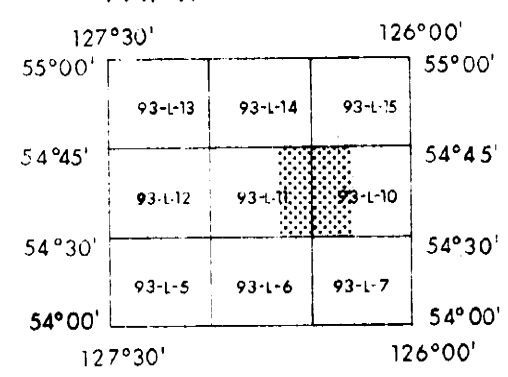
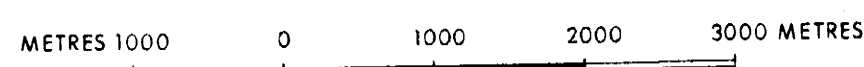


MAP INDEX



SCALE: 1:50,000



238

TK-Telkwa B2(a)A

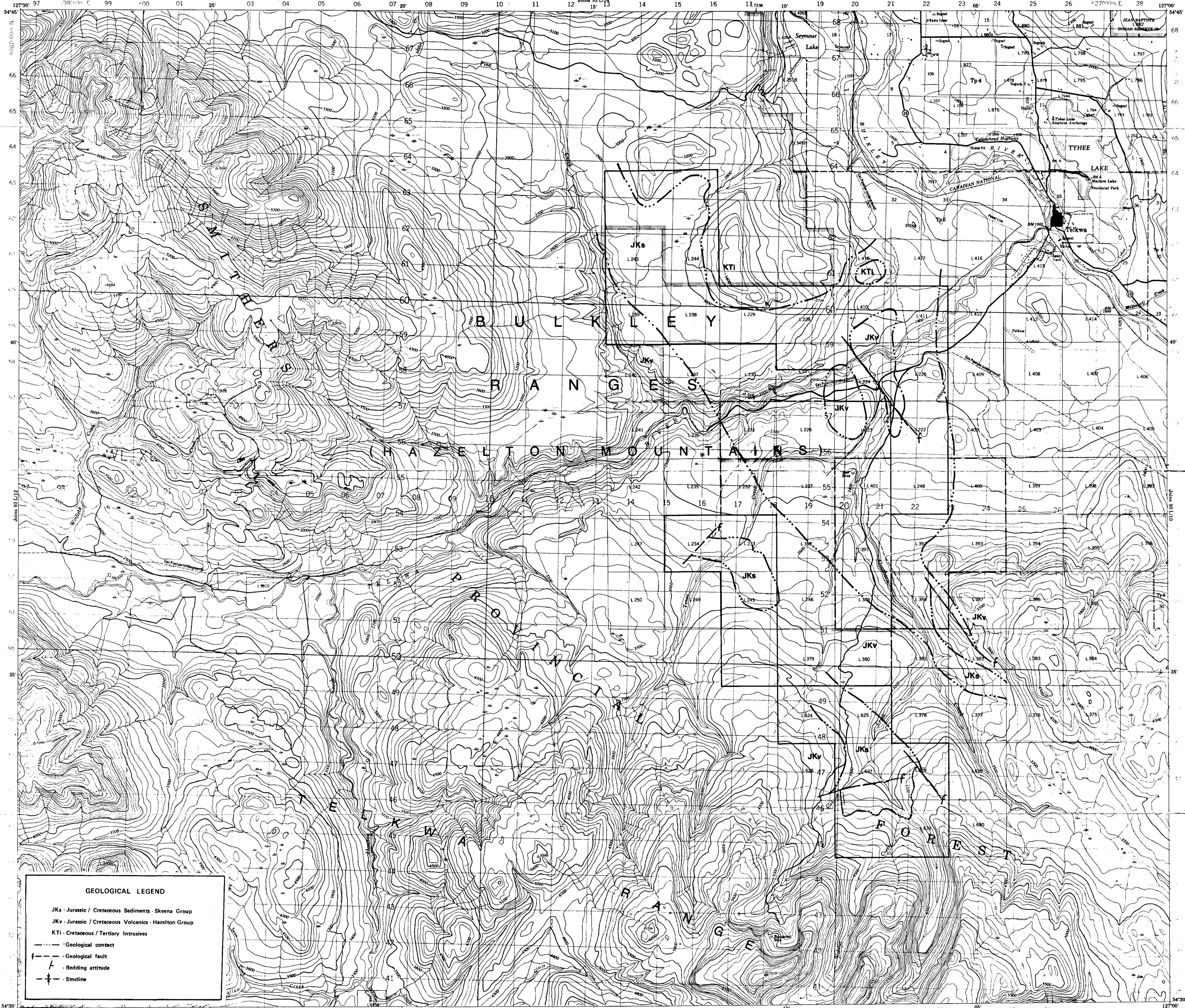
**Crows Nest Resources Limited**  
 EXPLORATION  
 WEST CENTRAL B.C.  
 TELKWA PROJECT

**ROAD ACCESS MAP AND  
 EXPLORATION DRILLING AREAS**

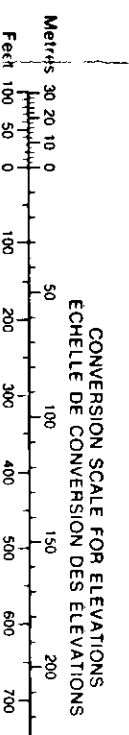
NTS - 93L10/11 UTM Zone 9  
 AUTHOR CNRL SCALE 1:50,000 ENCLOSURE No 1-2  
 DATE 82.12. REVISED DRAWING No TW5A1  
 To accompany

PIC



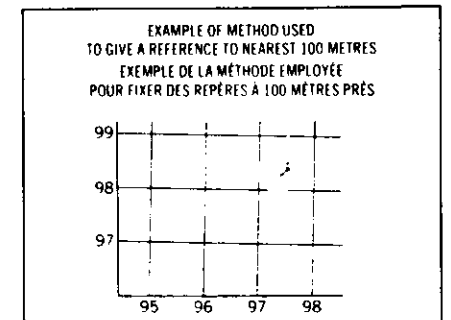
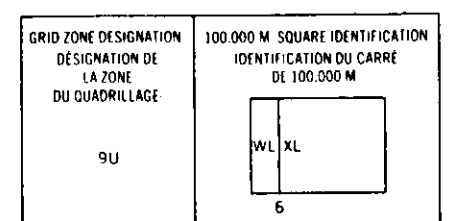


Military users refer to this map as: **SERIE A 721 SERIE**  
 Réference de cette carte pour usage militaire: **MAP 93 L/11 CARTE**  
**EDITION 2 MCE EDITION**



The diagram only to obtain numerical values  
 APPROXIMATE MEAN SEA LEVEL 1972  
 100 CENTRE OF MAP  
 Annual change decreasing 3.7  
 Note: le diagramme sert pour obtenir les valeurs numériques  
 DÉCLINAISON MOYENNE APPROXIMATIVE  
 AU CENTRE DE LA CARTE EN 1972  
 Variation annuelle décroissante 3.7

ONE THOUSAND METRE  
 UNIVERSAL TRANSVERSE MERCATOR GRID  
**ZONE 9**  
 QUADRILLAGE DE MILLE MÈTRES  
 TRANSVERSE UNIVERSSEL DE MÉRIDIEN



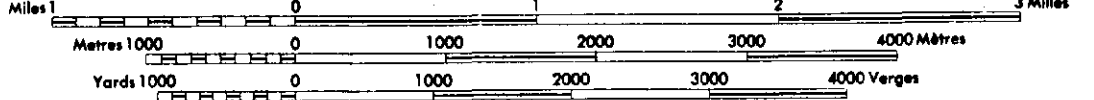
REFERENCE POINT: CHURCH, EGLISE (see above) (voir ci-dessus)  
 POINT DE RÉFÉRENCE  
 EASTING: Read number on grid line immediately to left of point.  
 LONGITUDE EST: Note the number on the line of quadrillage immediately to the left of the point.  
 Estimate tenths of a square from this line eastward to point.  
 Estimer le nombre de dixièmes de carré entre cette ligne et le repère en direction est.  
 NORTHING: Read number on grid line immediately above point.  
 COORDONNÉES NORD: Note le nombre sur la ligne de quadrillage immédiatement en dessus du repère.  
 Estimate tenths of a square from this line northward to point.  
 Estimer le nombre de dixièmes de carré entre cette ligne et le repère en direction nord.  
 GRID REFERENCE: 975084  
 RÉFÉRENCE AU QUADRILLAGE: 975084  
 Note: 1:50,000 scale = 1:50,000 metres (about 1:164,000 feet) at sea level.

**GEOLOGICAL LEGEND**

JKs - Jurassic / Cretaceous Sediments - Skeena Group  
 JKv - Jurassic / Cretaceous Volcanics - Hazelton Group  
 KTI - Cretaceous / Tertiary Intrusives

--- Geological contact  
 - - - Geological fault  
 / Bedding attitude  
 † St.oclme

**TELKWA**  
 COAST LAND DISTRICT RANGE 5  
 BRITISH COLUMBIA  
 Scale 1:50,000 Échelle



This Professional Map is equivalent to a standard map in accuracy of content.  
 Certains renseignements sur cette carte ne sont pas encore officiels. La Direction des cartes et du cartage géométrique n'est pas responsable de ces renseignements.  
 Some names on this map are not official. Corrections or additions are invited by the Survey and Mapping Branch.  
 Certains noms inscrits sur cette carte ne sont pas encore officiels. La Direction des cartes et du cartage géométrique n'est pas responsable de ces renseignements.  
 Some names on this map are not official. Corrections or additions are invited by the Survey and Mapping Branch.  
 Certains renseignements sur cette carte ne sont pas encore officiels. La Direction des cartes et du cartage géométrique n'est pas responsable de ces renseignements.

Projet de carte mis à jour par la DIRECTION DES LEVÉS ET DE LA CARTOGRAPHIE, MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES, à l'aide de données graphiques actualisées prises en 1984. Variation des courbes en 1971. Imprimé en 1975.  
 Ces cartes sont en vente au Bureau des Cartes du Canada, Ministère de l'Énergie, des Mines et des Ressources, Ottawa, ou chez le marchand de livres.  
 © Canada, 1975. Tous droits réservés.

**238** TK-Talkwa 82(2)A

**Crows Nest Resources Limited**  
 EXPLORATION

WEST CENTRAL B.C.  
 TELKWA PROJECT

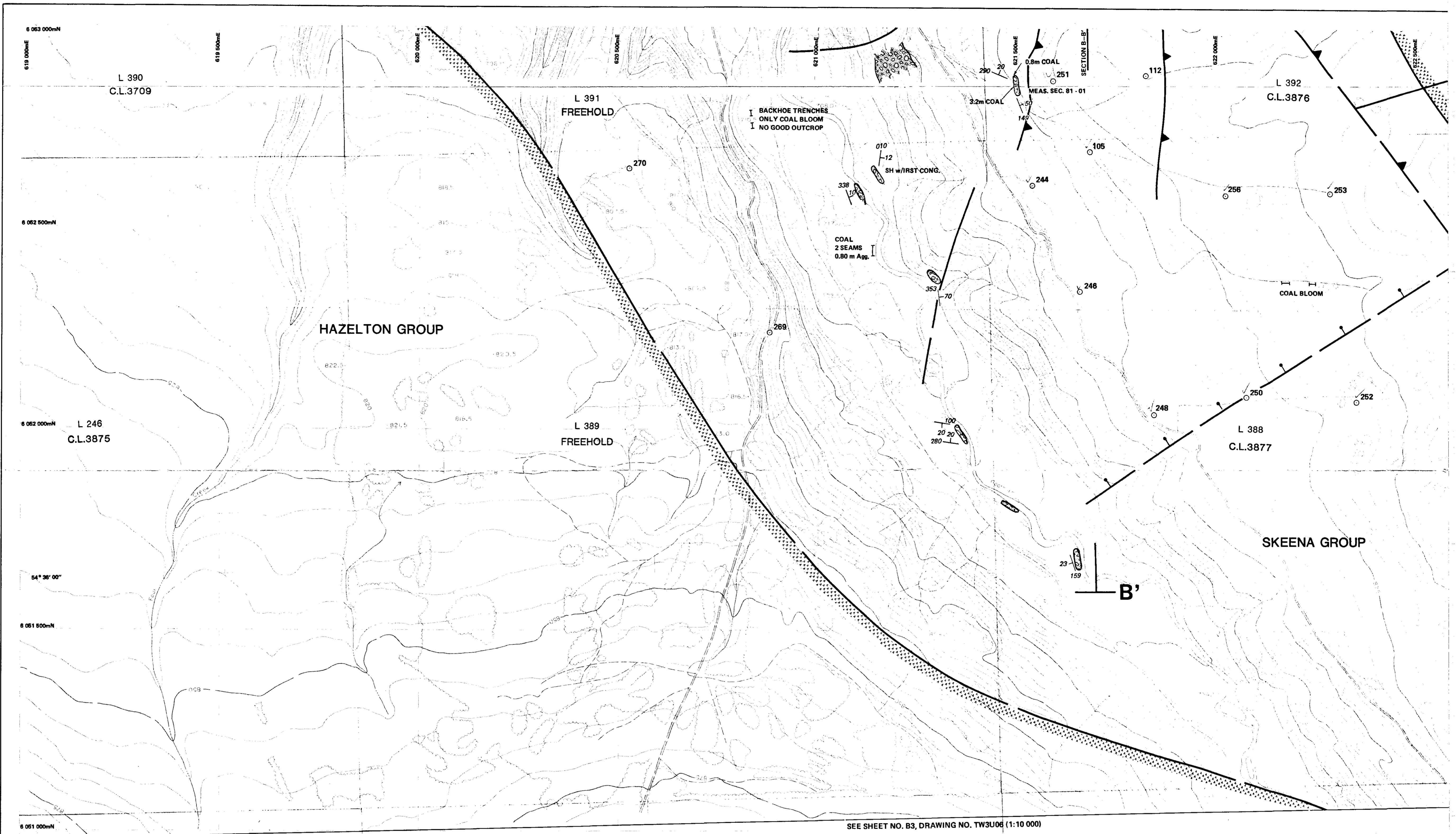
**GEOLOGY COMPILATION MAP**

Author: D. HANDY SCALE: 1:50,000 ENCLOSURE No: 1-3  
 DATE: DEC. 15, 1981 REVISED: DRAWING No: HK-100  
 To Accompany: 1982 GEOLOGICAL REPORT

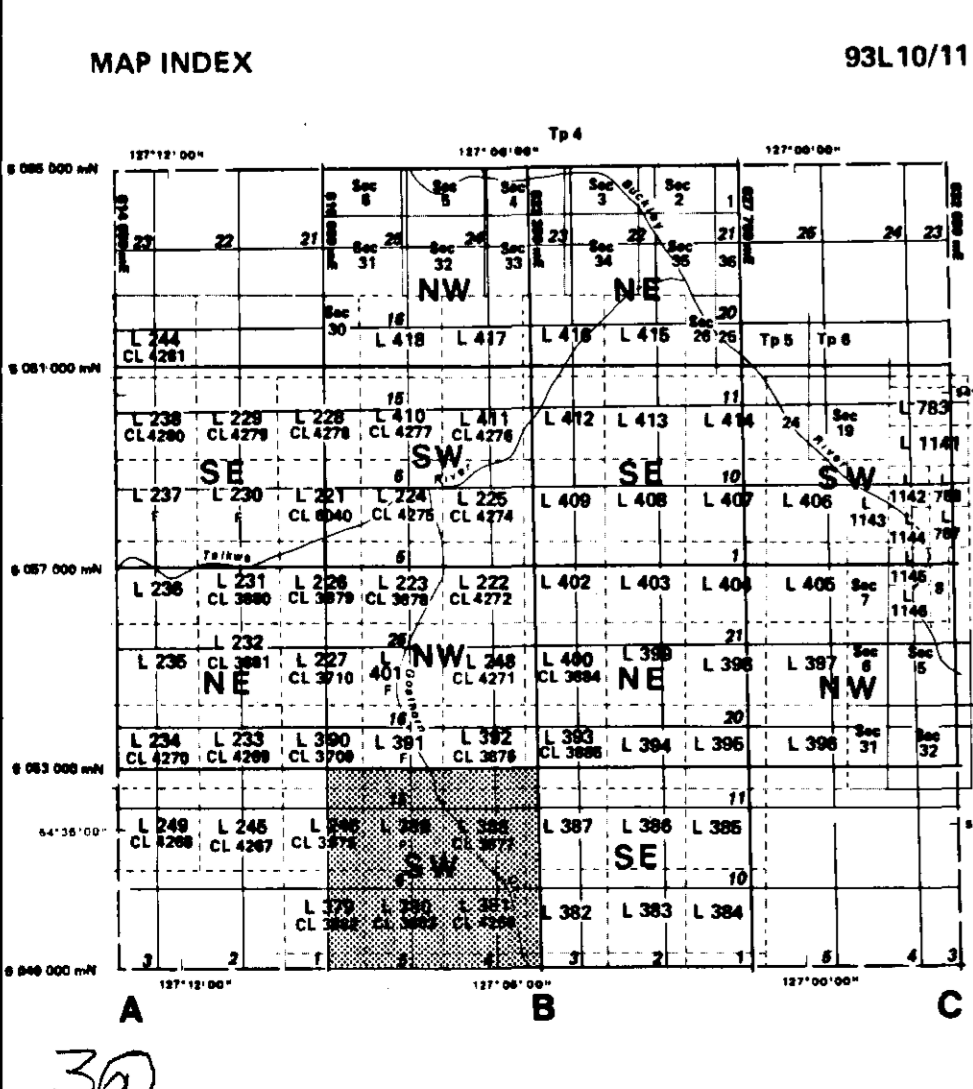
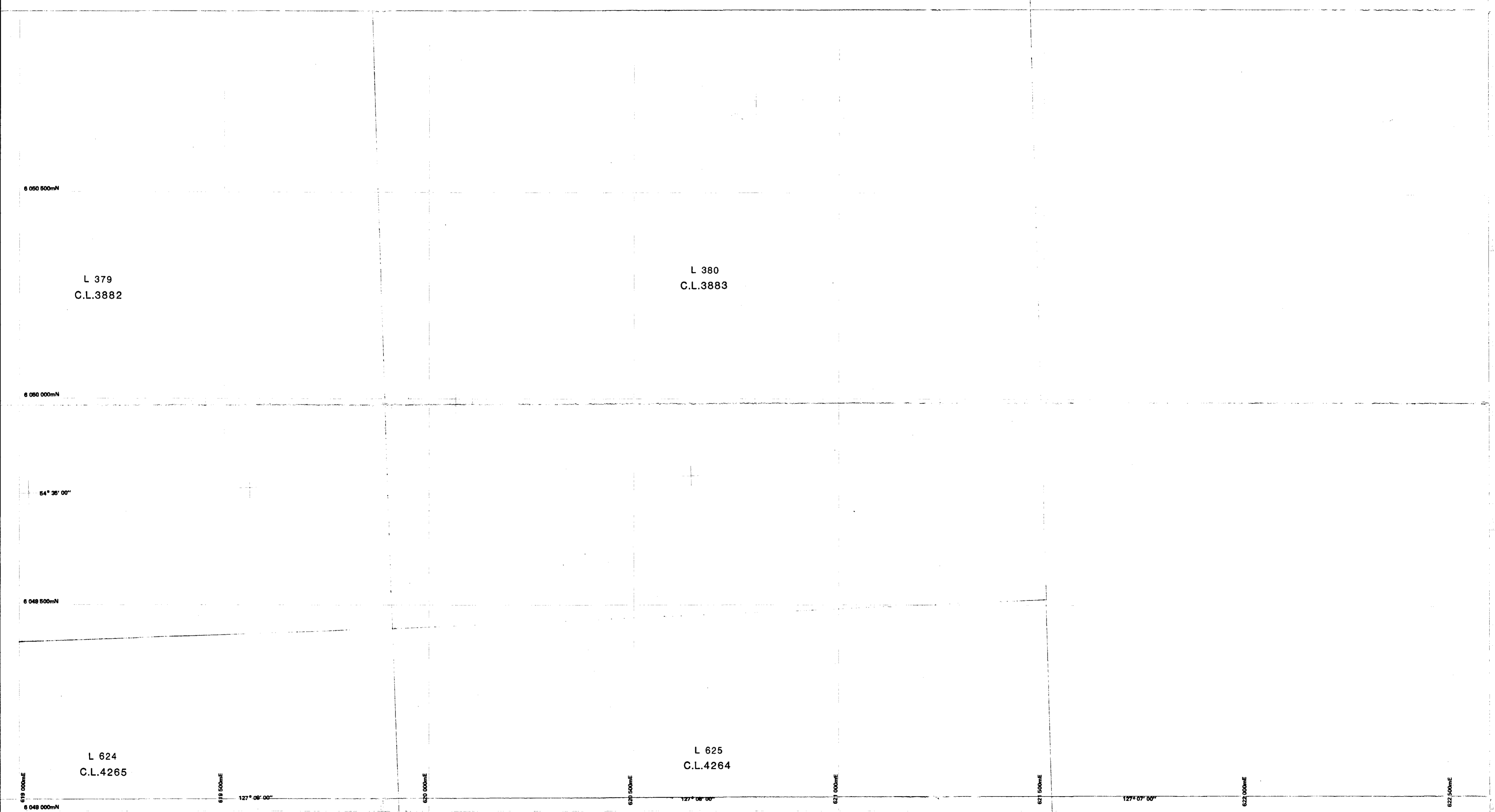
First edition map prepared by the SURVEYS AND MAPPING BRANCH, DEPARTMENT OF ENERGY, MINES AND RESOURCES, from photogrammetric data in 1958. Culture sheet 1971. Printed 1975.  
 Copies may be obtained from the Canada Map Office, Department of Energy, Mines and Resources, Ottawa, or your nearest map dealer.  
 © Canada Copyright Reserved 1975

