This document is made available electronically by the Minnesota Legislative Reference Library as part of an ongoing digital archiving project. http://www.leg.state.mn.us/lrl/lrl.asp

The Annual Report of the Inspector of Mines



Photo by Paul Pluskwik

2019

Derek Harbin Mine Inspector St. Louis County 201 South 3rd Avenue West Virginia, MN 55792 218-742-9841 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

2019 * * * * * * * * * * * * * * * * * *

INSPECTOR OF MINES

Derek Harbin

16079 Goss St., P.O. Box 241

Pengilly, MN 55775

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

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

Micah Hovet

733 Elizabeth Avenue Grand Rapids, MN 55744

CELL PHONE: 218-244-7772 OFFICE PHONE: 218-742-9840

OFFICE AT **GOVERNMENT SERVICES CENTER**

201 South 3rd Avenue West, Virginia, Minnesota 55792 PHONE: 218-742-9841

THE ST. LOUIS COUNTY BOARD OF COMMISSIONERS

District 1	Frank Jewell, Duluth, Minnesota
District 2	Patrick Boyle, Duluth, Minnesota
District 3	Beth Olson, Duluth, Minnesota
District 4	Paul McDonald, Ely, Minnesota
District 5	Keith Musolf, Duluth, Minnesota
District 6	Keith Nelson, Virginia, Minnesota
District 7	Mike Jugovich, Chisholm, Minnesota

THE ITASCA COUNTY BOARD OF COMMISSIONERS

District 1	Davin Tinquist
District 2	Terry Snyder
District 3	Leo Trunt
District 4	Burl Ives
District 5	Ben DeNucci

Jeff Walker Itasca County Auditor Vic Williams Itasca County Sheriff, Itasca County Mine Inspector February 25, 2020

THE HONORABLE BOARDS OF COMMISSIONERS

ST. LOUIS COUNTY
COURT HOUSE
DULUTH, MN 55802-1202

ITASCA COUNTY COURT HOUSE GRAND RAPIDS, MN 55744

Dear Chairs Jugovich, DeNucci and Commissioners:

The Annual Report of the Inspector of Mines for 2019 is herewith submitted.

Mining activity for 2019 showed a strong production schedule for both St. Louis and Itasca Counties. A total of 38,665,148 tons of natural ore and taconite were shipped from area operations compared to 40,986,054 in 2018. Mining related employment increased and was reported at 4,105 individuals. This was an increase of 151 employees compared to the 3,954 reported in 2018. These positive numbers mark three consecutive years of steady production. The total work hours reported for area mining operations was 8,517,320 for the year.

The number of active mining operations in the area during 2019 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 was made by several area operations toward the objective of growth during the coming years. These include PolyMet, who continued efforts to obtain the final mine permits associated with the NorthMet project (copper/nickel/precious metal mining) and Twin Metals, who submitted their formal mine plan of operation this year and continued to move forward with efforts directed toward their semi-precious metal mining project near Ely.

2019 was marked with the loss of industry and mine safety advocate, former State Representative and County Commissioner Tommy Rukavina. Also of significance was the opening of the new mine view by the City of Hibbing, which showcases area mining operations and provides a public viewing opportunity.

(Continued on page 3)

During 2019, area mining operations reported a total of 7 lost time or serious accidents. This is a significant decrease in comparison to the 14 experienced in 2018. Unfortunately, one fatality was reported during the year. This tragic incident occurred at the Arcelormittal Minorca Mine on November 5, 2019 and points to the importance of our shared commitment to the safety of all those who work in the mining industry.

St. Louis County Mine Inspectors successfully completed all required inspections of area operations mandated by Minnesota State Law Chapter 180, Section 180.03 during 2019.

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,

Derek P. Harbin Inspector of Mines St. Louis County Joseph J. Austin MS, MIS, CHMM Director, Safety and Risk Management St. Louis County

110

Excerpts from the Law On

INSPECTOR OF MINES

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

Section 180.015; Subd. 7. Reportable accident.

- "Reportable accident" means:
- (1) a death of any individual on mine property;
- (2) an injury that has a reasonable potential to cause death;
- (3) mine fires that result in evacuation of miners or cause significant damage to structures or equipment at a mine;
- (4) all explosions, including methane, dust, or unplanned detonation of explosives or blasting agents;
- (5) coal or rock outbursts, including bumps or bounces, that result in injury or evacuation of an area, or that interrupt production for more than 30 minutes;
- (6) inundations by liquid or gas;
- (7) entrapment of any person requiring mine rescue efforts;
- (8) any unstable condition at an impoundment or refuse pile that requires emergency corrective action to prevent failure or requires evacuation;
- (9) any accident at a mine that is likely to be the subject of immediate or extraordinary media interest;

or

(10) a death of any individual off-mine property resulting from activities, such as flyrock, on mine property.

