

Feature Bedding  Foliation  Fragment size & shape  Shearing  Fault  Vein 
 c carbonate
 q quartz

Mineralization Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
0.5		assorted weathered pebbles and fragments predominantly f. to m. gr. quartzarenite (micaceous in part) some milky qtz pebbles							
0.35									
5		weathered (possibly sheared) off-white f. gr. quartzarenite - well developed cleavage siltstone?						5	
0.9									
0.55		probably reasonably fresh siltstone - shale partings green-grey to black							
0.67		sheared zone contorted qtz veining						9.4	veinlets & dissem. pyr.
0.95	10	lithology as above (dark shaly siltstone) brecciated? contains qtz frags & heavily veined with siderite shearing ~ 20° to c.a. 10.8 here predominantly carbonaceous shale marked carbonaceous beds ~ 1cm thick bedding ~ 40° to c.a. 11.6 - fault? sheared						10	pyr. trace sph. ~ 40% pyr.
1.2								11	f. gr. pyr.
1.3		12.7 5 cm siderite vein to bedding extensive siderite & qtz veining → fault? 12.9 graphite, galena						11.3	f. gr. sph & qtz & carb veinlet
0.5		Well laminated → 1mm bedding, probably sandier sid. sandy shale and shale						11.5	" " dissem. pyr.
0.85		13.6 10cm siderite vein						12.3	f. gr. dissem. pyr. < 5%
1.0	15	ext. fissile, poss. faulted dominantly galena in shale broken, core thinly intercalated slst. & sh. occ. small kink folds. Bedding ~ 40° to c.a.						13.2	f. gr. dissem. pyr 30%, sph veins < 10% galena 10% in siderite vein.
1.0								13.5	3cm. Pyr. blebs. dissem. veinlets.
< 10cm		Fault zone → broken core lithology as above						14.9	syn. pyr. < 5%
0.1								15	pyr. blebs
0.3		black-grey well laminated sandy shale						15.4	pyr. vein in fracture & qtz, co ₂ ~ 2cm
1.0	20	possibly fault zone cavity (1m) well bedded carbonaceous slst - shale						16.9	< 1% bedded sph.
0.6								18.9	< 1% sph. in sid. vein ~ 5mm thick.
0.3								19.0	dissem & veined pyr. ~ 15%
1.0								19.3	sph. in blebs & small veins < 5%
0.6								19.5	~ 5% veined & dissem. m. gr. pyr.
0.3								19.7	< 1% sph. as flecks & pyr. in qtz veins and veins.
1.0								20.3	4cm vein ~ 30% pyr, 15% sph, < 2% gal.
0.9								20.6	of total vein, mostly qtz.
0.3								21.9	pyrite (f. → m. gr) veinlets some sub parallel to bedding ~ 10% associated sphalerite 1-3% with qtz veins.
0.15								23.0	pyr. veinlets ~ 5% mostly to bedding sph. < 1%
0.4	25							24.0	pyr. veinlets ~ 2% sph. < 1%

