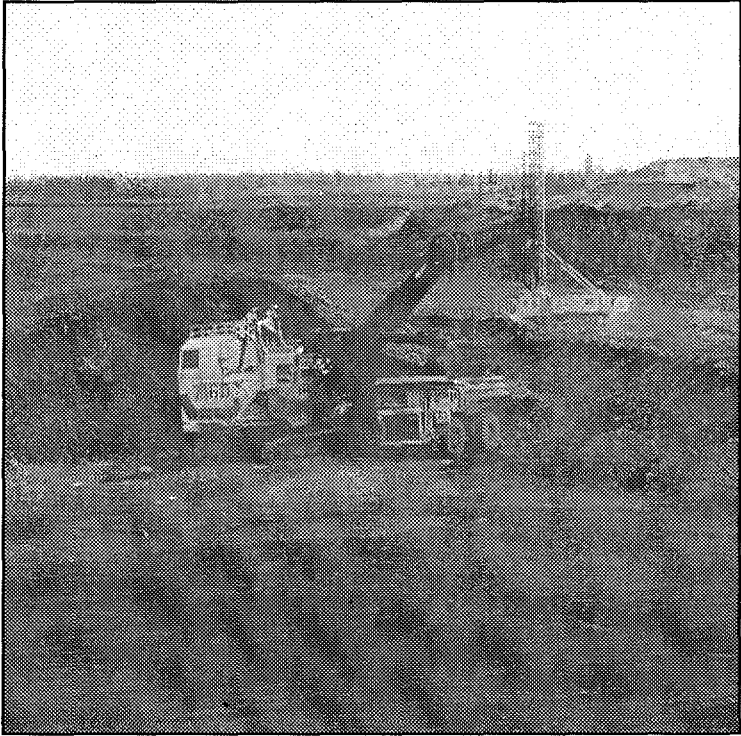


07 - 0292

**The  
Annual Report  
of the  
Inspector of Mines**

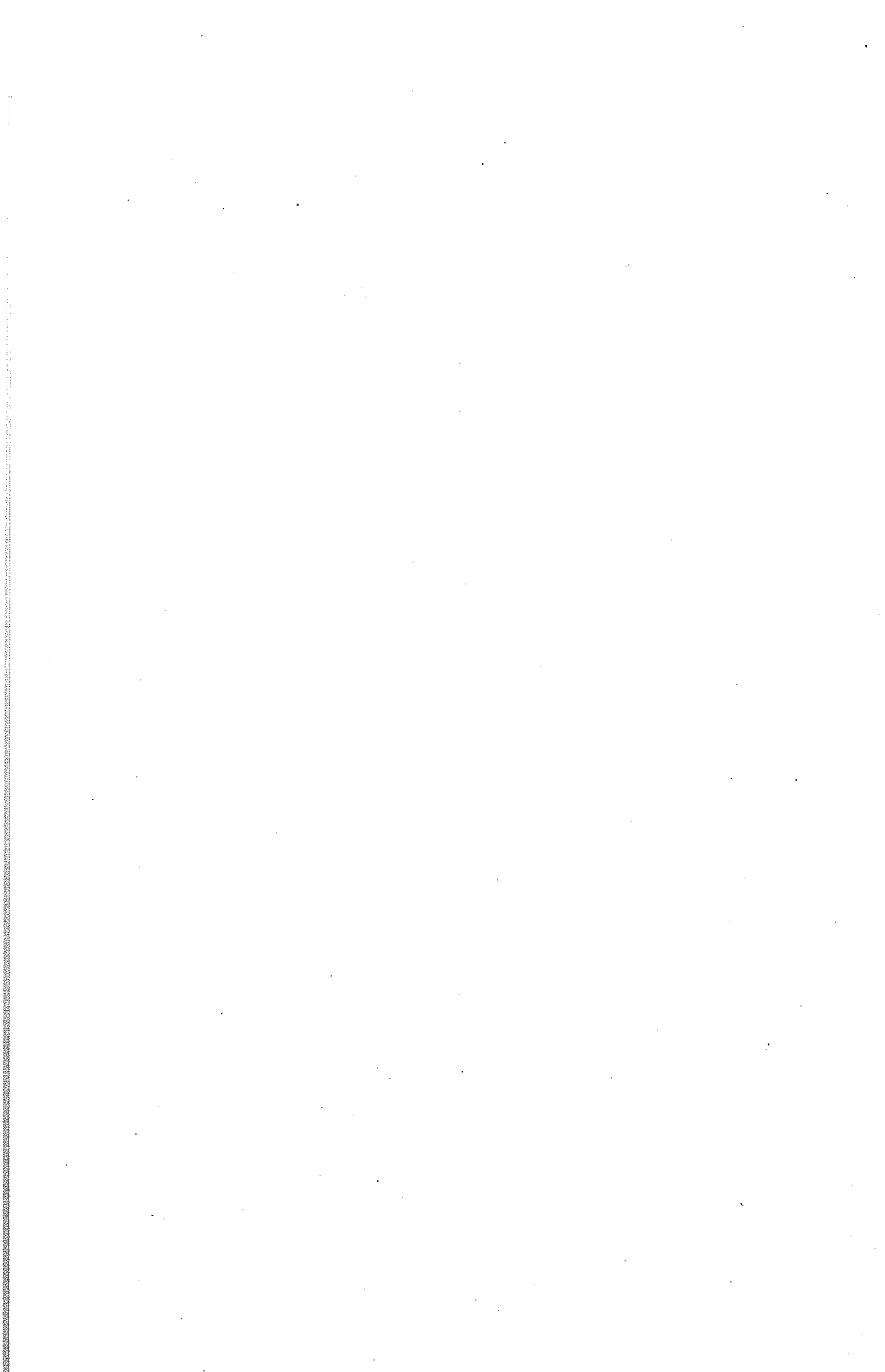


**2006**

**INSPECTOR OF MINES**  
Barry D. Lesar

**OFFICE AT**  
St. Louis County Garage  
Highway 135 East  
Virginia, Minn. 55792

**PHONE: 218-742-9840**



The  
**ANNUAL REPORT**  
of the  
**INSPECTOR OF MINES**  
St. Louis County, Minnesota