SUMMARY OF STATISTICS

2019

Number of Mining Companies Number of Mines in Operation Number of Plants in Operation Number of Wash Plants Number of Mines Inactive Number of Abandoned Mine Shafts Inspected	
Total Number of Mines and Plants	
Total Taconite Products Shipped	
Total Concentrate Shipped	
Taconite Mined	
Stripping and Waste Removal, Tons	. 152,286,561
Total Material Moved, Tons Estimate	. 287,316,410
Total People Employed	4,105
Number of Fatal Accidents, Open Pit	
Number of Fatal Accidents, Plant	0
Total Number of Fatal Accidents	1
Fatalities per 1,000 People Employed	0.24
Number of Lost-time and Time Charged Accidents	
Total Number of Employee-Hours Worked	8,517,320
Number of Inspections	385
Number of Investigations	4

2019 WAGE RATES INCENTIVE INCLUDED

Labor	Wage
Grade	Rate
1	
2	\$28.38
3	
4	\$32.84
5	\$34.88

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.

MINES	TONS	EMPLOYED	INJURED	FATALS	FAT/1000	WAGES
(Averag	ge per year)	13,320 19,918 15,286 16,048 16,000 11,430 14,639 14,779 15,307 14,212 14,121 12,043 9,688 11,896 11,538 10,180 9,225 9,038 8,022 8,008 7,752 4,824 2,243 2,843 4,272 4,079 4,694 6,356 3,773 4,589 5,547 7,097 8,101 9,597 9,390 8,495 7,100 8,715 10,286 9,680 10,257 11,884 10,257 10,286 10,257 11,884 10,257 10,286 10,257 11,884 10,257 10,286 10,257 11,884 10,257 10,25	60 107 156 247 175 167 153 178 187 159 188 160 215 157	378 144 34 42 60 33 66 64 27 18 52 9 7 13 4 2 1 2 6 6 5 4 3 1 5 4 7 6 2 6 9 5 7 4 8 2 4 4 2 1 2 6 6 5 4 3 1 5 1 7 6 2 6 9 5 7 4 8 2 4 4 2 1 2 6 6 5 4 3 1 5 1 7 6 2 6 9 5 7 4 8 2 4 4 2 1 2 6 6 5 4 3 1 5 1 7 6 2 6 9 5 7 4 8 2 4 4 2 1 2 6 6 5 4 3 1 5 1 7 6 2 6 9 5 7 4 8 2 4 4 2 1 2 6 6 5 4 3 1 5 1 7 6 2 6 9 5 7 4 8 2 4 4 2 1 2 6 6 5 4 3 1 5 1 7 6 2 6 9 5 7 4 8 2 4 4 2 1 2 6 6 5 4 3 1 5 1 7 6 2 6 9 5 7 4 8 2 4 4 2 1 2 6 6 5 4 3 1 5 1 7 6 2 6 9 5 7 4 8 2 4 4 2 1 2 6 6 5 4 3 1 5 1 7 6 2 6 9 5 7 4 8 2 4 4 2 1 2 6 6 5 4 3 1 5 1 7 6 2 6 9 5 7 4 8 2 4 4 2 1 2 6 6 5 4 3 1 5 1 7 6 2 6 9 5 7 4 8 2 4 4 2 1 2 6 6 5 4 3 1 5 1 7 6 2 6 9 5 7 4 8 2 4 4 2 1 2 6 6 5 4 3 1 5 1 7 6 2 6 9 5 7 4 8 2 4 4 2 1 2 6 6 5 4 3 1 5 1 7 6 2 6 9 5 7 4 8 2 4 4 2 1 2 6 6 5 4 3 1 5 1 7 6 2 6 9 5 7 4 8 2 4 4 2 1 2 6 6 6 5 4 3 1 5 1 7 6 2 6 9 5 7 4 8 2 4 4 2 1 2 6 6 6 5 4 3 1 5 1 7 6 2 6 9 5 7 4 8 2 4 4 2 1 2 6 6 6 5 4 3 1 5 1 7 6 2 6 9 5 7 4 8 2 4 4 2 1 2 6 6 6 5 4 3 1 5 1 7 6 2 6 9 5 7 4 8 2 4 4 2 1 2 6 6 6 5 4 3 1 5 1 7 6 2 6 9 5 7 4 8 2 4 4 2 1 2 6 6 6 5 4 3 1 5 1 7 6 2 6 9 5 7 4 8 2 4 4 2 1 2 6 6 6 5 4 3 1 5 1 7 6 2 6 6 5 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6	5.44 3.91 3.31 2.74 2.59 2.10 2.32 1.51 3.92 2.55 2.16 3.48 2.27 1.63 2.43 1.12 2.12 1.68 0.89 0.35 0.47 1.28 0.79 1.06 0.18 0.70 0.73 0.64 1.70 0.73 0.74 0.74 0.74 0.75 0.76 0.77 0.73 0.74 0.74 0.75 0.76 0.77 0.73 0.74 0.74 0.74 0.75 0.76 0.76 0.77 0.77 0.77 0.77 0.77 0.77	2.110 2.640 2.575 2.705 2.310 2.421 2.923 3.391 4.347 5.645 6.010 6.037 4.062 5.076 5.144 5.126 5.283 5.305 5.230 5.340 5.280 5.260 4.308 4.433 4.830 5.260 4.830 6.200 5.816 6.080 6.400 6.820 7.030 7.720 7.720 7.720 8.720 9.480 9.480 10.480 10.480 10.480 10.480 10.480 10.480 11.480 11.480 12.560 14.850
1 6 1	,	,				17.560
	(Silver (1) 114 102 84 90 75 76 66 70 59 57 50 32 30 35 42 40 42 52 38 43 47 63 60 62 66 56 60 79 80 94 109 116 122 122 121	(Silver Cave Disaster) 114 25,349,924 102 27,165,386 84 13,398,525 90 33,147,517 75 22,808,875 76 29,077,679 66 32,583,943 70 28,052,363 59 29,704,774 57 35,680,720 50 25,196,155 32 12,270,886 30 1,773,750 35 10,809,167 42 11,781,226 40 13,703,715 42 23,322,975 52 36,536,326 38 10,976,760 43 24,156,258 47 36,493,781 63 45,874,218 60 53,923,635 62 51,753,320 66 50,532,679 56 47,544,509 60 38,380,361 79 47,293,918 80 52,020,563 94 42,406,528 109 48,671,966 116 60,249,538 122 48,192,132 122 60,776,174 121 49,845,118 127 36,137,304	(Average per year) 13,320 19,918 15,286 16,048 16,000 11,430 14,639 14,779 (Silver Cave Disaster) 15,307 14,212 114 25,349,924 14,121 102 27,165,386 12,043 84 13,398,525 9,688 90 33,147,517 11,896 75 22,808,875 11,538 76 29,077,679 10,180 66 32,583,943 9,225 70 28,052,363 9,038 59 29,704,774 8,022 57 35,680,720 8,008 50 25,196,155 7,752 32 12,270,886 4,824 30 1,773,750 2,243 35 10,809,167 2,843 42 11,781,226 4,272 40 13,703,715 