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	25.1 25.3	sheared → fault?							pyr veins ~1%
0.3		f. to m.gr. lt. grey massive quartzite → little evidence of bedding here.						25.9	f. to m.gr. pyr. in veins → 5mm thick sometimes with qtz. Approx. 1%
0.5		siderite veining → 2cm wide common consists of ~5-10% of rock often with thin veins of dark, v.f. gr. slst or carb. shale						26.3 26.5	← 1% f. gr. vein pyr.
0.8								27.5	sph. & gal. veins both ~1% in association. Pyr. occurring or before < 1%
0.4								27.9	
0.15								28.2	sph pyr. v.f. gr. ~2-3%
1.7	30	bedding now discernible ~30° to c.a. extensive siderite veinlets av. ~2mm thick subparallel to bedding (some). This later veining postdating qtz veining (1-2cm thick)						28.4	f. gr. pyr. veins < 1%
0.7								29.0	sph. & gal. & siderite veins ~1cm thick sph ~5-6% gal ~10-12%
0.9								29.6	f. gr. pyr. vein ~1%
0.2		broken core possibly faulted.							
0.5									
	35	Quartz vein (35.1) ~5cm thick. Prob. some shear faces here						35.1	m. gr. dissemin. & vein pyr. ~3%
0.8									
1.3		slightly coarser grained quartzite still lt. grey						37.8 38.0	m. gr. vein pyr. ~5mm thick, minor sph. m. to c. gr. vein pyr. up to 1cm thick pyr ~3% sph. < 1%
1.7	40	fractured, qtz veining - fracture zone						39.5	f. to m. gr. vein pyr ~2% sph. vein < 2%
2.2								39.3	pyr. & sph. veins ~2mm thick approx. every 4-5cm along core pyr ~2% sph. < 2% commonly in association (veins) with siderite
0.7	45	broken up core possibly faulted.						41.0	
0.15								42.0	several 1-2cm veins pyr. sph. in qtz with graphite ~1% dominantly vein pyr. ~every 4-5cm sph. < 1-2% of vein.
0.6								43.4	pyr (f. gr.) 20%, sph ~10-15% gal ~5% in siderite & qtz veins → 2cm thick in this fractured zone veins are approx 10% of this part of core.
1.0								45.0	
1.1	50	dark grey → black siltstone + shale Q5 bedding is frequently very contorted, outlined by thin qtz beds or veins. bedding ~20-30° to c.a.						46.3	siderite vein ~5cm
									vein pyr. ~1-2mm thick
								47.8	(2) 2cm - 4cm wide veins carb. sid. qtz 60% of vein is pyr. minor sph.
								48.5	sid. vein 1-2cm pyr. 20% sph 20-25% gal 10%
								49.5	v. f. gr. pyr. occurs in thin dissemin. & veins in qtz veins and in rock itself although mostly in qtz veins
								50.0	pyr. veins ~1-2cm in thickness

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 Foliation Fault Common 5-15%
 Fragment Vein Abundant 15-60%
 size & shape Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE COMMON ABUNDANT MASSIVE	DEPTH m	MINERALIZATION
1.8	50	lithology as above silty shale of argillaceous slst. fairly carbonaceous. qtz veins			50.0	pyr (f.gr.) 50% of qtz veins & pyr. veins. Veins ~ 2cm wide sph. < 1% pyr. ~ 5% of total core section
0.2		fractured & mineralized zone brecciated, fissile, graphitic. 52.0 → 52.6 extensive qtz veining.			51.0	vein sph. ~ 60% galena 20% pyr 10% carb. siderite remainder
0.8		bedding plane fracturing & brecciation (intra) fairly common.			52.0	pyr. veins extensive ~ 40% f.gr. → v.c. gr. galena ~ 20% some with qtz veining.
0.7					52.8	3 pyr. veins (n. to v.c. gr.) ~ 15%
2.2	55	pyr. here occurring in thin plates in bedding? layers ~ 1-5mm in thickness and alternate light and dark grey coloured. much still occurs with no apparent directional control as veins ~ 1mm thick, however.			53.0	m.gr. pyr. in veins ~ 3% of core length.
0.4		crumbled core - fault? sericite, siderite			53.5	pyr. vein ~ 5% in qtz
0.3		silty carbonaceous f. grained quartzite			54.3	syn. pyr. ~ 1% in bedding plane dissem.
1.2	60	crumbled core → fault?			55.0	qtz vein 1cm thick 2% pyr.
0.7	62	crumbled core → fault?			55.2	2-3cm gal. ~ 50% pyr ~ 15-20% sph. < 2%
1.5	65	QS as before (before 50m) fgr. dark grey to black contorted and brecciated bedding consisting of intercalated qtz, shale, slst & thin qtz veins and beds generally very fissile and graphitic overall, essentially siltstone; bedding ~ 20° → 40° to c.a.			55.5	carb vein 2cm pyr. 80% sph. 2%
3.0	70				55.8	qtz, carb. veins 2-3cm pyr. 50% sph. 15%
2.8	75	extensive contortion & qtz veining (thin).			56.2	several 1-2mm veinlets composed of essentially pyr. Veins comprise < 1% of this core length.
2.4					57.5	sid. & qtz veining. n. to v.c. pyr. 25% sph. 35% gal < 5%
					57.8	several qtz & pyr. veinlets → 1cm thick composed of v.f. gr. pyr. sid. & sph. (minor) < 3% of core.
					59.0	10-12cm sid. vein sph. 10% gal. 5-10%
					60.5	5mm pyr. vein 5-10% gal. 20% siderite.
					63.9	20cm qtz, sid. veins 15% pyr. gal. R sph. < 1%
					64.1	finely dissem. & vein pyr. < 5%
					64.6	2x 1/2 cm pyr. bleb.
					65.0	3-5mm pyr. veins 20° to c.a. 2x 3cm bleb.
					65.9	sd. vein. pyr. 60% sph. < 1% 1-2cm vein
					66.1	several 1x2cm blebs pyr.
					68.0	0.5-1cm pyr. blebs v.f. gr. often ± qtz.
					68.3	< 5% of core.
					69.6	1x2cm pyr. bleb.
					70.6	pyr. blebs < 1%
					72.8	pyr. (v.f. gr. → rare)
						2x1cm pyr. bleb.

