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COMPENDIUM OF DATA ON SKARN DEPOSITS OF ALASKA

By

Rainer J. Newberry¹

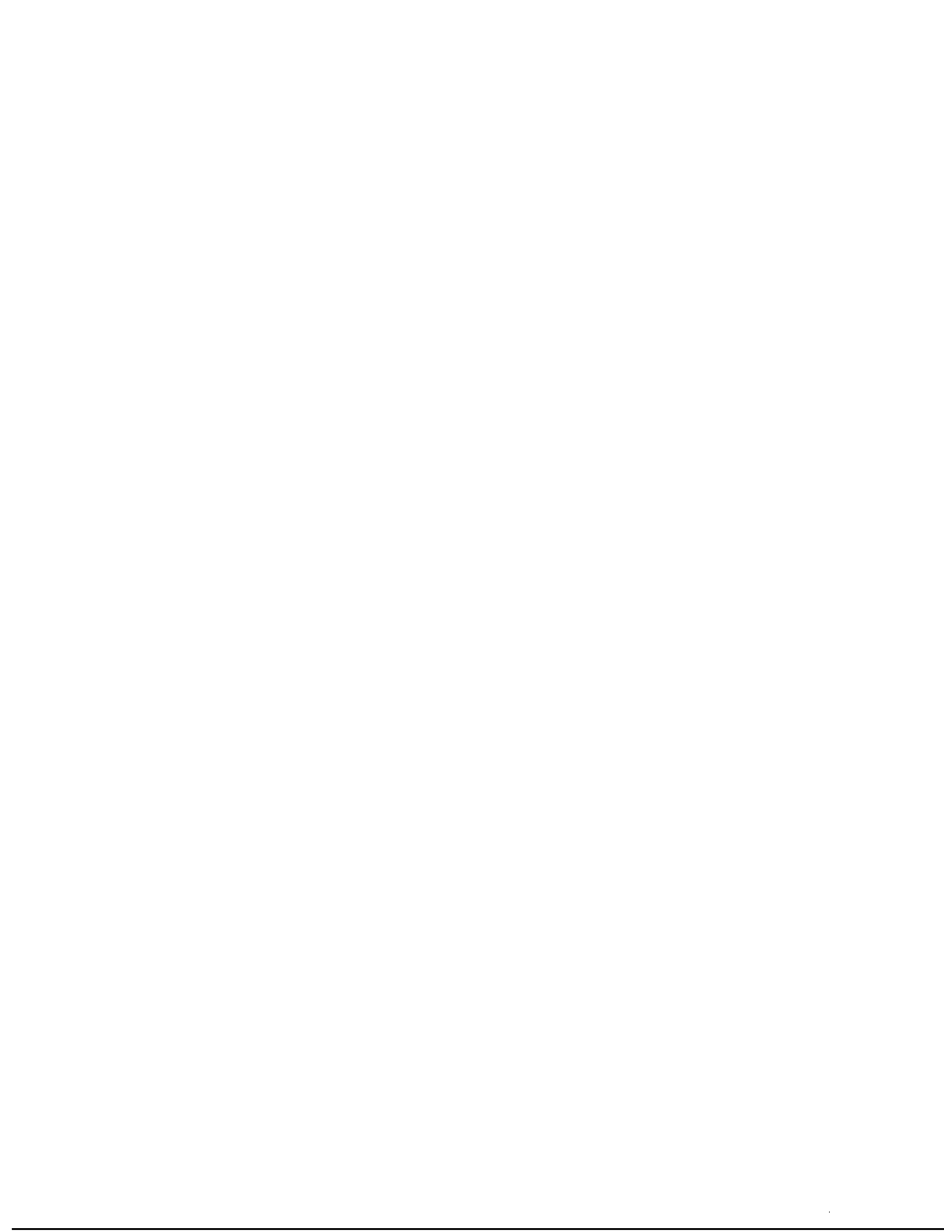
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Shale:	30	20
Black shale:	30	20
Quartzite:	30	10
Graywacke:	0	0

METAMORPHIC GRADE: HBL HFLS
 NEARBY DEPOSIT TYPES: AU-CU-CO-PB-ZN-BA VMS
 ORE TYPE: AU, CU, CO, PB, ZN, BA

HOST ROCK ASSAY VALUES

	MAX	MIN
AS:	20	
CO:	26	
CU:	100	100
MO:	10	
NI:	20	
PB:	5	
ZN:	140	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 135 TO 135 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	60	20
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Potassic
 Propylitic
 Endoskarn present

TEXTURES

Porphyritic
 Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
 Hornblende

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock
Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Chalcopyrite
Bornite
Chalcocite
Sphalerite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Chalcopyrite
Bornite
Chalcocite
Sphalerite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: 103-2-1 NAME: BRUIN BAY
LATITUDE: 059021000 LONGITUDE: 154001000
QUADRANGLE: ILIAMNA

CLASS: CU-MO
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 10000 MINIMUM TONS: 10
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE: PODS?

REPORTED ASSAY VALUES

MAX MIN

Syenite 0 0
Alkali granite 0 0

INTRUSIVE ALTERATION TYPES

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 30.0
K-SPAR 30.0
MAFICS 20.0

Major Oxide Analysis

SiO₂: 70.80
Al₂O₃: 16.30
Fe₂O₃: 1.00
FeO: 0.76
MgO: 0.37
CaO: 3.20
Na₂O: 4.30
K₂O: 2.20
TiO₂: 0.18
P₂O₅: 0.06
MnO: 0.10

Normative Minerals

QTZ: 20.0
ORTHOCLASE: 13.00
ALBITE: 36.40
ANORTHITE: 15.50
CORUNDUM: 1.17
DIOPSIDE: 0.00
HYPERSTHENE: 1.38
OLIVINE: 0.00
MAGNETITE: 1.45
ILMENITE: 0.34

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: BC-2-1 NAME: MAID OF ERIN
LATITUDE: 059034300 LONGITUDE: 136035000
QUADRANGLE: BRITISH COLUMBIA

CLASS: CU-MO
LOCALIZATION: HFLS/MB CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 50000 MINIMUM TONS: 5000
PRODUCTION: 1200

GEOMETRY

LENGTH: 50.0 WIDTH: 10.0 DEPTH: 500

SHAPE: PODS

REPORTED ASSAY VALUES

	MAX	MIN
AG:	145.0	145.0
AU:	0.05	
CU:	30000	30000
ZN:	1000	
BI:	1000	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: PENN-PERM
TERRANE: ALEXANDER(CRAIG) THICKNESS: 400

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	30	20
Dolomite:	0	0
Marl:	30	20
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	30	20
Black shale:	30	20
Quartzite:	30	10
Graywacke:	0	0

METAMORPHIC GRADE: U.GREENSCHIST
NEARBY DEPOSIT TYPES: CU-CO-AU-BA-ZN-PB VMS
ORE TYPE: CU, CO, AU, BA, ZN, PB

HOST ROCK ASSAY VALUES

	MAX	MIN
AS:	20	
AU:	0.005	
BA:	250	
CO:	26	
CU:	100	100
MO:	10	
NI:	20	
PB:	5	
ZN:	140	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 135 TO 135 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	60	20
Syenite	0	0

Alkali granite 0 0

INTRUSIVE ALTERATION TYPES

Potassic
Sericitic
Propylitic
Endoskarn present

TEXTURES

Porphyritic
Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Hornblende

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock
Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Wollastonite
Epidote
Sphene
Monticellite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite

Pyrite
Chalcopyrite
Bornite
Chalcocite
Sphalerite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite:	97.0
Pyrope:	0.0
Grossularite:	3.0
Almandite:	0.0
Spessartite:	0.0

PYROXENE MINERALS

Diopside:	92
Hedenbergite:	8
Johannsenite:	0

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Wollastonite
Epidote
Sphene
Monticellite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite
Bornite
Chalcocite
Sphalerite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite: 97.0
Pyrope: 0.0
Grossularite: 3.0
Almandite: 0.0
Spessartite: 0.0

PYROXENE MINERALS

Diopside: 92
Hedenbergite: 8
Johannsenite: 0

ID NUMBER: EG-CU-1 NAME: MITCHELL
LATITUDE: 064006000 LONGITUDE: 143002000
QUADRANGLE: EAGLE

CLASS: CU-MO
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 20000 MINIMUM TONS: 1000
PRODUCTION: 0

GEOMETRY

LENGTH: 20.0 WIDTH: 5.0 DEPTH: 100

SHAPE: UNKNOWN

REPORTED ASSAY VALUES

	MAX	MIN
AG:	68.0	68.0
AU:	0.20	
CU:	20000	20000
MO:	25.0	
PB:	300	
SN:	30	
W:	1.0	
ZN:	900	
AS:	200	
BA:	40	
CO:	20	
F:	70	

NI: 22

HOST ROCK CHARACTERISTICS

FORMATION: AGE: PALEOZOIC
TERRANE: YUKON-TANANA-Y4 THICKNESS: -1

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	10
Dolomite:	0	0
Marl:	0	0
Mafic volc:	30	10
Int. Volc:	0	0
Felsic Volc:	20	0
Shale:	50	20
Black shale:	30	10
Quartzite:	50	10
Graywacke:	20	0

METAMORPHIC GRADE: U.GREENSCHIST
NEARBY DEPOSIT TYPES: PLACER AU, ULMF-ASSOC.SULF., SHALE-
HOSTED PB-ZN?
ORE TYPE: AU,PB,ZN

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.2	
AS:	50	
AU:	0.050	
CU:	60	60
MO:	50	
NI:	150	
PB:	30	
SN:	10	
W:	3	
ZN:	300	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 177 TO 177 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0

Monzodiorite	20	10
Quartz diorite	0	0
Quartz monzodiorite	60	40
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	40	10
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic
Propylitic

TEXTURES

Equigranular
Porphyritic
Seriata

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 45.0
K-SPAR 10.0
MAFICS 35.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 5.0
PLAG: 35.0
K-SPAR 40.0

MAFICS 20.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 15.0
PLAG: 60.0
K-SPAR 15.0
MAFICS 8.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 5.0
PLAG: 50.0
K-SPAR 15.0
MAFICS 30.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 50.0
K-SPAR 10.0
MAFICS 30.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 21.0
PLAG: 24.0
K-SPAR 30.0
MAFICS 25.0

Major Oxide Analysis

Normative Minerals

SiO₂: 58.90
Al₂O₃: 15.17
Fe₂O₃: 1.75
FeO: 5.37
MgO: 3.48
CaO: 6.18
Na₂O: 2.08
K₂O: 4.32
TiO₂: 0.76
P₂O₅: 0.51
MnO: 0.16

QTZ: 21.0
ORTHOCLASE: 25.67
ALBITE: 17.66
ANORTHITE: 19.36
CORUNDUM: 0.00
DIOPSIDE: 6.63
HYPERSTHENE: 12.91
OLIVINE: 0.00
MAGNETITE: 2.55
ILMENITE: 1.45

MINERAL COMPOSITION

QUARTZ: 21.0
PLAG: 24.0
K-SPAR 30.0
MAFICS 25.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 31.0
PLAG: 33.0
K-SPAR 28.0
MAFICS 8.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 1.0
PLAG: 48.0
K-SPAR 7.0
MAFICS 45.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 18.0
PLAG: 62.0
K-SPAR 11.0
MAFICS 10.0

Major Oxide Analysis

Normative Minerals

SiO2: 62.20
Al2O3: 13.50
Fe2O3: 2.00
FeO: 4.40
MgO: 3.30
CaO: 4.60
Na2O: 2.20
K2O: 4.00
TiO2: 0.87
P2O5: 0.34
MnO: 0.16

QTZ: 18.0
ORTHOCLASE: 23.90
ALBITE: 18.80
ANORTHITE: 15.30
CORUNDUM: 0.00
DIOPSIDE: 4.40
HYPERSTHENE: 11.50
OLIVINE: 0.00
MAGNETITE: 2.90
ILMENITE: 1.70

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Bornite

Limestone:	10	5
Dolomite:	0	0
Marl:	0	0
Mafic volc:	30	10
Int. Volc:	60	30
Felsic Volc:	40	20
Shale:	30	10
Black shale:	0	0
Quartzite:	0	0
Graywacke:	30	10

METAMORPHIC GRADE:
 NEARBY DEPOSIT TYPES: VMS
 ORE TYPE:

HOST ROCK ASSAY VALUES

	MAX	MIN
CU:	Reported	
PB:	Reported	
ZN:	Reported	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 44 TO 44 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	20	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	60	40
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock
 Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Chalcopyrite
Sphalerite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Chalcopyrite
Sphalerite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: KK-CU-1 NAME: COMMONWEALTH
LATITUDE: 055046000 LONGITUDE: 130012000
QUADRANGLE: KETCHIKAN

CLASS: CU-MO
LOCALIZATION:

REPORTED TONNAGES

MAXIMUM TONS: 50000 MINIMUM TONS: 1000
PRODUCTION: -1

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

 MAX MIN
CU: Reported
MO: Reported

HOST ROCK CHARACTERISTICS

FORMATION: AMPHIBOLITE
MESOZOIC
TERRANE: TRACY ARM

AGE: L. PALEOZ-

THICKNESS: 20

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	5
Dolomite:	0	0
Marl:	0	0
Mafic volc:	40	20
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	40	20
Black shale:	0	0
Quartzite:	50	20
Graywacke:	0	0

METAMORPHIC GRADE: AMPHIBOLITE
NEARBY DEPOSIT TYPES:
ORE TYPE:

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	Reported	
AU:	Reported	
CU:	Reported	
ZN:	Reported	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 50 TO 50 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	60	30
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic

Propylitic

TEXTURES

Equigranular
Porphyritic
Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock
Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 22.0
PLAG: 45.0
K-SPAR 23.0
MAFICS 10.0

Major Oxide Analysis

SiO₂: 65.50
Al₂O₃: 16.90
Fe₂O₃: 1.60
FeO: 2.50
MgO: 1.70
CaO: 4.00
Na₂O: 3.70
K₂O: 2.20
TiO₂: 0.66
P₂O₅: 0.24
MnO: 0.05

Normative Minerals

Qtz: 22.0
Orthoclase: 13.00
Albite: 31.00
Anorthite: 18.00
Corundum: 1.80
Diopside: 0.00
Hypersthene: 6.60
Olivine: 0.00
Magnetite: 2.30
Ilmenite: 1.20

MINERAL COMPOSITION

QUARTZ: 21.0
PLAG: 56.0
K-SPAR 21.0
MAFICS 2.0

Major Oxide Analysis

SiO2: 71.60
Al2O3: 16.20
Fe2O3: 0.42
FeO: 0.52
MgO: 0.20
CaO: 1.90
Na2O: 5.20
K2O: 3.00
TiO2: 0.14
P2O5: 0.03
MnO: 0.02

Normative Minerals

Qtz: 21.0
Orthoclase: 18.00
Albite: 44.00
Anorthite: 9.00
Corundum: 1.00
Diopside: 0.00
Hypersthene: 0.90
Olivine: 0.00
Magnetite: 0.60
Ilmenite: 2.00

MINERAL COMPOSITION

Quartz: 23.0
Plag: 50.0
K-spar 14.0
Mafics 13.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

Quartz: 23.0
Plag: 39.0
K-spar 27.0
Mafics 11.0

Major Oxide Analysis

Normative Minerals

SiO2: 68.40
Al2O3: 15.40
Fe2O3: 1.00
FeO: 2.00
MgO: 1.10
CaO: 2.90
Na2O: 3.70
K2O: 3.80
TiO2: 0.57
P2O5: 0.18
MnO: 0.02

Qtz: 23.0
Orthoclase: 22.00
Albite: 31.00
Anorthite: 13.00
Corundum: 0.40
Diopside: 0.00
Hypersthene: 4.70
Olivine: 0.00
Magnetite: 1.40
Ilmenite: 1.00

MINERAL COMPOSITION

Quartz: 28.0
Plag: 31.0
K-spar 39.0
Mafics 1.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

Quartz: 31.0
Plag: 39.0
K-spar 21.0
Mafics 9.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 24.0
PLAG: 47.0
K-SPAR 22.0
MAFICS 7.0

Major Oxide Analysis

Normative Minerals

SiO2: 70.20
Al2O3: 15.50
Fe2O3: 1.00
FeO: 1.10
MgO: 0.64
CaO: 2.30
Na2O: 3.90
K2O: 3.90
TiO2: 0.33
P2O5: 0.12
MnO: 0.03

QTZ: 24.0
ORTHOCLASE: 23.00
ALBITE: 33.00
ANORTHITE: 10.00
CORUNDUM: 1.00
DIOPSIDE: 0.00
HYPERSTHENE: 2.30
OLIVINE: 0.00
MAGNETITE: 1.40
ILMENITE: 0.60

MINERAL COMPOSITION

QUARTZ: 25.7
PLAG: 43.3
K-SPAR 21.5
MAFICS 9.5

Major Oxide Analysis

Normative Minerals

SiO2: 70.50
Al2O3: 15.30
Fe2O3: 1.10
FeO: 1.30
MgO: 0.82
CaO: 2.60
Na2O: 3.70
K2O: 3.40
TiO2: 0.36
P2O5: 0.13
MnO: 0.04

QTZ: 25.7
ORTHOCLASE: 20.00
ALBITE: 31.00
ANORTHITE: 11.70
CORUNDUM: 1.00
DIOPSIDE: 0.00
HYPERSTHENE: 3.00
OLIVINE: 0.00
MAGNETITE: 1.50
ILMENITE: 0.60

MINERAL COMPOSITION

QUARTZ: 25.6
PLAG: 45.0
K-SPAR 16.0
MAFICS 13.4

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 26.0
PLAG: 56.0
K-SPAR 4.0
MAFICS 14.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 25.0
PLAG: 50.0
K-SPAR 15.0
MAFICS 10.0

Major Oxide Analysis

Normative Minerals

SiO2: 57.30
Al2O3: 18.20
Fe2O3: 2.40
FeO: 3.80
MgO: 2.80
CaO: 5.70
Na2O: 4.20
K2O: 1.80
TiO2: 0.85
P2O5: 0.34
MnO: 0.07

QTZ: 25.0
ORTHOCLASE: 11.00
ALBITE: 36.00
ANORTHITE: 26.00
CORUNDUM: 0.00
DIOPSIDE: 0.47
HYPERSTHENE: 10.70
OLIVINE: 0.00
MAGNETITE: 3.50
ILMENITE: 1.20

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Actinolite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Chalcopyrite
Chalcocite
Sphalerite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

METAMORPHIC GRADE:
NEARBY DEPOSIT TYPES: VMS
ORE TYPE:

HOST ROCK ASSAY VALUES

	MAX	MIN
CU:	Reported	
PB:	Reported	
ZN:	Reported	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 44 TO 44 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	20	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	60	40
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock
Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Chalcopyrite
Sphalerite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Chalcopyrite
Sphalerite

ORE PARAGENESIS:

Int. Volc:	60	30
Felsic Volc:	40	20
Shale:	20	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	40	20

METAMORPHIC GRADE:
 NEARBY DEPOSIT TYPES: VMS
 ORE TYPE:

HOST ROCK ASSAY VALUES

	MAX	MIN
BA:	Reported	
CU:	Reported	
PB:	Reported	
ZN:	Reported	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 39 TO 39 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	60	40
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock
 Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Chalcopyrite
Bornite
Sphalerite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Chalcopyrite
Bornite
Sphalerite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: PB-2-3 NAME: DEVILFISH BAY
LATITUDE: 056008000 LONGITUDE: 133023000
QUADRANGLE: PETERSBURG

CLASS: CU-MO
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 200000 MINIMUM TONS: 10000
PRODUCTION: 0

GEOMETRY

LENGTH: 1000.0 WIDTH: 100.0 DEPTH: -1

SHAPE: DISCORDANT TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
CU:	2000	2000
MO:	1000.0	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: SILURIAN
TERRANE: ALEXANDER(CRAIG) THICKNESS: 20

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	10
Dolomite:	0	0
Marl:	20	10
Mafic volc:	20	10
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	80	60

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: ZN-PB-BA-AG VMS
 ORE TYPE: ZN, PB, BA, AG

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AU:	0.005	
BA:	300	
CO:	20	
CU:	60	60
MO:	3	
NI:	20	
PB:	20	
ZN:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 100 TO 100 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	50	30
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Potassic
 Propylitic

TEXTURES

Equigranular
Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 22.0
PLAG: 47.0
K-SPAR 31.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 23.0
PLAG: 53.0
K-SPAR 24.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Wollastonite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: MH-2-1 NAME: POWELL GULCH
LATITUDE: 063008420 LONGITUDE: 144048540
QUADRANGLE: MT. HAYES

CLASS: CU-MO
LOCALIZATION:

REPORTED TONNAGES

MAXIMUM TONS: 50000 MINIMUM TONS: 10
PRODUCTION: -1

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

MAX MIN

AG: Reported
CU: Reported

HOST ROCK CHARACTERISTICS

FORMATION: CHISNA FM
TERRANE: WRANGELLIA

AGE: PENN-PERM
THICKNESS: 20

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	5	5
Dolomite:	0	0
Marl:	0	0
Mafic volc:	0	0
Int. Volc:	80	60
Felsic Volc:	30	20
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: CU-ZN-PB VMS
ORE TYPE:

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.4	
AS:	20	
AU:	0.005	
BA:	250	
CO:	26	
CU:	100	100
MO:	10	
NI:	20	
PB:	15	
ZN:	140	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 240 TO 170 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0

Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic

TEXTURES

Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Hornblende
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: .5
Minimum grain size: .5

Anorthite content maximum: 40
Anorthite content minimum: 40

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 31.0
PLAG: 39.0
K-SPAR 23.0
MAFICS 7.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ZONING:

	MAXIMUM	MINIMUM
Limestone:	50	30
Dolomite:	0	0
Marl:	30	10
Mafic volc:	20	10
Int. Volc:	10	0
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	60	40

METAMORPHIC GRADE:

NEARBY DEPOSIT TYPES: ZN-PB-BA-AG VMS

ORE TYPE: ZN,PB,BA,AG

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AU:	0.005	
BA:	300	
CO:	20	
CU:	60	60
MO:	3	
NI:	20	
PB:	20	
ZN:	100	

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Pyrhottite
Chalcopyrite

Galena
Scheelite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Pyrhottite
Chalcopyrite
Galena
Scheelite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Pyrhottite
Chalcopyrite
Galena
Scheelite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Pyrhottite
Chalcopyrite
Galena
Scheelite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: PB-2-4 NAME: SHAKAN
LATITUDE: 056008000 LONGITUDE: 133027000
QUADRANGLE: PETERSBURG

CLASS: CU-MO
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 10000 MINIMUM TONS: 1000
PRODUCTION: 0

GEOMETRY

LENGTH: 500.0 WIDTH: 30.0 DEPTH: -1

SHAPE: IRREGULAR

REPORTED ASSAY VALUES

	MAX	MIN
CU:	2000	2000
MO:	1000.0	
PB:	Reported	
W:	500.0	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: SILURIAN
TERRANE: ALEXANDER(CRAIG) THICKNESS: 200

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	50	30
Dolomite:	0	0
Marl:	30	10
Mafic volc:	20	10
Int. Volc:	10	0
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	60	40

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: ZN-PB-BA-AG VMS
ORE TYPE: ZN,PB,BA,AG

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AU:	0.005	
BA:	300	
CO:	20	
CU:	60	60
MO:	3	
NI:	20	
PB:	20	
ZN:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 100 TO 100 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	40	20
Quartz monzodiorite	40	20
Tonalite	0	0

Quartz monzonite	0	0
Granodiorite	30	0
Syanite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Potassic

TEXTURES

Porphyritic
Porphyry
Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 8.0
PLAG: 50.0
K-SPAR 7.0
MAFICS 35.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Scheelite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: MF-2-1 NAME: LEMEISUR ISL.
LATITUDE: 058015000 LONGITUDE: 136004000
QUADRANGLE: MT. FAIRWEATHER

CLASS: CU-MO
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 10000 MINIMUM TONS: 100
PRODUCTION: 0

GEOMETRY

LENGTH: 200.0 WIDTH: 35.0 DEPTH: 1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
CU: Reported		
MO: Reported		

HOST ROCK CHARACTERISTICS

FORMATION: AGE: SILURIAN
TERRANE: ALEXANDER (CRAIG) THICKNESS: 300

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	40	20
Dolomite:	0	0
Marl:	0	0
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	40	10
Black shale:	0	0

Quartzite: 0 0
Graywacke: 60 40

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: SPL-GL IN LMS, BARITE, ZN-CU-AG VMS
ORE TYPE: BA, ZN, CU, PB, AG

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
BA:	200	
CU:	30	30
MO:	3	
NI:	15	
PB:	4	
SN:	10	
ZN:	100	
V:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 145 TO 25 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	40	20
Quartz monzodiorite	0	0
Tonalite	60	40
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic

TEXTURES

Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 30.0
PLAG: 43.0
K-SPAR 10.0
MAFICS 17.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 24.0
PLAG: 34.0
K-SPAR 35.0
MAFICS 7.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 30.0
PLAG: 42.0
K-SPAR 20.0
MAFICS 8.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 30.0
PLAG: 40.0
K-SPAR 17.0
MAFICS 13.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 70.0
K-SPAR 6.0
MAFICS 4.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 15.0
PLAG: 45.0
K-SPAR 10.0
MAFICS 30.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 42.0
PLAG: 35.0
K-SPAR 12.0
MAFICS 13.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Apatite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Bornite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: MF-2-2 NAME: GEIKIC INLET
LATITUDE: 058035000 LONGITUDE: 136032000
QUADRANGLE: MT. FAIRWEATHER

CLASS: CU-MO

LOCALIZATION:

REPORTED TONNAGES

MAXIMUM TONS: 10000 MINIMUM TONS: 100
PRODUCTION: 10

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

MAX MIN

MO: Reported

HOST ROCK CHARACTERISTICS

FORMATION: AGE: PENN-PERM
TERRANE: WRANGELLIA THICKNESS: 30

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	10
Dolomite:	0	0
Marl:	30	10
Mafic volc:	30	20
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	40	20
Black shale:	0	0
Quartzite:	0	0
Graywacke:	50	30

METAMORPHIC GRADE: HORNFELS
NEARBY DEPOSIT TYPES:
ORE TYPE:

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
BA:	150	
CU:	30	30
MO:	3	
NI:	15	
PB:	4	
SN:	10	
V:	30	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 38 TO 27 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	50	20
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Potassic

TEXTURES

Porphyritic
Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Hornblende
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 25.0
PLAG: 30.0
K-SPAR 40.0
MAFICS 5.0

Major Oxide Analysis

SiO₂: 71.40
Al₂O₃: 15.20

Normative Minerals

QTZ: 25.0
ORTHOCLASE: 21.27

FE2O3: 1.90
FeO: 0.00
MGO: 0.59
CAO: 2.20
NA2O: 4.20
K2O: 3.60
TiO2: 0.00
P2O5: 0.00
MNO: 0.00

ALBITE: 35.53
ANORTHITE: 10.91
CORUNDUM: 0.39
DIOPSIDE: 0.00
HYPERSTHENE: 1.47
OLIVINE: 0.00
MAGNETITE: 1.16
ILMENITE: 0.38

MINERAL COMPOSITION

QUARTZ: 45.0
PLAG: 30.0
K-SPAR 23.0
MAFICS 2.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Actinolite
Apatite
Sphene
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

AG: 1.0
 BA: 200
 CO: 10
 CU: 30 30
 MO: 3
 NI: 15
 PB: 4
 SN: 10
 ZN: 100
 V: 100

INTRUSIVE ROCK CHARACTERISTICS

AGE: 145 TO 25 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	30	0
Quartz monzodiorite	0	0
Tonalite	40	20
Quartz monzonite	0	0
Granodiorite	20	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
 Minimum grain size:
 Anorthite content missing

INTRUSIVE COMPOSITION DATA

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: MF-2-4 NAME: DUNDAS BAY W.
LATITUDE: 058028000 LONGITUDE: 136034000
QUADRANGLE: MT. FAIRWEATHER

CLASS: CU-MO
LOCALIZATION:

REPORTED TONNAGES

MISSING
PRODUCTION: -1

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

MAX MIN

CU: Reported

MO: Reported
W: Reported

HOST ROCK CHARACTERISTICS

FORMATION: AGE: U. PALEOZOIC
TERRANE: WRANGELLIA THICKNESS: -1

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	0	0
Marl:	0	0
Mafic volc:	80	60
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	20	10

METAMORPHIC GRADE: L. AMPHIBOLITE
NEARBY DEPOSIT TYPES:
ORE TYPE:

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.4	
AS:	20	
AU:	0.005	
BA:	250	
CO:	26	
CU:	100	100
MO:	10	
NI:	20	
PB:	5	
ZN:	140	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 38 TO 27 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0

Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	90	60
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

Porphyritic
Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Hornblende

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 25.0
PLAG: 30.0
K-SPAR 30.0
MAFICS 15.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 30.0
K-SPAR 45.0
MAFICS 5.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 15.0
PLAG: 50.0

K-SPAR 30.0
MAFICS 5.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Scheelite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: PB-2-1 NAME: LILLIE
LATITUDE: 056009000 LONGITUDE: 133026000
QUADRANGLE: PETERSBURG

CLASS: CU-MO
LOCALIZATION: NEAR GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 100000 MINIMUM TONS: 20000
PRODUCTION: 0

GEOMETRY

LENGTH: 100.0 WIDTH: 55.0 DEPTH: -1

SHAPE: IRREGULAR

REPORTED ASSAY VALUES

	MAX	MIN
CU:	300	300
MO:	1600.0	
SN:	Reported	
W:	200.0	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: SILURIAN
TERRANE: ALEXANDER(CRAIG) THICKNESS: 200

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	50	30
Dolomite:	0	0
Marl:	30	10
Mafic volc:	20	10
Int. Volc:	10	0
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	60	40

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: ZN-PB-BA-AG VMS
ORE TYPE: ZN, PB, BA, AG

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AU:	0.005	
BA:	300	
CO:	20	
MO:	3	
NI:	20	
PB:	20	
ZN:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 100 TO 100 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	30	10
Tonalite	30	10
Quartz monzonite	0	0
Granodiorite	20	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Potassic
Propylitic

TEXTURES

Equigranular
Porphyritic
Porphyry
Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: FINE

Anorthite content maximum: 23
Anorthite content minimum: 23

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION
QUARTZ: 22.0

PLAG: 58.0
K-SPAR 20.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 16.0
PLAG: 59.0
K-SPAR 15.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 27.0
PLAG: 61.0
K-SPAR 12.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 19.0
PLAG: 61.0
K-SPAR 10.0
MAFICS 10.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Sphene

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite
Scheelite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite: 96.0
Pyrope: 0.0
Grossularite: 4.0
Almandite: 0.0
Spessartite: 0.0

PYROXENE MINERALS

Missing

ID NUMBER: CHD-2-1 NAME: EVELYN LEE
LATITUDE: 067040000 LONGITUDE: 149014000
QUADRANGLE: CHANDALAR

CLASS: CU-MO
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1000000 MINIMUM TONS: 10000
PRODUCTION: 0

GEOMETRY

LENGTH: 100.0 WIDTH: 50.0 DEPTH: 3000

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	30.0	30.0
AU:	0.10	
CU:	10000	10000
FE:	100000	
MO:	50.0	
PB:	10	
SN:	1	
W:	1.0	
ZN:	80	
CO:	10	
NI:	20	
CR:	40	
SB:	5	

Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	60	30
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic
 Propylitic
 Endoskarn present

TEXTURES

Equigranular
 Porphyritic
 Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
 Sphene
 Hornblende
 Apatite
 Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
 Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 3
 Minimum grain size: .5

Anorthite content maximum: 20
 Anorthite content minimum: 20

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 25.0
 PLAG: 40.0
 K-SPAR 30.0
 MAFICS 5.0

Major Oxide Analysis

SiO2: 66.30
 Al2O3: 14.60

Normative Minerals

QTZ: 25.0
 ORTHOCLASE: 10.34

FE2O3: 5.30
 FEO: 0.00
 MGO: 1.20
 CAO: 2.10
 NA2O: 4.30
 K2O: 1.75
 TIO2: 0.60
 P2O5: 0.27
 MNO: 0.12

ALBITE: 36.38
 ANORTHITE: 8.66
 CORUNDUM: 2.46
 DIOPSIDE: 0.00
 HYPERSTHENE: 5.77
 OLIVINE: 0.00
 MAGNETITE: 3.05
 ILMENITE: 1.14

MINERAL COMPOSITION

QUARTZ: 23.0
 PLAG: 47.0
 K-SPAR 20.0
 MAFICS 20.0

Major Oxide Analysis

SIO2: 61.00
 AL2O3: 17.50
 FE2O3: 4.30
 FEO: 0.00
 MGO: 1.30
 CAO: 7.00
 NA2O: 6.00
 K2O: 1.60
 TIO2: 0.80
 P2O5: 0.21
 MNO: 0.05

Normative Minerals

QTZ: 23.0
 ORTHOCLASE: 9.46
 ALBITE: 50.77
 ANORTHITE: 16.09
 CORUNDUM: 0.00
 DIOPSIDE: 7.32
 HYPERSTHENE: 0.00
 OLIVINE: 0.00
 MAGNETITE: 3.34
 ILMENITE: 1.52

SKARN MINERAL DATA

SKARN MINERALS

Garnet
 Pyroxene
 Epidote
 Actinolite
 Chlorite
 Sphene
 Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
 Pyrite
 Chalcopyrite
 Bornite

Chalcocite
Tetrahedrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite: 90.0
Pyrope: 0.0
Grossularite: 10.0
Almandite: 0.0
Spessartite: 0.0

PYROXENE MINERALS

Diopside: 90
Hedenbergite: 10
Johannsenite: 0

ID NUMBER: MF-2-6 NAME: NUNATAK
LATITUDE: 058059000 LONGITUDE: 136007000
QUADRANGLE: MT. FAIRWEATHER

CLASS: CU-MO
LOCALIZATION: NEAR PORPHYRY DIKES

REPORTED TONNAGES

MAXIMUM TONS: 150000000 MINIMUM TONS: 8000000
PRODUCTION: 0

GEOMETRY

LENGTH: 1500.0 WIDTH: 500.0 DEPTH: 1500

SHAPE: DISCORDANT TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	0.1	0.1
AU:	0.10	
CU:	300	300
MO:	700.0	
PB:	5	
SN:	10	
W:	100.0	
BA:	200	
BI:	2	

CO: 5
NI: 15
V: 70
TI: 1000

HOST ROCK CHARACTERISTICS

FORMATION: AGE: SIL-DEV
TERRANE: ALEXANDER(CRAIG) THICKNESS: 100

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	30	10
Dolomite:	0	0
Marl:	30	20
Mafic volc:	20	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	30	10
Black shale:	0	0
Quartzite:	0	0
Graywacke:	50	30

METAMORPHIC GRADE: U.GREENSCHIST
NEARBY DEPOSIT TYPES: ZN-CU-BA VMS
ORE TYPE: ZN,CU,BA

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
BA:	250	
CO:	10	
CU:	30	30
MO:	3	
NI:	15	
PB:	4	
SN:	10	
ZN:	200	
V:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 38 TO 27 M.Y.

HOST ROCK LITHOLOGY

MAXIMUM	MINIMUM
---------	---------

Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	70	40
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Potassic
Sericitic

TEXTURES

Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: FINE
Minimum grain size: FINE
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Actinolite
Biotite
Plagioclase
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Pyrhottite
Chalcopyrite
Bornite
Tetrahedrite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Actinolite
Biotite
Plagioclase
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Pyrhottite
Chalcopyrite
Bornite
Tetrahedrite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: NB-2-1
LATITUDE: 062011000
QUADRANGLE: NABESNA

NAME: LEMMON (ORANGE HILL)
LONGITUDE: 142050000

CLASS: CU-MO
LOCALIZATION: INTRUSIVE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 50000000 MINIMUM TONS: 50000
PRODUCTION: 0

GEOMETRY

LENGTH: 3000.0 WIDTH: 100.0 DEPTH: 3000

SHAPE: PODS

REPORTED ASSAY VALUES

	MAX	MIN
AG:	9.3	9.3
AU:	0.10	
CU:	5000	5000
FE:	100000	
MO:	100.0	
ZN:	10000	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: PERMIAN
TERRANE: WRANGELLIA THICKNESS: 200

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	20
Dolomite:	0	0
Marl:	0	0
Mafic volc:	30	30
Int. Volc:	40	40
Felsic Volc:	0	0
Shale:	10	10
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: L.GREENSCHIST
NEARBY DEPOSIT TYPES: KENNECOTT-TYPE CU
ORE TYPE: CU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
AU:	0.030	
BA:	250	
CO:	30	
CU:	80	80
MO:	2	
NI:	40	
PB:	10	
SN:	1	
W:	1	
ZN:	120	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 105 TO 105 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	10	10
Quartz monzodiorite	30	20
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	30	20
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Potassic
 Sericitic
 Propylitic

TEXTURES

Porphyritic
 Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
 Small stock
 Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 3
Minimum grain size: 1
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 23.0
PLAG: 43.0
K-SPAR 22.0
MAFICS 12.0

Major Oxide Analysis

MINERAL COMPOSITION

QUARTZ: 12.0
PLAG: 52.0
K-SPAR 16.0
MAFICS 20.0

Major Oxide Analysis

SiO₂: 62.50
Al₂O₃: 16.00
Fe₂O₃: 2.10
FeO: 3.70
MgO: 2.50
CaO: 5.70
Na₂O: 3.40
K₂O: 2.20
TiO₂: 0.66
P₂O₅: 0.09
MnO: 0.10

Normative Minerals

Normative Minerals

Qtz: 12.0
Orthoclase: 13.00
Albite: 28.70
Anorthite: 21.90
Corundum: 0.00
Diopside: 60.00
Hypersthene: 0.00
Olivine: 0.00
Magnetite: 3.10
Ilmenite: 1.30

MINERAL COMPOSITION

QUARTZ: 32.0
PLAG: 58.0
K-SPAR 10.0
MAFICS 0.0

Major Oxide Analysis

MINERAL COMPOSITION

QUARTZ: 38.0
PLAG: 54.0
K-SPAR 8.0
MAFICS 0.0

Normative Minerals

Major Oxide Analysis

MINERAL COMPOSITION

QUARTZ: 27.0
PLAG: 49.0

Normative Minerals

K-SPAR 19.0
MAFICS 5.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 22.0
PLAG: 42.0
K-SPAR 18.0
MAFICS 8.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 39.0
PLAG: 57.0
K-SPAR 4.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Wollastonite
Epidote
Actinolite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrrhotite
Chalcopyrite
Bornite
Sphalerite
Tetrahedrite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: NB-2-2
LATITUDE: 062016000

NAME: COOPER PASS
LONGITUDE: 142028000

QUADRANGLE: NABESNA

CLASS: CU-MO

LOCALIZATION: GD CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1000000 MINIMUM TONS: 1000
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

MAX MIN

CU: Reported

MO: Reported

HOST ROCK CHARACTERISTICS

FORMATION:

TERRANE: WRANGELLIA

AGE: PERMIAN

THICKNESS: 500

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	30	20
Dolomite:	0	0
Marl:	0	0
Mafic volc:	30	20
Int. Volc:	30	20
Felsic Volc:	10	5
Shale:	0	0
Black shale:	20	10
Quartzite:	0	0
Graywacke:	20	10

METAMORPHIC GRADE: L.GREENSCHIST

NEARBY DEPOSIT TYPES: CU-ZN-PB VMS

ORE TYPE: CU,ZN,PB

HOST ROCK ASSAY VALUES

MAX MIN

AG: 1.0
 BA: 25
 CO: 30
 CU: 100 100
 MO: 2
 NI: 30
 PB: 10
 SN: 1
 W: 1
 ZN: 130

INTRUSIVE ROCK CHARACTERISTICS

AGE: 114 TO 101 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	20	10
Quartz monzodiorite	20	10
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	20	10
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic
 Propylitic

TEXTURES

Equigranular
 Porphyritic
 Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
 Clinopyroxene
 Hornblende
 Apatite
 Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock
 Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 3
Minimum grain size: 1

Anorthite content maximum: 45
Anorthite content minimum: 15

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 22.0
PLAG: 44.0
K-SPAR 15.0
MAFICS 19.0

Major Oxide Analysis

SiO₂: 62.60
Al₂O₃: 16.40
Fe₂O₃: 2.30
FeO: 3.50
MgO: 2.70
CaO: 5.00
Na₂O: 2.90
K₂O: 2.20
TiO₂: 0.64
P₂O₅: 0.11
MnO: 0.15

Normative Minerals

Qtz: 22.0
Orthoclase: 13.10
Albite: 24.70
Anorthite: 23.90
Corundum: 0.50
Diopside: 59.00
Hypersthene: 0.00
Olivine: 0.00
Magnetite: 3.35
Ilmenite: 1.22

MINERAL COMPOSITION

QUARTZ: 18.0
PLAG: 64.0
K-SPAR 18.0
MAFICS 0.0

Major Oxide Analysis

MINERAL COMPOSITION

QUARTZ: 21.0
PLAG: 64.0
K-SPAR 15.0
MAFICS 0.0

Normative Minerals

Major Oxide Analysis

MINERAL COMPOSITION

QUARTZ: 23.0
PLAG: 63.0
K-SPAR 14.0
MAFICS 0.0

Normative Minerals

Major Oxide Analysis

MINERAL COMPOSITION

Normative Minerals

QUARTZ: 27.0
PLAG: 53.0
K-SPAR 10.0
MAFICS 0.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION

QUARTZ: 42.0
PLAG: 45.0
K-SPAR 13.0
MAFICS 0.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Hematite
Pyrite
Chalcopyrite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CHD-2-6 NAME: DEIMOS
LATITUDE: 067044000 LONGITUDE: 149013000
QUADRANGLE: CHANDALAR

CLASS: CU-MO

LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 20000 MINIMUM TONS: 500
PRODUCTION: 0

GEOMETRY

LENGTH: 200.0 WIDTH: 10.0 DEPTH: 500

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	60.0	60.0
CU:	19000	19000
ZN:	Reported	

HOST ROCK CHARACTERISTICS

FORMATION: SKAJIT AGE: DEVONIAN
TERRANE: ARCTIC AK-HAMMOND THICKNESS: 100

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	20
Dolomite:	5	5
Marl:	15	15
Mafic volc:	0	0
Int. Volc:	20	20
Felsic Volc:	0	0
Shale:	40	40
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: AU-SB-AS VEINS
ORE TYPE: AU,SB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AS:	100	
AU:	0.050	
BA:	300	
BE:	2	
CO:	24	
CU:	56	56
FE:	30000	
NI:	42	
PB:	24	

SN: 1
W: 1
ZN: 100

INTRUSIVE ROCK CHARACTERISTICS

AGE: 402 TO 395 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	70	30
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic
Propylitic

TEXTURES

Porphyritic
Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

Major Oxide Analysis

Normative Minerals

SIO2: 65.70
AL2O3: 16.60
FE2O3: 0.80
FEO: 3.00
MGO: 0.55
CAO: 3.15
NA2O: 6.10
K2O: 0.25
TIO2: 0.60
P2O5: 0.28
MNO: 0.02

QTZ: -1.0
ORTHOCLASE: 19.21
ALBITE: 51.61
ANORTHITE: 8.32
CORUNDUM: 0.00
DIOPSIDE: 4.69
HYPERSTHENE: 2.86
OLIVINE: 0.00
MAGNETITE: 1.16
ILMENITE: 1.14

Major Oxide Analysis

SIO2: 61.60
AL2O3: 16.60
FE2O3: 1.40
FEO: 2.00
MGO: 1.65
CAO: 5.80
NA2O: 5.95
K2O: 3.10
TIO2: 0.48
P2O5: 0.30
MNO: 0.06

Normative Minerals

QTZ: -1.0
ORTHOCLASE: 18.32
ALBITE: 50.34
ANORTHITE: 9.43
CORUNDUM: 0.00
DIOPSIDE: 12.31
HYPERSTHENE: 0.00
OLIVINE: 0.00
MAGNETITE: 2.03
ILMENITE: 0.91

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Actinolite
Chlorite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CR-2-1
LATITUDE: 055027000
QUADRANGLE: CRAIG

NAME: CAPE ADDINGTON
LONGITUDE: 133049000

CLASS: CU-MO
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1000000 MINIMUM TONS: 100
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
CU:	10000	10000
ZN:	500	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: SILURIAN
TERRANE: ALEXANDER (CRAIG) THICKNESS: 100

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	20
Dolomite:	0	0
Marl:	0	0
Mafic volc:	0	0
Int. Volc:	30	30
Felsic Volc:	0	0
Shale:	20	20
Black shale:	0	0
Quartzite:	10	10
Graywacke:	20	20

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: CU-ZN-PB VMS
ORE TYPE: CU, PB, ZN

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.4	
AS:	20	

AU: 0.005
 BA: 250
 CO: 26
 CU: 100 100
 MO: 10
 NI: 20
 PB: 15
 ZN: 140

INTRUSIVE ROCK CHARACTERISTICS

AGE: -1 TO -1 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	20	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syanite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
 Minimum grain size:
 Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CHD-2-9 NAME: PILGRIM
LATITUDE: 067045000 LONGITUDE: 149001000
QUADRANGLE: CHANDALAR

CLASS: CU-MO

LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 50000 MINIMUM TONS: 5000
PRODUCTION: 0

GEOMETRY

LENGTH: 50.0 WIDTH: 10.0 DEPTH: 150

SHAPE: PLANAR TABULAR

INTRUSIVE ROCK CHARACTERISTICS

AGE: 402 TO 395 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	50	30
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic
Propylitic

TEXTURES

Porphyritic
Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 3 MM
Minimum grain size: .5 MM
Anorthite content missing

INTRUSIVE COMPOSITION DATA

Major Oxide Analysis		Normative Minerals	
SiO ₂ :	68.84	QTZ:	-1.0
Al ₂ O ₃ :	15.02	ORTHOCLASE:	12.17
Fe ₂ O ₃ :	0.33	ALBITE:	32.58
FeO:	0.87	ANORTHITE:	17.75

MGO: 1.48
 CAO: 3.77
 NA2O: 3.85
 K2O: 2.06
 TIO2: 0.44
 P2O5: 0.11
 MNO: 0.04

CORUNDUM: 0.00
 DIOPSIDE: 0.18
 HYPERSTHENE: 4.27
 OLIVINE: 0.00
 MAGNETITE: 0.48
 ILMENITE: 0.84

Major Oxide Analysis

SIO2: 68.73
 AL2O3: 14.72
 FE2O3: 1.20
 FEO: 2.46
 MGO: 0.08
 CAO: 1.78
 NA2O: 4.56
 K2O: 3.54
 TIO2: 0.51
 P2O5: 0.21
 MNO: 0.09

Normative Minerals

QTZ: -1.0
 ORTHOCLASE: 20.92
 ALBITE: 38.58
 ANORTHITE: 7.46
 CORUNDUM: 20.92
 DIOPSIDE: 0.00
 HYPERSTHENE: 3.04
 OLIVINE: 0.00
 MAGNETITE: 1.74
 ILMENITE: 0.97

Major Oxide Analysis

SIO2: 63.12
 AL2O3: 15.44
 FE2O3: 0.80
 FEO: 3.58
 MGO: 2.06
 CAO: 3.27
 NA2O: 4.25
 K2O: 1.59
 TIO2: 0.58
 P2O5: 0.23
 MNO: 0.08

Normative Minerals

QTZ: -1.0
 ORTHOCLASE: 9.34
 ALBITE: 35.96
 ANORTHITE: 14.72
 CORUNDUM: 1.33
 DIOPSIDE: 0.00
 HYPERSTHENE: 10.23
 OLIVINE: 0.00
 MAGNETITE: 1.16
 ILMENITE: 1.10

SKARN MINERAL DATA

SKARN MINERALS

Garnet
 Epidote
 Actinolite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
 Chalcopyrite
 Sphalerite

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: AU-SB-AS VEINS
ORE TYPE: AU,SB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AS:	100	
AU:	0.050	
BA:	300	
BE:	2	
CO:	24	
CU:	56	56
FE:	30000	
NI:	42	
PB:	24	
SN:	1	
W:	1	
ZN:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 402 TO 395 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	70	50
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic
Propylitic

TEXTURES

Porphyritic
Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene

Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 3 MM
Minimum grain size: .1 MM
Anorthite content missing

INTRUSIVE COMPOSITION DATA

Major Oxide Analysis	Normative Minerals
SIO2: 66.80	QTZ: -1.0
AL2O3: 15.00	ORTHOCLASE: 18.91
FE2O3: 1.70	ALBITE: 28.77
FEO: 2.20	ANORTHITE: 16.19
MGO: 2.00	CORUNDUM: 0.01
CAO: 3.50	DIOPSIDE: 0.00
NA2O: 3.40	HYPERSTHENE: 6.88
K2O: 3.20	OLIVINE: 0.00
TIO2: 0.50	MAGNETITE: 2.47
P2O5: 0.18	ILMENITE: 1.06
MNO: 0.10	

Major Oxide Analysis	Normative Minerals
SIO2: 66.00	QTZ: -1.0
AL2O3: 15.20	ORTHOCLASE: 16.55
FE2O3: 1.50	ALBITE: 27.08
FEO: 3.00	ANORTHITE: 18.84
MGO: 2.10	CORUNDUM: 0.00
CAO: 4.30	DIOPSIDE: 1.07
NA2O: 3.20	HYPERSTHENE: 8.09
K2O: 2.80	OLIVINE: 0.00
TIO2: 0.65	MAGNETITE: 2.18
P2O5: 0.18	ILMENITE: 1.24
MNO: 0.10	

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Actinolite

PARAGENESIS:

ASSEMBLAGE:

Dolomite:	5	5
Marl:	15	15
Mafic volc:	0	0
Int. Volc:	20	20
Felsic Volc:	0	0
Shale:	40	40
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: AU-SB-AS VEINS
 ORE TYPE: AU,SB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AS:	100	
AU:	0.050	
BA:	300	
BE:	2	
CO:	24	
CU:	56	56
FE:	30000	
NI:	42	
PB:	24	
SN:	1	
W:	1	
ZN:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 402 TO 395 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	50	20
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic
 Propylitic

TEXTURES

Porphyritic
Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 3 MM
Minimum grain size: .1 MM
Anorthite content missing

INTRUSIVE COMPOSITION DATA

Major Oxide Analysis

SiO2: 63.70
Al2O3: 15.00
Fe2O3: 3.80
FeO: 1.20
MgO: 0.96
CaO: 8.80
Na2O: 3.10
K2O: 0.22
TiO2: 0.50
P2O5: 0.17
MnO: 0.14

Normative Minerals

QTZ: -1.0
ORTHOCLASE: 1.30
ALBITE: 26.23
ANORTHITE: 26.36
CORUNDUM: 0.00
DIOPSIDE: 5.16
HYPERSTHENE: 0.00
OLIVINE: 0.00
MAGNETITE: 2.86
ILMENITE: 0.95

Major Oxide Analysis

SiO2: 62.20
Al2O3: 16.00
Fe2O3: 1.00
FeO: 2.00
MgO: 0.65
CaO: 1.10
Na2O: 4.60
K2O: 3.20
TiO2: 0.61
P2O5: 0.28
MnO: 0.05

Normative Minerals

QTZ: -1.0
ORTHOCLASE: 18.91
ALBITE: 38.92
ANORTHITE: 3.63
CORUNDUM: 3.64
DIOPSIDE: 0.00
HYPERSTHENE: 3.55
OLIVINE: 0.00
MAGNETITE: 1.45
ILMENITE: 1.16

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Actinolite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite
Sphalerite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CHD-2-10 NAME: MIKE-VICKI-CINDI
LATITUDE: 067045300 LONGITUDE: 149000000
QUADRANGLE: CHANDALAR

CLASS: CU-MO
LOCALIZATION:

REPORTED TONNAGES

MISSING
PRODUCTION: -1

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	0.5	0.5
CU:	2500	2500
PB:	20	
ZN:	8300	

Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	70	30
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Porphyritic
Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Chalcopyrite
Sphalerite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite

Chalcopyrite

Sphalerite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CHD-2-5

NAME: GINGER

LATITUDE: 067043000

LONGITUDE: 149015000

QUADRANGLE: CHANDALAR

CLASS: CU-MO

LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1000000 MINIMUM TONS: 50000
PRODUCTION: 0

GEOMETRY

LENGTH: 100.0 WIDTH: 30.0 DEPTH: 1000

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	6.0	6.0
CU:	2000	2000
PB:	10	
SN:	1	
W:	1.0	
ZN:	50	
CO:	30	
NI:	20	

Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	70	30
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic
Propylitic

TEXTURES

Porphyritic
Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 3 MM
Minimum grain size: .1 MM
Anorthite content missing

INTRUSIVE COMPOSITION DATA

Major Oxide Analysis		Normative Minerals	
SiO ₂ :	63.70	QTZ:	-1.0
Al ₂ O ₃ :	16.20	ORTHOCLASE:	25.41
Fe ₂ O ₃ :	0.20	ALBITE:	37.23
FeO:	0.65	ANORTHITE:	11.75
MgO:	1.50	CORUNDUM:	0.00
CaO:	3.90	DIOPSIDE:	5.53
Na ₂ O:	4.40	HYPERSTHENE:	2.01
K ₂ O:	4.30	OLIVINE:	0.00
TiO ₂ :	0.10	MAGNETITE:	0.29
P ₂ O ₅ :	0.10	ILMENITE:	0.19
MnO:	0.02		

Major Oxide Analysis

SiO2: 68.77
 Al2O3: 11.38
 Fe2O3: 1.22
 FeO: 3.90
 MgO: 1.85
 CaO: 2.62
 Na2O: 4.63
 K2O: 1.82
 TiO2: 1.35
 P2O5: 0.67
 MnO: 0.09

Normative Minerals

Qtz: -1.0
 Orthoclase: 10.76
 Albite: 39.18
 Anorthite: 4.89
 Corundum: 0.00
 Diopside: 3.08
 Hypersthene: 7.18
 Olivine: 0.00
 Magnetite: 1.77
 Ilmenite: 2.56

SKARN MINERAL DATA

SKARN MINERALS

Garnet
 Epidote
 Actinolite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
 Pyrite
 Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite: 95.0
 Pyrope: 0.0
 Grossularite: 5.0
 Almandite: 0.0
 Spessartite: 0.0

PYROXENE MINERALS

Missing

ID NUMBER: CHD-2-4
 LATITUDE: 067039000

NAME: EVA
 LONGITUDE: 149023000

QUADRANGLE: CHANDALAR

CLASS: CU-MO

LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 20000 MINIMUM TONS: 1000
PRODUCTION: 0

GEOMETRY

LENGTH: 30.0 WIDTH: 5.0 DEPTH: 100

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
CU:	5000	5000
SN:	1	
W:	1.0	

HOST ROCK CHARACTERISTICS

FORMATION: SKAJIT AGE: DEVONIAN
TERRANE: ARCTIC AK-HAMMOND THICKNESS: 100

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	20
Dolomite:	5	5
Marl:	15	15
Mafic volc:	0	0
Int. Volc:	20	20
Felsic Volc:	0	0
Shale:	40	40
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST

NEARBY DEPOSIT TYPES: AU-SB-AS VEINS

ORE TYPE: AU,SB

HOST ROCK ASSAY VALUES

MAX MIN

AG: 0.1
 AS: 100
 AU: 0.050
 BA: 300
 BE: 2
 CO: 24
 CU: 56 56
 FE: 30000
 NI: 42
 PB: 24
 SN: 1
 W: 1
 ZN: 100

INTRUSIVE ROCK CHARACTERISTICS

AGE: 402 TO 395 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	70	30
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic
 Propylitic

TEXTURES

Porphyritic
 Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
 Sphene
 Hornblende
 Apatite
 Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 3 MM
Minimum grain size: .1 MM
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 30.0
PLAG: 40.0
K-SPAR 20.0
MAFICS 10.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 30.0
PLAG: 50.0
K-SPAR 12.0
MAFICS 8.0

Major Oxide Analysis

SiO₂: 67.30
Al₂O₃: 14.00
Fe₂O₃: 1.40
FeO: 4.00
MgO: 2.95
CaO: 0.09
Na₂O: 2.40
K₂O: 2.40
TiO₂: 0.83
P₂O₅: 0.18
MnO: 0.05

Normative Minerals

QTZ: 30.0
ORTHOCLASE: -1.00
ALBITE: -1.00
ANORTHITE: -1.00
CORUNDUM: -1.00
DIOPSIDE: -1.00
HYPERSTHENE: -1.00
OLIVINE: -1.00
MAGNETITE: -1.00
ILMENITE: -1.00

MINERAL COMPOSITION

QUARTZ: 35.0
PLAG: 35.0
K-SPAR 25.0
MAFICS 5.0

Major Oxide Analysis

SiO₂: 63.24
Al₂O₃: 16.72
Fe₂O₃: 1.74
FeO: 3.78
MgO: 1.23
CaO: 2.16
Na₂O: 5.08
K₂O: 3.26
TiO₂: 0.75
P₂O₅: 0.33

Normative Minerals

QTZ: 35.0
ORTHOCLASE: 14.18
ALBITE: 20.31
ANORTHITE: 3.30
CORUNDUM: 6.25
DIOPSIDE: 0.00
HYPERSTHENE: 12.26
OLIVINE: 0.00
MAGNETITE: 2.03
ILMENITE: 1.58

MNO: 0.10

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Actinolite
Chlorite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite:	80.0
Pyrope:	0.0
Grossularite:	20.0
Almandite:	0.0
Spessartite:	0.0

PYROXENE MINERALS

Missing

ID NUMBER: CHD-2-3 NAME: VICTOR
LATITUDE: 067038000 LONGITUDE: 149022000
QUADRANGLE: CHANDALAR

CLASS: CU-MO
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS:	1000000	MINIMUM TONS:	20000
PRODUCTION:	0		

GEOMETRY

LENGTH: 300.0 WIDTH: 50.0 DEPTH: 500

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	5.5	5.5
AU:	0.05	
CU:	11000	11000
FE:	100000	
MO:	150.0	
PB:	20	
SN:	1	
W:	1.0	
ZN:	50	
CO:	25	
NI:	20	
SB:	2	

HOST ROCK CHARACTERISTICS

FORMATION: SKAJIT AGE: DEVONIAN
TERRANE: ARCTIC AK-HAMMOND THICKNESS: 200

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	20
Dolomite:	5	5
Marl:	15	15
Mafic volc:	0	0
Int. Volc:	20	20
Felsic Volc:	0	0
Shale:	40	40
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: AU-SB-AS VEINS
ORE TYPE: AU,SB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	

AS: 100
 AU: 0.050
 BA: 300
 BI: 2
 CO: 24
 CU: 56 56
 FE: 30000
 NI: 42
 PB: 24
 SN: 1
 W: 1
 ZN: 100

INTRUSIVE ROCK CHARACTERISTICS

AGE: 402 TO 395 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	60	30
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic
 Propylitic

TEXTURES

Porphyritic
 Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
 Sphene
 Hornblende
 Apatite
 Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
 Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 3 MM
Minimum grain size: .1 MM
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 57.0
K-SPAR 15.0
MAFICS 8.0

