GOLD FIELDS EXPLORATION PTY. LIMITED

DRILL CORE RECORD

102057

HOLE NO. : HP 28

STATE : TASMANIA

PROJECT	TYDNALL
DESIGNED BY	A.J. CARTWRIGHT
LOGGED BY	A.J. CARTWRIGHT
COMMENCED	4.8.1987
COMPLETED	21.8.1987

PURPOSE

This hole was designed as part of a two hole test for extensions to the mineralisation encountered in HP19.

LOG SUMMARY / GENERAL COMMENTS

A well developed mineralised zone was encountered 30.9m (downhole) from the Fault Footwall. This zone included an upper 4.0m thick quartz-sericite-sulphide vein; containing abundant galena and sphalerite. Significant assays are recorded below.

ASSAY SUMMARY

INTERVAL From	INTERVAL To	Width	Au	Ag	As	Cu	Pb	Zn	Bi – all ppm					COMMENTS
318.2	322.2	4.0m	4.04	14.6	51	794	2371	3359	9					
and														
326.2	332.0	5.8m	0.53	12.5	134	1227	6883	4137	13					

LOCATION

NORTHING	5364218.7
EASTING	379961.4
R.L.	2588.3
GRID	AMG
LENGTH	379.8

HOLE CONDITION

SIZE Hole Size	SIZE Depth
HW	0.0- 17.0
HQ	17.0-379.8

SIGNIFICANT CORE LOSS INTERVALS From	To	% Lost
17.0	37.0	14

POOR GROUND CONDITION ZONES From	To	Condition
0.0	37.0	Weathered Hanging wall rocks.
253.2	287.3	Henty Fault. Mylonites and highly fractured, clays and soft rock.
341.3	342.6	A strongly developed puggy clay-soft fractured rock zone.

HOLE CONDITIONS AFTER COMPLETION

All rods removed from hole. 15.0m of HW casing is stuck in hole from 2.0m to 17.0m. A hole marker was left in the collar.

SURVEY DATA (Note: Bearing type must be same as Project Grid Type)

SURVEY Depth	Bearing	Dip	INTERVAL From	To	Distance	VERTICAL D.Sin.Dip	R.L.	HORIZONTAL D.Cos.Dip	Prog.Total	SURVEY Depth	Bearing	Dip	INTERVAL From	To	Distance	VERTICAL D.Sin.Dip	R.L.	HORIZONTAL D.Cos.Dip	Prog.Total
0.0	090	65.0	0.0	19.0	19.0	17.2	2571.1	8.0	8.0										
38.0	090	64.0	19.0	44.0	25.0	22.5	2548.6	11.0	19.0										
50.0	091	63.5	44.0	75.0	31.0	27.7	2520.9	13.8	32.8										
100.0	091	61.0	75.0	128.5	53.5	46.8	2474.1	25.9	58.8										
157.0	088	59.0	128.5	177.5	49.0	42.0	2432.1	25.2	84.0										
198.0	091	53.5	177.5	225.5	48.0	38.6	2393.5	28.6	112.5										
253.0	088	50.0	225.5	284.5	59.0	45.2	2348.3	37.9	150.5										
316.0	092	49.0	284.5	336.5	52.0	39.2	2309.0	34.1	184.6										
357.0	091	48.0	336.5	367.5	31.0	23.0	2286.0	20.7	205.3										
378.0	092	48.0	367.5	379.8	12.3	9.1	2276.9	8.2	213.6										

