Diamond Dr

010

Township of ELDORADO

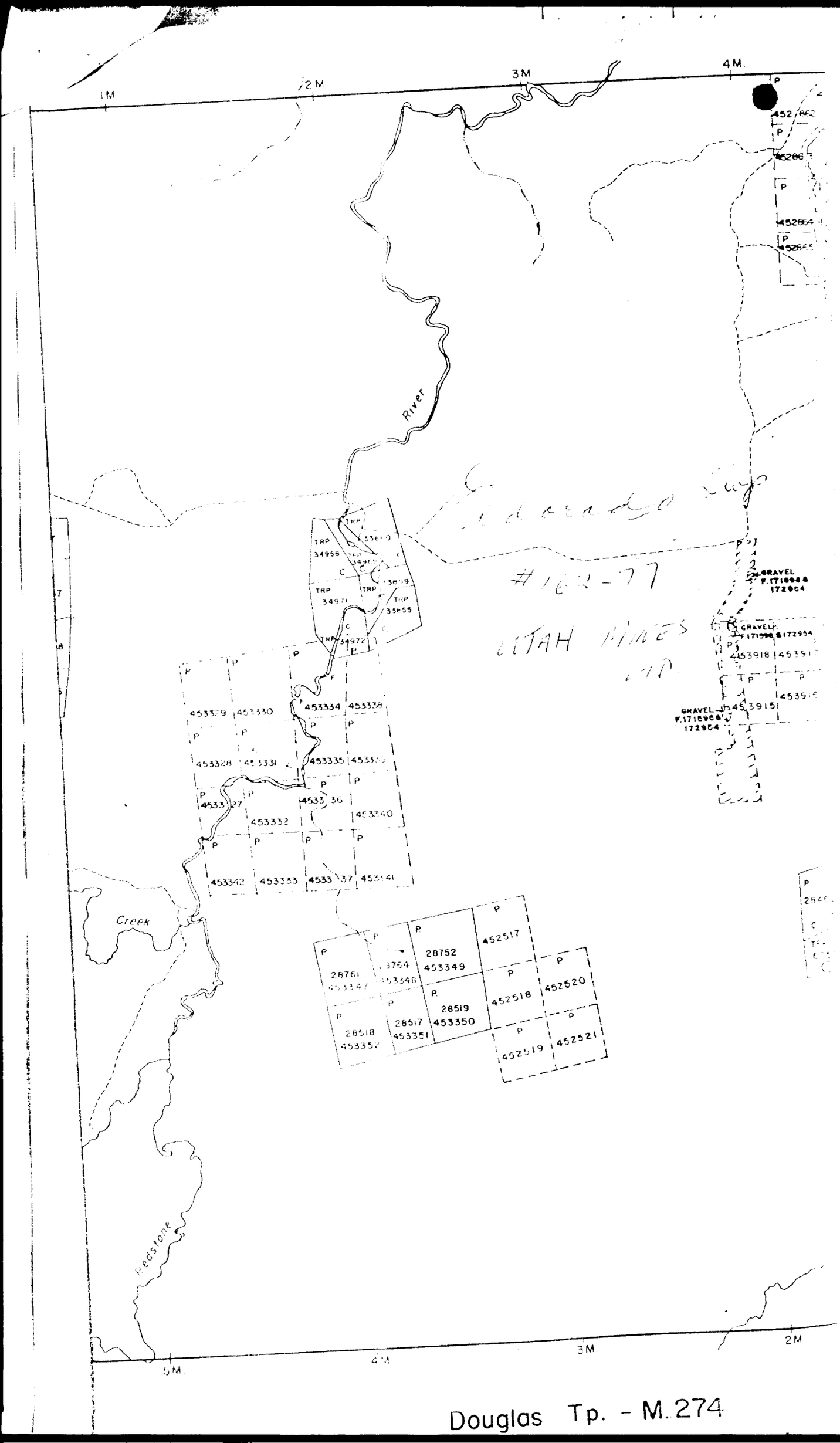
Report № 33

Work performed by: Utah Mines Limited

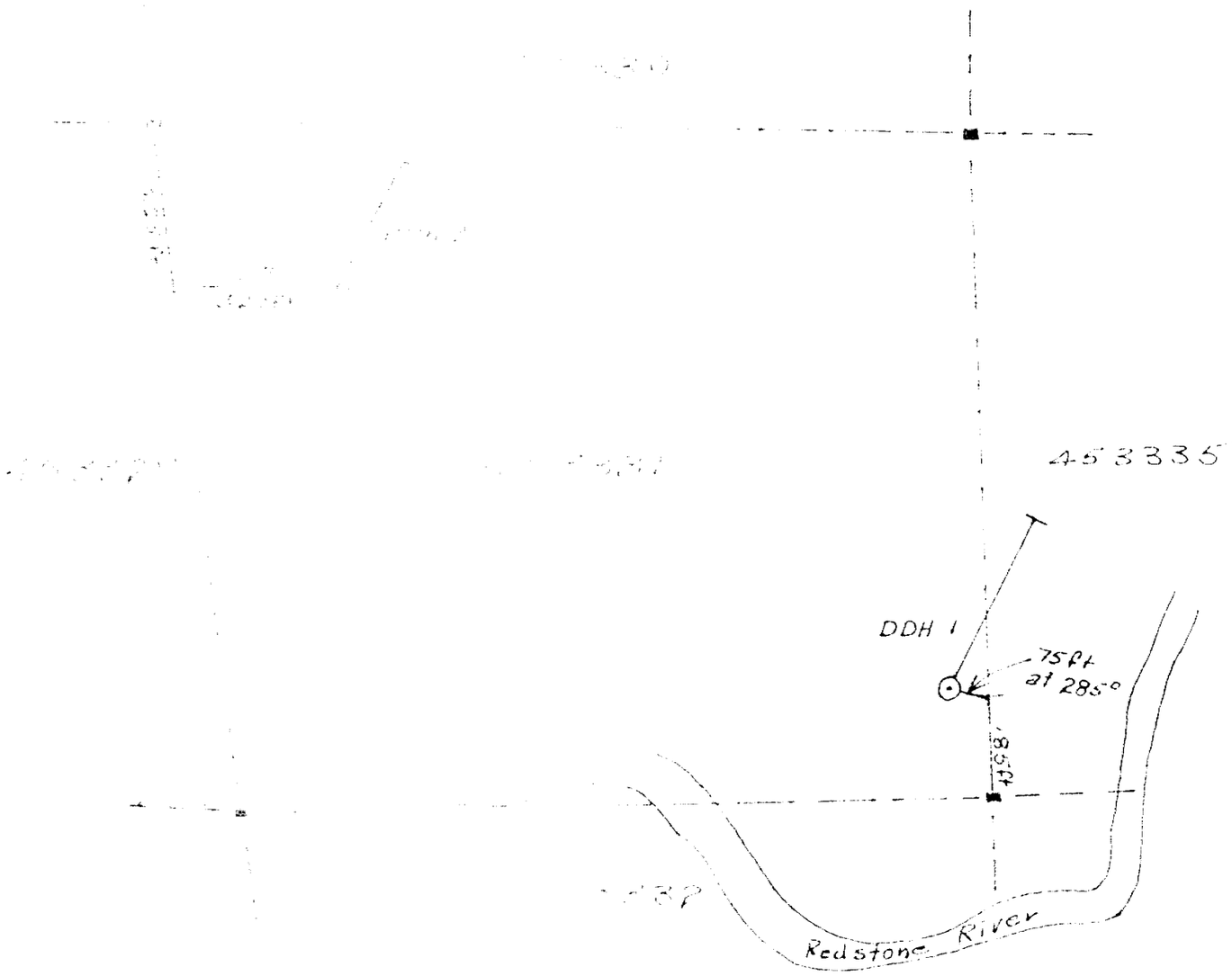
Claim №	Hole №	Footage	Date	Note
P 453331 & P 453335	1	526.0'	June/77	(1)
P 453331	2	423.0'	June/77	(1)

