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GEOPHYSICAL REPORT

ON THE WEAVER PROPERTY

FORT STEELE MINING DIVISION NTS 82 F/8E

BY

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GEOLOGICAL BRANCH ASSESSMENT REPORT

<u>22,879</u>

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SUMMARY

The Weaver property is located 25 kilometres southwest of Cranbrook, in southeastern British Columbia, and is centered on Weaver Creek, a historic placer gold tributaries of the Moyie River. (Figure 1)

This report covers the 1992 exploration program on the property. This program entailed extensive reconnaissance magnetic geophysical survey and localized gravity survey.

Magnetic geophysics indicated there was good correlation between the known structures, the high magnetic response and the significant amount of gold values.

The gravity survey results proved to be very encouraging. Several anomalies were detected around the old galena outcropping adit, suggesting significant strike extent.

The property is underlain by Proterozoic Aldridge and Creston Formation rocks which have been locally intruded by Precambrian gabbro and diorite sills and dykes as well as Cretaceous or early lamprophyric and felsic dykes.

The potential occurrence of a major subcropping intrusion is best illustrated by the magnitude of predominant northeast trending faults, the collection of aeromagnetic anomalies, the presence of syenite float found along the ridgeline and the concentration of anomalous gold from heavy mineral sampling in the surrounding drainages.

Previous programs on the Weaver property discovered what was to be the main zones of interest for many years, namely the MC2 Shear, the Red Zone, the Hill Vein, the Galena Vein and the Galena Adit.

The MC2 area proved to be the most promising as the trenching program discovered a broad zone of alteration, silicification and mineralization. Gold in the MC2 is concentrated within late quartz veins which parallel and cross-cut the shearing, with values up to 0.845 oz/ton across 40 cm.

Altered wallrock adjacent to quartz veins and within shear zones is locally anomalous in gold thus demonstrating a possibility for larger tonnage, lower grade lode gold deposits.

The presence of gold mineralization from rock samples combined with the distinct Northeast - oriented quartz shear zones on trend with the high gold values obtained from Ryder Creek drainage are significant indicators of a favourable economic environment. The particular grid area at the ridge top above the MC2 is located within the potential convergence of the two structures, the AC and MC faults, This inferred zone of convergence at depth is an important exploration target.

1.0 INTRODUCTION

1.1 Location and Access

The Weaver claims are located approximately 25 kilometres southwest of Cranbrook, B.C. and are centred on Weaver Creek, a major east flowing tributary of the Moyie River (Figures 2,3). The western portion of the claims straddle part of the Moyie River / Perry Creek divide with a small portion of the claims covering upper Galway Creek on the Perry Creek side.

Access is via highways from Cranbrook or Kimberley, with very good logging roads providing access to all the tributary drainages. Presently inactive logging roads that are still in fair condition provide good road access to the major showings that have been developed on the property. A newly constructed 4X4 access route in 1989 linked the east side of the claimblock - MC2 area to the west side of the claims - Galway Creek. (Figures 2,3)

1.2 Topography and Climate

The Weaver property is part of the Purcell Mountain Range. Elevation on the claim block ranges from 1460 to 2140 metres and topography varies from gentle and moderate wooded slopes to steep rocky slopes. The climate is moderate with temperatures ranging from $+35^{\circ}$ to -40° ; extreme temperatures are generally short-lived. The period of snow cover is from early November to about mid May. The property is forested with pine, fir, larch and balsam. Large areas within the claim block have been clear-cut logged within the past 20 years and these are now in various stages of regeneration.

1.3 Property and Ownership

The Weaver claims are privately owned by J.E. Kennelly of Cranbrook, B.C. with a 50% interest and cost-sharing responsibility by a Calgary group. The claim block consists of 112 units in 7 claims with the following details: (Figure 3)









CLAIM NAME	NO. OF UNITS	RECORD NO.	RECORD DATE	DATE DUE
Weaver l	20	2076	Feb.17,1984	1994
Weaver 2	20	1411	May 12,1981	1994
Weaver 3	12	1412	May 12,1981	1994
Weaver 4	12	1413	May 12,1981	1994
Weaver 5	8	1414	May 12,1981	1994
Weaver 7	20	1456	June 9,1981	1994
Weaver 8	20	1457	June 9,1981	1994