Roads: hard surface, all weather; hard surface, all weather; loose or stabilized surface, all weather; loose surface, dry weather and uncultivated streets; cart track; trail or portage.  
 Routes: paved, toute saison; pavée, toute saison; de gravier aggloméré, toute saison; de gravier, temps sec et ruts hors classe; de terre; sentier ou portage.





SEE SHEET NO. B3, DRAWING NO. TW3U06 (1:10 000)



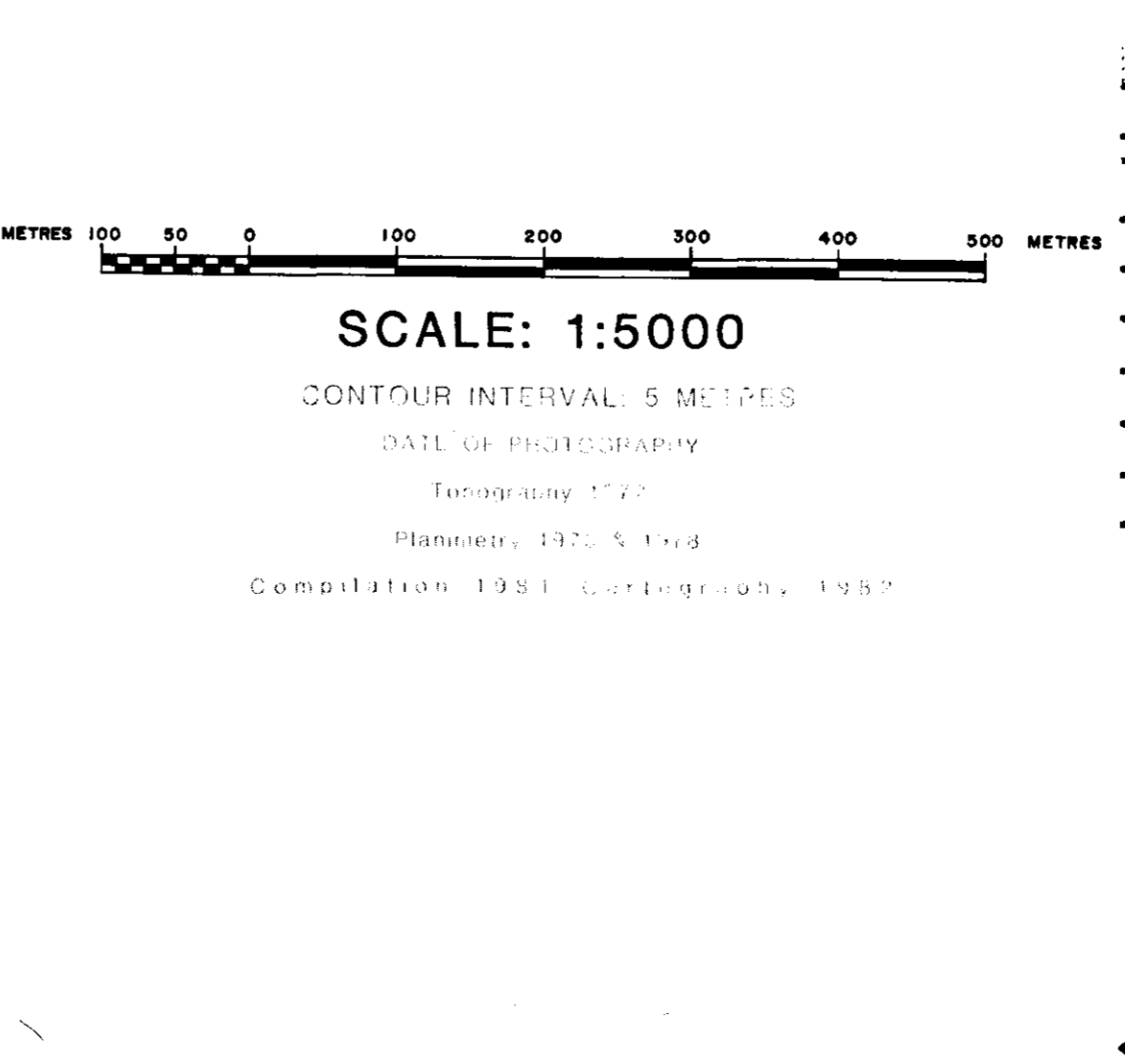
**LEGEND**

MAIN ROAD	RIVER
SECONDARY ROAD	INTERMITTENT STREAM
BRIDGE, CULVERT	LAKE
TRACK or TRAIL	SWAMP
BUILDING	SAND
POLE	SLIDE
FENCE	TREES
LOT LINE	DRILL HOLE
CUT LINE	HORIZONTAL CONTROL
POLE HEIGHT	VERTICAL CONTROL
CENTRIS	HORIZONTAL VERTICAL CONTROL
DEPRESSION	NOTE: LOT LINES APPROXIMATE ONLY

MAP PROJECTION: UNIVERSAL TRANSVERSE MERCATOR  
CENTRAL MERIDIAN REFERENCE 129° W UTM Zone 9

**3**  
SURVEY NOTE:  
Coordinates are on U.T.M. Grid (Zone 9) and are derived from Government control stations Blitzen, Padre, and Tack. Elevations are on Randatic Datum and are derived from B.M. 910.519. Ssd 922 metres via resectional trigonometric levelling.

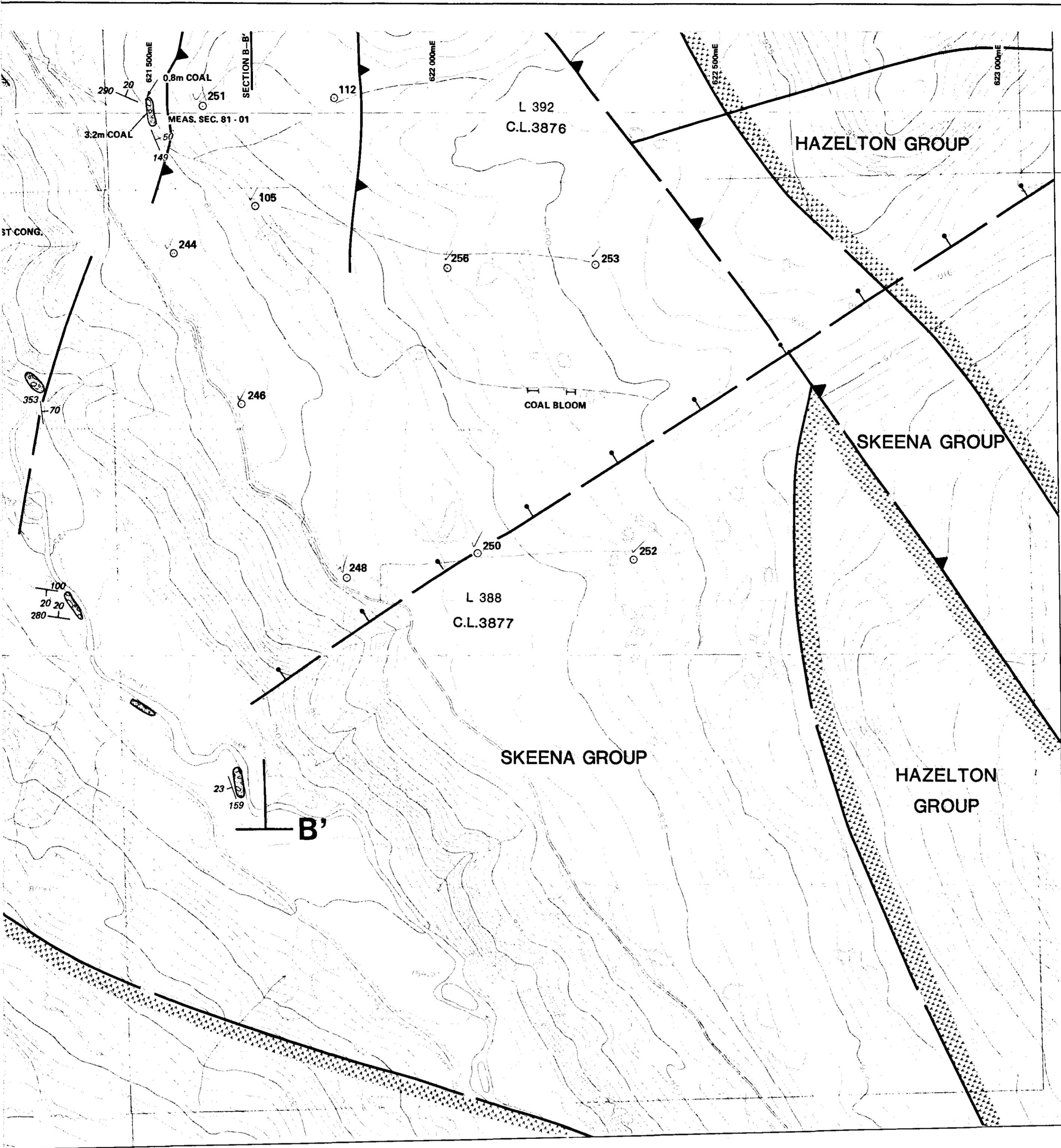
PREPARED BY: Aero Geometrics Ltd.



**LEGEND**

	HAZELTON GROUP (VOLCANICS) - (unconformable contacts) - Jurassic
	SKEENA GROUP (SEDIMENTS) - (unconformable contacts) - Lower Cretaceous
	TERTIARY INTRUSIVE - (unconformable contacts)
	REVERSE FAULT (KNOWN) - (triangle indicates upthrown side)
	REVERSE FAULT (APPROXIMATE) - (triangle indicates upthrown side)
	FAULT (DEFINED) - (type unknown)
	FAULT (UNDEFINED) - (type unknown)
	NORMAL FAULT (KNOWN) - (sad poles indicate downthrown side)
	NORMAL FAULT (APPROXIMATE) - (sad poles indicate downthrown side)
	ALIGNMENT OF UNKNOWN GEOLOGICAL SIGNIFICANCE (air photo interpreted)
	BEDDING ATTITUDE
	OUTCROP
	B.V.C. SURFACE MINE AREA AND BOUNDARIES OF PREVIOUS UNDERGROUND MINES
	DRILL HOLE (Crows Nest Resources Ltd.)
	BULKLEY VALLEY COLLIERIES LTD. PREVIOUS UNDERGROUND MINE
	COAL LICENCE BOUNDARY (approx)
	TRENCH
	PLACER EXPLN DRILL HOLE - 1970
	SYNCLINE (arrow indicates direction of plunge)

NTS:93L11  
AUTHOR: D. HANE  
DATE: 83-01  
To Accompany



SEE SHEET NO. B3, DRAWING NO. TW3U06 (1:10 000)

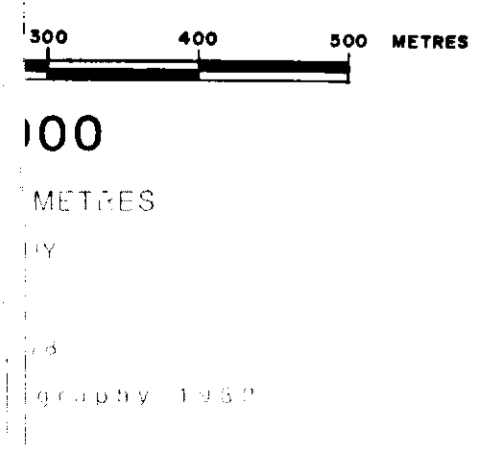
3, DRAWING NO. TW3U06 (1:10 000)

6 053 000mN  
6 052 500mN  
6 052 000mN  
6 051 500mN  
6 051 000mN

621 500mE 127° 07' 00" 622 000mE 622 500mE 127° 06' 00" 623 000mE  
6 048 500mN  
6 048 000mN  
6 048 500mN  
6 048 000mN

**LEGEND**

- HAZELTON GROUP (VOLCANICS) - (unconformable contacts) - Jurassic
- SKEENA GROUP (SEDIMENTS) - (unconformable contacts) - Lower Cretaceous
- TERTIARY INTRUSIVE - (unconformable contacts)
- REVERSE FAULT (KNOWN) - (triangle indicates upthrown side)
- REVERSE FAULT (APPROXIMATE) - (triangle indicates upthrown side)
- FAULT (DEFINED) - (type unknown)
- FAULT (UNDEFINED) - (type unknown)
- NORMAL FAULT (KNOWN) - (triangle indicates downthrown side)
- NORMAL FAULT (APPROXIMATE) - (triangle indicates downthrown side)
- ALIGNMENT OF UNKNOWN GEOLOGICAL SIGNIFICANCE (air photo interpreted)
- BEDDING ATTITUDE
- OUTCROP
- B.V.C. SURFACE MINE AREA AND BOUNDARIES OF PREVIOUS UNDERGROUND MINES
- DRILL HOLE (Crows Nest Resources Ltd.)
- B.V.C. BULKLEY VALLEY COLLIERIES LTD. PREVIOUS UNDERGROUND MINE
- COAL LICENCE BOUNDARY (approx)
- TRENCH
- PLACER EXPLN' DRILL HOLE - 1970
- SYNCLINE (arrow indicates direction of plunge)



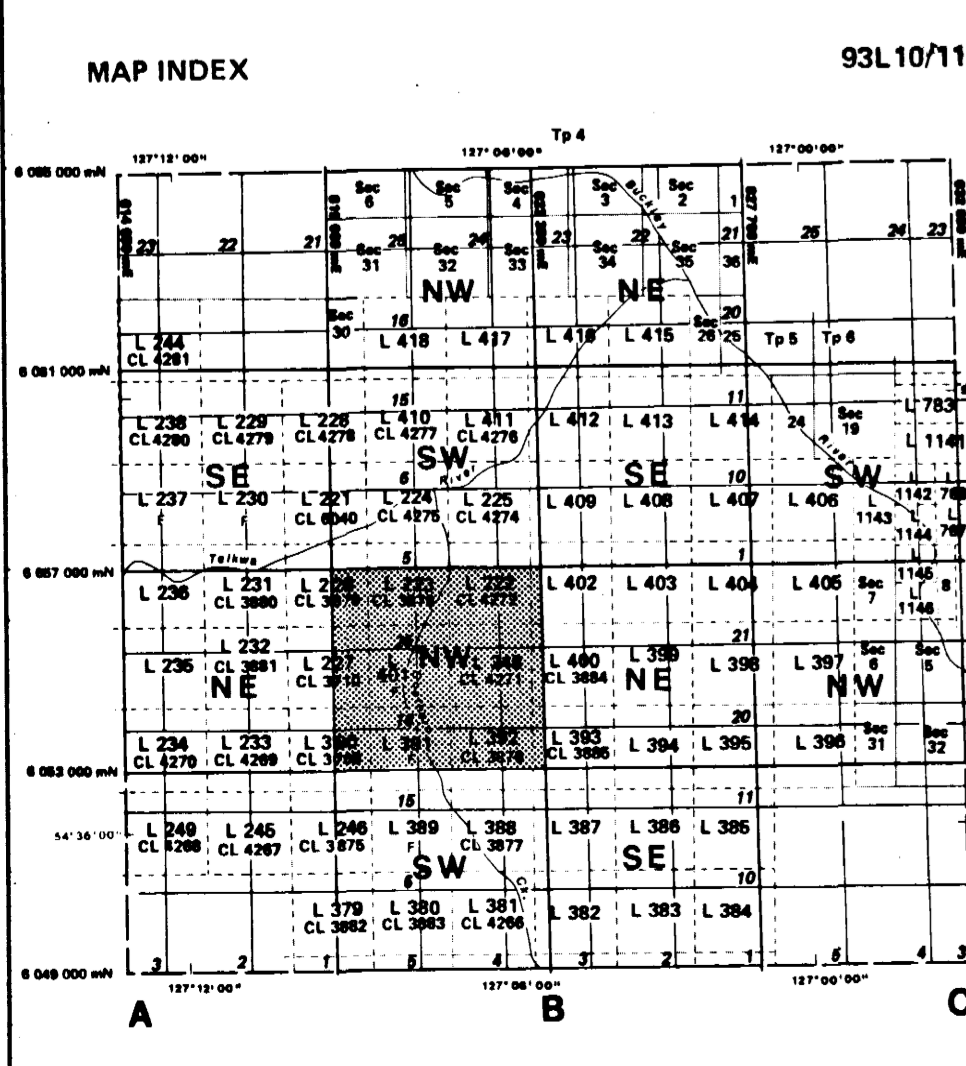
**238**

Tk Telkwa 82(2)A

<b>Crows Nest Resources Limited</b> EXPLORATION		
TELKWA PROJECT SMITHERS AREA WEST CENTRAL B.C.		
<b>GEOLOGICAL MAP</b> <small>(GOATAGEN)</small>		
NTS:93L11		UTM ZONE 9
AUTHOR: D.HANDY/S.CAMERON	SCALE: 1:5000	DRAWN BY:
DATE: 83-01	REVISED:	DRAWING No: TW2U04
To Accompany 1982 GEOLOGICAL REPORT		

③b





**LEGEND**

MAIN ROAD  
SECONDARY ROAD  
BRIDGE, CULVERT  
TRACK or TRAIL  
BUILDING  
POLE  
FENCE  
TREE  
DRILL HOLE  
HORIZONTAL CONTROL  
VERTICAL CONTROL  
CONTOUR  
DEPRESSION

HAZELTON GROUP (VOLCANICS) - (unconformable contacts) - Jurassic  
SKEENA GROUP (SEDIMENTS) - (unconformable contacts) - Lower Cretaceous  
TERTIARY INTRUSIVE - (unconformable contacts)  
REVERSE FAULT (KNOWN) - (triangle indicates upthrown side)  
REVERSE FAULT (APPROXIMATE) - (triangle indicates upthrown side)  
FAULT (UNDEFINED) - (type unknown)  
NORMAL FAULT (KNOWN) - (rod poles indicate downthrown side)  
NORMAL FAULT (APPROXIMATE) - (rod poles indicate downthrown side)  
ALIGNMENT OF UNKNOWN GEOLOGICAL SIGNIFICANCE (air photo interpreted)  
BEDDING ATTITUDE  
OUTCROP  
B.V.C. SURFACE MINE AREA AND BOUNDARIES OF PREVIOUS UNDERGROUND MINES  
DRILL HOLE (Crows Nest Resources Ltd.)  
BULKLEY VALLEY COLLIERIES LTD.  
PREVIOUS UNDERGROUND MINE  
COAL LICENCE BOUNDARY (approx)  
TRENCH  
PLACER EXPLN' DRILL HOLE - 1970  
SYNCLINE (arrow indicates direction of plunge)

MAP PROJECTION: UNIVERSAL TRANSVERSE MERCATOR  
CENTRAL MERIDIAN REFERENCE 129° W. UTM Zone 9

**3** SURVEY NOTE:  
Coordinates are on U.T.M. Grid (Zone 9) and are derived from Government control stations Blitzen, Poite, and Toka. Elevations are on Geodetic Datum and are derived from 1927-1958, 1959 - 538 922 metres via reciprocal trigonometric levelling.

