

RIO TINTO CANADIAN EXPLORATION LIMITED

DIAMOND DRILL RECORD

HOLE NO : 77 - 110

LOCATION : 256284 E 173195 N

AZIMUTH : -

PROPERTY : Gayna

DIP : 90°

LENGTH : 537'

ELEVATION : 4290'

Claim No.: RT 150

STARTED : June 27, 1977

CORE SIZE : BQ

DATE LOGGED : June 29 1977

SECTION : -

COMPLETED : June 29, 1977

DIP TESTS : -

LOGGED BY : R. Hewton

PURPOSE :

CONTRACTOR: Canadian Longyear

| FOOTAGE | | DESCRIPTION | SAMPLE NO | FOOTAGE | | LENGTH | % Zn | % Pb | | | | |
|---------|-----|---|-----------|---------|-------|--------|------|-------|--|--|--|--|
| from | to | | | from | to | | | | | | | |
| 0 | 1 | STICKUP | 300701 | 314.0 | 319.0 | 5.0' | 0.20 | 0.01 | | | | |
| | | | 300702 | 319.0 | 324.0 | 5.0' | 0.46 | 0.02 | | | | |
| 1 | 10 | OVERBURDEN | 300703 | 324.0 | 328.7 | 4.7' | 6.70 | 0.07 | | | | |
| | | | 300704 | 328.7 | 331.8 | 3.1' | 2.18 | 0.03 | | | | |
| 10 | 202 | UPPER HOST | 300705 | 331.8 | 334.8 | 3.0' | 0.07 | 0.01 | | | | |
| | | Dolostone, medium to coarse grained, | 300706 | 334.8 | 340.0 | 5.2' | 2.41 | 0.27 | | | | |
| | | light grey to buff grey, rare chert | 300707 | 340.0 | 344.0 | 4.0' | 4.30 | 1.09 | | | | |
| | | nodules, locally recrystallized. | 300708 | 344.0 | 347.0 | 3.0' | 4.35 | 0.67 | | | | |
| | | 17.5' fluxobreccia, dolomite matrix, | 300709 | 347.0 | 351.0 | 4.0' | 4.40 | 0.13 | | | | |
| | | some pyrite. Minor amounts of | 300710 | 351.0 | 355.0 | 4.0' | 0.44 | 0.01 | | | | |
| | | dolomite stringers or fracture | 300711 | 363.6 | 367.0 | 3.4' | 0.25 | 0.01 | | | | |
| | | filling. | 300712 | 367.0 | 372.0 | 5.0' | 1.34 | 0.01 | | | | |
| | | 36 to 64.9' - dolostone. Minor calcite | 300713 | 372.0 | 376.5 | 4.5' | 0.46 | 0.01 | | | | |
| | | influx as fracture filling. Minor | 300714 | 376.5 | 379.5 | 3.0' | 4.51 | 0.04 | | | | |
| | | dolomite influx as fracture filling | 300715 | 379.5 | 382.5 | 3.0' | 0.13 | 0.02 | | | | |
| | | and fluxobreccia. Some argillaceous | 300716 | 382.5 | 387.5 | 5.0' | 3.85 | 0.18 | | | | |
| | | banding. Locally recrystallized | 300717 | 387.5 | 392.5 | 5.0' | 1.90 | 0.13 | | | | |
| | | such as at 62'. Numerous stylolitic | 300718 | 392.5 | 397.5 | 5.0' | 2.57 | 0.28 | | | | |
| | | contacts, some with carbon. 51 - | 300719 | 397.5 | 402.5 | 5.0' | 1.42 | 0.02 | | | | |
| | | 52' - wispy bedding. | 300720 | 402.5 | 407.5 | 5.0' | 1.94 | 0.02 | | | | |
| | | 64.9 to 77' - limestone. Calcite influx | 300721 | 407.5 | 411.0 | 3.5' | 3.80 | 0.02 | | | | |
| | | as fracture filling. Medium grey; | 300722 | 411.0 | 416.0 | 5.0' | 2.53 | <0.01 | | | | |
| | | fine grained; medium to thin bed- | 300723 | 416.0 | 418.2 | 2.2' | 0.34 | 0.01 | | | | |
| | | ding. Numerous argillaceous bands. | 300724 | 418.2 | 421.0 | 2.8' | 7.19 | 0.01 | | | | |