4,079 42 23,322,975 4,694 52 36,536,326 6,356 38 10,976,760 3,773 43 24,156,258 4,589 47 36,493,781 5,547 63 45,874,218 7,097 60 53,923,635 8,101 62 51,753,320 9,597 66 50,532,679 9,390 56 47,544,509 8,495 60 38,380,361 7,100 79 47,293,918 8,715 80 52,020,563 10,286 94 42,406,528 9,680 109 48,671,966 10,257 116 60,249,538 11,884 122 48,192,132 10,838 122 60,776,174 12,079 121 49,845,118 9,925 127 36,137,304 10,381	(Average per year) (Average per year) 13,320 19,918 15,286 16,048 16,000 11,430 14,639 14,779 (Silver Cave Disaster) 15,307 14,212 114 25,349,924 14,121 102 27,165,386 12,043 84 13,398,525 9,688 90 33,147,517 11,896 75 22,808,875 11,538 76 29,077,679 10,180 66 32,583,943 9,225 70 28,052,363 9,038 59 29,704,774 8,022 57 35,680,720 8,008 50 25,196,155 7,752 32 12,270,886 4,824 30 1,773,750 2,243 35 10,809,167 2,843 42 11,781,226 4,272 40 13,703,715 4,079 42 23,322,975 4,694 52 36,536,326 6,356 38 10,976,760 3,773 43 24,156,258 4,589 47 36,493,781 5,547 63 45,874,218 7,097 60 60 53,923,635 8,101 107 62 51,753,320 9,597 156 63 45,874,218 7,097 60 60 53,923,635 8,101 107 62 51,753,320 9,597 156 63 45,874,218 7,097 60 60 53,923,635 8,101 107 62 51,753,320 9,597 156 63 45,874,218 7,097 60 60 53,923,635 8,101 107 62 51,753,320 9,597 156 63 45,874,218 7,097 60 60 53,923,635 8,101 107 62 51,753,320 9,597 156 63 45,874,218 7,097 60 60 53,923,635 8,101 107 62 51,753,320 9,597 156 63 38,380,361 7,100 167 79 47,293,918 8,715 153 80 52,020,563 10,286 178 94 42,406,528 9,680 187 109 48,671,966 10,257 159 116 60,249,538 11,884 188 122 48,192,132 10,838 160 122 60,776,174 12,079 215 121 49,845,118 9,925 157 121 49,845,118 9,925 157 121 49,845,118 9,925 157	(Average per year) 13,320 73 19,918 78 15,286 51 16,048 44 16,000 43 11,430 24 14,639 34 14,779 22 (Silver Cave Disaster) 15,307 60 14,212 33 114 25,349,924 14,121 36 102 27,165,386 12,043 26 84 13,398,525 9,688 24 90 33,147,517 11,896 27 75 22,808,875 11,538 21 76 29,077,679 10,180 18 66 32,583,943 9,225 15 70 28,052,363 9,038 22 59 29,704,774 8,022 9 57 35,680,720 8,008 17 50 25,196,155 7,752 13 32 12,270,886 4,824 4 30 1,773,750 2,243 2 35 10,809,167 2,843 1 42 11,781,226 4,272 2 40 13,703,715 4,079 6 42 23,322,975 4,694 6 52 36,536,326 6,356 5 38 10,976,760 3,773 4 43 24,156,258 4,589 3 47 36,493,781 5,547 6 63 45,874,218 7,097 60 5 60 53,923,635 8,101 107 14 62 51,753,320 9,597 156 7 66 50,532,679 9,390 247 6 67 47,544,509 8,495 175 12 60 38,380,361 7,100 167 6 79 47,293,918 8,715 153 9 80 52,020,563 10,286 178 5 94 42,406,528 9,680 187 7 109 48,671,966 10,257 159 4 116 60,249,538 11,884 188 8 122 48,192,132 10,838 160 2 122 60,776,174 12,079 215 4 121 49,845,118 9,925 157 4 121 49,845,118 9,925 157 4 121 49,845,118 9,925 157 4 121 49,845,118 9,925 157 4 121 49,845,118 9,925 157 4 127 36,137,304 10,381 151	(Average per year) 13,320 73 5.44 19,918 78 3.91 15,286 51 3.31 16,048 44 2.74 16,000 43 2.59 11,430 24 2.10 14,639 34 2.32 14,779 22 1.51 (Silver Cave Disaster) 15,307 60 3.92 14,212 33 2.32 114 25,349,924 14,121 36 2.55 102 27,165,386 12,043 26 2.16 84 13,398,525 9,688 24 3.48 90 33,147,517 11,896 27 2.27 75 22,808,875 11,538 21 1.82 76 29,077,679 10,180 18 1.77 66 32,583,943 9,225 15 1.63 70 28,052,363 9,038 22 2.43 59 29,704,774 8,022 9 1.12 57 35,680,720 8,008 17 2.12 57 35,680,720 8,008 17 2.12 50 25,196,155 7,752 13 1.68 32 12,270,886 4,824 4 0.83 30 1,773,750 2,243 2 0.89 35 10,809,167 2,843 1 0.35 40,279 40 13,703,715 4,079 6 1.47 42 23,322,975 4,694 6 1.28 52 36,536,326 6,356 5 0.79 38 10,976,760 3,773 4 1.06 43,241,56,258 4,589 3 0.65 47 36,493,781 5,547 1 0.18 63 45,874,218 7,097 60 5 0.70 60 53,923,635 8,101 107 14 1.70 66 53,923,635 8,101 107 14 1.70 66 53,923,635 8,101 107 14 1.70 66 53,923,635 8,101 107 14 1.70 66 53,923,635 8,101 107 14 1.70 62 51,753,320 9,597 156 7 0.73 66 50,532,679 9,390 247 6 0.64 67,544,509 8,495 175 12 1.41 60 38,380,361 7,100 167 6 0.84 79 47,293,918 8,715 153 9 1.03 80 52,020,563 10,286 178 5 0.49 94 42,406,528 9,680 187 7 0.72 109 48,671,966 10,257 159 4 0.38 116 60,249,538 11,884 188 8 0.66 122 48,192,132 10,838 160 2 0.18 122 48,192,132 10,838 160 2 0.18 122 48,192,132 10,838 160 2 0.18 121 49,845,118 9,925 157 4 0.40 127 36,137,304 10,381 151 2 0.19

