# Drill Hole Record

Cominco

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Property | J.C. Property | District | Watson Lake M.D. | Hole No. | JC 81-4 | | |
| Commenced | 9 July 1981 | Location | Yukon Territory | Tests at | p. 10 | Hor. Comp. | |
| Completed | 17 July 1981 | Core Size | BQ | Corr. Dip | -70° | Vert. Comp. | |
| Co-ordinates | 88 + 91E 91 + 389 N | | | True Brg. | 360° | Logged by | G.D.L. |
| Objective | Test skarn horizon for Sn mineralization. | | | % Recov. | | Date | 16 July 1981 |

| Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. | Sheet |
|---|---|---|---|---|---|---|
| JC | 360 | -70 | 5168.9' | 878' | | |

Scale

Colour Plot & Dips

0

| Footage From | To | Description | Sample No. | Length | Cu | WO3 | Sn | Ag | Au |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 10.0 | CASING | | | | | | | |
| 10.0 | 96.0 | QUARTZITE | | | | | | | |
| | | Largely light gray w/ irregular mauve coloured (argillaceous) interbeds; mauve sections are easily visible in gray sections; some lighter gray cherty sections; minor po as specks and spots throughout; occasional minor chlorite in small veinlets and as joint fillings. | | | | | | | |
| | | Core angle @ 95' 9° | | | | | | | |
| 96.0 | 101.0 | BIOTITE QUARTZ-FELDSPAR (PORPHYRY) | 97599 | 96.0 101.0 | <0.01 | <0.01 | <0.01 | 0.03 | <0.003 |
| | | Strongly resembles a f. gr. version of the BIOTITE Q.F.P. unit in JC 81-3; light gray; speckled w/ brownish 1mm spots of biotite; phenocrysts of qtz. or feld. are not readily visible; minor po and py dissem. throughout; trace cpy as small blebs (1mm); sl. chloritic w/ one 1cm pocket of green chlorite and dissem. sulphides; sulphide filled fractures and small veinlets in quartzite directly below 101.0'. | | | | | | | |

211-0437

Scale

Colour Plot & Dips

# Drill Hole Record

Cominco

| | | | |
|---|---|---|---|
| Property | District | Hole No. JC 81-4 | |
| Commenced | Location | Tests at | Hor. Comp. |
| Completed | Core Size | Corr. Dip | Vert. Comp. |
| Co-ordinates | | True Brg. | Logged by |
| Objective | | % Recov. | Date |

Claim JC | T Brg. 360 | Collar Dip -70 | Elev. 5168.9' | Length 818' | Hole No. | Sheet

| Footage From | To | Description | Sample No. | Length | Analysis |
|---|---|---|---|---|---|
| 101.0 | 211.5 | QUARTZITE | | | |
| | | Generally cf. 10.0-96.0; often contains thin darker coloured bands that are irregular and folded or weblike (hornfels type texture); mnr po still common; occasional green chloritic veinlets, spots or joint fillings; occasional white patches of a few cm. may be limey interbeds (but do not effervesce); several of these light coloured interbeds from 173'-177', often pinkish or greenish w/ some chlorite and po/py; | | | |
| | | Core angle @172' $10^{0}$ | | | |
| | | Occasional qtz. veins or 'sweats' of 1-5cm, often chloritic; | | | |
| | | Core angle @ 203' $9^{0}$ | | | |
| 211.5 | 213.0 | LAPILLI TUFF(?) | | | |
| | | Light gray quartzitic rock; on polished surface of core light gray qtzitic frags(?) are visible; frags(?) aug. 3-5mm by 10-20mm and are elongated parallel to apparent bedding; not rusty like LAPILLI TUFF units of JC 81-2, 3; a few thin qtz/calcite stringers; sections are somewhat chloritic; frags are rounded or ovoid in shape and often separated by thin weblike stringers of darker coloured material. | | | |
| 213.0 | 218.5 | QUARTZITE | | | |
| | | cf. 101.0-211.5 | | | |

