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REPORT ON INTERPRETATION

OF

VLF-EM, AND MAGNETIC SURVEYS DATA

FROM

SALMO AREA, B.C.

FOR

BALOIL LASSITER PETROLEUM LTD

BY

SHENSHA CONSULTANTS LIMITED

1701,505-3rd STREET S.W.,

CALGARY, ALBERTA T2P 3E6.

Tel: 403-266-4660

DECEMBER, 1988

CALGARY



Shensha Consultants Limited



ASSESSMENT REPORT

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INTRODUCTION

The Sumit group of claims is located in the Sheep Creek gold mining camp which ranks 6th in terms of total historic gold production in British Columbia. A total of 736,000 ounces of gold, 365,000 ounces of silver, 377,000 pounds of lead and 312,000 pounds of zinc have been recovered from 1,720,000 tons of ore mined in the Sheep Creek camp. The majority of this mining was done prior to 1950.

Initial staking of the Sumit group of claims was done during 1901 on the north slope of Mount Waldie. Sporadic production between 1906 and 1938 produced 1,205 tons of ore which yielded average grades of 0.72 ounces gold/ton, 1.01 ounces silver/ton, 1.25% lead and 1.18% zinc. The nearby Ore Hill mine produced 3,369 tons of ore which graded 0.77 ounces gold/ton. 1.47 ounces silver, 2.54% lead and 2.27% zinc. Similar average grades indicate that these two mines probably worked the very same system of veins.

The veins tend to be narrow but have recorded high grade values of up to 14 ounces of gold/ton. There is also dissemination of minerals into the limestone wall rock and fine fracture fill mineralization surrounding the veins.

At least four portals exist on the Sumit. As well numerous visible cuts and trenches trace the fissure system up the mountain slope.

This property has never been subjected to modern exploration technology nor has there ever been any drilling done to evaluate the extent of the mineralization. Based on what is presently visible and known, there is potential for developing ore reserves in the vein extension southward in the known fissure system as well as in parallel vein systems. Also it appears that these vein systems extend down dip across other favorable formations.

LOCATION AND ACCESS

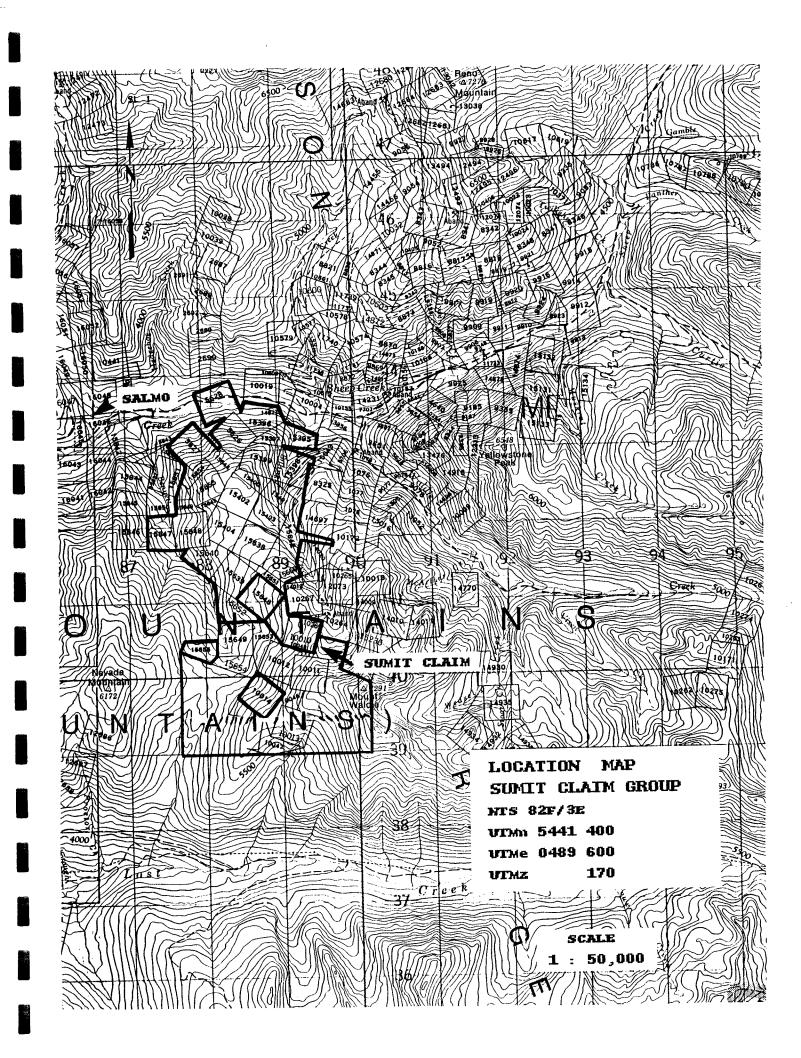
The SWIFT claims are located in the Nelson Mining District,

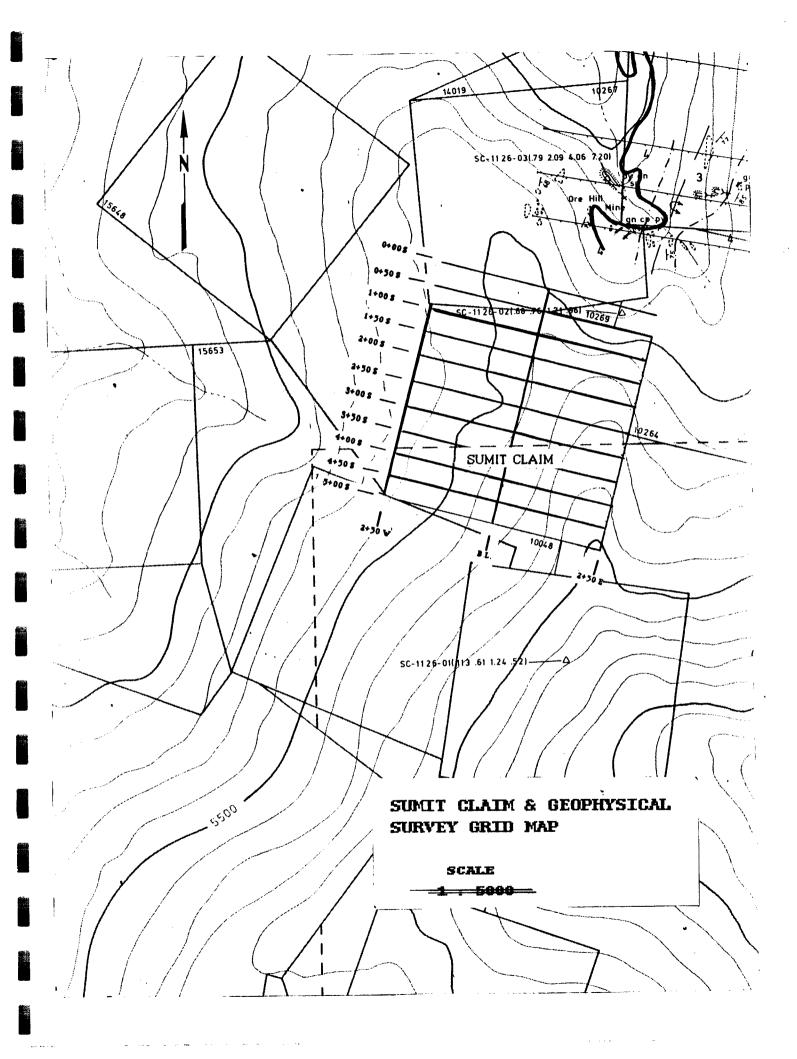
NTS 82F/3, approximately 20 km southeast of Salmo, B.C.

The property can be easily reached via an excellent gravel road which joins Highway 3 and 6.



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GENERAL GEOLOGY

The Salmo area indicates the presence of late Precambrian and early palaeozoic sedimentary and metamorphic rocks, and late Mesozoic volcanic rocks and Tertiary granitic rocks. The Palaeozoic rocks in the Salmo Area consist of thick is highly deformed at places. sedimentary sequence which Four Cambrian formations-the quartzite Range, Reno, Laib Nelway have been named. The Quartzite Range and Reno mainly quartzitic, the Laib is an argillaceous formation containing prominent limestone members, and the Nelway is a unit of limestone and thick dolomite. group of northeasterly trending faults are common in the area and this fault group is associated with known productive veins. A few northwesterly and northerly trending faults are also reported from the area. Copper, Zinc, Lead, Silver, and production from the area dates back to 1910's.



VLF-EM AND MAGNETIC SURVEYS

VLF-EM and Magnetic surveys were carried out over the SUMIT claims in Salmo Area, B.C. for Baloil Lassiter Petroleum Ltd in November and December, 1988.

The equipment used was the EDA's OMNI- PLUS System. The OMNI-PLUS is a portable, microprocessor-based Magnetometer/VLF system which is capable of measuring changes or by two different types of geophysical methods: Magnetic and VLF Electromagnetic. A measurement from these methods can be read and stored in as little as seconds. The data is both sensitive and highly repeatable. The OMNI-PLUS is a multi-purpose instrument designed to operate as:a magnetometer with configurations of Tie-line magnetometer, Total field magnetometer, recording station, and Gradiometer; a combined magnetometer/VLF system or a VLF system. The primary purpose of the system when used a magnetometer is to measure and store the magnitude of the earth's magnetic field independent of its direction. The magnetometer has a sensitivity of \pm 0.2 gammas. When used as a VLF system the primary purpose is to measure and record the secondary field components of the primary field from up to three VLF transmitting stations. Measurements are obtained by use of two sensors ; a proton precession sensor carried on



a pole to measure the magnetometer total field magnitude and: a three -component sensor worn on the back to measure the magnetic component of the secondary field. In addition, probes attached through the VLF circuitry housing are used to measure the electric component of the VLF secondary field. An electronics console is worn on the front of the operator that allows the operator to view and store the collected data in an internally protected memory. The system is operated by rechargeable batteries. Readings for VLF-EM and magnetometer were taken on a grid with a line spacing of 50 m and station interval of 25 m. A total of 968 measurements for VLF-EM and magnetic surveys were taken and recorded. The transmitting station used for the VLF-EM survey was Jim Creek, Washington with a frequency of 24.8 kHz.



INTERPRETATION OF DATA

The VLF-EM data was first subjected to filtering using Fraser and Hjelt filters. The Fraser filter is a simple process of mathematically convolving the shape of an expected anomaly along various profiles. When the anomaly outline matches one the measured data, a large positive or negative number results depending upon the definition of the anomaly. The Hjelt filter can be thought of a generalized as filter. The Fraser filter is based on the notion of pattern matching and basic filter theory and the Hjelt filter was developed from the concept of magnetic fields associated with current flow. That is the filter attempts to determine current distribution responsible for producing the measured determination of filter shape magnetic field. The coefficients is a fairly complex mathematical process. Fraser filter, this filter is designed for use with parameters which exhibit cross over type responses. This is a six point filter. Each line was processed using these filters and final analysis only Fraser filtered data for Inphase and Quadrature components of the electromagnetic field were used. Plots for raw data and filtered data for each generated and are included in the report. The interpretation



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of VLF-EM data outlined the presence of sixteen conductors as shown on the Fraser filtered Inphase data. These conductors probably due to the presence of metallic sulphides in association with gold in the shear or fault zones. Almost all of the conductors are NE-SW trending which is the trend of the faults associated with ore bearing veins. Some small and weak conductors are probably due to the presence disseminated sulphides. The magnetic data interpretation was carried out by utilizing modern modelling techniques. The theoretical magnetic anomalies over a sloping step are well known. Any horizontal body of polygonal section may defined mathematically as a series of sloping steps, each having its inclined edge coincident with a side of polygon. Summing the effect of all these sloping steps, with due regard to sign, gives the anomaly due to the polygonal body alone; the effects of the horizontal surfaces sum to zero. The problem of computing the anomaly due to a body of cross-section therefore reduces to that of polygonal computing the effects of each station along the profile in turn, which is done quite rapidly by the computer. The second technique used is known as the inverse modelling which is gaining knowledge of the physical features of a disturbing body by making observations of its effects; finding the model



from observed data. In the inverse modelling technique the computer program adjusts the parameters of geometrical model of a magnetized body, to give the best fit between the observed data and the calculated anomaly of the model. The magnetic data from each line was plotted and a anomaly map was prepared. The magnetic anomaly map outlines the presence several magnetic highs and the shear zones in the area. One magnetic high anomaly located between 125 E and S, 350 S, 400 S, 450 S and 500 S lines 300 indicates the presence of a intrusive in the area. This anomaly was further investigated by modelling data from lines 400 S AND 450 S. The modelling results indicate the presence of an intrusive which probably outcrops in the area and has a dip of 9.6 degrees on line 450 S and a dip of 140 degrees on line 400 S with magnetic susceptibilities of 974 and 3568 respectively suggesting the presence of an intrusive in the area.



CONCLUSIONS AND RECOMMENDATIONS

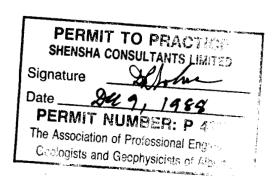
The interpretation VLF-EM and Magnetic surveys data outlined several targets to be tested for possible presence of metallic sulphides in association with gold in the area. It is recommended that:-

The NE-SW trending conductors should be drill tested first because the geological information indicates the presence of NE-SW trending faults which are associated with ore bearing veins. Moreover the conductors located in the vicinity of the intrusive should be the second priority for drill testing for possible presence of metallic sulphides in association with gold in veins and in contact zones. In total 12 drill locations are recommended to evaluate the mineral potential in the area.

Respectfully submitted,

D.R. VOHRA, P. ENG. , P. GEOPH.

