

Contents.

Page No.

	Page No.
Summary. 1993-1994 Exploration Report.	1
Recommendations.	1
Section A. Exploration Programme and Results.	
Drilling 1993.	2
Interim Geological Report.	2
Gold Panning Results.	3
Petrological Examination and Results.	3-4
Assay Results.	4
Conclusions.	5
Recommendations.	5
References.	5
Table 1. Gold Assays.1989 and 1994.	6
Section B. Geological Report.	
Introduction.	7
Investigation Programme.	7
Objectives of the Investigation Drilling Programme.	8
Previous Investigation.	8
Topography and Location of the Drilling.	9
Regional Geology.	9
Drilling Results.	9-10
Comparison of the 1989-1993 Drilling Results.	10
Minor lithological Differences between Drill Holes.	10
Geological Source of the Gold.	11
Possible Alternative Explanation than a Dolerite Sill.	11
Conclusions.	11
Recommendations.	12
References.	12
Appendix 1.	
Memo to Directors of Evalast Minerals and Mining Pty. 21-11-'93.	13
Appendix 2.	
Petrographic Report, R.S.Bottrill, 5-5-'94.	14-16
Appendix 3.	
Aquatic Labs. Assay Results. J.R.lethborg. 6-6-'94.	17
" " " " " " 27-6-'94.	18
Drilling Logs and Photographs of the Core. 1993 Holes.	
DDH.4.-1993.	19-22
DDH.5.-1993.	23-29
DDH.6.-1993.	30-33
Photographs of the Core. 1989 Holes.	
DDH.1.-1989.	34
DDH.2.-1989.	35
DDH.3.-1989.	36
Figs. 1, 2 and 3.	In rear cover pocket

Exploration Report for the Financial Year 1993-94.
Dillons Creek Prospect. Exploration Licence No.94/87.
Evalast Minerals and Mining Pty. Ltd.

W.R.Moore.

Summary of 1993 - 94. Exploration Results.

Sept.'93.

Three vertical holes were drilled on two divined anomalies. A similar technique was used to site 3 angular holes nearby in 1989. Two of these holes assayed gold. One assayed values at 58 grams / ton for a 2m length of core.

Oct.'93.

Logging of the three '93 holes showed the same lithologies and apparent structure as the '89 holes. It appeared to be a thin dolerite sill close to the ground surface underlain by graphitic sandstones. The assayed gold appeared to be in the dolerite and the underlying sandstones immediately below the dolerite. No gold or associated mineralisation was seen in the 6 cores examined.

In the geological report an alternative placer deposit hypothesis for the origin of the gold was suggested.

Nov'93.

Panning of the poor samples from the soils and surface silts above the dolerite in the high assay core area, found no gold. It appeared that the gold must be finely disseminated in the dolerite.

May'94.

Petrological examination showed no gold or evidence for any mineralisation in the dolerite or sandstones of this '89 core.

June'94.

1994 re-assays of the cores of the '89 holes, in contrast to the '89 assays showed no gold in the dolerite and little in the underlying sandstone.

No gold was found by the 1994 assays in the dolerite and underlying sandstones of the '93 cores.

Some gold was assayed in coarse graphitic and pyrriferous sandstone of Triassic age at 14m depth from a '93 core. This gold was not seen in a petrological sample from this section of core.

Recommendations.

(1) A traxcavator trench be dug to the unweathered dolerite on the site of the high assayed bore of the '89 drilling to cover the area of this angular hole. If this is not possible a 5m grid of shallow, vertical holes be drilled around this hole of the '89 drilling.

(2) By careful, systematic sampling it should be possible to solve the dolerite structure and differing assay results.

Section A.

Exploration Programme and Results.

Drilling 1993.

September '93.

In the Dillon Creek prospective area a further 3 vertical diamond holes were drilled with a total meterage of 78m. The holes are situated on the flood plain of Kellerways Creek. Fig. 1.

The '93 sites were selected on two divined anomalies 30 to 50m north of a similar anomaly which was drilled in 1989. Fig. 2.

The Evalast directors decision to undertake this additional drilling in 1993 was based on the gold assay results from the 1989 drilling DDH's 1 & 2, Fig 2. (PT89-1 & 2), Jones 1989.

In these two holes gold was assayed from 2m samples within a near surface thin dolerite sill and underlying graphitic sandstone. A value averaging 59 grams per ton was assayed from the dolerite sill, Fig 3.

October '93.

The 3 holes of the '93 holes were logged and the '89 holes were also examined by the writer. In the '93 holes the upper lithological sequence was the same as that drilled in '89. They showed thin Jurassic dolerite appearing to intrude at near ground surface graphitic sandstones of Triassic age. In the deeper '93 holes the upper sandstone sequence was replaced by a dominantly mudstone succession.

No gold or obvious mineral veining or hydro-thermal alteration was recognised visually in either the dolerite or sandstones in any of the holes.

A coarser graphitic sandstone band with sedimentary pyrite was seen in DDH.6 between 13.2 and 16.2m.

Interem Geological Report.

In this report, because of the high core losses, an alternative hypothesis of alluvial large dolerite boulders and gravel horizon rather than a dolerite sill origin for the occurrence of the gold was suggested. Such a placer origin would explain the high and what appears to the writer to be an anomalous high gold value in DDH.1.

Mineralogically to obtain gold from a dolerite magma intrusion appeared improbable to the writer. If the gold is a later intrusion more mineralisation, veining, alteration of the dolerite should be visible, especially with the high assay values as were reported.

The major recommendations of this report was that Mr. Peter James retired chief mineralogist of Mines Dept laboratory, Launceston be employed to recommend future assaying requirements of all the drilling to date.

On the 11th of October a copy of the geological report was forwarded to Evalast and it forms Section B of this report.

November '93.

To both Mr. James and the writer it appeared the first priority should be to establish the source of the gold assayed from the 1989 drilling particularly that from DDH. 1, (PT89-1).

A three stage investigation programme was proposed to Evalast.

- (1) The top section of gravel and weathered dolerite of DDH.1 be panned for gold.
- (2) A petrological examination of the core of DDH. 1 be undertaken by Mr. R. Bottrill. Mines Division, Tas. Dept. of Energy and Resources.
- (3) A re-assaying of the upper section of DDH. 1 & 2 to be undertaken by Mr. J. Lethborg of Aquatic Labs, Westbury.

Gold Panning Results.

No gold was recovered from the panning of DDH. 1 and no gold was recognized by Mr. James in the cores of DDH 1 & 2.

Copies of a letter of 27th of October and a memo of the 21st November to Evalast covering this section of the investigation are enclosed in appendix 1.

May 1994.

Evalasts authorisation of this work was given to Mines Division at the end of January. Because of the lack of availability of a petrological laboratory assistant and other commitments to Mines Division work the petrology was not completed until May.

Petrological Examination of Core DDH. 1.

The core was re-examined by Bottrill. Four representative samples selected, cut and polished for thin sectioning and examined petrologically.

Petrology Results.

(1) No gold was identified in the samples examined in either the dolerite or the underlying Triassic sandstones. These results combined with no evidence of post mineralisation in either rock types Bottrill considered petrologically the gold potential of the area discouraging.