Notes:

(1) #362-77



Douglas Tp. - M.274



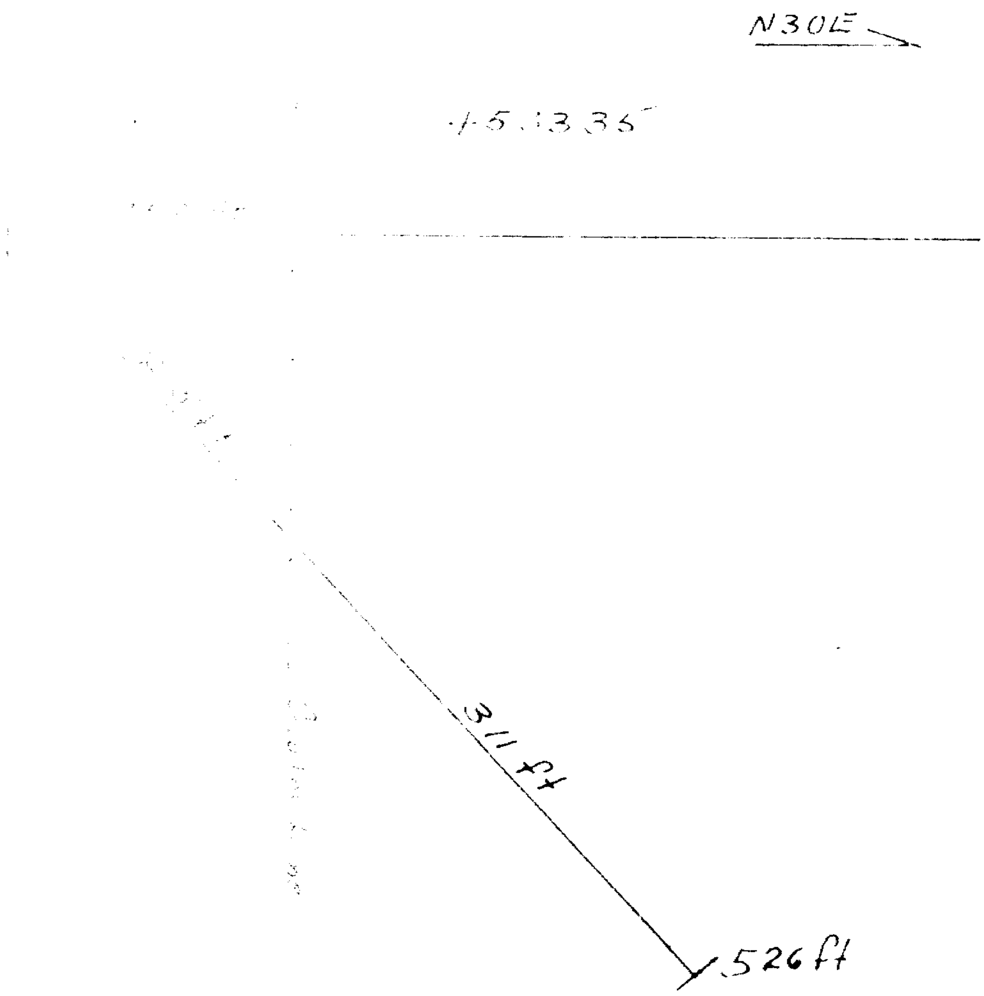
UTAH MINES LIMITED
EXPLORATION DEPARTMENT

PROPERTY

DDH #1 + #2

	FILE	MAP
	2A(G)	1 of 1

600



UTAH MINES LIMITED

EXPLORATION DEPARTMENT

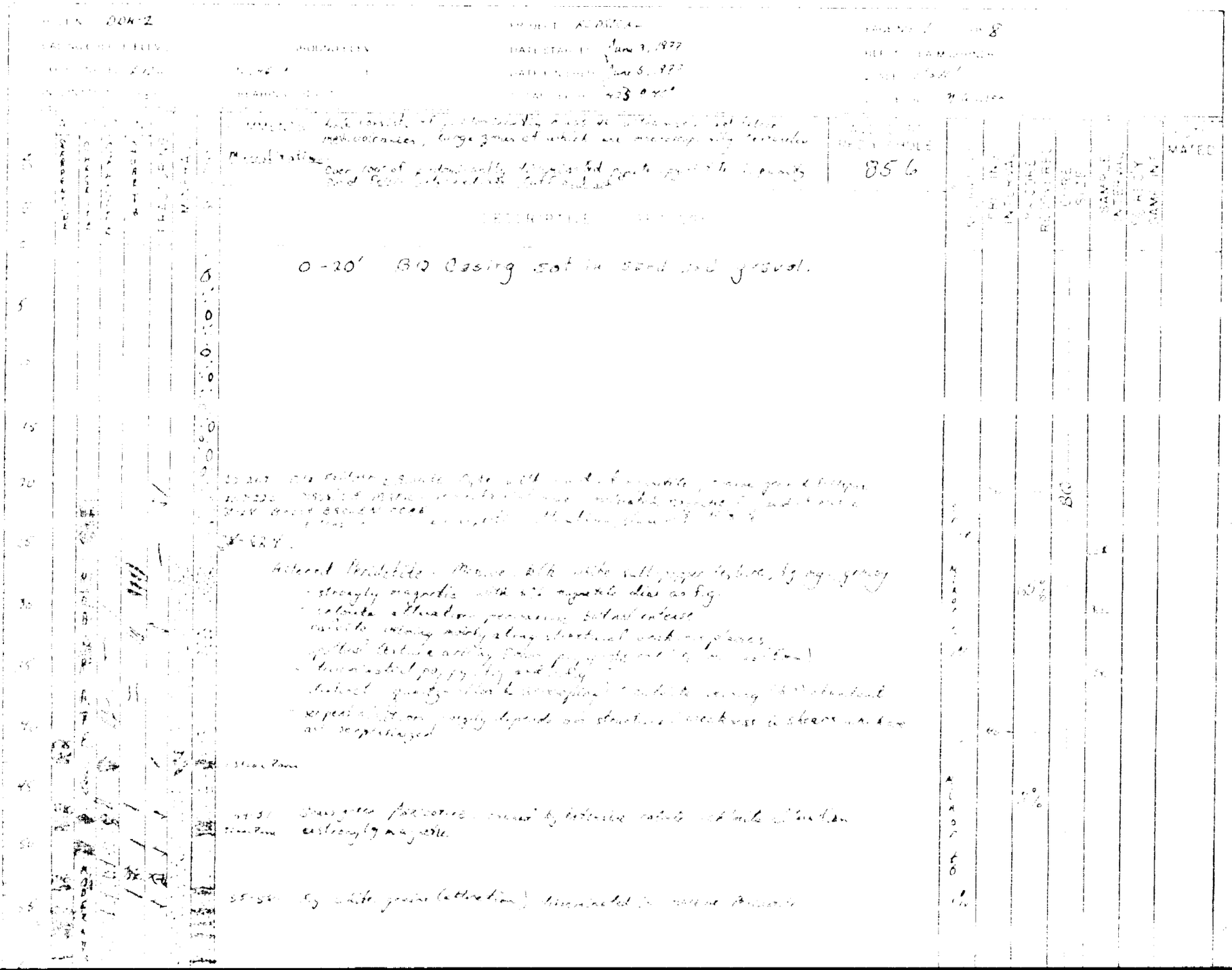
CANADA

REDSTONE PROPERTY

Section Through DDH#1

			N.T.S.	FILE	MAP
[illegible]			42A6	—	OF

.200



DDH-2 | REDSTONE | 2 of 8

R12W [illegible] 1460N | June 3, 1977 | [illegible]
[illegible] | June 5, 1977 | 1"=10'
-45° N30°E | [illegible] E 40° | M. Wilson