	741						
YEAR	MINES	TONS	EMPLOYED	INJURED	FATALS	FAT/1000	WAGES
1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990	124 90 89 95 85 46 61 42 54 49 51 53 51 49 54 47 49 51 52 42 66 61 61 61 61 61 61 61 61 61 61 61 61	50,093,275 30,495,093 16,055,353 39,526,879 33,169,291 23,269,349 35,255,178 39,115,088 40,891,345 44,412,473 41,216,870 43,078,879 34,628,234 33,648,268 32,687,511 35,100,156 46,076,814 51,745,763 45,394,814 41,425,833 26,556,566 50,806,547 54,530,338 42,076,497 47,300,056 22,335,570 26,843,983 30,463,941 31,948,722 26,608,769 30,063,909 37,250,243 38,421,803 41,441,888	12,804 10,250 9,256 11,797 9,200 8,676 7,671 8,102 8,305 9,445 8,825 9,125 9,394 9,631 9,441 9,431 10,131 10,667 10,864 11,514 10,840 13,056 13,267 11,441 11,630 7,626 5,935 6,305 5,539 5,250 4,857 4,546 5,664 6,379	144 83 93 132 51 57 30 26 53 56 52 55 58 71 77 82 138 164 107 96 44 50 55 29 33 26 41 55 40	6 0 4 2 4 1 2 1 0 4 4 2 0 5 0 0 4 1 0 1 2 1 0 1 0 0 2 0 0 0 1 1 2 1	0.47 0.00 0.43 0.16 0.43 0.11 0.26 0.12 0.00 0.43 0.44 0.22 0.00 0.52 0.00 0.09 0.09 0.09 0.09 0.09 0.00 0.09 0.00 0 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	17.560 18.400 22.480 22.430 22.430 22.430 22.430 22.430 22.430 23.760 25.640 27.430 28.520 32.480 34.096 35.352 44.360 45.842 47.368 56.682 64.344 70.832 80.112 89.472 94.192 84.19 87.39 90.60 94.19 94.19 94.19 94.19 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	1	0.18	109.936
2001	8	34,144,559	4,212	60	0	0.00	113.936
2002	8	39,087,907	4,036	60	0	0.00	113.936