(2) One dolerite sample was normal dolerite in texture, mineralisation and grain size. The other dolerite sample is atypical in these properties with coarse grained magnetite intergrown with pyrite and possible quartz. Bottrill suggests that these minerals are xenoliths inclusions from underlying rocks that were caught up in a late stage volatile rich porphyritic* dolerite intrusive magma, which " may indicate a possible external source for sulphides and gold."

*Large crystals in a fine ground mass

(3) The coarse grained sandstone at 14m depth in DDH 6 containing coarse grained pyrite. These sulphides are thought to originate by sedimentary means and no indication of, "Gold related mineralisation or any obvious concentration of heavy minerals".

The petrology gives no definitive origin for the sulphides seen in the dolerite core or underlying sandstones or evidence of the gold reported in the 1989 assays.

The full petrological report is appendix 2 of this report.

June '94.

Fourteen samples of core were forwarded to Aquatic Labs. Westbury, for flame assaying. Samples were taken from core of the two holes DDH.1 and DDH.2 of the '89 drilling programme (PT89 1 & 2), to check the 1989 assay results of Analabs, Burnie. Core samples were also taken from DDH.4, 5, & 6 of the 1993 drilling.

Eleven samples were taken from the unweathered dolerite and underlying sandstone section of the cores, plus an additional coarse grained sandstone with pyrite at 14.2m depth in DDH. 6. Two further samples from the upper weathered section of DDH.1 were forwarded for assaying to complete the coverage of the 1989 reported high gold value zone of this hole.

the Aquatic Labs assay results are given in appendix 3 and the assay results from the two laboratories are summarised in table 1.

Assay Results.

(1) The 1994 assay results from core of the 1989 drilling show very different results from the samples assayed in 1989.

(2) From the residual half of the core where the 1989 high gold values of Pt89-1, tube 1, were assayed in dolerite. In the 1994 assays no gold was detected. Only a trace of gold was assayed in the river silts and underlying sandstone core below the dolerite in 1994 retesting, Samples 4 and 2.

(3) No gold was found in the re-assaying of the dolerite and sandstone of DDH.2, (PT89-2) of the 1989 programme.

(4) From the 1993 drilling no gold was assayed in the dolerite and underlying sandstones in DDH.4,5 & 6.

(5) Gold was assayed at 0.49grams /ton in coarse grained sandstone with pyrite drilled in DDH.6 from 14.2m.to 15.0m. This gold was not detected in the petological sample from the same horizon.

Conclusions.

- (1) Gold in Jurassic dolerite and in Triassic age sediments in Tasmania is difficult to explain geologically. This is more difficult where no obvious post mineralisation, hydrothermal alteration and widespread veining was seen macroscopically or microscopically in the drill cores.
- (2) The writer has no rational geological explanation for the differing assays results from the samples from apparently the same cores of the 1989 drilling programme.
- (3) The structure of the dolerite is not solved satisfactorily and its implications for the likely presence of gold.
- (4) A sedimentary placer deposit appears a more likely option than a igneous origin for any gold in the Dillon Creek prospect.

Recommendations.

- (1) With the aim of solving the structural interpretation of the dolerite and possibly the conflicting assay results a trench on the angular DDH.1 hole to the unweathered surface of the proposed sill be dug. A large traxcavator machine be used. If this is impossible because of the old road location a 5m square grid of 4 shallow vertical holes be drilled to 10m depth around DDHI (PT-89-1).
- (2) In either the trenching or drilling good samples and complete systematic coverage should be given priority.
- (3) The samples assayed every meter and with two geologists present; preferably the two involved on the project to date.

References.

- 1990 Jones P. A. Exploration Licence No.94/87.
Progress Report on Exploration Activity.
4 November 1988 to 4 November 1989.

Table 1. Gold Assays 1989 and 1994. Drill Cores.

Report Hole No. and Assay Year	Bore Core No. and Sample No.	Core Length Sampled (m)	Assay Grams / Analabs Burnie.	Values ton. Aquatic Labs Westbury.	Rock Type.
DDH.1. BH89-1					
1994	S4	0.0-3.4	-	0.15	Slt.
"	S5	3.4-4.4	-	<0.05	Jdl.(C#)
"	S1	5.0-6.0	-	<0.05	Jdl.
"	S2	6.5-9.5	-	0.15	TRs.
"	S3	9.5-11.0	-	<0.05	TRs.
PT89-1					
1989	Tube 1	4.0-6.0	57.1	-	Jdl.
"	Repeat	" "	61.8	-	"
"	Tube 2	6.0-8.0	0.017	-	TRs.
"	" 3	8.0-10.0	1.225	-	TRs.
"	" 4	10.0-12.0	<0.008	-	TRs.
DDH.2. BH89-2					
1994	S1	6.0-8.0	-	<0.05	Jdl.
"	Repeat	" "	-	<0.05	"
"	S2	8.0-11.2	-	<0.05	TRs.
PT89-2.					
1989	Tube 9	4.0-6.0	0.124	-	Jdl.
"	" 10	6.0-8.0	0.021	-	Jdl.
"	" 11	8.0-10.0	0.064	-	TRs.
"	" 12	10.0-12.0	0.017	-	TRs.
DDH.4. BH93-4					
1994	S1	2.0-4.5	-	<0.05	Jdl.
"	S2	4.5-6.0	-	<0.05	TRs.
DDH.5. BH93-5					
1994	S1	1.0-3.0	-	<0.05	Jdl.
"	S2	3.5-4.5	-	<0.05	TRs.
DDH.6. BH93-6					
1994	S1	0-3.4	-	<0.05	Jdl.
"	S2	3.4-4.4	-	<0.05	TRs.
"	S3	14.2-14.5	-	0.49	TRs.

CONSULTANTS**Engineering and Groundwater Geology, Geophysics and Drilling**

Principal Geologist
W. R. MOORE, B.A. B.Sc. M.Sc. Hon. N.Z.
Telephone (002) 48 9070

173 Rifle Range Road
SANDFORD, HOBART
TASMANIA 7020

SECTION. B**GEOLOGICAL REPORT****Further Drilling on Dillions Creek****Exploration Licence No 94/87****Evalast Minerals and Mining Pty Ltd**

W.R.Moore.
7/10/'93.

INTRODUCTION:

On behalf of the principals of the above company, Mr Kerry Richardson of K.M.R. Drilling Co. requested the writer to lithologically log three proposed exploration diamond drill holes.

INVESTIGATION PROGRAMME:

These 3 holes were drilled between 20-23rd September 1993 using an Atlas Co Mobile 8 overhead drive rig and coring with 1.5mNX core barrel. The writer made a reconnaissance visit to this drilling on 22nd September and collected the report of the previous exploration of 1988-1989, Jones 1990. A further visit was made to the site at the conclusion of drilling on the 23rd and a survey of drill holes undertaken. The cores were logged on the 25 and 26th September and the cores of the 1989 drilling examined on the 30th September.

The location of the drilling area within the lease is shown on Fig 1. With the location of the 1989 and 1993 holes shown on Fig 2. The lithological logs of the 1993 drilling are also enclosed. From Jones 1990 report, figure 2 which shows the lithology of the three holes drilled in 1989 with the gold assays, is also included as fig.3 in this report.

