GOLD FIELDS EXPLORATION PTY. LIMITED

DRILL CORE RECORD

102023

HOLE NO. : HP23

STATE : TASMANIA

PROJECT	TYNDALL
DESIGNED BY	A.J. CARTWRIGHT
LOGGED BY	A.J. CARTWRIGHT
COMMENCED	30.5.87
COMPLETED	23.6.87

PURPOSE

To test the Henty Mineralised Zone in a 50m square pattern around the HP4 intersection.

LOG SUMMARY

The hole encountered three separate mineralised zones below the Fault footwall, within a variably altered volcaniclastic sequence. Significant assays are recorded below.

GENERAL COMMENTS

ASSAY SUMMARY

INTERVAL From	INTERVAL To	Width	Au	Ag	As	Cu	Pb	Zn	Bi					COMMENTS
245.0	261.6	16.6m	0.46	3.7	83	513	487	440	19					
including														
259.0	260.0	1.0m	3.43	23.0	400	3850	3625	4100	21					
274.0	277.0	3.0m	0.91	6.7	27	2907	267	178	13					
284.8	290.8	6.0m	0.32	17.3	180	3083	5361	865	18					

LOCATION

NORTHING	5364011.4
EASTING	379971.2
R.L.	2600.8
GRID	AMG
LENGTH	305.7

HOLE CONDITION

SIZE Hole Size	SIZE Depth
HW	0.0- 9.0
HQ	9.0-305.7

SIGNIFICANT CORE LOSS INTERVALS

From	To	% Lost
9.0	19.0	14

POOR GROUND CONDITION ZONES

From	To	Condition
0.0	60.8	Weathered hanging-wall rocks.
207.0	241.6	Henty Fault. Mylonites, strongly fractured rock and puggy, unconsolidated clay zones.

HOLE CONDITIONS AFTER COMPLETION

Hole is open, all casing removed, with a collar marker in place.

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

SURVEY Depth	SURVEY Bearing	SURVEY Dip	INTERVAL From	INTERVAL To	INTERVAL Distance	VERTICAL D.Sin.Dip	VERTICAL R.L.	HORIZONTAL D.Cos.Dip	HORIZONTAL Prog.Total	SURVEY Depth	SURVEY Bearing	SURVEY Dip	INTERVAL From	INTERVAL To	INTERVAL Distance	VERTICAL D.Sin.Dip	VERTICAL R.L.	HORIZONTAL D.Cos.Dip	HORIZONTAL Prog.Total
0.0	076	64.0	0.0	22.5	22.5	20.2	2580.6	9.9	9.9										
45.0	076	64.0	22.5	67.5	45.0	40.4	2540.1	19.7	29.6										
90.0	077	61.0	67.5	115.0	47.5	41.5	2498.6	23.0	52.6										
140.0	077	58.0	115.0	166.0	51.0	43.3	2455.3	27.0	79.6										
192.0	077	54.0	166.0	213.5	47.5	38.4	2416.9	27.9	107.6										
235.0	077	54.0	213.5	255.0	41.5	33.6	2383.3	24.4	132.0										
275.0	077	54.0	255.0	305.7	50.7	41.0	2342.4	29.8	161.7										

PROJECT: TYNDALL HOLE NO: HP23

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DRILL HOLE PLOT

PLAN VIEW

364 011·4mN
379 971·2mE

2600·8mR.L.

364 000mN

380 100mE

Limit of ox.

MEDIUM GRAINED VOLCANICLASTICS AND LAVAS
CUT BY MAFIC DYKES
sil., hem., chl., ser.

DIP PROFILE

100m

200m

HENTY FAULT
ser., shear., frac.

increased fracturing, ser.

MYLONITE ZONE

CRUSHED ZONE

MINERALISED COARSE VOLCANICLASTICS
sil., ser., chl., sulph.