YEAR	MINES	TONS	EMPLOYED	INJURED	FATALS	FAT/1000	WAGES	
0000	0	05 000 007	4 177	0.5	0	0.00	101 000	
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	0	0.00	231.92	
2017	7	39,485,849	3,944	18	0	0.00	231.92	
2018	6	40,986,054	3,954	14	0	0.00	241.20	
2019	6	38,665,148	4,105	7	1	0.24	249.68	
_0.0		30,000,140	1, 100	,		0.2	_ 10.00	

T (0.01						-
	5	5	57	12	,	
EMPLOYEE	774,849	1,534,052	1,168,218	1,126,058		
AVERAGE NUMBER PEOPLE EMPLOYED PLANTS / PITS	350	740	575	529		
TONS STRIPPING WASTE (ROCK & OVERBURDEN)	7,370,726	31,969,882	9,677,173	20,870,054		
TOTAL TACONITE MINED	8,259,728	27,946,136	15,680,690	15,219,818		
TONS OF TACONITE PRODUCTS SHIPPED	2,729,514	7,473,344	5,051,628	5,309,187		
	Pellets - Pellet Chips -					
AINES	ARCELORMITTAL AINORCA MINE, INC.	IIBBING TACONITE CO.	VORTHSHORE MINING CO. SABBITT AND SILVER BAY	JNITED TACONITE LLC		
	TONS NUMBER TOTAL STRIPPING PEOPLE TACONITE WASTE (ROCK EMPLOYED EIMINED & OVERBURDEN) PLANTS / PITS	TONS OF TACONITE TOTAL STRIPPING PEOPLE SHIPPED MINED & OVERBURDEN) PLANTS / PITS HOURS CA MINE, INC. Pellets - 2,729,514 8,259,728 7,370,726 350 774,849	TONS OF TACONITE TOTAL STRIPPING PEOPLE SHIPPING PRODUCTS SHIPPED MINED & OVERBURDEN) PLANTS / PITS HOURS HOURS PEOBLE SHIPPED MINED & OVERBURDEN) PLANTS / PITS HOURS S8,893 7,370,726 350 774,849 Pellet Chips - 58,893 27,946,136 31,969,882 740 1,534,052	TONS OF TACONITE TOTAL STRIPPING FEOPLE NUMBER PRODUCTS TACONITE WASTE (ROCK SHIPPED MINED & OVERBURDEN) PLANTS / PITS HOURS HOURS Pellets - 2,729,514 8,259,728 7,370,726 350 774,849 Pellet Chips - 58,893 27,946,136 31,969,882 740 1,534,052 NG CO. 5,051,628 15,680,690 9,677,173 575 1,168,218	Pellets - 2,729,514 8,259,728 7,370,726 350 774,849 Pellet Chips - 5,051,628 15,680,690 9,677,173 579 529 1,126,058	TONS OF

