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**Report on the exploration of**

**Mineral claims held by**

**And under option by**

**SYMC RESOURCES Ltd.**

**In the**

**ALBERNI INLET AREA**

**ALBERNI MINING DIVISION**

**VANCOUVER ISLAND**

**BRITISH COLUMBIA**

**During the work season 1998**

**Located at**

**LATITUDE 49-00 TO 49-10 NORTH  
LONGITUDE 124-50 TO 125-00 WEST**

**by**

**Davey Consulting and Engineering**

**Robert A Davey P.Eng**

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## Summary.

Symc Resources Ltd has a extensive claim holdings and options in the Alberni Mining division, on Vancouver Island, British Columbia. Several reports on the mineralisation have been written and mining operations were conducted on outcrops near the shoreline of Alberni Inlet as far back as the turn of the 20<sup>th</sup> century and sporadic shipping of high grade mineralised material have been noted in government files in the 1920's. However no large scale and systematic approach to the exploration was conducted in these early years and it was not until the 1980's when intense and modern geological mapping was carried out to determine the extent of the possible mineralised structures and tonnage's that may be of economic benefit.

The successful launch of the public offering of shares in 1998 enabled the proceeds from this offering to be used to further the exploration of the known deposits and to provide stratigraphical analysis of the known vein systems ( Carter and Davey 1998) and to evaluate the aerial photographical interpretation of Dr Bryce Whittles. ( Whittles 1998) In addition, as the next step in the development of the proposed programme for this property drill site locations were assessed in respect to length of hole and information which may be available from the next stage of exploration.

The work programme took place in several stages and was greatly influenced by both the results of the previous stages information, and the weather, as the long hot and dry summer of 1998 precluded work in the forest zones during much of the normally productive summer season and extended the work well into the fall of 1998.

From the work programme several definite targets for a further advanced stage of exploration were delineated but this work will be dependent upon the successful raising of the necessary funds. The previous interpretations of the aerial photogrammetric study were reinforced and both electromagnetometer and magnetometer VLF results correlated with known mineralized occurrences. The absence of high Fe rich magnetite within the Hydrothermal intrusions showed that the simple magnetometer survey did not produce good results but that the VLF method can be used with moderate success however the results must be analyzed critically especially in the steep relief of the claim area and may not be an economical method of exploration.

Investigative work on the modes or origin and types of skarn however has lead to the conclusion that the highly magnetic areas around the anomalies detected on the Mc claim group is typical of a mode of formation and that further exploration work is warranted.

The grab sampling noted on the former Dauntless and Holk prospect, now held under option as the Sky claims need further investigation to prove the vein and mineralised structures or to substantiate the description of the B.C. Government "Minfile" analysis which categorized these structures as mud veins. The present view of the writer is that a portion of the veins may carry mineralisation with a hanging wall feature of a later mud infilling of the voids, similar to the Fred vein structure on the Macktush claims.

More work needs to be completed on all vein and skarn systems to prove a justifiable volume and tonnage of material and, although small pits and bulk tonnages for

metallurgical testing can be extracted, the urgent priority is to develop depth to the deposits by diamond drilling the structures.  
A programme of work for the 1999 season is appended at the end of section C and is based on the information gained throughout this season.

### **A1.0 Location and Access.**

1.1 All claim groups are contiguous and are located directly south of Port Alberni, on Vancouver Island. Access from Port Alberni is by way of private logging roads to a former logging road formerly described as M100. This road was scheduled for deactivation under the Forest Practices Code and the upkeep and liability was there assumed by SYMC Resources Ltd. In accordance with normal practice this road has been gated and no public access allowed.

The claim groups extend along the Alberni Inlet, from a joint claim post held by the company or its directors, approx. 5 km from port Alberni and extend in a southerly direction for 10 Km, to a position south of Macktush creek, a distance of 15 km from the city of Port Alberni

Geographically, the claims occupy an area between Latitude 49-00 North and Latitude 49-10 North and Longitude 124-50 and Longitude 125-00 with a central co-ordinate of 49-08 North and 124-52 West.

The principal mineralised areas are marginal to Macktush Creek and several smaller creeks which directly discharge into Alberni Inlet

Access to all sections of the extensive claim holdings is possible by highway from Port Alberni and the MacMillan Bloedel, Sproat Lake Division, logging road system either by a "Beach" road which generally follows the shore line along Alberni Inlet, or by another main haul road ["Cous Main"] and then along the Macktush Creek access road to the gated M100 intersection.

All work completed during the past season was along previously constructed logging roads and along the steep margins of these roads.

### **A2.0 History.**

A2.1 The following section has been copied from the present authors previous work ( Davey and Carter 1997) on the property and is included here to give some sense of the potential of the area for historical activity of the inlet and its propensity for the discovery of additional deposits which may be economic.

A2.2 "The earliest record of prospecting and mining activity west of Port Alberni and around the Alberni Inlet dates back to the turn of the century when copper-gold vein occurrences near the head of the Inlet were investigated and some 1900 tonnes of material containing copper-silver-gold were mined from the Three Jays skarn deposit south of Nahmint River. Sporadic exploration work, directed to several copper and/or precious metal prospects, has continued to the present.

The current Macktush property includes a number of gold-silver-copper bearing quartz veins. The majority of these have been located by work over the past several years but at least one was explored a number of years ago by several pits and two short adits. Remains of an old cabin [now destroyed] attest

to this earlier work and an old claim post with a claim tag characteristic of those in use up to the mid-1940's was observed adjacent to one of the known quartz veins during recent exploration work and reported upon by Carter [1994]. There are no records of this earlier work and references included in the B.C. Ministry of Energy Mines and Petroleum Resources Minfile [92F Alberni June 1990 ] description of the Macktush property pertain to descriptions of the regional geological setting.

A2.3 The old workings on one of the vein structures were re-discovered by principals of SYMC RESOURCES Ltd. in April of 1981.

A number of 2-post mineral claims were located [abandoned and relocated as Modified Grid claims in 1983] and work through 1986 included prospecting, trenching and sampling.

A2.4 SYMC RESOURCES Ltd. was incorporated in 1987 and this company purchased the mineral claims comprising the Macktush property. [ The company has since added to these original claims by staking and purchasing by way of share options to the principals of the company adjacent claim groups including the Mc and Sky claims.]. Financing was arranged for additional work in 1987 and 1988 which included a legal survey, ten diamond drill holes totaling more than 900 metres, mechanical trenching at more than 20 sites and surface sampling at 25 locations.

A2.5 Preliminary metallurgical test work was carried out in 1988 [Broughton, 1988] as were initial investigations pertaining to possible tailings impoundment areas, [Palmer and Skirmer 1988] and potential mining methods. This work was undertaken in response to the British Columbia Mine Development Steering Committee which had received a preliminary prospectus from SYMC RESOURCES Ltd. earlier that year.

A2.6 A survey of surface workings and drill hole collars on the main quartz vein structure was supervised by John Wilson P.Geo., in January of 1990 and a compilation of results of exploration work was completed by Wilson in April of that year. Carter [1990] completed a report on the property and three diamond drill holes were relogged by Wilson in late 1990.

Additional excavator trenching was completed on two of the known quartz vein structures in early 1991.

A2.7 Work in 1992 and 1993 included 160 metres of road construction, approximately 1500 cubic metres of excavator trenching and 12 hand pits.

The 1996 programme included an extension of the previous trenching, and detailed surface sampling of the Macktush vein structures; regional mapping of on the Sky claim group, held by SYMC RESOURCES Ltd under option from the company's president: and whereby the company can purchase these claims for cash or shares equal to the presidents costs of staking and maintaining the claims to the date of purchase by the company: and chip sampling of the skarn type deposit on the MC claims completed the 1996 field programme.

A2.8 Most of the work carried out on the Macktush property to date has been directed to the south-western part of COPPER #102 claim  
The value of exploration work and related technical studies undertaken on the

property since the initial location of the mineral claims is estimated to be more than \$500,000.”

### A3.0 Mineral titles

#### Mineral Titles held by Sync Resources Ltd Macktush Area Claim Grouping.

Tenure #	Claim Name	Owner #	Status	Units	Tag #
200210	Copper 100	130750	2000/10/31	12	13401
200211	Copper 101	130750	2000/10/31	9	13396
200212	Copper 102	130750	2000/10/31	16	13400
200213	Copper 103	130750	2000/10/31	12	13395
200214	Copper 104	130750	2000/10/31	20	13397
200215	Copper 105	130750	2000/10/31	20	13393
200279	Copper 50	130750	2001/10/13	10	84075
322953	Bay 1	130750	2001/11/27	18	216131

#### Mineral Tenures Held under option from H. McMaster

316105	Copper 106	117908	2000/12/14	18	216700
361106	Copper 107	117908	2000/12/16	16	216701
361115	Copper 109	117908	2000/12/21	20	216703
361117	Copper 108	117908	2000/12/18	20	216702
341127	Ardin Creek#1	117908	2001/02/07	12	216150
341127	Ardin#3	117908	2000/10/23	18	216194

## A4.0 Regional Geology

A4.1 The regional geology of the Macktush claim area has been well documented in previous reports ( Muller and Carson 1968; Muller 1977 ; Wilson 1998; Carter 1990; and Davey and Cater 1997 )but an overview of the previous interpretation is included to provide a regional context to the site specific exploration programmed carried out in 1998.

The formation of Vancouver island can be grouped into 6 major geological periods or Formal Rock groups but only 4 of these groups are seen in the Macktush Claim grouping area. These are:

- 1) Vancouver group
- 2) Bonanza group
- 3) Island Intrusions or the Jurassic Island Plutonic Suite and
- 4) Tertiary Intrusive Rocks.

And which comprise the following rock groups and time periods of formation.. Karmutsen formations and the Quatsino /Parson Bay formation of the Vancouver group and formed within the Triassic period, the Bonanza Group volcanics, Pacific rim complex and Island Intrusions of the Jurassic period, sediments of the Nanaimo Grouping belonging to the Cretaceous period and the sediments and volcanics of the Tertiary period including the Carmanah and Metehosin formations.

A4.2 The exploration work was designed to achieve several specific objectives and one of these goals was to identify the possibility of structures which may host mineralised inclusions, these inclusions being economically significant and being able to be extracted at a profit, i.e. an orebody.

A4.3 However before the results of the work are discussed a brief analysis of the tectonic forces which produce the openings for hydrothermal fluids to enter will be given as all fractures and openings in the crustal layers will not receive the fluids equally.

A4.4 Early work by Massey ( 1955) established 5 known phases of tectonic movement but of these 5 only 3 are relevant to this area. Of these phases the 4<sup>th</sup> phase of tectonic movement into the lower and Middle Jurassic systems and forming the Cowichan uplift and elongate lineaments parallel to the NW axis of the uplift, is probably the most significant with the 5<sup>th</sup> phase during the Eocene period with the resulting large thrust and reverse faults at a lower order of importance ( Massey 1995; Coney 1980; Monger and Irving 1980)

A 4.5 In addition to this Tectonic activity the structural formations and movements associated with these activities must be considered as each type of fault has a particular significance in the hosting of mineralised deposits. As a starting point the definition of a fault is the ability of a movement within the tectonic reactions to overcome the structural or cohesive strength of the rock mass. In general the rock mass will tend to fracture and produce a "fault " on the general direction of the axis of the stress being applied, and this is true with a range of +/- 30 degrees from the axis. Smaller fractures or " faults " will occur off the main axis of the stress and these faults are secondary or



tertiary order faults. Anderson (1951; Moody and Hill 1956) In addition it has been suggested by Moody and Hill that these lower order faults may splay off the original fault but in a parallel direction to the main fault. Additionally to the primary and secondary series of faults the determination of the type of faults can also be classified as Strike faults Reverse Faults and Strike/Slip faults

A4.6 Reverse faults are normally considered when the compressive stress is maximised in the horizontal direction and the least force is in the vertical direction. In the Alberni Valley these faults are near vertical or dip to the NW and can be called a thrust fault. (Whittle 1998)

A4.7 Strike /Slip faults occur when the minimum compressive strength is primarily horizontal and also appear to be very dominant in the Alberni Valley and have been plotted on rose diagrams by Whittle 1998

## **A5.0 Mineralization**

**A5.1** The documentation of the mineralized occurrences within the Alberni Mining district has been readily available to engineers and geologists and dated back to the early years of the century when extraction or "Ore" encouraged the production from several mines within the Inlet. However that classification of the mineralised areas was subjected to a review by Sutherland Brown in 1986 and this author tabulated the following deposits.

Vein type deposits	55%
Skarns	26%
VMS	9%
Porphyries	4%
Others	6%

**A5.2** However when these deposits are rationally organized according to the type of host rock and economic significance the breakdown according to Sutherland Brown is:

Karmutsen Volcanics	29% but little economic significance
Bonanza and Island Intrusive	54% Classified as type 1,2, and 3 vein deposits With major economic potential
Quatsino group	12% manly skarns but with economic value
Buttle and Nanaimo groups	5% Minor economic significance

On the Macktush claim group both the Karmutsen and the Bonanza /Intrusive rock types are evident.

Type 1 and 2 vein structures are according to Sutherland Brown relatively low in the economic potential scale but Type 3 is a typical Hydrothermal intrusive type vein structure and are spatially related to the Tertiary plutons.

A typical vein deposit in this type of structure would be classified as ribbon textured, distinctively orange-red well developed shear structure. The rational for this type of depositional mode is that the movement of the rock during deposition kept the fractures open allowing successive periods of emplacement as identified by the ribbons of minerals laid upon each other along the sides of the fracture zones.

The mineralisation within the vein structures has been identified as quartz and carbonates with metallic sulphide minerals identified as pyrite pyrrohitite, chalcopyrite, sphalerite and galena. Precious metal mineralisation may exist as a free gold in the quartz matrix or as a replacement molecule in the pyrite and chalcopyrites.

**A5.3** In addition to this work additional research by Pantelev (1985) has characterized the mode of deposition as Epithermal as describing the genetic classification of deposits from Hydrothermal fluid sources from within the earth. These depositions occurred in rocks subject to moderate pressures and relatively low 50 to 300 degrees C temperature. In addition the deposition only occur in

- (a) rocks near the surface hence low pressure formation
- (b) Within veins or branches of veins, and commonly form stockworks or cone like feature.
- (c) In areas with well developed tensional fracture planes.
- (d) Near or in Volcanic terranes with well differentiated subaerial pyroclastic rocks.
- (e) Ores and associated minerals form or fill open space to show banded cruciform, vuggy, drusy, colloform, and cockscomb textures.
  
- (f) Gold silver are the main economic values, with copper occurring as chalcopyrite.
- (g) Gangue minerals are quartz and calcite with the Silica occurring as quartz but varieties identified include opal chalcedony and cristoballite.
- (h) Zones of Silicification can be flanked by sericite and other clay minerals and Kaolinite is often noticed.
- (i) At depth and above the boiling levels the precious metals are replaced by base metals. Often a barren area is contained within the transition zone between the precious metal and base metal areas.

From previous work upon the claim all the previous type of mineralisation and modes of deposition could be recognised and therefore the work schedule was to elaborate further on the vein structure to provide information to allow a properly planned diamond drill programme to be executed.

## **A 6.0 Field Work 1998**

A6.1 In the context of the regional geology and the need to provide both an expansion of the fracture systems which ultimately lead to the inflow of hydrothermal fluids to form a vein system and the expansion of the known vein systems previously named the Fred David and Red System both ground geological mapping and electromagnetic and magnetometer mapping techniques were used.

These differing techniques produced mixed results and will be detailed further into this report, but an explanation of both these non-invasive methods covering both the Mactush and the Mic claim groups, will be given and is taken directly from the field technician's report (A. Davey) submitted at the conclusion of the programme, and covers the basic information needed and the methods used to produce the information with conclusions regarding phased additional work for both the Mactush Arden and Mic group of Claims.

### **A6.2 Field Work Report 1998 Davey Consulting and Engineering Report by A Davey Field Instrument Technician**

#### **1.0 INSTRUMENTATION AND METHODOLOGY**

1.1 The primary step in collecting field data for SYMC Resources Ltd. was to establish the location of the work area. This consisted of locating the areas using a GPS, or Global Positioning System(Figs 6 and 7). A GPS uses information sent to Earth from several satellites in geostationary orbit; the GPS instrument then uses a technique known as triangulation to locate itself at a unique position on the Earth's surface. Depending on the quality of the computer chip in the instrument, the GPS instrument may locate itself to within 1 metre of its true location. The instrument utilized on this field survey was a small, hand-held instrument used primarily by hunters and other sportspersons to avoid becoming lost in the wilderness. This instrument allowed an accuracy of only 10 to 30 metres, but it was decided to use this instrument in the data collection as it was distinctly portable and required no specialized training, as did the more accurate instrumentation

and was also based on a cost factor as the extremely precise instruments can cost upwards of \$25,000 to obtain. The hand-held instrument that was used was accurate enough to enable further field data to be followed up by more precise instrumentation. The GPS provided a method to develop a grid pattern where practical, or to identify the sites where anomalous results were produced when a grid system was not practicable.

1.2 Another instrument used in the data collection of a field geophysical measurements is an electromagnetometer(Fig8), an instrument which measures the intensity and orientation of the earth's magnetic field (Envimag,1). Electromagnetometer uses include mapping the "overburden stratigraphy"(Geovation, July8,98), the "delineation of vertical and aerial extent of contamination"(Ibid,July 8,1998), as well as mineral exploration. Magnetic variations occur depending where the instrument is located relative to the poles, with lower readings being recorded near the Equator, and higher readings at either pole. Magnetometer readings usually range in values from 25,000 to 70,000 nanoTesla, or gamma (Envimag, 2). It is actually the anomalies at any one position relative to its neighbouring readings that are of significance in this field survey for mineralised areas. Anomalies are due to a disturbance in the earth's magnetic field, caused by any object which may be magnetised (Ibid, 5), or which has magnetic properties. Such objects may simply be overhead power lines, buried iron and steel objects such as drums, and even bodies of water such as streams and channels. Thus, it is extremely important to conduct the field data collection away from overhead power lines, and if possible, away from the influence of water. In this field season the presence of a highly magnetic skarn deposit was suspected

The magnetometer instrument consists of a solid state measuring device contained within a box coupled to external sensors, which the user accesses through a LCD display, and a sensor mounted on either a pole carried by the field technician or mounted behind the head on a backpack. To minimise the interference from one's own magnetic field, it is usual to mount the sensor on the pole. The user inputs the information through an input recorder button after the instrument has had time to read the variation through the sensor.

It is important to note that the sensor must be held on the pole both vertical (not perpendicular to the ground) and immobile during the reading. Any movement or tilt to the sensor causes an erroneous anomaly at that station, resulting in false conclusions. In addition, the sensor must be mounted on the pole correctly, with the magnetic indicator mark placed vertically on the pole nearer to the magnetic poles, as the location was, and horizontally when in proximity to the equator. Incorrectly mounting the sensor on the pole causes inaccurate readings and false conclusions. Furthermore, any person in accompaniment with the data collector must be a distance from the sensor; this distance should remain consistent. For this survey, the field assistant remained approximately 3metres from the sensor to reduce magnetic variations during the data collection.

The method of collecting data with the magnetometer was straightforward. No grid pattern was used, due to the steep nature of the terrain; instead a walking survey along old and disused logging roads was accomplished, with each survey station located approximately 30 metres apart. At each station the magnetometer reading was measured, and the reading, as well as the GPS position in UTM units, was recorded in a field notebook. Approximately every hour it was necessary to return to an allocated "base"

station to ensure no diurnal variation or magnetic storm was causing readings to be abnormally high or low.

1.3 The one inherent difficult encountered with the magnetometer was it did not measure the presence of non-magnetic minerals(Fig 9) which were thought to be present in the vein structures on the exploration property, and therefore another instrument was needed. The use of a VLF, or very low frequency, instrument was indispensable to the data collection of this type of exploration programme, as it is used to locate and map major discontinuities in the bedrock, for example fractures, faults and joints, which may serve as hosts for mineralisation without magnetism(Geovation,July 8,1998). The VLF is also useful for groundwater exploration, toxic waste contamination detection, soil engineering, cultural detection for archaeological sites, and other non-resource based projects(Wright,2). VLF frequencies are between the range of 15 and 25 kHz, and became a practical tool for exploration purposes in the 1960's(Herz,July 8,1998). VLF can also be turned into audible sounds that can be heard as a "whistle", since VLF emissions are at such low frequencies(VLF Site,July 8,1998).

The VLF instrument is again a sophisticated digital sensor contained within a box; however, there are two complementary components to the system. The first is the magnetometer, again with the sensor mounted on a pole and carried with the data collector.

The second component is a transmitter/receiver mounted on the data collector or field technician's back, and which receives signals from transmitter stations from around the world. However, only the three strongest signals of the many received are utilised. The three signals used in this survey were, in descending order, Jim Creek, WA, at 24.8

kHz, Aguada, Puerto Rico, at 28.5 kHz, and Cutler, Maine, at frequency 24.0 kHz(Wright,4). These three frequencies were referred to as VLF1, VLF2, and VLF3, respectively. The receiver attached to the data recorder box by a stout cable.

The data recorder box itself had a digital input/display, and automatically recorded the line and station number, as it works best with a grid system. However, since a grid system was not practical in the sort of terrain on the mountains, the GPS was again used, and the UTM co-ordinates were input to the VLF. At each station the instrument recorded the magnetometer reading, and the in-phase and out-of-phase, or quadrature, of each of the three frequencies. The survey was again conducted on disused and deactivated logging roads. At the completion of each day's survey, the data was downloaded, or "dumped", into a computer program for later analysis.

## 2.0 ANALYSIS

2.1 The next step in the process was to analyse the data previously collected. The raw data for both magnetometer and VLF was transformed to spreadsheets, with columns for the UTM readings for both the Northing and Easting, and for the instrument reading. The VLF data was also decoded as a spreadsheet for each frequency. Thus, several spreadsheets were produced.(Fig 10)

Each spreadsheet then needed to be transformed into a chart or graph. Due to the vast number and types of charts and graphs available, it was necessary to consider the ease of comprehension of each type of graph. Therefore, a line graph was chosen to represent the data(Fig 11 and 12), as the VLF in-phase and quadrature readings could be



represented on one graph to indicate areas of significant structural anomalies and correlated with the known geology.

In addition to spreadsheets and graphs, the magnetometer readings were also transferred to large-scale maps. Contours were then drawn around readings of similar values to indicate general areas of higher or lower magnetic values(Fig 13).

2.2 Through graphical and map analysis of magnetometer readings, it was discovered that the skarn deposit along the 405 logging road on the “Mic” claim at the north-west section of the exploration property had high magnetic values interspersed with very low values. The “Mic” claim at the opposite site of the valley, accessed from the 400 logging road, had lower magnetic values across the entire survey area.

Other locations, such as the “Ardin” group of claims on the eastern section of the exploration property and accessed from the 1010 logging road had very little VLF activity except for one large discontinuity, which may indicate a fault, fracture and/or even water sources.

VLF and magnetometer readings from the “Copper” claims at the southern section of the property showed significant areas of bedrock discontinuity, possibly due to faulting or fracturing. In addition, this discontinuity extended over a large area of the land mass, and mineral claims extended to the lower elevations, including a road being developed for access to the known vein structure by larger excavators. Significant changes in the VLF readings were indicated at known areas of mineralisation, including the intersections across the “Fred” and “David” veins.

