 |
| 4B | | <10 | <10 | 130 | <10 | 116 |
| 5B | | <10 | <10 | 238 | <10 | 389 |
| 7B | | <10 | <10 | 183 | <10 | 161 |
| 8B | | <10 | <10 | 145 | <10 | 185 |
| 9B | | <10 | <10 | 202 | <10 | 366 |
| 2C | | 10 | <10 | 266 | <10 | 381 |
| 3C | | <10 | <10 | 207 | <10 | 418 |
| 4C | | 10 | <10 | 124 | <10 | 123 |
| 5C | | <10 | <10 | 252 | <10 | 415 |
| 7C | | <10 | <10 | 218 | <10 | 166 |
| 8C | | <10 | <10 | 182 | <10 | 395 |
| 9C | | 10 | 10 | 172 | <10 | 394 |

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Finalized Date: 16-OCT-2012
This copy reported on
26-OCT-2012
Account: DAHGEO

# QC CERTIFICATE VA12234435

Project: Liard Fluorspar

P.O. No.: 14850

This report is for 24 Soil samples submitted to our lab in Vancouver, BC, Canada on 26-SEP-2012.

The following have access to data associated with this certificate:

| | | |
|---|---|---|
| NEIL MCCALLUM | | |

## SAMPLE PREPARATION

| ALS CODE | DESCRIPTION |
|---|---|
| WEI-21 | Received Sample Weight |
| LOG-22 | Sample login - Rcd w/o BarCode |
| SCR-41 | Screen to -180um and save both |

## ANALYTICAL PROCEDURES

| ALS CODE | DESCRIPTION | INSTRUMENT |
|---|---|---|
| F-ELE81a | F by Specific Ion Electrode | WST-SIM |
| ME-ICP61 | 33 element four acid ICP-AES | ICP-AES |

To: DAHROUGE GEOLOGICAL CONSULTING LTD.
ATTN: NEIL MCCALLUM
SUITE 1450 - 789 WEST PENDER STREET
VANCOUVER BC V6C 1H2

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature:
Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 16-OCT-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234435

| Sample Description | F-ELE81a | ME-ICP61 | ME-ICP61 | ME-ICP61 | ME-ICP61 | ME-ICP61 | ME-ICP61 | ME-ICP61 | ME-ICP61 | ME-ICP61 | ME-ICP61 | ME-ICP61 | ME-ICP61 | ME-ICP61 | ME-ICP61 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | F | Ag | Al | As | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Ga | K |
| Units | ppm | ppm | % | ppm | ppm | ppm | ppm | % | ppm | ppm | ppm | ppm | % | ppm | % |
| LOR | 20 | 0.5 | 0.01 | 5 | 10 | 0.5 | 2 | 0.01 | 0.5 | 1 | 1 | 1 | 0.01 | 10 | 0.01 |
| **STANDARDS** | | | | | | | | | | | | | | | |
| GBM908-10 | | 3.1 | 7.62 | 55 | 1160 | 1.5 | 4 | 3.98 | 1.4 | 28 | 143 | 3740 | 5.76 | 20 | 2.23 |
| Target Range - Lower Bound | | 1.9 | 6.54 | 42 | 940 | <0.5 | <2 | 3.36 | <0.5 | 21 | 125 | 3270 | 4.96 | <10 | 1.83 |
| Upper Bound | | 4.2 | 8.02 | 68 | 1170 | 2.5 | 6 | 4.12 | 2.7 | 27 | 155 | 3990 | 6.08 | 40 | 2.26 |
| GBM908-5 | | 58.8 | 7.49 | 8 | 2490 | 2.4 | <2 | 1.95 | <0.5 | 11 | 27 | 489 | 3.31 | 20 | 3.61 |
| Target Range - Lower Bound | | 51.5 | 6.79 | <5 | 2070 | 1.4 | <2 | 1.70 | <0.5 | 8 | 23 | 447 | 3.14 | <10 | 3.15 |
| Upper Bound | | 64.1 | 8.32 | 17 | 2550 | 3.7 | 6 | 2.10 | 1.5 | 14 | 30 | 549 | 3.86 | 50 | 3.87 |
| MRGeo08 | | 4.5 | 7.13 | 32 | 1050 | 3.2 | <2 | 2.61 | 1.9 | 18 | 91 | 606 | 3.79 | 20 | 3.08 |
| Target Range - Lower Bound | | 3.4 | 7.00 | 22 | 980 | 2.0 | <2 | 2.35 | 1.1 | 17 | 82 | 567 | 3.61 | <10 | 2.79 |
| Upper Bound | | 5.9 | 8.57 | 45 | 1210 | 4.3 | 6 | 2.90 | 3.4 | 23 | 102 | 695 | 4.43 | 40 | 3.43 |
| OGGeo08 | | 19.9 | 6.50 | 118 | 930 | 2.8 | 10 | 2.19 | 18.5 | 96 | 84 | 8060 | 5.27 | 20 | 2.84 |
| Target Range - Lower Bound | | 17.9 | 6.24 | 104 | 630 | 1.8 | 6 | 1.98 | 17.6 | 83 | 78 | 7550 | 4.89 | <10 | 2.59 |
| Upper Bound | | 22.9 | 7.65 | 138 | 790 | 4.1 | 16 | 2.44 | 22.6 | 103 | 98 | 9230 | 6.00 | 40 | 3.19 |
| SARM-1 | 4140 | | | | | | | | | | | | | | |
| Target Range - Lower Bound | 3760 | | | | | | | | | | | | | | |
| Upper Bound | 4640 | | | | | | | | | | | | | | |
| STSD-1 | 960 | | | | | | | | | | | | | | |
| Target Range - Lower Bound | 840 | | | | | | | | | | | | | | |
| Upper Bound | 1070 | | | | | | | | | | | | | | |
| **BLANKS** | | | | | | | | | | | | | | | |
| BLANK | <20 | | | | | | | | | | | | | | |
| Target Range - Lower Bound | <20 | | | | | | | | | | | | | | |
| Upper Bound | 40 | | | | | | | | | | | | | | |
| BLANK | | <0.5 | <0.01 | <5 | <10 | <0.5 | 3 | <0.01 | <0.5 | <1 | <1 | <1 | <0.01 | <10 | <0.01 |
| BLANK | | <0.5 | <0.01 | <5 | <10 | <0.5 | <2 | <0.01 | <0.5 | 1 | <1 | <1 | <0.01 | <10 | <0.01 |
| Target Range - Lower Bound | | <0.5 | <0.01 | <5 | <10 | <0.5 | <2 | <0.01 | <0.5 | <1 | <1 | <1 | <0.01 | <10 | <0.01 |
| Upper Bound | | 1.0 | 0.02 | 10 | 20 | 1.0 | 4 | 0.02 | 1.0 | 2 | 2 | 2 | 0.02 | 20 | 0.02 |

