

SUMMARY:

005151

The following report summarises ~~the~~ the filing system in Vancouver Exploration office for both the Anvil and Gabaga Districts. It also ~~includes~~ includes an assessment of work needed to ~~take the files~~ upgrade and revise the files into a usable, internally consistent documentation of past Exploration activities and future Exploration priorities.

# <sup>ret. +</sup> <sub>see page</sub> → Exploration documentation  
Current files are incomplete because ~~it~~ <sup>it</sup> was previously <sup>work.</sup> deemed of lower priority compared to more pressing deposit geology. For expediency long range Exploration activities were sacrificed ~~because~~ <sup>because</sup> of an overcommitment of time toward feasibility and development projects.

We fear that the same mistake is presently being made. Vancouver exploration has been put in charge of revising the Grum mine model ~~and report, but responsibility.~~ At the same time we are continually being asked to complete district-wide compilation <sup>work,</sup> assessment work, and evaluation of exploration potential. These conflicting activities result in costly delays and superficial treatment of both the Grum ~~feasibility~~ ~~model~~ model and the District revisions and exploration activities. Continuing to use Exploration personnel for feasibility work only results in a further delaying the job of adequately documenting, compiling, and interpreting Exploration potential in the Anvil District.

The current situation cannot be allowed to continue indefinitely. ~~CAMC Management needs to reconsider its corporate commitment to District exploration. If the commitment to District exploration is deemed important, then additional manpower is needed.~~ At present we are understaffed for completing both Exploration and Feasibility activities. If CAMC Management desires a continuing Exploration department, ~~some~~ additional manpower is needed.

M

#7 for earlier  
page.

For the Anvil District a minimum time of 5 man-weeks would make the Vancouver files usable by anyone. This does not include any documentation of previous activities. To fully document the exploration potential of the District activities and potential of the District a further 50-60 man-weeks would be required.

The Gataga District files need less overhaul to make the files usable. A minimum of <sup>10</sup> 8 man-weeks is required to revise and update the files. Most of this ~~is~~ time is for the large proportion of this time is needed to <sup>document</sup> ~~revise~~ the geology and ~~and~~ <sup>document</sup> ~~revise~~ update the geological information for the E&F claims.

## INTRODUCTION:

Recently attention within CAMC has been focused on long term goals, department needs, and department priorities. Exploration has ~~been involved with the~~ <sup>undergone a period of</sup> ~~intensive~~ <sup>intensive</sup> ~~work~~ <sup>work</sup> as a result of writing regional District (Anvil & Galena) geological papers, inquiries from the computer needs Steering Committee, and the continuing need for assessment evaluation of the exploration potential of properties away from the major deposit areas.

The following report summarizes our <sup>evaluation</sup> ~~assessment~~ of the status of the geological files in the Vancouver Exploration office. It describes the organization of the files. ~~Further~~ <sup>It also</sup> ~~discusses~~ <sup>discusses</sup> the ~~work~~ <sup>work</sup> ~~required~~ <sup>required</sup> extent of work required to revise and update the files to ~~an~~ <sup>an</sup> ~~internally~~ <sup>internally</sup> ~~consistent~~ <sup>consistent</sup> <sup>usable</sup> status for current and future exploration use. ~~Status of the~~ <sup>by</sup> ~~Gregg Wilson~~ <sup>Gregg Wilson</sup> describes the Anvil District files and ~~Lee Pizaga~~ <sup>Lee Pizaga</sup> describes the Galena District files.

In the past extended commitments by Exploration meant that Exploration activities were not fully documented. <sup>At that time</sup> ~~It~~ <sup>was</sup> considered expedient to not fully ~~update~~ <sup>update</sup> and revise Exploration files because of severe manpower shortages.

We are apprehensive that ~~the~~ a similar mistake is being made at the present moment. Exploration is being asked to revise the Green mine model and fully evaluate <sup>the</sup> ~~exploration~~ potential of several properties in the Anvil District. Because of manpower shortages both projects are being delayed. Meanwhile the Exploration files continue to be poorly utilized because of a need for major revision and documentation.