OBJECTIVES OF THE 1993 INVESTIGATION DRILLING PROGRAMME:

The principals of Evalast Minerals & Mining Pty Ltd have the following objectives in undertaking further drilling in 1993:-

(1) The anomaly ascertained by divining by Mr. H. Lazarus on the Palverata Road near Dillions Creek and extends across to Kellaways Creek flood plain be further tested by drilling.

(2) The aim of this drilling was to establish if the same rock sequence found present under the old Palverata Road by the 1989 drilling extends to the creek.

(3) Given the same rock types and sedimentary sequence is established then the rocks be assayed for gold.

(4) A subsidiary aim of the directors of Evalast Minerals and Mining Co. was to obtain a second geological and metallurgical opinions on the prospects of the area.

With this in view they employed the writer for the geology and P.L. James of Launceston for the metallurgy. Both are retired employees of the Tas. Dept. of Mines.

PREVIOUS INVESTIGATION:

In July 1989, one of the anomalies, the Dillion Creek anomaly was diamond drilled for gold; using Mines Department truck mounted L.Q. diamond drill rig. Three angle holes were drilled at 60° to 12-20 meters. The location of these holes is shown on Fig 2 and results Fig 3.

This drilling and exploration programme was carried out under the supervision of Mr. P.L. Jones of Phil Jones and Associates. The assays of the rocks encountered were undertaken by the Burnie laboratories of Analabs Ltd.

These assay results, lithological logs of diamond holes as well as regional geology, plus a future exploration programme etc are covered in a comprehensive report.

In his summary and recommendations, Jones 1990, states; "Only one anomaly, the Dillion Creek zone has been drilled (3 holes) returning highly encouraging results from one hole assaying 2m of 58 g/t Au."

In his evaluation of the exploration potential of the licence 94/87 Jones states, "Good potential for discovery of possible sediment of structurally hosted gold deposits occurring with in hematitic and graphitic altered Triassic permeable sandstones, minor siltstones and shales."

TOPOGRAPHY AND LOCATION OF DRILLING:

The 1989 drilling was undertaken on the bend of the old bye passed section of the Palverata Road. These holes were located at the foot of the steep southern slope of the Kellaways Creek valley. The 1993 drilling was on the north side of the existing road, on the narrow, southern, flood plain of Kellaways Creek, fig 2.

REGIONAL GEOLOGY:

Farmer 1981, mapped the lower Kellaways Creek area as a lower Triassic Age sedimentary sequence of dominantly medium to coarse grained quartz sandstones with subordinate mudstones and minor clay pellet beds. These Triassic age sediments overlie felspathic sandstones with subordinate mudstones of the Ferntree Formation of Permian Age. Both mapping units of these sediments belong to the Parmeer super group of sediments of Permian and Triassic ages.

Quartzose and graphitic sandstones and mudstones mapped as Triassic age sediments outcrop on the 3m high road bank immediately west of the drilling.

Overlying the valley floor sediments are thick sills of dolerite forming the high ridges of Kellaways Creek valley. Farmer shows the sediment dolerite contact as conformable in the vicinity of the drilling area.

DRILLING RESULTS:

(A) 1989 Drilling:- (See logs of holes 1 to 3, Jones, 1990 Appendix 1 for details.)

The cores of these 3 angle hole were examined and photographed.

(B) 1993 Drilling:- (see enclosed logs for details)

In all three holes drilled a soil horizon of alluvial silts with some fine river gravels at the base.

These Recent deposits overlie highly weathered Triassic quartzose sandstone and /or slightly weathered dolerite of Jurassic age. In this section of the drill holes high drill losses were experienced. Because of this the thickness and structure of the dolerite is difficult to interpret

Below the dolerite and possibly above it is a weathered zone of quartzose sandstone. Below the weathered zone a sequence of massive and well bedded, quartz-felspathic,

graphitic sandstones up to 27m thick was drilled. Within this sandstone sequence in DDH. 4 & 5 is a correlate zone of mudstones and closely bedded sandstones between 17 and 21 meters.

In the deepest hole drilled DDH 6 below 26m depth the sandstone sequence is replaced by a dominantly mudstone sequence which at 31 to 36m is laminae bedded, micaceous mudstone, definitive of Triassic age sediments.

Cross bedding and graphite sandstone beds and bands are common through out the sedimentary sequence in all three holes. In DDH. 6 between 14 and 18 meters a coarse sandstone and grit band was present with coarse pyrite, biotite, graphite and clay pellets.

COMPARISON OF THE 1989-1993 DRILLING RESULTS:

The core loss of the 1993 was less than that of the 1989 drilling. Both the dolerite and the lower Triassic age sandstone sequence is lithologically similar in both sets of drill holes.

MINOR LITHOLOGICAL DIFFERENCES BETWEEN DRILL HOLES:

Minor lithological differences exist between all drill holes of both programmes. Such differences are to be anticipated and are found in other areas where Triassic sediments outcrop in S.E. Tasmania. Rapid changes in current directions and depositional conditions within short distances are features of these fluvial and lacustrine sediments.

The differences observed were:-

- (1) The hematitic alteration and banding seen in holes 1 to 3 is not present in holes 4 to 6. The only major hematitic alteration seen in these holes is that of the red mudstone at 32 to 34 meters in DDH.5.
- (2) Graphitic bedding both thick and fine is more common in the 1993 holes than in the 1989 holes. Graphite which appears to be sedimentary occurs in both sets of holes, often associated with mudstone fragments.
- (3) The correlate horizon of bedded mudstones and closely bedded sandstones of DDH 4 and 5 at depths of 17 to 23 meters was not reached by the drilling of 1989. The holes were too shallow. The horizon also probably dips below DDH. 6 to the west.
- (4) The coarse sandstone and grit band of DDH.6 at 14 to 18 meters depth with sedimentary pyrite, biotite, graphite and clay pellets is not present in any of the other five holes.

GEOLOGICAL SOURCE OF THE GOLD:

In the Cygnet area, the source of the gold is considered to be the alkaline, intrusive rocks, namely syenites of Cretaceous age. The syenites generally intrude as dyke swarms in the Permian age sediments rather than Triassic sediments.

No syenites and no veining was present in the cores of the 1989 or 1993 drilling. In addition the pyrite and graphite found in the coarser sediment of DDH. 6 appears to be sedimentary and secondary. The only mineralisation recognized was the thin veinlets [$<1\text{mm}$], in the dolerite of DDH.1

The assay of this dolerite and the sandstone above of the 2 meters sampled gave an exceptionally high value for gold of 59.2 g/t. In the underlying sandstone sequence the assay values at 2 meter intervals were 1.23 g/t, declining to 0.20 g/t and 0.11 g/t. Fig 3.

POSSIBLE ALTERNATIVE EXPLANATION THAN A DOLERITE SILL:

A thin dolerite sill intruding at the top of the sandstone sequence appears to be the most likely structural explanation for the dolerite in the 6 holes drilled; with residual surface weathering accounting for the high assay values of DDH.1.

