



TITLE OF REPORT [type of survey(s)] Assessment Report on 2009 Biogeochemical survey of Pan Gnome Claims TOTAL COST \$12,860.53

AUTHOR(S) Ragnar U. Bruaset SIGNATURE(S) Ru Bruaset

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S) NA YEAR OF WORK 2009

STATEMENT OF WORK - CASH PAYMENT EVENT NUMBER(S)/DATE(S)  
EVENT No 1D 4589571

PROPERTY NAME GNOME

CLAIM NAME(S) (on which work was done) Pan 1, 2 #3, GNOME M.C.s.

COMMODITIES SOUGHT Au, Cu, Mo

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN \_\_\_\_\_

MINING DIVISION South central NTS 92 P/2

LATITUDE 51° 10' 00" LONGITUDE 120° 53' 00" (at centre of work)

OWNER(S)  
1) Ragnar U. Bruaset & Associates Ltd Ragnar Bruaset

MAILING ADDRESS  
5851 Halifax Street  
Burnaby B.C.  
V5P 2P4

OPERATOR(S) (who paid for the work)  
1) Ragnar U. Bruaset & Associates Ltd

MAILING ADDRESS  
As above

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):  
The Gnome property is underlain by U. Triassic to L. Jurassic Nicola arc. The local volcanic rocks are alkaline, hence assumed to be the northward extension of Eastern volcanic Nicola facies of adjacent Ashcroft sheet. The volcanics of Gnome are frequently strongly foliated and of middle Greenschist facies. Locally, the otherwise thermally metamorphosed rock have undergone garnet epidote skarnification. Intrusive rocks in the property area include monzonite and porphyritic granite rocks. Mineralization consists of chalcopyrite in monzonite and chalcopyrite, Mo in quartz veins in porphyritic granite and chalcopyrite, pyrite, pyrrhotite and Mo in garnet-epidote skarn. Au occurs in siliceous sinter deposits that are considered as cap of an epithermal system.

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS  
4257, 12021, 15120, 23971

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK, (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
<b>GEOLOGICAL (scale, area)</b>			
Ground, mapping _____			
Photo interpretation _____			
<b>GEOPHYSICAL (line-kilometres)</b>			
Ground			
Magnetic _____			
Electromagnetic _____			
Induced Polarization _____			
Radiometric _____			
Seismic _____			
Other <u>Conifer outer bark</u>		<u>PAM 1, 2 #3, GNOME</u>	<u>12,860.53</u>
Airborne _____			
<b>GEOCHEMICAL (number of samples analyzed for ...)</b>			
Soil _____			
Silt _____			
Rock _____			
Other _____			
<b>DRILLING (total metres; number of holes, size)</b>			
Core _____			
Non-core _____			
<b>RELATED TECHNICAL</b>			
Sampling/assaying <u>Conifer outer bark analyses for</u>			
Petrographic <u>\$12588.24 incl.</u>			
Mineralographic _____			
Metallurgical _____			
<b>PROSPECTING (scale, area)</b>			
<b>PREPARATORY/PHYSICAL</b>			
Line/grid (kilometres) _____			
Topographic/Photogrammetric (scale, area) _____			
Legal surveys (scale, area) _____			
Road, local access (kilometres)/trail _____			
Trench (metres) _____			
Underground dev. (metres) _____			
Other _____			
<b>TOTAL COST</b>			<u>\$12,860.53</u>

**BC Geological Survey  
Assessment Report  
31609**

**ASSESSMENT REPORT  
ON  
2009 BIOGEOCHEMICAL SURVEY  
OF  
PAM AND GNOME CLAIMS  
VIDETTE LAKE-AREA**

**SOUTH-CENTRAL MINING REGION, B.C.**

**51°10', 120°53', NTS 92P/2**

ASSESSMENT REPORT  
ON THE 2009  
DOUGLAS FIR OUTER BARK SURVEY  
ON THE PAM AND GNOME CLAIMS

VIDETTE LAKE AREA, SOUTH-CENTRAL MINING REGION, B.C.

LATITUDE AND LONGITUDE: 51°10', 120°53'

NTS 92P/2

REGISTERED OWNERS: RAGNAR U. BRUASET  
AND RAGNAR U. BRUASET & ASSOCIATES LTD.

FIELD WORK STARTED: October 23, 2009

ANALYTICAL WORK COMPLETED: January 6, 2010

REPORT BY: Ragnar U. Bruaset, B.Sc.

July 2010

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2	CLAIM MAP	1:50,000 approx.
3	COMPILATION	1:10,000
4	Au - BIOGEOCHEMISTRY: Data and contours	1:5,000
5	As - " "	
6	Ba- " "	
7	Br- " "	
8	Ca- " "	
9	Co- " "	
10	Cr- " "	
11	Cs (cesium) " "	
12	Fe " "	
13	Hg " "	
14	K " "	
15	Mo " "	
16	Na " "	
17	Sb " "	
18	Sc " "	
19	Zn " "	
20	La " "	
21	Ce (cerium) " "	
22	Sm " "	
23	Yb (ytterbium) " "	
24	Cu " "	1:5,000

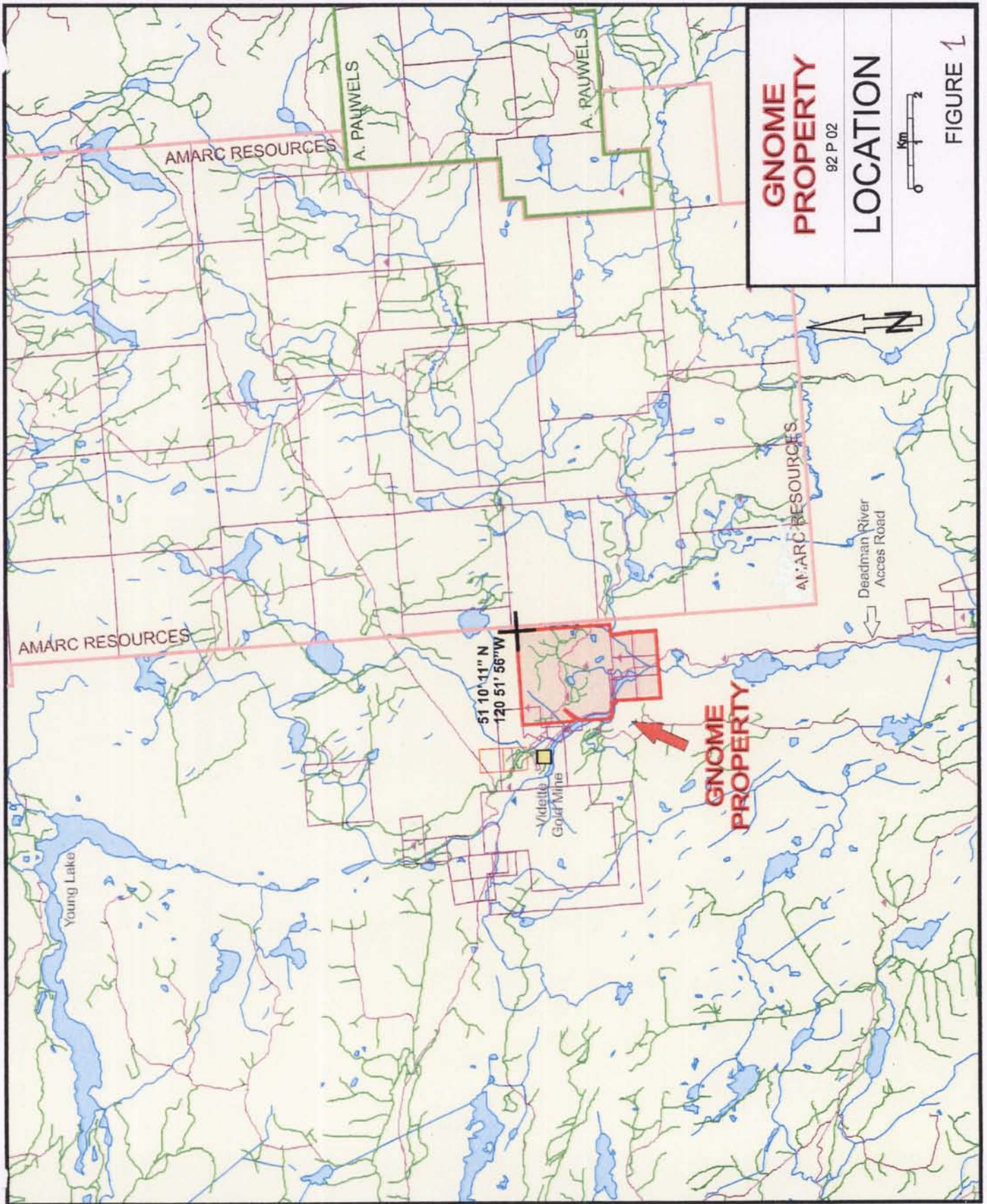
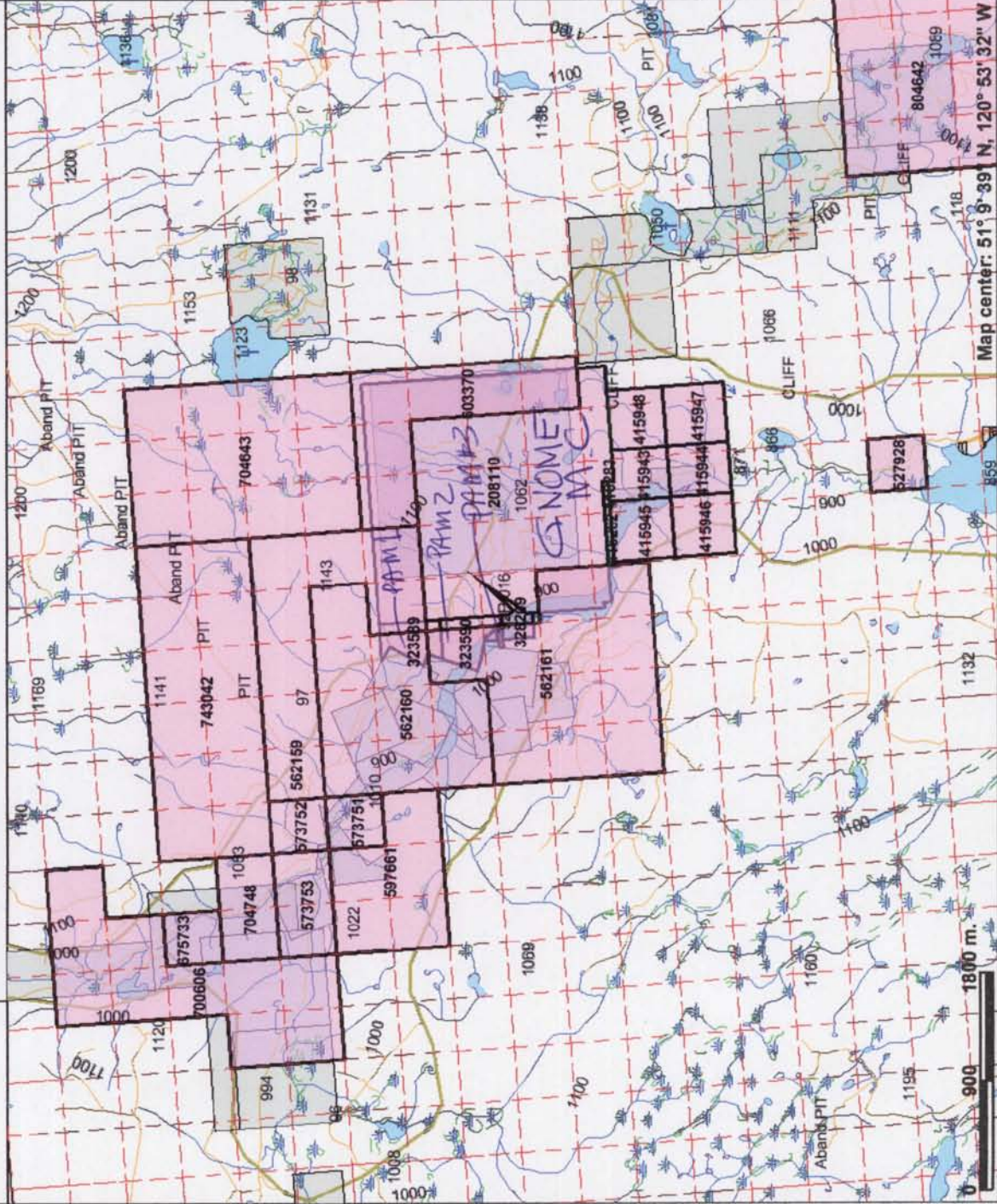


FIGURE 1

# PAM, GNOME



Map center: 51° 9' 39" N, 120° 53' 32" W

1800 m. 900



**Legend**

- Indian Reserves
- National Parks
- Conservancy Areas
- Parks
- MTO Grid (MTO)
- Blocked by MEM
- Other
- Mineral Tenure (current)
- Mineral Claim
- Mineral Lease
- Mineral Reserves (current)
- Placer Claim Designation
- Placer Lease Designation
- No Staking Reserve
- Conditional Reserve
- Release Required Reserve
- Surface Restriction
- Recreation Area
- Others
- Survey Parcels
- BCGS Grid
- Contours (1:250K)
- Contour - Index
- Contour - Intermediate
- Area of Exclusion
- Area of Indefinite Contours
- Transportation - Points (TRIM)
- Helipad
- Transportation - Lines (TRIM)
- Airfield
- Airport
- Airstrip

Scale: 1:50,000

Figure 2

This map is a user generated static output from an internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.



## INTRODUCTION

This report describes a biogeochemical survey conducted in 2009 on the Gnome property. This property is situated at Vidette Lake, 65 km northwest of the city of Kamloops, in the South-Central Mining Region of British Columbia. It is accessible by Deadman River Road which starts at Trans-Canada Highway about 35 km east of Cache Creek, or 7 km west of Savona. The distance from the highway is about 45 km.

The physiographic division in which Vidette Lake is located is known as the Thompson Plateau (GSC Map 1701A: Physiographic Map of the Canadian Cordillera).

Conifer outer bark sampling was carried out. The purpose was to better define the northern and eastern extensions of previously indicated copper and gold anomalies detected variously by soil and bark surveys on the former Vid claims and the current Gnome property (Dawson, 1973; Bruaset, 2005).

The Gnome property, covering an area of about 675 ha., consisted of Gnome and Pam 1-11 Mineral Claims at the time of the subject survey. The registered owners of the claims are Ragnar U. Bruaset & Associates Ltd. and Ragnar U. Bruaset. The property overlaps the eastern portions of the former Vidette Gold Mine property situated near the north-end of Vidette Lake. From 1933 to 1940, Vidette produced 29,869 oz. of gold, 46,573 oz. Ag and undetermined copper and lead from 53,900 tons of ore mined from a northwesterly trending vein which dips about 50°NE (Ref. tabulation accompanying Preliminary Map No. 64: GOLD IN BRITISH COLUMBIA). At the time of mine-closure, a new zone known as the Dexheimer was under development and an access adit under Vidette Lake had been completed.

The Gnome property lies in Quesnellia. More specifically, it lies in the northern extension of the Eastern volcanic facies- the alkaline portion- of the Nicola arc as per the adjoining Ashcroft sheet (GSC Map 42-1989). This northward extension of the Eastern volcanic facies is supported by the author's 1970s rock geochemical work along the east sides of Deadman River and Hamilton Creek. The Gnome property lies on the apparent down-faulted SE-extension of the Vidette vein system. The property is also considered to have potential for porphyry Cu-Au-Mo deposit in Upper Triassic volcanics and intrusives. Further, there is potential for Eocene epithermal gold deposits.

The author has been interested in the mineralizing systems of Vidette Lake since the mid-1970s. Companies that have explored the area of the Gnome property since 1970 and contributed to the present knowledge include Keda Resources, Cominco Ltd., Chevron, Noranda, Inco Gold, Queenstake and Ragnar U. Bruaset & Associates Ltd. Some of this work is described in the Assessment Report file; this report makes reference to some of this work. Work completed includes mapping, soil and rock geochemical sampling, IP and ground magnetic, bark sampling, petrographic studies, fluid inclusion studies, Enzyme Leach surveying and diamond drilling.

## SUMMARY

This report deals with a douglas fir outer bark survey covering Pam 1-3 M.C.s and the portion of Gnome M.C. situated west of Lot 947 (Fig. 3). The survey was conducted on the steep, mainly talus covered slope above Deadman River Road, which runs along the east-edge of Vidette Lake, with the survey extending onto the generally gently rolling ranchland east of the major switch-back of the same road (Figure 3). Overall, 68 conifer outer bark samples, including duplicates, were collected at 100-m intervals along 13 lines spaced about 100 m.

Douglas fir outer bark analytical data on 21 elements comprises Figs. 4-24. These generally show coincident multi-element anomalies for Au, Cu and other Au-related elements.

Geological mapping at 1:2500 scale is recommended as follow-up in the anomalous areas indicated by this survey as well as tightening up of the bark grid to 50 m sample spacing adjacent to the most highly anomalous samples.

## LOCATION, TERRAIN, CLIMATE AND ACCESS

The Gnome property is situated about 65 km northwest of the city of Kamloops in south-central B.C. and is centered on District Lot 947 at Vidette Lake. The latitude and longitude of the centre of the property are approximately 120°52" and 51°10", respectively. The local topographic map references are Criss Creek, (Map 92P/2, scale 1:50,000) and TRIM map 92P.016 (scale 1:20,000).

Property elevations, based on TRIM data, range from ±873 m, at the level of Vidette Lake, to a maximum 1120 m for the ranchland to the east.

The Deadman River valley is located in the southern B.C. dry belt and the Gnome-area is believed to be semi-arid (total annual precipitation range being 250-500 mm), with actual total annual precipitation of the plateau area of Gnome about 380 mm (Bruaset, AR 12,021).

Access to Gnome is via 45 km of Deadman River Road starting at Trans Canada Highway. Preferred access to the Gnome property for heavy equipment is via gravel covered logging roads out of Clinton.

## PROPERTY AND OWNERSHIP

TABLE 1

CLAIM NAME	TENURE No.	OWNER
GNOME	208110	Ragnar U. Bruaset & Associates Ltd
PAM 1	323589	Ragnar U. Bruaset & Associates Ltd
PAM 2	323590	Ragnar U. Bruaset & Associates Ltd
PAM # 3	328209	Ragnar U. Bruaset & Associates Ltd
PAM 10	416282	Ragnar U. Bruaset
PAM 11	416283	Ragnar U. Bruaset
PAM 6	415945	Ragnar U. Bruaset
PAM 4	415943	Ragnar U. Bruaset
PAM 9	415948	Ragnar U. Bruaset
PAM 7	415946	Ragnar U. Bruaset
PAM 5	415944	Ragnar U. Bruaset
PAM 8	415947	Ragnar U. Bruaset

### EXPLORATION HISTORY OF PAM 1-3 AND THE WESTERN PART OF GNOME M.C.

Exploration activity in the Vidette Lake area, including the ground currently under investigation, extends back to at least 1926, but may have began much earlier. A 1930s survey plan of Crown Grants, bearing the presumed B.C. Lands file number 103488, shows a Crown Grant named White Pass (L.4741). It was located in 1926 on the south side of Vidette Lake in the area of the Dexheimer zone. Prospector, trapper, and upper Deadman River resident since before WW 1, Fred Dexheimer, discovered the Vidette vein system (Villiers). His first claim was recorded in the early spring of 1930.

Dexheimer, hailed from Colorado (Villiers), more particularly Creede, according to late former Vidette miner, photographer and long-time Deadman River resident, Bill Philip, (early 1990s pers. comm.). Lot 947, covered by Gnome M.C. was deeded to Charles A. Semlin, in 1907. According to wikipedia.org, Semlin was elected the 12<sup>th</sup> Premier of B.C., in 1898. Semlin had moved to B.C. in 1862 from eastern Canada during the gold rush to become a prospector. Settling in Cache Creek in 1869, he purchased the Dominion Ranch, believed to have been renamed Semlin Ranch.

The current Pam 1, 2 and # 3, and part of Gnome M.Cs. are partial relocations of the following reverted Crown Grants: Myrta (L.4737), Percy (L.4738), and Searcher No. 5 (L.4739), Amy (L. 4761), Fir Bench No. 2, (L. 4763), Fir Bench No.3 (L.4767) and E B Fraction (L.4760). The first three claims were being prospected for gold by Vidette Gold Mines, Limited in 1934, based on a report in GSC Memoir 179 (Cockfield, 1935). During the course of earlier surveys, the current author tied survey lines to several angle-irons denoting the legal corners of these Crown Grants.

1930s gold exploration, in, and near the current survey area includes several hand-dug pits and trenches and two short adits (AR 27,889). The adits are located in SW portion of Gnome M.C. and are believed to represent work on the Shelly and Missing Link claims which are described on p. 35 in Cockfield, 1935.

A large soil survey conducted by Keda Resources in 1972 and described in AR 4,257 included 4 lines extending variously across the current survey area. That was the first systematic geochemical survey in the Vidette area on record. Part of this grid is shown on Fig. 3. It is noted that samples in the western part of the Keda grid, in the area of current survey, were anomalous for Cu with up to 410 ppm.

During the mid-to late 1970s, over the span of a couple of years, the author recollects conducting a reconnaissance soils survey for Cominco Ltd in which the southeastern 1.2 km of the Keda grid, was overlapped. The Cominco grid extended across L. 947 in entirety. Line-lengths were comparable to the Keda grid but the line-spacing was increased to ¼ mile (402 m). This grid consisted of about 8 lines. The program was designed to develop a stockwork Mo target, and it did. Samples were analyzed for Mo, F, Cu, Zn and other elements. Copper gave very weak responses. The sizeable Mo soil anomaly from this early survey trends through the northwest quadrant of what is now Gnome onto Pam 1 M.C. We staked this anomaly as the Gala claims during the surge in moly-interest in 1980. An IP survey, described in AR 9223, was carried out in 1981 yielding a strong IP anomaly within the strongest portion of the reconnaissance Mo-soil anomaly. It was not until 1995 that this IP anomaly received its first test. A fence of two angled diamond drill holes bored at that time by Queestake indicated strong zoning of Cu-Au relative to Mo (Assessment Report 23,971).

A douglas fir outer bark survey over the Gnome property extending part way into the area of current survey had been carried out in 1994. Bark samples were collected on a 200 m square grid. In addition, an Enzyme Leach survey was carried out (Bruaset, Feb. 1995). The author is grateful to the owner of Lot 947 at the time for holding off the planned clear-cutting of his land until the bark survey was completed. This provided an extraordinarily interesting data base that would have been impossible to obtain with the present tree-cover.

The copper-gold geochemical surveys based on douglas fir outer bark and conventional soil sampling carried out in the southern and southwestern portions of the Gnome claim in 2005 are discussed in AR 27,889.

## GEOLOGY

The Gnome property is situated in a window of basaltic Nicola Group volcanic rocks of Middle to Upper Triassic age. The adjoining Nicola rocks are capped by basaltic volcanic rocks of the Miocene-Pliocene Chilcotin Group (Geology Bonaparte Lake GSC map 1278A, scale 1:250,000 and GSC Open File 5743, Sheet 1 of 3, including updated Bonaparte sheet, scale 1:20,000).

Mapping on the Gnome property to scale of 1:5,000 and diamond drilling has provided samples of intermediate to mafic volcanic rocks of the Nicola Group that exhibit strong foliation and have experienced ductile strain. These rocks were given names such as carbonate chlorite schists, calcareous biotite amphibolite schist, biotite actinolite schist, calcareous biotite schist and calc-silicate and amphibolitic schist (contains garnet and epidote) based on petrographic work carried out by Charles Greig, MSc, P.Geo. Mr. Greig states: "this petrographic study suggests the Nicola rock on Gnome are roughly of middle Greenschist facies, is syn-(?) to late-to post-kinematic with respect to deformation that formed the fabric in the rocks, and as a consequence, many of the deformation textures have been annealed through recrystallization". This metamorphic grade is atypical for basic to intermediate volcanics of the Nicola Group, in general, which usually have undergone low temperature regional metamorphism of the subgreenschist facies (Monger, 1971).

