CSR Limited

DRILL LOG—Sample Data Sheet

CGI

Area: EL 15/76 | Prospect Number: 602 | Approximate AMG Co-ordinates N/S: 5367,480 | Inclination: -45½ | Date Started: 28-7-80 | Hole Size: H to 26·2m, NQ to 63, BQ to 356 | Hole Number: CG1

State: TAS | 1:100,000 Sheet: 7914 | E/W: 367,380 | Azimuth T/M/G: 277° | Date Completed: | Lab Rep No: | Sample Type: M—Creekmud, S—Soil, SA—Soil auger, RC—Drill core, RP—Percussion chips, R—Rock, F—Float, CC—core chips, CS—core split

Location: DUNDAS | Local Grid Used: CUN 1. | Collar RL: | Depth: 356m | Contractor: A.D.D | Driller: G. ARCHER | Drill Type: F30 | Analytical Method(s): | Logged by: P MacNAMARA | Reference:

Metres	Sample Number / Year	Sample Type	A % core recov'd; B weight (kg); C sample fraction	From (E/W)	To (N/S)	Interval m	Chemical Analyses (ppm or %): Sn	Cu	Zn	Pb	Bi	Ag	Au (ppb)	Co	Description
	80 CG1.602														0–6.5m: BROWN CLAY – completely weathered (hardness, H<1) med brn – greywacke sst? No obvious veining.
	CG1.602.001	CC		0.0	3.70	3.70	<5	80	230	80	60	4	5	180	
	CG1.602.002	CC		3.70	6.50	2.80	<5	50	320	50	50	3	3	150	6.5–8.0m: ? GREYWACKE Sst? – completely to highly weathered 10–30mm broken fragments, khaki green, limonite impregnated. H~1. No veining.
	CG 602.003	CC		6.50	8.00	1.5	<5	35	370	70	50	3	5	100	
	CG1.602.004	CC		8.00	14.00	6.00	<5	80	260	70	40	3	3	65	8 → 59.20m Greywacke SANDSTONE AND SILTSTONE – essentially (1) greenish grey well banded greywacke sst and (2) green-blue grey less well banded greywacke siltstone and sandstone.
	CG1.602.005	CC		14.00	21.30	7.30	<5	90	175	20	40	3	5	55	(1) 8–21.3m: g/wacke sst & slst well bleached schistose "colour" parallel to bedding. Grainsize ≤0.5mm. Banding (bedding) to Core axis = 48°/8.15m 11.5m; 47–52°/12.7–18m, 65–60°/21.3–21.5m, 55–60°/22→25m. Weathering: highly to moderately weathered 8–12.m, 10–30mm fragments to 12.2m, 10–80mm 12.2m→21.3m.
	CG1.602.006	CC		21.30	25.40	4.10	<5	90	130	30	35	2	3	55	
	007	CC		25.40	30.00	4.60	<5	110	170	40	45	2	5	55	(2) 21.3–25.4m: blue green grey, moderately banded greywacke sst and slst; phyllitic schistose sheen // bedding which mainly 65° to C.A. Limonite stain on some fractures, weathering slight. No obvious hornfelsing, alteration, veining or sulphides – minor quartz veins only.
	008	CC		30.00	35.00	5.00	<5	70	140	35	50	3	3	55	
	009	CC		35.00	39.00	4.00	<5	90	80	25	40	2	3	45	
	010	CC		39.00	45.00	6.00	<5	35	70	30	50	2	5	70	(3) 25.4–39m: greenish grey greywacke sst with green FeMg (?) rich bands alternating with lower FeMg rich bands. Grainsize ≤0.5mm, bands 2–3mm wide. Banding 65°/25.4, 62°/30m 60°/31m, 55°/32–33m, 65°/36→39m. No strong veining or obvious sulphides or alteration. Minor limonite stain on frs. Slight weakening (H 5→6).
	011	CC		45.00	50.00	5.00	<5	60	55	25	40	1	5	45	
	012	CC		50.00	55.00	5.00	<5	30	60	20	30	1	5	40	
	013			55.00	59.20	4.20	<5	115	95	30	55	2	3	60	(4) 39–55m: As for 21.3–25.4m. Bedding 65° at 40 42 50 53m depth. No obvious hornfelsing. Schistose cleavage/banding/bedding, many irregular quartz veins. No sulphides. Minor limonite on some fractures.