With core recovery so low in all holes near the surface and the presence of fine river gravel at the base of the dolerite in some of the holes may indicate the dolerite and the sandstone above it are boulders. The gravels appear to be embedded in the soft sandstone surface and because of this are not thought to be drilling contamination from higher up the holes.

Pleistocene gravels are common in the Kingborough sheet area from talus slides or coarse river gravels. A boulder layer would explain the one dolerite piece of core with the mineralised veinlets and the large jump in the assay values of the top sample of DDH 1.

CONCLUSIONS:

(1) The rock types found in the six holes are the same lithologically and the sedimentary sequence appears to be the same stratigraphic level for both the 1989 and 1993 drilling.

(2) No definitive explanation for the presence of gold particularly the values of DDH.1 was gained from the logging of the cores. If the gold extends north of the original 1989 drilling, it is likely to be very fine grained and associated with graphite.

(3) From the geology alone no prediction of the gold values is possible for the 1993 drilling.

RECOMMENDATIONS:

(1) A copy of this report, as well as Jones report be forwarded to Mr. James, the metallurgist at Launceston.

(2) With no obvious geological connection between the cores of the 1989 and their assay values, the 1993 cores be forwarded to Launceston for his inspection and sampling. Mr. James should select the intensity of sampling required to evaluate for any gold and select laboratory to undertake the assaying.

(3) When the assaying results are available Mr. James and the writer complete jointly the final report assessing the Dillions Creek anomaly.

REFERENCES:

- 1981 N. Farmer. Kingborough Geological Sheet.
Geological Atlas 1:50,000.
Tas. Dept. of Mines.
- 1990 P.L. Jones. Exploration Licence 94/87.
Progress Report on Exploration Activity.
4 Nov. 1988 - 4 Nov. 1989.
Phil Jones and Associates

.....

 W.R. Moore.

Appendix. 1.

Memo to Messrs. H. and P. Lazarus and T. Sofia.
Evalast Minerals and Mining Company.

W.R. Moore.

Topics.

- (1) Results of Mr. James visit to Hobart on the Friday 12th. Nov. 93.
- (2) Proposed investigation and exploration programme.

Source of the Gold in P.T.89. 1.

To the writer it has always appeared a waste of time and money to undertake any further assaying or any other work on the 1993 core until the source of the high gold value in 4-6m dolerite and gravel section of the above hole has been established.

Mr. James agrees with this concept and jointly with the Lazarus brothers worked out the following programme.

Testing the Sediment and Dolerite.

Panning the sand and silt from the above section of the core resulted in no gold being recognised. Therefore its source could only be in the dolerite. Examination of the dolerite core with magnification +x20, showed some fine disseminated mineral, possibly gold, associated with veining but not in the actual vein. No other mineral zones were recognized in this section of the core.

Analabs Burnie were contacted to see if they retained any of the core or residues. Unfortunately they had been thrown out.

Proposed Programme.

- (1) The dolerite section P.T.89. be cut and one half be used for future petrological examination and assaying. It is recommended that the petrology be undertaken by R. Bottrill of the Mines Division of the Dept of Resources and Tas. He has wide experience in gold petrology in Queensland and if available is the best petrologist in Tasmania.
- (2) If gold is recognised the core be crushed and assayed by John Lethborg, metallurgist of Launceston for gold, iron, arsenic, antimony, zinc and copper.
- (3) Given that the Analabs results are duplicated then dolerite of the other drill holes be examined petrologically. The Triassic sandstone core below the dolerite in P.T.89 1 also be petrologically examined.
- (4) A seismic and magnetic survey be undertaken on the Dillons Creek area covered by the 1989 and 1993 drilling to ascertain if the dolerite drilled is a sill or large boulder bed. All the drill holes to be levelled.
- (5) This programme be incorporated with the interim geological report. Both be submitted to the Mines Division as a logical exploration programme which if successful to be followed by further trenching and sampling.


W.R. Moore.

21/11/'93.

Copy P. James. Metallurgist, Launceston.

DILLON CREEK DIAMOND DRILLING

DEPTH	RECRY % 20 60 100	DISCONTINUITIES	GRAPHIC LOG	WTH-ING	ROCK DESCRIPTION
		N.A.		HW	0-0.4 <u>Soil</u> . Brown sandy silt (ML)
		Pebbles Dolerite 15-20mm		HW	0.4-0.6 <u>Gravel</u> , fine river.
1					0.6-3.8
2					No core.
3					
4		Vertical joint. Rusted (SW)		SW	3.8-4.5 <u>Dolerite</u> Medium grained.
5		Bedded - with current bedding prevalent. Dip 30° - to core axis. Joints - soft, sandy Siltstone filled. Some iron staining.		SW	4.5-7.42 m. <u>Graphitic and felspathic Sandstone</u> , grey - well bedded.
6					
7					
8		Broken soft zone. Joint 45° Fine sandstone		No core	7.4-7.8 m. No core.
9		Massive		F	7.8-8.4 m. As above
10		No core		No core	8.4-10.42m <u>Quartz - felspathic Sandstone</u> . with some graphite, grey - massive.
11		Bedding dip 30° to core axis. Joints dip 45° - 80° Graphite polish and slickensided joint faces.			10.4-13.4 m <u>Felspathic Sandstone</u> with minor graphite sandstone bands. Massive to poorly bedded.
12					

DILLON CREEK DIAMOND DRILLING

DEPTH	RECRY %	DISCONTINUITIES	GRAPHIC LOG	WITH-ING	ROCK DESCRIPTION
13	20.60/100	As above			10.4 - 13.4 contd. As above
14		Massive. Many drilling breaks. Few joints.		F	13.4 - 16.4 m <u>Felspathic Sandstone.</u> Mottled light grey. Minor graphitic banding. Massive.
17		Massive			16.4 - 19.4 m. <u>Mudstone</u> <u>interbedded with minor</u> <u>Sandstone.</u> Mudstone - light and dark grey. Sandstone closely bedded.
18		200mm. Shattered core. Sandy mudstone, minor black pebbles 1-2mm. and nodules. Closely bedded Sandstones, dip 50° to core axis.			
19		300mm. shattered and brecciated. Mudstone with small pebbles.			
20		Laminae bedded Shatter zone of mudstone.			19.4 - 21.0 <u>Mudstone.</u> Dark grey - black micaceous. Sandstone, minor beds interbedded with mudstone. towards base.
21		Poorly bedded.			21 - 22.3 m. <u>Felspathic Sandstone</u> <u>with minor Mudstones.</u> Sandstone poorly bedded white - to light grey.
22		Total depth 22.3m.			

**Petrographic examination of some diamond drill core
from EL 94/87, in the Pelverata area,
for indications of gold mineralisation,
for Evalast Minerals & Mining.**

R.S. Bottrill

5/5/94

Introduction

Background

Several diamond drill holes have been drilled in the Dillons Ck. prospect, near Pelverata, to test a possible gold occurrence, delineated by divining techniques. Some very encouraging results have been returned, including 2m @ 58 g/t Au and 2m @ 1.23 g/t Au (Jones, 1990). These assays were of samples of quartz silt, Jurassic dolerite and Triassic sandstones and arkose. No obvious macroscopic visual indications of gold mineralisation have been identified to date.

