

Company AMAX Potash Limited
 Mining _____
 Division Omineca
 Geographic _____
 Coordinates _____

Project #515
 Property Lennac Lake
 Started March 27, 1974
 Completed March 31, 1974
 Logged by C.J. Hodgson

Bearing _____
 Inclination -90°

 Depth 606'

Sheet 1 of 4 Hole No. _____
 Coordinates _____
114+00N
80+00E
 Altitude 15' above
 lake

LL 74-2

Footage	Core Rec	% Rec											Remarks	
														0-26 Casing
														26-298 Dull grey andesite, variable texture from fine grained equigranular to porphyritic. For the most part fragmental (flow breccia - no foreign fragments).
														- Well fractured, with quartz veins (+ py, ep, trace mag, trace cpy) and pyrite veinlets. Pyrite and epidote also occurs in disseminated grains and clots.
														- Quartz veins 1%, 1 mm - 2 cm, average 1-3 mm. Commonly drusy. Commonly low angles to CA. Py 3-5%, Py/cpy \geq 5/1, epidote 2%
														Rock is reasonably competent to 150'
														28' looks like K-feldspar associated with py-ep vein
														32.5' traces moly in 1/2" quartz vein
														38.5-39' chloritized plagioclase porphyry fragments (dyke?) at 75° to CA
														43-48' Blocky. Calcite veins on fractures.

170 172220

Footage Core
Rec Rec

Remarks

323-370 Andesite, with BFP dykes

Blocky and chloritized, with minor shears at 324.5', 328-330', 342.5'.

BFP dykes at 325.5 (6"); 332-333 (lower contact 45° to CA); 342.5-347; 351.5-353; 355.5-359. 1% quartz veins with epidote, pyrite, minor magnetite. Pyrite 1-3%

354' 2" quartz-K-feldspar-epidote-pyrite vein 80° to CA

368-370' Gouge zone at lower contact

370-384 BFP, dark grey, weakly chloritized

C4. 1% quartz veins
1/2 - 1% sulphides, pyrite >> chalcopyrite

374' 3/8" quartz vein 20° to CA, with selvage of moly, minor chalcopyrite

384-408 Andesite

C4. 3% sulphides (py/cpy = 5/1), 1% quartz veins, 1/2% epidote. 396-401' - Cpy, py in 1/2" quartz vein at 0° to CA. 403' - 1/2" quartz vein with moly.

408-415.5 BFP, fresh

C4. 1% sulphides (pyrite >> chalcopyrite)
Upper contact 35° to CA

Sheet 3 of 4

Footage	Core Rec	% Rec												Remarks	
															415.5-521 Andesite breccia. med-dark grey mottled. 1-3% quartz veins with pyr, cpy, epidote, some with minor moly (e.g. 429', 483', 489'). Many of the larger quartz veins (> 1/4") are 0-20" to CA. Sulphides approx. 3% (py/cpy approx. 3/1) 440' - 1/4" cpy seam 10" to CA.
															521-534 - BFP Pale green clay-sericite alteration of feldspar Rare quartz veins 528' 1/2" vuggy quartz vein with moly.
															534-606 - Andesite tuff breccia, greywacke, dull grey-green 1-2% quartz veins, 2-3% sulphides, pyrite >> cpy
															538-547' Fine grained, volcanic greywacke, locally banded at 80" to CA
															547-590' Andesite breccia (flow breccia?) same as 415.5-521'
															590-606' Andesitic tuff-breccia with greywacke matrix. Some banding at 75" to CA 1/2% disseminated epidote throughout. Chloritized throughout. Black chlorite especially apparent adjacent to hairline quartz seams.
															606 END OF HOLE
															C J Hodgson P Eng

Rec Rec

REMARKS

182-191' Moderately sericitized

187-191' Andesite inclusion. Fine grained secondary biotite, 10% quartz veins

CU

226-227.5 Biotitized breccia with BFP andesite fragments. Felted biotite, py, cpy disseminated in matrix. Intrusive breccia, marginal to late-stage porphyry dike.

