

LITHOLOGIC LOG

HOLE ID: 97G-04

004025

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Core Size: NQ

Date: OCT 12/97

Logged By: J.T. Kellner

FROM (m)	TO (m)	REC.	NO.	UNIT	DESCRIPTION
0 0	1 5				CASING
1 5	9 6 4	9 5	1	40 (401) (40m) 80:15:5	CALCAREOUS PHYLLITE WITH LOCAL CHLORITIC ALTERATION AND MULTIPLE FAULT GONGES (SEE FAULT LOG); MED GREY TO LT GREEN; 2-4% QTZ/CARB VNS AND VNLETS ^ 11cm WIDE; FAULT GONGES FROM 2 TO 21 cm WIDE;
9 6 4	1 0 2 9	9 5	2	30P (30X) (30m) 60:30:10	GRAPHITIC PHYLLITE WITH FAULT BRECCIA AND GONGE ZONES (SEE FAULT LOG); BLACK WITH WHITE BRASSY BANDS; 1-2% PYRITE; 3-5% QTZ/DOL VNLETS UP TO 9mm WIDE.
1 0 2 9	1 0 3 9	8 0	3	QwX	QTZ BRITTLE BRECCIA WITH 7-10% DOLOMITE AND 15-20% 30 FRAGMENTS; WHITE WITH PALE YELLOW AND BLACK;
1 0 3 9	1 0 7 9	9 8	4	2015P	NON-CALCAREOUS PHYLLITE; SILVERY GREY TO PALE GREEN, + or - PALE YELLOW BANDS; WK LOCAL CHLORITIC & SERICITIC ALTERATION; 1-2% QTZ VNLETS ^ 6mm WIDE; TRACE TO 1% PYRITE.

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FROM (m)	TO (m)	REC.	NO.	UNIT	DESCRIPTION
11079	11095	98	5	2PZGH	LOW TO HIGH GRADE RIBBON BANDED QTZITE; BLACK WITH BRASSY YELLOW AND REDDISH SANDS; HIGH PYRITE (10-12%), 4-6% SPHAL & 1-2% GALENA.
11095	11117	98	6	3PZGH (44s) 9P:10	HIGH GRADE PYRITIC QTZITE WITH A SERICITIC METABASITE FINER FROM 11.0 - 11.2m; PALE GREY WITH BRASSY & RED BANDS; 7-10% PYRITE; 5-7% SPHAL & 1% GALENA;
11117	11237	98	7	44(s) (3PZGH) 85:15	MED GREEN METABASITE WITH LOCAL CHLORITE &/OR SERICITIC ALTERATION; 15% HIGH GRADE PYRITIC QTZITE AS ABOVE; 44 HAS MED GREEN & PALE WHITE BANDS UP TO 9mm WIDE; NO SX SEEN. - 3 HAS 5-7% PYRITE, 4-6% SPHAL AND TR-1% GALENA; (INTERVALS: 117.3-117.8m; 119.1-119.9m; 120.7-121.4m)
11237	11425	95	8	3PZGH (2PZGH) (44s) 7a:20:10	HIGH GRADE PYRITIC QTZITE WITH ZONES OF RIBBON QTZITE & SERICITIC METABASITE; PALE GREY WITH BRASSY & REDDY BANDS; 4-8% PYRITE; 7-9% SPHAL AND 1-3% GALENA. FOLD NOSES FROM 129.2 - 130.9m;
11425	11445	95	9	3IZGC	DARK GREY QUARTZITE - STRONGLY BANDED (65°) S <sub>2</sub> - WELL JOINTED - FINE GRAINED PYRITE (5%), SPHALERITE (30%), GALENA (2%) MAINLY IN THIN LAYERS PARALLEL FOLIATION TRACE CHALCOPYRITE. (L)

