The Annual Report of the Inspector of Mines



Photo by Paul Pluskwik

2018

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

* * * * * * * * * * * * * * * * * * * 2018 * * * * * * * * * * * * * * * * * * *

INSPECTOR OF MINES

Steve Manninen 4502 Cedar Island Drive Eveleth, MN 55734

OFFICE PHONE: 218-742-9840 CELL PHONE: 218-742-2919

FAX: 218-471-7270

ASSISTANT MINE INSPECTOR

David Hamalainen 620 Bourgin Road Virginia, MN 55792

CELL PHONE: 218-290-8855 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

Derek Harbin

16079 Goss St., P.O. Box 241

Pengilly, MN 55775

CELL PHONE: 218-910-4753 OFFICE PHONE: 218-742-9841

OFFICE AT

NORTHLAND OFFICE BUILDING

307 South First Street, Virginia, Minnesota 55792

PHONE: 218-742-9841 * * * * * * * * * * * * * * * * *

THE ST. LOUIS COUNTY BOARD OF COMMISSIONERS

| District 1 | Frank Jewell, Duluth, Minnesota |
|------------|-------------------------------------|
| | |
| | Beth Olson, Duluth, Minnesota |
| | Tom Rukavina, Ely, Minnesota |
| | Pete Stauber, Hermantown, Minnesota |
| District 6 | Keith Nelson, Virginia, Minnesota |
| | Mike Jugovich, Chisholm, Minnesota |

THE ITASCA COUNTY BOARD OF COMMISSIONERS

| District 1 | Davin Tinquist |
|-------------|---|
| District 2 | Terry Snyder |
| District 3 | Leo Trunt |
| | Burl Ives |
| District 5 | Ben DeNucci |
| Jeff Walker | Itasca County Auditor |
| | 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 Boyle, Tinquist and Commissioners:

The Annual Report of the Inspector of Mines for 2018 is herewith submitted.

Mining activity for 2018 showed a strong and steady production schedule for both St. Louis and Itasca counties. A total of 40,986,054 tons of taconite were shipped from area operations compared to 39,485,849 in 2017. Mining related employment also increased and was reported at 3,954, which was an increase of 10 individuals compared to 2017. These positive numbers mark two years of steady production and a significant improvement compared to the two consecutive years of reduced production and mining related employment in the area reported for 2015 and 2016. The total work hours reported for area mining operations was 8,415,781 for the year.

The number of active mining operations in the area during 2018 remained at six, these include: ArcelorMittal Minorca, Hibbing Taconite, Keetac, Minntac, Northshore, and United Taconite. All six of these facilities reported 12 months in operation during the year.

Progress continues to be made by several area operations toward the objective of growth during the coming years. These include PolyMet who has now been issued the majority of necessary mine permits associated with the NorthMet project (copper/nickel/precious metal mining) and Twin Metals who continues to move forward with efforts directed at their semi-precious metal mining project near Ely.

On the regulatory front, positive revisions to MS 180 (the law governing the mine inspection function) were made in St. Paul. The revisions further enhance the statute by establishing a mechanism for exemption to enable beneficial reuse of land formerly used for mining, while at the same time maintaining the inspection, investigation and reporting requirements associated with the office that has served to promote Mine Safety since the law

(Continued on page 3)

was originally promulgated in 1905. Many stakeholders, including Mine/ Mine Safety representatives, Union officials, Mine Safety Committee representatives, the Iron Mining Association, the St. Louis County Board and County Administration, worked collaboratively to assure that the changes made sense and to get them passed into law. Special thanks to Senator David Tomassoni and Representative Jason Metsa for their efforts in St. Paul during the session to get the changes passed into law. It is clear that without the collaborative effort put forward, the law would not have been updated.

During 2018, area mining operations reported a total of 14 lost time or serious accidents. This is a decrease in comparison to the 18 experienced in 2017. Zero fatalities were reported in 2018. The continued commitment 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 2018.