\*\*\*\*\*

2006

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**INSPECTOR OF MINES**  
Barry D. Lesar  
329 Viking Drive  
Hoyt Lakes, Minnesota 55750  
**HOME PHONE: 218-225-3203**  
**OFFICE PHONE: 218-742-9840**  
**MOBILE UNIT: CD-28**  
**E-MAIL: lesarb@co.st-louis.mn.us**  
**Fax: 218-741-7832**

**ASSISTANT MINE INSPECTOR**

Stanley J. Rojeski, Jr.  
4554 Vermillion Trail  
Gilbert, Minnesota 55741  
**HOME PHONE: 218-865-6945**  
**OFFICE PHONE: 218-742-9842**  
**MOBILE UNIT: CD-27**

**ASSISTANT MINE INSPECTOR**

Paul T. Wier  
2311 Station 44 Road  
Eveleth, Minnesota 55734  
**HOME PHONE: 218-744-2806**  
**OFFICE PHONE: 218-742-9843**  
**MOBILE UNIT: CD-20**

**ASSISTANT MINE INSPECTOR**

Terrance M. O'Neil  
616 S. Main Street, Box 294  
Biwabik, Minnesota 55708  
**HOME PHONE: 218-865-6978**  
**OFFICE PHONE: 218-742-9841**  
**MOBILE UNIT: CD-14**

**OFFICE AT**  
**ST. LOUIS COUNTY GARAGE**  
**7823 HIGHWAY 135 EAST**  
Virginia, Minnesota 55792  
**PHONE: 218-742-9840**

\*\*\*\*\*

**THE ST. LOUIS COUNTY BOARD OF COMMISSIONERS**

District 1 ..... Dennis Fink, Duluth, Minnesota  
District 2 ..... Steven O'Neil, Duluth, Minnesota  
District 3 ..... William J. Kron, Duluth, Minnesota  
District 4 ..... Mike Forsman, Ely, Minnesota  
District 5 ..... Peg Sweeney, Gnesen Township, Minnesota  
District 6 ..... Keith Nelson, Virginia, Minnesota  
District 7 ..... Steve Raukar, Kelly Lake, Minnesota

December 31, 2006

**THE HONORABLE BOARD OF COMMISSIONERS  
ST. LOUIS COUNTY  
COURT HOUSE  
DULUTH, MN 55802-1202**

Dear Chairman Kron, and Fellow Commissioners:

The Annual Report of the Inspector of Mines for the year 2006 is herewith submitted.

While the mining industry in northern Minnesota was marred by the tragedy at United Taconite in October, the overall condition of the industry has been very good for the second year in a row. With the return of United Taconite to full production and the continued work to bring the Polymet project at the old Erie mining company plant site on line, the future of mining in St. Louis and Itasca counties holds much promise for our area and our state.

The total employment for the year was 3,714 and these people worked a total of 7,657,134 manhours.

There was no natural ore shipped and 39,617,873 tons of taconite pellets shipped from these mines. There were 75,142,401 tons of stripping and waste removed from these mines.

Inspections and visits for 2006 were as follows: Approximately 675 inspections, visits and investigations were made to the operating and non-operating mines. There was 1 fatality and 14 lost time or serious accidents reported.

Acknowledgement and appreciation is extended to both Labor and Management for their continued interest, efforts and cooperation in the field of safety and health throughout the mines and plants in St. Louis and Itasca counties.

Respectfully submitted,



Barry D. Lesar  
Inspector of Mines  
St. Louis County

Excerpts from the Law On

**INSPECTOR OF MINES**

**CHAPTER 180**

**MINNESOTA STATUTES**

**SECTION 180.03**

**SUBDIVISION 3**

**ABANDONED MINES**

When any mine is idle or abandoned it shall be the duty of the inspector of mines to notify the person, firm, or corporation that is or has been engaged in the business of mining to erect and maintain around all the shafts, caves, and open pits of such mines a fence, barrier, appropriate signs, or combination of them, suitable to warn of the presence of shafts, caves, or open pits and reduce the possibility of accidentally falling into these shafts, caves, or open pits. If the mine has been idle or abandoned for more than ten years, or if the person, firm, or corporation that has been engaged in the business of mining no longer exists, the fee owner shall erect the fence, barrier, or signs required by this section. The notice shall be in writing and be served upon such person, firm, corporation, or fee owner by certified mail.

