## Diamond Drilling and Gravity Report

# Lew \& Bingo Claims NTS 82F/8E 

Lat.: $49^{\circ} 18^{\prime}$; Long.: $116^{\circ} 04^{\prime}$
Fort Steele Mining Division For Statement of Work Nos: 3112355, 3112369, 3112370,3442378, 3112371, 3112372, 3112373, 3112374, 3112354

Report For: Sedex Mining Corp.
P.O. Box 215,

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### 1.00 INTRODUCTION

### 1.10 Location and Access

The Bingo, David, Harmony, Lew, Lewis Fraction, Lewis, LMC, Moyie, Moyie Fraction, SMC, Thea Two, Thea, Vel and Velvet mineral claims collectively referred to as the South Moyie River claim block are located approximately 30 km southwest of the town of Cranbrook, B.C. See the index map (figure 1) for the location of the claim block. Access is by road along the Lumberton and Moyie logging roads from Cranbrook. A series of improved and unimproved logging roads provide good access to much of the claim block. Two hydro power lines cross the property.

### 1.20 History

Parts of the South Moyie River claim block have been held and prospected by Cominco for Sullivan-type deposits in the past including the Lew, Ice and Hot claims. Some lode gold prospecting was conducted on the David-Harmony and Laurie claims as well as placer workings along Ridgeway Creek, Weaver Creek and the South Moyie River. In 1996 Sedex Mining Corp. undertook to re-evaluate the entire area for Sullivan-type deposits.
1.30 Physiography

The property is situated west of the Rocky Mountain Trench within the Moyie Range of the Purcell Mountains. Topography is moderate to steep with glacially rounded ridges. Within the property area elevations range from 1300 to 2000 meters.

Vegetation cover varies from immature to mature forests of larch, pine, spruce and fir. Considerable clear-cut logging has occurred on the claim group in the recent past and the logged areas are in various stages of regeneration. Traverses are difficult necessitating cut lines and GPS control for location.

### 1.40 Property

The South Moyie River claims block consisting of 743 claim units and 153 claims (figure 2, in pocket) is a contiguous block of claims owned by Sedex Mining Corp., 1000-675 W. Hastings Street, Vancouver, B.C.

See Appendix III for claim list.
1.50 Scope of Present Program

Diamond drilling was initiated on the Lew property (optioned from Cominco by Sedex Mining Corp..) and on the Bingo Property (optioned from L.Morgan by Sedex Mining Corp.) in order to test for strataform $\mathrm{Pb} / \mathrm{Zn}$ mineralization at or above the Sullivan Time Horizon.


Figure 1.-..-Index Map showing location of Lew / Bingo Claims


Figure 3.--Regional geology map of the Purcell Supergroup, Southeastern British Columbia.
2.10 Regional Geology

The area of the claims is underlain by PreCambrian Purcell Supergroup rocks of the Aldridge Formation (Fig.2). These are fine-grained clastics that include impure quartzites, siltstones and argillites. The rocks have been metamorphosed to lower greenschist facies and have been intruded by a series of basaltic composition sills and dikes.

### 2.20 Property Geology

On the South Moyie River claim block Precambrian-age Aldridge Formation rocks are generally flat-lying with local dips up to $20^{\circ}$. Outcrops comprise less than $10^{\circ}$ of the area and are generally restricted to cliff faces and ridges. Considerable glacial material covers the slopes and valleys. Some outcrop exists in the creek beds. The area mapped can be subdivided into four sub-areas,

1. Sub-Area \#1 (centered near $5457500 \mathrm{~m} \mathrm{~N}, 567500 \mathrm{~m} \mathrm{E}$ ) A northwesterly-trending ridge and cliff face along the southern part of the claim block. Here quartz wackes turbidites are cut by a series of NEtrending gabbro dykes and faults. Locally albite occurs on fractures. Tourmaline and possible markers present. Minor sulphide mineralization is present. A strong WNW-trending fault system along the southern boundary of the mapped area.
2. Sub-Area $\# 2$ (centered near $5459000 \mathrm{~m} \mathrm{~N}, 563000 \mathrm{E}$ ) A northwesterlytrending ridge and cliff face along the southwestern part of the claim block. Here quartz wacke turbidites and quartz turbidites are interbedded with gabbro sills. The sedimentary units show hornfels, disrupted beds and ripup clast features from the emplacement of the intrusives. A strong NNEtrending fault parallels a NNE-trending anticlinal feature. No sulphide mineralization present.
3. Sub-Area $=3$ (centered near 5461000 mN .565000 m E) A northtrending ridge and cliff face along the SW-central part of the claim block. Here quartz wacke and quartz turbidite beds form a north-trending synclinal feature. Fragmental and marker rocks are common. Faulting is random but generally north-south-trending. Winor aiteration and no sulphide mineralization present.
4. Sub-Area $\# 4$ (centered near $5465500 \mathrm{~m} \mathrm{N} .566500 \mathrm{~m} \mathrm{E)} \mathrm{~A} \mathrm{northeast-}$ trending ridge nose with few outcrops. Quarz wacke turbidite beds show minor alteration and one possible marker unit. The minor sulphide mineralization consists of weakiy disseminated galena stringers, pyrrhotitepyrite along bedding and some galena associated with chiorite veinlets.

### 3.00 Diamond Drilling

A total of 1,406.2 meters of NQ diamond drilling was done on the Lew-Bingo property during the fall of 1997. All drill core is stored at the Sedex Mining Corp. Field office; 3380 Wilks Rd., Cranbrook, B.C.

The following table lists the data for each drill hole:

| DRILL HOLE \# | TOTAL DEPTH | INCLINATION | BRG. |
| :---: | :---: | :---: | :---: |
| L-97-1 | 1096.4 m | $-70^{\circ}$ | AZ200 |
| B-97-1 | 132.9 m | $-80^{\circ}$ | AZ045 |
| B-97-2 | 45.1 m | $-90^{\circ}$ |  |
| B-97-3 | 131.8 m | $-90^{\circ}$ |  |

Total meters drilled $=\quad 1,406.2$
Refer to Appendix I for detailed drill logs

Diamond drill hole L-97-1 did not intercept any mineralized horizons of any significance. A very thick gabbro sill was intersected between 785.7-1049.0 meters.

Diamond drill holes B-97-1 did not intercept any mineralized horizons.
Diamond drill hole B-97-2 was abandoned in overburden.
Diamond drill hole B-97-3 did not intercept any mineralized horizons.
No further drilling is recommended in the immediate vicinity of the 1997 drilling.

## Statement of Costs

Diamond Drilling (incl. cat work)
DDH-L97-1 (Lone Ranger Diamond Drilling) \$94,018.78
DDH's -B97-1,2,3 " " " \$26,602.75
Total drilling $=\$ 120,621.53$

Salaries
B.Woödfill (Hastings Management Supervision) (8.5 days @ \$400./day)
\$ 3,400.
M.Johnson (GPS technician)(1.5 days @ \$125/day) \$ 187.50
T.Kennedy (Prospector / Project Help)(3 days @ \$200/day) \$ 600.
G.Rodgers (project supervision, report)(6 days @ \$250/day) \$ 1,500.
P.Klewchuk (Drill core logging, on site visits) \$ $11,728.22$

Total Salaries $=\$ 17,415.72$
Expenses (lodging / food)
B.Woodfill $(8.5 * \$ 100)=\$ 850$.
M.Johnson $(1.5 * \$ 100)=\$ 150$.
T.Kennedy $(3 * \$ 100)=\$ 300$.
G.Rodgers $(2 \quad * \$ 100)=\$ 200$.

Total lodging $/$ food $=\$ 1,500$.

Trucks (4*4)
Gravity Survey (Quadra Surveys)
Computer Drafting, type logs, data

Total Trucks $=\quad \$ 2,125$.
\$ 1,102.10
\$ 1,251.

6.00 STATEMENT OF QUALIFICATIONS

I, Glen Rodgers, certify that:

1. I am a graduate of the University of Manitoba School of Geological Engineering (1977) and am registered with the British Columbia Association of Professional Engineers and Geoscientists as a P. Eng.
2. I have based this report on work done by myself during 1997 on the South Movie River claim block including supervision of the project.
3. I do not expect to receive any share consideration as a result of writing this report.
4. I have practiced my profession continuously over the last 20 years ass exploration geologist working in Canada, Alaska and Central Andrea


### 6.00 AUTHOR'S QUAIIFICATIONS

As author of this report, I, Peter Klewchuk certify that:

1. I am an independent consulting geologist with offices at 246 Moyie Street, Kimberley, B.C.
2. I am a graduate geologist with a B.Sc. degree (1969) from the University of British Columbia and an M.Sc. degree (1972) from the University of Calgary.
3. I am a Fellow of the Geological Association of Canada and a member of the Association of Professional Engineers and Geoscientists of the Province of British Columbia.
4. I have been actively involved in mining and exploration geology, primarily in the province of British Columbia, for the past 21 years.
5. I have been employed by major mining and exploration companies and by provincial government geological departments.

Dated at Kimberley, British Columbi, $\begin{aligned} & \text { mathis } 15^{\text {th }} \text { day }\end{aligned}$ of November, 1996.


## APPENDIX I

## Drill Hole Record

Property: Lew Option
District: Fort Steele
Hole No ..... L-97-01
Length of Hole: ..... 1096.4 metres
Commenced: ..... July 2, 1997
Completed: ..... July 29, 1997
General Location N. Moyie River
Co-ordinates:
Elevation:
Inclination:
Azimuth: ..... $200^{\circ}$
Dip Test Results: ..... None
Core Size: ..... NQ
Logged By: Peter Klewchuk
Objective: Test for strataform PbZn mineralization
Location of Core: Cranbrook Field Office
Drilled By: Lone Ranger Diamond Drilling, Ltd.
Type of Drill: Longyear 44
WP7 File No: C: ICorellLEAHFILELL-97-01.wpd
General Comments: ..... None

| 0-5.2 | Casing. No Core. |
| :---: | :---: |
| 5.2-31.7 | SS/SILT/ARGILLITE <br> Mixed lithologies; laminated and thin bedded argillite to med. thick quartzites. Color varies from light gray to dark blue-gray. Bedding is most commonly planar, at $85-90^{\circ}$ to $\mathrm{c} / \mathrm{a}$, but there are numerous, generally narrow, zones of disrupted bedding. These are of argillite and siltstone with a lensey character but locally there are rounded clasts up to 6 cm diam. <br> Silicic alteration is present in a number of quartzites with 'concretionary' development of pink garnets, minor biotite, chlorite and possible actinolite-tremolite in a generally bleached zone ("collage" beds). Locally po and/or minor py are present in these zones. Pink garnets are relatively common through the entire interval. Minor py is common throughout, both dissem. and as thin veinlets on fracture surfaces. <br> At 18.55 to 18.63 m a narrow marker band is present with relatively thin lines. |
| 31.7-38.6 | QUARTZITE <br> Variably light, med. and darker blue-gray. Dominantly thick and very thick bedded quartzite and silty quartzite with very minor thin bedded and laminated siltstone and argillite. Bedding at $85-90^{\circ}$ to $\mathrm{c} / \mathrm{a}$. Quartzites have a mottled to spotted texture due to alteration. Very minor dissem. po is present in the quartzites. |
| 38.6-44.4 | SS/SILT/ARGILLITE <br> Med. to darker blue-gray. Rarely light gray. Mixed lithologies, ranging from thin bedded and lam-argillite to med. thick, altered quartzite. <br> Some narrow argillite sections display disrupted bedding. <br> Bedding at $85^{\circ}$ to $\mathrm{c} / \mathrm{a}$. Altered quartzites have a mottled bleaching (sericitic alteration?) With scattered pink garnets. Minor dissem. py occurs throughout locally concentrated to $2-3 \%$ in a narrow zone of disrupted bedding at 41.6 m . <br> 43.65-43.95 Marker band, generally thin, faint lines. |
| 44.4-46.4 | QUARTZ VEIN <br> Probable thin QV, may be only $5-7 \mathrm{~cm}$ wide, nearly parallel to drill hole. Light gray, granular quartz with mottled texture. Coarse patches of biotite, po with minor Cpy and vuggy pyrite are all present. Minor calcite and chlorite are also present. | and chlorite are also present.