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,

Joseph J. Austin MS, MIS, CHMM

Inspector of Mines - Interim

Director, Safety and Risk Management

St. Louis County

Excerpts from the Law On

CHAPTER 180

MINNESOTA STATUTES

SECTION 180.03

DUTIES

INSPECTIONS

Subdivision 1

The duties of the inspector of mines shall be to visit all mining operations for which a permit to mine has been obtained from the commissioner of natural resources in the inspector's county at least once every 90 days and more often if requested so to do as hereinafter provided, and closely inspect the mines so visited and condemn all such places where the employees are in danger from any cause. In the event that the inspector of mines finds that a place is dangerous from any cause, it shall be the inspector's duty immediately to order those engaged in the work at that place to cease work, and notify the superintendent, agent, or person in charge to secure the place from the existing danger, which notification or order shall be in writing, clearly define the limits of the dangerous place, and specify the work to be done or change to be made to render the same secure, ordinary mine risks excepted. It shall be the duty of the inspector of mines to order the person, persons, or corporation working any mine, or the agent, superintendent, lead supervisor, or other person having immediate charge of the working of any mine, to mitigate the identified hazard.

SUMMARY OF STATISTICS

2018

| Number of Mining Companies | 6 |
|--|-------------|
| 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 Inspected | 66 |
| Total Number of Mines and Plants | 294 |
| Total Taconite Products Shipped | 40,986,054 |
| Total Ore Shipped | 0 |
| Taconite Mined | 136,996,909 |
| Stripping and Waste Removal, Tons | 138,050,822 |
| Total Material Moved, Tons Estimate | 275,047,731 |
| Total People Employed | 3,954 |
| 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 | 14 |
| Total Number of Man-hours Worked | 8,415,781 |
| Number of Investigations and Inspections | |

2018 WAGE RATES INCENTIVE INCLUDED

| Labor | Wage |
|-------|---------|
| Grade | Rate |
| 1 | \$25.05 |
| 2 | \$27.42 |
| 3 | \$30.15 |
| 4 | \$31.73 |
| Б | \$33.70 |

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.

| ਨੂ | ES | TONS | ЕМРЬОУЕВ | INJURED | FATALS | FAT/1000 | WAGES |
|--------------------|------------|--------------------------|------------------|------------|----------|--------------|------------------|
| YEAR | MINES | TOP | E
E | 3 | FA. | FA | δ.
A |
| 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
2.10 | 2.310
2.421 |
| 1914-15 | | | 11,430 | | 24
34 | 2.10 | 2.923 |
| 1915-16 | | | 14,639
14,779 | | 22 | 1.51 | 3.391 |
| 1916-17
1917-18 | (Silver C | Cave Disaster) | 15,307 | | 60 | 3.92 | 4.347 |
| 1917-18 | (Silver C | ave pisaster) | 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
17 | 1.12
2.12 | 5.230
5.340 |
| 1929 | 57 | 35,680,720 | 8,008
7,752 | | 13 | 1.68 | 5.280 |
| 1930 | 50
32 | 25,196,155
12,270,886 | 4,824 | | 4 | 0.83 | 5.260 |
| 1931
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 | 60 | 1
5 | 0.18
0.70 | 6.400
6.820 |
| 1941 | 63 | 45,874,218 | 7,097
8,101 | 60
107 | 14 | 1.70 | 7.030 |
| 1942 | 60
62 | 53,923,635
51,753,320 | 9,597 | 156 | 7 | 0.73 | 7.440 |
| 1943
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
12.160 |
| 1953 | 122 | 60,776,174 | 12,079 | 215
157 | 4
4 | 0.33
0.40 | 12.160
12.560 |
| 1954 | 121 | 49,845,118 | 9,925
10,381 | 157
151 | 2 | 0.40 | 14.850 |
| 1955
1956 | 127
127 | 36,137,304
44,493,944 | 10,381
11,017 | 134 | 6 | 0.54 | 17.560 |
| 1900 | 121 | 77,700,077 | , | | - | | |

