

# METALLIC MINERAL EXPLORATION IN WISCONSIN

## Summary of 1983 Activity

*This is the fourth in a series of annual summaries of metallic mineral exploration activity in Wisconsin. Please send comments to the author, William P. Scott, in care of the publisher, the Geological and Natural History Survey, 1815 University Avenue, Madison, Wisconsin 53705-4096 (608-263-7386).*

### HIGHLIGHTS OF 1983 ACTIVITY

The major highlight in 1983 for metallic mineral exploration was that exploration occurred in southern Wisconsin for the first time since 1979. The mineral exploration division of Mobil Oil Company drilled in five southeastern counties and one southwestern county to gather geologic information to guide them in their search for zinc and lead mineralization.

Exploration activity can be measured in various ways. The total number of holes drilled in 1983 was down 4 percent from the previous year. Total drilling in bedrock as measured by the lineal foot was down 27 percent. Total drilling, however, is a misleading indicator because it includes developmental drilling, that is, drilling performed on known and publicly announced mineral deposits. Only by excluding developmental drilling does one measure true exploration drilling as opposed to the legal definition of exploration drilling. True exploration drilling was up 23 percent over 1982 levels in both the number of holes drilled and in bedrock footage.

The number of companies licensed to drill for metallic minerals increased from 14 to 17. The number of companies actually drilling, usually less than the number that is legally entitled to drill, increased from 8 to 9 companies. If developmental drilling is disregarded, then the increase is from 7 to 9 companies performing exploration drilling. An average of 9 companies have drilled each year since licensing began in 1978.

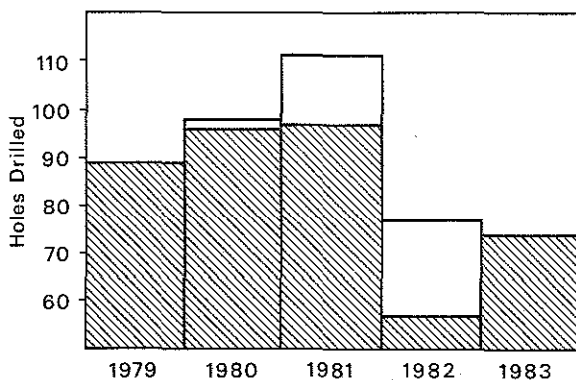


Fig.1 Number of Holes Drilled by Year.\*

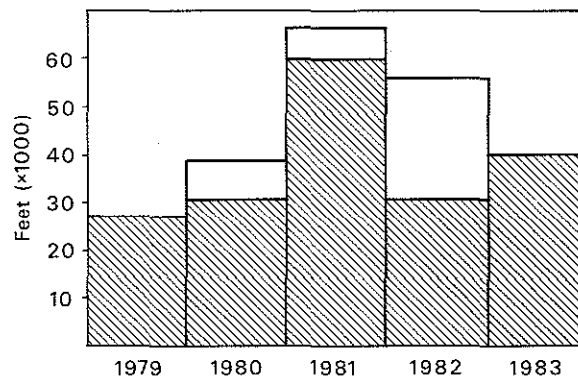


Fig. 2 Lineal Feet of Drilling in Bedrock. \*

\*The hachured portion represents true exploration drilling, unhachured portion represents developmental drilling.

<sup>1</sup> Exploration has a specific legal definition in Wisconsin that essentially is synonymous with drilling. Unless otherwise stated, this definition is followed in this report.

Drilling occurred in 14 counties in 1983. Five counties were added to the cumulative record of counties in which drilling has occurred, bringing that total to 24 since 1977.

The geologic information statute, s. 107.15, Wis. Stats., was the focus of two legal challenges in 1983. Attorneys for Noranda Exploration, Inc. initiated their case in 1979 but brought it to the Wisconsin Supreme Court in 1983. The court found that the provisions of the geologic information statute which provide for public disclosure of information are unconstitutional, but their judgment did not affirm in part or reject in part, it merely reversed the decision of the appellate court. The State contends that the law is still in effect except for those portions specifically found to be unconstitutional. In December of 1983, Ernest K. Lehmann and Associates of Wisconsin, Inc. started legal action against the State asking for return of their materials submitted under s. 107.15, stats., and for a judgment declaring the statute unconstitutional and permanently restraining enforcement of the statute. No decision was rendered by April 10, 1984.

