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NORTHWESTERN EXPLORATIONS, LIMITED

GEOLOGICAL, GEOCHEMICAL AND GEOPHYSICAL REPORT

on the

EYE CLAIMS

Kamloops M.D., B. C.

Situated 5 miles south southwest of Pimainus Lake, B.C.
50 - 121 Southeast

by

Charles S. Ney, P. Eng.

November 10, 1958

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Claims to which Assessment Work is being Applied

Claim	Group	Tag No.	Distribution of Work			Total	Years Work Claimed
			Geological	Geophysical	Geochemical		
EYE 1)		225161	\$ 46		\$ 63	\$109	1
2)		225162	46		63	109	1
3)		225163	46		63	109	1
4(	EYE #1	225164	46		63	109	1
5(		225165	46		63	109	1
6)		225166	46		63	109	1
13)		B51313	46		63	109	1
43)		300943	46		63	109	1
7)		225167	44	\$ 9	65	118	1
8)		225168	44	9	65	118	1
14)		225160	44	9	65	118	1
15(	EYE #2	225159	44	9	65	118	1
16(		B51309	44	9	65	118	1
17)		300917	44	9	65	118	1
19)		300919	44	9	65	118	1
44)		300944	44	9	65	118	1
18)		300918	44	21	80	145	1
20)		300920	44	21	80	145	1
25)		300925	44	21	80	145	1
27(	EYE #3	300927	44	21	80	145	1
29(		300929	44	21	80	145	1
30)		200930	44	21	80	145	1
31)		300931	44	21	80	145	1
32)		300932	44	21	80	145	1
26)		300926	72	8	22	105	1
37)		300937	72	8	22	105	1
38)		300938	72	8	22	105	1
40(	EYE #4	300940	72	8	22	105	1
41(		300941	72	8	22	105	1
42)		300942	72	8	22	105	1
45)		300945	72	8	22	105	1
46)		300946	72	8	22	105	1
28)		300928	41	16	44	101	1
39)		300939	41	16	44	101	1
47(	EYE #5	300947	41	16	44	101	1
48(		300948	41	16	44	101	1
49)		300949	41	16	44	101	1
50)		300950	41	16	44	101	1

NORTHWESTERN EXPLORATIONS, LIMITED

EYE CLAIMS

INTRODUCTION

The EYE Claims are located on the west side of the Guichon Creek Batholith 5 miles south of Pimainus Lake. The claims were investigated by Northwestern Explorations, Limited in the summer of 1958. The program consisted of geological mapping, geochemical sampling, and a partial magnetometer survey.

Geological mapping was done by G. Rayner, R. Chaplin and D.A. Barr, under the supervision of J.J. Brummer, P. Eng., and C.S. Ney, P. Eng. Geochemical sampling was done by O. Bradley, D. Sleigh, R. Hyndman and D. Drummond, under the supervision of J.J. Brummer. H.E. Hawkes, Ph.D., consulting geochemist for Northwestern Explorations, Limited, advised on the geochemical work. The magnetometer surveys were run almost entirely by J. McAusland under the instruction and supervision of D. Hansen, geophysicist for Northwestern Explorations, Limited.

Line cutting was done by J. Komlossy, R. Gullison, D. Stenton, T. Walsh and others named above in other branches of work. The work was done on the EYE Claims mainly during June and July 1958. Additional work was done in late August and September.

LOCATION

The claims are located at latitude $50^{\circ}20'N$; longitude $121^{\circ}08'W$, 5 miles south southwest of Pimainus Lake, southwest of Spences Bridge, B.C. Elevation ranges from 2500 feet to 5500 feet in the claim area. The northeast half of the claim area is a plateau surface of subdued topography. The south and west portions of the area are steep slopes gullied by tributaries of Skuhun Creek.

ACCESS

A good dirt road up Skuhun Creek extends within two miles of the south end of the claims. A jeep trail from Skuhun Creek to Pimainus Lake runs one to two miles east of the claims. Logging roads approach the claims on the west. No road provides direct access to the claims.

FIELD METHODS

Surveys: A set of east-west lines tied in to north-south base lines were run by compass and chain to provide a base for geological mapping, magnetometer observations and soil samples. Lines were spaced at 1000 feet normally, 400 feet in areas of greater interest. An enlargement of the B.C. Government Interim Maps from 2640 scale to 1000 scale provided a topographic control for the lines.

