

MINERAL AVAILABILITY SYSTEM

Field Work Sheet

Identification

State Montana County Choteau Date _____

Commodity Description

Commodity Name
(in order of importance) Grade Units
(oz/ton, percent, etc.)

Al-110 82.6% iron

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

Current operational status _____ . Type of mining (surface, underground, etc.) _____ . Type of mineral holdings _____

Deposit Name

Primary Name Choteau titaniferous magnetite deposits.
Additional Names (found in beach sands)

Owner/Operator

Confidentiality _____ . Status of owner/operator _____ . Owner/operator name and percent of ownership _____

E?
↑
(W)

Location

Sections 11, 12, 13, 14, 17, T. 25 N, R. 5 + W

Location Several exposures are listed on pg. 38-39 of DeMunck section to smallest fraction, range, township, principal meridian and base line.

Reference poin. (head frame, main adit, etc.) _____ . Precision in meters _____ . Land survey status (unknown, _____)

*Generalized
Location:*

Lat. ~~47° 55' 30"~~ 47° 55' 30"
Long. ~~112° 20' 30"~~ 112° 19' 57"

*UTM: 5308880 N
400500 E*

*~~5,308,000~~ Northing
~~401,000~~ Easting*

unsurveyed, surveyed, superimposed grid) _____ . Elevation of reference point in meters _____ . Precision of elevation estimate (in meters) _____ . Name of U.S.G.S. 1:250,000 Quadrangle _____ .

Geographical and Environmental Characteristics

Road requirements, in kilometers _____ .
(existing roads, roads needed, etc.)
Distance to adequate water supply, in kilometers _____ .
Distance to adequate power supply, in kilometers _____ .
Name of mining district _____ . Domain _____ .
(private, state, federal, etc.)
Drainage basin _____ . Topography _____ .
from USGS manual _____ describe and
_____ . Annual precipitation _____ .
give relief in meters _____ inches
Distribution of precipitation _____ . Temperature _____
wettest season _____

_____ .
tropical temperate, cool, cold, ice cap - give average for extreme month
Vegetation _____ . Soil texture (gravel,

describe
sand, loam, etc) with portion of other material contained _____
_____ . Land use _____
urban-residential, forestry,
_____ . Working season _____ .
mining, farming, etc.

Labor supply _____ . Land disturbed _____ .
(Act) _____ (Pot) _____

Environmental sensitivity to mineral extraction
"People Reaction" to disturbance of following:

Short Term

Long Term

- (1) Land
- (2) Vegetation
- (3) Wildlife
- (4) Water
- (5) Air
- (6) Aesthetics
- (7) Sound
- (8) Overall

Use the following terms to rate the reactions: (1) undetermined; (2) nil; (3) moderate; (4) significant; (5) extreme; (6) prohibitive. Maximum surface area potentially disturbed in hectares _____ . Map series _____ . Map name _____ .
scale or area covered

Exploration

Mode of discovery _____ . Year of discovery _____
exposed in place, geochemical, etc _____ . Year of first significant production _____ . Year of last production _____ .

Description of Exploration Methods Employed

<u>Method</u>	<u>Extent</u> Little, moderate, or extensive	<u>Extent Method Supports Resource Evaluation</u> Little, moderate, or extensive	<u>Year</u>
(1) core drilling			
(2) Davis tube analysis			
(3)			
(4)			
(5)			
(6)			

Rock Description

Formation name Virgelle Sandstone Geologic age Upper Cretaceous.
Rock deformation (faulting, folding, metamorphism, etc.) _____,
_____, _____, _____. Geologic
age of deformation _____. Relationship of mineralization to
deformation (preceding, contemporaneous or following) _____.
Rock density (gm/cm³) _____.

Rock Types

<u>Rock Name</u> (Alaskite, granite, slate, etc.)	<u>Relationship to Ore</u> (Lies over/under, encloses, etc.)
(1) Sandstone	encloses
(2)	
(3)	
(4)	
(5)	
(6)	

Economic and Gangue Minerals

Geologic age of mineralization _____. Mineral grain size
(undetermined, aphanitic, phaneritic-fine (less than 1 mm), phaneritic-
medium (1-5 mm), phaneritic-coarse (greater than 5 mm), pegmatitic, or
variable) _____.

Mineral Description

<u>Mineral Name</u> (Albite, azurite, etc.)	<u>Mineral Class</u> (Native, sulfide, silicate, etc.)	<u>Grain Size</u> (see above)	<u>Amount</u> (% in ore)	<u>Units</u> (90, vol. % grams per metric ton) (ppm)
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- (1) magnetite
- (2) ilmenite
- (3)
- (4)
- (5)
- (6)

Deposit Characteristics

Type of ore body (fissure vein, stockwork, etc.) _____.
Mode of origin (hydrothermal, sedimentation, etc.) sedimentation.
Shape of ore body (tabular, lenticular, pipelike, etc.) lenses.
Ore control (folding, faulting, etc.) folding. Degree of wallrock alteration (slight, moderate or intense) _____. Type of wallrock alteration (advanced argillic, sericitic, etc.) _____.

Orientation and Dimensions of Mineralized Zone

Average depth to mineralized zone (meters) _____. Minimum depth to mineralized zone (meters) _____. Average thickness of unconsolidated material (overburden) (meters) little or no. Minimum thickness of unconsolidated material (meters) _____. Average length of mineralized zone (meters) _____. Strike of zone _____. Average width of zone _____. Dip of zone _____. Average thickness of zone (meters) 1.5.

Tonnage estimate 3-11 million Mining method _____
Rock hardness _____ Water Conditions _____
Description of workings _____

Swell Factor _____

Land Status _____

References Victor De Munck. "Iron Deposits in Montana" 1956
Pete Peterson "Titaniferous Magnetite Deposits of North Central Montana", Industrial and Economic Development Department, B.N. Railroad.

Additional data _____

Data compiled by _____