

2003 DIAMOND DRILLING REPORT
SIWASH GOLD MINE AREA
ELK PROPERTY

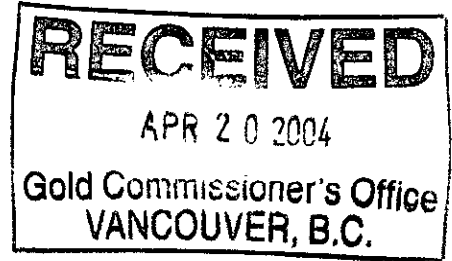
Similkameen Mining Division
Siwash Lake Area, British Columbia
NTS: 92H/16W; Lat. 49°50'N, Long. 120°19'W

VOLUME II : PLATES 1 TO 16

This report consists of two volumes:
Volume I: Text, Tables, Figures & Appendices
Volume II: Plates 1 to 16

May, 2004

By
W.J. Jakubowski, P. Geo.
Almaden Minerals Ltd.
1103 - 750 West Pender St.
Vancouver, B.C. V6C 2T8



CEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

27397
2 of 2

Report Preparation: Original + 4 copies

VOLUME II

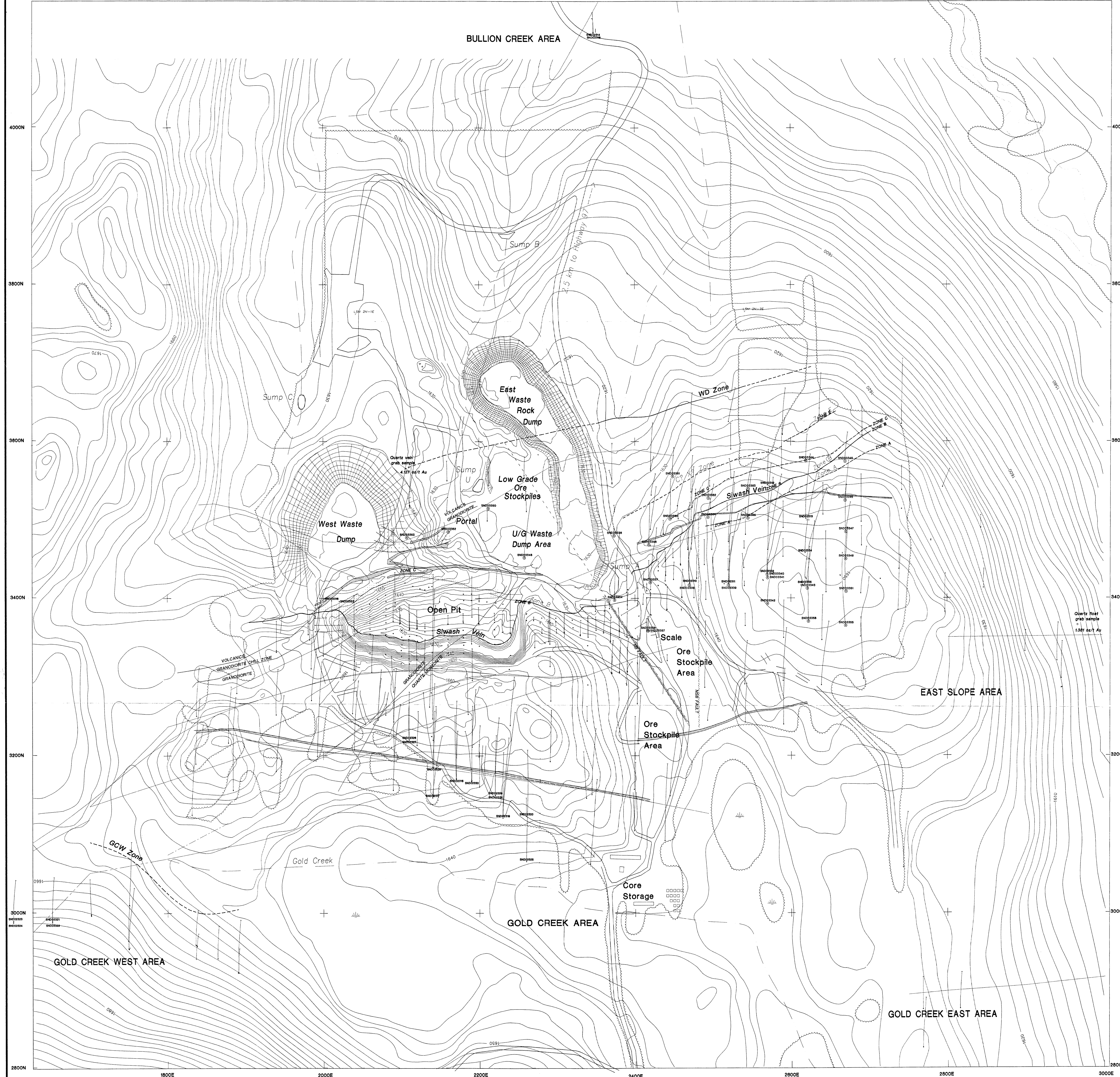
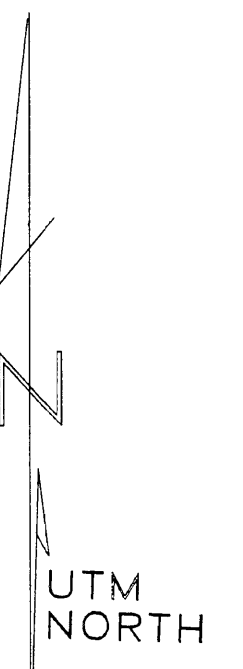
PLATES

(in pockets)

Scale

| | | |
|------------------|---|--------|
| <u>Plate 1:</u> | - Siwash North Mine Site Plan and Surface Drill Hole Locations | 1:2000 |
| <u>Plate 2:</u> | - WD Vein Longitudinal Section | 1:1500 |
| <u>Plate 3:</u> | - Drill Section 2110E | 1:250 |
| <u>Plate 4:</u> | - Drill Section 2160E | 1:250 |
| <u>Plate 5:</u> | - Drill Section 2210E | 1:250 |
| <u>Plate 6:</u> | - Drill Section 2260E | 1:250 |
| <u>Plate 7:</u> | - Drill Section 2370E | 1:350 |
| <u>Plate 8:</u> | - Drill Section 2420E | 1:300 |
| <u>Plate 9:</u> | - Drill Section 2445E | 1:300 |
| <u>Plate 10:</u> | - Drill Section 2470E | 1:350 |
| <u>Plate 11:</u> | - Drill Section 2495E | 1:300 |
| <u>Plate 12:</u> | - Drill Section 2520E | 1:350 |
| <u>Plate 13:</u> | - Drill Section 2545E | 1:300 |
| <u>Plate 14:</u> | - Drill Section 2570E | 1:300 |
| <u>Plate 15:</u> | - Drill Section 2620E | 1:350 |
| <u>Plate 16:</u> | - Drill Section 2670E | 1:350 |

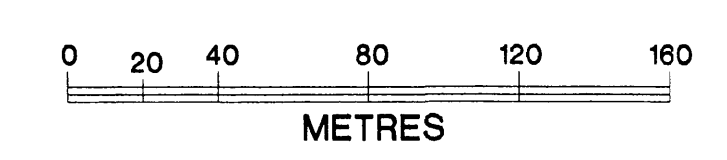
BULLION CREEK AREA



LEGEND

- Stream
- Swamp
- Vein Exposure
- Projected Trace of Vein
- Edge of Trees
- Drill Hole Trace
- VLF Conductor
- Magnetics Contact
- Andesite Dyke
- Aplite Dyke
- Geological Contact

27,397



SIWASH GOLD MINE
 Simikameen Mining Division
 NTS 92H/16W, B.C.

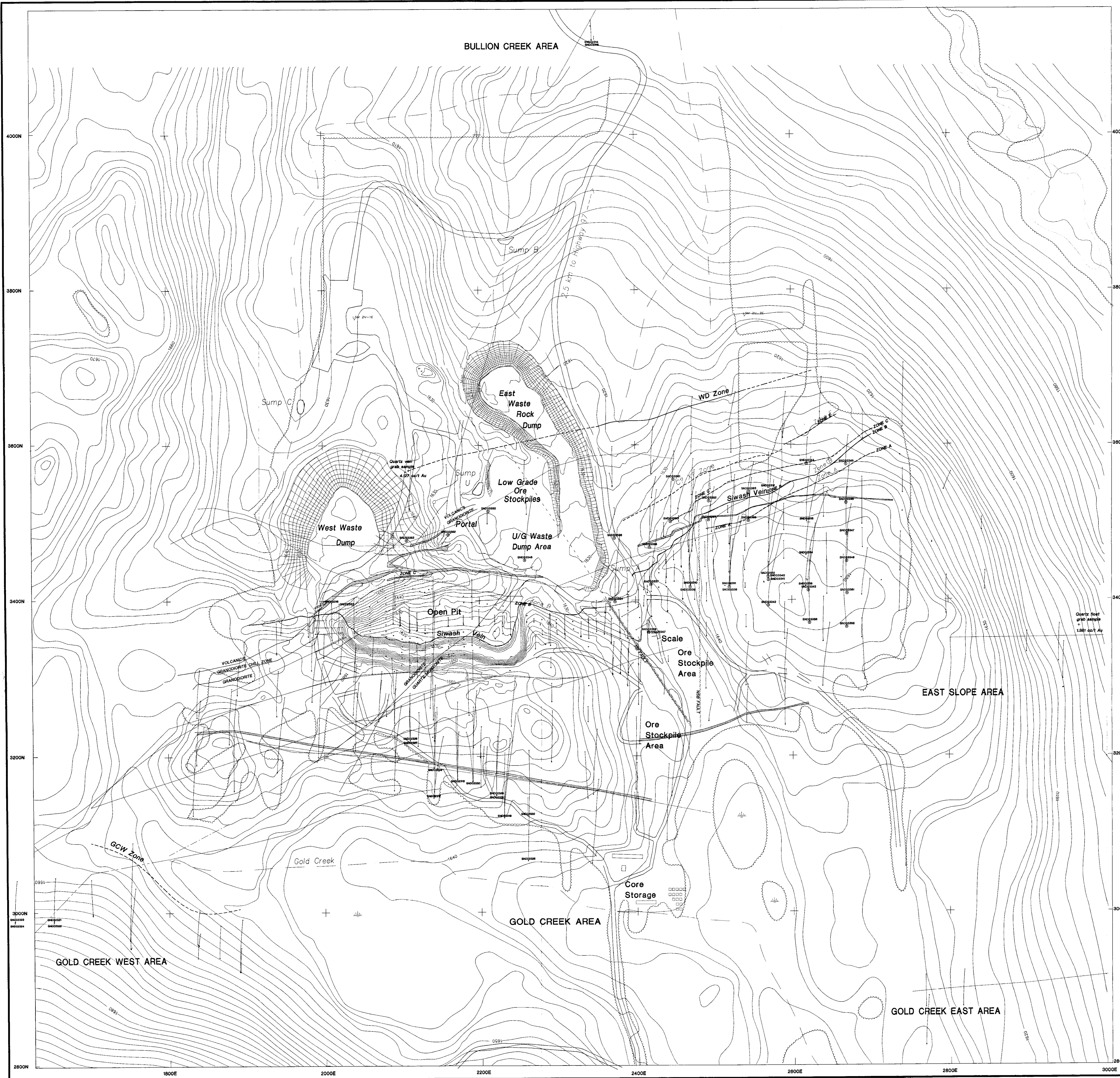
MINE SITE PLAN AND DRILL HOLE COLLAR LOCATIONS

SCALE 1 : 2000

Drawn by WJ, EM
 APRIL, 2004

Plate 1

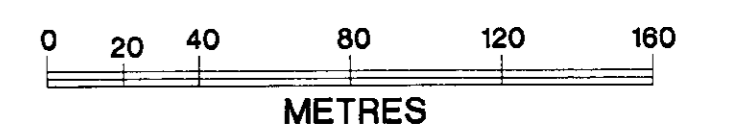
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 1103 750 West Pender Street Vancouver, British Columbia V6C 2T8



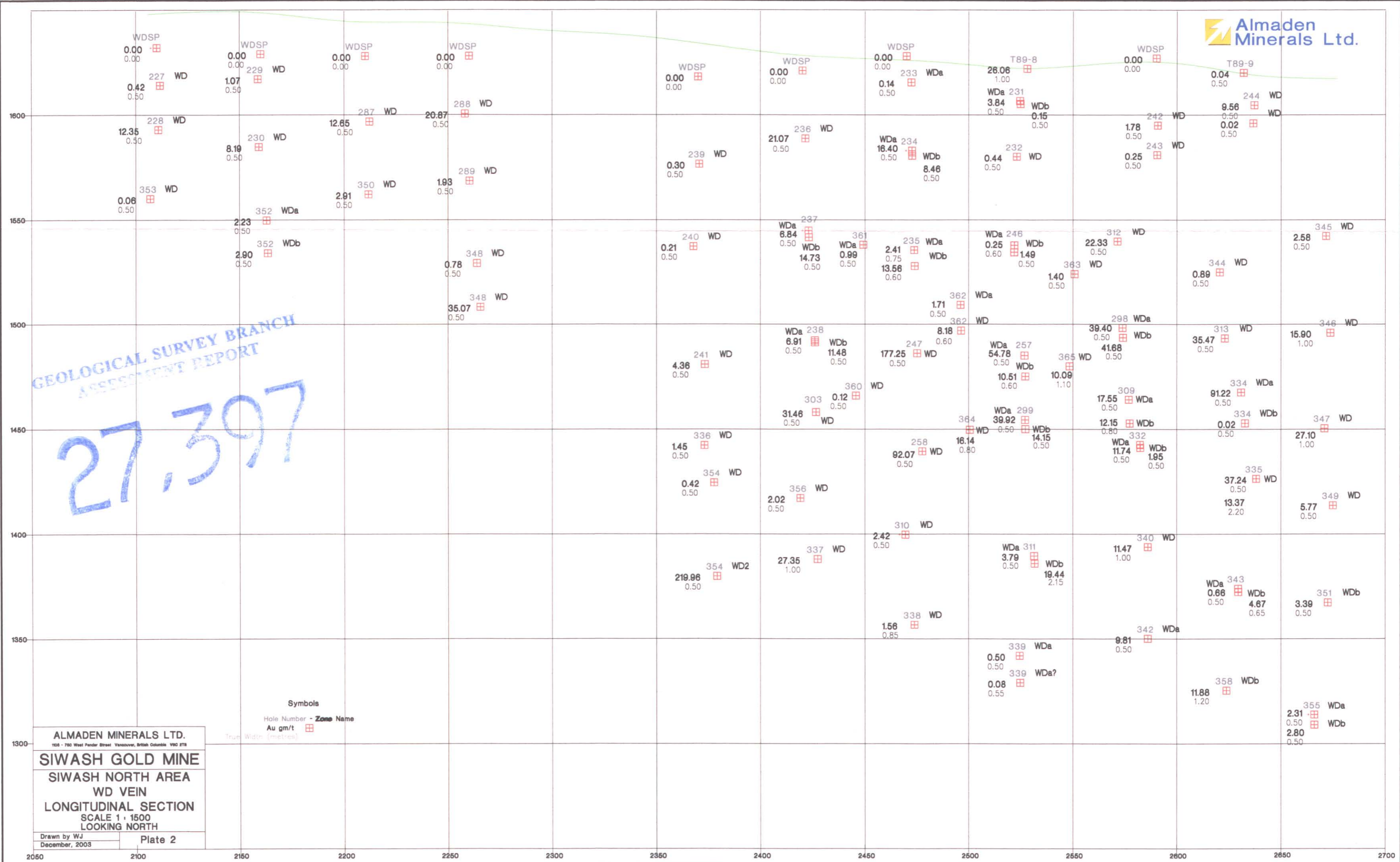
LEGEND

- Stream
- Swamp
- Vein Exposure
- Projected Trace of Vein
- Edge of Trees
- Drill Hole Trace
- VLF Conductor
- Magnetic Contact
- Andesite Dyke
- Apite Dyke
- Geological Contact

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| | |
|---|---------|
| SIWASH GOLD MINE | |
| Simikameen Mining Division NTS 92H/16W, B.C. | |
| MINE SITE PLAN AND DRILL HOLE COLLAR LOCATIONS | |
| SCALE 1 : 2000 (M) | |
| Drawn by WJ, EM | Plate 1 |
| APRIL, 2004 | |
| ALMADEN MINERALS LTD. | |
| 1103 760 West Pender Street Vancouver, British Columbia V6C 2T8 | |