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11445	11450	1910	110	31ZIG1-	GREY PYRITIC QUARTZITE AS ABOVE - MINOR IRREGULAR WHITE QUARTZ VEINING - CORE FRACTURED. (L)
11450	11490	11010	111	21ZIG1/14	GREY/BLACK QUARTZITE WITH BANDS (5-30MM) LIGHT GREY (H) QUARTZITE HEAVILY MINERALIZED WITH PYRITE (20%) SPHALERITE (6%) GALENA (3%) CHALCOPYRITE (TR). BRITTLE CORE WELL JOINTED - FEW SECTIONS BROKEN. BANDING AND S <sub>2</sub> FOLIATION @ 84' WEAKLY GRAPHITIC. 147.3 m 1cm PINE GREEN METABASITE PARALLEL FOLIATION @ 83°
11490	11522		112	21ZIG1-	DARK GREY/BLACK WEAK TO MODERATE FOLIATED QUARTZITE - (H) - WEAKLY GRAPHITIC - LIGHTER GREY BANDS (LESS NUMEROUS THAN ABOVE) QUARTZITE WITH FLUPYRITE (10%) SPHALERITE (6%) GALENA (2%) HARD BRITTLE CORE - MODERATE TO STRONG JOINTING - FEW SECTIONS FRACTURED/BROKEN. 152.1-152.2 BROKEN WITH GOUGE - FAULT.
11522	11547		113	21ZIG1	AS ABOVE - FAIR/GOOD CORING - PYRITE (15%) SPHALERITE (7%) GALENA (2%) (H) WEAKER FOLIATION (63°)
11547	11610			21ZIG1M	GREY BANNED WEAKLY GRAPHITIC QUARTZITE BANDS FINE GRAINED (L) + PYRITE (10%) WITH SPHALERITE (5%) GALENA (2%) - CORE VERY FRACTURED OR BROKEN - FAULT ZONE - SOME GOUGE.
11610	11612			21ZIG1	BLACK WEAKLY GRAPHITIC QUARTZITE WITH BANDS (1-50mm) (H) LIGHT GREY QUARTZITE MINERALIZED WITH PYRITE (15%) SPHALERITE (7%) GALENA (2%)

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					FOLIATED IN SECTIONS $S_2$ ( $83^\circ$ ). FAIR CORING MODERATE JOINTING.
11622	11630			2ZIGm	FAULT WITH VERY BROKEN CORE + GOUGE. - BLACK PYRITIC QUARTZITE (H) WITH SPHALERITE + GALENA 20 CM METABASITE DIVIDE IN MIDDLE OF SECTION.
11630	11655			2ZIGl	GREY MODERATELY FOLIATED QUARTZITE ( $S_2$ @ $62^\circ$ ) INC. SPHALERITE (9%) (H) MAINLY ASSOCIATED WITH $S_2$ FOLIATIONS. LESS PYRITE (5%) GALENA (4%). - FAIR CORING BROKEN TOWARDS END
11655	11670			2ZIGm	FAULT - AS 162.2 - 163.0 - HEAVY GOUGE IN PATCHES NO METABASITE (L+)
11670	11680			2ZIGl/54	PAGE GREEN ALTERED CHLORITE QUARTZ MUSCOVITE PHYLLITE WITH (H) PATCHES MINERALIZED (HEAVY) GREY WEAKLY GRAPHITIC QUARTZITE. - MAINLY GOOD CORING
11680	11698			514/2ZIG	AS ABOVE - LESS QUARTZITE. GOOD CORING - MODERATE JOINTING (W)
11698	11750			2ZG1-	BLACK GRAPHITIC QUARTZITE - RIBBON BANDS - FOLIATED $S_2$ @ $68^\circ$ (H) MANY THIN INTERBANDS LIGHT GREY QUARTZITE HEAVILY MINERALIZED WITH SPHALERITE (8%) PYRITE (15%) GALENA (2%) WELL JOINTED TO BROKEN WITH MINOR GOUGE.
11750	11834			2ZIGl	BLACK GRAPHITIC QUARTZITE FOLIATED ( $S_2$ @ $68^\circ$ ) - DIST (H/V) BANDS NEAR MASSIVE FULL THICK SPHALERITE (12%) PYRITE (15%) GALENA (4%). MAINLY GOOD CORING.