# Drill Hole Record

Cominco

| | | | |
|---|---|---|---|
| Property | District | Hole No. JC 81-4 | |
| Commenced | Location | Tests at | Hor. Comp. |
| Completed | Core Size | Corr. Dip | Vert. Comp. |
| Co-ordinates | | True Brg. | Logged by |
| Objective | | % Recov. | Date |

Claim JC | T Brg. 360 | Collar Dip -70 | Elev. 5168.9 | Length 878 | Hole No. | Sheet

Scale

Colour Plot & Dips

| Footage From | To | Description | Sample No. | Length | Analysis |
|---|---|---|---|---|---|
| 218.5 | 220.0 | LAPILLI TUFF(?) | | | |
| | | cf. 211.5-213.0 | | | |
| 220.0 | 324.5 | QUARTZITE | | | |
| | | Generally cf. 101.0-211.5; mauve coloured bands and sections becoming more common; often quite massive w/ no banding; occasional qtz 'sweats' up tp 20cm, usually chloritic w/ chloritic selvedges and minor po/py as small blebs. | | | |
| 324.5 | 347.0 | AMYGDALOIDAL BASALT | | | |
| | | Black w/ brownish patches; speckled w/ white, calcite filled amygdules (1-2mm); occasional thin calcite stringers; also speckled w/ small black glassy(?) grains of less than 1mm; some larger amygdules are filled w/ a green talcose mineral; parts of unit are weakly magnetic; calcite stringers may also carry green talcose mineral (talc(?)); lower contact appears to be at a steep angle, roughly 80$^{o}$ ; little brecciation at either contact. | | | |
| 347.0 | 407.0 | QUARTZITE | | | |
| | | cf. 220.0-324.5 | | | |

211-9437

Scale

Colour Plot & Dips

# Drill Hole Record

Cominco

| | | | | | |
|---|---|---|---|---|---|
| Property | | District | | Hole No. | JC 81-4 |
| Commenced | | Location | | Tests at | |
| Completed | | Core Size | | Corr. Dip | |
| Co-ordinates | | | | True Brg. | |
| Objective | | | | % Recov. | |

| | |
|---|---|
| Hor. Comp. | |
| Vert. Comp. | |
| Logged by | |
| Date | |

| Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. | Sheet |
|---|---|---|---|---|---|---|
| J.C. | 360 | -70° | 5168.9' | 878' | | |

| Footage From | Footage To | Description | Sample No. | Length | Analysis Cu | WO3 | Sn | Ag | Au |
|---|---|---|---|---|---|---|---|---|---|
| 407.0 | 412.0 | BRECCIA-CONGLOMERATE<br>Polymictic; large angular frags of mauve and green gray qtzite up to 2 or 3 cm; smaller angular frags of these rocks and white qtz down to 1mm and less; fragment supported, up to 90% frags; may be quite calcareous in sections; underlying quartzite is brecciated for about 5' w/ qtz and calcareous infilling; upper contact w/ qtzite seems quite sharp; | | | | | | | |
| 412.0 | 461.0 | QUARTZITE<br>cf. 220.0-324.5; quite often mauve coloured (argillaceous); small section of BRECCIA-CONGLOMERATE at 425.0-425.5.<br>Core angle @ 443' 23° | | | | | | | |
| 461.0 | 465.0 | BIOTITE QUARTZ-FELDSPAR(PORPHYRY)<br>Very similar to 96.0-101.0; bluish-gray; large (1-3mm) spots of brown biotite scattered throughout; py/po in thin, discontinuous veinlets; biotite spots are often rectangular and lathlike (phenocrysts). | 97600 | 461.0<br>465.0 | <0.01 | <0.01 | <0.01 | 0.01 | <0.003 |
| 465.0 | 577.0 | QUARTZITE<br>cf. 412.0-461.0<br><br>516.0-522.0 Resembles 'marble-cake' hornfels of JC 81-3 | | | | | | | |