259·0 – 260·0m
1·0m @ 3·43g/t Au
23·0g/t Ag
0·39% Cu
0·36% Pb
0·41% Zn

274·0 – 277·0m
3·0m @ 0·91g/t Au
6·7 g/t Ag
0·29% Cu

WEAKLY ALTERED COARSE VOLCANICLASTICS
sil., chl.

300m

EOH 305·7m

2394·1m R.L. (FFW)

2342·4m R.L. (EOH

5-10% py

1-2% py

15-20% py

10-15% py

10% py (+cp)

SCALE 1:1000

METRES 80 40 0 40 80

5 cm

STATE: TAS.

HOLE N: HP23

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102025

ULV. PAPER

PROJECT: TYNDALL

DRILL CORE LOG AND ASSAY DATA

HOLE NUMBER: HP23 Page: 1

INTERVAL From	INTERVAL To	RECOVERY m	RECOVERY %	DESCRIPTION	ASSAY DATA Sample No.	From	To	Rec. %
				SUMMARISED LOG				PG1
0.0	207.0	203.3	98	MEDIUM GRAINED VOLCANICLASTICS WITH MINOR AUTOBRECCIATED FELSIC LAVAS, CUT BY A SERIES OF MAFIC DYKES. STRONGLY WEATHERED NEAR SURFACE AND STRONGLY FRACTURED AND SERICITIC AT DEPTH.		0·0	60·8	HWLX
						60·8	207·0	HWUW
207.0	241.6	34.6	100	HENTY FAULT. A WELL DEVELOPED MYLONITE ZONE IS UNDERLAIN BY A FRACTURED ZONE AND A THIN CLAY-CRUSHED ZONE OF SOFT PUGGY CLAYS. VERY WEAK MINERALISATION OCCURS IN THE FAULT.		207·0	232·0	FTMY
						232·0	241·6	FTCS
241.6	291.5	49.9	100	VARIABLY BUT GENERALLY STRONGLY ALTERED AND MINERALISED COARSE MEDIUM GRAINED VOLCANICLASTICS. THIN FINE GRAINED, MASSIVE PYRITE LENSES ARE DEVELOPED AT THE BASE OF AN UPPER MINERALISED ZONE WHICH IS SEPARATED FROM TWO LOWER STRONGLY MINERALISED ZONES BY VERY WEAKLY ALTERED VOLCANICLASTICS.		241·6	291·5	FWMZ
291.5	305.7	14.2	100	WEAKLY ALTERED, UNMINERALISED, VERY COARSE VOLCANICLASTIC BRECCIA. WEAKLY SILICIFIED WITH A STRONGLY FRACTURED SERICITIC ZONE.		291·5	305·7	FWAL
				DETAILED LOG				
				0.0-207.0 MEDIUM GRAINED VOLCANICLASTICS WITH MINOR LAVAS, CUT BY FINE GRAINED MAFIC DYKES.				
0.0	9.0			Tricone, no core recovered.				
9.0	19.0	8.6	86	Deep brown, strongly weathered volcaniclastics. Abundant limonite occurs pervasively through the rock and on joint surfaces. The rock is strongly fractured.				
19.0	60.8	41.6	100	Brown-green-grey, moderately weathered, medium grained volcaniclastics.				