## SUMMARY OF STATISTICS

### MINES OF ST. LOUIS COUNTY, MINNESOTA

2006

Number of Mining Companies .....	7
Number of Mines in Operation .....	6
Number of Plants in Operation .....	6
Number of Wash Plants .....	0
Number of Mines Inactive .....	285
Number of Abandoned Mine Shafts .....	64
Total Number of Mines and Plants .....	291
Total Pellets Shipped .....	39,617,873
Total Ore Shipped .....	0
Taconite Mined .....	134,680,847
Stripping and Waste Removal, Tons .....	75,142,401
Total Material Moved, Tons Estimate .....	209,823,248
Total People Employed .....	3,714
Number of Fatal Accidents, Open Pit .....	0
Number of Fatal Accidents, Plant .....	1
Total Number of Fatal Accidents .....	1
Fatalities per 1,000 People Employed .....	0.27
Number of Lost-time and Time Charged Accidents .....	14
Total Number of Man-hours Worked .....	7,657,134
Number of Visits, Inspections and Investigations .....	675

### LABOR CLASSIFICATION AND HOURLY RATES

Shift Difference: .....	Sunday 11/4 Time
.....	Afternoon \$0.30
.....	Night \$0.45

### 2006 WAGE RATES INCENTIVE INCLUDED

Labor Grade	Wage Rate
1 .....	18.736
2 .....	20.608
3 .....	22.798
4 .....	24.047
5 .....	25.613

Due to Contractual changes the wage structure has changed significantly in recent years resulting in fewer job classes. This is one example of the several different pay schedules presently in effect.

YEAR	MINES	TONS SHIPPED	EMPLOYED	INJURED	FATALS	FAT/1000	WAGES
1905-10	(Average per year)		13,320		73	5.44	2.110
1910-11			19,918		78	3.91	2.640
1911-12			15,286		51	3.31	2.575
1912-13			16,048		44	2.74	2.705
1913-14			16,000		43	2.59	2.310
1914-15			11,430		24	2.10	2.421
1915-16			14,639		34	2.32	2.923
1916-17			14,779		22	1.51	3.391
1917-18	(Sliver Cave Disaster)		15,307		60	3.92	4.347
1918-19			14,212		33	2.32	5.645
1919-20	114	25,349,924	14,121		36	2.55	6.010
1920-21	102	27,165,386	12,043		26	2.16	6.037
1921-22	84	13,398,525	9,688		24	3.48	4.062
1923	90	33,147,517	11,896		27	2.27	5.076
1924	75	22,808,875	11,538		21	1.82	5.144
1925	76	29,077,679	10,180		18	1.77	5.126
1926	66	32,583,943	9,225		15	1.63	5.283
1927	70	28,052,363	9,038		22	2.43	5.305
1928	59	29,704,774	8,022		9	1.12	5.230
1929	57	35,680,720	8,008		17	2.12	5.340
1930	50	25,196,155	7,752		13	1.68	5.280
1931	32	12,270,886	4,824		4	0.83	5.260
1932	30	1,773,750	2,243		2	0.89	4.308
1933	35	10,809,167	2,843		1	0.35	4.433
1934	42	11,781,226	4,272		2	0.47	4.830
1935	40	13,703,715	4,079		6	1.47	5.060
1936	42	23,322,975	4,694		6	1.28	4.800
1937	52	36,536,326	6,356		5	0.79	6.200
1938	38	10,976,760	3,773		4	1.06	5.816
1939	43	24,156,258	4,589		3	0.65	6.080
1940	47	36,493,781	5,547		1	0.18	6.400
1941	63	45,874,218	7,097	60	5	0.70	6.820
1942	60	53,923,635	8,101	107	14	1.70	7.030
1943	62	51,753,320	9,597	156	7	0.73	7.440
1944	66	50,532,679	9,390	247	6	0.64	7.750
1945	56	47,544,509	8,495	175	12	1.41	7.720
1946	60	38,380,361	7,100	167	6	0.84	7.720
1947	79	47,293,918	8,715	153	9	1.03	8.720
1948	80	52,020,563	10,286	178	5	0.49	9.480
1949	94	42,406,528	9,680	187	7	0.72	9.480
1950	109	48,671,966	10,257	159	4	0.38	10.480
1951	116	60,249,538	11,884	188	8	0.66	10.480
1952	122	48,192,132	10,838	160	2	0.18	11.480
1953	122	60,776,174	12,079	215	4	0.33	12.160
1954	121	49,845,118	9,925	157	4	0.40	12.560
1955	127	36,137,304	10,381	151	2	0.19	14.850
1956	127	44,493,944	11,017	134	6	0.54	17.560
1957	124	50,093,275	12,804	144	6	0.47	17.560
1958	90	30,495,093	10,250	83	0	0.00	18.400
1959	89	16,055,353	9,256	93	4	0.43	22.480