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46.4-88.2 QUARTZITE
    Light gray to darker blue-gray. Mixed lithologies but quartzite comprises about 60% of the interval. Laminated
    to thin bedded, darker gray argillite zones are locally planar bedded, locally with disrupted lensey bedding.
    Patchy alteration in quartzites is similar to previous sections; bleached with pink garnets common, minor sericite
    and biotite.
    Minor py occurs throughout, dissem. and as hairline veinlets. At 56.0 m., py occurs along a narrow (1.5 mm
    wide) vuggy quartz 'vein' with minor ZnS. Py, po and ZnS occur dissem. in silty argillite just below the vein
    also.
    Bedding is at }8\mp@subsup{5}{}{\circ}\mathrm{ to c/a.
    6 3 . 1 ~ t o ~ 6 3 . 5 ~ i s ~ l a m i n a t e d ~ t o ~ t h i n ~ b e d d e d ~ a r g i l l i t e ~ a n d ~ s i l t s t o n e ~ w i t h ~ s o m e ~ m a r k e r ~ l i n e s .
    At 71.0 a 10 cm section is a faint possible marker.
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SILT/ARGILLITE
Med. gray to darker blue-gray. Mostly thin bedded and laminated with a few med. quartzites. Numerous narrow zones of lensey, disrupted bedding. Bedding at \(85^{\circ}\) to c/a. Minor dissem. po occurs with accessory Cpy and rare reddish-brown ZnS .
```

QUARTZITE
Similar to 46.4-88.2. Bedding at $85^{\circ}$ to $\mathrm{c} / \mathrm{a}$.
96.6 to 99.7 is more broken core with chloritic alteration; rubbly chloritic siltstone and minor fault zone at $\sim 98.0$ m , possibly at $\sim 30^{\circ}$ to $\mathrm{c} / \mathrm{a}$.

## SILT/ARGILLITE

Light to med. gray-brown and gray-green. Thin bedded and laminated, few med. beds.
Bedding at $85-90^{\circ}$ to $\mathrm{c} / \mathrm{a}$. 106.2-107.2 hosts numerous faint marker bands.
Thin zones of lensey fragmental/disrupted bedding occur near 109.1 m .

## QUARTZITE

Similar to overlying quartzite intervals. About $15-20 \%$ are narrow zones of thin bedded and laminated darker gray argillite and silty argillite; some of these zones have disrupted, lensey bedding. Bedding is at $85-90^{\circ} \mathrm{c} / \mathrm{a}$. Concretionary, bleached alteration zones in the quartzites carry pink garnets, biotite and pale green chlorite and tremolite-actinolite. At 112.5 m a 13 cm wide concretion has $6-7 \mathrm{~cm}$ of massive pink garnet at the center

## SS/SILT/ARGILLITE

Thinner bedded interval of mixed lithologies. Color varies from light gray and greenish gray to darker blue-gray. Mostly thin and med. bedded with some laminated zones and thicker quartzites from 141.8 to 144.5 m . Bedding at $85-90^{\circ}$ to $\mathrm{c} / \mathrm{a}$. Local bleached, concretionary alteration zones are present, with garnet, biotite and tremolite.
Fine dissem. po and some py, occur throughout in very minor amounts.
At 142.8 m . py is more concentrated in a narrow vuggy section of light gray, bleached siltstone.
Narrow zones of lensey, disrupted bedding are present. From 153.9 to 154.6 m is mostly disrupted with a fragmental texture. Most clasts are lensey, parallel to bedding, but one is rounded, equidimensional, 2.5 cm diam.
Py appears more common (1-1.5\%) in this fragmental section.

## QUARTZITE

Med-dark blue-gray, mottled. Patchy tan-gray bleaching (sericitization?) is common in the lowermost 80 cm , controlled by fractures. Local patchy concentrations of spotted garnet, biotite and chlorite occur in bleached (silicified) concretionary features. Med. and thick bedded, bedding at $80-85^{\circ}$ to $\mathrm{c} / \mathrm{a}$.

## SS/SILT/ARGILLITE

Mixed lithologies, mainly quartzite, lesser siltstone, minor argillite.
157.1-167.5 is more altered with patchy pale greenish tan-gray bleaching. Chlorite and minor pyrite are common in some bleached zones.
158.3-158.45 is a milky white quartz vein at $45-75^{\circ}$ to $\mathrm{c} / \mathrm{a}$. Adjacent rock for $20-40 \mathrm{~cm}$ above and below is more intensely altered - bleached, silicified and brecciated with chlorite and fine dissem. py.
The remainder of the interval is more typically med-dark blue-gray med. thin and thick bedded. Tan-gray
bleached (sericitic altered ?) zones are much less common.
Scattered garnet-biotite-chlorite "concretions" are present.
Thin bedded argillite zones are commonly biotitic.
Bedding typically at $85^{\circ}$ to $\mathrm{c} / \mathrm{a}$.
Minor fine dissem. po occurs throughout, with py also present.
181.6-182.4 is a minor fault; core is locally fractured, brecciated with chloritic fracture surfaces at $30-35^{\circ}$ to c/a. At 188.0 m another minor fault is evident; bx core with thin calcite veinlets; chloritic fracture surfaces at $25^{\circ}$ to c/a.

| 204.5-205.2 | QUARTZ VEIN <br> Light gray to milky white, mottled narrow quartz vein at $<5^{\circ}$ to c/a. May only be $5-7 \mathrm{~cm}$ wide. Minor py and <br> chlorite are present. |
| :--- | :--- |
| 205.2-213.5 | QUARTZITE <br> Med. gray - med. blue-gray, rarely darker, mottled by alteration. Med. and thick bedded, bedding planes fairly <br> indistinct. |
| A number of rounded to elongate clasts occur isolated in the quartzites. |  |
| 212.3-213.5 is brecciated, fractured at $0-20^{\circ}$ to c/a, adjacent to underlying fault. |  | 213.5-214.3 | FAULT |
| :--- |
| Brecciated and fragmented quartzite, $10-15 \mathrm{~cm}$ fault gouge zone at 213.5 m. |
| Minor dissem. py in tan-gray bleached fragments. |$\quad$| SILT/ARGILLITE |
| :--- |
| Med. gray and gray-green to light blue-gray. Thin bedded, some laminations and a few med. beds. Weakly |
| chloritic with minor dissem. py. Change in lithology below fault suggests some movement. Bedding at $85-90^{\circ}$ to |
| c/a. |
| 220.5-220.7 is a quartz vein, sub-parallel to c/a with minor py and chlorite. |
| 221.6-223.4 <0.5 m core recovered as rubbly siltstone; not an obvious fault. |

## SS/SILT/ARGILLITE

Mixed lithology with quartzite predominating.
Color is typically light gray to med. and darker blue-gray. Pale gray-green to tan gray (sericitic?) altered zone from 249.0-253.3 m med. quartzites alternate with narrow zones of laminated and thin bedded argillite and silty argillite. Some thin bedded sections have lensey distupted bedding. Local concentrations of spotted pink garnet and biotite in narrow bleached zones occur through much of the interval.
At 250.6 m a 6 cm wide milky quartz vein has irregular blebs and veinlets of PbS .
1.5 cm crushed zone with quartz pebbles occurs on footwall contact. QV is sub-parallel to bedding.

At 251.75-252.25 is more intense bleaching with strong development of fine muscovite.
Core here is quite soft and argillic or talc altered.
Bedding is typically at $80-85^{\circ}$ to $\mathrm{c} / \mathrm{a}$.

## SILTSTONE

Med. gray and blue-gray. Generally quite massive and uniform in composition, few bedding planes evident at $\sim 80^{\circ}$ to c/a. Metamorphic overprinting masks original bedding character; randomly-oriented porphyroblasts (2-6 mm long) of biotite and chlorite are variably developed, up to $15 \%$. May be a 'massive wacke' unit. Minor po and py are present.
Near 296.7 m ., a narrow zone of lensey disrupted bedding.

## SS/SILT/ARGILLITE

Mixed lithologies with quartzite predominating.
Color varies from light gray to med. and darker blue-gray: similar to previous intervals of mixed lithologies.
Typically med. and thin bedded with laminated zones and a few thick quartzite beds. Scattered bleached concretionary zones with pink garnets, biotite and chlorite and sometimes po.
At 313.7 m ., a 6 cm wide bedding-parallel quartz vein is vuggy and contains minor dissem. py.
314.4 to 315.65 m is bleached tan-gray, locally silicified with fine dissem. py.
330.8 to 331.6 is similarly bleached, silicified with minor fine dissem. py.

Narrower zones of similar bleaching occur near 342.7 and 350.4 m.
352.5 to 355.7 is variably bleached and silicified with minor py.
342.2 m to 345 m is mostly thin bedded and laminated.

Bedding is typically at $80-85^{\circ}$ to $\mathrm{c} / \mathrm{a}$.
374.8-378.2 MOYIE INTRUSIVE

Upper contact planar at $77^{\circ}$ to $\mathrm{c} / \mathrm{a}$, lower contact irregular, sediments below are med. gray-green, fine to medium grained.

## SS/SILT/ARGILLITE

Mixed lithologies, mainly quartzite. Med. and darker blue-gray med. to thin bedded. Moderately silicified throughout, locally with tan-gray bleaching and fine dissem. py. Minor po is also present, dissem. and in small irregular veinlets.
At 369.4 m a $3-4 \mathrm{~cm}$ wide QV which pinches out down hole, irregular and sub-parallel to $\mathrm{c} / \mathrm{a}$, carries abundant $\mathrm{PbS}, \mathrm{ZnS}$ and po in an altered, bleached zone with chlorite, pink garnets, biotite and minor po. Bedding at $85^{\circ}$ to c/a.

## SS/SILT/ARGILLITE

## MOYIE INTRUSIVE

Both contacts at $\sim 68^{\circ}$ to $\mathrm{c} / \mathrm{a}$. Top contact is wavy, bottom contact is planar.
Dark green, fine grained. Only a very slight increase in grain size near the middle.
Minor po with accessory Cpy occurs through much of the gabbro. Po is typically finely dissem. but near 358 m a number of larger rounded blebs, some with quartz, some mostly quartz, are dissem. through $15-20 \mathrm{~cm}$ of core. 358.8 to 359.5 is a quartz-chlorite-pyrite-carbonate vein, up to 3.5 cm wide, at $\sim 5^{\circ}$ to c/a. (Seds. at both contacts are strongly whitish bleached, possibly albitic).

Mixed lithologies, dominated by quartzite.
Color is generally med. to darker blue-gray, but locally extensively bleached and mottled by alteration. Med. and thin bedded to laminated. Thin bedded and laminated zones commonly display lensey, disrupted bedding. Near $380.3 \mathrm{~m} \sim 15 \mathrm{~cm}$ of more intense bleaching with minor py is associated with a series of $\sim 6$ thin $(1 / 2-2 \mathrm{~mm}$ wide) qtz- $\mathrm{CO}_{3}$ veins at $40^{\circ}$ to $\mathrm{c} / \mathrm{a}$.
At 387 m 5 cm of core is a healed breccia with a quartz vein matrix, developed sub-parallel to bedding. Local strong bleaching is gray-brown. Blebs of py occur with QV.
From 388.3 to 393.3 is a zone of more intense bleaching associated with healed shearing; fractures are at $25-30^{\circ}$ to $\mathrm{c} / \mathrm{a}$ and sometimes filled with quartz-sericite-(carbonate?) and minor pyrite veins up to 3 mm wide. This altered zone ends at 393.3 in an unhealed fracture zone which curses across the core at $15-50^{\circ}$ to $\mathrm{c} / \mathrm{a}$. At 402.7 m a 20 cm zone of albite(?) chlorite alteration appears to be a bedding-parallel zone.

MOYIE INTRUSIVE
Both contacts parallel or sub-parallel to bedding: upper contact at $77^{\circ}$ to $\mathrm{c} / \mathrm{a}$, lower contact at $65^{\circ}$ to $\mathrm{c} / \mathrm{a}$. Mostly med-dark green, fine, med. and coarse-grained. Quite massive.
At 408.3 m a 4 cm wide quartz vein cuts core at $22^{\circ}$ to $\mathrm{c} / \mathrm{a}$. Po, py and Cpy are concentrated along vein contacts.
$419.5-422.8 \mathrm{~m}$ is a fault zone with broken, bleached core. Fracture surfaces are at $20-40^{\circ}$ to $\mathrm{c} / \mathrm{a}$ with very minor QV and local med. grained euhedral pyrite.
At 426 m a 15 cm wide quartzite band is included in fine-grained, chlorite and biotite-altered gabbro.

## QUARTZITE

Med. and thick bedded with a few thin beds. $<5 \%$ is siltstone or silty argillite. Light, med. and dark blue-gray.