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18-10509 81ST AVE. NW
EDMONTON AB T6E 1X7


Finalized Date: 16-OCT-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234435

| Sample Description | Method / Analyte / Units / LOR | ME-ICP61 La ppm 10 | ME-ICP61 Mg % 0.01 | ME-ICP61 Mn ppm 5 | ME-ICP61 Mo ppm 1 | ME-ICP61 Na % 0.01 | ME-ICP61 Ni ppm 1 | ME-ICP61 P ppm 10 | ME-ICP61 Pb ppm 2 | ME-ICP61 S % 0.01 | ME-ICP61 Sb ppm 5 | ME-ICP61 Sc ppm 1 | ME-ICP61 Sr ppm 1 | ME-ICP61 Th ppm 20 | ME-ICP61 Ti % 0.01 | ME-ICP61 Tl ppm 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **STANDARDS** | | | | | | | | | | | | | | | | |
| GBM908-10 | | 50 | 1.95 | 822 | 60 | 2.26 | 2290 | 1060 | 2170 | 0.39 | 8 | 19 | 312 | 20 | 0.68 | <10 |
| Target Range - Lower Bound | | 20 | 1.61 | 716 | 57 | 1.90 | 2030 | 860 | 1860 | 0.33 | <5 | 14 | 260 | <20 | 0.58 | <10 |
| Upper Bound | | 70 | 1.99 | 886 | 72 | 2.34 | 2480 | 1080 | 2280 | 0.43 | 12 | 20 | 320 | 60 | 0.73 | 20 |
| GBM908-5 | | 100 | 0.87 | 472 | 49 | 2.64 | 407 | 1290 | 396 | 0.17 | <5 | 7 | 429 | 40 | 0.36 | <10 |
| Target Range - Lower Bound | | 90 | 0.76 | 430 | 49 | 2.27 | 375 | 1160 | 338 | 0.14 | <5 | 6 | 380 | <20 | 0.31 | <10 |
| Upper Bound | | 140 | 0.95 | 537 | 62 | 2.80 | 461 | 1450 | 418 | 0.19 | 15 | 10 | 467 | 80 | 0.40 | 30 |
| MRGeo08 | | 30 | 1.30 | 542 | 14 | 1.93 | 659 | 1040 | 1065 | 0.29 | 7 | 11 | 301 | 20 | 0.48 | <10 |
| Target Range - Lower Bound | | 20 | 1.24 | 506 | 12 | 1.76 | 616 | 910 | 964 | 0.27 | <5 | 10 | 271 | <20 | 0.45 | <10 |
| Upper Bound | | 60 | 1.54 | 630 | 18 | 2.18 | 756 | 1140 | 1180 | 0.35 | 15 | 15 | 333 | 60 | 0.57 | 30 |
| OGGeo08 | | 30 | 1.21 | 487 | 865 | 1.80 | 8440 | 840 | 7260 | 2.73 | 24 | 9 | 257 | 20 | 0.39 | <10 |
| Target Range - Lower Bound | | <10 | 1.08 | 447 | 841 | 1.62 | 8020 | 760 | 6510 | 2.58 | 16 | 8 | 218 | <20 | 0.36 | <10 |
| Upper Bound | | 60 | 1.34 | 557 | 1030 | 2.00 | 9810 | 950 | 7970 | 3.18 | 39 | 13 | 268 | 60 | 0.47 | 20 |
| SARM-1 | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| STSD-1 | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| **BLANKS** | | | | | | | | | | | | | | | | |
| BLANK | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| BLANK | | <10 | <0.01 | <5 | <1 | <0.01 | <1 | <10 | <2 | <0.01 | <5 | <1 | 1 | <20 | <0.01 | <10 |
| BLANK | | <10 | <0.01 | <5 | 1 | <0.01 | <1 | <10 | <2 | <0.01 | <5 | <1 | <1 | <20 | <0.01 | <10 |
| Target Range - Lower Bound | | <10 | <0.01 | <5 | <1 | <0.01 | <1 | <10 | <2 | <0.01 | <5 | <1 | <1 | <20 | <0.01 | <10 |
| Upper Bound | | 20 | 0.02 | 10 | 2 | 0.02 | 2 | 20 | 4 | 0.02 | 10 | 2 | 2 | 40 | 0.02 | 20 |