	REPORT OF	THE COUNTY OPER YEAR END	E COUNTY INSPECTOR OF MINES — OPERATIONAL SUMMARY YEAR ENDING DECEMBER 31, 2019	REPORT OF THE COUNTY INSPECTOR OF MINES — PER MS 180.11 OPERATIONAL SUMMARY YEAR ENDING DECEMBER 31, 2019	180.11		
MINES	TONS OF CONCENTRATE SHIPPED	TONS OF TACONITE PRODUCTS SHIPPED	TOTAL TACONITE MINED	TONS STRIPPING WASTE (ROCK & OVERBURDEN)	AVERAGE NUMBER PEOPLE EMPLOYED PLANTS / PITS	MAN HOURS	MONTHS
USS CORPORATION M.O.O. KEEWATIN TACONITE CO. ST. LOUIS ITASCA	78	5,166,341	18,984,036	22,012,708	451	921,933	12
USS CORPORATION M.O.O. MINNTAC		12,876,241	48,939,441	60,386,018	1,460	2,992,210	12
TOTALS	78	38,665,148	135,029,849	152,286,561	4,105	8,517,320	

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 Phone: 218-778-8798

Lawrence Sutherland General Manager
Travis Kolari Plant Manager
Cory Hertling Area Manager - Electrical & Mine Maintenance
John Kingston 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	nterim Manager - Employee Relations
Kent Swanson	Manager - Safety & Industrial Hygiene
Mike Levar	Safety & IH Specialist
Jerry Orrell	Safety & IH Specialist
Jeffrey 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	Chief Operating Officer Vice President, Sales & Marketing General Counsel & Secretary
Michael Chimitris	
Therese Vande Hey	
Neil Kohlberg Vice I	President, Finance & Procurement
Richard Campoli	Controller
Pat Parker	Vice President, Labor Relations
Gary Norgren	. Vice President, General Manager
Robb Peterson	Operations Manager
Daniel Wallden	Treasurer
Richard Lenehan	Assistant Treasurer
Christine F. Fleps	Assistant Treasurer
Joseph P. Wallace	
William R. Martin	Assistant Treasurer

Managers

Robb A. Peterson Operations Mai	nager - ArcelorMittal Minorca Mine
Steven I. Mekkes	Manager - Operating Technology
Eric A. Krause	Manager - Pit
Adam R. Sersha	Manager - Plant
Jaime L. Johnson	Manager - Environmental
Daniel G. Vidmar Manager - He	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
Dan Aagenes	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

	General Manager
Hyan Korpela	Area Manager - Plant
Jared Lubben	Area Manager - Mine
Nick Beukema	Area Manager - Maintenance
Adam Radel	Area Manager - Finance
Joseph Mattson	. Area Manager - Human Resources
Ryan Bogart	Area Manager - Safety
Candice Maxwell	Area 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	_
Conor McCue	
Bryan Rusco	Railroad Manager
Scott Blood	Safety Manager
Andrea Hayden	Environmental Manager
Andy Rogers	Asset Manager
Troy Sarles	Human Resource Manager
Chris Tokvam	Purchasing Manager
Nolan Koskela	Finance Manager
Luke Thun	Plant Safety Representative
Jake Baxter	Plant Safety Representative
Abby Cyr	Plant Safety Associate
Rod Lampton	Mine Safety Representative

POLYMET MINING

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

Jon Cherry	President and Chief Executive Officer	
LaTisha Gietzen Dir	ector of Public and Community Relations	
James Tieberg	Division Manager - Mining	
Kevin Pylka Manager of Environmental Permitting & Compliance		
Christie Kearney	Environmental Site Director	

* * * * * *

TWIN METALS MINNESOTA, LLC

400 Miners Drive Ely, MN 55731

Kelly Osborne	CEO
Julie Padilla	
Derek Heinecke	V.P. Finance
Glenn Barr	V.P. Engineering
Dean DeBeltz	Director Operations and Safety

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
Austin Dusek	
Robert Crowe	Mining Engineer / Inspector
John Reed	Geological Engineer
Matt Walto	Manager of Mines