Variably mottled by bleaching alteration, some of which is controlled by fractures.
At 436.2 m a 5 cm wide bedding-parallel band contains $\sim 15 \%$ py as very irregular veinlets. Py is centered in a 15 cm wide zone of tan-gray bleached alteration. Bedding is typically at $\sim 80^{\circ}$ to $\mathrm{c} / \mathrm{a}$.

## SS/SILT/ARGILLITE

Mixed lithologies with est. $75 \%$ quartzite.
Light, med. and darker blue-gray. Med. and thin bedded. Few thick beds, some narrow laminated zones.
Lensey disrupted bedding is common in thin bedded zones.
Patchy bleaching is common; some have pink garnets.
Bedding is at $75-80^{\circ}$ to $\mathrm{c} / \mathrm{a}$.

## SILT/ARGILLITE

Med. gray to med. and dark blue-gray. Thin bedded and laminated throughout with a few med. thick beds. $<5 \%$ is quartzite. Bedding at $70-80^{\circ}$ to $\mathrm{c} / \mathrm{a}$.
470.3-470.5 is lighter gray with fine laminations of pyrite and chlorite. Similar to "Sullivan Horizon" lithology.

## QUARTZITE

Med-dark blue-gray, mottled by bleaching which tends to be along healed fractures
Thick and med. bedded, $<15 \%$ thin bedded and lam. siltstone and silty argillite.
Bedding at $75-80^{\circ}$ to $\mathrm{c} / \mathrm{a}$.

| 486.1-505.1 | SS/SILT/ARGILLITE <br> Mixed lithologies, $65 \%$ quartzite. <br> Med-darker blue-gray. Med., thick and thin bedded with lensey disrupted bedding in narrow thimbedded and laminated sections. <br> Locally bleached to a tan-gray color. eg., around 488.2 and 488.8 where bedding sub-parallel quartz and quartz carbonate veins are present, up to 5 cm thick. <br> Minor healed bx occurs with Qtz-CO $\mathrm{CO}_{3}$ veins at 488.8 m . Fine dissem. py is common in some tan-gray altered zones. Bedding typically at $70-80^{\circ}$ to $\mathrm{c} / \mathrm{a}$. <br> At $488.5 \mathrm{~m} \sim 10 \mathrm{~cm}$ of very faint possible marker in tan-gray altered zone. |
| :---: | :---: |
| 505.1-511.8 | QUARTZITE <br> Med gray to rarely med. and dark blue-gray, thick and med. bedded. Locally fractured at $5^{\circ}$ and $25^{\circ}$ to $\mathrm{c} / \mathrm{a}$ with open fractures. Bedding at $85-90^{\circ}$ to $\mathrm{c} / \mathrm{a}$. A few coarse blebs of ZnS present at 511.05 m . |
| 511.8-516.0 | SS/SILT/ARGILLITE <br> Mixed lithologies with $\sim 60 \%$ quartzite. <br> Med. gray to med. and dark blue-gray, thin bedded to mainly thick bedded. <br> 209.0-210.0 is fragmental with matrix-supported small angular clasts ranging in length from $<1 \mathrm{~mm}$ to 75 cm (width of core) but averaging $3-5 \mathrm{~mm}$. Clasts tend to be aligned sub-parallel to bedding at $\sim 90^{\circ}$ to $\mathrm{c} / \mathrm{a}$. Clasts tend to be more argillaceous in a silty matrix. <br> Bedding is at $80^{\circ}$ to $\mathrm{c} / \mathrm{a}$. |
| 516.0-517.4 | FRAGMENTAL <br> Matrix-supported but with close-packed sections that are almost clast-supported. Clasts are angular, ragged, elongate and typically aligned at $70-80^{\circ}$ to $\mathrm{c} / \mathrm{a}$, with a strong fabric evident. Clasts are mostly argillite, in a siltstone matrix. |
| 517.4-588.8 | SS/SILT/ARGILLITE <br> Mixed lithologies with est. $65 \%$ quartzite. <br> Color varies from light gray to med. and dark blue-gray. Mainly med. and thick bedded with-seattered thin bedded and laminated zones. Some thin bedded zones are of lensey disrupted bedding. <br> $523.8-531.0$ is mostly quartzite, thick and med. bedded with $\sim 5 \%$ argillite bed tops. |

542.6-543.5 is a wider zone of thin bedded and laminated argillite and silty argillite.
$543.7-548.5$ is mostly quartzite with $\sim 5 \%$ silty and argillite bed tops.
Patchy alteration occurs throughout; mostly narrow zones of bleaching, tan to tan-gray colored. At 578.7 m a 7 cm wide bedding - sub-parallel zone of calcite-quartz veins forms a matrix to healed breccia; which is central to a 40 cm long more intensely altered/bleached section. Pyrite is locally abundant with $\mathrm{CO}_{3}-\mathrm{Qtz}$ veins.
533.0 to 554.4 m is more broken core with open fracturedd crush zones at 553.6 m and 554.0 m , at $70^{\circ}$ to $90^{\circ}$ to c/a.
A few similarly fractured (open to partially healed) zones exist between 554 and 568.6 m .
568.6-588.8 Core is generally more broken with scattered 'crackle breccia' to openly fractured zones. Fracture attitudes tend to be $\sim 35^{\circ}$ to c/a but with considerable variation.
Narrow $0.5-2.0 \mathrm{~cm}$ wide qtz-chlorite veins at 578.4 and 585.3 m are at $15^{\circ}$ to $\mathrm{c} / \mathrm{a}$. Minor po and fine dissem. py are present. Locally py occurs on fracture surfaces. Bedding is typically at $70-80^{\circ}$ to $\mathrm{c} / \mathrm{a}$.

FAULT
Moderately to strongly brecciated and sheared, locally intense with fault gouge.
Lithology ranges from silty argillite to quartzite. Predominant fabric appears to be at $\sim 30^{\circ}$ to $\mathrm{c} / \mathrm{a}$ but there is lots of variation. A few qtz- $\mathrm{CO}_{3}$ veinlets are present and very minor fine, dissem. py occurs in fault gouge and in fractures.

## SS/SILT/ARGILLITE

Mixed lithologies, est $65-70 \%$ quartzite, remainder siltstone, minor silty argillite. Generally similar to previous intervals. 606.3-607.5 is tan-gray-green bleached with minor py on fractures.
Some thin bedded sections display disrupted lensey bedding.
At 620.4 and 634.3 narrow 8 cm and 5 cm wide bedding parallel QV have associated narrow ( 30 to 45 cm wide) bleached alteration zones with minor fine dissem. py. Bedding typically at $75-80^{\circ}$ to $\mathrm{c} / \mathrm{a}$.

## ((All depths from 517.25 m to $\mathbf{6 3 0} \mathrm{m}$ to be corrected by $\mathbf{- 3 . 0 5} \mathrm{m}$ )) Below here, all depths correct.

Numerous bedding-parallel quartz veins $1-7 \mathrm{~cm}$ wide, occur below 633 m .
Typically these are associated with narrow bleached tan-gray to green alteration zones with minor dissem. py. At 640.4 m galena, sphalerite and py occur to gether in a Qv . At 681 m PbS and py occur in a 1.5 cm wide vuggy Qv.

Near 672 m a 30 cm zone is more intensely altered with strong bleaching and silicification in a healed breccia. Minor py occurs along veinlets, dissem. po occurs with accessory Cpy and there is local strong patchy development of biotite.
A general increase in the alteration occurs below 672 m with patchy development of spotted, porphyroblastic biotite.
683.7-685.5 QUARTZITE

One, possibly 2 beds. Light-med. gray, mottled; bleached, sericitic and biotitic, vaguely banded at $75^{\circ}$ to $c / a$, otherwise massive.
685.5-732.9 SS/SILT/ARGILLITE

Mixed lithologies with est. $65 \%$ quartzite. Med-darker gray and blue-gray with patchy lighter bleaching throughout. Med. and thin bedded, few thick beds.
Some thin bedded zones display lensey disrupted bedding and there are scattered oval clasts in some beds. A few narrow sections lower in the interval (below 721.5 m ) have numerous elongate, sometimes ragged clasts and are essentially narrow bedding-parallel fragmental zones. Fragmental zones tend to be strongly biotite-altered. Scattered biotite-spotting is also present. Bedding is at $75-80^{\circ}$ to $\mathrm{c} / \mathrm{a}$.
Stronger bleaching occurs in association with narrow quartz veins and qtz- $\mathrm{CO}_{3}$ veins.
Some, eg at $693.4 \mathrm{~m}, 696 \mathrm{~m}$ and 729.7 m contain PbS as well as py.

## SILT/ARGILLITE

Med-darker gray, biotite-altered. Thin bedded to laminated, few med. thick beds - thicker interval of thin bedded siltstone and silty argillite which occurs with quartzites in previous intervals. Local lensey disrupted bedding (bedding-parallel fragmental zones, up to 15 cm wide). Bedding at $80-85^{\circ}$ to $\mathrm{c} / \mathrm{a}$, rarely $75^{\circ}$.

## SS/SILT/ARGILLITE

Mixed lithologies with est. $50 \%$ quartzite. Generally similar to previous intervals but not as thick bedded and less quartzite:
Med. to darker gray with patchy tan-gray-plae green alteration. Med. and thin bedded. Thin bedded sections have some lensey disrupted bedding zones.
Strongly biotite-altered throughout; quartzites are biotite-spotted and siltstone-argillite sections have biotite-rich beds and lenses.
At 753.5 m an 8 cm wide bedding-parallel Qtz -feldspar vein carries py, PbS and accessory Cpy. Pyrite occurs
below this vein to $\sim 754.2 \mathrm{~m}$ with Qtz -chlorite veins and dissem. Minor reddish-brown ZnS is dissem. close to a thin py-chl-qtz vein at 754.2 m . Bedding is typically at $80^{\circ}$ to $\mathrm{c} / \mathrm{a}$, ranging from $70^{\circ}$ to $85^{\circ}$.
From $756-757 \mathrm{~m}$ core is locally shattered - an unhealed crackle breccia.
Fracture attitudes tend to be at $15^{\circ}$ and $35^{\circ}$ to c/a.

## SILT/ARGILLITE

Med-dark gray with patchy pale gray-green alteration.
Thin bedded with a few med. thick silty quartzite beds.
Bedding at $75-80^{\circ}$ to $\mathrm{c} / \mathrm{a}$.

## SS/SILT/ARGILLITE

Mixed lithologies with siltstone predominating, less silty quartzite and silty argillite thin and med. bedded.
Bedding is strongly masked by chloritic alteration and bleaching.
771.1-772.3 is uniformly thin bedded. Minor pyrite is common in thin veinlets with chlorite through mud of the interval.
Bedding is typically at $70-75^{\circ}$ to $\mathrm{c} /$ a, bit more wavy from disturbance by underlying gabbro near 777.6 m .777 .2

- 777.6 broken, rubbly siliceous core.


## MOYIE INTRUSIVE

Upper contact in broken core.
777.6-728.8 Fine-grained gabbro. Med. - datk green, appears mafic-rich

Cut by a series of thin ( $<1.5 \mathrm{~mm}$ ) quartz veins, at $<5^{\circ}$ to $30^{\circ}$ to $\mathrm{c} / \mathrm{a}$.
At 778.25 m a $5-7 \mathrm{~m}$ section of broken core is strongly pyritic and siliceous with fine-grained pyritohedrous and granular quartz.
778.8-780.0 Pyritic gabbro. Mostly rubbly core with a few scattered

Vuggy quartz veins at $\sim 35-40^{\circ}$ to c/a. Gabbro is dark gray and strongly pyritic through most of the interval with abundant ( $\sim 25 \%$ ) fine grained dissem. py.

## 780.0-782.2 ALTERED GABBRO, FAULT, QUARTZ VEINS

Light to med. yellow and green-gray with est. $10-15 \%$ dissem. py throughout.
Quite massive except for a series of $Z V$ up to 3 cm wide which cut core at $60^{\circ}$ to $80^{\circ}$ to $\mathrm{c} / \mathrm{a}$.
Fault zone at 781.1-781.2 Fault breccia with clay matrix. Top contact at $\sim 70^{\circ}$ to $\mathrm{c} / \mathrm{a}$ (may be a "beddingparallel" crush zone).
781.2-782.2 Only $\sim 20 \mathrm{~cm}$ of core recovered, rubbly altered gabbro and quartz veining, all strongly
pyritic.
785.7-1049.0

## QUARTZ VEIN

Milky white to light gray, massive and mottled. Pyrite is common, in lensey veins of dissem. fine-grained euhedral crystals, irregularly distributed and concentrated near contacts. Very minor PbS (?) is also present. 10 cm of $40 \%$ py at 782.85 m , with a few cm of crushed core at the base.

## SS/SILT/ARGILLITE ?

Bleached sediments. Strongly altered, some relict thin bedding at $80-85^{\circ}$ to $\mathrm{c} / \mathrm{a}$ is evident. Pale brownish gray to blue-gray, generally strongly mottled with no preserved bedding except for the upper 75 cm . Dissem. biotite is common; locally there is minor dissem. py and a few quartz and quartz-py veins cut the core at $\sim 60^{\circ}$ to $\mathrm{c} / \mathrm{a}$.