SHENSHA CONSULTANTS LIMITED CALGARY, ALBERTA



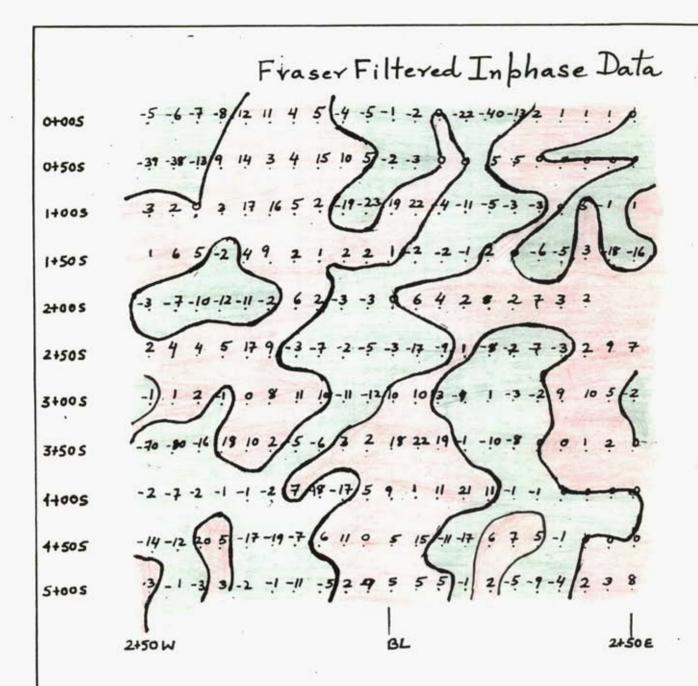




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VLF-EM INTERPRETATION SUMIT CLAIMS, SALMO AREA, B.C.

Scale: 1 = 100m

M cool

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Fraser Filtered Inphase Data
         -5 -6 -7 -8/12 11 4 5/-4 -5-1 -2 9 -22-40-13/2 1
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0+505
14005
              5-2649 2 1 2 2 1/-2 -2 -1,2 0 -6-5/3
1+505
         -3 -7-10-12-11-2 6 2/-3 -3 0 6 4 2 5
2+005
          2 4 4 5 17 9/-3-7-2-5-3-17-9/1 (-8-2 7-3/2 9 7
2+505
          -! ! 2/-! 0 8 !! 19-!! -!3/10 !g/-3 -4) ! -3 -2/9 10 5/-2
20042
                  18 10 2/-5-6/3 2 18 22 19/-1 -10-8 0 1
3+50 S
14005
                    17-19-7/6 11 8 5 15/-11-16 7 5/-1
                       -1-11-5/2 4 5 5 5/-! 2-5-9-4/2 3
5+00S
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VLF-EM INTERPRETATION SUMIT CLAIMS, SALMO AREA, B.C.

Scale: -1" = 100m

— Conductor

- Proposed Drill sites.

-! -5 2 17 23 11 ! ! 5 14 4/-5 -4 -15 -11/2 3 3 3 -16-2)12 18 8 6 2 1 4 9 -4-17-2/4/-3/-3/5 4/-2 -3/6/ -1/3 31-1/4 5/-4-5,4 12 12 16 15-2111 20 151-5-1/1/-1 _ p -1 -2 -5 -11 -10 -11 -13 -2/1 -8 -5/2 6 -5 -3 7 6(-1 + 0 3+005 _ -3/21-1 0 5 10 9/-17-18/9 9/-2-1 0-2-1/18 HI 5 b-2 4+005 - -2-3-12/4 15 14 8 1 1/-1/19/2-43-28-11-2/8 7/-2-1,5 0 0 0 0 0 0 9-5-14-193 6 4 61-4-20-612 +3/-3-5

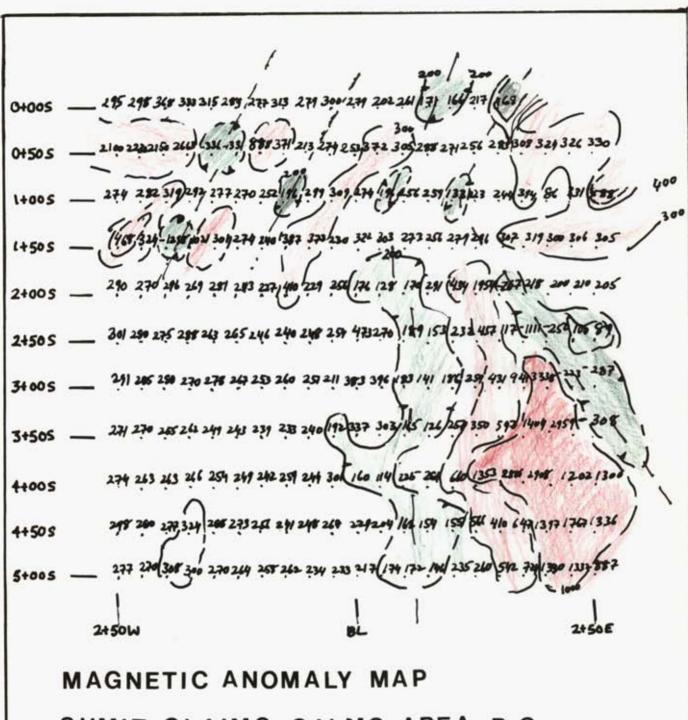
VLF-EM INTERPRETATION

SUMIT CLAIMS, SALMO AREA, B.C.

SCALE: 1" = 100 m

0 M

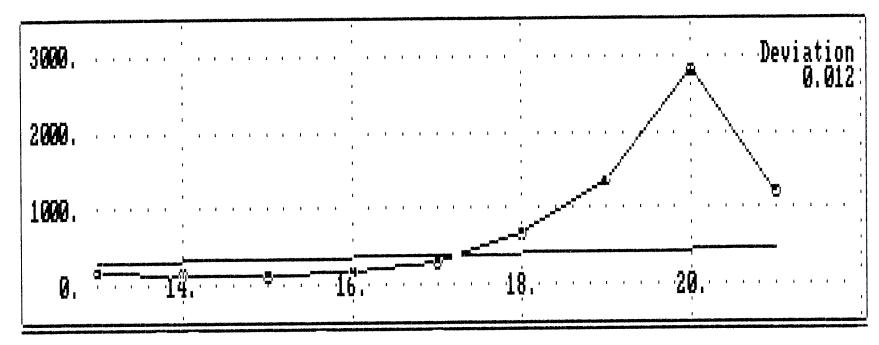
Conductor

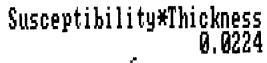


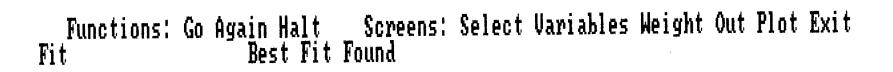
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SCALE: I" = 100m

Shear / Fault --



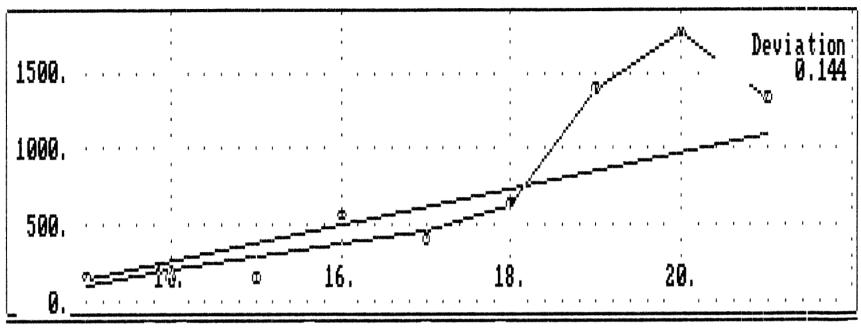


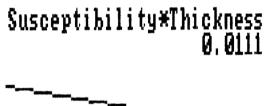


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Model Type Field Type Field Strengtl Inclination Declination Sensor Height Strike Perp Line Direction	90.0 0.00 0.00 0.00	Depth Width Dip Suscep x Thick Position Base Level Base Slope	0.625 Yes (3.63 Yes (140. Yes	0.0300 40 5.00 17	Tol Range 3.0 0.0200 0.195 3.0 0.0200 0.251 75. 2.50 6.29 0.0022 0.0038 1.0 0.0800 0.103 0.160 140. 1.68 21.5

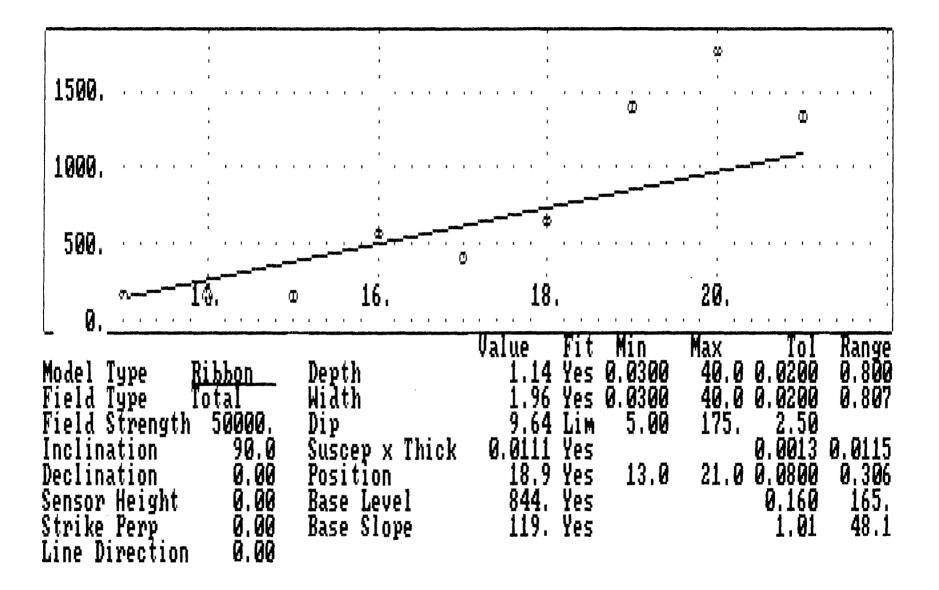
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Screens: Select Weight Fit Out Plot Exit



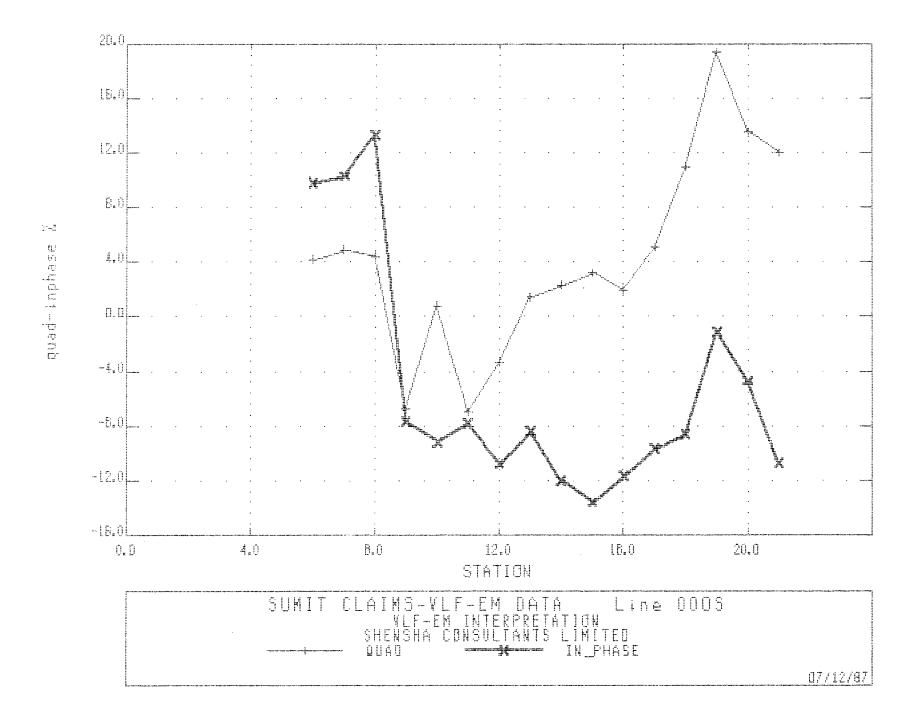


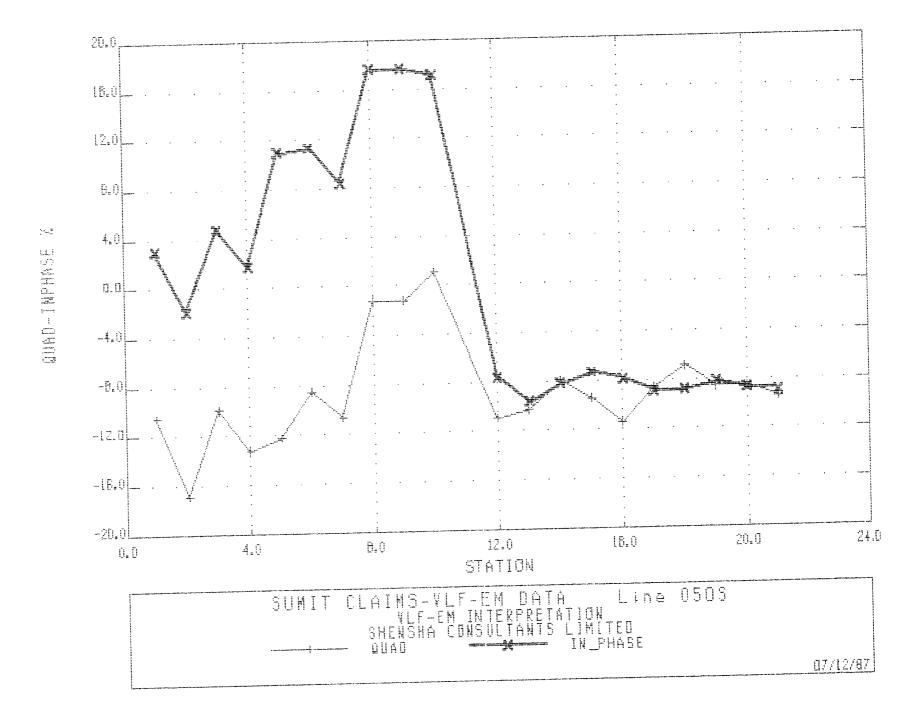
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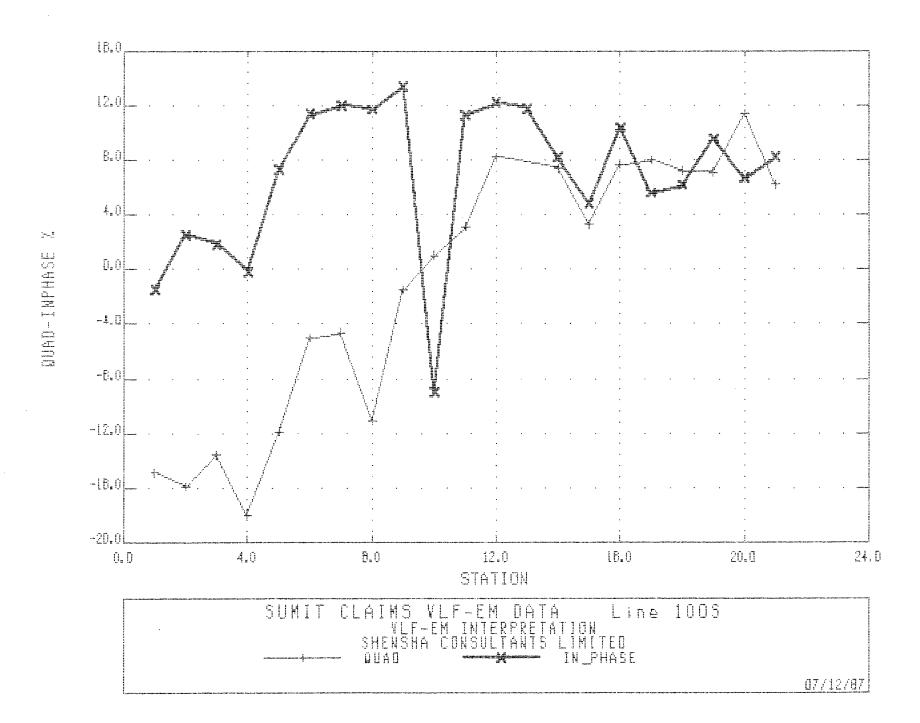