### **3.0 CONCLUSIONS AND RECOMMENDATIONS encompassing the geophysical survey of both the Macktush and Mc Claim groups.**

#### **3.1 Conclusion**

The area of study south of Port Alberni and west of the Alberni Inlet is one of intense geologic activity and tectonic deformation. As a result, many opportunities for exploration and development exist, although these must be completed in conjunction with sound environmental practices. Due to the geologic activity, much mineralisation has taken place along fractures of the rock, many of which may have economic significance. Exploration with geophysical instruments such as electromagnetometers and VLF are useful data collection tools to identify areas of increased mineralisation or geologic activity, thus narrowing the search areas.

#### **3.2 Recommendations**

Following analysis of the data on spreadsheets, graphs, and maps, recommendations may be presented. The area known as the “Copper” group of claims should have a high level of ground-based exploration continued, as VLF readings indicate a high level of bedrock discontinuity, and therefore pose an increased chance of mineralisation. This group of claims should have the highest priority when scheduling exploration and development, although environmental considerations must be observed.

The “Mic” claim accessed from 405 logging road, and the “Ardin” claim should be prioritised next, as both claim areas show promising magnetometer and VLF readings when analysed with graphs. Environmental protocol must be considered when any development is planned.

The "Mc" claim accessed from the 400 logging road, although showing promise indicated by copper staining on several rock outcrops, should have lower priority due to the possible high pyrite content, possibly generating acid rock drainage, and additional environmental considerations (McGinn et al, 10-4).

#### **4.0 Conclusions and Recommendation Macktush Group of Claims**

- 4.1** Due to the extreme drought during the summer exploration period in 1998 the access road from the M& B Beach logging road was not completed. This road if projected through to its conclusion should intercept the structural interpretation of Dr Bryce Whittles aero-photo study and allow a greater understanding of the intrusive and geotectonic forces at work.
- 4.2** When this road is completed an invasive programme of delineation drilling is required to investigate the depth potential of the known structures and to extend the surface intercepts at depth. One key element of Dr Whittles work was the proposition of splay veins hosting mineralisation and a limited surface drilling programme would identify these vein structures.
- 4.3** The extent of the proposed drilling work is shown on the attached plans and the total length of each hole should not exceed 500ft. It will be possible to set up on each diamond drill station and develop several holes so that movement of the drill would be minimized. Ideally and with the correct interpretation of the drill logs it may be possible to drill through both the David and Fred veins and to establish the relationship between the veins structures, and the possibility of a stockwork of veins which could produce a significant tonnage in a smaller area than the present individual known vein system.
- 4.4** The present tonnage, as recorded in the B.C. Government's "Minfile" is listed through the surface expression of the structures, and allows for limited extraction of a resource but given the difficulty of extracting narrow surface veins by surface mining this option should be investigated by detailed planning of the extraction method.
- 4.5** However this extraction of a bulk sample from the presently known vein system may be possible, and would provide valuable mineralogical and metallurgical information.

**Section B**

**MC Claims**

**And the contiguous claims**

**Surrounding the Mineralization**

**Established within this area.**

## **B 1.0 Location and Claim Group**

**B 1.1** In conjunction with the exploration of the Macktush group of claims the mineralisation of the area to the North of the Macktush property was thought to be extremely interesting because of the high copper magnetite values returned in previous sampling field work. The mineralised area are accessed by the same system of logging roads as the Macktush deposits from the Port Alberni area with the "Cous Main" access road being the arterial route to the centre of the mineralised area. From this haul road a side road designated by Macmillan Bloedel Ltd as M 405 passes through the exposures and to recently logging areas. Work during this exploration season in fact had to be coordinated with the logging activities to ensure safe working conditions for the technologists participating with the field work.

All claims within the exploration area are contiguous with those of the Macktush group of claims and consist of the MC 1 to 4 and Sky 3 to 8 and are staked on the modified grid [4 post system]. These claims stretch from tide water on the Alberni Inlet inland in a westerly direction for approximately 6 km

### **Mineral Tenures Held By Syc Resources Ltd.**

Nil

### **Mineral tenures held under option from H.McMaster**

<b>Tenure #</b>	<b>Claim Name</b>	<b>Owner #</b>	<b>Status</b>	<b>Units</b>	<b>Tag #</b>
36796	MC#1	117908	2000/03/01	18	216909
367977	MC#2	117980	2000/03/01	18	216910
344121	MC#3	117980	2000/03/08	15	216637

## **B 2.0 Regional geology.**

**B 2.1** Without repeating the regional geology contained within section A of this report a brief overview of the main points of this area and the difference between the mineralisation of the Macktush group of claims and that of the MC group is warranted.

Previous mineralisation has tentatively been identified as "Skarn" type and this type of mineralisation is expounded upon in greater detail in the following paragraphs but it is known to exist in areas where the limestone and intrusives or volcanics contact.

The junction and possible water course known as Cous Creek appears from initial investigation to be a significant limestone contact and therefore the probability of finding economic deposits of Skarn mineralisation appear high.

In addition the exploitation of skarn deposits within British Columbia has had a significant success although on Vancouver Island most skarn deposits have been of limited tonnage, but the grades have been very high. Initial limited sampling by the

author of the report has demonstrated that these high values appear to be contained with the exposure on the current claim and that the "skarns" are highly mineralised and will respond to magnetometer and electromagnetic exploration techniques.

Therefore within this section of the report a definition of "skarns", their occurrence and significant mineralisation characteristics will be given, and is taken from several authoritative reports on the subject.

### Skarns.

**B 2.2** The word "Skarn" was first developed in Sweden in 1875 by Tornebohm [Bergman 1992] and described an outcrop of rocks contained within a feldspar poor, felsic volcanic rock and initially described as "brunskarn" or "gronskarn" i.e brown skarn or green skarn.

Since that initial description a wider variation of the definition has been given and now a more open interpretation is used.

Conventionally the word Skarn is used to describe a mineralised area which may or may not be economic, but is formed during regional or contact metamorphism and from a variety of metasomatic processes involving fluids of magmatic metamorphic meteoric and or marine origin. (L. Meinhart 1998). These skarns can be found adjacent to plutons faults and shear zones, shallow geothermal systems, seafloor systems and deeply buried metamorphic terranes. However with a diverse orogenesis of the deposits one constant feature remains and all deposits include a wide variety of Calcium rich silicate minerals with garnets and pyroxene usually dominant. However the term skarn must be used as a descriptive term and not as a method of formation as the usual economic skarns can be from the large scale metasomatic transfer of fluids from an adjoining calcium rich rock mass with the fluid hydraulics determining the skarn and possible ore mineralogy.

### **B 2.2** Evolution of a skarn.

The formation of a skarn deposit is a dynamic combination of many factors including pressure temperature and often fluid circulation within a metamorphic cell. Recognizing the formation modes allows recognition of the skarn and possible indicator minerals and exploration tools which aid in outlining an economic model.

In addition the depth of formation can also be a major factor in determining the type and size of the skarn as circulating fluids in a steep thermal gradient environment and small fracture type plutonic masses will lead to smaller intrusive skarns with single mineralizing mineralogy while the larger scale more complex fluid masses will produce a complex deposit containing a mixture of metasomatic and metamorphic minerals. The recognition of the depth of formation can often be seen by geologic reconstruction of the igneous textures including chilled margins on dykes; porphyry ground mass grain size; and the presence of brecciation and brittle fracture geometry on shallow deposits.

The depth of formation can also be a useful tool in determining the mechanical properties of the skarn as in deep seated deposits the rocks tend to flow or become ductile rather than shear or fracture as in shallow deposits, and within the contact of a sedimentary rock the intrusive fluids tend to flow along the bedding planes or be sub-

parallel to the planes, or the sedimentary rocks are distorted until they align with the intrusive pluton.

This depth of formation has been documented by Einaudi (1982) and with the deeper mode of formation of the skarn, the skarns appear as narrow deposits of relatively small size whereas at shallow depth the skarns tend to be discordant to the bedding planes and massively replaces the host beds equaling or exceeding the size of the originating pluton.

This hydrofracturing associated with the shallow deposits also increases the permeability of the host rocks and allow igneous related metasomatic fluids to intrude into the origination igneous mass and is one of the distinctive features of skarn formation in a shallow environment.

#### Skarn mineralogy.

B 2.3 Meinhart (1998) writes "that just as mineralogy is the key to recognizing and defining skarns it is also critical in understanding their origin and in distinguishing economically important skarns from interesting but uneconomic mineral localities."

The skarn mineralogy is mappable and in addition the alteration envelope around the deposit can be constructed and can be critically important in the early exploration stages and to develop grass roots exploration models.

The skarn minerals are typical alteration and rock forming minerals and defining the types allows significant information about the mode of formation to be defined with periclase, phogopite, talc, serpentine and brucite typical of magnesian skarns but absent from other skarns.

Seven major skarn types are noted [ Au, Cu, Fe, Mo, Sn, W and Zn-Pb] but additional minerals within the mineralised group can be extracted for their economic significance including F, C, Ba, Pt, U, REE. and industrial minerals such as Garnet and Wollastonite.

#### Iron skarns.

Iron skarns are the largest grouping of the skarn types and have been reviewed by such eminent writes as Sangster (1969) Sokolov and Grigorev (1977) and Einaude (1981) and are normally mined fore their Fe content but significant amounts of Cu Co Ni and Au may be present. Large tonnage deposits are common with > 500 million tons or Ore and >300 million tons Fe being present.

The typical depositional mode of these skarns is the iron rich plutons intruding into limestone and volcanic wall rocks, and garnet and pyroxene predominate. Alteration of the igneous rocks are common with widespread albite orthoclase and scapolite veins noted.

This is in marked contrast to Magnesium Iron skarns which exclusively form in dolomitic wall rocks, and in which the main skarn minerals diopside Forsterite Periclase talc and serpentine do not contain much iron; and the iron in solutions forms Magnetite rather than andradite or hedenbergite. ( Hall 1989).

#### Copper Skarns

Copper skarns are probahly the most abundant skarn type, and have been reviewed by several noted geologists and authors including Einaudo 1981. From this work it appears that the preponderance of copper skarns are associated with a magnetite

series calc-alkaline porphyritic plutons, and co-existing with volcanic rocks stockworks veining and brittle fracture cracks. In addition intense hydrothermal alteration and a relatively shallow depositional mode are concurrent with dolomitic wall rocks. Mineralogically the deposits are significant in that the hematite and magnetite may have been mined from the known deposits but that the copper mineralisation of pyrite chalcopryrite increase in copper content to bornite in and around the marble contact.

Past mining has illustrated that the largest copper skarns are associated with a mineralised copper pluton and tonnage's of 5 million tons of reeoverable copper has been indicated in the largest skarns.

The presence of the other skarn types Zinc, Molybdenum, and Tin skarns mat be significant in a world wide texture and interpretation but in the review of the potential for economic mineralisation in the Port Alberni Inlet has little significance as none of the trace minerals which characterize these deposits have been noted here, and therefore the discussion of these types of skarns is not relative to this area.

However in closing the description of skarn deposits it has been demonstrated that zoning patterns within the skarn deposits can be "stretched out" over several kilometers and that these zones can provide a significant exploration guide for the interpretation of contact zones and magnetic disturbances.

Almost all of the skarns do exhibit a geophysical response {[Chapman and Thompson 1984]}and the skarn is denser that the surrounding rock and can also form a gravitational anomaly or seismic discontinuity.

Iron skarns normally for a magnetic high due to the large content of Magnetite or other magnetic minerals such as high temperature prrhotite, and the metasomatism of dolomitic rocks tend to form abundant magnetite, those skarns in and around the contact with the limestone's will tend to have a strong magnetic signature. However the interpretation of all magnetic anomalies has to be very carefully interpreted as disseminated or massive sulphide minerals may give a strong IP or EM response, and the redistribution of carbon as graphite can strongly affect any electrical survey. These carbon related anomalies may be a distant form or entirely unrelated to a skarn deposit.

### **B 3.0 Results of Field Investigations**

**B 3.1** Attached to this report are the field results that show a strong anomaly was recorded by the magnetometer survey and that the Electromagnetic survey coincided with the Magnetic results. Topographical variations however did mask the true indications and the GPS survey indicated that a possible high values can be re-identified in the field for further study. Given the high Forest fire hazard rating during 1998 the significant outcrop of magnetite observed during the field observations could not be sampled by mechanical equipment as an access road was required.

This further investigation will be reserved for the next stage of exploration.



#### **B 4.0 Conclusions and recommendations**

**B 4.1** The evidence that economic mineralisation could be present is strongly supported by the magnetometer results and field observations. Hand samples show a high percentage of magnetite, and as demonstrated in the review on skarn formation this indicator mineral has produced significant anomalies in both the magnetometer and electromagnetic readings. The true width of these areas of intensity magnetism is of the prime importance as the topography of the claims lends itself to small scale underground removal of the mineralised body by using a vertical mining method and which would have a limited amount of development in non-mineralised material.

**B 4.2** The practical method of evaluating the width of the mineralisation and the specific delineation of a possible tonnage potential would be to consider the known areas of high magnetic readings and to probe these intersection at depth. Minor test pitting and widely spaced diamond drill holes should be considered to prove the extent of the mineralised zones and if this work proves that the anomaly is, as suspected, based on a magnetite skarn then the delineation drilling should be used to define the limits and prove possible tonnage's. The magnetic highs are demonstrated in several places and are separate entities, and therefore each anomaly should be tested in this manner to define or eliminate the structures.

**B 4.3** The skarn mineralised material is, in contrast to the hydrothermal intrusions of both the Macktush and Dauntless zones, linked to the contact of the Jurassic intrusives and lime rich rocks and therefore a better spatial relationship should be established in the field between the contacts.

## **Section C**

### **Sky Claims**

**and the Mineralization**

**established within this area.**

#### **C 1.0 Location and Claim Groups.**

C 1.1 The area held under the claims collectively known as the SKY group comprise the following claim units Sky 3 to 10 held under option by the company.

Previous mining work was undertaken on these claims by limited mining in the early portion of the century and therefore the area was classified as an attractive exploration potential. However the access to the area is mainly by water craft as no major access roads have been constructed to the outcrops of mineralisation and the areas formerly worked, and the regional geology was not as detailed as that of the other mineralised areas under study.

In direct contradiction to these negative aspects of the claims is the location; as all claims are the most Northerly of the entire holdings either directly held by the company or under option; and are accessible during the entire year being at or near tide water with a relatively low relief. If and when an access road is constructed into the mineralised sites exploration work can be continued almost throughout the year with little interruption for climatic conditions. The location of these claims is shown on the attached drawings.

#### Mineral Tenures Held By Sync Resources Ltd.

Nil

#### Mineral Tenures held under option from H.McMaster.

Tenure #	Claim Name	Owner #	Status	Units	Tag #
323117	Sky#3	117908	2000/12/17	18	216138
323118	Sky#4	117908	2000/12/18	18	216137
323119	Sky#5	117908	2000/12/19	12	216146
323120	Sky#6	117908	2000/12/20	15	216147
323121	Sky#7	117908	2000/12/21	18	216148
323122	Sky#8	117908	2000/12/23	15	216139
342353	Sky#9	117908	2000/11/23	20	216627
342354	Sky#10	117908	2000/12/03	20	216628

#### C 2.0 Regional Geology.

C.2.1 Without repeating the overall regional geology from the introduction to this report the claims are within and around the contact between the Jurassic and intrusive granitic pluton and the Karmutsen volcanics. The earlier interpretation Sutherland Brown of vein structures within the volcanics being numerous but with little economic potential of significance does not appear to be either true in this area or that the rock types are not volcanics but nearer to the Bonanza or Island intrusive group and that the original mapping by Muller and Carson 1969 and Carter 1989 may not be truly representative of the actual ground contacts. Additionally it is possible that the overlying rocks may be Karmutsen type rocks but that the thickness may be limited and the underlying intrusives may have significant potential.

In addition Carson [1969] demonstrated that a metallogenic study of the deposits of Vancouver Island were early to middle tertiary and within or adjacent to the quartz-diorite intrusive complexes.

Historically the known and mined deposits at Zeballos, Mt Washington and occurrences at Faith Lake are spatially and genetically related to quartz diorites and dacite porphyries.

These particular rock types are found in the immediate area of the claims and therefore the probability of vein structures is high.

### **C 3.0 Field work**

C 3.1 The work within this claim group was limited to regional sampling of the known outcrops and research into the historical production of the area to establish the context of high grade production. Records from the Ministry of Energy and Mines in Victoria infer that small quantities of high grade "ore" were shipped during the early parts of this century but site investigation showed that the tonnage of material that was shipped was probably under estimated and that the excavations in the form of horizontal tunnels or 'adits' would support the view that the extraction of the mineralised material was significantly higher than that reported.

In addition spoil piles at the entrance to the workings show high values of Copper in the form of either Chalcopyrite or Bornite and the gangue mineral was a quartz calcite matrix. This vein mineralisation supported the theory that these structures are spatially related to both the igneous intrusion and the Macktush deposits, and are hydrothermal in origin.

Linear distances along the outcrops can be related to the land form, and this is similar the Macktush deposit, with the footwall of the vein outcrop forming the southern edge of drainage valleys. It is supposed that during later glaciation of the area, the vein structure being harder than the footwall alteration envelope, was resistant to erosional forces and remained above the softer eroded rocks.

Mapping of these vein outcrops was not intensively completed as outside the scope of this work programme but by surface tape and chain survey, the slope distances of the outcrop and vein structures could be determined from tidewater at Alberni Inlet for distance of 300m in the North East /South West directions. Several structures were noted but no determination made as to whether these were individual structures or a system of splay veins with a common point of origin.

Overburden and first growth timber has masked many of the intermediate points along the outcrops so that only cursory samples were taken of the exposed portions and these may not represent the true value of the total vein structure.

However when referenced to the "Minfile" reports [Report # 092F 155, and 092F 168 the vein structures are classified as mudseams and therefore the economic potential must be developed by further investigation at depth.

#### **C 4.0 Conclusions and Recommendations**

C 4.1 Past evidence of mining in this areas of the claims is indicative of the probability of hydrothermal alteration and injection of mineralised fluids into a host rock. This inference from the field work however has to be balanced against the "Minfile" reports which describe the structures as mudseams.

C4.2 The sampling which took place on the excavated spoil piles at the entrance to the previous underground workings support the supposition that the structures are a combination of both hydrothermal injections from the underlying Jurassic intrusive and a weakly established fracture pattern from this intrusion which may only be partially mineralised.

C 4.3 To establish a definitive link between the fractures and mineralisation it will be necessary to carry out additional work on the claims, and as both the magnetometer and the electro-magnetic [VLF] surveys found correlation between hydrothermal mineralisation, but would be considered an expensive option to physical ground work and future exploration work should be conducted by both intrusive methods and test pitting.

C4.4 Test pitting should be completed at relatively large intervals to establish the structural context to the hydrothermal intrusions, with the material being sent for analysis and metallurgical testing. In addition short diamond drill holes should be inserted as shown on the accompanying maps to determine the dip and strike of the systems, and the possible wall rock.

C 4.5 If the intrusive rocks are found to be within the upper layers of the projected drill holes a deeper series of holes should be identified which would then establish both longitudinal and vertical extent of the zones and possibly a tonnage potential.

**Proposed work programme for  
The continued exploration of the  
Macktush Mc and Sky claims**

**Section A Macktush Claim group**

Access road construction and drill pads	\$ 10,000.00
Diamond drilling 1500m at \$125.00/m	\$ 187,500.00
Bulk sampling	\$ 50,000.00
Sample splitting and analysis	\$ 20,000.00
Engineering Supervision	\$ 20,000.00
Geological interpretation of Diamond drill Core And plotting of information	\$ 30,000.00
Contingency	\$ 32,700.00
Total of next phase.	<b><u>\$ 360,200.00</u></b>

**Section B Mc Claim group**

Bulk tonnage sample at outcrop	\$ 20,000.00
Diamond drilling # 1000m @ \$ 125.00/m	\$ 125,000.00
Sample splitting and analysis	\$ 15,000.00
Engineering supervision	\$ 10,000.00
Geological interpretation of Diamond Drill core And plotting of information	\$ 15,000.00
Contingency	\$ 16500.00
Total of next phase	<b><u>\$ 181,500.00</u></b>

**Section C Sky Claim Group**

Access road construction	\$ 15,000.00
Test pitting and sampling of outcrop	\$ 25,000.00
Diamond Drilling 500 m at \$ 125.00/m	\$ 62,500.00

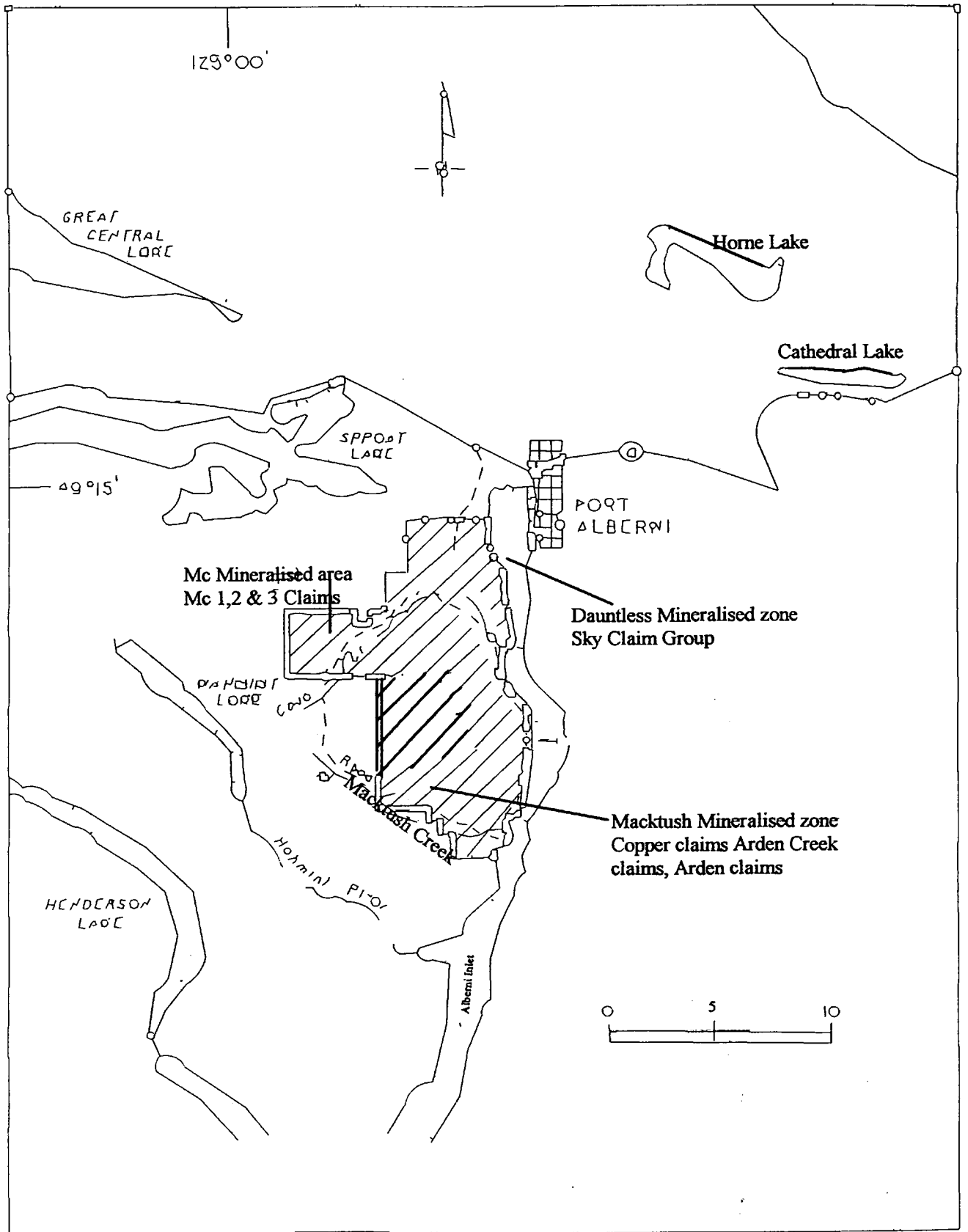
Sample splitting and analysis	\$ 10,000.00
Engineering supervision	\$ 10,000.00
Geological interpretation of diamond drill core And plotting of information	\$ 10,000.00
Contingency	\$ 9,250.00
Total of next phase	<b><u>\$101,750.00</u></b>