PREPARED BY: Aero Geometrics Ltd.

SCALE: 1:5000  
CONTOUR INTERVAL: 5 METRES  
DATE OF PHOTOGRAPHS: February 1977  
Photometry 1975 & 1978  
Geobotany 1971, Cartography 1982

LEGEND

HAZELTON GROUP (VOLCANICS) - (unconformable contacts) - Jurassic  
SKEENA GROUP (SEDIMENTS) - (unconformable contacts) - Lower Cretaceous  
TERTIARY INTRUSIVE - (unconformable contacts)  
REVERSE FAULT (KNOWN) - (triangle indicates upthrown side)  
REVERSE FAULT (APPROXIMATE) - (triangle indicates upthrown side)  
FAULT (UNDEFINED) - (type unknown)  
NORMAL FAULT (KNOWN) - (rod poles indicate downthrown side)  
NORMAL FAULT (APPROXIMATE) - (rod poles indicate downthrown side)  
ALIGNMENT OF UNKNOWN GEOLOGICAL SIGNIFICANCE (air photo interpreted)  
BEDDING ATTITUDE  
OUTCROP  
B.V.C. SURFACE MINE AREA AND BOUNDARIES OF PREVIOUS UNDERGROUND MINES  
DRILL HOLE (Crows Nest Resources Ltd.)  
BULKLEY VALLEY COLLIERIES LTD.  
PREVIOUS UNDERGROUND MINE  
COAL LICENCE BOUNDARY (approx)  
TRENCH  
PLACER EXPLN' DRILL HOLE - 1970  
SYNCLINE (arrow indicates direction of plunge)

**LEGEND**

HAZELTON GROUP (VOLCANICS) - (unconformable contacts) - Jurassic  
SKEENA GROUP (SEDIMENTS) - (unconformable contacts) - Lower Cretaceous  
TERTIARY INTRUSIVE - (unconformable contacts)  
REVERSE FAULT (KNOWN) - (triangle indicates upthrown side)  
REVERSE FAULT (APPROXIMATE) - (triangle indicates upthrown side)  
FAULT (UNDEFINED) - (type unknown)  
NORMAL FAULT (KNOWN) - (rod poles indicate downthrown side)  
NORMAL FAULT (APPROXIMATE) - (rod poles indicate downthrown side)  
ALIGNMENT OF UNKNOWN GEOLOGICAL SIGNIFICANCE (air photo interpreted)  
BEDDING ATTITUDE  
OUTCROP  
B.V.C. SURFACE MINE AREA AND BOUNDARIES OF PREVIOUS UNDERGROUND MINES  
DRILL HOLE (Crows Nest Resources Ltd.)  
BULKLEY VALLEY COLLIERIES LTD.  
PREVIOUS UNDERGROUND MINE  
COAL LICENCE BOUNDARY (approx)  
TRENCH  
PLACER EXPLN' DRILL HOLE - 1970  
SYNCLINE (arrow indicates direction of plunge)

238

Tk. Telkwa 83(10)

**Crows Nest Resources Limited**  
EXPLORATION

TELKWA PROJECT  
SMITHERS AREA  
WEST CENTRAL B.C.

GEOLOGICAL MAP

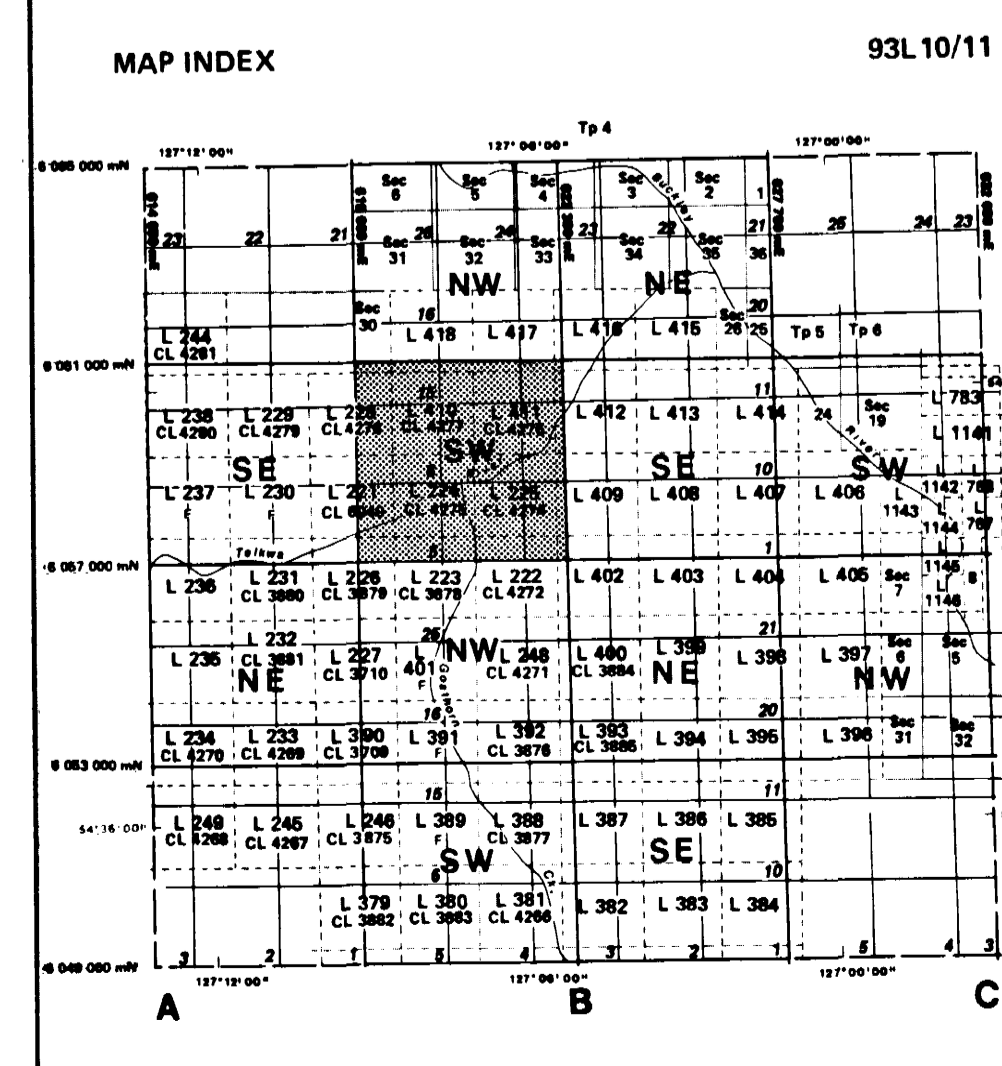
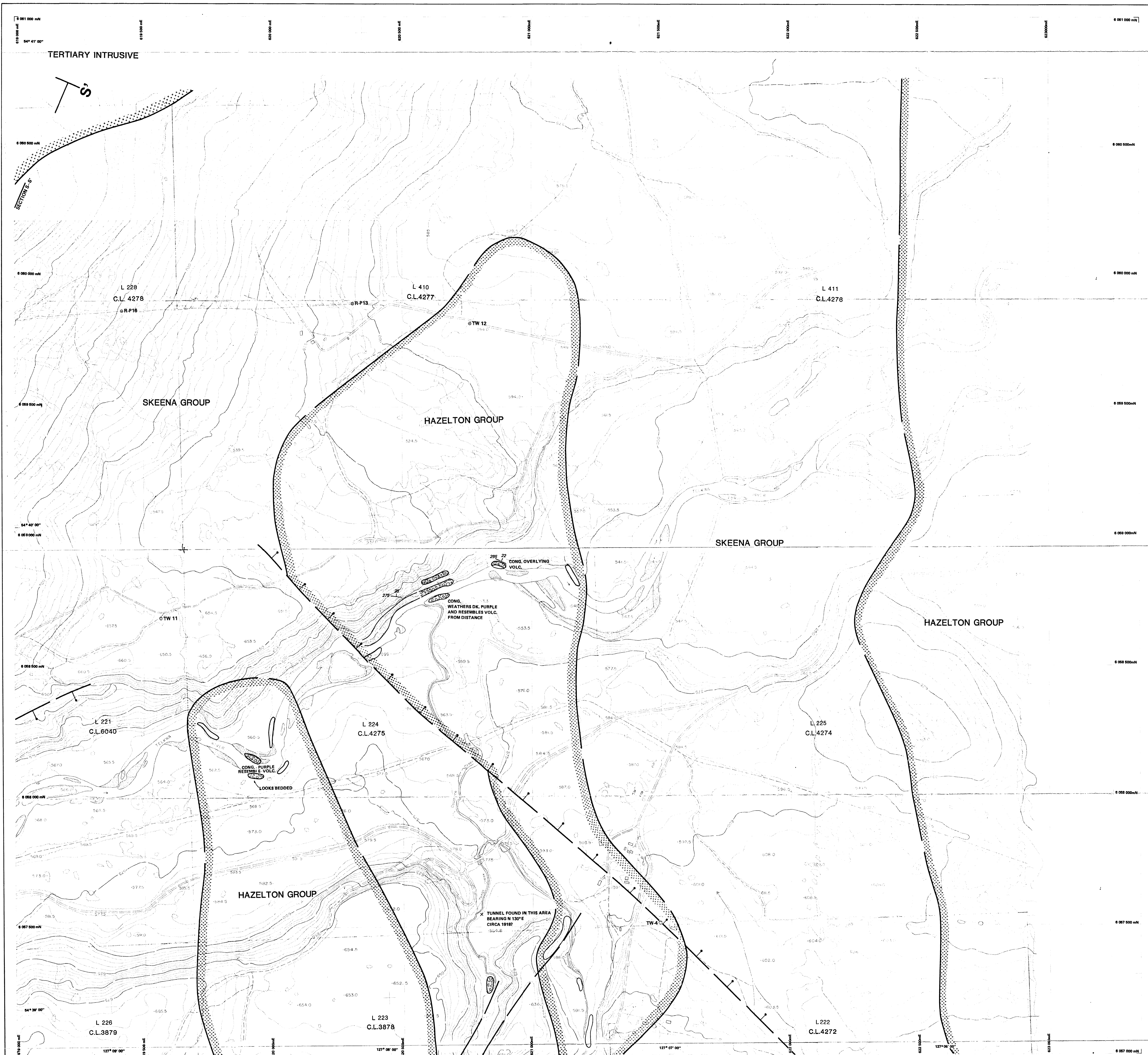
Geotitles

UTM ZONE 9

NTS:93L/11 AUTHOR: D. HANDY/SCAMERON DATE: 83-01 To Accompany 1982 GEOLOGICAL REPORT	SCALE: 1:5000 REVISIONS: DRAWN BY: DRAWING No: TW2U05
---	--

SEE SHEET NO. 83, DRAWING NO. TW3U06 (1:10 000)





**LEGEND**

MAIN ROAD  
SECONDARY ROAD  
BRIDGE, CULVERT  
TRACK OR TRAIL  
RAILING  
POLY FENCE  
LOT LINE  
CUT LINE  
SPOT HEIGHT  
CONTOURS  
DEPRESSION

RIVER  
INTERMITTENT STREAM  
LAKE  
SWAMP  
SAND  
SLOPE  
DRILL HOLE  
HORIZONTAL CONTROL  
VERTICAL CONTROL  
HORIZONTAL, VERTICAL CONTROL

NOTE: LOT LINES APPROXIMATE ONLY

MAP PROJECTION: UNIVERSAL TRANSVERSE MERCATOR  
CENTRAL MERIDIAN REFERENCE 129° W. UTM Zone 9

**SURVEY NOTE:**  
Coordinates are on U.T.M. Grid (Zone 9) and are derived from Government control stations Blitzen, Paddy, and Tack. Elevations are on Geodetic Datum and are derived from BM 7943369 - 528.922 metres via reciprocal topographic levelling.

PREPARED BY: Aero Geometrics Ltd.

SCALE: 1:5000  
CONTOUR INTERVAL: 5 METRES  
DATE OF PHOTOGRAPHY: 1977  
Photograph 1975 & 1974  
Compilation 1981 Cartograph: 1981

**LEGEND**

HAZELTON GROUP (VOLCANICS) - (unconformable contacts) - Jurassic  
SKEENA GROUP (SEDIMENTS) - (unconformable contacts) - Lower Cretaceous  
TERTIARY INTRUSIVE - (unconformable contacts)  
REVERSE FAULT (KNOWN) - (triangle indicates upthrown side)  
REVERSE FAULT (APPROXIMATE) - (triangle indicates upthrown side)  
FAULT (DEFINED) - (type unknown)  
FAULT (UNDEFINED) - (type unknown)  
NORMAL FAULT (KNOWN) - (rod poles indicate downthrown side)  
NORMAL FAULT (APPROXIMATE) - (rod poles indicate downthrown side)  
ALIGNMENT OF UNKNOWN GEOLOGICAL SIGNIFICANCE (air photo interpreted)  
BEDDING ATTITUDE  
OUTCROP  
B.V.C. SURFACE MINE AREA AND BOUNDARIES OF PREVIOUS UNDERGROUND MINES  
DRILL HOLE (Crows Nest Resources Ltd.)  
BULKLEY VALLEY COLLIERIES LTD.  
PREVIOUS UNDERGROUND MINE  
COAL LICENCE BOUNDARY (approx)  
TRENCH  
PLACER EXPLN' DRILL HOLE - 1970  
SYNCLINE (arrow indicates direction of plunge)

238

Telkwa, B.C.

**Crows Nest Resources Limited**  
EXPLORATION

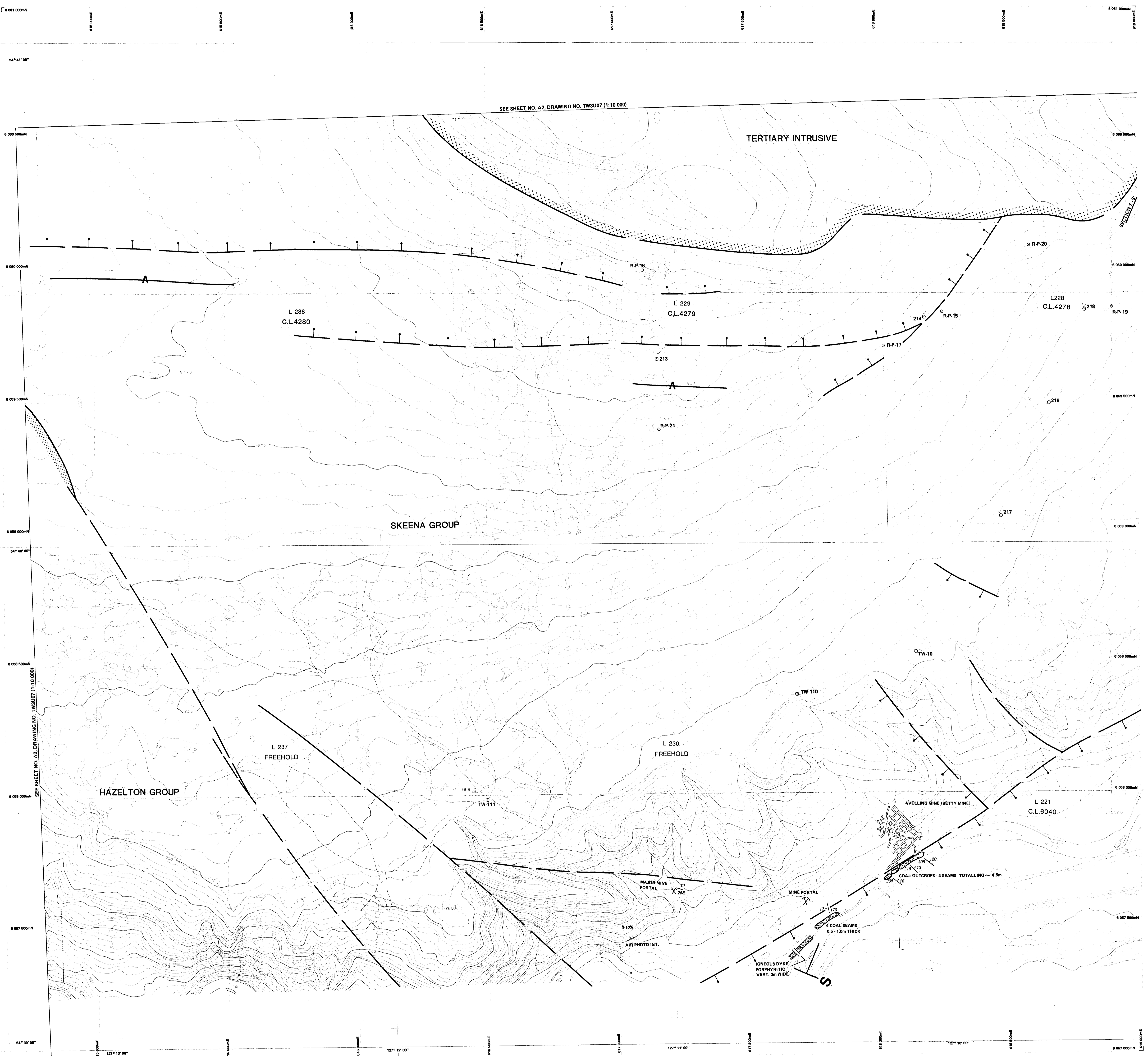
TELKWA PROJECT  
SMITHERS AREA  
WEST CENTRAL B.C.