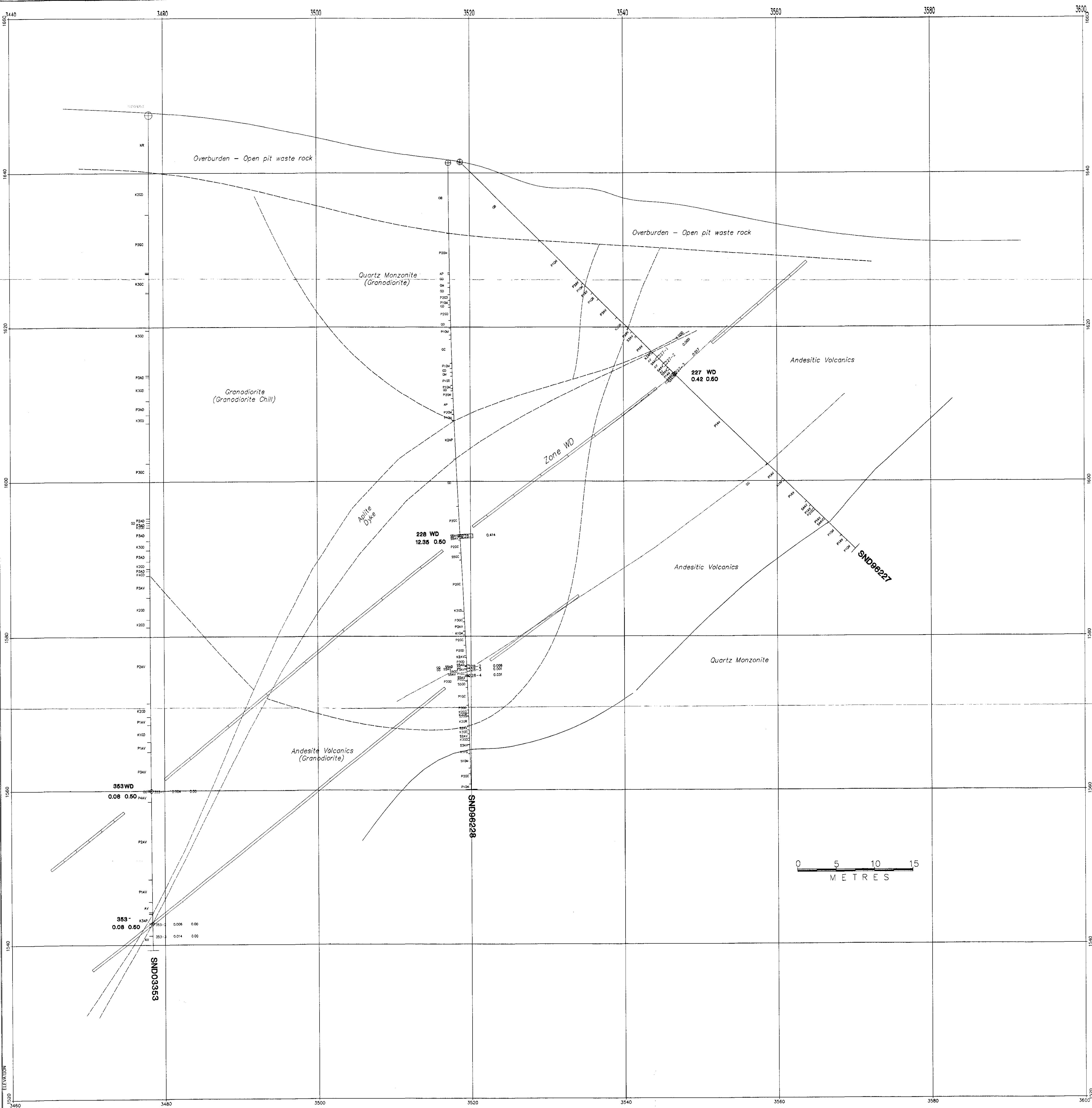
GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

27,397

Symbols
Hole Number - Zone Name
Au gm/t

ALMADEN MINERALS LTD.
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SIWASH GOLD MINE
SIWASH NORTH AREA
WD VEIN
LONGITUDINAL SECTION
SCALE 1 : 1500
LOOKING NORTH
Drawn by WJ
December, 2003
Plate 2

112



LEGEND

LITHOLOGY

| | |
|---|--|
| CS | CASING |
| MI | MISSING CORE |
| OB | OVERBURDEN |
| TERTIARY | |
| AD | ANDESITE DYKE dark grey-green to olive green, fine-grained to waxy porphyritic |
| BR | BRECCIA fragmented rock in a clay or clay-chert rich matrix, commonly grades into gouge |
| GG | GOUGE clay-rich with numerous rock fragments, shear foliation or banding may be evident |
| QV | QUARTZ VEIN white to grey quartz with some arsenic, commonly 10% to 20% pyrite, pyrrhotite, sphalerite, galena, tetrahedrite, rare visible gold |
| JURASSIC | |
| OSPREY LAKE BATHOLITH | |
| AP | APLITE pink to light grey, fine grained, eucrasic, may grade into pegmatite |
| FP | FELDSPAR PORPHYRY pink to red, medium fine-grained, K-spar rich |
| GC | GRANODIORITE CHILL MARGIN very dark grey, fine grained up to 25% biotite or hornblende |
| GD | GRANODIORITE medium to dark grey, fine to medium grained, with 10% to 20% |
| GR | GRANITE pink to pinkish grey, quartz - K-spar rich with some hornblende |
| PG | PEGMATITE pink to light grey, very coarse grained to megacrystic, quartz - K-spar - muscovite rich |
| QM | QUARTZ MONZONITE light to medium pinkish grey, medium to coarse grained, megacrystic with up to 10% biotite or hornblende |
| TRIASSIC | |
| NICOLA GROUP VOLCANICS | |
| AV | ANDESITIC VOLCANICS dark grey-green to near black, very fine-grained to granitic |
| (Pyroarhectic volcanic as above; phenocrysts of plagioclase or hornblende to about 20%) | |
| (B) VOLCANIC BRECCIA as above; brecciated (primary) with andesitic matrix, matrix rarely contains up to 25% pyrite - pyrrhotite - chloropyrite | |

ALTERATION CODES

| | | | |
|-------|----------------------|------|----------------|
| A(n) | ARGILLIC | P(n) | PROPYLITIC |
| P(n) | PHYLIC | S(n) | SERICITIC |
| PK | K-SPAR STABLE PHYLIC | SK | SCHISTOSE |
| P(n) | POTASSIC | X(n) | SILICIFICATION |
| BU(n) | AULITIC | | |

(n = 1 to 5, WEAK TO INTENSE)

SULFIDE CONTENT CODES (quartz veins)

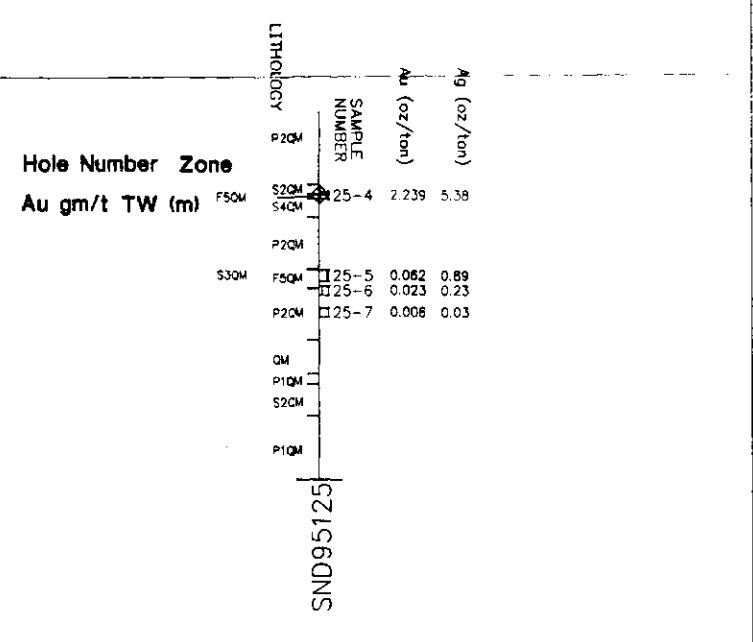
| | |
|----|--------------------------|
| VP | Visible gold |
| UT | less than 1% sulfide |
| V1 | 1% to 5% |
| V2 | 5% to 10% sulfide |
| V3 | 10% to 20% sulfide |
| V4 | 20% to 30% sulfide |
| V5 | greater than 30% sulfide |

SYMBOLS

- LITHOLOGIC CONTACT
- TRACE OF MINERALIZED STRUCTURE
- FAULT OR SHEAR

PLOT OF DRILL HOLE

| Hole Number | Zone | Au gm/t TW (m) | Summ. (gm/t) | Int. (gm/t) |
|-------------|---------|----------------|--------------|-------------|
| 228 WD | Zone WD | 12.38 | 0.60 | 0.414 |
| 227 WD | Zone WD | 0.42 | 0.60 | |
| 363 WD | AV | 0.08 | 0.60 | 0.008 |
| 353 | AV | 0.08 | 0.60 | 0.014 |



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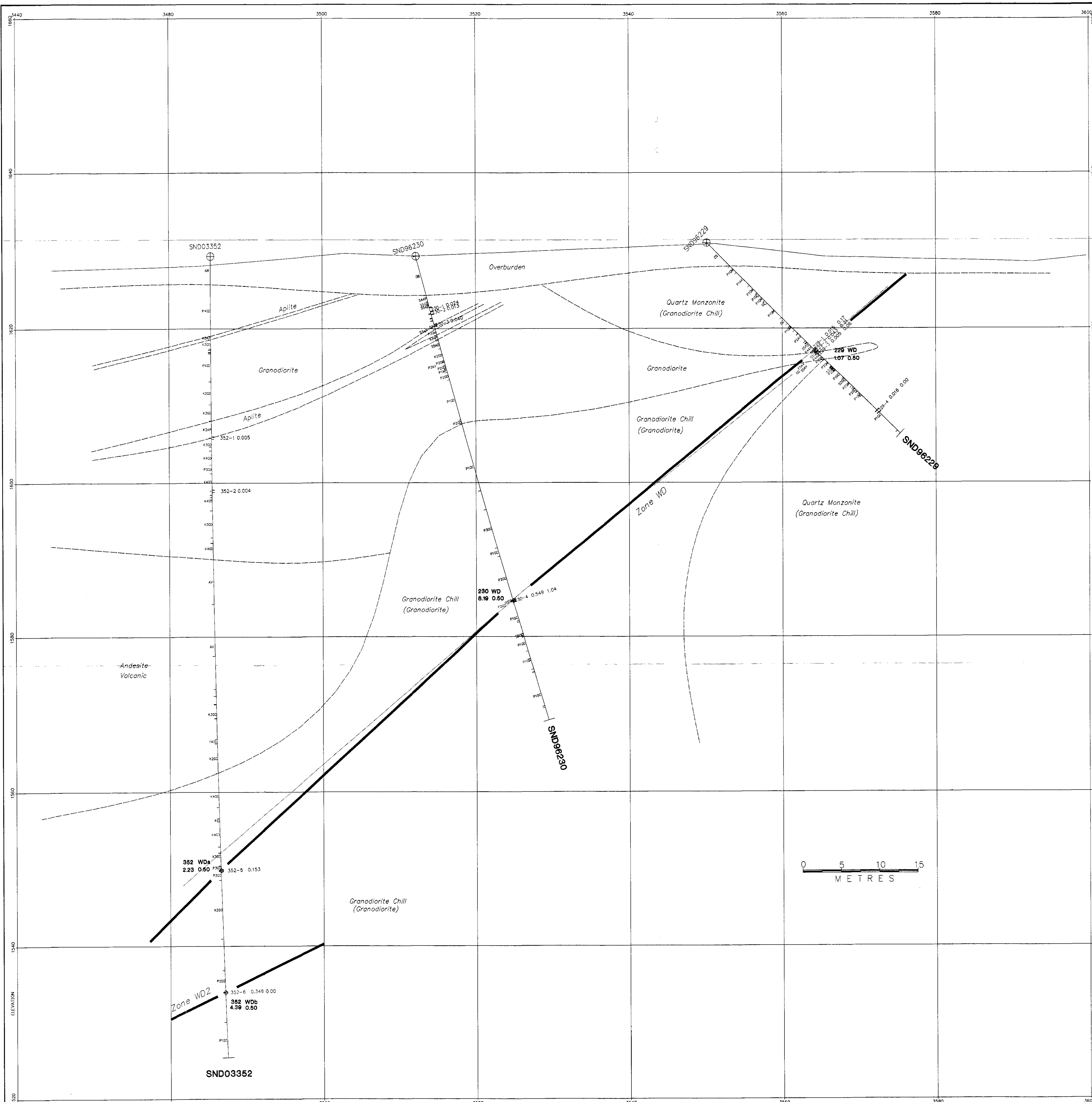
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100 - 780 West Pender Street, Vancouver, British Columbia, V6C 2T8

SIWASH GOLD MINE
SWASH NORTH AREA
DIAMOND DRILL SECTION
2110E
SCALE 1 : 250
LOOKING WEST

M3

Drawn by WJ
December, 2003

Plate 3



- ### LEGEND
- #### LITHOLOGY
- CS CASING
 - MI MISSING CORE
 - OB OVERBURDEN
- #### TERTIARY
- AD ANDESITE DIKE dark grayish-green to olive green, fine-grained to weakly porphyritic
 - BR BRECCIA fragmented rock in a clay or clay-chlorite rich matrix, commonly grades into gouge
 - GG GOUGE clay-rich with numerous rock fragments, shear foliation or banding may be evident
 - QV QUARTZ VEIN white to gray quartz with some onkwite, commonly 10% to 20% pyrite, pyrrhotite, sphalerite, goethite, tetrahedrite, rare visible gold
- #### JURASSIC
- ##### OSPREY LAKE BATHOLITH
- AP APLITE pink to light grey, fine grained, saccharic, may grade into pegmatites
 - FP FELDSPAR PORPHYRY pink to red, medium fine-grained, K-spar rich
 - GD GRANODIORITE CHILL MARGIN very dark grey, fine grained, up to 25% biotite or hornblende
 - GD GRANODIORITE medium to dark grey, fine to medium grained, with 10% to 20%
 - GR GRANITE pink to pinkish grey, quartz - K-spar rich with some hornblende
 - PG PEGMATITE pink to light grey, very coarse grained to megacrystic, quartz - K-spar - muscovite rich
 - QM QUARTZ MONZONITE light to medium pinkish grey, medium to coarse grained equigranular with up to 10% biotite or hornblende
- #### TRIASSIC
- ##### NICOLA GROUP VOLCANICS
- AV ANDESITIC VOLCANICS dark grey-green to near black, very fine-grained to aphanitic
 - (P)PHENOCRYTIC VOLCANIC as above; phenocrysts of plagioclase or hornblende to about 20%
 - (B)BRECCIATED BRECCIA as above; brecciated (primary) with andesitic matrix; matrix rarely contains up to 25% pyrite - pyrrhotite - chalcopyrite
- #### ALTERATION CODES
- | | | | |
|------|----------------------|------|----------------|
| A(n) | ARGILLIC | P(n) | PROPYLITIC |
| FO | FELSIC | SP | SERPENTINIC |
| PK | K-SPOR STABLE PHYLIC | SK | SKARN |
| K(n) | POTASSIC | X(n) | SILICIFICATION |
| B(n) | ALBITIC | | |
- (n = 1 TO 5, WEAK TO INTENSE)
- #### SULFIDE CONTENT CODES (quartz veins)
- | | |
|----|--------------------------|
| V9 | visible gold |
| V7 | less than 1% sulfide |
| V3 | 5 - 10% sulfide |
| V4 | 10 - 20% sulfide |
| V5 | 20 - 30% sulfide |
| V5 | greater than 30% sulfide |
- #### SYMBOLS
- LITHOLOGIC CONTACT
 - TRACE OF MINERALIZED STRUCTURE
 - ... FAULT OR SHEAR

PLOT OF DRILL HOLE

| Hole Number | Zone | Au gm/t | TW (m) |
|-------------|-------|---------|--------|
| 352-4 | 228-4 | 2.239 | 5.36 |
| 352-5 | 230-5 | 0.062 | 0.89 |
| 352-6 | 230-6 | 0.033 | 0.23 |
| 352-7 | 228-7 | 0.006 | 0.03 |