## General Description of Vancouver Geology Files

geology, non computer based,

The Vancouver office files are of two major types:

### A) NTS Files

1) Files of reports and folded maps, both published and unpublished, covering most of Western Canada, ~~and~~ organized on first on NTS basis and second a claim group basis. 22% of these files concern the Anvil District and 4% the Gatagan District; the remainder is split about  $\frac{1}{3} / \frac{2}{3}$  between British Columbia and Yukon <sup>+ N.W.T.</sup> ~~and~~ respectively and consists of topographic, geologic, and claims maps as well as reports on individual claim blocks and projects especially major reconnaissance projects in Yukon + N.W.T. An index is available in Vancouver & Calgary

### B) "Hanging" Files

2) Files of mylar map originals hanging in cabinets. These maps are the originals of all maps that have been produced over the years by Cyprus Anvil and its predecessor companies (Dynasty Explorations, Atlas Exploration, Cyprus Exploration Corp Ltd and its related entities, and Anvil Mining Corp Ltd.) These maps are also organized by NTS and claim group. However ~~there~~ <sup>certain</sup> ~~are~~ cabinets ~~that~~ house special map collections - among these are:

a) the Anvil District ~~Compilation~~ maps

These are a set of 10 ~~map areas~~ <sup>map areas</sup> that ~~cover~~ <sup>cover</sup> the major portion of the Anvil District particularly those areas that have

received ~~the~~ <sup>most</sup> intensive ground based exploration. The attached index shows the location of these maps. The maps are prepared at a scale of 1:12,000 (1"=1000') using an orthophoto basemap prepared in 1975 and are also available at 1:24,000 (1"=2000'). For most sheets the following maps are available

- 1) topographic and culture
- 2) orthophotographic
- 3) claims - showing the most accurate known location of claim posts and indicating degree of precision known.
- 4) geological compilation - based on mapping up to 1975 with revisions to reflect reinterpretations up to 1979 and minor updating to 1981
- 5) geological structure overlay -  $D_0$  &  $D_1$
- 6) geological structure overlay -  $D_2$  & later
- 7) outcrops and station locations
- 8) compilation of cut line grids
- 9) geochem - with Cu, Pb, Zn values
- 10) " - contoured for Cu
- 11) " - " for Pb
- 12) " - " for Zn
- 13) ground magnetic surveys - not tied together
- 14) Turam EM surveys - profiles, common scaled
- 15) J/CEN EM Surveys - profiles or contours
- 16) Gravity Surveys - either residual or Bouguer or in rare cases terrain corrected Bouguer
- 17) airborne EM
- 18) airborne Mag

not all these maps are available for each of the 10 map areas.

b) a set of 1:50,000 scale maps mainly intended to compile regional geological <sup>and geochemical</sup> data. These sheets cover much of the southeastern Yukon and adjoining NWT. They are in varying states of completion and most require further work. The following are available

- 1) topographic map
- 2) geological map
- 3) station locations and outcrops
- 4) structural overlay (2 for some sheets)
- 5) airborne magnetic (by GSC)
- 6) geochemical - silt and heavy mineral (several sheets for some)

c) Gataga district map collection

Maps for both regional and property exploration work are stored in a separate hanging file cabinet. ~~This~~ These files are described more completely in a separate section.

d) Anvil District deposit files - collections of maps and sections made by Cyprus Anvil, Anvil, or Kerr Addison for FARO GRUMA DY VANGORDA and SWINA deposits. Most of the FARO collection has been moved to the Faro operation geology office but the other deposits are kept in Vancouver. Most deposits have several types of <sup>partial</sup> cross sections and long sections available; Bench Plans for Vangorda are available and each deposit has one or more maps showing DDT locations and/or surface geology. Originals of Kerr Addison GRUMA VANGORDA and SWINA sections and plans are available.

These maps and map collections are stored upstairs at the Vancouver office in 7 hanging file type cabinets. In addition to these maps the 7 cabinets contain miscellaneous recent or active property maps, coal property maps and miscellaneous regional maps. The Anvil District compilation and Gatica collection ~~each~~ each fill one cabinet, the Anvil district deposits fill 2 cabinets and the NTS  $2\frac{1}{2}$  with the remainder being coal and miscellaneous. The contents of these cabinets are indexed and an index is available in Vancouver or Calgary.

Additionally there are 5 unindexed cabinets in the basement at Vancouver which house originals for maps from old projects, now inactive, and most of the originals of the surveys compiled into the various maps of the Anvil District compilation.

In addition to these files there are several other collections of maps which are generally not indexed and are largely though not entirely working copies of originals stored in the hanging files already mentioned. These pertain to active or recently active projects and are so identified.