Major Oxide Analysis

SiO₂: 66.53
Al₂O₃: 14.84
Fe₂O₃: 1.59
FeO: 2.56
MgO: 1.14
CaO: 2.65
Na₂O: 3.80
K₂O: 3.00
TiO₂: 0.59
P₂O₅: 0.27
MnO: 0.12

Normative Minerals

QTZ: 20.0
ORTHOCLASE: 17.73
ALBITE: 32.15
ANORTHITE: 11.38
CORUNDUM: 1.17
DIOPSIDE: 0.00
HYPERSTHENE: 5.48
OLIVINE: 0.00
MAGNETITE: 2.31
ILMENITE: 1.12

MINERAL COMPOSITION

QUARTZ: 25.0
PLAG: 55.0
K-SPAR 10.0
MAFICS 10.0

Major Oxide Analysis

SiO₂: 72.00
Al₂O₃: 13.40
Fe₂O₃: 1.10
FeO: 1.00
MgO: 0.67
CaO: 1.40
Na₂O: 4.10
K₂O: 2.60
TiO₂: 0.28
P₂O₅: 0.09
MnO: 0.07

Normative Minerals

QTZ: 25.0
ORTHOCLASE: 15.36
ALBITE: 34.69
ANORTHITE: 6.36
CORUNDUM: 1.51
DIOPSIDE: 0.00
HYPERSTHENE: 2.26
OLIVINE: 0.00
MAGNETITE: 1.60
ILMENITE: 0.53

MINERAL COMPOSITION

QUARTZ: 28.0
PLAG: 52.0
K-SPAR 12.0
MAFICS 8.0

Major Oxide Analysis

Normative Minerals

SIO2:	65.37	QTZ:	28.0
AL2O3:	14.56	ORTHOCLASE:	-1.00
FE2O3:	1.59	ALBITE:	-1.00
FEO:	2.85	ANORTHITE:	-1.00
MGO:	2.44	CORUNDUM:	-1.00
CAO:	3.38	DIOPSIDE:	-1.00
NA2O:	3.47	HYPERSTHENE:	-1.00
K2O:	3.47	OLIVINE:	-1.00
TIO2:	0.56	MAGNETITE:	-1.00
P2O5:	0.18	ILMENITE:	-1.00
MNO:	0.10		

SKARN MINERAL DATA

SKARN MINERALS

Garnet
 Pyroxene
 Epidote
 Actinolite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
 Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite:	90.0
Pyrope:	0.0
Grossularite:	10.0
Almandite:	0.0
Spessartite:	0.0

PYROXENE MINERALS

Missing

ID NUMBER:	CHD-2-2	NAME:	VENUS
LATITUDE:	067037000	LONGITUDE:	149019000
QUADRANGLE:	CHANDALAR		

CLASS: CU-MO
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 3000000 MINIMUM TONS: 50000
PRODUCTION: 0

GEOMETRY

LENGTH: 200.0 WIDTH: 100.0 DEPTH: 600

SHAPE: ELLIPSOID

REPORTED ASSAY VALUES

	MAX	MIN
AG:	14.5	14.5
AU:	0.14	
CU:	20000	20000
MO:	100.0	
PB:	20	
SN:	1	
W:	2.0	
ZN:	140	
CO:	40	
NI:	40	
SB:	5	

HOST ROCK CHARACTERISTICS

FORMATION: SKAJIT AGE: DEVONIAN-SILURIAN
TERRANE: ARCTIC AK-HAMMOND THICKNESS: 200

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	20
Dolomite:	5	5
Marl:	15	15
Mafic volc:	0	0
Int. Volc:	20	20
Felsic Volc:	0	0
Shale:	40	40
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: AU-SB-AS VEINS
ORE TYPE: AU,SB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AS:	100	
AU:	0.050	
BA:	300	
BE:	2	
CO:	24	
CU:	56	56
FE:	30000	
NI:	42	
PB:	24	
SN:	1	
W:	1	
ZN:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 402 TO 395 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	40	20
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Potassic
Sericitic
Endoskarn present

TEXTURES

Porphyritic
Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 25.0
PLAG: 51.0
K-SPAR 12.0
MAFICS 12.0

Major Oxide Analysis

SiO₂: 67.50
Al₂O₃: 13.90
Fe₂O₃: 0.05
FeO: 2.80
MgO: 1.15
CaO: 2.10
Na₂O: 4.70
K₂O: 4.80
TiO₂: 0.04
P₂O₅: 0.12
MnO: 0.01

Normative Minerals

QTZ: 25.0
ORTHOCLASE: 10.64
ALBITE: 39.77
ANORTHITE: 9.63
CORUNDUM: 0.69
DIOPSIDE: 0.00
HYPERSTHENE: 7.55
OLIVINE: 0.00
MAGNETITE: 0.73
ILMENITE: 0.08

MINERAL COMPOSITION

QUARTZ: 30.0
PLAG: 45.0
K-SPAR 15.0
MAFICS 10.0

Major Oxide Analysis

SiO₂: 69.40
Al₂O₃: 14.20
Fe₂O₃: 0.35
FeO: 2.50
MgO: 1.35
CaO: 1.70
Na₂O: 3.40
K₂O: 3.00

Normative Minerals

QTZ: 30.0
ORTHOCLASE: 17.73
ALBITE: 28.77
ANORTHITE: 7.45
CORUNDUM: 2.63
DIOPSIDE: 0.00
HYPERSTHENE: 7.62
OLIVINE: 0.00

TIO2: 0.04
P2O5: 0.15
MNO: 0.01

MAGNETITE: 0.51
ILMENITE: 0.08

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 55.0
K-SPAR 10.0
MAFICS 15.0

Major Oxide Analysis

SiO2: 64.60
AL2O3: 15.80
FE2O3: 0.70
FeO: 3.30
MGO: 2.10
CAO: 3.20
NA2O: 3.90
K2O: 2.50
TIO2: 0.04
P2O5: 0.09
MNO: 0.03

Normative Minerals

QTZ: 20.0
ORTHOCLASE: 14.77
ALBITE: 33.00
ANORTHITE: 15.29
CORUNDUM: 1.08
DIOPSIDE: 0.00
HYPERSTHENE: 10.70
OLIVINE: 0.00
MAGNETITE: 1.02
ILMENITE: 0.08

MINERAL COMPOSITION

QUARTZ: 35.0
PLAG: 30.0
K-SPAR 25.0
MAFICS 10.0

Major Oxide Analysis

SiO2: 73.40
AL2O3: 12.60
FE2O3: 0.10
FeO: 0.96
MGO: 0.76
CAO: 3.00
NA2O: 4.00
K2O: 1.50
TIO2: 0.25
P2O5: 0.02
MNO: 0.03

Normative Minerals

QTZ: 35.0
ORTHOCLASE: 8.86
ALBITE: 33.84
ANORTHITE: 12.00
CORUNDUM: 0.00
DIOPSIDE: 2.26
HYPERSTHENE: 2.15
OLIVINE: 0.00
MAGNETITE: 0.15
ILMENITE: 0.48

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Actinolite
Serpentinite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite: 100.0
Pyrope: 0.0
Grossularite: 0.0
Almandite: 0.0
Spessartite: 0.0

PYROXENE MINERALS

Diopside: 80
Hedenbergite: 20
Johannsenite: 0

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite: 100.0
Pyrope: 0.0
Grossularite: 0.0
Almandite: 0.0
Spessartite: 0.0

PYROXENE MINERALS

Diopside: 80
Hedenbergite: 20
Johannsenite: 0

ID NUMBER: TM-2-1 NAME: TREASURE CREEK
LATITUDE: 062053000 LONGITUDE: 149017000
QUADRANGLE: TALKEETNA MOUNTAINS

CLASS: CU-MO
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1000 MINIMUM TONS: 5
PRODUCTION: 0

GEOMETRY

LENGTH: 20.0 WIDTH: 10.0 DEPTH: 50

Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	100	60
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Potassic
Propylitic

TEXTURES

Equigranular
Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 3
Minimum grain size: 1

Anorthite content maximum: 30
Anorthite content minimum: 15

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 42.0
PLAG: 21.0
K-SPAR 28.0
MAFICS 9.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 41.0
PLAG: 25.0
K-SPAR 30.0
MAFICS 4.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION

QUARTZ: 29.0
PLAG: 29.0
K-SPAR 36.0
MAFICS 6.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Pyroxene
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

ID NUMBER: 103-1-5 NAME: DIAMOND POINT
LATITUDE: 059039000 LONGITUDE: 153038000
QUADRANGLE: ILIAMNA

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 10000 MINIMUM TONS: 10
PRODUCTION: 0

GEOMETRY

LENGTH: 100.0 WIDTH: 20.0 DEPTH: -1

SHAPE: IRREGULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	Reported	
AU:	3.40	
CU:	Reported	
FE:	Reported	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: TRIASSIC
TERRANE: PENINSULAR THICKNESS: 100

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	30	20
Dolomite:	0	0
Marl:	0	0
Mafic volc:	40	20
Int. Volc:	50	30
Felsic Volc:	20	10
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: VMS
ORE TYPE:

HOST ROCK ASSAY VALUES

	MAX	MIN
CU: Reported		
PB: Reported		
ZN: Reported		

INTRUSIVE ROCK CHARACTERISTICS

AGE: 168 TO 160 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	80	60
Quartz monzodiorite	40	20
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrrhotite
Chalcopyrite
Gold

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrrhotite
Chalcopyrite
Gold

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: 103-1-6 NAME: INISKIN RIVER
LATITUDE: 059048000 LONGITUDE: 153027000
QUADRANGLE: ILIAMNA

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 10000 MINIMUM TONS: 100
PRODUCTION: 0

GEOMETRY

LENGTH: 1000.0 WIDTH: 20.0 DEPTH: -1

SHAPE: LENTICULAR

REPORTED ASSAY VALUES

Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
 Minimum grain size:
 Anorthite content missing

INTRUSIVE COMPOSITION DATA

Major Oxide Analysis	Normative Minerals
SiO ₂ : 57.10	QTZ: -1.0
Al ₂ O ₃ : 17.70	ORTHOCLASE: 2.50
Fe ₂ O ₃ : 3.20	ALBITE: 27.80
FeO: 4.50	ANORTHITE: 32.10
MgO: 3.90	CORUNDUM: 0.00
CaO: 8.80	DIOPSIDE: 7.17
Na ₂ O: 3.30	HYPERSTHENE: 10.70
K ₂ O: 0.43	OLIVINE: 0.00
TiO ₂ : 0.80	MAGNETITE: 4.60
P ₂ O ₅ : 0.39	ILMENITE: 1.50
MnO: 0.12	

Major Oxide Analysis	Normative Minerals
SiO ₂ : 60.40	QTZ: -1.0
Al ₂ O ₃ : 16.80	ORTHOCLASE: 3.70
Fe ₂ O ₃ : 2.80	ALBITE: 26.60
FeO: 4.20	ANORTHITE: 30.60
MgO: 2.70	CORUNDUM: 0.00
CaO: 6.90	DIOPSIDE: 2.13
Na ₂ O: 3.10	HYPERSTHENE: 10.50
K ₂ O: 0.62	OLIVINE: 0.00
TiO ₂ : 0.60	MAGNETITE: 4.10
P ₂ O ₅ : 0.24	ILMENITE: 1.20
MnO: 0.12	

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrrhotite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: 103-1-7 NAME: MILLETT
LATITUDE: 059047000 LONGITUDE: 154031000
QUADRANGLE: ILIAMNA

CLASS: FE-AU
LOCALIZATION: QD CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 500000 MINIMUM TONS: 10000
PRODUCTION: 0

GEOMETRY

LENGTH: 3500.0 WIDTH: 30.0 DEPTH: -1

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

Quartz monzodiorite	50	10
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

Equigranular
Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock
Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: COARSE
Minimum grain size: MEDIUM
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Actinolite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Hematite
Pyrite
Pyrrhotite

Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Garnet

Epidote

Actinolite

Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite

Hematite

Pyrite

Pyrhottite

Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

MAX MIN

CU: Reported
PB: Reported
ZN: Reported

INTRUSIVE ROCK CHARACTERISTICS

AGE: -1 TO -1 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	20	10
Monzodiorite	0	0
Quartz diorite	90	60
Quartz monzodiorite	30	10
Tonalite	40	10
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

Major Oxide Analysis		Normative Minerals	
SiO ₂ :	54.10	QTZ:	-1.0
Al ₂ O ₃ :	17.70	ORTHOCLASE:	6.10
Fe ₂ O ₃ :	3.30	ALBITE:	29.50
FeO:	4.70	ANORTHITE:	30.80
MgO:	4.00	CORUNDUM:	0.00
CaO:	7.90	DIOPSIDE:	4.40

NA2O: 3.40
 K2O: 1.00
 TIO2: 0.85
 P2O5: 0.45
 MNO: 0.11

HYPERSTHENE: 12.80
 OLIVINE: 0.00
 MAGNETITE: 4.90
 ILMENITE: 1.70

Major Oxide Analysis

SIO2: 59.40
 AL2O3: 17.20
 FE2O3: 3.50
 FEO: 4.30
 MGO: 3.20
 CAO: 7.10
 NA2O: 2.80
 K2O: 0.31
 TIO2: 0.56
 P2O5: 0.31
 MNO: 0.10

Normative Minerals

QTZ: -1.0
 ORTHOCLASE: 1.90
 ALBITE: 24.00
 ANORTHITE: 33.50
 CORUNDUM: 0.00
 DIOPSIDE: 0.30
 HYPERSTHENE: 12.10
 OLIVINE: 0.00
 MAGNETITE: 5.20
 ILMENITE: 1.10

Major Oxide Analysis

SIO2: 54.00
 AL2O3: 17.90
 FE2O3: 3.30
 FEO: 5.10
 MGO: 4.10
 CAO: 9.10
 NA2O: 3.60
 K2O: 0.78
 TIO2: 0.73
 P2O5: 0.27
 MNO: 0.16

Normative Minerals

QTZ: -1.0
 ORTHOCLASE: 4.70
 ALBITE: 30.80
 ANORTHITE: 30.70
 CORUNDUM: 0.00
 DIOPSIDE: 10.80
 HYPERSTHENE: 10.70
 OLIVINE: 0.00
 MAGNETITE: 4.80
 ILMENITE: 1.40

SKARN MINERAL DATA

SKARN MINERALS

Garnet
 Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
 Hematite
 Pyrite
 Pyrrhotite
 Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: 103-1-9 NAME: URSUS COVE
LATITUDE: 059031000 LONGITUDE: 153046000
QUADRANGLE: ILIAMNA

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 10000 MINIMUM TONS: 100
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

MAX MIN

CU: Reported
FE: Reported

HOST ROCK CHARACTERISTICS

FORMATION: KAKHONAK COMPLEX AGE: PERMIAN-
TRIASSIC
TERRANE: PENINSULAR THICKNESS: 40

GENERALIZED HOST ROCK COMPOSITION:

MAXIMUM MINIMUM

Limestone: 20 10
Dolomite: 0 0

Marl:	0	0
Mafic volc:	0	0
Int. Volc:	50	20
Felsic Volc:	0	0
Shale:	60	20
Black shale:	0	0
Quartzite:	30	10
Graywacke:	50	20

METAMORPHIC GRADE: L.AMPHIBOLITE

NEARBY DEPOSIT TYPES: ?

ORE TYPE:

HOST ROCK ASSAY VALUES

MAX MIN

INTRUSIVE ROCK CHARACTERISTICS

AGE: 180 TO 160 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	20	10
Monzodiorite	20	0
Quartz diorite	80	60
Quartz monzodiorite	30	0
Tonalite	20	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
 Minimum grain size:
 Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	5	5
Marl:	0	0
Mafic volc:	40	20
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	30	10
Black shale:	0	0
Quartzite:	30	20
Graywacke:	30	10

METAMORPHIC GRADE: AMPHIBOLITE
 NEARBY DEPOSIT TYPES: CU-ZN VMS
 ORE TYPE: CU,ZN

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
BA:	1000	
BE:	1	
CO:	20	
CU:	100	100
MO:	10	
NI:	20	
PB:	5	
ZN:	140	
V:	300	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 85 TO 70 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	80	40
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	30	10
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Propylitic
Endoskarn present

TEXTURES

Equigranular
Myrmekitic
Seriata

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 5
Minimum grain size: 1
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 14.0
PLAG: 69.0
K-SPAR 6.0
MAFICS 11.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 24.5
PLAG: 55.5
K-SPAR 13.5
MAFICS 6.5

Major Oxide Analysis

Normative Minerals

SiO₂: 63.20
Al₂O₃: 18.20
Fe₂O₃: 1.40
FeO: 2.40
MgO: 1.40
CaO: 4.80
Na₂O: 5.20

QTZ: 24.5
ORTHOCLASE: 10.60
ALBITE: 44.00
ANORTHITE: 21.00
CORUNDUM: 0.00
DIOPSIDE: 1.14
HYPERSTHENE: 5.62

K2O:	1.80	OLIVINE:	0.00
TiO2:	0.45	MAGNETITE:	2.00
P2O5:	0.22	ILMENITE:	0.80
MNO:	0.07		

MINERAL COMPOSITION

QUARTZ:	14.0
PLAG:	62.0
K-SPAR	13.0
MAFICS	11.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ:	15.0
PLAG:	70.0
K-SPAR	3.0
MAFICS	12.0

Major Oxide Analysis

Normative Minerals

SiO2:	65.90
AL2O3:	18.10
FE2O3:	1.60
FEO:	1.90
MGO:	1.00
CAO:	4.80
NA2O:	4.70
K2O:	2.20
TiO2:	0.37
P2O5:	0.18
MNO:	0.08

QTZ:	15.0
ORTHOCLASE:	12.80
ALBITE:	39.20
ANORTHITE:	21.50
CORUNDUM:	0.00
DIOPSIDE:	0.69
HYPERSTHENE:	3.83
OLIVINE:	0.00
MAGNETITE:	2.20
ILMENITE:	0.60

MINERAL COMPOSITION

QUARTZ:	5.0
PLAG:	78.0
K-SPAR	2.0
MAFICS	15.0

Major Oxide Analysis

Normative Minerals

SiO2:	67.60
AL2O3:	16.90
FE2O3:	1.32
FEO:	1.40
MGO:	0.84
CAO:	3.75
NA2O:	4.47
K2O:	2.74
TiO2:	0.32
P2O5:	0.16
MNO:	0.07

QTZ:	5.0
ORTHOCLASE:	16.00
ALBITE:	38.00
ANORTHITE:	17.00
CORUNDUM:	0.10
DIOPSIDE:	0.00
HYPERSTHENE:	3.19
OLIVINE:	0.00
MAGNETITE:	1.90
ILMENITE:	0.60

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Hornblende
Biotite
Chlorite
Scapolite
Apatite
Sphene
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Hematite
Pyrite
Pyrrhotite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: 103-1-10 NAME: DUTTON
LATITUDE: 059041000 LONGITUDE: 153058000
QUADRANGLE: ILIAMNA

CLASS: FE-AU

LOCALIZATION: DIOR/LMS CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 200000 MINIMUM TONS: 1000
PRODUCTION: 100

GEOMETRY

LENGTH: 3000.0 WIDTH: 200.0 DEPTH: -1

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	17.0	17.0
AU:	0.70	
CU:	15000	15000

INTRUSIVE ALTERATION TYPES

TEXTURES

Equigranular
Seriata

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 5
Minimum grain size: 2
Anorthite content missing

INTRUSIVE COMPOSITION DATA

Major Oxide Analysis

SiO₂: 65.70
Al₂O₃: 15.50
Fe₂O₃: 2.30
FeO: 2.30
MgO: 1.60
CaO: 5.20
Na₂O: 3.80
K₂O: 1.60
TiO₂: 0.80
P₂O₅: 0.18
MnO: 0.12

Normative Minerals

Qtz: -1.0
Orthoclase: 9.50
Albite: 32.30
Anorthite: 20.60
Corundum: 0.00
Diopside: 3.32
Hypersthene: 3.67
Olivine: 0.00
Magnetite: 3.30
Ilmenite: 1.50

Major Oxide Analysis

SiO₂: 62.30
Al₂O₃: 18.40
Fe₂O₃: 2.60
FeO: 2.30
MgO: 1.50
CaO: 6.30
Na₂O: 4.00
K₂O: 0.65
TiO₂: 0.74
P₂O₅: 0.21
MnO: 0.13

Normative Minerals

Qtz: -1.0
Orthoclase: 3.90
Albite: 33.90
Anorthite: 29.50
Corundum: 0.16
Diopside: 0.00
Hypersthene: 5.78
Olivine: 0.00
Magnetite: 3.80
Ilmenite: 1.40

Major Oxide Analysis

SiO₂: 42.00
Al₂O₃: 14.70
Fe₂O₃: 5.80

Normative Minerals

Qtz: -1.0
Orthoclase: 1.40
Albite: 12.80

FE0:	8.30	ANORTHITE:	32.10
MGO:	11.60	CORUNDUM:	0.00
CAO:	11.40	DIOPSIDE:	20.10
NA2O:	1.70	HYPERSTHENE:	0.00
K2O:	0.23	OLIVINE:	24.80
TIO2:	1.80	MAGNETITE:	8.50
P2O5:	0.08	ILMENITE:	3.50
MNO:	0.18		

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Actinolite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrrhotite
Chalcopyrite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: CR-1-8 NAME: SUMMIT LAKE
LATITUDE: 055013000 LONGITUDE: 132033000
QUADRANGLE: CRAIG

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 100 MINIMUM TONS: 1000
PRODUCTION: 0

GEOMETRY

LENGTH: 150.0 WIDTH: 10.0 DEPTH: -1

SHAPE: TABULAR-IRREGULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	30.0	30.0
AU:	1.00	
CU:	15000	15000
MO:	10.0	
PB:	20	
SN:	1	
W:	1.0	
ZN:	500	
BA:	300	
BE:	1	
CO:	70	
NI:	60	
V:	200	

HOST ROCK CHARACTERISTICS

FORMATION: WALES GROUP AGE: PRE-
ORDOVICIAN
TERRANE: ALEXANDER(CRAIG) THICKNESS: 500

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	5	5
Marl:	0	0
Mafic volc:	20	10
Int. Volc:	50	30
Felsic Volc:	20	10
Shale:	10	10
Black shale:	0	0
Quartzite:	0	0
Graywacke:	10	5

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: BA-PB-ZN-CU-AG-AU VMS

ORE TYPE: BA, PB, ZN, CU, AG, AU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AU:	0.010	
BA:	300	
CU:	60	60
MO:	3	
NI:	20	
PB:	20	
SN:	1	
W:	1	
ZN:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 105 TO 101 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	40	20
Monzodiorite	0	0
Quartz diorite	50	20
Quartz monzodiorite	0	0
Tonalite	40	20
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

Equigranular
Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 2
Minimum grain size: 2

Anorthite content maximum: 40
Anorthite content minimum: 35

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 60.0
K-SPAR 5.0
MAFICS 15.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 18.8
PLAG: 48.0
K-SPAR 18.0
MAFICS 26.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 17.0
PLAG: 56.0
K-SPAR 10.0
MAFICS 17.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

TERRANE: ALEXANDER(CRAIG) THICKNESS: 400

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	30	20
Dolomite:	0	0
Marl:	30	20
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	30	20
Black shale:	30	20
Quartzite:	30	10
Graywacke:	0	0

METAMORPHIC GRADE: U.GREENSCHIST
NEARBY DEPOSIT TYPES: ZN-PB-CU-BA-CO VMS
ORE TYPE: ZN,PB,CU,BA,CO

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.4	
AS:	20	
AU:	0.005	
BA:	250	
CO:	26	
CU:	100	100
MO:	10	
NI:	20	
PB:	5	
ZN:	140	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 240 TO 70 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	60	40
Monzodiorite	0	0
Quartz diorite	60	40
Quartz monzodiorite	20	0
Tonalite	20	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Endoskarn present

TEXTURES

Equigranular
Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock
Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Actinolite
Hornblende

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Chalcopyrite
Sphalerite

Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Actinolite
Hornblende

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Chalcopyrite
Sphalerite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CR-1-2 NAME: JUMBO
LATITUDE: 055014300 LONGITUDE: 132037000
QUADRANGLE: CRAIG

CLASS: FE-AU

LOCALIZATION: QD CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1000000 MINIMUM TONS: 200000
PRODUCTION: 123000

GEOMETRY

LENGTH: 250.0 WIDTH: 100.0 DEPTH: 700

SHAPE: TABULAR

REPORTED ASSAY VALUES

MAX MIN

AG: 22.0 22.0
 AU: 1.80
 CU: 40000 40000
 MO: 400.0
 PB: 30
 SN: 2
 W: 2.0
 ZN: 800
 AS: 100
 CO: 130
 F: 150
 NI: 300

HOST ROCK CHARACTERISTICS

FORMATION: WALES GROUP AGE: PRE-
 ORDOVICIAN
 TERRANE: ALEXANDER(CRAIG) THICKNESS: 500

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	5	5
Marl:	0	0
Mafic volc:	20	10
Int. Volc:	50	30
Felsic Volc:	20	10
Shale:	10	10
Black shale:	0	0
Quartzite:	0	0
Graywacke:	10	5

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: ZN-PB-CU-AG-AU VMS
 ORE TYPE: ZN,PB,CU,AS,AU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AU:	0.010	
BA:	300	
CU:	60	60
MO:	3	
NI:	20	
PB:	20	
SN:	1	

W: 1
ZN: 100

INTRUSIVE ROCK CHARACTERISTICS

AGE: 105 TO 101 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	10	10
Monzodiorite	30	10
Quartz diorite	0	0
Quartz monzodiorite	70	60
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Propylitic
Endoskarn present

TEXTURES

Equigranular
Porphyritic
Seriatic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock
Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 3
Minimum grain size: 1

Anorthite content maximum: 40
Anorthite content minimum: 25

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 5.0
PLAG: 60.0
K-SPAR 10.0
MAFICS 25.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 50.0
K-SPAR 30.0
MAFICS 10.0

Major Oxide Analysis

Normative Minerals

SiO2: 59.44
Al2O3: 17.40
Fe2O3: 3.30
FeO: 2.77
MgO: 1.81
CaO: 6.51
Na2O: 4.22
K2O: 3.12
TiO2: 0.66
P2O5: 0.28
MnO: 0.17

QTZ: 10.0
ORTHOCLASE: 18.40
ALBITE: 35.60
ANORTHITE: 19.50
CORUNDUM: 0.00
DIOPSIDE: 8.97
HYPERSTHENE: 1.81
OLIVINE: 0.00
MAGNETITE: 4.90
ILMENITE: 1.40

MINERAL COMPOSITION

QUARTZ: 15.0
PLAG: 50.0
K-SPAR 35.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 50.0
K-SPAR 0.0
MAFICS 50.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 5.0
K-SPAR 75.0
MAFICS 10.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 2.0
PLAG: 53.0
K-SPAR 5.0
MAFICS 40.0

Major Oxide Analysis

SiO2: 60.66
Al2O3: 16.59
Fe2O3: 3.12
FeO: 3.04
MgO: 2.11
CaO: 5.94
Na2O: 4.12
K2O: 3.03
TiO2: 0.62
P2O5: 0.00
MnO: 0.15

Normative Minerals

QTZ: 2.0
ORTHOCLASE: 18.10
ALBITE: 37.30
ANORTHITE: 18.00
CORUNDUM: 0.00
DIOPSIDE: 8.37
HYPERSTHENE: 3.51
OLIVINE: 0.00
MAGNETITE: 3.30
ILMENITE: 0.87

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Wollastonite
Epidote
Actinolite
Hornblende
Chlorite
Plagioclase
Scapolite
Monticellite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Hematite
Specular Hematite
Pyrite
Pyrrhotite
Chalcopyrite
Sphalerite
Gold
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite: 36.0
Pyrope: 0.0
Grossularite: 64.0
Almandite: 0.0
Spessartite: 0.0

PYROXENE MINERALS

Missing

ID NUMBER: CR-1-7 NAME: GREEN MONSTER
LATITUDE: 055015000 LONGITUDE: 132032000
QUADRANGLE: CRAIG

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 3000 MINIMUM TONS: 10000
PRODUCTION: 10

GEOMETRY

LENGTH: 20.0 WIDTH: 10.0 DEPTH: 100

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	30.0	30.0
AU:	1.00	
CU:	16000	16000
MO:	10.0	
PB:	20	
SN:	1	
W:	1.0	
ZN:	50	
BA:	400	
BE:	1	
CO:	70	
NI:	60	
V:	200	

Monzodiorite	40	20
Quartz diorite	0	0
Quartz monzodiorite	40	20
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic
Endoskarn present

TEXTURES

Equigranular
Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock
Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM

Anorthite content maximum: 55
Anorthite content minimum: 40

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 60.0
K-SPAR 20.0
MAFICS 20.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 40.0



K-SPAR 25.0
MAFICS 25.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 60.0
K-SPAR 0.0
MAFICS 40.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 60.0
K-SPAR 5.0
MAFICS 35.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Actinolite
Chlorite
Scapolite
Monticellite
Serpentinite
Quartz

PARAGENESIS:

ASSEMBLAGE:

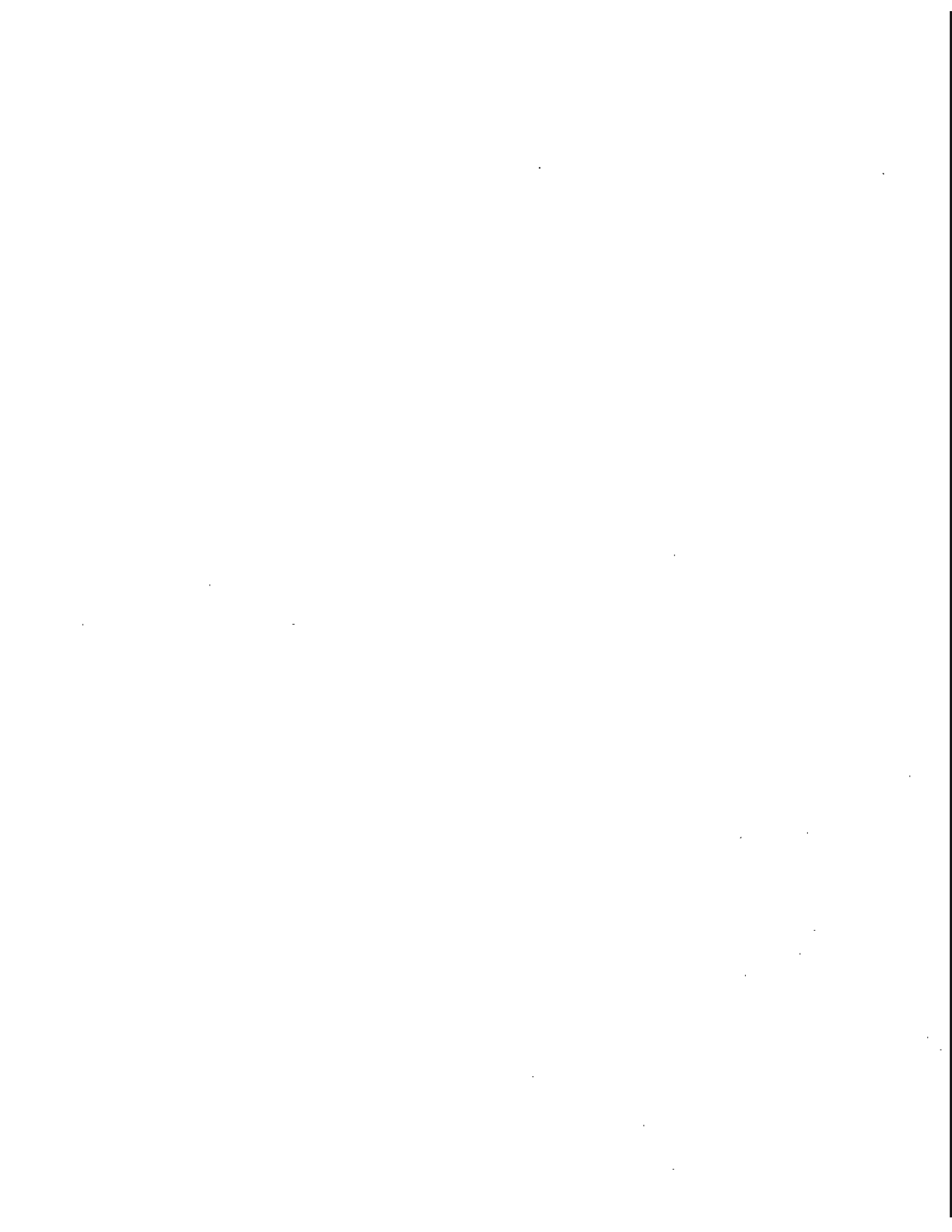
ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrhottite
Chalcopyrite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:



SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: CR-1-6 NAME: GOULD
LATITUDE: 055013000 LONGITUDE: 132036000
QUADRANGLE: CRAIG

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1000 MINIMUM TONS: 100
PRODUCTION: 10

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE: TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	Reported	
AU:	Reported	
CU:	Reported	
CO:	300	
NI:	500	

HOST ROCK CHARACTERISTICS

FORMATION: WALES GROUP AGE: PRE-
ORDOVICIAN
TERRANE: ALEXANDER(CRAIG) THICKNESS: 20

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	10	5
Marl:	0	0

Mafic volc:	20	10
Int. Volc:	50	30
Felsic Volc:	20	10
Shale:	10	10
Black shale:	0	0
Quartzite:	0	0
Graywacke:	10	5

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: BA-ZN-PB-CU-AU-AS VMS
 ORE TYPE: BA,ZN,PB,CU,AU,AS

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AU:	0.010	
BA:	300	
CU:	60	60
MO:	3	
NI:	20	
PB:	20	
SN:	1	
W:	1	
ZN:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 105 TO 101 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	20	20
Monzodiorite	30	20
Quartz diorite	0	0
Quartz monzodiorite	50	40
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
 Endoskarn present

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing

Anorthite content maximum: 40
Anorthite content minimum: 40

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 5.0
PLAG: 45.0
K-SPAR 5.0
MAFICS 45.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrrhotite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: CR-1-5 NAME: COPPER MOUNTAIN
LATITUDE: 055014000 LONGITUDE: 132037000
QUADRANGLE: CRAIG

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 100000 MINIMUM TONS: 10000
PRODUCTION: 5768

GEOMETRY

LENGTH: 100.0 WIDTH: 10.0 DEPTH: 1500

SHAPE: TABULAR-IRREGULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	56.0	56.0
AU:	0.80	
CU:	19000	19000
MO:	20.0	
PB:	24	
SN:	1	
W:	1.0	
ZN:	500	
BA:	200	
CO:	400	
NI:	350	
SB:	200	

HOST ROCK CHARACTERISTICS

FORMATION: WALES GROUP AGE: PRE-
ORDOVICIAN
TERRANE: ALEXANDER(CRAIG) THICKNESS: 200

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	5	5
Marl:	0	0
Mafic volc:	20	10
Int. Volc:	50	30
Felsic Volc:	20	10
Shale:	10	10
Black shale:	0	0
Quartzite:	0	0
Graywacke:	10	5

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: ZN-PB-CU-AG-AU VMS
 ORE TYPE: ZN,PB,CU,AS,AU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AU:	0.010	
BA:	300	
CU:	60	60
MO:	3	
NI:	20	
PB:	20	
SN:	1	
W:	1	
ZN:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 105 TO 101 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	10	10
Monzodiorite	30	10
Quartz diorite	0	0
Quartz monzodiorite	60	50
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic

Endoskarn present

TEXTURES

Equigranular
Porphyritic
Seriata

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 3
Minimum grain size: 1

Anorthite content maximum: 30
Anorthite content minimum: 20

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 60.0
K-SPAR 10.0
MAFICS 20.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 30.0
K-SPAR 0.0
MAFICS 70.0

Major Oxide Analysis

Normative Minerals

SiO₂: 47.71
Al₂O₃: 7.98
Fe₂O₃: 4.59
FeO: 5.54
MgO: 4.30
CaO: 11.84
Na₂O: 3.43

QTZ: 0.0
ORTHOCLASE: 7.20
ALBITE: 23.40
ANORTHITE: 31.00
CORUNDUM: 0.00
DIOPSIDE: 22.50
HYPERSTHENE: 0.00

K2O: 1.19
TiO2: 0.97
P2O5: 0.00
MNO: 0.17

OLIVINE: 3.80
MAGNETITE: 4.90
ILMENITE: 1.40

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 40.0
K-SPAR 25.0
MAFICS 25.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 65.0
K-SPAR 0.0
MAFICS 25.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Scapolite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Hematite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: CR-1-4 NAME: MAGNETITE CLIFF
LATITUDE: 055015000 LONGITUDE: 132037000
QUADRANGLE: CRAIG

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1000000 MINIMUM TONS: 370000
PRODUCTION: 0

GEOMETRY

LENGTH: 200.0 WIDTH: 75.0 DEPTH: 450

SHAPE: TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	2.5	2.5
AU:	0.31	
CU:	8000	8000
FE:	460000	

HOST ROCK CHARACTERISTICS

FORMATION: WALES GROUP AGE: PRE-
ORDOVICIAN
TERRANE: ALEXANDER(CRAIG) THICKNESS: 500

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	5	5
Marl:	0	0
Mafic volc:	20	10
Int. Volc:	50	30
Felsic Volc:	20	10
Shale:	10	10
Black shale:	0	0
Quartzite:	0	0

Graywacke: 10 5

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: ZN-PB-CU-AG-AU VMS
ORE TYPE: ZN,PB,CU,AG,AU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AU:	0.010	
BA:	300	
CU:	60	60
MO:	3	
NI:	20	
PB:	20	
SN:	1	
W:	1	
ZN:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 105 TO 101 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	10	0
Monzodiorite	30	10
Quartz diorite	0	0
Quartz monzodiorite	60	50
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Endoskarn present

TEXTURES

Equigranular
Porphyritic
Seriatic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene

Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 2
Minimum grain size: 1
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 20.0
K-SPAR 0.0
MAFICS 80.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 60.0
K-SPAR 5.0
MAFICS 35.0

Major Oxide Analysis

Normative Minerals

SiO2: 60.30
Al2O3: 17.70
Fe2O3: 3.40
FeO: 2.90
MgO: 1.80
CaO: 6.60
Na2O: 4.20
K2O: 3.10
TiO2: -1.00
P2O5: -1.00
MnO: -1.00

QTZ: 0.0
ORTHOCLASE: 18.32
ALBITE: 35.54
ANORTHITE: 20.29
CORUNDUM: 0.00
DIOPSIDE: 10.12
HYPERSTHENE: 2.08
OLIVINE: 0.00
MAGNETITE: 4.93
ILMENITE: 1.13

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 60.0
K-SPAR 10.0
MAFICS 20.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 40.0
K-SPAR 30.0
MAFICS 10.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 9.0
PLAG: 51.0
K-SPAR 21.0
MAFICS 19.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 55.0
K-SPAR 0.0
MAFICS 45.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 40.0
K-SPAR 30.0
MAFICS 10.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Biotite
Plagioclase
Scapolite
Apatite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite

Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite: 45.0
Pyrope: 0.0
Grossularite: 55.0
Almandite: 0.0
Spessartite: 0.0

PYROXENE MINERALS

Missing

ID NUMBER: CR-1-3 NAME: UPPER MAGNETITE BODY
LATITUDE: 055015000 LONGITUDE: 132037000
QUADRANGLE: CRAIG

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 500000 MINIMUM TONS: 50000
PRODUCTION: 0

GEOMETRY

LENGTH: 70.0 WIDTH: 30.0 DEPTH: 250

SHAPE: TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	2.5	2.5
AU:	0.30	
CU:	70000	70000
FE:	450000	

HOST ROCK CHARACTERISTICS

FORMATION: WALES GROUP AGE: PRE-
ORDOVICIAN

TERRANE: ALEXANDER(CRAIG)

THICKNESS:

200

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	5	5
Marl:	0	0
Mafic volc:	20	10
Int. Volc:	50	30
Felsic Volc:	20	10
Shale:	10	10
Black shale:	0	0
Quartzite:	0	0
Graywacke:	10	5

METAMORPHIC GRADE: GREENSCHIST

NEARBY DEPOSIT TYPES: ZN-PB-CU-AG-AU VMS

ORE TYPE: ZN,PB,CU,AG,AU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AU:	0.010	
BA:	300	
CU:	60	60
MO:	3	
NI:	20	
PB:	20	
SN:	1	
W:	1	
ZN:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 105 TO 101 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	10	10
Monzodiorite	30	10
Quartz diorite	0	0
Quartz monzodiorite	60	50
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Propylitic
Endoskarn present

TEXTURES

Equigranular
Porphyritic
Seriata

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 3
Minimum grain size: 1

Anorthite content maximum: 40
Anorthite content minimum: 25

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 5.0
PLAG: 50.0
K-SPAR 25.0
MAFICS 20.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 5.0
PLAG: 50.0
K-SPAR 20.0
MAFICS 25.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 1.0

PLAG: 50.0
K-SPAR 30.0
MAFICS 19.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Actinolite
Hornblende
Biotite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite: 50.0
Pyrope: 0.0
Grossularite: 50.0
Almandite: 0.0
Spessartite: 0.0

PYROXENE MINERALS

Diopside: 75
Hedenbergite: 25
Johannsenite: 0

ID NUMBER: HY-1-1
LATITUDE: 063015120
QUADRANGLE: HEALY

NAME: COPPER KING
LONGITUDE: 149038360

CLASS: FE-AU
LOCALIZATION: MB LAYERS

REPORTED TONNAGES

MAXIMUM TONS: 50000 MINIMUM TONS: 1000
PRODUCTION: 10

GEOMETRY

LENGTH: 400.0 WIDTH: 5.0 DEPTH: -1

SHAPE: STRATIFORM

REPORTED ASSAY VALUES

	MAX	MIN
AG:	96.0	96.0
AU:	2.00	
CU:	10000	10000
MO:	15.0	
PB:	5	
SN:	30	
ZN:	300	
AS:	100	
BI:	60	
CO:	20	
NI:	100	
CR:	Reported	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: PENN-PERM
TERRANE: CHULITNA THICKNESS: -1

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	5
Dolomite:	0	0
Marl:	0	0
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	30	10
Black shale:	0	0
Quartzite:	0	0
Graywacke:	90	60

METAMORPHIC GRADE: L.GREENSCHIST
NEARBY DEPOSIT TYPES: BARITE
ORE TYPE: BA

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.5	
AS:	200	
AU:	0.020	
BA:	300	
BE:	1	
BI:	10	
CU:	30	30
MO:	3	
NI:	150	
PB:	10	
SN:	10	
W:	50	
ZN:	200	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 68 TO 68 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	100	100
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic
Propylitic

TEXTURES

Equigranular
Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Hornblende

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:

Minimum grain size:

Anorthite content maximum: 35

Anorthite content minimum: 25

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 5.0

PLAG: 68.0

K-SPAR 0.0

MAFICS 27.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 10.0

PLAG: 80.0

K-SPAR 0.0

MAFICS 10.0

Major Oxide Analysis

Normative Minerals

SiO₂: 63.65

QTZ: 10.0

Al₂O₃: 15.03

ORTHOCLASE: 21.98

Fe₂O₃: 0.31

ALBITE: 26.48

FeO: 3.55

ANORTHITE: 15.97

MgO: 2.55

CORUNDUM: 0.00

CaO: 4.03

DIOPSIDE: 2.18

Na₂O: 3.13

HYPERSTHENE: 10.61

K₂O: 3.72

OLIVINE: 0.00

TiO₂: 0.63

MAGNETITE: 0.45

P₂O₅: 0.21

ILMENITE: 1.19

MnO: 0.06

MINERAL COMPOSITION

QUARTZ: 5.0

PLAG: 45.0

K-SPAR 0.0

MAFICS 50.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Pyroxene
Epidote
Chlorite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Pyrrhotite
Chalcopyrite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: HY-1-2 NAME: SILVER KING
LATITUDE: 063012000 LONGITUDE: 149036240
QUADRANGLE: HEALY

CLASS: FE-AU
LOCALIZATION: LMS LAYERS

REPORTED TONNAGES

MAXIMUM TONS: 1000000 MINIMUM TONS: 85000
PRODUCTION: 0

GEOMETRY

LENGTH: 800.0 WIDTH: 150.0 DEPTH: -1

SHAPE: STRATIFORM

REPORTED ASSAY VALUES

	MAX	MIN
AG:	6.8	6.8
AU:	0.45	
CU:	1000	1000
MO:	10.0	
PB:	20	
SN:	15	
ZN:	200	
AS:	1000	
BI:	30	
CO:	200	

NI: 100
CR: Reported

HOST ROCK CHARACTERISTICS

FORMATION: AGE: TRIASSIC
TERRANE: CHULITNA THICKNESS: 100

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	30	20
Dolomite:	0	0
Marl:	0	0
Mafic volc:	0	0
Int. Volc:	30	10
Felsic Volc:	0	0
Shale:	0	0
Black shale:	70	50
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES:
ORE TYPE:

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.5	
AS:	200	
AU:	0.020	
BA:	300	
BE:	1	
BI:	10	
CU:	30	30
MO:	3	
NI:	150	
PB:	10	
SN:	10	
W:	50	
ZN:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 68 TO 68 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	100	100
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic

TEXTURES

Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrhottite
Chalcopyrite
Arsenopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrhottite
Chalcopyrite
Arsenopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: HY-1-4
LATITUDE: 063004000
QUADRANGLE: HEALY

NAME: PARTIN CREEK
LONGITUDE: 149057000

CLASS: FE-AU
LOCALIZATION: BASALT/LMS CONTACTS

REPORTED TONNAGES

MAXIMUM TONS: 100000 MINIMUM TONS: 1000
PRODUCTION: 0

GEOMETRY

LENGTH: 3000.0 WIDTH: 1000.0 DEPTH: -1

SHAPE: STRATIFORM

REPORTED ASSAY VALUES

	MAX	MIN
AG:	10.3	10.3
AU:	0.34	
CU:	1000	1000
MO:	10.0	
PB:	10	
SN:	100	
ZN:	200	
AS:	500	
BI:	10	
CD:	20	
CO:	70	
TI:	10000	
SB:	200	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: TRIASSIC
TERRANE: CHULITNA THICKNESS: 10

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	40	30
Dolomite:	0	0
Marl:	0	0
Mafic volc:	70	60
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES:
ORE TYPE:

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.5	
AS:	200	
AU:	0.020	
BA:	300	
BE:	1	
BI:	10	
CU:	30	30
MO:	3	
NI:	150	
PB:	10	
SN:	10	
W:	50	
ZN:	200	

INTRUSIVE ROCK CHARACTERISTICS

AGE: -1 TO -1 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	-1	-1
Monzodiorite	-1	-1
Quartz diorite	-1	-1
Quartz monzodiorite	-1	-1
Tonalite	-1	-1
Quartz monzonite	-1	-1
Granodiorite	-1	-1
Syenite	-1	-1
Alkali granite	-1	-1

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

No exposures

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Pyrrhotite
Chalcopyrite
Arsenopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Pyrhottite
Chalcopyrite
Arsenopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: HY-1-6 NAME: WINDY E.
LATITUDE: 063027360 LONGITUDE: 149007000
QUADRANGLE: HEALY

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 5000 MINIMUM TONS: 300
PRODUCTION: 0

GEOMETRY

LENGTH: 30.0 WIDTH: 6.0 DEPTH: -1

SHAPE: TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	0.8	0.8
AU:	0.00	
CU:	2000	2000
FE:	300000	
MO:	20.0	
PB:	5	
SN:	50	
W:	50.0	
ZN:	17	
AS:	200	
BA:	50	

CO: 150
NI: 31
V: 50

HOST ROCK CHARACTERISTICS

FORMATION: AGE: DEVONIAN
TERRANE: DILLINGER THICKNESS: 30

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	0
Dolomite:	0	0
Marl:	0	0
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	60	30
Black shale:	0	0
Quartzite:	0	0
Graywacke:	60	30

METAMORPHIC GRADE: L.GREENSCHIST
NEARBY DEPOSIT TYPES: NONE
ORE TYPE:

HOST ROCK ASSAY VALUES

MAX MIN
PB: Reported

INTRUSIVE ROCK CHARACTERISTICS

AGE: 70 TO 70 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	100	100
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: FINE

Anorthite content maximum: 25
Anorthite content minimum: 25

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 24.0
PLAG: 58.0
K-SPAR 5.0
MAFICS 13.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Wollastonite
Epidote
Hornblende

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrrhotite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: HY-1-7 NAME: WINDY W.
LATITUDE: 063027480 LONGITUDE: 149009240
QUADRANGLE: HEALY

CLASS: FE-AU
LOCALIZATION: HFLS/MB CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 2000 MINIMUM TONS: 100
PRODUCTION: 0

GEOMETRY

LENGTH: 20.0 WIDTH: 5.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	0.6	0.6
AU:	0.20	
CU:	2000	2000
FE:	150000	
MO:	2.0	
PB:	21	
SN:	3	
W:	2.0	
ZN:	52	

AS: 200
 BA: 70
 CO: 200
 F: 100
 NI: 150
 V: 50

HOST ROCK CHARACTERISTICS

FORMATION: AGE: DEVONIAN
 TERRANE: DILLINGER THICKNESS: 20

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	0	0
Marl:	0	0
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	60	30
Black shale:	0	0
Quartzite:	0	0
Graywacke:	60	30

METAMORPHIC GRADE: L.GREENSCHIST
 NEARBY DEPOSIT TYPES: NONE
 ORE TYPE:

HOST ROCK ASSAY VALUES

MAX MIN
 PB: Reported

INTRUSIVE ROCK CHARACTERISTICS

AGE: 70 TO 70 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	100	100
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0

Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Wollastonite
Epidote
Hornblende

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite

Pyrhottite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Wollastonite
Epidote
Hornblende

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrhottite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ORE TYPE: ZN, PB, AU, CU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	Reported	
CU:	Reported	
PB:	Reported	
ZN:	Reported	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 100 TO 80 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	30	10
Quartz monzodiorite	40	20
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic
Endoskarn present

TEXTURES

Equigranular
Porphyritic
Seriatic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock
Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 5
Minimum grain size: 2

Anorthite content maximum: 40
Anorthite content minimum: 20

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Actinolite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Hematite
Pyrite
Chalcopyrite
Gold

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite:	35.0
Pyrope:	0.0
Grossularite:	65.0
Almandite:	0.0
Spessartite:	0.0

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Actinolite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Hematite
Pyrite
Chalcopyrite
Gold

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite:	35.0
Pyrope:	0.0
Grossularite:	65.0
Almandite:	0.0
Spessartite:	0.0

PYROXENE MINERALS

Missing

ID NUMBER:	IL-AU-4	NAME:	TURTLE REEF
LATITUDE:	059036000	LONGITUDE:	153034000
QUADRANGLE:	ILIAMNA		

CLASS: FE-AU
LOCALIZATION: QD CONTACT

REPORTED TONNAGES

MAXIMUM TONS:	10000	MINIMUM TONS:	100
PRODUCTION:	0		

GEOMETRY

LENGTH:	100.0	WIDTH:	30.0	DEPTH:	-1
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Quartz diorite	100	60
Quartz monzodiorite	20	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
 Clinopyroxene
 Sphene
 Hornblende
 Apatite
 Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 5
 Minimum grain size: 2
 Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
 Idocrase
 Epidote
 Chlorite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrrhotite
Chalcopyrite
Gold

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Idocrase
Epidote
Chlorite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrrhotite
Chalcopyrite
Gold

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Quartzite: 30 10
Graywacke: 0 0

METAMORPHIC GRADE: AMPHIBOLITE
NEARBY DEPOSIT TYPES: VMS? (CU-ZN)
ORE TYPE: CU,ZN

HOST ROCK ASSAY VALUES

MAX MIN
CU: Reported
ZN: Reported

INTRUSIVE ROCK CHARACTERISTICS

AGE: 85 TO 80 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	80	40
Quartz monzodiorite	40	20
Tonalite	30	10
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic
Propylitic

TEXTURES

Equigranular
Porphyritic
Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 11.0
PLAG: 57.0
K-SPAR 0.0
MAFICS 32.0

Major Oxide Analysis

SiO₂: 58.60
Al₂O₃: 17.60
Fe₂O₃: 0.70
FeO: 6.00
MgO: 4.00
CaO: 6.70
Na₂O: 3.60
K₂O: 1.50
TiO₂: 0.83
P₂O₅: 0.41
MnO: 0.09

Normative Minerals

QTZ: 11.0
ORTHOCLASE: 9.00
ALBITE: 31.00
ANORTHITE: 28.00
CORUNDUM: 0.00
DIOPSIDE: 2.60
HYPERSTHENE: 17.90
OLIVINE: 0.00
MAGNETITE: 1.00
ILMENITE: 1.50

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 55.0
K-SPAR 0.0
MAFICS 25.0

Major Oxide Analysis

SiO₂: 58.00
Al₂O₃: 17.90
Fe₂O₃: 1.70
FeO: 4.80
MgO: 3.70
CaO: 6.50
Na₂O: 3.20
K₂O: 1.80
TiO₂: 0.92
P₂O₅: 0.31
MnO: 0.10

Normative Minerals

QTZ: 20.0
ORTHOCLASE: 11.00
ALBITE: 27.00
ANORTHITE: 29.00
CORUNDUM: 0.00
DIOPSIDE: 0.88
HYPERSTHENE: 15.00
OLIVINE: 0.00
MAGNETITE: 2.40
ILMENITE: 1.70

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 48.0
K-SPAR 11.0
MAFICS 22.0

Major Oxide Analysis

SiO2: 61.10
 Al2O3: 17.10
 Fe2O3: 1.20
 FeO: 4.40
 MgO: 3.00
 CaO: 5.40
 Na2O: 3.10
 K2O: 2.60
 TiO2: 0.71
 P2O5: 0.21
 MnO: 0.08

Normative Minerals

Qtz: 20.0
 Orthoclase: 15.00
 Albite: 26.00
 Anorthite: 25.00
 Corundum: 0.00
 Diopside: 0.30
 Hypersthene: 13.50
 Olivine: 0.00
 Magnetite: 1.70
 Ilmenite: 1.30

MINERAL COMPOSITION

Quartz: 31.6
 Plag: 50.6
 K-spar 8.4
 mafics 9.4

Major Oxide Analysis

SiO2: 60.60
 Al2O3: 17.20
 Fe2O3: 88.00
 FeO: 3.80
 MgO: 3.30
 CaO: 6.00
 Na2O: 3.30
 K2O: 1.80
 TiO2: 0.74
 P2O5: 0.31
 MnO: 0.12

Normative Minerals

Qtz: 31.6
 Orthoclase: 10.50
 Albite: 27.50
 Anorthite: 26.00
 Corundum: 0.10
 Diopside: 0.69
 Hypersthene: 7.40
 Olivine: 0.00
 Magnetite: 9.90
 Ilmenite: 1.30

MINERAL COMPOSITION

Quartz: 15.6
 Plag: 56.0
 K-spar 16.7
 mafics 11.4

Major Oxide Analysis

MINERAL COMPOSITION

Quartz: 16.6
 Plag: 59.2
 K-spar 15.8
 mafics 8.4

Normative Minerals

Major Oxide Analysis

MINERAL COMPOSITION

Quartz: 14.8
 Plag: 54.3
 K-spar 4.5
 mafics 26.4

Normative Minerals

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 18.7
PLAG: 52.4
K-SPAR 19.3
MAFICS 9.6

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: IL-1-2 NAME: FOLLY CLAIM
LATITUDE: 059015000 LONGITUDE: 154027000
QUADRANGLE: ILIAMNA

CLASS: FE-AU

LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 10000 MINIMUM TONS: 10
PRODUCTION: 0

GEOMETRY

LENGTH: 100.0 WIDTH: 20.0 DEPTH: -1
SHAPE: PODS

REPORTED ASSAY VALUES

	MAX	MIN
AG:	27.4	27.4
AU:	3.42	
CU:	3000	3000
FE:	Reported	

HOST ROCK CHARACTERISTICS

FORMATION: KAKHONAK COMPLEX AGE: PERMIAN?
TERRANE: PENINSULAR THICKNESS: 10

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	30	10
Dolomite:	0	0
Marl:	0	0
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	60	40
Black shale:	0	0
Quartzite:	30	10
Graywacke:	40	10

METAMORPHIC GRADE: L.AMPHIBOLITE
NEARBY DEPOSIT TYPES: ZN-CU VMS?
ORE TYPE: ZN,CU

HOST ROCK ASSAY VALUES

	MAX	MIN
CU:	Reported	
ZN:	Reported	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 180 TO 155 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	10	5
Monzodiorite	0	0
Quartz diorite	90	60
Quartz monzodiorite	30	10
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic
Endoskarn present

TEXTURES

Equigranular
Porphyritic
Seriatic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock
Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 5
Minimum grain size: 2

Anorthite content maximum: 55
Anorthite content minimum: 5

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Actinolite

Hornblende

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite

Pyrite

Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Actinolite

Hornblende

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite

Pyrite

Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: KN-1-1 NAME: TUXEDNI BAY
LATITUDE: 060015000 LONGITUDE: 152051000
QUADRANGLE: KENAI

CLASS: FE-AU
LOCALIZATION: VOLC/MB CONTACT

REPORTED TONNAGES

MAXIMUM TONS:	50000	MINIMUM TONS:	5000
PRODUCTION:	0		

GEOMETRY

LENGTH:	120.0	WIDTH:	35.0	DEPTH:	-1
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SHAPE: PODS

REPORTED ASSAY VALUES

	MAX	MIN
AG:	1.6	1.6
AU:	0.06	
CU:	2000	2000
FE:	250000	

HOST ROCK CHARACTERISTICS

FORMATION:		AGE:	TRIASSIC
TERRANE:	PENINSULAR	THICKNESS:	200

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	30	20
Dolomite:	0	0
Marl:	0	0
Mafic volc:	0	0
Int. Volc:	80	60

K-SPAR 25.0
MAFICS 25.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION
QUARTZ: 0.0
PLAG: 60.0
K-SPAR 0.0
MAFICS 40.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION
QUARTZ: 0.0
PLAG: 60.0
K-SPAR 5.0
MAFICS 35.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Actinolite
Chlorite
Scapolite
Monticellite
Serpentine
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrhottite
Chalcopyrite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

Felsic Volc:	0	0
Shale:	20	10
Black shale:	0	0
Quartzite:	0	0
Graywacke:	30	10

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: VMS
 ORE TYPE:

HOST ROCK ASSAY VALUES

	MAX	MIN
CU:	Reported	
PB:	Reported	
ZN:	Reported	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 170 TO 168 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	90	60
Quartz monzodiorite	30	10
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
 Clinopyroxene
 Hornblende
 Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
 Minimum grain size:
 Anorthite content missing

INTRUSIVE COMPOSITION DATA

Major Oxide Analysis

SiO2: 61.90
 Al2O3: 16.30
 Fe2O3: 2.20
 FeO: 4.10
 MgO: 3.20
 CaO: 6.50
 Na2O: 3.00
 K2O: 1.40
 TiO2: 0.56
 P2O5: 0.08
 MnO: 0.11