## MOYIE INTRUSION

785.7-796.0 Patchy altered with numerous quartz-sulfide veins.

Color varies from med. and dark green to pale gray-green bleached zones, usually adjacent to quartz veins. Fine to med. grained, locally coarse-grained and generally with increasing grain size down hole. Quartz veins are milky white to light gray, mottled and massive and typically cut the core at $35-60^{\circ}$ to c/a. A few veins are partly vuggy. Most veins carry minor dissem. py, many carry coarse to fine blebs of PbS and a few have coarse blebs of greenish ZnS .
Veins are at: 788.4 ( 20 cm wide), 789.5 ( 20 cm wide), 792.7 ( 7 cm wide), $793.0(10 \mathrm{~cm}$ wide, vuggy with Py and ZnS ), 793.7 ( 10 cm wide), and 795.7 ( 20 cm wide).
796.0-856.9 More massive gabbro with scattered narrow Qv.

Med. to dark green. Med. to coarse grained with local narrow very coarse-grained sections. Scattered, usually thin ( $1-3 \mathrm{~cm}$ wide) quartz veins are typically at $70-85^{\circ}$ to $\mathrm{c} / \mathrm{a}$. Most veins have local alteration associated with them, with some py $\pm$ epidote $\pm$ chlorite. Onew Qv at 841.2 m has minor PbS . At 846.6 m a 20 cm zone is bleached to med. and dark gray with two 1 cm wide QV at $80^{\circ}$ to $\mathrm{c} / \mathrm{a}$, abundant dissem. py, biotite and epidote on contacts.
Upper contact of this zone is a shear/fault at $20^{\circ}$ to $\mathrm{c} / \mathrm{a}$.
At 847.2 m a similar 10 cm wide bleached pyritic zone occurs adjacent to a central 12 mm wide QV.

## 856.9-857.5 QUARTZ VEIN/SHEAR/FAULT ZONE

856.9 to 857 is bleached, pyritic, silicified.

857 to 857.25 is a massive quartz-feldspar vein with minor dissem. py and PbS .
$857.25-857.35$ is bleached, pyritic fault gouge, fabric at $65^{\circ}$ to $\mathrm{c} / \mathrm{a}$.
857.35-857.5 is yellow-gray-brown mottled, bleached pyritic altered gabbro.

At 857.5 m is greenish fault gouge $1-2 \mathrm{~cm}$ wide, at $75-80^{\circ}$ to $\mathrm{c} / \mathrm{a}$.
Sample $\quad 856.9-857.5 \quad 0.6 \mathrm{~m}$
857.5-885.7 Massive gabbro, darker green, coarse grained. Numerous thin Qv at $75-80^{\circ}$ to $\mathrm{c} / \mathrm{a}$, commonly associated with pyritic alteration.
10 cm of med. green (chloritic?) Fault gouge at $880.9 \mathrm{~m}, 75^{\circ}$ to $\mathrm{c} / \mathrm{a}$.
At 883.2 m a 10 cm zone of quartz veining, silicification, bleaching and pyrite, foliated at $60^{\circ}$ to $\mathrm{c} / \mathrm{a}$.
885.7-890.6 ALTERATION ZONE/QUARTZ VEINING/ FAULT ZONE
885.7-886.8 Med. gray, mottled, foliated weakly at $30^{\circ}$ to c/a. Quite massive and intensely altered - no gabbro character at all. Minor dissem. py.
886.8-887.1 Fault zone. Med. gray, slightly greenish, siliceous fault gouge, fabric at $\sim 60^{\circ}$ to c/a. Irregular small QV and quartz pods. 7 cm at 887.1 is very dark green, almost black with very fine-grained pyrite. May be graphitic, but not obviously .
887.1-887.4 Quartz vein massive to ribboned with very fine-grained dark green to black pyritic material, at $\sim 70^{\circ}$ to $\mathrm{c} / \mathrm{a}$. Minor dissem. py and PbS .
887.4-887.8 Quartz vein and sheared, altered material consisting of green to yellow mica and possibly epidote. Some of the quartz is vuggy. Fine dissem. py is common. Minor dissem. PbS .
887.8-889.2 Bleached, altered zone somewhat similar to 885.7-886.8 interval. Scattered QV and pods, locally strongly foliated at $65-70^{\circ}$ to $\mathrm{c} / \mathrm{a}$. Fine dissem. py common.
889.2-890.35 Altered, bleached gabbro, quartz veins, fault gouge. Med. gray green, mottled and foliated at 35 $65^{\circ}$ to $\mathrm{c} / \mathrm{a}$. Scattered QV, up to 30 cm thick with abundant dissem. fine grained py in altered gabbro. Narrow fault gouge zones at 889.3, 889.4 and 889.8.
890.35-890.6 Bleached, altered gabbro. Mottled gray-green-brown. Dissem. py.

Sampling: $\quad 887.4-887.8 \quad 0.4 \mathrm{~m}$
890.6-970.9 More massive gabbro. Med. green, locally darker green. Med. and coarse grained, locally more finegrained.
A few QV are scattered through the interval, typically at $60-80^{\circ}$ to $\mathrm{c} / \mathrm{a}$, commonly with narrow pyritic bleached alteration zones.
895.5-895.9 is a strongly folicated zone - possibly an older fault, dark green with abundant fine dissem. py and numerous lensey, irregular QV .

Foliation is typically at $60-80^{\circ}$ to $\mathrm{c} / \mathrm{a}$.
At $949.15 \sim 10 \mathrm{~cm}$ of broken quartz veining is central to a 35 cm zone of bleached alteration with dissem. py.

## 970.9-974.1 ALTERED ZONE, QUARTZ VEINS

Pale gray-green-amphiboles are bleached, quite massive. Numerous quartz veins cut the interval, usually with fine dissem. py. A few have light brown tourmaline needles. One QV at 973.6 has course py, po and minor accessory Cpy. QV are in generally broken core but at $30-80^{\circ}$ to $\mathrm{c} / \mathrm{a}$.
974.7-1049.0 Fairly massive gabbro. Med-darker green and gray-green. Med. grained, locally more coarse-grained, fine-grained and darker gray-green below 1040 m .
Very few thin QV are present, some with narrow, bleached pyritic alteration zones.
108.9-109.45 is a fault zone, core is foliated at $45^{\circ}$ to c/a with irregular to foliation-parallel quartz veins. 1020.1-1020.55 is a pyritic-altered zone with 15 cm of QV at $70^{\circ}$ to $\mathrm{c} / \mathrm{a}$.
1037.3-1038 is a bleached pyritic alteration zone with scattered thin QV.

Contact at 1049.0 m is at $75^{\circ}$ to $\mathrm{c} / \mathrm{a}$, parallel to underlying beds.
1049.0-1067.7 SILT/ARGILLITE

Med-darker gray, brown-gray and blue-gray. Thin and med. bedded with a few thicker beds. Mainly siltstone and argillaceous siltstone with minor 'thicker bedded' quartzite.
Bedding typically at $\sim 75^{\circ}$ to $\mathrm{c} / \mathrm{a}$. Biotite alteration masks distinctiveness of bedding planes.
Minor po occurs, both 'finely dissem. and locally as coarse blebs with accessory Cpy.
Thin ( $6-7 \mathrm{~mm}$ ) bedding-parallel QV at 1063.2 and 1064.9 m contain minor chlorite and/or po. Core is relatively hard and appears pervasively silicified.

## 1067.7-1068.8 LAMPROPHYRE

Both contacts sharp, at 80 and $85^{\circ}$ to c/a; a sill. Dark green, quite massive with vague patches and thin streaks of biotite sub-parallel to $\mathrm{c} / \mathrm{a}$.
Relatively hard; apparently silicified.
1068.8-1096.4 SS/SILT/ARGILLITE

Mainly siltstone and quartzite with minor thin bedded argillite.
Med-dark blue-gray, locally bleached to a lighter tan-gray color. Mainly med. and thin bedded. A few quartzites
appear thick bedded but have prominant internal laminations. Bedding tends to be fairly planar but wavy, discontinuous, lensey bedding is not uncommon. Bedding is typically at $70-80^{\circ}$ to $\mathrm{c} / \mathrm{a}$.
A few thin ( $3 \mathrm{~mm}-3 \mathrm{~cm}$ wide) bedding-parallel QV are present, commonly with minor pyrite, locally with PbS and/or $/ \mathrm{ZnS}$.
$1085.7-1087 \mathrm{~m}$ is mostly tan-gray bleached (generally in bedding-parallel zones) with a number of (pyritic) QV, mostly bedding-parallel but 2 cross-cut core at $\sim 35^{\circ}$ to c/a. Local py and chlorite alteration is associated with the QV.

Acid test at 1084 m , measured angle $78^{\circ}$.

## Drill Hole Record

| Property: | Bingo |
| :--- | :--- |
| District: | Fort Steele |
| Hole No. | B-97-1 |
| Length of Hole: | 132.9 metres |
| Commenced: | October 7, 1997 |
| Completed: | October 9, 1997 |
| General Location | North Moyie River |
| Co-ordinates: | $566,595 m$ E, 5,468,824m N |
| Elevation: | $-80^{\circ}$ |
| Inclination: | 045 |
| Azimuth: | None |
| Dip Test Results: | NQ |
| Core Size: | Peter Klewchuk |
| Logged By: | Test for strataform PbZn mineralization |
| Objective: | Cranbrook Field Office |
| Location of Core: | Nanger Diamond Drilling, Ltd. |
| Drilled By: | Type of Drill: |


| Metres | Description Page 1 of 5 |
| :---: | :---: |
| 0-7.32 | Casing, no core. |
| 7.32-7.70 | QUARTZITE <br> Med. blue gray, thin and thick bedded. Mainly one fairly massive bed plus $3-4$ thin beds at 7.70 m . Bottom 10 cm whitish and albitized with dissem. biotite. <br> Bedding at $80^{\circ}$ to $\mathrm{c} / \mathrm{a}$. |
| 7.70-8.70 | QUARTZ VEIN <br> Both contacts at $15-20^{\circ}$ to $\mathrm{c} /$ a. Massive, mottled light gray quartz with large limonite coated vugs. Ragged patches of veins of py occur locally. |
| 8.70-16.1 | QUARTZITE <br> Light gray-green to med. blue-gray. Mainly thick bedded with a few med. thick beds. Texture is mottled locally by alteration. Dark (biotite) altered concretions are present. Some with a light gray albitic rim. Bedding at 70$80^{\circ}$ to c/a. |
| 16.1-36.5 | SILTSTONE, QUARTZITE, ARGILLITE <br> Mixed lithologies. Light gray to med. and darker blue-gray, thick to thin bedded. Bedding at $\sim 70^{\circ}$ to $\mathrm{c} / \mathrm{a}$. A few narrow albitic altered sections are present, with dissem. biotite and pink garnet. At 18.8 and $19.2,2$ QV. $4-6 \mathrm{~cm}$ wide, at $15-20^{\circ}$ to $\mathrm{c} / \mathrm{a}$. Vuggy with minor py and local patches of coarse biotite. Upper parts of H 1 marker occur from 25.7-25.8, 31.7-32.3, at $33.0 \mathrm{~m}, 33.95-34.25,34.8-34.9$. Minor ZnS occurs with py \& po in a lamination at 24.4 m . |
| 36.5-37.9 | QUARTZ VEIN ZONE, SULFIDES, SILTSTONE <br> $\sim 50 \%$ QV, $50 \%$ quartzite, siltstone. QV up to 20 cm wide, $20^{\circ}$ to $\mathrm{c} / \mathrm{a}$, wavy boundaries. Coarse, vuggy py is locally very abundant in quartz, along with chlorite. Bedding of included sediments is $60^{\circ}$ to $\mathrm{c} / \mathrm{a}$. |
| 37.9-57.8 | SILTSTONE, SILTY ARGILLITE, MINOR QUARTZITE <br> Light gray to med. \& darker gray and blue-gray. Typically thin and med. bedded with a few thick quartzites. Bedding at $70^{\circ}$ to $\mathrm{c} / \mathrm{a}$. <br> Core is locally broken over narrow sections but no obvious faulting. At $51.05 \mathrm{~m}, 5 \mathrm{~cm}$ of mud is probably |

related to drilling activity, not part of the core.
Weak to moderate alteration; patchy white to light gray albitization, up to 15 cm wide, usually $3-6 \mathrm{~cm}$ wide, with dissem. biotite, garnets \& po. Locally abundant cpy with po. Local pale greenish overprinting, presumably chloritic alteration.
Near 46.8 m , thin $1-2 \mathrm{~mm}$ wide QV with minor py cut core at $80^{\circ}$ to $\mathrm{c} / \mathrm{a}$, within quartzite.
Portions of H 1 marker in this interval: $38.78-38.85 \mathrm{~m}, 40.95-41.4 \mathrm{~m}, 46.2-46.6$ quite faintly developed, another zone from 51.15-51.35.
57.8-60.6 $\begin{aligned} & \text { QUARTZITE, MINOR SILTSTONE \& SILTY ARGILLITE } \\ & \text { Light gray-green to med. and locally darker blue-gray. Thick and very thick bedded with a few thin and med. }\end{aligned}$
60.6-64.5 SILTSTONE \& ARGILLITE, MINOR QUARTZITE

Light gray to med. and dark gray and blue-gray. Thin and med. bedded, some laminated zones. Bedding at 65$70^{\circ}$ to $\mathrm{c} / \mathrm{a}$. Local albitic alteration with biotite and garnets.
64.5-67.2 QUARTZITE

Light gray to med. blue-gray. Thick bedded with one narrow 12 cm section of thin beds at 64.9 m . Local sericitic alteration: network of bleached pale gray green color along bedding parallel and cross-cutting "healed fractures."

