District Geologist, VictoriaOff Confidential: 89.03.01
ASSESSMENT REPORT 17562 MINING DIVISION: Nanaimo
PROPERTY: DDAM
LOCATION: LAT 491200 LONG ..... 1243730
NTS 092F02E
CLAIM(S): DDAM 1-2
OPERATOR(S): Lacana Min. AUTHOR(S): Jones, P.W.
REPORT YEAR: 1988, 35 Pages
COMMODITIES
SEARCHED F
GEOLOGICAL ..... SUMMARY:
The property is underlain by Sicker volcanic rocks, predominantly lapilli agglomeratic tuffs of the Nitnat Formation. Included within the tuffs is a silicious, banded, grey-black aphanitic tuff layer. There are silicified, bleached, altered, pyritic zones at strati- graphic contacts.
WORK
DONE:

```
Geological,Geophysical,Geochemical
EMGR 4.9 km;VLF
GEOL 400.0 ha
            Map(s) - 2; Scale(s) - 1:5000
LINE 4.9 km
ROCK }101\mathrm{ sample(s) ;ME
SOIL 201 sample(s) ;ME
    Map(s) - 1; Scale(s) - 1:5000
```



NANAIMO MINING DIVISION

## Mapsheet 92F/2E


by
Paul W. Jones


March 1988
GEOLOGICALBRANCH ASSESSMENTREPORT


1

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## SUMMARY

The following is a geological report pertaining to the status of the Ddam claim group. A grassroots prospecting program was undertal:en during September and Datober of 1987. The program involved geologic mapping (1: Sooo), rock sampling (101), a sail survey (201) samples and a EM-VLF geophysics survey.

The lithology on the property is of Gicker volcanics, with predominantly Nitnat Formation mixed lapiliiagglomeratic tufts. Included within the tuff assemblege is a distictive siliceous, banded, grey-black aphanitic tuff which is found along the cliffs on the west drainage of Henry Lake creek. It is postulated that this unit should also outcrop in the Cop Creek valley. Of further geologic note are sulicified, bleached, altered, pyritic zones which appear where the contact of the mised lapilli-agglomeratic tuff? volcanic sandstone? (unit F), and the upper green matras with broken purple and green lapilij-agglomeratic tuff (unit C) coincides. This contact may also be a reverse thrust fault.

The rock assaying dia not produce any anomalous fu values, but other elements returned anomaldous resultsn Three areas with jnteresting lool:ing rocksy 1 e a 2 m wide continuous shear zone with sporatic sulphide mineralization, an alteration zone discontinuous with silicified bleached rock wath $10-20 \%$ fuchsite and pyrite in contact with a serpentinite zone, and a quartz-flooded quartz veined section of the aphanitic grey-black tuff all deserve further attention.

The soil survey produced areas of higher base and rare earth elements and weak gold responses. The Au indications although weak, correspond to the EM-VLF geophysical conductor. There may even be a relationship between the Au responce, the geophysical conductor and the possible thrust contact between units $F$ and $C_{*}$

The geophysical survey produced significant cross-overs along three adjacent lines which are 150 m apart, thus giving a minimal strife length of zoom. Due to the under growth fover additional geophysical surveys may prove to be of value.

The claim group has 36 man days of actual prospecting work. In this tame geologit areas of mineralogic potential have been discovered. The claims need a comprehensive geologic evaluation to fully determine their potential. the significant clevelopment of the Debbie and Yellow claims adjacent to the west, warrents further evaluation.

## INTFRDUCTION

The Ddam claim group is Iocated on South Central Vancouver Island 14 km southeast of Fort Alberni, $\mathrm{Bn}_{\mathrm{n}} \mathrm{C}$. (figure 1). Access is via highway 4 and logging roads in the Cameron Division of Maclvillan-Eloedel. Logging in the claim area has provided good access to the property. During the winter of ' $87-88$ further road construction will make the upper reaches of the Ddan group much more feasible for potential trenching and if warrented, drilling.

Elevation on the claim group ranges from 600 to 1300 metres with creeks and road cuts providing rock exposure. Fleistocene glaciation blanketed much of the cjaim area with a thin layer of glacıal debris. The E-soil horizon is moderately developed and has been proven an effective exploration medium in this area.

The claim group covers if units, has an anniversary date of March $1 s t$, and $15100 \%$ owned by Faul Jones. The claims are in good standing pending acceptance of report of work froin September-October, 1987.

## gealggy

## FEE IGNAIL:

The Ddam claim group 15 situated on a fault bound block of Sicker volcanics within the Insular Belt of the Canadian Cordilleran Pennsylvanian to Fermian in age, Sicker volcanics are characterized by basaltic to rhyolitic ineta-valcanic flows, tuffs and lapillı-agglomerates of greenschist metamorphic grade.