GEOLOGICAL MAP

UTM ZONE 9

NTS: 93L/11		SCALE: 1:5000	
AUTHOR: D. HANDY/SCAMERON		DRAWN BY:	
DATE: 83-01		REVISED:	
To Accompany 1982 GEOLOGICAL REPORT		DRAWING No: TW2U06	





SEE SHEET NO. A2, DRAWING NO. TW3U07 (1:10 000)

TERTIARY INTRUSIVE

SKEENA GROUP

HÁZELTON GROUP

L 237  
FREEHOLD

L 230  
FREEHOLD

L 221  
C.L.6040

AVELLING MINE (BETTY MINE)

MAJOR MINE PORTAL

MINE PORTAL

IGNEOUS DYKE  
PORPHYRYTIC  
VERT. 3m WIDE

4 COAL SEAMS  
0.5 - 1.0m THICK

COAL OUTCROPS - 4 SEAMS TOTTALLING ~ 4.5m

AIR PHOTO INT.

0-10%

0-10%

0-10%

0-10%

0-10%

0-10%

0-10%

0-10%

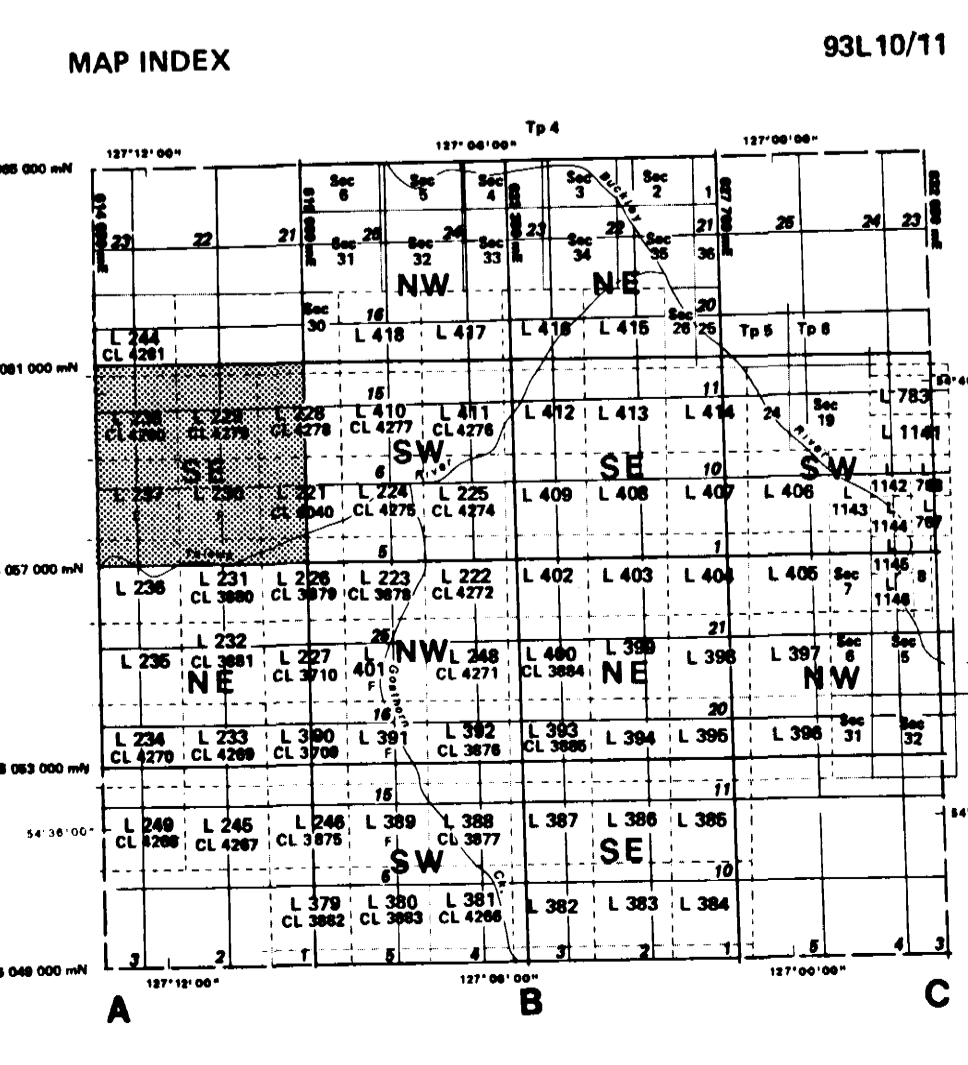
0-10%

0-10%

0-10%

0-10%

0-10%



**LEGEND**

MAIN ROAD  
SECONDARY ROAD  
BRIDGE, CULVERT  
TRACK & TRAIL  
BUILDING  
POLE  
FENCE  
DITCH LINE  
SHOT LINE  
SHOT HEIGHT  
CONTOURS  
DEPRESSION

RIVER  
INTERMITTENT STREAM  
LAKE  
SWAMP  
SAND  
SLIDE  
TREES  
MILL HOLE  
HORIZONTAL CONTROL  
VERTICAL CONTROL  
HORIZONTAL VERTICAL CONTROL

NOTE: LOT LINES APPROXIMATE ONLY

MAP PROJECTION: UNIVERSAL TRANSVERSE MERCATOR  
CENTRAL MERIDIAN REFERENCE 129° W UTM Zone 9

**3 SURVEY NOTE:**  
Coordinates are on U.T.M. Grid (Zone 9) and are derived from Government control stations Blitzen, Haina, and Tasa. Elevations are on Geodetic Datum and are derived from BM 7942.169 + 538 922 metres via reciprocal triangulation levelling.

PREPARED BY: Aero Geometrics Ltd.

SCALE: 1:5000  
CONTOUR INTERVAL: 5 METRES  
DATE OF PHOTOGRAPHY: February 1975  
Photometry 1975 & 1978  
Compilation 1981 Cartography 1982

**LEGEND**

HAZELTON GROUP (VOLCANICS) - (unconformable contacts) - Jurassic  
SKEENA GROUP (SEDIMENTS) - (unconformable contacts) - Lower Cretaceous  
TERTIARY INTRUSIVE - (unconformable contacts)  
REVERSE FAULT (KNOWN) - (triangle indicates upthrown side)  
REVERSE FAULT (APPROXIMATE) - (triangle indicates upthrown side)  
FAULT (DEFINED) - (type unknown)  
FAULT (UNDEFINED) - (type unknown)  
NORMAL FAULT (KNOWN) - (two poles indicate downthrown side)  
NORMAL FAULT (APPROXIMATE) - (two poles indicate downthrown side)  
ALIGNMENT OF UNKNOWN GEOLOGICAL SIGNIFICANCE (air photo interpreted)  
BEDDING ATTITUDE  
OUTCROP  
B.V.C. SURFACE MINE AREA AND BOUNDARIES OF PREVIOUS UNDERGROUND MINES  
DRILL HOLE (Crown Nest Resources Ltd.)  
BULKLEY VALLEY COLLIERIES LTD.  
PREVIOUS UNDERGROUND MINE  
COAL LICENCE BOUNDARY (approx)  
TRENCH  
PLACER EXPLN' DRILL HOLE - 1970  
SYNCLINE (arrow indicates direction of plunge)

238

Tk. Telawa 82438

**Crows Nest Resources Limited**  
EXPLORATION

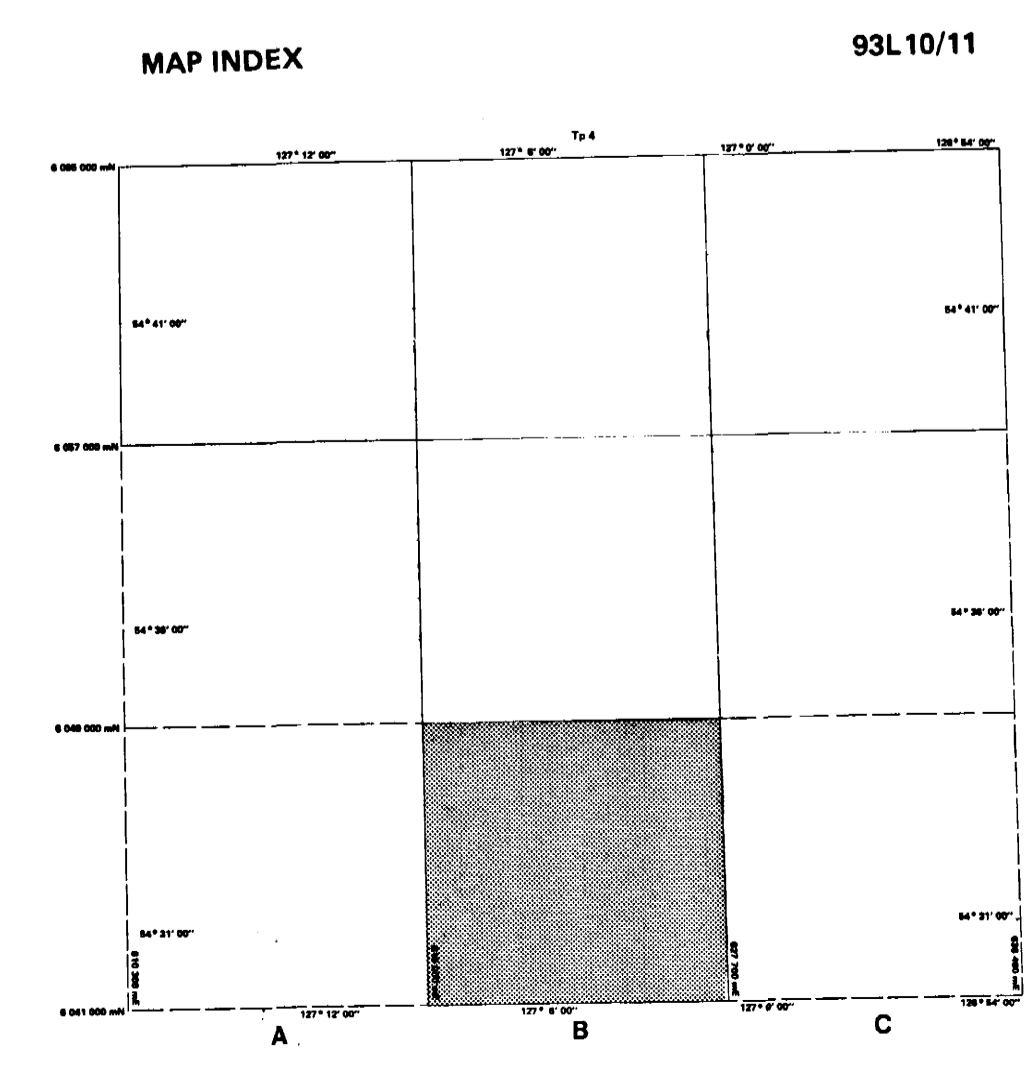
TELKWA PROJECT  
SMITHS AREA  
WEST CENTRAL B.C.

**GEOLOGICAL MAP**  
(1:5000)

UTM ZONE 9

NTS:93111	Enc 1-4	SCALE: 1:5000	DRAWN BY:
AUTHOR: D. HANDY/SCAMERON	DATE: 83-01	REVISED:	DRAWING No: TW2U07
To Accompany 1982 GEOLOGICAL REPORT			

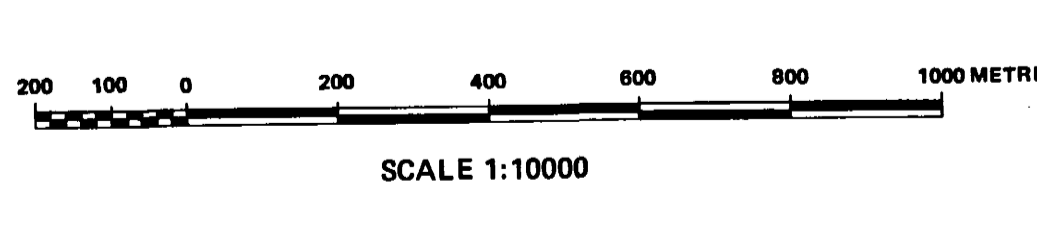




**LEGEND**

HAZELTON GROUP (VOLCANICS) - (unconformable contacts) - Jurassic  
 SKEENA GROUP (SEDIMENTS) - (unconformable contacts) - Lower Cretaceous  
 TERTIARY INTRUSIVE - (unconformable contacts)  
 REVERSE FAULT (KNOWN) - (triangle indicates upthrown side)  
 REVERSE FAULT (APPROXIMATE) - (triangle indicates upthrown side)  
 FAULT (DEFINED) - (type unknown)  
 FAULT (UNDEFINED) - (type unknown)  
 NORMAL FAULT (KNOWN) - (red poles indicate downthrown side)  
 NORMAL FAULT (APPROXIMATE) - (red poles indicate downthrown side)  
 ALIGNMENT OF UNKNOWN GEOLOGICAL SIGNIFICANCE (air photo interpreted)  
 BEDDING ATTITUDE  
 OUTCROP  
 B.V.C. SURFACE MINE AREA AND BOUNDARIES OF PREVIOUS UNDERGROUND MINES  
 DRILL HOLE (Crow's Nest Resources Ltd.)  
 BULKLEY VALLEY COLLIERIES LTD.  
 PREVIOUS UNDERGROUND MINE  
 COAL LICENCE BOUNDARY (approx)  
 TRENCH  
 PLACER EXPLN/ DRILL HOLE - 1970  
 SYNCLINE (arrow indicates direction of plunge)

HAZELTON GROUP (VOLCANICS) - (unconformable contacts) - Jurassic  
 SKEENA GROUP (SEDIMENTS) - (unconformable contacts) - Lower Cretaceous  
 TERTIARY INTRUSIVE - (unconformable contacts)  
 REVERSE FAULT (KNOWN) - (triangle indicates upthrown side)  
 REVERSE FAULT (APPROXIMATE) - (triangle indicates upthrown side)  
 FAULT (DEFINED) - (type unknown)  
 FAULT (UNDEFINED) - (type unknown)  
 NORMAL FAULT (KNOWN) - (red poles indicate downthrown side)  
 NORMAL FAULT (APPROXIMATE) - (red poles indicate downthrown side)  
 ALIGNMENT OF UNKNOWN GEOLOGICAL SIGNIFICANCE (air photo interpreted)  
 BEDDING ATTITUDE  
 OUTCROP  
 B.V.C. SURFACE MINE AREA AND BOUNDARIES OF PREVIOUS UNDERGROUND MINES  
 DRILL HOLE (Crow's Nest Resources Ltd.)  
 BULKLEY VALLEY COLLIERIES LTD.  
 PREVIOUS UNDERGROUND MINE  
 COAL LICENCE BOUNDARY (approx)  
 TRENCH  
 PLACER EXPLN/ DRILL HOLE - 1970  
 SYNCLINE (arrow indicates direction of plunge)



DATE OF PHOTOGRAPHY:  
 TOPOGRAPHY 1972  
 PLANIMETRY 1975 & 1978  
 COMPILATION 1978 - 1981 CARTOGRAPHY 1982

238

TKTelkwa 82(2)A

**Crows Nest Resources Limited**  
EXPLORATION

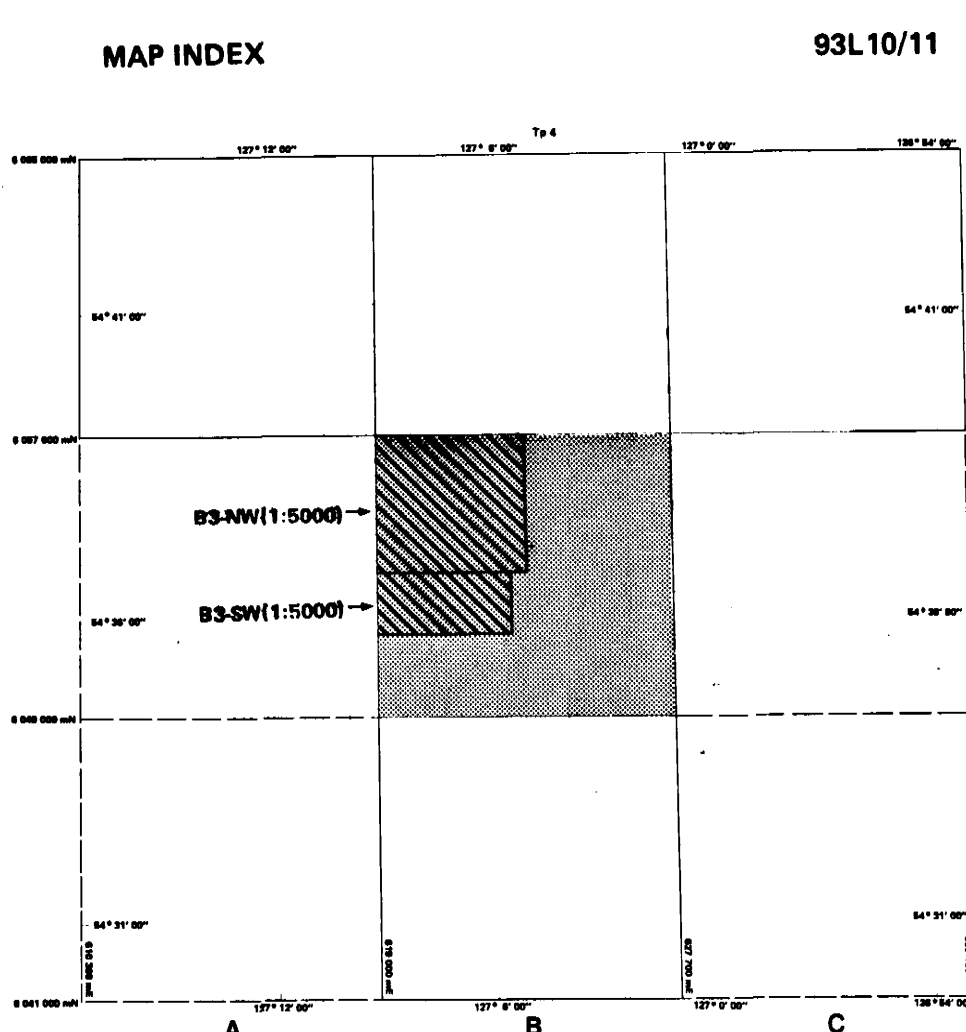
TELKWA PROJECT  
SMITHS AREA  
WEST CENTRAL B.C.

**GEOLOGICAL MAP**  
Telkwa North

UTM ZONE 9

NTS-93L/11		SCALE: 1:10000	DRAWN BY:
AUTHOR: D. HANDY/C. LANGILL	DATE: 83-01	REVISED:	DRAWING No: TW3U05
To Accompany 1982 GEOLOGICAL REPORT			





**LEGEND**

MAIN ROAD	RIVER
SECONDARY ROAD	INTERMITTENT STREAM
BRIDGE/CULVERT	LAKE
TRACK OR TRAIL	SWAMP
LOT LINE	SAND
CONTR. LINE	SLIDE
SPOT HEIGHT	TREES
CONTOURS	
DEPRESSION	

NOTE: LOT LINES APPROXIMATE ONLY

MAP PROJECTION: UNIVERSAL TRANSVERSE MERCATOR  
CENTRAL MERIDIAN REFERENCE 129 W. UTM ZONE 9

NOTE: PHOTOGRAMMETRIC MAPPING BASED ON SURVEY CONTROL AND CONTROL TAKEN FROM NTS MAP 93L/11

PREPARED BY: A&O GEOMETRICS LTD.