Objective

The objective of this study is to determine if any microscopic indications of gold mineralisation are present.

Petrographic examination

The core was examined macroscopically and no obvious indications of gold mineralisation (eg. quartz veining) were detected. The core consists of dolerite and sandstone. Four representative samples were prepared as polished thin sections for study, under the polarising microscope, to identify any gold mineralisation and/or associated indicator minerals, hydrothermal alteration, etc.

Sample No. C107495 (PT89-1, 5.2 m)

This sample consists of Jurassic dolerite, of typical mineralogy, texture and grain size (~0.5-1 mm). There is dominant plagioclase (~45%), abundant augite (~25%), ~5% pigeonite and about 25% mesostasis. This fine grained brown mesostasis contains abundant fibrous alkali feldspars and fine grained magnetite (<0.5 mm), minor pyroxene needles, quartz and clay-like phyllosilicates

Appendix 2.

(celadonite?), and a trace of very fine grained chalcopyrite. There is no indication of any post-pneumatolitic hydrothermal alteration or gold-related mineralisation.

Sample No. C107496 (PT89-1, 6.3 m)

This sample consists of Jurassic dolerite, of rather atypical texture, mineralogy and grain size. There is about 15% plagioclase, 15% augite, ~2-5% pigeonite, ~5% magnetite, ~1% pyrite and about 50-60% mesostasis. The pyroxenes are unusually coarse, with blades about 10x2 mm in size, and are variably altered to red-brown phyllosilicates. The plagioclase laths are up to 5mm in length, and are partly micrographically intergrown and replaced by quartz-feldspathic material. The magnetite is up to 5 mm in size, abnormally large for dolerite, and is commonly skeletal and intergrown with coarse grained pyrite, plus quartz(?) and other minerals. The white - brown mesostasis varies from granophyric to radiating and plumose in texture, and contains abundant fibrous alkali feldspars, quartz and magnetite. There is also a trace of very fine grained chalcopyrite.

The dolerite is unusual, and appears to represent a late stage, volatile-rich, porphyritic phase of the dolerite. The pyrite and magnetite are conceivably xenocrystic inclusions originating in underlying rocks and caught up in the rapidly rising and quenching dolerite; they may have replaced pyrrhotite or another mineral. There is probably insufficient sulphide for pyrite crystallisation from normal doleritic fluids, although this rock was presumably volatile rich to crystallise the coarse crystals. The sulphide may also have been derived from reaction with wallrocks.

There is no indication of any post-pneumatolitic hydrothermal alteration or gold-related mineralisation, although the pyrite-magnetite intergrowths may indicate a possible external source for sulphides and gold.

Sample No. C107497 (PT89-1, 8.3 m)

This sample is a fine to medium grained, well sorted, quartz arenite with quartz cement, rounded quartz grains and about 10% phyllite clasts. There is minor plagioclase, potash feldspar and mica and traces of graphite and fine grained pyrite (probably diagenetic). The siliceous matrix is probably metamorphic in origin. There is no indication of any syngenetic sulphides, hydrothermal alteration, gold-related mineralisation or any obvious concentration of heavy minerals.

Sample No. C107498 (BH 6, 14.5 m)

This sample is a quartz arenite. It contains poorly sorted, fine to very coarse grained quartz and about 10-15% mudstone and argillaceous matrix. There is a trace of mica, potash feldspar, graphite and pyrite. The pyrite is medium to coarse grained, euhedral and is often enclosed in quartz and chert grains, which it appears to replace; it is probably detrital and/or diagenetic in origin. There is no indication of any syngenetic sulphides, hydrothermal alteration, gold-related mineralisation or any obvious concentration of heavy minerals.

Appendix 2.

Discussion

The core was examined macroscopically and microscopically, and no good indications of gold mineralisation (veining, alteration, sulphidation) were detected. The sandstones contain a little detrital and/or diagenetic pyrite, and some silicification, probably diagenetic or metamorphic. One of the dolerites is normal in texture, the other quite atypical. The latter is porphyritic and contains coarse grained pyrite-magnetite intergrowths. These are enigmatic and may indicate an external source of sulphides (and perhaps also gold).

There is, however, little or no encouragement for the gold potential of the area that can be derived from this petrological analysis. If more gold anomalies are encountered during assaying, it may be worthwhile rechecking the splits of these samples.

Appendix 3.



AQUATIC LABS

The Tassy Assay Professionals

Enquirees: J.R. Lethborg (B.Sc. Chemistry)
 Phone : 003 931 774
 Your reference : Dillons Creek Drill Core
 Our file : 941240-941241

Assay laboratory
 Box 126,
 Westbury
 Tasmania 7203

27 June, 1994

Dear Mr Moore

Please find below the assay results on the drill core sections posted to Aquatic Labs by Mr Moore.

Laboratory Reference	Clients Description	Gold grams/ton
941070	Evalast Minerals Dillons Creek Bore BH 89-1 S4 0-3.4 Metre	0.15
941071	Evalast Minerals Dillons Creek Bore BH 89-1 S5 3.4-4.4 M	<0.05

Detection limit 0.05 grams/ton

At Aquatic Labs the reference source for the fire assaying methods used is "A Manual on Fire Assaying and Determination of the Noble Metals in Geological Materials" published by the American Geological Survey in 1977.

Please consider Aquatic Labs for all your assaying requirements. You will not be disappointed in our service or the fees that are charged for that service.

J.R. Lethborg (B.Sc. Chemistry)

Appendix 3.



AQUATIC LABS

The Tassy Assay Professionals

Engineer: J.R. Lethborg (B.Sc. Chemistry)
 Phone : 003 921 772
 Your reference: Dillons Creek Drill Core
 Our file : 941070-941081

Assay Laboratory
 P.O. Box 10
 South
 Tassell 7393

8 June 1994

Dear Mr Moore

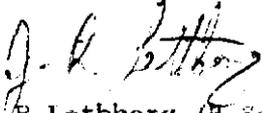
Please find below the assay results on the drill core sections delivered to Aquatic Labs on Monday 6 th of June 1994 by Mr Lazarus.

Laboratory Reference	Clients Description	Gold gram/ton
941070	Evalast Minerals Dillons Creek Bore BH 93-6 S1 0-3.4 Metre	<0.05
941071	Evalast Minerals Dillons Creek Bore BH 93-6 S2 3.4-4.4 M	<0.05
941072	Evalast Minerals Dillons Creek Bore BH 93-5 S1 1.0-3.0 M	<0.05
941073	Evalast Minerals Dillons Creek Bore BH 93-5 S2 3.5-4.5 M	<0.05
941074	Evalast Minerals Dillons Creek Bore BH 93-4 S1 2.0-4.5 M	<0.05
941075	Evalast Minerals Dillons Creek Bore BH 93-4 S2 4.5-6.0 M	<0.05
941076	Evalast Minerals Dillons Creek Bore BH 89-4 S1 6.0-6.5 M	<0.05
941077	Evalast Minerals Dillons Creek Bore BH 89-4 S2 6.5-9.5 M	0.15
941078	Evalast Minerals Dillons Creek Bore BH 89-4 S3 9.5-11.0 M	<0.05
941079	Evalast Minerals Dillons Creek Bore BH 89-2-S1 6.0-9.0 M	<0.05
941080	Evalast Minerals Dillons Creek Bore BH 89-2-S2 8.0-11.2 M	<0.05
941081	Evalast Minerals Dillons Creek Bore BH 93-6 S3 14.2-14.5 M	0.41
941079	Evalast Minerals Dillons Creek Bore BH 89-2-S1 6.0-6.0 M	<0.05
Repeat		

Detection limit 0.05 grams/ton

At Aquatic Labs the reference source for the fire assaying methods used is "A Manual on Fire Assaying and Determination of the Noble Metals in Geological Materials" published by the American Geological Survey in 1977.

