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Stewart Claim Group, Nelson M.D. Assessment Report

Title Page and Summary

Type of Report: Geological

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Signature M. A. Kaufman

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Property Name: Stewart Claim Group

B.C. Minfile Numbers: 204, 221, 229 and 311

Mining Division: Nelson

NTS: Nelson 82F/6W Salmo 82F/3W

Latitude: 49 degrees 17 minutes; Longitude: 117 degrees 17 minutes ✓
(Approx. centre of property) ✓

Names and Numbers of all mineral tenures in good standing (when work was done) that form the property:
Mineral Claims Stewart 1 (232635), Stewart 2 (232636), Stewart 3 (232637), Stewart 5 (232697), Stewart 6 (232698), Stewart 7 (232699), Stewart 8 (232700), Stewart 9 (232701), Stewart 10 (232702), and Stewart 12 (232704). Reverted Crown Grants Free Silver and Ruby (232633), Royal (232634), Houlton (232705), and Fairview (234612).

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Summary Geology:

The predominant lithologies found within the Stewart Claim Group are the Elise Volcanics and the Hall Formation which comprise the mid to upper Rossland volcanic sedimentary Group. The Rossland rocks have been invaded by the late Jurassic-Cretaceous Nelson intrusions dominantly of granitic to granodiorite composition and by later more felsic intrusions which might correlate with the Eocene Coryell.

The Elise volcanics are predominantly andesitic to more mafic "greenstones". Tuffaceous and fragmental sections are common in the Craigtown Creek area. In the Gold Hill area gray andesites(?), rhyolites and felsic volcanic breccias occur in bands(?) with Hall(?) sedimentary rocks. Previous mappers have considered these to be dikes. My mapping has shown some evidence suggesting that some or possibly all of these bands might be interbedded with the sediments.

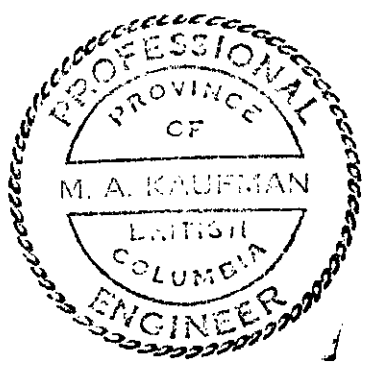
The Hall sediments where observed are predominantly argillite with in places more limey or sandy units. In the Gold Hill (southwest portion) of the claim area and further to the south and east the argillites are commonly carbonaceous, and often phyllitic.

A major structural feature, the N-S trending Hall Syncline traverses the property a little east of its centre. The true nature of the area's structure is difficult to determine because of extensive alluvial cover. In general, a broad band of Hall sediments occupying the centre of the claim group with older Elise volcanics to the east and west suggests a broad syncline, but the area's structure is probably far more complex than we can discern.

Regionally, there are several known porphyry Mo occurrences within a relatively small area both within and outside of the Stewart Claim Group. At the Hattie prospect, 3.5 km. west of the claim boundary, a low grade Mo/Cu resource has been delineated on a porphyry occurrence, while on the Stewart, a small ore grade resource has been drilled at the Stewart Mo porphyry-type prospect, and an Mo anomaly occurs in a porphyry setting at The West Moly Prospect. There are numerous mineral occurrences on the Stewart Property including old mining areas at Gold Hill and Arrow Tungsten. Three areas considered by this writer to have excellent untested exploration potential are Gold Hill-Rest Creek (Au), the Craigtown Creek gold anomaly (Au), and the Stewart Mo-Arrow Tungsten area (Mo, W, possible Au). These areas are

discussed in greater detail in this report. In addition, it is possible that other significant mineral occurrences remain to be found on this large claim group by thorough compilation of existing data followed by field exploration.

References To Previous Work: Assessment Reports 2301, 7074, 7722, 10072,11670, 13166, 19704, 22829 and 23902. GSC Maps 1145A and 1571A. EMPR Open File Map 1988-1, EMPR Geology of the Rossland Group In the Erie Lake Area in Geological Fieldwork 1990.



Expiry Date Dec. 31, 1991

M. A. Kaufman

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PART I

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Stewart Claims Assessment Report
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INTRODUCTION

The Stewart Claim Group, comprised of Stewart 1-3, 5-10 and 12 multi-unit claims, and Free Silver, Ruby, Royal, Houlton and Fairview reverted crown grant claims, occupies an area of approximately 45 sq. km. centered approximately 8.5 km. north of the village of Salmo. Principal access is via the Erie Creek-Second Relief and Stewart Creek forestry roads. The claim group is owned 50% each by Eric Denny of Nelson, B.C. and Jack Denny of Salmo. The Dennys have controlled the ground since the late 1970s.

Property Location Access

Since the late 1960s, a succession of companies have carried out work on different parts of the property. By far, the greatest efforts were undertaken by Shell Canada and B.P. Selco from the period 1978 through the early '80s. Much of this expenditure went to testing the Stewart Mo occurrence, but B.P. Selco also carried out a regional study which included aerial photography in conjunction with geological mapping, aerial imput EM and aerial magnetic surveying. The maps produced by this work still provide an excellent base for continuing exploration of the property. I first became involved with this area during the early '80s when I managed an exploration project for Ryan Exploration (RTZ), and during the late '80s when my company briefly held an option on the ground. The most recent work on the property was by Minnova in the late '80s and early '90s, and by Cameco from 1992 to 1993. Minnova identified an extensive soils Au geochem anomaly called the Craigtown Creek Au anomaly, and Cameco drilled four holes into one portion of this anomaly. During the past few years I have independently carried out geological studies and prospecting around the boundaries of the Stewart property including the Arlington Mine area. During 1995, on behalf of the Dennys, I have conducted a geological evaluation of three target areas on the Stewart Property, the Craigtown Creek Au anomaly, the Gold Hill area, and the Stewart Mo - Arrow Tungsten area. This work involved study and compilation of past data, reconnaissance geological mapping at the Craigtown Creek and Stewart Mo areas, and detailed geological mapping in the Gold Hill area. As well, my studies of the Arlington Mine located one km. south of Gold Hill are incorporated in the Gold Hill report.

History

Current Work

In addition to my work, Jack Denny made a study of the Cameco cores, and split a number of samples which were sent out for assay. Late in the field season Orvana Minerals Corp. of Vancouver became interested in the property and initiated negotiations for an option. Robert Fredericks, an Orvana geologist, initiated field reconnaissance accompanied by lithogeochemistry studies.

The first section of this assessment report contains reports, compilation and geological maps pertaining to my work. A second section includes Jack Denny's core studies including assay results, and a third section pertains to Rob Frederickson's lithogeochemical study on behalf of Orvana Minerals.

Expiry date Dec. 31, 1995

M. A. Kaufman

Geological Report
Gold Hill - Rest Creek - Trixie V Area

This large area, which occupies most of the Stewart 10 multi-unit claim, contains scattered workings around the Gold Hill Mine (Minfile# 204), and two adits at the Trixie V Mine (Minfile #221) . The Gold Hill - Rest Creek area is centered about 1.4 km. north of and across the valley of Rest Creek from the Arlington Mine, while the Trixie V workings are located about 1.1 km. NNE from the Gold Hill workings Because of its proximity to Gold Hill, the Arlington occurrence might have relevance to interpreting the geology at Gold Hill. Accordingly, before discussing Gold Hill, I will briefly describe my findings at the Arlington Mine.

Arlington Mine

The Arlington mine has recorded production of 1648.5 kg (53,000 oz.) of gold and 1804 kg. (58,000) oz. of silver from 26308 tonnes of ore (62.4 grams/tonne (1.82 opt) Au and + 68.6 grams/tonne (2 opt) Ag). However, when one considers later dump shipments and +6.8 grams/tonne rock used as backfill, the Arlington total resource probably would be in the order of 226,796 tonnes of 11.99 grams/tonne (.35 opt) Au and + 31 gram/tonne (1 opt) Ag. As the deposit is shallow, gently dipping and occurs near a hilltop, had it been mined in more recent times, it could have been a very lucrative open pit. My study of the deposit makes me believe that it is an irregular manto-like zone of semi-massive sulfides (mainly ZnS, PbS, Pyrite and gray copper) associated with networks of quartz-carbonate veining which generally follows the gentle dip of the host Hall Formation carbonaceous argillites. Some of the old reports say that the ore occurred on both sides of a felsic dike or sill. This can not be corroborated, but there are some felsic rocks in the dumps.

During 1985 I managed a program in which we drilled five vertical rotary holes through different parts of the property. I postulated that The Arlington deposit was controlled by a gently dipping fault, possibly a thrust, and that similar deposits might occur at depth. It is possible that the mineralized zone is controlled by a thrust, but we had no success in finding any additional mineralized zones of any substance under the productive one. The lower portions of four out of five of my holes, as well as previously drilled core holes, intersected substantial thicknesses (60 to 80 metres) of and bottomed in a light colored unit which has been

called quartzite-conglomerate. During recent reconnaissance mapping of the area I found large float boulders, probably close to a bedrock source, which might be similar to the "quartzite-conglomerate" found at depth in the holes, but the float appears to be coarse agglomerate or volcanic breccia. This finding led me to closely investigate the lower Arlington dumps. In one of them, I found rock which appears to be an extremely poorly sorted mess with fragments of variable composition and myriad shapes and sizes (some, 10 cm. across) in a fine grained, felsic groundmass which contains disseminated pyrite and occasional fine biotite phenocrysts. This would appear to be some sort of volcanic agglomerate rather than conglomerate. Possibly, this formation, which was found from 40 to +100 metres below the old workings level, might represent the contact between the Elise and Hall formations. Generally, this formation, where assayed, did not contain gold values, but in two holes there were some anomalous intercepts. If this lithologic interpretation is correct, possibly this formation might indicate proximity to a vent source.

Soils geochemical surveys previously conducted over the Arlington Mine area indicate a very pronounced Zn anomaly with only sporadic Au, and the Au might in places be enhanced by old "gopher hole" workings which brought Au bearing rock to surface.

Gold Hill - Rest Creek Area

Large portions of the Gold Hill-Rest Creek area are completely covered by glacial overburden. At Gold Hill there are outcrops of carbonaceous phyllites, minor interbedded carbonaceous lime, and gray banded sediments, some possibly tuffaceous, which are all thought to be part of the Lower Hall sedimentary section. Within these sediments are lesser amounts of rhyolite, andesite(?), and what appears to be explosive rhyolite breccia. These have been considered by past mappers to be dikes. My study shows that some or possibly all of these volcanic bands might be interbedded with the sediments rather than intrusive. The evidence for this interpretation is as follows (see accompanying 1:1000 and 1:5000 maps). At the long N-S trench west of the Gold Hill workings several contact areas between rhyolite and phyllite can be observed. In no case is there any evidence that the rhyolites cut the sediments; rather they appear to be conformable with them. Moreover, some of the rhyolites are banded, and this banding appears to be parallel to the bedding of the phyllites. Also, there is no evidence of any alteration or metamorphism in the phyllites, even when they are narrowly sandwiched between rhyolites.

About 170 metres N of the northernmost Gold Hill workings there is a sequence less than 50 metres wide of gray andesite(?) to the west with rhyolite east of it, and very well banded felsic tuff further east. Because of cover, no contact relationships can be observed, but all of the formations are probably north striking. Interestingly, the tuff appears to contain very narrow bands (< 1 cm.) of rhyolite which appears very similar to the thicker rhyolite unit outcropping a few metres to the west. If this interpretation is correct, we might be dealing with a transitional Elise-Hall contact zone with interbedded volcanic and sedimentary beds. The "explosive breccia" mentioned above consists of variable fragments, generally < 5 cm. in maximum dimension, in what appears to be a tuffaceous rhyolite matrix, which generally contains + 5% sulfides, mostly pyrite. As there are no contacts visible, it is not possible to prove whether these breccias are formational, structural, intrusive, or some combination thereof.

The old mines on Gold Hill reportedly shipped 19 tonnes from which 560 grams of gold and 1027 grams of silver were recovered. Reportedly "Lower Hall Fm. sediments were host to a number of closely spaced chalcopyrite-arsenopyrite bearing quartz veinlets which followed their gently dipping structure" (Minfile). There is no mention of volcanic rock or breccia, though these formations are seen in some of the dumps. North of the workings, old trenches expose mineralized quartz veins both in argillite and in volcanic rock.

Showings exposed in the north trending trench system to the west of the old productive zone and further west are found in fractured rhyolite interbedded(?) with phyllites and carbonaceous lime. The rhyolite is silicified and contains from a few to maybe 10% sulfides, chiefly pyrite with lesser arsenopyrite and galena. The trench exposes these showings for a distance of more than 100 metres north of its mouth, and similar rocks with lesser showings are exposed by trenches for about 250 metres further to the SE. Assays from samples of the mineralized rock taken from the main trench area range from slightly more than 31 grams/tonne (1.0 opt) Au for high graded grabs, to hundreds of ppb for larger samples. At the mouth of the main trench, the mineralized rhyolite band appears to be about 4 metres thick, and strikes NNW with a dip of about 45 degrees NE. It is in contact with narrow bands of phyllite both on the hanging and footwall, which are in turn in contact with other rhyolite bands (see cross section on 1:1000 map). Because of debris and overgrowth in the old trench, it is not possible to determine whether the trench showings occur in one mineralized

rhyolite band or in two or more. However, strikes taken in the north part of the trench indicate a swing from NW at the trench mouth to NNE at its north end, so it is possible that only one rhyolite unit is involved. There is no visble evidence in the trench area of mineralization or alteration in the sediments. However, it would be worthwhile to assay some of this rock, particularly the carbonaceous lime.

Extensive soils geochemical surveys have been carried out over the Gold Hill - Rest Creek area, first by Quintana Minerals during the late '60s, then later under my guidance by Ryan Exploration, and later again by Lacana. Quintana first discovered the extensive, strong Zn anomalies centered about 1 km. ENE of the Gold Hill showings. I have heard that some cat trenching was attempted, but bedrock was not reached. My work during 1985 relocated the Quintana anomaly, but we also assayed for gold, and extended the survey west to cover Gold Hill. Lacana, more or less, repeated the survey done by Ryan. Both the Ryan and Lacana surveys detected gold anomalies. Within the old Quintana Zn anomaly sporadic, weakly anomalous gold values were found, and in the Gold Hill area several irregular and some linear appearing gold anomalies are apparent (see accompanying Lacana geochem. maps). The east (Quintana) anomaly bears some resemblence to the soils geochem. results over the Arlington Mine area. The Zn and Au anomalies at Gold Hill are interesting in light of the known geology, as some of them trail away from known showings including the breccia area.

Trixie V Area

The geology between Gold Hill and the Trixie V mine is interpreted from scattered outcrops found on the ridge between them. A traverse up the trail to Trixie V failed to find any outcrop at all, and there is not much to be seen at the mine. It is probable that the same section seen at Gold Hill extends to this area (argillites with various volcanic dikes, sills or bands). The adits are badly sloughed so the geology shown on the accompanying 1:150 scale map is limited. I would guess that the little production from these workings was from a narrow quartz vein or veins. There is some interesting looking shattered volcanic rock around the portal which contains quartz veinlets and disseminated sulfide.