Normative Minerals

Qtz: -1.0
 Orthoclase: 8.30
 Albite: 25.60
 Anorthite: 27.00
 Corundum: 0.00
 Diopside: 3.80
 Hypersthene: 11.10
 Olivine: 0.00
 Magnetite: 3.20
 Ilmenite: 1.10

Major Oxide Analysis

SiO2: 57.30
 Al2O3: 17.70
 Fe2O3: 3.10
 FeO: 4.90
 MgO: 4.00
 CaO: 7.80
 Na2O: 2.80
 K2O: 1.20
 TiO2: 0.62
 P2O5: 0.10
 MnO: 0.07

Normative Minerals

Qtz: -1.0
 Orthoclase: 7.10
 Albite: 23.80
 Anorthite: 32.30
 Corundum: 0.00
 Diopside: 4.67
 Hypersthene: 13.20
 Olivine: 0.00
 Magnetite: 4.50
 Ilmenite: 1.20

Major Oxide Analysis

SiO2: 61.60
 Al2O3: 16.50
 Fe2O3: 2.20
 FeO: 4.00
 MgO: 2.90
 CaO: 6.20
 Na2O: 3.10
 K2O: 1.50
 TiO2: 0.56
 P2O5: 0.10
 MnO: 0.12

Normative Minerals

Qtz: -1.0
 Orthoclase: 9.00
 Albite: 26.50
 Anorthite: 27.00
 Corundum: 0.00
 Diopside: 2.43
 Hypersthene: 11.00
 Olivine: 0.00
 Magnetite: 2.30
 Ilmenite: 1.10

Major Oxide Analysis

SiO2: 67.60
 Al2O3: 15.50
 Fe2O3: 1.90
 FeO: 2.10
 MgO: 1.50

Normative Minerals

Qtz: -1.0
 Orthoclase: 0.90
 Albite: 30.90
 Anorthite: 21.60
 Corundum: 0.14

CAO:	4.40	DIOPSIDE:	0.00
NA2O:	3.60	HYPERSTHENE:	5.41
K2O:	1.50	OLIVINE:	0.00
TIO2:	0.46	MAGNETITE:	0.00
P2O5:	0.02	ILMENITE:	0.89
MNO:	0.04		

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Idocrase
Epidote
Chlorite

PARAGENESIS: MT & GAR CUT BY GAR VN; MT REP

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite:	70.0
Pyrope:	-1.0
Grossularite:	28.0
Almandite:	1.0
Spessartite:	1.0

PYROXENE MINERALS

Missing

ID NUMBER: KN-1-2	NAME: REDOUBT
LATITUDE: 060013000	LONGITUDE: 152045400
QUADRANGLE: KENAI	

CLASS: FE-AU
LOCALIZATION:

REPORTED TONNAGES

MAXIMUM TONS: 10000 MINIMUM TONS: 100
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

MAX MIN

AG: Reported
AU: Reported
CU: Reported
FE: Reported

HOST ROCK CHARACTERISTICS

FORMATION: U KAMISHAK LMS AGE: TRIASSIC
TERRANE: PENINSULAR THICKNESS: 100

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	40	10
Dolomite:	0	0
Marl:	30	10
Mafic volc:	20	10
Int. Volc:	60	30
Felsic Volc:	10	0
Shale:	0	0
Black shale:	0	0
Quartzite:	20	10
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: VMS
ORE TYPE:

HOST ROCK ASSAY VALUES

MAX MIN

CU: Reported
PB: Reported

ZN: Reported

INTRUSIVE ROCK CHARACTERISTICS

AGE: 170 TO 168 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	40	0
Monzodiorite	0	0
Quartz diorite	80	40
Quartz monzodiorite	20	0
Tonalite	60	40
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

Major Oxide Analysis		Normative Minerals	
SiO ₂ :	61.90	QTZ:	-1.0
Al ₂ O ₃ :	15.30	ORTHOCLASE:	11.30
Fe ₂ O ₃ :	2.10	ALBITE:	26.30
FeO:	4.20	ANORTHITE:	22.30

MGO:	3.00	CORUNDUM:	0.00
CAO:	7.50	DIOPSIDE:	12.00
NA2O:	3.10	HYPERSTHENE:	6.74
K2O:	1.90	OLIVINE:	0.00
TIO2:	0.55	MAGNETITE:	3.10
P2O5:	0.06	ILMENITE:	1.10
MNO:	0.09		

Major Oxide Analysis

SIO2:	57.60
AL2O3:	16.80
FE2O3:	3.00
FEO:	4.20
MGO:	3.80
CAO:	7.40
NA2O:	3.40
K2O:	1.10
TIO2:	0.65
P2O5:	0.10
MNO:	0.12

Normative Minerals

QTZ:	-1.0
ORTHOCLASE:	6.60
ALBITE:	29.30
ANORTHITE:	27.80
CORUNDUM:	0.00
DIOPSIDE:	7.05
HYPERSTHENE:	10.60
OLIVINE:	0.00
MAGNETITE:	4.40
ILMENITE:	1.30

Major Oxide Analysis

SIO2:	58.10
AL2O3:	16.30
FE2O3:	2.07
FEO:	5.46
MGO:	3.76
CAO:	7.13
NA2O:	2.46
K2O:	1.29
TIO2:	0.56
P2O5:	0.08
MNO:	0.14

Normative Minerals

QTZ:	-1.0
ORTHOCLASE:	7.80
ALBITE:	21.40
ANORTHITE:	30.40
CORUNDUM:	0.00
DIOPSIDE:	4.36
HYPERSTHENE:	15.30
OLIVINE:	0.00
MAGNETITE:	3.10
ILMENITE:	1.10

SKARN MINERAL DATA

SKARN MINERALS

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: LC-1-1
LATITUDE: 060009000

NAME: KASNA CREEK
LONGITUDE: 154003000

QUADRANGLE: LAKE CLARK

CLASS: FE-AU
LOCALIZATION:

REPORTED TONNAGES

MISSING
PRODUCTION: 0

GEOMETRY

LENGTH: 250.0 WIDTH: 250.0 DEPTH: 1050

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	6.8	6.8
AU:	0.13	
CU:	10000	10000
FE:	270000	
MO:	Reported	
PB:	500	
ZN:	500	
CO:	200	
NI:	400	

HOST ROCK CHARACTERISTICS

FORMATION: TALKEETNA FM AGE: TRIASSIC
TERRANE: PENINSULAR THICKNESS: 1500

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	30	10
Dolomite:	10	5
Marl:	0	0
Mafic volc:	20	0
Int. Volc:	60	30
Felsic Volc:	20	10
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST

NEARBY DEPOSIT TYPES: VMS
ORE TYPE:

HOST ROCK ASSAY VALUES

	MAX	MIN
CU:	Reported	
PB:	Reported	
ZN:	Reported	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 85 TO 60 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	20	10
Monzodiorite	0	0
Quartz diorite	40	20
Quartz monzodiorite	40	20
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Hornblende

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Actinolite
Chlorite
Quartz

PARAGENESIS:

ASSEMBLAGE: STAR SPL IN CP

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Hematite
Specular Hematite
Pyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE: STAR SPL IN CP

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Actinolite
Chlorite
Quartz

PARAGENESIS:

ASSEMBLAGE: STAR SPL IN CP

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Hematite
Specular Hematite
Pyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE: STAR SPL IN CP

ID NUMBER: IL-1-3 NAME: COPPER KING
LATITUDE: 059041000 LONGITUDE: 153090000

QUADRANGLE: ILIAMNA

CLASS: FE-AU

LOCALIZATION: PENDANTS IN BATH

REPORTED TONNAGES

MAXIMUM TONS: 10000 MINIMUM TONS: 500
PRODUCTION: 0

GEOMETRY

LENGTH: 400.0 WIDTH: 5.0 DEPTH: -1

SHAPE: PODS

REPORTED ASSAY VALUES

	MAX	MIN
AG:	17.1	17.1
AU:	0.62	
CU:	5000	5000
FE:	150000	

HOST ROCK CHARACTERISTICS

FORMATION: KAKHONAK COMPLEX AGE: PERM-TRIASSIC
TERRANE: PENINSULAR THICKNESS: 100

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	100	100
Dolomite:	0	0
Marl:	0	0
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: L.AMPHIBOLITE

NEARBY DEPOSIT TYPES: ZN-PB-CU VMS

ORE TYPE: ZN,PB,CU

HOST ROCK ASSAY VALUES

MAX MIN
CU: Reported
PB: Reported
ZN: Reported

INTRUSIVE ROCK CHARACTERISTICS

AGE: 170 TO 157 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	20	10
Monzodiorite	0	0
Quartz diorite	80	60
Quartz monzodiorite	20	10
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Propylitic
Endoskarn present

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock
Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 5
Minimum grain size: 2
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Hematite
Pyrite
Pyrrhotite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite:	1.0
Pyrope:	-1.0
Grossularite:	-1.0
Almandite:	-1.0
Spessartite:	-1.0

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Hematite
Pyrite
Pyrrhotite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite: 1.0
Pyrope: -1.0
Grossularite: -1.0
Almandite: -1.0
Spessartite: -1.0

PYROXENE MINERALS

Missing

ID NUMBER: LC-1-2 NAME: TAKOKA CREEK
LATITUDE: 060008000 LONGITUDE: 154008000
QUADRANGLE: LAKE CLARK

CLASS: FE-AU
LOCALIZATION:

REPORTED TONNAGES

MAXIMUM TONS: 10000 MINIMUM TONS: 100
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

MAX MIN

Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Hornblende

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: MC-1-7 NAME: CHITISTONE GLACIER
LATITUDE: 061027120 LONGITUDE: 142011000
QUADRANGLE: MCCARTHY

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 100 MINIMUM TONS: 1
PRODUCTION: 0

GEOMETRY

LENGTH: 20.0 WIDTH: 0.1 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	2.0	2.0
AU:	0.10	
CU:	5000	5000

HOST ROCK CHARACTERISTICS

FORMATION: HANSEN CRK FM AGE: PERMIAN
TERRANE: WRANGELLIA THICKNESS: 20

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	10

Dolomite:	0	0
Marl:	0	0
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	50	30
Black shale:	0	0
Quartzite:	40	20
Graywacke:	10	10

METAMORPHIC GRADE: L.GREENSCHIST
 NEARBY DEPOSIT TYPES: NONE
 ORE TYPE:

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.4	
AS:	20	
AU:	0.005	
BA:	250	
CO:	26	
CU:	100	100
MO:	10	
NI:	20	
PB:	5	
ZN:	140	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 278 TO 271 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	100	100
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
 Propylitic

TEXTURES

Equigranular
Seriata

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM

Anorthite content maximum: 70
Anorthite content minimum: 50

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 2.0
PLAG: 45.0
K-SPAR 0.0
MAFICS 53.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: MC-1-5 NAME: KUSKULANA PASS
LATITUDE: 061035000 LONGITUDE: 143037000
QUADRANGLE: MCCARTHY

CLASS: FE-AU
LOCALIZATION: HFLS/MB CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 5000 MINIMUM TONS: 5
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	0.5	0.5
AU:	0.06	
CU:	1500	1500
FE:	200000	
MO:	7.0	

HOST ROCK CHARACTERISTICS

FORMATION: CHITISTONE LMS AGE: TRIASSIC
TERRANE: WRANGELLIA THICKNESS: 1200

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	50	30

Dolomite:	0	0
Marl:	30	30
Mafic volc:	40	30
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: L.GREENSCHIST
 NEARBY DEPOSIT TYPES: CU-AG (KENNICOTT TYPE)
 ORE TYPE: CU,AG

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.4	
AS:	20	
AU:	0.010	
BA:	250	
CO:	26	
CU:	100	100
MO:	17	
NI:	20	
PB:	5	
ZN:	40	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 146 TO 138 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	50	30
Monzodiorite	0	0
Quartz diorite	50	30
Quartz monzodiorite	10	0
Tonalite	50	30
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic

TEXTURES

Equigranular

Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Hornblende
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: MF-1-2 NAME: FRANCIS ISLAND
LATITUDE: 058038000 LONGITUDE: 136011000
QUADRANGLE: MT. FAIRWEATHER

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS:	10000	MINIMUM TONS:	100
PRODUCTION:	10		

GEOMETRY

LENGTH:	50.0	WIDTH:	5.0	DEPTH:	-1
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SHAPE: ELONGATE

REPORTED ASSAY VALUES

	MAX	MIN
AG:	20.0	20.0

AU: Reported
 CU: 1000 1000
 FE: 100000
 MO: 5.0
 PB: 10
 SN: 7
 W: 50.0
 ZN: 250
 BA: 30
 CO: 15
 NI: 50
 V: 80
 TI: 1000
 Y: 15

HOST ROCK CHARACTERISTICS

FORMATION: AGE: SILURIAN
 TERRANE: ALEXANDER(CRAIG) THICKNESS: 300

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	60	40
Dolomite:	0	0
Marl:	0	0
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	60	40

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: BARITE; ZN-CU-AG VMS
 ORE TYPE: BA,ZN,CU,AG

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
BA:	150	
CU:	30	30
MO:	3	
NI:	15	
PB:	4	
SN:	10	
V:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 115 TO 110 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	40	10
Monzodiorite	0	0
Quartz diorite	80	60
Quartz monzodiorite	0	0
Tonalite	20	10
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: COARSE
Minimum grain size: MEDIUM

Anorthite content maximum: 35
Anorthite content minimum: 30

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 15.0
PLAG: 60.0

K-SPAR 0.0
MAFICS 25.0

Major Oxide Analysis

MINERAL COMPOSITION
QUARTZ: 22.0
PLAG: 53.0
K-SPAR 0.0
MAFICS 25.0

Normative Minerals

Major Oxide Analysis

SIO2: 53.20
AL2O3: 20.20
FE2O3: 7.60
FEO: 0.00
MGO: 2.60
CAO: 6.80
NA2O: 5.10
K2O: 1.20
TIO2: 0.00
P2O5: 0.00
MNO: 0.00

Normative Minerals

QTZ: 22.0
ORTHOCLASE: 7.09
ALBITE: 43.15
ANORTHITE: 28.68
CORUNDUM: 0.00
DIOPSIDE: 4.23
HYPERSTHENE: 3.77
OLIVINE: 7.00
MAGNETITE: 2.18
ILMENITE: 0.85

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 32.0
K-SPAR 0.0
MAFICS 68.0

Major Oxide Analysis

MINERAL COMPOSITION
QUARTZ: 3.0
PLAG: 58.0
K-SPAR 0.0
MAFICS 39.0

Normative Minerals

Major Oxide Analysis

SIO2: 57.20
AL2O3: 16.30
FE2O3: 6.50
FEO: 0.00
MGO: 3.80
CAO: 7.40
NA2O: 5.40
K2O: 1.40
TIO2: 0.00
P2O5: 0.00
MNO: 0.00

Normative Minerals

QTZ: 3.0
ORTHOCLASE: 8.27
ALBITE: 45.69
ANORTHITE: 16.10
CORUNDUM: 0.00
DIOPSIDE: 16.88
HYPERSTHENE: 8.21
OLIVINE: 0.00
MAGNETITE: 2.18
ILMENITE: 1.10

MINERAL COMPOSITION

QUARTZ: 41.0
PLAG: 48.0

K-SPAR 2.0
MAFICS 9.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 26.0
PLAG: 41.0
K-SPAR 0.0
MAFICS 33.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 25.0
PLAG: 65.0
K-SPAR 0.0
MAFICS 10.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Actinolite
Chlorite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING: QD>SK>SULF+QTZ>MB

SKARN ORE MINERALS PRESENT

Magnetite
Hematite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: MC-1-1 NAME: MIDAS (BENZ CRK)
LATITUDE: 061033000 LONGITUDE: 143046000
QUADRANGLE: MCCARTHY

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 500 MINIMUM TONS: 50000
 PRODUCTION: 2

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	8.0	8.0
AU:	2.00	
CU:	10000	10000
FE:	Reported	
MO:	20.0	
AS:	500	
CO:	500	

HOST ROCK CHARACTERISTICS

FORMATION: NIZINIA & CHITISTONE LMS AGE: TRIASSIC
 TERRANE: WRANGELLIA THICKNESS: 1200

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	50	30
Dolomite:	0	0
Marl:	30	30
Mafic volc:	40	20
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: L.GREENSCHIST
 NEARBY DEPOSIT TYPES: CU (KENNICOTT TYPE)
 ORE TYPE: CU

HOST ROCK ASSAY VALUES

MAX MIN

AG: 0.4
 AS: 20
 AU: 0.005
 BA: 250
 CO: 26
 CU: 100 100
 MO: 17
 NI: 20
 PB: 5
 ZN: 140

INTRUSIVE ROCK CHARACTERISTICS

AGE: 146 TO 138 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	50	30
Monzodiorite	0	0
Quartz diorite	50	30
Quartz monzodiorite	10	0
Tonalite	50	30
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic

TEXTURES

Equigranular
 Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
 Hornblende
 Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock
 Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing
 Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: MC-1-3 NAME: COPPER QUEEN
LATITUDE: 061035000 LONGITUDE: 143044300
QUADRANGLE: MCCARTHY

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 50000 MINIMUM TONS: 2000
PRODUCTION: 10

GEOMETRY

LENGTH: 600.0 WIDTH: 100.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

MAX MIN

AG: Reported
AU: Reported
CU: Reported
FE: Reported

HOST ROCK CHARACTERISTICS

FORMATION: CHITISTONE LMS AGE: TRIASSIC
TERRANE: WRANGELLIA THICKNESS: 1200

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	50	30
Dolomite:	0	0
Marl:	30	30
Mafic volc:	40	30
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: L.GREENSCHIST

NEARBY DEPOSIT TYPES: CU-AG (KENNICOTT TYPE)

ORE TYPE: CU,AG

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.4	
AS:	20	
AU:	0.005	
BA:	250	
CO:	26	
CU:	100	100
MO:	17	
NI:	20	
PB:	5	
ZN:	40	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 146 TO 138 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	70	50
Monzodiorite	0	0
Quartz diorite	50	30
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Hornblende
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Chlorite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrhottite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Chlorite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrrhotite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: MC-1-4 NAME: BERNARD GLACIER
LATITUDE: 061007000 LONGITUDE: 141048000
QUADRANGLE: MCCARTHY

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1000 MINIMUM TONS: 5

PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	0.0	0.0
AU:	0.00	
CU:	200	200
FE:	200000	

HOST ROCK CHARACTERISTICS

FORMATION: SKOLAI GROUP AGE: PENNSYLVANIAN
TERRANE: WRANGELLIA THICKNESS: 50

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	0	0
Marl:	0	0
Mafic volc:	30	10
Int. Volc:	60	30
Felsic Volc:	10	10
Shale:	10	10
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: AMPHIBOLITE
NEARBY DEPOSIT TYPES: CU-ZN-PB VMS
ORE TYPE: CU,ZN,PB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.4	
AS:	20	
AU:	0.005	
BA:	250	
CO:	26	
CU:	100	100

MO: 10
NI: 20
PB: 10
ZN: 140

INTRUSIVE ROCK CHARACTERISTICS

AGE: 297 TO 295 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	50	30
Monzodiorite	30	20
Quartz diorite	0	0
Quartz monzodiorite	30	10
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic

TEXTURES

Equigranular
Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM

Anorthite content maximum: 50
Anorthite content minimum: 20

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 5.0
PLAG: 35.0
K-SPAR 30.0
MAFICS 30.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 50.0
K-SPAR 0.0
MAFICS 50.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 30.0
K-SPAR 40.0
MAFICS 30.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	90	80

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: BARITE; ZN-CU-AG VMS
 ORE TYPE: BA,ZN,CU,AG

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
BA:	250	
CU:	30	30
MO:	3	
NI:	15	
PB:	4	
SN:	10	
V:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 115 TO 110 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	60	30
Monzodiorite	0	0
Quartz diorite	70	40
Quartz monzodiorite	20	10
Tonalite	20	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
 Propylitic

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM

Anorthite content maximum: 50
Anorthite content minimum: 30

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 15.0
PLAG: 45.0
K-SPAR 0.0
MAFICS 40.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Wollastonite

PARAGENESIS:

ASSEMBLAGE: QTZ-SULF VNS IN SKARN

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Pyrrhotite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: MC-1-2 NAME: WAR EAGLE
LATITUDE: 061033240 LONGITUDE: 143045480

QUADRANGLE: MCCARTHY

CLASS: FE-AU

LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 10000 MINIMUM TONS: 2000
PRODUCTION: 10

GEOMETRY

LENGTH: 100.0 WIDTH: 25.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	0.0	0.0
AU:	0.00	
CU:	1000	1000

HOST ROCK CHARACTERISTICS

FORMATION: CHITISTONE LMS AGE: TRIASSIC
TERRANE: WRANGELLIA THICKNESS: 1200

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	50	30
Dolomite:	0	0
Marl:	30	30
Mafic volc:	40	30
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: L.GREENSCHIST

NEARBY DEPOSIT TYPES: CU-AG (KENNICOTT TYPE)

ORE TYPE: CU,AG

HOST ROCK ASSAY VALUES

MAX MIN

AG: 0.4
 AS: 20
 AU: 0.005
 BA: 250
 CO: 26
 CU: 100 100
 MO: 17
 NI: 20
 PB: 5
 ZN: 140

INTRUSIVE ROCK CHARACTERISTICS

AGE: 146 TO 138 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	50	30
Monzodiorite	0	0
Quartz diorite	50	30
Quartz monzodiorite	10	0
Tonalite	50	30
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
 Hornblende
 Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing
 Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Hornblende
Chlorite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrhottite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Hornblende
Chlorite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrrhotite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: MF-1-12 NAME: W RENDU INLET
LATITUDE: 058055000 LONGITUDE: 136039000
QUADRANGLE: MT. FAIRWEATHER

CLASS: FE-AU
LOCALIZATION: QD CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 100000 MINIMUM TONS: 1000
PRODUCTION: 0

GEOMETRY

LENGTH: 1000.0 WIDTH: 25.0 DEPTH: -1

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	1.0	1.0
CU:	1000	1000
FE:	200000	
PB:	4	
SN:	10	
ZN:	200	
BA:	70	

CO: 130
NI: 3
V: 100
TI: 2000

HOST ROCK CHARACTERISTICS

FORMATION: AGE: SILURIAN
TERRANE: ALEXANDER(CRAIG) THICKNESS: 2000

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	30	30
Dolomite:	0	0
Marl:	30	30
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	40	40

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: ZN-CU-BA VMS
ORE TYPE: BA,ZN,CU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
BA:	250	
CU:	30	30
MO:	3	
NI:	15	
PB:	4	
SN:	10	
ZN:	100	
V:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 115 TO 110 M.Y.

HOST ROCK LITHOLOGY

MAXIMUM	MINIMUM
---------	---------

Diorite	30	0
Monzodiorite	0	0
Quartz diorite	100	60
Quartz monzodiorite	0	0
Tonalite	20	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

Hornblende
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: COARSE
Minimum grain size: MEDIUM
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Chlorite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite

Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Chlorite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: MF-1-1 NAME: ABYSS LAKE
LATITUDE: 058020000 LONGITUDE: 136037000
QUADRANGLE: MT. FAIRWEATHER

CLASS: FE-AU
LOCALIZATION:

REPORTED TONNAGES

MISSING
PRODUCTION: -1

GEOMETRY

LENGTH: 30.0 WIDTH: 10.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	1.0	1.0
CU:	1000	1000

FE: 100000
 MO: 12.0
 PB: 10
 SN: 10
 W: 100.0
 ZN: 200
 BA: 20
 CO: 50
 NI: 40
 V: 30
 TI: 300
 Y: 5

HOST ROCK CHARACTERISTICS

FORMATION: AGE: PALEOZOIC
 TERRANE: WRANGELLIA THICKNESS: 10

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	5
Dolomite:	0	0
Marl:	10	5
Mafic volc:	80	60
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	30	10
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: AMPHIBOLITE
 NEARBY DEPOSIT TYPES:
 ORE TYPE:

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
BA:	150	
CU:	30	30
MO:	3	
NI:	15	
PB:	4	
SN:	10	
V:	100	
Y:	15	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 115 TO 110 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	60	30
Monzodiorite	0	0
Quartz diorite	60	40
Quartz monzodiorite	20	10
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Propylitic

TEXTURES

Equigranular
Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: COARSE
Minimum grain size: MEDIUM

Anorthite content maximum: 45
Anorthite content minimum: 25

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION
QUARTZ: 11.0

PLAG: 37.0
K-SPAR 0.0
MAFICS 52.0

Major Oxide Analysis

MINERAL COMPOSITION

QUARTZ: 4.0
PLAG: 46.0
K-SPAR 0.0
MAFICS 50.0

Normative Minerals

Major Oxide Analysis

MINERAL COMPOSITION

QUARTZ: 8.0
PLAG: 55.0
K-SPAR 0.0
MAFICS 37.0

Normative Minerals

Major Oxide Analysis

MINERAL COMPOSITION

QUARTZ: 2.0
PLAG: 55.0
K-SPAR 0.0
MAFICS 43.0

Normative Minerals

Major Oxide Analysis

SiO2: 49.80
Al2O3: 19.40
Fe2O3: 9.80
FeO: 0.00
MgO: 3.80
CaO: 8.20
Na2O: 4.20
K2O: 0.60
TiO2: 0.00
P2O5: 0.00
MnO: 0.00

Normative Minerals

QTZ: 2.0
ORTHOCLASE: 3.55
ALBITE: 35.55
ANORTHITE: 32.31
CORUNDUM: 0.00
DIOPSIDE: 7.00
HYPERSTHENE: 2.86
OLIVINE: 11.56
MAGNETITE: 2.18
ILMENITE: 0.83

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 73.0
K-SPAR 0.0
MAFICS 27.0

Major Oxide Analysis

MINERAL COMPOSITION

QUARTZ: 25.0
PLAG: 50.0
K-SPAR 5.0
MAFICS 20.0

Normative Minerals

Major Oxide Analysis

SiO2: 59.10
Al2O3: 15.70
Fe2O3: 8.60
FeO: 0.00
MgO: 3.60
CaO: 5.40
Na2O: 3.40
K2O: 1.40
TiO2: 0.00
P2O5: 0.00
MnO: 0.00

Normative Minerals

Qtz: 25.0
Orthoclase: 8.27
Albite: 28.77
Anorthite: 23.44
Corundum: 0.00
Diopside: 2.78
Hypersthene: 18.07
Olivine: 0.00
Magnetite: 2.18
Ilmenite: 0.92

MINERAL COMPOSITION

Quartz: 10.0
Plag: 60.0
K-spar 0.0
Mafics 30.0

Major Oxide Analysis

MINERAL COMPOSITION

Quartz: 5.0
Plag: 20.0
K-spar 25.0
Mafics 50.0

Normative Minerals

Major Oxide Analysis

MINERAL COMPOSITION

Quartz: 6.0
Plag: 35.0
K-spar 4.0
Mafics 55.0

Normative Minerals

Major Oxide Analysis

MINERAL COMPOSITION

Quartz: 18.0
Plag: 41.0
K-spar 27.0
Mafics 14.0

Normative Minerals

Major Oxide Analysis

MINERAL COMPOSITION

Quartz: 27.0
Plag: 22.0
K-spar 40.0
Mafics 11.0

Normative Minerals

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 6.0
PLAG: 46.0
K-SPAR 26.0
MAFICS 22.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 29.0
PLAG: 28.0
K-SPAR 26.0
MAFICS 17.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 37.0
PLAG: 25.0
K-SPAR 30.0
MAFICS 8.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Chlorite
Apatite
Sphene
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Hematite
Pyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: MD-1-1
LATITUDE: 063014000

NAME: NIXON FORK
LONGITUDE: 154046000

QUADRANGLE: MEDFRA

CLASS: FE-AU

LOCALIZATION: GRANITE/LMS CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 50000 MINIMUM TONS: 20000
PRODUCTION: 15000

GEOMETRY

LENGTH: 400.0 WIDTH: 50.0 DEPTH: 800

SHAPE: PODS

REPORTED ASSAY VALUES

	MAX	MIN
AG:	34.0	34.0
AU:	104.00	
CU:	50000	50000
PB:	500	
W:	0.0	
ZN:	500	
BI:	400	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: ORD-SIL
TERRANE: NIXON FORK THICKNESS: 2000

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	70	50
Dolomite:	0	0
Marl:	0	0
Mafic volc:	10	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	40	20
Black shale:	9	0
Quartzite:	30	10
Graywacke:	30	10

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: ?STRATIFORM PB-ZN
ORE TYPE:

HOST ROCK ASSAY VALUES

MAX MIN
PB: Reported
ZN: Reported

INTRUSIVE ROCK CHARACTERISTICS

AGE: 67 TO 67 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	40	30
Tonalite	0	0
Quartz monzonite	30	20
Granodiorite	10	10
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Potassic
Sericitic
Propylitic

TEXTURES

Equigranular
Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 5
Minimum grain size: .03

Anorthite content maximum: 48
Anorthite content minimum: 28

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Hornblende
Plagioclase
Scapolite
Apatite
Sphene
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite:	30.0
Pyrope:	0.0
Grossularite:	70.0
Almandite:	0.0
Spessartite:	0.0

PYROXENE MINERALS

Missing

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite:	30.0
Pyrope:	0.0
Grossularite:	70.0
Almandite:	0.0
Spessartite:	0.0

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Hornblende
Plagioclase
Scapolite
Apatite
Sphene
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite:	30.0
Pyrope:	0.0
Grossularite:	70.0
Almandite:	0.0
Spessartite:	0.0

PYROXENE MINERALS

Missing

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite:	30.0
Pyrope:	0.0
Grossularite:	70.0
Almandite:	0.0
Spessartite:	0.0

PYROXENE MINERALS

Missing

ID NUMBER: MF-1-10 NAME: QUEEN INLET
LATITUDE: 058054000 LONGITUDE: 136031000
QUADRANGLE: MT. FAIRWEATHER

CLASS: FE-AU
LOCALIZATION: VOLC/LMS CONTACTS

REPORTED TONNAGES

MAXIMUM TONS: 1000000 MINIMUM TONS: 50000
PRODUCTION: 0

GEOMETRY

LENGTH: 1000.0 WIDTH: 50.0 DEPTH: -1

SHAPE: STRATIFORM

REPORTED ASSAY VALUES

	MAX	MIN
AG:	1.0	1.0
AU:	Reported	
CU:	300	300
FE:	250000	
MO:	12.0	
PB:	4	
SN:	30	
ZN:	200	
AS:	30	
BA:	30	
BI:	5	
CO:	100	
NI:	30	
V:	75	
TI:	3000	
Y:	70	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: SILURIAN-
DEVONIAN
TERRANE: ALEXANDER(CRAIG) THICKNESS: 100

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	30	20
Dolomite:	1	0

Marl:	40	20
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	20	10
Shale:	30	10
Black shale:	0	0
Quartzite:	0	0
Graywacke:	30	20

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: ZN-CU-BA VMS
 ORE TYPE: BA,ZN,CU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
BA:	250	
CU:	30	30
MO:	3	
NI:	15	
PB:	4	
SN:	10	
ZN:	100	
V:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 115 TO 110 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	20	0
Monzodiorite	0	0
Quartz diorite	60	20
Quartz monzodiorite	0	0
Tonalite	60	20
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
 Propylitic

TEXTURES

Equigranular
 Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM

Anorthite content maximum: 50
Anorthite content minimum: 10

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 60.0
K-SPAR 0.0
MAFICS 20.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 50.0
K-SPAR 0.0
MAFICS 30.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION

QUARTZ: 30.0
PLAG: 65.0
K-SPAR 2.0
MAFICS 3.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Hornblende
Chlorite
Plagioclase

Quartz

PARAGENESIS: ALBITE VNS IN QD AND SKARN

ASSEMBLAGE:

ZONING: VOLC>SKARN>MT>SULF>MB

SKARN ORE MINERALS PRESENT

Magnetite

Pyrite

Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: MF-1-11

NAME: MT. MERRIAM

LATITUDE: 058054000

LONGITUDE: 136026000

QUADRANGLE: MT. FAIRWEATHER

CLASS: FE-AU

LOCALIZATION:

REPORTED TONNAGES

MAXIMUM TONS:	200000	MINIMUM TONS:	1000
PRODUCTION:	0		

GEOMETRY

LENGTH:	-1.0	WIDTH:	-1.0	DEPTH:	-1
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SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	0.0	0.0
AU:	0.00	
CU:	3000	3000
FE:	200000	

HOST ROCK CHARACTERISTICS

FORMATION:

AGE: SILURIAN-

DEVONIAN

TERRANE: ALEXANDER (CRAIG)

THICKNESS: 3000

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	60	30
Dolomite:	0	0
Marl:	40	10
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	10	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	30	20

METAMORPHIC GRADE:

NEARBY DEPOSIT TYPES: BARITE; ZN-CU-BA VMS
 ORE TYPE: BA, ZN, CU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
BA:	250	
CU:	30	30
MO:	3	
NI:	15	
PB:	4	
SN:	10	
ZN:	100	
V:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 115 TO 110 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	60	20
Monzodiorite	0	0
Quartz diorite	60	20
Quartz monzodiorite	0	0
Tonalite	30	10
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic

TEXTURES

Equigranular
Seriata

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Hornblende
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock
Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM

Anorthite content maximum: 50
Anorthite content minimum: 30

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 70.0
K-SPAR 0.0
MAFICS 10.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Wollastonite
Idocrase
Epidote
Hornblende
Chlorite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: MF-1-9 NAME: JOHN HOPKINS INLET
LATITUDE: 058045000 LONGITUDE: 137000000
QUADRANGLE: MT. FAIRWEATHER

CLASS: FE-AU
LOCALIZATION: NEAR GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 100000 MINIMUM TONS: 1000
PRODUCTION: 0

GEOMETRY

LENGTH: 1000.0 WIDTH: 20.0 DEPTH: -1

SHAPE: ELONGATE

REPORTED ASSAY VALUES

	MAX	MIN
AG:	1.0	1.0
AU:	0.10	
CU:	1000	1000
FE:	100000	
MO:	12.0	
PB:	5	
SN:	10	
W:	50.0	
ZN:	200	
BA:	300	
BI:	20	
CO:	30	
NI:	30	
V:	200	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: SILURIAN-
DEVONIAN

TERRANE: ALEXANDER(CRAIG)

THICKNESS:

-1

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	40	10
Dolomite:	0	0
Marl:	0	0
Mafic volc:	20	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	60	40

METAMORPHIC GRADE: AMPHIBOLITE

NEARBY DEPOSIT TYPES: BARITE; ZN-CU-BA VMS

ORE TYPE: BA,ZN,CU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
BA:	250	
CU:	30	30
MO:	3	
NI:	15	
PB:	4	
SN:	10	
ZN:	100	
V:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 115 TO 110 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	30	10
Monzodiorite	0	0
Quartz diorite	60	30
Quartz monzodiorite	20	0
Tonalite	30	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Epidote
Hornblende
Chlorite
Plagioclase

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Hematite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

Epidote
Hornblende
Chlorite
Plagioclase

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Hematite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: MF-1-5 NAME: WILLOUGHBY ISLAND
LATITUDE: 058036000 LONGITUDE: 136008000
QUADRANGLE: MT. FAIRWEATHER

CLASS: FE-AU

LOCALIZATION:

REPORTED TONNAGES

MISSING
PRODUCTION: 10

GEOMETRY

LENGTH: 15.0 WIDTH: 5.0 DEPTH: 15

SHAPE: CROSS-CUTTING BLOB

REPORTED ASSAY VALUES

MAX MIN

AG: Reported
AU: Reported
CU: Reported
FE: Reported
AS: Reported

HOST ROCK CHARACTERISTICS

FORMATION: AGE: SILURIAN
TERRANE: ALEXANDER(CRAIG) THICKNESS: 300

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	80	60
Dolomite:	0	0
Marl:	0	0
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	40	20

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: BARITE; ZN-CU-AG VMS
ORE TYPE: BA, ZN, CU, AG

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
BA:	250	
CU:	30	30
MO:	3	
NI:	15	
PB:	4	
SN:	10	
ZN:	100	
V:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 115 TO 110 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	50	0
Monzodiorite	50	0
Quartz diorite	80	30
Quartz monzodiorite	50	0

Tonalite	50	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

Clinopyroxene
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Chalcopyrite
Arsenopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Chalcopyrite
Arsenopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: MF-1-7 NAME: E DUNDEIS BAY
LATITUDE: 058023000 LONGITUDE: 136011000
QUADRANGLE: MT. FAIRWEATHER

CLASS: FE-AU
LOCALIZATION:

REPORTED TONNAGES

MISSING
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	Reported	
AU:	Reported	
CU:	Reported	
FE:	Reported	

HOST ROCK CHARACTERISTICS

INTRUSIVE ALTERATION TYPES

Propylitic

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:

Minimum grain size:

Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite

Hematite

Pyrite

Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Hematite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: MF-1-6 NAME: ALASKA CHIEF
LATITUDE: 058027000 LONGITUDE: 136007000
QUADRANGLE: MT. FAIRWEATHER

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 500000 MINIMUM TONS: 25000
PRODUCTION: 10

GEOMETRY

LENGTH: 200.0 WIDTH: 75.0 DEPTH: -1

SHAPE: POD

REPORTED ASSAY VALUES

	MAX	MIN
AG:	70.0	70.0
AU:	3.50	
CU:	10000	10000
FE:	100000	
MO:	7.0	
PB:	10	
SN:	10	
W:	50.0	
ZN:	600	
BA:	150	
BI:	120	
CO:	100	
NI:	130	
V:	50	
TI:	1000	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: SILURIAN
TERRANE: ALEXANDER(CRAIG) THICKNESS: 50

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	40	10
Dolomite:	0	0
Marl:	0	0
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	90	60

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: BARITE; ZN-CU-AG VMS
ORE TYPE: BA, ZN, CU, AG

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
BA:	200	
CU:	30	30
MO:	3	
NI:	15	
PB:	4	
SN:	10	
ZN:	100	
V:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 115 TO 110 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	30	10
Monzodiorite	30	0
Quartz diorite	80	40
Quartz monzodiorite	30	0
Tonalite	30	0
Quartz monzonite	0	0

Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Propylitic

TEXTURES

Equigranular
Porphyritic
Seriatic

MAFIC AND ACCESSORY MINERALS PRESENT

Hornblende
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:

Anorthite content maximum: 50
Anorthite content minimum: 30

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 60.0
K-SPAR 5.0
MAFICS 15.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 25.0
PLAG: 65.0
K-SPAR 0.0
MAFICS 10.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 60.0

K-SPAR 0.0
MAFICS 40.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Actinolite
Chlorite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Pyrrhotite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: MH-1-5 NAME: YORK RIDGE
LATITUDE: 063018000 LONGITUDE: 146000000
QUADRANGLE: MT. HAYES

CLASS: FE-AU

LOCALIZATION: VOLC/LMS CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 5000 MINIMUM TONS: 100
PRODUCTION: 0

GEOMETRY

LENGTH: 100.0 WIDTH: 2.0 DEPTH: -1

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	10.0	10.0
AU:	1.00	

CU: 3700 3700

HOST ROCK CHARACTERISTICS

FORMATION: AGE: PENN-PERM
TERRANE: WRANGELLIA THICKNESS: 5

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	10
Dolomite:	0	0
Marl:	0	0
Mafic volc:	80	60
Int. Volc:	0	0
Felsic Volc:	20	10
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: AMPHIBOLITE
NEARBY DEPOSIT TYPES: CU-PB-ZN VMS
ORE TYPE: CU, PB, ZN

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.4	
AS:	20	
AU:	0.005	
BA:	250	
CO:	26	
CU:	100	100
MO:	10	
NI:	20	
PB:	5	
ZN:	140	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 150 TO 140 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	100	100
Monzodiorite	0	0

Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic

TEXTURES

Equigranular
Seriata

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing

Anorthite content maximum: 60
Anorthite content minimum: 55

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 3.0
PLAG: 48.0
K-SPAR 0.0
MAFICS 49.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Epidote
Hornblende
Serpentinite

Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: MH-1-6 NAME: E.FK BROXSON GULCH S
LATITUDE: 063019120 LONGITUDE: 146001000
QUADRANGLE: MT. HAYES

CLASS: FE-AU
LOCALIZATION: VOLC/MB CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 10000 MINIMUM TONS: 20
PRODUCTION: 0

GEOMETRY

LENGTH: 10.0 WIDTH: 3.0 DEPTH: -1

SHAPE: POD

REPORTED ASSAY VALUES

	MAX	MIN
AG:	36.7	36.7
AU:	2.80	
CU:	7500	7500
PB:	500	

ZN: 500

HOST ROCK CHARACTERISTICS

FORMATION: AGE: PENN-PERM
TERRANE: WRANGELLIA THICKNESS: 5

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	0	0
Marl:	0	0
Mafic volc:	90	90
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: AMPHIBOLITE
NEARBY DEPOSIT TYPES: CU-PB-ZN VMS
ORE TYPE: CU, PB, ZN

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.4	
AS:	20	
AU:	0.005	
BA:	250	
CO:	26	
CU:	100	100
MO:	10	
NI:	20	
PB:	5	
ZN:	140	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 150 TO 140 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	100	100
Monzodiorite	0	0

Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
 Clinopyroxene
 Sphene
 Hornblende
 Apatite
 Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
 Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing

Anorthite content maximum: 60
 Anorthite content minimum: 60

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 3.0
 PLAG: 60.0
 K-SPAR 0.0
 MAFICS 37.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
 Pyroxene

Hornblende
Biotite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrhottite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: MH-1-7 NAME: E. FORK BROXON GULCH
LATITUDE: 063020120 LONGITUDE: 146000030
QUADRANGLE: MT. HAYES

CLASS: FE-AU
LOCALIZATION:

REPORTED TONNAGES

MAXIMUM TONS: 500 MINIMUM TONS: 5
PRODUCTION: 0

GEOMETRY

LENGTH: 10.0 WIDTH: 1.0 DEPTH: -1

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

 MAX MIN
AG: 0.0 0.0

AU: 0.00
CU: Reported

HOST ROCK CHARACTERISTICS

FORMATION: AGE: PENN-PERM
TERRANE: WRANGELLIA THICKNESS: 100

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	30	30
Dolomite:	0	0
Marl:	0	0
Mafic volc:	0	0
Int. Volc:	50	50
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	20	20

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: CU-ZN-PB VMS
ORE TYPE: CU, ZN, PB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.4	
AS:	20	
AU:	0.005	
BA:	250	
CO:	26	
CU:	100	100
MO:	10	
NI:	20	
PB:	5	
ZN:	140	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 150 TO 140 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	100	100

Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
 Clinopyroxene
 Sphene
 Hornblende
 Apatite
 Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing
 Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Epidote
 Actinolite
 Hornblende

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite

Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Epidote
Actinolite
Hornblende

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: MF-1-4 NAME: SANDY COVE
LATITUDE: 058043300 LONGITUDE: 135058300
QUADRANGLE: MT. FAIRWEATHER

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 50000 MINIMUM TONS: 1000
PRODUCTION: -1

GEOMETRY

LENGTH: 200.0 WIDTH: 20.0 DEPTH: -1

SHAPE: LENTICULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	25.0	25.0
AU:	3.00	
CU:	5000	5000
FE:	100000	
MO:	20.0	
PB:	50	
SN:	10	
ZN:	200	
BA:	200	
BI:	200	
CO:	10	
NI:	5	
V:	70	
TI:	1000	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: SILURIAN
TERRANE: ALEXANDER (CRAIG) THICKNESS: 200

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	60	40
Dolomite:	0	0
Marl:	0	0
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0

Quartzite: 0 0
Graywacke: 60 40

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: BARITE; ZN-CU-AG VMS
ORE TYPE: BA, ZN, CU, AG

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
BA:	150	
CU:	30	30
MO:	3	
NI:	15	
PB:	4	
SN:	10	
ZN:	100	
V:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 115 TO 110 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	40	10
Quartz monzodiorite	90	60
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic
Endoskarn present

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM

Anorthite content maximum: 50
Anorthite content minimum: 10

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 55.0
K-SPAR 25.0
MAFICS 10.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Actinolite

PARAGENESIS:

ASSEMBLAGE: SULF REPL. IN MB

ZONING:

SKARN ORE MINERALS PRESENT

Hematite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: MH-1-9 NAME: MAGNETITE CREEK
LATITUDE: 063012000 LONGITUDE: 145006000
QUADRANGLE: MT. HAYES

CLASS: FE-AU

LOCALIZATION: GRANITE/MB CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 50000 MINIMUM TONS: 100
 PRODUCTION: 0

GEOMETRY

LENGTH: 100.0 WIDTH: 10.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG: Reported		
AU: Reported		
CU: Reported		
FE: Reported		

HOST ROCK CHARACTERISTICS

FORMATION: MAKOMEN FM AGE: PERM-TRIASSIC
 TERRANE: WRANGELLIA THICKNESS: 30

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	0	0
Marl:	0	0
Mafic volc:	40	30
Int. Volc:	40	30
Felsic Volc:	10	10
Shale:	0	0
Black shale:	10	10
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: ZN-PB-CU VMS
 ORE TYPE: ZN, PB, CU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.4	
AS:	50	

AU: 0.005
BA: 250
CO: 26
CU: 100 100
MO: 20
NI: 20
PB: 10
ZN: 400

INTRUSIVE ROCK CHARACTERISTICS

AGE: 240 TO 170 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	60	40
Monzodiorite	20	10
Quartz diorite	30	10
Quartz monzodiorite	20	10
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic

TEXTURES

Equigranular
Seriata

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 5
Minimum grain size: 3

Anorthite content maximum: 50
Anorthite content minimum: 35

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 56.0
K-SPAR 4.0
MAFICS 40.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 6.0
PLAG: 67.0
K-SPAR 2.0
MAFICS 25.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 51.0
K-SPAR 10.0
MAFICS 19.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 63.0
K-SPAR 5.0
MAFICS 32.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Epidote
Chlorite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: MH-1-10 NAME: W. FORK GLACIER
LATITUDE: 063011000 LONGITUDE: 144048540
QUADRANGLE: MT. HAYES

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 10000 MINIMUM TONS: 500
PRODUCTION: 0

GEOMETRY

LENGTH: 25.0 WIDTH: 5.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	14.0	14.0
AU:	0.60	
CU:	20000	20000
FE:	300000	

HOST ROCK CHARACTERISTICS

FORMATION: CHIISNA FM AGE: PENN-PERM
TERRANE: WRANGELLIA THICKNESS: 5

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	5	5
Dolomite:	0	0
Marl:	0	0
Mafic volc:	0	0
Int. Volc:	80	60
Felsic Volc:	30	20
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: CU-ZN-PB VMS
 ORE TYPE: CU,ZN,PB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.4	
AS:	20	
AU:	0.005	
BA:	250	
CO:	26	
CU:	100	100
MO:	10	
NI:	20	
PB:	15	
ZN:	140	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 240 TO 170 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	80	70
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM

Anorthite content maximum: 45
Anorthite content minimum: 40

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 9.0
PLAG: 44.0
K-SPAR 27.0
MAFICS 20.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION

QUARTZ: 25.0
PLAG: 51.0
K-SPAR 17.0
MAFICS 7.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Epidote
Chlorite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Hematite
Specular Hematite
Pyrite
Pyrhottite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: MH-1-11 NAME: SLATE CREEK
LATITUDE: 063009180 LONGITUDE: 144051000
QUADRANGLE: MT. HAYES

CLASS: FE-AU
LOCALIZATION: VOLCANIC CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 50000 MINIMUM TONS: 500
PRODUCTION: 0

GEOMETRY

LENGTH: 500.0 WIDTH: 15.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	16.0	16.0
AU:	0.20	
CU:	10000	10000

Diorite	10	10
Monzodiorite	0	0
Quartz diorite	60	30
Quartz monzodiorite	60	30
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Propylitic

TEXTURES

Equigranular
Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM

Anorthite content maximum: 40
Anorthite content minimum: 30

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 7.0
PLAG: 57.0
K-SPAR 26.0
MAFICS 10.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 79.0

K-SPAR 0.0
MAFICS 11.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 70.0
K-SPAR 0.0
MAFICS 20.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 15.0
PLAG: 78.0
K-SPAR 0.0
MAFICS 7.0

Major Oxide Analysis
ID NUMBER: MH-1-2
LATITUDE: 063018530
QUADRANGLE: MT. HAYES

Normative Minerals
NAME: MACLAREN GLACIER E
LONGITUDE: 146029300

CLASS: FE-AU
LOCALIZATION: IGNEOUS CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 500000 MINIMUM TONS: 10000
PRODUCTION: 0

GEOMETRY

LENGTH: 2000.0 WIDTH: 10.0 DEPTH: -1
SHAPE: PLANAR

REPORTED ASSAY VALUES

MAX MIN

CU: Reported
FE: Reported

HOST ROCK CHARACTERISTICS

FORMATION: BASALT AGE: TRIASSIC
TERRANE: WRANGELLIA THICKNESS: 300

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	10
Dolomite:	0	0
Marl:	0	0
Mafic volc:	80	60
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	30	10
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE:

NEARBY DEPOSIT TYPES: KENNICOTT-TYPE CU
 ORE TYPE: CU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.4	
AS:	20	
AU:	0.005	
BA:	250	
CO:	20	
CU:	200	200
MO:	10	
NI:	20	
PB:	5	
ZN:	140	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 140 TO 130 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	20	10
Monzodiorite	30	10
Quartz diorite	50	30
Quartz monzodiorite	50	30
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic

Propylitic

TEXTURES

Equigranular
Porphyritic
Seriatic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock
Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM

Anorthite content maximum: 45
Anorthite content minimum: 40

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 50.0
K-SPAR 0.0
MAFICS 40.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 2.0
PLAG: 43.0
K-SPAR 0.0
MAFICS 55.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 73.0
K-SPAR 2.0
MAFICS 5.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION

QUARTZ: 15.0
PLAG: 50.0
K-SPAR 15.0
MAFICS 20.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION

QUARTZ: 32.0
PLAG: 44.0
K-SPAR 8.0
MAFICS 16.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 60.0
K-SPAR 0.0
MAFICS 30.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION

QUARTZ: 16.0
PLAG: 33.0
K-SPAR 15.0
MAFICS 36.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION

QUARTZ: 12.0
PLAG: 62.0
K-SPAR 3.0
MAFICS 23.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION

QUARTZ: 2.0
PLAG: 32.0
K-SPAR 14.0
MAFICS 52.0

Major Oxide Analysis Normative Minerals

SKARN ORE MINERALS PRESENT

Magnetite

Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN ORE MINERALS PRESENT

Magnetite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: MH-1-1 NAME: ZACKLY
LATITUDE: 063013000 LONGITUDE: 146042000
QUADRANGLE: MT. HAYES

CLASS: FE-AU

LOCALIZATION: INTR-VOL/MBL CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 5000000 MINIMUM TONS: 1200000
PRODUCTION: 0

GEOMETRY

LENGTH: 300.0 WIDTH: 30.0 DEPTH: 10000

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	340.0	340.0
AU:	6.84	
CU:	30000	30000
MO:	30.0	
PB:	20	
ZN:	100	
AS:	300	
HG:	1	

HOST ROCK CHARACTERISTICS

FORMATION: ANDESITIC VOLC AGE: TRIASSIC
TERRANE: WRANGELLIA THICKNESS: 600

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	20
Dolomite:	0	0
Marl:	0	0
Mafic volc:	30	30
Int. Volc:	40	40
Felsic Volc:	0	0
Shale:	8	8
Black shale:	0	0
Quartzite:	2	2
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: KENNICOTT CU, SED-HOSTED
 ORE TYPE: CU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.4	
AS:	20	
AU:	0.005	
BA:	Reported	
CO:	20	
CU:	100	100
MO:	17	
NI:	20	
PB:	5	
ZN:	140	
HG:	0.03	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 144 TO 126 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	20	5
Monzodiorite	80	50
Quartz diorite	30	10
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Propylitic

TEXTURES

Equigranular
Porphyritic
Seriata

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing
Anorthite content missing

INTRUSIVE COMPOSITION DATA

Major Oxide Analysis

SiO₂: 58.50
Al₂O₃: 17.20
Fe₂O₃: 6.70
FeO: 0.00
MgO: 2.25
CaO: 7.20
Na₂O: 3.50
K₂O: 2.60
TiO₂: 0.45
P₂O₅: 0.26
MnO: 0.13

Normative Minerals

Qtz: -1.0
Orthoclase: 15.36
Albite: 29.62
Anorthite: 23.54
Corundum: 0.00
Diopside: 8.68
Hypersthene: 7.04
Olivine: 0.00
Magnetite: 2.83
Ilmenite: 0.86

Major Oxide Analysis

SiO₂: 58.00
Al₂O₃: 17.40
Fe₂O₃: 6.70
FeO: 0.00
MgO: 2.40
CaO: 7.00
Na₂O: 4.10
K₂O: 3.00
TiO₂: 0.55
P₂O₅: 0.33

Normative Minerals

Qtz: -1.0
Orthoclase: 17.72
Albite: 34.69
Anorthite: 20.21
Corundum: 0.00
Diopside: 10.19
Hypersthene: 6.29
Olivine: 0.00
Magnetite: 2.97
Ilmenite: 1.05

MNO: 0.14

Major Oxide Analysis

SiO2: 62.00
Al2O3: 15.90
Fe2O3: 5.60
FeO: 0.00
MgO: 1.75
CaO: 5.50
Na2O: 3.00
K2O: 3.20
TiO2: 0.45
P2O5: 0.23
MNO: 0.12

Normative Minerals

QTZ: -1.0
ORTHOCLASE: 18.91
ALBITE: 25.38
ANORTHITE: 20.47
CORUNDUM: 0.00
DIOPSIDE: 4.38
HYPERSTHENE: 6.09
OLIVINE: 0.00
MAGNETITE: 2.83
ILMENITE: 0.85

Major Oxide Analysis

SiO2: 60.50
Al2O3: 17.20
Fe2O3: 6.20
FeO: 0.00
MgO: 1.95
CaO: 6.00
Na2O: 3.50
K2O: 3.00
TiO2: 0.55
P2O5: 0.26
MNO: 0.12

Normative Minerals

QTZ: -1.0
ORTHOCLASE: 17.28
ALBITE: 29.61
ANORTHITE: 22.36
CORUNDUM: 0.00
DIOPSIDE: 4.71
HYPERSTHENE: 7.00
OLIVINE: 0.00
MAGNETITE: 3.00
ILMENITE: 1.05

Major Oxide Analysis

SiO2: 57.00
Al2O3: 19.00
Fe2O3: 5.70
FeO: 0.00
MgO: 2.45
CaO: 8.20
Na2O: 3.60
K2O: 2.80
TiO2: 0.55
P2O5: 0.33
MNO: 0.14

Normative Minerals

QTZ: -1.0
ORTHOCLASE: 16.55
ALBITE: 30.46
ANORTHITE: 27.41
CORUNDUM: 0.00
DIOPSIDE: 9.05
HYPERSTHENE: 5.38
OLIVINE: 0.00
MAGNETITE: 3.00
ILMENITE: 1.05

SKARN MINERAL DATA

SKARN MINERALS

Pyroxene
Wollastonite
Rhodachrosite
Actinolite
Biotite
Chlorite
Plagioclase
Scapolite
Sphene

Tourmaline

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Hematite
Specular Hematite
Pyrite
Pyrrhotite
Chalcocite
Sphalerite
Galena
Tetrahedrite
Gold
Fluorite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: MH-1-3 NAME: RAINEY CREEK
LATITUDE: 063019150 LONGITUDE: 145058300
QUADRANGLE: MT. HAYES

CLASS: FE-AU
LOCALIZATION: INTRUSIVE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 50000 MINIMUM TONS: 100
PRODUCTION: 0

GEOMETRY

LENGTH: 200.0 WIDTH: 10.0 DEPTH: -1

SHAPE: TABULAR

INTRUSIVE ROCK CHARACTERISTICS

AGE: 240 TO 140 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	100	80
Monzodiorite	10	0
Quartz diorite	10	0
Quartz monzodiorite	10	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic

TEXTURES

Equigranular
Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Clinopyroxene
Sphene
Hornblende
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM

Anorthite content maximum: 50
Anorthite content minimum: 20

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 60.0
K-SPAR 0.0

MAFICS 40.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: NB-1-1 NAME: NABESNA
LATITUDE: 062021000 LONGITUDE: 142055000
QUADRANGLE: NABESNA

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1000000 MINIMUM TONS: 300000
PRODUCTION: 300000

GEOMETRY

LENGTH: 500.0 WIDTH: 20.0 DEPTH: 1500

AU: 0.010
CO: 26
CU: 100 100
MO: 10
NI: 20
PB: 5
ZN: 140

INTRUSIVE ROCK CHARACTERISTICS

AGE: 118 TO 114 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	10	5
Monzodiorite	0	0
Quartz diorite	30	10
Quartz monzodiorite	80	50
Tonalite	20	10
Quartz monzonite	10	5
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Propylitic

TEXTURES

Equigranular
Porphyritic
Seriata

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 3
Minimum grain size: 1

Anorthite content maximum: 40
Anorthite content minimum: 30

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 62.0
K-SPAR 2.0
MAFICS 26.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 7.0
PLAG: 62.5
K-SPAR 1.5
MAFICS 29.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 23.0
PLAG: 42.0
K-SPAR 3.5
MAFICS 31.5

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 12.0
PLAG: 54.0
K-SPAR 4.0
MAFICS 30.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 9.0
PLAG: 47.5
K-SPAR 20.0
MAFICS 22.5

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 11.0
PLAG: 41.0
K-SPAR 21.0
MAFICS 27.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 9.5
PLAG: 53.0
K-SPAR 6.0
MAFICS 31.5

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 5.0
PLAG: 55.0
K-SPAR 9.0
MAFICS 31.0

Major Oxide Analysis

Normative Minerals

SiO2: 50.20
Al2O3: 15.70
Fe2O3: 2.60
FeO: 7.00
MgO: 7.50
CaO: 9.00
Na2O: 3.00
K2O: 1.80
TiO2: 0.51
P2O5: 0.19
MnO: 0.21

QTZ: 5.0
ORTHOCLASE: 10.70
ALBITE: 24.50
ANORTHITE: 24.10
CORUNDUM: 0.00
DIOPSIDE: 15.70
HYPERSTHENE: 4.68
OLIVINE: 12.10
MAGNETITE: 3.80
ILMENITE: 1.00

MINERAL COMPOSITION

QUARTZ: 14.0
PLAG: 58.0
K-SPAR 0.0
MAFICS 28.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 13.0
PLAG: 48.5
K-SPAR 10.0
MAFICS 28.5

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 8.0
PLAG: 51.0
K-SPAR 13.0
MAFICS 28.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 11.0

PLAG: 42.0
K-SPAR 27.0
MAFICS 20.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 16.0
PLAG: 84.0
K-SPAR 4.5
MAFICS 25.5

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 11.0
PLAG: 51.0
K-SPAR 18.0
MAFICS 20.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 15.0
PLAG: 49.0
K-SPAR 12.5
MAFICS 23.5

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 11.5
PLAG: 40.0
K-SPAR 20.0
MAFICS 28.5

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 13.0
PLAG: 41.0
K-SPAR 13.5
MAFICS 32.5