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PROJECT: TYNDALL

DRILL CORE LOG AND ASSAY DATA

HOLE NUMBER: HP23

INTERVAL From	INTERVAL To	RECOVERY m	RECOVERY %	DESCRIPTION
				The core consists of sections of only slightly weathered rock among thick (5-6m) zones of very strong weathering:- abundant limonite/clay development. Overall the rock is moderately- strongly fractured and very weakly foliated. Several thin (1-2m wide) mafic dykes cut the core, which is a medium grained intermediate volcaniclastic.
60.8	191.0	129.4	99	Pink-green medium grained volcaniclastics and pink felsic lavas cut by a series of mafic, dark green dykes. The sequence is weakly fractured and the volcaniclastics are moderately foliated at 40°CA. The felsic lavas are pink and strongly siliceous, often autobrecciated with dark green volcaniclastics. The latter are usually gritty with numerous pale coloured lava fragments. The mafic dykes are from 10 to 50cm thick and occur every 10-20m. The sequence is metamorphosed to quartz-albite-chlorite-hematite-assemblage and is weakly veined by very thick (up to 1.0m wide) quartz-chlorite-hematite veins. The mafic dykes are often veined by wispy irregular quartz veinlets. A few narrow (0.2m) highly fractured zones also occur. Between 97.0 and 118.5, the core is predominantly mafic dykes and felsic lavas, with numerous thick dykes (up to 4.5m wide) occuring. These are also generally strongly fractured.
191.0	207.0	16.0	100	Pale pink-green, strongly fractured and sericitic volcaniclastics and lavas. The core is metamorphosed as above, but is also strongly serictised and highly fractured into many crumbly and puggy zones. Quartz veins and veinlets occur irregularly throughout the sequence which is unfoliated. A very well developed puggy-soft rock fragment zone occurs between 192.0 and 194.0.
				207.0-241.6 HENTY FAULT. A MYLONITE ZONE IS UNDERLAIN BY A CRUSHED-FRACTURED-PUGGY CLAY ZONE.
207.0	232.0	25.0	100	Pale green-white coloured mylonite. This rock is all clay altered; a claystone. Numerous fractures paralleling foliation occur (at 70°CA). Also crenulations and kink banding are strongly developed. Overall the rock is very soft, is strongly fractured and foliated, and contains numerous

ASSAY DATA Sample No	From	To	Rec. %

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PROJECT: TYNDALL

DRILL CORE LOG AND ASSAY DATA

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INTERVAL From	INTERVAL To	RECOVERY m	RECOVERY %	DESCRIPTION	Sample No.	From	To	Rec. %	ASSAY DATA (all ppm) Au	Ag	As	Cu	Pb	Zn	Bi
				small (0.1m) crushed zones.											
				At 215.2, a 0.8m thick solid quartz metamorphic vein is underlain by 0.4m of soft clay and silt with minor rock fragments.											
				At 225.0, the core is very strongly fractured into puggy clays and soft angular sericitic rock fragments over 1.0m.											
				At 227.5 a 0.8m thick strongly sheared and foliated mylonitic black shale occurs.											
				Below this shale, the core becomes slightly sulphidic (1%) increasing towards the unit below.											
232.0	239.0	7.6	100	Pale green moderately strongly altered and sheared volcanics. The unit is altered to a sericitic-quartz assemblage with minor pyrite finely disseminated (1-2% by vol.) The rock contains numerous sericite-filled fractures and overall is strongly fractured. Below 236.6m, a few narrow (0.1-0.2m wide) silicified zones occur. Also below this depth, the sericite turns a bright lime green colour throughout the fractured zones.											
239.6	241.6	2.0	100	Bright green-grey-black completed fractured unconsolidated clays. Soft puggy clay and very fine fractured rock (sericitic) fragments occur. The original lithology appears to have been strongly altered, but it is impossible to determine. Sulphides are also indiscernable. A sharp, fractured contact occurs with the unit below.	T9000	232.0	233.0	100	<0.008	<0.5	30	<5	125	215	1
				241.6-291.5 VARIABLY ALTERED AND MINERALISED COARSE-MEDIUM GRAINED VOLCANICLASTICS.	T7304		234.0	"	"	"	17	15	195	645	3
					5		235.0	"	"	"	21	<5	100	370	1
					6		236.0	"	"	"	22	"	105	315	4
241.6	251.0	9.4	100	Moderately strong altered and mineralised grey-green volcaniclastics. The rocks are coarse grained with numerous, pinkish silicified clasts in a gritty matrix. The unit is poorly sorted, very weakly foliated and moderately fractured. The sequence is altered to silica-chlorite-sericite, and fine disseminated pyrite with rare coarser base metal sulphide bleb s occurs as around 5-10% total sulphides. Veining is not developed and a few 0.1-0.2m wide, strongly silicified zones are present. At 244.4, a 0.3m puggy clay zone, similar to the previous unit, occurs.	7		237.0	"	0.010	"	25	"	170	265	2
					8		238.0	"	"	0.5	34	40	230	810	1
					9		239.0	"	0.020	1.0	32	50	840	1450	2
					10		240.0	"	0.010	"	31	"	640	1850	2
					1		241.0	"	<0.008	<0.5	45	30	290	1015	<1
					2		242.0	"	"	"	25	45	215	495	2
					3		243.0	"	0.060	0.5	20	50	45	75	5
					T7314		244.0	"	<0.008	<0.5	6	90	10	50	4