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18-10509 81ST AVE. NW
EDMONTON AB T6E 1X7


Finalized Date: 16-OCT-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234435

| Sample Description / Method / Analyte / Units / LOR | ME-ICP61 U ppm 10 | ME-ICP61 V ppm 1 | ME-ICP61 W ppm 10 | ME-ICP61 Zn ppm 2 |
|---|---|---|---|---|
| **STANDARDS** | | | | |
| GBM908-10 | <10 | 151 | <10 | 1120 |
| Target Range - Lower Bound | <10 | 125 | <10 | 939 |
| Upper Bound | 20 | 155 | 30 | 1155 |
| GBM908-5 | 10 | 60 | <10 | 242 |
| Target Range - Lower Bound | <10 | 52 | <10 | 207 |
| Upper Bound | 30 | 66 | 30 | 257 |
| MRGeo08 | <10 | 111 | 10 | 793 |
| Target Range - Lower Bound | <10 | 99 | <10 | 712 |
| Upper Bound | 30 | 123 | 30 | 874 |
| OGGeo08 | <10 | 86 | <10 | 7110 |
| Target Range - Lower Bound | <10 | 77 | <10 | 6400 |
| Upper Bound | 30 | 97 | 30 | 7830 |
| SARM-1 | | | | |
| Target Range - Lower Bound | | | | |
| Upper Bound | | | | |
| STSD-1 | | | | |
| Target Range - Lower Bound | | | | |
| Upper Bound | | | | |
| **BLANKS** | | | | |
| BLANK | | | | |
| Target Range - Lower Bound | | | | |
| Upper Bound | | | | |
| BLANK | <10 | <1 | <10 | <2 |
| BLANK | <10 | <1 | <10 | <2 |
| Target Range - Lower Bound | <10 | <1 | <10 | <2 |
| Upper Bound | 20 | 2 | 20 | 4 |

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Finalized Date: 16-OCT-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234435