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 55.0
K-SPAR 12.0
MAFICS 23.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 13.0
PLAG: 41.0
K-SPAR 16.5
MAFICS 29.5

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Wollastonite
Idocrase
Epidote
Actinolite
Hornblende
Chlorite
Scapolite
Apatite
Sphene
Serpentinite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Hematite
Specular Hematite
Pyrite
Pyrrhotite
Chalcopyrite
Sphalerite
Arsenopyrite
Gold

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite: 92.0

Felsic Volc: 80 80
 Shale: 0 0
 Black shale: 0 0
 Quartzite: 0 0
 Graywacke: 0 0

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: CU-PB-ZN VMS
 ORE TYPE: CU,PB,ZN

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.4	
AS:	20	
AU:	0.005	
CO:	26	
CU:	100	100
MO:	10	
NI:	20	
PB:	5	
ZN:	140	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 150 TO 140 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	100	100
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

Clinopyroxene
 Sphene

Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing

Anorthite content maximum: 60
Anorthite content minimum: 55

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 3.0
PLAG: 65.0
K-SPAR 0.0
MAFICS 32.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Hornblende

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Pyrhottite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Quartzite: 0 0
Graywacke: 0 0

METAMORPHIC GRADE: AMPHIBOLITE
NEARBY DEPOSIT TYPES: CU-NI MAGMATIC SULFIDE
ORE TYPE: CU,NI

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.4	
AS:	20	
AU:	0.005	
BA:	250	
CO:	26	
CU:	100	100
MO:	10	
NI:	20	
PB:	5	
ZN:	140	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 240 TO 135 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	100	100
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing

Anorthite content maximum: 70
Anorthite content minimum: 65

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 50.0
K-SPAR 0.0
MAFICS 50.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Pyroxene
Hornblende
Chlorite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Specular Hematite
Pyrite
Pyrhottite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Graywacke: 20 0

METAMORPHIC GRADE: AMPHIBOLITE

NEARBY DEPOSIT TYPES:

ORE TYPE:

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AU:	0.005	
BA:	300	
CO:	20	
CU:	60	60
MO:	3	
NI:	20	
PB:	20	
ZN:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 180 TO 100 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	50	20
Monzodiorite	0	0
Quartz diorite	50	20
Quartz monzodiorite	30	10
Tonalite	20	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: FINE
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 8.0
PLAG: 75.0
K-SPAR 7.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 15.0
PLAG: 74.0
K-SPAR 11.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 17.0
PLAG: 67.0
K-SPAR 16.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Hornblende

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Hematite

Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: SK-1-2 NAME: SAKSAIA GLACIER
LATITUDE: 059024000 LONGITUDE: 136020000
QUADRANGLE: SKAGWAY

CLASS: FE-AU
LOCALIZATION:

REPORTED TONNAGES

MAXIMUM TONS: 1000 MINIMUM TONS: 10
PRODUCTION: -1

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	1.0	1.0
AU:	Reported	
CU:	1000	1000
FE:	200000	
MO:	2.0	
ZN:	200	
BA:	100	
CO:	80	
NI:	70	
V:	300	

HOST ROCK CHARACTERISTICS

FORMATION: PERMIAN
 TERRANE: ALEXANDER(CRAIG) AGE: SILURIAN-
 THICKNESS: -1

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	60	40
Dolomite:	0	0
Marl:	0	0
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	60	40
Black shale:	0	0
Quartzite:	10	10
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: BA-PB-ZN-AG VMS
 ORE TYPE: BA, PB, ZN, AG

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	3.2	
BA:	1000	
CU:	500	500
FE:	50000	
MO:	30	
NI:	20	
PB:	1000	
ZN:	1000	
V:	150	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 119 TO 105 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	70	30
Monzodiorite	0	0
Quartz diorite	70	30
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM

Anorthite content maximum: 50
Anorthite content minimum: 30

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 70.0
K-SPAR 20.0
MAFICS 8.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION

QUARTZ: 5.0
PLAG: 20.0
K-SPAR 0.0
MAFICS 75.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 80.0
K-SPAR 0.0
MAFICS 0.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Pyroxene
Epidote
Hornblende
Chlorite
Apatite
Sphene
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Hematite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: SK-1-3 NAME: RENDU GLACIER
LATITUDE: 059002000 LONGITUDE: 136048000
QUADRANGLE: SKAGWAY

CLASS: FE-AU
LOCALIZATION: QD CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 100000 MINIMUM TONS: 10000
PRODUCTION: 0

GEOMETRY

LENGTH: 100.0 WIDTH: 50.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	100.0	100.0
AU:	2.00	
CU:	20000	20000
FE:	100000	

W: 2000.0
ZN: 200
BA: 30
BI: 50
NI: 70

HOST ROCK CHARACTERISTICS

FORMATION: AGE: SILURIAN-
DEVONIAN
TERRANE: ALEXANDER (CRAIG) THICKNESS: 100

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	30	10
Dolomite:	0	0
Marl:	30	10
Mafic volc:	30	10
Int. Volc:	0	0
Felsic Volc:	20	0
Shale:	30	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	60	30

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: BARITE; ZN-CU-BA VMS
ORE TYPE: BA, ZN, CU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
BA:	250	
CU:	30	30
MO:	3	
NI:	15	
PB:	4	
SN:	10	
ZN:	100	
V:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 115 TO 110 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	40	10
Monzodiorite	0	0
Quartz diorite	60	20
Quartz monzodiorite	40	10
Tonalite	60	20
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
 Minimum grain size:
 Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
 Epidote
 Chlorite
 Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
 Pyrrhotite
 Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Chlorite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Pyrrhotite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: ST-1-2 NAME: INDIAN ISLAND
LATITUDE: 058014300 LONGITUDE: 136021000
QUADRANGLE: SITKA

CLASS: FE-AU
LOCALIZATION:

REPORTED TONNAGES

MAXIMUM TONS: 10000 MINIMUM TONS: 10
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

MAX MIN

AG: Reported
AU: Reported

CU: Reported
FE: Reported

HOST ROCK CHARACTERISTICS

FORMATION: AGE: TRIASSIC
TERRANE: WRANGELLIA THICKNESS: -1

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	5
Dolomite:	0	0
Marl:	0	0
Mafic volc:	80	60
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	30	10
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: CU-AG-PB-ZN IN VOLC ROCK
ORE TYPE: ZN,CU,PB,AG

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.4	
AS:	20	
AU:	0.005	
BA:	250	
CO:	26	
CU:	100	100
MO:	10	
NI:	20	
PB:	15	
ZN:	140	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 119 TO 113 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	60	20

Monzodiorite	0	0
Quartz diorite	80	40
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Propylitic

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:

Anorthite content maximum: 50
Anorthite content minimum: 45

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 7.0
PLAG: 61.0
K-SPAR 0.5
MAFICS 31.5

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 11.0
PLAG: 59.0
K-SPAR 3.0
MAFICS 27.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 7.5
PLAG: 54.0
K-SPAR 0.5
MAFICS 38.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 6.0
PLAG: 71.0
K-SPAR 1.0
MAFICS 22.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 12.0
PLAG: 65.0
K-SPAR 0.0
MAFICS 23.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: ST-1-3
LATITUDE: 057048000

NAME: BALDY LODGE
LONGITUDE: 135020000

QUADRANGLE: SITKA

CLASS: FE-AU

LOCALIZATION:

REPORTED TONNAGES

MAXIMUM TONS: 100 MINIMUM TONS: 20000
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

MAX MIN

CU: Reported

FE: Reported

HOST ROCK CHARACTERISTICS

FORMATION: AGE: MISSISSIPPIAN
TERRANE: ALEXANDER(CRAIG) THICKNESS: -1

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	30	10
Dolomite:	0	0
Marl:	10	0
Mafic volc:	40	20
Int. Volc:	50	30
Felsic Volc:	10	0
Shale:	20	10
Black shale:	0	0
Quartzite:	0	0
Graywacke:	40	20

METAMORPHIC GRADE:

NEARBY DEPOSIT TYPES: GYPSUM

ORE TYPE: GYPSUM

HOST ROCK ASSAY VALUES

MAX MIN

AG: 0.4
 AS: 20
 AU: 0.005
 BA: 250
 CO: 26
 CU: 100 100
 MO: 10
 NI: 20
 PB: 15
 ZN: 140

INTRUSIVE ROCK CHARACTERISTICS

AGE: 150 TO 100 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	30	10
Monzodiorite	0	0
Quartz diorite	60	30
Quartz monzodiorite	50	20
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

Equigranular
 Myrmekitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
 Clinopyroxene
 Sphene
 Hornblende
 Apatite
 Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing
 Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 3.5
PLAG: 66.0
K-SPAR 3.0
MAFICS 27.5

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 13.5
PLAG: 54.0
K-SPAR 6.5
MAFICS 26.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 14.0
PLAG: 60.0
K-SPAR 7.0
MAFICS 19.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 45.0
K-SPAR 10.0
MAFICS 35.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 15.0
PLAG: 66.0
K-SPAR 10.0
MAFICS 14.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 5.0
PLAG: 52.0
K-SPAR 5.0
MAFICS 38.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 0.0

PLAG: 60.0
K-SPAR 2.0
MAFICS 38.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Idocrase

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Hematite
Pyrite
Pyrrhotite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: TK-1-1 NAME: DALL GLACIER
LATITUDE: 062033240 LONGITUDE: 152012360
QUADRANGLE: TALKEETNA

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 50000 MINIMUM TONS: 50
PRODUCTION: -1

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	139.4	139.4
AU:	2.20	
CU:	25000	25000

HOST ROCK CHARACTERISTICS

FORMATION: AGE: DEVONIAN
TERRANE: MYSTIC THICKNESS: 200

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	20
Dolomite:	0	0
Marl:	10	0
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	30	10
Black shale:	10	0
Quartzite:	30	10
Graywacke:	7	50

METAMORPHIC GRADE:
NEARBY DEPOSIT TYPES: CU-PB-ZN VMS
ORE TYPE: CU, PB, ZN

HOST ROCK ASSAY VALUES

	MAX	MIN
CU:	Reported	
PB:	Reported	
ZN:	Reported	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 65 TO 65 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	60	30
Tonalite	0	0
Quartz monzonite	30	10
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Hornblende

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: COARSE
Minimum grain size: MEDIUM
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 16.0
PLAG: 58.0
K-SPAR 26.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 26.0
PLAG: 56.0
K-SPAR 18.0
MAFICS 0.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION

QUARTZ: 11.0
PLAG: 47.0
K-SPAR 42.0
MAFICS 0.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION

QUARTZ: 22.0
PLAG: 46.0
K-SPAR 32.0
MAFICS 0.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Pyroxene

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Chalcopyrite

Bornite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CR-1-15 NAME: MT. JUMBO
LATITUDE: 055015300 LONGITUDE: 132038300
QUADRANGLE: CRAIG

CLASS: FE-AU

LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1000 MINIMUM TONS: 100
PRODUCTION: 0

GEOMETRY

LENGTH: 20.0 WIDTH: 5.0 DEPTH: -1

AG: 0.1
 AU: 0.010
 BA: 300
 CO: 20
 CU: 60 60
 MO: 3
 NI: 20
 PB: 20
 SN: 1
 W: 1
 ZN: 100

INTRUSIVE ROCK CHARACTERISTICS

AGE: 105 TO 101 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	20	10
Monzodiorite	30	20
Quartz diorite	0	0
Quartz monzodiorite	70	50
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
 Endoskarn present

TEXTURES

Equigranular
 Porphyritic
 Seriate

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
 Clinopyroxene
 Sphene
 Hornblende
 Apatite
 Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 16.0
PLAG: 46.0
K-SPAR 23.0
MAFICS 15.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 55.0
K-SPAR 20.0
MAFICS 15.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 15.0
PLAG: 54.0
K-SPAR 19.0
MAFICS 12.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Pyrrhotite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite: 55.0
Pyrope: 0.0
Grossularite: 45.0
Almandite: 0.0
Spessartite: 0.0

PYROXENE MINERALS

Missing

ID NUMBER: CR-1-19 NAME: HAIDA
LATITUDE: 055036000 LONGITUDE: 132030000
QUADRANGLE: CRAIG

CLASS: FE-AU
LOCALIZATION: VOLC CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 50000 MINIMUM TONS: 10000
PRODUCTION: 100

GEOMETRY

LENGTH: 30.0 WIDTH: 20.0 DEPTH: 300

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	7.0	7.0
AU:	1.00	
CU:	10000	10000
FE:	330000	
MO:	4.0	
PB:	10	
SN:	1	
W:	15.0	
ZN:	60	
AS:	1000	
CO:	37	
F:	40	
NI:	25	
CR:	64	
SB:	5	

HOST ROCK CHARACTERISTICS

FORMATION: DESCON FM. AGE: ORD-SIL
TERRANE: ALEXANDER(CRAIG) THICKNESS: 10

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	5
Dolomite:	0	0
Marl:	10	5
Mafic volc:	20	0
Int. Volc:	70	50
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	30	10

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: ZN-CU-PB VMS
ORE TYPE: ZN-CU-PB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
AS:	200	
AU:	0.050	
BA:	300	
BE:	1	
CO:	30	
CU:	60	60
MO:	5	
NI:	40	
PB:	50	
SN:	1	
W:	1	
ZN:	150	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 450 TO 400 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	90	60

Monzodiorite	40	10
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Endoskarn present

TEXTURES

Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Hornblende

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite

Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite:	95.0
Pyrope:	0.0
Grossularite:	5.0
Almandite:	0.0
Spessartite:	0.0

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite:	95.0
Pyrope:	0.0
Grossularite:	5.0

Black shale: 0 0
 Quartzite: 0 0
 Graywacke: 40 30

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: ZN-CU-PB VMS
 ORE TYPE: ZN,CU,PB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
AS:	200	
AU:	0.050	
BA:	300	
BE:	1	
CO:	30	
CU:	60	60
MO:	5	
NI:	40	
PB:	50	
SN:	1	
W:	1	
ZN:	150	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 450 TO 400 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	-1	-1
Monzodiorite	-1	-1
Quartz diorite	-1	-1
Quartz monzodiorite	-1	-1
Tonalite	-1	-1
Quartz monzonite	-1	-1
Granodiorite	-1	-1
Syenite	-1	-1
Alkali granite	-1	-1

INTRUSIVE ALTERATION TYPES

Albitic

TEXTURES

Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: .5

Minimum grain size: .1

Anorthite content maximum: 50

Anorthite content minimum: 30

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 15.0

PLAG: 60.0

K-SPAR 15.0

MAFICS 10.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 5.0

PLAG: 55.0

K-SPAR 5.0

MAFICS 35.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 10.0

PLAG: 55.0

K-SPAR 10.0

MAFICS 25.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet

Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Hematite
Pyrite
Chalcopyrite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CR-1-33 NAME: IRON KING
LATITUDE: 055033000 LONGITUDE: 132025000
QUADRANGLE: CRAIG

CLASS: FE-AU
LOCALIZATION: VOLC CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 10000 MINIMUM TONS: 1000
PRODUCTION: 20

GEOMETRY

LENGTH: 30.0 WIDTH: 10.0 DEPTH: 150

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG: Reported		
AU: Reported		
CU: 15000	15000	
FE: 400000		

HOST ROCK CHARACTERISTICS

FORMATION: DESCON FM. AGE: ORD-SIL
TERRANE: ALEXANDER(CRAIG) THICKNESS: 10

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	30	10
Dolomite:	0	0
Marl:	30	10

Mafic volc:	10	0
Int. Volc:	70	40
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	30	10

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: ZN-CU-PB VMS
 ORE TYPE: ZN,PB,CU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
AS:	200	
AU:	0.050	
BA:	200	
BE:	1	
CO:	30	
CU:	60	60
MO:	5	
PB:	50	
SN:	1	
W:	1	
ZN:	150	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 450 TO 400 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	40	10
Monzodiorite	20	0
Quartz diorite	0	0
Quartz monzodiorite	90	40
Tonalite	0	0
Quartz monzonite	20	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
 Propylitic

TEXTURES

Equigranular
Porphyritic
Seriatic

MAFIC AND ACCESSORY MINERALS PRESENT

Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 2
Minimum grain size: 1

Anorthite content maximum: 40
Anorthite content minimum: 40

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 12.0
PLAG: 60.0
K-SPAR 15.0
MAFICS 13.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 75.0
K-SPAR 0.0
MAFICS 25.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CR-1-32 NAME: TOLSTOI-WALLACE
LATITUDE: 055038000 LONGITUDE: 132022000
QUADRANGLE: CRAIG

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 500 MINIMUM TONS: 5
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
CU: Reported		
FE: Reported		
Y: 1		

HOST ROCK CHARACTERISTICS

FORMATION: DESCON FM. AGE: ORD-SIL
TERRANE: ALEXANDER(CRAIG) THICKNESS: 10

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	0	0
Marl:	10	10
Mafic volc:	10	0
Int. Volc:	70	50

Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	40	20

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: ZN-CU-PB VMS
 ORE TYPE: ZN,CU,PB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
AS:	200	
AU:	0.050	
BA:	200	
BE:	1	
CO:	30	
CU:	60	60
MO:	5	
PB:	50	
SN:	1	
W:	1	
ZN:	150	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 450 TO 400 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	30	10
Monzodiorite	30	10
Quartz diorite	0	0
Quartz monzodiorite	60	30
Tonalite	0	0
Quartz monzonite	10	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
 Propylitic

TEXTURES

Equigranular
 Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM

Anorthite content maximum: 45
Anorthite content minimum: 45

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 15.0
PLAG: 60.0
K-SPAR 10.0
MAFICS 15.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CR-1-31 NAME: THORNE BAY
LATITUDE: 055043000 LONGITUDE: 132033000
QUADRANGLE: CRAIG

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1000 MINIMUM TONS: 100
PRODUCTION: 0

GEOMETRY

LENGTH: 20.0 WIDTH: 10.0 DEPTH: 600

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
CU:	Reported	
FE:	Reported	

HOST ROCK CHARACTERISTICS

FORMATION: DESCON FM. AGE: ORD-SIL
TERRANE: ALEXANDER(CRAIG) THICKNESS: 10

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	5	5
Dolomite:	0	0
Marl:	5	5
Mafic volc:	10	0
Int. Volc:	70	40
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	50	20

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: ZN-CU-PB VMS
ORE TYPE: ZN,CU,PB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
AS:	200	
AU:	0.050	
BA:	200	
BE:	1	
CO:	30	
CU:	60	60
MO:	5	
PB:	50	
SN:	1	
W:	1	
ZN:	150	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 110 TO 100 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	30	0
Monzodiorite	0	0
Quartz diorite	70	30
Quartz monzodiorite	30	10
Tonalite	10	0
Quartz monzonite	30	10
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Propylitic

TEXTURES

Equigranular
Porphyritic
Seriata

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock
No exposures

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 3
Minimum grain size: 1

Anorthite content maximum: 45
Anorthite content minimum: 35

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 30.0
K-SPAR 50.0
MAFICS 10.0

Major Oxide Analysis

SiO₂: 61.00
Al₂O₃: 17.50
Fe₂O₃: 1.60
FeO: 2.70
MgO: 2.40
CaO: 6.90
Na₂O: 3.30
K₂O: 2.30
TiO₂: 1.00
P₂O₅: 0.30
MnO: 0.10

Normative Minerals

QTZ: 10.0
ORTHOCLASE: 13.59
ALBITE: 27.92
ANORTHITE: 26.14
CORUNDUM: 0.00
DIOPSIDE: 4.92
HYPERSTHENE: 5.78
OLIVINE: 0.00
MAGNETITE: 2.32
ILMENITE: 1.90

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 65.0
K-SPAR 5.0
MAFICS 20.0

Major Oxide Analysis

MINERAL COMPOSITION

QUARTZ: 25.0
PLAG: 73.0
K-SPAR 0.0
MAFICS 2.0

Normative Minerals

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CR-1-1 NAME: IT
LATITUDE: 055035000 LONGITUDE: 132028000
QUADRANGLE: CRAIG

CLASS: FE-AU

LOCALIZATION: VOLC CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1000000 MINIMUM TONS: 100000
PRODUCTION: 50000

GEOMETRY

LENGTH: 200.0 WIDTH: 50.0 DEPTH: 300

SHAPE: IRREG/PLANAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	15.3	15.3
AU:	2.20	
CU:	40000	40000
FE:	300000	
MO:	20.0	
PB:	10	
SN:	1	
W:	1.0	
ZN:	70	
AS:	30	
BA:	20	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 450 TO 400 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	60	40
Monzodiorite	0	0
Quartz diorite	50	30
Quartz monzodiorite	50	30
Tonalite	10	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Propylitic
Endoskarn present

TEXTURES

Equigranular
Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing

Anorthite content maximum: 40
Anorthite content minimum: 30

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION
QUARTZ: 7.0

PLAG: 49.5
K-SPAR 0.0
MAFICS 42.5

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION
QUARTZ: 10.0
PLAG: 57.0
K-SPAR 19.0
MAFICS 14.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION
QUARTZ: 11.5
PLAG: 42.0
K-SPAR 0.0
MAFICS 46.5

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION
QUARTZ: 11.0
PLAG: 46.0
K-SPAR 0.0
MAFICS 43.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION
QUARTZ: 13.5
PLAG: 54.0
K-SPAR 17.5
MAFICS 14.5

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Idocrase
Epidote
Hornblende
Biotite
Chlorite
Plagioclase
Scapolite
Sphene
Serpentinite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Hematite
Specular Hematite
Pyrite
Chalcopyrite
Gold

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite: 45.0
Pyrope: 0.0
Grossularite: 55.0
Almandite: 0.0
Spessartite: 0.0

PYROXENE MINERALS

Diopside: 75
Hedenbergite: 25
Johannsenite: 0

ID NUMBER: CR-1-20 NAME: STEVENSTOWN
LATITUDE: 055031000 LONGITUDE: 132017000
QUADRANGLE: CRAIG

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 100000 MINIMUM TONS: 2000
PRODUCTION: 500

GEOMETRY

LENGTH: 200.0 WIDTH: 20.0 DEPTH: 350

SHAPE: PLANAR

BE: 1
CO: 30
CU: 60 60
MO: 5
PB: 50
SN: 1
W: 1
ZN: 150

INTRUSIVE ROCK CHARACTERISTICS

AGE: 450 TO 400 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	70	40
Monzodiorite	10	0
Quartz diorite	20	0
Quartz monzodiorite	40	20
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Endoskarn present

TEXTURES

Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:

Anorthite content maximum: 40
Anorthite content minimum: 40

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 5.0
PLAG: 65.0
K-SPAR 5.0
MAFICS 25.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 70.0
K-SPAR 0.0
MAFICS 10.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Actinolite
Hornblende
Chlorite
Sphene

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CR-1-10 NAME: HELTA MOUNTAINS
LATITUDE: 055012000 LONGITUDE: 132032000
QUADRANGLE: CRAIG

CLASS: FE-AU

LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 5000 MINIMUM TONS: 500
PRODUCTION: 10

GEOMETRY

LENGTH: 30.0 WIDTH: 5.0 DEPTH: 100

SHAPE: TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	200.0	200.0
AU:	1.50	
CU:	11000	11000
MO:	300.0	
PB:	22	
ZN:	3700	
BA:	600	
CO:	750	
NI:	140	

HOST ROCK CHARACTERISTICS

FORMATION: WALES GROUP AGE: PRE-
ORDOVICIAN
TERRANE: ALEXANDER(CRAIG) THICKNESS: 50

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	5	5
Marl:	0	0
Mafic volc:	20	10
Int. Volc:	50	30
Felsic Volc:	20	10
Shale:	10	10
Black shale:	0	0
Quartzite:	0	0
Graywacke:	10	5

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: BA-ZN-PB-AG-AU-CU VMS
ORE TYPE: BA,ZN,PB,AG,AU,CU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AU:	0.010	
BA:	300	
CO:	20	
CU:	60	60
MO:	3	
NI:	20	
PB:	20	
SN:	1	
W:	1	
ZN:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 105 TO 103 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	20	10
Monzodiorite	0	0
Quartz diorite	40	20
Quartz monzodiorite	60	30
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Endoskarn present

TEXTURES

Equigranular
Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 8
Minimum grain size: 4

Anorthite content maximum: 40
Anorthite content minimum: 30

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 15.0
K-SPAR 5.0
MAFICS 70.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 60.0
K-SPAR 5.0
MAFICS 15.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 15.0
PLAG: 50.0
K-SPAR 30.0
MAFICS 5.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 15.0
K-SPAR 7.0
MAFICS 78.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 21.0
PLAG: 57.0
K-SPAR 7.0
MAFICS 15.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 14.0

PLAG: 52.0
K-SPAR 34.0
MAFICS 0.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrhottite
Chalcopyrite
Sphalerite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite: 63.0
Pyrope: 0.0
Grossularite: 37.0
Almandite: 0.0
Spessartite: 0.0

PYROXENE MINERALS

Missing

ID NUMBER: CR-1-21 NAME: MAMIE
LATITUDE: 055031000 LONGITUDE: 132017000
QUADRANGLE: CRAIG

CLASS: FE-AU
LOCALIZATION: GRAN & VOLC CONTACTS

REPORTED TONNAGES

MAXIMUM TONS: 1000000 MINIMUM TONS: 500000
PRODUCTION: 50000

GEOMETRY

LENGTH: 100.0 WIDTH: 40.0 DEPTH: 200

SHAPE: CONTORTED TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	4.0	4.0
AU:	0.60	
CU:	9000	9000
FE:	550000	
MO:	10.0	
PB:	5	
SN:	1	
W:	1.0	
ZN:	110	
AS:	Reported	
CO:	254	
NI:	21	
CR:	49	
SB:	5	

HOST ROCK CHARACTERISTICS

FORMATION: DESCON FM. AGE: ORD-SIL
TERRANE: ALEXANDER(CRAIG) THICKNESS: 70

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	30	20
Dolomite:	0	0
Marl:	10	0
Mafic volc:	20	0
Int. Volc:	60	40
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	40	20

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: ZN-CU-PB VMS

ORE TYPE: ZN,CU,PB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
AS:	200	
AU:	0.050	
BA:	200	
BE:	1	
CO:	30	
CU:	60	60
MO:	5	
PB:	50	
SN:	1	
W:	1	
ZN:	150	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 450 TO 400 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	30	10
Monzodiorite	30	10
Quartz diorite	0	0
Quartz monzodiorite	50	20
Tonalite	0	0
Quartz monzonite	20	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Propylitic
Endoskarn present

TEXTURES

Equigranular
Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Clinopyroxene
Sphene
Hornblende
Apatite

Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 2
Minimum grain size: 1

Anorthite content maximum: 40
Anorthite content minimum: 30

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 15.0
PLAG: 60.0
K-SPAR 15.0
MAFICS 10.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 60.0
K-SPAR 10.0
MAFICS 20.0

Major Oxide Analysis

Normative Minerals

SIO2:	58.90	QTZ:	10.0
AL2O3:	17.10	ORTHOCLASE:	25.65
FE2O3:	1.97	ALBITE:	39.26
FEO:	0.95	ANORTHITE:	13.01
MGO:	1.75	CORUNDUM:	0.00
CAO:	8.00	DIOPSIDE:	16.90
NA2O:	4.64	HYPERSTHENE:	0.00
K2O:	4.34	OLIVINE:	0.00
TIO2:	0.59	MAGNETITE:	1.41
P2O5:	0.20	ILMENITE:	1.12
MNO:	0.10		

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Hornblende
Chlorite

Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite

Pyrite

Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CR-1-12

NAME: LAKE MARGE

LATITUDE: 055012000

LONGITUDE: 132031000

QUADRANGLE: CRAIG

CLASS: FE-AU

LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS:

5000

MINIMUM TONS:

100

PRODUCTION:

0

GEOMETRY

LENGTH:

-1.0

WIDTH:

-1.0

DEPTH:

-1

SHAPE:

REPORTED ASSAY VALUES

MAX

MIN

AU: Reported

CU: Reported

MO: Reported

HOST ROCK CHARACTERISTICS

FORMATION: WALES GROUP

AGE: PRE-

ORDOVICIAN

TERRANE: ALEXANDER(CRAIG)

THICKNESS:

30

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	5	5
Marl:	0	0
Mafic volc:	20	10
Int. Volc:	50	30
Felsic Volc:	20	10
Shale:	10	10
Black shale:	0	0
Quartzite:	0	0
Graywacke:	10	5

METAMORPHIC GRADE: GREENSCHIST

NEARBY DEPOSIT TYPES: BA-ZN-PB-CU-AG-AU VMS

ORE TYPE: BA,ZN,PB,CU,AG,AU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AU:	0.010	
BA:	300	
CO:	20	
CU:	60	60
MO:	3	
NI:	20	
PB:	20	
SN:	1	
W:	1	
ZN:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 105 TO 101 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	50	20
Monzodiorite	0	0
Quartz diorite	50	20
Quartz monzodiorite	0	0
Tonalite	30	10
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Endoskarn present

TEXTURES

Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock
Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing

Anorthite content maximum: 25
Anorthite content minimum: 25

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 15.0
PLAG: 57.0
K-SPAR 18.0
MAFICS 10.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 17.0
PLAG: 50.0
K-SPAR 2.3
MAFICS 20.3

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 17.0
PLAG: 38.0
K-SPAR 39.0
MAFICS 6.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Chalcopyrite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite: 97.0
Pyrope: 0.0
Grossularite: 3.0
Almandite: 0.0
Spessartite: 0.0

PYROXENE MINERALS

Missing

ID NUMBER: CR-1-22 NAME: MOUNT ANDREW
LATITUDE: 055031000 LONGITUDE: 132018000
QUADRANGLE: CRAIG

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 4000000 MINIMUM TONS: 2000000
PRODUCTION: 250000

GEOMETRY

LENGTH: 550.0 WIDTH: 60.0 DEPTH: 600

SHAPE: PLANAR TABULAR

MO: 5
PB: 50
SN: 1
W: 1
ZN: 150

INTRUSIVE ROCK CHARACTERISTICS

AGE: 450 TO 400 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	30	20
Monzodiorite	0	0
Quartz diorite	20	0
Quartz monzodiorite	60	40
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Propylitic
Endoskarn present

TEXTURES

Equigranular
Porphyritic
Seriata

MAFIC AND ACCESSORY MINERALS PRESENT

Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 60.0
K-SPAR 15.0
MAFICS 15.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 75.0
K-SPAR 15.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Hornblende
Chlorite
Ilvaite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Specular Hematite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite: 45.0
Pyrope: 0.0

Grossularite: 55.0
Almandite: 0.0
Spessartite: 0.0

PYROXENE MINERALS

Diopside: 75
Hedenbergite: 15
Johannsenite: 0

ID NUMBER: CR-1-14 NAME: CAMPBELL
LATITUDE: 055016000 LONGITUDE: 132039000
QUADRANGLE: CRAIG

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1000 MINIMUM TONS: 100
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	1.5	1.5
AU:	0.10	
CU:	1400	1400
MO:	25.0	
PB:	20	
SN:	1	
W:	1.0	
ZN:	175	
AS:	25	
BA:	50	
CO:	80	
F:	150	
NI:	40	
V:	120	

HOST ROCK CHARACTERISTICS

FORMATION: WALES GROUP
ORDOVICIAN

AGE: PRE-

TERRANE: ALEXANDER (CRAIG)

THICKNESS:

100

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	5	5
Marl:	0	0
Mafic volc:	20	10
Int. Volc:	50	30
Felsic Volc:	20	10
Shale:	10	10
Black shale:	0	0
Quartzite:	0	0
Graywacke:	10	5

METAMORPHIC GRADE: GREENSCHIST

NEARBY DEPOSIT TYPES: BA-ZN-PB-CU-AG-AU VMS

ORE TYPE: BA, ZN, PB, CU, AG, AU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AU:	0.010	
BA:	300	
CO:	20	
CU:	60	60
MO:	3	
NI:	20	
PB:	20	
SN:	1	
W:	1	
ZN:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 105 TO 101 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	20	0
Monzodiorite	30	10
Quartz diorite	0	0
Quartz monzodiorite	80	50
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 16.0
PLAG: 60.0
K-SPAR 24.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 12.0
PLAG: 38.0
K-SPAR 8.0
MAFICS 42.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 24.0
PLAG: 44.0
K-SPAR 32.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrrhotite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite:	43.0
Pyrope:	0.0
Grossularite:	57.0
Almandite:	0.0
Spessartite:	0.0

PYROXENE MINERALS

Missing

ID NUMBER:	CR-1-23	NAME:	ALARM
LATITUDE:	055035000	LONGITUDE:	132028000
QUADRANGLE:	CRAIG		

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS:	1000	MINIMUM TONS:	300
PRODUCTION:	20		

GEOMETRY

LENGTH:	30.0	WIDTH:	5.0	DEPTH:	30
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SHAPE: IRREGULAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	10.0	10.0
AU:	0.50	
CU:	7000	7000

AGE: 450 TO 400 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	20	0
Monzodiorite	0	0
Quartz diorite	80	50
Quartz monzodiorite	40	20
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Endoskarn present

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION
QUARTZ: 12.0
PLAG: 44.0
K-SPAR 0.0
MAFICS 44.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION
QUARTZ: 10.0
PLAG: 57.0
K-SPAR 19.0

MAFICS 13.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 11.0

PLAG: 46.0

K-SPAR 0.0

MAFICS 43.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 13.0

PLAG: 18.0

K-SPAR 55.0

MAFICS 14.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet

Pyroxene

Idocrase

Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite

Specular Hematite

Pyrite

Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite: 45.0

Pyrope: 0.0

Grossularite: 55.0

Almandite: 0.0
Spessartite: 0.0

PYROXENE MINERALS

Diopside: 95
Hedenbergite: 5
Johannsenite: 0

ID NUMBER: CR-1-17 NAME: POORMAN
LATITUDE: 055034000 LONGITUDE: 132026000
QUADRANGLE: CRAIG

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 2000000 MINIMUM TONS: 900000
PRODUCTION: 0

GEOMETRY

LENGTH: 200.0 WIDTH: 85.0 DEPTH: 1500

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	2.3	2.3
AU:	1.00	
CU:	2500	2500
FE:	524000	
MO:	20.0	
PB:	10	
ZN:	35	
CO:	50	
NI:	50	
TI:	400	
SB:	5	

HOST ROCK CHARACTERISTICS

FORMATION: DESCON FM. AGE: ORD-SIL
TERRANE: ALEXANDER(CRAIG) THICKNESS: 100

GENERALIZED HOST ROCK COMPOSITION:

MAXIMUM MINIMUM

Limestone:	10	5
Dolomite:	0	0
Marl:	20	10
Mafic volc:	20	0
Int. Volc:	60	20
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	30	20

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: ZN-CU-PB VMS
 ORE TYPE: ZN,CU,PB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
AS:	200	
AU:	0.050	
BA:	300	
BE:	1	
CO:	30	
CU:	60	60
MO:	5	
NI:	40	
PB:	50	
SN:	1	
W:	1	
ZN:	150	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 450 TO 400 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	60	40
Monzodiorite	0	0
Quartz diorite	50	30
Quartz monzodiorite	50	30
Tonalite	10	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Endoskarn present

TEXTURES

Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Batholith
No exposures

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM

Anorthite content maximum: 50
Anorthite content minimum: 40

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 11.0
PLAG: 43.0
K-SPAR 36.0
MAFICS 0.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION

QUARTZ: 12.0
PLAG: 60.0
K-SPAR 15.0
MAFICS 13.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Hornblende

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Specular Hematite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CR-1-24 NAME: BROWN & METZDARF
LATITUDE: 055025000 LONGITUDE: 132029000
QUADRANGLE: CRAIG

CLASS: FE-AU

LOCALIZATION: VOLC CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 5000 MINIMUM TONS: 500
PRODUCTION: 100

GEOMETRY

LENGTH: 30.0 WIDTH: 10.0 DEPTH: 70

SHAPE: IRREGULAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	19.0	19.0
AU:	0.90	
CU:	38000	38000
MO:	500.0	
PB:	10	
SN:	1	
W:	3.0	
ZN:	40	
AS:	760	
CO:	85	
F:	90	
NI:	15	
SB:	1	

HOST ROCK CHARACTERISTICS

FORMATION: DESCON FM. AGE: SIL-DEV
TERRANE: ALEXANDER(CRAIG) THICKNESS: 10

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	20
Dolomite:	0	0
Marl:	20	10
Mafic volc:	20	0
Int. Volc:	70	40
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	40	20

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: ZN-CU-PB VMS
ORE TYPE: ZN,CU,PB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
AS:	200	
AU:	0.050	
BA:	200	
BE:	1	
CO:	30	
CU:	60	60
MO:	5	
PB:	50	
SN:	1	
W:	1	
ZN:	150	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 450 TO 400 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	70	30
Monzodiorite	50	0

Quartz diorite	50	0
Quartz monzodiorite	50	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Endoskarn present

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
 Minimum grain size:
 Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
 Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
 Pyrite
 Chalcopyrite
 Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CR-1-9 NAME: HOUGHTON
LATITUDE: 055016000 LONGITUDE: 132038000
QUADRANGLE: CRAIG

CLASS: FE-AU

LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 50000 MINIMUM TONS: 5000
PRODUCTION: 100

GEOMETRY

LENGTH: 30.0 WIDTH: 5.0 DEPTH: 200

SHAPE: TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	100.0	100.0
AU:	1.70	
CU:	23000	23000
MO:	20.0	
PB:	20	
ZN:	150	

	MAXIMUM	MINIMUM
Diorite	20	10
Monzodiorite	40	30
Quartz diorite	0	0
Quartz monzodiorite	20	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Endoskarn present

TEXTURES

Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Clinopyroxene
 Sphene
 Hornblende
 Apatite
 Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 3
 Minimum grain size: 1

Anorthite content maximum: 35
 Anorthite content minimum: 30

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 10.0
 PLAG: 50.0
 K-SPAR 30.0
 MAFICS 10.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 0.0
 PLAG: 40.0

K-SPAR 25.0
MAFICS 25.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 5.0
PLAG: 75.0
K-SPAR 0.0
MAFICS 20.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 34.0
PLAG: 32.0
K-SPAR 31.0
MAFICS 3.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 35.0
K-SPAR 20.0
MAFICS 45.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrrhotite
Chalcopyrite
Sphalerite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite: 53.0
Pyrope: 0.0
Grossularite: 47.0
Almandite: 0.0
Spessartite: 0.0

PYROXENE MINERALS

Missing

ID NUMBER: CR-1-13 NAME: RUSSIAN BEAR
LATITUDE: 055013000 LONGITUDE: 132034000
QUADRANGLE: CRAIG

CLASS: FE-AU
LOCALIZATION:

REPORTED TONNAGES

MAXIMUM TONS: 1000 MINIMUM TONS: 100
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AU:	0.40	
CU:	2000	2000
MO:	500.0	
PB:	50	
ZN:	35	
BA:	100	
CO:	35	
NI:	150	
V:	100	

HOST ROCK CHARACTERISTICS

FORMATION: WALES GROUP
ORDOVICIAN

AGE: PRE-

TERRANE: ALEXANDER (CRAIG)

THICKNESS:

-1

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	5	5
Marl:	0	0
Mafic volc:	20	10
Int. Volc:	50	30
Felsic Volc:	20	10
Shale:	10	10
Black shale:	0	0
Quartzite:	0	0
Graywacke:	10	5

METAMORPHIC GRADE: GREENSCHIST

NEARBY DEPOSIT TYPES: BA-ZN-PB-CU-AG-AU VMS

ORE TYPE: BA,ZN,PB,CU,AG,AU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AU:	0.010	
CO:	20	
CU:	60	60
MO:	3	
NI:	20	
PB:	20	
SN:	1	
W:	1	
ZN:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 105 TO 101 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	30	10
Monzodiorite	40	20
Quartz diorite	0	0
Quartz monzodiorite	60	40
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing

Anorthite content maximum: 30
Anorthite content minimum: 30

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 5.0
PLAG: 50.0
K-SPAR 20.0
MAFICS 25.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 60.0
K-SPAR 10.0
MAFICS 20.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 37.0
PLAG: 63.0
K-SPAR 0.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 28.0

PLAG: 70.0
K-SPAR 2.0
MAFICS 0.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite: 60.0
Pyrope: 0.0
Grossularite: 40.0
Almandite: 0.0
Spessartite: 0.0

PYROXENE MINERALS

Missing

ID NUMBER: ST-1-1 NAME: STAG BAY
LATITUDE: 057055000 LONGITUDE: 136020000
QUADRANGLE: SITKA

CLASS: FE-AU
LOCALIZATION:

REPORTED TONNAGES

MAXIMUM TONS: 10000 MINIMUM TONS: 100
PRODUCTION: 0

GEOMETRY

LENGTH: 150.0 WIDTH: 55.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG: Reported		
AU: Reported		
CU: 5000	5000	5000

HOST ROCK CHARACTERISTICS

FORMATION: AGE: TRIASSIC
TERRANE: WRANGELLIA THICKNESS: -1

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	10
Dolomite:	0	0
Marl:	0	0
Mafic volc:	60	40
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	40	20
Black shale:	0	0
Quartzite:	30	20
Graywacke:	0	0

METAMORPHIC GRADE: U.GREENSCHIST
NEARBY DEPOSIT TYPES: CU-ZN-PB VMS
ORE TYPE: CU,ZN,PB

HOST ROCK ASSAY VALUES

	MAX	MIN
CU: Reported		
PB: Reported		
ZN: Reported		

INTRUSIVE ROCK CHARACTERISTICS

AGE: 120 TO 100 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	30	10
Monzodiorite	0	0
Quartz diorite	80	60
Quartz monzodiorite	20	10
Tonalite	20	10
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Propylitic

TEXTURES

Equigranular
Seriata

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM

Anorthite content maximum: 50
Anorthite content minimum: 30

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 69.0
K-SPAR 10.0

MAFICS 11.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 65.0
K-SPAR 0.0
MAFICS 25.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 65.0
K-SPAR 0.0
MAFICS 25.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION

QUARTZ: 15.0
PLAG: 65.0
K-SPAR 0.0
MAFICS 20.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 65.0
K-SPAR 0.0
MAFICS 15.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 60.0
K-SPAR 5.0
MAFICS 15.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION

QUARTZ: 8.0
PLAG: 67.0
K-SPAR 0.0
MAFICS 25.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION

QUARTZ: 20.0

PLAG: 68.0
K-SPAR 7.0
MAFICS 5.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 15.0
PLAG: 55.0
K-SPAR 10.0
MAFICS 20.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite
Gold

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Diopside: 25
Hedenbergite: 70
Johannsenite: 5

ID NUMBER: CR-1-30

NAME: BAKER POINT

LATITUDE: 055031000 LONGITUDE: 132025000
QUADRANGLE: CRAIG

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 100 MINIMUM TONS: 1
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

MAX MIN

FE: Reported

HOST ROCK CHARACTERISTICS

FORMATION: DESCON FM. AGE: ORD-SIL
TERRANE: ALEXANDER(CRAIG) THICKNESS: 5

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	5	5
Dolomite:	0	0
Marl:	5	5
Mafic volc:	10	0
Int. Volc:	70	40
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	50	20

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: ZN-CU-PB VMS
ORE TYPE: ZN,CU,PB

HOST ROCK ASSAY VALUES

MAX MIN

AG: 1.0
 AS: 200
 AU: 0.050
 BA: 200
 BE: 1
 CO: 30
 CU: 60 60
 MO: 5
 PB: 50
 SN: 1
 W: 1
 ZN: 150

INTRUSIVE ROCK CHARACTERISTICS

AGE: 110 TO 100 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	90	40
Quartz monzodiorite	0	0
Tonalite	60	10
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic

TEXTURES

Equigranular
 Porphyritic
 Seriate

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
 Sphene
 Hornblende
 Apatite
 Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
 Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM

Anorthite content maximum: 40
Anorthite content minimum: 40

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 35.0
PLAG: 60.0
K-SPAR 5.0
MAFICS 0.0

Major Oxide Analysis

SIO2: 64.20
AL2O3: 17.40
FE2O3: 2.90
FEO: 1.90
MGO: 1.50
CAO: 4.70
NA2O: 4.20
K2O: 1.10
TIO2: 0.38
P2O5: 0.26
MNO: 0.13

Normative Minerals

QTZ: 35.0
ORTHOCLASE: 6.70
ALBITE: 35.60
ANORTHITE: 19.80
CORUNDUM: 0.23
DIOPSIDE: 0.00
HYPERSTHENE: 4.50
OLIVINE: 0.00
MAGNETITE: 4.20
ILMENITE: 0.73

SKARN MINERAL DATA

SKARN MINERALS

Pyroxene
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CR-1-11
LATITUDE: 055017000

NAME: SULTANA
LONGITUDE: 132035000

QUADRANGLE: CRAIG

CLASS: FE-AU

LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 5000 MINIMUM TONS: 250
PRODUCTION: 0

GEOMETRY

LENGTH: 10.0 WIDTH: 3.0 DEPTH: 60

SHAPE: TABULAR

REPORTED ASSAY VALUES

MAX MIN

AG: Reported
AU: Reported
CU: Reported
FE: Reported
NI: 1000

HOST ROCK CHARACTERISTICS

FORMATION: WALES GROUP
ORDOVICIAN

AGE: PRE-

TERRANE: ALEXANDER(CRAIG)

THICKNESS: 400

GENERALIZED HOST ROCK COMPOSITION:

MAXIMUM MINIMUM

Limestone:	10	10
Dolomite:	5	5
Marl:	0	0
Mafic volc:	20	10
Int. Volc:	50	30
Felsic Volc:	20	10
Shale:	10	10
Black shale:	0	0
Quartzite:	0	0
Graywacke:	10	5

METAMORPHIC GRADE: GREENSCHIST

NEARBY DEPOSIT TYPES: BA-ZN-PB-CU-AG-AU VMS

ORE TYPE: BA,ZN,PB,CU,AG,AU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AU:	0.010	
BA:	300	
CO:	20	
CU:	60	60
MO:	3	
NI:	20	
PB:	20	
SN:	1	
W:	1	
ZN:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 105 TO 101 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	30	20
Monzodiorite	40	30
Quartz diorite	0	0
Quartz monzodiorite	60	40
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Endoskarn present

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing

Anorthite content maximum: 35
Anorthite content minimum: 35

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 3.0
PLAG: 40.0
K-SPAR 15.0
MAFICS 42.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 5.0
PLAG: 40.0
K-SPAR 25.0
MAFICS 40.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 20.0
K-SPAR 0.0
MAFICS 80.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 4.0
PLAG: 60.0
K-SPAR 4.0
MAFICS 32.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 14.0
PLAG: 69.0
K-SPAR 17.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrrhotite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite:	64.0
Pyrope:	0.0
Grossularite:	36.0
Almandite:	0.0
Spessartite:	0.0

PYROXENE MINERALS

Missing

ID NUMBER:	CR-1-25	NAME:	COPPER CENTER
LATITUDE:	055037000	LONGITUDE:	132030000
QUADRANGLE:	CRAIG		

CLASS: FE-AU
LOCALIZATION: VOLC CONTACT

REPORTED TONNAGES

MAXIMUM TONS:	3000	MINIMUM TONS:	500
PRODUCTION:	0		

GEOMETRY

LENGTH:	20.0	WIDTH:	5.0	DEPTH:	100
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SHAPE: IRREGULAR

REPORTED ASSAY VALUES

AGE: 450 TO 400 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	80	30
Monzodiorite	0	0
Quartz diorite	80	30
Quartz monzodiorite	30	10
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

Clinopyroxene
Sphene
Hornblende
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 2
Minimum grain size: 1
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 5.0
PLAG: 5.0
K-SPAR 70.0
MAFICS 20.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 5.0
PLAG: 70.0

AU: Reported
CU: Reported
FE: Reported

HOST ROCK CHARACTERISTICS

FORMATION: DESCON FM. AGE: ORD-SIL
TERRANE: ALEXANDER(CRAIG) THICKNESS: 10

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	5
Dolomite:	0	0
Marl:	10	0
Mafic volc:	20	0
Int. Volc:	60	30
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	60	30

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: ZN-CU-PB VMS
ORE TYPE: ZN,CU,PB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
AS:	200	
AU:	0.050	
BA:	200	
BE:	1	
CO:	30	
CU:	60	60
MO:	5	
PB:	50	
SN:	1	
W:	1	
ZN:	150	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 450 TO 400 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	80	50
Monzodiorite	30	0
Quartz diorite	30	0
Quartz monzodiorite	30	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:

Minimum grain size:

Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite

Pyrite

Pyrrhotite

Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrrhotite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CR-1-27 NAME: IRON CAP
LATITUDE: 055039000 LONGITUDE: 132024000
QUADRANGLE: CRAIG

CLASS: FE-AU

LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 200000 MINIMUM TONS: 70000
PRODUCTION: 0

GEOMETRY

LENGTH: 70.0 WIDTH: 70.0 DEPTH: 200

SHAPE: IRREGULAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	10.0	10.0
AU:	Reported	
CU:	2500	2500
FE:	400000	

HOST ROCK CHARACTERISTICS

FORMATION: DESCON FM. AGE: ORD-SIL
TERRANE: ALEXANDER(CRAIG) THICKNESS: 30

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	5
Dolomite:	0	0
Marl:	10	0
Mafic volc:	10	0
Int. Volc:	80	50
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	40	20

METAMORPHIC GRADE: GREENSCHIST

NEARBY DEPOSIT TYPES: ZN-CU-PB VMS

ORE TYPE: ZN,CU,PB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
AS:	200	
AU:	0.050	
BA:	200	
BE:	1	
CO:	30	
CU:	60	60
MO:	5	
PB:	50	
SN:	1	
W:	1	
ZN:	150	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 450 TO 400 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	30	10

Monzodiorite	30	10
Quartz diorite	0	0
Quartz monzodiorite	60	30
Tonalite	0	0
Quartz monzonite	10	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic

TEXTURES

Porphyritic
Seriata

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM

Anorthite content maximum: 45
Anorthite content minimum: 45

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 45.0
K-SPAR 20.0
MAFICS 25.0

Major Oxide Analysis

SiO₂: 52.80
Al₂O₃: 15.90
Fe₂O₃: 2.40
FeO: 7.50

Normative Minerals

QTZ: 10.0
ORTHOCLASE: 6.10
ALBITE: 26.20
ANORTHITE: 26.70

MGO:	5.50	CORUNDUM:	0.00
CAO:	8.90	DIOPSIDE:	11.30
NA2O:	3.10	HYPERSTHENE:	18.30
K2O:	1.00	OLIVINE:	0.00
TIO2:	0.98	MAGNETITE:	3.50
P2O5:	0.44	ILMENITE:	1.80
MNO:	0.21		

MINERAL COMPOSITION

QUARTZ: 15.0
 PLAG: 60.0
 K-SPAR 10.0
 MAFICS 15.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
 Pyroxene
 Epidote
 Hornblende
 Chlorite
 Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
 Specular Hematite
 Pyrite
 Pyrrhotite
 Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CR-1-28 NAME: BIG FIVE
 LATITUDE: 055039000 LONGITUDE: 132025000
 QUADRANGLE: CRAIG

CLASS: FE-AU

LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1000 MINIMUM TONS: 50
PRODUCTION: 0

GEOMETRY

LENGTH: 20.0 WIDTH: 10.0 DEPTH: 50

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG: Reported		
AU: Reported		
CU: Reported		
FE: Reported		

HOST ROCK CHARACTERISTICS

FORMATION: DESCON FM. AGE: ORD-SIL
TERRANE: ALEXANDER(CRAIG) THICKNESS: 10

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	30	10
Dolomite:	0	0
Marl:	30	10
Mafic volc:	20	0
Int. Volc:	70	40
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	40	20

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: ZN-CU-PB VMS
ORE TYPE: ZN,CU,PB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
AS:	200	
AU:	0.050	
BA:	200	
BE:	1	

CO: 30
CU: 60 60
MO: 5
PB: 50
SN: 1
W: 1
ZN: 150

INTRUSIVE ROCK CHARACTERISTICS

AGE: 450 TO 400 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	30	10
Monzodiorite	0	0
Quartz diorite	70	30
Quartz monzodiorite	70	30
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Propylitic

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM

Anorthite content maximum: 50
Anorthite content minimum: 50

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 70.0
K-SPAR 0.0
MAFICS 20.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 5.0
PLAG: 65.0
K-SPAR 10.0
MAFICS 20.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrrhotite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CR-1-29 NAME: KINA COVE
LATITUDE: 055029000 LONGITUDE: 132031000
QUADRANGLE: CRAIG

CLASS: FE-AU

LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 500 MINIMUM TONS: 10
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	Reported	
AU:	Reported	
CU:	Reported	
FE:	Reported	

HOST ROCK CHARACTERISTICS

FORMATION: DESCON FM. AGE: ORD-SIL
TERRANE: ALEXANDER(CRAIG) THICKNESS: 5

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	5	5
Dolomite:	0	0
Marl:	15	5
Mafic volc:	10	0
Int. Volc:	30	10
Felsic Volc:	0	0
Shale:	10	10
Black shale:	0	0
Quartzite:	0	0
Graywacke:	80	50

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: ZN-CU-PB VMS
ORE TYPE: ZN,CU,PB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
AS:	200	
AU:	0.050	
BA:	200	
BE:	1	
CO:	30	
CU:	60	60
MO:	5	

PB: 50
SN: 1
W: 1
ZN: 150

INTRUSIVE ROCK CHARACTERISTICS

AGE: 110 TO 100 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	60	10
Quartz monzodiorite	50	10
Tonalite	0	0
Quartz monzonite	30	10
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic

TEXTURES

Equigranular
Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM

Anorthite content maximum: 30
Anorthite content minimum: 30

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 35.0
PLAG: 60.0
K-SPAR 0.0
MAFICS 5.0

Major Oxide Analysis

SiO2: 58.40
Al2O3: 17.70
Fe2O3: 3.50
FeO: 2.40
MgO: 2.30
CaO: 4.50
Na2O: 4.80
K2O: 3.10
TiO2: 0.52
P2O5: 0.34
MnO: 0.12

Normative Minerals

QTZ: 35.0
ORTHOCLASE: 18.40
ALBITE: 40.40
ANORTHITE: 16.00
CORUNDUM: 0.67
DIOPSIDE: 0.00
HYPERSTHENE: 6.70
OLIVINE: 0.00
MAGNETITE: 5.10
ILMENITE: 0.90

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrrhotite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CR-1-36 NAME: UNCLE SAM
LATITUDE: 055032000 LONGITUDE: 132023000
QUADRANGLE: CRAIG

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 20000 MINIMUM TONS: 2000
PRODUCTION: 350

GEOMETRY

LENGTH: 50.0 WIDTH: 7.0 DEPTH: 200

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	12.0	12.0
AU:	2.00	
CU:	25000	25000
FE:	Reported	

HOST ROCK CHARACTERISTICS

FORMATION: DESCON FM. AGE: ORD-SIL
TERRANE: ALEXANDER(CRAIG) THICKNESS: 50

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	10
Dolomite:	0	0
Marl:	20	10
Mafic volc:	20	0
Int. Volc:	70	50
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	30	10

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: ZN-CU VMS
ORE TYPE: ZN,CU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
AS:	200	
AU:	0.050	
BA:	200	

BE: 1
CO: 30
CU: 60 60
MO: 5
PB: 50
SN: 1
W: 1
ZN: 150

INTRUSIVE ROCK CHARACTERISTICS

AGE: 450 TO 400 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	30	10
Monzodiorite	0	0
Quartz diorite	20	10
Quartz monzodiorite	80	30
Tonalite	0	0
Quartz monzonite	40	20
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Propylitic

TEXTURES

Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Hornblende
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 3
Minimum grain size: .5

Anorthite content maximum: 40
Anorthite content minimum: 40

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 5.0
PLAG: 55.0
K-SPAR 0.0
MAFICS 40.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 60.0
K-SPAR 5.0
MAFICS 35.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 5.0
PLAG: 55.0
K-SPAR 30.0
MAFICS 10.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CR-1-38
LATITUDE: 055031000
QUADRANGLE: CRAIG

NAME: PEACOCK-TACOMA
LONGITUDE: 132030000

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 30000 MINIMUM TONS: 1000
PRODUCTION: 50

GEOMETRY

LENGTH: 30.0 WIDTH: 10.0 DEPTH: 500

SHAPE: IRREGULAR PLANAR

REPORTED ASSAY VALUES

	MAX	MIN
AG: Reported		
AU: Reported		
CU: 5000		5000
FE: 300000		

HOST ROCK CHARACTERISTICS

FORMATION: DESCON FM. AGE: ORD-SIL
TERRANE: ALEXANDER(CRAIG) THICKNESS: 50

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	10
Dolomite:	0	0
Marl:	20	10
Mafic volc:	20	0
Int. Volc:	70	50
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	30	10

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: ZN-CU-PB VMS
ORE TYPE: ZN,CU,PB

HOST ROCK ASSAY VALUES

MAX MIN

AG: 1.0
 AS: 200
 BA: 200
 BE: 1
 CO: 30
 CU: 60 60
 MO: 5
 PB: 50
 SN: 1
 W: 1
 ZN: 150

INTRUSIVE ROCK CHARACTERISTICS

AGE: 450 TO 400 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	40	10
Monzodiorite	40	10
Quartz diorite	0	0
Quartz monzodiorite	60	30
Tonalite	0	0
Quartz monzonite	20	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
 Propylitic
 Endoskarn present

TEXTURES

Equigranular
 Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 2
 Minimum grain size: .5

Anorthite content maximum: 50
Anorthite content minimum: 45

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 90.0
K-SPAR 0.0
MAFICS 0.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION

QUARTZ: 15.0
PLAG: 60.0
K-SPAR 15.0
MAFICS 10.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION

QUARTZ: 5.0
PLAG: 65.0
K-SPAR 5.0
MAFICS 25.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CR-1-39
LATITUDE: 055037000

NAME: RUSH & BROWN
LONGITUDE: 132035000

QUADRANGLE: CRAIG

CLASS: FE-AU

LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1000000 MINIMUM TONS: 120000
PRODUCTION: 45000

GEOMETRY

LENGTH: 100.0 WIDTH: 50.0 DEPTH: 200

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	23.0	23.0
AU:	3.00	
CU:	30000	30000
CO:	700	

HOST ROCK CHARACTERISTICS

FORMATION: DESCON FM.
TERRANE: ALEXANDER(CRAIG)

AGE: ORD-SIL
THICKNESS: -1

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	5
Dolomite:	0	0
Marl:	20	10
Mafic volc:	20	0
Int. Volc:	50	20
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	50	20

METAMORPHIC GRADE: GREENSCHIST

NEARBY DEPOSIT TYPES: ZN-CU-PB VMS

ORE TYPE: ZN,CU,PB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
AS:	200	
AU:	0.050	
BA:	200	
BE:	1	
CO:	30	
CU:	60	60
PB:	50	
SN:	1	
W:	1	
ZN:	150	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 450 TO 400 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	80	30
Monzodiorite	30	0
Quartz diorite	30	0
Quartz monzodiorite	30	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic

TEXTURES

Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
 Clinopyroxene
 Sphene
 Hornblende
 Apatite
 Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM

Anorthite content maximum: 60
Anorthite content minimum: 40

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 25.0
PLAG: 73.0
K-SPAR 0.0
MAFICS 2.0