Frecidus and base metal vein/replacement mineralization is prominent in this region. These types of deposits are located $1 \pi$ karmutsen and Sucker volcanics and are proximal to major structures and/or dioritic intrusives of the Jurassic Island intrusives.

Gealogy of this region is similar to that of the Buttle Lake area where westmin Rescurces is mining Kurako-type, polymetallic sulphide oren These exhalite ore bodies are related to rhyolitic or rhyodacite volcanics of the Myra formation of the Sicker Group.

Adjacent and to the west of the Ddam group lies the Debbie and Yellow properties. The original Victoria occurence operated in 1896, 189日, 1935-36 and 1939. It produced 384 03 Au, 52 az Ag , and 194 jbs Cu. These properties are at present undergoing extensive development, inciuding the driving of a 1.2 mile underground adit anto the Mineral Creel and Linda
gold :omes.

## FROFEFTY:

The Ddam clajm group has rock types from both the Sicl:er and the Vancouver Groups, the Sicker being the most extensiven The Sicker Group rofts host the Mineral-Yellow mineral pccurences.

The Sicker Group ig divided 1 nto two formatoons in this arean The lower Nitnat and the upper lichaughlin Fidge (proposed nomenclature A. Sutherland Erown, $C_{n} Y_{n}$ Yorath). The Mchaughlin Fidge Formation replaces the Myra Formation 1 abel in name although both are similar in age and lithology.

On the Ddan group the basal unit js a thick masejve firme grained dark green andesite flow lava (unje J.). The flow edges are more strongly chlorite al Eered and occasional sulphide lenses up to Scm long contalning pyrite, magnetite and chajcopyrite oEcum at the flow divisions.

Above the flow lava is a thick massive fine to medium grained green tuff (unit H). Whthin this tuff unit are graded beds showing stratigraphic tops upwardn

The top of the massive tuff is capped by a continuous aphanitıc, silıceous, banded grey-black tuff (unit G). Thjs banded tuff is chert-like with a concoidal fracture. The tuff forms a sharp cijff in the Henry Lake Creek valley.

Above the Gherty tuff is an obher thick mixed lapilif to agglomeratic tuff (unit $F$ ). This tuff has a mixed appearance on the weathered surface and in some places has a volaanic sandstone texture. The tuff has a green matri\% and green fragments. The fragments are either of the lower massive tuff composition or the cherty tuff.

There exists the possjbility of a facies change from Henry Feak west to Cop Mountain, kherefore enablang two different units to overije the mixed lapilij. to agglomeratic tuff unit. On Henry Feak the overlying unat js a devatrified feldspar porphry tuff (unit $E$ ). This unit $\quad$ us banded and forms the majority Henry Feat:

Overlying the porphry tuff is a lapilli tuff witha purple matrix and green fragments (unit D). Due to the limuted exploration and outcrop exposure the exact relationship and extent is somewhat dubious.

To the west the overlying rock unit is a green matrix with broken purple and green lapilli to agglomeratic tuff (unit C). Again due to the lack of rock exposure at the Eontacts the relationship between untts (F) and (C) iss


Regional Map fig 1 Property Location Map

\#4
\#4


Figure 2


suspect. Although sporatically along what is believed to be the geologic contact there are highly altered rock zones. These zones are silicified, bleached with a pervasive light brown colour and the phenocryst have been uralitized. Some of these zones have from $5-10 \%$ disseminated pyrite. There exists the possibility that a low angle thrust fault may exist between these two units.

Down the slope on the southern flank of McLaughlin Fidge the final Sicker Group unit is a massive green agglomeratic to lapilli tuff (unit B).

Unconformibly overlying the sicker Group is the Vancouver Group. The lower karmutsen Formation an extensive basaltic pillow lava member is fault bounded and is located on the eastern boundry of the Dam claims.

## STFUCTUFE:

The Diam claim group has numerous structural lineaments crossing the property. Although proximal to the MineralYellow Creel: fault it does mot lie on it. A possible splay off the Maneral-Yellow Creek fault is evident from air photo interpretation. Any mineral potentiallies within these structural lineaments. The possible thrust fault mentioned in the property geology section may be of structural interest.. Although no substantial evidence was collected further work may provide a better understanding to the geologic contact.