YEAR	MINES	TONS SHIPPED	EMPLOYED	INJURED	FATALS	FAT/1000	WAGES
1960	95	39,526,879	11,797	132	2	0.16	22.430
1961	85	33,169,291	9,200	51	4	0.43	22.430
1962	46	23,269,349	8,676	57	1	0.11	22.430
1963	61	35,255,178	7,671	30	2	0.26	22.430
1964	42	39,115,088	8,102	26	1	0.12	22.430
1965	54	40,891,345	8,305	53	0	0.00	22.430
1966	49	44,412,473	9,445	56	4	0.43	22.430
1967	51	41,216,870	8,825	52	4	0.44	23.760
1968	53	43,078,879	9,125	55	2	0.22	25.640
1969	51	34,628,234	9,394	58	0	0.00	27.430
1970	49	33,648,268	9,631	71	5	0.52	28.520
1971	50	32,687,511	9,441	58	0	0.00	32.480
1972	46	35,100,156	9,431	63	0	0.00	34.096
1973	47	46,076,814	10,131	58	4	0.40	35.352
1974	49	51,745,763	10,667	60	1	0.09	44.360
1975	51	45,394,814	10,864	71	0	0.00	45.842
1976	52	41,425,833	11,514	77	1	0.09	47.368
1977	24	26,556,566	10,840	82	2	0.19	56.682
1978	26	50,806,547	13,056	138	1	0.08	64.344
1979	26	54,530,338	13,267	164	0	0.00	70.832
1980	18	42,076,497	11,441	107	1	0.09	80.112
1981	12	47,300,056	11,630	96	0	0.00	89.472
1982	11	22,335,570	7,626	44	0	0.00	94.192
1983	9	26,843,983	5,935	50	2	0.34	84.19
1984	9	30,463,941	6,305	55	0	0.00	87.39
1985	9	31,948,722	5,539	29	0	0.00	90.60
1986	9	26,608,768.51	5,250	33	0	0.00	94.19
1987	9	30,063,909	4,857	26	1	0.21	94.19
1988	9	37,250,242.97	4,546	41	1	0.18	94.19
1989	9	38,421,803	5,664	55	2	0.35	94.19
1990	9	41,441,888	6,379	40	1	0.16	94.19
1991	10	38,420,014	6,468	49	0	0.00	94.19
1992	10	37,684,439	6,325	110	0	0.00	106.94
1993	9	39,338,920	5,953	133	0	0.00	106.94
1994	9	43,976,323.01	6,051	97	1	0.17	93.936
1995	9	47,030,820.33	6,005	87	0	0.00	97.936
1996	8	46,144,620.64	6,032	96	0	0.00	101.936
1997	8	46,978,014	6,129	84	0	0.00	103.616
1998	8	46,862,734	5,962	114	1	0.17	105.936
1999	9	43,136,042	5,633	99	0	0.00	105.936
2000	9	44,806,128	5,610.7	77	1	0.18	109.936
2001	8	34,144,559.29	4,212	60	0	0.00	113.936
2002	8	39,087,907	4,036	60	0	0.00	113.936
2003	8	35,282,267	4,177	35	0	0.00	121.936
2004	8	42,059,597	3,444	24	0	0.00	145.384
2005	8	40,464,088.92	3,568	29	0	0.00	178.40
2006	7	39,617,873	3,714	14	1	0.27	178.40

Average/Day  
Average Day



**REPORT TO COUNTY INSPECTOR OF MINES  
(Minnesota Statutes 180)  
ORE SHIPPED FROM MINES, TONS OF STRIPPING REMOVED  
NUMBER OF PEOPLE EMPLOYED, MINES OF ST. LOUIS COUNTY, MINNESOTA  
YEAR ENDING DECEMBER 31, 2006**

MINES AND SUPERINTENDENTS	TONS OF NATURAL ORE SHIPPED	TONS OF TACONITE PELLETS SHIPPED	TOTAL TACONITE MINED	TONS STRIPPING WASTE *	AVG. NO. PEOPLE EMPLOYED PLANTS/PITS	MAN HOURS	MONTHS WORKED
CLIFFS ERIE L.L.C.  Operations Manager T. 59, 60, R. 12, 15	Shut Down and Deactivation activities for the old LTV Steel Plant						
UNITED TACONITE LLC Todd Roth - VP & General Manager	All Tonnages in Long Tons	4,278,000	13,217,000	16,633,000	484	1,025,641	12
Keewatin Taconite Co. Division of USX	Itasca Co. Production St. Louis Co. Production	5,073,233 0	19,027,394 0	6,353,511 0	Mine 148 Plant 145 Mine Maintenance & Elec. 88 Administrative 15	307,928 303,429 184,098 32,234	12 12 12 12
HIBBING TACONITE CO. Ed Latendresse, Manager T. 57, R. 20, & 21	Production Shipped From Plant Total Vessel	8,349,725 8,255,965** 8,310,368	30,112,137	21,215,297	725	1,419,115	12
MITTAL STEEL USA, MINORCA MINE, INC. Minorca Mine J.H. Holmes, General Manager	All Tonnages in Long Tons	71,889 - chips 2,838,944 - Flux 2,910,833 - Total	8,407,411	8,618,313	335	703,650	12

**REPORT TO COUNTY INSPECTOR OF MINES**  
**(Minnesota Statutes 180)**  
**ORE SHIPPED FROM MINES, TONS OF STRIPPING REMOVED**  
**NUMBER OF PEOPLE EMPLOYED, MINES OF ST. LOUIS COUNTY, MINNESOTA**  
**YEAR ENDING DECEMBER 31, 2006**

MINES AND SUPERINTENDENTS	TONS OF NATURAL ORE SHIPPED	TONS OF TACONITE PELLETS SHIPPED	TOTAL TACONITE MINED	TONS STRIPPING WASTE *	AVG. NO. PEOPLE EMPLOYED PLANTS/PITS	MAN HOURS	MONTHS WORKED
NORTH SHORE MINING COMPANY Babbitt, Silver Bay M. Mlinar, General Manager	All Tonnages in Long Tons	4,337,968	14,673,313	9,936,060	507	1,036,087	12
USX CORPORATION S. Coleman, Gen. Mgr. Minntac Plant, Mt. Iron T. 58, R. 17 Minntac Mine  Minntac Plant  Shop, Warehouse, & Miscellaneous	All Tonnages in Gross Tons	14,761,874	49,243,592	12,386,220  Mine, Crushing - 527  Concentrating, Agglomerator Operations - 313  Maintenance, Tech. Services, Administration - 427	527  313  427	1,100,228  653,395  891,329	12  12  12
<b>TOTALS</b>		39,617,873	134,680,847	75,142,401	3,714	7,657,134	12
TOTAL RAW ORE							
TOTAL RAW ORE AND PELLETS		39,617,873 TONS	TOTAL NATURAL ORE & TACONITE MINED		134,680,847 TONS		