#### 1983 METALLIC MINERAL EXPLORATION LICENSEES<sup>1</sup>

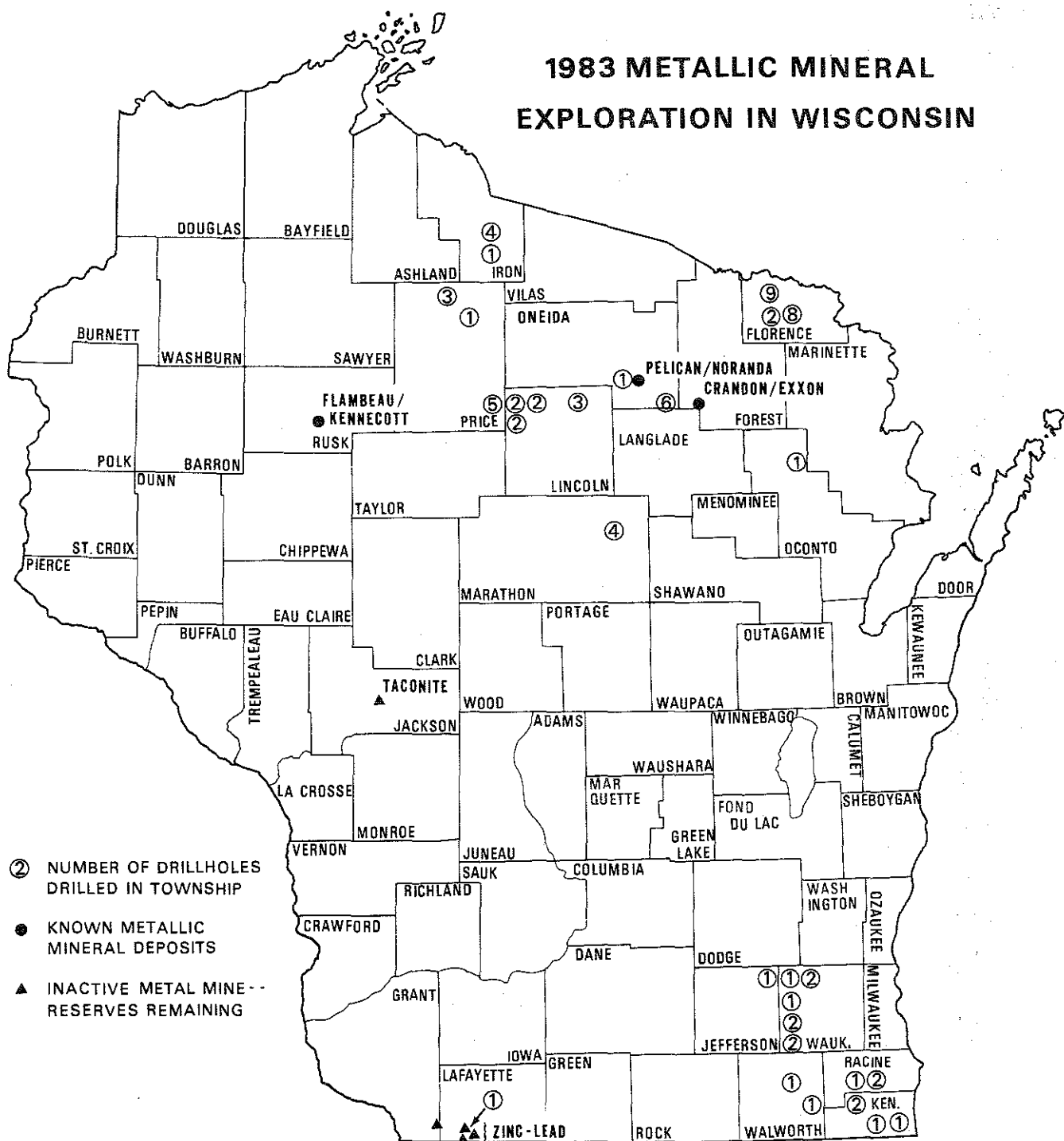
License		License	
No.	Company	No.	Company
1	Exxon Minerals Company	10	AMAX Exploration, Inc.
3	Noranda Exploration, Inc.	11	UOP, Inc. - Mineral Exploration
5	Ernest K. Lehmann & Assoc. of Wisconsin, Inc.	12	Inspiration Development Co.
6	Central Wisconsin Joint Venture (Getty Oil Co., Denison Mines U.S. Inc., Ernest K. Lehmann & Assoc. of Wisconsin, Inc.) <sup>2</sup>	15	Minatome Corporation
7	St. Joe American Corporation	17	Kerr-McGee Corporation
9	American Copper & Nickel Co. Inc	18	Amoco Minerals Company
		19	Amselco Exploration, Inc.
		20	Texasgulf Western, Inc.
		21	Mineralco, Inc. <sup>3</sup>
		22	Mobil Oil Corporation <sup>3</sup>
		23	Molycorp, Inc. <sup>3</sup>

