The Annual Report of the Inspector of Mines



2016

Steve Manninen Mine Inspector St. Louis County 307 South First Street Virginia, MN 55792 218-742-9840 Joseph Austin Safety & Risk Mgmt. Director St. Louis County 2503 Rice Lake Road Duluth, MN 55811 218-726-2139

The **ANNUAL REPORT** of the **INSPECTOR OF MINES**

St. Louis County, Minnesota

2016

INSPECTOR OF MINES

Steve Manninen 4502 Cedar Island Drive Eveleth, MN 55734

HOME PHONE: 218-744-2817 OFFICE PHONE: 218-742-9840 CELL PHONE: 218-742-2919

FAX: 218-471-7270

ASSISTANT MINE INSPECTOR

Paul Wier 2311 Station 44 Road Eveleth, MN 55734

HOME PHONE: 218-744-2806 OFFICE PHONE: 218-742-9843 **SAFETY & RISK MGT. DIRECTOR**

Joseph J. Austin 5888 Sunny Lane

Caribou Lake, MN 55811

OFFICE PHONE: 218-726-2139 CELL PHONE: 218-348-0355

FAX: 218-722-8860

ASSISTANT MINE INSPECTOR

Todd Toman 1015 16th St. N. Virginia, MN 55792

OFFICE PHONE: 218-742-9841 CELL PHONE: 218-929-3449

OFFICE AT

NORTHLAND OFFICE BUILDING

307 South First Street, Virginia, Minnesota 55792

PHONE: 218-742-9840

THE ST. LOUIS COUNTY BOARD OF COMMISSIONERS

District 1	Frank Jewell, Duluth, Minnesota
	Patrick Boyle, Duluth, Minnesota
	Chris Dahlberg, Duluth, Minnesota
District 4	Tom Rukavina, Ely, Minnesota
	Pete Stauber, Hermantown, Minnesota
	Keith Nelson, Virginia, Minnesota
	Steve Raukar, Kelly Lake, Minnesota

THE ITASCA COUNTY BOARD OF COMMISSIONERS

	Davin Tinquist
	Terry Snyder
District 3	Leo Trunt
District 4	Rusty Eichorn
District 5	Mark Mandich
1-65144-11	Manage County Available
Vic Williams	Itasca County Sheriff, Itasca County Mine Inspector

THE HONORABLE BOARDS OF COMMISSIONERS

ST. LOUIS COUNTY COURT HOUSE DULUTH, MN 55802-1202 ITASCA COUNTY COURT HOUSE GRAND RAPIDS, MN 55744

Dear Chairs Jewell, Snyder and Commissioners:

The Annual Report of the Inspector of Mines for 2016 is herewith submitted.

Mining activity for 2016 again showed a reduced production schedule for both St. Louis and Itasca counties. A total of 28,970,579 tons of natural ore and taconite were shipped from area operations compared to 34,683,076 in 2015. Mining related employment also took a significant downturn and was reported at 3,621, which was a reduction of 426 individuals compared to 2015. These numbers mark two consecutive years of reduced production and mining related employment in the area. Total work hours reported for area mining operations was 6,913,551 for the year.

Although the last remaining Magnetation facility (Plant 4) was shut down in 2016, several other facilities initiated calling employees back to work and/or ramping production back up. By the end of 2016, United Taconite, Hibbing Taconite, Northshore, Minntac and ArcelorMittal Minorca were all operating in some capacity. Keetac announced late in 2016 that they would re-open in early 2017.

Progress was made by several area operations toward the objective of growth during the coming years. These include PolyMet's continued efforts toward a mine permit for the NorthMet project (copper/nickel/precious metal mining) and the Twin Metals semi-precious metal mining project near Ely.

MnDOT made significant progress on the Highway 53 reroute and new bridge across the Rouchleau Pit in Virginia. This project is scheduled for completion in 2017.

During 2016, area mining operations reported a total of 22 lost time or serious accidents, which is an increase in comparison to the 19 experienced in 2015. Zero fatalities were reported in 2016. The continued commit-

(Continued on page 3)

ment to the safety of all those who work in the mining industry is our shared goal.

St. Louis County Mine Inspectors successfully completed all required inspections of area operations mandated by Minnesota State Law Chapter 180, Section 180.03 during 2016.

