

This is Geophysical Report No. EM-M-71-124
 Covering the MILLIE MAC, BLACK BEAR and RMW claims groups
 Seven Miles N.E. Burton, B.C.
 Kaslo-Slocan Mining Division
 50° N - 117°45' W 82K/4E4W
 For Richwood Silver Mines Ltd.
 July 1, 1971 to September 14, 1971

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3226

PLANS

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| 1 MILLIE MAC mag Profile Plan | M-71-124-A |
| 2 MILLIE MAC EM Profile plan | EM-71-124-B |
| 3 BLACK BEAR Mag Profile plan | M-71-124-C |
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| 6 Location Map | Em-M-71-124-L |
| 7 RMW Control Plan | EM-71-124-GC |
| 8 MILLIE MAC - BLACK BEAR Control | EM-M-71-124-GC |

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ELC GEOPHYSICAL REPORT NO. EM-M-71-124 COVERING THE MILLIE MAC, BLACK BEAR AND RMW CLAIMS GROUP, ON THE NORTH SIDE OF CARIBOU CREEK, SEVEN MILES N.E. OF BURTON, B. C. IN THE KASLO-SLOCAN MINING DIVISION AREA. 50° N. - 117°45' W. FOR RICHWOOD SILVER MINES LTD. JULY 1, 1971 to SEPTEMBER 14, 1971.

Purpose:

The purpose of the survey was to obtain geophysical assessment by means of Em and Magnetometer instrumentation from any anomalous configuration that might be correlated with known geological information.

Instrumentation:

The geophysical survey was conducted with a type EM 16 Ronka Instrument operating on 18.6 KHZ from the US Navy Station NPC in Arlington, Washington.

The survey was also conducted with a type 100M vertical field fluxgate magnetometer made by Sabre Electronics of Vancouver, all results are plotted on separate plans.

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Geological Reference:

Reports of S.S. Fowler, 1911, by J.A. Mitchell, P.Eng. Dec. 1968, and by H.D. Forman, P.Eng. Jan. 15th, 1969.

Presentation:

Report covers three gridded areas that were traversed, wherein the MILLIE MAC survey is shown in plan drawings M-71-124-A and EM-71-124-B for magnetic and EM surveys respectively. The BLACK BEAR survey is shown on plan drawing M-71-124-C and EM-71-124-D. The control plan is EM-M-71-124-GC.

The RMW electromagnetic traverse is shown on plan drawing EM-71-124-E and control plan EM-71-124-GC.

The surveys are plotted in profile form, with the EM showing both the vertical and the horizontal components. Interpretation of the EM results are based on change of amplitude, polarity and phase relations of the two components.

The interpretation of the magnetometer results are based on profile amplitude and configuration relative

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to adjoining lines to thereby form linear anomalies. Topographical features are assessed for anomaly influences.

The MILLIE MAC and BLACK BEAR grid traverses are connected by a base line extending north west from the MILLIE MAC traverse to the southeast of the BLACK BEAR traverse. The mountain ridge extends between the two surveys, with the MILLIE MAC on the south slope and the BLACK BEAR on the north slope.

Location:

The BLACK BEAR, MILLIE MAC and RMW claims groups are located on the south west slope of Silver Mountain, on the north side of Caribou Creek, Seven miles north east of Burton, B.C., in the Kaslo-Slocan mining division. The surveyed areas are indicated on the location plan No. EM-M-71-124-L.

Results: MILLIE MAC - mag.

The MILLIE MAC magnetometer survey is shown on drawing M-71-124-A. The contact anomaly CIA appears to follow closely to the outcropping of the shear zone. The linear anomaly LIA extends nearly north and south and appears to follow closely with the contours of the stream

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bed that the road crosses west of the dump.

The strongest anomalous feature is in the northern portion of the survey, the L2A linear crossing line 12 NW and extending westerly. A north-south anomaly L3A appears to begin at the shear zone in the south and extends northward from line 10 NW to line 15 NW across the central base line.

A magnetic 'high' exists in the centre of the survey, bracketed by L4A, L5A, L6A and L7A. This magnetic anomaly covers an area that is nearly square, 300 feet by 300 feet and appears to be generally north of the early underground work.

Results: MILLIE MAC -- EM

Referring to plan No. EM-71-124-B the contact anomaly C1B similar to C1A seems to follow the outcropping of the thrust zone, over most of its exposed area. The C2B and C3B contact anomalies appear to follow portions of the eastern edge of the thrust outcropping. A linear anomaly L1B follows closely to C1B and appears to join to the west. The L2B anomaly in the northern portion of the survey is in the general proximity of the L2A anomaly. The L3B linear anomaly parallels the L3A anomaly

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but is more easterly. The L4B anomaly which is quite strong is believed to be created by the old tram cable on the south end of the property. Generally speaking the anomalies from the thrust fault outcropping are more predominant in the EM readings.