GEOLOGICAL SURVEY BRANCH
MINISTER OF ENERGY

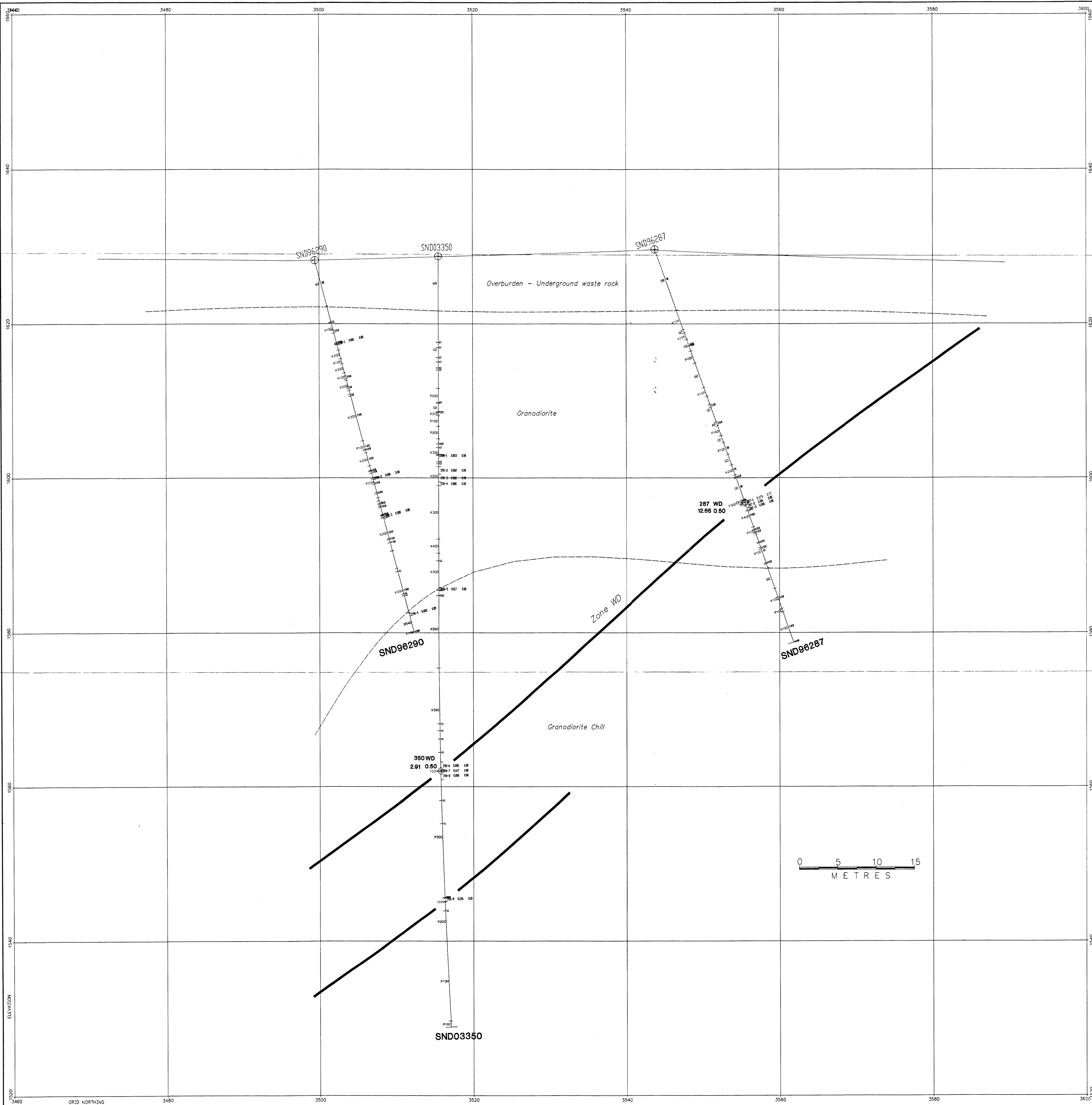
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SIWASH GOLD MINE
SIWASH NORTH AREA
DIAMOND DRILL SECTION
2160E
SCALE 1 : 250
LOOKING WEST

(M4)

Drawn by WJ
December, 2003

Plate 4



LEGEND

LITHOLOGY

| | |
|------------------------|--|
| CS | CASING |
| MI | MISSING CORE |
| OB | OVERBURDEN |
| TERTIARY | |
| AD | ANDESITE DIKE dark greyish-green to olive green, fine-grained to medly porphyritic |
| BR | BRECCIA fragmented rock in a clay or clay-chlorite rich matrix, commonly grades into gouge |
| GG | GOUGE clay-rich with numerous rock fragments, shear foliation or bonding may be evident |
| QV | QUARTZ VEIN white to grey quartz with some ankerite; commonly 10K to 20 pyrite, pyrrhotite, sphalerite, galena, tetrahedrite; rare visible gold |
| JURASSIC | |
| OSPREY LAKE BATHOLITH | |
| AP | APLITE pink to light grey, fine grained, sucrosic, may grade into pegmatite |
| FP | FELDSPAR PORPHYRY pink to red, medium fine-grained, K-spar rich |
| GC | GRANODIORITE CHILL MARGIN very dark grey, fine grained, up to 25% biotite or hornblende |
| GD | GRANODIORITE medium to dark grey, fine to medium grained, with 10% to 20% |
| GR | GRANITE pink to pinkish grey, quartz - K-spar rich with some hornblende |
| PG | PEGMATITE pink to light grey, very coarse grained to megacrystic quartz - K-spar - muscovite rich |
| QM | QUARTZ MONZONITE light to medium pinkish grey, medium to coarse grained equigranular with up to 10% biotite or hornblende |
| TRIASSIC | |
| NICOLA GROUP VOLCANICS | |
| AV | ANDESITIC VOLCANICS dark grey-green to near black, very fine-grained to aphanitic |
| (P) | PHENOCRYSTIC VOLCANIC as above, phenocrysts of plagioclase or hornblende to about 20% |
| (B) | BRECCIA as above, brecciated (primary) with andesitic matrix, matrix rarely contains up to 25% pyrite - pyrrhotite - chloropyrite |

ALTERATION CODES

| | | | |
|-------|-----------------------------|-------|----------------|
| A(n) | ARGILLIC | P(n) | PROPYLITIC |
| PH(n) | PHYLIC | SR(n) | SERPENTINIC |
| FS(n) | FINE-GRANULAR STABLE PHYLIC | SK(n) | SKARN |
| K(n) | POTASSIC | X(n) | SILICIFICATION |
| B(n) | ALBITIC | | |

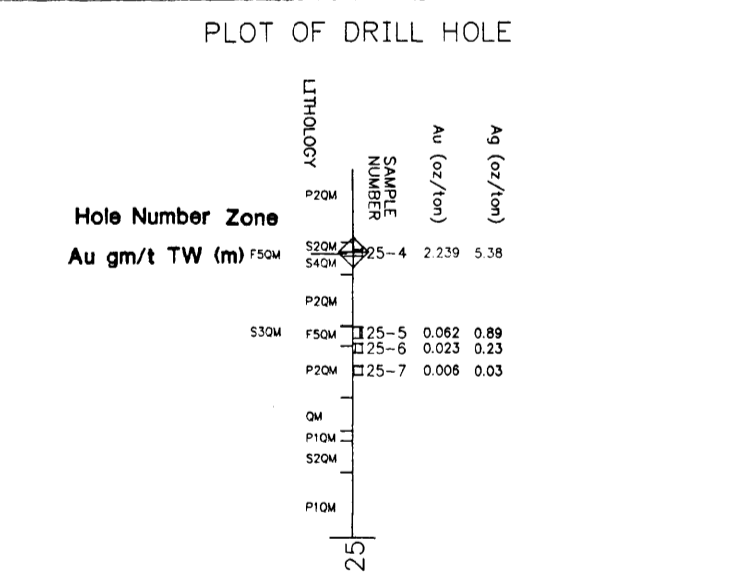
(n = 1 TO 5, WEAK TO INTENSE)

SULFIDE CONTENT CODES (quartz veins)

| | |
|----|--------------------------|
| Vg | visible gold |
| V1 | less than 1% sulfide |
| V2 | 1% to 5% |
| V3 | 5 - 10% sulfide |
| V4 | 10 - 20% sulfide |
| V5 | 20 - 30% sulfide |
| V6 | greater than 30% sulfide |

SYMBOLS

- LITHOLOGIC CONTACT
- TRACE OF MINERALIZED STRUCTURE
- FAULT OR SHEAR



GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

27.397

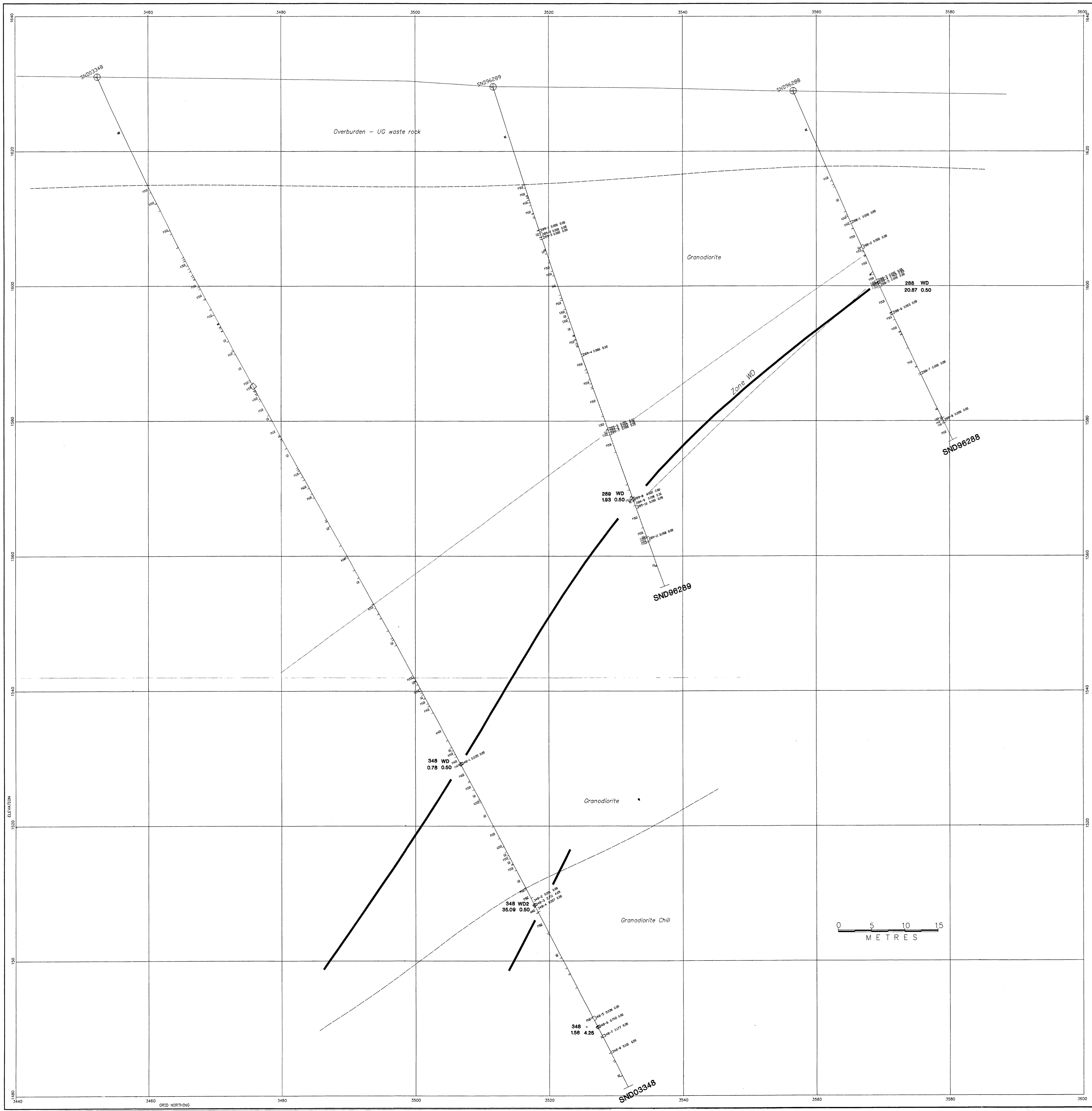
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103 - 750 West Pender Street Vancouver, British Columbia V6C 2T8

SIWASH GOLD MINE
SIWASH NORTH AREA
DIAMOND DRILL SECTION
2210E
SCALE 1 : 250
LOOKING WEST

Drawn by WJ
December, 2003

Plate **5**





LEGEND

LITHOLOGY

CS CASING
 MI MISSING CORE
 OB OVERBURDEN

TERTIARY

AD ANDESITE DYKE dark greyish-green to olive green fine-grained to weakly porphyritic
 BR BRECCIA fragmented rock in a clay or clay-chlorite rich matrix; commonly grades into gouge
 GO GOUGE clay-rich with numerous rock fragments, shear foliation or banding may be evident
 QV QUARTZ VEIN white to grey quartz with some arsenite; commonly 10% to 20% quartz, arsenite, epidote, galena, tetrahedrite; rare visible gold

JURASSIC

OSPREY LAKE BATHOLITH

AP APLITE pink to light grey, fine grained, sucrosic, may grade into pegmatite
 FP FELDSPAR PORPHYRY pink to red, medium fine-grained, K-spar rich
 GC GRANODIORITE CHILL MARBLED very dark grey, fine grained; up to 25% biotite or hornblende
 GD GRANODIORITE medium to dark grey, fine to medium grained, with 10% to 20% biotite
 GR GRANITE pink to pinkish grey, quartz - K-spar rich with some hornblende
 PG PEGMATITE pink to light grey, very coarse grained to megacrystic; quartz - K-spar - muscovite rich
 QM QUARTZ MONZONITE light to medium pinkish grey-medium to coarse grained equigranular with up to 10% biotite or hornblende

TRASSIC

NICOLA GROUP VOLCANICS

AV ANDESITIC VOLCANICS dark grey-green to near black, very fine-grained to aphanitic
 (PHENOCRYSTIC VOLCANIC) as above, phenocrysts of plagioclase or hornblende to about 50%
 (VOLCANIC BRECCIA) as above, brecciated (primary) with andesitic matrix; matrix rarely contains up to 25% pyrite - pyromorphite - chalcopyrite

ALTERATION CODES

A(N) ARGILLIC P(N) PROPYLITIC
 F(N) FRETILLIC S(N) SERICITIC
 K(N) K-SPAR STABLE PHYLLIC SK(N) SKARN
 M(N) MANTLE S(N) SILICIFICATION
 B(N) ALBITIC

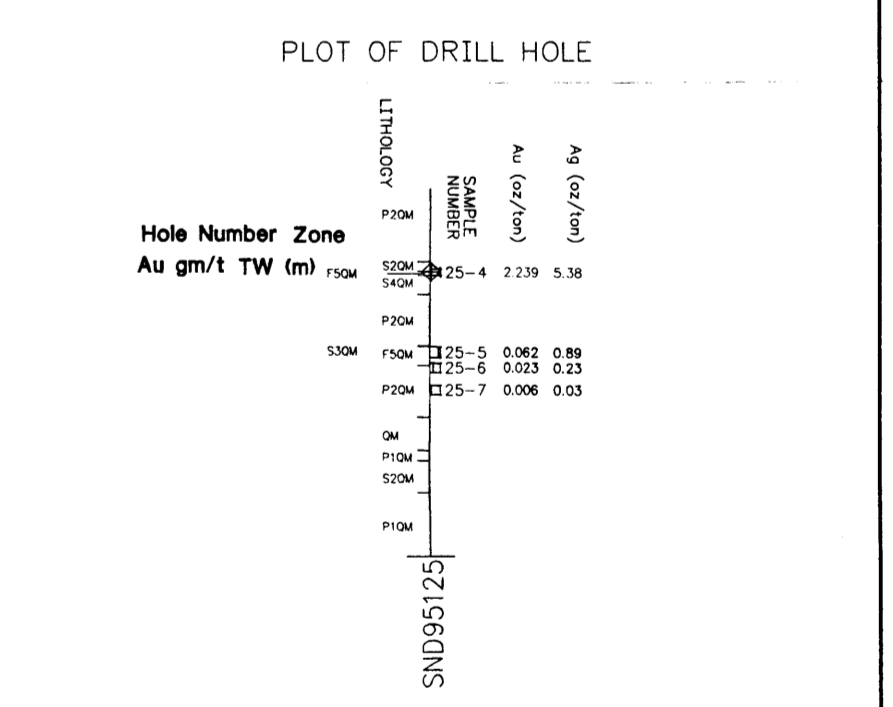
(x = 1 to 5, WEAK TO INTENSE)

SULFIDE CONTENT CODES (quartz veins)

Vg visible gold
 V1 less than 1% sulfide
 V2 1 to 5% sulfide
 V3 5 to 10% sulfide
 V4 10 to 20% sulfide
 V5 greater than 20% sulfide