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,

Steven K. Manninen

Inspector of Mines St. Louis County 1 1

Joseph J. Austin MS, MIS, CHMM Director, Safety and Risk Management St. Louis County Excerpts from the Law On

CHAPTER 180
MINNESOTA STATUTES
SECTION 180.08

ACCIDENTS; NOTICE, INVESTIGATION

Upon the occurrence of a reportable accident, it is the duty of the manager or designee of the mine to give notice to the inspector of mines, as soon as practical but at least within one hour of stabilization of the accident scene, stating the particulars of the accident. Upon notification, the inspector shall, if the inspector deems it necessary, go immediately to the scene of the accident and make suggestions and render assistance as the inspector may deem necessary in the premises and personally investigate the cause of the accident and take steps as the inspector may deem necessary for the safety of the employees of the mine and to prevent accident of a like or similar nature. The inspector shall be accompanied by three persons appointed by the manager or other person in charge of the mine and by three persons appointed by a majority of the employees of the mine. The requirement for accompaniment may be modified by a waiver signed by representatives from the employees, management, and inspector.

SUMMARY OF STATISTICS

2016

Number of Mining Companies	7
Number of Mines in Operation	6
Number of Plants in Operation	
Number of Wash Plants	0
Number of Mines Inactive	285
Number of Abandoned Mine Shafts Inspected	66
Total Number of Mines and Plants	294
Total Taconite Products Shipped	27,841,630
Total Ore Shipped	1,128,949
Taconite Mined	99,769,024
Stripping and Waste Removal, Tons	100,419,324
Total Material Moved, Tons Estimate	
Total People Employed	3,621
Number of Fatal Accidents, Open Pit	0
Number of Fatal Accidents, Plant	0
Total Number of Fatal Accidents	0
Fatalities per 1,000 People Employed	0
Number of Lost-time and Time Charged Accidents	22
Total Number of Man-hours Worked	6,913,551
Number of Investigations and Inspections	

2016 WAGE RATES INCENTIVE INCLUDED

Labor	Wage
Grade	Rate
1	\$24.08
2	
3	
4	\$30.51
5	\$32.40

Due to Contractual changes the wage structure from mine to mine has changed significantly in recent years resulting in differing methods of payment. This results in different pay scales and different average daily wages from mine to mine. This is an example of what the rates are for the mines in St. Louis and Itasca counties.

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YEAR	MINES	SN =	MPL	2	FATALS	NI N	WAGES
=	Σ	≥ <u>1</u> 2	<u>iii</u>	Z	ī	II.	3
1905-10	(Average	e 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 2.32	2.421
1915-16			14,639		34 22	1.51	2.923
1916-17	(Cliver C	Cave Disaster)	14,779 15,307		60	3.92	3.391 4.347
1917-18	(Silver C	Jave Disaster)	14,212		33	2.32	5.645
1918-19 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 3	1.06	5.816
1939	43 47	24,156,258	4,589 5,547		1	0.65 0.18	6.080 6.400
1940 1941	63	36,493,781 45,874,218	7,097	60	5	0.70	6.820
1941	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

Page 6

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		TONS	EMPLOYED	Q	ທຸ	00	_တ
E.	ES	<u> </u>	ž	INJURED	FATALS	FAT/1000	WAGES
YEAR	MINES	8 🗒	¥	5	AT	AT	Š
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1957	124	50,093,275	12,804	144	6	0.47	17.560
1958	90	30,495,093	10,250	83	ŏ	0.00	18.400
1959	89	16,055,353	9,256	93	4	0.43	22.480
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 1	0.19	56.682
1978	26 26	50,806,547	13,056	138 164	0	80.0 00.0	64.344
1979 1980	18	54,530,338 42,076,497	13,267 11,441	107	1	0.00	70.832 80.112
1981	12	47,300,056	11,630	96	ò	0.00	89.472
1982	11	22,335,570	7,626	44	Ö	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	ō	0.00	87.39
1985	9	31,948,722	5,539	29	Ö	0.00	90.60
1986	9	26,608,769	5,250	33	0	0.00	94.19
1987	9	30,063,909	4,857	26	1	0.21	94.19
1988	9	37,250,243	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	6,051	97	1	0.17	93.936
1995	9	47,030,820	6,005	87	0	0.00	97.936
1996	8	46,144,621	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	5,611	77 60	1	0.18	109.936
2001	8 8	34,144,559 39,087,907	4,212 4,036	60 60	0	0.00	113.936 113.936
2002	0	39,100,501	4,030	00	U	0.00	113.530

