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ROGUE RESOURCES, INC.
GOLDEN CHALICE RESOURCES INC.

PETROGRAPHY REPORT ON SAMPLES FROM DDH-10-01 RADIO HILL

TIMMINS AREA
ONTARIO, CANADA

March, 2011

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1.0 EXECUTIVE SUMMARY

In October, 2010, Micon International Limited (Micon) was retained by Golden Chalice Inc. to undertake the logging of one or more drill holes on the Radio Hill deposit and to prepare a petrological analysis of samples from the core. Effective October 13, 2010, Golden Chalice announced that it would trade under the name of Rogue Resources Inc.

The Radio Hill iron formation intercepted in DDH-10-01 is a banded iron formation composed of varying amounts of chert, minnesotaite, and magnetite with minor amounts of siderite, pyrrhotite, chlorite, and pyrite. DDH-10-01 contained several intervals of relatively high-grade iron formation with interbedded chert, chert magnetite, and magnetite beds. Historical metallurgical work classified the high-grade iron formation as E-Type ore. The magnetite is fine-grained and is typically less than 35 microns (μ) with an average grain size of approximately 20 – 25 μ. Metallurgical work will be required to determine if concentrate with acceptable levels of SiO_2 can be achieved with reasonable grinds (500 mesh or above). However, magnetite in the massive ("metallic") bands has an estimated, effective liberation size of approximately 45 μ (325 mesh). This suggests that rejection of lower grade and finer grained chert-magnetite by cobbing could result in production of concentrate with reasonably low SiO_2 grades (<7 wt.% SiO_2) at reasonable grinds (+500, -325 mesh).

The dominant iron oxide mineral at Radio Hill is magnetite and the preferred processing method would be magnetic separation. Multiple bedding parallel veins and veinlets of chlorite-magnetite-pyrrhotite were intercepted in DDH-10-01. Since pyrrhotite is magnetic, zones containing the chlorite-magnetite-pyrrhotite veins would need to be treated as waste or diluted with low sulphur ore to control the sulphur content of the concentrate.

2.0 INTRODUCTION

Diamond drill hole DDH-10-01 was logged in November, 2010 by an Associate of Micon, an iron ore geologist, at the Rogue Resources Inc. core logging facility in Timmins, Ontario. Eleven samples representing different iron formation and other rock types were collected for petrographic analyses (See Table 3.1).

3.0 METHODOLOGY

Eleven samples were selected for petrographic study by Micon. Thin sections and polished mounts were prepared at Rod Johnson and Associates, Inc. in Negaunee, Michigan. The thin sections were analyzed in transmitted light and polished mounts with reflected light with an Olympus BX60 petrographic microscope. Images were collected using a Canon 5D digital SLR and processed using Adobe Photoshop C3 Extended. Cursory image analysis was also performed using Adobe Photoshop CS3 Extended.

Minerals were identified using their optical properties. In some instances, the very fine-grained nature of some of the minerals prevented the collection of adequate data for an unequivocal identification. In these instances, minerals were identified based on partial optical properties, habit and mineral association. The sample description attempts to correlate iron formation types with the historic F- and E-Types.

Table 3.1
Samples Collected for Petrographic Analysis

Start (m)	End (m)	Description
47.00	47.07	Gabbro
156.51	156.56	Possible F-Type
		ch-mt>mt>ch-sil>ch
203.00	203.05	Possible E-Type
		ch-mt>ch-mt2>mt>ch
205.33	205.40	Chlorite-magnetite-pyrrhotite
208.17	208.23	Possible E-Type
		ch-mt2>mt>ch-sil
310.94	311.00	Possible E-Type
		ch-mt>mt>ch
338.05	338.10	Possible F-Type
		ch>ch-mt>mt
341.00	341.05	Possible F-type
		ch>ch-mt>mt
369.73	369.78	Chert-silicate
		ch-sil>mt>ch-mt>ch
401.00	401.06	Possible F-Type
		ch-mt>mt>ch
416.26	416.31	Possible E-Type
		ch-mt>mt>ch

Abbreviations for bedding types and rank of abundance are also indicated: ch – chert, sil – silicate, mt – magnetite, and mt2 – magnetite-rich.

4.0 RESULTS

The Radio Hill iron formation is composed of chert (microcrystalline quartz), silicates (dominantly minnesotaite), magnetite, and siderite. The beds in the iron formation can be classified as chert (ch), chert-silicate (ch-sil), chert-magnetite (ch-mt), magnetite-rich chert magnetite (ch-mt2) and magnetite (mt). Gabbro was intercepted at the top of DDH-10-01 (9.6 – 71.0 metres (m)). Veins or beds composed of chlorite-magnetite-pyrrhotite were interbedded with the iron formation. The various rock types and iron formation bed-types will be discussed in the following section.

4.1 GABBRO

The gabbro that was intercepted at the top of DDH-10-01 is equigranular and composed of plagioclase laths, prismatic clinopyroxene and interstitial (see Figure 4.1). Plagioclase laths are partially altered to sericite and epidote. Prismatic clinopyroxene (augite) are partially altered to epidote. Interstitial glass is altered to chlorite and biotite. Magnetite is skeletal and contains ilmenite exsolution lamellae. Pyrite occurs in trace amounts as disseminated anhedral grains.

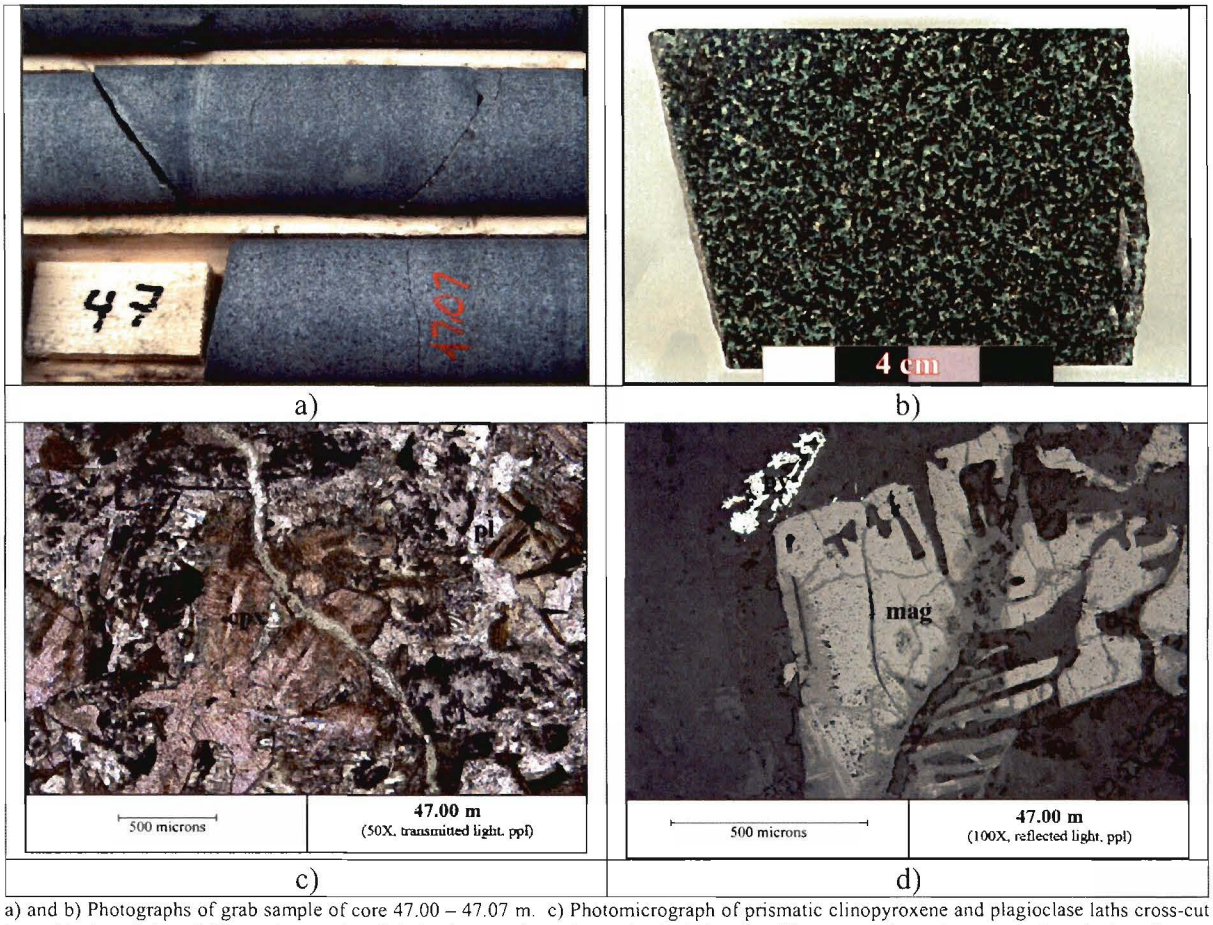
4.2 CHERT

Chert bands or beds are off-white to light gray and are composed of fine-grained granoblastic quartz with varying amounts of disseminated euhedral magnetite (Figure 4.2). The disseminated magnetite in chert bands is euhedral and commonly less than 20 μ.

4.3 CHERT-SILICATE

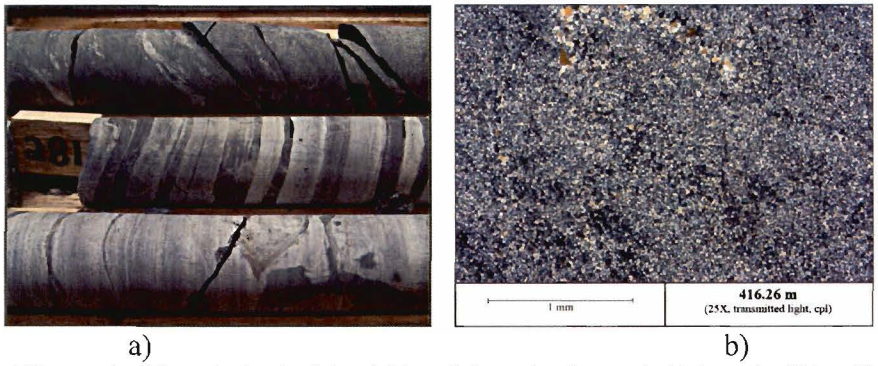
Most chert bands contain some silicates. The most abundant iron-silicate mineral a Radio Hill is minnesotaite. Chert-silicate bands or beds are conspicuous by their greenish color (Figure 4.3). Minnesotaite occurs as decussate fibres.

Figure 4.1
Photograph and Photomicrographs of Grab Sample of Gabbro (47.00 – 47.07 m)



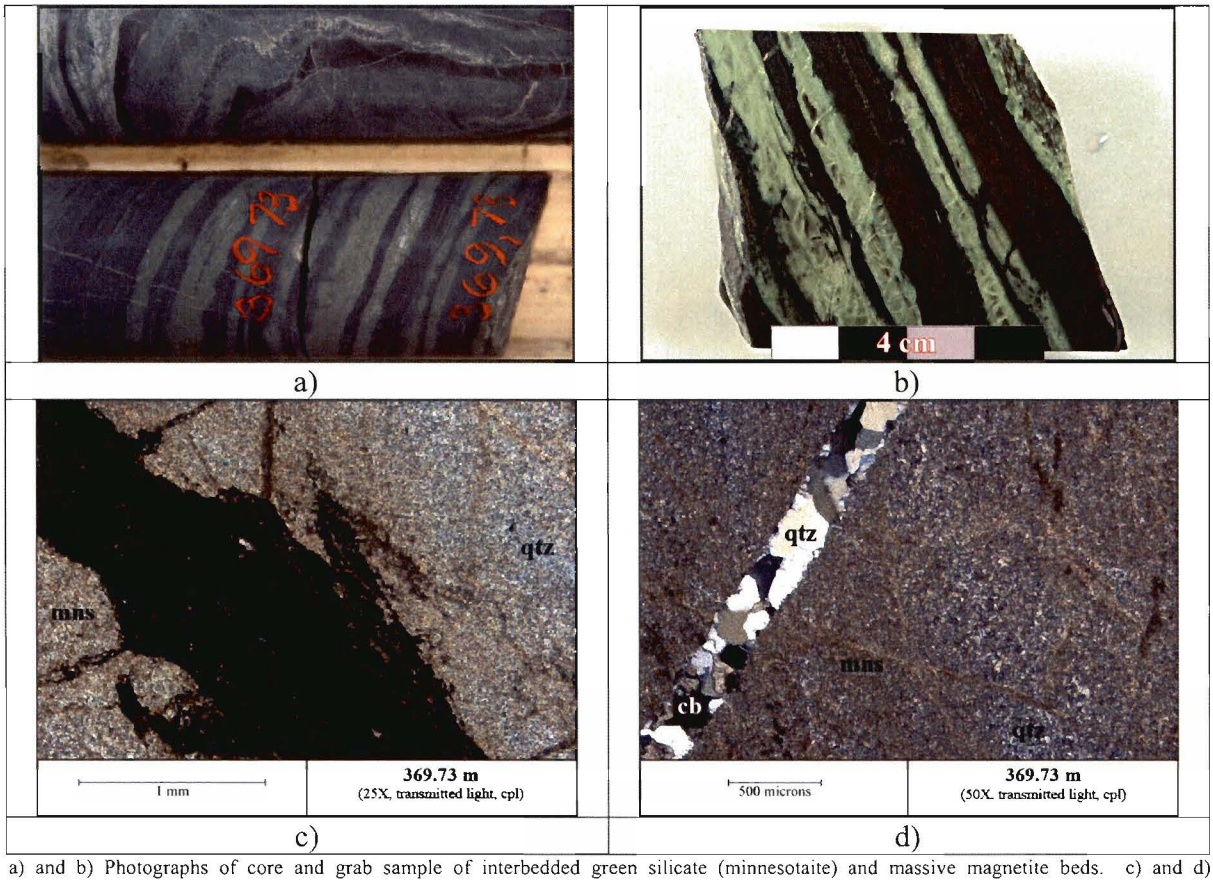
a) and b) Photographs of grab sample of core 47.00 – 47.07 m. c) Photomicrograph of prismatic clinopyroxene and plagioclase laths cross-cut by a chlorite veinlet. d) Photomicrographs of skeletal magnetite grains and anhedral pyrite. Note magnetite grains contain ilmenite lamellae.

Figure 4.2
Photograph and Photomicrographs of Chert



a) Photograph of alternating bands of chert (white to light gray) and magnetite (dark gray) at 281 m. b) Photomicrograph of chert (fine-grained granoblastic quartz) with minor disseminated magnetite (opaque).

Figure 4.3
Photograph and Photomicrographs of Chert-Silicate (369.73 – 369.78 m)

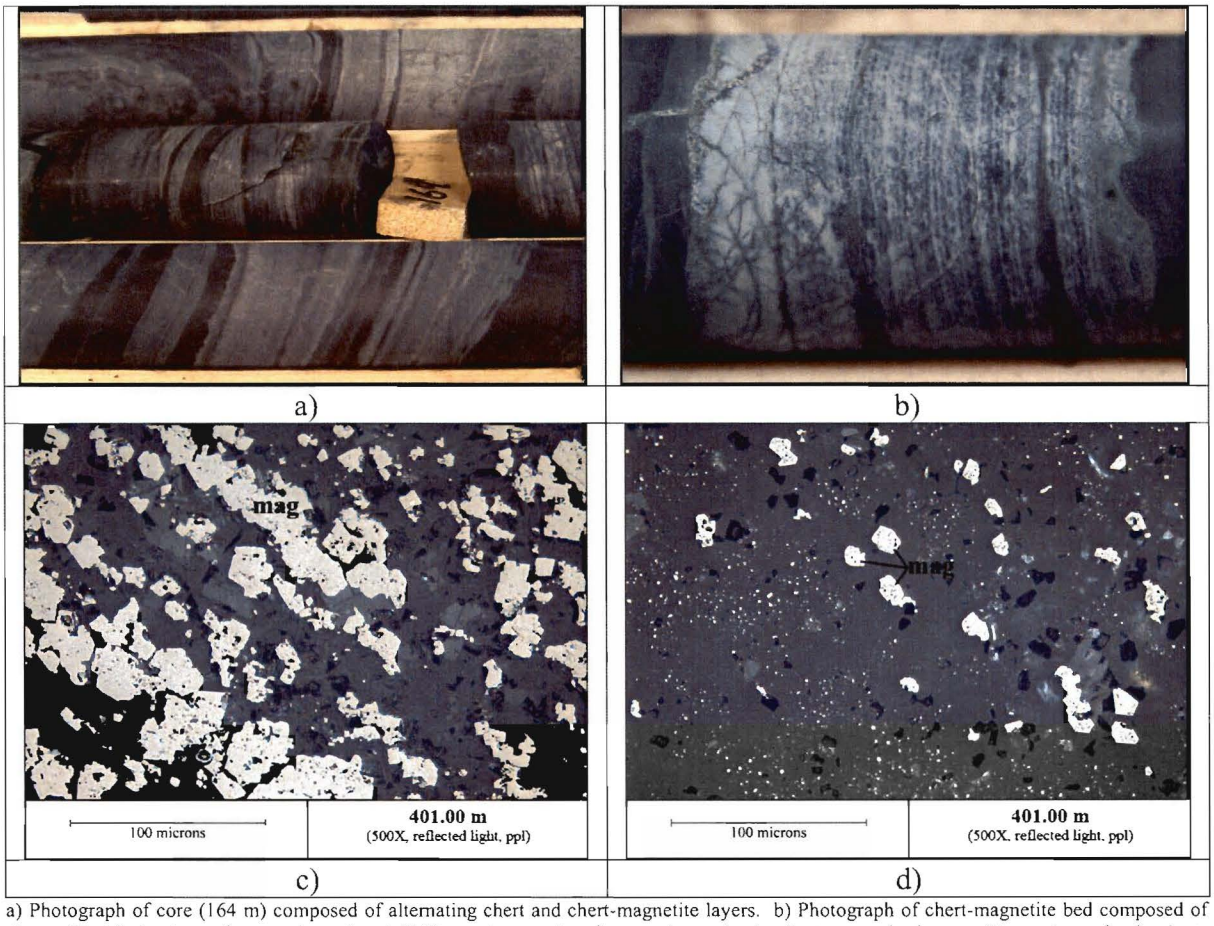


a) and b) Photographs of core and grab sample of interbedded green silicate (minnesotaite) and massive magnetite beds. c) and d) Photomicrographs of granoblastic quartz and decussate minnesotaite.

4.4 CHERT-MAGNETITE

Chert-magnetite beds or bands are light to medium grey and are composed of fine-grained granoblastic quartz and disseminated grains or thin laminae of magnetite. Magnetite grains in chert-magnetite beds are commonly less than 25 μ.

Figure 4.4
Photograph and Photomicrographs of Chert-Magnetite

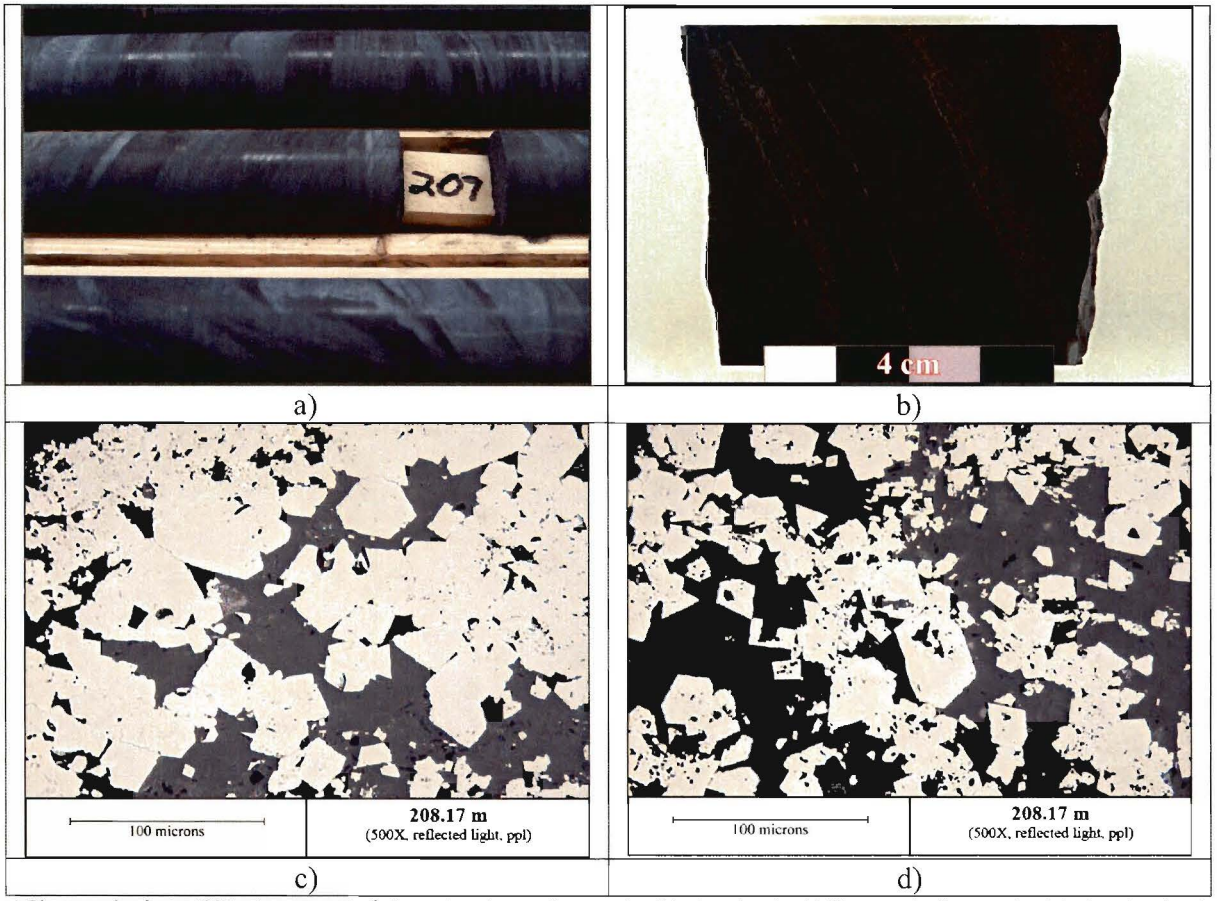


a) Photograph of core (164 m) composed of alternating chert and chert-magnetite layers. b) Photograph of chert-magnetite bed composed of chert with thin laminae of magnetite. c) and d) Photomicrographs of magnetite grains in chert magnetite layers. Magnetite grains in chert-magnetite bands or beds are commonly less than 25 μ.

4.5 MAGNETITE-RICH CHERT

Magnetite-rich chert beds are medium- to bluish-grey and composed of fine-grained granoblastic quartz and disseminated to semi-massive magnetite. (See Figure 4.5). Magnetite grains in magnetite-rich chert beds are commonly less than 35 μ.

Figure 4.5
Photograph and Photomicrographs of Magnetite-Rich Chert

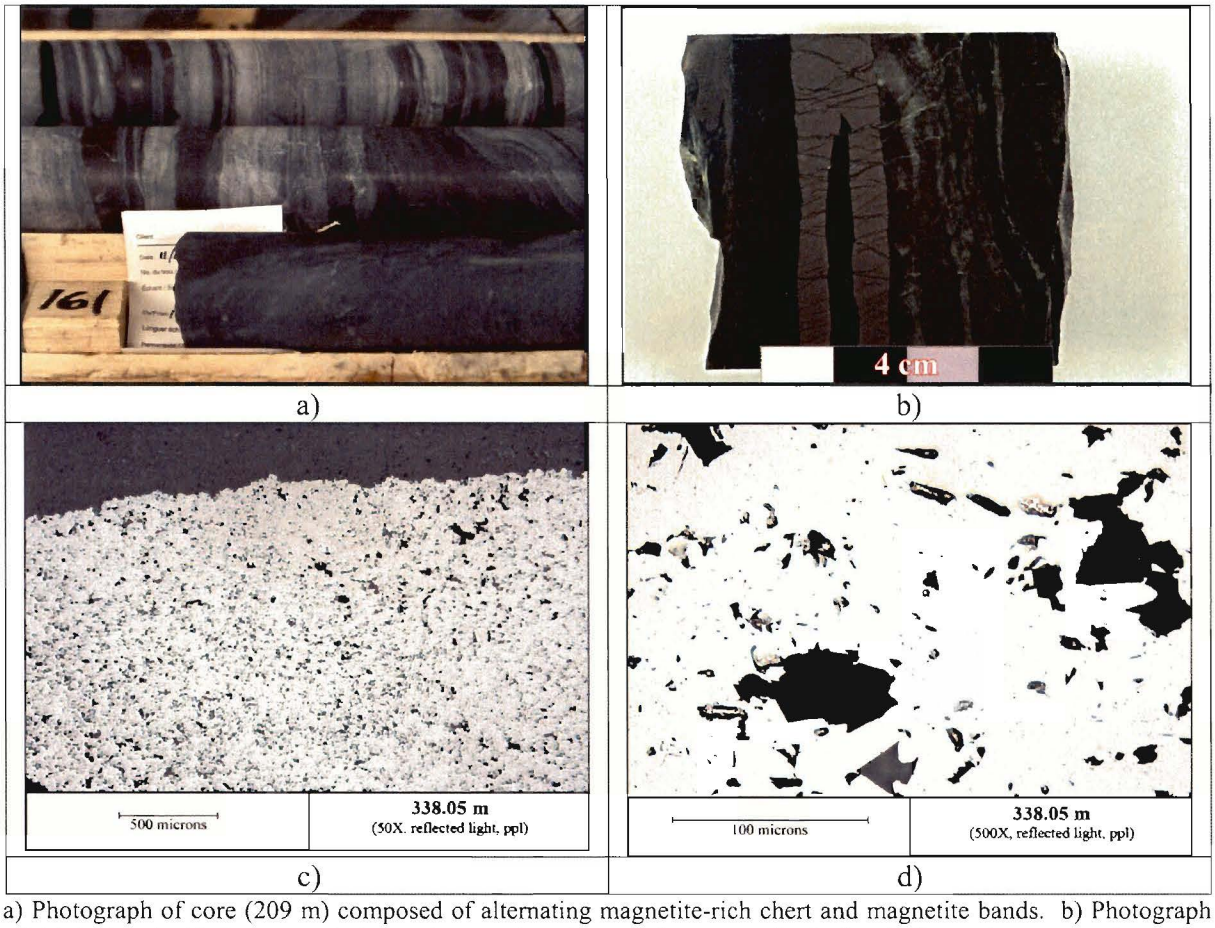


a) Photograph of core (207 m) composed of alternating chert and magnetite-rich chert bands. b) Photograph of magnetite-rich chert bands. c) and d) Photomicrographs of euhedral magnetite in beds. Magnetite grains range in size from approximately 2 μ to 40 μ. The magnetite grains in magnetite-chert beds average approximately 20 μ. Effective liberation is estimated to be approximately 45 μ (325 mesh).