GOLD FIELDS EXPLORATION PTY. LIMITED

102058

PROJECT: TYNDALL

DRILL CORE LOG AND ASSAY DATA

HOLE NUMBER: HP 28 Page: 1

INTERVAL From	INTERVAL To	RECOVERY m	RECOVERY %	DESCRIPTION	ASSAY DATA Sample No.	From	To	Rec. %
				SUMMARISED LOG				PGI
0.0	253.2	247.6	98	COARSE GRAINED VOLCANICLASTICS WITH LENSES OF FELSIC FINE GRAINED LAVAS AND FINE GRAINED EPICLASTICS. METAMORPHOSED TO A QUARTZ-CHLORITE-HEMATITE ASSEMBLAGE AND CUT BY A SERIES OF FINE GRAINED MAFIC DYKES.		0.0	37.0	HWJT
						37.0	253.2	HWJN
253.2	287.3	34.1	100	HENTY FAULT. STRONGLY SHEARED AND ALTERED MYLONITIC VOLCANICLASTICS WITH LATER KINK BAND DEFORMATION. STRONGLY SERICITIC AND FRACTURED IN PLACES.		253.2	268.9	FTMY
						268.9	287.3	FTCS
287.3	318.2	30.9	100	WEAKLY ALTERED COARSE GRAINED VOLCANICLASTICS WITH A WELL DEVELOPED CARBONATE ALTERATION ZONE OCCURRING ON THE BASAL CONTACT.		287.3	318.2	FWAW
318.2	332.8	14.6	100	A WELL DEVELOPED QUARTZ-SERICITE-SULPHIDE VEIN COMPLEX (4.0m WIDE) IS UNDERLAIN BY VARIABLY BUT GENERALLY STRONGLY ALTERED AND MINERALISED MEDIUM-FINE GRAINED VOLCANICLASTICS.		318.2	332.8	FVMZ
332.8	379.8	47.0	100	WEAKLY ALTERED AND IN PLACES STRONGLY SILICIFIED FINE-COARSE GRAINED VOLCANICLASTICS WITH MINOR BLACK SHALES.		332.8	379.8	FWAW
				DETAILED LOG				
				0.0-253.2. COARSE GRAINED VOLCANICLASTICS WITH MINOR FELSIC LAVAS AND EPICLASTICS CUT BY A SERIES OF MAFIC DYKES.				
0.0	17.0			Tricone, no core recovered.				
17.0	37.0	17.2	86	Pale brown-green moderately weathered and fractured coarse volcaniclastics. Limonite coats much of the core and numerous fractures.				
37.0	253.2	215.8	100	Dark green-pink coarse volcaniclastics with minor lenses of felsic lavas. Numerous grit-sized lithic chips occur in a dark green chloritic matrix.				

GOLD FIELDS EXPLORATION PTY. LIMITED

102059

PROJECT: TYNDALL

DRILL CORE LOG AND ASSAY DATA

HOLE NUMBER: HP 28

INTERVAL From	INTERVAL To	RECOVERY m	RECOVERY %	DESCRIPTION	ASSAY DATA Sample No.	From	To	Rec. %
				The lavas are metamorphosed to a hematite-silica assemblage. The core is very weakly foliated at around 45°CA, and is moderately fractured. A few, narrow, rare epiclastic lenses also occur, and the sequence is cut by thin mafic dykes. Quartz veinlets are often developed in these two fine grained lithologies. Below 75.0, autobrecciated lavas are more common (around 40-50% of the rock) and the core is slightly more fractured. A few thick quartz-chlorite veins (metamorphic) occur in these lavas. Also below this depth, the mafic dykes become more abundant (around every 10m). An 8.0m thick autobrecciated lava occurs at 130.0m. Below this, the lavas are absent or very rare. Below 162.0, the core is very strongly foliated at 50°CA, and is generally more epiclastic-like, with very fine grained lenses and clast-poor fine fine grained volcaniclastics. Below 185.0, the core becomes moderatlely fractured with very weakly developed sericitic zones occurring also. A particularly highly fractured zone lies between 189.3 and 193.2m. At 232.0, the core becomes strongly sericitic, strongly foliated and moderately fractured, all increasing with depth into the unit below.				
				253.2-287.3 HENTY FAULT. STRONGLY MYLONITIC, SERICITIC AND ALTERED VOLCANICLASTICS.				
253.2	268.9	15.7	100	Pale pink-green, soft, highly sheared, highly sericitic mylonitic volcanics. Moderately fractured, soft, highly altered rock, with a few completely shattered-fractured zones (up to 0.5m wide). The banded dark and light coloured clay rich rock is often later kink banded (the original cleavage) into close folds. The rock is unveined apart from a few thick metamorphic veins.				
268.9	287.2	18.3	100	Green-grey strongly altered, moderately fractured, weakly mylonitic, *coarse volcaniclastics and epiclastics.* Not as strongly and pervasively sericitic as the unit above, but does contain many bright green sericitic veinlets, all strongly foliated, sub-parallel and in many places, strongly kink banded. Several puggy, clayey zones (usually 5-10cm) are present.				