| | | | Ω | | | | |
|--------------|-----------|--------------------------|------------------|-----------|--------|--------------|--------------------|
| | | 9 | EMPLOYED | | လူ | 000 | ပ္သ |
| YEAR | MINES | TONS | P.C | INJURED | FATALS | FAT/1000 | WAGES |
| ΥE | Ž | 당동 | E | Ź | FA | Ā | ``` |
| | | TO 200 0775 | 40.004 | 444 | c | 0.47 | 17.560 |
| 1957
1958 | 124
90 | 50,093,275
30,495,093 | 12,804
10,250 | 144
83 | 6
0 | 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
55 | 4 | 0.44
0.22 | 23.760
25.640 |
| 1968 | 53 | 43,078,879 | 9,125 | 55
50 | 2
0 | 0.22 | 27.430 |
| 1969 | 51 | 34,628,234 | 9,394 | 58
71 | 5 | 0.52 | 28.520 |
| 1970 | 49 | 33,648,268 | 9,631
9,441 | 58 | 0 | 0.00 | 32.480 |
| 1971 | 50
46 | 32,687,511
35,100,156 | 9,431 | 63 | ő | 0.00 | 34.096 |
| 1972
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
0.00 | 84.19
87.39 |
| 1984 | 9 | 30,463,941 | 6,305 | 55
29 | 0
0 | 0.00 | 90.60 |
| 1985 | 9 | 31,948,722 | 5,539
5,250 | 33 | 0 | 0.00 | 94.19 |
| 1986 | 9 | 26,608,769 | 5,250
4,857 | 26 | 1 | 0.21 | 94.19 |
| 1987
1988 | 9
9 | 30,063,909
37,250,243 | 4,546 | 41 | 1 | 0.18 | 94.19 |
| 1988 | 9 | 38,421,803 | 5,664 | 55 | 2 | 0.35 | 94.19 |
| 1909 | 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
77 | 0
1 | 0.00
0.18 | 105.936
109.936 |
| 2000 | 9 | 44,806,128 | 5,611
4,212 | 77
60 | 0 | 0.00 | 113.936 |
| 2001 | 8 | 34,144,559 | 4,212
4,036 | 60 | 0 | 0.00 | 113.936 |
| 2002 | 8 | 39,087,907 | 4,000 | 30 | v | 0.00 | |
| | | | | | | | |

| YEAR | MINES | TONS | EMPLOYED | INJURED | FATALS | FAT/1000 | WAGES |
|------|-------|------------|----------|---------|--------|----------|---------|
| , | | | | 0.5 | 0 | 0.00 | 101 026 |
| 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 | 40,464,089 | 3,568 | 29 | 0 | 0.00 | 178.40 |
| 2006 | 7 | 39,617,873 | 3,714 | 14 | 1 | 0.27 | 178.40 |
| 2007 | 7 | 38,041,616 | 3,724 | 13 | 2 | 0.54 | 187.848 |
| 2008 | 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 | 0 | 0.00 | 238.44 |
| 2011 | 7 | 40,395,202 | 4,215 | 24 | 0 | 0.00 | 188.40 |
| 2012 | 9 | 41,099,022 | 4,441 | 17 | 0 | 0.00 | 221.85 |
| 2013 | 9 | 40,221,204 | 4,371 | 29 | 0 | 0.00 | 226.24 |
| 2014 | 9 | 41,301,098 | 4,387 | 29 | 0 | 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 | Ö | 0.00 | 231.92 |
| 2017 | 7 | 39,485,849 | 3,944 | 18 | Ō | 0.00 | 231.92 |
| 2017 | 6 | 40,986,054 | 3,954 | 14 | ő | 0.00 | 241.20 |
| 2010 | 3 | 40,000,004 | 3,301 | | | | |

MONTHS 1,536,910 1,142,975 769,677 1,086,691 MAN HOURS EMPLOYED PLANTS / PITS AVERAGE NUMBER PEOPLE 515 735 562 354 REPORT OF THE COUNTY INSPECTOR OF MINES — PER MS 180.11 OPERATIONAL SUMMARY YEAR ENDING DECEMBER 31, 2018 STRIPPING WASTE (ROCK & OVERBURDEN) 8,021,964 16,633,146 35,881,773 7,807,011 TONS TOTAL TACONITE MINED 14,543,077 8,509,156 28,881,084 15,538,157 TONS OF TACONITE PRODUCTS SHIPPED 2,765,816 23,558 5,674,198 5,218,678 7,799,330 Pellets -Pellet Chips -NORTH SHORE MINING CO. BABBITT AND SILVER BAY HIBBING TACONITE CO. UNITED TACONITE LLC ARCELORMITTAL MINORCA MINE, INC. MINES