Major Oxide Analysis

SIO2: 63.41
AL2O3: 16.86
FE2O3: 0.00
FEO: 2.88
MGO: 0.00
CAO: 1.47
NA2O: 7.38
K2O: 3.09
TIO2: 0.26
P2O5: 0.12
MNO: 0.28

Normative Minerals

QTZ: 25.0
ORTHOCLASE: 18.26
ALBITE: 62.44
ANORTHITE: 3.75
CORUNDUM: 0.00
DIOPSIDE: 2.46
HYPERSTHENE: 3.00
OLIVINE: 0.00
MAGNETITE: 1.28
ILMENITE: 0.49

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Hornblende

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Specular Hematite
Pyrite
Pyrrhotite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CR-1-35 NAME: COPPER QUEEN
LATITUDE: 055032000 LONGITUDE: 132023000
QUADRANGLE: CRAIG

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 5000 MINIMUM TONS: 50
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

MAX MIN

AG: Reported
AU: Reported
CU: Reported
FE: Reported

HOST ROCK CHARACTERISTICS

FORMATION: DESCON FM. AGE: ORD-SIL
TERRANE: ALEXANDER(CRAIG) THICKNESS: 10

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	0	0
Marl:	20	10
Mafic volc:	10	0
Int. Volc:	70	50
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	30	10

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: ZN-CU-PB VMS

ORE TYPE: ZN,CU,PB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
AS:	200	
AU:	0.050	
BA:	200	
BE:	1	
CO:	30	
CU:	60	60
MO:	5	
PB:	50	
SN:	1	
W:	1	
ZN:	150	
Y:	1	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 450 TO 400 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	30	10
Monzodiorite	0	0
Quartz diorite	60	30
Quartz monzodiorite	60	30
Tonalite	0	0
Quartz monzonite	40	20
Granodiorite	0	0
Syenite	10	10
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic

TEXTURES

Equigranular
Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 3
Minimum grain size: .5
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 90.0
K-SPAR 0.0
MAFICS 0.0

Major Oxide Analysis

SiO2: 63.41
AL2O3: 18.86
FE2O3: 1.00
FeO: 1.88
MGO: 0.05
CAO: 1.47
NA2O: 7.38
K2O: 3.09
TiO2: 0.26
P2O5: 0.12
MNO: 0.28

Normative Minerals

QTZ: 10.0
ORTHOCLASE: 19.00
ALBITE: 65.20
ANORTHITE: 3.90
CORUNDUM: 0.00
DIOPSIDE: 2.60
HYPERSTHENE: 2.60
OLIVINE: 0.00
MAGNETITE: 1.50
ILMENITE: 0.51

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CR-1-37
LATITUDE: 055032000

NAME: HOLE-IN-THE-WALL
LONGITUDE: 132018000

QUADRANGLE: CRAIG

CLASS: FE-AU

LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 15000 MINIMUM TONS: 1000
PRODUCTION: 50

GEOMETRY

LENGTH: 50.0 WIDTH: 25.0 DEPTH: 50

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG: Reported		
AU: Reported		
CU: Reported		
FE: Reported		

HOST ROCK CHARACTERISTICS

FORMATION: DESCON FM. AGE: ORD-SIL
TERRANE: ALEXANDER(CRAIG) THICKNESS: 30

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	5
Dolomite:	0	0
Marl:	10	5
Mafic volc:	20	0
Int. Volc:	70	50
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	30	10

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: ZN-CU-PB VMS
ORE TYPE: ZN,CU,PB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
AS:	200	
AU:	0.050	
BA:	200	
BE:	1	
CO:	30	
CU:	60	60
PB:	50	
SN:	1	
W:	1	
ZN:	150	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 450 TO 400 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	20	10
Monzodiorite	30	10
Quartz diorite	0	0
Quartz monzodiorite	60	30
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Propylitic

TEXTURES

Equigranular
Porphyritic
Seriata

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 5
Minimum grain size: 1

Anorthite content maximum: 50
Anorthite content minimum: 40

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 12.0
PLAG: 65.0
K-SPAR 13.0
MAFICS 10.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 5.0
PLAG: 55.0
K-SPAR 0.0
MAFICS 40.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 2.0
PLAG: 68.0
K-SPAR 20.0
MAFICS 10.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 7.0
PLAG: 50.0
K-SPAR 7.0
MAFICS 35.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: PR-1-1 NAME: NELSON & TIFT
LATITUDE: 054048000 LONGITUDE: 131058000
QUADRANGLE: PRINCE RUPERT

CLASS: FE-AU

LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 50000 MINIMUM TONS: 3000
PRODUCTION: 1300

GEOMETRY

LENGTH: 30.0 WIDTH: 10.0 DEPTH: 75

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	13.0	13.0
AU:	18.00	
CU:	Reported	

HOST ROCK CHARACTERISTICS

FORMATION: WALES GROUP AGE: PRE-
ORDOVICIAN
TERRANE: ALEXANDER(CRAIG) THICKNESS: 20

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	5	5

Dolomite:	0	0
Marl:	5	5
Mafic volc:	20	10
Int. Volc:	30	20
Felsic Volc:	30	10
Shale:	0	0
Black shale:	30	20
Quartzite:	5	5
Graywacke:	0	0

METAMORPHIC GRADE: AMPHIBOLITE
 NEARBY DEPOSIT TYPES: ZN-CU-PB VMS
 ORE TYPE: ZN, CU, PB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
BA:	300	
BE:	10	
CO:	25	
CU:	50	50
FE:	40000	
MO:	10	
NI:	60	
PB:	10	
ZN:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 510 TO 446 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	30	20
Monzodiorite	0	0
Quartz diorite	70	50
Quartz monzodiorite	0	0
Tonalite	30	10
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
 Propylitic
 Endoskarn present

TEXTURES

Equigranular
Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM

Anorthite content maximum: 40
Anorthite content minimum: 35

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 4.0
PLAG: 43.0
K-SPAR 1.0
MAFICS 52.0

Major Oxide Analysis

SiO₂: 52.60
Al₂O₃: 18.40
Fe₂O₃: 3.20
FeO: 4.90
MgO: 4.60
CaO: 9.50
Na₂O: 3.60
K₂O: 0.74
TiO₂: 0.66
P₂O₅: 0.24
MnO: 0.17

Normative Minerals

QTZ: 4.0
ORTHOCLASE: 4.50
ALBITE: 30.40
ANORTHITE: 31.70
CORUNDUM: 0.00
DIOPSIDE: 12.00
HYPERSTHENE: 12.00
OLIVINE: 0.00
MAGNETITE: 3.25
ILMENITE: 1.37

MINERAL COMPOSITION

QUARTZ: 1.0
PLAG: 56.0
K-SPAR 0.0
MAFICS 44.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 24.0
PLAG: 58.0
K-SPAR 4.0
MAFICS 14.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 48.0
K-SPAR 0.0
MAFICS 52.0

Major Oxide Analysis

Normative Minerals

SiO2: 46.40
Al2O3: 16.90
Fe2O3: 4.10
FeO: 7.20
MgO: 7.40
CaO: 11.50
Na2O: 1.60
K2O: 1.10
TiO2: 1.00
P2O5: 0.05
MnO: 0.22

QTZ: 0.0
ORTHOCLASE: 6.70
ALBITE: 13.60
ANORTHITE: 35.60
CORUNDUM: 0.00
DIOPSIDE: 17.24
HYPERSTHENE: 10.90
OLIVINE: 7.40
MAGNETITE: 6.00
ILMENITE: 2.00

MINERAL COMPOSITION

QUARTZ: 9.0
PLAG: 68.0
K-SPAR 4.0
MAFICS 19.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 16.0
PLAG: 58.0
K-SPAR 2.0
MAFICS 24.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 66.0
K-SPAR 0.0
MAFICS 34.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 4.0
PLAG: 31.0

K-SPAR 3.0
MAFICS 62.0

Major Oxide Analysis

SiO2: 45.00
Al2O3: 19.20
Fe2O3: 5.80
FeO: 6.80
MgO: 5.90
CaO: 10.20
Na2O: 2.80
K2O: 0.42
TiO2: 1.20
P2O5: 0.23
MnO: 0.22

Normative Minerals

Qtz: 4.0
Orthoclase: 2.20
Albite: 23.60
Anorthite: 38.60
Corundum: 0.00
Diopside: 8.96
Hypersthene: 4.55
Olivine: 8.50
Magnetite: 8.40
Ilmenite: 2.30

MINERAL COMPOSITION

Quartz: 9.0
Plag: 48.0
K-SPAR 1.0
MAFICS 42.0

Major Oxide Analysis

SiO2: 55.10
Al2O3: 17.80
Fe2O3: 2.70
FeO: 5.20
MgO: 3.30
CaO: 6.10
Na2O: 4.00
K2O: 1.90
TiO2: 0.98
P2O5: 0.35
MnO: 0.20

Normative Minerals

Qtz: 9.0
Orthoclase: 11.10
Albite: 34.10
Anorthite: 25.00
Corundum: 0.00
Diopside: 2.26
Hypersthene: 13.10
Olivine: 0.00
Magnetite: 3.90
Ilmenite: 2.00

MINERAL COMPOSITION

Quartz: 22.0
Plag: 54.0
K-SPAR 2.0
MAFICS 22.0

Major Oxide Analysis

MINERAL COMPOSITION

Quartz: 13.0
Plag: 69.0
K-SPAR 2.0
MAFICS 16.0

Normative Minerals

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Wollastonite
Epidote
Actinolite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrrhotite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: MC-1-6 NAME: COLORADO
LATITUDE: 061057000 LONGITUDE: 141003000
QUADRANGLE: MCCARTHY

CLASS: FE-AU

LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS:	5000	MINIMUM TONS:	500
PRODUCTION:	10		

GEOMETRY

LENGTH:	-1.0	WIDTH:	-1.0	DEPTH:	-1
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SHAPE:

REPORTED ASSAY VALUES

MAX	MIN
-----	-----

AU:	Reported
CU:	Reported
FE:	Reported
AS:	Reported

HOST ROCK CHARACTERISTICS

FORMATION: NUTZOTIN MTNS SEQUENCE AGE: JURASSIC
TERRANE: WRANGELLIA THICKNESS: 20

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	5	5
Dolomite:	0	0
Marl:	0	0
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	35	35
Black shale:	0	0
Quartzite:	0	0
Graywacke:	60	60

METAMORPHIC GRADE: L.GREENSCHIST
NEARBY DEPOSIT TYPES: NONE
ORE TYPE:

HOST ROCK ASSAY VALUES

MAX MIN

CU: Reported

INTRUSIVE ROCK CHARACTERISTICS

AGE: 115 TO 108 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	50	30
Monzodiorite	20	10
Quartz diorite	0	0
Quartz monzodiorite	50	30
Tonalite	0	0
Quartz monzonite	20	10
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock
Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 8.0
PLAG: 78.0
K-SPAR 14.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 9.0
PLAG: 83.0
K-SPAR 8.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 11.0
PLAG: 52.0
K-SPAR 17.0
MAFICS 20.0

Major Oxide Analysis

Normative Minerals

SiO₂: 47.80
Al₂O₃: 17.60
Fe₂O₃: 4.40
FeO: 6.00
MgO: 5.80
CaO: 11.10
Na₂O: 2.90

Qtz: 11.0
Orthoclase: 5.90
Albite: 24.60
Anorthite: 32.10
Corundum: 0.00
Diopside: 30.50
Hypersthene: 0.00

K2O: 1.00
TiO2: 0.90
P2O5: 0.32
MNO: 0.24

OLIVINE: 0.00
MAGNETITE: 4.70
ILMENITE: 1.20

MINERAL COMPOSITION

QUARTZ: 1.0
PLAG: 84.0
K-SPAR 15.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 19.0
PLAG: 49.0
K-SPAR 32.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 4.0
PLAG: 89.0
K-SPAR 7.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 13.0
PLAG: 58.0
K-SPAR 29.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 10.0
PLAG: 67.0
K-SPAR 23.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 13.0
PLAG: 68.0
K-SPAR 19.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 5.0
PLAG: 95.0
K-SPAR 0.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 16.0
PLAG: 53.0
K-SPAR 31.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 1.0
PLAG: 91.0
K-SPAR 8.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 60.0
K-SPAR 20.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 11.0
PLAG: 62.0
K-SPAR 27.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 3.0
PLAG: 69.0
K-SPAR 28.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 58.0
K-SPAR 4.0
MAFICS 38.0

Major Oxide Analysis

Normative Minerals

SIO2: 58.50
AL2O3: 17.10
FE2O3: 3.20
FEO: 3.50
MGO: 2.50
CAO: 5.90
NA2O: 3.70
K2O: 2.80
TIO2: 0.64
P2O5: 0.29
MNO: 0.16

QTZ: 0.0
ORTHOCLASE: 16.70
ALBITE: 31.50
ANORTHITE: 21.90
CORUNDUM: 0.00
DIOPSIDE: 58.80
HYPERSTHENE: 0.00
OLIVINE: 0.00
MAGNETITE: 7.60
ILMENITE: 2.70

MINERAL COMPOSITION

QUARTZ: 15.0
PLAG: 34.0
K-SPAR 51.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 4.0
PLAG: 94.0
K-SPAR 2.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 1.0
PLAG: 98.0
K-SPAR 1.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 1.0
PLAG: 99.0
K-SPAR 0.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ORE TYPE: ZN, CU, AG, BA

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
BA:	250	
CO:	10	
CU:	30	30
MO:	3	
NI:	15	
PB:	4	
SN:	10	
V:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 115 TO 110 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	30	10
Monzodiorite	0	0
Quartz diorite	60	30
Quartz monzodiorite	60	30
Tonalite	30	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Propylitic

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 15.0
PLAG: 65.0
K-SPAR 10.0
MAFICS 10.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 65.0
K-SPAR 8.0
MAFICS 7.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite
Arsenopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: MF-1-13 NAME: DUNDAS BAY NE
LATITUDE: 058028000 LONGITUDE: 136034000
QUADRANGLE: MT. FAIRWEATHER

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 200000 MINIMUM TONS: 500
PRODUCTION: 0

GEOMETRY

LENGTH: 100.0 WIDTH: 20.0 DEPTH: 150

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	7.0	7.0
AU:	1.00	
CU:	1000	1000
MO:	7.0	
SN:	20	
W:	20.0	
BI:	200	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: SIL-DEV
TERRANE: ALEXANDER (CRAIG) THICKNESS: 150

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	30	10
Dolomite:	0	0
Marl:	0	0
Mafic volc:	30	20
Int. Volc:	50	20
Felsic Volc:	30	0
Shale:	30	10
Black shale:	0	0
Quartzite:	0	0
Graywacke:	30	10

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: ZN-CU-BA VMS
ORE TYPE: ZN,CU,BA

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
AU:	0.050	
BA:	250	
BE:	1	
CO:	10	
CU:	30	30
MO:	3	
NI:	15	
PB:	4	
SN:	10	
ZN:	20	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 115 TO 110 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	100	100
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Propylitic

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing.

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 2.0
PLAG: 72.0
K-SPAR 0.0
MAFICS 26.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Wollastonite
Idocrase
Epidote
Actinolite
Chlorite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

ID NUMBER: MF-2-5 NAME: 3850 NUNATAK
LATITUDE: 058057000 LONGITUDE: 136059000
QUADRANGLE: MT. FAIRWEATHER

CLASS: FE-AU

LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 20000 MINIMUM TONS: 100
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

AGE: 80 TO 50 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	30	0
Granodiorite	30	10
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic
Propylitic

TEXTURES

Equigranular
Porphyritic
Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock
Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Actinolite

Chlorite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Pyrhottite
Chalcopyrite
Bornite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Actinolite
Chlorite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Pyrhottite
Chalcopyrite
Bornite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: HY-1-5
LATITUDE: 063010000
QUADRANGLE: HEALY

NAME: COPELAND CREEK
LONGITUDE: 149048000

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 10000 MINIMUM TONS: 100
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	3.0	3.0
AU:	0.20	
CU:	1000	1000
MO:	10.0	
PB:	10	
SN:	10	
ZN:	200	
AS:	300	
BE:	1	
BI:	10	
CD:	20	
CO:	40	
TI:	3000	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: TRIASSIC
TERRANE: CHULITNA THICKNESS: 100

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	40	30
Dolomite:	0	0
Marl:	40	30
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	30	20
Black shale:	0	0
Quartzite:	20	10

Graywacke: 20 10

METAMORPHIC GRADE: GREENSCHIST

NEARBY DEPOSIT TYPES:

ORE TYPE:

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.5	
AS:	200	
AU:	0.020	
BA:	300	
BE:	1	
BI:	10	
CO:	15	
CU:	30	30
MO:	3	
NI:	150	
PB:	10	
SN:	10	
W:	50	
ZN:	200	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 68 TO 65 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	100	100
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 70.0
K-SPAR 0.0
MAFICS 30.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrrhotite
Chalcopyrite
Gold

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CR-1-34 NAME: CU KING-MORNING STAR
LATITUDE: 055034000 LONGITUDE: 132026000
QUADRANGLE: CRAIG

CLASS: FE-AU

LOCALIZATION: VOLC CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1500 MINIMUM TONS: 500
PRODUCTION: 50

GEOMETRY

LENGTH: 30.0 WIDTH: 10.0 DEPTH: 30

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG: Reported		
AU: 3.00		
CU: 30000		30000
FE: Reported		

HOST ROCK CHARACTERISTICS

FORMATION: DESCON FM. AGE: ORD-SIL
 TERRANE: ALEXANDER (CRAIG) THICKNESS: 20

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	0	0
Marl:	20	10
Mafic volc:	10	0
Int. Volc:	60	20
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	30	10

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: ZN-CU-PB VMS
 ORE TYPE: ZN, CU, PB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG: 1.0		
AS: 200		
AU: 0.050		
BA: 200		
BE: 1		
CO: 20		
CU: 60		60
MO: 5		

PB: 50
SN: 1
W: 1
ZN: 150

INTRUSIVE ROCK CHARACTERISTICS

AGE: 450 TO 400 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	60	40
Monzodiorite	0	0
Quartz diorite	50	30
Quartz monzodiorite	50	30
Tonalite	10	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Endoskarn present

TEXTURES

Equigranular
Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: ANC-1-1 NAME: TERRY'S SKARN
LATITUDE: 061042000 LONGITUDE: 148029000
QUADRANGLE: ANCHORAGE

CLASS: FE-AU

LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 200 MINIMUM TONS: 20
PRODUCTION: 0

GEOMETRY

LENGTH: 5.0 WIDTH: 2.0 DEPTH: 20
SHAPE: TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	0.3	0.3
AU:	0.10	
CU:	400	400
PB:	15	
W:	2.0	
ZN:	45	
CO:	40	
NI:	80	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: U. PALEOZOIC
TERRANE: PENINSULAR THICKNESS: 10

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	2	2
Dolomite:	0	0
Marl:	0	0
Mafic volc:	30	30
Int. Volc:	18	18
Felsic Volc:	0	0
Shale:	30	30
Black shale:	0	0
Quartzite:	20	20
Graywacke:	0	0

METAMORPHIC GRADE: AMPHIBOLITE
NEARBY DEPOSIT TYPES: STRATIFORM CU
ORE TYPE: CU

HOST ROCK ASSAY VALUES

MAX MIN

INTRUSIVE ROCK CHARACTERISTICS

AGE: 180 TO 160 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	30	20
Monzodiorite	0	0
Quartz diorite	50	30
Quartz monzodiorite	0	0
Tonalite	30	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Endoskarn present

TEXTURES

Equigranular
Seriatic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 3 MM
Minimum grain size: 3 MM

Anorthite content maximum: 50
Anorthite content minimum: 30

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION
QUARTZ: 13.0

PLAG: 63.0
K-SPAR 2.0
MAFICS 22.0

Major Oxide Analysis

SiO2: 52.42
Al2O3: 16.76
Fe2O3: 3.33
FeO: 8.00
MgO: 5.58
CaO: 7.88
Na2O: 1.98
K2O: 0.09
TiO2: 0.39
P2O5: 0.06
MnO: 0.22

Normative Minerals

Qtz: 13.0
Orthoclase: 0.55
Albite: 23.29
Anorthite: 34.70
Corundum: 0.00
Diopside: 4.44
Hypersthene: 26.85
Olivine: 0.00
Magnetite: 2.84
Ilmenite: 0.77

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Idocrase
Epidote
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite: 90.0
Pyrope: 0.0
Grossularite: 10.0
Almandite: 0.0
Spessartite: 0.0

PYROXENE MINERALS

MAXIMUM TONS: 1000 MINIMUM TONS: 50
PRODUCTION: 0

GEOMETRY

LENGTH: 20.0 WIDTH: 10.0 DEPTH: 50

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG: Reported		
AU: Reported		
CU: Reported		
FE: Reported		

HOST ROCK CHARACTERISTICS

FORMATION: DESCON FM. AGE: ORD-SIL
TERRANE: ALEXANDER(CRAIG) THICKNESS: 10

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	30	10
Dolomite:	0	0
Marl:	30	10
Mafic volc:	20	0
Int. Volc:	70	40
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	40	20

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: ZN-CU-PB VMS
ORE TYPE: ZN,CU,PB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
AS:	200	
AU:	0.050	
BA:	200	
BE:	1	

CO: 30
 CU: 60 60
 MO: 5
 PB: 50
 SN: 1
 W: 1
 ZN: 150

INTRUSIVE ROCK CHARACTERISTICS

AGE: 450 TO 400 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	30	10
Monzodiorite	0	0
Quartz diorite	70	30
Quartz monzodiorite	70	30
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
 Propylitic

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

Clinopyroxene
 Sphene
 Hornblende
 Apatite
 Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
 Minimum grain size: MEDIUM

Anorthite content maximum: 50
 Anorthite content minimum: 50

METAMORPHIC GRADE: AMPHIBOLITE
NEARBY DEPOSIT TYPES: PB-ZN-CU VMS
ORE TYPE: PB,ZN,CU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
BA:	1000	
BE:	1	
CO:	20	
CU:	40	40
MO:	5	
NI:	30	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 100 TO 80 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	80	30
Quartz monzodiorite	50	0
Tonalite	30	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic

TEXTURES

Equigranular

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrhottite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrhottite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:
ID NUMBER: TM-1-1 NAME: ADAMS-PESSEL PROSP.
LATITUDE: 062028000 LONGITUDE: 148032000
QUADRANGLE: TALKEETNA MOUNTAINS

CLASS: FE-AU
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 100 MINIMUM TONS: 1
PRODUCTION: 0

GEOMETRY

LENGTH: 10.0 WIDTH: 3.0 DEPTH: 20

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
CU:	Reported	
FE:	Reported	

HOST ROCK CHARACTERISTICS

FORMATION: PZV AGE: PENN-PERM
TERRANE: WRANGELLIA THICKNESS: 20

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	10
Dolomite:	0	0
Marl:	0	0
Mafic volc:	60	30
Int. Volc:	60	30
Felsic Volc:	10	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: U.GREENSCHIST
NEARBY DEPOSIT TYPES: CU-ZN-AU-AG VMS
ORE TYPE: CU,ZN,AU,AG

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	1.0	
AU:	0.030	
BA:	200	
CO:	30	
CU:	100	100
NI:	30	
SN:	1	
W:	1	
ZN:	140	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 190 TO 160 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	30	10
Monzodiorite	0	0
Quartz diorite	60	30
Quartz monzodiorite	60	30
Tonalite	0	0
Quartz monzonite	60	30
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic

TEXTURES

Equigranular
Seriata

MAFIC AND ACCESSORY MINERALS PRESENT

Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock
Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 4
Minimum grain size: 2

Anorthite content maximum: 45
Anorthite content minimum: 30

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 5.0
PLAG: 43.0
K-SPAR 36.0
MAFICS 16.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 15.0
PLAG: 67.0
K-SPAR 4.0
MAFICS 14.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 0.0
PLAG: 78.0
K-SPAR 0.0
MAFICS 22.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 8.0
PLAG: 81.0
K-SPAR 3.0
MAFICS 8.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Idocrase
Epidote
Actinolite
Chlorite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: HY-1-3
LATITUDE: 063002000
QUADRANGLE: HEALY

NAME: BUTTE CREEK
LONGITUDE: 147037000

CLASS: FE-AU
LOCALIZATION:

REPORTED TONNAGES

MISSING
PRODUCTION: -1

GEOMETRY

LENGTH: 100.0 WIDTH: 5.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

MAX MIN

AU: Reported
CU: Reported

HOST ROCK CHARACTERISTICS

FORMATION: AGE: TRIASSIC
TERRANE: WRANGELLIA THICKNESS: 300

GENERALIZED HOST ROCK COMPOSITION:

MAXIMUM MINIMUM
Limestone: 20 10

Dolomite:	0	0
Marl:	0	0
Mafic volc:	80	60
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	30	10
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE:
 NEARBY DEPOSIT TYPES:
 ORE TYPE:

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.4	
AS:	20	
AU:	0.005	
BA:	250	
CO:	20	
CU:	200	200
MO:	10	
NI:	20	
PB:	5	
ZN:	140	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 143 TO 130 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	100	70
Monzodiorite	0	0
Quartz diorite	30	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Hornblende

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

Major Oxide Analysis

SiO₂: 48.60
Al₂O₃: 13.67
Fe₂O₃: 2.69
FeO: 12.12
MgO: 5.71
CaO: 8.03
Na₂O: 2.95
K₂O: 1.10
TiO₂: 1.35
P₂O₅: 0.19
MnO: 0.18

Normative Minerals

QTZ: -1.0
ORTHOCLASE: -1.00
ALBITE: -1.00
ANORTHITE: -1.00
CORUNDUM: -1.00
DIOPSIDE: -1.00
HYPERSTHENE: -1.00
OLIVINE: -1.00
MAGNETITE: -1.00
ILMENITE: -1.00

Major Oxide Analysis

SiO₂: 60.20
Al₂O₃: 19.64
Fe₂O₃: 1.56
FeO: 4.10
MgO: 3.21
CaO: 2.45
Na₂O: 2.92
K₂O: 3.35
TiO₂: 1.90
P₂O₅: 0.23
MnO: 0.03

Normative Minerals

QTZ: -1.0
ORTHOCLASE: -1.00
ALBITE: -1.00
ANORTHITE: -1.00
CORUNDUM: -1.00
DIOPSIDE: -1.00
HYPERSTHENE: -1.00
OLIVINE: -1.00
MAGNETITE: -1.00
ILMENITE: -1.00

Major Oxide Analysis

SiO₂: 55.66
Al₂O₃: 14.28
Fe₂O₃: 1.42
FeO: 5.80
MgO: 8.21
CaO: 5.62
Na₂O: 1.70
K₂O: 0.21
TiO₂: 0.69

Normative Minerals

QTZ: -1.0
ORTHOCLASE: -1.00
ALBITE: -1.00
ANORTHITE: -1.00
CORUNDUM: -1.00
DIOPSIDE: -1.00
HYPERSTHENE: -1.00
OLIVINE: -1.00
MAGNETITE: -1.00

P2O5: 0.49
MNO: 0.09

ILMENITE: -1.00

Major Oxide Analysis

SiO2: 50.26
Al2O3: 17.73
Fe2O3: 2.05
FeO: 6.19
MgO: 5.17
CaO: 6.92
Na2O: 2.85
K2O: 1.76
TiO2: 1.14
P2O5: 0.60
MNO: 0.13

Normative Minerals

QTZ: -1.0
ORTHOCLASE: -1.00
ALBITE: -1.00
ANORTHITE: -1.00
CORUNDUM: -1.00
DIOPSIDE: -1.00
HYPERSTHENE: -1.00
OLIVINE: -1.00
MAGNETITE: -1.00
ILMENITE: -1.00

SKARN ORE MINERALS PRESENT

Magnetite
Chalcopyrite
Gold

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN ORE MINERALS PRESENT

Magnetite
Chalcopyrite
Gold

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: NB-1-3
LATITUDE: 062023000
QUADRANGLE: NABESNA

NAME: RAMBLER(GOLDEN EAGLE
LONGITUDE: 143000000

CLASS: FE-AU
LOCALIZATION: VEIN

REPORTED TONNAGES

MAXIMUM TONS: 300000 MINIMUM TONS: 10000
PRODUCTION: 0

GEOMETRY

LENGTH: 60.0 WIDTH: 20.0 DEPTH: 200

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	20	15
Quartz monzodiorite	80	70
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	5	5
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Albitic
Propylitic

TEXTURES

Porphyritic
Seriatic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 3 MM
Minimum grain size: 1 MM

Anorthite content maximum: 40
Anorthite content minimum: 30

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 14.0
PLAG: 58.0
K-SPAR 18.0
MAFICS 20.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 13.0
PLAG: 41.0
K-SPAR 14.0
MAFICS 32.0

Major Oxide Analysis

SiO2: 53.01
Al2O3: 91.98
Fe2O3: 2.93
FeO: 6.00
MgO: 3.82
CaO: 9.07
Na2O: 2.93
K2O: 1.41
TiO2: 0.68
P2O5: 0.17
MnO: 0.14

Normative Minerals

QTZ: 13.0
ORTHOCLASE: 8.30
ALBITE: 24.80
ANORTHITE: 34.50
CORUNDUM: 0.00
DIOPSIDE: 7.80
HYPERSTHENE: 15.30
OLIVINE: 0.00
MAGNETITE: 3.20
ILMENITE: 1.30

MINERAL COMPOSITION

QUARTZ: 7.0
PLAG: 62.0
K-SPAR 2.0
MAFICS 29.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Actinolite
Chlorite
Serpentinite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrhottite
Chalcopyrite
Gold

ORE PARAGENESIS:

NEARBY DEPOSIT TYPES: CU-AG KENNECOTT TYPE
ORE TYPE: CU,AG

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.4	
AS:	20	
AU:	0.005	
BA:	200	
CO:	40	
CU:	100	100
MO:	10	
NI:	40	
PB:	15	
ZN:	140	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 116 TO 112 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	10	0
Monzodiorite	50	30
Quartz diorite	10	10
Quartz monzodiorite	60	50
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	5	5
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Potassic
Sericitic
Albitic
Propylitic
Endoskarn present

TEXTURES

Equigranular
Porphyritic
Seriata

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene

Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 2 MM
Minimum grain size: 2 MM

Anorthite content maximum: 40
Anorthite content minimum: 30

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 12.0
PLAG: 54.0
K-SPAR 4.0
MAFICS 30.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 16.0
PLAG: 54.0
K-SPAR 5.0
MAFICS 25.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 14.0
PLAG: 58.0
K-SPAR 18.0
MAFICS 20.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 9.0
PLAG: 48.0
K-SPAR 20.0
MAFICS 23.0

Major Oxide Analysis

Normative Minerals

SiO2: 55.97
Al2O3: 17.15

QTZ: 9.0
ORTHOCLASE: 10.60

FE2O3:	2.46	ALBITE:	26.30
FEO:	6.00	ANORTHITE:	27.60
MGO:	4.20	CORUNDUM:	0.00
CAO:	8.18	DIOPSIDE:	10.00
NA2O:	3.11	HYPERSTHENE:	6.00
K2O:	1.79	OLIVINE:	0.00
TIO2:	0.75	MAGNETITE:	3.30
P2O5:	0.14	ILMENITE:	1.40
MNO:	0.15		

SKARN MINERAL DATA

SKARN MINERALS

Garnet
 Pyroxene
 Idocrase
 Actinolite
 Chlorite
 Serpentinite
 Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
 Hematite
 Specular Hematite
 Pyrite
 Pyrhottite
 Chalcopyrite
 Sphalerite
 Arsenopyrite
 Gold

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite:	80.0
Pyrope:	0.0
Grossularite:	20.0
Almandite:	0.0
Spessartite:	0.0

PYROXENE MINERALS

Missing

ID NUMBER: 103-5-1 NAME: DURYEA (SILVER BELL)
LATITUDE: 059041000 LONGITUDE: 153056000
QUADRANGLE: ILIAMNA

CLASS: PB-ZN
LOCALIZATION: FLT CON. OF LMS/J QD

REPORTED TONNAGES

MAXIMUM TONS: 10000 MINIMUM TONS: 10
PRODUCTION: 0

GEOMETRY

LENGTH: 300.0 WIDTH: 50.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	680.0	680.0
CU:	1000	1000
PB:	50000	
ZN:	20000	

HOST ROCK CHARACTERISTICS

FORMATION: BRUIN BAY LMS AGE: TRIASSIC
TERRANE: PENINSULAR THICKNESS: 200

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	30	20
Dolomite:	0	0
Marl:	10	0
Mafic volc:	60	40
Int. Volc:	20	10
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	30	10
Graywacke:	20	10

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: BASALT-CU
ORE TYPE: CU

HOST ROCK ASSAY VALUES

MAX MIN

CU: Reported

INTRUSIVE ROCK CHARACTERISTICS

AGE: 180 TO 160 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	80	50
Quartz monzodiorite	40	10
Tonalite	20	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Clinopyroxene
Hornblende
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Pyrrhotite
Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Pyrhottite
Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: BR-5-1 NAME: NELSON GLACIER
LATITUDE: 056029000 LONGITUDE: 131059420
QUADRANGLE: BRADFIELD CANAL

CLASS: PB-ZN
LOCALIZATION: DIKE CONTACTS

REPORTED TONNAGES

MAXIMUM TONS: 10000 MINIMUM TONS: 500
PRODUCTION: 0

GEOMETRY

LENGTH: 25.0 WIDTH: 8.5 DEPTH: -1

SHAPE: ELONGATE ELLIPSOID

REPORTED ASSAY VALUES

	MAX	MIN
AG:	0.0	0.0
CU:	1000	1000
PB:	10000	
ZN:	10000	

HOST ROCK CHARACTERISTICS

FORMATION:
TERRANE: TAKU

AGE:
THICKNESS: 20

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	5
Dolomite:	0	0
Marl:	0	0
Mafic volc:	60	40
Int. Volc:	30	10
Felsic Volc:	0	0
Shale:	50	20
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: AMPHIBOLITE
NEARBY DEPOSIT TYPES: PB-ZN-AU-CU VMS
ORE TYPE: PB,ZN,AU,CU

HOST ROCK ASSAY VALUES

	MAX	MIN
AU:	Reported	
CU:	Reported	
PB:	Reported	
ZN:	Reported	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 20 TO 20 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	100	100
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Sphalerite
Galena
Fluorite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

	MAXIMUM	MINIMUM
Limestone:	30	10
Dolomite:	0	0
Marl:	0	0
Mafic volc:	0	0
Int. Volc:	40	20
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: BA (VMS?)
 ORE TYPE:

HOST ROCK ASSAY VALUES

MAX MIN

INTRUSIVE ROCK CHARACTERISTICS

AGE: -1 TO -1 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: 117-5-1 NAME: NORTHERN CU CO.
LATITUDE: 056053000 LONGITUDE: 133022000
QUADRANGLE: PETERSBURG

CLASS: PB-ZN
LOCALIZATION: LMS/SLATE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 50000 MINIMUM TONS: 1000
PRODUCTION: 0

GEOMETRY

LENGTH: 120.0 WIDTH: 10.0 DEPTH: -1

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	2.0	2.0
CU:	2000	2000
PB:	100	
ZN:	30000	
BA:	200	
BE:	2	
CD:	200	
CO:	15	
NI:	10	
V:	50	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: JUR-
CRETACEOUS
TERRANE: ALEXANDER (ADMLTY) THICKNESS: 50

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	15	5
Dolomite:	0	0
Marl:	0	0
Mafic volc:	60	40
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	60	20
Black shale:	0	0
Quartzite:	40	20
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST?
NEARBY DEPOSIT TYPES: BARITE
ORE TYPE: BA

HOST ROCK ASSAY VALUES

MAX MIN

BA: Reported

INTRUSIVE ROCK CHARACTERISTICS

AGE: 65 TO 25 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	80	50
Monzodiorite	0	0
Quartz diorite	50	20
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrrhotite
Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrrhotite
Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: 117-5-2 NAME: GROUNDHOG BASIN
LATITUDE: 056031000 LONGITUDE: 132004000
QUADRANGLE: PETERSBURG

CLASS: PB-ZN
LOCALIZATION: SCHIST/MB CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1000000 MINIMUM TONS: 200000
PRODUCTION: 0

GEOMETRY

LENGTH: 3200.0 WIDTH: 3.0 DEPTH: -1

SHAPE: STRATIFORM

REPORTED ASSAY VALUES

	MAX	MIN
AG:	51.0	51.0
AU:	0.34	
CU:	300	300
MO:	Reported	
PB:	15000	
ZN:	80000	
F:	Reported	

HOST ROCK CHARACTERISTICS

FORMATION: TRIASSIC AGE: PERMIAN-
TERRANE: TAKU THICKNESS: 5

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	5
Dolomite:	0	0
Marl:	0	0
Mafic volc:	60	40
Int. Volc:	30	10
Felsic Volc:	0	0
Shale:	50	20
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: U.GREENSCHIST
NEARBY DEPOSIT TYPES: PB-ZN-(CU-AU) VMS
ORE TYPE: PB,ZN,CU,AU

HOST ROCK ASSAY VALUES

MAX MIN

INTRUSIVE ROCK CHARACTERISTICS

AGE: 17 TO 17 M.Y.

HOST ROCK LITHOLOGY

MAXIMUM MINIMUM

Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	-1	-1
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic

TEXTURES

Porphyritic

Porphyry

Seriate

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:

Minimum grain size:

Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet

Pyroxene

Epidote

Actinolite

Biotite

Plagioclase

Apatite

Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrhottite
Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Actinolite
Biotite
Plagioclase
Apatite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrhottite
Chalcopyrite
Sphalerite

Limestone:	20	20
Dolomite:	0	0
Marl:	0	0
Mafic volc:	70	50
Int. Volc:	10	10
Felsic Volc:	0	0
Shale:	0	0
Black shale:	5	5
Quartzite:	0	0
Graywacke:	40	20

METAMORPHIC GRADE: AMPHIBOLITE

NEARBY DEPOSIT TYPES:

ORE TYPE: AU, SN, PB

HOST ROCK ASSAY VALUES

	MAX	MIN
AU:	Reported	
SN:	Reported	

INTRUSIVE ROCK CHARACTERISTICS

AGE: -1 TO -1 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	-1	-1
Monzodiorite	-1	-1
Quartz diorite	-1	-1
Quartz monzodiorite	-1	-1
Tonalite	-1	-1
Quartz monzonite	-1	-1
Granodiorite	-1	-1
Syenite	-1	-1
Alkali granite	-1	-1

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

No exposures

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Pyroxene
Actinolite
Chlorite
Apatite
Sphene
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Pyroxene
Actinolite
Chlorite
Apatite
Sphene
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

HOST ROCK ASSAY VALUES

MAX MIN
AU: Reported
SN: Reported

INTRUSIVE ROCK CHARACTERISTICS

AGE: -1 TO -1 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	-1	-1
Monzodiorite	-1	-1
Quartz diorite	-1	-1
Quartz monzodiorite	-1	-1
Tonalite	-1	-1
Quartz monzonite	-1	-1
Granodiorite	-1	-1
Syenite	-1	-1
Alkali granite	-1	-1

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

No exposures

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Pyroxene
Actinolite
Chlorite
Apatite

Sphene
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Pyroxene
Actinolite
Chlorite
Apatite
Sphene
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

Marl:	0	0
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	80	50
Black shale:	0	0
Quartzite:	30	20
Graywacke:	0	0

METAMORPHIC GRADE: U.GREENSCHIST
 NEARBY DEPOSIT TYPES: PLACER AU
 ORE TYPE: AU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AS:	150	
AU:	Reported	
CU:	50	50
MO:	5	
PB:	20	
SN:	2	
W:	3	
ZN:	60	

INTRUSIVE ROCK CHARACTERISTICS

AGE: -1 TO -1 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	-1	-1
Monzodiorite	-1	-1
Quartz diorite	-1	-1
Quartz monzodiorite	-1	-1
Tonalite	-1	-1
Quartz monzonite	-1	-1
Granodiorite	-1	-1
Syenite	-1	-1
Alkali granite	-1	-1

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

No exposures

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

**Maximum grain size:
Minimum grain size:
Anorthite content missing**

INTRUSIVE COMPOSITION DATA

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

**Pyroxene
Actinolite**

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

**Magnetite
Chalcopyrite
Sphalerite
Galena**

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

**ID NUMBER: MC-5-1
LATITUDE: 061202000**

**NAME: O'HARA
LONGITUDE: 143050240**

QUADRANGLE: MCCARTHY

CLASS: PB-ZN

LOCALIZATION: FAULT

REPORTED TONNAGES

MAXIMUM TONS: 5000 MINIMUM TONS: 10
PRODUCTION: 10

GEOMETRY

LENGTH: 30.0 WIDTH: 0.5 DEPTH: -1

SHAPE: VEIN

REPORTED ASSAY VALUES

	MAX	MIN
AG: Reported		
PB: Reported		
ZN: Reported		

HOST ROCK CHARACTERISTICS

FORMATION: SKOLAI GROUP AGE: PENN-PERM
TERRANE: WRANGELLIA THICKNESS: 50

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	20
Dolomite:	0	0
Marl:	0	0
Mafic volc:	70	50
Int. Volc:	30	10
Felsic Volc:	0	0
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: CU-ZN-PB VMS
ORE TYPE: CU, ZN, PB

HOST ROCK ASSAY VALUES

MAX	MIN
-----	-----

AG: 0.4
AS: 20
AU: 0.005
BA: 250
CO: 26
CU: 100 100
MO: 10
NI: 20
PB: 5
ZN: 140

INTRUSIVE ROCK CHARACTERISTICS

AGE: -1 TO -1 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	-1	-1
Monzodiorite	-1	-1
Quartz diorite	-1	-1
Quartz monzodiorite	-1	-1
Tonalite	-1	-1
Quartz monzonite	-1	-1
Granodiorite	-1	-1
Syenite	-1	-1
Alkali granite	-1	-1

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

No exposures

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Pyrhottite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Pyrhottite
Sphalerite
Galena

ORE PARAGENESIS:

Marl:	0	0
Mafic volc:	0	0
Int. Volc:	70	50
Felsic Volc:	0	0
Shale:	20	10
Black shale:	0	0
Quartzite:	0	0
Graywacke:	20	10

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES:
 ORE TYPE: BA,AU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AU:	0.005	
BA:	300	
CO:	20	
CU:	60	60
MO:	3	
NI:	20	
PB:	20	
ZN:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: -1 TO -1 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	100	100
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic

TEXTURES

Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Chlorite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Chlorite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: MK-5-1 NAME: SLIPPERY CREEK
LATITUDE: LONGITUDE:
QUADRANGLE: MT. MCKINLEY

CLASS: PB-ZN
LOCALIZATION: DIKE CONTACTS

REPORTED TONNAGES

MAXIMUM TONS: 1000000 MINIMUM TONS: 100000
PRODUCTION: 0

GEOMETRY

LENGTH: 1500.0 WIDTH: 25.0 DEPTH: -1

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	50.0	50.0
AU:	0.30	
CU:	10000	10000
PB:	10000	
ZN:	10000	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: TRIASSIC
 TERRANE: PINGSTON THICKNESS: 100

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	0	0
Marl:	0	0
Mafic volc:	20	10
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	40	30
Black shale:	10	10
Quartzite:	20	10
Graywacke:	30	20

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: ?
 ORE TYPE:

HOST ROCK ASSAY VALUES

MAX MIN

INTRUSIVE ROCK CHARACTERISTICS

AGE: 38 TO 38 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0

Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic

TEXTURES

Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Hornblende
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 30.0
PLAG: 60.0
K-SPAR 10.0
MAFICS -1.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 35.0
PLAG: 50.0
K-SPAR 15.0
MAFICS -1.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 37.0
PLAG: 20.0
K-SPAR 43.0
MAFICS -1.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrrhotite
Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: MH-5-1
LATITUDE: 063012000
QUADRANGLE: MT. HAYES

NAME: MENDENHALL
LONGITUDE: 145001420

CLASS: PB-ZN
LOCALIZATION: VEIN

REPORTED TONNAGES

MAXIMUM TONS: 100 MINIMUM TONS: 1
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

MAX MIN

AG: Reported
ZN: Reported

HOST ROCK CHARACTERISTICS

FORMATION: AGE: PENN-PERM
TERRANE: WRANGELLIA THICKNESS: 10

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	5	5
Dolomite:	0	0
Marl:	0	0
Mafic volc:	0	0
Int. Volc:	80	60
Felsic Volc:	30	20
Shale:	0	0
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: CU-PB-ZN VMS
ORE TYPE: CU, PB, ZN

HOST ROCK ASSAY VALUES

MAX MIN

AG: 0.4
AS: 20
AU: 0.005
BA: 250
CO: 26
CU: 100 100
MO: 10
NI: 20
PB: 15
ZN: 140

INTRUSIVE ROCK CHARACTERISTICS

AGE: -1 TO -1 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

No exposures

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Epidote
Chlorite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Epidote
Chlorite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

HOST ROCK ASSAY VALUES

MAX MIN
AU: Reported
CU: Reported
PB: Reported
ZN: Reported

INTRUSIVE ROCK CHARACTERISTICS

AGE: 20 TO 15 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	100	100
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic

TEXTURES

Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Pyroxene
Plagioclase

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrrhotite
Chalcopyrite
Sphalerite
Galena
Fluorite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Pyroxene
Plagioclase

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrrhotite
Chalcopyrite

Sphalerite
Galena
Fluorite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: PB-5-4 NAME: TAYLOR CREEK
LATITUDE: 056047360 LONGITUDE: 133021450
QUADRANGLE: PETERSBURG

CLASS: PB-2N
LOCALIZATION: SCHIST CONTACT

REPORTED TONNAGES

MAXIMUM TONS:	10000	MINIMUM TONS:	1000
PRODUCTION:	0		

GEOMETRY

LENGTH:	20.0	WIDTH:	10.0	DEPTH:	300
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SHAPE: PLANAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	30.0	30.0
AU:	0.10	
CU:	500	500
MO:	5.0	
ZN:	30000	
AS:	100	
BA:	300	
CO:	5	
NI:	7	
V:	5	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: TRIASSIC
TERRANE: ALEXANDER (ADMTY) THICKNESS: 20

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	5	5
Marl:	0	0
Mafic volc:	0	0
Int. Volc:	60	30
Felsic Volc:	0	0
Shale:	30	10
Black shale:	10	10
Quartzite:	0	0
Graywacke:	30	10

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES:
ORE TYPE: BA, AU

HOST ROCK ASSAY VALUES

MAX MIN
AU: Reported

INTRUSIVE ROCK CHARACTERISTICS

AGE: -1 TO -1 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	100	100
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Pyroxene
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Pyroxene
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: TN-5-1 NAME: QUARTZ CREEK
LATITUDE: 065016000 LONGITUDE: 151023000
QUADRANGLE: TANANA

CLASS: PB-ZN
LOCALIZATION:

REPORTED TONNAGES

MAXIMUM TONS: 1000 MINIMUM TONS: 100
PRODUCTION: 10

GEOMETRY

LENGTH: 30.0 WIDTH: 1.0 DEPTH: 50

SHAPE: VEIN

	MAXIMUM	MINIMUM
Diorite	-1	-1
Monzodiorite	-1	-1
Quartz diorite	-1	-1
Quartz monzodiorite	-1	-1
Tonalite	-1	-1
Quartz monzonite	-1	-1
Granodiorite	-1	-1
Syenite	-1	-1
Alkali granite	-1	-1

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

No exposures

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing

Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Pyroxene

Chlorite

Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Chalcocite

Sphalerite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Pyroxene

Chlorite

Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Chalcocite

Sphalerite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: TK-5-1
LATITUDE: 062053150
QUADRANGLE: TALKEETNA

NAME: HOGBACK
LONGITUDE: 152013300

CLASS: PB-ZN
LOCALIZATION: SCHIST/MB CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 5000 MINIMUM TONS: 400
PRODUCTION: 0

GEOMETRY

LENGTH: 50.0 WIDTH: 4.0 DEPTH: -1

SHAPE: LENTICULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	170.0	170.0
CU:	2000	2000
ZN:	20000	

HOST ROCK CHARACTERISTICS

FORMATION: L. PALEO AGE: U. PRECAMB-
TERRANE: YUKON-TANANA THICKNESS: 100

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	5
Dolomite:	0	0
Marl:	0	0
Mafic volc:	15	5
Int. Volc:	30	10
Felsic Volc:	0	0
Shale:	30	10
Black shale:	0	0
Quartzite:	70	40
Graywacke:	30	10

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES:
ORE TYPE:

HOST ROCK ASSAY VALUES

MAX MIN

AG: 0.2
 AS: 50
 AU: 0.100
 CO: 10
 CU: 50 50
 MO: 5
 NI: 30
 PB: 12
 SN: 2
 W: 3
 ZN: 60

INTRUSIVE ROCK CHARACTERISTICS

AGE: 60 TO 50 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	100	100
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
 Minimum grain size:
 Anorthite content missing

INTRUSIVE COMPOSITION DATA

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Chalcopyrite
Sphalerite
Galena
Fluorite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: CR-5-1 NAME: GOULD ISLAND
LATITUDE: 055017000 LONGITUDE: 132032000
QUADRANGLE: CRAIG

CLASS: PB-ZN
LOCALIZATION: SCHIST/MB CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 2000 MINIMUM TONS: 100
PRODUCTION: 10

GEOMETRY

LENGTH: 10.0 WIDTH: 5.0 DEPTH: 50

SHAPE: TABULAR

SN: 1
W: 1
ZN: 100

INTRUSIVE ROCK CHARACTERISTICS

AGE: 110 TO 100 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	100	100
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Endoskarn present

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Wollastonite
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Wollastonite
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CHD-5-5
LATITUDE: 067049000
QUADRANGLE: CHANDALAR

NAME: JIM MONTANA
LONGITUDE: 148054000

CLASS: PB-ZN
LOCALIZATION:

REPORTED TONNAGES

MISSING
PRODUCTION: -1

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

MAX MIN

HOST ROCK CHARACTERISTICS

FORMATION: SKAJIT AGE: DEVONIAN
TERRANE: ARCTIC AK-HAMMOND THICKNESS: 200

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	20
Dolomite:	5	5
Marl:	15	15
Mafic volc:	0	0
Int. Volc:	20	20
Felsic Volc:	0	0
Shale:	40	40
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: AU-SB-AS VEINS
ORE TYPE: AU,SB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AS:	100	
AU:	0.050	
BA:	300	
BE:	2	
CO:	24	
CU:	56	56
FE:	30000	
NI:	42	
PB:	24	
SN:	1	

W: 1
ZN: 100

INTRUSIVE ROCK CHARACTERISTICS

AGE: 402 TO 395 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	70	30
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic
Propylitic

TEXTURES

Porphyritic
Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN ORE MINERALS PRESENT

Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CHD-5-4 NAME: IO
LATITUDE: 067047000 LONGITUDE: 149006000
QUADRANGLE: CHANDALAR

CLASS: PB-ZN
LOCALIZATION: FAULT

REPORTED TONNAGES

MAXIMUM TONS: 100000 MINIMUM TONS: 1000
PRODUCTION: 0

GEOMETRY

LENGTH: 100.0 WIDTH: 20.0 DEPTH: 300

W: 1
ZN: 100

INTRUSIVE ROCK CHARACTERISTICS

AGE: 402 TO 395 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	70	30
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Porphyritic
Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Actinolite
Chlorite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Actinolite
Chlorite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: CHD-5-3
LATITUDE: 067049000
QUADRANGLE: CHANDALAR

NAME: MOWGLI
LONGITUDE: 148049000

CLASS: PB-ZN

LOCALIZATION: FAULT CONTACT

REPORTED TONNAGES

MISSING
PRODUCTION: -1

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	150.0	150.0
CU:	4800	4800
PB:	8700	
ZN:	1750	

HOST ROCK CHARACTERISTICS

FORMATION: SKAJIT AGE: DEVONIAN
TERRANE: ARCTIC AK-HAMMOND THICKNESS: 200

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	20
Dolomite:	5	5
Marl:	15	15
Mafic volc:	0	0
Int. Volc:	20	20
Felsic Volc:	0	0
Shale:	40	40
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: AU-SB-AS VEINS
ORE TYPE: AU,SB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	

AS: 100
AU: 0.050
BA: 300
BE: 2
CO: 24
CU: 56 56
FE: 30000
MO: 5
NI: 42
PB: 24
SN: 1
W: 1
ZN: 100

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Sphalerite
Galena
Tetrahedrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Sphalerite
Galena
Tetrahedrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Sphalerite
Galena
Tetrahedrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

Mafic volc:	10	0
Int. Volc:	30	20
Felsic Volc:	20	10
Shale:	40	10
Black shale:	0	0
Quartzite:	30	10
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: AU VEINS
 ORE TYPE: AU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.3	
AS:	50	
AU:	0.100	
CO:	10	
CU:	50	50
MO:	5	
NI:	30	
PB:	12	
SN:	2	
W:	3	
ZN:	60	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 50 TO 50 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	100	70
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic

TEXTURES

Porphyritic
 Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 33.0
PLAG: 30.0
K-SPAR 30.0
MAFICS 7.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrrhotite
Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

NEARBY DEPOSIT TYPES: AU-SB-AS VEINS
ORE TYPE: AU,SB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AS:	100	
AU:	0.050	
BA:	300	
BE:	2	
CO:	24	
CU:	56	56
FE:	30000	
NI:	42	
PB:	24	
SN:	1	
W:	1	
ZN:	100	

INTRUSIVE COMPOSITION DATA MISSING

INTRUSIVE COMPOSITION DATA MISSING

ID NUMBER: CHD-5-2 NAME: GAYLE
LATITUDE: 067052000 LONGITUDE: 148043000
QUADRANGLE: CHANDALAR

CLASS: PB-ZN
LOCALIZATION: FAULT CONTACT

REPORTED TONNAGES

MISSING
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	Reported	
PB:	Reported	
ZN:	Reported	

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

INTRUSIVE COMPOSITION DATA MISSING

SKARN ORE MINERALS PRESENT

Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: BD-5-2 NAME: STONEBOY CREEK
LATITUDE: 064041000 LONGITUDE: 144024000
QUADRANGLE: BIG DELTA

CLASS: PB-ZN
LOCALIZATION: DIKE CONTACT

REPORTED TONNAGES

MAXIMUM TONS:	10000	MINIMUM TONS:	1000
PRODUCTION:	0		

GEOMETRY

LENGTH:	-1.0	WIDTH:	-1.0	DEPTH:	-1
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SHAPE:

REPORTED ASSAY VALUES

MAX	MIN
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AG:	Reported
PB:	Reported
ZN:	Reported

HOST ROCK CHARACTERISTICS

FORMATION:
TERRANE: YUKON-TANANA-Y3

AGE: L. PALEOZOIC
THICKNESS: 30

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	5
Dolomite:	0	0
Marl:	10	5
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	20	10
Shale:	50	10
Black shale:	50	10
Quartzite:	50	10
Graywacke:	50	10

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: LODE AU
ORE TYPE: AU

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.3	
AS:	10	
AU:	0.100	
CO:	10	
CU:	50	50
MO:	5	
NI:	30	
PB:	12	
SN:	2	
W:	3	
ZN:	60	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 140 TO 70 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	70	40

Syenite 0 0
Alkali granite 0 0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Actinolite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Pyrhottite
Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Diopside: 20
Hedenbergite: 70
Johannsenite: 10

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Actinolite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Pyrhottite
Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Diopside: 20
Hedenbergite: 70
Johannsenite: 10

Black shale: 20 20
 Quartzite: 20 20
 Graywacke: 10 10

METAMORPHIC GRADE: L.GREENSCHIST
 NEARBY DEPOSIT TYPES: PB-ZN-BA STRATIFORM
 ORE TYPE: PB,ZN,BA

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.6	
AU:	0.100	
BI:	20	
CO:	50	
CU:	50	50
MO:	15	
NI:	20	
PB:	50	
W:	3	
ZN:	100	
V:	300	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 50 TO 30 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	30	10
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic
 Endoskarn present

TEXTURES

Porphyritic
 Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 23.0
PLAG: 47.0
K-SPAR 21.0
MAFICS 9.0

Major Oxide Analysis

SiO₂: 64.16
Al₂O₃: 15.79
Fe₂O₃: 0.88
FeO: 2.48
MgO: 1.80
CaO: 6.18
Na₂O: 3.30
K₂O: 2.08
TiO₂: 0.60
P₂O₅: 0.17
MnO: 0.07

Normative Minerals

QTZ: 23.0
ORTHOCLASE: 12.60
ALBITE: 28.60
ANORTHITE: 22.70
CORUNDUM: 0.00
DIOPSIDE: 6.21
HYPERSTHENE: 4.61
OLIVINE: 0.00
MAGNETITE: 1.31
ILMENITE: 1.17

MINERAL COMPOSITION

QUARTZ: 23.0
PLAG: 47.0
K-SPAR 21.0
MAFICS 9.0

Major Oxide Analysis

SiO₂: 64.16
Al₂O₃: 15.79
Fe₂O₃: 0.80
FeO: 2.48
MgO: 1.80
CaO: 6.18
Na₂O: 3.30

Normative Minerals

QTZ: 23.0
ORTHOCLASE: 12.60
ALBITE: 28.60
ANORTHITE: 22.70
CORUNDUM: 0.00
DIOPSIDE: 6.21
HYPERSTHENE: 4.61

K2O:	2.08	OLIVINE:	0.00
TiO2:	0.60	MAGNETITE:	1.31
P2O5:	0.17	ILMENITE:	1.17
MNO:	0.07		

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Chlorite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrrhotite
Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite:	80.0
Pyrope:	0.0
Grossularite:	20.0
Almandite:	0.0
Spessartite:	0.0

PYROXENE MINERALS

Diopside:	20
Hedenbergite:	70
Johannsenite:	10

ID NUMBER: MCG-5-4
LATITUDE: 062026000
QUADRANGLE: MCGRATH

NAME: MIDWAY
LONGITUDE: 153039050

CLASS: PB-ZN
LOCALIZATION: DIKE/MBL CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 100000 MINIMUM TONS: 10000
PRODUCTION: 0

GEOMETRY

LENGTH: 50.0 WIDTH: 10.0 DEPTH: 200

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	50.0	50.0
AU:	0.10	
CU:	11000	11000
MO:	6.0	
PB:	2000	
W:	3.0	
ZN:	30000	
BI:	50	
CD:	200	
CO:	60	
NI:	15	
V:	250	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: SILURIAN
TERRANE: DILLINGER THICKNESS: -1

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	20
Dolomite:	0	0
Marl:	10	10
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	20	20
Black shale:	20	20
Quartzite:	20	20
Graywacke:	10	10

METAMORPHIC GRADE: L.GREENSCHIST
NEARBY DEPOSIT TYPES: PB-ZN-BA STRATIFORM
ORE TYPE: PB,ZN,BA

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.6	
AU:	0.100	
BI:	20	
CO:	50	
CU:	50	50
MO:	15	
NI:	20	
PB:	50	
W:	3	
ZN:	100	
V:	300	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 50 TO 30 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	30	10
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic
Endoskarn present

TEXTURES

Porphyritic
Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende

Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 25.0
PLAG: 20.0
K-SPAR 40.0
MAFICS 15.0

Major Oxide Analysis

SiO₂: 64.36
Al₂O₃: 15.46
Fe₂O₃: 1.51
FeO: 3.32
MgO: 1.86
CaO: 4.72
Na₂O: 3.16
K₂O: 2.04
TiO₂: 0.59
P₂O₅: 0.15
MnO: 0.04

Normative Minerals

QTZ: 25.0
ORTHOCLASE: 12.40
ALBITE: 27.50
ANORTHITE: 22.60
CORUNDUM: 0.00
DIOPSIDE: 0.41
HYPERSTHENE: 8.62
OLIVINE: 0.00
MAGNETITE: 2.25
ILMENITE: 1.15

Major Oxide Analysis

SiO₂: 66.50
Al₂O₃: 16.30
Fe₂O₃: 1.00
FeO: 2.55
MgO: 1.55
CaO: 5.00

Normative Minerals

QTZ: -1.0
ORTHOCLASE: 13.10
ALBITE: 30.70
ANORTHITE: 22.00
CORUNDUM: 0.00
DIOPSIDE: 2.53

N

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite
Sphalerite

Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite: 100.0
Pyrope: 0.0
Grossularite: 0.0
Almandite: 0.0
Spessartite: 0.0

PYROXENE MINERALS

Diopside: 50
Hedenbergite: 40
Johannsenite: 10

ID NUMBER: MCG-5-3 NAME: TIN CREEK
LATITUDE: 062025030 LONGITUDE: 153038250
QUADRANGLE: MCGRATH

CLASS: PB-ZN
LOCALIZATION: DIKE/MBL CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1000000 MINIMUM TONS: 50000
PRODUCTION: 0

GEOMETRY

LENGTH: 500.0 WIDTH: 5.0 DEPTH: 500

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	28.0	28.0
AU:	0.10	
CU:	3000	3000
MO:	5.0	
PB:	7000	
W:	2.0	
ZN:	50000	
BI:	20	

CO: 70
NI: 10
V: 300

HOST ROCK CHARACTERISTICS

FORMATION: AGE: SILURIAN
TERRANE: DILLINGER THICKNESS: -1

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	20
Dolomite:	0	0
Marl:	10	10
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	20	20
Black shale:	20	20
Quartzite:	20	20
Graywacke:	10	10

METAMORPHIC GRADE: L.GREENSCHIST
NEARBY DEPOSIT TYPES: PB-ZN-BA STRATIFORM
ORE TYPE: PB,ZN,BA

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.6	
AU:	0.100	
BI:	20	
CO:	50	
CU:	50	50
MO:	15	
NI:	20	
PB:	50	
W:	3	
ZN:	100	
V:	300	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 50 TO 30 M.Y.