227.5-456 Post-mineral porphyry (PMP)

227.5-234' Intense green sericite alteration of plagioclase

234-235' BFP inclusion with quartz veins

CU

PMP is typically unaltered, darker grey than BFP with 25% plagioclase phenocryst to 1 cm, 3% biotite phenocrysts to 1 cm, in 65% dull grey aphanitic matrix.

Alteration is minor white kaolinization of plagioclase adjacent to fractures, and green sericitized zones adjacent to shear zones. Minor quartz-K-feldspar vein are present.

Rare inclusions of BFP andesite < 1/2% sulphides, py = cpy. Disseminated and on fractures

335' 2" quartz vein with K-feldspar, minor moly

370.5-372.5' Weak shear zone - kaolinized

Sheet 3 of 6

375' 6" BFP inclusion

395' 8" Andesite inclusion

388-407' Calcite filled fractures about 1 per foot

408-456' Variably sericitized, with several major gouge zones at 417-418, 428-437, 441-443, 455-456.

456-477 Andesite
Upper contact is shear zone

458-461.5' -

Skarn-type mineralization with abundant ep, mag, py, cpy, tapering off at depth towards 461.5'. Sulphides are particularly abundant between 458.5-459.5' (10% cpy, 15% py).

Section is very blocky. Gouge at 472.5-473.5'. Good quartz vein stockwork, 5-8% quartz; sulphides approx. 2% outside skarn section (py/cpy approx. 2-3/1).

Section is quite bleached

477-506 PMP, as above. Minor BFP inclusions. Minor quartz veins, $\leq 1/2\%$ sulphides (py \approx cpy), in quartz veins, hairline seams, disseminated

476.5-482' Gouge

482-488' Moderately sericitized

Hole No. 3
Sheet 4 of 6

Footage	Core Rec	% Rec	Remarks
			CU, <u>506-509</u> BFP 5% quartz veins, 2% sulphides (py ≈ cpy)
			<u>509-519.5</u> PMP, as above BFP inclusions at 515.5', 517.5'
			<u>519.5-523</u> Andesite, porphyritic, blocky, 5% quartz vei
			<u>523-534</u> BFP 5% quartz veins to 1/2", mainly 70-80° to CA commonly with K-feldspar selvages
			CU <u>524-524.5'</u> Sericitized shear zone 1-2% sulphides py ≈ cpy
			<u>534-585.5</u> Andesite, dark grey
			534-542' Veryfine grained (greywacke?)
			542-585.5' More normal fine grained subporphyriti andesite Quartz veins 2-3%; sulphides, 3% (py/cpy approx. 5/1)
			CU, Epidote up to 5%. Irregularly distribut in patches, quartz veins, and with pyrite along seams.
			571-571.5' PMP dyke 25° to CA, 1-2% disseminated epidote
			CU <u>585.5-608.5</u> BFP, moderate clay-sericite alteration throughout. Upper contact 30° to CA. Quartz veins 2-3%, K-feldspar selvages common. Sulphides 1-2%, py ≈ cpy, trace moly.
			597-598' Sericitized skarn.

100 & 100

Footage

Core

%

Rec

Rec

Remarks

608.5-613 Andesite, dark grey, quartz veins 2%, minor
K-feldspar selvages, sulphides approx. 3%, py/
cpy approx. 2-3/1.

CU

613 END OF HOLE

C J Holden P Eng

Company AMAX Potash Limited
 Mining
 Division Omineca
 Geographic _____
 Coordinates _____

Project #515
 Property Lennac Lake
 Started April 2, 1974
 Completed April 4, 1974
 Logged by C.J. Hodgson

Bearing 300°
 Inclination -46.5° at
collar, -48° at 597'
 Depth 597'

Sheet 1 of 4 Hole No. _____
 Coordinates 108+00N,
73+93E
 Altitude Lake
 elevation _____

Footage	Core Rec	% Rec											Remarks		
															0-46 CASING
															46-504 BFP
															46-100' Alteration: K-feldspar veins 5-6/ft, 1 mm. Local sericitized plagioclase at 65', 79', 90', 92', 96' adjacent to quartz-calcite, pyrite veins, 20° to CA. Quartz veins rare (<1%), <1/ft average. Sulphides approx. 1%, (cpy-py, mainly disseminated. Rare hairline magnetite seams, some with cpy.
															100-200' Pretty much the same as above, with some rather prominent silicified zones, and more abundant sericite alteration. Traces disseminated epidote, less K-feldspar veining.
															CU. 110-115' - 4' recovered in 2' quartz-calcite-pyrite shear vein 112-114', at 30° to CA, with peripheral sericitize BFP. Sericite alteration continues to 125'
															Main sericitized pyrite veins at 123, 125'.