Magnetic Survey: Magnetometer readings were taken at 100 foot intervals along all lines in the east half of the claim area. Instrument used was a Sharpe A-3. This measures Vertical Intensity with a sensitivity in the normal range of 26 gammas per scale division. In actual practice, readings would not repeat closer than 2 or 3 scale divisions, and in very warm weather repeatability was much worse, so that in general the values are only reliable to ± 150 y. No correction for diurnal variation was made, but a base station was read at the beginning and end of each day to check on instrumental drift and magnetic storm variations.

Geochemical Survey: Geochemical work included collection of samples from sediment in streams draining the area, and soil samples along grid lines. In the streams three samples were taken at each site as a check. Sites were spaced $\frac{1}{4}$ mile or less along the streams. The fine silt in actual contact with running water was preferred for a sample. In many cases however, streams were dry at the time of sampling. Soil samples were taken at 100 foot intervals along the grid lines, one per site, of material just below the organic layer. All samples were dried and screened to -80 mesh in a field laboratory at Guichon Creek, and tested for readily exchangeable copper by the procedure devised by R.H.C. Holman. In local situations, following up indications obtained by grid sampling, considerable field testing was done by the Holman procedure without sample preparation.

GEOLOGY

Outcrops occupy only an estimated two percent of the total area of the claims. Except for a large blank area in the northwest, the distribution of outcrop is statistically good enough to show the general geology and to eliminate the possibility of extensive mineralization being missed. Intrusive rocks of the Guichon Creek batholith occupy large areas east of the claims. These are overlapped irregularly on the west by volcanic rocks of the Spence's Bridge Group. Sedimentary rocks which occur in very restricted outcrops may be pre Guichon Creek batholith, in age. Intrusives younger than the main body of the batholith, but older, at least in part, than the Spence's Bridge Group occupy significant areas.

Sku Group: A group of altered volcanic and sedimentary rocks was mapped on the Sku Claims to the south of the EYE. Field evidence placed these rocks unconformably below the Spences Bridge Group. Relations with the Guichon Creek batholith were not established. The degree of alteration in them made it appear likely that they are older than the batholith. Several small outcrops on the west part of the EYE Group are similar to the quartzite types seen on the Sku Claims. Field data do not give clear evidence of their relative age.

Guichon Creek Batholith: The most abundant rock type is a uniform moderately coarse grained quartz-diorite, with 15-20 percent mafics and a small percentage of quartz. A phase richer in quartz and lower in mafic minerals appears immediately east of the claims. The mafic minerals nearly always show a measurable planar alignment dipping steeply west and striking N 20° W. Significant variation in strike is recorded on the geological plan, but the dip is consistently steep.

Within the batholith there are dark dioritic phases occupying large irregular areas. One area occurs on claim 19 and extends for a few thousand feet east. A smaller area is mapped on claim 50. These diorite phases are thought to be incompletely granitized remnants of the older rocks which were invaded by the Guichon quartz-diorite.

Devil's Diorite: Significantly large irregular areas of medium grained even textured dioritic rock are found in the Guichon quartz diorite near its western boundary. These intrusives were given the name "Devil's Diorite". They truncate the foliation in the Guichon quartz diorite, and so are clearly younger. The relations with the Spences Bridge volcanics are less definite. Many dykes of andesite porphyry cut both Guichon quartz-diorite and Devil's Diorite. These dykes are thought to be feeders to Spences Bridge volcanics. It is significant that the Devil's Diorite is found mainly in valleys at relatively low elevations, and that it makes its appearance along the same line as the Spences Bridge volcanics.

Spence's Bridge Group: This group is made up of a variety of volcanic rocks ranging in composition from rhyolite to basalt. Particularly prevalent are light coloured feldspar porphyries of intermediate composition and more acid, aphanitic types showing flow banding. A band of buff-coloured volcanic breccia can be identified through the length of the property. Some granitic fragments occur in this breccia.

Attitudes were never well observed in the Spence's Bridge volcanics on the EYE claims. From the distribution of these rocks it is inferred that they dip at low angles west or southwest. The surface of unconformity on which they were laid down must have also had a general southwest dip modified by considerable topographic irregularity. Some moderately steep southwest slopes show windows of quartz-diorite within Spence's Bridge volcanics, and alternatively slopes dominantly quartz-diorite show occasional outliers of Spence's Bridge volcanics.