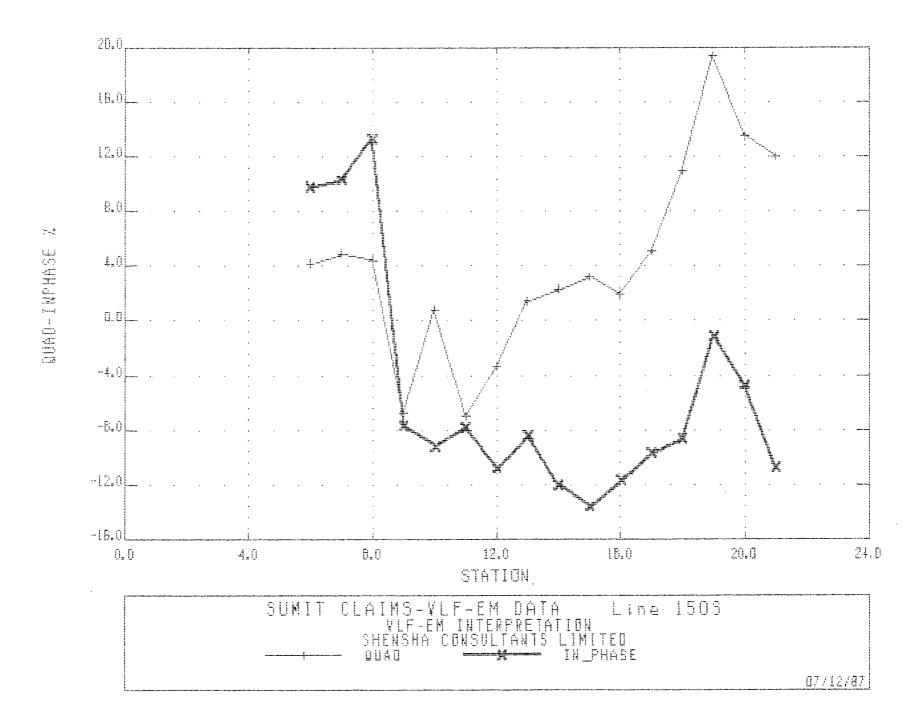
Functions: More Variables

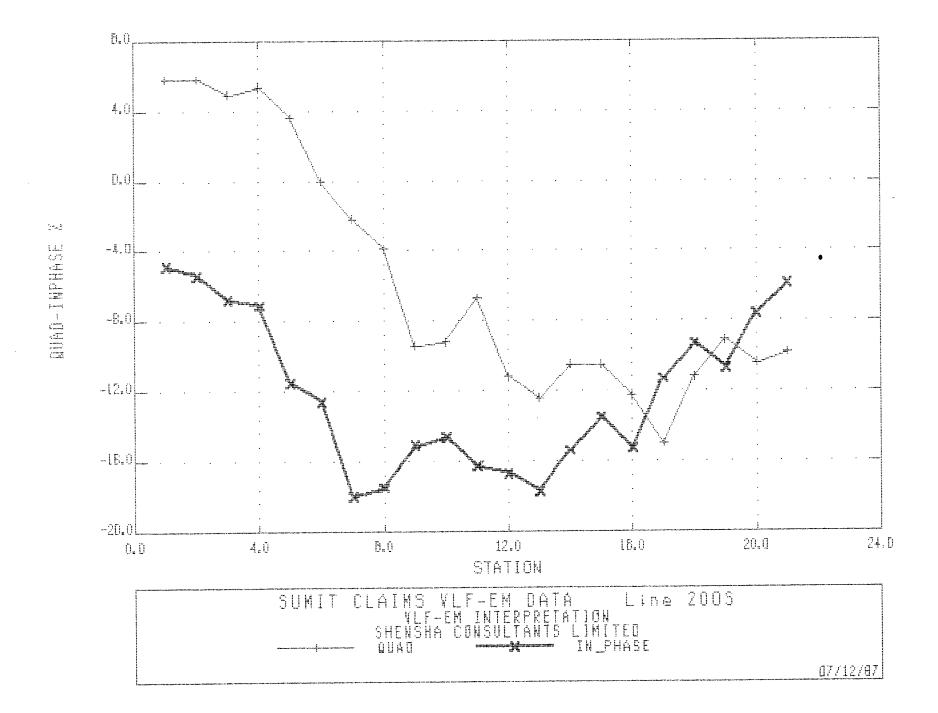
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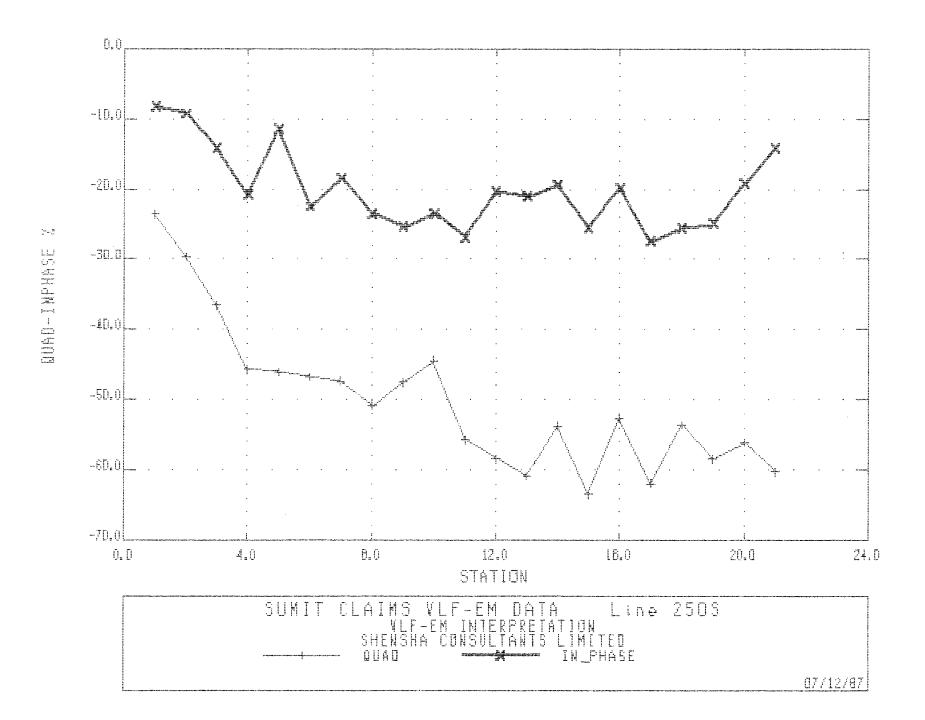