4.6 MAGNETITE

Massive magnetite beds are composed of semi-massive to massive magnetite with interstitial chert and minnesotaite. (See Figure 4.6). Magnetite grains range in size from 2 to 50 μ with an average grain size of approximately 20 to 25 μ. Effective liberation is estimated to be approximately 50 μ (-270, +325 mesh).

Figure 4.6
Photograph and Photomicrographs of Magnetite Beds or Bands

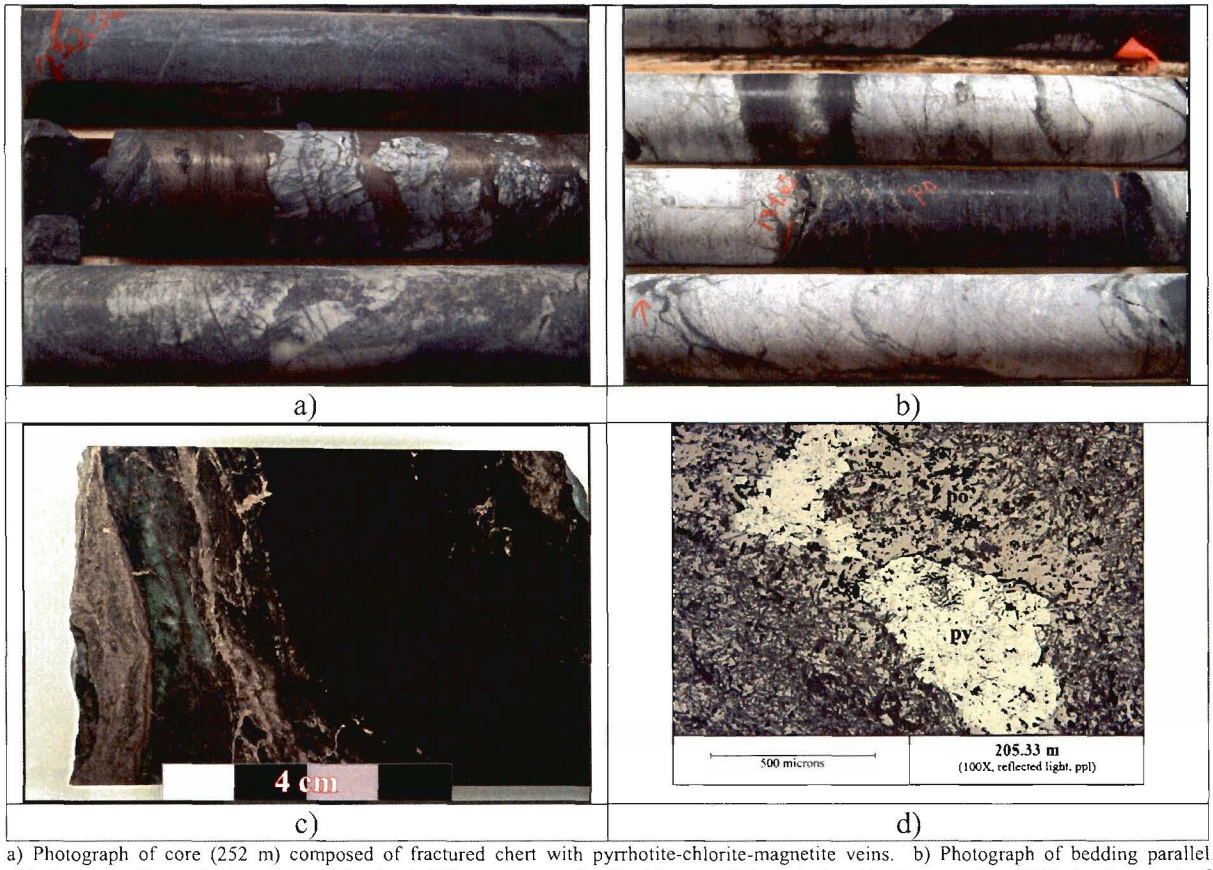


a) Photograph of core (209 m) composed of alternating magnetite-rich chert and magnetite bands. b) Photograph of thinly interbedded chert and chert-minnesotaite with massive magnetite beds. c) Photomicrograph of massive magnetite. d) Photomicrograph of massive euhedral magnetite with interstitial chert. Magnetite grains range in size from 2 to 50 μ with an average grain size of approximately 20 to 25 μ.

4.7 CHLORITE-MAGNETITE-PYRRHOTITE

Several of chlorite-magnetite-pyrrhotite veins and veinlets were intercepted in DDH-10-01 (see Figure 4.7). Some of the intervals contained massive pyrrhotite up to 60 centimetres (cm) thick. The chlorite-magnetite-pyrrhotite veins, in most cases, were parallel to bedding and could be classified as beds.

Figure 4.7
Photographs and Photomicrographs of Chlorite-Magnetite-Pyrrhotite Veins.



a) Photograph of core (252 m) composed of fractured chert with pyrrhotite-chlorite-magnetite veins. b) Photograph of bedding parallel chlorite-magnetite-pyrrhotite vein in white chert. c) Photomicrograph of bedding parallel pyrrhotite-chlorite-magnetite. d) Photomicrograph of pyrrhotite with pyrite porphyroblasts.

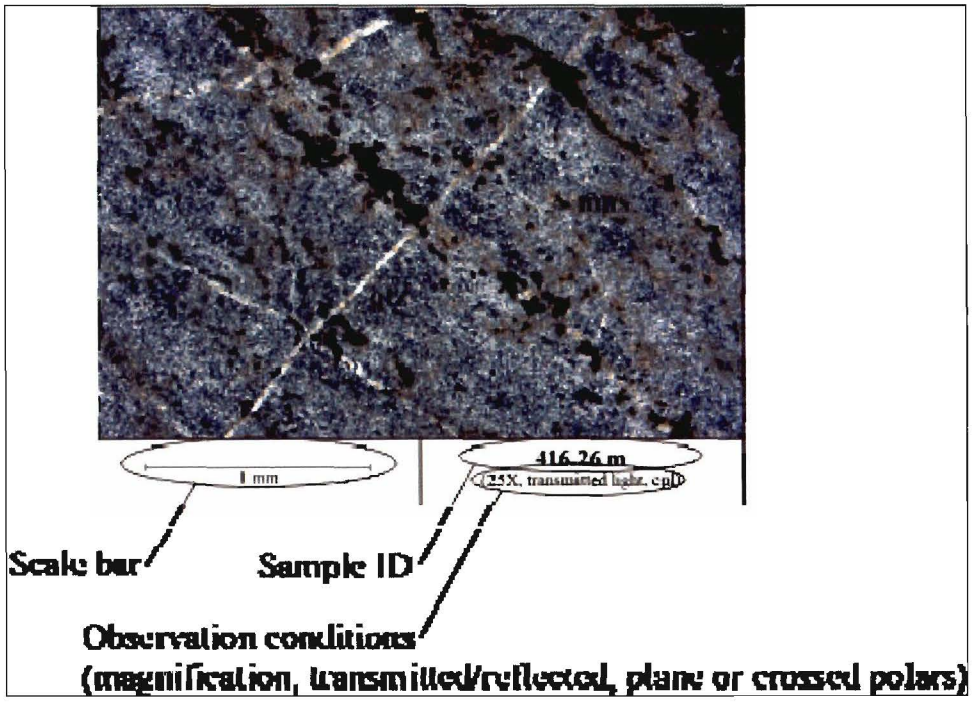
5.0 DISCUSSION

The Radio Hill iron formation intercepted in DDH-10-01 is a banded iron formation composed of varying amounts of chert, minnesotaite, and magnetite with minor amounts of siderite, pyrrhotite, chlorite, and pyrite. DDH-10-01 contained several intervals of relatively high-grade iron formation with interbedded chert, chert magnetite, and magnetite beds. Historical metallurgical work classified the high-grade iron formation as E-Type ore. The magnetite is fine-grained and is typically less than 35 μ with an average grain size of approximately 20 – 25 μ. Metallurgical work will be required to determine if concentrate with acceptable levels of SiO_2 can be achieved with reasonable grinds (500 mesh or above). However, magnetite in the massive ("metallic") bands has an estimated, effective liberation size of approximately 45 μ (325 mesh). This suggests that rejection of lower grade and finer grained chert-magnetite by cobbing could result in production of concentrate with reasonably low SiO_2 grades (<7 wt.% SiO_2) at reasonable grinds (+500, -325 mesh).

The dominant iron oxide mineral at Radio Hill is magnetite and the preferred processing method would be magnetic separation. Multiple bedding parallel veins and veinlets of chlorite-magnetite-pyrrhotite were intercepted in DDH-10-01. Since pyrrhotite is magnetic, zones containing the chlorite-magnetite-pyrrhotite veins would need to be treated as waste or diluted with low sulfur ore to control the sulfur content of the concentrate.

6.0 PETROGRAPHIC DESCRIPTIONS

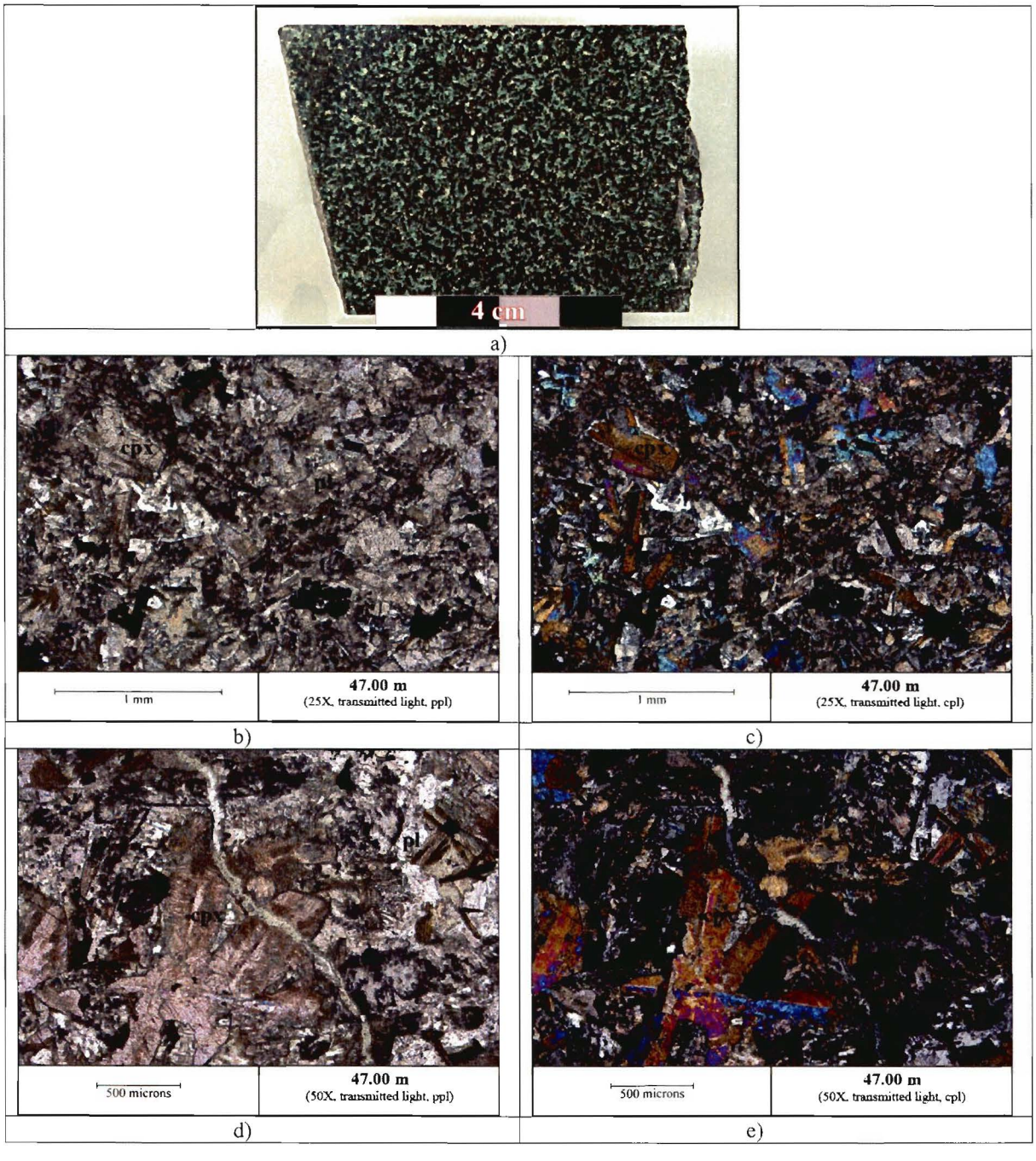
The following petrographic descriptions are based on the legend for the photomicrographs shown schematically below.

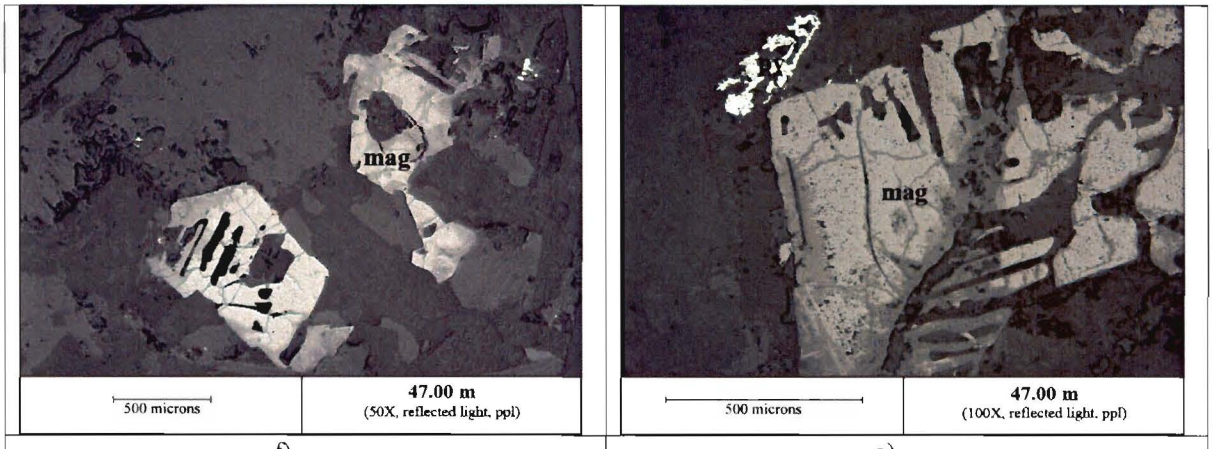


6.1 SAMPLE: 47.00-47.07 METRES

Equigranular; composed of plagioclase laths, prismatic clinopyroxene and interstitial. Plagioclase laths are partially altered to sericite and epidote. Prismatic clinopyroxene (augite) are partially altered to epidote. Interstitial glass is altered to chlorite and biotite. Magnetite is skeletal and contains ilmenite exsolution lamellae. Pyrite occurs in trace amounts as disseminated anhedral grains.

Figure 6.1
Sample at 47.00 – 47.07 m





f) g)

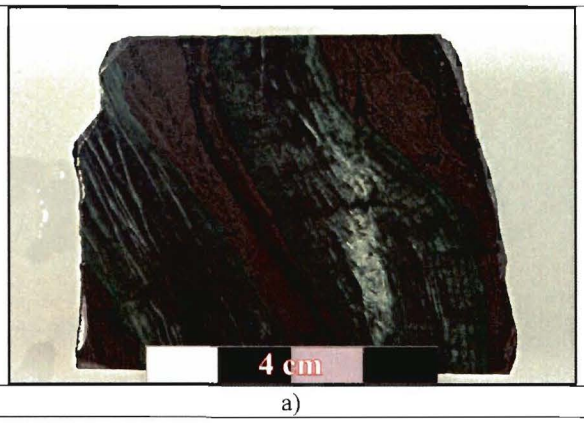
Photograph and photomicrographs of grab sample of core 47.00 – 47.07 meters. a) Photograph of grab sample of core 47.00 – 47.07 meters. b) and c) Photomicrographs of plagioclase laths and prismatic clinopyroxene with interstitial chlorite and biotite. d) and e) Photomicrographs of prismatic clinopyroxene and plagioclase laths cross-cut by a chlorite veinlet. f) and g) Photomicrographs of skeletal magnetite grains and anhedral pyrite. Note magnetite grains contain ilmenite lamellae.

6.2 SAMPLE: 156.51-156.56 METRES

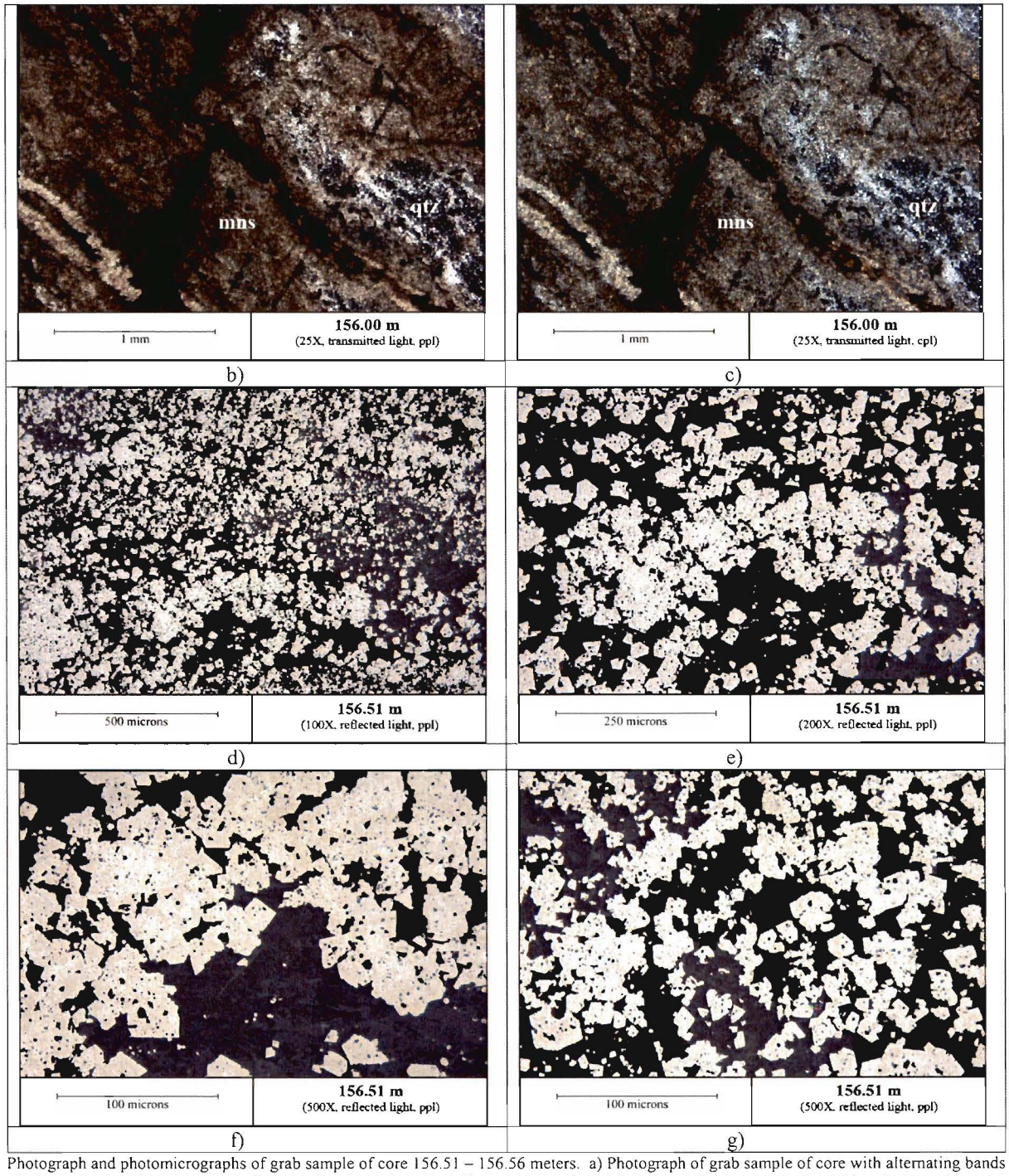
Thinly bedded; alternating bands of minnesotaite-chert and magnetite-chert. Minnesotaite-chert bands are composed of alternating laminae of decussate minnesotaite, chert and very thin laminae of magnetite. Magnetite-chert beds are composed of euhedral magnetite with minnesotaite and chert.

Magnetite grains range in size from approximately 5 μ to about 35 μ with an average grain size of approximately 25 μ. Effective liberation is estimated to be approximately 35 to 40 μ (400 mesh).

Figure 6.2
Sample 156.51-156.56 m



a)

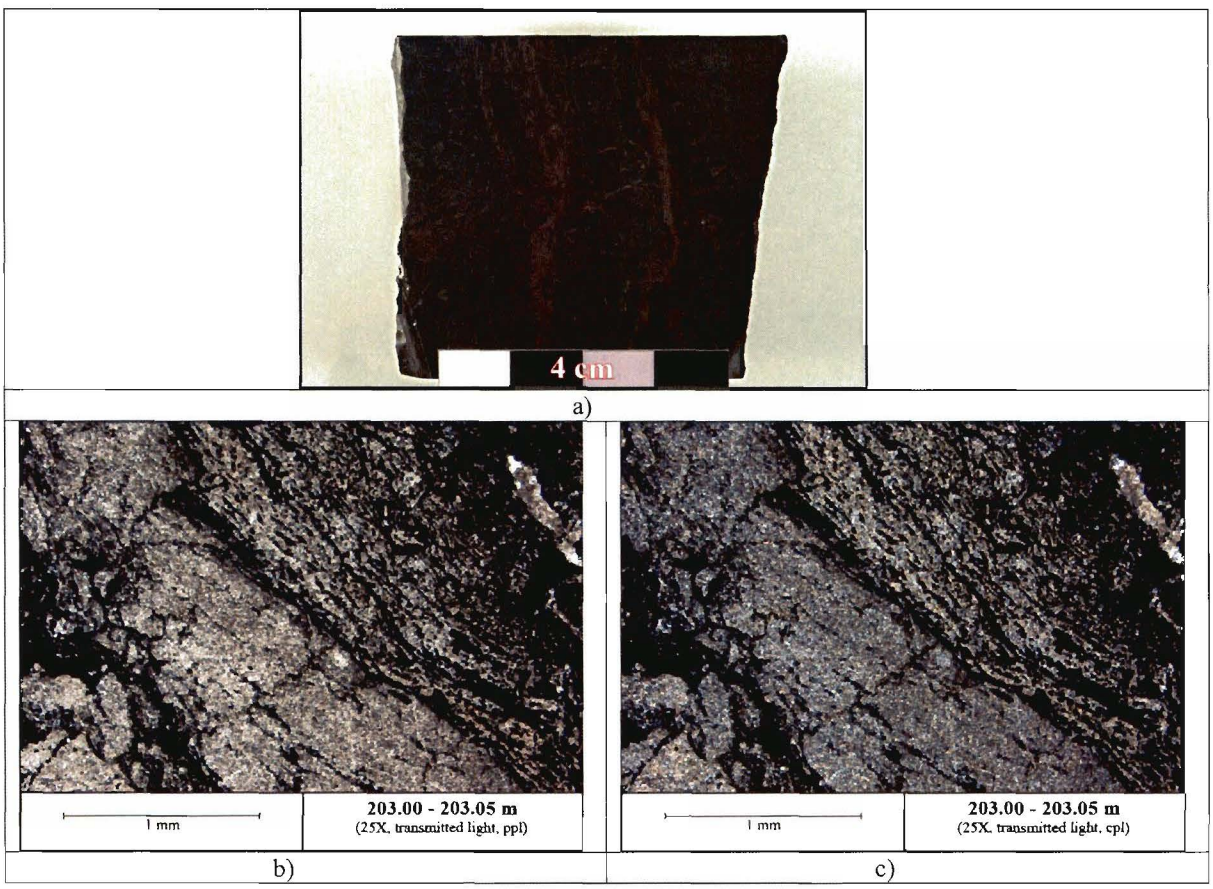


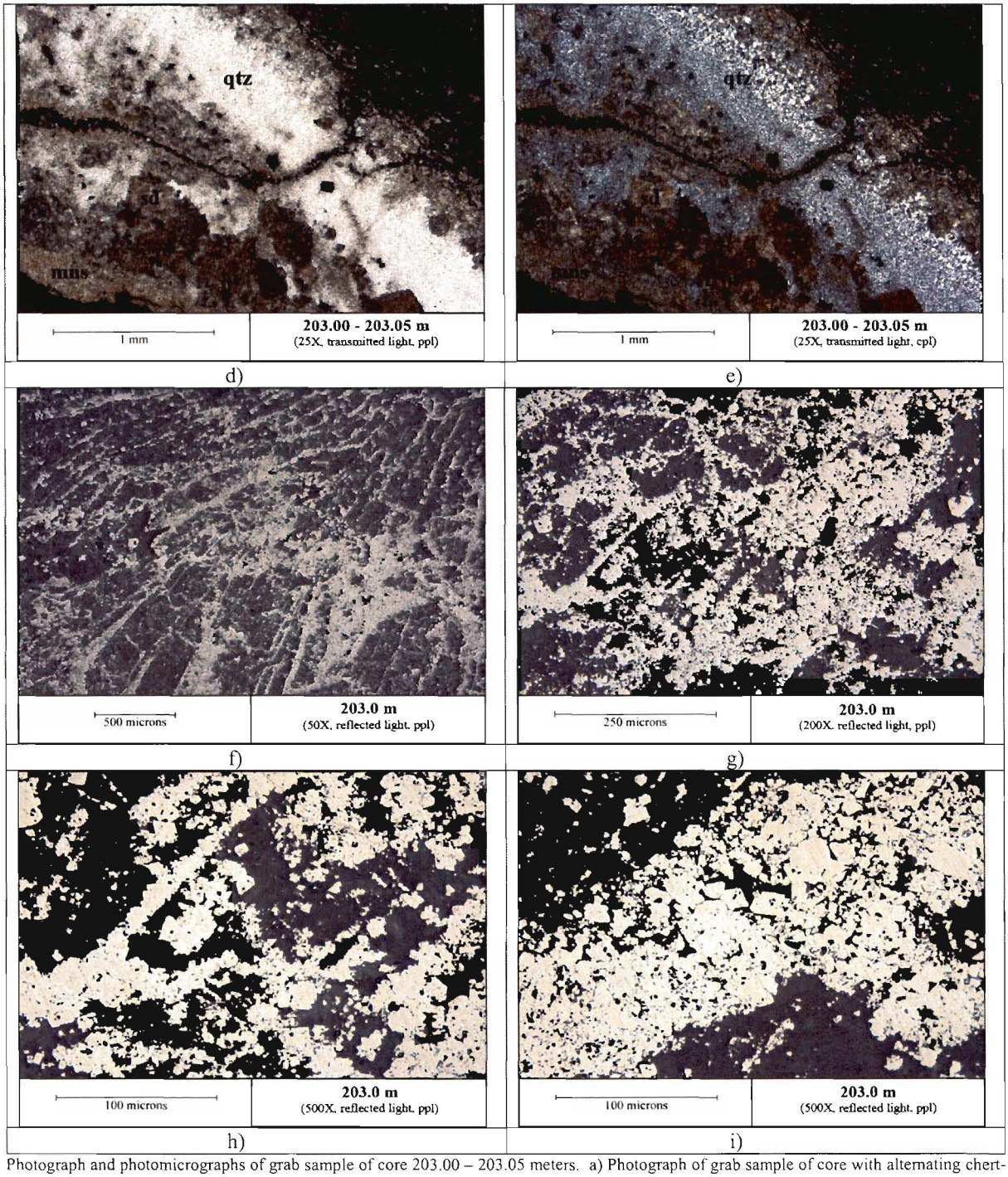
Photograph and photomicrographs of grab sample of core 156.51 – 156.56 meters. a) Photograph of grab sample of core with alternating bands of chert-minnesotaite-magnetite and magnetite-chert. b) and c) Photomicrographs of decussate minnesotaite (yellowish) and chert. Note the off-setting faults. d) and e) Photomicrographs of magnetite-rich beds with euhedral magnetite. Magnetite ranges in size from about 5 – 35 μwith a mean of approximately 25 μ. f) and g) Photomicrographs of euhedral magnetite in magnetite-rich beds. Note that the magnetite in g) is relatively finer-grained with a coarse size of approximately 20 μ. Effective liberation is estimated to be approximately 35 to 40 μ (400 mesh).