SHEET 1 OF 4

143-145' Quartz-pyrite shear veins 05° to CA,
BFP is sericitized 1' either side

164-174 Large quartz vein or silicified zone
with sericitized BFP inclusions with
secondary biotite. Minor pyrite in
this zone.
Moderate-intense sericitization extends
down to about 203'

179-180' Bleached feldspars adjacent to pyrite-
quartz-calcite veins @ 20° to CA

200-300' Same as 100-200
Sulphides uniform, at approx. 1/2%
(cpy > py) dissem and fractures
Minor quartz veins, quartz & K-feldspar
veins, K-feldspar veins (total <1%),
averaging may be 1/ft (1/4-1/2" wide)

220.5' 3" PMP dyke - 70° to CA

221.5' Sericitized quartz-pyrite-hematite
shear vein 1" at 20°, Same at 213'

263' 6" PMP dyke

264' 6" sericitized pyritic shear zone

300-400' Continuing very weak K-feldspar and
quartz veining, ≤ 1/2% sulphides.
Several shear zones with peripheral
sericitized BFP

Rec Rec

Remarks

319.5-320' Sericitized shear
 339-341' Sericitized shear gouge
 348-348.5' Sericitized shear gouge
 372-373' Sericitized shear gouge
 374' 3" Sericitized shear gouge
 389' 2" pyrite shear zone at 40° to CA

The section 372-404 is throughout quite blocky, with numerous shears in addition to the larger ones mentioned. Green sericite alteration throughout.

CU. 400-504' Continuing fresh looking BFP with minor quartz and quartz-K-feldspar veins 1/4" (up to 3/ft, but total <1%) Sulphides 1/2 - 1%, cpy ≥ py
 458-466.5' Sericitized zone

493-504' Increasing sericite alteration towards contact, with minor pyritic fractures at 502.5'

504-505 Dark grey, fine grained, andesite

CU. 505-584 Medium to dark grey chloritized BFP or PMP (?)
 Tone is non-uniform, with alternating medium and dark grey sections. Unit is not as convincingly PMP as in LL-14-3. This is more of a tonal than a textural difference. Quartz veins plus quartz-K-feldspar veins are just as numerous than above if not more so (1-4/ft, 1-2%). Sulphides appear to be about equally abundant to above unit at approx. 1/2% (cpy ≥ py).

Carbonate veins are common at 10-60° to CA

SECTION OF

Rec Rec

Remarks

571-572' Shear zone, bleached and sericitized.

505-552 Biotite phenocrysts are not present. Apparently completely gone to chlorite

552-577 Much less altered, almost same as above 504'. Biotite phenocrysts unchloritized

577-584 Intensely chloritized, with 30% green sericitized plagioclases in a black chloritic matrix

CU. 584-589 Blocky, highly chloritized fine grained andesite with quartz veins, 2% py, minor cpy.

CU. 589-597 Breccia, with BFP, andesite fragments. Some interstitial carbonate, minor disseminated sulphides (< 1/2%, cpy ± py), along with traces disseminated epidote.

Can not tell whether intrusive or diatreme breccia. May herald approach of PMP as in LL-74-3. Last 8" appears to be non brecciated BFP

597 END OF HOLE

CJ Hodgson P6g

Sheet 4 of 11

Company AMAX Potsh Limited
 Mining Omineca
 Division Omineca
 Geographic
 Coordinates

Project #515
 Property Lennac Lake
 Started April 5, 1974
 Completed April 7, 1974
 Logged by C.J. Hodgson

Bearing
 Inclination -90°
 Depth 598'