GOLD FIELDS EXPLORATION PTY. LIMITED

102060

PROJECT: TYNDALL

DRILL CORE LOG AND ASSAY DATA

HOLE NUMBER: HP 28 Page: 3

INTERVAL From	INTERVAL To	RECOVERY m	RECOVERY %	DESCRIPTION	ASSAY DATA (all ppm) Sample No.	From	To	Rec. %	Au	Ag	As	Cu	Pb	Zn	Bi
				The core is harder than above, being altered to quartz-sericite-assemblage with minor pyrite (0-1%) developed in places. Irregular quartz veins are common.											
				287.3-318.2 WEAKLY ALTERED COARSE GRAINED VOLCANICLASTICS WITH MINOR CARBONATE ALTERATION AT DEPTH.											
287.3	318.2	30.9	100	Pale pink-grey, weakly altered coarse grained volcaniclastics. Elongate, pink, siliceous fragments from grit to large pebble sized, occur poorly sorted in a fine grained matrix. The sequence is weakly altered to a quartz-chlorite-sericite-hematite assemblage and is weakly fractured. In places the rock is fine grained (epiclastics) and overall is strongly foliated at 50°CA. A few, sericitic-fractured zones are present. Very rare pyrite occurs as very fine disseminations in the matrix. At 310.5, wispy carbonate veinlets begin to appear in the core, and below 313.5, these increase in volume and density to become large coarse intergrowths and lenses. A few sericitic (green) bands also occur in this carbonate-rich rock, which ends on an abrupt, broken contact with the unit below.	T9638	317.2	318.2	100	0.070	0.5	83	70	55	185	2
				318.2-332.8 A QUARTZ-SERICITIC-SULPHIDE VEIN IS UNDERLAIN BY STRONGLY ALTERED AND MINERALISED VOLCANICLASTICS.											
318.2	322.2	4.0	100	Pale green-grey quartz-sericite-sulphide vein. Pale green intergrowths of pale brown quartz and green sericite stringers occur with lenses (0.1-0.3m) of white quartz containing network veinlets of base metal sulphides, particularly galena and sphalerite. The sericite veinlets are foliated at 50°CA, otherwise the core is unfoliated. Overall the vein complex is moderately strongly fractured with several very strongly fractured zones. The overall sulphide content is 5-10%, most as base metal sulphides.	T9611	318.2	318.9	100	2.030	2.0	11	130	175	65	3
					2		319.9	"	5.030	25.0	37	940	4100	4200	10
					3		320.4	"	0.330	11.0	190	1400	1600	155	7
					4		321.3	"	2.430	4.5	25	555	345	125	6
					T9616	321.3	322.2	"	8.160	25.0	46	1080	5500	10000	18
322.2	323.0	0.8	100	Dark grey, strongly sulphidic fine grained volcaniclastics. No coasrse fragments are visible in this unit which is a quartz-chlorite-sericite-sulphide assemblage. Thin (1-2mm) bands of massive pyrite occur along the length of the core, and are folded through axial planes perpendicular to the core. The rock is weakly fractured and the overall sulphide content (all pyrite) is 15-20%.	T9617	322.2	323.0	100	0.290	3.5	190	990	260	85	7