**REPORT TO COUNTY INSPECTOR OF MINES**  
**(Minnesota Statutes 180)**  
**ORE SHIPPED FROM MINES, TONS OF STRIPPING REMOVED**  
**NUMBER OF PEOPLE EMPLOYED, MINES OF ST. LOUIS COUNTY, MINNESOTA**  
**YEAR ENDING DECEMBER 31, 2006**

NON-FERROUS MINES AND SUPERINTENDENTS	TONS OF PRODUCT SHIPPED	TOTAL ORE MINED	TONS STRIPPING WASTE *	AVG. NO. PEOPLE EMPLOYED PLANTS/PITS	MAN HOURS	MONTHS WORKED
---	-------------------------------	-----------------------	------------------------------	---	--------------	------------------

Polymet Mining Corp.  
 Don Hunter  
 Project Manager

NON-FERROUS PROPERTY, IN DEVELOPMENT, NOT IN PRODUCTION AT THIS TIME

TOTAL MATERIAL MOVEMENT  
 FERROUS AND NON-FERROUS

- \* - Total Tonnage of both waste rock and overburden removed to expose the ore body
- \*\* - Tonnage Used to Determine Total Production Shipped for the year

**MINING COMPANIES, MINE OPERATIONS,  
SAFETY PERSONNEL AND OTHER AGENCIES**

**CLIFFS ERIE L.L.C**

P.O. Box 900  
Hoyt Lakes, Minnesota 55750  
Phone: 218-225-4250  
Fax: 218-225-4230

Bruce Gerlach ..... Area Manager, Facilities

**\* \* \* \* \***

**KEEWATIN TACONITE**

One Mine Road  
P.O. Box 217  
Keewatin, Minnesota 55753  
Phone: 218-778-6521

Scott Coleman ..... General Manager  
Jeremy Smolich.... Area Manager - Plant Operations & Maintenance  
John Skube ..... Labor Relations  
Scott Karpinen ..... Staff Supervisor of Safety  
Don Thompson ..... Area Manager - Mine  
William Getty ..... Area Manager, Electrical & Mine Maintenance

**\* \* \* \* \***

**UNITED TACONITE LLC**

P.O. Box 180  
Eveleth, MN 55734  
Phone: 218-744-7800

T.D. Roth ..... General Manager  
T.W. Nanti ..... Area Manager - Plants  
M. Smith ..... Area Manager - Mine  
T. Davis ..... Area Manager, Technical Services  
B. Wittman ..... CFO  
J. Baxter ..... Area Manager, Human Resources

**HIBBING TACONITE COMPANY**

P.O. Box 589  
Hibbing, Minnesota 55746  
Phone: 218-262-6800

E.M. Latendresse ..... General Manager  
S.G. Rogers .... Area Manager - Technical Services & Environmental  
T.S. Tomsich ..... Sr. Area Manager - Financial Control  
J.T. Croswell ..... Area Manager - Mining  
P.A. Carlson ..... Area Manager - Concentrator  
S.H. Romani ..... Area Manager - Pellet Plant  
D.E. McLaughlin ..... Area Manager - Maintenance Service  
D.G. Pollock ..... Area Manager - Materials  
J.C. Tamminen ..... Area Manager - Mine Maintenance  
K.K. Eggert ..... Area Manager - Information Technology  
E.G. Bryant ..... Sr. Area Manager - Human Resources

\* \* \* \* \*

**MITTAL STEEL USA  
MINORCA MINE, INC.**

5950 Old Hwy. 53  
P.O. Box 1  
Virginia, Minnesota 55792  
Phone: 218-749-5910  
Fax: 218-749-5256

**DIRECTORS**

Jonathan H. Holmes, Madhu G. Ranade, Carlos Hernandez,  
Vaidya Sethuraman, Fernando Ruiz Sahagun,  
Leonard H. Chuderewicz

**ISPAT INLAND MINING OFFICERS**

Madhu G. Ranade ..... President & COB  
Jonathan H. Holmes ..... Vice President  
Thomas A. McCue ..... Treasurer  
Marc R. Jeske ..... Secretary  
Matthew Scherschel ..... Assistant Secretary

**SECTION MANAGERS**

J.H. Holmes ..... Operations Manager - Minorca Mine  
R.E. Aaseng ..... Manager - Plant  
W.M. Bond ... Division Manager - Business & Operating Technology  
G.L. Golobich ..... Manager - Human Resources/Labor Relations  
E.A. Soderberg ..... Plant Controller  
S.W. Harrison ..... Manager - Pit  
G.R. Josephson ..... Manager, Safety & Environmental  
T.R. Cossalter ..... Manager - Purchasing

\* \* \* \* \*

**NORTHSHORE MINING COMPANY**

10 Outer Drive  
Silver Bay, Minnesota 55614  
Phone: 218-226-4125

M. Mlinar ..... General Manager  
M. Buckley ..... Area Manager, Technical Services  
B. Bundschuh ..... Area Manager, Silver Bay Power & Energy  
C. Viola ..... Area Manager, Finance Control  
J. Korpi ..... Area Manager, Silver Bay Operations  
J. Sandstrom ..... Area Manager, Railroad  
K. Kerschen ..... Area Manager, Human Resources  
J. Lipovetz ..... Area Manager, Mine  
K. Alvey ..... Corporate Manager, Safety and Health  
H. Garland ..... Area Manager, Materials  
D. Scamehorn ..... Area Manager, Maintenance