**Total expenditures needed for completion of  
Exploration work on the Macktush Mc and Sky claims  
groups \$643450.00**

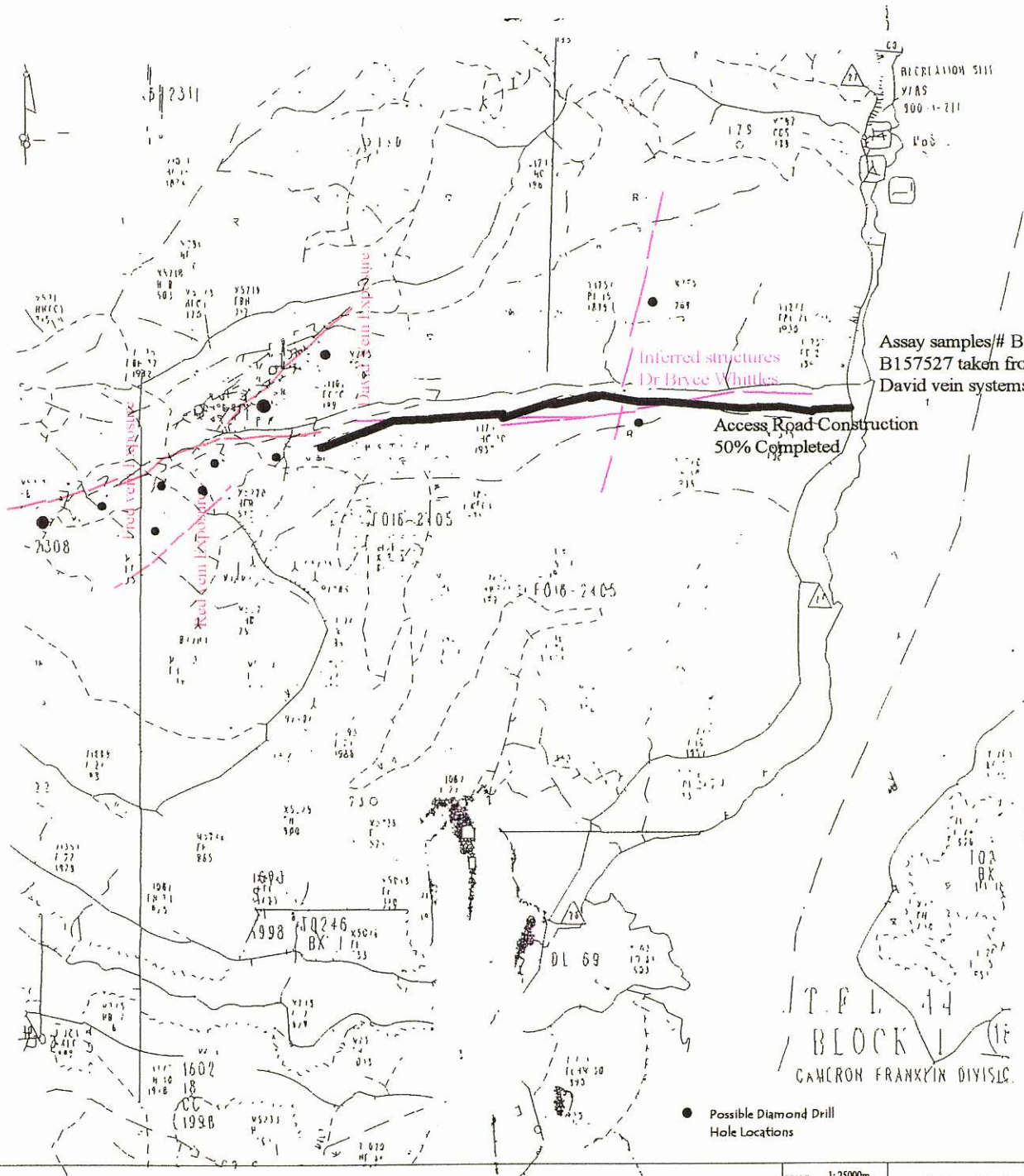


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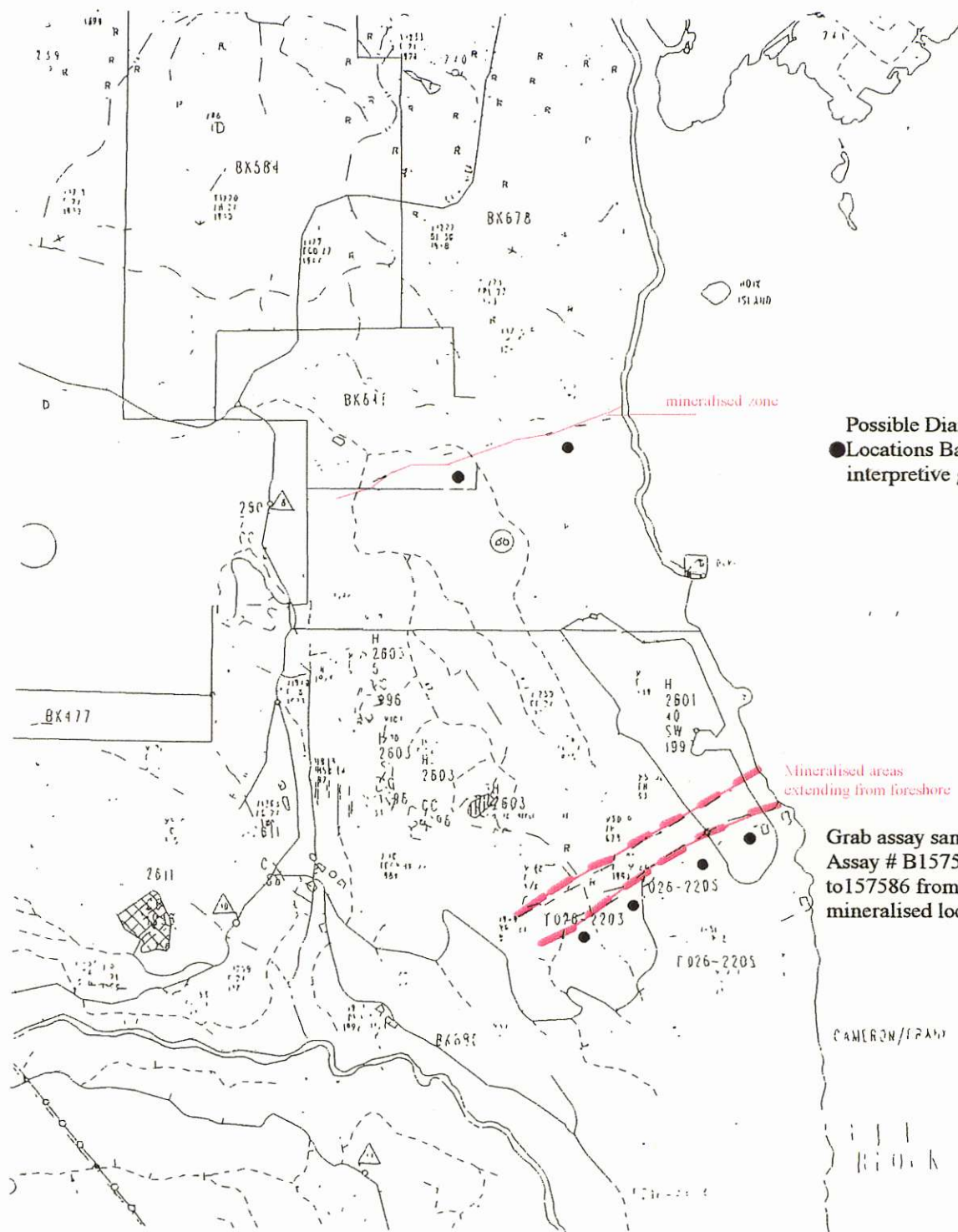


# Possible Exploration targets Diamond Drilling and Bulk sampling

SCALE: 1:25000m	c:\ms1\cwp\50\drawings\1	DRAWN BY: RAD
DATE: April 99		PROJECT: SYMC
<b>Davey Consulting &amp; Engineering</b> <small>Div of Davey Holdings Ltd., Box 473, 1200 Leffer Road, Ermine, B.C., V0R 1V0</small>		
SYMC Resources Ltd Port Alberni B.C.		DRAWING NUMBER:







Possible Diamond Drill Hole  
 ● Locations Based on  
 interpretive geology

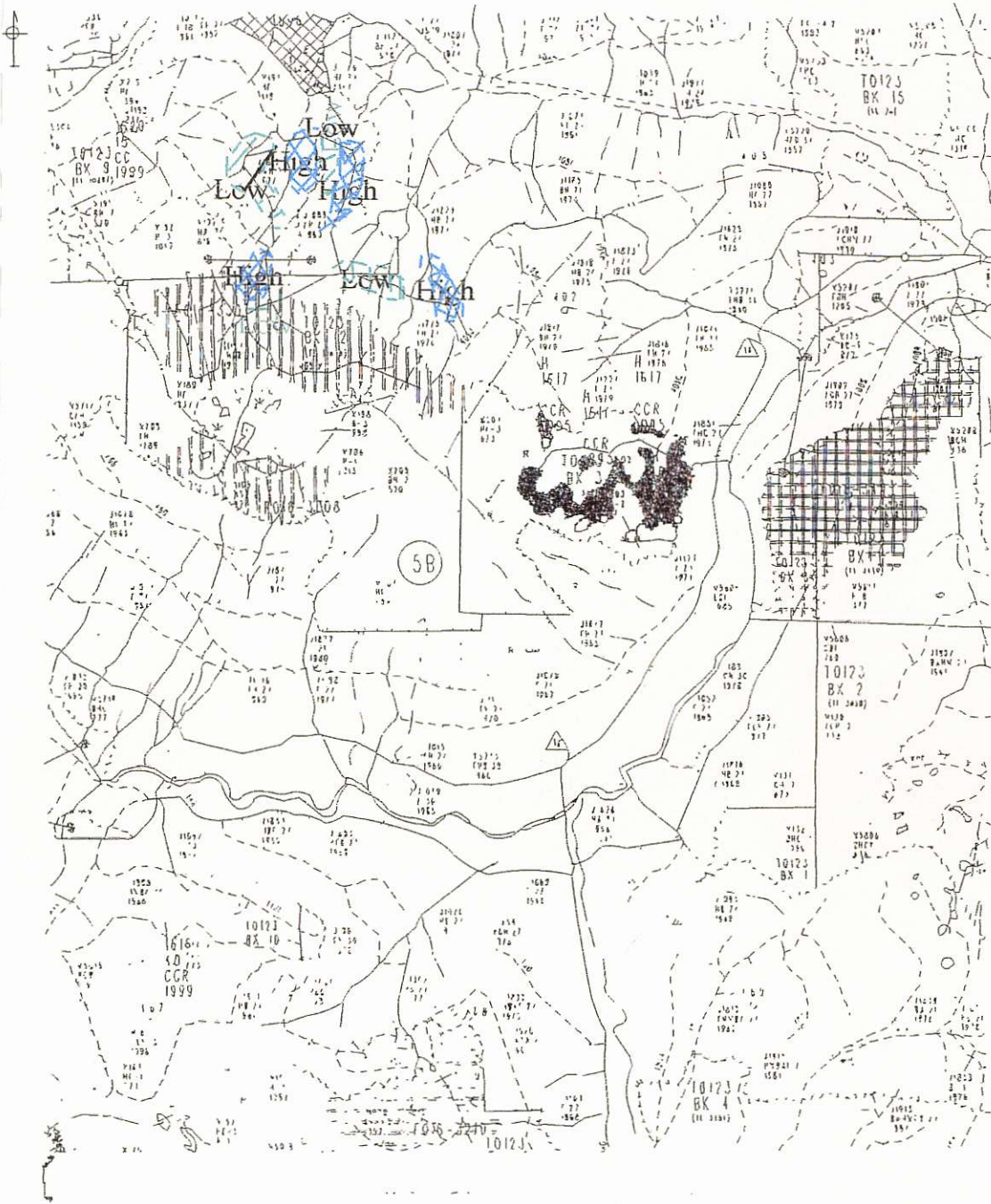
Mineralised areas  
 extending from foreshore

Grab assay samples  
 Assay # B157563  
 to 157586 from this  
 mineralised location

**Mineralised areas around  
 Former Dauntless and Holk  
 Properties**

SCALE: 1:25000m	c:\msa\topw50\drawings\1	DRAWN BY: RAD
DATE: April 99		PROJECT: SYMC
<b>Davey Consulting &amp; Engineering</b> <small>Div. of Davey Holdings Ltd., Box 477, 1200 Leffler Road, Eirington, B.C., V0R 1V0</small>		
<b>SYMC Resources Ltd.</b> <small>Dart Alhoni B.C.</small>		DRAWING NUMBER:





Areas of High Magnetic potential shown as HIGH

Areas of Low magnetic potential shown as LOW

Areas of High Magnetic Values are considered as possible magnetic Skarn areas and possible drilling targets

# Mc Claim Group Areas of Potential Exploration

SCALE: 1:25000m

c:\ms\comp50\drawings\1

DRAWN BY: RAD

DATE: April 99

PROJECT: SYMC

Davey Consulting & Engineering

Div. of Davey Holdings Ltd., Box 473, 1200 Leffer Road, Errington, B.C., V0R 1V0

SYMC Resources Ltd  
Port Alberni B.C.

DRAWING NUMBER:



ASSAY CERTIFICATE



SYMC (David Holding Ltd) File # 9805072  
3009 Kingsway, Port Alberni BC V9Y 1X7

SAMPLE#	Mo %	Cu %	Pb %	Zn %	Ag** oz/t	Ni %	Co %	Mn %	Fe %	As %	U %	Th %	Cd %	Sb %	Bi %	Au** oz/t
B 157563	.001	27.272	<.01	.11	.91	.003	.054	.01	29.70	.10	<.01	<.01	.003	<.001	.01	.012
B 157564	.001	14.700	<.01	.01	.50	.004	.018	.08	30.21	.07	<.01	<.01	.001	<.001	<.01	.007
B 157565	.001	22.517	<.01	.14	1.02	.003	.036	.01	28.64	.10	<.01	<.01	.002	<.001	.01	.014
B 157566	.001	28.984	<.01	.08	.94	.002	.023	<.01	32.44	.11	<.01	<.01	.003	<.001	<.01	.026
B 157567	.001	13.429	<.01	.05	1.09	.002	.018	.01	16.60	.06	<.01	<.01	.002	<.001	<.01	.008
B 157568	.001	25.801	<.01	.11	.97	.002	.037	.01	30.27	.10	<.01	<.01	.004	<.001	.01	.012
B 157569	.001	27.215	<.01	.09	.98	.004	.036	.01	31.41	.10	<.01	<.01	.004	<.001	.01	.020
B 157570	.001	16.111	<.01	.01	.67	.003	.017	.07	30.92	.05	<.01	<.01	.001	<.001	.01	.005
B 157571	.001	26.491	<.01	.10	1.02	.003	.050	.01	29.36	.10	<.01	<.01	.004	<.001	.01	.012
B 157572	.002	25.190	<.01	.11	1.00	.003	.052	<.01	27.88	.08	<.01	<.01	.004	<.001	<.01	.016
B 157573	.001	27.169	<.01	.14	1.04	.004	.042	.01	32.28	.12	<.01	<.01	.005	<.001	.01	.012
B 157574	.003	24.386	<.01	.08	.94	.005	.032	.02	30.69	.09	<.01	<.01	.003	<.001	.01	.013
B 157575	.002	26.464	<.01	.10	1.05	.002	.033	.01	29.24	.10	<.01	<.01	.004	<.001	.01	.014
B 157576	.003	17.855	<.01	.06	.79	.003	.034	.01	22.13	.07	<.01	<.01	.002	<.001	<.01	.012
RE B 157576	.003	17.549	<.01	.06	.79	.004	.035	.01	22.26	.07	<.01	<.01	.002	<.001	<.01	.011
B 157577	.001	27.199	<.01	.13	.93	.003	.035	.01	31.81	.11	<.01	<.01	.004	<.001	.01	.034
B 157578	.001	27.596	<.01	.09	.67	.002	.034	.01	31.58	.10	<.01	<.01	.003	.001	<.01	.040
B 157579	.001	23.242	<.01	.13	.92	.002	.026	.01	26.73	.08	<.01	<.01	.004	<.001	.01	.017
B 157580	.001	27.459	<.01	.08	1.01	.004	.032	.01	31.29	.11	<.01	<.01	.003	<.001	.01	.016
B 157581	.003	22.048	<.01	.08	.72	.002	.030	.02	26.37	.08	<.01	<.01	.003	<.001	.01	.018
B 157582	.002	26.360	<.01	.10	1.10	.001	.033	<.01	30.06	.11	<.01	<.01	.003	<.001	.01	.025
B 157583	.005	21.871	<.01	.05	.73	.005	.027	.02	29.27	.09	<.01	<.01	.002	<.001	.01	.030
B 157584	.002	25.714	<.01	.23	.80	.002	.031	<.01	27.13	.08	<.01	<.01	.005	<.001	<.01	.014
B 157585	.002	23.204	<.01	.08	.80	.003	.031	<.01	25.68	.09	<.01	<.01	.003	<.001	.01	.018
B 157586	.002	25.453	<.01	.12	.87	.003	.027	<.01	28.13	.10	<.01	<.01	.004	<.001	<.01	.016
STANDARD R-1/AU-1	.086	.841	1.31	2.29	2.98	.026	.025	.08	6.58	.95	.01	.01	.045	.166	.03	.098

1 GM SAMPLE DIGESTED IN 30 ML AQUA - REGIA, DILUTE TO 100 ML, ANALYSIS BY ICP.  
AG\*\* & AU\*\* BY FIRE ASSAY FROM I.A.T. SAMPLE.  
- SAMPLE TYPE: ROCK  
Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns

DATE RECEIVED: NOV 16 1998 DATE REPORT MAILED: Nov 20/98 SIGNED BY: *C.P.* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS





ASSAY CERTIFICATE



SYMC (David Holding Ltd) File # 9803012  
3009 Kingsway, Port Alberni BC V9Y 1X7

SAMPLE#	Mo %	Cu %	Pb %	Zn %	Ag** oz/t	Ni %	Co %	Mn %	Fe %	As %	U %	Th %	Cd %	Sb %	Bi %	Au** oz/t
B 157501	.009	1.016	<.01	<.01	1.59	.001	<.001	.01	2.78	<.01	<.01	<.01	<.001	<.001	<.01	.156
B 157502	.004	.975	<.01	<.01	3.17	.002	<.001	.01	4.37	<.01	<.01	<.01	<.001	.002	<.01	.892
B 157503	.005	.943	<.01	<.01	.96	.001	<.001	.01	2.73	<.01	<.01	<.01	<.001	.001	<.01	.097
B 157504	.007	.880	<.01	<.01	1.73	.002	<.001	.01	2.77	<.01	<.01	<.01	<.001	.002	<.01	.430 *
B 157505	.005	.686	<.01	<.01	.54	.001	<.001	.01	2.15	<.01	<.01	<.01	<.001	<.001	<.01	.121
B 157506	.002	.361	<.01	<.01	.84	.001	.001	.01	2.12	<.01	<.01	<.01	<.001	.001	<.01	.259
B 157507	.006	.818	<.01	<.01	.74	.001	.001	.01	2.66	<.01	<.01	<.01	<.001	<.001	<.01	.157
B 157508	.004	1.361	<.01	<.01	3.55	.002	.001	.01	4.52	<.01	<.01	<.01	<.001	.002	<.01	.929
B 157509	.009	.898	<.01	<.01	.36	.001	<.001	.01	2.30	<.01	<.01	<.01	<.001	.001	<.01	.074
B 157510	.002	1.053	<.01	<.01	3.04	.002	.001	<.01	4.52	<.01	<.01	<.01	<.001	.002	<.01	.804
B 157511	.007	.798	<.01	<.01	.36	.001	<.001	.01	2.46	<.01	<.01	<.01	<.001	.002	<.01	.061
B 157512	.002	.718	<.01	<.01	1.74	.001	<.001	<.01	3.67	<.01	<.01	<.01	<.001	.001	<.01	.491
B 157513	.002	.752	<.01	<.01	.66	.001	<.001	.01	2.81	<.01	<.01	<.01	<.001	.002	<.01	.109
B 157514	.002	.444	<.01	<.01	1.32	.002	.001	<.01	2.37	<.01	<.01	<.01	<.001	.001	<.01	.365 *
B 157515	.001	.106	<.01	<.01	.47	.001	.001	.04	3.01	<.01	<.01	<.01	<.001	.001	<.01	.089
B 157516	.003	.354	<.01	<.01	.65	.001	.001	<.01	1.96	<.01	<.01	<.01	<.001	.001	<.01	.193 *
B 157517	.004	.036	<.01	<.01	.13	<.001	.001	.03	2.47	<.01	<.01	<.01	<.001	.002	<.01	.117
RE B 157517	.004	.035	<.01	<.01	.15	<.001	.001	.03	2.48	<.01	<.01	<.01	<.001	.002	<.01	.114
B 157518	.002	.193	<.01	.02	.25	.001	.001	.08	3.42	.02	<.01	<.01	<.001	.059	<.01	.029
B 157519	.006	.072	<.01	<.01	.13	<.001	.001	.01	1.95	<.01	<.01	<.01	<.001	<.001	<.01	.100
B 157520	.006	.974	<.01	<.01	.37	.001	<.001	.01	2.07	<.01	<.01	<.01	<.001	<.001	<.01	.040
B 157521	.007	.005	<.01	<.01	<.01	.001	.001	.02	3.16	<.01	<.01	<.01	<.001	<.001	<.01	.024
B 157522	.002	.190	<.01	<.01	.52	.001	.001	.03	1.94	<.01	<.01	<.01	<.001	.007	<.01	.067
B 157523	.005	1.108	<.01	<.01	1.30	.001	<.001	.01	2.80	<.01	<.01	<.01	<.001	.002	<.01	.320
B 157524	.002	.130	<.01	.01	.06	.001	.001	.01	2.34	<.01	<.01	<.01	<.001	<.001	<.01	.122
B 157525	.004	.609	<.01	.02	.48	<.001	.001	.05	3.09	.02	<.01	<.01	<.001	.059	<.01	.074
B 157526	.024	.251	<.01	<.01	.37	.001	.001	<.01	1.67	<.01	<.01	<.01	<.001	<.001	<.01	.749
B 157527	.002	.283	<.01	.03	.39	.001	.001	.07	3.38	.03	<.01	<.01	<.001	.099	<.01	.051
STANDARD R-1/AU-1	.090	.854	1.38	2.32	3.00	.025	.026	.09	6.69	.98	.01	.01	.047	.166	.03	.098

1 GM SAMPLE DIGESTED IN 30 ML AQUA - REGIA, DILUTE TO 100 ML, ANALYSIS BY ICP.  
AG\*\* & AU\*\* BY FIRE ASSAY FROM I.A.T. SAMPLE.  
- SAMPLE TYPE: ROCK  
Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: JUL 23 1998 DATE REPORT MAILED: *July 29/98* SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

\* Please note changes on gold data.

