

GEOPHYSICAL REPORT MAGNETIC SURVEY

on the



NEWTON MINERAL CLAIMS

CLINTON MINING DIVISION

BRITISH COLUMBIA

NTS 92 0/13E

51 ° 48 ' N. LATITUDE 123 ° 37 ' W. LONGITUDE

for

VERDSTONE GOLD CORPORATION

#310-1959-152nd Street Surrey, BC V4A 9E3

by

R.M. Durfeld, B.Sc., P.Geo.

NOVEMBER 1993

TABLE OF CONTENTS

Page

,

1.)	INTRODUCTION	1
2.)	LOCATION	1
3.)	ACCESS AND PHYSIOGRAPHY	1
4.)	OWNERSHIP	3
5.)	HISTORY	5
6.)	GEOLOGY	7
A.	Regional Geology	7
в.	Newton Property Geology	8
	Structure	9
	Alteration	10
	Mineralization	11
7.)	GEOPHYSICAL SURVEY - GROUND MAGNETIC SURVEY	11
А.	Field Procedure and Data Collection	11
в.	Results	12
8.)	CONCLUSIONS	12
9.)	COST STATEMENT	14
10.)	REFERENCES	15
11.)	STATEMENT OF QUALIFICATIONS	16

•

.

,

# ILLUSTRATIONS

,

Figure 1	NEWTON PROPERTY LOCATION MAP	(1:	750,000)
Figure 2	NEWTON PROPERTY CLAIM MAP	(1:	50,000)
Figure 3	GEOLOGICAL PLAN	(1:5,000)	Attached
Figure 4	GEOPHYSICAL PLAN TOTAL MAGNETIC FIELD (GAMMAS)	(1:5,000)	Attached
Figure 5	GEOPHYSICAL PLAN CONTOURED MAGNETICS (GAMMAS)	(1:5,000)	Attached

, ,

٠

#### 1. INTRODUCTION

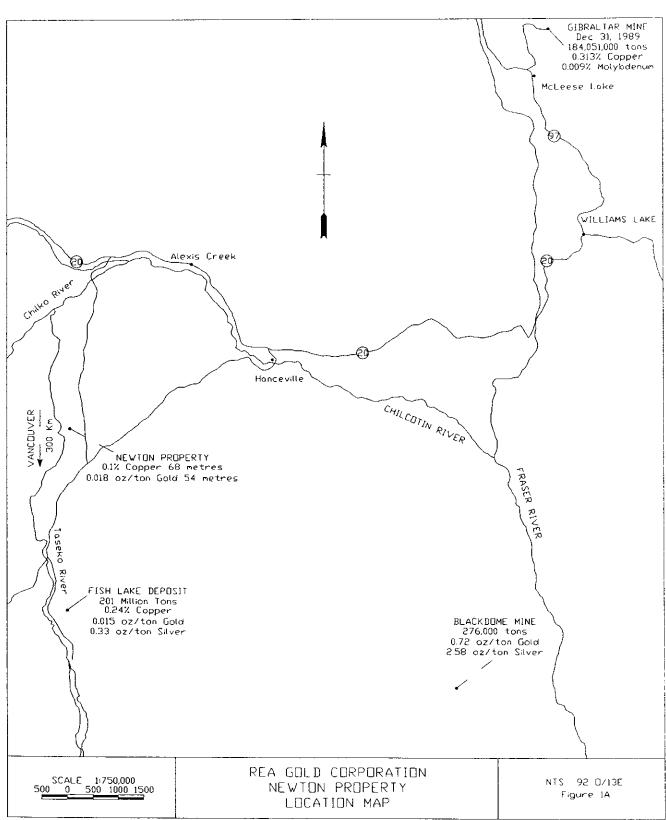
During the period May 1st to May 15th, 1993 a ground magnetic surveywas conducted on the Newton property. This report documents the results of this survey and compiles them with the results of previous surveys.

## 2. LOCATION

The Newton claims are located (Figure 1) in the Clinton Mining Division, British Columbia, approximately 37 kilometres westsouthwest of the community of Hanceville and 105 kilometres west-southwest of the city of Williams Lake. The claims are centered at 51 degrees 48 minutes north latitude and 123 degrees 37 minutes west longitude (NTS map sheet 920/13E).