Summary

MILLIE MAC Results

It would appear that the magnetic high in the centre of the survey M1 is bracketed by four linears. The strike of these periphery lines appear to coincide closely with the direction of the shear zone thrust, however M1 is located on a prominent ridge that thickens in this area, and the magnetic high may be attributed to this topographic feature.

The L2A and L2B linear anomalies are also in close association with a second ridge and the linear anomaly L2B follows the ridge very closely.

Magnetic anomaly L2A indicates almost an outcrop reaction on the north east end of the anomaly on line 12 suggesting the existance of a vein extending nearly perpendicular to the line and dipping to the west. It would seem the location of this anomaly is in the area referred to in the Fowler report where a "sand bed" vein existed.

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Results: BLACK BEAR - mag

Refer to M-71-124-C showing the magnetic profiles for the BLACK BEAR traverse. The apparent contact area is signified by the anomalies C1C and C2C having a curvature conforming with the topography. The east west linear anomalies L1C and L2C appear to be valid indications of subsurface formation changes. The north south linear anomalies L3C and L4C may also be associated with topographical features, the acuteness of the L4C anomalies suggest near surface influences. In contrast, the L2C anomaly indicates depth influence.

Results: BLACK BEAR - EM

The contact linear anomaly C1D appears to follow the general direction of the thrust fault outcropping. The L2D and L3D north south linears are quite weak, however the L3D does follow closely with the L3C. The paralleling of C1D with the grid lines, obscures the anomaly to the north.

Summary: BLACK BEAR and MILLIE MAC

The anomalous features in the immediate

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vicinity of ClC may be influenced by the steep slopes in the topography to the north, directly above the open cuts. However, LlC and L1D appear to be valid having an east west trend. The centre base line 0+00 is electromagnetically anomalous between the stations 20 N and 21 N and is magnetically anomalous between stations 19 NW and 19+50 NW. This suggests a possibility that the L2A east west linear anomaly may extend across the base line in the vicinity of station 19 NW and thereby continue to the vicinity of the linear anomalies LlC and L1D thus extending a linear anomaly from the MILLIE MAC to the BLACK BEAR traverse. The strike line of this assumed projection between L2A and the area of LlC would be approximately fifteen degrees north of west.

Results: RMW

The RMW group extends along the road north of Caribou Creek on the lower southern slope to the west, as indicated in the control plan EM-71-124-GC. The profile and anomalous features are indicated in the plan EM-71-124-E. The longest single anomaly appears to be a contact, indicated by ClE with a north-east, southwest strike. A smaller conductive linear anomaly CL1E with a more easterly strike is directly north of ClE. A group of conductive anomalies are shown in the CZ1E zone to the east. A con-

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ductive linear anomaly CL2E has a north-east south-west strike across the most westerly grid. Paralleling this strike are the linear anomalies L1E and L2E, all crossing the road.

Summary: RMW Geophysical results

The anomalies on the eastern portion of the survey all appear to be valid and do not conform with any topography. A major formation change appears to occur along the strike of C1E. The CZ1E zone shows the highest area of conductivity in the survey, extending over 200 feet along line 15 W and 400 feet along the base line 0+00 from line 15 W to the east to the line 10W and intermittently to line 5 W.

The conductive linear anomaly CL2E appears to be associated with a contact, and L1E appears to be the opposite side of the formation. The detail readings suggest these conductive anomalous sources are close to the surface.

Conclusions:

Perhaps the most interesting anomaly is the projected east west linear extending from the north of

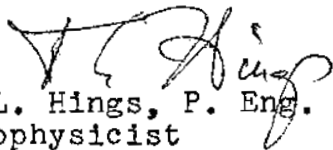
...con't...

the MILLIE MAC to the south of the BLACK BEAR survey (L2A to L1C).. The area M1 is close enough to the MILLIE MAC old workings to be **partially** checked by known geology. The M1 area is not supported by EM and therefore indicates the anomalous source is at depth.

There is evidence that the linear L2A from Independence Gulch to L1C on Blue Grouse Creek slope, is also at considerable depth, and may not show outcropping other than mild topographic features.

The geological significance of this should be carefully assessed prior to committing development expenditures.

The RMW anomalies in contrast may be assessed in many cases right along the road with relatively little coverage.


D.L. Hings, P. Eng.
Geophysicist

A statement of costs for Geophysical Survey Covering
MILLIE MAC, BLACK BEAR AND RMW Claims Group, North-
East of Burton, B.C. by ELC GEOPHYSICS LTD. July 1,
1971 to Sept. 14, 1971.