STATION		MAG READING				
1	100	1	55758.6	0.24	0.481389	0
2	100	1	55758.1	0.24	0.456944	0
3	200	1	55846.2	0.24	0.631389	0
4	300	1	55528.3	0.22	0.683889	0
5	400	1	55463.8	0.25	0.700556	0
6	500	1	55532.7	0.22	0.715278	0
7	600	1	55488.1	0.21	0.731389	0
8	700	1	55723.5	0.26	0.751111	0
9	800	1	55717.8	0.26	0.7675	0
10	900	1	55669	0.31	0.786944	0
11	1000	1	55654.4	0.22	0.803889	0
12	1100	1	55885	0.28	0.82	0
13	1700	1	55130.7	0.23	3.122222	0
14	1800	1	55837.9	0.25	3.136944	0
15	1900	1	55790.3	0.29	3.149722	0
16	2000	1	55716.2	0.26	3.162778	0
17	2100	1	55486.1	0.17	3.176944	0
18	2200	1	55568.7	0.22	3.199444	0
19	2300	1	55771.6	0.25	3.214444	0
20	2400	1	55748.4	0.24	3.227778	0
21	2500	1	55594.7	0.21	3.243611	0
22	2600	1	55747.4	0.28	3.259167	0
23	2700	1	55449.6	0.2	3.274444	0
24	2800	1	55603.9	0.23	3.288889	0
25	2900	1	55541	0.26	3.304167	0
26	3000	1	55657.9	0.25	3.321667	0
27	3100	1	55613.6	0.23	3.386667	0
28	3200	1	55483.9	0.18	3.351667	0
29	3400	1	55415.4	0.22	3.39	0
30	3500	1	55320	0.18	3.406667	0
31	3600	1	55319.1	0.17	3.423056	0
32	3700	1	55248.5	0.19	3.438611	0
33	3800	1	55166.5	0.16	3.456389	0
34	3900	1	55171.1	0.2	3.477778	0
35	4000	1	55204.5	0.15	3.496667	0
36	4000	1	55204.5	0.15	3.496667	0

0	4	55474.7	0.25	2.631944	0
100	4	55657.6	0.19	2.6725	0
200	4	55649.6	0.18	2.689722	0
300	4	55747.2	0.2	2.705833	0
400	4	55881.6	0.23	2.723333	0
500	4	55817.6	0.25	2.738889	0
600	4	55806.2	0.23	2.755556	0

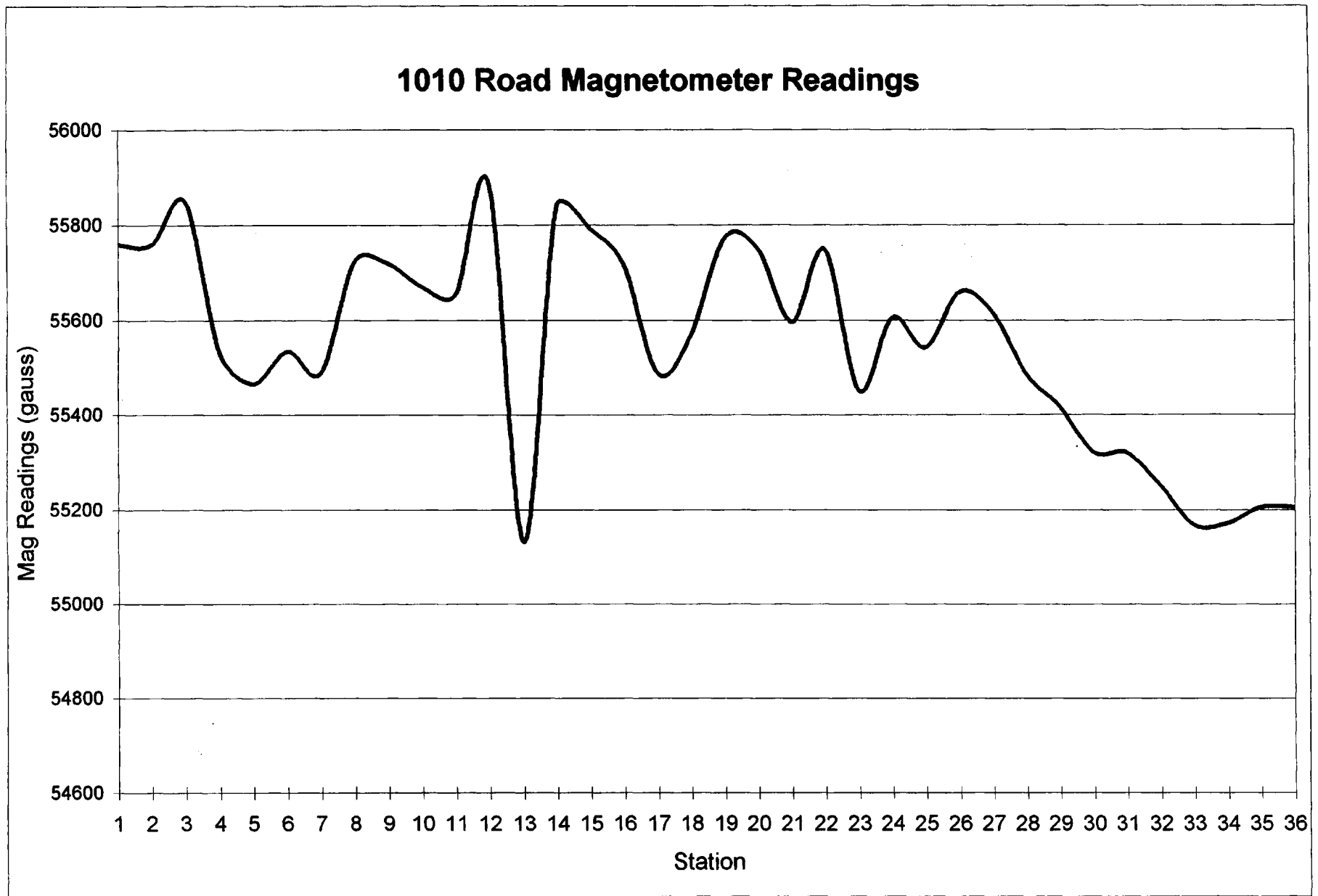
?

0	2	55576.3	0.22	0.899167	0	0
100	2	55377.5	0.19	0.965	0	100
200	2	55410.4	0.19	0.995	0	200
300	2	55485.2	0.21	1.017222	0	300
400	2	55643.1	0.21	1.045833	0	400
500	2	55670.3	0.22	1.0625	0	500
500	2	55670.3	0.22	1.0625	0	600
600	2	55750.7	0.21	1.095	0	700
700	2	55701	0.24	1.1125	0	800
800	2	55584.1	0.21	1.129167	0	900
900	2	55658.8	0.23	1.146667	0	1000
1000	2	55621.6	0.21	1.1625	0	1100
1100	2	55555.7	0.19	1.191389	0	1200
1200	2	55542.3	0.19	1.211389	0	
1300	2	55515.3	0.21	1.235278	0	
1400	2	55583.7	0.22	1.267778	0	
1500	2	55593	0.26	1.284167	0	
1600	2	55531.1	0.26	1.301944	0	
1700	2	55346	0.21	1.319167	0	

3	55508.7	0.2	2.1575	0	0	4	55474.7
3	55466.9	0.2	2.240833	0	100	4	55657.6
3	55465.9	0.22	2.258611	0	200	4	55649.6
3	55485.1	0.18	2.277222	0	300	4	55747.2
3	55415.2	0.19	2.315556	0	400	4	55881.6
3	55393.7	0.18	2.334167	0	500	4	55817.6
3	55460.9	0.2	2.355278	0	600	4	55806.2
3	55347.7	0.2	2.382222	0			
3	55462.2	0.18	2.410556	0			
3	55436.8	0.2	2.426944	0			
3	55543	0.25	2.455	0			
3	55513	0.19	2.491667	0			
3	55460	0.2	2.515556	0			

0.25	2.631944
0.19	2.6725
0.18	2.689722
0.2	2.705833
0.23	2.723333
0.25	2.738889
0.23	2.755556

0  
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0



STATION		IN-PHASE QUADRATURE					
2500	1	27.3	6.3	179.12	0	15.3	3.243611
2600	1	30.8	5.1	180.04	0	17.1	3.259167
2700	1	28.8	6.6	178.97	0	16.1	3.274444
2800	1	28.3	6.9	179.71	0	15.8	3.288889
2900	1	31.7	8.3	179.12	0	17.7	3.304167
3000	1	25	5.7	180.76	0	14	3.321667
3100	1	21.7	5.2	179.05	0	12.3	3.336667
3200	1	20.2	4.3	178.83	0	11.4	3.351667
3300	1	16.1	2.5	178.37	0	9.1	3.370278
3400	1	20.1	4.6	178.78	0	11.4	3.39
3500	1	17.6	1.9	177.87	0	10	3.406667
3600	1	21.3	3.9	177.75	0	12	3.423056
3700	1	25.1	6.6	178.18	0	14.1	3.438611
3800	1	-27.7	-8.7	177.72	0	-15.5	3.456389
3900	1	29	11.8	179.01	0	16.3	3.477778
4000	1	27.6	10.6	178.82	0	15.6	3.496667
	1	29.8	7.2	180.39	0	16.7	3.122222
	1	29.8	5.9	180.11	0	16.6	3.136944
	1	28.2	4.5	180.17	0	15.8	3.149722
	1	26.4	6.3	180.96	0	14.8	3.162778
	1	24.3	3.6	180.79	0	13.7	3.176944
?	1	23.3	1	179.34	0	13.1	3.199444
1	1	23.9	0.9	179.18	0	13.4	3.214444
-1	1	26.2	5.8	178.73	0	14.7	3.227778
-1	1	27.3	6.3	179.12	0	15.3	3.243611
-1	1	30.8	5.1	180.04	0	17.1	3.259167
-1	1	28.8	6.6	178.07	0	16.1	3.274444
-1	1	28.3	6.9	179.71	0	15.8	3.288889
-1	1	31.7	8.3	179.12	0	17.7	3.304167
-1	1	25	5.7	180.76	0	14	3.321667
-1	1	21.7	5.2	179.05	0	12.3	3.336667
-1	1	20.2	4.3	178.83	0	11.4	3.351667
-1	1	16.1	2.5	178.37	0	9.1	3.370278
-1	1	20.1	4.6	178.78	0	11.4	3.39
0	1	17.6	1.9	177.87	0	10	3.406667



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100	1	21.3	3.9	177.75	0	12	3.423056
200	1	25.1	6.6	178.18	0	14.1	3.438611
300	1	-27.7	-8.7	177.72	0	-15.5	3.456389
400	1	29	11.8	179.01	0	16.3	3.477778
500	1	27.6	10.6	178.62	0	15.6	3.496667
600	2	26.8	6.1	180.44	0	15	1.095
700	2	27.4	8.9	178.87	0	15.4	1.1125
800	2	29.2	8.6	179.94	0	16.3	1.129167
900	2	30.9	6.4	180.34	0	17.2	1.146667
1000	2	29.9	11.2	180	0	16.8	1.1625
1100	2	31.9	8.3	181.1	0	17.8	1.191389
1200	2	27	11.3	182.63	0	15.3	1.211389
1300	2	19.8	4.9	179.71	0	11.2	1.235278
1400	2	20.8	6.5	180.58	0	11.8	1.267778
1500	2	19.7	13.2	178.37	0	11.3	1.284167
1600	2	22.7	11.6	179.67	0	12.9	1.301944
1700	2	20.8	10.3	179.78	0	11.9	1.319167
0	3	11.1	4.2	180.02	0	6.3	2.1575
100	3	10.8	2.7	180.38	0	6.1	2.240833
200	3	6.9	-0.9	180.24	0	3.9	2.258611
300	3	8.1	-4	180.98	0	4.6	2.277222
400	3	-11.7	3.3	179.48	0	-6.6	2.315556
500	3	12.7	-5	180.67	0	7.2	2.334167
600	3	-14.9	7	181.37	0	-8.4	2.355278
700	3	-15	7.3	179.83	0	-8.5	2.382222
800	3	-15.5	8.7	179.98	0	-8.8	2.410556
900	3	16.7	-7.9	181.52	0	9.5	2.426944
1000	3	-17.4	6.6	180.67	0	-9.8	2.455
1100	3	15.4	-10.6	180.67	0	8.8	2.491667
1200	3	17	-5.2	179.19	0	9.6	2.515556
0	4	17	-5.6	180.93	0	9.7	2.631944
100	4	17.5	-4.5	180.04	0	9.9	2.6725
200	4	15.2	-6.1	180.15	0	8.7	2.689722
300	4	15.9	-3.7	180.77	0	9	2.705833

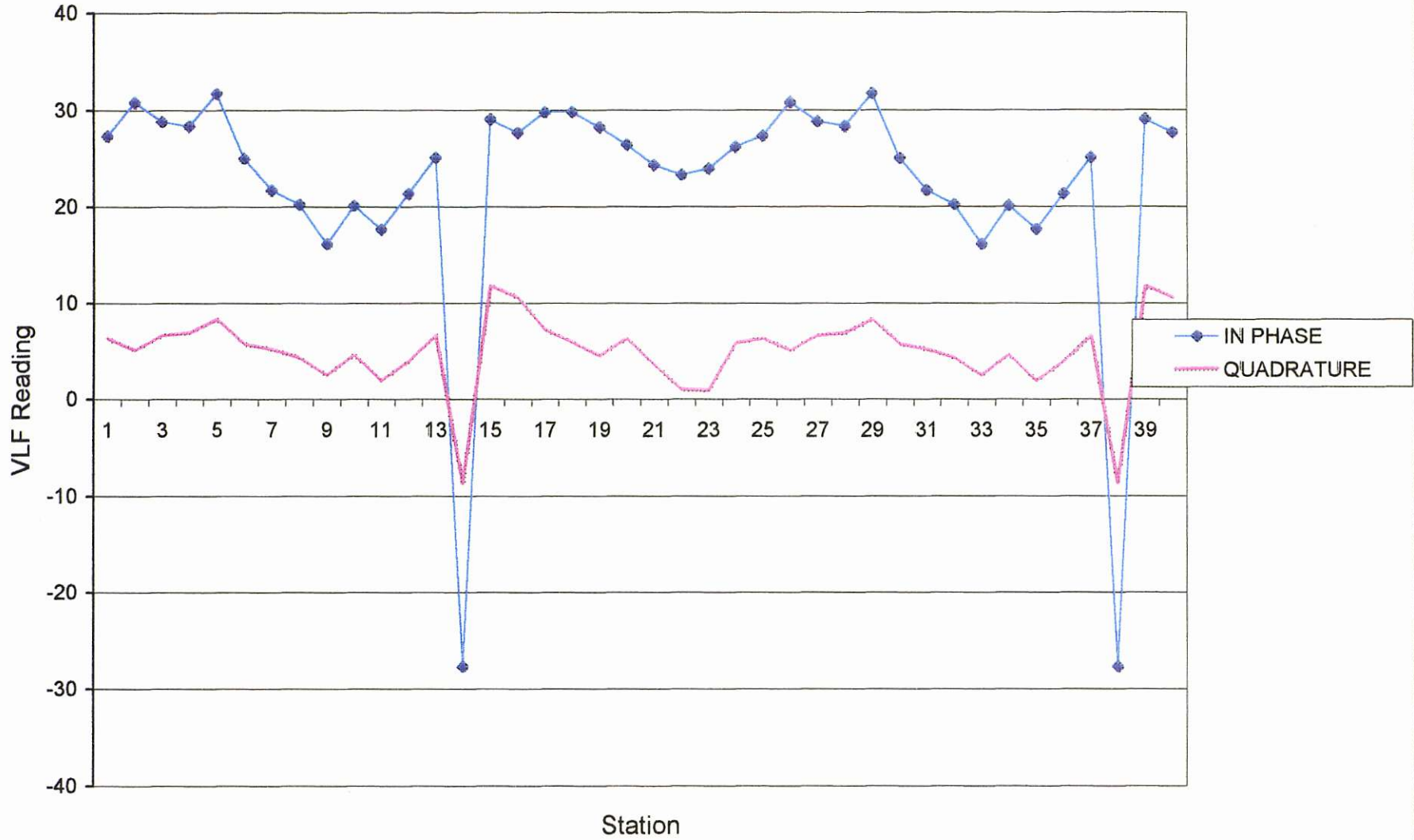
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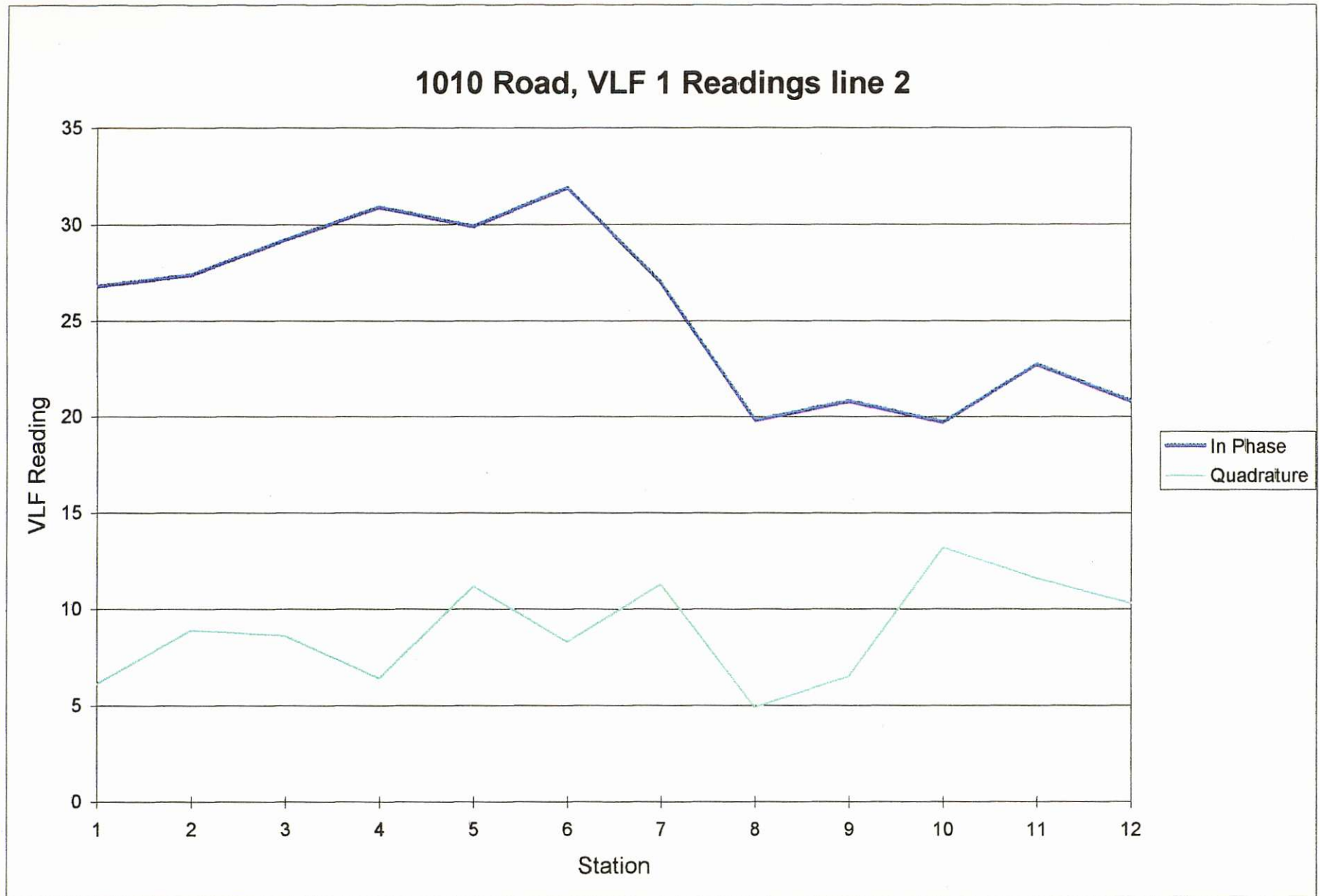
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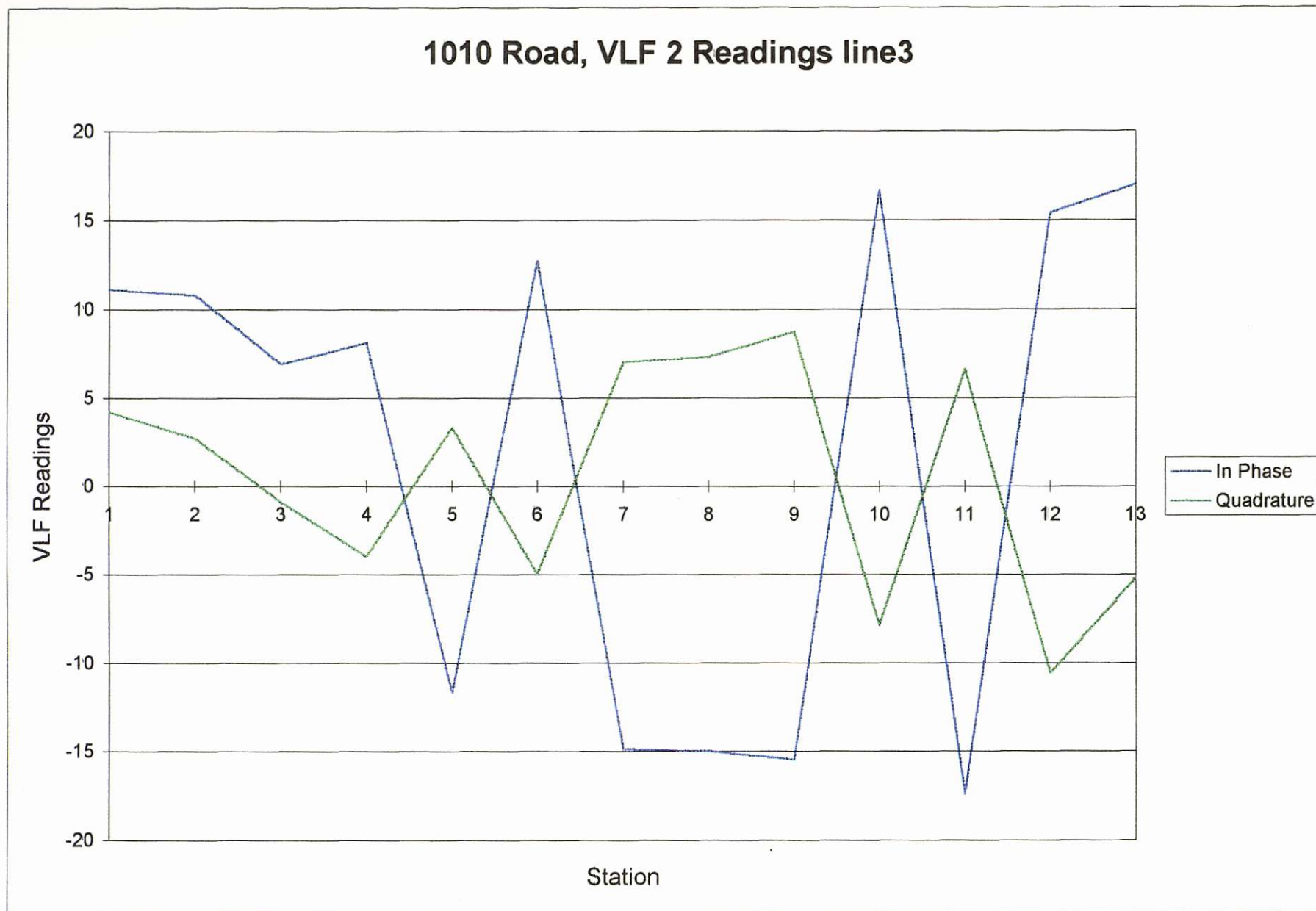
400	4	17.7	0.1	180.43	0	10	2.723333
500	4	18.9	-0.7	180.46	0	10.7	2.738889
600	4	18.1	-2.1	179.41	0	10.2	2.755556