MINERALIZATION AND ALTERATION:
From the two tothree weeks of grassroots prospecting done on the Diam group no strongly anomalous mineral values were returned. This is in spate of area's of sulphides and intense alteration. Shear zones provided the most mineralization mainly pyrite with trace amounts of chalcopyrite. Within these shears were occasional milky grey mite quartz veins. These veins ranged any where from lem stockwork vejmlets to loom veins. A second quartz epidote silica phase post dates the milky quartz veins and were generally found to be barren. A small area was trenched with explosives where serpentinized lenses with $00-20 \%$ fuchsute and pyrite were discovered. The grey-black cherty tuff was discovered to be ankerite altered and silucified with pyrite both within the cherty tuff and within the milky grey-white quartz veins.

TRENCHING

On October 15,1987 , Fall Jones (Lacana) and Larry Epp (Crewforcl Explosives) experimented with the watergel
explosiveto determine whether the product would be an effective tool for representative rock sampling. Three seperate blasts were initiated. The sites were in one area from which three different rock types had been previously sampled. A comparison of pre and post sample results and the effectiveness of the explosive to produce a representative sample were the man objectives.

Limited written information was supplied on the product, most coming from personal communication with the product supplier, Larry Epp.

The explosive 15 a plastic wrapped gel that $3 s$ detonated with a standard blasting cap. The explosive material does not contain nitroglycerıne and for the most part is odourless. The package weighs 1 kg and is malleable with a $10 \mathrm{~cm} \times 25 \mathrm{~cm}$ cylindrical shape. Safety dictates that the caps and the explosives must be contanned in seperate stong boxes.

The primary use of the product is for breaking up large boulders when buidding logging roads. The explosive is designed to be detonated on the surface of the rock thereby limiting the need for additional equipment ie. drills for making blasting holes

The cost of the explosive and the safety fuse assemblies js as follows:

SAK FACK I kg per case 101.70
CAFS
1 metre ( 5 minute) per 100
136.60

For one blast: $\ddagger 4.07 /$ pac $+51.57 / f u s e=\$ 5.94 / b 1 a s t$
Site 1. - weakly fractured, silicified quartz carbonate shear zone, medium soft hardnes and consistency.

- explosive was positioned on rock lengthwise with a triangular cross section split for full advantage in directionality of detonation.
- the detonation brote the outcrop to a maximum depth of locm and had a radial extent of 10cm $x$ Sism, the rock fragments ranged from 4cm thin chips to dust, the majority being 2cm in size, scatter of the rock was minumal and confined to 1 metre.
Fre-samples 87JF-47, 87JFi-50
Fost -samples 87JFi-66, 87JFi-67
Site 2 - moderately foliated, serpentinized shear zone, softmedium hardness and consistency, soft along foliation but hard perpendicular.
- explosive was positioned upright on the outcrop with a paper cone inside the explusive for detonation control. -the detonation broke the outcrop more extensively along the direction of foliation, the rock fractured 40cm along foldation and logm perpendicular to it, due to the
nature of the rock (serpentinite) the fragments were larger chunks 7em x Bem with some smaller chips with very ijttle dust and no scatter other than the immediate blast area.
Fre-sample $87 J R-48$
Fost-sample 87JF-68
Site 3 - strongly silicified annealed fracture zone, very hard with no preferential fracture directiony outcrop surface rounded and smooth.
-- explosive was set upright with a paper cone much the same as site 2.
- the detonation of this very hard rocl: was not as successful as the previous blasts, the immediate area under the piastic explosive was shattered to a depth of Ecm and a locm radial extent, the chips were very angular and roughly 2cm :2cm in size, the nature of the tracturing is in tune with the brittle siliceous composation of the outcropn
Fre-sample 87JR-52
Fost-sample 87JF-69
The testing of the SAK-Fak 2000 product as an effective sampling toal proved to be somewhat successful. fin gold exploration it 15 neccessary to collect large representative samples to correctly determine the quantity and distribution of the element. Due to the value of even minute quantıties of gold and the' nugget effect (gold collecting together locally) a tool that would enable large representative samples to be collected more effectively would be greatly received. The site sampled by hand and hammer took anywhere from $1 / 2$ hour to an hour to sample. The size of the sample was limited to the amount of rock dislodged. The explosive set up and the sampling process can be completed in 15 minutes. The size of the sample js adequate to be representative. The potential for sampling accross a 20 metre zone by setting off a series of blasts would allow more time for further geological investigation. fin consideration of the safety required when using explosives, concern must be taken with 1 ts transportation and storage. In this respert the explosive would be useful for gampling sites that require munimal personal transportation. It was suggested that carrying of the explosive during prospecting traverses might be useful. This is not recommended. The procluct has a use in detail bulk samplingn it is effective in obtaining large, therefore prepresentative samples. It is also a time effective tool. Its primary use would be in lacal detail sampling where time and volume are a concern. As a day to day tool the safety and regulation do not warrent the troullen


## GEDCHEMICAL SURVEY

The' sampling undertaken on the Ddam group was done by the owner, Faul Jones and gealogist John Termuende. This project was the most extensive of any to date, but still is of a reconnaissance nature due to time constraints during collection of the data. A total of 28 man days were spent collecting the samples. During this time lol rock samples and 192 sail samples were collected.