211-9437

# Drill Hole Record

Cominco

Scale

Colour Plot & Dips

| | |
|---|---|
| Property | |
| District | |
| Hole No. | JC 81-4 |
| Commenced | |
| Location | |
| Tests at | |
| Hor. Comp. | |
| Completed | |
| Core Size | |
| Corr. Dip | |
| Vert. Comp. | |
| Co-ordinates | |
| True Brg. | |
| Logged by | |
| Objective | |
| % Recov. | |
| Date | |

| Claim | T Brg. | Collar Dip | Elev. | Length |
|---|---|---|---|---|
| JC | 360 | -70 | 5168.9' | 878' |

| Footage From | Footage To | Description | Sample No. | Length | Cu | WO3 | Sn | Ag | Au |
|---|---|---|---|---|---|---|---|---|---|
| 577.0 | 583.0 | BIOTITE QUARTZ-FELDSPAR PORPHYRY | 97601 | 577.0 583.0 | <0.01 | <0.01 | <0.01 | 0.01 | <0.003 |
| | | Very similar to 461.0-465.0; small 4cm xenolith of mauve and green QUARTZITE at 577.5; | | | | | | | |
| | | top contact w/ QUARTZITE @ approx. 60°; dissem. po/py | | | | | | | |
| 583.0 | 601.0 | QUARTZITE | | | | | | | |
| | | Generally cf. 465.0-577.0; increasing number of chloritec quartz 'sweats'. | | | | | | | |
| 601.0 | 602.0 | BIOTITE Q.F.P. | | | | | | | |
| | | cf. 577.0-583.0 | | | | | | | |
| 602.0 | 741.5 | QUARTZITE | | | | | | | |
| | | cf. 583.0-601.0 | | | | | | | |
| * | | 670.0-741.5 Banded chlorite-biotite bearing rock; biotite as thin veins of 1mm flakes esp. | 97602 | 702.0 708.0 | <0.01 | <0.01 | <0.01 | <0.01 | 0.003 |
| | | w/ qtz. sweats; small (1mm) garnets also occur w/ qtz and bio; some py; some small qtz. veins | 97603 | 708.0 715.0 | <0.01 | <0.01 | <0.01 | 0.03 | <0.003 |
| | | (616') give pale green fluorescence; QUARTZITE from 610' down bears various proportions of | 97604 | 715.0 722.0 | <0.01 | 0.01 | <0.01 | 0.01 | <0.003 |
| | | chlorite, biotite and some garnet; banding is not usually apparent or is streaky and irregular; | 97605 | 722.0 729.0 | <0.01 | 0.01 | <0.01 | <0.01 | 0.004 |
| | | thin bands of biotite may sometimes parallel original bedding; large (3-4mm) spots of scheelite | 97606 | 729.0 734.0 | <0.01 | 0.01 | <0.01 | <0.01 | <0.003 |
| | | in qtz. veins below 739.5. | 97607 | 734.0 738.0 | <0.01 | <0.01 | <0.01 | <0.01 | <0.003 |
| | | | 97608 | 738.0 741.5 | <0.01 | 0.02 | <0.01 | 0.01 | <0.003 |

# Drill Hole Record

Cominco

| | | | | | |
|---|---|---|---|---|---|
| Property | | District | | Hole No. | JC 81-4 |
| Commenced | | Location | | Tests at | |
| Completed | | Core Size | | Corr. Dip | |
| Co-ordinates | | | | True Brg. | |
| Objective | | | | % Recov. | |

Hor. Comp.
Vert. Comp.
Logged by
Date

Claim: JC
T Brg.: 360
Collar Dip: -70
Elev.: 5168.9
Length: 878'