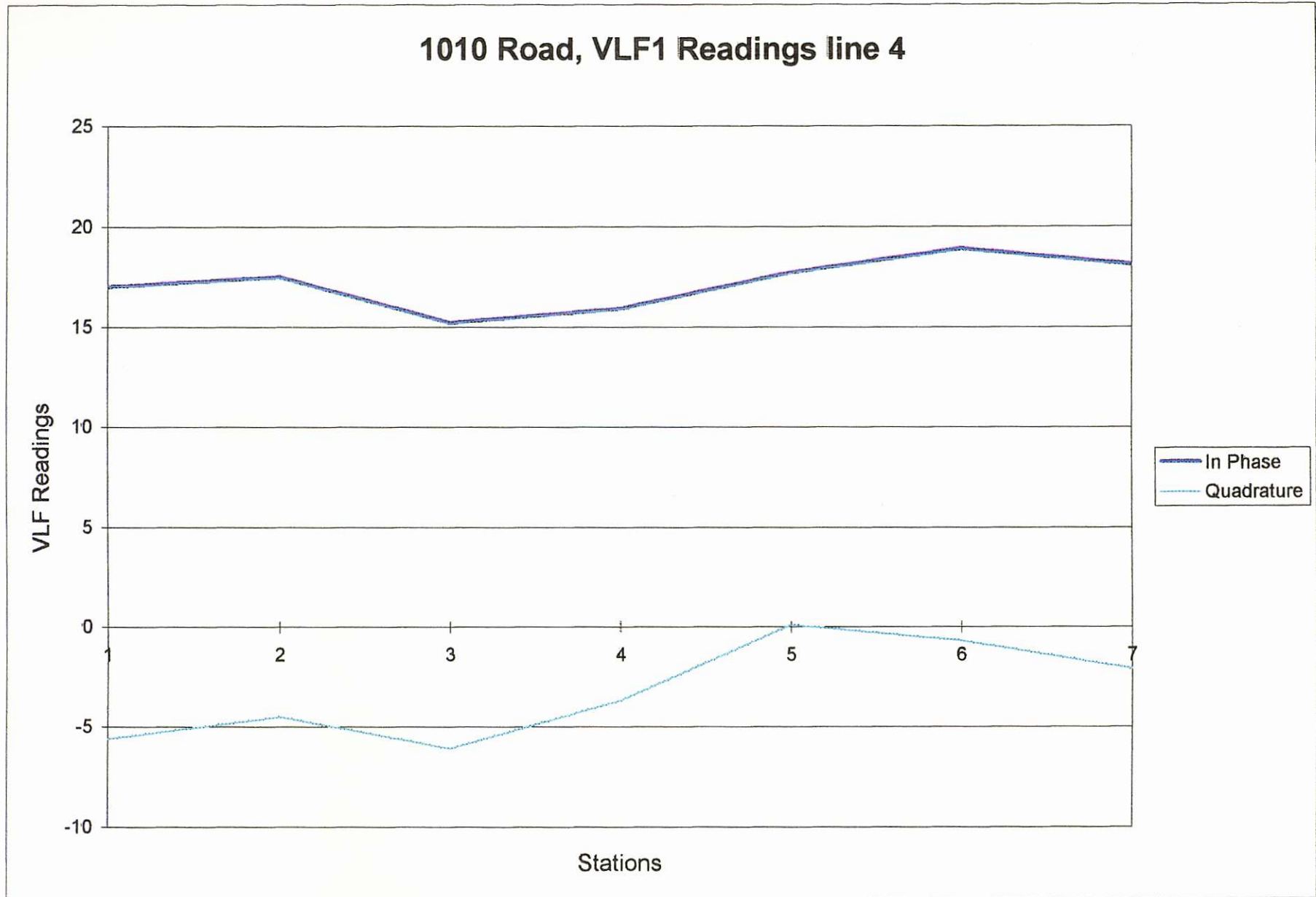
### 1010 Road VLF Readings line 1





### 1010 Road, VLF 2 Readings line3



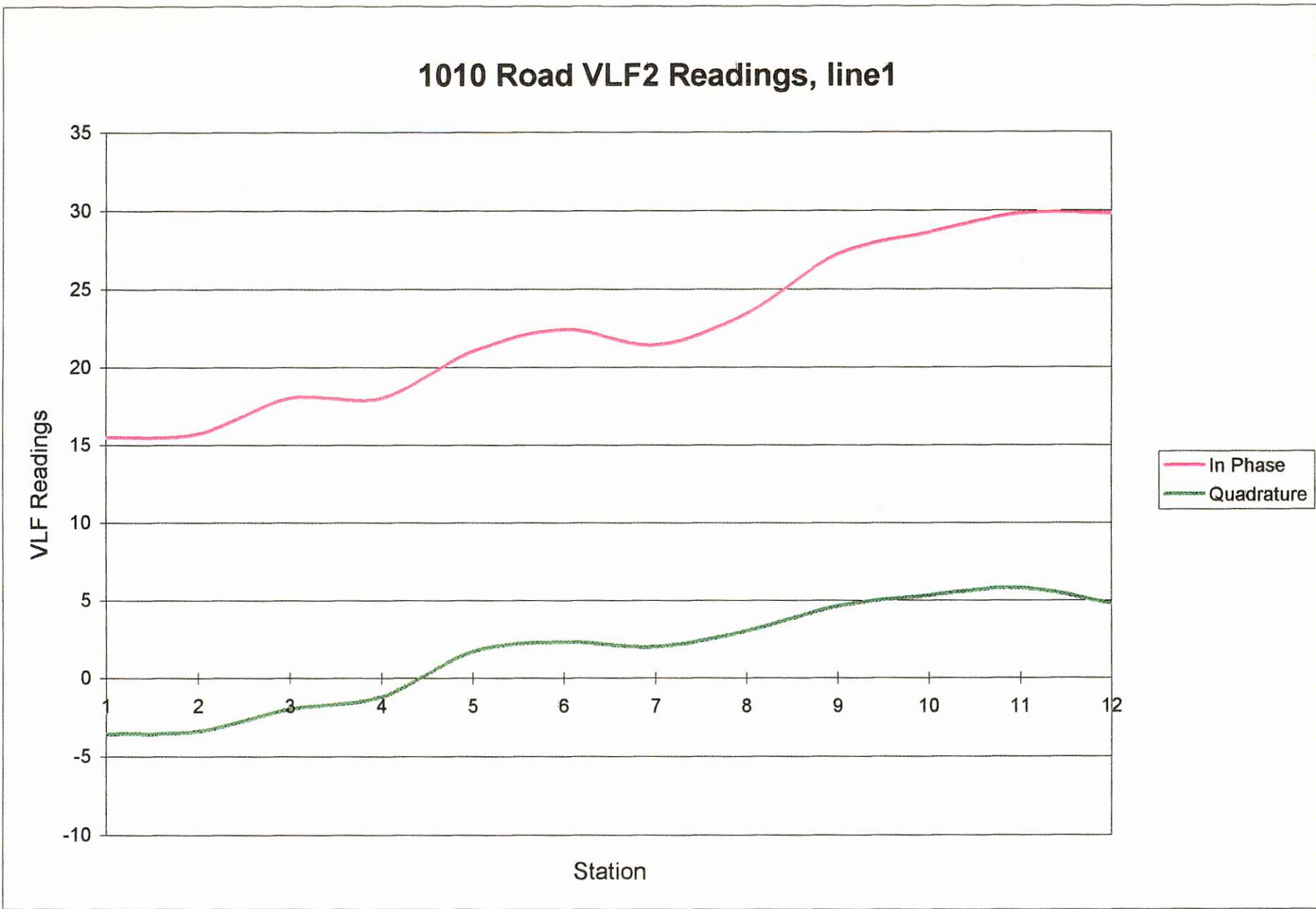


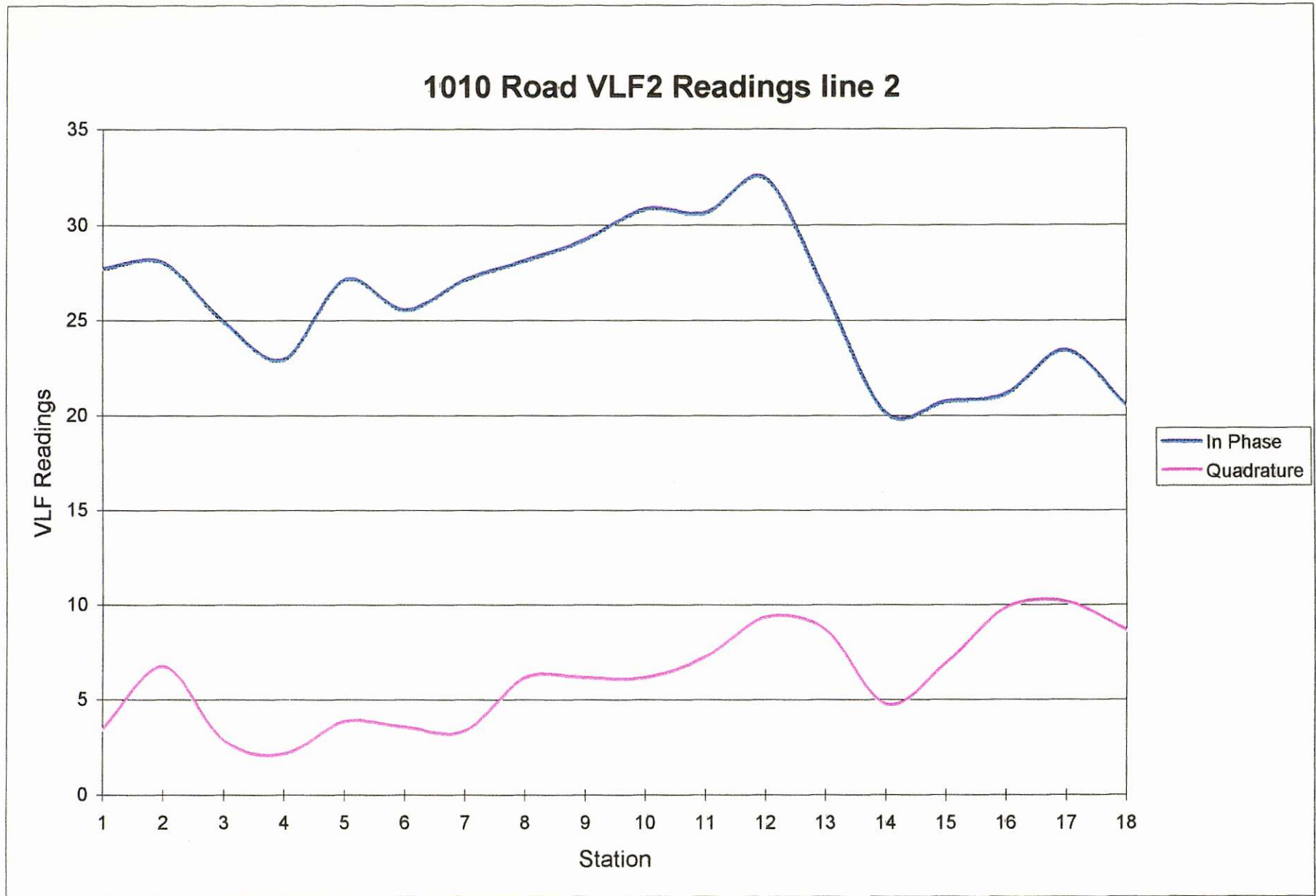
Station			In-Phase	Quadrature					
	1	1	100	15.5	-3.6	7.61	0	8.8	0.456944
	2	-1	100	15.7	-3.4	7.41	0	8.9	0.481389
	3	-1	200	18	-2	7.23	0	10.2	0.631389
	4	-1	300	18	-1.2	7.59	0	10.2	0.683889
	5	-1	400	21	1.7	7.5	0	11.8	0.700556
	6	-1	500	22.4	2.3	7.82	0	12.6	0.715278
	7	-1	600	21.4	2	7.36	0	12.1	0.731389
	8	-1	700	23.4	3	7.97	0	13.1	0.751111
	9	-1	800	27.2	4.6	7.73	0	15.2	0.7675
	10	-1	900	28.6	5.3	7.49	0	16	0.786944
	11	-1	1000	29.8	5.8	7.4	0	16.6	0.803889
	12	-1	1100	29.8	4.8	7.62	0	16.6	0.82
line 2									
	1	0	2	27.7	3.4	7.63	0	15.5	0.899167
	2	100	2	28	6.7	7.79	0	15.7	0.965
	3	200	2	24.9	2.8	7.45	0	14	0.995
	4	300	2	22.9	2.1	7.54	0	12.9	1.017222
	5	400	2	27.1	3.8	7.55	0	15.2	1.045833
	6	500	2	25.5	3.5	7.31	0	14.3	1.0625
	7	600	2	27.1	3.3	7.62	0	15.1	1.095
	8	700	2	28.1	6.1	7.56	0	15.7	1.1125
	9	800	2	29.2	6.1	7.38	0	16.3	1.129167
	10	900	2	30.8	6.1	7.52	0	17.2	1.146667
	11	1000	2	30.6	7.2	7.56	0	17	1.1625
	12	1100	2	32.4	9.3	8.47	0	18.1	1.191389
	13	1200	2	26.5	8.6	8.57	0	14.9	1.211389
	14	1300	2	20.1	4.7	8.17	0	11.4	1.235278
	15	1400	2	20.7	6.9	7.79	0	11.7	1.267778
	16	1500	2	21.1	9.8	7.38	0	12	1.284167
	17	1600	2	23.4	10.1	7.43	0	13.3	1.301944
	18	1700	2	20.5	8.6	7.03	0	11.6	1.319167
line 3									
	1	0	3	11.9	2.9	7.46	0	6.8	2.1575
	2	100	3	11.1	2.1	7.45	0	6.3	2.240833
	3	200	3	6.3	-1.8	7.24	0	3.6	2.258611
	4	300	3	9.1	-3.3	7.44	0	5.2	2.277222
	5	400	3	-12.5	2.9	7.36	0	-7.1	2.315556
	6	500	3	13	-3.6	7.58	0	7.4	2.334167
	7	600	3	-14.8	4.4	7.45	0	-8.4	2.355278
	8	700	3	-15.6	5	7.46	0	-8.8	2.382222
	9	800	3	-16	5.7	7.41	0	-9.1	2.410556
	10	900	3	16.9	-5.7	7.61	0	9.6	2.426944
	11	1000	3	-17.8	3.6	7.63	0	-10	2.455
	12	1100	3	16.9	-6.7	8.16	0	9.6	2.491667
	13	1200	3	16	-3.3	7.31	0	9.1	2.515556
line 4									
	1	0	4	17.4	-2.8	7.28	0	9.9	2.631944
	2	100	4	17.8	-2.1	7.19	0	10.1	2.6725
	3	200	4	15.5	-3.7	7.6	0	8.8	2.689722

4	300	4	15.8	-1.4	7.41	0	8.9	2.705833
5	400	4	17.7	1.1	7.76	0	10	2.723333
6	500	4	19	1.1	7.54	0	10.8	2.738889
7	600	4	17.6	5.6	7.4	0	10	2.755556
8	1700	1	30.6	5.4	7.59	0	17	3.122222
9	1800	1	30.3	5.5	7.44	0	16.9	3.136944
10	1900	1	28	4.1	7.58	0	15.6	3.149722
11	2000	1	25.8	3.1	7.8	0	14.5	3.162778
12	2100	1	24.7	0.6	7.59	0	13.8	3.176944
13	2200	1	24.5	1	7.22	0	13.8	3.199444
14	2300	1	24.5	1.4	7.11	0	13.7	3.214444
15	2400	1	28.9	2.7	7.05	0	16.1	3.227778
16	2500	1	27.2	2.8	6.88	0	15.2	3.243611
17	2600	1	30.4	5.9	7.13	0	17	3.259167
18	2700	1	29.6	3	7.22	0	16.5	3.274444
19	2800	1	27.9	3	7.69	0	15.6	3.288889
20	2900	1	32.1	9.3	7.77	0	17.9	3.304167
21	3000	1	25	5.3	7.35	0	14	3.321667
22	3100	1	22.4	1.9	7.27	0	12.6	3.336667
23	3200	1	21.1	4.8	7.41	0	11.9	3.351667
24	3300	1	16.2	-0.3	6.52	0	9.2	3.370278
25	3400	1	19.6	1.7	6.58	0	11	3.39
26	3500	1	18.4	1.7	6.98	0	10.4	3.406667
27	3600	1	21.4	2.9	6.77	0	12.1	3.423056
28	3700	1	24.9	7.3	6.71	0	14	3.438611
29	3800	1	-28.4	-8.2	6.48	0	-15.9	3.456389
30	3900	1	28.5	10.3	7.08	0	16.1	3.477778
31	4000	1	27.6	10	7.09	0	15.5	3.496667

