



MINFILE - PAST, PRESENT, AND FUTURE

By A. Wilcox and C. Ritchie

Numerous changes have taken place in the methods of collection, storage, and distribution of mineral inventory data by the Province of British Columbia since the inception of the mineral inventory file system 17 years ago.

PAST

A mineral inventory system consisting of a series of mineral deposit maps and a corresponding card file was started by the Geological Branch in 1967. This was a manual card file consisting of one card per deposit, and information recorded included: (1) identification; (2) location; (3) history of discovery; (4) status of mining or exploration; (5) work history; (6) references; (7) geological summary; and (8) detailed geology using 15 descriptive parameters. This system was difficult to use and complete so in 1969 plans were made to redesign the forms used for data capture to make the file compatible for computer storage using I.D. location, status, references, and geology. By working with the currently active properties, the Ministry planned to obtain as complete a coverage of the Province in as short a time as possible.

MINDEP was a research project initiated by the Department of Geological Sciences at the University of British Columbia, and initially financed primarily by research grants from the Ministry of Energy, Mines and Petroleum Resources and the federal Department of Energy, Mines and Resources to Drs. H. R. Wynne-Edwards and A. J. Sinclair. The objectives of the project were to develop a computer-processible mineral deposits data file, and to design methods for data retrieval and manipulation. The program was under the direction of Dr. J. H. Montgomery (Wynne-Edwards and Sinclair, 1976). The mineral inventory cards maintained by the Ministry of Energy, Mines and Petroleum Resources became the main source of basic data for the MINDEP project; it also incorporated data obtained from the MacDonald File (Montgomery, *et al.*, 1975; Sinclair, *et al.*, 1976), a private industry mineral deposits file.

MINDEP was transferred from the University of British Columbia to the computer facilities of the British Columbia Systems Corporation (BCSC) in 1976. With this transfer the file was renamed MINFILE and the task of maintaining data entry, and updating became the responsibility of the Resource Data and Analysis Section in Victoria. Initially MINFILE resided on a Honeywell 6066 computer and control programs were written in Cobol. A conversion took place in 1981 in which BCSC changed operating systems from Honeywell to IBM; the control programs were also converted to PL1.

OB2FSW001 PAGE 175
 84/04/12 MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES 00020000
 R0200L1 RESOURCE DATA SECTION 5 VERSION 1.1
 NAME(S) ASPEN(L 12471) N.T.S. 092103E 7 MI. QB2FSW001
 LAT 4910.9 UTMZ 1
 LONG 11711.1 UTMN
 ELEVATION 1100 UTMW
 MINING DIVISION NELS 6 MINERAL STATUS 2 PAPP
 LOCATION ACCURACY 1 MINDEP ID 00979
 COMMODITIES PRESENT 4 AG PB ZN AU MINERALS PRESENT 3 GLEN SFLR TROR DLMT
 CAPSULE GEOLOGICAL COMMENT THE INTRUSION OF GRANITIC MATERIALS INTO THE LIMESTONE IS THOUGHT TO HAVE FRACTURED THE LIMESTONE, AND IT IS ALONG THESE FRACTURE AREAS THAT, BY REPLACEMENT, MINERALIZATION HAS OCCURRED. STRIKE OF THE VEIN IS 20E AND DIP 50E. THE COUNTRY ROCK IS LIMESTONE OF LOWER CAMBRIAN AGE. THE DEPOSIT IS IN DOLOMITIZATION IN A ZONE OF THERMAL METAMORPHISM. MINERALS: GALENA, SPHALERITE, TETRAHEDRITE.
 NATIONAL MINERAL INVENTORY NO. 82F3 ZN8
 PUBLISHED RESERVES DATA 8
 1 ZONE ASPEN MINE
 DATE 19830628 (YEAR/MONTH/DAY)
 CLASSIFICATION INFERRED
 QUANTITY 45,360
 AG 202,1300 GT CUT-OFF USED
 OCCURRING IN AN 11.5 FOOT ZONE. ALSO ASSOCIATED AU, PB, AND ZN VALUES.
 PUBLISHED PRODUCTION DATA 9

YEAR	TONNES MINED	TONNES MILLED	GOLD (G)	SILVER (G)	COPPER (KG)	LEAD (KG)	ZINC (KG)	MOLY (KG)	OTHER
1918	6	0	0	13,499	0	0	0	0	0
1920	6	0	0	4,354	0	0	0	0	0
1934	16	0	31	18,506	0	431	365	0	0
TOTALS*	28	0	31	36,359	0	431	365	0	
IMPERIAL	20	0	0	1,168	0	950	804	0	

 BIBLIOGRAPHY
 1 N MINER APR 2, 1981
 2 N MINER FEB 19, 1981
 3 GCNL #41, 1981
 4 BCDM OPEN FILE
 5 GSC MAP 1091A, 299A
 6 GSC MEM 308-134, 149, 172-65
 7 GSC BULL 28-18
 8 GSC SUM RPT 1929-A266
 9 BCDM INDEX 3-188
 10 BCDM BULL 28-18, 41-89
 11 1959-62
 12 1933-232, 1934-A29, E22, 1935-A31, 050, 1936-E42, 1937-E53, 1951-139,
 13 1917-170, 195, 452, 1918-173, 198, 1920-133, 1926-278, 1927-308, 1928-348
 14 BCDM MMAR 1896-73, 1901-1222, 1912-155, 1913-131, 1914-329, 1915-162,
 15 BCDM ASS RPT 9053
 16 GCNL #128, 1983 RES

Figure 131. Typical MINFILE printout.