Few rock samples returned anomalous values. The highest being 66 ppm Mo, 444 ppm Cu, 254 ppm Zny 1.5 ppin Ag, 222 ppm As and 32 ppb Au. Four rocks returned vanadium values greater than 200 ppm.

The soil results were equally as dissappointing and inconclusive. The survey was done over 7 i ines spaced 150 metres apart. The lines ran roughly east west to cross over north south structures. The samples were taken 25 metres apart on the lines. A shovel was used lo collect the samples. A hole zocin deep was dug and the well developed "E" horizon was sampled. This was to maintan consistency in the samples. The soil had a thick humus horizon, some times as much as locm thick with abundant overgrowth. The "A" horizon was evident but not always present. The "B" horizon varied in colour from dark to light to orange brown and was the thickest. The "C" horizon was not always encountered but most prevalent in the vicinaty of Henry Feak.

The analysis was done by Acme Analytical of Vancouver, B.C.. All of the samples, both rock and sai? were run through the same technique. A 30 element J.CP analysis was performed and then a geochemical atomac absorption technique was used to analyse for Au.

The survey was farply inconclusive although the only detectable Au values coincide with an EM-VLF conductor (see geophysical section) that straddles the ridge. This is an area that has a higher concentration of base and rare earth elements that may be of some significance. None of the samples neither rock nor sol came back greater than $z$ standard deviations higher than the individual elements. This leads to a coclusion that no anomalous samples were collected.

The following are descriptions of the rock samples collectegn

| 87JF-1 | grab | foliated green volcanic rock with 1\% |
| :---: | :---: | :---: |
|  |  | disseminated pyrite. |
| 87JF-2 | grab | quartz bleb Scm wide $\times 20 \mathrm{~cm}$ long with minor Fe stain |
| 87JF-3 | grab | quartz veinlets within shear zone with trace pyrite |


| 87JFi－4 | grab | green and purple agglomeratic rock with t\％disseminated pyrite |
| :---: | :---: | :---: |
| 87J下゙ー5 | 1／2m chap | shear zone with quartz and fuchsite， minor Fe carbonate |
| 87JF－6 | 1／2m chip | ghear zone with quartz and fuchsite， minor Fe carbonate |
| 87JF゙－7 | 1／2m chap | shear zone with quartz and fuchsite， minor Fe Garbonate |
| 87JF－8 | 1／2m chap | shear zone with quartz and fuchsite， minor Fe carbonate |
| 87J下゙ー9 | Im chap | ankerite zone with jasper horizon on one とロットact |
| 87JF－10 | 1 m chip | anterite zone with jasper horizon on one contact |
| 87JFi－ 11 | grab | quartz ankerite zone with mica |
| 87J下゙ーl2 | S／4m chip | across pale green feldspar porphory dyte |
| 87J下゙ー13 | grab | quarta stocl：work within foliated andesite |
| 873F－14 | grab | quartz epictote vein with $1 \%$ djssaminated pyrate within foliated andesite |
| 87JF－15 | 20cm chip | quartz carbonate shear zone |
| 87JF゙－16 | 1／2m chip | shear contact at pillowed unit with massive banded certy tuff |
| B7JFi－17 | 10cm chip | quartz carbonate ankerite shear |
| 87JFi－18 | 1／2m chip | quamtz carbonate ankerite shear |
| 87JFi－19 | grab | white quartz vein woth epidote wathin green agglomeratic tuff |
| 87JF－20 | float | quarta epjabte vein |
| 87JFi－21 | float | rusty grey cherty tuff with $5 \%$ blebs of pyrite |
| 87JF－22 | grab | quartz epidote vein |
| 87JF－23 | grab | banded fine grained black tuff with quartz stringers |
| 87JF－24 | 1m chip | altered quartz ankerite zone |
| 87JF－25 | grab | Fine grajned basalt，minor quarta veining， $1 \%$ djssemjnated pyrite |
| 87Jだ26 | 1／2m chip | quartz carbonate shear zome |
| 87J下ー27 | grat | quartz vein within foliated volcanic unit |
| 873Fi－28 | grab | quartz vein within fault zone |
| 87JRー29 | clab | Eum quartz epidote veing discontinuous |
| 87JFi－50 | float | whotercirey quartz wi khin blamk chert |
| 87JFi－3 | float | quartz ankerite vein stockworl：within black banded cherty tuff |
| 87JFi－32 | float | quartz ankerite vein Etockwork within black banded cherty tuff |
| 87JF－3\％ | $9 \times \mathrm{ab}$ | sericite altered cherty tuff with ankerite veaning |
| 87JFi－34 | grab | quartz staclawort veining within sericite altered cherty tuff |
| 87JFi－35 | float | quartz skocliwort withjn black cherty tuff |
| 87JF゙ー36 | grab | silucifued chert with locm wide milky white quartz vein |
| 87JF－S7 | grab | quarta ankerite stovkwork |
| B7JFi－38 | grab | 5cm wide quartz vein within banded tuff （less cherty） |