Please consider Aquatic Labs for all your assaying requirements. You will not be disappointed in our service or the fees that are charged for that service.


 J.R. Lethborg (B.Sc. Chemistry)

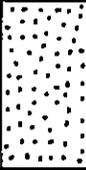
DILLON CREEK DIAMOND DRILLING

DEPTH	RECRY %	DISCONTINUITIES	GRAPHIC LOG	WT-ING	ROCK DESCRIPTION
	20.60/100				
		N.A.		CW	0-0.6 Soil. Brown silt (ML). Alluvial flood plain.
1		2 joints dip 45° to core axis. Weathered Fe ⁺ stained and silt.		SW	0.6-1.5m. Dolerite, medium grained small pebbles at base.
2		No core.			1.5-3.2m. No core
3					
4		10mm. Soft zone at base.		HW	3.2-4.2m. Quartz Sandstone, medium grained.
5		Drilling breaks along 2 bedding joints dip 45° to core axis. 80mm. Soft zone Massive.		F	4.2-5.7m. Felspathic Sandstone, light grey, medium grained. Massive.
6		Cross bedding horizontal and dip 20° to core axis. Bedding and joints dip 45° to core axis			5.7-7.4m Graphitic and Felspathic Sandstone with black mudstone fragments bedded.
7					
8		Breaks in core. Mainly drilling breaks. Poorly bedded.			7.4-9.9m. Felspathic Sandstone, light grey, mottled and white flecked. Minor graphitic sandstone bands 5-10 mm.
9					
10					
11		Massive		F	9.9-12.0m Felspathic Sandstone, grey, fine. Rare graphitic sandstone bands.
12		10mm. Grit bed. 2 10mm Mudstone beds.			12.0-13.6m.

DILLON CREEK DIAMOND DRILLING

DEPTH	RECRY % 20 60 100	DISCONTINUITIES	GRAPHIC LOG	WTH-ING	ROCK DESCRIPTION
13		Massive			12.0 - 13.6m. contd. <u>Grey Sandstone and interbedded sandy siltstone.</u>
14		Bedding dips and graphitic sandstone bands. Dip 35° to core axis.			13.6 - 16.4 m. <u>Felspathic Sandstone with graphitic sandstone bands.</u> Poorly bedded & flecked.
15					
16					
17		Massive			16.4 - 17.5m <u>Felspathic Sandstone, grey-white mottled.</u>
18		Mudstone crushed and brecciated. Sandstone cross-bedded			17.5 - 19.4m. <u>Sandstone and interbedded Mudstone.</u> Sandstone, grey fine Mudstone - brecciated and crushed.
19					
20		Finely bedded Mudstones and laminae bedded. Crushed and brecciated.			19.4 - 22.4m. <u>Mudstone with minor sandstone beds.</u> Mudstone dark grey laminae bedded and micaceous. Sandstone cross bedded & micaceous.
21		Sandston cross bedded			
22					
23		300mm. Mudstone bed. Cross bedded.			22.4 - 25.1m <u>Graphitic and micaceous sandstone, light grey and cross bedded.</u>
24					

DILLON CREEK DIAMOND DRILLING

DEPTH	RECRY % 20 60 100	DISCONTINUITIES	GRAPHIC LOG	WTH-ING	ROCK DESCRIPTION
25		Poorly bedded to massive.			25.1 - 26.1m <u>Felspathic and graphitic Sandstone.</u>
26		Massive.			26.2 - 26.9m. <u>Micaceous Mudstone</u> , yellow grey-sandy at base.
27		Bedding dip 50° to core axis. Graphitic sandstone banding 1-2mm.			26.9 - 28.5m. <u>Micaceous and graphitic sandstone</u> , light grey - white. Poorly bedded.
28					
29		Massive.		F	28.5 - 29.9m. <u>Sandy Mudstone</u> , yellow and light grey.
30		150mm. Crush & breccia zone.			
31		Core crushed. Vertical joint with mauve mudstone. Base of vertical joint.			29.9 - 31.4m. <u>Mudstone and sandy Mudstone.</u> Light grey sandy mudstone. Dark grey mudstone.
32		Massive white light grey mudstone.			
33		Red mauve massive mudstone.			31.4 - 35.9m. <u>Mudstones</u> white, red - mauve and laminae bedded. Dark grey
34					
35		Closely bedded, dark grey, mudstone. Bedding laminae and sub horizontal.			
		Crush zone, vertical joint.			
		Total depth 35.9m.			

861026



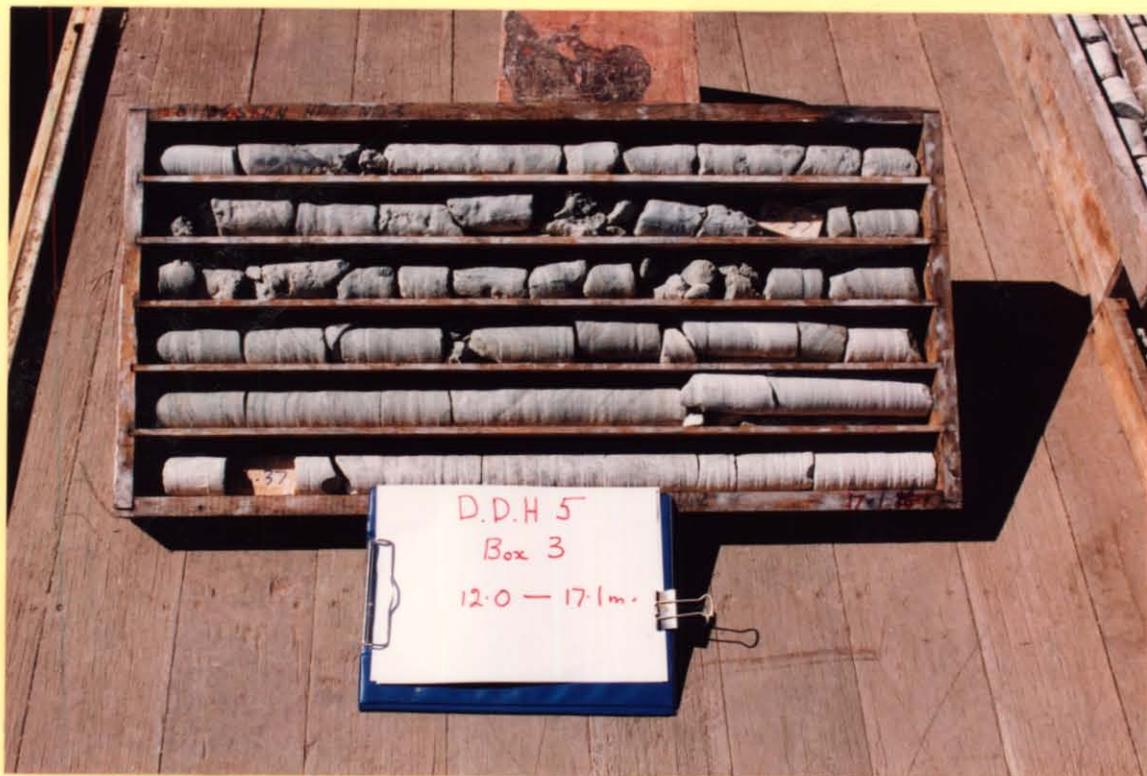
D.D.H.4. 1993 Drilling Programme. Vertical Hole.
Total Depth = 22.3 m