[illegible] increases with depth [illegible] appear to be [illegible] tops [illegible] [illegible]

856

DESCRIPTIVE [illegible]

62.4-63.8 [illegible] (Peridotite) [illegible]

63.8-65.0 [illegible] PERIDOTITE; silicified, mineralized with [illegible] pyrite

65-65.4 MASSIVE PERIDOTITE

65.4-74.0 [illegible] (ULTRAMAFIC) [illegible]
- possibly a flow top or break between flows; [illegible] (15-20%) and [illegible] of [illegible] calcite [illegible] disseminated [illegible]

[illegible]

75.0-83.5
Ultramafic Flow Sequence Magnetic
[illegible] developed spinifex at top [illegible] massive [illegible]
[illegible]
[illegible]
[illegible] spinifex developed [illegible]
[illegible] pyrite

[illegible] ULTRAMAFIC; massive black, [illegible] strongly magnetic
- as 63-73, [illegible] appears as flow

[illegible]
Ultramafic Flow Sequence [illegible] Magnetic
- pervasive chlorite alteration [illegible] fractures
- weak mineralization of visible pyrite [illegible]
- flow thickness varies from [illegible] to over [illegible]
- [illegible] grains [illegible] disseminated
- [illegible]

[illegible] Flow [illegible] and deformation (folding?)

[illegible] serpentinized massive peridotite with [illegible] 2% [illegible] alteration grains disseminated

[illegible] [illegible] spinifex texture ([illegible] - tremolite) well developed
- excellent texture

BQ

75%

85%

90%

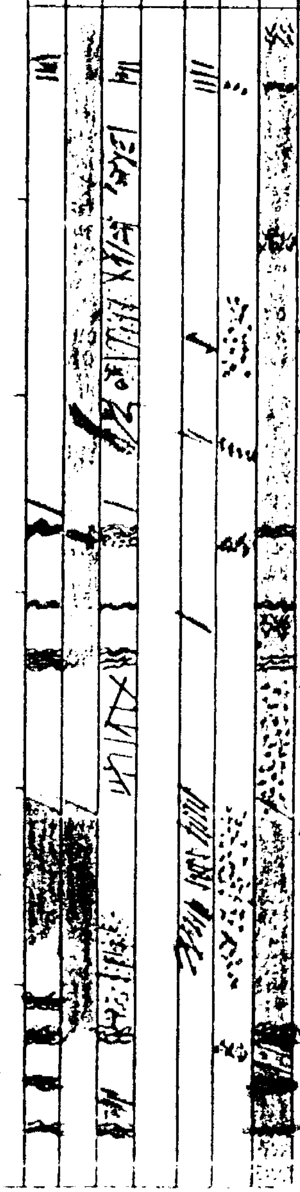
HOLE NO. DDH-2		PROJECT REDSTONE	PAGE No. 3 OF 5
CASING COLLAR ELEV.:	GROUND ELEV.:	DATE STARTED June 3, 1988	REF. TO CLAIM CORNER
COORDINATES L12W	N 1460N E.	DATE FINISHED June 5, 1988	SCALE 1" = 10'
INCLINATION -45°	BEARING N30°E	TOTAL DEPTH 423 e 40°	LOGGED BY Mattison

COMMENTS: Flows thicken, 10-20' but no noticeable increase in sulphide mineralization at base.

AVE. CORE RECOVERY: 85.6

Columns: SECTION | ALTERATION (SERPENTINE, CHLORITE, CALCITE, QUARTZ) | FRACTURING | MINERAL | GEOLOGY | DESCRIPTIVE GEOLOGY | CORE RECOVERED | SAMPLE INTERVAL | % RECOVERY SAMPLE INT. | ESTIMATED

Section depths: 120, 125, 130, 135, 140, 145, 150, 155, 160, 165, 170, 175, 180



DESCRIPTIVE GEOLOGY

120-150

ULTRAMAFIC FLOW SEQUENCES: MAGNETIC

- mineralization of pyrrhotite, if any, is concentrated at base of flow [illegible] massive rock as f.g.-v.f.g. disseminated grains
- calcite-serp along fractures with occ. py
- pervasive chloritic alteration characteristic

131-132: F.g. white alteration dissemination (minor <1%)

- occasional py cubes (5mm) dissemination

132-150

- Massive Peridotite; f.g. dk green-blk with [illegible] magnetite and pyrrhotite as fine to v.f.g. disseminated grains
  - pyrite is minor and chlorite alteration is moderately pervasive
- large interior section of flow, calcite in fractures with minor pyrite
- two occurrences of calcite-magnetite-py. [illegible] at 142 and [illegible] increase in magnetism over rest of section
- no ~~accumla~~ accumulation of magnetite or sulphides

shear

shear

shear: coin core

154.4-161.8

Feldspar-Hornblende-Quartz Porphyry Dyke:

- lt gry white, massive mg to c.g.
- white-pink ~~ora~~ orange feldspar crystals and hornblende [illegible] altered to chlorite
- calcite-zeolite-epidote veins (⅛") common while calcite [illegible] veins and occasional stringers

161.8-172.8

MASSIVE PERIDOTITE: weakly magnetic

- largely altered by pervasive serpentine, chlorite and calcite
- pyrite mineralization in strong serpentine zones
- schistosity highly variable; zone of deformation
- f.g. white alteration crystals diss. near shear zone

shear zone

172.8-173.9: Qtz-Plagioclase-Biotite (+Chlorite) Dyke; biotite phenocrysts in [illegible] f.g. matrix

shear zone

173.5-186.7: Qtz-Feldspar Biotite Dyke

Core recovered: 85% (120-132); 10% (145-154); 80% (161.8-172.8)

HOLE NO. DDH-2 | PROJECT REDSTONE | PAGE NO: 4 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: June 3, 1977 | REF. TO CLAIM CORNER:

COORDINATES L12W | N. 14ON E | DATE FINISHED: June 5, 1977 | SCALE 1"=10'

INCLINATION -45° | BEARING N30°E | TOTAL DEPTH: 428 @ 40° | LOGGED BY: M. Wilson

COMMENTS: Conductor: 195-204.7': Massive sulphide (pyrite) with minor pyrrhotite. Pentlandite eyes not evident within sulphide zone (less Nickel?)