## pyrite

| 87JF－68 | 1 m chip | serpentinized black certy tuff with उ\％ disseminated pyrite |
| :---: | :---: | :---: |
| 87JFi－67 | Im chip | serpentinite altered contact at foliated ankerite andesite rock |
| 87JF－70 | 1／2m chip | blact cherty tuff with io\％blebs pyrite |
| 87TR－1． | ロ゙ab | quartz vein within green andesite |
| 87TRー2 | float | rusty quartz boulder |
| 871F－3 | jm rhip | shear zone within andesite flow，trace pyrite |
| 87TF－4． | lm chap | shear zone within andesite flow trace pyrite |
| 87TR－5 | grab | Pyritized chert zone |
| 87TF－6 | grab | foliated chert with rusty quartz stringers |
| 87TR－7 | 1．m chip | pyritic shear zome |
| 87TR－8 | 1／2m chip | rusty pyritic shear zome |
| 87TRー－9 | grab | phyl．J．te rock with trace pyrite |
| B7TFi－10 | float | andesite with trace pyrite |
| 87TFi－11 | grab | cherty tuff with pyrite |
| 日7TK゙ー 12 | grab | as above |
| 87TRー1 | grab | as above |
| 87TF－14 | grab | as above |
| 87TR－15 | 1 m chap | shear zone $1 n$ chest with rusty stain and $1 \%$ pyrite |
| 87TF－16 | grab | shear sone in chest with pyrite |
| 87TR－17 | grab | very sheared rock： |
| 87TR－18 | grab | basalt with Gmin quartz vein |
| 87TR゙－19 | grab | altered basalt（sheared）with quartz epidote vein |
| 87TF－20 | grab | siliceous basalt chest？，fracture pyrite arsenopyrite |
| 87TF゙－21 | grab | pyrite rusty siliceaus tuff |
| 87TR－22 | 1 m chip | faliated rusty chest tuff with desseminated and blebs pyrite 1－5\％ |
| 87Tだー33 | 1 m chip | as above |
| 87TF－24 | 1 m chip | as above |
| 87TR－ご | Im chip | as above |
| 87TF－－26 | 1m chip | as above |
| 87TR－26A | 1m chip | as above |
| 87TFi－27 | lm chip | as above |
| 87TF－28 | 1．m chip | as above |
| 87TFR－29 | 1 m chip | as above |
| 87TR－30 | grab | anmineral jzed chesty tuff |

## GEDFHYSICAL SURVEY

A EM－VLF geophysical survey was performed over the Diam grid．A Crone Fiaden Elv－VLF receiver was used in conjunction with 2 stations j，Laulualei，Hawaii（NFM）2S， 4 KHz ，and Bordeaux，France（FUO） 15.1 KHz ，（very weal，but detectable）． ］aulualei had the stronger signal and was more perpendicular to the direction of the survey lines．Not having a station orthogonal to the survey 1 ines，required that 2 stations be used to substantiate anomalous conductors．The survey was performed to dilineate possible disseminated and or massive sulphide bodies and conductive zones．The overburden profile suggests that $1 t$ is non－conductive．This is evident from the high sand and humus nature of the sail．The receiver measuredthe dip angle，in degrees，of the magnetic feild component．This dip angle is the deviation from the horizontal of the major axis of the magnetic feild components polarized ellipse．The accuracy of the readings is 1,5 degrees．A total of $G$ lines were surveyed with a total length of 4.9 kilometers．Steep slopes and cliff edges limited the extent of the survey．The raw data was Fraser filtered which reproduces the cross overs into positive peaks for conductor location separation of crest to trough through inflection points of non－filtered data give some indication of maximum conductor depth．SHape of dip angle curve relates ta subsurface orientation of conductors．The survey was done by paul jones on November 2,1987 ．It covered the saddle shaped plateau region between Cop Mountain and Henry Feat．