D.D.H.4. 1993 Drilling Programme. Vertical Hole.
Total Depth = 22.3m



D.D.H.5. 1993 Drilling Programme. Vertical Hole.
Total Depth = 35.9 m



D.D.H.5. 1993 Drilling Programme. Vertical Hole.
Total Depth = 35.9 m

861030



D.D.H.5. 1993 Drilling Programme. Vertical Hole.
Total Depth = 35.9 m

861031



D.D.H.5. 1993 Drilling Programme. Vertical Hole.
Total Depth = 35.9 m

DILLON CREEK DIAMOND DRILLING

861032

DEPTH	RECRY %	DISCONTINUITIES	GRAPHIC LOG	WTH-ING	ROCK DESCRIPTION
	20 60 100				
		N. A.		CW	0-0.5m. <u>Soil</u> . Brown sandy silt (ML). Alluvial Flood Plain.
1		Broken Core. Rounded pebbles and brown quartz sandstone Dolerite - jointed, and some rounded pebbles.		SW	0.5 - 2.0 m <u>Sandstone</u> and <u>Dolerite</u> (slightly weathered).
2		Contact Zone			
3		Small dolerite pebbles 1-2mm. in matrix of sandstone. Bedding Breaks. Dip 50° to core axis.		HW	2.0 - 4.4m. <u>Silty Sandstone</u> Yellow Quartzose micaceous fine grained.
4		Broken core.			
5		500mm. Mudstone, closely bedded, micaceous.		F	4.4 - 5.2m. <u>Silty Sandstone</u> and <u>sandy Mudstone</u> . Grey, poorly bedded.
6				SW	5.2 - 6.5m <u>Fine Sandstone</u> , yellow-grey, micaceous, felspathic.
7		Broken Core Breaks along bedding. Bedding plane uniform dip 50° to core axis.			
8					
9		Consistant uniform bedding Dip 55° to core axis.		F	6.5 - 14.2 m. <u>Felspathic Sandstone</u> Light grey, graphitic bands 1-5mm. Regular bedding and thin 1-3mm.
10					
11					
12					

DILLON CREEK DIAMOND DRILLING

DEPTH	RECRY % 2060100	DISCONTINUITIES	GRAPHIC LOG	WTH-ING	ROCK DESCRIPTION	
13		20mm. Sandy Mudstone bed		T	12.0 - 14.2 m contd. As above	
14		20m. Sandy Mudstone bed				
15		Massive 5mm. Soft Sandstone Regular bedding. Dip 60° to core axis.			14.2 - 15.9 m. <u>Coarse Sandstone & Grits.</u> Massive - then bedded. Biotite, Pyrite & Mudstone fragments.	
16		Broken core, sandy siltstone. Regular bedding, dip 60° to core axis.				15.9 - 17.6m. <u>Graphitic Sandstone.</u> Grey, bedded, medium grained, felspathic pyrite and biotite.
17		Breaks mainly drilling breaks. Massive.				17.6 - 19.4 m. <u>Felspathic Graphitic Sandstone.</u> Light, grey, medium grained with pyrite.
18		Bedding dip 60° to core axis.				19.4 - 20.2 m. <u>Felspathic Sandstone.</u> Light grey, fine to medium grained.
19		Total depth 20.2m.				
20						



D.D.H.6. 1993 Drilling Programme. Vertical Hole.
Total Depth = 20.2 m

861035



D.D.H.1. 1989 Drilling Programme.PT-89-1.P.A.Jones.



D.D.H.6. 1993 Drilling Programme. Vertical Hole.
Total Depth = 20.2 m

861037



D.D.H.3. 1989 Drilling Programme.PT-89-3.P.A.Jones.



D.D.H.2. 1989 Drilling Programme. PT-89-2. P.A. Jones.

PROPOSED PROGRAM 1994-1995

As 1993/94 was concentrated to assaying and research into work already carried out.

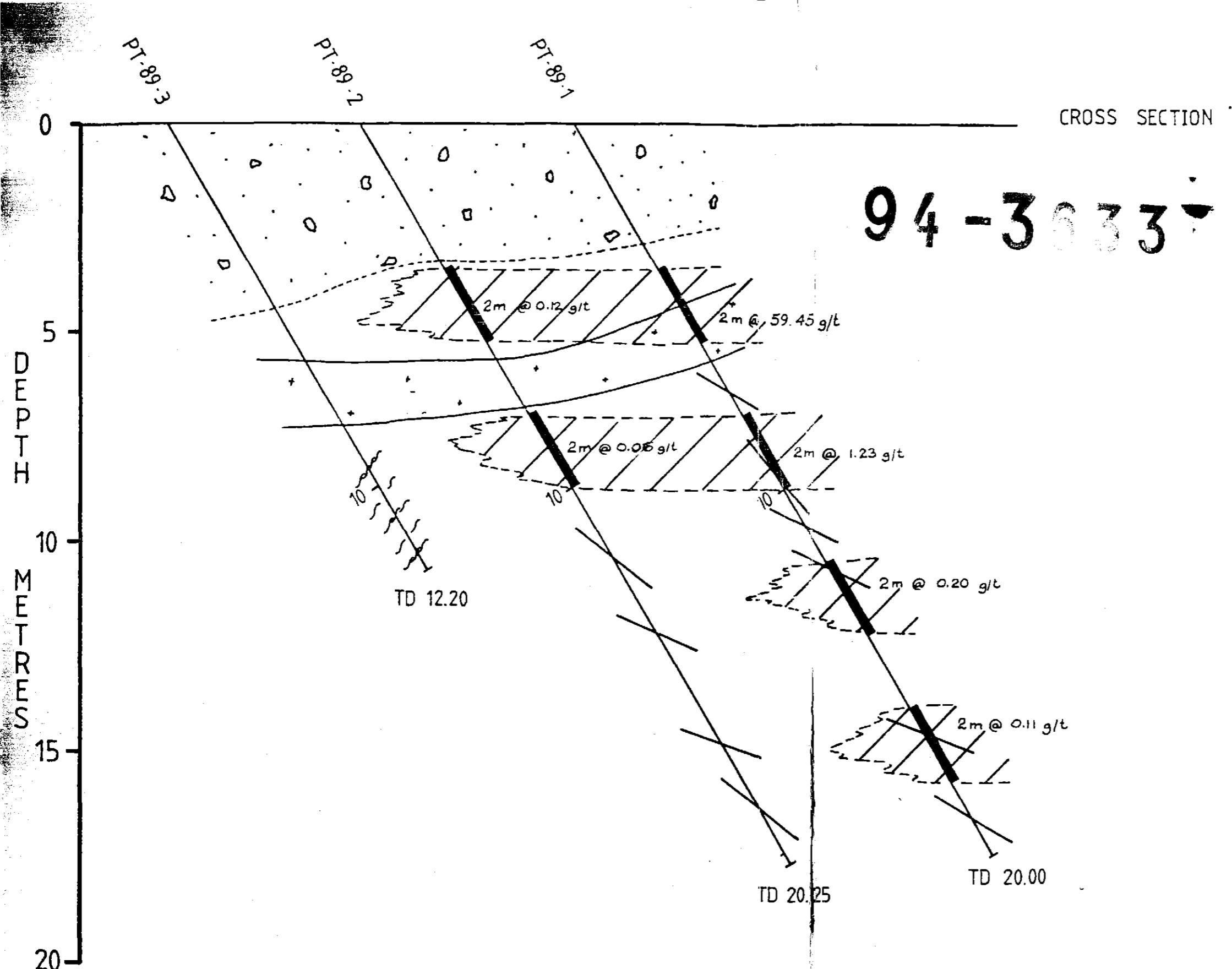
Core samples DDholes 4,5,6 were assayed but after some delays in having core samples from DDholes 1,2,3, redone by two separate laborites to try to recreate the findings of ANALAB in these three holes with out success.