Area Potential

Despite the favorable geology and proximity to a significant

occurrence at the Arlington mine, no serious work has ever been done at Gold Hill - Rest Creek with the concept of gold exploration. I believe that this has more to do with industry turmoil over the the past decade than with the area's geology. Ryan left the area because of a shift of all exploration out of B.C., while Lacana shed numerous properties after successive mergers. Minnova geologists were interested in the area, but after the Metall merger its exploration essentially collapsed.

Before my recent geological work I considered the area to have potential for a bulk tonnage Au deposit possibly related to the numerous felsic "intrusions" in the area, and/or a possible deposit similar to that at the Arlington Mine. My recent findings indicate other possibilities as well.

If there is a vent complex in the area, what age might it be, and where might it be found? Possibly, it could have formed at the end of the main stage of Elise vulcanism, but there could have been continuing volcanic activity during and after early Hall sedimentation. Perhaps this might be the source for the Arlington mineralization. One can only guess where this hypothesized vent complex might be located, but one possibility might be the extensive covered area in the valley of Rest Creek between the Arlington Mine and Gold Hill. Beyond bulk tonnage, vein and Arlington type possibilities, perhaps then there might also be a chance for volcanogenic massive sulfide type deposits.

Recommended Exploration

Aside from a few lines of AEM and aerial mag done by Selco years ago which crossed portions of the area, no geophysical work has ever been done here. It would certainly be justified to carry out an E-W oriented EM survey over the whole Gold Hill - Rest Creek Area to determine whether any significant conductive bodies might exist. I.P. might also be useful, particularly at Gold Hill and in the valley between it and the Arlington Mine. Whether I.P. would be effective over the Quintana (East) Zn-Au soils anomaly is questionable. If a section similar to that found at the Arlington Mine underlies this area (thick carbonaceous sediments) it would cause an extensive lithologic anomaly. If geophysical exploration proves to be ineffective on this target, the best approach after relocating the anomaly would be to prospect with a backhoe and/or an air track percussion drill.

The only apparent drill target at this point is the mineralized

rhyolite found at the trench west of the old Gold Hill mines. It would justify a few steep angle holes drilled from east to west, but I would suggest waiting until other drill targets might become evident from geophysical work.

Appendix: Comments On Lithology and Structure

Lithology

The predominant Hall Formation lithology seen at the Arlington Mine is dark, carbonaceous argillite and phyllite. Numerous fine grained dikes and sills ranging from rhyolite to diorite in composition have been indicated in old core drill logs. I have noted lighter gray, well banded siltstone/grit in some of the lower (westernmost) dumps. At Gold Hill the Hall Formation seems to be mostly light gray phyllite with occasional narrow bands of carbonaceous lime. At the old Gold Hill dumps there is some well banded siltstone/grit similar to that seen in the lower Arlington dumps. In general the Hall sediments at Gold Hill appear to be more gray rather than black as at the Arlington, probably indicating less carbonaceous content.

The rhyolite breccia seen at Gold Hill contains smaller and more uniform sized fragments than what I call the agglomerate found in the lower Arlington dump. It is possible that the light color of the Gold Hill breccias is influenced by pyrite leaching. The rhyolites seen at Gold Hill are very fine grained, white and often porphyrytic with quartz eyes <.5 cm. across. They generally contain minor disseminated pyrite, and In some areas subtle bands < .5 cm. wide are found which appear to be compositional. I have not tried to trace out specific units to determine strike length, but previous Selco work indicates that some of the rhyolites can be followed for at least .5 km. on strike.

The "andesites" seen at Gold Hill are generally very fine grained, gray and sometimes porphyritic. They are unlike the "greenstones" that make up much of the thick Elise volcanic sections seen at the head of Burnt creek to the west, at Whiskey Creek to the south, or at Craigtown Creek to the north.

Structure

Because of the extensive overburden very little can be determined about the general structure. Having been underground at the Arlington Mine before the adits were closed off, I can attest

that the formations are almost flat dipping here, then dip moderately west in the westerly workings. At Gold Hill most of the bedding attitudes that I have been able to measure (in the long trench area) were northerly striking and predominantly dipping 45 degrees east to almost vertical. I can not verify the very gentle dips reported at the old Gold Hill workings to the east, but if these dips are true, there would be folding between the two areas. Whether the Arlington mineralized zone was controlled by a thrust can not be proven or disproven. There is no obvious evidence for such a structure at Gold Hill - Rest creek, but this does not preclude the possibility at depth or under overburden.

In B.C.EMPR "Geological Fieldwork 1990", Hoy and Andrew indicate that going from west to east in this region there is a broad syncline centering at Keystone Mountain where the axis of the N-S Hall syncline comes through. This interpretation is probably a good one, but the local structure is likely far more complex than what we can imagine from the few outcrop areas.

The principal purpose of the above described study was to evaluate exploration potential. My hypothesis for an environment conducive to volcanogenic type deposits is still conjectural. From the point of exploration, the same techniques that would be used to explore for veins, Arlington-type mantos, or bulk tonnage mineralization would also apply to Volcanogenic type deposits. From a more scientific point of view, a lot more can be done with geological mapping, particularly detail at Gold Hill and to the north where there is outcrop.

M. A. Kaufman

M. A. Kaufman

Oct. 12, 1995

Refer to: Gold Hill - Rest Creek 1:10,000, 1:5000 and 1:1000 geological maps, Trixie V 1:150 geological map, and Lacana 1:5000 geochem. maps.

Evaluation of Craigtown Creek Au Anomaly
Stewart Claim Group

This report discusses my evaluation of the Craigtown Creek Au anomaly based on study of available data and cores. Also, several days were spent in the field examining the few outcrop areas within and near the anomaly, and prospecting for additional rock exposures.

Geological Summary

The previously designated Craigtown Creek Au anomaly is comprised of two large areas where anomalous Au has been detected in soils. The anomalous area is situated a short distance (< 1km.) W and NW of the west flank of the West Moly porphyry showing. There is only a very minor amount of outcrop in the Craigtown Creek Au anomaly area. Based on these outcrops and four core holes drilled into one portion of the anomaly, it appears that the area is underlain by Elise volcanics, chiefly of intermediate to basic composition and commonly tuffaceous or fragmental. The volcanics have been invaded by small intrusive bodies of intermediate composition thought to be coevil, and by later felsic intrusions. Probably a larger pluton underlies the area.

A weighted average of all core samples assayed averages 290 ppb Au, but is possibly skewed by several better grade samples. In the area drilled, the rock appears altered and contains on average about 3 to +5% sulfides, mostly pyrrhotite with lesser pyrite and very minor chalcopyrite. Sulfides, both disseminated and along fractures, are ubiquitous in both volcanics and intrusives. The gold apparently occurs with these sulfides, but the better values do not consistently occur with the highest sulfide content. However, the highest grade found, 24.8 grams/tonne Au (.725 opt) over one metre, contained 15 centimetres of massive sulfide. The true nature of the alteration is not possible to define by hand specimen identification. The most dominant feature noted is an apparent fine, felsic flooding, particularly of the volcanics, which erodes crystals and fragments. The only outcrop found within the whole anomaly, which is located at 800S, 900W, is an altered, mineralized hybrid volcanic/intrusive rock much like what is seen in the cores.

Comments on Geochem. Surveys

Anomalous gold in soils and rock has been detected over an area roughly 3.1 km N-S by 1.4 km E-W. The gold anomalies are

not everywhere within this area, but have been detected in extensive zones particularly the "North" anomaly, the "South" anomaly, and an unnamed anomaly which occurs along the west boundary of the Stewart Claims with the adjacent Dog Claims north of the "South" anomaly. Weakly anomalous copper is found over most of the anomalous gold areas. It is strongest within the unnamed anomaly along the Stewart-Dog boundary. When one looks at the Minnova geochem. maps there are large gaps between survey areas, and extensive portions of the generally anomalous area with no obvious survey lines. It is not known whether these areas were ever tested.

From my experience, interpreting soils geochem. surveys in the Kootenays is a tricky business because of the common presence of thick, transported glacial alluvium, much of it clay-bearing. Drilling on the "North" anomaly indicates that it obviously reflects a bedrock source. In all likelyhood, the "South" and unnamed anomalies also reflect underlying or upslope bedrock anomalous gold sources. Though the "North" anomaly comes through glacial cover, the terrain is fairly steep, and the bedrock anomaly sufficiently widespread that gold grains have managed to move down slope. What concerns me here though are areas of gentler topography with thicker cover where gold grains might not be able move through the overburden, or where underlying gold anomalies might be buried by downslope movement of non-anamalous clays from above. Such an area might be the lower valley slopes of Craigtown Creek, particularly the "gap" between the "North" and "South" anomalies.

Comments On Geophysical Surveys

The area has been covered by a government aerial mag. survey, aerial mag. and Imput EM surveys by B.P. Selco, and I.P. and ground mag. surveys by Minnova. Both the government and the Selco surveys were carried out on widely spaced E-W lines, while the Minnova surveys were done on E-W lines spaced 200 metres apart with a few fill ins at 100 metres. I should caution that I am not familiar with the capabilities of the Syntrex IP unit used, particularly with the possible significance of lower range chargeabilities. Based upon a review of the profiles, it appears to me that a large portion of the 3.1 x 1.4 km area surveyed is anomalous, but there are, internally, weak or non anomalous areas. It is interesting to note that some of the strongest IP responses occur at the extremities of the survey, particularly at the E. and W. Examination of cores and outcrops (in all cases Elise

Volcanics or intermediate to acidic intrusive rocks) makes it appear that the IP anomalies are sulfide-caused and not formational. Also, I can state that such widespread sulfide zones are not common within the Elise Volcanics in this region.

The aerial mag. data show several magnetic low features within and adjacent to the Au anomaly. Two of them are elliptically shaped, while one is linear. It is very possible that these features might represent destruction of magnetic minerals caused by alteration. This idea will be discussed in more detail later. The Selco aerial Em survey did not detect any conductors within the Au anomaly, but it was flown on E-W lines at the closest 150 metres apart, and more often 300 metres separate. The linear mag. low just mentioned, which occurs on the Dog Claims, trends WNW. It would have been a miracle if any possible high grade structures of general E-W trend would have been detected by the Selco survey or by the Minnova IP.

Suggestions For Further Exploration

Though considerable effort has been expended on this target, the drilling has been concentrated in only one area. Moreover, almost no effort has been concentrated on the important target concept of possible high grade vein deposits similar to Rossland (the most important mining district in this region, which yielded 2.8 million ounces of gold). Accordingly, there appears to be good, totally undrilled potential for both significant bulk tonnage-type and high grade vein-type mineralization.

The first step in further testing this target should be a limited ground EM survey along N-S lines to test for possible high grade structures with general E-W orientation. I would suggest one line following the Minnova base line for its full length of 3.1 km. Another line is recommended at 800W from 600N to 1400S. If any conductors would be located by this work, additional lines would be required.

Secondly, the IP data should be worked over by a qualified geophysicist. Particular attention should be paid to possible deep anomalies and integrating resistivities with the chargeabilities.

From my evaluation of the combined geochemical-geophysical data, several specific target areas are evident.

The area near 0-0 on the Minnova baseline sits at the valley bottom approximately at the south margin of the "North" Au anomaly and 400 metres S from the closest drill hole, Cameco hole 4. A mag. low occurs in this area, and chargeabilities appear to be strong accompanied by low resistivities in places. Possibly this represents an alteration center. Two initial holes would be justified, one vertical and one angled to the north.

The whole west grid area appears to be of interest from 400N to 1800S. All of the lines end with anomalous chargeabilities, and significantly anomalous gold and copper has been found at several localities. No drilling has been undertaken anywhere close to this area. An interesting mag. low feature with strong chargeabilities and low resistivities in an area of known anomalous Au/Cu sits at lines 600S to 800S at about 800W. Also, the "South" gold anomaly occurs in an area of moderate to high chargeabilities. Of particular interest is the fact that lines 1200 and 1400 south have very strong chargeabilities at their west extremities where the gold anomaly terminates going into deep overburden. Drilling is warranted at this open, untested anomaly.

Other areas worthy of further investigation are respectively the gold soils anomaly centered at 900 to 1000N, 300E and the area along the Stewart-Dog boundary at approximately 600N, 1230W. Also of possible interest might be the north, south and east periphery of the West Moly stock. At the 900N to 1000N area the gold anomaly (with associated As) appears to coincide with good IP response. The IP anomaly might be open to the north, and the geochem. values as one goes further downslope here could be masked. In the 600N, 1230W area there is what appears to be close-to-source float of silica-indurated, fragmental volcanic/ intrusive rock which carries sulfides and is erratically anomalous in Au. Prospecting for outcrop along old logging trails in this area was totally unsuccesful. Neither soils geochem. nor any kind of ground geophysical work has been done in this area. The strong IP anomaly at the east extremity of lines 400S through 2000S appears to coincide from 1100S to 1800S with the west contact zone between the altered "West Moly" intrusive to the east, and a sulfide-bearing hornfels-skarn(?) zone developed in volcanics to the west. One old hole, Shell 80-1, was angled into this zone at the east extremity of line 1400S. Weakly anomalous Mo/W is reported, but the core has not been assayed for gold. It should be. Past gold assaying on the West Moly outcrops was negative. However, even if assaying of hole 80-1 were also negative, it would be worthwhile to investigate the north, south and east perimeter of this intrusive

for possible gold mineralization.

M. A. Kaufman

Oct. 15, 1995

Reference: Attached 1:10,000 and 1:5000 compilation maps made from Minnova base maps, which include my geological mapping.

Expiry Date Dec. 31, 1995

M. A. Kaufman

Geological Report
Stewart Mo - Arrow Tungsten Area

This area has been the focus of a large part of the past work on the Stewart Property. The Stewart Mo occurrence (MI 229) drilled both by Shell and B.P. Selco was found to contain an estimated resource of +200,000 tons averaging .37% MoS2. It is, in a broad sense, a porphyry type occurrence, but is not typical of most porphyry Mo deposits. The delineated resource is thought to occur in an elongate breccia zone, probably a pipe, which is located along a contact between granitic intrusive to the south, and Hall sediments to the north. What makes it unusual is the fact that later core assaying first by myself and then by Lacana indicates that the Shell - BP drilling cut erratic but significantly anomalous gold/silver values within the Mo-W system.

The Arrow Tungsten adits (MI 311) are located approximately .5 km. NNE from and 60 metres topographically lower than the drilled area. Past work here indicates small, discontinuous skarn zones containing up to 1% to 2% Wo3. The Arrow showings occur within a very extensive zone where north striking steeply to moderately dipping Hall sediments have been altered to hornfels -skarn containing pervasive disseminated and fracture controlled pyrite-pyrrhotite. This altered zone which contains frequently anomalous Mo/W, can be traced for at least 700 metres north of and 600 metres west of the drilled area.

One day of mapping was spent around the Stewart-Arrow area with the purpose of investigating outcrop areas N, NE and W of the known altered zone. Approximately .7 km. NNE from the Stewart Mo occurrence an extensive area of sulfide bearing hornfels/skarn sediments is exposed by a logging road. This location sits just north of the Stewart Claim boundary, and is probably part of an extensive Mo/W anomaly held by Cominco in 1980 (Bobbi Claims). It is undoubtedly an extension of the Stewart altered zone. Cominco noted that this zone of altered/anomalous sediments lies about half way between the Stewart mineralized intrusive drilled by Shell, and another mineralized plug drilled by Cominco .9 km. further to the NE. Cominco suggested that this anomalous area is probably caused by a subjacent intrusive. The same can be said for the Arrow Tungsten area.