12

7

12

7

MONTHS WORKED 7 12 881,893 2,997,635 7,533,888 881,893 8,415,781 MAN HOURS EMPLOYED PLANTS / PITS NUMBER PEOPLE AVERAGE 399 1,389 3,555 399 3,954 REPORT OF THE COUNTY INSPECTOR OF MINES — PER MS 180.11 OPERATIONAL SUMMARY YEAR ENDING DECEMBER 31, 2018 WASTE (ROCK & OVERBURDEN) STRIPPING 17,792,966 51,913,962 120,257,856 17,792,966 138,050,822 TONS TOTAL TACONITE MINED 118,002,912 136,996,909 50,531,438 18,993,997 18,993,997 TACONITE PRODUCTS SHIPPED 35,366,491 5,619,563 40,986,054 5,619,563 13,884,911 **TONS OF** TOTALS ST. LOUIS COUNTY KEEWATIN TACONITE CO. ST. LOUIS ITASCA TOTALS ITASCA COUNTY USS CORPORATION M.O.O. USS CORPORATION M.O.O. TOTALS MINES

Page 10

MINING COMPANIES, MINE OPERATIONS, SAFETY PERSONNEL AND OTHER AGENCIES

UNITED STATES STEEL CORPORATION

Minnesota Ore Operations KEEWATIN TACONITE P.O. Box 217 Keewatin, Minnesota 55753

eewatin, Minnesota 5575 Phone: 218-778-8798

| Lawrence Suther | land General Manager |
|-----------------|---|
| Travis Kolari | Plant Manager |
| Corv Hertling | Area Manager - Electrical & Mine Maintenance |
| John Kinaston | Area Manager - Mine Operations & Crusher |
| John Minor | Area Manager - Plant Operations & Maintenance |
| Susan Wiire | Interim Manager - Employee Relations |
| Kent Swanson | 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

| Lawrence Sutherland | General Manager |
|---------------------|--|
| Tim Kalisch | . Division Manager - Plant & Plant Maintenance |
| Susan Wiire | Interim Manager - Employee Relations |
| Kent Swanson | Manager - Safety & Industrial Hygiene |
| Mike Levar | Safety & IH Specialist |
| Jerry Orrell | Safety & IH Specialist |
| Jeffrev Tomsich | IH Specialist |
| Christie Dixon | Safety & IH Specialist |
| | |

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: robb.peterson@arcelormittal.com

Officers

| John Brett | President and CEO |
|--------------------|---|
| Keith Howell | Chief Operating Officer |
| Daniel Mull | . Executive Vice President, Sales & Marketing |
| Paul Liebenson | General Counsel & Secretary |
| Michael Chimitris | Assistant Secretary |
| Therese Vande Hey | Assistant Secretary |
| Neil Kohlberg | Vice President, Finance & Procurement |
| Richard Campoli | |
| Pat Parker | Vice President, Labor Relations |
| Wendell Carter | Vice President, General Manager |
| Robb Peterson | Operations Manager |
| Daniel Wallden | Treasurer |
| Richard Lenehan | Assistant Treasurer |
| Christine F. Fleps | Assistant Treasurer |
| Joseph P. Wallace | Assistant Treasurer |
| William R. Martin | Assistant Treasurer |
| | |

<u>Managers</u>

| Robb A. Peterson Operations Ma | nager - ArcelorMittal Minorca Mine |
|--------------------------------|------------------------------------|
| Steven I. Mekkes | Manager - Operating Technology |
| Scott W. Harrison | Manager - Pit |
| Adam R. Sersha | Manager - Plant |
| Daniel G. Vidmar Manager - H | uman Resources/Labor Relations |
| Mark H. Anderson | Manager - Safety |
| Thomas R. Cossalter | Manager - Purchasing |
| Ross A. Phenning | Manager - Electrical/Systems |

HIBBING TACONITE COMPANY

P.O. Box 589

Hibbing, Minnesota 55746 Phone: 218-262-5950

| Ed Latendresse | General Manager |
|-----------------|---------------------------------|
| Joe Marturano | Manager - Asset Management |
| Todd Nelson | Manager - Financial Control |
| Rally Hess | Manager - Mining |
| Rally Hess | Manager - Plants |
| Michael P. Kern | Manager - Human Resources |
| Andrea J. Bakk | Manager - Safety & Loss Control |
| Julie C. Lucas | Manager - Environmental |
| Tim Angelo | Manager - Procurement |