SCALE 1:10000

CONTOUR INTERVAL: 10 METRES

DATE OF PHOTOGRAPHY: TOPOGRAPHY 1972  
PLANIMETRY 1975 & 1978  
COMPILATION 1978 - 1981 CARTOGRAPHY 1982

**LEGEND**

	HAZELTON GROUP (VOLCANICS) - (unconformable contacts) - Jurassic
	SKEENA GROUP (SEDIMENTS) - (unconformable contacts) - Lower Cretaceous
	TERTIARY INTRUSIVE - (unconformable contacts)
	REVERSE FAULT (KNOWN) - (triangle indicates upthrown side)
	REVERSE FAULT (APPROXIMATE) - (triangle indicates upthrown side)
	FAULT (DEFINED) - (type unknown)
	FAULT (UNDEFINED) - (type unknown)
	NORMAL FAULT (KNOWN) - (rod poles indicate downthrown side)
	NORMAL FAULT (APPROXIMATE) - (rod poles indicate downthrown side)
	ALIGNMENT OF UNKNOWN GEOLOGICAL SIGNIFICANCE (air photo interpreted)
	BEDDING ATTITUDE
	OUTCROP
	B.V.C. SURFACE MINE AREA AND BOUNDARIES OF PREVIOUS UNDERGROUND MINES
	DRILL HOLE (Crows Nest Resources Ltd.)
	BULKLEY VALLEY COLLIERIES LTD.
	PREVIOUS UNDERGROUND MINE
	COAL LICENCE BOUNDARY (approx)
	TRENCH
	PLACER EXPL'N DRILL HOLE - 1979
	SYNCLINE (arrow indicates direction of plunge)

238

TR Talkus 82(2)A

**Crows Nest Resources Limited**  
EXPLORATION

TELKWA PROJECT  
SANTNES AREA  
WEST CENTRAL B.C.

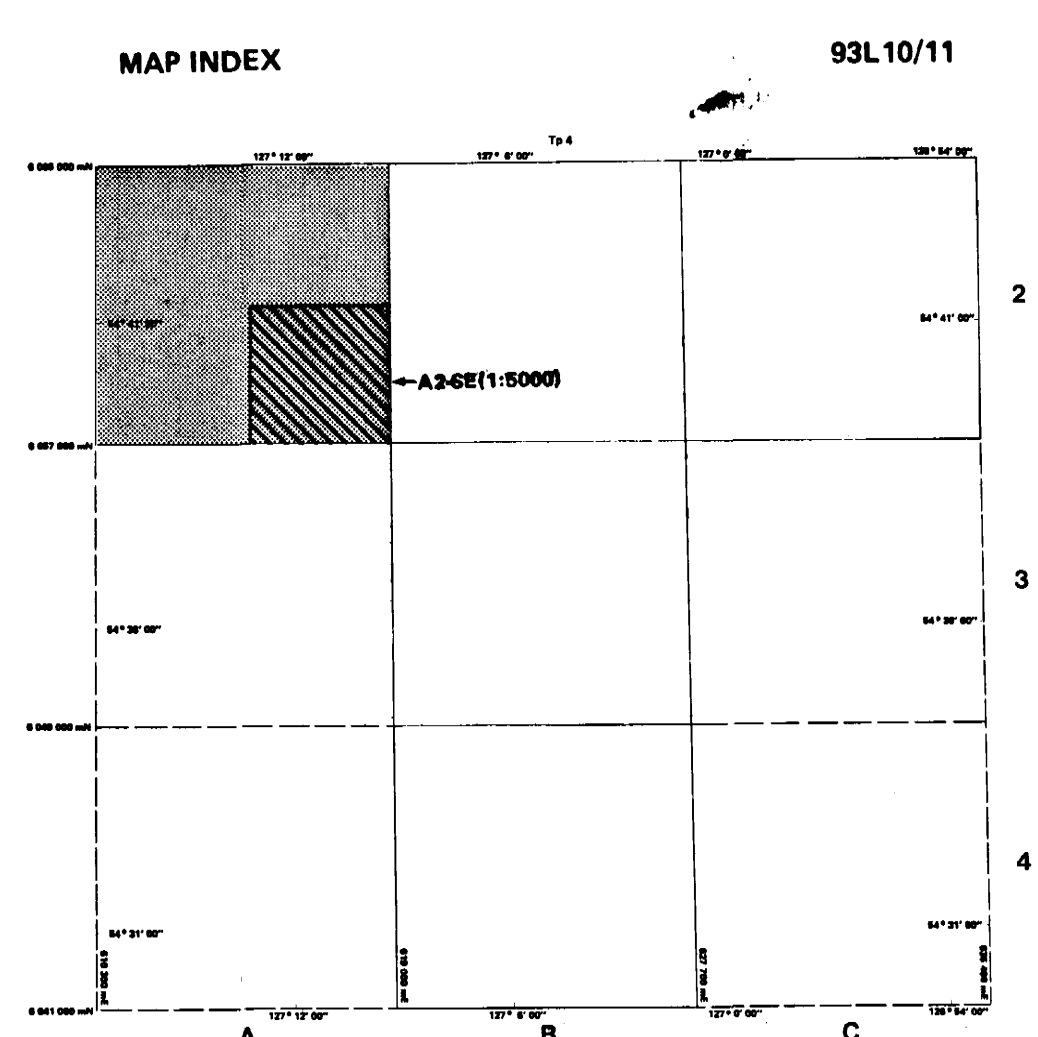
GEOLOGICAL MAP

Cabinet Creek

UTM ZONE 9

AUTHOR: D.HANDY/C.LANGILL		SCALE: 1:10000	DRAWN BY:
DATE: 83-01		REVISED:	DRAWING No: TW3U06
To Accompany 1982 GEOLOGICAL REPORT			

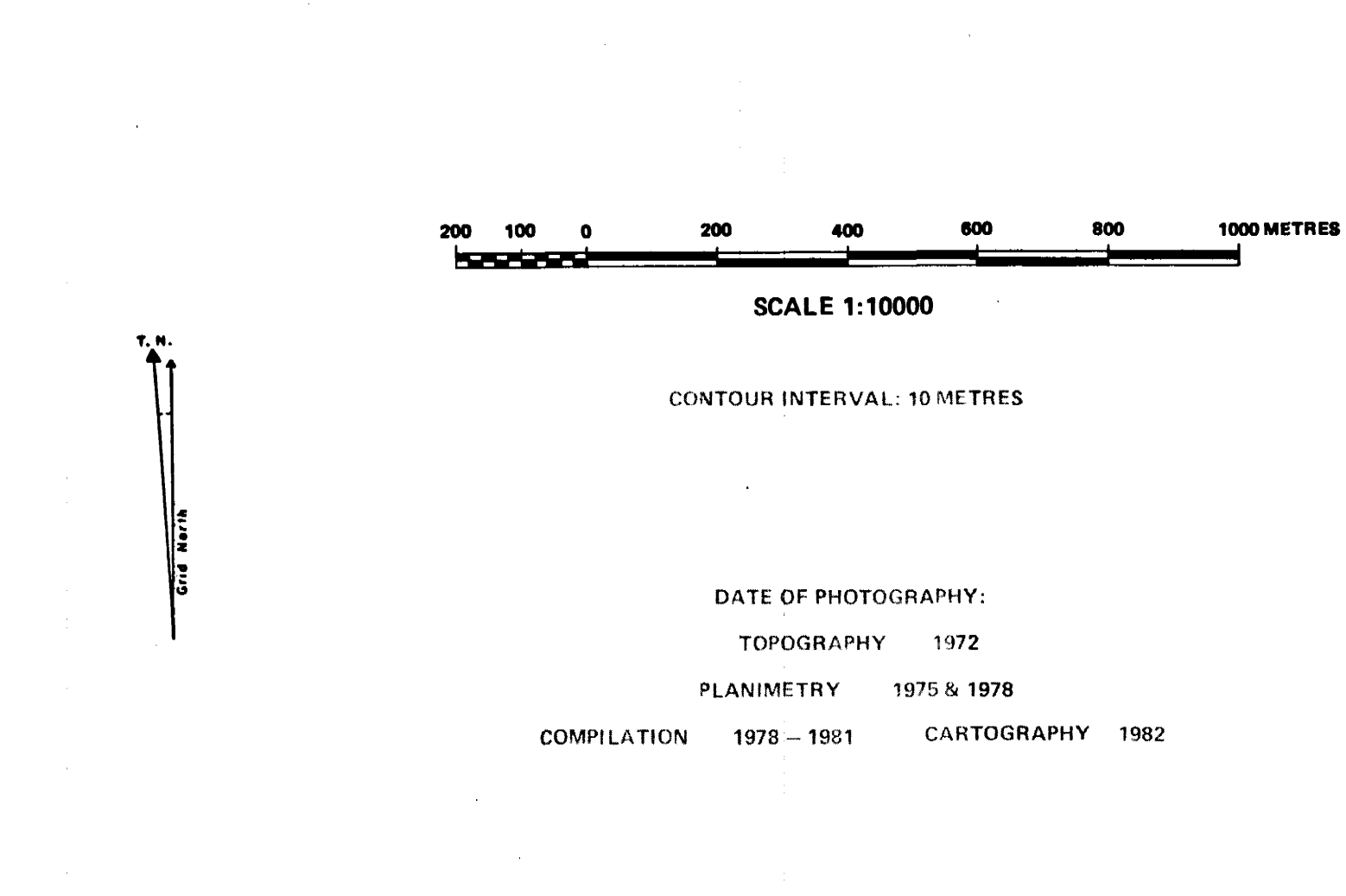




**LEGEND**

MAIN ROAD	RIVER
SECONDARY ROAD	INTERMITTENT STREAM
BRIDGE CULVERT	LAKE
TRACK OR TRAIL	SWAMP
LOT LINE	SAND
OUTLINE	SLIDE
POLE HEIGHT	TREES
CONTOURS	
DEPRESSION	

NOTE: LOT LINES APPROXIMATE ONLY



**LEGEND**

	HAZELTON GROUP (VOLCANICS) - (unconformable contacts) - Jurassic
	SKENA GROUP (SEDIMENTS) - (unconformable contacts) - Lower Cretaceous
	TERTIARY INTRUSIVE - (unconformable contacts)
	REVERSE FAULT (KNOWN) - (triangle indicates upthrown side)
	REVERSE FAULT (APPROXIMATE) - (triangle indicates upthrown side)
	FAULT (UNDEFINED) - (type unknown)
	FAULT (UNDEFINED) - (type unknown)
	NORMAL FAULT (KNOWN) - (rod poles indicate downthrown side)
	NORMAL FAULT (APPROXIMATE) - (rod poles indicate downthrown side)
	ALIGNMENT OF UNKNOWN GEOLOGICAL SIGNIFICANCE (air photo interpreted)
	BEDDING ATTITUDE
	OUTCROP
	B.V.C. SURFACE MINE AREA AND BOUNDARIES OF PREVIOUS UNDERGROUND MINES
	DRILL HOLE (Open Nest Resources Ltd.)
	BULKLEY VALLEY COLLIERIES LTD. PREVIOUS UNDERGROUND MINE
	COAL LICENCE BOUNDARY (approx)
	TRENCH
	PLACER EXPLN DRILL HOLE - 1970
	SYNCLINE (arrow indicates direction of plunge)

238

TK-Telkwa 82(2)A

**Crows Nest Resources Limited**  
EXPLORATION

TELKWA PROJECT  
SWIFTERS AREA  
WEST CENTRAL B.C.

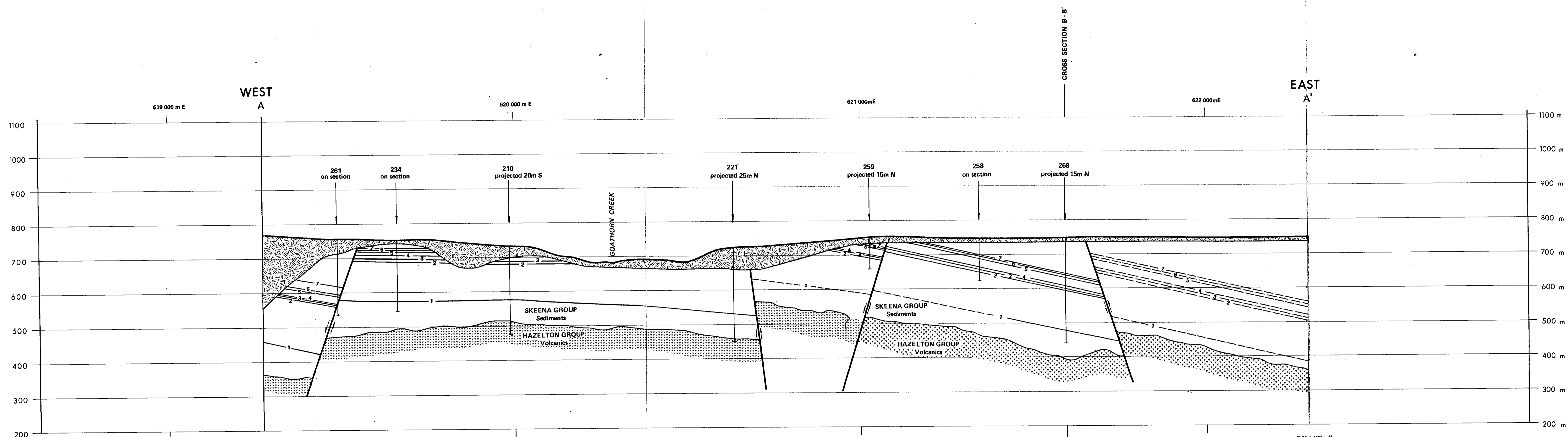
GEOLOGICAL MAP

TELKWA NORTH

UTM ZONE 9

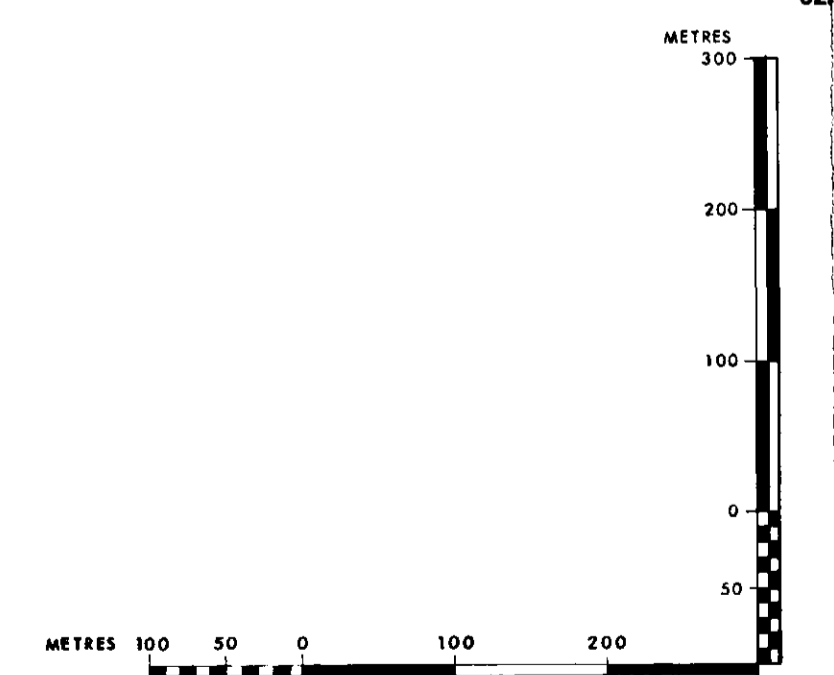
NTS-93L/11	SCALE: 1:10000	DRAWN BY:
AUTHOR: D. HANDY/C. LANGILL	REVISION:	DRAWING No: TW3U07
DATE: 83-01	To Accompany 1982 GEOLOGICAL REPORT	





**GEOLOGICAL LEGEND**

- DRILL HOLE
- FAULT (arrows indicate relative movement)
- REVERSE FAULT (triangles indicate upthrown block)
- COAL SEAM
- TILL & ALLUVIUM
- SKEENA
- HAZELTON



238

T.K. Telkwa 83(2)0

**Crows Nest Resources Limited**  
EXPLORATION

TELKWA PROJECT  
W.C. BC  
GOATHORN AREA

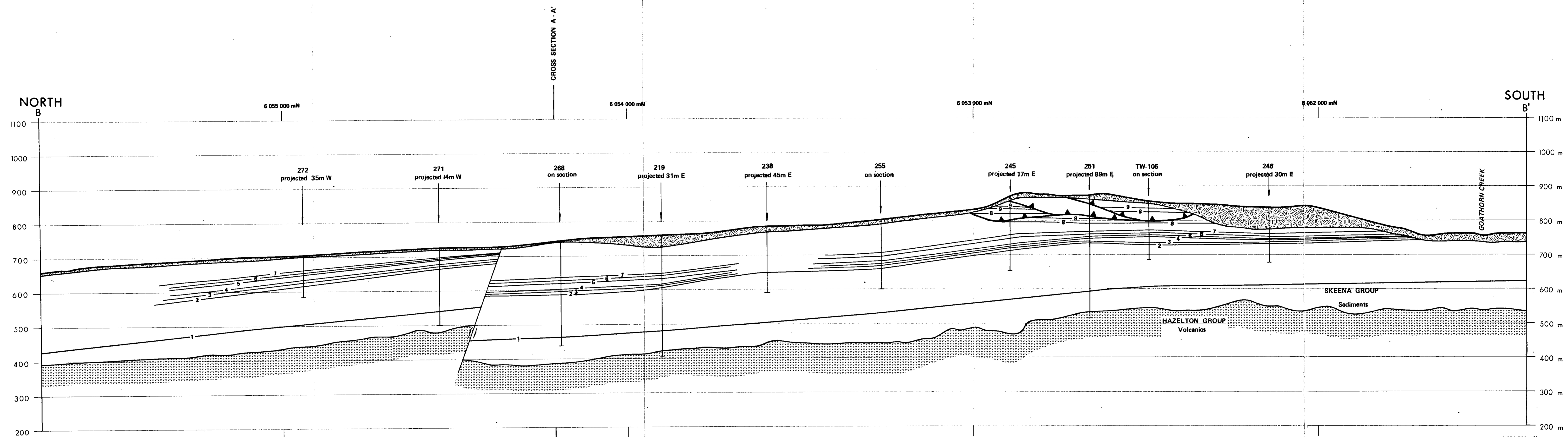
⑩

**CROSS SECTION A-A'**

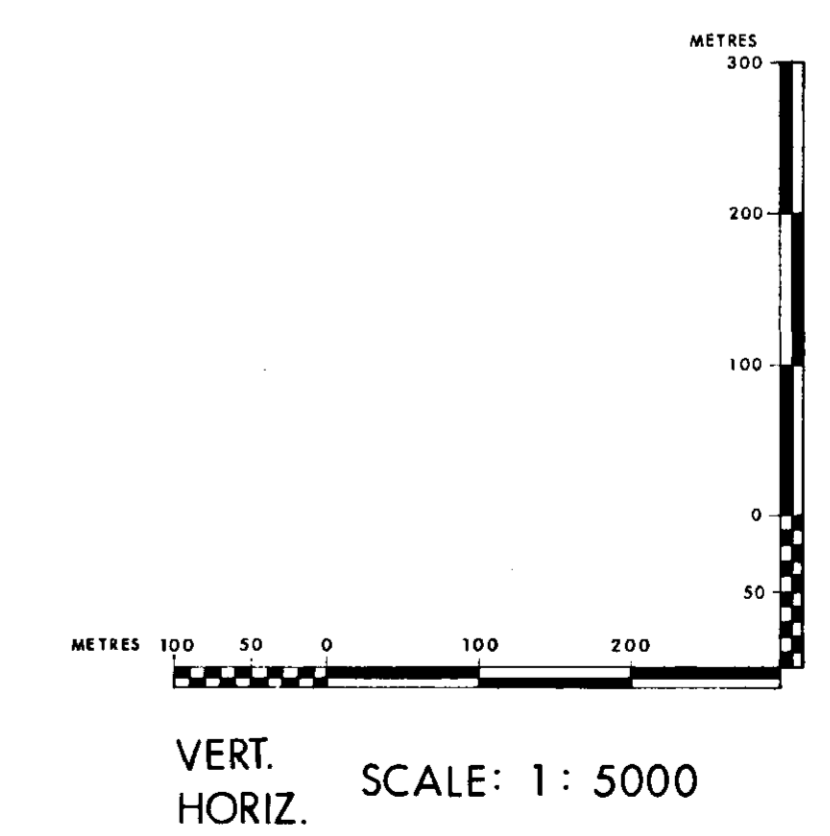
UTM. ZONE 9 N.T.S. 93L-11

AUTHOR: D. HANDY	SCALE: 1: 5000	DRAWN BY: S. ROGAL
DATE: 82-12	REVISED:	DRAWING No: TW2X2
To Accompany 1982 GEOLOGICAL ASSESSMENT REPORT		