<sup>1</sup> License numbers not shown on this list were issued previously to companies that did not renew for the year 1983.

<sup>2</sup> Denison Mines U.S. Inc. is no longer a partner in Central Wisconsin Joint Venture as of July 1, 1983.

<sup>3</sup> This company has not previously held a license to explore in Wisconsin.

# 1983 METALLIC MINERAL EXPLORATION IN WISCONSIN



WISCONSIN  
G&NS 5/84

All drillhole data are from public records--drillhole abandonment reports submitted to the Wisconsin Department of Natural Resources.

1983 METALLIC MINERAL EXPLORATION BY COMPANY AND COUNTY

<u>Company</u>	<u>Drillholes</u>	<u>Bedrock Footage</u>	<u>Total Footage</u>
Amax Exploration, Inc.	2	496	795
American Copper and Nickel Co., Inc.	4	955	1,137
Amoco Minerals Co.	5	2,339	2,767
Kerr-McGee Corporation	5	1,688	2,840
Ernest K. Lehmann & Associates of Wisconsin, Inc.	17	10,955	12,704
Mineralco Inc.	1	375	550
Mobil Oil Corporation	19	7,780	10,397
Noranda Exploration, Inc.	6	7,048	7,240
UOP Inc.	15	8,714	10,164
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TOTAL	74	40,350	48,594

<u>County</u>	<u>Drillholes</u>	<u>Bedrock Footage</u>	<u>Total Footage</u>
Florence	19	9,315	11,093
Iron	5	1,688	2,840
Jefferson	1	297	317
Kenosha	4	1,942	2,578
Lafayette	1	287	327
Lincoln	9	5,280	6,200
Marathon	4	955	1,137
Oconto	1	1,738	1,838
Oneida	7	7,423	7,790
Price	9	5,908	6,876
Racine	3	1,726	2,170
Taylor	1	263	423
Walworth	2	1,078	1,352
Waukesha	8	2,450	3,653
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TOTAL	74	40,350	48,594

# FIVE-YEAR METALLIC MINERAL EXPLORATION SUMMARY

	1979	1980	1981	1982	1983
Companies Licensed To Drill <sup>1</sup>	16	15	14	14	17
Newly Licensed Companies	3	1	1	2	3
Companies Conducting Drilling	9	9	10	8	9
Total Counties with Drilling	10	12	10	10	14
Total Holes Drilled	89 (89) <sup>2</sup>	98 (96)	111 (97)	77 (57)	74 (74)
Total Footage Drilled	34,660 (34,660)	49,562 (40,303')	77,999 (69,618)	66,580 (37,586)	48,594 (48,594)
Total Bedrock Footage	27,040 (27,040)	39,203 (31,520)	66,037 (60,096)	56,334 (31,481)	40,350 (40,350)

Source: DNR Drillhole Abandonment Reports and Metallic Mineral Exploration Licenses

<sup>1</sup> An exploration license may be obtained during any month of the year, but must be renewed each July 1. This total includes companies licensed to drill for all or part of the indicated year.

<sup>2</sup> Numbers in parentheses indicate number of drillholes or total footage or bedrock footage drilled for non-developmental exploration, that is for exploration performed at sites that are not known or publicly announced mineral deposits.