GOLD FIELDS EXPLORATION PTY. LIMITED

102061

PROJECT: TYNDALL

DRILL CORE LOG AND ASSAY DATA

HOLE NUMBER: HP 28 Page: 4

INTERVAL From	INTERVAL To	RECOVERY m	RECOVERY %	DESCRIPTION	ASSAY DATA (all ppm) Sample No.	From	To	Rec. %	Au	Ag	As	Cu	Pb	Zn	Bi
323.0	326.2	3.2	100	Pink-grey coarse-medium grained volcaniclastics. Strongly silicified in places but otherwise weakly altered and poorly sulphidic (1-2% by vol.). The large fragments are hematitic and siliceous, in a fine green matrix. In places the core is strongly foliated at 50°CA and is weakly fractured. A very sharp contact at 50°CA occurs with unit below.	T9618	323.0	324.0	100	0.050	0.5	38	85	180	260	1
					9		325.0	"	0.010	"	26	15	25	80	<1
					T9620	325.0	326.2	"	<0.008	1.0	16	65	45	100	3
326.2	328.7	2.5	100	Dark grey-pink strongly altered and mineralised medium-fine grained volcaniclastics. Abundant pyrite and minor base metal sulphides occur in the matrix and the sequence is altered to a quartz-chlorite-sericite-hematite-sulphide assemblage. The core is weakly foliated at 55°CA and is weakly fractured, apart from two main very strongly fractured-sericitic zones between 327.2-327.4m and 328.0-328.3m. A patch of unmineralised, hematitic, fine grained rock occurs, between 327.4 and 327.8. At the start ofthis unit (326.2m), an 8cm band of very strongly developed sphalerite with minor galena and pyrite occurs. Similarly at the end of the unit (328.7m), a 5cm band of coarse galena with minor chalcpyrite is present.	T9621	326.2	327.4	100	0.780	16.0	140	2200	15500	19000	3
					2		327.8	"	<0.008	1.0	18	85	370	715	<1
					3		328.2	"	1.160	15.0	170	1250	2200	175	10
					T9624	328.2	328.7	"	0.300	13.0	200	2250	21000	940	3
328.7	331.2	2.5		DROPPED CORE TRAY. The core in this interval was dropped and was later pieced together into 3 separate lengths and an amount of fractured core and sericitic rock chips. The relative positions of the three lengths of core are unknown. The three lengths are described below.	B	(T9625)			0.960	55.0	170	2100	15000	180	68
				B(0.6m): Strongly mineralised and altered medium grained volcaniclastics. The core is altered to a quartz-chlorite-sericite-sulphide assemblage and is characterised by a narrow 1-2cm wide quartz-galena-chalcopyrite vein, that runs down the length of the core.	C	(T9626)			1.010	5.0	150	880	215	95	6
					D	(T9627)			0.110	0.5	78	95	65	80	6
					F	(T9629)			0.340	3.5	150	550	830	80	12
				C(0.4m) and D(0.8m): Weakly altered and mineralised medium-coarse grained volaniclastics. The core is weakly foliated at ~60°CA and is weakly fractured. Hematite-chlorite-sericite-pyrite alteration is developed but the pyrite content is low, around 2-3%. The fractured pieces of core left over (sample F) represent the other 0.7m of this dropped interval, and as such contains characteristics of B, C and D.	328.7-331.2 (2.5m) average:				0.522	15.1	132	829	3888	106	23
331.2	332.8	1.6	100	Moderately altered and mineralised coarse-medium grained volcaniclastics.											