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FROM (m)	TO (m)	REC.	NO.	UNIT	DESCRIPTION
11834	11836			514	ALTERED PALE GREEN CHLORITIC PHYLLITE - GOOD CORING FOLIATION S <sub>2</sub> @ 73°.
11836	11855			212G	GRAPHIC RIBBON BANDED QUARTZITE - STRONGER FOLIATION (H-) AND LOWER GRADE THAN 175.0-183.4. GOOD CORING.
11855	11917			312IG	PALE GREY/GREEN QUARTZITE - FOLIATION WEAK OR (H) ABSENT (ROCK IS ALTERED). DISSEMINATED PYRITE (15%) SPHALERITE (7%) GALENA (3%). GOOD CORING.
11917	11931			312IG	AS ABOVE - HEAVIER MINERALIZATION - GOOD CORING. (V) SPHALERITE (15%) PYRITE (15%) GALENA (4%)
11931	11933			52E	MASSIVE PYRITE - BESSY SPHALERITE (4%) GOOD CORING. (L)
11933	11936			442I	METABASITE - MINOR DISSEMINATED SPHALERITE - GOOD CORING (L)
11936	11940			51	MASSIVE PYRITE. - MAINLY FINE GRAINED - PARTLY BESSY (N)
11940	11948			212IG	BLACK RIBBON BANDED GRAPHIC QUARTZITE - F.GR PYRITE (8%) (H) SPHALERITE (10%) GALENA (3%) WELL FOLIATED! GOOD CORING
11948	11952			44-1	METABASITE - LIGHT GREEN MUCH GOUGE. (FUCHSITE). LWR CONTACT (N) 58°.
11952	11955			212IG-	RIBBON BANDED QUARTZITE AS ABOVE - LOWER GRADE - V. BROKEN (H-)

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11955	11963			21ZIG1	RIBBON BANDED GRAPHITIC QUARTZITE (5, 52°) BLACK HARD. (H/V) PYRITE (10%) SPHALERITE (3%) GALENA (3%). GOOD CORING MODERATE JOINTING.
11963	11968			441/310	ZG - GREEN METASANDSTONE + PATCHY WHITE QUARTZ VEINING + DISC (L) PYRITE (3%) SPHALERITE (4%) GALENA (2%). GOOD CORING PYROPHOSPHATE (TR) CHALCOPHYLLITE (TR). LOWER CONTACT 56°. UNIFORM.
11968	12012			21ZIG1	RIBBON BANDED GRAPHITIC QUARTZITE AS 195.5-196.3 GOOD CORING (H).
12012	12018			21ZIG1	FAULT - MAINLY BLACK GRAPHITIC QUARTZITE FRAGMENTS + BLACK (L+) GOLDFIELD - PATCHY SULPHIDE MINERALIZATION - PYRITE, SPHALERITE, GALENA, ARSENOPYRITE (TR)
12018	12113			21ZIG1	RIBBON BANDED GRAPHITIC QUARTZITE - BLACK WITH LIGHTER (L) GREY MINERALIZED MORE SILICEOUS LAYERS + PYRITE (15%) SPHALERITE (4%) GALENA (1%). GOOD CORING MODERATE JOINTING.
12113	12115			21ZIG1/15	AS ABOVE WITH BANDS NEAR MASSIVE PYRITE 2-6CM WIDE (L) PYRITE (20%)
12115	12119			21ZIG1	RIBBON BANDED GRAPHITIC QUARTZITE AS 200-213.5 - LOW GRADE. (L) GOOD CORING.
12119	12217			209ZIG	PHYLLITE - GREY - NON CALCARIFEROUS - THIN SILICEOUS BANDS. (W)