TABLE 1 - Claim Status

1.4 History

Mining was initiated in the East Kootenays in 1864 by the discovery of placer gold on the Wildhorse River, Moyie River, Perry Creek and Weaver Creek. Although there is no reliable record of the total gold recovered, it is mentioned that the Wildhorse alone produced over 20 million dollars in placer gold in early 1900's. Perry Creek followed as the scene of an intense gold rush, having been the most prolific placer gold producer in the East Kootenay Region. Prospectors of the past explored by driving adits, sinking shafts and digging numerous hand trenches. The Running Wolfe Mine on France Creek has over 1000 feet of adits. The Homestake boasts of a 560-ft tunnel and a 60-ft shaft.

Old records are scanty, but two bulk samples are on record: The Yellow Metal Group yielded .4 oz/ton Au from a one-ton sample and a 3-ton sample from the Homestake yielded .3 oz/ton Au. The Shakespeare group reported up to .75 oz/ton Au. The Excess, Rory, O'More, Evil Genius and Red Mountain claims all reported around .5 oz/ton Au. In 1973, a 1375-ton bulk sample from Quartz Hill ran .26 oz/ton gold and .2 oz/ton silver. Several of the veins carried gold and although no major deposit was discovered, several small shipments are reported.

Besides being a major placer gold camp in B.C., Cranbrook area heralded as having the largest lead and zinc producer in Canada, the Sullivan orebody. The Sullivan is one of the largest base metal deposits in the world, having produced more than 140 million tons of ore. This deposit is by far the most important economic in the region. Within the Cranbrook area, two districts included most of the important mines, the Moyie and the Kimberley districts; the former containing the St. Eugene, Society Girl and Aurora, the latter the Sullivan, North Star and Stemwinder Mines. Several other deposits of economic importance occurred throughout the region. Although the majority of these base metal mines are not in operation today, the largest, the Sullivan continues production with an estimated reserve of 25 million tons of ore. Several smaller companies are active in placer mining in all three drainages of the Moyie, Perry Creek and Wildhorse, while the largest operation, Queenstake, continues to show favourable workings in the Moyie drainage.

2.0 GEOLOGY

2.1 Regional geology

Mapping by Reesor (1981), Hoy and Diakow (1982) and Hoy (1984) has developed a good understanding of the geology and structure of the Cranbrook area of southeastern B.C. This area, which includes the Weaver claims, is part of the Purcell Anticlinorium, a geological sub-province which lies between the Kootenay Arc on the west and the Rocky Mountain Thrust and Fold Belt to the east.

The Purcell Supergroup, which occurs within the core of the anticlinorium, includes up to 11 kilometres of dominantly finegrained clastic and carbonate rocks.

The Weaver claims are underlain by parts of the two lowermost units of the Purcell Supergroup, namely the Aldridge and Creston Formations. Both formations are fine-grained clastic rocks; the Aldridge is comprised predominantly of a thick succession of impure quartzites and siltstones of turbidite affinity while the Creston formation is a shallower water sequence of cleaner quartzites but with considerable siltstone and argillite. The Aldridge Formation is cut by a series of gabbro to diorite composition sills and dykes; a few dykes extend into the Creston Formation. (Figure 4)

2.2 Structural Geology

The Purcell Mountains exhibit a pronounced North East trending structural grain, delineated by late transverse faults.

The two transverse fault zones, the St. Mary and Boulder Creek (Wildhorse) on the north and the Moyie and Dibble creek on the south, are hypothesized to coincide with a southwest trending Precambrian rift that continues beneath the Rocky Mountains into Alberta. Several deep reflecting horizons of anomalous magnetic and gravity trends show that the rift is continuous across Alberta and B.C., more specifically through the Kimberley lead-zinc field, and possibly the Coeur d'Alene mining district of Idaho. (Kanasewich -Precambrian Rift)

Purcell Mountains

Cenozoic

Quaternary

Pleistocene and Recent: Till,Sand and Gravel

Mesozoic

Cretaceous

Kg Quartz Monzonite, Granodiorite

- - - - - - - - -

Proterozoic

Helikian - Purcell Supergroup

PEs Sill: Gabbro or Diorite

- PEg Gateway Formation: Green and Mauve Siltstone, Argillite, Quartzite, Dolomite
- PEnc Nicol Creek Formation: Amygdaloidal and Vesicular Basalt