There are six filing cabinets full of air photographs of much of southern Yukon and portions of BC. These are all arranged by NTS, and are stored in the basement.

and Gataga Drillhole  
Much <sup>and Gataga</sup> District data is stored in CANAC's HP-3000 computer. Descriptions of these databases are available and need not be duplicated here though a summary is attached. <sup>(Table 2.3)</sup> The Gorn database is being revised and ~~the Gataga data~~ the Gataga <sup>data</sup> bases are revised at least to the point of usability. Much revision will be needed on the other Arvil databases. Hard copy files and tapes of these databases are stored at Vancouver.

A computerized geochemical database was started in 1980-81 but has only progressed to the point of manipulating data for display by conventional means on maps and the production of summary statistics. This database is on tape and hard copies are available.

## Assessment of the Status of Files - Anvil District

The Vancouver geology files require updating and revision to various degrees. Some are seriously in need of revision and correction and are of limited use to those not involved in their creation as long as these modifications are outstanding.

The NTS files are generally in a good state. However there is a need for additional filing to be done and new files to be created to facilitate addition of new material. The active Grum Deposit portion of the file has been moved to a more accessible location along with the Grum diamond drill logs, and eventually must be returned to the NTS file.

Drill logs for the Anvil District are now scattered through the NTS files. This creates considerable difficulty locating drill logs for holes not part of a given ore deposit. ~~\_\_\_\_\_~~ A new Drill hole index file <sup>has been proposed (Pigage, attached)</sup> to help alleviate this problem, as well as assist in the answering of many other drill hole queries.

Many file folders in the NTS files will be found to be empty. This is largely due to the migration of maps into the field where they are either lost or destroyed. Many of these maps can be reproduced from the originals in the Hanging files or purchased anew from the GSC or other distributors, but this practice should be discouraged.

~~is stated~~ The movement of any material, other than copies, from the Vancouver office <sup>should also be discouraged.</sup>

The Hanging Files are generally well indexed. However the contents of some of the files are seriously in need of revision or completion. The major offender in this regard is the Anvil District Compilation.

The geology maps for each of the 10 sheets needs to be checked for compliance with the most up to date legend for the district and the most recent interpretation. Many maps or portions of <sup>geology</sup> maps remote from the ~~\_\_\_\_\_~~ deposits need addition of unit numbers and clarification of contacts.

Each geophysical and geochemical map should be checked for completeness and ~~o~~missions corrected.

The usefulness of some of the geophysical compilations has been hindered by an unclear display of surveyed as opposed to unsurveyed grids; this should be corrected. The claims map portion of this compilation was intended as a collection of well known claim locations onto a single map - as such the claim maps are not necessarily up to date and they are not complete. ~~Thus~~ their utility is limited. A new series of up to date and

accurate claims maps should be constructed and probably keyed to expiry dates as an aid to evaluation of assessment work priorities. A compilation

of drill holes for the district would also be useful (see also <sup>proposal</sup> ~~this~~ information is currently compiled on both

the master index

the geology maps and station number maps where it tends to be confused by detail. ~~\_\_\_\_\_~~ The

Anvil District Compilation was constructed before Kerr Addison's holdings in the District were acquired.

Consequently only selected K-A data is compiled;

the compilation of DDT locations in particular is affected but other survey data may exist which could be integrated into the compilation maps.

The NTS maps ~~for~~ for the Anvil District are shown on the accompanying map. There are 17 maps; most of these are in good shape but require checking for unit designations and editing for contact accuracy and consistency. Not all the maps show the most recent geological interpretation as outlined on the accompanying map but in most cases the change from one interpretation to another is trivial or requires only a change in line weighting. Thus the maps are useable if not exactly up to date.

The remaining NTS maps are not as complete; there are about 85 of these maps. There are station locations and outcrop maps for each sheet, ~~but~~ and a manuscript  $\frac{1}{2}$  interpretation is available for each. All the sheets have been interpreted together at either 1:250,000 or 1:125,000 but this small scale interpretation is only retrofitted to the larger scale maps for a fraction of the 85 sheets. All geochemical data is displayed at either 1:250,000 or 1:125,000 but it also has not been compiled ~~at~~ <sup>at</sup> 1:50,000 scale ~~at~~ except for a few sheets.