SILTSTONE, ARGILLITE \& QUARTZITE
Light gray through medium and darker blue-gray. Thick bedded to thin bedded and laminated. Bedding at $70^{\circ}$ to c/a. Within quartzitic beds, narrow albite altered zones are present with dissem. biotite, garnets \& chlorite. Biotite alteration is common with more intensely developed biotite in argillite laminae.

QUARTZITE
Light gray green to med. And darker blue-gray. Thick or very thick bedded, bedding at $65-70^{\circ}$ to $\mathrm{c} / \mathrm{a}$. Few darker biotitic concretions with weak albite rims.

SILTSTONE, QUARTZITE \& SILTY ARGILLITE
Light gray green in quartzites to med. blue gray siltstones to darker blue gray argillites. Beds range from thick bedded to laminated. Bedding at $\sim 70^{\circ}$ to $\mathrm{c} / \mathrm{a}$, locally to $65^{\circ}$. Bedding mostly planar, locally wavy, with narrow
$3-7 \mathrm{~cm}$ zones of lensey, disrupted bedding. Scattered albite-altered patches, with dissem. biotite, chlorite \& garnet \& minor po.

2 narrow bands of silty quartzite. Bedding at $70^{\circ}$ to $\mathrm{c} / \mathrm{a}$. Med. to darker gray. Thin bedded \& laminated. ?

SILTSTONE, QUARTZITE, ARGILLITE
Interval of mixed lithologies. Med. blue-gray, ranging to light gray-green \& darker blue-gray. Bed thickness ranges from very thick and thick quartzites to thin bedded and laminated argillite. Thicker quartzite sections occur at: 87.5 to $90.1 \mathrm{~m}, 93.7$ to $97.5,103.2$ to 105.9, 124.6 to 125.6 and $130.7-131.7$.
Zones (concretions?) Of patchy white to light gray albitic alteration are scattered through the quartzite sections, commonly with dissem, biotite and pink garnets $\pm$ chlorite and po. Bedding at $70^{\circ}$ to $\mathrm{c} / \mathrm{a}$, mostly planar bedded, locally wavy. Very minor thin sandy cross-bedded units, scattered zones of lensey disrupted bedding. Weakly developed marker segments occur at: 84.35-84.45 m, 90.6-90.7 m, 101.45-101.5, 117.85-118.3. Narrow sections of broken core are present; fracture surfaces are chloritic and pyritic, no obvious faulting.

End of Hole.
Property: Bingo
District: Fort Steele
Hole No. ..... B-97-02
Length of Hole: metres
Commenced: ..... October 13, 1997
Completed: October 14, 1997
General Location North Moyie River Drainage
Co-ordinates: 5,469,239 m North; 566,261 m East
Elevation:
Inclination: ..... $-90^{\circ}$
Azimuth: ..... $0^{\circ}$
Dip Test Results: None
Core Size: ..... NQ
Logged By: Peter Klewchuk
Objective: Test for stratiform lead/zinc mineralization
Location of Core: Cranbrook Field Office
Drilled By: Lone Ranger Drilling
Type of Drill: Longyear 44
WP7 File No: C: C CorelLEAHFILElbingo2.wpd
General Comments: DDH lost in overburden

Tricone to bedrock. Hole lost in overburden at 45.1 m depth.

## Drill Hole Record

Property: Bingo
District: Fort Steele
Hole No. ..... B-97-03
Length of Hole: 131.8 metres
Commenced: October 14, 1997
Completed: October 16, 1997
General Location North Moyie River Drainage
Co-ordinates:
Elevation:
Inclination: ..... $-90^{\circ}$
Azimuth ..... $0^{\circ}$
Dip Test Results: None
Core Size: ..... NQ
Logged By: Peter Klewchuk
Objective: Test for stratiform lead/zinc mineralization
Location of Core: Cranbrook Field Office
Drilled By: Lone Ranger Drilling
Type of Drill: Longyear 44
WP7 File No: C: \CorelLEAHFILEไbingo3.wpd
General Comments: None

| 0-19.8 | Casing, No core. |
| :---: | :---: |
| 19.8-58.3 | SILTSTONE, QUARTZITE, ARGILLITE |
|  | Interval of mixed lithologies. Color varies from light tan-gray to med. \& darker blue-gray. Laminated to thick bedded. Narrow zones of lensey, disrupted bedding are common. Local soft sediment slumping deformation is evident. |
|  | At 35.1 m a laminated segment of core with bedding at 5 degrees to $\mathrm{c} / \mathrm{a}$ sits on a "normal" bedded zone with bedding at 85 degrees to $\mathrm{c} / \mathrm{a}$. Bedding throughout is at $\sim 80$ degrees to $\mathrm{c} / \mathrm{a}$. A number of isolated rip-up clasts are present. Most are elongate, lensey to oval and parallel to bedding. At 38.5 m a $2-3 \mathrm{~cm}$ long massive po and quartz clast is present. |
|  | Alteration is weak, mostly biotite, dissem. and concentrated on some laminations, minor limited albite freckling of local small patches of dissem. garnet. |
|  | At 33.5 m one concretionary patch of albite has dissem. biotite and a few garnets. |
|  | At 35.85 m near massive po and biotite is irregularly developed in an argillite patch. |
|  | At $39.9 \mathrm{a} 2-3 \mathrm{~mm}$ po vein cuts core at 40 degrees to c/a. |
|  | Core is variably broken below 41.3 m with a few narrow crush zones, healed silicified weak breccia, chloritic fractures with local slickensides, but no obvious fault zone. |
|  | 2 MARKER segments, 8 cm long at 20.25 m and 7 cm long at 31.85 m . |
|  | At 29.4 ma 1.5 cm Qv at $\sim 5$ degrees to $\mathrm{c} / \mathrm{a}$ has garnet, biotite and minor chlorite on margins. |
| 58.3-58.4 | QUARTZ VEIN, SULFIDES |
|  | Mottled white to light gray quartz within a sheared zone at 30 degrees to c/a. |
|  | Dissem. Pbs and py are common in the quartz. |
| 58.4-63.2 | QUARTZITE |
|  | Light to med. gray. Mostly very thick bedded, quite massive, few bedding planes at $\sim 80$ degrees to $\mathrm{c} / \mathrm{a}$. |
| 63.2-89.6 | SILTSTONE, QUARTZITE, ARGILLITE |
|  | Mixed lithologies. Similar to interval above 58.3 m . |
|  | Quartzite is more abundant here, comprising est. $40 \%$. Narrow zones of broken core, local healed fractures at |


|  | $\sim 5$ degrees to $\mathrm{c} / \mathrm{a}$. Narrow 1 cm wide quartz vein $/$ shear zone at 75.2 m , at $5-10$ degrees to $\mathrm{c} / \mathrm{a}$. <br> At 68.5 m 15 cm of crenulated MARKER. <br> 85.1-87.9 H1 MARKER ( $85.55 \mathrm{~m}=$ DDH B97-1 at 32.1 m ) <br> ( $87.8 \mathrm{~m}=\mathrm{DDH}$ B97-1 at 35.6 m ) <br> At 87.8 m elongate, bedding-parallel clots of pyrite with very minor ZnS occur within the marker. Bedding is at $80-85$ degrees to $\mathrm{c} / \mathrm{a}$. |
| :---: | :---: |
| 89.6-93.6 | QUARTZITE <br> Light to med. blue-gray. Thick and very thick bedded. Quite massive. Bedding at $80-85$ degrees to $\mathrm{c} / \mathrm{a}$. |
| 93.6-104.1 | SILTSTONE, QUARTZITE, ARGILLITE <br> Mixed lithologies. Similar to previous intervals of this character. Narrow zones of disrupted lensey bedding present. Isolated albite altered patches with dissem. biotite and pink garnets. <br> 2 MARKER Bands: 98.2 to 98.55 m \& 103.4-103.6 m. <br> Bedding at 80-85 degrees to c/a. |
| 104.1-107.2 | QUARTZITE, MINOR SILTSTONE <br> Med. gray, mainly thick bedded with a few med. thick siltstones. Minor albite alteration with dissem. biotite, pink garnets and chlorite. Bedding at 80-85 degrees to c/a. |
| 107.2-115.3 | SILTSTONE, QUARTZITE, ARGILLITE <br> Mixed lithologies. Light, med. and dark gray, laminated to thick bedded. Narrow zones of lensey, disrupted bedding are common in laminated/thin bedded argillite sections. A few patches of light gray albite alteration occur in quartzites, with dissem. biotite and pink garnets. <br> Bedding at 80-85 degrees to $\mathrm{c} / \mathrm{a}$. |
| 115.3-131.8 | QUARTZITE, MINOR SILTSTONE, ARGILLITE <br> Light to med. gray and blue-gray. Mainly thick and very thick bedded massive quartzites. Below 129.7 m , med. bedded siltstones and thin bedded argillites are mixed with quartzites. <br> Rare, minor albitic alteration present, with dissem. biotite and garnets. <br> Bedding at 80-85 degrees to $\mathrm{c} / \mathrm{a}$. <br> Narrow sections of broken core occur between 115.8 and 119.8. Fractures which tend to be at $\sim 20$ degrees to |

## cha are weakly chloritic.

## Appendix II

## SUMMARY REPORT

on a

# GRAVITY SURVEY 

conducted on the
LEW PROPERTY
Near Cranbrook, British Columbia

PROPERTY LOCATION

SURVEY PERIOD
WRITTEN FOR

WRITTEN BY

DATED
: W of Cranbrook, British Columbia
: UTM Zone 11 Easting: 563500-567000
: UTM Zone 11 Northing: 5467500-5469500
: June 27, 1997
: Sedex Mining Corporation 1000-675 West Hastings Street
Vancouver, British Columbia, V6C 1S4
: Tam Mitchell, AScT
QUADRA SURVEYS
2-8640 Blundell Road
Richmond, British Columbia, V6R 1K1
: September 3, 1997

## SUMMARY

A gravity survey was conducted in Lew Property in the Moyie area. The property hosts a geological terrain known to be prospective for sedex type deposits. The purpose of the work was to enhance the resolution of a previous survey and to define possible mineralized zones and geologic structures in the area.

The gravity survey was conducted with 4WD access on existing roads and walking traverse. Gravity measurements were carried out using a Scintrex gravity meter. The station locations were obtained with a real time Trimble double differential GPS survey system. Inclinometer readings were taken at every station to a distance of 170 meters for terrain corrections.

The gravity data were corrected for the various influences to yield partial Bouguer gravity anomaly values.

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Simple Bouguer Anomaly Plan Map
Figure 4 Scale 1:50,000.

## INTRODUCTION

At the request of Sedex Mining Corporation an infill gravity survey was conducted on the Lew Property in the Moyie area, 25 km Southwest of Cranbrook BC. This report describes the instrumentation, theory, field procedure, data reduction and results of the 1 day survey which was conducted June 27, 1997.

The survey was conducted by Tam Mitchell, AscT of Richmond, BC with the assistance of Jessie Campbell of Kimberley, BC. The crew was based at the Hastings Management field office at 3380 Wilks Road in Cranbrook. The exploration program was carried out under the field supervision of Dr. Robert Woodfill of Sedex Mining Corporation.

The main purpose of the survey was to enhance a survey conducted in the area in 1996 and to identify geologic structures in the area to locate possible zones of sedex type mineralization. Gravity surveying is a very effective tool in locating lead and zinc mineralization, particularly because of the high specific gravity of any sulphide mineralization especially that of lead.


| SEDEX MINING CORPORATION |  |
| :---: | :---: |
| LEW | ROJECT |
| CRANBROOK M.D., 8.C. |  |
| N.T.S. 82 F/8 GRASSY MOUNTAIN |  |
| DRAWN 8Y: TLM | DATE: AUGUST 1997 |
| SCALE 1:1,000,000 | FIGURE: 1 |

## LOCATION and ACCESS

The property is located 25 kilometers to the Southwest of Cranbrook approximately defined by UTM Zone 11; Easting: 563500 to 567000 and Northing: 5467500 to 5469500 . See figure 1.

Access to the property was on the Lumberton road located 10 kilometers South of Cranbrook.

## SURVEY PROCEDURE

All gravity readings were tied to the National Gravity Net by a gravity base station established in a 1996 gravity survey. The base is located at the Cranbrook field office at 3380 Wilks Road and is marked by a steel spike and identified by a wooden stake with an aluminum tag reading: "Gravity Base $\mathbf{- 1 0 1 " \text { ". Geographic coordinates for the station were }}$ derived by GPS measurements as $49^{\circ} 32^{\prime} 48.07384^{\prime \prime} \mathrm{N}$ and $115^{\circ} 48^{\prime} 44.86830^{\prime \prime} \mathrm{W}$ (see figure 2). The station has a National Gravity Net value of $\mathbf{9 8 0 6 8 8 . 1 3} \pm 0.02 \mathrm{mgal}$. Field ties were also made to station - 104 the GPS control station.