6.3 SAMPLE: 203.00-2.3.05 METRES

Thinly bedded and fragmental; composed of alternating beds of minnesotaite-chert, chert, siderite and magnetite-chert. Minnesotaite chert-beds are composed of decussate minnesotaite and chert with minor magnetite. Chert beds are composed of microcrystalline chert. Siderite beds are composed of euhedral siderite grains intergrown with fibrous minnesotaite. Magnetite chert beds are composed of euhedral magnetite and chert. Magnetite occurs as primary bedded magnetite and secondary cross-cutting magnetite. Magnetite grains range in size from approximately 1 μ to 20 μ with an average grain size of approximately 15 μ. Effective liberation is estimated to be approximately 30 to 35 μ (+500, -400 mesh).

Figure 6.3
Sample 203.00-203.05 m



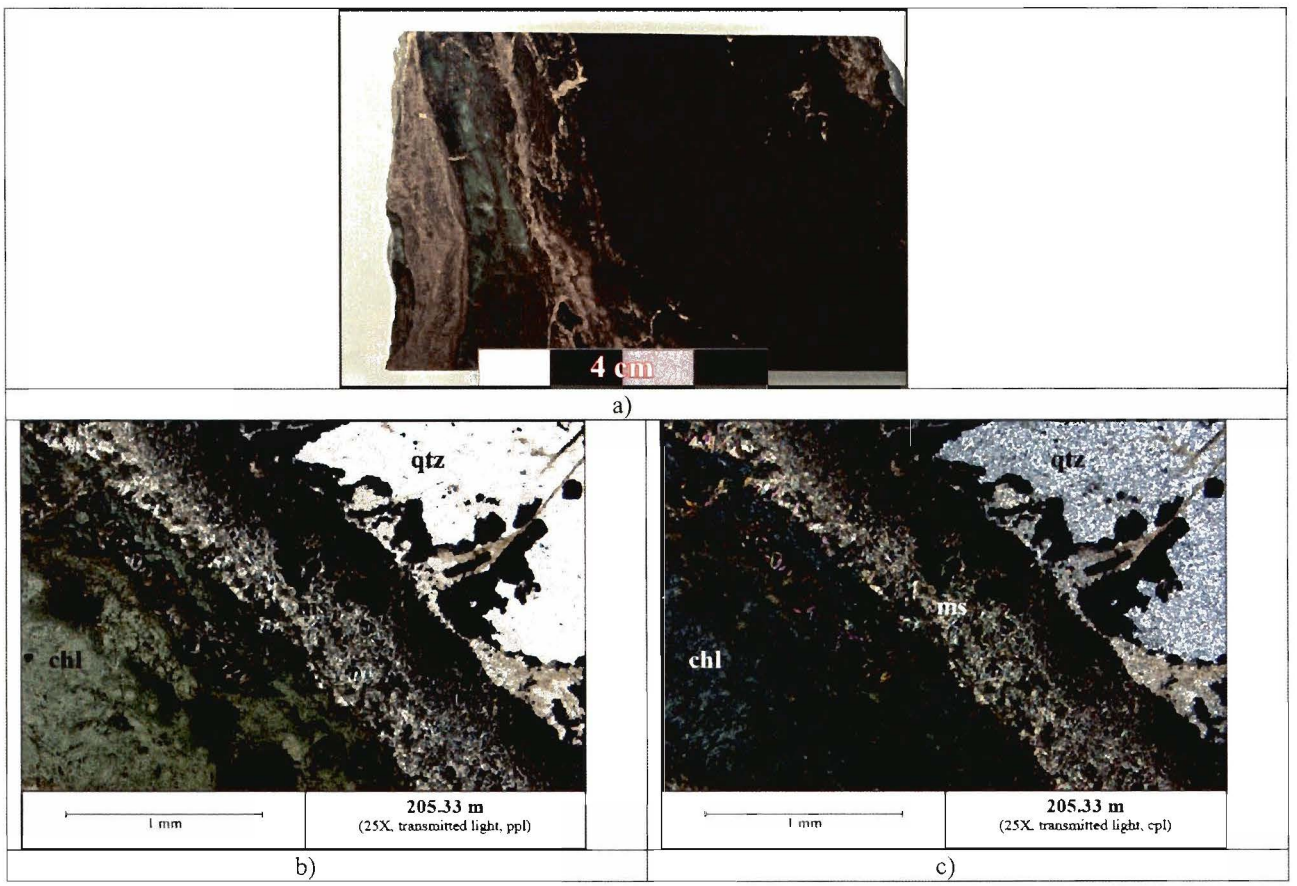


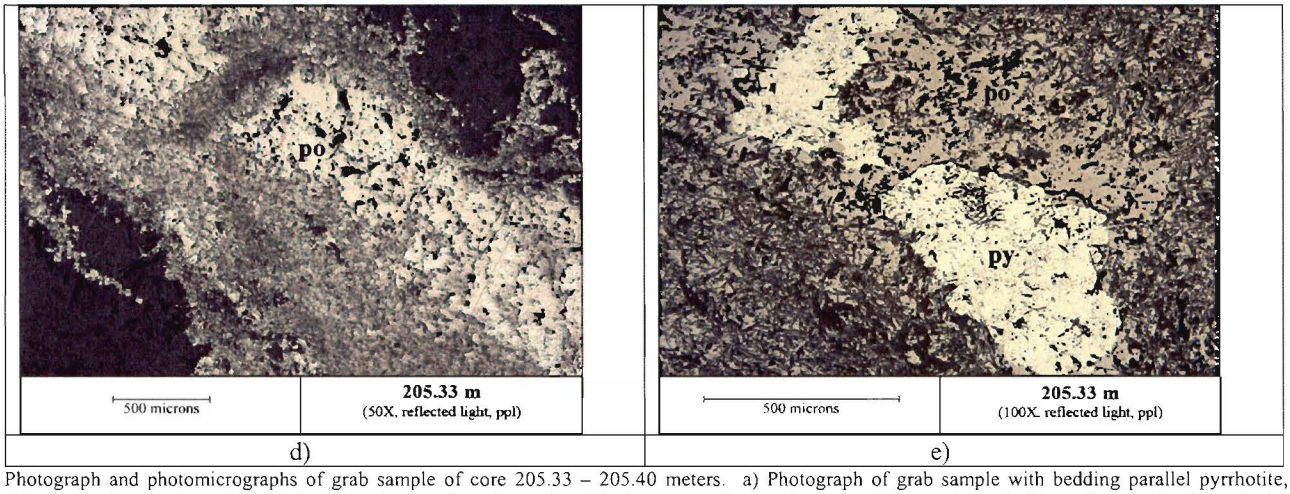
Photograph and photomicrographs of grab sample of core 203.00 – 203.05 meters. a) Photograph of grab sample of core with alternating chert-*minnesotaite*, chert-siderite, and magnetite-chert beds. Note the fragmental testure in some of the beds. b) and c) Photomicrographs of thin laminae of chert-minnesotaite alternating with thin magnetite laminae. d) and e) Photomicrographs of alternating layers of magnetite, chert, minnesotaite-chert, and siderite. f) Photomicrograph of thin laminae of magnetite cross-cut by irregular networks of secondary magnetite. g) Photomicrographs of irregular networks of magnetite. h) and i) Photomicrographs of beds of magnetite. Magnetite grains range in size from approximately 1 μ to 20 μ. Effective liberation is estimated to be approximately 30 to 35 μ (+500, -400 mesh).

6.4 SAMPLE 205.33-205.40 METRES

Vein; bedding parallel vein of pyrrhotite, chlorite, and magnetite. Chlorite occurs in coarse-grained decussate aggregates. Pyrrhotite occurs as aggregates of relatively fine-grained crystals intergrown with platy silicates. Magnetite occurs as disseminated euhedral grains. Muscovite occurs as thin bands parallel to the contact with the iron formation.

Figure 6.4
Sample 205.33-205.40 m



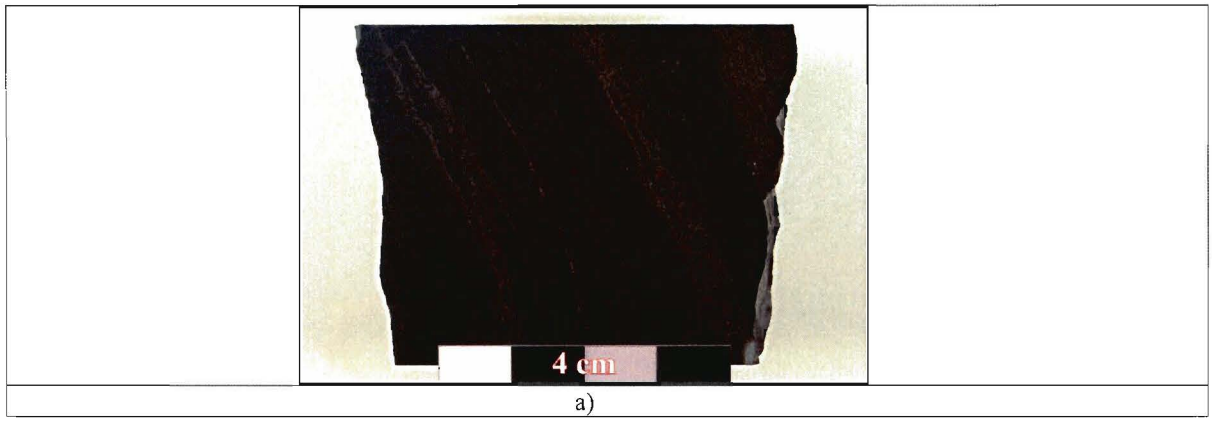


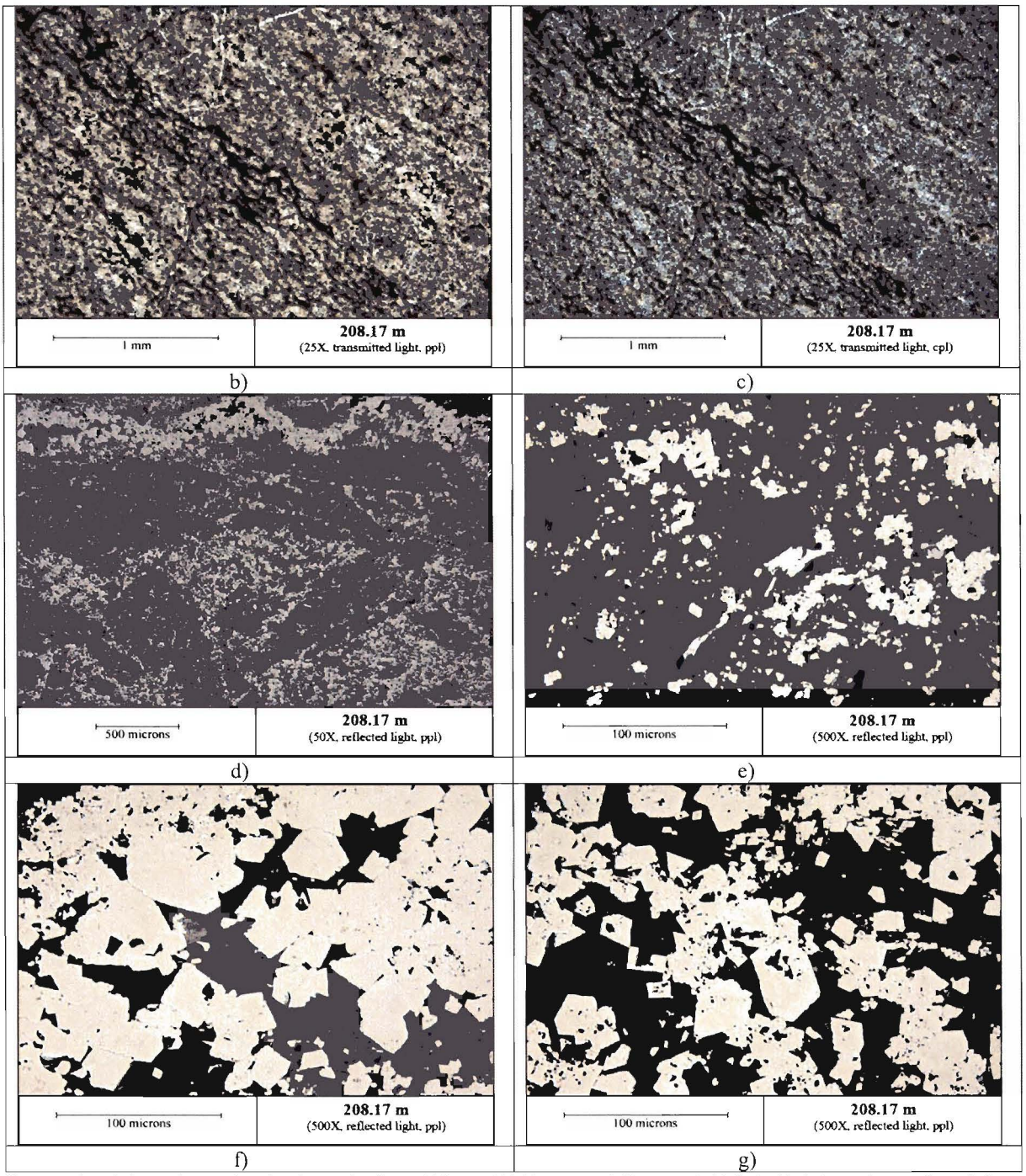
Photograph and photomicrographs of grab sample of core 205.33 – 205.40 meters. a) Photograph of grab sample with bedding parallel pyrrhotite, chlorite, and magnetite. b) and c) Photomicrographs of massive chlorite, magnetite, pyrrhotite, and muscovite. d) Photomicrograph of pyrrhotite intergrown with platy silicates. e) Photomicrograph of pyrrhotite with pyrite porphyroblasts.

6.5 SAMPLE 208.17-208.23 METRES

Bedded; composed of alternating beds of chert-minnesotaite, magnetite-chert. Chert-minnesotaite beds are composed of granoblastic chert with disseminated decussate minnesotaite. Chert-magnetite beds contain thin magnetite laminae. Magnetite chert beds are composed of euhedral magnetite with interstitial chert. Magnetite grains range in size from approximately 2 μ to 40 μ. The magnetite in magnetite-chert beds average approximately 20 μ. Effective liberation is estimated to be approximately 45 μ (325 mesh).

Figure 6.5
Sample 208.17-208.23 m



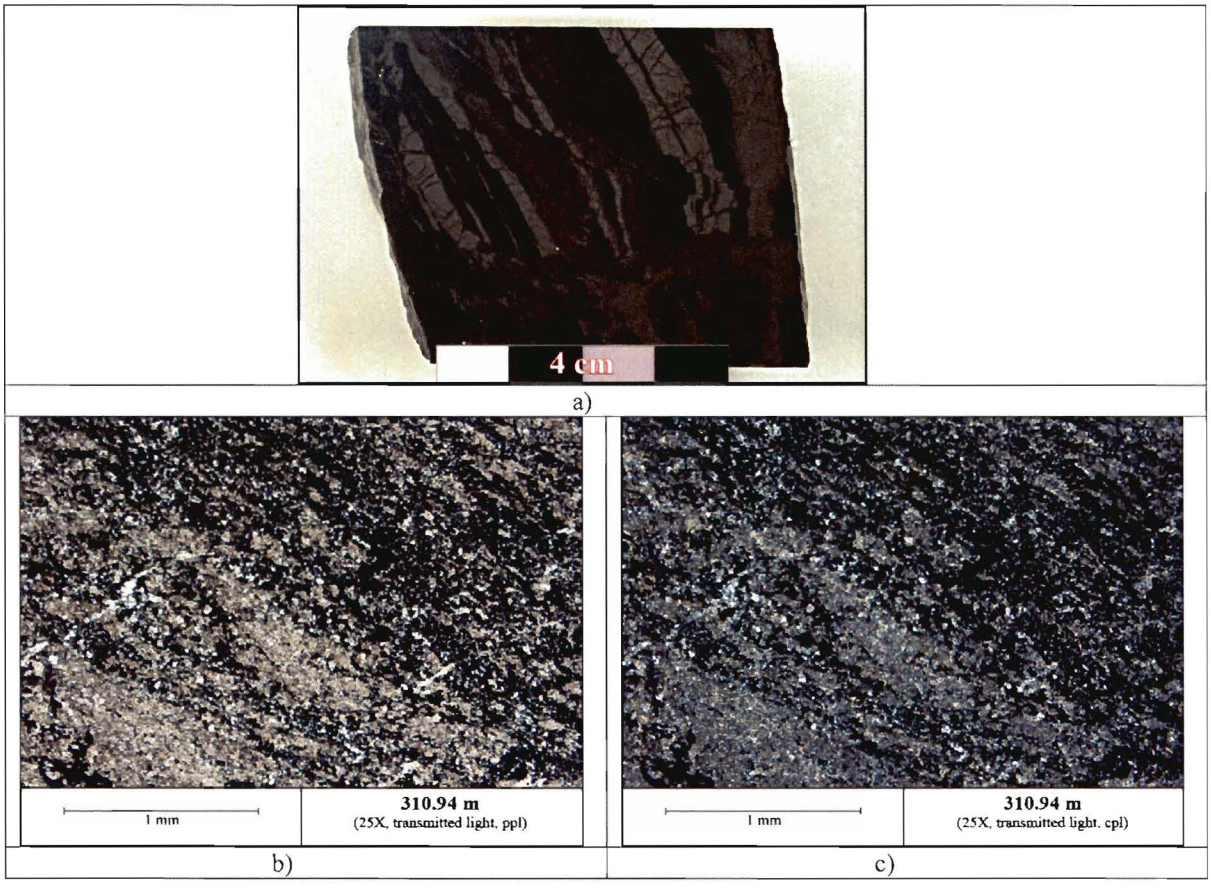


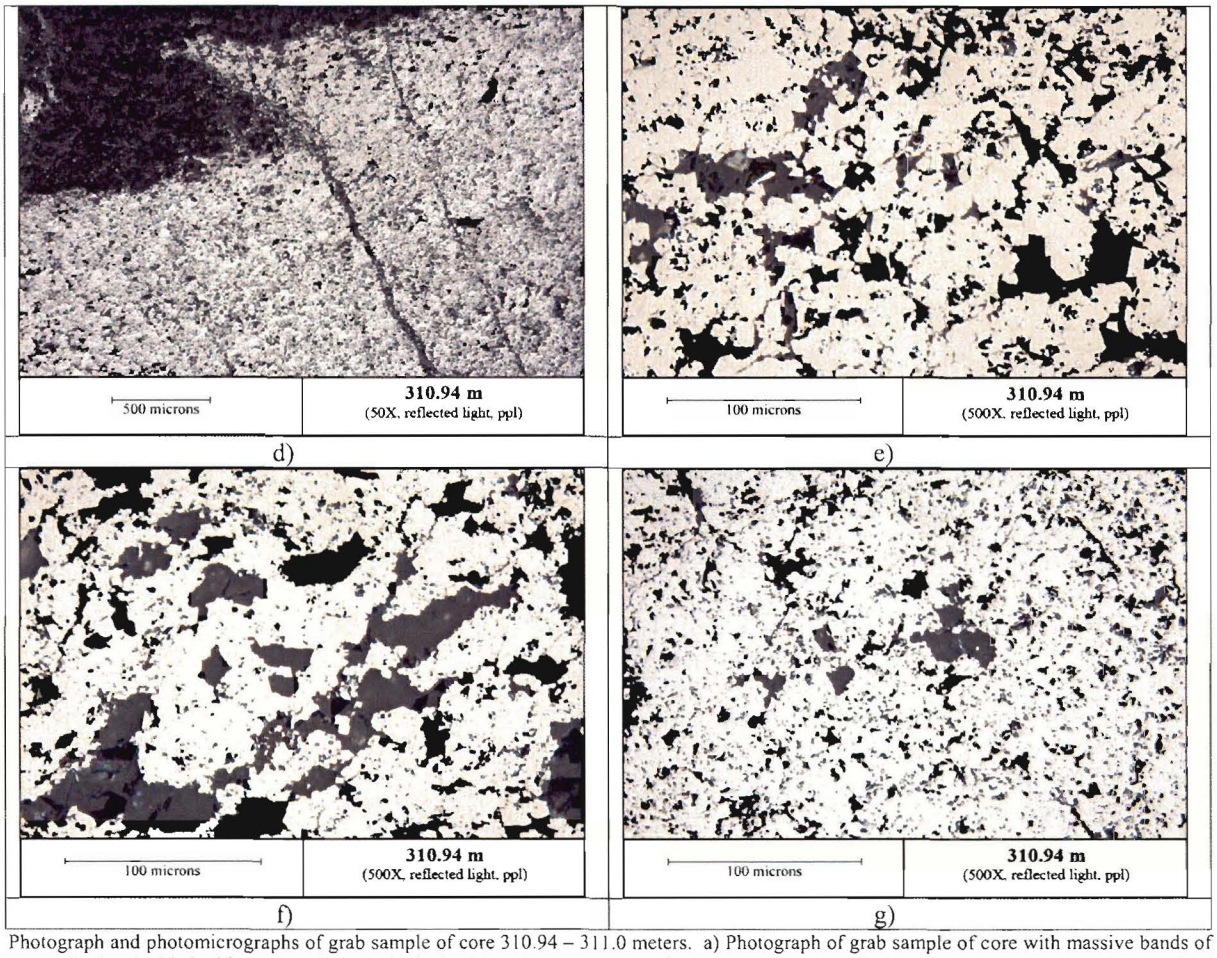
Photograph and photomicrographs of grab sample of core 208.17 – 208.23 meters. a) Photograph thinly bedded chert-minnesotaite and chert-magnetite. b) and c) Photomicrographs of thin laminae of chert-minnesotaite with thin magnetite laminae. d) and e) Photomicrographs of bedded and disseminated magnetite. f) and g) Photomicrographs of euhedral magnetite in beds. Magnetite grains range in size from approximately 2 μ to 40 μ. The magnetite in magnetite-chert beds average approximately 20 μ. Effective liberation is estimated to be approximately 45 μ (325 mesh).

6.6 SAMPLE: 310.94-311.00 METRES

Bedded; interbedded chert-minnesotaite-magnetite and massive magnetite beds. Chert-minnesotaite-magnetite beds are composed of thin laminae of chert, minnesotaite, or magnetite. Massive magnetite beds are composed of euhedral magnetite with interstitial chert. Magnetite grains range in size from 2 to 20μ. The massive magnetite beds have an effective mean liberation size of approximately 25 to 30 μ.