* * * * * *

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

2019 IMA Staff

Kelsey Johnson President

2019 IMA Board of Directors

Steve Mekkes
Ed LaTendresse ArcelorMittal - Hibbing Taconite Patrick Bloom Cleveland Cliffs Inc. Sandy Karnowski Cleveland Cliffs Inc Northshore Mining Co. Chad Asgaard Cleveland Cliffs Inc United Taconite Adam Radel Cleveland Cliffs Inc United Taconite Bruce Mars Conveyor Belt Services
Patrick Bloom
Patrick Bloom
Paul Carlson
Chad Asgaard
Adam Radel Cleveland Cliffs Inc United Taconite Bruce Mars Conveyor Belt Services
Bruce Mars Conveyor Belt Services
Bruce Mars Conveyor Belt Services
Jim Perry Furin & Shea Welding & Fabricating Inc.
Randy Abernethy Industrial Weldors & Machinists
Brian Maki Lakehead Constructors
Jon Anderson RMS Equipment
David Bednarz Steel Dynamics
Mark Lorenz Steel Dynamics
Jeff LipovetzTKDA
Matt ThibodeauThibodeau, Johnson & Feriancek PLLP
Deb Deluca Duluth Seaway Port Authority
Allyz Kramer Short-Elliott-Hendrickson, Inc.
Frank Frederickson Minnesota Power
Chrissy Bartovich
Tim Kalisch U.S. Steel Minnesota Ore Operations

ONONDAGA IRON, LLC

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

* * * * * *

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

* * * * * *

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
Jason Metsa	Deputy Commissioner
Matt Sjoberg	Executive Director of Development
Marianne Bouska	Chief Operating Officer
Linda Johnson Mining Red	lamation and Property Development

* * * * * *

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
Karen Matvey	Information Specialist

Government Services Center 201 South 3rd Avenue West Virginia MN 55792 Phone: 218-742-9841

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

Mark Weber......Director

7820 Hwy 135 Virginia, MN 55792 Phone: 218-742-9885

Julie Marinucci Deputy Director - Land Asset Management

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	
Daniel J. Goyen	Assistant District Manager
Wilbert W. Koskiniemi Jr	
Scott E. Salo Co	nference Litigation Representative
Stephen D. Cotie	Health Specialist

DULUTH FIELD OFFICE

William H. Soderlind Supervisory N	Mine Safety & Health Inspector
Richard D. Galamo	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	Vine 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

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	Director, Special Taxes Division
Steve Helmen	Minerals Tax Supervisor
Nick Norris	Revenue Tax Specialist

Minerals Tax Office 230 1st St. S., Suite 102 Virginia, Minnesota 55792

Phone: (218) 744-7424 Fax: (218) 742-9153

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

Dan Hill	President
Jamie Winger	Vice President
Candace Sprague	Recording Secretary
Kris Kuhlmey	Financial Secretary
Gary Butala	Treasurer
Larry Roberts	Safety Coordinator
Larry Simonson	Plant Safety Chairman
Gary Butala	Mine Safety Chairman
Bryan Sandnas	Training Coordinator

LOCAL #2660 KEEWATIN TACONITE

Phone: 218-778-6909

Cliff Tohou	President
Cilli Tobey	President
David Mlakar	Safety Chair/Safety Representative
Joe Ferris	Safety Representative
Pat Savage	Area Chair, Concentrator
Jeff Stalboerger	Area Chair, Shop
	Area Chair, Pit
Lorne Middlestead	Area Chair, Pond
Tawnya Gustafson	Area Chair, Crusher
	Area Chair, Pellet Plant
Eric Staydohar	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
Bill Fredette	Recording Secretary
Wade Bexell	Treasurer
Jeff Walters	Union Safety Representative
Bill Fredette	Safety Chairman

LOCAL #6115 ARCELORMITTAL MINORCA MINE, INC.

Phone: 218-741-3310

Harold Anderson	President
Tom French	Safety Coordinator
Reed Milos	Sub Chair, Safety
Kyle Lamppa	Training Coordinator

LOCAL #1938 USS - MINNTAC MINE

Phone: 218-741-0887

Steve Bonach President
Chad Daniels
Dave Chesser Recording Secretary
Paul Centa Financial Secretary
Rick NiemiTreasurer
Mitch McDonald Safety Committee Chairman
Mark Hagsten Safety Committee Co-Chairman
Matt Robillard Safety Coordinator - Minntac/Keetac
Rick Niemi Full-Time Safety Representative, Mine/Shops
Mike Hultman Full-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 Braford Business Manage	er/Financial Secretary
Aaron C. Jarva	"E" Board Member
Patrick D. O'Connell	"E" Board Member
Ryan Towner	"E" Board Member
Michael G. Warner	. Recording Secretary
Shelly A. Wiitanen	Office Manager
Alfred M. Lung	Sergeant at Arms