The average strike of the Gnome fabric is 295°; dips are steep northerly and southerly. Most of Gnome M.C. is underlain by the foliated rocks described by Mr. Greig. In the northwest quadrant of Gnome M.C., the garnet-epidote bearing rocks are most common. The field-name of the garnet-epidote bearing rocks is garnet-epidote skarn. This skarnification is thought to be caused by an underlying intrusion, not yet intersected by diamond drilling. In the course of the current survey, float of Nicola volcanics containing garnet were seen in several places on Pam 1 and 2 mineral claims suggesting a probable NW extension of the apparent thermal metamorphic rocks on Gnome M.C. Early mapping by Cockfield, (Cockfield, 1935) indicates three granitic stocks in the Vidette area, with two forming a NW trend. Subsequent mapping (in AR 4,257), confirmed and enhanced this trend through the discovery of additional outcrops of intrusive. An outcrop of unclassified porphyritic granitic rock in an old trench on the north-side of Deadman River Road near the Gnome bark reference site contains molybdenite and chalcopyrite in a sheared quartz vein (Figure 3).

The NE quadrant of Gnome contains four outcrop areas of siliceous sinter with veining, comb-texture and banding. These textures are suggestive of an epithermal origin (Bruaset April 1984, Petrographic report by Jeff Harris). Because anomalous geochemical levels in Au, As, Mo, and other elements, occur in these silica zones, and douglas firs are rooted in them, two of these silica zones were included in bark surveys (Table 3). All samples from the silica zones were averaged in the current study in order to provide a reference level for gold in douglas fir which was classed as ANOMALOUS:  $\geq 0.88$  ppb. Similarly, the average concentrations of 19 other elements, excepting copper, were used for reference. Bark samples from the silica zones have not undergone copper analysis.

Mafic monzonite containing coarse chalcopyrite has been found in float on the property and identifies by petrographic work. This is suggestive of alkaline-porphyry potential on Gnome.

Fracture controlled chalcopyrite, pyrite, pyrrhotite, and molybdenite with strong mineral zoning between Cu-Au and Mo (AR 23,971) has been encountered in drill holes bored in 1995 in the NW quadrant of Gnome to test the strongest portions of the IP anomaly

reported in AR 9,223. This IP anomaly appears to extend onto Pam 1, and as such was a target in the survey of 2009.

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## **BIOGEOCHEMICAL SURVEYING WITH CONIFER OUTER BARK**

Some considerations with regards to biogeochemistry in mineral exploration based largely on ideas from Dunn, 2007 are:

- Essential functions of roots include finding water (100 -150 liters of water/day including dissolved elements may be taken up by a large deciduous tree on a hot sunny day ( p. 27)
- providing dissolved nutrients, and
- providing support i.e. as 'anchor' (p. 63).

1. Douglas firs have tap roots that grow more or less straight down and act as support. Information on the depth to which roots extend appears in Table 11-7 in Brooks 1972 p. 107. This table indicates ponderosa pine has roots extending to a depth of 24 m. No current information is available on the typical length of douglas fir tap roots. However, based on observations in 2005, it seems clear that the ability of douglas firs to force their way into cracks in the rock and extend their roots is quite considerable, indeed their very existence depends on it. It is assumed that the large douglas firs that grow in the steep talus slope of the survey area are rooted in bedrock. Springs are abundant in the Vidette Lake area, indeed the ice on the lake is considered unsafe due to thickness variations considered by the locals to be caused by springs issuing from the lake bottom. This is suggestive of possible circulation of heated water along deep seated faults. Springs may also occur along the hill-side helping the vegetation to survive in this hot dry environment.

2. Plants absorb essential and non-essential elements from soil; from groundwater; from bedrock (roots may penetrate faults, fractures, joints, cleavages and any interstices, or boundaries between mineral grains); and from volatile compounds, emanations from oxidizing mineral deposits, and moving up through the rock column via fractures, and becoming trapped by various oxide precipitates coating mineral grains in the soil, (p. 63 and Clark, p. 1).

3. Roots are highly variable in their morphology and in lateral extent and penetration depth and have been studied extensively. The total length of roots, rootlets and their mycorrhizal fungi (considered to be essential for tree survival) can be measured in hundreds of km. Depth of penetration has been reported at 53 m. Accordingly, the root system of a single plant may be capable of integrating the geochemical signature of many cubic meters of soil, groundwater and rock ( p. 27).

4. Many factors, including chemistry of the root-environment influence a plant's element up-take. The pH immediately surrounding root-ends is a microenvironment that is relatively acid, more so than the surrounding soil, with values as low as pH =1 reported at root-ends. Many other factors are involved such as seasonal variations in pH, stability of

trace elements, Na content of groundwater solutions (Na content, and its blocking of K-uptake), redox potential may determine the availability of many elements in plants, decaying organic matter tends to capture trace elements and thus removing them from soil solutions, climatic conditions, slope and aspect, soil depth and texture influence uptake (p 27-28).

5. Unlike other biogeochemical sample media such as twigs, leaves, and roots, bark is dead tissue and its composition is free from seasonal variations. Thus, if one wishes to tie into a previous survey of the same kind for the purposes of following up an extension, a few samples collected at previous sites will aid in establishing validity of the new data. Any such comparison presupposes that all sampling procedures, species, and organ sampled, analytical procedures, etc. are the same. Some variability is to be expected, depending on the element considered. Gold is typically more variable than other elements due to its erratic and low concentration in the bark. Anomalous/background values that repeat in the anomalous/ background ranges are generally acceptable. Because of inherent variability of the composition of bark, it is preferable to consider anomalies defined by more than one sample, or multi-element anomalies.

6. The more an element is concentrated in the ground the more likely it is to be taken up in solution by the plant but several processes prevent this from being a linear association (p. 63).

7. Essential elements in the biogeochemistry of life include: H, C, N, O, Na, Mg, P, S, Cl, K, Ca, Mn, Fe, Cu, Zn, Se; essential to several classes of animals and plants are: Si, V, Mo, I; essential to a wide variety of species in one class: B, F, Cr, Br; and essential to only a few species Li, Al, Ni, Sr and Ba. It is useful to have knowledge of the plant requirement for these elements because some elements like Zn, may seem to have very high concentrations relative to those of soil, even though there may be no Zn mineralization in the underlying soil or rock. In the case of high Zn, one may want to look at the concentration of associated pathfinders such as Cd, it being a non-essential element, as it may be a better pathfinder for Zn than Zn itself (p. 23)

8. Gold is a non-essential element with no known use in plant metabolism. In some instances, Au has become absorbed and concentrated up to three orders of magnitude higher than normal background (p. 24).

### **THE 2009 DOUGLAS FIR OUTER BARK SURVEY**

Sixty-eight douglas fir outer bark samples were collected at approximately 100 m interval along 100 m spaced lines which were controlled by hip-chain and compass traversing. In a few places, sample spacing was different, reflecting lack of douglas fir at the desired sample site. Alternately, the most suitable nearby douglas fir would be sampled.

The land being sampled faces SW as indicated on the topographic map (Figure 3). Samples collected to the west of stations 32B, 27, 207B, 4, 14 49, 50, 55B, including

these stations, have steep SW aspects. The rest of the samples are in much less steep terrain although the aspect is the same.

In many cases, large douglas firs growing on very steep slopes were sampled. A fundamental requirement of these trees to maintain their position on these slopes is that they are anchored in bedrock

To avoid the possibility of sample contamination, no gold jewelry of any kind was worn by the sampler at any time during the bark survey, nor subsequently in the course of sample handling including moving samples during drying and packing for shipping (p. 106).

Standard bark sampling tools were used, including a dedicated paint scraper and plastic dust-pan with a crescent cut-out. As a safety precaution, the cutting edges of the scraper were dulled with a few strokes of a file and the edges of the cutting blade were filed round in order to reduce nicking of the soft plastic surface of the dustpan. Bark dust remaining on the dustpan and scraper after a sample had been taken and the sample poured into standard Kraft soil envelopes is easily discarded by blowing on the tools, if dry. If wet, a piece of clean tissue paper works. The scraper and dust-pan, with the plastic handle of the latter shortened, are conveniently stored in a single 10" x 18" plastic-sample bag. Storing sampling tools in a plastic bag reduces the opportunity for contamination from gold bearing material that may linger in the bottom of a packsack. Each bag of bark was tied with flagging and then gathered in a plastic sample bag kept in the packsack. Once back at camp, bark samples were lined up on a clean surface in a secure area to air-dry. Storing samples in plastic bags for an extended length of time is not advisable since sample integrity can be compromised by mould-growth or the Kraft sample bags could rot and disintegrate.

Upon return from the field, bark samples were transferred to a stack of plastic crates, where drying continued at room temperatures for about one month. Immediately, prior to being shipped to the laboratory, individually samples were placed in Zip-lock bags, locked, and tight-packed upright in doubled cardboard boxes. Samples were shipped by overnight FedEx air-courier to Activation Laboratories Ltd at Ancaster, Ontario. Instructions to the laboratory included running some blank organic material through the milling apparatus prior to commencement of sample preparation; processing all samples in numerical order; macerating the entire sample; preparing 30 g briquettes; analyzing briquettes by Instrumental Neutron Activation Analyses; analyzing for gold at the 0.05 ppb detection limit and determine Cu on macerated bark by aqua regia-ICP.

#### **THOUGHTS ON THE ORIGIN OF LOCAL TOPOGRAPHIC FEATURES AND POSSIBILITY FOR GLACIAL TRANSPORT OF Cu/Au MINERALIZATION FROM THE AREA OF VIDETTE MINE TO THE CURRENT SURVEY AREA.**

In the course of the interpretation of biogeochemical Cu-Au anomalies found along the east side of Vidette Lake, one may wonder about the possibility that gold and copper bearing float might have been transported by glaciation to this area from the vein system



of the Vidette Mine, a short distance up-valley. The local geomorphology suggest glacial transportation had little, if any, affect on the present Cu-Au anomalies located in the hillside above the lake.

The mineralogy at the mine consists of pyrite, chalcopyrite, tellurides and native gold (GSC Economic Geology Series No. 15, p.19). According to unpublished information, molybdenite was also present. Cu-Au-Mo is the geochemical signature of the Vidette Lake-area.

Hamilton Creek is a tributary of Deadman River. Vidette Lake is a narrow body of water situated in Hamilton Valley. The width of the lake ranges from 25 to 210 m and averages about 100m. Talus slopes and cliffs prior to the construction of Deadman River road extended into the lake. Vidette Lake appears to have formed behind an alluvial fan deposited by Deadman River (Figure 3). The outflow from Vidette Lake is now situated at the base of the talus slope on the west side of the Hamilton Creek valley. In plan, the valley of Vidette Lake is "z"-shaped.

The Vidette-operator drove an adit under the lake from the mine workings on the north side during the late 1930s to access the Dexheimer zone, which was the proposed portion of the vein system to be mined next. Before driving under the lake, they drilled a few DDHs to test the ground ahead and discovered the so-called Lake fault, a normal fault striking about 075° and dipping 80° southerly. A second fault, called Big fault, also normal, strikes about 320° and dips 80° NE (B.C. Dept. of Mines file plans No. 61749-51). These faults and two others are shown on Fig. 3. There is a high probability of Big fault, or another similar structure, extending along the long direction of Vidette Lake.

The author's hypothesis is that Hamilton valley is a fault-line valley (Thornbury, 1954). Accordingly, this valley was eroded by a river flowing along a fault or series of faults, or simply in a fault zone. The erosion of the valley took place at a time of high water availability, likely glacial melt-water. It is incomprehensible to imagine a continental ice sheet carving such a narrow valley. Accordingly, the current anomalies for Cu and Au located on the steep hillside above Vidette Lake are not likely to be related to transported mineralization along the lines of lateral moraine. It is probable that Yard Creek lengthened northward by headward erosion and in the course of that process may have eroded the SE extension of the productive Vidette vein, or vein system. This may explain Au and Cu anomalies appearing at sample site GN 09-1B near the bottom of Yard Creek and elsewhere. Alternately, buried Cu-Au-Mo deposit(s) may occur, unexposed in the target-area detected only by roots probing for nutrients and water.

### **DEFINITION OF ANOMALIES**

ANOMALOUS levels for the various elements considered were determined by calculating the mean concentration of element in question at the two principal silica sinter occurrences on Gnome claims (Table 3). In the case of these silica deposits, core sample from Noranda and Inco drilling yielded gold concentrations up to 1.6 g/t Au over narrow widths in vicinity of the silica deposits. The roots of trees whose bark samples are

classified as ANOMALOUS in Table 3 extend into the outcrops of sinters. However, no claim is made to the effect that the roots actually encountered gold mineralization of 1.6g tenor. The highest surface sample for gold in the Main silica sinter was about 450 ppb and was a grab sample collected by Earl Dodson in 1983. The Adit sinter has yielded up to 780 ppb Au in a grab sample collected in 1988 (Bruaset, 1988). The mean of the bark samples from the silica sinters is 0.88 ppb Au. Based on the foregoing, gold values  $\geq 0.88$  ppb Au are considered as anomalous by inspection of the data. The median of the various elements considered were determined graphically. A median value establishes the lowest values of the subject elements that may be of interest (Dunn, personal communication, Jan. 2006). Table 3 also lists median values for the various elements considered. The POSSIBLE ANOMALOUS category is restricted to values ranging between the median value and the ANOMALOUS value, but excluding both ends of range. The outline of POSSIBLE ANOMALOUS values are shown on Figs. 4 to 24. The elements that are most prominent indicators of the principal bark anomaly in this survey are listed in Table 2.

### PRESENTATION OF DATA

Fig. 3 shows the location of Vidette Gold mine relative to the Gnome property, the attitudes of the principal gold vein and the principal faults in the mine as well as TRIM topographic contours from map No 92 P.016. It was necessary to refer to the digital version of the high resolution microfiche of the Vidette Mine plan (map 61751) to decipher the map's fine detail, including dips of faults. Also shown are the locations of the so-called Main silica sinter and Adit silica sinter zones whose average element concentrations define ANOMALOUS levels in this survey. The principal structural trend of the property and the principal drainages of Deadman River and Hamilton Creek are also shown.

A contour plot was prepared for each element exhibiting a reasonable degree of variability. A total of 21 such elements were considered. The base-map used for Figs 4-24 includes Vidette Lake, roads, claims and the most prominent outcrops in the survey area.

## DISCUSSION

A prominent distribution pattern in this data is one of generally coincident POSSIBLE ANOMALIES involving mainly: Au, As, Co, Cr, Cs, Fe, Hg, K, Mo, Sb, Sc, Zn, La, Sm, Yb and Cu (Figs 4-24).

Background level of gold in plant tissue, that is to say, actual concentration, is about 0.1 ppb Au (see Dunn, 2007, p 255). In the current survey, samples containing <0.1 ppb Au are clustered in the eastern part of the survey area (Fig. 4). Caliche is likely present in parts of this area, but should not affect the local gold concentrations because portions of the douglas fir root system extend well below the depth of 1 m, at which the caliche layer forms. Further information on caliche is found below.

**TABLE 2.** Elements considered to define the principal gold anomaly which includes samples 8B, 9B

ELEMENT	SAMPLE Nos. GN 09-
Au *	8B, 9B, 20B
As *	8B, 9B, 19B, 20B
Br*****	8B, 9B, 19B, 20B, 21B, 22B, 23M, 24B
Fe *	8B, 8B, 19B, 20B
Hg **	8B, 9B, 19B, 20B, 23B, 24B
Mo*	8B, 9B, 19B, 20B
Sb*	8B, 9B, 19B, 20B
Sc***	8B, 9B, 19B, 20B
Zn*	8B, 9B, 19B, 20B
Cu*	8B, 9B
La****	8B, 9B, 19B, 20B, 23B
Sm****	8B, 9B, 19B, 20B,
Yb****	8B, 9B, 19B, 20B, 23B

Notes:

\*Denotes elements associated with gold in skarn-type, gold-quartz and disseminated deposits. Gangue elements are excluded except if present in abnormally high concentrations.

\*\* Denotes elements exhibiting a low or occasional high frequency of enrichment in deposits. (Boyle, 1979 p. 118).

\*\*\* Appears to be a relatively constant associate of Au in its deposits (Boyle, 1979, p. 133)

\*\*\*\* Rare-earths appear to have a fairly widespread distribution in gold deposits of all types--- (Boyle, 1979 p. 134)

\*\*\*\*\* Present in very small amount in gold deposits (Boyle, 1979 p. 158)

**COPPER** The median value for copper in the current survey at 13 ppm is high compared to a set of 455 douglas fir outer bark samples cited in Dunn, 2007 (p. 333). There Dr. Dunn states on p.250 that “ as a broad, but not definitive rule of thumb, values

in excess of 15 ppm Cu in conifers are worthy of closer examination". Samples in the current survey that contain >15 ppm Cu cluster in its western part of the survey (Fig.24). The two lowest values in the current survey, 8 ppm, approximate the median, 7.9 ppm, in Dr. Dunn's 455 sample-survey. The highest Cu in that survey was 13 ppm.

Interestingly, the extreme western-most samples in the Keda's copper soil geochemical survey, i.e. samples from the lowest portion of the talus slope, (AR 4,257) also yielded relatively high Cu (up to a few hundred ppm) compared to further east on the same lines where values were 10-15 ppm. The low-copper phenomenon of the Keda survey is likely caused by the inhibiting effect of caliche on Cu movement in the soil. Caliche on Gnome M.C. occurs a depth of 1 m in test pits dug in the rolling rangeland of the northern and central portion. Horsnail and Elliott, 1971 deals with soil sampling in caliche areas. It was their observation that Cu and Mo tended not to form discernable anomalies on the flat boulder clay covered areas while in the steeper areas covered by talus fans containing abundant caliche, anomalies did occur. Apparently, on the flat-land the caliche layer acts as an inhibitor to upward migration of Cu. In the talus fans, the caliche layer is disrupted by relatively rapid movement of material and related mixing of caliche and non caliche bearing fragments resulting in the detection of copper dispersion. In the case of biogeochemical systems, the roots acquire nutrients at depths below the caliche layers, and probably sample bedrock if it is necessary to reach those depths to obtain water.

**ARSENIC** The detection limit of As by INAA is 0.01 ppm. The median value of As in the current data is 1.11 ppm, about 2 orders of magnitude above the detection limit. Accordingly, the analyses for As should be reliable. Median As in the 455 douglas fir outer bark survey sited above was 1.3 ppm with the highest value being 7.6 ppm. Given that the As pattern coincides generally with that of gold and the high tendency of As to be enriched in Au deposit, one can view the arsenic pattern here as a positive biogeochemical feature pointing to gold potential.

**ANTIMONY** The INAA- detection limit for antimony is 0.005 ppm and the value considered as ANOMALOUS is  $\geq 0.052$  ppm; about one order of magnitude above the detection limit. The median of Sb in the current data is 0.037 ppm. These are low values, but typical for actual concentrations in vegetation samples. However, the distribution pattern of Sb is strikingly similar to some of the other gold indicator elements in this survey, namely Au, As, Fe, Zn, Mo, and Hg, to name a few. Accordingly, the Sb pattern is judged as supportive of a gold environment. It is considered that the strongest Sb pattern, defined by samples 8B, 9B, 19B and 20B, is an important gold indicator.

**IRON** The median value for iron is 0.037 % and the corresponding value in Dunn, 2007 p. 333 is 0.033 %. The maximum value in the current survey is 0.223% Fe and the corresponding value in the Dunn survey is 0.1%. A strong gossan is present in the outcrop a short distance uphill from sample 8B, which is the second highest Fe sample in this survey. It was apparent from a cursory examination of this gossan, the rocks, structures and mineralization present, that considerably more time would be required than available for an adequate examination. No rock sample was taken at the time. Boyle, 1979, p. 160 describes iron as a constant companion of gold in all of its deposits.

**ZINC** The concentration pattern of Zn is similar to the other gold indicator elements. The median value is 23 ppm and the maximum is 88. For the Dunn-survey, the corresponding values were 39 and 77 ppm, respectively (Dunn, 2007, p. 334). Zn is an essential element and is found in the outer bark at concentration levels comparable to those of soil, namely 10-300 ppm (Table 2-1 in Levinson, 1980). In the current survey, Zn appears to have background of about 20 whereas samples 8B and 9B located down slope from the most promising gossan observed on the property both contain 58 ppm. These levels of Zn are indicated to be supportive of a possible gold bearing structure in the vicinity.

**SODIUM** Sodium is a common associate of hypogene gold deposits, according to Boyle, 1979 p. 121 but it is also an essential element to all animals and plants (Dunn, 2007 p. 23). In this instance, Na is concentrated in the vegetation along the Deadman River road suggesting contamination from road salt, a common problem where road salt is applied. The salt is likely mobile in dust during the dry season or may be exposed to the vegetation through water. It is interesting that Cr has a similar distribution pattern to Na in this data and it exhibits a low or occasional high frequency of enrichment in gold deposits (Boyle, 1979, p. 118).

**RARE- EARTHS** Rare-earths elements for which data appears in this study includes La, Sm, Ce and Yb. These elements form similar pattern among themselves and overall similar pattern to Au. Boyle, 1979, p. 134 describes rare-earths as appearing to have a fairly widespread distribution in gold deposits of all types.

**SCANDIUM** This element is said to be a relatively constant associate of gold deposits (Boyle, 1979, p. 133). The distribution patten for Sc in the current data (Fig. 19) reveals that the highest Sc value corresponds to the second highest gold analyses with some other high gold values correlating to high scandium. The overall high patterns in gold and scandium are strikingly similar. Some of the scandium concentrations are quite high with values >0.5 ppm not uncommon. Dunn, 2007, p. 297,

## CONCLUSIONS

Multi-element biogeochemistry involving conifer outer bark, a tried and true method for detecting areas of ongoing exploration interest, has successfully done so again.

A total of 68 douglas fir outer bark samples were collected from the steep hill sides above Vidette Lake and Deadman River extending northward throughout Pam 1, 2 and Pam #3 M.C.s.

This survey extends Cu and Au anomalies indicated by the 2005 survey of the southern portion of Gnome M.C.

Substantially coincident anomalies for gold and gold indicator elements Cu, As, Sb, Fe and Mo and Sc indicate this anomaly merits geological follow-up work targeting gold and copper.

There is evidence of exploration activity by the prospectors of the 1930 in several places on the property, including the steep hill sides that presently appear to be of the greatest interest. With the aid of biogeochemistry it may be possible to locate mineralization in this area that remained elusive to the old timers, although they no-doubt recognized the potential in the area, but were limited by cost and technology.

REPORT BY:

  
Ragnar U. Bruaset, B.Sc.

July 2010

## REFERENCE

- B.C. Dept. of Mines, Bull. No.1, 1932: Vidette Lake p. 71
- B.C. Dept. of Mines, 1940, Plan and Cross sections prepared by Vidette Gold Mines Ltd. Scale 1"=100' and 1"=40' Map Nos. 61,749, 50, 51
- B.C. LANDS MAP 103488 Plan of Vidette Crown grants Scale 1"=300' Lillooet Land District (has Ashcroft Mining Division –stamp)
- BOYLE, R.W., 1979, The Geochemistry of Gold and its Deposits
- BROOKS, R.R. 1972, Geobotany and Biogeochemistry in Mineral Exploration
- BRUASET, R.U. March 1984, Soil and rock Geochemistry, Ground Magnetism Gnome Claim. Assessment Report 12,021
- BRUASET, R.U. April 1984, The 1993 Year End Report on the Gnome Property
- BRUASET, R.U. 1988, Evaluation Report on Gnome, K.G.D. YARD, EPI M.C.s, Vidette Lake area.
- BRUASET, R.U. 1995, Report on the 1994 Enzyme Leach and biogeochemical Surveys of the Gnome Property, Vidette Lake area
- BRUASET, R.U. 1995, Assessment Report on the Diamond Drilling Program on the Gnome Porphyry copper and epithermal gold prospect Assessment Report 23,971
- BRUASET, R.U. 2005, Soil and Biogeochemical Surveys and Prospecting in the South-western Quadrant of the Gnome Mineral Claim Assessment Report 27,889
- CAMPBELL, R.B., TIPPER, H.W. 1971, Geology of Bonaparte Lake Map-area B.C. G.S.C. Memoir 363, 1971
- CLARK, J. ROBERT, Enzyme Leach: Models, Sampling protocol & Case Histories
- COCKFIELD, W.E., 1935, Lode Gold Deposits of Fairview Camp, Camp Mc Kinney, and Vidette Lake area, and the Dividend-Lakeview Property near Osoyoos, B.C. G.S.C. Memoir 179
- DAWSON, J.M., 1973, Geochemical Report on the Vidette Lake Property, Assessment Report 4,257
- DUNN, COLIN E., 2007, Biogeochemistry in Mineral Exploration, Handbook of Exploration and Environmental Geochemistry 9, M. Hall Editor., Elsevier

- DUNN COLIN E., 2004, Biogeochemical Survey of the Old Nick Property, Southern British Columbia. Assessment Report 27,579
- HORSNAIL, R.F., ELLIOTT, I.L., 1971, Some Environmental Influences on the Secondary Dispersion of Molybdenum and Copper in Western Canada CIM Special Vol., 11
- GEIG, CHARLES, 1998? Petrographic Report on Gnome
- G.S.C., Economic Geology Series No. 15, Vidette Lake District p.19
- LEVINSON, A.A., 1980, Introduction to Exploration Geochemistry
- MONGER, J.W.H., 1971, Low Temperature Metamorphism: Distribution and Recognition. In: Programme and Abstracts Cordilleran Section GAC Feb. 26 and 27, 1971
- MORIN, James A., 1988, Geological, Geochemical and Drilling Report on the Gnome Claim Assessment Report 18,492.
- THORNBURY, W.D. 1954, Principles of Geomorphology
- VILLIERS, EDWARD The VIDETTE GOLD MINE prepared for the Savona Community Heritage Committee (Undated)
- WILSON, ROB G., 1986, Report on Drilling on the Gnome Claim Assessment Report 15,120

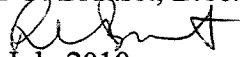


## STATEMENT OF QUALIFICATION

I certify that:

1. I am a 1967 graduate of the University of British Columbia with a B.Sc. degree in Geology. I have practiced my profession as an exploration geologist from 1967 to the present. I am a Member of the Association of Applied Geochemists.
2. I am the beneficial owner of the Gnome Property.
3. I was involved in reconnaissance exploration work in the Deadman River area during the mid to late 1970s; in systematic property work on the Gala claims in 1981; on Gnome in 1983, 1994, 1995, 1999, 2005 and 2009.
4. I conducted biogeochemical surveys on Gnome in 1994, 2005 and 2009.
5. I have conducted systematic property-wide biogeochemical surveys involving outer bark on a total of 8 properties, including the Gnome.
6. I am the author of this report and the interpretations are my own.