Traverses to the north of the Stewart logging road encountered one outcrop of argillite with granitic dikes that carry minor pyrite. Traverses along an old skid trail system approximately 1 km. W of

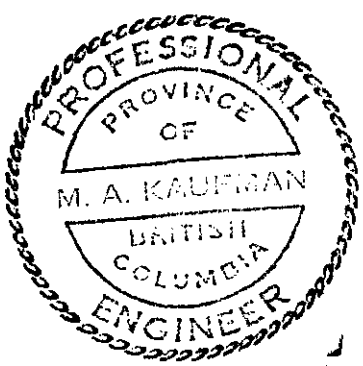
the Stewart Mo occurrence encountered Elise "greenstones" generally containing disseminated pyrite, and in places silicified. This area should be further investigated.

My conclusion from studying the old data and my limited mapping is that the very extensive hornfels/skarn zone N, NE and NW of the Stewart Mo showing, which has never been penetrated by a drill hole, deserves attention as a drill target for possible Mo/W targets at depth where there is probably an intrusive contact. The presence of erratic significant Au/Ag values in the Shell-BP cores encourages some hope for potential precious metals values somewhere within or around this large alteration zone. An interesting locality to start might be the area around the Arrow Tungsten adit. Rock sampling during 1985 by Ryan Exploration detected a very strong Mo/W anomaly over a width of 65 metres just to the SSW of the workings.

M. A. Kaufman

Oct. 16, 1995

Reference: Accompanying 1:20,000 Stewart Mo-Arrow W Geologic Map



Expiry Date Dec. 31, 1995

M. A. Kaufman

PART II

Stewart Assessment Report
Oct. 1995

Note: Core logs and assay reports in pocket

INFILL SAMPLING ON STEWART 1993 DRILL PROGRAM

It was determined that more sampling should be done on the core samples drilled by Cameco. -DEN-93-1, DEN-93-2, DEN-93-3 and DEN-93-4. (Assessment Report #23092) The reasoning behind the sampling was to test contacts, untested mineralized sections and wide gaps in the sampling. To provide continuity, the same numbering system as Cameco used was continued. The core splitting was done on July 27th and 28th.

The Assay results are in Appendix "A".

THE GEOLOGY OF THE AREA OF THE DRILLING

The soil anomaly which was drilled in 1993 is in the Elise Formation Mafic, Sub - Aqueous Flows and Pyroclastic of the Lower Jurassic Rossland Group. This has been intruded by Quartz Feldspar Porphry of the Jurassic Nelson Intrusions.

LITHOLOGY OF THE SAMPLES

HOLE - DEN 93 - 1

SAMPLE #	INTERVAL IN METRES	LITHOLOGY
DEN - 123	19.0 - 20.0	Andesite Lapilli Tuff - Breccia, 3.5% Pyrite and Pyrrhotite, traces of Chalcopyrite
DEN - 124	35.0 - 36.0	Same as DEN - 123
DEN - 125	46.0 - 47.0	Same as DEN - 123
DEN - 126	106.6 - 107.6	Andesite Lapilli Tuff - Breccia next to contact with a Lamprophyre Dyke.
DEN - 127	127.0 - 128.0	Andesite Lapilli Tuff - Breccia in contact with an Ash Tuff Bed

HOLE DEN - 93 - 2

SAMPLE #	INTERVAL IN METRES	LITHOLOGY
DEN - 209	16.0 - 17.0	Fine Grained Hornblende diorite 3 - 5% pyrrhotite and pyrite

SAMPLE #	INTERVAL IN METRES	LITHOLOGY
DEN - 210	20.0 - 21.0	Same as DEN - 209
DEN - 211	26.2 - 27.2	Same as DEN - 209
DEN - 212	67.9 - 68.9	Fine Grained Hornblende Diorite in contact with Lamprophere Dyke
DEN - 213	71.4 - 72.4	Same as DEN - 212
DEN - 214	96.0 - 97.0	Fine Grained Diorite, 3 - 5% pyrite & pyrrhotite

HOLE DEN - 93 - 3

SAMPLE #	INTERVAL IN METRES	LITHOLOGY
DEN - 316	23.0 - 23.5	Fine Grained Diorite, 3 - 5% pyrite & pyrrhotite trace of chalcopyrite
DEN - 317	53.0 - 54.0	Andesite Lapilli Tuff 3 - 5% pyrite & pyrrhotite
DEN - 318	78.0 - 79.0	Same as DEN - 317
DEN - 319	81.0 - 81.5	Andesite Lapilli Tuff in contact with bedded Rhyolite Ash Tuff
DEN - 320	86.5 - 87.5	Contact between bedded Rhyolite Ash Tuff and Andesite Lapilli Tuff Breccia, pyrite, pyrrhotite chalcopyrite
DEN - 321	97.0 - 98.0	Porphyritic Diorite pyrite pyrrhotite

HOLE DEN - 93 - 4

SAMPLE #	INTERVAL IN METRES	LITHOLOGY
DEN - 424	10.5 - 11.5	Siliceous "Skarnified" Ash Tuff 3% pyrite
DEN - 425	56.0 - 57.0	Same as DEN -424
DEN - 426	68.0 - 69.0	Contact of Rhyolite Tuff with Diorite 1 - 2% pyrite & pyrrhotite
DEN - 427	82.0 - 83.0	"Skarnified" Diorite 3 - 5% pyrite

FOR JACK DENNY

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
M. A. KAUFMAN

Expiry Date Dec. 31, 1995

M. A. Kaufman

PART III

Stewart Assessment Report
Oct. 1995

Note: Assay reports in pocket. Sample locations shown on M. A. Kaufman geologic maps; on the smallest scale map that the sample is located on.

Stewart Moly Road Lithogeochemistry

Fifteen samples were collected from the main logging road below the Stewart Moly showing, and near the Arrow Tungsten workings. This area features contact metamorphism of the sedimentary country rocks, as it is proximal to a quartz monzonite intrusive. The country rocks are mostly tuffaceous siltstones and minor carbonate. The siltstones are hornfelsed, being black, dense, and pyritic/pyrrhotitic. The carbonate rock was seen only in the Arrow Tungsten adit dump. It is recrystallized and weakly altered to garnet and pyroxene.

Very little gold was found in the rock samples. The highest value is 83ppb, from a sample of hornfels containing minor quartz-pyrite veinlets. Most of the rest of the samples have less than 5ppb Au. Of the other elements included in the analysis, weakly anomalous arsenic (to 130ppm), copper (to 530ppm) and moderately anomalous zinc (to 1400ppm) are present. Anomalous levels of Mo, Bi, and W were not found. Based on this very limited set of data, it does not appear that this portion of the Stewart Moly mineralizing system is very prospective for gold.

Gold Hill Lithogeochemistry

Gold Hill and the Trixi V mine area are underlain by andesitic volcaniclastics, thinly-bedded tuffaceous siltstone/argillite, and aphanitic felsite/rhyolite dikes and/or sills. The volcaniclastics are commonly pyritic, and the felsite/rhyolite is fractured and cut by quartz-pyrite veinlets in places.

Fifteen rock samples were collected in the Gold Hill - Trixi V area. These areas are about 1 Km apart. Most of these samples were collected from mine dumps or old dozer cuts. Several samples (#23929, 23969, 23961) have more than 1 gram Au/tonne. The maximum value is 2499ppb, a sample of quartz-pyrite vein material, collected from the lower dump of the Trixi V mine. This same sample has > 25ppm Ag. In general, the base metal signature seems to be stronger at the Trixi V mine than on Gold Hill. Silver values seem to be lower, though still anomalous, on Gold Hill. Arsenic values are highly anomalous (to 4000ppm) in some samples. Zinc values are commonly elevated at both Gold Hill and the Trixi V. This fact is significant, as zinc has been shown to be highly anomalous in soils in the Arlington mine area, as well as over Gold Hill.

The sample results are encouraging in this area. The geology of the area has potential to host either stratabound or structurally-hosted gold +/- base metal deposits. The lithogeochemical results support this conclusion.

FOR ROB FREDERICKS
M.A. Kaufman

STEWART PROJECT				
Rock Sample Descriptions				
Samples collected by Robert Fredericks 8/23-24/95				
SAMPLE NO.	AREA	SAMPLE TYPE	LOCATION	DESCRIPTION
23912	ST-MO	Grab	70m E of Mo show jct w/ log road, down log road	Hornfelsed tuff, tan to gray, with 5-10% dissem. f.g. po. stg FeOx. Minor shearing
23913	ST-MO	Grab	90 m E of jct.	Black hornfelsed tuff - can see wk bedding. 10% dissem. f.g. po; heavier in some bands, M.g. py in x-cutting veinlets approx 4%. Not calcareus. Stg. FeOx.
23914	ST-MO	Grab	160 m down from jct.	Black graphitic hornfels/shale, rotten, w/stg FeOx & some gypsum. From bx. zone.
23915	ST-MO	Grab	245 m down from jct.	Amphibolite? Black w/c.g. unoriented crystals in f.g. gnd mass. Med FeOx. Kinda light & punky. /from narrow sheared zone @ 030^0, 70^0 NW.
23916	ST-MO	Grab	350' from jct.	F.g. diorite w/veins of mixed dk gray/brn soft sulphide (Wolfanite?) & pyrite. Tr cpy. Diorite not too altered or common - mostly dk gray hornfels.
23917	ST-MO	Grab	363 m down from jct.	Black punky hornfels w/scattered black porphyroblasts w/good cleavage. Gosserous, vuggy where leached, has 10% dissem. po & diffuse clots of py, all v.f.g. Stg FeOx. Bedding 20 m E @ 320^0 65^0 NE.
23918	ST-MO	Grab	485 m down from jct.	Black hornfels, porphyroblasts, dense & heavy, not calcareus, w/5-10% dissem & minor fx of py>po. Stg FeOx. Bedding @ 290^0 40^0 NE.
23919	ST-MO	Grab $1m^2$	Approx. 200 m beyond #918; 80 m past landing, up skid rd.	Black shaly tuff/hornfels, lightly fx N-S 90^0, minor qtz-py veinlets. Stg FeOx in fx after py. Dissem. py & po.
23920	ST-MO	Grab	Approx. 180' past #919, up skid road, 80 m from far end of clearcut.	Lt. med gray tuffaceous hornfels, granular & quartzitic. 7% v.f.g., po as dissem. & bedding parallel concentrations. Stg FeOx. Miinor clots & veinlets of py.

23921	ST-Arrow W	Dump Character	Dump from main shaft.	Weakly banded lt. gray tuffaceous sediment, quartzitic. 10-20% dissem. pyrrhotite. Med. org. FeOx stain.
23922	ST-Arrow W	Dump Character	Same as #921	Black argillite w/limy laminations & 10% dissem. & bedding parallel po, minor py.
23923	ST-Arrow W	Dump Character	Bottom part of dump.	Skarn. Weak pervasive dull re/brn garnet rimmed by green pyx. Some calcite cores gt veins. Limy. Dissem to clots of po, 3-8%. Minor c.g. gt. Conforms to bedding - limy tuff?
23924	ST-Arrow W	Grab	Switchback below rd below mark adit dump, 30m N of ck.	Tuffaceous gray hornfels w/5-15% dissem. po & veinlets of py & dk gray soft sulfide - Wolfan? (approx 5%) V of FeOx.
23925	ST-MO	Grab over 4 m	Ridge nose, along log rd approx 5 m W back up rd from jct w/Mo show rd.	Lt. gray/tan hornfels, tuffaceous, w/10% dissem. po. Sx collected along fx. V. stg FeOx. Fx @ E-W, 90^0, & along bedding @ N-S, 85^0 E.
23926	ST-MO	Grab	Approx. 200 m W down logging road from #925	Nice crystalline tuff w/biotite hornfels alt. minor pyx & epidote along fx selvages. Very granular & siliceous looking. 15% dissem v.f.g. po. V. st. FeOx. 100 m down road (W) bedding @ 040^0 40^0 NW.
23927	ST-MO	Grab	1/2 way between clearcuts W of Moly rd on logging road.	Hornfelsy tuff, some crystaline (intrusive?) texture, w/10% dissem. po > py & veins. V. stg. FeOx. Wk amph. selvages on veins. Some good pervasive dissem. biotite.
23928	ST-Au Hill	Grab	just down rd from Au Hill adit.	Andesitic agglomerate, somewhat felsic. 5% dissem. & fx pyrite.
23929	ST-Au Hill	Grab/Rubble	Rhyolite trench, N end	Tan rhyolite, aphanitic, w/ common limonite - stained fx. No sulfides.
23930	ST-Au Hill	Rubble	Rhyolite trench	Rhyolite - aphanitic mottled lt. tan to org. 5% dissem. clots of py +/- aspy. limonite on fx.
23931	ST-Au Hill	Rubble	Rhyolite trench	Rhyolite w/qtz-py veinlets. Open space qtz xtalls w/ m.g. py core. /stg. limonite. Mo says high grade.

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Orvana Resources Corp.
2005 Ironwood Parkway
Coeur d'Alene, Idaho 83814
(208) 667-6000

DATE Oct. 7, 1995

№ 23957 SAMPLED BY RTF

OWNER OR CLAIM Stewart - Trixi

LOCATION Trixi Miner road, ~400m N of switchback prior to long straight stretch

KIND OF SAMPLE subcrop

DESCRIPTION Brecciated latite? Buff brownish + white feldspar phenos in aphanitic/fg. groundmass. 5-10% dissem fg. pyrrhotite. No veining. Stg. red brn/org FeOx on surf.

Au	Ag	As	Cu	Pb	Zn
<5ppb	<.1ppm	44ppm	3130ppm	<5ppm	16ppm
			Mo 38ppm		

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DATE 10/7/95

№ 23958 SAMPLED BY RTF

OWNER OR CLAIM Stewart - Trixi

LOCATION Trixi mine road, ~300m N of #957

KIND OF SAMPLE float

DESCRIPTION Qtz vein, 8cm thick, vuggy, w/ stg limonite on fx & minor in vugs. No wall rock. Other rocks in float are volcanic (andesite & rhyolite).

Au Ag

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DATE 10/7/95

№ 23959 SAMPLED BY RTF

OWNER OR CLAIM Trixi Mine

LOCATION Dump below lower road @ gully

KIND OF SAMPLE dump - common

DESCRIPTION Interbedded dk grey siltstone + med. grey crystal tuff w/ lots of crystal frags. 5% py as dissem. + along bedding (syngenetic?).

Au Ag

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DATE Oct. 7, '95

№ 23960 SAMPLED BY RTF

OWNER OR CLAIM Trixi / Stewart

LOCATION same as #959

KIND OF SAMPLE dump - common

DESCRIPTION Brecciated porphyritic/aphanitic lt. tan rhyolite or poss. crystal tuff. Bx fx filled w/ white qtz >> pyrite >> aspy? 5% dissem vfg. py, 5% as bx filling. Weathers org/brn.

Au Ag

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(208) 667-6000

DATE Oct. 7, 1995

№ 23961 SAMPLED BY RTF

OWNER OR CLAIM Stewart - Trixi

LOCATION Same as #960, base of dump

KIND OF SAMPLE dump - not common

DESCRIPTION Qtz - pyrite vein, 30% cg. py. Very little wall rock - probably Rhyolite. Vein 1cm thick.