FATAL ACCIDENT

ARCELORMITTAL MINORCA MINE, INC:

Mobile Equipment Mechanic, Date of Accident — November 5, 2019. Employee was driving Service Truck SR136 on the main haul road heading east towards the pit. For unknown reasons at this time it appears the truck hit the berm on the south side of the road causing it to tip sideways ending up on the driver's side. Employee was found outside of the vehicle.

NON-FATAL LOST-TIME AND SERIOUS ACCIDENTS

ARCELORMITTAL MINORCA MINE, INC:

Pit Shift Manager, Date of Accident — August 9, 2019. Employee was climbing up a berm to plan the next job, which was moving a drill cable. The employee lost his footing and fell, catching himself and breaking the fall with his left arm. He felt pain in his shoulder at the time. He sustained a torn rotator cuff and a partially torn bicep tendon which required surgery to repair. Days Lost — 43

HIBBING TACONITE:

Maintenance Mechanic, Date of Accident — February 24, 2019. Employee was working on the filter in the Pellet Plant. The snap blow had stopped working so the attendant removed an access plate to investigate and noticed material built on the proxy switch. The attendant reacted by removing the material that was on the proxy switch. At that time, the filter drive gear rotated around and clipped the right pointer finger of the attendant's hand causing a laceration. The filter was not locked out at the time of the incident. The incident resulted in stitches to the right pointer finger. Days Lost — 1

Auto Diesel Mechanic, Date of Accident — April 10, 2019. Employee was assigned to an engine repair change out on a production truck. It is believed that the employee was working on installing the left hand exhaust pipe for the production truck. It is assumed that the employee was either stepping onto or off of the rolling stair pulled up next to the frame when they fell approximately 10 feet to the ground. There were no witnesses to the incident that are currently known. The employee's partner stated they heard some noise/commotion and they heard their partner call for them. The employee's partner found him inside the driver's left front tire on the floor on his hands and knees. Employee did not lose consciousness during the incident. Incident caused contusion, spine compression and abrasions. Days Lost — 14

Electrician, Date of Accident — May 14, 2019. Employee was working on overtime installing new light fixtures in a storage room. The employee had lowered the JLG Liftpod, stepped out of the unit, squatted down to unhook their harness from the tie-off point, stood up and immediately felt pain in their right knee. Employee then sat down and removed their fall protection harness to take a look at their knee. Their knee appeared to be swollen and employee had difficulty bearing weight on it. Incident resulted in a torn meniscus and required surgical repair. Days Lost — 38

HIBBING TACONITE COMPANY (cont)

Auto Diesel Mechanic, Date of Accident — August 11, 2019. Employee was using a pry bar on a section of loader fan shroud to align the bolt holes for installation by their partner. Employee using the pry bar applied pressure which caused the pry bar to slip and strike the employee in the left ear. This resulted in a small cut to their left ear. Days Lost — 3

NORTHSHORE MINING COMPANY

Babbitt: None

Silver Bay: None

UNITED TACONITE:
None

USS CORPORATION, MINNESOTA ORE OPERATIONS

KEETAC: None

MINNTAC:

Utility Person, Step 1,2 Agglomerator, Date of Accident — January 8, 2019. Utility person #1 was working on replacing a 1.5" ball valve off the main 273 water header. Upon completion of installing the new valve and pipe assembly (approximately 20" in length) the water header was re-energized. Utility person #1 then tried to open the 1.5" ball valve and the entire pipe assembly started to rotate towards the employee. Utility person #1 and utility person #2 again isolated the 1.5" ball valve and attempted to tighten the assembly by hand. Utility person #2 began to walk away while utility person #1 re-energized the 1.5" ball valve. At this point it is assumed that utility person #1 was struck by the valve/pipe assembly as it rotated off the header pipe extension. The employee suffered a fractured skull. Days Lost — 180

OpTech 1, Step 1,2 Agglomerator, Date of Accident — February 9, 2019. An OpTech 1 had exited the 1591 service pick-up truck and was walking across the Step 1,2 parking lot to enter the Step 1,2 Agglomerator. As the injured walked across the lot, he stepped on a patch of compressed snow and ice, slipping and landing on his right shoulder, tearing his right rotator cuff. The shoulder required surgery to repair the torn rotator cuff. Days Lost — 21