Ragnar U. Bruaset, B.Sc.



July 2010

## COST STATEMENT

Analytical work: Activation Laboratories Ltd.	2588.25
Domicile: Food and lodging	\$475.35
Surface transportation: gas, insurance, mileage	\$436.03
Field miscellaneous	\$60.90
Mob, sampling, demob. 6 days R.U. Bruaset @ \$600 \$3,600.00	
Prepare: prepare samples for shipment, prepare maps, interpretation, complete report: 9 days for R.U. Bruaset @ \$600.00 \$5,400.00	
Scanning, photostats	300.00
TOTAL	\$12,860.53

GN10ASR10.1

# **APPENDIX 1**

**ACTIVATION LABORATORY REPORT No. A09-7044**

Quality Analysis ...



Innovative Technologies

Date Submitted: 25-Nov-09  
Invoice No.: A09-7044  
Invoice Date: 06-Jan-10  
Your Reference: GN SUITE

Ragnar U. Bruaset and Associates  
5851 Halifax Street  
Burnaby BC V5B 2P4  
Canada

ATTN: Ragnar Bruaset

## CERTIFICATE OF ANALYSIS

68 Vegetation samples were submitted for analysis.

The following analytical packages were requested: Code 2B-30g Vegetation INAA(INAAGEO)  
Code 2C1 Ash Aqua Regia ICP(AQUAJA)

REPORT      **A09-7044**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

### Notes:

Revised: Corrected Au detection limit

CERTIFIED BY :

A handwritten signature in black ink, consisting of several loops and a long horizontal stroke at the end, positioned above a horizontal line.

Emmanuel Esemé , Ph.D.  
Quality Control

### 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@actlabsint.com](mailto:ancaster@actlabsint.com) ACTLABS GROUP WEBSITE <http://www.actlabsint.com>



Activation Laboratories Ltd. Report: A09-7044 rev 1

Analyte Symbol	Au	Ag	As	Ba	Br	Cd	Co	Cr	Cs	Fo	Hf	Ir	K	Mo	Ni	Rb	Sb	Sc	Sr	Ta	Th
Unit Symbol	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppb	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.3	0.01	0.1	0.3	0.05	0.005	0.05	0.05	0.05	0.05	0.1	0.01	0.05	1	2	1	0.005	0.01	0.1	10
Analysis Method	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
GN 09-55B	0.28	< 0.3	0.81	0.4	1.0	< 0.05	0.037	0.10	0.07	< 0.1	0.10	< 0.1	0.10	0.24	< 2	< 1	0.041	0.15	60	< 0.05	< 0.1
GN 09-56B	0.26	< 0.3	0.56	0.3	0.7	< 0.05	0.025	0.10	< 0.05	< 0.1	0.12	< 0.1	0.12	0.12	< 2	< 1	0.027	0.10	30	< 0.05	< 0.1
GN 09-57B	0.08	< 0.3	0.47	0.3	0.8	< 0.05	0.024	0.15	< 0.05	< 0.1	0.11	< 0.1	0.11	0.22	< 2	< 1	0.028	0.10	50	< 0.05	< 0.1
GN 09-58B	< 0.05	< 0.3	0.71	0.3	0.8	< 0.05	0.024	0.19	< 0.05	< 0.1	0.12	< 0.1	0.12	0.20	< 2	< 1	0.043	0.10	40	< 0.05	< 0.1
GN 09-59B	< 0.05	< 0.3	0.82	0.3	1.1	0.05	0.036	0.19	< 0.05	< 0.1	0.12	< 0.1	0.12	0.22	< 2	< 1	0.053	0.16	40	< 0.05	< 0.1
GN 09-60B	0.22	< 0.3	0.65	0.2	1.0	0.05	0.026	0.09	< 0.05	< 0.1	0.10	< 0.1	0.10	0.16	< 2	< 1	0.024	0.12	40	< 0.05	< 0.1
GN 09-61B	0.05	< 0.3	1.17	0.3	0.7	< 0.05	0.020	0.05	< 0.05	< 0.1	0.16	< 0.1	0.16	0.15	< 2	< 1	0.023	0.08	20	< 0.05	< 0.1
GN 09-62B	< 0.05	< 0.3	1.08	0.2	0.6	< 0.05	0.014	0.12	< 0.05	< 0.1	0.11	< 0.1	0.11	0.18	< 2	< 1	0.020	0.06	30	< 0.05	< 0.1
GN 09-63B	0.12	< 0.3	1.08	0.3	0.9	< 0.05	0.025	0.22	< 0.05	< 0.1	0.13	< 0.1	0.13	0.17	< 2	< 1	0.052	0.11	30	< 0.05	< 0.1
GN 09-64B	< 0.05	< 0.3	0.50	0.2	0.7	< 0.05	0.018	0.18	< 0.05	< 0.1	0.09	< 0.1	0.09	0.48	< 2	< 1	0.041	0.07	30	< 0.05	< 0.1
GN 09-65B	0.14	< 0.3	0.85	0.3	1.0	< 0.05	0.026	0.21	< 0.05	< 0.1	0.08	< 0.1	0.08	0.25	< 2	< 1	0.036	0.12	20	< 0.05	< 0.1
GN 09-66B	< 0.05	< 0.3	0.54	0.2	0.8	< 0.05	0.019	0.13	< 0.05	< 0.1	0.07	< 0.1	0.07	0.33	< 2	< 1	0.037	0.08	30	< 0.05	< 0.1
GN 09-67B	< 0.05	< 0.3	1.08	0.2	1.0	0.06	0.020	0.14	< 0.05	< 0.1	0.13	< 0.05	0.13	0.23	< 2	< 1	0.037	0.08	30	< 0.05	< 0.1
GN 09-68B	0.10	< 0.3	1.17	0.2	0.7	< 0.05	0.012	0.13	< 0.05	< 0.1	0.12	< 0.05	0.12	0.30	< 2	< 1	0.023	0.05	20	< 0.05	< 0.1
GN 09-69B	< 0.05	< 0.3	0.84	0.2	1.0	< 0.05	0.015	0.15	< 0.05	< 0.1	0.11	< 0.1	0.11	0.19	< 2	< 1	0.028	0.06	40	< 0.05	< 0.1
GN 09-70B	0.59	< 0.3	0.99	0.9	2.8	0.12	0.122	0.14	< 0.05	< 0.1	0.09	< 0.1	0.09	0.33	< 2	< 1	0.057	0.56	30	< 0.05	< 0.1

Analyte Symbol	U	W	Zn	La	Co	Ni	Sm	Eu	Tb	Lu	Yb	Mass	Cu
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g	ppm
Detection Limit	0.01	0.05	2	0.01	0.1	0.3	0.001	0.05	0.1	0.001	0.005	1	1
Analysis Method	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	AR-ICP
GN 09-1B	< 0.01	0.06	22	0.38	0.7	0.4	0.077	< 0.05	< 0.1	0.008	0.052	30.1	22
GN 09-2B	< 0.01	< 0.05	88	0.28	0.5	< 0.3	0.056	< 0.05	< 0.1	0.006	0.040	30.3	16
GN 09-3B	< 0.01	< 0.05	30	0.40	0.8	0.5	0.084	< 0.05	< 0.1	0.007	0.048	30.3	16
GN 09-4B	< 0.01	< 0.05	21	0.19	0.3	< 0.3	0.035	< 0.05	< 0.1	0.003	0.018	30.0	15
GN 09-5B	< 0.01	< 0.05	18	0.00	0.2	< 0.3	0.019	< 0.05	< 0.1	0.002	0.010	30.1	9
GN 09-6B	< 0.01	< 0.05	22	0.22	0.4	< 0.3	0.050	< 0.05	< 0.1	0.005	0.035	30.0	14
GN 09-7B	< 0.01	< 0.05	20	0.15	0.3	< 0.3	0.026	< 0.05	< 0.1	0.003	0.014	30.1	9
GN 09-8B	< 0.01	< 0.05	58	0.22	0.3	< 0.3	0.045	< 0.05	< 0.1	0.004	0.025	30.1	17
GN 09-9B	< 0.01	< 0.05	58	0.44	0.9	< 0.3	0.088	< 0.05	< 0.1	0.009	0.064	30.3	17
GN 09-10B	< 0.01	< 0.05	30	0.23	0.5	< 0.3	0.053	< 0.05	< 0.1	0.005	0.038	30.0	18
GN 09-11B	< 0.01	< 0.05	27	0.16	0.3	< 0.3	0.032	< 0.05	< 0.1	0.003	0.021	30.1	18
GN 09-14B	0.02	< 0.05	14	0.20	0.3	< 0.3	0.044	< 0.05	< 0.1	0.004	0.026	30.1	15
GN 09-15B	< 0.01	< 0.05	13	0.11	0.3	< 0.3	0.024	< 0.05	< 0.1	0.002	0.018	30.2	11
GN 09-16B	< 0.01	< 0.05	20	0.08	0.2	< 0.3	0.019	< 0.05	< 0.1	0.002	0.008	30.3	10
GN 09-17B	< 0.01	< 0.05	25	0.14	0.3	< 0.3	0.029	< 0.05	< 0.1	0.003	0.024	30.1	13
GN 09-18B	< 0.01	< 0.05	28	0.17	0.3	< 0.3	0.032	< 0.05	< 0.1	0.004	0.029	30.4	13
GN 09-19B	< 0.01	< 0.05	33	0.37	0.7	< 0.3	0.066	< 0.05	< 0.1	0.006	0.041	30.1	15
GN 09-20B	< 0.01	< 0.05	42	0.25	0.5	< 0.3	0.045	< 0.05	< 0.1	0.004	0.028	30.6	14
GN 09-21B	< 0.01	< 0.05	24	0.08	0.2	< 0.3	0.015	< 0.05	< 0.1	< 0.001	0.009	30.1	10
GN 09-22B	< 0.01	< 0.05	26	0.14	0.3	< 0.3	0.024	< 0.05	< 0.1	0.002	0.016	30.5	10
GN 09-23B	< 0.01	< 0.05	27	0.22	0.4	< 0.3	0.037	< 0.05	< 0.1	0.004	0.026	30.2	14
GN 09-24B	< 0.01	< 0.05	26	0.19	0.4	< 0.3	0.034	< 0.05	< 0.1	0.003	0.021	30.2	13
GN 09-25B	< 0.01	< 0.05	24	0.15	0.3	< 0.3	0.024	< 0.05	< 0.1	0.002	0.018	30.1	14
GN 09-26B	< 0.01	< 0.05	26	0.16	0.3	< 0.3	0.030	< 0.05	< 0.1	0.004	0.023	30.1	11
GN 09-27B	< 0.01	< 0.05	18	0.10	0.2	< 0.3	0.017	< 0.05	< 0.1	0.002	0.012	30.1	11
GN 09-28B	< 0.01	< 0.05	24	0.17	0.3	< 0.3	0.027	< 0.05	< 0.1	0.003	0.019	30.2	16
GN 09-29B	< 0.01	< 0.05	83	0.12	0.2	< 0.3	0.019	< 0.05	< 0.1	0.002	0.012	30.2	11
GN 09-30B	< 0.01	< 0.05	31	0.19	0.4	< 0.3	0.032	< 0.05	< 0.1	0.002	0.021	30.0	15
GN 09-31B	< 0.01	< 0.05	36	0.20	0.4	< 0.3	0.032	< 0.05	< 0.1	0.003	0.020	30.0	13
GN 09-32B	< 0.01	< 0.05	17	0.12	0.3	< 0.3	0.020	< 0.05	< 0.1	0.002	0.012	30.1	12
GN 09-33B	< 0.01	< 0.05	15	0.11	0.2	< 0.3	0.015	< 0.05	< 0.1	0.001	0.008	30.0	10
GN 09-34B	< 0.01	< 0.05	23	0.10	0.2	< 0.3	0.014	< 0.05	< 0.1	0.001	0.008	30.2	14
GN 09-35B	< 0.01	< 0.05	23	0.17	0.4	< 0.3	0.025	< 0.05	< 0.1	0.002	0.016	30.1	14
GN 09-36B	< 0.01	< 0.05	17	0.09	0.2	< 0.3	0.014	< 0.05	< 0.1	0.001	0.008	30.1	13
GN 09-37B	< 0.01	< 0.05	20	0.12	0.3	< 0.3	0.020	< 0.05	< 0.1	0.002	0.013	30.2	13
GN 09-38B	< 0.01	< 0.05	22	0.20	0.4	< 0.3	0.029	< 0.05	< 0.1	0.002	0.015	30.1	15
GN 09-39B	< 0.01	< 0.05	17	0.10	0.2	< 0.3	0.014	< 0.05	< 0.1	0.002	0.009	30.1	10
GN 09-40B	< 0.01	< 0.05	19	0.21	0.4	< 0.3	0.031	< 0.05	< 0.1	0.003	0.018	30.1	13
GN 09-41B	< 0.01	< 0.05	18	0.08	0.2	< 0.3	0.011	< 0.05	< 0.1	0.001	0.007	30.1	8
GN 09-42B	< 0.01	< 0.05	11	0.12	0.3	< 0.3	0.016	< 0.05	< 0.1	0.001	0.010	30.2	9
GN 09-43B	< 0.01	< 0.05	17	0.16	0.3	< 0.3	0.023	< 0.05	< 0.1	0.002	0.015	30.1	15
GN 09-44B	< 0.01	< 0.05	17	0.16	0.3	< 0.3	0.022	< 0.05	< 0.1	0.002	0.013	30.1	16
GN 09-45B	< 0.01	< 0.05	16	0.08	0.2	< 0.3	0.010	< 0.05	< 0.1	< 0.001	0.007	30.1	11
GN 09-46B	< 0.01	< 0.05	27	0.11	0.2	< 0.3	0.016	< 0.05	< 0.1	0.002	0.010	30.1	12
GN 09-47B	< 0.01	0.09	16	0.14	0.3	< 0.3	0.021	< 0.05	< 0.1	0.002	0.010	30.2	11
GN 09-48B	< 0.01	< 0.05	27	0.19	0.3	< 0.3	0.028	< 0.05	< 0.1	0.003	0.016	30.2	14
GN 09-49B	< 0.01	< 0.05	23	0.16	0.3	< 0.3	0.026	< 0.05	< 0.1	0.002	0.014	30.2	11
GN 09-50B	< 0.01	< 0.05	25	0.22	0.5	< 0.3	0.035	< 0.05	< 0.1	0.004	0.023	30.1	16
GN 09-51B	< 0.01	< 0.05	22	0.18	0.4	< 0.3	0.029	< 0.05	< 0.1	0.003	0.018	30.4	13
GN 09-52B	< 0.01	< 0.05	19	0.27	0.6	< 0.3	0.048	< 0.05	< 0.1	0.005	0.030	30.1	14
GN 09-53B	< 0.01	< 0.05	26	0.26	0.6	< 0.3	0.047	< 0.05	< 0.1	0.004	0.027	30.3	19
GN 09-54B	< 0.01	< 0.05	23	0.20	0.4	< 0.3	0.037	< 0.05	< 0.1	0.004	0.022	30.1	14

Analyte Symbol	U	W	Zn	La	Co	Nd	Sm	Eu	Tb	Lu	Yb	Mass	Cu
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g	ppm
Detection Limit	0.01	0.05	2	0.01	0.1	0.3	0.001	0.05	0.1	0.001	0.005	1	1
Analysis Method	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	AR-ICP
GN 09-55B	< 0.01	< 0.05	28	0.15	0.3	< 0.3	0.025	< 0.05	< 0.1	0.003	0.014	30.1	13
GN 09-56B	< 0.01	< 0.05	21	0.10	0.2	< 0.3	0.016	< 0.05	< 0.1	0.002	0.010	30.1	10
GN 09-57B	< 0.01	< 0.05	17	0.11	0.2	< 0.3	0.016	< 0.05	< 0.1	0.002	0.007	30.1	12
GN 09-58B	< 0.01	< 0.05	19	0.11	0.2	< 0.3	0.018	< 0.05	< 0.1	0.002	0.011	30.1	8
GN 09-59B	< 0.01	< 0.05	25	0.18	0.3	< 0.3	0.030	< 0.05	< 0.1	0.003	0.015	30.1	12
GN 09-60B	< 0.01	< 0.05	25	0.13	0.3	< 0.3	0.022	< 0.05	< 0.1	0.001	0.012	30.1	13
GN 09-61B	< 0.01	< 0.05	15	0.08	0.3	< 0.3	0.016	< 0.05	< 0.1	0.002	0.008	30.2	12
GN 09-62B	< 0.01	< 0.05	27	0.08	0.2	< 0.3	0.013	< 0.05	< 0.1	0.001	0.007	30.2	11
GN 09-63B	< 0.01	< 0.05	31	0.15	0.3	< 0.3	0.022	< 0.05	< 0.1	0.002	0.010	30.0	12
GN 09-64B	< 0.01	< 0.05	23	0.11	0.2	< 0.3	0.016	< 0.05	< 0.1	0.002	0.010	30.0	13
GN 09-65B	< 0.01	< 0.05	15	0.16	0.3	< 0.3	0.024	< 0.05	< 0.1	0.002	0.014	30.2	17
GN 09-66B	< 0.01	< 0.05	15	0.11	0.2	< 0.3	0.018	< 0.05	< 0.1	0.001	0.008	30.3	14
GN 09-67B	< 0.01	< 0.05	30	0.11	0.2	< 0.3	0.017	< 0.05	< 0.1	0.002	0.008	30.2	11
GN 09-68B	< 0.01	< 0.05	19	0.06	0.1	< 0.3	0.009	< 0.05	< 0.1	0.001	< 0.005	30.2	10
GN 09-69B	< 0.01	< 0.05	30	0.08	0.2	< 0.3	0.014	< 0.05	< 0.1	0.001	0.008	30.1	12
GN 09-70B	< 0.01	< 0.05	18	0.29	0.6	< 0.3	0.059	< 0.05	< 0.1	0.006	0.034	30.3	16



Quality Control

Analyte Symbol	Unit Symbol	Detection Limit	Au	As	Ba	Br	Ca	Co	Cr	Fe	Hf	K	Mo	Na	Rb	Sb	Sc	Sr	U	Zn	La	Ce	Sm	Lu	Yb	Cu
Analysis Method			ppb	ppm	ppm	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
GXR-1 Meas			0.05	0.01	5	0.01	0.01	0.1	0.3	0.005	0.05	0.01	0.05	1	1	0.005	0.01	10	0.01	2	0.01	0.1	0.001	0.001	0.005	1
GXR-1 Cert			INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	AR-ICP
GXR-4 Meas			20.1	0.22	20	4.80	3.87	0.3	2.2	0.054	0.10	1.30	0.20	230	6	0.128	0.12	100	0.03	20	0.47	0.8	0.064	0.005	0.033	
GXR-4 Cert			20	0.22	20	4.8	3.8	0.3	2.1	0.05	0.11	1.3	0.25	235	6	0.13	0.1	95	0.03	25	0.48	0.8	0.06	0.005	0.030	
GXR-2 Meas																										
GXR-2 Cert																										
GXR-6 Meas																										
GXR-6 Cert																										
OREAS 13P Meas																										
OREAS 13P Cert																										
L-STD-2 Meas																										
L-STD-2 Cert																										
GN 09-15B Orig																										
GN 09-15B Dup																										
GN 09-29B Orig																										
GN 09-29B Dup																										
GN 09-42B Orig																										
GN 09-42B Dup																										
GN 09-58B Orig																										
GN 09-58B Dup																										
Method Blank Method																										
Blank																										
Method Blank Method																										
Blank																										

Source: 2009 Actlabs Schedule of Fees & Services

BARK METHOD USED:  
 Note: 30g briquettes used  
 this gives 0.05 ppb Au  
 detection limit

# Biogeochemistry - Humus & Vegetation

All elements are in ppm except where noted and Code 2F and Code 2F-PGE which are in ppb, except where noted.

	Humus INAA Code 2A	Vegetation INAA Code 2B	Ash Package INAA Code 2C	Base Metal Vegetation Aqua Regia-ICP Code 2C1	Ash Package Digestion ICP/MS Code 2D	Ash Package ICP/MS Au+Pt+Pd Code 2E	Vegetation Unashed HR-ICP/MS Code 2F (all ppb)	Vegetation Unashed Code 2F-PGE
Ag	2	0.2	2	0.2	0.2	0.2	1	
Al					2	2		
As	1	0.01	0.5		1	3	5	
Au	1 ppb	0.1 ppb	5 ppb			5 ppb	0.1	
B			*(2)		5	5	200	
Ba	100	5	50		3	3	1 ppm	
Be					0.005	0.08	0.1	
Bi					0.05	0.05	1	
Br	1	0.01	1					
Ca	0.5%	0.01%	0.2%		0.1%	0.1%	2 ppm	
Cd					0.01	0.01	0.1	
Ce	1	0.1	3		0.01	0.01	0.5	
Co	1	0.1	1		0.01	0.01	0.5	
Cr	1	0.3	1		1	10	10	
Cs	0.5	0.05	0.5		0.001	0.001	0.1	
Cu				1	0.2	0.2	20	
Dy					0.001	0.001	0.05	
Er					0.001	0.001	0.05	
Eu	0.2	0.05	0.01		0.001	0.001	0.1	
Fe	0.05%	0.005%	0.05%		0.01%	0.01%	0.5 ppm	
Ga					0.1	0.1	0.5	
Gd					0.01	0.01	1	
Ge					0.1	0.1	10	
Hf	0.5	0.05	0.5		0.01	0.01	2	
Hg	0.5	0.05	1				5	
Ho					0.001	0.001	0.01	
In					1 ppb	1 ppb	0.1	
Ir	5 ppb	0.1 ppb	2 ppb					0.2 ppb
K		0.01%	0.05%		0.01%	0.01%	10 ppm	
La	0.1	0.01	0.1		0.002	0.002	0.2	
Li					0.5	0.5	5	
Lu	0.1	0.001	0.05		0.001	0.001	0.2	
Mg					0.01%	0.01%	0.5 ppm	
Mn				1	0.1	0.1	10	
Mo	0.5	0.05	2	1	0.1	0.1	1	
Na	100	1	10		0.01%	0.01%	10 ppm	
Nb					0.005	0.005	0.5	
Nd	3	0.3	5		0.002	0.002	0.2	
Ni	10	2	50	1	5	5	0.1 ppm	
Pb				1	0.1	0.1	10	
Pr					0.002	0.002	0.5	
Pt						2 ppb		0.2 ppb
Pd						3 ppb		0.1 ppb
Rb	20	1	5		0.01	0.01	10	
Re					0.1 ppb	0.1 ppb	0.1	
Rh								0.1 ppb
Ru						10 ppb		0.2 ppb
Sb	0.1	0.005	0.1		0.02	0.02	0.2	
Sc	0.1	0.01	0.1		0.5	0.5	1	
Se	2	0.1	2		1	10	0.2 ppm	
Si					0.2%	0.2%		
Sm	0.1	0.001	0.1		0.001	0.001	0.1	
Sn						1	40	
Sr	100	10	300		0.1	0.1	20	
Ta	0.5	0.05	0.5		0.001	0.001	0.1	
Tb	0.2	0.1	0.5		0.001	0.001	0.02	
Te					0.01	0.01	1	
Th	0.5	0.1	0.1		0.001	0.001	5	
Ti					1	1	20	
Tl					0.001	0.001	0.5	
Tm					0.001	0.001	0.05	
U	0.1	0.01	0.1		0.001	0.001	1	
V					1	10	10	
W	1	0.05	1		0.5	0.5	5	
Y					0.001	0.001	0.2	
Yb	0.1	0.005	0.05		0.001	0.001	0.4	
Zn	20	2	50	1	1	1	0.2 ppm	
Zr					0.5	0.5	5	
<b>Price</b>	\$18.25	\$21.50	\$20.00	\$10.50	\$26.50	\$33.00	\$61.75	\$115.50

**Code 2A - Humus**  
**Code 2B - Vegetation**  
 INAA provides a very cost effective, rapid means of analyzing humus or vegetation to very low detection limits for gold and many other elements useful for geochemical exploration. The organic material is dried below 60°C, macerated and a 15 g aliquot is compressed into a briquette and analyzed using Code 2A or Code 2B depending on whether the material is purely organic (Code 2B) or contains mineral matter (Code 2A). These briquettes are irradiated and their gamma ray spectra are measured and quantified. The advantages of this technique are simplicity (less chance of human error and contamination, ashing is costly and the results in loss of gold) and INAA is the technique with ultimate sensitivity for gold and other trace elements. Prices listed in Codes 2A and 2B are for standard 15 g briquettes. Selected elements may be available at lower costs.