The survey revealed one continuous conductor（非j）over Z lines and 6 other single line conductors．

The continuous conductor was also the strongest，having degree readings in dSt to 20 degree range as well as above the selected 10 degree anomalous value．The depth of the conductor ranges from 50－70 meters．The inferred shape is that of a thin slab dipping down to the west．Along the strike of the conductor down into Henry Lake Creek valley is a pronounced structure．Within this structure are associated quarts veins that were noticed but due to time constraints were not mapped or sampled．

Conductor（zero is located on the base line just west of（非1） and was picked up by both stations．

Conductor（株）was picked up by both stations on the base lane but only Bordeaux on the 1 to $\mathrm{Sa}_{\mathrm{n}}$

Conductor（\＃4），like（\＃2）parellels the major（\＃1）conductor and was detected by both stations．

Conductor（\＃S）on the $1+505$ is weak but detected by both stations．

The final crossover, conductor (ttr) was detected by Laulualei but $j s$ also weak:

Df the six croseーavers only the conduletor (\#j) is of significant and persistent character to be of gealogical interest. The only detectable Au values from the soil survey also correlate to the comductor strite.
It is jmportant to mention that the survey has some Iimitations. It is only of reconnaissance nature, 1 jпe spacings were j50m., transmittor stationswere not Perpendicular to survey lines, nor were the stations perpendicular to revealed conductors.

## CONCLIJSIONS

Fiesults of 1 imited grassroots prospecting have indicated the presence of potential mineral environnents tinat have ecomomic significance. A more comprehensive exploration program would better determime the potential of the claim group. All prospecting tools, from geochemistry to geophysics are effective. With the completion of winter jogging roads more efficient access will greatly facilitate future exploration.

.- Bordeawr tve Wat - Laulualei tre East
-ve Wast

Figuse 6

車


Cront Radem VLF-EM
Fraser Filtered Data
Reseiver


AFFENDIX A : GEDCHEMICAL DATA

LACANA MINING PROJECT-6101 FILE \# 87-5374



Page 4



$10000 E$
$1043 E E$
$10+30 E$
$10475 E$
$11000 E$

| 1 | 2 |
| ---: | ---: |
| 2 | 3 |
| 7 | 3 |
| 11 | 3 |


$\begin{array}{lllll}2 & 5 & 0 & 2 & .2 \\ 2 & 1 & \text { M } & 1 & 2 \\ 2 & 5 & 0 & 1 & 2 \\ 5 & 5 & \pi & 2 & 2! \\ 2 & 5 & \text { n } & 1 & 3!\end{array}$
25
20
20
$3!$
$3!$

| 2 | 2 |
| :--- | :--- |
| 2 | 2 |
| 2 | 2 |
| 3 | 3 |
| 2 | 2 |

 45 $\begin{array}{cc}5 & .17 \\ 30 & .76 \\ 1 & .13 \\ 23 & .75 \\ 9 & .12\end{array}$ $\begin{array}{cc}18 & .14 \\ 19 & .17 \\ 7 & .15 \\ 20 & .16 \\ 14 & .14\end{array}$
$\begin{array}{ll}3 & 1.37 \\ 3 & 2.15 \\ 6 & .36 \\ 5 & 3.00 \\ 4 & 1.24\end{array}$ $\begin{array}{ll}.01 & .08 \\ .01 & .03 \\ .01 & .05 \\ .08 & .05 \\ .01 & .05\end{array}$



| 2 | 24 | .1 |
| :--- | :--- | :--- |
| 2 | 2 | .1 |
| 3 | 13 | .4 |
| 7 | 25 | .3 |
| 7 | 35 | .1 |


| 13 | 2.22 |  |
| :---: | :---: | :---: |
| 2 | 2.10 |  |
| 2 | 104 | 1.65 |
| 1 | 1.58 |  |

11
1
3
2
4
$\begin{array}{ll}5 & 0 \\ 5 & 0 \\ 5 & 0 \\ 5 & 0\end{array}$ $1 \begin{array}{llll}13 & 1 & 2\end{array}$

$$
\begin{array}{llll}
6 & -19 & .041 & 7 \\
80 & -5 & 12 & 12
\end{array}
$$

$$
\begin{array}{ll}
5 & .04 \\
11 \\
.11 & 17 \\
.15 & 35
\end{array}
$$

$$
\begin{array}{ll}
\text { II } & .04 \\
87 & .04 \\
37 & -02 \\
\text { J } & .02 \\
4 & -04
\end{array}
$$

$$
\begin{array}{cccccc}
1 & 1.2 t & .04 & .04 & 1 & 2 \\
4 & 1.71 & .01 & .04 & 2 & 2 \\
2 & 2.5 & .01 & .06 & 1 & 1 \\
5 & 1.51 & .01 & .05 & 1 & 1 \\
2 & 2.51 & .01 & .05 & 1 & 1
\end{array}
$$