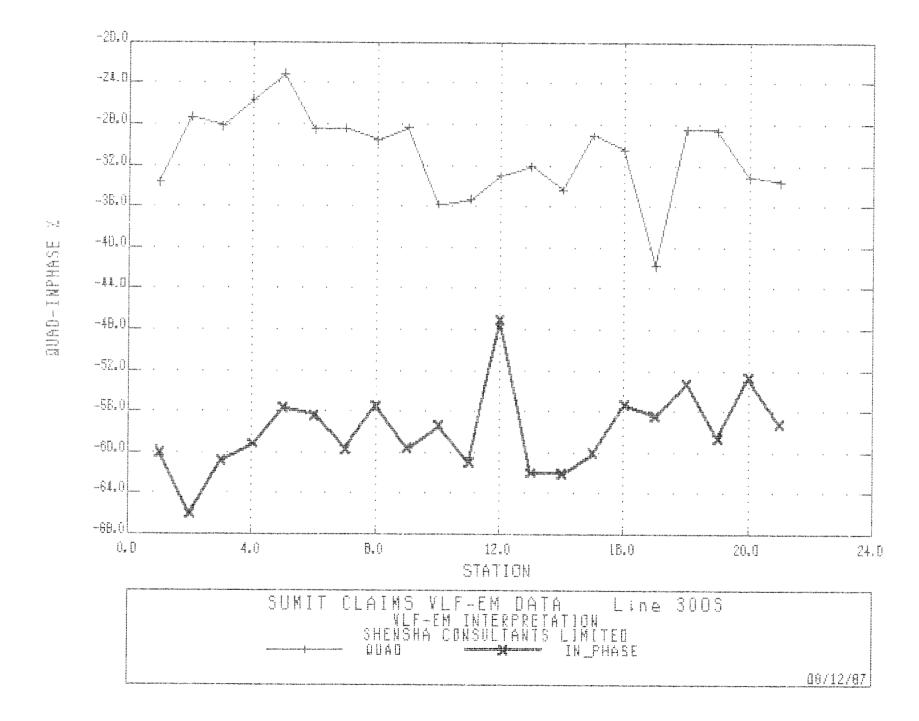


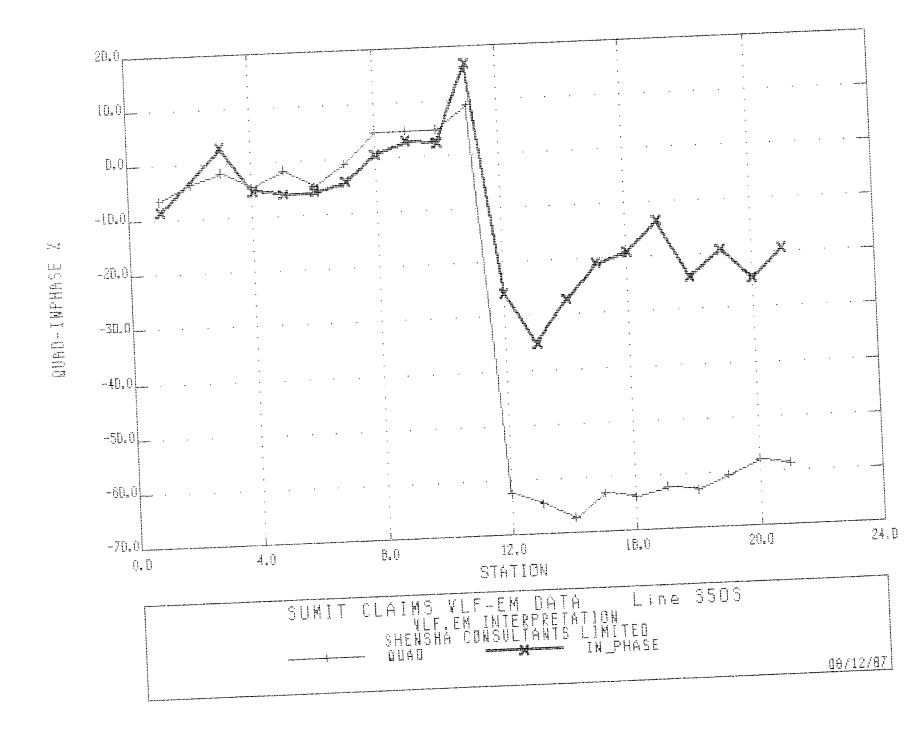


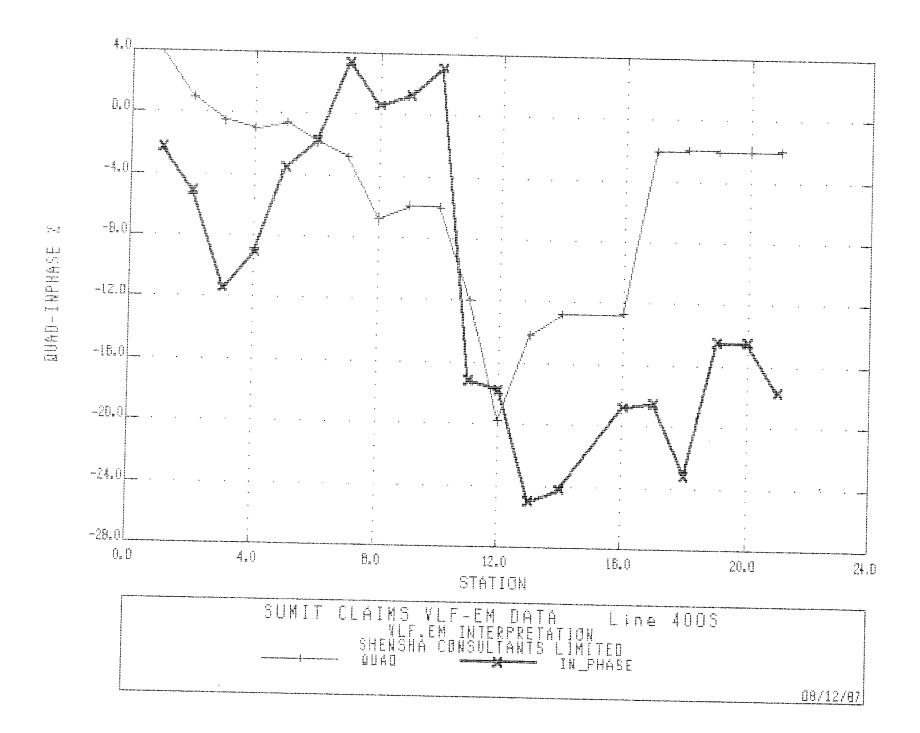


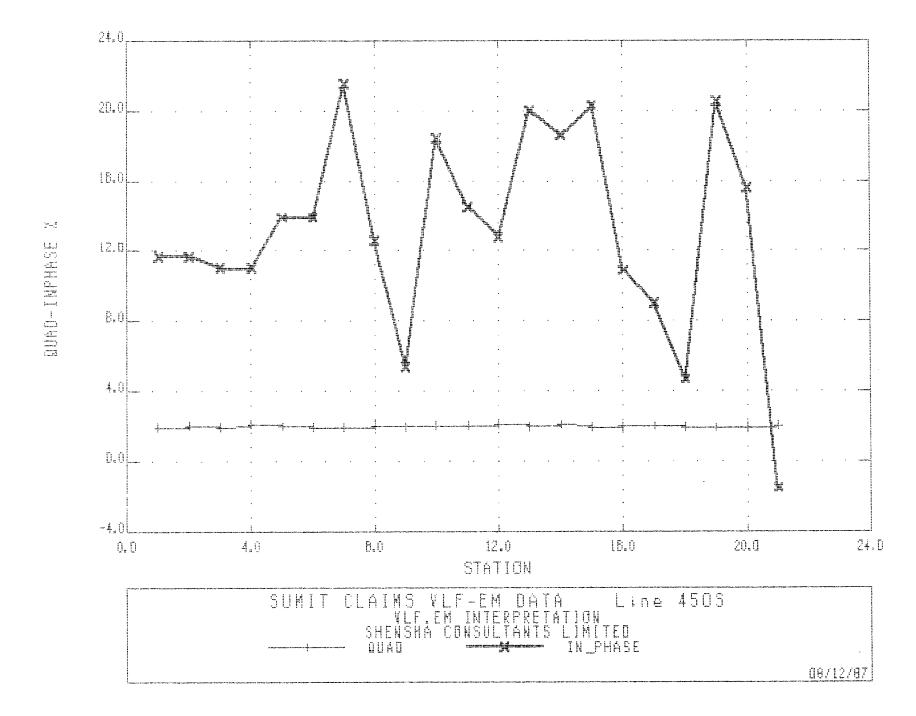


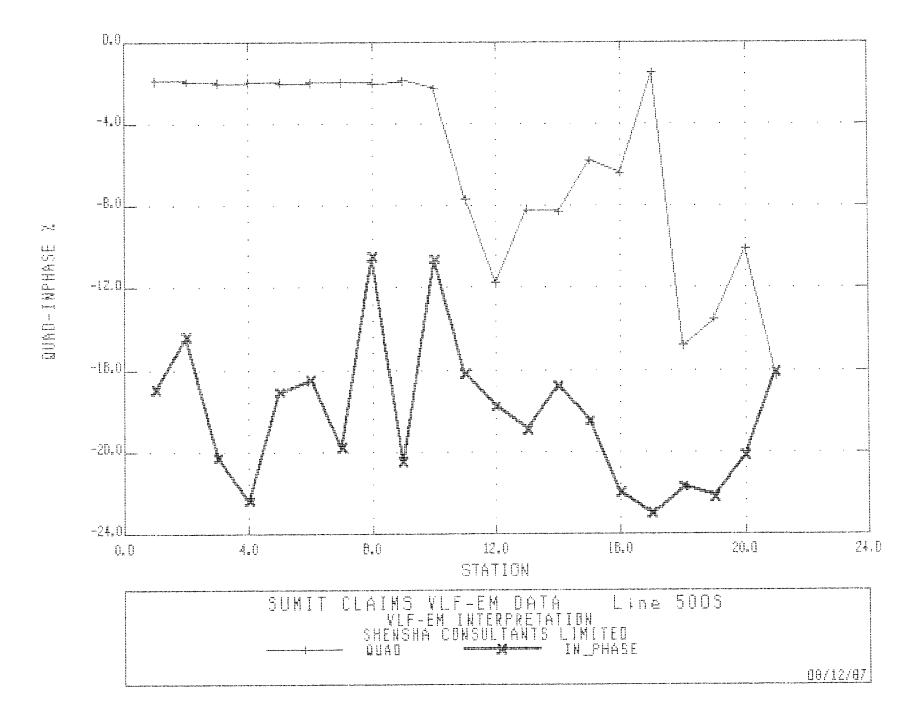


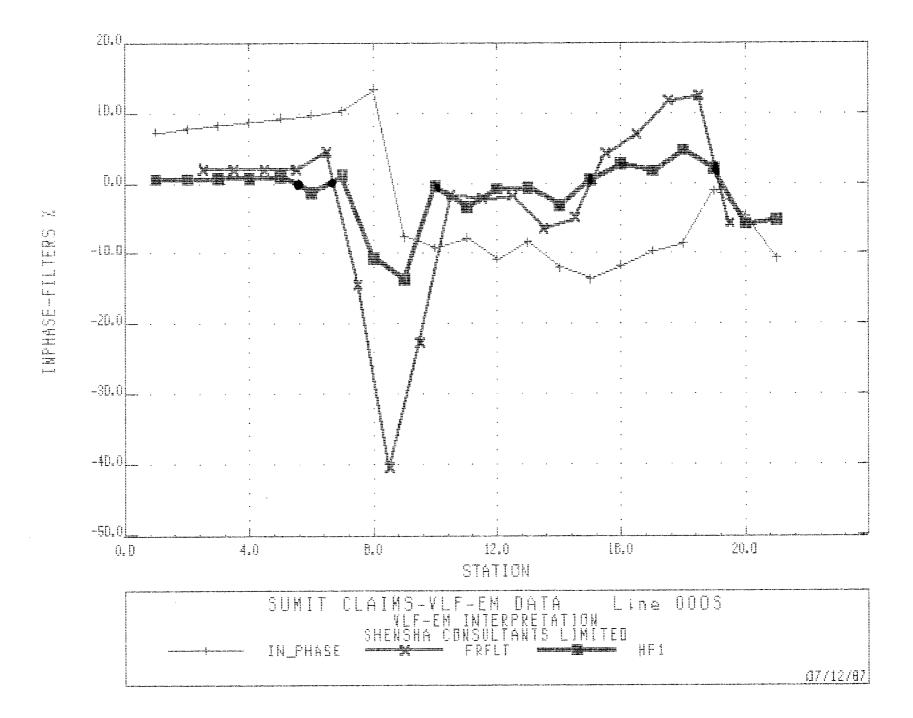


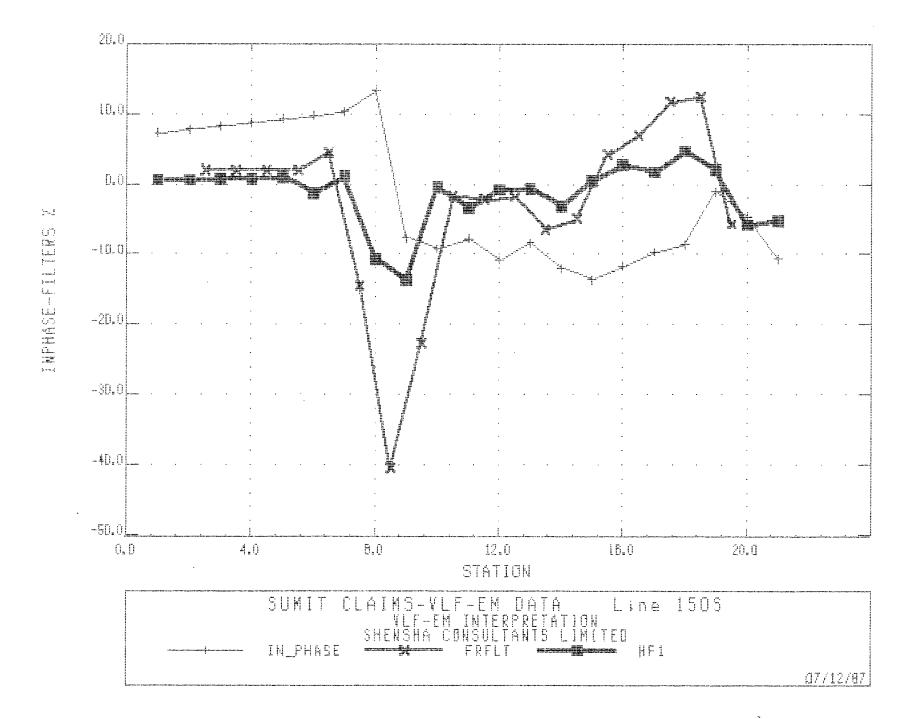


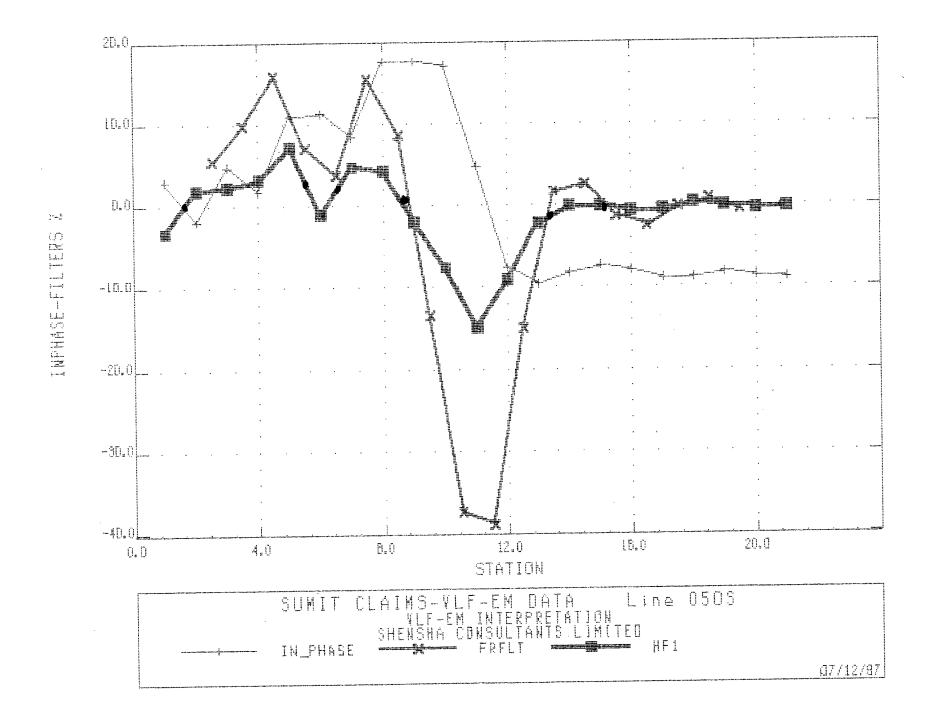


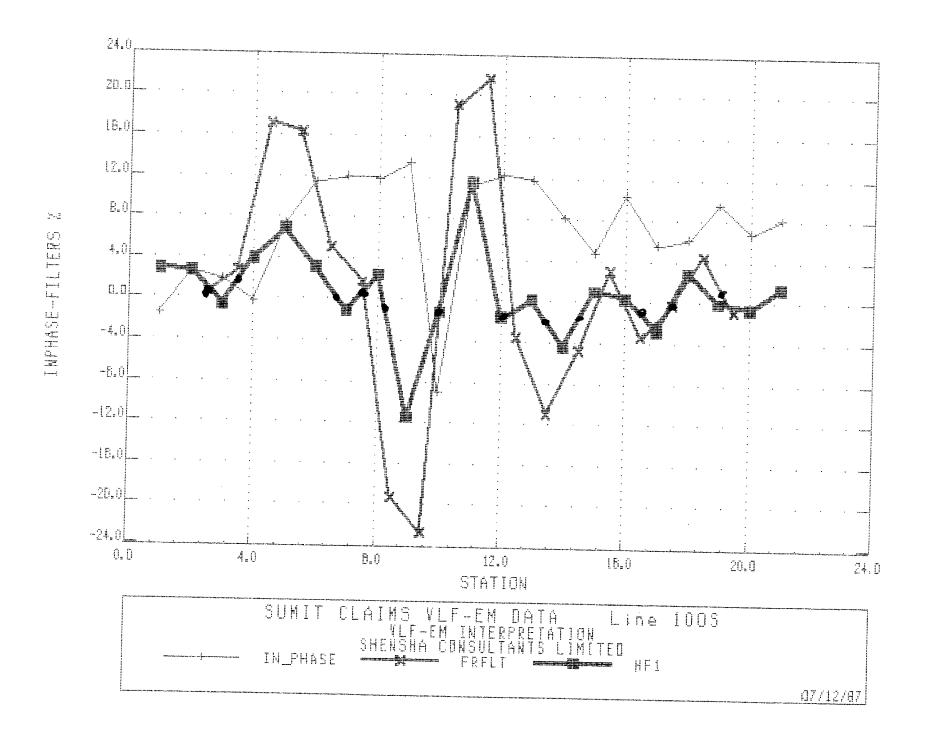


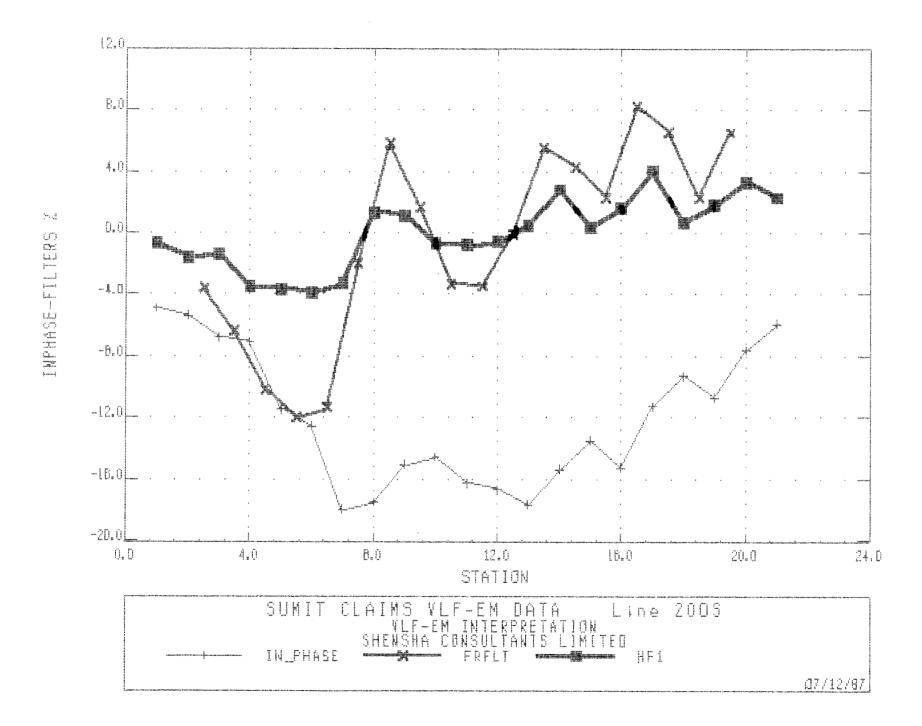


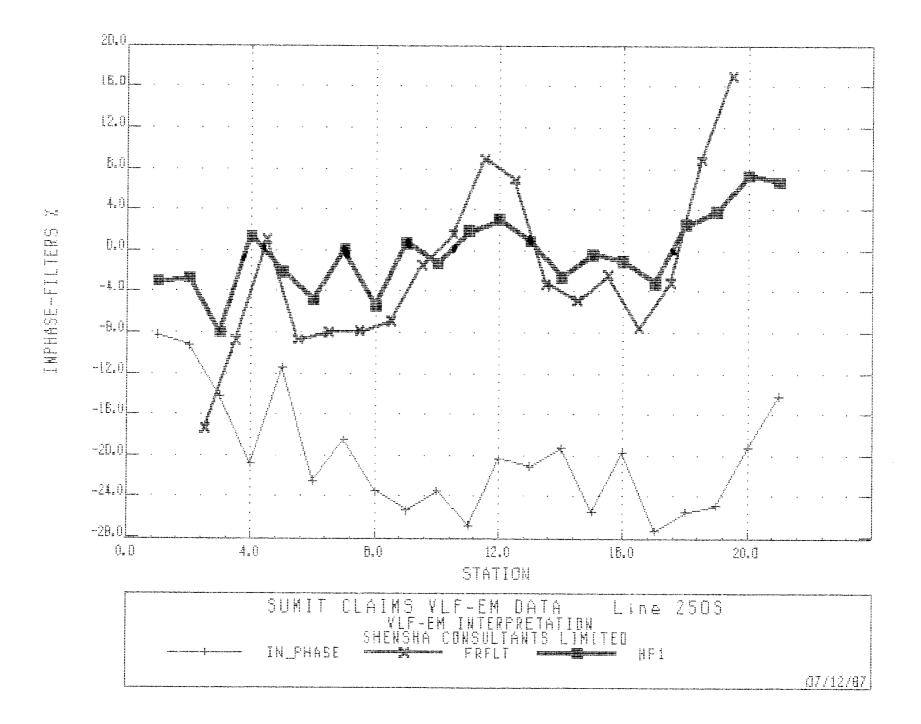




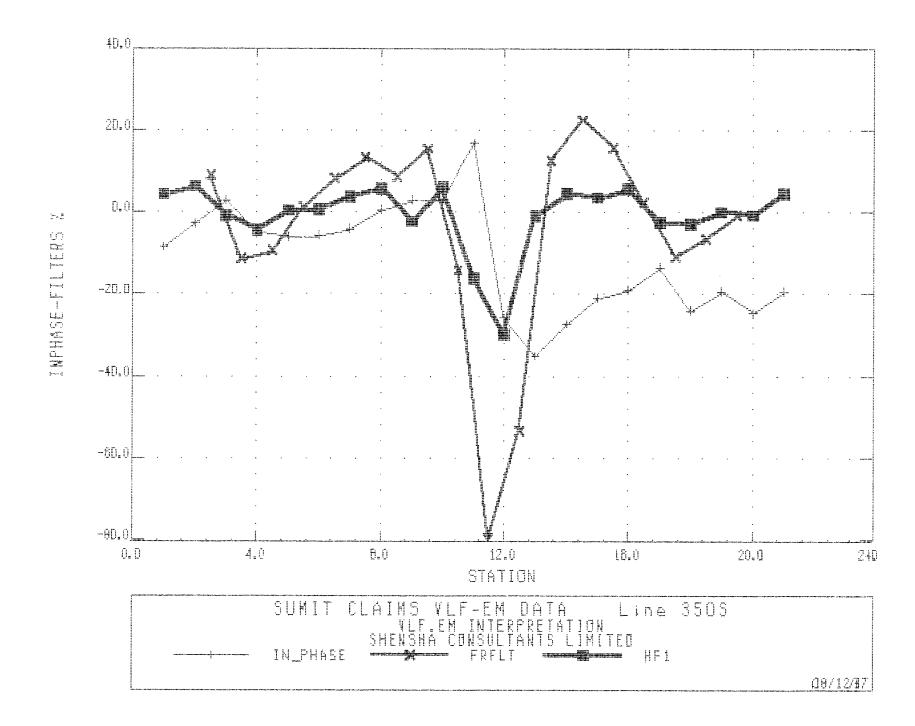