Au Ag

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DATE Oct. 7 '95

№ 23962 SAMPLED BY RTF

OWNER OR CLAIM Stewart - Trixi

LOCATION Same as #961

KIND OF SAMPLE dump - not common

DESCRIPTION Gouged up dk grey shale with very strong org + red limonite. Some vuggy areas after pyrite. No qtz veining.

Au Ag

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DATE Oct. 7, 1995
SAMPLED BY RTF

№ 23963
OWNER OR CLAIM Stewart - Trixi
LOCATION Same as #961, 62

KIND OF SAMPLE dump - ubiquitous
DESCRIPTION Fine-grained weakly porphyritic rhyolite +/- tuff. Color varies from tan to grey. 3% dissem v.f.g. py > py. Rb veining (avoided it). Greyish rock has some lapilli texture.

Au Ag

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DATE Oct. 7, 1995
SAMPLED BY RTF

№ 23964
OWNER OR CLAIM Stewart - Trixi
LOCATION north bank of gully, ~ 40m N of #960

KIND OF SAMPLE float - scree
DESCRIPTION Mixed dk grey fissile shale + crystal tuff. Stg dk limonite stain. No veining. Minor dissem py.

Au Ag

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DATE Oct. 7, 1995
SAMPLED BY RTF

№ 23965
OWNER OR CLAIM Stewart - Trixi
LOCATION S. bank dove adit in creek bed

KIND OF SAMPLE grab.
DESCRIPTION Dk grey tuffaceous shale w/ gossan parallel bedding @ 360° 25°E. Stg FeOx, mod fx + some folding. Only minor qtz veining.

Au Ag

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DATE Oct. 7, 1995
SAMPLED BY RTF

№ 23966
OWNER OR CLAIM Stewart - Trixi
LOCATION Cut/slope 10m S of upper adit in crk bottom

KIND OF SAMPLE grab over 5m
DESCRIPTION Rhyolite - looks like a dike, as it seems to crosscut bedding @ high ∠ (~360° 80°E). 3% dissem f.g. py, minor qtz veining.

Au Ag

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DATE 10/7/95
SAMPLED BY RTF

№ 23967
OWNER OR CLAIM Stewart - Trixi
LOCATION Right next to adit in creek bed, south side.

KIND OF SAMPLE 1m grab
DESCRIPTION Stockwork white quartz veinlets along E-W vertical structure in rhyolite. Part of creek bed. This structure probably whatever they were driving on.

Au Ag

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(208) 667-6000

DATE 10/16/95

№ 23991 SAMPLED BY Mo Kaufman

OWNER OR CLAIM Stewart - Au Hill

LOCATION El. 4400' Trench

KIND OF SAMPLE

DESCRIPTION Light tannish white rhyolite, silicified, aphanitic. Cut by qtz veinlets w/ open spaces (leached sulphide?). Minor coarse-grained pyrite assoc. w/ bx zones

Au	Ag

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Coeur d'Alene, Idaho 83814
(208) 667-6000

DATE 10/16/95

№ 23992 SAMPLED BY Mo Kaufman

OWNER OR CLAIM Stewart - Gold Hill

LOCATION El. 4480' Trench

KIND OF SAMPLE

DESCRIPTION Rhyolite, both aphanitic & silicified (almost white), and lt. grey, weakly banded w/ F.g. qtz eyes in aphanitic groundmass. Light rhyolite is mod fx w/ minor qtz/limonite crusts.

Au	Ag

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(208) 667-6000

DATE 10/16/95

№ 23993 SAMPLED BY Mo Kaufman

OWNER OR CLAIM Stewart - Gold Hill

LOCATION Gold Hill Trench El. 4480'

KIND OF SAMPLE

DESCRIPTION Andesitic lapilli tuff or volcanic breccia very strong med-dk org/brn limonite, probably lots of dissem f.g. pyrite that's oxidized.

Au	Ag

MK-95-15 GOLD HILL — FRACT. RHYOLITE, SILICIFIED W/ PY, AsS

MK-95-17 STEWART MO — HORNFELS-SKARN W/ PY, Po

MK-95-18 — " "

MK-95-19 — ANDESITE, SILICIFIED W/ PY.

Appendix I
Stewart Claim Group Assessment Report
Statement of Costs

(Itemized in detail on accompanying sheets)

In U.S. Funds

M. A. Kaufman: 21 days at $400/day* ------- $8400.00
Mileage: 716 miles at .35/mile: ---------- $251.00
Copying: ---------- $109.00

Subotal ---------- $8,760.00

Convert to Canadian X 1.32 ---------- $11,563.00

In Canadian Funds

M. A. Kaufman (Motel and Meals) ---------- $1232.00

Subtotal M.A. Kaufman ---------- $12,795.00

Jack Denny: 2 days at 150/day ----------$300.00
Freight: ----------$30.76
Assays: ---------- $415.70

Subtotal Jack Denny ---------- $746.00

Orvana (Robert Fredericks)
5 days at $300/day ---------- $1500.00
Living Expenses ---------- $375.00
Vehicle Expenses ---------- $250.00
Assays ---------- $829.00
Orvana
Draftsperson 64 hrs at $8.00/hr.---------- $512.00

Subtotal Orvana ---------- $3466.00

Grand Total ---------- $17,007.00

* This is the amount that I charge for long-term consulting in North America (jobs lasting more than 21 days).

Appendix II

AUTHOR'S QUALIFICATIONS

I, M. A. Kaufman hereby state that I have worked as a mining geologist and mining engineer for 38 years.

I received an A.B. degree in geology from Dartmouth College in 1955, and an M.S. degree in geology and mining engineering from The University of Minnesota in 1957.

I am currently registered as a Professional Engineer in the province of British Columbia.

From the period 1955 - 1965 I worked for the major companies, Kennecott, Giant Yellowknife (Falconbridge), Kerr-McGee, and Hunting Survey Corp. Ltd. I then worked on my own as a consultant and contractor, mainly for major companies. From 1969 through 1988, I was a principal of the consulting and contracting firm of Knox, Kaufman, Inc. From 1989 to present I have worked as an independent consultant and prospector.

STATEMENT OF QUALIFICATIONS

I, Jack Denny of 8884 Bonderoff Road, Box 325, in Salmo in the Province of British Columbia, do hereby state:

1. That I took first year Geology at Selkirk College in 1971. I also took the Chamber of Mines Prospecting Course at Nelson, BC in 1976 and again in 1987. In 1988, I took the Advanced Prospecting Course at Mesachie Lake on Vancouver Island and the Petrology Course at Nelson, BC in 1992.

2. That I have been in Mineral Exploration and Mining since 1970.

3. That I have been an independent prospector since 1975.

Jack Denny

STATEMENT OF QUALIFICATIONS

I, Robert T. Fredericks, of Coeur d'Alene, Idaho, U.S.A., certify that:

1. I am a geologist employed by Orvana Minerals Corporation, 710 - 1177 West Hastings Street, Vancouver, B.C., V6E 2K3, at their offices located at 1755 Silver Beach Loop Road, Coeur d'Alene, Idaho, U.S.A., 83814.

2. I am a graduate (1986) of the University of Idaho, Moscow, Idaho, and hold a B.Sc. degree in Geology.

3. I have been practicing my profession for the past eight years.

4. I am registered as a Geologist in Training (GIT) with the Idaho State Board of Registration for Professional Geologists.

Robert T. Fredericks
Geologist, Orvana Minerals Corporation

B.C.
P4 E

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50238
Sample Receipt : 8/30/95
Date of Report : 9/21/95
No. of Samples : 37 Rock
P.O. No. :SKARN
Page 1 of 2

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: ROB FREDERICKS

CLIENT SAMPLE ID	Test : Units : Method:	Au ppb FA+AA	Ag ppm FA+AA	As ppm ICP	Bi ppm ICP	Co ppm ICP	Cu ppm ICP	Pb ppm ICP	Mo ppm ICP
23912		5	.1	26	<10	18	90	<5	5
23913		14	.2	32	<10	17	100	<5	10
23914		<5	.3	36	<10	17	110	8	18
23915		<5	.2	45	<10	21	87	<5	<2
23916		<5	.6	50	<10	43	530	7	9
23917		<5	.4	120	<10	10	53	22	11
23918		<5	.3	24	<10	14	96	<5	12
23919		83	.2	29	<10	4	68	<5	11
23920		<5	.1	28	<10	15	110	<5	11
23921		<5	.3	91	<10	21	120	6	<2
23922		<5	.2	56	<10	13	110	6	10
23923		<5	.1	11	<10	12	74	<5	8
23924		N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
23925		<5	.2	41	<10	19	93	<5	6
23926		<5	.3	40	<10	29	190	8	<2
23927		20	.5	130	<10	24	230	42	<2
23928		<5	.4	50	<10	25	82	29	<2
23929		1975	3.3	4000	<10	<2	24	160	<2
23930		12	.3	300	<10	<2	27	16	3
23931		783	9.5	620	<10	4	100	250	6
23932		84	.2	38	<10	12	160	<5	<2
23933		554	1.4	80	<10	120	560	<5	<2
23934		16	.2	35	<10	13	61	<5	<2
23935		19	.2	34	<10	15	41	<5	<2
23936		98	.5	54	<10	29	240	<5	<2
23937		<5	<.1	39	<10	10	19	<5	<2
23938		23	.9	170	<10	360	2700	28	16
23939		<5	<.1	27	<10	10	80	<5	<2
23940		<5	<.1	31	<10	14	37	<5	<2
23941		18	.2	23	<10	15	75	<5	<2
23942		52	2.4	190	<10	270	4800	48	<2
23943		19	.1	17	<10	3	97	<5	<2
23944		<5	<.1	12	<10	3	39	<5	6
23945		<5	.1	38	<10	15	160	<5	2
23946		20	1.0	380	<10	20	1300	35	7
23947		<5	<.1	16	<10	3	79	<5	4
23948		<5	<.1	13	<10	3	60	<5	4

OLOGIC BRANCH
SSESSMENT REPORT

24,123

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50238
Sample Receipt : 8/30/95
Date of Report : 9/21/95
No. of Samples : 37 Rock
P.O. No. :SKARN
Page 2 of 2

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: ROB FREDERICKS

CLIENT SAMPLE ID	Test : Units : Method:	Zn ppm ICP	Ba ppm ICP	W ppm ICP
23912		34	23	<20
23913		1000	27	<20
23914		250	40	<20
23915		1400	17	<20
23916		40	18	<20
23917		590	20	<20
23918		200	14	<20
23919		190	27	<20
23920		65	20	<20
23921		49	17	<20
23922		88	27	<20
23923		1100	20	<20
23924		N/S	N/S	N/S
23925		56	20	<20
23926		70	30	<20
23927		200	49	<20
23928		51	60	N/R
23929		420	71	N/R
23930		300	31	N/R
23931		1400	74	N/R
23932		30	73	N/R
23933		55	100	N/R
23934		76	350	N/R
23935		100	570	N/R
23936		77	150	N/R
23937		55	58	N/R
23938		68	34	N/R
23939		48	32	N/R
23940		140	52	N/R
23941		39	25	N/R
23942		78	4	N/R
23943		7	12	N/R
23944		16	140	N/R
23945		28	120	N/R
23946		30	36	N/R
23947		11	35	N/R
23948		6	37	N/R

Reviewed By: Williams Date: 9/21/95 Charges : $693.00

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50299
Sample Receipt :10/17/95
Date of Report :10/27/95
No. of Samples : 49 Rock
P.O. No. :SKARN
Page 1 of 4

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: ROB FREDERICKS

CLIENT SAMPLE ID	Test : Units : Method:	Au ppb FA+AA	Ag ppm FA+AA	As ppm ICP	Bi ppm ICP	Co ppm ICP	Cu ppm ICP	Pb ppm ICP	Mo ppm ICP
23951		14	.5	40	<10	3	33	<5	<2
23952		113	.3	24	<10	15	160	<5	2
23953		28	<.1	21	<10	18	99	<5	5
23954		90	.1	12	<10	22	220	<5	38
23955		<5	.1	34	<10	23	41	<5	<2
23956		5	<.1	17	<10	9	120	<5	3
23957		<5	<.1	22	<10	14	75	<5	<2
23958		121	1.2	100	<10	<2	8	130	4
23959		7	.5	29	<10	15	88	<5	8
23960		1803	2.0	15600	<10	12	78	21	<2
23961		2499	>25	590	160	80	1300	19200	<2
23962		41	1.1	200	<10	7	47	60	7
23963		18	.5	75	<10	15	100	27	<2
23964		9	1.0	56	<10	4	51	10	18
23965		8	1.7	720	<10	15	170	14	32
23966		11	.1	42	<10	10	47	<5	<2
23967		232	5.3	4800	<10	13	170	120	3
23968		20	.1	78	<10	11	44	<5	<2
23969		<5	.1	30	<10	7	34	<5	8
23970		22	.2	56	<10	25	73	<5	<2
23971		660	.3	21	<10	24	170	<5	<2
23972		18	<.1	17	<10	13	81	<5	<2
23973		49	4.3	24	<10	3	92	<5	<2
23974		103	.1	18	<10	8	88	<5	3
23975		8	<.1	27	<10	9	11	<5	<2
23976		20	.1	16	<10	17	170	<5	<2
23977		83	.2	28	<10	9	130	<5	12
23978		58	.1	17	<10	20	160	<5	<2
23979		59	.2	25	<10	8	45	<5	14
23980		20	1.6	71	<10	24	250	16	<2
23981		261	.1	21	<10	9	41	<5	8
23982		118	.2	27	<10	12	140	<5	5
23983		65	1.7	110	<10	22	230	460	9
23984		226	.1	51	<10	9	35	<5	<2
23985		<5	.7	34	<10	18	110	<5	2
23986		39	>25	1700	<10	11	310	>20000	17
23987		72	19.7	14	110	15	130	530	10
23988		61	2.6	16	<10	7	79	80	2
23989		1169	19.2	530	82	16	120	550	27
23990		404	1.2	43	<10	<2	10	19	4

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50299
Sample Receipt :10/17/95
Date of Report :10/27/95
No. of Samples : 49 Rock
P.O. No. :SKARN
Page 2 of 4

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: ROB FREDERICKS

CLIENT SAMPLE ID	Test :	Au	Ag	As	Bi	Co	Cu	Pb	Mo
	Units :	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	Method:	FA+AA	FA+AA	ICP	ICP	ICP	ICP	ICP	ICP
23991		83	.5	1100	<10	<2	24	43	4
23992		28	.3	150	<10	<2	20	25	2
23993		8	.2	120	<10	5	85	5	2
EDBM 1		14	.2	32	<10	14	51	<5	4
EDBM 2		16	.2	32	<10	13	45	<5	<2
MK95-15 (EXTRA)		1999	.9	930	<10	3	32	30	<2
MK95-17 (EXTRA)		9	.7	44	<10	22	330	<5	38
MK95-18 (EXTRA)		5	.8	140	<10	8	52	<5	7
MK95-19 (EXTRA)		<5	1.0	24	<10	26	140	<5	39

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50299
Sample Receipt :10/17/95
Date of Report :10/27/95
No. of Samples : 49 Rock
P.O. No. :SKARN
Page 3 of 4