PEnci Volcaniclastic Siltstone and Sandstone

- PEvc Van Creek Formation: Green and Mauve Silstone, Argillite, Silty Quartzite
- PEk Kitchener Formation: Dolomite, Limestone
 - PEki Dolomitic Siltstone and Argillite
 - PEc Creston Formation: Green, Grey, and Mauve Siltstone and Quartzite
 - PEci Rusty Weathering Grey Silstone and Argillite, Quartzite
 - PEm Moyie Sills: Minor Dykes: Gabbro, Diorite
 - PEa Aldridge Formation: Quartzite, Quartz Wacke, Silstone, Argillite
 - PEa3 Upper Aldridge: Rusty Weathering Argillite and Silstone
 - PEa2 Middle Aldridge: Thin to thick Bedded Grey Quatzite, Grey Wacke: Silstone and Rusty Weathering Argillite
 - PEa1 Lower Aldridge: Rusty Weathering Silstone and Quartzite, Argillite

PEa1q : Grey Weathering Quartzite, Quartz Wacke

WEAVER CLAIMS			
Geology – Stratigraphic Section			
Author R.T. Banting Eng.	Date July/92		
Figure 4	·		



RIMBERLE U.S.A. GEOLOGY AFTER. HOY 19820; O 10 15 MILES 5 LEECH 1957, 1960. REESOR 1958, 1981. 15 20 25 KM 1O

Figure 5 Regional Geology - Cranbrook Area (after Hamilton et al 1983) There is evidence that synsedimentary faulting, perhaps near the northern edge of a transverse rift structure, locally controlled and modified the distribution of Purcell rocks in Lower and Middle Aldridge time. Clastic hosted lead zinc deposits such as the Sullivan, North Star, Stemwinder and Kootenay King deposits are also located at the northern edge of this transverse structure, suggesting a genetic link between mineralization and synsedimentary faulting.

A large granitic intrusion, the Bayonne Batholith occurs at the western extension of the St. Mary's fault. The batholith also coincides with northeast trending faults connecting to the White Creek Batholith, in St. Mary country. The St. Mary thrust fault zone, which converges with the Perry Creek fault at a granodiorite intrusive, is considered to be a prominent major shear in the complexly faulted terrain just north of Cranbrook and south of the Sullivan mine. Intrusive batholiths, such as the Hellroaring Creek and Grassy Mountain, straddle the St. Mary's fault. As H.Rice of the G.S.C. suggested, these occurrences are probably part of a larger unexposed granitic body beneath the entire Cranbrook area. (Figure 5)

2.3 Property Geology

The Weaver claims sit within an area of increased structural complexity which is more or less centered on the three prominent placer gold streams in the Cranbrook area, namely Perry Creek, Moyie and Wildhorse Rivers. A series of NNE to NE oriented shear zones and a series of east to northeast oriented E-W transverse create the block-faulted structurally complex area within which the placer gold occurs. The block faulted zone and the placer gold are directly related, as lode gold sources are believed structurally controlled.

The only major intrusives in the claim block are Precambrian gabbro and diorite sills and dikes. Minor occurrences of younger, Cretaceous or early Tertiary felsic intrusive activity have been recognized during trenching programs. Cretaceous lamprophyre dike float has also been viewed at a few localities.

Structure of the claim block consists predominantly of west-dipping beds which have been cut by a series of NE to NNE faults and shear zones. Available geologic mapping of the area is not detailed enough to establish the magnitude of movement along the structural breaks. One major fault juxtaposes Middle Creston rocks and Upper Middle Aldridge rocks resulting in a minimum vertical displacement of 1500 metres. Faults which occur entirely within the Middle Aldridge Formation could have displacement of similar attitude but careful detailed mapping and a knowledge of subtle Aldridge Formation marker stratigraphy are required to effectively resolve such displacement. The Weaver claims sit between the Cranbrook and Moyie transverse faults which may also be major controls of gold mineralization. No East-West oriented cross faults are known on the Weaver claims, but the prominent east-west oriented linear of Weaver Creek suggests it is structurally controlled. Significant gold values have been returned from the E-W transverse structures on the Weaver property as well as adjacent properties in the Moyie, Perry Creek and Wildhorse drainages. (Figures 7 & 8)

3.0 WEAVER EXPLORATION PROGRAM - 1992

The Weaver property was first staked by J. Kennelly of Cranbrook B.C. in 1981. A total of six exploration programs to date continued from 1983 to 1992. The objective of the exploration programs were to locate the source of the rich gold placer deposits in the area and to evaluate the structural possibility of testing the ground for extension of the Cominco Sullivan lead/zinc ore zone.