HOST ROCK LITHOLOGY

MAXIMUM	MINIMUM
---------	---------

Diorite	0	0
Monzodiorite	0	0
Quartz diorite	30	10
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic
Endoskarn present

TEXTURES

Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

Major Oxide Analysis		Normative Minerals	
SiO ₂ :	63.50	QTZ:	-1.0
Al ₂ O ₃ :	15.00	ORTHOCLASE:	15.60
Fe ₂ O ₃ :	1.30	ALBITE:	28.50
FeO:	3.00	ANORTHITE:	20.20
MgO:	1.80	CORUNDUM:	0.00
CaO:	4.20	DIOPSIDE:	1.47
Na ₂ O:	3.20	HYPERSTHENE:	11.80
K ₂ O:	2.50	OLIVINE:	0.00
TiO ₂ :	0.35	MAGNETITE:	1.50
P ₂ O ₅ :	0.09	ILMENITE:	0.70

MNO: 0.08

Major Oxide Analysis

SiO2: 65.50
Al2O3: 15.60
Fe2O3: 1.00
FeO: 3.00
MgO: 1.90
CaO: 5.50
Na2O: 3.60
K2O: 2.00
TiO2: 0.45
P2O5: 0.09
MNO: 0.04

Normative Minerals

QTZ: -1.0
ORTHOCLASE: 12.00
ALBITE: 30.90
ANORTHITE: 20.80
CORUNDUM: 0.00
DIOPSIDE: 5.76
HYPERSTHENE: 8.68
OLIVINE: 0.00
MAGNETITE: 2.05
ILMENITE: 0.87

MINERAL COMPOSITION

QUARTZ: 28.0
PLAG: 42.0
K-SPAR 18.0
MAFICS 12.0

Major Oxide Analysis

SiO2: 64.36
Al2O3: 15.45
Fe2O3: 1.51
FeO: 3.32
MgO: 1.86
CaO: 4.72
Na2O: 3.16
K2O: 2.04
TiO2: 0.59
P2O5: 0.15
MNO: 0.04

Normative Minerals

QTZ: 28.0
ORTHOCLASE: 12.40
ALBITE: 27.50
ANORTHITE: 22.60
CORUNDUM: 0.00
DIOPSIDE: 0.42
HYPERSTHENE: 8.60
OLIVINE: 0.00
MAGNETITE: 2.25
ILMENITE: 1.15

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Rhodachrosite
Epidote
Actinolite
Chlorite
Sphene
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Pyrrhotite
Chalcopyrite
Sphalerite
Galena
Arsenopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite: 98.0
Pyrope: 0.0
Grossularite: 2.0
Almandite: 0.0
Spessartite: 0.0

PYROXENE MINERALS

Diopside: 8
Hedenbergite: 80
Johannsenite: 12

ID NUMBER: MK-5-3 NAME: THOROUGHFARE (BALD MT)
LATITUDE: 063023000 LONGITUDE: 150014000
QUADRANGLE: MCKINLEY

CLASS: PB-ZN
LOCALIZATION: DIKE/MBL CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 50000 MINIMUM TONS: 5000
PRODUCTION: 0

GEOMETRY

LENGTH: 60.0 WIDTH: 5.0 DEPTH: 300

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	45.0	45.0

AU: 0.30
 CU: 8000 8000
 MO: 5.0
 PB: 30000
 SN: 1
 W: 5.0
 ZN: 53000
 AS: 50
 CD: 80
 CO: 30
 F: 450
 NI: 10

HOST ROCK CHARACTERISTICS

FORMATION: AGE: DEVONIAN
 TERRANE: MCKINLEY THICKNESS: 100

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	0	0
Marl:	20	20
Mafic volc:	50	50
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	20	20
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: SB VEINS
 ORE TYPE: SB

HOST ROCK ASSAY VALUES

MAX MIN

INTRUSIVE ROCK CHARACTERISTICS

AGE: 48 TO 38 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0

Monzodiorite	0	0
Quartz diorite	20	10
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	20	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic
Endoskarn present

TEXTURES

Porphyritic
Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 22.0
PLAG: 48.0
K-SPAR 16.0
MAFICS 14.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 29.0
PLAG: 50.0
K-SPAR 9.0

MAFICS 12.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Actinolite
Chlorite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: JN-5-1 NAME: BUND
LATITUDE: 058058000 LONGITUDE: 135010000
QUADRANGLE: JUNEAU

CLASS: PB-ZN
LOCALIZATION:

REPORTED TONNAGES

MISSING
PRODUCTION: -1

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

MAX MIN
AG: Reported
PB: Reported
ZN: Reported

HOST ROCK CHARACTERISTICS

FORMATION: AGE: PALEOZOIC
TERRANE: TRACY ARM THICKNESS: 30

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	20
Dolomite:	0	0
Marl:	0	0
Mafic volc:	30	10
Int. Volc:	50	20
Felsic Volc:	0	0
Shale:	30	10
Black shale:	0	0
Quartzite:	0	0
Graywacke:	30	10

METAMORPHIC GRADE: AMPHIBOLITE
NEARBY DEPOSIT TYPES: AU VEIN
ORE TYPE: AU

HOST ROCK ASSAY VALUES

MAX MIN

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: MCG-5-1 NAME: BOWSER CREEK S
LATITUDE: 062010030 LONGITUDE: 153041030
QUADRANGLE: MCGRATH

CLASS: PB-ZN
LOCALIZATION: DIKE/MBL CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 100000 MINIMUM TONS: 20000
PRODUCTION: 10

GEOMETRY

LENGTH: 50.0 WIDTH: 10.0 DEPTH: 250

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	150.0	150.0
AU:	0.08	
CU:	1500	1500
MO:	3.0	
PB:	20000	
ZN:	40000	
AS:	300	
BA:	50	
BE:	1	
CO:	50	
NI:	5	
V:	20	

HOST ROCK CHARACTERISTICS

FORMATION:		AGE:	ORD-SILURIAN
TERRANE:	DILLINGER	THICKNESS:	500

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	20
Dolomite:	0	0
Marl:	10	10
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	20	20
Black shale:	20	20
Quartzite:	20	20
Graywacke:	10	10

METAMORPHIC GRADE: L.GREENSCHIST
NEARBY DEPOSIT TYPES: PB-ZN-BA STRATIFORM
ORE TYPE: PB,ZN,BA

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.6	
AU:	0.100	
BI:	20	
CO:	50	
CU:	50	50
MO:	15	
NI:	20	
PB:	50	

W: 3
ZN: 100
V: 300

INTRUSIVE ROCK CHARACTERISTICS

AGE: 50 TO 30 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	20	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	0	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic

TEXTURES

Porphyritic
Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: .7 MM
Minimum grain size: .7 MM

Anorthite content maximum: 35
Anorthite content minimum: 35

INTRUSIVE COMPOSITION DATA

Major Oxide Analysis

SiO2: 61.09
 Al2O3: 16.95
 Fe2O3: 1.28
 FeO: 3.34
 MgO: 1.85
 CaO: 5.44
 Na2O: 4.07
 K2O: 2.02
 TiO2: 0.68
 P2O5: 0.24
 MnO: 0.12

Normative Minerals

Qtz: -1.0
 Orthoclase: 12.30
 Albite: 35.50
 Anorthite: 22.70
 Corundum: 0.00
 Diopside: 2.89
 Hypersthene: 7.62
 Olivine: 0.00
 Magnetite: 1.91
 Ilmenite: 1.33

MINERAL COMPOSITION

Quartz: 20.0
 Plag: 49.0
 K-spar: 19.0
 mafics: 12.0

Major Oxide Analysis

SiO2: 63.81
 Al2O3: 16.13
 Fe2O3: 0.60
 FeO: 2.03
 MgO: 1.36
 CaO: 5.81
 Na2O: 3.54
 K2O: 3.61
 TiO2: 0.52
 P2O5: 0.15
 MnO: 0.06

Normative Minerals

Qtz: 20.0
 Orthoclase: 21.90
 Albite: 30.70
 Anorthite: 17.90
 Corundum: 0.00
 Diopside: 8.71
 Hypersthene: 1.75
 Olivine: 0.00
 Magnetite: 0.89
 Ilmenite: 1.01

Major Oxide Analysis

SiO2: 65.39
 Al2O3: 16.94
 Fe2O3: 0.76
 FeO: 1.71
 MgO: 1.75
 CaO: 5.17
 Na2O: 4.06
 K2O: 1.62
 TiO2: 0.52
 P2O5: 0.17
 MnO: 0.05

Normative Minerals

Qtz: -1.0
 Orthoclase: 9.75
 Albite: 35.00
 Anorthite: 23.70
 Corundum: 0.00
 Diopside: 1.09
 Hypersthene: 5.70
 Olivine: 0.00
 Magnetite: 1.12
 Ilmenite: 1.00

SKARN MINERAL DATA**SKARN MINERALS**

Garnet
 Pyroxene
 Epidote
 Actinolite

Chlorite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrhottite
Sphalerite
Galena
Tetrahedrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite: 90.0
Pyrope: 0.0
Grossularite: 10.0
Almandite: 0.0
Spessartite: 0.0

PYROXENE MINERALS

Diopside: 5
Hedenbergite: 70
Johannsenite: 25

ID NUMBER: MK-5-4 NAME: LITTLE CARIBOU
LATITUDE: 063046000 LONGITUDE: 150030000
QUADRANGLE: MCKINLEY

CLASS: PB-ZN
LOCALIZATION:

REPORTED TONNAGES

MAXIMUM TONS: 2000 MINIMUM TONS: 100
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

W: 3
ZN: 60

INTRUSIVE ROCK CHARACTERISTICS

AGE: -1 TO -1 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	-1	-1
Monzodiorite	-1	-1
Quartz diorite	-1	-1
Quartz monzodiorite	-1	-1
Tonalite	-1	-1
Quartz monzonite	-1	-1
Granodiorite	-1	-1
Syenite	-1	-1
Alkali granite	-1	-1

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

No exposures

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Actinolite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Hematite
Pyrite
Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Actinolite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Hematite
Pyrite
Chalcopyrite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: TBM-5-1 NAME: AMMERMAN MTN
LATITUDE: 068022000 LONGITUDE: 141003000
QUADRANGLE: TABLE MTN

CLASS: PB-ZN
LOCALIZATION: DIKE/MBL CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 10000 MINIMUM TONS: 100
PRODUCTION: -1

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	Reported	
CU:	Reported	
PB:	Reported	
ZN:	Reported	

HOST ROCK CHARACTERISTICS

FORMATION: TERRANE: ARCTIC AK-N SLOPE AGE: PALEOZOIC
THICKNESS: -1

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	20
Dolomite:	0	0
Marl:	0	0
Mafic volc:	0	0
Int. Volc:	10	10
Felsic Volc:	0	0
Shale:	30	30
Black shale:	0	0
Quartzite:	20	20
Graywacke:	20	20

METAMORPHIC GRADE:
NEARBY DEPOSIT TYPES:
ORE TYPE:

HOST ROCK ASSAY VALUES

MAX MIN

INTRUSIVE ROCK CHARACTERISTICS

AGE: -1 TO -1 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	100	100
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite

Chalcopyrite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Chalcopyrite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: GK-5-1 NAME: AHTELL
LATITUDE: 062046000 LONGITUDE: 144001000
QUADRANGLE: GULKANA

CLASS: PB-ZN
LOCALIZATION: DIKE/MBL CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 500 MINIMUM TONS: 10
PRODUCTION: 0

GEOMETRY

LENGTH: 10.0 WIDTH: 5.0 DEPTH: 10

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

MAX MIN

INTRUSIVE ALTERATION TYPES

Propylitic

TEXTURES

Porphyritic
Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 35.0
K-SPAR 31.0
MAFICS 14.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 21.0
PLAG: 47.0
K-SPAR 6.0
MAFICS 23.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 11.0
PLAG: 45.0
K-SPAR 24.0
MAFICS 20.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Pyroxene
Actinolite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Chalcopyrite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: MCG-5-5
LATITUDE: 062018000
QUADRANGLE: MCGRATH

NAME: RAT FORK
LONGITUDE: 153054000

CLASS: PB-ZN
LOCALIZATION: GRANITE/MBL CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 100000 MINIMUM TONS: 10000
PRODUCTION: 0

GEOMETRY

LENGTH: 100.0 WIDTH: 5.0 DEPTH: 100

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	60.0	60.0
AU:	0.04	
CU:	1400	1400

MO: 5.0
 PB: 4000
 SN: 40
 ZN: 20000
 BA: 10
 BI: 7
 CD: 200
 CO: 50
 NI: 30
 SB: 70

HOST ROCK CHARACTERISTICS

FORMATION: AGE: ORD-SILURIAN
 TERRANE: DILLINGER THICKNESS: 500

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	20
Dolomite:	0	0
Marl:	10	10
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	20	20
Black shale:	20	20
Quartzite:	20	20
Graywacke:	10	10

METAMORPHIC GRADE: L.GREENSCHIST
 NEARBY DEPOSIT TYPES: PB-ZN-BA STRATIFORM
 ORE TYPE: PB,ZN,BA

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.6	
AU:	0.100	
BI:	20	
CO:	50	
CU:	50	50
MO:	15	
NI:	20	
PB:	50	
W:	3	
ZN:	100	
V:	300	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 50 TO 30 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	20	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	20	0
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Propylitic
Endoskarn present

TEXTURES

Porphyritic
Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: .8 MM
Minimum grain size: .8 MM
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 7.0
PLAG: 61.0
K-SPAR 7.0

MAFICS 15.0

Major Oxide Analysis

SiO2: 62.00
Al2O3: 15.70
Fe2O3: 1.40
FeO: 3.90
MgO: 2.20
CaO: 5.30
Na2O: 4.20
K2O: 2.10
TiO2: 0.45
P2O5: 0.05
MnO: 0.09

Normative Minerals

Qtz: 7.0
Orthoclase: 12.70
Albite: 36.50
Anorthite: 18.30
Corundum: 0.00
Diopside: 7.35
Hypersthene: 11.30
Olivine: 0.00
Magnetite: 1.47
Ilmenite: 0.88

MINERAL COMPOSITION

Quartz: 28.0
Plag: 46.0
K-spar: 18.0
MAFICS 8.0

Major Oxide Analysis

SiO2: 65.50
Al2O3: 16.00
Fe2O3: 1.15
FeO: 2.00
MgO: 1.60
CaO: 5.50
Na2O: 3.10
K2O: 2.40
TiO2: 0.40
P2O5: 0.08
MnO: 0.03

Normative Minerals

Qtz: 28.0
Orthoclase: 14.50
Albite: 26.90
Anorthite: 23.10
Corundum: 0.00
Diopside: 3.96
Hypersthene: 7.40
Olivine: 0.00
Magnetite: 1.35
Ilmenite: 0.78

MINERAL COMPOSITION

Quartz: 26.0
Plag: 47.0
K-spar: 13.0
MAFICS 14.0

Major Oxide Analysis

SiO2: 67.00
Al2O3: 17.00
Fe2O3: 0.45
FeO: 1.00
MgO: 1.60
CaO: 5.50
Na2O: 4.10
K2O: 2.50
TiO2: 0.30
P2O5: 0.02
MnO: 0.01

Normative Minerals

Qtz: 26.0
Orthoclase: 14.90
Albite: 34.90
Anorthite: 20.70
Corundum: 0.00
Diopside: 5.46
Hypersthene: 3.56
Olivine: 0.00
Magnetite: 0.78
Ilmenite: 0.56

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Actinolite
Chlorite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrhottite
Chalcopyrite
Sphalerite
Galena
Arsenopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: MK-5-2 NAME: MT EIELSON
LATITUDE: 063024000 LONGITUDE: 150020000
QUADRANGLE: MCKINLEY

CLASS: PB-ZN
LOCALIZATION: DIKE/MBL CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1000000 MINIMUM TONS: 200000
PRODUCTION: 0

GEOMETRY

LENGTH: 50.0 WIDTH: 15.0 DEPTH: 2000

SHAPE: PLANAR

REPORTED ASSAY VALUES

MAX MIN

AG: 150.0 150.0
 AU: 0.10
 CU: 2000 2000
 MO: 5.0
 PB: 30000
 SN: 1
 W: 7.0
 ZN: 50000
 AS: 50
 CD: 100
 CO: 30
 F: 500
 NI: 10
 SB: 5

HOST ROCK CHARACTERISTICS

FORMATION: AGE: DEVONIAN
 TERRANE: MCKINLEY THICKNESS: 100

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	0	0
Marl:	20	20
Mafic volc:	50	50
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	20	20
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: SB VEINS
 ORE TYPE: SB

HOST ROCK ASSAY VALUES

MAX MIN

INTRUSIVE ROCK CHARACTERISTICS

AGE: 48 TO 38 M.Y.

HOST ROCK LITHOLOGY

MAXIMUM MINIMUM

Diorite	0	0
Monzodiorite	0	0
Quartz diorite	10	5
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	15	5
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Endoskarn present

TEXTURES

Equigranular
 Porphyritic
 Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
 Hornblende
 Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
 Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
 Minimum grain size:

Anorthite content maximum: 45
 Anorthite content minimum: 25

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 31.0
 PLAG: 47.0
 K-SPAR 11.0
 MAFICS 8.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 28.0
 PLAG: 52.0

K-SPAR 15.0
MAFICS 5.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Actinolite
Chlorite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Chalcopyrite
Sphalerite
Galena
Tetrahedrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite:	90.0
Pyrope:	0.0
Grossularite:	10.0
Almandite:	0.0
Spessartite:	0.0

PYROXENE MINERALS

Diopside:	10
Hedenbergite:	80
Johannsenite:	10

ID NUMBER: CL-4-1

NAME: WHITE MTN. CREEK

LATITUDE: 067029000
QUADRANGLE: COLEEN

LONGITUDE: 141011000

CLASS: SN
LOCALIZATION:

REPORTED TONNAGES

MAXIMUM TONS: 50 MINIMUM TONS: 1000
PRODUCTION: 0

GEOMETRY

LENGTH: 75.0 WIDTH: 10.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	5.0	5.0
CU:	5000	5000
PB:	1000	
SN:	800	
ZN:	2000	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: L PALEOZOIC
TERRANE: PORCUPINE THICKNESS: 20

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	0	0
Marl:	0	0
Mafic volc:	20	10
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	70	50
Black shale:	0	0
Quartzite:	20	10
Graywacke:	0	0

METAMORPHIC GRADE: L.GREENSCHIST
NEARBY DEPOSIT TYPES: BARITE
ORE TYPE: BA

HOST ROCK ASSAY VALUES

MAX MIN

BA: Reported

INTRUSIVE ROCK CHARACTERISTICS

AGE: 335 TO 295 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	100	100
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Potassic
Sericitic

TEXTURES

Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Grain size missing

Anorthite content maximum: 5
Anorthite content minimum: 5

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Epidote
Chlorite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Chalcopyrite
Bornite
Sphalerite
Galena
Fluorite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Epidote
Chlorite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Chalcopyrite

Bornite
Sphalerite
Galena
Fluorite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: HY-4-1 NAME: READY CASH-CANYON CK
LATITUDE: 063009150 LONGITUDE: 149051300
QUADRANGLE: HEALY

CLASS: SN
LOCALIZATION:

REPORTED TONNAGES

MAXIMUM TONS: 20000 MINIMUM TONS: 1000
PRODUCTION: 10

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	20.0	20.0
AU:	0.05	
CU:	2000	2000
MO:	10.0	
PB:	1000	
SN:	500	
ZN:	1000	
AS:	5000	
BE:	1	
CD:	100	
CO:	15	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: TRIASSIC
TERRANE: CHULITNA THICKNESS: 100

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	40	30
Dolomite:	0	0
Marl:	40	20
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	30	20
Black shale:	0	0
Quartzite:	20	10
Graywacke:	20	10

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES:
ORE TYPE:

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.5	
AS:	200	
AU:	0.020	
BA:	300	
BE:	1	
BI:	10	
CU:	30	30
MO:	3	
NI:	150	
PB:	10	
SN:	10	
W:	50	
ZN:	200	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 56 TO 52 M.Y.

HOST ROCK LITHOLOGY

MAXIMUM MINIMUM

Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	100	100
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Equigranular
Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Apatite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: FINE
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 36.0
PLAG: 24.0
K-SPAR 40.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 44.0
PLAG: 22.0
K-SPAR 34.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 43.0
PLAG: 26.0
K-SPAR 31.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 31.0
PLAG: 27.0
K-SPAR 42.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 30.0
PLAG: 30.0
K-SPAR 40.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 36.0
PLAG: 35.0
K-SPAR 29.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 32.0
PLAG: 29.0
K-SPAR 39.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 31.0
PLAG: 32.0
K-SPAR 37.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Tourmaline

Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Chalcopyrite

Galena

Arsenopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: TK-4-1 NAME: J&K BOULDER CREEK
LATITUDE: 062054150 LONGITUDE: 152090120
QUADRANGLE: TALKEETNA

CLASS: SN
LOCALIZATION:

REPORTED TONNAGES

MAXIMUM TONS: 100000 MINIMUM TONS: 3500
PRODUCTION: 0

GEOMETRY

LENGTH: 160.0 WIDTH: 20.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

 MAX MIN
AG: 13.6 13.6

CU: 8000 8000
SN: 5000
ZN: 1000

HOST ROCK CHARACTERISTICS

FORMATION: AGE: U. PRECAMB-
L. PALEO
TERRANE: YUKON-TANANA THICKNESS: 100

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	5
Dolomite:	0	0
Marl:	0	0
Mafic volc:	15	5
Int. Volc:	30	10
Felsic Volc:	0	0
Shale:	30	10
Black shale:	0	0
Quartzite:	70	40
Graywacke:	30	10

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES:
ORE TYPE:

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AS:	150	
CU:	50	50
MO:	5	
PB:	20	
SN:	2	
W:	3	
ZN:	60	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 56 TO 56 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0

Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	100	100
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Equigranular
 Porphyritic
 Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: COARSE
 Minimum grain size: FINE
 Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 37.0
 PLAG: 30.0
 K-SPAR 33.0
 MAFICS -1.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 43.0
 PLAG: 22.0
 K-SPAR 35.0
 MAFICS -1.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 32.0

PLAG: 26.0
K-SPAR 42.0
MAFICS -1.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 33.0
PLAG: 31.0
K-SPAR 36.0
MAFICS -1.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 33.0
PLAG: 33.0
K-SPAR 34.0
MAFICS -1.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 38.0
PLAG: 23.0
K-SPAR 38.0
MAFICS -1.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 35.0
PLAG: 19.0
K-SPAR 46.0
MAFICS -1.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 35.0
PLAG: 34.0
K-SPAR 31.0
MAFICS -1.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 39.0
PLAG: 32.0
K-SPAR 29.0
MAFICS -1.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 39.0
PLAG: 34.0
K-SPAR 27.0
MAFICS -1.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 35.0
PLAG: 30.0
K-SPAR 35.0
MAFICS -1.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 37.0
PLAG: 21.0
K-SPAR 42.0
MAFICS -1.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 33.0
PLAG: 23.0
K-SPAR 44.0
MAFICS -1.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Actinolite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrrhotite
Chalcopyrite
Galena
Arsenopyrite
Cassiterite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: BD-4-1 NAME: SERPENTINE HOT SPNGS
LATITUDE: 065051000 LONGITUDE: 164039000
QUADRANGLE: BENDELEBEN

CLASS: SN
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 500 MINIMUM TONS: 5
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	1.0	1.0
AU:	0.02	
CU:	500	500
MO:	30.0	
PB:	300	
SN:	200	
W:	200.0	
ZN:	200	
AS:	200	
CO:	15	
NI:	30	

HOST ROCK CHARACTERISTICS

FORMATION:
TERRANE: SEWARD

AGE: SIL-DEV
THICKNESS: 10

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	5
Dolomite:	0	0
Marl:	10	10
Mafic volc:	20	10
Int. Volc:	0	0
Felsic Volc:	20	0
Shale:	30	20
Black shale:	30	10
Quartzite:	0	0
Graywacke:	30	10

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: SED. HSTED PB-ZN;AU VEINS
ORE TYPE: PB,ZN,AU

HOST ROCK ASSAY VALUES

	MAX	MIN
AS:	200	
BA:	250	
BE:	2	
CU:	25	25
MO:	5	
NI:	40	
PB:	10	
SN:	3	
W:	2	
ZN:	200	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 69 TO 67 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	100	100
Syenite	0	0

Alkali granite 0 0

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Equigranular
Porphyritic
Porphyry
Pegmatitic-aplitic
Myrmekitic
Seriata

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 20
Minimum grain size: 3

Anorthite content maximum: 27
Anorthite content minimum: 8

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 30.0
PLAG: 27.6
K-SPAR 36.6
MAFICS 5.8

Major Oxide Analysis

SiO₂: 72.55
Al₂O₃: 13.94
Fe₂O₃: 0.35
FeO: 1.48
MgO: 0.34
CaO: 1.12
Na₂O: 3.23
K₂O: 5.39
TiO₂: 0.27
P₂O₅: 0.07

Normative Minerals

QTZ: 30.0
ORTHOCLASE: 32.10
ALBITE: 27.60
ANORTHITE: 3.90
CORUNDUM: 1.40
DIOPSIDE: 0.00
HYPERSTHENE: 2.94
OLIVINE: 0.00
MAGNETITE: 0.51
ILMENITE: 0.52

MNO: 0.05

MINERAL COMPOSITION

QUARTZ: 37.4
PLAG: 31.4
K-SPAR 26.8
MAFICS 4.4

Major Oxide Analysis

SiO2: 75.59
Al2O3: 12.86
Fe2O3: 0.28
FeO: 1.12
MgO: 0.08
CaO: 0.90
Na2O: 3.29
K2O: 4.59
TiO2: 0.12
P2O5: 0.09
MNO: 0.07

Normative Minerals

QTZ: 37.4
ORTHOCLASE: 27.30
ALBITE: 28.00
ANORTHITE: 2.20
CORUNDUM: 1.70
DIOPSIDE: 0.00
HYPERSTHENE: 1.88
OLIVINE: 0.00
MAGNETITE: 0.41
ILMENITE: 0.33

MINERAL COMPOSITION

QUARTZ: 30.0
PLAG: 35.0
K-SPAR 32.4
MAFICS 2.6

Major Oxide Analysis

SiO2: 76.25
Al2O3: 13.04
Fe2O3: 0.23
FeO: 0.60
MgO: 0.11
CaO: 0.62
Na2O: 3.69
K2O: 4.65
TiO2: 0.12
P2O5: 0.04
MNO: 0.05

Normative Minerals

QTZ: 30.0
ORTHOCLASE: 27.60
ALBITE: 30.70
ANORTHITE: 1.90
CORUNDUM: 1.40
DIOPSIDE: 0.00
HYPERSTHENE: 1.09
OLIVINE: 0.00
MAGNETITE: 0.33
ILMENITE: 0.23

MINERAL COMPOSITION

QUARTZ: 34.8
PLAG: 35.8
K-SPAR 26.9
MAFICS 2.5

Major Oxide Analysis

SiO2: 76.65
Al2O3: 12.75
Fe2O3: 0.36
FeO: 0.51
MgO: 0.11
CaO: 0.70
Na2O: 3.59

Normative Minerals

QTZ: 34.8
ORTHOCLASE: 27.10
ALBITE: 28.90
ANORTHITE: 1.50
CORUNDUM: 1.60
DIOPSIDE: 0.00
HYPERSTHENE: 0.77

K2O:	4.58	OLIVINE:	0.00
TiO2:	0.13	MAGNETITE:	0.52
P2O5:	0.04	ILMENITE:	0.25
MNO:	0.04		

MINERAL COMPOSITION

QUARTZ:	31.0
PLAG:	29.0
K-SPAR	36.0
MAFICS	4.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Pyroxene
Idocrase
Actinolite
Biotite
Plagioclase
Sphene
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrhottite
Chalcopyrite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: MM-4-1 NAME: ESETUK GLACIER
LATITUDE: 069018000 LONGITUDE: 144022000
QUADRANGLE: MT. MICHAELSON

CLASS: SN
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS:	500	MINIMUM TONS:	20
PRODUCTION:	0		

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

MAX MIN
SN: 300
W: 1500.0
BE: Reported
F: Reported

HOST ROCK CHARACTERISTICS

FORMATION: NERUOKPUK FM. AGE: CAMB-DEV
TERRANE: ARCT.AK-ENDICOTT THICKNESS: 300

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	30	20
Dolomite:	0	0
Marl:	30	10
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	30	10
Black shale:	0	0
Quartzite:	50	30
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES:
ORE TYPE:

HOST ROCK ASSAY VALUES

MAX MIN

INTRUSIVE ROCK CHARACTERISTICS

AGE: 380 TO 380 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	100	100
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Equigranular
 Porphyritic
 Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
 Sphene
 Apatite
 Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
 Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 50
 Minimum grain size: 5

Anorthite content maximum: 20
 Anorthite content minimum: 4

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 16.0
 PLAG: 28.9
 K-SPAR 48.3
 MAFICS 6.8

Major Oxide Analysis

SiO₂: 73.40
 Al₂O₃: 13.30

Normative Minerals

QTZ: 16.0
 ORTHOCLASE: 28.50

FE2O3: 0.36
FEO: 2.20
MGO: 0.59
CAO: 0.69
NA2O: 2.40
K2O: 4.80
TIO2: 0.32
P2O5: 0.09
MNO: 0.07

ALBITE: 20.40
ANORTHITE: 2.50
CORUNDUM: 3.30
DIOPSIDE: 0.00
HYPERSTHENE: 0.00
OLIVINE: 0.00
MAGNETITE: 0.52
ILMENITE: 0.61

MINERAL COMPOSITION

QUARTZ: 29.1
PLAG: 28.0
K-SPAR 33.6
MAFICS 7.8

Major Oxide Analysis

SIO2: 73.20
AL2O3: 13.50
FE2O3: 0.80
FEO: 1.10
MGO: 0.54
CAO: 0.53
NA2O: 2.70
K2O: 5.90
TIO2: 0.24
P2O5: 0.07
MNO: 0.04

Normative Minerals

QTZ: 29.1
ORTHOCLASE: 35.70
ALBITE: 23.40
ANORTHITE: 1.40
CORUNDUM: 2.30
DIOPSIDE: 0.00
HYPERSTHENE: 0.00
OLIVINE: 0.00
MAGNETITE: 1.19
ILMENITE: 0.47

MINERAL COMPOSITION

QUARTZ: 32.4
PLAG: 31.5
K-SPAR 32.2
MAFICS 2.9

Major Oxide Analysis

SIO2: 73.80
AL2O3: 12.30
FE2O3: 2.50
FEO: 0.64
MGO: 0.10
CAO: 0.93
NA2O: 3.60
K2O: 4.10
TIO2: 0.10
P2O5: 0.04
MNO: 0.02

Normative Minerals

QTZ: 32.4
ORTHOCLASE: 24.50
ALBITE: 30.80
ANORTHITE: 3.40
CORUNDUM: 0.70
DIOPSIDE: 0.00
HYPERSTHENE: 0.00
OLIVINE: 0.00
MAGNETITE: 1.86
ILMENITE: 0.19

MINERAL COMPOSITION

QUARTZ: 36.9
PLAG: 27.9
K-SPAR 29.9
MAFICS 5.4

Major Oxide Analysis

SIO2: 72.00
AL2O3: 13.20
FE2O3: 0.84
FEO: 1.60
MGO: 0.60
CAO: 1.80
NA2O: 2.50
K2O: 5.10
TIO2: 0.30
P2O5: 0.11
MNO: 0.08

Normative Minerals

QTZ: 36.9
ORTHOCLASE: 30.40
ALBITE: 21.40
ANORTHITE: 7.90
CORUNDUM: 0.70
DIOPSIDE: 1.23
HYPERSTHENE: 0.00
OLIVINE: 0.00
MAGNETITE: 1.23
ILMENITE: 0.57

MINERAL COMPOSITION

QUARTZ: 37.6
PLAG: 24.4
K-SPAR 29.7
MAFICS 5.8

Major Oxide Analysis

SIO2: 72.30
AL2O3: 13.90
FE2O3: 0.00
FEO: 1.60
MGO: 0.50
CAO: 1.40
NA2O: 2.70
K2O: 5.40
TIO2: 0.23
P2O5: 0.08
MNO: 0.05

Normative Minerals

QTZ: 37.6
ORTHOCLASE: 32.20
ALBITE: 23.10
ANORTHITE: 6.20
CORUNDUM: 1.39
DIOPSIDE: 0.00
HYPERSTHENE: 0.00
OLIVINE: 0.00
MAGNETITE: 0.00
ILMENITE: 0.44

MINERAL COMPOSITION

QUARTZ: 34.6
PLAG: 32.2
K-SPAR 27.1
MAFICS 6.0

Major Oxide Analysis

SIO2: 75.50
AL2O3: 11.80
FE2O3: 0.60
FEO: 1.60
MGO: 0.31
CAO: 1.10
NA2O: 2.40
K2O: 4.90
TIO2: 0.24
P2O5: 0.07
MNO: 0.06

Normative Minerals

QTZ: 34.6
ORTHOCLASE: 29.40
ALBITE: 20.60
ANORTHITE: 4.80
CORUNDUM: 0.84
DIOPSIDE: 0.00
HYPERSTHENE: 0.00
OLIVINE: 0.00
MAGNETITE: 0.88
ILMENITE: 0.46

MINERAL COMPOSITION

QUARTZ: 36.9
PLAG: 25.4

K-SPAR 25.9
MAFICS 7.8

Major Oxide Analysis Normative Minerals

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrhottite
Chalcopyrite
Cassiterite
Fluorite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrhottite
Chalcopyrite
Cassiterite
Fluorite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: MM-4-3 NAME: JAGO
LATITUDE: 069017000 LONGITUDE: 143036000
QUADRANGLE: MT. MICHAELSON

CLASS: SN
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 100 MINIMUM TONS: 1
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

MAX MIN

CU: Reported
PB: Reported
SN: Reported
BE: Reported
F: Reported

HOST ROCK CHARACTERISTICS

FORMATION: NERUOKPUK FM. AGE: CAMB-DEV
TERRANE: ARCT.AK-ENDICOTT THICKNESS: 300

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	30	20
Dolomite:	0	0
Marl:	30	10
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	30	10
Black shale:	0	0
Quartzite:	50	30
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES:
ORE TYPE:

HOST ROCK ASSAY VALUES

MAX MIN

INTRUSIVE ROCK CHARACTERISTICS

AGE: 380 TO 380 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	100	100
Syenite	0	0

Alkali granite 0 0

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Equigranular
Porphyritic
Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 50
Minimum grain size: 5

Anorthite content maximum: 20
Anorthite content minimum: 4

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 31.9
PLAG: 17.8
K-SPAR 42.7
MAFICS 7.6

Major Oxide Analysis

SiO₂: 73.90
Al₂O₃: 13.40
Fe₂O₃: 0.40
FeO: 1.00
MgO: 0.42
CaO: 1.20
Na₂O: 1.00
K₂O: 5.80
TiO₂: 0.22
P₂O₅: 0.07
MnO: 0.04

Normative Minerals

QTZ: 31.9
ORTHOCLASE: 34.50
ALBITE: 8.50
ANORTHITE: 0.40
CORUNDUM: 5.40
DIOPSIDE: 0.00
HYPERSTHENE: 0.00
OLIVINE: 0.00
MAGNETITE: 0.58
ILMENITE: 0.42

MINERAL COMPOSITION

QUARTZ: 34.5
PLAG: 32.9
K-SPAR 24.5
MAFICS 8.2

Major Oxide Analysis

SiO2: 75.00
Al2O3: 12.90
Fe2O3: 0.36
FeO: 1.40
MgO: 0.40
CaO: 0.71
Na2O: 2.60
K2O: 5.00
TiO2: 0.21
P2O5: 0.07
MnO: 0.04

Normative Minerals

Qtz: 34.5
Orthoclase: 29.60
Albite: 22.00
Anorthite: 1.74
Corundum: 2.60
Diopside: 0.00
Hypersthene: 0.00
Olivine: 0.00
Magnetite: 0.52
Ilmenite: 0.40

MINERAL COMPOSITION

QUARTZ: 31.8
PLAG: 36.6
K-SPAR 23.9
MAFICS 7.8

Major Oxide Analysis

SiO2: 76.40
Al2O3: 12.20
Fe2O3: 0.54
FeO: 0.98
MgO: 0.25
CaO: 0.90
Na2O: 2.60
K2O: 4.60
TiO2: 0.17
P2O5: 0.04
MnO: 0.04

Normative Minerals

Qtz: 31.8
Orthoclase: 27.70
Albite: 22.60
Anorthite: 3.80
Corundum: 1.40
Diopside: 0.00
Hypersthene: 0.00
Olivine: 0.00
Magnetite: 0.79
Ilmenite: 0.31

MINERAL COMPOSITION

QUARTZ: 45.8
PLAG: 24.0
K-SPAR 26.0
MAFICS 4.1

Major Oxide Analysis

SiO2: 73.40
Al2O3: 13.40
Fe2O3: 0.39
FeO: 1.10
MgO: 0.54
CaO: 1.40
Na2O: 2.20
K2O: 5.10
TiO2: 0.21

Normative Minerals

Qtz: 45.8
Orthoclase: 30.20
Albite: 18.70
Anorthite: 1.05
Corundum: 3.90
Diopside: 0.00
Hypersthene: 0.00
Olivine: 0.00
Magnetite: 0.57

P2O5: 0.07
MNO: 0.07

ILMENITE: 0.40

MINERAL COMPOSITION

QUARTZ: 38.8
PLAG: 26.5
K-SPAR 19.1
MAFICS 15.2

Major Oxide Analysis

SiO2: 76.00
Al2O3: 13.10
Fe2O3: 0.90
FeO: 0.22
MgO: 0.15
CaO: 0.40
Na2O: 3.30
K2O: 4.60
TiO2: 0.04
P2O5: 0.01
MNO: 0.04

Normative Minerals

QTZ: 38.8
ORTHOCLASE: 27.50
ALBITE: 28.20
ANORTHITE: 1.10
CORUNDUM: 2.30
DIOPSIDE: 0.00
HYPERSTHENE: 0.00
OLIVINE: 0.00
MAGNETITE: 0.73
ILMENITE: 0.78

MINERAL COMPOSITION

QUARTZ: 42.1
PLAG: 24.4
K-SPAR 25.9
MAFICS 7.6

Major Oxide Analysis

SiO2: 73.60
Al2O3: 13.70
Fe2O3: 0.78
FeO: 1.20
MgO: 0.43
CaO: 0.55
Na2O: 2.70
K2O: 5.50
TiO2: 0.26
P2O5: 0.08
MNO: 0.07

Normative Minerals

QTZ: 42.1
ORTHOCLASE: 32.50
ALBITE: 22.90
ANORTHITE: 1.58
CORUNDUM: 2.70
DIOPSIDE: 0.00
HYPERSTHENE: 0.00
OLIVINE: 0.00
MAGNETITE: 1.10
ILMENITE: 0.49

MINERAL COMPOSITION

QUARTZ: 47.1
PLAG: 23.5
K-SPAR 23.5
MAFICS 5.9

Major Oxide Analysis

SiO2: 68.90
Al2O3: 14.80
Fe2O3: 0.67
FeO: 2.30
MgO: 0.88
CaO: 1.80

Normative Minerals

QTZ: 47.1
ORTHOCLASE: 35.20
ALBITE: 21.40
ANORTHITE: 6.10
CORUNDUM: 2.10
DIOPSIDE: 0.00

NA2O:	2.50	HYPERSTHENE:	0.00
K2O:	2.50	OLIVINE:	0.00
TIO2:	0.49	MAGNETITE:	0.98
P2O5:	0.17	ILMENITE:	0.94
MNO:	0.06		

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Idocrase
Axinite
Tourmaline

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Galena
Fluorite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: MM-4-2 NAME: CONTACT
LATITUDE: 069015000 LONGITUDE: 143038000
QUADRANGLE: MT. MICHAELSON

CLASS: SN
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 200 MINIMUM TONS: 10
PRODUCTION: -1

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
SN:	Reported	
W:	Reported	
BE:	Reported	
F:	Reported	

HOST ROCK CHARACTERISTICS

FORMATION: NERUOKPUK FM. AGE: CAMB-DEV
 TERRANE: ARCT.AK-ENDICOTT THICKNESS: 10

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	30	20
Dolomite:	0	0
Marl:	30	10
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	30	10
Black shale:	0	0
Quartzite:	50	30
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES:
 ORE TYPE:

HOST ROCK ASSAY VALUES

MAX	MIN
-----	-----

INTRUSIVE ROCK CHARACTERISTICS

AGE: 380 TO 380 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	100	100

Syenite 0 0
Alkali granite 0 0

INTRUSIVE ALTERATION TYPES

Potassic
Albitic
Propylitic
Endoskarn present

TEXTURES

Equigranular
Porphyritic
Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 50
Minimum grain size: 5

Anorthite content maximum: 20
Anorthite content minimum: 4

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 34.5
PLAG: 26.2
K-SPAR 35.2
MAFICS 2.8

Major Oxide Analysis

SiO₂: 74.70
Al₂O₃: 12.80
Fe₂O₃: 1.00
FeO: 0.73
MgO: 0.35
CaO: 1.30
Na₂O: 2.60
K₂O: 4.80

Normative Minerals

QTZ: 34.5
ORTHOCLASE: 28.80
ALBITE: 22.30
ANORTHITE: 5.80
CORUNDUM: 1.20
DIOPSIDE: 0.00
HYPERSTHENE: 0.00
OLIVINE: 0.00

TIO2: 0.21
P2O5: 0.06
MNO: 0.04

MAGNETITE: 1.47
ILMENITE: 0.40

MINERAL COMPOSITION

QUARTZ: 33.0
PLAG: 27.4
K-SPAR 33.8
MAFICS 5.8

Major Oxide Analysis

SIO2: 75.90
AL2O3: 12.40
FE2O3: 0.00
FEO: 1.10
MGO: 0.18
CAO: 0.71
NA2O: 2.70
K2O: 5.00
TIO2: 0.08
P2O5: 0.02
MNO: 0.06

Normative Minerals

QTZ: 33.0
ORTHOCLASE: 29.80
ALBITE: 23.10
ANORTHITE: 1.90
CORUNDUM: 1.90
DIOPSIDE: 0.00
HYPERSTHENE: 0.00
OLIVINE: 0.00
MAGNETITE: 0.00
ILMENITE: 0.15

MINERAL COMPOSITION

QUARTZ: 32.2
PLAG: 27.6
K-SPAR 37.7
MAFICS 2.5

Major Oxide Analysis

SIO2: 69.00
AL2O3: 14.40
FE2O3: 0.85
FEO: 2.50
MGO: 1.10
CAO: 1.90
NA2O: 2.70
K2O: 4.70
TIO2: 0.51
P2O5: 0.17
MNO: 0.06

Normative Minerals

QTZ: 32.2
ORTHOCLASE: 28.10
ALBITE: 23.10
ANORTHITE: 7.30
CORUNDUM: 2.30
DIOPSIDE: 0.00
HYPERSTHENE: 0.00
OLIVINE: 0.00
MAGNETITE: 1.24
ILMENITE: 0.98

MINERAL COMPOSITION

QUARTZ: 15.6
PLAG: 26.0
K-SPAR 51.3
MAFICS 7.1

Major Oxide Analysis

SIO2: 66.60
AL2O3: 15.30
FE2O3: 0.85
FEO: 2.50
MGO: 1.50

Normative Minerals

QTZ: 15.6
ORTHOCLASE: 30.30
ALBITE: 21.30
ANORTHITE: 9.00
CORUNDUM: 2.40

CAO: 2.80
NA2O: 2.50
K2O: 5.10
TiO2: 0.44
P2O5: 0.16
MNO: 0.06

DIOPSIDE: 0.00
HYPERSTHENE: 0.00
OLIVINE: 0.00
MAGNETITE: 1.20
ILMENITE: 0.80

MINERAL COMPOSITION

QUARTZ: 23.3
PLAG: 28.4
K-SPAR 46.8
MAFICS 1.4

Major Oxide Analysis

SiO2: 22.80
AL2O3: 13.00
FE2O3: 0.62
FeO: 1.80
MGO: 0.61
CAO: 1.50
NA2O: 2.40
K2O: 5.00
TiO2: 0.34
P2O5: 0.12
MNO: 0.06

Normative Minerals

QTZ: 23.3
ORTHOCLASE: 29.80
ALBITE: 20.50
ANORTHITE: 6.10
CORUNDUM: 1.40
DIOPSIDE: 0.00
HYPERSTHENE: 0.00
OLIVINE: 0.00
MAGNETITE: 0.91
ILMENITE: 0.65

MINERAL COMPOSITION

QUARTZ: 26.2
PLAG: 27.4
K-SPAR 44.6
MAFICS 1.8

Major Oxide Analysis

SiO2: 75.00
AL2O3: 13.00
FE2O3: 0.36
FeO: 1.40
MGO: 0.45
CAO: 0.50
NA2O: 2.20
K2O: 5.60
TiO2: 0.24
P2O5: 0.08
MNO: 0.04

Normative Minerals

QTZ: 26.2
ORTHOCLASE: 33.20
ALBITE: 18.70
ANORTHITE: 1.30
CORUNDUM: 2.80
DIOPSIDE: 0.00
HYPERSTHENE: 0.00
OLIVINE: 0.00
MAGNETITE: 0.52
ILMENITE: 0.46

MINERAL COMPOSITION

QUARTZ: 33.5
PLAG: 22.4
K-SPAR 39.1
MAFICS 5.0

Major Oxide Analysis

SiO2: 71.00
AL2O3: 13.40

Normative Minerals

QTZ: 33.5
ORTHOCLASE: 23.90

FE2O3:	0.58	ALBITE:	22.20
FEO:	2.20	ANORTHITE:	8.30
MGO:	1.00	CORUNDUM:	1.80
CAO:	2.00	DIOPSIDE:	0.00
NA2O:	2.60	HYPERSTHENE:	0.00
K2O:	4.00	OLIVINE:	0.00
TIO2:	0.44	MAGNETITE:	0.85
P2O5:	0.16	ILMENITE:	0.84
MNO:	0.06		

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Axinite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrrhotite
Fluorite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: SP-4-7 NAME: LOWER KOBUK N
LATITUDE: 067019000 LONGITUDE: 154002000
QUADRANGLE: SURVEY PASS

CLASS: SN
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1000 MINIMUM TONS: 200
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

CU: 25 25
MO: 3
NI: 50
PB: 20
SN: 1
W: 1
ZN: 70
V: 200
CR: 100

INTRUSIVE ROCK CHARACTERISTICS

AGE: 370 TO 365 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	90	90
Syenite	0	0
Alkali granite	10	10

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Equigranular
Porphyritic
Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 41.0
PLAG: 9.0
K-SPAR 50.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 32.0
PLAG: 18.0
K-SPAR 50.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

SiO2: 74.22
Al2O3: 13.10
Fe2O3: 0.32
FeO: 1.51
MgO: 0.22
CaO: 0.29
Na2O: 3.09
K2O: 5.71
TiO2: 0.17
P2O5: 0.06
MnO: 0.05

QTZ: 32.0
ORTHOCLASE: 33.74
ALBITE: 26.14
ANORTHITE: 1.05
CORUNDUM: 1.45
DIOPSIDE: 0.00
HYPERSTHENE: 2.87
OLIVINE: 0.00
MAGNETITE: 0.46
ILMENITE: 0.32

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Hornblende
Biotite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Sphalerite
Fluorite

ORE PARAGENESIS:

NEARBY DEPOSIT TYPES: CU-ZN-PB-BA VMS
ORE TYPE: CU,ZN,PB,BA

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.3	
AS:	200	
BA:	250	
BE:	1	
BI:	10	
CO:	20	
CU:	25	25
MO:	3	
NI:	50	
PB:	20	
SN:	1	
W:	1	
ZN:	70	
V:	200	
CR:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 370 TO 365 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	90	90
Syenite	0	0
Alkali granite	10	10

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Equigranular
Porphyritic
Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 21.0
K-SPAR 59.0
MAFICS 0.0

Major Oxide Analysis

SiO₂: 77.12
Al₂O₃: 11.33
Fe₂O₃: 0.28
FeO: 1.19
MgO: 0.00
CaO: 1.33
Na₂O: 2.96
K₂O: 5.09
TiO₂: 0.12
P₂O₅: 0.04
MnO: 0.02

Normative Minerals

QTZ: 20.0
ORTHOCLASE: 30.07
ALBITE: 25.05
ANORTHITE: 2.60
CORUNDUM: 0.00
DIOPSIDE: 3.34
HYPERSTHENE: 0.02
OLIVINE: 0.00
MAGNETITE: 0.41
ILMENITE: 0.23

MINERAL COMPOSITION

QUARTZ: 25.0
PLAG: 17.0
K-SPAR 58.0
MAFICS 0.0

Major Oxide Analysis

SiO₂: 76.47
Al₂O₃: 13.19
Fe₂O₃: 0.34
FeO: 1.16
MgO: 0.19
CaO: 0.76
Na₂O: 3.32
K₂O: 5.29
TiO₂: 0.17
P₂O₅: 0.06
MnO: 0.05

Normative Minerals

QTZ: 25.0
ORTHOCLASE: 31.30
ALBITE: 28.10
ANORTHITE: 3.38
CORUNDUM: 0.76
DIOPSIDE: 0.00
HYPERSTHENE: 2.10
OLIVINE: 0.00
MAGNETITE: 0.49
ILMENITE: 0.32

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Hornblende
Biotite
Axinite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Chalcopyrite
Cassiterite
Fluorite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: SP-4-14 NAME: NOATAK NW
LATITUDE: 067036000 LONGITUDE: 155005000
QUADRANGLE: SURVEY PASS

CLASS: SN
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 200 MINIMUM TONS: 5
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	1.0	1.0
CU:	200	200
MO:	50.0	

CR: 100

INTRUSIVE ROCK CHARACTERISTICS

AGE: 370 TO 365 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	80	80
Syenite	0	0
Alkali granite	20	20

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Equigranular
Porphyritic
Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 46.0
PLAG: 8.0
K-SPAR 46.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 32.0
PLAG: 18.0
K-SPAR 50.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 46.0
PLAG: 6.0
K-SPAR 48.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

SiO2: 74.00
Al2O3: 13.67
Fe2O3: 0.44
FeO: 1.02
MgO: 0.42
CaO: 0.93
Na2O: 3.32
K2O: 5.00
TiO2: 0.17
P2O5: 0.06
MnO: 0.05

QTZ: 46.0
ORTHOCLASE: 29.50
ALBITE: 28.10
ANORTHITE: 4.10
CORUNDUM: 1.30
DIOPSIDE: 0.00
HYPERSTHENE: 2.37
OLIVINE: 0.00
MAGNETITE: 0.64
ILMENITE: 0.32

MINERAL COMPOSITION

QUARTZ: 43.0
PLAG: 7.0
K-SPAR 50.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

SiO2: 78.38
Al2O3: 11.32
Fe2O3: 0.51
FeO: 0.76
MgO: 0.05
CaO: 0.31
Na2O: 2.50
K2O: 5.30
TiO2: 0.17
P2O5: 0.06
MnO: 0.05

QTZ: 43.0
ORTHOCLASE: 31.30
ALBITE: 21.20
ANORTHITE: 1.15
CORUNDUM: 1.05
DIOPSIDE: 0.00
HYPERSTHENE: 0.91
OLIVINE: 0.00
MAGNETITE: 0.74
ILMENITE: 0.32

MINERAL COMPOSITION

QUARTZ: 28.0
PLAG: 3.0
K-SPAR 69.0
MAFICS 0.0

Major Oxide Analysis		Normative Minerals	
SiO2:	69.59	QTZ:	28.0
Al2O3:	15.31	ORTHOCLASE:	25.90
Fe2O3:	0.62	ALBITE:	28.30
FeO:	2.40	ANORTHITE:	3.50
MgO:	0.28	CORUNDUM:	3.77
CaO:	0.79	DIOPSIDE:	0.00
Na2O:	3.35	HYPERSTHENE:	4.40
K2O:	4.38	OLIVINE:	0.00
TiO2:	0.17	MAGNETITE:	0.90
P2O5:	0.06	ILMENITE:	0.32
MNO:	0.05		

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Pyrhottite
Arsenopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: SP-4-8 NAME: LOWER KOBUK S
 LATITUDE: 067018300 LONGITUDE: 154002000
 QUADRANGLE: SURVEY PASS

CLASS: SN
 LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 300 MINIMUM TONS: 20
 PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

CO: 20
 CU: 25 25
 MO: 3
 NI: 50
 PB: 20
 SN: 1
 W: 1
 ZN: 70
 V: 200
 CR: 100

INTRUSIVE ROCK CHARACTERISTICS

AGE: 470 TO 465 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	90	90
Syenite	0	0
Alkali granite	10	10

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
 Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
 Minimum grain size:
 Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION
 QUARTZ: 35.0
 PLAG: 15.0
 K-SPAR 50.0
 MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION
 QUARTZ: 26.0
 PLAG: 10.0
 K-SPAR 64.0
 MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION
 QUARTZ: 42.0
 PLAG: 13.0
 K-SPAR 45.0
 MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION
 QUARTZ: 23.0
 PLAG: 0.0
 K-SPAR 77.0
 MAFICS 0.0

Major Oxide Analysis

Normative Minerals

SIO2: 70.21
 AL2O3: 14.20
 FE2O3: 0.74
 FEO: 2.50
 MGO: 0.22
 CAO: 0.29
 NA2O: 3.09
 K2O: 5.71
 TIO2: 0.17
 P2O5: 0.06
 MNO: 0.05

QTZ: 23.0
 ORTHOCLASE: 33.74
 ALBITE: 26.14
 ANORTHITE: 1.05
 CORUNDUM: 2.55
 DIOPSIDE: 0.00
 HYPERSTHENE: 4.34
 OLIVINE: 0.00
 MAGNETITE: 1.07
 ILMENITE: 0.32

SKARN MINERAL DATA

SKARN MINERALS

Garnet
 Epidote
 Hornblende
 Biotite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrrhotite
Chalcopyrite
Arsenopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: SP-4-3 NAME: ARRIGETCH CENTER E
LATITUDE: 067025300 LONGITUDE: 154002000
QUADRANGLE: SURVEY PASS

CLASS: SN
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1000 MINIMUM TONS: 100
PRODUCTION: 0

GEOMETRY

LENGTH: 20.0 WIDTH: 5.0 DEPTH: 1000

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	25.0	25.0
CU:	200	200
MO:	5.0	
PB:	5000	
SN:	500	
W:	40.0	
ZN:	5000	
AS:	200	
BA:	300	
BE:	20	
BI:	100	
SB:	50	

Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	90	90
Syenite	0	0
Alkali granite	10	10

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Equigranular

Porphyritic

Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:

Minimum grain size:

Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 29.0

PLAG: 32.0

K-SPAR 39.0

MAFICS 0.0

Major Oxide Analysis

SiO₂: 76.38

Al₂O₃: 12.27

Fe₂O₃: 0.40

FeO: 1.16

MgO: 0.05

CaO: 1.63

Na₂O: 4.56

K₂O: 1.09

TiO₂: 0.16

P₂O₅: 0.05

MnO: 0.07

Normative Minerals

QTZ: 29.0

ORTHOCLASE: 6.44

ALBITE: 38.58

ANORTHITE: 7.76

CORUNDUM: 0.75

DIOPSIDE: 0.00

HYPERSTHENE: 1.79

OLIVINE: 0.00

MAGNETITE: 0.58

ILMENITE: 0.30

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Idocrase
Epidote
Hornblende
Biotite
Sphene
Tourmaline
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Sphalerite
Galena
Fluorite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: SP-4-5 NAME: UPPER KOBUK
LATITUDE: 067021000 LONGITUDE: 154002000
QUADRANGLE: SURVEY PASS

CLASS: SN
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 50 MINIMUM TONS: 5
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

PB: 20
SN: 1
W: 1
ZN: 70
V: 200
CR: 100

INTRUSIVE ROCK CHARACTERISTICS

AGE: 370 TO 365 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	90	90
Syenite	0	0
Alkali granite	10	10

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Equigranular
Porphyritic
Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 38.0
PLAG: 17.0
K-SPAR 45.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 30.0
PLAG: 17.0
K-SPAR 53.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

SiO2: 69.37
AL2O3: 13.50
FE2O3: 0.63
FeO: 2.24
MgO: 0.74
CaO: 1.12
Na2O: 4.11
K2O: 3.60
TiO2: 0.17
P2O5: 0.06
MnO: 0.05