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FROM (m)	TO (m)	REC.	NO.	UNIT	DESCRIPTION
					WITH PYRITE (3%) SPHALERITE (TR %) GALENA (TR).
12217	12273			210R1	PHYLLITE - GREY NON CALCAREOUS - TRACE PYRRHOTITE. (N)
12273	12310			51419/RIP Z	PHYLLITE - ALTERED PINK GREEN + CHALCITE SILICIFIED + PYRRHOTITE (5%) AND PYRITE (2%) SPHALERITE (TR) GALENA (TR). CHALCOPYRITE (TR)
12310	12361			51410/P1	AS ABOVE - UNMINERALIZED - MINOR PINK GREY QUARTZ VEINING + PYRITE. (N)
12361	12367			210P1	GREY PHYLLITE WITH PYRITE - SOFT - STRONGLY FOLIATED - NON CALCAREOUS. (N)
12367	12376			31R1P ZIG	QUARTZITE - PINK GREY TO DARK GREY WITH DIS + PATCHES PYRRHOTITE (5%) PYRITE (2%) SPHALERITE (5%) GALENA (1%). (L)
12376	12407			210191	PHYLLITE - GREY WEAKLY SILICIFIED - MINOR GREY QUARTZ VEINING WITH PYRITE, SPHALERITE, GALENA (ALL TRACE), MAINLY BARREN. (W)
12407	12416			210R1P1	PHYLLITE - DARK GREY + 70% WH. QTZ. VEINING + CHALCITE PYRITE (TR) NON CALCAREOUS. (N)
12416	12493			210	PHYLLITE - DARK GREY NON CALCAREOUS WELL FOLIATED - WEAKLY SILICIFIED TOWARDS END. FAIR CORING - MOD. TO STRONG JOINTING. - MINOR ARSEN + GADOL. (N)
12493	12513			21ZIG	RIBBON BANDED QUARTZITE GREY AND BLACK BANDS MARQUE (H/V)

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					PYRITE HA TO 3cm THICK PARALLEL FOLIATION - SPHALERITE (9%) SOMETIMES HEAVY PATCHES GALENA (3%) - JOINED CORE
12571.3	12571.5			521	MASSIVE PYRITE - WITH INTERSTITIAL SPHALERITE (H/V)
12571.5	12573.0			2121G1	RIBBON BANDED GRAPHIC QUARTZITE. PYRRHOTITE (8%) PYRITE (2%) (H-) SPHALERITE (6%) GALENA (2%) JOINED AND BROKEN CORE.
12573.0	12575.1			2121G1	Fault - RIBBON BANDED BLACK GRAPHIC QUARTZITE BROKEN + GORLE AND (H-) LOTT CORE.
12575.1	12579.1			3121G1	PYRITIC QUARTZITE - STRONG BANDING PYRITE (15%) SPHALERITE (H/V) (10%) GALENA (3%) IN PLACE GRAY TO CREAM COLORED QTZ. GOOD CORING - MINOR PATCH METABASITE
12579.1	12579.8			414	METABASITE - PINK GREEN WEAKLY FOLIATED (54°) GOOD CORING. (N) LOWER CONTACT @ 36°
12579.8	12602			3121G1	PYRITIC QUARTZITE AS ABOVE. (H)
12602	12611.3			44	METABASITE - PINK GREEN - FOLIATED - 5% JSP PYRITE - GREEN PUCHITE. (N) GOOD CORING.
12611.3	12612.3			44/39	Z METABASITE - PINK TO RICH GREEN WITH PUCHITE - (80%) WITH (L) MINOR PATCHES PYRITIC QUARTZITE SAME AS ABOVE GOOD CORING. LOWER CONTACT 55°