AVE CORE REC'Y / HOLE: 85.6

SECTION	ALTERATION: Serpentine	ALTERATION: Epidote-Garnet-Calcite	ALTERATION: Calcite	ALTERATION: Quartz	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP INT	ESTIMATED
180										180					
185								180-186.7 Feldspar-Quartz-Biotite Dyke: m-c.g., massive, lt. grey orange • f.g. magnetite disseminated (1-2%); epidote-quartz and epidote-quartz-pyrite ± biotite envelopes							
190	Chlorite					Tuff		186.7-195 Altered Volcanic Tuff (Dacitic): Moderately pervasive Chlorite alteration • massive f.g. (lt. grey grn); calcite-pyrite veining abundant • po-py mixed on fracture-schistosity planes • sl.-mod. magnetic from po and minor magnetite	2%		95%				
195						Py		195-204.7 MASSIVE SULPHIDE: (within Rhyolite volcanic): Conductor • First 6" massive pyrrhotite; rest massive and colloform pyrite in siliceous rhyolite (granular & foliation)	95%				195		trace
200						Py		• colloform pyrite up to 1" diameter	90%	200			200		trace
205						Py		204.7-227.95 Mineralized Quartz Vein: white, sugary f.g. textured Pyrite and Pyrrhotite: Pyrite: v. minor colloform at 205.3, thereafter as massive veins (¼"), bands up to 1" ∠ c.a. and stringers (hairline to ⅛") - c.g. cubes common in veins and bands	40%		95%	BQ	205		trace
210						Py and Po			15%				210		trace
215						Po		Pyrrhotite: massive granular texture in bands, veins, stringers and irregular patches	20%				215		trace
220								Sulphides as monomineralic veins and stringers and polymineralic veins, stringers and bands. Occasional tar-calcite associated with veins and stringers.	40%	220			220	220.0	95%	3% Ni .8% Cu
225											95%		227.95		
230								227.95-229.8: Silicified moderately magnetic Volcanic Tuff: • f.g. lt-dk grey with biotite frgs (4mm); pervasive calcite-pyrite (vol)-chlorite veining	.5%	230			230.2	90%	trace
235								233-236.35 c.g. Qtz-Feldspar-Biotite dyke	5%				233.0	85%	1% Ni .5 Cu
240								236.35-240 Silicified Volcanic Tuff: Thinly banded (1") with alternating lt-dk grey bands. Fragmental f.g. with diss po:py; moderately fractured with Epidote (grn)-Quartz	nil				236.35		
245									10-5%	240				85%	1% Ni tr. Cu

HOLE NO. DDH-2
CASING COLLAR ELEV.:
COORDINATES: L12W
INCLINATION: -45°

GROUND ELEV.:
N. 1460N E.
BEARING: N30°E

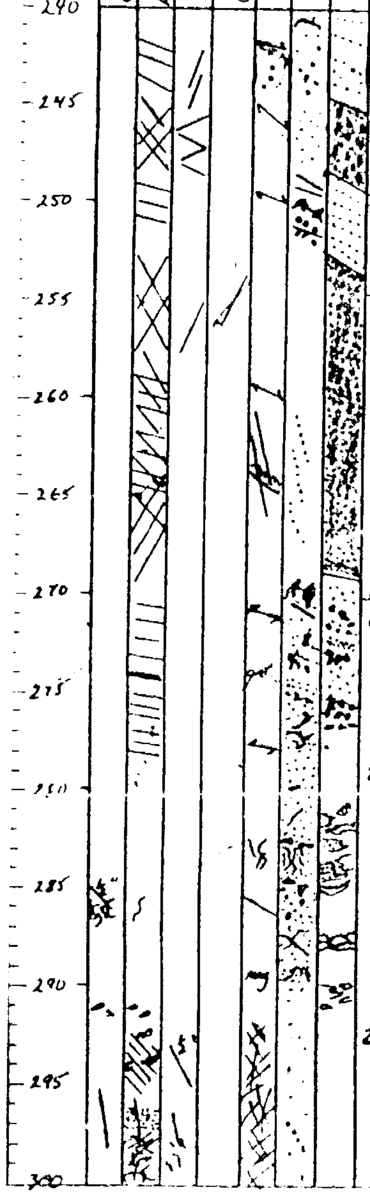
PROJECT: REDSTONE
DATE STARTED: June 3, 1977
DATE FINISHED: June 5, 1977
TOTAL DEPTH: 428 e 40°

PAGE NO. 5 OF 8
REF. TO CLAIM CORNER:
SCALE: 1"=10'
LOGGED BY: M. Wilson

COMMENTS: Epidote-Zeolite veining has either calcite or quartz associated, result quartz or calcite interior with epidote intermediate and zeolite enveloping. Often with po, py, tr. cpy on border contacts.
278.2-298:

AVE CORE REC'Y / HOLE: 85.6

Columns: SECTION | ALTERATION (Garnet-Epidote-Zeolite; Epidote-Zeolite-Calc.; Calcite; Quartz) | FRACTURING | MINERAL | GEOLOGY



DESCRIPTIVE GEOLOGY

240-245.1
Volcanic Tuff (crystal): siliceous, hornfels-altered f.g. massive lt. gry to dk grey
- po, py disseminated; po in irregular patches and veins (hairline to 1/8"); calcite on frcts.

245.1-249.3
C.g. Qtz-Feldspar-Biotite Dyke
60% K-spar + Biotite phenocrysts; minor magnetite; schistosity evident in lineation

249.3-253.4
Volcanic Tuff: massive, siliceous, f.g., dk. gry.
- c.g. po, py disseminated near lower contact; otherwise 1/4" veins and irregular masses assoc. to epidote alteration

253.4-269.0
Mg-Cg Qtz-Feldspar-Biotite Dyke
- calcite on hairline fractures; moderate epidote-quartz veining (hairline to 1/4")
- chill margin contacts (1")
- py, po diss. and flake on hairline calcite-fractures

269-278.2
Altered Volcanic FRAGMENTAL TUFF: f.g.-c.g. dk gry green and massive; siliceous
- lenticular frgs up to 1" long; qtz frgs (eyes) up to 3 mm. ± possible texture result of alteration
- irregular veins and bands of epidote-quartz (1/2")
- pyrite predominant on fracture surfaces; as grains + crystals disseminated (mg-c.g)
- po disseminated, irregular masses and veins

278.2-292
METASEDIMENTARY CRYSTAL TUFF (AND MASSIVE, TEXTURELESS ASH OR SEDIMENT PRECIPITATE)
- compositional change unnoticeable, remains predominantly feldspar + biotite (± chlorite) ± quartz except in epidote ± garnet ± zeolite ± quartz alteration zones which vary from weak to intense
- This is the beginning of a massive thick sequence which is in places completely altered to a porcelanitic type rock and where not altered remains f.g. dk gry massive and textureless
- it may be a Fragmental pyroclastic from 270-293 ? very wispy

Sulphides: pyrite: disseminated grains, occasional blebs and stringers; possibly restricted to particular bands
pyrrhotite: predominant, as disseminated grains, stringers and veinlets

292-
Altered METASEDIMENTS (TUFFACEOUS)
- baked and bleached (intrusive alteration) of epidote-zeolite ± calcite veining
- no sulphides in comparison to unit immediately above
- slightly chloritic at very base

Section (ft)	% Sulphides	Drilling Interval	% Core Recovered	Core Size	Sample Interval	% Rec'y Samp Int	Estimated
240-245	10%	240			240-245	75%	1% Ni, tr. Cu
245-249.3	nil to trace		80%		245-249.3		
249.3-253.3	10%				249.3-253.3	75%	1% Ni
253.3-269		260		BQ	253.3-269		
269-275	9%		98%		269-275	75%	.8 Ni
275-280	7%				275-280		1% Ni
280-285	5%	280	95%		280-285		Tr. Ni
285-290	2%	285	95%		285-290		Tr. Ni
290-300	trace	290-300			290		

HOLE NO DDH-2 | PROJECT REDSTONE | PAGE NO 6 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED June 3/77 | REF TO CLAIM CORNER:

COORDINATES L 12W | N. 1460N | E. | DATE FINISHED June 5/77 | SCALE 1"=10'

INCLINATION -45° | BEARING N30°E | TOTAL DEPTH 423 (+4') | LOGGED BY M. Gibson

COMMENTS Epidote-Zeolite-Calcite veins often carry irregular masses of pyrite and occasionally pyrrhotite.
Alteration of Dyke (320-326) indicates another later intrusive nearby.