The 1992 exploration programs entailed magnetometer and gravity surveys.

3.1 Magnetometer Survey

In 1992, a magnetometer survey was conducted over parts of the Weaver claims.

The following is a dissertation offered by field geophysicist, Bob Galeski. "Between 9 June, 1992 and 27 June, 1992 a magnetometer survey was conducted over parts of the Weaver claims. For this work, Omni IV equipment (base station and mobile) was used. A three man field crew was led by operator, M. McCombe. Supervision and interpretation was performed by R.B. Galeski, Professional Geophysicist. During the period worked, approximately 15.4 kilometres of reconnaissance line was run on established trails at a station spacing of 15 meters. Additionally, 11.3 kilometres of detail work was completed at a station spacing of 8 meters or 4 meters.

Data are remarkably smooth and flat. Where significant magnetite occurs in the immediate subsurface, the magnetic anomalies found are sharp and high in amplitude. In most cases, where such anomalies occur, detail work with 8 meters or 4 meter spacing was instituted. The locations of reconnaissance lines and detail areas are shown on Figures 7 and 8. In addition, contour maps (scale: 1:600, contour interval 100 gammas) of certain detailed areas are included and described below:

Figure 7 - MC Switchback Grid area, SW part of Weaver #2. Contour interval on this map is 50 gammas. The feature outlined by the contours trends N26 - 42E, and it has about 400 gammas relief, being open to the northeast. The relatively low amplitude (400+/gammas) and the moderate slopes of this feature suggest that the magnetite - bearing dike causing it, is rather deeply buried under overburden. It may continue northeasterly and tie to a less-deeply buried dike (of 700 gamma relief) mapped on the MC road survey at station 357. Dip is Steep to the northwest.

Figure 9 - Galena Vein Area, NE corner of Weaver #2. Not enough detail has been done in this area to properly define the anomaly at the galena vein. A 500 gamma, sharp magnetic high was found at station 85 on the road line, coinciding with a trench previously dug there. Direction of lineations is probably about N30E. The feature is open to the southwest. Other, lesser, local magnetic highs are shown on the map. None has been investigated in detail.

Figure 10 - Red Zone Area, NE part of Weaver #2. The magnetic anomaly mapped here has about 1300 gammas of relief. It is lineal, trending N45E for a distance in excess of 100 meters. Dip is northwesterly. High point is near station 72.5 on the Red Zone road. Cause appears to be a magnetite bearing dike just below overburden.

Figure 11 - Prospector's Dream Area, NE corner of Weaver #1. This is the largest anomaly found in the entire area, being about 100 meters wide and 200 meters long. Maximum relief is over 2000 gammas. It is probably caused by a pair of N-S trending, magnetite bearing dikes dipping easterly. Tops of these dikes should be found just beneath overburden.

Figure 13 - MC Landing Area, NE part of Weaver #8. This feature is generally lineal in a N40E direction with magnetic relief of over 1000 gammas. Mapped length is 135 meters, although it probably extends both SW and NE of the area covered. Dip of this shallow causative magnetite - bearing dike is near vertical. A narrow parallel feature of 250-400 gamma relief exists about 40 meters to the southeast.

Farther southeast in the adit area, two lines indicate a N35E trending anomaly of 260-440 gamma relief. This is about 135 meters southeast of a galena vein exposed on the surface and prospected many years ago with a short adit. Note that the area around this vein is magnetically flat.