**Code 2C - Vegetation Ash INAA**  
**Code 2C1 - Vegetation Ash-ICP/OES**  
**Code 2D - Vegetation Ash-ICP/MS**  
 Some geologists prefer ashing samples at low temperature (480°C) and determining metals on the ash. This may be advantageous, particularly if base metals are also required for your gold project or for base metal exploration. Note when samples are ashed, there may be volatile loss of certain elements (Au, As, Br, Hg, Cd, etc). Results are reported on an ash weight basis. Code 2D uses a proprietary acid digestion on the ash followed by ICP/MS and extends the list of elements which are available. Not all elements may be total. This package can be quite useful for diamond exploration. **Prices for Code 2C1 for single element is \$5.50 with each additional element costing \$2.25.**

**Code 2E**  
 This package is similar to Code 2D but requires a different digestion of the plant ash to obtain Au, Pt and Pd to low levels. This method has been shown to be very effective for PGE exploration.

**Code 2F**  
 Dry vegetation samples are dissolved in acid and analyzed by High Resolution ICP/MS.

**Code 2F-PGE**  
 Actlabs has developed a new package capable of detecting the PGE in vegetation at the sub-ppb level by microwave digestion, ion exchange and High Resolution ICP/MS. This method eliminates interferences.

Actlabs only ashes vegetation in dedicated vegetation ashing furnaces to avoid contamination.

## **APPENDIX 2**

**LISTING OF ANALYSES OF 21 ELEMENTS IN  
DESCENDING ORDER SHOWING MEDIAN  
VALUES,**

**TABLE 3**

GOLD (Au) ppb in douglas fir outer bark; determined by INAA; detection limit=0.05 ppb; Activation Laboratory Report A09-7044

3.53	0.17
1.23	0.17
1.10	0.17
0.87	0.17
0.84	0.16
0.79	0.15
0.59	0.14
0.55	0.14
0.49	0.14
0.36	0.14
0.36	0.12
0.35	0.12
0.34	0.12
0.29	0.12
0.28	0.12
0.28	0.10
0.26	0.10
0.26	0.08
0.26	0.06
0.25	0.05
0.25	<0.05
0.24	<0.05
0.24	<0.05
0.22	<0.05
0.22	<0.05
0.22	<0.05
0.22	<0.05
0.21	<0.05
0.20	<0.05
0.20	<0.05
0.20	<0.05
0.19	<0.05
0.18	<0.05
0.18	<0.05

MEDIAN=0.18 ppb

n=68

p. 1 of 21

ARSENIC (As) ppm in douglas fir outer bark; INAA; detection limit=0.01 ppm;  
 Activation Laboratory Report A09-7044

3.59	0.97
2.91	0.97
2.38	0.96
2.33	0.95
2.21	0.91
2.13	0.88
1.94	0.88
1.75	0.85
1.65	0.85
1.62	0.84
1.62	0.84
1.54	0.82
1.53	0.81
1.46	0.76
1.43	0.71
1.36	0.71
1.36	0.69
1.32	0.65
1.32	0.65
1.26	0.65
1.19	0.65
1.17	0.65
1.17	0.64
1.16	0.62
1.10	0.60
1.08	0.58
1.08	0.56
1.08	0.55
1.08	0.54
1.07	0.53
0.99	0.51
0.99	0.50
0.99	0.48
0.99	0.47

MEDIAN=0.99 ppm

n=68

p. 2 of 21

BARIUM (Ba) ppm in douglas fir outer bark; INAA; detection limit=5 ppm; Activation Laboratory Report A 09-7044

110	45
102	44
100	43
99	42
96	40
91	40
91	38
87	38
81	37
72	37
71	37
69	37
69	36
69	36
69	36
67	34
66	33
62	31
62	31
60	31
59	31
58	28
57	28
57	26
56	25
55	23
54	19
54	18
52	18
52	18
50	17
49	16
47	15
45	11

MEDIAN=45 ppm

n=68

p. 3 of 21

BROMINE (Br) ppm in douglas fir outer bark; INAA; detection limit=0.01 ppm;  
 Activation Laboratory Report A09-7044

8.40	3.57
6.57	3.40
6.30	3.40
6.22	3.37
6.12	3.36
6.00	3.18
5.85	3.06
5.78	3.06
5.52	3.06
5.40	3.06
5.34	2.97
5.10	2.96
4.59	2.89
4.39	2.89
4.38	2.82
4.38	2.79
4.32	2.64
4.25	2.58
4.18	2.52
4.16	2.46
4.16	2.40
4.14	2.34
4.08	2.28
4.02	2.24
3.98	2.21
3.96	2.07
3.84	2.04
3.78	1.80
3.72	1.73
3.69	1.63
3.67	1.63
3.60	1.26
3.60	1.22
3.57	1.08

MEDIAN=3.57 ppm

n=68

p. 4 of 21

CALCIUM (Ca) % in douglas fir outer bark; INAA; detection limit =0.01%; Activation Laboratory Report A09-7044

1.09	0.57
0.99	0.57
0.94	0.54
0.92	0.54
0.92	0.53
0.91	0.53
0.88	0.53
0.84	0.53
0.77	0.53
0.76	0.53
0.72	0.52
0.72	0.52
0.72	0.52
0.71	0.51
0.69	0.50
0.69	0.50
0.69	0.50
0.68	0.50
0.68	0.50
0.68	0.47
0.66	0.47
0.64	0.45
0.64	0.44
0.63	0.43
0.63	0.42
0.62	0.41
0.62	0.40
0.62	0.40
0.61	0.38
0.58	0.36
0.58	0.36
0.58	0.32
0.57	0.27
0.57	0.27

MEDIAN=0.57 ppm

n=68

p. 5 of 21



COBALT (Co) ppm in douglas fir outer bark; INAA; detection limit=0.1 ppm; Activation Laboratory Report A09-7044

1.3	0.3
1.3	0.3
1.1	0.3
1.1	0.3
1.0	0.3
0.9	0.3
0.9	0.3
0.9	0.3
0.8	0.3
0.8	0.3
0.8	0.3
0.7	0.3
0.6	0.3
0.6	0.3
0.6	0.2
0.5	0.2
0.4	0.2
0.4	0.2
0.4	0.2
0.4	0.2
0.4	0.2
0.4	0.2
0.4	0.2
0.4	0.2
0.4	0.2
0.3	0.2
0.3	0.2
0.3	0.2
0.3	0.2
0.3	0.2
0.3	0.2
0.3	0.2
0.3	0.2
0.3	0.2
0.3	0.2
0.3	0.2
0.3	0.2
0.3	0.2
0.3	0.1

MEDIAN=0.3 ppm

n=68

p. 6 of 21

CHROMIUM (Cr) ppm in douglas fir outer bark; INAA; detection limit=0.3 ppm;  
 Activation Laboratories Report A09-7044

5.1	1.0
3.7	1.0
3.5	1.0
3.2	1.0
2.9	1.0
2.8	1.0
2.8	1.0
2.8	1.0
2.6	1.0
2.2	0.9
2.2	0.9
1.9	0.9
1.8	0.9
1.8	0.9
1.7	0.8
1.7	0.8
1.5	0.8
1.5	0.8
1.5	0.8
1.4	0.7
1.4	0.7
1.4	0.7
1.3	0.7
1.3	0.7
1.3	0.7
1.3	0.7
1.2	0.6
1.2	0.6
1.2	0.6
1.1	0.6
1.1	0.6
1.1	0.6
1.1	0.5
1.0	0.4

MEDIAN=1.0 ppm

n=68

p. 7 of 21

CESIUM (Cs) ppm in douglas fir outer bark; INAA; detection limit=0.05 ppm;  
 Activation Laboratories Report A09-7044

0.22	<0.05
0.18	<0.05
0.17	<0.05
0.16	<0.05
0.14	<0.05
0.13	<0.05
0.12	<0.05
0.11	<0.05
0.11	<0.05
0.11	<0.05
0.10	<0.05
0.10	<0.05
0.09	<0.05
0.08	<0.05
0.07	<0.05
0.07	<0.05
0.07	<0.05
0.07	<0.05
0.07	<0.05
0.06	<0.05
0.06	<0.05
0.06	<0.05
0.06	<0.05
0.05	<0.05
0.05	<0.05
0.05	<0.05
0.05	<0.05
0.05	<0.05
0.05	<0.05
0.05	<0.05
<0.05	<0.05
<0.05	<0.05
<0.05	<0.05
<0.05	<0.05
<0.05	<0.05

MEDIAN: <0.05 ppm

n=68

p.8 of 11

IRON (Fe) % in douglas fir outer bark; INAA; detection limit=0.005%; Activation  
Laboratories Report A09-7044

0.223	0.037
0.193	0.035
0.178	0.035
0.166	0.034
0.158	0.032
0.138	0.030
0.127	0.029
0.122	0.027
0.097	0.026
0.091	0.026
0.086	0.025
0.084	0.025
0.078	0.025
0.074	0.024
0.070	0.024
0.060	0.024
0.054	0.024
0.053	0.023
0.053	0.023
0.050	0.021
0.050	0.020
0.049	0.020
0.046	0.020
0.045	0.019
0.045	0.018
0.041	0.018
0.040	0.018
0.040	0.016
0.039	0.015
0.038	0.015
0.038	0.014
0.038	0.014
0.038	0.014
0.038	0.012

MEDIAN=0.038 %

n=68

p. 9 of 21

MERCURY (Hg) ppm in douglas fir outer bark; INAA; detection limit=0.05 ppm;  
 Activation Laboratories Report A09-7044

0.28	0.12
0.27	0.12
0.23	0.11
0.22	0.11
0.22	0.11
0.21	0.11
0.21	0.11
0.20	0.10
0.20	0.10
0.20	0.10
0.20	0.10
0.20	0.09
0.19	0.09
0.19	0.09
0.19	0.09
0.18	0.09
0.17	0.08
0.16	0.08
0.16	0.08
0.15	0.07
0.15	0.05
0.15	0.05
0.15	0.05
0.15	<0.05
0.14	<0.05
0.14	<0.05
0.14	<0.05
0.14	<0.05
0.13	<0.05
0.13	<0.05
0.13	<0.05
0.13	<0.05
0.12	<0.05
0.12	<0.05

MEDIAN=0.12 ppm

n=68

p. 10 of 21

POTASSIUM (K) % in douglas fir outer bark; INAA; detection limit=0.01%;  
 Activation Laboratories Report A09-7044

0.22	0.13
0.21	0.13
0.20	0.13
0.20	0.12
0.19	0.12
0.18	0.12
0.17	0.12
0.17	0.12
0.16	0.12
0.16	0.12
0.16	0.12
0.16	0.12
0.16	0.12
0.16	0.11
0.16	0.11
0.16	0.11
0.16	0.11
0.16	0.11
0.16	0.11
0.16	0.11
0.16	0.11
0.15	0.10
0.15	0.10
0.15	0.10
0.15	0.10
0.14	0.10
0.14	0.10
0.14	0.10
0.14	0.09
0.13	0.09
0.13	0.09
0.13	0.09
0.13	0.08
0.13	0.08
0.13	0.07

MEDIAN=0.13 %

N=68

p. 11 of 21

MOLYBDENUM (Mo) ppm in douglas fir outer bark; INAA; detection limit=0.05 ppm;  
 Activation Laboratories Report A09-7044

0.51	0.22
0.49	0.22
0.48	0.22
0.45	0.22
0.42	0.21
0.38	0.21
0.36	0.20
0.36	0.20
0.34	0.19
0.34	0.18
0.33	0.18
0.33	0.17
0.32	0.17
0.31	0.17
0.30	0.16
0.30	0.16
0.28	0.15
0.28	0.15
0.28	0.15
0.27	0.15
0.27	0.15
0.27	0.15
0.27	0.15
0.27	0.14
0.26	0.14
0.26	0.14
0.26	0.13
0.25	0.13
0.25	0.12
0.25	0.12
0.24	0.11
0.24	0.11
0.23	0.10
0.23	0.10
0.22	0.09

MEDIAN=0.22 ppm

n=68

p. 12 of 21

SODIUM (Na) ppm in douglas fir outer bark; INAA; detection limit=1ppm;  
 Activation Laboratories Report A09-7044

467	138
371	135
362	135
320	134
306	132
276	128
255	127
241	124
235	116
222	116
218	115
209	114
203	113
201	111
196	111
192	105
187	101
183	100
181	100
176	97
174	96
171	94
163	92
159	90
156	90
151	86
150	83
149	81
144	74
143	73
143	68
141	68
139	66
139	53

MEDIAN=139 ppm

n=68

p. 13 of 21



ANTIMONY (Sb) ppm in douglas fir outer bark; INAA; detection limit=0.005 ppm;  
 Activation Laboratories Report A09-7044

0.187	0.036
0.128	0.036
0.091	0.036
0.090	0.036
0.071	0.035
0.069	0.035
0.066	0.034
0.066	0.033
0.065	0.033
0.064	0.032
0.062	0.032
0.058	0.032
0.057	0.031
0.057	0.031
0.055	0.031
0.054	0.030
0.053	0.029
0.053	0.029
0.053	0.028
0.052	0.027
0.052	0.025
0.048	0.024
0.047	0.023
0.047	0.023
0.046	0.022
0.043	0.022
0.043	0.021
0.042	0.020
0.041	0.020
0.041	0.020
0.041	0.019
0.041	0.019
0.037	0.018
0.037	0.014

MEDIAN=0.037 ppm

n=68

p. 14 of 21

SCANDIUM (Sc) ppm in douglas fir outer bark; INAA; detection limit=0.01 ppm;  
 Activation Laboratories Report A09-7044

0.88	0.12
0.73	0.12
0.63	0.12
0.56	0.12
0.56	0.12
0.52	0.11
0.52	0.10
0.40	0.10
0.35	0.10
0.34	0.10
0.33	0.10
0.33	0.10
0.30	0.10
0.26	0.09
0.23	0.09
0.23	0.08
0.22	0.08
0.21	0.08
0.20	0.08
0.20	0.08
0.19	0.08
0.18	0.07
0.18	0.07
0.17	0.07
0.16	0.07
0.16	0.07
0.15	0.06
0.15	0.06
0.15	0.05
0.15	0.05
0.15	0.05
0.14	0.05
0.14	0.04
0.13	0.04

MEDIAN=0.13 ppm

n=68

p. 15 of 21

ZINC (Zn) ppm in douglas fir outer bark; INAA; detection limit=2 ppm;  
 Activation Laboratories Report A09-744

93	23
88	23
58	22
58	22
42	22
36	22
33	21
31	21
31	20
30	20
30	20
30	19
30	19
28	19
28	19
27	18
27	18
27	18
27	18
27	18
26	17
26	17
26	17
26	17
25	17
25	17
25	16
25	15
24	15
24	15
24	15
23	14
23	13
23	11

MEDIAN=23 ppm

n=68

p. 16 of 21

LANTHANUM (La) ppm in douglas fir outer bark; INAA; detection limit=0.01 ppm;  
 Activation Laboratories Report A09-744

0.44	0.15
0.40	0.15
0.38	0.15
0.37	0.15
0.29	0.14
0.28	0.14
0.27	0.14
0.26	0.13
0.25	0.12
0.23	0.12
0.22	0.12
0.22	0.12
0.22	0.11
0.22	0.11
0.21	0.11
0.20	0.11
0.20	0.11
0.20	0.11
0.20	0.11
0.20	0.11
0.19	0.11
0.19	0.10
0.19	0.10
0.19	0.10
0.18	0.10
0.18	0.09
0.18	0.09
0.17	0.09
0.17	0.09
0.17	0.08
0.16	0.08
0.16	0.08
0.16	0.08
0.16	0.08
0.16	0.06

MEDIAN=0.16 ppm

n=68

p. 17 of 21

CERIUM (Ce) ppm in douglas fir outer bark; INAA; detection limit=0.1 ppm;  
 Activation Laboratories Report A09-744

0.9	0.3
0.8	0.3
0.7	0.3
0.7	0.3
0.6	0.3
0.6	0.3
0.6	0.3
0.5	0.3
0.5	0.3
0.5	0.3
0.5	0.3
0.4	0.3
0.4	0.3
0.4	0.2
0.4	0.2
0.4	0.2
0.4	0.2
0.4	0.2
0.4	0.2
0.4	0.2
0.4	0.2
0.4	0.2
0.4	0.2
0.4	0.2
0.3	0.2
0.3	0.2
0.3	0.2
0.3	0.2
0.3	0.2
0.3	0.2
0.3	0.2
0.3	0.2
0.3	0.2
0.3	0.2
0.3	0.2
0.3	0.2
0.3	0.2
0.3	0.1

MEDIAN=0.3 ppm

n=69

p. 18 of 21

SAMARIUM (Sm) ppm in douglas fir outer bark; INAA; detection limit=0.001 ppm;  
 Activation Laboratories Report A09-7044

0.098	0.024
0.084	0.024
0.077	0.024
0.066	0.024
0.059	0.023
0.059	0.022
0.053	0.022
0.050	0.022
0.048	0.021
0.047	0.020
0.045	0.020
0.045	0.019
0.044	0.019
0.037	0.018
0.037	0.018
0.035	0.017
0.035	0.017
0.034	0.016
0.032	0.016
0.032	0.016
0.032	0.016
0.032	0.016
0.031	0.016
0.030	0.016
0.030	0.015
0.029	0.015
0.029	0.014
0.029	0.014
0.028	0.014
0.027	0.014
0.026	0.013
0.026	0.011
0.025	0.010
0.025	0.009

MEDIAN= 0.025 ppm

n=68

p. 19 of 21

YTTERBIUM (Yb) ppm in douglas fir outer bark; INAA; detection limit=0.005 ppm;  
 Activation Laboratories Report A09-7044

0.064	0.015
0.052	0.014
0.048	0.014
0.041	0.014
0.040	0.014
0.038	0.013
0.035	0.013
0.034	0.012
0.030	0.012
0.029	0.012
0.028	0.012
0.027	0.011
0.026	0.010
0.026	0.010
0.025	0.010
0.024	0.010
0.023	0.010
0.023	0.010
0.022	0.010
0.021	0.009
0.021	0.009
0.021	0.008
0.020	0.008
0.019	0.008
0.018	0.008
0.018	0.008
0.018	0.008
0.018	0.008
0.018	0.008
0.018	0.007
0.016	0.007
0.016	0.007
0.015	0.007
0.015	<0.005

MEDIAN=0.015 ppm

n=68

p. 20 of 21

COPPER (Cu) ppm in douglas fir outer bark; aqua regia digestion/ICP; detection limit=1 ppm; Activation Laboratories Report A09-7044

22	13
19	13
18	13
18	13
17	13
17	13
17	12
16	12
16	12
16	12
16	12
16	12
16	12
16	12
15	11
15	11
15	11
15	11
15	11
15	11
15	11
14	11
14	11
14	11
14	10
14	10
14	10
14	10
14	10
14	10
14	10
13	9
13	9
13	9
13	8
13	8

MEDIAN=13 ppm

n=68

p. 21 of 21

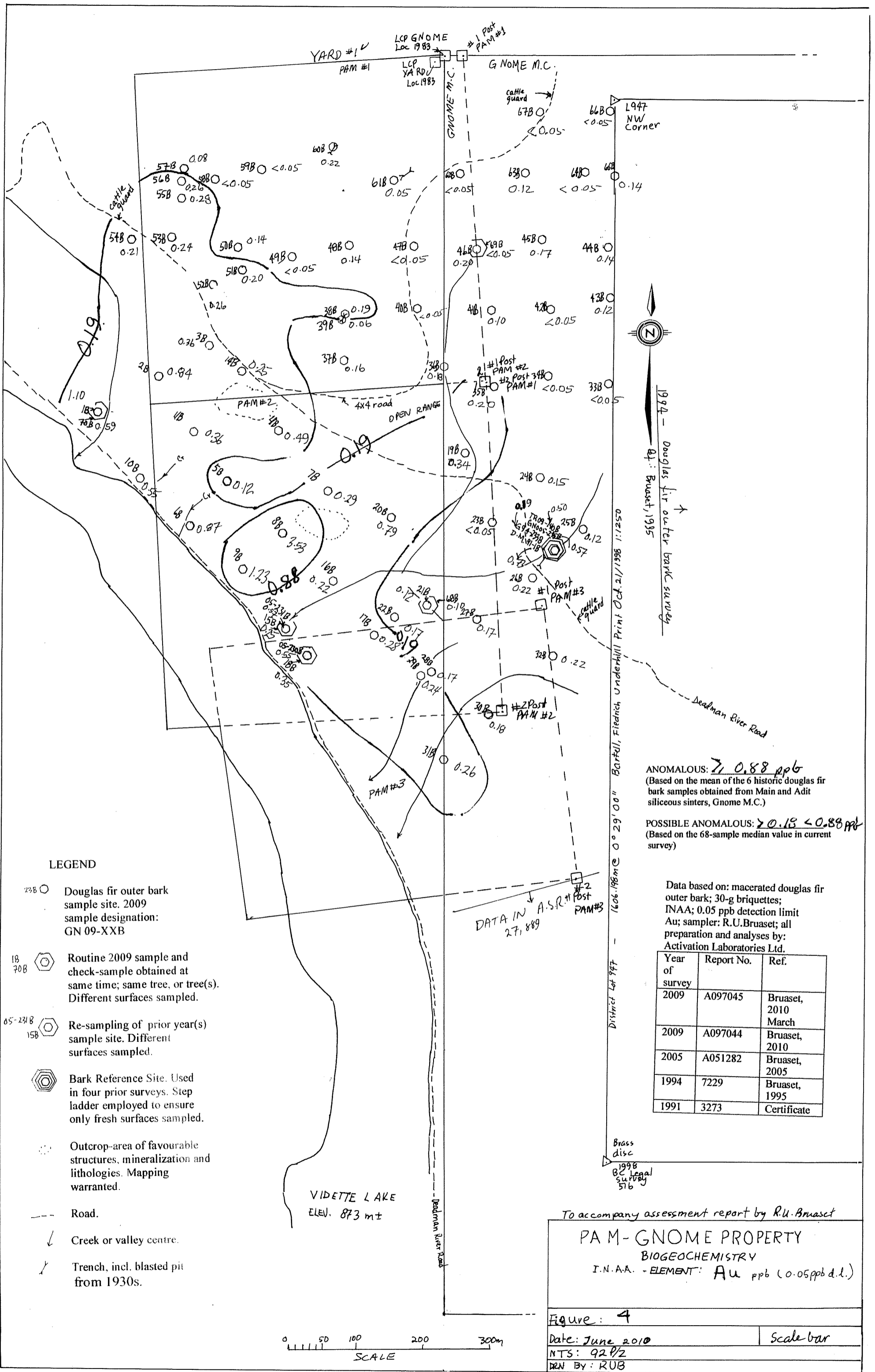


**TABLE 3. Concentrations of select elements in outer barks of douglas fir rooted in siliceous sinter on Gnome M.C. All bark analyses from these sinters are tabulated. The data on each element was averaged and the mean was designated the ANOMALOUS level for the purposes of the 2009 bark survey. The category of POSSIBLE ANOMALOUS was defined as values >MEDIAN and ranging up to the ANOMALOUS i.e.: POSSIBLE ANOMALOUS for any element in the list= >MEDIAN to <ANOMALOUS.**

All analyses were done by ACTLAB INAA and 30 g briquettes with Au at the 0.05 ppb detection limit. Certificates number are denoted by (R.) and sample number by (S.) Any value <detection limit is included in calculation as half of detection limit. No data for copper available from sinters.