Page 7

YEAR	MINES	TONS	EMPLOYED	INJURED	FATALS	FAT/1000	WAGES
2003	8	35,282,267	4,177	35	0	0.00	121.936
2004	8	42,059,597	3,444	24	0	0.00	145.384 178.40
2005	8 7	40,464,089	3,568	29 14	0 1	0.00 0.27	178.40
2006 2007	7	39,617,873 38,041,616	3,714 3,724	13	2	0.54	187.848
2007	7	40,599,311	3,732	26	0	0.00	182.40
2009	7	18,025,710	2,687	39	0	0.00	201.44
2010	7	37,996,765	3,761	27	ő	0.00	238.44
2010	7	40,395,202	4,215	24	0	0.00	188.40
2012	9	41,099,022	4,441	17	ő	0.00	221.85
2013	9	40,221,204	4,371	29	Õ	0.00	226.24
2014	9	41,301,098	4,387	29	Ō	0.00	226.24
2015	10	34,683,076	4,047	19	0	0.00	231.92
2016	7	28,970,579	3,621	22	0	0.00	231.92

MONTHS មា ∞ 12 12 MAN 506,715 763,444 754,248 1 483 006 TONS NUMBER STRIPPING PEOPLE (MASTE (Rock EMPLOYED & Overburden) 705 474 355 508 REPORT OF THE COUNTY INSPECTOR OF MINES --- PER MS 180.11 OPERATIONAL SUMMARY YEAR ENDING DECEMBER 31, 2016 4,638,643 4,679,000 33,553,404 6,016,537 TOTAL IRON ORE TAILINGS TOTAL TACONITE MINED 9 573 530 5,061,000 30,245,749 8 704 258 TACONITE PRODUCTS 2,749,992 42,943 3,231,895 1,548,396 8,172,331 TONS OF SHIPPED TONS OF NATURAL ORE SHIPPED Pellet Chips Pellets -NORTH SHORE MINING CO BABBITT AND SILVER BAY UNITED TACONITE LLC HIBBING TACONITE CO. ARCELORMITTAL MINORCA MINE, INC. MINES

Page 9

MAN MONTHS HOURS WORKED 12 12 78,151 6.524,861 2,939,297 6,524,861 EMPLOYED PLANTS / PITS 1,360 NUMBER PEOPLE 3,440 AVERAGE 38 3,440 REPORT OF THE COUNTY INSPECTOR OF MINES -- PER MS 180.11 OPERATIONAL SUMMARY YEAR ENDING DECEMBER 31, 2016 & Overburden) WASTE (Rock 51,531,740 STRIPPING 100 419 324 100,419,324 TONS TOTAL IRON ORE TAILINGS MINED TACONITE 46,184,487 99,769,024 99,769,024 TOTAL MINED *Keetac was idled throughout 2016 PRODUCTS SHIPPED TONS OF TACONITE 12,096,073 27,841,630 27,841,630 TONS OF NATURAL ORE SHIPPED TOTALS ST. LOUIS COUNTY KEEWATIN TACONITE CO. DIVISION OF USS St. Louis Itasca TOTALS ITASCA COUNTY USS CORPORATION M.O.O. USS CORPORATION M.O.O. MINNTAC MINES TOTALS

Page 10

MAN 47,718 388,690 388,690 340,674 EMPLOYED PLANTS / PITS AVERAGE NUMBER PEOPLE 159 181 181 2 REPORT OF THE COUNTY INSPECTOR OF MINES — PER MS 180.11 & Overburden) WASTE (Rock STRIPPING TONS OPERATIONAL SUMMARY YEAR ENDING DECEMBER 31, 2016 TOTAL IRON ORE TAILINGS MINED 172,882 O 6,694,780 6,694,780 6,521,898 TOTAL TACONITE MINED TONS OF TACONITE **PRODUCTS** SHIPPED TONS OF NATURAL 34,756 0 1,128,949 1,128,949 1 094 193 SHIPPED ORE TOTALS ST. LOUIS COUNTY TOTALS ITASCA COUNTY PLANT 4 - COLERAINE PLANT 1 - KEEWATIN MAGNETATION LLC PLANT 2 - BOVEY

MONTHS

0

298

10

6,524,861 388,690 6,913,551

3,440 181 3,621

100,419,324

99,769,024

27,841,630

TOTALS ST. LOUIS COUNTY

TOTALS

100,419,324

99,769,024

27,841,630

1,128,949

1,128,949

TOTALS ITASCA COUNTY

GRAND TOTALS

6,694,780 6,694,780

Page 11

MINES

MINING COMPANIES, MINE OPERATIONS, SAFETY PERSONNEL AND OTHER AGENCIES

UNITED STATES STEEL CORPORATION

Minnesota Ore Operations
KEEWATIN TACONITE
P.O. Box 217
Keewatin, Minnesota, 5575

Keewatin, Minnesota 55753 Phone: 218-778-8798

Lawrence Sutherland	General Manager
Travis Kolari	Plant Manager
Cory Hertling Area Ma	anager - Electrical & Mine Maintenance
Kraig Raiber Area Man	ager - Plant Operations & Maintenance
James Van Buren	Interim Manager - Employee Relations
	Manager - Safety & Industrial Hygiene
Jerry Orrell	Safety & Industrial Hygiene Specialist