The deposit files are as up to date as the interpretation of a given deposit allows. Grom revisions are currently underway and will be for some time; this of course precludes any revision of other deposits. Fvo is handled at Faro. Dy is seriously in need of revision and is the next highest priority after Grom. Vanguarda could benefit from reinterpretation but it will probably be mined out before a revision could be completed.

At the scale of a block computer model the revisions needed at Vanguarda are not of great significance however there is <sup>good exploration potential around Vanguarda that will require further study</sup> Swinn needs further modification to sections and the sections need to be drafted.

~~to study~~  
~~to study~~  
~~to study~~  
Explains intelligently

The minimal investment of time required for the Anvil District compilation is 1 day of geologist time per sheet and a comparable amount of drafting followed by 1/2 day per sheet of geologist time for a final edit. Total ~~2~~<sup>3</sup> man weeks are required in order to make the maps useable by anyone.

Anvil District

The N.T.S. maps require about the same time per sheet but the maps tend to be less complex so 15 days would also be a reasonable estimate.

The outside Anvil District N.T.S. maps require essentially an entire winter season which it is unlikely could ever be found; these sheets are of lowest priority at the present time.

Deposit revisions are impossible to estimate but judging from the progress on Grom to date small deposits like Vanguarda or Swinn would require 2 months or more while a large deposit like Dy is a full winter

• Season job.

The revisions to the Annual District Compilation and Annual District NTS maps are revisions that will make the maps useable to anyone. These revisions have always ~~been~~ been known to be necessary but the maps in their present state were usable to the likely users thus the revisions were given a lower priority. Most of these "likely users" are now gone thus the priority for these revisions must be immediately increased to urgent. The district compilation is a central exploration tool which is constantly needed to function in the Annual area - it must be revised and it should be kept up to date in the future to prevent a recurrence of this situation.



Dave Jennings and I have prepared an extensive text summarizing the geology of the April District. This text is a summary statement of what is known about the district's structure, stratigraphy and its ore deposits. An exploration model for the deposits is developed and outlined and genetic speculations are advanced. This paper is regional in scope and presents only generalizations. It is not site specific and is in no way a satisfactory exposition of <sup>either the practices or results of</sup> exploration on the district over the last decade.

The paper is sufficiently descriptive to allow one to formulate an idea of lithologies but avoids usage of <sup>local</sup> lithofacies jargon as much as possible. As such the paper is of limited usefulness to those interested in recognizing and logging the rock types described.

An extension of this paper is required in order to address three shortcomings and provide the needed documentation for exploration to continue in the district using what has been done over the years. Much of the second set of concerns has already been alleviated by setting up and describing the typical examples of Gm and Dy units but some additional discussion and elaboration is needed. Of particular concern here is the correlation of how different or similar rocks have been handled <sup>by logs</sup> at different deposits. We already know of several  potentially very confusing

situations in comparing Dy, Vanguard, and  
Gunn logs. We feel strongly that much  
of this potential confusion could be alleviated  
if a written record of the details <sup>is</sup>  
prepared. We have further unclarified <sup>ambiguity</sup> problems  
that have existed in data collection that  
should be discussed in order to ~~produce~~ produce  
unambiguous logs in the future.

An adequate discussion could be achieved with  
a one or two page written discussion of each  
of the commonly used (thus important) rock types  
at Gunn. <sup>and Faro</sup> There are about ~~30~~ major rock types  
logged thus this would involve at least two  
weeks of work.

The first major unaddressed topic is a more  
ambitious undertaking and ~~would~~ <sup>would</sup> be best  
handled in conjunction with the District  
Data compilation map series. What is needed  
is a report for each of the ten map  
sheets describing the geology and exploration  
history of the area and providing a guide  
to the available data for the area.

The geological portion of the report should  
emphasize the local problems and questions  
pertinent to the map sheet with suggestions  
for further clarification and statements  
of alternative interpretations already known  
to be possible. Supporting maps should be  
refined. The above short term revisions to  
geological maps will make them perfectly  
acceptable for ~~the use~~ <sup>use in such a summary</sup> but several additional  
presentations of the data are required. A summary  
S<sub>2</sub> Form line and lineation trend plot is required  
for each sheet.