Reference

92088

CSR Limited

DRILL LOG—Sam[illegible] Data Sheet

CGI

Area | Prospect Number | Co-ordinates N/S | Inclination | Date Started | Hole Size | Sample Type: M—Creekmud, S—Soil, SA—Soil auger, RC—Drill core, RP—Percussion chips, R—Rock, F—Float | Hole Number CG1

State | 1:100,000 Sheet | E/W | Azimuth T/M/Grid | Date Completed | Lab Rep No | Reference

Location | Grid Used | Collar RL | Depth | Contractor | Analytical Method(s) | cc core chips

Driller | Logged by PMM | cs drill core

Drill Type

Metres	Sample Number / Year	Sample Type	A % core recov'd B weight (kg) C grade fraction	From E/W	To N/S	Interval m	Chemical Analyses (ppm or %) Sn	Cu	Zn	Pb	Bi	Ag	Au (ppb)	Co	Description
	80 CG1602/														(5) 55 – 59.2m: Banded dark greenish black unit with 20–30% paler grey bands 0.5–5mm wide – greywacke or possibly a basic tuff, but similar to the above. FeMgs 1–2mm, up to 7mm grainsize. Minor carbonate in frs. Banding 62–65° to CA. No ilmenite, except traces on a few fractures. 8–15 per metre 25° thin qtz veins from 53.20 – 59.2m at 30° to bedding. (ie ~ 80° to bedding dip) Veins are quartz ± minor sulphide or calcite. Sparse cpy and bornite in veinlets.
	CG1602 014	CC		59.20	64.00	4.80	<5	110	75	35	65	3	5	75	
	CG1602 015	CC		64.00	68.45	4.45	<5	90	600	45	55	3	5	75	59.20 – 68.45m Dark greenish grey to grey, banded to more massive rock (as above) – GREYWACKE or basic tuff? H=6. Dark green FeMgs in bands alternate with pale grey bands. Banding 65°/59.20, 55/60.30m, 65/62.30m, 60°/61m. Banding indistinct below 62.5m. Veining: white carbonate ± qtz ± cpy, pyr ~6/m at 20–50° to CA. Trace py–cp in cb veinlets.
	016	CC		68.45	71.15	2.70	<5	40	110	40	45	2	3	40	
	017	CC		71.15 / 72.30	72.15 / 72.55	1.00 / 0.25	IP	200	770	360	65	5	5	85	68.45 – 68.70m Black Shale with (green) (?) silty bands. Banding crenulated 60–70° to CA. Irregular qtz veinlets with trace py.
															68.70 – 71.15m Grey WACKE (or basic tuff), f.g (<0.5mm) finely banded & massive medium grey (Fine grained equivalent of 59.20 → 68.45m?) Thin black shale bands decrease downwards from 20% to 5%. 10% (rock) Carbonate. Bandings (bdds) 70°/69m, 75°/69.5m, 70°/70m, 65°/71m. Contact 71.15m at ~ 45°. Sparse fine veinlets 0.5–2mm wide 30° minor 60° some irregular short gash veinlets. No sulphide in body of rock. Rare carbonate (cb) veinlets, trace sulphide.

Reference Cb – white carbonate
po – pyrrhotite

120888

CSR Limited # DRILL LOG—Sample Data Sheet

Hole Number: CG1

Area		Prospect Number		Co-ordinates N/S	
State		1:100,000 Sheet		E/W	
Location		Grid Used		Collar RL	
Inclination		Azimuth T/M/Grid		Depth	
Date Started		Date Completed		Contractor	
Driller		Drill Type		Hole Size	to / to / to
Lab Rep No		Analytical Method(s)		Logged by	

Sample Type: M–Creekmud, S–Soil, SA–Soil auger, RC–Drill core, RP–Percussion chips, R–Rock, F–Float, CC – core chip, CS – split core

Reference

Metres	Sample Number (Year)	Sample Type	A % core recov'd / B weight (kg) / C sample fraction	From (E/W)	To (N/S)	Interval (m)	Sn	Cu	Zn	Pb	Bi	Ag	Au (ppb)	Co
	80 CG1 602													
	CG1 602018	CS		72·15	72·30	0·15	125	640	3·1%	1600	90	14	5	80
	CG1 602019	CS		72·55	73·55	1·00	25	115	660	900	60	6	10	70
	020	CS		73·55	74·55	1·00	10	75	290	175	40	2	5	30
	021	CS		74·55	76·20	1·65	15	120	1700	165	45	3	10	35
	022	C		76·20	81·00	4·80	5	35	85	30	35	1	10	30
	023	CC		81·00	86·00	5·00	<5	50	145	75	45	2	10	35
	024	CC		86·00	90·00	4·00	5	40	75	30	45	2	5	35
	025	CC		90·00	94·05	4·05	<5	50	90	30	45	1	5	35

Description

71·15 – 73·55m. dk grey, massive chloritic greywacke (tuff?) composed of green & grey 1-3mm irregular felsic (?) fragments with similar matrix material and dark greenish grey fine chloritic material.
Minor narrow (1mm) veins and minor dissem Cb – po – galena ± (?) stibnite. Rock speckled with pink-brown fibrous silicate (antigorite?).
The unit has a distinctive appearance
Lower contact 30 – 60°, indistinct.
Banding 60°/73m 65°/73·20
Banded green carbonate zone 72·15 – 72·30 with bands of po, py, sphalerite, possibly a vein. Banding 55–70° to CA). Upper contact 65°, slickensided. Section is 75% carbonate – 10% po – plus pyrite, some sphalerite. Zone parallels banding each side of zone but may be an infilling vein.
Two 10mm wide 50° similar carbonate – sphalerite – galena banded veinlets 73·3 – 73·4m.
Elsewhere in zone 71·15 – 73·30 cream carbonate 1-5 mm wide 70° carbonate veinlets occur some associated with po. Po also occurs as short gash veinlets and splashes throughout the section. In addition, 0.5-2mm veinlets of sphalerite ± pyrite at 70° in a few places.