#### 3. ACCESS AND PHYSIOGRAPHY

The Newton property is readily accessible from Williams Lake by two different routes. The first follows Highway 20 to Hanceville where the Taseko Lake access road branches off to the southwest. At approximately 48 kilometres (30 miles) on the Takeko Lake road, a rough four-wheel-drive trail to Scum Lake branches northwest, and after 8 kilometres (5 miles) bisects the Newton property from the south. The second route follows Highway 20 for approximately 120 kilometres (75 miles) west from Williams Lake, where the Weldwood 7000 logging road branches off to the south, crossing the Chilko River at the Siwash Bridge. Recent extensions of the 7000 road end at 37 kilometres (22.2 miles), from where four-wheel-drive trails trails and a bulldozed seismic line provide good access on the property.



- 2 -

٠ د

.

,

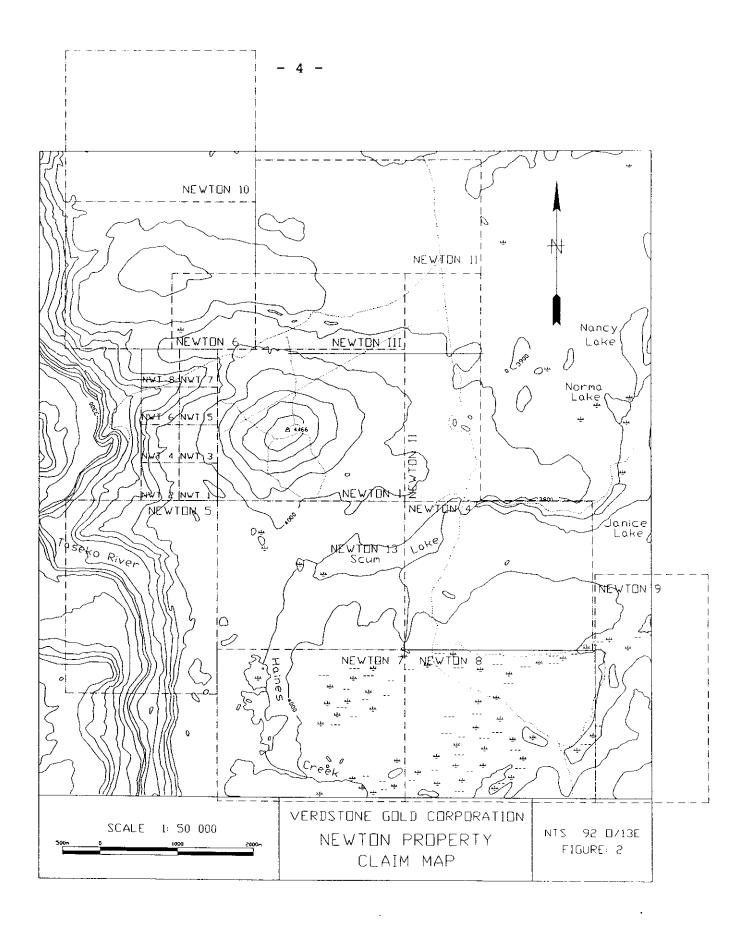
The physiography of the Newton property is dominated by Newton Hill, a circular hill some four kilometres in diameter, which protrudes about 150 metres (500 feet) above the surrounding Fraser Plateau. Elevations on the property range from 1200 metres (3950 feet) at Scum Lake to 1361 metres (4466 feet) at the summit of Newton Hill.

Vegetation on the Newton property is characterized by open, mature forests of Douglas fir at higher elevations and lodgepole pine at lower elevations with willow in swampy areas. The understory consists largely of grasses with occasional juniper bushes.

## 4. OWNERSHIP

The Newton property consists of 12 contiguous modified grid mineral claims and 8 2-post claims, totalling 228 units and covering 5700 hectares (14,085 acres). The status of the claims is summarized below and the relative claim locations are outined on the Claim Map at a scale of 1:50,000 (Figure 1B). The year of expiry reflects all the work that has been applied to the claims to date.