Figure 14 - Ryder Creek Landing Area. Work done here is on Weaver #8 on the high ridge dividing Ryder and Weaver Creek drainages. Low density of information does not allow for proper contouring of these data, so no detail map was constructed. However, it should be pointed out that a complex of close, spaced magnetic highs were found on lines 5S and 10S and these are certainly related. Highest value on line 10S. (550 gammas) at station 59 appears to tie to one on line 5S. (600 gammas) at station 14. In addition there are two closely spaced magnetic highs on the RCL line at station 33 (700

gammas) and station 36 (400 gammas). These are approximately 500 meters northwest of the Ryder Creek landing.

In general, the data obtained with the Omni system are very smooth. Long traverses are exceptionally magnetically "flat". Anomalies that do exist are mostly high amplitude, repeatable and sharp. A large area southeast part of Weaver #2 and essentially all of Weaver #3 and Weaver #4) is devoid of any significant magnetic features whatsoever. This is true even in the area of the goldbearing hill vein. In the later case, hematite staining is abundant in the area. Apparently, whatever magnetite may have intruded with the quartz and gold here has been completely oxidized. This may be true of all of the area south of Weaver Creek. Or, if there is magnetite present near Weaver Creek, it may be covered with thick overburden.

Another area of overburden thickness probably great enough to mask the magnetic presence of magnetite - bearing dikes is that of the "MC Road" in the upper reaches of Weaver Creek. Except at the southwest end of this road where the MC Landing anomaly exists, results were either deep-seated or non-existent."

3.2 Gravity Survey

The following is the synopsis of the Microgal Gravity Survey as delivered on November 25, 1992 by Excel Geophysics Inc. of High River, Alberta.

INTRODUCTION

On Thursday, September 17, 1992, Excel Geophysics Inc. conducted a high resolution microgal gravity survey over the suspected location of a shallow, narrow galena vein. The galena vein outcropped 20 meters to the west of the gravity survey, where it was less than 1 m wide. A short adit (about 8 meters long heading southeast) had been driven into this outcrop over a century ago. The galena vein dips at about 70° to the south. The purpose of this gravity survey was to check for the continuation of this vein to the east, to gain some measure of the mass of the galena present, and to search for any other nearby veins.

Two profiles, each about 50 m long and oriented from south to north, were laid out about 20 m and 40 m east of the galena vein outcrop. The profiles were about 18 m apart, and a short west to east line was run to connect the two profiles. The line locations are indicated on the station location map which is included with this survey.

A station spacing of about 2 m was used in the vicinity of the suspected galena vein. The spacing was increased to about 5 m for the north end of the profiles to cover as much territory as possible in a limited time. The 5 m spacing was too coarse to detail a near surface vein, but our plan was to define the regional field and to detect anomalies for future consideration.

The gravity survey consisted of a total of 39 stations located over three lines. The survey was started at 11:00 on Thursday 92-09-17, and it was completed by 17:00 the same day. The Excel personnel on the project were:

Brian Jones	elevation survey, party	chief
Mike McCombe	gravity meter operator	
Ted Sanders	horizontal survey, terra	in corrections

Jim and Pat Kenelly (clients) assisted with the survey.

The survey site consisted primarily of outcropping bedrock, with very little tree cover. The site sloped to the north at about 20%. At a local scale of a few meters, the site was rugged, but over dimensions of 100's of meters, the site could be considered a sloping plane.

We were able to drive to within a few hundred meters of the northwest corner of the survey site. We determined the location of the parked vehicles, using GPS, to be approximately 49° 24' 15" N, and 116° 05' 37" W, at an elevation of about 1900 m. The survey site is further referenced to the adit, which is a very prominent local feature.

SURVEY PROCEDURES AND ACCURACY

A. HORIZONTAL

The survey lines were laid out by survey chain and compass. The compass declination was set at 17° E., so that the survey lines would be oriented close to N-S and E-W. Two lines, 18 m apart and each about 50 m long, where oriented from south to north. The east line was labelled Line 0, and the west line was labelled Line 1. A short line, 18 m long running from west to east, was used to join the two long profiles. This line was labelled Line 2. Each station label along the lines was simply the distance of the station from the start of the line.

The exact station locations along the survey lines were selected to minimize the inner terrain corrections. The station locations were marked with a small paint spot and flag.