- GEOLOGICAL LEGEND**
- DRILL HOLE
  - FAULT (arrows indicate relative movement)
  - REVERSE FAULT (triangles indicate upthrown block)
  - COAL SEAM
  - TILL & ALLUVIUM
  - SKEENA
  - HAZELTON



*TR. Telkwa 8/2/11*

**Crows Nest Resources Limited**  
EXPLORATION

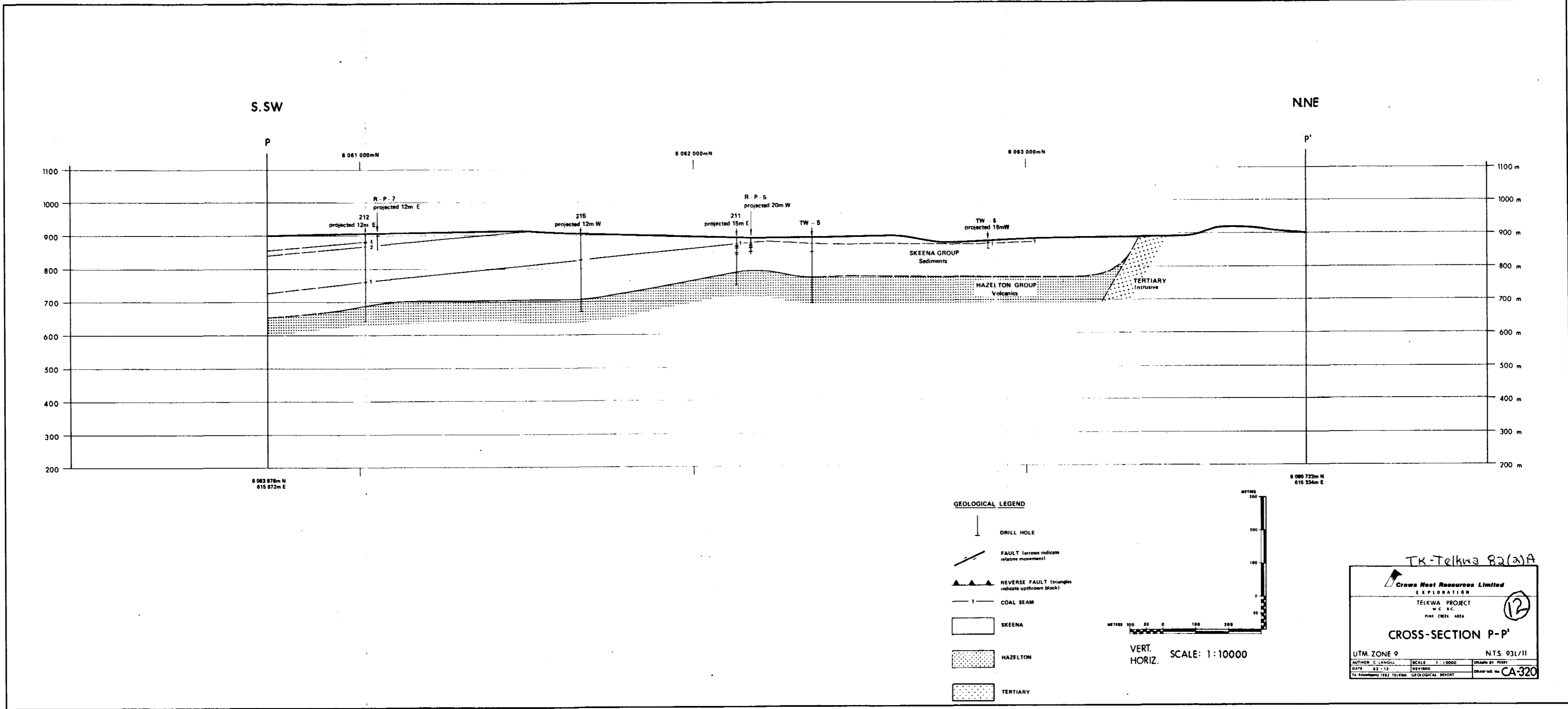
TELKWA PROJECT  
W.C. B.C.  
GOATHORN AREA

**CROSS SECTION B-B'**

UTM. ZONE 9 N.T.S. 93L-11

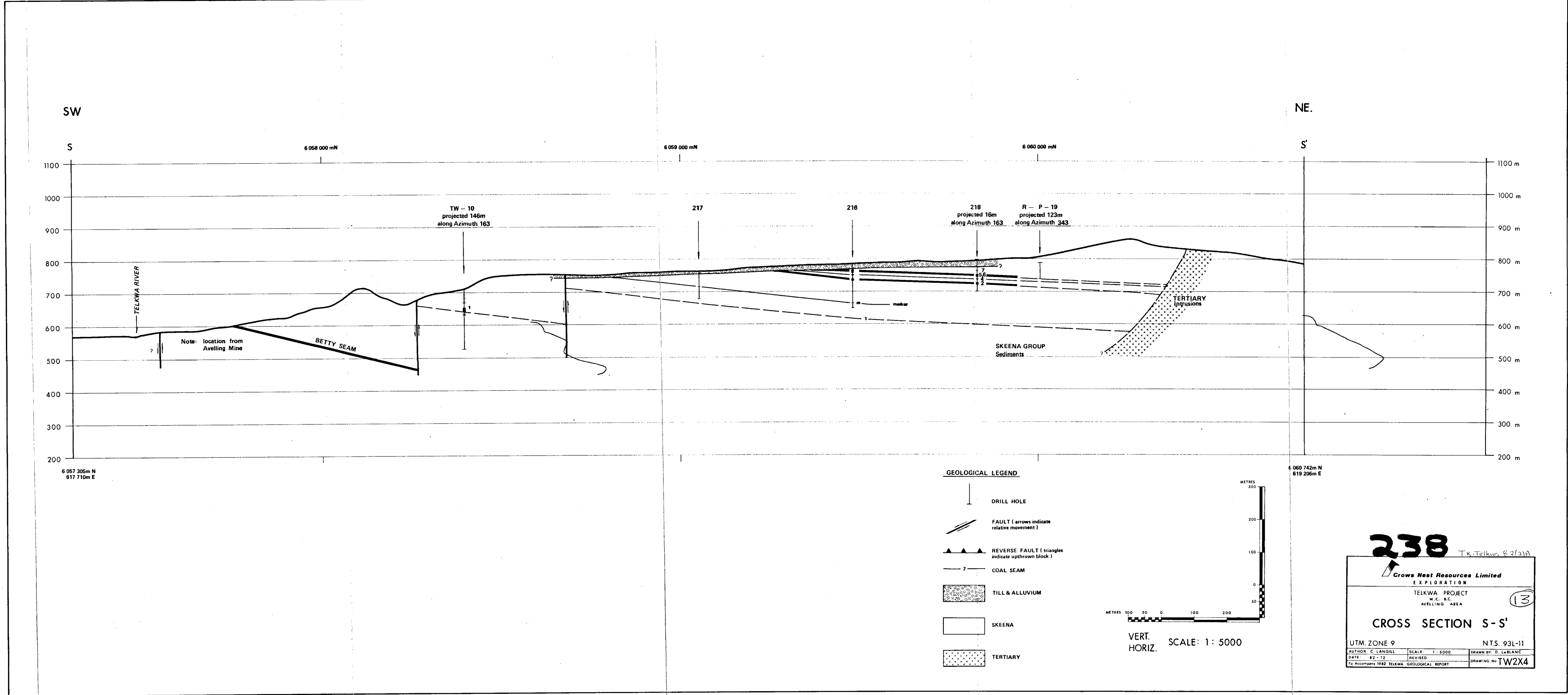
AUTHOR: D. HANDY	SCALE: 1: 5000	DRAWN BY: R. REECE
DATE: 82-12	REVISED:	DRAWING NO: TW2X3
To Accompany 1982 GEOLOGICAL ASSESSMENT REPORT		



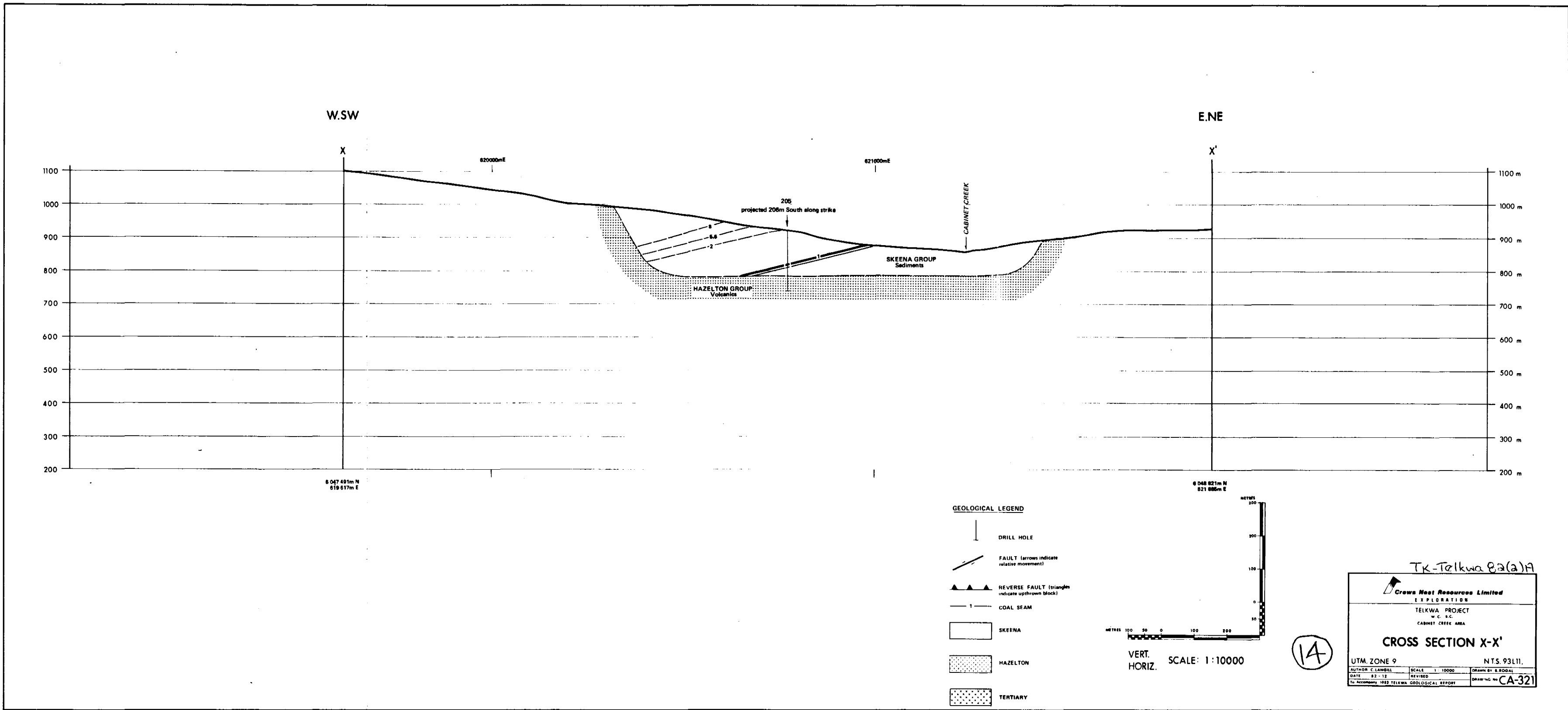


238



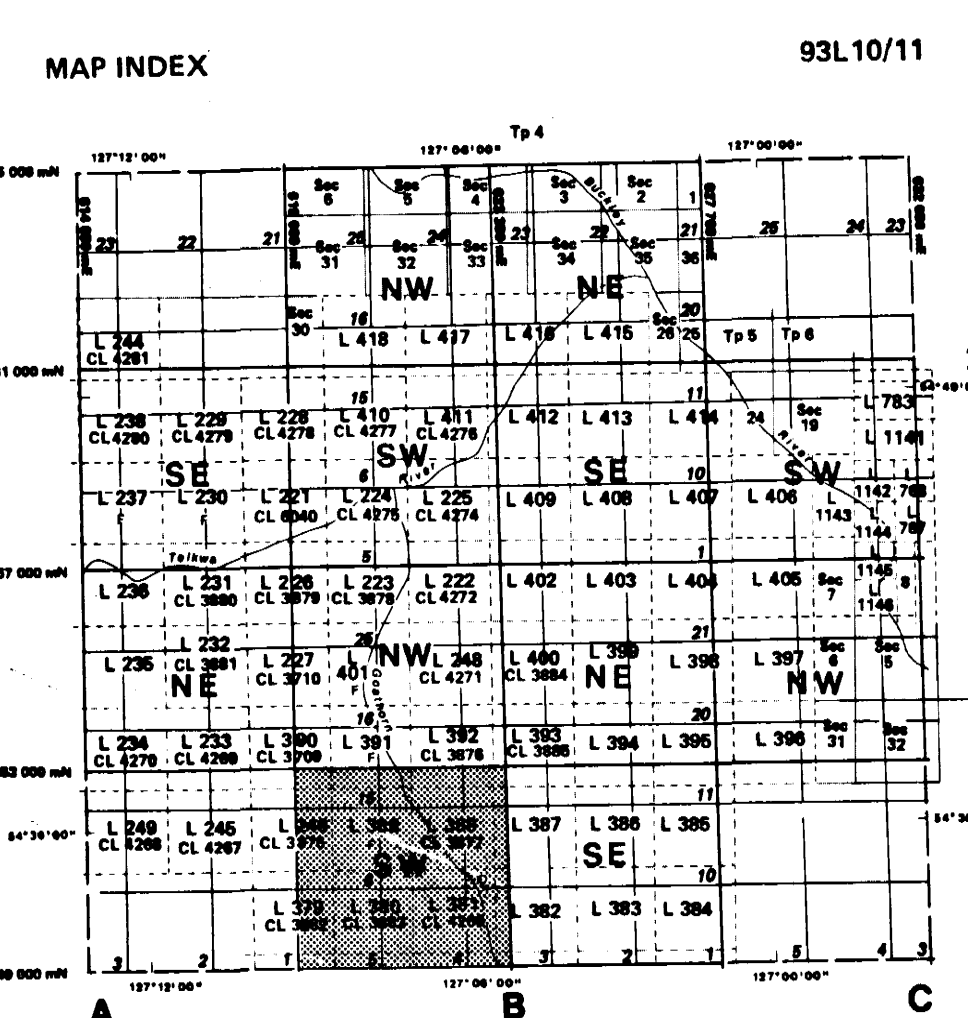
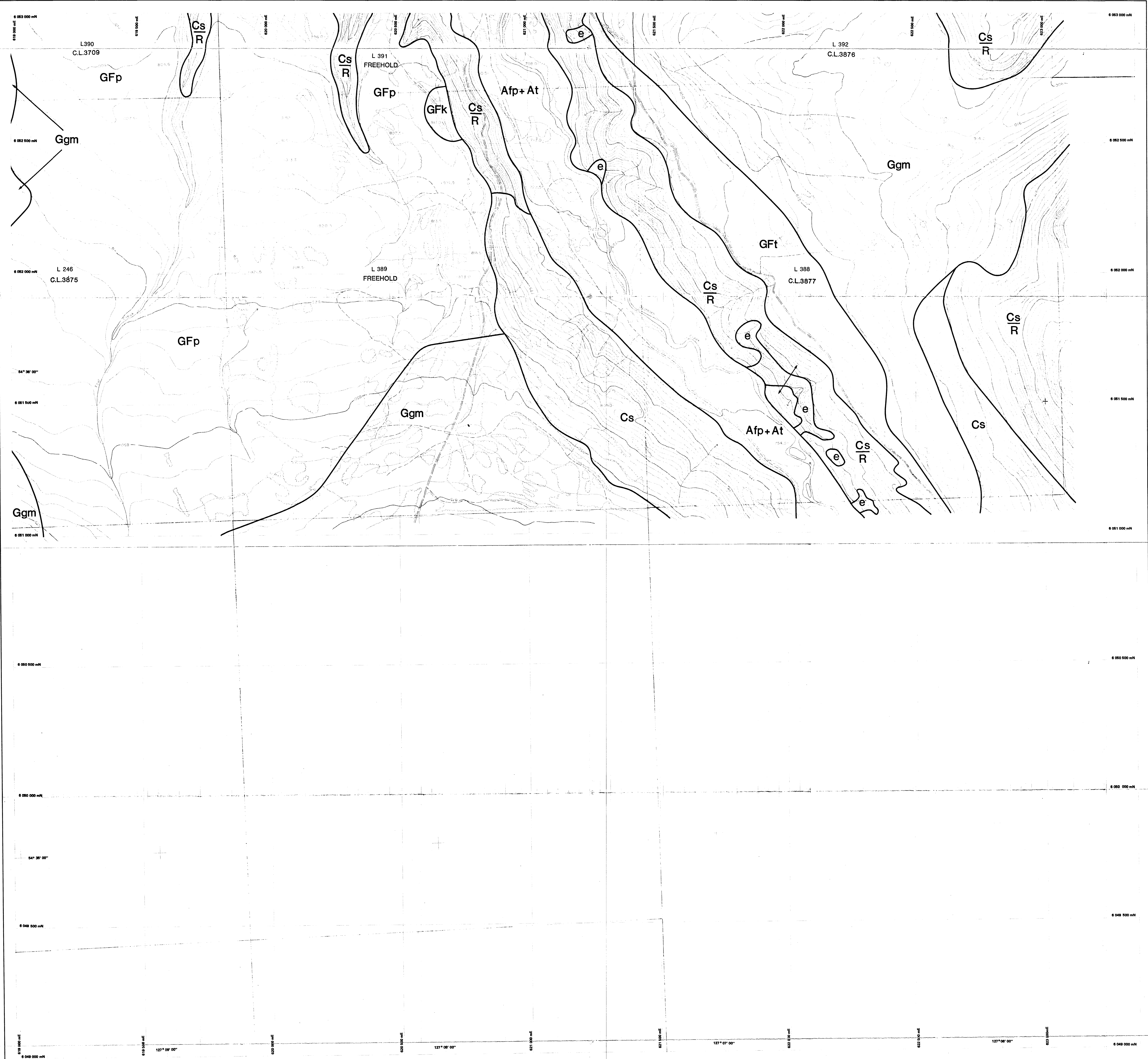






238





**LEGEND**

	MAIN ROAD		RIVER
	SECONDARY ROAD		INTERMITTENT STREAM
	BRIDGE		LAKE
	CULVERT		SWAMP
	TRACK OR TRAIL		SAND
	BUILDING		SLIDE
	POLE		TREES
	FENCE		DRILL HOLE
	LOT LINE		HORIZONTAL CONTROL
	SPOT HEIGHT		VERTICAL CONTROL
	CONTOURS		HORIZONTAL/VERTICAL CONTROL
	DEPRESSION		NOTE: LOT LINES APPROXIMATE ONLY

MAP PROJECTION: UNIVERSAL TRANSVERSE MERCATOR  
CENTRAL MERIDIAN REFERENCE 129° W UTM Zone 9

**SURVEY NOTE:**  
Coordinates are on U.T.M. Grid (Zone 9) and are derived from Government Control Stations Wilford, Pacific and Tarka. Elevations are on Geodetic Datum and are derived from BM 7942359 - 538.922 metres via reciprocal trigonometric levelling.