CLAIM NAME	RECORD	NUMBER OF	DATE OF	YEAR OF
	NUMBER	UNITS	RECORD	EXPIRY
NEWTON I	208327	20	09/14/87	1995
NEWTON 2	208573	12	10/09/88	1995
NEWTON 3	208574	12	10/11/88	1995
NEWTON 4	209337	20	02/05/91	1995
NEWTON 5	209338	20	02/06/91	1995
NEWTON 6	209339	20	02/05/91	1995
NEWTON 7	300211	20	02/05/91	1994
NEWTON 8	300212	20	02/05/91	1994
NEWTON 9	300213	18	02/05/91	1994



• •

NEWTON	10	300214	20	02/05/91	1994
NEWTON	11	300215	18	02/05/91	1994
NEWTON	13	314549	20	02/05/91	1994
NWT	1	313481	1	09/25/92	1994
NWT	2	313482	1	09/25/92	1994
NWT	3	313483	1	09/25/92	1994
NWT	4	313484	1	09/25/92	1994
NWT	5	313485	1	09/25/92	1994
NWT	6	313486	1	09/25/92	1994
NWT	7	313487	1	09/25/92	1994
NWT	8	313488	1	09/25/92	1994

Rea Gold Corporation and R.M. Durfeld are the registered owner of the Newton mineral claims.

## 5. HISTORY

A description of the property area is first given in the 1916 B.C. Department of Mines report which documents a Mr. Newton working on Newton Hill and obtaining gold assays of \$1 to \$3 per ton (ie. up to 0.1 ounces per ton). His work is still evident: both the Newton Shaft, a small shaft near the top of Newton Hill, and some open cuts remain. Mr. Newton probably accessed Newton Hill from his ranch to the north, the Newton Place, which is located just north of the Siwash Bridge.

The claims on Newton Hill were held by several people after Newton's time, but the first documented work was in 1971 and 1972, was by Cyprus Exploration Corporation, who conducted geological mapping, induced polarization and magnetometer surveys followed by drilling of 10 B.Q. diamond drill holes totalling 1615 metres (5300 feet). The objective of this

- 5 -

program was to explore for a supergene enriched, porphyry copper deposit. Feldspar porphyry intrusives with related hydrothermal alteration and a leached cap up to 30 metres (100 feet) thick were investigated. The induced polarization survey indicated a large zone around Newton Hill interpreted to contain 5% sulphide mineralization. The diamond drill holes were collared to test these high sulphide zones and the copper grades encountered were low and the claims were permitted to lapse.

1981, Taseko Mines Limited acquired the Ski claims, In covering the Newton property and the surrounding area. In 1982, Taseko drilled 8 percussion and 4 diamond drill holes on the property. These drill holes, collared to test the outer portions of the anomalous induced polarization zones, are along the southern and western property boundary. The results this work are discussed in Assessment Report 11,001. of Diamond drill hole 82-3, just inside the southern claim boundary, showed one 3 metre (10 foot) section of core to assay 1028 ppb gold.

Parts of the Ski claims subsequently lapsed and were then acquired by R. M. Durfeld in 1987 and 1988 as the Newton I, Newton #2 and Newton #3 mineral claims. New potential for an economic gold and/or copper deposit was seen. Initially, 82 soil samples and 129 rock samples (outcrop and 1972 drill core) were collected and analyzed for gold and pathfinder elements. This work showed two 3 metre (10 foot) sections of core in hole 72-6 to contain 2300 and 2790 ppb gold respectively. The orientation soil survey resulted in several zones which are anomalous to strongly anomalous in gold (up to 580 ppb) and mercury.

In 1989, Rea Gold Corporation entered into an option -

agreement with Messrs. R. M. Durfeld and A. J. Schmidt to acquire a 100% interest in the Newton property. Subsequent work by Rea Gold and Verdstone Gold on the expanded Newton property has consisted of geochemical (rock and soil), trenching, induced polarization and diamond drilling.

A compilation of these previous results suggested some of the high copper and gold values being related to a magnetic biotite feldspar porphyry. This report compiles the results of a 19 kilometre magnetic survey with previous geological information.

#### 6. GEOLOGY

## A. Regional Geology

The regional geology of the Scum Lake area was mapped by H. W. Tipper of the Geological Survey of Canada and is published as Open File 534. This work shows the volcanic and clastic rocks of the Upper Cretaceous Kingsvale Group to be unconformably overlying a basement of Mid-Jurassic granitic rocks. Eocene felsic stocks, dykes and related volcanics intrude and overlie all rocks excepting the younger Miocene Age plateau basalts of the Chilcotin Group. The limited outcrop in the property area is masked by these Miocene plateau basalts and glacial drift of Quaternary Age.