All Survey locations were referenced to GPS Control Station - 104 (see figure 3). The station was established in a 1996 survey and was found in good condition. The station is located 2 kilometers to the Northeast of the property under the powerline SW of pole 77/1. The station is further described as follows:

| Nad 83 Northing | $49^{\circ} 22^{\prime} 41.16172^{\prime \prime} \mathrm{N}$ |
| :--- | :--- |
| Nad 83 Easting | $116^{\circ} 03 \prime 14.6357 \mathbf{N}^{\prime \prime} \mathrm{W}$ |
| CVD28 Elevation | 13375.884 |
| Absolute Gravity | $980604.13 \pm 0.04$ mgal |

Tam Mitchell, AScT, of Richmond BC, with the assistance of Jessie Campbell of Kimberley BC acquired the field data. A total of 19 stations were acquired during the 1 day of the survey.

The gravity survey was conducted with 4WD on existing logging roads and by walking on uncut lines.

Inclinometer readings were taken on each gravity station with a Suunto inclinometer to provide inner zone terrain corrections in accordance with the Hammer Chart method. Zone B inclinometer readings were taken at $0,90,180$ and 270 at a distance of 9.3 meters from the station. Zones C and D were shot at $0,60,120,180,240$, and 300 degrees at distances of 35 and 112 meters respectively. Distances and angles were estimated. The terrain correction data was not used in the accompanying simple Bouguer anomaly map since no inner terrain correction data was used in the 1996 survey.

## INSTRUMENTATION

## GRAVITY

The gravity readings were taken with a Scintrex CG-3 gravity meter (serial no. 10345) manufactured in Concord Ontario. The instrument has a world wide calibration range of over $7,000 \mathrm{mgal}$ and a reading resolution of 0.005 mgal . This instrument features a sensor based on a fused quartz elastic system. The proof mass is balanced by a spring and a relatively small electrostatic restoring force. The position of the mass, which is sensed by a capacitative displacement transducer, is altered by a change in gravity. The inherent strength and elastic properties of the fused quartz together with stop limits around the proof mass permit the instrument to be operated without clamping. Instrument drift is considerably reduced by precise thermostatic control of the unit and software correction for residual effects. The instrument's tilt sensors are analog as well as electronic with a resolution of 1 arc second. Real time corrections for tilt errors can be automatically made for a range of $\pm 200$ arc seconds. The entire gravity sensing mechanism is enclosed in a vacuum chamber to provide isolation from variations in atmospheric pressure. This extremely stable operating environment allows the long term drift of the sensor to be accurately predicted, and real time software correction reduces it to less than $0.02 \mathrm{mGals} /$ day in theory. The unit can also automatically compensate for earth tides. The ETC is generated using the Longman formula (gravimetric factor 1.16).

## SURVEYING

Station locations were surveyed using the Trimble Site Surveyor 4400 system with a Pacific Crest radio link. The system used was capable of post-processing rapid static measurements with an accuracy of $\pm 5 \mathrm{~mm}+1 \mathrm{ppm}$ horizontal and $\pm 1 \mathrm{~cm}+1 \mathrm{ppm}$ vertical or real time data acquisition with an accuracy rating of $\pm 1 \mathrm{~cm}+2 \mathrm{ppm}$ horizontal and $\pm 2 \mathrm{~cm}+2 \mathrm{ppm}$ vertical.

The Site Surveyor 4400 is based on Trimble's fourth generation real-time survey technology. Incorporating the latest Trimble real-time GPS engine code and solution alogrithms, the system provides very fast on-the-fly (OTF) initializations with the industry's most reliable position results. With this technology, average initialization times are cut in half. With advanced satellite signal acquisition and tracking, the ability to survey near trees is enhanced and downtime due to loss of signal minimized.

## DATA REDUCTION and FORMULAE

The gravity data was processed by computer in the following manner:
go Observed Gravity- field observations corrected for earth tides and long term instrument drift were downloaded from electronic storage in the gravity meter and corrections made for instrument height and residual instrument drift. These values were then tied to the National Gravity Net.
$\mathrm{g}_{\mathrm{f}} \quad$ Free Air Effect- Correction for relative distances of observation points from the centre of mass(earth). This calculation moves all stations to a common elevation datum and corrects for relative distances in distance from the source mass. The elevation datum used was CGVD 28 mean sea level. The formulae used was:

$$
\mathrm{g}_{\mathrm{fa}}=-0.3086 \mathrm{mgal} / \mathrm{m}
$$

gbs Bouger Slab Effect - Correction for the relative differences in amounts of surface rock below gravity stations. This calculation requires that a mean density or rock type between the lowest and highest grid elevations be established. All stations are shifted to a common datum as in the free air effect except that the vertical change is through an assumed slab of the derived density. The elevation datum used was CGVD 28 mean sea level.

$$
\mathrm{g}_{\mathrm{bs}}=2 * \mathrm{PI}^{*} .00667^{*} \sigma \mathrm{mgal} / \mathrm{m}
$$

Where $\sigma=$ slab density (gm/cc)
gl Theoretical Gravity - Yields correction for change of observed gravity with change in latitude which is due primarily to the rotation of the earth and the difference in earth's radius between the poles and the equator.
$g_{\mathrm{t}}=\mathrm{g}_{\mathrm{e}}\left(1+\alpha \sin ^{2} \theta+\beta \sin ^{2} 2 \theta\right)$
Where $g_{e}=$ equatorial gravity $=978,031.85 \mathrm{mgal}$.
$\alpha=0.005278895$
$\beta=-0.000023462$
$\theta=$ Latitude
gt
Terrain Correction- corrections for variations caused by local terrain. The vertical component of the gravitational effect exerted by nearby hills, or not exerted by nearby valleys or gullies, will effect the net reading obtained on any one station. The overall effect on a given line profile or area will be a function of the station spacing relative to the frequency of terrain undulations. Areas were segmented using circular sectors in zones developed by Hammer (1939). Corrections were made for zones B, C, and D (covering an area from 2 to 170 meters from the station).
$\mathrm{g}_{\mathrm{t}}$ was calculated from the following expression:

$$
\mathrm{g}_{\mathrm{t}}=\Sigma \Phi \tau \sigma\left[\mathrm{r}_{\mathrm{o}}-\mathrm{r}_{\mathrm{i}}+\left(\mathrm{r}_{\mathrm{i}}^{2}+\mathrm{z}^{2}\right)^{1 / 2}-\left(\mathrm{r}_{0}^{2}+\mathrm{z}^{2}\right)^{1 / 1}\right]
$$

Where $\Phi=$ Sector angle $\left(B=90^{\circ}, C \& D=60^{\circ}\right)$
$\tau=$ gravitational constant $=0.00667$
$\sigma=$ average density (gm/cc)
$\mathrm{r}_{\mathrm{o}}=$ outer sector radius ( $B=16.6, C=53.3, \mathrm{D}=170$ )
$\mathrm{r}_{\mathrm{i}}=$ inner sector radius $(\mathrm{B}=2, \mathrm{C}=16.6, \mathrm{D}=53.3)$
$\mathrm{z}=$ elevation difference between sector and station.

Glan Free Air Anomaly: is derived from the following formulae:

$$
\mathrm{g}_{\text {faa }}=\mathrm{g}_{0}-\left(\mathrm{g}_{1}-0.3086^{*} \mathrm{E}\right)=\text { Free Air Anomaly }
$$

Where $g_{0}=$ observed gravity
$\mathrm{g}_{1}=$ theoretical gravity
$\mathrm{E}=\mathrm{CGVD} 28$ elevation
$\mathrm{g}_{\mathrm{ba}} \quad$ Bouguer Anomaly: was derived from the following formulae:
$\mathrm{g}_{\mathrm{ba}}=\mathrm{g}_{\mathrm{b}}+\mathrm{g}_{\mathrm{faa}}+\mathrm{g}_{\mathrm{t}}=$ Bouguer Gravity

Where $g_{b}=$ Bouguer gravity
$\mathrm{g}_{\text {faa }}=$ free air anomaly
$\mathrm{g}_{\mathrm{t}}=$ terrain corrections

## RESULTS \& INTERPRETATION

The data was reduced to Simple and partial Bouguer anomaly. Terrain corrections have been applied to the data listing to 170 meters. The terrain corrections were not used in the rendition of the simple Bouguer map that accompanies this report since the data it is presented with was previously collected and does not have inner zone terrain corrections. A density of $2.67 \mathrm{gm} / \mathrm{cc}$ was used throughout the survey. The simple Bouguer gravity anomaly values spanned a range of 5.16 milligals from a low of -142.19 mgal to a high of -137.03 mgal. The mean simple Bouguer gravity anomaly value was $-139.48 \pm 1.40$ mgal. The survey enhanced the resolution of the 1996 data in the area of interest.

## SURVEY PRECISION

## GRAVITY

The daily gravity loop tie was made to the base station -101 at the Cranbrook field office as follows:

$$
\begin{array}{rr}
\text { Date } & \text { Loop Tie in mgal } \\
\text { 27-June-97 } & 0.01
\end{array}
$$

Repeat gravity readings were conducted on one station from a 1996 survey. It should be noted that the location of the repeat station was somewhat indeterminate and in an area of high gradient which may have contributed to a rather poor tie as follows:
Station $\quad$ Repeat Accuracy - mgal
10801

## LOCATION

Only one GPS control point was used throughout the survey, therefore no network adjustment was performed and there is no closure or error analysis performed for the survey.

## REFERENCES

LaCoste \& Romberg Instruction Manual, Model G and D Gravity Meter, June 1989

Seigel, H.O.; A Guide to High Precision Land Gravimeter Surveys, August 1995

Telford, W. M., Geldart, L. P., Sheriff, R. E., Keys, D. A.; Applied Geophysics, 1982

Longman, I. M.; Journal of Geophysical Research, Volume 64, No. 12; Formulas for Computing the Tidal Accelerations Due to the Moon and Sun, December 1959

Hammer, 1939; (Terrain Correction Model)

## STATEMENT OF QUALIFICATIONS

I Thomas L. Mitchell, AScT, of the city of Richmond, Province of British Columbia, DO HEREBY CERTIFY THAT:

1. I am the owner of Quadra Surveys with office at 2-8640 Blundell Road, Richmond, British Columbia, V6R 1K1.
2. I am a graduate of BCIT, with a diploma in Surveying Technology (1977).
3. I am a geophysical surveyor, registered with the Association of Applied Science Technologists and Technicians of British Columbia.
4. I have practiced my profession in Africa, Canada, Japan and USA for 19 years.
5. This report is based on a gravity survey which I conducted.
6. I have no direct or indirect interest in the property nor do I expect to receive any.


Dated at Cranbrook, British Columbia, this $3^{\text {rd }}$ day of September, 1997.

## COST BREAKDOWN




# APPENDIX I 

Gravity \& GPS Base Stations


## APPENDIX II

Partial Bouguer Anomaly Gravity Data Listing
Real Time GPS Station Locations and Elevation Calculations
Observed Gravity Values - Electronic Notes from Gravity Meter
Observed Gravity Data Reduction and Calculations
Inner Zone Terrain Corrections
Field Notes

## SEDEX MINING CORPORATION

1997 Lew Property Gravity Infill Survey
Partial Bouguer Anomaly Gravity Data Listing
Surveyed by: Quadra Surveys. June 27, 1997
Operator: Tam Mitchell, AScT
Density 2.67

| Stn | NAD 83 <br> Northing | NAD 83 <br> Easting | NAD 83 <br> Latitude | NAD 83 <br> Longitude | CGVD28 <br> Elev |
| ---: | ---: | ---: | ---: | ---: | ---: |
| -104 | 5469919.01 | 568662.34 | 49.378100336 | -116.054065494 | 1375.88 |