* * * * * *

UNITED STATES STEEL CORPORATION

Minnesota Ore Operations MINNTAC P.O. Box 417 Mt. Iron, MN 55768 Phone: 218-749-7299

ARCELORMITTAL MINORCA MINE, INC. Company Officers and Staff

Minnesota Address 5950 Old U.S. Highway 53 North P.O. Box 1 Virginia, MN 55792

Main Telephone

(218) 749-5910 (218) 749-3420 Fax E-mail: jonathan.holmes@arcelormittal.com

Officers

	President and CEO Chief Operating Officer
Daniel Mull	Executive Vice President, Sales & Marketing
Paul Liebenson	General Counsel & Assistant Secretary
Marc Jeske	Secretary
Neil Kohlberg	Vice President, Finance & Procurement
Richard Campoli	
Pat Parker	Vice President, Labor Relations
Wendell Carter	Vice President, General Manager
Jonathan Holmes	Vice President, Mining
Laurent Koenig	Treasurer
	Assistant Treasurer
Christine F. Fleps	Assistant Treasurer
	Assistant Treasurer

Managers

Jonathan H. Holmes Vice	
	ArcelorMittal Minorca Mine
William Bond	Manager - Operating Technology
Scott Harrison	Manager - Pit
Robb Peterson	Manager - Plant
Gary Kleffman Manager - H	uman Resources/Labor Relations
Karla Heritage-McKenzie	Маладег - Safety
Thomas Cossalter	Manager - Purchasing
Ross Phenning	Manager - Electrical/Systems

HIBBING TACONITE COMPANY

P.O. Box 589 Hibbing, Minnesota 55746 Phone: 218-262-5950

Jack T. Croswell	General Manager
Joe Marturano	Manager - Asset Management
Todd Nelson	Manager - Financial Control
Jared Lubben	Manager - Mining
Rally Hess	Manager - Plants
Michael P. Kern	
Andrea J. Bakk	. Manager - Safety & Loss Control
Julie C. Lucas	Manager - Environmental
Tim Angelo	

UNITED TACONITE LLC

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

Santi Romani	General Manager
Ryan Korpela	Area Manager - Plant
	Area Manager - Mine
Jacelyn Govender	Area Manager - Maintenance
Todd Nelson	Area Manager - Finance
John Baxter	. Area Manager - Human Resources
	Area Manager - Safety
	Section Manager - Environmental
Jon Lamusga	Section Manager - Materials

NORTHSHORE MINING COMPANY

10 Outer Drive Silver Bay, Minnesota 55614 Phone: 218-226-4125 Fax: 218-226-6037

NORTHSHORE MINING BABBITT MINE BABBITT, MINNESOTA 55706

Phone: 218-827-2101

Ed Latendresse	Plant Manager
Connor McCue	Mine Manager
Bryon Rusco	Railroad Manager
Ron Holm	Safety Manager
Andrea Hayden	Environmental Manager
Bill Bundschuh	Silver Bay Power Manager
Ken Stocco	Reliability Manager
Carl Kerschen	Human Resource Manager
Chris Tokvam	Purchasing Manager
Scott Deming	Finance Manager
Scott Blood	
Maria Strand	Plant Safety Associate
Rod Lampton	Mine Safety Representative

MAGNETATION LLC

102 NE 3rd Street Suite 120 Grand Rapids, MN 55744 Phone: 218-999-5165

Fax: 218-999-5827

Larry Lehtinen	Chairman & CEO
Matt Lehtinen	President & COO
Joe Broking	CFO

* * * * * *

MINING RESOURCES, LLC

P.O. Box 151 Chisholm, Minnesota 55719 Phone: 218-254-0163 Fax: 218-254-9987

POLYMET MINING

P.O. Box 475 6500 County Road 666 Hoyt Lakes, MN 55750 Phone: 218-471-2150

* * * * *

ALWORTH LAND & IMPROVEMENT COMPANY

306 W. Superior Street, Suite 1605 Duluth, Minnesota 55802-1816 Phone: 218-722-0816

Nicholas B. Alworth	Chairman
John Signorelli	Vice Chairman
Steven G. LaFlamme	President
Terry F. Netzel	Assistant Vice President
George W. Kratzner	Treasurer
Patricia S. McGaffey	Secretary

* * * * * *

CONGDON MINERAL MANAGEMENT INC.