② There should be a set of maps that show the nature and thickness of overburden and terrain conditions in order to aid interpretation, exploration <sup>and planning of future surveys</sup> and summary diamond drill hole map is required in order to more clearly display this important data. ④ The third dimension should be stressed with preparation of at least three <sup>NE-SW</sup> cross sections through each map sheet. ③ Cross section and structural form line maps would then allow a map to be made showing the favorable <sup>map | Vango - rd |</sup> contact and depth to the contact for areas that are reasonably drillable. ⑥ A tabulation of Diamond Drill holes and Rotary drill holes <sup>and results</sup> for each sheet is required especially one that encompasses Kerr Addison drilling currently not integrated with an database (this will be required at any rate in order to provide a District wide drilling index database per ~~proposals~~ proposals already made). ⑦ A tabulation of field notes for each <sup>map</sup> unit on each sheet would be of great help to users in understanding the true nature and appearance of map units. ⑧ (add P 8 from next page)

The exploration portion of this report should describe what has been done and where possible why or to what end. The various surveys should be rated for applicability and reliability and the degree to which they are diagnostic or critical of ore potential should be evaluated. The results (ie anomalies) should be tabulated and shown on a map. Where possible each anomaly should be given an explanation and the evidence that that explanation

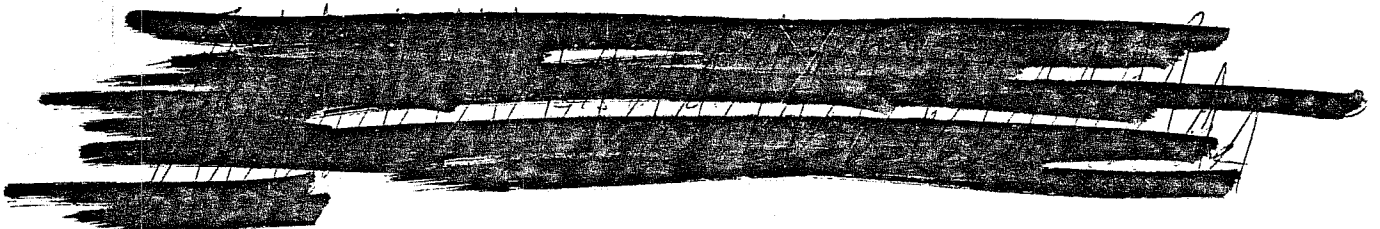
is valid should be discussed. Unexplained anomalies should be listed; methods of further investigation recommended, <sup>and listed</sup> and the anomalies should be prioritized.

move up  
to where  
it is  
indicated  
in schedule.

⑧ Each of the sheets should also have an up to date and complete claim map prepared in order to assess potential of given claims in the future. Such maps would doubtless point out gaps in land coverage that are not apparent in the compilations now available. These claim maps or a parallel set should ~~be~~ be keyed to expiry date and ownership.

All the geophysical and geochemical maps should be checked for completeness and clarity. Present ambiguities in some of these maps with regard to extent of surveys should be dealt with.

An assessment of the status of geological data of any contained mineral deposits or occurrences should be made and recommendations for further action put forward. A summary description of each showing or occurrence ~~is~~ is needed especially for the lesser known entities.



These reports should give a detailed list of [redacted] references to reports available for the area [redacted] with annotations as to the scope and nature of the reports and where it can be found.

← insert paragraph on back

The last item required is a general Statement applicable to the district as a whole of exploration methods used, their limitations and advantages the degree to which they have proven diagnostic and how they can contribute to the overall geologic understanding of the district as well as directly search for ore. This should give examples of test cases on and near ore deposits for tools that have not been widely used such as IP or seismic. Studies of physical parameters of rocks of the district: conductivity, density, chargeability, magnetic susceptibility should be summarized and tabulated.

Such a general report would build on those already published by Bock, [redacted] Aho and Chisholm for the district as well as numerous unpublished evaluations in our files. Portions of this summary have already been prepared by Glenn Simpson and Dave Jennings

"A"

→ insert paragraph from below.

Minimal estimates of the time required to produce this documentation would be

map & logging unit specific descriptive material 2-3 weeks

general exploration report 4 weeks

each map sheet summary report (10 reports) 2-4 weeks each  
say 3 average  
with 1 more week  
of map preparation

1:50,000 scale NTS sheets (5 reports?) 3 weeks each  
or amplified general report 3 weeks  
to total.

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51 - 63 weeks

The <sup>time</sup> cost of this work is obviously large. To be completed a full winter season would have to be devoted to it with no further commitments to ore deposit specific work. That is to say exploration would be doing only exploration work not development work.