Figure 6.6
Sample 310.94-311.00 m



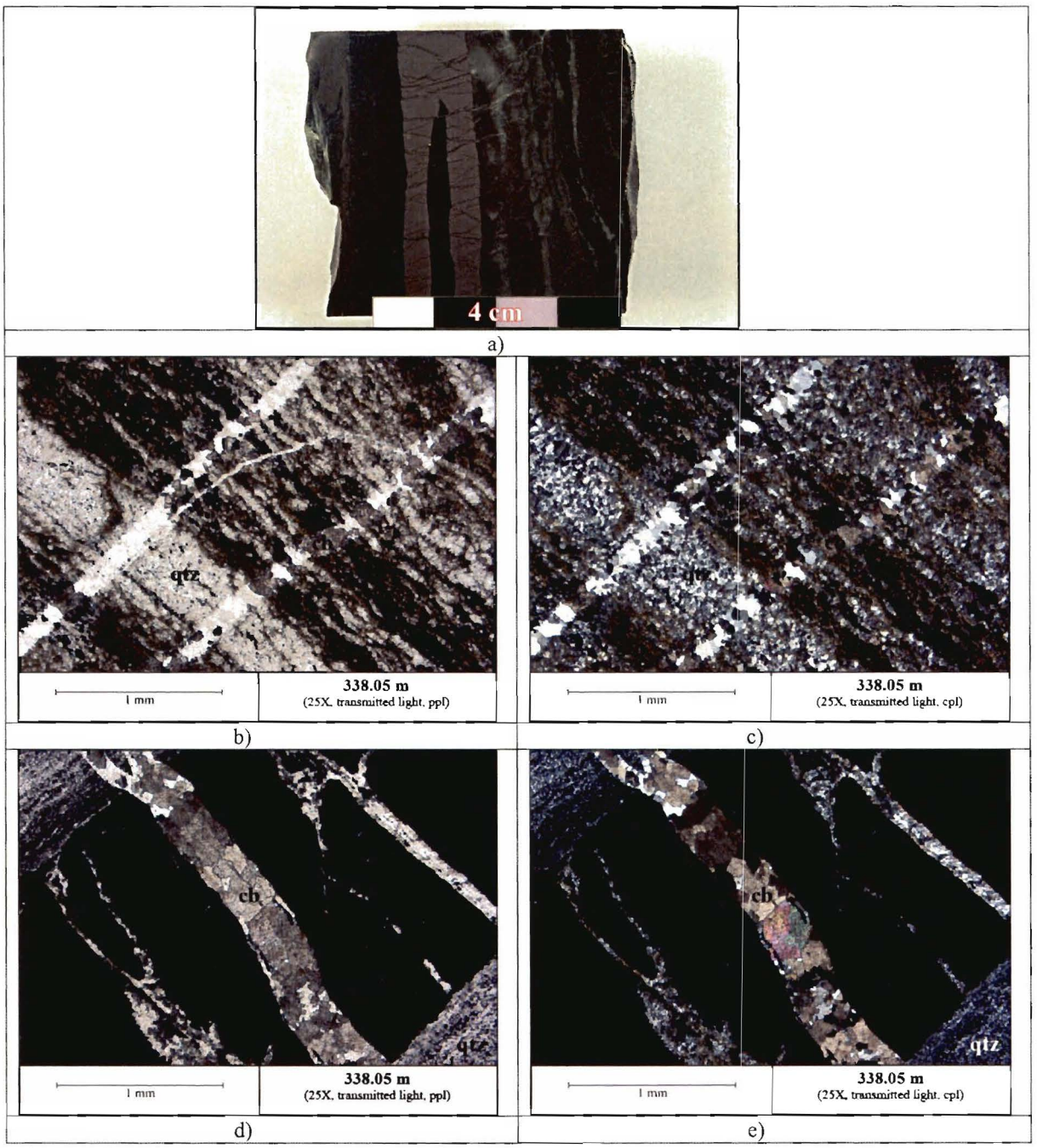


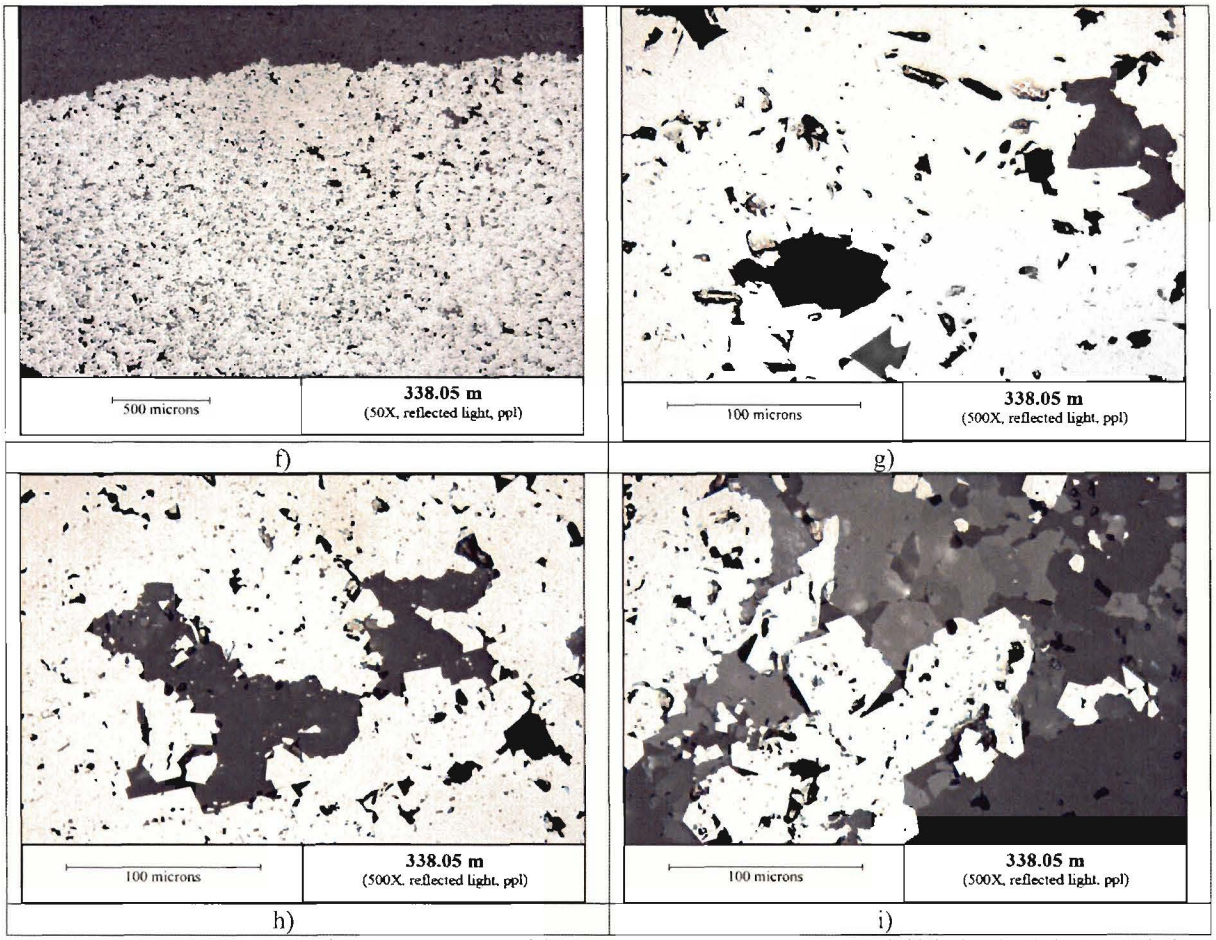
Photograph and photomicrographs of grab sample of core 310.94 – 311.0 meters. a) Photograph of grab sample of core with massive bands of magnetite interbedded with quartz-minnesotaite beds. Note the cross-cutting fault containing magnetite breccia. b) and c) Photomicrograph of beds of chert-minnesotaite-magnetite. d) Photomicrograph of massive magnetite bed with fault off-set . e), f) and g) Photomicrographs of massive magnetite. Magnetite grains range in size from 2 to 20μ. The massive magnetite beds have an effective mean liberation size of approximately 25 to 30 μ.

6.7 SAMPLE 338.05-338.10 METRES

Bedded; thinly interbedded chert, chert-minnesotaite, and chert-minnesotaite-magnetite beds with massive magnetite beds. Chert beds are composed of granoblastic quartz with minor minnesotaite. Chert-minnesotaite-magnetite beds are composed of laminae of chert, minnesotaite and magnetite. Massive magnetite beds are composed of euhedral magnetite with interstitial chert. Magnetite grains range in size from 2 to 50 μ with an average grain size of approximately 20 to 25 μ. Effective liberation is estimated to be approximately 50 μ (-270, +325 mesh).

Figure 6.7
Sample 338.05-338.10 m



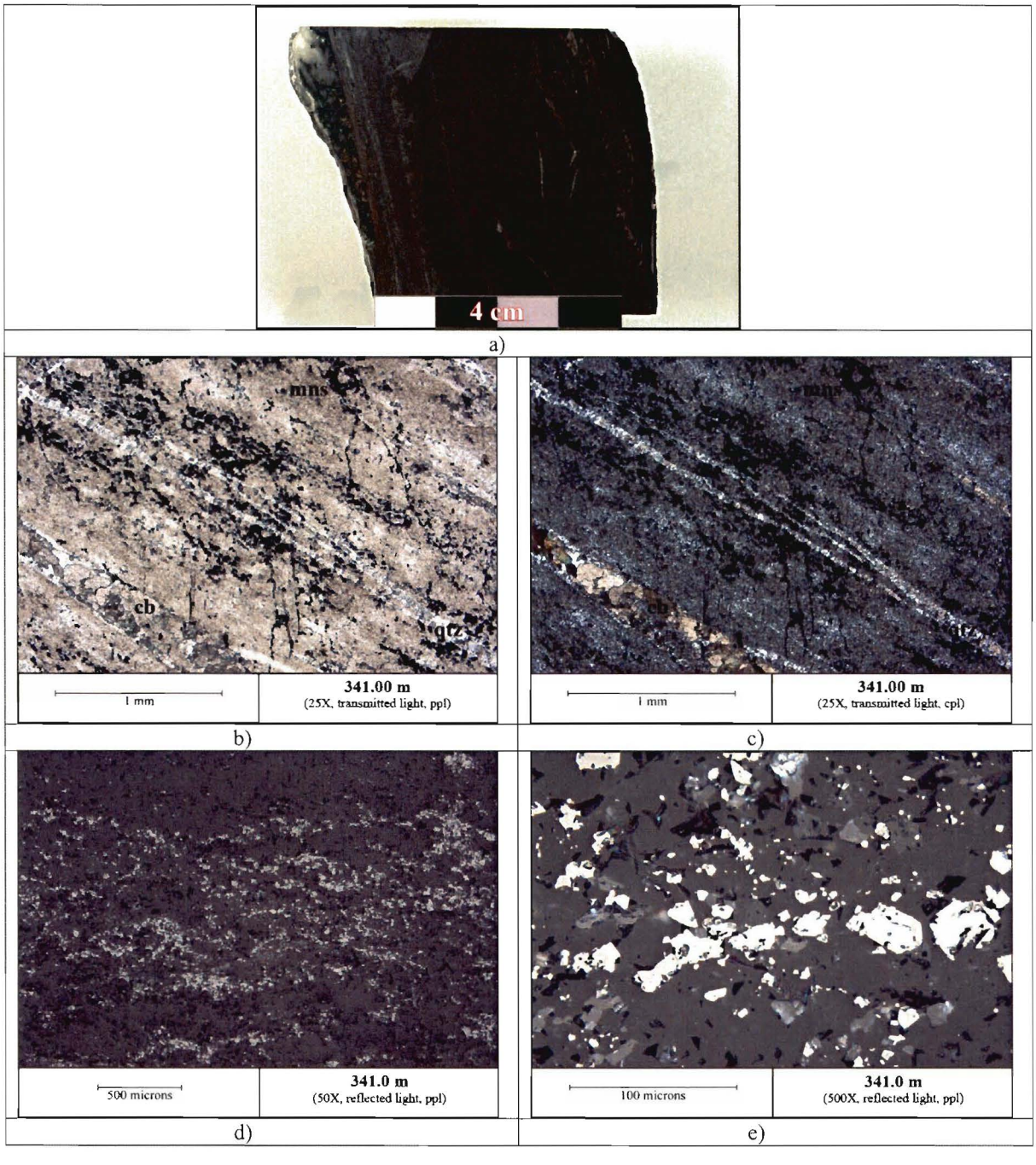


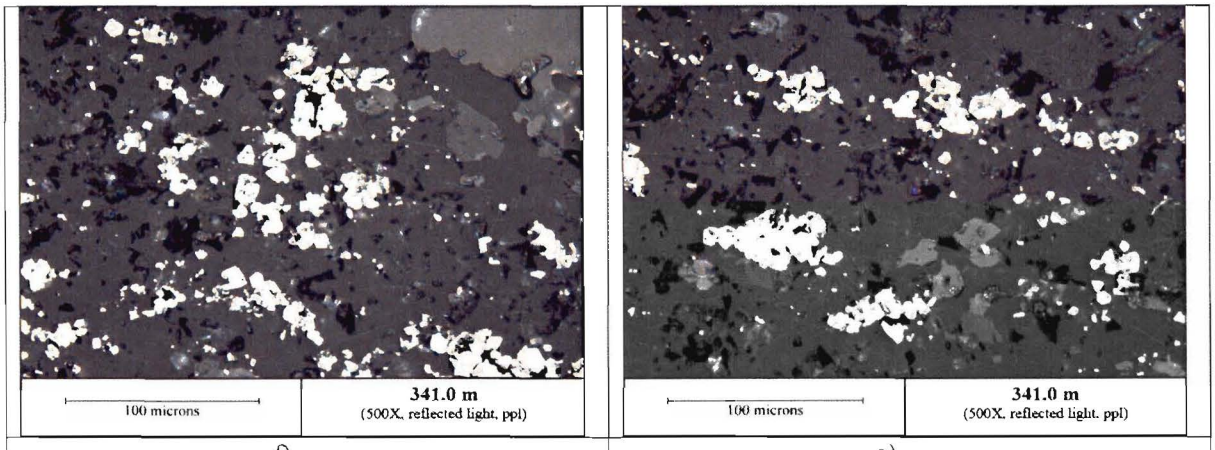
Photograph and photomicrographs of drill core sample 338.05 – 338.10 meters. a) Photograph of thinly interbedded chert and chert-minnesotaite with massive magnetite beds. b) and c) Photomicrographs of thinly interbedded chert, chert-minnesotaite, and chert-minnesotaite-magnetite beds cross-cut by quartz-carbonate veinlets. d) and e) Photomicrographs of siderite and chert-quart-minnesotaite veinlets cross-cutting massive magnetite beds. f) Photomicrograph of massive magnetite. g) h) and i) Photomicrographs of massive euhedral magnetite with interstitial chert. Magnetite grains range in size from 2 to 50 μ with an average grain size of approximately 20 to 25 μ. Effective liberation is estimated to be approximately 50 μ (-270, +325 mesh).

6.8 SAMPLE 341.00-341.05 METRES

Laminated; thin alternating laminae of chert-minnesotaite and chert-minnesotaite-magnetite with sparse siderite laminae. Chert ocurs in granoblastic aggregates. Minnesotaite occurs in decussate networks. Magnetite grains range in size from 1 to 30 μ and an average grain size of approximately 5 to 10 μ.

Figure 6.8
Sample 341.00-341.05 m





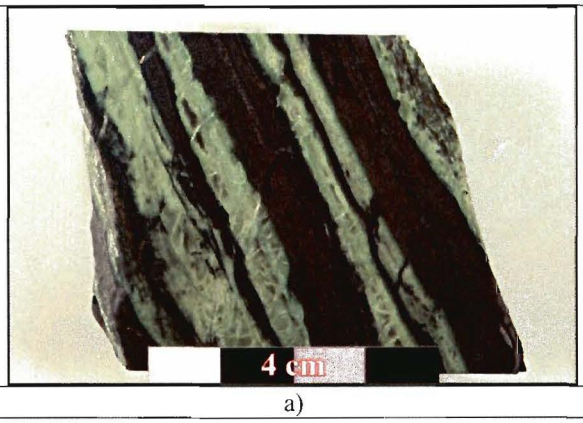
f) g)

Photograph and photomicrographs of drill core sample 341.00 – 341.10 meters. a) Photograph of drill core sample of thinly laminated chert-minnesotaite-magnetite. b) and c) Photomicrographs of inter-laminated chert, chert-minnesotaite, and chert-minnesotaite-magnetite laminae. d) Photomicrographs of magnetite laminae. e) f) and g) Photomicrographs of disseminated and laminated magnetite. Magnetite grains range in size from 1 to 30 μ and an average grain size of approximately 5 to 10 μ.

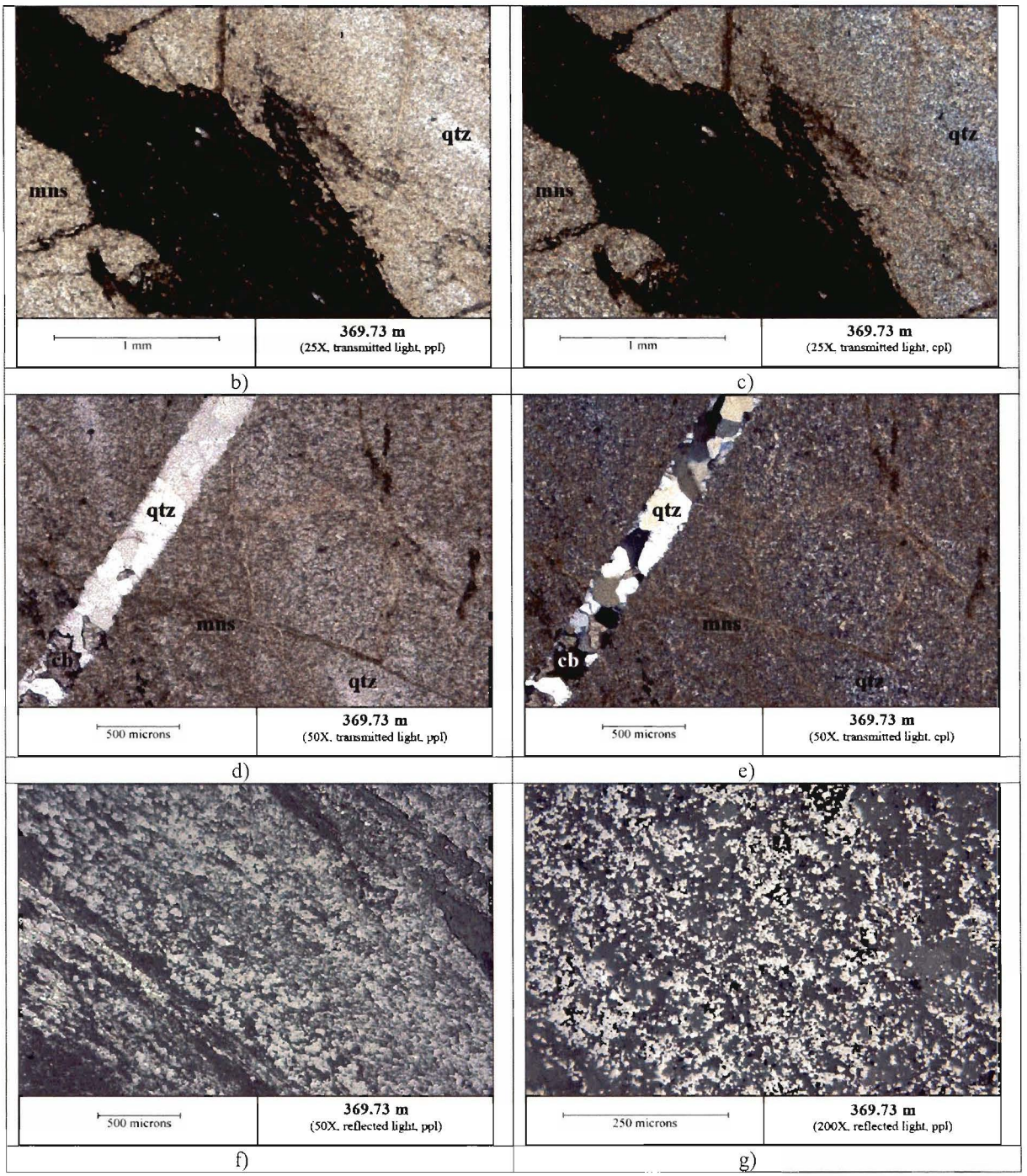
6.9 SAMPLE 369.73-369.78 METRES

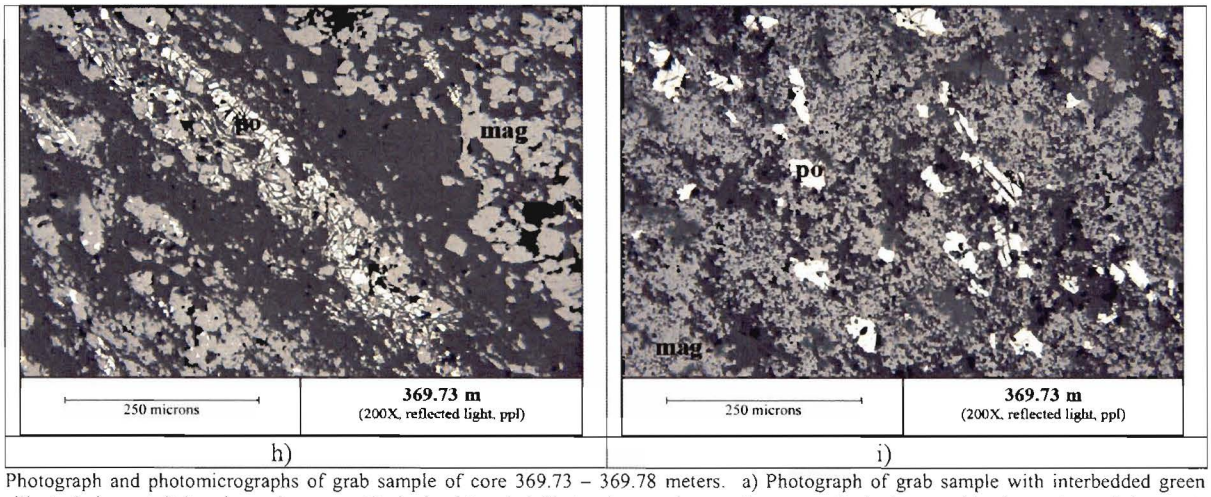
Bedded; interbedded green chert-minnesotaite and magnetite-chert-minnesotaite beds. Chert-minnesotaite beds are composed of granoblastic chert and decussate minnesotaite. Magnetite-chert-minnesotaite beds are composed of massive to semi-massive magnetite with interstitial granoblastic chert and decussate minnesotaite. Pyrrhotite occurs in minor amounts intergrown with silicates or as disseminated grains. Magnetite grains range in size from <1 to 15 μ with an average of 5 to 10 μ. Pyrrhotite grains average approximately 20 to 25 μ.