Survey Crew

R.L. Reece	31 days @ 60.00	1860.00	
W. Mather	31 days @ 40.00	1240.00	
R. Fuller	28 days @ 40.00	1120.00	
K. Sisson	9 days @ 30.00	<u>270.00</u>	
			4490.00

Transportation

4 x 4 Truck	36 days @ 12.00		432.00
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Living Costs

Food, Camp and Motel			740.00
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Equipment and Supplies

31 days @ 5.00			155.00
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Instruments

Ronka EM 16	33 days @ 10.00	330.00	
Sabre Magnetometer	33 days @ 10.00	<u>330.00</u>	
			660.00

Data Processing and Drafting

D. Cramer	10 days @ 60.00	600.00	
R. Reece	5 days @ 60.00	300.00	
B. Kaminski	5 days @ 25.00	<u>125.00</u>	
			1025.00

Interpretation and Report

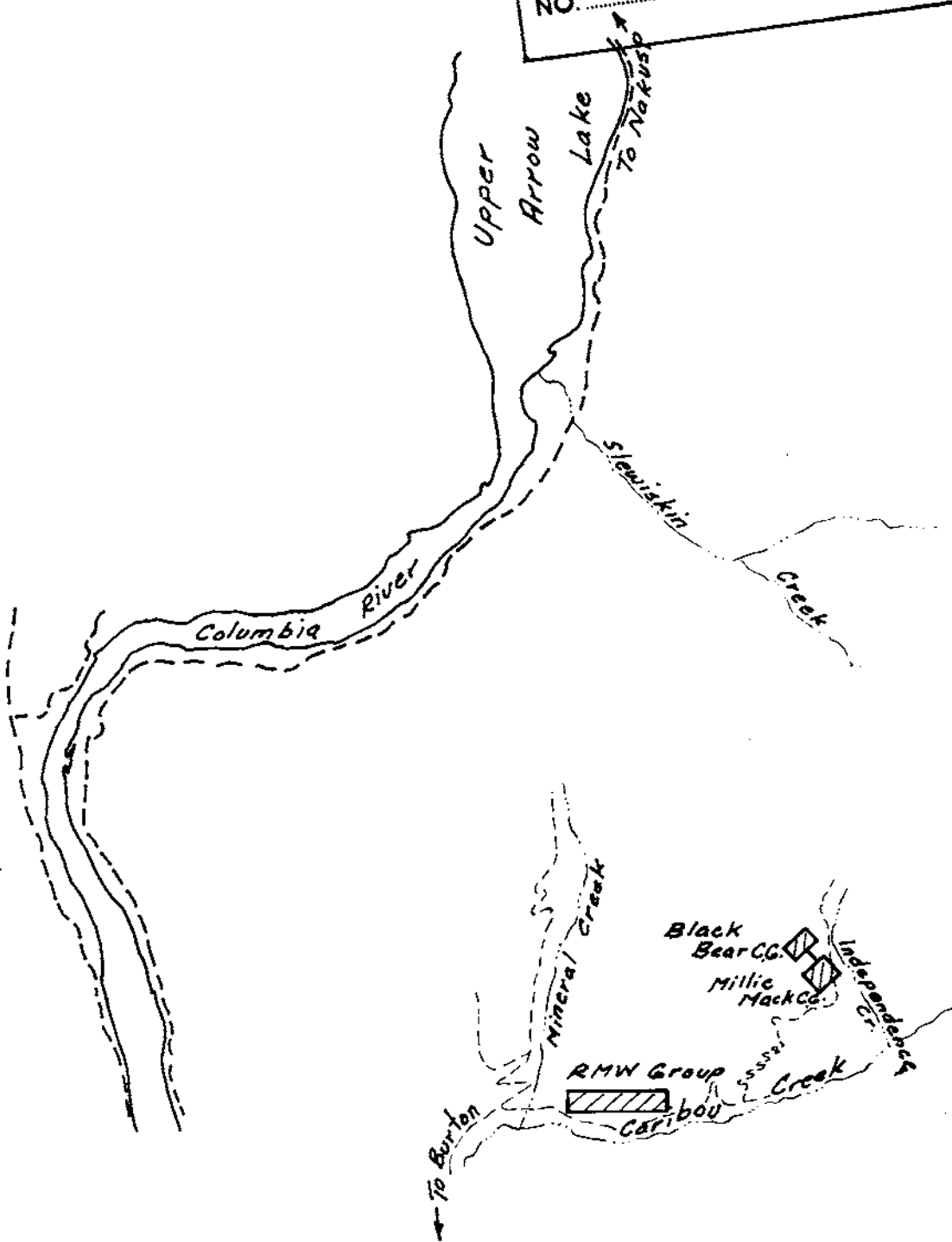
D.L. Hings, P. Eng.			720.00
6 days @ 120.00			