Dykes of feldspar porphyry resembling flows of the Spence's Bridge volcanics are very common in the Guichon Quartz Diorite and Devil's Diorite. They are thought to be feeders to the flows. They are wide and numerous and well exposed on claim 25.

MAGNETIC RESULTS

Magnetic observations were first plotted in the form of profiles. This showed the significant highs and lows immediately and a rapid comparison could be made with the geology along the same line. Minor irregularities, amounting at times to 500 y, were smoothed out of the profiles visually, and the resulting smooth curves were made the basis for contouring. Contouring was not too satisfactory with lines spaced so far apart.

The plan of magnetic contours shows little of interest. There is a rough correspondence between highs and the dioritic phases of the Guichon batholith. There are no highs strong enough to suggest the presence of contact metamorphic magnetite deposits. It is doubtful if the contours express any true structure in the batholithic rocks.

Specimens of various rock types were systematically tested for magnetic susceptibility by observing the amount of deflection in a small magnet suspended from a long thread. These measurements were useful in substantiating the field data, e.g., they showed that the diorite phases of the Guichon and the Devil's Diorite were strongly magnetic while most of the Spence's Bridge types were very slightly if at all magnetic.

GEOCHEMICAL RESULTS

On the 1000 scale plan showing geochemical samples, it will be noted that values obtained from stream silts are distinguished from those of soils. This is essential to interpretation, since copper in the former may be transported, in the latter it may originate in situ.

Silt Values in the larger tributaries (over 1000 feet long) are all low - in the range 0 - 6 ppm Cu. Values as high as 26 ppm are found in the heads of small tributaries. They are of little significance because of the small area represented. The values of 5 on a large tributary on claim 43 and 6 on claim 48 may be important.

Soil values are generally nil. There is a scattering of low positives without much pattern. The group of values on claims 32 and 49 appeared interesting but follow-up with more detailed sampling disclosed nothing of interest. Moderately high values were obtained along the line between claims 13 and 14. Some good values also occurred along the line between 25 and 26 in association with copper occurrence. The ground between these two occurrences was considered worth examining in more detail with lines 400 feet apart. This showed a grouping of values on claims 13 and 43, with nothing in the ground between the original lines.

MINERALIZATION

The only occurrence of copper mineralization of any significance

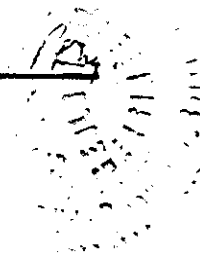
is a narrow zone of veinlets near the final posts of claims 27 and 28. The main structure strikes about east-west and dips steeply northeast. Mineralization (chalcopyrite and malachite) extends over an area 15 feet x 100 feet. The country rock is Devil's Diorite. There are several large dykes of Spence's Bridge type in the vicinity.

CONCLUSIONS

Mineralization on the EYE Claims is interesting because it is in a younger dioritic intrusive. Economically it is not significant. The wide area of slightly anomalous soil samples in deep overburden on claims 13 and 43 is worth further investigation.