3920 13 Ave. E., Suite 7 Hibbing, Minnesota 55746-3675 Phone: 218-262-0799 Fax: 206-203-0098

EVELETH FEE OFFICE, INC.

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

GREAT NORTHERN IRON ORE PROPERTIES

Office of the Trustees
W-1290 First National Bank Building
332 Minnesota Street
St. Paul, Minnesota 55101-1361
Phone: (651) 224-2385
Fax: (651) 224-2387
www.gniop.com

Engineering & Inspection Office 801 East Howard Street P.O. Box 429 Hibbing, Minnesota 55746-0429 Phone: 218-262-3886 Fax: 218-262-4295

J.S. Micallef	President and CEO
J.A. Swearingen	Trustee
R.W. Staehle	Trustee
R.A. Stein	Trustee
T.A. Janochoski	
R.P. Johnson	Manager of Mines
K.A. Baehr	. Manager of Accounting

* * * * *

HARTLEY OFFICE

740 East Superior Street Duluth, Minnesota 55802 Phone: 218-723-8060

IRON MINING ASSOCIATION OF MINNESOTA

324 West Superior Street Suite 502 Duluth, Minnesota 55802 Phone: 218-722-7724 Fax: 218-720-6707 www.taconite.org

2016 IMA Staff Kelsey Johnson President

2016 IMA Board of Directors		

* * * * * *

(Board Chair)

ONONDAGA IRON COMPANY

740 East Superior Street Duluth, MN 55802 Phone: 218-723-8060

Douglas H. Lewis Chief Financial Officer

MINING MINNESOTA

P.O. Box 16666
Duluth, Minnesota 55816
Phone: 218-393-2301
E-Mail: fongaro@miningminnesota.com

Frank Ongaro Executive Director

MERIDEN ENGINEERING, LLC

A Wholly-Owned Subsidiary of Superior Mineral Resources LLC 1910 East 8th Avenue P.O. Box 650 Hibbing, Minnesota 55746 Phone: 218-262-6127

SUPERIOR MINERALS RESOURCES, LLC

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

Jim Hecimovich President and Chief Executive Officer Greg Lindahl Vice President and Chief Operating Officer

* * * * * *

MESABI MINERAL ASSOCIATION

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

GLOBAL MINERALS ENGINEERING, LLC

3920 13th Ave. E., Suite 7 Hibbing, Minnesota 55746-3672 Phone: 218-262-0799 Fax: 206-203-0098

* * * * * *

MINNESOTA DEPARTMENT OF NATURAL RESOURCES 500 Lafayette Road St. Paul, Minnesota 55155 (651) 259-5959

FAX (651) 296-5939

> Division of Lands and Minerals 1525 Third Avenue E. Hibbing, Minnesota 55746 (218) 231-8443 FAX (218) 262-7328

Peter Clevenstine Asst. Director, Division of Lands and Minerals

* * * * *

STATE OF MINNESOTA IRON RANGE RESOURCES & REHABILITATION BOARD MINELAND RECLAMATION 1003 Discovery Drive

Chisholm, Minnesota 55719 Phone: (218) 274-7000 Fax: (218) 274-7002

* * * * * *

IRON RANGE RESOURCES & REHABILITATION BOARD 4261 HIGHWAY 53 SOUTH

P.O. BOX 441 EVELETH, MN 55734

Phone: (218) 735-3000 or 800-765-5043

Mark Phillips	Commissioner
Mary Finnegan	Deputy Commissioner
	Executive Director of Development
Marianne Bouska	Chief Operating Officer
	. Senior Policy Advisor - New Mining

RGGS Lands & Minerals LTD., L.P.
P.O. Box 1266
Virginia, MN 57792
Phone: (218) 749-1291
Fax: (218) 749-1294

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ST. LOUIS COUNTY SAFETY AND RISK MANAGEMENT 2503 RICE LAKE ROAD DULUTH, MINNESOTA 55811-4819 PHONE: 726-2139

Joseph J. Austin Director

ST. LOUIS COUNTY MINE INSPECTORS

Steve Manninen	Inspector of Mines
Paul Wier	Assistant Mine Inspector
Todd Toman	Assistant Mine Inspector

MINE INSPECTOR OFFICE NORTHLAND OFFICE BUILDING 307 South First Street Virginia, Minnesota 55792 Phone: 218-742-9840

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UNITED STATES DEPARTMENT OF LABOR MINE SAFETY AND HEALTH ADMINISTRATION