| Sample Description / Method / Analyte / Units / LOR | F-ELE81a F ppm 20 | ME-ICP61 Ag ppm 0.5 | ME-ICP61 Al % 0.01 | ME-ICP61 As ppm 5 | ME-ICP61 Ba ppm 10 | ME-ICP61 Be ppm 0.5 | ME-ICP61 Bi ppm 2 | ME-ICP61 Ca % 0.01 | ME-ICP61 Cd ppm 0.5 | ME-ICP61 Co ppm 1 | ME-ICP61 Cr ppm 1 | ME-ICP61 Cu ppm 1 | ME-ICP61 Fe % 0.01 | ME-ICP61 Ga ppm 10 | ME-ICP61 K % 0.01 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DUPLICATES** | | | | | | | | | | | | | | | |
| ORIGINAL | | 2.2 | 7.27 | <5 | 510 | 2.4 | <2 | 3.32 | <0.5 | 16 | 64 | 25 | 4.29 | 20 | 2.14 |
| DUP | | 2.0 | 7.53 | <5 | 530 | 2.4 | <2 | 3.40 | <0.5 | 17 | 65 | 25 | 4.37 | 20 | 2.18 |
| Target Range - Lower Bound | | 1.5 | 7.02 | <5 | 480 | 1.8 | <2 | 3.18 | <0.5 | 15 | 60 | 23 | 4.10 | <10 | 2.04 |
| Upper Bound | | 2.7 | 7.78 | 10 | 560 | 3.0 | 4 | 3.54 | 1.0 | 18 | 69 | 27 | 4.56 | 30 | 2.28 |
| 1B | 390 | | | | | | | | | | | | | | |
| DUP | 400 | | | | | | | | | | | | | | |
| Target Range - Lower Bound | 360 | | | | | | | | | | | | | | |
| Upper Bound | 430 | | | | | | | | | | | | | | |
| 2B | | <0.5 | 5.01 | 13 | 2230 | 1.3 | 2 | 0.80 | <0.5 | 8 | 62 | 11 | 2.76 | 10 | 1.19 |
| DUP | | <0.5 | 5.17 | 18 | 2310 | 1.5 | <2 | 0.84 | <0.5 | 9 | 67 | 11 | 2.85 | 10 | 1.23 |
| Target Range - Lower Bound | | <0.5 | 4.83 | 10 | 2150 | 0.8 | <2 | 0.77 | <0.5 | 7 | 60 | 9 | 2.65 | <10 | 1.14 |
| Upper Bound | | 1.0 | 5.35 | 21 | 2390 | 2.0 | 4 | 0.87 | 1.0 | 10 | 69 | 13 | 2.96 | 20 | 1.28 |

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Finalized Date: 16-OCT-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234435

| Sample Description | Method / Analyte / Units / LOR | ME-ICP61 La ppm 10 | ME-ICP61 Mg % 0.01 | ME-ICP61 Mn ppm 5 | ME-ICP61 Mo ppm 1 | ME-ICP61 Na % 0.01 | ME-ICP61 Ni ppm 1 | ME-ICP61 P ppm 10 | ME-ICP61 Pb ppm 2 | ME-ICP61 S % 0.01 | ME-ICP61 Sb ppm 5 | ME-ICP61 Sc ppm 1 | ME-ICP61 Sr ppm 1 | ME-ICP61 Th ppm 20 | ME-ICP61 Ti % 0.01 | ME-ICP61 Tl ppm 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | **DUPLICATES** | | | | | | | | |
| ORIGINAL | | 20 | 1.34 | 617 | 12 | 2.70 | 18 | 470 | 31 | 0.03 | <5 | 14 | 180 | 20 | 0.52 | <10 |
| DUP | | 20 | 1.38 | 634 | 8 | 2.74 | 17 | 490 | 32 | 0.03 | <5 | 14 | 182 | 20 | 0.53 | <10 |
| Target Range - Lower Bound | | <10 | 1.28 | 589 | 9 | 2.57 | 16 | 450 | 28 | 0.02 | <5 | 12 | 171 | <20 | 0.49 | <10 |
| Upper Bound | | 30 | 1.44 | 662 | 12 | 2.87 | 19 | 510 | 35 | 0.04 | 10 | 16 | 191 | 40 | 0.56 | 20 |
| 1B | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 2B | | 30 | 0.50 | 225 | 4 | 0.91 | 37 | 210 | 18 | 0.01 | <5 | 7 | 152 | <20 | 0.35 | <10 |
| DUP | | 40 | 0.52 | 229 | 4 | 0.95 | 38 | 210 | 19 | 0.02 | <5 | 7 | 158 | <20 | 0.35 | <10 |
| Target Range - Lower Bound | | 20 | 0.47 | 211 | 3 | 0.87 | 35 | 190 | 16 | <0.01 | <5 | 6 | 146 | <20 | 0.32 | <10 |
| Upper Bound | | 50 | 0.55 | 243 | 5 | 0.99 | 40 | 230 | 21 | 0.02 | 10 | 8 | 164 | 40 | 0.38 | 20 |

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Finalized Date: 16-OCT-2012
Account: DAHGEO