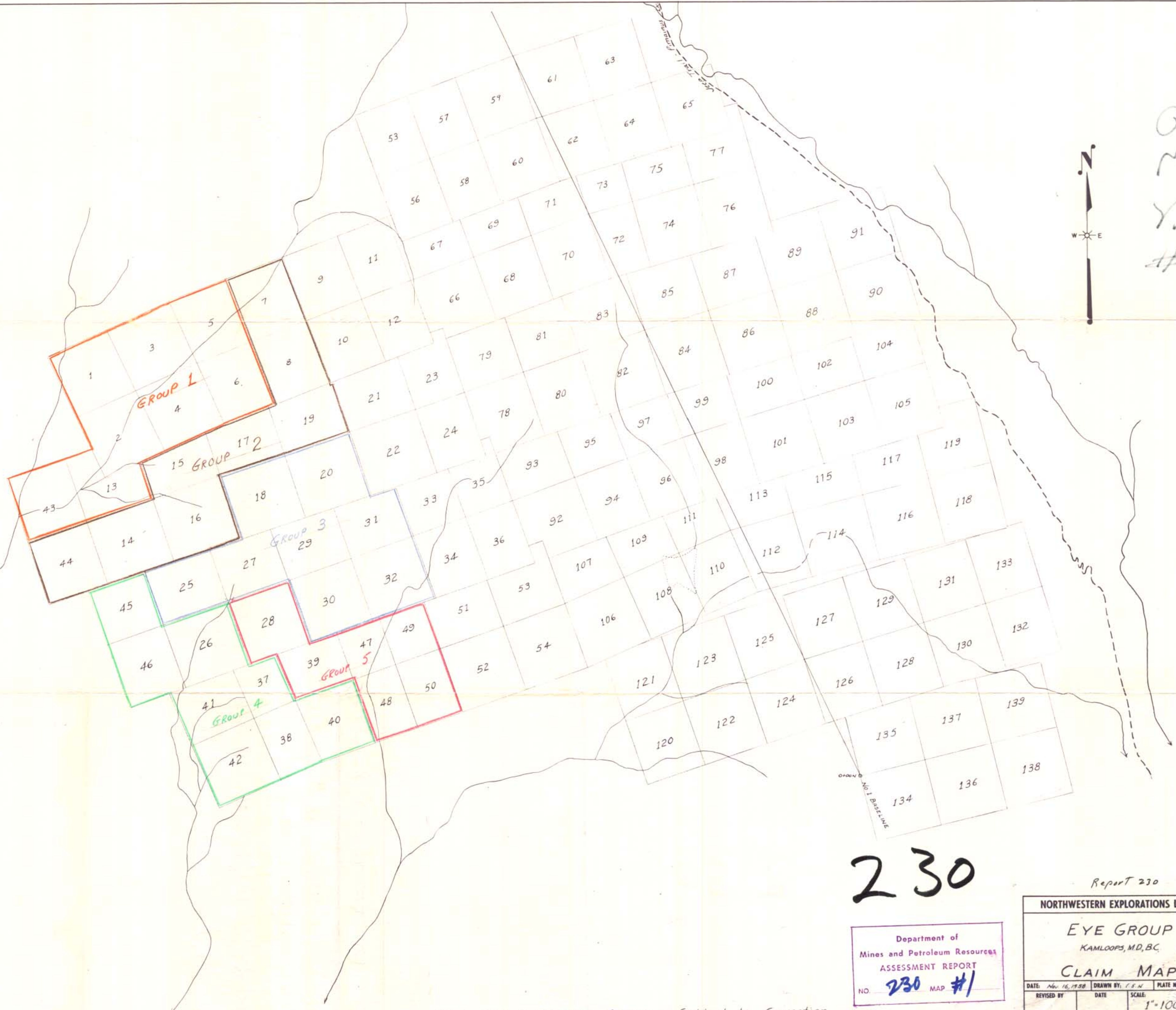
November 12, 1958

Charles S. Ney
Charles S. Ney



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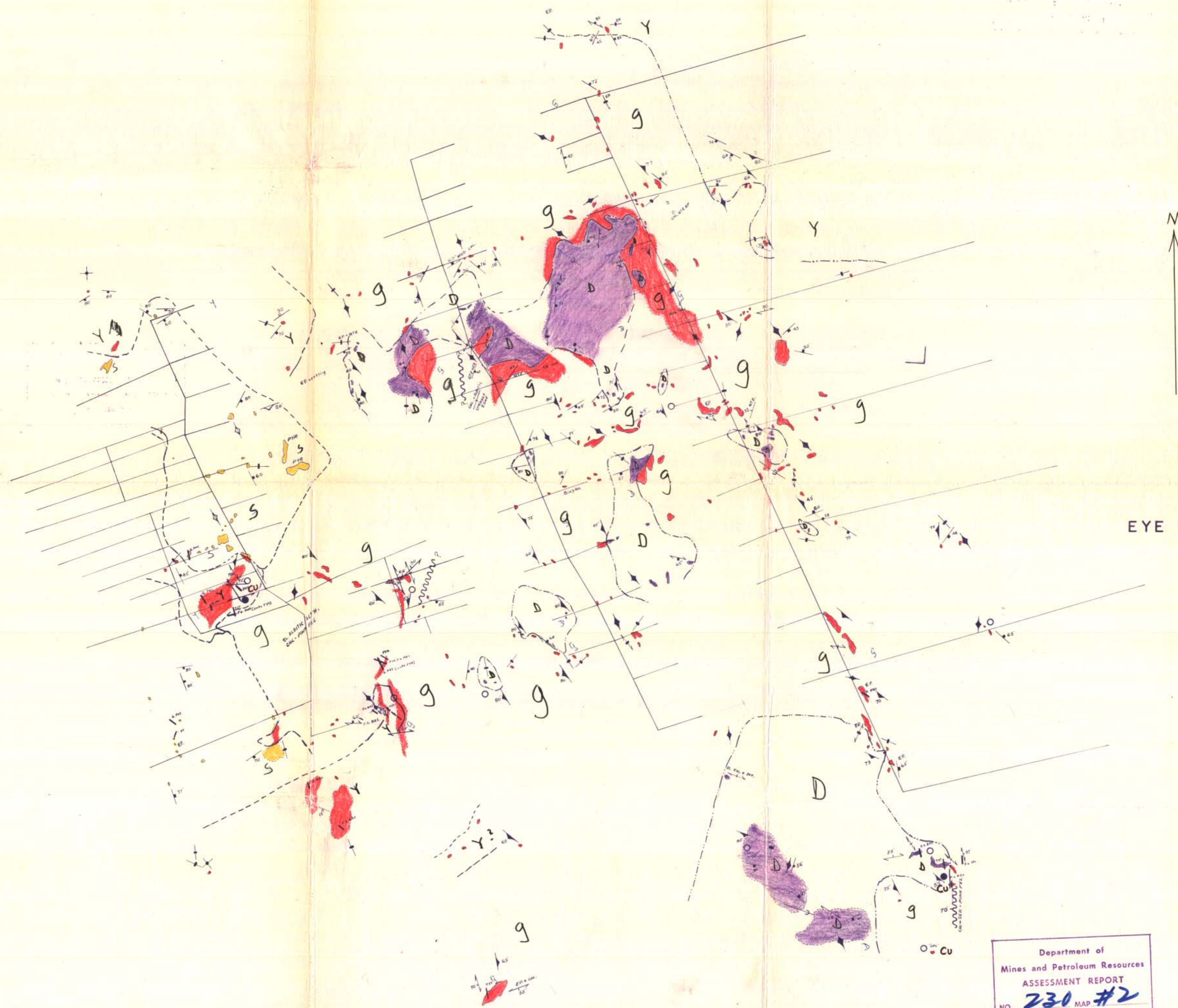
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Note: Chain - Compass Surveys - Subject to Correction

Department of
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ASSESSMENT REPORT
NO. 230 MAP #1

Report 230		
NORTHWESTERN EXPLORATIONS LIMITED		
EYE GROUP		
KAMLOOPS, M.D., B.C.		
CLAIM MAP		
DATE: Nov 16, 1958	DRAWN BY: J.S.N.	PLATE NO.
REVISED BY:	DATE:	SCALE: 1"=1000'

Charles Hey, P. Eng.



EYE GROUP

- SPENCES BRIDGE VOLCANICS S
- YOUNGER INTRUSIVES Y
- GUICHON QUARTZ DIORITE G
- DIORITIC COMPLEX D

- COPPER MINERALIZATION ●
- JOINTS
- SHEARS
- ROCK FOLIATION
- GLACIAL STRIAE

Covers area shown in groups 1 to 5 on map 1

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ASSESSMENT REPORT
NO. **230** MAP #2

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NORTHWESTERN EXPLORATIONS LIMITED			
EYE GROUP			
KAMLOOPS MD. B.C.			
GEOLOGY			
DATE: 23-11-58	DRAWN BY: R.E.C.	PLATE NO.	
DESIGNED BY	DATE	SCALE	1" = 1000'

Charles & Kay Flynn Report 230



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ASSESSMENT REPORT
NO. **230** MAP **#13**

