



Energy, Mines and  
Resources Canada



**OPEN FILE 1990-7  
SHEET 1 OF 2  
STRUCTURAL INTERPRETATION OF AIRBORNE SYNTHETIC  
APERTURE RADAR IMAGERY IN THE SULPHURETS-UNUK-ISKUT  
RIVER AREA, NORTHWEST BRITISH COLUMBIA(104B)**

NTS 104A/5, 12, 13  
104B/1, 6, 7, 8, 9, 10, 11, 14, 15, (16)  
BY I.C.L.WEBSTER AND W.J.McMILLAN

SCALE 1:100 000

**VOLCANIC AND SEDIMENTARY**

**QUATERNARY**

Q<sub>v</sub> BASALTIC FLOW AND TEPHRA

**MIDDLE TO UPPER JURASSIC**

J<sub>u</sub> BOWSER LAKE GROUP, INCLUDES SALMON RIVER FM.

**SEDIMENTARY**

**TRIASSIC TO LOWER JURASSIC**

J<sub>o</sub> MOUNT DILWORTH FORMATION, FELSIC VOLCANIC

T<sub>u</sub>J<sub>st</sub> VOLCANIC

**DEVONIAN TO PERMIAN**

P<sub>s</sub> STIKINE ASSEMBLAGE

PS VOLCANIC AND SEDIMENTARY

**INTRUSIVE**

**TERTIARY**

T<sub>g</sub> COAST PLUTONIC COMPLEX

**MESOZOIC**

M<sub>u</sub> TRIASSIC AND JURASSIC

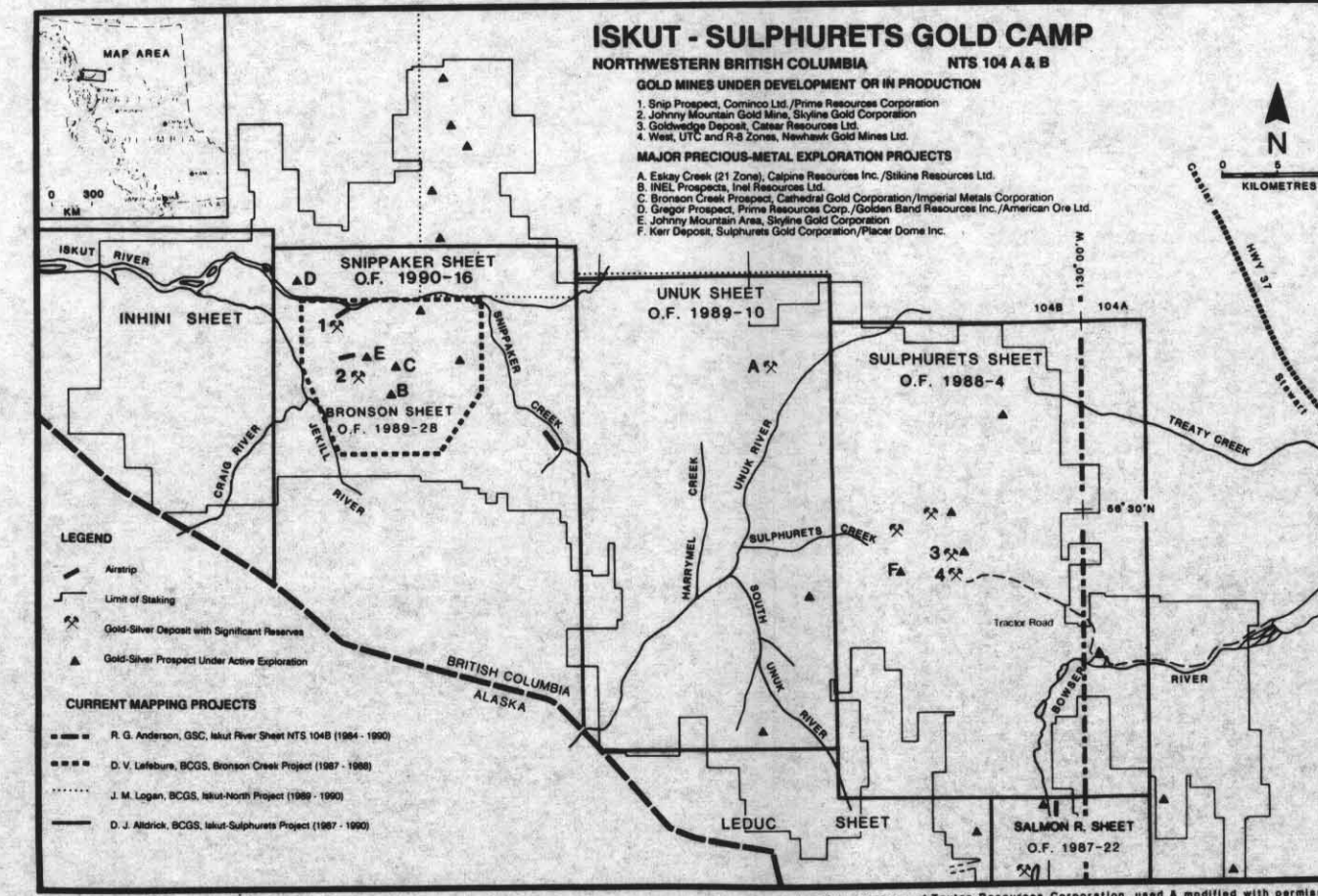
M<sub>u</sub> DIORITE TO SYENITE

**NOTES ON STRUCTURAL INTERPRETATION:**

Radar-image lineaments suggest a major fault system trends easterly along the Iskut River into the headwaters of the Unuk and northwesterly into Tegen Creek valley. Numerous splays with sigmoidal configurations are noted in this structure and suggest dextral strike-slip movement. The geometry of partial duplexes developed along this system also suggests right lateral movement. However, offset of the older north trending structures, such as the Hargreaves-Forrest Kerr Creek fault system, indicates a period of sinistral movement.

The Proulx plateau area of the upper Unuk River may represent a major extensional duplex that has been truncated by the Iskut River fault system. Evidence for an extensional regime on the Proulx plateau includes the down-dropping of the Bowser Lake Group into juxtaposition with the Hazelton Group.

**CAUTION:** Severe scale and angular distortion. Shadowing occurs on southwest facing slopes and ghosting is problematic in areas of extreme topographic relief.



**TECHNICAL DETAILS**

Airborne data acquired by Canada Centre for Remote Sensing July 25, 1990. Unuk Project (89-28). Swath mode. Nadir incidence angle range: from 0 to 74.5°. Image recorded with slant range swath width: 22 kilometres. Polarization: VV. Resolution (aircraft): range 500 metres at V looks. Master negative image scale 1:85 000. Look direction: southwest.

This joint airborne SAR project is part of the programme of experimental flights, organized by the Non-Renewable Resources Team, Radar Data Development Programme (RDDP), Applications Division, Canada Centre for Remote Sensing (CCRS) and the B.C. Geological Survey. The copyright for the radar data displayed remains with the Queen in right of Canada.