TOTAL			<u>\$ 8,222.00</u>
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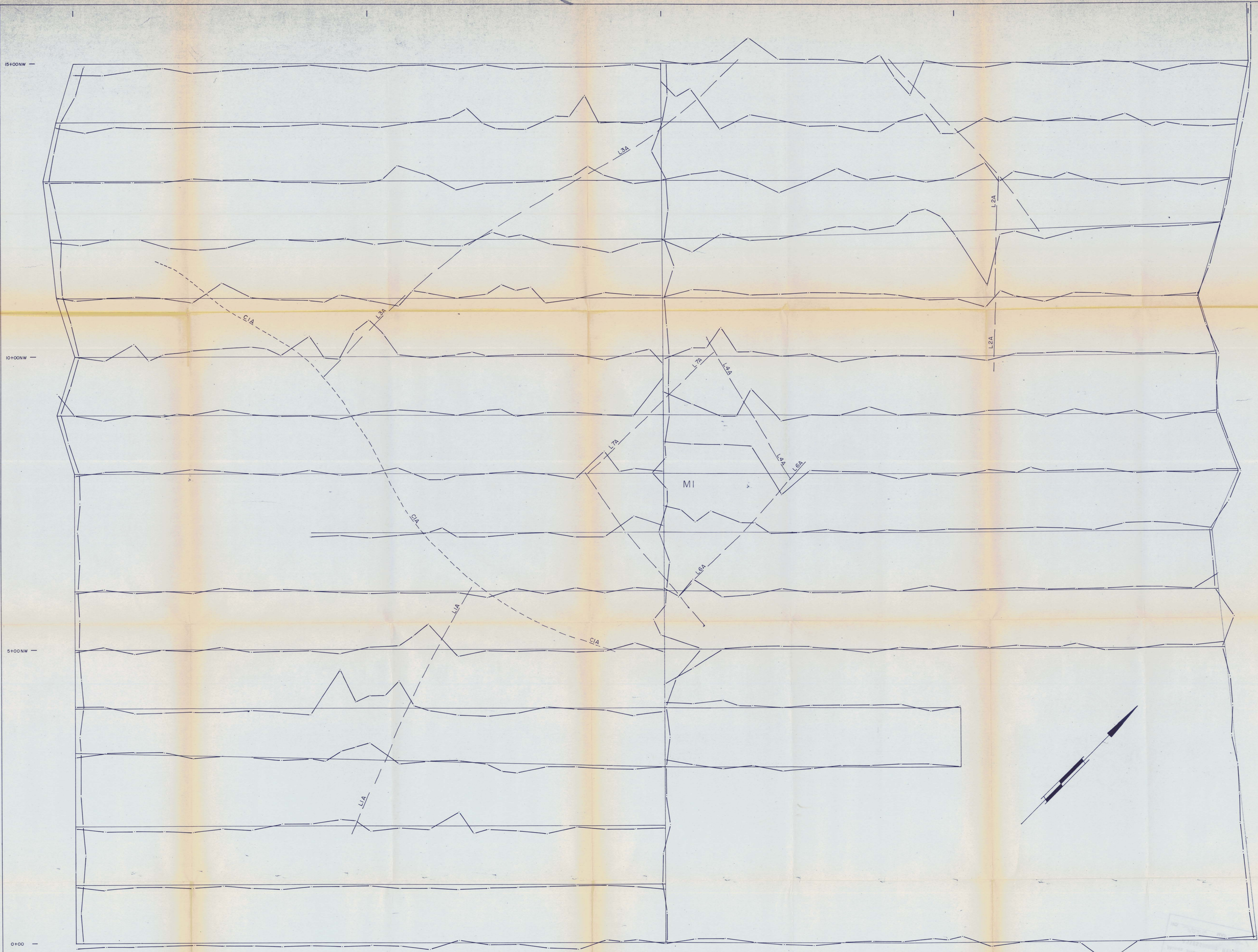
LOCATION PLAN
EM-M-71-124-L
Scale 1" = 2 Miles