The dominant structural trend is northwesterly, parallel to the Yalakom and Chilcotin transcurrent faults, which lie south and north of the property respectively. Emplacement of the Newton Hill intrusions was controlled by this northwesterly structure, along with weaker northeasterly, easterly and north-south structures. Strong linear features on the flanks

- 7 -

of Newton Hill are visual evidence for these structures. The probably hill is topographic dome. related the а to emplacement of the intrusive rocks. The Taseko River, immediately to the west of the Newton property, shows sharp northwesterly and northeasterly displacements from a regional north-south trend, further supporting the presence of strong structures in these directions.

Prominent grooves show the direction of glacial movement to be north-northeast.

## B. Newton Property Geology

The initial 1:5000 scale geological mapping was done in conjunction with the grid soil sampling and is based on mapping of limited outcrop exposures and subcrop areas, as well as the prospecting of angular, local float from soil sample pits. Extensive Quaternary glacial till covers the flanks of Newton Hill and the surrounding Fraser Plateau. Mapping ofsurface trenches in 1991 and 1992 and diamond drilling has modified the lithological contacts on the 1:5000 Geology map (Figure 3).

All rocks mapped on Newton Hill have undergone extensive hydrothermal alteration, making recognition of primary textures and compositions difficult.

The oldest rocks in the area, as Mid-Jurassic granodiorite and andesite, lie immediately west of the Newton property on the banks of the Taseko River.

The Upper Cretaceous Kingsvale Group (Kv), formed by processes of continental sedimentation and volcanism, occurs on the

Newton property as siltstone (SS), sandstone (SD), conglomerate (CNG) and intercalated tuffs (LAP). Positive identification of the Kingsvale Group rocks is often difficult due to strong hydrothermal alteration.

Kingsvale rocks have subsequently been The intruded by irregular dykes, sills and stocks of Eocene age (Ef). The Eocene intrusions are felsic in composition showing variation in texture and accessary minerals. The intrusions are often porphyritic in feldspar (F), quartz (Q) and/or biotite (B) showing both compositional and textural variation. These porphyries were mapped as quartz feldspar, quartz eye or granites representing a quartz saturated magma. A medium grained biotite feldspar porphyry of monzonite composition shows no free quartz.

Megascopically, the Eocene intrusions occur as eastnortheasterly trending dykes, sills or stocks with interfingered bands of Kingsvale Group rocks. Detailed mapping modifies these intrusive contacts, but also shows smaller dyke swarms with northeasterly and northwesterly trends.

#### Structure

The strongest faults and structures in the Newton property area are northwesterly (Yalakom and Chilcotin Faults), with weaker northeasterly, easterly and northerly structures. Faults and joint sets in the property area are parallel to these major structural trends. The two most prominent structures are northwesterly trending faults and joints dipping steeply to the southwest, and easterly trending faults and joints dipping steeply to the north. These are most evident in the short shaft that is located just east of the summit of Newton Hill. Here, these joint sets are associated with small-scale shears or faults indicated by slickensides and narrow, 30-centimetre, fault breccia zones consisting of subangular clasts to lcentimetre in a fine grained strongly limonitic matrix. The east-west distribution of the Eocene feldspar porphyry intrusions suggests that their emplacement was controlled by the east-west structures. Some of the weaker joints form a more random to concentric pattern and may reflect the emplacement of the intrusives.

## Alteration

The mapped hydrothermal alteration shows as a 1 kilometreradius area centred on Newton Hill. The alteration products mapped were sericite, kaolinite and quartz as veining or silica flooding. Sericite and kaolinite are usually present, with sericite alteration being the most intense and extensive. Kaolinite alteration is strongest in zones of silicification and fracturing. In trenches one and two, a light green to yellow, soft, waxy mineral occuring as 1 to 2 centimetre thick veins has been identified as pyrophyllite. Secondary chlorite was noted in sections of andesitic to mafic Kingsvale rocks.

The Newton property shows strong surface weathering. Oxidation is present in diamond drill holes to depths of 30 metres (98 feet). This weathering is evident in surface samples as relic pyrite grains in areas of euhedral pyrite casts. Some of the bleached bedrock may be due to sulphuric acid development during the weathering of this pyrite. Evidence of this oxidation has been mapped as hematite and jarosite.