PREPARED BY: Aero Geomatics Ltd.

**LEGEND**

SCALE: 1:5000  
CONTOUR INTERVAL: 5 METRES  
DATE OF PHOTOGRAPHY: Topography 1972  
Planimetry 1975 & 1978  
Compilation 1981 Cartography 1982

METRES 100 200 300 400 500

**LEGEND**

**ALLUVIAL DEPOSITS**  
Afp - flood plain: stratified silt, sand and gravel; subject to flooding.  
At - terrace: low terraces of silt, sand and gravel; not subject to flooding.

**COLLUVIAL DEPOSITS**  
Cs - slopewash: debris of rocks, sand and silt on steep to moderate slopes; some bedrock exposures.

**GLACIAL DEPOSITS**  
Ggm - ground moraine: unsorted material ranging from clay to boulders on upland surfaces; isolated bedrock exposures.  
Ghm - hummocky moraine: like Ggm but with more irregular surface and less compacted.

**GLACIOFLUVIAL DEPOSITS**  
Gfk - eskar: narrow sinuous ridges of stratified gravel, sand and minor silt.  
Gfp - plain: upland outwash plain of stratified sand, gravel and minor silt; possible isolated bedrock exposures.  
Gfr - terrace: high terraces of stratified sand, gravel and minor silt.

**LACUSTRINE DEPOSITS**  
Lp - plain: former glacial lake bottom of stratified clay and silt.

**BEDROCK**  
R - undifferentiated: mostly sandstone, conglomerates, shales, coal or volcanic sediments.  
e - eroded, gullied.  
/ or - thin covering of one unit over another.

**NOTE:** The descriptions on this legend are made without benefit of field check. The best gravel sources are probably: (1) Gfk, (2) Gfp, (3) Gfr, (4) Gfp.

C.W. Drew Jr., P. Geol.  
Sprole Associates Limited

238

Tk-Talkwa 82(2)

**Crows Nest Resources Limited**  
EXPLORATION

TELKWA PROJECT  
SWITZER AREA  
WEST CENTRAL B.C.

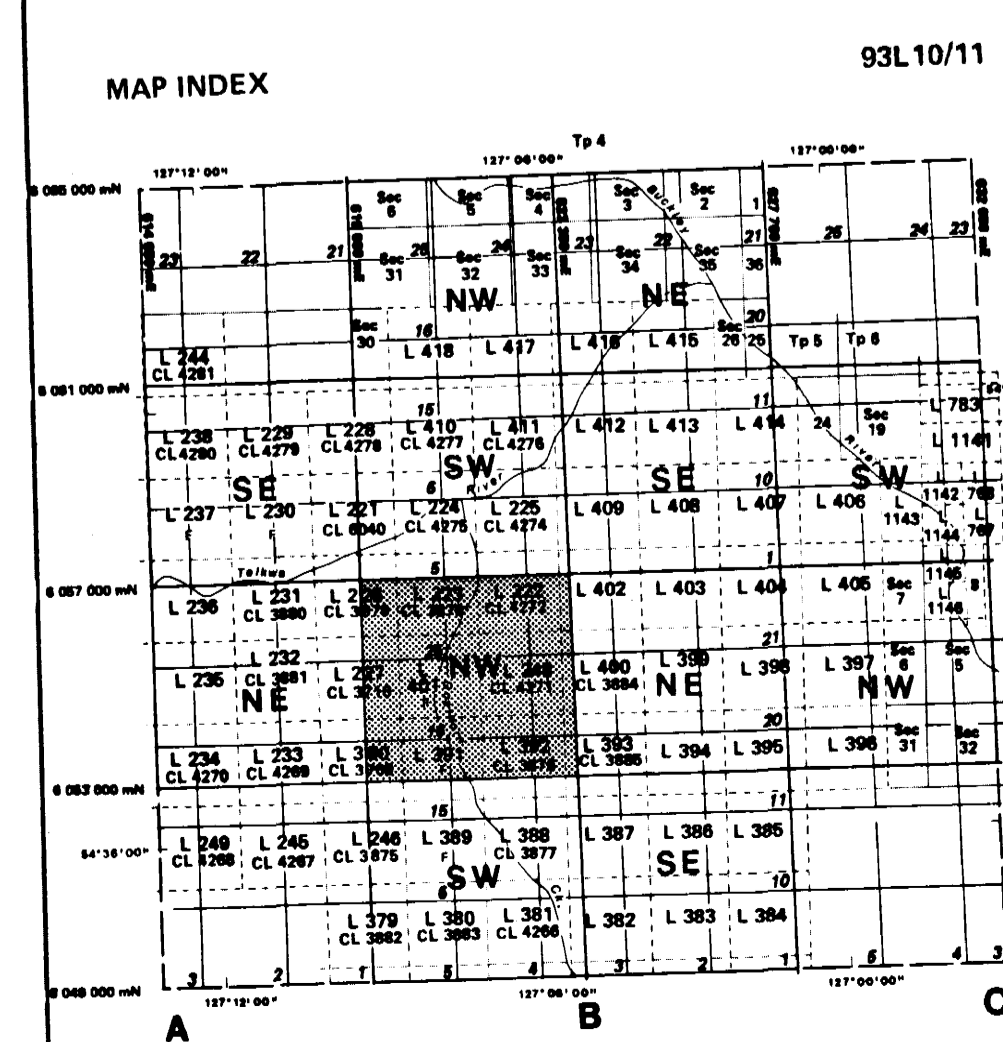
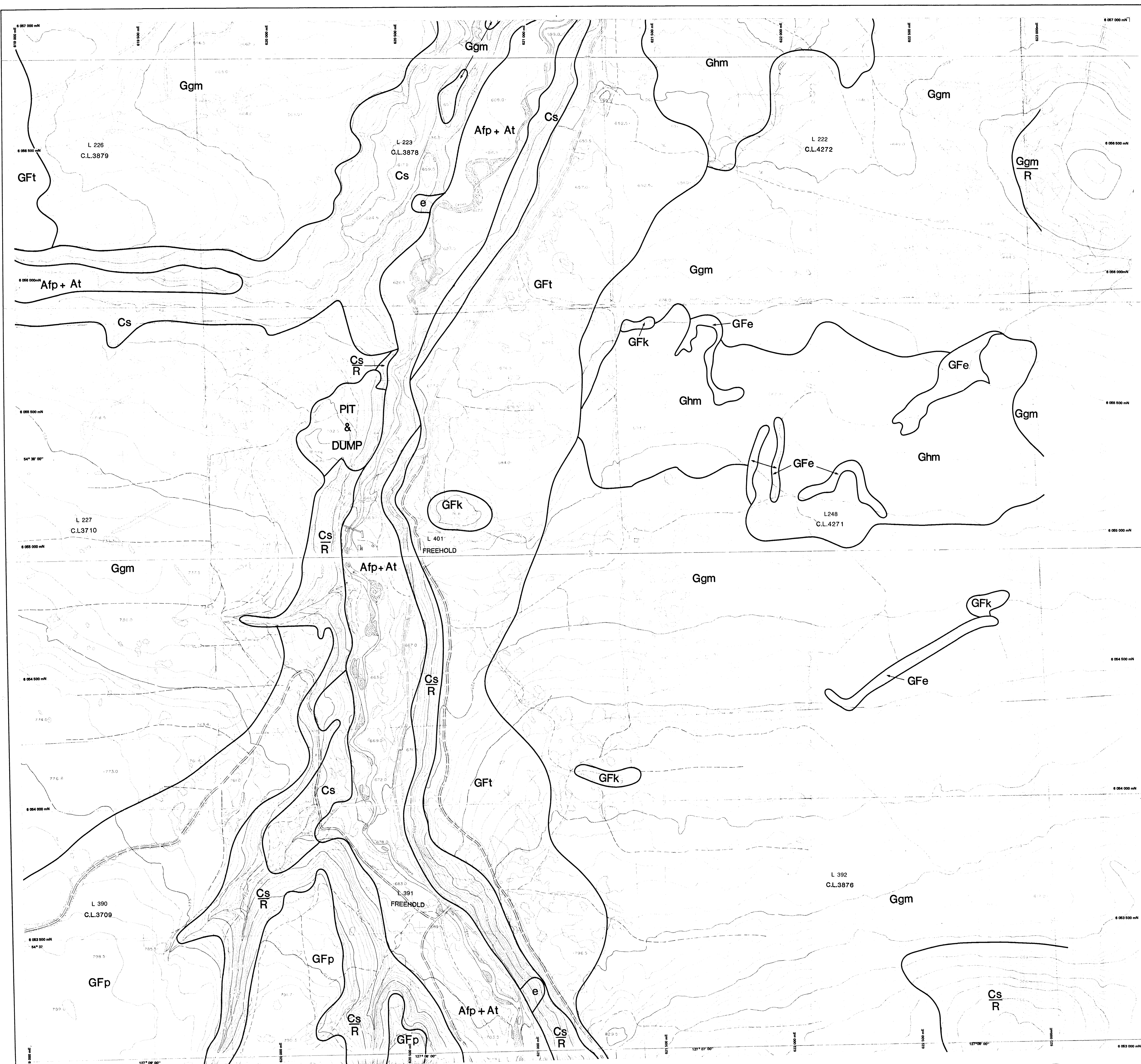
QUATERNARY GEOLOGY

15

Enc. 1-6  
UTM ZONE 9

NTS 93L/11	SCALE: 1:5,000	DRAWN BY: P.F.B.
AUTHOR: SPROLE ASSOC. LTD.	DATE: 83-01	REVISED:
To Accompany 1982 GEOLOGICAL REPORT		DRAWING No: TW2U08





**LEGEND**

MAIN ROAD  
SECONDARY ROAD  
BRIDGE/CULVERT  
TRACK/ TRAIL  
BUILDING  
POLE  
FENCE  
LOT LINE  
CUT LINE  
PROPERTY HEIGHT  
CONTOURS  
DEPRESSION

RIVER  
INTERMITTENT STREAM  
LAKES  
SWAMP  
SAND  
SLIDE  
FREESES  
DRILL HOLE  
HORIZONTAL CONTROL  
VERTICAL CONTROL  
HORIZONTAL VERTICAL CONTROL

NOTE: LOT LINES APPROXIMATE ONLY

MAP PROJECTION: UNIVERSAL TRANSVERSE MERCATOR  
CENTRAL MERIDIAN REFERENCE 129° W, UTM Zone 9

**3** SURVEY NOTE:  
Coordinates are on U.T.M. Grid (Zone 9) and are derived from Government control stations Blitzen, Polze, and Tok. Elevations are on Geodetic Datum and are derived from BM 744-3569 - 558.922 metres via reciprocal trigonometric levelling.

PREPARED BY: Aero Geometrics Ltd.

**LEGEND**

ALLUVIAL DEPOSITS  
Afp - flood plain: stratified silt, sand and gravel; subject to flooding.  
At - terrace: low terraces of silt, sand and gravel; not subject to flooding.

COLLUVIAL DEPOSITS  
Cs - slopewash: debris of rocks, sand and silt on steep to moderate slopes; some bedrock exposures.

GLACIAL DEPOSITS  
Ggm - ground moraine: unsorted material ranging from clay to boulders on upland surfaces; isolated bedrock exposures.  
Ghm - hummocky moraine: like Ggm but with more irregular surface and less compressed.

GLACIOFLUVIAL DEPOSITS  
Gfe - esker: narrow sinuous ridges of stratified gravel, sand and minor silt.  
Gfk - kame: mound of stratified gravel and sand.  
Gfp - plain: upland narrowish plain of stratified sand, gravel and minor silt; possible isolated bedrock exposures.  
Gfr - terrace: high terraces of stratified sand, gravel and minor silt.

LACUSTRINE DEPOSITS  
Lp - plain: former glacial lake bottom of stratified clay and silt.

BEDROCK  
R - undivided: mostly sandstone, conglomerate, shale, coal or volcanic sediments.  
e - eroded, gullied.  
/ or - thin covering of one unit over another.

NOTE: The descriptions on this legend are made without benefit of field check. The best gravel sources are probably: (1) Gfk, (2) Gfe, (3) Gfp, (4) Gfr.

SCALE: 1:5000  
CONTOUR INTERVAL: 5 METRES  
DATE OF PHOTOGRAPHY: Topography 1972  
Planimetry 1975 & 1978  
Compilation 1981 Cartography 1982

**LEGEND**

ALLUVIAL DEPOSITS  
Afp - flood plain: stratified silt, sand and gravel; subject to flooding.  
At - terrace: low terraces of silt, sand and gravel; not subject to flooding.

COLLUVIAL DEPOSITS  
Cs - slopewash: debris of rocks, sand and silt on steep to moderate slopes; some bedrock exposures.

GLACIAL DEPOSITS  
Ggm - ground moraine: unsorted material ranging from clay to boulders on upland surfaces; isolated bedrock exposures.  
Ghm - hummocky moraine: like Ggm but with more irregular surface and less compressed.

GLACIOFLUVIAL DEPOSITS  
Gfe - esker: narrow sinuous ridges of stratified gravel, sand and minor silt.  
Gfk - kame: mound of stratified gravel and sand.  
Gfp - plain: upland narrowish plain of stratified sand, gravel and minor silt; possible isolated bedrock exposures.  
Gfr - terrace: high terraces of stratified sand, gravel and minor silt.

LACUSTRINE DEPOSITS  
Lp - plain: former glacial lake bottom of stratified clay and silt.

BEDROCK  
R - undivided: mostly sandstone, conglomerate, shale, coal or volcanic sediments.  
e - eroded, gullied.  
/ or - thin covering of one unit over another.

NOTE: The descriptions on this legend are made without benefit of field check. The best gravel sources are probably: (1) Gfk, (2) Gfe, (3) Gfp, (4) Gfr.

C.W. Drew Jr., P. Geol.  
Sproule Associates Limited

238

TK - Telkwa 82(2)A

**Crows Nest Resources Limited**  
EXPLORATION

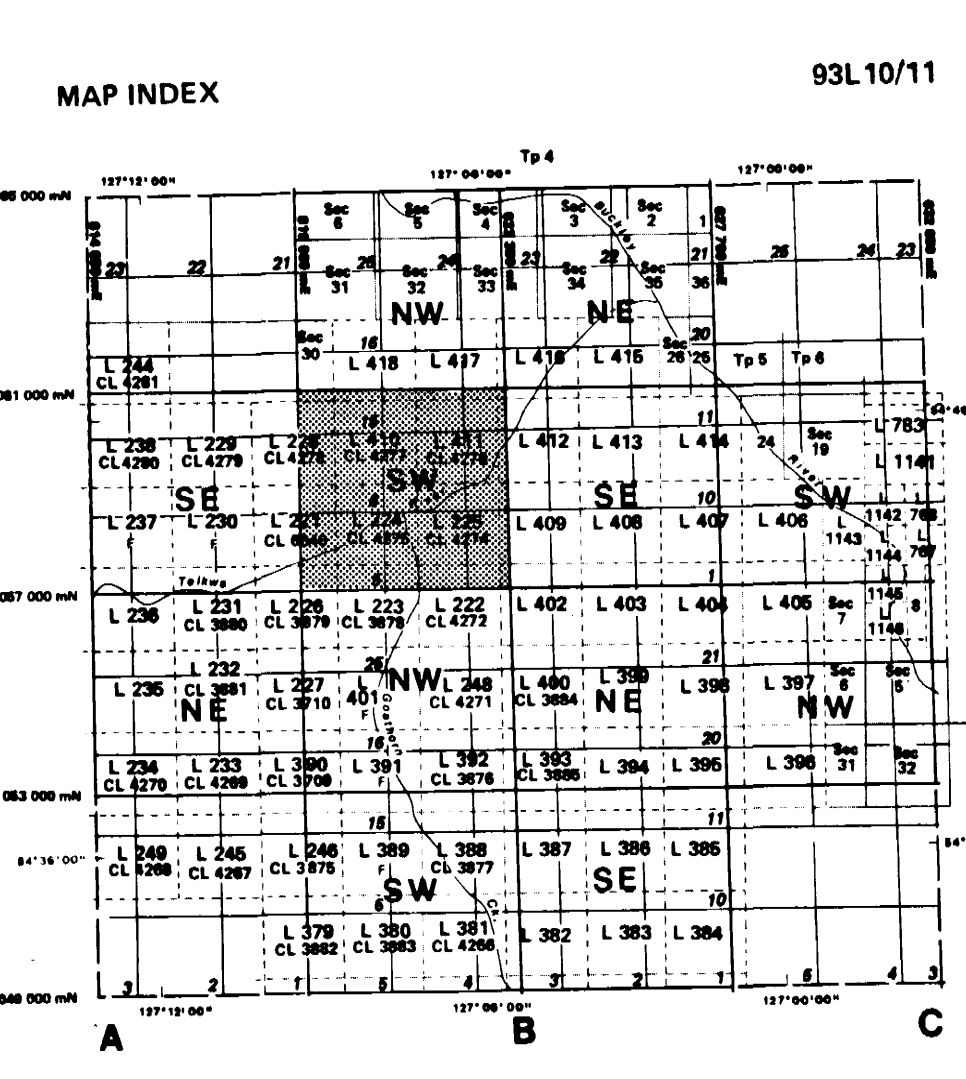
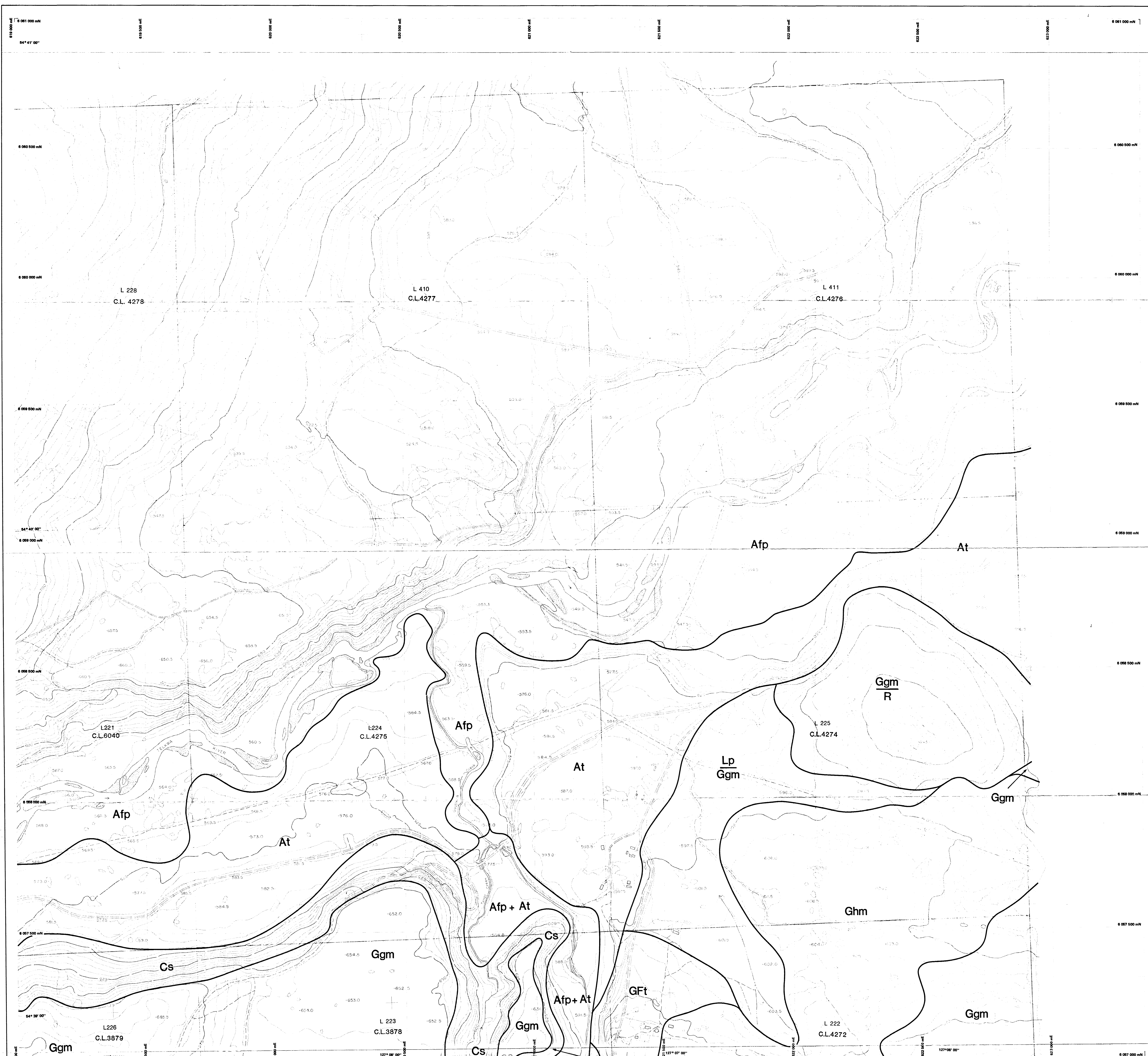
TELKWA PROJECT  
SMITHERS AREA  
WEST CENTRAL B.C.