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FROM (m)	TO (m)	REC.	NO.	UNIT	DESCRIPTION
21612.3	21618.1			21ZIG1	RIBBON BANDED GRAPHITIC QUARTZITE. BLACK. (H+ → L) HEAVY FINE GRAINED PYRITE MINERALIZATION IN BANDS (20%) HEAVY SPHALERITE (10%) DECREASING TOWARDS END. MINOR GALENA TRACE CHALCOPRITE. GOOD CORING.
21618.1	21710.9			31RIZIG1	PYRITIC QUARTZITE - LIGHT GREY HARD GOOD CORING - (L) BANDED MINERALIZATION PYRRHOTITE (5%) PYRITE (3%) SPHALERITE (5%) GALENA (2%)
21710.9	21711.8			21ZIG1	RIBBON BANDED GRAPHITIC QUARTZITE - AS ABOVE (H+) GOOD CORING PYRITE (15%) SPHALERITE (10%) GALENA (3%) IN BANDS
21711.8	21714.8			20QIG1	GREY NON CALCAREOUS QUARTZITE 20% WHITE QUARTZ VEINING (N) MORE SILICEOUS TOWARDS END. GOOD CORING.
21714.8	21715.7			31RIZIG1	PYRITIC QUARTZITE - GREY WITH BANDED HEAVY MINERALIZATION (H) GOOD CORING. PYRITE (20%) SPHALERITE (10%) GALENA (3%)
21715.7	21715.9			21ZIG1M	FAULT - BROKEN CORE - AUBALE - FAULT GORGE. BLACK GRAPHITIC (H?) QUARTZITE WITH PYRITE, SPHALERITE + GALENA
21715.9	21718.8			21ZIG1	RIBBON BANDED GRAPHITIC QUARTZITE + BANDS PYRITE (20%) (L) SPHALERITE (5%) GALENA (1%) FAIR CORING - SOME JOINTING.
21718.8	21811.9			31D1G1-	BLACK CARBONACEOUS PHYLLITE WITH THIN SILICEOUS LAMINAE (N) MINOR DISC PYRITE (3%) - WELL JOINTED - MINOR WH. QTC VEINING.

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2811.9	2824.4			30M	FAULT - BLACK GRAPHIC GOUGE + ROCK FRAGMENTS. (N)
2812.4	2815.8			30M	GRAPHIC PHYLLITE - BLACK WELL JOINTED PARTLY ABOVE MINOR GOUGE (N)
2815.8	2816.0			30M	FAULT - BLACK GRAPHIC PHYLLITE FRAGMENTS IN ROCK GOUGE. (N)
2816.0	2816.4			30 1/4	SILICIFIED BLACK GRAPHIC PHYLLITE. GOOD CORING - MODERATELY HARD. (N)
2816.4	2817.9			4 1/4 / 130	METABASITE - LIGHT BROWN WEAKLY SILICIFIED WITH UNALTERED REMNANTS OF ABOVE. (GOOD CORING) 3% F. CR. PYRITE (NO FELDSPATE) (N) UPPER CONTACT @ 72°
2817.9	2819.8			30 1/4 PIZ	BLACK SILICIFIED GRAPHIC PHYLLITE + GRAPHIC QUARTZITE - BANDS (W) SILICIFIED PYRITE (4%) WITH MINOR SPALICERITE (2%) FEELING NEAR END
2819.8	2819.1			4 1/4 / 152	HEAVY TO MASSES PYRITE (50%) WITH PATCHES STRONG INTERSTITIAL SPALICERITE (10%) (H)
2819.1	2819.5			4 1/4	METABASITE - PALE BROWN (NO FELDSPATE) LOWER CONTACT 15° (N) LOWER CONTACT 78° (SHARP)
2819.5	2819.9			30 1/4 PIZ	BLACK SILICIFIED GRAPHIC PHYLLITE. - MINOR SPALICERITE (W)
2819.9	2819.50			4 1/4 / 20 1/2	METABASITE AT ABOVE WITH MINOR REMNANTS SILICIFIED GRAPHIC PHYLLITE. GOOD CORING - MAJOR SPALICERITE FROM 2933m (W)