73·55 – 93·65 GREYWACKE, <0·5mm fine grained banded dark grey, limey, with black shale bands significant to 90m. Shaly bands 1-30mm, average 5mm up to 20% of core in places.
Banding 55°/75·1, 58°/75·8m, 55°/77·8m, 75°/80·5, 81·5, 82·2; 60°/84·5, 65°/86·5m, 55°/87m, 60°/88·2, 70°/89·5m, 50°/91·2m.
Basal contact 50°
Core cut by numerous (~ 50/m) Cb veinlets at 45°, 20°, 80° 1 – 10mm wide.
Mineralization: sphalerite occurs in 1mm wide irregular veinlets 73·55 – 76·20. Po also present as separate short, 1mm wide gash veins possibly // bedding in part. Green Cb-pyrite zone 75·3 – 75·35m at 30°–60° to CA
There is little sulphide disseminated in the body of the rock which contains a fair amount of carbonate (HCl tested).

Reference

CSR Limited

DRILL LOG—Sample Data Sheet

Area | Prospect Number | Co-ordinates N/S | Inclination | Date Started | Hole Size ___ to ___ | Sample Type: | Hole Number CG1

State | 1:100,000 Sheet | E/W | Azimuth T/M/Grid | Date Completed | Lab Rep No | Reference

Location | Grid Used | Collar RL | Depth | Contractor | Driller | Drill Type | Analytical Method(s) | Logged by R MACNAMARA

Sample Type: M—Creekmud, S—Soil, SA—Soil auger, RC—Drill core, RP—Percussion chips, R—Rock, F—Float, CC – core chip, CS – split core.

Metres	Sample Number (Year)	Sample Type	A % core recov'd / B weight (kg) / C sample fraction	From ~~E/W~~	To ~~N/S~~	Interval m	Sn	Cu	Zn	Pb	Bi	Ag	Au	Co
	80 CG1, 602/													
	CG1, 602, 026	CC		94.05	99.00	4.95	<5	165	90	59	59	2	5	69
	CG1, 602, 027	CC		99.00	103.3	4.30	<5	155	100	35	50	2	5	50
	028	CC		103.30	110.0	6.70	<5	15	60	35	45	2	5	35

Description

93.65 – 94.05 As for 73.55 – 93.65m, except for a red coloration in parts (hematitic). Contacts 93.65/55°, 94.05m/50° to CA. The 94.05m contact is along a dk green hard chloritic 2mm wide zone.

94.05 – 103.3m DOLERITE (or coarse grained volcanic ?) dk grey to dk grn grey "porphyritic" (3mm) felspathic (70%) rock, finer FeMg and a f.g. felspar – FeMg – chlorite matrix (30%). Brown to mauve mineral (= FeMg ?). Disseminated trace pyrrhotite (po) and chalcopyrite (cp). Basal contact indistinct 20 – 30° to CA, possibly chilled, marked with 1-2mm wide 'white $CO_3^{=}$ zone'.

(A) Possibly finer grained 94.05 → 94.60m – ? due to chilling?. No apparent banding. 5-10% / 1-5mm wide / 45°, 70° qtz and $CO_3^{=}$ veins, trace $S^{=}$ only.

(B) Coarser grained zone, almost pegmatitic 94.60 – 95.7m with strong disseminated pyrrhotite – cpy – pyrite. Banding 50 – 60° with sulphides // banding? Some qtz ± CO_3 veinlets / 1-5mm wide / 45°, 60°.

(C) 95.7 – 100.20m: paler, grey altered, mottled and veined. Alteration and veining 0 – 10° to CA cuts early series of veins (45-70°). Alteration → qtz – chlorite, med grn grey, mottled ~ 0 - 10° to CA. qtz – $CO_3^{=}$ veins ± po – cp.

(D) 100.20 — 103.30m: mixed "porphyritic" less altered zones with some altered mottled zones as in 95.7 – 100.2 (2.5% qtz), qtz – CO_3 veinlets ± po – cp at 45°, 70° to CA.

Possible chilling 103 → 103.3m

Reference

62098

CSR Limited

DRILL LOG—Sample Data Sheet

CG-1

Area		Prospect Number		Co-ordinates N/S		Inclination	
State		1:100,000 Sheet		E/W		Azimuth T/M/Grid	
Location		Grid Used		Collar RL		Depth	

Date Started: ______ Date Completed: ______ Contractor: ______ Driller: ______ Drill Type: ______

Hole Size: ____ to ____ / ____ to ____ / ____ to ____

Lab Rep No: ______ Analytical Method(s): ______ Logged by: P.M.M.