Feature

Bedding



Shearing



Foliation



Fault



Fragment
size & shape



Vein



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NQ
D
R
O
P
P
E
D
T
R
A
Y

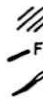
CORE RECD	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
24	75	Lithology as above: brecciated, contorted bedded siltstones and shales containing qtz frags. and beds. Some rounded, most subangular fragments							
	0.4								
	80	78.7 x 1 cm subangular qtz frag.						90	f. gr. pyr ~ 40%
	9.5	bedding ~ 30-40° to c.a. 80.0 → brecciated zone 2cm wide siderite veining						90.3	intact frags of pyr. (f. gr.) brecciated ~ 1% of core
		bedding 28-30° to c.a.						92.2	2 cm qtz frag. dissem. & specks pyr. < 1%
	84.0							92.5	1 x 1/2 cm f. gr. pyr. frag. = qtz. Pyr. > 90%
	84.2	crushed core - fault						93.5	pyr. = qtz frag ~ 15%
	85	5mm siderite 78.6 vein.						94.0	6 x 4 mm pyr. frag.
	31	fissure lode siderite vein 2-3cm wide						95	sph. 60% gal. 30%
		1cm 86.5 siderite vein some seric.						95.7	2mm pyr. veins, 5mm frags and specks. Small specks, veins pyr. < 1% of core
	3.0							96.0	sph. 6% gal. < 2% Pyr. 5-6% f. gr.
	90							98.3	1/2 mm specks sph. minor pyr. = siderite, qtz vein
	3.0							99.0	→ 1cm frags f. gr. pyr
								99.2	→ 1cm frags. f. gr. pyr < 1% core length
								99.5	pyr. as frags. → 1cm in size and specks and inclusions in fragments mostly of qtz or stst. ~ 1% of core length.
								99.7	
	95	broken core & breccia, sericite, siderite, graphite fault?						92.2	
	3.0	fine intraclasts ~ 30% of core here						93.5	trace f. gr. pyr in inclusions.
	96.4							94.2	v. f. gr. pyr ~ 80% of vein.
	96.7	broken core - fault?						94.6	3x2cm f. gr. pyr. minor qtz.
	97.5	5x2cm finely bedded subrounded qtz frag.						94.8	sid. sericite brecciated zone pyr. 60%
	3.0							95	
	100							96.0	1 cm pyr. vein.
								100	v. f. gr. syn. pyr. in frags ~ 5% of frag 3-4cm