AVE CORE REC'Y / HOLE 85.6

ALTERATION: CHLORITE | EPIDOTE + ZEOLITE | CALCITE | QUARTZ

FRACTURING | MINERAL | GEOLOGY

DESCRIPTIVE GEOLOGY

300-318.5
Altered tuffaceous FRAGMENTAL: increase of chlorite, esp in fragments: f.g-c.g - v.f.g massive
- intermediate composition with chlorite-epidote alteration predominant

Sulphide - mineralization
- consists of disseminated py, po as cubic crystals and grains
b) magnetite-py-po-cpy concentrations
? c) sulphide clasts & fragments (¼")
d) stringers and hairline veins

Alteration
- changes down hole from chlorite-epidote to epidote-zeolite-garnet ± quartz & calcite as approach intrusive

FRAGMENTS: predominantly altered but extensive variety from siliceous to chloritic
¼" to 2 inches

318.5-320
Chill margin (contact zone not defined)
- intensely altered but appears granitic-granodiorite

320-326
Feldspar-Qtz-Biotite Dyke:
- pervasively altered by epidote-zeolite veins (¼-½")
- biotite specks and clumps within m.g. feldspar-quartz matrix

326-
MASSIVE ASH OR LAVA SEQUENCE: weakly magnetic
- intermediate composition and largely macroscopically texturaless
- f.g-v.f.g. dark grey crystallinity with extensive homogeneity of plagioclase (alb?) (±epidote as alteration) with minor quartz (trace in zones)
- granular magnetic visible in minor amounts

Sulphides:
trace to nil pyrite

Alteration:
- upper part (326-342) largely restricted to within ¼" of veins but becomes progressively pervasive until 345-358 where alteration is 100% effective in bleaching and solidifying rock - porcellanitic
- lack of compositional variation supports massive homogeneity
- bluish green amorphous alteration in direct association: type of epidote?

100% Alteration

355-360: grading into crystal tuff of plag-qtz: predominantly massive bands of coarser recrystallized quartz
- increase in magnetite to moderately magnetic

SECTION	SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP INT	ESTIMATED
300	5%	300			300		
305	3%		90%		305		
310	1%				310		
315	trace				315		
320		320					
325			85%	BQ			
330							
335							
340	nil	340					
345							
350			95%				
355							
360							

HOLE NO. DDH-2
CASING COLLAR ELEV.: GROUND ELEV.:
COORDINATES L12W N. 1460N
INCLINATION -45° BEARING N30°E

PROJECT REDSTONE
DATE STARTED June 3/77
DATE FINISHED June 5/77
TOTAL DEPTH 423 @ 40°

REF. TO CLAIM CORNER
SCALE 1" = 10'
LOGGED BY M. Wilson

SECTION	ALTERATION (CHLORITE / Epid & cal & Calc & Sil / CALC / QUARTZ)	FRACTURING	MINERAL	GEOLOGY	COMMENTS	AVE CORE REC'Y / HOLE
						85.6

DESCRIPTIVE GEOLOGY

Con't 326-

- massive but distinguishable grains of quartz and magnetite within massive plagioclase-qtz groundmass
- zones of coarser textured material appear as black granular dots, composition unknown but partially magnetite
- otherwise ~~microscopic~~ macroscopically textureless

Sulphides: minor to trace
- noticeable in coarser phases of sequence and consist of pyrite, pyrrhotite and ~~minor~~ trace chalcopyrite

Alteration

360- Isolated patches of epidote-actinolite ± zeolite vary in size from f.g. to 1/4" globules and lense-like masses with actinolite cores.
- possibly represents totally replacement of fragments, probably biotite rich

Texture:

385-388: F.g. homogeneous, massive plagioclase-quartz with bands of recrystallized quartz and occasional lenticular lenses of black biotite ~~will~~ which do not appear to occur together

395-409.8
Alteration:
- progressively increases but not the same as other zones; composed of actinolite-epidote and zeolite
- intensity varies from weak to intense for no apparent reason

409.8-423
FELDSPATHIC GABBRO DYKE
- 3' chill margin of f.g. pyroxene-plag (Calcic)-olivine-apatite
- grades into mg.-c.g. plag-pyroxene (augite)-olivine
- pyroxene {110} occasionally good and colour dark brown; minor secondary alteration to hornblende + chlorite
- olivine - olive green granular masses; some alteration to magnetite + ?

SECTION	SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP INT	ESTIMATED
360		360					
365–375	trace		95%				
375		375			375		
375–380	?		90%				
380		380			380		
385–400			95%	BQ			
400		400					
405–420			95%				

Section depths: 360, 365, 370, 375, 380, 385, 390, 395, 400, 405, 410, 415, 420

HOLE NO. DDH-2 | PROJECT REDSTONE | PAGE NO. 8 OF 8

CASING COLLAR ELEV. | GROUND ELEV. | DATE STARTED June 3/77 | REF. TO CLAIM CORNER

COORDINATES L 12W N 14ON E | DATE FINISHED June 5/77 | SCALE 1"=20'

INCLINATION -45° | BEARING N30E | TOTAL DEPTH 423 @ 40° | LOGGED BY M. Wilson

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE 85.6	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP INT.	ESTIMATED
420													
					423 Hole stopped in massive feldspathic Gabbro dyke at 7:30 PM, June 5, 1977. Acid test showed 40° dip at end of hole.				95	BQ			

Log completed by Mike Wilson, June 16, 1977.

May 29, 1977
June 1977
SCALE 1" = 10'
DIP -45°
N26°E 42°
300
N30°E

ESTIMATED % RECY	SAMPLE INTERVAL	% RECY SAMP IN	ESTIMATED
89%			

DESCRIPTIVE GEOLOGY

0-36' RQ casing set in sand-gravel and boulder.

Massive dark green Peridotite; sl. magnetic and largely altered to chlorite fine grain to medium grain

40-50'
- pervasive calcification with associated magnetite grains disseminated throughout
- calcite in veins and as part of matrix
- pyrite [illegible] disseminated grains and .5-1.0 mm cubes

45' - [illegible] increasing downhole chlorite decreasing

506' Contact [illegible] dacite-rhyodacite volcanic light grey, fine grained and sericitic
- pyrite [illegible] chlorite-epidote patches; [illegible] of chalcopyrite - quartz
- [illegible] of epidote-chlorite causing [illegible] texture

546'
Massive [illegible] SERPENTIZED [illegible] (very), fg [illegible] ? [illegible] to ascertain
- pyrite disseminated [illegible] magnetite, pyrite [illegible] & calcite veins

trace | 100%
trace | 100%
38

HOLE NO. DDH-1
CASING COLLAR ELEV.:
GROUND ELEV.:
COORDINATES: N. E.
INCLINATION: -45°
BEARING: N30°E

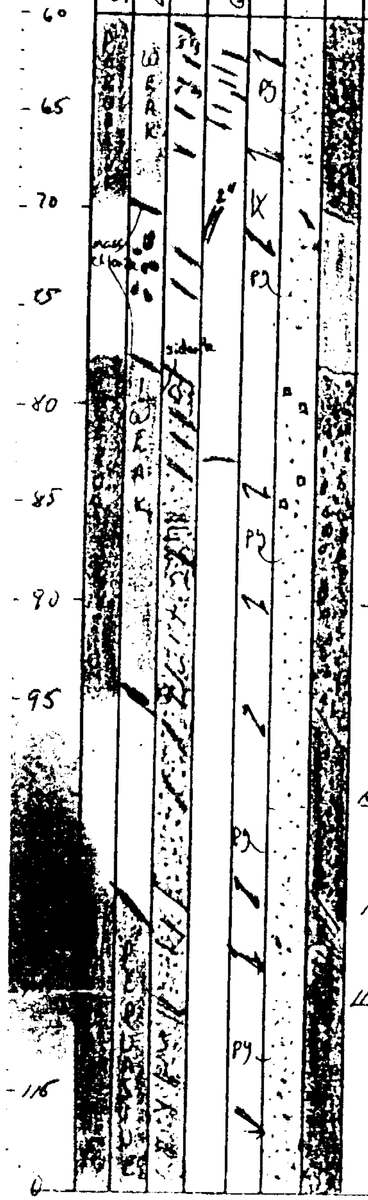
PROJECT: REDSTONE
DATE STARTED: MAY 29/77
DATE FINISHED:
TOTAL DEPTH:

REF. TO CLAIM CORNER
SCALE 1" = 10'
LOGGED BY: M. Wilson

COMMENTS:

AVE CORE REC'Y / HOLE: 89%

Columns: SECTION | ALTERATION (Serpentine, Epidote-Chlorite, Calcite, Qtz-Sericite) | FRACTURING | MINERAL | GEOLOGY | DESCRIPTIVE GEOLOGY | % SULPHIDES | DRILLING INTERVAL | % CORE RECOVERED | CORE SIZE | SAMPLE INTERVAL | % REC'Y SAMP INT | ESTIMATED



DESCRIPTIVE GEOLOGY

60-70.6' Altered Tuffaceous Volcanics: f.g.-m.g. sequences (3-4'); coarsening down hole
.1-.2 mm frags of qtz - plag or K-spar (→ epidote) + biotite specks (greywacke turbidite sequence?)
- pyrite disseminated as grains; v. minor chalcopyrite
- sl. to non-magnetite correspond to medium to f.g. zones

70.6-80
70.6-78.0 Qtz - Feldspar - Biotite (→ chlorite) Intrusive Dyke:

78.0-80.0 Altered Tuffaceous Volcanics (Crystal-Lithic Tuff)
- mafic to sl. intermediate composition

80-90' Altered Mafic (sl. intermediate) Tuffs: poorly developed bedding with minor magnetite disseminated as grains; possibly turbidite sequence with poor sorting
- py cubes and disseminated grains minor

90-100
90-95.2 as above, dark green and sl. magnetic
- py diss. as grains

95.2-100 Massive Lt. Grey Tuff or Greywacke; unsorted; bedding undectable
- frags small (.1mm) of qtz + feldspar; non-magnetic and unaltered

100-110
100-104.8
- as above with very minor py patches disseminated

104.8-110
Chlorite Schistose: thin (1/2") banded chlorite - epidote - albite (minor)
- massive, fine grained, light green alternating grey black bands

110-120
BANDING DISAPPEARING
111-120 MASSIVE DARK GREEN BLACK PERIDOTITE: extensive calcite - chlorite - serp alteration
117.5-120 Peculiar Hornfelsic texture caused by laths (1mm-3mm) of chlorite - serp replacement of olivine

Section	% Sulphides	Drilling interval	% Core recovered
60-70	trace to .5%	70	100%
70-78	trace	78	
80-90	trace	90	100%
90-110	trace	110	100%
110-120	trace to .5%		100%

HOLE NO. DDH-1 | PROJECT: REDSTONE | PAGE NO: 3 OF 9

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: MAY 29, 1977 | REF. TO CLAIM CORNER:

COORDINATES: L 4E N. 13+00 N E. | DATE FINISHED: June 1, 1977 | SCALE: 1"=10'

INCLINATION: -45° BEARING: N30°E | TOTAL DEPTH: 526' | LOGGED BY: M. Wilson

COMMENTS:

AVE CORE REC'Y / HOLE 89%

SECTION	ALTERATION: SERPENTINE	ALTERATION: ETHORE-CHLOR.	ALTERATION: CALCITE	ALTERATION: QTZ-SERICITE	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTIMATED
no								120-130 Massive Peridotite: dk green black, sl. magnetic - extensive calcite-chlorite-serpentine alteration - contained non-foliated (or micro-spinifex) texture caused by chlorite-serp	trace		100%	BQ			
130								130-140 pseudomorphs after olivine 130-130.6' Olivine decreases 130.6-134.0: Massive Peridotite non-magnetic with white-yellow alt'n grains diss (10%) 134-135.0: Mineralized shear zone: intensive serpentine 135-140: Massive Peridotite with white-yellow f.g. alt'n grains diss (15%)	1%	130			133 137	80%	Trace Cu, Ni
140								140-150 MASSIVE Peridotite fg. lt. green non-magnetic - no white-yellow alt'n crystals	trace		100%				
150								150-160 150-157: MASSIVE Peridotite: lt. grn f.g., increasing magnetite 157-160: Lt. Blk-grn, sl. magnetic with black calcareous needles	trace	150					
160								160-170: Massive Peridotite: lt grn to blk grn with corresponding magnetite content 162-163.6: White yellow fine grain alt'n crystals - non to sl. magnetic 167-168 - serpentinized shear zone 169-170 - Dip and serpentine increasing	trace		80%				
170								170-180: MASSIVE SERPENTIZED PERIDOTITE: fg. lt grn, sl. magnetic - calcite-pyrite (crystals) along schistosity planes	trace	170	90%				
180															

HOLE NO. DDH-1 | PROJECT: REDSTONE | PAGE NO: 4 OF 9

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: MAY 29, 1977 | REF. TO CLAIM CORNER:

COORDINATES: L 4E N. 1300N E. | DATE FINISHED: JUNE 1, 1977 | SCALE: 1"=10'

INCLINATION: -45° | BEARING: N30°E | TOTAL DEPTH: 526' | LOGGED BY: N. Wilson

COMMENTS: Three types of unidentified alteration: as a) crystal-grain form, 2) veins, 3) irregular masses. (hard-possibly garnet, as irregular masses and occ. crystals)

AVE CORE REC'Y / HOLE 89%

ALTERATION: SERPENTINE | CHLORITE-EP | CALCITE | QUARTZ-SERICITE

FRACTURING | MINERAL | GEOLOGY

DESCRIPTIVE GEOLOGY

180-190
Massive PERIDOTITE: extensively serpentinized, lt. green, f.g. and massive
184-185, 186-187: white-yellow f.g. alth grains (10%) disseminated
188-189 Wispy almost flow texture of serpentine
189-190: Calcareous, blk-grn (increased magnetite)

190-200
190-197 Siliceous (qtz-chlorite) f.g. intrusive dyke.
- possibly silicified volcanic zone ∴ of magnetite bearing bands

197-199 Massive Peridotite: calcareous, magnetic and f.g. blk-green.

200-210
200-202: Siliceous qtz-chlorite dyke, lt. gray, medium grained (feldspar?)
202-210: SERPENTINIZED PERIDOTITE f.g. massive; banded sl. magnetic
- possibly altered sediment or tuffaceous volcanic (?)
- abundant calcite veining parallel schistosity

210-220
210-214.3 Serpentinized Peridotite (?); banded lt grn-dk grn.