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. **3226** MAP **#6**



J. E. Hip



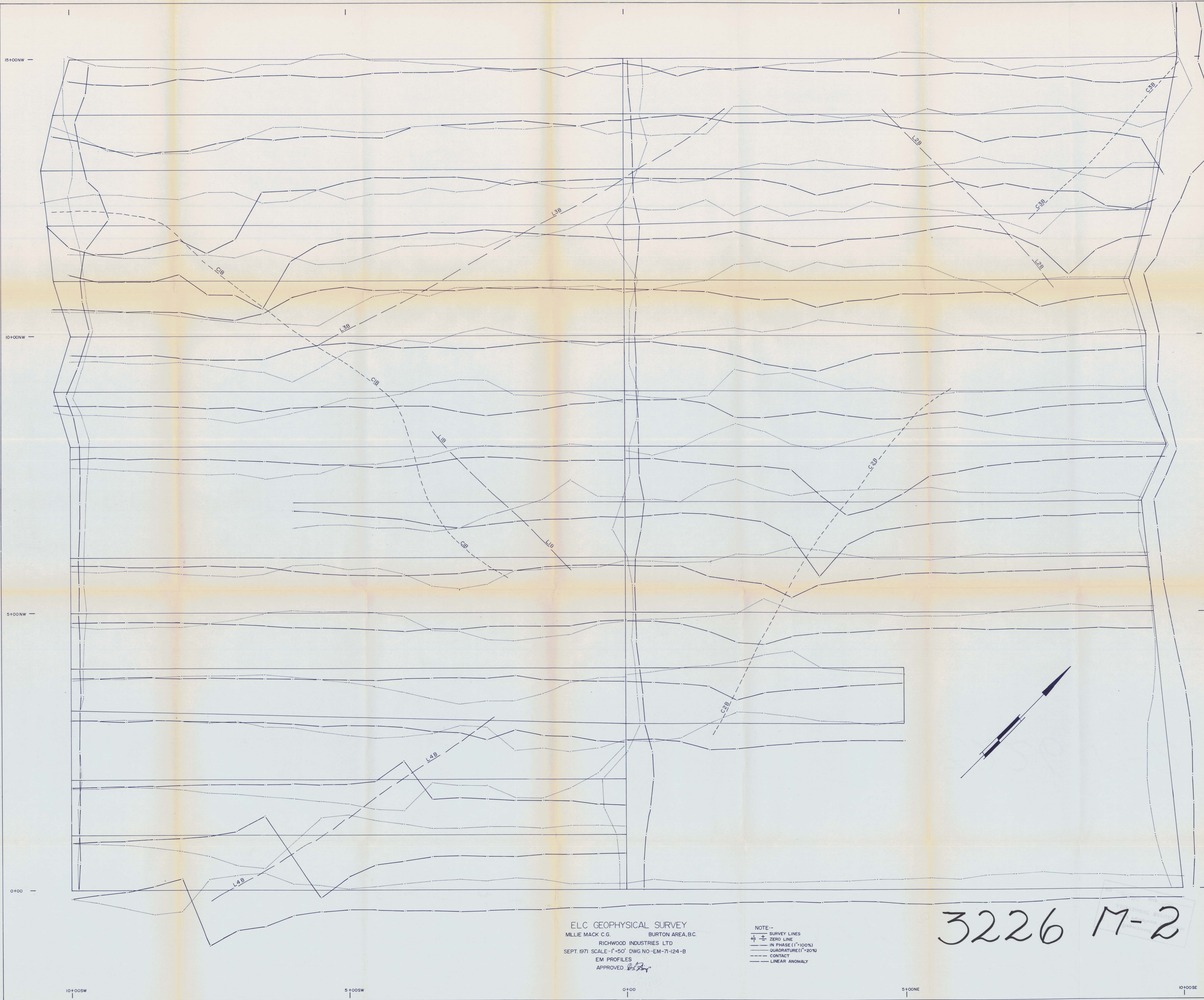
ELC GEOPHYSICAL SURVEY
 MILLIE MACK C.G. BURTON AREA, B.C.
 RICHWOOD INDUSTRIES LTD
 SEPT. 1971 SCALE - 1" = 50' DWG. NO - M-7H24-A
 MAG. PROFILES
 APPROVED *[Signature]*

NOTE:-
 - SURVEY LINES
 - ZERO LINE 55,700 GAMMAS (1" = 1000 GAMMAS) *55,700*
 - CONTACT
 - LINEAR ANOMALY

3226 M-1

15+00NW
10+00NW
5+00NW
0+00

10+00SW 5+00SW 0+00 5+00SE 10+00SE



ELC GEOPHYSICAL SURVEY
 MILLIE MACK C.G. BURTON AREA, B.C.
 RICHWOOD INDUSTRIES LTD
 SEPT. 1971 SCALE - 1" = 50' DWG NO - EM-71-124-B
 EM PROFILES
 APPROVED: *[Signature]*