## Mineralization

Pyrite was noted in only a few locations on the Newton property. Disseminated pyrite appears to comprise a maximum of 5% of the original rock, including the pyrite casts. Previous drilling, however, indicates that oxidation and leaching are almost complete to a depth of 30 metres, and that below this level, disseminated pyrite is ubiquitous, comprising from less than 1% to 10% of the rock.

The only evidence of copper mineralization on surface was trace turquoise. A thin supergene enriched layer immediately below the oxidized cap returned assay values to 0.2% copper in drill core.

Accessary magnetite was disseminated in the Biotite Feldspar Porphyry and the less altered Kingsvale volcanic lithologies. It was therefore felt that a ground magnetic survey may be of assistance in mapping contacts in areas of extensive cover.

## 7.) GEOPHYSICAL SURVEY - GROUND MAGNETIC

## A. Field Procedures and Data Collection

Nineteen kilometres of soil grid were rehabilitated and using 'Scintrex surveyed а MP-2 Proton Precession Magnetometer'. Total magnetic field readings were taken at 25 metre intervals on lines 100 metres apart. A central base station was established and reread at requrlar intervals to determine the diurnal variation. All readings were corrected for this diurnal variation and and transferred to a computer data base. Digital data was exported from this data base, and relative plots generated, and plotted through autocad. The · 'Geophysical Plan / Total Magnetic Field (Gammas)', figure 4, gives the station location with the total magnetic field. The 'Geophysical Plan / Contoured Magnetics (Gammas)', figure 5, was generated by running the digital magnetic data through a contouring program.

## B. Results

The Contoured Magnetics, Figure 5, show a series of magnetichighs in a crude circle around a relative low that is centred on Newton Hill. The geology suggests that the magnetic low corresponds to strong altered and silicified sediments and volcanics of the Kingsvale group. The magnetic high features at 95+00E and 100+25N, and 98+00E and 102+00N are correspond to a magnetic biotite feldspar porphyry. Several of the other magnetic highs corresponded to less altered magnetic andesite in the area of 100+50E and 99+50N.

## 8.) CONCLUSIONS

The Newton property is underlain by volcanic and clastic rocks of the Upper Cretaceous Kingsvale Group, which were intruded by plutonic biotite feldspar porphyry and felsic hypabyssal rocks as irregular dykes, sills and stocks. The intrusive rocks represent calc-alkaline (quartz saturated) magmatism of probable Eocene Subsequent age. strong hydrothermal alteration, probably related to the Eocene intrusives, has altered all rocks within a one kilometre (0.6 mile) radius of Newton Hill to sericite and kaolinite. The silicification, pyritization and gold-copper mineralization are probably related to this alteration event. Extensive steep-dipping fractures and faults are present in all rocks parallel to the . regional northwesterly, north-easterly, easterly and northerly structures. A zoned high level porphyry to epithermal coppergold target best fits the Newton property.

Trench90-2 cut altered and magnetic biotite feldspar porphyry that ran 0.1% copper and 264 ppb gold over 68 metres (223 feet), which is also in the magnetic high feature at 95+00E and 100+25N. The foregoing suggests that other magnetic highs of this survey may correspond to other mineralized occurences of magnetic biotite feldspar porphyry.

Additional work on the Newton property should focus evaluating additional magnetic high features as possibly corresponding to a mineralized magnetic biotite feldspar porphyry. 9.) COST STATEMENT

Technical Staff R.M. Durfeld (Manager - Instrument Man) \$ 1,400.00 May 4 to 6 and 10 4 days @ \$350 B. A. Forseille (Field Assistant) May 4 to 6 3 days @ \$220 660.00 Tony Bains (Field Assistant) May 10 and 11 2 days @ \$220 440.00 Room and Board 9 mandays @ \$50 450.00 Truck Rental 4 days @ \$50 200.00 Report Preparation, Compilation and drafting 900.00

Total Cost

\$ 4,050.00

Dated at Williams Lake, British Columbia this 1st day of December 1993

## 10.) REFERENCES

Adamson, R.S. (1981): Preliminary Airphoto Geology of the Scum Lake Area.

Durfeld, R.M. (1988): Geochemical and Geological Report on the Newton Mineral Claims. Assessment Report

Schmidt, A.J. (1989): Geochemical Report on the Newton Mineral Claims. Assessment Report

Simpson, J.G. (1973): Scum Lake Project - Exploration and Diamond Drill Program 1972.

Tipper, H.W. (1978): Geology Taseko Lake (920) Map Area, Geological Survey of Canada Open File 534.