Figure 6.9
Sample 369.73-369.78 m



a)


qtz
mns
1 mm
369.73 m
(25X, transmitted light, ppl)
b)
qtz
mns
1 mm
369.73 m
(25X, transmitted light, cpl)
c)
qtz
mns
cb
qtz
500 microns
369.73 m
(50X, transmitted light, ppl)
d)
qtz
mns
cb
qtz
500 microns
369.73 m
(50X, transmitted light, cpl)
e)
500 microns
369.73 m
(50X, reflected light, ppl)
f)
250 microns
369.73 m
(200X, reflected light, ppl)
g)

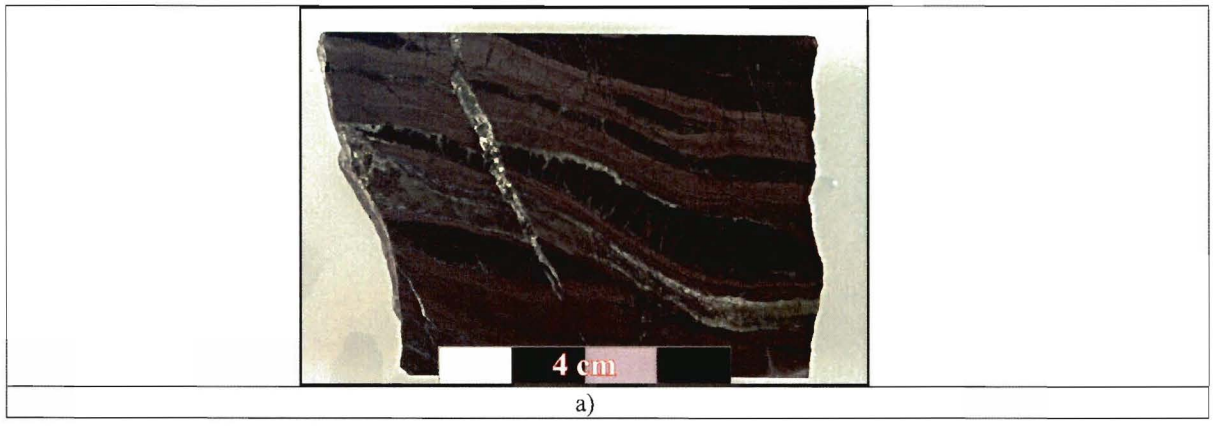


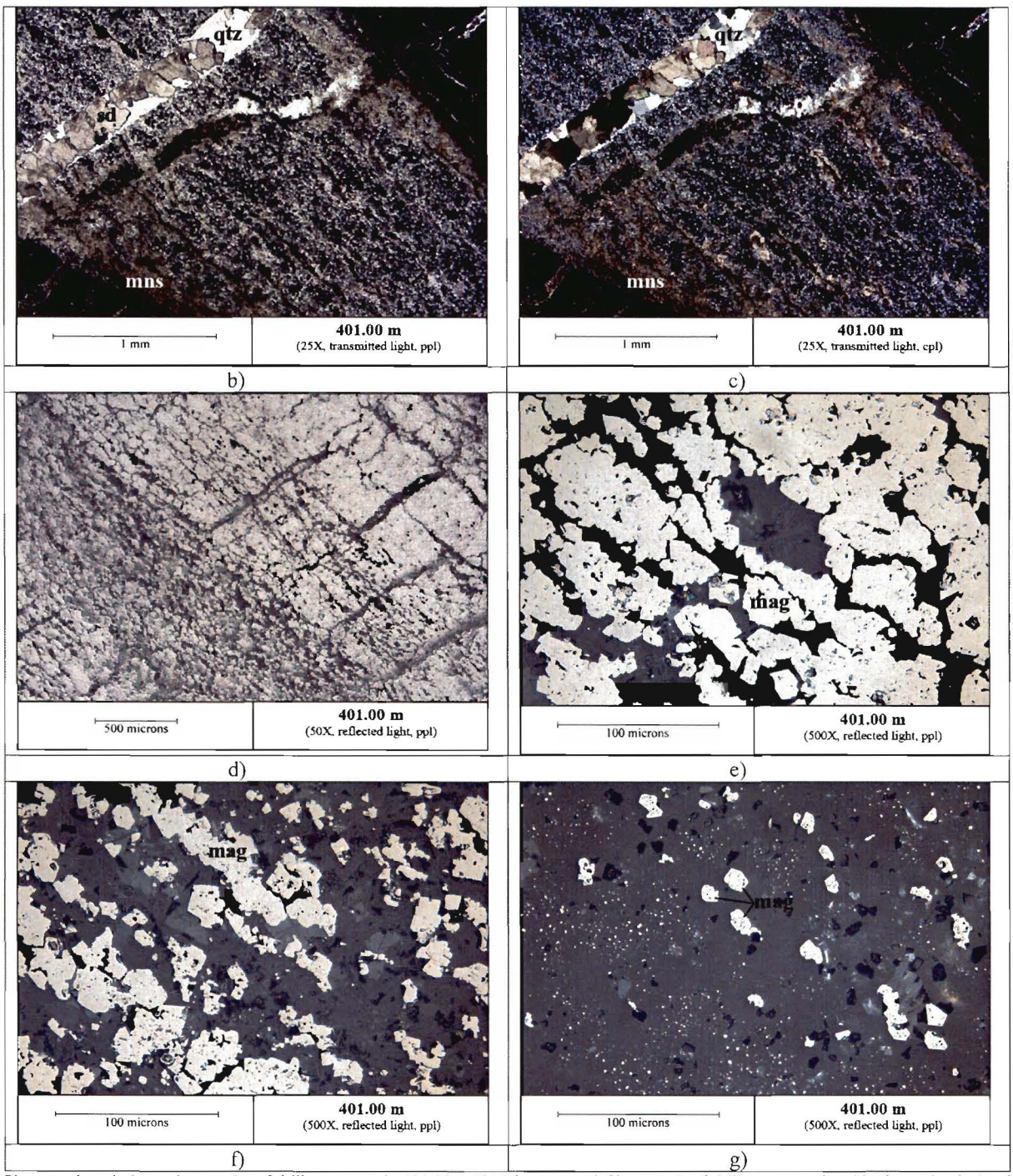
Photograph and photomicrographs of grab sample of core 369.73 – 369.78 meters. a) Photograph of grab sample with interbedded green silicate (minnesotaite) and massive magnetite beds. b) and c) Photomicrographs massive magnetite beds, granoblastic quartz, and decussate minnesotaite. d) and e) Photomicrographs of quartz-carbonate veinlet cross-cutting granoblastic quartz and decussate minnesotaite. f) Photomicrograph of massive magnetite bed with minor disseminated pyrrhotite. g) Photomicrograph of semi-massive magnetite with interstitial chert. h) Photomicrograph of magnetite-pyrrhotite bed. i) Photomicrograph of disseminated pyrrhotite in magnetite. Magnetite grains range in size from <1 to 15 μ with an average of 5 to 10 μ. Pyrrhotite grains average approximately 20 to 25 μ.

6.10 SAMPLE 401.00-401.06 METRES

Bedded; alternating beds of chert-minnesotaite-magnetite and massive to semi-massive magnetite beds. Chert-minnesotaite-magnetite beds are composed of granular chert, decussate minnesotaite, and ultra-fine-grained magnetite. Massive to semi-massive magnetite meds are composed of euhedral magnetite and interstitial chert-minnesotaite, and/or siderite. Magnetite grains range in size from less than 2 μ to 45 μ with an average grain size in the massive to semi-massive beds of approximately 25 μ. Effective liberation is estimated to be approximately 35 to 40 μ (-325, +400 mesh).

Figure 6.10
Sample 401.00-401.06 m



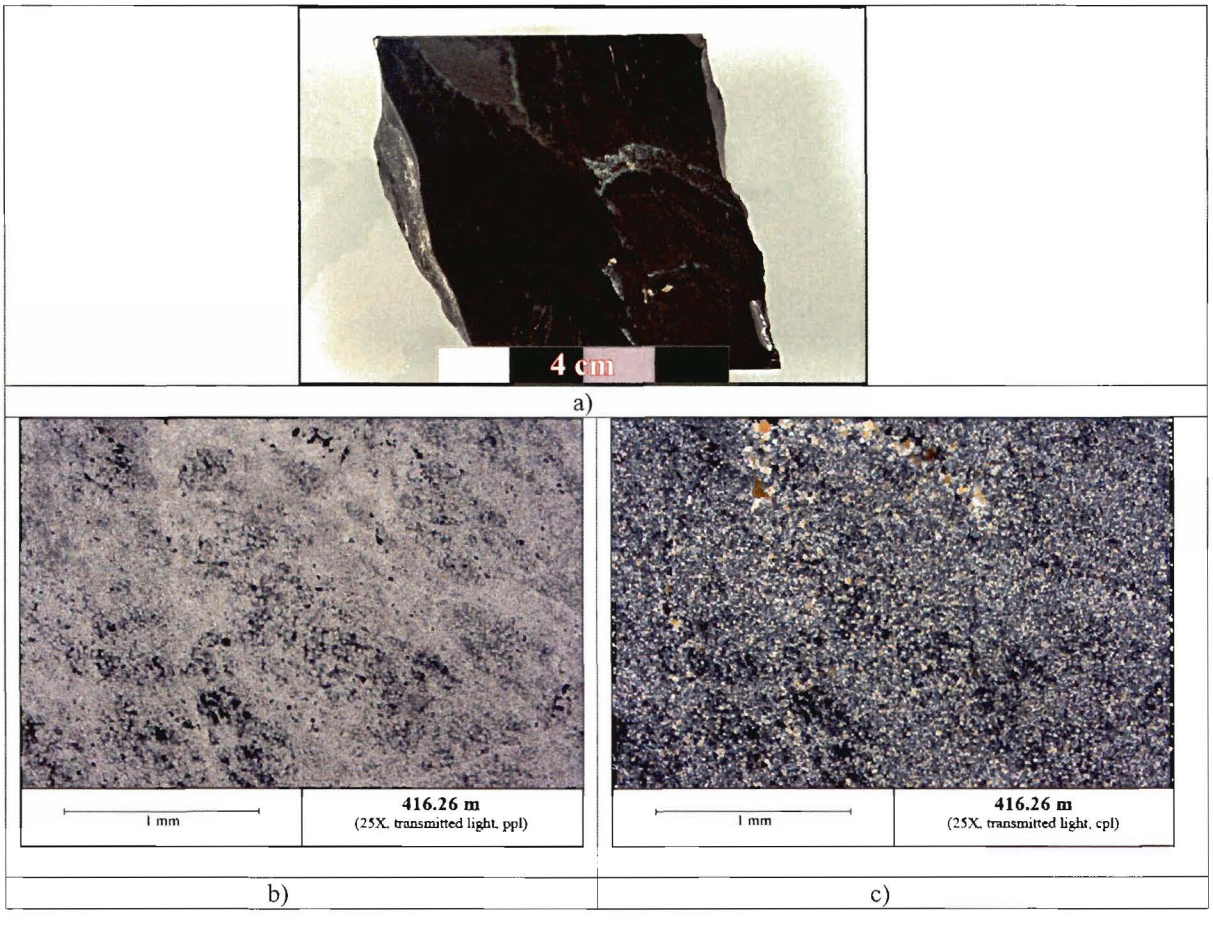


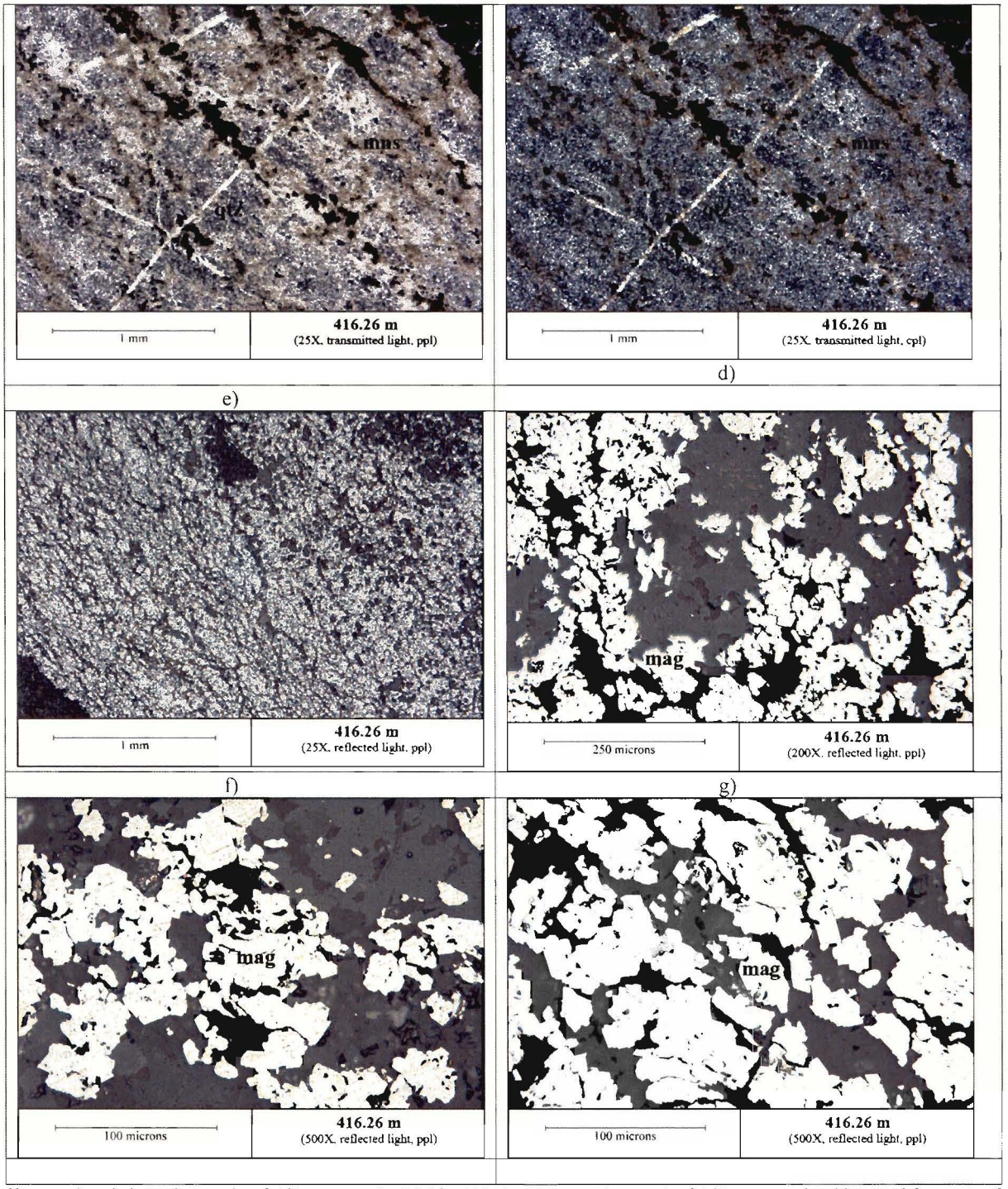
Photograph and photomicrographs of drill core sample 401.00 – 401.06 meters. a) Photograph of drill core sample with alternating beds of chert-minnesotaite-magnetite and massive magnetite. b) and c) Photomicrographs of chert-minnesotaite-magnetite bed between massive magnetite beds. Note the increase in minnesotaite at the contacts with the massive magnetite beds. The beds are cross-cut by quartz-siderite veinlets. d) Photomicrograph of massive magnetite bed with cross-cutting silicate veinlets. e) and f) Photomicrographs of massive to semi-massive magnetite with interstitial chert and minnesotaite. g) Photomicrograph of magnetite in chert-minnesotaite bed. Note that the magnetite grains are smaller than in the massive and semi-massive magnetite beds. The coarse magnetite grains are 10 μ the finer magnetite grains are less than 2 μ. Magnetite grains range in size from less than 2 μ to 45 μ with an average grain size in the massive to semi-massive beds of approximately 25 μ. Effective liberation is estimated to be approximately 35 to 40 μ (-325, +400 mesh).

6.11 SAMPLE 416.26-416.31 METRES

Fragmental; composed of fragments of thinly laminated chert-magnetite and chert-minnesotaite-magnetite and massive magnetite. Chert-magnetite is composed of granular chert and laminae of ultra-fine-grained magnetite. chert-minnestotaite-magnetite is composed of granular chert, decussate minnesotaite, and magnetite laminae. Massive magnetite is composed of euhedral magnetite in massive to semimassive aggregates with interstitial chert, minnesotaite, and siderite. Magnetite grains range in size from 3 to 45 μ with an average grain size of approximately 30 to 35 μ. Effective liberation is estimated to be approximately 35 to 40 μ (-325, +400 mesh).

Figure 6.11
Sample 416.26-416.31 m





Photograph and photomicrographs of drill core sample 416.26 – 416.31 meters. a) Photograph of drill core sample with rotated fragments of thinly laminated chert-magnetite, chert-minnesotaite-magnetite, and massive magnetite. b) and c) Photomicrographs of chert-magnetite composed of granular chert and disseminated magnetite. d) and e) Photomicrographs of thinly laminated chert, chert-minnesotaite, and chert-minnesotaite-magnetite laminae cross-cut by quartz veinlets. f) Photomicrograph of massive to semi-massive magnetite with interstitial chert, minnesotaite, and siderite. g) Photomicrograph of semi-massive magnetite with interstitial chert and siderite. h) and i) Photomicrographs of semi-massive magnetite with interstitial chert and siderite. Magnetite grains range in size from 3 to 45 μ with an average grain size of approximately 30 to 35 μ. Effective liberation is estimated to be approximately 35 to 40 μ (-325, +400 mesh).

APPENDIX A

LITHOLOGIC LOG FOR DDH 10-01

Drill Hole No. DDH-10-01
Total Depth 446 meters

Appendix A.

Lithologic Log -- DDH 10-01

Drill Hole No. DDH-10-01
Total Depth 446 meters

Depth	Lithology	Samples	Description	Iron Formation Bedding			% Mt - chert beds	% Mt bands	Magnetic Susceptibility
				Type	Mineralogy	Thickness			
			0.0 - 9.6 meters: Overburden:						
			9.6 - 71.0 m: Gabbro: Equigranular, fine grained, plagioclase, clinopyroxene, interstitial glass altered to chlorite and/or biotite, magnetite with minor pyrite and trace amounts of disseminated pyrite						

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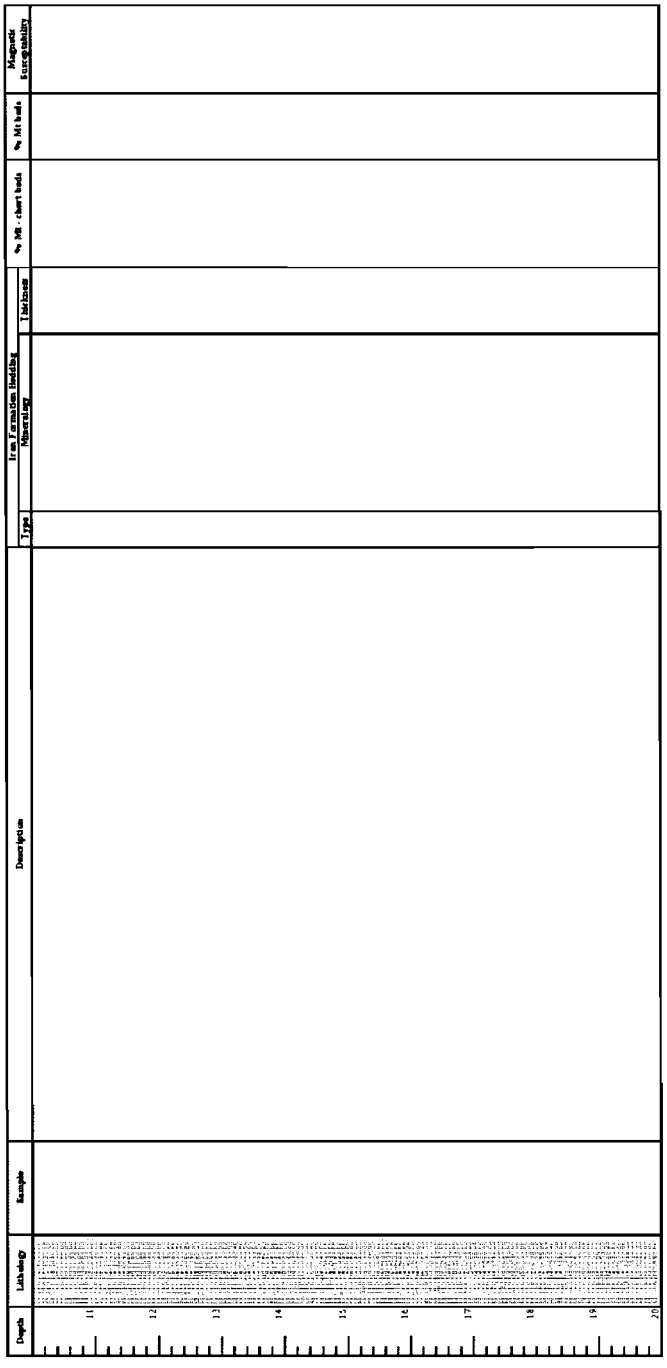

Drill Hole No. DDH-10-01
Total Depth 446 meters

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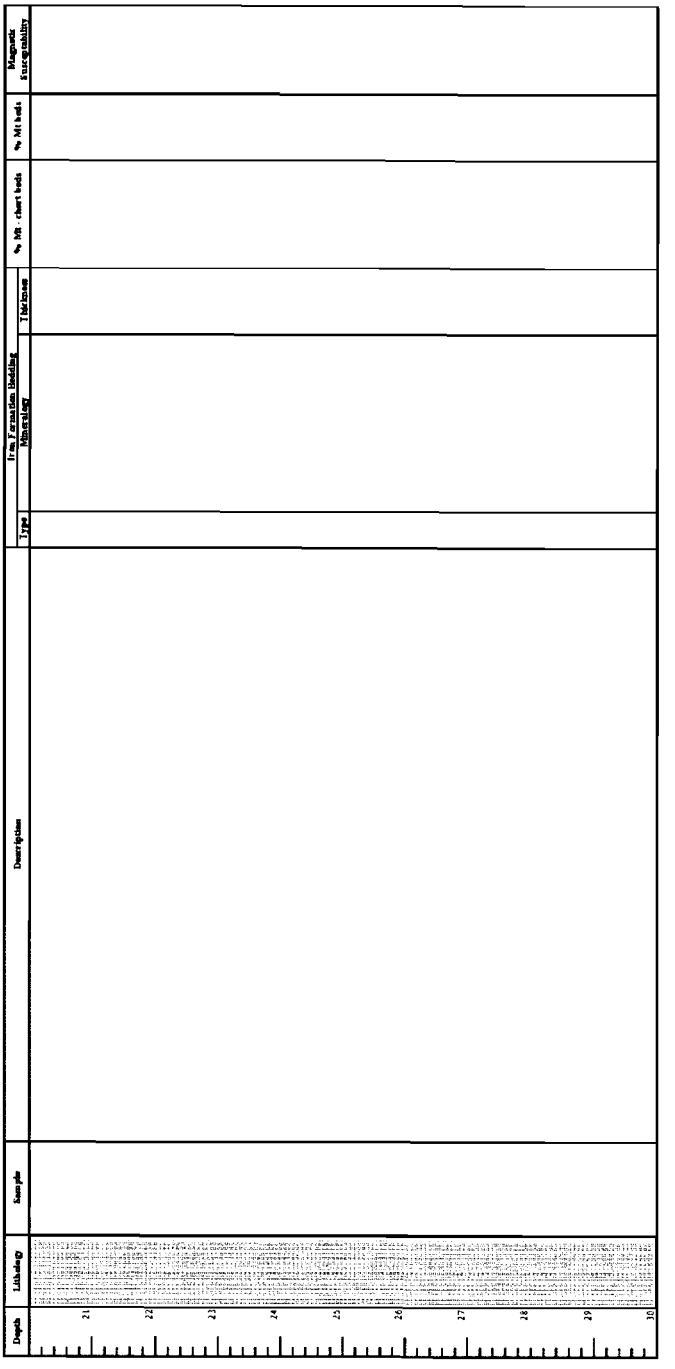

Drill Hole No. DDH-10-01
Total Depth 446 meters

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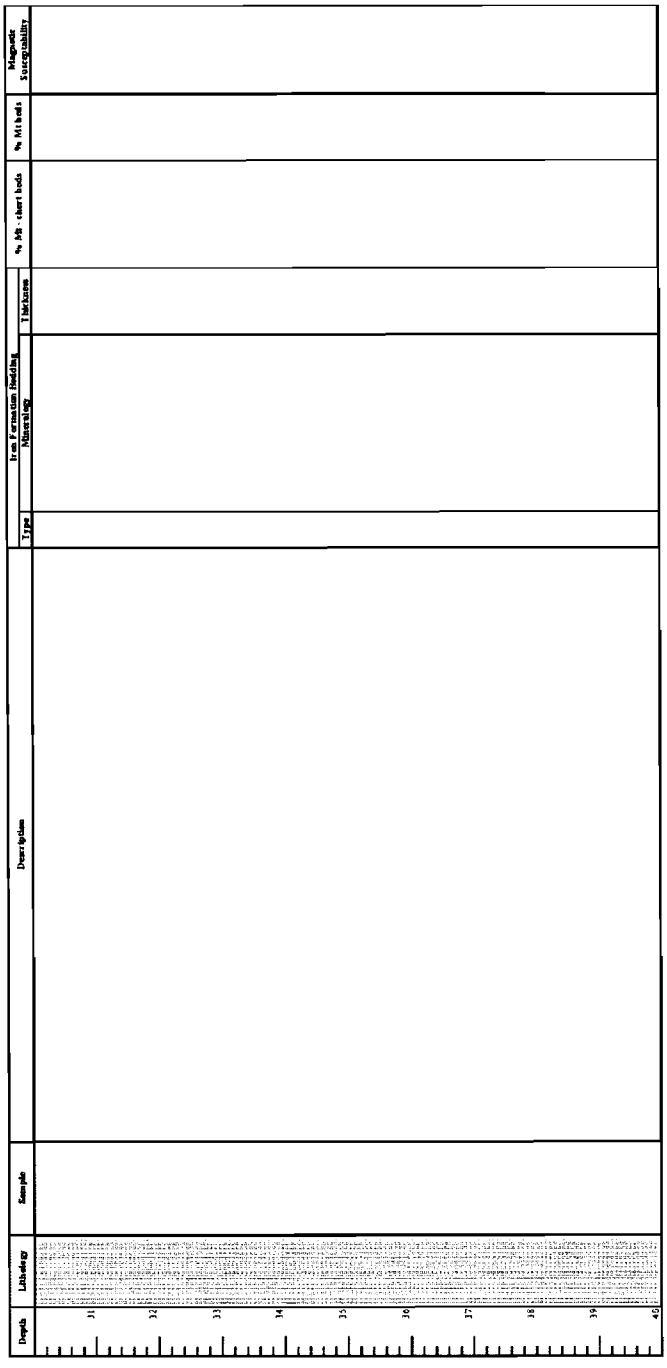
Drill Hole No. DDH-10-01
Total Depth 446 meters



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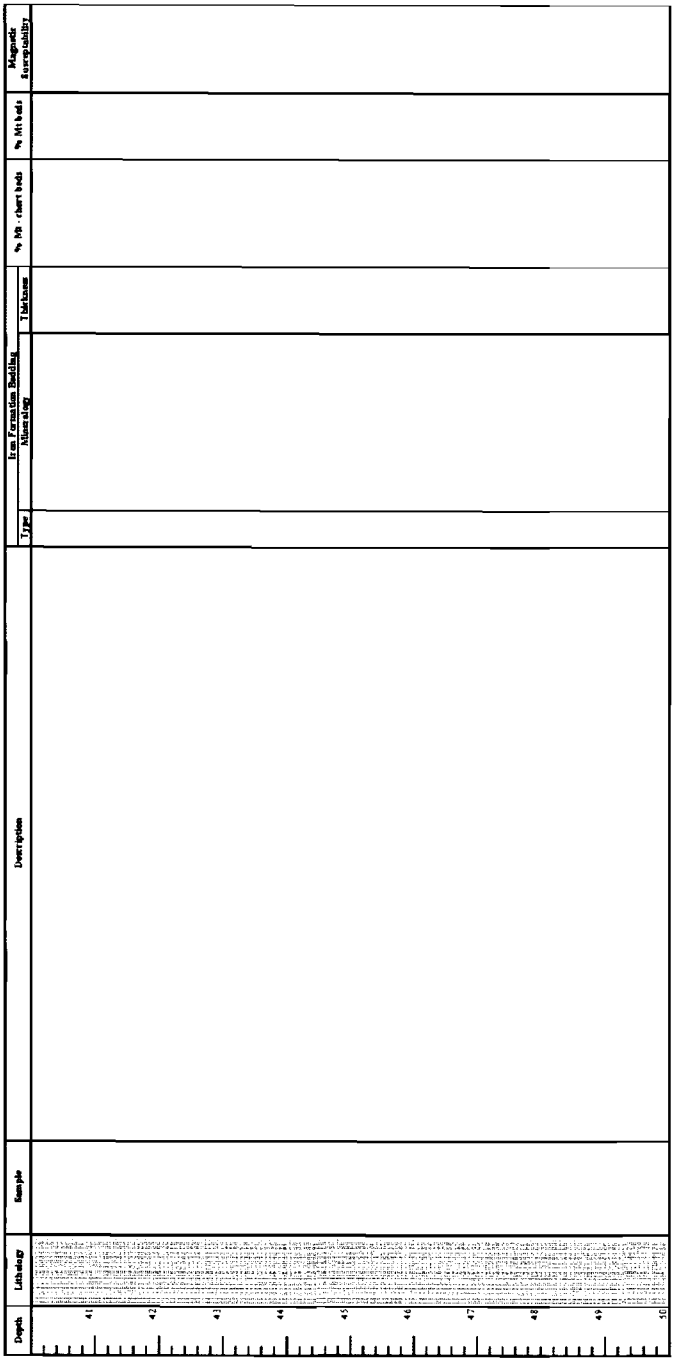