| 501 | 5469139.09 | 566518.51 | 49.371323706 | -116.083726608 | 1397.36 |
| 10801 | 5469157.43 | 566020.87 | 49.371542733 | -116.090577489 | 1425.86 |
| 502 | 5469281.88 | 565423.72 | 49.372726450 | -116.098781533 | 1440.28 |
| 503 | 5469277.81 | 564792.12 | 49.372757333 | -116.107481389 | 1462.30 |
| 504 | 5469218.43 | 564138.27 | 49.372292444 | -116.116496642 | 1542.11 |
| 505 | 5468911.07 | 564597.30 | 49.369479608 | -116.110224267 | 1599.38 |
| 506 | 5468678.28 | 565143.38 | 49.367327781 | -116.102741533 | 1651.23 |
| 507 | 5468531.72 | 564853.61 | 49.366040469 | -116.106756022 | 1690.57 |
| 508 | 5468532.79 | 564437.45 | 49.366094317 | -116.112486989 | 1743.88 |
| 509 | 5468669.50 | 565008.22 | 49.367263192 | -116.104604342 | 1667.60 |
| 510 | 5468811.71 | 564876.35 | 49.368556333 | -116.106397214 | 1625.85 |
| 511 | 5469131.99 | 564588.73 | 49.371467436 | -116.110306389 | 1524.32 |
| 512 | 5469048.65 | 564876.87 | 49.370687267 | -116.106351442 | 1544.18 |
| 513 | 5468869.08 | 565222.19 | 49.369035331 | -116.101624889 | 1582.12 |
| 514 | 5468534.52 | 565809.46 | 49.365963258 | -116.093592239 | 1607.69 |
| 515 | 5468439.28 | 565798.85 | 49.365107789 | -116.093754050 | 1614.62 |
| 516 | 5468747.48 | 565356.81 | 49.367927250 | -116.099790861 | 1608.16 |
| 517 | 5467227.27 | 565493.42 | 49.354239950 | -116.098159483 | 1489.50 |
| 518 | 5467573.10 | 563823.95 | 49.357527419 | -116.121089725 | 1721.42 |


| Observed Gravity | Theoretical Gravity | Terrain to $\mathbf{1 7 0 m}$ | Free Air Anomaly | Bouguer Anomaly |
| :---: | :---: | :---: | :---: | :---: |
| 980604.16 | 981013.91 |  | 14.85 | -139.11 |
| 980597.97 | 981013.30 | 0.71 | 15.89 | -139.76 |
| 980592.57 | 981013.32 | 0.31 | 19.27 | -139.97 |
| 980588.94 | 981013.43 | 0.07 | 19.99 | -141.11 |
| 980583.58 | 981013.43 | 0.26 | 21.42 | -141.95 |
| 980568.25 | 981013.39 | 1.10 | 30.76 | -140.71 |
| 980559.01 | 981013.14 | 0.49 | 39.45 | -139.03 |
| 980549.65 | 981012.94 | 0.41 | 46.27 | -138.09 |
| 980541.98 | 981012.83 | 0.16 | 50.87 | -138.14 |
| 980530.32 | 981012.83 | 0.21 | 55.65 | -139.27 |
| 980546.22 | 981012.94 | 0.30 | 47.91 | -138.40 |
| 980554.22 | 981013.05 | 0.47 | 42.91 | -138.55 |
| 980572.03 | 981013.31 | 1.26 | 29.12 | -140.19 |
| 980569.24 | 981013.24 | 1.06 | 32.53 | -139.20 |
| 980563.04 | 981013.10 | 0.73 | 38.19 | -138.12 |
| 980557.97 | 981012.82 | 0.50 | 41.29 | -138.11 |
| 980556.29 | 981012.74 | 0.37 | 41.82 | -138.48 |
| 980558.29 | 981013.00 | 0.41 | 41.57 | -137.97 |
| 980581.74 | 981011.77 | 0.07 | 29.63 | -136.97 |
| 980535.85 | 981012.07 | 0.14 | 55.02 | -137.47 |

## SEDEX MINING CORPORATION

## 1997 Lew Property Gravity Infill Survey

Real Time Station Locations and Elevation Calculations
Instrumentation: Trimble RTK 4400 SSI GPS Survey System
Surveyed by: Quadra Surveys. June 27, 1997
Operator: Tam Mitchell, AScT

|  |  | Latitude |  |  | Longitude |  |  |  |  |  |  | Corrected |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Station | Northing | Easting |  |  | ss.sssss |  |  | ss.sss | Elev | GSD95W | Lat | Long | Elev |
| -104 | 5469919.01 | 568662.34 | 49 | 22 | 41.16121 | 116 | 3 | 14.63578 | 1375.88 | -13.56 | 49.38 | -116.05 | 1375.88 |
| 501 | 5469139.09 | 566518.51 | 49 | 22 | 16.76534 | 116 | 5 | 1.41579 | 1397.40 | -13.52 | 49.37 | -116.08 | 1397.36 |
| 10801 | 5469157.43 | 566020.87 | 49 | 22 | 17.55384 | 116 | 5 | 26.07896 | 1425.90 | -13.52 | 49.37 | -116.09 | 1425.86 |
| 502 | 5469281.88 | 565423.72 | 49 | 22 | 21.81522 | 116 | 5 | 55.61352 | 1440.33 | -13.51 | 49.37 | -116.10 | 1440.28 |
| 503 | 5469277.81 | 564792.12 | 49 | 22 | 21.92640 | 116 | 6 | 26.93300 | 1462.35 | -13.51 | 49.37 | -116.11 | 1462.30 |
| 504 | 5469218.43 | 564138.27 | 49 | 22 | 20.25280 | 116 | 6 | 59.38791 | 1542.17 | -13.50 | 49.37 | -116.12 | 1542.11 |
| 505 | 5468911.07 | 564597.30 | 49 | 22 | 10.12659 | 116 | 6 | 36.80736 | 1599.43 | -13.51 | 49.37 | -116.11 | 1599.38 |
| 506 | 5468678.28 | 565143.38 | 49 | 22 | 2.38001 | 116 | 6 | 9.86952 | 1651.28 | -13.51 | 49.37 | -116.10 | 1651.23 |
| 507 | 5468531.72 | 564853.61 | 49 | 21 | 57.74569 | 116 | 6 | 24.32168 | 1690.62 | -13.51 | 49.37 | -116.11 | 1690.57 |
| 508 | 5468532.79 | 564437.45 | 49 | 21 | 57.93954 | 116 | 6 | 44.95316 | 1743.93 | -13,51 | 49.37 | -116.11 | 1743.88 |
| 509 | 5468669.50 | 565008.22 | 49 | 22 | 2.14749 | 116 | 6 | 16.57563 | 1667.65 | -13.51 | 49.37 | -116.10 | 1667.60 |
| 510 | 5468811.71 | 564876.35 | 49 | 22 | 6.80280 | 116 | 6 | 23.02997 | 1625.90 | -13.51 | 49.37 | -116.11 | 1625.85 |
| 511 | 5469131.99 | 564588.73 | 49 | 22 | 17.28277 | 116 | 6 | 37.10300 | 1524.37 | -13.51 | 49.37 | -116.11 | 1524.32 |
| 512 | 5469048.65 | 564876.87 | 49 | 22 | 14.47416 | 116 | 6 | 22.86519 | 1544.23 | -13.51 | 49.37 | -116.11 | 1544.18 |
| 513 | 5468869.08 | 565222.19 | 49 | 22 | 8.52719 | 116 | - | 5.84960 | 1582.17 | -13.51 | 49.37 | -116.10 | 1582.12 |
| 514 | 5468534.52 | 565809.46 | 49 | 21 | 57.46773 | 116 | 5 | 36.93206 | 1607.73 | -13.52 | 49.37 | -116.09 | 1607.69 |
| 515 | 5468439.28 | 565798.85 | 49 | 21 | 54.38804 | 116 | 5 | 37.51458 | 1614.66 | -13.52 | 49.37 | -116.09 | 1614.62 |
| 516 | 5468747.48 | 565356.81 | 49 | 22 | 4.53810 | 116 | 5 | 59.24710 | 1608.21 | -13.51 | 49.37 | -116.10 | 1608.16 |
| 517 | 5467227.27 | 565493.42 | 49 | 21 | 15.26382 | 116 | 5 | 53.37414 | 1489.54 | -13.52 | 49.35 | -116.10 | 1489.50 |
| 518 | 5467573.10 | 563823.95 | 49 | 21 | 27.09871 | 116 | 7 | 15.92301 | 1721.47 | -13.51 | 49.36 | -116.12 | 1721.42 |

## SEDEX MINING CORPORATION



# SEdex Mining Corporation 

## 1997 Lew Property Gravity Infill Survey

Observed Gravity Values - Electronic Notes from Gravity Meter
Instrumentation; Scintrex CG3 Gravity Meter No. 10345
Surveyed by: Quadra Surveys. June 27, 1997


| Station Grav | v. SD. | Tilt $\times$ Till $y$ | Temp. | E.T.C. | Dur \# Rej | Time |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| -101 | 4196.837 | * 0.021 | 1 | 12 | -0.52 | 0.007 | 60 | 0 | 8:47:08 |
| -104 | 4112.855 | * 0.058 | -9 | -3 | -0.48 | -0.001 | 60 | 6 | 10:22:59 |
| 501 | 4106.635 | * 0.049 | -6 | 3 | -0.45 | -0.005 | 60 | 0 | 10:49:3 |
| 10801 | 4101.26 * | * 0.023 | -7 | 2 | -0.45 | -0.009 | 60 | 2 | 11:11:43 |
| 502 | 4097.627 | * 0.026 | -10 | -9 | -0.43 | -0.011 | 60 | 2 | 11:24:05 |
| 503 | 4092.275 | * 0.023 | -7 | 8 | -0.43 | -0.013 | 60 | 3 | 11:33:04 |
| 503 | 4092.265 | * 0.022 | -14 | 3 | -0.42 | -0.013 | 60 | 0 | 11:35:15 |
| 504 | 4076.935 | * 0.03 | -8 | 1 | -0.41 | -0.016 | 60 | 0 | 11:48:04 |
| 505 | 4067.699 * | * 0.049 | 4 | 9 | -0.49 | -0.018 | 60 | 0 | 12:00:14 |
| 505 | 4067.695 * | * 0.033 | 9 | 7 | -0.46 | -0.019 | 60 | 1 | 12:01:49 |
| 506 | 4058.36 * | * 0.047 | 28 | 6 | -0.45 | -0.02 | 60 | 1 | 12:07:56 |
| 506 | 4058.335 | * 0.016 | 8 | 8 | -0.44 | -0.02 | 60 | 13 | 12:09:38 |
| 507 | 4050.711. | *.... . 0.258 | 22 | -5 | -0.46 | -0.021 | 60. | 0 | 12:16:54 |
| 507 | 4050.696 * | * 0.047 | -14 | 1 | -0.45 | -0.021 | 60 | 0 | 12:18:21 |
| 507 | 4050.696 * | * 0.051 | -9 | 0 | -0.44 | -0.021 | 60 | 0 | 12:19:47 |
| 508 | 4039.014 * | * 0.025 | -12 | -4 | -0.49 | -0.022 | 60 | 0 | 12:26:20 |
| 508 | 4039.014 * | * 0.024 | -8 | -9 | -0.48 | -0.023 | 60 | 0 | 12:28:39 |
| 509 | 4054.911 * | * 0.021 | -2 | 3 | -0.45 | -0.024 | 60 | 1 | 12:37:14 |
| 509 | 4054.911 * | * 0.04 | -5 | 3 | -0.45 | -0.024 | 60 | 0 | 12:38:41 |
| 510 | 4062.923 * | * 0.02 | -14 | 2 | -0.43 | -0.025 | 60 | 2 | 12:46:26 |
| 510 | 4062.917 * | * 0.094 | -11 | -2 | -0.43 | -0.026 | 60 | 0 | 12:47:53 |
| 511 | 4080.786 * | * 0.026 | 8 | 13 | -0.38 | -0.029 | 60 | 0 | 13:17:00 |
| 511 | $4080.766^{*}$ | * 0.022 | 6 | 6 | -0.37 | -0.029 | 60 | 0 | 13:18:31 |
| 511 | 4080.759 * | * 0.03 | 12 | 17 | -0.35 | -0.029 | 60 | 0 | 13:20:14 |
| 512 | 4080.833 * | * 0 | 31 | 68 | -0.35 | -0.03 | 1 | 0 | 13:25:58 |
| 511 | 4080.733 * | * 0.024 | 5 | 3 | -0.37 | -0.03 | 60 | 0 | 13:26:29 |
| 512 | 4077.95 * | * 0.024 | -6 | -5 | -0.42 | -0.032 | 60 | 0 | 13:52:50 |
| 512 | 4077.941 * | * 0.021 | -17 | -10 | -0.4 | -0.032 | 60 | 0 | 13:54:08 |

## SEDEX MINING CORPORATION

## 1997 Lew Property Gravity Infill Survey

Observed Gravity Values - Electronic Notes from Gravity Meter
Instrumentation: Scintrex CG3 Gravity Meter No. 10345
Surveyed by: Quadra Surveys. June 27. 1997

| 513 | 4071.755* | 0.017 | -17 | 9 | -0.46 | -0.032 | 60 | 0 | 14:11:36 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 513 | 4071.75* | 0.014 | -23 | -6 | -0.42 | -0.033 | 60 | 0 | 14:14:26 |
| 514 | 4066.675 * | 0.169 | -10 | 15 | -0.45 | -0.033 | 60 | 1 | 14:33:11 |
| 514 | 4066.68* | 0.104 | 0 | 1 | -0.43 | -0.033 | 60 | 0 | 14:34:37 |
| 515 | 4065.012* | 0.022 | 0 | 11 | -0.41 | -0.032 | 60 | 1 | 14:45:17 |
| 515 | 4064.977 * | 0.036 | -15 | 1 | -0.38 | -0.032 | 60 | 9 | 14:51:13 |
| 515 | 4064.983* | 0.066 | -6 | 6 | -0.37 | -0.032 | 60 | 4 | 14:52:50 |
| 515 | 4064.974* | 0.025 | -25 | 5 | -0.39 | -0.032 | 60 | 0 | 14:58:22 |
| 516 | 4066.985* | 0.019 | -10 | 7 | -0.45 | -0.031 | 60 | 0 | 15:19:42 |
| 516 | 4066.983 * | 0.02 | -15 | 12 | -0.43 | -0.031 | 60 | 0 | 15:21:01 |
| 517 | 4090.431 * | 0.05 | -4 | -15 | -0.24 | -0.023 | 60 | 0 | 16:42:34 |
| 517 | 4090.429 * | 0.032 | -4 | 2 | -0.23 | -0.023 | 60 | 3 | 16:44:06 |
| 518 | 4077.853 * | 0.028 | 2 | 14 | -0.26 | -0.021 | 60 | 0 | 17:00:53 |
| 518 | 4077.852* | 0.027 | -13 | 10 | -0.25 | -0.021 | 60 | 0 | 17:02:16 |
| 518 | 4071.644* | 0.035 | 1 | 2 | -0.27 | -0.02 | 60 | 1 | 17:09:26 |
| 518 | 4071.636* | 0.028 | 5 | -2 | -0.27 | -0.02 | 60 | 2 | 17:10:44 |
| 518 | 4044.559 * | 0.038 | 3 | -4 | -0.29 | -0.018 | 60 | 0 | 17:28:09 |
| 518 | 4044.553 * | 0.049 | 1 | -1 | -0.28 | -0.018 | 60 | 0 | 17:29:37 |
| -104 | 4112.779 * | 0.015 | -2 | 8 | -0.21 | -0.015 | 60 | 4 | 18:05:22 |
| -104 | 4112.776 * | 0.027 | -6 | -11 | -0.21 | -0.015 | 60 | 4 | 18:06:44 |
| -101 | 4196.912 * | 0.027 | 155 | 122 | -0.19 | -0.013 | 60 | 0 | 19:03:13 |
| -101 | 4196.851 * | 0.023 | -5 | 7 | -0.2 | -0.013 | 60 | 4 | 19:04:53 |
| -101 | 4196.85 * | 0.01 | 0 | 7 | -0.2 | -0.013 | 60 | 7 | 19:06:58 |

## SEDEX MINING CORPORATION

## 1997 Lew Property Gravity Infill Survey

Observed Gravity Data Reduction and Calculations
Instrumentation: Scintrex CG3 Gravity Meter No. 10345
Surveyed by: Quadra Surveys, June 27. 1997
Operator: Tam Mitchell, AScT





# APPENDIX III 

Partial Bouguer Anomaly Plan Map



## LEGEND

1996 Simple Bouguer Anomaly Gravity
1997 Simple Bouguer Anomaly Gravity

SIMPLE BOUGUER ANOMALY GRAVITY


QuAdra survers

## ABITIBI MINING CORPORATION <br> LEW PROJECT <br> SIMPLE BOUGUER ANOMALY GRAVITY

| CRANBROOK M.D., B.C. |  |
| :---: | :---: |
| N.T.S. 82 F/8 | SY MOUNTAIN |
| DRAWN BY: TLM | DATE: AUGUST 1897 |
| SCALE 1:50,000 | FIGURE: 4 |

## Appendix III

| Tenure <br> Number | Claim Name | Owner <br> Number | Map <br> Number | Work Recorded To | Status | Mining <br> Division | Units |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 209795 | LEW 18 | $34663100 \%$ | 082F08E | $20070505$ | Good Standing 20070505 | 5 Fort Steele | 9 |
| 200800 | LEW 22 | 3663 100\% | 082F08E | $20070602$ | Good Standing 20070602 | 5 Fort Steele | 12 |
| 200891 | LEW 23 | $134603100 \%$ | 082F08E | $20070602$ | Good <br> Standing <br> 20070602 | 5 Fort Steele | 12 |
| 210975 | DAVID 1 | 18869 100\% | 082F08E | 19991029 | Good <br> Standing <br> 19991029 | 5 Fort Steele | 1 |