Sample Type: M–Creekmud, S–Soil, SA–Soil auger, RC–Drill core, RP–Percussion chips, R–Rock, F–Float, CC Core chips, CS Split Core

Hole Number: CG 1 [DDH] [PDH] [RDH]

Reference: ______

Metres	Sample Number (Year)	Sample Type	A % core recov'd / B weight (kg) / C sample fraction	From (~~E/W~~)	To (~~N/S~~)	Interval m	Sn	Cu	Zn	Pb	Bi	Ag	Au (ppb)	Co
	84 CG1 602													
	CG1 602 029	CC		116.00	116.00	6.00	<5	30	75	40	45	2	5	35
	CG1 602 030	CC		116.00	122.00	6.00	<5	70	125	45	55	3	5	60
	CG1 602 031	CC		122.00	130.85	8.85	<5	70	290	90	55	3	5	60
	CG1 602 032	CS		130.85	131.25	0.40	90	460	1.26%	1.35%	125	54	10	120
	033	CS		131.25	132.50	1.25	<5	65	900	380	55	4	5	55
	034	CS		132.50	133.75	1.25	<5	60	190	50	45	3	5	45
	035	CC		133.75	140.00	6.25	<5	130	85	40	50	3	5	60

Description

<u>103.3 → 130.85 m</u> GREY WACKE med grey <0.5 mm (f.g.) massive to banded greywacke sst and slst. H ~ 6. Numerous black shale bands occur throughout gen 1–20 mm wide and < 10% of core but 30% 111.3 — 112.7, 116.5 – 122.5, 126.2 – 128.4.

Lower contact 45°/130.85 against black sh.

Some red and grey cherty(?) zones 103.6 – 103.7, 105.15 m. Irregular black bands (sh?) 60° to core axis 103.75 m.

Bedding 62/105.4, 55°/106.2, 75°/107.5, 60°/108.5, 60°/109.6, 60°/110.5, 56°/112.2, 60°/114.2, 57°/116.0, 50–70°/117–119 Crenulated, 55°/119–122, 76°/122.3, 70°/126, 65°/128, 70°/129, 55°/130

Mineralization: Irregular white qtz and cb veinlets 1–5 mm wide occur at 10°, 25° and irregularly ≈ 5% of core. No strong sulphide association.

Black shales have increased pyrite associated possibly 1% of the black shale bands = pyrite. Cleavage // bedding.

<u>130.85 — 131.25</u> (0.23 m recovered)

Black shale 130.85 — (?) 131.05 m then 0.02 m of cream colored hard, acid-resistant (non-carbonate) mineral in zone associated with strong pyrite, grey metallic sulphide (tetrahedrite) sphalerite. Sulphides banded crudely 45° – 55°.

<u>131.25 – 133.75 m</u> CHERT or siliceous Shale f.g. med grey with some silty bands of similar color plus minor black sh. bands. 131.25/60° contact; slickensides 60–70° lower contact.

Rock is highly pyritic with pyrite as thin stockwork veinlet type fracture (2–5% pyrite). No other S= obvious.

Reference ______

00698830

CSR Limited

DRILL LOG—Sample Data Sheet

Area		Prospect Number		Co-ordinates N/S	
State		1:100,000 Sheet		E/W	
Location		Grid Used		Collar RL	
Inclination		Azimuth T/M/Grid		Depth	

Date Started ______ Date Completed ______ Contractor ______ Driller ______ Drill Type ______

Hole Size ______ to ______ ______ to ______ ______ to ______ Lab Rep No ______ Analytical Method(s) ______ Logged by ______

Sample Type: M–Creekmud, S–Soil, SA–Soil auger, RC–Drill core, RP–Percussion chips, R–Rock, F–Float, CC – core chips, CS – Split core

Hole Number: CG1 CG1

Reference ______

Metres	Sample Number / Year	Sample Type	A % core recov'd / B weight (kg) / C Sample fraction	From E/W	To N/S	Interval m	Sn	Cu	Zn	Pb	Bi	Ag	Au	Co
	80 CG1602/													
	CG1 6 02 036	CC		140.00	149.50	9.50	15	90	0.12%	210	50	3	5	59
	037	CC		149.50	156.00	5.50	<5	119	399	59	55	4	5	70
	038	CC		156.00	161.00	5.00	5	90	600	165	55	3	19	69
	039	CC		161.00	166.40	5.40	29	95	0.22%	0.11%	69	7	19	89

Description

133.75 – 149.50m DOLERITE (, similar to section 94 – 103.3m) dark grey in places blackish grey, med to coarse grained (0.5 – 3mm) "porphyritic" (fibrous) FeMg rich rock massive non banded almost pegmatitic in appearance 136.20 – 139.70, with very crude 45° – 60° layering.