13+50E
13-7TE
14+408
14+2TE
$14+2 \mathrm{DE}$
$14+50 E$
$\begin{array}{cccc}4 & 10 & 511 & 9.54 \\ 1 & 2 & 106 & 1.15 \\ 5 & 11 & 31 & 4.16 \\ 1 & 2 & 71 & 1.90 \\ 2 & 3 & 7 & 1.62\end{array}$
$\begin{array}{cc}20 & 5 \\ 3 & 5 \\ 4 & 5 \\ 2 & 5\end{array}$
$14+758$
$15+008$

$$
020
$$

$15+0$ CE
$15-2 \mathrm{EE}$
15-50E
连

| 2 | 45 | 11 | 7 | .1 | 4 | 11 | 31 | 9.54 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 1 | 7 | 5 | 15 | .1 | 1 | 2 | 109 | 1.51 |
| 2 | 5 | 1 | 51 | -2 | 5 | 11 | 31 | 4.04 |
| 1 | 1 | 5 | 12 | .1 | 1 | 2 | 71 | 1.90 |
| 1 | 9 | 1 | 20 | .1 | 2 | 3 | 9 | 1.42 |

$\qquad$
$\qquad$ 12
$1+50654$
$1+5055+7$
1-50es latox

$1.5013450 \%$
$1+5051+755$
1.505 7+00E

1+505 1+TE
1.505 T+500

18506 7. TE
l-SOS 1400





LACANA MINING PROJECT-8101 File E7-5S74 Page 1
SuTEE
 (1) 1

 $\begin{array}{rr}71 \\ 7 & 1\end{array}$ 21 \begin{tabular}{ll}
I \& 1 <br>
I \& <br>
\hline

 ${ }_{m}^{m}$ 

.000 <br>
.027 <br>
.004 <br>
.071 <br>
.011 <br>
.11 <br>
.016 <br>
.27 <br>
.032 <br>
.53 <br>
.002 <br>
.43 <br>
\hline
\end{tabular} $\begin{array}{ll}3 & 1 \\ 3 & 18 \\ 7 & 3 \\ 3 & 2 \\ 1 & 5\end{array}$ $\begin{array}{cc}.41 \\ .22 \\ 1.23 & 1 \\ .71 \\ .07\end{array}$ $\begin{array}{cc}17 & .25 \\ 27 & .11 \\ 104 & .07 \\ 2 & .12\end{array}$ $\begin{array}{llll}3 & 1.49 & .01 & .02 \\ 2 & 1.44 & .01 & .04 \\ 4 & 3.73 & .01 & .04 \\ 3 & 1.57 & .02 & .03 \\ 2 & 1.07 & .01 & .02\end{array}$

3+500 14+006 $4+50414+25$ 450 M $14-50 \mathrm{E}$
 H501 14675


$\qquad$


| 1 | 17 | 5 | 14 | .3 | 2 | 3 | 161 | 1.79 | 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | 1 | 11 | .1 | 2 | 2 | 10 | 1.14 | 2 |
| 1 | 51 | 2 | 0 | .3 | 21 | 11 | 946 | 3.65 | 3 |
| 1 | 5 | 4 | 12 | .2 | 2 | 3 | 114 | 274 | 3 |
| 1 | 10 | 3 | 3 | .1 | 2 | 2 | 30 | .7 | 2 |


13
1
13

36001 1145x
$3+00111+75$
$3+00 \mathrm{Cl} 1200 \mathrm{E}$
$3+00112+205$

| 1 | 1 | 1 | 4 | .1 | 1 | 1 | 11 | -.50 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 11 | 7 | 4 | .3 | 1 | 1 | 4 | .54 |
| 1 | 17 | 3 | 25 | .2 | 2 | 3 | 130 | 3.03 |
| 1 | 14 | 1 | 1 | .2 | 2 | 2. | 51 | .0 |
| 1 | 1 | 3 | 1 | .1 | 3 | 3 | 54 | .14 |