Wolfhard, M.R. (1976): Fish Lake - Porphyry Deposits of the Canadian Cordillera, The Canadian Institute of Mining and Metallurgy Special Volume 15

Woodcock, J.R. (1982): Skum Lake Property - Drill Report on the Ti and Ski Claims. Assessment Report 11,001

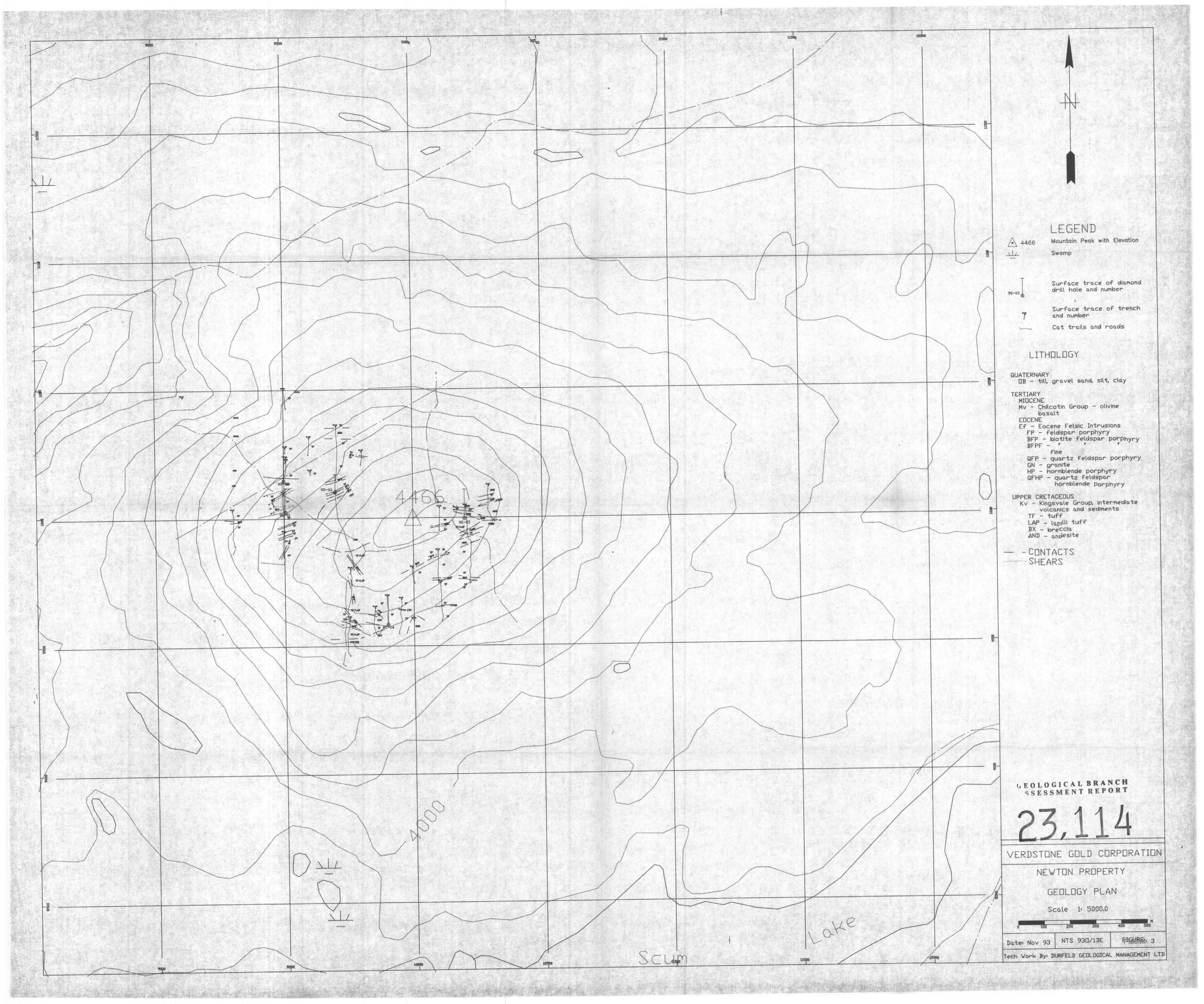
#### 11.) STATEMENT OF QUALIFICATIONS

I Rudolf M. Durfeld, do hereby certify:

- 1.) That I am a consulting geologist with offices at 180 Yorston Street, Williams Lake, B.C.
- 2.) That I am a graduate of the University of British Columbia, B.Sc. Geology 1972, and have practiced my profession with various mining and/ or exploration companies and as an independent geologist since graduation.
- 3.) That I am a Fellow of the Geological Association of Canada (Member No: F3025), a member of the British Columbia and Yukon Chamber of Mines and a member of the Canadian Institute of Mining and Metallurgy.
- 4.) That I am registered as a Professional Geoscientist by the Association of Engineers and Geoscientists of B.C. (No. 18241)
- 5.) That this report is based on my personal knowledge of the property and supervisor of the team that conducted a ground magnetic survey on the Newton Property during the period May 1st to 10th, 1993.

Dated at Williams Lake, British Columbia

this 1st day of December 1993. R.M. Durfeld, B.Sc. (Geologist) Geo.



157154 +57206 +57194 +57134 +57134 +57161 +57163 +57263 +57278 +57278 +57287 +57287 +57517 +57240 +57750 +58174 +57750 +58174 +57966 +57651 +57651 +57651	57095 -57010 -57273 -57400 -57498 -57498 -57498 -57498 -57498 -57498 -57498 -57498 -57498 -57498 -57498 -57498 -57575 -57401 -57575 -57401 -57575 -57401 -57575	+57128 +57089 +57316 +57401 +57444 +57143 +57143 +57295 +57131 +57133 +57131 +57373 +57373 +57364 +57176 +57177 +57110 +57205 +57310 +57643 +57314 +57314 +57357 +57357 +57330 +57345	+57446-5 +57519+5 +57498-5 +57223-5 +57240+5 +57118+5	7479-57391-57 7409-57426-57 7428-57408-57 7331-57387-57 7311-57380-57 7283-57294-57	+57190 +57297 +57297 +57189 +56986 +57062 +57236 +57314 +57141 +56944 +57170 +57285 +57318 +57323 +57276 +57225 +57153 +57034 +57034 +57034 +57034 +57034 +57034 +57034 +57034 +57034 +57034 +57034 +57034 +57034 +57034 +57034 +57034 +57034 +57035 +57080	336,57217450 667,57366,57 92,02 638,57345,57 457,57382,57 457,57382,57 480,57652,57 274,57696,57	950156844 7037456910 7018456926 27157456912 7331456876 7434457139	+56980 +57115 +57513 +57617 +57617 +57644 +57741 +57741 +57741 +57741 +57741 +57742 +57464 +57317 +57144 +57116 +57002 +57123 +56978 +56978 +56978 -56988 -56989 -56989 -56989 -56785 +56785 +56785	+5 +5 +5 +5 +5 +5 +5 +5 +5 +5 +5 +5 +5 +	7975 8012 7523 7286 7256 7256 7256 7256 72418 7230 77230 77230 77000 77098
+57719 +57342 +57321 +57461 +57251 +57354 +57357 +57323 +57303 +57303 +57360 +57313 +57349 +57393 +57422 +57422 +57422 +57428 +57428 +57344 +57309 +57225 +57231 +57244	-57594 -57500 -57645 -57405 -57405 -57620 -57620 -57688 -57667 -57658 -57658 -57551 -57594 -57521 -57522 -57575 -57521 -57482 -5	+57343 +57106 +57340 +57438 +57391 +57627 +57540 +57629 +57622 +57725 +57706 +57769 +57622 +57769 +57622 +57725 +57648 +57579 +57648 +57530 +57481 +57438 +57375 +57240 +57138 +56957 +56934 +56849			+56945 +56945 +56945 +56956 +56742 +56742 +56761 +56794 +56953 +57026 +57460 +58129 +57969 +58136 +58323 +58779 +58973 +58971 +57927 +57569 +57713 +57727	20-01		States and States of States	1568401 568244 +567174 +567594 +567594 +567694 +567694 +567494 +567494 +567494 +567154 +567154 +567154 +567154 +567754 +567754 +567754 +567754 +56779 +56890 +576774 +56900 +578314 +578314 +59151 +57736 +577560 +577268 +56962 +56892 +56862	56917 56791 56753 56778 56768 56768 56763 56782 56782 56782 56733 56738 56733 56738 56738 56738 56738 56738 56738 56743 56758 56758 57568 57398 57398