PRESENT

At the present time there are approximately 8 900 mineral occurrences listed in MINFILE; a mineral occurrence is defined as a concentration of any ore or economic mineral in bedrock, but excluding geochemical or geophysical anomalies or mineralized float. Incomplete placer and coal deposit information are also captured. The system resides on an IBM 3081 mainframe computer at the BCSC offices in Victoria. Inquiry into the system is by batch mode. Searching may be carried on any of the following nine categories (see Fig. 131):

- (1) B.C. Map number
- (2) Deposit type
- (3) Minerals present
- (4) Commodities present
- (5) NTS quadrangle
- (6) Mining Division
- (7) NTS
- (8) Reserves data
- (9) Production data

MINFILE is available to the public in three formats: microfiche, computer tape, and paper. The first two contain the complete file; the paper output may contain the whole file or may be part of a customized search on any of the nine categories above. Two cross-reference indexes are also available: alphabetical by property name, and by commodity. Mineral inventory maps at a scale of 1:125 000 or 1:250 000 are also available; these show location, property name, mineral inventory number, and commodities present.

Data is passed freely between Victoria and Ottawa, where MINFILE data is used to contribute to the National Mineral Inventory file.

FUTURE

MINFILE is currently undergoing a redesign to serve five main functions: (1) in conjunction with the Ministry's five-year plan to provide a better enquiry base for mineral inventory data for Ministry and industry use, (2) to eliminate long-term problems caused by converting from Honeywell to IBM mainframe, (3) to be able to down-load parts of data base onto personal computers for use by individual geologists in government and industry, (4) to provide graphic output capabilities, and (5) to provide a lead-in to 'expert' systems.

The working/steering committee formed decided at an early stage that the only practical choice of hardware was the VAX mini-computer already installed in the Mineral Titles Branch of the Ministry. The committee decided to develop a table-driven, relational data base. Geological Survey of Canada Paper 78-26 'Computer-based files on mineral deposits:

Guidelines and recommended standards for data content' (Longe, et al., 1978) was used to define certain areas and tables, and as a broad guide to the data base structure. The main tables to be included are: (a) economic minerals; (b) deposit type; (c) commodity; (d) age of deposit; and (e) name of formation (host rock). In addition to the tables, narrative (textual) descriptions will be associated with any area of the data base.

Implementation Schedule

1984/85:

- (1) Consultation on data base design with:
 - (a) Victoria staff
 - (b) District geologists
 - (c) Industry groups in Vancouver
 - (d) Energy, Mines and Resources/Geological Survey of Canada
- (2) Revisions to data base design
- (3) Final choice of software and programming
- (4) Pilot test conversion of system

1985/86:

- (5) Programming to capture new data
- (6) Complete conversion to new system
- (7) Testing
- (8) Routine production

Further information on the system or order inquiries may be made by telephone or directed to either of the authors at the following address:

Geological Branch
Mineral Resources Division
Ministry of Energy, Mines and Petroleum Resources
Parliament Buildings
Victoria, British Columbia
V8V 1X4
(604) 387-5975

REFERENCES

- James, G. L. (1979): British Columbia Mineral Exploration Information: Resources Branch Has a Wealth of Data, *Western Miner*, Vol. 52, No. 7, pp. 15-22.
- Longe, R. V., Burk, C. F., Dugas, J., Ewing, K. A., Ferguson, S. A., Gunn, K. L., Jackson, E. V., Kelly, A. M., Oliver, A. D., Sutterlin, P. G., and Williams, G. D. (1978): Computer-based Files on Mineral Deposits: Guidelines and Recommended Standards for Data Content, *Geol. Surv., Canada*, Paper 78-26.

- Montgomery, J. H., Sinclair, A. J., Wynne-Edwards, H. R., Fox, A.C.L., and Giroux, G. H. (1975): Data Capture in the Construction of MINDEP's Computer-based Mineral Deposits File, *Cdn. Jour. Earth Sci.*, Vol. 12, No. 4, pp. 698-703.
- Sinclair, A. J., Wynne-Edwards, H. R., and Montgomery, J. H. (1976): Some Geological Applications of the MINDEP Computer-based Filing System for Mineral Deposit Data, *C.I.M., Bull.*, Vol. 69, No. 772, pp. 119-125.
- Wynne-Edwards, H. R. and Sinclair, A. J. (1976): MINDEP Computer-processible Files of Mineral Deposit Information, *Western Miner*, Vol. 49, No. 2, pp. 10-18.