**REFERENCES**

Aldrick, D.J., Britton, J.M., MacLean, M.E., Hancock, K.D., Fletcher, S.A., Hebert, S.D. (1990). Geology and Mineral Deposits of the Snipakeet Area. B.C. Ministry of Energy, Mines and Petroleum Resources, Open File 1990-16.

Aldrick, D.J., Britton, J.M., Webster, I.C.L., Russell, C.W.P. (1989). Geology and Mineral Deposits of The Unuk Area. B.C. Ministry of Energy, Mines and Petroleum Resources, Open File 1989-10.

Aldrick, D.J. and Britton, J.M. (1988). Geology and Mineral Deposits of The Sulphurets Area. B.C. Ministry of Energy, Mines and Petroleum Resources, Open File 1988-4.

Aldrick, D.J. (1987). Geology and Mineral Deposits of the Salmon River Valley, Stewart Area. B.C. Ministry of Energy, Mines and Petroleum Resources, Open File 1987-22.

Aldrick, D.J., Mortensen, J.K., Armstrong, R.L. (1986). Uranium-lead age determinations in The Stewart Area. B.C. Ministry of Energy, Mines and Petroleum Resources, Geological Fieldwork 1985, Paper 1986-1.

Anderson, R.G. and Sevier, M.L. (1990). A note on Mesozoic and Tertiary K-Ar geochronometry of plutonic suites, Iskut River nap area, northwestern British Columbia. Geological Survey of Canada, Current Research, Part E, Paper 90-1E. Geological Survey of Canada (1987) Stikine River Area, B.C. (104A,B,G,H,I,J), Map 9-1987.

Grove, E.W. (1986). Geology and Mineral Deposits of The Unuk River - Salmon River - Anyox Area. B.C. Ministry of Energy, Mines and Petroleum Resources, Bulletin 63, 152 pages.

Kerr, F.A. (1948). Lower Stikine and Western Iskut River Areas, British Columbia. Geological Survey of Canada, Memoir 246, 94 pages.

Lefebvre, D.V. and Gunning, M.H. (1989). Geology of The Bronson Creek Area, NTS 104B/10W, 11E. B.C. Ministry of Energy, Mines and Petroleum Resources, Open File 1989-28.

Logan, J.M., Koyanagi, V.M. and Drobe, J.R. (1990). Geology, Geochemistry and Mineral Occurrences of The Forrest Kerr - Iskut River Area, Northwestern British Columbia (104B/10, 11). B.C. Ministry of Energy, Mines and Petroleum Resources, Open File 1990-2.

Read, P.B., Brown, R.L., Pauls, J.F., Moore, J.M., Journeay, M., Lane, L.S. and Orchard, M.J. (1989). Geology, More and Forrest Kerr Creeks (parts of 104B/10, 15, 16 and 104G/1, 2), Northwestern British Columbia. Geological Survey of Canada, Open File 2004.

Woodcock, N.H. and Fischer, M. (1986). Strike-slip duplexes. Journal of Structural Geology, Vol. 8, No. 7, pages 725-735.