NOTE -
 — SURVEY LINES
 + ZERO LINE
 — IN PHASE (1" = 100%)
 — QUADRATURE (1" = 20%)
 - - - CONTACT
 — LINEAR ANOMALY

3226 M-2

10+00SW

5+00SW

0+00

5+00SE

10+00SE

34+00NW

30+00NW

25+00NW



10+00SW

5+00SW

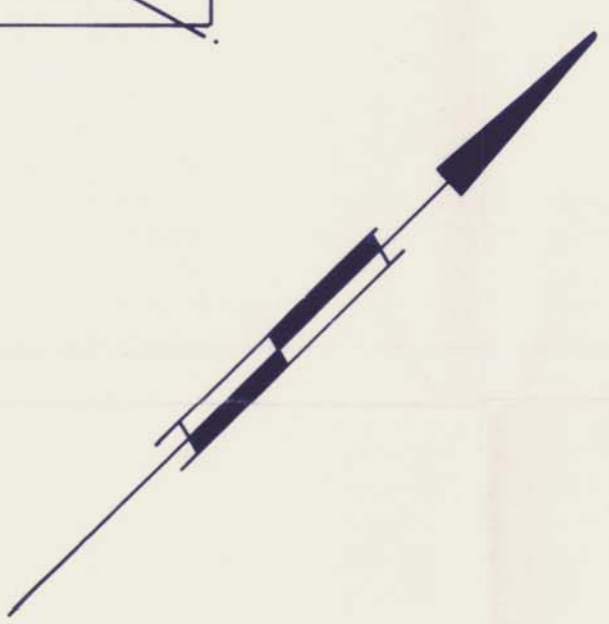
0+00

5+00NE

10+00NE

ELC GEOPHYSICAL SURVEY
 BLACK BEAR CG. BURTON AREA, BC.
 RICHWOOD INDUSTRIES LTD.
 SEPT. 1971 SCALE: 1"=50' DWG. NO. M-71-124-C
 MAG. PROFILES
 APPROVED: *[Signature]*

NOTE:-
 — SURVEY LINES
 — ZERO LINE = 55,700 GAMMAS (1" = 1000 GAMMAS) $\frac{1}{55,700}$
 - - - CONTACT
 - - - LINEAR ANOMALY