**NORTHSHORE MINING AREA SAFETY COORDINATORS**

Phone: 218-827-2101

D. DeBeltz ..... Mine Safety Representative  
L. Rasmussen ..... Mine Safety Associate  
S. Eckman ..... Reliability  
S. Thompson ..... Maintenance  
T. Edman ..... Railroad  
D. Solberg ..... Warehouse  
C. Lekatz ..... Railroad  
T. Bee ..... Railroad  
T. Lilienthal ..... Mine Operations  
M. Vandervest ..... Mine Operations  
B. Sader ..... Mine Operations  
M. Brenny ..... Mine Operations  
J. Tuomala ..... Mine Operations  
E. Mayranen ..... Mine Operations  
M. Muhvich ..... Mine Operations  
J. Struna ..... Mine Operations

**USS, A DIVISION OF USX CORPORATION**

Minnesota Ore Operations

General Office - Mt. Iron, Minnesota 55768

Phone: 218-749-7200

Scott Coleman ..... General Manager

John Skube ..... Manager - Employee Relations

**ORE OPERATIONS**

Ray Luoma ..... Division Manager - Maintenance Services

Bruce Kniivila ..... Division Manager - Mining, Crushing

Brian Rauzi ..... Senior Staff Supervisor - Safety & Security

Greg Yanief ..... Division Manager, Concentrator & Agglomerator

Bob Youngman ..... Staff Supervisor - Safety

Kent Swanson ..... Staff Supervisor - Safety

\* \* \* \* \*

**POLYMET MINING**

P.O. Box 475 County Road 666

Hoyt Lakes, MN 55750

**OFFICERS**

Ian Forrest ..... Chairman of the Board

William Murray ..... President and Chief Executive Officer

Douglas Newby ..... Chief Financial Officer (corporate)

\*James Swearingen ..... Chief Financial Officer (U.S. subsidiary)

\*Warren Hudelson ..... Executive Vice President - Development  
(Director of U.S. subsidiary)

Gaston Reymanants ..... Vice President - Marketing

**STAFF**

\*Don Hunter ..... Project Manager

\*James Scott ..... Manager - Environmental

\*Richard Patelke ..... Project Geologist

\*Joe Scipioni ..... Manager - Operations and Development

\* = Offices at the PolyMet Office at the PolyMet Hoyt Lakes Plant Site

\* \* \* \* \*

**ALWORTH LAND & IMPROVEMENT COMPANY**

1605 Alworth Building  
306 W. Superior Street  
Duluth, Minnesota 55802  
Phone: 218-722-0816

R.K. Prescott ..... Chairman  
Nicholas B. Alworth ..... Vice Chairman  
Steven G. LaFlamme ..... President  
Roger D. Wedin ..... Executive Vice President  
George W. Kratzner, II ..... Treasurer  
Thea M. Littler ..... Secretary

\* \* \* \* \*

**THE AMERICAN IRON ORE ASSOCIATION**

11 E. Superior Street  
Suite 514  
Duluth, MN 55802  
Phone: (218) 722-7724  
FAX: (218) 720-6707  
[www.aioa.org](http://www.aioa.org)

Anne Glumack ..... Interim Director

**CONGDON MINERAL MANAGEMENT INC.**

1910 East 8th Avenue  
P.O. Box 650  
Hibbing, Minnesota 55746  
Phone: 218-262-6127

John P. Congdon ..... President  
David C. Adams ..... Vice President  
David C. Dudley ..... Vice President, Secretary, Treasurer  
David G. Meineke ..... Vice President  
Susan K. Milani ..... Assistant Treasurer  
Bethany J. Hooper ..... Assistant Secretary

\* \* \* \* \*

**EVELETH FEE OFFICE, INC.**

301 McKinley Avenue  
P.O. Box 521  
Eveleth, Minnesota 55734-0521  
Phone: 218-744-4646  
Fax: 218-744-2149

Daniel L. England ..... President  
Thomas J. Malkovich ..... Vice President/Manager of Mines  
Beverly A. Saranpaa ..... Administrative Assistant

\* \* \* \* \*



**GREAT NORTHERN IRON ORE PROPERTIES**

801 East Howard Street  
P.O. Box 429  
Hibbing, Minnesota 55746-0429  
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Fax: 218-262-4295

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**\* \* \* \* \***

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**\* \* \* \* \***

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\* \* \* \* \*

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Cliff Tobey ..... Area Chair, Shops  
Dan Grzybowski ..... Area Chair, Pit  
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Gerry Knaeble ..... Chairman, Safety Committee  
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Mike Neri ..... Financial Secretary  
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Mark Hagsten ..... Safety Committee Co-Chairman  
Dennis Jensrud ..... Safety Coordinator - Plants  
Rodney Moberg ..... Safety Coordinator - Mines

# FATAL INDUSTRIAL ACCIDENT

## Name of Deceased, Age and Occupation

Andrew D. Reed, 24 Years Old, Electric Coordinator

## Nature and Extent of Injuries

Trauma due to an electrical explosion in the New Side M.C.C. Room

On Wednesday, October 11, 2006 there had been a general shut-down of the concentrator for maintenance in the tails pocket. After the tails pocket maintenance was finished the operating lines in the concentrator were sequentially restarted. When the #4 mill line was restarted the #4 Ball Mill only ran for about 20 minutes before the south ball mill motor experienced an electrical failure and caused the mill to shut down. The electrical department started to troubleshoot the problem to correct it. This troubleshooting continued from approximately 5:30 P.M. on October 11, 2006 through 2 shifts to the time of the accident at approximately 12:45 P.M. Thursday, October 12, 2006, with various electricians working on it.