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: ROB FREDERICKS

CLIENT SAMPLE ID	Test : Units : Method:	Zn ppm ICP	Ba ppm ICP	Ag oz/t FA
23951		18	51	
23952		19	33	
23953		20	27	
23954		9	18	
23955		64	290	
23956		18	35	
23957		55	33	
23958		45	23	
23959		360	52	
23960		39	47	
23961		>20000	13	3.64
23962		140	43	
23963		130	37	
23964		180	97	
23965		690	62	
23966		160	40	
23967		140	51	
23968		27	120	
23969		40	110	
23970		45	63	
23971		12	6	
23972		19	28	
23973		31	29	
23974		24	21	
23975		76	800	
23976		23	16	
23977		23	25	
23978		14	10	
23979		150	82	
23980		87	96	
23981		36	24	
23982		48	20	
23983		1200	82	
23984		38	44	
23985		230	23	
23986		>20000	9	7.18
23987		9300	5	
23988		330	20	
23989		460	18	
23990		50	3	

SVL ANALYTICAL, INC.
REPORT OF ANALYTICAL RESULTS

SVL Job Number :X50299
Sample Receipt :10/17/95
Date of Report :10/27/95
No. of Samples : 49 Rock
P.O. No. :SKARN
Page 4 of 4

Client: PAUL DIRCKSEN
ORVANA RESOURCES
1755 SILVER BEACH LOOP
COEUR D'ALENE ID 83814

ATTN: ROB FREDERICKS

CLIENT SAMPLE ID	Test : Units : Method:	Sn ppm ICP	Ba ppm ICP	Ag oz/t FA
23991		140	32	
23992		84	30	
23993		190	100	
EDBM 1		250	90	
EDBM 2		350	93	
MK95-15 (EXTRA)		110	19	
MK95-17 (EXTRA)		16	30	
MK95-18 (EXTRA)		350	22	
MK95-19 (EXTRA)		52	40	

Reviewed By:_____ Date:_____ Charges : $828.15

8-Aug-95

ECO-TECH LABORATORIES LTD.
10041 East Trans Canada Highway
KAMLOOPS, B.C.
V2C 6T4

Phone: 604-573-5700
Fax : 604-573-4557

VOLOGIC I BRANCH
ASSESSMENT REPORT

24,123

ERIC DENNY AK 95-530
R.R. #1, S-21, C-9
NELSON, B.C.
V1L 5P4

21 Core samples received July 31, 1995
Project #: None Given
Shipment #: None Given

Values in ppm unless otherwise reported

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Tl %	U	V	W	Y	Zn
1	DEN209	185	<.2	1.59	25	45	<5	2.83	<1	20	38	158	5.04	<10	1.26	[illegible]	6	0.03	8	1600	6	<5	<20	78	0.1	<10	100	<10	1	35
2	DEN210	355	<.2	1.67	15	50	<5	3.31	<1	19	35	106	4.59	<10	1.25	[illegible]	3	0.03	4	1270	<2	<5	<20	79	0.07	<10	109	<10	<1	29
3	DEN211	45	<.2	1.93	<5	50	<5	3.48	8	16	50	72	4.81	<10	1.56	[illegible]	2	0.02	10	1250	10	<5	<20	100	0.07	<10	131	<10	<1	42
4	DEN212	60	<.2	1.94	20	40	<5	4.32	<1	18	43	79	5.01	<10	1.36	[illegible]	4	0.04	9	1570	<2	<5	<20	169	0.07	<10	150	<10	2	30
5	DEN213	25	<.2	2.14	5	50	<5	3.65	<1	20	50	68	4.98	<10	1.40	[illegible]	1	0.05	8	1610	2	<5	<20	130	0.12	<10	151	<10	2	35
6	DEN214	50	<.2	1.54	<5	25	<5	3.05	<1	16	37	105	4.65	<10	1.30	[illegible]	3	0.02	5	1130	<2	5	<20	97	0.05	<10	86	<10	<1	37
7	DEN316	300	0.4	2.14	10	30	<5	4.87	<1	17	71	487	4.16	<10	2.02	[illegible]	73	0.02	18	1470	<2	10	<20	93	0.08	<10	161	<10	<1	42
8	DEN317	55	<.2	1.91	30	40	<5	2.92	<1	19	40	122	4.22	<10	1.60	[illegible]	5	0.03	8	1450	2	10	<20	100	0.06	<10	101	<10	<1	46
9	DEN318	95	<.2	1.54	850	25	<5	4.31	<1	21	26	176	4.47	<10	1.31	[illegible]	5	0.02	7	1660	4	<5	<20	121	0.03	<10	88	<10	<1	34
10	DEN319	65	<.2	1.18	10	15	<5	2.40	<1	16	54	129	4.11	<10	1.15	[illegible]	5	0.03	15	1300	14	<5	<20	128	0.04	<10	78	<10	4	52
11	DEN320	100	0.6	0.82	40	15	<5	2.71	2	13	40	141	3.20	<10	0.77	[illegible]	6	0.02	6	1090	132	<5	<20	137	0.03	<10	45	<10	3	277
12	DEN321	80	<.2	1.39	<5	25	<5	2.82	<1	18	54	102	4.65	<10	1.15	[illegible]	9	0.04	9	1640	22	<5	<20	122	0.07	<10	91	<10	1	76
13	DEN123	250	<.2	1.30	<5	30	<5	2.41	<1	30	62	178	5.88	<10	1.22	[illegible]	6	0.03	19	1390	<2	<5	<20	105	0.08	<10	78	<10	<1	30
14	DEN124	180	<.2	1.73	30	40	<5	4.67	1	32	69	223	5.99	<10	1.60	[illegible]	10	0.03	30	1300	<2	<5	<20	129	0.09	<10	99	<10	<1	50
15	DEN125	145	<.2	2.05	<5	45	<5	3.45	<1	28	83	171	6.24	<10	1.99	[illegible]	6	0.03	32	1390	<2	<5	<20	89	0.09	<10	114	<10	<1	44
16	DEN126	60	<.2	1.20	<5	40	<5	2.78	2	24	60	137	4.76	<10	1.15	[illegible]	4	0.04	17	1470	136	<5	<20	99	0.07	<10	86	<10	<1	217
17	DEN127	115	<.2	2.60	30	85	<5	3.08	<1	29	56	115	5.83	<10	2.06	[illegible]	4	0.03	16	1380	2	5	<20	69	0.1	<10	125	<10	<1	49
18	DEN424	65	<.2	1.59	<5	35	<5	1.09	<1	26	41	180	5.65	<10	1.35	[illegible]	3	0.05	12	1510	10	<5	<20	37	0.11	<10	129	<10	4	46
19	DEN425	15	0.2	3.03	10	30	<5	4.66	5	30	36	122	6.82	<10	2.55	1117	7	0.02	21	1880	270	<5	<20	294	0.02	<10	165	<10	<1	607
20	DEN426	15	<.2	1.76	<5	35	<5	3.33	1	23	30	157	5.47	<10	1.47	745	6	0.02	10	1470	32	<5	<20	174	0.06	<10	80	<10	2	82
21	DEN427	50	<.2	1.91	<5	100	<5	3.04	<1	26	32	95	4.78	<10	1.43	710	<1	0.03	8	1450	8	5	<20	84	0.12	<10	72	<10	<1	42

23944	<5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23945	<5	.1	38	<10	15	160	<5	2
23946	20	1.0	380	<10	20	1300	35	7
23947	<5	<.1	16	<10	3	79	<5	4
23948	[illegible]	[illegible]	13	<10	3	60	<5	4

VOLOGIC I BRANCH
ASSESSMENT REPOR

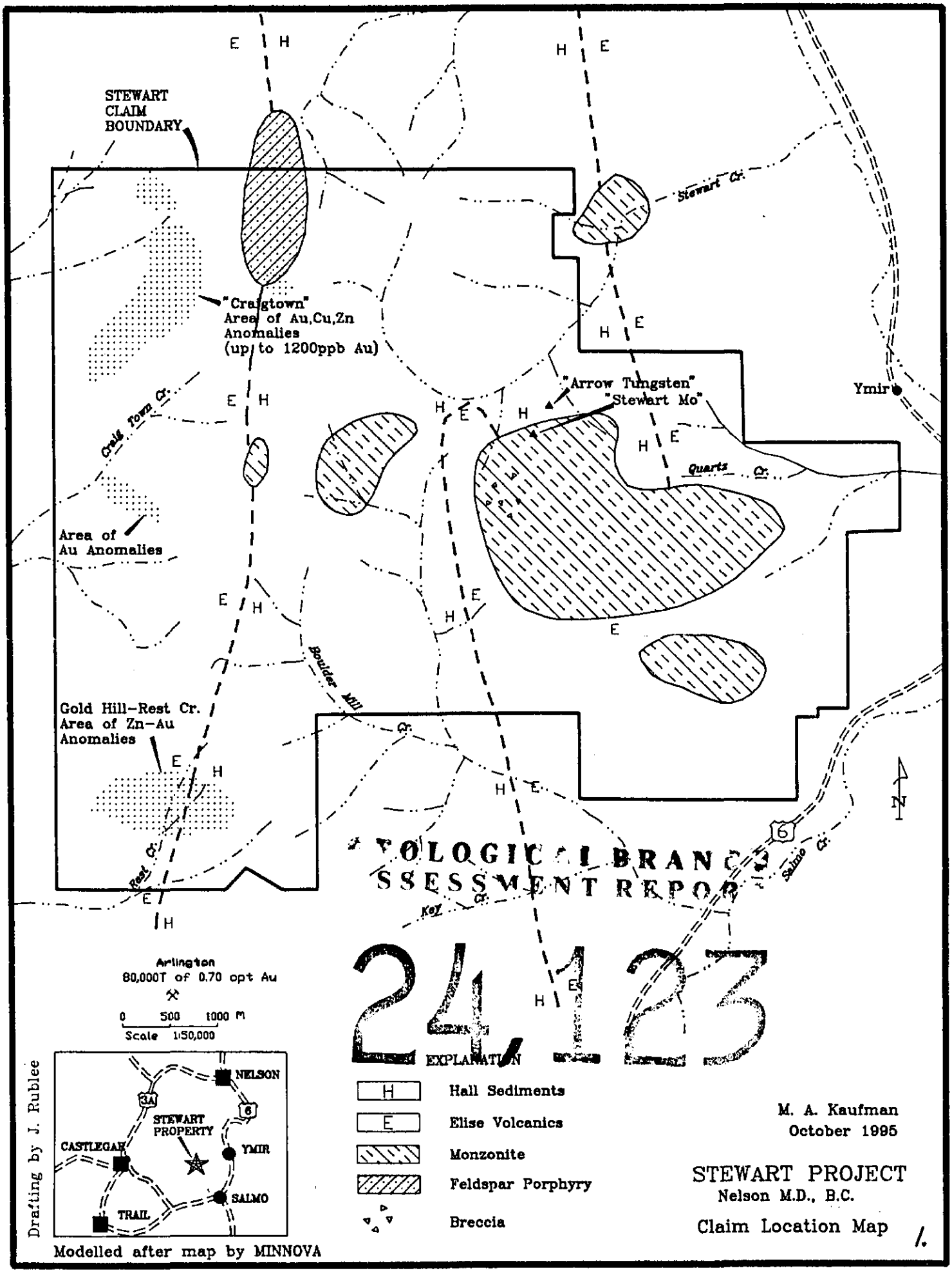
ECO-TECH LABORATORIES LTD.

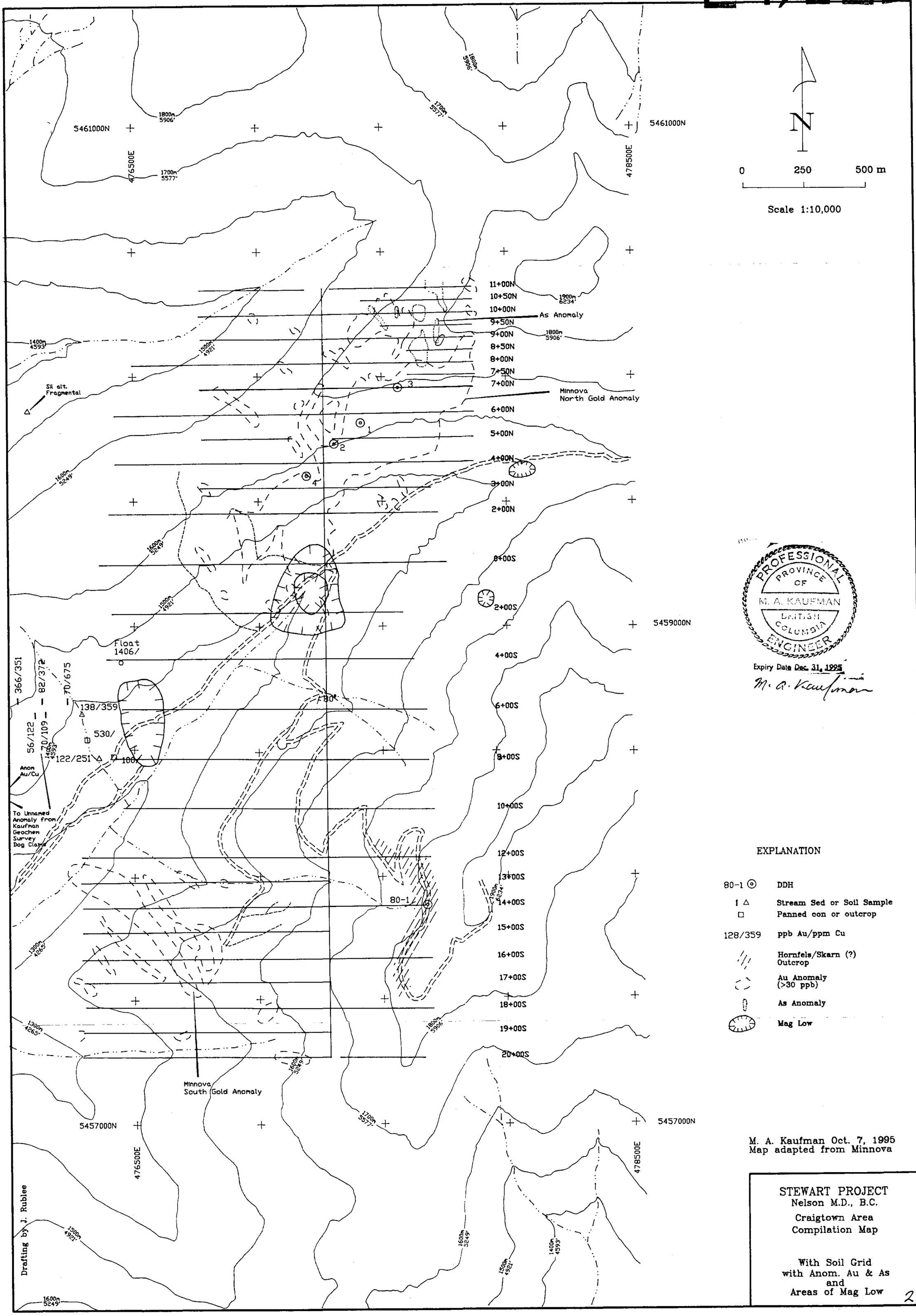
Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
QC DATA:																														
Resplit:																														
R/S 1	DEN209	205	<.2	1.58	25	45	<5	2.83	<1	20	43	151	5.09	<10	1.25	614	7	0.03	8	1570	4	<5	<20	79	0.09	<10	99	<10	<1	34
Repeat:																														
1	DEN209	180	<.2	1.55	30	40	<5	2.77	<1	20	38	152	4.96	<10	1.24	592	6	0.03	7	1570	6	5	<20	76	0.09	<10	98	<10	<1	35
10	DEN319	70	<.2	1.14	15	15	<5	2.35	<1	16	53	128	4.05	<10	1.12	740	5	0.03	14	1280	14	<5	<20	124	0.04	<10	76	<10	3	53
19	DEN425	-	<.2	2.75	15	25	<5	4.51	4	27	33	112	6.24	<10	2.32	1030	6	0.02	20	1760	258	5	<20	271	0.02	<10	151	<10	<1	588
Standard:																														
GEO'95		150	1.2	1.63	80	160	<5	1.60	<1	17	53	82	3.76	<10	0.87	663	<1	0.01	26	640	20	<5	<20	50	0.08	<10	68	<10	4	71

df/515D
XLS/95Kmisc.#5

ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer

23944	<5	.1	38	<10	15	160	<5	2
23945	<5	.1	38	<10	15	160	<5	2
23946	20	1.0	380	<10	20	1300	35	7
23947	<5	<.1	16	<10	3	79	<5	4
23948	<5	<.1	13	<10	3	60	<5	4





24,123

5461000N
476500E
478500E
1800m 5906'
1700m 5577'
1900m 6234'
1400m 4593'
1500m 4921'
1600m 5249'
1300m 4265'

11+00N
10+50N
10+00N
9+50N
9+00N
8+50N
8+00N
7+50N
7+00N
6+00N
5+00N
4+00N
3+00N
2+00N
0+00S
2+00S
4+00S
6+00S
8+00S
10+00S
12+00S
13+00S
14+00S
15+00S
16+00S
17+00S
18+00S
19+00S
20+00S

5459000N
5457000N

0 250 500 m

Scale 1:10,000

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
M. A. KAUFMAN

Expiry Date Dec. 31, 1995

M. G. Kaufman

EXPLANATION

Limit of Survey — Limit of Survey

STRONG +80MV/V | MODERATE 10–80MV/V | WEAK 5–10MV/V | NOT ANOM.