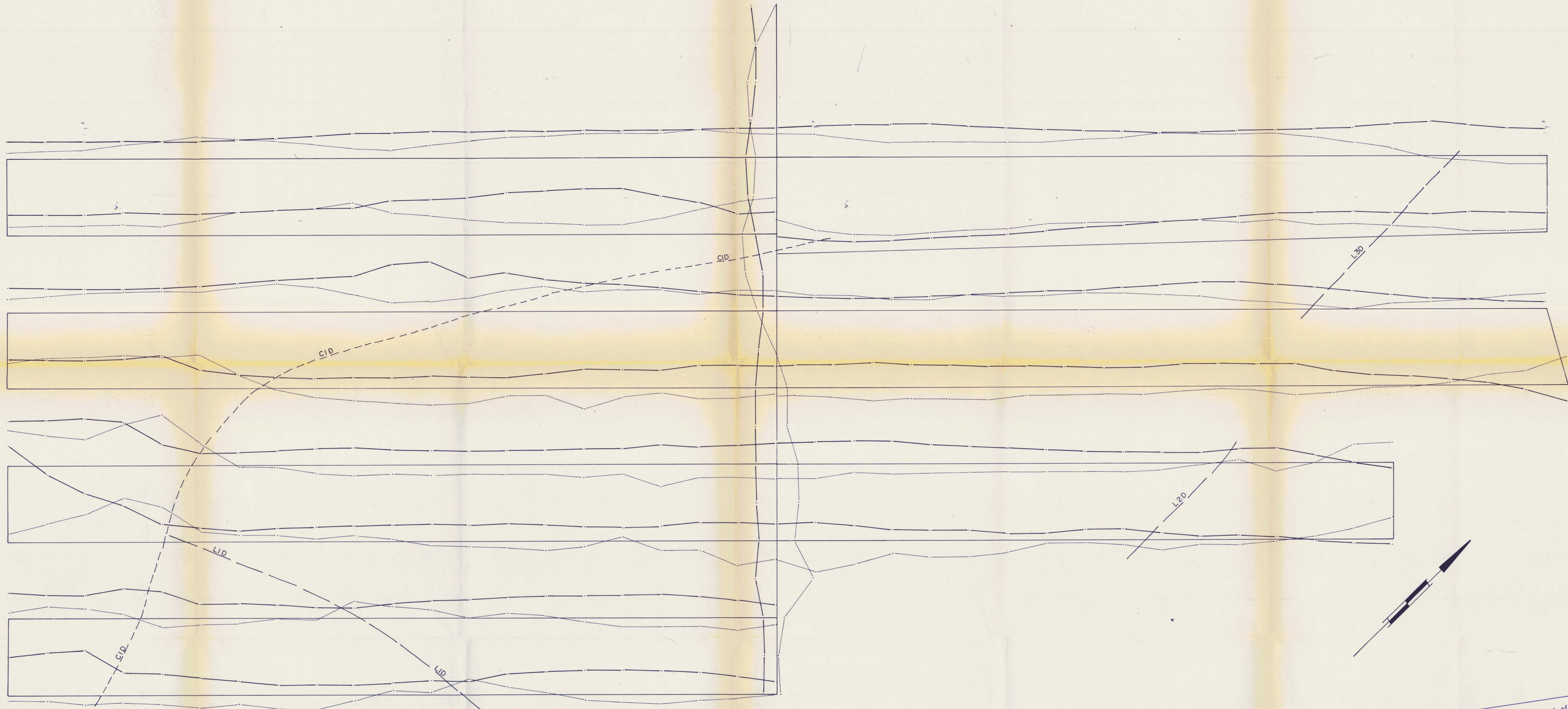


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 NO. 3226 MAP #3

34+00NW

30+00NW

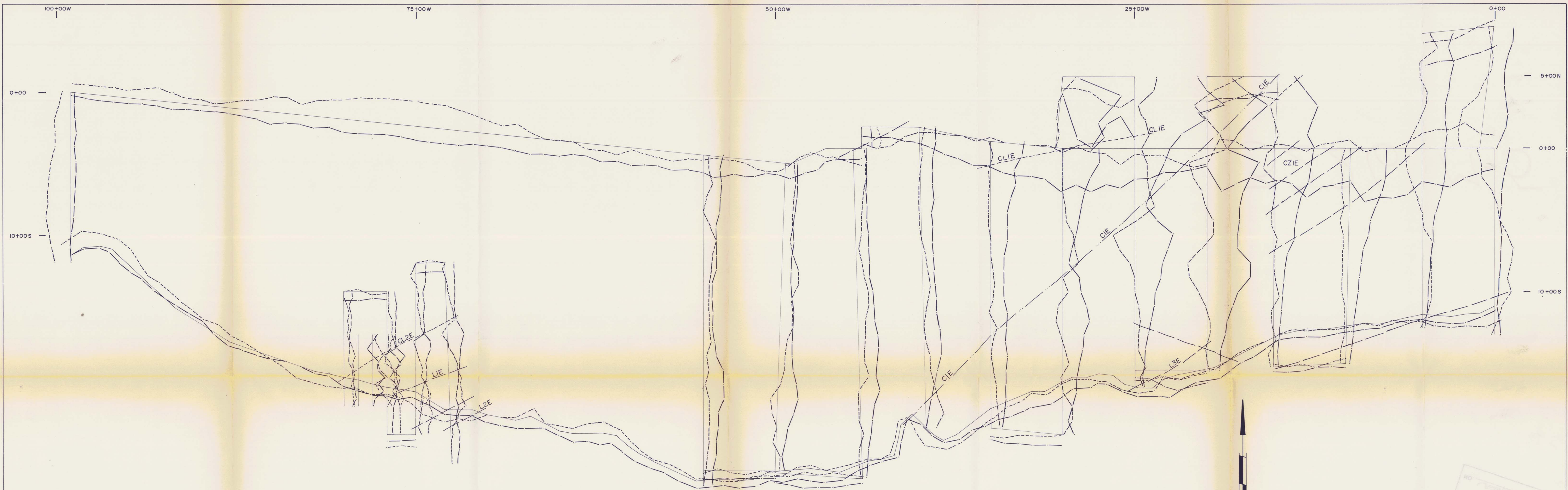
25+00NW



ELC GEOPHYSICAL SURVEY
 BLACK BEAR CG. BURTON AREA, B.C.
 RICHWOOD INDUSTRIES LTD.
 SEPT. 1971 SCALE 1"=50' DWG. NO. EM-71-124-D
 EM PROFILES
 APPROVED *[Signature]*

NOTE:-
 — SURVEY LINES
 +|- ZERO LINE
 - IN PHASE (1"=100%)
 - QUADRATURE (1"=20%)
 - - - CONTACT
 - - - LINEAR ANOMALY

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 NO. 3226 MAP #4



ELC GEOPHYSICAL SURVEY
 RMW CLAIMS BURTON AREA, B.C.
 RICHWOOD INDUSTRIES LTD.
 SEPT. 1971 SCALE: 1"=250' DWG. NO.-EM-71-124-E
 EM PROFILES
 APPROVED *[Signature]*

NOTE:-
 — SURVEY LINES
 + ZERO LINE
 - IN PHASE (1"=100%)
 - QUADRATURE (1"=20%)
 - LINEAR ANOMALY
 - CONDUCTIVE LINEAR ANOMALY
 - CONTACT