Black bands at 55° to CA at 136.75 136.95m = chlorite alteration (or black shale??) grey black zone 70° to CA on contact 134.50 – 134.80 and irregular zone of similar type 143.95 – 146.65 147 – 149.5

Veining: 133.75 – 137m / 10% 1 – 10mm wide qtz – cb veining highly irregular 0 – 60° to CA anastomozing. Elsewhere veining 5% qtz – cb. highly irregular short fracture filling little sulphide associated

Sphalerite in fractures and band / 60°, 45° / 148.1 – 148.2

149.5 – 166.40 : GABBRO ? mainly pale greenish grey altered H 4 → 5 serpentinized 2mm grain gabbro altered to chlorite FeMg + clayey feldspar.

165.20 – 166.40 : consists of coarser grained ? serpentinized dark green rock possibly with a chilled margin. Has 4mm "phenocrysts" of pale green color : H = 5, crude banding 65 – 70° Similar material 148 – 149.50 ?

Veining : 2% 5 – 10mm wide 10° qtz veinlets or qtz + chlorite also sphalerite veinlets.

Banded cream cb – qtz – black chlorite zone 65° 165.6 – 165.65m

No pyrite or cp obvious but sp occurs in fractures locally especially toward the base of this section

Reference ______

13088

CSR Limited

DRILL LOG—Sample Data Sheet

Area	
State	
Location	
Prospect Number	
1:100,000 Sheet	
Grid Used	
Co-ordinates N/S	
E/W	
Collar RL	
Inclination	
Azimuth T/M/Grid	
Depth	
Date Started	
Date Completed	
Contractor	
Driller	
Drill Type	
Hole Size	to / to / to
Lab Rep No	
Analytical Method(s)	
Logged by	R. WILLIAMS
Hole Number	CG1
Reference	

Sample Type: M–Creekmud, S–Soil, SA–Soil auger, RC–Drill core, RP–Percussion chips, R–Rock, F–Float, CS core split, CC core chip

Metres	Sample Number / Year	Sample Type	A % core recov'd / B weight (kg) / C sample fraction	From E/W	To N/S	Interval	Sn	Cu	Zn	Pb	Ag	Au		
	040	CC		166.40	171.00	4.60	15	90	0.36%	79	3	5		
	CG1.602 041	CC		171.00	176.00	5.00	45	85	380	110	3	5		
	042	CC		176.00	180.80	4.80	45	70	230	40	2	10		
	043	CC		180.80	183.00	2.20	5	70	145	45	3	5		
	044	CC		183.00	189.50	6.50	5	50	115	45	3	5		
	045	CC		189.50	191.50		10	45	300	135	3	10		

Description

166.40 – 180.80 m
Shale: strongly cleaved, banded grey black pyritic
(Heavy core loss core badly broken)
Cleavage ∠70° // banding (bedding)
Pyrite – m.g. cubic, disseminated // bedding ~ 3-5%
Weak to moderate qtz-ch veining 5mm/10 cms

180.80 m – 183.00 m. Interbedded shales and siltstones: Pale grey to grey green shale (50%) to sandy siltstones (50%)
Numerous graded beds indicate facing is upholes
Cleavage (weak) ∠70° // bedding
No sulphides
Weak, irregular qtz-ch veining

183.00 – 188.20 m Greywacke with minor shale & siltstone bands
Dominantly (70%) f.m.g grey green greywacke with grey green shale and siltstone bands (30%). Numerous graded beds give facing uphole
Cleavage (weak) ∠70° // bedding
Weak to v. weak narrow (<2 mm) qtz-ch veining irregular
No sulphides

188.20 – 189.50 m Shale: Black poorly banded irregular qtz-ch veined shale. Sharp upper contact (188.2) lower contact gradational (interbedded shale/siltstone)
Qz-ch veining irregular <2 mm except at 188.86 2cm vein at ∠45°
Cleavage moderate ∠70°
Trace py

189.50 – 191.50 m Interbedded greywacke & shale Grey green greywacke (70%) and black shale (30%)
Graded bedding gives facing is uphole
Cleavage (weak) ∠70°. Bedding ∠65-70°
Considerable soft [illegible] deformation
V. weak narrow (1-2mm) qtz-cb veining
No sulphides

Reference

88032

CSR Limited

DRILL LOG—Sample Data Sheet

Area		Prospect Number		Co-ordinates N/S		Inclination		Date Started		Hole Size	to	Sample Type: M–Creekmud, S–Soil, SA–Soil auger, RC–Drill core, RP–Percussion chips, R–Rock, F–Float	Hole Number	
State		1:100,000 Sheet		E/W		Azimuth T/M/Grid		Date Completed			to		Reference	
Location		Grid Used		Collar RL		Depth		Contractor		Lab Rep No				
								Driller		Analytical Method(s)				
								Drill Type		Logged by				