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CORE REC'D	DEPTH m 100	GEOLOGY	VISUAL LOG	TRACE COMMON ABUNDANT MASSIVE	DEPTH m 100	MINERALIZATION
		lithology as above possibly higher percentage of intraclastic material is more quartzitic			100.6	<1% core 1/2-1cm pyr. frags. f.gr.
3.0		fractures in fragmental material filled with qtz or rarely pyrite.			101.0	qtz frags 2-4cm contain finely dissem. pyr. <1%
		brecciated zone 2-5cm			103.0	sh. frags contain ~30% f.gr. pyr. frags → 3cm pyr. in small frags or minor as veinlets all <1% in rare.
	105	approximately 80% breccia frags.			104.2	
3.0	106.0	f. to m.gr. light grey silty and shales quartzite still fragmental although highly angular with large 5-6 cm frags and larger.			105	gal. ~10% pyr. frag. 1-2cm. in qtz vein.
	107.3	black intraclastic shale			106.5	2x3cm. frag. of pyr.
	107.6	qtzi as before (106.0 - 107.3)				
2.9	108.2	black intraclastic shale, contorted bedding, fragments of qtzi, numerous qtz veins.				
	110	fairly non-fragmental			110	
	110.2	fractures containing drusy qtz.				
3.0	111.2	5mm sid. vein 60° to c.a.				
	112.4	5mm sid. & qtz vein bedding 10° to c.a.				
	113.4	fragmental here				
	113.7	m.gr. qtzi fragmental on boundaries				
3.1	113.8	shales as per 108.2 bedding 25° to c.a.			114.0	shale bound? pyr. ~3% of 1cm bed
	115				115.0	
	115.2	ext. fissile graphitic zone, sericite & qtz. → fault?			115+	stei/seric. frag. ~3% gal. frag. 5x3cm.
	115.6				116.9	2cm sid. vein. pyr. ~15%
2.9		sid. vein 30° to c.a.			117.7	1x 1/2 cm pyr. blebs.
	120	pulverized core - fault (<10cm thick)			120	
3.0	120.5	1/2 cm. sid. & qtz. vein.			120	2cm. pyr. frags. trace to minor pyr. in blobs
	121.0	qtz, sid. vein in fragmental part 5-10cm.			121.9	thin gal. in sid. vein ~3%
	121.8	brecciated, powdered core			122.0	pyr. in vein ~5%
	122.0	brecciated, powdered core			122.5	f.gr. pyr. veins & fillings ~50%; sph. ~5%
	122.3	sidite veining			122.7	gal. 10-15%
	122.5	fragmental zone			123.2	2x1cm frag pyr.
3.0					123.8	2x2cm vein of f.gr. pyr. pyr. <1% as <1cm frags. of core length.
	125				125	