Station to station horizontal accuracy along each line is within a few cm. Across the entire survey, we estimate the relative accuracy of the station locations to be within a few meters. The main sources of horizontal error are errors in compass bearing, and our use of slope distance instead of horizontal distance. A relative bearing error of 2° over 50 m results in a location error of about 2 m. A 50 m distance over a 20% slope is in error by about 1 m.

Local reference for the horizontal survey is provided by the adit, which is indicated on the station location map. Our local base station, Line O, Station O, is marked by a paint spot and flag.

The effect of errors in the station locations on the final reduced Bouguer gravity values is about 2 μ gal across the entire survey, and much less than 1 μ gal for local anomalies spanning 10's of meters.

B. VERTICAL

The relative elevation for each gravity station was determined using a level and a rod. The elevation for the gravity station at Line O, Station O was arbitrarily set at 1000 cm. A few repeat elevation determinations lead us to estimate that the relative station to station accuracy along the lines to be about +/-2 cm. We estimate that the relative accuracy of the elevation survey across the entire survey to be better than +/-20 cm.

The effect of errors in the elevations of the stations on the Bouguer gravity values is about +/- 40 µgal across the entire survey. Over local anomalies spanning 10's of meters, the errors in the Bouguer gravity values, due to elevation errors, are about +/-4 µgal.

C. GRAVITY

The gravity survey was carried out with a Scintrex microgal gravity meter SN 101183. This gravity meter will reliably measure gravity to within +/-4 µgal. For comparison, a standard LaCoste Romberg model G gravity meter will reliably measure gravity to within about +/-25 µgal at best. Very stringent operating procedures must be employed when operating a Scintrex microgal gravity meter. For instance, the meter must not be left stationary and off level for more than about one minute, or large hysteresis errors will dominate the gravity readings. The height of the gravity meter above the ground was measured at each gravity reading. We used two minute observations for each reading.

The gravity meter functioned very well during this survey. This behavior may have been due to the fact that the meter was set on bedrock for most of the readings, and even when the meter was not on bedrock, the soil layer was very thin. As a result, the meter stayed very stable during the readings, with little vibration or level drift.

The drop of 10 µgal in meter reading and the related change in drift rate which occurred at the gravity base between 15:27 and 16:07 was due to the operator changing the battery. This effect is normal for a Scintrex Gravity meter. Battery changes are always performed at a base station in order that the operator can monitor the reading and drift offsets.

During the survey, we repeated two gravity stations, one at Line O, Station 28, and one at Line 1, Station 15. In both cases the repeat gravity readings agreed with the original readings to 1 µgal.

We estimate that the errors in the Bouguer gravity values, due to errors in the gravity readings, are much less than +/-4 µgal.

The gravity survey is relative to an arbitrary gravity base that we set up near Line O, Station O. The base is marked by a paint spot.

D. INNER TERRAIN CORRECTIONS

The survey site consisted primarily of outcropping bedrock, with very little tree cover. The site sloped to the north at about 20%. At a local scale of a few meters, the site was rugged, but over dimensions of 100's of meters, the site could be considered a sloping plane.

We were interested in very short wavelength gravity anomalies, so we focused our inner terrain correction efforts on the Hammer Chart A (2 m) and B (16.6 m) zones. (For conventional gravity surveys, the A zone is usually ignored, and zones B,C,D are determined .) We measured elevation differences for six segments in the A zone, and four segments in the B zone, around each gravity station. We did not carry the terrain corrections beyond the B Zone.

Considering topographic features between 20 m and 210 m, much of the survey site could be characterized as a sloping plane, and the outer zone terrain corrections changed smoothly across the survey site. The lack of terrain corrections beyond the B zone will introduce a smooth gravity gradient across the gravity map area that will be indistinguishable from the regional gravity gradient. The outer terrain effect and the regional gravity gradient were removed from the final Bouguer gravity values with simple straight line regional fields.

The inner terrain corrections were done very carefully. The six A zone elevation differences for each station were determined with a tape measure. The B zone elevation differences were estimated by eye. The final gravity value for the inner terrain was calculated using a computer program that models sloping top prisms.

Inner terrain corrections done by estimating elevation differences are rarely accurate to better than +/-25, based on past studies that we have conducted. We estimate that the errors in the Bouguer values due to errors in the terrain corrections will lie in the vicinity of 10 µgal for anomalies spanning 20 - 30 m.