* * * * * *

UNITED TACONITE LLC

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

| Chad Asgaard | General Manager |
|-----------------|---------------------------------|
| Rvan Korpela | Area Manager - Plant |
| Jared Lubben | Area Manager - Mine |
| Nick Beukema | Area Manager - Maintenance |
| Todd Nelson | Area Manager - Finance |
| Joseph Mattson | Area Manager - Human Resources |
| Brvan Baird | Area Manager - Safety |
| Candice Maxwell | 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

| Paul Carlson | General Manager |
|----------------|-----------------------------|
| Ron Holm | Plant Manager |
| Conor McCue | Mine Manager |
| | Railroad Manager |
| Scott Blood | Safety Manager |
| | Environmental Manager |
| Bill Bundschuh | Silver Bay Power Manager |
| Ken Stocco | Reliability Manager |
| | Human Resource Manager |
| Chris Tokvam | Purchasing Manager |
| Nolan Koskela | Finance Manager |
| Luke Thun | Plant Safety Representative |
| Jake Baxter | Plant Safety Representative |
| Maria Strand | Plant Safety Associate |
| Rod Lampton | Mine Safety Representative |

ERP INTERNATIONAL

28754 County Highway 61 Grand Rapids, MN 55744

Rob Bigelow Managing Director

* * * * * *

POLYMET MINING

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

PIONEER FOUNDERS, LLC

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

Nicholas B. Alworth Managing Director

* * * * * *

CONGDON MINERAL MANAGEMENT INC.

1035 7th Ave. E.
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

GLACIER PARK IRON ORE PROPERTIES, LLC

CORPORATE OFFICE

755 E. Mulberry Ave., Suite 600 San Antonio, TX 78212 Phone: 210-821-6523

| Mr. David Schlagel | President |
|--------------------|------------|
| Matt Gonzales | Accountant |

HIBBING OFFICE

801 E. Howard Street PO Box 429 Hibbing, MN 55746 Phone: 218-262-3886

| Jeff Tromp | Chief Mining Engineer |
|--------------|------------------------------------|
| John Dixon | Senior Land / Mining Inspector |
| Ben Gardeski | Senior Mining Engineer / Inspector |
| Austin Dusek | Geologist / GIS Specialist |
| Robert Crowe | Mining Engineer / Inspector |

* * * * * *

HARTLEY OFFICE

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

Patrick Flattery Trust Manager

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

2018 IMA Staff

| Kelsey Johnson | President |
|----------------|------------------------|
| Katy Lofquist | Director of Operations |

2018 IMA Board of Directors

| 201 | 8 IMA Board of Directors |
|-------------------|--|
| Marci Knight | American Bank of the North |
| Steve Mekkes | ArcelorMittal Minorca Mine |
| Robb Peterson | ArcelorMittal Minorca Mine |
| Patrick Bloom | Cleveland Cliffs Inc. |
| Sandy Karnowski | Cleveland Cliffs Inc. |
| Ed LaTendresse | Cleveland Cliffs Inc Hibbing Taconite - |
| | (Board Chair) |
| Paul Carlson | Cleveland Cliffs Inc Northshore Mining Co. |
| Chad Asgaard | Cleveland Cliffs Inc United Taconite |
| Todd Nelson | Cleveland Cliffs Inc United Taconite |
| Bruce Mars | Conveyor Belt Services |
| Jim Perry | Furin & Shea Welding & Fabricating Inc. |
| Randy Abernethy | Industrial Weldors & Machinists |
| John Ward | Komatsu Mining Corp. |
| Nels Ojard | Krech Ojard & Associates |
| Brian Maki | Lakehead Constructors |
| | Lind Industrial Supplies |
| Jon Anderson | RMS Equipment |
| David Bednarz | Steel Dynamics |
| Mark Lorenz | Steel Dynamics |
| Jeff Lipovetz | TKDA |
| Matt Thibodeau | Thibodeau, Johnson & Feriancek PLLP |
| Chrissy Bartovich | U.S. Steel Minnesota Ore Operations |
| Tim Kalisch | U.S. Steel Minnesota Ore Operations |
| Travis Kolari | U.S. Steel Minnesota Ore Operations |
| Larry Sutherland | U.S. Steel Minnesota Ore Operations |

ONONDAGA IRON, LLC

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

David Adams Chief Executive Officer

Jane Kingston 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

Greg D. Lindahl President and Chief Executive Officer

MESABI MINERAL ASSOCIATION

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

GLOBAL MINERALS ENGINEERING, LLC

1035 7th Ave. E. Hibbing, Minnesota 55746-3675 Phone: 218-262-0799 Fax: 206-203-0098