On day shift Bryan Sandnas (who came out early on night shift to work) was the lead electrician working on the problem with Erik Maki assisting as needed. Andrew Reed was the Electrical Coordinator on days who oversaw the work. During the morning Bryan and Erik tried several things to rectify the problems on the #4 Mill. One of the items they wanted to try was doing a test start on test power. In order to do this they needed to rack out the mill starter and engage the test power in the cabinet. They tried to rack out the starter but they had difficulty and couldn't rack out the starter for some reason, so they continued working on the relay circuits to try and determine the problem. While checking out the relays they did find a cracked base on one and found the ground relay would trip if touched, so Bryan changed the relay base and cleaned the ground relay contacts, which appeared to fix that problem. At this point (9:00 A.M.) they thought they had solved the problem so they waited until 9:30 A.M. to try starting the mill again (so the contractors on #5 mill would be clear for coffee). When they tried restarting at 9:30 everything looked good and the mill was running, but it only ran for about 5 minutes before dropping out again. At this time Bryan felt the only way to continue was to try eliminating parts of the relay circuits to determine which control section the fault was in. After trying several things they were left with having to rack out the starter to run on test power. At this time Bryan worked the switch several times and finally got the starter to rack out. Brian then opened the cabinet door and visually looked at the rack out linkage to see if anything was wrong with it, but he couldn't see anything that seemed to be causing the difficulty in racking out. Bryan and Erik then tried several things using test starts in test power and got to the point they thought they had narrowed the problem down to a point where they could try starting the mill.



Due to the nature of what they found Bryan asked Andrew Reed if they could try starting the mill on test power rather than through the normal power system for closing the contacts. Andrew thought that this would be OK and they decided to try starting the mill after lunch.

After lunch Bryan Sandnas, Erik Maki, and Andrew Reed went to the M.C.C. room and Bryan made sure the #4 mill south motor M.C.C. cabinet was shut and bolted. He then racked in the south motor M.C.C. and proceeded to do the same to the north motor M.C.C. Bryan then put the test power on to the circuit; he then turned the control power on both the north and south motors and both green lights came on. Bryan checked that both the I.S. reset and overloads were OK and when he was walking away from the starter cabinets he said that they needed to watch the relays when they tried to start the mills. Andrew Reed stood clear of the starter cabinets and in a location where he could see both the north and south motor relay cabinets above the starter cabinets. Erik Maki stood in the northeast corner of the M.C.C. room to watch one set of relays and Bryan Sandnas also stood in the northeast area to watch another set.

At this time the control room operator called to see if they were ready to try starting the #4 mill, and was told that they were ready. The control room then initiated the start procedure and tried starting the mill. When the mill tried to start, Bryan Sandnas saw the relays he was watching pick up and then drop out again. At this time he heard a noise, turned and saw a ball of fire over the top of the cabinets that were located between his position and the starter cabinets. The initial noise was followed by a louder noise that continued on for what seemed to be a long time to Bryan. The M.C.C. room immediately darkened and both Bryan and Erik exited the room via the mandoor in the northeast corner of the room. While they were doing this they called on their radios for the control room to shut everything down. They also tried to contact Andrew Reed, but they couldn't be sure their radios were working or if anyone could hear them. Due to the smoke and the fact that lighting had gone out they were forced to leave the area.

### **Conclusion**

At some time during the start up of the mill a phase to phase and phase to ground short developed in a starter cabinet. This resulted in the several explosions that the witness described and the extreme over pressure and heat generated by the electricity caused the fatal injuries.

The cause of the phase to phase and phase to ground short in the new side M.C.C. Room has not been determined at this time.

At this time there can be no determination of why the electrical discharge lasted for the time it did or exactly what caused it. This portion of the investigation will be revisited when a final conclusion can be determined.

## NON-FATAL LOST-TIME AND SERIOUS ACCIDENTS

### MITTAL STEEL USA, MINORCA MINE, INC.

Utility Equipment Operator, Date of Accident - April 6, 2006. Injured was in the process of using a forklift to remove a small boat from on top of some 4" pipe which was stored on top of old large tires, which were being used as blocking to keep stored parts out of the snow. After injured used the forklift to lift the boat, he exited the forklift to retrieve the oars which were also stored in the same place. As injured approached the tires a piece of the stored pipe rolled off the tires and struck injured on his left ankle. This resulted in a fractured left ankle. Days Lost - 83

Lab Analyst, Date of Accident - August 1, 2006. Injured was lifting a sample bucket of pellets into the waste skip. While lifting the bucket (weight 30 pounds) she felt a pain in her shoulder. This resulted in a strained left shoulder. Days Lost - 8

### UNITED TACONITE LLC

#### MINE

Mine Operations, Truck Driver, Date of Accident - September 29, 2006. Injured was having the truck he was driving loaded at the shovel; a large chunk of material impacted the truck box causing a severe jolt in the operator's cab of the truck. This jolting resulted in a muscle tear to the injured's shoulder. Days Lost - 65

#### PLANT

Plant Maintenance Mechanic, date of Accident - July 10, 2006. Injured and his partner were working on a horizontal pump. While attempting to roll the suction side of the pump case by hand, the pump case tipped and pinched injured's index finger. This resulted in the tip of the finger being cut off. Days Lost - 70

Plant Operations, Operations Maint. Tech., Date of Accident - August 13, 2006. Injured was removing a nozzle from a 1.5 inch hose. When injured twisted the nozzle off he felt a slight pain in his back. This action resulted in a lower back strain. Days Lost - 7