<b>ADIT SILICA SINTER</b>	<b>MAIN SILICA SINTER</b>
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	R. A05- 1282	R. 1994- 7229	R. 1991- 3273	R. A05- 1282	R. 1991- 3273	R. 1991- 3273			By graphics Ref. 21 pp start with p. 1 of 21
<b>ELE- MENT</b>	S. G05- 234B	S. G94- 9B	S. D.M. 91-4	S. G05- 233B	S. D.M. 91-2	S. D.M. 91-3	<b>MEAN Adit + Main Sinters</b>	<b>ANOM- ALOUS =</b>	<b>Median Value</b>
<b>Au ppb</b>	0.48	1.09	0.54	0.69	1.10	1.36	0.88	≥0.88	0.18
<b>As ppm</b>	0.78	1.4	0.46	1.8	1.7	0.51	1.11	≥1.11	0.99
<b>Ba ppm</b>	61	56	38	150	49	120	79	≥79	45
<b>Br ppm</b>	3.7	3.7	1.6	9.9	2.4	3.2	4.08	≥4.08	3.57
<b>Ca %</b>	0.55	0.79	0.45	0.91	0.48	0.72	0.65	≥0.65	0.57
<b>Co ppm</b>	0.4	0.3	0.1	0.5	0.2	0.4	0.3	≥0.3	0.3
<b>Cr ppm</b>	2.2	9.3	0.6	2.7	0.6	1.7	2.9	≥2.9	1.0
<b>Cs ppm</b>	0.12	<0.05	<0.05	0.18	0.08	0.09	0.09	≥0.09	<0.05
<b>Fe %</b>	0.066	0.092	0.017	0.114	0.018	0.064	0.062	≥0.062	0.038
<b>Hg ppm</b>	0.17	0.12	0.08	0.28	0.06	0.09	0.13	≥0.13	0.12
<b>K %</b>	0.23	0.204	0.090	0.25	0.196	0.090	0.18	≥0.18	0.13
<b>Mo ppm</b>	1.2	0.51	0.23	0.46	0.07	0.29	0.46	≥0.46	0.22
<b>Na ppm</b>	197	90	51	438	68	200	174	≥174	139
<b>Sb ppm</b>	0.055	0.051	0.016	0.11	0.020	0.060	0.052	≥0.052	0.037
<b>Sc ppm</b>	0.26	0.10	0.06	0.36	0.06	0.26	0.18	≥0.18	0.13
<b>Zn ppm</b>	63	38	19	58	15	29	37	≥37	23
<b>La ppm</b>	0.33	0.21	0.10	0.72	0.08	0.37	0.30	≥0.30	0.16
<b>Ce ppm</b>	0.4	0.3	0.1	0.8	0.1	0.5	0.37	≥0.4	0.30
<b>Sm ppm</b>	0.042	0.026	0.016	0.078	0.013	0.059	0.039	≥0.039	0.025
<b>Yb ppm</b>	0.029	0.012	0.008	0.055	0.007	0.027	0.023	≥0.023	0.015



**LEGEND**

- 23B Douglas fir outer bark sample site. 2009 sample designation: GN 09-XXB
- 18 70B Routine 2009 sample and check-sample obtained at same time; same tree, or tree(s). Different surfaces sampled.
- 05-231B 15B Re-sampling of prior year(s) sample site. Different surfaces sampled.
- Bark Reference Site. Used in four prior surveys. Step ladder employed to ensure only fresh surfaces sampled.
- Outcrop-area of favourable structures, mineralization and lithologies. Mapping warranted.
- Road.
- ↓ Creek or valley centre.
- Y Trench, incl. blasted pit from 1930s.

**ANOMALOUS: 71 0.88 ppb**  
 (Based on the mean of the 6 historic douglas fir bark samples obtained from Main and Adit siliceous sinters, Gnome M.C.)

**POSSIBLE ANOMALOUS: > 0.15 < 0.88 ppb**  
 (Based on the 68-sample median value in current survey)

Data based on: macerated douglas fir outer bark; 30-g briquettes; INAA; 0.05 ppb detection limit Au; sampler: R.U.Bruaset; all preparation and analyses by: Activation Laboratories Ltd.

Year of survey	Report No.	Ref.
2009	A097045	Bruaset, 2010 March
2009	A097044	Bruaset, 2010
2005	A051282	Bruaset, 2005
1994	7229	Bruaset, 1995
1991	3273	Certificate

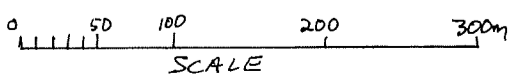
To accompany assessment report by R.U. Bruaset

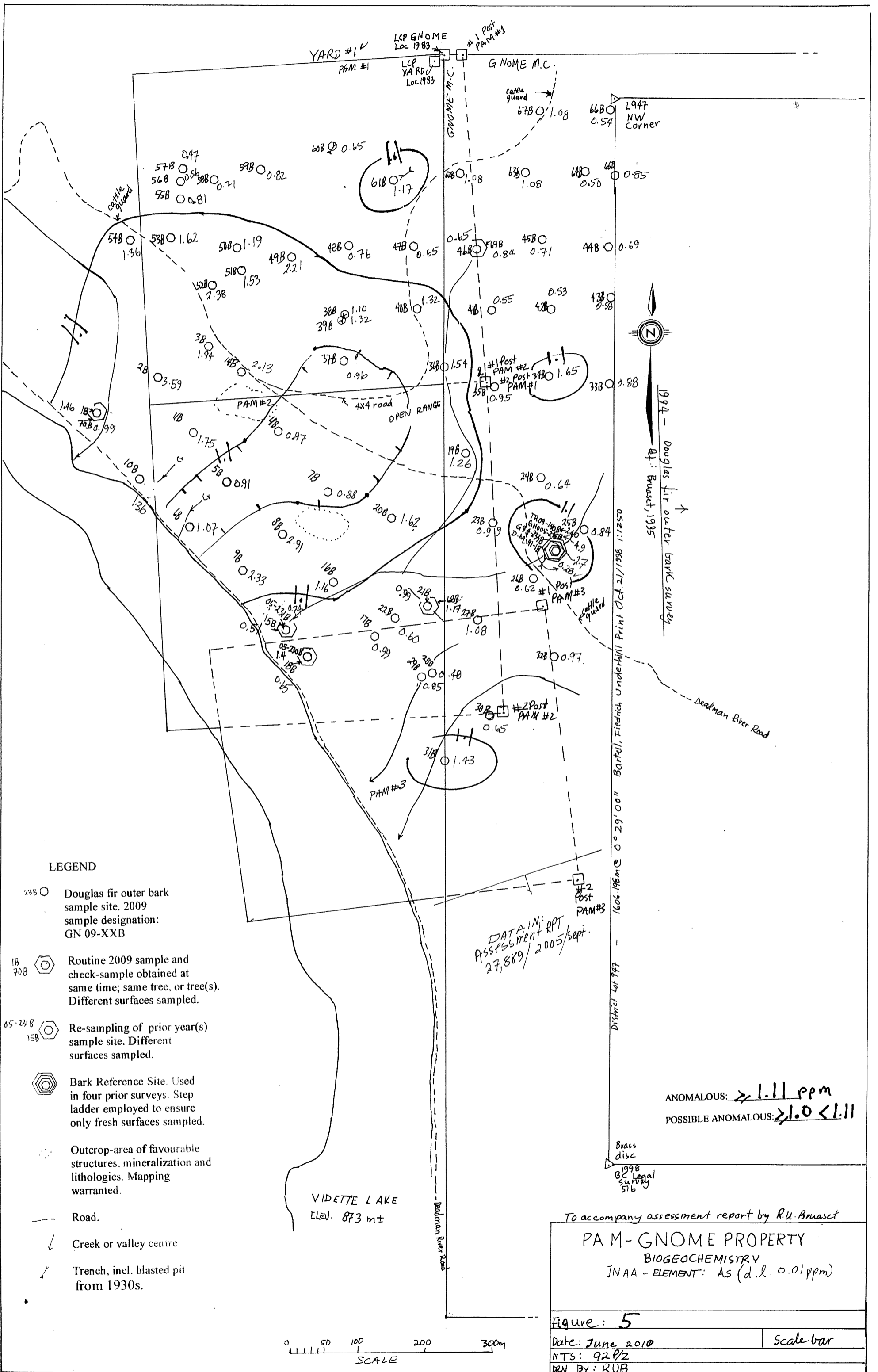
**PAM-GNOME PROPERTY**  
**BIOGEOCHEMISTRY**  
 I.N.A.A. - ELEMENT: Au ppb (0.05ppb d.l.)

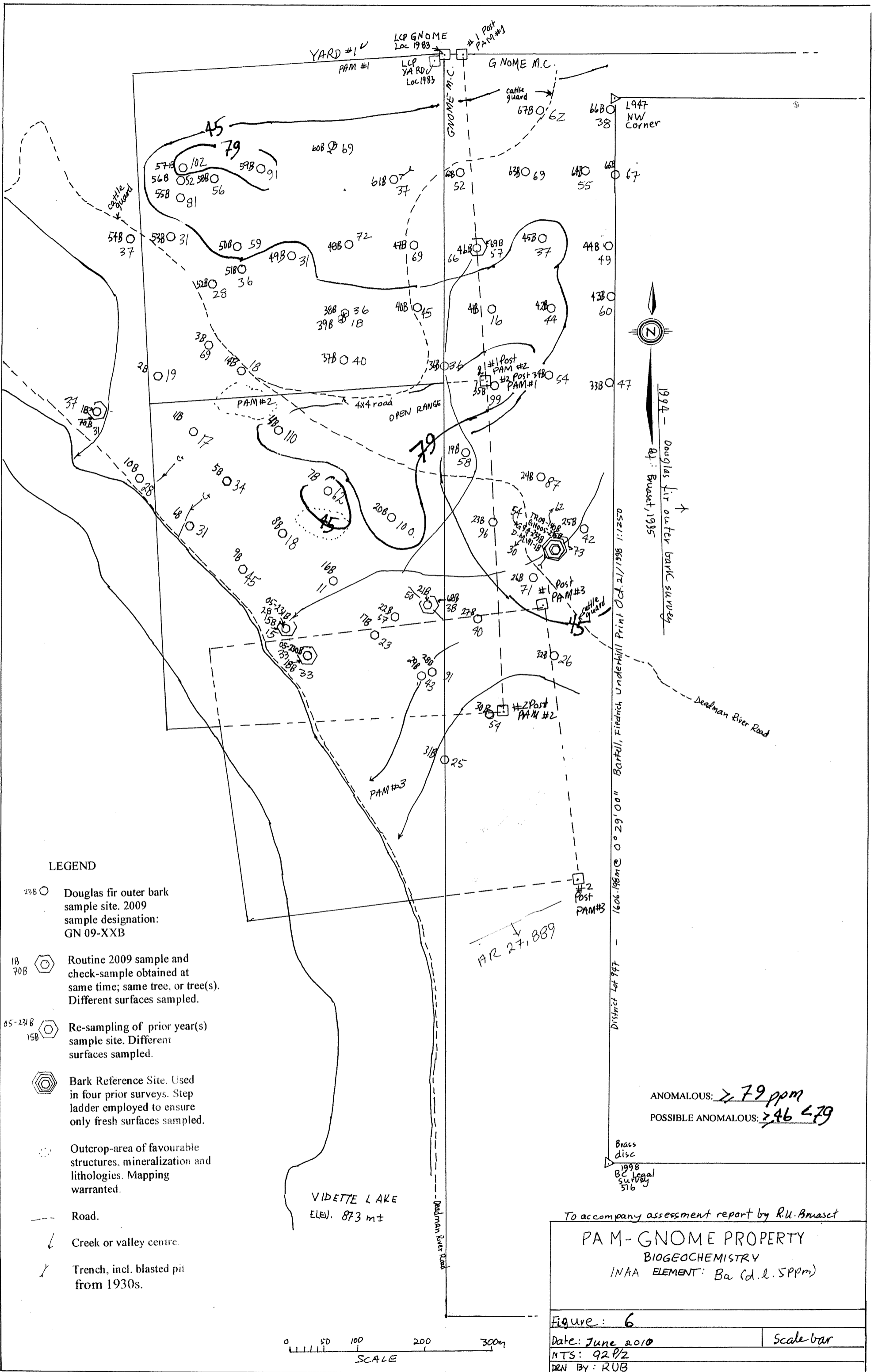
Figure: 4

Date: June 2010  
 NTS: 92 PZ  
 DRN BY: RUB

Scale bar

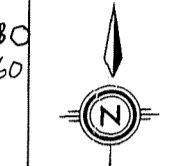






### LEGEND

- 238 ○ Douglas fir outer bark sample site. 2009 sample designation: GN 09-XXB
- 18 70B ⬡ Routine 2009 sample and check-sample obtained at same time; same tree, or tree(s). Different surfaces sampled.
- 05-2318 15B ⬡ Re-sampling of prior year(s) sample site. Different surfaces sampled.
- ⬡ Bark Reference Site. Used in four prior surveys. Step ladder employed to ensure only fresh surfaces sampled.
- Outcrop-area of favourable structures, mineralization and lithologies. Mapping warranted.
- Road.
- ↘ Creek or valley centre.
- ↘ Trench, incl. blasted pit from 1930s.



1994 - Douglas fir outer bark survey  
By: Bruaset, 1995

District Lot 947 - 1606.195m<sup>2</sup> 0° 29' 00" Bartul, Friedrich Underhill Print Oct. 21/1998 1:1250

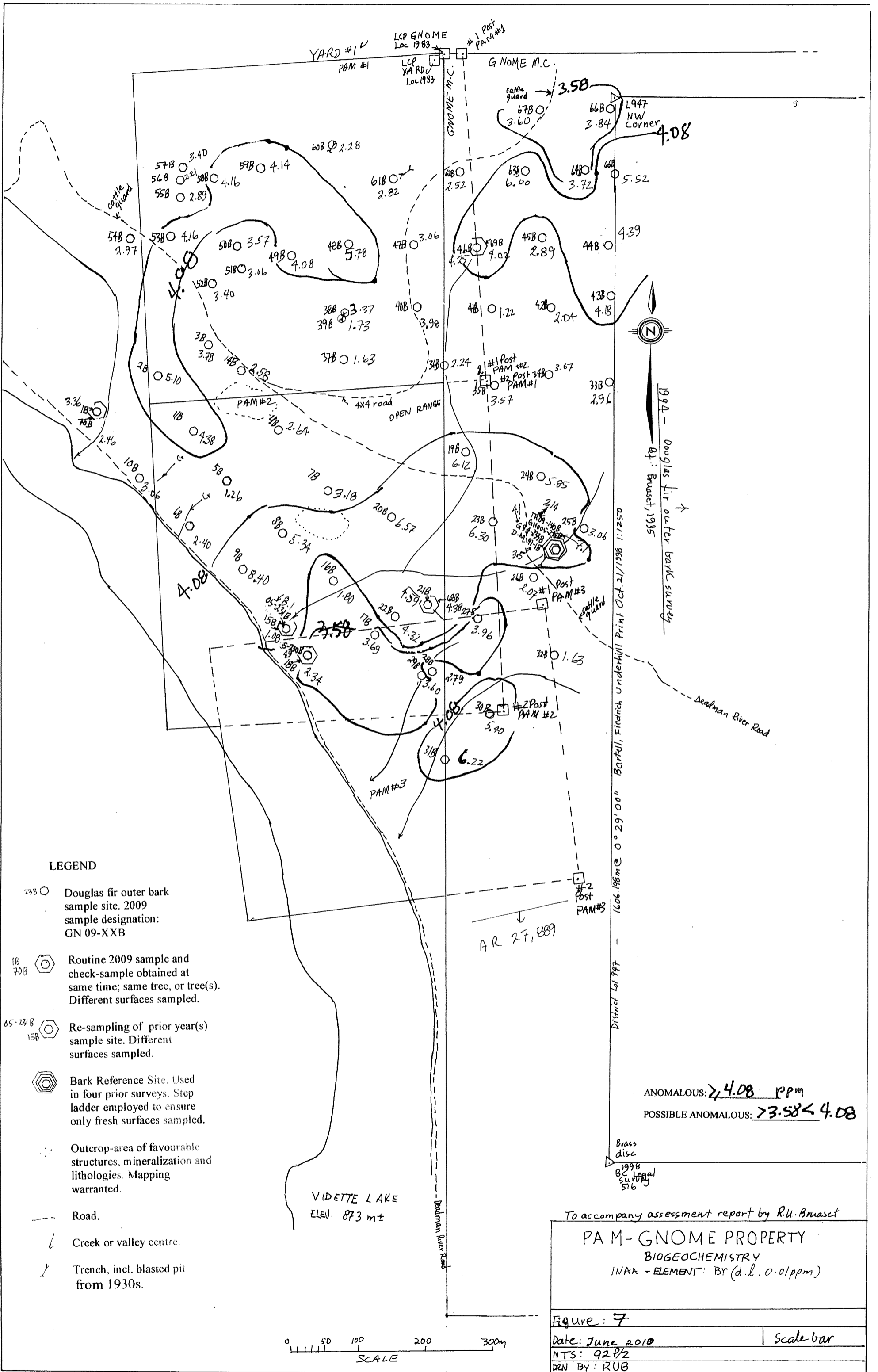
ANOMALOUS: 79 ppm  
POSSIBLE ANOMALOUS: 2.46 4.79

Brass disc  
1998 B2 legal survey 516

To accompany assessment report by R.U. Bruaset

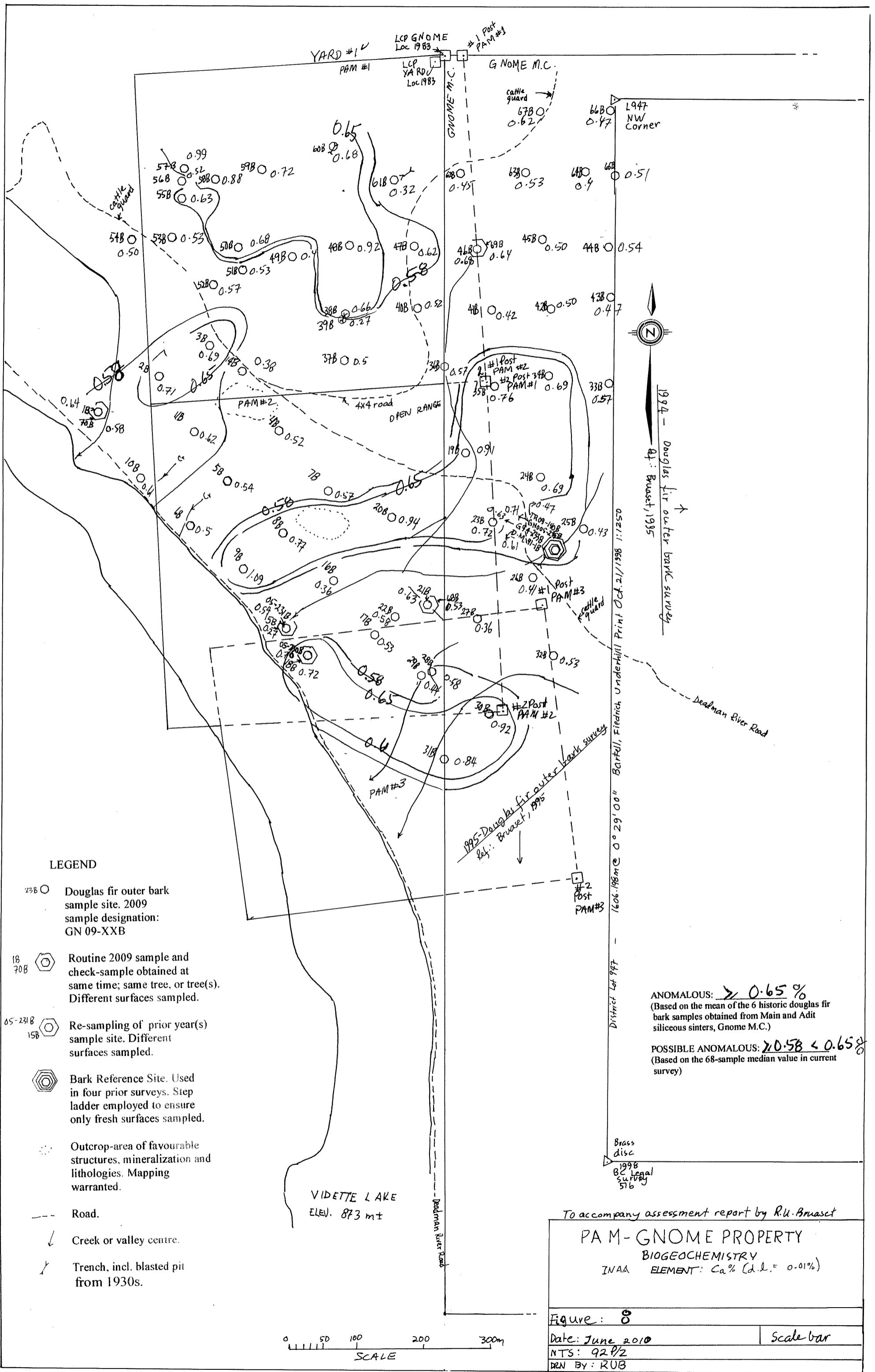
PAM-GNOME PROPERTY	
BIOGEOCHEMISTRY	
INAA ELEMENT: Ba (d.l. 5PPm)	
Figure: 6	Scale bar
Date: June 2010	
NTS: 92/2	
DRN BY: RUB	

0 50 100 200 300m  
SCALE



ANOMALOUS: 2.4.08 ppm  
 POSSIBLE ANOMALOUS: 73.58 < 4.08

To accompany assessment report by R.U. Bruaset  
**PAM-GNOME PROPERTY**  
 BIOGEOCHEMISTRY  
 INAA - ELEMENT: Br (d.l.o. 0.1ppm)  
 Figure: 7  
 Date: June 2010  
 NTS: 92 PZ  
 DEN BY: RUB  
 Scale bar



**LEGEND**

- 23B ○ Douglas fir outer bark sample site. 2009 sample designation: GN 09-XXB
- 18 70B ○ Routine 2009 sample and check-sample obtained at same time; same tree, or tree(s). Different surfaces sampled.
- 05-231B 15B ○ Re-sampling of prior year(s) sample site. Different surfaces sampled.
- Bark Reference Site. Used in four prior surveys. Step ladder employed to ensure only fresh surfaces sampled.
- Outcrop-area of favourable structures, mineralization and lithologies. Mapping warranted.
- Road.
- ↙ Creek or valley centre.
- ⊥ Trench, incl. blasted pit from 1930s.



1994 - Douglas fir outer bark survey  
 by: Bruaset, 1995

District Lot 947 - 1606.198m @ 0° 29' 00" Barfull, Friedrich Underhill Print Oct. 21/1998 1:1250

**ANOMALOUS:  $\geq 0.65\%$**   
 (Based on the mean of the 6 historic douglas fir bark samples obtained from Main and Adit siliceous sinters, Gnome M.C.)