515 W. First Street, Room 323 Duluth, MN 55802-1302 Phone: 218-720-5448 Fax: 218-720-5650

DISTRICT OFFICE

	District Manager Assistant Manager
	Assistant Manager
	Staff Assistant
	r Supervisory Special Investigator
George F. Schorr	Conference Litigation Representative
Daniel J. Goyen	Conference Litigation Representative
Dan L. Venier	Conference Litigation Representative
Kenneth L. Bickel	Safety Specialist
Stephen D. Cotie	Health Specialist
	Supervisory Management/Program Analyst

DULUTH FIELD OFFICE

William H. Soderlind Supervisory	Mine Safety & Health Inspector
Mindy A. Meierbachtol	. Mine Safety & Health Inspector
Terrance J. Norman	. Mine Safety & Health Inspector
Jeffrey J. Rausch	. Mine Safety & Health Inspector
Corey C. Niemi	. Mine Safety & Health Inspector
Seth A. Sayles	. Mine Safety & Health Inspector

HIBBING FIELD OFFICE

522 East Howard Street, Suite 201A Hibbing, MN 55746 Phone: 218-262-5205 Fax: 218-262-1296

MINNESOTA DEPARTMENT OF REVENUE

600 North Robert Street St. Paul, Minnesota 55101

Phone: (651) 556-6003 Fax: (651) 297-1939

Myron Frans Commissioner Gina Amacher Director, Special Taxes Division

Minerals Tax Office 612 Pierce St. Eveleth, Minnesota 55734-1611 Phone: (218) 744-7424 Fax: (218) 744-7421

Robert Wagstrom Production Tax Janet Baker Occupation Tax

INTERNATIONAL UNION OF OPERATING ENGINEERS

Local No. 49 8381 Enterprise Drive N Virginia, MN 55792 Phone: 218-741-8190 - Virginia 2829 Anthony Lane South

Minneapolis, Minnesota 55418-3285 Phone: 612-788-9441 - Minneapolis

UNITED STEEL WORKERS OF AMERICA DISTRICT 11

MINNEAPOLIS OFFICE

Phone: 612-623-8045

Emil Ramirez Director

EVELETH SUB-DISTRICT OFFICE

Phone: 218-744-2757 Fax: 218-744-7926

UNITED STEEL WORKERS OF AMERICA LOCAL UNITS

LOCAL #6860 UNITED TACONITE LLC

Phone: 218-744-4480

Brian Zarn	President
Joe Fredrickson	Vice President
Amy Hutkowski	Recording Secretary
Steve Lere	Financial Secretary
Gary Butala	Treasurer
Gary Butala Larry Roberts	
	Safety Coordinator

LOCAL #2660 KEEWATIN TACONITE

Phone: 218-778-6909

Cliff Tobey	President
	. Safety Chair/Safety Representative
Joe Ferris	Safety Representative
Kevin Noonan	Area Chair, Concentrator
Jeff Stalboerger	Area Chair, Shop
Kelly Peterson	Area Chair, Pit
Lorne Middlestead	Area Chair, Pond
Tom Damjanovich	Area Chair, Crusher
Carl Jeranek	Area Chair, Pellet Plant

LOCAL #2705 HIBBING TACONITE COMPANY

Phone: 218-254-2492 Fax: 218-254-7100

115 W. Lake Street, Chisholm, MN 55719

Frank Jenko	President
Chris Johnson	Vice President
Mike Mandich	Financial Secretary
Mike Rootes	Recording Secretary
Wade Bexell	Treasurer
Bill Fredette	Union Safety Representative
Chris Johnson	Chairman, Safety Committee

LOCAL #6115 ARCELORMITTAL MINORCA MINE INC.

Phone: 218-741-3310

Dave Bombich	President
Tom French	Safety Coordinator
Reed Milos	Sub Chair, Safety
Jim Kottke	Sub Chair, Safety
Kyle Lamppa	Training Coordinator

LOCAL #1938 USS - MINNTAC MINE

Phone: 218-741-0887

Lowell Carlon	
Dave Chesser	
Chad Daniels Financial Secretary	У
Paul CentaTreasure	ď
Mitch McDonald Safety Committee Chairman	n
Mark Hagsten Safety Committee Co-Chairman	n
Matt Robillard Safety Coordinator - Minntac/Keeta	С
Steve BonachFull-Time Safety Representative, Mine/Shops	
Mitch McDonald Full-Time Safety Representative, Concentrator/	
Crushen	S
Paul Coombe	3,
Agglomerators I, II, II	II

BUILDING AND CONSTRUCTION LABORERS LOCAL 1097

712 4th St. North

Virginia, MN 55792 Phone: 218-741-3638

	President Vice President
	Business Manager/Financial Secretary
Jerry F. Strle	"E" Board Member
	"E" Board Member
Mark Towner	"E" Board Member
Michael G. Warner	Recording Secretary
Shelly A. Wiitanen	Office Manager, Sergeant at Arms