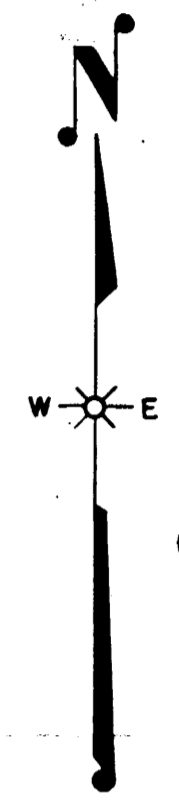
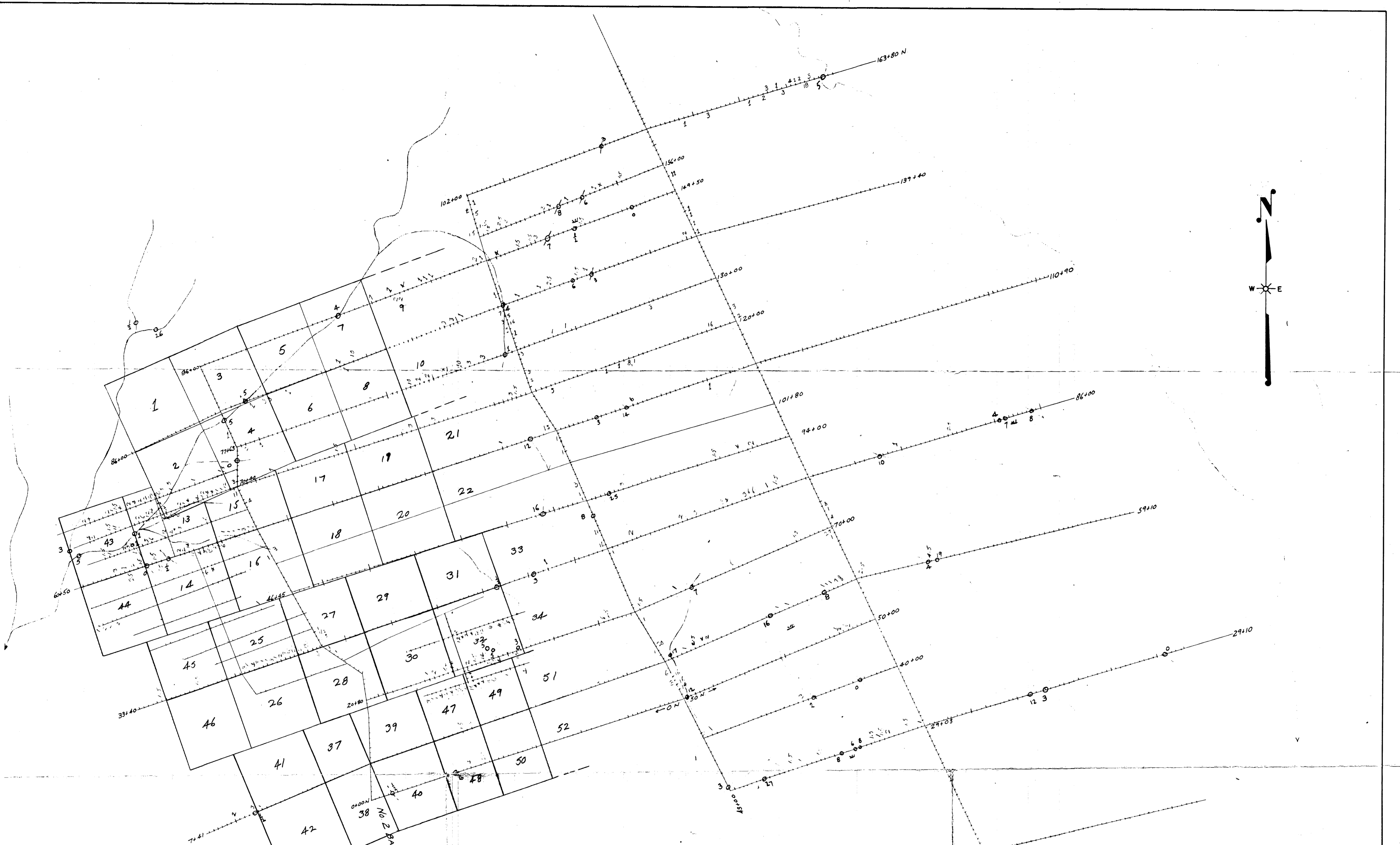
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Report 230
NORTHWESTERN EXPLORATIONS LIMITED
EYE GROUP
KAMLOOPS M.D., B.C.
MAGNETIC MAP

DATE 10/11/58	DRAWN BY C.S. Neely	PLATE NO.
REVISED BY	DATE	SCALE 1"=1000'

CONTOUR INTERVAL = 1000 y.
VALUES IN 1000'S

Checked by V. King



Soil Sample Sites
 Stream Silt Sites
 Values are P.P.M. Holman Copper
 Only Positives Shown

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 ASSESSMENT REPORT
 NO. **230** MAP #4

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EYE GROUP
 KAMLOOPS M.D., B.C.

GEOCHEMICAL DATA

DATE: 10/11/58	DRAWN BY: C.S. Mey	PLATE NO.
REVISED BY	DATE	SCALE: 1"=1000

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Checked by P. Ely