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PROJECT: TYNDALL

DRILL CORE LOG AND ASSAY DATA

HOLE NUMBER: HP23 Page: 4

INTERVAL From	INTERVAL To	RECOVERY m	RECOVERY %	DESCRIPTION	Sample No.	From	To	Rec. %	Au	Ag	As	Cu	Pb	Zn	Bi
									ASSAY DATA (all ppm)						
				Below 246.0, the core is more sulphidic. In general, the rock above this	T7315	244.0	245.0	100	0.090	0.5	19	175	125	35	3
				depth is around 1-5%, below it is about 10%.	6		246.0	"	0.130	1.0	23	35	25	175	<1
					7		247.0	"	0.510	1.5	19	600	45	30	2
251.0	261.6	10.6	100	Dark grey, strongly mineralised and altered medium grained volcaniclastics.	8		248.0	"	0.660	2.0	18	625	195	45	9
				An abrupt contact occurs with unit above, into this strongly foliated (at	9		249.0	"	0.620	3.0	20	605	730	375	10
				50°CA), weakly fractured sequence. A few large pebble siliceous clasts	21		250.0	"	0.200	3.5	21	105	885	665	5
				occur in a very fine grained matrix. The unit is unveined apart from a	2		251.0	"	0.160	3.0	26	170	725	265	5
				few wispy, pale green sericite veinlets. Minor, weakly developed	3		252.0	"	0.280	2.5	41	35	110	80	16
				silicified zones (0.1-0.2m wide) also occur. The overall sulphide content is	4		253.0	"	0.240	3.0	32	30	70	10	6
				around 15-20%, as disseminated very fine grained pyrite with a few coarser	5		254.0	"	0.070	0.5	29	"	50	"	3
				pyrite blebs. The rock is altered to a pyrite-sericite-quartz assemblage.	6		255.0	"	0.040	1.0	30	25	45	5	8
				At 258.7 the core contains several narrow (0.1m wide) clayey, highly	7		256.0	"	0.090	1.5	41	205	80	65	"
				fractured zones over the next 1.0m.	8		257.0	"	0.030	0.5	29	295	50	85	3
				At 259.0 a 0.4m wide band of fine grained massive pyrite occurs. This	9		258.0	"	0.070	"	44	140	60	30	4
				also contains minor coarse chalcopyrite. Another lensoid massive pyrite	30		259.0	"	0.620	6.0	220	930	820	1025	11
				zone, 0.1m thick, occurs at 260.8.	1		260.0	"	3.430	23.0	400	3850	3625	4100	21
				A sharp contact at 45°CA occurs with the unit below.	2		261.0	"	0.320	8.0	310	695	520	365	31
					3		261.6	"	0.170	2.5	130	225	70	35	11
261.6	262.9	1.3	100	Bright pink intensely silicified coarse volcaniclastics. A very strongly	T7335	261.6	262.6	"	<0.008	<0.5	10	50	<5	"	2
				developed silica-hematite alteration overprints and floods the rock, which is											
				unfoliated and unfractured. A sharp, fractured contact occurs with the											
				unit below.											
262.9	273.0	10.1	100	Medium-coarse grained pink-grey volcaniclastics. These rocks are weakly											
				altered/metamorphosed to chlorite-quartz-hematite-sericite-carbonate,											
				with the latter occuring mainly as irregular veinlets. The rock is a											
				poorly sorted gritty breccia, and is very weakly foliated and unfractured.											
				Pyrite occurs irregularly through the unit, averaging 1-2% by vol.											
273.0	277.8	4.8	100	Strongly mineralised and altered coarse grained volcaniclastics. Large											
				angular lava (Felsic) fragments occur in a fine grained matrix. The	T7336	273.0	274.0	"	0.080	<0.5	20	45	75	175	1
				sequence is strongly altered to a silica-sericite-carbonate-sulphide	7		275.0	"	0.190	1.5	41	985	105	70	10
				assemblage. The core is unfractured and moderately foliated at 40°CA.	8		276.0	"	0.930	15.0	29	7050	410	390	23
				Veining is rare, but silicified zones, up to 20cm wide are common.	9		277.0	"	1.620	3.5	12	685	285	75	6
				Coarse sulphides, often base metal sulphides, are associated with these	T7340	277.0	278.0	"	0.030	<0.5	33	325	65	80	4