Drill Hole No. DDH-10-01
Total Depth 446 meters

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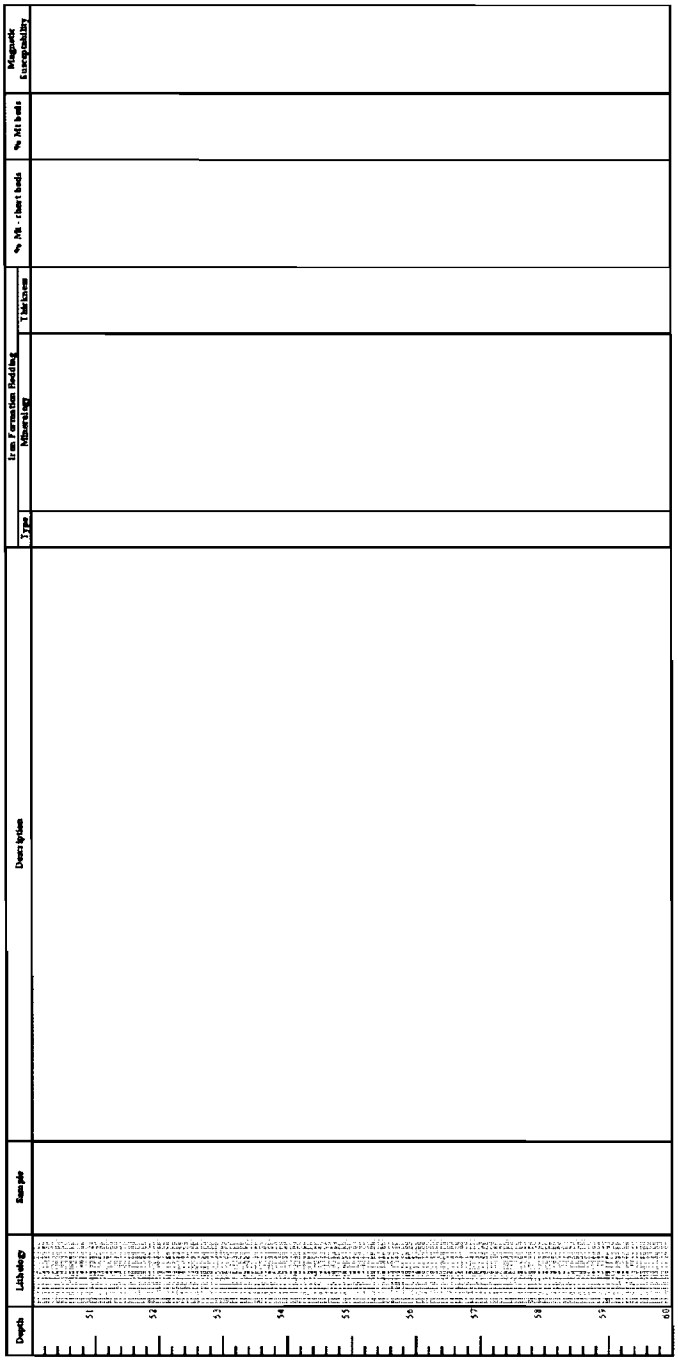

Drill Hole No. DDH-10-01
Total Depth 446 meters

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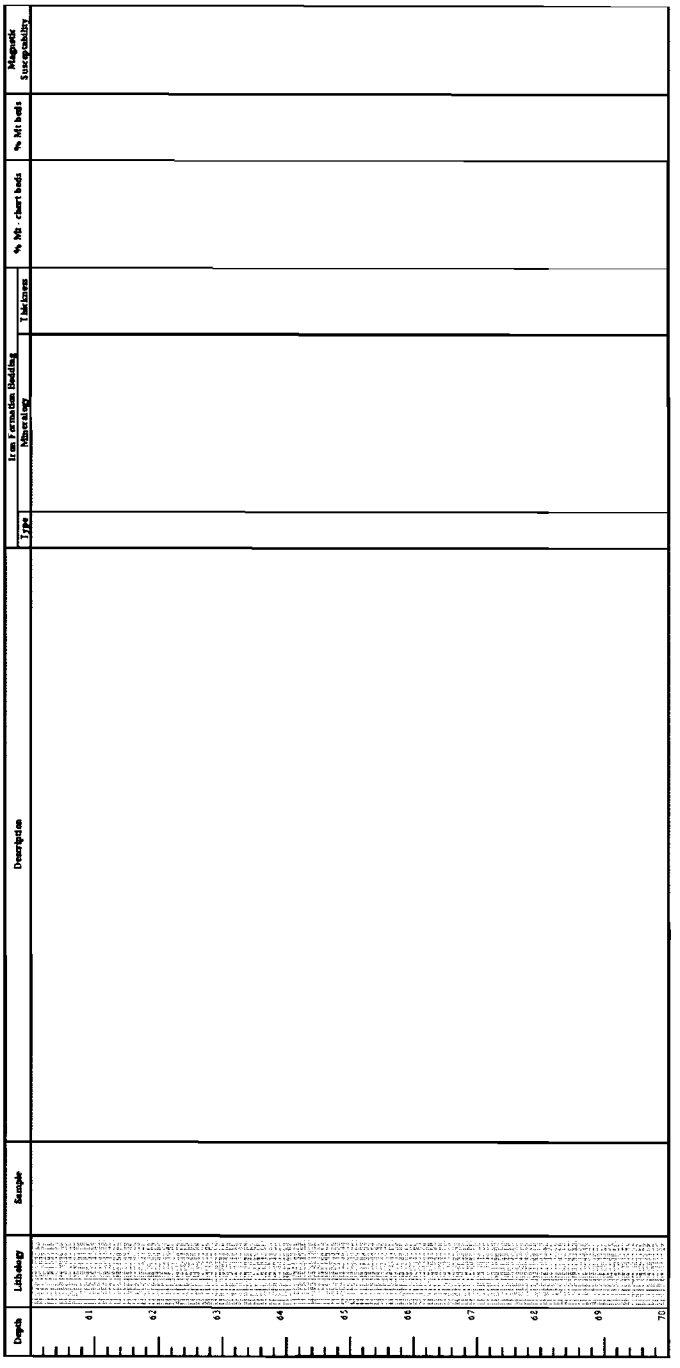
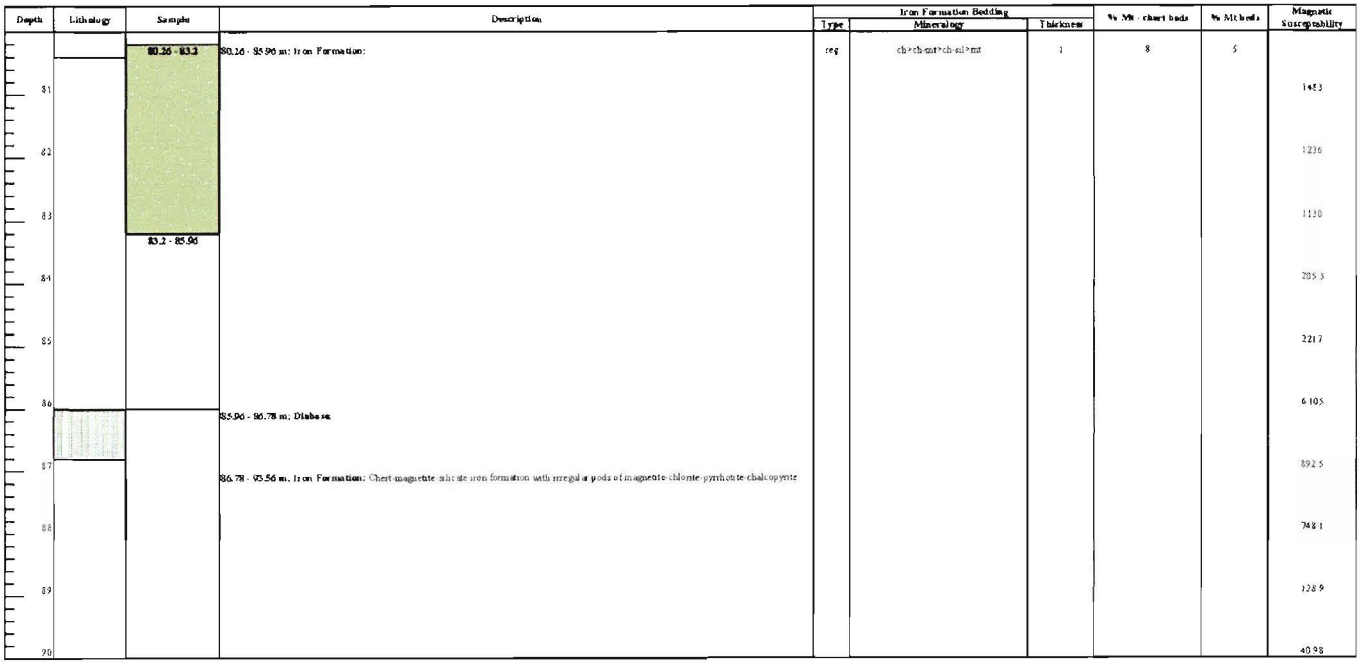
Drill Hole No. DDH-10-01
Total Depth 446 meters



Drill Hole No. DDH-10-01
Total Depth 446 meters

Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt - chert beds	% Mt beds	Magnetic Susceptibility
				Type	Mineralogy	Thickness			
71									1009
		71.0 - 73.0	71.00 -- 85.96 m: **Iron Formation:** Banded iron formation composed of alternating beds of chert, chert-silicate (munnesotaite), chert-magnetite, and massive magnetite 71.00 - 75.70 m	mix	ch>ch-sil>ch-mt>mt	10	7	3	
72									1001
73		73.0-75.7							1100
74									777.3
75									104.4
76		75.7 - 78.0	75.70 - 80.26 m: Iron Formation:	mix	ch-sil>ch>ch-mt>mt	2	10	5	727.9
77									315.7
78		78.0-80.26							478.1
79									547.1
80									1590

Drill Hole No. DDH-10-01
Total Depth 446 meters



Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt - chert beds	% Mt beds	Magnetic Susceptability
				Type	Mineralogy	Thickness			
		80.26 - 83.2	80.26 - 85.96 m; Iron Formation:	reg	ch-ch-mt>ch-sil>mt	1	8	5	
81									1453
82									1236
83									1130
84		83.2 - 85.96							205.3
85									221.7
86			85.96 - 86.78 m; Diabase.						6.105
87			86.78 - 95.56 m, Iron Formation: Chert-magnetite-silicate iron formation with irregular pods of magnetite-chlorite-pyrrhotite-chalcopyrite						892.5
88									748.1
89									128.9
90									40.98

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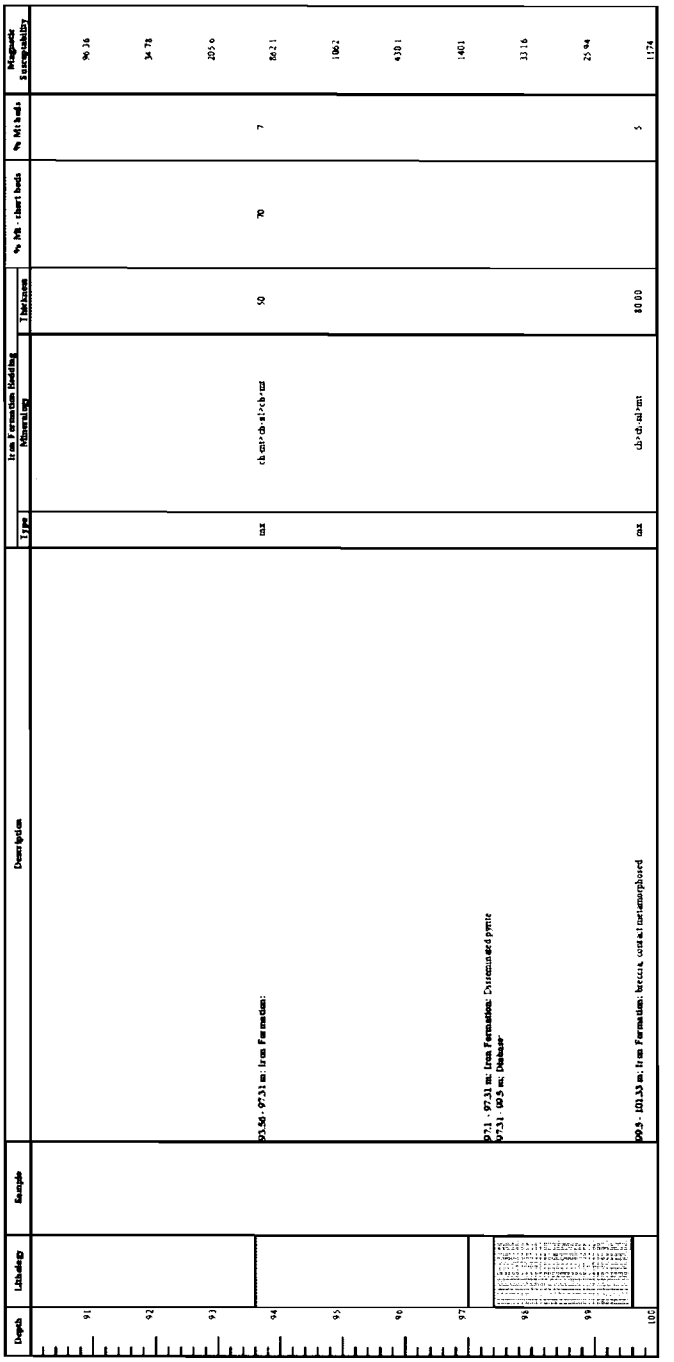
Drill Hole No. DDH-10-01
Total Depth 446 meters



Drill Hole No. DDH-10-01
Total Depth 446 meters

Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt - chert beds	% Mt beds	Magnetic Susceptability
				Type	Mineralogy	Thickness			
101									37.32
			101.33 - 104.32 m; Diabase						
102									16.45
103									47.12
104									25.35
			104.32 - 113.22 m; Iron Formation:	mx	ch>ch-ml>ch-mt>mt	100	12	5	
105									1.30
106									106.9
107									125.9
108									350.3
			108.36 - 113.22 m; Iron Formation: Disseminated pyrrhotite > chalcopyrite						
109									790.4
110									654.4

Drill Hole No. DDH-10-01
Total Depth 446 meters

Depth	Lithology	Sample	Description	Iron Formation Bedding: Type	Iron Formation Bedding: Mineralogy	Iron Formation Bedding: Thickness	% Mt - chert beds	% Mt beds	Magnetic Susceptability
111									1148
112									1349
113									94 23
			113.22 - 114.35 m; Diabase						
114									206 4
			114.35 - 119.03 m; Iron Formation: 114.35 - 119.03 m; Iron Formation: Disseminated pyrrhotite	mx	ch-al>>ch>ch-mt>mt	15	30	3	
115									642 40
116									898 3
117									817 3
118									981 7
119									447 1
			119.03 - 119.70 m; Diabase						
			119.70 - 121.30 m; Iron Formation: 119.70 - 121.3 m: Iron Formation: Disseminated pyrrhotite	mx	ch-al>ch>ch-mt>mt	20	25	4	
120									420 6

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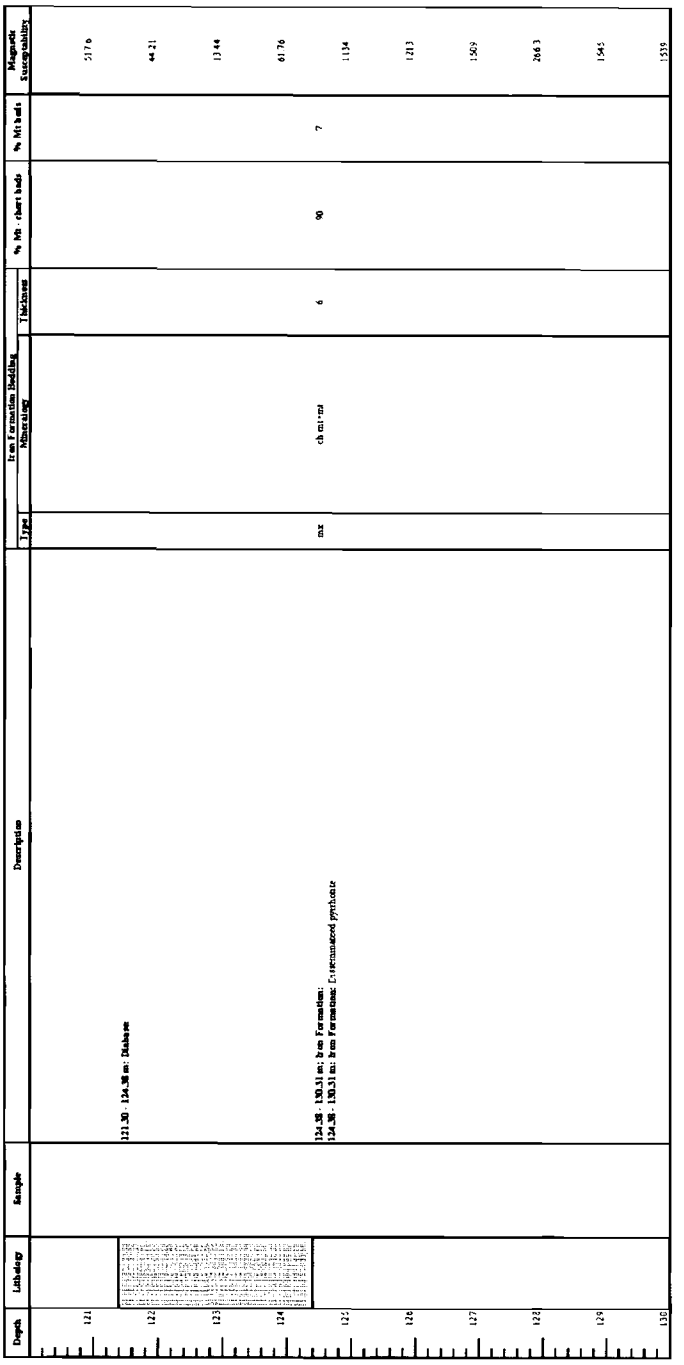
Drill Hole No. DDH-10-01
Total Depth 446 meters



Drill Hole No. DDH-10-01
Total Depth 446 meters

Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt - chert beds	% Mt beds	Magnetic Susceptability
				Type	Mineralogy	Thickness			
			130.31 - 130.58 m; Diabase						
131			130.58 - 134.97 m; Iron Formation: chert, breccia (solution breccia?) cemented with calcite/ankerite (*), chlorite and pyrrhotite, beds of chlorite and pyrrhotite	mx	ch>chl/mt po>ch/mt>mt	15	7	3	97.27
132									272.6
133									309.3
134									187.3
135									26.1
			134.97 - 135.28 m; Diabase						
136			135.28 - 138.71 m; Iron Formation: (v lean)	lm	ch>chl/mt-po>ch/mt>mt	5.00	7	2	234.4
137									58.1
138									183.7
139			138.71 - 145.63 m; Iron Formation:	lm	ch/mt>ch/mt>ch>mt	4	70	10	387.9
140			138.71 - 145.63 m; Iron Formation: *Occasional pyrrhotite and thin chlorite-magnetite-pyrrhotite beds*						155.5

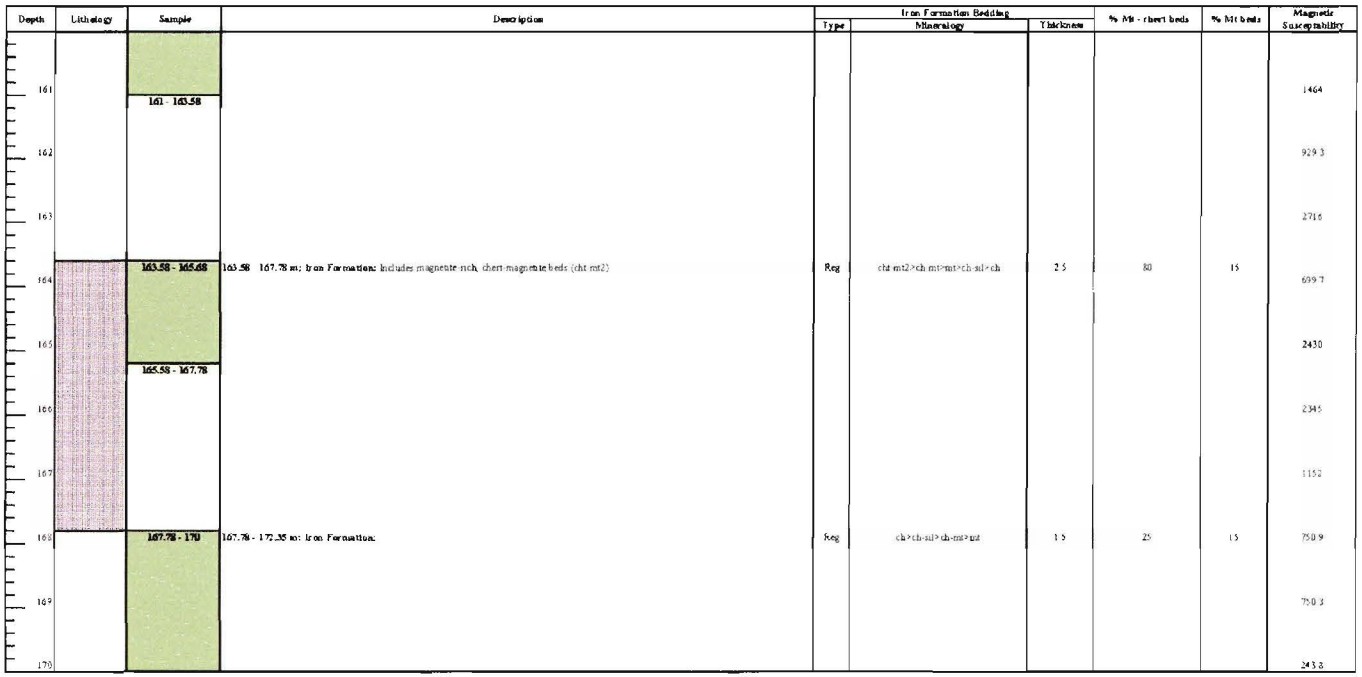
Drill Hole No. DDH-10-01
Total Depth 446 meters

Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt - chert beds	% Mt beds	Magnetic Susceptibility
				Type	Mineralogy	Thickness			
141									249.7
142									713.6
143									559.5
144									356.1
145									125.8
146		145.03 - 148.57	145.03 - 151.51 m; **Iron Formation:** Trace to minor amounts of pyrrhotite along bedding	reg	ch-mt>mt	5	75	25	126.4
147									179.9
148									110.3
		148.57 - 151.51							
149									127.2
150									84.3

Drill Hole No. DDH-10-01
Total Depth 446 meters

Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt - chert beds	% Mt beds	Magnetic Susceptability
				Type	Mineralogy	Thickness			
151									1966
			151.51 - 151.98 m: Diabase						
152									1216
		153.0 - 155.0	151.98 - 163.58 m: Iron Formation:	Irr	ch-mt>mt>ch-ml>ch	4	65	30	
153									1102
154									357.6
155									769.8
		155.0 - 158.0							
156									722.5
157									1106
158									878.4
		158.0 - 161.0							
159									3057
160									1114

Drill Hole No. DDH-10-01
Total Depth 446 meters



Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt - chert beds	% Mt beds	Magnetic Susceptibility
				Type	Mineralogy	Thickness			
161									1464
		161 - 163.58							
162									929.3
163									2716
164		163.58 - 165.68	163.58 - 167.78 m: Iron Formation: includes magnetite-rich chert-magnetite beds (cht-mt2)	Reg	cht-mt2>ch-mt>mt>ch-sil>ch	2.5	80	15	699.7
165									2430
		165.58 - 167.78							
166									2345
167									1152
168		167.78 - 170	167.78 - 172.35 m: Iron Formation:	Reg	ch>ch-sil>ch-mt>mt	1.5	25	15	750.9
169									750.3
170									243.8

Drill Hole No. DDH-10-01
Total Depth 446 meters

Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt - chert beds	% Mt beds	Magnetic Susceptibility
				Type	Mineralogy	Thickness			
		170.0 - 172.35							
171			170.6 - 172.35 m: **Iron Formation:** Pyrrhotite rich breccia and chert and m chl-mt-po beds						353 3
172									1200
			172.35 172.78 m: **Diabase**						
173		175.0 - 175.68	172.78 - 179.2 m: **Iron Formation:**	Irr	ch-mt>mt>ch>ch-ml>chl-mt-po	5	65	27	815 9
174									1056
175									1350
176		175.68 - 178.36							185 9
177									161
178									196 3
			178.44 179.00 m: **Iron Formation:** chl mt po beds						
179									116 5
		179.2 - 181.77	179.2 - 181.77 m: **Iron Formation:** interval contains thin beds with a hackly appearance Hackly beds are chert-minnesotaite beds, some of the chert-minnesotaite beds appear to have an umbricate texture	Reg	ch mt>ch-ml>mt>ch	2 5	70	10	
180									2271