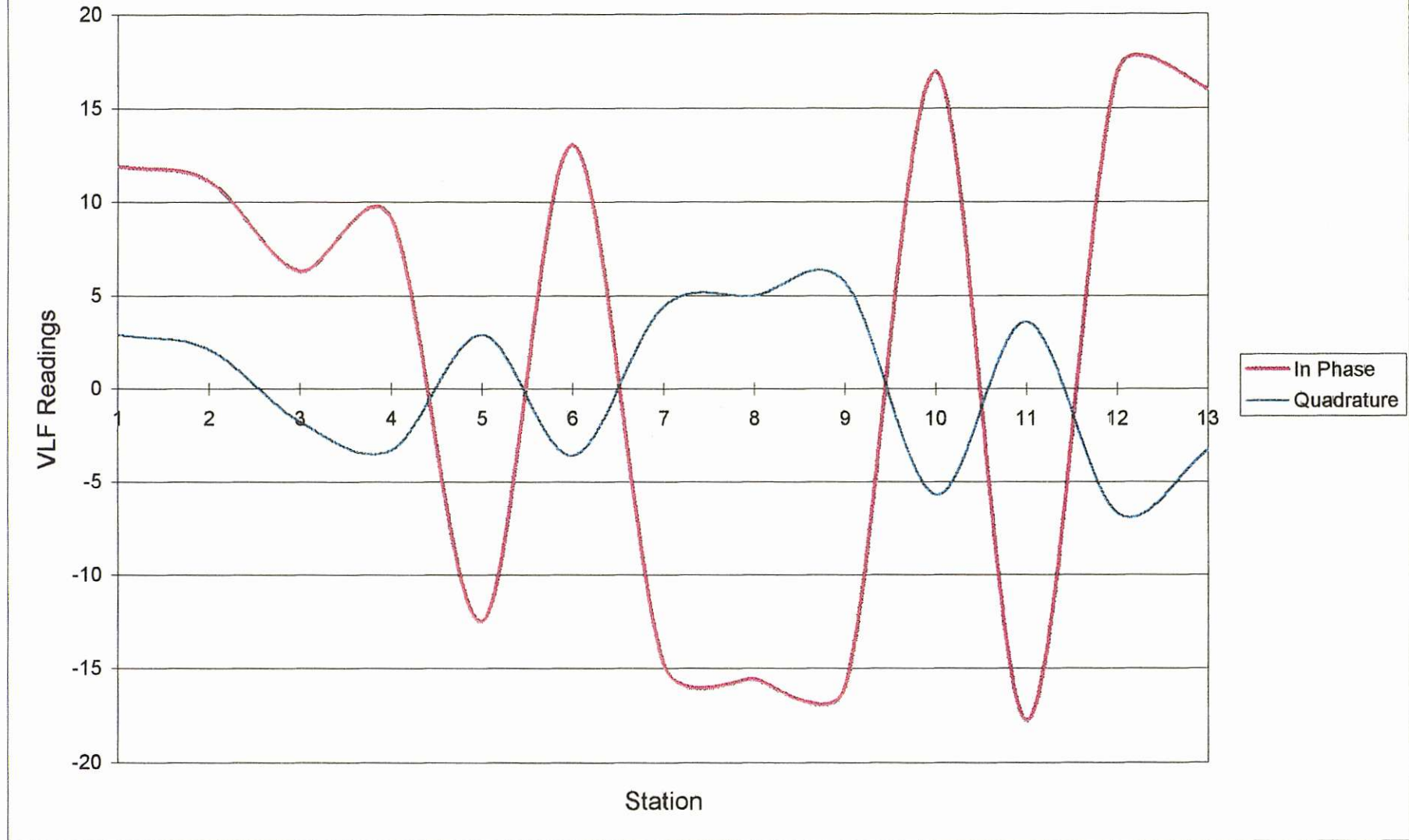


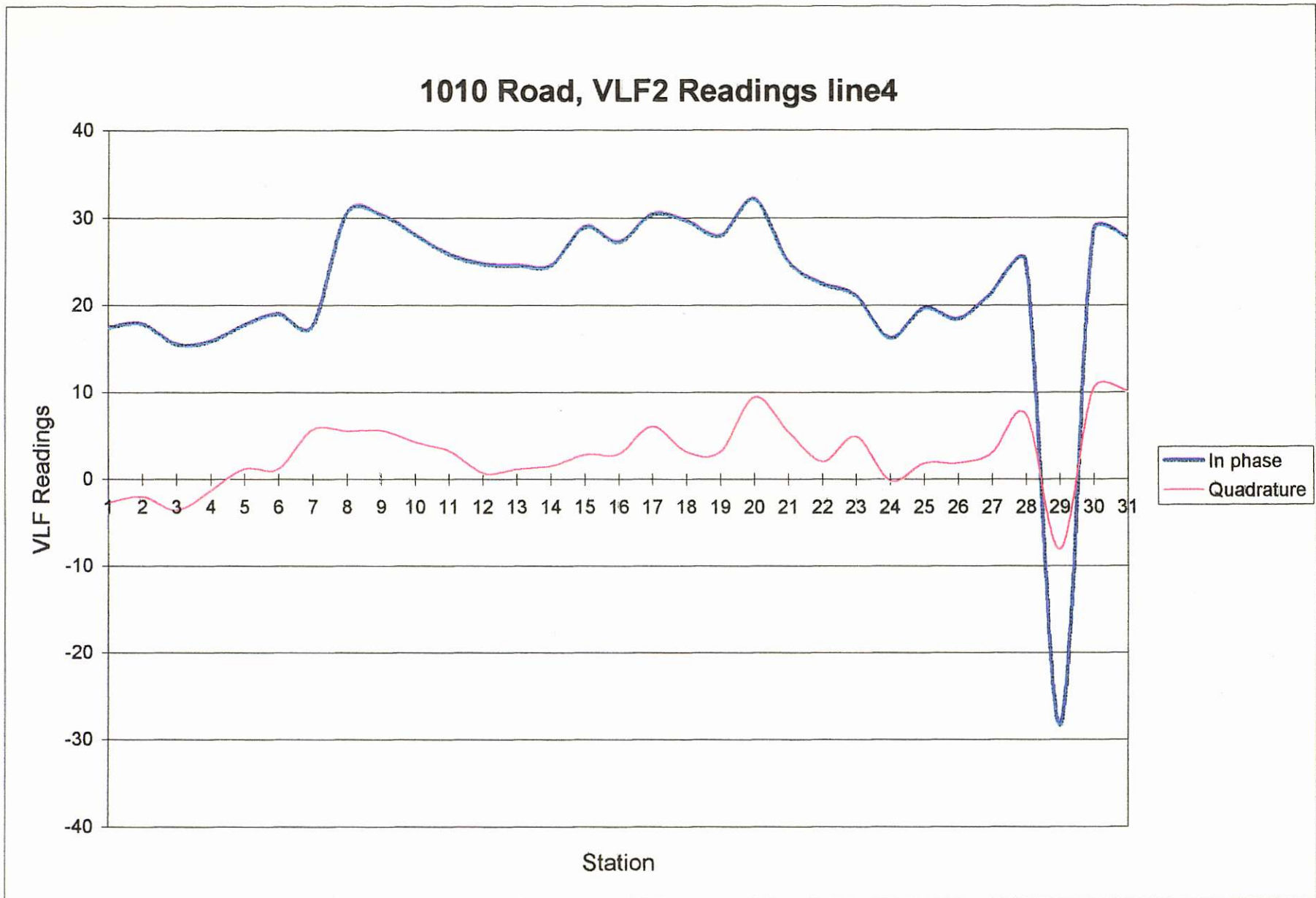
### 1010 Road VLF2 Readings, line1





### 1010 Road, VLF Readings line 3





Line 1  
Station

			In-Phase	Quadrature				
1	1	100	-15.8	0	7.14	0	-8.9	0.456944
2	-1	100	-15.9	0.1	6.88	0	-9	0.481389
3	-1	200	-17	-1.9	7.09	0	-9.6	0.631389
4	-1	300	-16.7	-1.1	7.03	0	-9.4	0.683889
5	-1	400	-20.1	-5.8	7.16	0	-11.3	0.700556
6	-1	500	-23.5	-4	7.46	0	-13.2	0.715278
7	-1	600	-21	-3.7	7.52	0	-11.8	0.731389
8	-1	700	-25.6	-5.1	7.17	0	-14.3	0.751111
9	-1	800	-28	-6.3	7.29	0	-15.6	0.7675
10	-1	900	-30	-5.8	6.95	0	-16.7	0.786944
11	-1	1000	-31	-7.6	7.19	0	-17.2	0.803889
12	-1	1100	-30.6	-5.4	7.17	0	-17	0.82

line 2

1	0	2	-27.4	-4.4	6.92	0	-15.3	0.899167
2	100	2	-29.7	-6.2	6.98	0	-16.5	0.965
3	200	2	-24.4	-3.6	7.5	0	-13.6	0.995
4	300	2	-25.2	-2.5	6.7	0	-14.1	1.017222
5	400	2	-27	-6.4	6.71	0	-15.1	1.045833
6	500	2	-26.2	-5.7	6.8	0	-14.6	1.0625
7	600	2	-26	-5.6	6.94	0	-14.5	1.095
8	700	2	-26.4	-10	6.77	0	-14.9	1.1125
9	800	2	-29	-9.6	7.01	0	-16.3	1.129167
10	900	2	-32.2	-5.5	6.96	0	-17.8	1.146667
11	1000	2	-29.4	-12.1	6.96	0	-16.5	1.1625
12	1100	2	-33.5	-7.4	7.41	0	-18.5	1.191389
13	1200	2	-26.8	-13.4	7.82	0	-15.2	1.211389
14	1300	2	-20.2	-4.7	7.64	0	-11.4	1.235278
15	1400	2	-22	-6.6	7.18	0	-12.4	1.267778
16	1500	2	-23.1	-9.6	7	0	-13	1.284167
17	1600	2	-24	-11.3	6.74	0	-13.6	1.301944
18	1700	2	-22	-10.3	6.83	0	-12.5	1.319167

line3

1	0	3	-9.9	-4.2	6.98	0	-5.6	2.1575
2	100	3	-9	-3.1	7.18	0	-5.1	2.240833
3	200	3	-6	1.1	7.57	0	-3.4	2.258611
4	300	3	-7.5	4	7.26	0	-4.2	2.277222
5	400	3	-11.6	2.1	7.11	0	-6.5	2.315556
6	500	3	-11.7	4.5	7.07	0	-6.6	2.334167
7	600	3	-14.3	7	7.42	0	-8.1	2.355278
8	700	3	-14.3	7.4	7.46	0	-8.1	2.382222
9	800	3	-14.5	8.8	7.45	0	-8.2	2.410556
10	900	3	-15.2	9.5	7.32	0	-8.6	2.426944
11	1000	3	-16	8.7	7.07	0	-9.1	2.455
12	1100	3	-13.4	11.3	7.69	0	-7.7	2.491667
13	1200	3	-12.9	12.6	7.19	0	-7.4	2.515556

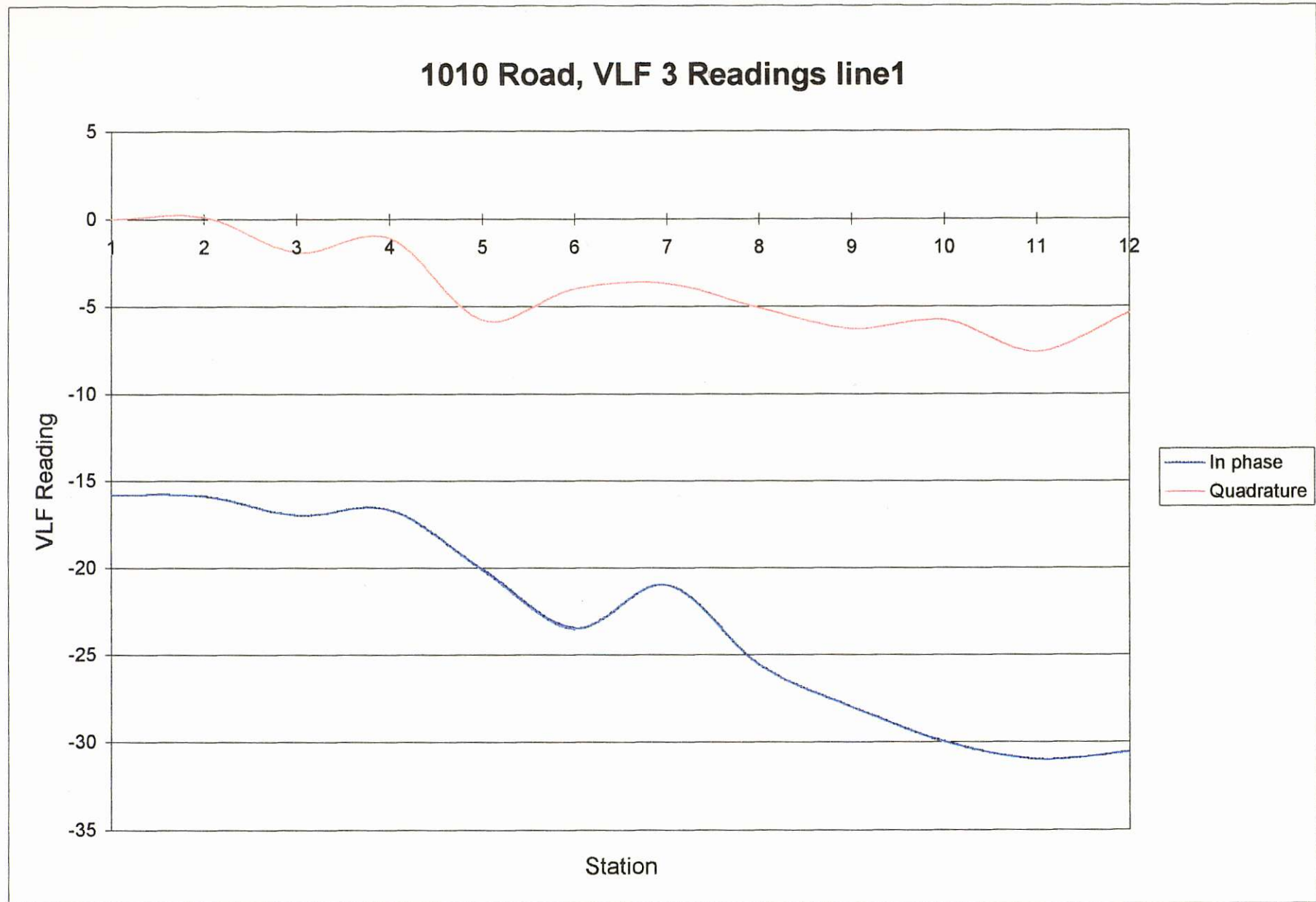
line4

1	0	4	-15.8	6.4	7.37	0	-8.9	2.631944
2	100	4	-16.9	5.5	7.21	0	-9.6	2.6725
3	200	4	-14.6	6.5	6.95	0	-8.3	2.689722

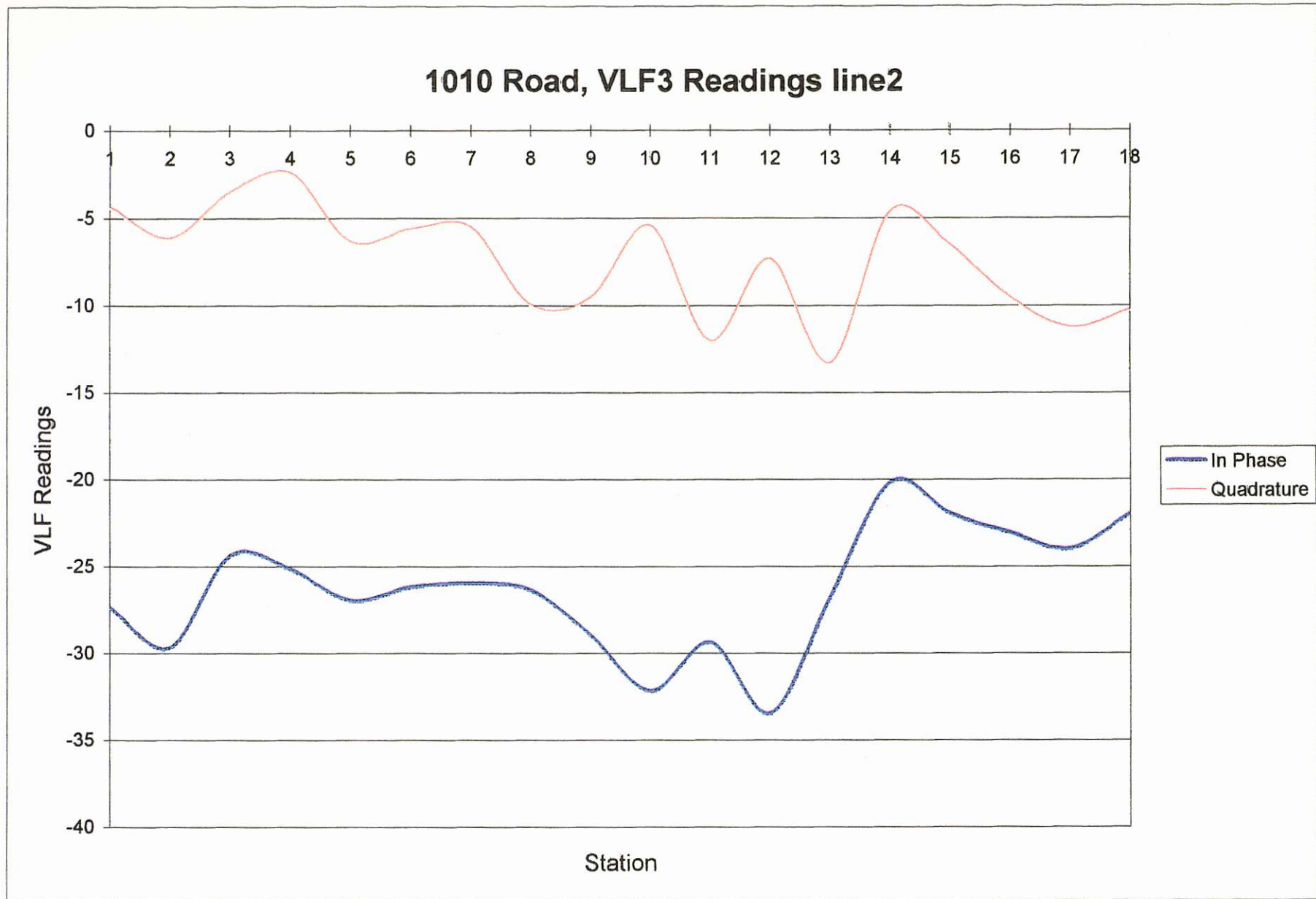
4	300	4	-14.5	4.9	7.28	0	-8.2	2.705833
5	400	4	-18.1	0.3	7.2	0	-10.2	2.723333
6	500	4	-18.6	1.7	7.13	0	-10.5	2.738889
7	600	4	-19	2.2	7.14	0	-10.7	2.755556
8	1700	1	-30.8	-8.1	7.2	0	-17.1	3.122222
9	1800	1	-30.8	-5.4	7.31	0	-17.1	3.136944
10	1900	1	-29	-4.3	7.1	0	-16.2	3.149722
11	2000	1	-25.8	-7.2	6.98	0	-14.5	3.162778
12	2100	1	-24.2	0.8	7.15	0	-13.5	3.176944
13	2200	1	-24.3	-0.8	6.8	0	-13.6	3.199444
14	2300	1	-24.4	-0.9	6.34	0	-13.7	3.214444
15	2400	1	-27.4	-3.3	6.67	0	-15.3	3.227778
16	2500	1	-26.7	-8.2	6.54	0	-15	3.243611
17	2600	1	-31	-4.2	6.57	0	-17.2	3.259167
18	2700	1	-28.5	-8.3	6.52	0	-15.9	3.274444
19	2800	1	-27.1	-7.9	6.64	0	-15.2	3.288889
20	2900	1	-32.1	-7.8	7.28	0	-17.8	3.304167
21	3000	1	-25	-6.6	6.85	0	-14	3.321667
22	3100	1	-20.7	-6.5	6.62	0	-11.7	3.336667
23	3200	1	-21	-3.5	6.73	0	-11.8	3.351667
24	3300	1	-16.1	-3	6.27	0	-9.1	3.370278
25	3400	1	-18.9	-4.9	6.01	0	-10.7	3.39
26	3500	1	-18.4	-1.6	6.11	0	-10.4	3.406667
27	3600	1	-22.1	-4.6	5.94	0	-12.4	3.423056
28	3700	1	-25.6	-6.9	6.03	0	-14.3	3.438611
29	3800	1	-28.2	-9.5	6.16	0	-15.8	3.456389
23	3900	1	-27.8	-11.5	6.13	0	-15.6	3.477778
31	4000	1	26.4	9.4	6.37	0	14.9	3.496667

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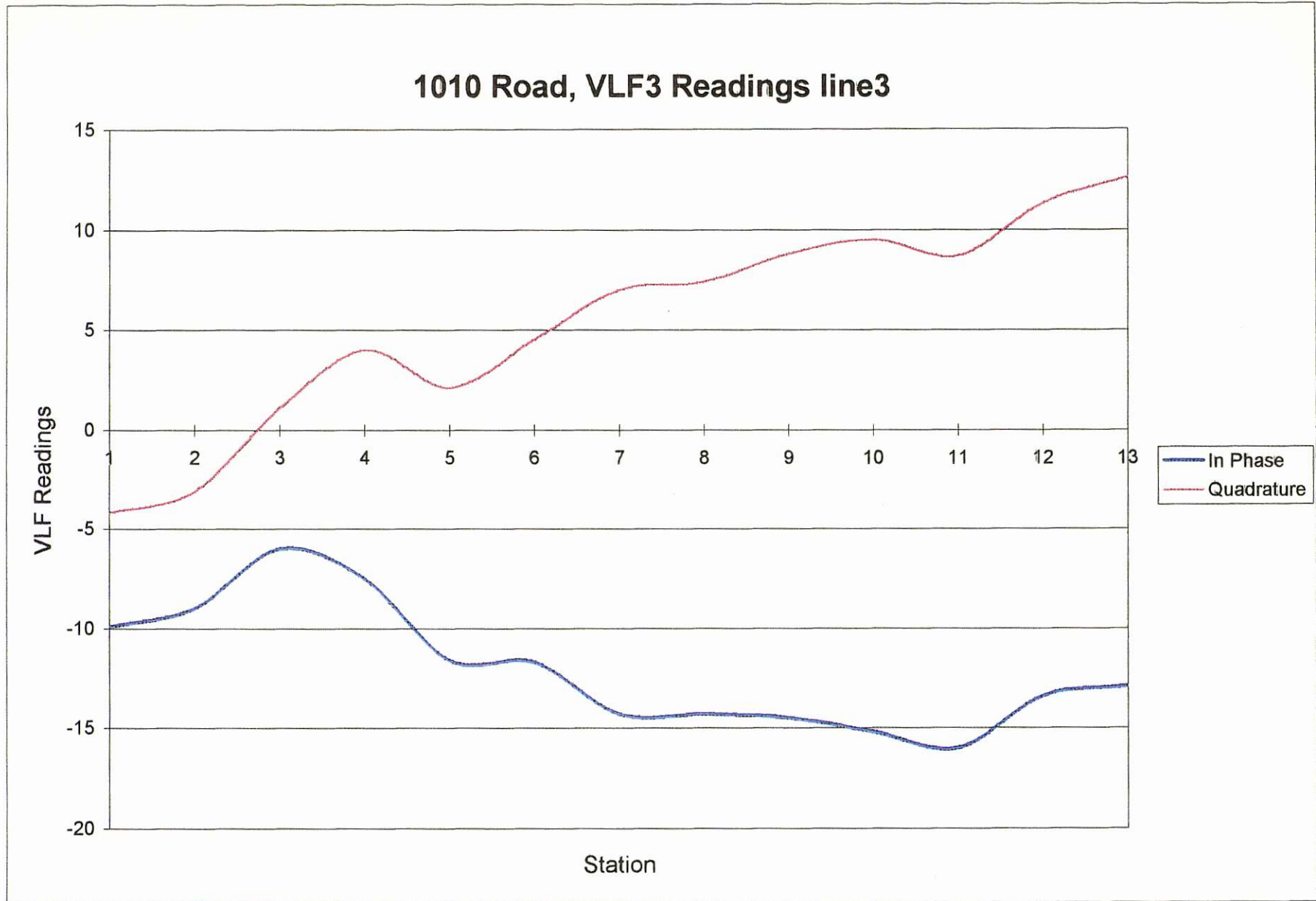
### 1010 Road, VLF 3 Readings line1

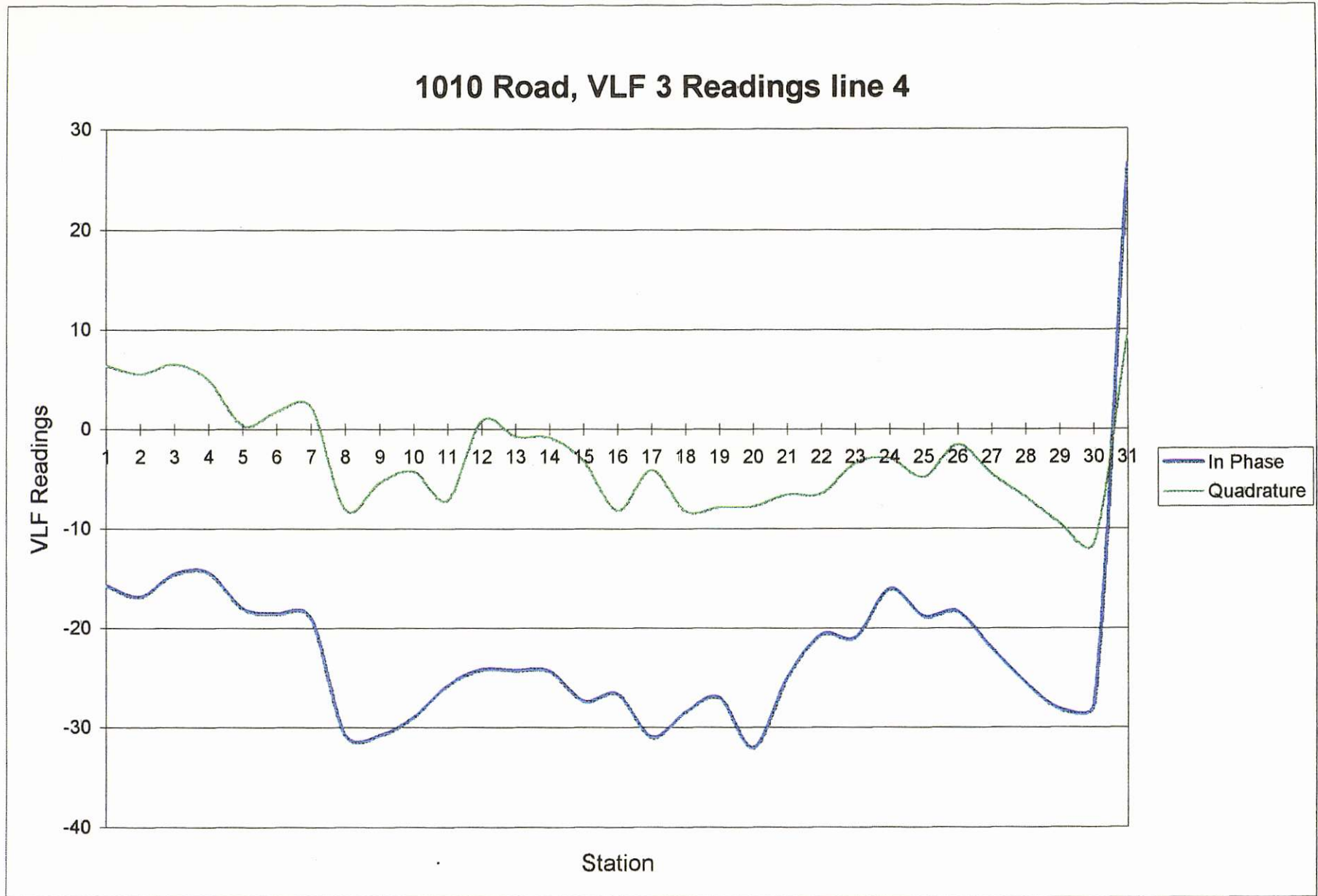












## LINE 1

station	reading	easting	northing
1	54709	360883	5447922
2	55286	361064	852
3	55610	360701	919
4	55739	656	5448010
5	55500	685	5447930
6	54981	667	891
7	55971	624	813
8	56082	589	786
9	55275	522	790
10	56343	524	719
11	57503	467	689
12	56300	530	629
13	55563	461	602
14	56285	391	548
15	55469	562	559
16	55832	641	570