Sheet 1 of 3 Hole No.
 Coordinates 108+00N
78+00E
 Altitude 12' above Lake

Footage	Core Rec	% Rec											Remarks			
																0-40 CASING
																40-295 Grey andesite breccia, chlorite-carbonate alteration. Calcite mainly on stringers. Quartz veins approx. 1-2%, about 3/ft. Sulphides approx. 3%, Py/cpy = 3-5/1, 1/2% epidote mainly on fractures with pyrite. Rare moly in quartz veins at 99', 146', 156', generally in quartz veins wider than 1/4", commonly with drusy quartz. Rare magnetite veinlets.
																40-43' Sheared, with calcite and chlorite
																171-203' Very blocky, about 29' of core recovered
																219-230' Splash of cpy with py, magnetite
																CU, 228' 6" cave
																233' 6" chloritized shear
																282.5-285.5' chloritized shear zone
																288' 4" chloritized shear
																291.5' 4" chloritized shear
																The section 280-295' is heavily chloritized and sheared throughout
																295-306 BFP dyke
																Upper contact 25° to CA, lower about 30° to CA
																Weakly chloritized, quartz veins approx. 1%.
																Sulphides approx. 1-2% py > cpy.

Footage	Core Rec	% Rec	Remarks
			306-365 Andesite breccia Same as 40-295'
			< 1% quartz veins, approx. 3% sulphides, py/ cpy approx. 3/1 1/2% disseminated epidote
			318-326' Blocky, chlorite slips, esp. 6" at 322'
			365-494.5 Fine-grained foliated quartz diorite, unli any phases seen in other holes. 3% subparallel biotite phenocrysts to 5 mm. 70-90 to CA. 10-25% plagioclase phenocrysts to 8 mm.
			Texturally this unit is very in-homogeneous. Locally it resembles BFP, but grades from that to a very fine-grained porphyry with no sharp contact between the two. Included fragments of pinkish BFP are common. On the other hand, this unit is unlike the PMP in that it is quartz-veined and has a low but constant sulphide content.
			Unit is fairly fresh, but shows kaolinite alterat of plagioclase where more coarsely porphyritic. Quartz veins 1% with sericite selvages, possibly some K-feldspar. Sulphides \leq 1/2% py \approx /cpy
			365-369' looks like pretty good BFP
			384' 2" quartz veins and moly 30° to CA
			395' 2" quartz veins and moly 30° to CA

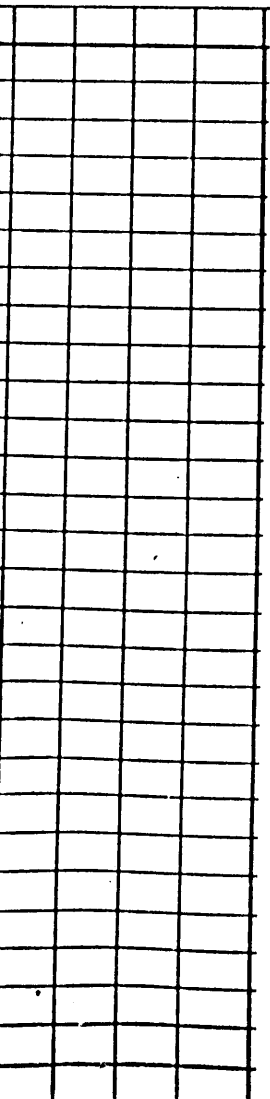
Footage	Core Rec	% Rec												Remarks
														396.5' - 494.5' Good fine grained phase with BFP inclusions
														457-458' Clay-sericite gouge zone
														482-488' Good PMP. Cuts off quartz veins in adjacent fine grained phase
														494.5-536 BFP, grey with pinkish tones Very rare quartz veins, traces sulphides except in major shear zone Traces disseminated epidote
														510-528' shear zone, blocky, local gouge, green sericite alteration throughout. Pyritic shear vein 0° to CA @ 510-513'. Gouge at 522-524'
														536-598 Fine-grained quartz diorite with 15-20% BFP inclusions: essentially an intrusive breccia. Foliation very variable - mainly at approx. 45° to CA. Quartz veins 1% to 1" wide, some with K-feldspar rims. Sulphides <1/2% (py/cpy > 1/1). Traces disseminated epidote Minor calcite veins
														590.5-596' Sericitized shear zone
														598 END OF HOLE
														CJ Hayden P Eng

LL-74-1

United Project #515
Property Lennac Lake
Started March 25, 1974
Completed March 26, 1974
g. Logged by C.J. Hodgson