Metres	Sample Number / Year	Sample Type	A % core recov'd / B weight (kg) / C sample fraction	From E/W	To N/S	Interval	Sn	Cu	Zn	Pb	Ag	Au			Description
	046	CC		191.50	197.50	6.0	5	45	280	70	3	10			**191.50 – 197.50 m** Greywacke with minor shales. Dominantly weakly banded grey green greywacke ([illegible]%) with minor interbeds of black and grey green shale ([illegible]). Grading indicates facing is up hole. Bedding ∠70° Cleavage (weak) ∠70–80°. Weak to moderate irregular qtz-cb veining; narrow (1-2mm). Predominant ∠s 70°, 30°. No sulphide mineralisation.
	047	CC		197.50	198.00	0.50	<5	70	165	50	2	10			**197.50 – 198.00 m** Interbedded shales and cherts. Mottled black [illegible] shales (50%) and grey cherts (50%). Minor silicified sandstone bands. Ragged chert bands are due to silicification of sst. Considerable interformational deformation (No bedding ∠s). Qtz-cb veining – weak, irregular, narrow (1-2mm). No sulphides.
	048	CC		198.00	200.40	2.40	<5	65	120	40	2	10			**198.00 – 200.40 m** Greywacke with minor shales. Dominantly grey green fine sst – greywacke (70%) with banded grey-green (25%) and black (5%) shales. Cleavage (weak) // bedding ∠70°. Grading ⇒ facing uphole. No significant sulphides.
	049	CS		200.40	201.70	1.30	10	420	0.43%	1.05	5	5			**200.40 – 201.70 m** Interbedded shales and siltstone – greywackes. Black shale (65%) and grey-green siltstone – greywacke; lower contact is graded giving uphole facing. Minor py only. At 201.30 – 201.40 m bands of patchy disc. aggregates of py (3%) and minor (< 3%) cp. Cleavage // bedding ∠70–75°. 10 mm qtz-cb vein @ 201.47 ∠75°. Irregular qtz-cb veining over 5 cms at lower contact.
	050	CC		201.70	207.00	5.30	<5	75	160	40	3	5			**201.70 – 212.40 m** Interbedded greywacke & shales; grey green greywacke (60%); grey green shales (30%); black shale (10%). Massive (v. weak cleavage // bedding). Bedding ∠70°. Graded bedding ⇒ uphole facing. V. weak irregular qtz-cb veining; main veining ∠40°. No sulphides.
	051	CC		207.00	212.40	5.40	<5	75	130	45	3	5			

Reference

88033

CSR Limited

DRILL LOG—Sample Data Sheet

Area		Prospect Number		Co-ordinates N/S		Inclination		Date Started		Hole Size	to	Sample Type: M–Creekmud, S–Soil, SA–Soil auger, RC–Drill core, RP–Percussion chips, R–Rock, F–Float	Hole Number
State		1:100,000 Sheet		E/W		Azimuth T/M/Grid		Date Completed			to		Reference
Location		Grid Used		Collar RL		Depth		Contractor		Lab Rep No			
								Driller		Analytical Method(s)			
								Drill Type		Logged by			

Metres	Sample Number (Year)	Sample Type	A % core recov'd / B weight (kg) / C sample fraction	From E/W	To N/S	Interval	Sn	Cu	Zn	Pb	Bi	Ag	Au	Co	Description
	052	CC		212.40	220.00	7.60	<5	75	130	40	59	2	5	65	212.40 – 230.60 m Shales with interbedded silts
															Banded black shale (80%) interbedded with grey, grey black shale and silt beds (20%)
	053	CC		220.00	225.00	5.00	<5	60	115	50	59	2	5	45	Bedding ∠ 60–90° – predominantly 70°–75°
															Cleavage ∠ 70°
															Qtz-cb veining – moderate to intense – irregular especially along soft rock deformation (slumping)
	081	CC		225.00	230.60	5.60	<5	65	115	49	75	3	10	55	Sulphides – irregular diss py (≤1% overall) aggregates to a short distances over 3 cm etc
	058	CC		230.60	232.50	1.90	5	79	130	35	45	2	5	65	230.60 – 232.50 m Sandstone with minor shale
															Interbedded grey green silt (95%) and black shale (5%); shale interbeds generally < 2 mm
															massive (breaking on shale bands)
															No good bedding – shale interbeds deformed
															No sulphides or veining
	055	CC		232.50	235.50	3.0	<5	60	400	70	75	2	5	55	232.50 – 235.50 m Shale and Greywacke
															Interbedded black shale (70%) and grey green greywacke (3%)
															Bonding and flame structures → upward facing
															Cleavage // bedding ∠ 75° – 80°
															Moderate irregular qtz-cb veining (≤ 3 mm wide)
															No sulphides
	056	CC		235.50	241.50	6.00	5	69	125	40	50	2	10	69	235.50 – 241.50 m Sandstone and Shale
															Interbedded grey green sandstone (60%) and black shale (40%) – all is massive
															Bedding ∠? – contorted except for massive silt units which are poorly bedded
															Cleavage ∠ 70°–80°
															Qtz-cb veining irregular; moderate in shales, weak to nil in silts
															No significant sulphides
	057	CC		241.50	248.00	6.50	<5	65	250	120	69	3	10	55	241.50 m – 280.35 m Shale with a minor sst bands
															Dominantly massive to banded black shale (95%)
	058	CC		248.00	254.50	6.50	<5	70	210	95	65	3	10	50	with minor narrow (< 5 cm) bands of grey silt – siltstone (5%)
															Cleavage (moderate) ∠ 80°