Plant Maintenance, Electrician, Date of accident - October 23, 2006. Injured was disconnecting the #4c tails pump motor. While pulling on a wrench to loosen a bolt, the wrench slipped. This resulted in a tendon rupture to the left thumb. Days Lost - 14

## HIBBING TACONITE COMPANY

Shovel Operator, Date of Accident - January 28, 2006. Injured was dismounting from the shovel via the frequently used boarding ladder, as the man lift was not operational at the time. The manual boarding ladder was stuck and while stomping on the ladder to free it, the ladder released and injured jumped on as it lowered. When the ladder hit the ground, injured sprained her right ankle and fractured a bone in her right foot. Days Lost - 50

Service Truck Driver, Date of Accident - April 17, 2006. Injured had left the reporting area and was driving west on the main haul road to access the water wagon at the beginning of the shift. While driving to the water truck, injured started to pass a production truck going the same direction. While passing the production truck, injured had to drive over a windrow in the road that is present while grading the road. When injured turned to re-enter the lane in front of the production truck, the van he was driving flipped and rolled over. The production truck driver stated that he saw a cloud of dust from the van flipping and rolling to the right and he managed to turn the production truck to the left to avoid striking the van. Injured was wearing his seat belt at the time of the accident and states that he was traveling around 40 mph at the time of the accident. The windrow that injured had to drive over was approximately 6-8 inches in height. This accident resulted in a bruised left shoulder and right leg. Days Lost - 14

Service Truck Driver, Date of accident - July 6, 2006. Injured was moving worn shovel teeth from the service truck to the used teeth dock when the shovel tooth slipped out of injured's hand and landed on his foot. This resulted in a fractured foot requiring surgical repair. Days Lost - 85

Shovel Operator, Date of Accident - October 7, 2006. Injured was assisting a mechanic in the installation of a shim on the shovel bucket door latch. The mechanic was having difficulty inserting the rod that holds the shims in place. The mechanic had lifted the latch bar to allow the rod to drop through the shims. Injured had put her hand on top of the rod in an attempt to get it to drop through the shims. When the mechanic lifted the latch bar, injured's right index finger was pinched between the rod and the structure of the bucket. This resulted in a pinched finger, requiring surgical repair. Days Lost - 10

## LTV CLIFFS LLC, ERIE MINE

- No Accidents Reported for 2006, not Operating

## KEEWATIN TACONITE

No Serious or Lost Time Accidents in 2006

### NORTHSHORE MINING COMPANY

0 Lost Time or Time Charged Injuries in 2006

### USX CORPORATION, MINNTAC MINE

Field Maintenance Mechanic, Date of Accident - February 9, 2006. The injured employee and his partner were assigned to reposition a pin that had walked out on the #39 Shovel dipper. This entailed pushing the stick heel pin in with a hydraulic jack and placing a bolt in place to hold it. Injured and his partner pulled the #602 service truck behind the dipper, approximately 10" away. Working off the driver's side, they placed blocking and a hydraulic ram in place to push the pin in. The injured employee's partner moved the shovel stick to release pressure and the pin slid in. The injured employee then installed the 1-1/2" X 14" bolt and proceeded to take the oxy./acetylene torch and melt the threads to lock it in place. Injured was standing on top of the side cabinet of the truck, about 26" above the bed, and as he proceeded to shut off the torch the cabinet underneath him exploded. He was blown into the back of the truck and his partner, located driver's rear side corner of the truck, was thrown about 15 feet to the rear. The #602 service truck is equipped with dual torch sets connected to one set of oxy./acetylene cylinders. The cylinders are in a cabinet on the passenger side of the truck along with a torch and another torch is stored in a cabinet on the driver's side. It is believed that the torch on the driver's side was leaking acetylene into the cabinet injured was standing on and it was ignited by the lit torch the injured was holding. The torch in the driver's side cabinet was found to have the mixing handles acetylene valve slightly open. The injured employee was transported to the Virginia Regional Medical Center. This resulted in a fractured right heel and possible hearing loss in the right ear. Days Lost - 224 Days

Maintenance Technical Mechanic, Date of Accident - July 10, 2006. Injured and partner had just finished putting parts into the elevator to bring to another floor, and stated that the elevator was crowded. Being in a slightly different position as usual for closing the doors, injured grabbed the pull cord for closing the elevator's outer doors and as the bottom and top halves of the door met, injured's hand got caught between the two doors causing a broken bone on the right hand above the little finger. Days Lost - 12 Days

Maintenance Tech Mechanic, Date of Accident - July 24, 2006. Injured was assigned to paint the upper floor in the Bullgang shop.

Before the painting could be completed, boxes and a shelving unit had to be moved. In order to move the shelving unit, it had to be disassembled. This required injured to first remove the upper, middle and bottom shelves. After the shelves were removed, injured began disassembling the eight-piece main support. Injured attempted to complete this process by dragging the first support piece backwards 3-4 inches, without twisting, to disconnect the support rods. After the support rod had been detached, injured started moving the support piece forward, with some slight body twisting. As injured moved the heavy piece forward he felt a pinch in his belly. This resulted in a hernia. Days Lost - 26

Operating Technician I, Date of Accident - July 28, 2006. After a variety of jobs and operating different equipment throughout the day, injured was to clean the ramp and area around the #7 Excavator using the #63 RTD. As injured was spreading tailings along the right side of the shovel, the shovel swung to the right (being his blind side) and came in contact with the RTD, smashing into the operator's cab, which caused a fracture of the little finger on the right hand, with additional bruises to the right leg, calf and foot. This was investigated as a potentially serious accident, though there was no injury or time lost. Days Lost - 0