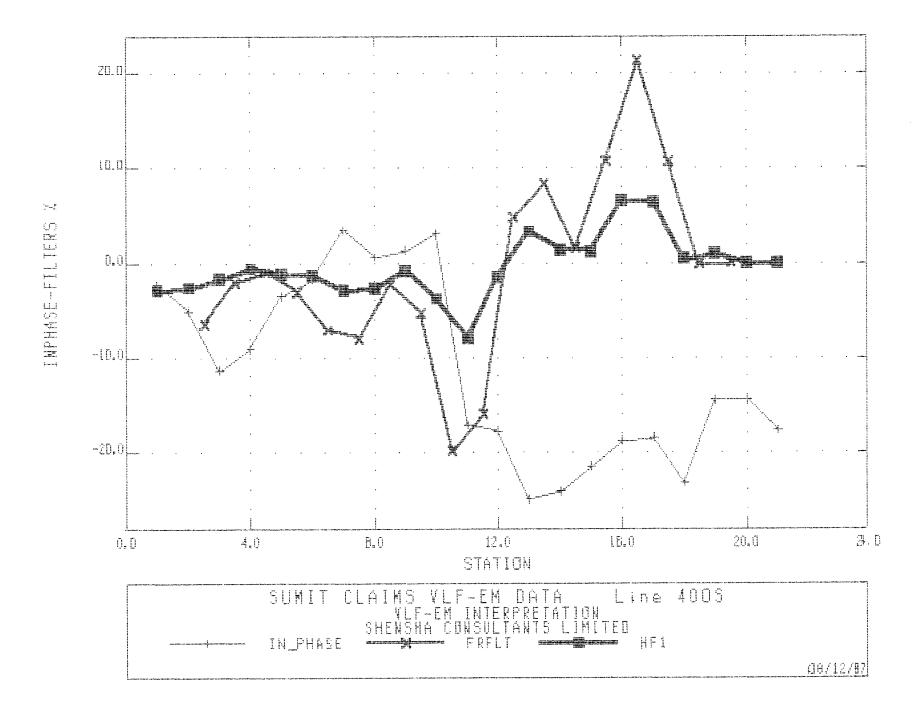


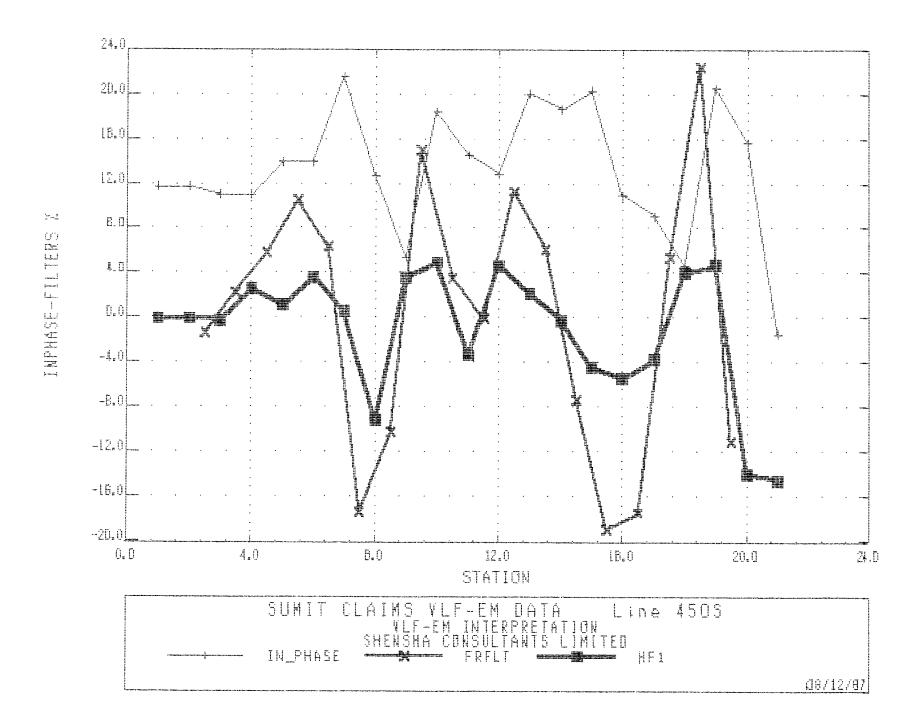


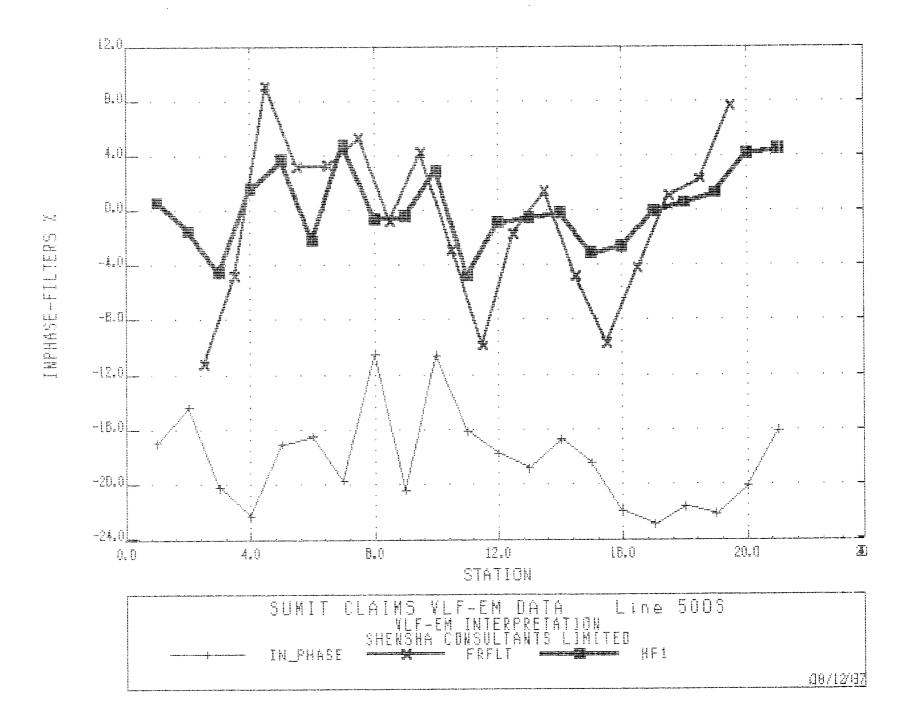


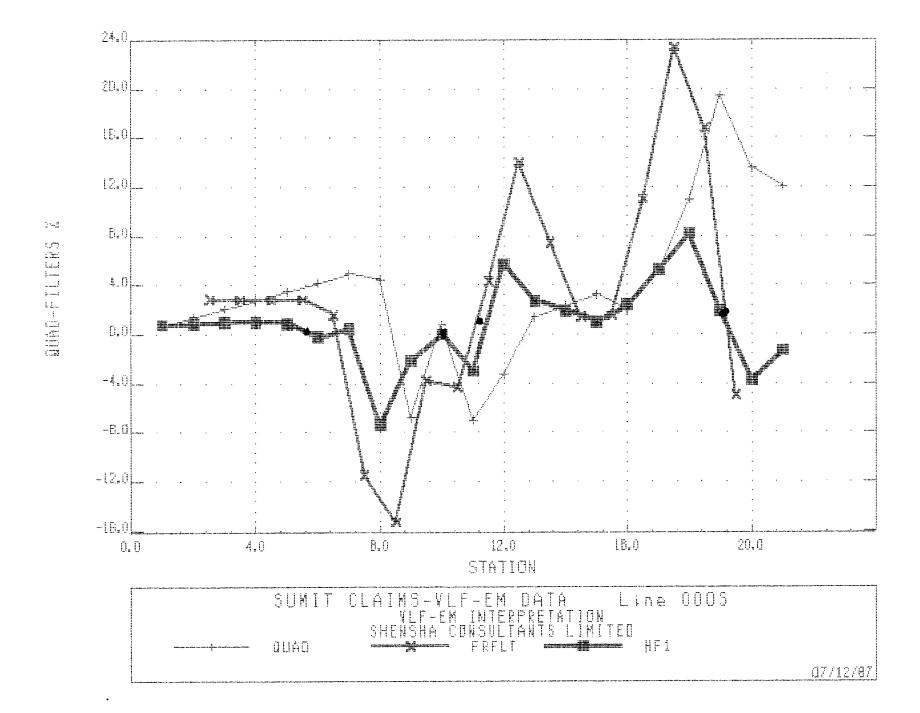


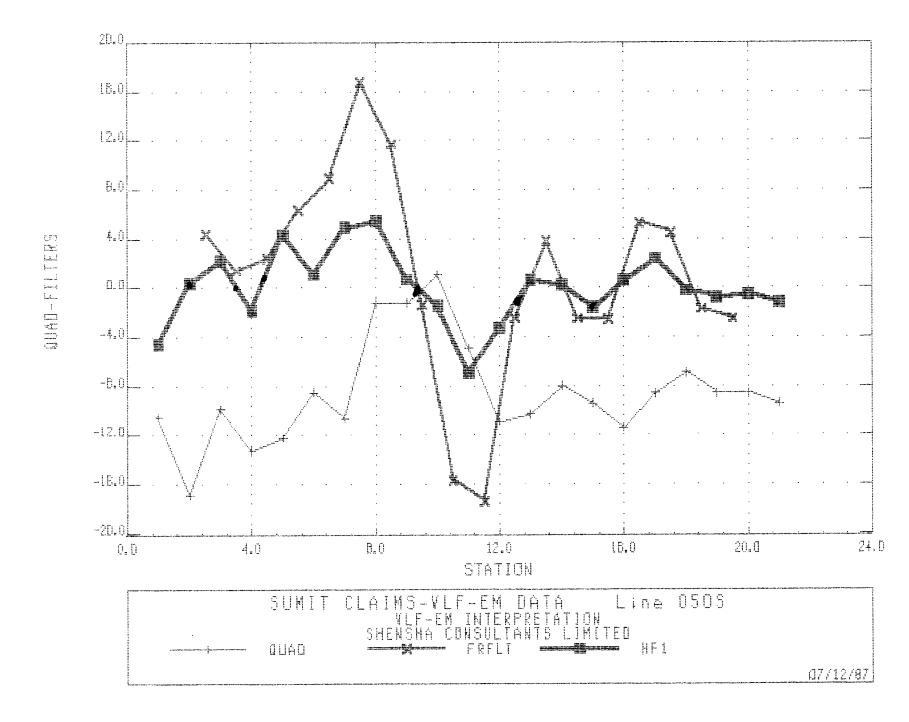


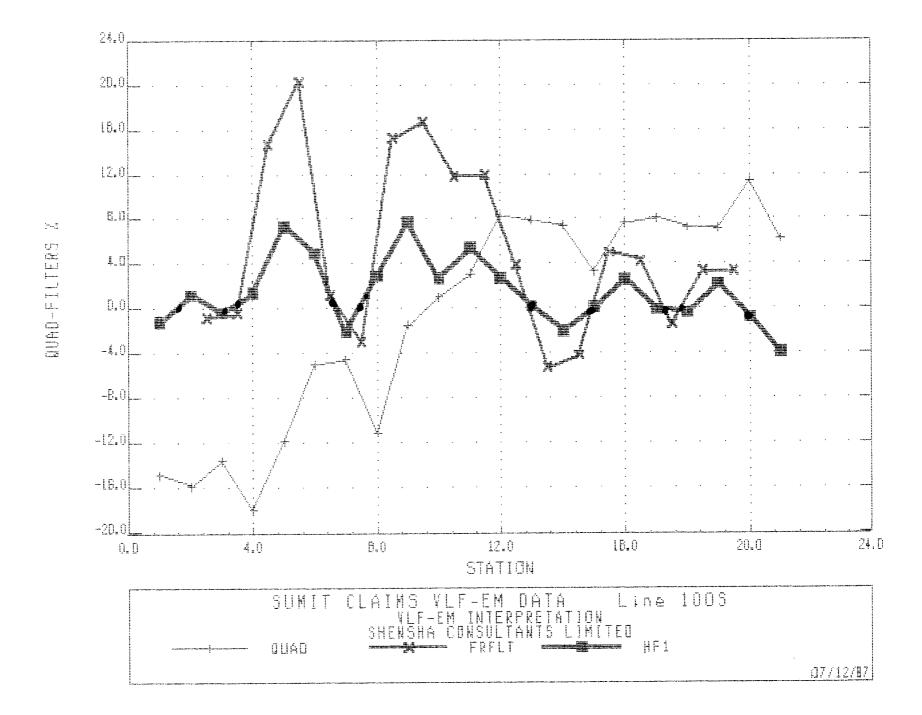


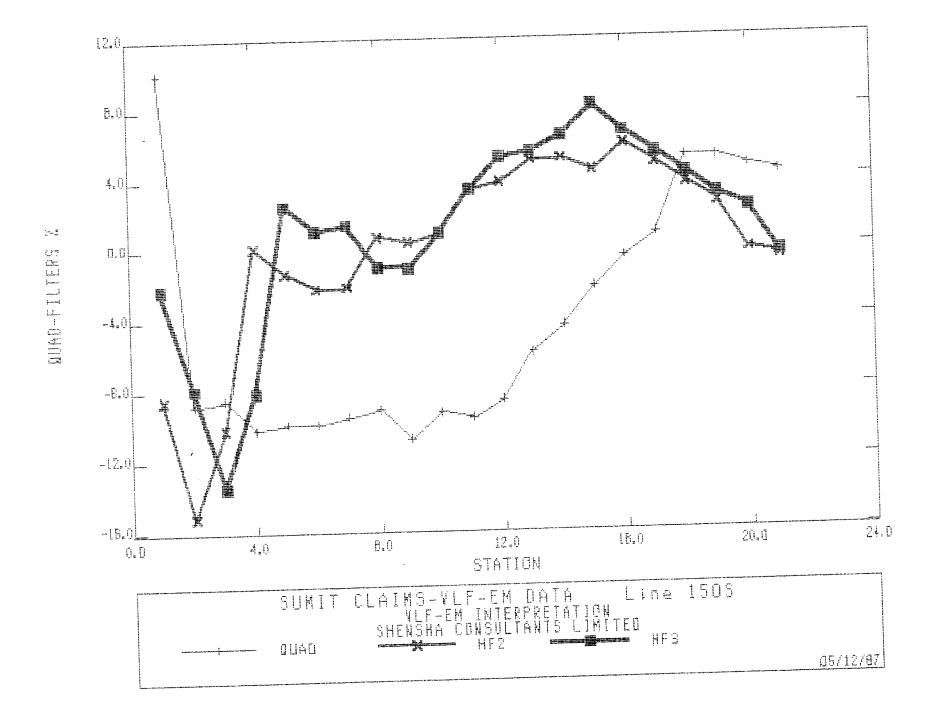


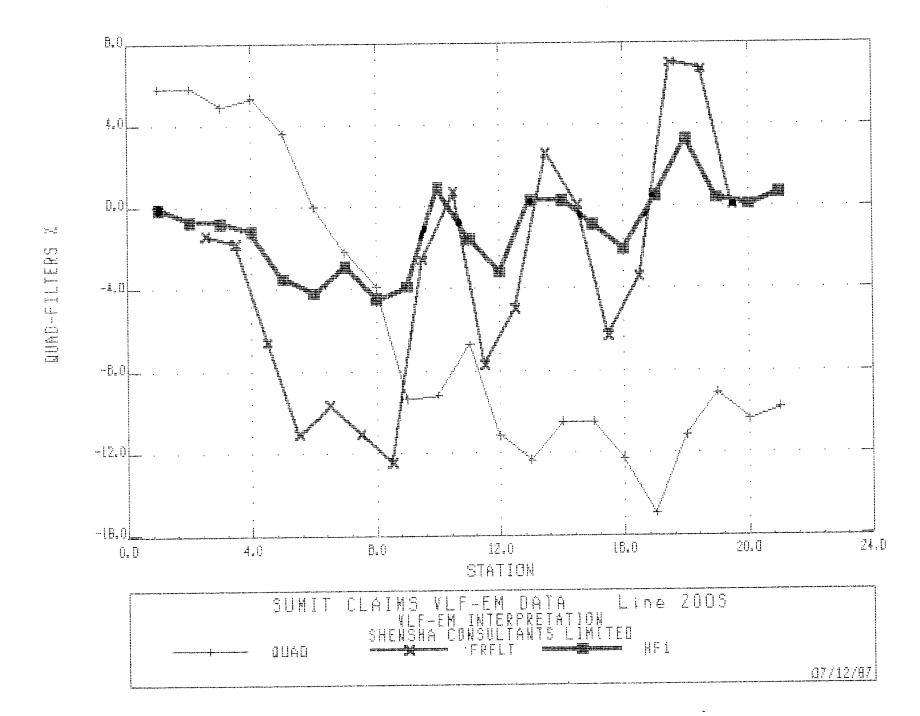


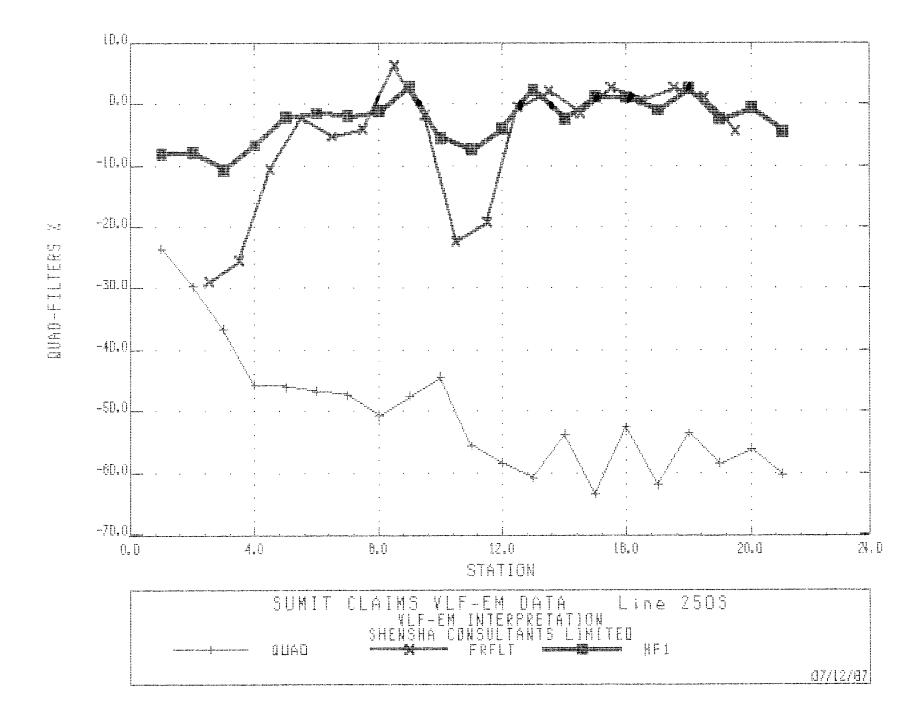


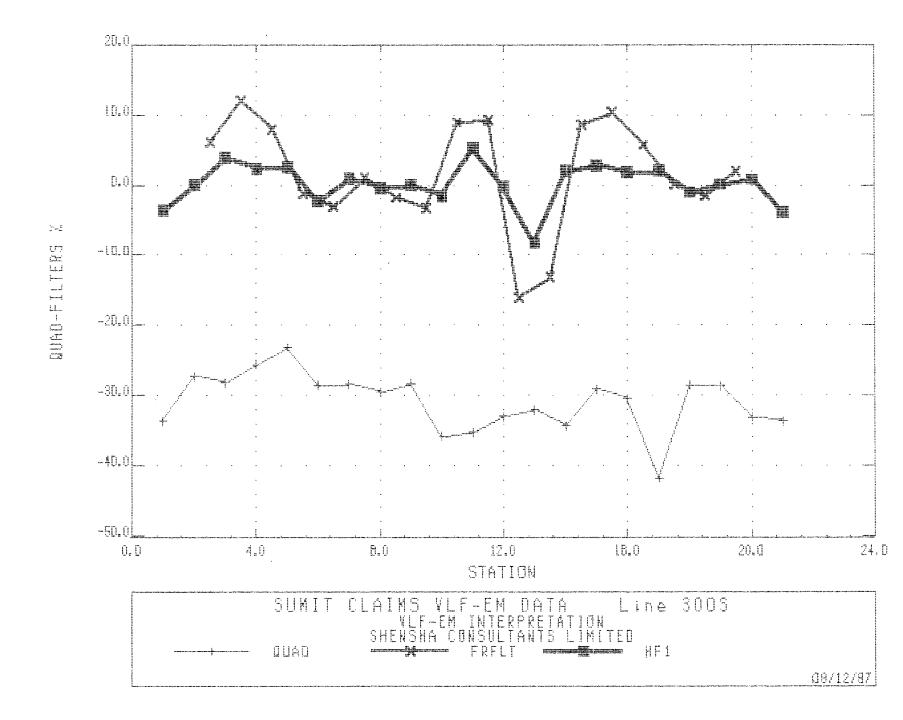


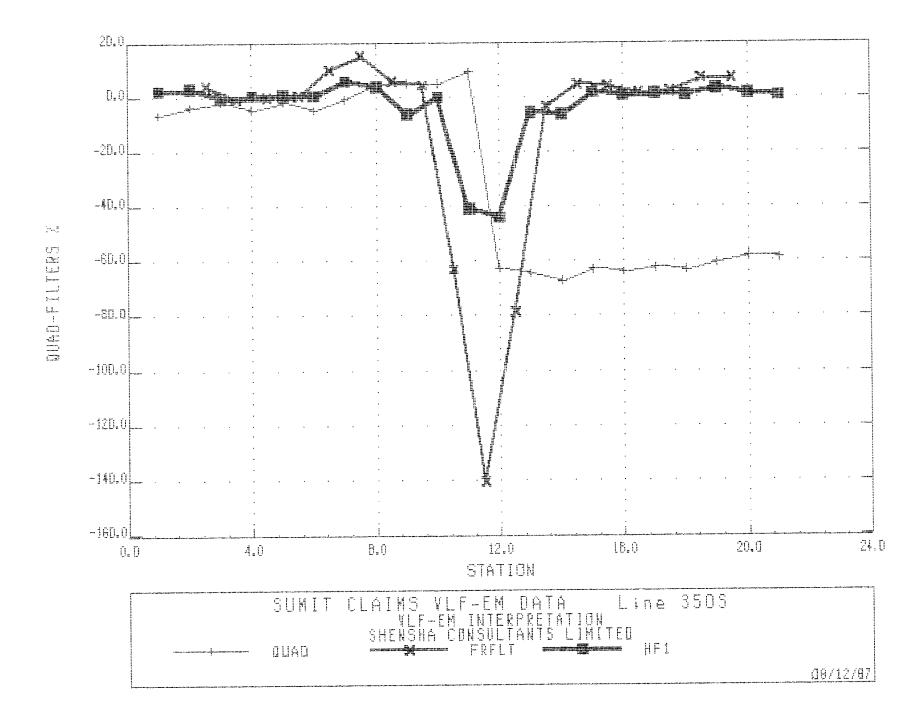


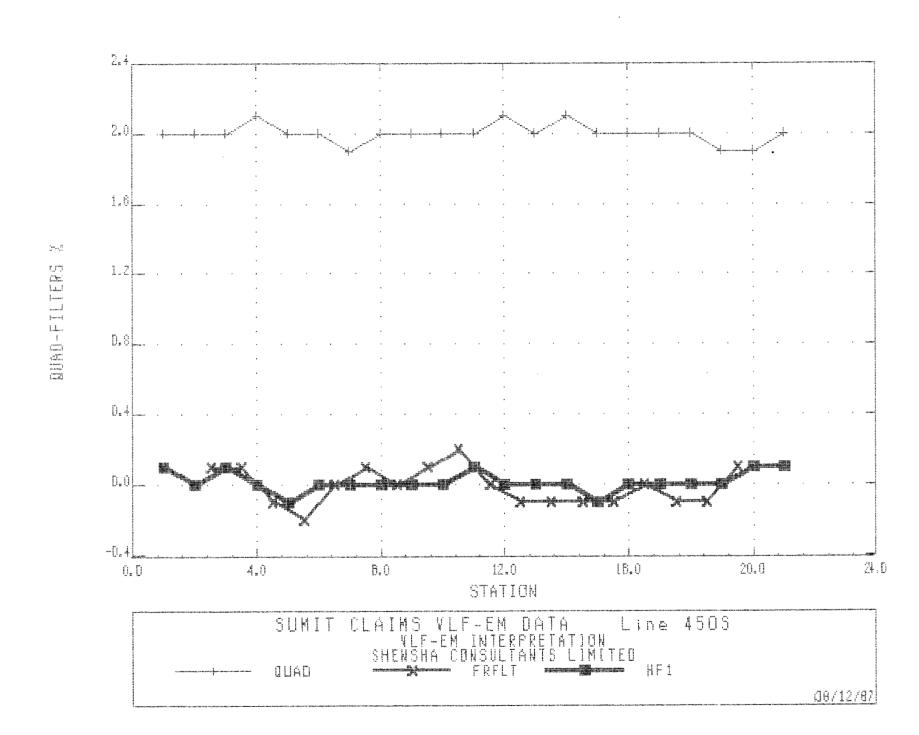


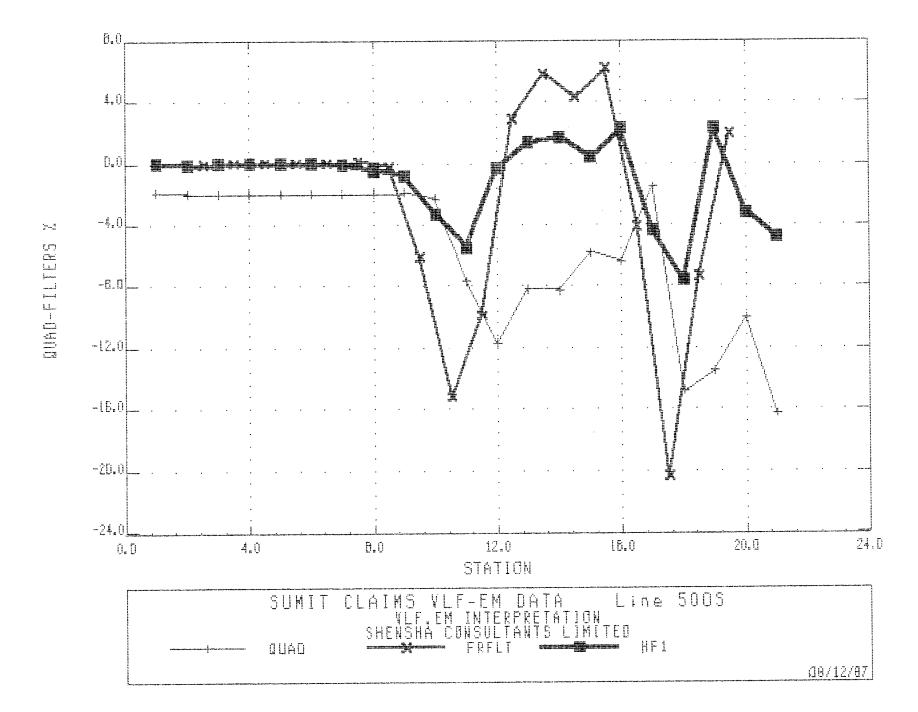