Reference

88034

CSR Limited

DRILL LOG—Sample Data Sheet

Area | Prospect Number | Co-ordinates N/S | Inclination | Date Started | Hole Size to | Sample Type: M–Creekmud, S–Soil, SA–Soil auger, RC–Drill core, RP–Percussion chips, R–Rock, F–Float | Hole Number

State | 1:100,000 Sheet | E/W | Azimuth T/M/Grid | Date Completed | Contractor | Lab Rep No | Reference

Location | Grid Used | Collar RL | Depth | Driller | Analytical Method(s) | Drill Type | Logged by

Metres	Sample Number / Year	Sample Type	A % core recov'd / B weight (kg) / C sample fraction	From E/W	To N/S	Interval (m)	Sn	Cu	Zn	Pb	Bi	Ag	Au	Co
	059	CC		254.50	261.00	6.50	<5	90	185	60	65	3	5	50
	060	CC		261.00	267.50	6.50	<5	80	500	130	60	3	10	50
	061	CC		267.50	274.00	6.50	<5	80	330	95	50	2	5	50
	062	CC		274.00	280.35	6.35	15	70	0.33%	680	45	4	5	45
	063	CC		280.35	284.0	3.65	10	110	0.24%	980	50	4	5	50
	064	CC		284.00	287.95	3.95	<5	125	430	150	55	1	5	50
	065	CS		287.95	288.95	1.00	20	40	0.20%	540	45	3	10	55
	066	CS		288.95	289.85	0.90	565	0.15%	24.7%	2.4%	55	71	10	70

Description

contd. Bedding crumpled ~ <80°
Qtz - cb veining is irregular varying from moderate intensity to 250.50m then weak intensity.
Frequent veining // bedding
Traces py (<1%)

Major veining 244.60m - 15mm vein @ <30°
245.20 - 10mm " " <45°
247.20 - 15mm " " <30°
247.50 - 15mm " " <45°
250.50 - 15mm " " <45°
266.60 - 10cm zone at irregular <s
269.20 - 10mm vein at <70°
273.80 - 20mm " " <70°
273.90 - 10mm " " <60°
279.30 - 10mm " " <30°

280.35 – 288.95m Greywacke and Shale

Interbedded grey-green mts greywacke (50%) and black shale (50%)
Unit is strongly brecciated (especially sst) with healing by shale material.
Cleavage (weak) <30°, 70°
Banding variable (crumpled) ~ <70°
Nil sulphides
Minor 1mm qtz-cb veins
Many qtz-cb veins @ 281.70 - 1cm vein
284.55 - 5cm zone
286.10 - 75cm @ <30

288.95 – 289.85m MASSIVE SULPHIDES with Cb veining

Coarsely crystalline massive sulphide with brecciated in part with qtz-cb veining and fracture infilling
Sulphides (50%) - 40% Sp 10% gn
trace py, [illegible] Sp [illegible] brown to black; possible [illegible].
Minor inclusions of sst & shale.

— LOOKS LIKE FRACTURE FILLING. VEIN SULPHIDES WITH Cb TYPICAL VEIN TYPE
No obvious banding of sulphides.

Contact <s irregular.

Reference

88033

CSR Limited

DRILL LOG—Sample Data Sheet

Area | State | Location | Prospect Number | 1:100,000 Sheet | Grid Used | Co-ordinates N/S | E/W | Collar RL | Inclination | Azimuth T/M/Grid | Depth

Date Started | Date Completed | Contractor | Driller | Drill Type | Hole Size … to … | Lab Rep No | Analytical Method(s) | Logged by

Sample Type: M–Creeknud, S–Soil, SA–Soil auger, RC–Drill core, RP–Percussion chips, R–Rock, F–Float

Hole Number | Reference

Metres	Sample Number (Year)	Sample Type	A % core recov'd / B weight (kg) / C sample fraction	From (E/W)	To (N/S)	Interval	Sn	Cu	Zn	Pb	Bi	Ag	Au	Co
	067	CS		289.85	291.60	1.75	25	60	0.17%	510	45	3	5	55
	068	CC		291.60	297.0	5.40	10	70	860	240	45	3	10	55
	069	CC		297.00	303.50	6.50	<5	60	130	45	60	2	10	60
	070	CC		303.50	310.00	6.50	<5	75	140	35	50	2	5	65
	071	CC		310.00	316.50	6.50	<5	70	270	210	55	3	5	70
	072	CC		316.50	323.00	6.50	10	60	160	50	50	2	10	60
	073	CC		323.00	329.50	6.50	<5	65	195	55	55	3	5	70
	074	CC		329.50	336.00	6.50	<5	70	125	35	50	2	10	60
	075	CC		336.00	341.60	5.60	<5	70	120	35	45	3	10	65

Description

289.85 – 291.60 m Shales and silts

Interbedded black and grey shales (60%) and grey green silt (40%), in part brecciated.
Bedding ∠ 70°; facing is uphole.
No significant sulphides.
Weak, irregular qtz – cb veining.