David G. Meineke President & CEO Dorothy M. Meineke CFO

* * * * * *

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
DEPARTMENT OF
IRON RANGE RESOURCES & REHABILITATION
MINELAND RECLAMATION
1003 Discovery Drive
Chisholm, Minnesota 55719
Phone: (218) 274-7000 Fax: (218) 274-7002

Linda Johnson Mining and Reclamation Programs Supervisor Shelley Sallee Office & Administration Specialist, Sr. James B. Plummer .. Laurentian Vision and Real Property Coordinator Tom Schmelzler Building and Grounds Supervisor

DEPARTMENT OF IRON RANGE RESOURCES & REHABILITATION 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 |
| Matt Sioberg | Executive Director of Development |
| Marianne Bouska | Chief Operating Officer |
| Brian Hiti | 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

ST. LOUIS COUNTY SAFETY AND RISK MANAGEMENT 2503 RICE LAKE ROAD **DULUTH MN 55811-4819**

PHONE: 218-726-2139

Joseph J. Austin Director

NORTHLAND OFFICE BUILDING 307 South First Street Virginia MN 55792 Phone: 218-742-9841

Steve Manninen Inspector of Mines David Hamalainen Assistant Mine Inspector Derek Harbin Assistant Mine Inspector

ST. LOUIS COUNTY LAND AND MINERALS GOVERNMENT SERVICE BUILDING 320 West 2nd Street Duluth MN 55802

Mark Weber......Director

HIBBING ANNEX 1814 14th Avenue East Phone: 218-262-8000

Julie Marinucci Mineral Development Specialist

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

| Christopher A. Hensler | District Manager |
|--------------------------|--------------------------------------|
| Gerald D. Holeman | Assistant Manager |
| Scott K, Johnson | Assistant Manager |
| Wilbert W. Koskiniemi Jr | Supervisory Special Investigator |
| George F. Schorr | Conference Litigation Representative |
| Daniel J. Goyen | Conference Litigation Representative |
| Stephen D. Cotie | Health Specialist |

DULUTH FIELD OFFICE

| William H. Soderlind Supervisory | Mine Safety & Health Inspector |
|----------------------------------|--------------------------------|
| Mindy A. Meierbachtol | Mine Safety & Health Inspector |
| Cory C. Niemi | Mine Safety & Health Inspector |
| Terrance J. Norman | Mine Safety & Health Inspector |
| Jeffrey J. Rausch | Mine Safety & Health Inspector |
| Seth A. Sayles | Mine Safety & Health Inspector |
| Rufus L. Taylor | Mine Safety & Health Inspector |

HIBBING FIELD OFFICE

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

Fax: 218-262-1296

| Richard V. Boeckermann. | . Supervisory Mine Safety & Health Inspector |
|--------------------------|--|
| Jerome A. Cuffe | Mine Safety & Health Inspector |
| Luke E. Jarvi | Mine Safety & Health Inspector |
| Rvan D. Moberg | Mine Safety & Health Inspector |
| Kevin N. Ouke | Mine Safety & Health Inspector |
| Craig W. Rautiola | Mine Safety & Health Inspector |
| Scott E. Salo | Mine Safety & Health Inspector |
| Thaddeus J. Sichmeller . | Mine Safety & Health Inspector |

MINNESOTA DEPARTMENT OF REVENUE 600 North Robert Street St. Paul, Minnesota 55101

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

| Cynthia Bauerly |
Commissioner |
|-----------------|------------------|
| Gina Amacher | |
| Nick Norris | |

Minerals Tax Office 230 1st St. S., Suite 102 Virginia, Minnesota 55792 Phone: (218) 744-7424 Fax: (218) 742-9153

Bob Wagstrom Production Tax Robert Pecchia Production 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

John RebrovichAssistant DirectorCathy DrummondStaff RepresentativeMichael WoodsStaff RepresentativeMichele FagreStaff Representative

UNITED STEEL WORKERS OF AMERICA LOCAL UNITS

LOCAL #6860 UNITED TACONITE LLC

Phone: 218-744-4480

| Joe Fredrickson | President |
|-----------------|-----------------------|
| Dan Hill | |
| Candace Sprague | |
| Kris Kuhlmey | Financial Secretary |
| Gary Butala | |
| Larry Roberts | |
| Bryan Sandnas | Plant Safety Chairman |
| Gary Butala | Mine Safety Chairman |