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| FOOTAGE | | DESCRIPTION | SAMPLE No | FOOTAGE | | LENGTH | % Zn | % Pb | | | | |
|---------|-------|---|-----------|---------|-------|--------|-------|-------|--|--|--|--|
| from | to | | | from | to | | | | | | | |
| | | 77 to 202' - light grey, fine grained, | 300725 | 421.0 | 426.0 | 5.0' | 0.42 | 0.01 | | | | |
| | | thin bedded with numerous argillaceous | 300726 | 426.0 | 431.0 | 5.0' | 1.42 | 0.01 | | | | |
| | | beds, limestone. Numerous stylolitic | 300727 | 431.0 | 436.0 | 5.0' | 2.11 | 0.01 | | | | |
| | | borders. Rare to non-existent calcite | 300728 | 436.0 | 438.0 | 2.0' | 1.88 | 0.01 | | | | |
| | | fracture filling. Some graphite with | 300729 | 438.0 | 441.5 | 3.5' | 4.45 | 0.01 | | | | |
| | | argillaceous bands. Locally medium | 300730 | 441.5 | 446.0 | 4.5' | 2.20 | <0.01 | | | | |
| | | grained. 107.6' - distorted bedding | 300731 | 446.0 | 451.0 | 5.0' | 0.65 | 0.01 | | | | |
| | | and fragment. 107 - 127' - possible | 300732 | 451.0 | 456.0 | 5.0' | 1.56 | <0.01 | | | | |
| | | beds of cross bedding within zone. | 300733 | 456.0 | 461.0 | 5.0' | 1.80 | <0.01 | | | | |
| | | 127' on - more argillaceous - numerous | 300734 | 461.0 | 466.0 | 5.0' | 1.00 | <0.01 | | | | |
| | | thick black argillaceous and graphite | 300735 | 466.0 | 469.5 | 3.5' | 1.85 | <0.01 | | | | |
| | | bands. 134' - probable cross beds. | 300736 | 469.5 | 474.0 | 4.5' | 9.30 | <0.01 | | | | |
| | | 137 - 147' - 1' core missing. 141.5' - | 300737 | 474.0 | 477.5 | 3.5' | 19.85 | 0.01 | | | | |
| | | fragment. 146 - 156' - combined wispy | 300738 | 477.5 | 479.5 | 2.0' | 12.76 | <0.01 | | | | |
| | | and spiked texture. 166 - 173' - spike | 300739 | 479.5 | 482.0 | 2.5' | 1.22 | 0.01 | | | | |
| | | texture. After 177' - increasing ar- | 300740 | 482.0 | 487.0 | 5.0' | 0.30 | <0.01 | | | | |
| | | gillite. 186 - 187.5' - calcite blebs. | 300741 | 487.0 | 492.0 | 5.0' | 0.04 | 0.01 | | | | |
| | | 187.5 - 193' - syneresis cracks. 201.5' | 300742 | 492.0 | 497.0 | 5.0' | 0.02 | <0.01 | | | | |
| | | - "birds eye" calcite. | | | | | | | | | | |
| 202 | 283 | ARGILLACEOUS MARKER | | | | | | | | | | |
| | | Limestone. | | | | | | | | | | |
| | | 203 to 231' - Conglomerate Unit. Sparse | | | | | | | | | | |
| | | fragments; dark grey; some "birds eye" | | | | | | | | | | |
| | | calcite. 207 - 217' - 2.5' core lost. | | | | | | | | | | |
| | | 210 - 213.5' - chert, broken. | | | | | | | | | | |
| | | 231 to 283' - well bedded dark grey to | | | | | | | | | | |
| | | black limestone. 247 - 257' - 1' core | | | | | | | | | | |
| | | lost. 251.5', 252.8', 256 - 257' - | | | | | | | | | | |
| | | bedded pyrite. 273 - 282' - numerous | | | | | | | | | | |
| | | seams pyrite. 267.8' - pyrite. | | | | | | | | | | |
| | | Very minor calcite influx. | | | | | | | | | | |
| 283 | 499.4 | LOWER HOST | | | | | | | | | | |
| | | 283 to 286' - breccia zone, primary dolo- | | | | | | | | | | |

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| FOOTAGE | | DESCRIPTION | SAMPLE No | FOOTAGE | | LENGTH | | | | | | |
|---------|----|---|-----------|---------|----|--------|--|--|--|--|--|--|
| from | to | | | from | to | | | | | | | |
| | | stone. | | | | | | | | | | |
| | | 286 to 291' - wavy bedding - stromatolitic, limestone. | | | | | | | | | | |
| | | 291 to 294.5' - bedded limestone, stromatolitic | | | | | | | | | | |
| | | 294.5 to 297.5' - recrystallized primary breccia, dolostone. | | | | | | | | | | |
| | | 297.5 to 309' - bedded dolostone with white calcite influx as rubble, mosaic and fluxobreccia. 305 - 308' - specks of red sphalerite in calcite. Local areas of poorly developed primary breccia. | | | | | | | | | | |
| | | 309 to 319' - fairly massive limestone with numerous argillaceous bands. 309 - 310' - stromatolitic. Minor calcite influx. | | | | | | | | | | |
| | | 319 to 327.8' - primary breccia, dolostone that has 5% calcite influx as fracture filling and crackle breccia. 322.5' - quartz crystals on fracture plane. 321.5 - 324' - partially recrystallized. 319 - 327.8' - approx. 0.5% sphalerite as red crystals in influx. | | | | | | | | | | |
| | | 327.8 to 334.8' - recrystallized dolostone. Minor influx with orangey red sphalerite best grade - 324 - 331' - 3% sphalerite. | | | | | | | | | | |
| | | 334.8 to 352.5' - regular bedded dolostone with minor calcite with red crystals of sphalerite. Minor amount of breccia fragments. Calcite influx more like fracture filling or veinlets. Minor galena with the sphalerite. 337 - 347' - 3-4% sphalerite; 0.5% galena. 339.5 - 341', 345 - 347' - rubble | | | | | | | | | | |