SYMBOLS

--- LITHOLOGIC CONTACT
 --- TRACE OF MINERALIZED STRUCTURE
 --- FAULT OR SHEAR



GEOLOGICAL SURVEY BRANCH
 ALBERTA
 27,397

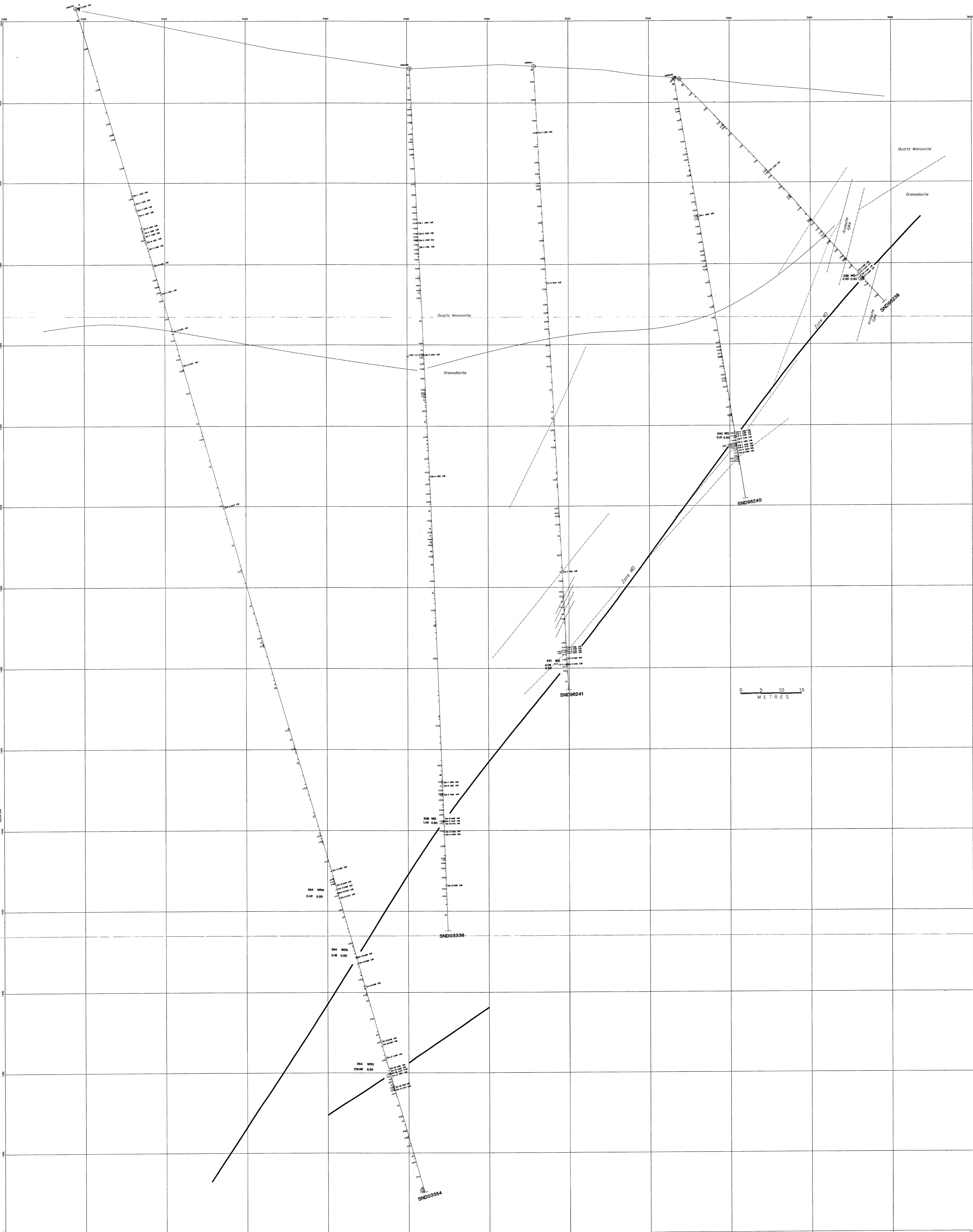


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SIWASH GOLD MINE
 SIWASH NORTH AREA
 DIAMOND DRILL SECTION
2260E
 SCALE 1 : 250
 LOOKING WEST

Drawn by WJ
 January, 2004

Plate **6**

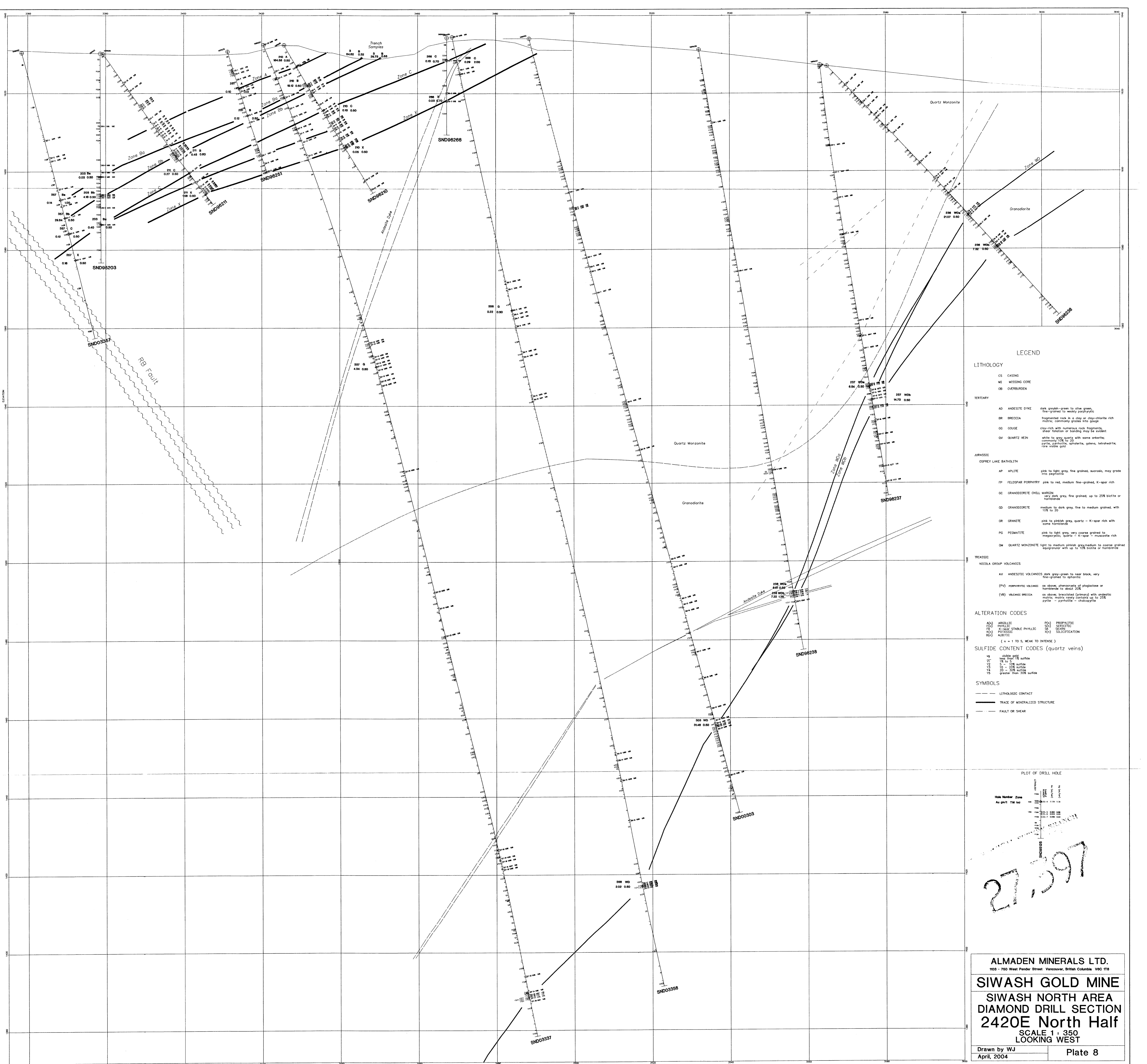


- ### LEGEND
- #### LITHOLOGY
- CS CASING
 - MI MISSING CORE
 - OB OVERBURDEN
- #### TERTIARY
- AD ANDESITE DYKE *dark, crystalline to olive green, fine-grained to weakly porphyritic*
 - BR BRECCIA *fragmented rock in a clay or clay-chlorite rich matrix, commonly grades into gouge*
 - GG GOUGE *clay-rich with numerous rock fragments, other foliation or banding may be evident*
 - QV QUARTZ VEIN *white to grey quartz with some alteration; commonly 10% to 20 pyrite, pyrrhotite, sphalerite, galena, tetrahedrite; trace metallic gold*
- #### JURASSIC
- ##### OSPREY LAKE BATHOLITH
- AP APLITE *pink to light grey, fine grained, aegirine, may grade into pegmatite*
 - FP FELDSPAR PORPHYRY *pink to red, medium fine-grained, K-spar rich*
 - GC GRANDIORITE CHILL MARGIN *medium to dark grey, fine grained, up to 25% biotite or hornblende*
 - GD GRANDIORITE *medium to dark grey, fine to medium grained, with hornblende to about 25%*
 - GR GRANITE *pink to greenish grey quartz - K-spar rich with some hornblende*
 - PG PEGMATITE *pink to light grey, very coarse grained to megacrystic; quartz - K-spar - muscovite rich*
 - QM QUARTZ MONZONITE *light to medium pinkish grey/medium to coarse grained equigranular with up to 10% biotite or hornblende*
- #### TRIASSIC
- ##### NICOLA GROUP VOLCANICS
- AV ANDESITIC VOLCANICS *dark grey-green to near black, very fine-grained to aphanitic*
 - (P)PHOENIXITIC VOLCANIC *as above, phenocrysts of plagioclase or hornblende to about 25%*
 - (B)VOLCANIC BRECCIA *as above, brecciated (primary) with andesitic matrix; matrix rarely contains up to 25% pyrite - pyrrhotite - staurolite*
- #### ALTERATION CODES
- | | | | |
|------|----------------------|------|----------------|
| A(n) | ARGILLIC | P(n) | PROPHYLITIC |
| F(n) | FELTIC | S(n) | SERPENTINIC |
| PK | K-spar STABLE PHYLIC | SK | SKARN |
| K(n) | KAOLINIC | K(n) | SILICIFICATION |
| R(n) | ALBITIC | | |
- (n = 1 to 5, WEAK TO INTENSE)
- #### SULFIDE CONTENT CODES (quartz veins)
- | | |
|----|--------------------------|
| 15 | white, trace |
| 16 | trace to 1% surface |
| 17 | 1% - 5% surface |
| 18 | 5% - 10% surface |
| 19 | 10% - 20% surface |
| 20 | 20% - 30% surface |
| 21 | greater than 30% surface |
- #### SYMBOLS
- LITHOLOGIC CONTACT
 - TRACE OF MINERALIZED STRUCTURE
 - FAULT OR SHEAR

PLOT OF DRILL HOLE

| File Number | Zone | Alt. (m) | TM | Alt. (m) | TM | Alt. (m) | TM | Alt. (m) | TM |
|-------------|------|----------|------|----------|------|----------|------|----------|------|
| SND03334 | M0 | 1380 | 1380 | 1380 | 1380 | 1380 | 1380 | 1380 | 1380 |
| SND03336 | M0 | 1380 | 1380 | 1380 | 1380 | 1380 | 1380 | 1380 | 1380 |
| SND06241 | M0 | 1380 | 1380 | 1380 | 1380 | 1380 | 1380 | 1380 | 1380 |
| SND06240 | M0 | 1380 | 1380 | 1380 | 1380 | 1380 | 1380 | 1380 | 1380 |
| SND06239 | M0 | 1380 | 1380 | 1380 | 1380 | 1380 | 1380 | 1380 | 1380 |

GEOLOGICAL SURVEY BRANCH
 27.397



LEGEND

LITHOLOGY

CS CASING
MI MISSING CORE
OB OVERBURDEN

TERTIARY

AD ANDESITE DYKE dark greenish-grey to olive green, fine-grained to medium porphyritic
BR BRECCIA fragmented rock in a clay or clay-chlorite rich matrix; commonly grades into gouge
CG GOUGE clay-rich with numerous rock fragments, shear foliation or banding may be evident
QV QUARTZ VEIN white to grey quartz with some arsenite, commonly 1/8" to 20" wide, pyrite, sphalerite, galena, tetrahedrite, rare visible gold

JURASSIC

OSPREY LAKE BATHOLITH

AP APLITE pink to light grey, fine grained, aurotic, may grade into pegmatite
FP FELDSPAR PORPHYRY pink to red, medium fine-grained, K-spar rich
GC GRANDIORITE CHILL MANION very dark grey, fine grained, up to 25% biotite or hornblende
GD GRANDIORITE medium to dark grey, fine to medium grained, with 10% to 20% biotite
GR GRANITE pink to pinkish grey, quartz - K-spar rich with some hornblende
PG PEGMATITE pink to light grey, very coarse grained to megacrystic, quartz - K-spar - muscovite rich
QM QUARTZ MONZONITE light to medium pinkish grey, medium to coarse grained equigranular with up to 10% biotite or hornblende

MESAZOIC

NISICLA GROUP VOLCANICS

AV ANDESITIC VOLCANICS dark grey-green to near black, very fine-grained to aphanitic
(PV) PORPHYRIC VOLCANIC as above, phenocrysts of plagioclase or hornblende to about 20%
(VB) VOLCANIC BRECCIA as above, brecciated (primary) with andesitic matrix, matrix rarely contains up to 25% pyrite - pyrrhotite - chalcocopyrite

ALTERATION CODES

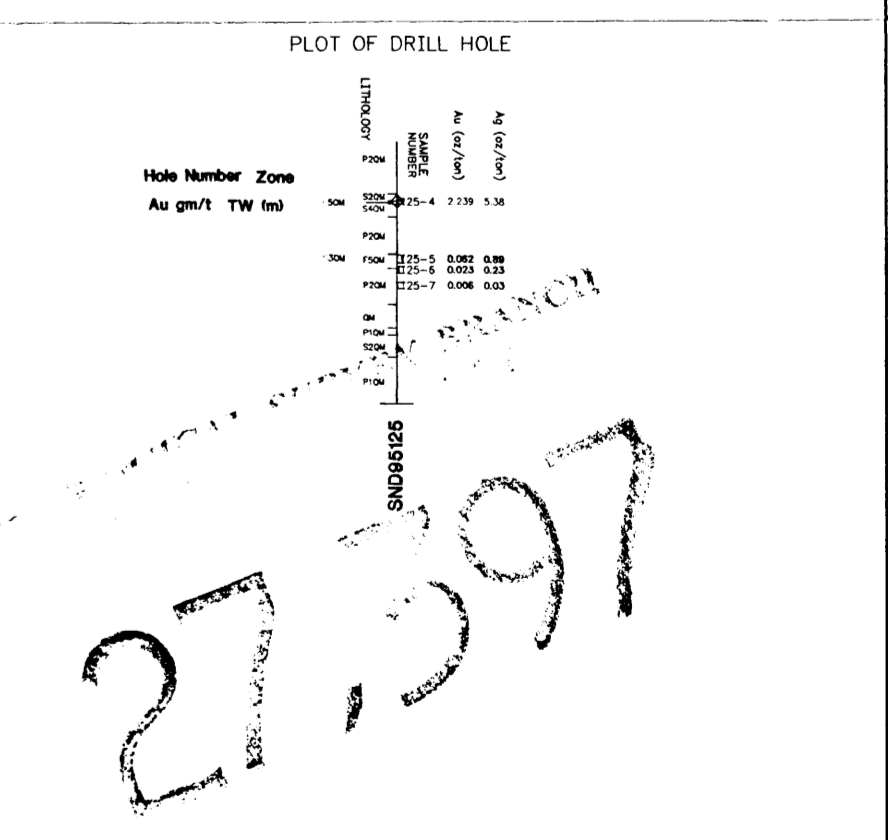
A(A) ARGILLIC P(P) PROPYLITIC
F(F) FERRUGINOUS STABLE PHYLIC S(S) SERICITIC
K(K) POTASSIC X(X) SILICIFICATION
A(B) ALBERTIC
(n = 1 to 5, WEAK TO INTENSE)

SULFIDE CONTENT CODES (quartz veins)

V0 visible gold
V1 less than 1% surface
V2 1% to 2% surface
V3 2% to 10% surface
V4 10% to 20% surface
V5 greater than 20% surface

SYMBOLS

--- LITHOLOGIC CONTACT
--- TRACE OF MINERALIZED STRUCTURE
--- FAULT OR SHEAR

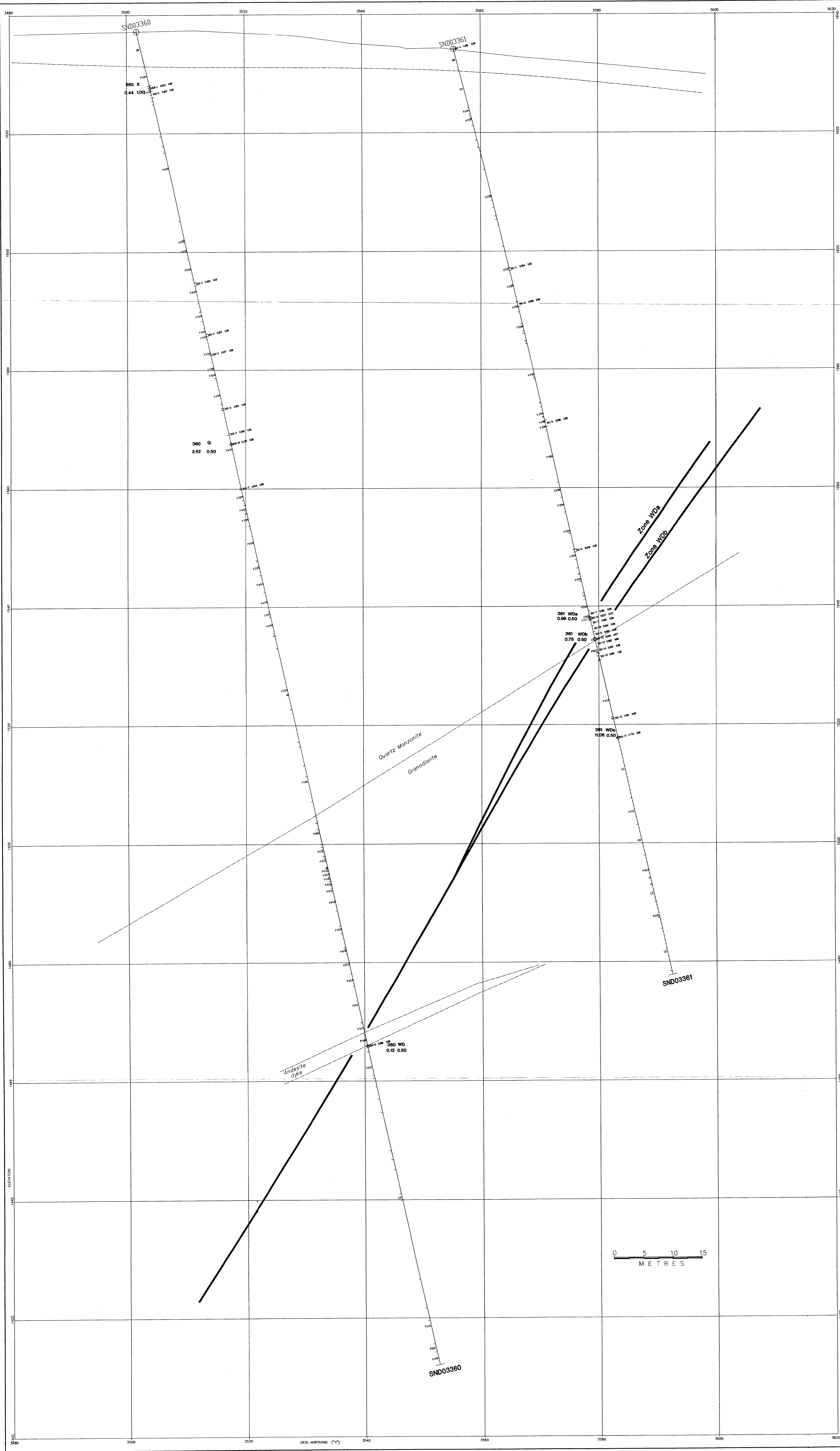


ALMADEN MINERALS LTD.
1103 - 750 West Pender Street Vancouver, British Columbia V6C 1T6