Drill Hole No. DDH-10-01
Total Depth 446 meters

Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt - chert beds	% Mt beds	Magnetic Susceptability
				Type	Mineralogy	Thickness			
181									1526
182		181.77 - 184.77	181.77 - 187.82 m: Iron Formation:	Reg	ch-mt>mt>ch-sil	1.5	80	10	898.4
183									658.5
184									1004
185		184.77 - 187.82							1538
186									707.5
187									1411
188		187.82 - 191.38	187.82 - 197.65 m: Iron Formation: Possible "E-type", with massive magnetite beds and magnetite-rich chert-magnetite beds, chlorite-magnetite-pyrrhotite	Irr	ch-mt2>ch-mt>mt>ch-sil>chl-mt-po		80	15	819
189									1639
190									2102

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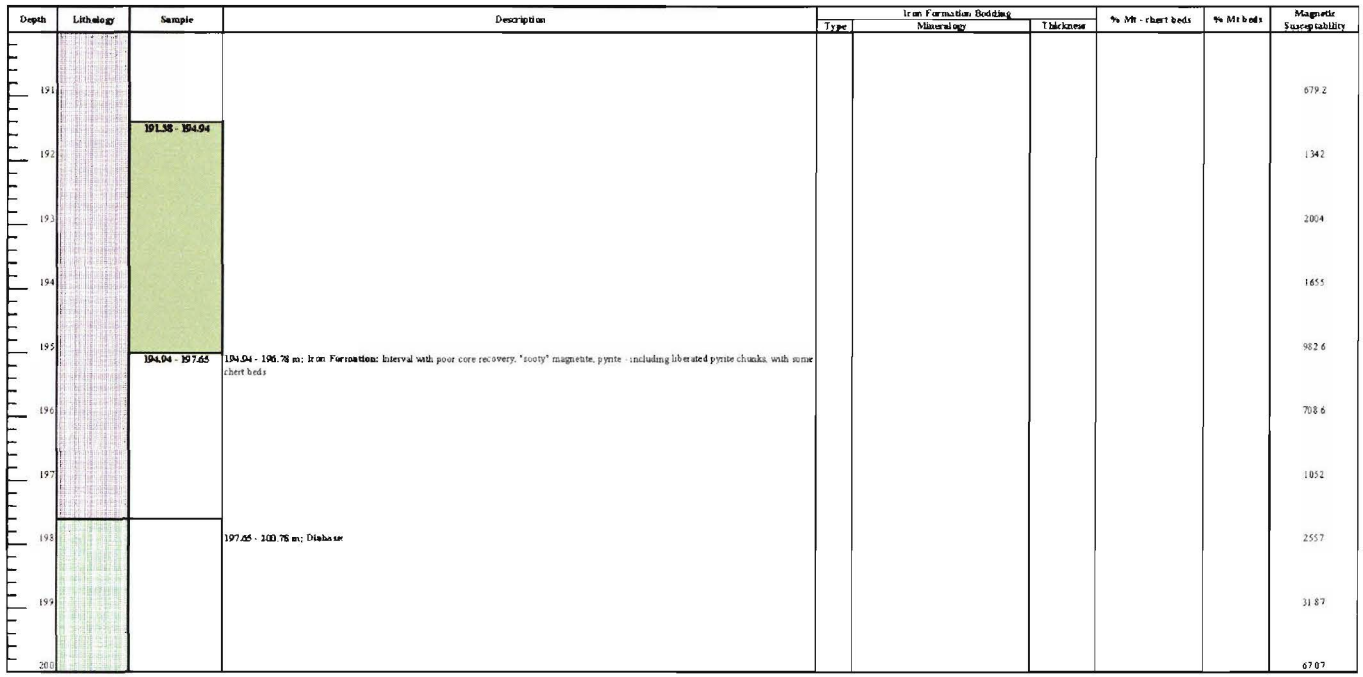
Drill Hole No. DDH-10-01
Total Depth 416 meters

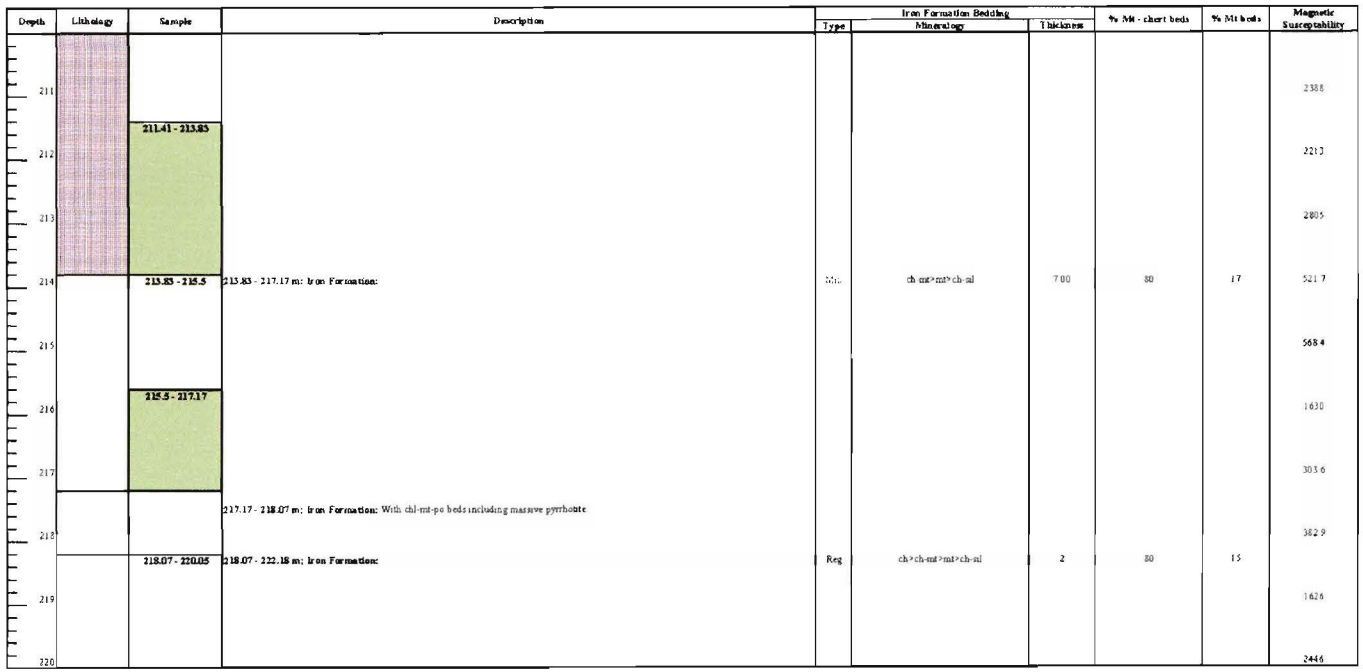


Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt - chert beds	% Mt beds	Magnetic Susceptability
				Type	Mineralogy	Thickness			
191									679.2
		191.38 - 194.04							
192									1342
193									2004
194									1655
195		194.04 - 197.65	194.04 - 196.78 m: **Iron Formation:** Interval with poor core recovery, "sooty" magnetite, pyrite - including liberated pyrite chunks, with some chert beds						982.6
196									708.6
197									1052
198			197.65 - 200.78 m: Diabase						2557
199									31.87
200									67.07

Drill Hole No. DDH-10-01
Total Depth 446 meters

Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt - chert beds	% Mt beds	Magnetic Susceptibility
				Type	Mineralogy	Thickness			
201		200.78 - 202.8	200.78 - 204.73 m; **Iron Formation:** Possible "E-type"	Mix	ch-mt>ch-mt2>mt>ch	2.5	75	20	641.8
202									1730
203		202.8 - 204.73							1441
204									1881
205			204.73 - 205.59 m; **Iron Formation:** With interbedded ch-mt-po beds, beds less than 9cm thick, also contain disseminated pyrrhotite						717
206									397.9
207		206.59 - 209	205.59 - 213.83 m; **Iron Formation:** Possible "E-type", conspicuous massive magnetite beds, [virtually the highest magnetite grade interval]	Mix	ch-mt2>mt>ch-ml	23.00	55	40	1779
208									1912
209		209.0 - 211.41							1321
210									2366

Drill Hole No. DDH-10-01
Total Depth 446 meters



Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt - chert beds	% Mt beds	Magnetic Susceptability
				Type	Mineralogy	Thickness			
211									2388
		211.41 - 213.83							
212									2213
213									2805
214		213.83 - 215.5	213.83 - 217.17 m: Iron Formation:	Mix	ch-mt>mt>ch-sl	7.00	80	17	521.7
215									568.4
		215.5 - 217.17							
216									1630
217									303.6
			217.17 - 218.07 m: Iron Formation: With chl-mt-po beds including massive pyrrhotite						
218									382.9
		218.07 - 220.05	218.07 - 222.18 m: Iron Formation:	Reg	ch>ch-mt>mt>ch-sl	2	80	15	
219									1626
220									2446

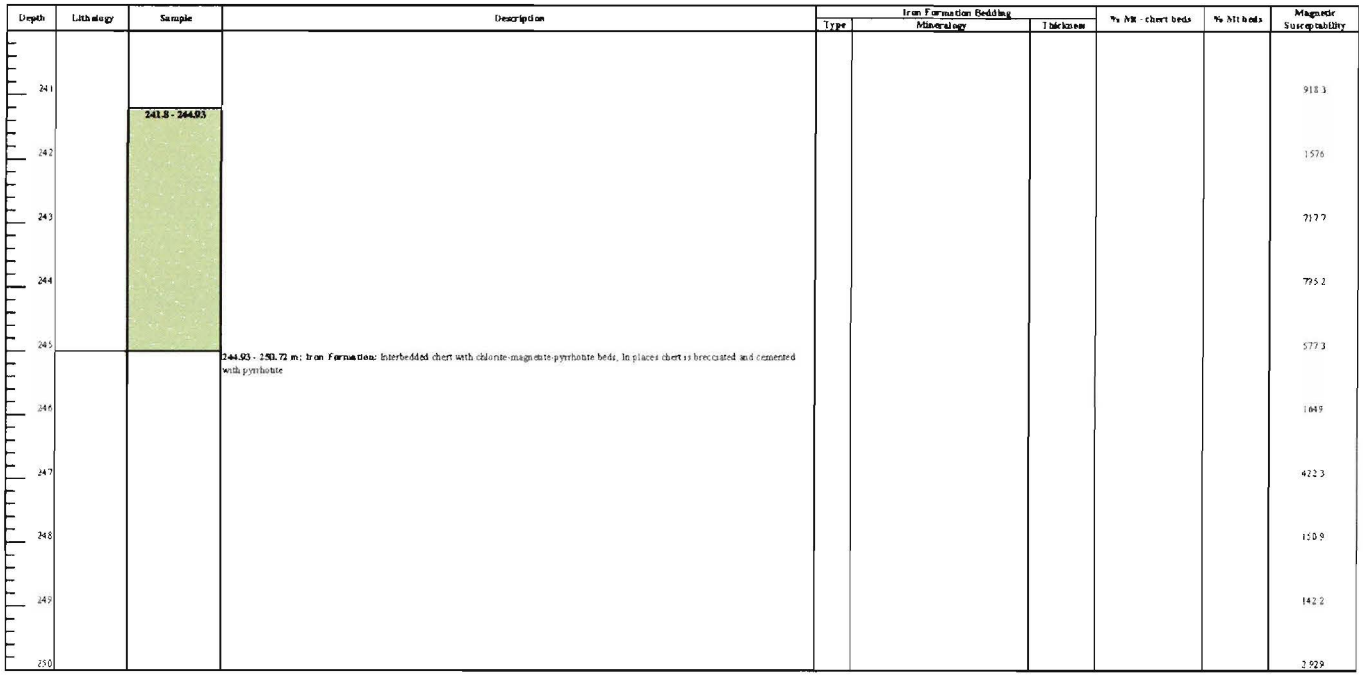
Drill Hole No. DDH-10-01
Total Depth 446 meters

Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt - chert beds	% Mt beds	Magnetic Susceptibility
				Type	Mineralogy	Thickness			
221		**220.05 - 222.18**							217.4
222									574.7
			222.18 - 223.79 m; Iron Formation: Interval composed of massive chert-silicate beds (40 cm) , massive pyrrhotite, and chert breccias with pyrrhotite cement						
223									58.64
224		**223.79 - 226.71**	**223.79 - 232.56 m; Iron Formation:** Contains disseminated pyrrhotite	Mix	ch-mt>mt>ch-mt2>ch-ml	4.00	60	30	687.4
225									157.4
226									690.9
227		**226.71 - 229.63**							515.9
228									809.5
229									214.1
230		**229.63 - 232.56**							759.7

Drill Hole No. DDH-10-01
Total Depth 446 meters

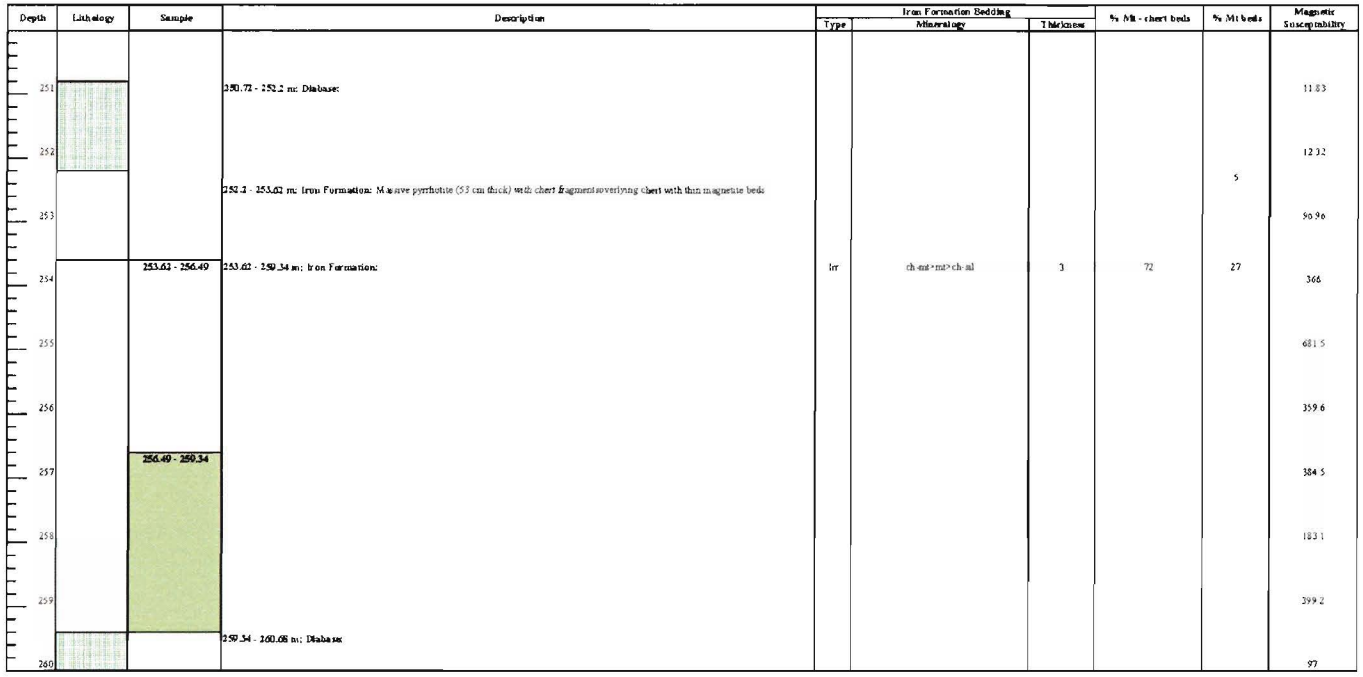
Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt chert beds	% Mt beds	Magnetic Susceptibility
				Type	Mineralogy	Thickness			
231									619.5
232									2181
233			232.56 - 236.1 m; **Iron Formation:** Contains massive pyrrhotite (60 cm thick), chert breccia cemented with pyrrhotite	Mix	po>ch>ch-mt>ch-sil>mt	8	30	7	465.8
234									159.9
235									114.1
236									343.9
237		236.1 - 238.83	236.1 - 238.83 m; Iron Formation:	Reg	ch-sil>ch-ent>mt	1.5	20	15	1127
238									298.1
239		238.83 - 241.8	238.83 - 244.95 m; Iron Formation:	In	ch-mt>ch>ch-mt	1.5	40	15	503.8
240									1349

Drill Hole No. DDH-10-01
Total Depth 446 meters



Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt - chert beds	% Mt beds	Magnetic Susceptability
				Type	Mineralogy	Thickness			
241									918.3
		241.8 - 244.93							
242									1576
243									7177
244									795.2
245			244.93 - 250.72 m: **Iron Formation:** Interbedded chert with chlorite-magnetite-pyrrhotite beds. In places chert is brecciated and cemented with pyrrhotite						577.3
246									164.9
247									422.3
248									150.9
249									142.2
250									2,929

Drill Hole No. DDH-10-01
Total Depth 446 meters



Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt - chert beds	% Mt beds	Magnetic Susceptibility
				Type	Mineralogy	Thickness			
251			250.72 - 252.2 m: Diabase:						11.83
252									12.32
			252.2 - 253.62 m: Iron Formation: Massive pyrrhotite (53 cm thick) with chert fragments overlying chert with thin magnetite beds					5	
253									96.96
		253.62 - 256.49	253.62 - 259.34 m: Iron Formation:	frr	ch-mt+mt>ch-al	3	72	27	
254									366
255									681.5
256									359.6
257		256.49 - 259.34							384.5
258									183.1
259									399.2
			259.34 - 260.06 m: Diabase:						
260									97

Drill Hole No. DDH-10-01
Total Depth 446 meters

Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt - chert beds	% Mt beds	Magnetic Susceptibility
				Type	Mineralogy	Thickness			
261		260.68 - 263.80	260.68 - 276.27 m: Iron Formation:	Irr	ch-mt>mt>ch>ch-ml	1	70	20	1.844
262									1.395
263									316.9
264		263.80 - 266.92							1102
265									439.9
266									1019
267		266.92 - 270							591.7
268									373.6
269									1214
270									891.9

Drill Hole No. DDH-10-01
Total Depth 446 meters

Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt - chert beds	% Mt beds	Magnetic Susceptability
				Type	Mineralogy	Thickness			
		270.0 - 273.1							
271									675.9
272									955.1
273		273.1 - 276.27							465.9
274									1576
275									785.1
276									464.4
			276.17 - 279.36 m; Iron Formation: Lean chert with chlorite-magnetite-pyrrhotite beds					5	
277									370.1
278									101.3
279									37.26
			279.36 - 281.0 m; Diabase: Sheared along the upper contact						
280									21.01

Drill Hole No. DDH-10-01
Total Depth 446 meters

Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt - chert beds	% Mt beds	Magnetic Susceptability
				Type	Mineralogy	Thickness			
281			281.0 - 282.97 m; **Iron Formation:** Chert breccia with chlorite, chlorite-magnetite-pyrrhotite cement						1009
282									89.66
283									78.4
			282.97 - 287.36 m; **Iron Formation:** Chert interbedded with chlorite-magnetite pyrhotite beds (up to 34cm thick) and magnetite beds	Reg	ch>chl-mt-po>mt	34		5	
284									225.6
285									203.7
286									280.9
287									51.59
			287.36 - 288.14 m; **Iron Formation:**	Irr	ch>mt			>	
288									292.9
			288.14 - 288.88 m; Diabase						
289		288.88 - 292.35	288.88 - 292.35 m; **Iron Formation:** With cumpate beds	Irr	ch>ch-mt>mt	4	60	12	251
290									96.17

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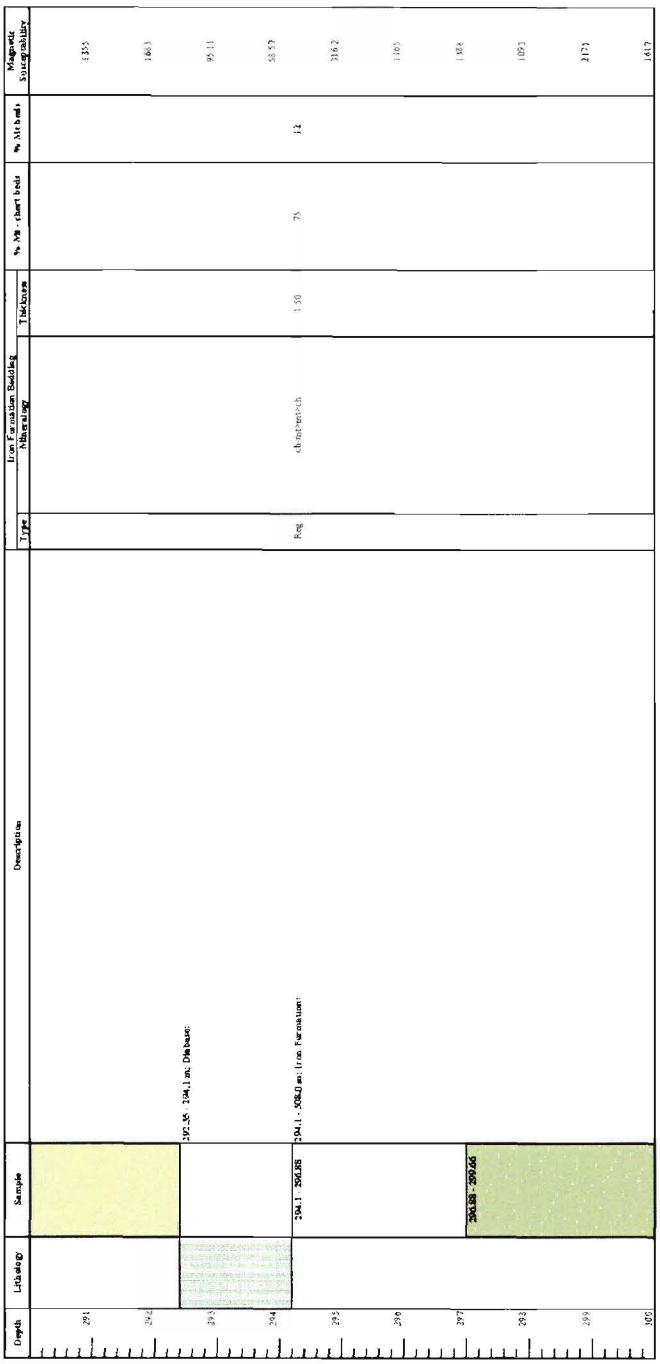
Drill Hole No. DDH-10-01
Total Depth 446 meters



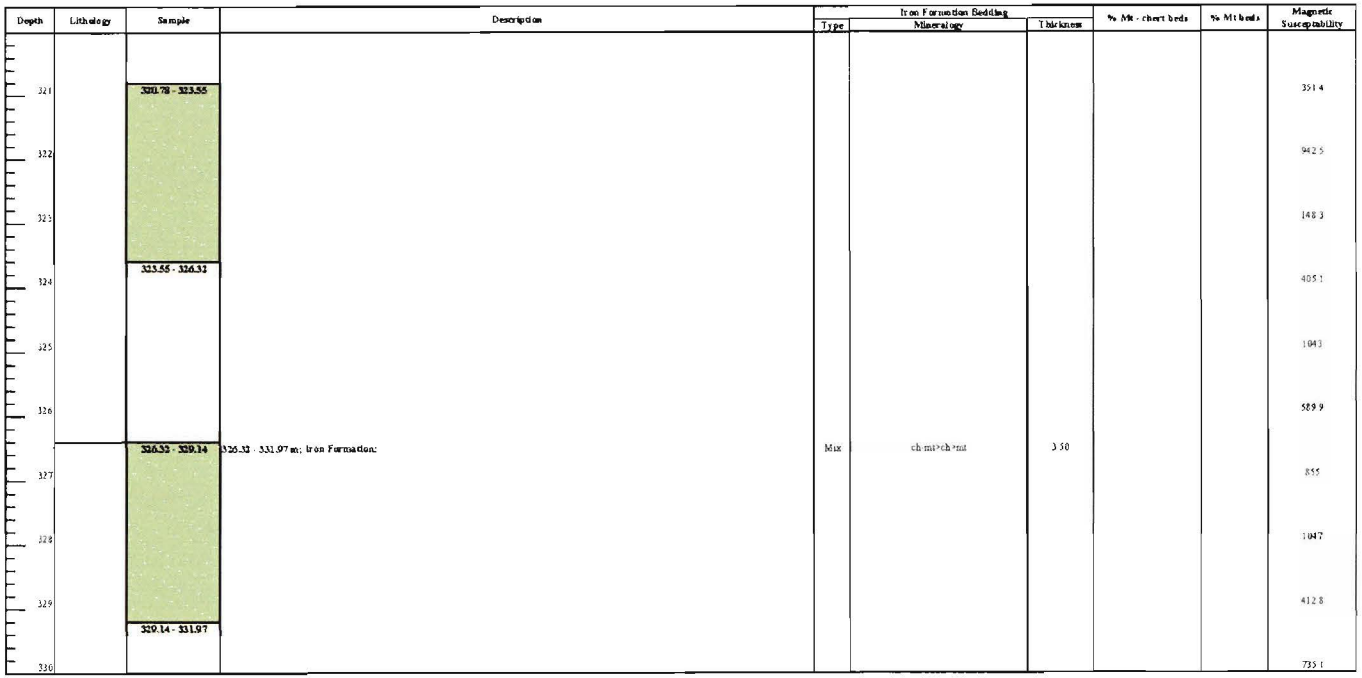
Drill Hole No. DDH-10-01
Total Depth 446 meters

Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt - chert beds	% Mt beds	Magnetic Susceptability
				Type	Mineralogy	Thickness			
		299.66 - 302.44							
301									2115
302									1385
		302.44 - 305.33							
303									781.8
304									2768
305									1566
		305.33 - 308.0							
306									1593
307									867.3
308									1422
		308.0 - 310.36	308.0 - 312.72 m; Iron Formation: Possible "E-type"	Reg	chert/magnetite	1.5	75	20	
309									2000
310									3339