## LINE 2 fork

1	55685	678	610
2	55623	557	554
3	55778	579	526
4	56515	614	418
5	55226	573	361
6	55213	547	280
7	55865	509	220
8	55141	588	234

## LINE 3 fork

54's~55's	735	637
55365	778	716
55593	845	755
55573	855	859
55690	658	609

## LINE 4

Station	reading	easting	northing
1	56264	360514	5447619
2	55442	860	866
3	55461	849	5448010
4	55341	867	63
5	55567	609	110
6	55178	706	185
7	56027	636	180
8	56031	541	265
9	55891	458	264
10	55343	401	273
11	55197	337	276

## LINE 5 fork

1	55553	227	245
2	55339	140	161
3	56078	157	88
4	55767	178	70
5	55290	55	71

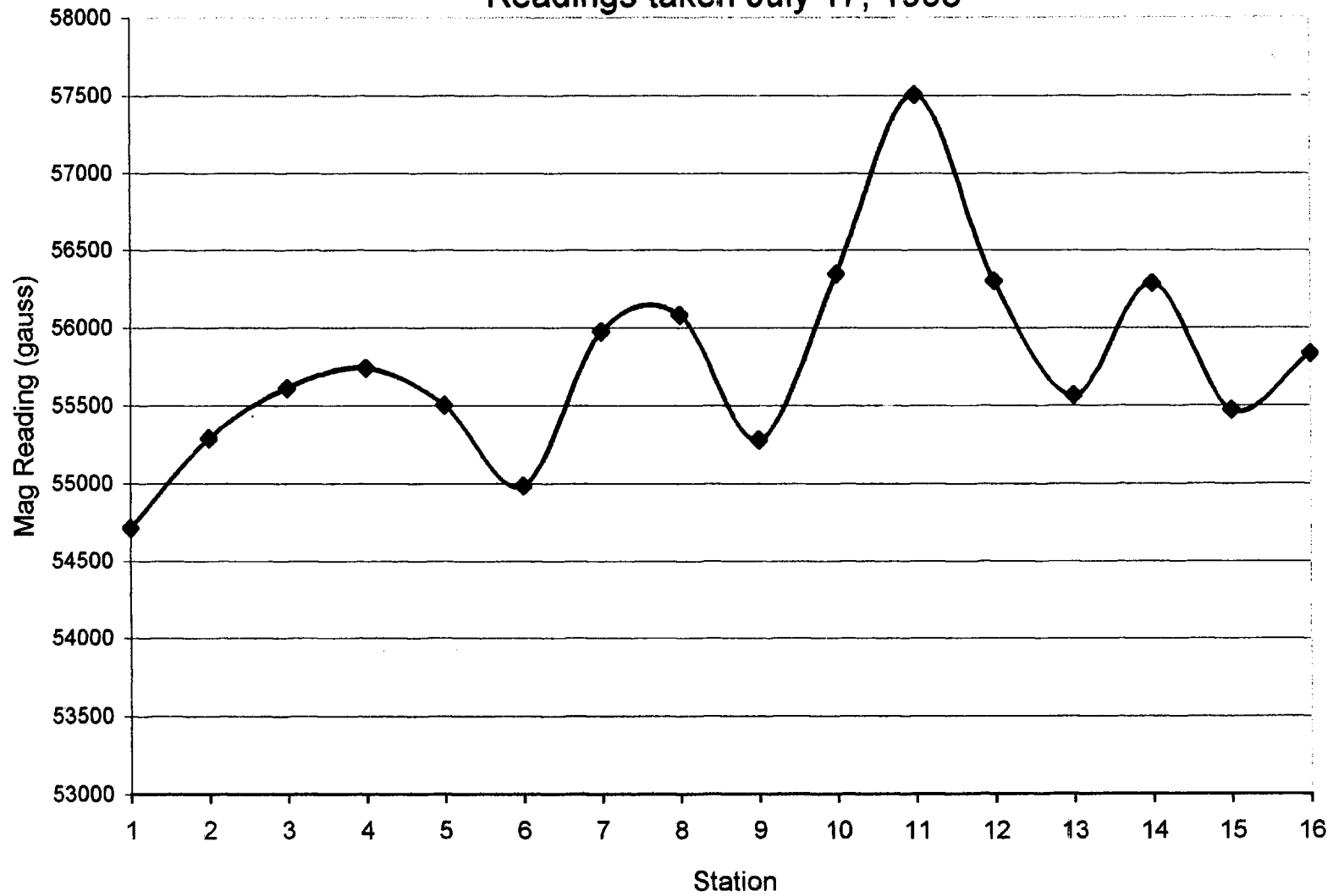
## LINE 3 fork

1	56249	487	29
2	55978	420	58
3	55623	308	73
4	55547	233	35
5	55741	151	88
6	56140	384	387
7	55578	434	395
8	55256	619	549
9	55520	508	542
10	55769	710	462
11	55471	711	364
12	55162	748	343
13	55116	631	5447112

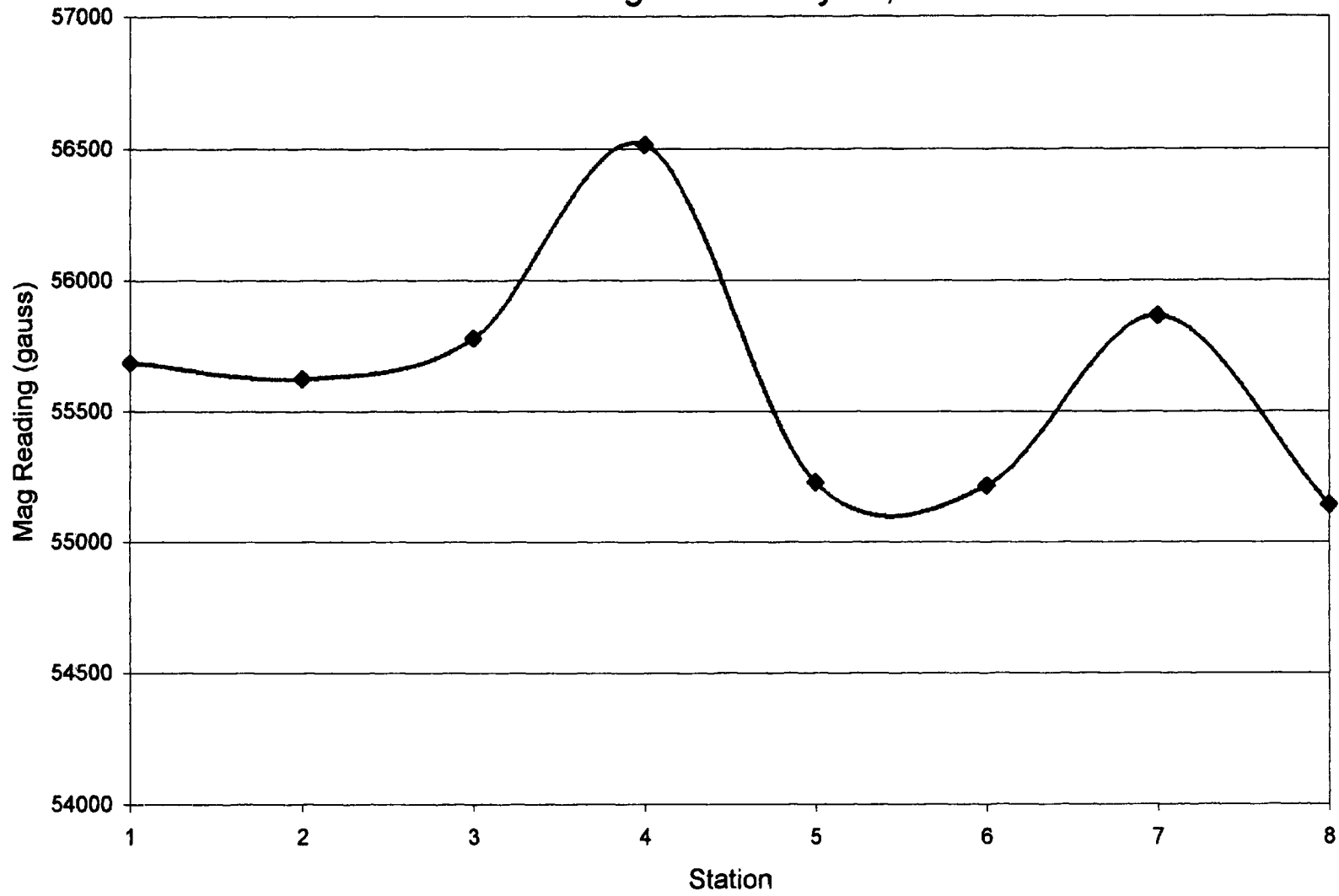
## LINE 6 fork

1	55080	600	151
2	55182	737	155
3	55601	775	289
4	55434	811	437
5	55272	903	467
6	55313	938	478
7	55316	906	570
8	55168	994	652
9	55308	361078	657
10	55271	45	793
11	55317	85	826
12	55196	63	956
13	55346	360984	5448164

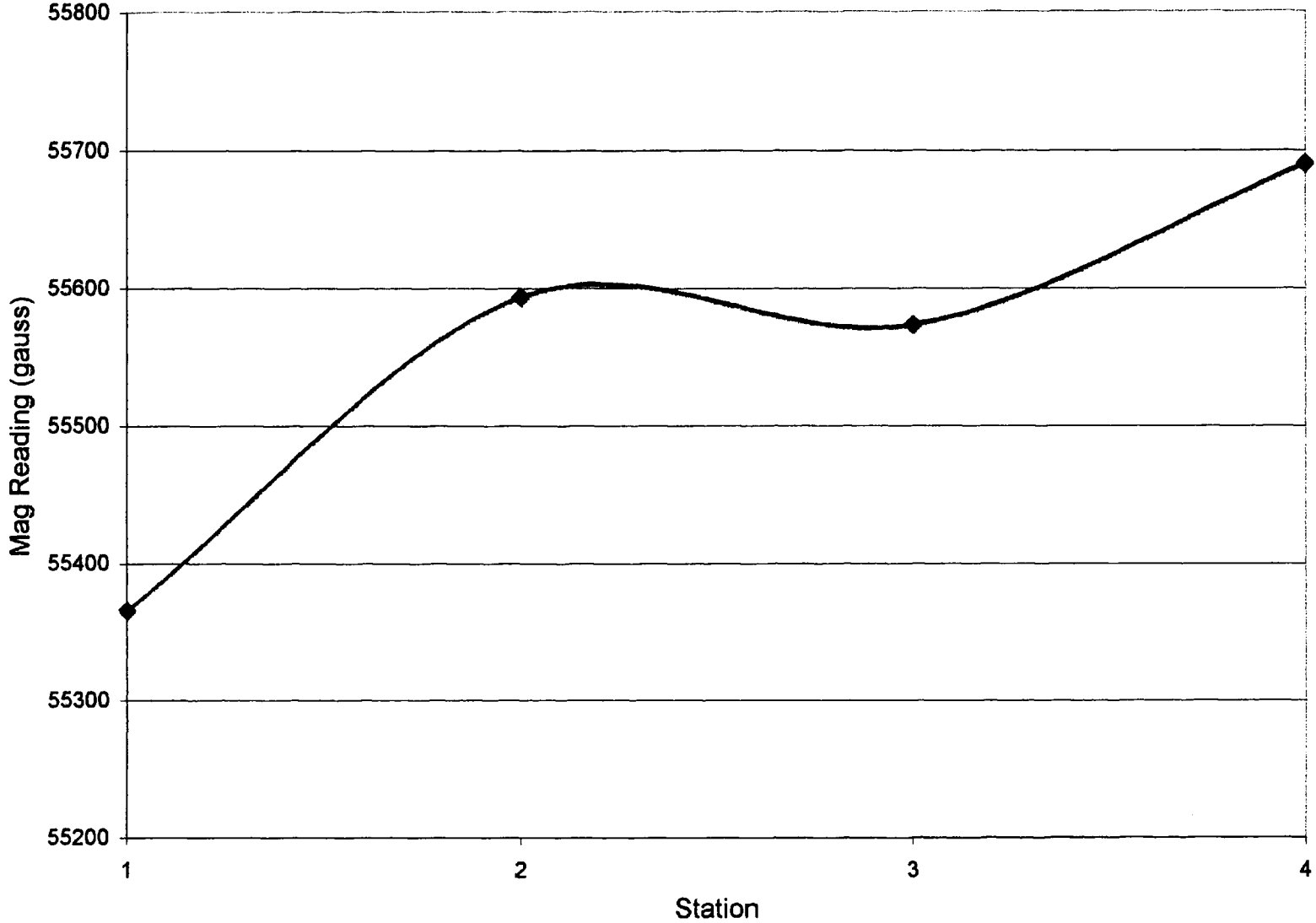
**400 Road line 1**  
**Readings taken July 17, 1998**



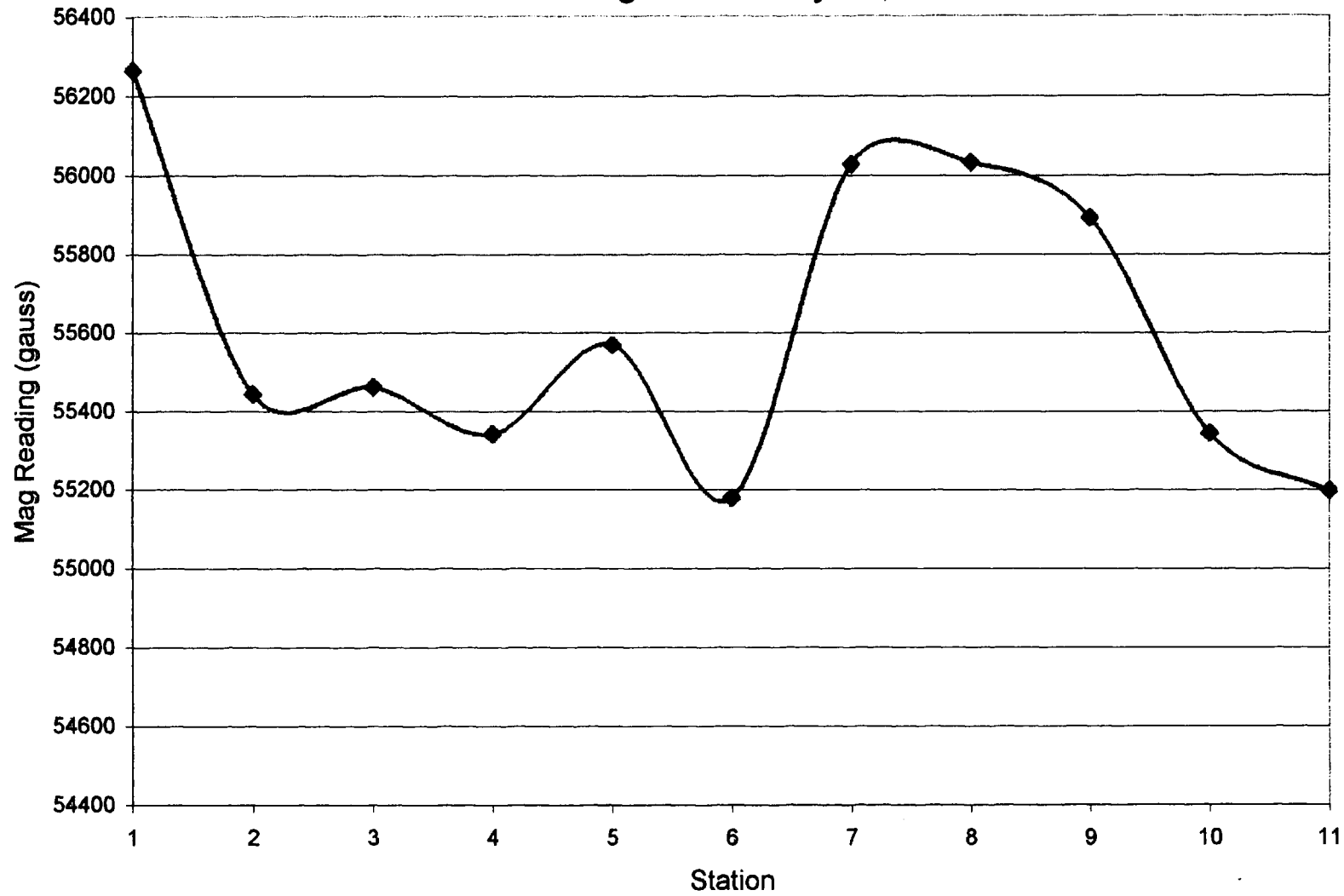
**400 Road line 2**  
Readings taken July 17, 1998