GOLD FIELDS EXPLORATION PTY. LIMITED

102062

PROJECT: TYNDALL

DRILL CORE LOG AND ASSAY DATA

HOLE NUMBER: HP 28

INTERVAL From	INTERVAL To	RECOVERY m	RECOVERY %	DESCRIPTION	Sample No.	From	To	Rec. %	Au	Ag	As	Cu	Pb	Zn	Bi
									ASSAY DATA (all ppm)						
				Generally altered to a hematite-quartz chlorite-sericit e-pyrite assemblage,											
				but several zones of silification-base metal sulphide development occur.	T9628	331·2	332·0	100	0·290	3·0	130	930	90	130	12
				The core is weakly foliated and weakly fractured.	T9630	332·0	332·8	"	0·080	0·5	99	305	45	35	3
				332.8-379.8 WEAKLY ALTERED, VARIABLY SILICIFIED FINE- COARSE											
				VOLANICLASTICS WITH MINOIR BLACK SHALES.											
332.8	350.0	17.2	100	Moderately altered coarse grained volcaniclastics. Large, elongate,	T9631	332·8	333·8	100	0·050	0·5	73	25	50	70	3
				hematitic-siliceous fragments occur in a dark green-grey, chloritic-pyritic	2		334·8	"	0·040	<0·5	53	20	25	75	1
				fine grained matrix. Overall, the pyrite content is low, around 1-2%.	3		335·8	"	<0·008	"	41	15	20	70	<1
				The core is strongly foliated at 50°CA, and is strongly fractured.	4		336·8	"	"	"	32	"	25	35	<1
				Patches of lava (fragment) rich material occur, as do puggy zones (one	5		337·5	"	0·070	"	93	25	35	40	8
				between 338.5-338.7). In places the rock is strongly silicified.	7	337·5	338·5	"	0·010	"	52	140	25	55	1
				Another strongly developed puggy-crushed rock zone occurs between											
				341.3 and 342.6. Below this core is siliceous, hematitic and unsulphidic.											
				A sharp contact occurs with the unit below.											
					T9654	350·0	351·0	100	0·110	4·0	98	170	285	1500	56
350.0	361.6	2.5	100	Dark grey-black very fine grained shale/epiclastics. Weakly altered and	5		352·0	"	0·090	2·5	64	110	160	235	47
				may be carbonaceous. Irregular quartz veinlets occur throughout. Weakly	6		353·0	"	0·030	1·5	30	45	115	320	13
				fractured and foliated at 55°CA.	7		354·0	"	0·010	1·0	21	39	85	310	1
				This is underlain by a variety of lithologies between 352.5 and 359.5,	8		355·0	"	<0·008	0·5	26	40	75	335	<1
				where another shale sequence, identical to the one ab ve, lasts to the end	9		356·0	"	0·010	"	25	"	80	275	2
				of the unit at 361.6.	60		357·0	"	<0·008	1·0	33	45	105	345	8
				The rocks inbetween consist of fine grained epiclastics mixed with bands	1		358·0	"	"	0·5	21	40	95	665	<1
				and lenses of coarse volcaniclastics and breccias. The sequence is	3		359·0	"	"	<0·5	14	35	40	350	"
				slightly altered to weakly altered and is moderately fractured.	4		360·0	"	0·030	1·5	45	90	160	1250	12
					5		361·0	"	0·140	3·0	81	195	185	190	62
361.6	379.8	18.2	100	Pink-grey, medium-coarse grained volcaniclastics. Very strongly silicified,	T9666	361·0	362·0	"	0·080	1·0	43	80	150	230	33
				but otherwise weakly altered. The silicification becomes very strong,											
				obliterating all previous textures. The core is weakly fractured, apart	T9668	375·0	376·0	100	<0·008	<0·5	7	10	<5	105	<1
				from a few sericitic-strong fractured zones up to 0.3m wide.	9		377·0	"	"	"	4	"	"	65	1
				At 375.0, the core is moderately fractured, pale green in colour, sericitic	70		378·0	"	"	"	"	"	"	90	"
				and contains a few disseminated sulphides. Overall moderately altered,	1		379·0	"	"	"	2	"	"	170	<1
				th lasts to the end of the unit.	T9672	379·0	379·8	"	"	"	"	15	"	55	"
				END OF HOLE 379.8m.											

PROJECT: TYND. - HOLE NO: HP28

GOLD FIELDS EXPL. ..TION PTY. LIMITED

DRILL HOLE PLOT

PLAN VIEW

s364 218·7mN
379 961·4mE

2588·3mR.L.

s364 200mN

380 100mE

Limit of ox.

100m

200m

300m

DIP PROFILE

COARSE GRAINED VOLCANICLASTICS AND LAVAS AND EPICLASTICS CUT BY THIN MAFIC DYKES
sil., chl., hem., ser.

Increased fracturing, ser.

HENTY FAULT
sil., ser., frac., sheering

MYLONITE ZONE

CRUSHED ZONE

WEAKLY ALTERED COARSE VOLCANICLASTICS WITH A BASAL CARBONATE ALTERATION ZONE
sil., ser., chl., hem., carb

318·2 - 322·2m
4·0m @ 4·04g/t Au
14·6g/t Ag
0·24% Pb
0·34% Zn

QUARTZ - SERICITE - SULPHIDE VEIN

STRONGLY ALTERED + MINERALISED FINE-MEDIUM VOLCANICLASTICS

WEAKLY ALTERED COARSE VOLCANICLASTICS AND MINOR BLACK SHALES.

5 - 10% py + cp + gn + sl

1 - 10%

1 - 2% py

EOH 379·8

2346·2mR.L. (FFW)

2276·9mR.L. (EOH)

5 cm

SCALE 1:1000

20 10 0 40

METRES

STATE: TAS.

HOLE N° HP23