Project: Liard Fluorspar

# QC CERTIFICATE OF ANALYSIS VA12234435

| Sample Description | Method / Analyte / Units / LOR | ME-ICP61 U ppm 10 | ME-ICP61 V ppm 1 | ME-ICP61 W ppm 10 | ME-ICP61 Zn ppm 2 |
|---|---|---|---|---|---|
| **DUPLICATES** | | | | | |
| ORIGINAL | | 10 | 110 | <10 | 73 |
| DUP | | 10 | 112 | <10 | 73 |
| Target Range - Lower Bound | | <10 | 104 | <10 | 67 |
| Upper Bound | | 20 | 118 | 20 | 79 |
| 1B | | | | | |
| DUP | | | | | |
| Target Range - Lower Bound | | | | | |
| Upper Bound | | | | | |
| 2B | | <10 | 146 | <10 | 123 |
| DUP | | <10 | 150 | <10 | 127 |
| Target Range - Lower Bound | | <10 | 140 | <10 | 117 |
| Upper Bound | | 20 | 156 | 20 | 133 |

A68

*Quality Analysis ...* *Innovative Technologies*

**Date Submitted:** 01-Nov-12
**Invoice No.:** A12-12242
**Invoice Date:** 16-Nov-12
**Your Reference:** VA12234434

**Dahrouge Geological Consulting Ltd.**
**10509-81 Ave.**
**Suite 18**
**Edmonton AB T6E 1X7**
**Canada**

**ATTN: Neil McCallum**

# CERTIFICATE OF ANALYSIS

12 Pulp samples were submitted for analysis.

The following analytical package was requested: Code 4F-F Fusion Specific Ion Electrode-ISE

REPORT **A12-12242**



Notes:

CERTIFIED BY :

Emmanuel Eseme , Ph.D.
Quality Control

ISO/IEC 17025
SCC Accredited LAB 266
LAB 266 Accrédité CCN

**ACTIVATION LABORATORIES LTD.**

1336 Sandhill Drive, Ancaster, Ontario Canada L9G 4V5 TELEPHONE +1.905.648.9611 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

# Activation Laboratories Ltd. Report: A12-12242

| Analyte Symbol | F |
|---|---|
| Unit Symbol | % |
| Detection Limit | 0.01 |
| Analysis Method | FUS-ISE |
| 78903 | 22.4 |
| 78912 | 28.7 |
| 78921 | 7.78 |
| 78654 | 0.79 |
| 78660 | 5.11 |
| 78667 | 1.42 |
| 78676 | 7.38 |
| 78682 | 16.4 |
| 78855 | 14.9 |
| 78860 | 14.9 |
| 78877 | 27.5 |
| 78882 | 13.1 |

**Activation Laboratories Ltd.** **Report: A12-12242**

## Quality Control

| Analyte Symbol | F |
|---|---|
| Unit Symbol | % |
| Detection Limit | 0.01 |
| Analysis Method | FUS-ISE |
| GBW 07113 Meas | 0.13 |
| GBW 07113 Cert | 0.130 |
| SCO-1 Meas | 0.08 |
| SCO-1 Cert | 0.08 |
| DR-N Meas | 0.05 |
| DR-N Cert | 0.0500 |
| UB-N Meas | < 0.01 |
| UB-N Cert | 0.00950 |
| W-2a Meas | 0.02 |
| W-2a Cert | 0.0205 |
| SGR-1b Meas | 0.19 |
| SGR-1b Cert | 0.1960 |
| 78882 Orig | 13.0 |
| 78882 Dup | 13.1 |
| Method Blank | < 0.01 |
| Method Blank | < 0.01 |

**Statement of Qualifications**

I, Neil McCallum, P.Geol. of 23 Craig St., Ottawa, ON, K1S 4B6

Do hereby certify that:

1) I am author of the Report titled 'Assessment Report on the Liard Fluorspar Project, Summer 2012' dated January 16th, 2013, relating to the Liard Fluorspar Property, north-central British Columbia.

2) I supervised the work described herein.

3) I have been a registered professional geologist with the Association of Professional Engineers, Geologists and Geophysicists of Alberta since 2009, member # 78767; and a registered geologist with the Association of Professional Engineers, Geologists and Geophysicist of British Columbia since 2011, member #35641.

4) I am a graduate of the University of Alberta, Edmonton, Alberta, with a B.Sc. in geology, 2004.

5) I have practiced in the field of mineral exploration for base-metal, precious metal, uranium, rare metals, industrial mineral and coal deposits since 2004. I have practiced my profession continuously since 2004.

Dated at Vancouver this 6[h] day of May, 2013.

Neil McCallum, B.Sc., P.Geo.