.50
.56
3.03
.41

$$
1.312
$$

$$
\begin{array}{ll}
2 & 3 \\
2 & 3
\end{array}
$$

$$
\begin{aligned}
& 2 \\
& 1
\end{aligned}
$$

34001 127 75

$$
\begin{array}{lll}
1 & 5 & .2 \\
2 & 3 & .2
\end{array}
$$

$3+40 \mathrm{~m} 13+0 \mathrm{~N}$
J+acel ij+10E


J+4015 130 7 S
3+10.4 $14+006$
3+00814+25
3+001 14 SaE
H

| 1 | 1 | 4 | 12 | .1 |
| :---: | :---: | :---: | :---: | :---: |
| 1 | 11 | 6 | 11 | .1 |
| 1 | 1 | 7 | 11 | . .2 |
| 1 | 1 | 7 | 2 | .1 |
| 1 | 1 | 1 | 5 | .2 |


| 2 | 13 | 1.1 |
| :---: | :---: | :---: |
| 3 | 102 | $J .5$ |
| 3 | EII | 3.3 |
| 2 | 27 | 5 |
| 3 | 27 | 70 |


| 2 | 65 |
| :--- | :--- |
| 2 | 25 |
| 2 | 105 |

.
300. 1407

$$
14
$$

$$
\begin{array}{ll}
2 & 3 \\
1 & 1
\end{array}
$$



15S荡 445AE

| 1.91 | 4 |
| :--- | :--- |
| 3.5 | 2 |
| 3.24 | 4 |
| 2.72 | 2 |
| 1.61 | 3 |




| 1 | 61 | 288 | 20 | .7 |
| :---: | :---: | :---: | :---: | :---: |
| 1 | 52 | 4 | 39 | .3 |
| 5 | 54 | 31 | 39 | 1.1 |
| 2 | 22 | 7 | 42 | .1 |
| 3 | 114 | 9 | 43 | .5 |


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LACANA MINING CORP. PRGJECT-6101 File \# 87-4827


LACANA MINING FROJECT-S101 FILE \# 97-4828
Fage 3

17-73-1




- SAYPLE TYPE: PI-2 ROCI P3-50IL NUE AMALYSIS IY AA FROM 10 GRAM SARPLE.

DATE RECEIVED: $C 14197$ DATE REPORT MAILED: OCT $20 / 87$ ASSAYER. ASAEYA. DEAN TOYE, CERTIFIED B.C. ASSAYER
LACANA MINING PROJECT-6101 File * $87-4828$ Fage 1


AFFENDIX E : GEGFHYSICAL DATA

Lau luale:


Bosdeaux


## STATEMENT OF COSTS

BASE LINE

| 2 man days @ $\$ 100 /$ day | 200.00 |
| :--- | ---: |
| 2 man days @ $\$ 70 /$ day | 140.00 |
| Truck -2 days @ $\$ 40 /$ day | 80.00 |
| Equipment | 20.00 |
| Food \& Accomodations 4 days @ $\$ 40 /$ day/man | 160.00 |


| 2 man days @ $\$ 100 /$ day | 200.00 |
| :--- | ---: |
| Truck - 1 days @ $\$ 40 /$ day | 40.00 |
| Equipment | 20.00 |
| Food \& Accomodations 2 days @ $\$ 40 /$ day/man $\quad 80.00$ |  |

340.00

GEOLOGICAL

| 19 man days @ $\$ 100 /$ day | $1,900.00$ |
| :--- | ---: |
| 2 man days @ $\$ 70 /$ day | 140.00 |
| Truck - 10 days @ $\$ 40 /$ day | 400.00 |
| Food \& Accomodations 21 days @ $\$ 40 /$ day $/$ man 840.00 |  |
| Travel Costs | 100.00 |
| Report Compilation | 250.00 |

GEOPHYSICAL
2 man days @ \$100/day $\begin{array}{lr}200.00 \\ 40.00\end{array}$
Equipment Rental 80.00
Truck - 2 days @ \$40/day $\quad 80.00$
Food \& Accomodations 2 days @ \$40/day/man 80.00

GEOCHEMICAL
4 man days @ \$100/day
6 man days @ \$70/day
Truck - 5 days @ \$40/day
Equipment 140.00
Food \& Accomodations 10 days @ $\$ 40 /$ day/man 400.00

| Assays - 305 samples | $4,015.00$ |
| :--- | ---: |
| Shipping | 50.00 |

Shipping
400.00
420.00
200.00
$3,630.00$
400.00

5,625.00

TO'TAL
$\$ 10,595.00$

## STATEMENT OF QUALIFICATIONS

I, PAUL WILLIAM JONES, of P.O. Box 6564, Station "C', Victoria, British Columbia, do hereby certify that:

I have worked in the mineral exploration industry for nine years. The last two full time. The work was carried oft under the supervision of the Lacana Mining Corporation's Distffct Manager, Darrel Johnson. This report is based on personally working on the DDAM claim group in September, October and November of 1987.