NON-FATAL LOST-TIME AND SERIOUS ACCIDENTS

ARCELORMITTAL MINORCA MINE INC:

No lost time accidents

HIBBING TACONITE:

Drill Operator, Date of Accident – January 7, 2016. The employee was changing a drill bit and deck bushing on the drill with the help of the service truck driver. While trying to position the deck bushing in place, the drill operator pushed on the approximately 300 pound deck bushing with his left leg and felt a pulling sensation on the left side of his abdomen. Incident resulted in an abdominal hernia, which became lost time upon surgical repair in May 2016. Days Lost – 28

Maintenance Mechanic, Date of Accident – March 11, 2016. Employees were attempting to move the non-flanged end of a 21'long, 16 inch diameter concentrate underflow pipe approximately 5 feet to allow the forklift access to remove it from the area. The employee was attempting to place a nylon sling under the pipe while it was being lifted from the grated floor with a 5 foot pry bar by the employee's partner. The sling did not clear the underside of the pipe so the employee then pushed the sling all the way under the pipe to be able to retrieve the sling on the other side. At that time, the pry bar slipped pinching the left index finger of the employee between the floor grating and the pipe. Incident resulted in amputation to the tip of the employee's left index finger. Days Lost – 62

Maintenance Mechanic, Date of Accident – May 5, 2016. Employee was walking down the stairs from the west pellet load out accumulator room when the employee's left foot slipped and right foot went between two stairs. The employee felt a strain in the right ankle and knee. Incident resulted in a high ankle sprain. Days Lost – 2

Welder, Date of Accident – May 5, 2016. Employee was welding repairs on chute for the load zone to hearth layer -4. The employee lost his footing and caught himself by grabbing the closest beam causing pain that started in the right elbow and subsequently spread down the arm and hand. Incident resulted in partial tear of the right elbow tendon and lost time upon surgical repair in August 2016. Days Lost – 87

Maintenance Mechanic, Date of Accident – June 9, 2016. Employee was re-installing guard on the turning gear for windbox exhaust fan. While lifting the guard over the turning gear clutch and coupling,

(Continued on page 28)

HIBBING TACONITE COMPANY (cont)

employee felt discomfort in mid-section. Incident resulted in an umbilical hernia diagnosis which became lost time upon surgical repair in December 2016. Days Lost – 15

Production Truck Driver, Date of Accident – August 13, 2016. Employee was leaving a dump and hit a small pothole causing pain in truck driver's lower back. Incident resulted in back strain. Days Lost – 10

Welder, Date of Accident – October 18, 2016. Employee injured his right ankle while accessing the discharge end of the line 3 furnace to perform clean up after rail maintenance had taken place. The MMG was climbing in through the access door on the west side of the furnace, his foot got caught/stuck on a part of a deflector plate and caused him to twist his ankle and therefore lose his balance. Incident resulted in a sprained right ankle. Days Lost – 16

Welder, Date of Accident — November 17, 2016. Employee was cutting apart a 20 foot long W beam to be used for a rougher sump. The employee was using a 4.5 inch grinder to cut 4 small connection sections down the middle of beam. The beam came from the vendor already partially cut apart (partial WT beam) in the center of the beam. Each connection point was approximately 1.5 inch long. The employee was standing/straddling the beam while in the process of making the 3rd of 4 cuts on the connection sections when the beam sprang apart. The beam moved approximately 4.5 feet causing the employee's leg to be struck therefore losing his balance and falling face forward to the floor. The employee reported discomfort and swelling on the left inside of his leg and in his lower back. Incident resulted in lower back strain and crushed nerve root. Days Lost - 29

NORTHSHORE MINING COMPANY

Babbitt:

Railroad Operations Technician, Date of Accident – June 9, 2016. Employee was operating a grapple truck to remove railroad rail from the bed of the truck. In the process of hoisting and swinging the rail, the employee inadvertently rotated the grapple on the loader in the wrong direction. The rail end struck the employee resulting in lacerations to the elbow and knee. Days Lost – 8

Silver Bay:

Plant Operations Technician, Date of Accident – July 12, 2016. Employee was using a 50 ton hydraulic ram to unplug a stuck (Continued on page 29)

NORTHSHORE MINING COMPANY (cont)

crusher. When force was applied, the ram slipped off the contact point striking the employee in the lower leg resulting in a deep tissue bruise. Days Lost – 2

Plant Maintenance Technician, Date of Accident – September 21, 2016. The discharge of a slurry pump had plugged causing the pump to cavitate and build heat/pressure in the casing. As the employee worked to unplug the pump, the plugged material let loose spraying the employee's arm with hot material/steam resulting in burns to the right arm. Days Lost – 29

UNITED TACONITE:

Maintenance Mechanic, Date of Accident – July 28, 2016. The employee was lifting a liner plate at the unloading pocket and felt a pain in his abdomen. Later was diagnosed with a hernia. Days Lost – 25.