SIWASH GOLD MINE
SIWASH NORTH AREA
DIAMOND DRILL SECTION
2420E North Half
SCALE 1 : 350
LOOKING WEST

Drawn by WJ
April, 2004

Plate 8



LEGEND

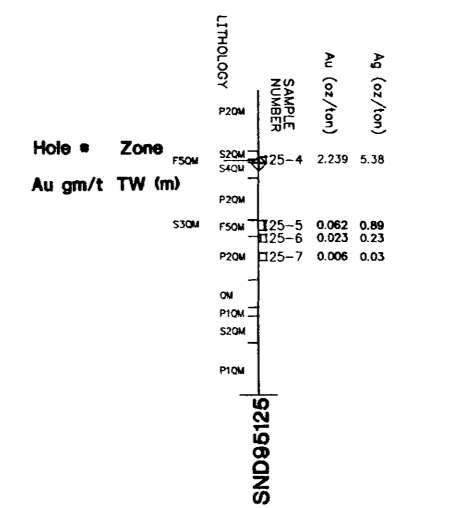
- LITHOLOGY**
- CS CASING
 MI MISSING CORE
 OB OVERBURDEN
- TERTIARY**
- AD ANDESITE DYKE dark greyish-green to olive green, fine-grained to weakly porphyritic
 BR BRECCIA fragmented rock in a clay or clay-chlorite rich matrix, commonly grades into gouge
 GG GOUGE clay-rich with numerous rock fragments, shear foliation or banding may be evident
 QV QUARTZ VEIN white to grey quartz with some arsenite, commonly 10% to 20% pyrite, pyrrhotite, sphalerite, galena, tetrahedrite, rare visible gold
- JURASSIC**
- OSPREY LAKE BATHOLITH
- AP APLITE pink to light grey, fine grained, sucrosic, may grade into pegmatite
 FP FELDSPAR PORPHYRY pink to red, medium fine-grained, K-spar rich
 GC GRANDIORTITE CHILL MARGIN very dark grey, fine grained, up to 25% biotite or hornblende
 GD GRANDIORTITE medium to dark grey, fine to medium grained, with 10% to 20%
 GR GRANITE pink to pinkish grey, quartz - K-spar rich with some hornblende
 PG PEGMATITE pink to light grey, very coarse grained to megacrystic, quartz - K-spar - muscovite rich
 QM QUARTZ MONZONITE light to medium pinkish grey, medium to coarse grained equigranular with up to 10% biotite or hornblende
- TRIASSIC**
- NICOLA GROUP VOLCANICS
- AV ANDESITIC VOLCANICS dark grey-green to near black, very fine-grained to ophanitic
 (P)PORPHYRYIC VOLCANIC as above; phenocrysts of plagioclase or hornblende to about 20%
 (V)VOLCANIC BRECCIA as above; brecciated (primary) with andesitic matrix, matrix rarely contains up to 25% pyrite - pyrrhotite - chalcopyrite

- ALTERATION CODES**
- | | | | |
|------|----------------------|------|----------------|
| A(n) | ARGILLIC | P(n) | PROPHYLITIC |
| F(n) | PHYLIC | S(n) | SERPENTINIC |
| FK | K-spar STABLE PHYLIC | SK | SKARN |
| K(n) | POTASSIC | X(n) | SILICIFICATION |
| B(n) | ALBITIC | | |
- (n = 1 to 5, WEAK TO INTENSE)

- SULFIDE CONTENT CODES (quartz veins)**
- | | |
|----|--------------------------|
| Vg | visible gold |
| Y1 | less than 1% sulfide |
| Y2 | 1% to 5% sulfide |
| Y3 | 5 - 10% sulfide |
| Y4 | 10 - 20% sulfide |
| Y5 | 20 - 30% sulfide |
| Y6 | greater than 30% sulfide |

- SYMBOLS**
- LITHOLOGIC CONTACT
 ——— TRACE OF MINERALIZED STRUCTURE
 - - - - - FAULT OR SHEAR

PLOT OF DRILL HOLE



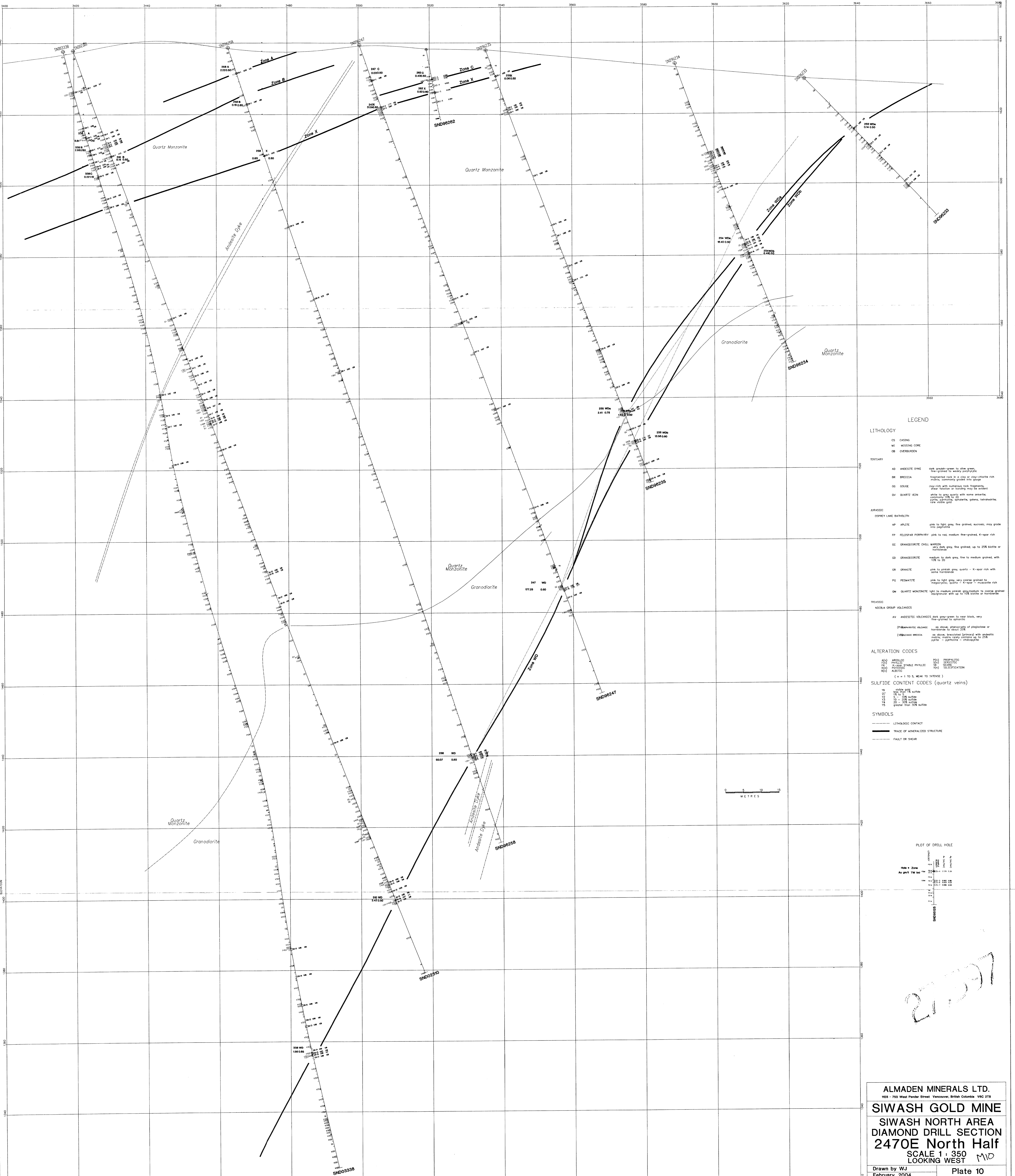
27,597

ALMADEN MINERALS LTD.
 1103 - 750 West Pender Street Vancouver, British Columbia V6C 2T8

SIWASH GOLD MINE
 SIWASH NORTH AREA
 DIAMOND DRILL SECTION
2445E
 SCALE 1 : 300
 LOOKING WEST

Drawn by WJ
 January, 2004

Plate 9



LEGEND

LITHOLOGY

| | | |
|--------------------------------|---------------------------|---|
| CS | CASING | |
| MT | MISSING CORE | |
| OB | OVERBURDEN | |
| TERTIARY | | |
| AD | ANDESITE DYKE | dark grey-green to olive green, fine-grained to medium-grained |
| BR | BRECCIA | fragmented rock in a clay or claystone rich matrix, commonly grades into gouge |
| GC | GOUGE | claystone with numerous rock fragments, shear foliation or banding may be evident |
| QV | QUARTZ VEIN | white to grey quartz with some arsenic, pyrite, galena, siliceous, pyrite, arsenic, iron white gold |
| JURASSIC | | |
| OSPREY LAKE BATHOLITH | | |
| AP | APLITE | pink to light grey, fine grained, barren, may grade into pegmatite |
| FP | FELDSPAR PORPHYRY | pink to red, medium fine-grained, K-spar rich |
| GC | GRANODIORITE CHILL MARGIN | very fine grey, fine grained up to 25% biotite or hornblende |
| GD | GRANODIORITE | medium to dark grey, fine to medium grained, with 10% to 20% |
| GR | GRANITE | pink to pinkish grey quartz - K-spar rich with some hornblende |
| PR | PEGMATITE | pink to light grey, very coarse grained to megacrystic quartz - K-spar - muscovite rich |
| QW | QUARTZ MONZONITE | light to medium pinkish, granitic to coarse grained megacrystic with up to 10% biotite or hornblende |
| TRASCAN | | |
| NICOIA GROUP VOLCANICS | | |
| AV | ANDESITIC VOLCANICS | dark grey-green to red black, very fine-grained to aphanitic |
| (PHANOCRISTIC VOLCANIC) | | |
| | | as above, phenocrysts of plagioclase or hornblende to about 25% |
| (VOLCANIC BRECCIA) | | |
| | | as above, brecciated (primary) with granitic matrix, matrix rarely contains up to 25% pyrite - pyroclastic - thalassite |

ALTERATION CODES

| | | | |
|----|-------------------|----|----------------|
| AN | ANDESITIC | PH | PROPHYLITIC |
| AP | APLITE | SP | SPHERULITIC |
| FP | FELDSPAR PORPHYRY | ST | STABLE PHYLLIC |
| GC | GOUGE | SI | SILICIFICATION |
| GR | GRANITE | | |

(n = 1 TO 5, WEAK TO INTENSE)

SULFIDE CONTENT CODES (quartz veins)

| | |
|----|--------------------------|
| W | NO SULFIDE |
| W1 | 1% to 2% sulfide |
| W2 | 2% to 5% sulfide |
| W3 | 5% to 10% sulfide |
| W4 | 10% to 20% sulfide |
| W5 | greater than 20% sulfide |

SYMBOLS

- LITHOLOGIC CONTACT
- TRACE OF MINERALIZED STRUCTURE
- FAULT OR SHEAR

PLOT OF DRILL HOLE

| | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|
| Zone | Zone | Zone | Zone | Zone | Zone | Zone | Zone | Zone | Zone |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

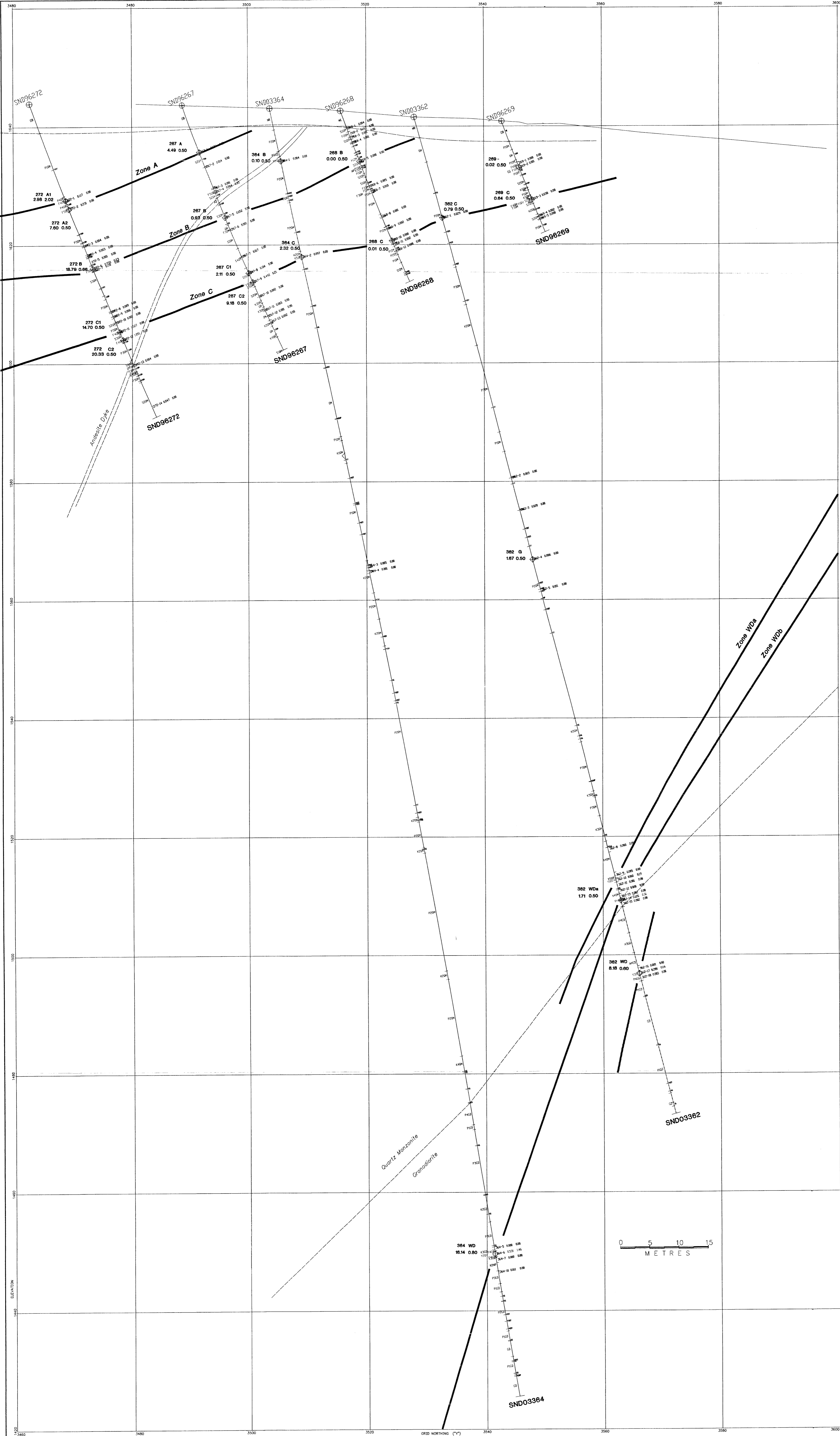
ALMADEN MINERALS LTD.
 105 - 750 West Pender Street Vancouver, British Columbia V6C 2T8