QTZ: 30.0
ORTHOCLASE: 21.27
ALBITE: 34.77
ANORTHITE: 5.16
CORUNDUM: 0.95
DIOPSIDE: 0.00
HYPERSTHENE: 5.25
OLIVINE: 0.00
MAGNETITE: 0.91
ILMENITE: 0.32

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Biotite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Sphalerite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: SP-4-6 NAME: MIDDLE KOBUK
LATITUDE: 067019300 LONGITUDE: 153059000
QUADRANGLE: SURVEY PASS

CLASS: SN
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1200000 MINIMUM TONS: 100000
PRODUCTION: 0

GEOMETRY

LENGTH: 450.0 WIDTH: 50.0 DEPTH: 1200

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	0.3	0.3
CU:	30	30
MO:	20.0	
PB:	60	
SN:	1000	
W:	150.0	
ZN:	700	
AS:	300	
BA:	150	
BE:	700	
BI:	70	

HOST ROCK CHARACTERISTICS

FORMATION: SKAJIT AGE: DEVONIAN
TERRANE: ARCTIC AK-HAMMOND THICKNESS: 1000

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	20
Dolomite:	0	0
Marl:	10	10
Mafic volc:	10	10
Int. Volc:	10	10
Felsic Volc:	0	0
Shale:	30	30
Black shale:	10	10
Quartzite:	0	0
Graywacke:	10	10

METAMORPHIC GRADE: GREENSCHIST

NEARBY DEPOSIT TYPES: CU-ZN-PB-BA VMS
ORE TYPE: CU,ZN,PB,BA

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.3	
AS:	200	
BA:	250	
BE:	1	
BI:	10	
CO:	20	
CU:	25	25
MO:	3	
NI:	50	
PB:	20	
SN:	1	
W:	1	
ZN:	70	
V:	200	
CR:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 370 TO 365 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	90	90
Syenite	0	0
Alkali granite	10	10

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Equigranular
Porphyritic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 45.0
PLAG: 5.0
K-SPAR 10.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 41.0
PLAG: 8.0
K-SPAR 51.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

SiO₂: 77.01
Al₂O₃: 11.84
Fe₂O₃: 0.42
FeO: 1.60
MgO: 0.02
CaO: 0.16
Na₂O: 2.68
K₂O: 5.12
TiO₂: 0.17
P₂O₅: -0.06
MnO: 0.05

QTZ: 41.0
ORTHOCLASE: 30.49
ALBITE: 22.34
ANORTHITE: 0.40
CORUNDUM: 1.76
DIOPSIDE: 0.00
HYPERSTHENE: 2.45
OLIVINE: 0.00
MAGNETITE: 0.61
ILMENITE: 0.32

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Hornblende
Biotite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Sphalerite
Fluorite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: SP-4-2 NAME: ARRIGETCH CREEK W
LATITUDE: 067026300 LONGITUDE: 154011000
QUADRANGLE: SURVEY PASS

CLASS: SN
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 500 MINIMUM TONS: 50
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	0.5	0.5
CU:	70	70
MO:	5.0	
PB:	5	
SN:	1000	
ZN:	500	
AS:	200	
BA:	50	
BE:	1	

HOST ROCK CHARACTERISTICS

FORMATION: SKAJIT

AGE: DEV-SIL

TERRANE: ARCTIC AK-HAMMOND THICKNESS: 1000

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	20
Dolomite:	0	0
Marl:	10	10
Mafic volc:	10	10
Int. Volc:	10	10
Felsic Volc:	0	0
Shale:	30	30
Black shale:	10	10
Quartzite:	0	0
Graywacke:	10	10

METAMORPHIC GRADE: GREENSCHIST

NEARBY DEPOSIT TYPES: CU-ZN-PB-BA VMS

ORE TYPE: CU,ZN,PB,BA

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.3	
AS:	200	
BA:	250	
BE:	1	
BI:	10	
CO:	20	
CU:	25	25
MO:	3	
NI:	50	
PB:	20	
SN:	1	
W:	1	
ZN:	70	
V:	200	
CR:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 370 TO 365 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0

Quartz monzonite	0	0
Granodiorite	90	90
Syenite	0	0
Alkali granite	10	10

INTRUSIVE ALTERATION TYPES

Potassic

TEXTURES

Equigranular
 Porphyritic
 Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
 Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
 Minimum grain size:
 Anorthite content missing

INTRUSIVE COMPOSITION DATA

Major Oxide Analysis	Normative Minerals
SIO2: 78.63	QTZ: -1.0
AL2O3: 11.23	ORTHOCLASE: 20.70
FE2O3: 1.06	ALBITE: 8.60
FEO: 1.06	ANORTHITE: 0.41
MGO: 0.17	CORUNDUM: 5.92
CAO: 0.20	DIOPSIDE: 0.00
NA2O: 0.99	HYPERSTHENE: 0.83
K2O: 3.41	OLIVINE: 0.00
TIO2: 0.43	MAGNETITE: 1.58
P2O5: 0.09	ILMENITE: 0.84
MNO: 0.01	

Major Oxide Analysis	Normative Minerals
SIO2: 75.23	QTZ: -1.0
AL2O3: 11.69	ORTHOCLASE: 42.40
FE2O3: 0.61	ALBITE: 8.19
FEO: 1.67	ANORTHITE: 0.20
MGO: 0.15	CORUNDUM: 2.56
CAO: 0.11	DIOPSIDE: 0.00
NA2O: 0.95	HYPERSTHENE: 2.26

K2O: 7.04
TiO2: 0.47
P2O5: 0.10
MNO: 0.03

OLIVINE: 0.00
MAGNETITE: 0.90
ILMENITE: 0.91

Major Oxide Analysis

SiO2: 76.58
Al2O3: 12.98
Fe2O3: 0.50
FeO: 1.24
MgO: 0.06
CaO: 0.54
Na2O: 6.99
K2O: 0.63
TiO2: 0.17
P2O5: 0.06
MNO: 0.02

Normative Minerals

Qtz: -1.0
Orthoclase: 3.72
Albite: 59.14
Anorthite: 2.18
Corundum: 0.00
Diopside: 0.09
Hypersthene: 1.72
Olivine: 0.00
Magnetite: 0.73
Ilmenite: 0.32

Major Oxide Analysis

SiO2: 77.19
Al2O3: 11.19
Fe2O3: 0.33
FeO: 1.51
MgO: 0.10
CaO: 0.51
Na2O: 3.29
K2O: 4.89
TiO2: 0.11
P2O5: 0.04
MNO: 0.03

Normative Minerals

Qtz: -1.0
Orthoclase: 28.89
Albite: 27.84
Anorthite: 1.32
Corundum: 0.00
Diopside: 0.83
Hypersthene: 2.19
Olivine: 0.00
Magnetite: 0.48
Ilmenite: 0.21

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Actinolite
Plagioclase
Tourmaline

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Cassiterite
Fluorite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: SP-4-4 NAME: ARRIGETCH CENTER N
LATITUDE: 067026300 LONGITUDE: 153057000
QUADRANGLE: SURVEY PASS

CLASS: SN
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1000 MINIMUM TONS: 50
PRODUCTION: 0

GEOMETRY

LENGTH: 20.0 WIDTH: 15.0 DEPTH: 100

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	0.5	0.5
CU:	700	700
MO:	5.0	
PB:	20	
SN:	1200	
W:	50.0	
ZN:	1000	
AS:	500	
BA:	100	
BE:	15	
BI:	20	

HOST ROCK CHARACTERISTICS

FORMATION: SKAJIT AGE: DEVONIAN
TERRANE: ARCTIC AK-HAMMOND THICKNESS: 1000

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	20
Dolomite:	0	0
Marl:	10	10

Mafic volc:	10	10
Int. Volc:	10	10
Felsic Volc:	0	0
Shale:	30	30
Black shale:	10	10
Quartzite:	0	0
Graywacke:	10	10

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: CU-ZN-PB-BA VMS
 ORE TYPE: CU,ZN,PB,BA

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.3	
AS:	200	
BA:	250	
BE:	1	
BI:	10	
CO:	20	
CU:	25	25
MO:	3	
NI:	50	
PB:	20	
SN:	1	
W:	1	
ZN:	70	
V:	200	
CR:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 370 TO 365 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	90	90
Syenite	0	0
Alkali granite	10	10

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Equigranular
Porphyritic
Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 22.0
PLAG: 35.0
K-SPAR 43.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 40.0
PLAG: 38.0
K-SPAR 22.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

SiO₂: 74.43
Al₂O₃: 12.85
Fe₂O₃: 0.24
FeO: 1.44
MgO: 0.01
CaO: 0.37
Na₂O: 3.60
K₂O: 5.47
TiO₂: 0.16
P₂O₅: 0.05
MnO: 0.02

QTZ: 40.0
ORTHOCLASE: 32.32
ALBITE: 30.46
ANORTHITE: 1.51
CORUNDUM: 0.45
DIOPSIDE: 0.00
HYPERSTHENE: 2.24
OLIVINE: 0.00
MAGNETITE: 0.35
ILMENITE: 0.30

MINERAL COMPOSITION

QUARTZ: 36.0
PLAG: 19.0

K-SPAR 45.0
MAFICS 0.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Hornblende

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Chalcopyrite
Sphalerite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: SP-4-9 NAME: KOBUK NW
LATITUDE: 067018300 LONGITUDE: 154023300
QUADRANGLE: SURVEY PASS

CLASS: SN
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 500 MINIMUM TONS: 50
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	0.3	0.3

CU: 100 100
 MO: 3.0
 PB: 90
 SN: 800
 W: 30.0
 ZN: 250
 AS: 300
 BA: 200
 BE: 40
 BI: 15

HOST ROCK CHARACTERISTICS

FORMATION: PZSGN AGE: L.PALZOIC
 TERRANE: ARCTIC AK-HAMMOND THICKNESS: 30

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	0	0
Marl:	10	10
Mafic volc:	10	10
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	50	50
Black shale:	10	10
Quartzite:	0	0
Graywacke:	10	10

METAMORPHIC GRADE: U.GREENSCHIST
 NEARBY DEPOSIT TYPES: CU-ZN-PB-BA VMS
 ORE TYPE: CU,ZN,PB,BA

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.3	
AS:	200	
BA:	500	
BE:	1	
BI:	10	
CO:	20	
CU:	20	20
MO:	3	
NI:	50	
PB:	20	
SN:	1	
W:	1	

ZN: 75
V: 200
CR: 100

INTRUSIVE ROCK CHARACTERISTICS

AGE: 370 TO 365 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	80	80
Syenite	0	0
Alkali granite	20	20

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Equigranular
Porphyritic
Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION
QUARTZ: 24.0
PLAG: 20.0
K-SPAR 56.0

MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 27.0
PLAG: 30.0
K-SPAR 43.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 37.0
PLAG: 37.0
K-SPAR 26.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 25.0
PLAG: 37.0
K-SPAR 38.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 44.5
PLAG: 3.0
K-SPAR 52.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

SiO2: 76.50
Al2O3: 11.85
Fe2O3: 0.67
FeO: 1.58
MgO: 0.15
CaO: 0.74
Na2O: 3.00
K2O: 4.68
TiO2: 0.17
P2O5: 0.06
MnO: 0.05

QTZ: 44.5
ORTHOCLASE: 27.70
ALBITE: 25.40
ANORTHITE: 3.28
CORUNDUM: 0.65
DIOPSIDE: 0.00
HYPERSTHENE: 2.53
OLIVINE: 0.00
MAGNETITE: 0.97
ILMENITE: 0.32

MINERAL COMPOSITION

QUARTZ: 32.0
PLAG: 23.0
K-SPAR 55.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Epidote
Hornblende
Biotite

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Sphalerite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: SP-4-10 NAME: N REED RIVER
LATITUDE: 067019000 LONGITUDE: 154058000
QUADRANGLE: SURVEY PASS

CLASS: SN
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 500 MINIMUM TONS: 10
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	4.0	4.0
CU:	6000	6000
PB:	90	
SN:	30	
ZN:	30	

AGE: 370 TO 365 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	80	80
Syenite	0	0
Alkali granite	20	20

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Equigranular
Porphyritic
Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 30.0
PLAG: 41.0
K-SPAR 29.0
MAFICS 0.0

Major Oxide Analysis

SiO₂: 73.03
Al₂O₃: 13.00
Fe₂O₃: 0.72

Normative Minerals

QTZ: 30.0
ORTHOCLASE: 26.50
ALBITE: 26.90

FEO: 1.72
MGO: 0.54
CAO: 1.61
NA2O: 3.18
K2O: 4.49
TIO2: 0.17
P2O5: 0.06
MNO: 0.05

ANORTHITE: 7.60
CORUNDUM: 0.13
DIOPSIDE: 0.00
HYPERSTHENE: 3.72
OLIVINE: 0.00
MAGNETITE: 1.05
ILMENITE: 0.32

MINERAL COMPOSITION

QUARTZ: 32.0
PLAG: 23.0
K-SPAR 45.0
MAFICS 0.0

Major Oxide Analysis

SIO2: 76.00
AL2O3: 12.12
FE2O3: 0.41
FEO: 0.93
MGO: 0.15
CAO: 0.68
NA2O: 3.25
K2O: 4.89
TIO2: 0.17
P2O5: 0.06
MNO: 0.05

Normative Minerals

QTZ: 32.0
ORTHOCLASE: 28.90
ALBITE: 27.50
ANORTHITE: 2.98
CORUNDUM: 0.34
DIOPSIDE: 0.00
HYPERSTHENE: 1.56
OLIVINE: 0.00
MAGNETITE: 0.59
ILMENITE: 0.32

MINERAL COMPOSITION

QUARTZ: 27.0
PLAG: 5.0
K-SPAR 68.0
MAFICS 0.0

Major Oxide Analysis

MINERAL COMPOSITION

QUARTZ: 38.0
PLAG: 22.0
K-SPAR 40.0
MAFICS 0.0

Normative Minerals

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Hornblende
Biotite

PARAGENESIS:

ASSEMBLAGE:

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	0
Dolomite:	0	0
Marl:	10	10
Mafic volc:	10	10
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	50	50
Black shale:	10	10
Quartzite:	0	0
Graywacke:	10	10

METAMORPHIC GRADE: U.GREENSCHIST
 NEARBY DEPOSIT TYPES: CU-ZN-PB-BA VMS
 ORE TYPE: CU,ZN,PB,BA

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.3	
AS:	200	
BA:	500	
BE:	1	
BI:	10	
CO:	20	
CU:	20	20
MO:	3	
NI:	50	
PB:	20	
SN:	1	
W:	1	
ZN:	75	
V:	200	
CR:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 370 TO 365 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0

Granodiorite	80	80
Syenite	0	0
Alkali granite	20	20

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Equigranular
 Porphyritic
 Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
 Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
 Minimum grain size:
 Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 35.0
 PLAG: 33.0
 K-SPAR 32.0
 MAFICS 0.0

Major Oxide Analysis

SiO2: 70.92
 AL2O3: 14.18
 FE2O3: 0.71
 FEO: 1.89
 MGO: 0.82
 CAO: 1.31
 NA2O: 3.39
 K2O: 4.82
 TIO2: 0.17
 P2O5: 0.06
 MNO: 0.05

Normative Minerals

QTZ: 35.0
 ORTHOCLASE: 28.48
 ALBITE: 28.68
 ANORTHITE: 6.11
 CORUNDUM: 1.14
 DIOPSIDE: 0.00
 HYPERSTHENE: 4.74
 OLIVINE: 0.00
 MAGNETITE: 1.03
 ILMENITE: 0.32

MINERAL COMPOSITION

QUARTZ: 24.0
 PLAG: 30.0

K-SPAR 46.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 31.0
PLAG: 36.0
K-SPAR 33.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

SiO2: 69.20
Al2O3: 15.02
Fe2O3: 0.85
FeO: 2.29
MgO: 0.96
CaO: 2.69
Na2O: 2.70
K2O: 3.25
TiO2: 0.17
P2O5: 0.06
MnO: 0.05

QTZ: 31.0
ORTHOCLASE: 19.21
ALBITE: 22.85
ANORTHITE: 12.95
CORUNDUM: 2.31
DIOPSIDE: 0.00
HYPERSTHENE: 5.71
OLIVINE: 0.00
MAGNETITE: 1.23
ILMENITE: 0.32

MINERAL COMPOSITION

QUARTZ: 24.0
PLAG: 38.0
K-SPAR 38.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

SiO2: 67.00
Al2O3: 14.76
Fe2O3: 1.25
FeO: 2.65
MgO: 1.01
CaO: 2.75
Na2O: 3.65
K2O: 4.45
TiO2: 0.17
P2O5: 0.06
MnO: 0.05

QTZ: 24.0
ORTHOCLASE: 26.29
ALBITE: 30.88
ANORTHITE: 10.74
CORUNDUM: 0.00
DIOPSIDE: 2.09
HYPERSTHENE: 5.11
OLIVINE: 0.00
MAGNETITE: 1.81
ILMENITE: 0.32

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Hornblende
Biotite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Sphalerite
Galena
Arsenopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: SP-4-12 NAME: ANGAYU CRK N
LATITUDE: 067030000 LONGITUDE: 155009000
QUADRANGLE: SURVEY PASS

CLASS: SN
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 2000 MINIMUM TONS: 100
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	0.5	0.5
CU:	25	25
MO:	4.0	
PB:	70	
SN:	600	
W:	50.0	
ZN:	200	
AS:	200	
BA:	1200	
BE:	25	
BI:	200	

Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	90	90
Syenite	0	0
Alkali granite	10	10

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Porphyritic
Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 28.0
PLAG: 24.0
K-SPAR 48.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 36.0
PLAG: 0.0
K-SPAR 64.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

SIO2: 73.00	QTZ: 36.0
AL2O3: 12.19	ORTHOCLASE: 26.80
FE2O3: 0.43	ALBITE: 30.20
FEO: 0.93	ANORTHITE: 2.29

MGO: 0.15
CAO: 0.54
NA2O: 3.57
K2O: 4.54
TiO2: 0.17
P2O5: 0.06
MNO: 0.05

CORUNDUM: 0.57
DIOPSIDE: 0.00
HYPERSTHENE: 1.54
OLIVINE: 0.00
MAGNETITE: 0.62
ILMENITE: 0.32

MINERAL COMPOSITION

QUARTZ: 33.0
PLAG: 13.0
K-SPAR 54.0
MAFICS 0.0

Major Oxide Analysis

SiO2: 74.40
AL2O3: 13.80
FE2O3: 0.25
FeO: 1.08
MGO: 0.23
CAO: 1.10
NA2O: 3.63
K2O: 4.54
TiO2: 0.17
P2O5: 0.06
MNO: 0.05

Normative Minerals

QTZ: 33.0
ORTHOCLASE: 26.80
ALBITE: 30.70
ANORTHITE: 5.07
CORUNDUM: 1.06
DIOPSIDE: 0.00
HYPERSTHENE: 2.16
OLIVINE: 0.00
MAGNETITE: 0.36
ILMENITE: 0.32

MINERAL COMPOSITION

QUARTZ: 42.0
PLAG: 12.0
K-SPAR 46.0
MAFICS 0.0

Major Oxide Analysis

MINERAL COMPOSITION

QUARTZ: 37.0
PLAG: 22.0
K-SPAR 41.0
MAFICS 0.0

Normative Minerals

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Hornblende
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Chalcopyrite
Arsenopyrite
Stibnite
Fluorite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: SP-4-13 NAME: NOATAK S
LATITUDE: 067031000 LONGITUDE: 155007000
QUADRANGLE: SURVEY PASS

CLASS: SN
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 500 MINIMUM TONS: 10
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	4.0	4.0
CU:	280	280
MO:	50.0	
PB:	18	
SN:	30	
W:	5.0	
ZN:	300	
AS:	200	
BA:	3000	
BE:	1	
BI:	10	

HOST ROCK CHARACTERISTICS

FORMATION: DP AGE: DEVONIAN
TERRANE: ARCTIC AK-HAMMOND THICKNESS: 30

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	20
Dolomite:	0	0
Marl:	10	10
Mafic volc:	7	7
Int. Volc:	8	8
Felsic Volc:	0	0
Shale:	40	40
Black shale:	10	10
Quartzite:	0	0
Graywacke:	5	5

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: CU-ZN-PB-BA VMS
ORE TYPE: CU,ZN,PB,BA

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.3	
AS:	200	
BA:	300	
BE:	1	
BI:	10	
CO:	20	
CU:	35	35
MO:	3	
NI:	50	
PB:	10	
SN:	1	
W:	1	
ZN:	100	
V:	200	
CR:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 370 TO 365 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0

Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	80	80
Syenite	0	0
Alkali granite	20	20

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Equigranular
 Porphyritic
 Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
 Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
 Minimum grain size:
 Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 30.0
 PLAG: 43.0
 K-SPAR 27.0
 MAFICS 0.0

Major Oxide Analysis

SiO₂: 71.19
 Al₂O₃: 14.30
 Fe₂O₃: 0.20
 FeO: 1.90
 MgO: 0.54
 CaO: 2.32
 Na₂O: 3.99
 K₂O: 3.51
 TiO₂: 0.07
 P₂O₅: 0.06

Normative Minerals

QTZ: 30.0
 ORTHOCLASE: 20.74
 ALBITE: 33.76
 ANORTHITE: 10.74
 CORUNDUM: 0.00
 DIOPSIDE: 0.32
 HYPERSTHENE: 4.48
 OLIVINE: 0.00
 MAGNETITE: 0.29
 ILMENITE: 0.13

MNO: 0.05

MINERAL COMPOSITION

QUARTZ: 28.0
PLAG: 42.0
K-SPAR 30.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 41.0
PLAG: 37.0
K-SPAR 22.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

SiO2: 77.89
Al2O3: 11.30
Fe2O3: 0.45
FeO: 0.82
MgO: 0.02
CaO: 0.11
Na2O: 3.10
K2O: 5.09
TiO2: 0.17
P2O5: 0.06
MNO: 0.05

QTZ: 41.0
ORTHOCLASE: 30.07
ALBITE: 26.23
ANORTHITE: 0.15
CORUNDUM: 0.64
DIOPSIDE: 0.00
HYPERSTHENE: 0.99
OLIVINE: 0.00
MAGNETITE: 0.65
ILMENITE: 0.32

MINERAL COMPOSITION

QUARTZ: 24.0
PLAG: 38.0
K-SPAR 48.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

SiO2: 71.49
Al2O3: 12.50
Fe2O3: 0.71
FeO: 3.50
MgO: 0.41
CaO: 1.78
Na2O: 2.88
K2O: 4.12
TiO2: 0.17
P2O5: 0.06
MNO: 0.05

QTZ: 24.0
ORTHOCLASE: 24.35
ALBITE: 24.37
ANORTHITE: 8.44
CORUNDUM: 0.21
DIOPSIDE: 0.00
HYPERSTHENE: 6.67
OLIVINE: 0.00
MAGNETITE: 1.03
ILMENITE: 0.32

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene

Epidote
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrrhotite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: TL-4-7 NAME: BESSIE MAPLE
LATITUDE: 065027000 LONGITUDE: 167011300
QUADRANGLE: TELLER

CLASS: SN
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 2000000 MINIMUM TONS: 300000
PRODUCTION: 0

GEOMETRY

LENGTH: 150.0 WIDTH: 50.0 DEPTH: 1000

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	300.0	300.0
AU:	0.20	
CU:	200	200
PB:	1000	
SN:	2000	
W:	500.0	
BA:	40	
BE:	1000	
F:	150000	
V:	8	
CR:	2	
SB:	500	

Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	100	100
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Equigranular
Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 2
Minimum grain size: 2
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Idocrase
Hornblende
Plagioclase
Tourmaline

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite
Sphalerite
Galena
Arsenopyrite
Stannite
Cassiterite
Fluorite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Idocrase
Hornblende
Plagioclase
Tourmaline

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Chalcopyrite
Sphalerite
Galena
Arsenopyrite
Stannite
Cassiterite
Fluorite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: TL-4-6
LATITUDE: 065027300
QUADRANGLE: TELLER

NAME: TIN CREEK
LONGITUDE: 167007000

CLASS: SN

LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1000000 MINIMUM TONS: 100000
PRODUCTION: 0

GEOMETRY

LENGTH: 150.0 WIDTH: 50.0 DEPTH: 1200

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
CU:	10	10
PB:	100	
SN:	500	
BA:	30	
BE:	2000	
F:	200000	
V:	20	
CR:	10	

HOST ROCK CHARACTERISTICS

FORMATION: PORT CLARENCE LMS AGE: ORDOVICIAN
TERRANE: YORK THICKNESS: 3000

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	30	30
Dolomite:	5	5
Marl:	10	10
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	30	30
Black shale:	10	10
Quartzite:	5	5
Graywacke:	10	10

METAMORPHIC GRADE: GREENSCHIST

NEARBY DEPOSIT TYPES:

ORE TYPE:

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.5	
AS:	200	
BA:	250	
BE:	2	
CO:	15	
CU:	25	25
MO:	5	
NI:	40	
PB:	10	
SN:	2	
W:	2	
ZN:	70	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 80 TO 77 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	100	100
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Equigranular

Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 2
Minimum grain size: 2
Anorthite content missing

INTRUSIVE COMPOSITION DATA

Major Oxide Analysis

SiO₂: 74.07
Al₂O₃: 13.38
Fe₂O₃: 1.21
FeO: 0.75
MgO: 0.27
CaO: 0.70
Na₂O: 3.15
K₂O: 5.56
TiO₂: 0.27
P₂O₅: 0.08
MnO: 0.05

Normative Minerals

Qtz: -1.0
Orthoclase: 33.00
Albite: 26.70
Anorthite: 2.83
Corundum: 1.15
Diopside: 0.00
Hypersthene: 0.70
Olivine: 0.00
Magnetite: 1.76
Ilmenite: 0.51

MINERAL COMPOSITION

Quartz: 29.2
Plag: 31.8
K-spar: 35.8
Mafics: 3.2

Major Oxide Analysis

SiO₂: 76.50
Al₂O₃: 12.80
Fe₂O₃: 0.10
FeO: 0.82
MgO: 0.10
CaO: 0.44
Na₂O: 4.10
K₂O: 4.30
TiO₂: 0.02
P₂O₅: 0.00
MnO: 0.03

Normative Minerals

Qtz: 29.2
Orthoclase: -1.00
Albite: -1.00
Anorthite: -1.00
Corundum: -1.00
Diopside: -1.00
Hypersthene: -1.00
Olivine: -1.00
Magnetite: -1.00
Ilmenite: -1.00

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Idocrase
Hornblende
Tourmaline
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Stannite
Cassiterite
Fluorite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: TL-4-3 NAME: BROOKS MNT.
LATITUDE: 065031000 LONGITUDE: 167009000
QUADRANGLE: TELLER

CLASS: SN
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1000000 MINIMUM TONS: 100000
PRODUCTION: 0

GEOMETRY

LENGTH: 50.0 WIDTH: 10.0 DEPTH: 2000

SHAPE: PODIFORM

REPORTED ASSAY VALUES

	MAX	MIN
AG:	2.0	2.0
AU:	0.01	
CU:	400	400
FE:	100000	
MO:	5.0	
PB:	500	
SN:	500	
W:	30.0	
ZN:	600	
AS:	600	
BA:	300	
BE:	50	
BI:	30	
CO:	10	
NI:	40	
V:	70	

Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	90	80
Syenite	0	0
Alkali granite	20	10

INTRUSIVE ALTERATION TYPES

Potassic
Sericitic

TEXTURES

Porphyritic
Porphyry
Pegmatitic-aplitic
Seriata

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 3
Minimum grain size: 3

Anorthite content maximum: 12
Anorthite content minimum: 12

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 38.0
PLAG: 10.0
K-SPAR 48.0
MAFICS 4.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 40.0
PLAG: 10.0
K-SPAR 50.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

SiO2: 71.30

QTZ: 40.0

AL2O3: 14.40
FE2O3: 0.56
FEO: 1.40
MGO: 0.80
CAO: 1.10
NA2O: 4.10
K2O: 5.30
TIO2: 0.21
P2O5: 0.06
MNO: 0.05

ORTHOCLASE: 31.31
ALBITE: 34.69
ANORTHITE: 5.06
CORUNDUM: 0.06
DIOPSIDE: 0.00
HYPERSTHENE: 3.85
OLIVINE: 0.00
MAGNETITE: 0.81
ILMENITE: 0.40

MINERAL COMPOSITION

QUARTZ: 25.0
PLAG: 5.0
K-SPAR 65.0
MAFICS 5.0

Major Oxide Analysis

SIO2: 73.30
AL2O3: 13.34
FE2O3: 0.69
FEO: 1.15
MGO: 0.28
CAO: 0.71
NA2O: 3.22
K2O: 5.56
TIO2: 0.27
P2O5: 0.09
MNO: 0.05

Normative Minerals

QTZ: 25.0
ORTHOCLASE: 33.09
ALBITE: 27.10
ANORTHITE: 1.50
CORUNDUM: 1.56
DIOPSIDE: 0.00
HYPERSTHENE: 1.90
OLIVINE: 0.00
MAGNETITE: 1.01
ILMENITE: 0.52

MINERAL COMPOSITION

QUARTZ: 28.2
PLAG: 31.6
K-SPAR 36.7
MAFICS 3.5

Major Oxide Analysis

MINERAL COMPOSITION

QUARTZ: 26.9
PLAG: 29.5
K-SPAR 37.3
MAFICS 5.9

Normative Minerals

Major Oxide Analysis

MINERAL COMPOSITION

QUARTZ: 40.0
PLAG: 20.0
K-SPAR 30.0
MAFICS 10.0

Normative Minerals

Major Oxide Analysis

SIO2: 72.90

Normative Minerals

QTZ: 40.0

AL2O3: 13.51
 FE2O3: 0.96
 FEO: 1.28
 MGO: 0.17
 CAO: 0.85
 NA2O: 3.22
 K2O: 5.53
 TIO2: 0.28
 P2O5: 0.08
 MNO: 0.05

ORTHOCLASE: 32.80
 ALBITE: 27.40
 ANORTHITE: 1.45
 CORUNDUM: 1.71
 DIOPSIDE: 0.00
 HYPERSTHENE: 1.62
 OLIVINE: 0.00
 MAGNETITE: 1.40
 ILMENITE: 0.53

MINERAL COMPOSITION

QUARTZ: 25.0
 PLAG: 5.0
 K-SPAR 70.0
 MAFICS 0.0

Major Oxide Analysis

SIO2: 72.76
 AL2O3: 13.39
 FE2O3: 0.35
 FEO: 1.62
 MGO: 0.28
 CAO: 1.16
 NA2O: 3.12
 K2O: 5.46
 TIO2: 0.33
 P2O5: 0.09
 MNO: 0.04

Normative Minerals

QTZ: 25.0
 ORTHOCLASE: 32.52
 ALBITE: 26.20
 ANORTHITE: 3.37
 CORUNDUM: 1.22
 DIOPSIDE: 0.00
 HYPERSTHENE: 2.93
 OLIVINE: 0.00
 MAGNETITE: 0.51
 ILMENITE: 0.63

SKARN MINERAL DATA

SKARN MINERALS

Garnet
 Pyroxene
 Wollastonite
 Idocrase
 Actinolite
 Biotite
 Chlorite
 Scapolite
 Tourmaline
 Ludwigite
 Serpentinite
 Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrrhotite
Chalcopyrite
Bornite
Sphalerite
Galena
Arsenopyrite
Tetrahedrite
Stannite
Scheelite
Fluorite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: TL-4-2 NAME: EAR MOUNTAIN
LATITUDE: 065056000 LONGITUDE: 166012000
QUADRANGLE: TELLER

CLASS: SN
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 3000000 MINIMUM TONS: 500000
PRODUCTION: 0

GEOMETRY

LENGTH: 100.0 WIDTH: 65.0 DEPTH: 1000

SHAPE: PODS

REPORTED ASSAY VALUES

	MAX	MIN
AG:	10.0	10.0
AU:	0.20	
CU:	3000	3000
MO:	10.0	
PB:	500	
SN:	2000	
W:	300.0	
ZN:	1000	
AS:	500	
BA:	100	
BE:	100	
BI:	200	
CO:	10	

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	25	25
Granodiorite	70	70
Syenite	5	5
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic
Endoskarn present

TEXTURES

Equigranular
Porphyritic
Porphyry
Pegmatitic-aplitic
Seriatic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 10
Minimum grain size: 3

Anorthite content maximum: 30
Anorthite content minimum: 2

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION
QUARTZ: 30.4
PLAG: 25.4
K-SPAR 42.2
MAFICS 1.9

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 14.6
PLAG: 32.5
K-SPAR 42.9
MAFICS 9.9

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 32.3
PLAG: 29.9
K-SPAR 34.1
MAFICS 3.7

Major Oxide Analysis

Normative Minerals

SiO2: 73.86
Al2O3: 13.74
Fe2O3: 0.17
FeO: 0.82
MgO: 0.01
CaO: 0.60
Na2O: 4.64
K2O: 4.66
TiO2: 0.02
P2O5: 0.06
MnO: 0.04

QTZ: 32.3
ORTHOCLASE: 27.20
ALBITE: 37.50
ANORTHITE: 3.10
CORUNDUM: 0.21
DIOPSIDE: 0.05
HYPERSTHENE: 0.00
OLIVINE: 0.00
MAGNETITE: 0.09
ILMENITE: 0.04

MINERAL COMPOSITION

QUARTZ: 22.4
PLAG: 35.4
K-SPAR 35.4
MAFICS 6.8

Major Oxide Analysis

Normative Minerals

SiO2: 75.43
Al2O3: 12.85
Fe2O3: 0.12
FeO: 1.84
MgO: 0.06
CaO: 0.59
Na2O: 3.46
K2O: 4.64
TiO2: 0.04
P2O5: 0.01
MnO: 0.04

QTZ: 22.4
ORTHOCLASE: 27.82
ALBITE: 29.60
ANORTHITE: 2.91
CORUNDUM: 0.10
DIOPSIDE: 0.00
HYPERSTHENE: 0.15
OLIVINE: 0.00
MAGNETITE: 0.02
ILMENITE: 0.08

MINERAL COMPOSITION

QUARTZ: 33.4
PLAG: 29.4
K-SPAR 36.4
MAFICS 0.8

Major Oxide Analysis

Normative Minerals

SiO2: 73.48
 Al2O3: 12.92
 Fe2O3: 0.84
 FeO: 1.12
 MgO: 0.26
 CaO: 0.96
 Na2O: 2.88
 K2O: 4.94
 TiO2: 0.02
 P2O5: 0.09
 MnO: 0.04

Qtz: 33.4
 Orthoclase: 29.60
 Albite: 24.70
 Anorthite: 4.40
 Corundum: 1.30
 Diopside: 0.00
 Hypersthene: 0.64
 Olivine: 0.00
 Magnetite: 0.90
 Ilmenite: 0.38

MINERAL COMPOSITION

Quartz: 27.8
 Plag: 25.3
 K-SPAR 40.3
 MAFICS 6.6

Major Oxide Analysis

SiO2: 73.48
 Al2O3: 12.74
 Fe2O3: 0.60
 FeO: 1.69
 MgO: 0.29
 CaO: 0.90
 Na2O: 2.92
 K2O: 4.85
 TiO2: 0.26
 P2O5: 0.07
 MnO: 0.05

Normative Minerals

Qtz: 27.8
 Orthoclase: 29.10
 Albite: 25.10
 Anorthite: 4.10
 Corundum: 1.23
 Diopside: 0.00
 Hypersthene: 0.73
 Olivine: 0.00
 Magnetite: 1.59
 Ilmenite: 0.50

MINERAL COMPOSITION

Quartz: 18.4
 Plag: 26.0
 K-SPAR 46.2
 MAFICS 9.4

Major Oxide Analysis

SiO2: 76.37
 Al2O3: 13.08
 Fe2O3: 0.40
 FeO: 0.80
 MgO: 0.01
 CaO: 0.59
 Na2O: 3.59
 K2O: 4.66
 TiO2: 0.07
 P2O5: 0.05
 MnO: 0.04

Normative Minerals

Qtz: 18.4
 Orthoclase: 27.60
 Albite: 30.40
 Anorthite: 2.50
 Corundum: 1.23
 Diopside: 0.00
 Hypersthene: 1.68
 Olivine: 0.00
 Magnetite: 0.00
 Ilmenite: 0.13

MINERAL COMPOSITION

Quartz: 8.4
 Plag: 33.0
 K-SPAR 49.0

MAFICS 9.6

Major Oxide Analysis

SiO2: 72.83
Al2O3: 14.19
Fe2O3: 1.44
FeO: 0.80
MgO: 0.31
CaO: 1.19
Na2O: 3.97
K2O: 3.91
TiO2: 0.28
P2O5: 0.12
MnO: 0.06

Normative Minerals

Qtz: 8.4
Orthoclase: 23.20
Albite: 33.70
Anorthite: 2.80
Corundum: 2.40
Diopside: 0.00
Hypersthene: 0.78
Olivine: 0.00
Magnetite: 1.97
Ilmenite: 0.53

MINERAL COMPOSITION

Quartz: 24.7
Plag: 24.7
K-spar: 44.6
MAFICS 6.0

Major Oxide Analysis

SiO2: 73.84
Al2O3: 13.53
Fe2O3: 0.65
FeO: 1.14
MgO: 0.19
CaO: 0.98
Na2O: 3.37
K2O: 5.04
TiO2: 0.22
P2O5: 0.09
MnO: 0.04

Normative Minerals

Qtz: 24.7
Orthoclase: 29.90
Albite: 28.70
Anorthite: 2.80
Corundum: 1.51
Diopside: 0.00
Hypersthene: 1.75
Olivine: 0.00
Magnetite: 0.95
Ilmenite: 0.42

MINERAL COMPOSITION

Quartz: 36.3
Plag: 28.3
K-spar: 32.9
MAFICS 2.5

Major Oxide Analysis

SiO2: 73.54
Al2O3: 13.36
Fe2O3: 0.44
FeO: 1.36
MgO: 0.62
CaO: 1.12
Na2O: 2.96
K2O: 4.76
TiO2: 0.22
P2O5: 0.09
MnO: 0.04

Normative Minerals

Qtz: 36.3
Orthoclase: 28.52
Albite: 25.30
Anorthite: 5.00
Corundum: 1.42
Diopside: 0.00
Hypersthene: 0.78
Olivine: 0.00
Magnetite: 0.26
Ilmenite: 0.42

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Wollastonite
Idocrase
Epidote
Actinolite
Hornblende
Biotite
Chlorite
Plagioclase
Scapolite
Axinite
Apatite
Sphene
Tourmaline
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Hematite
Pyrite
Pyrrhotite
Chalcopyrite
Sphalerite
Galena
Arsenopyrite
Stibnite
Stannite
Scheelite
Cassiterite
Fluorite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite:	54.0
Pyrope:	0.0
Grossularite:	46.0

Almandite: 0.0
Spessartite: 0.0

PYROXENE MINERALS

Diopside: 20
Hedenbergite: 80
Johannsenite: 0

ID NUMBER: TL-4-1 NAME: LOST RIVER
LATITUDE: 065028000 LONGITUDE: 167010000
QUADRANGLE: TELLER

CLASS: SN
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 15000000 MINIMUM TONS: 10000000
PRODUCTION: 35000

GEOMETRY

LENGTH: 800.0 WIDTH: 400.0 DEPTH: 1200
SHAPE: ELLIPSOID

REPORTED ASSAY VALUES

	MAX	MIN
AG:	30.0	30.0
CU:	500	500
MO:	50.0	
PB:	500	
SN:	2100	
W:	500.0	
ZN:	500	
AS:	1000	
BA:	50	
BE:	2000	
BI:	200	
CO:	20	
F:	200000	
NI:	20	
V:	100	

HOST ROCK CHARACTERISTICS

FORMATION:
TERRANE: YORK

AGE: ORDOVICIAN
THICKNESS: 8000

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	40	30
Dolomite:	15	10
Marl:	40	30
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	20	20
Black shale:	0	0
Quartzite:	0	0
Graywacke:	10	10

METAMORPHIC GRADE: L.GREENSCHIST
NEARBY DEPOSIT TYPES: AU VEINS
ORE TYPE: AU

HOST ROCK ASSAY VALUES

	MAX	MIN
AS:	200	
BA:	250	
BE:	2	
CO:	15	
CU:	25	25
MO:	5	
NI:	40	
PB:	10	
SN:	3	
W:	2	
ZN:	200	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 80 TO 80 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	100	100
Syenite	0	0

Alkali granite 0 0

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Equigranular
Porphyritic
Porphyry
Pegmatitic-aplitic
Myrmekitic
Seriatic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 2
Minimum grain size: 2

Anorthite content maximum: 20
Anorthite content minimum: 5

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 45.0
PLAG: 20.0
K-SPAR 30.0
MAFICS 5.0

Major Oxide Analysis

SiO₂: 75.40
Al₂O₃: 13.80
Fe₂O₃: 0.31
FeO: 0.23
MgO: 0.23
CaO: 0.70
Na₂O: 3.60
K₂O: 4.80
TiO₂: 0.02
P₂O₅: 0.00

Normative Minerals

QTZ: 45.0
ORTHOCLASE: 28.36
ALBITE: 30.46
ANORTHITE: 3.47
CORUNDUM: 1.41
DIOPSIDE: 0.00
HYPERSTHENE: 1.02
OLIVINE: 0.00
MAGNETITE: 0.45
ILMENITE: 0.04

MNO: 0.17

Major Oxide Analysis

SiO2: 76.10
Al2O3: 13.40
Fe2O3: 0.20
FeO: 0.72
MgO: 0.19
CaO: 0.60
Na2O: 3.30
K2O: 4.60
TiO2: 0.02
P2O5: 0.00
MNO: 0.10

Normative Minerals

QTZ: -1.0
ORTHOCLASE: 27.18
ALBITE: 27.92
ANORTHITE: 2.97
CORUNDUM: 1.90
DIOPSIDE: 0.00
HYPERSTHENE: 1.78
OLIVINE: 0.00
MAGNETITE: 0.29
ILMENITE: 0.04

Major Oxide Analysis

SiO2: 75.70
Al2O3: 13.70
Fe2O3: 0.20
FeO: 0.73
MgO: 0.16
CaO: 0.58
Na2O: 3.50
K2O: 4.70
TiO2: 0.02
P2O5: 0.00
MNO: 0.06

Normative Minerals

QTZ: -1.0
ORTHOCLASE: 27.77
ALBITE: 29.61
ANORTHITE: 2.87
CORUNDUM: 1.80
DIOPSIDE: 0.00
HYPERSTHENE: 1.65
OLIVINE: 0.00
MAGNETITE: 0.29
ILMENITE: 0.04

Major Oxide Analysis

SiO2: 75.73
Al2O3: 13.63
Fe2O3: 0.24
FeO: 0.56
MgO: 0.19
CaO: 0.63
Na2O: 3.47
K2O: 4.70
TiO2: 0.02
P2O5: 0.00
MNO: 0.11

Normative Minerals

QTZ: -1.0
ORTHOCLASE: 27.77
ALBITE: 29.36
ANORTHITE: 3.12
CORUNDUM: 1.69
DIOPSIDE: 0.00
HYPERSTHENE: 1.48
OLIVINE: 0.00
MAGNETITE: 0.35
ILMENITE: 0.04

Major Oxide Analysis

SiO2: 75.00
Al2O3: 14.00
Fe2O3: 0.50
FeO: 2.10
MgO: 0.40
CaO: 0.39
Na2O: 1.11
K2O: 3.00
TiO2: 0.02
P2O5: 0.02
MNO: 0.46

Normative Minerals

QTZ: -1.0
ORTHOCLASE: 17.27
ALBITE: 9.39
ANORTHITE: 1.80
CORUNDUM: 8.26
DIOPSIDE: 0.00
HYPERSTHENE: 3.61
OLIVINE: 0.00
MAGNETITE: 1.94
ILMENITE: 0.05

Major Oxide Analysis

SIO2: 75.28
AL2O3: 13.02
FE2O3: 0.04
FEO: 0.76
MGO: 0.13
CAO: 0.57
NA2O: 3.28
K2O: 4.45
TIO2: 0.03
P2O5: 0.03
MNO: 0.04

Normative Minerals

QTZ: -1.0
ORTHOCLASE: 26.60
ALBITE: 28.10
ANORTHITE: 0.00
CORUNDUM: 2.84
DIOPSIDE: 0.00
HYPERSTHENE: 0.70
OLIVINE: 0.00
MAGNETITE: 1.76
ILMENITE: 0.51

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Idocrase
Epidote
Actinolite
Hornblende
Biotite
Chlorite
Plagioclase
Axinite
Apatite
Sphene
Tourmaline
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Hematite
Pyrite
Pyrhottite
Chalcopyrite
Sphalerite
Galena
Arsenopyrite
Stibnite
Stannite
Wolframite
Scheelite
Cassiterite

Fluorite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite: 80.0
Pyrope: 0.0
Grossularite: 15.0
Almandite: 0.0
Spessartite: 5.0

PYROXENE MINERALS

Diopside: 40
Hedenbergite: 60
Johannsenite: 0

ID NUMBER: SP-4-18 NAME: ARRIGETCH CTR W (OZ)
LATITUDE: 067026000 LONGITUDE: 154006000
QUADRANGLE: SURVEY PASS

CLASS: SN
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 200000 MINIMUM TONS: 1000
PRODUCTION: 0

GEOMETRY

LENGTH: 30.0 WIDTH: 20.0 DEPTH: 1500

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	50.0	50.0
AU:	0.01	
CU:	170	170
MO:	1.0	
PB:	9000	
SN:	700	
ZN:	800	

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	90	90
Syenite	0	0
Alkali granite	10	10

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Equigranular
 Porphyritic
 Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
 Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
 Minimum grain size:
 Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 29.0
 PLAG: 25.0
 K-SPAR 46.0
 MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 28.0
 PLAG: 33.0
 K-SPAR 39.0
 MAFICS 0.0

Major Oxide Analysis

SiO2: 69.31
Al2O3: 14.42
Fe2O3: 1.77
FeO: 3.46
MgO: 1.45
CaO: 1.09
Na2O: 2.46
K2O: 3.63
TiO2: 0.77
P2O5: 0.12
MnO: 0.03

Normative Minerals

Qtz: 28.0
Orthoclase: 21.45
Albite: 20.81
Anorthite: 4.63
Corundum: 4.75
Diopside: 0.00
Hypersthene: 7.28
Olivine: 0.00
Magnetite: 2.56
Ilmenite: 1.46

MINERAL COMPOSITION

Quartz: 35.0
Plag: 14.0
K-spar 51.0
Mafics 0.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Pyroxene
Epidote
Actinolite
Biotite
Chlorite
Plagioclase
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Sphalerite
Galena

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: SP-4-17
LATITUDE: 067025300
QUADRANGLE: SURVEY PASS

NAME: PENDANT PEAK
LONGITUDE: 153058000

CLASS: SN
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 1500 MINIMUM TONS: 500
PRODUCTION: 0

GEOMETRY

LENGTH: 10.0 WIDTH: 10.0 DEPTH: 100

SHAPE:

REPORTED ASSAY VALUES

MAX MIN

SN: Reported
BE: Reported
F: Reported

HOST ROCK CHARACTERISTICS

FORMATION: SKAJIT AGE: DEVONIAN
TERRANE: ARCTIC AK-HAMMOND THICKNESS: 1000

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	20
Dolomite:	0	0
Marl:	10	10
Mafic volc:	10	10
Int. Volc:	10	10
Felsic Volc:	0	0
Shale:	30	30
Black shale:	10	10
Quartzite:	0	0
Graywacke:	10	10

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: CU-ZN-PB-BA VMS
ORE TYPE: CU,ZN,PB,BA

HOST ROCK ASSAY VALUES

MAX MIN

AG: 0.3
 AS: 200
 BA: 250
 BE: 1
 BI: 10
 CO: 20
 CU: 25 25
 MO: 3
 NI: 50
 PB: 20
 SN: 1
 W: 1
 ZN: 70
 V: 200
 CR: 100

INTRUSIVE ROCK CHARACTERISTICS

AGE: 370 TO 365 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	90	90
Syenite	0	0
Alkali granite	10	10

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Equigranular
 Porphyritic
 Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
 Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 42.0
PLAG: 4.0
K-SPAR 54.0
MAFICS 0.0

Major Oxide Analysis

SiO2: 77.61
Al2O3: 11.25
Fe2O3: 0.55
FeO: 2.16
MgO: 0.00
CaO: 0.63
Na2O: 3.08
K2O: 4.20
TiO2: 0.18
P2O5: 0.07
MnO: 0.04

Normative Minerals

QTZ: 42.0
ORTHOCLASE: 24.82
ALBITE: 26.06
ANORTHITE: 2.67
CORUNDUM: 0.66
DIOPSIDE: 0.00
HYPERSTHENE: 3.29
OLIVINE: 0.00
MAGNETITE: 0.79
ILMENITE: 0.34

MINERAL COMPOSITION

QUARTZ: 50.0
PLAG: 9.0
K-SPAR 41.0
MAFICS 0.0

Major Oxide Analysis

MINERAL COMPOSITION

QUARTZ: 36.0
PLAG: 18.0
K-SPAR 46.0
MAFICS 0.0

Normative Minerals

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Fluorite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: SP-4-15 NAME: NOATAK NE
LATITUDE: 067033000 LONGITUDE: 154059000
QUADRANGLE: SURVEY PASS

CLASS: SN
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 100 MINIMUM TONS: 1
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	10.0	10.0
CU:	7000	7000
MO:	2.0	
PB:	20	
SN:	30	
W:	5.0	
ZN:	7000	
AS:	5000	
BA:	200	
BE:	1	
BI:	50	

HOST ROCK CHARACTERISTICS

FORMATION: DP AGE: DEVONIAN
TERRANE: ARCTIC AK-HAMMOND THICKNESS: 30

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	20
Dolomite:	0	0
Marl:	10	10
Mafic volc:	7	7
Int. Volc:	8	8
Felsic Volc:	0	0
Shale:	40	40
Black shale:	10	10
Quartzite:	0	0
Graywacke:	5	5

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: CU-ZN-PB-BA VMS
 ORE TYPE: CU,ZN,PB,BA

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.3	
AS:	200	
BA:	300	
BE:	1	
BI:	10	
CO:	20	
CU:	35	35
MO:	3	
NI:	50	
PB:	10	
SN:	1	
W:	1	
ZN:	100	
V:	200	
CR:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 370 TO 365 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0

Granodiorite	80	80
Syenite	0	0
Alkali granite	20	20

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Equigranular
 Porphyritic
 Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
 Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
 Minimum grain size:
 Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 35.0
 PLAG: 35.0
 K-SPAR 30.0
 MAFICS 0.0

Major Oxide Analysis

SiO₂: 73.58
 Al₂O₃: 13.86
 Fe₂O₃: 0.86
 FeO: 1.40
 MgO: 0.42
 CaO: 1.43
 Na₂O: 3.30
 K₂O: 4.72
 TiO₂: 0.17
 P₂O₅: 0.06
 MnO: 0.05

Normative Minerals

QTZ: 35.0
 ORTHOCLASE: 27.90
 ALBITE: 27.90
 ANORTHITE: 6.70
 CORUNDUM: 0.81
 DIOPSIDE: 0.00
 HYPERSTHENE: 2.72
 OLIVINE: 0.00
 MAGNETITE: 1.25
 ILMENITE: 0.32

MINERAL COMPOSITION

QUARTZ: 38.0
 PLAG: 25.0

K-SPAR 37.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 29.0
PLAG: 36.0
K-SPAR 35.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

SIO2: 75.05
AL2O3: 13.44
FE2O3: 0.40
FEO: 1.22
MGO: 0.26
CAO: 0.76
NA2O: 3.12
K2O: 5.07
TIO2: 0.17
P2O5: 0.06
MNO: 0.05

QTZ: 29.0
ORTHOCLASE: 30.00
ALBITE: 26.40
ANORTHITE: 3.38
CORUNDUM: 1.58
DIOPSIDE: 0.00
HYPERSTHENE: 2.37
OLIVINE: 0.00
MAGNETITE: 0.58
ILMENITE: 0.32

MINERAL COMPOSITION

QUARTZ: 32.0
PLAG: 28.0
K-SPAR 40.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

SIO2: 69.95
AL2O3: 14.53
FE2O3: 0.55
FEO: 2.30
MGO: 0.83
CAO: 2.12
NA2O: 3.53
K2O: 4.34
TIO2: 0.17
P2O5: 0.06
MNO: 0.05

QTZ: 32.0
ORTHOCLASE: 25.70
ALBITE: 29.90
ANORTHITE: 10.70
CORUNDUM: 0.32
DIOPSIDE: 0.00
HYPERSTHENE: 5.65
OLIVINE: 0.00
MAGNETITE: 0.80
ILMENITE: 0.32

MINERAL COMPOSITION

QUARTZ: 42.0
PLAG: 3.0
K-SPAR 55.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 43.0
PLAG: 8.0

K-SPAR 49.0
MAFICS 0.0

Major Oxide Analysis Normative Minerals

MINERAL COMPOSITION
QUARTZ: 41.0
PLAG: 18.0
K-SPAR 41.0
MAFICS 0.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrhottite
Chalcopyrite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: TL-4-8 NAME: RAPID RIVER
LATITUDE: 065027000 LONGITUDE: 167018300
QUADRANGLE: TELLER

CLASS: SN
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 2500000 MINIMUM TONS: 500000
PRODUCTION: 0

GEOMETRY

LENGTH: 300.0 WIDTH: 100.0 DEPTH: 800

SHAPE: BOX

W: 2
ZN: 70

INTRUSIVE ROCK CHARACTERISTICS

AGE: 80 TO 77 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	100	100
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Porphyritic
Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Biotite
Tourmaline
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Hematite
Sphalerite
Galena
Cassiterite
Fluorite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

Biotite
Tourmaline
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Hematite
Sphalerite
Galena
Cassiterite
Fluorite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: TL-4-9 NAME: CAMP CREEK
LATITUDE: 065028000 LONGITUDE: 167009000
QUADRANGLE: TELLER

CLASS: SN
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 5000000 MINIMUM TONS: 100000
 PRODUCTION: 0

GEOMETRY

LENGTH: 250.0 WIDTH: 100.0 DEPTH: 1700

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	1.0	1.0
CU:	10	10
PB:	40	
SN:	200	
BA:	60	
BE:	2500	
F:	280000	
V:	20	
CR:	12	

HOST ROCK CHARACTERISTICS

FORMATION: PORT CLARENCE LMS AGE: ORDOVICIAN
 TERRANE: YORK THICKNESS: 3000

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	30	30
Dolomite:	5	5
Marl:	10	10
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	30	30
Black shale:	10	10
Quartzite:	5	5
Graywacke:	10	10

METAMORPHIC GRADE: L.GREENSCHIST
 NEARBY DEPOSIT TYPES:
 ORE TYPE:

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.5	
AS:	200	
BA:	250	
BE:	2	
CO:	15	
CU:	25	25
MO:	5	
NI:	40	
PB:	10	
SN:	2	
W:	2	
ZN:	70	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 82 TO 77 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	100	100
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Porphyritic
 Porphyry
 Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Idocrase
Biotite
Tourmaline
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Cassiterite
Fluorite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL DATA

SKARN MINERALS

Idocrase
Biotite
Tourmaline
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Chalcopyrite
Cassiterite
Fluorite

Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	80	80
Black shale:	0	0
Quartzite:	0	0
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES:
 ORE TYPE:

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.5	
BE:	1	
BI:	3	
CU:	15	15
MO:	2	
PB:	7	
SN:	10	
ZN:	200	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 79 TO 79 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	100	100
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Potassic
 Albitic
 Propylitic
 Endoskarn present

TEXTURES

Equigranular
 Porphyry

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:

Minimum grain size:

Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 33.7

PLAG: 27.9

K-SPAR 34.0

MAFICS 4.4

Major Oxide Analysis

SiO₂: 74.31

Al₂O₃: 13.20

Fe₂O₃: 0.24

FeO: 1.10

MgO: 0.20

CaO: 0.82

Na₂O: 3.05

K₂O: 5.41

TiO₂: 0.18

P₂O₅: 0.08

MnO: 0.03

Normative Minerals

QTZ: 33.7

ORTHOCLASE: 32.20

ALBITE: 25.70

ANORTHITE: 2.48

CORUNDUM: 1.50

DIOPSIDE: 0.00

HYPERSTHENE: 2.09

OLIVINE: 0.00

MAGNETITE: 0.35

ILMENITE: 0.35

MINERAL COMPOSITION

QUARTZ: 32.1

PLAG: 26.7

K-SPAR 36.9

MAFICS 4.3

Major Oxide Analysis

SiO₂: 74.36

Al₂O₃: 13.84

Fe₂O₃: 0.18

FeO: 0.94

MgO: 0.14

CaO: 0.90

Na₂O: 3.04

K₂O: 5.39

TiO₂: 0.16

P₂O₅: 0.13

Normative Minerals

QTZ: 32.1

ORTHOCLASE: 31.90

ALBITE: 25.80

ANORTHITE: 1.79

CORUNDUM: 2.36

DIOPSIDE: 0.00

HYPERSTHENE: 1.72

OLIVINE: 0.00

MAGNETITE: 0.26

ILMENITE: 0.31

MNO: 0.03

Major Oxide Analysis

SIO2: 74.30
AL2O3: 14.00
FE2O3: 0.27
FEO: 0.54
MGO: 0.06
CAO: 0.50
NA2O: 3.40
K2O: 5.60
TIO2: 0.13
P2O5: 0.00
MNO: 0.03

Normative Minerals

QTZ: -1.0
ORTHOCLASE: 33.09
ALBITE: 28.77
ANORTHITE: 2.48
CORUNDUM: 1.44
DIOPSIDE: 0.00
HYPERSTHENE: 0.76
OLIVINE: 0.00
MAGNETITE: 0.39
ILMENITE: 0.25

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Wollastonite
Idocrase
Tourmaline
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Sphalerite
Arsenopyrite
Cassiterite
Fluorite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: TL-4-4
LATITUDE: 065035000
QUADRANGLE: TELLER

NAME: CAPE MOUNTAIN
LONGITUDE: 167009000

CLASS: SN
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 5000000 MINIMUM TONS: 800000
PRODUCTION: 640000

GEOMETRY

LENGTH: 500.0 WIDTH: 100.0 DEPTH: 1500
SHAPE: PODS

REPORTED ASSAY VALUES

	MAX	MIN
SN:	1000	
W:	300.0	
BE:	200	
F:	3000	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: MISSISSIPPIAN
TERRANE: NORTH SLOPE THICKNESS: 300

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	30	30
Dolomite:	0	0
Marl:	0	0
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	60	60
Black shale:	10	10
Quartzite:	20	20
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES:
ORE TYPE:

HOST ROCK ASSAY VALUES

MAX MIN

INTRUSIVE ROCK CHARACTERISTICS

AGE: 79 TO 79 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	100	90
Syenite	0	0
Alkali granite	10	0

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Equigranular
Porphyritic
Pegmatitic-aplitic
Seriata

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 3
Minimum grain size: 3

Anorthite content maximum: 20
Anorthite content minimum: 3

INTRUSIVE COMPOSITION DATA

Major Oxide Analysis		Normative Minerals	
SiO ₂ :	77.08	QTZ:	-1.0
Al ₂ O ₃ :	13.73	ORTHOCLASE:	24.50
Fe ₂ O ₃ :	0.00	ALBITE:	36.20
FeO:	0.26	ANORTHITE:	0.76
MgO:	0.02	CORUNDUM:	1.92
CaO:	0.28	DIOPSIDE:	0.00
Na ₂ O:	4.28	HYPERSTHENE:	0.51

K2O: 4.25
TiO2: 0.02
P2O5: 0.05
MNO: 0.01

OLIVINE: 0.00
MAGNETITE: 0.00
ILMENITE: 0.38

MINERAL COMPOSITION

QUARTZ: 31.0
PLAG: 32.1
K-SPAR 31.7
MAFICS 5.2

Major Oxide Analysis

SiO2: 72.97
Al2O3: 13.67
Fe2O3: 0.00
FeO: 2.09
MgO: 0.40
CaO: 1.08
Na2O: 2.94
K2O: 5.31
TiO2: 0.26
P2O5: 0.13
MNO: 0.06

Normative Minerals

QTZ: 31.0
ORTHOCLASE: 31.50
ALBITE: 25.00
ANORTHITE: 2.53
CORUNDUM: 2.17
DIOPSIDE: 0.00
HYPERSTHENE: 4.53
OLIVINE: 0.00
MAGNETITE: 0.00
ILMENITE: 0.50

MINERAL COMPOSITION

QUARTZ: 34.9
PLAG: 32.6
K-SPAR 27.3
MAFICS 5.2

Major Oxide Analysis

SiO2: 74.17
Al2O3: 13.06
Fe2O3: 0.22
FeO: 1.53
MgO: 0.40
CaO: 1.13
Na2O: 3.12
K2O: 4.82
TiO2: 0.28
P2O5: 0.10
MNO: 0.06

Normative Minerals

QTZ: 34.9
ORTHOCLASE: 28.60
ALBITE: 26.40
ANORTHITE: 2.10
CORUNDUM: 1.97
DIOPSIDE: 0.00
HYPERSTHENE: 3.29
OLIVINE: 0.00
MAGNETITE: 0.32
ILMENITE: 0.53

MINERAL COMPOSITION

QUARTZ: 27.4
PLAG: 55.8
K-SPAR 16.8
MAFICS 0.0

Major Oxide Analysis

SiO2: 76.27
Al2O3: 13.10
Fe2O3: 0.16
FeO: 0.40

Normative Minerals

QTZ: 27.4
ORTHOCLASE: 31.00
ALBITE: 29.80
ANORTHITE: 1.11

MGO:	0.05	CORUNDUM:	1.24
CAO:	0.61	DIOPSIDE:	0.00
NA2O:	3.55	HYPERSTHENE:	0.66
K2O:	5.24	OLIVINE:	0.00
TIO2:	0.08	MAGNETITE:	0.23
P2O5:	0.02	ILMENITE:	0.15
MNO:	0.03		

MINERAL COMPOSITION

QUARTZ:	31.1
PLAG:	31.5
K-SPAR	31.8
MAFICS	5.6

Major Oxide Analysis

SiO2:	72.71
AL2O3:	14.27
FE2O3:	0.28
FEO:	1.66
MGO:	0.31
CAO:	1.13
NA2O:	2.92
K2O:	5.31
TIO2:	0.30
P2O5:	0.16
MNO:	0.06

Normative Minerals

QTZ:	31.1
ORTHOCLASE:	31.40
ALBITE:	24.70
ANORTHITE:	2.97
CORUNDUM:	2.63
DIOPSIDE:	0.00
HYPERSTHENE:	3.21
OLIVINE:	0.00
MAGNETITE:	0.41
ILMENITE:	0.57

Major Oxide Analysis

SiO2:	73.80
AL2O3:	13.60
FE2O3:	0.37
FEO:	1.30
MGO:	0.55
CAO:	0.87
NA2O:	3.50
K2O:	4.80
TIO2:	0.18
P2O5:	0.04
MNO:	0.04

Normative Minerals

QTZ:	-1.0
ORTHOCLASE:	-1.00
ALBITE:	-1.00
ANORTHITE:	-1.00
CORUNDUM:	-1.00
DIOPSIDE:	-1.00
HYPERSTHENE:	-1.00
OLIVINE:	-1.00
MAGNETITE:	-1.00
ILMENITE:	-1.00

SKARN MINERAL DATA

SKARN MINERALS

Pyroxene
 Wollastonite
 Actinolite
 Biotite
 Chlorite
 Scapolite
 Sphene
 Tourmaline
 Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Pyrrhotite
Sphalerite
Scheelite
Cassiterite
Fluorite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: SP-4-16 NAME: E CONTACT(SADDLE CK)
LATITUDE: 067025300 LONGITUDE: 153055300
QUADRANGLE: SURVEY PASS

CLASS: SN
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 2000000 MINIMUM TONS: 500
PRODUCTION: 0

GEOMETRY

LENGTH: 300.0 WIDTH: 50.0 DEPTH: 1000

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	6.5	6.5
AU:	0.01	
CU:	10000	10000
MO:	3.0	
PB:	150	
SN:	1500	
W:	50.0	
ZN:	3000	
SB:	15	

HOST ROCK CHARACTERISTICS

FORMATION: SKAJIT AGE: DEVONIAN
TERRANE: ARCTIC AK-HAMMOND THICKNESS: 1000

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	20	20
Dolomite:	0	0
Marl:	10	10
Mafic volc:	10	10
Int. Volc:	10	10
Felsic Volc:	0	0
Shale:	30	30
Black shale:	10	10
Quartzite:	0	0
Graywacke:	10	10

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: CU-ZN-PB-BA VMS
ORE TYPE: CU,ZN,PB,BA

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.3	
AS:	200	
BA:	250	
BE:	1	
BI:	10	
CO:	20	
CU:	25	25
MO:	3	
NI:	50	
PB:	20	
SN:	1	
W:	1	
ZN:	70	
V:	200	
CR:	100	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 370 TO 365 M.Y.