**400 Road line 3**  
**Readings taken July 17, 1998**

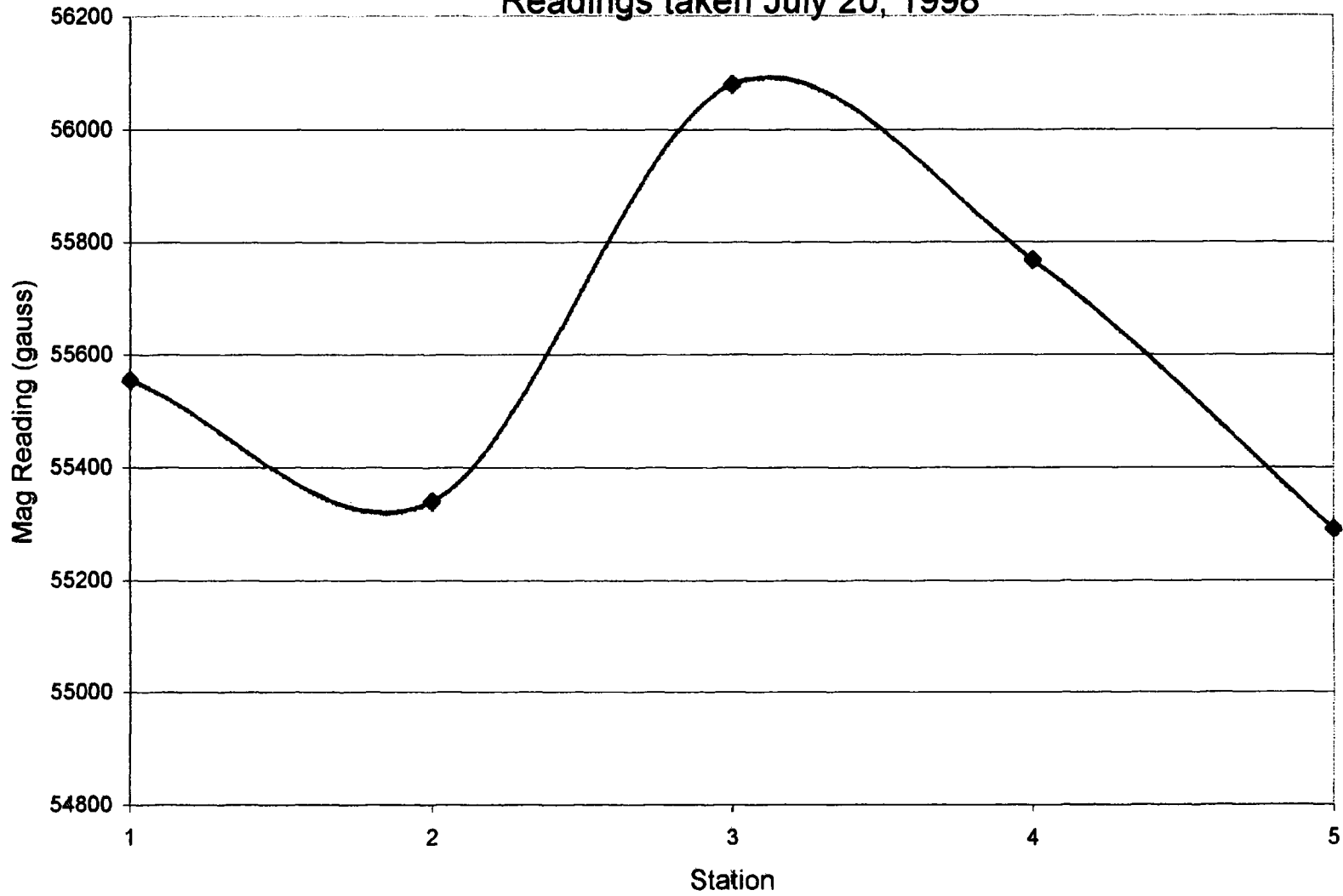


**400 Road line 4**  
**Readings taken July 20, 1998**

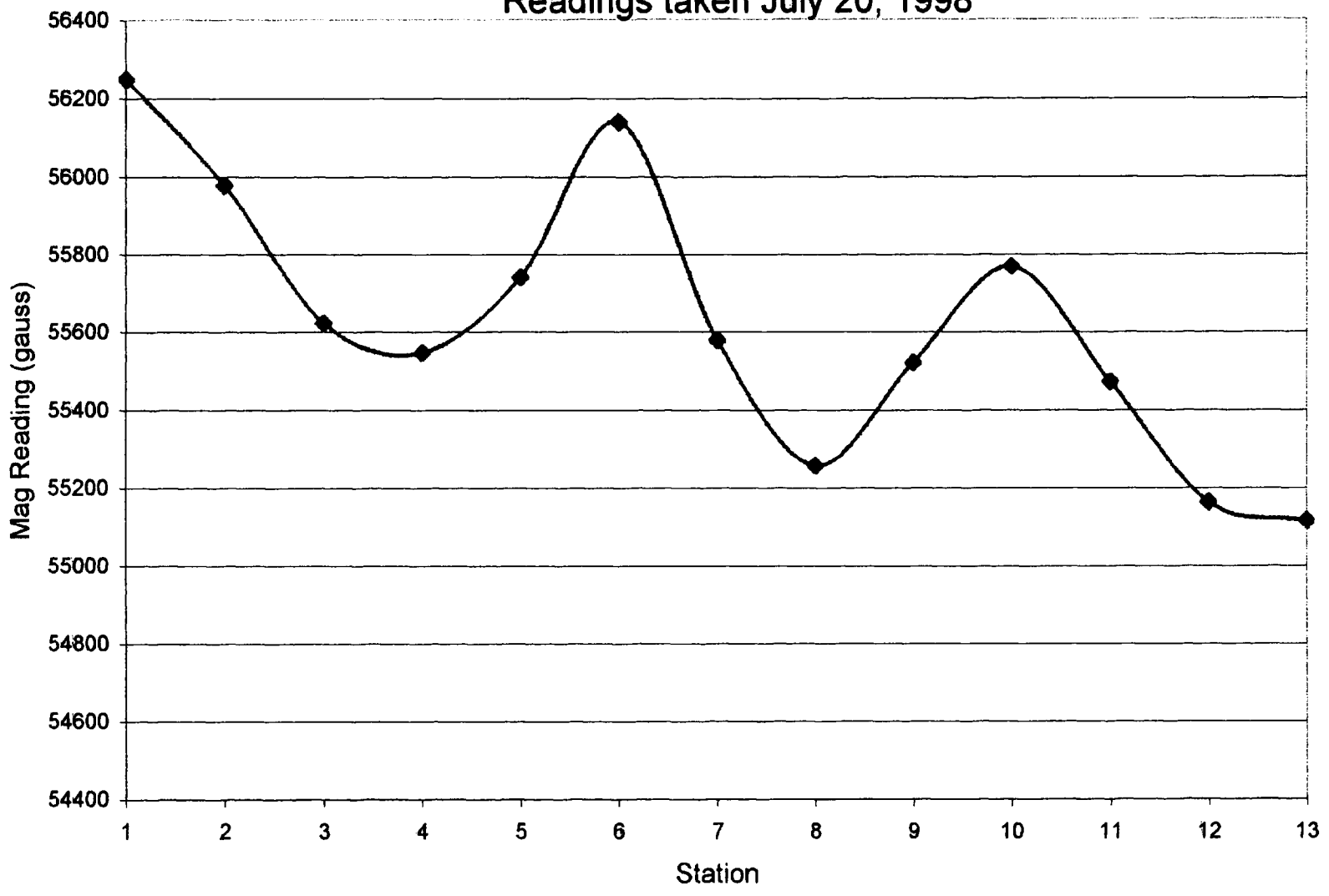




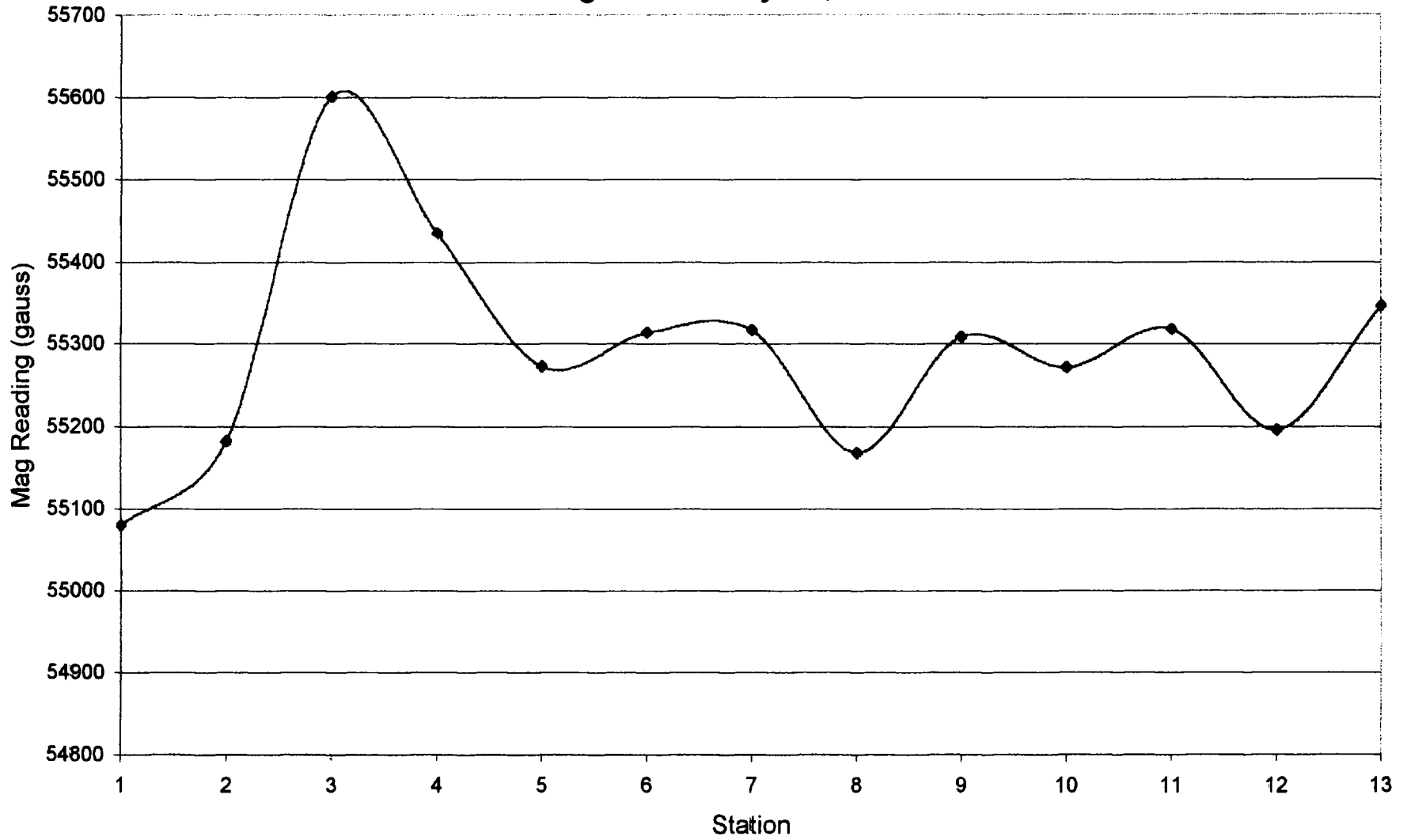
**400 Road line 5**  
Readings taken July 20, 1998



**400 Road line 6**  
**Readings taken July 20, 1998**



**400 claim line 7**  
**Readings taken July 20, 1998**

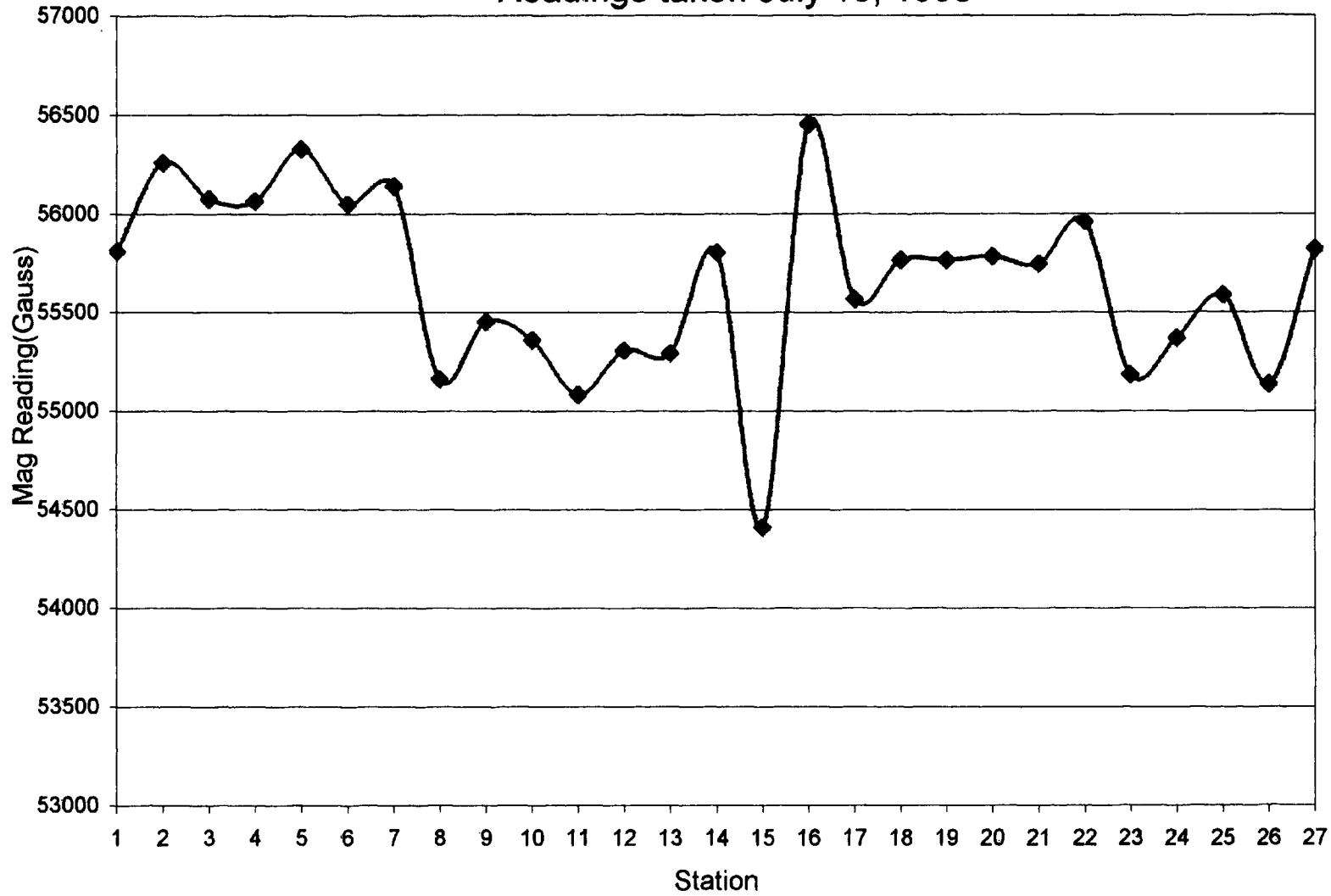


STATION	MAGNETOMETER	EASTING	NORTHING
1	55805	357780	5450805
2	56259	786	793
3	56073	784	673
4	56064	795	701
5	56328	741	642
6	56046	763	595
7	56139	711	716
8	55158	721	526
9	55452	740	703
10	55357	642	530
11	55079	718	538
12	55304	634	490
13	55290	700	304
14	55801	705	429
45	54410	782	882
16	58451	768	848
17	55564	660	850
18	55761	630	887
19	55761	563	899
20	55781	521	894
21	55742	502	865
22	55959	493	884
23	55180	435	948
24	55369	432	981
25	55587	364	991
26	55134	308	933
27	55819	266	881

<b>STATION</b>	<b>MAGNETOMETER</b>	<b>EASTING</b>	<b>NORTHING</b>
1	55805	357744	5450851
2	55222	790	768
3	55355	729	808
4	55778	742	763
5	56009	731	733
6	55688	735	625
7	55503	674	632
8	55856	641	585
9	55347	635	533
10	55368	591	472
11	55275	594	456
12	56047	538	584
13	55702	520	585
14	55981	569	619
15	56064	556	610
16	55688	507	622
17		515	712
18	55268	526	693

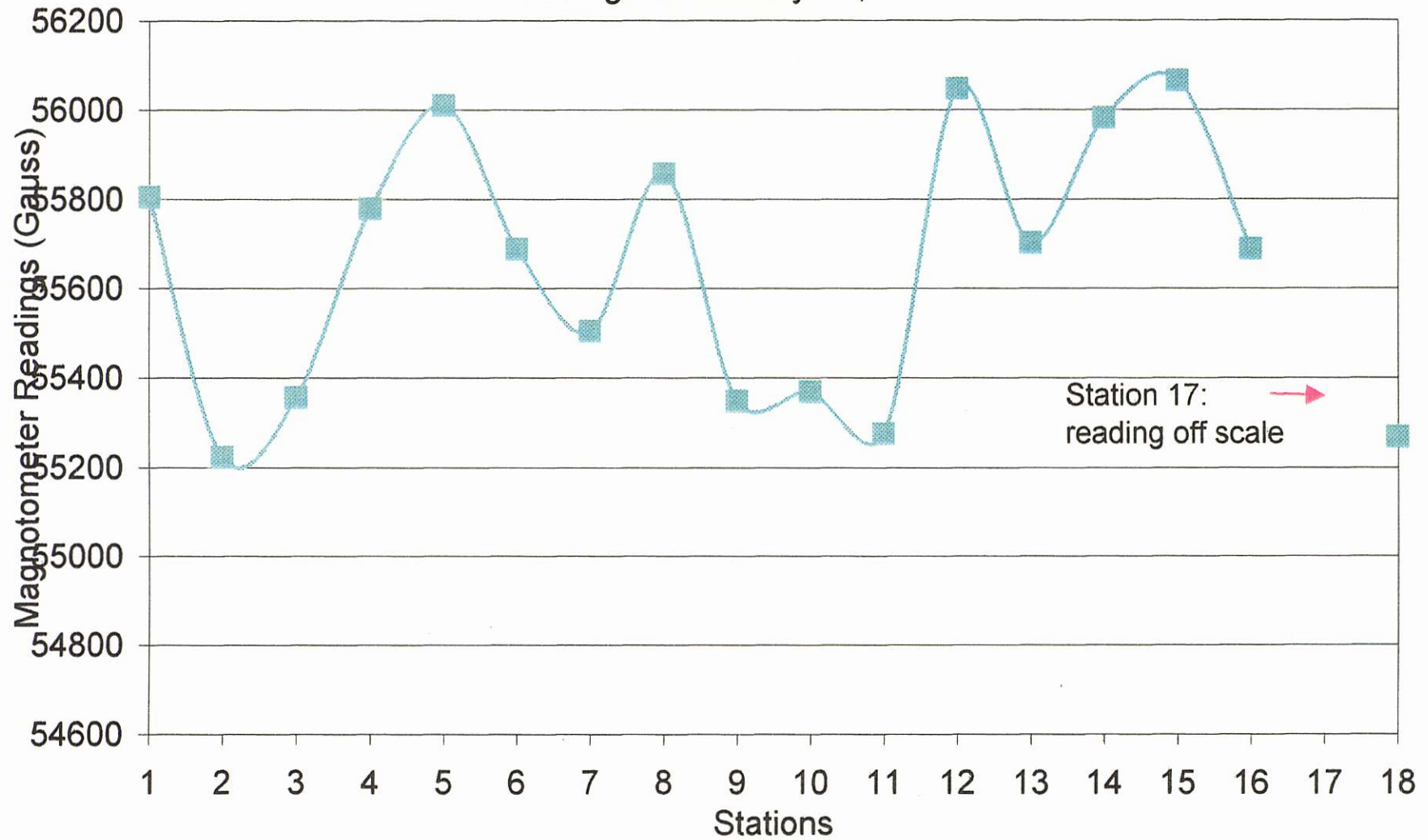
STATION	MAGNETOMETER	EASTING	NORTHING
1	55310	357306	5457853
2	55143	286	837
3	55047	320	729
4	55291	347	738
5	55618	387	690
6	55267	419	565
7	55564	397	514
8	55699	446	429
9	55344	343	340
10	55609	382	306
11	55223	350	185
12	55082	389	142
136	55171	433	5457089
14	55018	546	5457048
15	56213	352	425
16	55522	339	334
17	55736	301	181
18	55552	360	5457025
19	55440	791	306
20	55380	812	312
21	55668	853	349
22	55882	870	443
23	55557	884	396
24	55638	873	463
25	55460	859	426
26	55474	831	398
27	55396	788	334
28	55238	804	331

**405 Road Magnetometer Readings line 1**  
Readings taken July 13, 1998



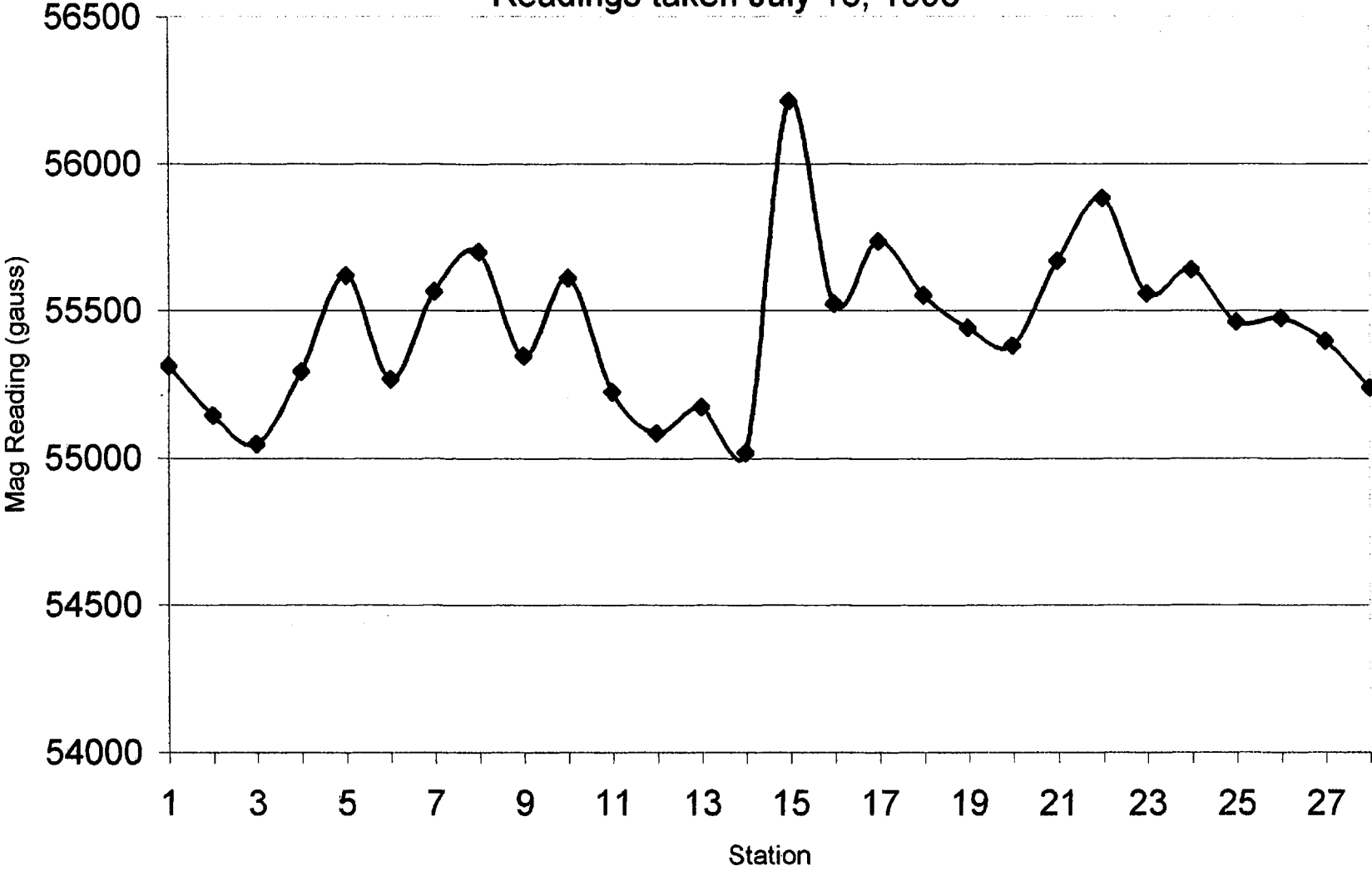
### 405 Road Magnetometer Readings line 2

Readings taken July 14, 1998





**405 Road, Magnetometer Reading line 3**  
**Readings taken July 15, 1998**



Base Magnetometer Readings					
-872	271	55488.4	0.14	11.50861	0
-3913	5239	55539.6	0.26	11.73222	0
-3913	5239	55525	0.21	11.74861	0
-3941	5252	55588.6	0.23	11.89278	0
-3889	5285	55536.8	0.14	12.02861	0
-3884	5234	55607.2	0.22	12.15417	0
-3793	5176	55562.2	0.16	12.34	0
-3764	5113	55328.9	0.16	12.80056	0
-3799	5091	55384.7	0.25	13.08889	0
-3731	3596	55115.8	0.23	10.82806	0
-3705	3538	55441.9	0.22	10.9925	0
-3676	3494	55364.6	0.17	11.11111	0
-3647	3450	55226.7	0.2	11.1675	0
-3705	3407	55453.5	0.2	11.23028	0
-3793	3378	55423.2	0.19	11.29694	0
-3850	3305	55493.4	0.23	11.35778	0
-3953	3335	55488.2	0.21	11.45556	0
-3880	3713	55720.7	0.26	11.69583	0
-3880	3713	55720.7	0.26	11.69583	0
-3836	3655	55383.1	0.19	11.76417	0
-3778	3596	55318.9	0.22	11.82083	0
-3735	3538	55464.4	0.22	11.88806	0
-3705	3495	55374.3	0.22	11.94806	0
-3691	3465	55277.7	0.23	11.98417	0
-3589	3456	55121.4	0.21	13.14861	0
-3531	3407	55176.9	0.19	13.25111	0
-3575	3393	55207.5	0.2	13.35889	0
-3575	3364	55375.8	0.23	13.43667	0
-3531	3364	55533.7	0.24	13.50917	0
-3502	3320	55520.3	0.26	13.57361	0
-3444	3320	55355.9	0.21	13.6675	0
-3389	3320	55602.3	0.23	13.8125	0
-3458	3276	55731	0.17	13.91944	0
-3487	3233	55717.8	0.17	13.99389	0
-3575	3102	55540.9	0.16	14.09528	0
-3662	3087	55661.5	0.26	14.17833	0
-3735	3044	55638	0.17	14.25778	0
-3360	3349	55540.1	0.16	14.4975	0
-3258	3553	55460.3	0.14	14.69528	0
-3142	3625	55197	0.18	14.76694	0
-4185	3713	55509	0.2	14.825	0
-3156	3785	55710.5	0.25	14.89222	0
-7517	3570	31962.2	9.85	10.67194	0
-7451	3599	33209.4	9.75	10.79806	0
-7500	3620	35753.6	10.09	10.95528	0
-7468	3870	36614.3	9.68	11.12639	0
-7184	3815	37669.9	10.14	11.29694	0
-7025	3800	40216.5	10.19	11.40917	0
-6938	3800	42344.7	11.06	11.52361	0
-6895	3800	44670.7	10.86	11.60111	0

-6836	3800	48603.5	10.24	11.64972	0
-6792	3800	54248.4	7	11.74278	0
-6755	3800	55292.5	0.25	11.785	0
-6710	3800	55260.1	0.22	11.81639	0
-6685	3800	55352	0.23	11.84417	0
-6650	3800	55326.3	0.17	11.87889	0
-6610	3800	55297.4	0.19	11.91056	0
-6570	3800	55318.1	0.16	11.96861	0
-9733	361	55250.3	0.17	13.25944	0
-9650	313	54929.6	0.15	13.32583	0
-9587	409	54964.1	0.15	13.45417	0
-9583	396	55086.2	0.19	13.56639	0
-9526	243	55003.4	0.18	13.65722	0
-9579	35	55306.7	0.2	13.77528	0
-9619	157	55144.7	0.19	13.85722	0
-9722	41	54986.6	0.18	13.92278	0
-9765	108	54771.9	0.35	14.0325	0
-9797	173	55046.8	0.22	14.075	0
-9818	185	55194	0.19	14.12722	0
-9870	239	55047.9	0.21	14.21917	0
-9920	295	55016.7	0.23	14.29528	0
-9948	301	55246.5	0.23	14.35306	0
-33	342	55569.1	0.24	14.41	0
-129	265	55437.5	0.18	14.47611	0
-109	354	55719.7	0.29	14.54	0
-242	318	55773	0.2	14.60222	0
-324	276	55094.7	0.17	14.68417	0
-357	280	54919.7	0.2	14.80194	0
-445	327	55195.8	0.24	14.8925	0
-476	392	55003.8	0.21	14.97389	0
-476	392	55003.8	0.2	14.98583	0
-480	439	55190	0.24	15.04528	0

### Baseline Magnetometer Readings

#### magnetometer readings