SIWASH GOLD MINE
 SIWASH NORTH AREA
 DIAMOND DRILL SECTION
 2470E North Half
 SCALE 1: 350
 LOOKING WEST

Drawn by WJ
 February, 2004

Plate 10

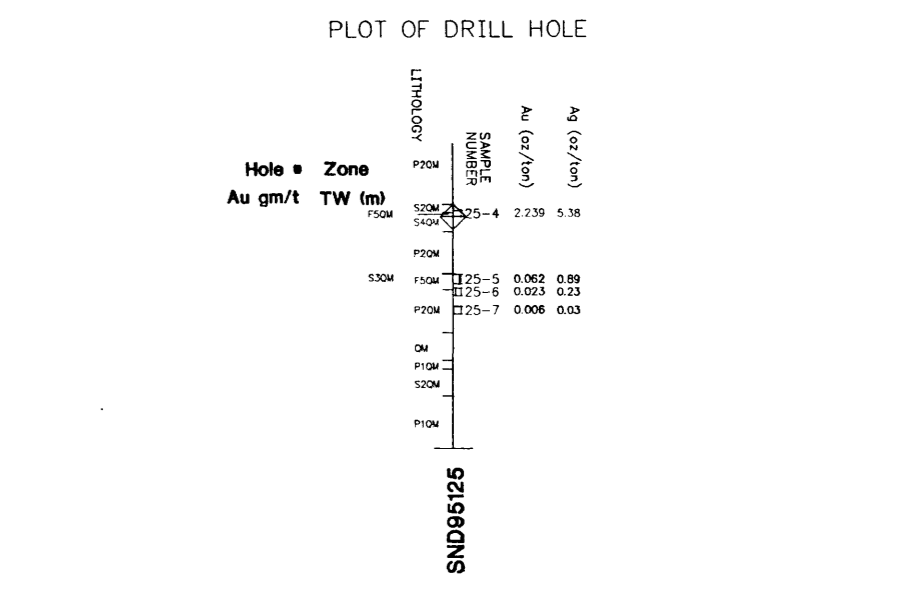
27.207



LEGEND

LITHOLOGY

| | | | |
|---|--------------------------------|--|----------------|
| CS | CASING | | |
| MI | MISSING CORE | | |
| OB | OVERBURDEN | | |
| TERTIARY | | | |
| AD | ANDESITE DYKE | dark greyish-green to olive green, fine-grained to weakly porphyritic | |
| BR | BRECCIA | fragmented rock in a clay or clay-chalite rich matrix, commonly grades into gouge | |
| GG | GOUGE | clay-rich with numerous rock fragments, shear foliation or banding may be evident | |
| QV | QUARTZ VEIN | white to grey quartz with some ankerite; commonly 10% to 20% pyrite, pyrrhotite, sphalerite, galena, tetrahedrite, rare visible gold | |
| JURASSIC | | | |
| OSPREY LAKE BATHOLITH | | | |
| AP | APLITE | pink to light grey, fine grained, sucrosic, may grade into pegmatite | |
| FP | FELDSPAR PORPHYRY | pink to red, medium fine-grained, K-spar rich | |
| GC | GRANODIORITE CHILL MARGIN | very dark grey, fine grained, up to 25% biotite or hornblende | |
| GD | GRANODIORITE | medium to dark grey, fine to medium grained, with 10% to 20% | |
| GR | GRANITE | pink to pinkish grey, quartz - K-spar rich with some hornblende | |
| PG | PEGMATITE | pink to light grey, very coarse grained to megacrystic; quartz - K-spar - muscovite rich | |
| QM | QUARTZ MONZONITE | light to medium pinkish grey; medium to coarse grained equigranular with up to 10% biotite or hornblende | |
| TRIASSIC | | | |
| NICOLA GROUP VOLCANICS | | | |
| AV | ANDESITIC VOLCANICS | dark grey-green to near black, very fine-grained to aphanitic | |
| | (PVP)PORPHYRYIC VOLCANIC | as above; phenocrysts of plagioclase or hornblende to about 20% | |
| | (VB)VOLCANIC BRECCIA | as above; brecciated (primary) with andesitic matrix; matrix rarely contains up to 25% pyrite - pyrrhotite - chalcopyrite | |
| ALTERATION CODES | | | |
| A(n) | ARGILLIC | P(n) | PROPYLITIC |
| F(n) | PHYLIC | S(n) | SERPENTINIC |
| FK | K-SPAR STABLE PHYLIC | SK | SKARN |
| K(n) | POTASSIC | X(n) | SILICIFICATION |
| B(n) | ALBITIC | | |
| (n = 1 to 5, WEAK TO INTENSE) | | | |
| SULFIDE CONTENT CODES (quartz veins) | | | |
| V0 | visible gold | | |
| V1 | less than 1% sulfide | | |
| V2 | 1% to 5% | | |
| V3 | 5% - 10% sulfide | | |
| V4 | 10% - 20% sulfide | | |
| V5 | 20% - 30% sulfide | | |
| V6 | greater than 30% sulfide | | |
| SYMBOLS | | | |
| --- | LITHOLOGIC CONTACT | | |
| --- | TRACE OF MINERALIZED STRUCTURE | | |
| --- | FAULT OR SHEAR | | |



27,397

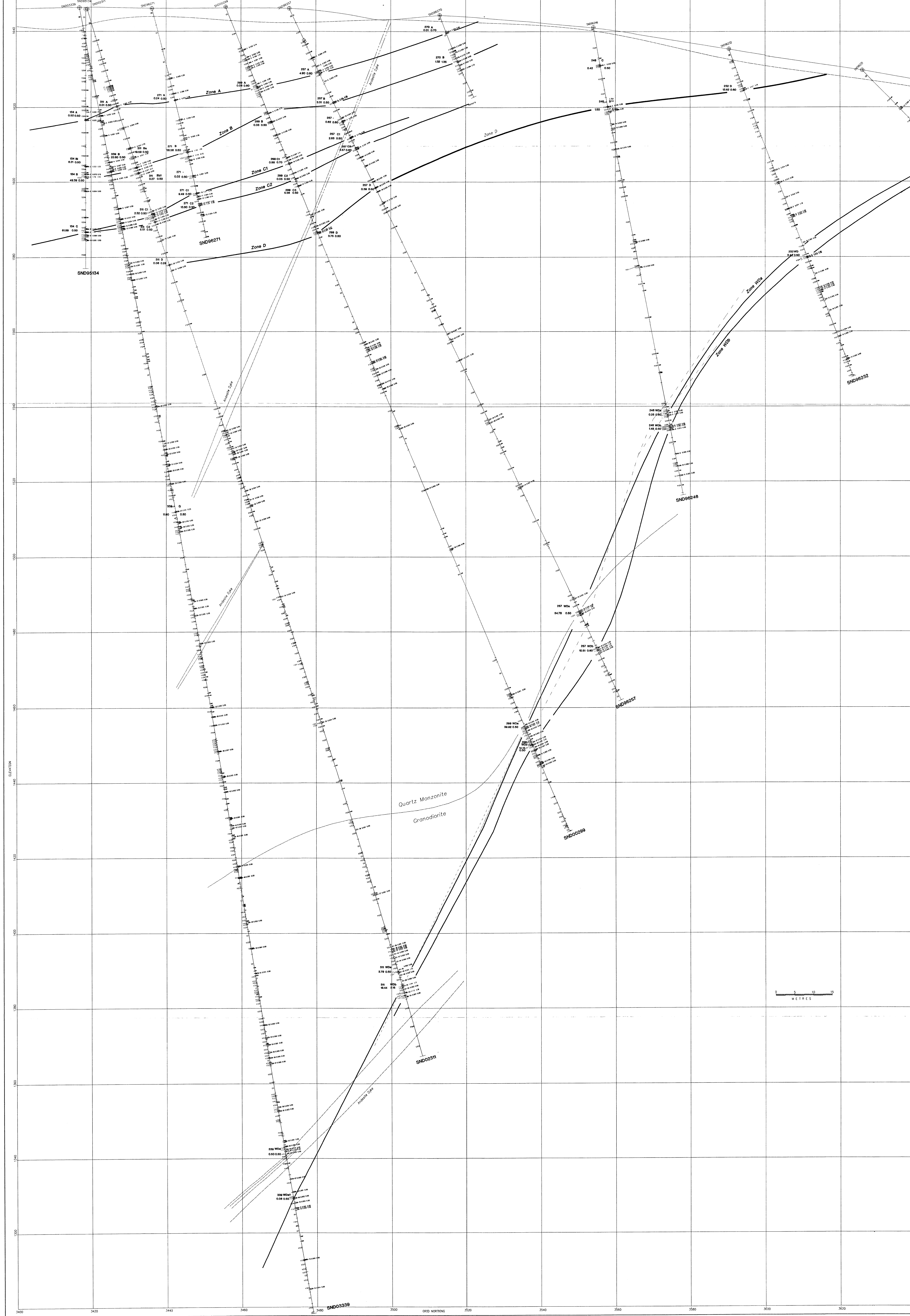
ALMADEN MINERALS LTD.
1103 - 750 West Pender Street Vancouver, British Columbia V6C 2T8

SIWASH GOLD MINE

**SIWASH NORTH AREA
DIAMOND DRILL SECTION
2495E**

SCALE 1 : 300
LOOKING WEST

Drawn by WJ February, 2004 Plate 11



LEGEND

LITHOLOGY

CS CASING
 MI MISSING CORE
 OB OVERBURDEN

TERTIARY

AD ANDESITE DYKE dark green to olive green, fine-grained to weakly porphyritic
 BR BRECCIA fragmented rock in a clay or clay-chlorite rich matrix, commonly grades into argillite
 CG CONGLOMERATE clay-rich with numerous rock fragments, shear fracture or bedding may be evident
 QV QUARTZ VEIN white to grey, quartz with some admixtures, commonly 10% to 20% pyrite, galena, sphalerite, silica, tourmaline, rare visible gold

JURASSIC

OSPREY LAKE BATHOLITH

AP APLITE pink to light grey, fine grained, asexual, may grade into pegmatite
 FP FELDSPAR PORPHYRY pink to red, medium fine-grained, K-spar rich
 GC GRANODIORITE CHILL MARCON very dark grey, fine grained, up to 25% biotite or hornblende
 GD GRANODIORITE medium to dark grey, fine to medium grained, with 10% to 20% biotite
 GR GRANITE pink to pinkish grey, quartz - K-spar rich with some hornblende
 PG PEGMATITE pink to light grey, very coarse grained to megacrystic, quartz - K-spar - muscovite rich
 QM QUARTZ MONZONITE light to medium pinkish grey, medium to coarse grained equigranular with up to 10% biotite or hornblende

TRIASSIC

NICOLA GROUP VOLCANICS

AV ANDESITIC VOLCANICS dark grey-green to near black, very fine-grained to aphanitic
 (P) PORPHYRITIC VOLCANIC as above, phenocrysts of plagioclase or hornblende to about 20%
 (B) VOLCANIC BRECCIA as above, brecciated (primary) with andesitic matrix matrix rarely oriented up to 25% pyrite - pyrrhotite - chalcopyrite

ALTERATION CODES

| | |
|----------------------------|----------------------|
| A(A) ARGILLIC | P(P) PROPYLITIC |
| CH(C) CHLORITIC | SP(S) SERICITIC |
| PK(K) K-spar STABLE PHYLIC | SK(S) SKARN |
| PR(P) PROXIMAL | SL(S) SILICIFICATION |
| AL(A) ALBITIC | |

(C = 1 to 5, WEAK TO INTENSE)

SULFIDE CONTENT CODES (quartz veins)

10 visible gold
 11 less than 1% surface
 12 1% to 2% surface
 13 2% to 5% surface
 14 5% to 10% surface
 15 greater than 10% surface

SYMBOLS

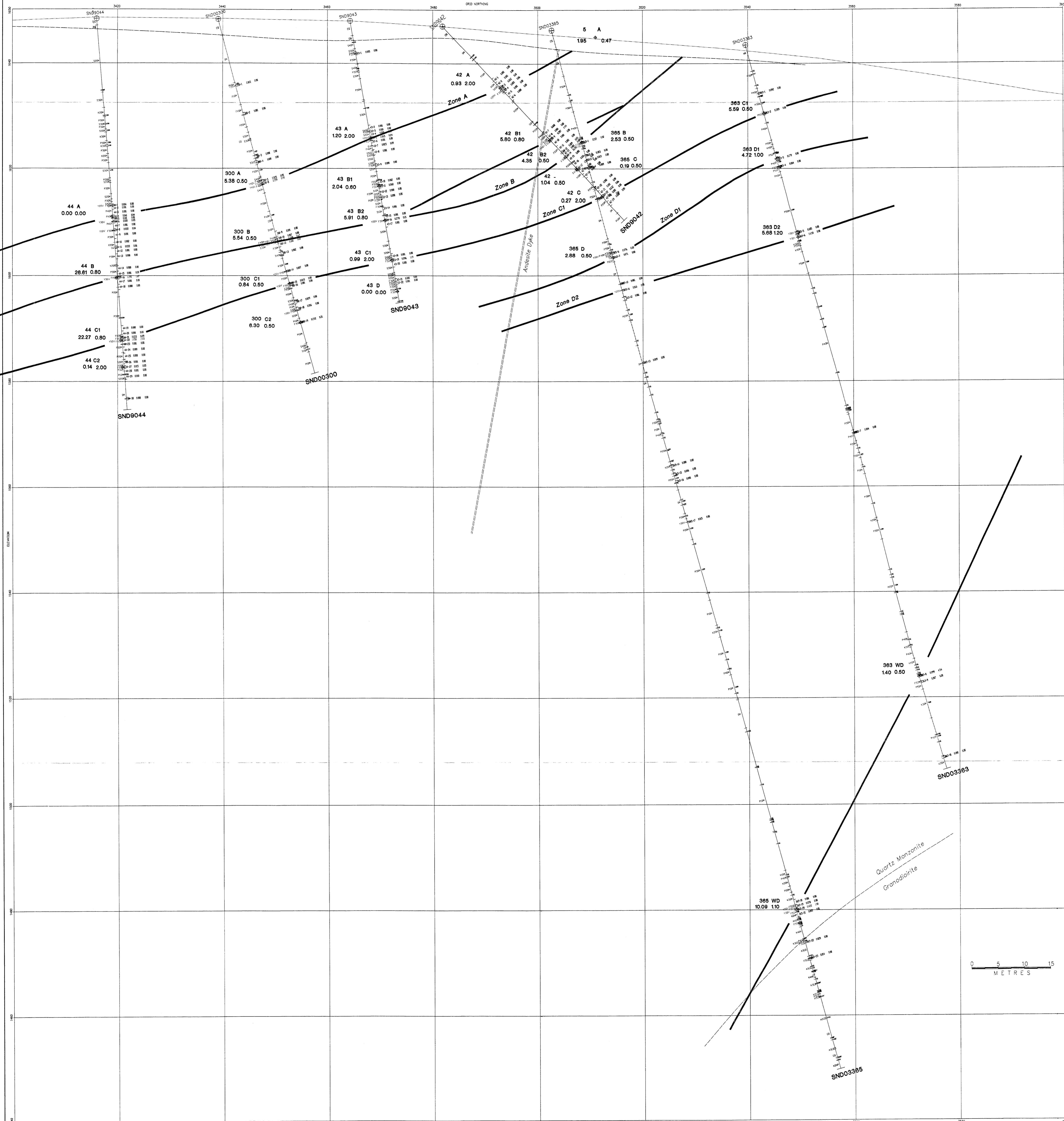
--- LITHOLOGIC CONTACT
 ——— TRACE OF MINERALIZED STRUCTURE
 - - - FAULT OR SHEAR