Our program will be on consent of both the Mines Dpt. the land owner 10 mtr. long 5 mtr. deep 1 mtr. wide to try to locate and repeat ANALABS result of 59gr. as we have several theories on how this reading came about:

1. There may have been a small sample stuck to core sample.
2. There may be a thin vein of gold
3. As the area in question is an abandoned strip of roadway and the sample that was found may have been transported into the area contained in the road fill that has come from another area.

CROSS SECTION BEARING 078° Magnetic

94-3033



Drilling Contractor : Dept. of Mines
 Period : July 1989
 Drill Used : Longyear 38
 Truck Mounted.
 On Site Geologist : P. A. Jones

-  Road Fill
-  Triassic Med. to coarse grained quartz sandstone graphitic, minor shale.
-  Jurassic Dolerite.

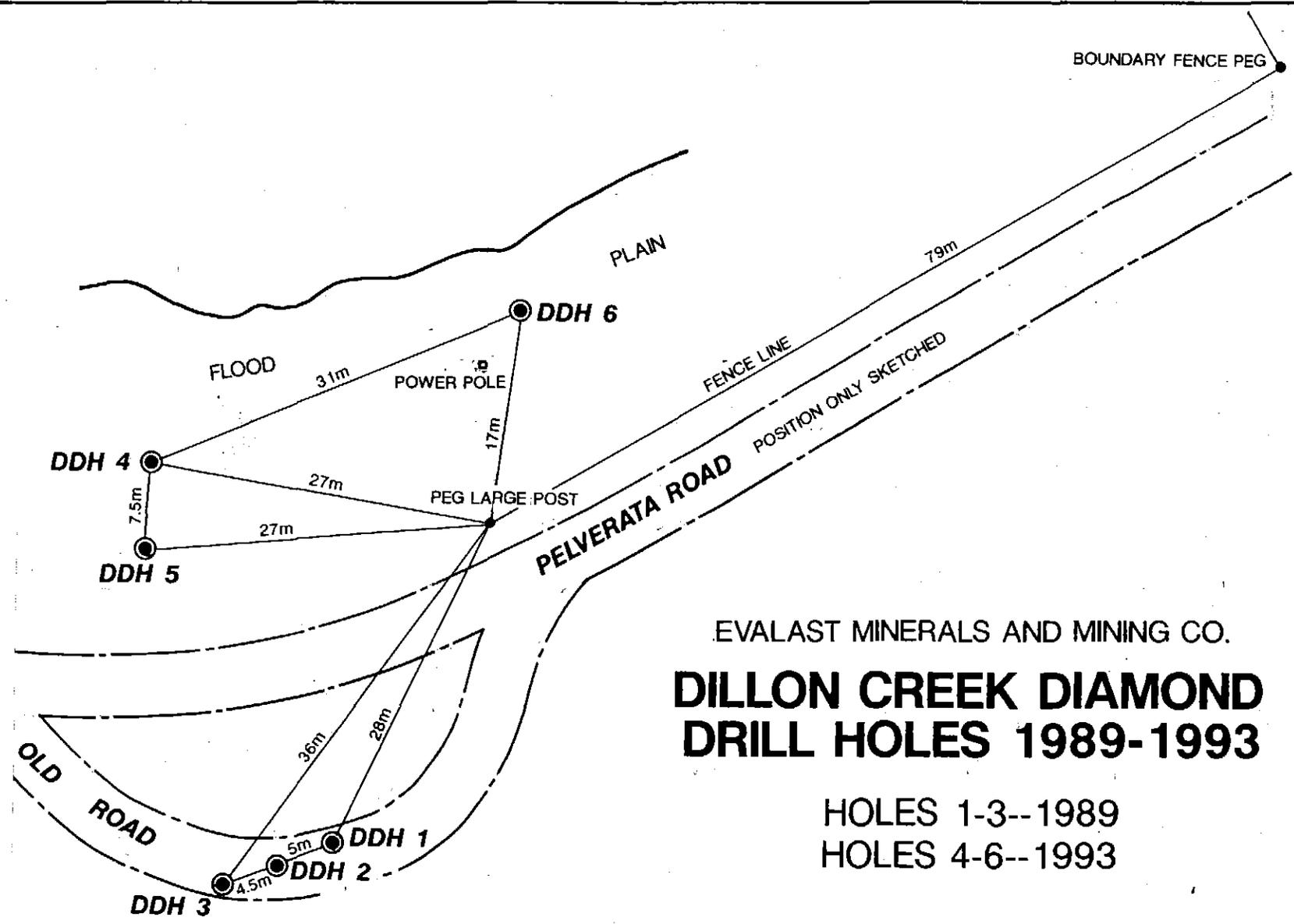
2m @ 0.11 g/t Au. - Fire Assay Gold
 5cm

EVALAST MINERALS MINING	
EL 94/87 DRILL HOLE CROSS SECTION	Drawn by : PAJ Draughtsman: PAJ Date : Jan 90 Revisions :
Scale 1:100  METRES	FIG 2.

Fig 3.

Michael Jones '90

94-3633



EVALAST MINERALS AND MINING CO.
**DILLON CREEK DIAMOND
DRILL HOLES 1989-1993**

HOLES 1-3--1989
HOLES 4-6--1993

NOTE: TAPE AND COMPASS SURVEY
HOLE POSITIONS APPROXIMATE

861042