It must be clear why this report writing has not already been done - this amount of time has simply never been available because it has always been judged too costly in light of other commitments.

In hindsight it is a reasonable question

whether this decision was correct. There is certainly a body of opinion that [redacted] regards the exploration department to be remiss for not already having done this documentation. It is

apparent to me that [redacted] the data exists to elaborate on every aspect outlined above; it is further clear that each of these topics has been thought about, discussed and acted upon over the years - that was the reason the District Compilation was started in 1975.

↑  
"move up  
to "A"  
A

I regard it as a serious mistake that these reports are not already in hand - by extension what was done instead was a misallocation of <sup>exploration</sup> personnel. We are continuing this tradition of mistake for exactly the same reasons - an ore deposit needs short term work done and everyone knows that's more important. It's hard to question that priority but the real question is, is it an exploration priority or a mine priority? <sup>is there a distinction</sup> and does this company want an exploration department? If so then why is exploration constantly in a position to do other departments geology. If this geology is so important why isn't there a corporate commitment in numbers of people to see that the work gets done?

The Benefits of this work must be readily apparent simply by examining what has gone on over the last several months

- a) Sheets G6 and D-6 had to be evaluated to assess the lower Annil Creek area - a superficial evaluation was made that took several days time away from pressing work
- b) an evaluation of <sup>distinct</sup> exploration potential was requested and prepared for a portion of the district - this shows that the reports are desired. The author of that report can testify to the difficulties encountered in that evaluation and to the unsatisfactory level of investigation that was possible in the time frame.
- c) The question of exploration northwest of Faro has been raised several times. These reports would provide a concise answer to that question.
- d) half the ground in the North Annil Area has been dropped without the benefit of a final evaluation of the claims - This was obviously a time problem and a competent recommendation was being followed but there was no way those taking the action could satisfy themselves <sup>it was the cost more.</sup>
- e) The remaining north Annil claims need evaluation and here again time must be taken away from Gunn - detailed study of gravity profiles so far suggests a possible target remains - this level of investigation cannot be attained in a superficial overview.
- f) Sunn Basin looms on the horizon - another interruption. ~~Some~~ <sup>Some</sup> will require more in-depth study since ~~some of the current staff~~ <sup>some of the current staff</sup> have been involved with it since 1975

TABLE 1 . GATAGA DISTRICT INFORMATION

	Storage area
1) Regional geological and geochemical reports	A
2) Property geological and geochemical reports includes drill-logs, assay reports, geotechnical reports	A
3) Computer data base drill hole information - lithologies, assays, structure.	D
4) Field notebooks - geological and geochemical, assay tag books, air photos	B
5) Technical drawings, cross sections, diagrams for all reports	C
6) Operations, government permits, general correspondence, inventories	A
7) Environmental impact, sociological impact, metallurgical studies	E
8) Land claims information	F

Storage location

A - locktrieder rotating files (by NTS)

B - Basement warehouse

C - Hanging files

D - HP 3000 computer

E - Feasibility & Development files

F - Land files, Vancouver (also Calgary)

TABLE 2.

DDH SUBFILES  
(DIAMOND DRILL HOLE DATA BASE)

1. Drill Hole Master Data  
location and elevation of drill hole  
other general information
2. Downhole Survey Data  
orientation of drill hole at specified downhole survey  
stations
3. Assay Data  
sample number, assay intervals, analyses, etc
4. Lithology Data  
lithologic units logged sequentially downhole
5. Structure Data  
structural measurements of planes (So bedding,  $S_1$   $S_2$ , ...  
cleavages) recorded at intervals downhole
6. Fault Data  
location, extent, and orientation of faults logged  
sequentially downhole
7. Composites Data  
weighted averages of analytical data for specified intervals

TABLE 3.

REVISION STATUS  
(DIAMOND DRILL HOLE DATA BASE)

	<u>PROPERTY</u>	<u>DDH</u>	<u>REVISED</u>	<u>MAN-MONTHS</u>
Anvil Area				
	Anvil	208	No	?
	Dy	57	No	3
	Grum	372	No	10
	Vangorda	36	No	2
	General	0	-	-
Akie Area				
	Cirque	113	Yes	-
	Elf	23	No	1.0
	Fluke	8	No	0.5

# GATAGA DISTRICT — FILES

Information on CAMC exploration activities in the Gataga District can be divided into 8 subsets. Table 1 summarizes these categories and indicates where the information is stored in the Vancouver office.