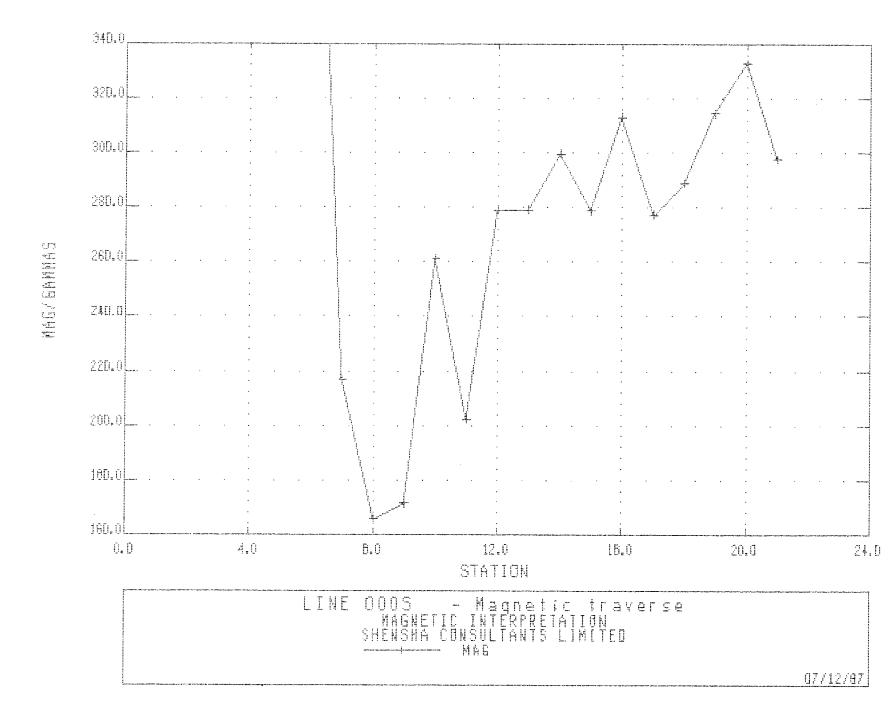


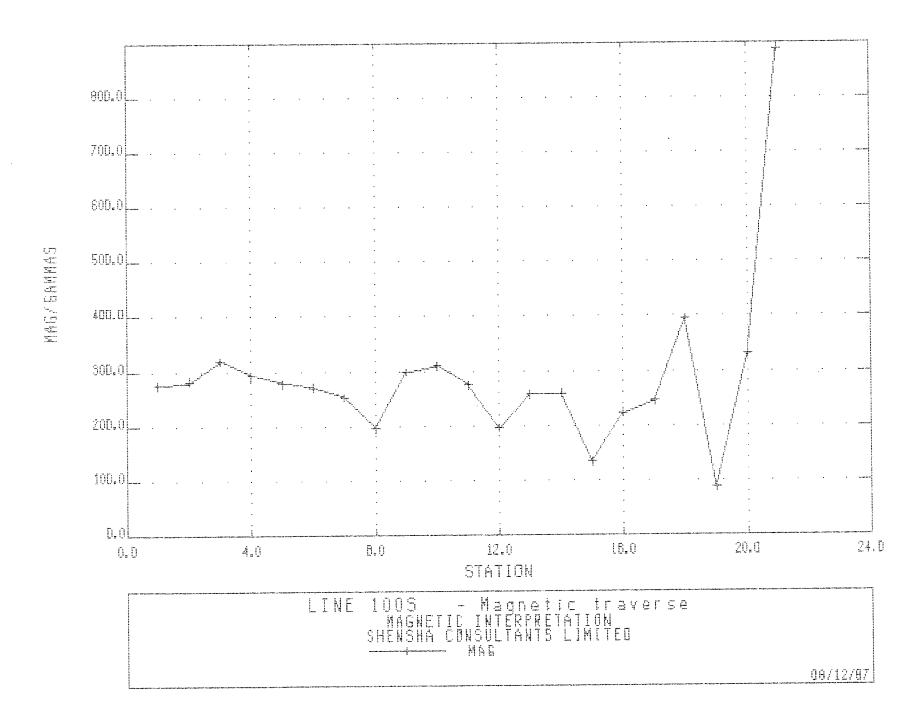


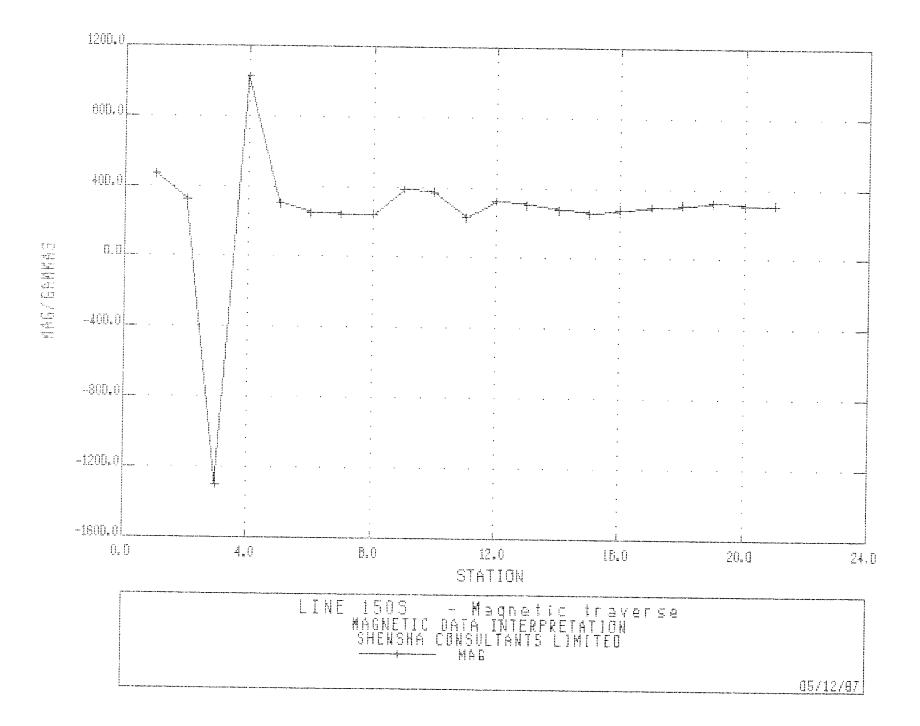


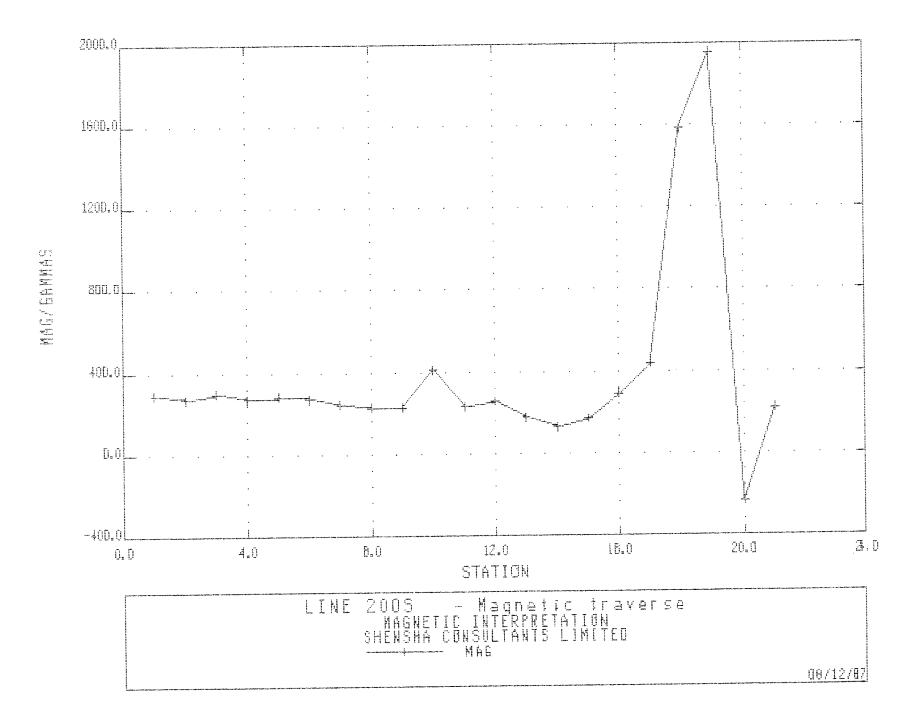


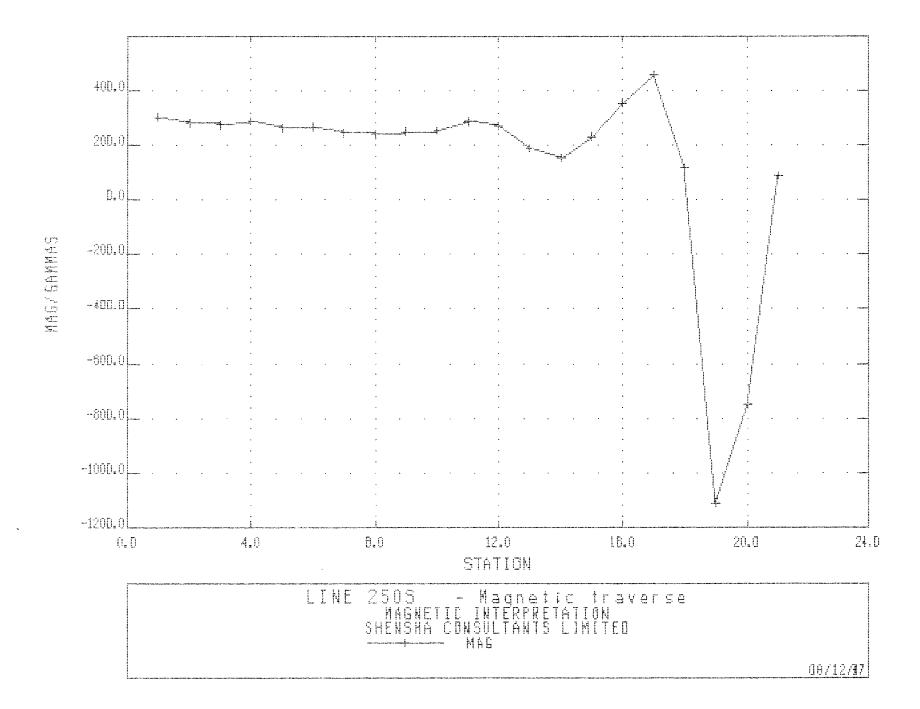


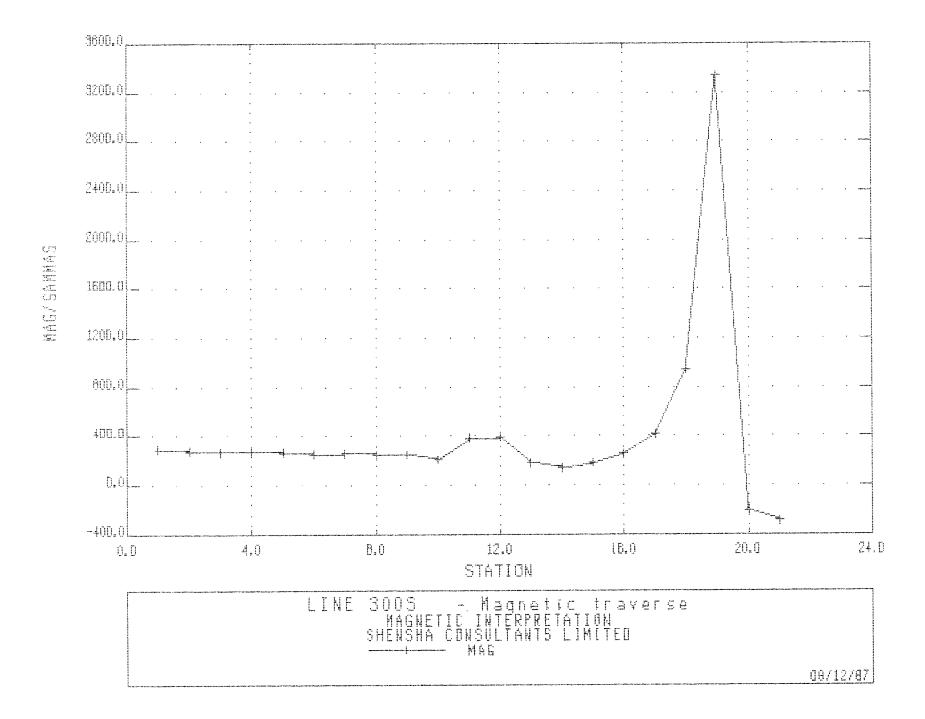


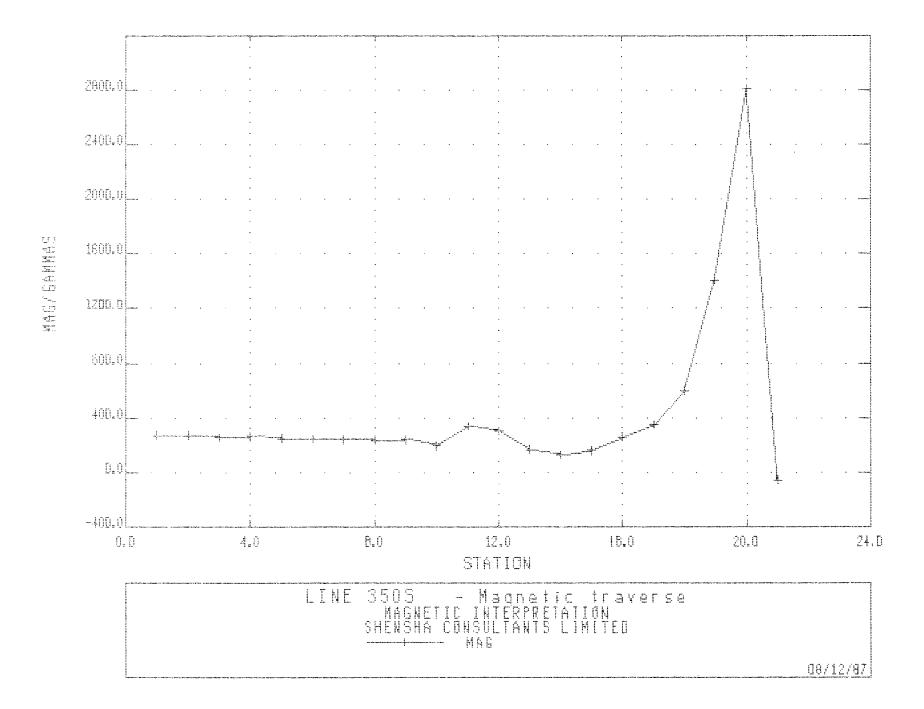


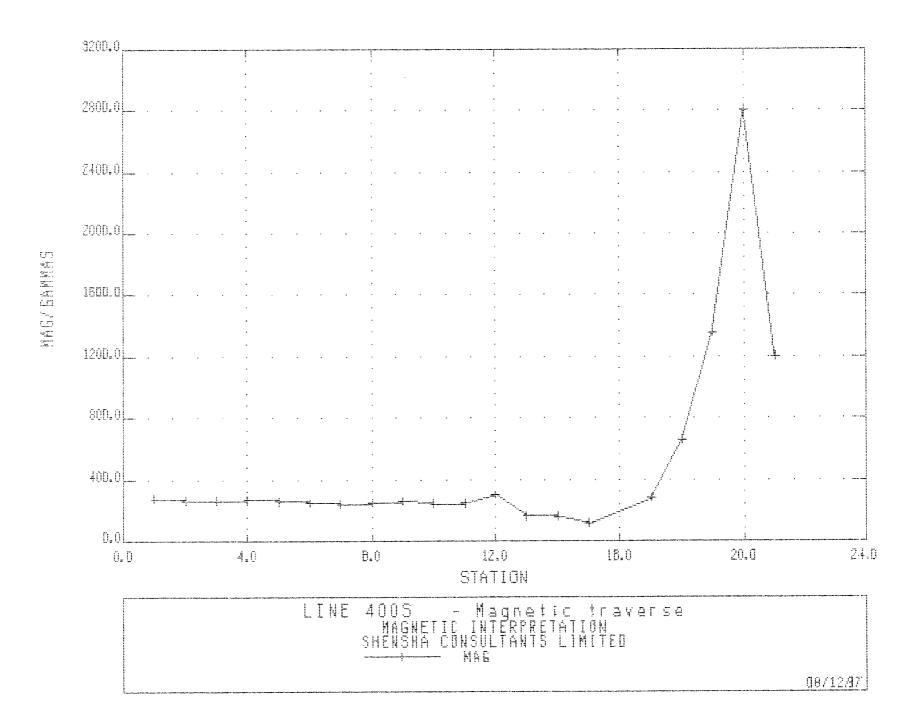


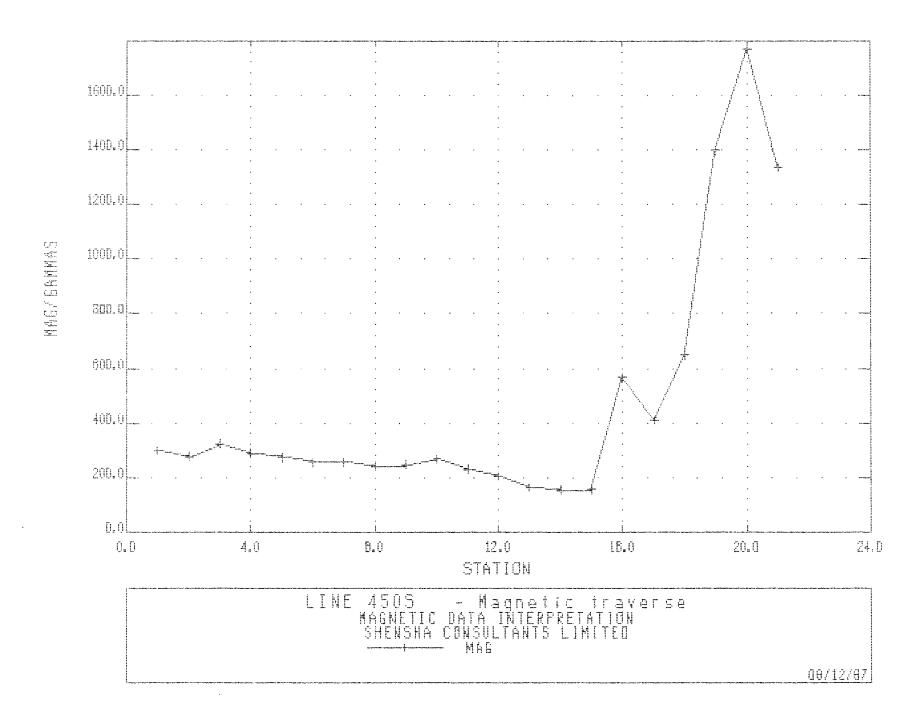


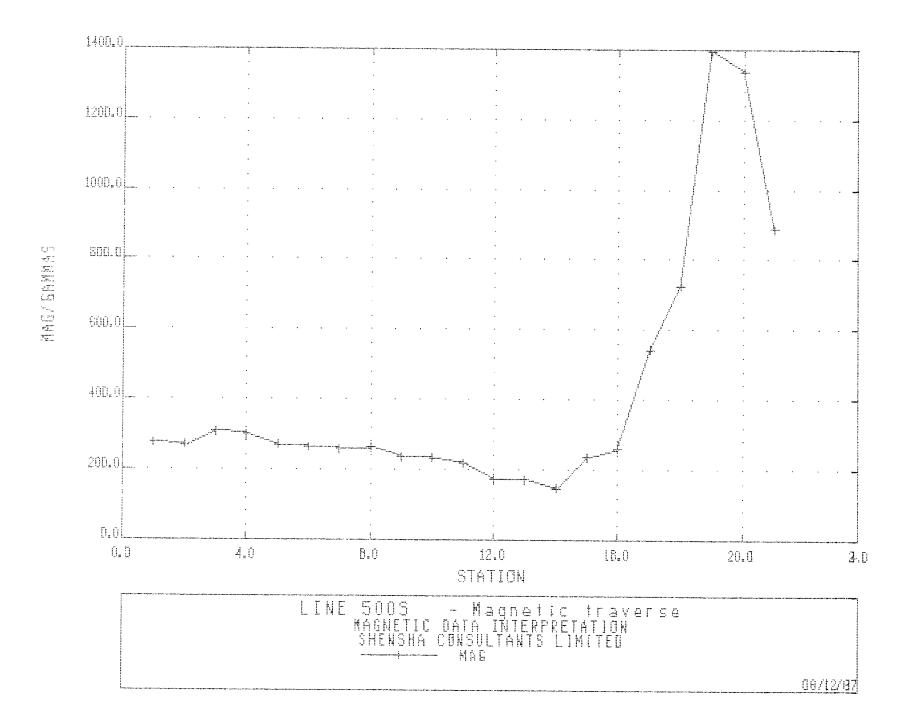












Shensha Consultants Limited

D. R. Vohra, P. Eng., P. Gooph.

Specialists in Exploration Geophysics