Maintenance Mechanic, Date of Accident – November 27, 2016. The employee was walking by the line 2 cooler in the pellet plant and stepped onto a dislodged cover plate causing his leg to drop through the hole and injuring his knee. Days Lost - 18

USS CORPORATION, MINNESOTA ORE OPERATIONS

KEETAC:

Maintenance Technician, Date of Accident – October 9, 2016. The employee was working on hooking up portable heaters in the plant when he felt pain in his left groin area. The employee was using an 18" and 24" pipe wrench connecting hoses to the heaters at the time of the incident. Days Lost – 21

Maintenance Technician, Date of Accident – October 31, 2016. The employee was assigned to go disconnect a lube motor in the center of the cooler. Employee and another electrician were looking to see if there was a local disconnect for this pump in the center of the cooler. As the employees were walking around the basement in the center of the cooler the injured employee tripped over a 4-wheel cart (with no handles) that was in the center of the cooler basement. The employee fell forward and put his arms out to catch himself on the concrete floor. The employee felt a pop in his right shoulder as he fell to the ground. Days Lost - 40

USS CORPORATION, MINNESOTA ORE OPERATIONS

MINNTAC:

Maintenance Technician, Date of Accident – March 21, 2016. Employee was tightening a lip liner bott in 83-22 screen with a 15/16" end wrench. The employee stated that as he was tightening (pushing) the bolt with his right hand he felt pain/tear in the back of his right shoulder. Days Lost – 46

Utility Technician, Date of Accident – April 11, 2016. Employee was in the process of loading rod racks in the Step 3 rod bay. While putting the cable slings under a bundle of rods, which was 4 inches off the ground, he bent over and felt a pop in the area of his belly button. Days Lost – 3

Maintenance Technician, Date of Accident – August 31, 2016. Employee was assigned to work on shortening the grate during the Line 5 minor. Employee stated he felt minor discomfort during the process of chain jacking the grate together and pounding out the rod sections. Employee completed the grate work and his second assigned job before leaving at 3. Employee stated the discomfort got worse through the night and turned into a steady pain. Employee showed up for his scheduled shift on 9/1 and reported the pain to a supervisor at 10 am. Incident resulted in an inguinal hernia. Days Lost – 21

Utility Technician, Date of Accident - November 10, 2016. At approximately 15:45, an Agglomerator Utility Person was hauling chunk box material from the line 5 chunk box to the Group 13 dump site using the #623 International 7400 dump truck. The employee had just crossed the railroad tracks north of the Utility Plant, and was heading east towards the Group 13 chunk pile. While turning to the left (north) off the main roadway, the operator lost control of the truck. The driver said it felt like the truck "was on two wheels" and was fishtailing. It appears the driver side wheels came off the ground and some of the load discharged from the truck box. As the operator tried to regain control of the truck, the truck veered to the right, and rolled onto the driver's side. He described this as, "turning right to compensate," then, "felt like the truck cut in and made an abrupt turn." The employee became pinned between the steering wheel and the air ride seat and was unable to get out of the truck. Incident resulted in facial and spleen lacerations. Days Lost - 1

Maintenance Technician, Date of Accident – November 29, 2016. The injured employee suffered a broken right arm and two broken ribs when he was pinned underneath and pushed 23' by the #51 Cushman Titan that he was working on. Days Lost – 12

Production Truck Driver, Date of Accident – December 16, 2016. The employee was in the process of getting out of a pickup to ride with the

(Continued on page 31)

MINNTAC COMPANY (cont)

Blasting Coordinator to assist in shooting off the blast. The employee got out of the passenger side of one truck to get into the coordinator's passenger seat. While walking toward the door to get in the employee's feet kicked out from underneath him and he fell on his backside. The employee stated that he caught himself with his right hand while falling. The employee reported that he had pain in his right wrist. Days Lost -4

MAGNETATION

PLANT 1:

No lost time accidents.

PLANT 2:

No lost time accidents.

PLANT 4:

Equipment Operator, Date of Accident – June 25, 2016. Employee was assisting on the removal of a distributor plug on Cobber WHIMS 5. A different employee was handing the plug down, and the injured employee grabbed the plug, and smashed his thumb between the Thandle and distributor. The tip of the thumb was pinched off. Days Lost - 14