3226 M-5

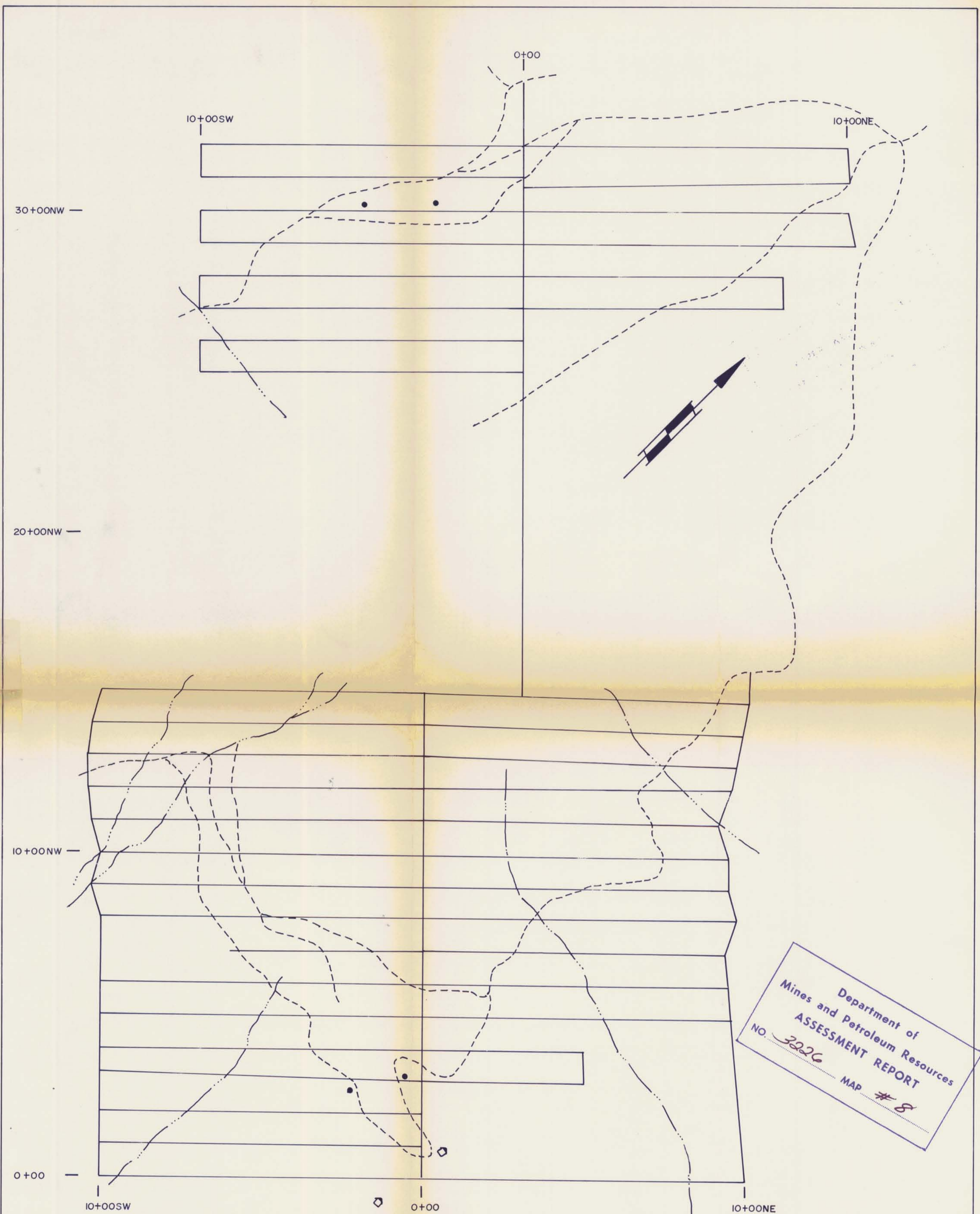
To be interpreted
 TFO929 THAM22322A
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Department of
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 ASSESSMENT REPORT
 NO. 3226 MAP # 7

ELC GEOPHYSICAL SURVEY
 RMW CLAIMS BURTON AREA, B.C.
 RICHWOOD INDUSTRIES LTD.
 SEPT. 1971 SCALE: 1" = 500' DWG. NO. EM-71-124-GC
 CLAIM LOCATIONS
 APPROVED *J. King*

NOTE:-
 — SURVEY LINE — CLAIM LINE
 ● CLAIM POST — CREEK
 - - - ROAD ⊠ BUILDING



ELC GEOPHYSICAL SURVEY
 BLACK BEAR CG. MILLIE MACK CG. BURTON, B.C.
 RICHWOOD INDUSTRIES LTD.
 SEPT. 1971 SCALE: 1" = 200' DWG. NO.: EM-M-71-124-GC
 GRID CONTROL
 APPROVED: *[Signature]*

NOTE:-
 — SURVEY LINE
 - - - ROAD — CREEK
 ◊ BUILDING ● ADIT OR SHAFT