President.

INVOICE NO. BAL-00253 881209

BALOIL LASSITER PETROLEUM LTD. 935,610-8TH AVE. S.W. CALGARY, ALBERTA T2P 1G5

ATTENTION : Mr. A.BALASCH

Re: VLF-EM AND MAGNETIC SURVEYS IN SALMO AREA, B.C. (SUMIT CLAIMS).

1:02259...0031

IFO00423IF

VLF-EM AND MAGNETIC SURVEYS......\$9875.00

ADVANCE FAID.....\$4937.50

Paid by BLP

PAY TO THE ONDER OF CANADA 6TH AVE. & 5TH ST. S.W. BR. 600A - 6TH AVENUE S.W. CALGARY, ALBERTA T2P 0S4 PER DESCRIPTION OF CANADA BALOIL LASSITER PETROLEUM LTD.

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Suite 1701, 505 · 3rd Street S.W., Calgary, Alberta 72P 3E6
Telephone: (403) 266-4660 After Hours: (403) 281-8828 Teles: 038-25570 Fax: (403) 264-1262

COSTS OF GEOPHYSICAL SURVEY

NOVEMBER 21- DECEMBER 1, 1988

9 days senior geophysicist\$400.00/d	3600.00
9 days geophsical technician\$200.00/d	1800.00
9 days field assistant\$100.00/d	900.00
11 days truck & gas\$80.00/d	880.00
9 days hotel 2 men\$60.00/d	540.00
9 days food 2 men\$40.00/d	360.00
11 days VLF-EM Magnetometer rental\$163.20/d	1795.00
	\$9875.00