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CORE RECD	DEPTH m	GEOLOGY	VISUAL LOG	TRACE COMMON ABUNDANT MASSIVE	DEPTH m	MINERALIZATION
	200.4	Lithology as above			200.0	v.f. gr. Pyr. syn. 8-10%
	200.6	QS as per P.P. essentially slt & sh. bedding 90 c.a.			200.4	
0.2		Broken, puggy core - <u>Fault Zone</u>				
1.6	201.6				201.7	verinour sph. trace.
					202.4	f. gr. Pyr. >90% vein 1-2 cm.
1.3						
					203.0	4cm qtz vein
					204.0	2cm qtz vein
	205				204.2	syn. Pyr. >90 syn. bed ~5m thick.
3.1	205.3	QS? siltstone-shale intercalated. bedding is fairly planar (ie non-contorted) ~40° to c.a. Contains occasional thin → 3mm qtz veins frequently parallel to bedding.			205.0	syn. Pyr. <5% v.f. gr. well bedded. minor fragmental. syn. Pyr. 50% 3 cm.
					207.5	
3.0	208.3	Sh Black, pyritic weakly fragmental carbonaceous shale. Some thin siltstone beds			208.9	syn. Pyr. 5-7% v.f. gr.
					209.4	
	209.8				210	
	210	Broken & puggy core - <u>Fault Zone</u> qtz & sid. veining.			210.0	v.f. gr. syn. Pyr 10 f.to mg. Pyr. also occurs as 2mm veins → replacement?
	210.3	Dolomite fragments appearing - still siltstone overall, however:			210.4	
3.1	210.8	Dol: oliv-green grey extremely fine grained, very finely bedded dolomite mudstone. Contains fragments (poorly sorted, moderately rounded) up to several centimetres in size. Dol. is characterized by extensive multiple qtz-filled fracturing. Fragr. predominantly slt & qtz. Pyritic			211.0	
					212.4	v.f. gr. syn Pyr. 1-5
	212.3	QS Lithology as at 200.4. poss dolomitic?			213.6	
	213.0	Broken & puggy core - <u>Fault Zone</u>			213.6	
0.3	213.4	Dol-Sh Base weakly dolomitic grades into black carbonaceous pyritic shales & siltstones. Generally well bedded, occasionally fragmental & intraclastic.			215	
	214.5				215.4	v.f. gr. syn. Pyr ~1-2%
0.7	215	Broken core, some parts puggy - <u>Fault Zone</u>			216.5	
1.0	215.4				217.5	v.f. gr. syn Pyr. ~1-2%
3.1					217.9	
	219.0	sedimentary breccia - intraclastic.			220	
	220				220.3	v.f. gr. syn. Pyr. 2-3%
3.0					221.3	
					221.6	v.f. gr. syn Pyr & bedded f. gr. ~10%
		bedding ~30° to c.a.			223.4	v.f. gr. syn. Pyr ~15%
3.1					224.0	
					224.2	syn. Pyr. f-mg. dissem. ~20-30% 1cm
	225				225	

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	225				225	
		Lithology as above black carbonaceous pyritic siltstone - shale			225.4	v. f. g. syn. Pyr. ~ 2%
2.2			225.6 1 cm sid qtz vein		225.9	v. f. g. & f. to m. g. syn. Pyr. ~ 10% recrystallized Pyr.?
					226.3	
0.8	228.1	sheared puggy & broken core			228.5	syn. Pyr. 1-2
	228.4	<u>Fault zone</u>				
1.2					230.0	
	230					
1.6					233.8	1-2 Py. syn.
3.1						
	235				235	
0.5	235				235.6	
	235.6	<u>SAVE MATERIAL OR FAULT</u>				
0.4	235.6				237.8	2-5 syn. Pyr.
1.8					238.9	5x2 cm syn. Pyr. > 90%
	238.7					
1.2					240	
0.3	240					
1.0	240	VT fine grained sericitic lithic tuff, light grey - green, Parts carbonate-rich. Clasts up to 30 mm.				
2.9					245	
3.0	245					
	245					
3.1						
	250	possibly pyroclast ~ 10-15 cms long, chilled margins - lava?			250	

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3.0	250.7 251.1	<p>Pgs, sheared, broken core - FAULTED CONTACT - FAULT ZONE</p> <p>SH Black, v.f.g. carbonaceous pyritic? shale.</p>			250.7	<p>vare varin. sph.</p> <p>Syn. Pg. rare as before in shales</p>
0.3					252.6	<p>Syn. Pg. 1-2% parts recrystall. Pg.</p>
2.9	253.5 254.3	<p>Si? - Dol. Light grey well bedded v.f.g. → aphanitic siliceous (carbonaceous) dolomite (intraclastic & fragmental)</p> <p>VT Lithology as before: pyritic, light gangue (lithic tuff) tuff agglomerate v. sericitic; composed essentially of pyroclasts → 60mm or more in size vesicles sericite, qtz, pg. filled</p>			253.6 254.3 254.7 255 255.2 255.6	<p>Pg 2-5% as veins, infillings and what appears to be frags.</p> <p>Pg 2-5% occ. as above - fracture infills.</p>
3.1						
3.0	260				260	<p>Pg. trace to none (ie < 1%) as veins, infillings</p>
3.0						
3.0	265				265	
3.0						
3.0	270				270	
		EOH				
		270.7 metres				