214-223
Mineralized Quartz Vein: intimate mixture of pyrite, pyrrhotite and pentlandite(?) of vuggy-vein nature
- mineral vein 70° to C.A.; schistosity of vein (weak) 20° CA

223-230
Silicified (80%) Peridotite: dk grn, f.g. massive
- massive (1") seams and veinstringers of py, po, (pn?)
228.4: Gradual transition into altered peridotite - f.g. shiny black

230-240 with white granular calcareous grains aligned // ↔ (f.g.).
PERIDOTITE: massive, fresh, f.g., m.g. irregular masses of granular white-red mineral associated with finely disseminated pyrrhotite // to banding // to schistosity
- occ silicified zones of 2-3 inches

SECTION	± SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP INT.	ESTIMATED
180	+ trace		90%	BQ			
190		190					
200	+ trace		90%				
210		210					
213	20%		90%		213		Tr Ni
223	3-5%				223		Tr Ni
230	1%	230	80%		230		Tr Ni
235					235		Tr Ni
240					240		

HOLE NO. DDH-1
CASING COLLAR ELEV.:
COORDINATES: L4E N. 1300N E.
INCLINATION: -45°
GROUND ELEV.:
BEARING: N30°E
PROJECT: REDSTONE
DATE STARTED: MAY 29/77
DATE FINISHED: June 1/77
TOTAL DEPTH: 526'
PAGE NO: 5 OF 9
REF. TO CLAIM CORNER:
SCALE: 1"=10'
LOGGED BY: M. Wilson.

ALTERATION: SERPENTINE | CHLORITE-EPI. | CALCITE | Quartz-Sericite; FRACTURING; MINERAL; GEOLOGY

COMMENTS: ORANGE-RED VEINS, later Followed by calcite. Colour, hardness (>6) warrants analysis.

AVE CORE REC'Y / HOLE: 89%

DESCRIPTIVE GEOLOGY

240-250
MASSIVE PERIDOTITE: sl serp., f.g. dk.grn-blk
±½" banding of dk grn - dk black // schistosity
- garnets restricted to dk. black bands
- yellow-brown calcite veining = ⅛"
py, po, mag diss. as grains in minor-trace amounts

250-260
251-258 HORNFELS TUFF (Intermediate): f.g. lt. gray
- silicified quartz-plag-chlorite (porphyroblasts)
- veining minor but 50° to bedding
258-260 Gradational transition into Peridotite

260-270
260-264: PERIDOTITE: pyroxenitic at base; blk grn, f.g. sl.mag
- 1-2% Pyrrhotite, pyrite disseminated
264-269: HORNFELS INTERMEDIATE VOLCANIC (as above, textured different)
- particular globular texture in 1" bands: minor sulphides

269-280
MASSIVE PERIDOTITE: Dk grn-blk and f.g.
- alternating patches of lt. gray white (pyrrhotite bearing) and f.g. green chloritic zones
275' becoming increasingly silicified changing colour to lt. gray v.f.g. - possibly intermediate felsic massive volcanic

280-290
ALTERED PERIDOTITE: v.f.g., fractured (moderate)
284.0-284.6: Contact with intensely fractured (chlorite-calcite-epidote) altered dacite-rhyolite brecciated volcanic.
287-292: MASSIVE SULPHIDE: fine grain pyrrhotite and pentlandite with intimate chalcopyrite masses; f.g. to m.g. pyrite

292-300
ALTERED DACITE: f.g. massive
- intense to pervasive fracturing (chl-calc-epidote)
- minor to trace py, po, cpy

SECTION	SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP INT	ESTIMATED
240–250	trace to 1%	250	90%	BQ	240–245, 245–250		Tr Ni, Tr Ni
250–270	trace to 1%	270	80%	BQ	250–255, 255–260, 260–265, 265–270		Tr Ni, Tr Ni, Tr Ni, Tr Ni
270–287	1% to 2%		80%	BQ	270–275, 275–280, 280–287		Tr Ni, Tr Ni, Tr Ni
287–292	100%	290		BQ	287–292		1% Ni .6% Cu
292–300	trace to 1%		90%	BQ	292–300		Tr Ni

HOLE NO. DDH-1
CASING COLLAR ELEV.:
COORDINATES: L 4E
INCLINATION: -45°

GROUND ELEV.:
N. 1300 E.
BEARING: N30°E

PROJECT: REDSTONE
DATE STARTED: May 29, 1977
DATE FINISHED: June 1, 1977
TOTAL DEPTH: 526' @ 42°

PAGE NO: 6 OF 9
REF. TO CLAIM CORNER:
SCALE: 1"=10'
LOGGED BY: M. Wilson

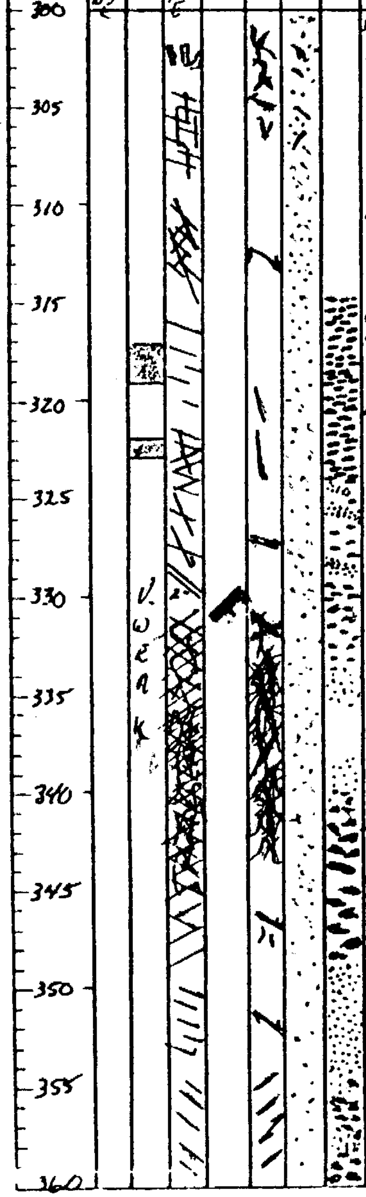
SECTION | ALTERATION (SERPENTINE, CHLORITE, CALCITE, QUARTZ) | FRACTURING | MINERAL | GEOLOGY

COMMENTS: Alteration predominate feature is bleached (lt. gry white and silicified.

AVE CORE REC'Y / HOLE: 89%

DESCRIPTIVE GEOLOGY

SULPHIDES | DRILLING INTERVAL | % CORE RECOVERED | CORE SIZE | SAMPLE INTERVAL | % REC'Y SAMP INT | ESTIMATED



30% alt.

300-314: Altered Massive Dacite: silicified and moderately fractured; f.g. lt. gry
- zones of qtz-hblde-sulphide clasts (5mm); sulphides v.f.g., disseminated, hairline veins and clasts (<5mm)

10% alt

310-314: increased calcite veining (hairline), occasional po, py grains associated
- fracturing weaker, mineralization similiar but weaker

314-349: Altered FRAGMENTAL Volcanic: possibly silicified mafic fragmental as chloritic zones (DACITIC?) sl. magnetic appear least altered

60% alt

- fragments lenticular (squeezed) 1"-2" long; dark, f.g., sl. chloritic
- matrix predominantly silicified and f.g. grained with minor f.g. magnetite

20% alt.

- chloritic zones appear least altered; more increased magnetite
- occasional alteration f. grains (lt. brn white) on fracture surfaces; up to 20%
- zones of pepper texture (chl-epid 1-2mm) about 1"

80% alt.

Sulphides: weak, f.g. and unidentifiable; occasional traces of po, py; rare cpy in qtz-calcite veins
minute py, po in hairline calcite veins, commonly dark (tar?)

Calcite Veins:
- coating fracture surfaces, predominant as hairline veins, occasional stringers
- magnetite-calcite veins few; ¼" // schistosity

90% alt.