## Regional and Property Project Reports (categories 1 and 2)

Reports are stored in the Lehtinen files in the Vancouver office. Types of reports included in these files are geological, geochemical, grade and tonnage, <sup>and</sup> diamond drill results. Additional information filed in ~~the~~ with the reports are assay certificates, field diamond drill logs, and miscellaneous material. All the files for the Gataga District are placed under the main category — N.T.S. G.F. Separate property files in G.F. are maintained for CIRQUE, E.N.F., FAURE, and G.M. properties. All reports are listed in the general file index.

## Mylar Diagrams — Hanging Files (category 5)

The Gataga District diagrams are stored in a single hanging file in the Vancouver office. The diagrams are filed by property within the District. An inventory of the different diagrams is incorporated into the general hanging file index.

Diagrams included in the hanging file are topographic base maps, orthophoto base maps, geologic maps, geochemical survey maps, vertical and horizontal drill hole projection plots, vertical geologic cross-sections, and miscellaneous geologic diagrams. Many of these diagrams are incorporated into the various reports stored in the Lehtinen files. Others are working diagrams and have not necessarily been included in reports.

Computer Data Base (category 3)

Drill hole information for the CIRQUE, ELF, and FLAKE properties are stored in the HP 3000 computer in the Vancouver office. Additional tape copies of the information are stored outside the Main Building. Tables 2 and 3 show the type of information stored in the data bases and the number of drill holes included within the data bases respectively. Printed copies of the information are also stored in a special filing cabinet for computer output in the Vancouver office. The data bases contain all the diamond drill holes completed in the Guloaga District.

General Correspondence, Permits, etc. (category 6)

Miscellaneous operational information and correspondence for the Guloaga District and the Finbow camp are also stored in the retriever files in the Vancouver office. These files are located on shelf 2 of Cabinet # 2 (right).

Land claims (category 8)

All land claims information for <sup>properties</sup> CTRC are stored in a separate filing cabinet in the Vancouver office. Information is filed alphabetically by property name. Files are continuously being updated as required.

## GATAGA DISTRICT — UPDATING FIRES

Introduction

In general the different files for the Gataga District are in reasonable shape. Information can be retrieved with a moderate to minimum amount of effort. ~~Files for the different properties are~~ Of the different properties, files for CIRQUE are most complete and up current. ELF files, in contrast, are incomplete and require major ~~major~~ updating and re-interpretation before they are readily usable.

The following sections describe suggested work to update ~~the~~ and improve the Gataga files. Those suggestions that are marked with an asterisk (\*) are not vital and can be delayed for an interval of time.

Computer Data Bases

Data bases for CIRQUE, ELF, and FAUKE drilling have been checked, and major errors have been corrected. Lithologic names have been updated to the latest (1953) stratigraphic coding being used by CAMC. The files are generally usable for finding general and specific information concerning drilling results on each of the properties.

The data bases have not been revised to the standards of the GRAM data base. Major changes are needed to bring the data bases up to these standards. These changes are briefly indicated below:

- 1.) ELF, FAUKE, and CIRQUE data bases do not contain any cross section capabilities. Appropriate cross sections need to be defined for each property. End-points of these cross sections need to be measured/calculated and entered into the data base files.

\* 2.) EKF, FLUKE, and CIRQUE data bases do not contain any fault files. Fault and core quality information is currently imperfectly and incompletely recorded in the lithology files. Much of the fault information is available only in the original field drill logs. A Fault files for each drill hole needs to be constructed and entered into the appropriate data base.

\* 3.) Only the major lithologic unit and a limited number of descriptive modifiers have been entered into the lithology files. Minor interbedded lithologies and additional descriptive modifiers have not been entered into the description columns of the ~~lithology~~ lithology files. This additional information needs to be entered into each ~~data base~~ drill hole in the data bases.

\* 4.) The data bases do not contain any ~~contour~~ contour files. Grade and tonnage calculations would be simplified if contour files were constructed for each drill hole. Thus ~~the~~ upgrading of the files is most important for CIRQUE because that property has ~~the~~ the greatest potential for ~~its~~ immediate development.