PLOT OF DRILL HOLE

| Hole # | Zone | Au g/t | TW (m) |
|----------|------|--------|--------|
| 270 A | A | 0.00 | 100 |
| 271 B | B | 0.00 | 100 |
| 272 C | C1 | 0.00 | 100 |
| 273 D | D | 0.00 | 100 |
| 274 W1 | W1 | 0.00 | 100 |
| 275 W2 | W2 | 0.00 | 100 |
| 276 W3 | W3 | 0.00 | 100 |
| 277 W4 | W4 | 0.00 | 100 |
| 278 W5 | W5 | 0.00 | 100 |
| 279 W6 | W6 | 0.00 | 100 |
| 280 W7 | W7 | 0.00 | 100 |
| 281 W8 | W8 | 0.00 | 100 |
| 282 W9 | W9 | 0.00 | 100 |
| 283 W10 | W10 | 0.00 | 100 |
| 284 W11 | W11 | 0.00 | 100 |
| 285 W12 | W12 | 0.00 | 100 |
| 286 W13 | W13 | 0.00 | 100 |
| 287 W14 | W14 | 0.00 | 100 |
| 288 W15 | W15 | 0.00 | 100 |
| 289 W16 | W16 | 0.00 | 100 |
| 290 W17 | W17 | 0.00 | 100 |
| 291 W18 | W18 | 0.00 | 100 |
| 292 W19 | W19 | 0.00 | 100 |
| 293 W20 | W20 | 0.00 | 100 |
| 294 W21 | W21 | 0.00 | 100 |
| 295 W22 | W22 | 0.00 | 100 |
| 296 W23 | W23 | 0.00 | 100 |
| 297 W24 | W24 | 0.00 | 100 |
| 298 W25 | W25 | 0.00 | 100 |
| 299 W26 | W26 | 0.00 | 100 |
| 300 W27 | W27 | 0.00 | 100 |
| 301 W28 | W28 | 0.00 | 100 |
| 302 W29 | W29 | 0.00 | 100 |
| 303 W30 | W30 | 0.00 | 100 |
| 304 W31 | W31 | 0.00 | 100 |
| 305 W32 | W32 | 0.00 | 100 |
| 306 W33 | W33 | 0.00 | 100 |
| 307 W34 | W34 | 0.00 | 100 |
| 308 W35 | W35 | 0.00 | 100 |
| 309 W36 | W36 | 0.00 | 100 |
| 310 W37 | W37 | 0.00 | 100 |
| 311 W38 | W38 | 0.00 | 100 |
| 312 W39 | W39 | 0.00 | 100 |
| 313 W40 | W40 | 0.00 | 100 |
| 314 W41 | W41 | 0.00 | 100 |
| 315 W42 | W42 | 0.00 | 100 |
| 316 W43 | W43 | 0.00 | 100 |
| 317 W44 | W44 | 0.00 | 100 |
| 318 W45 | W45 | 0.00 | 100 |
| 319 W46 | W46 | 0.00 | 100 |
| 320 W47 | W47 | 0.00 | 100 |
| 321 W48 | W48 | 0.00 | 100 |
| 322 W49 | W49 | 0.00 | 100 |
| 323 W50 | W50 | 0.00 | 100 |
| 324 W51 | W51 | 0.00 | 100 |
| 325 W52 | W52 | 0.00 | 100 |
| 326 W53 | W53 | 0.00 | 100 |
| 327 W54 | W54 | 0.00 | 100 |
| 328 W55 | W55 | 0.00 | 100 |
| 329 W56 | W56 | 0.00 | 100 |
| 330 W57 | W57 | 0.00 | 100 |
| 331 W58 | W58 | 0.00 | 100 |
| 332 W59 | W59 | 0.00 | 100 |
| 333 W60 | W60 | 0.00 | 100 |
| 334 W61 | W61 | 0.00 | 100 |
| 335 W62 | W62 | 0.00 | 100 |
| 336 W63 | W63 | 0.00 | 100 |
| 337 W64 | W64 | 0.00 | 100 |
| 338 W65 | W65 | 0.00 | 100 |
| 339 W66 | W66 | 0.00 | 100 |
| 340 W67 | W67 | 0.00 | 100 |
| 341 W68 | W68 | 0.00 | 100 |
| 342 W69 | W69 | 0.00 | 100 |
| 343 W70 | W70 | 0.00 | 100 |
| 344 W71 | W71 | 0.00 | 100 |
| 345 W72 | W72 | 0.00 | 100 |
| 346 W73 | W73 | 0.00 | 100 |
| 347 W74 | W74 | 0.00 | 100 |
| 348 W75 | W75 | 0.00 | 100 |
| 349 W76 | W76 | 0.00 | 100 |
| 350 W77 | W77 | 0.00 | 100 |
| 351 W78 | W78 | 0.00 | 100 |
| 352 W79 | W79 | 0.00 | 100 |
| 353 W80 | W80 | 0.00 | 100 |
| 354 W81 | W81 | 0.00 | 100 |
| 355 W82 | W82 | 0.00 | 100 |
| 356 W83 | W83 | 0.00 | 100 |
| 357 W84 | W84 | 0.00 | 100 |
| 358 W85 | W85 | 0.00 | 100 |
| 359 W86 | W86 | 0.00 | 100 |
| 360 W87 | W87 | 0.00 | 100 |
| 361 W88 | W88 | 0.00 | 100 |
| 362 W89 | W89 | 0.00 | 100 |
| 363 W90 | W90 | 0.00 | 100 |
| 364 W91 | W91 | 0.00 | 100 |
| 365 W92 | W92 | 0.00 | 100 |
| 366 W93 | W93 | 0.00 | 100 |
| 367 W94 | W94 | 0.00 | 100 |
| 368 W95 | W95 | 0.00 | 100 |
| 369 W96 | W96 | 0.00 | 100 |
| 370 W97 | W97 | 0.00 | 100 |
| 371 W98 | W98 | 0.00 | 100 |
| 372 W99 | W99 | 0.00 | 100 |
| 373 W100 | W100 | 0.00 | 100 |

27-397

ALMADEN MINERALS LTD.
 103 - 720 West Pender Street Vancouver, British Columbia V6C 2T8
SIWASH GOLD MINE
SIWASH NORTH AREA
DIAMOND DRILL SECTION
2520E
 SCALE 1 : 350
 LOOKING WEST
 Drawn by WJ February, 2004 Plate 12



LEGEND

LITHOLOGY

| | |
|--------------------------------------|---|
| CS | CASING |
| MI | MISSING CORE |
| OB | OVERBURDEN |
| TERTIARY | |
| AD | ANDESITE DYKE dark greyish-green to olive green, fine-grained to weakly porphyritic |
| BR | BRECCIA fragmented rock in a clay or clay-chlorite rich matrix, commonly grades into gouge |
| GG | GOUGE clay-rich with numerous rock fragments, shear foliation or banding may be evident |
| QV | QUARTZ VEIN white to grey quartz with some arsenite, commonly 10% to 20% pyrite, pyrrhotite, galena, tetrahedrite, rare visible gold |
| JURASSIC | |
| OSPREY LAKE BATHOLITH | |
| AP | APLITE pink to light grey, fine grained, saccharic, may grade into pegmatite |
| FP | FELDSPAR PORPHYRY very dark grey, fine to medium grained, K-spar rich |
| GC | GRANODIORITE CHILL MARGIN very dark grey, fine grained; up to 25% biotite or hornblende |
| GD | GRANODIORITE medium to dark grey, fine to medium grained, with 10% to 20% |
| GR | GRANITE pink to pinkish grey, quartz - K-spar rich with some hornblende |
| PG | PEGMATITE pink to light grey, very coarse grained to megacrystic; quartz - K-spar - muscovite rich |
| QM | QUARTZ MONZONITE light to medium pinkish grey; medium to coarse grained equigranular with up to 10% biotite or hornblende |
| TRIASSIC | |
| NECADA GROUP VOLCANICS | |
| AV | ANDESITIC VOLCANICS dark grey-green to near black, very fine-grained to aphanitic |
| (PV) | PORPHYRITIC VOLCANIC as above; phenocrysts of oligoclase or hornblende to about 20% |
| (VB) | VOLCANIC BRECCIA as above; brecciated (primary) with andesitic matrix; matrix rarely contains up to 25% pyrite - pyrrhotite - arsenite |
| ALTERATION CODES | |
| A(n) | ARGILLIC |
| PH(n) | PHYLIC |
| FX | K-spar STABLE PHYLIC |
| PRO | PROLITIC |
| B(n) | ALBITIC |
| P(n) | PROPYLITIC |
| SE | SEQUESTIC |
| SK | SKARN |
| X(n) | SILICIFICATION |
| (n = 1 TO 5, WEAK TO INTENSE) | |
| SULFIDE CONTENT CODES (quartz veins) | |
| Y0 | visible gold |
| Y1 | less than 1% sulfide |
| Y2 | 1% to 5% |
| Y3 | 5% to 10% sulfide |
| Y4 | 10% to 25% sulfide |
| Y5 | 25% to 50% sulfide |
| Y6 | greater than 50% sulfide |

SYMBOLS

- LITHOLOGICAL CONTACT
- TRACE OF MINERALIZED STRUCTURE
- - - FAULT OR SHEAR

PLOT OF DRILL HOLE

| Hole Number | Zone | Average True Au g/t | Width (m) |
|-------------|-------|---------------------|-----------|
| 363 WD | 140 | 0.50 | |
| 365 WD | 10.09 | 1.10 | |

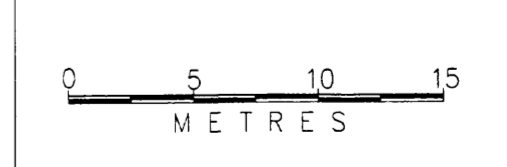
ALMADEN MINERALS LTD.
103 - 750 West Pender Street Vancouver, British Columbia V6C 2T8

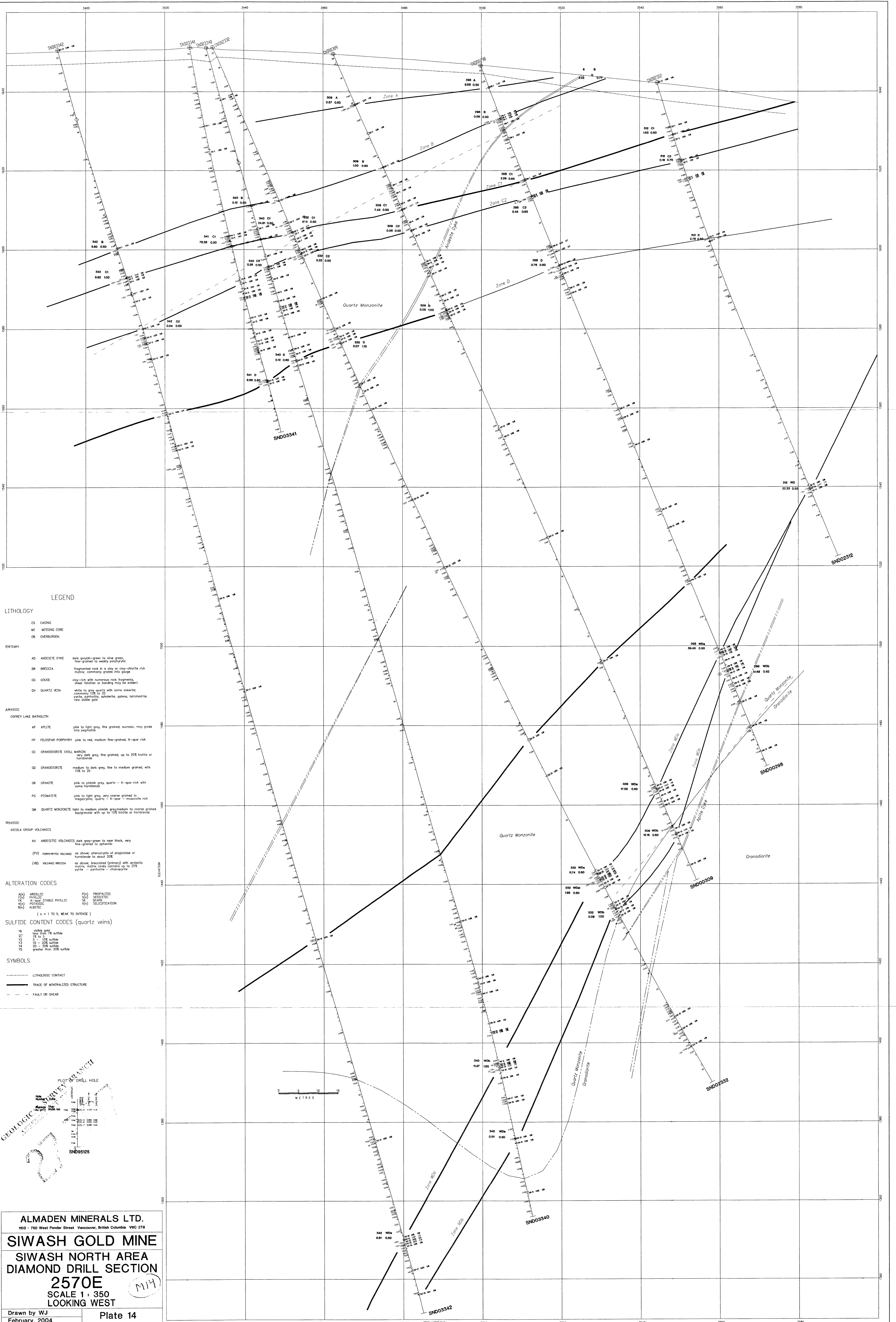
SIWASH GOLD MINE
SIWASH NORTH AREA
DIAMOND DRILL SECTION
2545E
SCALE 1 : 300
LOOKING WEST

Drawn by WJ
February, 2004

Plate 13

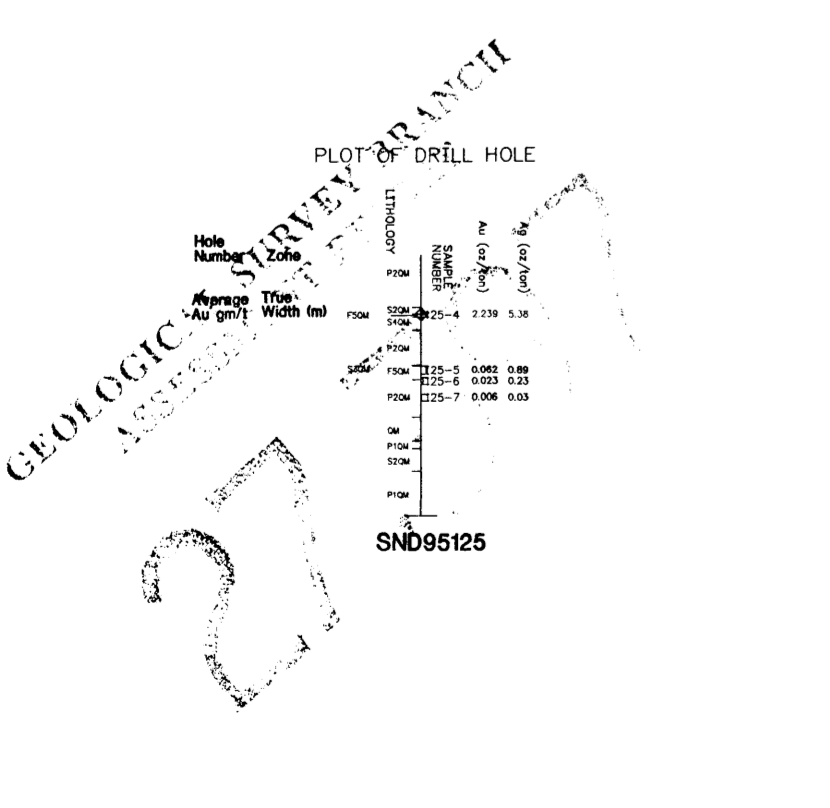
27,397





LEGEND

- LITHOLOGY**
- CS CASING
 - MI MISSING CORE
 - OB OVBURDEN
- TERTIARY**
- AD ANDESITE DYKE dark grey-green to olive green, fine-grained to weakly porphyritic
 - BR BRECCIA fragmented rock in a clay or clay-siltstone rich matrix, commonly grades into gouge
 - GG GOUGE clay-rich with numerous rock fragments, sharp friction or bedding may be evident
 - QV QUARTZ VEIN white to grey quartz with some siliceous; commonly 10% to 20% silica, pyrite, sphalerite, galena, tetrahedrite, rare visible gold
- JURASSIC**
- OSPREY LAKE BATOLITH**
- AP APLITE pink to light grey, fine grained, astringent, may grade into pegmatite
 - FP FELDSPAR PORPHYRY pink to red, medium fine-grained, K-spar rich
 - GC GRANODIORITE CHILL MARCIN very dark grey, fine grained, up to 25% biotite or hornblende
 - GD GRANODIORITE medium to dark grey, fine to medium grained, with 10% to 20%
 - GR GRANITE pink to pinkish grey, quartz - K-spar rich with some hornblende
 - PG PEGMATITE pink to light grey, very coarse grained to megacrystic, quartz - K-spar - muscovite rich
 - QM QUARTZ MONZONITE light to medium pinkish grey, medium to coarse grained equigranular with up to 10% biotite or hornblende
- TRASSIC**
- NICOLO GROUP VOLCANICS**
- AV ANDESITIC VOLCANICS dark grey-green to near black, very fine-grained to aphanitic
 - (PV) PORPHYRITIC VOLCANIC as above, phenocrysts of plagioclase or hornblende to about 20%
 - (VB) VOLCANIC BRECCIA as above, brecciated (primarily) with andesitic matrix, matrix rarely contains up to 25% pyrite - garnetite - chlorite
- ALTERATION CODES**
- | | |
|----------------------|--------------------|
| (A) ANGIOLIC | (P) PROLIFERIC |
| (F) FERRUGINOUS | (S) SERICITIC |
| (K) K-FIELD SPHALLIC | (X) XENOTIMIC |
| (M) MARGINAL | (Y) YUKONITE |
| (N) NICKEL | (Z) ZONAL |
| (O) OXIDATION | (a) SILICIFICATION |
- (n = 1 TO 5, NEAR TO INTENSE)
- SULFIDE CONTENT CODES (quartz veins)**
- 99 whole gold
 - 100 max 100% sulfide
 - 15 5 - 10% sulfide
 - 10 10 - 20% sulfide
 - 20 20 - 30% sulfide
 - 30 greater than 30% sulfide
- SYMBOLS**
- LITHOLOGIC CONTACT
 - TRACE OF MINERALIZED STRUCTURE
 - - - FAULT OR SHEAR