| 210976 | DAVID 2 | 118869 100\% | 082F08E | 19991029 | Good <br> Standing <br> 19991029 | 5 Fort Steele | 1 |
| 210077 | DAVID 3 | $188669100 \%$ | 082F08E | 19991029 | Good <br> Standing <br> 19991029 | 5 Fort Steele | 1 |
| 210978 | DAVID 4 | 118869 100\% | 082F08E | 19991029 | Good <br> Standing <br> 19991029 | 5 Fort Steele | 1 |
| 210979 | DAVID 5 | 118869 | 082F08E | $20001029$ | Good <br> Standing <br> 20001029 | 5 Fort Steele | 1 |
| 210880 | DAVID 6 | 18869 100\% | 082F08E | $20001029$ | Good <br> Standing <br> 20001029 | 5 Fort Steele | 1 |
| 21002 | DAVID 7 | 1408 $100 \%$ | 082F08E | 19991029 | Good Standing 19991029 | 5 Fort Steele | 1 |
| 211003 | DAVID 8 | 132\% 100\% | 082F08E | 19991029 | Good Standing 19991029 | 5 Fort Steele | 1 |
|  |  |  |  |  | Good |  |  |



| 33792 | MOYIE 8 | $134603100 \%$ | \% 082 F 08 E | $20010708$ | $\left\|\begin{array}{l} \text { Standing } \\ 20010708 \end{array}\right\|$ | 5 Fort Steele |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 337703 | MOYIE 9 | $134663100 \%$ | 082F08E | 20020709 | Good <br> Standing <br> 20020709 | 5 Fort Steele | 20 | 23 |
| 337704 | MOYIE 10 | $34603100 \%$ | \%82F08E | 20000709 | Good <br> Standing <br> 20000709 | 5 Fort Steele | 20 | 23 |
| 338134 | HOMESTAKE 7 | $18869100 \%$ | 682F08E | 19980713 | Good <br> Standing <br> 19980713 | 5 Fort Steele | 1 | $6 \epsilon$ |
| 338371 | MOYIE 13 | $139499 \quad 100 \%$ | ,082F08E | 20010720 | Good <br> Standing <br> 20010720 | 5 Fort Steele | 15 | 23 |
| 338372 | MOYIE 12 | 30499 100\% | 082 F 08 E | 20010719 | Good <br> Standing <br> 20010719 | 5 Fort Steele | 20 | 23 |
| 338377 | MOYIE 15 | $134663100 \%$ | 082F08E | $20010718$ | Good <br> Standing <br> 20010718 | 5 Fort Steele | 1 | 65 |
| 338378 | MOYIE 16 | $134663100 \%$ | 082F08E | 20010718 | Good <br> Standing <br> 20010718 | 5 Fort Steele | 1 | 65 |
| 338379 | MOYIE 17 | $130499 \quad 100 \%$ | 082F08E | $20050718$ | Good <br> Standing <br> 20050718 | 5 Fort Steele | 1 | 65 |
| 33830 | MOYIE 18 | $134603100 \%$ | 082F08E | 20010719 | Good <br> Standing <br> 20010719 | 5 Fort Steele | 1 | 65 |
| 338381 | MOYIE 19 | 134663 100\% | 082F08E | 20000719 | Good <br> Standing <br> 20000719 | 5 Fort Steele | 1 | 65 |
| 338608 | PAYDAY 1 | 31005 | 082F08E | 19980805 | Good <br> Standing <br> 19980805 | 12 Nelson | 20 | 21 |
| 38869 | PAYDAY 2 | $3275100 \%$ | 082F08E | 19980805 | Good <br> Standing <br> 19980805 | 12 Nelson | 1 | 66 |
| 398 | PAYDAY 3 | 320 100\% | 082F08E | 19980805 | Good <br> Standing <br> 19980805 | 12 Nelson | 1 | 66 |
|  |  |  |  |  | Good |  |  |  |


|  | 332640 | VELVET 9 | 12\%成1 $100 \%$ | \%082F08E | 2000111 | $4 \left\lvert\, \begin{aligned} & \text { Standing } \\ & 20001114 \end{aligned}\right.$ | $55 \text { Fort Steele }$ |  | 165 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\bigcirc$ | 332642 | VELVET 11 | $128711100 \%$ | 082F08E | 19991114 | 4Good <br> Standing <br> 19991114 | 5 Fort Steele |  | 165 |
|  | 334156 | THEA TWO | 123054 100\% | 082F08E | E20000114 | Good <br> 4 Standing 20000114 | 5 Fort Steele | 15 | 521 |
|  | 334922 | VELVET 13 | 128711 100\% | 082F08E | ER20000418 | Good Standing 20000418 | 5 Fort Steele |  | 65 |
|  | 334923 | VELVET 14 | $128711100 \%$ | 082F08E | 20000418 | Good Standing 20000418 | 5 Fort Steele |  | 65 |
|  | 334924 | VELVET 15 | $128711100 \%$ | 082F08E | 20000418 | Good Standing 20000418 | 5 Fort Steele | 1 | 65 |
|  | 334925 | VELVET 16 | 12871] 100\% | 082F08E | 20000418 | Good Standing 20000418 | 5 Fort Steele | 1 | 65 |
|  | 334926 | VELVET 17 | 128711 100\% | 082F08E | $20000420$ | Good <br> Standing <br> 20000420 | 5 Fort Steele | 1 | 65 |
| $\bigcirc$ | 335194 | VELVET 1 | $123054100 \%$ | 082F08E | 20000424 | Good <br> Standing <br> 20000424 | 5 Fort Steele | 1 | 66 |
|  | 335196 | VELVET 3 | $123054100 \%$ | 082F08E | $20000426$ | Good <br> Standing <br> 20000426 | 5 Fort Steele | 1 | 66 |
|  | 335223 | VELVET 6 | $23054100 \%$ | 082F08E | 20000426 | Good <br> Standing <br> 20000426 | 5 Fort Steele | 1 | $6 \epsilon$ |
|  | 335818 | CUBBY 1 | $120100100 \%$ | 082F08E | $20020518$ | Good <br> Standing <br> 20020518 | 5 Fort Steele | 1 | 60 |
|  | 336820 | CUBBY 3 | 2010 100\% | 082F08E | $20020518$ | Good Standing 20020518 | 5 Fort Steele | 1 | 62 |
|  | 35822 | CUBBY 5 | 206 100\% | 082F08E2 | $20020518$ | Good <br> Standing <br> 20020518 | 5 Fort Steele | 1 | 62 |
|  |  |  |  |  |  | Good |  |  |  |




Mineral Titles Search by Map

| 336470 | HARMONY 1 | $123054100 \%$ | 082 F 08 E | $20050601$ | $1\left\|\begin{array}{l} \text { Standing } \\ 20050601 \end{array}\right\|$ | 5 Fort Steele |  | 166 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 336471 | HARMONY 2 | $2305+100 \%$ | ,082F08E | $20020601$ | Good Standing 20020601 | 5 Fort Steele | 1 | $6 t$ |
| 336472 | HARMONY 3 | 123054 100\% | 082F08E | E20050601 | Good <br> Standing <br> 20050601 | 5 Fort Steele | 1 | 66 |
| 336473 | HARMONY 4 | 123054 100\% | 082F08E | 20020601 | Good Standing 20020601 | 5 Fort Steele | 1 | 66 |
| 32999 | SMC 2 | $23054100 \%$ | 082F08E | $20000729$ | Good <br> Standing <br> 20000729 | 5 Fort Steele | 20 | 21 |
| 329000 | SMC 1 | $123054100 \%$ | 082F08E | 20000728 | Good <br> Standing <br> 20000728 | 5 Fort Steele | 20 | 21 |
| 330703 | PHANTOM 1 | $20109100 \%$ | 082F08E | 20020913 | Good <br> Standing <br> 20020913 | 5 Fort Steele | 8 | 23 |
| 331405 | SMC 3 | $123054100 \%$ | 082F08E | $20021008$ | Good <br> Standing <br> 20021008 | 5 Fort Steele | 1 | 65 |
| 331406 | SMC 4 | $123054100 \%$ | 082F08E | $20011008$ | Good <br> Standing <br> 20011008 | 5 Fort Steele | 1 | 65 |
| 33.87 | SMC 5 | 53054 100\% | 082F08E | 20011008 | Good <br> Standing <br> 20011008 | 5 Fort Steele | 1 | 65 |
| 332480 | BINGO 2 | \%304 100\% | 082F08E | $20021115$ | Good <br> Standing <br> 20021115 | 5 Fort Steele | 1 | 65 |
| 332408 | BINGO 3 | 2054 $100 \%$ | 082F08E | $20021115$ | Good <br> Standing <br> 2002115 | 5 Fort Steele | 1 | 65 |
| 723? | BINGO 4 | 235+100\% | 082F08E2 | $20021115$ | Good <br> Standing <br> 20021115 | 5 Fort Steele | 1 | 65 |
| 0268 | VELVET 7 | $\therefore \quad 100 \%$ | 082F08E | $20001114$ | Good <br> Standing <br> 20001114 | 5 Fort Steele | 1 | 65 |
|  |  |  |  |  | Good |  |  |  |


| 559238 | RNG 8 | 13n63 100\% | 1082G05W | 20001221 | $1 \begin{aligned} & \text { Standing } \\ & 20001221 \end{aligned}$ | 5 Fort Steele |  | 6734 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 353239 | RNG 9 | $134603100 \%$ | 082G05W | 20001221 | Good Standing 20001221 | 5 Fort Steele |  | 6734 |
| 353240 | RNG 10 | $134603100 \%$ | 082G05W | 20001221 | Good <br> Standing <br> 20001221 | 5 Fort Steele | 1 | 6734 |
| 353241 | RNG 11 | $134663100 \%$ | 082G05W | 20001221 | Good <br> Standing <br> 20001221 | 5 Fort Steele | 1 | 6775 |
| 353246 | RNG 2 | 134663 100\% | 082G05W | $20000109$ | Good <br> Standing <br> 20000109 | 5 Fort Steele | 20 | 2027 |
| 353247 | RNG 12 | 134663 100\% | 082G05W | $20010107$ | Good <br> Standing <br> 20010107 | 5 Fort Steele | 1 | 677s |
| 353248 | RNG 13 | 34663 100\% | 082G05W | $20010107$ | Good Standing 20010107 | 5 Fort Steele | 1 | 6779 |
| 353240 | RNG 14 | $134663100 \%$ | 082G05W | $20010109$ | Good <br> Standing <br> 20010109 | 5 Fort Steele | 1 | 6775 |
| 353250 | RNG 15 | 134663 100\% | 082G05W2 | $20010109$ | Good <br> Standing <br> 20010109 | 5 Fort Steele | 1 | 6775 |
| 353251 | RNG 16 | $134663100 \%$ | 082G05W2 | 20010109 | Good <br> Standing <br> 20010109 | 5 Fort Steele | 1 | 6775 |
| 35335 | RNG 3 | 134663 100\% | 082G05W2 | $20010120$ | Good <br> Standing <br> 20010120 | 5 Fort Steele | 20 | $202{ }^{\circ}$ |
| 353393 | RNG 4 | 134663 100\% | 082G05W2 | 20000121 | Good <br> Standing <br> 20000121 | 5 Fort Steele | 20 | 202; |
| 35335 | RNG 5 | $34663100 \%$ | 082G05W2 | $20000124$ | Good <br> Standing <br> 20000124 | 5 Fort Steele | 20 | 2027 |
| 35355 | RNG 17 | 1806 100\% | 082G05W2 | $20020110$ | Good <br> Standing <br> 20020110 | 5 Fort Steele | 1 | 677! |
|  |  |  |  |  | Good |  |  |  |


| 155356 | RNG 18 | $13+60$ | 100\% | 082G05W | 20010114 | Standing 20010114 | 5 Fort Steele |  | 6775 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 353357 | RNG 19 | 134663 | 100\% | 082G05W | 20010114 | Good <br> Standing <br> 20010114 | 5 Fort Steele | 1 | 677s |
| 353358 | RNG 20 | 134603 | 100\% | 082G05W | 20010111 | Good Standing 20010111 | 5 Fort Steele | 1 | 677s |
| 353359 | RNG 21 | 134663 | 100\% | 082G05W | 20000120 | Good <br> Standing <br> 20000120 | 5 Fort Steele | 1 | 6775 |
| 353360 | RNG 22 | 134663 | 100\% | 082G05W | $\mathrm{v} 20000120$ | Good Standing 20000120 | 5 Fort Steele | 1 | 677s |
| 353361 | RNG 23 | 134653 | 100\% | 082G05W | $20000122$ | Good <br> Standing <br> 20000122 | 5 Fort Steele | 1 | 6775 |
| 353362 | RNG 24 | 134663 | 100\% | 082G05W | 20000122 | Good Standing 20000122 | 5 Fort Steele | 1 | 6775 |
| 35336 | RNG 25 | 134663 | 100\% | 082G05W | $20000122$ | Good <br> Standing <br> 20000122 | 5 Fort Steele | 1 | 6775 |
| 353664 | RNG 26 | 134663 | 100\% | 082G05W | $20000122$ | Good <br> Standing <br> 20000122 | 5 Fort Steele | 1 | 6775 |
| 353365 | RNG 27 | 34663 | 100\% | 082G05W | $20000122$ | Good <br> Standing <br> 20000122 | 5 Fort Steele | 1 | 6775 |
| 35336 | RNG 28 | 34663 | 100\% | 082G05W | $20010122$ | Good <br> Standing <br> 20010122 | 5 Fort Steele | 1 | 6779 |
| 353367 | RNG 29 | 34663 | 100\% | 082G05W | 20010122 | Good <br> Standing <br> 20010122 | 5 Fort Steele | 1 | 6775 |
| 333368 | RNG 30 | 346\% | 100\% | 082G05W | $20010123$ | Good <br> Standing <br> 20010123 | 5 Fort Steele | 1 | 6775 |
| 5886 | RNG 31 | 34663 | 100\% | 082G05W | 20010123 | Good <br> Standing <br> 20010123 | 5 Fort Steele | 1 | 677s |
|  |  |  |  |  |  | Good |  |  |  |



| 246324 | PURPLE 1 | $134603100 \%$ | 082G05W | $20010530$ | Good <br> Standing <br> 20010530$\|$ | 5 Fort Steele | 20 | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 340325 | ROBE 1 | $134663100 \%$ | 082G05W | 20000525 | Good <br> Standing <br> 20000525 | 5 Fort Steele | 1 | 6274 |
| 346326 | ROBE 2 | $34663100 \%$ | 082G05W | 20000525 | Good <br> Standing <br> 20000525 | 5 Fort Steele | 1 | 6274 |
| 346327 | ROBE 3 | $134663100 \%$ | 082G05W | 20000525 | Good <br> Standing <br> 20000525 | 5 Fort Steele | 1 | 6690 |
| 346328 | ROBE 4 | $324663100 \% 0$ | 082G05W | 20000525 | Good <br> Standing <br> 20000525 | 5 Fort Steele | 1 | 6690 |
| 446329 | ROBE 5 | $34663100 \%$ | 082G05W | 20000525 | Good <br> Standing <br> 20000525 | 5 Fort Steele | 1 | 6274 |
| 346330 | ROBE 6 | $134663100 \%$ | 082G05W | 20010525 | Good <br> Standing <br> 20010525 | 5 Fort Steele | 1 | 6274 |
| 553235 | RNG 1 | $134663100 \%$ | 082G05W | 20000108 | Good Standing 20000108 | 5 Fort Steele | 20 | 202\% |
| 333236 | RNG 6 | 13.660 | 082G05W | 20000106 | Good <br> Standing <br> 20000106 | 5 Fort Steele | 1 | 6734 |
| 53327 | RNG 7 | 24663 100\% | 082G05W | 20000106 | Good <br> Standing <br> 20000106 | 5 Fort Steele | 1 | 6734 |
|  | PP 1 | 2084 100\% | 082G05W | 19981126 | Good <br> Standing <br> 19981126 | 5 Fort Steele | 1 | 6714 |
| 104\% | PP 2 | -6\% 100\% | 082G05W | 19981126 | Good <br> Standing <br> 19981126 | 5 Fort Steele | 1 | 6714 |
|  |  |  |  |  | Good |  |  |  |