Drill Hole No. DDH-10-01
Total Depth 446 meters

Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt - chert beds	% Mt beds	Magnetic Susceptability
				Type	Mineralogy	Thickness			
		310.36 - 312.72							
311									1159
312									826
313			312.72 - 313.21 m: Diabase						994
			313.21 - 314.48 m: Iron Formation: Chert breccia with chlorite cement, minor magnetite						
314									40.12
		314.48 - 317.39	314.48 - 317.39 m: Iron Formation:	Mix	ch>ch-mt>mt>ch-sil	4.00	15	7	
315									153.8
316									123
317									172.3
			317.39 - 318.01 m: Diabase With chlorite at upper contact						
318									23.76
		318.01 - 320.78	318.01 - 320.32 m: Iron Formation:	Irr	ch,mt>ch>mt>ch-sil	4	75	10	
319									309.8
320									978.4

Drill Hole No. DDH-10-01
Total Depth 446 meters



Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt - chert beds	% Mt beds	Magnetic Susceptability
				Type	Mineralogy	Thickness			
321		320.78 - 323.55							351.4
322									942.5
323									148.3
		323.55 - 326.32							
324									405.1
325									104.3
326									589.9
		326.32 - 329.14	326.32 - 331.97 m; Iron Formation:	Mix	ch mt>ch mt	3.50			
327									855
328									1047
329									412.8
		329.14 - 331.97							
330									735.1

Drill Hole No. DDH-10-01
Total Depth 446 meters

Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt - chert beds	% Mt beds	Magnetic Susceptibility
				Type	Mineralogy	Thickness			
331									928.1
332		331.97 - 333.83	331.97 - 333.83 m; Iron Formation:	Reg	ch-mt2>ch-mt>mt>ch	0.5	45	15	403.6
333									191.2
334		333.83 - 337.14	333.83 - 380.37 m; Iron Formation:	Reg	ch>ch-mt>mt	0.50	60	10	764.5
335									737.8
336									426.5
337									143.1
		337.14 - 340.46							
338									422.9
339									128.6
340									487.3

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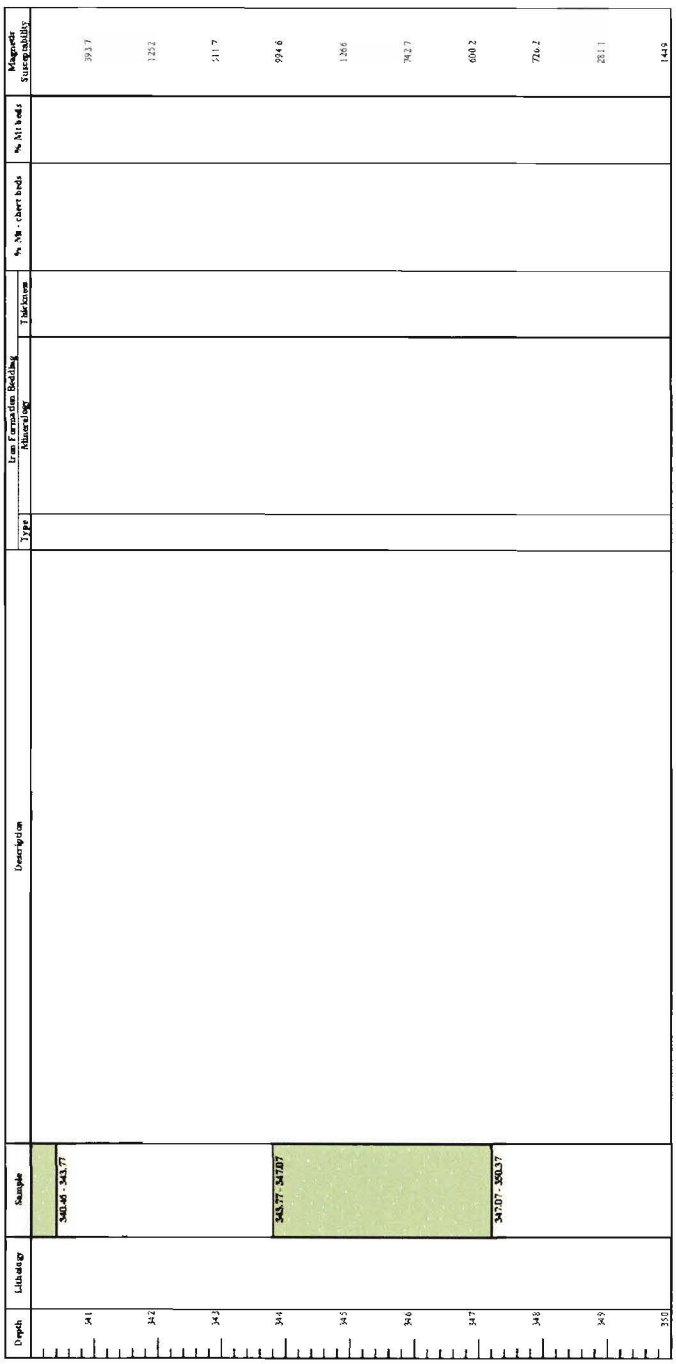
Drill Hole No. DDH-10-01
Total Depth 446 meters



Drill Hole No. DDH-10-01
Total Depth 446 meters

Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt - chert beds	% Mt beds	Magnetic Susceptability
				Type	Mineralogy	Thickness			
		350.37 - 353.18	350.37 - 364.44 m; Iron Formation:	Mix	chert/chrt	4		17	
351									616.2
352									104.8
353									136.7
		353.18 - 356.0							
354									301.8
355									1333
356									180.9
		356.0 - 358.8							
357									437.2
358									938.9
359		358.8 - 361.61							389.5
360									1063

Drill Hole No. DDH-10-01
Total Depth 446 meters

Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt - chert beds	% Mt beds	Magnetic Susceptibility
				Type	Mineralogy	Thickness			
361									168.9
362		361.61 - 364.44							531.6
363									452
364									375.7
365			364.44 - 365.94 m; Iron Formation: Chert with chlorite-magnetite-pyrrhotite beds overlying 1m thick massive chert-silicate bed						27.6
366		365.94 - 368.96	365.94 - 368.96 m; Iron Formation:	mx	ch-mt>ch-sl>mt>ch	8	30	20	458.4
367									660.3
368									698.3
369									628
			368.96 - 369.45 m; Iron Formation: Chert with chlorite-magnetite-pyrrhotite beds						
370			369.45 - 369.99 m; Iron Formation:	reg	ch-sl>mt>ch-mt>ch	0.5	15	25	522.8

Drill Hole No. DDH-10-01
Total Depth 446 meters

Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt - chert beds	% Mt beds	Magnetic Susceptibility
				Type	Mineralogy	Thickness			
			369.99 - 370.37 m; Iron Formation: Chert with chlorite-magnetite-pyrrhotite beds						
		370.37 - 372.7	370.37 - 375.10 m; Iron Formation:	mx	ch-sl>ch-mt>ch>mt		30	7	
371									234.7
372									252.9
373		372.7 - 375.10							585.9
374									365.6
375									788.8
		375.10 - 377.18	375.10 - 377.18 m; Iron Formation: Possible "E-type"	rr	ch-mt>mt>ch>ch-sl	4	55	35	
376									116.3
377									816.8
		377.18 - 379.63	377.18 - 384.55 m; Iron Formation: Includes short interval (380.3-381.1) of possible "E-type"						
378									840.3
379									834.5
380		379.63 - 381.08							636.3

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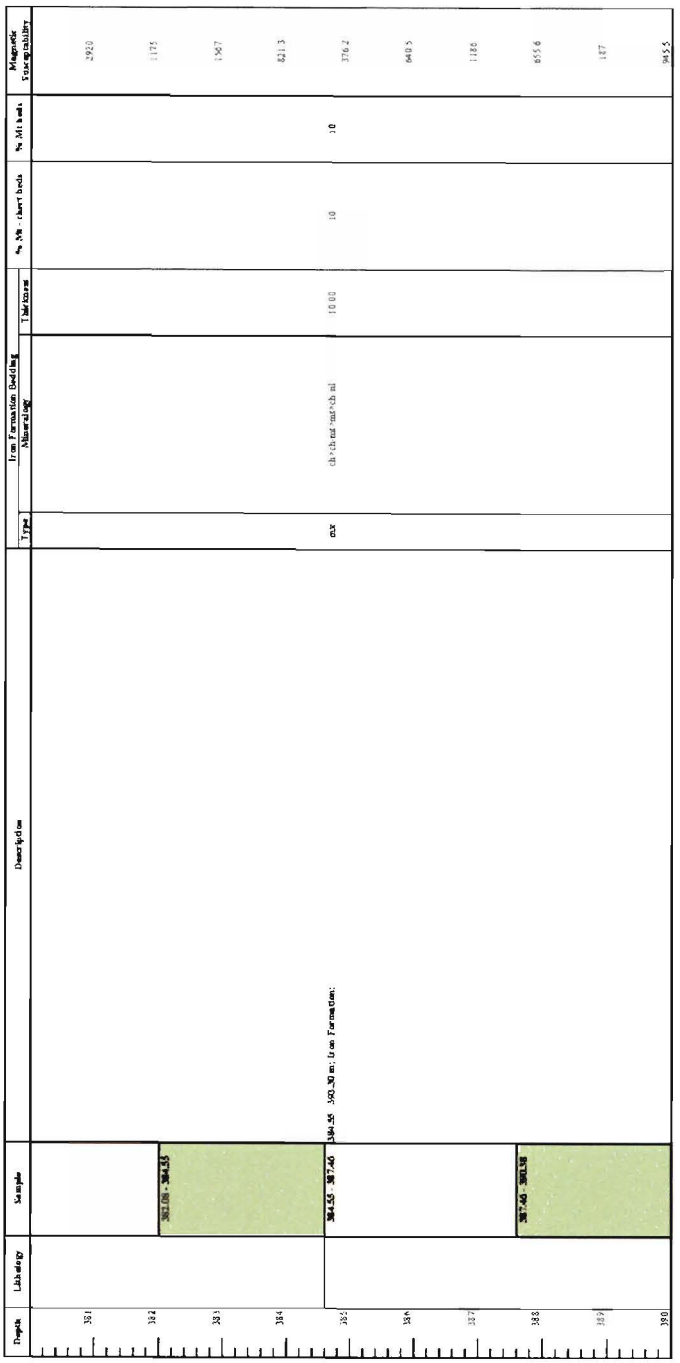

Drill Hole No. DDH-10-01
Total Depth 4+6 meters

Drill Hole No. DDH-10-01
Total Depth 446 meters

Depth	Lithology	Sample	Description	Iron Formation Bedding			% Mt chert beds	% Mt beds	Magnetic Susceptability
				Type	Mineralogy	Thickness			
		390.38 - 393.3							
391									533.5
392									1364
393									399.5
		393.3 - 395.58	393.30 - 400.15 m; Iron Formation:	aut	ch-mt>mt>ch	5	50	40	
394									935.7
395									820.8
		395.58 - 397.86							
396									481.2
397									404.4
		397.86 - 400.15							
398									1314
399									1276
400									1829

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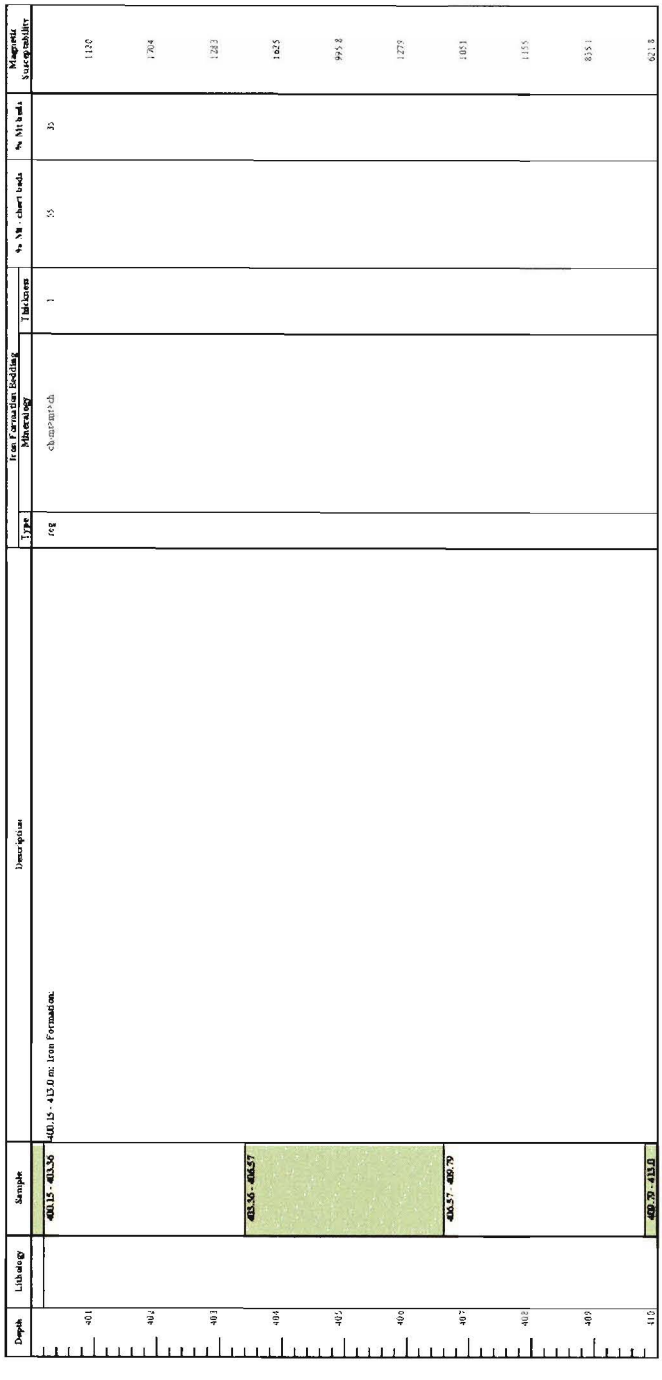
Drill Hole No. DDH-10-01
Total Depth 446 meters



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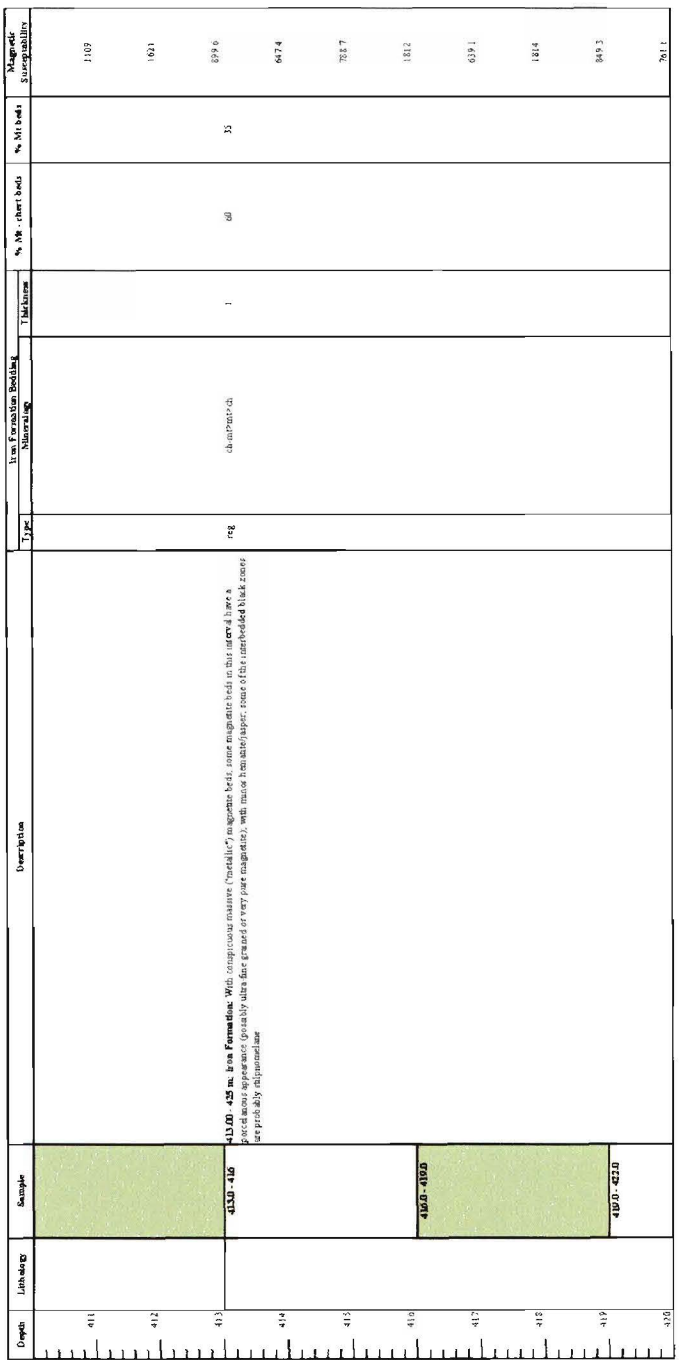

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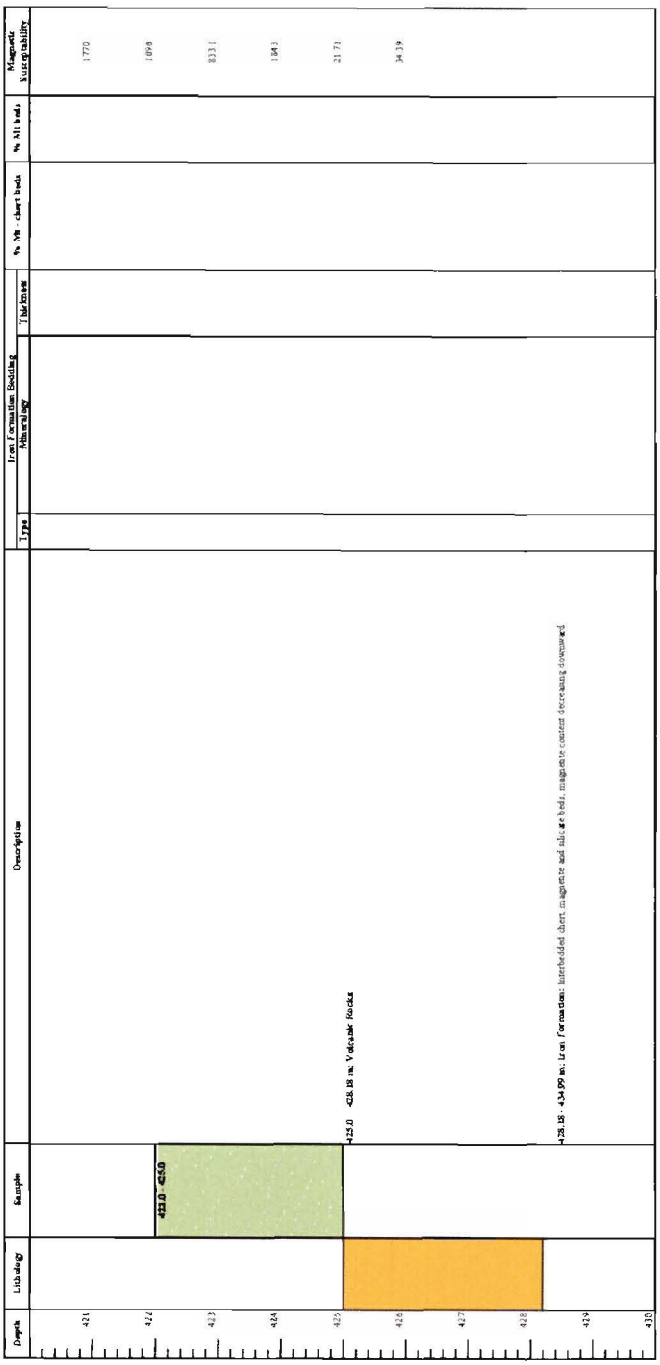
Drill Hole No. DDH-10-01
Total Depth 446 meters



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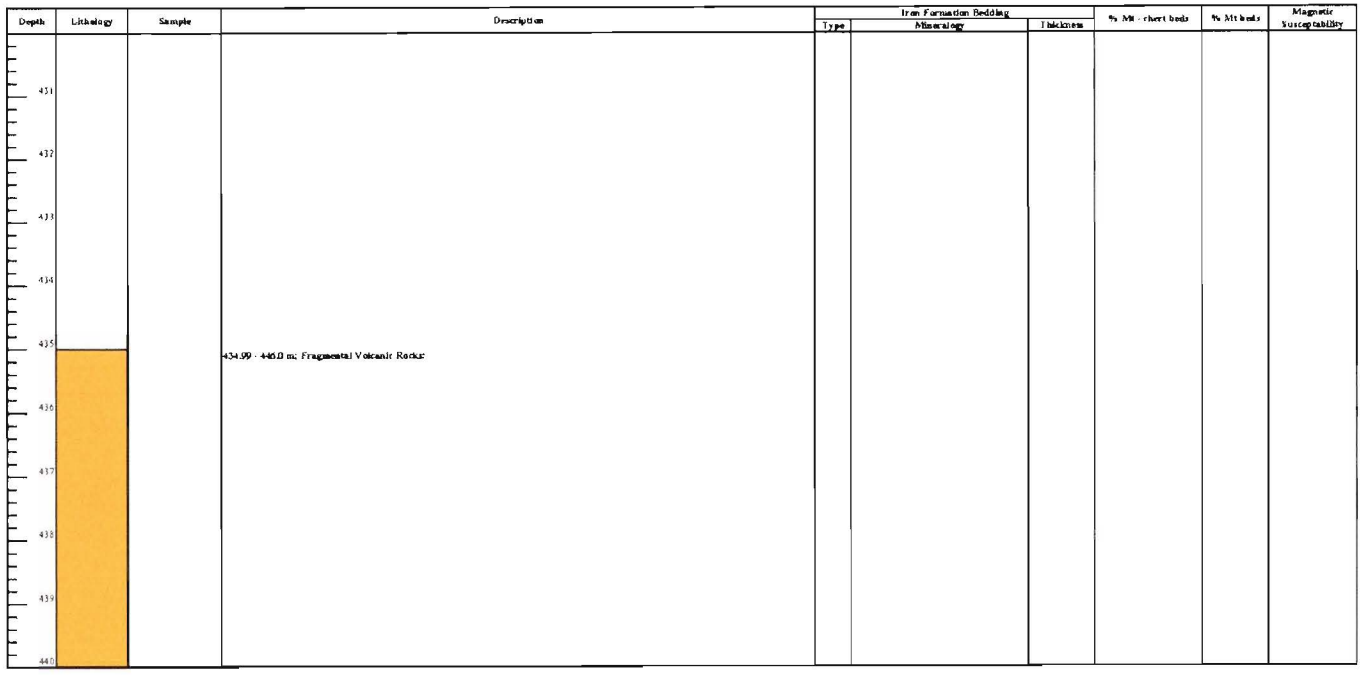
Drill Hole No. DDH-10-01
Total Depth 446 meters



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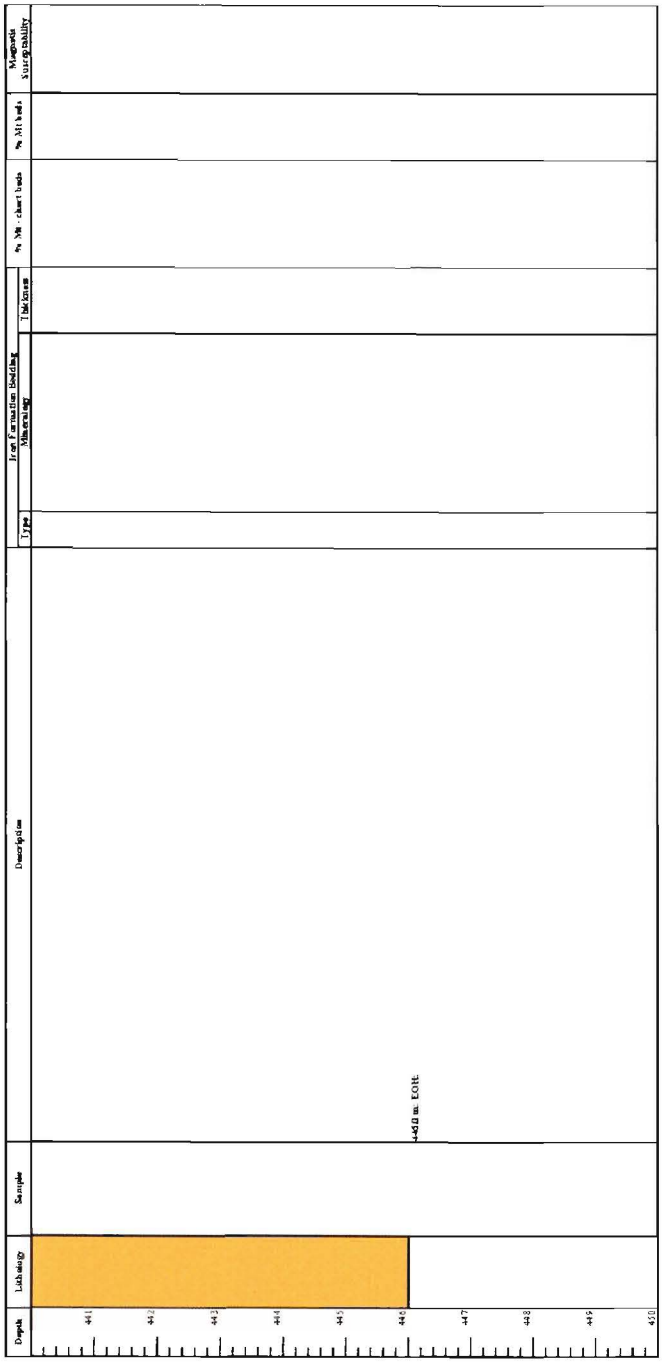

Drill Hole No. DDH-10-01
Total Depth 446 meters