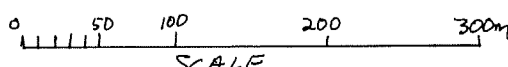
**POSSIBLE ANOMALOUS:  $\geq 0.58 < 0.65\%$**   
 (Based on the 68-sample median value in current survey)

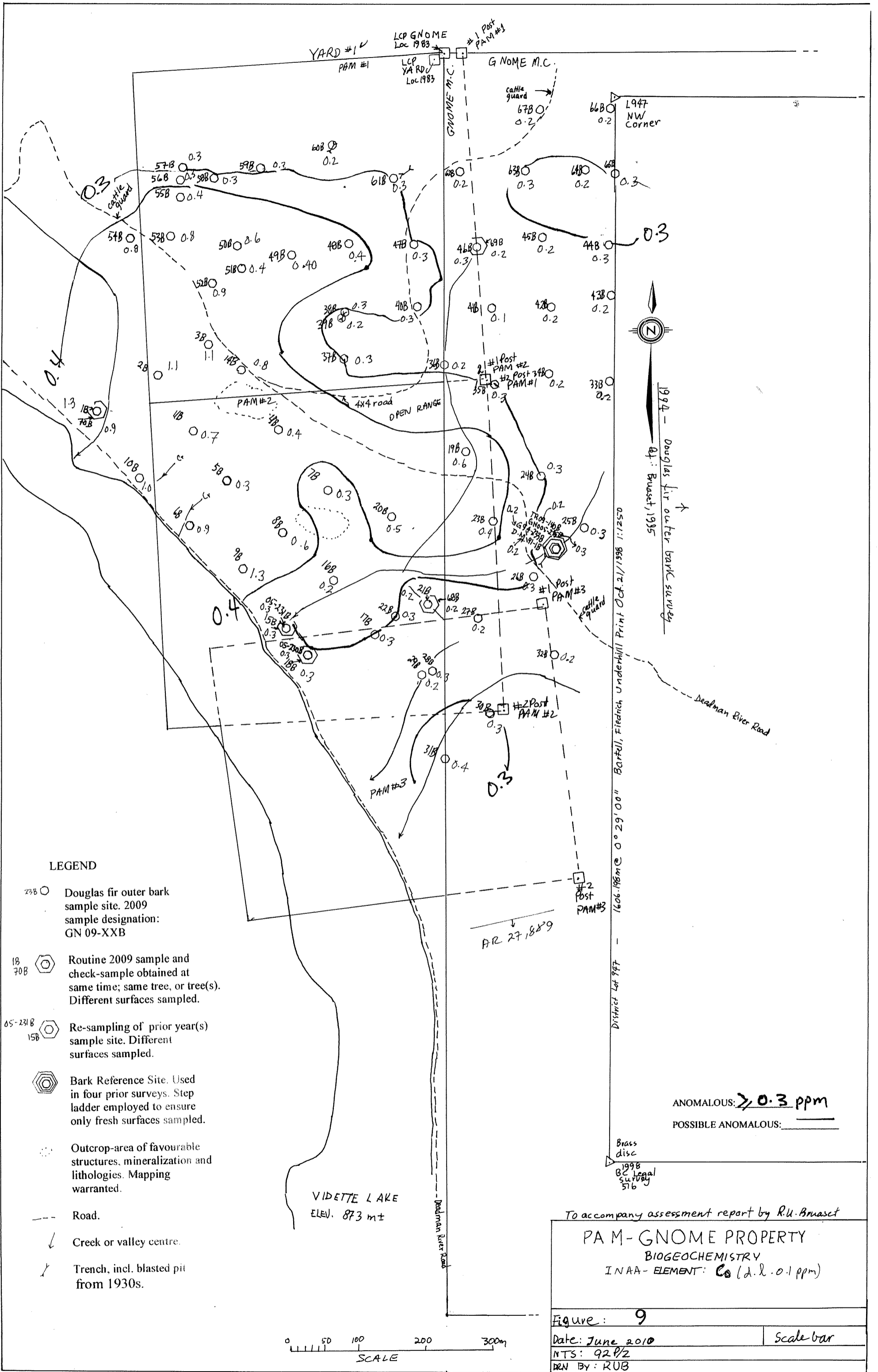
VIDETTE LAKE  
 ELEV. 873 mt

Brass disc  
 1998 BC legal survey 516

To accompany assessment report by R.U. Bruaset

<b>PAM-GNOME PROPERTY</b>	
BIOGEOCHEMISTRY	
INAA ELEMENT: Ca% (d.l. = 0.01%)	
Figure: 8	Scale bar
Date: June 2010	
NTS: 92/2	
DEN BY: RUB	





**LEGEND**

- 238 Douglas fir outer bark sample site. 2009 sample designation: GN 09-XXB
- 18, 70B Routine 2009 sample and check-sample obtained at same time; same tree, or tree(s). Different surfaces sampled.
- 05-238, 15B Re-sampling of prior year(s) sample site. Different surfaces sampled.
- ⊕ Bark Reference Site. Used in four prior surveys. Step ladder employed to ensure only fresh surfaces sampled.
- ⊙ Outcrop-area of favourable structures, mineralization and lithologies. Mapping warranted.
- Road.
- ↘ Creek or valley centre.
- ⊥ Trench, incl. blasted pit from 1930s.

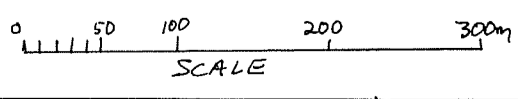
ANOMALOUS: > 0.3 ppm  
 POSSIBLE ANOMALOUS: \_\_\_\_\_

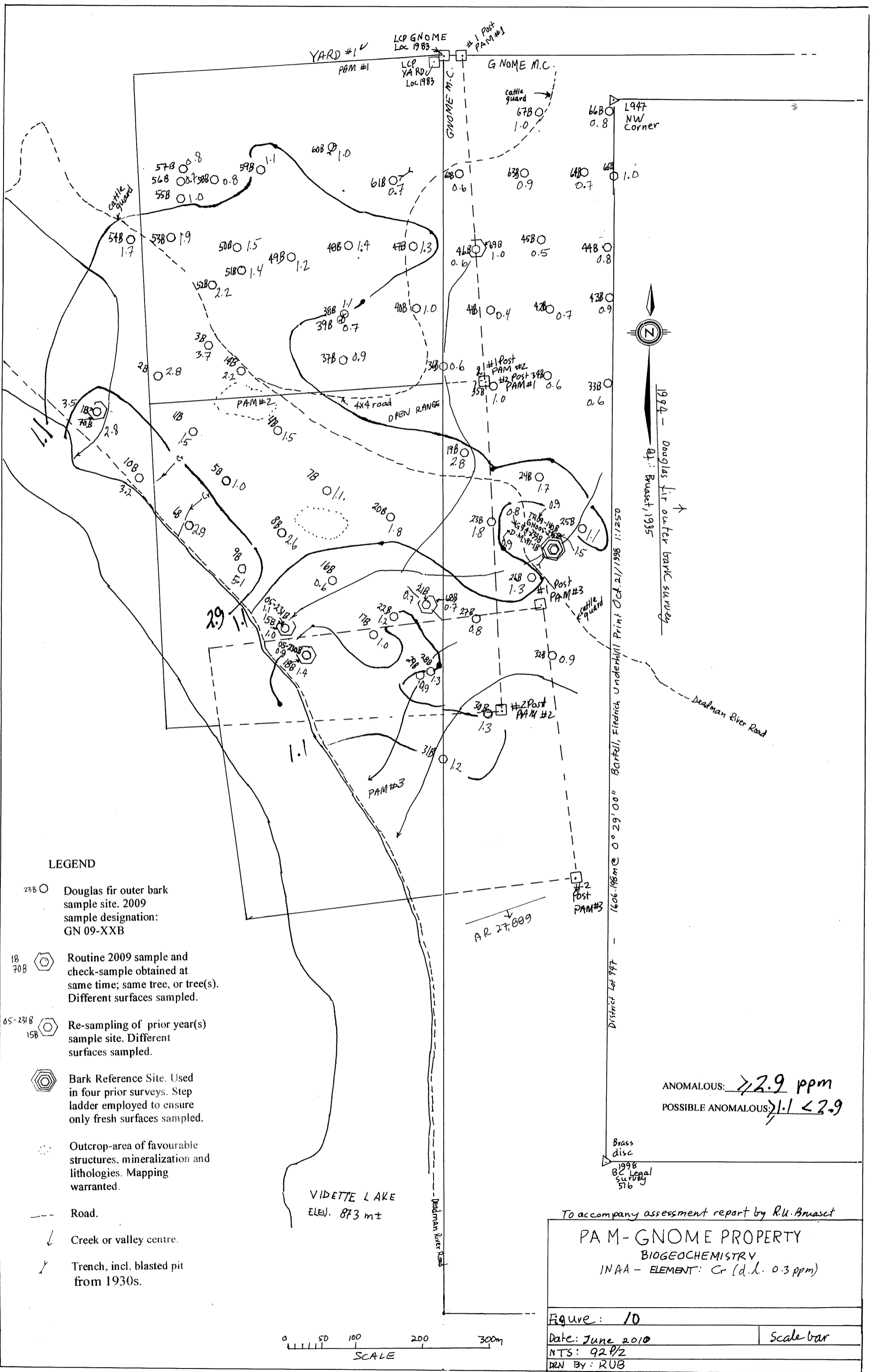
To accompany assessment report by R.U. Bruaset

**PAM-GNOME PROPERTY**  
 BIOGEOCHEMISTRY  
 IN AA - ELEMENT: **Pb** (a.l. 0.1 ppm)

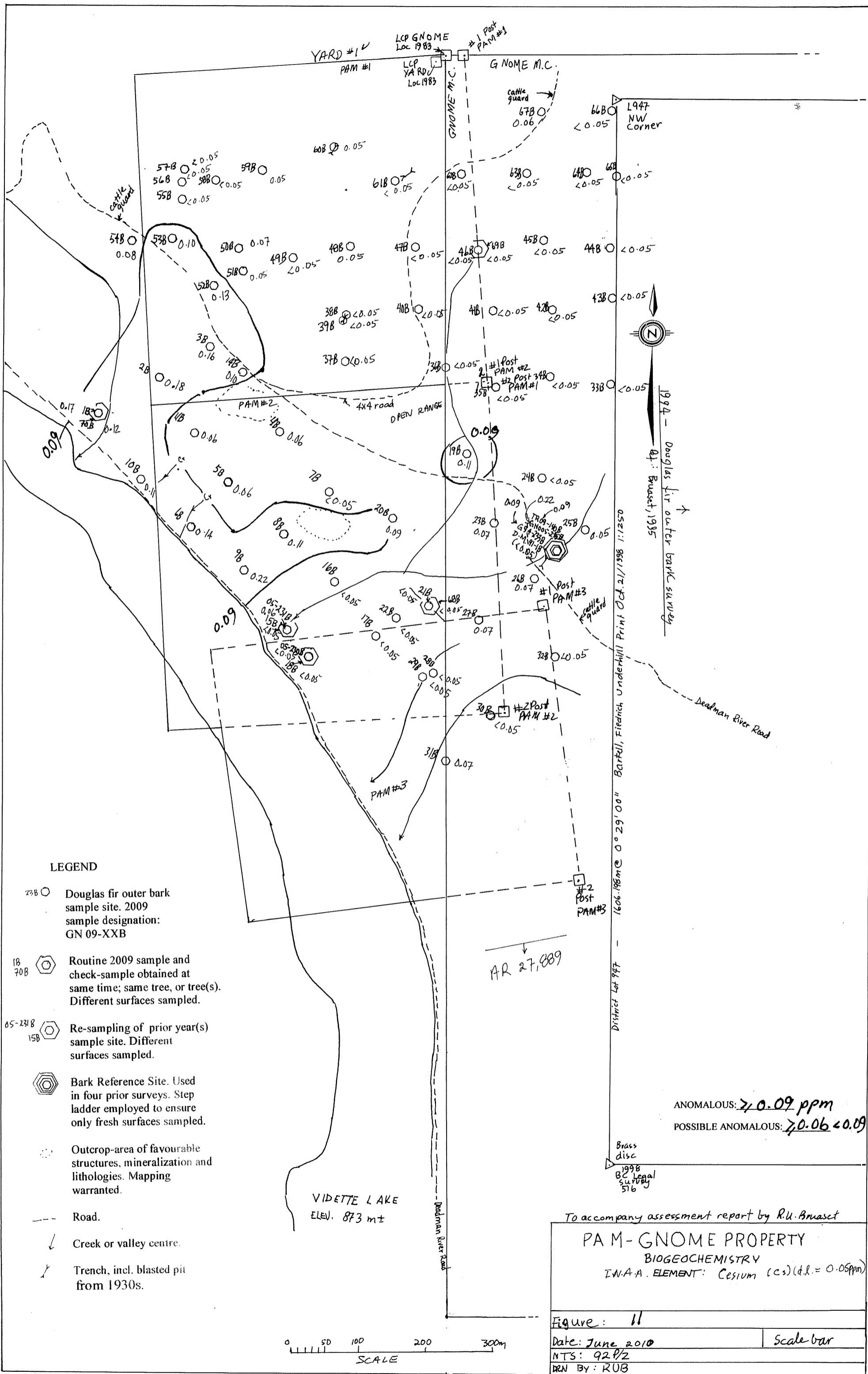
Figure: **9**

Date: June 2010	Scale bar
NTS: 92 PZ	
DEN BY: RUB	









**LEGEND**

- 23B Douglas fir outer bark sample site. 2009 sample designation: GN 09-XXB
- 18, 70B Routine 2009 sample and check-sample obtained at same time; same tree, or tree(s). Different surfaces sampled.
- 05-231B, 15B Re-sampling of prior year(s) sample site. Different surfaces sampled.
- ⊕ Bark Reference Site. Used in four prior surveys. Step ladder employed to ensure only fresh surfaces sampled.
- ⊙ Outcrop-area of favourable structures, mineralization and lithologies. Mapping warranted.
- Road.
- ↘ Creek or valley centre.
- ⊥ Trench, incl. blasted pit from 1930s.

ANOMALOUS: ≥ 0.09 ppm  
 POSSIBLE ANOMALOUS: ≥ 0.06 < 0.09

To accompany assessment report by R.U. Bruaset

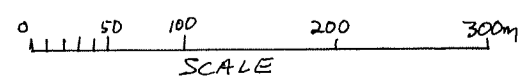
**PAM-GNOME PROPERTY**  
 BIOGEOCHEMISTRY  
 I.N.A.A. ELEMENT: Cesium (Cs) (d.l. = 0.05ppm)

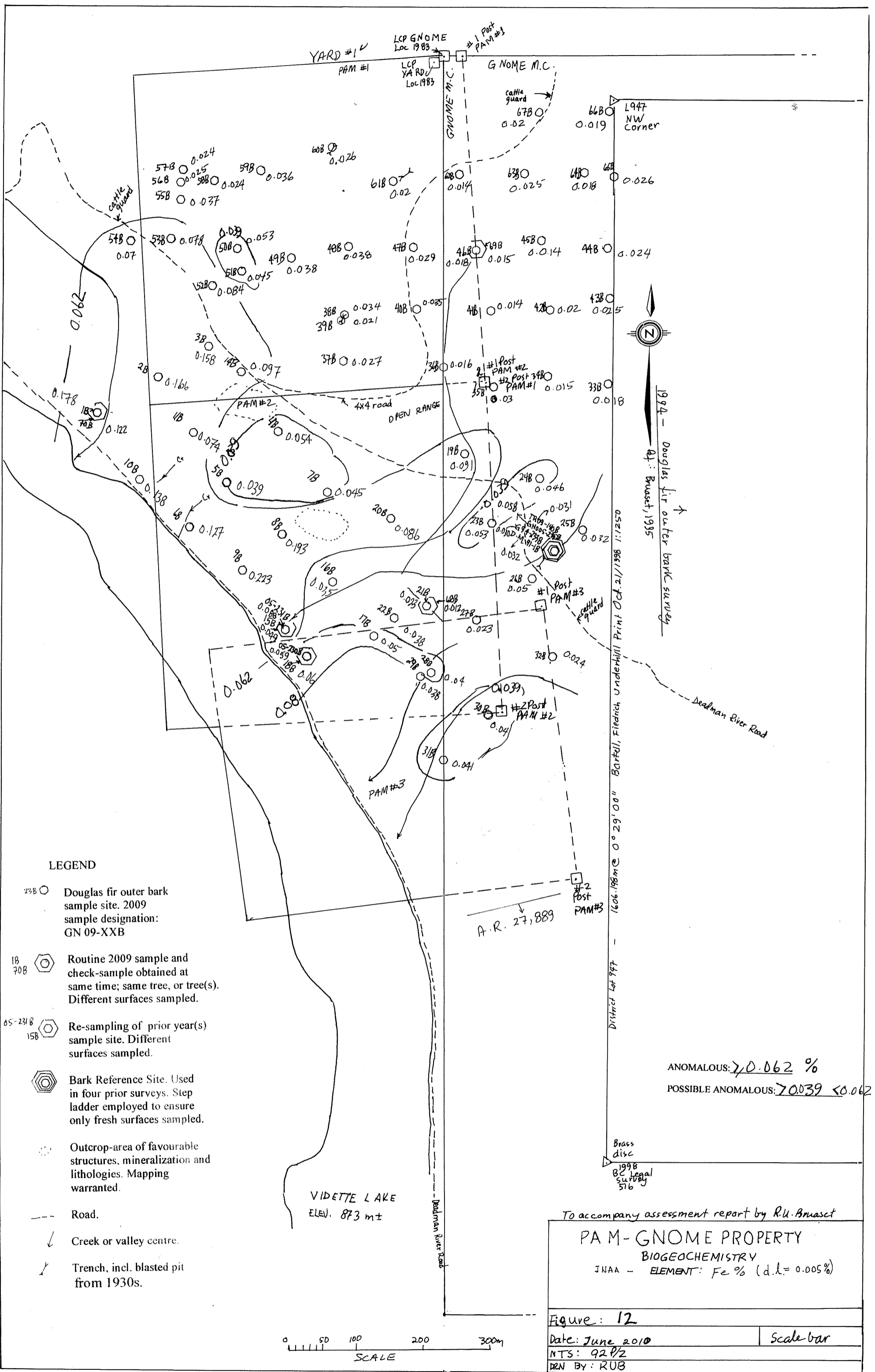
Figure: 11

Date: June 2010 Scale bar

NTS: 92 PZ

DRN BY: RUB





**LEGEND**

- 23B Douglas fir outer bark sample site. 2009 sample designation: GN 09-XXB
- 1B, 70B Routine 2009 sample and check-sample obtained at same time; same tree, or tree(s). Different surfaces sampled.
- 05-231B, 15B Re-sampling of prior year(s) sample site. Different surfaces sampled.
- ⊞ Bark Reference Site. Used in four prior surveys. Step ladder employed to ensure only fresh surfaces sampled.
- ⊞ Outcrop-area of favourable structures, mineralization and lithologies. Mapping warranted.
- Road.
- ↙ Creek or valley centre.
- ↘ Trench, incl. blasted pit from 1930s.

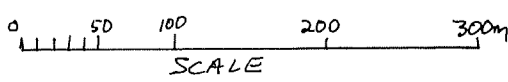
ANOMALOUS: 70.062 %  
 POSSIBLE ANOMALOUS: 70.039 < 0.062

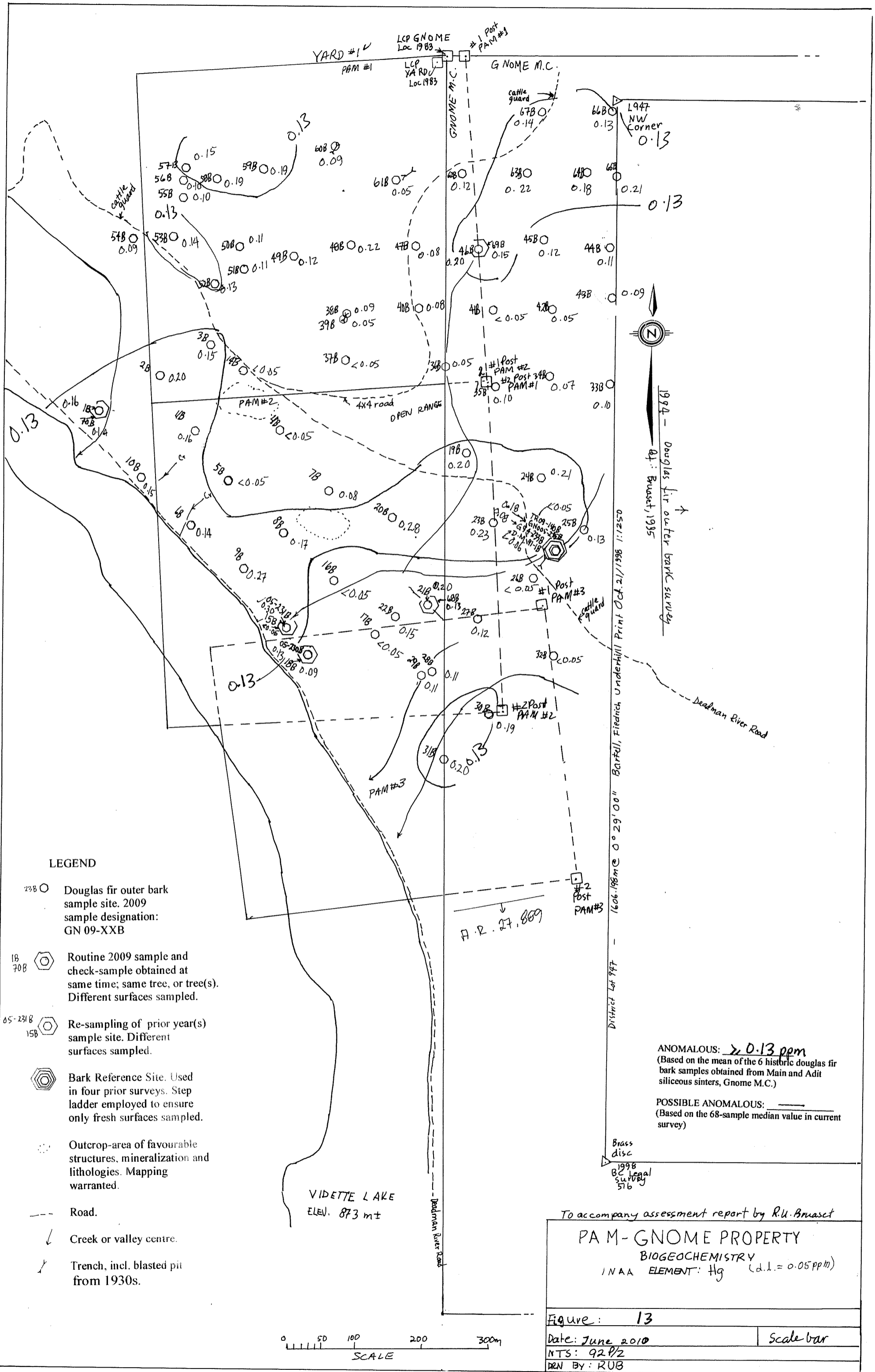
To accompany assessment report by R.U. Bruaset

**PAM-GNOME PROPERTY**  
 BIOGEOCHEMISTRY  
 INAA - ELEMENT: Fe % (d.l. = 0.005%)

Figure: 12

Date: June 2010	Scale bar
NTS: 92 PZ	
DRN BY: RUB	

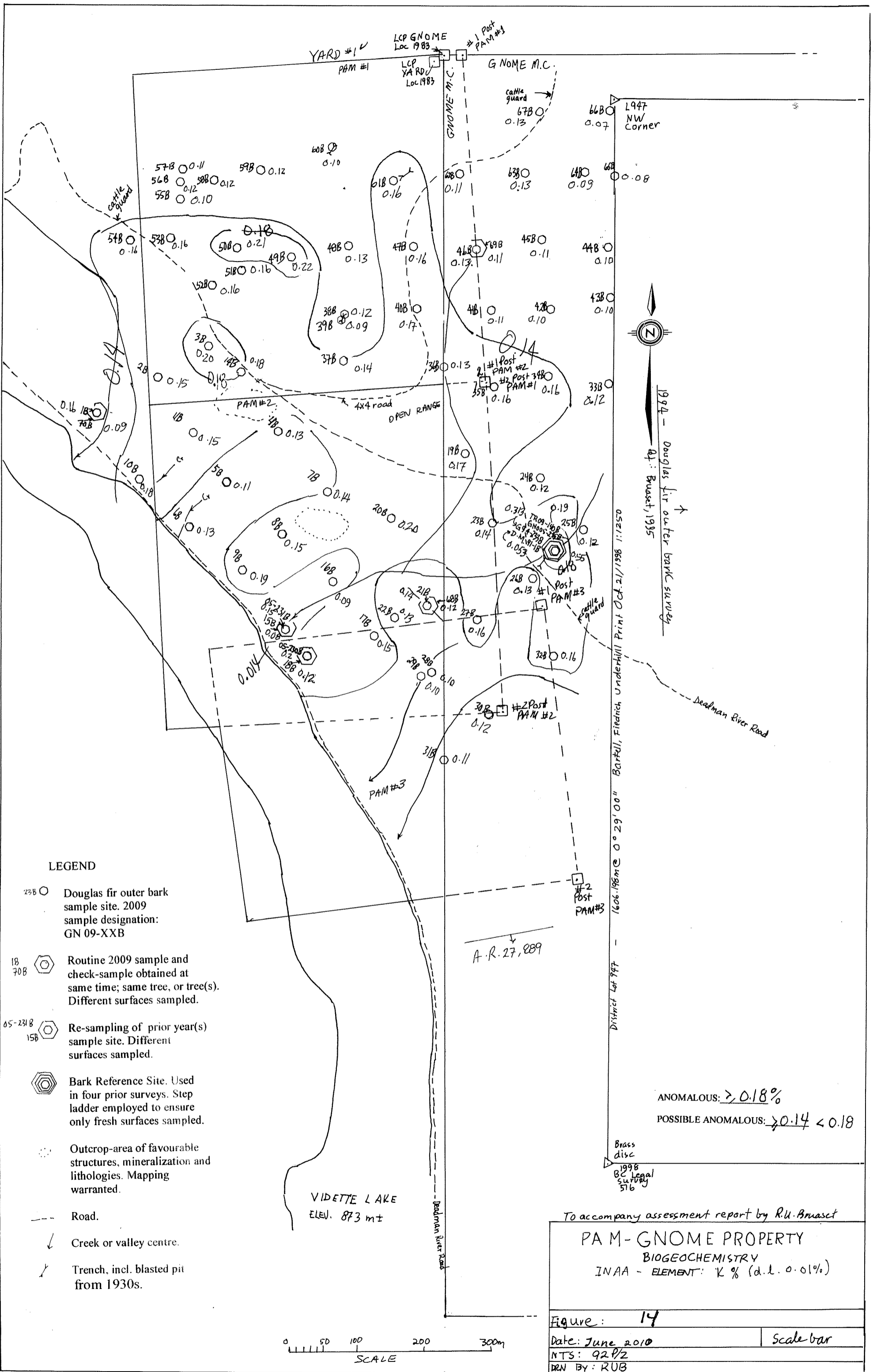




ANOMALOUS:  $> 0.13$  ppm  
(Based on the mean of the 6 historic douglas fir bark samples obtained from Main and Adit siliceous sinters, Gnome M.C.)