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|---------|----|---|-----------|---------|----|--------|--|--|--|--|--|--|
| from | to | | | from | to | | | | | | | |
| | | breccias with calcite matrix. Sphalerite with calcite. 350 - 351' - rubble breccia. | | | | | | | | | | |
| | | 352.5 to 358.5' - evenly bedded limestone little influx, no sphalerite. | | | | | | | | | | |
| | | 358.5 to 363.6' - massive calcite with sparse euhedral pyrite crystals. | | | | | | | | | | |
| | | 363.6 to 375' - rubble breccia zone - dolostone. Most fragments are primary breccia. Reddish orange sphalerite coats fragments. 0.5% over zone. Sphalerite is also disseminated in primary breccia fragment. | | | | | | | | | | |
| | | 375 to 397.2' - dolostone, coarse grained. | | | | | | | | | | |
| | | 379 - 383' - primary breccia with sparsely disseminated sphalerite. Some calcite as fracture filling and local fluxobreccias. Abundant sphalerite associated with calcite but percentage of calcite is low. 1.5% sphalerite over zone. | | | | | | | | | | |
| | | 397.2 to 441' - dolostone, mainly primary breccia, sparse fragments. Local areas of calcite influx. Sphalerite associated with calcite and very sparsely disseminated in primary breccia. Local areas of recrystallization. 397.2 - 411' - about 1% sphalerite. 411' - euhedral sphalerite crystals in calcite. 411 - 417' - 0.05% sphalerite. Two periods of sphalerite - first is reddish-orange - envelopes fragments or borders of influx; 2nd is pale yellowish orange that coats the darker colour - reverse from | | | | | | | | | | |

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|---------|----|--|-----------|---------|----|--------|--|--|--|--|--|--|
| from | to | | | from | to | | | | | | | |
| | | 418.2 - 420' - 12% sphalerite - mostly with calcite in rubble breccia although there is a band at 419.6' that is 1.2 inches of massive fine grained reddish-orange sphalerite. Band is replacement in dolostone. 420 - 441' - sphalerite with minor calcite influx. Some sphalerite disseminated in primary breccia beds such as 434 - 437'. Grade is 1% over zone. Lesser amounts of sphalerite in bedded material such as 423 - 426'. 423 - 433' - increase in argillaceous content - thin bedded. 438 - 441' - 2% sphalerite. | | | | | | | | | | |
| | | 441 to 453.5' - recrystallized dolostone -medium grained. Minor calcite influx in irregular patches, probably related to recrystallization. <1% sphalerite with calcite and filling cavities within zone. | | | | | | | | | | |
| | | 453.5 to 465.5' - banded dolostones - thin bedded dark and light grey banded dolostone. 1% sphalerite over zone, disseminated and in veinlets. Minor calcite influx. Very thin blebs of calcite with sphalerite parallel to bedding. Zone quite dark in general - higher concentration of argillite and graphite. | | | | | | | | | | |
| | | 465.5 to 479.5' - rubble breccia with lots of calcite near top and primary breccia fragments - could be a small collapse. | | | | | | | | | | |

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| FOOTAGE | | DESCRIPTION | SAMPLE No | FOOTAGE | | LENGTH | | | | | | |
|---------|-----|--|-----------|---------|----|--------|--|--|--|--|--|--|
| from | to | | | from | to | | | | | | | |
| | | 465.5 - 469.5' - less than 1% sphalerite along borders of fragments and occasionally disseminated in fragments. Dissemination are coarse irregular blebs - replacement type. 469.5 - 479.5' - approximately 10% zinc or better. Sphalerite occurs rimming fragments as high grade replacement in fragments and as matrix material to a primary breccia. 474 - 479' - contains 24% zinc as matrix. There is some calcite influx within this zone (469.5 - 479.5). | | | | | | | | | | |
| | | 479.5 to 491' - dolostone - numerous strololites, some argillaceous fragments. 479.5 - 487' - <1% sphalerite rare disseminations and occasional association with calcite. 483.5 - 484' - limestone. 484 - 487' - recrystallized. Very little influx. No sphalerite after 487'. | | | | | | | | | | |
| | | 491 to 499.4' - Primary breccia; sparse fragments - small argillaceous fragments. Occasional calcite fracture filling. | | | | | | | | | | |
| 499.4 | 537 | SHARPSTONE BRECCIA | | | | | | | | | | |
| | | 499.4 to 507' - limestone, light grey, occasional bed of moderately well developed sharpstone breccia. | | | | | | | | | | |
| | | 507 to 528' - limestone, mainly well-developed syneresis cracks interbedded with occasional moderately well developed sharpstone breccia. | | | | | | | | | | |