291.60 – 292.60 m Finely banded grey shale

Cleavage // bedding ∠ 70°
No sulphides; weak qtz – cb veining.

292.60 – 297.00 m Shales and silts

Interbedded grey and black shales (80%) and grey silts (20%); grading ⇒ uphole facing
Bedding // cleavage ∠ 70°
15 cms qtz – cb veining (@ 294.50 m)
Remainder weak – moderate irregular qtz – cb veining

296.75 – 299.50 m Massive qtz – cb vein

At ∠ 10° – 0° to 3 cms wide; no sulphides; inclusions of host rocks

297.00 – 341.60 m Greywacke and shale

Interbedded black and grey shale (30%) and grey green greywacke (70%). Numerous facings are uphole.
Bedding ∠ 65 – 75°
No sulphides

Weak irregular qtz – cb veining except as below
314.68 – 316.50 m strong qtz – cb veining, irregular, appears to be brecciated zone; aggregate 50 cms over veined interval
321.60 – 323.75 m moderate irregular veining 1 – 2 mm with some to 10 mm; aggregate [illegible]
326.70 m 3 cm zone of qtz – cb veinlets
337.60 m 2 cms veinlet ∠ 60°
338.65 m irregular veining to 1 cm.
339.60 m 2 cms qtz – cb vein at ∠ 30°
340.50 m 1 cms qtz – cb vein at ∠ 30°

Reference

CSR Limited

DRILL LOG—Sample Data Sheet

Area	Prospect Number	Co-ordinates N/S	Inclination	Date Started	Hole Size	Sample Type	Hole Number
State	1:100,000 Sheet	E/W	Azimuth T/M/Grid	Date Completed	Lab Rep No	M–Creekmud, S–Soil, SA–Soil auger, RC–Drill core, RP–Percussion chips, R–Rock, F–Float	Reference
Location	Grid Used	Collar RL	Depth	Contractor / Driller / Drill Type	Analytical Method(s) / Logged by		

Metres	Sample Number (Year)	Sample Type	A % core recov'd / B weight (kg) / C sample fraction	From (E/W)	To (N/S)	Interval	Sn	Cu	Zn	Pb	Bi	Ag	Au	Co	Description
	076	CC		341.60	344.30	2.70	<5	135	160	40	55	2	5	79	341.60 – 344.30m Shales & Silts
	077	CC		344.30	349.70	5.40	<5	65	500	90	55	3	10	79	344.30 – 350.70 m Silts and Shales
	078	CS		349.70	350.70	1.00	<5	80	260	40	60	3	5	75	
	079	CS		350.70	354.80	4.10	<5	80	155	50	55	3	5	55	350.70 – 354.80 m Banded Black Shale
	080	CS		354.80	355.80	1.00	<5	80	115	30	55	2	5	75	354.80 – 356.60 m. Silts and Shales

341.60 – 344.30m Shales & Silts

Interbedded black and grey shales (70%) and grey silts (30%)
Massive with weak cleavage // bedding planes < 60°
Graded bedding ⇒ upward facing
Minor py on joint surfaces.
Minor weak qtz-cb veining

344.30 – 350.70 m Silts and Shales

Massive grey green silts (70%) with interbedded grey and black shales (30%). Shales, in part, fill fractures in ~~[illegible]~~ brecciated sections of silts.

Weak qtz-cb veining with significant veins at:
346.90 m 1cm qtz-cb vein at 45°.
348.80 m " " " " 70°
350.70 m irregular veins aggregate 2cms/10cms
No significant sulphides

350.70 – 354.80 m Banded Black Shale

Weak to moderate irregular qtz-cb veining.
Cleavage < 60-90°; Bedding [illegible]
5% sulphides as aggregated diss py; stringer pyrrhotite - mainly as aggregates on cleavage planes
Minor po at 353.80m

354.80 – 356.60 m. Silts and Shales

Interbedded grey green silt (70%) and black & grey shales (30%)
Silts brecciated in part with fracture infilling by dark shaley material.
No significant sulphides or qtz-cb veining.
Bedding & cleavage < 65°.

END OF HOLE 356.60m

ACID TUBE SURVEYS (R Williams)

200m : 47° (as read) = 38° true
300m : 40° (as read) = 32½° true

Reference