POSSIBLE ANOMALOUS: \_\_\_\_\_  
(Based on the 68-sample median value in current survey)

To accompany assessment report by R.U. Bruasct	
<b>PAM-GNOME PROPERTY</b>	
<b>BIOGEOCHEMISTRY</b>	
1 NAA ELEMENT: Hg (d.l. = 0.05 ppm)	
Figure: 13	Scale bar
Date: June 2010	
NTS: 92 1/2	
DN BY: RUB	



**LEGEND**

- 23B ○ Douglas fir outer bark sample site. 2009 sample designation: GN 09-XXB
- 1B, 70B ○ Routine 2009 sample and check-sample obtained at same time; same tree, or tree(s). Different surfaces sampled.
- 05-231B, 15B ○ Re-sampling of prior year(s) sample site. Different surfaces sampled.
- Bark Reference Site. Used in four prior surveys. Step ladder employed to ensure only fresh surfaces sampled.
- Outcrop-area of favourable structures, mineralization and lithologies. Mapping warranted.
- Road.
- ↙ Creek or valley centre.
- ↘ Trench, incl. blasted pit from 1930s.

ANOMALOUS:  $> 0.18\%$   
 POSSIBLE ANOMALOUS:  $> 0.14 < 0.18$

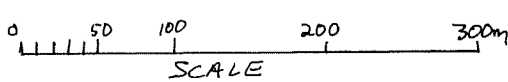
To accompany assessment report by R.U. Bruaset

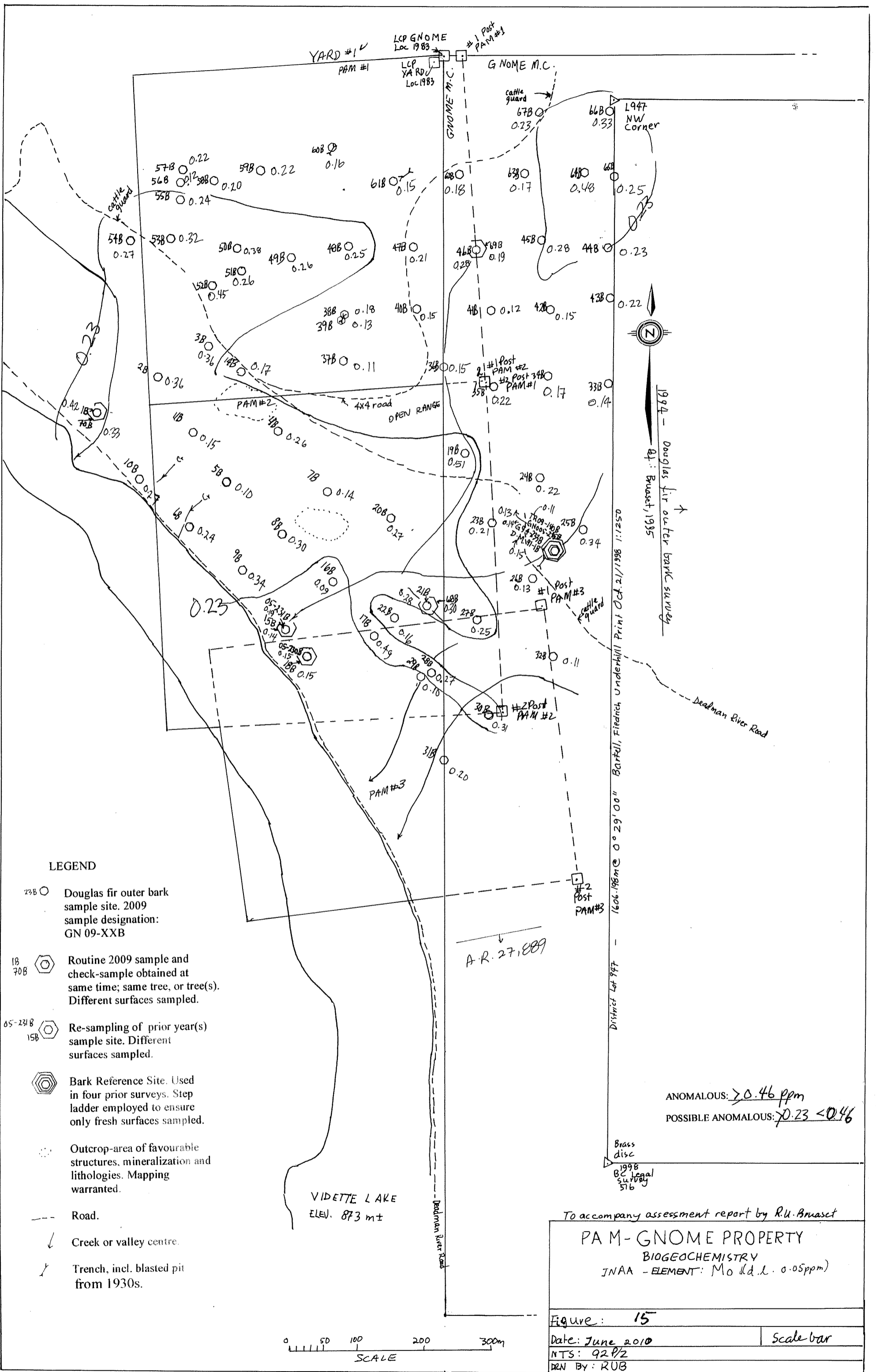
**PAM-GNOME PROPERTY**  
 BIOGEOCHEMISTRY  
 INAA - ELEMENT: K % (d.l. 0.01%)

Figure: **14**

Date: June 2010  
 NTS: 92 PZ  
 DRN BY: RUB

Scale bar





**LEGEND**

- 23B ○ Douglas fir outer bark sample site. 2009 sample designation: GN 09-XXB
- 1B, 70B ○ Routine 2009 sample and check-sample obtained at same time; same tree, or tree(s). Different surfaces sampled.
- 05-231B, 15B ○ Re-sampling of prior year(s) sample site. Different surfaces sampled.
- (with concentric circles) Bark Reference Site. Used in four prior surveys. Step ladder employed to ensure only fresh surfaces sampled.
- (with dashed circle) Outcrop-area of favourable structures, mineralization and lithologies. Mapping warranted.
- Road.
- ↙ Creek or valley centre.
- ↘ Trench, incl. blasted pit from 1930s.

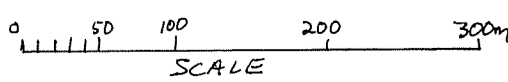
ANOMALOUS:  $> 0.46$  ppm  
 POSSIBLE ANOMALOUS:  $> 0.23 < 0.46$

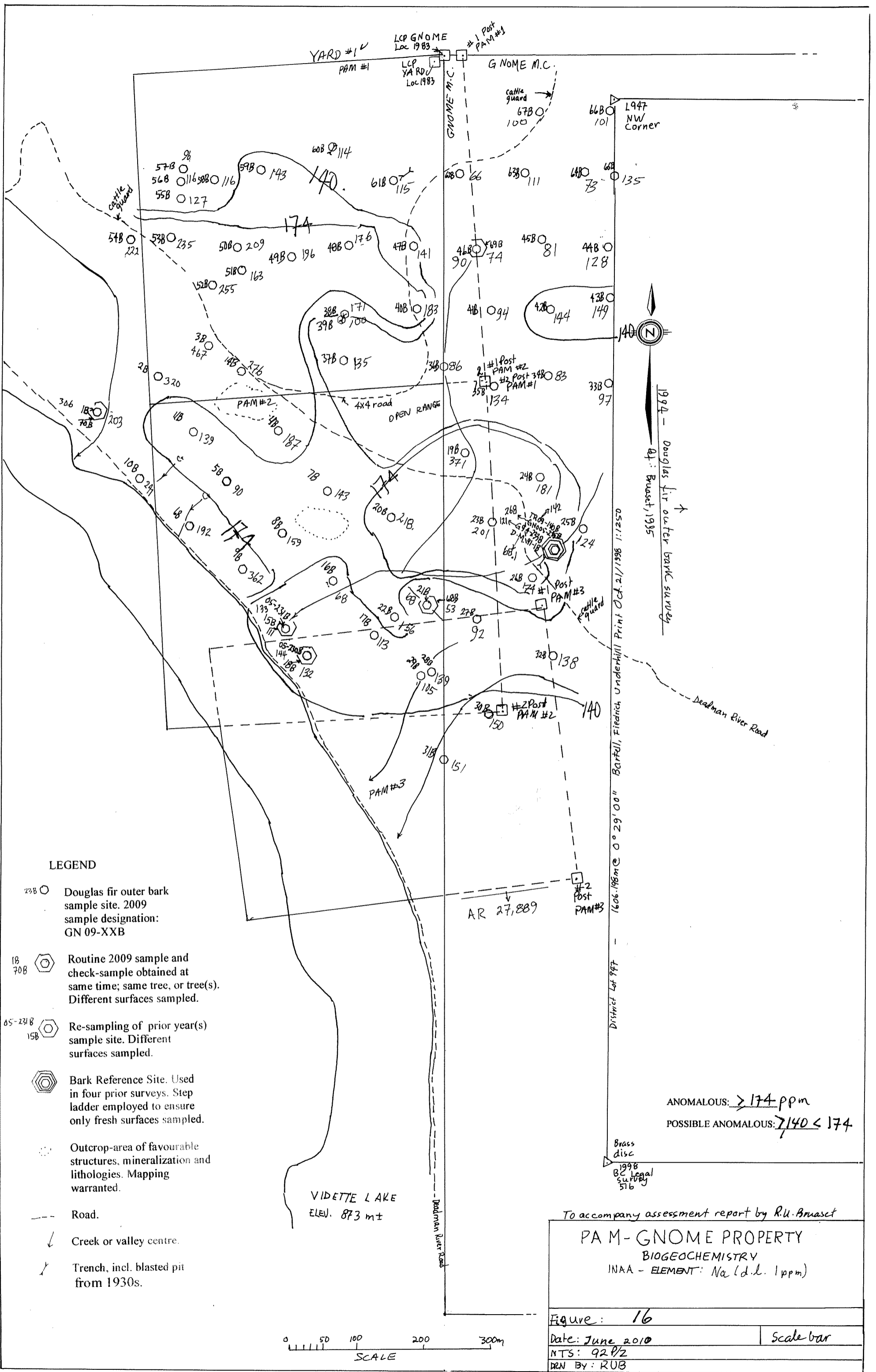
To accompany assessment report by R.U. Bruaset

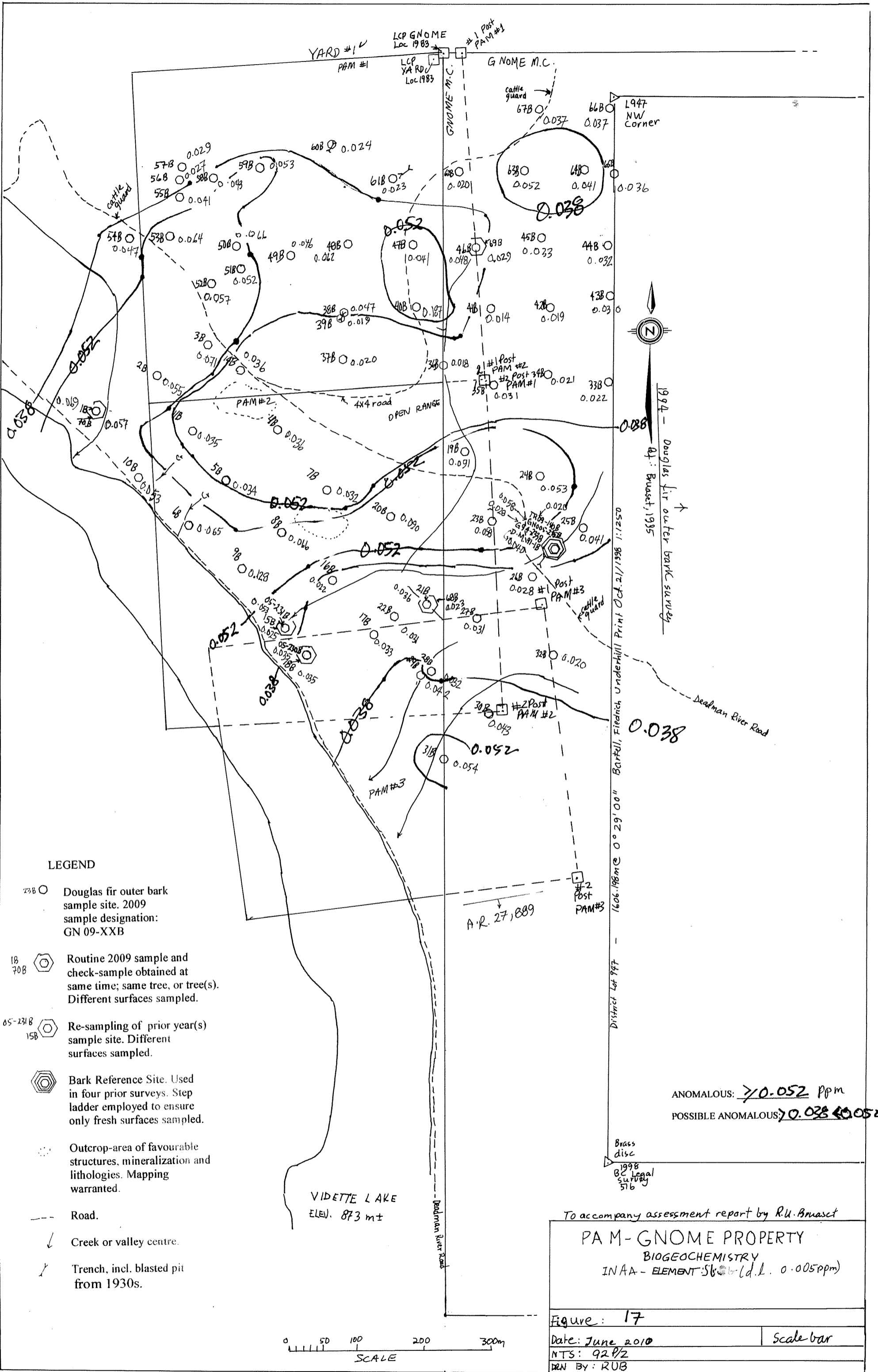
**PAM-GNOME PROPERTY**  
 BIOGEOCHEMISTRY  
 JNAA - ELEMENT: Mo (d.d. 0.05ppm)

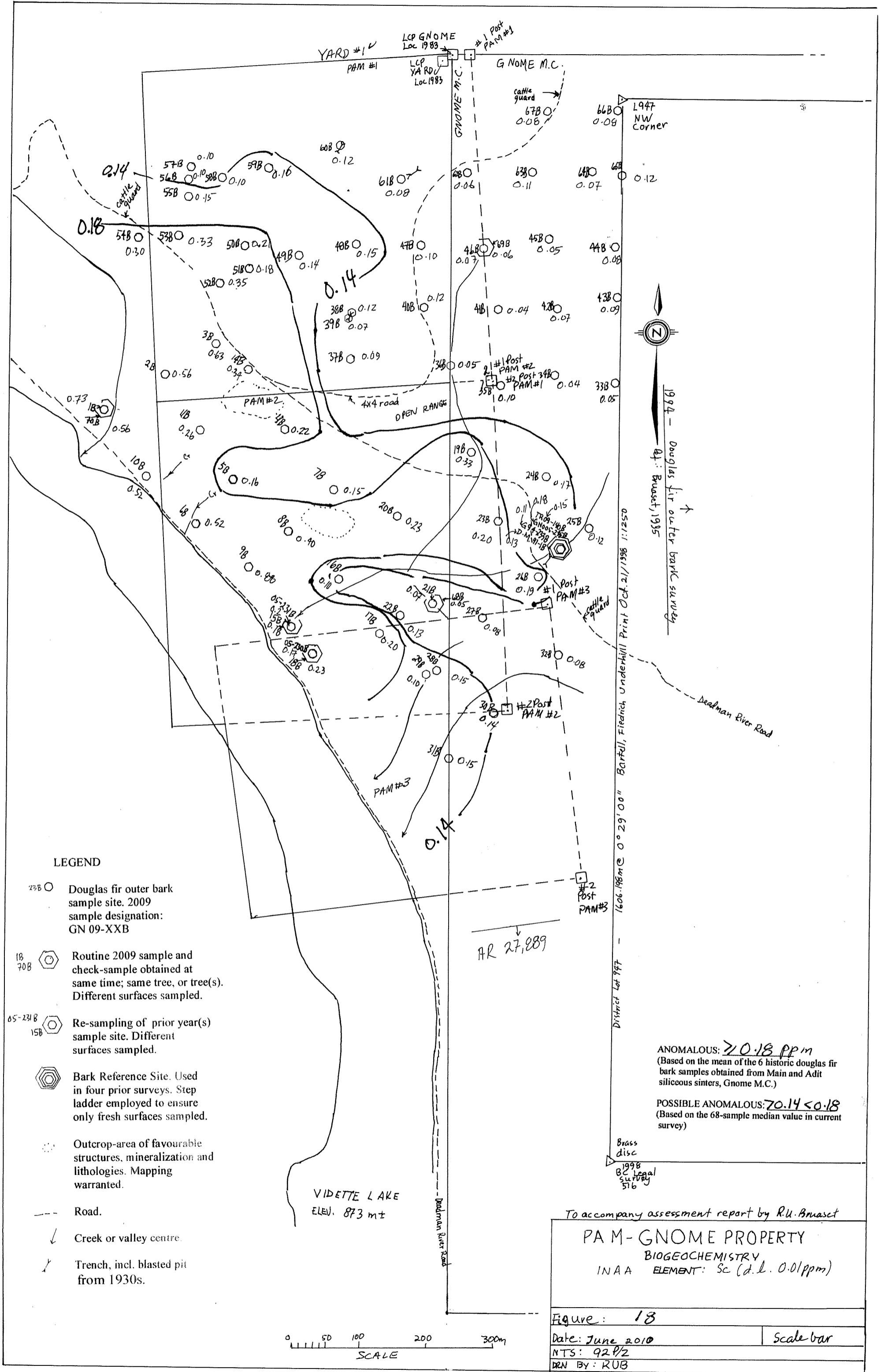
Figure: 15

Date: June 2010	Scale bar
NTS: 92 PZ	
DRN BY: RUB	









**LEGEND**

- 23B Douglas fir outer bark sample site. 2009 sample designation: GN 09-XXB
- 1B, 70B Routine 2009 sample and check-sample obtained at same time; same tree, or tree(s). Different surfaces sampled.
- 05-231B, 15B Re-sampling of prior year(s) sample site. Different surfaces sampled.
- ⊞ Bark Reference Site. Used in four prior surveys. Step ladder employed to ensure only fresh surfaces sampled.
- ⊙ Outcrop-area of favourable structures, mineralization and lithologies. Mapping warranted.
- Road.
- ↙ Creek or valley centre.
- ⊥ Trench, incl. blasted pit from 1930s.



1994 - Douglas fir outer bark survey  
 by: Bruasct, 1995

District Lot 947 - 1606.195m @ 0° 29' 00" Barfull, Friedrich Underhill Print Oct. 21/1998 1:1250

**ANOMALOUS: > 0.18 ppm**  
 (Based on the mean of the 6 historic douglas fir bark samples obtained from Main and Adit siliceous sinters, Gnome M.C.)