DATA PROCESSING

The horizontal survey data were plotted on a base map from the survey notes.

The elevation survey data were reduced using standard survey procedures for level surveys.

The gravity data from the Scintrex gravity meter printouts are already corrected for tide and drift, and converted to µgal. We removed a small residual drift form the data and set the observed gravity values relative to the gravity base at 0.0.

We next processed the observed gravity data to Bouguer gravity with the following standard corrections: height of instrument correction, free air correction, Bouguer slab correction, latitude correction, and terrain correction. The Bouguer and terrain corrections were made using a density of 2.7. The latitude corrections were based on a local gravity gradient of 0.8026 µgal per meter north. The reference location for the latitude correction was the southern most gravity station, Line 0, Station 0, which was set at 0.0 north.

The station locations are indicated on the station location map which is included with this report. The data processing computer printouts for the elevation data, observed gravity data and Bouguer gravity data are also included with this report, along with profiles of the elevation and Bouguer gravity data.

RESIDUAL GRAVITY

The Bouguer gravity data are dominated by large, but almost planer regional gravity field. The regional gravity field was approximated by a series of interlocking straight line regionals fit by eye to the Bouguer gravity profiles.

The regional and residual fields are shown in profile and map form.

RBSULTS AND RECOMMENDATIONS

The gravity results from this survey are very encouraging. Several anomalies, which are likely due to thin galena veins, have been detected by this survey; the anomaly amplitudes, which exceed 60 microgal, are much greater than the noise level of the survey, which we estimate at about 10 microgal.

The anomalies that we have mapped with this survey would be difficult to map with a standard gravity meter. The signal to noise level for this microgal survey is at least 6:1. If a conventional gravity meter was used for the same survey, the signal to noise ratio would be about 2:1; quantitative interpretation would not be possible in this case.

We have included a calculated gravity profile with this report. The model used for this calculation was a sheet of galena, 1 ft thick, dipping at 70° for 30 ft. The top of the model vein was at a depth of 5 ft. The amplitude and wavelength of several of the observed residual anomalies closely resemble the calculated response. The existing is too limited for detailed data set nore Ω. interpretation.

Based on the observed anomalies, the data interval of 5 m is much too coarse, and entire anomalies could be missed. The data interval of 2 m will detect all anomalies, but the sample interval is still too coarse to detail the anomalies sufficiently to allow precise gravity modelling. Dip, depth , thickness and tonnage can only be approximated with the present data. For future surveys, a data interval of about 1.5 m would be adequate to detail any shallow anomalies that may have economic significance. However, we should note that the 5 m data interval does allow us to cover a larger area which is essential for the definition of the regional gravity field.

Due to the limited areal extent of this survey, the definition of the regional field is poor. Some warping and amplitude variations in the residual anomalies will occur when a more extensive gravity survey is available. The present residual anomalies can be used for a first estimation of the model parameters, but the limited extent of the regional field precludes the use of detailed modelling procedures. The residual gravity map suggests that the galena vein which was sampled by the adit continues to the east. A second possible vein or series of veins, occurs to the north, with the same trend; this vein was probably not sampled by the adit, and appears to be somewhat deeper and larger. This deeper vein does not appear to extend to the east, although this observation depends to some extent on the definition of the regional gravity field.

I suspect that the galena veins have significant strike extent. I suggest that the location of the veins first be identified by electrical surveys. Electrical surveys will give similar responses for both thin and thick galena veins. If the electrical surveys are followed by a gravity survey, the most massive portions of the veins can be identified. The most promising locations should then be drilled.

Gravity surveys and drilling programs work well together. The detailed drill results constrain the gravity interpretation, while the gravity models extend the drill results far from the hole. 3.3 Program Expenditures

Magnetometer Survey	 R.T.Banting Engineering Ltd. M. McCombe, Operator/Equipment B. Galeski, Geophysicist J.Kennelly, Labour Sub Total 	- \$ 2,204.20 - \$ 8,900.00 - \$ 3,250.00 - <u>\$ 3,600.00</u> \$17,954.20
Gravity Survey	- Excel Geophysics	- \$ 2,621.50
Report/Maps	- R.T. Banting Engineering Ltd.	- \$ 3,000.00

TOTAL - \$23,575.70

4.0 RECOMMENDATIONS

Continued exploration must be designed to provide for diamond drilling in order to maintain an ongoing evaluation and development program.