LOCAL #2660 KEEWATIN TACONITE

Phone: 218-778-6909

| | President Safety Chair/Safety Representative |
|------------------|--|
| Joe Ferris | Safety Representative |
| Pat Savage | Area Chair, Concentrator |
| Jeff Stalboerger | Area Chair, Shop |
| Kelly Peterson | Area Chair, Pit |
| | Area Chair, Pond |
| | Area Chair, Crusher |
| | Area Chair, Pellet Plant |
| | Area Chair, Electrical |
| | Area Chain Shop |

LOCAL #2705 HIBBING TACONITE COMPANY

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

115 W. Lake Street, Chisholm, MN 55719

| Chris Johnson | President |
|----------------|-----------------------------|
| Steve Rancourt | Vice President |
| Mike Mandich | Financial Secretary |
| | Recording Secretary |
| Wade Bexell | Treasurer |
| Jeff Walters | Union Safety Representative |
| | Safety Chairman |
| | |

LOCAL #6115 ARCELORMITTAL MINORCA MINE INC.

Phone: 218-741-3310

| Harold Anderson | President |
|-----------------|-----------|
| Tom French | |
| Reed Milos | |
| Jim Kottke | |
| Kyle Lamppa | |

LOCAL #1938 USS - MINNTAC MINE

Phone: 218-741-0887

| | President |
|---------------------|---|
| Steve Bonach | Vice President |
| Dave Chesser | Recording Secretary |
| | Financial Secretary |
| | Treasurer |
| | Safety Committee Chairman |
| Mark Hagsten | Safety Committee Co-Chairman |
| | Safety Coordinator - Minntac/Keetac |
| | I-Time Safety Representative, Mine/Shops |
| Mike Hultman Full-1 | Time Safety Representative, Concentrator/ |
| | Crushers |
| Paul Coombe | Full-Time Safety Representative, |
| | Agglomerators I, II, III |

* * * * * *

BUILDING AND CONSTRUCTION LABORERS LOCAL 1097

712 4th St. North Virginia, MN 55792 Phone: 218-741-3638

| Rick J. Cannata | President |
|----------------------|-------------------------------------|
| Todd Payne | Vice President |
| Shawn BrafordB | usiness Manager/Financial Secretary |
| Donald Schmidt | "E" Board Member |
| Patrick D. O'Connell | "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

ARCELORMITAL MINORCA MINE INC:

Crusher Welder, Date of Accident – July 30, 2018. Employee was fitting a wear ring on the head nut so it could be welded on. While adjusting the ring for final placement prior to welding, the wear ring slipped over the head nut due to excessive wear. It fell to the ground landing on the employee's right foot. The ring weighs approximately 375 lbs. The incident resulted in a fractured foot. Days Lost – 154 (in 2018)

HIBBING TACONITE:

Maintenance Mechanic, Date of Accident – January 23, 2018. Employee was working with 3 other mechanics changing idlers on a conveyor belt. Two mechanics working on the head of the belt set down a pry bar (lying flat on its side) at the top ramped walkway. Another mechanic employee was working at the tail end of the belt sitting down to change out a return idler. The bar slid down the ramped walkway striking the employee in the left glute causing a bruise. Days Lost – 1

Tractor Operator, Date of Accident – January 24, 2018. A tractor operator was parking a pickup at the end of their shift. As the employee was exiting the cab their right foot became entangled in a loop of wire hanging down alongside the brake and gas pedal. When they tried to step out of the cab they fell to the ground landing on their lunch pail due to the cable wrapped around their foot. Incident resulted in fractured ribs and clavicle. Days Lost – 52

Welder, Date of Accident – March 6, 2018. A welder was repairing worn spots and adding material D-11 blade. While they were building up the blade with hard surfacing wire, a piece of molten metal fell on the top of their left boot. The molten metal burned through the synthetic tongue of the boot and sock into the top of their left foot and then rolled down inside the boot to the bottom of the employee's foot. Incident resulted in burns to the left foot. Days Lost $-19\,$