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PROJECT: TYNDALL

DRILL CORE LOG AND ASSAY DATA

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INTERVAL From	INTERVAL To	RECOVERY m	RECOVERY %	DESCRIPTION	Sample No.	From	To	Rec. %	ASSAY DATA (all ppm) Au	Ag	As	Cu	Pb	Zn	Bi
				zones. Overall the sulphide content is 10-15%, mostly as disseminated pyrite. This unit ends sharply against the one below. At 275.0, a 0.2m thick irregular silicified band contains particularly coarse grained chalcopyrite.										
277.8	283.8	5.0	100	Pink-pale grey strongly silicified coarse grained volcaniclastics. Variably gritty and very coarse grained volcanic breccias with a strong siliceous overprint. The unit is weakly quartz veined and very weakly foliated at 40°CA. The core is unfractrured and poorly sulphidic; >1% by vol.										
					T7364	283·8	284·8	100	0·070	1·0	57	350	85	70	6
283.8	291.5	7.7	100	Strongly mineralised and altered medium grained volcaniclastics. Coarse gritty volcanic breccias with numerous felsic lava clasts in a silca-sericite-sulphide matrix. The unit is grey in colour, unfractured, unfoliated, unveined and the sulphide content is ~ 10%, mainly as fine disseminated pyrite with a few coarse chalcopyrite blebs. With depth below 290.5, the core becomes less altered and mineralised, grading into the unit below.	5		285·8	"	0·160	2·0	73	1500	335	195	7
					6		286·8	"	0·150	1·5	100	280	265	240	6
					7		287·8	"	0·560	5·0	99	1400	805	215	25
					8		288·8	"	0·130	3·5	90	670	705	145	10
					70		289·8	"	0·620	36·0	81	10800	29400	4200	49
					1		290·8	"	0·300	4·0	98	3850	655	195	11
					T7372	290·8	291·8	"	0·050	0·5	19	50	35	95	5
				291.5-305.7 WEALY ALTERED VERY COARSE GRAINED VOLCANICLASTICS.											
291.5	305.7	14.2	100	Dark grey-pink very coarse grained volcaniclastics. Weakly altered/ metamorphosed to a silica-hematite-chlorite-assembalge. The unit is weakly fractured and foliated at 45°CA. Large (0.2m wide), white silicified zones are common, particularly near the top of this sequence. Below 297.5 the core becomes moderately-strongly fractured and below 303.8, to the end of the hole a strongly sericitic, pale green fractured zone occurs.											
				END OF HOLE 305.7											