Relative Low Resistivity

Mag Low

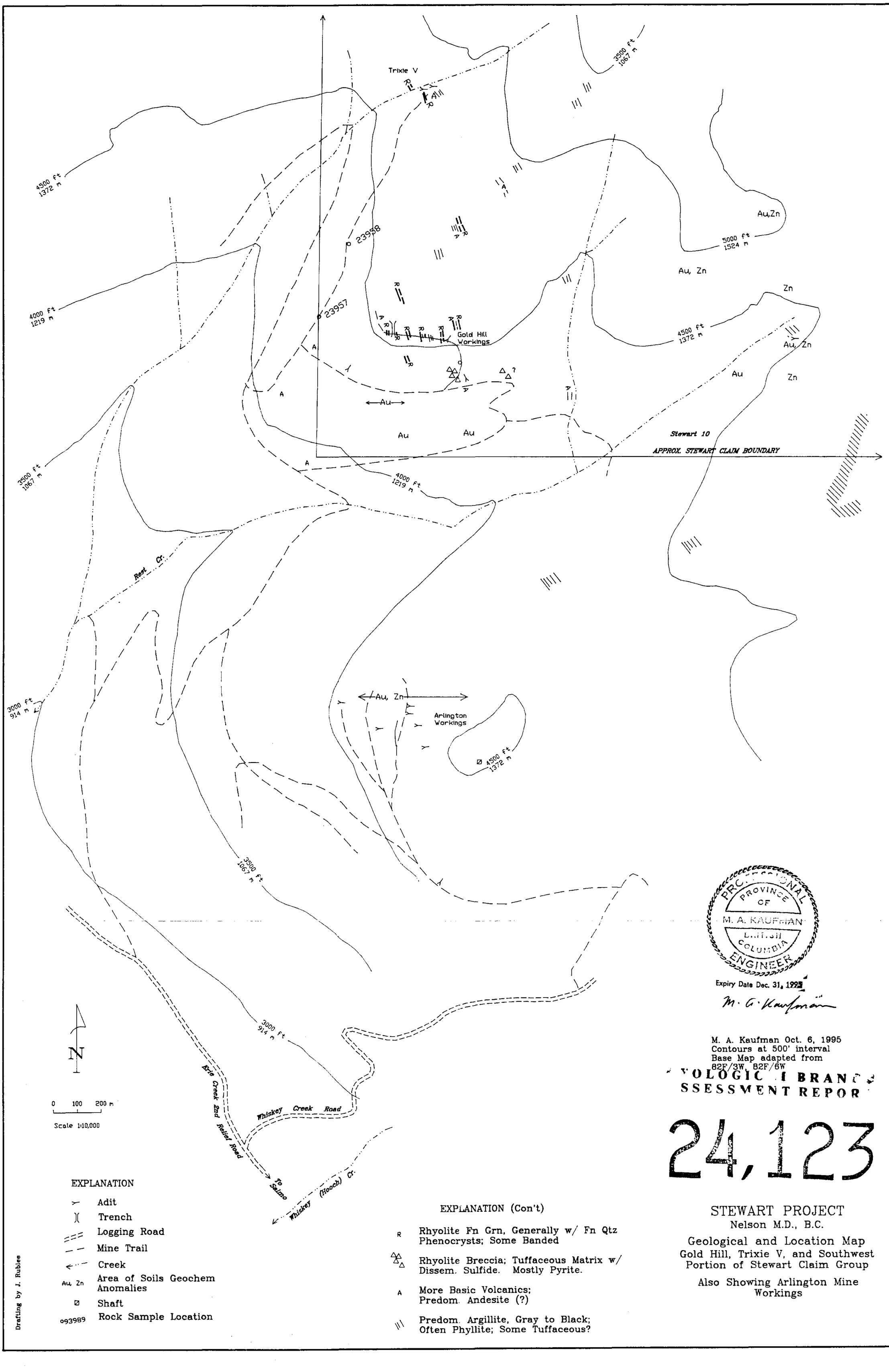
M. A. Kaufman Oct. 7, 1995
Map adapted from Minnova

Drafting by J. Rublee

STEWART PROJECT
Nelson M.D., B.C.
Craigtown Area
Compilation Map
I.P. Survey

Chargeability and Resistivity
and
Areas of Mag Low

3.



EXPLANATION

- Adit
- Trench
- Logging Road
- Mine Trail
- Creek
- Au, Zn — Area of Soils Geochem Anomalies
- Shaft
- 093989 — Rock Sample Location

EXPLANATION (Con't)

- R — Rhyolite Fn Grn, Generally w/ Fn Qtz Phenocrysts; Some Banded
- Rhyolite Breccia; Tuffaceous Matrix w/ Dissem. Sulfide. Mostly Pyrite.
- A — More Basic Volcanics; Predom. Andesite (?)
- Predom. Argillite, Gray to Black; Often Phyllite; Some Tuffaceous?

PROVINCE OF BRITISH COLUMBIA
M. A. KAUFMAN
PROFESSIONAL ENGINEER

Expiry Date Dec. 31, 1995

M. A. Kaufman Oct. 6, 1995
Contours at 500' interval
Base Map adapted from
82F/3W, 82F/6W

GEOLOGICAL BRANCH
ASSESSMENT REPORT

24,123

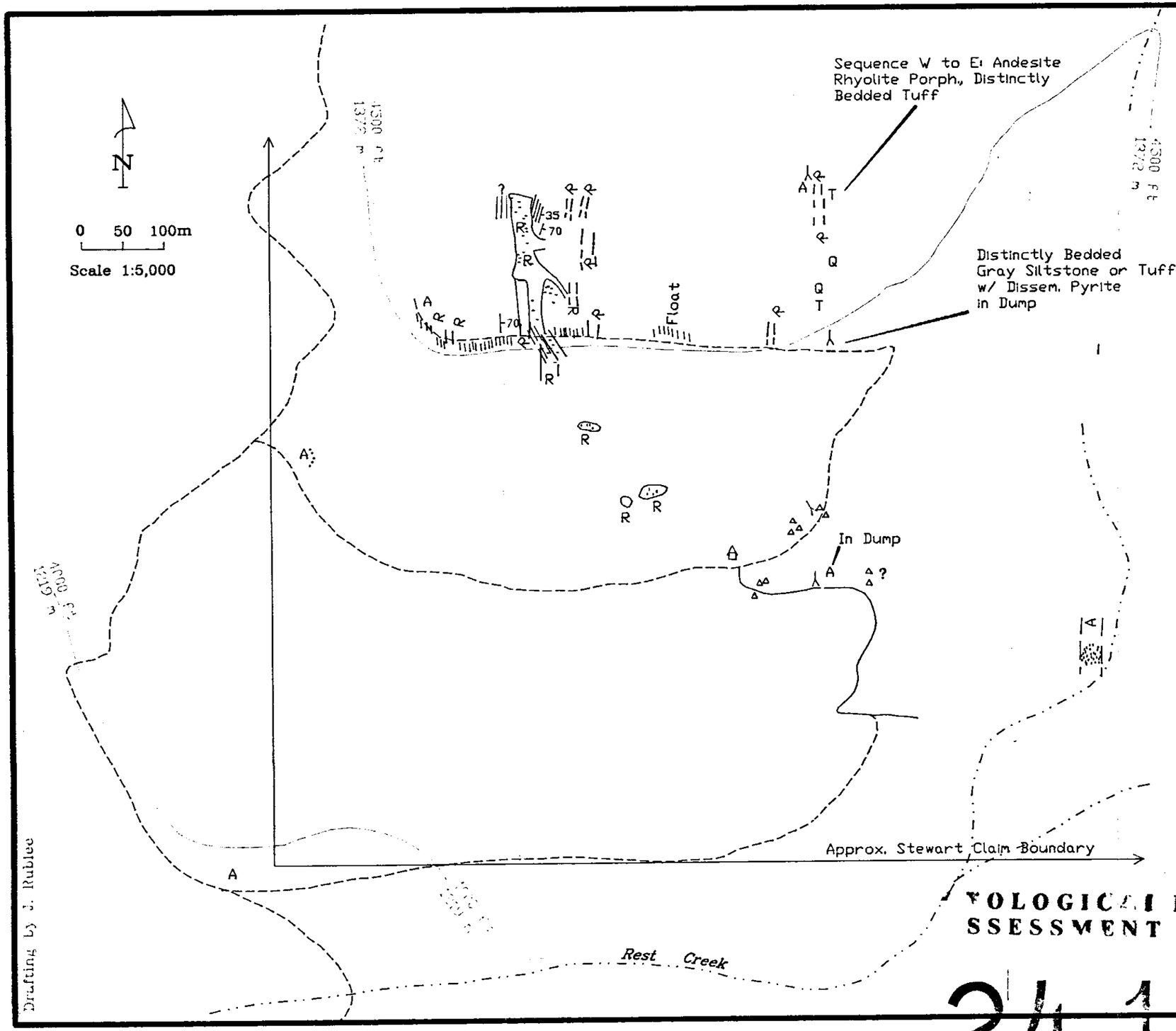
STEWART PROJECT

Nelson M.D., B.C.

Geological and Location Map Gold Hill, Trixie V, and Southwest Portion of Stewart Claim Group

Also Showing Arlington Mine Workings

Drafting by J. Rublee



EXPLANATION

- R — Rhyolite, Fn Grn., Generally w/ Fn Qtz Phenocrysts; some banded
- Rhyolite Breccia; Tuffaceous Matrix w/ Dissem. Sulfide, Mostly Pyrite
- Dissem. & Fracture Controlled Sulfides, Mostly Pyrite
- T — Banded Tuff, Light Colored, Distinct Bedding
- A — Andesite, Generally Gray
- Argillite; Generally Gray & Phyllitic
- Q — Mineralized Quartz Veins
- Adit
- Trench
- Trail
- Cabin
- Contour: 500' Interval
- Creek

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
M. A. KAUFMAN

Expiry Date Dec. 31, 1995

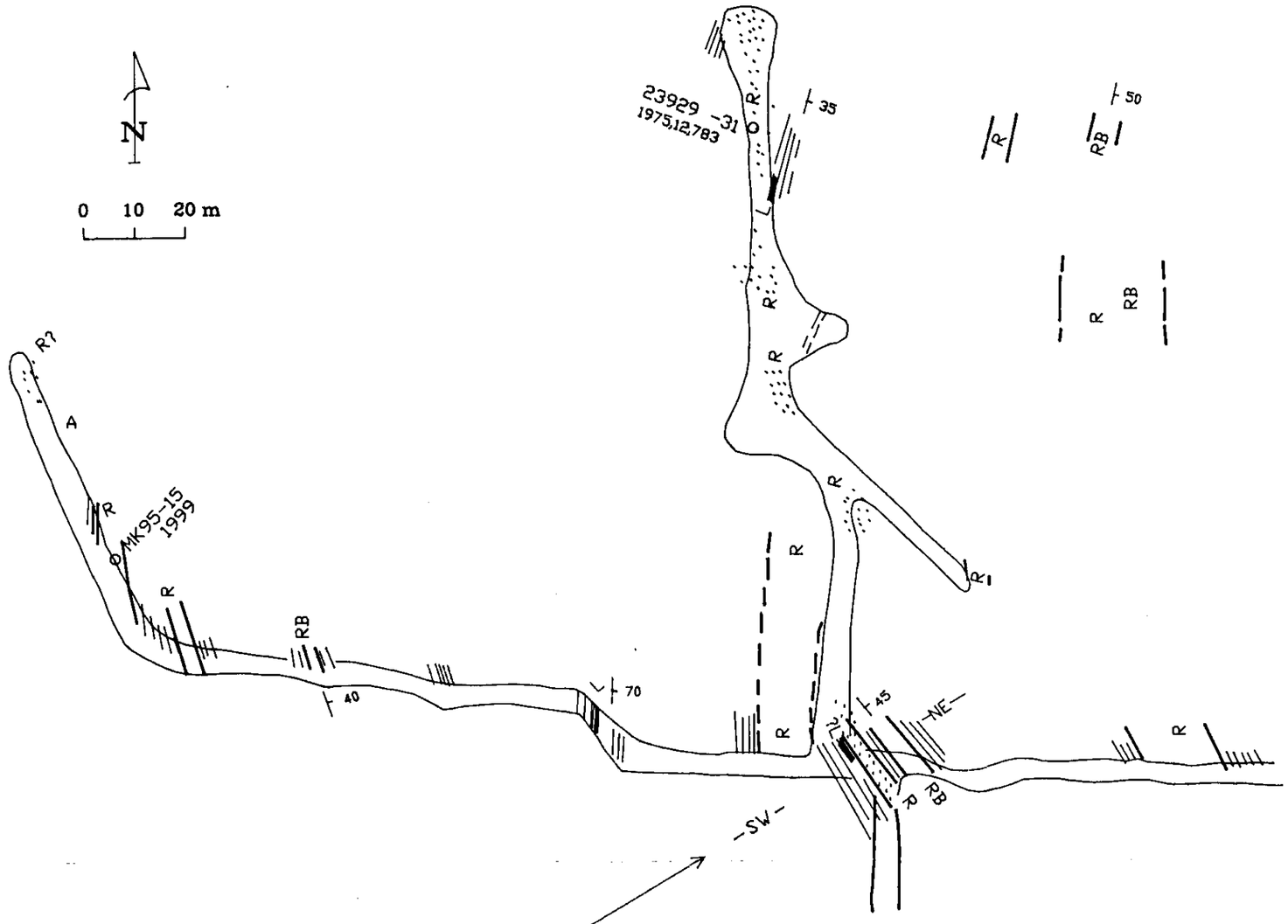
M. A. Kaufman October 4, 1995

STEWART PROJECT

Nelson M.D., B.C.