Bearing -
Inclination -90°
Depth 603'

Sheet 1 of 5 Hole No.
Coordinates 114+00N
76+25E
Altitude 40' above lake



Remarks
Casing
14-206.5
Dull grey-green, andesite, fine grained,
- local plagioclase phenocrysts (2mm. 5-15%)
- locally subtle breccia texture apparent (flow breccia)
- chloritized throughout. Minor epidote in disseminated spots and quartz veins
- quartz vein stockwork throughout. Veins 1 mm. to 4 cm wide (av. 5 mm.), 10-15 per foot, predominantly at 45° and 0-10° to core axis. Veins contain py, cpy, mag, moly. Quartz-magnetite veins, 1-2 mm., parallel to core axis are late-stage, cutting all other veins. Vein quartz comprises 2-4% of rock between 14 and 182' and 5% of rock between 182 and 206.5'. Some veins have drusy cavities
- sulphides total about 3%, with py/cpy approx. 5/1. occur on 1 mm. fractures, in quartz veins and disseminations
30-40' minor magnetite-cpy-py veins at low angles (< 10°) to CA
40' trace moly in quartz vein
56-61' weak shearing and calcite veins



CU.

CU

Sheet 1 of 5

Core Roc	% Roc										

Remarks

224.5 - 242.5 As 206.5-219, but grn. sericite alteration is more intense, with relict patches of white clay alteration of plagioclase

-quartz veins 5-7%, many at 0° to CA

-minor barren quartz-carbonate (ankerite?) veins occur in this section and at 206.5-219, at 070° to C. These cut other quartz veins and are up to 1" wide.

234' - K-feldspar-quartz-moly vein

242.5-269.5 Andesite

Upper contact @ 45° to CA, lower at 30° to CA

Quartz veins very abundant, about 10%. Py/cpy approx 1-2/1. Total 3% sulphides. Rare late mag-quartz veins.

247.5' - 4" quartz vein with abundant pyrite

282.5-336 BFP

Alteration less than 224.5-242.5. Mainly white clay alteration.

Py/cpy approx. 1/1-2. Total approx. 3% sulphides

Quartz veins mainly 30-60 and 0° to CA, about 5%, mainly < 1/2" (av. 1/4")

327-336' - Schistose towards contact

330' - 2" quartz vein with abundant py, no cpy. vuggy.

CU.

CU.

Sheet 3 of 5

Core %
Rec Rec

Remarks

CU

336-376 Andesite
Upper contact at 45° to CA, lower at 35° to CA, 5% quartz veins
Sulphides 3-4%, py/cpy approx. 1/1

CU

376-603 BFP
-Weak to moderate clay-sericite alteration of feldspars
local pinking adjacent to quartz veins @ 386', 397-8403' is hematite.
-1% sulphides, py/cpy approx. 1/1
-quartz veins 3% to 467', then about 1% between 467' and 603'

CU

380-385' Finer grained lenses at 45° to CA (1-4" thick). Inclusions?
395-407' White clay alteration increases towards fault zone
407-422' Rock is gouged, sheared, rubbly
422-426' 5% quartz veins, with 2% cpy
426-429' clay gouge
422-575' predominant alteration is weak-intense apple green sericitization of plagioclase
445' 6" clay gouge
450-455' Quartz-carbonate veins to 1" in sericitized BFP (healed fault zone?)

Core Rec	% Rec								

Remarks

456.5' Minor moly disseminated in 3" quartz vein

467-603' Quartz veins decrease to approx. 1%, sulphides 1/2-1% (cpy > py). Green sericite alteration continues strong to 575', weakens thereafter

476-476.5' sericite-clay gouge

507.5-508' Sericitized shear zones @ approx. 45°

513-514' to CA " "

518-519' " "

523-527' " "

528-531' " "

533-534.5' " "

543.5-545' clay and sericite shear

566.5 4" andesite inclusion with 5% quartz veins, most of which terminate at edges of inclusion

584-603' Last box of core. Generally fresher-looking, fewer sulphides and quartz veins.

603 END OF HOLE

C/Adymer, P. Eng

HOLE NO. 1
Sheet 5 of 5