Scale
Colour Plot & Dips

| Footage From | To | Description | Sample No. | Length | Cu | WO3 | Sn | Ag | Au |
|---|---|---|---|---|---|---|---|---|---|
| *741.5 | 747.5 | QTZ. MONZONITE | | | | | | | |
| | | Pale greenish to light gray; aug. grain size approx. 1-2mm; speckled w/ black biotite flakes (½-1mm aug.); afew large qtz. eyes up to 5mm; throughout section pale yellow biotite free stripes (fractures or veins) cross core @ 43° | 97609 | 741.5 747.5 | <0.01 | <0.01 | <0.01 | <0.01 | <0.003 |
| *747.5 | 752.0 | QUARTZITE | | | | | | | |
| | | Very similar to 610.0-741.5; melted appearance; a few small spots of scheelite; | 97610 | 747.5 752.0 | <0.01 | 0.01 | <0.01 | <0.01 | <0.003 |
| *752.0 | 754.0 | QTZ. MONZONITE | 97611 | 752.0 754.0 | <0.01 | <0.01 | <0.01 | <0.01 | <0.003 |
| | | cf. 741.5-747.5 | | | | | | | |
| 754.0 | 760.0 | QUARTZITE | 97612 | 754.0 760.0 | <0.01 | 0.02 | <0.01 | <0.01 | <0.003 |
| | | cf. 747.5-752.0 small section of GRANITE @ 756.0-756.5 | | | | | | | |
| *760.0 | 780.0 | QTZ. MONZONITE | 97613 | 760.0 765.0 | <0.01 | <0.01 | 0.02 | <0.01 | <0.003 |
| | | Generally cf. 741.5-747.5; some sections are pale yellowish colour (like cross cutting | 97614 | 765.0 770.0 | <0.01 | <0.01 | 0.02 | 0.01 | <0.003 |
| | | veins or fractures described above); large yellowish (3-5mm) squarish feld. phenos. are occas- | 97615 | 770.0 775.0 | <0.01 | <0.01 | 0.02 | 0.01 | <0.003 |
| | | ionally visible; below 766.5' thin black tourmaline veins or fractures filling crosscut the | 97616 | 775.0 780.0 | <0.01 | <0.01 | 0.01 | 0.01 | <0.003 |
| | | core @ approx. 33°; yellowish crosscutting veins fade-out, trace dissem. py near bottom of section. | | | | | | | |

811-9437

Scale

Colour Plot & Dips

0

# Drill Hole Record

Cominco

| | | | |
|---|---|---|---|
| Property | District | Hole No. JC 81-4 | |
| Commenced | Location | Tests at | Hor. Comp. |
| Completed | Core Size | Corr. Dip | Vert. Comp. |
| Co-ordinates | | True Brg. | Logged by |
| Objective | | % Recov. | Date |

| Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. | Sheet |
|---|---|---|---|---|---|---|
| JC | 360 | -76 | 5168.9' | 878' | | |

| Footage From | Footage To | Description | Sample No. | Length | Analysis Cu | WO3 | Sn | Ag | Au |
|---|---|---|---|---|---|---|---|---|---|
| **780.0 | 830.0 | SKARN | | | | | | | |
| | | Extremely variable in colour and proportions of major constituent minerals (garnet, diopside actinolite); large sections are light yellowish green to pink green diopside-garnet skarn; these sections often contain irregular subangular 'spots' of actinolite and/or tourmaline similar to be SPOTTED SKARN of JC 81-1; darker green sections of garnet-diopside skarn conatain large patches of actinolite and/or tourmaline; these sections also contain thin parallel to sub-parallel veinlets of actinolite/tourmaline; py and cpy occur in groups of thin parallel veinlets w/ actinolite; large (1cmor more) grains of purplish fluorite may occur w/ sulphides; purplish axinite is also observed occasionally as large bladed crystals | | | | | | | |
| | | 780.0-783.0 Pyrite and lesser cpy throughout, dissem and in thin, close-spaced veinlets w/ actinolite crosscutting core @ 64$^{0}$; also large (1cm or more) rounded grains of fluorite; large (up to 1cm) grains of pink-red garnet; weakly magnetic (contains some po and/or magn.); trace arspy(?). | 97617 | 780.0 783.0 | 0.05 | 0.02 | 0.05 | 0.09 | <0.003 |
| | | | 97618 | 783.0 788.0 | <0.01 | <0.01 | 0.15 | 0.05 | <0.003 |
| | | | 97619 | 788.0 793.0 | <0.01 | <0.01 | 0.19 | 0.05 | <0.003 |
| | | 783.0-802.0 Largely SPOTTED SKARN; varying proportions of garnet and diopside w/ actin. and tourm in 'spots'. | | | | | | | |