Geology
Gold Hill Area
M.I. 204

5a



EXPLANATION

- R — Rhyolite, Fn Grn., Generally w/ Fn Qtz Phenocrysts
- RB — Rhyolite w/ subtle to More Easily Distinquishable Banding (Bedding)
- Rhyolite Breccia
- Brecciated, Silicified and Mineralized; Mostly Pyrite. Lesser Pbs & Arsenopyrite
- A — Gray Andesite
- Argillite, Generally Gray and Phyllitic
- Massive (Limey?) Argillite Interbedded w/ Phyllite
- Mafic Dike
- Trail or Bulldozer Trench
- 23991 83 — Sample Location & No. Au (ppb)

23992,93
28, 8
R
Float

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PROVINCE OF BRITISH COLUMBIA
M. A. KAUFMAN
Expiry Date Dec. 31, 1995

M. A. Kaufman

GEOLOGICAL BRANCH
ASSESSMENT REPORT

24,123

M. A. Kaufman October 3, 1995

23991
83
R,RB,A
Float

R,RB
Float

STEWART PROJECT
Nelson M.D., B.C.

Geology
West Trench Area
Gold Hill
M.I. 204

Drafting by J. Rublee

5b.

(6)

SAMPLING RESULTS

Samp. No.	Metres	Au (ppb)
D-100	2	159
101	2	268
102	2	45
103	2	49
104	2	111
105	2	24
106	2	178
107	2	33
108	2	24
109	2	18
110	1.0	30
111	2	4
112	1.0	24
113	2	52
114	2	56
115	2	100
116	2	38
117	2	101
118	1.0	207
119	2	29
120	2	79
121	2	72
122	1.0	44
123	1.0	250
124	1.0	180
125	1.0	145
126	1.0	60
127	1.0	115

3935 ÷ 47
A1 84 Pro

LEGEND

Surface

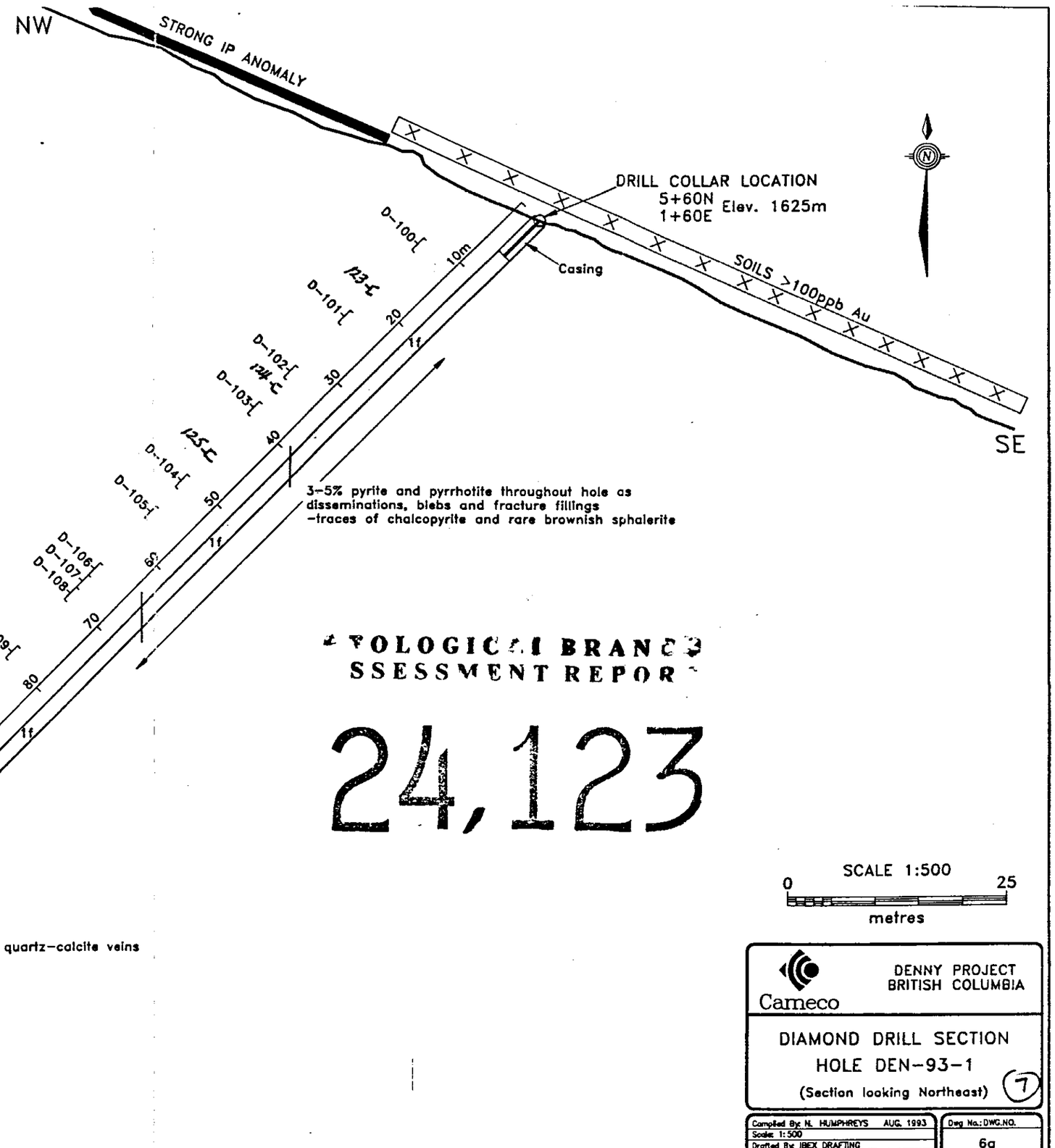
D-100 Drill Core Sample Interval

1f Andesite Lapilli Tuff – Breccia
- with minor ash tuff
- has generally weak patchy biotite hornfelsing and bleaching due to quartz-sericite-albite(?)

QFP Quartz Feldspar Porphyry
- unaltered

5c Lamprophyre Dyke

Narrow quartz-calcite veins



SCALE 1:500
0 25
metres

Cameco

DENNY PROJECT
BRITISH COLUMBIA

DIAMOND DRILL SECTION
HOLE DEN-93-1
(Section looking Northeast)

7

Compiled By: N. HUMPHREYS AUG. 1993	Dwg No.: DWG.NO.
Scale: 1:500	6a
Drafted By: IBEX DRAFTING	
Disposition:	

NW

DRILL COLLAR LOCATION
4+65N
0+35E Elev. 1590m

Casing

10m

3–5% po,py

rubbly, rusty core from 21.6–23.0
–coarse pyrite blebs and veinlets from 22.6–22.7
–from 21.6–23.0, 50% recovery

increase in pervasive sericite near contact

1f,g
3% py,po

2% py,po

1f,g

3–5% py,po

5c

3–5% py,po

1f,g
3–5% py

patchy bleached zones,3–5% py,po

1f,g
bedding 45°/CA

SOILS >100ppb Au

SE

D-200 D-201 D-202 D-203 D-204 D-205 D-206 D-207 D-208 D-209 D-210 D-211 D-212 D-213 D-214

20 40 50 60 70 80 90 100

SAMPLING RESULTS

Samp. No.	Metres	Au (ppb)
D–200	2	1868
201	2	316
202	2	143
203	1.0	39
204	2	31
205	2	124
206	2	22
207	2	37
208	2	42
209	1.0	185
210	1.0	355
211	1.0	45
212	1.0	60
213	1.0	25
214	1.0	58

5925 ÷ 23
m 256

LEGEND

Surface

D-100 Drill Core Sample Interval

1c — Fine–Grained Hornblende Diorite
–equigranular to weakly porphyritic
–weak patchy bleached zones of quartz–sericite–albite(?)

1c — Very Fine Grained Diorite

1c — Fine Grained Diorite
–weakly porphyritic with rounded feldspar phenocrysts

1f,g — Andesite Lapilli, Ash Tuff
–weakly to moderately sericitic
–local weak hornfelsing

5c — Lamprophyre Dyke

SCALE 1:500
0 25
metres

Cameco

DENNY PROJECT
BRITISH COLUMBIA

DIAMOND DRILL SECTION
HOLE DEN–93–2
(Section looking Northeast) (8)

Compiled By: N. HUMPHREYS AUG. 1993	Dwg No.: DWG.NO.
Scale: 1:500	6b
Drafted By: IBEX DRAFTING	
Disposition(s):	

SAMPLING RESULTS

Samp. No.	Metres	Au (ppb)
D-300	2	69
301	2	34
302	2	86
303	2	111
304	1.8	35
305	2	29
306	2	52
307	2	63
308	2	47
309	2	84
310	2	93
311	2	156
312	2	149
313	1.0	75
314	2	163
315	2	141
316	.5	300
317	1.0	55
318	1.0	95
319	.5	65
320	1.0	100
321	1.0	80

3-204 ÷ 35.8

A1 39

LEGEND

Surface

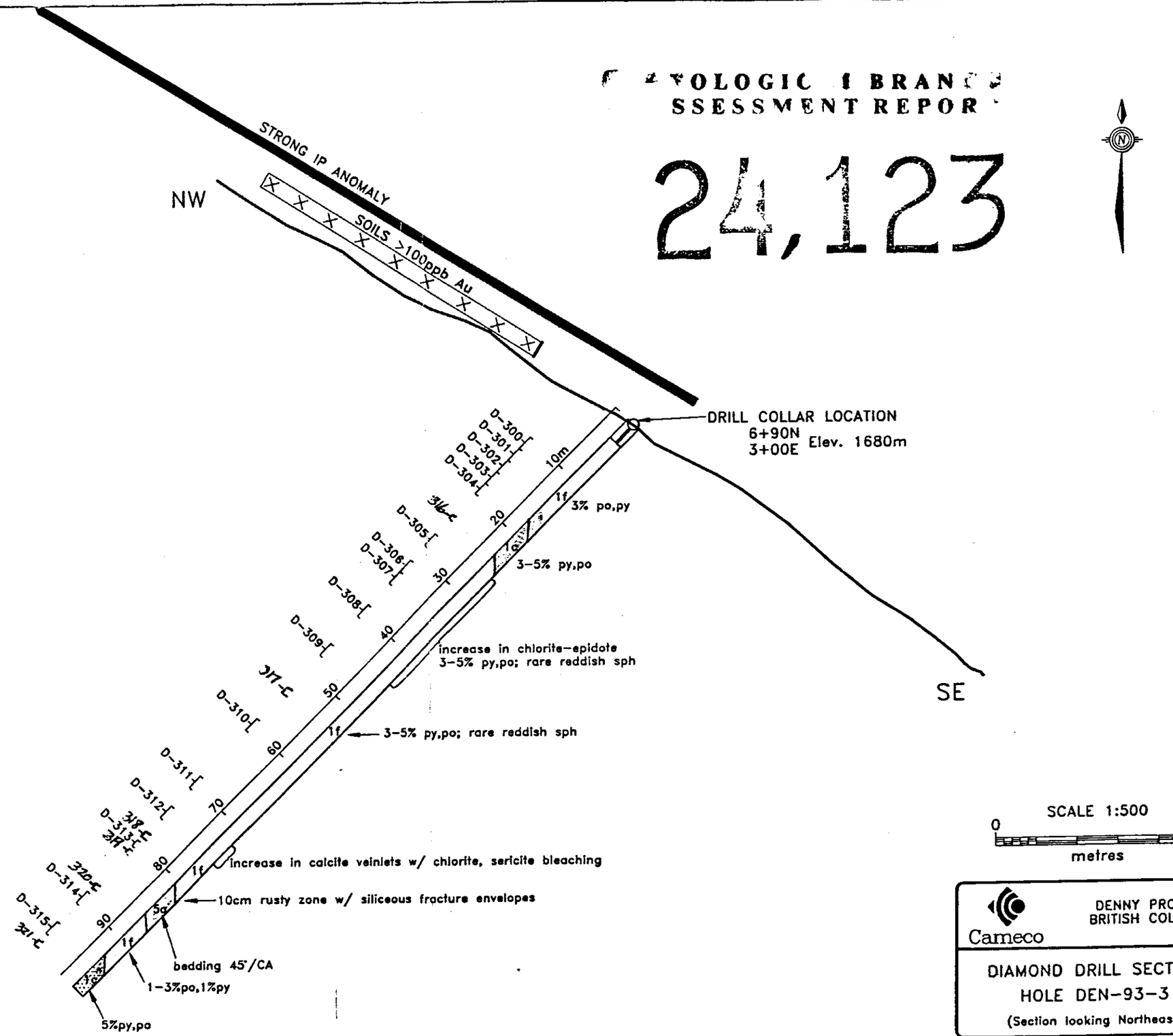
D-100 Drill Core Sample Interval

1c Fine-Grained Diorite
- equigranular to weakly porphyritic
- weak patchy bleached zones of quartz-sericite-albite(?)