Located structures should be further investigated by geological mapping and trenching. This should be carried out with ground geophysics such as Induced Polarization and Magnetometer survey, soil and rock geochemistry and alteration geology. One such intersection is the Weaver Creek linear and MC2 Shear.

Trenching, along with rock geochemistry should be continued on the Ridge, where the MC2 Shear and the AC Shear converge. The large diorite sills that parallel the Ridge Zone extend in an east-west trend once over the ridge. This area infers that there could be considerable flexing of the stratigraphy around the sheared terminations.

With the added benefits of additional detail provided within the MC2 and Ridge zones, new targets could be established for an expanded diamond drilling program.

In consideration of the geophysical surveys, it is recommended that a diamond drill be utilized to probe several of the mapped magnetic anomalies. For this project the MC Landing anomaly and the Red zone anomaly are well developed and easily accessible.

The Prospectors Dream anomaly - the most outstanding of all so far found on the property - is worthy of drilling. Furthermore, although it needs more magnetometer work, the Galena Vein should be given a couple of holes while the drill is on the property.

The ill-conceived drilling program of a few years ago in this area did not penetrate the vein itself. In addition, the adit area of the discovery vein (galena) could be probed with a number of shallow holes.

Should such a drilling program establish a relationship between magnetite and the presence of gold in significant concentration - such as occurs on the David claims adjoining to the south - a more extensive magnetometer program should be undertaken on the property.

5.0 CONCLUSION

The exploration programs to date on the Weaver claims indicate that the property has excellent potential for discovery of a gold mineralized deposit.

Exploration on the property, by previous trenching and recent magnetic survey has defined a Northeast shear structure that extends a distance of four kilometres from Upper Ryder Creek, south of the claim boundary to the Galena Vein, in Weaver 1 claim.

Extensive trenching in the MC2 zone has revealed significant gold mineralization in a similar environment found on the adjacent claims to the south, where reserves of 97,000 tons at a grade between .23 and .43 oz/ton has been delineated by diamond drilling.

In summary, there is good correlation between the known structures, the high magnetic response and the significant amount of anomalous gold values to warrant further exploration, more specifically, on the MC2 Zone.

Based on the results obtained from the gravity survey, the definition of significant strike extent to the galena adit vein could prove to be a promising drill hole location. Although the information gathered from this area is relatively recent, the gravity survey combined with the; interpretation of the lithological (Mid Aldridge), stratigraphic section (Galena dating-Sullivan time), and structural definition (the edge of a Moyie intrusive), suggests a strong similarity to the `Vine' and `Fors' prospects. Both prospects are being tested extensively for the extension of the Cominco Sullivan lead/zinc ore zone.

6.0 STATEMENT OF QUALIFICATIONS - R. T. Banting

- I, ROBERT BANTING, certify that:
- I am a consulting mining engineer, of R. T. Banting Engineering Ltd., with offices at 201 - 14th Ave. N., suite 204, Cranbrook, BC.
- 2. I am a graduate of Michigan Technological University with a degree in Mining Engineering (B.Sc.) 1972.
- 3. I have practised my profession of engineering in British Columbia, Manitoba, Ontario and Quebec for a total of eighteen years. As an independent consultant, I have been engaged in exploration and engineering activities for six years.
- 4. I am a member in good standing of the Association of Professional Engineers of British Columbia.
- 5. This report is based on the exploration program conducted on the Weaver property during the summer of 1992.

Dated at Cranbrook, British Columbia, This 21st day of December, 1992.

Banting, Rober P.Eng.







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Detail Grid

RED ZONE-CONTOURS Scale 1:600 Detail Grid Grid - 92 MAG HIGH



ROAD TO PROSPECTORS DIREAM-GRAPH Socie 1:3150	
	- 58000



ROAD TO PROSPECTORS DREAM-CONTOURS Scale 1:600



MC LANDING

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MAGNETIC CONTOURS C.I. 100 gammas SCALE 1:600 24 Date : July / 92 Figure: 13 Designed by : B. Galeski Drawn by: R.A.D. CONSULTANT R.T. Banting Eng. Ltd.