QUATERNARY GEOLOGY

Fac. 1-6  
UTM ZONE 9

NTS 93L/11	SCALE: 1:5000	DRAWN BY: P.F.S.
AUTHOR: SPROULE ASSOC. LTD.	DATE: 83-01	REVISOR:
To Accompany 1982 GEOLOGICAL REPORT		DRAWING No: TW2U09





**LEGEND**

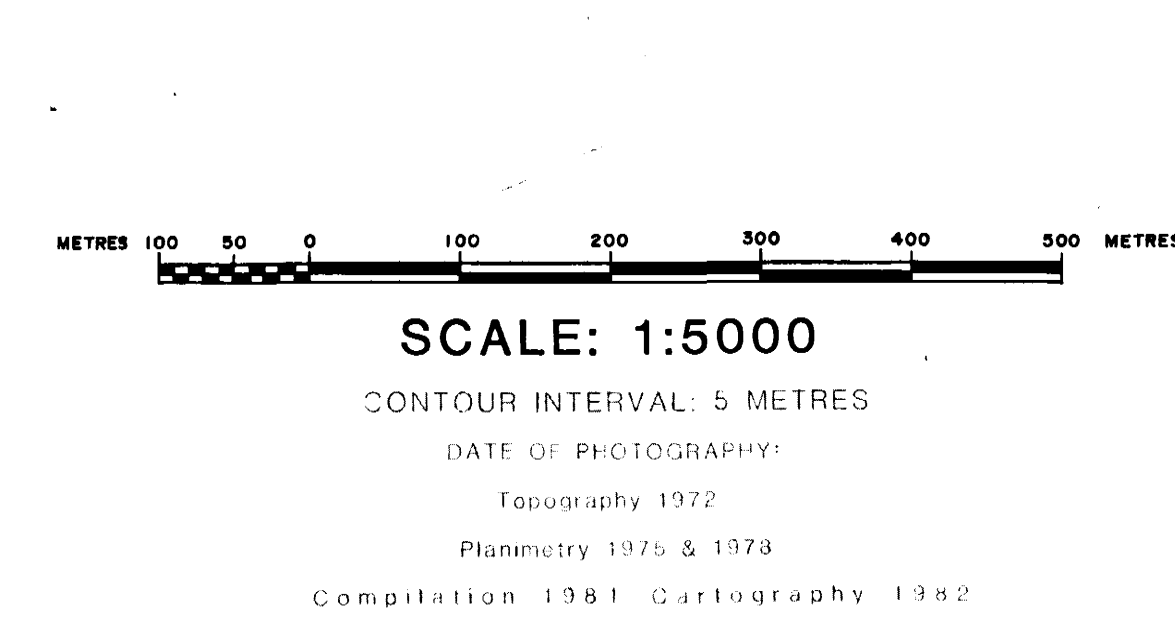
RIVER  
 INTERMITTENT STREAM  
 LAKE  
 SWAMP  
 SAND SLIP  
 TRACKS  
 DRILL HOLE  
 HORIZONTAL CONTROL  
 VERTICAL CONTROL  
 HORIZONTAL VERTICAL CONTROL  
 NOTE: LOT LINES APPROXIMATE ONLY

MAIN ROAD  
 SECONDARY ROAD  
 BRIDGE, CULVERT  
 TRACKS OR TRAIL  
 BUILDING  
 POLE  
 FENCE  
 LOT LINE  
 OUTLINE  
 SHUT HEIGHT  
 CONTOURS  
 DEPRESSION

MAP PROJECTION: UNIVERSAL TRANSVERSE MERCATOR  
 CENTRAL MERIDIAN REFERENCE 129° W UTM Zone 9

**SURVEY NOTE:**  
 Coordinates are on U.T.M. Grid (Zone 9) and are derived from Government control stations Blitzen, Padre, and Tack. Elevations are on Geodetic Datum and are derived from BM79H4359 - 528.922 metres via reciprocal trigonometric levelling.

PREPARED BY: Aero Geometrics Ltd.



**LEGEND**

**ALLUVIAL DEPOSITS**  
 Afp - flood plain: stratified silt, sand and gravel; subject to flooding.  
 At - terrace: low terraces of silt, sand and gravel; not subject to flooding.

**COLLUVIAL DEPOSITS**  
 Cs - slopewash: debris of rocks, sand and silt on steep to moderate slopes; some bedrock exposures.

**GLACIAL DEPOSITS**  
 Ggm - ground moraine: unsorted material ranging from clay to boulders on upland surfaces; isolated bedrock exposures.  
 Ghm - hummocky moraine: like Ggm but with more irregular surface and less compacted.

**GLACIOLUVIAL DEPOSITS**  
 Gfk - fan: narrow sinuous ridges of stratified gravel, sand and minor silt.  
 Gfp - plain: upland narrow plain of stratified sand, gravel and minor silt; possible isolated bedrock exposures.  
 Gfr - terrace: high terraces of stratified sand, gravel and minor silt.

**LACUSTRINE DEPOSITS**  
 Lp - plain: former glacial lake bottom of stratified clay and silt.

**BEDROCK**  
 R - undivided: mostly sandstone, conglomerate, shale, coal or volcanic sediments.  
 e - eroded, gullied.  
 / or - this covering of one unit over another.

NOTE: The descriptions on this legend are made without benefit of field check. The best gravel sources are probably: (1) Gfk, (2) Gfp, (3) Gfr, (4) Gfr.

238

Tk. Tulkoo 2a(a)

**Crows Nest Resources Limited**  
EXPLORATION

TELKWA PROJECT  
SMITHERS AREA  
WEST CENTRAL B.C.

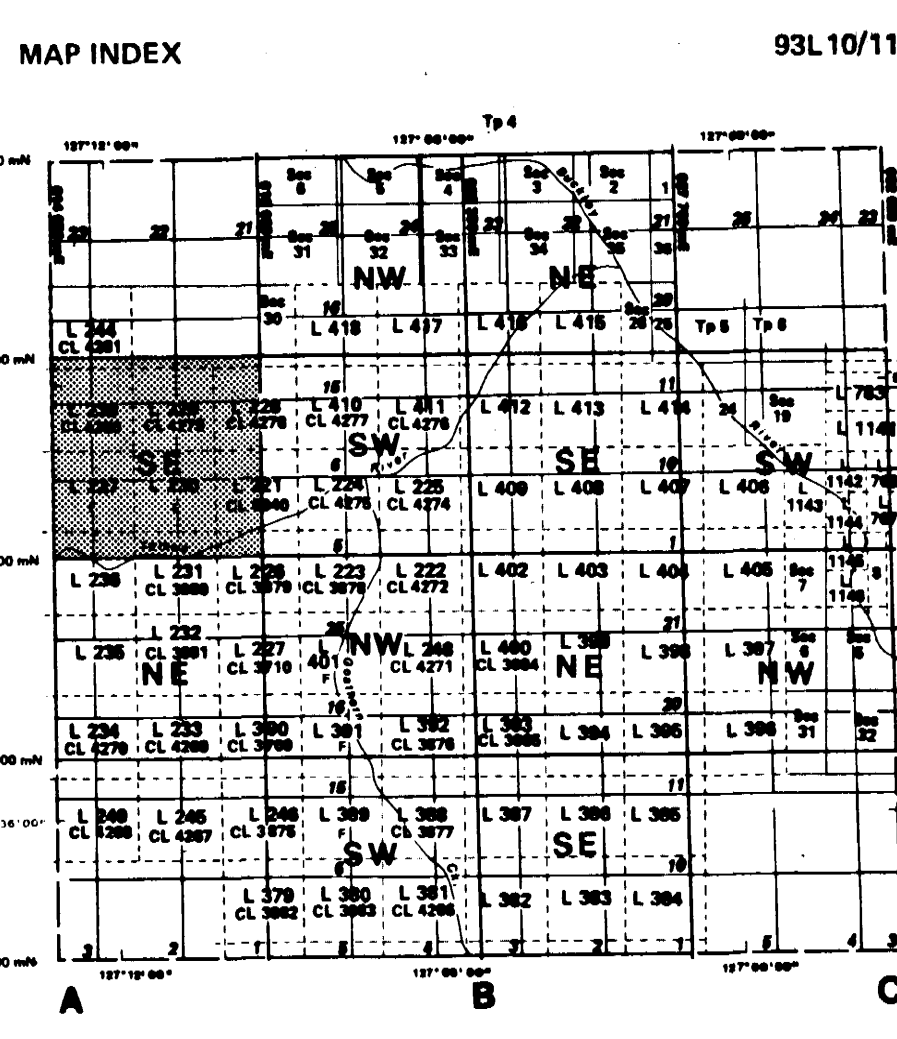
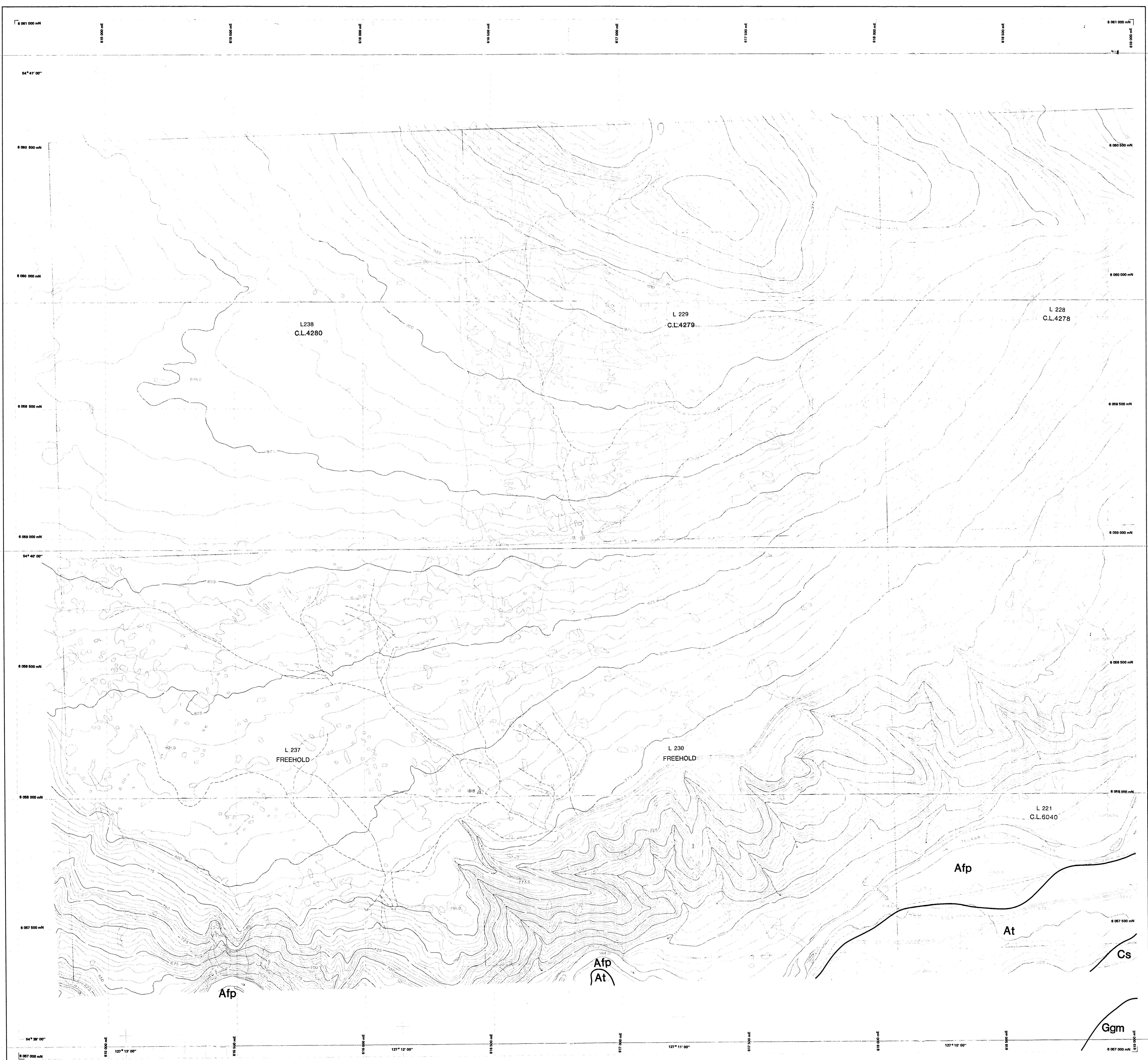
**QUATERNARY GEOLOGY** (17)

Enc. 1-6  
UTM ZONE 9

NTS 93L/11		SCALE: 1:5 000		DRAWN BY: P.F.B.	
AUTHOR: SPROULE ASSOC. LTD.		DATE: 83-01		REVISED:	
To Accompany 1982 GEOLOGICAL REPORT		DRAWING No: TW2U10			

C.W. Drew Jr., P. Geol.  
Sproule Associates Limited





**LEGEND**

MAIN ROAD  
SECONDARY ROAD  
BRIDGE, CULVERT  
TRACK or TRAIL  
BUILDING  
POLE  
FENCE  
CUT LINE  
SPOT HEIGHT  
CONTOURS  
DEPRESSION

RIVER  
INTERMITTENT STREAM  
LAKE  
SWAMP  
SAND  
SLIDE  
TREES  
DRILL HOLE  
HORIZONTAL CONTROL  
VERTICAL CONTROL  
HORIZONTAL, VERTICAL CONTROL

NOTE: LOT LINES APPROXIMATE ONLY

MAP PROJECTION: UNIVERSAL TRANSVERSE MERCATOR  
CENTRAL MERIDIAN REFERENCE 129° W UTM Zone 9

**SURVEY NOTE**  
Coordinates are on U.T.M. Grid (Zone 9) and are derived from Government control stations, Blizna, Pains, and Tack. Elevations are on Geoid; datum and are derived from BM 7962.509 - 538.922 metres via reciprocal trigonometric levelling.

PREPARED BY: Aero Geometrics Ltd.

**SCALE: 1:5000**  
CONTOUR INTERVAL: 5 METRES  
DATE OF PHOTOGRAPHY: Topography 1979  
Planimetry 1975 & 1979  
Compilation 1981 Cartography 1982

**LEGEND**

**ALLUVIAL DEPOSITS**  
Afp - flood plain: stratified silt, sand and gravel; subject to flooding.  
At - terrace: low terraces of silt, sand and gravel; not subject to flooding.

**COLLUVIAL DEPOSITS**  
Cs - clastic: debris of rocks, sand and silt on steep to moderate slopes; some bedrock exposures.

**GLACIAL DEPOSITS**  
Ggm - ground moraine: unsorted material ranging from clay to boulders on upland surfaces; isolated bedrock exposures.  
Gm - moraine: debris of rocks, sand and silt on steep to moderate slopes; some bedrock exposures.  
Ghm - hummocky moraine: like Ggm but with more irregular surface and less compacted.

**GLACIOFLUVIAL DEPOSITS**  
Gfs - fan: narrow sinuous ridges of stratified gravel, sand and minor silt.  
Gfsc - terrace: mound of stratified gravel and sand.  
Gfp - plain: upland outwash plain of stratified sand, gravel and minor silt; possible isolated bedrock exposures.  
Gftr - terrace: high terraces of stratified sand, gravel and minor silt.

**LACUSTRINE DEPOSITS**  
Lp - plain: former glacial lake bottom of stratified clay and silt.

**BEDROCK**  
R - undivided: mostly sandstone, conglomerate, shale, coal or volcanic sediments.  
r - eroded, gullied.  
r/c - thin covering of one unit over another.

NOTE: The descriptions on this legend are made without benefit of field check. The best ground sources are probably: (1) GfK, (2) GfA, (3) GfV, (4) GfP.

C.W. Drew Jr., P. Geol.  
Sproule Associates Limited

238

T.K. Telkwa 8A(a)

**Crows Nest Resources Limited**  
EXPLORATION

TELKWA PROJECT  
SMITHERS AREA  
WEST CENTRAL B.C.

QUATERNARY GEOLOGY

Encl 6  
UTM ZONE 9

NTS 93L/11	SCALE: 1:5 000	DRAWN BY: P.F.B.
AUTHOR: SPROULE ASSOC LTD	DATE: 83-01	REVISOR:
To Accompany 1982 GEOLOGICAL REPORT		DRAWING No: TW2T11