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FROM (m)	TO (m)	REC.	NO.	UNIT	DESCRIPTION
					WEAKLY FOLIATED - CONTACTS MODERATE TO HIGH ANGLES - IRREGULAR LOOSE CONTACT 68°
29150	29165			5R/21/12	PATCHES MASSIVE PYRITIC SULPHIDES + PYRANOTITE + SPHALERITE (H) IN BLACK SILICIFIED GRAPHITIC PHYLLITE - PATCHY COB GRADE - FAIR/GOOD CORING SOME JOINTING - MINOR METABASITE.
29165	29170			301q	BLACK SILICIFIED GRAPHITIC PHYLLITE (or 2/30) (or 20g) (N)
29170	29171			3101q/1	FAULT. - BLACK RUBBLE - NO GOUGE (N)
29171	29177			301q	AS 296.5-297.0 5% BANDS DIS. PYRITE (N)
29177	29180			5Z	MASSIVE PYRITE AND SPHALERITE (30%) (V)
29180	29189			4141q	METABASITE - LIGHT BUFF BROWN/GREEN (NO KUCHITE) SILICIFIED (N)
29189	29193			301q	GRAPHITIC PHYLLITE - BLACK SILICIFIED (N)
29193	29196			5Z	MASSIVE PYRITE + SPHALERITE (40%) (V)
29196	29199			3101q	GRAPHITIC PHYLLITE AS ABOVE (N)
29199	30100			301q/1	FAULT. GREEN SOFT MINOR GOUGE (N)
30100	30103			5Z/1310	MASSIVE PYRITE/SPHALERITE BANDS IN GRAPHITIC PHYLLITE (H).

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1310103	1310105			414	METABASITE - LIGHT BROWN (NO FELSITE) LWR CONTACT 49° IRREGULAR (N)
1310105	1310141			4ZIG/2	BLACK GRAPHIC QUARTZITE WITH SECTIONS NEAR MASSIVE PYRITE (55%) SPHALERITE (15%) GOOD CORING - (PARTLY GRANITIC IN FEW SECTIONS?) (V)
1310141	1310179			4C1	PYRITIC (40%) QUARTZITE - TRACED CHALCOPYRITE - PALE SPHALERITE GOOD CORING (W)
1310179	1310194			414	METABASITE - PALE BLUE/GREEN: FOLIATED - MINOR PANI HEAVY F.C.R. PYRITE IN SECTIONS OF SILICIFICATION GOOD CORING. LWR CONTACT 86° (N)
1310194	131106			5Z1/2	MASSIVE PYRITE/SPHALERITE (12%) WITH REMNANTS MINERALIZED BLACK GRAPHIC QUARTZITE. (P.Z.G.) GOOD CORING. (V)
131106	131112			414	METABASITE - LIGHT BROWN FINE GRAINED LWR CONTACT 52° MINOR GREY QTZ/PYRITE LENSES. (N)
131112	131184			201g/2IG	NON CALCAREOUS DK GREY PHYLLITE - SILICIFIED IN SECTIONS - MINOR STRINGERS (1-2mm) SPHALERITE (1%) G.A.S.M.A (TV) - COMMENT FROM 318.4 - 321.5 m. - STRS FOLDED FOLIATION MAINLY GOOD CORING. - FEW PATCHES LWR Q.T.Z. VEINING. (W)
131184	133114			201Q	NON CALCAREOUS DK GREY PHYLLITE - JOINED THEN GOOD CORING - MINOR WH. QTZ. VEINING (N)
133114	133119			40	DK. GREY GREEN CALCAREOUS PHYLLITE - STRONGLY CALCAREOUS AT END 331.9 m E.O.H. (N)

NQ CORE - ADVANCED DIAMOND DRILLING.