

UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

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RECEIVED JUL 10 1978  
DATE ENTERED NOV 28 1978

NATIONAL REGISTER OF HISTORIC PLACES  
INVENTORY -- NOMINATION FORM

SEE INSTRUCTIONS IN HOW TO COMPLETE NATIONAL REGISTER FORMS  
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC  
Bruce Mine Headframe  
AND/OR COMMON  
Bruce Headframe

2 LOCATION

STREET & NUMBER 5 of Chisholm  
E 1/2, NW 1/4, Sec. 27 T58N, R20W  
CITY, TOWN Chisholm VICINITY OF 8th  
STATE Minnesota CODE 22 COUNTY St. Louis CODE 137  
CONGRESSIONAL DISTRICT

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE
<input type="checkbox"/> DISTRICT	<input checked="" type="checkbox"/> PUBLIC	<input type="checkbox"/> OCCUPIED	<input type="checkbox"/> AGRICULTURE <input type="checkbox"/> MUSEUM
<input type="checkbox"/> BUILDING(S)	<input type="checkbox"/> PRIVATE	<input checked="" type="checkbox"/> UNOCCUPIED	<input type="checkbox"/> COMMERCIAL <input type="checkbox"/> PARK
<input checked="" type="checkbox"/> STRUCTURE	<input type="checkbox"/> BOTH	<input type="checkbox"/> WORK IN PROGRESS	<input type="checkbox"/> EDUCATIONAL <input type="checkbox"/> PRIVATE RESIDENCE
<input type="checkbox"/> SITE	<b>PUBLIC ACQUISITION</b>	<b>ACCESSIBLE</b>	<input type="checkbox"/> ENTERTAINMENT <input type="checkbox"/> RELIGIOUS
<input type="checkbox"/> OBJECT	<input type="checkbox"/> IN PROCESS	<input type="checkbox"/> YES: RESTRICTED	<input type="checkbox"/> GOVERNMENT <input type="checkbox"/> SCIENTIFIC
	<input type="checkbox"/> BEING CONSIDERED	<input checked="" type="checkbox"/> YES: UNRESTRICTED	<input type="checkbox"/> INDUSTRIAL <input type="checkbox"/> TRANSPORTATION
		<input type="checkbox"/> NO	<input type="checkbox"/> MILITARY <input checked="" type="checkbox"/> OTHER: Vacant

4 OWNER OF PROPERTY

NAME St. Louis County  
STREET & NUMBER 5th Avenue West & First Street  
CITY, TOWN Duluth VICINITY OF Minnesota STATE

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC. St. Louis County Courthouse  
STREET & NUMBER 5th Avenue West & First Street  
CITY, TOWN Duluth, Minnesota STATE

6 REPRESENTATION IN EXISTING SURVEYS

TITLE Minnesota Statewide Survey  
DATE November FEDERAL  STATE  COUNTY LOCAL  
DEPOSITORY FOR SURVEY RECORDS Minnesota Historical Society, Bldg. 25 Fort Snelling  
CITY, TOWN St. Paul, Minnesota STATE

# 7 DESCRIPTION

## CONDITION

EXCELLENT  
 GOOD  
 FAIR

DETERIORATED  
 RUINS  
 UNEXPOSED

## CHECK ONE

UNALTERED  
 ALTERED

## CHECK ONE

ORIGINAL SITE  
 MOVED DATE \_\_\_\_\_

### DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The Bruce Headframe was built on the south half of the Mesabi Iron Range near Chisholm, Minnesota in 1925-26. It was built at the Bruce Mine by the International Harvester Company. The headframe held the pulleys carrying the cables used to lower or raise the crew elevators and iron ore skips in the mine shaft. The shaft at the Bruce Mine was a five compartment shaft operated by two hoists through the headframe. Ore raised to the surface by the headframe was loaded in tram cars on an oval track beneath the frame. The ore was then taken to the on-site crusher for processing. Power for operating the cable of the headframe was produced in the engine house. The hoisting cables were powered by electricity supplied by the Minnesota Power and Light Company

A sintering plant was added to the mine facilities within three years of the mine's construction. This was necessary because of the lower grade of ore excavated at the Bruce site. The Bruce Mine was one of three such plants in Minnesota and the only one on the Mesabi to handle underground iron ore exclusively.

The Bruce Headframe, a structure typical of the underground mining process, the process initially brought to the Mesabi Iron Range, was constructed of riveted steel and was equipped with pulleys which lifted ore loads from a depth of 300 feet. The headframe provided locomotion for a newly developed remote-controlled cage so that an operator could control upward and downward movement of the cage and ore skips from within. Or, by disconnecting that control, the cage could be operated by remote control from within the engine house. The Bruce Headframe operated between 1926 and the early 1940s when the mine was closed because of the rising costs of ore production and the low grade of ore. Presently, the headframe is in stable condition, but in need of preservation.

# 8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW				
<input type="checkbox"/> PREHISTORIC	<input type="checkbox"/> ARCHEOLOGY-PREHISTORIC	<input type="checkbox"/> COMMUNITY PLANNING	<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> RELIGION	
<input type="checkbox"/> 1400-1499	<input type="checkbox"/> ARCHEOLOGY-HISTORIC	<input type="checkbox"/> CONSERVATION	<input type="checkbox"/> LAW	<input type="checkbox"/> SCIENCE	
<input type="checkbox"/> 1500-1599	<input type="checkbox"/> AGRICULTURE	<input type="checkbox"/> ECONOMICS	<input type="checkbox"/> LITERATURE	<input type="checkbox"/> SCULPTURE	
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> ARCHITECTURE	<input type="checkbox"/> EDUCATION	<input type="checkbox"/> MILITARY	<input type="checkbox"/> SOCIAL/HUMANITARIAN	
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> ART	<input checked="" type="checkbox"/> ENGINEERING	<input type="checkbox"/> MUSIC	<input type="checkbox"/> THEATER	
<input type="checkbox"/> 1800-1899	<input type="checkbox"/> COMMERCE	<input type="checkbox"/> EXPLORATION/SETTLEMENT	<input type="checkbox"/> PHILOSOPHY	<input type="checkbox"/> TRANSPORTATION	
<input checked="" type="checkbox"/> 1900-	<input type="checkbox"/> COMMUNICATIONS	<input type="checkbox"/> INDUSTRY	<input type="checkbox"/> POLITICS/GOVERNMENT	<input type="checkbox"/> OTHER (SPECIFY)	
		<input type="checkbox"/> INVENTION			

SPECIFIC DATES      1925-1926

BUILDER/ARCHITECT

## STATEMENT OF SIGNIFICANCE

The Bruce Headframe is significant because it is the last standing headframe on the Mesabi Iron Range and because it is associated with the on-site iron ore sintering process. The Mesabi Range, located in northeastern Minnesota, was the largest iron ore producing region in the United States for several decades and has remained a high producer since then. Initially underground mining was the technology for excavating iron ore on the Mesabi and headframes were built at every underground mining site. Many of these sites could be found on the Mesabi in the 1890s. However, a shift to open pit mining operations began shortly thereafter. Open pit mining has predominated and characterized the mining procedures of the Mesabi Range since that time. With the exception of the Bruce Headframe, all headframes on the Mesabi were taken down as underground mining was superceded by the open pit process. The Bruce Headframe remains as the last such vestige of underground mining operations which were once prevelant on the Mesabi.