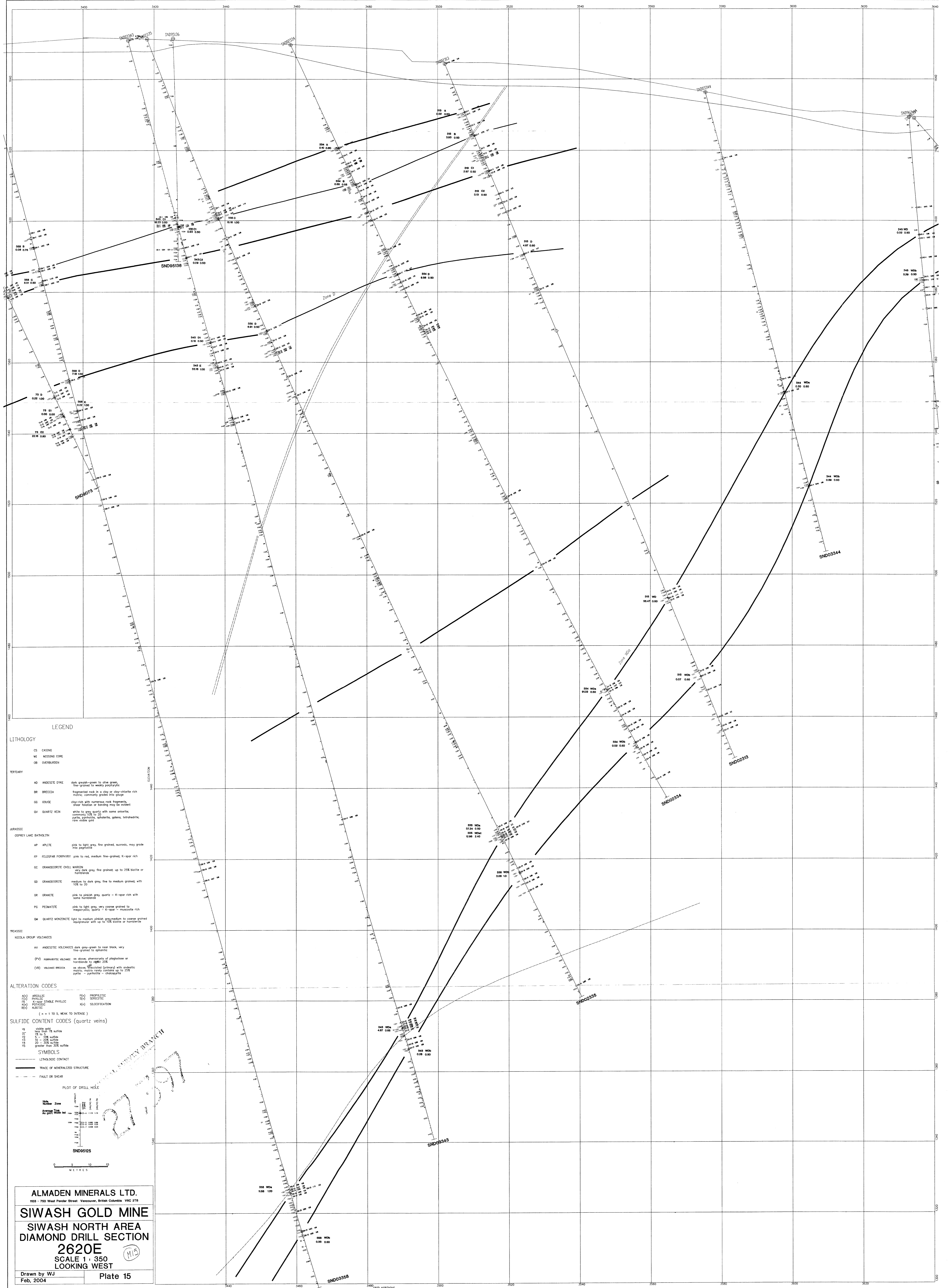


ALMADEN MINERALS LTD.
 1005 - 750 West Pender Street Vancouver, British Columbia V6C 2T8

SIWASH GOLD MINE
 SIWASH NORTH AREA
 DIAMOND DRILL SECTION
 2570E
 SCALE 1 : 350
 LOOKING WEST

Drawn by WJ
 February, 2004

Plate 14

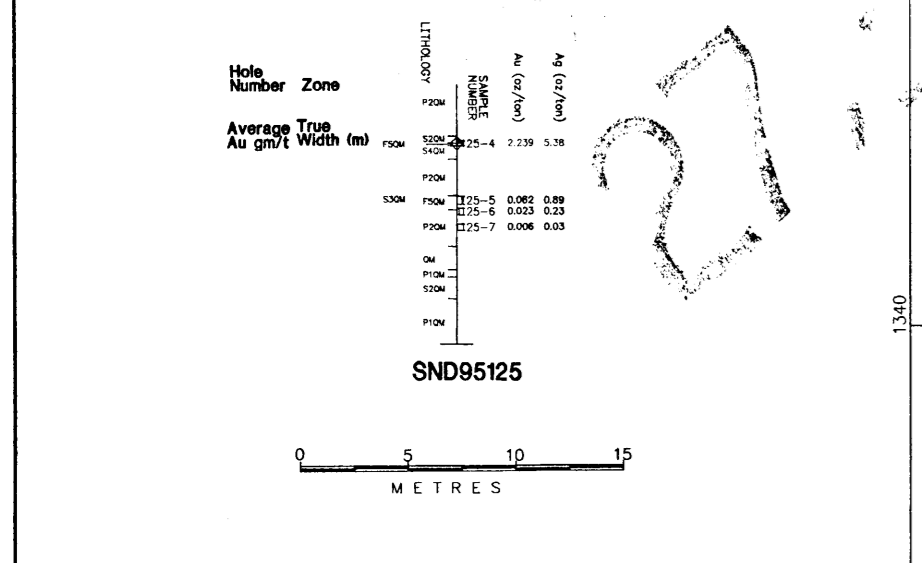


LEGEND

- LITHOLOGY**
- CS CASING
 - WC WASTING CORE
 - DB OVERBURDEN
- TERTIARY**
- AD ANDESITE DYKE dark grey-green to olive green, fine-grained to medium porphyritic.
 - BR BRECCIA fragmented rock in a clay or clay-chlorite rich matrix, commonly grades into gouge
 - CG COUGE clay-rich with numerous rock fragments, clear fracture or bedding may be evident
 - QV QUARTZ VEIN white to grey quartz with some arsenic, commonly fine to 25 pyrite, pyrrhotite, sphalerite, galena, tetrahedrite, rare native gold
- JURASSIC**
- DOONEY LAKE BATHOLITH**
- AP APLITE pink to light grey, fine grained, aegirine, may grade into pegmatite
 - FP FELDSPAR PORPHYRY pink to red, medium fine-grained, K-spar rich
 - OC ORANKORITE OHL MARGIN very dark grey, fine grained, up to 25% biotite or hornblende
 - OD ORANKORITE medium to dark grey, fine to medium grained, with 10% to 25%
 - OR GRANITE pink to brown grey, quartz - K-spar rich with some hornblende
 - PG PEGMATITE pink to light grey, very coarse grained to megacrystic, quartz - K-spar - muscovite rich
 - QM QUARTZ MONZONITE light to medium pinkish grey, medium to coarse grained megacrystic with up to 10% biotite or hornblende
- TRASSIC**
- NICOLA GROUP VOLCANICS**
- AV ANDESITIC VOLCANICS dark grey-green to near black, very fine-grained to aphanitic
 - (V) ANDRESITIC VOLCANIC as above, phenocrysts of plagioclase or hornblende to 0.8mm to 2.0mm
 - (V) VOLCANIC BRECCIA as above, brecciated (fragment) with metallic matrix, matrix may contain up to 25% pyrite - pyrrhotite - arsenopyrite

- ALTERATION CODES**
- (A) ARFVEDSONITE
 - (P) PHYLIC
 - (K) K-FELDSPAR
 - (R) SERPENTINE
 - (S) STABLE PHYLIC
 - (X) SERICITIC
 - (M) MICA
 - (S) SILICIFICATION
 - (A) ALBITE
 - (X) SILICIFICATION
- (n = 1 to 5, WEAK TO INTENSE)

- SULFIDE CONTENT CODES (quartz veins)**
- VS vein surface
 - 15 to 100 surface
 - 15 to 100 surface
 - 25 to 100 surface
 - greater than 100 surface
- SYMBOLS**
- LITHOLOGIC CONTACT
 - TRACE OF MINERALIZED STRUCTURE
 - - - FAULT OR SHEAR

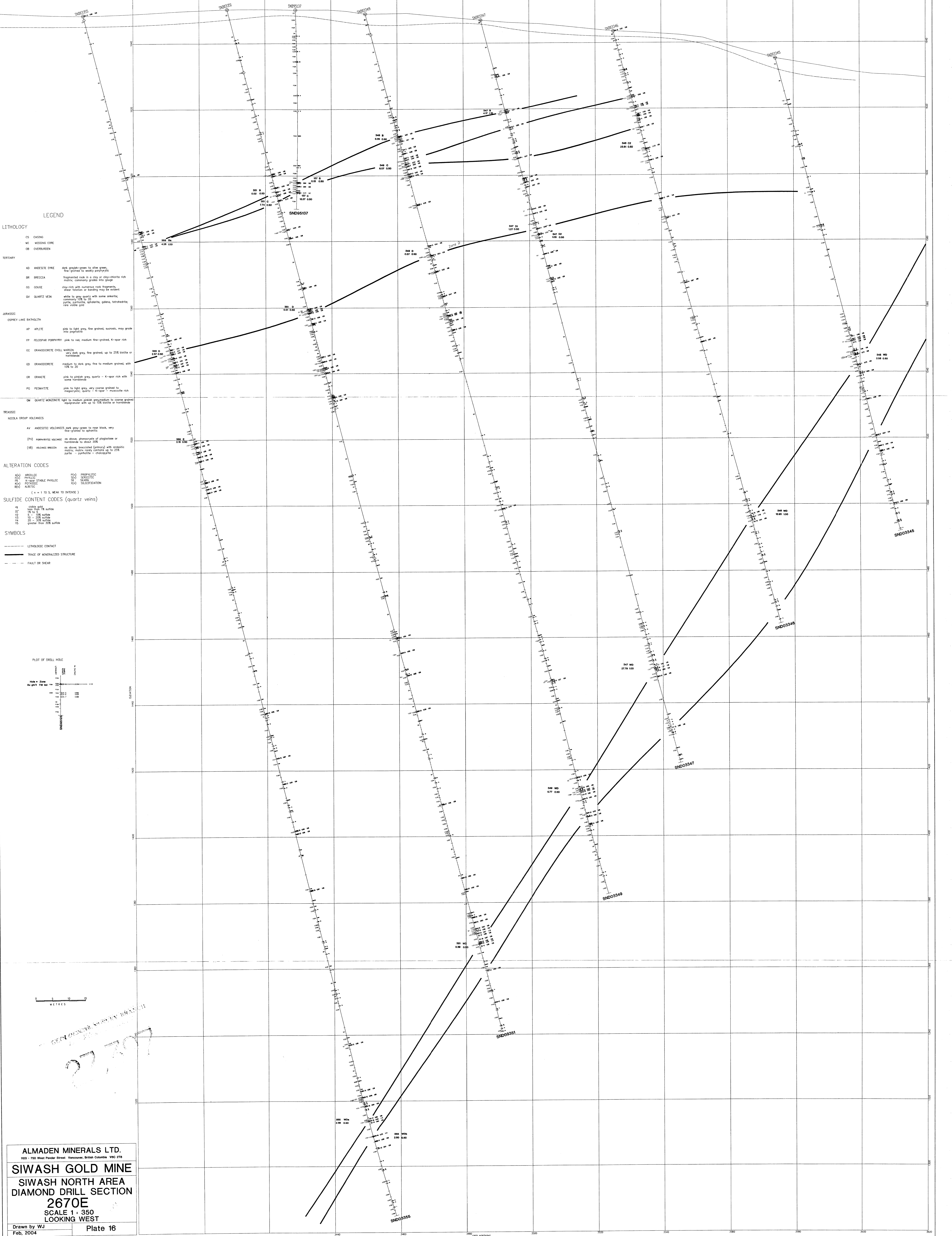


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SIWASH GOLD MINE
 SIWASH NORTH AREA
 DIAMOND DRILL SECTION
2620E
 SCALE 1 : 350
 LOOKING WEST

Drawn by WJ
 Feb, 2004

Plate 15



LEGEND

LITHOLOGY

CS CASING

WT WEEDING CORE

OB OVERBLASTED

TERTIARY

AD ANDESITE DYKE dark grey-green to olive green, fine grained to weakly porphyritic

BR BRECCIA fragmented rock in a clay or clay-siliceous rich matrix, commonly grades into gouge

CG GOUGE clay-rich with numerous rock fragments, where lamination or banding may be evident

QV QUARTZ VEIN white to grey quartz with some arsenic, commonly 10% to 25% pyrite, sphalerite, galena, tetrahedrite, rare cobaltite

JURASSIC

OSPREY LAKE BATWOLTH

AP APLITE pink to light grey, fine grained, aegirine, may grade into porphyritic

FP FELDSPAR PORPHYRY pink to red, medium fine-grained, K-spar rich

OC ORANODORITE CHILL MASONRY very dark grey, fine grained, up to 25% biotite or hornblende

OD ORANODORITE medium to dark grey, fine to medium grained, with 10% to 20%

GR GRANITE pink to pinkish grey, quartz - K-spar rich with some hornblende

PG PEGMATITE pink to light grey, very coarse grained to megacrystic, quartz - K-spar - muscovite rich

QM QUARTZ MONZONITE light to medium pinkish grey medium to coarse grained megacrystic with up to 20% biotite or hornblende

TRIASSIC

NICOLA GROUP VOLCANICS

AV ANDESITIC VOLCANICS dark grey-green to red black, very fine-grained to aphanitic

(P) PORPHYRITIC VOLCANIC in above, phenocrysts of plagioclase or hornblende to about 20%

(B) VOLCANIC BRECCIA in above, brecciated (fragmentary) with andesitic matrix, matrix rarely contains up to 25% pyrite - sphalerite - galena

ALTERATION CODES

| | |
|--------------------------|--------------------|
| AR) ARILLIC | PR) PROPYLITIC |
| PH) PHYLIC | PO) POGONITIC |
| PS) PSEUDO-STABLE PHYLIC | SH) SHEAR |
| AD) ANDRESITIC | SC) SERICITIZATION |
| BO) ALBITIC | |

(x = 1 to 5, WEAK TO INTENSE)

SULFIDE CONTENT CODES (quartz veins)

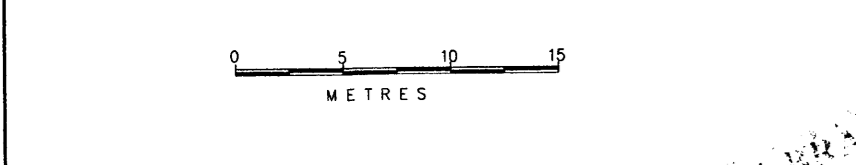
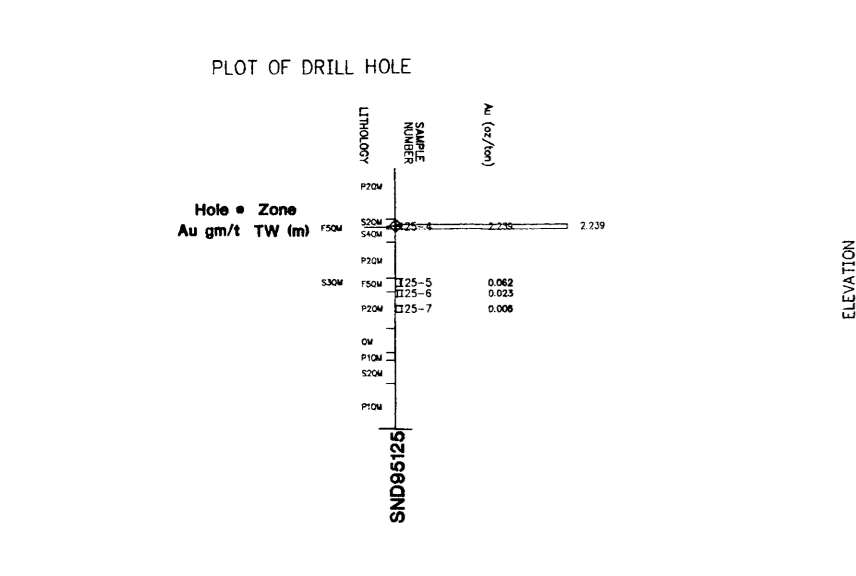
| | |
|----|--------------------------|
| 0 | white quartz |
| 1 | 10% surface |
| 2 | 20% surface |
| 3 | 30% surface |
| 4 | 40% surface |
| 5 | 50% surface |
| 6 | 60% surface |
| 7 | 70% surface |
| 8 | 80% surface |
| 9 | 90% surface |
| 10 | greater than 90% surface |

SYMBOLS

--- LITHOLOGIC CONTACT

--- TRACE OF MINERALIZED STRUCTURE

--- FAULT OR SHEAR



27307