HOST ROCK LITHOLOGY

MAXIMUM	MINIMUM
---------	---------

Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	90	90
Syenite	0	0
Alkali granite	10	10

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Equigranular
 Porphyritic
 Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
 Batholith
 No exposures

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
 Minimum grain size:
 Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 24.0
 PLAG: 52.0
 K-SPAR 24.0
 MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 37.0
 PLAG: 13.0
 K-SPAR 50.0
 MAFICS 0.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 36.0
PLAG: 3.0
K-SPAR 61.0
MAFICS 0.0

Major Oxide Analysis

SiO2: 75.24
Al2O3: 10.40
Fe2O3: 3.34
FeO: 4.45
MgO: 0.82
CaO: 0.46
Na2O: 2.51
K2O: 2.35
TiO2: 0.29
P2O5: 0.07
MnO: 0.09

Normative Minerals

QTZ: 36.0
ORTHOCLASE: 13.88
ALBITE: 21.23
ANORTHITE: 1.82
CORUNDUM: 3.06
DIOPSIDE: 0.00
HYPERSTHENE: 7.14
OLIVINE: 0.00
MAGNETITE: 4.83
ILMENITE: 0.55

MINERAL COMPOSITION

QUARTZ: 43.0
PLAG: 45.0
K-SPAR 12.0
MAFICS 0.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Actinolite
Hornblende

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrhottite
Chalcopyrite
Sphalerite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

	MAX	MIN
AG:	0.2	
AS:	50	
AU:	0.100	
CO:	10	
CU:	50	50
MO:	5	
NI:	30	
PB:	12	
SN:	2	
W:	3	
ZN:	60	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 92 TO 65 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	100	70
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Porphyritic

Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite

Sphene

Hornblende

Apatite

Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 30.0
PLAG: 25.0
K-SPAR 35.0
MAFICS 10.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Scheelite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: CIR-3-2
LATITUDE: 065027000
QUADRANGLE: CIRCLE

NAME: TABLE MOUNTAIN
LONGITUDE: 145055000

CLASS: W

LOCALIZATION: CONTACTS

REPORTED TONNAGES

MAXIMUM TONS: 1000 MINIMUM TONS: 10
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE: STRATIFORM

REPORTED ASSAY VALUES

	MAX	MIN
AG:	2.0	2.0
AU:	0.07	
CU:	500	500
MO:	2.0	
PB:	30	
SN:	5	
W:	1000.0	
ZN:	100	
AS:	500	
CO:	10	
NI:	30	
SB:	5	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: L. PALEOZOIC
TERRANE: YUKON-TANANA-Y2 THICKNESS: 10

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	5
Dolomite:	0	0
Marl:	40	20
Mafic volc:	30	10
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	60	20
Black shale:	0	0
Quartzite:	30	10
Graywacke:	40	0

METAMORPHIC GRADE: EPI-AMPHIBOLITE

NEARBY DEPOSIT TYPES: PLACER AU, STRATABOUND PB-ZN?
ORE TYPE: AU, PB, ZN

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.2	
AS:	50	
AU:	0.100	
CO:	10	
CU:	50	50
MO:	5	
NI:	30	
PB:	12	
SN:	2	
W:	3	
ZN:	60	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 0 TO 0 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	80	50
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

Porphyritic
Pegmatitic-aplitic
Myrmekitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Small stock
Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 3
Minimum grain size: 3

Anorthite content maximum: 32
Anorthite content minimum: 11

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 20.0
PLAG: 34.0
K-SPAR 36.0
MAFICS 10.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 30.0
PLAG: 20.0
K-SPAR 30.0
MAFICS 20.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 25.0
PLAG: 40.0
K-SPAR 20.0
MAFICS 5.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Epidote
Actinolite
Hornblende
Plagioclase
Sphene
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Scheelite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite:	15.0
Pyrope:	0.0
Grossularite:	84.0
Almandite:	0.0
Spessartite:	1.0

PYROXENE MINERALS

Diopside:	12
Hedenbergite:	82
Johannsenite:	6

ID NUMBER:	CIR-3-1	NAME:	BIG WINDY
LATITUDE:	065007000	LONGITUDE:	144039300
QUADRANGLE:	CIRCLE		

CLASS: W
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS:	100000	MINIMUM TONS:	100
PRODUCTION:	0		

GEOMETRY

LENGTH:	-1.0	WIDTH:	-1.0	DEPTH:	-1
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SHAPE:

REPORTED ASSAY VALUES

MAX	MIN
-----	-----

AG: 2.0 2.0
 AU: 0.07
 CU: 500 500
 MO: 2.0
 PB: 30
 SN: 5
 W: 2000.0
 ZN: 2000
 AS: 300
 CO: 10
 NI: 30

HOST ROCK CHARACTERISTICS

FORMATION: AGE: L. PALEOZOIC
 TERRANE: YUKON-TANANA-Y2 THICKNESS: 10

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	5
Dolomite:	0	0
Marl:	10	5
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	50	10
Black shale:	50	10
Quartzite:	50	10
Graywacke:	50	10

METAMORPHIC GRADE: U. GREENSCHIST
 NEARBY DEPOSIT TYPES: PLACER AU, STRATABOUND PB-ZN
 ORE TYPE: AU, PB, ZN

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.2	
AS:	50	
AU:	0.100	
CO:	10	
CU:	50	50
MO:	5	
NI:	30	
PB:	12	
SN:	2	
W:	3	
ZN:	60	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 92 TO 60 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	90	70
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Porphyritic
Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size:
Minimum grain size:
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 25.0
PLAG: 35.0
K-SPAR 35.0
MAFICS 5.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Idocrase
Hornblende

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Scheelite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: BT-3-1 NAME: BONANZA
LATITUDE: 066037360 LONGITUDE: 150002420
QUADRANGLE: BETTLES

CLASS: W
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 30000 MINIMUM TONS: 300000
PRODUCTION: 0

GEOMETRY

LENGTH: 1000.0 WIDTH: 10.0 DEPTH: -1

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

	MAX	MIN
AG:	60.0	60.0
AU:	0.02	
CU:	300	300
MO:	500.0	
PB:	5000	
W:	7000.0	
ZN:	500	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: DEV-SIL
TERRANE: RUBY THICKNESS: 30

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	0	0
Marl:	20	10
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	80	50
Black shale:	0	0
Quartzite:	20	10
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: CU-ZN-PB-BA VMS
ORE TYPE: CU, ZN, PB, BA

HOST ROCK ASSAY VALUES

	MAX	MIN
AU:	Reported	
BA:	Reported	
CU:	Reported	
PB:	Reported	
ZN:	Reported	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 111 TO 91 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	90	70
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Potassic

TEXTURES

Equigranular
Porphyritic
Pegmatitic-aplitic
Myrmekitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 5
Minimum grain size: 5
Anorthite content missing

INTRUSIVE COMPOSITION DATA

Major Oxide Analysis	Normative Minerals
SiO ₂ : 70.50	QTZ: -1.0
Al ₂ O ₃ : 14.80	ORTHOCLASE: 22.46
Fe ₂ O ₃ : 1.85	ALBITE: 26.23
FeO: 0.00	ANORTHITE: 10.01
MgO: 0.65	CORUNDUM: 1.92
CaO: 2.15	DIOPSIDE: 0.00

NA2O: 3.10
K2O: 3.80
TiO2: 0.25
P2O5: 0.10
MNO: 0.04

HYPERSTHENE: 2.76
OLIVINE: 0.00
MAGNETITE: 1.12
ILMENITE: 0.49

Major Oxide Analysis

SiO2: 72.50
AL2O3: 13.90
FE2O3: 1.70
FeO: 0.00
MGO: 0.60
CAO: 1.80
NA2O: 2.60
K2O: 4.40
TiO2: 0.20
P2O5: 0.08
MNO: 0.04

Normative Minerals

QTZ: -1.0
ORTHOCLASE: 26.00
ALBITE: 21.99
ANORTHITE: 8.40
CORUNDUM: 1.78
DIOPSIDE: 0.00
HYPERSTHENE: 2.55
OLIVINE: 0.00
MAGNETITE: 1.04
ILMENITE: 0.39

Major Oxide Analysis

SiO2: 71.50
AL2O3: 14.00
FE2O3: 2.40
FeO: 0.00
MGO: 0.80
CAO: 1.95
NA2O: 2.60
K2O: 4.20
TiO2: 0.30
P2O5: 0.16
MNO: 0.05

Normative Minerals

QTZ: -1.0
ORTHOCLASE: 24.82
ALBITE: 21.99
ANORTHITE: 8.63
CORUNDUM: 2.01
DIOPSIDE: 0.00
HYPERSTHENE: 3.40
OLIVINE: 0.00
MAGNETITE: 1.48
ILMENITE: 0.57

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Hornblende
Biotite
Plagioclase
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrrhotite
Chalcopyrite

Sphalerite
Galena
Scheelite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: BV-3-2 NAME: VALLEY RIDGE
LATITUDE: 066038000 LONGITUDE: 149050000
QUADRANGLE: BEAVER

CLASS: W
LOCALIZATION: HFLS/MB CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 10000 MINIMUM TONS: 100
PRODUCTION: 0

GEOMETRY

LENGTH: 500.0 WIDTH: 30.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

	MAX	MIN
AG:	20.0	20.0
AU:	0.10	
CU:	100	100
MO:	10.0	
PB:	500	
W:	6000.0	
ZN:	500	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: DEV-SIL
TERRANE: RUBY THICKNESS: 30

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	0	0
Marl:	20	10
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	80	50
Black shale:	0	0
Quartzite:	20	10
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: ZN-PB-CU-BA VMS
ORE TYPE: ZN,PB,CU,BA

HOST ROCK ASSAY VALUES

	MAX	MIN
CU:	Reported	
PB:	Reported	
ZN:	Reported	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 111 TO 91 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	90	70
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Potassic
Endoskarn present

TEXTURES

Porphyritic
Pegmatitic-aplitic
Myrmekitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 5
Minimum grain size: 5
Anorthite content missing

INTRUSIVE COMPOSITION DATA MISSING

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Hornblende
Biotite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrhottite
Chalcopyrite
Sphalerite
Galena
Scheelite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Hornblende
Biotite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrhottite
Chalcopyrite
Sphalerite
Galena
Scheelite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: CHR-3-1 NAME: TWIN MOUNTAIN
LATITUDE: 065006000 LONGITUDE: 143028000
QUADRANGLE: CHARLEY RIVER

CLASS: W
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 10000 MINIMUM TONS: 100
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE: STRATIFORM

REPORTED ASSAY VALUES

 MAX MIN
W: Reported

INTRUSIVE ROCK CHARACTERISTICS

AGE: 135 TO 135 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	J	0
Granodiorite	100	80
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

Porphyritic

Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Hornblende

MORPHOLOGY OF INTRUSIVE ROCKS

Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: COARSE
Minimum grain size: COARSE
Anorthite content missing

INTRUSIVE COMPOSITION DATA

Major Oxide Analysis	Normative Minerals
SiO ₂ : 75.90	QTZ: -1.0
Al ₂ O ₃ : 13.40	ORTHOCLASE: 26.00
Fe ₂ O ₃ : 0.10	ALBITE: 14.00
FeO: 0.80	ANORTHITE: 7.00
MgO: 0.75	CORUNDUM: 3.40
CaO: 1.70	DIOPSIDE: 0.00
Na ₂ O: 1.70	HYPERSTHENE: 3.36
K ₂ O: 4.30	OLIVINE: 0.00
TiO ₂ : 0.11	MAGNETITE: 0.15
P ₂ O ₅ : 0.24	ILMENITE: 0.21
MnO: 0.14	

Major Oxide Analysis	Normative Minerals
SiO ₂ : 70.50	QTZ: -1.0
Al ₂ O ₃ : 14.50	ORTHOCLASE: 24.00
Fe ₂ O ₃ : 1.10	ALBITE: 26.00
FeO: 1.80	ANORTHITE: 8.00
MgO: 1.00	CORUNDUM: 2.30
CaO: 1.90	DIOPSIDE: 0.00
Na ₂ O: 3.00	HYPERSTHENE: 4.63
K ₂ O: 4.10	OLIVINE: 0.00
TiO ₂ : 0.31	MAGNETITE: 1.60
P ₂ O ₅ : 0.26	ILMENITE: 0.60
MnO: 0.00	

SKARN MINERAL DATA

SKARN MINERALS

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

INTRUSIVE ROCK CHARACTERISTICS

AGE: 135 TO 135 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	100	80
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

Porphyritic
Pegmatitic-aplitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Hornblende

MORPHOLOGY OF INTRUSIVE ROCKS

Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: COARSE
Minimum grain size: COARSE
Anorthite content missing

INTRUSIVE COMPOSITION DATA

Major Oxide Analysis	Normative Minerals
SiO2: 75.90	QTZ: -1.0
Al2O3: 13.40	ORTHOCLASE: 26.00
Fe2O3: 0.10	ALBITE: 14.00
FeO: 0.80	ANORTHITE: 7.00
MgO: 0.75	CORUNDUM: 3.40
CaO: 1.70	DIOPSIDE: 0.00
Na2O: 1.70	HYPERSTHENE: 3.36
K2O: 4.30	OLIVINE: 0.00
TiO2: 0.11	MAGNETITE: 0.15
P2O5: 0.24	ILMENITE: 0.21
MnO: 0.14	

Major Oxide Analysis	Normative Minerals
SiO2: 70.50	QTZ: -1.0
Al2O3: 14.50	ORTHOCLASE: 24.00
Fe2O3: 1.10	ALBITE: 26.00
FeO: 1.80	ANORTHITE: 8.00
MgO: 1.00	CORUNDUM: 2.30
CaO: 1.90	DIOPSIDE: 0.00
Na2O: 3.00	HYPERSTHENE: 4.63
K2O: 4.10	OLIVINE: 0.00
TiO2: 0.31	MAGNETITE: 1.60
P2O5: 0.26	ILMENITE: 0.60
MnO: 0.00	

SKARN MINERAL DATA

SKARN MINERALS

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: BV-3-1 NAME: BEEF RIDGE
LATITUDE: 066048000 LONGITUDE: 149057000
QUADRANGLE: BEAVER

CLASS: W
LOCALIZATION: HFLS/MB CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 500000 MINIMUM TONS: 30000
PRODUCTION: 0

GEOMETRY

LENGTH: 500.0 WIDTH: 10.0 DEPTH: -1

SHAPE: STRATIFORM

REPORTED ASSAY VALUES

	MAX	MIN
AG:	10.0	10.0
CU:	800	800
MO:	400.0	
PB:	100	
SN:	3	
W:	7000.0	
ZN:	500	
BI:	20	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: DEV-SIL
TERRANE: RUBY THICKNESS: 30

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	10	10
Dolomite:	0	0
Marl:	20	10
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	80	50
Black shale:	0	0
Quartzite:	20	10
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
NEARBY DEPOSIT TYPES: ZN-PB-CU-BA VMS
ORE TYPE: ZN, PB, CU, BA

HOST ROCK ASSAY VALUES

	MAX	MIN
BA:	Reported	
CU:	Reported	
PB:	Reported	
ZN:	Reported	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 111 TO 91 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	90	70
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Potassic

TEXTURES

Equigranular
Porphyritic

Pegmatitic-aplitic
Myrmekitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 5
Minimum grain size: 5
Anorthite content missing

INTRUSIVE COMPOSITION DATA

Major Oxide Analysis	Normative Minerals
SiO ₂ : 71.50	QTZ: -1.0
Al ₂ O ₃ : 14.00	ORTHOCLASE: 23.05
Fe ₂ O ₃ : 2.80	ALBITE: 23.69
FeO: 0.00	ANORTHITE: 8.63
MgO: 0.85	CORUNDUM: 2.01
CaO: 1.95	DIOPSIDE: 0.00
Na ₂ O: 2.80	HYPERSTHENE: 4.17
K ₂ O: 3.90	OLIVINE: 0.00
TiO ₂ : 0.20	MAGNETITE: 1.62
P ₂ O ₅ : 0.16	ILMENITE: 0.38
MnO: 0.05	

Major Oxide Analysis	Normative Minerals
SiO ₂ : 71.00	QTZ: -1.0
Al ₂ O ₃ : 14.20	ORTHOCLASE: 24.23
Fe ₂ O ₃ : 2.70	ALBITE: 25.38
FeO: 0.00	ANORTHITE: 8.81
MgO: 0.80	CORUNDUM: 1.60
CaO: 2.00	DIOPSIDE: 0.00
Na ₂ O: 3.00	HYPERSTHENE: 3.95
K ₂ O: 4.10	OLIVINE: 0.00
TiO ₂ : 0.30	MAGNETITE: 1.48
P ₂ O ₅ : 0.17	ILMENITE: 0.57
MnO: 0.05	

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Idocrase
Hornblende
Biotite
Apatite
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrrhotite
Chalcopyrite
Sphalerite
Galena
Scheelite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: EG-W-1 NAME: COPPER CRK (WOLV.)
LATITUDE: 064051000 LONGITUDE: 143018000
QUADRANGLE: EAGLE

CLASS: W
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 50000 MINIMUM TONS: 100
PRODUCTION: 0

GEOMETRY

LENGTH: 50.0 WIDTH: 40.0 DEPTH: 150

SHAPE: BLOCK

REPORTED ASSAY VALUES

	MAX	MIN
AG:	10.2	10.2
CU:	2000	2000
W:	10000.0	
ZN:	1000	
BI:	100	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: DEVONIAN?
TERRANE: YUKON-TANANA-Y4 THICKNESS: 50

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	80	30
Dolomite:	0	0
Marl:	50	20
Mafic volc:	0	0
Int. Volc:	0	0
Felsic Volc:	0	0
Shale:	50	20
Black shale:	0	0
Quartzite:	20	0
Graywacke:	0	0

METAMORPHIC GRADE: M-U.GREENSCHIST

NEARBY DEPOSIT TYPES: NONE?

ORE TYPE:

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AS:	150	
AU:	0.100	
CU:	50	50
MO:	5	
PB:	20	
SN:	2	
W:	3	
ZN:	60	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 93 TO 93 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	100	90
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

Equigranular
Porphyritic
Pegmatitic-aplitic
Myrmekitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM

Anorthite content maximum: 1
Anorthite content minimum: 1

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 25.0
PLAG: 39.0
K-SPAR 19.0
MAFICS 18.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 30.0
PLAG: 38.0
K-SPAR 23.0
MAFICS 9.0

Major Oxide Analysis

Normative Minerals

SiO₂: 71.20
Al₂O₃: 14.90
Fe₂O₃: 0.60
FeO: 2.00
MgO: 0.50
CaO: 2.10
Na₂O: 2.80
K₂O: 4.20
TiO₂: 0.21
P₂O₅: 0.08
MnO: 0.06

Qtz: 30.0
Orthoclase: 25.00
Albite: 23.80
Anorthite: 9.90
Corundum: 2.20
Diopside: 0.00
Hypersthene: 4.20
Olivine: 0.00
Magnetite: 0.87
Ilmenite: 0.40

MINERAL COMPOSITION

QUARTZ: 31.0
PLAG: 35.0
K-SPAR 18.0
MAFICS 16.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 28.0
PLAG: 27.0
K-SPAR 36.0
MAFICS 8.0

Major Oxide Analysis

Normative Minerals

SiO₂: 69.00
Al₂O₃: 15.70
Fe₂O₃: 0.22
FeO: 1.80
MgO: 1.10
CaO: 2.20
Na₂O: 2.70
K₂O: 5.40
TiO₂: 0.39
P₂O₅: 0.12
MnO: 0.00

Qtz: 28.0
Orthoclase: 32.10
Albite: 23.00
Anorthite: 10.10
Corundum: 1.70
Diopside: 0.00
Hypersthene: 5.20
Olivine: 0.00
Magnetite: 0.32
Ilmenite: 0.75

MINERAL COMPOSITION

QUARTZ: 27.0
PLAG: 32.0
K-SPAR 28.0
MAFICS 13.0

Major Oxide Analysis

SiO2: 65.10
Al2O3: 14.60
Fe2O3: 1.80
FeO: 2.50
MgO: 2.10
CaO: 4.00
Na2O: 3.00
K2O: 4.40
TiO2: 0.44
P2O5: 0.25
MnO: 0.08

Normative Minerals

Qtz: 27.0
Orthoclase: 26.10
Albite: 25.50
Anorthite: 13.40
Corundum: 0.00
Diopside: 2.10
Hypersthene: 6.80
Olivine: 0.00
Magnetite: 2.60
Ilmenite: 0.84

MINERAL COMPOSITION

QUARTZ: 28.0
PLAG: 36.0
K-SPAR 20.0
MAFICS 16.0

Major Oxide Analysis

SiO2: 66.00
Al2O3: 17.10
Fe2O3: 1.60
FeO: 1.70
MgO: 1.20
CaO: 3.90
Na2O: 4.80
K2O: 2.50
TiO2: 0.42
P2O5: 0.19
MnO: 0.07

Normative Minerals

Qtz: 28.0
Orthoclase: 14.70
Albite: 40.50
Anorthite: 17.70
Corundum: 0.00
Diopside: 0.05
Hypersthene: 4.20
Olivine: 0.00
Magnetite: 2.30
Ilmenite: 0.80

MINERAL COMPOSITION

QUARTZ: 33.0
PLAG: 23.0
K-SPAR 37.0
MAFICS 6.0

Major Oxide Analysis

SiO2: 68.30
Al2O3: 15.50
Fe2O3: 0.50
FeO: 2.61
MgO: 1.20
CaO: 2.90
Na2O: 2.60
K2O: 4.10
TiO2: 0.39
P2O5: 0.11

Normative Minerals

Qtz: 33.0
Orthoclase: 24.40
Albite: 22.10
Anorthite: 13.60
Corundum: 0.02
Diopside: 0.00
Hypersthene: 6.90
Olivine: 0.00
Magnetite: 0.73
Ilmenite: 0.75

MNO: 0.08

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Hornblende
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrrhotite
Chalcopyrite
Bornite
Sphalerite
Galena
Scheelite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Missing

PYROXENE MINERALS

Missing

ID NUMBER: EG-3-2 NAME: CRESCENT CREEK
LATITUDE: 064048000 LONGITUDE: 143039000
QUADRANGLE: EAGLE

CLASS: W
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 50000 MINIMUM TONS: 1000
PRODUCTION: 0

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE:

REPORTED ASSAY VALUES

MAX MIN

W: Reported

HOST ROCK CHARACTERISTICS

FORMATION: AGE: PRECAMB-
PALOEZ
TERRANE: THICKNESS: -1

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	5	2
Dolomite:	0	0
Marl:	0	0
Mafic volc:	50	20
Int. Volc:	30	10
Felsic Volc:	10	5
Shale:	0	0
Black shale:	0	0
Quartzite:	30	10
Graywacke:	40	10

METAMORPHIC GRADE: AMPHIBOLITE
NEARBY DEPOSIT TYPES: PLACER AU
ORE TYPE: AU

HOST ROCK ASSAY VALUES

MAX MIN

AU: Reported

INTRUSIVE ROCK CHARACTERISTICS

AGE: 93 TO 93 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	90	60
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

TEXTURES

Equigranular
Porphyritic
Pegmatitic-aplitic
Myrmekitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: MEDIUM
Minimum grain size: MEDIUM
Anorthite content missing

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 30.0
PLAG: 34.0
K-SPAR 17.0
MAFICS 17.0

Major Oxide Analysis

SiO2: 74.80
Al2O3: 14.20
Fe2O3: 0.28
FeO: 0.84
MgO: 0.14
CaO: 0.84
Na2O: 3.10
K2O: 4.80
TiO2: 0.13
P2O5: 0.13
MnO: 0.00

Normative Minerals

Qtz: 30.0
Orthoclase: 28.40
Albite: 26.20
Anorthite: 3.26
Corundum: 2.70
Diopside: 0.00
Hypersthene: 1.45
Olivine: 0.00
Magnetite: 0.41
Ilmenite: 0.25

MINERAL COMPOSITION

QUARTZ: 38.0
PLAG: 33.0
K-SPAR 28.0
MAFICS 1.0

Major Oxide Analysis

SiO2: 71.60
Al2O3: 14.70
Fe2O3: 0.20
FeO: 1.60
MgO: 0.70
CaO: 1.30
Na2O: 2.90
K2O: 5.30
TiO2: 0.27
P2O5: 0.11
MnO: 0.04

Normative Minerals

Qtz: 38.0
Orthoclase: 31.50
Albite: 24.70
Anorthite: 5.50
Corundum: 2.20
Diopside: 0.00
Hypersthene: 4.20
Olivine: 0.00
Magnetite: 0.29
Ilmenite: 0.52

MINERAL COMPOSITION

QUARTZ: 28.0
PLAG: 30.0
K-SPAR 33.0
MAFICS 8.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 22.0
PLAG: 48.0
K-SPAR 7.0
MAFICS 25.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 31.0
PLAG: 35.0
K-SPAR 18.0
MAFICS 16.0

Major Oxide Analysis Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Idocrase
Plagioclase
Sphene

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Scheelite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: LV-3-1 NAME: PEDRO
LATITUDE: 065002000 LONGITUDE: 147031000
QUADRANGLE: LIVENGOOD

CLASS: W
LOCALIZATION: GRANITE CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 5000 MINIMUM TONS: 500
PRODUCTION: 0

GEOMETRY

LENGTH: 20.0 WIDTH: 5.0 DEPTH: 30

SHAPE: PLANAR TABULAR

REPORTED ASSAY VALUES

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	10	10
Quartz monzonite	0	0
Granodiorite	60	60
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic
Endoskarn present

TEXTURES

Equigranular
Porphyritic
Pegmatitic-aplitic
Myrmekitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 4 MM
Minimum grain size: 4 MM

Anorthite content maximum: 25
Anorthite content minimum: 20

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION
QUARTZ: 19.0

PLAG: 53.0
 K-SPAR 14.0
 MAFICS 14.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 26.0
 PLAG: 36.0
 K-SPAR 35.0
 MAFICS 3.0

Major Oxide Analysis

Normative Minerals

SiO2: 67.03
 AL2O3: 15.05
 Fe2O3: 0.95
 FeO: 3.15
 MgO: 1.07
 CaO: 3.53
 Na2O: 3.54
 K2O: 3.00
 TiO2: 0.57
 P2O5: 0.19
 MnO: 0.09

QTZ: 26.0
 ORTHOCLASE: 17.70
 ALBITE: 30.00
 ANORTHITE: 16.30
 CORUNDUM: 0.02
 DIOPSIDE: 0.00
 HYPERSTHENE: 6.90
 OLIVINE: 0.00
 MAGNETITE: 1.38
 ILMENITE: 1.08

MINERAL COMPOSITION

QUARTZ: 22.0
 PLAG: 36.0
 K-SPAR 40.0
 MAFICS 2.0

Major Oxide Analysis

Normative Minerals

SiO2: 72.76
 AL2O3: 13.80
 Fe2O3: 0.40
 FeO: 1.22
 MgO: 0.50
 CaO: 1.75
 Na2O: 3.44
 K2O: 3.93
 TiO2: 0.19
 P2O5: 0.08
 MnO: 0.04

QTZ: 22.0
 ORTHOCLASE: 23.20
 ALBITE: 29.10
 ANORTHITE: 8.20
 CORUNDUM: 0.70
 DIOPSIDE: 0.00
 HYPERSTHENE: 2.90
 OLIVINE: 0.00
 MAGNETITE: 0.58
 ILMENITE: 0.36

SKARN MINERAL DATA

SKARN MINERALS

Garnet
 Pyroxene
 Idocrase
 Hornblende
 Apatite
 Sphene

	MAXIMUM	MINIMUM
Limestone:	5	5
Dolomite:	0	0
Marl:	5	5
Mafic volc:	20	10
Int. Volc:	0	0
Felsic Volc:	5	0
Shale:	80	50
Black shale:	0	0
Quartzite:	20	10
Graywacke:	0	0

METAMORPHIC GRADE: U.GREENSCHIST
 NEARBY DEPOSIT TYPES: PB-ZN-AU-SB VEINS
 ORE TYPE: PB,ZN,AU,SB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AS:	5	
AU:	0.360	
CU:	35	35
F:	630	
MO:	7	
PB:	17	
SN:	2	
W:	5	
ZN:	56	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 92 TO 92 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	70	70
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic
 Endoskarn present

TEXTURES

Porphyritic
Pegmatitic-aplitic
Myrmekitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 4 MM
Minimum grain size: 4 MM

Anorthite content maximum: 25
Anorthite content minimum: 20

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 28.0
PLAG: 32.0
K-SPAR 32.0
MAFICS 8.0

Major Oxide Analysis

SiO₂: 71.76
Al₂O₃: 12.75
Fe₂O₃: 0.41
FeO: 2.79
MgO: 0.56
CaO: 2.13
Na₂O: 2.90
K₂O: 3.47
TiO₂: 0.32
P₂O₅: 0.09
MnO: 0.10

Normative Minerals

QTZ: 28.0
ORTHOCLASE: 20.50
ALBITE: 24.50
ANORTHITE: 10.00
CORUNDUM: 0.57
DIOPSIDE: 0.00
HYPERSTHENE: 5.84
OLIVINE: 0.00
MAGNETITE: 0.59
ILMENITE: 0.61

MINERAL COMPOSITION

QUARTZ: 38.0
PLAG: 34.0

K-SPAR 24.0
MAFICS 4.0

Major Oxide Analysis

SiO2: 74.30
Al2O3: 12.52
Fe2O3: 0.18
FeO: 1.55
MgO: 0.03
CaO: 1.58
Na2O: 3.25
K2O: 3.95
TiO2: 0.12
P2O5: 0.06
MnO: 0.06

Normative Minerals

Qtz: 38.0
Orthoclase: 23.30
Albite: 27.50
Anorthite: 7.45
Corundum: 0.17
Diopside: 0.00
Hypersthene: 2.69
Olivine: 0.00
Magnetite: 0.26
Ilmenite: 0.23

MINERAL COMPOSITION

Quartz: 34.0
Plag: 38.0
K-SPAR 18.0
MAFICS 10.0

Major Oxide Analysis

SiO2: 72.88
Al2O3: 13.79
Fe2O3: 0.41
FeO: 0.19
MgO: 0.30
CaO: 1.95
Na2O: 3.28
K2O: 4.13
TiO2: 0.19
P2O5: 0.08
MnO: 0.07

Normative Minerals

Qtz: 34.0
Orthoclase: 24.40
Albite: 27.80
Anorthite: 9.20
Corundum: 0.57
Diopside: 0.00
Hypersthene: 0.57
Olivine: 0.00
Magnetite: 0.29
Ilmenite: 0.36

MINERAL COMPOSITION

Quartz: 21.0
Plag: 54.0
K-SPAR 19.0
MAFICS 6.0

Major Oxide Analysis

SiO2: 67.03
Al2O3: 15.05
Fe2O3: 0.95
FeO: 3.15
MgO: 1.07
CaO: 3.53
Na2O: 3.54
K2O: 3.00
TiO2: 0.57
P2O5: 0.19
MnO: 0.09

Normative Minerals

Qtz: 21.0
Orthoclase: 17.73
Albite: 30.00
Anorthite: 16.30
Corundum: 0.02
Diopside: 0.00
Hypersthene: 6.89
Olivine: 0.00
Magnetite: 1.38
Ilmenite: 1.08

MINERAL COMPOSITION

QUARTZ: 23.0
PLAG: 48.0
K-SPAR 15.0
MAFICS 14.0

Major Oxide Analysis

SiO2: 70.16
Al2O3: 14.77
Fe2O3: 0.29
FeO: 1.31
MgO: 0.50
CaO: 2.16
Na2O: 3.93
K2O: 4.15
TiO2: 0.33
P2O5: 0.11
MnO: 0.05

Normative Minerals

QTZ: 23.0
ORTHOCLASE: 24.50
ALBITE: 33.30
ANORTHITE: 10.00
CORUNDUM: 0.15
DIOPSIDE: 0.00
HYPERSTHENE: 2.96
OLIVINE: 0.00
MAGNETITE: 0.42
ILMENITE: 0.63

MINERAL COMPOSITION

QUARTZ: 34.0
PLAG: 36.0
K-SPAR 17.0
MAFICS 13.0

Major Oxide Analysis

MINERAL COMPOSITION

QUARTZ: 28.0
PLAG: 36.0
K-SPAR 25.0
MAFICS 11.0

Normative Minerals

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Wollastonite
Idocrase
Epidote
Actinolite
Hornblende
Apatite
Sphene
Quartz

PARAGENESIS:

ASSEMBLAGE:

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	5	5
Dolomite:	0	0
Marl:	5	5
Mafic volc:	20	10
Int. Volc:	0	0
Felsic Volc:	5	0
Shale:	80	50
Black shale:	0	0
Quartzite:	20	10
Graywacke:	0	0

METAMORPHIC GRADE: U.GREENSCHIST
 NEARBY DEPOSIT TYPES: PB-ZN-AU-SB VEINS
 ORE TYPE: PB,ZN,AU,SB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AS:	5	
AU:	0.360	
CU:	36	36
F:	635	
MO:	7	
PB:	17	
SN:	2	
W:	5	
ZN:	56	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 92 TO 92 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	90	90
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Porphyritic
Pegmatitic-aplitic
Myrmekitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 4 MM
Minimum grain size: 4 MM

Anorthite content maximum: 3
Anorthite content minimum: 20

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 25.0
PLAG: 38.0
K-SPAR 30.0
MAFICS 7.0

Major Oxide Analysis

SiO₂: 76.27
Al₂O₃: 12.59
Fe₂O₃: 0.10
FeO: 1.04
MgO: 0.10
CaO: 0.97
Na₂O: 3.70
K₂O: 4.27
TiO₂: 0.04
P₂O₅: 0.06
MnO: 0.10

Normative Minerals

QTZ: 25.0
ORTHOCLASE: 25.20
ALBITE: 31.30
ANORTHITE: 4.40
CORUNDUM: 0.26
DIOPSIDE: 0.00
HYPERSTHENE: 1.95
OLIVINE: 0.00
MAGNETITE: 0.14
ILMENITE: 0.08

MINERAL COMPOSITION

QUARTZ: 22.0

PLAG: 38.0
K-SPAR 31.0
MAFICS 9.0

Major Oxide Analysis

SiO2: 76.13
Al2O3: 12.77
Fe2O3: 0.24
FeO: 0.68
MgO: 0.09
CaO: 1.58
Na2O: 3.20
K2O: 4.45
TiO2: 0.08
P2O5: 0.05
MnO: 0.03

Normative Minerals

Qtz: 22.0
Orthoclase: 26.30
Albite: 27.10
Anorthite: 7.30
Corundum: 0.00
Diopside: 0.15
Hypersthene: 1.12
Olivine: 0.00
Magnetite: 0.35
Ilmenite: 0.15

MINERAL COMPOSITION

Quartz: 29.0
Plag: 36.0
K-SPAR 29.0
MAFICS 6.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Pyroxene
Actinolite
Apatite
Sphene
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
Pyrhottite
Scheelite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

ID NUMBER: FBX-3-2

NAME: STEPOVICH

Quartzite: 20 10
Graywacke: 0 0

METAMORPHIC GRADE: U.GREENSCHIST
NEARBY DEPOSIT TYPES: PB-ZN-AU-SB VEINS
ORE TYPE: PB,ZN,AU,SB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AS:	150	
AU:	0.360	
CU:	50	50
MO:	5	
PB:	20	
SN:	2	
W:	5	
ZN:	60	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 91 TO 91 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	80	60
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic

TEXTURES

Porphyritic
Pegmatitic-aplitic
Myrmekitic

MAFIC AND ACCESSORY MINERALS PRESENT

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 4 MM
Minimum grain size: 4 MM

Anorthite content maximum: 35
Anorthite content minimum: 20

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 23.0
PLAG: 48.0
K-SPAR 15.0
MAFICS 14.0

Major Oxide Analysis

SiO₂: 70.16
Al₂O₃: 14.77
Fe₂O₃: 0.29
FeO: 1.31
MgO: 0.50
CaO: 2.16
Na₂O: 3.93
K₂O: 4.45
TiO₂: 0.33
P₂O₅: 0.11
MnO: 0.05

Normative Minerals

QTZ: 23.0
ORTHOCLASE: 24.52
ALBITE: 33.25
ANORTHITE: 10.00
CORUNDUM: 0.15
DIOPSIDE: 0.00
HYPERSTHENE: 2.96
OLIVINE: 0.00
MAGNETITE: 0.42
ILMENITE: 0.63

MINERAL COMPOSITION

QUARTZ: 28.0
PLAG: 32.0
K-SPAR 32.0
MAFICS 8.0

Major Oxide Analysis

MINERAL COMPOSITION

QUARTZ: 24.0
PLAG: 36.0
K-SPAR 39.0
MAFICS 1.0

Normative Minerals

Major Oxide Analysis

SiO₂: 76.27
Al₂O₃: 12.59
Fe₂O₃: 0.10
FeO: 1.04
MgO: 0.00
CaO: 0.97

Normative Minerals

QTZ: 24.0
ORTHOCLASE: 25.20
ALBITE: 31.30
ANORTHITE: 4.42
CORUNDUM: 0.26
DIOPSIDE: 0.00

NA2O: 3.70
K2O: 4.27
TiO2: 0.04
P2O5: 0.06
MNO: 0.10

HYPERSTHENE: 1.95
OLIVINE: 0.00
MAGNETITE: 0.14
ILMENITE: 0.08

MINERAL COMPOSITION

QUARTZ: 31.0
PLAG: 30.0
K-SPAR 36.0
MAFICS 1.0

Major Oxide Analysis

SiO2: 77.67
AL2O3: 12.13
FE2O3: 0.20
FeO: 1.13
MGO: 0.00
CAO: 1.37
NA2O: 3.37
K2O: 3.68
TiO2: 0.07
P2O5: 0.04
MNO: 0.04

Normative Minerals

QTZ: 31.0
ORTHOCLASE: 21.80
ALBITE: 28.50
ANORTHITE: 6.54
CORUNDUM: 0.21
DIOPSIDE: 0.00
HYPERSTHENE: 1.87
OLIVINE: 0.00
MAGNETITE: 0.29
ILMENITE: 0.13

MINERAL COMPOSITION

QUARTZ: 39.0
PLAG: 29.0
K-SPAR 30.0
MAFICS 2.0

Major Oxide Analysis

SiO2: 69.76
AL2O3: 14.80
FE2O3: 0.58
FeO: 2.61
MGO: 0.96
CAO: 2.85
NA2O: 3.17
K2O: 3.13
TiO2: 0.49
P2O5: 0.12
MNO: 0.06

Normative Minerals

QTZ: 39.0
ORTHOCLASE: 18.50
ALBITE: 26.80
ANORTHITE: 13.40
CORUNDUM: 1.30
DIOPSIDE: 0.00
HYPERSTHENE: 6.01
OLIVINE: 0.00
MAGNETITE: 0.84
ILMENITE: 0.93

MINERAL COMPOSITION

QUARTZ: 23.0
PLAG: 48.0
K-SPAR 23.0
MAFICS 6.0

Major Oxide Analysis

SiO2: 74.95
AL2O3: 11.85
FE2O3: 0.47

Normative Minerals

QTZ: 23.0
ORTHOCLASE: 20.10
ALBITE: 23.40

FEO:	2.84	ANORTHITE:	9.20
MGO:	0.47	CORUNDUM:	0.27
CAO:	1.98	DIOPSIDE:	0.00
NA2O:	2.76	HYPERSTHENE:	5.72
K2O:	3.40	OLIVINE:	0.00
TIO2:	0.28	MAGNETITE:	0.68
P2O5:	0.10	ILMENITE:	0.53
MNO:	0.10		

MINERAL COMPOSITION

QUARTZ:	38.0
PLAG:	34.0
K-SPAR	24.0
MAFICS	4.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
 Pyroxene
 Idocrase
 Epidote
 Biotite
 Chlorite
 Plagioclase
 Apatite
 Sphene
 Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Pyrite
 Pyrrhotite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite:	30.0
Pyrope:	0.0

Grossularite: 60.0
Almandite: 5.0
Spessartite: 5.0

PYROXENE MINERALS

Diopsida: 20
Hedenbergite: 80
Johannsenite: 0

ID NUMBER: FBX-3-4 NAME: YELLOW PUP
LATITUDE: 064059000 LONGITUDE: 147020000
QUADRANGLE: FAIRBANKS

CLASS: W
LOCALIZATION: SCHIST/MBL CONTACT

REPORTED TONNAGES

MAXIMUM TONS: 10000 MINIMUM TONS: 1000
PRODUCTION: 50

GEOMETRY

LENGTH: -1.0 WIDTH: -1.0 DEPTH: -1

SHAPE: PRISM

REPORTED ASSAY VALUES

	MAX	MIN
AG:	0.1	0.1
AU:	0.07	
CU:	140	140
MO:	8.0	
PB:	10	
SN:	8	
W:	5400.0	
ZN:	68	
AS:	5	
F:	1050	
SB:	1	

HOST ROCK CHARACTERISTICS

FORMATION: AGE: LOWER
PALEOZOIC
TERRANE: YUKON-TANANA-Y2 THICKNESS: 5

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	5	5
Dolomite:	0	0
Marl:	5	5
Mafic volc:	20	10
Int. Volc:	0	0
Felsic Volc:	5	0
Shale:	80	50
Black shale:	0	0
Quartzite:	20	10
Graywacke:	0	0

METAMORPHIC GRADE: U.GREENSCHIST
 NEARBY DEPOSIT TYPES: PB-ZN-AU-SB VEINS
 ORE TYPE: PB,ZN,AU,SB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AS:	5	
AU:	0.360	
CU:	21	21
F:	500	
MO:	2	
PB:	7	
SN:	2	
W:	5	
ZN:	68	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 93 TO 91 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	90	90
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic
Propylitic

TEXTURES

Equigranular
Porphyritic
Pegmatitic-aplitic
Myrmekitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Large stock

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 4 MM
Minimum grain size: 4 MM

Anorthite content maximum: 35
Anorthite content minimum: 20

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 32.0
PLAG: 35.0
K-SPAR 23.0
MAFICS 10.0

Major Oxide Analysis

SiO₂: 75.26
Al₂O₃: 12.94
Fe₂O₃: 0.18
FeO: 0.95
MgO: 0.04
CaO: 1.01
Na₂O: 3.51
K₂O: 4.48
TiO₂: 0.06
P₂O₅: 0.04
MnO: 0.04

Normative Minerals

QTZ: 32.0
ORTHOCLASE: 26.50
ALBITE: 29.70
ANORTHITE: 4.75
CORUNDUM: 0.58
DIOPSIDE: 0.00
HYPERSTHENE: 1.62
OLIVINE: 0.00
MAGNETITE: 0.26
ILMENITE: 0.11

MINERAL COMPOSITION

QUARTZ: 25.0
PLAG: 36.0
K-SPAR 26.0
MAFICS 13.0

Major Oxide Analysis

SiO2: 70.16
Al2O3: 14.77
Fe2O3: 0.29
FeO: 1.31
MgO: 0.50
CaO: 2.16
Na2O: 3.93
K2O: 4.15
TiO2: 0.33
P2O5: 0.11
MnO: 0.05

Normative Minerals

Qtz: 25.0
Orthoclase: 24.50
Albite: 33.30
Anorthite: 10.00
Corundum: 0.15
Diopside: 0.00
Hypersthene: 2.96
Olivine: 0.00
Magnetite: 0.42
Ilmenite: 0.63

MINERAL COMPOSITION

QUARTZ: 30.0
PLAG: 41.0
K-SPAR 19.0
MAFICS 10.0

Major Oxide Analysis

SiO2: 76.13
Al2O3: 12.77
Fe2O3: 0.24
FeO: 0.68
MgO: 0.09
CaO: 1.58
Na2O: 3.20
K2O: 4.45
TiO2: 0.08
P2O5: 0.05
MnO: 0.03

Normative Minerals

Qtz: 30.0
Orthoclase: 26.30
Albite: 27.10
Anorthite: 7.30
Corundum: 0.00
Diopside: 0.15
Hypersthene: 1.12
Olivine: 0.00
Magnetite: 0.35
Ilmenite: 0.15

MINERAL COMPOSITION

QUARTZ: 24.0
PLAG: 33.0
K-SPAR 42.0
MAFICS 1.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 26.0
PLAG: 30.0
K-SPAR 40.0
MAFICS 4.0

Major Oxide Analysis

Normative Minerals

SIO2: 73.57
AL2O3: 13.73
FE2O3: 0.47
FEO: 1.44
MGO: 0.33
CAO: 1.70
NA2O: 3.15
K2O: 4.48
TIO2: 0.16
P2O5: 0.06
MNO: 0.05

QTZ: 26.0
ORTHOCLASE: 26.50
ALBITE: 26.70
ANORTHITE: 8.00
CORUNDUM: 0.75
DIOPSIDE: 0.00
HYPERSTHENE: 2.91
OLIVINE: 0.00
MAGNETITE: 0.68
ILMENITE: 0.30

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Wollastonite
Idocrase
Epidote
Actinolite
Hornblende
Biotite
Apatite
Sphene
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Pyrhottite
Scheelite
Fluorite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite: 20.0
Pyrope: 0.0

GENERALIZED HOST ROCK COMPOSITION:

	MAXIMUM	MINIMUM
Limestone:	5	5
Dolomite:	0	0
Marl:	5	5
Mafic volc:	10	10
Int. Volc:	0	0
Felsic Volc:	5	0
Shale:	80	50
Black shale:	0	0
Quartzite:	20	10
Graywacke:	0	0

METAMORPHIC GRADE: GREENSCHIST
 NEARBY DEPOSIT TYPES: PB-ZN-AU-SB VEINS
 ORE TYPE: PB,ZN,AU,SB

HOST ROCK ASSAY VALUES

	MAX	MIN
AG:	0.1	
AS:	94	
AU:	0.360	
CU:	33	33
F:	874	
MO:	3	
PB:	10	
SN:	2	
W:	5	
ZN:	63	

INTRUSIVE ROCK CHARACTERISTICS

AGE: 93 TO 91 M.Y.

HOST ROCK LITHOLOGY

	MAXIMUM	MINIMUM
Diorite	0	0
Monzodiorite	0	0
Quartz diorite	0	0
Quartz monzodiorite	0	0
Tonalite	0	0
Quartz monzonite	0	0
Granodiorite	90	70
Syenite	0	0
Alkali granite	0	0

INTRUSIVE ALTERATION TYPES

Sericitic
Endoskarn present

TEXTURES

Porphyritic
Pegmatitic-aplitic
Myrmekitic

MAFIC AND ACCESSORY MINERALS PRESENT

Biotite
Clinopyroxene
Sphene
Hornblende
Apatite
Magnetite-ilmenite

MORPHOLOGY OF INTRUSIVE ROCKS

Dikes
Batholith

MISCELLANEOUS INTRUSIVE CHARACTERISTICS

Maximum grain size: 4 MM
Minimum grain size: 4 MM

Anorthite content maximum: 35
Anorthite content minimum: 22

INTRUSIVE COMPOSITION DATA

MINERAL COMPOSITION

QUARTZ: 19.0
PLAG: 53.0
K-SPAR 14.0
MAFICS 14.0

Major Oxide Analysis

SiO₂: 67.03
Al₂O₃: 15.05
Fe₂O₃: 0.95
FeO: 3.15
MgO: 1.07
CaO: 3.53
Na₂O: 3.54
K₂O: 3.00
TiO₂: 0.57
P₂O₅: 0.19
MnO: 0.09

Normative Minerals

QTZ: 19.0
ORTHOCLASE: 17.70
ALBITE: 30.00
ANORTHITE: 16.30
CORUNDUM: 0.02
DIOPSIDE: 0.00
HYPERSTHENE: 6.90
OLIVINE: 0.00
MAGNETITE: 1.38
ILMENITE: 1.08

MINERAL COMPOSITION

QUARTZ: 24.0
PLAG: 36.0
K-SPAR 39.0
MAFICS 1.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 31.0
PLAG: 34.0
K-SPAR 26.0
MAFICS 9.0

Major Oxide Analysis

Normative Minerals

SiO2: 72.88
Al2O3: 13.79
Fe2O3: 0.41
FeO: 0.19
MgO: 0.30
CaO: 1.95
Na2O: 3.28
K2O: 4.13
TiO2: 0.19
P2O5: 0.08
MnO: 0.07

QTZ: 31.0
ORTHOCLASE: 24.40
ALBITE: 27.80
ANORTHITE: 9.15
CORUNDUM: 0.57
DIOPSIDE: 0.00
HYPERSTHENE: 0.57
OLIVINE: 0.00
MAGNETITE: 0.29
ILMENITE: 0.36

MINERAL COMPOSITION

QUARTZ: 31.0
PLAG: 30.0
K-SPAR 36.0
MAFICS 1.0

Major Oxide Analysis

Normative Minerals

MINERAL COMPOSITION

QUARTZ: 33.0
PLAG: 31.0
K-SPAR 28.0
MAFICS 8.0

Major Oxide Analysis

Normative Minerals

SiO2: 74.85
Al2O3: 13.93
Fe2O3: 0.43
FeO: 1.31
MgO: 0.31
CaO: 2.38
Na2O: 3.13
K2O: 3.55
TiO2: 0.16
P2O5: 0.11
MnO: 0.06

QTZ: 33.0
ORTHOCLASE: 21.00
ALBITE: 26.50
ANORTHITE: 11.10
CORUNDUM: 0.87
DIOPSIDE: 0.00
HYPERSTHENE: 2.67
OLIVINE: 0.00
MAGNETITE: 0.62
ILMENITE: 0.30

MINERAL COMPOSITION

QUARTZ: 27.0
PLAG: 38.0
K-SPAR 30.0
MAFICS 5.0

Major Oxide Analysis

SiO2: 72.53
Al2O3: 13.88
Fe2O3: 0.57
FeO: 1.98
MgO: 0.53
CaO: 2.26
Na2O: 2.93
K2O: 4.31
TiO2: 0.26
P2O5: 0.10
MnO: 0.08

Normative Minerals

Qtz: 27.0
Orthoclase: 25.50
Albite: 24.80
Anorthite: 10.60
Corundum: 0.53
Diopside: 0.00
Hypersthene: 4.20
Olivine: 0.00
Magnetite: 0.83
Ilmenite: 0.49

MINERAL COMPOSITION

QUARTZ: 27.0
PLAG: 35.0
K-SPAR 33.0
MAFICS 5.0

Major Oxide Analysis

SiO2: 74.00
Al2O3: 13.75
Fe2O3: 0.29
FeO: 1.31
MgO: 0.23
CaO: 1.50
Na2O: 3.20
K2O: 5.05
TiO2: 0.13
P2O5: 0.05
MnO: 0.05

Normative Minerals

Qtz: 27.0
Orthoclase: 29.80
Albite: 27.10
Anorthite: 7.10
Corundum: 0.41
Diopside: 0.00
Hypersthene: 2.62
Olivine: 0.00
Magnetite: 0.42
Ilmenite: 0.25

MINERAL COMPOSITION

QUARTZ: 22.0
PLAG: 38.0
K-SPAR 31.0
MAFICS 9.0

Major Oxide Analysis

SiO2: 74.69
Al2O3: 13.14
Fe2O3: 0.15
FeO: 0.63
MgO: 0.01
CaO: 1.21
Na2O: 3.71
K2O: 4.65
TiO2: 0.04
P2O5: 0.04

Normative Minerals

Qtz: 22.0
Orthoclase: 27.50
Albite: 31.40
Anorthite: 5.47
Corundum: 0.00
Diopside: 0.24
Hypersthene: 0.89
Olivine: 0.00
Magnetite: 0.22
Ilmenite: 0.08

MNO: 0.03

MINERAL COMPOSITION

QUARTZ: 30.0
PLAG: 39.0
K-SPAR 25.0
MAFICS 6.0

Major Oxide Analysis

SIO2: 74.30
AL2O3: 12.52
FE2O3: 0.18
FEO: 1.55
MGO: 0.03
CAO: 1.58
NA2O: 3.25
K2O: 3.95
TIO2: 0.12
P2O5: 0.06
MNO: 0.06

Normative Minerals

QTZ: 30.0
ORTHOCLASE: 23.30
ALBITE: 27.50
ANORTHITE: 7.45
CORUNDUM: 0.00
DIOPSIDE: 0.17
HYPERSTHENE: 2.69
OLIVINE: 0.00
MAGNETITE: 0.26
ILMENITE: 0.23

MINERAL COMPOSITION

QUARTZ: 32.0
PLAG: 34.0
K-SPAR 29.0
MAFICS 5.0

Major Oxide Analysis

Normative Minerals

SKARN MINERAL DATA

SKARN MINERALS

Garnet
Pyroxene
Wollastonite
Idocrase
Epidote
Actinolite
Hornblende
Biotite
Apatite
Sphene
Quartz

PARAGENESIS:

ASSEMBLAGE:

ZONING:

SKARN ORE MINERALS PRESENT

Magnetite
Pyrite
Scheelite
Fluorite
Molybdenite

ORE PARAGENESIS:

ORE ASSEMBLAGE:

SKARN MINERAL COMPOSITIONAL DATA

GARNET MINERALS

Andradite:	20.0
Pyrope:	0.0
Grossularite:	65.0
Almandite:	5.0
Spessartite:	10.0

PYROXENE MINERALS

Diopside:	25
Hedenbergite:	70
Johannsenite:	5

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