Alteration:
- intensity varies with texture - causes bleaching (lgry to lt. brn white (90-100%)
- definite silicification, recrystallization features not evident
- weak chlorite alteration; f.g. lt. brn white on fracture surfaces
- magnetite common in calcite veins

coarse Fragments

Coarse FRAGMENTS:
- barely visible (possibly caused by alteration)
- up to 3inches in width; composition similar to matrix; colour sl. drk grey
- predominantly lenticular wedges

all (hornfels?)

349-354: Altered Tuffaceous Volcanics: (weak)
- small (1-5mm) tuffaceous clasts of chl-qtz-magnetite ± biotite within silicified altered f.g. massive lt. gry matrix; hairline calcite-magnetite ± tar veins
- sl. magnetic; occasional py to cpy

354-364
Altered Tuffaceous to Fragmental Volcanics; intermixed zones of tuff and fragmental, generally coarsening downwards
- Fragments up to 4" wide; frgs more mafic than matrix
- trace sulphides

Interval	Sulphides	Drilling Interval	% Core Recovered
300-310	trace	310	90%
310-330	nil	330	90%
330-350	trace to nil	350	90%
350-360	nil		

HOLE NO. DDH-1 | PROJECT: REDSTONE | PAGE NO: 7 OF 9

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: MAY 29, 1973 | REF. TO CLAIM CORNER:

COORDINATES: L4E | N. 1700 N | E. | DATE FINISHED: June 1, 1973 | SCALE: 1" = 10'

INCLINATION: -45° | BEARING: N30°E | TOTAL DEPTH: 526' @ 47° | LOGGED BY: M. Wilson

COMMENTS: Calcite-quartz-opaque veins commonly contain sulphide grains if present.

AVE CORE REC'Y / HOLE 89%

ALTERATION: SERICITE | CHLORITE | CALCITE | QUARTZ | FRACTURING | MINERAL | GEOLOGY

SECTION | DESCRIPTIVE GEOLOGY | % SULPHIDES | DRILLING INTERVAL | % CORE RECOVERED | CORE SIZE | SAMPLE INTERVAL | % REC'Y. SAMP. INT. | ESTIMATED

360 - 370.4 Altered Pyroclastic Volcanic (Fragmental-Tuffaceous)
- Lt. grey aphanitic, massive, sl. magnetic
- trace sulphides (py, po); minor magnetite; calcite occ. along fractures
- alteration stronger but fragments still oligomictic and more mafic than matrix
- no bedding evident

trace

370.4 - 378.0
40% Altered Massive Volcanic: sl. mag., f.g. Lt. grey
- calcite-py ± cpy ± po (minor) coating fractures (minor)
- calcite-qtz + opaque veins at 374.8

370

378.0 Chunky core with no alteration evident

378 - 401.0
40-50% Altered tuffaceous Volcanic (Intermediate)
- massive to mg. (5mm) sl. more chl+bio (mafic) than matrix
- matrix however is siliceous (silicified?)
- sulphides predominantly as diss. cpy, py and po, cpy stringers and irregular masses
- occasional calcite-quartz-opaque veins and stringers
- 393.0 - calcite hairline fracture filling veins becoming increasingly abundant
- rock is predominantly texturelets expect at 394.6'-393 where it appears to be altered fragmental pyroclastic
- colour changes to ~~darker~~ darker grey indicating less alteration of one type while increased calcite veining result of dyke

MINOR | 70%

380

401 - 413.6
Quartz - Feldspar - Biotite (±Chlorite) Dyke
(60%) (30%) (10%)
- Lt-dk. grey, massive, Medium-coarse grain (Porphyry)
- calcite-py on fracture-schistosity planes

trace | 85%

410

413.6 - 420
MASSIVE FRAGMENTAL PYROCLASTIC: VERY COARSE; 30-40% Altered:
- strong fracturing at 45°, 30°, 20°, filled with calcite, calcite-chlorite
- fragments (1-2" qtz-bio) fractured with hair line veins of qtz-chlorite (sep.d) ±calcite
- fg disseminated pyrite with po(?) along fractures

trace | 90%

BQ

HOLE NO. DDH-1

CASING COLLAR ELEV.:

COORDINATES: L 24E N. 1200' N E.

INCLINATION: -45°

GROUND ELEV.:

BEARING: N30°E

PROJECT: REDSTONE

DATE STARTED: May 29, 1977

DATE FINISHED: June 1, 1977

TOTAL DEPTH: 526' @ 42°

REF. TO CLAIM CORNER:

SCALE: 1" = 10'

LOGGED BY: M. Wilson

COMMENTS: Alteration decreasing until virtually at 435, whereupon calcite-chlorite decreases.

* Ultramafic fragmental at 476-478 appears unaltered, possibly the fragmental sequence of hole is altered ultramafic

AVE CORE REC'Y / HOLE: 89%

Columns: SECTION | ALTERATION (Chlorite, Calcite, Quartz) | FRACTURING | MINERAL | GEOLOGY | DESCRIPTIVE GEOLOGY | SULPHIDES | DRILLING INTERVAL | % CORE RECOVERED | CORE SIZE | SAMPLE INTERVAL | % REC'Y SAMP. INT | ESTIMATED

DESCRIPTIVE GEOLOGY

420 - 435.6

MASSIVE FRAGMENTAL PYROCLASTIC: as before (413-420)
- lt. gry to lt. brn with varying degrees of alteration (silicified, bleached)
- occasional calcite-qtz-opaque veins (1/8-1") // fracturing and carrying minor sulphides of py, po (fine grain and border positioning)
- chlorite-qtz ± calcite hairline to 1/8" veins (chlorite-prehnite)
- fragments continue to be fractured with hairline calcite-chlorite or quartz veins
- intense alteration zones light brown and essentially textureless

(30% alt. / 70% alt. / 80% alt.)

435.6 Contact: 3-5" of Mineralization
Po, cpy as irregular masses in calcite, quartz veins and as disseminated f.g.

Sulphides: trace — % Core Recovered: 90%

435.6 - 446.6

CHLORITIC MAFIC VOLCANIC FLOW: Possibly Peridotite Flow
- appears to be 2 flows 435-441, 441-446.6; breccia base and top with massive chloritic interior; 2nd flow silicified and texture destroyed essentially
- magnetic moderately and weak-moderate pervasive chlorite

(silicified 20-30%) 445-446.6: Contact Zone Mineralization:
Po predominantly as irregular masses and disseminated; partially ass. c calcite-qtz vein

Sulphides: trace — % Core Recovered: 80%

446.6 - 447.6 MASSIVE CHLORITIC F.G. ANDESITE DYKE

447.6 - 465.6

MASSIVE AND MAFIC VOLCANIC FLOWS:
- variable length of flows and breccia zones; top breccia moderately pervasive calcite
- weakly chloritic to moderate depending on massive or breccia
- trace to nil py, po; associated with calcite-qtz-opaque veins
- hairline to 1/8" calcite veins, stringers thinner
- pyrite-calcite on fracture surfaces
- moderately magnetic

Sulphides: trace — % Core Recovered: 85%

(silicified 70%)

465.6 - 480

Ultra-MAFIC TUFFACEOUS AND FRAGMENTAL (20%) Volcanics: PERVASIVE CHLORITE-CALCITE
- predominantly lithic tuff of chlorite-calcite ± epid. clasts (5mm) with frags of chl.-bio (3inches)

472-475 = silicified approximately 20%

*476-478.5 Ultramafic composition (dk. grn; magnetic) of matrix and fragments, strongly calcitized

Sulphides: 6 1% — % Core Recovered: 90%

becoming increasingly silicified

Section depths: 420, 425, 430, 435, 440, 445, 450, 455, 460, 465, 470, 475