211-943

Scale

Colour Plot & Dips

# Drill Hole Record

Cominco

Property

District

Hole No. JC 81-4

Commenced

Location

Tests at

Hor. Comp.

Completed

Core Size

Corr. Dip

Vert. Comp.

Co-ordinates

True Brg.

Logged by

Objective

% Recov.

Date

Claim JC

T Brg. 360

Collar Dip -70°

Elev. 5689'

Length 878'

Hole No.

Sheet

| Footage From | Footage To | Description | Sample No. | Length | Cu | WO3 | Sn | Ag | Au |
|---|---|---|---|---|---|---|---|---|---|
| | | 796.0-796.5 Section w/ about 80% dark green actinolite; cpy as small blebs (about 3-4%); | 97620 | 793.0 798.0 | 0.31 | <0.01 | 0.63 | 0.58 | <0.003 |
| | | large pink-red garnet grains; slightly magnetic throughout. | 97621 | 798.0 802.0 | <0.01 | <0.01 | 0.19 | 0.06 | <0.003 |
| | | | 97622 | 802.0 807.0 | 0.02 | <0.01 | 0.15 | 0.06 | <0.003 |
| | | | | | | | | | |
| | | 802.0-828.0 Largely GARNET-DIOPSIDE SKARN; very few 'spots'; somewhat finer gr. on aug than | | | | | | | |
| | | above; still has larger 'patches' of actinolite. | | | | | | | |
| | | | | | | | | | |
| | | 807.0-808.5 About 75% massive to fibrous/acicular dark green actinolite; a few large (up | 97623 | 807.0 808.5 | 0.23 | 0.02 | 0.94 | 0.46 | <0.003 |
| | | to 1cm) pink-red garnets crystals; about 20% reddish bronze po as irreg grains 1-3mm; | 97624 | 808.5 813.5 | <0.01 | <0.01 | 0.13 | 0.03 | <0.003 |
| | | lesser cpy as small blebs; po seems exceptionally magnetic. | | | | | | | |
| | | | | | | | | | |
| | | 813.5-814.0 Vein(?) consisting largely of purple bladed/tabular crystals of axinite up to | 97625 | 813.5 818.0 | <0.01 | <0.01 | 0.10 | 0.08 | <0.003 |
| | | 1 cm; some large (3-7mm) light green grains of diopside(??); lesser calcite as wh. grains | 97626 | 818.0 823.0 | <0.01 | <0.01 | 0.13 | 0.01 | <0.003 |
| | | of several mm. | 97627 | 823.0 828.5 | <0.01 | <0.01 | 0.09 | 0.01 | <0.003 |
| | | | | | | | | | |
| | | 828.5-830.0 About 80% coarse gr. pink-red garnet; 'spots' of actinolite , sometimes w/ calcite; | 97628 | 828.5 830.0 | <0.01 | <0.01 | 0.09 | 0.03 | <0.003 |
| | | also larger patches containing actinolite,w/ lesser fluorite, diopside and minor calcite. | | | | | | | |
| | | | | | | | | | |
| 830.0 | 853.5 | QTZ. MONZONITE | | | | | | | |
| | | Generally cf. 741.5-747.5; seems to lack crosscutting veins and fractures; a few thin | | | | | | | |
| | | tourmalinised joints or fractures. | | | | | | | |