**POSSIBLE ANOMALOUS: 70.14 < 0.18**  
 (Based on the 68-sample median value in current survey)

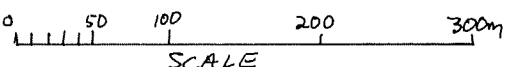
Brass disc  
 1998 BC legal survey  
 576

VIDETTE LAKE  
 ELEV. 873 m ±

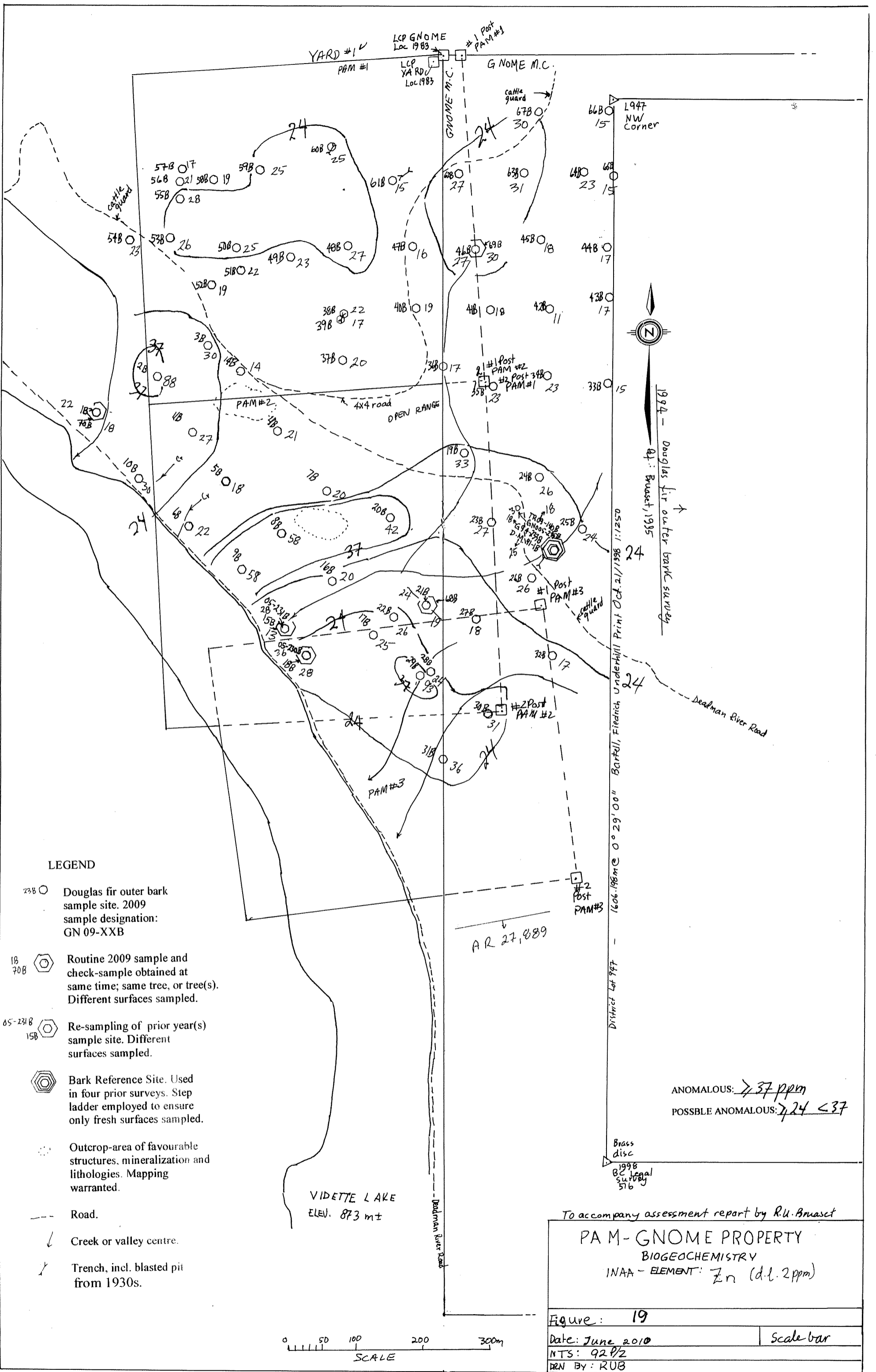
AR 27, 289

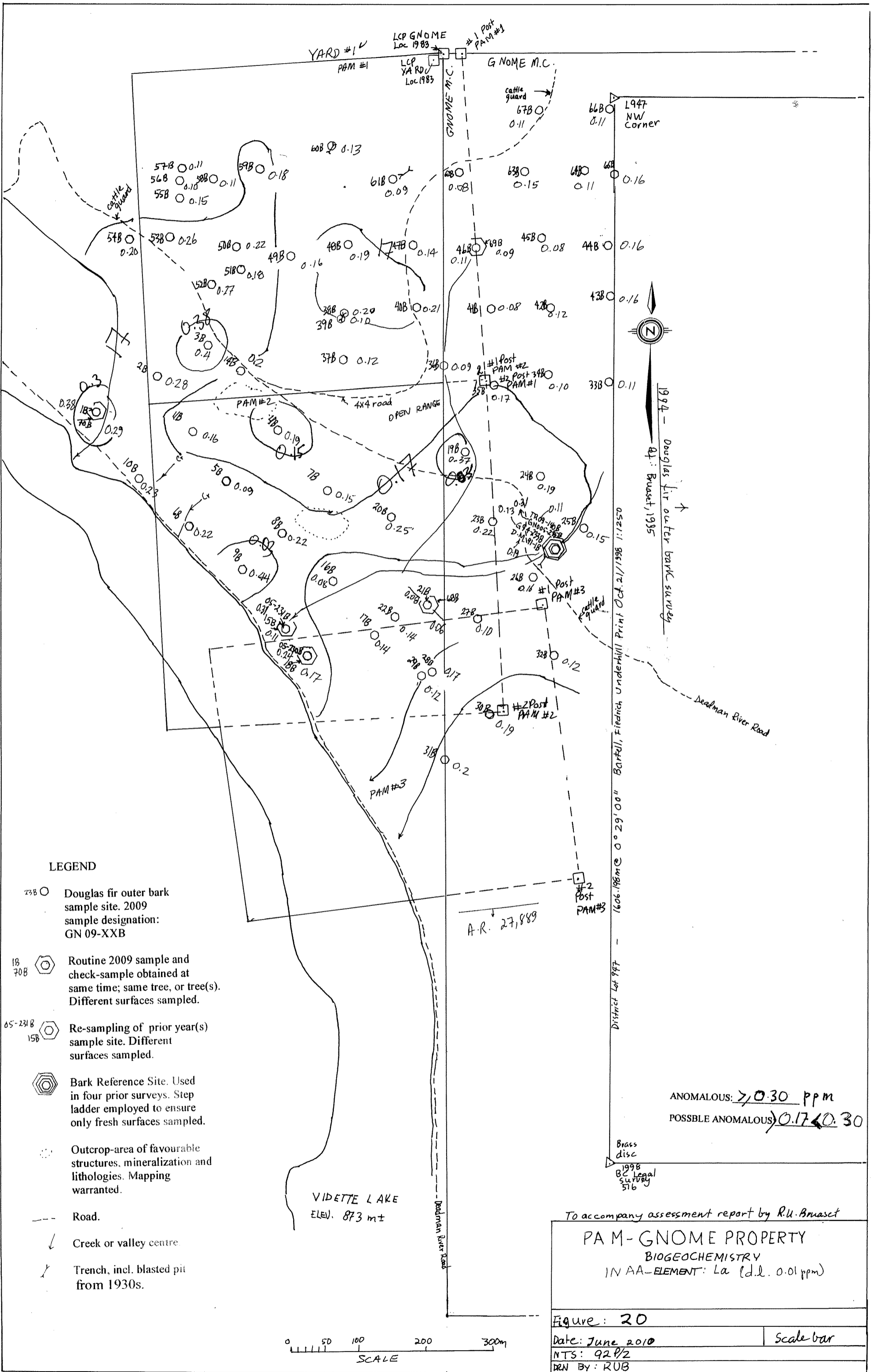
To accompany assessment report by R.U. Bruasct

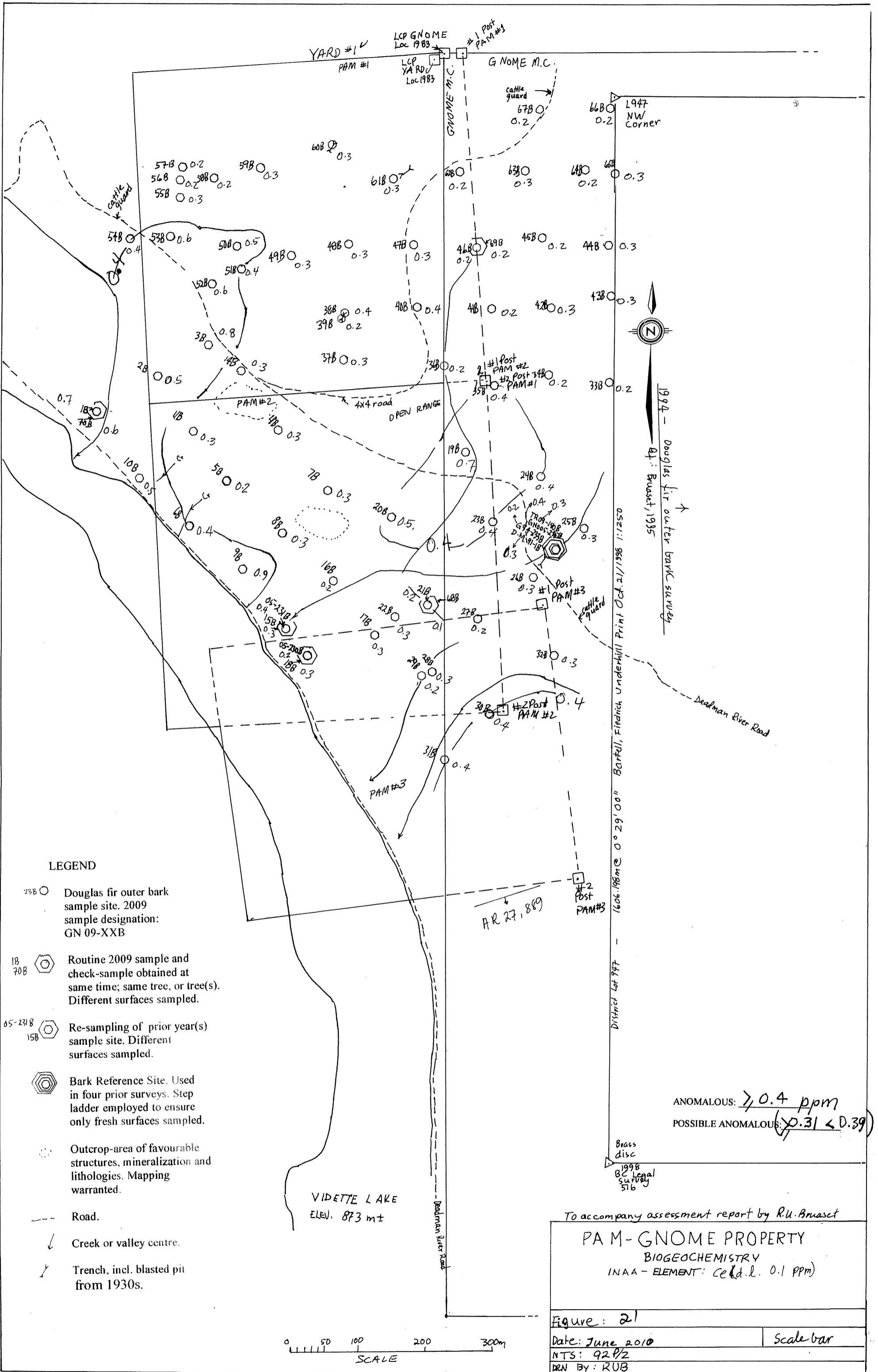
<b>PAM-GNOME PROPERTY</b> BIOGEOCHEMISTRY INAA ELEMENT: Sc (d.l. 0.01ppm)	
Figure: 18	Scale bar
Date: June 2010	
NTS: 92 1/2	
DRN BY: RUB	

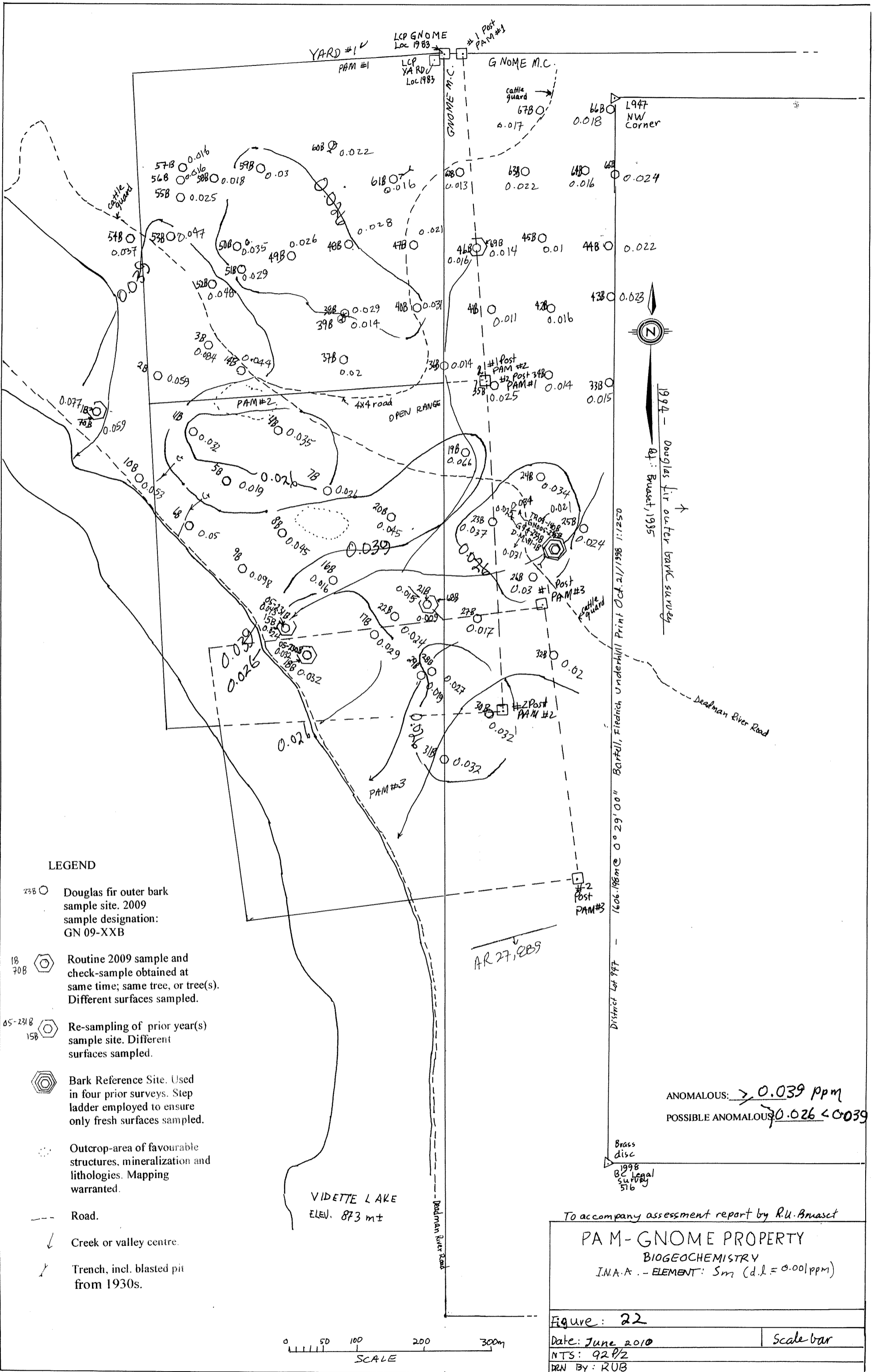












**LEGEND**

- 23B Douglas fir outer bark sample site. 2009 sample designation: GN 09-XXB
- 1B, 70B Routine 2009 sample and check-sample obtained at same time; same tree, or tree(s). Different surfaces sampled.
- 05-231B, 15B Re-sampling of prior year(s) sample site. Different surfaces sampled.
- ⊕ Bark Reference Site. Used in four prior surveys. Step ladder employed to ensure only fresh surfaces sampled.
- ⊙ Outcrop-area of favourable structures, mineralization and lithologies. Mapping warranted.
- Road.
- ↙ Creek or valley centre.
- ⊥ Trench, incl. blasted pit from 1930s.

ANOMALOUS:  $> 0.039$  ppm  
 POSSIBLE ANOMALOUS:  $0.026 < 0.039$

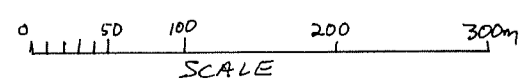
To accompany assessment report by R.U. Bruasct

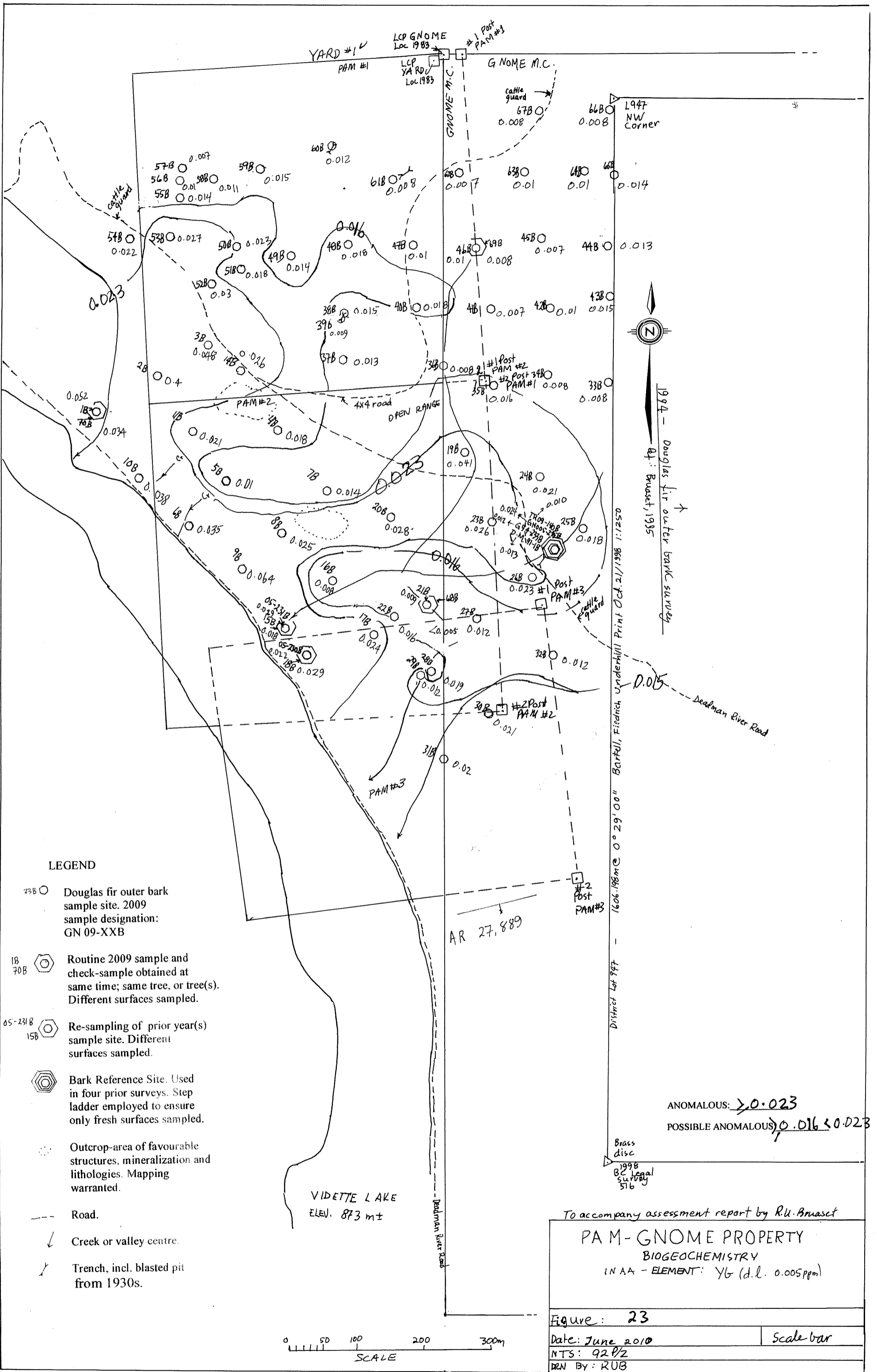
**PAM-GNOME PROPERTY**  
 BIOGEOCHEMISTRY  
 INA-A -- ELEMENT: Sm (d.l. = 0.001 ppm)

Figure: 22

Date: June 2010  
 NTS: 92 PZ  
 DRN BY: RUB

Scale bar





**LEGEND**

- 238 Douglas fir outer bark sample site. 2009 sample designation: GN 09-XXB
- 18, 70B Routine 2009 sample and check-sample obtained at same time; same tree, or tree(s). Different surfaces sampled.
- 05-231B, 15B Re-sampling of prior year(s) sample site. Different surfaces sampled.
- ⊞ Bark Reference Site. Used in four prior surveys. Step ladder employed to ensure only fresh surfaces sampled.
- ⊙ Outcrop-area of favourable structures, mineralization and lithologies. Mapping warranted.
- Road.
- ↙ Creek or valley centre.
- ⊥ Trench, incl. blasted pit from 1930s.

ANOMALOUS: >0.023  
 POSSIBLE ANOMALOUS: 0.016 < 0.023

Brass disc  
 1998 BC Legal Survey 516

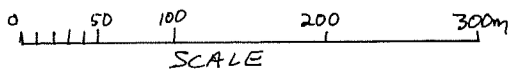
To accompany assessment report by R.U. Bruaset

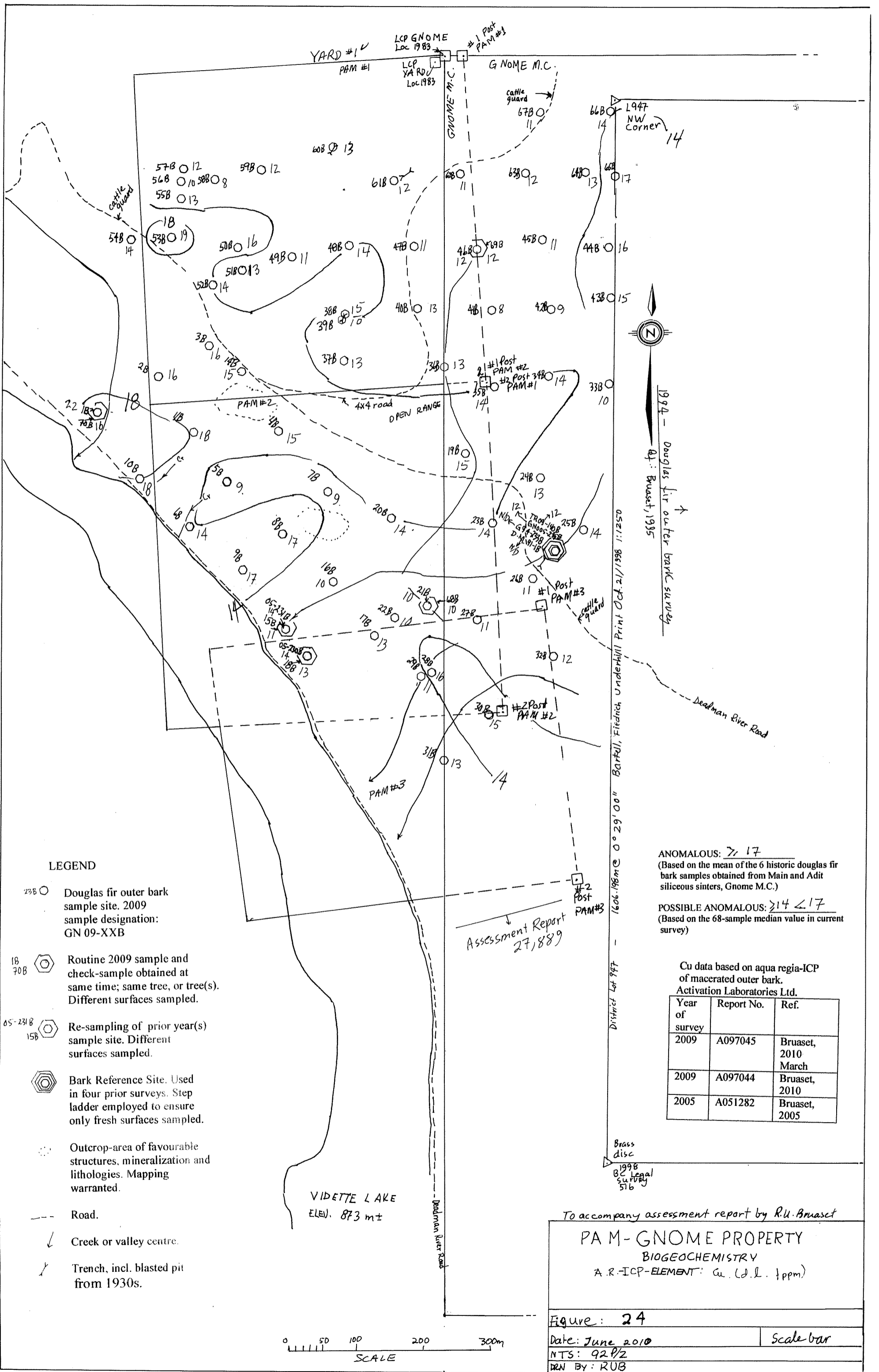
**PAM-GNOME PROPERTY**  
 BIOGEOCHEMISTRY  
 IN AA - ELEMENT: Y6 (d.l. 0.005ppm)

Figure: **23**

Date: June 2010  
 NTS: 92 PZ  
 DRN BY: RUB

Scale bar





**LEGEND**

- 23B ○ Douglas fir outer bark sample site. 2009 sample designation: GN 09-XXB
- 18 70B ○ Routine 2009 sample and check-sample obtained at same time; same tree, or tree(s). Different surfaces sampled.
- 05-231B 15B ○ Re-sampling of prior year(s) sample site. Different surfaces sampled.
- Bark Reference Site. Used in four prior surveys. Step ladder employed to ensure only fresh surfaces sampled.
- Outcrop-area of favourable structures, mineralization and lithologies. Mapping warranted.
- Road.
- ↙ Creek or valley centre.
- ↘ Trench, incl. blasted pit from 1930s.

**ANOMALOUS:  $\geq 17$**   
 (Based on the mean of the 6 historic douglas fir bark samples obtained from Main and Adit siliceous sinters, Gnome M.C.)

**POSSIBLE ANOMALOUS:  $\geq 14 < 17$**   
 (Based on the 68-sample median value in current survey)

Cu data based on aqua regia-ICP of macerated outer bark.  
 Activation Laboratories Ltd.

Year of survey	Report No.	Ref.
2009	A097045	Bruaset, 2010 March
2009	A097044	Bruaset, 2010
2005	A051282	Bruaset, 2005

To accompany assessment report by R.U. Bruaset

**PAM-GNOME PROPERTY**  
**BIOGEOCHEMISTRY**  
 A.R.-ICP-ELEMENT: Cu. (d.l. ppm)

Figure: 24

Date: June 2010

NTS: 92 P/2

DRN BY: RUB