Maintenance Mechanic, Date of Accident – April 24, 2018. Maintenance mechanic was working with two other mechanics to change two lip shrouds on a shovel bucket. A stuck shroud was not coming off so mechanic began pounding on it with a 10 lb. sledge hammer. After striking the shroud several times a small piece of metal broke off the shroud and entered into the mechanic's right leg by the shin causing a small cut. Employee had a fragment surgically removed from their right shin. Days Lost – 5

HIBBING TACONITE COMPANY (cont)

Auto Mechanic, Date of Accident – April 24, 2018. Two truck shop mechanics were using a bar placed through the lifting eye of a box pin (\sim 150 lbs.) to lift the pin. One auto mechanic reported they felt a strain in their lower back. Days Lost – 6

Equipment Operator, Date of Accident – May 17, 2018. An excavator operator was walking the excavator north of the hydro separator discharge pump house. While walking along the edge of a narrow embankment, the excavator's right track overhanging the narrow embankment slid off the edge and the excavator rolled over onto the noncab side of the excavator. Employee was not wearing a seat belt. Employee sustained a chest contusion and laceration to the face resulting in lost time. Days Lost – 2

Auto Mechanic, Date of Accident – August 3, 2018. A truck shop auto mechanic was using a 1" impact gun to remove nuts holding the bucket segments on a loader. A welder had previously cut part of the nuts off to ease in removal of the nuts and bolts. The mechanic then placed their left hand underneath the bucket to push up the plough bolt and when they hit the trigger on the gun the bolt spun resulting in a cut to their left hand palm area. Days Lost $-53\,$

Auto Mechanic, Date of Accident – November 28, 2018. An electrician was attempting to help the cable crew manually carry a section of electrical cable. Part of the cable they were carrying tightened and rapidly pulled them to the ground causing immediate pain to the employee's right knee. The employee sustained a torn meniscus. Days Lost – 23 (in 2018)

Maintenance Mechanic, Date of Accident – December 10, 2018. A mechanic was working with two other employees trying to lower a house fan in the shovel. The employee climbed up a 5 ft. fiberglass ladder and adjusted some come-a-longs that were being used to lower the house fan. As the employee was descending the ladder, they turned away from the ladder to view a come-a-long causing them to miss the last step of the ladder. This caused them to fall to the ground landing on their left ankle awkwardly. Employee sustained a sprained and fractured ankle. Days Lost – 15 (in 2018)

NORTHSHORE MINING COMPANY

| Babbitt | : |
|---------|---|
| | |

None

Silver Bay:

None

UNITED TACONITE:

Production Truck Operator, Date of Accident – March 31, 2018. Employee was driving a production truck, and reported a sore back from being shook while in the cab. Days Lost – 2

USS CORPORATION, MINNESOTA ORE OPERATIONS

KEETAC:

None

MINNTAC:

Crusher MTM, Date of Accident – January 16, 2018. A Turn Bin MTM was exiting the lunch room returning to work in the Step III Turn Bin. The employee proceeded to descend the wooden steps with his right hand on the handrail. His boot slipped when it contacted the 2nd step from the top. The employee's boots continued slipping over the remaining 6 steps while his arm was strained holding the handrail all the way down. He regained a foot hold for a moment near the bottom, then slipped again on the rubber mat at the bottom of the stairs landing on his right hip. The incident resulted in a torn rotator cuff. Days Lost – 8

Concentrator MTM, Date of Accident – April 6, 2018. Employee was trying to free up a 143-15-1 pump barrel using a 24 inch pipe wrench. He was able to turn the impeller about 3 or 4 times using the wrench. While pulling the 5th time, the wrench slipped off the shaft and he fell backward. He put out his right hand and caught himself from hitting the floor. After which he felt pain in his right triceps. The incident resulted in a torn triceps tendon. Days Lost – 25

Crusher MTM, Date of Accident – May 1, 2018. A crusher MTM was in the process of pulling isolation channels out of the East Side of 061-03 pan feeder in the Crusher Turn Bin. The isolation channels were in place to allow maintenance to continue work inside of the pan feeder while the bin above was still taking material for production. The injured employee was standing on the 4th rung of an 8 ft step ladder, operating (2) 1,000 lb Pullzalls that were attached to the isolation channels in order to pull them out. While pressing the button to retract one Pullzall, the ladder tipped or moved causing the employee to lose his balance. His left foot was caught between the 4th and 5th rung as he fell down head first towards the ground, fracturing his left leg just above the ankle. Days Lost – 70