Scale

Colour Plot & Dips

# Drill Hole Record

Cominco

| | | | |
|---|---|---|---|
| Property | District | Hole No. JC 81-4 | |
| Commenced | Location | Tests at | Hor. Comp. |
| Completed | Core Size | Corr. Dip | Vert. Comp. |
| Co-ordinates | | True Brg. | Logged by |
| Objective | | % Recov. | Date |

| Claim | T Brg. | Collar Dip | Elev. | Length |
|---|---|---|---|---|
| JC | 360 | -70 | 5168.9' | 878' |

| Footage From | Footage To | Description | Sample No. | Length | Cu | WO3 | Sn | Ag | Au |
|---|---|---|---|---|---|---|---|---|---|
| | | 830.0-832.5 Section is pinkish red; could be pink feldspar or possibly garnets(??), sl. coarser | 97629 | 830.0-832.5 | <0.01 | <0.01 | 0.03 | <0.01 | <0.003 |
| | | gr. than granite in general. | 97630 | 832.5-838.0 | <0.01 | <0.01 | 0.03 | <0.01 | <0.003 |
| | | | 97631 | 838.0-843.0 | <0.01 | <0.01 | 0.03 | <0.01 | <0.003 |
| | | | 97632 | 843.0-848.0 | <0.01 | <0.01 | 0.03 | <0.01 | <0.003 |
| | | | 97633 | 848.0-853.5 | <0.01 | <0.01 | 0.03 | <0.01 | <0.003 |
| 853.5 | 861.0 | GNT.-DIOPS. SKARN | 97634 | 853.5-857.5 | <0.01 | <0.01 | 0.14 | 0.03 | <0.003 |
| | | Coarse gr. patchy garnet-diopside skarn; pink-red garnet grains up to 15mm (aug. 2-4mm); | 97635 | 857.5-861.0 | <0.01 | 0.01 | 0.08 | 0.05 | <0.003 |
| | | Light green diopside is much finer gr.; patches and spots from a few mm. to several cm. of dark | | | | | | | |
| | | green figr. actinolite; a few wh. grains of calcite w/ actinolite; minor py/arspy as 2-3mm | | | | | | | |
| | | grains at bottom contact. | | | | | | | |
| 861.0 | 878.0 | QTZ. MONZONITE | 97636 | 861.0-864.5 | <0.01 | 0.01 | 0.02 | <0.01 | <0.003 |
| | | 861.0-868.0 Slightly pinkish and slightly finer gr. than gray sections; may display large rec- | 97637 | 864.5-868.0 | <0.01 | <0.01 | 0.02 | <0.01 | <0.003 |
| | | tangular phenos of feldspar up to 15mm long; biotite grains up to 4mm; a few small veins or frac- | | | | | | | |
| | | ure fillings of purple fluorite; veins of qtz.-feldspar pegmatite (aug. grain size 4-5mm) about | | | | | | | |
| | | 1cm thick are occasionally visible; | | | | | | | |
| | | 868.0-878.0 cf. 830.0-853.5; some sections have yellowish stripes or fractures | 97638 | 868.0-873.0 | <0.01 | <0.01 | 0.01 | <0.01 | <0.003 |
| | | | 97639 | 873.0-878.0 | <0.01 | <0.01 | 0.01 | <0.01 | <0.003 |

211-8437

Scale

Colour Plot & Dips

0

# Drill Hole Record

Cominco

| | | | |
|---|---|---|---|
| Property | District | Hole No. JC 81-4 | |
| Commenced | Location | Tests at | Hor. Comp. |
| Completed | Core Size | Corr. Dip | Vert. Comp. |
| Co-ordinates | | True Brg. | Logged by |
| Objective | | % Recov. | Date |

| Claim | T Brg. | Collar Dip | Elev. | Length |
|---|---|---|---|---|
| JC | 360 | -70 | 5168.9' | 878' |

| Footage From | To | Description | Sample No. | Length | Analysis | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | E.D.H. 878' | | | | | | | |
| | | Dip tests @ 500' 70$^{0}$ | | | | | | | |
| | | @ 878' test ruined at drill | | | | | | | |

211-9437