Porphyritic Diorite
- pseudo brecciated look in places
- patchy silicification(?) at top

1f Andesite Lapilli Tuff
- common pale greenish silicified and/or albitized(?) patches
- weak biotite hornfelsing

5a Rhyolite Ash Tuff



SCALE 1:500
0 25
metres

Cameco

DENNY PROJECT
BRITISH COLUMBIA

DIAMOND DRILL SECTION
HOLE DEN-93-3
(Section looking Northeast) (9)

Compiled By: N. HUMPHREYS AUG. 1993	Dwg No.: DWG.NO.
Scales: 1:500	6c
Drafted By: IBEX DRAFTING	
Disposition(s):	

SAMPLING RESULTS

Samp. No.	Metres	Au (ppb)
D-400	2	175
401	2	59
402	2	39
403	2	44
404	2	59
420	0.5	286
421	0.5	180
422	0.5	395
423	0.5	18
405	1.0	24,854
406	2	75
407	1.0	207
408	2	158
409	2	171
410	2	24
411	2	25
412	2	24
413	2	32
414	2	9
424	1.0	65
425	1.0	15
426	1.0	15
427	1.0	50

27,133 ÷ 34
Av. 806

LEGEND

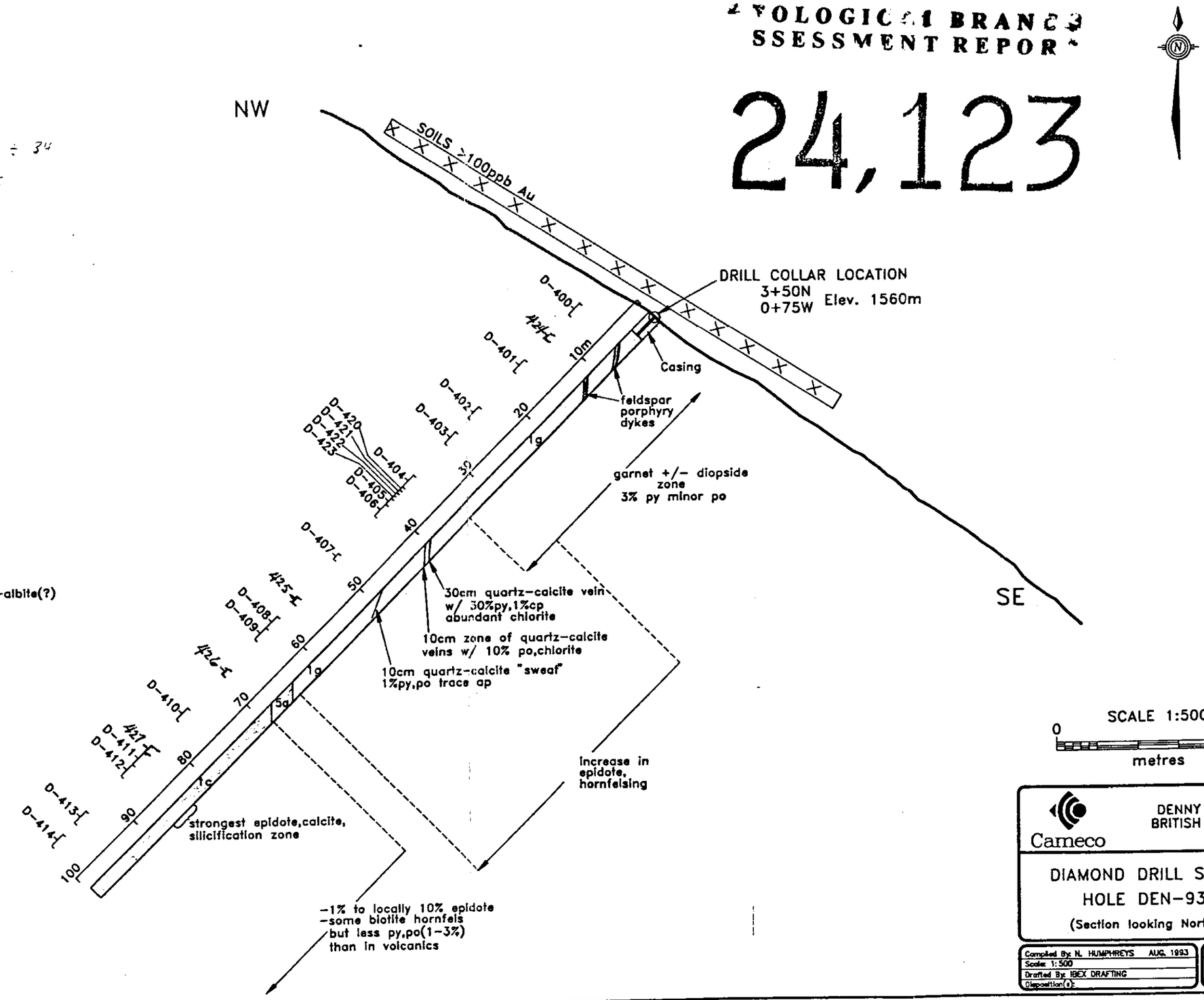
Surface

D-100 Drill Core Sample Interval

1c Porphyritic Diorite
-1-5% epidote, minor siliceous-albite(?) bleaching, biotite hornfelsing

5a Rhyolite Tuff

1g Skarnified Ash Tuff
-siliceous, greenish with minor biotite hornfels; variable garnet-diopside clots



SCALE 1:500
0 25
metres

Carneco

DENNY PROJECT
BRITISH COLUMBIA

DIAMOND DRILL SECTION
HOLE DEN-93-4
(Section looking Northeast) (10)

Compiled By: N. HUMPHREYS AUG. 1993	Dwg No.: DWG.NO.
Scale: 1:500	6d
Drafted By: IBEX DRAFTING	
Disposition(s):	

FLOAT

CENTER MAG LOW

EL 4850' BASALT, MINOR FELSIC DIKES, MINOR SULFIDE IN DIKES

CRAIGTOWN CR

EL 4450' GRANITIC INTRUSIVE FLAT, ABUNDANT DISSEM PY, TR CPY

EL 4460' BASALT AND FN GRN FELSIC INTRUSIVE, MINOR SULFIDES

EL 5030'

ANOM AU/CU

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Expiry Date Dec. 31, 1995

M. A. Kaufman

B/L

4+00S

6+00S

8+00S

10+00S

12+00S

14

16

18

20+00S

1000 W

800 W

600 W

400 W

200 W

0

50M

100M

CRAIGTOWN CR.
SOUTH GRID - GOLD SOILS

>30 PPB

>100 PPB

NUMBERS ON LINE ARE AU GEOCHEM PPB

M. A. KAUFMAN
08/11/95

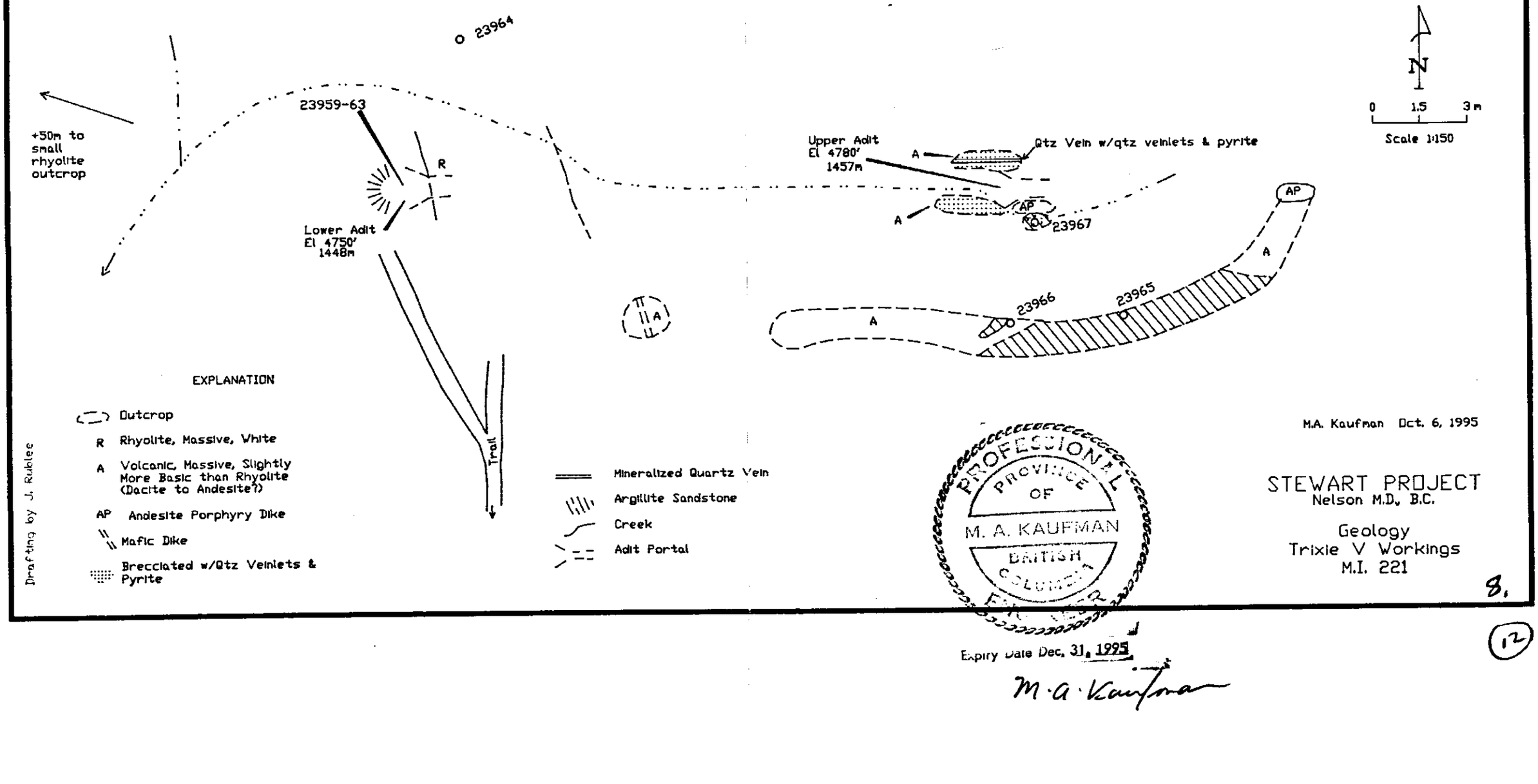
00 EAST

N

(11)

7.

IP CHARGEABILITY
STRONG
MODERATE
POSSIBLE
LOW RESISTIVITY
65/250 AUPPB/CUPPM
SOIL
STREAM SED PANNED CN
ROCK



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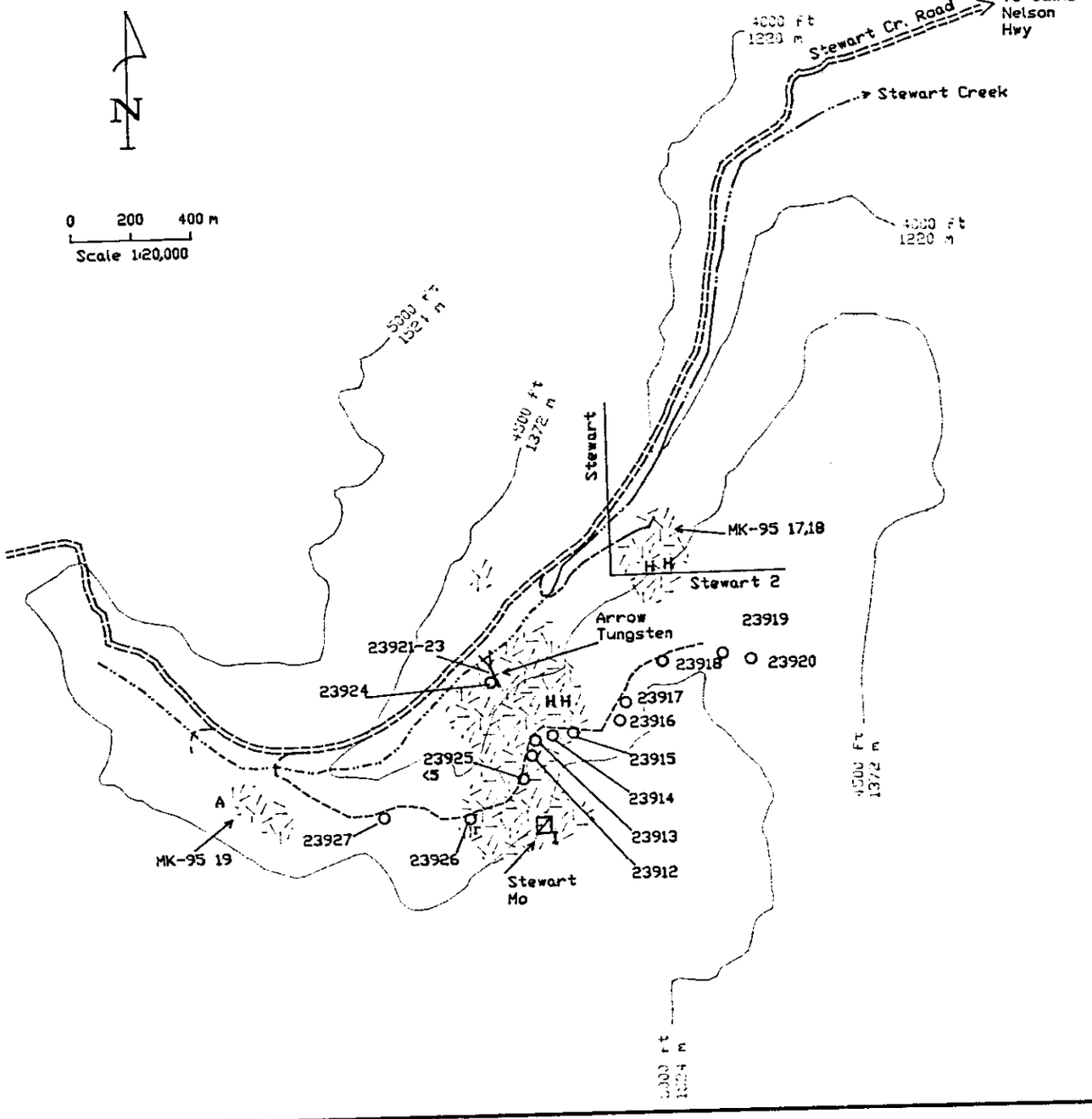
(12)



Drafting by J. Rubiee

M. A. Kaufman Oct. 6, 1995

Base Map after B.C. EMPR Open File 1988-1

EXPLANATION

I	Granitic Intrusive Altered to Hornfels w/ minor skarn
HH	Hall Fm. Sediments
A	Elise Fm. Andesite
	Area of Dissem. & Fracture Controlled Sulfides
	Trail
	Creek
	Shaft
	Adit
O 23920	Rock Sample Location & No.

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Expiry date Dec. 31, 1995

M. A. Kaufman

STEWART PROJECT

Nelson M.D., B.C.

Arrow Tungsten
Stewart Mo Prospect Area
M.I. 229, 311

9.

(13)

ASPA INDUSTRIES BOUNDARY (APPROX.)
WEST GRID
EAST 'B' GRID
10+00W
B.L. 0+50 W
SLH 8+00E
SLG
SLC
SLF
61+00 N
56+00 N
58+50 N
57+50 N
56+50 N
55+50 N
SLB (SLJ)
SLJB
53+00 N
52+40 N
SLE
52+00 N
SLK
SLL
SLW
SLV
SLT
SLS
SLD
SLM
SLN
SLP
SLA
SLR
Caved portal
Mine dump &
caved portal
Gold Hill
dump
REST CREEK
Road
AU +30 ppb
+100 ppb
LEGEND
Soil sample location
Cat. trench
80,1040 Au in ppb, Zn in ppm - 1986 (Au) 20 ppb shown as -)
25,365 " " " , " " " - 1987
N
GEOLOGICAL BRANCH
ASSESSMENT REPORT
24,123
LACANA MINING CORPORATION
CANADIAN MINERALS JOINT VENTURE (1980)
REST CREEK – GOLD HILL AREA
Au, Zn GEOCHEMISTRY
NELSON M.D., B.C.
0 100 200 400 metres
14
PREPARED D.J.
DATE AUG.1987
SCALE 1:5000
PROJECT
MAP SHEET 82F-6
FIGURE 10.

ASPA INDUSTRIES BOUNDARY (APPROX.)

WEST GRID

EAST 'B' GRID

10+00W

B.L. 0+50 W

SLH 8+00E

SLG

SLC

61+00 N

58+50 N

57+50 N

56+50 N

55+50 N

SLB (SLJ)

SLJB

53+00 N

52+40 N

SLE

52+00 N

SLK

SLL

SLF

SLW

SLV

SLT

SLS

SLD

56+00 N

SLM

SLN

SLP

SLA

SLR

Tuile V

Mine dump B caved portal

Tuile IV

Caved portal

Gold Hill dump

REST CREEK

Road

+ 700 PPM Zn
+ 1000 PPM Zn

LEGEND

Soil sample location

Cat. trench

80, 1040 Au in ppb, Zn in ppm – 1986 (Au) 20 ppb shown as –)

25,365 " " " , " " " – 1987

N

MINING CORPORATION

CANADIAN MINERALS JOINT VENTURE (1980)

REST CREEK – GOLD HILL AREA
Au, Zn GEOCHEMISTRY

NELSON MD., B.C.

0 100 200 400 metres

15

PREPARED	DATE	SCALE	PROJECT	MAP SHEET	FIGURE
D.J.	AUG. 1987	1:5000		82F-6	11.

CHONG