### Hanging Files — CIRQUE

CIRQUE files are in reasonably good shape <sup>because</sup> ~~and~~ a massive revision of the geological data during 1982-83. Maps and cross sections generally correspond to the latest (1983) stratigraphic coding. Further work to improve the files ~~is~~ as follows:

1.) All maps and diagrams in the hanging files need to be sorted and ~~placed~~ re-filed in the appropriate location. The files have become slightly jumbled with use. ~~The~~ Older, no longer current

diagrams, and interpretations need to be clearly marked as such and placed in a "dead file" category at the back of the CIRQUE file space.

\* 2.) The most recent geologic interpretation of Cirque ~~work~~ recognizes numerous ~~even~~ faults and lists normal faults in the structural panel overlying the Cirque deposit. This interpretation has been completed for South Cirque but has not been extended northwest to Cirque. It needs to be completed for the Cirque deposit. ~~The~~ The new interpretation is needed because it dramatically reduces the number of late normal faults cutting through the Cirque deposit; this would make the deposit much more attractive for mining purposes.

\* 3.) The geology of the R-Creek area (northwest of Cirque) needs to be re-evaluated. The present interpretation involves a dramatic stratigraphic thinning of the siliceous Gunstail sequences. Structural complications have not been adequately accounted for in the current geology model.

### Hanging Files — FLUKE

Because of limited field work during 1982, FLUKE files are also in reasonably good shape. Drill hole cross sections have generally been revised to be consistent with the 1983 stratigraphic coding. Suggested work to improve the files is as follows:

1.) All maps and diagrams need to be sorted and re-filed in the appropriate location. Older, no longer current, diagrams need to be clearly marked as such and placed in a "dead file"

category at the back of the FLUKE file space.

2.) The 1982 drilling program needs to be ~~completely~~ included in the 1:2000 and 1:10,000 scale geologic maps. Since this involves only one diamond drill hole, the modifications are minor.

3.) The 1:2000 and 1:10,000 FLUKE geology maps need to be revised and updated to correspond to the most recent 1982 regional geology interpretation. Field traverses during the 1982 season need to be added to the maps. In addition the property maps have not <sup>yet</sup> been revised to incorporate the latest stratigraphic coding. The 1:2000 geology maps also have not been completely drafted; structural information remains to be drafted onto the geology base map; at present the structure is included on a reasonably neat mylar working copy of the geology map.

### Hanging Files — ELF

ELF needs extensive work ~~to~~ before ~~the~~ the files represent a usable, internally consistent set of geologic information. Many of the existing maps are incomplete, and base maps contain different amounts of information. In addition the files are full of earlier, dated geologic interpretations which have not been revised to our current level of understanding of the ELF geology. Several recommendations for further work are as follows:

1.) All maps and diagrams in the hanging files need to be sorted and re-filed in the appropriate location. Older, no longer current diagrams need to be clearly marked as such and placed in a "dead file" category at the back of the ELF file space.

2.) ELF claims need a single compilation base map incorporating all diamond drilling to date. Locations of ~~the~~ diamond drill holes and plan projections are currently ~~minimally~~ incompletely documented on several working copy maps.

3.) Vertical cross section drill hole projection plots need to be redone for ELF diamond drill holes. New field re-logging of diamond drill holes during the 1981 and 1982 field seasons has not been incorporated into the drill hole plots.

4.) ELF surface geology maps need to be revised to incorporate additional information from both the diamond drilling results and the 1982 field mapping on G.D. claims. Both programs have important implications concerning the current interpretation of ELF geology. At present geology maps and drilling results are not internally consistent.

5.) Geologic cross sections showing the diamond drilling results on ELF need to be completed. At present only one cross section containing four drill holes has been completed to 1983 standards of stratigraphic coding and geologic understanding. Evaluation of further exploration potential cannot be completed until the cross sections are drawn and interpreted.

\* 6.) During the 1981 field season a detailed geochemical sampling program of the Gurotil formation was conducted on a limited number of drill holes. Whole rock analyses and qualitative ICP analyses were completed for some 150 samples. The program was to look at <sup>possible</sup> zoning patterns in the Gurotil formation to try to determine if zoning geochemical zoning could

be used as an exploration tool. These analyses have not been looked at ~~at~~ due to lack of manpower. The study needs to be continued at least to the stage of compilation and broad pattern zoning studies to see if the analyses can help unravel exploration potential of the T.F.